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ENVIRONMENTAL JUSTICE RESEARCH STUDY

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DMJM+HARRIS
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COLORADO DEPARTMENT OF TRANSPORTATION
RESEARCH BRANCH

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<p>16. Abstract The research for this study began with a literature review of the existing rules and regulations at federal and state levels pertaining to environmental justice (EJ). This literature search was followed by phone interviews with several transportation organizations and agencies around the country and within CDOT. The surveys were conducted to assess the processes currently in place related to EJ in the context of transportation planning. The next step in the research was to evaluate the best way to define, identify, and locate minority populations and low-income populations within the State at the planning level. Having identified where the low-income households and minority populations reside in the State, a successful public involvement program needs to occur to seek out these targeted population groups in order to provide opportunities for involvement in the transportation planning decision-making process.</p> <p>Implementation To provide consistency in the application of an environmental justice analysis for statewide and regional transportation planning purposes, it is recommended that the definitions and identification methodologies for low-income and minority populations be incorporated into the statewide planning process. Suggested changes to four of CDOT's planning documents are provided: <u>CDOT Metropolitan Planning Organization Guidance Manual</u>, <u>Colorado Department of Transportation Guidelines for Public Involvement in Statewide Transportation Planning and Programming</u>, <u>CDOT Regional Transportation Planning Guidebook</u>, and <u>Rules and Regulations for the Statewide Transportation Planning Process and Transportation Planning Regions</u>.</p>				
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Environmental Justice Research Study

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The Research Study Panel

A Research Study Panel was formed to assess the research and to steer the development of the environmental justice planning process. Through its efforts, the panel members have ensured that the best approach for implementing environmental justice within the Colorado Department of Transportation (CDOT) will occur. The panel was comprised of staff from various divisions of CDOT's Headquarters, several staff members representing the CDOT Regions, the Federal Highway Administration (FHWA), the Environmental Protection Agency (EPA), and the Denver Regional Council of Governments (DRCOG). The Study Panel met regularly throughout the development of the study. Members of the Panel include:

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EXECUTIVE SUMMARY

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994 was enacted to reinforce Title VI of the Civil Rights Act of 1964. In the Civil Rights Act it is stated that “No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Executive Order 12898 states “Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

The Colorado Department of Transportation (CDOT) is responsible for the allocation of resources that stem from many federal programs. As such, it is imperative that CDOT successfully integrate environmental justice (EJ) into its program and planning activities as an entity utilizing federal funds. A Research Study Steering Panel was formed to help to develop the EJ process.

The integration of the EJ principles into the long-range planning process should be consistent throughout the engineering regions of the state including within CDOT headquarters. The implementation of EJ needs to occur for all populations in Colorado especially for the low-income and minority populations.

The research for this study began with a literature review of the existing rules and regulations at federal and state levels pertaining to environmental justice. This literature search was followed by phone interviews with several transportation organizations and agencies around the country and within CDOT. The surveys were conducted to assess the processes currently in place related to EJ in the context of transportation planning.

The next step in the research was to evaluate the best way to define, identify, and locate minority populations and low-income populations within the State at the planning level. Working with the Research Study Panel, the following was determined:

- Data is to be collected to the Census Tract level.
- 2000 Census Tracts are the lowest level of geography to be analyzed (at the statewide planning level).
- 2000 Census Data is the basis for the Minority Population and households by income.
- Minority populations are defined as all races other than White Non-Hispanic.
- Low-income households are calculated through the use of Housing and Urban Development's (HUD) low-income thresholds established for each county in Colorado combined with total households by income as determined in the 2000 Census.
- To help locate and identify minority or low-income populations, maps are to be used. These maps will show the concentration levels where Minority and Low-income populations reside by percent ranges.
 - As a first level of analysis, the percent of minority populations within a given census tract is to be compared to the percent of minority populations for the State of Colorado. The percent of low-income households within a census tract is compared to the percent of low-income households in the county where the census tract is located in order to determine substantial concentrations.

Having identified where the low-income households and minority populations reside in the State, a successful public involvement program will seek out these targeted population groups in order to provide opportunities for involvement in the transportation planning decision-making process.

Implementation Statement

To provide consistency in the application of an environmental justice analysis for statewide and regional transportation planning purposes, it is recommended that the definitions and identification methodologies for low-income and minority populations presented in this report be incorporated into the statewide planning process. Suggested changes to four of CDOT's

planning documents are provided: CDOT Metropolitan Planning Organization Guidance Manual, Colorado Department of Transportation Guidelines for Public Involvement in Statewide Transportation Planning and Programming, CDOT Regional Transportation Planning Guidebook, and Rules and Regulations for the Statewide Transportation Planning Process and Transportation Planning Regions.

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INTRODUCTION

Background

The term Environmental Justice has been in the government lexicon since 1994 with Environmental Justice Executive Order 12898. The concept, however, has been in place since the Civil Rights Act of 1964, Title VI. In this Act it is stated that “No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued in 1994, serves to strengthen the language in the Civil Rights Act with regard to minority and low-income populations. From this Executive Order, federal agencies were directed to identify and address disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority and low-income populations. Many of the U.S. laws, federal regulations, and policies since 1964 have been incorporating the intent of environmental justice. The United States Department of Transportation (US DOT) issued an order on environmental justice (DOT Order 5610.2) in 1997, followed by the Federal Highway Administration (FHWA Order 6640.23) in 1998; both orders were directly related to addressing the EJ activities and responsibilities within transportation and the FHWA.

The three fundamental principles of EJ are:

- Avoid, minimize, or mitigate disproportionately high and adverse...effects on minority populations and low-income populations.
- Ensure the full and fair participation...
- Prevent the denial of... benefits by minority and low-income populations

Study Objectives

The objective of the first phase of this two-phase Environmental Justice Research Study is to develop recommended enhancements to CDOT's methods for including minority populations and low-income populations in the regional and statewide transportation planning process. Part of this objective includes the identification of the types of demographic data and level of geographic specificity applicable for considering environmental justice requirements in the statewide and regional transportation planning process.

Scope of Study

The tasks performed as part of the first phase of the Environmental Justice Research Study include:

1. Review of existing Federal and state rules and regulations pertaining to environmental justice. Examine CDOT's current methods for identifying and including the specified groups in both the regional and statewide transportation planning process.
2. Research various approaches used by a sample of other states to address the Federal requirements. Recommend approaches for Colorado's regional and statewide transportation planning processes.
3. Recommend enhancements to CDOT's methods for including minority and low-income populations in all phases of the regional and statewide transportation planning processes. Recommend the types of environmental justice-related demographic information to incorporate into the statewide and regional transportation planning process. Recommend enhancements to the public involvement process in order to foster meaningful participation from minority and low-income populations.

4. Research statistical information needed for the recommended methods as to how the information will be used, the level of geographic detail required and the data's compatibility with CDOT's Geographic Information System (GIS).

5. Develop a demographic template for environmental justice data applicable at the statewide, CDOT Region, and Transportation Planning Region (TPR) levels. This template should include the identification of the locations of low-income and minority populations. Additionally, individual data profiles and illustrative maps for each TPR, CDOT Region, and the State are to be created based on the demographic template.

Purpose and Intended Uses for the Recommendations

The recommendations contained in this document respond to the federal requirements for evaluating environmental justice in the context of long-range transportation planning. The intent of this research is to present a methodology that establishes the level of effort that will be necessary to sufficiently address the identification of minority and low-income populations per Executive Order 12898 and FHWA Order 6640.23.

FEDERAL REQUIREMENTS

“Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994

The term environmental justice has been in the government lexicon since 1994 with Executive Order 12898, Environmental Justice. The concept, however, has been in place since the Civil Rights Act of 1964, Title VI. Many of the U.S. laws, federal regulations, and policies incorporate the intent of environmental justice.

Title VI Civil Rights Act of 1964 states that “No person in the United States (based on race, color, religion, sex or national origin) be excluded from participation, denied benefits of or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

National Environmental Policy Act of 1969 (NEPA) focuses on providing for “all Americans safe, healthful, productive, and esthetically pleasing surroundings,” and developing a “systematic, interdisciplinary approach” to aid in the decision-making for the community and environmental factors.

Federal-aid Highway Act of 1970 further establishes a basis for the equitable treatment of communities being affected by transportation projects. The Act requires that consideration be given to the anticipated effects of proposed transportation projects upon residences, businesses, farms, accessibility of public facilities, tax base, and other community resources.

Executive Order 12898 Environmental Justice, February 11, 1994 The three fundamental Environmental Justice principles as set forth by Executive Order 12898 are:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.

2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

U.S. DOT Order 5610.2 to Address Environmental Justice in Minority Populations and Low-Income Populations, 1997 summarizes and elaborates upon the Executive Order 12898, environmental justice. The order describes the process for incorporating environmental justice principles into all existing DOT programs, policies, and activities.

U.S. DOT Order 6640.23, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, December 1998 Requires that FHWA implement the principles of the DOT Order 5610.2 and Executive Order 12898 by incorporating environmental justice principles in all FHWA program, policies, and activities.

Why the Colorado Department of Transportation Needs to Address Environmental Justice

The Colorado Department of Transportation (CDOT) is responsible for the allocation of resources from many federal programs. As such, it is imperative that CDOT works to integrate EJ into its program and planning activities as a condition for the use of federal funds. The integration of the EJ principles into the Colorado Department of Transportation's long-range planning process should be consistent throughout the organization including the regional offices.

REVIEW OF ENVIRONMENTAL JUSTICE PROCESSES

The literature search yielded a moderate volume of actual experience and information on EJ applications. Therefore, in order to learn from experiences of other agencies in implementing environmental justice programs, a series of interviews was conducted with representatives of implementing agencies. Representative agencies from across the country, including state departments of transportation, and metropolitan planning organizations, were chosen for their relevance to Colorado's planning environment and for innovation in their programs.

Interviews Conducted External to CDOT

Interviews were conducted with the following individuals:

- Libby Rushley, Statewide Transportation Improvement Program Coordinator, Ohio Department of Transportation
- Nancy Pfeffer, Director of Planning and Policy, Southern California Association of Governments
- Mary Frye, Transportation Planner, Pikes Peak Area Council of Governments
- Pat Oliver-Wright, Director, Long-Range Planning, New Mexico Department of Transportation
- James Lewis, Transportation System Analyst, New Jersey Department of Transportation
- Emerson Bryan, Director of Support Services, Atlanta Regional Commission
- Pat Mullins, Director of Planning and Programming, Georgia Department of Transportation

A series of interview questions was developed to explore the overall strategies and goals, data collection, planning process, and public involvement aspects of their program. Each agency was contacted by phone or e-mail to determine the best person within the agency to speak knowledgeably about their program. The appropriate person was then contacted by either e-mail or phone to set up a time to conduct the interview over the phone. Each interview took from 35

to 55 minutes. The survey questions were used as a guide for the conversation, rather than as a strict question and answer tool. In this way, the interviewer was able to structure the conversation in a way that obtained the most relevant information about the respondent's program.

A wide range in the variability of practices was revealed. Some organizations are just beginning to grapple with the implications of the EJ requirements, while others have well-developed programs. Southern California Association of Governments is probably the leading example nationally in applying and developing a program. This is understandable given the size of the metropolitan area and the range of potential issues.

The majority of the agencies interviewed have focused on ethnicity and income as measures, with some additional analysis used in the areas with more aggressive programs. The use of Census data is almost universal as a tool to locate EJ populations. The level of analysis ranges again from qualitative planning level assessment to data-rich economic analysis. In other areas, FHWA has accepted EJ programs that make a good faith effort to incorporate EJ principles in the planning process. Efforts have been successful that are scaled to the relative need and available resources of the planning agency. From those states sampled and persons interviewed, it was communicated that an EJ analysis requires a serious effort on the part of transportation agencies.

Best Practices

The following best practices were determined from the interviews, and are listed by category:

Overall Strategies and Goals

- Develop a consistent approach for Transportation Planning within the state.
- Seek an equitable distribution of both benefits and burdens across demographic strata.
- Ensure that transportation services are available especially where low-income and minority populations are significant proportions of the total.
- Re-emphasize the commitment to protect human rights and to enable all citizens to participate in decisions affecting the transportation system.

- Develop methods to apply positive impacts to EJ populations rather than to merely avoid negative impacts.

Planning Process

- Quantify adverse impacts in measurable units where possible
- Initiate performance based planning process with measurable performance indicators.
- Incorporate EJ-related criteria into its project/alternative analysis and selection process.
- Focus on coordination, policy and strategy
- Develop a Livable Centers Initiative (LCI) that integrates EJ into land use and transportation planning. LCI provides seed money to communities that are working to enhance livability and mobility for their residents.

Public Involvement

- Be included on the agenda of existing community groups that meet in the neighborhood
- Provide translators at meetings
- Provide snacks or food
- Utilize focus groups in identified low-income and minority areas
- Publish notices in several languages
- Host citizen conferences to address EJ principles
- Utilize public information centers at bus and train stops

Data Collection

- Level of geography of data collection
 - DOT's: Census Tract/County
 - MPO's: Traffic Analysis Zones
- Source of data for use in identifying minority populations
 - DOT's: Census Data
 - MPO's: Census Data

- Source of data for identifying income populations
 - DOT's: Census Data
 - MPO's: Census Data, internal methodology

- Other Data Collected
 - Elderly 65 +, mobility impaired, auto availability

Details of the interviews are contained in Appendix A.

Interviews Conducted within CDOT

Several interviews were conducted within CDOT as well. The interviews were conducted with personnel who are project managers for various studies along major corridors within Colorado or represent agencies that address EJ concerns in local communities. The purpose of the interviews was to determine their current methodologies for performing EJ analysis during environmental studies or during project development. It was found that a uniform application of EJ methods has not been utilized at the project level. Existing CDOT efforts have depended primarily on US Census data for baseline information; other more localized data sources in certain situations have been used as well. A standard definition of low-income and minority has not yet been developed within CDOT. Efforts have been made (or planned) to develop a demographic profile of the study areas. However, no systematic approach is in place to identify disproportionate impacts to EJ populations as compared to the population at large. The complete full interviews are contained in the Appendix A. Interviews were conducted with the following people:

- Chris Paulsen, CDOT Region 6, Project Manager, I-70 East
- Loraine Grendada, Executive Director, Colorado People's Environmental and Economic Network (COPEEN), represents the Globeville area along I-70 East project
- Cecelia Joy, Environmental Manager, CDOT-Region 1, Project Manager, I-70 West PEIS
- Jim Paulmeno, CDOT, Environmental Manager, T-REX

DEMOGRAPHICS

The first step in realizing an EJ process is to identify where significant numbers of minority populations and low-income populations live within a given study area. These two segments of the population are singled out in Executive Order 12898.

Federal Definitions for Low-Income and Minority Populations

The definitions for minority populations and low-income populations contained in the final *US DOT Order 5610.2 on Environmental Justice in the Federal Register on April 15, 1997* are:

Low-Income: Household income at or below the Department of Health and Human Services or Census Bureau poverty guidelines.

Low-Income Population: Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy, or activity

Minority: Black, Hispanic, Asian American, American Indian, and Alaskan Native

Minority Population: Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity

The Steering Panel members did not believe the above federal definitions would be adequate for CDOT's use. These definitions were too limiting and did not best describe the diverse population and living opportunities within the State. Therefore many options for defining low-income households and minority populations were explored.

Minority Populations

For the purposes of defining and identifying minority populations, Census data was determined to be the best data source. The Census, while updated only every ten years, is the accepted source for demographic data. Census data are available at the State level, for each CDOT Region, and for each Transportation Planning Region, as well as by census tract. The race information from the 2000 Census can be contained in seven mutually exclusive and exhaustive categories. These categories include:

- White, alone;
- Black or African American, alone;
- American Indian and Alaska Native, alone;
- Asian, alone;
- Native Hawaiian and Other Pacific Islander, alone;
- Some other Race, alone; and
- Two or more races.

The Census is self-enumerated which means that a person self-selects the race category that best describes their situation. “Alone” listed after each race category signifies that a person selected that listed race category only and did not select *Two or More Races* when self-enumerating their race category. Additionally, it should be noted that Hispanic is not listed as a race category. This is because the Federal government considers race and Hispanic origin to be two separate and distinct concepts. A person of Hispanic origin can be from any race. The Hispanic population is accounted for under ethnicity. Therefore, a double counting would occur if one were to count the Hispanic population in with the race data.

For the purposes of an EJ analysis, within the geographic area being analyzed, the total population minus the total White Non-Hispanic population would generate the minority population.

Low-Income Populations

The Research Panel determined that the poverty guidelines established by the Department of Health and Human Services (HHS) and the U.S. Census Bureau are set at levels that are too low to be good EJ benchmarks for the CDOT. Low-income/poverty thresholds more representative of particular sub-areas of the State were desired. For example in some areas of the State, such as in the resort towns, the cost of living is, on average, much higher than in other areas of the State.

Many options were explored as to how best to represent the low-income households in the State. Best practices were reviewed to find out how other agencies determined low-income households. Typically, the State Departments of Transportation use the U.S. Census information to identify low-income households, whereas the Councils of Government, or Metropolitan Planning Organizations are more likely to develop methodologies in-house to identify and forecast low-income households.

Income thresholds used in determining the allocation of Community Development Block Grant (CBDG) funds were assessed for applicability for use in an EJ analysis. These income thresholds, set annually by the US Department of Housing and Urban Development (HUD), are established for the purpose of identifying housing needs. The thresholds are developed by county and by household size up to an 8-person household. Given that this data source represents the variation of housing costs amongst the counties, it was felt that these established income thresholds are the most appropriate for CDOT's use. Two thresholds are provided by HUD: moderate and low income. Moderate income is defined as 80% of the county's median (50% above and 50% below) income, and low-income represents 50% of the county's median income. The low-income threshold was chosen.

Geographically identifying low-income households, once defined, is a multi-step process. The Census data shows the number of households by income by the desired level of geography. This data, however, does not indicate the number of persons in each household. It is necessary to reconcile the two data sources given that the thresholds for low-income are by persons per

household. Average household size by census tract will be used as the means of making the data sources compatible. (The methodology is provided in Appendix B).

Census Geography

A geographically based demographic profile is integral to implementing a comprehensive EJ program. It is recommended that census tract level geography be employed for the EJ process at the planning level. However, smaller geography (block) or larger geography (county, TPR or State) may be appropriate at the project planning level or for long-range planning in large geographic areas, respectively.

Additional Demographic Data

While not required in Executive Order 12898, other demographic data, in addition to low-income population and minority population, may be used to assess the community or region. Data on populations groups such as the elderly, disabled persons, and persons with limited English proficiency may be necessary to help better define the transportation system necessary to accommodate the area. The population data for these groups may be obtained from the U.S. Census Bureau and are ordinarily available for the desired level of geography. Other specialized population groups, such as households without auto availability, may have applicability to a region as well.

Identification of Low-Income Populations and Minority Populations

The geographic locations of significant numbers of low-income and minority populations are most easily represented through the use of maps. A key question raised during the course of this research was at what level or percentage should a minority or low-income population be considered significant and therefore be graphically highlighted. The maps generated from this process are shown in Appendix C.

The interview process revealed substantial variability in the methods used by different agencies to determine areas with low-income and minority populations. Some agencies are using thresholds. Thresholds in transportation planning serve two purposes. The first is to provide a comparison to a point of reference. A number in and of itself often becomes useful only when compared to another number. When shown in that context, its relevance becomes more apparent. The other application for thresholds is to provide a screening tool to identify areas that exhibit important characteristics including variances from the mean.

Two statistical options were initially evaluated for using thresholds to identify low-income households and minority populations. These included setting a percent of the total low-income households or minority populations within a given level of geography. That is, if a Census tract has a minority population of 50% or more, then that tract would be determined to be a tract that needs to be included in an EJ analysis. The other option looked at was to set a percentage or standard deviation above either total low-income households or minority populations compared to the next larger area of geography. That is, if a Census tract has a higher percentage of a low-income household population than the county as a whole, then that tract is to be included in an EJ analysis. These methodologies were analyzed and discarded as not as useful to CDOT at the planning level.

Some agencies make use of ranges by showing, in varying levels, either the absolute number or the percent of low-income or minority populations in a given geographic area. By showing the population groups graphically with this method, the areas of concentration where low-income and minority populations reside can be seen. This method is recommended for CDOT to use in their EJ analysis.

For the purposes of planning, the use of percent ranges is not to be used to decisively determine whether a census tract is a “minority population” tract or not. The intent is for the percent ranges to serve as a guide to help those professionals working in statewide and regional transportation

planning to focus where their time and effort would be most efficiently spent in reaching that segment of the population.

RECOMMENDATIONS FOR DEMOGRAPHICS AND GEOGRAPHY

Minority Populations

Minority population data is recommended to be collected for the race categories defined and tabulated by the U.S. Census Bureau as listed below:

- White Non-Hispanic- (Population not in this category would be considered minority)
- White-Hispanic
- Black or African American; alone
- American Indian and Alaskan Native; alone
- Asian; alone
- Native Hawaiian and Other Pacific Islander alone; and
- Some other Race, alone; and
- Two or more races.

In addition to collecting the minority population in aggregate, data collected for each race separately may be useful. Knowing the specific races within a geographic area could become important, particularly for public involvement. This information could help provide further insight into a community, and identification of community leaders.

Low-Income Populations

It is recommended that low-income households be defined as households whose income levels are at or below the low-income thresholds established by HUD. The methodology to be used to determine the locations for the low-income households incorporates the average household size by census tract, the income thresholds from HUD, and the total households by income from the 2000 Census.

Census Geography

It is recommended that for the purposes for planning, the Census Tract will be the base unit for demographic analysis.

Identification of Low-Income Populations and Minority Populations

For the minority populations, it is recommended that the percent of minority populations within a given census tract be compared to the percent of the minority population for the State as a first level of analysis. Several percent ranges have been established for mapping purposes and analysis. The first range is for those Census Tracts that have percent minority populations that fall below the percent of minority populations for the state. The State of Colorado minority population from the 2000 Census is 17.23%. The next three ranges 18%-24%, 25%-49%, 50%-100% are the same as those used by the Environmental Protection Agency (EPA) Region 8 for their EJ maps. Due to the future potential for sharing of EJ information between the agencies, adopting the same percent ranges was believed to be important for consistency.

For the identification of the low-income populations, another level of comparison is recommended. Low-income households are determined based on income thresholds that are unique for each county. Therefore, evaluate the percent of low-income households for that tract to the percent of low-income households for the county that the tract is located. The first range is for those census tracts that have percent low-income households that fall below the percent of low-income households for the county. The next three ranges are to be presented in quartiles following the establishment of the county percent.

RECOMMENDED ENHANCEMENTS TO PUBLIC INVOLVEMENT

A critical element in CDOT's ability to comply with the EJ requirements is to involve low-income and minority populations in the transportation decision-making process. *Executive Order 12898* outlines the need to ensure there is a full and fair participation in the transportation planning process. It is crucial that targeted population groups have a voice in determining the fate of projects in their neighborhoods and communities and this should begin at the planning stage. CDOT's public involvement process is a proactive method for meeting this requirement; however, it is recommended that CDOT consider additional public outreach approaches to embrace the importance of diverse community involvement in the transportation planning process. Although some guidance is already in place to involve targeted population groups, such as those traditionally under-served by the transportation system, it is important to summarize some of the key issues and opportunities as they relate to low-income and minority populations.

Targeting Populations

As with any public involvement process, the initial step is to identify those population groups (stakeholders) that need to be involved in the transportation planning decision-making process. Equally, it is important to identify those geographic locations and neighborhoods with low-income and minority populations. The demographic maps in Appendix C should be used to aid in this identification process.

Knowing the locations of the low-income and minority populations, the neighborhood leaders or organization representatives who work or live in targeted neighborhood areas can be brought into the process. Local business leaders, school or community directors can also be contacted to discuss advertising opportunities and approaches for engaging the identified population groups.

Public Participation Strategies

In an attempt to initiate a community and neighborhood dialog in regards to transportation planning it is recommended that several strategies to be implemented as shown below.

- Contact neighborhood and community leaders to collaboratively discuss methods for broader public involvement.
- Collaborate with local elected officials to understand the community's interest in transportation, historic issues, occupational or economic factors, and sensitivity to possible future impacts.
- Collectively develop list of key stakeholders to involve in the planning process.
- Document local contacts and information to help build public involvement strategies statewide.

Advertising and Communication

Advertising and location have major impacts on setting the tone of a public involvement activity. Attendees need to feel the importance of being at the meeting and know that their concerns and issues are heard. They should feel welcome, be confident that they will be part of a decision-making process, and feel that their concerns will be valued.

Meeting advertisements, flyers and handouts should be void of technical jargon. Printed materials are to communicate a plain and understandable message that is informative and useful. In this way, attendees can respond with meaningful comments and concerns. Transportation officials should communicate to attendees in their language. Also, transportation officials should collaborate with community leaders prior to any meetings to find out other issues of concern. This is done to identify the best time(s) of the day to hold meeting(s), the culturally specific media to be used for advertising, and the possible need to use community representatives to communicate with the targeted population groups. An atmosphere that fosters “cooperation and participation” is desired. A follow-up mechanism that communicates what was heard and

provides information of any outcomes from the planning process can help to enhance participation.

Meeting Locations

Meetings should be held within local community forums rather than at regional or state facilities. This provides a non-threatening atmosphere and makes it more accessible for those that have limited transportation. Depending upon the detailed level of information to be shared and communicated it may be helpful to discuss with local neighborhood leaders opportunities to combine transportation topics with regularly scheduled community or school meetings. In doing so, an agency becomes the invited guest to discuss issues and solicit public feedback.

Meeting locations must be in compliance with the American with Disabilities Act (ADA) and conveniently located to targeted population groups. Transportation to meeting locations may impact the ability of many people to attend. Meetings held at local community centers, schools, or places of worship may lessen some transportation obstacles as well as offer facilities for on-site child care.

Contacts and Documentation

All relative transportation documents should be available for public review. Although most agencies place transportation documents in public libraries, these locations may not be the ideal for low-income and minority populations groups to easily and efficiently access the information. Locations for documents could include community centers, recreation centers or places of worship. Contact information should be provided with each document, which would provide an opportunity for direct communication on specific questions and concerns.

Enhancements to the mailing list database currently maintained by CDOT's Division of Transportation Development are recommended. The enhancements would be made to better document the issues and concerns of the low-income and minority populations early in the

planning process. A communication mechanism should be investigated that does not require large time commitments but provides basic information for shared communication.

RECOMMENDATIONS FOR CHANGES TO CDOT’S GUIDELINE DOCUMENTS

The research conducted as part of this study included a review of four existing CDOT documents to identify opportunities for enhancing CDOT’S guidance for EJ. Specific additions or improvements are identified and listed along with the specific recommended changes. The recommended changes are shown in bold italics.

Documents Reviewed

CDOT Metropolitan Planning Organization Guidance Manual

*Certification and Compliance of **Title VI Assurance***

*Page 2-5 states “MPOs **must** provide an assurance that they are complying with Title VI of the Civil Rights Act of 1964 (49 CFR part 21) and Executive Order 12898 ” by:*

- **Using strategies for engaging low-income and minority populations in the public involvement process.**
- **Implementing strategies for evaluating the effectiveness of outreach efforts to low-income and minority populations.**
- **Using mechanisms to document and consider issues and concerns raised by targeted populations in the decision-making process.**

Certification of the Planning Process

Page 2-5 Requires that MPOs and CDOT must certify that the planning process is addressing the following issues:

- Metropolitan Planning Process (23 USC 134, 135; 49 USC 5303-5306, 323(1))
- Non-attainment and/or maintenance area compliance
- Prohibition of discrimination on the basis of protected classes, Title VI of the Civil Rights Act of 1964, ~~and~~ the Title VI assurance executed by Colorado, ***and Executive Order 12898 regarding environmental justice.***
- Involvement of disadvantaged business enterprises in FHWA and FTA funded planning projects
- Provisions of Americans with Disabilities Act of 1990

CDOT Regional Transportation Planning Guidebook

Getting Started

Page v, The ten following factors should be kept in mind when updating regional transportation plans:

- Consider and incorporate the themes proposed for the 2020 Plan
- Address all modes of transportation and other transportation systems and programs.
- Link to the TPR's first Regional Transportation Plan
- Address the twenty-year period 2001 – 2020
- Delineate a preferred system plan, which identifies the overall transportation needs of the region for the next 20 years to meet mobility and accessibility requirements, support economic growth and development, and sustain a desired quality of life.

- **Consider natural and human** Address environmental sensitivity **and possible impacts that may occur to identified population groups**
- Encourage adequate public involvement.
- Address requirement for appropriate federal and state legislation.
- Develop a process for cooperating with neighboring TPRs, and neighboring states, as well as other appropriate local and state partners.
- After prioritizing the preferred system plan, develop a financially constrained plan that is based on the results of the CDOT regional prioritization process and other local and private revenues likely to be available.

Step II – Public Participation Process

Page II – 2, Bullet 4 “Seeking out and considering the needs of those persons or groups that may be considered under-served by existing transportation systems, **or low-income and minority population groups that could potentially become impacted by future transportation decisions. This outreach could include** such as low-income and minority households, the elderly, persons with disabilities, and student population which may face difficulties accessing employment or other amenities;”

Step IV – Inventory of Existing Transportation Systems

Page IV – 1 Paragraph 4 “Along with the data set, several programs have been developed which are available to assist in completing the eleven primary planning steps defined in this guidebook. Some of the capabilities these programs provide are the ability to determine current highway capacities, **locations of low-income and minority populations**, project future traffic volumes, identify current deficiencies of transportation modes, identification of trends and creation of prioritized and financially constrained project lists.”

Step V – Socioeconomic and Environmental Regional Profile

Page V – 2 Add New Paragraph after the Paragraph on Air Quality *The role of environmental justice in the planning process is a key area of concern. Executive Order 12898, issued in 1994, establishes the need to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. CDOT has put together graphical information showing the locations of low-income and minority population groups by census tract. Each TPR is asked to review this information and consider the locations of these population groups in relation to their planning activities and the selection of projects. Based on the unique characteristics of the TPR, each RPC may choose to overlay additional information such as mobility impaired, auto availability, hazardous material sites, transit availability, etc. to identify broad issues for future project level consideration.*

Each area is also asked to collectively consider ways to enhance the public involvement process. This may include discussions with local neighborhood/community representatives and the need for meetings to be held in locations that are convenient for these population groups to attend.

Related Planning Documents

V – 4 PRODUCTS Section Revised data set information on:

Socioeconomic Data

- Population trends and forecasts, *including minority demographics*
- Employment trends and forecasts
- Income levels, *including low-income demographics*
- Growth Patterns/Corridors

Environmental

- Air Quality Non Attainment Areas
- Air Quality at Risk Areas
- Water Quality
- *Hazardous Materials Sites*
- Environmental Constraints

Step XI – Regional Plan Consistency with State and Federal Requirements

Page XI – 1 The authority and need for Colorado’s regional transportation planning process, is based on three sources:

- ~~*Intermodal Surface Transportation Efficiency Act (ISTEA)*~~
- Title 43 Colorado Revised Statutes
- *Transportation Equity Act of the 21st Century (TEA-21)*
- Statewide Transportation Planning Process Rules and Regulations

Other laws and guidelines, both federal and state, also have a bearing on the process. These include federal environmental laws, the American with Disabilities Act, *Title VI of the Civil Rights Act of 1964 (49 CFR part 21) and Executive Order 12898*, U.S. DOT guidelines regarding MPO and Statewide planning, state laws regarding regional planning commissions, and others. The Statewide Transportation Planning Process Rules and Regulations (The Rules) consider all these and outline a process ensuring that resulting long-range regional transportation plans meet all necessary requirements...”

Colorado Department of Transportation Guidelines for Public Involvement in Statewide Transportation Planning and Programming

Public Involvement Goals

Introductory Page, GRASS ROOTS INVOLVEMENT “To solicit direct citizen input and participation early and continuously in both the regional and statewide transportation planning and programming process. Opportunities for involvement such as public meeting, citizen advisory groups, surveys, ***neighborhood/community groups***, focus groups, and other mechanisms should be provided.”

Introductory Page, INTERACTION “To develop strong communication linkages among citizens, CDOT, local elected officials, transportation providers, environmental groups and agencies, ***neighborhood/community groups***, and other interested parties as a method of building support through all phases of statewide transportation planning and programming.”

III. Process Elements

Page 2, “CDOT will promote public involvement in the Statewide Transportation Planning and Programming Process through the following five elements:

- Public Education;
- Scheduled Opportunities for Public Input Prior to Key Decisions;
- Outreach for Groups Representing Statewide Interests;
- Media Plan; and,
- Outreach for Under-served ***and/or Low-income and Minority*** Populations.”

B. Scheduled Opportunities for Public Input prior to key Decisions in the Statewide Planning Process

Page 4, 1 – Initiating the Planning Process “This occurs on a six-year cycle. CDOT intends to make available to the public context-setting information (see Paragraph 1 under Public

Education, Page 2), state transportation policy, statewide vision, issues of state significance, definition of major statewide mobility corridors, modal priorities, *regional demographics notating locations of low-income and minority populations groups*, direction-setting criteria and standards, results of public surveys, etc.

C. Groups Representing Statewide Interests

Page 6, Paragraph 1-2 “Comments from these groups will be solicited prior to initiating the transportation planning process in order to assist in identifying critical statewide issues and priorities. Second, these groups will be asked to comment on the draft statewide transportation plan(s).

The interest groups will be identified based on the following broad topic areas:

- Business/Economic Development/Tourism
- Freight/Commodity/Passenger Movement
- Environment
- *Low-income and Minority Populations*

E. Outreach to Under-Served Groups

Heading for Section E to “***OUTREACH TO UNDER-SERVED AND/OR LOW-INCOME AND MINORITY GROUPS***”

Paragraph 1 CDOT believes additional measures are required to reach traditionally under-served *and/or low-income and minority* groups such as the elderly, handicapped, low-income households, people of color, physically or mentally challenged persons, and student populations which may face difficulties accessing employment and other amenities. These special measures

are in addition to the other public participation activities discussed throughout the public involvement process and will be conducted in accordance with the Americans with Disabilities Act, Title VI of the 1964 Civil Rights Acts, *Executive Order 12898 on Environmental Justice*, and other acts associated with the inclusion of the under-served groups in public involvement activities.

Change all other references in Section E from “under-served” to “*traditionally under-served and/or low-income or minority*”

APPENDIX A – Guidelines for Public Sessions

Page 10, Special Guidelines for Public Meetings

1. At least one half of the meeting time should be for open discussion.
2. Distribute an agenda.
3. Select presenters who are understandable.
4. Select experienced facilitators for the open discussion.
5. Use clear visual aids and handouts.
6. Provide adequate staff for sign-in, note taking, and presentations.
7. Provide for other amenities as needed *such as translators and interpreters, etc.*

Rules and Regulations for the Statewide Transportation Planning Process and Transportation Planning Regions

(Consider changes only as a part of revisions necessitated by future federal transportation legislation reauthorizations)

Development of Regional and Statewide Transportation Plans

Page 11, Section A, 4a - Establishing and maintaining for the geographic area of responsibility a mailing list of all known parties interested in transportation planning including, but not limited to: elected officials; municipal and county planning staffs; affected public agencies; local, state, and federal agencies eligible for federal and state transportation funds; local representatives of transportation agency employees; transportation providers; private industry; ***local representatives of communities or neighborhood organizations***; environmental and other interest groups; Indian tribal governments and the U.S. Secretary of the Interior when tribal lands are involved; and members of the general public expressing such interest in the transportation planning process.

Page 11, Section A, 4d - Seeking out those persons or groups that may be under-served by existing transportation systems ***or may experience disproportionately high or adverse impacts from proposed transportation improvements***, for the purposes of exchanging information, increasing their involvement, and considering their transportation needs in the transportation planning process.

RECOMMENDATIONS FOR INTEGRATING ENVIRONMENTAL JUSTICE GUIDELINES AND POLICY TOOLS IN THE STATEWIDE AND REGIONAL PLANNING PROCESS

During the course of this research study, the Research Study Panel raised issues and concerns related to the need for broader guidelines and policy tools on EJ. These issues and concerns included:

- The need for a common understanding of the requirements;
- The need to define the different approaches for environmental justice between the statewide and regional planning processes as well as the project development process; and,
- The need to provide for a concise and detailed explanation of the federal requirements for environmental justice in the MPO and Regional Planning Guidelines.

To assist CDOT with these issues and the integration of EJ into the statewide and regional planning processes, several recommendations were formulated.

Guideline Document of CDOT's Environmental Justice Process

A review of CDOT's existing MPO Guidance Manual and Regional Transportation Planning Guidebook found that each of these documents focused on broad statewide and regional planning process requirements. To include a section on the EJ planning process would not be in keeping with the original intent of these two documents.

It is recommended that CDOT develop a separate EJ guideline document to assist with its planning efforts. The benefits of guidelines specifically related to EJ are to:

- Provide a baseline for statewide consistency while maintaining the flexibility to meet individual regional concerns.
- Explain the federal environmental justice requirements and how CDOT will integrate these requirements into their planning processes.
- Provide planners with an explanation of the differences between statewide, regional and project level planning.
- Document how CDOT’s planning process is in compliance with the Executive Order and Title VI.
- Provide a forum for documenting the lessons learned from other state and regional planning agencies.
- Compile information on the process, necessary data, and public involvement all in one document.

Training and Education on EJ

It is recommended that CDOT offer EJ-related training opportunities for both its internal planning and engineering professionals as well as for its external transportation planning partners. Specific groups to target for EJ training include:

Internal CDOT Training Opportunities	External Training Opportunities with CDOT’S Partners
Statewide Planning Team	Statewide Transportation Advisory Committee
DTD Regional and Statewide Planning Staff	Regional Planning Commissions
CDOT Region Planning and Environmental Staff	MPO’s and Their Planning Partners
Other Engineering and Planning Staff Involved in the Project Development Process	Private Consultants
Executive Management Team	

There are various mechanisms for creating training on EJ. One currently available mechanism is the Title VI, Environmental Justice and Transportation Planning Assistance Workshop sponsored by FHWA and the Federal Transit Administration (FTA). This workshop focuses on the legal requirements and introduces participants to EJ best practices. CDOT should consider collaborating with FHWA and FTA to jointly sponsor an on-site training session. Another option is to develop a portable training course that can be conducted in all areas of the state whether participants are employed by CDOT or partnering in the statewide and regional planning process.

CDOT Policy Directive and/or Procedural Directive on Environmental Justice

Two specific tools exist to that can be used to incorporate EJ regulations and procedures in the mainstream of CDOT work activities:

- CDOT Policy Directive – defines the purpose and objective of the policy, identifies the implementing strategies, communicates the relationship of the policy to the goals of the Transportation Commission or the Executive Management Team, and indicates the level(s) of organization that may be responsible for implementing the function or activity.
- CDOT Procedural Directive identifies the policy to be implemented, identifies the authority and level of decision-making necessary, establishes lines of communication and any subsequent responsibility, and provides a detailed description of the procedures to be implemented.

A directive would work to attach the EJ principles to various levels of decision-making, thereby establishing consistency within CDOT. Both a Policy Directive and a Procedural Directive would require coordination with the Office of Policy and Governmental Relations, a review by CDOT's Executive Management Team, and consideration by the Colorado Transportation Commission for adoption.

APPENDIX A

External Interviews

Methodology, Purpose and Intent

The literature search yielded a moderate volume of experience and information on Environmental Justice applications. In order to learn from experiences of other agencies in implementing environmental justice programs, a series of interviews was conducted with representatives of implementing agencies. Representative agencies from across the country including state departments of transportation and metropolitan planning organizations were chosen for their relevance to Colorado's planning environment and for innovation in their programs.

A series of interview questions was developed to explore the Overall Strategies and Goals, Data Collection, Planning Process, and Public Involvement aspects of the program. The interview questions are included with this document. Each agency was contacted by phone or e-mail to determine the best person within the agency to speak knowledgeably about the program. The appropriate person was then contacted by either e-mail or phone to set up a time to conduct the interview over the phone. Each interview took from 35 to 55 minutes. The survey questions were used as a guide for the conversation, rather than as a strict question and answer tool. In this way, the interviewer was able to structure the conversation in a way that obtained the most relevant information about the respondent's program.

Libby Rushley, Statewide Transportation Improvements Program Coordinator, Ohio DOT

Overall Strategies and Goals

The Ohio Department of Transportation developed "Guidance and Best Practices for Incorporating Environmental Justice into Ohio Transportation Planning and Environmental Process" dated May 30, 2000. It is currently in draft form, to be revised upon the release of final FHWA environmental justice guidance and regulations.

The major goal of the effort was to develop a consistent approach for transportation planning within the state, to include ODOT and its administrative districts as well as MPOs. The process is to apply to long-range plan development, TIPs, and the STIP. A subsidiary goal was to develop a process that would facilitate the approval and adoption process through the use of uniform methods. While the document deals to some extent with the project level NEPA process, it is intended primarily for use with the plan, TIPs and STIP. The NEPA process is adapted to individual projects to meet the required environmental justice criteria.

Implementation is dispersed throughout the department, with primary responsibility under the planning division and the districts, who are responsible for most direct public involvement activities. While Title VI plays a significant role in environmental justice, the department's coordinator is not directly involved with the effort. That office deals primarily with internal equal opportunity and employment.

Data Collection

The process is entirely dependent on US Census data due to its consistently reliable data. They only employ county level data in the process and do not locate specific target populations at a smaller geographic unit for use in statewide planning. The MPOs utilize data at the TAZ level. The process addresses four types of environmental justice populations: low-income is defined as the poverty level used in the Census; minority is defined as race as a percent compared to the statewide average; elderly as 65+; and handicapped as Census defined mobility impaired. The first two categories are clearly demanded by current federal guidance, while elderly and handicapped were added in anticipation of possible enhancements to the final federal rule.

Planning Process

ODOT has developed a list of 14 potential impacts that are to be measured for disproportionate impacts against a target population:

- bodily impairment, infirmity, illness or death;
- air, noise, and water pollution and soil contamination;

- destruction or disruption of man-made or natural resources;
- destruction or diminution of aesthetic values;
- destruction or disruption of community cohesion;
- destruction or disruption of a community's economic vitality;
- destruction or disruption of the availability of public and private facilities and services;
- vibration;
- adverse employment effects;
- displacement of persons, businesses, farms, or nonprofit organizations;
- increased traffic congestion;
- isolation;
- exclusion or separation of minority or low-income individuals within a given community
- or from the broader community; and
- the denial of, reduction in, or significant delay in the receipt of, benefits.

Impacts are quantified in measurable units where possible, or subjectively if quantitative analysis is impossible. A series of questions was developed for each factor to be used in judging its impacts.

FHWA, the MPOs, and to a certain extent FTA were involved in the development of the process. As a measure of success and acceptance, FHWA approved the most recent STIP with no criticism of the state's methods of addressing environmental justice in the planning process. The most effective strategy has been the adoption of a district-based public involvement process.

Public Involvement

In addition to the "Guidance" manual, two other documents will assist with the process. First, a companion document has been completed that incorporates relevant US Census data at the county level for each county. This was intended to provide a ready data resource in a uniform

format for the use of the districts and MPOs. Second, a new public involvement manual is under development that will include environmental justice principles. It is intended to build a public involvement process to be followed from early planning through project development stages.

Nancy Pfeffer, Director of Planning and Policy, Southern California Association of Governments

Overall Strategies and Goals

The Southern California Association of Governments (SCAG) is the designated MPO for the largest and most populous metropolitan planning region in the country, including the greater Los Angeles area. SCAG is responsible for long-range transportation planning for the entire six-county area, containing approximately 16 million people. The diversity of this large metropolitan area is remarkable for the proportion of ethnic and low-income populations. Two long-range plans have been completed for the region, in 1998 and 2001, with significant Environmental Justice components. The program is building, but is a national leader in terms of implementing EJ in its programs.

The major goal of the program is to seek an equitable distribution of both benefits and burdens across all demographic strata. This goal is accomplished by analyzing the costs and benefits of the long-range plan to all demographic sub-populations, not just those designated as a target population for EJ activities. SCAG does not address project development level EJ issues. The agency has established a set of guidelines “Environmental Justice Policies and Procedures” for its activities.

No single department or division within SCAG holds primary responsibility to implement its EJ program. Each operating group considers EJ one of its core responsibilities and integrates those principals in its day-to-day work. In that sense, the Executive Director is considered to hold the ultimate authority. In practice, the Department of Planning and Policy, with its Transportation Planning and Analysis Section, and the Department of Government and Public Affairs, which handles all public outreach, have primary roles in implementing EJ principles as related to

transportation planning. EJ principles relating to Title VI are addressed through those departments, while a separate section addresses internal equal opportunity and employment issues.

Data Collection

This respondent suggested that, at least for their purposes, the establishment of universal thresholds for analysis may not be productive. For example, a common method is to choose an appropriate threshold, like number of households with incomes under the poverty level, and measure the effects of the plan or project on those households. This is problematic in that it is often difficult to obtain consensus on appropriate thresholds. SCAG chose to sidestep the issue by analyzing impacts to ALL categories.

In addition to income and ethnic data, SCAG analyzed impacts to the elderly (65+) and census-defined mobility impaired. All information becomes input to the regional travel demand and air quality models, allowing analyses of alternative development scenarios for each group.

Enhanced analysis conducted under the “Accessibility” performance measure provided the momentum for the agreed upon changes. SCAG defines “Accessibility” as the percent of total workers within 25 minutes travel to their jobs. All analysis was conducted at (or converted to) the Transportation Analysis Zone (TAZ) level. The analysis used three income levels - under \$12,000, \$12,000 to \$25,000, and over \$25,000. In an interesting development, rather than employing straight household income figures as reported in the 1990 Census, adjusted household numbers were obtained by applying per capita income to known average household size, which in this area is approximately three, whereas federal poverty levels are determined based on a household size of four. The analysis examined all Census ethnic designations, but for EJ analysis purposes, grouped them by Black, Hispanic and Other. The three income segments and three ethnic segments were then placed in a matrix of nine total categories, allowing the assignment of an ethnic/income designation. The plan was then analyzed for its benefits and costs to each group.

All forecasts were made to 2025, using a variety of data sources, to create a demographic profile by TAZ. Data sources included US Census (1990), ES-202 (post census, establishment-based job data), and the Dun & Bradstreet employment data file.

Planning Process

SCAG initiated a performance based planning process in 1994 in order to provide a comprehensive framework for decision-making. The seven performance indicators adopted in this process include:

- Mobility
- Accessibility
- Environment
- Cost-Effectiveness
- Reliability
- Safety
- Consumer Satisfaction

Public Involvement

Following the release of the preliminary long-range plan “CommunityLink 21” in 1997, a coalition of groups filed an intent to sue over Title VI and environmental justice issues. The threatened suit alleged that the draft plan appeared to offer few benefits to those living below the poverty line. The primary issue was that SCAG intended to invest heavily in light rail, documented to benefit more privileged populations, and lower investments in the existing bus system, known to be used more heavily by lower-income groups. Also at issue was a failure to involve low-income and minority communities in the planning process.

SCAG undertook a significant revision of its process, which resulted in noteworthy changes to the plan that was documented in a court issued Consent Decree. Significant changes included greater investment in traditional bus transportation and improved public outreach activities. The resulting plan was endorsed by the objecting coalition.

SCAG has developed a comprehensive public involvement program with a specific component designed to improve interactions with communities. The program, “Environmental Justice Community Dialogues,” targets low-income and minority populations, and is an effort to create a two-way conversation. It begins with a “tutorial” on the transportation planning process, then creates an opportunity for feedback in an effort to determine community needs. SCAG has found it especially productive to be placed on the agenda of existing community groups that meet in the neighborhood. This has been more successful than sponsoring a meeting dedicated solely to the planning issue. Location and time of the event are also considered critical. Often members of the target group will be intimidated by meeting in unfamiliar surroundings and will provide a better turnout for evening or weekend meetings. Language barriers are addressed by providing translators at meetings and translations of documents and materials. Written input is usually taken on forms, with formal comments recorded at a microphone. Offering snacks or other food often encourages attendance. The availability of child care is an issue, but is not typically provided by SCAG.

No direct feedback to the community group is typically provided, except through the results of the plan itself. A major watchdog group’s acceptance of the plan is how success was measured.

Other

SCAG’s major challenges involve making their performance measures more responsive to specific needs of minority and low-income populations. They need to spend even MORE time in communities, but are limited by resource availability. Specifically, efficient transit needs to be available for everybody. The final measure of effectiveness will be to set SCAG’s funding priorities on the basis of the equity and accessibility performance indicators that have been years

in development. In other words, the organization feels some disconnect between the successfully completed long-range plan and the commitment of appropriate resources to programs that address potential discrimination.

One of SCAG's major successes revolves around restructuring of aviation plans due to noise impacts in predominantly low-income neighborhoods. Their re-examination of 65db noise levels as impacting target groups resulted in a decentralization of aviation service, thus dispersing noise throughout the region, rather than concentrating it in low-income areas.

Lessons Learned - The plan must be responsive to community needs and equitable across society; these are not mutually exclusive goals. Benefits and burdens can be integrated into a performance-based planning process that helps to identify and address the potential for discrimination.

Mary Frye, Transportation Planner, Pikes Peak Area Council of Governments, Colorado Springs, CO

Overall Strategies and Goals

The Pikes Peak Area Council of Governments (PPACG) has recently completed the 2025 Long-Range Plan Update. PPACG is the MPO for the greater Colorado Springs area. The update incorporates some environmental justice components. The major goal of the EJ component was to ensure that city transit services are available to all neighborhoods, and especially where low-income or minority populations are significant proportions of the total.

Data Collection

The MPO has created an extensive demographic profile of the entire community, using 1990 US Census data. Data is analyzed primarily at the TAZ level. During the recent public involvement effort associated with the plan update, the addresses of attendees at public meetings have been geocoded into the GIS database, allowing an assessment of demographic characteristics as compared to the entire planning area. This will assist with their evaluation of the effectiveness of the public involvement process.

Planning Process

The plan incorporates several EJ related criteria into its project/alternatives analysis and selection process, including comparison of EJ target population transit users to all users and neighborhood users.

Public Involvement

The MPO employed the technique of focus groups as part of its EJ public involvement. The focus groups were demographically representative of the region at large with respect to income, race, gender, and age. The focus groups examined the planning process, the TEA 21 Planning Factors, and assisted in assigning weighting factors to evaluation criteria. Analysis of the focus group input was completed at a qualitative level, providing the MPO with opinion-based feedback about the plan and planning process. There is no current EJ analysis of the TIP.

Several techniques were employed to help ensure the availability of and reduce barriers to participation in the public process. These included ensuring the meeting location is transit and ADA accessible, holding meetings in neighborhoods throughout the community, holding meetings in schools and community centers, news releases to media that target advertising in Spanish language newspapers, and translation of some materials. Translators and signers have been advertised as available on request, but never accessed.

A Specialized Transportation Committee is convened on a regular schedule to provide feedback on elderly and disabled issues. The committee is made up of representatives of the elderly and disabled community including transportation providers, users and agencies.

Other

Too much effort has been placed in the past on the standard “public meeting” that typically involves only a small portion of the community and provides limited useful feedback - all with a large investment in time and resources to produce. More productive methods have included

placement on the agenda of existing community organizations and councils. PPACG also had good success with a speaker's bureau in which groups were invited to call and request that a speaker come to their location to make a presentation.

Pat Oliver-Wright, Director, Long-Range Planning, New Mexico, DOT

Overall Strategies and Goals

The New Mexico DOT has just begun the process of updating their seven long-range regional plans. The plans are for Regional Planning Organizations (RPO). In addition, New Mexico has 3 MPOs that conduct their own planning processes but do coordinate with the state. One goal of the plan update process will be to address Environmental Justice principles to the extent recommended and expected by FHWA. The planning process is under the primary jurisdiction of the Long-Range Planning Section within the Transportation Planning Division. The Department's Title VI Coordinator has expressed an interest in coordinating with the Long Range Planning Division on the initiative, but is not heavily involved to date.

Data Collection

NMDOT intends to create a mapped profile of each region using 2000 Census data as it is available. Income data for New Mexico is not yet available. Proposed projects will be overlaid on the demographic maps to determine impacts to EJ populations. A specific methodology for the comparison has not been determined. They intend to evaluate impacts using race and income only, due to existing federal guidance. Definitions or thresholds are as yet undetermined.

Planning Process

The DOT supports each RPO with the direct employment of a contractor to complete the plan. They are now in the process of gathering needs assessments. Any potential benefit/costs methodology is also undetermined. The process is expected to apply to the long-range plan, with no expected evaluation of the STIP.

Public Involvement

Each RPO has submitted a proposed public involvement plan that is under review by the DOT. In addition to regional public involvement, NMDOT is planning a series of seven regional “citizen conferences” specifically designed to address EJ principles. Attendance at the conferences will be by invitation, with invitees selected by a consultant for a statistically demographic cross-section of the state’s population.

NMDOT publishes notices of public involvement events in English and Spanish, along with notification that interpreters are available on request. Live interpretation is seldom or never requested. They also experimented with signers for the hearing impaired, but due to limited demand no longer employ a signer for every meeting; they are, however, also available upon request.

Other

Twenty-two tribes have homelands in New Mexico requiring NMDOT to have developed extensive partnering processes. In their experience, the tribes have not been especially active in attending public meetings hosted by the regions. Sovereignty issues are critical and the tribes prefer to meet directly with federal representatives or the state. The DOT has had some success with attending regularly scheduled tribal meetings and activities and seeking input at those venues.

James B. Lewis, Transportation System Analyst, New Jersey DOT

Interview date 1/22/02

Overall Strategies and Goals

The emergence of environmental justice as a critical issue in long-range planning happened after New Jersey had begun the most recent update. The focus of NJDOT's plan is policy and strategic, rather than project oriented and geographic. For this type of plan, it was considered appropriate to forgo the GIS/Census data-based effort that is in process for other areas. Therefore, this process focuses on the public involvement process and feedback systems as the critical piece.

New Jersey's long-range plan, "Transportation Choices," clearly states its environmental justice policy, "A major goal for environmental justice in the state is to re-emphasize NJDOT's and NJ TRANSIT's commitment to protect human rights and to enable all New Jersey citizens to participate in decisions affecting the transportation system and to enjoy the benefits it provides."

Data Collection

The plan does address minority, low-income, mobility and age issues, but does not attempt to define these specific populations in relation to the general population.

Planning Process

New Jersey is completely "blanketed" with three MPOs. While there are some rural areas in the state, they are under the jurisdiction of one urban area or another. With that in mind, the state plan focuses on coordination, policy and strategy, while MPO plans focus on more specific project level needs. To this end, the long-range plan contains an Urban Supplement.

The Urban Supplement reports for seven cities in New Jersey developed as part of this plan specifically focus on the needs of inner-city residents who are reverse commuting or are seeking

employment outside the city in which they live. These data provide valuable insight on how the benefits derived from recent transportation investments have been distributed throughout all sectors of the population. NJDOT and NJ TRANSIT have incorporated the discussions from the focus and issue groups, as well as the information gathered for the Urban Supplement, in the policies of this long-range transportation plan update. The public involvement process and concentration on urban issues has provided an opportunity to frame the plan for system improvements in terms of all the elements of a community, with special attention paid to the target populations.

The Title VI Coordinator has coordinated with the long-range planning process from the beginning and has begun several independent, but related initiatives. For example, an EJ Task Force has met over the past year to help coordinate efforts between the long-range plan and project development phases with the MPOs. The Title VI office has also assembled a comprehensive statewide list of organizations that represent or comprise EJ populations.

Public Involvement

NJDOT and NJ TRANSIT are fully aware of the importance of addressing environmental justice issues in the transportation development process. NJDOT and NJ TRANSIT have reached out to the disadvantaged and minority groups in the state as a part of the public involvement process for the formulation of *Transportation Choices 2025*. Five focus groups were held throughout the state to discuss various transportation needs and issues. Three of these groups - the Low-Income Focus Group, the Minority Focus Group, and the Disabled Focus Group - specifically addressed issues associated with environmental justice. To understand the concerns of senior citizens - another traditionally under-served sector of the population with respect to transportation - a Mobility and the Aging Population Issue Group was convened. The forum gathered input from individuals and agencies involved in providing transportation to this sector of the population in an effort to identify their special transportation needs. The feedback and recommendations from all the focus groups and the issue groups have served as supportive material in the development of the plan.

Another effort to reach out included manning “public information centers” in a variety of areas, including train and bus stations. Each station was available for a half day during which planning materials and feedback forms were distributed, a video was available and NJDOT’s “Virtual Budget Game” could be accessed through a computer connection. The budget game allowed a virtual distribution of funds to types of program areas, dependent on the participant’s priorities. In addition, the summary document of the long-range plan was translated into the dominant non-English language.

Other

NJDOT and NJ TRANSIT will continue to address environmental justice through the “living plan” process. Future work is anticipated in three areas and will be conducted in coordination with the state’s MPOs. Work is envisioned on demographic profile mapping, outreach and systems level analysis:

- Updating Demographic Profile Mapping
- Update the mapping of locations of minority and low-income population concentrations using 2000 Census data
- Develop maps for elderly and disabled population concentrations
- Continuing Focused Outreach
- Continue work on targeting and engaging populations of concern in identifying needs and in transportation decision-making, including involving them in context sensitive design projects.
- Conducting Systems-Level Analysis - Prepare an analysis using the three MPO travel demand models to evaluate if access to jobs and services is equitably distributed to populations of concern.
- Develop strategies to address any disproportionately low benefits or high burdens on those populations. Both agencies are committed to integrating environmental justice into all transportation processes, and will evidence this commitment through continued efforts in

fulfillment of public involvement and planning process requirements, as well as in the shaping of policy.

Paul Mullins, Director of Planning and Programming, Georgia DOT

GDOT has just released a Request for Proposal for Environmental Justice Planning. They essentially are only beginning to develop an EJ program, similar to Colorado. The RFP is also similar to CDOT's project with tasks associated with research of national resources and best practices, evaluation of the current Georgia process, development of recommended procedures, etc. We were directed to the Atlanta Regional Commission as a good example of existing process.

Emerson Bryan, Director of Support Services, Atlanta Regional Commission

Interview Date 1/24/02

The Atlanta Regional Commission (ARC) is the metropolitan planning organization for the greater Atlanta area, comprising 10 counties and 63 municipalities. The Commission is responsible for the full range of planning activities, including transportation, water, the Area Agency on Aging, and implementing the Regional Workforce Training Act.

Overall Strategies and Goals

Unique among agencies contacted during the course of this study, the ARC considers EJ, and social justice in general, not to be a response to federal legislation or regulations, but to be a way of doing business. There is a long history of social justice issue problem solving in Atlanta. To ARC, the only good business model is one that takes a comprehensive approach to the integration of all needs in the process of government.

To address transportation-related EJ issues, ARC has begun an initiative called "Burdens and Benefits" to assess the social, environmental and economic impacts of its transportation programs, including the long-range plan and STIP, on all population segments. This model-

based process evaluates performance measures including access, travel time, and other transportation indicators to determine the benefits and burdens (costs) to society.

Most importantly, the goal of EJ programs is to develop methods to apply positive impacts to EJ populations rather than to avoid negative impacts. In other words, the basic premise is to ask “How can the transportation system facilitate positive social and community results?”

The 2025 regional plan expresses these policies related to EJ:

- Ensuring the equitable provision of transportation services on a geographic, demographic and modal basis including 1) children, elderly, disabled and transportation-disadvantaged and 2) access to jobs for minority and poor populations; and
- Considering origins and destinations of low-income people, the elderly or those who do not own automobiles when determining the location of transportation improvements, especially transit improvements.

Data Collection

The primary data source for EJ applications is the US Census, especially income, poverty status, race, automobile availability and age. Block groups have been used as the region’s TAZs and form the basis for analysis. Any particular zone was classified as having an EJ population if any one of the following criteria were true:

- 50% non-white
- 20% zero vehicle households
- 20% households below poverty line
- 20% population over age 60

The agency has also recently conducted an extensive travel survey of home-based trips. The data can be segmented and analyzed by any number of demographic criteria, including income and ethnicity.

Planning Process

ARC has another ongoing planning process called “Livable Centers Initiative” through which they are allocating \$20 - \$30 million per year to communities to develop more livable communities. Programs include the integration of land use and transportation planning and are expected to promote better planning in general. At the end of a 5-6 year period, a second process will begin to fund the actual implementation of ideas developed in the plans. Title VI implications are integral to EJ and are a major part of the set of initiatives put in place by ARC.

Public Involvement

They have enhanced the public involvement program to be more inclusive and extensive. There are several distinct components to the program, including:

- A formal public involvement process designed to satisfy the requirements of TEA 21, especially the timing of input opportunities at major milestones
- Temporary “Listening Stations” were established at busy public places such as bus and transit stations. These kiosks were used to distribute literature, hand out feedback forms, talk, listen, etc.
- Created a series of planning task forces, including a dedicated Environmental Justice Task Force.
- Conduct quarterly polling about transportation issues. The polls include a demographically consistent cross-section.
- Created an integrated staff public involvement team whose mission is to coordinate the many public meetings, building on existing meeting structures as much as possible. They promote information sharing among all the member entities and translate pertinent documents into about 17 languages and Braille.
- Created a Citizen Committee to participate directly on the board with elected officials.

Other

ARC is conducting a comprehensive analysis of the financial aspects of the long-range plan and the TIP. The analysis examines how much is being spent in what geographic areas. It examines the phasing over time of transportation projects to account for the time periods required to complete major projects before investing in another area.

One of the most important lessons is to document the feedback loop - it is critical to tell people what the agency heard through the public involvement process and how it affected the output of the plan. Their whole concept is evolving from public involvement that is too often done to satisfy a requirement to “citizen engagement” that offers full partnership in the decision-making process. It is based on respect for individuals, their experience and personal expertise.

Preliminary Conclusions

A wide range in the variability of practices is evident. Some organizations are just beginning to grapple with the implications of the Environmental Justice initiative, while others are particularly well-developed. SCAG is probably the leading example nationally in applying and developing a program. This is understandable given the size of the metropolitan area and the range of potential issues.

The majority of organizations seem to be focusing on ethnicity and income as measures, with some additional analysis in the more aggressive areas. The use of US Census data is almost universal as a tool to locate EJ populations. The level of analysis ranges again from qualitative planning level assessment to data rich economic analysis. In other areas, FHWA has accepted EJ programs that make a good faith effort to incorporate EJ principles in the planning process. Efforts have been successful that are scaled to the relative need and available resources of the planning agency.

One often missed component that seems to be clearly required is a methodology to evaluate the overall benefits and costs to EJ populations in long-range plans and TIPs. It is probably insufficient to simply judge that a proposed project or plan has no significant negative impacts. The intent of the program also includes an analysis of disproportionality with respect to benefits. Also clearly required is an enhanced public involvement process. Methods should be developed specifically designed to engage EJ populations. This is often a resource intensive task.

CDOT Interviews

Chris Paulsen, CDOT Region 6, Project Manager, I-70 East

Date of Interview - 1/4/02

Overall Strategies and Goals

The I-70 East project will involve reconstruction of I-70 from I-25 (mousetrap) east to Pena Blvd. Very little environmental analysis has been done for this project except for the Major Investment Study of a few years ago. The I-70 East Environmental Impact State Request for Proposal is expected to be released by the end of February 2002. CDOT has begun preliminary meetings with community groups. The early assessment is that Environmental Justice will emerge as the number one environmental issue for the project. Other known issues include hazardous materials in the soil as a result of historic industrial activities and noise (existing and projected) from I-70. Even those issues have a direct bearing on EJ due to the ethnic and income composition of several contiguous neighborhoods. CDOT has indicated that they intend to conduct a major EJ analysis and will be looking for significant consultant expertise in that area. The selected consultant will be expected to use guidance available from FHWA and EPA. Spanish language communication and a responsive presence will be important.

Planning Process and Public Involvement

Transportation impacts in this neighborhood have a long history, dating from the original construction of I-70. The community division, noise and air quality impacts are high. Neighborhood activists have a long list of complaints, some of which date from previous construction activities, raising concerns about future construction. The potential for community mitigation activities is high. Possible scenarios may include bus transit upgrades, noise barriers and community improvements. This respondent believes that significant planning level EJ analysis should precede project development so as to identify potential issues of concern.

Other

Recommends contacting:

Elizabeth Evans (Michael Winstrom, staff), Director of Environmental Justice Programs, EPA, (303) 312-7009

Loraine Grendada, Executive Director, Colorado People's Environmental and Economic Network (COPEEN), represents the Globeville area along I-70 East project

Date of Interview - 1/3/02

Description of COPEEN

The Colorado People's Environmental and Economic Network (COPEEN) was formed by residents of Northeast Denver in 1994, as a proactive, grassroots response to grave environmental injustices perpetrated against their communities.

According to this organization's executive director, a neighborhood activist since 1987, the history of interaction between the neighborhoods located along the I-70 corridor and CDOT have been neglect and broken promises on one side and despair and isolation on the other. The highway bisected the community, closing many cross streets, and is elevated over school, residential and commercial areas or is separated from existing structures by nearly non-existent buffer zones, measured in inches or feet in some cases, rather than yards. The neighborhood was identified as 81% Latino and 42% monolingual (Spanish). Given the scope of the project, it was not considered appropriate to attempt to address perceived past transgressions by CDOT. This interview focused on what processes could be implemented to help alleviate concerns about the future. The following series of recommendations was made:

Planning Process

- Use COPEEN (and other organizations) as a contact - they have a 2650 member mailing list.
- Local organizations can help identify official and unofficial community leaders whose opinions and participation help inform the community and guide community opinion and action.
- Document the official response to input. Don't just listen - it is important to let the community know they have been heard.

Public Involvement

- Public meetings should be held in a familiar neighborhood facility, such as a school or church. Past meetings have been held in a place like the Red Lion Inn where many local residents feel uncomfortable or simply will not attend.
- Outreach is critical. CDOT must not only present a listening ear, but a presence that shows sincerity in caring about the people in the community rather than simply meeting the letter of the law.
- Local residents or organizations should be invited to assist with meeting planning and materials design. Jargon and text heavy materials are obstacles to understanding and participation.
- Spanish language materials and interpreters are necessary. Babysitting and interpreters could be provided by community residents if asked, and for a modest fee.

The respondent will mail materials about the organization and community issues.

Cecelia Joy, Environmental Manager, CDOT-Region 1, Project Manager, I-70 West PEIS

Date of Interview - 1/7/02

Overall Strategies and Goals

Federal guidance on the implementation of EJ is incomplete, so Region 1 has begun development of a process through the use of several consultants employed on three major projects. Region 1 expressed concerns about the need for flexibility of standards so that they can be adjusted to be responsive to project-specific needs. A second issue concerned the effectiveness of applying statewide/regional planning principles to the complexities of the NEPA process. Obtaining consensus among CDOT, FHWA, EPA and the community on appropriate thresholds is both critical and difficult. It is believed that establishing “one size fits all” standards and thresholds for the identification of EJ populations will be difficult and probably ineffective. Consequently, the Region has adopted two different sets of guidelines for three projects. The following information is from notes resulting from several meetings concerning the I-70 Mountain Corridor PEIS - Environmental Justice Approach and Public Involvement/Outreach Program. Meeting participants included CDOT personnel and consultants

associated with all three projects. A follow-up conversation was held with the Region to clarify concepts and issues associated with the three projects.

The primary strategy for these projects has been to use income and ethnicity data to identify potential EJ target populations within the corridor requiring further analysis and public involvement efforts.

Data Collection

The majority of the data has been drawn from 1990 US Census Block Group data and will be transitioned to 2000 data as it becomes available. In addition, schools were contacted for data on free or discounted lunch programs in an effort to help identify low-income areas. Other possible sources include the English as a Second Language program at the Colorado Mountain College and the Family Intercultural Resource Center at the Colorado Department of Local Affairs. It was noted that seasonal populations may be an issue in some areas, but are difficult to determine due to inherent transience and unavailability for Census surveys.

For the identification of low-income populations, two potential thresholds have been identified using either the Community Development Block Grant (CDBG) target of 80% of Average Median Income (AMI). An alternative threshold was established at 50% of the AMI that is above the \$17,050 defined by the State as poverty level. An unanswered issue in regard to EJ in the I-70 corridor is whether using the CDBG number of 80% of AMI to identify EJ communities requires a later commitment to use the same percentage for the mitigation of disproportionate impacts. The Region has decided to map both 50% and 80% threshold levels to use as background information to identify focus areas and that the identified communities would be targeted regardless of specific numbers. Later, when identifying impacts, the existing map data will assist in determining any disproportionate impacts.

The Region developed the following definition of Minorities for Environmental Justice Considerations:

- Black

- Hispanic
- Asian American
- American Indian or Alaskan Native

Planning Process

New alternatives are not anticipated as a result of the EJ analysis. However, a range of approaches or activities is anticipated as a result of public involvement process:

- Mitigating disproportionate impacts
- Recommending new studies, if warranted
- Documenting the problems and suggesting options for addressing these problems in the future; identifying the problems so people can readily see and choose to address these in a site-specific environmental document

Public Involvement

Proactive public involvement process designed to be most inclusive in identifying low-income and minority communities in the corridor.

Coordinated public involvement among three projects/consultants in order to share information and create a uniform approach to addressing EJ concerns.

2,000 surveys distributed in English and Spanish. Newsletters noted that Spanish and Russian translations are available. While Russian ethnicity is not a qualifying factor, it may be an indicator of low-income populations.

Jim Paulmeno, CDOT, Environmental Manager, T-REX

Date of Interview - 1/15/02

Overall Strategies and Goals

The Southeast Corridor Project in Denver has been renamed “T-REX” for Transportation Expansion Project. It includes major reconstruction and capacity expansion of I-25 from Lincoln Avenue in Douglas County to Broadway in Denver, and I-225 from Parker Road in Aurora to I-25 as well as construction of new light rail facilities. A major investment study (MIS) preceded the Final Environmental Impact Statement (FEIS). The project is currently in Phase 2 - Design/Build and will enter Phase 3 - Construction this year. CDOT staff is auditing and ensuring compliance with the mitigation procedures and agreements established in the FEIS.

Data Collection

CDOT’s contractor utilized FHWA’s 1998 NEPA guidance in the application of environmental justice procedures for the FEIS. The contractor established a demographic profile for census tracts impacted by the project using 1990 US Census data. In the profile, concentrations of low-income and minority populations were noted and evaluated for potential impacts for no-action and preferred alternative scenarios.

Planning Process

A standard series of environmental factors were evaluated including noise, vibration, residential displacement, commercial displacement, transit access, contaminated materials, air quality, and traffic congestion. No disproportionate impacts have been identified. In fact, the project is expected to improve low-income and minority communities through increased transit and light rail opportunities, lower fares, and decreased traffic at an existing maintenance facility.

Preliminary Conclusions

The following observations can be made:

- CDOT Regions have been and expect to be responsible, through the use of contractors, for the adaptation of existing NEPA and EJ guidance to individual projects.
- A uniform application of EJ methods has not been utilized at the project level.
- Some frustration about CDOT's responsiveness during past projects was identified and is well known in certain low-income and minority neighborhoods.
- Existing CDOT efforts have depended primarily on US Census data for baseline information about the targeted groups, but have used other more localized data sources in certain situations.
- A standard definition of low-income and minority has not been developed or applied within CDOT.
- Efforts have been made (or planned) to develop a demographic profile of the study areas. However, no systematic approach is in place to identify disproportionate impacts to EJ populations as compared to the population at large.
- Impacted populations or their representatives have become more educated about the process and expect to have not only significant involvement in planning, but significant influence on the outcome of projects affecting their communities.
- Efforts to date focus on the identification and mitigation of negative impacts. No apparent effort has been undertaken to identify or address the absence of positive impacts of CDOT's programs to EJ populations.

APPENDIX B

Low Income Methodology

EXAMPLE

Tract 1, County X

Low-income thresholds for County X

Persons per Household	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person
Low Income	\$24,450	\$27,950	\$31,450	\$34,950	\$37,750	\$40,550	\$43,350	\$46,150

Average household size= 3.25 persons per household.

Total Household Income ranges:

Household Income	Total households
Less than \$10,000	50
\$10,000 to \$14,999	60
\$15,000 to \$19,999	70
\$20,000 to \$24,999	80
\$25,000 to \$29,999	90
\$30,000 to \$34,999	100
\$35,000 to \$39,999	100
\$40,000 to \$44,999	200
\$45,000 to \$49,999	100
\$50,000 to \$59,999	100
\$60,000 to \$74,999	100
\$75,000 to \$99,999	100
\$100,000 to \$124,999	100
\$125,000 to \$149,999	100
\$150,000 to \$199,999	100
\$200,000 or more	100

Given the data, the number of household that are considered to be low-income in Tract 1 is calculated as follows:

Low-Income Threshold

$$\$34,950 \text{ (4-person household income)} - \$31,450 \text{ (3-person household income)} = \$3,500$$

$$\$3,500 * .25 = \$875$$

$$\text{Low-income threshold for Tract 1: } \$31,450 + \$875 = \mathbf{\$32,325}$$

(If the household size were 3.5, the threshold would be $\$3,500 * .5 = \$1,750$: $\$31,450 + \$1,750 = \$33,200$)

Referring back to the total household income, the total number of household with incomes at or below \$32,325 would be

HOUSEHOLD INCOME

Universe: Households:	Total households
Less than \$10,000	50
\$10,000 to \$14,999	60
\$15,000 to \$19,999	70
\$20,000 to \$24,999	80
\$25,000 to \$29,999	90
\$30,000 to \$34,999	<u>100</u>
TOTAL	450

Note: It is necessary to count those households that fall in the same income range even though the income is higher than the calculate threshold.

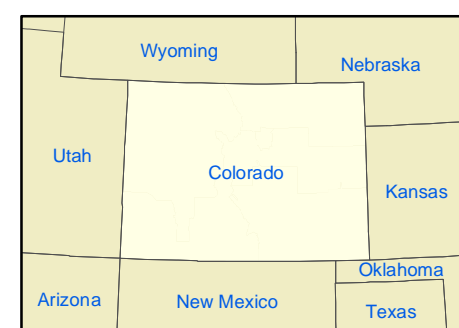
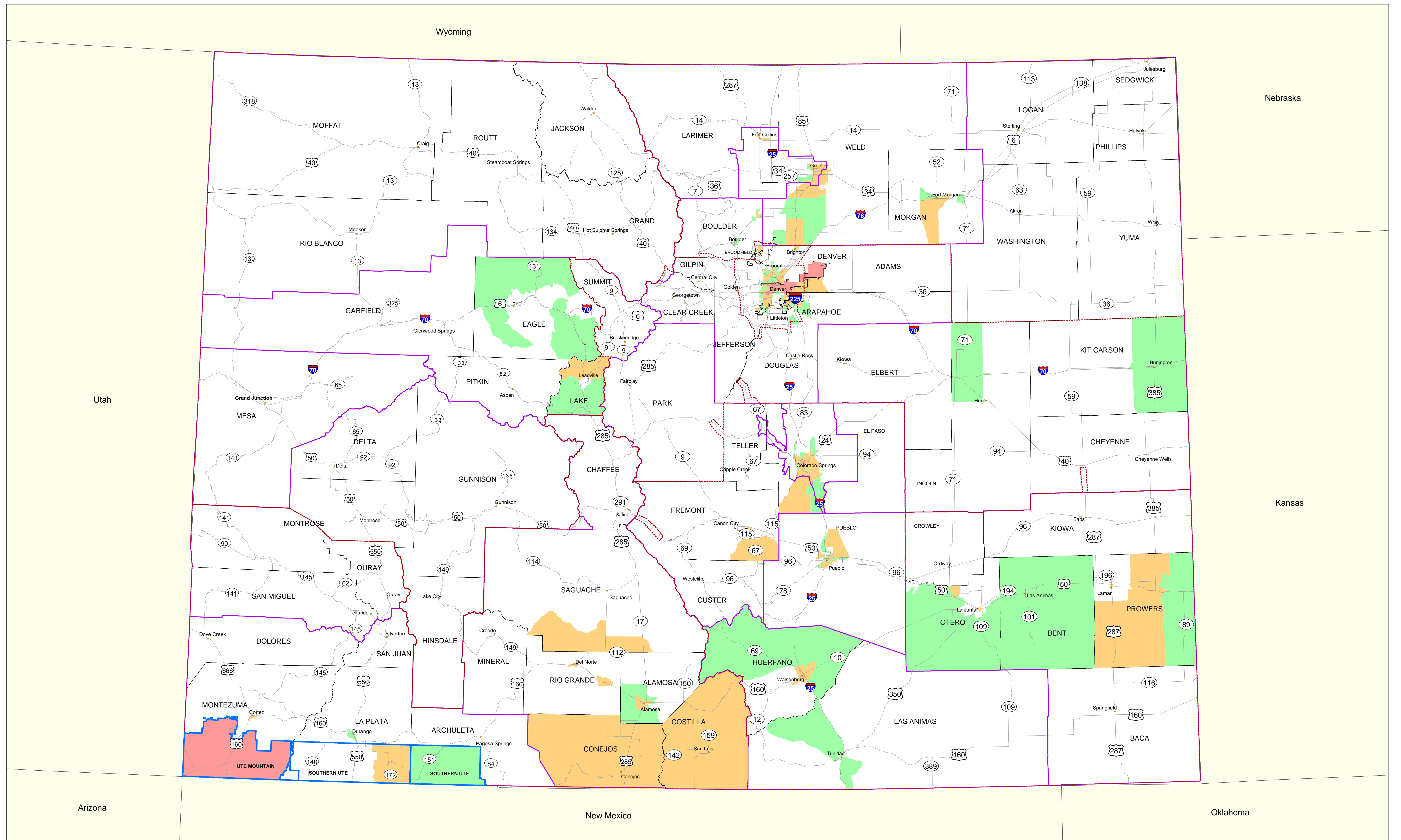
Data Sources:

Low-income thresholds are to be determined by Housing and Urban Development (HUD) developed for the counties in the State of Colorado for use by the Department of Local Affairs (DOLA) in the allocation of the Community Development Block Grants.

The **average household size** by census tract is to be determined through the use of the 2000 Census.

Total household income by census tract is to be determined through the use of the 2000 Census.

APPENDIX C
Maps



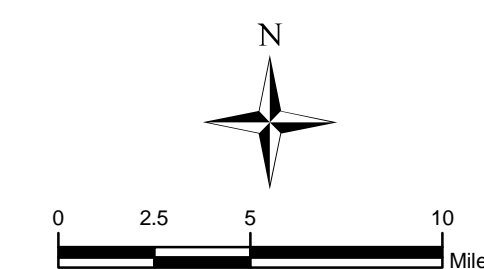
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

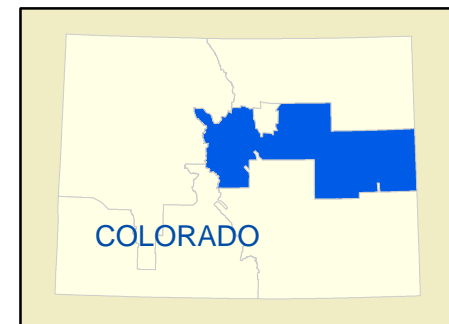
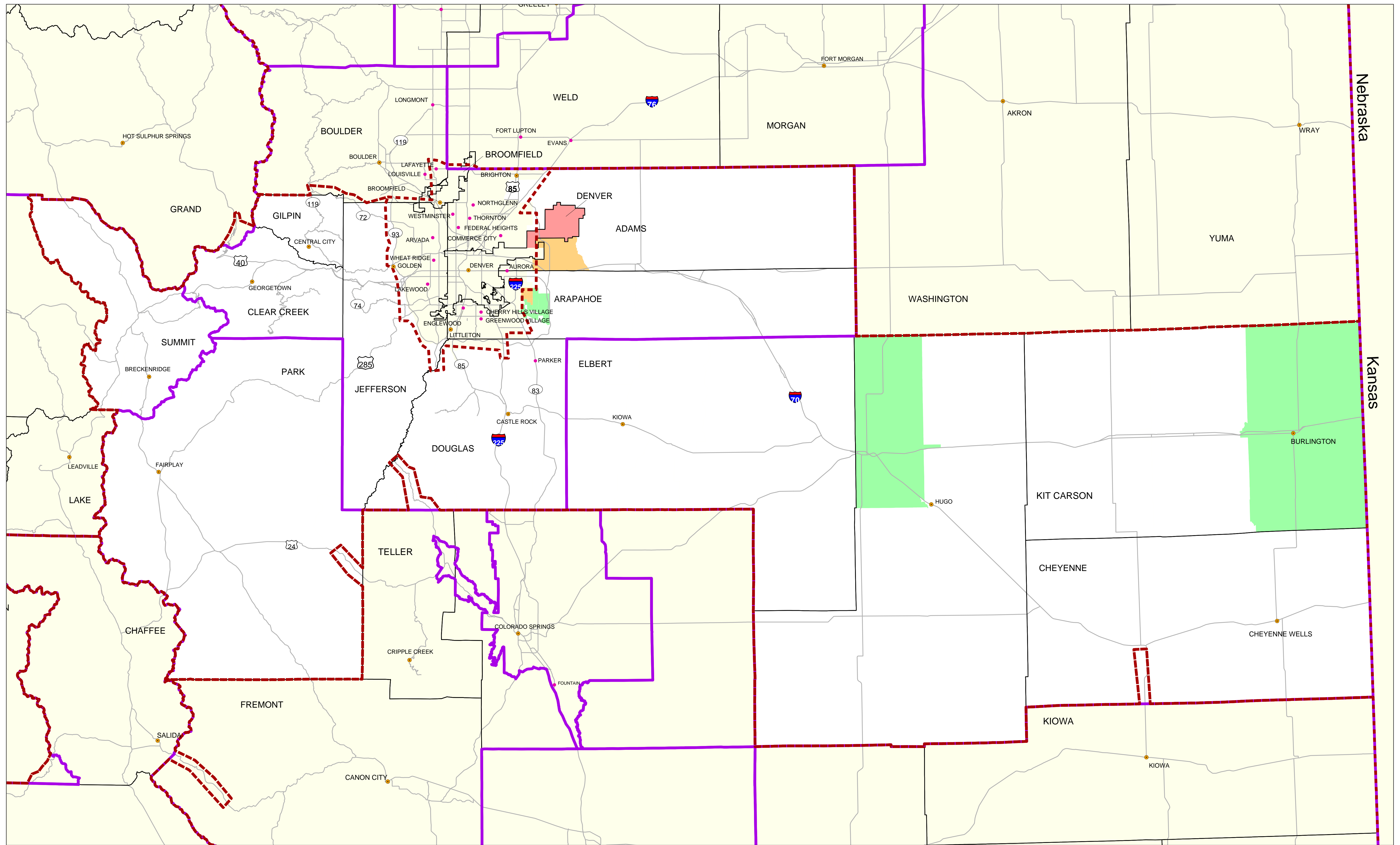
- CDOT Region
- Transportation Planning Region
- Tribal Boundaries
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
COLORADO**



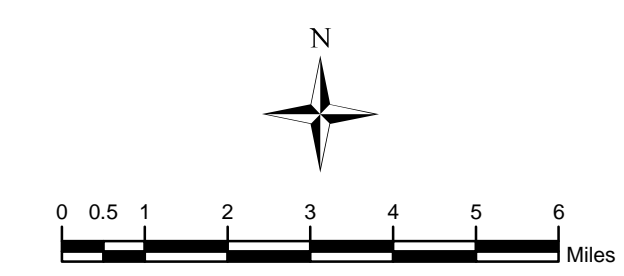
Minority Populations ⁽¹⁾

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- 18% - 24%
- 25% - 49%
- 50% - 100%

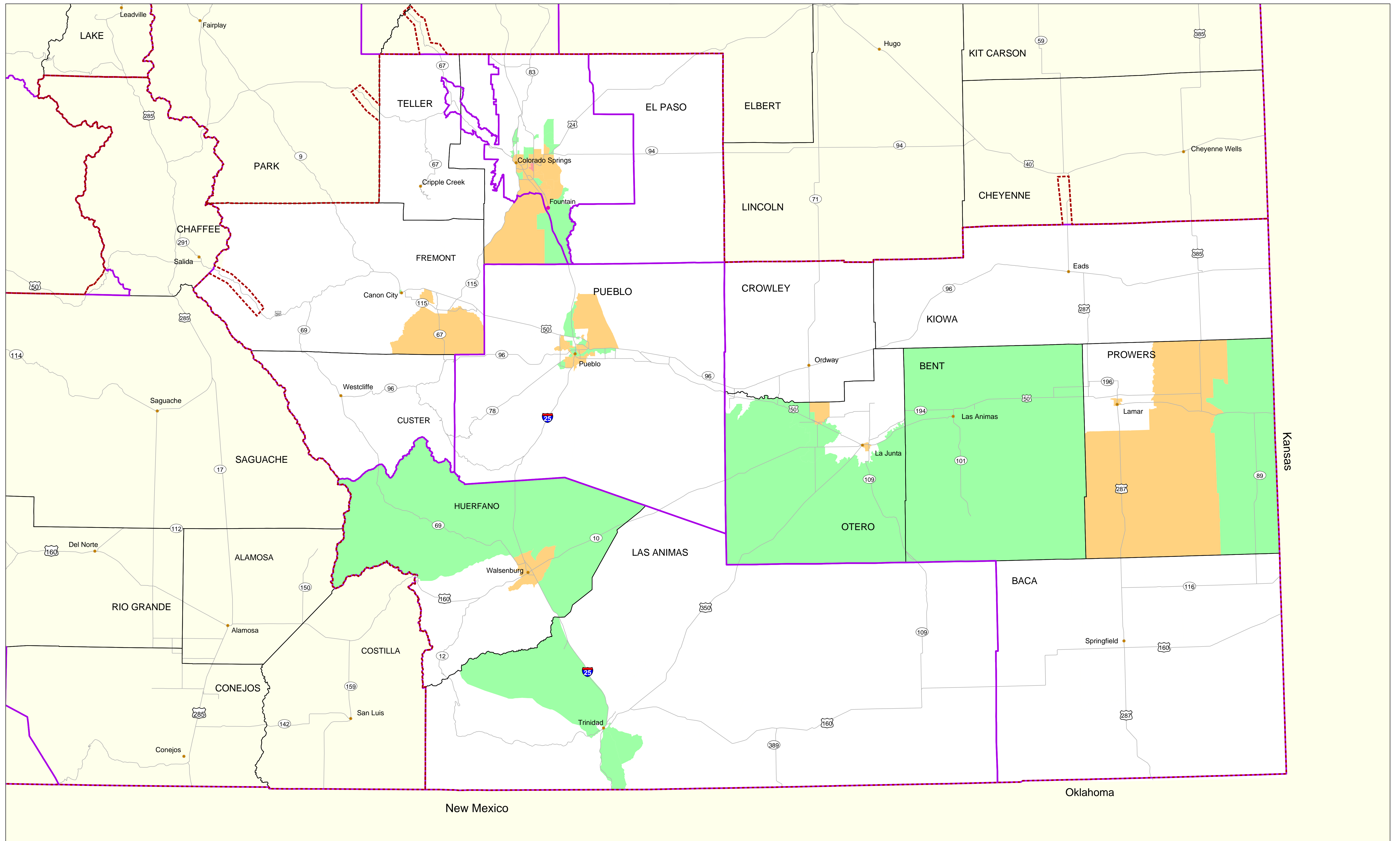
- CDOT Region
- Transportation Planning Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



Minority Populations CDOT Transportation Region 1



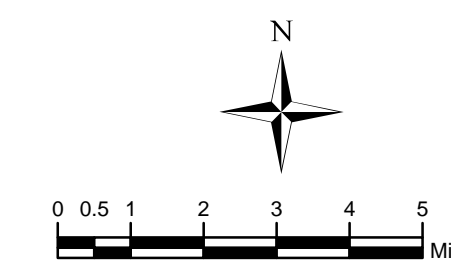
Minority Populations ⁽¹⁾

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- 25% - 49%
- 50% - 100%

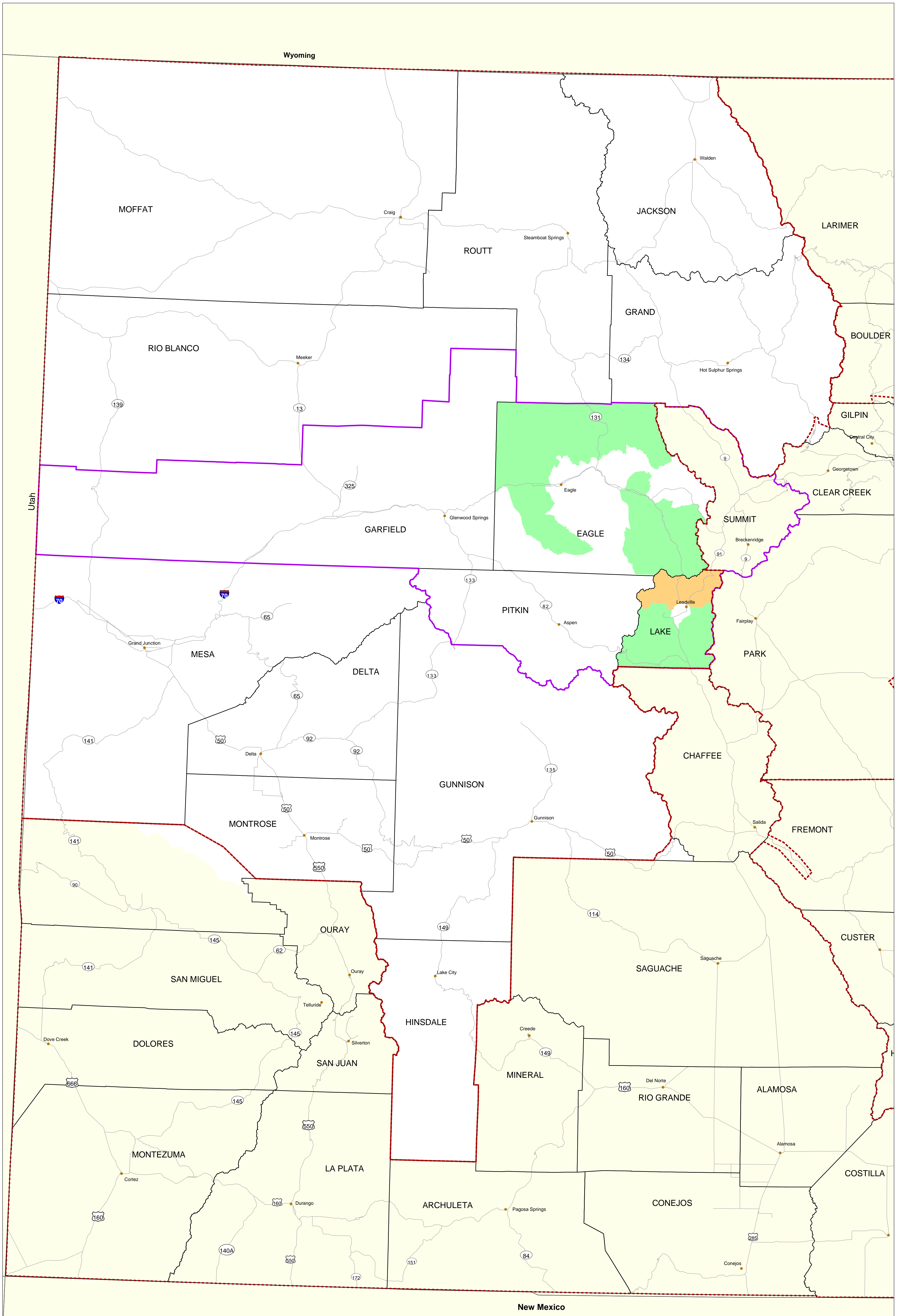
- CDOT Region
- Transportation Planning Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



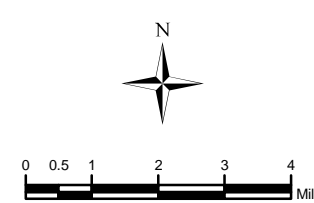
**Minority Populations
CDOT Transportation Region 2**



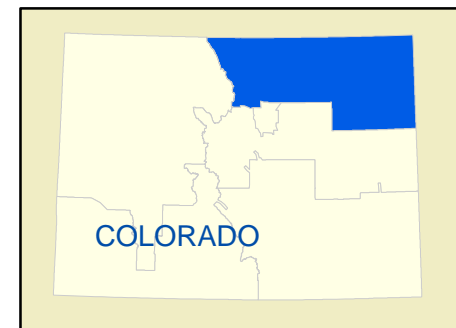
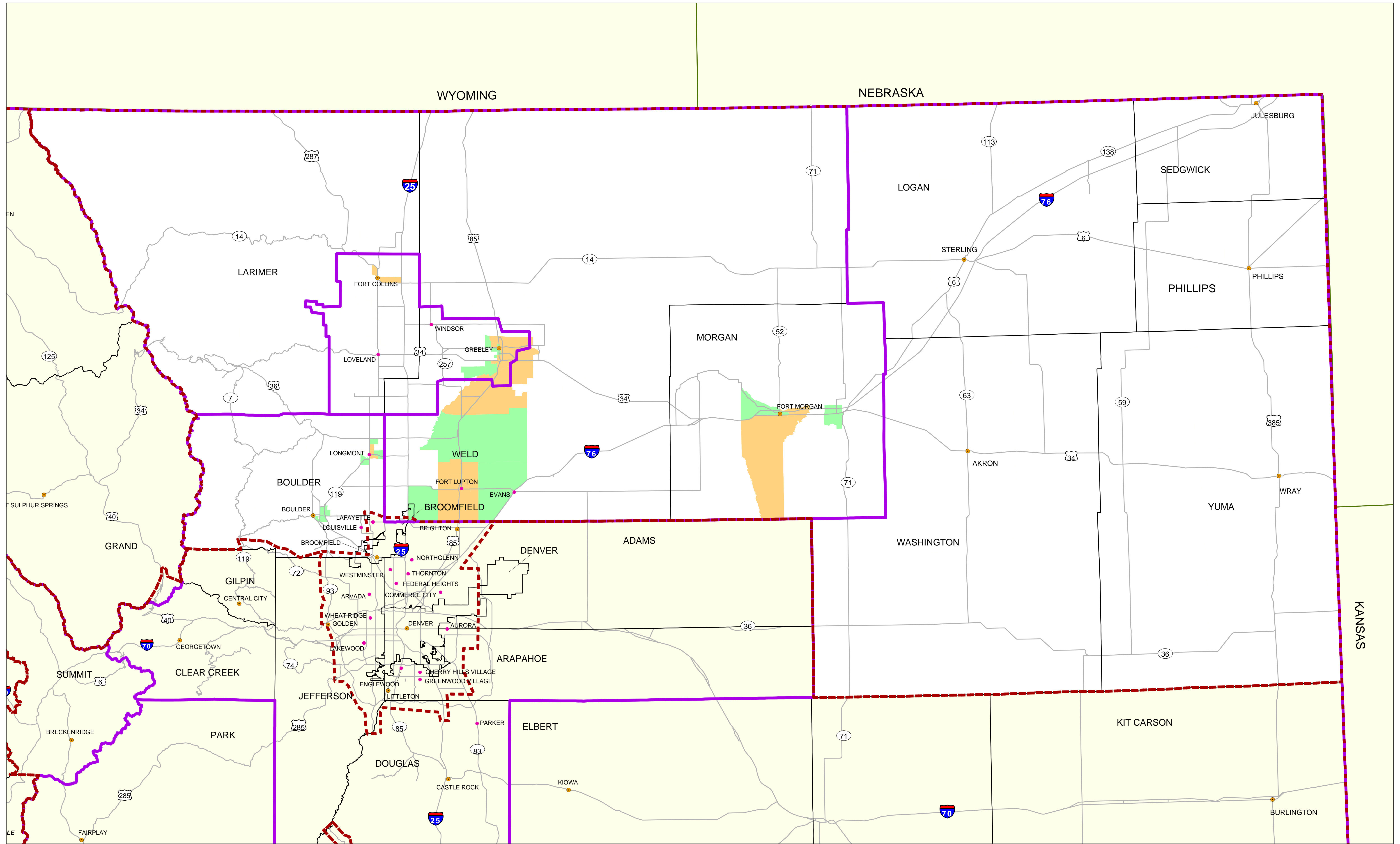
- Minority Populations⁽¹⁾**
- 0% - 17%⁽²⁾
 - 18% - 24%
 - 25% - 49%
 - 50% - 100%
- CDOT Region**
- CDOT Region
 - Transportation Planning Region
 - County Boundaries
 - County Seat
 - Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
CDOT Transportation Region 3**



Minority Populations ⁽¹⁾

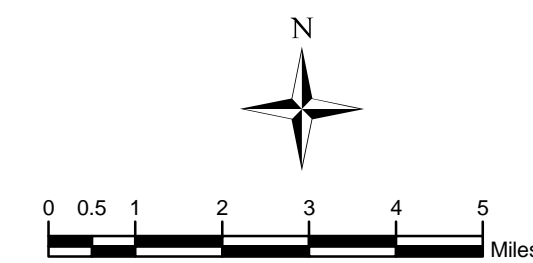
- 0% - 17% ⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

CDOT Region

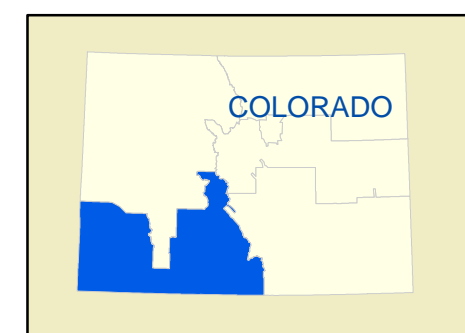
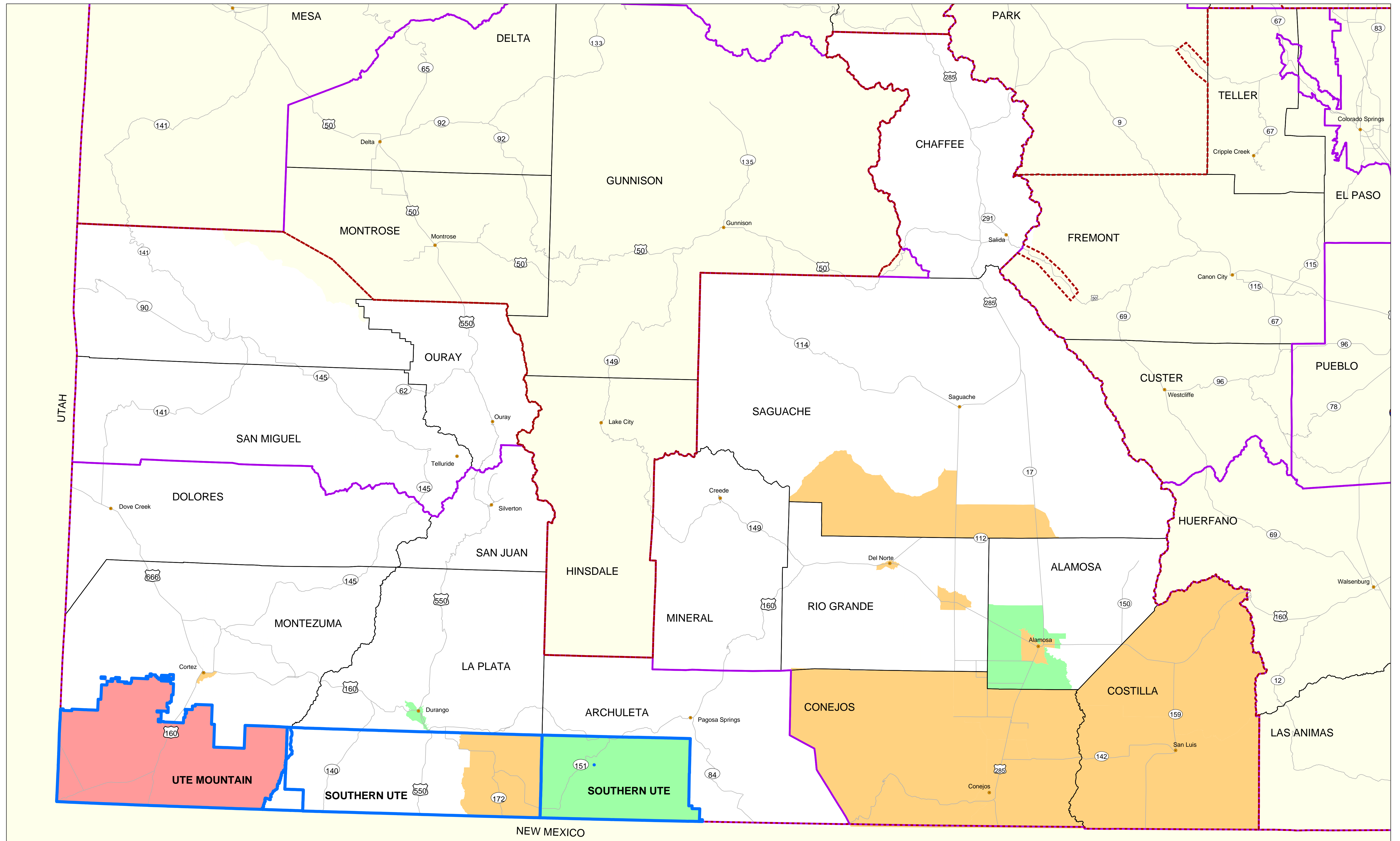
- Transportation Planning Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%.



**Minority Populations
CDOT Transportation Region 4**



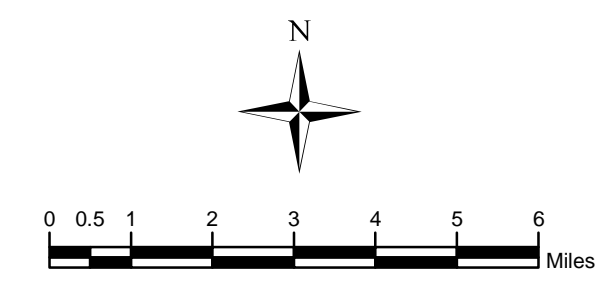
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

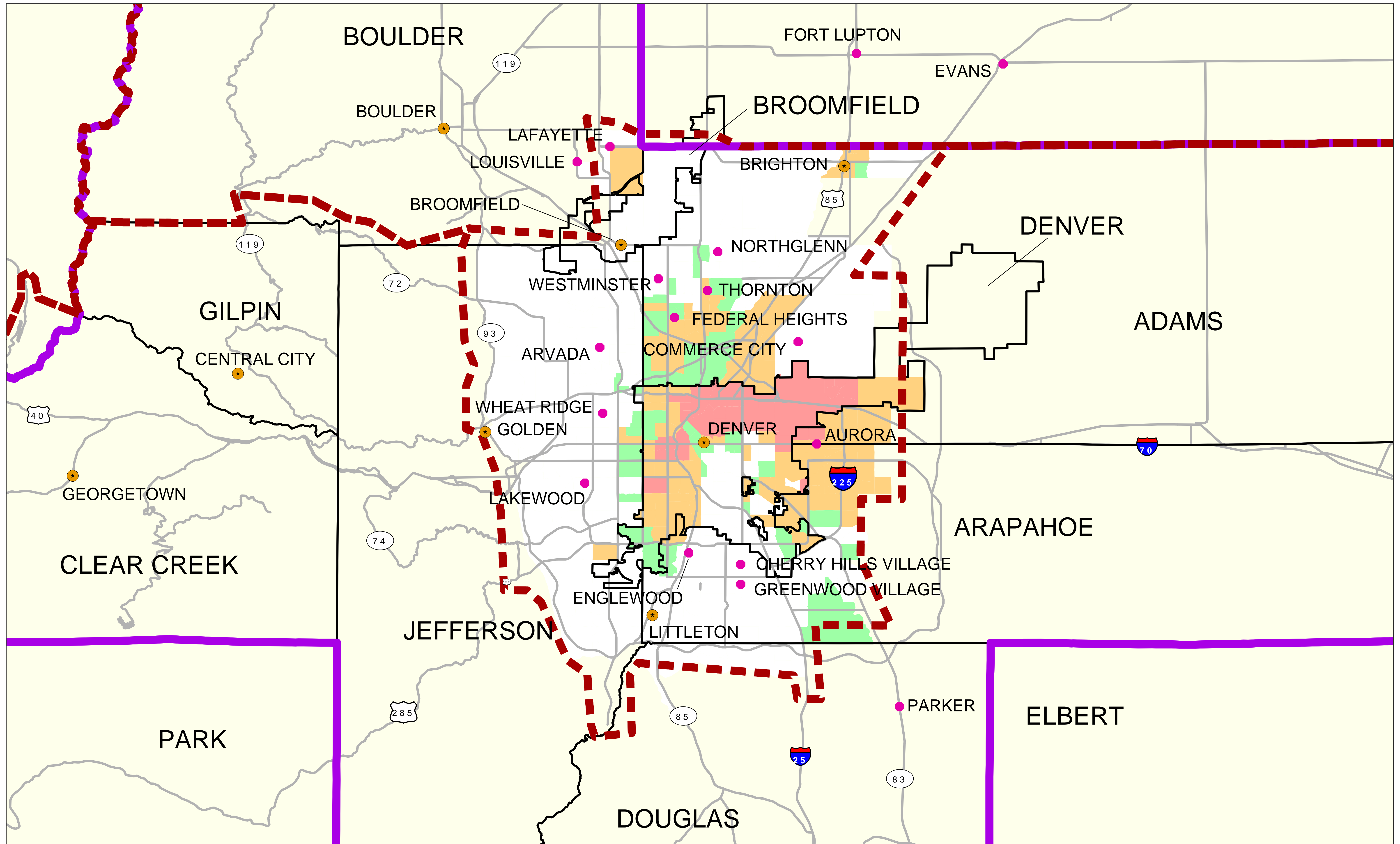
- CDOT Region
- Transportation Planning Region
- Tribal Boundaries
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
CDOT Transportation Region 5**



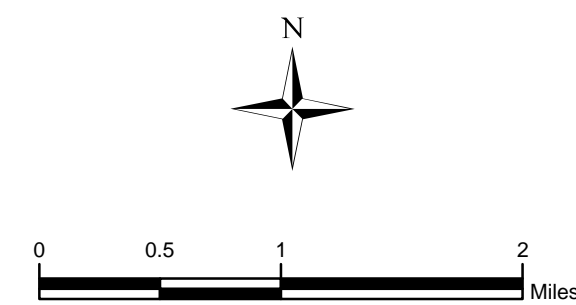
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

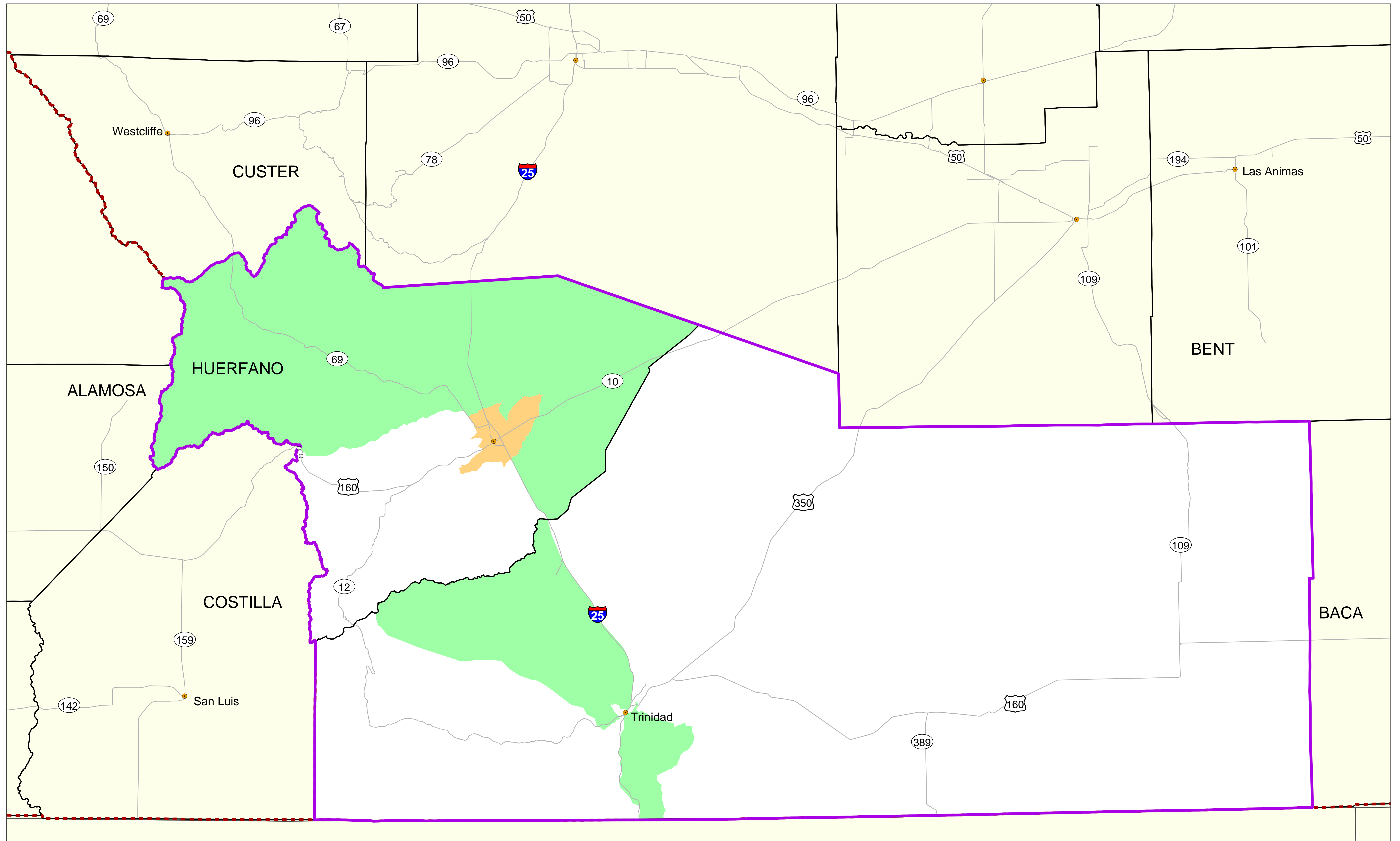
- CDOT Region
- Transportation Planning Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%.



**Minority Populations
CDOT Transportation Region 6**



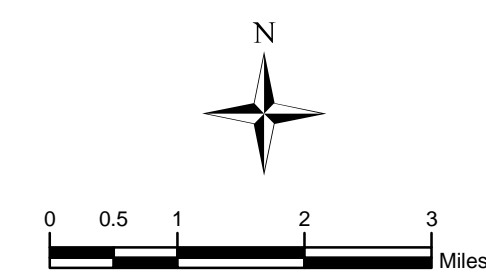
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

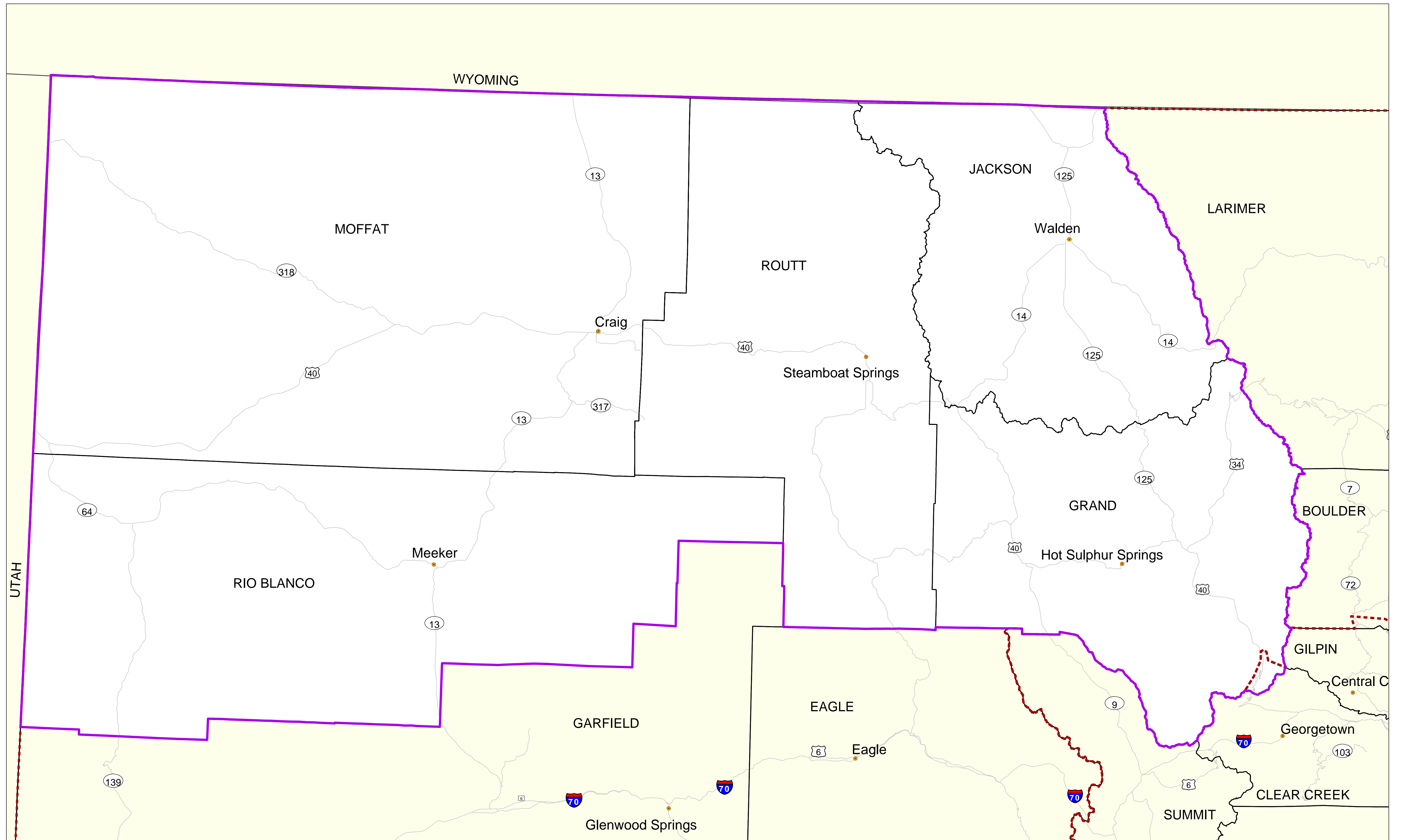
- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
South Central Transportation Planning Region**



Minority Populations⁽¹⁾

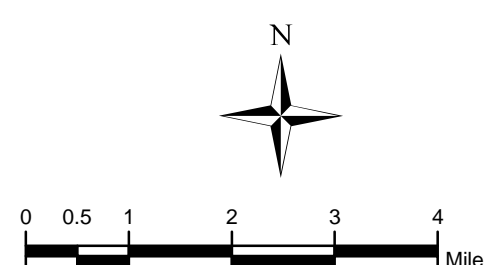
- + 0% - 17%⁽²⁾⁽³⁾
- + 18% - 24%
- + 25% - 49%
- + 50% - 100%

- + Transportation Planning Region
- CDOT Region
- + County Boundaries
- County Seat
- Roads

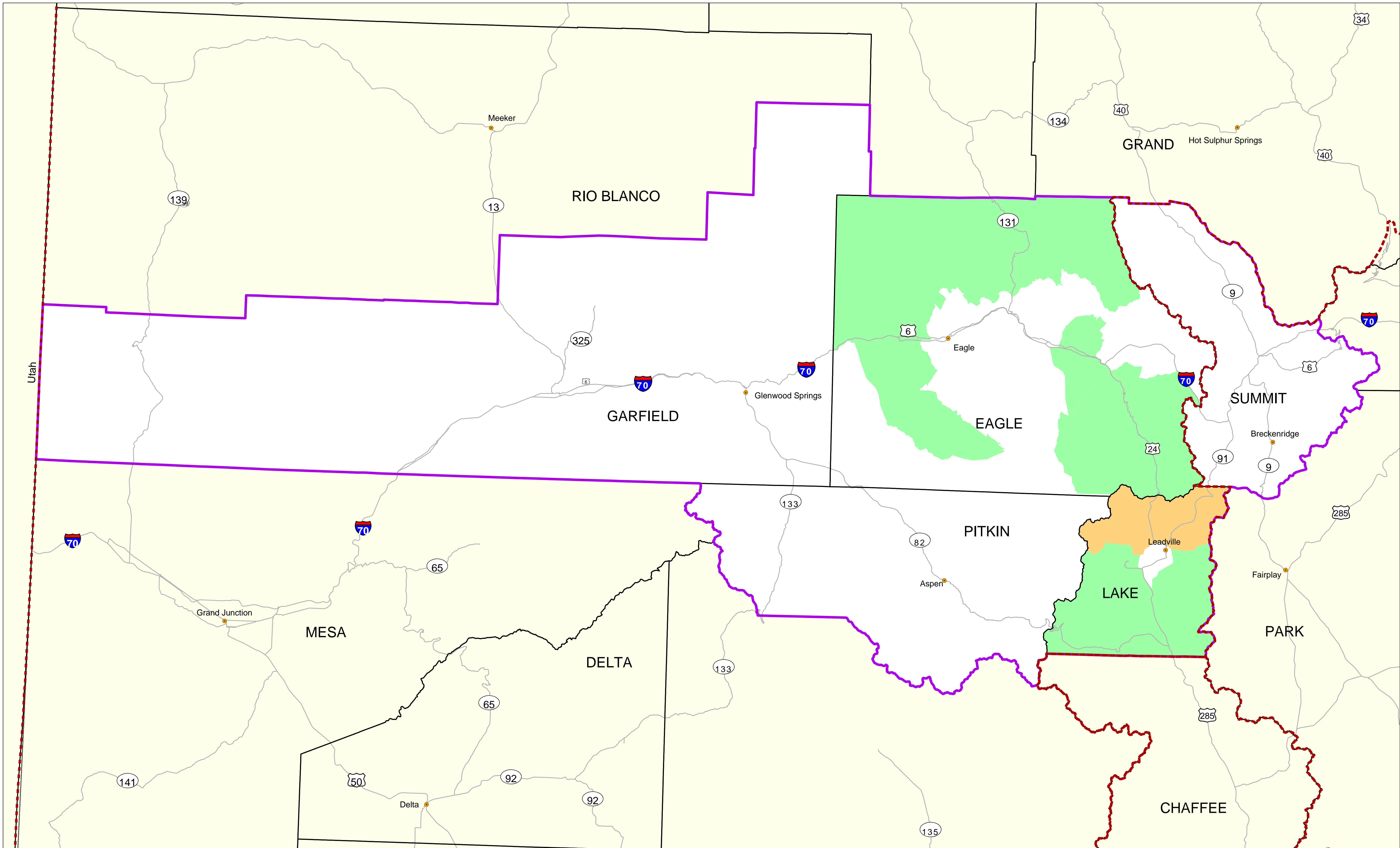
(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%

(3) Northwest TPR has no census tracts above 17.23%



**Minority Populations
Northwest Transportation Planning Region**



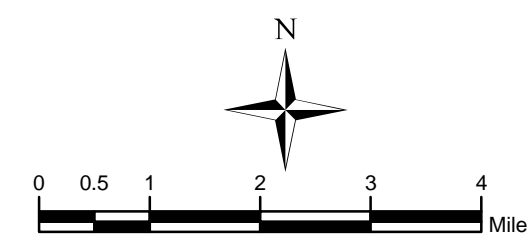
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

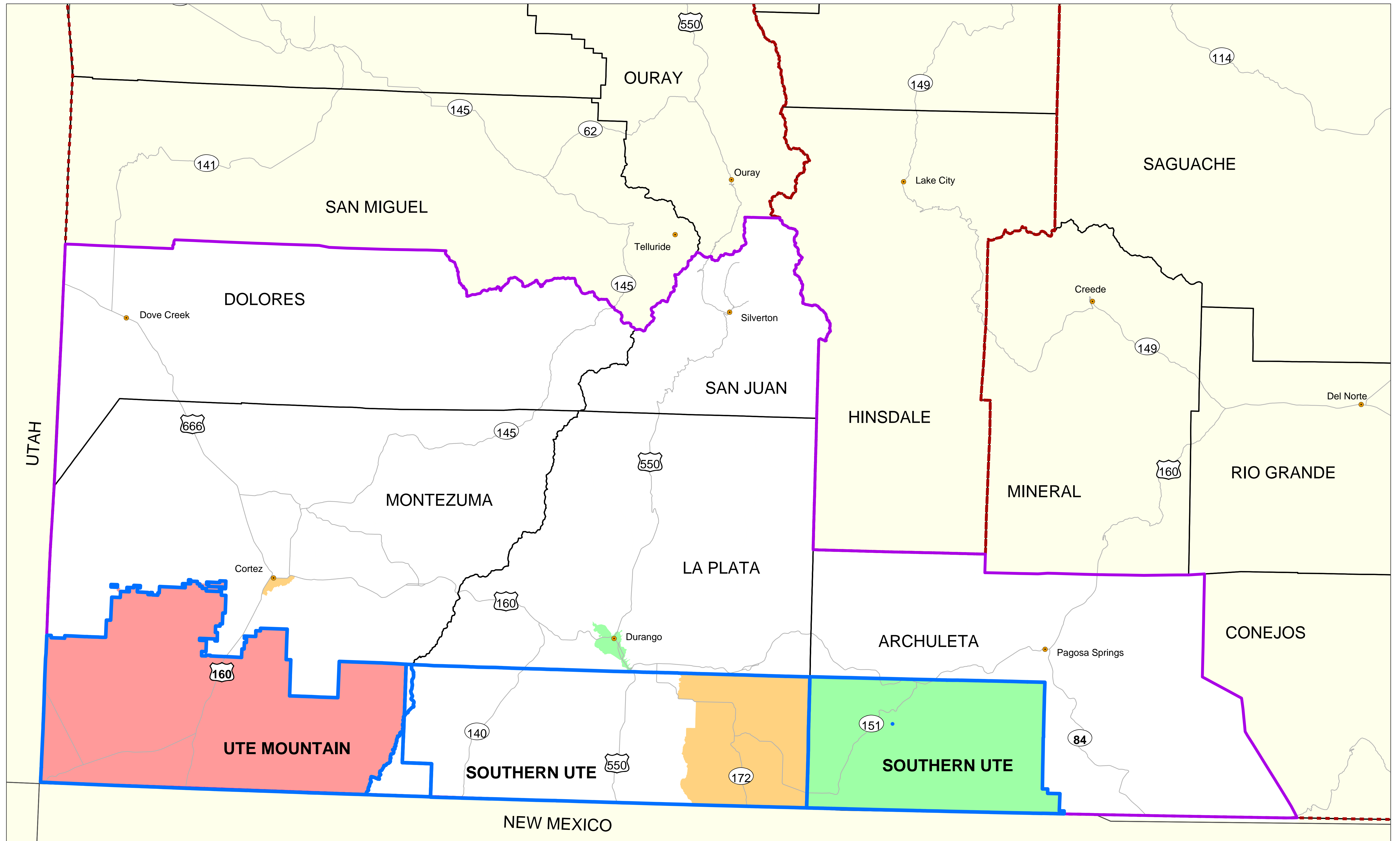
- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
Intermountain Transportation Planning Region**



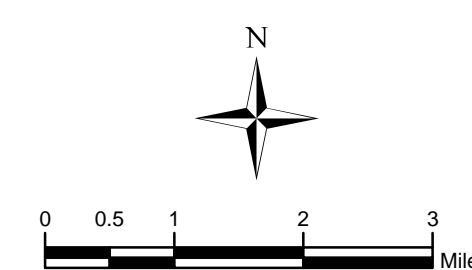
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

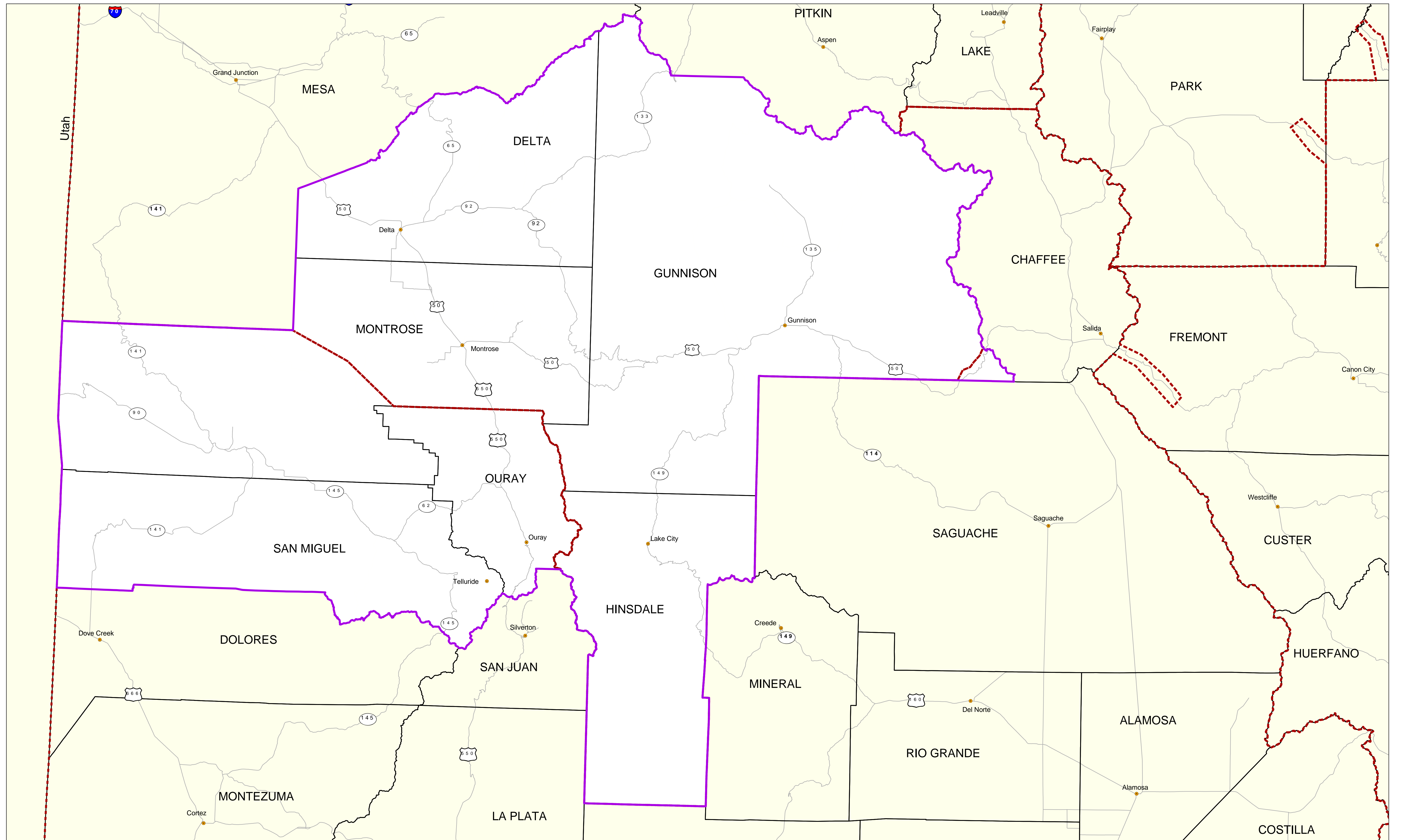
- Transportation Planning Region
- CDOT Region
- Tribal Boundaries
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

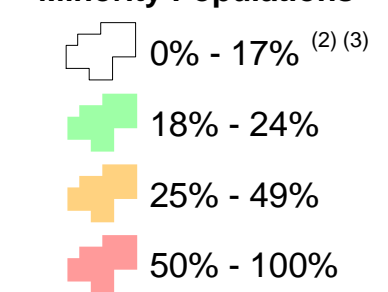
(2) The state-wide minority population is 17.23%



**Minority Populations
Southwest Transportation Planning Region**



Minority Populations⁽¹⁾



Transportation Planning Region

CDOT Region

County Boundaries

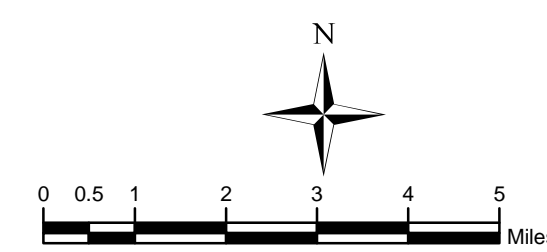
County Seat

Roads

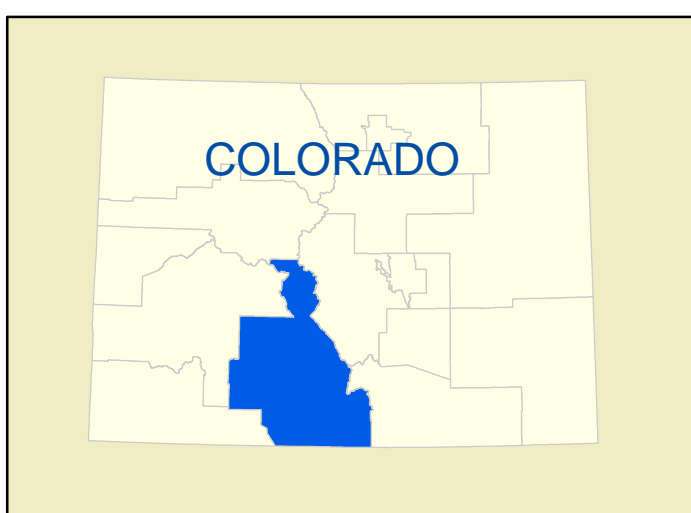
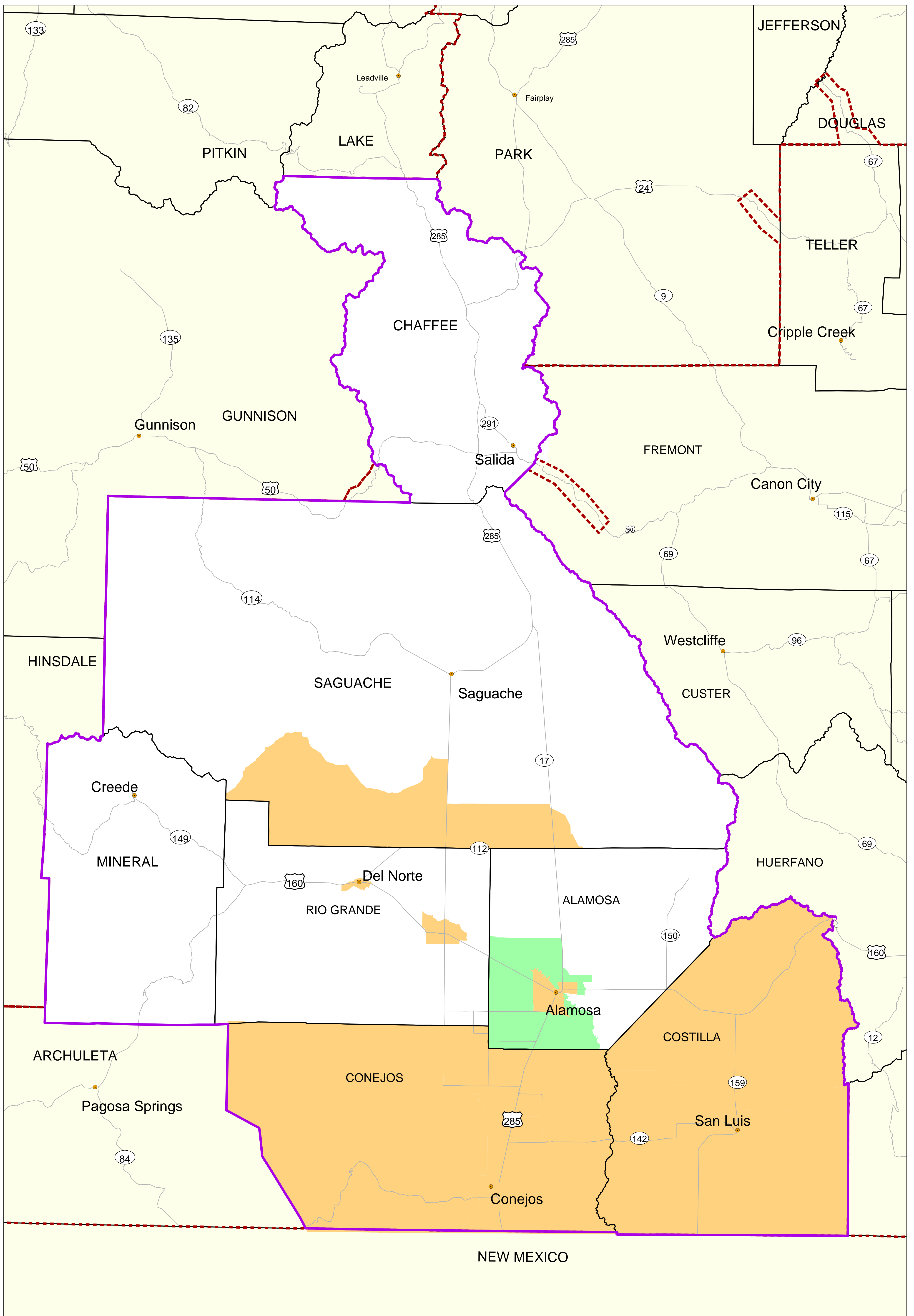
(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%

(3) Gunnison Valley TPR has no census tracts above 17.23%



**Minority Populations
Gunnison Valley Transportation Planning Region**

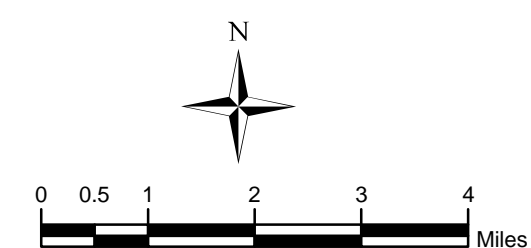


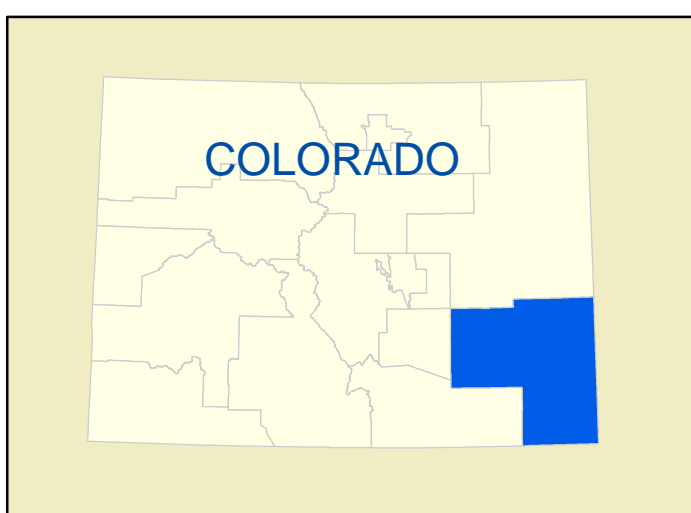
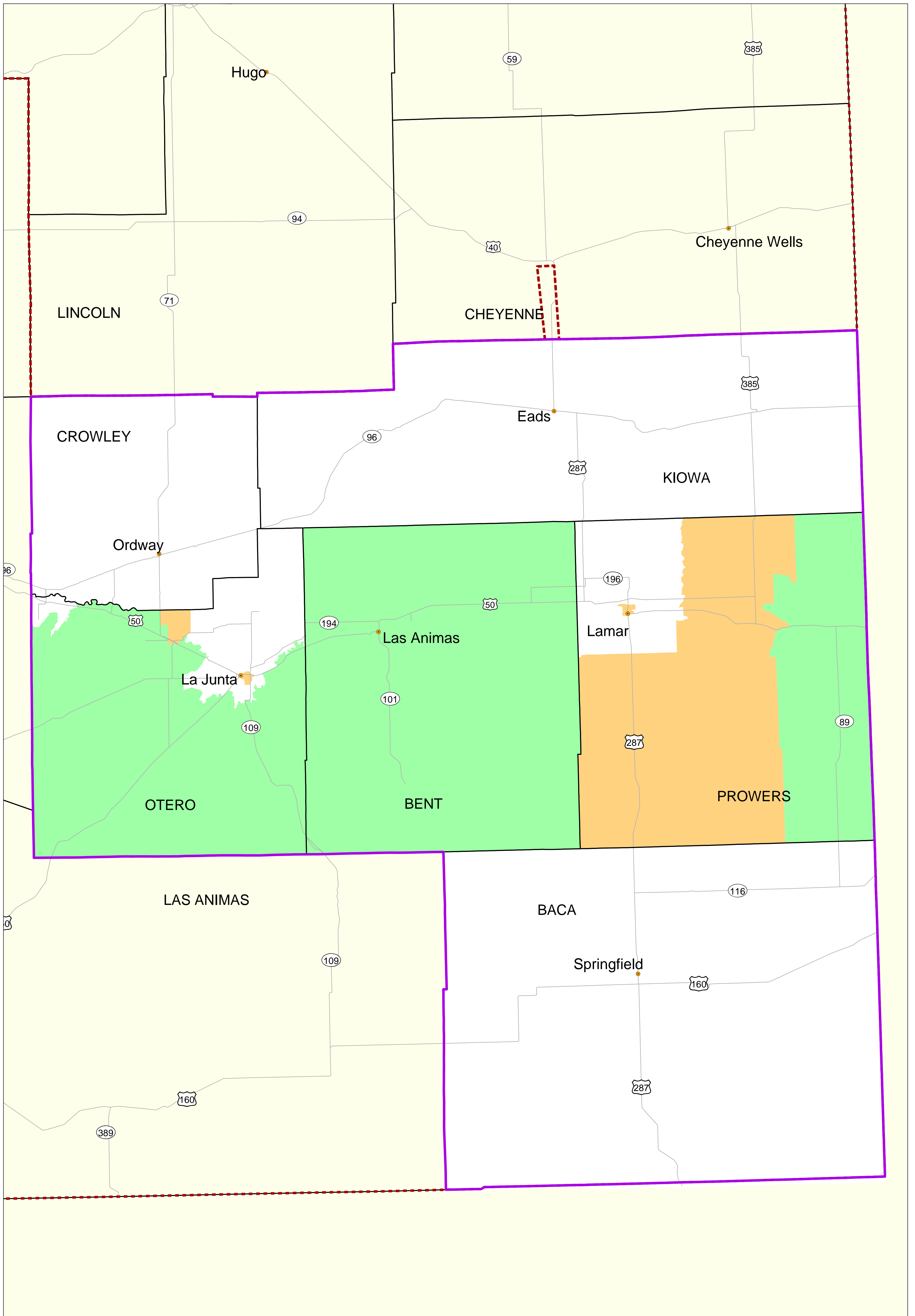
- Minority Populations** ⁽¹⁾
- 0% - 17% ⁽²⁾
 - 18% - 24%
 - 25% - 49%
 - 50% - 100%
- Transportation Planning Region
 - CDOT Region
 - County Boundaries
 - County Seats
 - Roads

Minority Populations San Luis Valley Transportation Planning Region

(1) Minority population census tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the Transportation Planning Region.

(2) The state-wide minority population is 17.23%

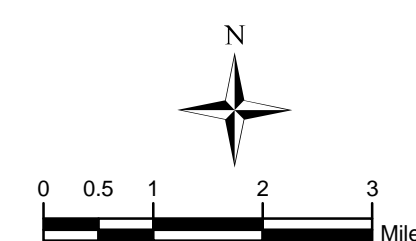


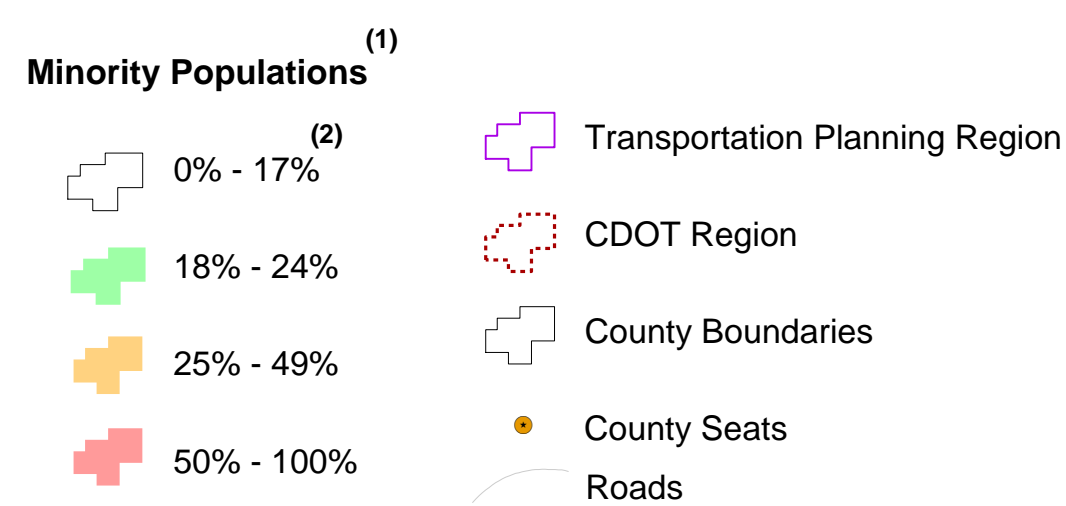
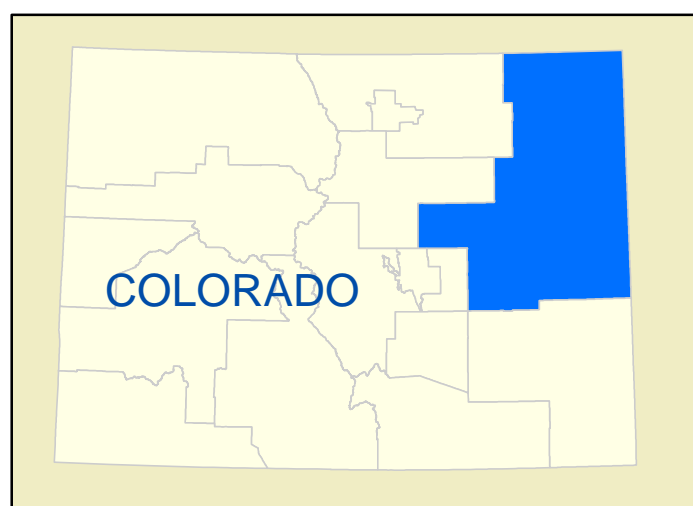
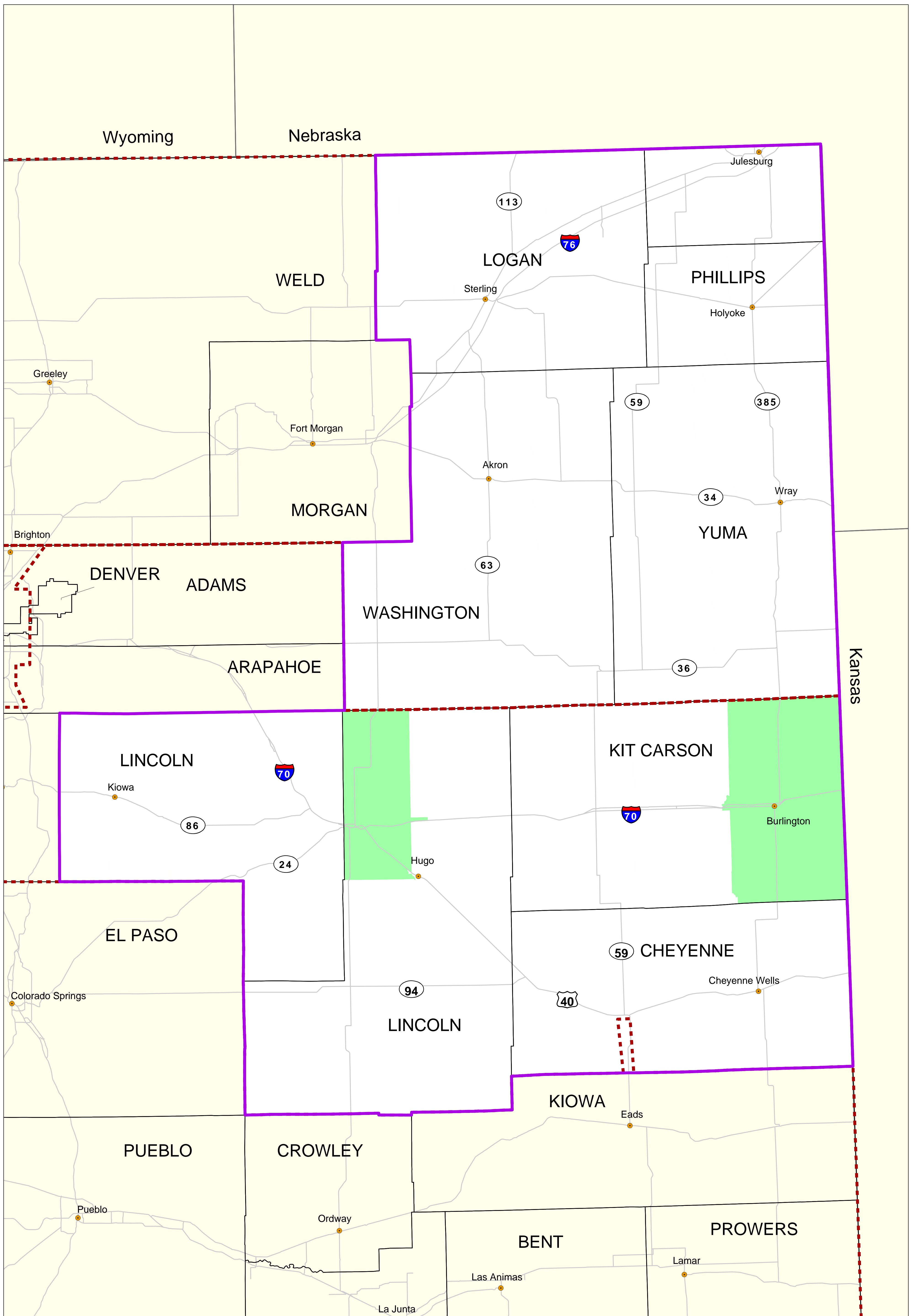


- Minority Populations** ⁽¹⁾
- 0% - 17% ⁽²⁾
 - 18% - 24%
 - 25% - 49%
 - 50% - 100%
- CDOT Region
 - County Boundaries
 - County Seats
 - Roads

Minority Populations Southeast Transportation Planning Region

(1) Minority population census tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the Transportation Planning Region.
 (2) The state-wide minority population is 17.23%

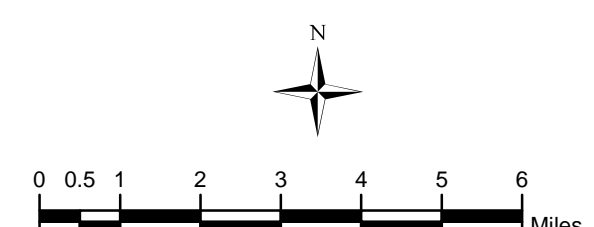


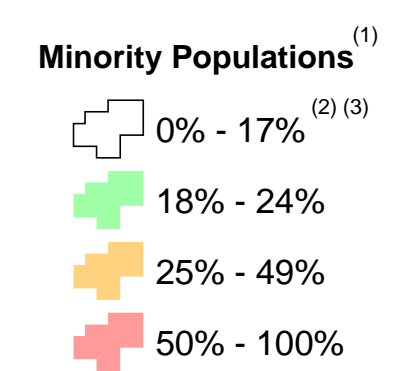
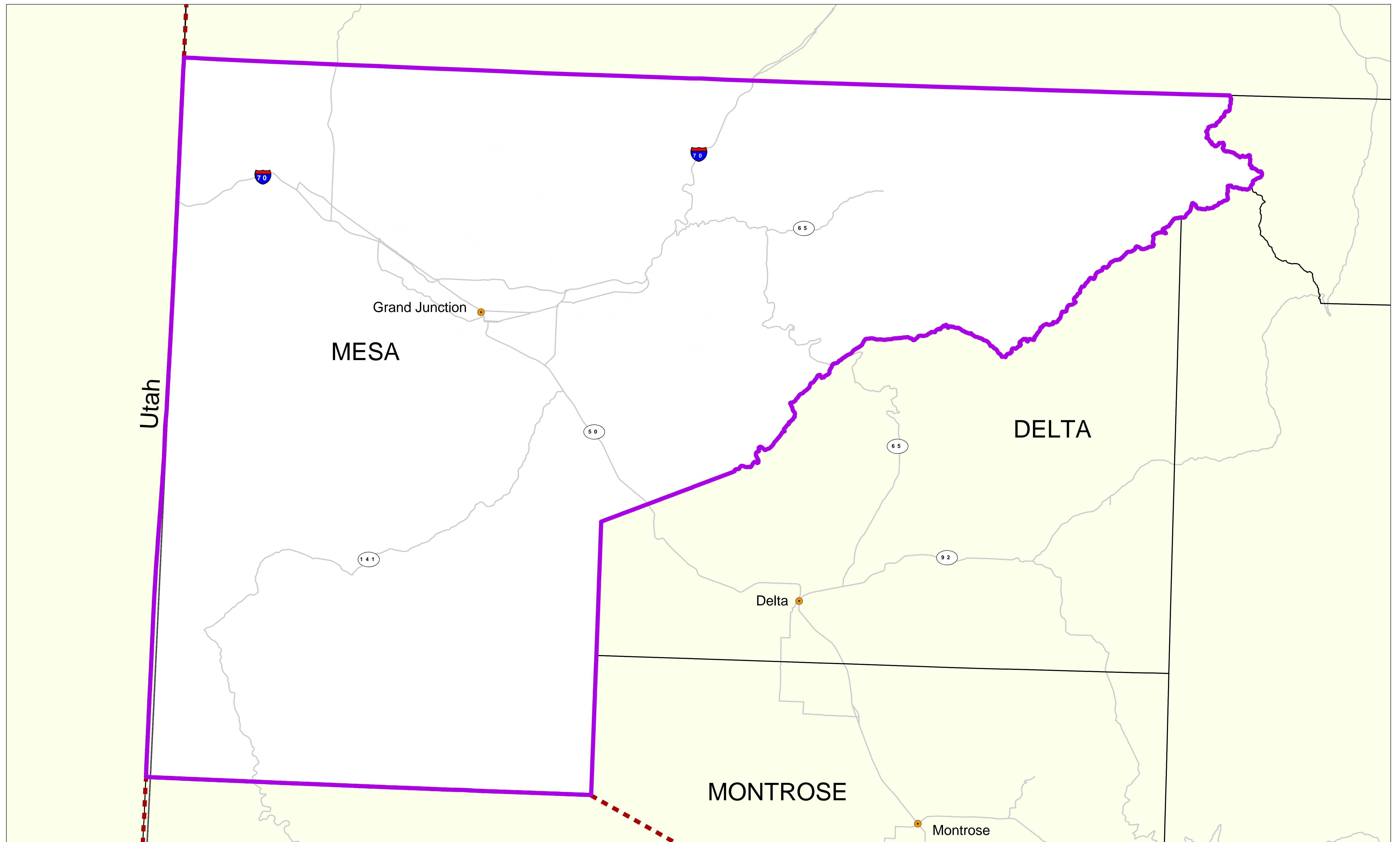


Minority Populations Eastern Transportation Planning Region

(1) Minority population census tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the Transportation Planning Region.

(2) The state-wide minority population is 17.23%



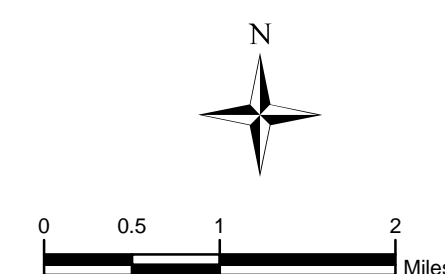


- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Roads

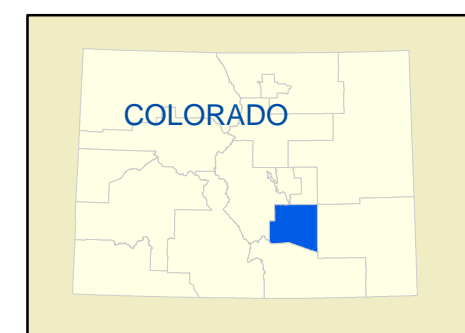
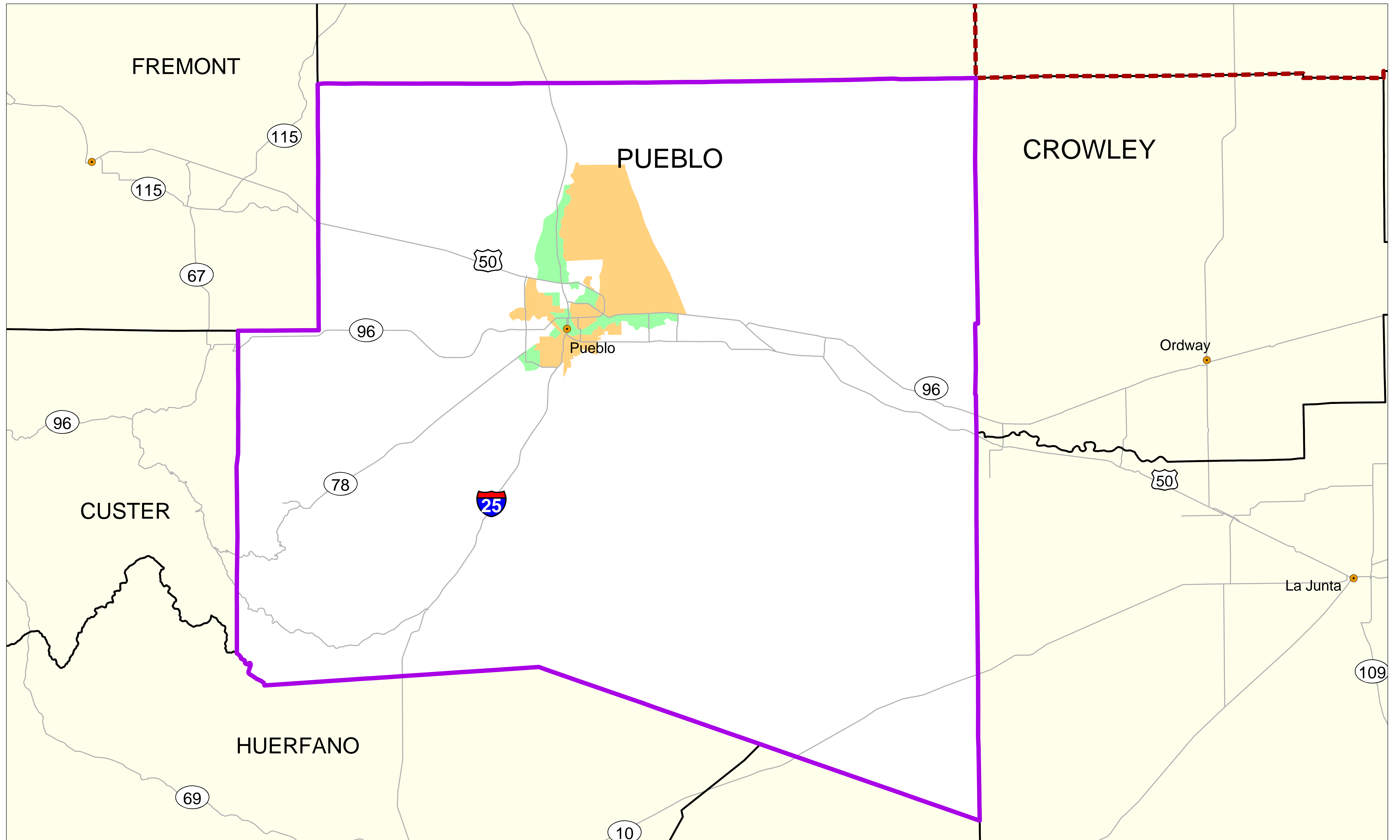
(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%

(3) Grand Junction TPR has no census tracts above 17.23%



**Minority Populations
Grand Junction Transportation Planning Region**



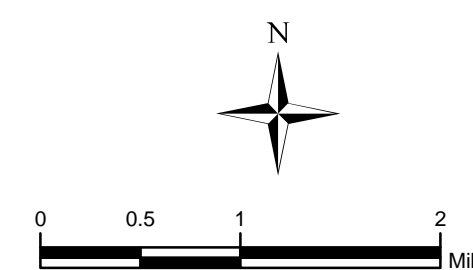
Minority Populations⁽¹⁾

- 0% - 17%⁽²⁾
- 18% - 24%
- 25% - 49%
- 50% - 100%

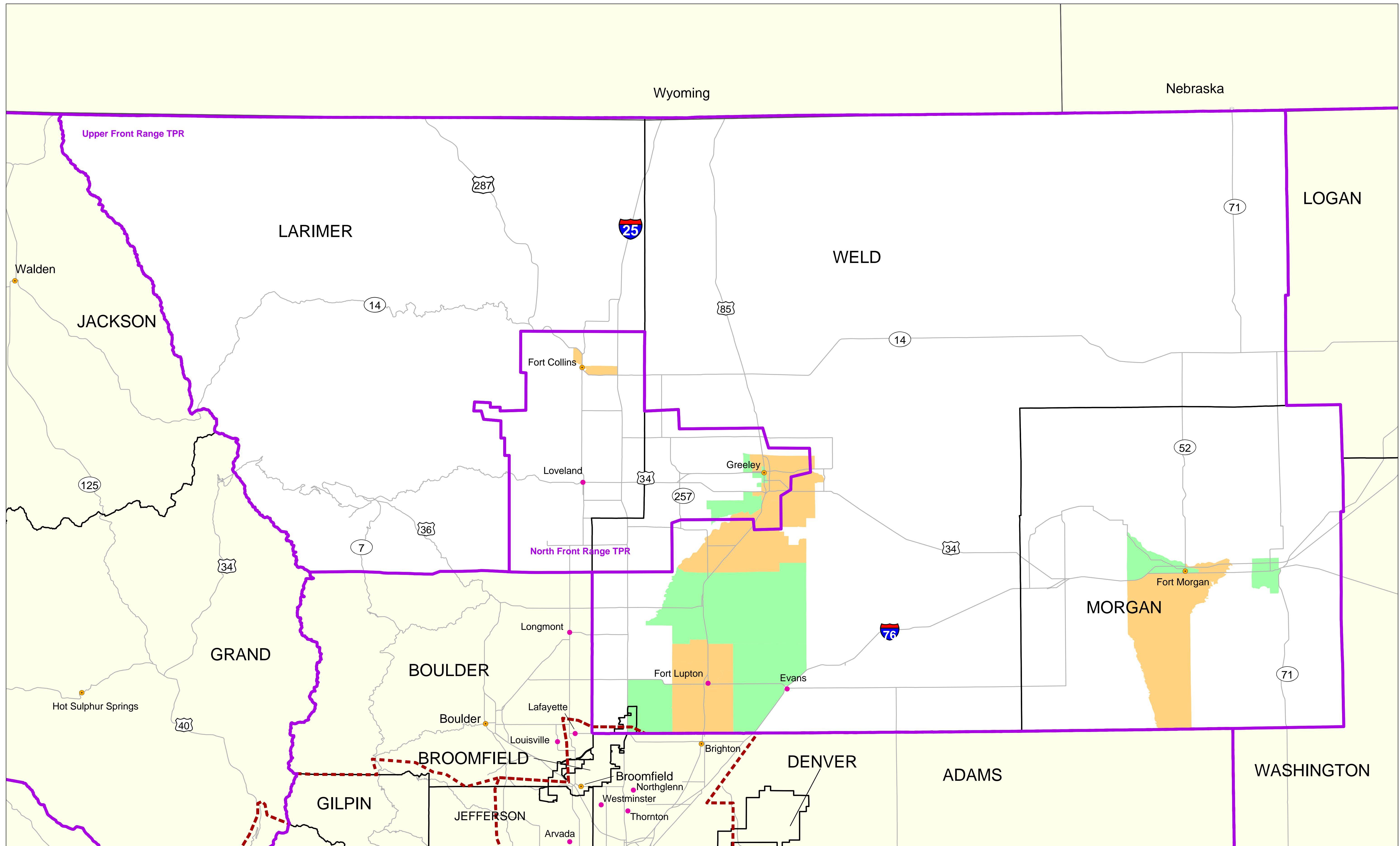
- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



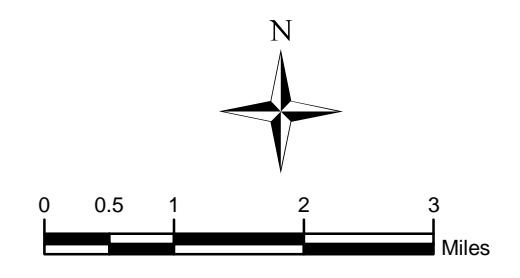
**Minority Populations
Pueblo Transportation Planning Region**



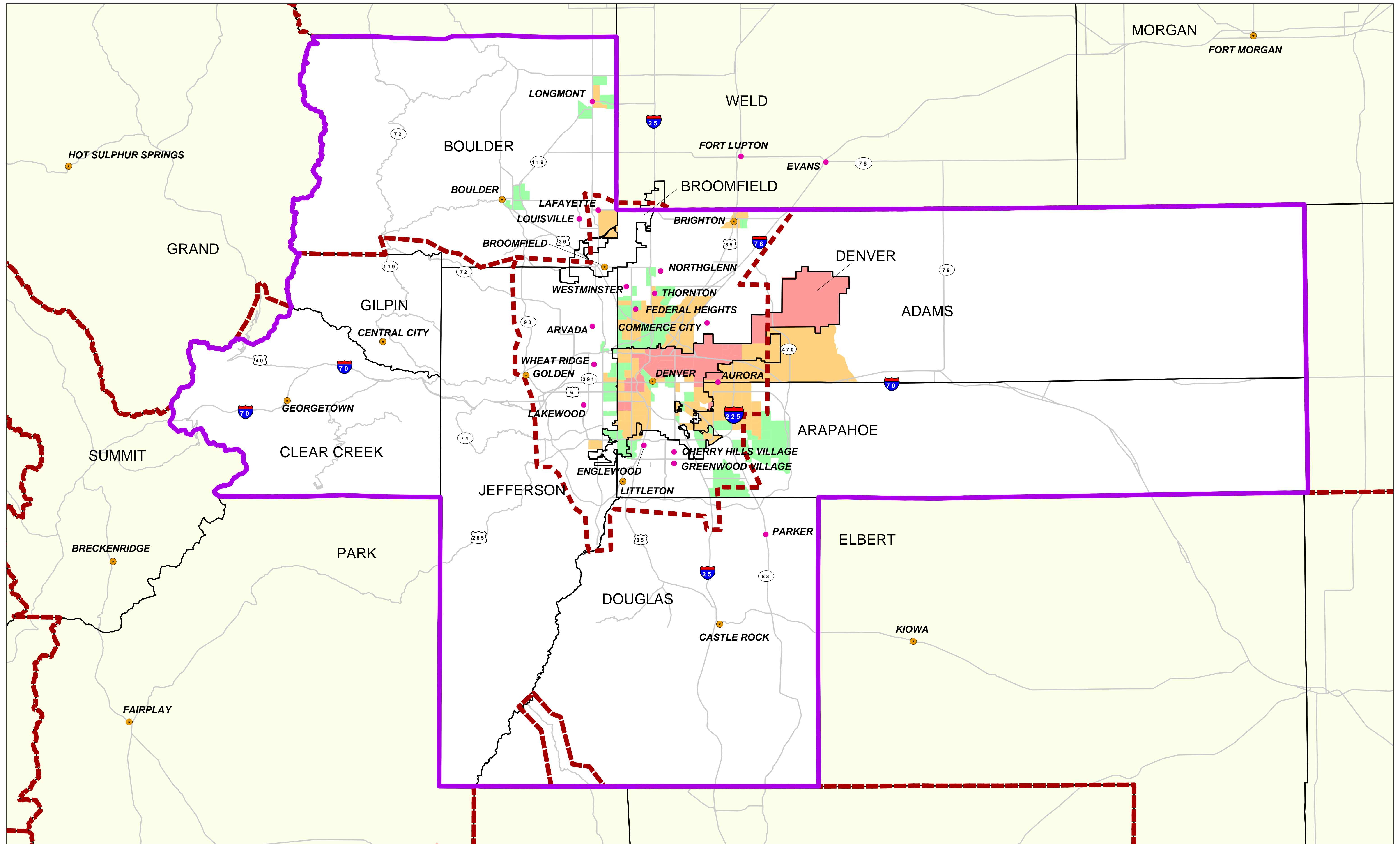
- Minority Populations⁽¹⁾**
- 0% - 17%⁽²⁾
 - 18% - 24%
 - 25% - 49%
 - 50% - 100%
- Transportation Planning Region
 - CDOT Region
 - County Boundaries
 - County Seat
 - Cities and Towns > 5000 Persons
 - Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
Upper Front and North Front Range
Transportation Planning Regions**

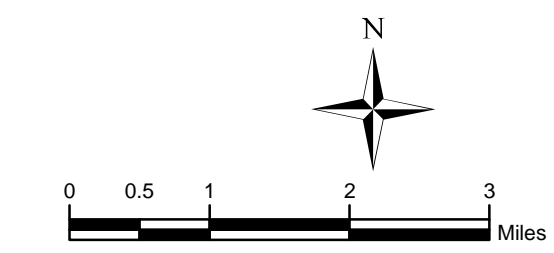


- Minority Populations⁽¹⁾**
- 0% - 17%⁽²⁾
 - 18% - 24%
 - 25% - 49%
 - 50% - 100%

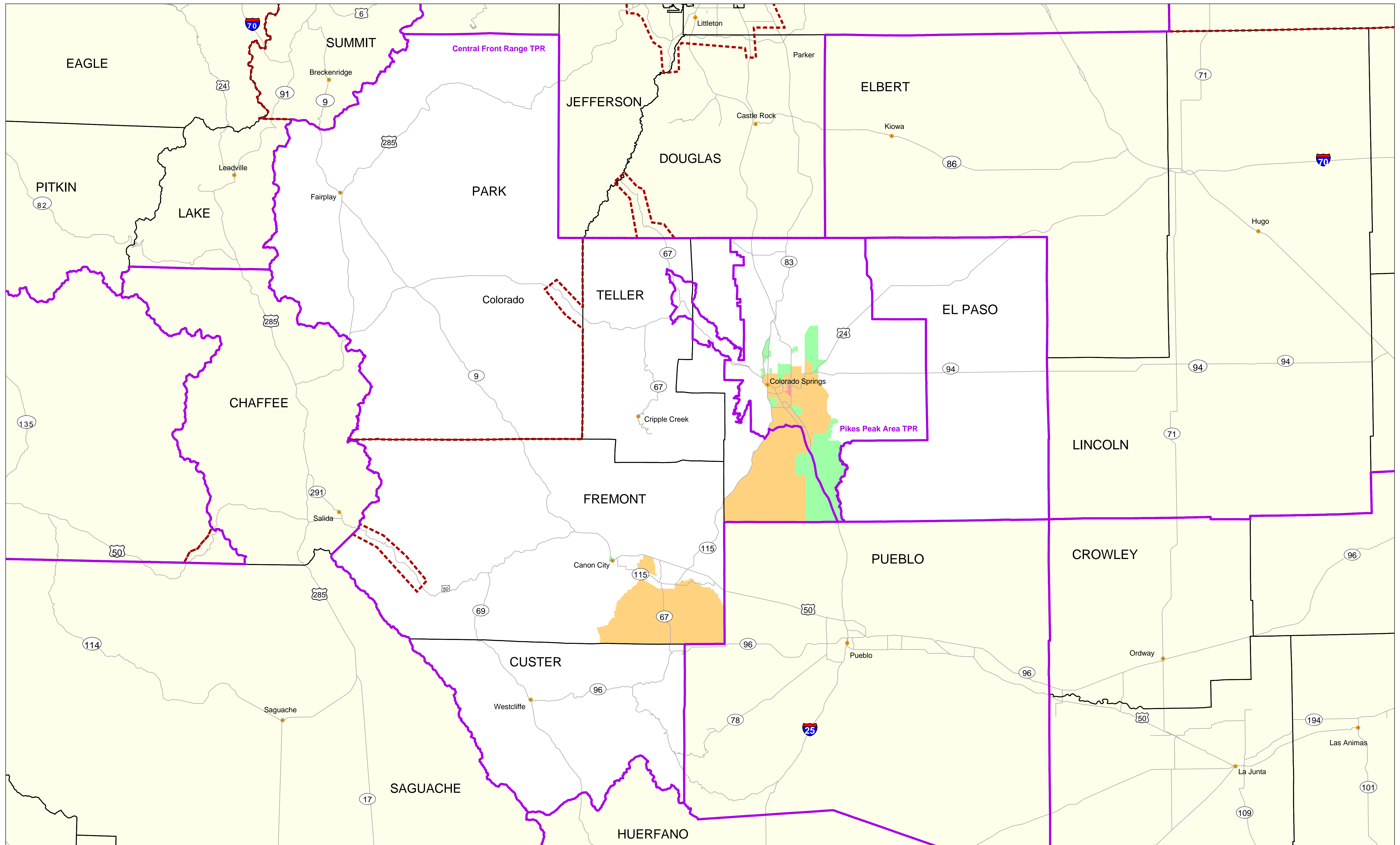
- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

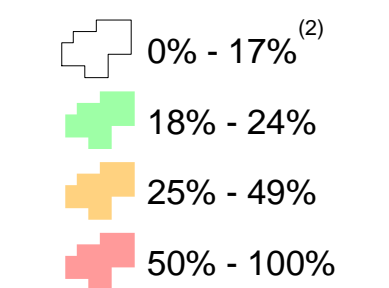
(2) The state-wide minority population is 17.23%



**Minority Populations
Greater Denver Area Transportation Planning Region**



Minority Populations⁽¹⁾



- Transportation Planning Region
- CDOT Region
- County Boundaries
- County Seat
- Cities and Towns > 5000 Persons
- Roads

(1) Minority Population Census Tracts are defined as those tracts that have a percentage of minority population that is greater than the percentage of minority population for the State of Colorado.

(2) The state-wide minority population is 17.23%



**Minority Populations
Central Front Range and Pikes Peak Area
Transportation Planning Regions**