

3.3 SOCIAL CONDITIONS

The following discussion presents existing social and demographic conditions in areas that adjoin or are in nearby proximity to the Geneva Road project corridor. A Community Social Assessment was completed for the Geneva Road project by Dr. Richard Krannich of Rocky Mountain Social Science. Attention was focused in part on the extent to which the project might have disproportionate impacts on particularly vulnerable populations such as racial/ethnic minorities, the elderly, or economically disadvantaged populations. The assessment also addressed potential project effects on community social organization, including levels of localized social interaction and activity patterns, neighborhood social integration and community cohesion, and other key quality of life dimensions. Also considered were residents' perceptions of existing neighborhood and community traffic problems, and their views regarding the possible effects of road reconstruction on their community and their local neighborhoods.

The assessment effort was based on the acquisition and analysis of several types of data. First, U.S. Census data for selected Census Tracts and sub-areas within certain Census Tracts that encompass portions of the project area adjoining the project corridor were identified and compiled. Although data from the 2000 Census are now somewhat dated and do not accurately reflect changes associated with more recent development patterns, they are used to provide a general profile of social and demographic conditions in the broader project area.

A second component of the data collection and analysis effort involved administration of self-completion survey questionnaires to randomly-selected households throughout the project area. This survey activity was conducted in August, 2007. Sampling focused on two types of households – those located on parcels immediately adjacent to the Geneva Road corridor, and those in surrounding neighborhoods located either west of the corridor (between Geneva Road and Utah Lake) or east of the corridor (between Geneva Road and I-15). For both the corridor-adjacent and off-corridor sample segments, the sample was further divided between residential areas located within the Provo city limits and areas located in portions of Utah County, Orem, Lindon, Vineyard and Pleasant Grove that encompass the northern portions of the project area.

The “corridor-adjacent” portion of the sample located within Provo city limits initially included 100 randomly-selected households; this number was reduced to 92 households once vacant lots and unoccupied homes were eliminated. Responses were obtained from 73 of these households. The “off-corridor” portion of the Provo-area sample also initially included 100 households, and was reduced to 93 households after vacant properties were eliminated. Responses were obtained from 78 of these households. For the areas located north of the Provo City limits samples of 75 on-corridor households (73 following adjustment for vacant properties) and 50 off-corridor households (47 following adjustment) were selected; responses were obtained from 53 of the on-corridor households and 38 of the off-corridor households. For the combined area-wide sample the survey response rate was 79.7%.

Corridor Background

The residential neighborhoods that adjoin and surround Geneva Road are characterized primarily by single-family residential housing. Major exceptions to this include a large multi-unit town home/condominium complex located immediately east of Geneva Road and just south of University Parkway in Orem, and a retirement home facility (Golden Living Retirement Home) located on the west side of Geneva Road just north of the intersection of Geneva Road and 1000 South in Orem. There is also a relatively large mobile home park located on the east side of Geneva Road within Provo city limits, immediately north of the Provo River bridge, and another mobile home park located immediately west of Geneva Road between 700 South and State Street in Pleasant Grove. Portions of Geneva Road located to the north of University Parkway in Orem and south of 700 South in Pleasant Grove are characterized by primarily commercial and industrial land uses on parcels that immediately adjoin the road corridor. Residential development on parcels adjoining the roadway is much more widespread in areas located south of University Parkway, as well as in the northernmost portion of the corridor between 700 South and State Street in Pleasant Grove.

3.3.1 Overall Community Context

An approximation of social and demographic characteristics that existed in 2000 for areas surrounding the Geneva Road corridor can be derived from U.S. Census data reported for Census Tracts or for smaller Block or Block Group areas within Census Tracts. Five Census-defined spatial areas were identified that in combination largely encompass the Geneva Road project area. These include:

(1). ***Census Blocks 3000, 4014, and 4015 within Census Tract 5.03.*** The neighborhoods included in these three Census Blocks are located in the northernmost portion of the project area, including areas immediately east and west of the portion of Geneva Road located south of State Street and north of 700 South in Pleasant Grove.

(2). ***Census Tract 6.01.*** This area is bounded on the north by 700 South in Pleasant Grove, on the south by 200 South in Lindon, on the east by State Street, and on the West by I-15.

(3). ***Census Tract 22.01.*** This area encompasses neighborhoods located to both the east and west of Geneva Road, extending between 200 South in Lindon on the northern boundary to 2000 South in Provo on the southern boundary. The area is bounded on the east by I-15, and on the west by Utah Lake.

(4). ***Census Tract 22.02.***

This area is bounded on the north by 2000 South in Provo, on the south by Center Street in Provo, on the east by I-15, and on the west by Utah Lake.

(5). ***Block Groups 2 and 3 within Census Tract 22.03.*** This area is located in portions of Provo located immediately to the south of the area where Geneva Road and Center Street intersect in Provo.

Selected social and demographic characteristics of the populations living in these Census-defined local areas at the time of the 2000 Census are summarized in Table 3-1, along with comparison data for Utah County as a whole.

Table 3-1. Selected Population Characteristics Reported in 2000 for Geneva Road Study Area Census Tracts and Block Groups.

	Blocks 3000, 4014 & 4015				Block Groups 2&3, Census	Utah County
	Census Tract 5.03	Census Tract 6.01	Census Tract 22.01	Census Tract 22.02	Tract 22.03	
Population in area	202	2,318	2,876	5,896	2,569	368,536
Race – percent non-white	6.4%	4.7%	9.9%	12.2%	13.2%	7.6%
Percent Hispanic	11.4%	5.0%	9.1%	11.6%	12.4%	7.0%
Percent age 65 or older	8.9%	4.4%	4.3%	5.2%	4.8%	6.4%
Percent of families with children under age 18	53.1%	72.8%	63.6%	71.4%	70.4%	59.8%
Median household income (1999)	\$41,563/ \$35,859*	\$52,313	\$46,750	\$47,643	\$50,818/ \$53,000	\$45,833
Percent of persons below poverty level	14.8%	8.7%	6.6%	4.2%	12.4%	12.0%

*Because household income data are not reported at the census block level, the median income figures reported here are for Census Block Groups 3 & 4, which encompass a larger area than the three designated census blocks.

Source: U.S. Bureau of the Census, <http://factfinder.census.gov> (2000 Census, Summary File 1 and Summary File 3)

The combined population of these areas in 2000 was 13,861 persons. That figure is undoubtedly considerably lower than the current population of this area, given new housing developments that have occurred since the time of the 2000 Census. The percentages of non-white residents were somewhat higher in Census Tract 22.01 (9.9%), Census Tract 22.02 (12.2%), and Block Groups 2 and 3 within Census Tract 22.03 (13.2%) than for Utah County as a whole (7.6%). The percentages of residents classified as Hispanic were higher than what was reported for Utah County as a whole (7.0%) for all but one of these Census-defined local areas (Census Tract 6.01, with 5.0% of residents classified as Hispanic).

In 2000 a majority of families residing in these Census-defined neighborhoods had children under the age of 18 living at home, with percentages ranging from a low of 53.1% in the neighborhood comprised by Blocks 3000, 4014, and 4015 in Census Tract 5.03 at the northern end of the project corridor in Pleasant Grove to a high of 72.8% in Census Tract 6.01 in Lindon and Pleasant Grove. Also indicative of the predominance of families in child-rearing stages of the life cycle is the relatively low proportion of the population in older age brackets. In 2000 the percentage of residents age 65 and older ranged from a low of just 4.3% in Census Tract 22.01 to a high of 8.9% in Blocks 3000, 4014, and 4015 in Census Tract 5.03.

Median household income levels reported in the 2000 Census (for 1999) were slightly higher in four of these project-area segments than was the case for Utah County as a whole. Median incomes were below the county-wide level only in an area that encompasses (but is larger than) the neighborhoods comprised of Blocks 3000, 4014 and 4015 in Census Tract 5.03 at the northern edge of the project area. The percentage of persons falling below the federal poverty level in 1999 was lower than that reported for Utah County in three of these Census-defined areas, but slightly higher than the county-wide percentage in two areas – the neighborhoods encompassed by Blocks 3000, 4014 and 4015 in Census Tract 5.03 at the northern end of the project corridor, and in Block Groups 2 and 3 in Census Tract 22.03 at the southern end of the corridor.

3.3.2 Community and Neighborhood Social Conditions

More current and more extensive documentation of social conditions among residents living in areas that surround the Geneva Road corridor is derived from results of the random sample survey conducted in August, 2007. In addition to detailing selected demographic characteristics of residents living in various portions of the project area several major aspects of local social organization are addressed, including neighborhood social integration and cohesion, neighborhood interaction patterns, and patterns of use and activity in and around the project corridor. Survey results are reported separately for respondents whose residential properties are located immediately adjacent to the Geneva Road corridor (“corridor-adjacent”) and for those who live in surrounding neighborhoods to the east and west of the corridor (“off-corridor”). Responses from these corridor-adjacent and off-corridor areas are further divided into those corresponding to residents located in the southern portions of the project area that fall within Provo city limits, those who live in central portions of the project area located within Orem city limits or in unincorporated portions of Utah County, and those who live in northern portions of the project area within the portions of Lindon, Vineyard, and Pleasant Grove.

Resident and Household Characteristics

Several survey questions were included to assess the socio-demographic characteristics of residents and households in the project area. Tables 3-2 through 3-8 provide detail regarding the social and demographic characteristics discussed in this section.

Looking across the project area as a whole, about one out of three respondents in both corridor-adjacent and off-corridor areas reported that they live in a household that includes just one or two persons (Table 3-2). A substantial majority of respondents indicated that their household includes three or more persons in all areas other than the corridor-adjacent portion of the Lindon/Vineyard/Pleasant Grove segment of the project area (where the small sample size requires caution in interpreting survey results).

Table 3-2. Number of people living in survey respondents' households.

Number of people	Combined Project Area		Provo Segment		Orem/Utah Co.		Lindon, Vineyard, Pleasant Grove	
	Corridor Adjacent	Off Corridor	Corridor Adjacent	Off Corridor	Corridor Adjacent	Off Corridor	Corridor Adjacent	Off Corridor
One	6.3%	11.6%	7.0%	12.2%	5.1%	10.0%	6.7%	12.5%
Two	31.0%	22.3%	25.4%	23.0%	20.3%	23.3%	80.0%	12.5%
Three	17.5%	14.3%	21.1%	13.5%	17.9%	16.7%	0.0%	12.5%
Four	22.2%	23.2%	22.5%	17.6%	30.8%	30.0%	0.0%	50.0%
Five	9.5%	8.9%	12.7%	9.5%	5.1%	6.7%	6.7%	12.5%
Six or more	13.5%	19.7%	11.2%	24.4%	20.5%	13.4%	6.7%	0.0%
Number of responses	126	112	71	74	39	30	15	8

As indicated in Table 3-3, a large majority of respondents indicated that no member of their household is age 65 or older. For the combined project area and across each of the three smaller area segments, the presence of one or more household members age 65 or older was reported somewhat more frequently by respondents residing in corridor-adjacent households than by those living in off-corridor neighborhoods. Similarly, respondents were asked about the presence of children under the age of 18 within their households (Table 3-4). For the project area as a whole slightly over one-half of respondents indicated that one or more persons under age 18 are included in their households.

Table 3-3. Number of people age 65 or older living in survey respondents' households.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
None	71.6%	86.0%	67.2%	83.8%	80.0%	88.0%	66.7%	100.0%
One	15.6%	5.0%	19.7%	4.4%	8.6%	8.0%	16.7%	0.0%
Two or more	11.0%	9.0%	13.1%	11.8%	11.5%	4.0%	16.7%	0.0%
Number of responses	109	100	61	68	35	25	12	7

Table 3-4. Number of people under the age of 18 living in survey respondents' households.

<u>Number of people</u>	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
None	47.4%	47.2%	38.5%	45.2%	55.3%	53.6%	70.0%	42.9%
One	15.8%	8.3%	20.0%	9.6%	10.5%	3.6%	10.0%	14.3%
Two	19.3%	15.7%	24.6%	12.3%	15.8%	25.0%	0.0%	14.3%
Three	10.5%	12.0%	10.8%	11.0%	10.5%	10.7%	10.0%	28.6%
Four or more	7.0%	16.8%	6.1%	21.1%	7.9%	7.2%	10.0%	0.0%
Number of responses	114	108	65	73	38	28	10	8

Data on the ethnic and racial characteristics of respondents and members of their households are reported in Table 3-5, 3-6 and 3-7. Looking first at Table 3-5, for the combined project area the proportion of respondents indicating that they are of Hispanic origin was higher among those living in corridor-adjacent locations (16.0%) than in off-corridor locations (10.9%), as was the proportion of respondents reporting that one or more other household members are Hispanic (13.6% for on-corridor respondents, 10.9% for off-corridor respondents). The highest concentrations of Hispanic respondents and household members occur in the corridor-adjacent portion of the study area segment located within Provo city limits (19.4%), and in the off-corridor portion of the segment located within Orem city limits and unincorporated portions of Utah County (17.2%). Across all portions of the project area a large majority of survey respondents indicated that they and other members of their households are white (see Tables 3-6 and 3-7). Those who did report a non-white racial identity most frequently chose the “other race” response option, most often reflecting a tendency to equate Hispanic ethnicity with a non-white racial identity.

Table 3-5. Percentages of survey respondents indicating that they or any other household members are of Hispanic origin.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Respondent is Hispanic	16.0%	10.9%	19.4%	9.5%	10.8%	17.2%	6.7%	0.0%
Other household member is Hispanic	13.6%	10.9%	16.9%	9.5%	8.1%	17.2%	6.7%	0.0%
Number of responses	125	110	71	74	37	29	15	7

Table 3-6. Survey respondents' identification of own racial group.

<u>Racial identity</u>	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
White	85.8%	89.9%	85.5%	91.8%	86.1%	82.8%	92.9%	100.0%
Black	0.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Asian	1.7%	0.9%	1.4%	1.4%	2.8%	0.0%	0.0%	0.0%
Pacific Islander	0.8%	0.9%	0.0%	0.0%	2.8%	3.4%	0.0%	0.0%
Native American	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%
Other	10.9%	7.3%	11.6%	6.9%	8.3%	10.3%	7.1%	0.0%
Number of responses	120	109	69	73	36	29	14	7

Table 3-7. Survey respondents' identification of other household members' racial groups.

<u>Racial identity</u>	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
White	83.3%	87.3%	80.3%	91.2%	85.3%	78.6%	100.0%	83.3%
Black	0.0%	1.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%
Asian	2.6%	1.0%	1.5%	1.5%	5.9%	0.0%	0.0%	0.0%
Pacific Islander	0.0%	1.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%
Native American	0.0%	1.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%
Other	14.1%	8.9%	18.2%	7.4%	8.8%	10.7%	0.0%	16.7%
Number of responses	114	102	66	68	34	28	13	6

Finally, respondents were asked to report their total household income (before taxes) in 2007 by checking one of fifteen income categories. The lowest eight of those categories were structured to reflect the U.S. Department of Health and Human Services (HHS) 2007 household poverty thresholds for family units of one to eight persons. The response distributions reported in Table 3-8 indicate that among those answering this question about 60% of respondents living in corridor-adjacent locations and nearly 69% of those in off-corridor locations had 2007 household incomes of \$40,000 or more. A higher proportion of off-corridor respondents than on-corridor respondents reported incomes of \$40,000 or more in the Provo segment and in the Lindon/Vineyard/Pleasant Grove segment of the study area, but that pattern was reversed in the Orem/Utah County segment.

Table 3-8. Annual household income levels reported by survey respondents.

Income	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
\$10,210 or less	0.9%	1.9%	1.6%	2.8%	0.0%	0.0%	0.0%	0.0%
\$10,211-\$13,690	2.8%	1.0%	3.2%	1.4%	0.0%	0.0%	8.3%	0.0%
\$13,691-\$17,170	6.5%	0.0%	6.5%	0.0%	3.0%	0.0%	8.3%	0.0%
\$17,171-\$20,650	2.8%	0.0%	3.2%	0.0%	3.0%	0.0%	0.0%	0.0%
\$20,651-\$24,130	3.7%	3.8%	3.2%	4.2%	3.0%	3.4%	8.3%	0.0%
\$24,131-\$27,610	2.8%	2.9%	3.2%	1.4%	3.0%	6.9%	0.0%	0.0%
\$27,611-\$31,090	1.9%	7.6%	0.0%	8.5%	3.0%	6.9%	8.3%	0.0%
\$31,091-\$34,570	8.3%	5.7%	12.9%	4.2%	0.0%	10.3%	8.3%	0.0%
\$34,571-\$39,999	10.2%	8.6%	11.3%	8.5%	9.1%	10.3%	8.3%	0.0%
\$40,000-\$49,999	13.0%	14.3%	9.7%	14.1%	24.2%	10.3%	0.0%	40.0%
\$50,000-\$59,999	14.8%	15.2%	11.3%	11.3%	21.2%	24.1%	16.7%	20.0%
\$60,000-\$79,999	19.4%	23.8%	17.7%	23.9%	21.2%	20.7%	25.0%	40.0%
\$80,000-\$99,999	5.6%	10.5%	6.5%	14.1%	3.0%	3.4%	8.3%	0.0%
\$100,000-\$149,999	3.7%	3.8%	6.5%	5.6%	0.0%	0.0%	0.0%	0.0%
\$150,000 or more	3.7%	1.0%	3.2%	0.0%	6.1%	3.4%	0.0%	0.0%
Number of responses	108	105	62	71	33	29	12	5

A conjoint analysis of responses to the income question and the measure of household size indicated that across the entire project area only 14 households fell below the size-adjusted HHS federal poverty threshold. Those 14 households represent 6.6% of the total number of households from

which responses to both the household size and income questions were obtained. Eight of the below-poverty households were located within Provo city limits, four were located in the Orem/Utah County segment, and two were located within Pleasant Grove city limits. There was not a clear spatial clustering of these below-poverty households in any of the study area segments.

In combination these responses to questions about household characteristics indicate that a large majority of the project area population is white and non-Hispanic. Most households include one or more children, and relatively few households include any member who is age 65 or older. Relatively few households fall into the lowest income categories, with a substantial majority reporting 2007 household income levels of \$40,000 or more. Only a small number of respondents reported household incomes below official HHS poverty levels. On balance, the project area as a whole does not appear to be characterized by high concentrations of low-income, minority, or elderly populations that might be unusually vulnerable to adverse impacts that could result from changes associated with the proposed roadway construction project.

Neighborhood Social Integration and Cohesion

Several survey questions measured various aspects of social integration and cohesion in the study area. These questions focus on levels of interaction among residents and the strength of residents' attachment to their neighborhoods. This information provides an important benchmark for evaluating the extent to which social dislocations might occur with the proposed reconstruction of Geneva Road corridor.

Respondents were first asked to indicate how long they had resided in their current home in the study area; inclusion of this question reflects a well-documented tendency for longer-term residents to exhibit higher levels of social attachment and integration into community life than is typically the case among shorter-term residents. As indicated in Table 3-9, for the project area as a whole and across each of the identified segments, respondents living in corridor-adjacent locations were considerably more likely to report long-term residence in their homes than were those in off-corridor areas. This is undoubtedly a reflection of the fact that recent residential development has been more widespread in the off-corridor portions of the project area. For the combined project area 50.4% of respondents living in corridor-adjacent areas reported that they had lived in their current home for 10 years or more, compared to just 19% of respondents who reside in off-corridor locations.

The survey also asked respondents to indicate the number of adults living in the ten houses located nearest to their home who they know on a first-name basis. Across the project area as a whole and in each individual segment, relatively few respondents indicated they do not know any of these nearby neighbors (see Table 3-10). For the combined project area only 6.3% of respondents living in corridor-adjacent areas and 5.2% of those in off-corridor areas said they do not know any of these nearby neighbors on a first-name basis. Residents of the Orem/Utah County segment of the study area living in both corridor-adjacent and off-corridor locations were somewhat more likely to report no or low levels of first-name familiarity with neighbors than was the case in other portions of the project area.

Table 3-9. Respondents' length of residence in current neighborhood.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Under 1 year	11.8%	19.8%	2.7%	19.2%	28.2%	23.3%	7.1%	12.5%
1 to 2 years	14.2%	17.2%	20.5%	16.7%	7.7%	20.0%	0.0%	12.5%
3 to 5 years	12.6%	24.1%	9.6%	24.4%	17.9%	23.3%	14.3%	25.0%
6 to 10 years	11.0%	19.8%	13.7%	19.2%	7.7%	26.7%	7.1%	0.0%
11 to 20 years	15.0%	10.3%	19.2%	10.3%	12.8%	6.7%	0.0%	25.0%
21 to 30 years	11.8%	5.2%	12.3%	5.1%	10.3%	0.0%	14.3%	25.0%
Over 30 years	23.6%	3.5%	21.9%	5.1%	15.4%	0.0%	57.1%	0.0%
Number of responses	127	116	73	78	39	30	14	8

Table 3-10. Number of adults known on a first-name basis from the ten houses located nearest to respondent's home.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
None	6.3%	5.2%	5.5%	2.6%	10.3%	13.8%	0.0%	0.0%
One or two	10.2%	10.4%	8.2%	10.3%	15.4%	13.8%	7.1%	0.0%
Three to five	18.6%	30.4%	20.5%	30.8%	17.9%	31.0%	7.1%	25.0%
Six to nine	21.3%	16.5%	23.3%	14.1%	12.8%	20.7%	35.7%	25.0%
Ten to twelve	18.9%	13.0%	21.9%	17.9%	10.3%	3.4%	28.6%	0.0%
Over twelve	24.4%	24.3%	20.5%	24.4%	33.3%	17.2%	21.4%	50.0%
Number of responses	127	115	73	78	39	29	14	8

As indicated in Table 3-11, relatively few respondents in any portion of the project area indicated that they have many close personal friends living within two to three blocks of their home. Across the combined project area and in each of the individual project area segments, respondents living in off-corridor locations were more likely to report that they do not have any close personal friends living in the immediate surrounding neighborhood than was the case among respondents living in corridor-adjacent areas. This pattern is likely associated with the generally shorter length of residence reported by respondents who live in off-corridor areas.

Table 3-11. Number of close personal friends living within 2-3 blocks of respondents' homes.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
None	34.9%	47.4%	37.0%	44.9%	34.2%	50.0%	21.4%	62.5%
One	10.3%	9.5%	6.8%	9.0%	10.5%	6.7%	28.6%	25.0%
Two to three	23.8%	18.1%	27.4%	17.9%	18.4%	23.3%	21.4%	0.0%
Four to five	7.9%	13.8%	8.2%	16.7%	7.9%	10.0%	7.1%	0.0%
Six to ten	10.3%	5.2%	9.6%	3.8%	10.5%	6.7%	14.3%	12.5%
Over ten	12.7%	6.0%	11.0%	7.7%	18.4%	3.3%	7.1%	0.0%
Number of responses	126	116	73	78	38	30	14	8

An additional aspect of neighborhood interaction and activity was addressed by a question that asked respondents how often they get out in their neighborhood for a walk, jog, or bicycle ride that takes them farther than one block from their home. Most respondents indicated that on average they participate in such activities at least several times a month, and many do so more frequently than that (Table 3-12). The percentage of respondents reporting such activity “once a week or more” was consistently higher in the off-corridor portions of the project area than among respondents who live in on-corridor locations – for the combined project area 53.9% of off-corridor respondents said they do such things on at least a weekly basis, compared to 35.4% of corridor-adjacent respondents.

Survey participants were next asked how often they visit or get together with any of their neighbors for informal social activities like playing cards, cookouts, or going out to dinner. Across all portions of the project area relatively few respondents reported that they engage in this type of neighboring activity as often as several times monthly or on a weekly basis (Table 3-13). For the combined project area the percentage of individuals indicating that they “never” engage in these types of neighboring activities was higher among those living in corridor-adjacent locations (38.1% of responses) than among those in off-corridor areas (24.3%). Reports of no or very little socializing with neighbors were most evident among corridor-adjacent residents living in the Provo

Table 3-12. Frequency with which respondents say they get out in their neighborhood for a walk, jog or bicycle ride that takes them farther than one block from their home.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Never or almost never	15.0%	7.8%	12.3%	5.2%	20.5%	16.7%	14.3%	0.0%
Once or twice a year	5.5%	7.0%	2.7%	5.2%	10.3%	10.0%	0.0%	12.5%
Once every 2-3 months	7.1%	3.5%	11.0%	2.6%	2.6%	6.7%	0.0%	0.0%
Once or twice a month	19.7%	10.4%	19.2%	14.3%	15.4%	3.3%	35.7%	0.0%
Several times a month	17.3%	17.4%	17.8%	19.5%	17.9%	6.7%	14.3%	37.5%
Once a week or more	35.4%	53.9%	37.0%	53.2%	33.3%	56.7%	35.7%	50.0%
Number of responses	127	115	73	77	39	30	14	8

Table 3-13. Frequency of informal visiting or socializing with neighbors.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Never or almost never	38.1%	24.3%	39.7%	19.5%	36.8%	33.3%	35.7%	37.5%
Less than once a year	6.3%	8.7%	4.1%	11.7%	2.6%	3.3%	21.4%	0.0%
Once or twice a year	13.5%	17.4%	15.1%	16.9%	10.5%	16.7%	14.3%	25.0%
Several times a year	14.3%	17.4%	19.2%	19.5%	10.5%	10.0%	0.0%	25.0%
Once every month or so	11.9%	20.9%	9.6%	24.7%	15.8%	16.7%	14.3%	0.0%
Several times a month	10.3%	3.5%	6.8%	2.6%	15.8%	3.3%	14.3%	0.0%
Once a week or more	5.6%	7.8%	5.5%	5.2%	7.9%	16.7%	0.0%	0.0%
Number of responses	126	115	73	77	38	30	14	8

segment of the project area (39.7%), and least evident among those who live in off-corridor locations in the Provo segment (19.5%). In addition, residents who live in corridor-adjacent locations were generally unlikely to report that they engage in regular social interactions with neighbors who live on the other side of Geneva Road (Table 3-14). For the combined project area and in each of the three smaller area segments, more than one-half of respondents indicated that they “never or almost never” visit or socialize with neighbors who live across the street on the other side of Geneva Road, suggesting that the roadway serves as a barrier to social interaction between residents who live on opposite sides of the corridor.

Table 3-14. Frequency of informal visiting or socializing with neighbors who live on the other side of Geneva Road (corridor-adjacent respondents only).

	<u>Combined Project Area</u>	<u>Provo Segment</u>	<u>Orem/Utah Co.</u>	<u>Lindon, Vineyard, Pleasant Grove</u>
Never or almost never	53.7%	52.8%	52.8%	57.1%
Less than once a year	7.3%	9.7%	5.6%	0.0%
Once or twice a year	12.2%	13.9%	8.3%	14.3%
Several times a year	5.7%	6.9%	5.6%	0.0%
Once every month or so	5.7%	5.6%	5.6%	7.1%
Several times a month	8.1%	6.9%	11.1%	7.1%
Once a week or more	7.3%	4.2%	11.1%	14.3%
Number of responses	123	72	36	14

Overall, most respondents in both corridor-adjacent and off-corridor portions of the project area indicated that they are not likely to move away from their current homes within the next two to three years (Table 3-15). The proportion of respondents who indicated that they definitely do expect to move in that time frame was highest among both corridor-adjacent and off-corridor respondents living in the Orem/Utah County segment of the project area. Respondents were also asked to indicate how sorry or pleased they would be to move away from their neighborhoods if they had to leave for some reason. As indicated in Table 3-16, a substantial majority of respondents across all portions of the project area said they would be either somewhat sorry or very sorry to move away. Overall, those living in corridor-adjacent settings were somewhat more likely to say they would be “very sorry” to relocate than was the case among respondents living in off-corridor locations, a result that is likely associated with the longer-term residence patterns previously observed among corridor-adjacent residents.

On balance, responses to this series of questions provide somewhat mixed evidence regarding levels of social cohesion among residents of the project area. In general, there is little evidence across the project area that residents are not acquainted with at least some of their nearby neighbors, and very few residents express a positive response to the idea of moving away from their current homes. At the same time few residents of the project area report that a large number of their closest friends are neighbors, and levels of socializing with neighbors are not especially high. Despite their generally longer-term tenure as residents of these neighborhoods, survey participants who live in corridor-adjacent locations appear less likely than residents of off-corridor areas to engage in outdoor activities such as walking, jogging or biking in their neighborhoods, and less likely to socialize with neighbors. Although respondents do exhibit a degree of attachment to their homes and their neighborhoods, overall the survey responses do not reveal the presence of an especially tightly-knit social community among residents of the Geneva Road project area.

Table 3-15. Respondent expectations regarding the likelihood that they will move away from their current home within the next two to three years.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Definitely will move	11.0%	12.1%	9.6%	10.3%	17.9%	20.0%	0.0%	0.0%
Probably will move	16.5%	12.1%	17.8%	14.1%	15.4%	6.7%	14.3%	12.5%
Uncertain	16.5%	22.4%	16.4%	17.9%	15.4%	33.3%	14.3%	37.5%
Probably will not move	21.3%	29.3%	20.5%	30.8%	25.6%	23.3%	14.3%	37.5%
Definitely will not move	34.6%	24.1%	35.6%	26.9%	25.6%	16.7%	57.1%	25.0%
Number of responses	127	116	73	78	39	30	14	8

Table 3-16. Respondent's indications of whether they would be sorry or pleased to move away from their current neighborhood.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very sorry to leave	49.6%	40.5%	47.9%	42.3%	53.8%	36.7%	50.0%	37.5%
Somewhat sorry to leave	26.8%	37.1%	28.8%	37.2%	23.1%	33.3%	21.4%	50.0%
Would not care	15.7%	14.7%	13.7%	12.8%	20.5%	20.0%	14.3%	12.5%
Somewhat pleased to leave	4.7%	3.4%	6.8%	2.6%	0.0%	6.7%	7.1%	0.0%
Very pleased to leave	3.1%	4.3%	2.7%	5.1%	2.6%	3.3%	7.1%	0.0%
Number of responses	127	116	73	78	39	30	14	8

3.3.4 Resident Use of the Project Corridor

Several survey questions were designed to measure how frequently residents of the project area use the Geneva Road corridor. Overall, about 94% of respondents living in corridor-adjacent locations, and 89% of those living in off-corridor portions of the project area, indicated that they or members of their households drive on Geneva Road every day or nearly every day. Only two individual respondents across the entire project area indicated that they drive on Geneva Road less frequently than several times a month (Table 3-17).

Table 3-17. Frequency with which respondents' or members of their immediate households drive on Geneva Road.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Daily/almost every day	93.7%	88.8%	90.4%	83.3%	97.4%	100.0%	100.0%	100.0%
Several times a week	3.9%	9.5%	5.5%	14.1%	2.6%	0.0%	0.0%	0.0%
Several times a month	1.6%	1.7%	2.7%	2.6%	0.0%	0.0%	0.0%	0.0%
Once or twice a month	0.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Less than once a month	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rarely or never	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Number of responses	127	116	73	78	39	30	14	8

Respondents were next asked how often they or members of their households walk, jog, or bicycle along or across Geneva Road. Not surprisingly, those who live in off-corridor neighborhoods were considerably more likely to say they “rarely or never” do so (42.2% of off-corridor respondents for the combined project area) than were corridor-adjacent residents (23.0% of respondents). As indicated in Table 3-18, the proportion of corridor-adjacent respondents (about one-fifth) who indicated that they walk, jog, or bike along or across Geneva Road on a daily or almost-daily basis was similar to the proportion who indicated that they rarely or never do so.

Respondents were also asked whether any children living in their households walk or bicycle along or across Geneva Road when going to or from school. For the project area as a whole, only about 17% of corridor-adjacent respondents and 14% of off-corridor respondents indicated that this occurs among children in their households (Table 3-19).

Table 3-18. Frequency with which respondents' or members of their immediate households walk, jog or bike on or across Geneva Road.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Daily/almost every day	21.4%	13.8%	23.6%	15.4%	12.8%	10.0%	35.7%	12.5%
Several times a week	19.8%	10.3%	23.6%	7.7%	15.4%	16.7%	14.3%	12.5%
Several times a month	15.1%	13.8%	11.1%	15.4%	20.5%	10.0%	21.4%	12.5%
Once or twice a month	11.9%	10.3%	11.1%	9.0%	12.8%	13.3%	14.3%	12.5%
Less than once a month	8.7%	9.5%	8.3%	7.7%	12.8%	13.3%	0.0%	12.5%
Rarely or never	23.0%	42.2%	22.2%	44.9%	25.6%	36.7%	14.3%	37.5%
Number of responses	127	116	72	78	39	30	14	8

Table 3-19. Percentage of respondents reporting that children living in their households walk or bike along or across Geneva Road when going to or from school.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Percent "yes"	17.1%	14.2%	22.9%	14.5%	13.2%	10.3%	0.0%	25.0%
Number of responses	123	113	70	76	38	29	14	8

3.3.3 Resident Opinions About Traffic and Road Conditions

Several survey questions were designed to assess project area residents' views about current traffic conditions on Geneva Road. When asked their opinion about how much of a problem current traffic congestion is on Geneva Road during times of the day when traffic levels are highest, substantial majorities of respondents indicated that there are moderate or serious problems (Table 3-20). For the combined project area, 42.5% of residents in corridor-adjacent areas indicated that traffic congestion is a "serious problem," while 36.2% considered congestion to be a "moderate problem." Among residents of off-corridor areas, 34.5% considered congestion to be a serious problem, and 42.2% considered it a moderate problem. The percentages of respondents who viewed congestion as a serious problem were highest among the small number of corridor-adjacent respondents living in the Lindon/Vineyard/Pleasant Grove segment of the project area (64.3%) and those living in corridor-adjacent portions of the Provo segment (43.8%).

Table 3-20. Extent to which respondents or members of their immediate households consider traffic congestion on Geneva Road to be a problem during times of the day when traffic levels are highest.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
No problem	4.7%	1.7%	4.1%	0.0%	7.7%	3.3%	0.0%	12.5%
Minor problem	16.5%	20.7%	15.1%	20.5%	23.1%	20.0%	7.1%	25.0%
Moderate problem	36.2%	42.2%	37.0%	42.3%	35.9%	40.0%	28.6%	50.0%
Serious problem	42.5%	34.5%	43.8%	35.9%	33.3%	36.7%	64.3%	12.5%
Don't know	0.0%	0.9%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%
Number of responses	127	116	73	78	39	30	14	8

We next asked respondents: “In light of rapid population growth that is occurring in and around your community, how important do you think it is to develop transportation system improvements that could better handle future increases in traffic levels along Geneva Road.” The most common response among respondents in all portions of the project area was “very important” (see Table 3-21). For the combined project area, respondents living in corridor-adjacent locations were most likely to indicate that they consider such transportation improvements to be either “very important” (57.9%) or “moderately important” (19.8%). Even higher percentages of off-corridor respondents selected the “very important” (64.7%) and “moderately important” (27.6%) response choices. Across all portions of the project area very few respondents indicated that it is “not at all important” to implement transportation system improvements.

Table 3-21. Respondents’ views about the importance of developing transportation system improvements that could better handle future increases in traffic levels along Geneva Road.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Not at all Important	7.1%	0.9%	8.3%	0.0%	7.7%	3.3%	0.0%	0.0%
Slightly Important	15.1%	6.9%	11.1%	6.4%	23.1%	3.3%	14.3%	25.0%
Moderately Important	19.8%	27.6%	22.2%	29.5%	15.4%	23.3%	21.4%	25.0%
Very Important	57.9%	64.7%	58.3%	64.1%	53.8%	70.0%	64.3%	50.0%
Number of responses	126	116	72	78	39	30	14	8

3.3.5 Resident Opinions and Concerns About Geneva Road Project Alternatives

An additional series of questions included in the public survey addressed area residents' views about potential impacts of implementing an on-corridor reconstruction of the Geneva Road corridor, and of maintaining current conditions through implementation of a "no action" alternative.

On-Corridor Reconstruction Alternative

The first series of questions in this portion of the questionnaire asked respondents to consider the effects that might accompany widening of Geneva Road from Center Street in Provo to State Street in Pleasant Grove, as well as the segment of Provo Center Street located between I-15 and Geneva Road. The scenario presented in the survey questionnaire indicated that the roadways would be widened to either five or seven lanes in order to meet current and future transportation demand. Because this scenario was presented to survey participants prior to final evaluation of various project alternatives, it does not correspond precisely to the variable lane configuration alternative that has been selected for further study in this EIS. Nevertheless, responses to this series of questions provide a useful perspective for understanding residents' opinions and concerns about the types of reconstruction activities that are proposed for the Geneva Road project corridors.

The first question in this series asked respondents about the effects that implementation of on-corridor reconstruction could have on their "community as a whole." Overall, most respondents anticipated that project effects on the community would be either "very positive" or "moderately positive" (Table 3-22). For the combined project area, 24.2% of survey participants living in corridor-adjacent locations anticipated that project effects would be "very positive," and 26.6% anticipated "moderately positive" effects on the community. Similarly, 26.7% of off-corridor respondents anticipated "very positive" effects, and a higher percentage (37.9%) anticipated "moderately positive" effects. At the same time, a substantial minority of residents living in corridor-adjacent areas (25.8% for the combined project area) indicated that effects on the community would be "very negative." Levels of concern about negative effects were most pronounced among residents living in corridor-adjacent portions of the Provo and Orem/Utah County segments of the project area, and much less evident among the small number of respondents living in the Lindon/Vineyard/Pleasant Grove segment.

Similarly, respondents were asked to consider the possible effects of on-corridor road reconstruction on the neighborhood area located within two blocks of their homes. Overall, respondents were more likely to anticipate negative project effects when their focus shifted from the community as a whole to their local neighborhoods (see Table 3-23). For the project area as a whole, nearly one-third (31.5%) of corridor-adjacent respondents indicated that they believe such reconstruction would have "very negative" effects on their local neighborhoods. Expressions of concern were most pronounced among corridor-adjacent residents of the Orem/Utah County segment of the project area, where approximately 40% selected the "very negative" response. Residents of off-corridor areas were uniformly less likely to anticipate very negative consequences of on-corridor reconstruction than those living immediately adjacent to the existing Geneva Road corridor.

Table 3-22. Respondents' views about the overall effects that an on-corridor option for Geneva Road transportation improvements would have on the community as a whole.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	24.2%	26.7%	23.3%	29.5%	23.1%	20.0%	33.3%	25.0%
Moderately Positive	26.6%	37.9%	27.4%	35.9%	20.5%	46.7%	40.0%	25.0%
Neither Positive or Negative	11.7%	7.8%	15.1%	9.0%	7.7%	0.0%	0.0%	25.0%
Moderately Negative	11.7%	19.8%	8.2%	19.2%	15.4%	23.3%	20.0%	12.5%
Very Negative	25.8%	7.8%	26.0%	6.4%	33.3%	10.0%	6.7%	12.5%
Number of responses	128	116	73	78	39	30	15	8

Table 3-23. Respondents' views about the overall effects that an on-corridor option for Geneva Road transportation improvements would have on the neighborhood located within two blocks of their homes.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	14.2%	19.1%	17.8%	19.5%	5.3%	16.7%	20.0%	25.0%
Moderately Positive	24.4%	30.4%	24.7%	29.9%	26.3%	36.7%	20.0%	12.5%
Neither Positive or Negative	12.6%	15.7%	12.3%	20.8%	13.2%	3.3%	6.7%	12.5%
Moderately Negative	17.3%	17.4%	16.4%	13.0%	15.8%	26.7%	26.7%	25.0%
Very Negative	31.5%	17.4%	28.8%	16.9%	39.5%	16.7%	26.7%	25.0%
Number of responses	127	115	73	77	38	30	15	8

The third question in this series asked respondents to evaluate the possible effects of on-corridor reconstruction on themselves and their families. Expressions of concern about project effects were substantial among corridor-adjacent residents, with approximately 40% of respondents living in those areas indicating they would anticipate “very negative” project effects (Table 3-24). Once again expressions of concern were highest among corridor-adjacent residents of the Orem/Utah County segment of the project area. In contrast, few off-corridor respondents in any portion of the project area indicated that they or their families would experience “very negative” effects due to implementation of such transportation improvement actions.

Table 3-24. Respondents’ views about the overall effects that an on-corridor option for Geneva Road transportation improvements would have on them and their families.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	19.8%	22.4%	19.4%	23.1%	21.1%	23.3%	20.0%	12.5%
Moderately Positive	19.8%	34.5%	20.8%	35.9%	15.8%	30.0%	26.7%	37.5%
Neither Positive or Negative	11.1%	19.8%	11.1%	20.5%	13.2%	16.7%	6.7%	25.0%
Moderately Negative	9.5%	14.7%	11.1%	11.5%	5.3%	20.0%	13.3%	25.0%
Very Negative	39.7%	8.6%	37.5%	9.0%	44.7%	10.0%	33.3%	0.0%
Number of responses	126	116	72	78	38	30	15	8

This series of questions was followed by an open-ended question providing respondents with the opportunity to describe in their own words the most important positive as well as negative consequences that they anticipate might result from implementation of an on-corridor reconstruction option. Over two-thirds of those providing comments regarding positive consequences highlighted expectations of improved traffic flows and reduced congestion. Improved traffic safety and easier on-off access to Geneva Road were each mentioned by 5-6% of those providing a response. No other positive consequences were identified by more than a small handful of survey participants. Comments regarding possible negative effects focused most frequently on concerns about construction-phase disruptions and inconvenience (18% of responses), followed by concerns about possible effects of residential relocation (11%), noise effects from increased traffic volume and proximity (9%), and disruptions to established neighborhood conditions (6%).

No Action Alternative

Finally, survey participants were asked to consider the possible community-wide, neighborhood, and personal effects of implementing a “No Action” alternative that would essentially maintain existing road conditions.

Throughout the project area, respondents were considerably more likely to anticipate negative rather than positive effects for the community as a whole if no action is taken to address transportation conditions in the Geneva Road corridor (Table 3-25). For the combined project area 50.4% of respondents living in corridor-adjacent areas indicated that they would anticipate either moderately or very negative community consequences, while 31.2% indicated that they would expect moderately or very positive consequences. Residents living in off-corridor areas were more likely to anticipate negative consequences of a no action decision – 59% of off-corridor respondents chose either the “moderately negative” or “very negative” response options, while only 18.8% anticipated moderately or very positive consequences.

Table 3-25. Respondents’ views about the overall effects that selection of a “no build” option would have on the community as a whole.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	16.0%	6.3%	15.7%	6.8%	23.1%	3.3%	0.0%	12.5%
Moderately Positive	15.2%	12.5%	14.3%	10.8%	15.4%	16.7%	20.0%	12.5%
Neither Positive or Negative	18.4%	22.3%	14.3%	27.0%	17.9%	10.0%	33.30%	25.0%
Moderately Negative	21.6%	28.6%	22.9%	27.0%	20.5%	36.7%	20.0%	12.5%
Very Negative	28.8%	30.4%	32.9%	28.4%	23.1%	33.3%	26.7%	37.5%
Number of responses	125	112	70	74	39	30	15	8

Similar response patterns were produced when survey participants were asked to consider the consequences of a no action option on their local neighborhoods (Table 3-26). For the combined project area and in each of the sub-area segments, respondents were substantially more likely to anticipate negative rather than positive consequences if Geneva Road conditions are allowed to remain unchanged. Among corridor-adjacent respondents 48.4% of respondents anticipated moderately or very negative consequences of a no-action approach for their neighborhoods, while 31.4% indicated that they would expect positive effects. Off-corridor respondents were twice as likely to anticipate positive (53.5%) rather than negative (20.6%) neighborhood consequences of a no action option.

Table 3-26. Respondents’ views about the overall effects that selection of a “no build” option would have on the neighborhood located within two blocks of their homes.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	16.1%	6.3%	15.9%	6.8%	20.5%	3.3%	6.7%	12.5%
Moderately Positive	15.3%	14.3%	14.5%	13.5%	17.9%	16.7%	13.3%	12.5%
Neither Positive or Negative	20.2%	25.9%	17.4%	28.4%	17.9%	20.0%	33.3%	25.0%
Moderately Negative	26.6%	32.1%	26.1%	31.1%	25.6%	36.7%	33.3%	25.0%
Very Negative	21.8%	21.4%	26.1%	20.3%	17.9%	23.3%	13.3%	25.0%
Number of responses	124	112	69	74	39	30	15	8

When asked to consider the consequences of a no action alternative for themselves and their families, corridor-adjacent respondents were only slightly more likely to anticipate moderately or very negative consequences (43.2%) than to expect positive consequences (39.2%). In contrast, respondents in off-corridor portions of the project area were considerably more likely to anticipate that they and members of their families would experience negative consequences (52.7%) rather than positive consequences (19.6%) if a no actions are taken to address conditions and traffic flows on Geneva Road (Table 3-27).

Table 3-27. Respondents’ views about the overall effects that selection of a “no build” option would have on them and their families.

	<u>Combined Project Area</u>		<u>Provo Segment</u>		<u>Orem/Utah Co.</u>		<u>Lindon, Vineyard, Pleasant Grove</u>	
	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>	<u>Corridor Adjacent</u>	<u>Off Corridor</u>
Very Positive	24.8%	8.0%	22.9%	6.8%	33.3%	10.0%	13.3%	12.5%
Moderately Positive	14.4%	11.6%	14.3%	12.2%	12.8%	6.7%	13.3%	25.0%
Neither Positive or Negative	17.6%	27.7%	15.7%	29.7%	15.4%	23.3%	33.3%	25.0%
Moderately Negative	20.8%	33.9%	20.0%	32.4%	20.5%	40.0%	26.7%	25.0%
Very Negative	22.4%	18.8%	27.1%	18.9%	17.9%	20.0%	13.3%	12.5%
Number of responses	125	112	70	74	39	30	15	8

Respondents were also presented with an open-ended question asking them to identify potential positive as well as negative effects of a “No Action” option. With respect to positive effects, respondents most frequently highlighted the avoidance of actions that would require removal of homes or businesses (37% of responses), avoidance of disturbance to existing neighborhood conditions (18%), avoidance of construction phase disturbances and traffic delays (18%), and avoidance of increased traffic volumes and/or speeds that could accompany a widened and improved roadway (13.5%). Comments regarding negative consequences of a No Action alternative focused overwhelmingly on concerns about continued and increasing problems with traffic congestion on Geneva Road (69% of responses), and on the failure to address future traffic problems (21.5% of responses).

3.4 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent possible and permitted by law.

Fundamental Environmental Justice principles include:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;
- To prevent the denial, reduction in, or substantial delay in the receipt of benefits by minority and low-income populations.

Executive Order 12898 and the United States Department of Transportation (USDOT) and Federal Highway Administration (FHWA) Orders on Environmental Justice address persons belonging to any of the following groups:

- **Black** – a person having origins in any of the black racial groups of Africa;
- **Hispanic** – a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- **Asian** – a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- **American Indian and Alaskan Native** – a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition;
- **Native Hawaiian or Other Pacific Islander** – a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands;
- **Low income** – a person whose household income (or in the case of a community or group, whose median household income) is at or below the HHS poverty guidelines.

Minority Populations

2000 Census data

Racial and ethnic characteristics and household income data for five Census-defined areas that encompass the project area were previously reported in Table 3-1. At the time of the 2000 U.S. Census, 7.6% of residents living in Utah County were classified as members of a non-white racial group. By comparison, the racial minority composition for the overall Geneva Road project area

was somewhat higher -- 10.6% of the combined population for these five Census Tract areas and sub-areas was classified as non-white in 2000. The percentage of racial minority residents varied across the individual areas and sub-areas within the larger project area. Racial minorities comprised a lower proportion of the population than was the case for Utah County as a whole in the two census-defined areas located in northern portions of the project area: 6.4% of residents in the area comprised of Blocks 3000, 4014 and 4015 in Census Tract 5.03 were classified as non-white, and 4.7% of those living in Census Tract 6.01 were non-white. In contrast, the percentages of non-white residents were higher than the figure for Utah County as a whole in each of the three census-defined areas that comprise portions of the project corridor located south of 200 South in Lindon. The proportion of residents who were members of a non-white racial minority group was highest in the southernmost area located immediately south of Center Street in Provo (Block Groups 2 and 3 in Census Tract 22.03, 13.2% non-white), somewhat lower in the area immediately north of Center Street (Census Tract 22.02, 12.2% non-white), and lower still (but higher than for the county as a whole) in the central portion of the project area comprised of Census Tract 22.01 (9.9% non-white).

In 2000 7.0% of Utah County residents were classified as being of Hispanic origin (regardless of race). For the combined populations of the five census-defined areas used to approximate the Geneva Road project area, 10.1% of residents were classified as Hispanic. The percentage of Hispanic residents was lower than for Utah County as a whole only in the portions of the project area that lie between 700 South in Pleasant Grove and 200 South in Lindon (Census Tract 6.01, 5.0% Hispanic). Hispanic residents were over-represented relative to the population that occurs in Utah County as a whole in each of the other four areas, with the highest concentrations observed in the northernmost portion of the project area (Blocks 3000, 4014 and 4015 in Census Tract 5.03, 11.4% Hispanic) and in two areas that comprise the southern portions of the project area (Census Tract 22.02, 11.6% Hispanic; Block Groups 2 and 3 in Census Tract 22.03, 12.4% Hispanic).

Survey data

To better identify the occurrence of minority populations within the project area and the potential for disproportionate impacts to minorities, the survey questionnaire used in 2007 to collect data for the community social assessment included questions focusing on the racial and ethnic identities of respondents and members of their households. As indicated previously, households selected for participation in the survey were drawn from three spatially-distinct categories within the project area (a southern segment that includes areas falling within Provo city limits; a central portion of the project area located within Orem city limits and in unincorporated portions of Utah County; and a northern area that is located within portions of Lindon, Vineyard, and Pleasant Grove). Within these segments of the project area survey respondents were further differentiated into two groups of households -- "corridor adjacent" households where residential properties directly abut the road corridor, and "off-corridor" households located in other areas that surround the project corridor.

Survey response patterns corresponding to questions on racial identity were reported previously in Tables 3-6 and 3-7. Overall, 12.2% of survey respondents (14.2% of corridor-adjacent respondents, and 10.1% of off-corridor respondents) reported that they are members of a non-white racial minority. In addition, 14.8% (16.7% of corridor-adjacent respondents, and 12.7% of off-corridor respondents) reported that at least one other household member is non-white. The percentage of respondents classified as non-white was highest in off-corridor areas of the project area segment

located in Orem and unincorporated Utah County, and lowest in the off-corridor areas located in parts of Lindon, Vineyard and Pleasant Grove. However, these figures may over-estimate the presence of racial minorities in the project area. As indicated in Tables 3-6 and 3-7, respondents who classified either themselves or other household members as non-white most frequently did so by checking the “other race” category; such a response was frequently accompanied by a written comment reflecting a Hispanic identity. The common tendency to confound racial and ethnic identities undoubtedly contributes to an inflation of racial minority percentages represented by the survey data, although the degree of bias that this creates cannot be determined. Nevertheless, the U.S. Census Bureau has estimated that in 2006 only 4.5% of all Utah County residents were members of a non-white racial minority (<http://quickfacts.census.gov/qfd/states/49/49049.html>). Clearly, the representation of racial minority populations is higher across the Geneva Road project area than is the case for Utah County as a whole.

Survey response patterns that indicate whether respondents or other household members are of Hispanic heritage were presented previously in Table 3-5. For the overall project area, 13.6% of respondents (16% of those in corridor-adjacent areas, and 10.9% of those in off-corridor areas) identified themselves as Hispanic. By comparison, 2006 estimates provided by the U.S. Census Bureau indicate that approximately 8.9% of residents in Utah County are Hispanic. This indicates a modest over-representation of Hispanic minority residents in the Geneva Road project area, relative to what exists for the county as a whole. Proportionate representation of Hispanic survey respondents was highest in the corridor-adjacent portion of the Provo segment of the project area (19.4%) and in the off-corridor portion of the Orem/Utah County segment (17.2%).

Low Income Populations

A person whose household income is at or below the HHS poverty guidelines is considered low-income. 2007 HHS poverty guidelines identify poverty levels adjusted for household size that range from \$10,210 or less for a household comprised of one person to \$34,570 for a household containing eight members.

Census data

Median household income levels and information regarding the percentages of residents living in households that fell below the official poverty level as reported in the 2000 Census (1999 income figures) were presented previously in Table 3-1. At that time median household income levels were slightly higher than the \$45,833 reported for Utah County as a whole in all portions of the Geneva Road project area other than the northernmost area located north of 700 South in Pleasant Grove. However, the fact that Census data pertaining to income are reported only for larger Block Group areas precludes a focus on only the specific neighborhoods that immediately surround this northern portion of the project corridor.

Data on the percentage of persons living in households with incomes below the poverty level illustrate a similar pattern with respect to the spatial differentiation of economic well-being in the study area. As shown in Table 3-1, in 1999 12% of Utah County residents lived in households with income levels below the poverty level. For the combined project area represented by the five

Census-defined areas, 7.1% of residents were classified as living in below-poverty level households. The percentage of below-poverty households was lower than that observed county-wide in those portions of the project area encompassed by Census Tract 6.01 (8.7%), Census Tract 22.01 (6.6%), and Census Tract 22.02 (4.2%), but slightly above that level in the northernmost portion of the project area in Pleasant Grove (Blocks 3000, 4014 and 4015 in Census Tract 5.03, 14.8%) and in the area located south of Center Street in Provo (Block Groups 2 and 3 in Census Tract 22.03, 12.4%).

Survey data

The community social survey included a question on total household income that, in combination with information on household size, allows for a more contemporary assessment of the economic status of project area households and the incidence of poverty in the area. Respondents were asked to report their total current household income by checking one of 16 income categories. The lowest eight of those categories were structured to reflect the U.S. Department of HHS 2007 household poverty thresholds for family units of one to eight persons.

Responses regarding 2007 household income levels (reported previously in Table 3-8) indicate that among residents living in corridor-adjacent locations across the project area the median household income was within an income bracket that ranges from \$40,000 to \$49,999, with 60.2% of respondents reporting household incomes of \$40,000 or more. Among respondents living in off-corridor portions of the project area the median income was within the bracket that ranges from \$50,000 to \$59,999, and 68.6% of respondents reported household incomes of \$40,000 or more.

Across the entire Geneva Road project area only 14 households participating in the social survey were identified as having size-adjusted income levels below the HHS-defined poverty threshold. Eight of those households are in the Provo City portion of the project area – three located along the corridor-adjacent segment of Center Street between I-15 and Geneva Road, one located in a corridor-adjacent portion of the mobile home park north of the Provo River bridge, and four located in off-corridor areas scattered across the Provo portion of the project area. Four below-poverty households participating in the survey are located in the Orem/Utah County portion of the project area – two in spatially separated corridor-adjacent locations along Geneva Road, and two in spatially-separated off-corridor locations. Two below-poverty households are located in the Lindon/Vineyard/Pleasant Grove area – both in off-corridor locations located along Main Street in Pleasant Grove. With the exception of the three households located in relatively close proximity along Center Street in Provo, the survey data do not reveal an obvious spatial clustering of poverty-level households in either corridor-adjacent or off-corridor areas along the Geneva Road project corridor.

In summary, these data indicate that racial and ethnic minority populations are to a modest extent disproportionately present in the areas that adjoin and surround proposed construction areas for the Geneva Road project, relative to the representation of racial and minority populations in Utah County as a whole. At the same time, for the project area as a whole there does not appear to be an unusually high concentration of residents living in low income, poverty-level households. To the extent that project activities could generate adverse social impacts associated with residential relocation, neighborhood disturbance, noise impacts or other adverse consequences, there appears to

be little likelihood that such impacts would be experienced disproportionately by racial and ethnic minority or low-income populations.

4.3 SOCIAL CONDITIONS

4.3.1 No Action Alternative

A decision to adopt the No Action alternative would leave existing social conditions and trends in the project area intact. Future residential and commercial development along and near to the Geneva Road corridor and in surrounding portions of Utah County would contribute to increased traffic flows, and growing problems with traffic congestion during peak-flow periods. Residents of the project area would continue to be frustrated by traffic volumes and congestion along the roadway, and dissatisfaction with these conditions would increase over time in association with future increases in traffic volume.

As these conditions worsen over time a growing number of residents living immediately adjacent to Geneva Road could be expected to relocate, resulting in increased residential turnover and reduced levels of social cohesion in affected neighborhoods. At the same time, a decision to implement this alternative would avoid the more sudden social and economic disruptions associated with the substantial number of relocations that would be required by roadway reconstruction, and would allow residents who wish to remain in their current homes to do so into the foreseeable future.

4.3.2 Geneva Road Alternative

Direct Impacts

The potential for adverse social impacts from roadway reconstruction as proposed under the Geneva Road alternative occurs primarily as a result of the requirement that some corridor-adjacent residences be removed and their occupants relocated in order to accommodate a widened roadway and associated corridor improvements. Depending on resolution of road alignment options within Section 7, this alternative would require relocation of either 41 or 52 structures across the length of the project corridor. Most of the affected parcels are residential properties. As noted previously, very few residents of the project area indicate a desire or willingness to move away from their current homes. In addition, a substantial majority of residents in corridor-adjacent areas have lived in their homes for extended time periods, contributing to patterns of attachment and localized social ties that would make it difficult for most to accept or adjust to a forced relocation. Those required to relocate would experience a variety of individual and family-level disruptions, due to alteration or loss of neighborhood-based social ties as well as social interaction patterns linked by residential location to participation in church, school, and other localized organizational activities. Although most individuals can be expected to adapt successfully to such relocation effects over time, these impacts would be experienced in the short term by nearly all of those affected by relocation requirements. Longer-term adaptive problems would be more likely to occur among elderly and low-income residents affected by relocation, because those populations tend generally to have fewer

resources and opportunities to establish the kinds of individual social networks that rely less on residential location and proximity.

In addition to difficulties experienced by individual households and family members who are directly affected by relocation requirements, there could also be adverse impacts of residential relocations on social integration and cohesion in some localized neighborhoods. Such effects would be most likely to occur in those areas where relocations affect more than one or two households, and where the relocations are spatially concentrated in such a manner that the broader character of a neighborhood is altered by the departure of multiple local residents. Given this, the potential for deterioration of neighborhood social cohesion and integration is highest in the trailer park located just north of the Provo River bridge in Section 3 (where six corridor-adjacent homes would be removed) and in the area located immediately west of Geneva Road between 1000 South and 800 South in Orem (Section 5), where eleven structures (including a portion of the Golden Living Retirement Home complex) would be removed. Residents of the Golden Living Retirement Home would be especially vulnerable to the effects of relocation if those living in the portion of the complex requiring removal could not be accommodated elsewhere in the facility, since relocation to a different retirement facility would inevitably sever social ties that residents may have established with other residents and staff members. In other portions of the project corridor the spatial distribution of residences identified for relocation is sufficiently scattered that there would be only minimal adverse effects on social integration and cohesion in immediately-surrounding neighborhood areas.

In the short term, residents living throughout the project area would experience inconvenience and frustration associated with traffic diversions and roadway closures during the construction phase of the project. Since a very large majority of residents living in all portions of the project area report that they and members of their households drive nearly every day on Geneva Road, these short-term adverse effects would be widespread. In addition, residents of corridor-adjacent areas and other nearby locations would experience short-term disturbances associated with the effects of construction-related noise and dust, and occasional difficulties in accessing their properties.

Over the longer term, residents of the project area would experience reduced frustrations associated with traffic congestion along the Geneva Road corridor, and improved ability to travel north and south through the project area during peak traffic periods and at times when I-15 is heavily congested, or closed due to road construction or traffic accidents. At the same time, residents living in areas immediately adjoining Geneva Road may experience increased long-term disturbance associated with the noise accompanying increased traffic volumes, closer proximity to portions of the roadway, and potentially increased traffic speeds.

4.3.3 Mitigation

Mature landscaping will be left intact wherever possible. Landscape features to remain or to be newly established as part of the construction project will be identified in the final plans.

Resident concerns about the potential for reduced auto and pedestrian safety due to increased traffic volumes and traffic speed will be addressed through the placement of left turn lanes, shoulders, curb and gutter, and sidewalks or a multi-use trail in designated sections of the project corridor.

4.4 ENVIRONMENTAL JUSTICE

Although the percentage of minority residents in the project area is higher than for Utah County as a whole, neither Census data or information derived from the social survey conducted in 2007 indicate an extremely high concentration of racial or ethnic minority populations in the project area or in specific portions of the area. There is also little evidence that there are unusually high numbers of low-income households in the project area, or that there are areas along the Geneva Road corridor in which there is a major concentration of such households. There is a localized concentration of several low-income households in the project section located along Center Street in Provo, but since none of those households has been identified for relocation the potential for adverse effects on those residents is limited. These conditions indicate that Environmental Justice issues are unlikely to emerge, since disproportionately high and adverse effects on minority or low-income populations would not occur.

4.4.1 Mitigation

Because Environmental Justice concerns have not been identified, no mitigation is required.