DATA SUMMARY

Social Group Maps

Purpose

This data summary is an initial step in the development of the proposed alternative corridors for the Parks Highway PEL Study. It is intended to confirm the characteristics of the existing environment for the social groups within the project study area. The study area boundaries or Probable Limits of the Alternatives (PLA), where the proposed alternative highway corridors will be located, is shown in Figure 1. The PLA is broadly bordered by the Parks Highway to the north (+500-1000 feet), Hyer Road interchange to the east, West Hawk Lane to the west, and Palmer Slough to the south, and includes 43,827 acres.

This data summary includes data collection methods, analysis methods, mapping methods, assumptions, and a summary of the key findings.
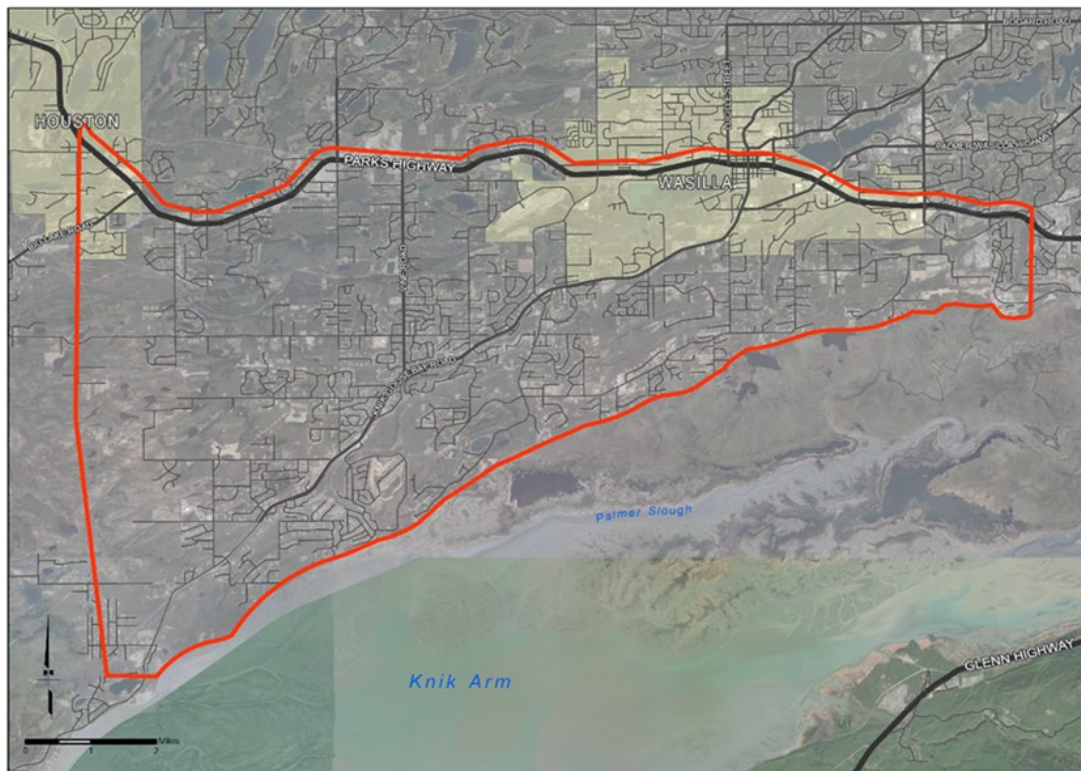

Figure 1: Probable Limits of Alternatives

The Social Groups Maps represent the location of groups of people who may be particularly impacted by an alternative highway corridor. The maps include the following:

- Demographics Map - identifies the location of demographic groups such as low-income, people of color, people over the age of 65, and people with disabilities that may be particularly impacted if a highway corridor disrupts their access to key public facilities or destinations they need to reach.

- Transit Map and Schools Map - identifies locations of those who do not drive a vehicle or school-age children who may be vulnerable to loss of access to work or school.

- Renters and Affordable Housing Map – shows the distribution of renters and affordable housing.

- Land Use Map and Development Over Time Map - shows patterns of development that may slow the growth of residential neighborhoods over time or cohesive clusters of development that would potentially be harmed if divided by a new highway corridor.

Data Collection Sources and Methods

Data sources included four categories that characterize social groups potentially affected by the proposed project: (1) census data, (2) transit data, (3) housing data, and (4) public facilities data. The following sections describe data sources and methods for developing maps, by category.

Census Data

Census data used to describe demographics consist of the American Community Survey (ACS) 2015-2019 estimates by block group[1]. The 2015-2019 estimates are the most recently available data, as the US Census Bureau states it "will not release its standard 2020 ACS one-year estimates because of the impacts of the COVID-19 pandemic on data collection." The Parks Highway Alternative Corridor PEL study social groups maps show data by block group due to the smaller geographical extents (i.e., higher granularity) and the availability of similar data characteristics compared to census tract boundaries.

Table 1 describes census data by demographic, a description of the population included in ACS data, how the demographic was defined, and the ACS table name and table ID. The demographic defined for people with low income and people of color are consistent with the methodology used by the United States Environmental Protection Agency's Environmental Justice Mapping and Screening Tool (EJSCREEN).[2] Looking at ACS data, substantial overlap was found with percentages of people over 65 years old (defined as elderly people in EJSCREEN) as well as people with disabilities. Therefore, the four demographic characteristics were combined to create one demographic indicator of populations who may be particularly impacted by an alternative corridor. To compare characteristics across block groups, the maps show percentages of each demographic within the included population.

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[1] *Explore Census Data.* United States Census Bureau. Accessed 2021. https://data.census.gov/cedsci/
[2] *EJSCREEN Technical Documentation.* U.S. Environmental Protection Agency. 2019. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf

Table 1. Census Data Description

Demographic	Included Population in Dataset	Characteristic Definition	ACS Table Name (Table ID)
People with low income	Population for whom poverty status is determined	People with a ratio of income to poverty level < 2.00	"Ratio of Income to Poverty Level in the Past 12 Months" (C17002)
People of color	Total population	People excluding "Not Hispanic or Latino white alone"	"Hispanic or Latino Origin By Race" (B03002)
People 65 years and older	Total population	People with age >= 65 years	"Sex by Age" (B01001)
People 17 years and younger	Total population	People with age < 18 years	"Sex by Age" (B01001)
People with disabilities	Civilian population 18 years and over for whom poverty status is determined	People with a disability	"Age by Veteran Status by Poverty Status in the Past 12 Months for the Civilian Population 18 Years and Over" (C21007)
People who do not drive to work and do not work from home	Workers 16 years and over who did not work at home	People using any means of transportation excluding "car, truck, or van"	"Means of Transportation to Work by Travel Time to Work" (B08134)
People who rent	Total population in occupied housing units	People in "renter occupied" units	"Total Population in Occupied Housing Unites by Tenure" (B25008)
Blockgroup shape Boundaries	All blockgroups in project area	-	https://gaftp.epa.gov/EJSCREEN/2019/

Transit Data

Transit data was compiled for fixed route bus routes serviced by Valley Transit, the primary transit service provided in the project area, and is described in Table 2.

Table 2. Transit Data Description

Data	Data Processing	Source
Fixed Route Transit stops	Created placemarks in Google Earth to get latitude and longitude of each stop	http://www.valleytransitak.org/valley-anchorage-service/

Public Facilities Data

Data from public facilities such as community centers, schools, city halls, and post offices are provided in the Matanuska-Susitna Borough's Open Data site,[3] as well as additional data about the Matanuska-Susitna Borough School District. Table 3 shows the datasets used, relevant data columns, queries used to filter the data, and the web link.

Table 3. Public Facilities Data Collection

Dataset Name	Relevant Data Columns	Data Queries	Web Link
Infrastructure Public Facilities	Type	Type IN ('Administrative', 'City Hall', 'Community Center', 'Courthouse', 'Library', 'Medical', 'Post Office', 'Public Safety', 'Recreational', 'School', 'Senior Comm Center', 'Senior Housing', 'Train Depot')	https://data1-msb.opendata.arcgis.com/datasets/infrastructure-public-facilities/explore?location=62.171552%2C-148.846500%2C8.00
Grocery Stores	Latitude and Longitude	Searched grocery stores in the area on Google Maps. Included Target and Walmart. Gathered latitudes and longitudes of grocery stores within the project area using Google Earth.	-
NCES CCD Public School Data – District ID 0200510 (2019-2020)	School Name, Number of Students	-	https://nces.ed.gov/ccd/schoolsearch/school_list.asp?Search=1&DistrictID=0200510
Find My Elementary School, Find My Middle School, Find My High School	School Bus Routes	-	https://msb.maps.arcgis.com/apps/webappviewer/index.html?id=cf3ae26028db4827a9273a2745071e89
Infrastructure Separated Paths	Name, Shape.STLength	-	https://data1-msb.opendata.arcgis.com/datasets/infrastructure-separated-paths/explore?location=61.916750%2C-149.468050%2C9.61

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[3] Open Data For a Smarter Community. Matanuska-Susitna Borough. Accessed 2021. https://data1-msb.opendata.arcgis.com/

Housing and Land Use Data

The housing and land use maps include data showing parcels, subdivisions, zoning (or building use, for outside of City of Wasilla limits), and the locations of affordable and senior housing developments. Table 4 shows the datasets used, relevant data columns, how the data has been processed, and source.

Table 4. Housing and Land Use Data Collection

Dataset Name	Relevant Data Columns	Data Processing	Source
Cadastral Parcels, Cadastral Subdivisions	P_ID, SUBD_NAME	-	https://data1-msb.opendata.arcgis.com/datasets/cadastral-parcels/explore https://data1-msb.opendata.arcgis.com/datasets/cadastral-subdivisions/explore
City of Wasilla Zoning	Layer	-	https://www.cityofwasilla.com/home/showpublisheddocument/9871/637431968146930000 CAD file obtained from COW
Special Use Districts	SPUD_NAME	-	https://data1-msb.opendata.arcgis.com/datasets/MSB::administrative-special-use-districts/explore https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough17/MatanuskaSusitnaBorough17.html#17
Buildings MSB Certified Tax Year 2021	Year Built, FILELOC (General building use type – Commercial, Residential, Multifamily, LIHTC, etc.)	-	Provided by MSB staff
Affordable and Senior Housing Developments	Location, Number of Units	-	Gathered from internet and information requests from developers
Mobile Home Parks	Latitude and Longitude	-	Gathered from internet

Mapping

The social groups maps consist of the following six separate maps: transit, demographics, schools, land use, renters and affordable housing, and development over time. Table 5 details the development of each map.

Table 5. Map Development Steps

Dataset Name	Map Development Steps
Transit Map	1. Created heat map using the percentage of the characteristic "people who do not drive to work and do not work from home" from the census data (Table 1) present in each block group. 2. Overlaid transit stops (Table 2) as points. Created lines between stops to map out transit path. 3. Overlaid separated paths (Table 3) as lines.
Demographics Map	1. Computed the average of the percentages of the characteristics "people with low income", "people of color", "people 65 years and older", and "people with disabilities" from the census data (Table 1) present in each block group. Used the average percentage to create a heat map by block group. 2. Added grocery stores (Table 2) as points. 3. Overlaid data in "Infrastructure Public Facilities" (Table 3) as points. Create separate symbols by "type" and add legend.
Schools Map	1. Created heat map using the percentage of the characteristic "people 17 years and younger" from the census data (Table 1) present in each block group. 2. Overlaid schools in "Infrastructure Public Facilities" (Table 3) as points. 3. Scaled size of school points using number of students in the "NCES CCD Public School Data" (Table 3) 4. Overlaid School Bus Routes (Table 3) as lines.
Zoning and Land Use Map	1. Added the "Cadastral Parcels" layer (Table 4). 2. Added the "City of Wasilla Zoning" layer (Table 4). Showed zoning districts as color-coded boundary lines. 3. Joined "Buildings MSB Certified Tax Year 2021" (Table 4) to "Cadastral Parcels" using the "P_ID" column. Colored "Cadastral Parcels" by joined "FILELOC" column (Table 4). Used similar color coding to relate "FILELOC" (land use) to similar zoning districts.
Renters and Affordable Housing Map	1. Added the "Cadastral Parcels" layer (Table 4). 2. Created heat map using the percentage of the characteristic "people who rent" from the census data (Table 1) present in each block group.

Dataset Name	Map Development Steps
	3. Overlaid housing developments in "Affordable and Senior Housing Developments" (Table 4) as points.
	4. Scaled size of housing development points using number of units in "Affordable and Senior Housing Developments" (Table 4). Color coded by developer.
Development over Time Map	1. Added the "Cadastral Subdivisions" layer (Table 4). 2. Created heat map / cluster analysis using Average Year Built for residential uses in "Buildings MSB Certified Tax Year 2021" (Table 4). 3. Highlighted areas with any residential zoning but no buildings by finding City of Wasilla Zoning residential locations with "P_ID's that do not appear in "Buildings MSB Certified Tax Year 2021" (Table 4).