



US 287 from SH 1 to LaPorte Bypass

US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



September 2004

Project STA 2873-100
US 287: SH 1 TO THE LAPORTE BYPASS
ENVIRONMENTAL ASSESSMENT

Submitted By
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
COLORADO DEPARTMENT OF TRANSPORTATION

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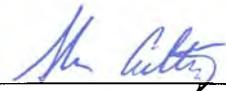
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US 287 from SH 1 to the LaPorte Bypass - Environmental Assessment

Executive Summary - September 2004

What is the project?

The Federal Highway Administration (FHWA) in conjunction with the Colorado Department of Transportation (CDOT) has been conducting studies to investigate alternatives that would improve mobility (travel conditions) and safety on the stretch of approximately 2 miles of United States Highway 287 (US 287) between State Highway 1 (SH 1) and the LaPorte Bypass intersection east of the town of LaPorte, mileposts (MP) 348.50 and 350.35. The complete Environmental Assessment (EA) is now available for review at various locations as noted in the attached announcement.

This stretch of US 287 is currently a two-lane, undivided road with one 12-foot lane in each direction and varying shoulder widths (0 to 4 feet). There are three signalized intersections within the project area, intersections of US 287 with SH 1, North Shields Street, and the LaPorte Bypass. The posted speed limit is 45 mph, the design speed is 50 mph, and there is an at-grade crossing with Union Pacific Railroad (UPRR) at North Shields Street.

Why are FHWA and CDOT pursuing this project?

Purpose: The purpose of this project is to improve the mobility and safety of existing and future travel on US 287 between SH 1 and the LaPorte Bypass intersection.

Need: The US 287 improvement is intended to achieve an acceptable level of service (traffic flow condition) and alleviate existing traffic congestion. Current travel conditions, primarily between intersections, are poor. The difficulty experienced by drivers making left turns and the related decrease in safety conditions further emphasize the need for improvements in this corridor. With future increased traffic volumes predicted (based on growth trends in neighboring cities), the travel and safety conditions will deteriorate further without implementation of improvements.

Alternatives Studied

FHWA and CDOT considered 12 alternatives along with the No Action Alternative, and assessed each alternative's ability to meet the purpose and need of the project. This study included consideration of whether to construct a new alignment or widen the existing roadway.

The following key issues were used to screen alternatives: crossing habitat suitable for threatened and endangered wildlife and plant species, impacts on public parks and natural areas, impacts on areas containing hazardous materials/waste, maintenance responsibilities for the route, the need for a new railroad crossing or overpass, residential relocations, commercial/industrial relocations, preliminary right-of-way procurement costs, impacts on approved future residential development, disruption of large farmland parcels, socioeconomic and environmental justice issues, and preliminary roadway, bridge, and utility costs.

After the initial screening process, 3 of the 12 alternatives along with the No Action Alternative were retained for further analysis: Alternatives A4 and A5 on the existing alignment and Alternative B on a new alignment. (See attached map.) Alternative A4 would minimize potential impacts on the human and natural environment, while following the existing road. Alternative A5 would necessitate relocation of Terry Lake Dam while reducing impacts on the south side of the existing road. Alternative B would include construction of a new roadway corridor to the south of existing US 287.

Environmental Analysis

The direct, indirect, and cumulative impacts and potential mitigation measures associated with these alternatives were analyzed for 25 different resources. Impacts requiring mitigation were identified for eight

resources: right-of-way acquisition and relocation, noise, ecology, wetlands, floodplains, water quality, hazardous materials/waste, and construction.

Preferred Alternative

As the lead agency, FHWA is responsible for the decision on the Preferred Alternative. After completion of the environmental analysis, FHWA and CDOT met with the city of Fort Collins, Larimer County, and other local, state, and federal agencies to announce the recommendation of Alternative A4 as the Preferred Alternative. The Preferred Alternative meets the project's purpose and need by improving the mobility and the safety of existing and future travel while using the existing US 287 alignment. In addition, the alignment of Preferred Alternative A4 has been engineered to minimize potential impacts on the human and natural environments in the corridor while maximizing safety benefits. The attached map shows the Preferred Alternative alignment and potential relocations. Relocations will include a range of 4 to 5 single-family residences, 6 apartment units, 8 businesses, and 14 to 23 mobile homes. Other impacts include loss of 0.3 acre of riparian (edge of stream) habitat, loss of 0.25 acre of wetlands, 325 linear feet of encroachment on the Dry Creek floodplain, noise impacts on 48 residences, and hazardous materials/waste impacts at 4 sites. Complete information on all impacts and proposed mitigation is found in the EA document.

Public Involvement Program

A public involvement program (PIP) to encourage participation by both agencies and local residents/businesses was initiated at the project start-up, and will continue to be conducted until the study is completed. CDOT solicited comments and suggestions from federal, state, and local agencies, special interest groups, and the public. Materials were distributed in both English and Spanish.

Federal, state, and local agency representatives were actively encouraged to participate in the process. Comments and suggestions were received through one Agency Scoping Meeting and three Agency Status Meetings between November 1999 and April 2001. CDOT also participated in numerous meetings with local agencies to discuss specific aspects of the project.

Five project factsheets were distributed to local area residents, local businesses, special interest groups, and federal, state, and local agencies between October 1999 and March 2004. A project website is maintained at www.us287-north-of-fort-collins.com. Three public scoping meetings were conducted with special interest groups in November 1999, January 2000, and February 2000. Public workshops were held on May 4, 2000 and September 21, 2000. CDOT proactively sought to involve the residents, property owners, and businesses that border the action alternatives under study by conducting door-to-door community interviews between April and June 2003.

What's next?

After the public hearing (see attached announcement), FHWA and CDOT will respond to comments and publish a National Environmental Policy Act (NEPA) decision document. After the NEPA decision document is published, the project will enter into the design phase, followed by utility and right-of-way acquisition (including relocation of affected residences and businesses), and ultimately project construction.

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US 287 desde SH 1 hasta LaPorte Bypass – Evaluación Ambiental

Resumen Ejecutivo – Septiembre de 2004

¿En qué consiste el proyecto?

La Administración Federal de Carreteras (FHWA), conjuntamente con el Departamento de Transporte de Colorado (CDOT), ha realizado estudios para investigar las alternativas que mejorarían la movilidad (condiciones de circulación vial) y la seguridad en el tramo de aproximadamente 2 millas (3.22 kilómetros) de la Carretera Federal 287 (US 287), comprendido entre la Carrera Estatal 1 (SH 1) y la intersección con LaPorte Bypass, al este de la ciudad de LaPorte, postes miliareos (MP) 348.50 y 350.35. La Evaluación Ambiental (EA) terminada ya está disponible para revisión en diversos lugares, como se indica en el anuncio adjunto.

Actualmente, este tramo de la carretera federal US 287 es un camino de dos carriles, sin división, con un carril de 12 pies (3.66 metros) en cada sentido y arcones de diversos anchos (de 0 a 4 pies [de 0 a 1.22 metros]). Hay tres intersecciones señalizadas dentro del área del proyecto: las intersecciones de US 287 con SH 1, North Shields Street y LaPorte Bypass. El límite de velocidad permitida es de 45 mph (72.5 km/h), la velocidad de diseño es de 50 mph (80.5 km/h), y hay un cruce de vía a nivel con el Union Pacific Railroad (UPRR) en North Shields Street.

¿Por qué la FHWA y el CDOT quieren realizar este proyecto?

Propósito: El propósito de este proyecto es mejorar la movilidad y la seguridad de la circulación vial existente y futura en el tramo de la carretera federal US 287 comprendido entre SH 1 y la intersección con LaPorte Bypass.

Necesidad: El mejoramiento de este tramo de la carretera federal US 287 tiene el objetivo de lograr un nivel satisfactorio de servicio (condición del flujo de tránsito) y mitigar el actual congestionamiento de tránsito. Las actuales condiciones de circulación vial, sobre todo entre las intersecciones, son malas. Las dificultades que experimentan los conductores para dar vuelta a la izquierda y la disminución consecuente en las condiciones de seguridad intensifican la necesidad de realizar mejoras en este corredor. En virtud de que se pronostican volúmenes cada vez mayores de tránsito (con base en las tendencias de crecimiento en las ciudades circunvecinas), las condiciones de circulación vial y seguridad seguirán deteriorándose si no se llevan a cabo las mejoras.

Alternativas estudiadas

La FHWA y el CDOT tomaron en consideración 12 alternativas junto con la de No actuar, y evaluaron la capacidad de cada alternativa para satisfacer el propósito y la necesidad de este proyecto. Este estudio incluyó la consideración de construir una nueva alineación, o bien ensanchar el tramo de carretera actual.

Se usaron los siguientes criterios fundamentales para examinar las alternativas: hábitat adecuado para las especies de flora y fauna amenazadas y en peligro de extinción, impactos en los parques públicos y áreas naturales, impactos en áreas que contienen materiales o desechos peligrosos, responsabilidades de mantenimiento de la ruta, la necesidad de un nuevo cruce de ferrocarril o paso elevado, reubicaciones residenciales, reubicaciones comerciales e industriales, costos preliminares de adquisición de derechos de vía, impactos en los proyectos de urbanización residencial aprobados, trastornos en parcelas grandes de tierras de labranza, aspectos socioeconómicos y de justicia ecológica y costos preliminares de construcción de la carretera, el puente y los servicios públicos.

Después del proceso de selección inicial, se decidió conservar 3 de las 12 alternativas, junto con la de No actuar, para seguir analizándolas: las alternativas A4 y A5 en la alineación existente y la alternativa B en una nueva alineación. (Véase el mapa adjunto.) La alternativa A4 reduciría al mínimo los posibles impactos en el ambiente humano y natural y seguiría el camino existente. La alternativa A5 requeriría la reubicación de Terry Lake Dam, y reduciría los impactos en el lado sur del camino existente. La alternativa B incluiría la construcción de un nuevo corredor al sur de la actual carretera US 287.

Análisis ambiental

Los impactos directos, indirectos y acumulativos, así como las posibles medidas de mitigación asociadas con estas alternativas se analizaron en 25 recursos diferentes. Los impactos que requieren mitigación se identificaron en ocho recursos: adquisición de derecho de vía y reubicación, ruido, ecología, tierras pantanosas, terrenos aluviales, calidad del agua, materiales y desechos peligrosos y construcción.

Alternativa preferente

La FHWA, en su calidad de organismo gubernamental encargado de este proyecto, es responsable de tomar la decisión sobre la alternativa preferente. Después de finalizar el análisis ambiental, la FHWA y el CDOT se reunieron con la ciudad de Fort Collins, el Condado de Larimer y otros organismos locales, estatales y federales para anunciar la recomendación de la alternativa A4 como la alternativa preferente. La alternativa preferente satisface el propósito y la necesidad del proyecto, ya que mejora la movilidad y la seguridad de las condiciones de circulación vial existentes y futuras y aprovecha la alineación actual de la carretera US 287. Además, la alineación de la alternativa preferente A4 se ha diseñado para reducir al mínimo los posibles impactos en el ambiente humano y natural a lo largo del corredor y, al mismo tiempo, maximiza los beneficios de seguridad. El mapa adjunto muestra la alineación de la alternativa preferente y las posibles reubicaciones. Las reubicaciones incluirán un rango de 4 a 5 residencias unifamiliares, 6 unidades de departamentos, 8 negocios y de 14 a 23 casas móviles. Otros impactos incluyen la pérdida de 0.3 acres (0.12 hectáreas) de hábitat ribereño (orillas del río); la pérdida de 0.25 acres (0.10 hectáreas) de tierras pantanosas, 325 pies lineales (99.06 metros lineales) de invasión de los terrenos aluviales de Dry Creek, impactos de ruido en 48 residencias e impactos de materiales y desechos peligrosos en 4 sitios. La información detallada sobre todos los impactos y las medidas de mitigación propuestas se encuentran en el documento de la EA.

Programa de participación pública

Al inicio del proyecto, se puso en marcha un programa de participación pública (PIP) para alentar la participación tanto de las instituciones como de los residentes y empresas de la localidad, y este programa seguirá vigente hasta que se termine el estudio. El CDOT solicitó los comentarios y sugerencias de organismos federales, estatales y locales, grupos de intereses especiales y el público en general. Los materiales se distribuyeron tanto en inglés como en español.

Se alentó activamente a los representantes de los organismos federales, estatales y locales a participar en el proceso. Los comentarios y sugerencias se recibieron durante una reunión de determinación de alcance y tres reuniones para informar sobre el estado del proyecto, celebradas con los representantes de los diferentes organismos entre noviembre de 1999 y abril de 2001. El CDOT también participó en numerosas reuniones con organismos locales para analizar aspectos específicos del proyecto.

Se distribuyeron cinco hojas de datos del proyecto entre residentes y negocios locales, grupos de intereses especiales y organismos federales, estatales y locales, entre octubre de 1999 y marzo de 2004. Se mantiene un sitio Web del proyecto en www.us287-north-of-fort-collins.com. Se realizaron tres reuniones públicas de determinación de alcance con diversos grupos de intereses especiales en noviembre de 1999, enero de 2000 y febrero de 2000. Se impartieron talleres públicos el 4 de mayo de 2000 y el 21 de septiembre de 2000. El CDOT trató activamente de buscar la participación de los residentes, propietarios de inmuebles y negocios que se encuentran en las áreas de acción de las alternativas en estudio, realizando entrevistas de puerta en puerta en la comunidad, entre abril y junio de 2003.

¿Qué sigue?

Después de la audiencia pública (véase el anuncio adjunto), la FHWA y el CDOT responderán a los comentarios y publicarán un documento de decisión, conforme a lo que estipula la Ley Nacional de Política Ambiental (NEPA). Después de publicar el documento de decisión previsto por la NEPA, el proyecto entrará en la fase de diseño, seguida por la adquisición de derecho de vía y servicios públicos (misma que incluirá la reubicación de las residencias y negocios afectados) y, por último, la construcción del proyecto.

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Glossary of Terms

- Appendix A. Relocation Assistance Memo
- Appendix B. Environmental Justice Community Interview Information
- Appendix C. Environmental Coordination Letters
- Appendix D. Larimer County Preferred Alternative
- Appendix E. Threatened & Endangered Species Survey Reports
- Appendix F. Wetland Finding
- Appendix G. Community letters and CDOT Responses
- Appendix H. Open House Handouts
- Appendix I. Project Newsletters/Factsheets

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US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Chapter 1 Project Purpose and Need

CHAPTER 1 - PROJECT PURPOSE AND NEED

1.1 Introduction and Description of Proposed Action

The Federal Highway Administration (FHWA), in conjunction with the Colorado Department of Transportation (CDOT), initiated an Environmental Assessment (EA) for United States Highway 287 (US 287) north of the city of Fort Collins between State Highway 1 (SH 1) and the LaPorte Bypass intersection east of the town of LaPorte, mileposts (MP) 348.50 and 350.35. As the lead agency, FHWA is responsible for the decision on the Preferred Alternative.

The project addressed by this EA is to improve mobility and safety conditions along this two-lane stretch of US 287. The *North Front Range 2025 Regional Transportation Plan* (December 2001) includes four-lane widening improvements for this segment of the highway, and the project is also a part of the Transportation Improvement Program (TIP). The four-lane improvements examined consist of either widening the current roadway or providing a new alignment. The project area is within the Urban Growth Area (UGA) of the city of Fort Collins and the North Front Range 2025 Regional Transportation Plan (RTP) area (Figure 1-1).

This approximately 2-mile stretch of highway is currently a two-lane, undivided road with one 12-foot lane in each direction and varying shoulder widths (0 to 4 feet) (Figure 1-2). There are three signalized intersections within the project area, intersections of US 287 with SH 1, North Shields Street, and the LaPorte Bypass. The posted speed limit is 45 miles per hour (mph), the design speed is 50 mph, and there is an at-grade crossing with Union Pacific Railroad (UPRR) at North Shields Street. Trains make two round trips a week and one every other Saturday.

CDOT currently owns right-of-way in the project area for only the existing US 287 corridor, which comprises 19.4 acres. Right-of-way refers to the total land area acquired for construction of a transportation corridor or facility. The existing US 287 right-of-way within the project area varies from 75 to 105 feet wide.

1.2 Project Context

Planning and construction of improvements to US 287 in northern Colorado have been ongoing for more than 20 years. Improvements began in the early 1970s when the highway was widened from two to four lanes between Fort Collins and Loveland. The LaPorte Bypass portion of US 287 north of Fort Collins was completed in 1988 and is a two-lane facility. In response to existing and projected traffic conditions north of Fort Collins, FHWA and CDOT have undertaken a study of alternatives for improving traffic conditions on US 287 between SH 1 and the LaPorte Bypass intersection. Widening of this section to four travel lanes would be consistent with the number of lanes on the eastern end of the project corridor. The majority of the westbound traffic on US 287 heads north on the LaPorte Bypass while the remainder continues west on the two-lane portion of highway that was historically part of US 287 but is now Larimer County Road 54G. The project area is also within the North Front Range 2025 RTP area, which has recommended the improvement of US 287.

This EA addresses potential impacts associated with the alternatives under study for improving this segment of US 287 (either on the existing US 287 or by providing a new

alignment), and was prepared in compliance with the National Environmental Policy Act of 1969 (NEPA), as amended; the Council on Environmental Quality (CEQ) regulations implementing NEPA; FHWA regulations; and other pertinent environmental regulations.

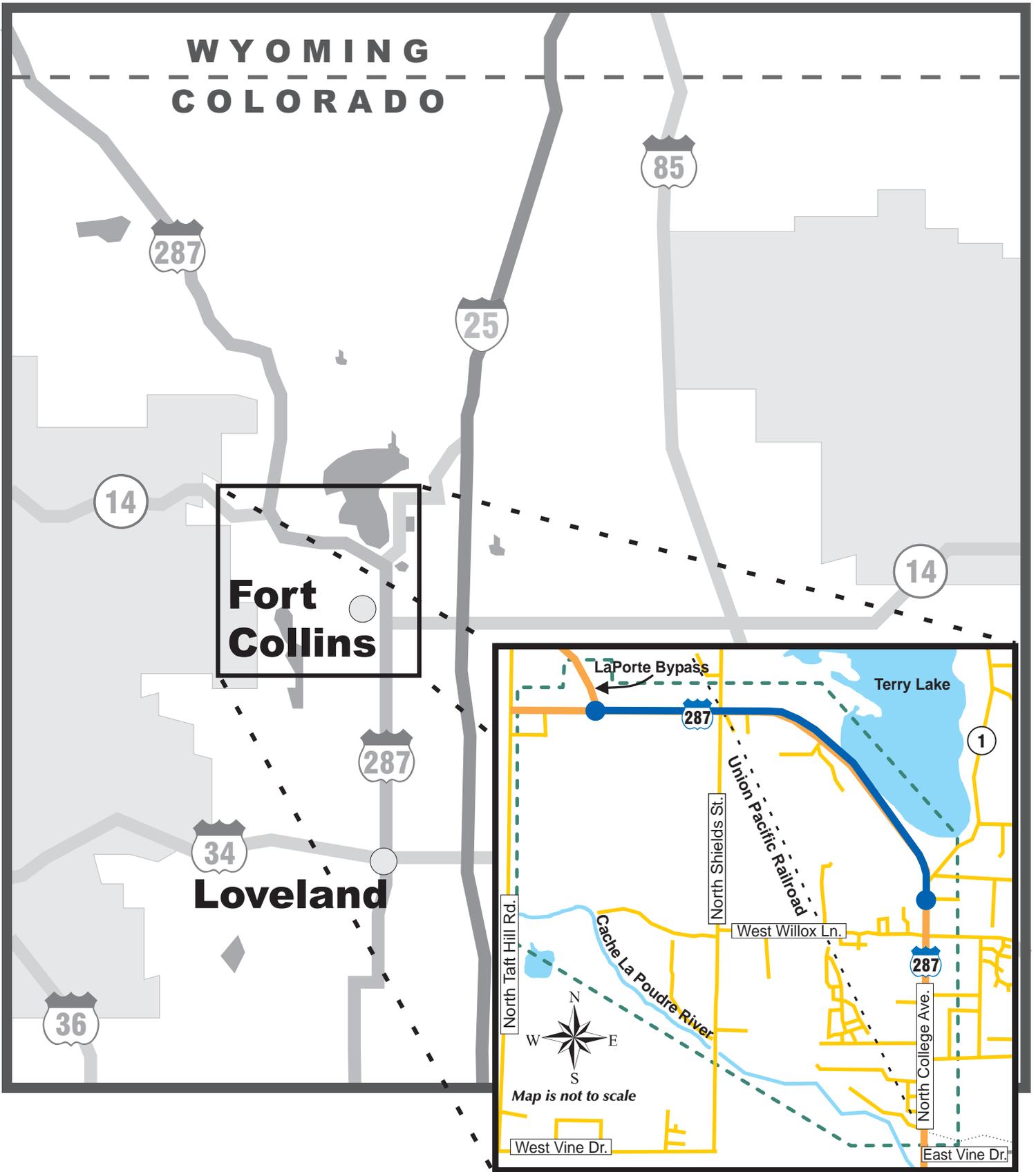
1.3 Scoping Activities

Scoping was initiated at the start of the project to identify issues and concerns related to US 287 and its potential improvement. These issues and concerns assisted in the development of alternatives, the project's purpose and need, and alternative screening criteria. Early and continued input from the public and from local, state, and federal agencies was proactively sought. The results of the scoping process are documented in *US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Scoping, Alternative Identification and Screening Report* (JFSA 2000).

In November 1999, April and September 2000, and April 2001, Agency Status Meetings were held with pertinent federal, state, and local agency representatives to solicit their input, identify issues, identify alternatives to be taken into consideration, and provide continued participation in the environmental assessment process. In addition, a coordination meeting was held on July 27, 2000, to brief the city of Fort Collins and Larimer County staff on the status of the alternatives and the environmental analysis. The agencies invited to these meetings included:

- City of Fort Collins Transportation
- City of Fort Collins Engineering
- City of Fort Collins Planning
- Larimer County Public Works
- Larimer County Engineering
- Larimer County Planning
- North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC)
- Fort Collins City Council Member
- LaPorte County Commissioner, District 2
- Colorado Division of Wildlife
- US Army Corps of Engineers
- Colorado State Patrol

Recognizing the value of public input and the diversity of the community, the Colorado Department of Transportation (CDOT) conducted a Public Involvement Program (PIP) with bilingual materials (see Chapter 4, Comments and Coordination). Through this program, information about the project was distributed through factsheets and a website published in English and Spanish. Comments were solicited at several meetings with special interest groups, potentially affected property owners, local business owners, local residents, and other interested citizens. Meeting formats included small group meetings, public workshops, community interviews and, upon request, one-on-one meetings.



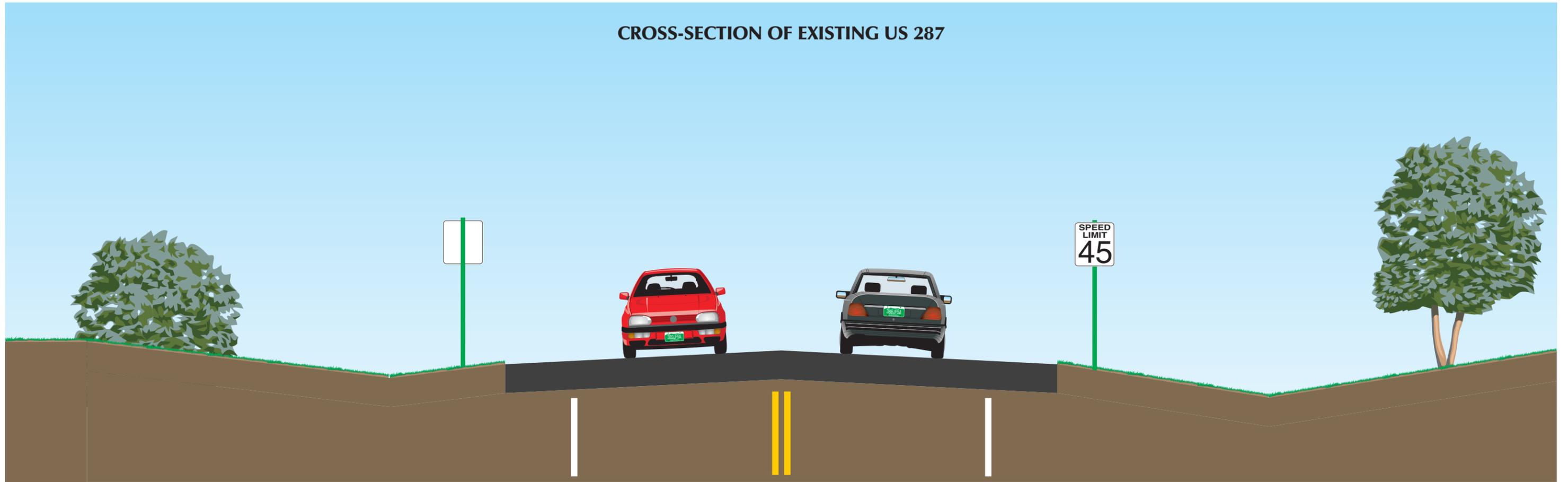
LEGEND

-  = Existing US 287 Under Study
-  = Project Area
-  = Project Termini

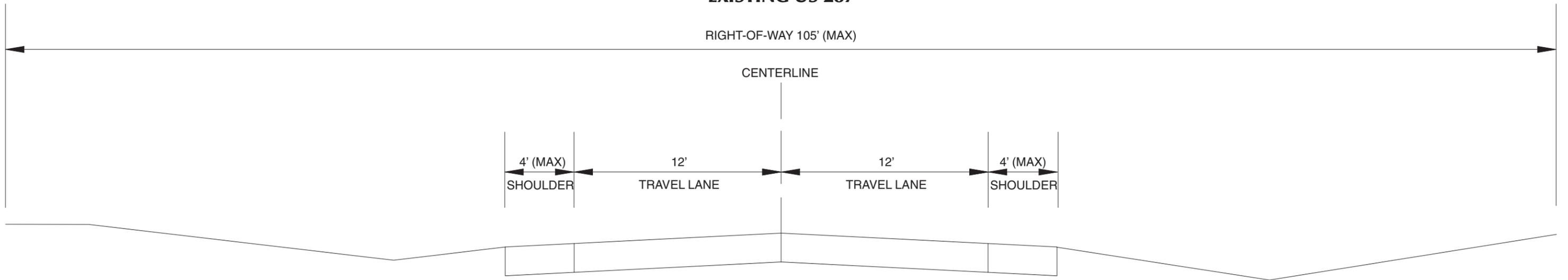


**US 287 - SH 1 to the LaPorte Bypass:
Project Area
FIGURE 1-1**

CROSS-SECTION OF EXISTING US 287



EXISTING US 287



**US 287 - SH 1 to the LaPorte Bypass:
Cross-Section of Existing US 287**

FIGURE 1-2

1.4 Purpose and Need

The purpose of this project is to improve the mobility and safety of existing and future travel conditions on US 287 between SH 1 and the LaPorte Bypass intersection. This improvement is intended to achieve an acceptable level of service (LOS) while alleviating traffic congestion that already exists. Current travel conditions, primarily between intersections, are poor. The difficulty experienced by drivers making left turns and the related decrease in safety conditions further emphasize the need for improvements along this corridor. With future increased volumes predicted based on growth trends in neighboring cities, the travel and safety conditions would degrade further without the implementation of improvements.

1.5 Project Area Description

Larimer County is located in north central Colorado within an hour's drive of the Denver metropolitan area. Population statistics rank Larimer County as the seventh-largest county in Colorado. It encompasses 2,640 square miles that boast high-quality irrigated farmland and vast stretches of scenic ranch lands, forests, and mountains. Outdoor, recreational, and picturesque surroundings in the county, including parts of Roosevelt National Forest and Rocky Mountain National Park, provide many recreational opportunities for the area's residents and visitors.

Larimer County's population has increased in recent years, reaching 251,494 in 2000. Most of the growth within the county over the last decade has been in the cities of Fort Collins and Loveland. Unincorporated Larimer County contains about 27 percent of the total 2000 county population, and the city of Fort Collins contains about 47 percent of the county population. State of Colorado population projections show continued growth in the city of Fort Collins specifically and in Larimer County as a whole, through the year 2025. Larimer County is projected to experience a 50 percent increase in population between 2000 and 2025 and is projected to reach 368,465 in 2025. Table 1-1 represents historical population data for Fort Collins and Larimer County.

Table 1-1. Population in the City of Fort Collins and Larimer County

	1970	1980	1990	1995	1999	2000
City of Fort Collins	43,337	65,092	87,511	101,447	115,630	118,652
Unincorporated Larimer County	26,413	47,384	53,557	62,373	66,029	68,819
Total Larimer County	89,900	149,184	186,136	216,289	242,783	251,494

Socioeconomic conditions within the project area contrast somewhat with the broader economic trends and patterns in Larimer County in that there does not appear to be economic growth in the project area similar to that of the county. The Fort Collins-Loveland area labor force grew between 1995 and 2000 to support new employment opportunities in the area. Unemployment in the Fort Collins-Loveland area decreased from 3.9 percent in 1995 to 3.0 percent in 2000. Major increases in construction, retail trade, services, and government employment occurred in the county between 1995 and 2000. The growth in these sectors mirrors economic growth typical in the western United States over the last decade. As with the increases in employment opportunities, wages have grown steadily throughout the county. Conversely, the economy within the project area has not exhibited the high growth trends evident elsewhere in the county.

The project area is occupied by a wide range of commercial properties, including agricultural equipment sales, furniture sales, game processing, storage units, animal hospital, and a commercial rafting outfitter. Commercial parcel sizes in this area range from 0.5 to 5 acres. The larger commercial properties; i.e., Jax Farm and Ranch and Ron's Equipment Company, are located along the north side of US 287. These commercial operations use their frontage on US 287 for storage, display, and advertising. Smaller commercial properties are interspersed among residential properties.

US 287 is the primary route between the city of Fort Collins and Laramie, Wyoming, where it connects with Interstate 80 (I-80). This is the connection for commercial traffic to and from the city of Fort Collins from the north and provides access to the area's residences and businesses. The projected population increase is anticipated to cause an increase in travel demand on US 287 between SH 1 and the LaPorte Bypass, which would further increase congestion and compromise safety. In addition, the city of Fort Collins completed the *Northern Colorado Truck Mobility/SH 14 Relocation Study* (December 2001), which recommended the designation of SH 14, including this portion of US 287, as the city's truck route. An environmental study would need to be completed in order for this to be implemented. Currently there is no funding allocated for such a study.

Fort Collins is the home of Colorado State University, which plays a major role in the local and regional economy and employed more than 7,000 persons in 2000. Other major employers in Larimer County (i.e., more than 1,000 employees in 2000) included Hewlett-Packard, the Poudre R-1 and Thompson School Districts, Poudre Valley Health, Larimer County, and the city of Fort Collins. Table 1-2 summarizes employment growth in the Fort Collins-Loveland area between 1995 and 2000.

**Table 1-2. City of Fort Collins-Loveland Metropolitan Statistical Area
Employment/Unemployment Trends (Annual Averages)**

	1995	1998	1999	2000
Total Labor Force	127,256	140,302	140,737	143,008
Total Employed	122,249	134,944	136,403	138,768
Total Unemployed	5,007	5,358	4,334	4,240
Percent Unemployed	3.9	3.8	3.1	3.0

Source: Colorado Department of Labor and Employment

Currently, the area adjacent to US 287 contains primarily single-family homes and small businesses, interspersed with some multi-family housing. The areas north of this segment of US 287 and south and west of Terry Lake Dam are largely agricultural. There are two subdivisions platted farther to the south and west of US 287; however, at present there are no similar plans for development within the project area. A large mobile home park, Poudre Valley Mobile Home Park (MHP), north of Willox Lane and southwest of the US 287/SH 1 intersection contains approximately 345 spaces, and two smaller mobile home parks along the existing corridor (Terry Lake MHP and Blue Spruce MHP) containing 37 and 30 spaces respectively. There are about 50 single-family residences existing also within the project area. Residential structures are set back from the roadway approximately 40 to 165 feet, and parcel sizes range from 0.2 to 4 acres.

As with economic and population growth rates, the number of housing units in the city of Fort Collins and Larimer County has also substantially increased. Table 1-3 shows an increase of approximately 27,600 housing units in Larimer County between 1990 and 2000.

Table 1-3. Larimer County Growth Indicators

	1990	1995	1996	1997	1998	2000
Total Housing Units	77,811	88,223	91,020	94,645	97,421	105,392
Total Households	70,472	82,061	83,997	86,334	88,543	97,164

Source: Colorado Department of Labor and Employment, US Bureau of Census

Provision of affordable housing is a major goal of both Larimer County and city of Fort Collins planning efforts. The project area is a part of the city of Fort Collins UGA. According to the city’s land use plan, annexation should occur by the year 2015. Development in the project area is subject to the UGA Agreement between the city of Fort Collins and Larimer County. Both the city and the county encourage land annexation before development to ensure that urban-level public improvements (e.g., streets, water and sewer, emergency services, schools, etc.) are provided. The project area is currently under Larimer County’s jurisdiction. In accordance with the UGA agreement, the county will only approve urban-level development within the UGA boundaries.

1.6 Photo Essay

Figure 1-3 represents photographs taken at various locations within the project area during summer and fall 2000.

1.7 Travel Conditions

US 287 is the primary connection between the city of Fort Collins and the LaPorte Bypass for both local access and through traffic. The numerous businesses and residences along the corridor are both origins and destinations for a portion of the traffic.

Existing traffic conditions and impacts resulting from projected future traffic demand increases are the primary reason for this study. The roadway’s lack of left turn lane facilities and narrow shoulders hinders through traffic when vehicles are unable to make a left turn because of continuous oncoming traffic.

1.8 Travel Demand

The current and projected traffic volumes and corresponding Level of Service (LOS) are critical factors in evaluating the need for this project. LOS is a quantitative measure of congestion ranked from A (best) to F (worst), describing the operational characteristics within a traffic stream. LOS factors include speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience. The factors used to determine LOS differ depending on the type of highway and intersection. For instance, an intersection LOS is based on vehicle seconds of delay, whereas highway LOS is generally based on percent-time-following and for higher-level facilities, predicted speed. For a two-lane highway, the percent of no-passing zones is also considered. General descriptions for each LOS are as follows:

- LOS A – free-flow operations
- LOS B – reasonably free-flow operations
- LOS C – noticeable traffic but no appreciable congestion
- LOS D – speeds decline and congestion begins to form
- LOS E – maximum service flow (full capacity)
- LOS F – heavy congestion, significant delays, stop-and-go-traffic

CDOT 20-year design guidelines indicate that a LOS C should be achieved in rural areas and D for urban areas. This section of US 287 is defined by CDOT as a Federal Aid Primary (urban) highway. Any of the action alternatives would be expected to operate at worst at LOS D.

The operations of the current traffic volume on US 287 were evaluated using the Highway Capacity Software (HCS) and SYNCHRO, an intersection simulation and traffic analysis software program. The 2000 average daily traffic (ADT) values were estimated from actual traffic counts. Currently, the analysis shows that the intersection of US 287 and SH 1 is operating at LOS C, and the intersections of US 287 with North Shields Street and with the LaPorte Bypass are operating at LOS B. Although the ADT of US 287 south of SH 1 is 25,000, traffic is free-flowing at LOS A. Conversely, although the ADT of US 287 between SH 1 and North Shields Street is only 16,000, the LOS is D. Similarly, the ADT of US 287 between North Shields Street and the LaPorte Bypass is only 14,000, with the LOS also at D. Figure 1-4 illustrates existing 2000 ADT and LOS. Table 1-4 summarizes year 2000 LOS.

Projections have been made for travel conditions on this stretch of highway for the year 2025 to show what the conditions would be like if no improvements are made (No Action Alternative) aside from the normal maintenance and upkeep that CDOT provides (Figure 1-5). For the No Action Alternative, the projected LOS would be F at the intersection of US 287 and SH 1, E at the intersection of US 287 and North Shields Street, and LOS C at the intersection of US 287 and the LaPorte Bypass. The highway segment west of North Shields Street would have a 2025 LOS of E with an ADT of 24,600. The highway segment north of the SH 1 intersection would have a 2025 ADT of 23,000 and would also be at LOS E. For two-lane, two-way highways, the range of volumes that result in LOS E is broad, from approximately 60 to 100 percent of ultimate capacity. Table 1-4 summarizes year 2025 LOS.

Table 1-4. Comparison of 2000 and 2025 LOS Without Improvements to US 287

Location	LOS	
	2000	2025
US 287 at LaPorte Bypass	B	C
US 287 at North Shields Street	B	E
US 287 at SH 1	C	F
Through traffic	D	E



1. View north along US 287 near SH 1



2. View northwest along US 287 near Terry Lake Dam



3. View southeast along US 287 from Terry Lake Dam



4. View east along US 287 near Terry Lake Dam

***US 287 - SH 1 to the LaPorte Bypass:
Photo Essay
FIGURE 1-3***



5. View northeast along US 287 near Aragon Iron and Metal Inc.



6. View north from US 287



7. View along US 287 east



8. View northeast along US 287 toward intersection of North Shields Street and Union Pacific RR crossing



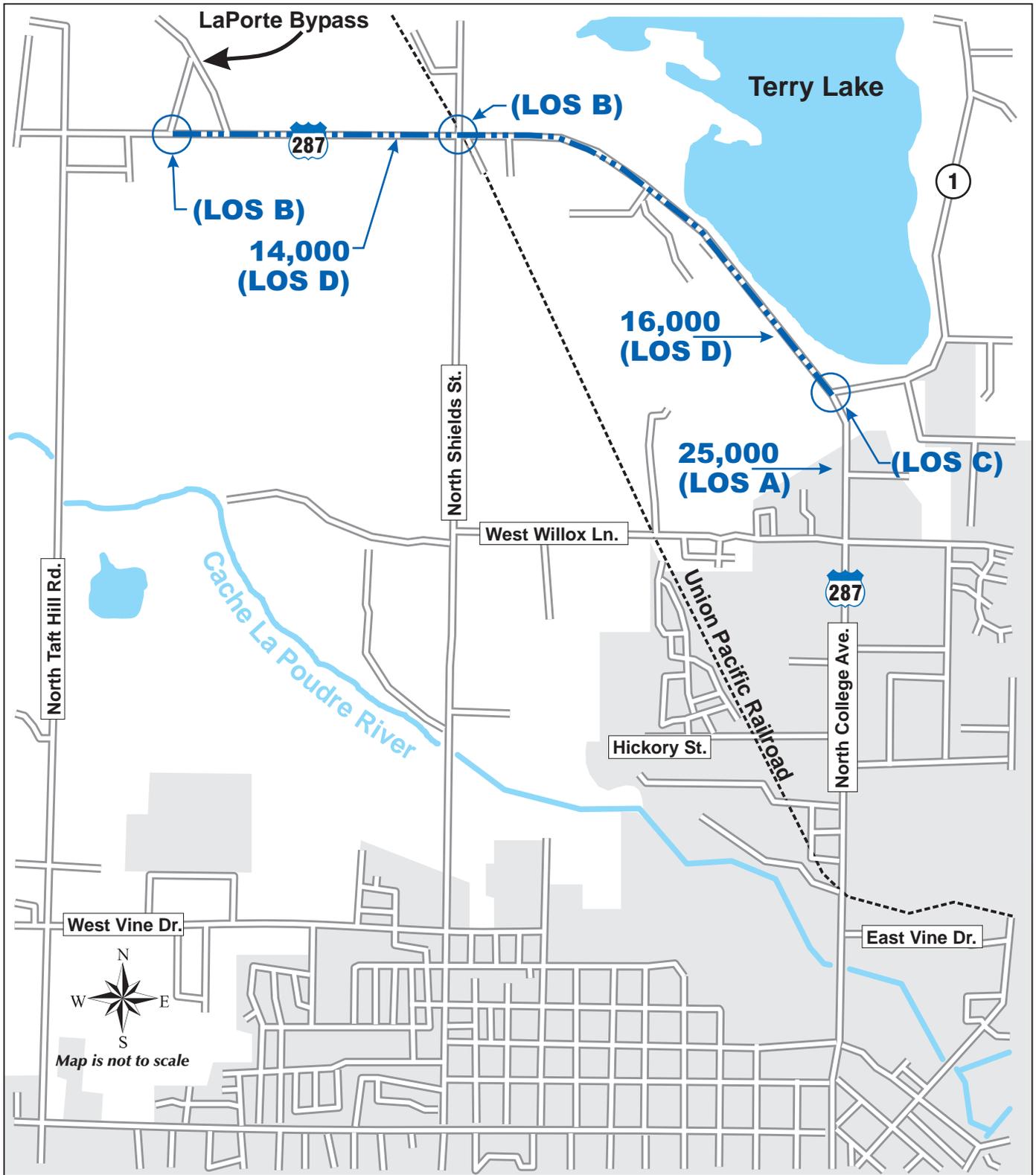
9. View southwest along US 287 from just east of Laporte Bypass



10. View west from North Shields Street



11. View south along North Shields Street



LEGEND

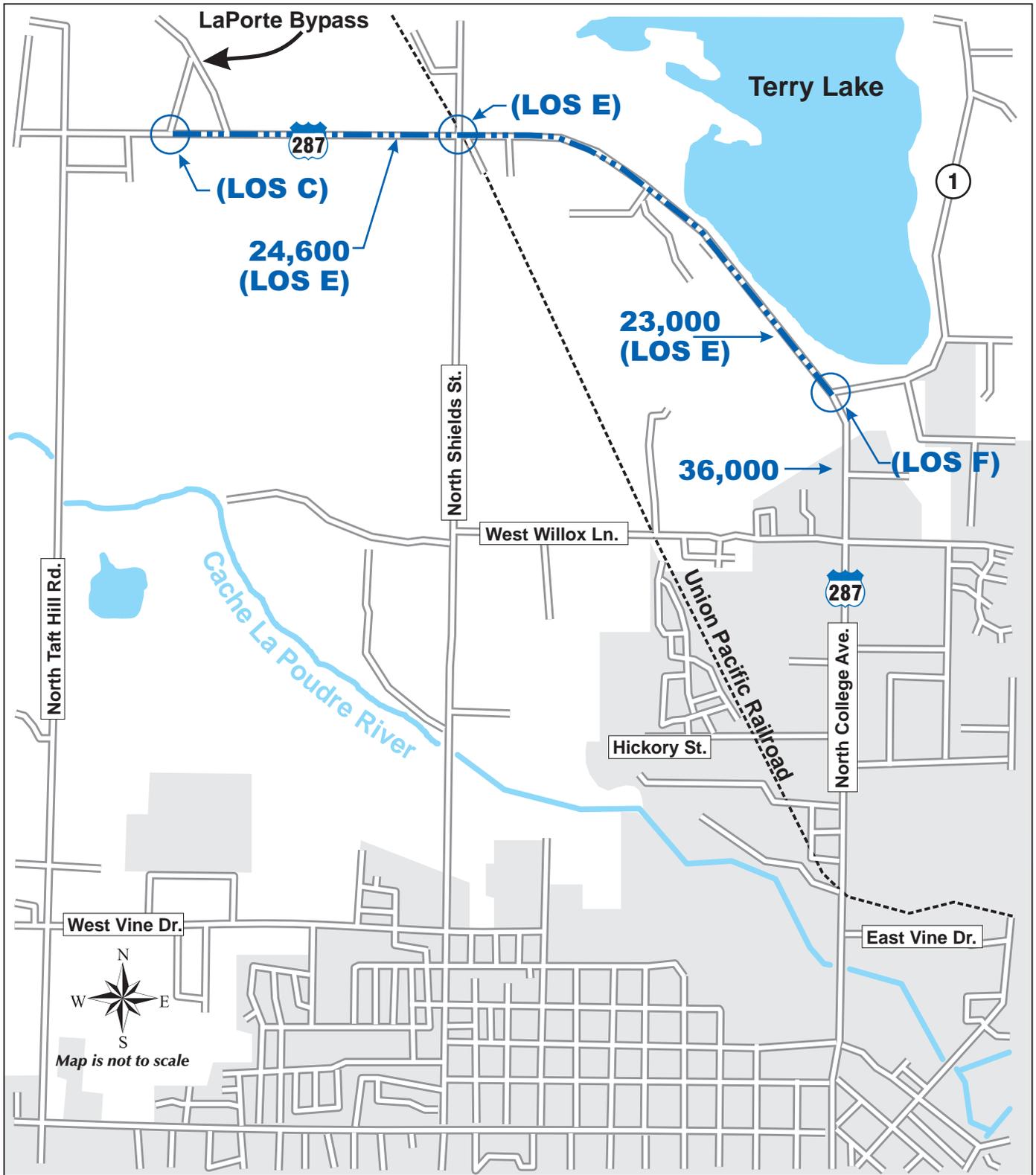
— = Existing US 287
Between SH 1 &
LaPorte Bypass
(Alternative A)

■ = City of Fort Collins
Boundary



**US 287 - SH 1 to the LaPorte Bypass:
2000 Average Daily Traffic (ADT)
and Level of Service (LOS)**

FIGURE 1-4



LEGEND

--- = Existing US 287
Between SH 1 &
LaPorte Bypass
(Alternative A)

■ = City of Fort Collins
Boundary



**US 287 - SH 1 to the LaPorte Bypass:
Projected 2025 Average Daily Traffic (ADT)
and Level of Service (LOS)
Associated with No Action Alternative**

FIGURE 1-5

The ADT figures shown in Figure 1-4 and Figure 1-5 are for a typical weekday. Traffic during peak hours would be stop-and-go, and delays due to congestion would cause increases in travel time. Under these conditions, drivers whose origins or destinations are not within the corridor might begin to seek alternative routes, the most obvious being Willox Lane to North Shields Street. The steadily worsening congestion would also restrict efficient access in and out of adjacent properties.

1.9 Crash Analysis

Traffic safety is also a concern along this segment of US 287. A crash analysis was performed with data collected by CDOT covering a period from January 1, 1998 to December 31, 2002. Crashes between mileposts (MP) 348.50 and 350.35 were assumed to be in the project area. Over the five-year period, there were a total of 114 crashes. Of the 114 crashes, 63 were property damage, 50 involved injuries and 1 involved a fatality. The most prominent crash types were rear-end (43), collisions with fixed objects such as utility poles or buildings (28), and broadside (13). These crashes resulted in an economic loss of approximately \$3 million. The loss was calculated using 2000 figures provided by the National Safety Council.

Compared to an average Federal Aid Primary (Urban) highway within the State of Colorado (2000 statistics), this approximate 2-mile stretch of US 287 has a safety record that is somewhat better than average. The rate of injury crashes per million vehicle miles traveled (MVMT) is 0.92, which is slightly under the statewide average of 0.96. The fatality rate was 1.83 per 100 MVMT, which is greater than the statewide average of 1.37. The total crash rate was 2.09, compared to the statewide average of 3.37 per MVMT.

For the entire approximate 2-mile stretch, the weighted hazard index (WHI), which compares the frequency and severity of crashes to statewide averages, is equal to -1.49, implying that overall crash rates and severities observed are less than the statewide average. The statewide average is 0.00.

The western portion of the corridor is more problematic than the eastern portion. For the western one mile, from MP 349.35 to 350.35, the WHI is equal to 0.14, implying that overall crash rates and severities observed are somewhat greater than the statewide average. The rate of injury crashes per MVMT is 1.18, which is greater than the statewide average of 0.96. This section starts at the curve where US 287 heads to the west and continues through the North Shields Street intersection where US 287 enters the LaPorte Bypass and heads to the northwest.

Although the overall WHI is lower than the statewide average, the frequency of access points to adjacent properties and the two-lane undivided configuration of the roadway create safety concerns. Many properties have multiple accesses along the highway and are poorly located with respect to opposing driveways resulting in sight restrictions due to curves.

The current two-lane configuration inhibits left turns, particularly during heavy traffic. The vehicle turning left would often be forced to stop in the through traffic lane to yield to heavy oncoming traffic. This situation often results in traffic slowdowns or stops behind the vehicle turning left, thus increasing the potential for crashes. Additionally, the combination of limited right-of-way and high traffic volume presents safety concerns for bicyclists and pedestrians.



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Chapter 2 Alternatives

CHAPTER 2 - ALTERNATIVES

This chapter describes the alternatives considered in this study and includes the:

- consideration of alternative transportation modes
- screening of potential alternatives
- identification of alternatives for detailed environmental evaluation

2.1 Screening Process

2.1.1 Alternative Modes of Transportation

Alternative modes of transportation were considered during the scoping process. The North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC) has included a goal of transferring some of the single-occupancy vehicle trips made in the area to a different mode of transportation (e.g., pedestrian, bicycle, carpool, transit, vanpool) in its Regional Transportation Plan (RTP). Most alternative modes of transportation are either nonexistent or not planned within the project area, and are described below.

a. Bus. Public bus service is currently available in the project area through Transfort, the city of Fort Collins' public transportation system. Route 8 extends from Fort Collins to the Poudre Valley Mobile Home Park by a route that travels east and north from the downtown transit center via Mountain Avenue, Linden Street, Vine Drive, and Lemay Avenue, then west and north along Conifer Street, Blue Spruce Drive, Willox Lane, and College Avenue. In addition, a bus service called the Foxtrot sponsored by Larimer County and the city of Fort Collins provides service along US 287 between the cities of Fort Collins and Loveland although not in the project area. Greyhound, a privately owned bus company, uses this stretch of US 287 in its route between Fort Collins and Wyoming.

b. Bicycle/Pedestrian. There are no bike paths along the existing US 287 alignment. The varying shoulder widths provide little consistency, convenience, or safety for persons wishing to walk or bike. A 10-foot wide shoulder and a sidewalk would be part of the design features should an action alternative be selected and implemented.

c. Carpool/Vanpool. The NFRT & AQPC and Northern Colorado Front Range communities support carpooling and vanpooling through a program called SMARTTrips™. This public program is designed to reduce automobile dependency and promote the use of alternative transportation in Northern Colorado. The SMARTTrips program encourages residents to leave their cars at home at least one day a week to help preserve air quality, decrease traffic congestion, conserve fuel and promote better health. SMARTTrips regional office is located at the NFRT & AQPC in the city of Fort Collins.

d. High Occupancy Vehicle (HOV) Lanes/Rapid Transit/Commuter Rail. HOV lanes are generally suited to freeway facilities with controlled access. Rapid transit and commuter rail systems work well in areas with a large population base. Because US 287 between State Highway 1 (SH 1) and the LaPorte Bypass does not have any of these characteristics, it is not a candidate for implementation of HOV lanes, rapid transit, or commuter rail.

2.1.2 Alternative Identification

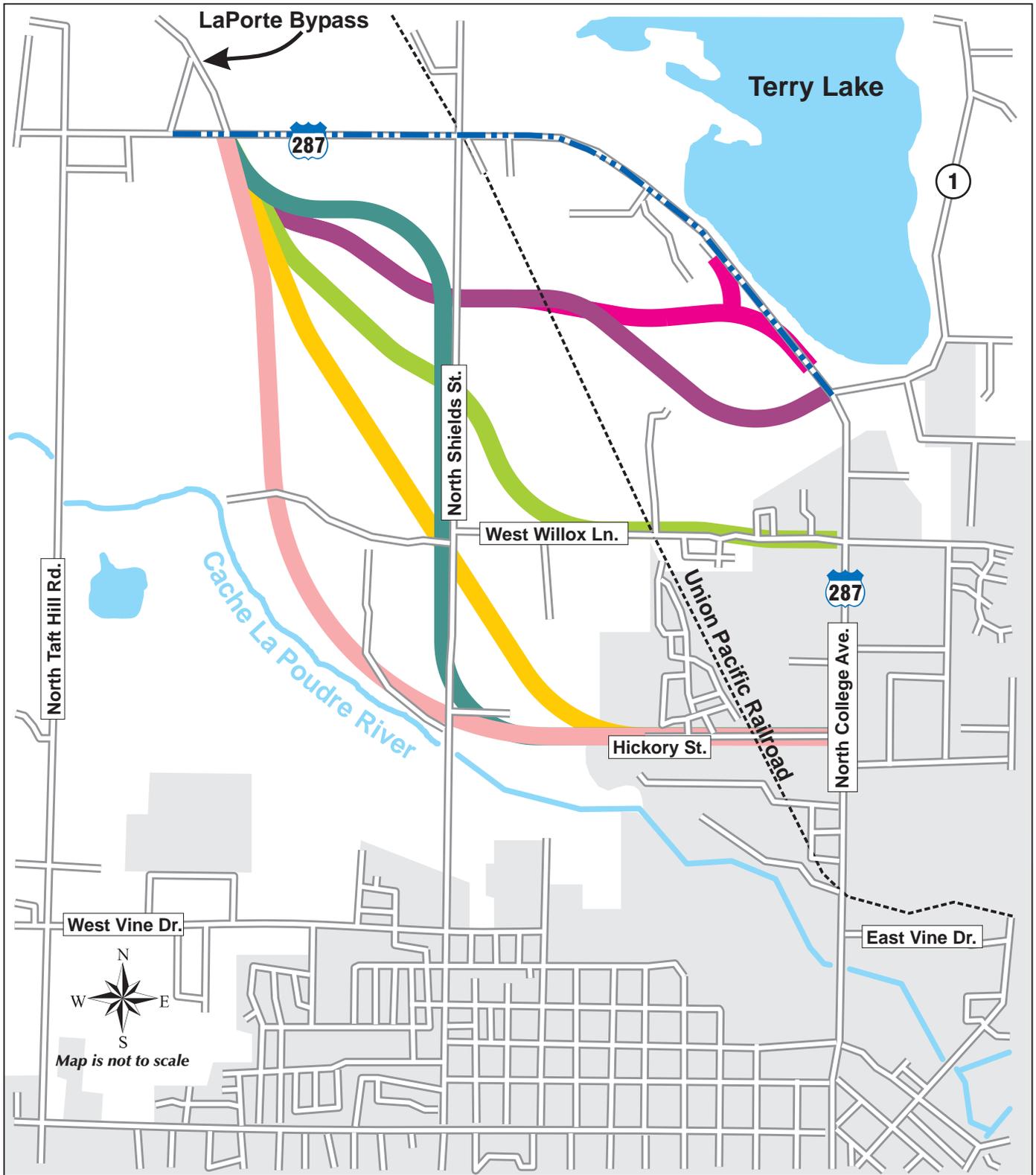
Results of scoping served as a base on which to expand alternative identification and refine the screening process. Many comments received during scoping related to the need for improvements along US 287 and the need to explore alternative alignments. Comments also indicated a need to address potential impacts associated with wetlands, wildlife, surface waters, noise, visual resources, historic resources, farmlands, access to homes and businesses, safety, and acquisition of residential and commercial properties.

The Federal Highway Administration (FHWA) and CDOT considered 12 alternatives along with the No Action Alternative and assessed each alternative's ability to meet the purpose and need of the project, which is to improve mobility and safety along US 287 between SH 1 and the LaPorte Bypass. This process included consideration of whether to create a new alignment or widen the existing roadway. The 12 alternatives included:

- Four on the existing US 287 alignment
 - A1 – hold the existing centerline constant and widen to both sides
 - A2 – hold the south edge of right-of-way constant and widen to the north
 - A3 – hold the north edge of right-of-way constant and widen to the south
 - A4 – widening to either the north or south in a meandering fashion to avoid and minimize impacts
- An additional alternative along the existing alignment (A5) was added in response to public input. It was suggested that the alternative consist of combining the meandering components of Alternative A4 and relocation of Terry Lake Dam to the north. This could potentially reduce impacts to the south side of the road.
- Seven new alignments (B, C, D, E, F, G, and H) all of which would connect to US 287 south of SH 1 and then head west – northwest to re-connect to US 287 at the LaPorte Bypass. All alternatives are shown on Figure 2-1 with the exception of Alternative D, which is a variation of Alternatives B and C.

Based on input from the scoping process, a preliminary list of issues was compiled to indicate constraints in the development of each of the 12 alternatives. These issues were used to assist in developing criteria for examining and screening alternatives.

Based on this list of issues, the following screening criteria were developed: crosses habitat suitable for threatened and endangered species, impacts to public parks and natural areas (Section 4(f)), impacts to areas containing hazardous materials/waste, maintenance responsibilities for the route, the necessity for a new railroad crossing or overpass, estimated residential relocations, estimated commercial/industrial relocations, preliminary right-of-way procurement costs, impacts to approved future residential development, disruption to large farmland parcels, socioeconomic and/or environmental justice issues, and preliminary roadway, bridge, and utility costs (Table 2-1).



LEGEND

- = Existing US 287 Between SH 1 & LaPorte Bypass (Alternatives A1, A2, A3, A4, and A5)
- = "A" Alternatives
- = Alternative B
- = Alternative C
- = Alternative E
- = Alternative F
- = Alternative G
- = Alternative H
- = City of Fort Collins Boundary



**US 287 - SH 1 to the LaPorte Bypass:
Alternatives
FIGURE 2-1**

Alternative D is a variation of Alternatives B and C

Alternatives Screening*

Alternative	Suitable Habitat for Threatened & Endangered Species ²	Public Park & Natural Areas (4(f))	Hazardous Materials (Remediation Recommended by EPA Records)	Maintenance Responsibility for Existing US 287	Requires Additional Railroad Crossing or an Overpass	Estimated Residential Relocations	Estimated Commercial/Industrial Relocations	Preliminary ROW Procurement Costs (in millions)	Crosses Approved Future Residential Development	Large Farm Land Parcel Disruption	Socioeconomics/Environmental Justice Issues	Preliminary Roadway, Bridge, & Utility Costs (in millions)	Preliminary ROW, Roadway, Bridge & Utility Costs (in millions)	Retained for Detailed Environmental Analysis	
Existing US 287 Alignment Alternatives	A1 Holding Centerline	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	CDOT	No	25	6	\$5.8 M	No	NA	No Disproportionate Impacts	\$19.1 M	\$24.9 M	No
	A2 Holding South Right-of-Way	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	CDOT	No	13	3	\$2.2 M	No	NA	No Disproportionate Impacts	⁴ \$23.6 M	\$25.8 M	No
	A3 Holding North Right-of-Way	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	CDOT	No	36	7	\$6.1 M	No	NA	No Disproportionate Impacts	\$10.4 M	\$16.5 M	No
	A4 Meander	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	CDOT	No	15	3	\$2.1 M	No	NA	No Disproportionate Impacts	\$12.7 M	\$17.6 M	Yes
	A5¹ <i>Combination of A2 and A4 with dam relocation</i>	<i>Avoids Habitat Suitable for T&E Species</i>	<i>Avoids 4(f) Properties</i>	<i>Avoids Hazardous Materials Sites</i>	<i>CDOT</i>	<i>No</i>	8	1	<i>\$1.25 M</i>	<i>No</i>	<i>NA</i>	<i>No Disproportionate Impacts</i>	⁴ <i>\$20.9 M</i>	<i>\$25.1 M</i>	Yes
New Alignment Alternatives	B	Avoids Habitat Suitable for T&E Species	Avoids 4(f) ³ Properties	Avoids Hazardous Materials Sites	County	Yes	17	5	\$2.0 M	No	6	No Disproportionate Impacts	⁵ \$11.1 M	⁵ \$14.1 M	Yes
	C	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	County	Yes	62	0	\$2.0 M	No	7	Substantial Socioeconomic & Environmental Justice Impacts	⁵ \$11.5 M	⁵ \$13.5 M	No
	E	Avoids Habitat Suitable for T&E Species	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	County	Yes	18	2	\$5.1 M	No	4	No Disproportionate Impacts	⁵ \$13.2 M	⁵ \$18.3 M	No
	F	Crosses Potential Habitat Suitable for T&E Species (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	8	7	\$2.7 M	No	3	No Disproportionate Impacts	⁵ \$14.5 M	⁵ \$17.2 M	No
	G	Crosses Potential Habitat Suitable for T&E Species (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	23	7	\$5.3 M	Yes • Harris Subdivision • Summit Enterprises MRD	3	No Disproportionate Impacts	⁵ \$17.2 M	⁵ \$22.5 M	No
H	Crosses Potential Habitat Suitable for T&E Species (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	17	7	\$7.5 M	Yes • Harris Subdivision • Summit Enterprises MRD	5	No Disproportionate Impacts	⁵ \$17.0 M	⁵ \$24.5 M	No	

* Information in this table was used for screening early in the process; detailed analysis resulted in revised quantities. Please refer to Chapter 3 for this information.

¹ Alternative A5 is a combination of the A4 alignment (Meander) and A2 (Holding south right-of-way) and has been included for evaluation as a result of interest expressed by the public. It consists of a meandering alignment between SH 1 and the LaPorte Bypass except at Terry Lake Dam, where the dam would be relocated and the south right-of-way held.

² Surveys were completed for the Ute ladies'-tresses orchid and Prebles meadow jumping mouse with negative results.

³ Potential effect to a historic property that is eligible for the National Register of Historic Places.

⁴ Relocating the dam will require both a feasibility analysis as well as a detailed analysis of farming/irrigation impacts. Preliminary dam relocation is estimated at \$9.1M. Cost of farming/irrigation impacts not included.

⁵ Costs assume an at-grade railroad crossing.



**US 287 - SH 1 to the LaPorte Bypass:
Alternatives Screening**

TABLE 2-1

As a result of the initial screening process, three of the twelve alternatives along with the No Action Alternative were retained for further analysis. These were Alternatives A4 and A5 on the existing alignment and B on a new alignment (highlighted in blue on Table 2-1 and mapped in Figure 2-2). Screening results are as follows and are listed in Table 2-1.

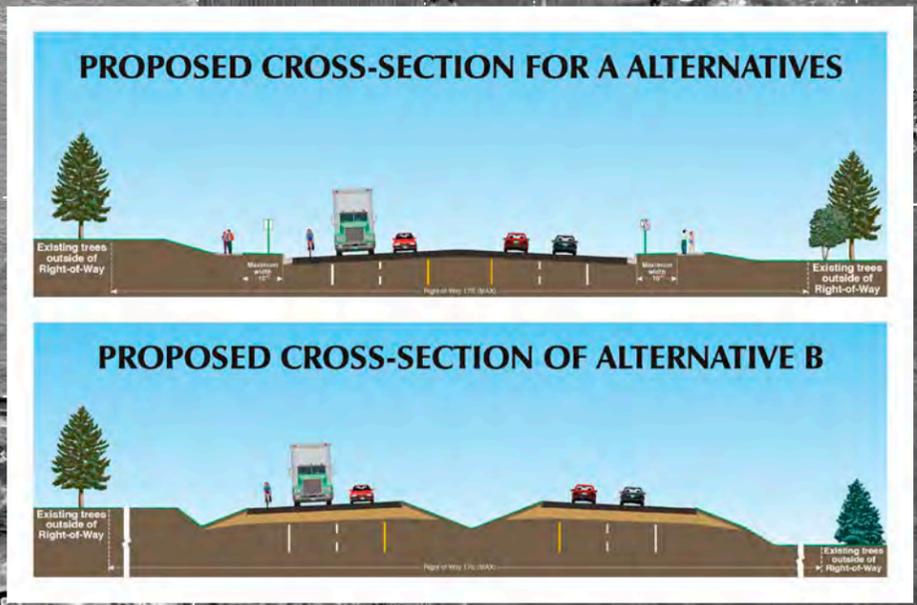
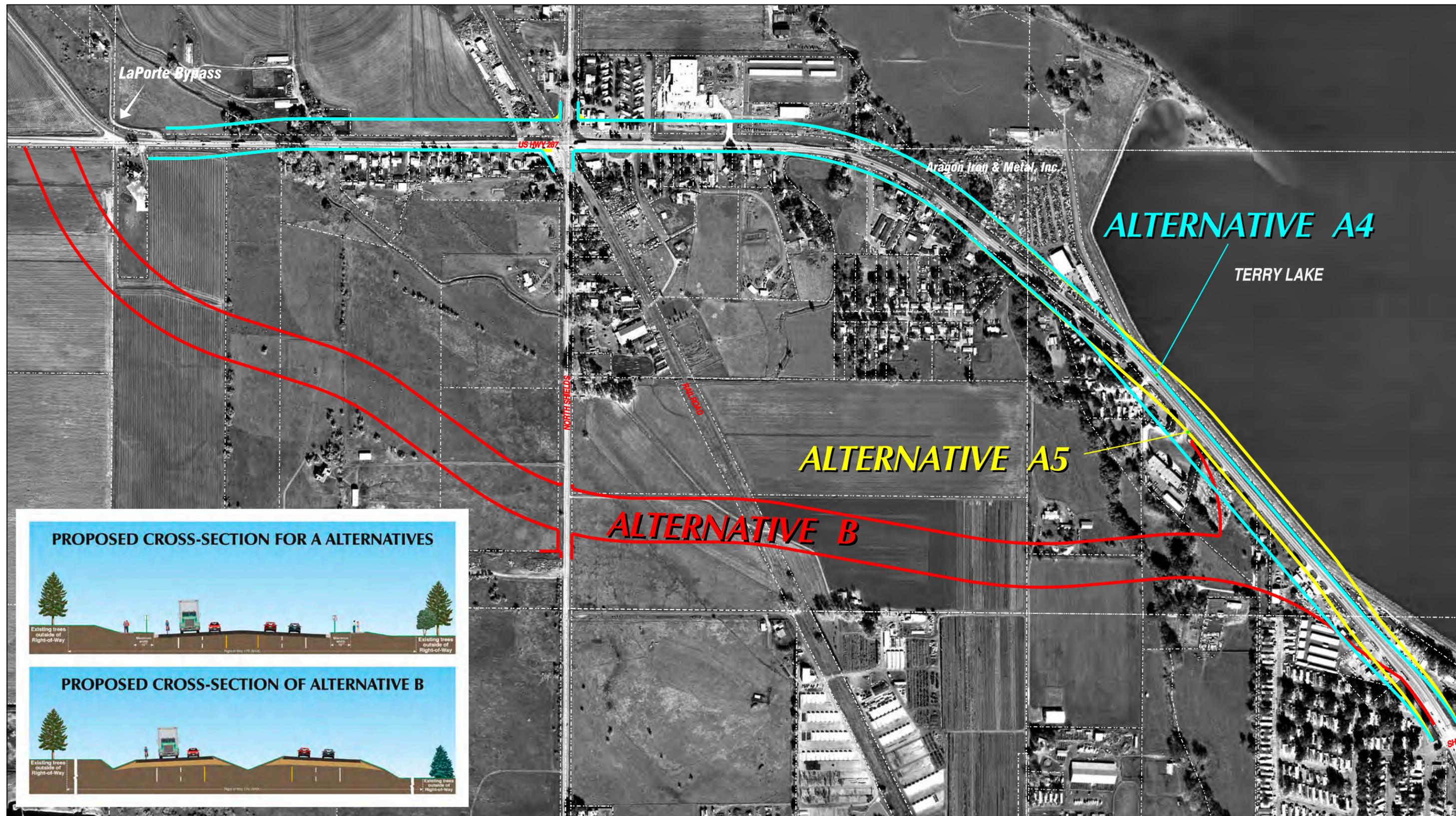
- **Alternatives A1, A2, and A3** were screened out because they had more residential and commercial relocations than Alternatives A4 or A5, while other impacts were similar.
- **Alternative A4** was retained for further analysis.
- **Alternative A5** was retained for further analysis.
- **Alternative B** was retained for further analysis.
- **Alternative C** bisected a mobile home park (MHP) and was screened out due to the high potential for disproportionate impacts to low-income and minority populations and its bisection of a community. Alternative C also had a higher number of estimated relocations than other alternatives, including an estimated 60 residences. This alternative would disturb community cohesiveness and increase noise, air, and visual quality impacts within the community.
- **Alternative D** was screened out because the alignment was similar to Alternative C and would bisect an MHP with an estimated 60 residential relocations that would disturb community cohesiveness and increase noise, air, and visual quality impacts within the community, where a major highway does not currently exist.
- **Alternative E** was screened out because the alignment had a higher number of estimated residential relocations and higher right-of-way and utility costs than alternative B, while offering the same benefit.
- **Alternative F** was screened out because it crossed habitat suitable for threatened and endangered species, had potential conflicts with public parks and natural areas, and would impact a hazardous materials site.
- **Alternative G** was screened out because it crossed habitat suitable for threatened and endangered species, had potential conflicts with public parks and natural areas, would impact a hazardous materials site, and would cross two approved future residential developments.
- **Alternative H** was screened out because it crossed habitat suitable for threatened and endangered species, had potential conflicts with public parks and natural areas, would impact a hazardous materials site, and would cross two approved future residential developments.

Physical components of each alternative retained for further analysis are represented in Table 2-2.

Table 2-2. Alternatives' Physical Components

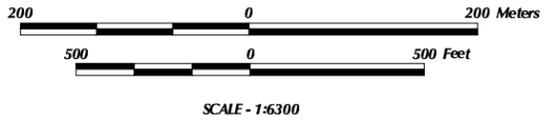
Physical Components	Project Alternative			
	No Action	A4 (On Existing Alignment)	A5 (On Existing Alignment)	B (On a New Alignment)
Right-of-way width (feet)	75-105	Varies 158-175	Same as A4	250
Roadway width (feet)	Varies from 30-75 at intersections	89 (back of curb to back of curb)	Same as A4	112 (76 feet of actual pavement width)
Roadway characteristics	One 12-foot travel lane in each direction 4-foot shoulders, no shoulder in some areas No sidewalks	Two 12-foot travel lanes in each direction 10-foot shoulder/bike lane on outside 7-foot wide sidewalk separated by approximately 10 feet from road edge, where space permits*	Same as A4	Two 12-foot travel lanes in each direction 10-foot shoulder/bike lane on outside 4-foot shoulder on inside
Median	Double yellow line	16-foot paved median	Same as A4	36-foot wide grass median
Design speed	50 mph (posted at 45 mph)	50 mph (posted at 45 mph)	Same as A4	55 mph (posted at 50 mph)
Traffic signals	<ul style="list-style-type: none"> • SH 1 • North Shields Street/ Union Pacific Railroad (UPRR) • LaPorte Bypass 	Replace existing signals at: <ul style="list-style-type: none"> • SH 1 • North Shields Street/ UPRR 	Same as A4	Replace existing signals at: <ul style="list-style-type: none"> • SH 1 Install signals at new intersections: <ul style="list-style-type: none"> • North Shields Street • LaPorte Bypass
Streetlights	Existing lights at: <ul style="list-style-type: none"> • SH 1 • North Shields Street/ UPRR 	Install new lights at: <ul style="list-style-type: none"> • SH 1 • North Shields Street/ UPRR 	Same as A4	Install new lights at: <ul style="list-style-type: none"> • SH 1 • North Shields Street • LaPorte Bypass
Bridge/structures	<ul style="list-style-type: none"> • Dry Creek Bridge • Little Cache La Poudre Ditch crossing 	Replace: <ul style="list-style-type: none"> • Dry Creek Bridge • Little Cache La Poudre Ditch crossing 	Same as A4	Culvert at: <ul style="list-style-type: none"> • Dry Creek
Terry Lake Dam	Location remains the same	Location remains the same	Shifts approximately 50 feet to the northeast	Location remains the same
UPRR Crossing	Existing – at-grade – with traffic signal	Existing – at-grade – with traffic signal	Same as A4	New – at-grade – RR crossing signal
Access	Access patterns remain the same.	Access patterns improved to meet the State Highway Access Code	Same as A4	Access patterns along US 287 remain the same. Access limited on the new roadway and would meet the State Highway Access Code
Cut and fill	None	5-8 foot cut and fill	5-8 foot cut and fill, 10-foot cut at the Terry Lake Dam	5-10 foot cut and fill

*Sidewalks would be attached where this reduces the number of relocations.



- LEGEND**
- Property Boundaries
 - Alternative A4 Right-of-Way
 - Alternative A5 Right-of-Way
 - Alternative B Right-of-Way

Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by DataMap, Inc. Map produced November 20, 2000 by JFSA.



**U.S. 287 - S.H. 1 to the Laporte Bypass:
 Alternatives Retained for Further
 Analysis (No Action, A4, A5, and B)**

FIGURE 2-2

During further refinement of the alternatives and associated environmental analysis documented in Chapter 3 – Impacts and Mitigation Measures, the number of relocations and costs associated with the three action alternatives that progressed through screening changed from those shown in this chapter in Table 2-1. The relocations for Alternatives A4 and A5 increased and those for Alternative B decreased. The increases were due mainly to a change in the setback distance that would require the acquisition of a structure. The distance for the alternatives screening was 5 feet; during the environmental analysis it was determined by CDOT right-of-way staff that 10 feet was more appropriate. Some structures between 10 and 15 feet were identified for acquisition during a field visit with a CDOT Right-of-Way Specialist, based on the change in functionality of the property resulting from the potential highway improvement.

The decrease in relocations required for Alternative B is a result of designing the access from US 287 in the east near SH 1 to be slightly farther north (avoiding the Poudre Valley Mobile Home Park) and narrowing the footprint.

This change in the number of relocations would not have resulted in a different outcome during the alternatives screening. A similar increase for Alternatives A1, A2, and A3 could be expected due to the change in the required setback distance, and the alternatives on a new alignment may have varied based on conceptual design refinement. Alternatives A4 and A5 still offer the greatest flexibility in avoiding conflicts with land use and other environmental resources. The environmental flaws associated with Alternatives E, F, G, and H would still have resulted in the screening out of these alternatives.

Alternatives C and D also would have been screened out as each offered the same improvement as Alternative B with a higher number of relocations and potential impacts to low-income and minority populations. Detailed information about the relocations associated with each of the three action alternatives that progressed through screening can be found in Chapter 3 – Impacts and Mitigation Measures.

2.2 Alternatives Retained for Further Study

This section summarizes the following alternatives retained for further analysis: Alternatives A4 and A5 on the existing alignment, Alternative B on a new alignment, and the No Action Alternative.

2.2.1 Design Criteria Summary

The potential widening of existing US 287 between SH 1 and the LaPorte Bypass for approximately 2-miles from two to four travel lanes includes the following design features: four 12-foot wide travel lanes, two 10-foot shoulders/bike lanes, a continuous left turn lane provided by a 16-foot painted median, and a 7-foot detached sidewalk where space permits. Sidewalks would be attached in areas where this reduces the number of relocations. In addition, a 25-foot utility corridor would be provided on each side of the roadway. The total right-of-way required for this cross-section varies from 158 to 175 feet in order to minimize impacts on the surrounding environment, residences, and businesses. Refer to sections 2.2.2 and 2.2.3 for detailed discussion of Alternatives A4 and A5, and to Figure 2-3 for a diagram of the cross-section of A Alternatives on the existing alignment.

The location and design of access onto US 287 are governed by State Highway Access Code (“Code”) 2 C.C.R. 601-1. Should an action alternative be selected, CDOT would work closely with all affected property owners to bring access into compliance with the Code. The current US 287 is categorized as a “Non-Rural Principal Highway” under the Code and allows for direct access to residential and commercial driveways. With the widening of US 287, the safety of this access would be improved by providing a shoulder, an additional travel lane, and a painted median for left turns. These changes would increase the ease with which drivers would pull in and out of residences and businesses located along the highway. US 287 intersects with SH 1, North Shields Street (classified by Larimer County as an arterial south of US 287 and a collector north of US 287), and the LaPorte Bypass, which is classified as an expressway.

Alternative B provides a new alignment and is a four-lane facility with limited access. This alignment is south and west of the existing US 287. The associated right-of-way is 250 feet with two 12-foot wide travel lanes in each direction, 10-foot outside shoulders/bike lanes, and a 4-foot inside shoulder separated by a 36-foot depressed median. Access to and from the highway would be limited to US 287 in the east, and North Shields Street and the LaPorte Bypass in the west. This alternative would also require a culvert to cross Dry Creek and a new at-grade railroad crossing. Refer to section 2.2.4 for a detailed discussion of Alternative B, and to Figure 2-8 for a diagram of the cross-section of Alternative B.

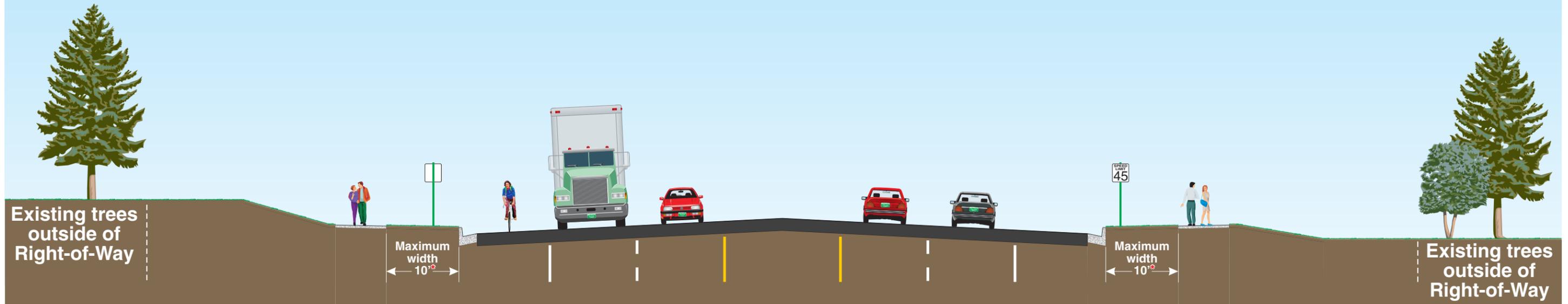
2.2.2 Alternative A4

Alternative A4 is conceptually designed with a meandering right-of-way widened to four lanes: two 12-foot lanes in each direction with a 10-foot outside shoulder and a 16-foot painted median (see Figure 2-3 and Figure 2-4). Detached sidewalks would be included where possible, and attached sidewalks, where this reduces the number of relocations. Alternative A4 would hold the north edge of existing US 287 right-of-way and would be widened to the southwest (opposite the Terry Lake Dam) as it extends north from SH 1 to Aragon Iron & Metal, Inc. Near the Aragon property to approximately 500 feet east of the LaPorte Bypass, the existing US 287 would be widened on the north side. At the LaPorte Bypass, US 287 would be widened on both sides. All improvements associated with Alternative A4 would be at-grade. Minimal grading would be required, but no flyover or underpass structures would be required.

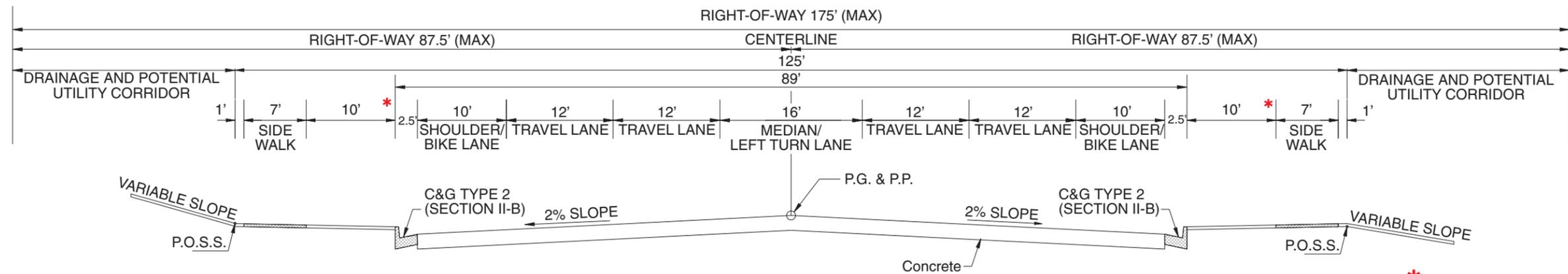
Alternative A4 would cross two existing major intersections: the US 287 and SH 1 intersection and the US 287 and North Shields Street/UPRR intersection. Improvements would include widening, replacing existing traffic signals and streetlights at the North Shields Street intersection, replacing the existing bridge over Dry Creek, and replacing the crossing of Little Cache La Poudre Ditch.

A grade-separated railroad crossing is not required at the UPRR intersection because the exposure threshold is not met. The US 287 intersection with the UPRR would remain at-grade with a 2025 average daily traffic (ADT) of approximately 24,000. The exposure factor is calculated using the number of train trips per week (two round trips per week and one every other Saturday) and the traffic volumes in 2025. (Exposure factor = ADT x 5 one-way trains per week/7 days per week = ADT x 5/7 trains per day.) The exposure factor will be approximately 16,400. This is well below the 35,000 exposure threshold that requires a grade-separated railroad crossing in rural areas.

PROPOSED CROSS-SECTION FOR A ALTERNATIVES ON EXISTING ALIGNMENT



URBAN ARTERIAL (LOW SPEED)



* WHERE SPACE PERMITS

**US 287 - SH 1 to the LaPorte Bypass:
Proposed Cross-Section for A Alternatives on Existing Alignment**

FIGURE 2-3

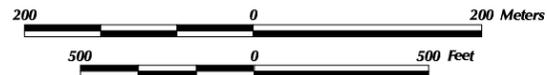


LEGEND

-  Property Boundaries
-  Access Changes
-  Right-of-Way
-  Lane Lines
-  Outside-Edge Lane Line
-  Inside-Edge Lane Line
-  Roadway Centerline
-  Paved Area
-  Traffic Signal to be Added



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE:

County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**U.S. 287 - S.H. 1 to the Laporte Bypass:
 Alternative A4**

FIGURE 2-4

Alternative A4 would widen the existing alignment to four lanes and reduce traffic congestion (see Figure 2-5). The estimated traffic volume would be the same for the No Action and all A Alternatives. Alternative A4 would improve the through section Level of Service (LOS) for this segment of US 287 from LOS E to LOS B by the year 2025.

Alternative A4 would address the safety conditions associated with the Aragon Iron & Metal, Inc. access location, which has been described as problematic due to lack of sight distance, a left turn lane, or shoulder. This alternative includes a wider highway design, center turn lanes, improved access design, and improved visibility. The overall Weighted Hazard Index (WHI) for the segment of US 287 between SH 1 and the LaPorte Bypass is expected to improve (increasing safety) with Alternative A4 as a result of increasing the number of lanes, providing a center turn lane and bringing all access points into compliance with the Access Code.

2.2.3 Alternative A5

Alternative A5 would follow the same meandering alignment as Alternative A4 with the exception of a segment between SH 1 and the west end of Terry Lake Dam (see Figure 2-3 and Figure 2-6). The portion of road between SH 1 and the east end of the dam would be widened on both sides, and the dam would be moved northeast (toward the lake) approximately 50 feet. This would avoid impacts to residential and commercial properties across from Terry Lake Dam. A new dam structure for Terry Lake would be constructed to accommodate the shift. West of the dam, the road would be widened on the north to approximately 500 feet east of the LaPorte Bypass, where it would then be widened on both the north and south to connect smoothly with the existing LaPorte Bypass.

The improved road would have two 12-foot lanes in each direction, 10-foot shoulders, a 16-foot painted median, and detached sidewalks where possible. Sidewalks would be attached where this reduces the number of relocations. The traffic signals and streetlights at the intersections of US 287 with North Shields Street and SH 1 would be replaced, as would the bridge over Dry Creek and the Little Cache La Poudre Ditch crossing.

As with Alternative A4, Alternative A5 would not require a grade-separated railroad crossing and would provide similar levels of service and safety conditions. The estimated traffic volume would be the same for the No Action and all Alternative A alignments. Alternatives A4 and A5 would improve the through section LOS for this segment of US 287 from LOS E to LOS B by the year 2025.

Alternative A5 would address the safety conditions associated with the Aragon Iron & Metal, Inc. access location, which has been described as problematic due to lack of sight distance, a left turn lane, or shoulder. This alternative includes a wider highway design, center turn lanes, improved access design, and improved visibility. The overall WHI for the segment of US 287 between SH 1 and the LaPorte Bypass is expected to improve (increasing safety) with Alternative A5 as a result of increasing the number of lanes, providing a center turn lane and bringing all access points into compliance with the Access Code.

2.2.4 Alternative B

Alternative B, a new alignment, connects to the existing US 287 approximately 1,000 feet north of SH 1 at the east terminus and at the south side of US 287 where it connects with the LaPorte Bypass. The road would be south and west of the existing alignment (Figure 2-7). Alternative B would require the widening of US 287 between SH 1 and the proposed intersection with Alternative B (Figure 2-8). This alternative would provide two 12-foot travel lanes, a 10-foot outside shoulder, and a 4-foot inside shoulder in each direction, separated by a 36-foot depressed median. Alternative B also requires a culvert to cross Dry Creek, a totally new roadbed, and an additional railroad crossing. The new right-of-way would be 250 feet wide and located south and west of the existing US 287.

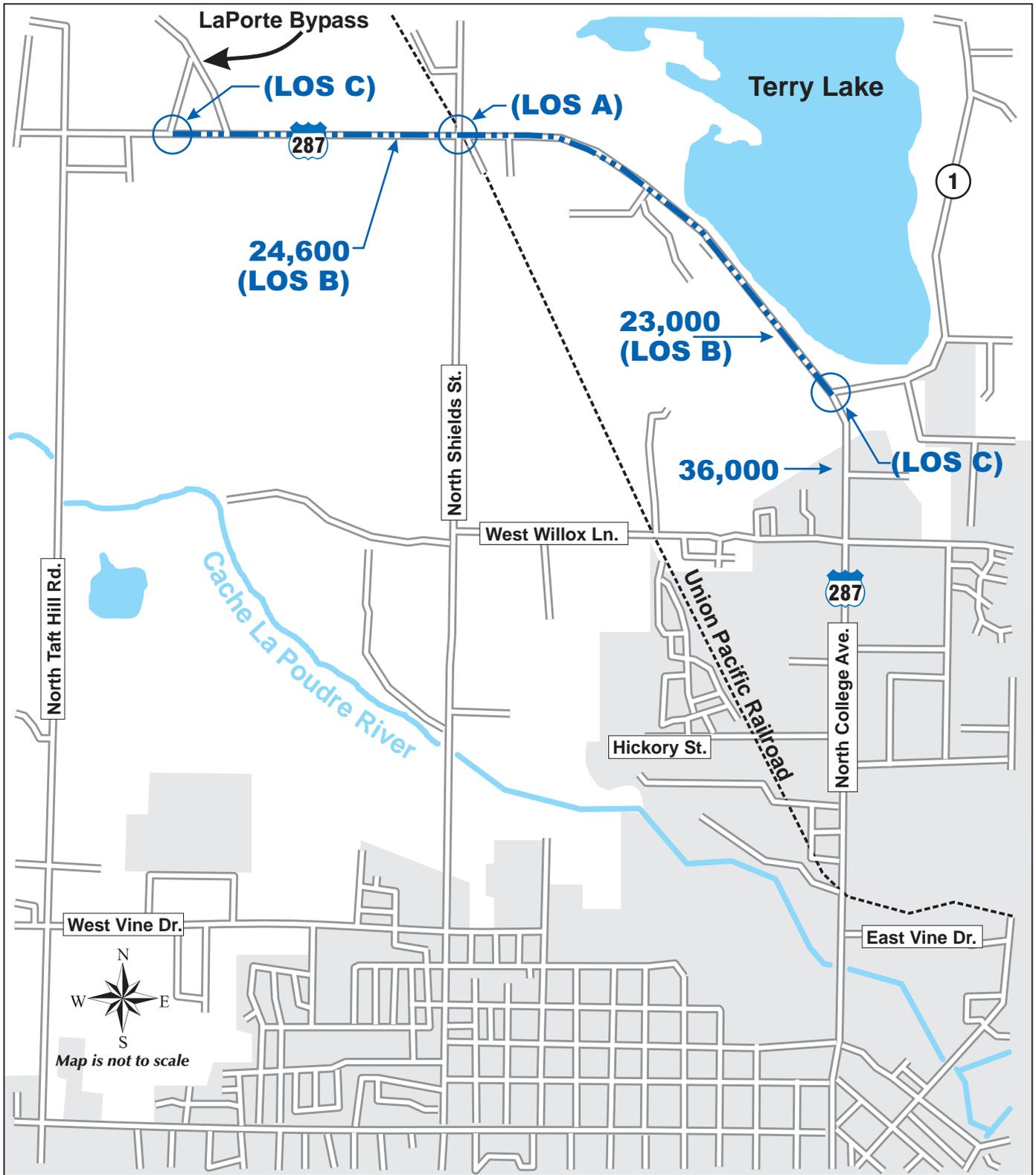
Alternative B would create three new intersections, one at the eastern intersection with existing US 287, one at North Shields Street, and one at the LaPorte Bypass. New traffic signals would be installed at all three intersections. All improvements would be at-grade. Alternative B would require minimal grading. No flyover structures or underpasses would be constructed. The low frequency of train trips per week (two round trips per week and one every other Saturday) and the expected traffic volume of 12,000 ADT results in an exposure factor of 8,306 along the new alignment, indicating that a grade-separated railroad crossing is not necessary. As mentioned previously, a grade-separated crossing is required in rural areas when the exposure factor exceeds a threshold of 35,000.

Two urban travel models (MINUTP and QRS-II) were used to forecast travel demand for the trip diversion to the highway alignment if Alternative B were selected and implemented (Figure 2-9). Both models demonstrated an approximate 50/50 split of traffic between the existing alignment, which would remain for access to adjacent properties, and the new Alternative B alignment.

By 2025 the existing alignment is expected to carry 11,000 to 13,000 ADT; the Alternative B alignment is expected to carry approximately 12,000 ADT. Under Alternative B, the existing US 287 alignment is expected to operate at LOS D and the new alignment is expected to operate at LOS A.

The model results were tested for reasonableness by reviewing the number of trips generated by existing land uses in the corridor. There are currently about 435 single-family and multi-family homes and 30 businesses accessible only via existing US 287. These residences and businesses generate approximately 6,000 trips daily. North Shields Street now carries around 4,800 average daily traffic (ADT), and this number is expected to increase to 7,000 ADT by 2025. The combination of number of trips and the number of persons who are using US 287 to access a home or business and would prefer to continue doing so supports the modeling results.

A traffic volume reduction would be expected on existing US 287 with implementation of Alternative B. Some of the safety issues associated with today's high volumes and low LOS would be improved. However, by 2025, LOS on the existing US 287 would once again reflect current conditions at LOS D.



LEGEND

 = Existing US 287
 Between SH 1 &
 LaPorte Bypass
 (Alternative A)

 = City of Fort Collins
 Boundary



**US 287 - SH 1 to the LaPorte Bypass:
 Projected 2025 Average Daily Traffic (ADT)
 and Level of Service (LOS)
 Associated with A4 or A5 Alternatives**

FIGURE 2-5



LEGEND

-  Property Boundaries
-  Access
-  Right-of-Way
-  Lane Lines
-  Outside-Edge Lane Line
-  Inside-Edge Lane Line
-  Roadway Centerline
-  Paved Area
-  Traffic Signal to be Added



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE: County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by DataMap, Inc. Map produced November 20, 2000 by JFSA.

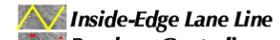


**U.S. 287 - S.H. 1 to the Laporte Bypass:
 Alternative A5**

FIGURE 2-6



LEGEND

-  Property Boundaries
-  Access
-  Right-of-Way
-  Lane Lines
-  Outside-Edge Lane Line
-  Inside-Edge Lane Line
-  Roadway Centerline
-  Paved Area
-  Traffic Signal to be Added



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



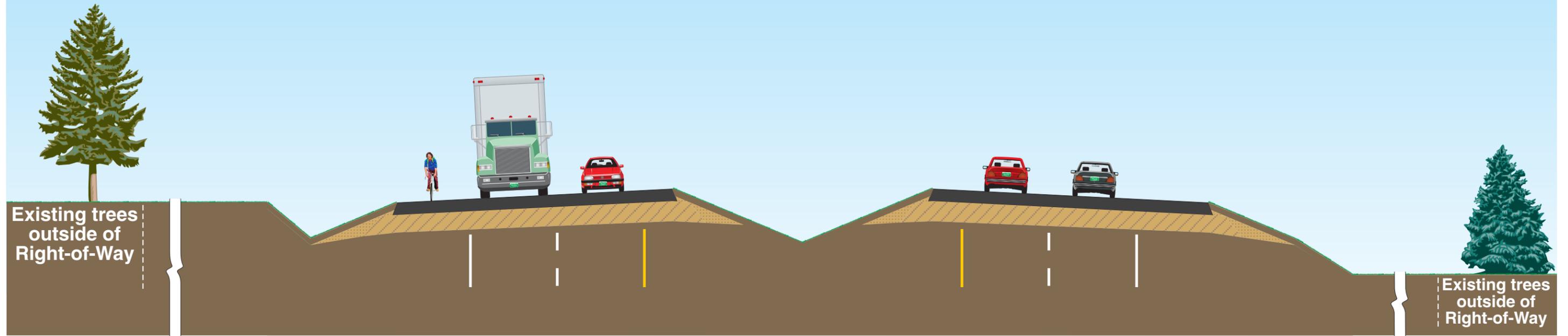
SCALE - 1:6300

SOURCE: County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.

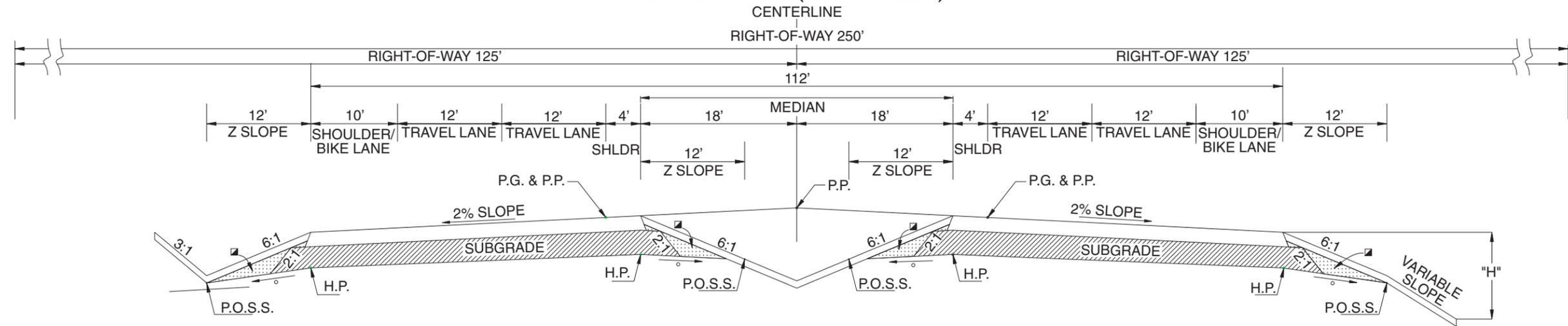


**U.S. 287 - S.H. 1 to the Laporte Bypass:
 Alternative B
 FIGURE 2-7**

PROPOSED CROSS-SECTION OF ALTERNATIVE B

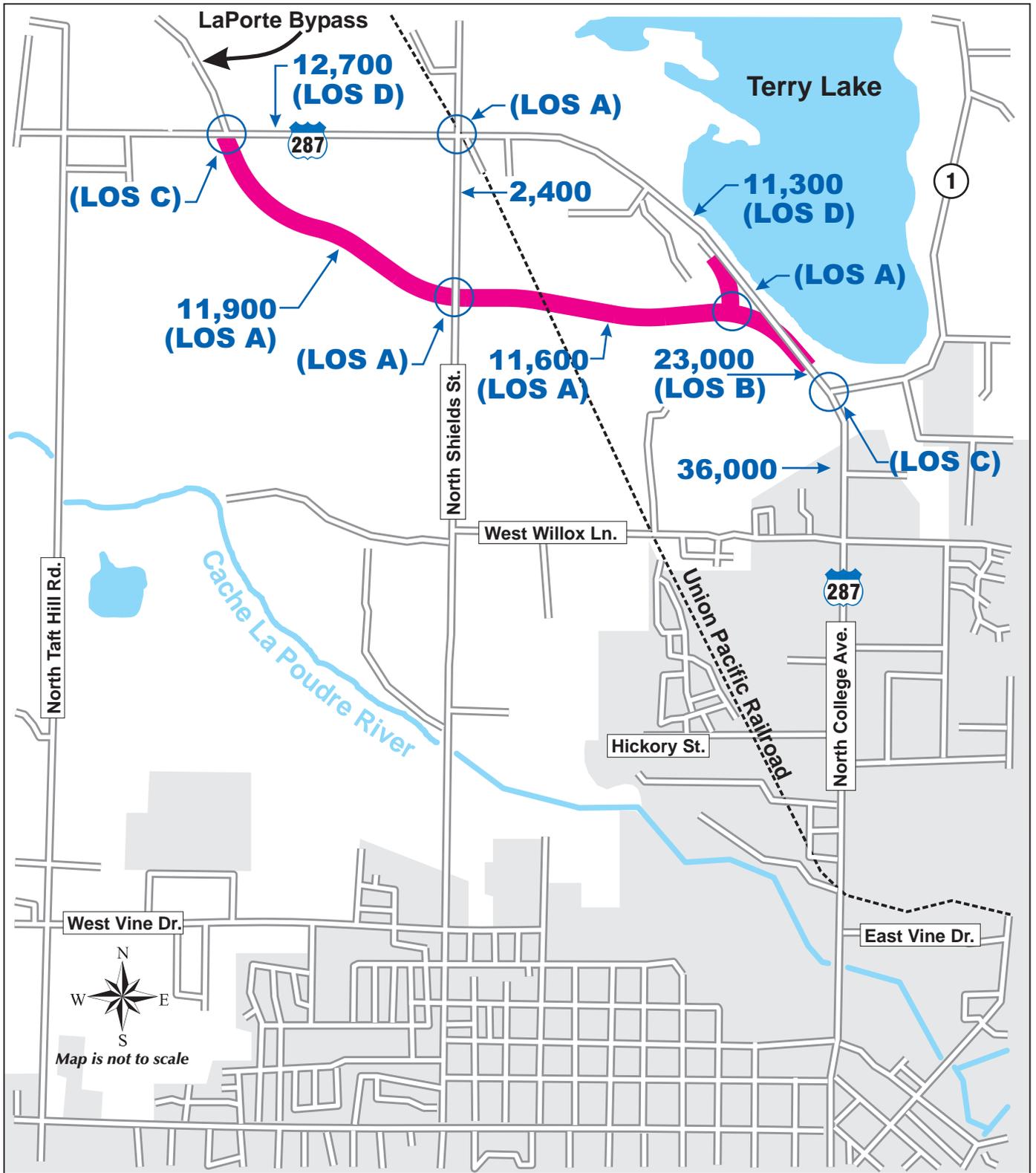


EXPRESSWAY (HIGH SPEED)



**US 287 - SH 1 to the LaPorte Bypass:
Proposed Cross-Section of Alternative B**

FIGURE 2-8



LEGEND

- = Alternative B
- = City of Fort Collins Boundary



**US 287 - SH 1 to the LaPorte Bypass:
Projected 2025 Average Daily Traffic (ADT)
and Level of Service (LOS)
Associated with Alternative B**

FIGURE 2-9

Also, Alternative B does not address some of the current safety issues associated with the existing US 287 alignment at certain locations (for example, the Aragon Iron & Metal, Inc. access). In addition, Alternative B is not expected to improve access to properties adjacent to the roadway.

The types of crashes occurring at these locations are not necessarily volume related but rather the result of driver carelessness, poor sight distance, and lack of space to maneuver around turning vehicles. The overall WHI for the segment of US 287 between SH 1 and the LaPorte Bypass may improve under Alternative B as a result of reduced volume. However, the frequency of the types of crashes, rear-end collisions, and sideswipes attributed in part to human error cannot be reliably predicted.

2.2.5 No Action Alternative

Under the No Action Alternative, US 287 would not be improved; however, current maintenance practices would continue. The existing environment adjacent to US 287 is expected to remain as is, except for the increase in traffic congestion and safety concerns. Currently there are no planned developments in the area; however, land use may change regardless of improvement to US 287 from SH 1 to the LaPorte Bypass due to changes in population. The projected increase in traffic volume is approximately 11,000 ADT in the section just east of the LaPorte Bypass and 7,000 ADT in the section north of SH 1. These increases would result in through traffic at LOS E, indicating that the system is near capacity and drivers would experience stop-and-go traffic with undesirable delays.

For two-lane, two-way highways, the range of volumes that result in LOS E is broad, from approximately 60 to 100 percent of the ultimate capacity. Under this alternative, the volumes would vary from about 85 to 90 percent of ultimate capacity. Critical intersections include North Shields Street, which would be at LOS E, and SH 1, which would be at LOS F. It is anticipated that safety concerns along the roadway would increase correspondingly, and the difficulty of making a left turn onto or from an access would become more difficult.



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Chapter 3 Impacts and Mitigation Measures

CHAPTER 3 - IMPACTS AND MITIGATION MEASURES

The Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT) conducted a comparative analysis to further examine key issues and environmental concerns associated with the No Action and Alternatives A4, A5 and B for potential improvements to United States Highway 287 (US 287) north of Fort Collins between State Highway 1 (SH 1) and the LaPorte Bypass. This chapter describes the direct, indirect, and cumulative impacts and potential mitigation measures associated with these alternatives. The impacts discussed in this chapter are organized by resource and are based on conceptual design. The issues, extent, and magnitude of the potential impacts of each alternative are summarized in Table 3-9 at the end of this chapter.

The following analysis was created prior to the selection of a Preferred Alternative. This comparative analysis resulted in the selection of a Preferred Alternative. Alternative-specific mitigation measures are summarized in section 3.5, Preferred Alternative – A4.

3.1 Socioeconomic Impacts

The socioeconomic project area includes the land immediately surrounding Alternatives A4, A5, and B. Land uses in this area include residential, commercial, and light industrial. The project area is located entirely within unincorporated Larimer County immediately north of Fort Collins, and within the Fort Collins Urban Growth Area (UGA).

Much of the data that describe the existing socioeconomic environment are available only on a countywide basis. County data were used in this analysis to describe broad regional trends. Descriptions of specific socioeconomic characteristics in the project area are based primarily on qualitative information gathered from site visits, and from a review of information obtained from the Colorado Department of Labor and Employment and the Colorado Department of Local Affairs websites.

This section describes right-of-way and relocations, minority and/or low-income populations, utilities and services, construction costs, farmland, land use, emergency services, economic effects, and local government.

3.1.1 Right-of-Way Acquisition and Relocations

Roadway alignments associated with each action alternative were conceptually designed to avoid as many conflicts with existing properties as possible. To minimize unavoidable impacts, FHWA and CDOT will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) as amended, which provides for uniform and equitable treatment of all persons displaced from their homes, businesses, or farms should an action alternative be selected. All relocatees are given a minimum of 90 days to find replacement housing or business locations. All qualified relocatees receive monetary payments, which may include payments for moving expenses, business “in lieu of” payments, rent supplements, downpayments, mortgage differential payments, or increased interest payments. No person can be displaced by a federally assisted project unless and until adequate replacement housing has been offered to all affected persons, regardless of race, color, religion, sex, or national origin.

The owners' and tenants' eligibility for benefits under the Uniform Act would be determined on an individual basis should an action alternative be selected. The owners and tenants would receive a detailed explanation of benefits, and information regarding their financial options. As discussed in further detail under Environmental Justice, section 3.1.2 of this chapter, additional potential benefits for relocatees may come from the Fort Collins Housing Authority (FCHA) and Neighbor to Neighbor (N2N) programs.

The information presented below is based on a range of potential relocations because the precise number would not be known until final design is complete. During final design, all measures to minimize the number of relocations would be implemented. These measures may include but are not limited to the construction of small retaining walls and attached sidewalks in some areas to reduce the number of relocations.

3.1.1.1 No Action Alternative

The No Action Alternative would not require right-of-way acquisition or residence/business relocations.

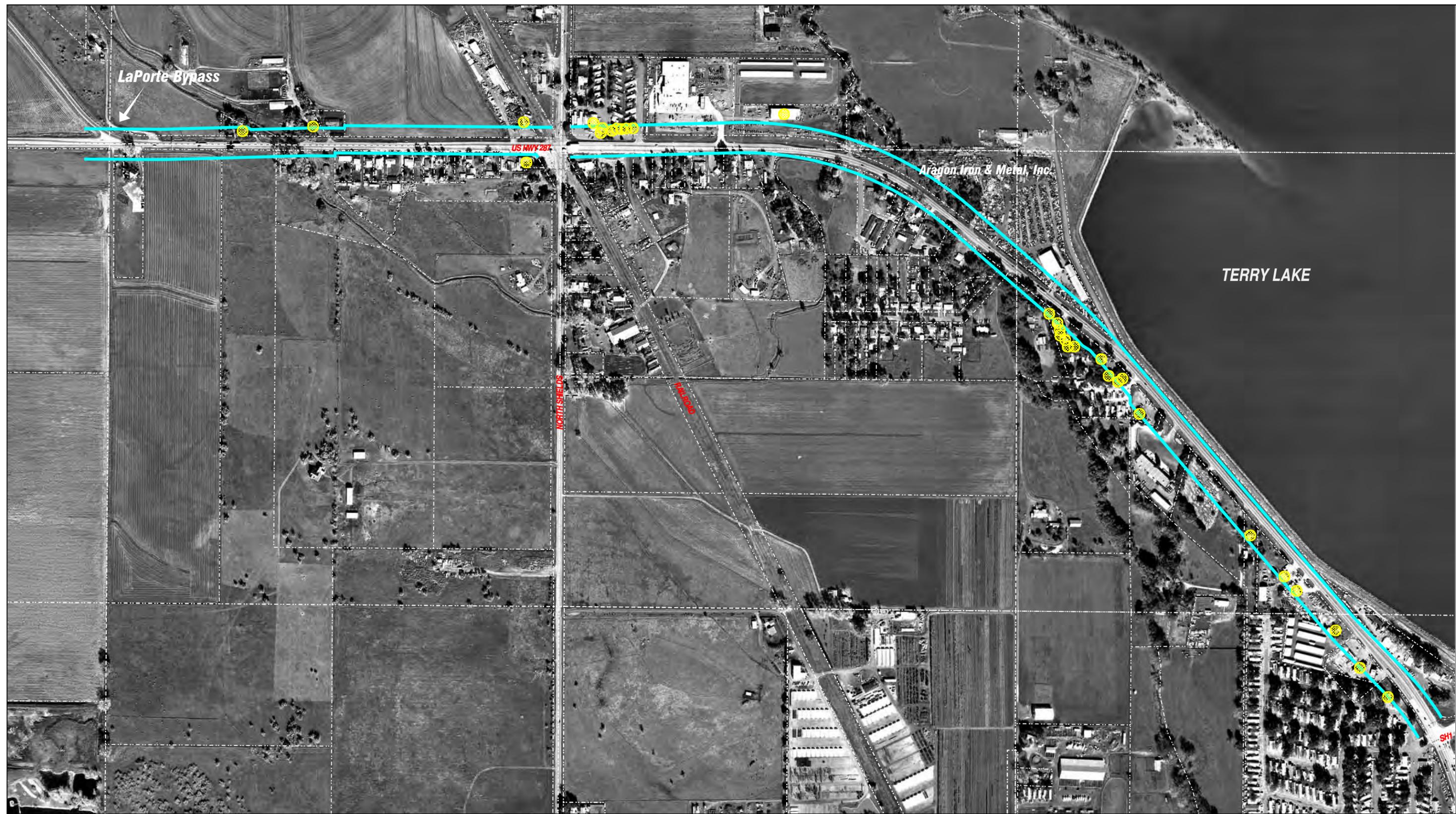
3.1.1.2 Alternative A4

Figure 3-1 illustrates the Alternative A4 right-of-way and associated residential and business relocations. This alignment would be widened mostly to the north from the LaPorte Bypass to North Shields Street. At the US 287 and North Shields Street intersection, the roadway would have two turn lanes in each direction. The left turn lane would be in the painted median and another lane would be added to provide a right turn lane. Where the alignment shifts to the north, the abandoned existing roadbed to the south would be removed, regraded, and seeded. This alignment shift would require extending accesses to properties along the south edge to meet the new roadway. Construction activities would affect relatively small portions of properties south of US 287 between the LaPorte Bypass and North Shields Street.

Between North Shields Street and SH 1, Alternative A4 would impact most properties along the southwest side of US 287 as the alignment approaches and curves around Terry Lake. Every property north of US 287 between SH 1 and the LaPorte Bypass would be affected to some extent by the construction of Alternative A4. Implementation of Alternative A4 would require approximately 17.6 acres and between 32 and 42 residential and commercial relocations, at an estimated cost of \$4.8 to \$5.5 million, as shown in Figure 3-1. Relocations will include a range of 4 to 5 single-family residences, 6 apartment units, 8 businesses, and 14 to 23 mobile homes.

3.1.1.3 Alternative A5

Figure 3-2 illustrates the Alternative A5 right-of-way and associated residential and business relocations. Impacts associated with construction of Alternative A5 are similar to those that would occur with Alternative A4 because the alignments are the same except for the stretch of US 287 adjacent to Terry Lake Dam. Relocations and right-of-way acreage differ slightly from Alternative A4 because of the adjusted curvature of the road at Terry Lake Dam. Fewer relocations would be required for Alternative A5 than for Alternative A4 because Alternative A5's alignment would encroach on Terry Lake Dam, away from residents and businesses located across from the dam.



LEGEND

-  Property Boundaries
-  Alternative A4 Right-of-Way
-  Alternative A4 Structural Displacement



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE: County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
 Alternative A4 Right-of-Way and
 Associated Relocations**

FIGURE 3-1

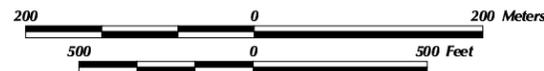


LEGEND

- Property Boundaries
- Alternative A5 Right-of-Way
- Alternative A5 Structural Displacement



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE:

County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
 Alternative A5 Right-of-Way and
 Associated Relocations**

FIGURE 3-2

Alternative A5 would require approximately 16.5 acres and between 27 and 38 residential and commercial relocations, at an estimated cost of \$4.2 to \$5.3 million. Relocations will include a range of 3 to 4 single-family residences, 6 apartment units, 8 businesses, and 10 to 20 mobile homes.

3.1.1.4 Alternative B

The Alternative B right-of-way and associated residence and business relocations are illustrated in Figure 3-3. Approximately eight active agricultural parcels would be affected, and an access shift would occur at two agricultural properties connecting to North Shields Street. Approximately 54.5 acres would be required for the alternative.

Alternative B would result in the least impacts of the alternatives under study on residential and commercial uses, potentially five relocations at the eastern intersection with US 287, and no relocations along the actual alignment. Five project-wide relocations—1 single-family residence and 4 businesses—are associated with this alternative. The estimated cost of these relocations is \$2.6 to \$3.4 million.

3.1.1.5 Mitigation Measures

Roadway alignments associated with each action alternative under consideration in this EA have been designed to avoid as much direct conflict with existing properties as possible. To minimize impacts that cannot be avoided, FHWA and CDOT will conform to the requirements set forth in the Uniform Act should an action alternative be selected. FHWA and CDOT would provide compensation and assistance in finding suitable sites for relocation. Further information regarding relocation assistance is provided in Appendix A.

3.1.2 Environmental Justice

Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations,” was signed by President Clinton on February 11, 1994 and published in the Federal Register on February 16, 1994. The EO focuses federal attention on the environmental and human health conditions of minority and/or low-income populations, promotes nondiscrimination in federal programs affecting human health and the environment, and provides minority and/or low-income populations with access to public information and an opportunity to participate in matters relating to the environment. The United States Department of Transportation (USDOT) issued an order on environmental justice in 1997 (DOT Order 5610.2), followed by the Federal Highway Administration in 1998 (FHWA Order 6640.23). Both orders relate directly to environmental justice activities and responsibilities within USDOT and FHWA. Additional information on EO 12898 can be found in Appendix B.

A minority is defined as an individual belonging to at least one of the following groups: Black, Hispanic, Asian, American Indian or Alaskan Native, Hawaiian or Other Pacific Islander, Some Other Race, or Two or More Races. Low-income as defined by FHWA is a household income (or in the case of a community or group, median household income) that is at or below the US Department of Health and Human Services poverty guidelines.

An analysis of environmental justice issues is normally conducted as part of the NEPA process. Two questions form the basis for analysis of environmental justice issues:

- Does the potentially affected area include minority and/or low-income populations?
- If there are minority and/or low-income populations who would be affected, are the adverse environmental impacts likely to be disproportionately high and adverse on either population?

The environmental justice assessment encompasses several aspects of demographics. The following paragraphs describe the demographics of the project area that are related to environmental justice. Figure 3-1, Figure 3-2, and Figure 3-3 illustrate the three project action alternatives proposed rights-of-way and associated relocations.

For this US 287 project, the following methodology was used to identify minority and/or low-income populations and potential disproportionate high and adverse impacts on these populations.

- a. Census tracts and block groups in the project area were identified.
- b. Demographic information was identified for each project area block group. Additional research was conducted by blocks for minority populations (income data is not available at the block level).
- c. For all block groups and blocks containing minority or low-income populations approaching or exceeding 50 percent and greater than the Larimer County average minority population, additional information was collected by means of a community interview process. (Per Council on Environmental Quality (CEQ) guidance, the standard for definition of an environmental justice population is over 50 percent minority or containing a minority population meaningfully greater than the minority population percentage in the general population [CEQ 1997].) Larimer County has a minority population of 12.5 percent. Additional interview information was also collected to represent the entire project corridor residential community as part of the general socioeconomic and detailed environmental justice analyses.
- d. Following guidance from the EPA publication *Community Culture and the Environment, A Guide to Understanding a Sense of Place* (US EPA 2002), the project team also looked for those community areas for which a “sense of community and place” existed.
- e. Three approaches to discerning disproportionately high and adverse effects were used. First, the proportion of relocations for each alternative as a whole was compared with the relocations from areas containing minority and/or low-income populations approaching or greater than 50 percent and exceeding the county average. Second, the project relocations were examined to determine whether they were being predominately born by a minority and/or low-income population. Third, the number of relocations associated with each alternative for each area for which there was a “sense of community and place” were compared to the total relocations for that alternative to determine the proportion of impacts on minority and/or low-income populations.
- f. Other environmental impacts such as air and noise were also examined.



LEGEND

-  Property Boundaries
-  Alternative B Right-of-Way
-  Alternative B Structural Displacement



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300
 SOURCE: County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
 Alternative B Right-of-Way and
 Associated Relocations**

FIGURE 3-3

3.1.2.1 Minority and/or Low-Income Populations in the Project Area

Minority and/or low-income population designations are based on US Bureau of Census data and environmental justice guidance prepared by the Environmental Protection Agency (EPA). These designations for the project area were obtained from the EPA Region 8 Environmental Justice database. Information from the 2000 Census was used in this analysis.

The federal poverty guideline of \$17,029 annual income for a family of four in 1999 (2000 Census) as established by the Department of Health and Human Services is considered low compared to the local cost of living in the project area. FHWA and CDOT determined that it would be more appropriate to use the US Department of Housing and Urban Development's (HUD's) definition of low-income as identified in the Community Development Block Grant (CDBG) criteria. This is defined as 50 percent of the area median income for a family of four (AMI). Fifty percent of AMI in the Fort Collins Metropolitan Statistical Area was \$22,229 in 1999.

Portions of three census tracts are located within the project area: Census Tract 13.04, Block Group 1; Census Tract 13.02, Block Group 1; and Census Tract 13.01, Block Group 4¹. The three census block groups within the project area represent approximately one percent of the total population in Larimer County. Figure 3-4 provides general information on the location of these census tract block groups and includes identification of census blocks adjacent to US 287. Table 3-1 provides data on the entire project area by block group.

Census Tract 13.01, Block Group 4 encompasses 13.7 square miles on both sides of US 287 from North Shields Street west to the LaPorte Bypass and extends through a large area north of the project. Additional interviews and inquiry were conducted in this Block Group as part of the general socioeconomic and detailed environmental justice analyses. Block Group 4 represents a rural population area. Two census blocks (4009 and 4013) are located adjacent to US 287. The total population for these census blocks is 134 individuals; 6 individuals (4 percent) were identified as minority. (Block statistics identified 6 individual as minorities, 6 divided by the total of 134 individuals resulted in the calculation of 4 percent.) Low-income information for Block Group 4 shows 27.9 percent of the total households with incomes below 50 percent of AMI compared to a Larimer County average of 28.4 percent. Based on population and income information, the probability of disproportionately high and adverse effects on low-income or minority populations is very low.

Census Tract 13.02, Block Group 1 encompasses 1.6 square miles in the vicinity of Terry Lake, including the project area east of North Shields Street and north of US 287. Additional interviews and inquiry were conducted in this Block Group as part of the general socioeconomic and detailed environmental justice analyses. One census block (1003) covers the project area adjacent to US 287. The total population in this census block is 375 individuals; 14 individuals

¹ A census block is a subdivision of a census tract, and the smallest geographic unit for which the Census Bureau tabulates 100-percent data. Many blocks correspond to individual city blocks bounded by streets, but blocks -- especially in rural areas -- may include many square miles and may have some boundaries that are not streets. A collection of blocks is called a block group. Information on race is tabulated at the census block level. Income information is tabulated for the block group level.

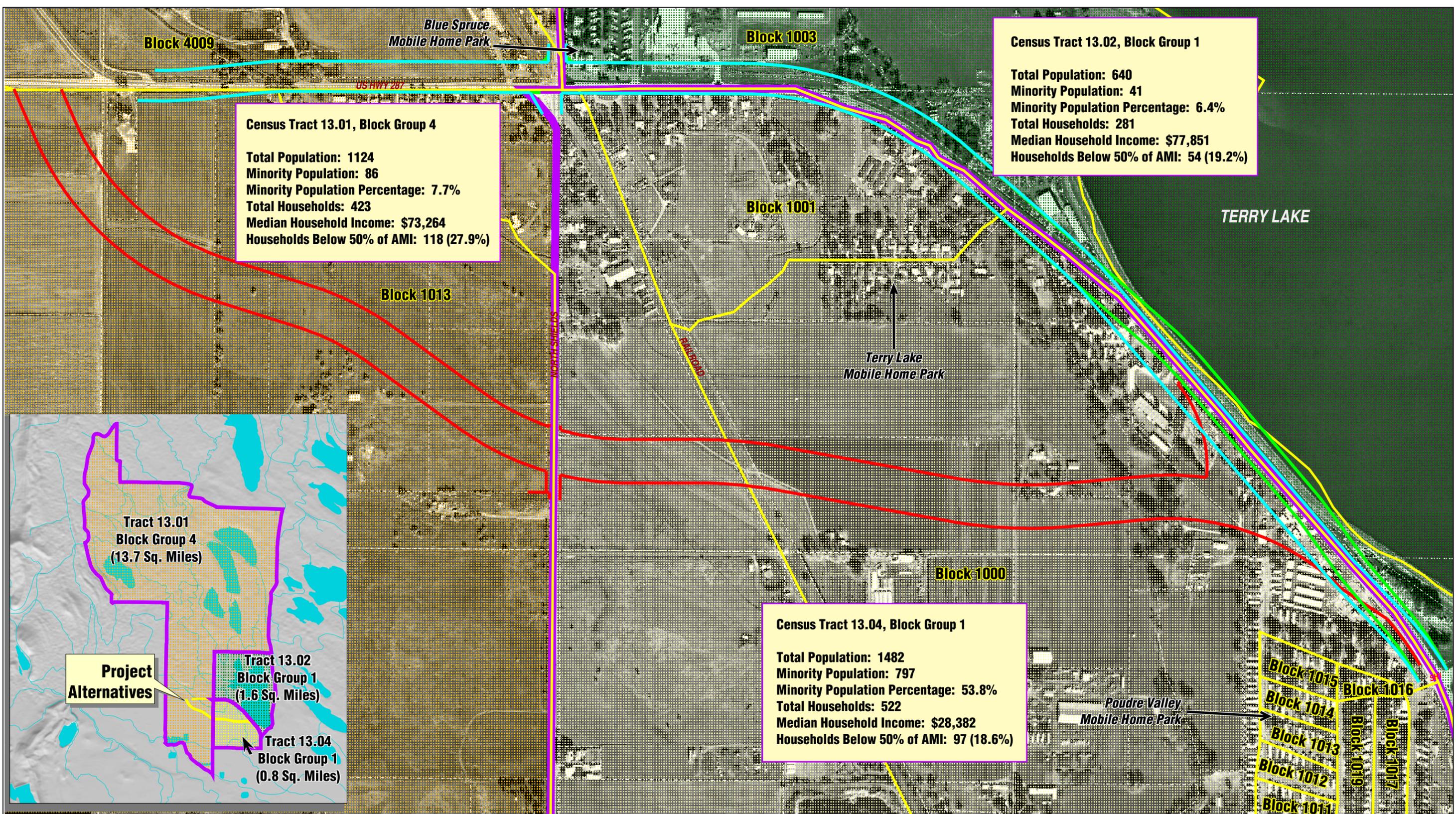
(3.7 percent) were identified as minorities. (Block statistics identified 14 individual as minorities, 14 divided by the total of 375 individuals resulted in the calculation of 3.7 percent.) Low-income information for Block Group 1 shows 19.2 percent of the total households with incomes below 50 percent of AMI compared to a Larimer County average of 28.4 percent. This block includes the Blue Spruce Mobile Home Park (MHP). Based on population and income information, the probability of disproportionately high and adverse effects on low-income or minority populations is very low.

Census Tract 13.04, Block Group 1 encompasses 0.8 square miles bordered on the north and east by US 287, North Shields Street to the west, and West Willox Lane to the south. This area contains numerous blocks relevant to this US 287 project (blocks 1000, 1001, and 1009 to 1019). Block 1001 runs along the south side of US 287 bordered by the UPRR and Meadow Drive. One individual (less than one percent) was identified as a minority for this census block. Block 1000 covers the area from Meadow Drive south to the vicinity of the Poudre Valley Mobile Home Park (PVMHP) and includes a population of 453 individuals; 188 individuals (41 percent) were identified as minorities. (Block statistics identified 188 individual as minorities, 188 divided by the total of 453 individuals resulted in the calculation of 41 percent.) This block includes the Terry Lake Mobile Home Park (MHP). The remainder of the blocks—1009 to 1019—generally represents PVMHP population ranging from 65 to 78 percent minority. The largest percentages of minority groups within this category are Hispanic or Latino². Of the household incomes in Block Group 1 for this census tract, 18.6 percent fall below 50 percent of AMI. Based on minority population levels, the population in this Block Group is subject to consideration under environmental justice.

3.1.2.2 Potential for Disproportionately High and Adverse Effects on Minority and/or Low-Income Populations

Early in the EA process, during screening, alternatives with large numbers of relocations and an obvious potential for causing “disproportionately high and adverse effects” on minority and/or low-income populations were screened out. These included Alternatives C and D, as discussed in Chapter 2. Both of these alternatives were associated with 60 potential residential relocations, including Census Tract 13.04, Block Group 1. Both alternatives were eliminated from further consideration. Screening of alternatives is discussed in Chapter 2.

² To make it easier to identify races on Table 3-1, the data has been sorted to combine Hispanic and Latino population who considered themselves under all the categories, including Some Other Race. The Census 2000 brief *Overview of Race and Hispanic Origin 2000* (U.S. Bureau of the Census, 2001) provides an explanation of the category “Some Other Race.” “Some Other Race” was included in Census 2000 for respondents who were unable to identify with the five Office of Management and Budget race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, are included in the Some Other Race category.



Census Tract 13.01, Block Group 4

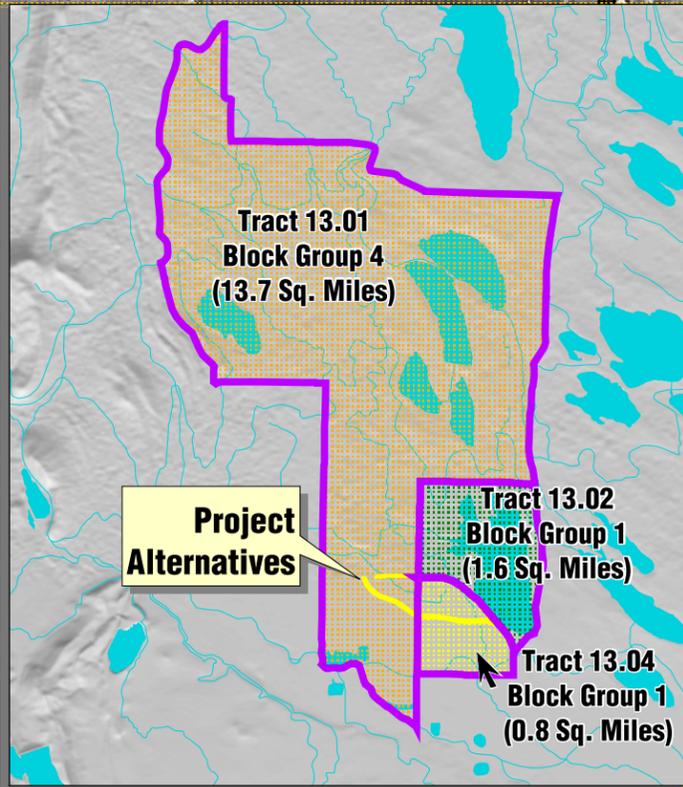
Total Population: 1124
 Minority Population: 86
 Minority Population Percentage: 7.7%
 Total Households: 423
 Median Household Income: \$73,264
 Households Below 50% of AMI: 118 (27.9%)

Census Tract 13.02, Block Group 1

Total Population: 640
 Minority Population: 41
 Minority Population Percentage: 6.4%
 Total Households: 281
 Median Household Income: \$77,851
 Households Below 50% of AMI: 54 (19.2%)

Census Tract 13.04, Block Group 1

Total Population: 1482
 Minority Population: 797
 Minority Population Percentage: 53.8%
 Total Households: 522
 Median Household Income: \$28,382
 Households Below 50% of AMI: 97 (18.6%)



LEGEND

- Property Boundaries
- Census Tract 13.01, Block Group 4
- Census Tract 13.04, Block Group 1
- Census Tract 13.02, Block Group 1
- Selected 2000 Census Block Boundaries
- Alternative A4 Right-of-Way
- Alternative A5 Right-of-Way
- Alternative B Right-of-Way

Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

200 0 200 Meters
 500 0 500 Feet
 SCALE - 1:6300

SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced September 9, 2004 by JFSA.



**US287 - SH 1 to the LaPorte Bypass:
 Project Area Census Tracts with
 2000 Demographic and Income Statistics**

FIGURE 3-4

Table 3-1. Minority and/or Low-Income Population Comparison – 2000 Data

Minority ¹								
Demographic Area	Hispanic ²	Black Alone	American Indian or Alaskan Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone ³	Two or More ³	Overall Minority
Census Tract 13.04, Block Group 1	50.5%	0.5%	1.0%	0.1%	0.1%	0.1%	1.6%	53.8%
Census Tract 13.02, Block Group 1	2.5%	0.6%	0.5%	1.9%	0.0%	0.0%	0.9%	6.4%
Census Tract 13.01, Block Group 4	4.6%	1.0%	0.2%	0.8%	0.1%	0.0%	1.0%	7.7%
Larimer County	8.3%	0.6%	0.5%	1.5%	0.1%	0.1%	1.4%	12.5%
¹ US Census 2000 Summary File 1 – Table P8 Total Population – Hispanic or Latino by Race. ² All Hispanic and Latinos, including those who claimed to be some other race alone and two or more races. ³ Not Hispanic or Latino.								
Low-Income (50% AMI)								
Census Tract 13.04, Block Group 1					18.6%			
Census Tract 13.02, Block Group 1					19.2%			
Census Tract 13.01, Block Group 4					27.9%			
Larimer County					28.4%			

Alternatives retained for further analysis have been designed to minimize encroachment on residential areas where feasible. The potential for disproportionately high and adverse effects was evaluated for each action alternative and for the No Action Alternative. FHWA Order 6640.23, “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” states that mitigation, enhancements, and offsetting benefits for the affected minority and/or low-income populations should also be taken into account in making determinations regarding disproportionately high and adverse effects.

3.1.2.3 Compliance with EO 12898

The project team, in conjunction with FHWA, developed a method for obtaining more precise information than is provided by census data on the residents and business property owners/renters in the project area. This method included a combination of informative letters with maps of the alternatives delivered by mail, followed by one-on-one interviews between project team members and residents and business property owners/renters. This information was gathered for the purpose of “telling the story” of the people in the project area, and as a means of gauging the project’s potential impacts. This task included gaining an awareness of the “sense of community and place” to better understand how the social structure of the community might be impacted. According to *Community Culture and the Environment: A Guide to Understanding a Sense of Place* (US EPA 2002), factors to consider when defining a community are sense of place (for example, geographic setting or natural/physical boundaries, standard of living,

political jurisdictions) and sense of community (for example, social interaction, common ties, mutual satisfaction of needs, and, often, a shared place).

Although only one of the three census block areas revealed minority and/or low-income populations subject to environmental justice considerations, the entire project corridor was included in the outreach program. Properties adjacent to US 287 were included in the community interview program and search for definition of a “sense of community and place.”

3.1.2.3.1 Outreach to Minority and/or Low-Income Populations

Geographic areas containing minority and/or low-income populations were identified early in the EA process based on the 2000 Census data. The public outreach effort included establishing a comprehensive mailing list, developing project factsheets in English and Spanish, public workshop notifications, small group meetings, one-on-one meetings, a project-based website, and community interviews.

3.1.2.3.2 Observations

Forty-three residential and commercial interviews were completed between April and June 2003. Interviews typically lasted 30 to 60 minutes. Residents were asked what they did and did not like about the existing alignment and the three action alternatives under study, their social activity in the project area, their reliance on others in the project area for assistance, and other pertinent questions. Sample questionnaires are provided in Appendix B.

Residential/Single-Family Home and Mobile Home Park Resident Interviews

Interviews of potentially affected residents were not limited to minority and/or low-income Block Group areas. Many residents of single-family homes have resided in the area for several years. Many people noted that they like the rural surroundings enhanced by the wildlife and mountain views, as well as the convenience of proximity to the city of Fort Collins. Several residents stated that they or someone in their household are patrons of Jax, a farming supply store in the project area that carries some convenience items and snacks, located on the north side of US 287 west of Terry Lake. Most residents noted that they were concerned about the existing facility due to unsafe access, turning movements, sight distance, and drivers' lack of observation of the posted speed limit. In most single-family homes, one common thread was seen: a majority of individuals interviewed knew of someone who had either been killed or injured on the existing facility. Two frequently asked questions were “When will improvements occur?” and “Will something finally be done?” Other concerns included the lack of bicycle and pedestrian facilities along the existing alignment, lack of alternative transportation modes, noise, and truck traffic. Concerns related indirectly to transportation included drainage, the potential for increased crime due to improved access, and increased speeds with an improved facility.

The residents of the single-family homes do not seem to have a reliance on their neighbors. Aside from occasional contact there does not seem to be much interaction that characterizes a traditional “sense of community and place.” Residents seemed to be informed about major events occurring with their neighbors, such as deaths, burglaries, and other topical matters. Only one resident noted sharing a ride to work with a neighbor on a regular basis.

Interviews were conducted with the owners of all three MHPs. The owners of two of the MHPs, Blue Spruce and Terry Lake, asked that the project team not interview their tenants or meet with them directly. Since at the time of the interviews the Preferred Alternative had yet to be identified, the owners expressed concern that their tenants might become needlessly alarmed and move hastily, thus creating an increase in vacancies. Instead, interviews were held with the property owners to discuss their concerns and interests regarding the No Action and action alternatives' potential impacts.

Concern about loss of tenants illustrated the transient nature of residents in these two MHPs. A general comment made by the owner of Terry Lake MHP was that "some (residents) would be more than happy to go." At the time of the interviews in the spring of 2003, the Terry Lake MHP did have two Section 8³ residents, other low-income (according to the owner) residents, and some elderly residents. There was little indication of a "sense of community and place" for the Blue Spruce and Terry Lake MHPs based on park owner interviews.

MHPs traditionally have a more transient clientele, but it was not uncommon to speak with residents of PVMHP who had lived there ten or more years. This community is located in Census Tract 13.04, Block Group 1, containing a high proportion of minority (65 to 78 percent) population. A few individuals from PVMHP stated that they enjoyed living there because it is an inexpensive place to live. Another common reason was the impromptu social gatherings at a small park within PVMHP.

Interviews revealed a supportive network among several residents of PVMHP. Some individuals interviewed were related to other residents of the park. Some PVMHP residents provide daycare services for other residents. Furthermore, some residents receive or provide assistance to other residents by sharing rides to places such as the grocery store, church, or work. Also, some bilingual residents provide translation services to other residents in the MHP.

Business Property Owners/Operator Interviews

Only three project area businesses seem to rely on residents within the project area for revenue. Those three businesses are the mobile home parks themselves. The majority of the workers employed by other businesses along the existing alignment come from outside the project area. Some of the other businesses may receive a portion of their patronage from nearby residents, but the business operators stated that most of their clientele live in the greater Fort Collins area. The main concern of business property owners/renters was safe vehicular access to and from their properties.

3.1.2.3.3 Conclusions

Based on statistical analysis of the three Block Groups in the projects area, only one—Census Tract 13.04, Block Group 1—contains a minority and/or low-income population

³ Section 8 is a rental assistance program of the US Department of Housing and Urban Development (HUD) administered by a local public housing authority. Vouchers and certificates are issued to low-income households meeting the program's eligibility criteria. Vouchers/certificates enable an individual to rent a dwelling owned by an approved Section 8 landlord.

sufficient to warrant further analysis for compliance with EO 12898. Within that area, PVMHP and Terry Lake MHP contained a high percentage of minority and/or low-income residents.

After completing the community interview process and reviewing the information gathered, only PVMHP displayed the main characteristics of a cohesive community. Many of the residents have lived at PVMHP for years, and expressed a connection with the other residents. Residents of PVMHP who were interviewed revealed an interactive community, with residents often assisting each other with daily needs such as child care, transportation, and language interpretation. The family relationships that exist within the PVMHP are also a highly identifiable character of this community. Relocating residents within this community could result in subsequent impacts on neighbors, friends, and/or family. This conclusion is further supported by dialogue and information provided by individuals from various local and nonprofit agencies who provide services to clients within PVMHP.

Aside from PVMHP, other residents and business owners/renters who were interviewed do not seem to have a “sense of community and place.” The project team learned that while residents enjoy the natural surroundings and general location, it is not a connection with the other residents or businesses that keeps them in the area. Based on the interview process, there is no indication that relocation of a specific resident would result in impacts on those in surrounding households. Businesses within the project area do not rely heavily on patronage from residents, nor do they employ those residing within the project area.

One consistent message that was delivered in the interviews was that most people believe that improvements to the existing US 287 from SH 1 to the LaPorte Bypass must occur. Both business owners/renters and residents expressed concern over access, the difficulty in making left turns from US 287, and the lack of a shoulder. Safety was a recurring concern for those interviewed. When reviewing the alternatives under study, those directly impacted by a certain alternative favored other alternatives that reduced or eliminated the impact. However, most people did express support for improvement to the existing facility (Alternatives A4 and A5) rather than the construction of a new alignment (Alternative B).

3.1.2.3.4 No Action Alternative

No disproportionately high and adverse effects on low-income or minority populations have been identified for the No Action Alternative. Past actions that currently affect the community include the location of residences in close proximity to the roadway. This has resulted in current noise levels exceeding CDOT’s noise abatement criteria, and some unsafe access along the existing transportation facility. These consequences will continue to affect the community as a whole as well as minority and/or low-income populations under the No Action Alternative, and may worsen as traffic volumes and population increase.

3.1.2.3.5 Alternative A4

A total of 32 to 42 project-wide relocations are associated with Alternative A4. Relocations will include a range of 4 to 5 single-family residences, 6 apartment units, 8 businesses, and 14 to 23 mobile homes (7 to 11 from Blue Spruce, 5 to 10 from Terry Lake, and 2 from Poudre Valley).

No disproportionately high and adverse effects on low-income or minority populations have been identified for Alternative A4. Alternative A4 would meander to both sides of the existing roadway, affecting areas where minority and/or low-income populations reside as well as portions of the project area that do not have a high percentage of low-income or minority residents. The proposed roadway cross-section would include four lanes (two lanes in each direction), with a painted median that would also serve as a left turn lane. A 10-foot shoulder on each side would provide additional room for disabled vehicles or bicyclists. A sidewalk for pedestrians or bicyclists would be included in the design. All of these features would combine to provide a safe, modern facility that would address safety and mobility issues on the existing US 287. This design would specifically help alleviate the high incidence of rear-end crashes currently occurring near the entrance to Aragon Iron & Metal that are likely caused by lack of a left turn lane combined with an inadequate sight distance. The addition of the sidewalk and shoulder would directly increase the safety of pedestrians and bicyclists using the corridor.

Minority and/or low-income populations would experience the same benefits and burdens from Alternative A4 as the population as a whole. As noted above, the conceptual design for widening US 287 would result in beneficial effects, including improved pedestrian access along the roadway, by incorporating detached sidewalks where space permits. Sidewalks would be attached in areas where this reduces the number of relocations. Additional benefits would include a wide shoulder for bicycles, safety improvements (including improved access and turning lanes), and a greater buffer between homes and the roadway in some locations. Noise mitigation measures were evaluated for each action alternative. Potential noise barriers are proposed where they meet reasonable and feasible criteria as described in the *Colorado State Noise Abatement Guidelines*. See section 3.1.2.4, Minimization and Mitigation Measures, for additional discussion.

In addition, lighting fixtures that direct the light downward and sensitive landscaping applications that correspond with the surrounding natural environment would help create a consistent aesthetic appearance along the roadway.

For Alternative A4, only the population in Census Block 13.04, which includes both the Terry Lake MHP and PVMHP, includes minority and/or low-income populations subject to environmental justice considerations. Through the community interview process and the information that was shared, the question of the existence of a “sense of community and place” within the project area has been answered. A “sense of community and place” was clearly identified at PVMHP.

Based on the methodology used for this environmental justice analysis, disproportionately high and adverse effects on minority and/or low-income populations would mean that a larger portion of relocations for Alternative A4 would be from areas containing minority and/or low-income populations. Including 5 to 10 relocations at Terry Lake MHP and two units at PVMHP, this presents a maximum of 12 relocations from a total of 32 to 42, which is not a disproportionately high and adverse effect.

Potential long-term quality of life changes from Alternative A4 may affect minority and/or low-income populations as well as other residents in terms of visual quality, noise, and loss of property. These issues are addressed in the appropriate resource sections of this

document. All residents in the project area, including minority and/or low-income populations, would experience short-term impacts from construction activities associated with Alternative A4. Mitigation measures are discussed in section 3.1.2.4.

3.1.2.3.6 Alternative A5

No disproportionately high and adverse effects on low-income or minority populations have been identified for Alternative A5. Alternative A5 would have the same cross-section and effects as Alternative A4, except in the vicinity of Terry Lake, where fewer relocations would occur due to the alignment shift into the lake area. A total of 27 to 38 project-wide relocations are associated with Alternative A5. Relocations will include a range of 3 to 4 single-family residences, 6 apartment units, 8 businesses, and 10 to 20 mobile homes (7 to 11 from Blue Spruce, 2 to 7 from Terry Lake, and 1 to 2 from Poudre Valley).

Based on the methodology used for this environmental justice analysis, disproportionately high and adverse effects on minority and/or low-income populations would mean that a larger portion of relocations for Alternative A5 would be from areas containing minority and/or low-income populations. Including 2 to 7 relocations at Terry Lake together with one to two units at PVMHP, this presents a maximum of 9 relocations from a total of 27 to 38, which is not a disproportionately high and adverse effect.

3.1.2.3.7 Alternative B

Alternative B would have fewer developed properties than Alternatives A4 and A5. No mobile home relocations will occur under Alternative B. Five project-wide relocations (1 single-family residence and 4 businesses) are associated with this alternative. None of these have been identified as minority or low-income residents.

In general, minority and/or low-income populations would experience the same benefits and burdens as the population as a whole from Alternative B. Burdens would be similar for Alternative A4 and A5 as described in sections 3.1.2.3.5 and 3.1.2.3.6. Benefits are different from Alternatives A4 and A5, and are described below.

Beneficial effects from Alternative B include a new transportation facility with pedestrian access along the new roadway and a 10-foot wide shoulder for bicycles. Undesirable effects from past actions, discussed under the No Action Alternative in section 3.1.2.3.4, will persist in the community along the existing US 287 alignment, and may worsen as traffic volumes and population increase.

3.1.2.4 Minimization and Mitigation Measures

Minority and/or low-income populations would be affected by selection of any action alternative. In compliance with EO 12898, the public involvement program was tailored to meet the needs of minority and/or low-income populations, who will continue to be specifically included in the process. As a result of implementation of environmental justice methodology outlined above, it was determined that there will be no disproportionately high and adverse effects on minority or low-income populations in the US 287 project area. There will be both beneficial and negative impacts on minority and/or low-income populations, as well as to the

population as a whole. Mitigation and relocation assistance measures are described below. Assistance includes measures that focus on low-income housing needs.

Additionally, each alternative alignment has been designed to minimize encroachment on residential areas where feasible. The alternatives along the existing alignment were modified from the uniform right-of-way cross-section to minimize property encroachment and relocations by decreasing right-of-way acquisition where it was feasible. Attached sidewalk and retaining walls would be used to reduce the number of relocations in some areas. Based on conceptual design, these changes in the cross-section reduce the square footage of impacts in Census Tract 13.04, Block Group 1 by 16,446 square feet for A4 and 12,019 square feet for A5. Narrowing the roadway cross-section through the use of retaining walls and an attached sidewalk in places would reduce the number of potential relocations. Original estimates indicated that upwards of 42 and 38 relocations would be required by Alternatives A4 and A5 respectively. With the modifications in conceptual design, this is now the upper limit of relocations that would be anticipated; it is estimated that only 32 to 42 and 27 to 38 relocations would be required for Alternatives A4 and A5, respectively. Alternative B would result in 5 relocations.

No disproportionately high and adverse relocation impacts on minority or low-income populations have been identified for any of the action alternatives. For Alternatives A4 and A5, a potential relocation impact on a maximum of twelve (A4) or nine (A5) minority or low-income residences has been identified. This also does not represent a disproportionately high and adverse impact compared with the total population affected by the project. Note that the minority and/or low-income population from Block Group 13.04 will reap the benefits of the safer and less-congested US 287 associated with the action alternatives.

Noise mitigation measures were evaluated for all action alternatives. Potential noise barriers are proposed where they meet reasonable and feasible criteria as described in the *Colorado State Noise Abatement Guidelines*. Additional information on noise impacts and mitigation is located in section 3.3.2.

Noise mitigation measures are applicable to PVMHP. Under Alternative A4, a noise wall 493 feet long and 16 feet tall was analyzed for PVMHP. It was estimated to cost approximately \$197,000 and predicted to provide an average of 4.9 dB(A) of noise reduction for 21 individual properties. This results in a cost-benefit of about \$1,900, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended.

A section of PVMHP is located south of SH 1, outside of the project area. It is recommended that this be examined during final design to determine if noise mitigation analysis is warranted. It is desirable in order to maintain some commonality between the two sections of PVMHP.

Noise mitigation is also considered feasible for Terry Lake MHP for Alternative A4. A noise wall 502 feet long and 13 feet tall was analyzed, and estimated to cost approximately \$151,000. The wall is predicted to provide an average of 5.7 dB(A) of noise reduction for 17 individual properties. This results in a cost-benefit of about \$1,600, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended, provided that

a new access point to US 287 would be constructed. Otherwise, the break in the wall would reduce its effectiveness.

Under Alternative A5, a noise wall 437 feet long and 14 feet tall was analyzed for PVMHP. It was estimated to cost approximately \$153,000 and predicted to provide an average of 4.5 dB(A) of noise reduction for 17 individual properties. This results in a cost-benefit of about \$2,000, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended.

For Alternative A5, a noise wall 397 feet long and 20 feet high with a cost of approximately \$199,000 is recommended at Terry Lake MHP. It is predicted to provide an average of 5.1 dB(A) of noise reduction for 12 individual properties. This results in a cost-benefit of about \$2,200, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended, provided that a new access point to US 287 would be constructed. Otherwise, the break in the wall would reduce its effectiveness.

For Alternative B, a wall 460 feet long and 14 feet tall at PVMHP was analyzed, and estimated to cost approximately \$161,000. It is predicted to provide an average of 4.4 dB(A) of noise reduction for 18 individual properties. This results in a cost-benefit of about \$2,000, which is considered “very reasonable” under CDOT guidelines. Thus, this noise wall is recommended for this location under this alternative.

A longer wall was considered for Alternative B at Terry Lake: 700 feet long and 14 feet tall, with a cost of approximately \$245,000. It is predicted to provide an average of 5.3 dB(A) of noise reduction for 21 individual properties. This wall has a cost-benefit of about \$2,200, and is recommended provided that a new access point to US 287 is constructed.

Mitigation for potential aesthetic impacts includes but is not limited to sensitive grading techniques, landscaping applications consistent with the surrounding area, and cutoff-type light fixtures that direct the illumination downward.

In an effort to identify additional benefits that may be afforded to all potential relocatees, CDOT has begun to establish a partnering effort with the Fort Collins Housing Authority (FCHA), Larimer County, and Neighbor-to-Neighbor (N2N). These additional benefits are derived from the agencies’ various programs and established eligibility criteria.

FCHA currently assists approximately 1,500 families (4,000 individuals) throughout Larimer County under various programs. These programs include Federally Subsidized Low-Income Public Housing, Section 8 Rental Assistance, management of the Wellington Housing Authority, management of the Fort Collins Housing Corporation’s nonsubsidized affordable housing properties, and management of the historic Northern Hotel low-income housing tax credit development.

N2N is a nonprofit agency in northern Colorado whose “mission is to empower people and promote housing opportunity through counseling, education, supportive services, community partnerships and the provision of multi-family affordable housing.” N2N fosters positive outcomes and stable housing along all points of the housing continuum, from homelessness through home ownership. These programs include connecting clients with affordable rental

opportunities, home ownership opportunities, and downpayment assistance programs, providing housing in N2N's communities as units become available (Affordable Housing and Project Based Section 8), meeting with individual residents to provide counseling on available options and resources, providing community outreach as needed, providing ongoing case management as needed, and serving as an information link between residents and available housing services.

A Larimer County Health and Human Services representative has attended a coordination meeting for this partnering effort and has committed to assist during the relocation process. Currently many of his clients reside at PVMHP.

FCHA will work with CDOT and N2N to identify housing options in their programs, and Larimer County Health and Human Services will continue to be involved by providing overall support and coordination. Currently it is anticipated that N2N would provide housing counseling for interested displaced individuals to help identify housing options and apply for necessary assistance. This potential additional assistance does not supersede CDOT's Relocation Assistance Process, but rather serves as a complementary effort. Potential residential relocatees would need to meet FCHA and N2N standard eligibility criteria in order to receive the benefits associated with the agencies' various programs.

All three agencies are interested in furthering and solidifying a partnering effort with CDOT should any of the action alternatives be selected and implemented.

CDOT has determined that adequate affordable replacement housing would currently be available for those displaced by the project. Mobile homes in decent, safe, and sanitary condition could be moved to a vacant lot in the same park or another park as stated by the Fort Collins Housing Authority. In many cases residences at Terry Lake MHP and PVMHP may not be in decent, safe, or sanitary condition due to their age. In such cases CDOT may need to purchase the older mobile home and provide assistance in the purchase of a newer mobile home or identification of a different housing option, some of which have been described above.

3.1.2.4.1 Relocation Assistance

CDOT is required to conform with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), which provides for uniform and equitable treatment of all persons displaced from their homes, businesses, or farms.

For low-income relocatees, rent or mortgage assistance may be available through the FCHA. The three main programs are Public Housing, Affordable Housing, and Section 8 housing. Each of these programs provides long-term rental assistance to low-income families and individuals. The Public Housing Program currently has a one- to two-year waiting period, the Affordable Housing Program has a three- to nine-month waiting period, and the Section 8 Program is currently closed to new applicants. However, priority is given to households displaced through government action, and since the actual relocation process is several years away, it is not possible to predict the exact length of the waiting period that relocatees would experience at the time the proposed highway widening would start. Some households may prefer to pursue home ownership, and the N2N housing counselor working on the project would be able to help with this process. Under the CDOT Relocation Program, a subsidy is available until applicants are accepted into one of the FCHA housing programs.

Further coordination and discussions will be needed to determine the best assistance available should any of the action alternatives be selected and implemented. CDOT's relocation agent would assist relocatees in finding a new location, and would assist low-income relocatees with enrollment into one of the FCHA programs available (applicants would need to meet income requirements of the program). Additional support will be available from the FHCA, N2N, and Larimer County Health and Human Services.

3.1.3 Utilities and Services

Utilities (telephone, natural gas, water, and electricity) serve the immediate vicinity of Alternatives A4 and A5; however, there are no utilities located along much of the relatively undeveloped Alternative B corridor.

The following cost estimates are based on conceptual design and are in year 2001 dollars. Should an action alternative be selected, final design would require a complete inventory of exact expenses. These cost estimates assume relocation of major utilities such as gas, electric, water, and telephone, and represent a worst case.

3.1.3.1 No Action Alternative

There would be no impacts or changes in utilities or services under this alternative.

3.1.3.2 Alternative A4

Utility relocation costs would be approximately \$1.1 to \$1.2 million.

3.1.3.3 Alternative A5

Utility relocation costs would be approximately \$1.6 to \$1.7 million.

3.1.3.4 Alternative B

Utility relocation costs would be approximately \$90,000.

3.1.4 Construction Costs

The following construction costs are presented in year 2001 dollars and do not include right-of-way acquisitions, relocations, utilities, or mitigation measures.

3.1.4.1 Alternative A4

Construction of Alternative A4 would cost between \$11.5 and \$11.6 million based on conceptual design.

3.1.4.2 Alternative A5

Construction of Alternative A5 would cost between \$19.1 and \$19.2 million based on conceptual design.

3.1.4.3 Alternative B

Construction of Alternative B would cost approximately \$11 million based on conceptual design.

3.1.5 Prime Farmland Disruption

Areas considered prime farmland were identified pursuant to the Farmland Protection Policy Act of 1981 (FPPA; 7 USC 4202). The purpose of this Act (Section 1540 [b]) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. A survey was conducted to identify prime, unique, and important farmlands in the project area and to evaluate the action alternatives' potential impacts on farmland resources.

Soil units considered to be prime farmland are those with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. The soil features include soil type, growing season, and moisture supply to produce sustained high yields when treated and managed with acceptable methods. Soil units identified as candidates for prime farmland are illustrated in Figure 3-5.

These soil units contain several common features, including a deep profile and good to moderately good drainage (Soil Conservation Service 1980). Other key features include the lack of a high water table, the lack of heavy, clay textures that impede drainage, and slopes of less than 6 percent.

The Natural Resources Conservation Service (NRCS) was contacted for mapping and descriptions of prime farmland for Larimer County. A Farmland Conversion Impact Rating Form (Form AD 1006; see Appendix C) was completed in cooperation with the NRCS (J. Fusaro, Larimer County Field Office) for areas containing soil types mapped as prime farmland and crossed by each action alternative. The land evaluation data includes total acres of prime farmland, as well as the percentage of farmland within the county that would be converted by this project (based on conceptual design). The rating results determine whether the area qualifies as prime farmland and identifies areas where additional considerations or avoidance are warranted. Additionally, 12 site assessment criteria rate the ability of an area to produce agricultural products to the maximum extent possible. These criteria take into account attributes that may detract from farmland being used to its full potential (for example, amount of nonurban use, percent of site being farmed, distance from urban buildup, and availability of farm support services).

A threshold of 160 points has been established by the NRCS for the Farmland Conversion Impact Rating form to determine if mitigation measures are required. A score of 160 or greater indicates that an area qualifies as prime farmland and is in agricultural production. Criteria used to rate areas include:

- area in nonurban use
- perimeter in nonurban use
- percent of site being farmed
- protection provided by state and local governments
- distance to urban support services
- distance from urban built-up areas
- size of present farm unit compared to average

- creation of nonfarmable land
- availability of farm support services
- on-farm investments
- effects of conversion on farm support services
- compatibility with existing agricultural use

3.1.5.1 No Action Alternative

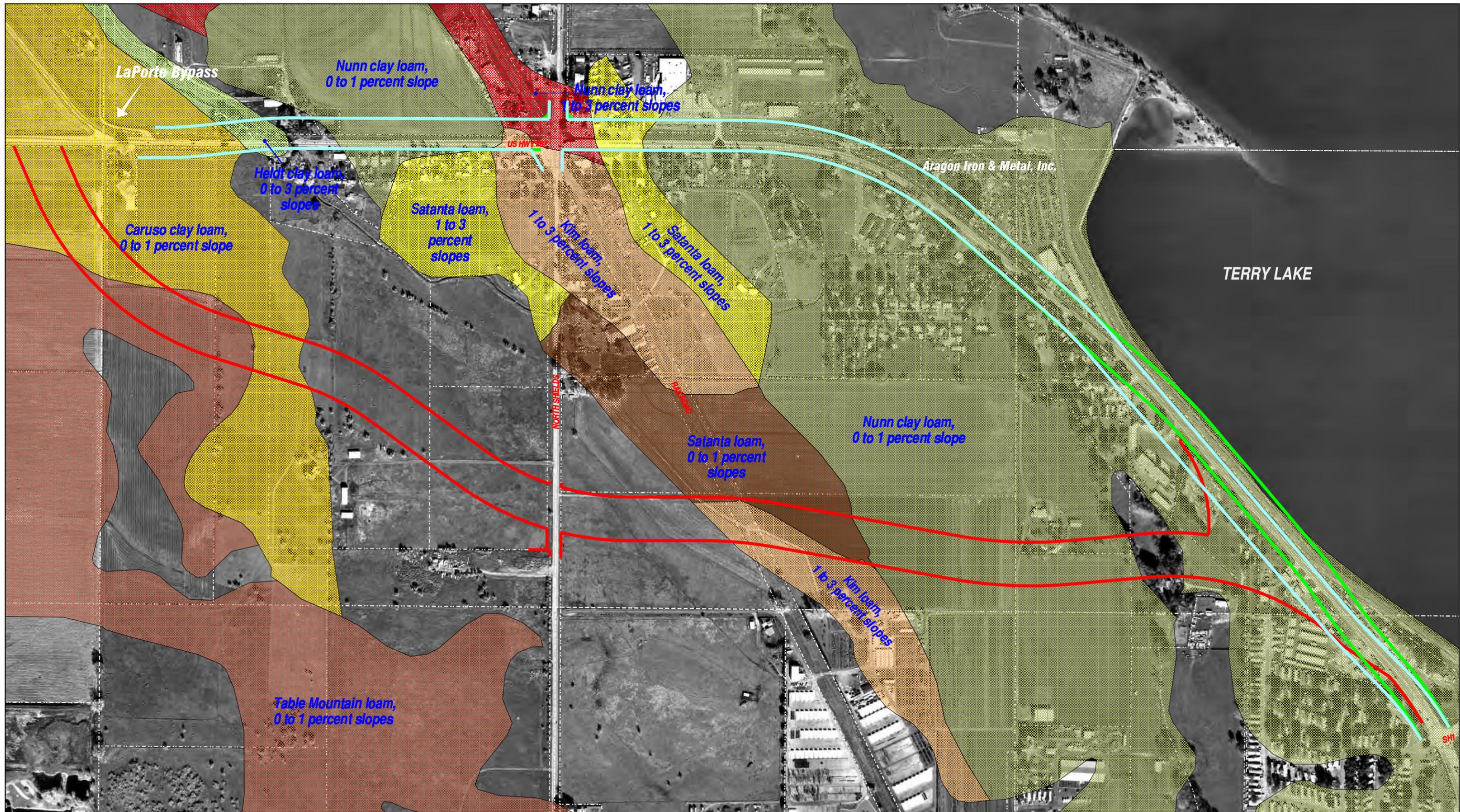
No conversion of soils that are classified as prime farmland would occur under the No Action Alternative. The project area currently contains residential and commercial development, especially along the existing US 287 right-of-way, and is within a region designated by Larimer County as a UGA (Larimer County 1997). An intergovernmental agreement has been developed between the city of Fort Collins and Larimer County for the city to annex and develop this area.

3.1.5.2 Alternatives A4 and A5

Although a number of soil types crossed by Alternatives A4 and A5 qualify for consideration as prime farmland, most of this area has been developed as residential and commercial properties. The exception occurs west of North Shields Street and north of US 287 in Nunn clay loam, 0 to 3 percent and Heldt clay loam, 1 to 3 percent. The relative land evaluation value was 39 of a possible 100 points for both alternatives (Appendix C). The site assessment criteria scoring resulted in a rating of 46 for each A Alternative, primarily because of urban buildup and the area of nonfarmable land along the US 287 corridor (Appendix C). Based on guidelines under the FPPA, if the assessment results in a total score of 160 or more, alternatives to conversion of soils that qualify as prime farmland should be considered. Consequently, it is not necessary to further consider conversion of prime farmland at this time. A total of 4.9 acres and 5.6 acres of soils categorized as prime and unique farmland would be directly impacted under Alternatives A4 and A5, respectively. Of the soils impacted, only 2.6 acres are currently in agricultural use for Alternatives A4 and A5.

3.1.5.3 Alternative B

This alternative crosses large areas of soil types that qualify as prime farmland and are currently in agricultural use. Alternative B may divide parcels currently being farmed, which could impair the functionality of part or all of the affected parcel. Alternative B would directly impact 25.0 acres of soils classified as prime and unique farmland. For Alternative B, 19.7 acres are currently in agricultural use. A land evaluation rating resulted in a value of 43 points, and the site assessment rating resulted in a value of 98 points.



LEGEND

- Property Boundaries
- Satanta loam, 1 to 3 percent slopes
- Satanta loam, 0 to 1 percent slopes
- Nunn clay loam, 1 to 3 percent slopes
- Nunn clay loam, 0 to 1 percent slope
- Table Mountain loam, 0 to 1 percent slopes
- Alternative A4 Right-of-Way
- Alternative A5 Right-of-Way
- Alternative B Right-of-Way
- Kim loam, 1 to 3 percent slopes
- Heldt clay loam, 0 to 3 percent slopes
- Caruso clay loam, 0 to 1 percent slope

Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

200 0 200 Meters
 500 0 500 Feet
 SCALE - 1:6300

SOURCE:
 Land use, parcel boundary, and soils information provided by the Larimer County GIS Department.
 Aerial photography provided by Datamap, Inc.
 Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
Prime Farmland Soils**

FIGURE 3-5

3.1.5.4 Mitigation Measures

Because potential losses of soils categorized as prime farmland are not considered substantial enough to warrant further consideration under the FPPA, no prime farmland mitigation measures are proposed for the three action alternatives. However, if an action alternative is selected, compensation for land required for the right-of-way would include an assessment of how that land is used, and compensation for loss of property—either physical loss or loss of functionality. Mitigation measures may also include replacement of any damaged or lost pipes and ditches as well as payment for any crops outside of the highway right-of-way damaged during construction.

3.1.6 Land Use

This section provides a description of the existing and proposed right-of-way conditions, existing land uses within the project area, and the impacts on land use that could potentially result from implementation of the alternatives under study. Figure 3-6 illustrates the existing land use along US 287 between SH 1 and the LaPorte Bypass.

While the A4, A5, and B Alternatives are within unincorporated Larimer County, they are also within the Fort Collins UGA boundary, which is likely to be annexed into Fort Collins by 2015. The purpose in defining a UGA is to encourage urban development to locate adjacent to areas already developed within cities and towns. The lands within the project area are currently under Larimer County’s jurisdiction; however, because of the agreements between the county and city pursuant to the UGA, the county will only approve urban-level development within the UGA boundaries. The Larimer County Master Plan (1997) reveals, “...the transportation system plays a key role in determining land use patterns. On the other hand, land use is an important factor in determining roadway functions and designs. Consequently, land use planning and transportation planning must be coordinated to achieve the objectives of each.”

As represented in Figure 3-6, the properties on US 287 between SH 1 and the LaPorte Bypass (south to west), transition from a strip of residential and commercial properties to an open agricultural land use pattern.

The section of US 287 between SH 1 and Aragon Iron & Metal includes a highly varied patterning of residential, commercial, and industrial properties that form a combination strip along US 287. The largest property/parcel bordering US 287 is the Aragon Iron & Metal and Terry Lake Dam. This area contains both single-family and multifamily residences, with lot sizes ranging from 0.7 to 6.2 acres. A wide range of commercial establishments include auto body repair, trash service, a construction company, propane sales, hunting supplies, game processing, water well service, storage, home repair, a cable company, and a commercial rafting outfitter. Commercial properties in this area range from 0.9 to 4 acres.

Residential and commercial properties along US 287 between Aragon Iron & Metal and the LaPorte Bypass are oriented toward the roadway and have direct access to US 287 with little definition of the roadway edge (for example, no sidewalks and little landscaping). Agricultural uses west of North Shields Street include forages, legumes (such as alfalfa), and horse pasture, with parcel sizes from 36.6 to 66.1 acres.

In contrast to the previously described areas, the area south and west of existing US 287 and adjacent development is composed predominantly of open agricultural land, with its major uses consisting of grazing and irrigated croplands. Agricultural uses include forage, legumes (such as alfalfa), horse pasture, and the Fort Collins Nursery, with parcel sizes ranging from 14.5 to 37.2 acres. Also, there are dispersed rural residences within this area. These properties are accessed from North Shields Street, which extends north and south through the project area.

3.1.6.1 No Action Alternative

The No Action Alternative would not cause changes to right-of-way, land use, or access in the project area.

3.1.6.2 Alternative A4

Widening the roadway as proposed by Alternative A4 would increase the existing US 287 right-of-way width from a range of 75 to 105 feet to a range of 158 to 175 feet.

Approximately 17.6 acres would need to be acquired. Direct impacts include acquisition of 32 to 42 residential and commercial buildings along US 287.

Alternative A4 would impact approximately 4.9 acres of soils that are categorized as prime and unique farmland; however, only 2.6 acres are currently being farmed. This area that would be directly impacted is on the north side of US 287 to the west of North Shields Street and is currently in use for agricultural productivity.

Alternative A4 would permanently impact 0.25 acre and temporarily impact 0.24 acre of wetlands.

3.1.6.3 Alternative A5

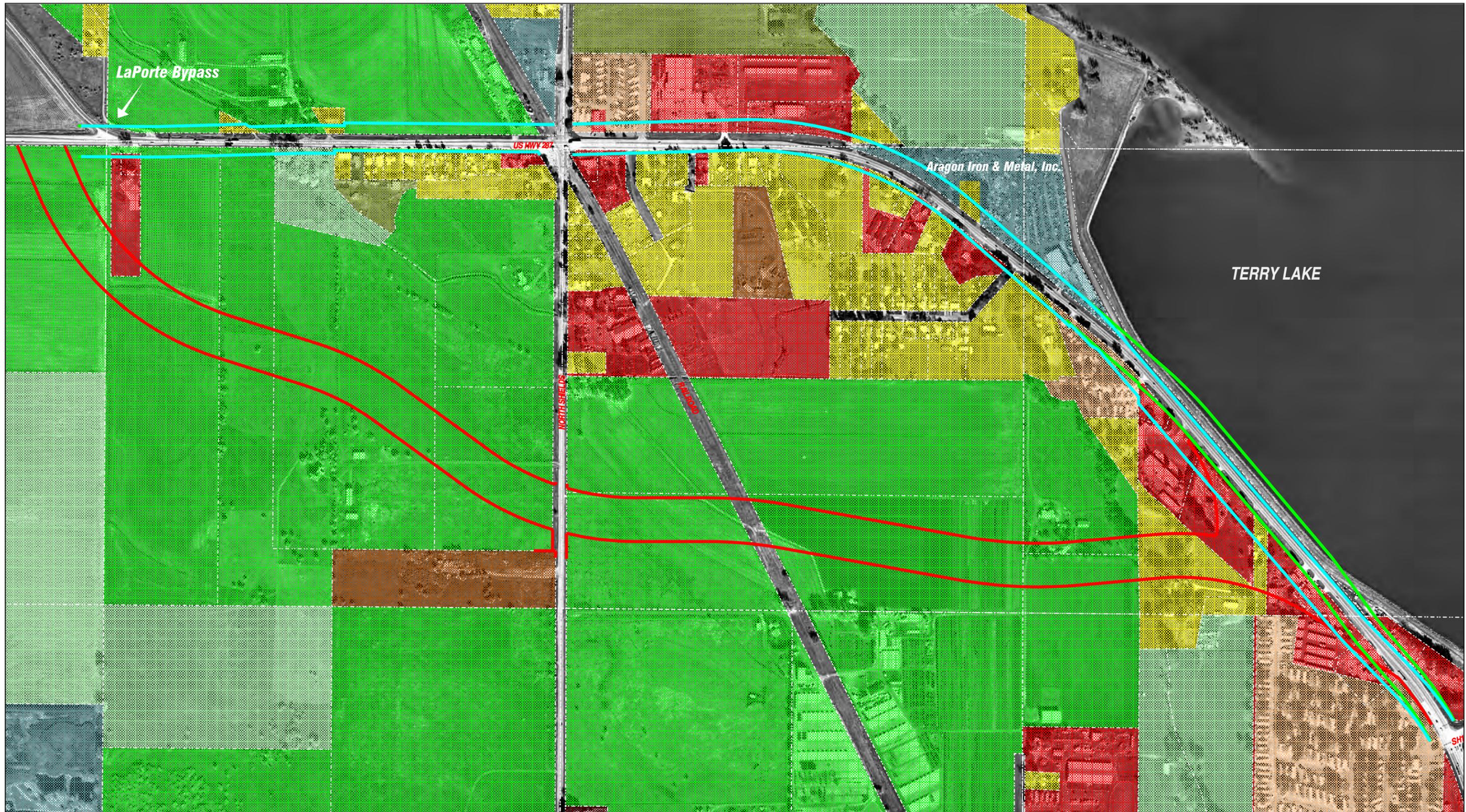
Widening the roadway as proposed by Alternative A5 would increase the existing US 287 right-of-way width from a range of 75 to 105 feet to a range of 158 to 175 feet. Approximately 16.5 acres would need to be acquired. This alternative necessitates the acquisition of between 27 and 38 residential and commercial buildings.

Alternative A5 would impact approximately 5.6 acres of soils that are categorized as prime and unique farmland; however, only 2.6 acres are currently being farmed. This area that would be directly impacted is on the north side of US 287 to the west of North Shields Street and is currently in use for agricultural productivity.

Alternative A5 would permanently impact 0.25 acre and temporarily impact 0.24 acre of wetlands.

3.1.6.4 Alternative B

The Alternative B right-of-way would be 250 feet wide, consisting of approximately 54.5 acres. Alternative B would require the acquisition of five residential and commercial buildings (at the intersection of Alternative B and US 287), approximately 25.0 acres of soils classified as prime and unique farmland (19.7 acres of which are currently in use for agricultural production), 7.76 acres of permanent wetland impact, and 1.49 acres of temporary wetland impact.

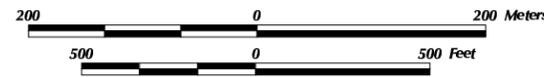


LEGEND

- | | | |
|---------------------------|-----------------------|-----------------------------|
| Property Boundaries | Industrial | Alternative A4 Right-of-Way |
| Single-Family Residential | Cropland | Alternative A5 Right-of-Way |
| Multi-Family Residential | Pasture | Alternative B Right-of-Way |
| Residential Unimproved | Agricultural Facility | |
| Residential Improved | | |
| Commercial / Business | | |



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
Existing Land Use**

FIGURE 3-6

3.1.6.5 Mitigation Measures

As noted in the discussion of right-of-way and relocation mitigation measures in section 3.1.1.5, each alternative alignment has been designed to avoid as much conflict as possible with existing properties and associated land uses. To minimize impacts that cannot be avoided, FHWA and CDOT would conform to the requirements set forth in the Uniform Act to provide a consistent policy for fair and equitable treatment of relocatees should an action alternative be selected. CDOT would also provide compensation and assistance in finding suitable sites for relocation. Farmland and wetlands impact mitigation are discussed in sections 3.1.5.4 and 3.3.5.5, respectively.

3.1.7 Emergency Services

Several entities provide emergency services in the project area, including the Larimer County Sheriff's Department and the Colorado State Patrol. The Poudre Fire Authority (PFA) provides fire protection, emergency medical service, basic life support services, rescue, and other emergency services. The Poudre Valley Hospital in the city of Fort Collins works with PFA by providing advanced life support and patient transport. Emergency services are handled with a 911 emergency calling system. If an action alternative is selected and implemented, construction and traffic management would be coordinated with emergency services providers to ensure access to properties during construction.

3.1.7.1 No Action Alternative

Under the No Action Alternative, mobility and safety would continue to deteriorate as volumes increase on US 287 between SH 1 and the LaPorte Bypass. This can be expected to affect all traffic, including emergency vehicles.

3.1.7.2 Alternatives A4 and A5

Both the A4 and A5 alternatives would improve mobility and safety on US 287 between SH 1 and the LaPorte Bypass through the addition of a second travel lane, left turn lane, and shoulder. The improved travel conditions would apply to all traffic, including emergency vehicles.

3.1.7.3 Alternative B

Alternative B would split the traffic volume on US 287 from SH 1 to the LaPorte Bypass between the existing and new alignments. However, the existing US 287 would remain the same, consisting of one lane of travel in each direction with no left turn lane. Mobility and safety issues therefore would not be addressed for the existing alignment.

3.1.8 Roadway Constructibility and Safety

One of the purposes of this study and the resulting recommendation is to improve safety of travel along US 287 between SH 1 and the LaPorte Bypass. As noted in Chapter 1, Purpose and Need, this section of US 287 has a slightly higher rate of crashes than the average for a Colorado State primary arterial. During the public involvement program for this project, safety was repeatedly mentioned as a concern for residents, business owners, and travelers along US 287. People indicated that they had difficulty entering and exiting the highway due to the

lack of shoulder and turn lanes, and sight distance problems associated with the area near Terry Lake Dam where the road curves.

3.1.8.1 No Action Alternative

The No Action Alternative would result in increasing traffic volumes and continued safety concerns.

3.1.8.2 Alternatives A4 and A5

Engineering review of the conceptual designs indicates that Alternatives A4 and A5 meet safety and constructibility criteria. The inclusion of a shoulder and median turn lane would help address safety issues along US 287.

3.1.8.3 Alternative B

Engineering review of the conceptual design indicates that the new alignment associated with Alternative B meets safety and constructibility criteria. Since there would be no change to the existing US 287, safety issues would not be directly addressed. However, the diversion of some through traffic to the new route may help reduce some of the safety concerns.

3.1.9 Economic Effects of the Alternatives

The project area description in Chapter 1, Purpose and Need, describes the area's social and economic profile. The following sections outline the potential for each of the alternatives to impact the local economy.

3.1.9.1 No Action Alternative

Under the No Action Alternative, no roadway improvement would be implemented to alleviate traffic congestion, although planned and routine roadway maintenance would continue. As such, this alternative would not alter socioeconomic conditions in the project area.

3.1.9.2 Alternatives A4 and A5

Alternatives A4 and A5 would not create long-term employment opportunities in the project area. Highway construction labor is expected to commute from areas outside the project area. Neither alternative would create additional opportunities for area development. As such, induced growth is not anticipated.

3.1.9.3 Alternative B

As with Alternatives A4 and A5, Alternative B would not result in long-term employment opportunities in the project area, and short-term employment opportunities may consist of highway construction workers commuting from outside the project area. Consequently, Alternative B would not directly produce short- or long-term changes in area socioeconomics.

It is unlikely that selection of Alternative B would negatively affect retail businesses along US 287. These businesses offer specific services and/or products that people seek out as

needed, unlike more general-type stores that could experience a reduction in clientele as a result of the reduction in traffic volume.

Induced growth in the agricultural/rural corridor through which Alternative B passes is not anticipated. Access to the new roadway would only be provided at existing roadway connections; that is, SH 1, North Shields Street, and the LaPorte Bypass. This area is part of the UGA for which Larimer County and the city of Fort Collins have developed land use and zoning regulations to govern existing and future development. Implementation of Alternative B would not affect government jurisdiction and would not necessitate alteration of the planning documents or agreements designed to manage growth in a manner consistent with both Larimer County and city of Fort Collins' goals.

3.1.10 Local Government Recommendation

FHWA and CDOT met with the city of Fort Collins and Larimer County throughout the process (Chapter 4, Comments and Coordination). Both entities agreed that the existing US 287 needs both capacity and safety improvements, and both agree that Alternative A4 be pursued. Appendix D contains minutes of the Larimer County Commissioners' meeting on May 7, 2001, which supported selection of Alternative A4 as the Preferred Alternative.

3.2 Cultural Resources

3.2.1 Archaeological Resources

In fall 2000 an archival literature search encompassing the project area was conducted at the Office of Archaeology and Historic Preservation (OAHP) in Denver, Colorado. The literature search produced no record of archaeological sites or features in or near the project area. Subsequent to the file search, a field survey of the corridor was conducted, also with negative results. In the event an action alternative is selected and buried cultural materials are exposed during any phase of construction, the CDOT staff archaeologist would be notified immediately to ensure that the remains are evaluated in accordance with criteria established by Section 106 of the National Historic Preservation Act (NHPA).

3.2.2 Native American Consultation

As mandated by Section 106 of the National Historic Preservation Act (as amended) and the revised Advisory Council on Historic Preservation regulations (36 CFR 800), FHWA contacted 15 federally recognized Indian tribes with an established interest in Larimer County, Colorado with an invitation to become consulting parties for the project (see Appendix C). Consultation with a Native American tribe recognizes the government-to-government relationship between the United States government and sovereign tribal groups. Federal agencies must be sensitive to the fact that historic properties of religious and cultural significance to one or more tribes may be located on ancestral, aboriginal, or ceded lands beyond modern reservation boundaries. Consulting tribes are offered the opportunity to identify concerns about cultural resources and comment on how the project might affect them. If it is found that the project will impact cultural resources that are eligible for inclusion on the National Register of Historic Places and are of religious or cultural significance to one or more consulting tribes, their role in the consultation process may also include participation in resolving how best to avoid, minimize,

or mitigate those impacts. By consulting with the interested Native American community, FHWA and CDOT strive to effectively protect areas important to Indian people.

Tribes invited via letter to participate as consulting parties included the following:

- Ute Mountain Ute Tribe
- Southern Ute Indian Tribe
- Ute Tribe of the Uintah and Ouray Agency (“Northern” Ute)
- White Mesa Ute Tribe
- Cheyenne and Arapaho Tribes of Oklahoma
- Comanche Tribe of Oklahoma
- Kiowa Tribe of Oklahoma
- Pawnee Nation of Oklahoma
- Cheyenne River Sioux Tribe
- Crow Creek Sioux Tribe
- Oglala Sioux Tribe
- Rosebud Sioux Tribe
- Standing Rock Sioux Tribe
- Northern Arapaho Tribe
- Northern Cheyenne Tribe

Four tribes responded in writing, each indicating a desire to be a consulting party for the undertaking: the Northern Arapaho Tribe, Southern Ute Indian Tribe, Kiowa Tribe of Oklahoma, and Pawnee Nation of Oklahoma. These tribes will continue to receive information pertinent to the NEPA documentation process for the duration of the US 287 EA project. The Kiowa Tribe requested a copy of the cultural resources survey report completed for the project, which was forwarded to the tribe by CDOT in April 2004. Subsequently, the CDOT Native American liaison spoke with the Kiowa Tribe representative by telephone regarding questions about the project. No specific concerns were raised by either the Kiowa Tribe or any of the remaining tribes regarding the proposed highway improvements or places considered to be of cultural or religious significance.

By initiating, encouraging, and facilitating Native American consultation, FHWA and CDOT have fulfilled their legal obligations in this regard as stipulated in the Section 106 and Advisory Council regulations.

3.2.3 Paleontological Resources

The potential for paleontological resources to occur within the project area was evaluated by a literature search, museum site search, and field survey conducted in the fall of 2000. The purpose of these studies was to 1) determine whether any known fossil localities occur within the project area, 2) assess the potential for disturbance of these localities during construction, and 3)

evaluate the paleontologic potential of the rock formations and/or surficial deposits within the project area. The University of Colorado Museum (UCM) and the Denver Museum of Nature and Science (DMNS) were employed in the record search.

The geologic units of the project area are a primary indicator of the potential for fossiliferous materials in the project area. The geologic maps used in the preparation of this report included Scott and Cobban (1986), which is a biostratigraphic map of the Pierre Shale, and Colton (1978). Colton's map covers all but the very northern margin of the project area, which, taking into account the geology and topography of this corridor, is considered to be adequate geologic coverage for this project. According to Colton (1978), the survey corridor crosses three geologic units. These include, from oldest to youngest, the Upper Cretaceous Pierre Shale (middle shale member), the Pleistocene Broadway Alluvium, and the Holocene Post-Piney Creek Alluvium.

The invertebrate and vertebrate fossil fauna of the Pierre Shale in Colorado, Wyoming, South Dakota, Montana, Kansas, and New Mexico have been the subject of numerous studies (Bergstresser 1981, Bishop 1985, Carpenter 1996, Cobban et al. 1993, Gill and Cobban 1966, Kauffman and Kesling 1960, Lammons 1969, Martz et al. 1999, Scott and Cobban 1986, and many others). The invertebrate fauna includes a diverse assemblage of mollusks (primarily ammonites and inoceramids), as well as other bivalves, bryozoans, and gastropods. The ichnofauna consists primarily of trails, burrows, tubes, fecal pellets, and raspings on shells (Gill and Cobban 1966). The vertebrate fauna is also diverse, containing a variety of fish, turtles, mosasaurs, plesiosaurs, and more rare dinosaurs, pterosaurs, and birds (Carpenter 1996). Because the Pierre Shale contains abundant invertebrate fossils and less common but scientifically important vertebrate fossils, it is considered to have moderate paleontologic potential.

The Broadway Alluvium has produced skeletal remains of mammoth, bison, horse, camel, and white-tailed prairie dog from along the South Platte River (Hunt 1954, Kihm 1984). In general, Pleistocene-aged deposits, particularly alluvium, may contain mineralized or partially mineralized animal bones, invertebrates, and plant remains of paleontologic significance. In Colorado, the most common Pleistocene fossils include the bones of mammoth, bison, deer, and small mammals (Cook 1930, 1931; Emslie 1986; Hunt 1954; Scott 1963; unpublished UCM and DMNS collections data; Wallace 2000). In alluvial deposits, these fossils are mostly isolated and are relatively rare, and thus alluvium is typically considered to have low paleontologic potential.

The Holocene Post-Piney Creek Alluvium was deposited within the last 10,000 years. Holocene-aged deposits contain relatively young and unfossilized remains of animals and plants, which fall into the realms of modern biology and/or archaeology, not paleontology. Because they are too young to contain fossils, Holocene-aged deposits are considered to have no paleontologic potential.

No previously documented fossil occurrences from within the corridor are recorded in the fossil locality databases of UCM or DMNS, and none were found in the scientific literature. The closest fossil localities to the project area include US Geological Survey invertebrate fossil localities in the Pierre Shale reported by Scott and Cobban (1986). The closest of these are only one mile to the north and east of the corridor, and the presence of these localities indicates that fossiliferous rocks of the Pierre Shale are locally exposed on the surface.

3.2.3.1 No Action Alternative

Selection of the No Action Alternative would not result in any foreseeable impacts on paleontological resources in the project area.

3.2.3.2 Alternatives A4, A5, and B

Results of a literature search, museum site search, and field survey indicate a low probability that any paleontological resources would be encountered during implementation of the Alternative A4, A5, or B.

3.2.3.3 Mitigation Measures

Spotty exposures of Pierre Shale occur within the survey corridor, but no fossils have been found. Should an action alternative be selected, it is recommended that the CDOT staff paleontologist examine the project design plans to estimate the extent of disturbance of the Pierre Shale (if any) which would occur during construction. If major excavations are planned, a paleontologic monitor should be present during construction because it is possible that scientifically significant fossils could be impacted. Immediate paleontologic clearance is recommended for all areas within the survey corridor mapped as Broadway Alluvium or Post-Piney Creek Alluvium. Although unlikely, it is possible that scientifically significant fossils are present within the Pleistocene-aged loess deposits within the corridor, and could be impacted during construction. Because Pleistocene-aged bones may be only partially mineralized and are often superficially similar to modern bones, they can be difficult to distinguish. If any subsurface bones or other potential fossils are found within the survey corridor during construction, the CDOT staff paleontologist should be notified immediately to assess their significance.

3.2.4 Historic Preservation

Information in this section is summarized from *An Intensive Level Cultural and Paleontological Survey* (Western Historical Services November 2000).

Historic sites of local, state, or national significance are protected under the National Historic Preservation Act of 1966 as amended, Section 106, and the Department of Transportation (DOT) Act of 1966, Section 4(f).

A records search was conducted at the OAHP to identify sites listed on or eligible for the National Register of Historic Places (NRHP). No historic or prehistoric sites were previously recorded within the project survey area. However, during a cultural survey that was conducted for this project in fall 2000, 15 new historic sites and one new historic isolate were identified and recorded.

An extensive field survey was conducted between October 28 and November 7, 2000, for a 250-foot-wide corridor for Alternatives A4, A5, and B. For each cultural resource over 50 years old encountered during the survey, site maps and OAHP site forms were prepared and photographs were taken. Determinations of eligibility were based on historical research conducted to determine if any significant events or people might be associated with any of the structures or objects encountered during the survey. Once historical context was established, statements of significance were prepared for each resource and NRHP criteria applied to determine if any resources were eligible for the NRHP. The NRHP criteria are as follows:

- Criterion A: Association with events that have made a significant contribution to the broad historical patterns of the country, state, or region.
- Criterion B: Association with the life of a significant person in our past.
- Criterion C: Association with the distinctive characteristics of a type, period, or method of construction, or representing a significant and distinguishable entity whose component may lack individual distinction.
- Criterion D: Properties that have yielded or may be likely to yield information important in history or prehistory.

Table 3-2 is a complete listing of sites identified and evaluated. Results of the records search and field survey indicated that two sites have been determined eligible for placement on the NRHP. The first site (5LR9895) is located at 317 North Highway 287, Fort Collins, Colorado, and comprises a collection of buildings that conveys the fabric and setting of an early 20th century dairy farm located on the property (originally Elliott Dairy). The State Historic Preservation Officer (SHPO) determined this property to be eligible for inclusion in the NRHP under Criteria A and C as a historic district. The dairy is described as a district because it has contributing elements that add to the collective eligibility of the site and are included in the impact analysis and mitigation measures for evaluation purposes. The second eligible resource is the Union Pacific Railroad (UPRR) Fort Collins to Laramie Branch (5LR1815.4). This resource has been determined eligible under Criteria A for its entire length, and the part of the line within the current project area has been determined a contributing part of this linear resource. The following paragraphs describe the potential impacts on the resources in relation to the alternatives under study.

3.2.4.1 No Action Alternative

Implementation of the No Action Alternative would not impact historic sites or historic isolates.

3.2.4.2 Alternatives A4 and A5

Implementation of either Alternative A4 or A5 would affect the UPRR where the existing facility crosses the rail line directly west of the North Shields Street intersection. There is already a crossing at this location that would need to be widened with the implementation of either Alternative A4 or A5. It is not anticipated that either Alternative A4 or A5 would affect the feeling of the rail line or change the setting so as to affect the eligibility of the resource.

3.2.4.3 Alternative B

The right-of-way for Alternative B crosses the property at the old Elliott Dairy at 317 North Highway 287, north of the structures eligible for inclusion on the NRHP. Potential impacts include acquisition of land north of the potential historic district right-of-way, and indirect impacts including increased noise and a change in the viewshed of the potential historic district.

Implementation of Alternative B also would impact the historic UPRR through construction of a new at-grade crossing, which would affect the design, materials, setting, and feeling of the rail line. A determination of No Adverse Effect is possible for this crossing.

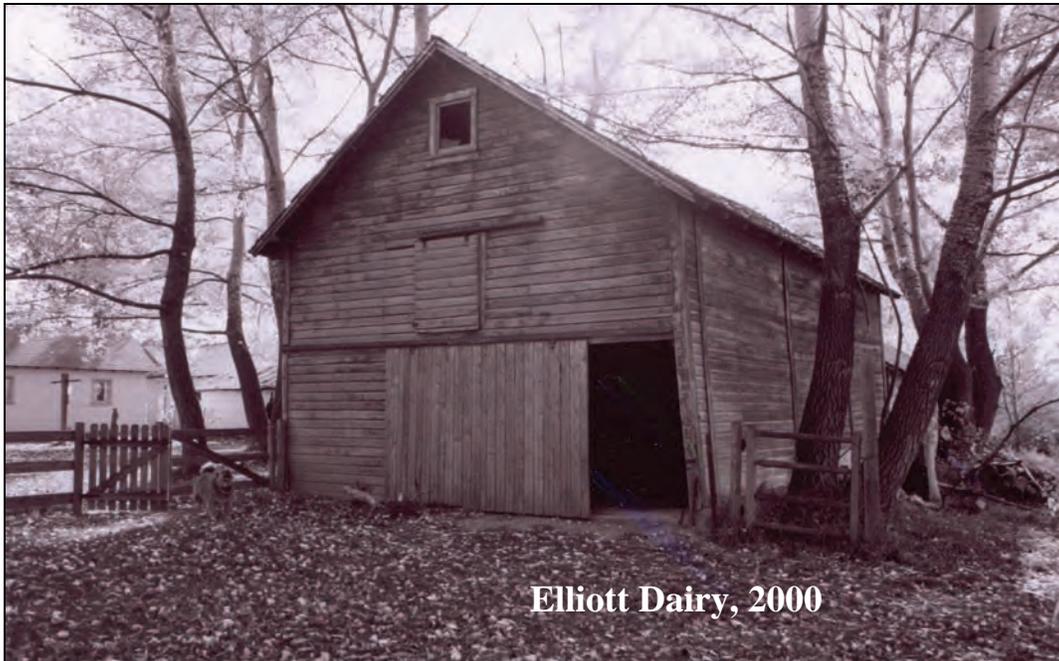
Table 3-2. NRHP Eligibility Recommendations

Site Number/ Property Address	Alternative A or B	NRHP Eligibility Recommendation	Management Recommendation	Comments
5LR9894 309 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9895 Elliott Dairy 317 N. Highway 287 Fort Collins, CO 80524	B	Recommended eligible as a historic district	Avoidance; if avoidance not possible, HABS study of the site.	Collection of buildings conveys the fabric, setting of early 20 th century dairy farm
5LR9896 437 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9897 533 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9898 707 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9899 801 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9900 913 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9901 1021 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9902 1117 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9903 1125 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9904 1201 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9905 1205 N. Highway 287 Fort Collins, CO 80524	A	Not eligible	No further work.	Does not meet criteria A–D.
5LR9906 Little Cache La Poudre Ditch	A and B	Not eligible	No further work.	Does not meet criteria A–D.
5LR1815.4 UPRR	A and B	Eligible	No further work.	Contributing part of eligible linear resource.
5LR9907 Historic Trash Dump	B	Not eligible	No further work.	No associations could be made with dump materials and surrounding properties; does not meet criteria A–D on its own.

3.2.4.4 Mitigation Measures

Alternatives A4, A5, and B all involve a crossing of the UPRR (5LR1815.4). (Upon identification of A4 as the Preferred Alternative and subsequent SHPO coordination, it was determined that the qualities of significance of the UPRR Fort Collins to Laramie Branch will not be adversely affected by Alternative A4 [OAHP 2001]). Alternative B involves a new crossing location, while Alternatives A4 and A5 will require additional right-of-way and widening at the existing crossing.

Only Alternative B would affect the Elliott Dairy (5LR9895). Should an effect or adverse effect be determined for this site, a Historical American Building Survey (HABS) could be conducted to ensure a permanent record of the site. The purpose of a HABS is to provide a permanent record of significant architecture throughout the United States and its territories. Under Section 106 of the National Historic Preservation Act of 1966, federal agencies must provide HABS-level documentation (includes measured drawings, written histories, and large format photographs) for buildings that are listed or eligible for listing on the NRHP. HABS documentation is prepared in order to mitigate the adverse effects of federal actions, such as alteration or demolition. Mitigation measures to reduce the impacts that could result should an action alternative be selected and implemented would be investigated.



Site 5LR9895 – Elliott Dairy Building

3.2.5 Section 4(f)/6(f)

FHWA and CDOT recognize the importance and value of properties defined by Section 4(f) of the DOT Act of 1966 (49 USC 303) and 6(f) properties defined by Section 6(f)(3) of the Land and Water Conservation Fund Act.

DOT regulations explicitly state that the Secretary of Transportation cannot approve the acquisition of publicly owned land from a park, recreation area, or wildlife refuge, or land from a

national, state, or local historic site unless there is no feasible and prudent alternative to the acquisition of such land. The abovementioned properties are commonly referred to by the applicable section of the Act; that is, 4(f) properties. This US 287 project area does not include any parks, recreation areas, or wildlife refuges.

The Elliot Dairy Farm (5LR9895) is eligible for inclusion on the NRHP and is therefore a 4(f) resource. It would be indirectly impacted by Alternative B only. As discussed in Historic Preservation, section 3.2.4 of this EA, the Elliot Dairy Farm is a 20th century farm that is part of the property located at 317 North Highway 287, Fort Collins, Colorado.

The UPRR (5LR1815.4) is also an eligible 4(f) resource discussed in Historic Preservation, section 3.2.4. This resource is potentially affected by all of the action alternatives. (The SHPO has made a finding of No Adverse Effect for Alternative A4 for this site.)

Historically significant properties can be either publicly or privately owned and, as with all 4(f) properties, the first goal is to avoid adverse impacts on the property. If impacts are unavoidable, mitigation measures must strive to maintain the integrity of the site, comply with 36 CFR, Part 800, and seek concurrence of the SHPO and Advisory Council on Historic Preservation (ACHP), as appropriate.

Section 6(f) properties are defined under Section 6(f)(3) of the Land and Water Conservation Fund Act signed into law on September 3, 1964. These properties consist of public recreation areas purchased or improved with monies from the Land and Water Conservation Fund, and are intended to remain in use for public recreation in perpetuity. There are no Section 6(f) properties in the project area.

The following paragraphs describe the potential impacts on the Section 4(f) resources in relation to the alternatives under study.

3.2.5.1 No Action Alternative

Implementation of the No Action Alternative would not impact any Section 4(f) resources.

3.2.5.2 Alternatives A4 and A5

Implementation of either Alternative A4 or A5 would affect the UPRR where the existing facility crosses the rail line directly west of the North Shields Street intersection. There is already a crossing at this location that would need to be widened with the implementation of either Alternative A4 or A5. It is not anticipated that either Alternative A4 or A5 would affect the feeling of the rail line or change the setting so as to affect the eligibility of the resource. Section 4(f) requires avoidance of eligible or listed sites on the NRHP and determination of appropriate mitigation measures if avoidance is not prudent or feasible. Avoidance of the UPRR crossing is not possible, since US 287 and the UPRR are perpendicular corridors. (The SHPO has concurred in a finding of No Adverse Effect for Alternative A4 for this site. Additional Section 4(f) evaluation is not required if there is no adverse effect.)

3.2.5.3 Alternative B

Alternative B requires construction of a new grade crossing of the historic UPRR (5LR1815.4). The new crossing would impact the design, materials, setting, and feel of a short segment of this linear resource.

The Alternative B right-of-way crosses the Elliott Dairy Farm property (5LR9895) at 317 North Highway 287, Fort Collins, Colorado, north of the structures eligible for NRHP designation. Potential impacts include the acquisition of land north of the potential historic district right-of-way, as well as indirect impacts of increased noise and a change in the viewshed of the potential historic district. Avoidance of this property is possible with Alternatives A4 and A5.

3.2.5.4 Mitigation Measures

No Section 4(f) impacts have been identified, and no mitigation measures are required.

3.2.6 Publicly Owned Parks, Recreation Areas, and Wildlife/Waterfowl Refuges

The Larimer County Planning Department was consulted during the identification of publicly owned parks, recreation areas, and wildlife/waterfowl refuge areas, and the county Geographic Information Systems (GIS) department provided data layers for the area. The city of Fort Collins Natural Resource Department was consulted to confirm that all such properties were identified and delineated correctly. Based on this consultation with both Larimer County and the city of Fort Collins, there are no publicly owned parks or recreation areas within the project area.

3.2.7 Aesthetics

The area of influence for aesthetic resources was defined as the landscape setting that could potentially be altered by any of the action alternatives. A visual influence zone (Figure 3-7) was determined as the potential affected area, primarily defined by residential viewpoints. The aesthetic components inventoried included both the visual character of the local landscape settings and the views and viewing conditions. The inventory was developed with information from aerial photography (Datamap) and a field survey conducted on September 8, 2000.

The project area's overall landscape is a mixture of farmland, dispersed rural residential properties, and clustered residential, commercial, and industrial properties concentrated along US 287. Dry Creek, its associated vegetation, and agricultural lands that provide distant views of the mountains are the significant landscape features in the area.

Views from existing residences were inventoried by identifying primary view directions and evaluating the potential for trees, structures, and topography to screen views. Views from North Shields Street were also inventoried because of the aesthetic value of the area's rural travel experience. There are no uniform roadway landscape elements along US 287 between SH 1 and the LaPorte Bypass.

Impacts on aesthetic resources were determined by comparing the character of the action alternatives with the character of the existing landscape setting. Important to the determination of contrast were: 1) an accurate description of action alternatives (e.g., extent of aboveground

features, the scale of cut and fill, roadway cross-sections) and 2) an estimate of project visibility from sensitive viewpoints.

3.2.7.1 No Action Alternative

The No Action Alternative would not cause identifiable aesthetic impacts on the area.

3.2.7.2 Alternative A4

Alternative A4 would affect views from residences on both sides of the alignment. Road widening associated with Alternative A4 would disrupt the landscape frontage of several residences, potentially increasing visibility to the roadway and resulting in moderate visual impacts.

3.2.7.3 Alternative A5

Impacts associated with this alternative are similar to those of Alternative A4, with the exception of approximately 0.5 mile of roadway along Terry Lake Dam. Under Alternative A5, the road widening would extend northeast, requiring that Terry Lake Dam be relocated approximately 50 feet northeast.

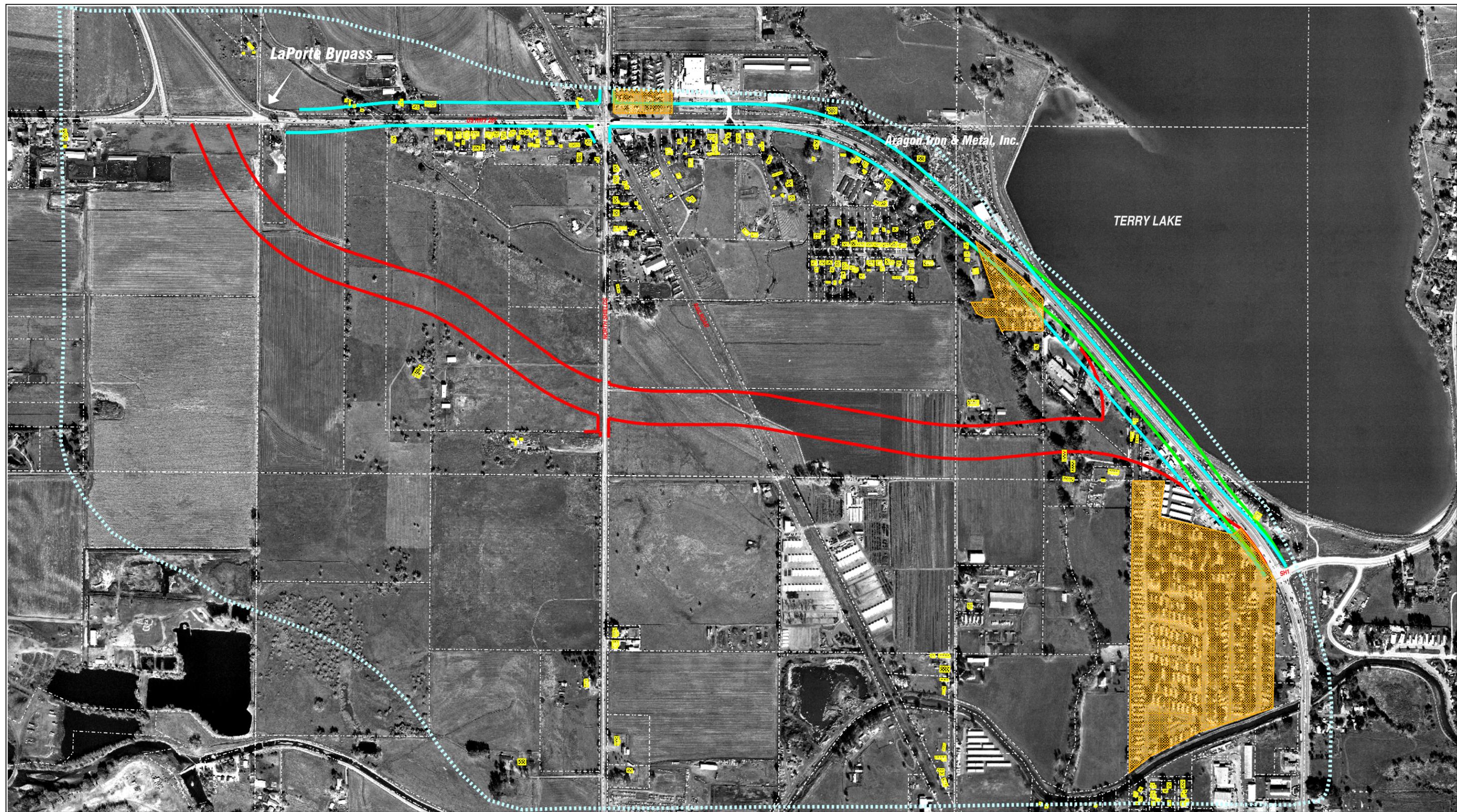
3.2.7.4 Alternative B

Alternative B may affect views from dispersed residences on both sides of the alignment. This alternative may disrupt the rural character of the area's landscape. Although Alternative B would be at-grade through this area, the proposed roadway may contrast with the rural setting because of the width of the cross-section and the traffic. There are currently no facilities in this area with the character of the proposed project; thus, the project would be a high-impact intrusion on the setting as viewed by residences in this area and travelers on North Shields Street. The contrast of Alternative B with this setting would be most evident to the public at the intersection of North Shields Street.

3.2.7.5 Mitigation Measures

The following measures could be implemented to reduce or eliminate potential visual resource impacts resulting from the project.

- Sensitive grading techniques that blend grading with the natural terrain may be implemented.
- Project site would be revegetated in a manner consistent with the patterns commonly found in the surrounding area (treatment may vary between A Alternatives and the B Alternative), and light fixtures for pole mounting may be a cutoff type, directing illumination downward.



LEGEND

-  Property Boundaries
-  Visual Influence Zone
-  Single-Family Residential Structures
-  Multi-Family Residential Structures
-  Alternative A4 Right-of-Way
-  Alternative A5 Right-of-Way
-  Alternative B Right-of-Way


 Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Visual Influence Zone determined through field observations and aerial photographic interpretation. Map produced November 20, 2000, reproduced March 1, 2004 by JFSA.



SCALE - 1:8250



**US 287 SH 1 to the LaPorte Bypass:
 Visual Influence Zone**

FIGURE 3-7

3.3 Environmental Impacts

3.3.1 Air Quality

The EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. These standards are nationally uniform measures by which an area is determined to be an attainment area (i.e., concentrations of pollutants are below NAAQS) or a nonattainment area (i.e., concentrations of pollutants exceed NAAQS). The project is located within the Fort Collins carbon monoxide maintenance/attainment area (Colorado Department of Public Health and Environment [CDPHE] 2003).

The US 287 project area is included in the recently designated nonattainment area for the 8-hour ozone standard. The area includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and parts of Larimer and Weld counties. An Early Action Compact (EAC) designed to achieve and maintain the 8-hour ozone standard has been developed for this nonattainment area. Therefore, the Environmental Protection Agency has deferred the effective date of the nonattainment designation as long as the EAC milestones are met. Conformity with respect to the 8-hour ozone standard does not apply to this project.

US 287 is not located in a PM₁₀ nonattainment or maintenance area; therefore, a detailed analysis of PM₁₀ impacts is not required. The Denver area is now designated an attainment/maintenance area for PM₁₀. Therefore, since a much larger area such as Denver has attained the PM₁₀ standard (24-hour standard is 150 micrograms per cubic meter), a smaller area like Fort Collins would also be expected to be in attainment of PM₁₀ standards.

3.3.1.1 No Action Alternative

This alternative would not measurably change air quality conditions. LOS at the three existing signalized intersections, as well as between intersections, would decline by 2025, resulting in longer delays, increased vehicle idling time, and an associated increase in vehicle emissions.

3.3.1.2 Alternatives A4 and A5

The air quality impacts of Alternatives A4 and A5 would be the same because traffic volumes and turn patterns would be the same. The increased highway capacity would improve the LOS and reduce motor vehicle exhaust emissions compared to the No Action Alternative. There would be a temporary increase in dust and construction equipment exhaust during construction if an action alternative is selected.

3.3.1.3 Alternative B

This alternative would reduce the traffic volume on existing US 287; therefore, LOS would improve and reduce motor vehicle exhaust emissions compared to the No Action Alternative. LOS A for the new Alternative B alignment would not create air quality impacts. There would be a temporary increase in dust and construction equipment exhaust emissions during construction if an action alternative is selected.

3.3.1.4 Air Quality Conformity

The Federal Clean Air Act requires that transportation plans, programs, and projects in air quality maintenance areas conform to implementation plans for improving air quality. This project is included in the conforming 2025 North Front Range Regional Transportation Plan (NFR RTP) and the conforming 2001–2006 Transportation Improvement Program.

Air quality modeling was not required for this project because all signalized intersections for the action alternatives would operate at LOS C or better. EPA modeling guidance states that intersections that operate at LOS C or better are not likely to violate federal carbon monoxide standards.

CDOT has coordinated this project with the Air Pollution Control Division (APCD) of the CDPHE. APCD has concurred with CDOT's conclusions that this project complies with the conformity provisions of the Clean Air Act (Appendix C).

3.3.1.5 Mobile Source Air Toxics

In addition to the NAAQS set forth by EPA for the six criteria pollutants, EPA has also established a list of 33 urban air toxics. Urban air toxics, also known as hazardous air pollutants, are those pollutants that cause or may cause cancer or other serious health effects or adverse environmental and ecological effects. Most air toxics originate from human sources, including road mobile sources (such as cars, trucks, or buses), non-road mobile sources (such as airplanes or lawnmowers), and stationary sources (such as factories, refineries, or power plants), as well as indoor sources (such as building materials). Some air toxics are also released from natural sources such as volcanic eruptions and forest fires.

These pollutants are in our atmosphere as a result of our industrialized society. Science has been providing evidence about the risks they pose to human health. The health risks for people exposed to urban toxics at sufficiently high concentrations or durations include an increased risk of cancer or other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive, developmental, respiratory, and other human health problems.

In 2001, EPA identified 21 toxic compounds as mobile source air toxics (MSATs) and issued regulations to control emissions of MSATs. Under these regulations, between 1990 and 2020, on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde will be reduced by 67 to 76 percent, and on-highway diesel particulate matter emissions will be reduced by 90 percent. These reductions are due to the impacts of national mobile source control programs, including the reformulated gasoline program, a new cap on the toxics content of gasoline, the national low emission vehicle standards, the Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and the heavy-duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. These are net reductions in emissions of MSATs—that is, reductions that will be experienced even after growth in vehicle miles traveled (VMT) is taken into account.

The EPA has not yet determined how to evaluate the impacts of new or expanded roadways on the ambient concentrations of urban air toxics. Currently there are no models or

techniques to accurately quantify the health impacts of localized concentrations of MSATs near roadways or of changes in MSAT emissions due to changes in VMT associated with roadway improvements. Unlike the NAAQS, there are no federal standards regulating the concentrations of MSATs in ambient air. Without the necessary standards and analytical methods, CDOT and FHWA cannot determine the specific impacts or contribution of roadways in the project area to MSATs. With the information currently available, CDOT and FHWA can conclude that:

- Localized concentrations of MSATs in the vicinity of US 287 between the LaPorte Bypass and SH 1 will be similar to those experienced by individuals, residences, businesses, and other facilities located at similar distances from roadways with similar volumes and operating characteristics.
- Regardless of the alternative selected, MSAT emissions in the project area will decrease over time as a result of EPA's national MSAT control programs.

3.3.1.6 Mitigation Measures

Should an action alternative be selected, the project contractor would be required to implement Best Management Practices (BMPs) to minimize dust emissions during construction. Measures could include using dust palliatives, wetting, and controlling trackout of dirt and mud onto paved roadways.

3.3.2 Noise

This section provides an overview of the noise analysis conducted for the alternatives under study, including general noise information, the criteria used to assess impacts, and existing noise levels within the project area. For more detailed information, refer to the *Noise Technical Report, US 287; SH 1 to LaPorte Bypass* (Hankard Environmental 2004).

3.3.2.1 Overview

The noise impact and mitigation analysis was conducted according to CDOT guidelines. The analysis consisted of determining existing noise levels at each of the residences and businesses in the project area, predicting the noise levels from the proposed roadway improvements at each of these locations, and comparing these levels to CDOT guidelines. Land use adjacent to US 287 within the project area consists of a mixture of residential and commercial. A total of 192 noise-sensitive locations were identified, of which 161 are residences, 23 are businesses, and 8 are unoccupied structures.

3.3.2.1.1 *General Noise Information*

Decibels (dB) are the unit by which noise levels are measured. Noise levels are generally "weighted" to replicate the fact that the human ear responds differently to sounds of various levels and frequencies. Weighted sound levels are expressed in units called A-weighted decibels (dB(A)). All of the noise levels discussed herein are A-weighted. Also of interest is the human ability to perceive changes in noise levels. Some common relationships are listed in Table 3-3. Table 3-4 provides examples of typical noise levels.

Table 3-3. Relationship Between Decibels and Loudness

Change in Sound Level	Typical Perception
+10 dB(A)	Twice as loud
+5 dB(A)	Readily perceptible increase
+3 dB(A)	Barely perceptible increase
0 dB(A)	No change
-3 dB(A)	Barely perceptible decrease
-5 dB(A)	Readily perceptible decrease
-10 dB(A)	Half as loud

Table 3-4. Typical Noise Levels

Noise Source	Noise Level (dB(A))
Amplified rock band	115–120
Commercial jet takeoff at 200 feet	105–115
Community warning siren at 100 feet	95–105
Busy urban street	85–95
Construction equipment at 50 feet	75–85
Freeway traffic at 50 feet	65–75
Normal conversation at 6 feet	55–65
Typical office interior	45–55
Soft radio music	35–45
Typical residential interior	25–35
Typical whisper at 6 feet	15–25
Human breathing	5–15
Threshold of hearing	0–5

3.3.2.1.2 Noise Criteria

The noise analysis was conducted according to *CDOT Noise Analysis and Abatement Guidelines*, February 1995. (1995 guidelines are used because the project was initiated before December 2001.) The CDOT noise guidelines are consistent with FHWA guidelines (23 CFR 772), and have been approved by the FHWA for use on Federal-aid projects in Colorado. CDOT’s guidelines establish noise abatement criteria, design requirements, and cost requirements for noise mitigation. The guidelines state that noise mitigation must be considered for any receptor or group of receptors where predicted traffic noise levels using future traffic volumes and roadway conditions equal or exceed CDOT’s Noise Abatement Criteria (NAC) shown in Table 3-5. The guidelines state that noise mitigation must also be considered for any receptors where predicted noise levels for future conditions are greater than existing noise levels by 10 dB(A) or more.

Table 3-5. CDOT Noise Abatement Criteria

Activity Category	$L_{eq}^{(1)}$ (dB(A))	Description of Activity Category
A	56 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	71 (Exterior)	Developed lands, properties, and activities not included in Category A or B above.
D	—	Undeveloped lands.
E	51 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

¹ Hourly A-weighted equivalent level for the “noisiest hour” of the day in the design year

3.3.2.1.3 Existing Noise Levels

Existing noise levels were predicted at most of the sensitive receptor locations using the computer model STAMINA 2.0, developed by the FHWA and approved for use on CDOT projects. STAMINA calculates the hourly, A-weighted L_{eq} at a receptor location given the noise emission level of vehicles traveling on the subject roadways, the peak hour volume and speed of traffic at LOS C, and the relative locations of all roadways, receptors, and terrain features of interest. Existing noise levels (L_{eq}) were predicted at each of the homes and businesses located along US 287 between SH 1 and the LaPorte Bypass using year 2000 peak hour traffic volumes and speeds, 1994 Colorado emission levels, and terrain data developed for the project. Measured noise levels were used to establish existing noise levels for properties located along the Alternative B alignment, as there is no existing highway. Predicted and measured noise levels range from 45 dB(A) to 69 dB(A). As described in section 3.3.2.1.2, residential receivers are considered impacted if the noise levels equals or exceeds 66 dB(A), which is the Category B NAC. Businesses are considered impacted at 71 dB(A), which is the Category C NAC. Some of the existing noise levels are provided in this report, and a complete listing is detailed in a separate report, *Noise Technical Report, US 287; SH 1 to LaPorte Bypass* (Hankard Environmental 2004).

As a check on the accuracy of the model, noise validation measurements were conducted at four locations (M1–M4) on November 6 and 7, 2000. M1 is located just east of the US 287 and North Shields Street intersection on the north side of US 287. M2 is located further east on the south side of US 287 near the Dry Creek crossing. M3 is located on the south side of US 287 across from Terry Lake Dam, and slightly east of the entrance to Aragon Iron & Metal; M4 is located further east across from Terry Lake Dam on the south side of US 287. Noise measurement locations are shown in Figure 3-8.

During the measurements, the numbers and average speeds of automobiles, medium trucks, and heavy trucks that passed in each direction on US 287 were tabulated. This data was used with STAMINA to predict noise levels at the four measurement locations. The predicted

levels were within -1.9 dB(A) to +0.1 dB(A) of the measured levels, which is well within the typical accuracy of ± 3.0 dB(A). Noise measurements were conducted at a fifth location (M5) east of North Shields Street next to the railroad just north of the Fort Collins nursery to establish existing noise levels along the Alternative B alignment. Table 3-6 compares measured and predicted noise levels for all five measurement locations.

Table 3-6. Measured versus Predicted Noise Levels (Leq (h) dB(A))

Location	Time	Measured Level	Predicted Level	Difference (Predicted – Measured)
M1	9:00–10:00 am	64.2	62.6	-1.6
M2	9:00–10:00 am	66.6	64.7	-1.9
M3	10:45–11:45 am	63.4	63.5	+0.1
M4	10:45–11:45 am	64.0	63.2	-0.8
M5	24 hours	46.3 ¹	N/A	N/A

¹Loudest hour

3.3.2.2 Noise Impacts and Mitigation

A noise analysis was conducted per the CDOT Noise Analysis and Abatement Guidelines, which are described in section 3.3.2.1. The analysis was conducted for each of the three action alternatives, as well as the No Action Alternative. The purpose of the analysis was to predict the impact of noise from each alternative, and determine where noise mitigation would be feasible and reasonable to implement.

CDOT guidelines for feasibility include: if constructed, can a barrier be built in a continuous manner, can at least a 5 dB(A) noise reduction be achieved, and will maintenance or safety issues cause a “fatal flaw”? Reasonableness guidelines include: do existing and future noise levels exceed the standards, is the cost-benefit per affected receptor per decibel of noise reduction within a \$3,500 limit, does the mitigation meet the desires of the residents, and how are Category B land uses affected?

3.3.2.2.1 Future Noise Impacts

Table 3-7 shows the number of receptor locations where noise levels are predicted to exceed CDOT’s Noise Abatement Criteria, and predicted average and maximum noise level increases. Not all potential property acquisitions were included in these totals. For the No Action Alternative and Alternatives A4 and A5, noise impacts are due to the predicted future noise level being greater than or equal to the Noise Abatement Criteria (66 dB(A) for residential type receptors). For Alternative B, the impacts are due to a combination of exceeding the Noise Abatement Criteria, and having a predicted increase of at least 10 dB(A). The locations where noise impacts are predicted to occur are shown for each alternative in Figure 3-9 to Figure 3-12. As defined in the CDOT Noise Analysis and Abatement Guidelines, noise mitigation was analyzed for each impacted area as described in section 3.3.2.2.2.



LEGEND

-  Property Boundaries
-  Alternative A4 Right-of-Way
-  Alternative A5 Right-of-Way
-  Alternative B Right-of-Way
-  Noise Measurement Location



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

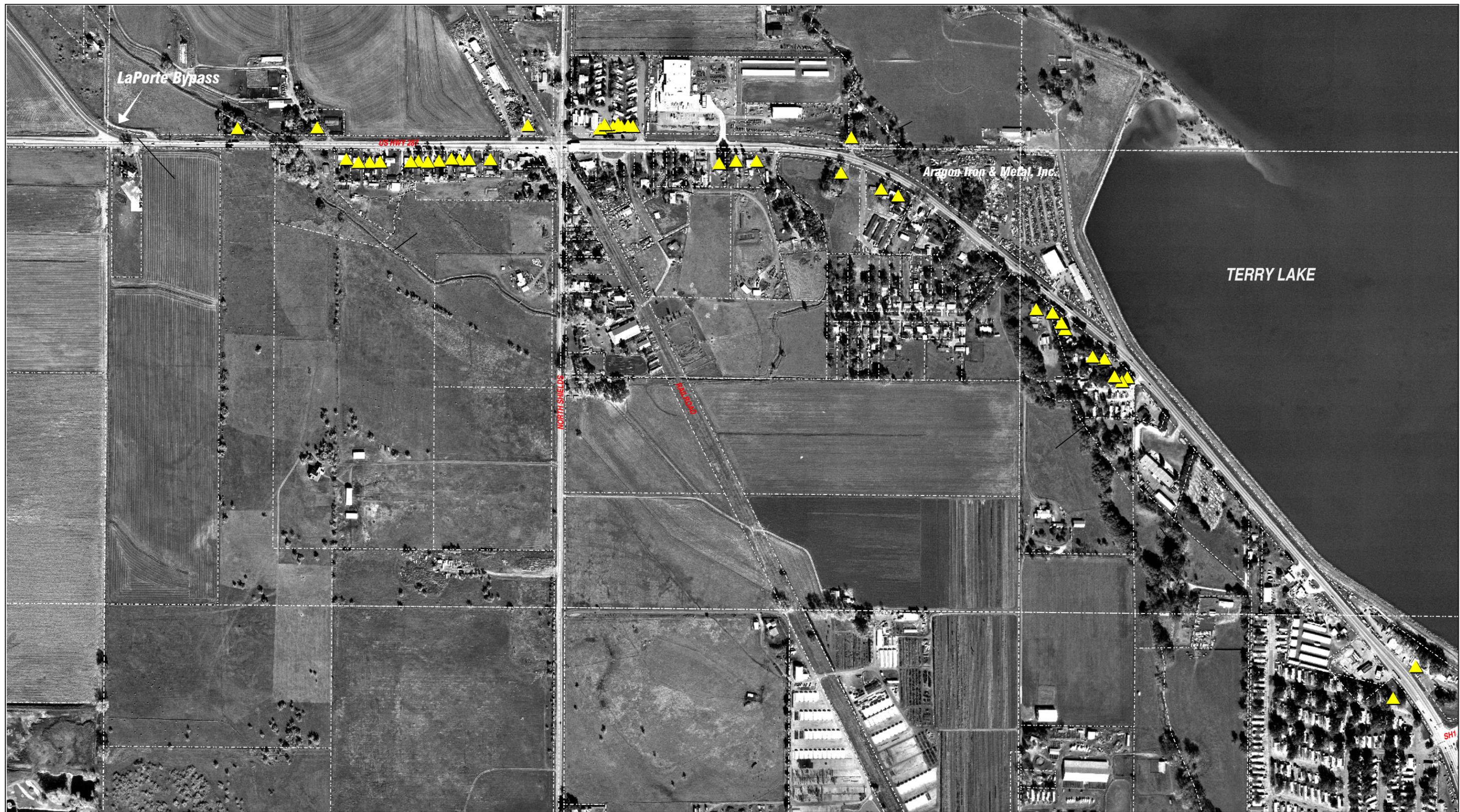
SOURCE:

County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



**US 287-SH 1 to the LaPorte Bypass:
 Noise Measurement Locations**

FIGURE 3-8



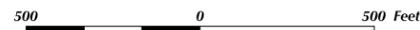
LEGEND

-  Property Boundaries
-  No Action Alternative Noise Impacts



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

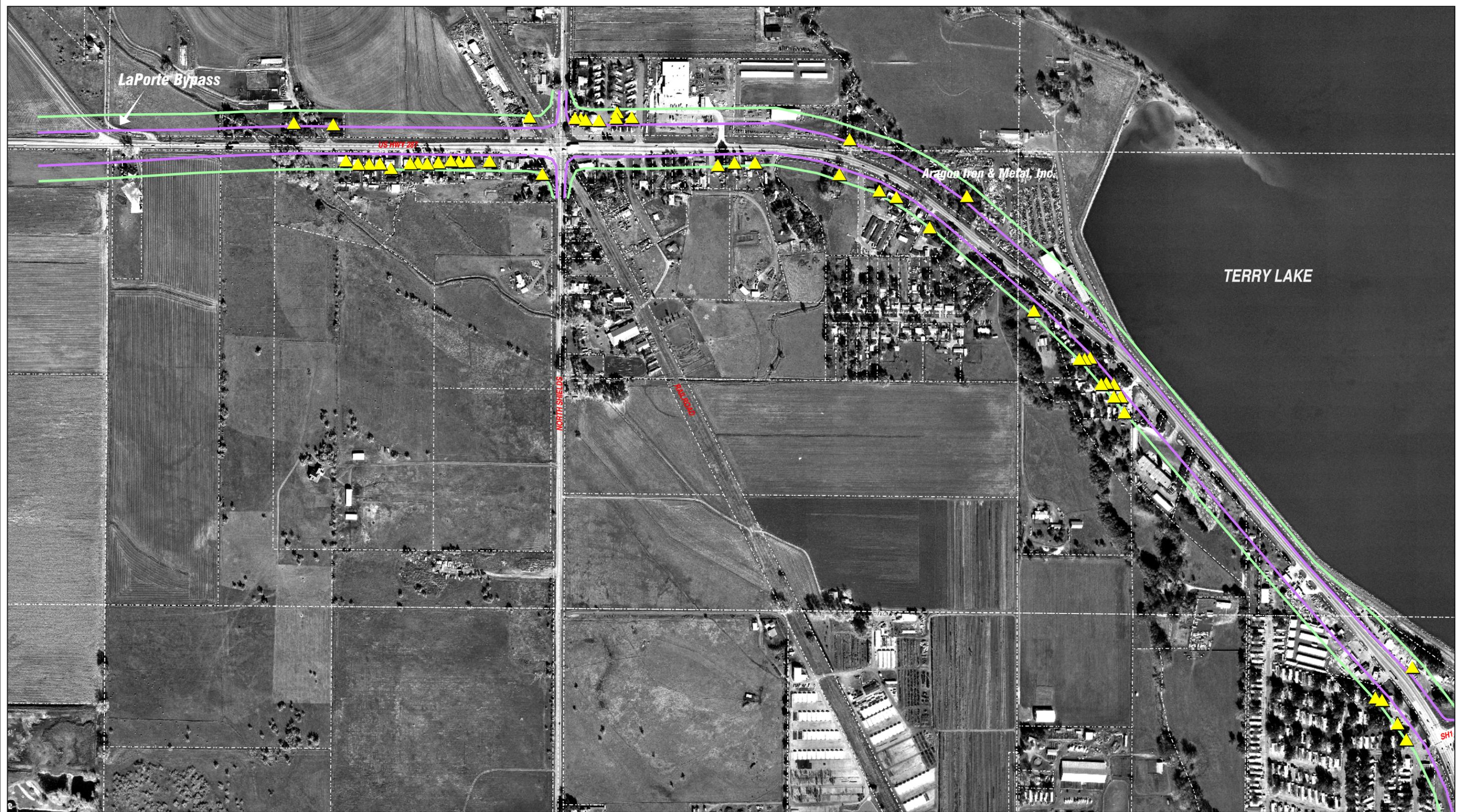
SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Noise analysis information provided by Hankard Environmental. Map produced November 20, 2000 by JFSA.



SCALE - 1:6300



**US 287-SH 1 to the LaPorte Bypass:
 No Action Alternative Noise Impacts
 Year 2025
 FIGURE 3-9**

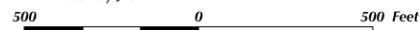


LEGEND

-  Property Boundaries
-  Alternative A4 71dB Noise Boundary (for Commercial)
-  Alternative A4 66dB Noise Boundary (for Residential)
-  Alternative A4 Noise Impacts


 Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Noise contour and impact information provided by Hankard Environmental. Map produced November 20, 2000, reproduced March 1, 2004 by JFSA.



SCALE - 1:6300



**US 287-SH 1 to the LaPorte Bypass:
 Alternative A4 Noise Impacts
 Year 2025
 FIGURE 3-10**



LEGEND

-  Property Boundaries
-  Alternative A5 71dB Noise Boundary (for Commercial)
-  Alternative A5 66dB Noise Boundary (for Residential)
-  Alternative A5 Noise Impacts

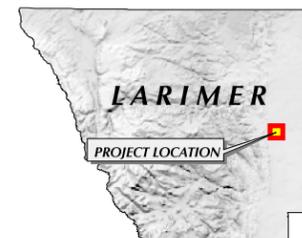


Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

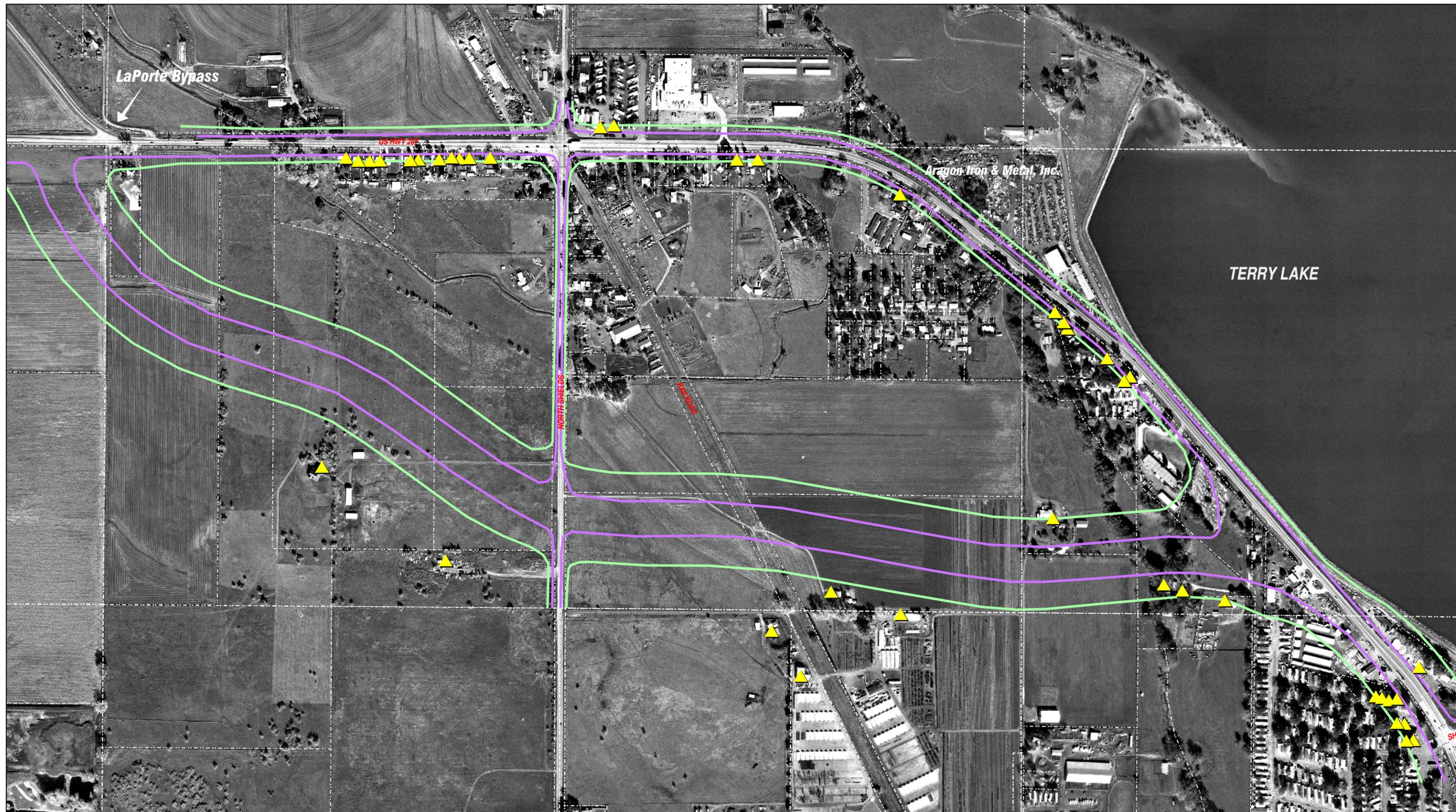
SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Noise contour and impact information provided by Hankard Environmental. Map produced on November 20, 2000, reproduced March 1, 2004 by JFSA.



SCALE - 1:6300



**US 287-SH-1 to the LaPorte Bypass:
 Alternative A5 Noise Impacts
 Year 2025
 FIGURE 3-11**



LEGEND

- Property Boundaries
- Alternative B 71dB Noise Boundary (for Commercial)
- Alternative B 66dB Noise Boundary (for Residential)
- Alternative B Noise Impacts

Coordinate System: Stateplane, Zone 3451

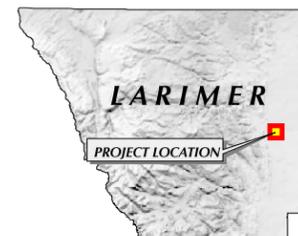
 Projection: Lambert Conformal Conic

 Units: US Survey Feet

 Datum: NAD83

SOURCE: Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000, reproduced March 1, 2004 by JFSA.

SCALE - 1:6300



US 287- SH 1 to the LaPorte Bypass:
Alternative B Noise Impacts
Year 2025
FIGURE 3-12

Table 3-7. Summary of Noise Impacts

Alternative	Number of Noise Impacts		Noise Level Increase	
	Residential (NAC B)	Commercial (NAC C)	Average (dB(A))	Maximum (dB(A))
No Action	40	0	1	2
A4	48	0	3	8
A5	43	0	3	8
B	39	2	3	17

3.3.2.2.2 Noise Mitigation

A noise mitigation analysis was conducted for each area where noise impact was predicted to occur, as described in section 3.3.2.2.1. Viable noise mitigation measures on this project include noise walls along the existing alignment of US 287, berms, alignment shifts, and buffer land acquisition along the Alternative B alignment. All noise mitigation analyses were conducted using year 2025 traffic volumes, a noise wall unit cost of \$25 per square foot, and a noise berm unit cost of \$5 per cubic yard. All noise barriers were modeled on the edge of the US 287 right-of-way.

The mitigation analysis consisted of first determining if mitigation is feasible. This includes determining whether a noise barrier can be physically constructed, and whether breaks in the barrier are needed for driveways and other access issues that would degrade the barrier’s performance. A minimum of 5 dB(A) must be achieved, and there should be no “fatal flaw” maintenance or safety issues with the proposed measure. Secondly, the “reasonableness” of proposed mitigation measures was analyzed, including the desires of affected residents, land use in the area (preference given to residential), and the cost-benefit ratio (cost of noise barrier divided by the number of benefited noise receptors and by the average noise reduction).

For this project, a number of locations have direct access to US 287. These access points would create breaks in a noise barrier that would significantly degrade effectiveness. Additionally, a noise barrier to protect these locations would, in some locations, create a safety issue for vehicles turning onto and off of US 287. For these areas, mitigation was not considered any further for this reason. The following paragraphs describe the noise mitigation analyses conducted for each of the remaining areas by alternative. Noise mitigation analysis locations are summarized in Figure 3-13.

No Action Alternative

A total of 40 properties are anticipated to be impacted in the year 2025 if this alternative is selected (see Figure 3-9). The No Action Alternative would not result in noise mitigation, as no improvements would be implemented.



Figure 3-13. Summary of Noise Mitigation Analysis Locations

Alternative A4

A total of 48 residential properties would be impacted in the year 2025 if this alternative were selected (see Figure 3-10). Of these, 28 locations have direct access to US 287, which would make a noise wall infeasible as previously described. The remaining 20 locations were localized into three areas (Blue Spruce, Terry Lake, and Poudre Valley Mobile Home Parks), as shown in Figure 3-14. A number of noise wall heights and lengths were analyzed, and the most efficient of these is described below for each area.

Blue Spruce Mobile Home Park. A noise wall 477 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$167,000. It is predicted to provide an average of 6.1 dB(A) of noise reduction for seven individual properties. This results in a cost-benefit of about \$3,900, which is considered “unreasonable” according to CDOT guidelines. Except for cost-benefit, this is the only feasibility or reasonableness guideline that doesn’t fit. The \$3,900 is slightly higher than the \$3,500 guideline. As a result, the noise wall is recommended at this time. This noise wall analysis will be reevaluated during final design for compliance with CDOT Guidelines.

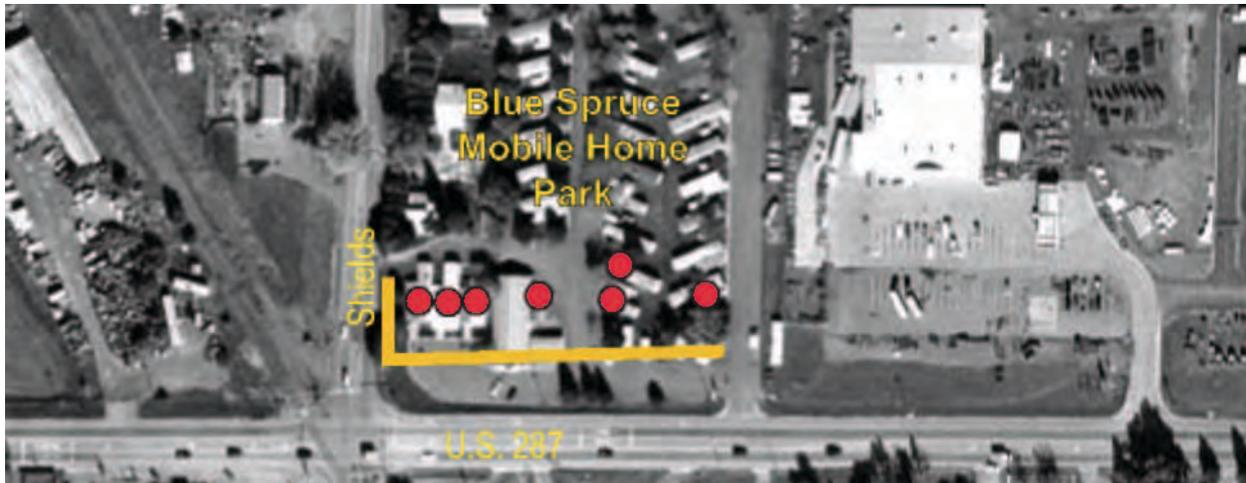
Terry Lake Mobile Home Park. A noise wall 502 feet long and 13 feet tall was analyzed, and estimated to cost approximately \$151,000. The wall is predicted to provide an average 5.7 dB(A) of noise reduction for 17 individual properties. This results in a cost-benefit of about \$1,600, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended, provided that a new access point to US 287 is constructed. Otherwise, the break in the wall would reduce its effectiveness.

Poudre Valley Mobile Home Park. A noise wall 493 feet long and 16 feet tall was analyzed, and estimated to cost approximately \$197,000. It is predicted to provide an average of 4.9 dB(A) of noise reduction for 21 individual properties. This results in a cost-benefit of about \$1,900, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended.

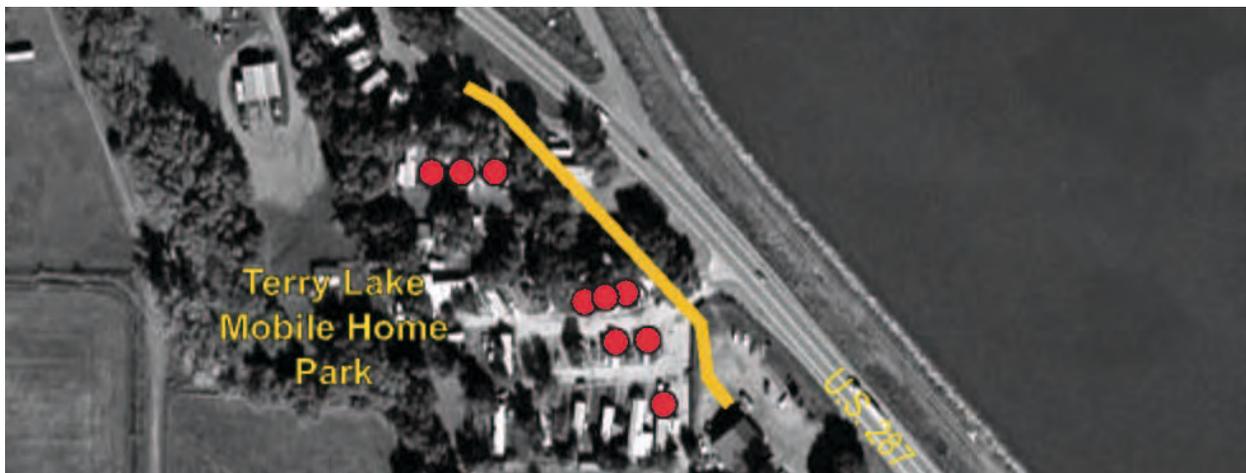
A section of the PVMHP is located south of SH 1, outside of the project area. It is recommended that this be examined during final design to determine if noise mitigation analysis is warranted. It is desirable in order to maintain some commonality between the two sections of the PVMHP.

Alternative A5

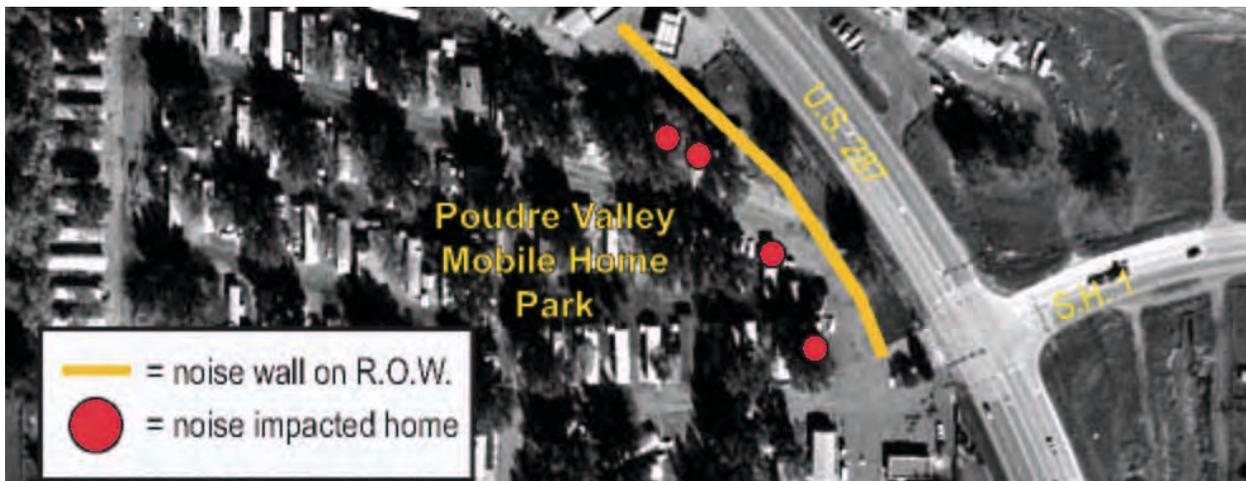
A total of 43 residential properties were predicted to be impacted by noise in the year 2025 if this alternative were selected (see Figure 3-11). Of these, 27 locations have direct access to US 287, which would make a noise wall infeasible as previously described. The remaining 16 locations impacted by noise were localized into three areas (Blue Spruce, Terry Lake, and Poudre Valley Mobile Home Parks), and were analyzed for noise mitigation as shown in Figure 3-15. Each noise mitigation analysis was completed using a number of noise wall sizes, but only the most efficient design is presented here.



(A)



(B)

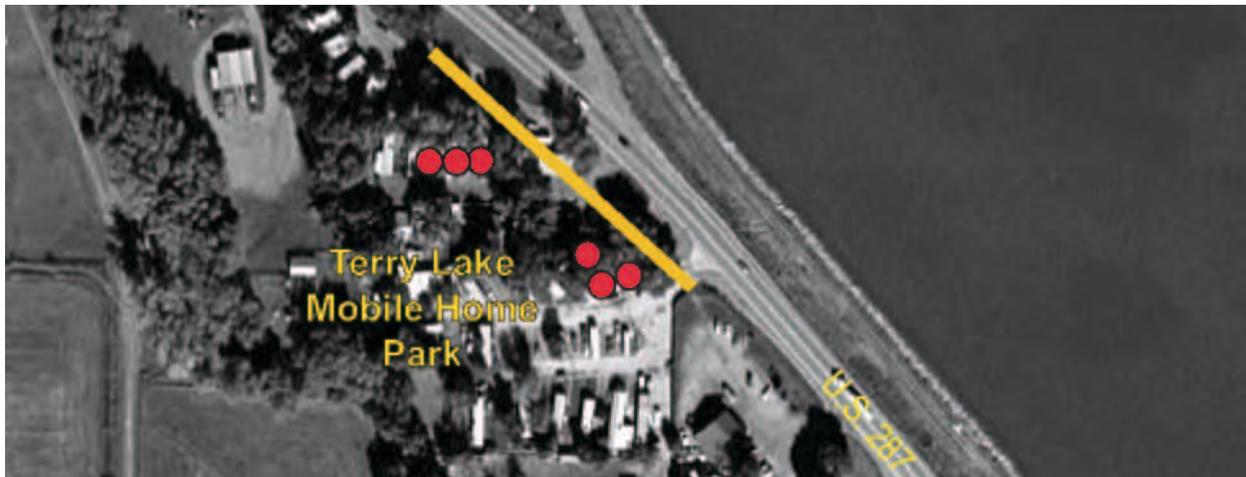


(C)

Figure 3-14. Noise Mitigation Analysis Locations for Alternative A4



(A)



(B)



(C)

Figure 3-15. Noise Mitigation Analysis Locations for Alternative A5

Blue Spruce Mobile Home Park. A noise wall 477 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$167,000. It is predicted to provide an average of 6.1 dB(A) of noise reduction for seven individual properties. This results in a cost-benefit of about \$3,900, which is considered “unreasonable” according to CDOT guidelines. Except for cost-benefit, this is the only feasibility or reasonableness guideline that doesn’t fit. The \$3,900 is slightly higher than the \$3,500 guideline. As a result, the noise wall is recommended at this time. This noise wall analysis will be reevaluated during final design for compliance with CDOT Guidelines.

Terry Lake Mobile Home Park. A noise wall 397 feet long and 20 feet tall was analyzed, and estimated to cost approximately \$199,000. It is predicted to provide an average of 5.1 dB(A) of noise reduction for 12 individual properties. This results in a cost-benefit of about \$2,200, which is considered “very reasonable” according to CDOT guidelines. Thus, this noise wall is recommended for this project, provided that a new access point to US 287 is constructed.

Poudre Valley Mobile Home Park. A noise wall 437 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$153,000. It is predicted to provide an average of 4.5 dB(A) of noise reduction for 17 individual properties. This results in a cost-benefit of about \$2,000, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended.

Alternative B

A total of 39 residential properties and two commercial properties were anticipated to be impacted in the year 2025 if this alternative were selected (see Figure 3-12). Of these, 15 locations have direct access to US 287, which would make a noise wall infeasible as previously described. Also, noise mitigation was not analyzed for the two commercial properties. The remaining locations include the Blue Spruce Mobile Home Park, Terry Lake Mobile Home Park, Poudre Valley Mobile Home Park, and eight other scattered single-family residences adjacent to the proposed alignment of Alternative B. The noise mitigation shown in Figure 3-16 to Figure 3-18 was analyzed for these areas, and the results are described below. Each noise mitigation analysis was completed using a number of noise wall or berm sizes, but only the most efficient design is presented here.

Blue Spruce Mobile Home Park. A noise wall 275 feet long and 14 feet tall noise wall was analyzed, and estimated to cost approximately \$96,000. It is predicted to provide an average of 4.5 dB(A) of noise reduction for 9 individual properties. This results in a cost-benefit of about \$2,400, which is considered “reasonable” according to CDOT guidelines. As a result, this wall is recommended.

Terry Lake Mobile Home Park. A noise wall 700 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$245,000. It is predicted to provide an average of 5.3 dB(A) of noise reduction for 21 individual properties. This results in a cost-benefit of about \$2,200, which is considered “very reasonable” according to CDOT guidelines. Thus, this noise wall is recommended for this project, provided that a new access point to US 287 is constructed. Under Alternative B, there is less traffic on old US 287 and no additional right-of-way requirements, resulting in a different noise wall configuration than proposed for Alternatives A4 and A5.



(A)

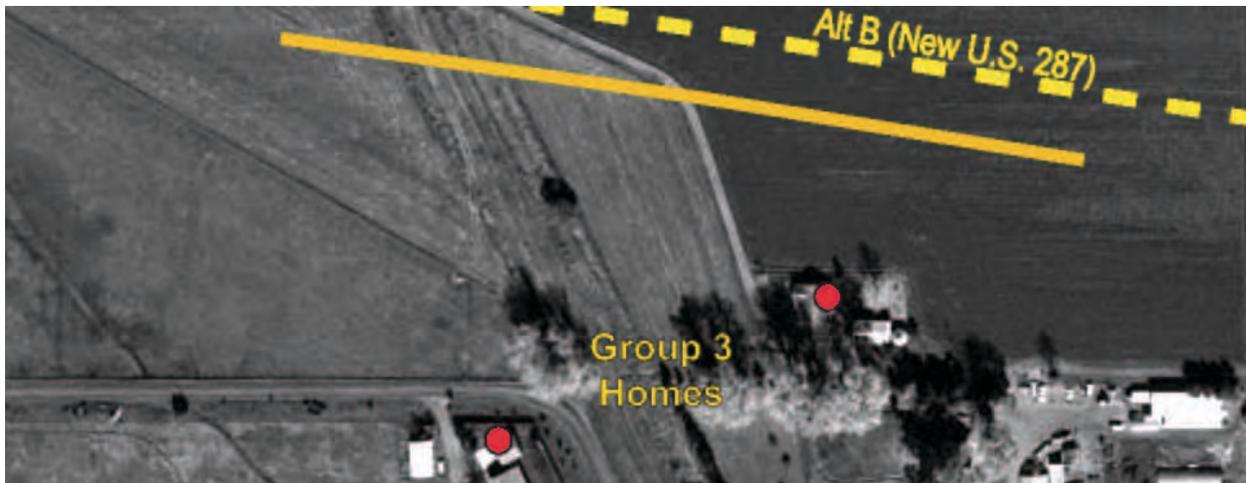


(B)

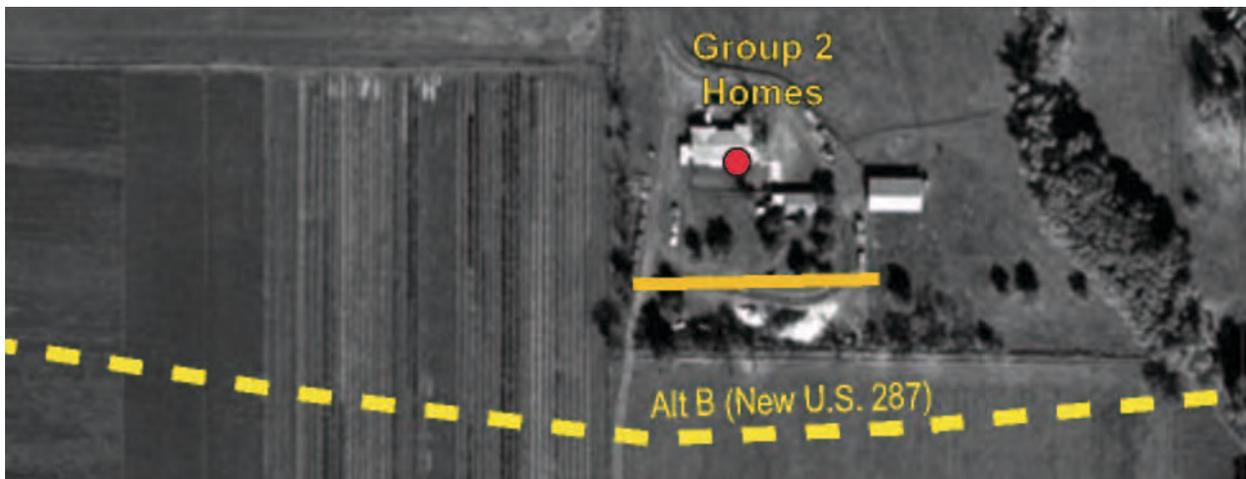


(C)

Figure 3-16. Noise Mitigation Analysis Locations for Alternative B – Mobile Home Parks



(A)



(B)



(C)

Figure 3-17. Noise Mitigation Analysis Locations for Alternative B – Groups 1 to 3

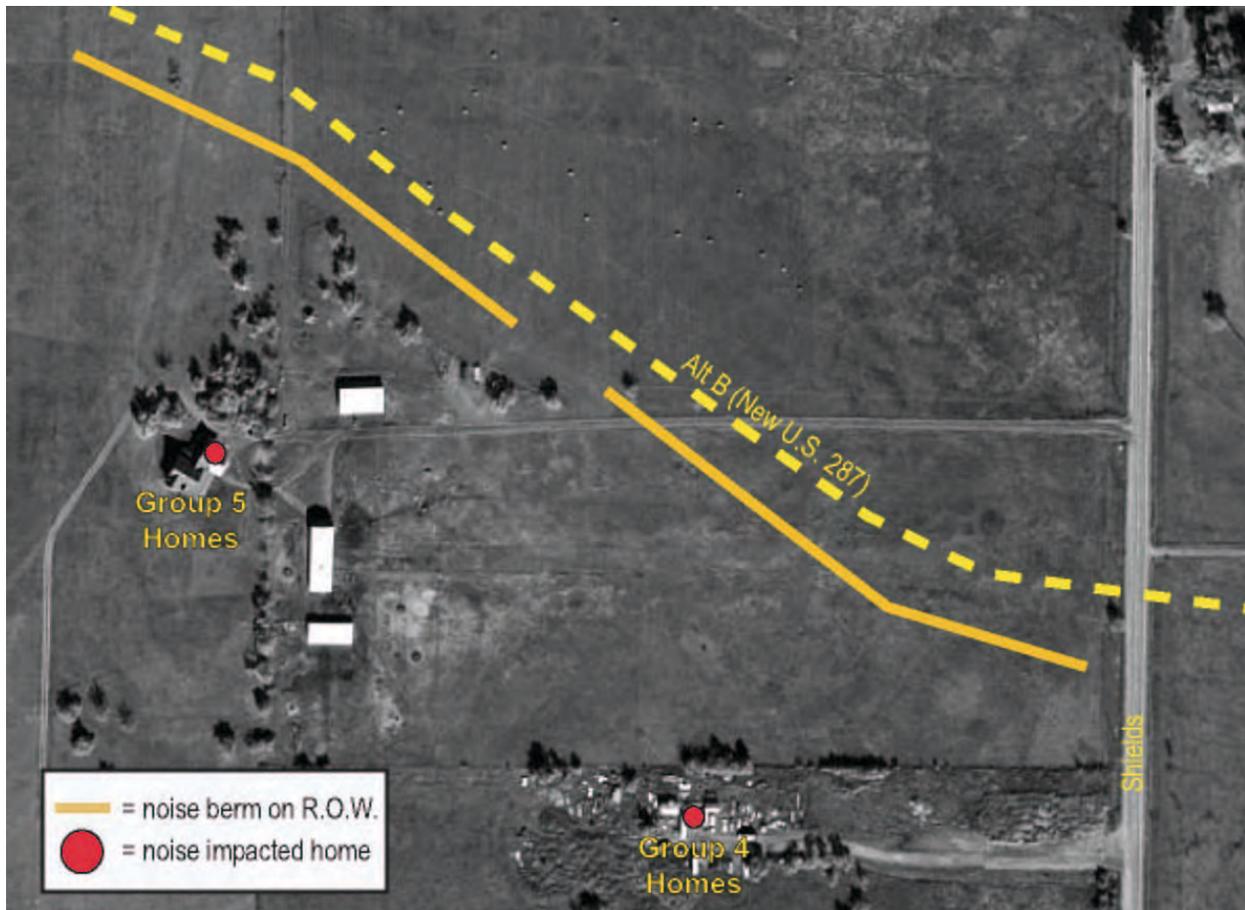


Figure 3-18. Noise Mitigation Analysis Locations for Alternative B – Groups 4 to 5

Poudre Valley Mobile Home Park. A noise wall 460 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$161,000. It is predicted to provide an average of 4.4 dB(A) of noise reduction for 18 individual properties. This results in a cost-benefit of about \$2,000, which is considered “very reasonable” under CDOT guidelines. Thus, this noise wall is recommended for this location under this alternative.

There are eight scattered residential properties adjacent to the proposed alignment of US 287 for Alternative B. These locations were organized into Groups 1 through 5, as shown in Figure 3-17 and Figure 3-18 above. The groups consists of one to three properties relatively close to one another. Berms were analyzed for this area, as there appears to be sufficient space for the larger footprint required by a berm. The berm analyzed for Group 1 is 562 feet long, 10 feet tall, and estimated to cost approximately \$31,000. The berm is predicted to achieve an average of 5.3 dB(A) of noise reduction for three individual properties. This results in a cost-benefit ratio of about \$1,950, which is considered “very reasonable.” Thus, this berm is recommended should this alternative be selected for construction.

Berms modeled at Groups 2 through 5 either did not achieve the required minimum noise reduction of 5 dB(A) for front-row receptors, and/or the cost-benefit was predicted to be “unreasonable” (in excess of \$3,500). For Group 2, the best-performing berm analyzed was 337 feet long and 14 feet tall, cost approximately \$37,000, provided an average of 5.5 dB(A) of noise

reduction for one property, and had a cost-benefit of approximately \$6,700. For Group 3, the best-performing berm analyzed was 1,071 feet long and 24 feet tall, cost approximately \$343,000, provided an average of 5.0 dB(A) of noise reduction for two properties, and had a cost-benefit of approximately \$34,000. For Group 4, the best noise berm analyzed was 827 feet long and 24 feet tall, cost approximately \$265,000, provided an average of 4.0 dB(A) of noise reduction for one property, and had a cost-benefit of approximately \$66,000. For Group 5, the best-performing berm analyzed was 833 feet long and 24 feet tall, cost approximately \$267,000, provided an average of 3.8 dB(A) of noise reduction for one property, and had a cost-benefit of approximately \$70,000.

Summary of Noise Mitigation Recommendations

For the No Action Alternative, no noise mitigation would be provided, as there is no funding for any construction. Should Alternative A4 or A5 be selected, noise mitigation is recommended for the Terry Lake, Blue Spruce, and Poudre Valley Mobile Home Parks as described above. Should Alternative B be selected, noise mitigation is recommended for the Blue Spruce, Terry Lake, and Poudre Valley Mobile Home Parks and the Group 1 residential properties.

3.3.3 Ecology

The project area was visited on several occasions between October 1999 and March 2000 to document ecology, wildlife habitats, and any evidence of wildlife occurrence. The areas encompassing all action alternatives were visually evaluated for quality of the wildlife habitat and species likely to be present. The presence of invasive or designated noxious weeds was also noted based on the list of noxious weeds provided by the Colorado Noxious Weed Act (35-5.5-115 CRS 1996). Wildlife species potentially inhabiting or occurring within the project area were compiled from several sources, including Fitzgerald et al. (1994), Kingery (1998), Hammerson (1999), and Ehrlich et al. (1988).

a. Habitat Types/Vegetation Communities. Historically, the foothills shrub-grassland ecotype has been the dominant habitat in the project area. The project area contains riparian corridors, agricultural land (primarily used as pasture and dry or irrigated farmland), wet meadows/wetlands, and residential and commercial areas. Presently, the area is dominated by ornamentals, non-native species that have adapted to the anthropogenic influences of the urban landscape, and native species. Principal habitats in the project area include riparian, irrigated/subirrigated meadows, and uplands.

(i) ***Riparian Vegetation.*** Riparian vegetation within the project area occurs primarily along Dry Creek and irrigation ditches and canals. Dry Creek contains well-developed and relatively continuous riparian vegetation. This community is very narrow throughout most of the area in conjunction with a narrow, incised channel and narrow or nonexistent floodplain. The vegetation strata include several tree layers of silverleaf poplar (*Populus alba*) (especially south of US 287), eastern cottonwood (*Populus deltoides*), and peachleaf willow (*Salix amygdaloides*). Peachleaf willow forms a lower tree stratum of 35 to 45 feet in height and also a tall shrub stratum approximately 20 to 25 feet tall under the taller poplars. An occasional boxelder (*Acer*

negundo) was also observed. The canopy cover was estimated at 20 to 30 percent, but ranged to 50 percent in some areas of dense willow stands.

Common herbaceous species include smooth brome (*Bromopsis inermis*), manna grass (*Glyceria striata*), streambank wheatgrass (*Agropyron riparian*), barnyard grass (*Echinochloa crus-galli*), curly dock (*Rumex crispus*), Canada thistle (*Cirsium arvense*), bouncing bet (*Saponaria officinalis*), and meadow foxtail (*Alopecurus pratensis*). Areas of the creek that widen slightly to form a floodplain and backwater flows contain cattail (*Typha latifolia*) and arrowhead (*Sagittaria latifolia*). Duckweed (*Lemna minor*), milfoil (*Myriophyllum heterophyllum*), and watercress (*Nasturtium officinale*) occur in shallow, slow-moving flows along the creek.

Ditches and canals are characterized by thick stands of Emory sedge (*Carex emoryi*) lining the banks. Other less dominant species include the showy milkweed (*Asclepias speciosus*), manna grass, little-leaf barley (*Hordeum jubatum*), wild asparagus (*Asparagus officinalis*), smooth brome, and clematis (*Viticella orientalis*). Large eastern cottonwood trees occur sporadically along the ditches, especially near homesteads. Other tree species include Chinese elm (*Ulmus pumila*), hackberry (*Celtis reticulata*), and peachleaf willow.

(ii) ***Irrigated/Subirrigated Meadows.*** Irrigated or subirrigated meadows also occur as part of the area's agricultural operations. These meadows contain a mixture of agronomic alfalfa, brome (*Bromus* spp.), native rushes (*Scirpus* spp.), saltgrass, and sedges (*Carex* spp.). See section 3.3.5 for additional information regarding this habitat.

(iii) ***Upland Vegetation.*** Upland vegetation in the project area consists primarily of crops, pastures, and weed-dominated fallow or vacant fields and lots. Principal crops include alfalfa, corn, and grass mixtures harvested for hay. Principal weed species of the area include field bindweed (*Convolvulus arvensis*), Canada thistle, knapweed (*Centaurea* spp.), leafy spurge (*Tithymalus [Euphorbia] esula*), lambsquarter (*Chenopodium album*), pigweed (*Amaranthus* spp.), and ragweed (*Ambrosia trifida*).

b. **Noxious Weeds.** According to the Colorado Noxious Weed Act (35-5.5-115, CRS 1996), a noxious weed is any "alien plant or part thereof which meets one of the following criteria: 1) aggressively invades or is detrimental to economic crops or native plant communities, 2) is poisonous to livestock, 3) is a carrier of detrimental insects, diseases, pests, or parasites, or 4) the direct or indirect effect of the presence of this plant is detrimental to the environmentally sound management of natural or agricultural ecosystems." Weedy species are introduced into an area in a number of ways, mostly by human disturbances of native habits. Weed seeds can be spread by wind and animals as well as pedestrians and vehicles. Non-native plant species, especially those considered noxious, can outcompete native species for resources such as water and sunlight. Weeds often dominate infestation areas and are usually less valuable than other plant species as forage and cover for livestock and wildlife.

Noxious weeds observed within the project area include diffuse knapweed (*Centaurea diffusa*), Canada thistle, field bindweed, leafy spurge, and bouncing bet. Noxious weeds are most prevalent in the upland areas adjacent to the Dry Creek drainage. The most prominent species observed was leafy spurge.

c. Wildlife Distribution. Because the project area is home to diverse habitats (i.e., riparian, dry and irrigated agricultural lands, wet meadows, and upland), and because of its location between the shortgrass prairie and the foothills ecosystems, a large variety of wildlife species inhabit or use the project area. Large mammal species such as white-tailed deer (*Odocoileus virginianus*), mule deer (*O. hemionus*), and coyote (*Canus latrans*) inhabit primarily riparian areas. Smaller mammalian carnivores as well as their prey species were identified by tracks or were considered likely to occur based on habitat associations in the project area. Bird observations were recorded during field investigations and breeding activity was confirmed using the *Colorado Breeding Birds Atlas* (Kingery 1998).

(i) **Large Mammals.** Mule deer and white-tailed deer are the predominant large mammals inhabiting the vicinity of the project area. Deer use wooded habitat along Dry Creek for resting, foraging, and cover. The project area is at the eastern edge of the extensive mule deer range that includes winter and severe winter range in the foothills west of the project area. The white-tailed deer is at the western edge of its range and also uses the agricultural areas and uplands for browsing and grazing. The project area does not contain concentrated wildlife movement corridors for large mammals (CDOW 1998).

(ii) **Small-to-Medium-Sized Mammals.** Many species of small-to-medium-sized mammals inhabit the project area's riparian zones, agricultural areas, and uplands. Typical small mammals known or expected to occur are mice (*Peromyscus* spp., *Reithrodontomys* spp.), voles (*Microtus* spp.), eastern cottontail (*Sylvilagus floridanus*), long-tailed weasel (*Mustela frenata*), and Norway rat (*Rattus norvegicus*). These species are important prey items for raptors, snakes, and coyotes.

Medium-sized mammals that likely inhabit the project area include the red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

(iii) **Nesting Birds.** Year-round resident birds in the project area include species associated with urban/riparian habitats: the house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), and black-billed magpie (*Pica pica*). Species that typically inhabit grasslands, shrublands, and deciduous forests—the western meadowlark (*Sturnella neglecta*), northern mockingbird (*Mimus polyglottus*), blue jay (*Cyanocitta cristata*), and black-capped chickadee (*Poecile atricapillus*)—also frequent the residential and agricultural habitats in the project area.

(iv) **Raptors.** Bird of prey species recorded as using the project area for nesting include the red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverius*). Surveyors detected no red-tailed hawk, great horned owl, or kestrel nesting activity in mid-March 1999;

however, this time of year may have been early for migratory kestrels. Raptor species in this area feed on small mammals that inhabit the riparian corridors, adjacent agricultural lands, and uplands. In the early 1990s, the city of Fort Collins in cooperation with CDOW undertook an ambitious project to introduce osprey to three lakeside locations around Fort Collins; however, Terry Lake was not included in the project. Broods of osprey young hatched over several years were raised and imprinted upon the area before they migrated to South America for the winter. There is one known site in Fort Collins that osprey returned to use for nesting, but this site is located approximately 1 mile from the project area. During spring and fall, migrating ospreys feed on fish from the Poudre River and area lakes, and likely fly over the project area.

All raptors, game birds (except during hunting season), and songbirds are protected by the Migratory Bird Treaty Act of 1918, which was enacted to protect birds, their nests, eggs, and parts (i.e., feathers).

(v) **Waterfowl.** Waterfowl use the Dry Creek drainage and other water bodies in the project area primarily during spring and fall migration. The most common species of waterfowl in the area is the mallard (*Anas platyrhynchos*). Other species observed include the cinnamon teal (*A. cyanoptera*), green-winged teal (*A. creca*), and American coot (*Fulica americana*). Wood ducks (*Aix sponsa*) are reported to nest in the large cottonwood trees lining Dry Creek (Taylor 2000).

(vi) **Wading Birds.** Many species of wading birds use the Dry Creek drainage and other project area wetland habitats for nesting and feeding. Great blue herons (*Ardea herodias*) are the most notable of the species, although many smaller wading birds use the project area during spring and fall migrations. Great blue herons feed on frogs, fish, crayfish, mice, and the nestlings of ground-nesting birds (Erlich et al. 1988). Great blue herons nest in colonies in large cottonwoods along the edges of rivers, lakes, and other permanent bodies of water. Although no great blue heron colonies were noted in the project area, fledged young were observed in the project area during field investigations (August 2000).

(vii) **Herpetofauna.** Several species of reptiles and amphibians likely inhabit the project area and associated riparian habitats. These species include the bullfrog (*Rana catesbeiana*), bull snake (*Pituophis melanoleucos*), and western garter snake (*Thamnophis elegans*).

Because of the relatively high ecological value of riparian habitats, the application process associated with Senate Bill 40, 33-5-101 of 1973 (SB 40), must be completed prior to implementing any activities with potential to negatively impact these habitats should an action alternative be selected. Impacts include bridge or culvert realignment or any changes to streambanks, all of which can contribute to increased sedimentation in streams. SB 40 was enacted to protect and preserve the state's fish and wildlife, with an emphasis on the state's fishing waters, from any actions of the state that may change the resource from its natural state. A state agency must prepare and submit an application to the Wildlife Commission that describes the action and the effect prior to any construction that may "...obstruct, damage, diminish,

destroy, change, modify, or vary the natural existing shape and form of any stream or its banks or tributaries...” The commission may either approve the application, suggest changes in the project design, or suggest mitigation measures.

3.3.3.1 No Action Alternative

The No Action Alternative would not change ecological conditions and processes from the current conditions.

3.3.3.2 Alternative A4

Alternative A4 would result in a loss of residential, commercial, and agricultural lands through the conversion of land to CDOT right-of-way. The average width of the affected area would be 80 feet for a distance of approximately 1,584 feet. The land that would be disturbed by Alternative A4 has been developed for predominately residential or commercial use. These areas have little ecological value and generally sustain wildlife species that have adapted to anthropogenic disturbances. It is expected that these species, as well as the raptors and large mammals in the area, would continue to use surrounding undisturbed lands for foraging, hunting, cover, and breeding once construction and reclamation are complete (see section 3.3.5).

Alternative A4 would also result in disturbance of the Dry Creek drainage, specifically in the area where the current roadway crosses the creek. Construction activities in the vicinity of the Dry Creek drainage would disturb approximately 0.3 acre of the drainage area’s riparian habitat. This is a loss of important habitat; however, species that use this riparian habitat are expected to resume normal activities once construction and revegetation are complete. Because of the relatively high ecological value of riparian habitats in Colorado, the application process associated with SB 40 must be completed before initiating any activities with potential to negatively impact these habitats.

3.3.3.3 Alternative A5

The area disturbed by Alternative A5 would be similar to that described for Alternative A4, including impacts on vegetation and wildlife. Constructing a new bridge over Dry Creek would disturb approximately 0.3 acre of riparian habitat, requiring SB 40 application.

3.3.3.4 Alternative B

Because Alternative B does not follow an established roadway, ecological impacts (specifically wildlife impacts) would be greater than those associated with Alternatives A4 and A5. Although much of the affected land has been altered from its natural state and is used for agricultural production, many species of birds, mammals, and herptiles have adapted to these rural habitats and use them for cover, feeding, breeding, and movement corridors. Specifically, implementation of Alternative B would impact grasslands and meadows where migratory bird and raptor species breed and spend the winter.

A significant area of wet meadows provides stopover habitat for shore birds and other waterfowl. Approximately 7.43 acres of wetlands defined as wet meadows will be affected by Alternative B. Edge areas that are not defined as wetlands may also be affected. Impacts on the riparian habitat of the Dry Creek drainage would occur on approximately 0.003 acre due to placement of a bridge or similar crossing structure. Fragmentation also is a threat from adding

new roads. Fragmentation can prevent animals from accessing important feeding, breeding, wintering, and cover habitats, thereby reducing the viability of local populations. The introduction of road traffic into an area that currently has none can also cause large and small wildlife mortality as a result of animal/vehicle collisions.

3.3.3.5 Mitigation Measures

Mitigation measures to minimize impacts on wildlife habitats along the Alternative A4 and A5 alignments may include the following:

- Spanning Dry Creek with a bridge to provide an access for wildlife to cross beneath US 287 along this drainage.
- Survey construction area for migratory bird nesting sites prior to construction to avoid disturbance of nesting sites.
- Employing BMPs during construction to enhance the ecological environment at the Dry Creek drainage area and prevent further down-cutting of the Dry Creek channel.
- Incorporating riparian/wetland restoration practices and roadway construction activities that may mitigate impacts on this habitat. Riparian habitat lost as a result of construction activities adjacent to Dry Creek would be replaced as part of the wetland mitigation measures.
- Eradicating existing noxious weed populations within construction areas before construction begins to minimize weed recolonization of disturbed areas.
- Prior to construction, establishing and implementing a weed management plan that incorporates the goals and objectives outlined in the *CDOT Integrated Noxious Weed Management Plan 1999–2000*. As part of the management plan, state-listed noxious weeds would be inventoried and mapped using the North American Weed Management Association (NAWMA) protocols, which would be compatible with the current CDOT GIS system. The potential for noxious weeds to spread will be evaluated. The plan would concentrate on prevention and removal of noxious weed species from the project site. The major components of the plan identified to date include:
 - coordination with other agencies
 - appropriate herbicide selection and timing of herbicide spraying
 - use of backpack herbicide sprayers in or around sensitive areas such as wetlands or riparian areas
 - cleaning equipment between sites to reduce the spread of noxious weeds
 - topsoil removal
 - mowing and cutting
 - reseeding roadsides and right-of-ways with native seed mix followed by application of certified weed-free hay mulch in accordance with the Weed Free Forage Act, Title 35, Article 27.5, CRS

In addition to the above, mitigation measures to minimize impacts on the wildlife habitats along the Alternative B alignment may include the following:

- To the extent possible, habitat enhancement would be implemented along the right-of-way to offset losses of meadow habitats that are used as avian feeding areas. Native plant species would be used to reclaim areas adjacent to the roadway wherever possible.
- Hydrologic control measures may be implemented in Dry Creek to prevent further down-cutting and to enhance habitat.

3.3.4 Threatened, Endangered, and Special Concern Species

In accordance with the Endangered Species Act (ESA) of 1973, all animals and plants with special protection status were identified and analyzed for occurrence in the project area, followed by assessment of potential impacts on these species that could result from selection and implementation of an action alternative.

Information regarding federally and state-listed threatened, endangered, and candidate plant and animal species and State Species of Special Concern that may occur in north-central Larimer County was obtained from the Colorado Natural Heritage Program (CNHP 1999, 2000), *Mammals of Colorado* (Fitzgerald et al. 1994), *Colorado Breeding Atlas* (Kingery 1998), and *Amphibians and Reptiles in Colorado* (Hammerson 1999). Species determined to potentially inhabit the project area were further identified from distribution records, habitat preferences, literature searches, and field surveys. Presence/absence survey reports for federally listed species likely to be present in the project area are presented in Appendix E.

One plant species and two animal species that are on the federal endangered species list and one state-listed animal are discussed first, along with their likelihood to occur in the project area. Eight other plant and animal species considered Colorado Species of Special Concern may also use or reside in the project area. Each is discussed below.

a. Ute ladies'-tresses orchid (*Spiranthes diluvialis*). The Ute ladies'-tresses orchid, which is on the federal list of threatened species, has the potential to occupy but was not found in the wet habitats in the project area. This species is a perennial that grows in low elevation riparian, spring, and meadow habitats in the interior of the western United States (United States Fish and Wildlife Service 1995). The potential for the Ute ladies'-tresses orchid to occur in the project area was evaluated through habitat analysis and field surveys conducted in July 1999 and August 2000. Both Dry Creek and the wet meadows south of US 287 near North Shields Street were included in this examination, and neither area was found to be suitable habitat for the orchid, nor was the species found. Appendix E contains additional information regarding field investigations.

b. Preble's meadow jumping mouse (*Zapus hudsonius preblei*). The Preble's meadow jumping mouse (PMJM) was listed by the federal government as a threatened subspecies under the ESA in 1998. The PMJM also is a state-listed threatened species. The PMJM requires dense habitat such as wet meadows, irrigation ditches, and riparian corridors, with a well-developed understory of grasses and a relatively dense shrub overstory (CDOW 2000). Because not enough is known about the distribution of this mammal (which is found only along the Front Range of

Colorado and into Wyoming) and because the habitat around Dry Creek fits this description, it was determined that surveys for the PMJM should be conducted in the project area. Trapping surveys to detect the presence of the species were conducted in late August and early September of 2000 in accordance with United States Fish and Wildlife Service (USFWS) protocol (1999); PMJM were not found. Appendix E contains additional information regarding field surveys.

c. Bald eagle (*Haliaeetus leucocephalus*). The bald eagle is a federally and state-listed threatened species currently under review for delisting, and is protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act of 1972 (16 USC et seq.). Bald eagles have become a common sight flying over areas of Fort Collins in the winter months where they hunt and have night roosts. These birds are seasonal migrants through Colorado with only a few known to nest in the state. No bald eagles have been recorded to nest in the Fort Collins area, and their use of the project area may be minimal because of the project's distance (approximately 1 mile) from the Poudre River, a lack of large fish in Dry Creek, and few perching trees in the area.

d. Northern river otter (*Lutra canadensis*). The northern river otter, a state-listed endangered species, historically occupied riparian habitats with permanent water sources from semidesert shrublands to subalpine forests (Fitzgerald et al. 1994). Their numbers have declined throughout Colorado. This species is not known to inhabit river stretches in the Fort Collins area, and very little evidence of the mammal has been observed in the Poudre watershed.

e. Other threatened, endangered, and sensitive (TES) species. Other species with special status that may use the project area include one plant species, the showy prairie gentian (*Eustoma russillianum*, also known as *E. grandiflorum*), which CNHP considers secure globally but vulnerable in Colorado, where there only have been 21 to 100 known occurrences. This plant has been recorded on the eastern side of Fort Collins and over 2 miles from the project area on the northwest side of LaPorte, but is not known to occur in the project area (Manci 2001).

One insect that may use portions of the project area is the smoky eyed brown butterfly (*Satyroides eurydice fumosa*). This butterfly species is globally secure according to CNHP, but the subspecies may be vulnerable throughout its range and is critically imperiled in Colorado because of rarity (CNHP 1999). In the project area, smoky eyed brown butterflies are most likely to inhabit the wet meadows in the area of Alternative B.

Vertebrate species considered State Species of Special Concern that may occur in the project area include the northern leopard frog (*Rana pipiens*), which can be found in open water areas; the American peregrine falcon (*Falco peregrinus anatum*), which is not likely to occur because it prefers habitat that includes high, precipitous cliffs or deep canyons; the ferruginous hawk (*Buteo regalis*), which mostly prefers shortgrass prairie habitats that occur north and east of the project area; the white pelican (*Pelecanus eruthrohynchos*), which is becoming a common summer visitor to Fort Collins lakes; and the black-tailed prairie dog (*Cynomys ludovicianus*), also a federal candidate for listing under ESA. CDOW studies have found this species to be more prevalent in Colorado than anticipated. Prairie dogs occupy shortgrass prairie habitats and may be found in agricultural and pasture areas north and east of (but not within) the project area.

3.3.4.1 Alternatives A4 and A5

Two of the identified TES species have been documented to occur within the project area: the bald eagle and the ferruginous hawk. However, no nesting sites have been observed and these species are likely to inhabit areas more suitable for foraging and nesting. Their use of the US 287 project area for foraging may be minimal. Construction and operation associated with Alternatives A4 and A5 would not be expected to directly affect these species. Under Alternative A5, Terry Lake Dam would be modified; however, the lake habitat used by the bald eagle would not be affected unless water levels were substantially lowered during dam relocation. Furthermore, ongoing development (transportation, commercial, and residential) along the existing roadway creates additional undesirable habitat conditions that discourage wildlife use relative to the more suitable habitats outside the project area.

3.3.4.2 Alternative B

This alternative crosses habitat suitable for several TES animals. Much of the potentially affected land for this alternative consists of wet meadows and irrigated pastures, which are potential habitat for the showy prairie gentian, the smoky eyed brown butterfly, and the northern leopard frog. It is unknown whether these species occur in the area affected by this alternative. Even if the individuals, their eggs, or their young are not present when construction begins, the loss of acreage and fragmentation of potential habitat could adversely affect the area's ecology. Acreage losses would be the same as those specified for wildlife species (7.43 acres of wet meadow and 0.003 acre of riparian habitat). Fragmentation can prevent wildlife from accessing critical feeding, breeding, wintering, and cover habitats, which can lead to eroded genetic exchange and population losses. This is especially important considering the often smaller sizes of TES species populations. Introducing road traffic and an elevated human presence into their area also adds potential for animal/vehicle collisions. Therefore, for TES species, Alternative B would be expected to have greater negative effects than Alternatives A4 and A5.

3.3.4.3 Mitigation Measures

Mitigation measures and BMPs set forth for wildlife habitats would often benefit TES species as well. Revegetation plans for Alternative B should include plant species preferred by the smoky eyed brown butterfly (*Satyroides eurydice fumosus*), such as the sedges eaten by their caterpillars (e.g., *Carex stricta*, *C. lupulina*, *C. bromoides*, and *C. trichocarpa*). Several TES species depend on wetlands and wet meadow habitats, and the mitigation measures described in Wetlands (section 3.3.5) would also benefit these species.

3.3.5 Wetlands

Wetlands and Other Waters of the US are regulated under Section 404 of the Clean Water Act. A permit is required from the US Army Corps of Engineers for placement of dredge and fill materials into these areas. Moreover, according to EO 11990, US Army Corps of Engineers guidelines on Section 404 of the Clean Water Act (CFR 33, Section 323), FHWA Regulations (CFR 23 Sections 771 and 777), and Technical Advisory T6640.8A, impacts on wetlands must be avoided wherever possible and minimized to the extent practicable during highway construction projects.

Wetlands were delineated through a combination of aerial photograph interpretation and field investigations conducted in August 2000. The analysis also included the wetland identifications developed for Larimer County by Cooper and Merrit (1996). Field investigations consisted of obtaining data on vegetation, soils, and hydrology in accordance with US Army Corps of Engineers Guidelines (1987). Field data were used to finalize mapping on an aerial photograph base (Figure 3-19), and are included in Appendix F, Wetland Finding Report.

The functions of each wetland type were identified using FHWA (1983) and Wetland Evaluation Technique (WET) methods developed by Adamus et al. (1987). Delineation and functional analysis methods are provided in more detail in Appendix F.

Two principal wetland types, Palustrine Forested and Palustrine Emergent (Cowardin et al. 1979), were identified within the project area. Figure 3-19 shows wetlands in the project area.

a. Palustrine Forested Wetlands. Palustrine persistent forested (PFO) (riparian forest) wetlands occur along Dry Creek, are perennially saturated, and are characterized by dense groves of peachleaf willow (*Salix amygdaloides*) and occasional stands of silver leaf cottonwood (*Populus alba*). Herbaceous species dominate the understory and include primarily manna grass (*Glyceria striata*), Emory sedge (*Carex emoryi*), watercress (*Nasturtium officinale*), and quackgrass (*Elytrigia repens*). Dry Creek's channel is generally narrow and incised throughout most of the project area; however, in areas where the floodplain widens slightly, Palustrine Emergent wetlands occur as part of the PFO to form a complex, and emergent species such as broad-leaved cattail (*Typha latifolia*), Emory sedge, and arrowhead (*Sagittaria latifolia*) are dominant. Soils were dark and saturated by stream flow with a high content of organic matter. Wetlands along Dry Creek provide a variety of functions, including bank stability and erosion control, flood-flow alteration-control, wildlife habitat, groundwater recharge, and (where the floodplain widens) provides sediment-toxicant retention. The wetlands associated with Dry Creek are considered jurisdictional to Section 404 of the Clean Water Act.

b. Palustrine Emergent Wetlands. Palustrine persistent emergent (PEM) wetlands include marsh and marshlike or meadow communities, and within the project area consist of sedge-dominated wetlands along the Little Cache La Poudre Ditch, Baltic rush and salt-grass-dominated meadows, and a cattail-dominated marsh.

PEM semipermanently saturated wetlands extend over much of the project area west of North Shields Street. These meadow areas are used for hay production and as pastureland, and are saturated most of the growing season from near-surface groundwater and/or irrigation that support the wetland conditions. Characteristic plant species include dense stands of Baltic rush or wire grass (*Juncus arcticus*) and salt grass (*Distichlis spicata*), with lesser amounts of curly dock, redtop (*Agrostis gigantea*), plantain (*Plantago major*), barnyard grass, and foxtail (*Hordeum jubatum*). Soils were moist within the plant-rooting zone and were often mottled, which is an indication of a fluctuating water table.

Functional attributes include providing production export to adjacent areas and wildlife diversity/abundance. Wet meadows of this area are highly productive and species-rich (Cooper and Merrit 1996).

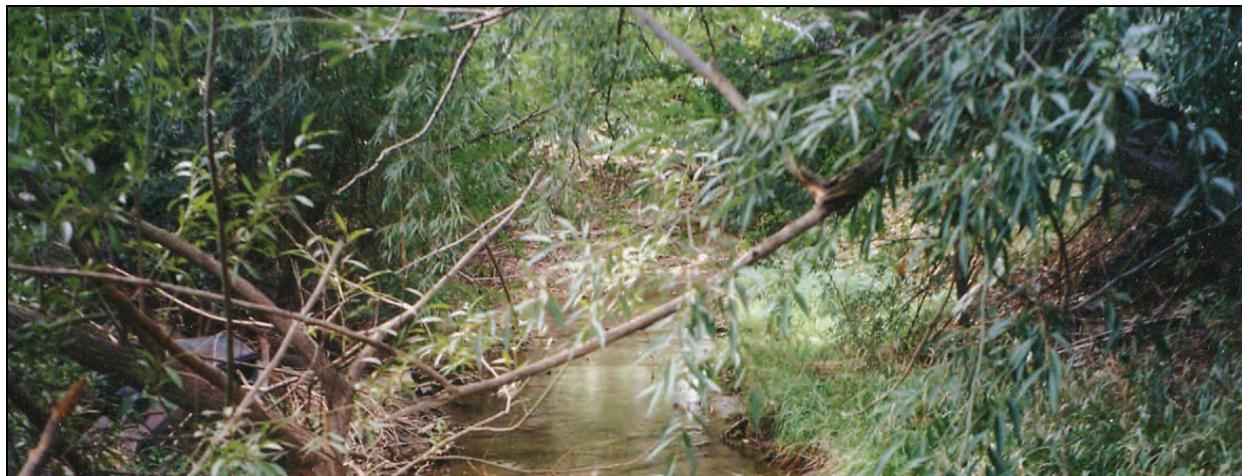
A PEM permanently saturated wetland (cattail-dominated marsh) was delineated north of US 287 at the LaPorte Bypass where water has been impounded by the highway's roadbed and an access road to private property. This wetland was dominated by cattail and contained a dark, gleyed (indicating anaerobic conditions) saturated soil. This area is permanently or semipermanently flooded. Similar wetlands also occur as small stands of cattail within the Dry Creek floodplain, but are described as part of the Palustrine Forest wetland system. Functions include a high capacity for sediment/toxicant retention, which improves water quality and provides flood-flow alteration and storage. Wildlife habitat function is not considered important because of the small size of these wetlands and their close proximity to the highway.

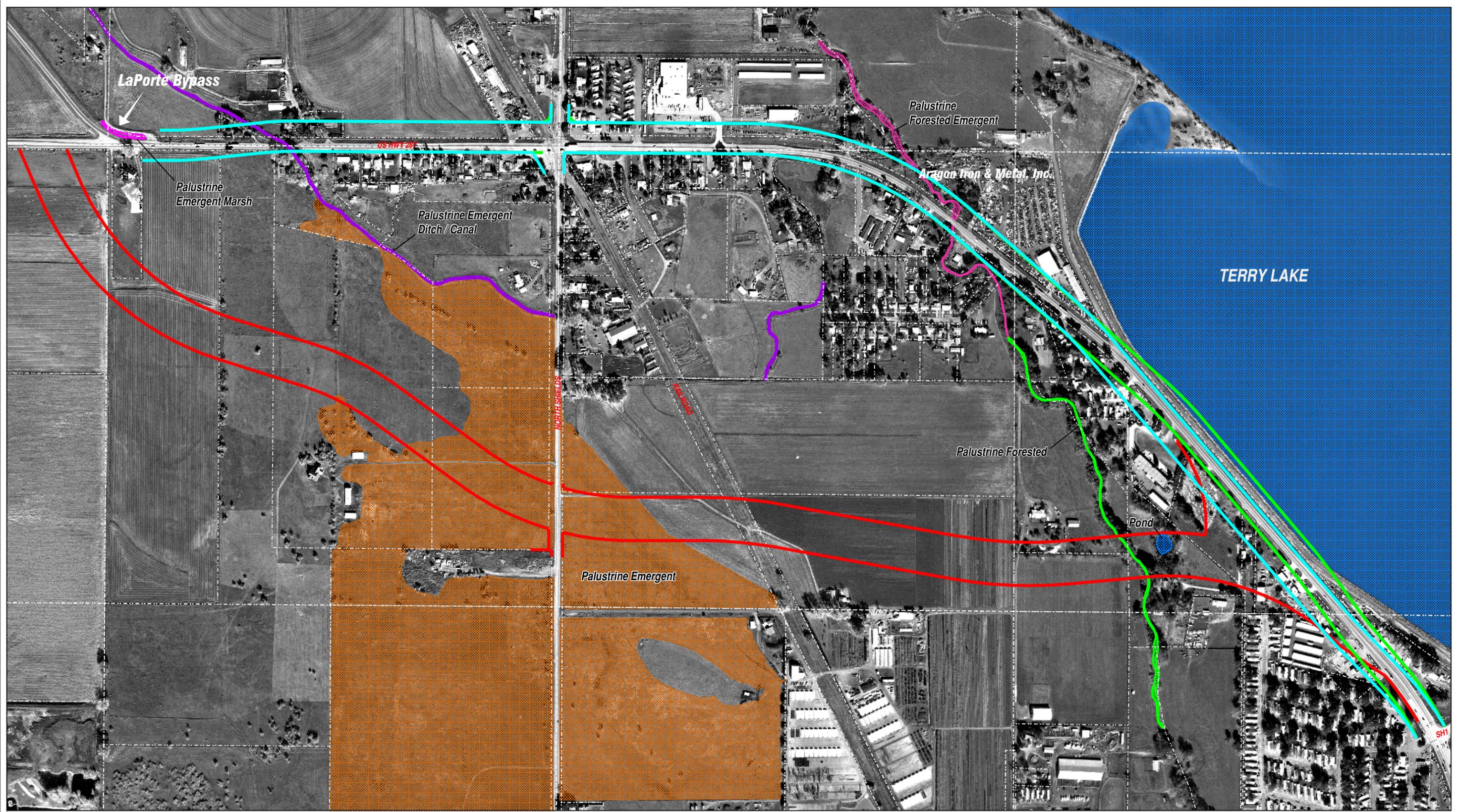
Based on a ruling by the Supreme Court, isolated wetlands are not considered to be jurisdictional to Section 404 of the Clean Water Act. The Solid Waste Agency of Northern Cook County (SWANCC) ruling in January 2001 excludes wetlands that are isolated from regulated Other Waters of the US. Because the Palustrine Emergent meadows and cattail marsh wetlands are separated from Other Waters of the US (Dry Creek and Poudre River) by the Larimer and Weld Canal, which in turn does not connect with Other Waters of the US, neither is considered jurisdictional (McKee 2001). EO 11990 and CDOT directives do not exclude "isolated" wetlands, however, and all wetlands are included in the impact analyses.

c. Other Waters of the US. Other Waters of the US are defined as navigable waters, lakes, rivers, and streams that could be used for recreation, mudflats, wetlands, sloughs, playa lakes, or natural ponds (CFR, Part 232-404). Initially, Dry Creek, Terry Lake, and a small pond were considered jurisdictional to Section 404 of the CWA (Franklin 2000). However, because of the SWANCC ruling on isolated waters near the east section of Alternative B (January 2001, CFR 328.3[9][3]) not being jurisdictional, the small pond is not considered jurisdictional (McKee 2001). Project area waters that meet Other Waters of the US definitions include Dry Creek, which is a tributary of the Cache La Poudre River, and Terry Lake.

3.3.5.1 No Action Alternative

Because there are no road construction activities associated with the No Action Alternative, it would not impact wetlands. Table 3-8 compares the No Action and action alternatives.





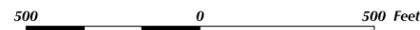
LEGEND

- Pond
- Palustrine Forested / Emergent
- Palustrine Forested
- Palustrine Emergent Marsh
- Palustrine Emergent Ditch/Canal
- Palustrine Emergent
- Open Water
- Property Boundaries
- Alignment A4 Right-of-Way
- Alignment A5 Right-of-Way
- Alignment B Right-of-Way

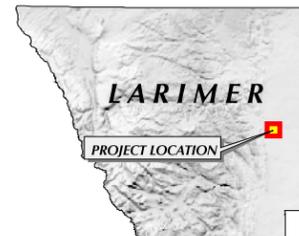


Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



SCALE - 1:6300



**US 287-SH 1 to the LaPorte Bypass:
 Wetlands**

FIGURE 3-19

**Table 3-8. Direct Permanent and Temporary Wetland Impacts
from Roadway Construction by Alternatives (acres)**

Wetland Type	Alternative						
	No Action	A4 Permanent	A4 Temp	A5 Permanent	A5 Temp	B Permanent	B Temp
Palustrine Forested* (Dry Creek)	0	0.09	0.01	0.09	0.01	0.33	0.15
Palustrine Emergent	0	0.16	0.23	0.16	0.23	7.43	1.34
Cattail Marsh	0	0.10	0.10	0.10	0.10	0	0
Meadows	0	0	0	0	0	7.43	1.34
Ditch/Canal	0	0.06	0.13	0.06	0.13	0	0
Total Wetland Impacts (Jurisdictional and Nonjurisdictional)	0	0.25	0.24	0.25	0.24	7.76	1.49

**Jurisdictional to Section 404 of the Clean Water Act; includes smaller areas of Palustrine Emergent wetlands*

3.3.5.2 Alternative A4

Potential impacts on wetlands were analyzed for the No Action Alternative and Alternatives A4, A5, and B (Figure 3-8). Direct permanent and temporary impacts were determined for each action alternative by overlaying the proposed roadway footprint on the wetlands identified and previously described. Indirect impacts, including degradation of wetlands from changes in water quality or hydrology, are also addressed for each action alternative. Appendix F contains a complete Wetland Finding Report for this study. Wetland acreage impacts are determined based on conceptual design. The exact acreage impacted would be determined during final design (should an action alternative be selected).

Based on the SWANCC ruling regarding isolated waters, only the Palustrine Forested wetlands are jurisdictional to Section 404 of the Clean Water Act, which requires 404 permits prior to any “dredge and fill” activity. The other wetland areas are considered to be “isolated waters,” having no surface connections to Other Waters of the US.

Construction activities to increase the width of the existing right-of-way on US 287 to a range of 158 to 175 feet have the potential to permanently affect 0.25 acre of wetlands comprised of 0.09 acre of Palustrine Forested and 0.16 acre of Palustrine Emergent wetlands. Another 0.24 acre was estimated to be affected temporarily by siltation fencing and erosion control material that may be placed near the toe of fill slopes during construction based on a 10-foot wide construction area from the edge of fill/cut. Only 0.09 acre of Palustrine Forested wetlands are jurisdictional.

Indirect impacts such as increased runoff and sedimentation from excavation sites during construction and increased runoff from paved surfaces after construction may be minimized by the use of BMPs (e.g., siltation fencing and barriers, perimeter fencing for work areas, erosion control material).

3.3.5.3 Alternative A5

Construction activities to increase the width of US 287 for this alternative have the potential to permanently impact 0.09 acre of Palustrine Forested wetlands and 0.16 acre of Palustrine Emergent wetlands. Only 0.09 acre of Palustrine Forested wetlands are jurisdictional. Approximately 0.81 acre of Terry Lake would be affected by relocating the dam, but no wetlands or jurisdictional Other Waters of the US would be affected. Approximately 0.24 acre of wetlands was estimated to be impacted by placement of siltation fencing and erosion control material required near the toe of fill to control run-in to wetlands from the construction site.

Indirect impacts such as increased runoff and sedimentation from excavation sites during construction and increased runoff from paved surfaces after construction may be minimized by the use of BMPs.

3.3.5.4 Alternative B

Construction activities associated with Alternative B have the potential to permanently affect 7.76 acres of wetlands, including 0.33 acre of jurisdictional Palustrine Forested wetlands at Dry Creek and 7.43 acres of nonjurisdictional Palustrine Emergent wetlands. The relatively large amount of wetland impacts results from a 250-foot right-of-way and a large complex of wet meadows east and west of North Shields Street (Figure 3-19). An additional 1.49 acres has the potential to be temporarily affected by placement of siltation fencing and erosion protection material (Table 3-8).

3.3.5.5 Mitigation Measures

Mitigation to offset direct impacts on wetlands generally consist of remediation measures that expand existing wetlands or involve establishing new wetlands to offset losses. Mitigation plans are required for losses of jurisdictional wetlands in order to meet the intent of Section 404, which is administered by the US Army Corps of Engineers. CDOT guidelines also require that nonjurisdictional wetlands under Section 404 be included in the analysis and mitigation measures. Palustrine Emergent wetlands that are considered part of isolated waters, including those along irrigation canals and the larger meadow complex, fall into this category.

Should an action alternative be selected, mitigation options would be identified as closely as possible to the construction site, and would be based on a one-to-one replacement ratio. Estimated permanent impacts for the alternatives range from 0.25 acre each for Alternatives A4 and A5 to 7.76 acres for Alternative B.

Mitigation of the impacts that occur from expanding the road right-of-way north across Dry Creek would consist of redesigning the stream within the right-of-way in conjunction with bridge construction work. Part of the channel would need to be reconstructed north of the road because widening the road would place earthwork into the creek, as the stream parallels the road in this area. The redesign would consist of developing meanders and widening the floodplain to establish a channel and sandbar complex. Palustrine Emergent, Palustrine Shrub-Scrub, and Palustrine Forested (peachleaf willow) wetlands would be established. Based on the topography of the existing floodplain and bridge construction plans it is anticipated that approximately 0.25 acre of wetlands would be established adjacent to Dry Creek. Right-of-way needs for relocating

Dry Creek would be addressed as part of final design. This mitigation addresses impacts associated with Alternatives A4 and A5. Additional information is located in Appendix F.

The possibility also exists for additional areas of Dry Creek to be rehabilitated and the habitat enhanced by removing debris from this area and planting additional wetland species (e.g., willows). Whether or not such mitigation measures would be feasible to offset impacts from the project needs to be determined, as it would be outside of the existing CDOT right-of-way and is primarily wetland enhancement, although some wetland expansion would also occur.

Mitigation to offset impacts from construction of Alternative B would require a large area of right-of-way along the road to reestablish wetlands in previously disturbed areas and to enhance other areas that currently have been degraded. Water rights would also have to be obtained for this effort.

Palustrine Emergent cattail marshes would be reestablished in conjunction with drainage control of roadway areas and near-surface drainage at the US 287 and LaPorte Road intersection. This area is targeted to reestablish approximately 0.16 acre of wetlands. Thus, between the Dry Creek realignment and the reestablishment of the cattail marsh, wetland losses from road construction would be offset.

The larger wetland losses associated with Alternative B result from placing a new roadway across an area of near-surface water table and poorly drained soils. Part of this area has been converted to alfalfa. Converting alfalfa back to wetland plant communities, along with drainage control, would be a way to offset wetland losses from this alternative. The same width required for road construction would be required for approximately 800 feet west of North Shields Street and 500 feet east of North Shields Street for such mitigation. Mitigation of 7.76 acres of wetlands in this area could be accomplished by converting areas along the right-of-way from agronomic to native wetlands species. Additional right-of-way would be required for this mitigation. Otherwise, all or part of the required mitigation would need to occur offsite. (Specific mitigation measures would be developed should Alternative B be selected.)

Indirect impacts such as increased runoff and sedimentation from excavation sites during construction and increased runoff from paved surfaces after construction may be minimized by the use of BMPs.

Should an action alternative be selected, mitigation of temporary impacts would be done as part of the construction work and would include removal of erosion control material and fencing, reclaiming soils that have been disturbed (e.g., compacted), and revegetating disturbed areas with native species appropriate to the site. Mitigation measures would include removing any construction material and reestablishing wetland vegetation.

3.3.6 Floodplain Analysis

The city of Fort Collins, Larimer County, and the Colorado Water Conservation Board commissioned the firm of Gingery Associates to complete a *Major Drainageway Planning Study for Dry Creek* in 1979–80. This study was done in response to concerns expressed by the sponsoring agencies and identified by the Federal Emergency Management Agency (FEMA)

regarding flood hazards along Dry Creek. The planning study includes preliminary designs for drainage improvement facilities to eliminate or alleviate flood hazards along Dry Creek.

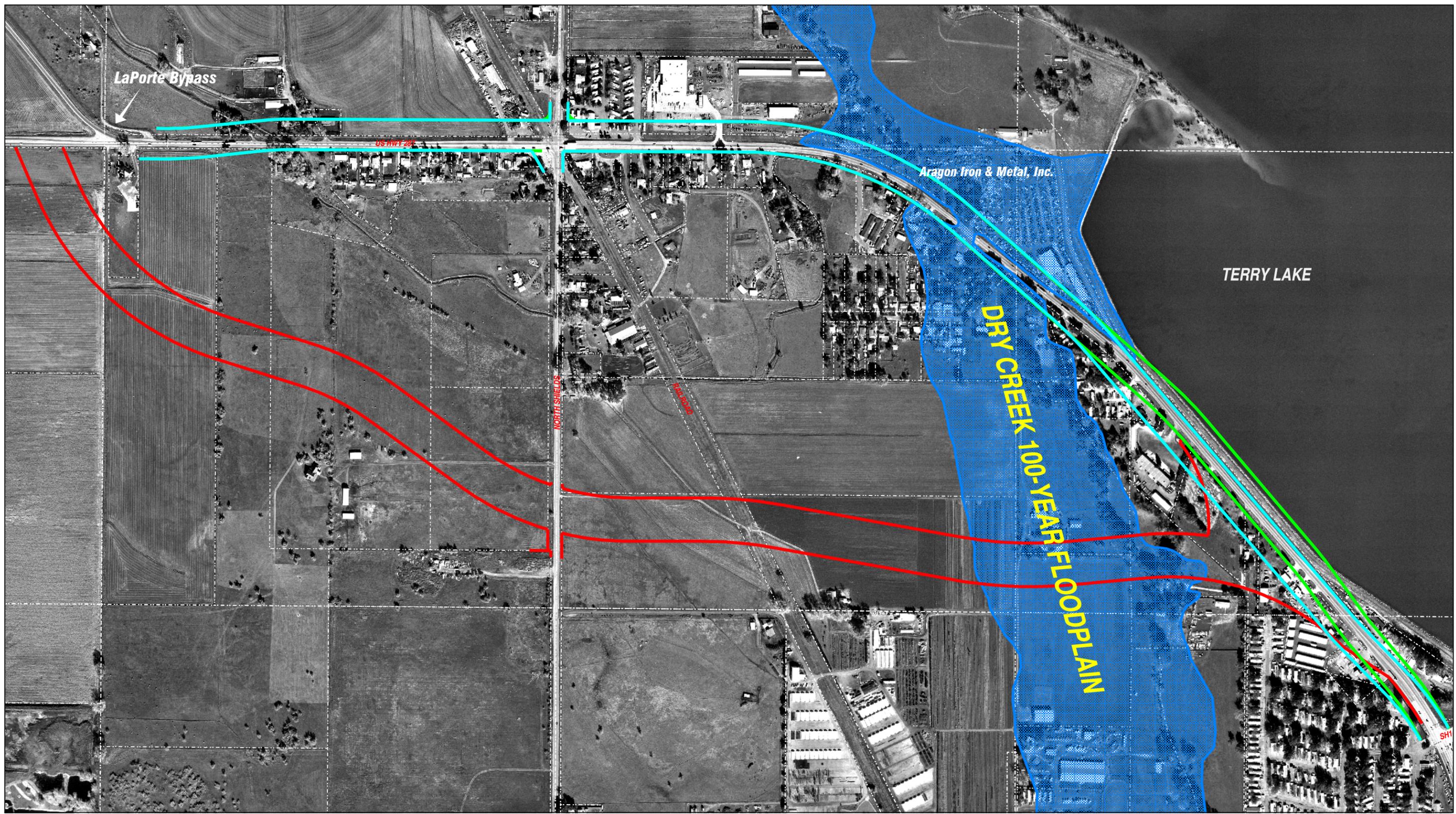
The 100-year floodplain and floodway boundaries for Dry Creek are included in the FEMA Flood Insurance Study (FIS) dated March 23, 1999. This FIS incorporated a Letter of Map Revision (LOMR) dated July 15, 1996 that revised the floodplain to match that delineated in the 1979–80 *Major Drainageway Planning Study for Dry Creek*. The LOMR was to correct the floodplain delineation shown on FEMA's map panel 0179D. Revision affects west overbank of Dry Creek from Lincoln Avenue to approximately 1,200 feet upstream. Base floodway elevations and floodway were not affected by the revision. The current alignment of US 287 crosses the Dry Creek 100-year floodplain with a 3-span concrete slab structure (Figure 3-20).

A Conditional LOMR (CLOMR) is currently being submitted to FEMA by the city of Fort Collins for channel improvements to Dry Creek upstream of the US 287 crossing. The CLOMR includes numerous changes to the Dry Creek floodplain including revised rainfall data, increased detention in Douglas Reservoir and the construction of detention ponds at the north end of the Dry Creek drainage area. These channel improvements will drastically reduce the flow under the US 287 Bridge from 2900 cubic feet per second (cfs) as designated in the 1999 FEMA FIS to 818 cfs. Upon completion of the channel improvements, the city of Fort Collins will submit a LOMR to FEMA officially changing the 100-year floodplain and flow data. The proposed CLOMR changes will reduce the flow volume from 2,900 cfs to 818 cfs at the bridge site. This reduction will decrease the required bridge opening needed to pass the 100-year event flood.

a. Major Drainage. The project area is within the watershed of Dry Creek, a tributary of the Cache La Poudre River. No municipal or irrigation water supply intake structures exist on Dry Creek in the project area. All runoff from existing US 287 drains to Dry Creek. The existing US 287 crosses Dry Creek approximately 1 mile upstream from the Cache La Poudre River. The project area also includes Terry Lake (Larimer and Weld Reservoir), a multipurpose reservoir storing water primarily for irrigation and recreation. A segment of the existing US 287 is located adjacent to Terry Lake Dam; thus, implementation of Alternative A5 would require relocation of the dam.

Dry Creek is the only perennial stream within the project area. Dry Creek flows south-southeast before the Larimer and Weld Canal intercepts it immediately south of the project area. The Dry Creek channel within the project area is characterized as well-defined, meandering, and of low flow with wide and gently sloping overbanks.

The Larimer and Weld Canal located immediately south of the project area intercepts all of the Dry Creek drainage flows. The primary cause of residential flooding in the project area is the backwater caused by this canal (Gingery Associates 1980). Further residential flooding is caused by undersized structures at the US 287 crossing and at a local residential street crossing downstream of US 287.



LEGEND

-  Property Boundaries
-  Dry Creek 100-Year Floodplain
-  Alternative A4 Right-of-Way
-  Alternative A5 Right-of-Way
-  Alternative B Right-of-Way


 Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Floodplain information provided by FEMA. Map produced November 20, 2000; reproduced March 1, 2004 by JFSA.


 SCALE - 1:8250



**US 287-SH 1 to the LaPorte Bypass:
Dry Creek 100-Year Floodplain**

FIGURE 3-20

b. Water Resources and Data. The project area lies within a semiarid region of the Front Range that receives 18 to 24 inches of precipitation annually (Moreland and Moreland 1975). Seventy to eighty percent of the area's annual precipitation falls between April and September, some occurring in the form of severe thunderstorms in the spring and summer months (Western Historical Studies 2000). During years of extensive snow cover or during periods of heavy rainfall, flow in Dry Creek may exceed channel capacity, resulting in occasional flooding.

3.3.6.1 No Action Alternative

No road construction activities are associated with the No Action Alternative; therefore, impacts on floodplains would not be expected.

3.3.6.2 Alternatives A4 and A5

Widening of the existing US 287 roadway for either Alternative A4 or A5 would cause additional encroachment on the Dry Creek floodplain upstream from the existing Dry Creek structure. At the US 287 crossing, Dry Creek runs parallel to the roadway. For Alternatives A4 and A5, widening the roadway would encroach on approximately 325 linear feet of the existing Dry Creek channel. A structure spanning this distance would not be necessary or cost-effective, so rechannelization would be necessary. A channel with a 5-foot bottom and 2:1 riprapped side slopes would accommodate the 100-year flood. A single span 50-foot bridge would pass the 100-year flow with adequate freeboard, without altering the existing roadway profile.

3.3.6.3 Alternative B

Alternative B would require crossing Dry Creek approximately 2,000 feet downstream from the existing US 287 crossing. According to the proposed floodplain delineated in the CLOMR being submitted to FEMA by the city of Fort Collins, the 100-year floodplain remains contained in the main channel. A culvert would be sufficient to cross the main channel.

3.3.6.4 Mitigation Measures

The mitigation measures for the Dry Creek floodplain are as follows:

- Design that considers avoidance of longitudinal and significant encroachment on the floodplains.
- Adherence to all FEMA requirements.
- Conformance of all hydraulic designs to the requirements of 23 CFR 650.
- Adherence to local and CDOT drainage criteria in the design of both major and minor structures.
- In anticipation of the approval and construction of the city of Fort Collins improvements to Dry Creek, a flow rate of 818 cfs was used to evaluate the proposed roadway alternatives. During the design phase, the status of these improvements would need to be confirmed and, in the event that approval and construction of the Dry Creek improvements do not take place, the US 287 crossing of Dry Creek would need to be revisited.

All work on this project would conform to Section 107.25 and Section 208 of the CDOT *Standard Specifications for Road and Bridge Construction*.

3.3.7 Water Quality

Dry Creek within and downstream from the project area, the Cache La Poudre River downstream from Dry Creek to the South Platte River, and Terry Lake are classified by CDPHE (2000) as not capable of sustaining a wide variety of sensitive species because of physical habitat, water flows or levels, or uncorrectable water quality conditions (Class 2 warmwater aquatic life). These waters are suitable only for uses such as fishing and other streamside or lakeside recreation activities where primary contact is not likely (Class 2 – Secondary Contact). These surface waters are also suitable for crop irrigation and as water for livestock.

There are 252 registered wells within a 1-mile radius of the project (Kumar and Associates 2000). The general types of wells consist of domestic and household (155), observation and monitoring (61), agricultural (34), and industrial and commercial (2). Groundwater levels recorded for these wells vary from 1 foot to 316 feet; however, a majority of the groundwater levels within 0.25 mile of the project area are less than 10 feet. Based on the surface topography and the south-trending Denver Basin geologic structure, the shallow, unconfined groundwater is expected to flow south-southeast toward the Larimer and Weld Canal.

Should an action alternative be selected, a US Army Corps of Engineers 404 permit for placing fill material in or crossing Dry Creek would be required. The permit would be obtained during the final design phase of the project. CDPHE 401 and 402 permits and the CDOW SB 40 Certification would also be obtained.

CDOT would need to develop a stormwater management plan (SWMP) for construction activities during final project design. The plan would be subject to approval by the Department's staff landscape architect. A National Pollutant Discharge Elimination System (NPDES) permit would need to be obtained from CDPHE.

3.3.7.1 No Action Alternative

The No Action Alternative would not result in direct impacts on the water quality of the project area. Normal highway maintenance operations that include plowing, sanding, and resurfacing of the roadway would continue. Historical stormwater runoff from the roadway and the potential for hazardous materials spills would continue to exist with this alternative. This risk is primarily of concern for the Dry Creek drainage area.

3.3.7.2 Alternative A4

Potential impacts on water quality resulting from the construction of Alternative A4 would primarily be associated with potential runoff (erosion and sedimentation) during construction and operation of the roadway. Proper sediment control during construction can protect Dry Creek from increased turbidity in runoff and potential sedimentation impacts.

3.3.7.3 Alternative A5

Potential impacts are similar to impacts of Alternative A4. In addition, Alternative A5 would require relocation of Terry Lake Dam. The existing dam would be removed and a new dam built approximately 50 feet northwest of the current dam. During construction of the new dam, the amount of stored water available for irrigation and recreation purposes may be reduced.

3.3.7.4 Alternative B

Alternative B involves roadway construction on a new alignment through primarily undeveloped areas where construction of roadway embankments may change the surface runoff in the area. Excavation and construction of compacted fill embankments may result in erosion and sedimentation processes that could impact Dry Creek.

Additional impacts include possible modifications of the current floodplain water level through culvert installation at the Alternative B crossing of Dry Creek. However, final design can incorporate criteria that would complement the city of Fort Collins Water Conservation Board's plans for eliminating or alleviating flood hazards along the Dry Creek channel.

3.3.7.5 Mitigation Measures

Should an action alternative be selected, mitigation measures for water quality would include:

a. Temporary Erosion Control. Temporary erosion control and stormwater measures would be implemented during construction activities. CDOT would develop an SWMP that details the BMPs in accordance with the CDOT Erosion Control and Stormwater Quality Guide. Erosion controls may be designed and implemented to counter these hazards and minimize or eliminate downgradient sedimentation and siltation. Such measures could include:

- staging construction to reduce disturbance
- minimizing access to the construction area
- temporarily seeding disturbed areas
- early final grading and seeding of completed areas
- establishing clean water diversion upgradient of the construction areas

b. Permanent Erosion Control. Permanent erosion control and stormwater measures will be implemented as part of the proposed action. BMPs, in accordance with the CDOT Erosion Control and Stormwater Quality Guide, may be implemented and may consist of establishing and maintaining vegetation in areas disturbed by construction. In addition to stabilizing soils and reducing the potential for erosion, vegetation can provide stormwater pollutant removal benefits through filtration, sediment deposition, infiltration, and in some cases, biological assimilation of pollutants by the vegetation. During the final design stage, site conditions, drainage area, and deicing usage/maintenance may be evaluated to help determine proper water quality controls.

3.3.8 Geology and Soils

The project area is located on the western flank of the Denver Basin geological structure. The Denver Basin is a south-trending asymmetrical structure extending from Pueblo northward beyond the Colorado-Wyoming border.

The action alternatives are primarily situated on alluvial deposits of the Quaternary Age Broadway Alluvium. West of North Shields Street, the alternatives traverse Quaternary Age Post Piney Creek Alluvium. Terry Lake is situated within the Middle Shale Member of the Upper Cretaceous Age Pierre Shale which, based on results of borings drilled along the south side of the lake, is overlain by alluvium. The southern portions of the project area traverse modern alluvium that includes Piney Creek alluvium and younger deposits.

The Broadway Alluvium consists predominately of sand with varying amounts of gravel. Borings drilled in the vicinity of Terry Lake Dam indicate that the granular alluvium is mantled by about 5 feet of clayey sand. The Broadway Alluvium at the borings, including the upper clayey sand, ranges in thickness from 10 to 17 feet. The Broadway Alluvium is a terrace deposit above the present day Cache La Poudre River.

The Post Piney Creek Alluvium consists of sediments deposited in the floodplain of the Cache La Poudre River. The Post Piney Creek Alluvium generally consists of silty to clayey sands with varying amounts of gravel. The alluvium in this area is underlain by older alluvium consisting of relatively clean sand, gravel, and cobbles. These underlying granular materials have been mined for aggregate production in the Cache La Poudre valley to the south and west of the project area.

Based on surface topography and subsurface conditions expected in the area, surface water runoff and shallow, unconfined groundwater in the project area are expected to flow south-southeast toward the Larimer and Weld Canal. Areas of shallower groundwater may be present, particularly south of Terry Lake and near the connection with the existing LaPorte Bypass at the west end of the project area. The groundwater conditions are expected to be similar along each of the alignments; that is, within 5 to 10 feet of the ground surface. The groundwater level at the boring made in Terry Lake Dam was at 21.5 feet above natural ground surface on August 29, 2000. This was approximately 3 feet lower than measured on April 17, 2000.

3.3.8.1 No Action Alternative

The No Action Alternative would not result in direct or indirect impacts on the geology and soils of the project area.

3.3.8.2 Alternatives A4, A5, and B

Alternatives A4, A5, and B are not expected to produce geological conditions of concern, and no geological hazards have been identified that would render any of the alternatives infeasible. All action alternatives would be constructed within similar geological conditions, including clay surface with sand and gravel subsurface.

3.3.9 Hazardous Materials/Waste

This section addresses the potential for hazardous materials/waste to be encountered during construction should an action alternative be selected. To identify potential hazardous material/waste locations, hazardous waste assessments are conducted as a part of the environmental assessment to consider the possibility of affecting or acquiring contaminated sites, prior to acquiring right-of-way and at the beginning of construction activities.

The descriptions of potential hazardous materials/waste existing in the area of the action alternatives have been summarized from the results of a Phase I Modified Environmental Site Assessment (M-ESA) (Kumar and Associates 2000). The M-ESA was prepared in accordance with the ASTM E 1527, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," and the CDOT scope of work for M-ESAs. The purpose of the M-ESA was to identify environmental conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the soils, groundwater, or surface water of the area.

When hazardous material/waste is encountered during an assessment and it is determined that the project may be impacted, CDOT contacts the appropriate parties. The course of action taken depends on the circumstances connected with the encounter. Generally, because of the potential high cost of site cleanup, it is CDOT's policy not to acquire right-of-way that has been identified as contaminated.

The results of the M-ESA indicate that four potential hazardous material/waste sites or areas of environmental concern exist within the immediate area of the alternatives (Figure 3-21), and one additional site was identified during community interviews held in the spring and summer of 2003. The five sites are as follows:

- Suburban Propane (site previously used as a service station)
- Merlin's Auto Body
- Jax Farm and Ranch
- Aragon Iron & Metal
- transformers located along US 287 (pole-mounted/transmission line)

a. Suburban Propane. The Suburban Propane site, located on the south side of US 287 at 205 North US Highway 287, was developed in the early 1970s by Vangas. The historical review revealed that numerous service stations have operated on the site. Three leaking underground storage tanks (LUSTs) were removed from the site on November 3, 1995. Gasoline was detected in soils associated with these LUSTs; however, according to the Colorado Department of Oil Inspection Section files, the soils were excavated and removed from the site, and the site is now considered to need "no further action."

During a field survey, several aboveground storage tanks (ASTs) were observed on this property. According to the manager of the store, the tanks were either empty or contained propane gas.

b. Merlin's Auto Body. The Merlin's Auto Body site, located on the south side of US 287 at 417 North US Highway 287, was developed in the early 1960s and has since been used as an auto repair shop. During the field survey, no staining of the soils was observed; however, the driveway and areas around the building were covered with gravel.

c. Jax Farm and Ranch Store. There may be underground fuel storage tanks located at 1000 North US 287; this information was gathered during the community interviews held in spring and summer 2003. There are no records of spills or leakage.

d. Aragon Iron & Metal. The Aragon Iron & Metal site located at 517 North Highway 287 on the north side of the highway was constructed in the late 1960s.

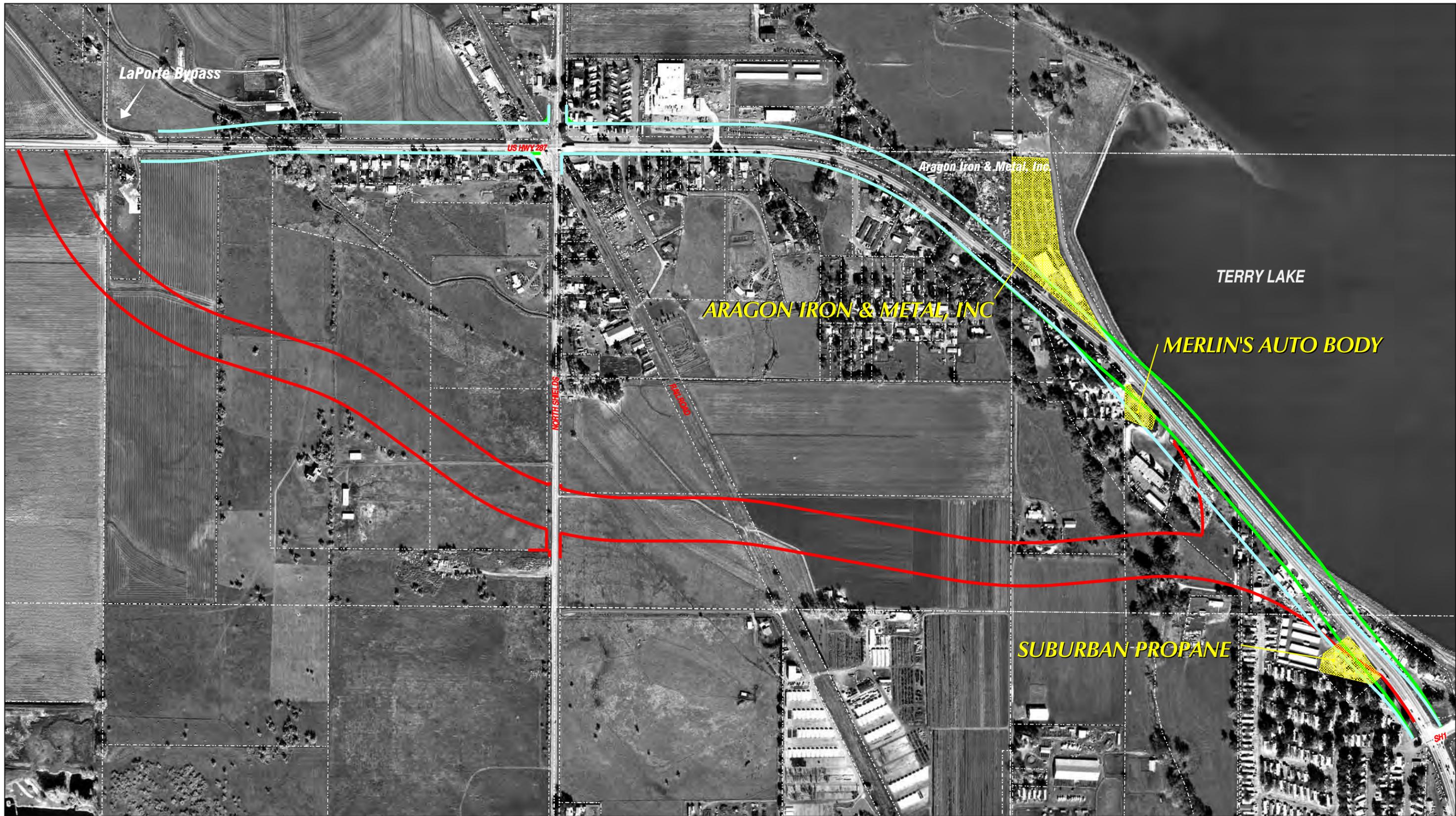
Numerous abandoned cars and large amounts of scrap steel were observed at the site. A limited surface and subsurface investigation of this location was performed in April and May 2000 to assess the potential for subsurface contamination in soils and groundwater. Two soil samples and two groundwater samples were collected as part of a limited subsurface study. The results of this test indicated that the subsurface soils and the groundwater at the site have not been affected by total petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylene compounds from surface spills or leaks. Furthermore, the owner of Aragon Iron & Metal indicated that oil-stained soils were removed from the northern part of the property in 1989.

e. Potential PCB Transformers. Several pad and pole-mounted (transmission line) transformers owned by the Poudre Valley Rural Electric Association (REA) are located along the existing roadway and adjacent to the Alternative A alignments. No transformers were observed within the Alternative B alignment that were not included in the Alternative A alignments. The transformers appeared to be in fair to good condition, with no indication of leaks or fire damage. According to the Poudre Valley REA, these transformers have not been tested for polychlorinated biphenyl (PCB) content. PCB is a toxic chemical regulated under the Toxic Substances Control Act. These untested transformers must be tested for PCB content prior to disposal. Appropriate testing and disposal procedures would be followed in accordance with current guidance and regulations.

Implementation of any action alternative may disturb soils containing hazardous materials/waste. Hence, prior to construction of any action alternative, a Phase II investigation may be necessary to determine the nature and extent, if any, of hazardous materials within the soils and potentially within the groundwater of each site that may be disturbed during construction.

3.3.9.1 No Action Alternative

Under the No Action Alternative, no hazardous waste or materials sites within the project area would be disturbed.



LEGEND

- Property Boundaries
- Alternative A4 Right-of-Way
- Alternative A5 Right-of-Way
- Alternative B Right-of-Way
- Potential Hazardous Material Property



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83



SCALE - 1:6300

SOURCE: County parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Hazardous materials information provided by Kumar & Associates. Map produced November 20, 2000 by JFSA.



**US 287- SH 1 to the LaPorte Bypass:
 Potential Hazardous Material/Waste Sites**

FIGURE 3-21

3.3.9.2 Alternatives A4, A5, and B

Construction of any of the three action alternatives may directly disturb at least one potential hazardous waste site and an unknown number of transformers. Alternatives A4 and A5 would impact portions of the Aragon Iron & Metals, Merlin Auto Body, Suburban Propane, and Jax Farm and Ranch properties. Alternative B would impact a portion of the Suburban Propane property. All action alternatives require replacement of transformers.

3.3.9.3 Mitigation Measures

Should an action alternative be selected, mitigation measures for hazardous materials/waste encountered before or during construction of any action alternative may include removal and disposal of such materials in accordance with applicable regulations. Since the ASTs at Suburban Propane are portable, their removal would cause minimal impacts.

Prior to construction activity, the transformers impacted by the selected alignment would be tested for PCBs. The utility company would be responsible for the handling and disposal of transformers exhibiting the presence of PCBs, if any, in accordance with regulations and requirements.

Should Phase II investigations indicate the presence of hazardous materials/waste, a Health and Safety Plan (HASP) would be developed and approved prior to beginning construction activities. The HASP may address incidents involving hazardous substances, potentially contaminated surface water, or groundwater. In addition, a Materials Management Plan (MMP) would be prepared and implemented if warranted by site investigation results.

3.3.10 Construction Impacts

The implementation of any action alternative may result in short-term impacts related to construction activities. This section describes those impacts and the mitigation necessary to reduce or minimize residual impacts related to construction.

3.3.10.1 Access/Emergency Services

Any short-term disruption of residence and business access would be avoided during construction of any action alternative. Although traffic movement through US 287 may be impacted during construction, these impacts will be controlled through the application of standard highway construction practices for traffic management. These practices would be coordinated with local emergency service providers to ensure that construction does not disrupt the provision of emergency assistance.

3.3.10.2 Air Quality

Possible impacts from construction include increased fugitive dust from earth-moving operations and exhaust from construction equipment. Dust emissions would be curtailed during construction by spraying exposed soil surfaces with water, wetting agents, or soil-binding agents. It would be recommended that all trucks hauling debris be covered, stockpile areas stabilized and covered, and exposed areas revegetated.

3.3.10.3 Noise

The action alternatives would generate both noise and vibration from diesel-powered earth-moving equipment such as dump trucks and bulldozers, backup alarms on certain equipment, and compressors. Construction noise levels at the receptors would usually be dependent on the loudest one or two pieces of equipment operating at any specific moment. Noise levels from diesel-powered equipment range from 80 to 95 dB(A) at a distance of 50 feet. Contractors would be encouraged to schedule construction activities during daytime hours to minimize noise impacts for sensitive receptors such as residential developments. Weekend work would be discouraged, with the exception of activities that are best suited for off-peak hours.

The construction project will follow applicable portions of the *Ordinance Concerning Noise Levels in Unincorporated Larimer County (Ordinance No. 97-03)*.

3.3.10.4 Ecology

Potential short-term impacts on the ecological resources would focus on using BMPs during construction activities to enhance the ecological condition of the Dry Creek drainage and prevent further down-cutting of the creek channel.

3.3.10.5 Wetlands

During construction, temporary fencing or flagging would protect wetlands not impacted by construction from unnecessary encroachment. Standard CDOT erosion control measures (M-Standard 107-1), which include the use of soil retention blankets, silt fences, and hay bales, would be conformed to and included in the design plans provided to the contractor. All bare fill or cut slopes adjacent to rivers, wetlands, intermittent drainages, or irrigation ditches would be stabilized as soon as possible by contouring, landscaping, and/or temporary seeding. No fertilizers/hydrofertilization or hydromulching would be allowed near any river, wetland, or intermittent drainage. Continuous work would not be allowed in any flowing water without the use of diversion measures to reduce sedimentation.

Additionally, employing BMPs during construction would minimize indirect impacts. In particular, staging construction equipment or storing construction supplies—particularly fuels—would not be allowed in wetlands or water-related areas.

3.3.10.6 Water Resources

Temporary erosion control and stormwater measures would be implemented during construction activities. During the project design phase, CDOT would develop an SWMP that details the BMPs to be used for construction during the design phase. This SWMP would be prepared in accordance with the *CDOT Erosion Control and Stormwater Quality Guide*. Erosion controls would be designed and implemented to counter these hazards and minimize or eliminate downgradient sedimentation and siltation. This may include the appropriate storage, use, and maintenance of construction equipment. Mitigation measures may include the following as needed:

- staging construction to reduce disturbance
- minimizing access to the construction area

- temporarily seeding disturbed areas
- early final grading and seeding of completed areas
- establishing clean water diversion upgradient of the construction areas
- establishing water quality ponds prior to construction to intercept construction runoff

3.3.10.7 Hazardous Materials

The use of heavy equipment during construction activities may result in inadvertent spillage or leakage of fuel, oil, grease, or chemicals. These releases would be contained and disposed of in accordance with CDOT BMPs.

3.3.10.8 Paleontological Resources

The CDOT staff paleontologist would examine the project design plans to estimate the extent of disturbance of the Pierre Shale, if any, which may occur during construction. Although unlikely, it is possible that scientifically significant fossils are present within the Pleistocene-aged loess deposits within the corridor, and could be impacted during construction. Because Pleistocene-aged bones may be only partially mineralized and are often superficially similar to modern bones, they can be difficult to distinguish. If any subsurface bones or other potential fossils are found within the survey corridor during construction, the CDOT staff paleontologist would be notified immediately to assess their significance.

3.3.10.9 Archaeological Resources

In the event that buried cultural materials are exposed during any phase of construction, the CDOT staff archaeologist would be notified immediately to ensure that the remains are evaluated in accordance with criteria established by Section 106 of the NHPA.

3.3.10.10 Visual

Although construction impacts are short-term, they typically would result in some of the most noticeable visual contrast. Construction operations are a highly visible activity. Excavation activities, equipment, dust, traffic, and road construction likely would attract the greatest amount of attention. Impacts on visual resources during construction may occur from the removal of vegetation required to accommodate the proposed project, resulting in disruption of the landscape frontage of several residences. Permanent revegetation in disturbed areas would be required. Contractors would be encouraged to schedule construction activities during daytime hours to minimize impacts. Weekend work would be discouraged, with the exception of activities that are best suited for off-peak hours.

3.4 Cumulative Impacts

This section addresses the potential impacts of the action alternatives in combination with all other past, present, and reasonably foreseeable future actions. The potential cumulative impacts were identified using data reviewed for an area of influence that varied depending on the environmental resource. The area of influence encompasses the communities and ecosystems with the greatest potential to be influenced by the proposed project. Resource data focused on the resources of concern identified in the project area. Available data sources for the cumulative

impact project area include: FEMA and CDOW mapping, National Wetland Inventory mapping, and Larimer County Land Use documents. Larimer County and city of Fort Collins planning documents were reviewed and planners were interviewed to identify cumulative impacts associated with reasonably foreseeable future transportation and development projects within the area of influence. Reasonably foreseeable transportation projects are defined as those for which funding has been identified and air quality conformity has been completed or is in progress. This information, in combination with impacts of past projects and the No Action Alternative, constitute a “baseline” condition. Impacts anticipated as a result of the proposed action were then added to the baseline condition to determine the contribution from the proposed action.

3.4.1 Existing Conditions

Resources within the project area are described below.

a. Land Use. The land uses in the cumulative impact area of influence surrounding the US 287 project area are predominantly open agricultural, commercial, and residential properties. Industrial properties occur sporadically. These land uses are consistent with the US 287 project area.

b. Wildlife. Wildlife in Larimer County consists of large-to-medium-sized mammals (including white-tailed and mule deer and coyotes), small mammals (including cottontail, raccoon, and red fox), nesting birds (including black-billed magpie, house sparrow, and western meadowlark), raptors (including red-tailed hawk, American kestrel, and great horned owl), waterfowl (including mallard, cinnamon and green-winged teal, and American coot), and several species of reptiles and amphibians. Wildlife occurrences are consistent with those presented for the US 287 project area.

c. Wetlands. Wetlands, including riparian forest/emergent, ditch and canal emergent, wet meadow emergent, and emergent marsh, extend beyond the US 287 project area, depending on the water source.

d. TES Species. TES species that may be found in the cumulative impact area of influence include the bald eagle (federally and state listed as threatened) (winter only), ferruginous hawk (state species of concern), smoky eyed brown butterfly (CNHP imperiled), showy prairie gentian (CNHP vulnerable), northern leopard frog (state species of concern), American peregrine falcon (state species of concern), white pelican (state species of concern), and black-tailed prairie dog (state species of concern). There are areas outside of the US 287 project area but within Larimer County that provide more supportive habitats for these species.

e. Water. Water resources that pass through or are adjacent to the US 287 project area include Dry Creek and its tributaries, the Cache La Poudre River, and Terry Lake.

f. Floodplains. Various floodplains exist within the cumulative impact area of influence, most of which are associated with Dry Creek and the Cache La Poudre River. The Cache La Poudre flows into the South Platte River approximately 37 miles downstream from the project area.

g. Historic Sites. The project area contains two historic sites identified as field-eligible for the NRHP. One site, formerly known as the Elliot Dairy Farm (5LR9895), is considered representative of an early 20th century setting. The other is the UPRR (5LR1815.4). Larimer County includes many other historic sites associated with the area's early settlement.

h. Prime Farmland. Prime farmland in agricultural production occurs sporadically throughout the cumulative impact area of influence and northern Colorado.

i. Visual. The visual landscape of the cumulative impact area of influence can be described as farmland, dispersed rural residential properties, and clustered residential, commercial, and industrial properties concentrated along US 287. This visual landscape pattern extends beyond the US 287 project area.

j. Population. The populations of Larimer County, and the cities of Fort Collins and Loveland have experienced large increases in recent years. Larimer County's growth is expected to continue over the next 20 years. The US 287 project area is experiencing slower population growth patterns.

Only a few scattered developments have been approved within or adjacent to the project area. The lack of growth in the area is primarily due to development fees associated with the Dry Creek floodplain, lack of public improvements, access, and traffic concerns. The US 287 project area is located within the city of Fort Collins UGA boundary, and may be annexed by the city of Fort Collins by 2015, as indicated in their land use plan.

k. Hazardous Materials/Waste. The US 287 project area includes five potential hazardous material sites. It is probable that additional hazardous materials sites are located near US 287 but outside the project area.

3.4.2 Transportation and Development Actions

A review of the top 15 priority transportation projects identified in the North Front Range 2025 Regional Transportation Plan revealed no other proposed projects within the cumulative impact area of influence, and no additional future non-transportation activities were identified in the area. The proposed widening of this portion of US 287 would provide consistency with the existing number of lanes on the eastern terminus at SH 1. The project would remove a bottleneck between SH 1 and the previously completed LaPorte Bypass at the western project terminus. This project provides continuity between two previous projects.

The US 287 project area is located within the city of Fort Collins UGA and may be annexed by the city of Fort Collins by 2015, as indicated in their land use plan. According to Larimer County's Advanced Planning Department, some residential development has been approved south of the project area. Until the area is annexed, Larimer County continues to initiate land use and zoning policies to encourage urban development within the growth areas adjacent to town boundaries. The project area does not have planned transportation or development activities.

3.4.3 Environmental Consequences

The No Action Alternative could result in cumulative impacts. Increased traffic congestion could create environmental impacts including noise, air quality, and safety impacts beyond the US 287 project area within the cumulative impact area of influence. Future increases in traffic congestion could force vehicles to use alternative routes, resulting in impacts on those areas. Such impacts are not quantifiable. The majority of such impacts are contained within the defined US 287 project area.

Cumulative impacts associated with Alternatives A4 and A5 would be similar, with the exception of impacts on Other Waters of the US. Alternative A5 would result in a temporary reduction of the surface area of Terry Lake, which extends beyond the US 287 project area. Alternative B has slightly more potential for cumulative impact for some resources due to the new alignment. The following items summarize cumulative impacts associated with action alternatives A4, A5, and B.

a. Wildlife Habitat. Past and present agricultural and residential/commercial development in northern Colorado has affected wildlife habitat through fragmentation and removal of large tracts of land from natural productivity. Increases in impermeable surfaces, increases in runoff entering creeks and riparian systems, and introduction of non-native or invasive (noxious) weeds have also negatively affected habitat. Although no specific projects have been identified within the cumulative impact area of influence, dispersed developments will continue to result in the loss or fragmentation of wet meadow, riparian, shrub, and grassland habitats. The loss of these habitats would result in corresponding decreases in the numbers and diversity of wildlife species that depend on these habitats. Only Alternative B will result in the loss of wet meadows habitat. Based on minimum habitat impacts described for the US 287 project corridor, the result will have little impact on the net remaining habitat in northern Colorado.

b. Subdivisions. Although two subdivisions are platted southwest of the US 287 project area, development of those parcels are not expected to contribute to impacts associated with the US 287 project area.

c. Wetlands. Cumulative impacts on wetlands include losses anticipated from the proposed project as well as additional impacts from future urban growth within Larimer County. Wetland losses from the US 287 project area range from 0.25 acre for Alternative A4 and A5 to 7.76 acres for Alternative B. Even at the worst case, this does not represent a large portion of the wetlands in northern Colorado.

d. Water Quality. Impacts on water resources would be limited to short-term increases in sedimentation in Dry Creek and intermittent tributaries within the Dry Creek drainage basin crossed by the proposed project. Short-term increases in sedimentation may result if the scattered developments are implemented at the same time the proposed project construction begins. As additional development occurs within the Cache La Poudre drainage basin, impacts on water quality within the Cache La Poudre and South Platte River could occur. Use of BMPs by developers should eliminate impacts on water quality.

e. Prime Farmland. Prime farmland has been affected by urban and commercial development in the cumulative impact area of influence. Loss of prime farmland, in addition to that associated with the proposed project, is anticipated in the future as urban development expands from the city of Fort Collins and other growth areas. Local planning decisions can provide appropriate protection for farmland. Improving an existing roadway along an already disturbed alignment (A4 and A5) has less potential for cumulative impact or loss of farmland than construction of a new alignment, such as Alternative B.

f. Visual. Past agricultural, residential, and commercial development in north central Colorado has contributed to the visual resource cumulative impacts. Currently no future actions in or adjacent to the US 287 project area have been identified. The project area is located within the city of Fort Collins UGA, and may be annexed into the city of Fort Collins by 2015, as indicated in their land use plan. The US 287 project will not create cumulative visual impacts outside of its project area.

g. Hazardous Materials/Waste. Cleanup of hazardous materials/waste associated with implementation of any of the action alternatives will generally only affect the immediate US 287 project area. No cumulative effects are anticipated beyond the US 287 project area.

h. Transportation and Development. The potential improvements associated with this project are being made only to initiate safety and traffic operation improvements. This level of improvement is not forecast to encourage economic growth or development. The project area, because it is located within the city of Fort Collins UGA, is expected to change regardless of the proposed action because of potential annexation and development of new businesses or residences in the areas that are now open agricultural lands. The implementation of any action alternative would not create additional unplanned opportunities for development. Selection of an action alternative would not produce measurable cumulative impacts on demographics, land use, or growth. This project would remove a bottleneck, improving current travel conditions and accommodating future traffic. This would not enhance the timeframe for development inside or outside of the US 287 project area.

3.4.4 Summary of Cumulative Impacts

Considering impacts associated with past, present, and reasonably foreseeable future developments, selection of any of the action alternatives would not result in measurable cumulative impacts.

Table 3-9 on page 3-106 summarizes the potential project-specific impacts and the potential cumulative impacts resulting from any of the action alternatives or the No Action Alternative. The analysis that corresponds to this table can be found in the previous sections of this chapter under Impacts and Mitigation Measures.

The alternatives were evaluated based on conceptual design. There are both positive and negative impacts associated with implementation of all alternatives. Table 3-9 summarizes these impacts, which were described earlier in this chapter. As a result of the assessment and the public involvement program, a Preferred Alternative was identified.

Table 3-9. Summary of Potential Impacts

Receptor	ALTERNATIVES RETAINED FOR ENVIRONMENTAL ANALYSIS				Preferred Action Alternatives
	No Action	Alternative A4	Alternative A5	Alternative B	
Socioeconomic					
Right-of-way acquisition (acres)	None	17.6	16.5	54.5	A4 or A5
Potential relocations	None	32–42	27–38	5	B
Environmental Justice	No impacts	No disproportionately high and adverse effects	No disproportionately high and adverse effects	No disproportionate high and adverse effects	No preference
Prime and Unique Farmland Soils Impacted ¹ ; acres in use for agriculture	No impacts	4.9 acres; 2.6 acres	5.6 acres; 2.6 acres	25 acres; 19.7 acres	A4 or A5
Estimated right-of-way and relocation costs	\$0	\$4.8–\$5.5 million	\$4.2–\$5.3 million	\$2.6–\$3.4 million	B
Construction cost only ²	\$0	\$11.5–\$11.6 million	\$19.1–\$19.2 million	\$11.0 million	A4 or B
Utility relocation cost	\$0	\$1.1–\$1.2 million	\$1.6–\$1.7 million	\$90,000	B
Disruption of emergency services	None	None	None	None	No preference
Traffic (2025)	LOS E	LOS B	LOS B	Existing alignment – LOS D New alignment – LOS A	A4 or A5
Safety (2025; potential for crashes)	Worse	Reduced	Reduced	Existing alignment – minimally reduced compared with No Action New alignment – not applicable	A4 or A5
Cumulative socioeconomic impacts	No impacts	No impacts	No impacts	No impacts	No preference

¹ The National Resource Conservation Service (NRCS) determined the value of the prime and unique farmland soils is less than 160 points for all three action alternatives, therefore, no mitigation is required.

² Construction cost does not include right-of-way acquisitions, relocations, and utilities.

Table 3-9. continued

Receptor	ALTERNATIVES RETAINED FOR ENVIRONMENTAL ANALYSIS				Preferred Action Alternatives
	No Action	Alternative A4	Alternative A5	Alternative B	
Cultural					
Paleontology	No impacts	No impacts	No impacts	No impacts	No preference
Archaeology	No impacts	No impacts	No impacts	No impacts	No preference
Historic preservation/4(f)	No impacts	No adverse effects	No adverse effects	2 potential sites	A4 or A5
Cumulative cultural resource impacts	No impacts	No impacts	No impacts	No impacts	No preference

Table 3-9. continued

Receptor	ALTERNATIVES RETAINED FOR ENVIRONMENTAL ANALYSIS				Preferred Action Alternatives
	No Action	Alternative A4	Alternative A5	Alternative B	
Environmental					
Air Quality	No change	Potential improvement	Potential improvement	Potential improvement	No preference
Geology and Soils	No impacts	No impacts	No impacts	No impacts	No preference
Ecology	No impacts	0.3 acres of riparian habitat	0.3 acres of riparian habitat	Potential impacts on 7.43 acres of wet meadows	A4 or A5
Wetlands permanent impacts	No impacts	0.25 acre	0.25 acre	7.76 acres (includes wet meadows)	A4
Threatened, Endangered, and Sensitive Species	No impacts	No impacts	No impacts	Potential impacts	A4 or A5
Water Quality	No impacts	Erosion control plans	Erosion control plans	Erosion control plans	No preference
Dry Creek Floodplain	No	325 linear feet of encroachment on channel	325 linear feet of encroachment on channel	No encroachment on channel.	A4 or A5
Parkland, Recreation, Trails, and Open Space/4(f) or 6(f)	No impacts	No impacts	No impacts	No impacts	No preference
Aesthetics	No change	Moderate contrast	Moderate contrast	Strong contrast	A4 or A5
Noise	40 properties	48 residences; 0 businesses	43 residences; 0 businesses	39 residences; 2 businesses	B
Potential Hazardous Materials	0	4 sites plus transformers	4 sites plus transformers	1 site plus transformers	B
Cumulative environmental impacts	No impacts	No impacts	No impacts	No impacts	No preference

3.5 Preferred Alternative – A4

The Preferred Alternative meets the project’s purpose and need by improving the road’s mobility and the safety of existing and future travel conditions using the existing US 287 alignment.

In addition, the alignment of Preferred Alternative A4 has been preliminarily engineered to minimize potential impacts on the human and natural environment along the corridor while maximizing safety benefits. The Preferred Alternative experiences the same impacts as, or is environmentally preferred to, Alternatives A5, B, or the No Action Alternative because it would:

- potentially improve air quality
- result in no adverse impacts on the area’s historic resources
- cause the least impact on prime and unique farmlands
- present no impact on threatened or endangered species
- present only a moderate contrast with the area’s visual resources
- provide the least damaging and most practicable alternative to preserving wetlands in accordance with the US Army Corps of Engineers guidelines on Section 404(b)(1) of the Clean Water Act (CFR 33, Section 323)

With the selection of Alternative A4, FHWA and CDOT are committed to the mitigation measures listed in Table 3-10A to lessen or eliminate the negative environmental impacts associated with this alternative. The implementation of Alternative A4 may result in short-term impacts related to construction activities. Table 3-10B describes general mitigation measures that may be used to minimize or eliminate construction impacts.

Table 3-10A. Summary of Mitigation Measures for Preferred Alternative

Alternative 4A Resource and Impacts	Mitigation or Benefits
Right-of-Way Acquisition and Relocations	Mitigation is required.
Implementation of Alternative A4 will require approximately 17.6 acres and between 32 and 42 residential and commercial relocations, at an estimated cost of \$4.8 to \$5.5 million. Relocations will include a range of 4 to 5 single-family residences, 6 apartment units, 8 businesses, and 14 to 23 mobile homes.	The roadway alignment has been designed to avoid as much direct conflict with existing properties as possible. To minimize impacts that cannot be avoided, FHWA and CDOT will conform to the requirements set forth in the Uniform Act. FHWA and CDOT will provide compensation and assistance in finding suitable sites for relocation. Further information regarding relocation assistance is provided in Appendix A.
Environmental Justice	No disproportionately high and adverse effects have been identified.
No disproportionately high and adverse effects on low-income or minority populations have been identified for Alternative A4. Minority and/or low-income populations will experience the same benefits and burdens from Alternative A4 as the entire population.	In compliance with EO 12898, the public involvement program was tailored to meet the needs of minority and/or low-income populations, who will continue to be specifically included in the process.

Alternative 4A Resource and Impacts	Mitigation or Benefits
Environmental Justice (continued)	<p>Additionally, the alignment has been designed to minimize encroachment where feasible. Alternative A4 was modified from the uniform right-of-way cross-section to minimize property encroachment and relocations by decreasing right-of-way acquisition where it was feasible. Attached sidewalk and retaining walls will be used to reduce the number of relocations in some areas. Based on conceptual design, these changes in the cross-section reduce the square footage impacts in Census Tract 13.04, Block Group 1 by 16,446 square feet for A4. Narrowing the roadway cross-section through the use of retaining walls and an attached sidewalk in places will reduce the number of potential relocations. Original estimates indicated that upwards of 42 relocations would be required by Alternative A4. With the modifications in conceptual design, this is now the upper limit of relocations that will be anticipated. It is estimated that only 32 to 42 relocations will be required for Alternative A4.</p> <p>No disproportionately high and adverse relocation impacts on minority or low-income populations have been identified. For Alternative A4, a potential relocation impact on 12 minority or low-income residences have been identified. This does not represent a disproportionately high and adverse effect compared with the total population affected by the project. Note that the minority and/or low-income population from Block Group 13.04 will reap the benefits of the safer and less-congested US 287 associated with the action alternatives.</p> <p>Noise mitigation for PVMHP and Terry Lake MHP is detailed in the noise mitigation section below.</p> <p>Mitigation for potential aesthetic impacts includes but is not limited to sensitive grading techniques, landscaping applications consistent with the surrounding area, and cutoff-type light fixtures that direct the illumination downward.</p> <p>In an effort to identify additional benefits that may be afforded to all potential relocatees, CDOT has begun to establish a partnering effort with the Fort Collins Housing Authority (FCHA), Larimer County, and Neighbor-to-Neighbor (N2N). These additional benefits are derived from the agencies' various programs and established eligibility criteria.</p>
Utilities and Services	No impacts have been identified.
Construction Costs	No impacts have been identified.

Alternative 4A Resource and Impacts	Mitigation or Benefits
Prime Farmland Disruption	No prime farmland mitigation is required.
A total of 4.9 acres of soils categorized as prime and unique farmland will be directly impacted under Alternative A4. Only 2.6 acres are currently in agricultural use.	Because potential losses of soils categorized as prime farmland are not considered substantial enough to warrant further consideration under the FPPA, no prime farmland mitigation measures are proposed. Compensation for land required for the right-of-way will include an assessment of how that land is used, and compensation for loss of property - either physical loss or loss of functionality. Additional measures may also include replacement of any damaged or lost pipes and ditches as well as payment for any crops outside of the highway right-of-way damaged during construction.
Land Use	No mitigation is required.
	See right-of-way, relocation, prime farmland disruption, and wetlands above for areas to be converted to US 287 right-of-way. No other land use impacts are noted.
Emergency Services	Project benefits will occur.
	Alternative A4 will improve mobility and safety on US 287 between SH 1 and the LaPorte Bypass through the addition of a second travel lane, left turn lane, and shoulder. The improved travel conditions will apply to all traffic, including emergency vehicles.
Road Constructibility and Safety	Project benefits will occur.
	Engineering review of the conceptual designs indicate that the Preferred Alternative meets safety and constructibility criteria. The inclusion of a shoulder and median turn lane will help address safety issues along US 287.
Economic Effects	No impacts have been identified.
	Alternative A4 will not create long-term employment opportunities in the project area. Highway construction labor is expected to commute from areas outside the project area. The project will not create additional opportunities for area development. As such, induced growth is not anticipated.
Local Government Recommendation	Alternative A4 has been selected.
FHWA and CDOT met with the city of Fort Collins and Larimer County throughout the process (Chapter 4, Comments and Coordination). Both entities agreed that the existing US 287 needs both capacity and safety improvements, and both agree that Alternative A4 be pursued.	
Archaeological Resources	No impacts have been identified.
	See Table 3-10B for construction mitigation.

Alternative 4A Resource and Impacts	Mitigation or Benefits
Native American Consultation	No impacts have been identified.
By initiating, encouraging, and facilitating Native American consultation, FHWA and CDOT have fulfilled their legal obligations in this regard as stipulated in the Section 106 and Advisory Council regulations.	
Paleontological Resources	No impacts have been identified.
Results of a literature search, museum site search, and field survey indicate a low probability that any paleontological resources will be encountered during implementation of Alternative A4.	See Table 3-10B for construction mitigation.
Historic Preservation	No mitigation is required.
Implementation of Alternative A4 will affect the UPRR where the existing facility crosses the rail line directly west of the North Shields Street intersection. An existing crossing at this location will need to be widened.	It is not anticipated that Alternative A4 will affect the feeling of the rail line or change the setting so as to affect the eligibility of the resource. A determination of No Adverse Effect has been made by the SHPO (June 22, 2001).
Section 4(f)/6(f)	No impacts have been identified.
Publicly Owned Parks, Recreation Areas, and Wildlife/Waterfowl Refuges	No resources were identified in the project area.
Aesthetics	Only BMPs are required.
Alternative A4 will affect views from residences on both sides of the alignment. Road widening associated with Alternative A4 will disrupt the landscape frontage of several residences, potentially increasing visibility to the roadway and resulting in moderate visual impacts.	<p>The following measures could be implemented to reduce or eliminate potential visual resource impacts resulting from the project:</p> <ul style="list-style-type: none"> • Sensitive grading techniques that blend grading with the natural terrain may be implemented. • Revegetating the project site in a manner consistent with the patterns commonly found in the surrounding area, and light fixtures for pole mounting may be a cutoff type, directing illumination downward.
Air Quality	No mitigation is required.
Air quality modeling was not required for this project because all signalized intersections for the action alternatives will operate at LOS C or better.	See Table 3-10B for construction mitigation.
Noise	Mitigation is required.
A total of 48 residential properties will be impacted in the year 2025. Of these, 28 locations have direct access to US 287, which will make a noise wall infeasible as previously described. The remaining 20 locations were localized into three areas (Blue Spruce, Terry Lake, and Poudre Valley Mobile Home Parks). A number of noise wall heights and lengths were analyzed, and the most efficient of these is recommended at each location.	<i>Blue Spruce Mobile Home Park.</i> A noise wall 477 feet long and 14 feet tall was analyzed, and estimated to cost approximately \$167,000. It is predicted to provide an average of 6.1 dB(A) of noise reduction for seven individual properties. This results in a cost-benefit of about \$3,900, which is considered “unreasonable” according to CDOT guidelines. Except for cost-benefit, this is the only feasibility or reasonableness guideline that doesn’t fit. The \$3,900 is slightly higher than the

Alternative 4A Resource and Impacts	Mitigation or Benefits
Noise (continued)	<p>\$3,500 guideline. As a result, the noise wall is recommended at this time. This noise wall analysis will be reevaluated during final design for compliance with CDOT guidelines.</p> <p><i>Terry Lake Mobile Home Park.</i> A noise wall 502 feet long and 13 feet tall was analyzed, and estimated to cost approximately \$151,000. The wall is predicted to provide an average of 5.7 dB(A) of noise reduction for 17 individual properties. This results in a cost-benefit of about \$1,600, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended, provided that a new access point to US 287 is constructed. Otherwise, the break in the wall will reduce its effectiveness.</p> <p><i>Poudre Valley Mobile Home Park.</i> A noise wall 493 feet long and 16 feet tall was analyzed, and estimated to cost approximately \$197,000. It is predicted to provide an average of 4.9 dB(A) of noise reduction for 21 individual properties. This results in a cost-benefit of about \$1,900, which is considered “very reasonable” according to CDOT guidelines. As a result, this wall is recommended.</p> <p>A section of the PVMHP is located south of SH 1, outside of the project area. It is recommended that this be examined during final design to determine if noise mitigation analysis is warranted. It is desirable in order to maintain some commonality between the two sections of the PVMHP.</p>
Ecology	Mitigation is required.
<p>The average width of the affected area will be 80 feet for a distance of approximately 1,584 feet. The land that will be disturbed by Alternative A4 has been developed for predominately residential or commercial use. These areas have little ecological value and generally sustain wildlife species that have adapted to anthropogenic disturbances.</p> <p>Construction activities in the vicinity of the Dry Creek drainage will disturb approximately 0.3 acre of the drainage area’s riparian habitat. This is a loss of important habitat; however, species that use this riparian habitat are expected to resume normal activities once construction and revegetation are complete.</p>	<p>Because of the relatively high ecological value of riparian habitats in Colorado, the application process associated with SB 40 must be completed before initiating any activities with potential to negatively impact these habitats.</p> <p>Mitigation measures to minimize impacts on wildlife habitats along the Alternative A4 alignment may include the following:</p> <ul style="list-style-type: none"> • Spanning Dry Creek with a bridge to provide an access for wildlife to cross beneath US 287 along this drainage. • Surveying the construction area for migratory bird nesting sites prior to construction to avoid disturbance of nesting sites. • Employing BMPs during construction to enhance the ecological environment at the Dry Creek drainage area and prevent further down-cutting of the Dry Creek channel. • Incorporating riparian/wetland restoration practices

Alternative 4A Resource and Impacts	Mitigation or Benefits
Ecology (continued)	<p>and roadway construction activities that may mitigate impacts on this habitat. Riparian habitat lost as a result of construction activities adjacent to Dry Creek will be replaced as part of the wetland mitigation measures.</p> <ul style="list-style-type: none"> • Eradicating existing noxious weed populations within construction areas before construction begins to minimize weed recolonization of disturbed areas. • Prior to construction, establishing and implementing a weed management plan that incorporates the goals and objectives outlined in the CDOT Integrated Noxious Weed Management Plan 1999–2000. As part of the management plan, state-listed noxious weeds will be inventoried and mapped using the North American Weed Management Association (NAWMA) protocols, which will be compatible with the current CDOT GIS system. The potential for noxious weeds to spread will be evaluated. The plan will concentrate on prevention and removal of noxious weed species from the project site. The major components of the plan identified to date include: <ul style="list-style-type: none"> • coordination with other agencies • appropriate herbicide selection and timing of herbicide spraying • use of backpack herbicide sprayers in or around sensitive areas such as wetlands or riparian areas • cleaning equipment between sites to reduce the spread of noxious weeds • topsoil removal • mowing and cutting • reseeded roadsides and right-of-ways with native seed mix followed by application of certified weed-free hay mulch in accordance with the Weed Free Forage Act, Title 35, Article 27.5, CRS
Threatened, Endangered, and Special Concern Species (TES)	No mitigation is required.
Two species have been documented to occur within the project area: the bald eagle and the ferruginous hawk. However, no nesting sites have been observed and these species are likely to inhabit areas more suitable for foraging and nesting. Their use of the US 287 project area for foraging may be minimal. Construction and operation associated with Alternative A4 will not be expected to directly affect these species.	

Alternative 4A Resource and Impacts	Mitigation or Benefits
Wetlands	Mitigation is required.
<p>Construction activities to increase the width of the existing right-of-way on US 287 to a range of 158 to 175 feet have the potential to permanently affect 0.25 acre of wetlands comprised of 0.09 acre of Palustrine Forested and 0.16 acre of Palustrine Emergent wetlands. Another 0.24 acre was estimated to be affected temporarily by siltation fencing and erosion control material that may be placed near the toe of fill slopes during construction based on a 10-foot wide construction area from the edge of fill/cut. Only 0.09 acre of Palustrine Forested wetlands is jurisdictional.</p>	<p>Mitigation options will be identified as closely as possible to the construction site and will be based on a one-to-one replacement ratio.</p> <p>Mitigation of the impacts that occur from expanding the road right-of-way north across Dry Creek will consist of redesigning the stream within the right-of-way in conjunction with bridge construction work. Part of the channel will need to be reconstructed north of the road because widening the road will place earthwork into the creek, as the stream parallels the road in this area. The redesign will consist of developing meanders and widening the floodplain to establish a channel and sandbar complex. Palustrine Emergent, Palustrine Shrub-Scrub, and Palustrine Forested (peachleaf willow) wetlands will be established. Based on the topography of the existing floodplain and bridge construction plans, it is anticipated that approximately 0.25 acre of wetlands will be established adjacent to Dry Creek. Right-of-way needs for relocating Dry Creek will be addressed as part of final design. Additional information is included in Appendix F.</p> <p>The possibility also exists for additional areas of Dry Creek to be rehabilitated and the habitat enhanced by removing debris from this area and planting additional wetland species (e.g., willows). Whether or not such mitigation measures will be feasible to offset impacts from the project needs to be determined, as it will be outside of the existing CDOT right-of-way and is primarily wetland enhancement, although some wetland expansion will also occur.</p> <p>Indirect impacts such as increased runoff and sedimentation from excavation sites during construction and increased runoff from paved surfaces after construction may be minimized by the use of BMPs (e.g., siltation fencing and barriers, perimeter fencing for work areas, erosion control material). See Table 3-10B for construction mitigation.</p>

Alternative 4A Resource and Impacts	Mitigation or Benefits
<p align="center">Floodplain Analysis</p>	<p align="center">Mitigation is required.</p>
<p>Widening of the existing US 287 roadway for Alternative A4 will cause additional encroachment on the Dry Creek floodplain upstream from the existing Dry Creek structure. At the US 287 crossing, Dry Creek runs parallel to the roadway. Widening the roadway will encroach on approximately 325 linear feet of the existing Dry Creek channel. A structure spanning this distance is not needed or cost-effective, so rechannelization will be necessary. A channel with a 5-foot bottom and 2:1 riprapped side slopes will accommodate the 100-year flood. A 50-foot single-span bridge will pass the 100-year flow with adequate freeboard, without altering the existing roadway profile.</p>	<p>The mitigation measures for the Dry Creek floodplain are as follows:</p> <ul style="list-style-type: none"> • Design that considers avoidance of longitudinal and significant encroachment on the floodplains. • Adherence to all FEMA requirements. • Conformance of all hydraulic designs to the requirements of 23 CFR 650. • Adherence to local and CDOT drainage criteria in the design of both major and minor structures. • In anticipation of the approval and construction of the city of Fort Collins improvements to Dry Creek, a flow rate of 818 cfs was used to evaluate the proposed roadway alternatives. During the design phase, the status of these improvements will need to be confirmed and, in the event the approval and construction of the Dry Creek improvements do not take place, the US 287 crossing of Dry Creek will need to be revisited. • All work on this project will conform to Section 107.25 and Section 208 of the <i>CDOT Standard Specifications for Road and Bridge Construction</i>.
<p align="center">Water Quality</p>	<p align="center">Mitigation is required.</p>
<p>Potential impacts on water quality resulting from the construction of Alternative A4 will be primarily associated with potential runoff (erosion and sedimentation) during construction and operation of the roadway. Proper sediment control during construction can protect Dry Creek from increased turbidity in runoff and potential sedimentation impacts.</p>	<p>Mitigation measures for water quality may include:</p> <ul style="list-style-type: none"> • <u>Temporary Erosion Control</u>. Temporary erosion control and stormwater measures will be implemented during construction activities. CDOT will develop an SWMP that details the BMPs in accordance with the <i>CDOT Erosion Control and Stormwater Quality Guide</i>. Erosion controls may be designed and implemented to counter these hazards and minimize or eliminate downgradient sedimentation and siltation. Such measures could include: <ul style="list-style-type: none"> • staging construction to reduce disturbance • minimizing access to the construction area • temporarily seeding disturbed areas • early final grading and seeding of completed areas • establishing clean water diversion upgradient of the construction areas • <u>Permanent Erosion Control</u>. Permanent erosion control and stormwater measures may be implemented as part of the proposed action. BMPs, in accordance with the <i>CDOT Erosion Control and Stormwater Quality Guide</i>, may be implemented and may consist of establishing and maintaining vegetation in areas disturbed by construction. In addition to stabilizing

Alternative 4A Resource and Impacts	Mitigation or Benefits
Water Quality (continued)	soils and reducing the potential for erosion, vegetation can provide stormwater pollutant removal benefits through filtration, sediment deposition, infiltration, and—in some cases—biological assimilation of pollutants by the vegetation. During the final design stage, site conditions, drainage area, and deicing usage/maintenance may be evaluated to help determine proper water quality controls.
Geology and Soils	No impacts have been identified.
Hazardous Materials/Waste	Mitigation is required.
Alternative A4 will impact portions of the Aragon Iron & Metal, Merlin Auto Body, Suburban Propane, and Jax Farm and Ranch properties.	<p>Mitigation measures for hazardous materials/waste encountered before or during construction may include removal and disposal of such materials in accordance with applicable regulations. Because the ASTs at Suburban Propane are portable, their removal will cause minimal impacts.</p> <p>Prior to construction activity, the transformers impacted by the selected alignment will be tested for PCBs. The utility company will be responsible for the handling and disposal of transformers exhibiting the presence of PCBs, if any, in accordance with regulations and requirements.</p> <p>Should Phase II investigations indicate the presence of hazardous materials/waste, a Health and Safety Plan (HASP) will be developed and approved prior to beginning construction activities. The HASP may address incidents involving hazardous substances, potentially contaminated surface water, or groundwater. In addition, a Materials Management Plan (MMP) will be prepared and implemented if warranted by site investigation results.</p>

Table 3-10B. Summary of Mitigation Measures for Construction Impacts

Access/Emergency Services	Water Quality
<p>Any short-term disruption of residence and business access would be avoided during construction of the Preferred Alternative alignment. Although traffic movement through US 287 may be impacted during construction, these impacts will be controlled through the application of standard highway construction practices for traffic management. These practices would be coordinated with local emergency service providers to ensure that construction does not disrupt the provision of emergency assistance.</p>	<p>Temporary erosion control and stormwater measures would be implemented during construction activities. During the project design phase, CDOT would develop an SWMP that details the BMPs to be used for construction during the design phase. This SWMP would be prepared in accordance with the CDOT <i>Erosion Control and Stormwater Quality Guide</i>. Erosion controls would be designed and implemented to counter these hazards and minimize or eliminate downgradient sedimentation and siltation. This may include the appropriate storage, use, and maintenance of construction equipment. Mitigation measures may include the following as needed:</p> <ul style="list-style-type: none"> • staging construction to reduce disturbance • minimizing access to the construction area • temporarily seeding disturbed areas • early final grading and seeding of completed areas • establishing clean water diversion upgradient of the construction areas • establishing water quality ponds prior to construction to intercept construction runoff
Air Quality	Hazardous Materials
<p>Possible impacts from construction include increased fugitive dust from earth-moving operations and exhaust from construction equipment. Dust emissions would be curtailed during construction by spraying exposed soil surfaces with water, wetting agents, or soil-binding agents. It would be recommended that all trucks hauling debris be covered, stockpile areas stabilized and covered, and exposed areas revegetated.</p>	<p>The use of heavy equipment during construction activities may result in inadvertent spillage or leakage of fuel, oil, grease, or chemicals. These releases would be contained and disposed of in accordance with CDOT BMPs.</p>
Ecology	Archaeological Resources
<p>Potential short-term impacts on ecological resources would focus on using BMPs during construction activities to enhance the ecological condition of the Dry Creek drainage and prevent further down-cutting of the creek channel.</p>	<p>In the event that buried cultural materials are exposed during any phase of construction, the CDOT staff archaeologist would be notified immediately to ensure that the remains are evaluated in accordance with criteria established by Section 106 of the NHPA.</p>

Noise	Paleontological Resources
<p>The Preferred Alternative would generate both noise and vibration from diesel-powered earth-moving equipment such as dump trucks and bulldozers, backup alarms on certain equipment, and compressors. Construction noise levels at the receptors would usually be dependent on the loudest one or two pieces of equipment operating at any specific moment. Noise levels from diesel-powered equipment range from 80 to 95 dB(A) at a distance of 50 feet. Contractors would be encouraged to schedule construction activities during daytime hours to minimize noise impacts for sensitive receptors such as residential developments. Weekend work would be discouraged, with the exception of activities that are best suited for off-peak hours.</p> <p>The construction project will follow applicable portions of the <i>Ordinance Concerning Noise Levels in Unincorporated Larimer County (Ordinance No. 97-03)</i>.</p>	<p>Spotty exposures of Pierre Shale occur within the survey corridor, but no fossils have been found. Should an action alternative be selected, it is recommended that the CDOT staff paleontologist examine the project design plans to estimate the extent of disturbance of the Pierre Shale, if any, which will occur during construction. If major excavations are planned, a paleontologic monitor should be present during construction because it is possible that scientifically significant fossils could be impacted. Immediate paleontologic clearance is recommended for all areas within the survey corridor mapped as Broadway Alluvium or Post Piney Creek Alluvium. Although unlikely, it is possible that scientifically significant fossils are present within the Pleistocene-aged loess deposits within the corridor, and these could be impacted during construction. Because Pleistocene-aged bones may be only partially mineralized and are often superficially similar to modern bones, they can be difficult to distinguish.</p> <p>If any subsurface bones or other potential fossils are found within the survey corridor during construction, the CDOT staff paleontologist should be notified immediately to assess their significance.</p>
Wetlands	Visual Resources
<p>During construction, temporary fencing or flagging would protect wetlands not impacted by construction from unnecessary encroachment. Standard CDOT erosion control measures (M-Standard 107-1), which include the use of soil retention blankets, silt fences, and hay bales, would be conformed to and included in the design plans provided to the contractor. All bare fill or cut slopes adjacent to rivers, wetlands, intermittent drainages, or irrigation ditches would be stabilized as soon as possible by contouring, landscaping, and/or temporary seeding. No fertilizers/hydrofertilization or hydromulching would be allowed near any river, wetland, or intermittent drainage. Continuous work would not be allowed in any flowing water without the use of diversion measures to reduce sedimentation.</p> <p>Additionally, employing BMPs during construction would minimize indirect impacts. In particular, staging construction equipment or storing construction supplies—particularly fuels—would not be allowed in wetland or water-related areas.</p>	<p>Although construction impacts are short-term, they typically would result in some of the most noticeable visual contrast. Construction operations are a highly visible activity. Excavation activities, equipment, dust, traffic, and road construction likely would attract the greatest amount of attention. Impacts on visual resources during construction may occur from the removal of vegetation required to accommodate the proposed project, resulting in disruption of the landscape frontage of several residences. Permanent revegetation in disturbed areas would be required. Contractors would be encouraged to schedule construction activities during daytime hours to minimize impacts. Weekend work would be discouraged, with the exception of activities that are best suited for off-peak hours.</p>



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Chapter 4 Comments and Coordination

CHAPTER 4 - COMMENTS AND COORDINATION

4.1 Public and Agency Involvement Programs

A Public Involvement Program (PIP) was conducted, and will continue to be conducted, throughout the study to encourage agency and public participation. The Colorado Department of Transportation (CDOT) solicited comments and suggestions from federal, state, and local agencies, special interest groups, and the public. All comments received were organized and analyzed to highlight issues and concerns. Letters received during the Environmental Assessment (EA) and the formal responses are included in Appendix G, open house handouts are included in Appendix H, and project factsheets are included in Appendix I.

4.1.1 Public Involvement Program

Recognizing the value of public input, CDOT conducted a PIP in concert with the study process. Through this PIP, information about the project has been distributed via factsheets and a website. Comments have been solicited through several meetings with special interest groups, potentially affected property owners, local business owners, local residents, and interested citizens. Formats for the meetings included one-on-one meetings, small group meetings, and two public workshops. Agendas, meeting summaries, and information generated from these meetings are provided in the *US 287 – SH 1 to the LaPorte Bypass Environmental Assessment Scoping, Alternatives Identification and Screening Report* completed in fall 2000. Additional effort was made to reach residents and businesses in the project area through Community Interviews conducted in May and June 2003.

a. Factsheets. Five project factsheets were distributed to local area residents, local businesses, special interest groups, and federal, state, and local agencies. These factsheets, distributed in October 1999, February 2000, July 2000, November 2000, and March 2004, provided information on the status of the project, project goals, schedule, alternatives analysis, environmental analysis, and the public involvement process.

Also, English and Spanish versions of the factsheets were placed in common areas of the Terry Lake, Poudre Valley and Blue Spruce Mobile Home Parks (MHPs). In addition, a one-on-one meeting was conducted with the owners of the Blue Spruce MHP, on March 9, 2000, at their request.

b. Website. A project website, www.us287-north-of-fort-collins.com, was created as a supplemental tool for the PIP. The website contains all the information that was sent out to individuals on the mailing list, including the English and Spanish factsheets and public notices. In addition to being a source of information, the website is an alternative method for soliciting comment.

c. Meetings. Three public scoping meetings were conducted with special interest groups in November 1999, January 2000, and February 2000 (Table 4-1). These meetings represented a range of interests and were small enough to allow a thorough introduction of the project, detailed discussions of issues, and informal dialogue.

Table 4-1. Public Scoping Meetings

Constituents	Date of Meeting	Number of Attendees
Larimer & Weld County Irrigation Company	November 29, 1999	7
North College Avenue Business Association	January 26, 2000	13
Larimer & Weld County Irrigation Company	February 12, 2000	4

d. Public Workshop #1. The first public workshop was held on May 4, 2000, at the Holiday Inn at 3836 Mulberry (I-25/Mulberry exit), Fort Collins, Colorado. Several methods were used to announce the workshop: a public notice was published in newspapers; postcards were mailed to individuals on the project mailing list (Figure 4-1 and Figure 4-2) and notices were posted in the project area. The workshop was held in an informal setting so that individuals could discuss the project one-on-one with Federal Highway Administration (FHWA) and CDOT representatives. In addition to a comment sheet, Post-it notes were provided to encourage attendees to attach their comments directly to the displays.

The purpose of the first workshop was to provide the attendees with a project overview, project process, project schedule, potential alternatives, and screening criteria, and to solicit input on the issues and alternatives to be studied. A total of 30 people attended the workshop, 21 Post-it notes were collected, and 1 person presented written comments (Table 4-2).



Figure 4-1. English Version of Public Notice for Public Workshop #1



AVISO
Colorado Department of Transportation
U.S. 287 from S.H. 1 to LaPorte Bypass

REUNION PUBLICA

El Colorado Department of Transportation (CDOT) ha empezado una evaluación ambiental para investigar posibles soluciones a los problemas de tránsito y seguridad que actualmente existen en el tramo de dos vías de U.S. 287 entre S.H. 1 y el By-pass LaPorte.

En la "open house" se presentará:

- Descripción General del Proyecto • Posibles alternativas
- Procedimiento del Proyecto • Criterios para la selección de alternativas
- Programa del Proyecto • Solicitud de opiniones sobre diferentes aspectos del proyecto y sobre posibles alternativas

Por favor llame a Michelle Li de la firma consultora J.F. Sato and Associates al teléfono (303)797-1200, o e-mail a mli@jfsato.com para obtener mas información sobre esta reunión publica o para hacer cualquier pregunta o comentario sobre el proyecto. Visite el website del proyecto www.us287-north-of-fort-collins.com

FECHA:	4 de Mayo , 2000
HORA:	De 4:30pm a 7:30pm
LUGAR:	Holiday Inn
DIRECCION:	3836 Mulberry (I-25/Mulberry Exit) Fort Collins, CO

Figure 4-2. Spanish Version of Public Notice for Public Workshop #1

Table 4-2. Attendees and Comments Received

Public Workshop #1 <i>May 4, 2000</i> <i>4:30 – 7:30 p.m.</i> <i>Holiday Inn</i> <i>3836 Mulberry (I-25/Mulberry Exit)</i> <i>Fort Collins, Colorado</i>	
Attendance	30
Post-it Notes	21
Written Comments	1
Public Workshop #2 <i>September 14, 2000</i> <i>4:30 – 7:30 p.m.</i> <i>Holiday Inn</i> <i>3836 Mulberry (I-25/Mulberry Exit)</i> <i>Fort Collins, Colorado</i>	
Attendance	53
Post-it Notes	39
Written Comments	8
Letters Received	2
Phone Calls	1

e. Public Workshop #2. A second public workshop was held on September 21, 2000, at the Holiday Inn located at 3836 Mulberry (I-25/Mulberry exit), Fort Collins, Colorado. A combined postcard printed in English and Spanish was mailed to individuals on the mailing list and a public notice was published in the newspapers (Figure 4-3). The workshops were informal so that individuals could discuss the project one-on-one with FHWA and CDOT representatives. Post-it notes were provided to encourage attendees to attach their comments directly to the displays.

 Public Workshop #2 <small>US287 from SH1 to LaPorte Bypass</small>		PUBLIC NOTICE/AVISO PÚBLICO Colorado Department of Transportation	
<p>The Colorado Department of Transportation (CDOT) is currently conducting an Environmental Assessment to investigate solutions for improving safety and mobility on the two-lane segment of US 287 between SH1 and the La Porte Bypass. The second Public Workshop will present information and solicit input on the following:</p>			
<ul style="list-style-type: none"> • Alternatives retained for further detailed environmental analysis • Environmental findings to date • Evaluation Analysis 		<ul style="list-style-type: none"> • Evaluation criteria • Initial alternatives comparison • Summary of issues resulting from scoping 	
<p>For further information please contact Michelle Li of J.F. Sato and Associates with any questions or comments at (303)797-1200 or e-mail at mlil@jfsato.com. Visit the project website at www.us287-north-of-fort-collins.com</p>			
<p>El Colorado Department of Transportation (CDOT) ha empezado una evaluación ambiental para investigar posibles soluciones a los problemas de tránsito y seguridad que actualmente existen en el tramo de dos vías de US 287 entre SH1 y el By-pass La Porte. La Segunda Reunión pública presentará información y solicitará opiniones en lo siguientes temas:</p>			
<ul style="list-style-type: none"> • Alternativas que serán estudiadas en mas detalle • Impactos ambientales ya definidos • Resumen de cuestiones incluidas como resultado del proceso de "Scoping" 		<ul style="list-style-type: none"> • Criterios de evaluación • Comparación inicial de alternativas • Analisis de evaluación del Medio Ambiente 	
<p>Por favor llame a Michelle Li de la firma consultora J.F. Sato and Associates al teléfono (303)797-1200, o e-mail a mlil@jfsato.com para obtener mas información sobre esta reunión publica o para hacer cualquier pregunta o comentario sobre el proyecto. Visite el website del proyecto www.us287-north-of-fort-collins.com</p>			
FECHA:	21 de Setiembre, 2000	DATE:	September 21, 2000,
HORA:	De 4:00pm a 7:00pm	TIME:	Between 4:00pm-7:00pm
LUGAR:	Holiday Inn -Coral Room II	LOCATION:	Holiday Inn-Coral Room II
DIRECCION:	3836 Mulberry (I-25/Mulberry Exit) Fort Collins, CO 970-484-4660	ADDRESS:	3836 Mulberry (I-25/Mulberry Exit) Fort Collins, CO 970-484-4660

Figure 4-3. Combined Spanish and English Version of Public Notice for Public Workshop #2

The second workshop was held to share information regarding the alternatives retained for further detailed environmental analysis, environmental findings to date, evaluation analysis, evaluation criteria, initial alternatives comparison, and summary of issues resulting from scoping. Fifty-three people attended the second workshop, 39 Post-it notes were collected, 8 comment sheets were submitted, and 2 letters and 1 phone call were received in response to the workshop (Table 4-2).



Project Team Members and Workshop Attendees, September 21, 2000

f. Community Interviews. CDOT proactively sought to involve the residents, property owners and businesses that border the action alternatives under study by conducting door-to-door community interviews completed between April and June 2003.

The team began interviews in the morning and concluded in the afternoon. Two attempts were made to contact each property owner. Packets of information were left at the doors of residences where no one was available. The packet contained a notice of attempt to contact, a brief summary of the project (with contact information), an aerial photograph of the project area with an overlay of the alternatives being studied, and the questionnaire that was used in the interviews with a postage-paid return envelope. Information was printed in both English and Spanish. Detailed information regarding this effort is included in Chapter 3, Environmental Justice, and Appendix B.

4.1.2 Summary of Public Comments

Comments received from the public primarily focused on:

- traffic and safety
- project schedule
- environmental concerns such as noise, historic resources, etc.
- access
- design
- Action Alternatives A4, A5, and B along with the No Action Alternative
- public involvement

The following issues and responses in this section were formulated during the EA process and do not reflect selection of the Preferred Alternative.

4.1.2.1 Traffic and Safety

Issue: Unprotected railway crossings are a problem. Would an overpass have to be built at the railroad crossing for option B? Would there be a traffic light at the Shields crossing?

Response: *The transportation facility to be built will be in compliance with all American Association of State Highway Transportation Officials (AASHTO) and safety standards. At-grade crossings will be considered, as an overpass is not warranted. It is assumed that a new traffic light will be installed at the intersection of Alternative B and North Shields Street.*

Issue: There is currently a risk of accidents and life-threatening situations along the existing alignment. There is no left-turning lane or traffic light. Imagine waiting for a semitruck speeding down US 287 and my vehicle at full stop waiting for traffic to clear to turn into my property.

Response: *Access concerns have been acknowledged as a safety issue along this stretch of US 287. Widening the existing alignment from two to four lanes will improve the safety conditions. There will be turn lanes for left turns at appropriate locations. Ten-foot shoulders that will allow room for right turns will be provided if there is not a right turn lane. This information was presented at the second public workshop. In addition, CDOT has initiated an Access Control Plan for this stretch of US 287 to address access concerns. Details for appropriate turn lanes, traffic signals, and safety improvements will be addressed during the design process, after a Preferred Alternative is chosen.*

4.1.2.2 Schedule

Issue: When will the project be built? We need it soon.

Response: *Proper analysis must be completed in compliance with all federal and state laws prior to construction. All reasonable alternatives and environmental considerations need to be analyzed in an Environmental Assessment to determine a Preferred Alternative. Agency and public involvement is a large part of this process. Based upon the findings of the Environmental Assessment and determination of a Preferred Alternative, the design process will commence. Construction will follow design.*

Issue: Will construction be dependent on funding? Will the construction date fluctuate?

Response: *Funding has been identified for the construction of the project under the Statewide Transportation Improvement Plan (STIP). The construction date may fluctuate due to the completion of the EA, the design process, and funding availability.*

4.1.2.3 Public Involvement

Issue: What is the consensus of opinion from the current landowners along the existing roadway towards an improvement project? They are the most affected by the project.

Response: *This is a very good point and is the reason for the EA. During the EA, we conducted public involvement activities throughout the project to gain a good understanding of the public sentiment. We will consider this information during the decision-making process for this project.*

Issue: Appreciate CDOT's effort in meeting with the public. Will this be an ongoing process? What are the opportunities for future involvement?

Response: *Public involvement is an integral part of the environmental process and decision-making. The public has been involved throughout this process. Project information was presented at two public workshops: May 4, 2000, and September 21, 2000. After preparing the EA document, the Preferred Alternative will be identified in the EA document, which will be available for public review during a mandatory 30-day public review and comment period. After the EA has been released for review for at least 14 days, a public hearing will be held to solicit input and comment on the Preferred Alternative. Should participants desire, a court recorder at the public hearing can formally record their oral comments. These comments will then be forwarded to FHWA to assist in their decision-making.*

4.1.2.4 Environmental Concerns

Issue: How can we go through wetlands without adversely affecting the ecosystem?

Response: *Potential effects on wetlands have been thoroughly evaluated in the Environmental Assessment to determine the Preferred Alternative. If wetlands are directly impacted by the least damaging practicable alternative, mitigation measures including replacement of the impacted wetlands will be implemented as described in the EA.*

Issue: Consider the increase of pollutants and of gasoline and diesel fumes. My property borders Dry Creek, which in turn flows into one of the main irrigation canals that is used for crops and livestock. Both my neighbors and myself currently have horses drinking from Dry Creek.

Response: *Potential impacts on water quality as a result of this project have been documented in the EA and appropriate mitigation measures have been prescribed. Analysis of Dry Creek determined that the water is suitable for irrigation of crops and is not hazardous as drinking water for livestock. All necessary permits will be obtained and Best Management Practices prescribed in compliance with state and federal laws for the Preferred Alternative. In addition*

to stabilizing soils and reducing the potential for erosion, the vegetation can provide stormwater pollutant removal benefits through filtration, sediment deposition, infiltration, and assimilation of pollutants. Air quality has been considered in the EA and concurrence has been obtained from the State Health Department that long-term air quality would not be adversely affected by the project. There could be some temporary increases in fumes during project construction.

Issue: Consider impacts on environmental issues and wildlife areas. This land is part of the last urban forest in the Fort Collins area. There are ancient trees that are 100 years old, which host a unique nesting for rare wood ducks and other wildlife. These ducks nest in the large trees here because of the protection and for the water source from Dry Creek. This urban forest is also on many southern flight paths for migration for a number of species of birds. Other animals that would be affected would be the fox and deer that come to drink from the creek and den in this area. Muskrat and beavers are present in the creek area as well. This is a true self-contained environment.

Response: *All ecological issues have been evaluated within the project's area of influence. Potential impacts relative to each alternative are described in the EA document. These include direct, indirect, and cumulative impacts. Losses of riparian habitat, among other criteria, were considered during design of the alternatives to minimize as much direct conflict as possible. Bridging Dry Creek will reduce the amount of riparian habitat that would be lost to roadway construction. Moreover, riparian habitat will be established as part of the project's mitigation measures after construction has been completed.*

4.1.2.5 Noise

Issue: What are the CDOT standards for noise control?

Response: *CDOT uses the CDOT Noise Analysis and Abatement Guidelines (February 1, 1995 for projects initiated before 12-01-01). During final design, the appropriate application of mitigation measures will be identified using the Colorado Noise Abatement Determination forms and incorporated into the project. This will include a cost-benefit analysis of each potential noise wall. In addition, construction noise will be mitigated where possible during construction. Further information regarding noise mitigation measures can be found in the noise section of Chapter 3.*

Issue: Please consider an earth berm to decrease noise, pollution, and accident risk. It is already a very loud road. Some cities are building walls and planting trees to help.

Response: *All reasonable and feasible methods of noise abatement will be considered during final design to minimize impacts on identified receptors, in accordance with the CDOT Noise Analysis and Abatement Guidelines. Earth berms can be an effective means of noise abatement, but they do require greater width to construct within*

the highway right-of-way. Trees are not an effective method for reducing traffic noise; however, they can help as a visual buffer.

Issue: The elevated railroad intersection along Alternative B will elevate noise for the whole area.

Response: *Analysis of traffic volumes and number of train trips indicate that grade-separated or elevated intersection of Alternative B and the railroad is not required.*

Issue: Residents along US 287 want restrictions on use of jake brakes. It would be an easy, inexpensive fix to put up a few signs that prohibit the use of them.

Response: *Jake brakes are an efficient braking system for heavy trucks that are widely used. The best way to address the issue presented is to enforce regulations to install efficient mufflers. In 2000, the state of Colorado passed a law that increased the fine for lack of mufflers on jake brakes from \$50 to \$550 to better enforce the use of efficient mufflers.*

Issue: Some supported the idea of prohibiting or restricting truck traffic on existing US 287, regardless of which alternative is selected, and regardless of the city's truck bypass outcome. They simply believe trucks create safety and noise problems.

Response: *Unfortunately, CDOT cannot prohibit or restrict truck traffic as part of this project. This problem has been acknowledged and is the reason for city of Fort Collins' Northern Colorado Truck Mobility/SH 14 Relocation Study (PBS&J 2001).*

Issue: Traffic is already growing on US 287 and the additional traffic in this area would increase additional noise and increase stress levels for animals and humans.

Response: *Noise impacts have been determined and mitigation measures prescribed as part of this EA.*

4.1.2.6 Access

Issue: A raised median is not a good idea for Alternative A. We need full access (left turns) on and off US 287 (don't want raised medians). We want a central lane to drive out on and go either direction. Otherwise, people who live along US 287 have to drive ¼ mile extra to get in and out of their property. If the raised median is chosen, we would prefer the state to buy our property.

Response: *Currently, CDOT has determined to provide a painted rather than raised median for alternatives along the existing alignment. A painted median will reasonably meet the accessibility needs of the property owners along the roadway.*

Issue: Access on A4 will be very dangerous for the residences and businesses. We already have a lot of difficulty getting in and out of our property.

Response: *Widening the existing alignment from two to four lanes will improve safety conditions. In addition, CDOT has initiated an Access Control Plan to address residents' concerns.*

Issue: Need a left turn lane going into my business, so large vehicles can easily access either direction. The access (on Alternative A) is currently shown as a right-in/right-out, but need to have a full movement access, since most of their business comes from Fort Collins.

Response: *CDOT recognizes the need to address specific residential and business access concerns. Access will be addressed with affected property owners during design after the Preferred Alternative is selected. In addition, CDOT's Access Control Plan will address these concerns. The design for the four-lane widening includes a painted median for left turns.*

Issue: Need a semitrailer access to the building which houses the Stove Company, the current layout needs to be reevaluated to make sure we can stay in business.

Response: *CDOT recognizes the need to address specific residential and business access concerns. Access will be addressed with affected property owners during design after the Preferred Alternative is selected. In addition, CDOT's Access Control Plan will address these concerns.*

Issue: Need to preserve north access into Aragon's north lot, semitrailer access all the way around the building, and access to and around the front lot. Aragon's north entrance must be wider to accommodate semitrailer trucks; the existing entrance is too narrow. The locked gate at the main entrance should be placed far enough from the roadway that when a truck pulls in, they will not extend out onto US 287 (no less than 65 feet).

Response: *CDOT recognizes the need to address specific residential and business access concerns. Access will be addressed with affected property owners during design after the Preferred Alternative is selected. In addition, CDOT's Access Control Plan will address these concerns.*

Issue: I have two requests: 1) please do not deny us the freedom to enter our property from either direction and 2) could the stoplights be timed so we will not be trapped in our driveways for too long?

Response: *CDOT recognizes the need to address specific residential and business access concerns. Access concerns will be determined during the design phase, after a Preferred Alternative has been selected. A raised median could be introduced*

sometime in the future; however, currently, CDOT has determined that a painted median best meets the needs of the property owners along the existing alignment.

Stoplights will be timed to minimize overall delay at traffic signals. The higher volume signalized movements will receive more “green” time than those of lower volume. Interference between access points and competing traffic near signalized intersections will be considered during the design. However, as with all unsignalized intersections, traffic going into and out of driveway access points will have to wait for acceptable gaps in the traffic stream to make their movements. CDOT’s Access Control Plan will further address access concerns.

4.1.2.7 Design

Issue: Why separate the farm [on Alternative B]? Can a road be built with an underpass? Why not straighten the road [on Alternative B] and relocate the home down towards the barn?

Response: *Alternative B was designed using AASHTO standards and to minimize as much direct conflict with existing properties as possible. Straightening the B alignment will impact more properties, therefore, the meandering alignment was chosen as the best alignment. Landowner conflicts will be addressed during the design phase should this alternative be selected.*

Issue: How high above current grade would the roadway be?

Response: *The elevation would depend on the design speed. The proposed roadway profile is close to the existing grade and will be further addressed in the design phase.*

Issue: Bike path would be a great idea.

Response: *Sidewalks and a 10-foot shoulder to accommodate bicycles will be implemented as part of this project.*

Issue: The typical section [painted median as presented at the open house] looks like a good idea for Alternative A.

Response: *CDOT has determined that a painted median should be included for alternatives along the existing alignment. A painted median will reasonably meet the accessibility needs of the property owners along the roadway and will not preclude future design options such as a raised median.*

Issue: Many residents were relieved that most houses on the south side of US 287, west of Shields, were not going to be impacted under the existing alignment alternatives.

Response: Design of the alignments is subject to change until after completion of the EA and design process. However, CDOT evaluates all environmental impacts in the process, including potential relocations and compensation for acquired property.

4.1.2.8 Alternatives A4 and A5

Issue: Where are the retention/detention structures to catch 50-year events before entry into Dry Creek, specifically for option A4?

Response: Retention/detention structures will be designed and incorporated, as appropriate, during preliminary design.

Issue: Building the four-lane highway makes sense. The existing alignment is good and can clean up the Aragon site.

Response: Actually, the Aragon property is far cleaner than some believe. In the earlier 1990s, Aragon completed a cleanup program that was very effective. In addition Kumar and Associates, a geotechnical and hazardous materials subconsultant, determined the site clean of contamination. More information is provided in the hazardous materials section of Chapter 3.

Issue: The last two times the DOT took property in our area they took our side. How about going to the other side this time?

Response: CDOT evaluates the full range of potential human and natural environmental impacts, along with traffic and engineering concerns, to identify the Preferred Alternative. Comparison of these factors relative to each alternative can be found in the EA document.

Issue: US 287 needs repair and to be made into a safer and a better road for the future. It keeps the noise, aesthetic, and traffic impacts in an existing commercial corridor, does not disrupt wetland area or current agricultural uses. It is better to widen US 287 in front of my house instead of putting a highway through existing open space in back of my house.

Response: Safety, noise, aesthetics, traffic, wetlands, and prime farmlands are all receptors that are considered during determination of the Preferred Alternative. The analyses provided in the EA will enable a more informed decision during this process.

Issue: We don't want Alternative A4 and A5. Alternative A takes too many lanes and too many homes compared to B. Alternatives A4 and A5 will put some good folks out of business.

Response: The analyses provided in the EA will enable a more informed decision in determining the Preferred Alternative. However, when considering right-of-way

impacts, the full range of environmental impacts including farmland losses, sensitive natural areas, and the amount of area needed to construct the facility are also considered in addition to residential and commercial impacts. In areas where residences or businesses cannot be avoided by the Preferred Alternative, CDOT will provide compensation and relocation assistance.

Issue: For Alternative A5, the reconstruction of Terry Lake Dam, and the effect of the existing water table. Because we are directly across from Terry Lake, our water table is 10 to 12 feet below the surface of the soil. My existing well is positioned at the correct distance below the surface to irrigate and provide water for my horses. This water not only runs into Dry Creek but also continues underground in all directions.

Response: *If Alternative A5 is selected as the Preferred Alternative, reconstruction of the Terry Lake Dam is not anticipated to result in long-term impacts on groundwater elevations in the vicinity of the lake. However, short-term, temporary impacts to lake surface water and groundwater elevations may result from any dewatering necessary to accommodate construction of the new dam.*

Issue: A business owner on US 287 was very opposed to either of the existing alignment alternatives, as both would require the acquisition of land from the front of his property that he uses for the display of his merchandise.

Response: *Roadway alignments associated with each action alternative in the EA have been designed to avoid as much direct conflict with existing properties as possible. To minimize impacts that cannot be avoided and to compensate for businesses that lose functionality, CDOT will meet the requirements set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) and the Uniform Relocation Act Amendments of 1987 (Public Law 100-17).*

4.1.2.9 Alternative B

Issue: Alternative B looks like a much safer route for US 287 than the present location ever will be, and less expensive. Alternative B would be the best as the impacts on homes and businesses are much less. Heavy traffic and truck traffic will be cut by 50 percent near our homes.

Response: *Safety, cost, right-of-way impacts, and traffic are all factors that are considered during determination of the Preferred Alternative. The results of how each of these factors is impacted by the alternatives are presented in the EA document.*

Issue: Two roads aren't any better than one. No new lane miles for Larimer County - please!

Response: The improvements associated with this project are being made only to serve the existing traffic needs in the area and not as part of an effort to encourage further economic growth development. The possibility of constructing a new facility and the impacts associated with that construction are compared with improvements to the existing facility in the EA.

Issue: Alternative B is the most feasible, the safest, the most environmentally sensitive (trucks would not have to stop if light was green). Less right-of-way impact, homeowners and businesses would be better off.

Response: The analyses provided in the EA will make the ultimate determination of the most feasible, safest, and environmentally Preferred Alternative. However, when considering right-of-way impacts, farmland losses and the amount of area needed to construct the facility are considered in addition to residential and commercial impacts.

Issue: Alternative B would require eight times as much cropland to be gobbled up as with the other alternatives. Alternative B would affect up to five and a half times the area of wetlands as with of the other alternatives. Wetlands have already been deemed important enough to require federal control.

Response: Effects on prime farmlands and wetlands have been evaluated in this EA. Areas considered to be prime farmlands are addressed pursuant to the Farmland Protection Policy Act (FPPA), and wetlands and Other Waters of the US have been addressed according to Section 404 of the Clean Water Act. These analyses will be utilized in determining the Preferred Alternative as a result of this EA.

Issue: A new road (Alternative B) through fields and pasture to the south would negatively impact the rural setting. If Alternative B was selected, noise and aesthetics would have a severe contrast with the existing rural atmosphere.

Response: Impacts on aesthetic resources and noise impacts were evaluated for each alternative as part of this project. Full evaluation of these impacts and prescribed mitigation measures are included in the EA and will be considered during the determination of a Preferred Alternative.

Issue: Alignment B would split my farm in half and I would not be able to cross the new road to farm the southern portion. To get to the lower field I would have to haul drive machinery around 2 miles. If you choose this alternative, I would expect you to build an overpass or buy the isolated portion of my farm.

Response: CDOT will work closely with the property owners when land is required for the Preferred Alternative to ensure that appropriate compensation is allocated. This process will meet the requirements set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Uniform Relocation Act Amendments of 1987.

4.1.2.10 Miscellaneous

Issue: You should have an alternative that is a combination of moving the reservoir and the meandering alternative.

Response: *CDOT has agreed to evaluate this combination alignment, designated as Alternative A5. After initial screening, this alignment has been determined to be feasible and is being evaluated in this EA.*

Issue: One person suggested that US 287 should go north around Terry Lake.

Response: *The goal of this EA is to improve both mobility and safety along the existing US 287 within the project area. All feasible alternatives to accommodate this goal were evaluated in a screening process, of which the remaining alternatives are being studied in this EA.*

4.2 Agency Scoping

Federal, state and local agency representatives were actively encouraged early on to participate in the process. Comments and suggestions were received through one Agency Scoping Meeting and three Agency Status Meetings.

The following is a comprehensive list of agency invitees:

- City of Fort Collins Transportation
- City of Fort Collins Engineering
- City of Fort Collins Planning
- Larimer County Public Works
- Larimer County Engineering
- Larimer County Planning
- North Front Range Transportation and Air Quality Planning Council
- Fort Collins City Council Representative
- LaPorte County Commissioner, District 2
- Colorado Division of Wildlife
- US Army Corps of Engineers
- Colorado State Patrol

These meetings coincided with key milestones in the process to ensure that comments were received in a timely manner.

Agency Scoping Meeting – November 10, 1999

The overall purpose of this meeting was to provide the various agency representatives with a project overview and to identify issues pertinent to the project.

The meeting agenda focused on:

- project overview
 - purpose and need
 - project goals
 - project schedule
- EA process
- PIP
- issue identification
- future coordination activities

Agency Status Meeting #1 – April 20, 2000

The purpose of this meeting was to provide information and solicit feedback on the following topics:

- alternatives identified to date
- preliminary alternative analysis results
- traffic study update
- PIP
- Public Workshop #1 Workplan

Agency Status Meeting #2 – September 13, 2000

The purpose of this meeting was to provide information and encourage input on the following topics:

- environmental analysis findings to date
- evaluation criteria
- scoping report results
- next steps

Agency Status Meeting #3 – April 9, 2001

The purpose of this meeting was to relay preliminary results and solicit input on the following topics:

- draft summary of impacts
- identification of alternatives retained for further study

4.2.1 Local Agency Meetings

CDOT participated in numerous meetings with local agencies to discuss specific aspects of the project. These meetings included presenting project information at a debriefing to the city of Fort Collins and Larimer County on July 27, 2000, Larimer County Health and Environmental

Advisory Board on September 12, 2000, and the city of Fort Collins Transportation Board meeting on September 20, 2000. These meetings offered the opportunity to focus on the particular agency's issues and concerns in detail. Environmental discipline specialists from the study team were available to discuss aspects of the project with their local agency counterparts.

An additional project update and coordination meeting were conducted with Larimer County and city of Fort Collins representatives on December 11, 2003.

4.2.2 Summary of Local Agency Comments

During meetings with local agencies, issues and questions were raised regarding the acquisition process, potential environmental effects, traffic concerns, and the process and schedule. These issues and inquiries were categorized and are summarized below. These issues and responses do not reflect a decision for a Preferred Alternative.

4.2.2.1 Acquisition Process

Issue: How were the estimated residential areas identified in the affected area, particularly for Alternative B? This concern is in relation to SH 1 and the mobile home parks in that area. We would like more information for which residential areas will be affected.

Response: *The right-of-way needed for the proposed widening construction is a larger area than the actual roadway. The total right-of-way for each alternative is not only the area needed to construct the roadway, but also includes remnants. The worst-case scenario is presented so that the general public is aware of how much land may be acquired during the design phase. Alternative A4 will impact more residences than Alternative A5, which avoids residences on the south side, and Alternative B, the new corridor, which is primarily agricultural.*

Issue: What is the boundary between the road and housing? Keep in mind that during the truck route study, the community felt 100 feet was too close.

Response: *If the right-of-way line comes within 5 to 10 feet of a structure, there is a potential that the structure will be taken. In the past, the right-of-way has come within 5 to 10 feet without relocating a house. The decision is made on a case-by-case basis. Anyone who is interested in CDOT's right-of-way acquisition process can pick up a brochure at any CDOT office. The brochure explains the owner's rights and entitlements of real estate property to be acquired for a federally funded project.*

4.2.2.2 Environmental

Issue: We are concerned with agricultural fields and large farmland disruption and segregation or parcels.

Response: *Areas considered to be prime farmlands will be addressed pursuant to the FPPA. A survey was conducted to identify prime, unique, and statewide important farmlands in the project area, and a Form AD-1006, Farmland Conversion*

Impact Rating, was completed in coordination with the Natural Resources Conservation Service (NRCS). Potential impacts on farmland resources from the action alternatives will be addressed in the EA.

Issue: Have past pesticide usage and affected water quality been considered?

Response: Current water quality conditions and the project's potential effects on water quality are addressed in the EA.

Issue: Was hazardous waste sampling done at Aragon Metal? The concern is with migration off the site.

Response: The first phase was to perform an initial record search through the EPA and CDPHE records. Then a followup was done. We spoke with the operator of Aragon and were informed that due to the thick layer of clay underneath the property they feel that any contaminant migration through to groundwater flow is very unlikely. In the early 1990s, Aragon completed a cleanup program that was very effective. As a final measure, Kumar and Associates, a geotechnical and hazardous materials subconsultant, was hired to drill the site to check for contamination. The samples taken came back clean. The results confirm that there is no migration of heavy metal contamination through groundwater flow at the Aragon site.

Issue: Why doesn't the initial screening include floodplain data? Suggested including floodplain features on the maps.

Response: During the initial screening, only criteria that would qualify as a fatal flaw or could drastically affect an alternative were included on the maps. Floodplains were not considered as the roadway can be designed across the channel. It is possible that, using the Hydrologic Engineering Center-River Analysis System (HEC-RAS) model, the floodplain issue can be approximately addressed. However, floodplain data was included on all the maps after the alternative analysis prior to the environmental analysis. It is also an environmental feature considered within the water resources section of the EA.

Issue: There was concern about locations of hazardous material sites – the city of Fort Collins will provide more info to JFSA.

Response: The hazardous materials locations have been rechecked and corrections made as needed.

Issue: There are floodplain issues in regards to the Poudre River for Alternative H and for all alternatives crossing Dry Creek. The city of Fort Collins has no issues with Terry Lake Dam since it is privately owned. The city has also adopted a product corridor for the Poudre River. A product corridor is very close to the tenth-of-a-

foot floodway in most cases and is calculated as $[(\text{Depth}) * (\text{500-year-flow Velocity})] \geq 6$. Meaning that whichever boundary, the floodplain or the product corridor, is more conservative, that boundary will be used.

Response: Because the remaining alternatives do not cross the Poudre River, the product corridor does not need to be considered for this project. The remaining alternatives, A4, A5, and B, cross the Dry Creek floodplain, which will be addressed appropriately in the EA.

4.2.2.3 Traffic

Issue: Is there a difference between summer and winter, weekday versus weekend, or tourist traffic versus commuter traffic?

Response: Traffic counts for this project were obtained in October 1998 through seven-day tube counts. Tube counts involve a rubber tube stretched across the roadway and a microprocessor attached to one end of the tube. The microprocessor records the number of vehicles as the vehicles pass over the tube. These volumes were then annualized using CDOT's historical factors for the month in which the counts were taken. Because counts were only taken during one period of the year, seasonal variations were not identified.

Issue: Was the Level of Service (LOS) based on an arterial analysis or volume/capacity (v/c) ratio?

Response: The LOS was derived from two-lane highway and multilane rural/suburban highway capacity analysis.

Issue: National Cooperative Highway Research Program Report (NCHRP) Report 279 states that a volume of 23,000 ADT is above the maximum threshold for a striped median. A raised median is warranted, which would match the city of Fort Collins's adopted standard for North College.

Response: NCHRP 279 lists warrants for continuous two-way left turn lanes of 10,000-20,000 vehicles per day (vpd) for existing four-lane highways. The A4 and A5 alignments fall just outside of this range with 23,000 vpd. However, if a raised median were to be used, access would be restricted creating an undue burden on residents and either frontage roads or long inconvenient travel routes would be required. The cross-section proposed is necessary to reasonably meet the accessibility needs of the property owners on the roadway. This section has been used for all of the US 287 improvements from Broomfield to Loveland. Since there are no parallel streets on which to gain other access, all access must be obtained from US 287. In addition, a raised landscaped median would impair the sight distance for drivers. This would create a safety concern that does not allow appropriate sight distance due to the obstructions provided by the median, impeding a driver's reaction time.

Issue: The 2020 traffic volumes from the travel demand forecast model do not seem to be balanced at each of the intersections.

Response: *All numbers were checked for reasonableness and similarity with existing volumes. We also coordinated these projections with the North College subarea model. The volumes shown at the LaPorte Bypass are one-way, so they need to be added together, which makes the numbers more consistent. All other projected volumes are consistent with current traffic volumes and turn movements. (Please refer to Chapter 2 of this document for updated traffic volumes to 2025.)*

Issue: In terms of alignments, we like the limited access; however, we do not see the need for an expressway with high design speed running through the city of Fort Collins.

Response: *We will investigate what the appropriate design speed is for this project.*

Issue: Adding to the previous comment – in terms of Alignment B, have you considered unanticipated development? Has the future development effect from the roadway been considered? It needs to be.

Response: *We incorporated the growth and development projections from the models provided to us by the city of Fort Collins, the North Front Range Metropolitan Planning Organization, and Larimer County. These were checked for reasonableness with trend analysis of historic volumes. We will continue to coordinate with the city of Fort Collins's Advance Planning Department to ensure that our projections match their estimates on development at these locations. The potential for induced development will be considered in the EA. Note that induced growth was originally considered for evaluation in the EA, however, after gathering more data it became apparent that the analysis of induced growth would be based on speculation. As such, induced growth was not analyzed.*

Issue: What assumptions were made for socioeconomic data? We would like to see what the density for development is.

Response: *There is no indication at this time that selection of any alternative would directly cause additional population growth. Generally, there could be induced development (economic growth and/or residential housing) associated with selection of any alternative considered in this EA. However, induced development could not occur without guidance from Larimer County and the city of Fort Collins, both of which have substantial control over project area land through land use and zoning policies. The level, location, and context of any induced development would be highly speculative and cannot be projected with any accuracy at this time.*

Issue: Why were projections for land use based on current use, not on possible redevelopment?

Response: Projections for land use were based on current use since induced development is unpredictable and cannot be projected with any accuracy at this time, as stated in the above response.

Issue: How are bridge, floodplains, and dam costs estimated?

Response: These details will be considered during the design phase. Bridge costs are based on previous projects of similar size and scope, as recorded by CDOT. Dam costs are based on a geotechnical report prepared by Kumar and Associates. Areas of consideration include soil composition, dam stability, bedrock elevations in the area, slopes, materials, and slurry wall depth.

Issue: Have access problems and turning lanes been addressed yet? You need to present the access information.

Response: There will be turn lanes for left turns at appropriate locations. Ten-foot shoulders that will allow room for right turns will be provided if there is not a right turn lane. This information was presented at the second public workshop and access will be negotiated with the owners during the design phase.

Issue: The city of Fort Collins would like to see city standards (i.e., raised landscape medians) within the Urban Growth Area. Be more specific when discussing the correct visual for highway improvements and medians.

Response: We will do our best to meet the city of Fort Collins's standards; however, a raised median would restrict access and impair sight distance. Because there are no parallel streets on which to gain other access, all access must be obtained from US 287, unless frontage roads or long inconvenient travel routes are installed. The typical section proposed is necessary to reasonably meet the accessibility needs of the property owners on the roadway. This section has been used for all of the US 287 improvements from Broomfield to Loveland. This conceptual design does not preclude future options including the application of a raised median.

Issue: The city of Fort Collins would like CDOT to widen the right-of-way to be sure to have detached sidewalks.

Response: Maintenance of the detached sidewalks will need to be the responsibility of the city of Fort Collins. If the city of Fort Collins agrees to maintain the sidewalks, we will try to meet this request in areas where it is feasible within the right-of-way. However, if the city of Fort Collins objects to providing maintenance, standard attached sidewalks will be constructed.

Issue: We are concerned about unanticipated development with Alignment B.

Response: Growth was not considered for other routes off of US 287. We only looked at the implications of adding the bypass to the network; we didn't model all of the other

streets in the network. We studied how the Alternative B would divert traffic from the existing alignment. The city of Fort Collins's TransCad model should serve to address land use changes and other connecting roadways. The potential for induced development will be considered in the EA. Induced growth was originally considered for evaluation in the EA; however, after gathering more data it became apparent that the analysis of induced growth would be based on speculation. As such, induced growth was not analyzed.

Issue: There was concern that the design speed of the new roadway was 10 or 20 mph over the speed limit of the unimproved US 287, which will cause traffic to build up as the speed is reduced.

Response: *The capacity of the roadway isn't a function of speed; actually the slower you go the more capacity you will have because people will drive closer together so there will be a higher density of cars. However, we will investigate what the appropriate design speed is for this project.*

Issue: We would prefer to see Alternatives A4 or A5 from a natural resource standpoint.

Response: *Thank you, the comment is noted.*

4.2.2.4 Process and Schedule

Issue: What is the time frame for the EA?

Response: *Preliminary environmental analysis information was presented at a second public workshop on September 21, 2000. We are currently preparing the EA document for review by FHWA and the CDOT. The Preferred Alternative will be identified in the EA document, which will be available for public review during a mandatory 30-day public review and comment period. After the EA has been released for review for at least 14 days, a public hearing will be held to solicit input and comment on the Preferred Alternative. Should participants wish, a court recorder at the public hearing can formally record their oral comments. These comments will be then forwarded to FHWA to assist in their decision-making.*

Issue: After you go to the public, when will you include the commissioners?

Response: *We have already met with Larimer County and the city of Fort Collins boards and committees, and we presented our findings in a letter to the commissioners in May 2001.*

Issue: We need a schedule for the city of Fort Collins and Larimer County as a follow-up item, to include when you go to the boards and commissions so they can stay on course. We need something in writing.

Response: A proposed schedule for the remaining major steps of the EA process was provided to the city of Fort Collins and Larimer County. In addition, the city of Fort Collins and Larimer County continue to be kept up to date through agency briefings, newsletters, and presentations.

Issue: Take care of North College Business Association, since they are a vocal group.

Response: Upon request, we will meet with North College Business Association. However, we have encouraged them to attend the workshops, and they will receive a notice of the public hearing. They are on our mailing list, which includes every member. So far we haven't received any requests for additional coordination from the North College Business Association.

Issue: Regarding the NEPA process, would you explain the 30-day review and comment period?

Response: This requirement is specified for FHWA in 23 CFR 771.119. The 30-day review and comment period will be announced through public notice. During that 30-day period, anyone can review the EA, which includes all the alternatives considered, the screening process, environmental analysis, the Preferred Alternative, and appropriate mitigation measures. The public will be notified about where documents will be available for review, which will start the 30-day comment period.

Issue: A suggestion was to present the Preferred Alternative to the public early on. It seems that people don't respond until you have a Preferred Alternative.

Response: The process we are following is outlined by the NEPA guidelines. We do our best to inform the public by presenting the latest information to show the benefits and drawbacks of each alternative. We can't select a Preferred Alternative until we have followed the appropriate steps to identify it. Generally, through public involvement and the environmental analysis process, the Preferred Alternative can be identified objectively. The Preferred Alternative cannot be recommended until we receive public and agency comments and the EA is signed.

Issue: CDOT needs to schedule a presentation at the city of Fort Collins Transportation Board Meeting. They have a board meeting the first or third Wednesday of every month in the evening.

Response: CDOT and JFSA met with the city of Fort Collins's Transportation Board on September 20, 2000, to present a project update and discuss the board's concerns. Many of the issues discussed were in regards to median type for the A4 and A5 alignments, the potential environmental impacts of alignment B, the design of alignment B, and the potential abandonment of the existing US 287 with alignment B. However, the project is still in the Environmental Assessment phase

and many of the board's concerns will likely be addressed during the design phase of the project.



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Chapter 5 References

CHAPTER 5 - LIST OF REFERENCES

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US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Glossary

GLOSSARY

Alternative Analysis

The process by which alternatives identified through the scoping process will be screened to determine how well each meets the Purpose and Need. The alternatives that qualify as a result of the screening process are included in the EA for further assessment and, ultimately, identification of the proposed alternative.

AMI

area median annual income

APCD

Air Pollution Control Division

AST

aboveground storage tank

Average Daily Traffic (ADT)

The average two-way traffic number of vehicles on a given roadway over a 24-hour period.

Best Management Practice (BMP)

Any program, technology, process, siting criteria, operating method measure, or device that controls, prevents, removes, or reduces effects from a project or activity on the surrounding area.

Capacity

The maximum rate of traffic flow at which vehicles can traverse a point on one lane of roadway in a 1-hour period.

CDBG

Community Development Block Grant

CDOW

Colorado Division of Wildlife

CDOT

Colorado Department of Transportation

CDPHE

Colorado Department of Public Health and Environment

CEQ

Council on Environmental Quality

Clean Water Act (CWA)

The Federal Water Pollution Control Act enacted in 1972 by Public Law 92-500 and amended by the Water Quality Act of 1987. The CWA prohibits discharge of pollutants to Waters of the United States without an NPDES permit. Section 404 of the CWA addresses protection of wetlands and aquatic habitats from dredge and fill activities.

CLOMR

Conditional Letter of Map Revision

CNHP

Colorado Natural Heritage Program

COE

US Army Corps of Engineers

dB

decibel

dB(A)

A-weighted decibel

DMNS

Denver Museum of Nature and Science

Endangered Species

A species in danger of extinction throughout all or a significant portion of its range within the foreseeable future.

Endangered Species Act (ESA)

Legislation passed by Congress in 1973 that protects listed plant and animal species and their habitats from harm.

Environmental Assessment (EA)

A document prepared by a federal agency under NEPA regulations to provide sufficient evidence and analysis of a proposed project or action for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI).

Environmental Protection Agency (EPA)

The US agency responsible for efforts to control air pollution, water pollution, noise, radiation hazards, pesticide hazards, solid waste disposal, and other potential risks to the natural environment.

Expressway

A multilane, divided highway designed to move large volumes of traffic at high speeds under free-flow conditions. Expressways have full control of access with grade-separated interchanges.

FCHA

Fort Collins Housing Authority

FEMA

Federal Emergency Management Agency

FHWA

Federal Highway Administration

Finding of No Significant Impact (FONSI)

A decision rendered as the result of an EA indicating that the proposed action has no significant environmental impacts that cannot be appropriately mitigated.

FIS

Flood Insurance Study

Floodplain

An area adjacent to a stream or lake that is inundated periodically by high flows.

FPPA

Farmland Protection Policy Act

GIS

Geographic Information Systems

Grade-Separated Intersection

An intersection of highway roads, railroad tracks, or dedicated transit rail tracks that run either parallel or across at different surface elevations.

Habitat

The environment in which an organism lives; the arrangement of food, water, cover, climate, and space suitable to meet the needs of an animal or plant.

HASP

Health and Safety Plan

Hazardous Materials

Materials that pose a risk to human health or the environment.

HCS

Highway Capacity Software

HEC-RAS

Hydrologic Engineering Center-River Analysis System

HUD

Housing and Urban Development (US Department of)

JFSA

J.F. Sato and Associates (project consultant)

Level of Service (LOS)

A qualitative measure describing the operational characteristics within a traffic stream, generally described in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. LOS ratings are as follows:

LOS A – free flow operations

LOS B – reasonably free-flow operations

LOS C – noticeable traffic

LOS D – speeds decline and congestion begins to form

LOS E – maximum service flow (full capacity)

LOS F – heavy congestion, significant delays, stop-and-go-traffic

LOMR

Letter of Map Revision

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.

LUST

leaking underground storage tank

M-ESA

Modified Environmental Site Assessment

MHP

mobile home park

Minority Population

Any readily identifiable group of minority 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.

MMP

Materials Management Plan

MP

milepost

MSAT

Mobile Source Air Toxics

MVMT

million vehicle miles traveled

NAAQS

National Ambient Air Quality Standards

NAWMA

North American Weed Management Association

NCHRP

National Cooperative Highway Research Program

NEPA

The National Environmental Policy Act of 1969 establishes policy, sets goals, and provides means for protection of the environment in federal decision-making. Under NEPA, all federal agencies must consider the environmental impacts of any proposed action that includes federal money or affects federal land and public input in relevant decisions. The Council on Environmental Quality (CEQ) regulations for implementing NEPA are found in 43 CFR 1500-1508.

NHPA

National Historic Preservation Act

NFRT & AQPC

North Front Range Transportation and Air Quality Planning Council

No Action Alternative

The project alternative that represents projected conditions within the project area without the implementation of improvement and that serves as a baseline for comparing action alternatives.

Non-Rural Principal Highway

NPDES

National Pollutant Discharge Elimination System

NRHP

National Register of Historic Places

N2N

Neighbor to Neighbor

OAHP

Office of Archeology and Historic Preservation

PCB

polychlorinated biphenyl

PEM

Palustrine persistent emergent

PFA

Poudre Fire Authority

PFO

Palustrine persistent forested

PIP

Public Involvement Program

PMJM

Preble's meadow jumping mouse

Purpose and Need

The underlying reason for conducting the studies and analysis; the purpose and need to which the agency is responding by proposing alternative solutions.

PVMHP

Poudre Valley Mobile Home Park

REA

Rural Electric Association

Right-of-Way

A general term denoting land, property, or interest therein that is usually in a strip acquired for or devoted to transportation purposes.

RTP

Regional Transportation Plan

Scoping

An open public process initiated at the beginning of the EA to help identify the relevant agencies' and public's concerns and recommended solutions.

Senate Bill (SB) 40

A Colorado law enacted in 1973 (Statute 33-5-101) to protect and preserve the state's fish and aquatic wildlife habitat from actions taken by the state.

SHPO

State Historic Preservation Officer

SMARTTrips™

A carpooling and vanpooling program in the northern Colorado Front Range communities.

SWMP

stormwater management plan

Threatened and Endangered Species (TES Species)

A classification of plant and animal species listed in the Endangered Species Act. Endangered species are in danger of becoming extinct; threatened species are in danger of being listed as endangered.

Transportation Improvement Program (TIP)

A prioritized program of transportation projects to be implemented in appropriate stages over 3 to 5 years as set forth in FHWA-UMTA joint regulations for transportation programming. The projects are recommended from those in the transportation systems management element and the long-range element of the planning process. Participation in this program is required as a condition for a locality to receive federal transit and highway grants.

Transportation Equity Act for the 21st Century (TEA-21)

Legislation that reauthorizes Intermodal Surface Transportation Efficiency Act (ISTEA) programs; passed on May 22, 1998, it was enacted June 9, 1998, as Public Law 105-178. TEA-21 authorized federal surface transportation programs for highways, highway safety, and transit for the 6-year period between 1998 and 2003. The TEA-21 Restoration Act enacted July 22, 1998, provided technical corrections to the original law.

UCM

University of Colorado Museum

UGA

Urban Growth Area

UPRR

Union Pacific Railroad

Urban Arterial

Roadways that serve major activity centers in urban areas, often with the highest traffic volume corridors and the longest trips.

USFWS

United States Fish and Wildlife Service

UTM

Universal Transverse Mercator

WET

wetland evaluation technique

Wetland

An area sufficiently inundated by surface water or groundwater to support a predominance of vegetation adapted for life in saturated soil conditions (bogs, ponds, estuaries, marshes).

WHI

weighted hazard index

4(f)

Properties that are defined under the National Historic Preservation Act of 1966 as amended, Section 106, and the Department of Transportation (DOT) Act of 1966, Section 4(f), which set forth protection measures for publicly owned land, including public parks, recreation areas, wildlife/waterfowl refuges, or land associated with historic sites of local, state, or national significance.

6(f)

Properties that are defined under Section 6(f)(3) of the Land and Water Conservation Fund Act signed into law on September 3, 1964. These properties consist of publicly owned land, including parks and recreation areas purchased or improved with monies from the Land and Water Conservation Fund and are intended to remain in use for public recreation in perpetuity.



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix A Relocation Assistance Memo

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Region 4



Right-of-Way Unit
1420 2nd Street
Greeley, Colorado 80631
(970) 350-2154
FAX (970) 350-2178

DATE: March 5, 2002

TO: Bethani Ploegstra
Region 4 Environmental Unit

FROM: Mike Morgan, Right-of-Way Supervisor

SUBJECT: US 287 from SH 1 to LaPorte Bypass
Replacement Housing Availability

The preferred project alternative affects properties on both sides of the existing alignment. This project will require the displacement of between 20 to 30 mobile homes, six apartments, between four to five conventional homes, and approximately eight businesses. CDOT is obligated through the Federal Relocation Program to find new locations for businesses and individuals displaced by highway projects. I have, therefore, attempted to formulate a preliminary strategy to handle these anticipated relocations and to look at the availability of replacement housing.

The business relocations will be entitled to moving expenses and reestablishment costs up to \$10,000. In addition, they receive an "in lieu" payment not to exceed \$20,000. CDOT will provide them with a relocation agent to assist them in whatever way is necessary to get them set up in a new location. Business relocations can be very complicated and each one is unique; however I do feel that the CDOT Relocation Program is capable of handling the business relocations on this project.

The conventional homeowners will also be entitled to relocation benefits. 180-day homeowners will be entitled to moving expenses and if they qualify, a housing supplement payment and mortgage of differential payment. After looking at the housing market in Fort Collins, I feel confident that there is more than a sufficient supply of conventional homes available to find replacement housing for the conventional homeowners.

Most mobile home parks in Fort Collins will only allow newer homes into their parks. The vast majority of the mobile homes on the project appear to be older homes. In mobile home relocations situations, I anticipate that we will have to purchase their existing homes and then pay the difference for them to get a new home. Newer mobile homes average between \$35,000 and \$40,000. In addition, the rental space in the new location could be more than what they are currently paying. The average rental space in a park is between \$350 and \$400 per month. The mobile home parks in Fort Collins are about 95% full; however I feel that with the number of parks in the area we will be able to find places to relocate the mobile homeowners. While I believe that they can all be relocated, I estimate that it will cost CDOT \$30,000 to \$40,000 to get each one relocated and that does not include the cost of purchasing their existing home. If they are 180-day mobile homeowners, they will be entitled to moving expenses and will be eligible for a housing supplement payment, a lot rent subsidy payment, or a mortgage differential payment. We also need to consider that because of pets, number of children, or vehicles, we may not be able to get them into a mobile home park and we could end up purchasing a conventional home for some of these people.

We also have renters on this project. I'm sure that some of the mobile home occupants will be renters and we also have some apartment renters. Under the Relocation Program, renters who are 90-day occupants are eligible for moving expenses as well as a rent differential payment. It appears that most of the rental properties on this project are below the average monthly rent amount in the Fort Collins area. The Relocation Program provides for a rent subsidy up to 42 months; after that the subsidy ceases. We do not want to put these relocated renters into the position that after 42 months they are occupying a rental unit they cannot afford.

I talked to John Tuchscherer of the Ft. Collins Housing Authority, about the low-income housing programs available in Fort Collins. There are three main programs: Public Housing, Affordable Housing, and Section 8 housing. Each of these programs provides long-term rental assistance to lower income families and individuals. I have attached a copy of a pamphlet that explains how each of the programs work. The Public Housing Program currently has a one-to-two year waiting period; the affordable Housing Program has a three-to-nine months waiting period; and the Section 8 Program is currently closed to new applicants. I believe our best course of action with the lower income renters is to pay them a subsidy under our Relocation Programs. It's difficult to estimate what rent subsidies would cost, but I would expect it to be \$300 to \$400 per month until applicants are accepted into one of the Ft. Collins housing programs.

Based on my current knowledge, I believe this project presents some challenges. Interviews with the potential relocates will allow us to determine their various situations. However, I feel that these people can be relocated through the current CDOT and Fort Collins Housing Authority programs available.

MDM/th

cc: Bob Grube

Attachment



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix B Environmental Justice Community Interview Information

This section includes the following supplemental information to the environmental justice discussion from Chapter 3, section 3.1.2: additional clarification of EO 12898 as it pertains to FHWA; a summary of the project community outreach program, interview methodology, and results of mobile home park outreach and interviews. Following the text discussion are copies of the introductory letters and questionnaires in both English and Spanish.

Executive Order 12898

Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations,” was signed by President Clinton on February 11, 1994 and published in the Federal Register on February 16, 1994. The EO focuses federal attention on the environmental and human health conditions of minority and low-income populations, promotes nondiscrimination in federal programs affecting human health and the environment, and provides minority and low-income populations with access to public information and an opportunity to participate in matters relating to the environment. The United States Department of Transportation issued an order on environmental justice in 1997 (DOT Order 5610.2), followed by the Federal Highway Administration in 1998 (FHWA Order 6640.23). Both of these orders relate directly to addressing EJ activities and responsibilities within transportation and FHWA.

FHWA Order 6640.23 provided the following clarifications:

EO agencies are to achieve environmental justice by identifying and addressing disproportionately high and adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the United States. These requirements are to be carried out to the greatest extent practicable, consistent with applicable statutes and the National Performance Review. Compliance with this FHWA Order is a key element in the environmental justice strategy adopted by FHWA to implement EO 12898, and can be achieved within the framework of existing laws, regulations, and guidance.

Additional definitions include:

- a. Low-Income Population means 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.
- b. Minority Population means 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.

- c. Adverse Effects means the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include but are not limited to: 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 or 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; or the denial of, reduction in, or significant delay in the receipt of benefits of FHWA programs, policies, or activities.
- d. Disproportionately High and Adverse Effect on Minority and Low-Income Populations means an adverse effect that:
- (1) is predominately borne by a minority population and/or a low-income population or
 - (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.

Outreach to Minority and/or Low-Income Populations

Geographic areas containing minority and/or low-income populations were identified early in the EA process based on 2000 Census data. The public outreach effort is described below.

- A project mailing list was developed to provide information to all those interested in the project.
- Five project factsheets were produced to provide information on the status and schedule of the proposed project, alternative analysis, environmental analysis, EA document preparation, and public participation methods.
- Factsheets 2, 3, 4, and 5 were translated into Spanish for Spanish-speaking residents of the project area.
- Factsheets 2, 3, and 4 were distributed at key locations in mobile home parks. These locations included the management offices and community centers.
- Two public workshops were held, one in May 2000 and the other in September 2000. An interpreter from the project team was available at both of these workshops for Spanish-speaking individuals.
- Public notices were published in local newspapers. Invitation postcards printed in English and Spanish were sent to persons on the mailing list. Public notices in

English and Spanish were also posted on the project website and displayed at key locations in the mobile home parks.

- A website was developed to provide factsheets and public notices in English and Spanish for those who prefer electronic access to information.
- Small group meetings were offered to any interested party/stakeholder via the factsheets and the website.
- Informal discussions with managers and residents of mobile home parks within the potentially affected area were held.
- Community interviews with residents and business owners/operators along the project corridor were conducted.

Interview Methodology

The 2000 Census data provided information on block and block group levels, and helped identify areas where low-income or minority populations might be present. Only one of three block groups contains threshold levels of minority and/or low-income populations. However, that information did not provide the level of detail to determine whether impacts on specific residences and businesses in that block group would affect low-income or minority populations with a “sense of community and place.” CDOT and FHWA proactively sought to develop the following methodology to gather more specific information about the residents and business property owners/operators who might be affected, and to determine whether there are interdependencies in the area that could be affected by the alternatives under consideration. This effort included measures to determine whether or not there is a “sense of community and place” present in the project area. This would be used later in conjunction with the identification of minority and/or low-income populations and potential relocations to identify potential disproportionate high and adverse impacts.

A letter announcing CDOT’s intent to visit both residences and businesses adjacent to the existing roadway and the alternatives under study was mailed to property owners and residences in April 2003, approximately one week before interviews began. The letter highlighted the following key components: an update on the status of the environmental assessment, the importance of providing input on alternatives still under consideration (including the No Action Alternative), the potential for residential/business relocations, an announcement that the project team would be visiting door-to-door in the following weeks to talk with residents and business owners/proprietors, and information on how to reach a member of the project team to either obtain additional information or to schedule a one-on-one meeting. In addition to the letter, a map of the project area illustrating the alternatives under consideration was included in the packet. The information was presented in English and Spanish. Copies of the letter and map are included in this appendix. The mailing list was developed from parcel data obtained from the Larimer County website, and included residences and businesses adjacent to the alternatives under study. The mailing was followed up with telephone calls to schedule meeting times. The project team found as many phone numbers as possible through the parcel information, white/yellow pages, and internet phone listings; however, telephone numbers were not available for all property owners.

Two types of interview were developed – one for residents and one for business property owners/operators in the project area. The interview team consisted of CDOT and consultant personnel. A Spanish-speaking interpreter was available to accommodate Spanish-speaking persons in the project area. In addition, a designated representative from the Fort Collins Housing Authority participated in the interviews as her schedule allowed.

A record of the names and addresses of individuals who declined to be interviewed was created for future reference and contact. New contacts made during the interview process were added to the mailing list to receive all future public mailings and meeting notifications.

The interviewers used the questionnaires as a tool to guide and encourage conversation. However, the conversations were adapted to each respondent to suit his or her needs, promote discussion, and prompt follow-up questions. Copies of both the residential and business questionnaires are included in this appendix.

Residential interviews were conducted at the residents' homes. Residents were asked about their relationships and roles within the community, their thoughts on the need for safety and mobility improvements on US 287 between SH 1 and the LaPorte Bypass (herein after referred to as the existing alignment), and how the proposed alternatives might affect them. The team brought relevant visual displays and handouts. A large aerial map of the project area allowed the participants to better explain the interdependency of relationships within the project area.

The team began interviews in the morning and concluded in the afternoon. Two attempts were made to contact each property owner. A log was kept to identify the address, time of visit, and reason why an interview was not conducted. A copy of the Community Interview Log is included in this appendix. Packets of information were left at the doors of residences where there was no response. Each packet contained a notice of attempt to contact, a brief summary of the project (with contact information for the project team), an aerial photograph of the project area including the three alternatives, and the questionnaire used in the interviews with a postage-paid return envelope. Information was printed in both English and Spanish.

Some residences were inaccessible due to a locked gate or an unchained dog. Minimal attempt was made to access a residence if an unchained dog was observed on the property.

Three mobile home parks (MHPs) are located within the project area. They are the Poudre Valley Mobile Home Park, Terry Lake Mobile Home Park, and the Blue Spruce Mobile Home Park. The process for contacting the property owners of these MHPs was the same as for single-family residences. Interviews with the owners of all three MHPs were conducted. The owners of two of the three MHPs asked that we not interview their tenants and meet with them directly. Because at the time of the interviews the Preferred Alternative was not yet identified, the owners expressed concern that their tenants might become needlessly alarmed and hastily move, thus creating an increase in

vacancies. Instead, interviews were held with the property owners to discuss their concerns and interests regarding the No Action and action alternatives' potential impacts. It is important to note that the MHP owners provided the interview team with insight regarding their residents, their concerns/issues, and the likelihood of interdependent situations within the MHP.

At Poudre Valley MHP (PVMHP) a full day of interviews was conducted on April 21, 2003. Accompanying the project team were a translator and community liaison. Packets of information were left at the doors of residences when there was no response. Each packet contained a notice of attempt to contact, a brief summary of the project (with contact information), an aerial photograph of the project area, and the questionnaire used in the interviews with a postage-paid return envelope. Information was printed in both English and Spanish.

The project team attempted to interview all business property owners/operators whose properties abut the existing and proposed rights-of-way. The purpose was to learn about the relationships/roles that individual businesses play within the project area, such as employment of persons from those populations and/or reliance on their patronage. As with residential interviews, information was left on-site if the business property owner/operator was not available.

Mobile Home Park Resident and MHP Property Owner Interviews

As mentioned previously, the project team was only allowed access to contact the residences of the PVMHP. Following a full day of interviews on April 21, 2003, discussions were held independently and collectively with the PVMHP's owner, its resident manager, and a local sheriff assigned to the PVMHP. In discussions it was learned that despite efforts to reach members of the public before the interviews via mailings and phone calls, many of the residents felt uneasy about answering questions at their doorstep and had misinterpreted the overall intent of the interviews, and unsubstantiated rumors were beginning to develop. The PVMHP's owner and the resident manager requested that the team stop visiting door-to-door and hold a meeting with the residents instead.

CDOT initiated the process of planning a resident meeting. During the coordination effort, the PVMHP owner decided to move forward and hold a meeting with the residents on his own. At the meeting, he discussed the project and answered residents' questions. Notification of the meeting was not provided in a timely fashion; therefore, CDOT representatives were not in attendance.

Following the meeting, the resident manager told CDOT that questions were answered satisfactorily, fears were laid to rest, and a meeting between CDOT and residents was no longer necessary at that point in time.

In addition, CDOT prepared written responses to resident questions provided by a local liaison from the PVMHP. These responses were then distributed to the local liaison, the PVMHP owner and the PVMHP manager.

MHPs traditionally have a more transient clientele, but it was not uncommon to speak with residents of PVMHP who had lived there ten or more years. A few individuals from the PVMHP stated that they enjoyed living there because it is an inexpensive place to live. Another common reason was the impromptu social gatherings at a small park within the PVMHP.

The interviews revealed a supportive network among several residents of the PVMHP. Some individuals interviewed were related to other residents of the park. Some PVMHP residents provide daycare services for other residents. Furthermore, some residents receive or provide assistance to other residents by sharing rides to places such as the grocery store, church, or work. Also, some bilingual residents provide translation services to other residents in the MHP.

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Region 4

1420 2nd Street
Greeley, Colorado 80631
970-350-2171
FAX: 970-350-2179



April 2003

Dear Business Owner or Resident,

We're trying to get in touch with you...

The Colorado Department of Transportation (CDOT) is doing an Environmental Assessment (EA) to look carefully at widening US 287 (North College Avenue) to four lanes between SH 1 and the LaPorte Bypass. The reasons for this change are to improve traffic flow and to correct safety concerns along this two-lane roadway.

We want you to know...

That your business or home may be affected if one of the alternatives listed below is chosen for implementation. Please see the attached map, which shows the alternatives being considered and how the road looks for each.

Alternative A4 widens the current roadway, and is designed to have fewer effects on the human and natural environment while meeting safety design criteria and improving traffic flow.

Alternative A5 is the same as Alternative A4, except that it includes relocating Terry Lake Dam to the northeast to avoid direct effects on the properties near the southwest of the dam.

Alternative B is a new roadway that connects just north of SH 1 and runs north-northwest to connect south of the LaPorte Bypass.

If the **No Action Alternative** is selected as the preferred alternative, there will be no changes to the existing roadway. Traffic flow and safety concerns will not be addressed.

We would like to hear your thoughts about the project...

We will be in the area during the daytime the week of April 21st to talk with you in person about this project. If you are not available when we stop by your home or business, we can either return at another time or talk with you on the phone. Please call Barbara at **970-667-4670, extension 5110**, to leave your name and instructions about how best to contact you. Or call one of the numbers listed below. One of us will get back to you quickly. We appreciate your time, and really look forward to hearing from you so we can include your comments in the study to help make the decision about which alternative to choose.

What happens next?

You will have an opportunity to review and comment on the Environmental Assessment document this summer. The EA will explain why a certain alternative was chosen. A public hearing at this time will give you another chance to comment. Please allow us to put you on our mailing list to make sure you are notified when the EA is published and where it can be reviewed, as well as the date, time, and location of the public hearing. This information will also be published in the *Fort Collins Coloradoan* and the *North Forty News*. Please call to add your name to the mailing list.

We look forward hearing from you very soon.

Sincerely,

Bethani Ploegstra
Project Manager, Region 4
CDOT, Region 4
970-350-2171

Bethani.Ploegstra@dot.state.co.us

Jeff Manuel
Environmental Unit Manager
CDOT, Region 4
970-350-2170

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Michelle Li
Project Manager
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303-797-1200

Mli@jfsato.com

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Region 4

1420 2nd Street
Greeley, Colorado 80631
970-350-2171
FAX: 970-350-2179



Abril 2003

Estimado Sr. Dueño de negocio o residente,

Estamos intentando comunicarnos con usted...

El Departamento de Transportation de Colorado (CDOT) esta dirigiendo una evaluacion ambiental para examinar la posibilidad de ampliar la carretera US 287 (North College Avenue) a cuarto pistas entre SH 1 y LaPorte Bypass. Las razones de este cambio, es mejorar el movimiento de trafico y corregir problemas de seguridad en este camino de doble via.

Queremos que usted sepa...

Que su negocio o casa podria ser afectada si una de las alternativas de la siguiente lista es eligida para su implementacion. Por favor observe el mapa incluido, el cual demuestra cuatro alternativas que estamos considerando y como la carretera se modificaria en cada una de ellas.

Alternativa A4 – ampliar la carretera existente, y rediseñarla para reducir los impactos y efectos al medio ambiente humano y natural. Al mismo tiempo mejorar la seguridad de los que viven alrededor de la ruta y hacer que el trafico se mueve mas rapido.

Alternativa A5 – presenta la misma que la Alternativa A4, con la excepcion que el embalse de Terry Lake se moveria hacia el noreste para evitar efectos directos a las propiedades ubicadas cerca de la parte suroeste del embalse.

Alternativa B – presenta una carretera nueva que empieza al norte de la carretera SH1, siguiendo hacia el norte, y noroeste hasta conectarse nuevamente a la misma carretera al sur de LaPorte Bypass.

Si la **Alternativa de no tomar ninguna accion** es eligida como la alternativa preferida, la carretera que existe quedaria sin modificacion. Los problemas de seguridad y trafico que existen no seran resueltos.

Nos gustaria escuchar sus opiniones sobre el proyecto...

Estaremos en su area durante la semana de Abril 21, 2003 para hablar con usted en persona sobre este proyecto. Si usted no va estar disponible cuando pasemos por su casa o negocio, podremos volver otro dia o comunicarnos por telefono. Por favor llame a Barbara al numero **970-667-4670, extension 5110**, para dejar su nombre y dejar instrucciones para contactarlo. O llame a uno de los numeros que estan en la lista. Uno de nosotros respondera a su llamada pronto. Nosotros agradecemos su tiempo y estamos ansiosos de escuchar sus opiniones para incluirlo en este estudio y asi ayudar a tomar la decision correcta sobre este proyecto.

Despues Que Pasa?

Ud. Tendra la oportunidad de revisar y comentar sobre la evaluacion ambiental (EA) este verano. La EA explicara porque cierta alternativa fue eligida. Una reunion publica le dara otra oportunidad de comentar sobre la decision tomada. Por favor permitanos ponerlo en nuestra lista de correo para estar seguro que estara notificado cuando la EA sea publicado. Tambien incluiremos el dia, la hora, y el sitio de la reunion publica. Esta informacion sera publicada en el *Fort Collins Coloradoan* y el *North Forty News*. Por favor llamenos para poder ponerlo en nuestra lista de correos.

Esperamos saber de Ud. lo mas pronto posible.

Sinceramente,



Bethani Ploegstra
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CDOT, Region 4
970-350-2171

Bethani.Ploegstra@dot.state.co.us



Jeff Manuel
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Michelle Li
Project Manager
J.F. Sato and Associates
303-797-1200

Mli@jfsato.com

US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Questions for US 287 Residents

The Colorado Department of Transportation (CDOT) is doing an Environmental Study to look carefully at possible four-lane improvements on US 287 (North College Avenue) between SH 1 and the LaPorte Bypass. The reason for these possible improvements would be to increase travel movement and take care of any safety concerns on this two-lane roadway. This property may be affected by one of the alternatives under study.

Name _____

Address _____

Do you rent or own the residence? _____

How long have you lived in your current home/apartment? years _____ months _____

Why do you like/dislike where you live? _____

What are your issues/concerns about this community? _____

Do you have a family member or long-time friend in the community/project area? Yes No

If so, where do they live in the community? _____

US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Questions for US 287 Residents

Page 2

Have you received any information about the project, i.e. Fact Sheets or Post Cards? Yes No

Do you go to a place of faith or school nearby? Yes No If yes, where and how do you get there?

Do you rely on someone in the community/project area to help you in one of the following ways:

Examples: Does anyone in the community/project area give you a ride to...

The doctor or medical facility? If yes, where _____

The grocery store or shopping? If yes, where _____

A place of faith? If yes, where _____

School? if yes, where _____

Other Places? If yes, where _____

Does anyone within your community:

Provide daycare services to your child/children?

Serve as a translator?

Adult Care?

Do you participate in any community social events? Yes No

If yes, please list event and location _____



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Questions for US 287 Residents

Do you use any social or recreational facilities nearby? Yes No If yes, where, and how do you get there? _____

Do you regularly shop or depend on any of the services provided by any of the businesses in your local community? Yes No If yes, please list _____

Do you work close by? Yes No If yes, where? _____

How do you get to work? _____

Do you volunteer within your community? Yes No If yes, where? _____

How do you travel along US 287? On foot? Bike? Car? Do you own the car?

Yes No Motorcycle? Do you own the motorcycle? Yes No



Evaluacion Ambiental Carretera US 287, desde la carretera SH1 a LaPorte Bypass. Preguntas para los Residentes de US 287

El Departamento de Transportation de Colorado (CDOT) esta realizando un estudio ambiental para examinar, la posibilidad de mejorar y ampliar la carretera US 287 a cuatro pistas (North College Avenue) en el tramo entre SH1 y el LaPorte Bypass. Las razones para estos posibles arreglos son para mejorar el movimiento de trafico y solucionar problemas de seguridad en la carretera de doble via. Esta propiedad podra ser afectada por una de las alternativas que estamos evaluando.

Nombre _____

Direccion _____

¿Paga renta o es dueño de esta residencia? _____

¿Cuanto tiempo han vivido en su casa/departamento? ¿Años? _____ ¿Meses? _____

¿Por que le gusta/no le gusta donde vive? _____

¿Cuales son sus problemas/preocupaciones sobre esta comunidad? _____

¿Tiene un familiar o amigo que vive en el area del futuro proyecto? Si ___ No ___

¿Si su respuesta es "si" donde viven estas personas en la comunidad? _____

¿Ha recibido informacion sobre este proyecto, por ejemplo paginas con datos o cartas? Si ___ No ___



Evaluacion Ambiental Carretera US 287, desde la carretera SH1 a LaPorte Bypass. Preguntas para los Residentes de US 287

Page 2

¿Tiene una iglesia o un colegio que esta cerca? Si___ No___ ¿Si responde que "si", donde esta el lugar y como llega alla?

Depende de alguna persona en su comunidad que lo ayude en una de las siguientes actividades:

Ejemplos: Alguien en la comunidad/area del proyecto lo lleva en auto:

- ¿Al Doctor o al hospital? Si responde que "si" donde queda_____
- ¿Al Supermercado o de compras? Si responde que "si" donde queda_____
- ¿A Una iglesia? Si responde que "si" donde queda_____
- ¿Otras partes? Si responde que "si" donde quedan_____

Hay alguien en su comunidad que:

- ¿Cuide a sus hijos?
- ¿Sirve como su traductor?
- ¿Cuida a ancianos?

¿Participa en eventos sociales en la comunidad? Si___ No___

Si responde que "si" anote el nombre del evento y la direccion donde se realiza._____

¿Usa centros sociales o centros recreativos que esten cercas? Si___ No___



Evaluacion Ambiental Carretera US 287, desde la carretera SH1 a LaPorte Bypass. Preguntas para los Residentes de US 287

Page 3

¿Si responde que "si", donde quedan y como llega alla? _____

¿Va de compras regularmente o depende de los servicios de los negocios en su comunidad?

Si___ No___ ¿Si responde que "si" anote el lugar? _____

¿Trabaja cerca de su casa? Si___ No___ Si responde que "si" donde trabaja? _____

¿Como llega al trabajo? _____

¿Hace trabajo voluntario en su comunidad? Si___ No___ ¿Si responde que "si" donde? _____

¿Como viaja por US 287?___ ¿Caminando?___ ¿En auto?___ ¿Es dueño de su auto? Si___ No___

¿En Motocicleta?___ ¿Es dueño de su motocicleta? Si___ No___

US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Questions for US 287 Businesses

The Colorado Department of Transportation (CDOT) is doing an Environmental Study to look carefully at possible four-lane improvements on US 287 (North College Avenue) between SH 1 and the LaPorte Bypass. The reason for these possible improvements would be to increase travel movement and take care of any safety concerns on this two-lane roadway. This property may be affected by one of the alternatives under study.

Name of Business _____

Name of Business Owner/Manager/or Person being interviewed as a representative _____

Address of Business _____

Type of Business/Services provided (describe goods and/or services) _____

Telephone Number/E-Mail _____ / _____

How many full-time employees do you have? ____ How many part-time? ____ What are their salaries or wages? _____ How many shifts do you have? _____

Do you know if any of your employees live within the project area? yes no

If yes, how many? _____

How do your employees within the community get to work? _____

How long have you been conducting business in the project area? _____ years _____ months

Are the services or goods you supply for those residing in the project area or elsewhere? _____



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment Questions for US 287 Businesses

Do you provide goods/services to a specific clientele? _____

Are those people primarily minority? yes no

Are your services or goods transported by vehicle? yes no If yes, what kind? _____

Is your business dependent upon local residents? yes no

How would your business be affected if 25-50% of local residences were relocated?



Evaluacion Ambiental Carretera US 287, desde la carretera SH1 a LaPorte Bypass. Preguntas para negocios en la carretera US 287

El Departamento de Transportation de Colorado (CDOT) esta haciendo un estudio de evaluacion ambiental para examinar la posibilidad de mejorar y ampliar la carretera US 287 a cuatro pistas (North College Avenue) en el tramo entre SH1 y el LaPorte Bypass. Las razones para estos posibles arreglos son para mejorar el movimiento de trafico y solucionar problemas de seguridad en la carretera de doble via. Esta propiedad podria ser afectada por una de las alternativas que estamos evaluando.

Nombre del negocio _____

Nombre del dueno/ jefe / o persona que se esta entrevistando como representante del negocio _____

Direccion del negocio _____

Tipo de negocio/servicio (describa lo que se vende o el tipo de servicio que hace el negocio) _____

Numero de telefono o e-mail _____/_____

¿Cuantos empleados tiene? _____ ¿Trabajan todo los dias o algunos dias de la semana? _____ ¿Cuales son los sueldos de sus empleados? _____ ¿Cuantos turnos de trabajo tienes? _____

¿Sabe si algunos de sus empleados viven dentro del area del proyecto? Si No

¿Si responde que "si" cuantos? _____

¿Como llegan al trabajo sus empleados que viven en la comunidad? _____

¿Cuanto tiempo ha estado haciendo negocios en el area del proyecto? _____ ¿Anos? _____ ¿Meses?



Evaluacion Ambiental Carretera US 287, desde la carretera SH1 a LaPorte Bypass. Preguntas para negocios en la carretera US 287

Page 2

¿Los servicios que presta su negocio son principalmente para la gente de la comunidad o para gente fuera del area?_____

¿Presta sus servicios a clientela especifica?_____

¿Sus empleados son principalmente minorias? Si No

¿Transportas sus mercancías o servicios por vehículo? Si No ¿Si responde "si" que tipo?_____

¿Piensa usted que su negocio depende principalmente de residentes locales? Si No

¿De que manera afectaria su negocio si entre el 25% al 50% de los residentes locales tuvieran que ser reubicados?



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix C Environmental Coordination Letters

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)	Date Of Land Evaluation Request 10/24/00
Name Of Project U.S. 287 - S.H. 1 to the LaPorte Bypass	Federal Agency Involved FHWA
Proposed Land Use CDOT ROW	County And State Larimer County, Colorado

PART II (To be completed by NRCS)		Date Request Received By NRCS 10/26/00	
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply -- do not complete additional parts of this form).</i>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Major Crop(s) beets, corn, alfalfa, wheat, barley, beans,		Farmable Land In Govt. Jurisdiction Acres: 168,000 %	Acres Irrigated 124,000 Average Farm Size 450
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System N/A	Amount Of Farmland As Defined in FPPA Acres: 143,000 %	
		Date Land Evaluation Returned By NRCS 11/2/00	

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A (A-4)	Site B (A-5)	Site C (B)	Site D
A. Total Acres To Be Converted Directly	25.2	20.4	53.9	
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	25.2	20.4	53.9	0.0

PART IV (To be completed by NRCS) Land Evaluation Information	Site A (A-4)	Site B (A-5)	Site C (B)	Site D
A. Total Acres Prime And Unique Farmland	5.2	6.2	25.0	
B. Total Acres Statewide And Local Important Farmland	0.0	0.0	0.0	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.003	0.004	0.02	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	61.0	61.0	57.0	

PART V (To be completed by NRCS) Land Evaluation Criterion	Site A (A-4)	Site B (A-5)	Site C (B)	Site D
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	39	39	43	0

PART VI (To be completed by Federal Agency)					
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))	Maximum Points	Site A (A-4)	Site B (A-5)	Site C (B)	Site D
1. Area In Nonurban Use	7	7	12		
2. Perimeter In Nonurban Use	5	5	8		
3. Percent Of Site Being Farmed	8	8	15		
4. Protection Provided By State And Local Government	0	0	0		
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average	5	5	7		
8. Creation Of Nonfarmable Farmland	0	0	25		
9. Availability Of Farm Support Services	5	5	5		
10. On-Farm Investments	8	8	15		
11. Effects Of Conversion On Farm Support Services	5	5	5		
12. Compatibility With Existing Agricultural Use	3	3	6		
TOTAL SITE ASSESSMENT POINTS	160	46	46	98	0

PART VII (To be completed by Federal Agency)	Maximum Points	Site A (A-4)	Site B (A-5)	Site C (B)	Site D
Relative Value Of Farmland (From Part V)	100	39	39	43	0
Total Site Assessment (From Part VI above or a local site assessment)	160	46	46	98	0
TOTAL POINTS (Total of above 2 lines)	260	85	85	141	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
----------------	-------------------	---

Reason For Selection:

Total Site Assessment points are less than 160; therefore, under 7 CFR 658.4 (c), this site will be given a minimal level of consideration, and no additional sites will be evaluated.

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 – NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 – In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 – NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

Total points assigned Site A = $\frac{180}{200} \times 160 = 144$ points for Site "A."

Maximum points possible 200



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

IN REPLY REFER TO:

ES/CO: T&E/*Spiranthes*/Larimer County
Mail Stop 65412

APR 05 2001

John K. Crier
Colorado Department of Transportation
1420 2nd Street
Greeley, CO 80631

Dear Mr. Crier,

Based on the authority conferred to the U.S. Fish and Wildlife Service (Service) by the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), the Service reviewed the Ute ladies'-tresses orchid, *Spiranthes diluvialis* (orchid), survey report submitted with your letter of March 28, 2001. This report regards the **US 287 from SH 1 to LaPorte Bypass** in Larimer County, Colorado (N ½ Section 35, NE ¼ of Section 34, Township 8 North, Range 69 West). The proposed project is located north of Fort Collins along and to the west of Dry Creek. The proposed development will include either widening the above portion of US 287 or constructing a new bypass. Either of these options may impact riparian wetlands and wet meadow, potential orchid habitat.

Given your compliance with the orchid survey guidelines, the Service finds the report acceptable and agrees that the orchid is not present within the surveyed area. Thus, the Service concurs with the determination that the impacts resulting from the proposed project are not likely to adversely affect the continued existence of the orchid.

We appreciate your submitting this report to our office for review and comment. If the Service can be of further assistance, please contact Alison Deans Michael of my staff at (303) 275-2370.

Sincerely,

LeRoy W. Carlson
Colorado Field Supervisor

pc: U.S. Army COE, Littleton, CO
CDOT (Jerry Powell)
Michael

Ref: Alison/CDOT2001/Reg4/orchid/



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

IN REPLY REFER TO:
ES/CO: T&E/PMJM/LarimerCounty
Mail Stop 65412

DEC - 6 2000

John K. Crier
Colorado Department of Transportation
Environmental Unit
1420 2nd Street
Greeley, Colorado 80631

Dear Mr. Crier,

Based on the authority conferred to the U.S. Fish and Wildlife Service (Service) by the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), the Service reviewed your October 30, 2000, letter requesting concurrence that the **U.S. 287 from SH1 to LaPorte Bypass** widening project in Larimer County, Colorado (SW 1/4 NE 1/4 Section 35, Township 7 South, Range 69 West) will not impact the Preble's meadow jumping mouse, *Zapus hudsonius preblei* (Preble's) or its habitat. The proposed project involves the widening of U.S. 287 from SH1 to the LaPorte Bypass.

Given your compliance with the Preble's survey guidelines, the Service finds the report acceptable and agrees that a population of Preble's is not likely to be present within the surveyed area. Thus, the Service concurs that development or other actions on this site should not directly affect the continued existence of Preble's. Should Preble's populations exist downstream from the site, actions on the site that result in significant modification of Preble's habitat downstream (for example, through alteration of existing flow regimes, or sedimentation) may be subject to provisions of the ESA.

We appreciate your submitting this report to our office for review and comment. If the Service can be of further assistance, please contact Alison Deans of my staff at (303) 275-2370.

Sincerely,

LeRoy W. Carlson
Colorado Field Supervisor

pc: U.S. Army COE, Littleton, CO
CDOT (J. Powell)
Deans

Ref: Alison/CDOT2000/Reg2

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9011



July 23, 2001

Margie Perkins
Director
Air Pollution Control Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80222

Re: US 287, SH 1 to LaPorte Environmental Assessment

Dear Ms. Perkins:

The Colorado Department of Transportation is preparing an environmental assessment for proposed improvements to US 287 in Fort Collins between SH 1 and the LaPorte Bypass (a distance of approximately one mile). (See attached project vicinity map.) Alternatives being evaluated include minor realignment and widening the existing segment of US 287 to four lanes or constructing a new four-lane segment of US 287 south and west of the existing highway. (See attached project alternatives map.)

The results of the traffic analysis show that for any of the build alternatives, all signalized intersections in the project area would operate at level of service C or better in the year 2020. (See attached level of service summary sheets) Opening year level of service would also be C or better because traffic volumes would be less than in 2020. EPA modeling guidance states that intersections which operate at level of service C or better are not likely to cause a violation of the federal eight-hour average carbon monoxide standard. Therefore, hot spot modeling is not required.

This project is included in the conforming 2020 North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC) Regional Transportation Plan and the conforming NFRT & AQPC 2001-2006 Transportation Improvement Program. Pursuant to the conformity provisions of the Clean Air Act Amendments of 1990, this project will not:

- (i) cause or contribute to any new violation of any standard;
- (ii) increase the frequency or severity of any existing violations of any standard;
- (iii) delay timely attainment of any standard or any required interim emission reductions.

If you concur, please sign below and return this letter by August 10, 2001.

Thank you.

Very truly yours,

Rebecca Vickers
Manager
Environmental Programs

I Concur:

Margie M. Perkins
Margie Perkins, Director

7-30-01
Date

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Environmental Programs
4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9259
FAX (303) 757-9445



May 23, 2001

Ms. Georgianna Contiguglia
State Historic Preservation Officer
Colorado Historical Society
1300 Broadway
Denver, CO 80203

SUBJECT: CDOT Project US Highway 287, State Highway 1 to La Porte Bypass, Larimer County

Dear Ms. Contiguglia:

This letter and the attached survey report constitute a request for concurrence on Determinations of Eligibility and Effect for the US 287, State Highway 1 to La Porte Bypass Project, located north of Fort Collins, in Larimer County, Colorado. This project involves three alternative routes for transportation improvements. Alternative A4 involves widening and upgrading existing US Highway 287 from the northern edge of Fort Collins to the southern end of the La Porte Bypass (where US 287 heads to the northwest). Alternative A5 is similar to A4, with minor changes. Alternative B connects the same two end points, but it heads west across open fields, then north and northwest across open fields, to connect with the La Porte Bypass. Please refer to the attached aerial photographs with alignment right-of-way boundaries for more detail, which delineate properties and associated features. These designs are conceptual and will be refined later in the process. They reflect the total proposed right-of-way, not the future alignment.

A 250-wide right-of-way along each alternative was surveyed for cultural resources. The Environmental Assessment prepared for this project has selected A4 as the Preferred Alternative. The attached plan sheets show a preliminary alignment of the alternatives. The cultural resource survey for this project was conducted by Western Cultural Resource Management, Inc. in October 2000.

Determinations of Eligibility

WCRM recorded 15 historic sites and 1 isolated feature. No prehistoric sites were identified. One complex is recommended as eligible to the NRHP as an historic district. The remainder, which include twelve structures, the Little Cache la Poudre Ditch, a segment of the Union Pacific Railroad, an historic trash dump, and an isolated find, are assessed as not eligible to the National Register.

The only eligible resource is the Elliott Dairy (Tyler Residence) at 317 North Highway 287 (5LR9895). This resource includes a 1929 ranch style house with Queen Anne elements, a wood frame barn, milk shed, garage, sheds, and outbuilding. The main ranch house has limited integrity because it was formed by moving two smaller houses together, and has had recent additions. The buildings on the property are

Site #	Alternative A or B	Site Name	Determination of Eligibility	Comments
5LR9894	A	Adams Residence (309 N. Highway 287)	Not Eligible	Does not meet criteria a-d
5LR9895	B	Elliott Dairy (317 N. Highway 287)	Not individually eligible; Recommended as an eligible historic district	Collection of buildings conveys the fabric and setting of early 20 th century dairy farm.
5LR9896	A	Motel (437 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9897	A	Pursley Residence (533 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9898	A	Commercial building (707 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9899	A	Residence (801 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9900	A	Whitley Residence (913 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9901	A	Wendel House (1021 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9902	A	Rocky Mountain Adventures (1117 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9903	A	Patrick Residence (1125 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9904	A	Gutzwiller Residence (1201 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9905	A	Martinez Residence (1205 N. Highway 287)	Not eligible	Does not meet criteria a-d
5LR9906	A and B	Little Cache la Poudre Ditch	Not eligible	Does not meet criteria a-d
5LR1815.4	A and B	Union Pacific Railroad	Not eligible	Does not meet criteria a-d
5LR9907	B	Historic Trash Dump	Not eligible	No associations with surrounding properties; Does not meet criteria a-d
5LR9921	B	Small Stock Pond (IF)	Not Eligible	Isolated Finds are not eligible

not recommended as individually eligible to the NRHP under Criteria a or b because there are no significant associations with the broad pattern of history, early 20th century development of Fort Collins, or persons important in that period of Fort Collins history. The property is not recommended as individually eligible under Criterion c because it does not represent the work of a master nor is particularly representative of a type, period, or method of construction. However, the collection of buildings, focusing on the barn, is viewed as eligible for the NRHP as an historic district. As a collection of buildings, the fabric and setting of an early to mid-20th century dairy farm remains.

The Union Pacific Railroad (SLR1815.4) is assessed as not eligible because the line has been recently upgraded and modernized, and extends only a few miles north of the recorded area to quarry sites. The remainder of the line has been abandoned and tracks removed. It no longer conveys the sense of an historic railroad because the fabric and function have been removed and changed.

The Little Cache la Poudre Ditch (SLR9906) is a small ditch that crosses US 287 west of Terry Lake. Built by early local farmers from 1869 to 1882, the ditch was later part of the New Mercer Ditch Company. It was enlarged in the early 20th century to carry water to the Terry Lake Feeder Inlet and for the Fort Collins Irrigation Canal. The resource is a minor ditch and is not one of the earliest constructed in the area. It is not significantly associated with local irrigation history and does not demonstrate significant engineering achievements. It is recommended as not eligible.

The remaining structures do not display distinctive architectural characteristics and are not associated with significant events or history. They are all recommended as not eligible.

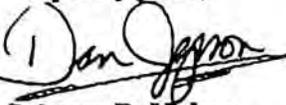
Determination of Effect

The selected alternative, A4, which involves widening and upgrades to the existing alignment of US 287, does not have the potential to impact the only eligible resource, the Elliott Dairy, as the property is not directly adjacent to US 287. Indirect impacts, including visual, noise, access, or vibration are unlikely because the property is buffered from US 287 by two other properties. Please refer to the attached aerial photos with alignment boundaries for more details. Therefore, CDOT recommends the determination of no historic properties affected for this resource.

We hereby request your concurrence with these determinations of eligibility and effect. Your response is necessary for the Federal Highway Administration's compliance with Section 106 of the National Historic Preservation Act (as amended) and with the Advisory Council on Historic Preservation's regulations.

Thank you in advance for your attention to this matter. If you require additional information, please contact CDOT Acting Staff Historian Dianna Litvak at (303)512-4258.

Very truly yours,



for Rebecca D. Vickers
Environmental Program Manager

Enclosures

cc: Bethani Ploegstra, Region IV (w/o attachments)
File/CF/RF



**COLORADO
HISTORICAL
SOCIETY**

The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137

June 22, 2001

Rebecca D. Vickers
Environmental Program Manager
Colorado Department of Transportation
4201 East Arkansas Avenue
Denver, CO 80222

RE: US Highway 287, State Highway 1 to La Porte Bypass

Dear Ms. Vickers:

Thank you for your correspondence dated May 23, 2001, concerning the above project having Federal Highway Administration involvement.

After reviewing the survey report and inventory forms you provided, we have the following comments regarding the eligibility of the resources identified and the effects of Preferred Alternative A4.

We concur with your determination that the properties listed below do not meet the National Register of Historic Places eligibility criteria:

**Little Cache La Poudre Ditch (5LR9906)
Adams Residence, 309 N. Highway 287 (5LR9894)
Motel, 437 N. Highway 287 (5LR9896)
Pursley Residence, 533 N. Highway 287 (5LR9897)
707 N. Highway 287 (5LR9898)
801 N. Highway 287 (5LR9899)
Whitley Residence, 913 N. Highway 287 (5LR9900)
Wendel House, 1021 N. Highway 287 (5LR9901)
Rocky Mountain Adventures Office, 1117 N. Highway 287 (5LR9902)
Patrick Residence, 1125 N. Highway 287 (5LR9903)
Gutzwiller Residence, 1201 N. Highway 287 (5LR9904)
Martinez Residence, 1205 N. Highway 287 (5LR9905)
5LR9907
Isolated Find (5LR9921)**

We also agree with your finding that the Elliott Dairy/Tyler House (5LR9895) is eligible for listing in the National Register under Criteria A and C.

In addition, it is our opinion that the segment of the Union Pacific Railroad Grade, Ft. Collins to Laramie Branch (5LR1815.4) is also eligible for the National Register under Criterion A. This is a

Rebecca D. Vickers

June 22, 2001

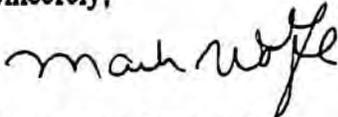
Page two

segment of the Union Pacific line between Denver and Laramie dating to ca. 1881. The form indicates that the full line is considered to be eligible. The field determination of not eligible for this segment appears to rest on the fact that the segment has been "recently upgraded and modernized" and that it contains "reconstructions." These actions are reported to have taken place "within last 5 years." However, the pictures that accompany the inventory form do not document any modernization of the railbed or track. Track is of jointed rail with fish plate joiners spiked to tie plates on wood ties. These materials do not indicate modernization. No evidence is presented that the bed itself has been rebuilt or realigned. Lacking more information on the alterations, it appears that this segment retains integrity of location, setting, design, materials, workmanship, feeling and association and thus retains its National Register eligibility. We would be happy to review any additional information you have that documents a loss of integrity.

In any event, we concur with your determination that Elliott Dairy/Tyler House (5LR9895) will not be affected by Alternative 4A. In addition, it is our opinion that the qualities of significance of the Union Pacific Railroad Grade, Ft. Collins to Laramie Branch (5LR1815.4) will not be adversely affected by this alternative.

Finally, we request a revised map for 5LR1815.4 that clearly delineates the endpoints of the segment. If we may be of further assistance, please contact Kaaren Hardy, our Intergovernmental Services Director, at 303/866-3398.

Sincerely,



for
Georgianna Contiguglia
State Historic Preservation Officer

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9011



April 15, 2004

Margie Perkins
Director
Air Pollution Control Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80222

Re: US 287, SH 1 to LaPorte Bypass Environmental Assessment

Dear Ms. Perkins:

The Colorado Department of Transportation is preparing an environmental assessment for proposed improvements to US 287 in Fort Collins between SH 1 and the LaPorte Bypass (a distance of approximately two miles). Alternatives being evaluated include the no-action, minor realignment and widening the existing segment of US 287 to four lanes, or constructing a new four-lane segment of US 287 south and west of the existing highway. (See attached project alternatives maps.)

The results of the traffic analysis show that for any of the build alternatives, all signalized intersections in the project area would operate at level of service C or better in 2025. (See attached level of service summary sheets) Opening year level of service would also be C or better because traffic volumes would be less than in 2025. EPA modeling guidance states that intersections which operate at level of service C or better are not likely to cause a violation of the federal eight-hour average carbon monoxide standard. Therefore, hot spot modeling is not required.

This project is included in the conforming 2025 North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC) Regional Transportation Plan and the conforming NFRT & AQPC 2003-2008 Transportation Improvement Program (TIP # NF3389). Pursuant to the conformity provisions of the Clean Air Act Amendments of 1990, this project will not:

- (i) cause or contribute to any new violation of any standard;
- (ii) increase the frequency or severity of any existing violations of any standard;
- (iii) delay timely attainment of any standard or any required interim emission reductions.

If you concur, please sign below and return this letter by April 30, 2004.

Thank you.

Very truly yours,

Bradley J. Beckham
Manager
Environmental Programs Branch

I Concur:

Margie M. Perkins
Margie Perkins, Director

April 21, 2004
Date



U.S. Department
Of Transportation
Federal Highway
Administration

Colorado Federal Aid Division
555 Zang Street, Room 250
Lakewood, CO 80228-1040

March 30, 2004

Ms. Maxine Natchees, Chairwoman
Uintah and Ouray Tribal Business Committee
P.O. Box 190
Ft. Duchesne, UT 84026

Dear Ms. Natchees:

Subject: Request for Section 106 Consultation; US Highway 287,
State Highway 1 to Laporte Environmental Assessment,
Larimer County, Colorado

The Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT) are preparing an Environmental Assessment (EA) that will address the effects of proposed improvements to a 1.7-mile segment of US Highway 287 between the communities of Fort Collins and Laporte in Larimer County, Colorado. The project seeks to improve mobility and safety along this narrow corridor while alleviating congestion, thereby making this section of highway consistent with adjacent four-lane sections to the north and south. Pursuant to the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) implementing regulations (40 CFR 1500-1508), FHWA and CDOT are documenting the potential social, economic and environmental consequences of this action. Please refer to the enclosed map and aerial photograph for specific locational information.

The FHWA will serve as the lead agency for this undertaking, and CDOT staff will facilitate the tribal consultation process. The agencies are seeking the participation of regional Native American tribal governments in cultural resources consultation for the undertaking, as described in Section 106 of the National Historic Preservation Act and implementing regulations 36 CFR 800 et seq. As a consulting party, you are offered the opportunity to identify concerns about cultural resources and comment on how the project might affect them. Further, if it is found that the project will impact cultural resources that are eligible for inclusion on the National Register of Historic Places and are of religious or cultural significance to your tribe, your role in the consultation process would include participation in resolving how best to avoid, minimize, or mitigate those impacts. It is our hope that by describing the proposed undertaking we can be more effective in protecting areas important to American Indian people. If you have interest in this project and in cultural resources that may be of religious or cultural significance to your tribe, we invite you to be a consulting party.



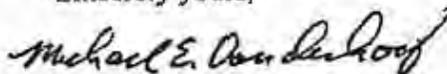
The project area along US 287 exhibits a combination of residential and commercial properties, with periodic sections of undeveloped land, especially along Alternative B (refer to the aerial photograph). The Area of Potential Effect (APE) for the project, as defined by 36 CFR 800.16(d), has been surveyed for historic properties. No sites containing evidence of Native American occupation have been documented within or near the project area. We would appreciate any information you have that may locate cultural resources in this area.

The Fort Collins area is home to a number of urban Indian people. As such, if you are aware of members of your tribe living in proximity to the US Highway 287 study area who would be interested in participating in the NEPA consultation process on some level, please notify us so that we may facilitate that interaction.

We are committed to ensuring that tribal governments are informed of, and involved in, decisions that may impact places with cultural significance. If you are interested in becoming a consulting party for the US 287 Environmental Assessment, please complete and return the enclosed Consultation Interest Response Form to CDOT Native American consultation liaison Dan Jepson within 60 days at the address or facsimile number listed at the bottom of that sheet. Mr. Jepson can also be reached via Email at Daniel.Jepson@dot.state.co.us or by telephone at (303) 757-9631. The 60-day period has been established to encourage your participation at this stage in project development. Failure to respond within this time frame will not prevent your tribe from becoming a consulting party at a later date. However, studies and decision-making will proceed and it may become difficult to reconsider previous determinations or findings, unless significant new information is introduced.

Thank you for considering this request for consultation.

Sincerely yours,



for William C. Jones
Division Administrator

Enclosures

cc: B. Chapoose, Director, Cultural Rights & Protection Office
J. Wallace, FHWA
B. Ploegstra, CDOT Region 4
D. Jepson, CDOT Environmental Program

FEDERAL HIGHWAY ADMINISTRATION/COLORADO DEPARTMENT OF TRANSPORTATION
SECTION 106 TRIBAL CONSULTATION INTEREST RESPONSE FORM

PROJECT: US Highway 287, State Highway 1 to Laporte Environmental Assessment

The Pawnee Nation of Okla. Tribe (is) (is not) (circle one) interested in becoming a consulting party for the Colorado Department of Transportation project referenced above, for the purpose of complying with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR 800). If your tribe will be a consulting party, please answer the questions below.

Signed: Alice Alexander MPD
Name and Title

CONSULTING PARTY STATUS [36 CFR §800.2(c)(3)]

Do you know of any specific sites or places to which your tribe attaches religious and cultural significance that may be affected by this project?

Yes No If yes, please explain the general nature of these places and how or why they are significant (use additional pages if necessary). Locational information is not required.

There are known sites North of the said location.
There is one possible site North of the said location.

SCOPE OF IDENTIFICATION EFFORTS [36 CFR §800.4(a)(4)]

Do you have information you can provide us that will assist us in identifying sites or places that may be of religious or cultural significance to your tribe?

Yes No If yes, please explain.

The sites are said to be Plains Woodland sites.

CONFIDENTIALITY OF INFORMATION [36 CFR §800.11(c)]

Is there any information you have provided here, or may provide in the future, that you wish to remain confidential?

Yes No If yes, please explain.

Please complete and return this form within 60 days via US Mail or fax to:

Dan Jepson, Section 106 Native American Liaison
Colorado Department of Transportation
Environmental Programs Branch
4201 E. Arkansas Ave.
Denver, CO 80222
FAX: (303)757-9445

FEDERAL HIGHWAY ADMINISTRATION/COLORADO DEPARTMENT OF TRANSPORTATION
SECTION 106 TRIBAL CONSULTATION INTEREST RESPONSE FORM

PROJECT: US Highway 287, State Highway 1 to Laporte Environmental Assessment

The Northern Arapaho Tribe (is) (is not) (circle one) interested in becoming a consulting party for the Colorado Department of Transportation project referenced above, for the purpose of complying with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR 800). If your tribe will be a consulting party, please answer the questions below.

Signed: [Signature]
Name and Title

CONSULTING PARTY STATUS [36 CFR §800.2(c)(3)]

Do you know of any specific sites or places to which your tribe attaches religious and cultural significance that may be affected by this project?

Yes No If yes, please explain the general nature of these places and how or why they are significant (use additional pages if necessary). Locational information is not required.
As tribal people we hold the earth and everything that grows upon it as being sacred.

SCOPE OF IDENTIFICATION EFFORTS [36 CFR §800.4(a)(4)]

Do you have information you can provide us that will assist us in identifying sites or places that may be of religious or cultural significance to your tribe?

Yes No If yes, please explain.
It is very general

CONFIDENTIALITY OF INFORMATION [36 CFR §800.11(c)]

Is there any information you have provided here, or may provide in the future, that you wish to remain confidential?

Yes No If yes, please explain.

Please complete and return this form within 60 days via US Mail or fax to:

Dan Jepson, Section 106 Native American Liaison
Colorado Department of Transportation
Environmental Programs Branch
4201 E. Arkansas Ave.
Denver, CO 80222
FAX: (303)757-9445

Jepson, Daniel

From: George Daingkau [pastor04@sbcglobal.net]
Sent: Saturday, April 10, 2004 11:22 AM
To: Jepson, Daniel
Subject: US Highway 287

Hello from Oklahoma!

Hi Dan, I thought I had better touch bases with you on the phone call and the site you mention.

Yes, Kiowa is interested in being a consulting party.

My interest is that, how will this project effect the surrounding areas? Have the people consented to have this road built in there front yards? You stated that a survey was made of the APE and that no evidence of Native American occupation have been documented? We as Kiowa have been through this place and have oral stories of migration as coming through this area pass on to our generations. One question, how big of an area was surveyed?

According to your map, is this the Terry Lake bend? Or is the area surveyed some place else? If the survey was in the lake or near the lake then your right, because by building this lake all the evidence would have been removed?

I am sure you have already contacted all the interested parties about their land and the decision for the road?

Our people who live along this road would probably be interested in knowing when, where, and how all this will be done?

In the survey who did it? CDOT? or others? Is there a copy of this survey available?

How are the other consulting parties that have been contacted react to your finding?

My opinion, is that if you must rebuild than alternative A4 up to point A5, and then use A5 would be my choice, because you already have structure in place to build off from and a ROW in place along this road.

If at any time and if funds are available, I and others would like to tour this route before its construction and to view what is exactly there. If you remember, Dan, I shared with you that the surface and its lay out will give you some information before its removed or destroyed. Well Dan, be safe, Rev. Daingkau

Discussed these issues w/ Mr. Daingkau by phone 4/12/04.

FEDERAL HIGHWAY ADMINISTRATION/COLORADO DEPARTMENT OF TRANSPORTATION
SECTION 106 TRIBAL CONSULTATION INTEREST RESPONSE FORM

PROJECT: US Highway 287, State Highway 1 to Laporte Environmental Assessment

The Southern Ute Indian Tribe Tribe is not (circle one) interested in becoming a consulting party for the Colorado Department of Transportation project referenced above, for the purpose of complying with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR 800). If your tribe will be a consulting party, please answer the questions below.

Signed: Neil B. Cloud NAGPRA COOR.
Name and Title

CONSULTING PARTY STATUS [36 CFR §800.2(c)(3)]

Do you know of any specific sites or places to which your tribe attaches religious and cultural significance that may be affected by this project?

Yes No If yes, please explain the general nature of these places and how or why they are significant (use additional pages if necessary). Locational information is not required.

SCOPE OF IDENTIFICATION EFFORTS [36 CFR §800.4(a)(4)]

Do you have information you can provide us that will assist us in identifying sites or places that may be of religious or cultural significance to your tribe?

Yes No If yes, please explain.

CONFIDENTIALITY OF INFORMATION [36 CFR §800.11(c)]

Is there any information you have provided here, or may provide in the future, that you wish to remain confidential?

Yes No If yes, please explain.

Please complete and return this form within 60 days via US Mail or fax to:

Dan Jepson, Section 106 Native American Liaison
Colorado Department of Transportation
Environmental Programs Branch
4201 E. Arkansas Ave.
Denver, CO 80222
FAX: (303)757-9445



US 287 from SH 1 to LaPorte Bypass

US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix D
Larimer County Preferred
Alternative
County Commissioners
May 7, 2001



Minutes of the Larimer County Commissioners

[Meetings & Minutes](#)

[Commissioners' Minutes](#)

Commissioners:

Kathay Rennels
[Send E-mail](#)

Tom Bender
[Send E-mail](#)

Glenn Gibson
[Send E-mail](#)

PROCEEDINGS OF THE BOARD OF COUNTY COMMISSIONERS

Monday, May 7, 2001

LAND USE HEARING

Audio Difficulties Were Experienced During This Hearing

(#32 & 33)

The Board of County Commissioners met with Larry Timm, Director of Planning; Chair Rennels presided and Commissioners Bender and Gibson were present. Also present were Al Kadera and Matt Lafferty, Planner II; Jim Reidhead, Director of the Rural Land Use Center; Claudia DeLude, Code Enforcement Officer; Jeannine Haag, Assistant County Attorney; Traci Downs, Civil Engineer; and Jean O'Connor, Recording Clerk.

Chair Rennels stated the following items are consent and will not be discussed unless requested by the Board or members of the audience.

1. FOX ACRES 1ST FILING, ENVELOPE E, AMENDED PLAT: NE 1/4 28-10-73; NORTHEAST OF RED FEATHER LAKES

This is a request to identify lots within an existing building envelope. Staff recommendation is approval of the Amended Plat of Envelope E, Fox Acres Country Club, First Filing.

2. DIAMOND FARMS REVISED RURAL LAND PLAN: 11-09-69; GENERALLY LOCATED 3 MILES NORTHWEST OF WELLINGTON AND ROUGHLY 1.5 MILES NORTH OF WAVERLY, IMMEDIATELY NORTH OF COUNTY ROAD 70, BETWEEN COUNTY ROAD 17 AND COUNTY ROAD 15.

This is a request to remove the requirement for fire sprinkler systems in the homes on Lots 4 through 7. Staff recommendation is approve of the Diamond Farms Revised Rural Land Plan request to remove the requirement for residential fire sprinkler systems for Lots 4 through 7 with the condition that emergency access arrangements will be approved by Dale Miller, Director of Larimer County Road and Bridge Department. All other conditions of this plan would remain in effect.

MOTION

Commissioner Bender moved that the Board of County Commissioners approve Fox Acres 1st Filing Envelope E Amended Plat #01-S1751 and Diamond Farms Amended Rural Land Use Plan #01-S1749 as presented and outlined above.

Motion carried 3 - 0.

3. US HWY 287- STATE HWY 1 TO LAPORTE BYPASS ENVIRONMENTAL ASSESSMENT:

Chair Rennels stated the Board and the Planning Commission attended a work session regarding this item and the proposed 4 alignments were discussed.

Mr. Sean Hahn, Project Manager for the Environmental Assessment study recommended the Board select option A4 since this option enlarges the current alignment to 4-lanes and minimizes land takings and environmental impacts, while mitigating safety concerns at the Aragon/Meadow Lane area. Mr. Hahn stated that several community meetings were held and well attended by affected parties.

Chair Rennels noted there is no public present to comment on this item.

M O T I O N

Commissioner Gibson moved that the Board of County Commissioners select "A4" as the preferred alternative route for improvements on Hwy 287 between State Hwy 1 and the LaPorte Bypass, based on review of the potential impacts of each alternative identified in the Environmental Assessment document prepared.

Motion carried 3 - 0.

4. HARVEST HEIGHTS SUBDIVISION FINAL PLAT: SW 1/4 OF 17-04-69; LOCATED ON THE EAST SIDE OF COUNTY ROAD 23 APPROXIMATELY 1/4 MILE NORTH OF HIGHWAY 56.

This is a request for approval of the Final Plat for the Harvest Heights Subdivision. Staff is recommending this item be tabled until a ditch agreement is acquired, collateral guaranteeing public improvements is provided is a form acceptable to the County.

Mr. Lafferty stated that the applicant is requesting Board approval of this final plat prior to all issues being addressed from the Preliminary Plat hearing. Mr. Lafferty stated that the applicant has tried to get an agreement with the Ditch Company regarding stormwater discharge into the ditch but has not been successful at this time. Mr. Lafferty further stated that the applicant has applied for "Tax Exempt" status with the IRS and therefore owes back taxes; which is an issue. And lastly, Mr. Lafferty stated the applicant has not submitted a guarantee of public improvements (collateral) as required under Section 12.6.2 of the Land Use Code.

Mr. Bruce Conover, the applicant, stated that he has been negotiating with the Ditch Company for 14-months. The concern, Mr. Conover stated is that the company is requesting more than is required under the Land Use Code for a ditch that is not even located on the site of the application. Historically, Mr. Conover continued the ditch has been maintained from the south side of the ditch, however the applicant is willing to allow the ditch company to share the easement requested by Open Lands for a public trail, but the company is requesting an exclusive easement. Furthermore, Mr. Conover stated the applicant is willing to pay



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix E Threatened & Endangered Species Survey Reports

- E.1 Preble's Meadow Jumping Mouse
- E.2 Ute Ladies' -Tresses

APPENDIX E - THREATENED AND ENDANGERED SPECIES

E.1 Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) Presence/Absence Survey Report, September 25, 2000

E.1.1 Introduction

The objective of this survey was to determine the presence or absence of the Preble's meadow jumping mouse (PMJM) in the Dry Creek drainage in north Fort Collins, Larimer County, Colorado. The nearest known occurrences of the PMJM were at the Lone Pine State Wildlife Area approximately 18 miles from the project area in northeast Fort Collins (Meaney et al. 1997a). This survey was conducted under federal subpermit SP00-13.00 under the authority of permit PRT-704930, and State License Number 00-TR911.

The PMJM (*Zapus hudsonius preblei*) is a subspecies of the meadow jumping mouse, with distribution restricted to the Front Range of Colorado and Wyoming, between Pueblo County, Colorado and Goshen County, Wyoming. The PMJM was listed as threatened on May 13, 1998, under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et. seq.*).

The PMJM requires moist habitats with a well-developed shrub and grass understory and an equally well-developed overstory (Armstrong et al. 1997, Bakeman and Deans 1997, Meaney et al. 1997b). These habitats typically occur in riparian areas in close proximity to water. However, moist or wet meadows, whether from natural or anthropogenic causes, are also suitable habitat and should be considered when investigating potentially suitable habitat (US Fish and Wildlife Service [USFWS] 1999). USFWS (1999) and other researchers (Shenk and Sivert 1998, Colorado Natural Heritage Program 1999) defined PMJM habitat as wet meadows, irrigation ditches, and riparian corridors with a well-developed understory of grasses and a relatively dense shrub overstory. According to Meaney (1997a), irrigation and roadside ditches (although marginal breeding habitat) have been used by PMJM as migration or dispersal corridors, and are considered suitable. Presently the range of the PMJM is restricted to areas below elevations of 7,600 feet in Colorado and 8,100 feet in Wyoming (USFWS 1999).

One purpose of the ESA is to provide a means for conserving endangered and/or threatened species and their habitats. The term "threatened" means any species that is likely to become an endangered species within the foreseeable future. "Endangered" indicates that a species is in danger of extinction throughout all or a significant portion of its range within the foreseeable future. Before initiation of activities that might alter the habitat of threatened or endangered species, a habitat assessment or presence/absence survey is required by USFWS (URS Greiner, Woodward Clyde 1999). According to the 1999 Interim Guidelines for PMJM, a minimum of 750 to 1,000 trap nights are required over a minimum of three nights of trapping between June 1 and September 15 to determine the presence or absence of PMJM (USFWS 1999). Trapping efforts initiated after September 1st require a minimum of 1,000 trap nights because adult PMJM may enter hibernation after this date, especially at higher elevations (USFWS 1999).

In the event PMJM are captured during survey efforts, a formal consultation under ESA Section 7 is required by USFWS for all federally funded projects that might jeopardize the

continued presence of any species listed under ESA. A biological assessment would be required as part of the compliance regulations under the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4332).

E.1.2 Methods

On the evenings of August 23, 24, 28, and 29, 2000, 150 non-folding Sherman live traps were in place in potential PMJM habitat along approximately 0.8 mile (1.0 km) of the Dry Creek drainage. Traps were first set and baited with sweet oats on the evening of August 23. The survey was conducted according to USFWS survey protocol (1999). Five sets of transects were placed in parallel rows spaced approximately 32.8 feet apart. Individual traps along each transect were set 16.4 feet apart. A potential of 600 trap nights were available for PMJM trapping over the duration of the survey – fewer than the 750 trap nights required by USFWS. However, based on the narrowness and small size of the habitat, and the generally degraded nature and lack of suitable upland habitats, it was not possible to place more traps in appropriate habitat. Data were recorded on survey forms provided by USFWS and the Colorado Division of Wildlife (CDOW), and on other forms created by the surveying biologist.

The southeastern-most trap location was recorded in Universal Transverse Mercator (UTM) coordinates using a hand held GPS III Plus by Garmin® for each pair of transects.

E.1.3 Project Area

Habitat within the Dry Creek drainage consists of a narrow creek channel with riparian and wetland vegetation in the adjacent floodplain areas (Plate 1). The creek averages approximately 4.0 to 6.0 feet wide and approximately 0.5 feet deep, and generally flows in a north-south direction. The floodplain of the creek has been constrained by the construction of US 287 and adjacent agricultural lands on both sides of the creek. Where a floodplain exists, creek width averages 8.0 to 12.0 feet. The banks of the creek were generally steep, with plant species common to disturbed riparian systems prevailing. Leafy spurge (*Euphorbia esula*) and smooth brome (*Bromopsis inermis*) were the dominant herbaceous vegetation; plains cottonwood (*Populus deltoides*), peach-leaved willow (*Salix amygdaloides*), Chinese elm (*Ulmus pumila*), and green ash (*Fraxinus pennsylvanicus*) were the dominant woody species within the corridor (Plate 2). No regeneration of woody species was evident during the course of the surveys, further indicating that the level of anthropomorphic disturbance of the drainage has had a negative impact on the habitat.

Other vegetation along Dry Creek included manna grass (*Glyceria striata*), streambank wheatgrass (*Agropyron riparium*), Canada thistle (*Breea [Cirsium] arvense*), and bouncing bet (*Saponaria officinalis*). Areas where the creek widened to create a floodplain contained cattail (*Typha latifolia*), sedge species (*Carex emoryi*), and arrowhead (*Sagittaria latifolia*) (Plate 1). The shrub cover was represented by wild plum (*Prunus americana*), skunkbush (*Rhus trilobata*), and scattered snowberry (*Symphoricarpos* spp.). Tree cover over the creek itself ranged from 90 percent in some areas to less than 40 percent in others. Grasses accounted for approximately 80 percent of the ground cover in areas adjacent to the creek, although forbs and weeds increased as the distance to water increased. Shrubs accounted for less than 5 percent of the available cover. The presence of permanent water, dense grass or understory vegetation, and secondary overhead

cover (downed willow limbs) met some of the criteria for classifying the habitat as suitable for PMJM (Plate 3).

Adjacent upland areas consisted of over-grazed horse pasture, alfalfa fields, and a scrap metal and steel yard (Plate 4 and Plate 5). Pasture areas and immediate upland vegetation contained approximately 80 percent leafy spurge (visual estimate). However, because of the impacts of industrial development (e.g., Aragon Iron and Metal, Inc.), invasive species (leafy spurge, Canada thistle), dumping, adjacent agricultural lands, and the narrowness of the stream corridor, the habitat in this project area is marginal for PMJM.

E.1.3.1 Soils and Geology

Soils within the study site were classified by the Soil Conservation Service and recorded digitally by the Larimer County Geographical Information System group in May 1999. According to this data, the soils are a Nunn clay loam on 0 to 1% slope and a Loveland clay loam on 0 to 1% slope. The Nunn series of soils consists of very deep, well-drained soils that formed in loess and mixed alluvium. These soils are typically well-drained with negligible to very high runoff, depending on slope, and moderately slow or slow permeability. Native vegetation of this soil type is blue grama (*Bouteloua gracilis*), buffalograss (*Buchloe dactyloides*), needlegrass (*Stipa* spp.), and wheatgrass (*Agropyron* spp.) (National Cooperative Soil Survey 1997).

Loveland series soils are on floodplains and low terraces along the smaller streams draining the Rocky Mountain areas, with slopes of 0 to 6%. The soils formed in alluvial sediments are derived from a variety of rock sources. The principal native vegetation of this soil type is junegrass (*Koeleria macrantha*), bluegrass (*Poa* spp.), and blue grama (National Cooperative Soil Survey 1997).

E.1.3.2 Human Development/Disturbance

The survey area has been impacted by past human activity including disposal of old tires and automobile bodies. Barns, horse pasture, and manicured lawns were located within 32.8 feet of the southern-most pair of transects. The northern-most transects were within 32.8 feet of a metal and steel salvage yard.

E.1.3.3 Wildlife

Wildlife species observed either directly or by sign (tracks, scat) other than species captured included raccoon (*Procyon lotor*), domestic cats, great blue heron (*Ardea herodias*), black-crowned night heron (*Nycticorax nycticorax*), and American kestrel (*Falco sparveius*). One muskrat (*Ondatra zibethicus*) was observed in the creek in the area of the southern-most transect pair. Domestic dogs were seen moving along the creek during daylight hours. No other wildlife species were observed, nor their presence detected during the surveys.

E.1.4 Results

No PMJM were captured during the total 503 trap nights. Total trap nights were calculated by subtracting the number of sprung traps (n = 97) from the total potential trap nights (n = 600) available. Of the traps available, 80.5 percent were open and empty throughout the duration of the trapping effort. A total of 20 captures (3.9 percent capture rate) were recorded

over the course of the project. The house mouse (*Mus musculus*) was the most common species captured, representing nine of the 20 captures recorded (45 percent). The remaining captures were meadow voles (*Microtus pennsylvanicus*), prairie voles (*Microtus ochrogaster*), and deer mice (*Peromyscus maniculatus*).

E.1.5 Conclusion and Discussion

Presence/absence surveys were conducted for PMJM along Dry Creek in north Fort Collins, Larimer County, Colorado. These surveys detected no PMJM within the area of interest. Four generalist species were detected along the drainage: the house mouse, meadow vole, deer mouse, and prairie vole.

The house mouse is a frequent inhabitant of human dwellings, including barns and grain bins. The species is also common as feral populations along fencerows, ditch banks, rights-of-way, abandoned fields, and cropland (Fitzgerald et al. 1994). Conversely, the PMJM does not typically occur in human structures or areas that are drastically disturbed by the presence of humans. The house mouse is uncommon in undisturbed areas that are generally associated with the occurrence of PMJM (Whitaker 1988). Similarly, the house mouse is opportunistic in diet, consuming anything from grains, insects, and carrion to leather and glue (Fitzgerald et al. 1994). The PMJM is a specialist species that feeds primarily on arthropods, with secondary food sources including endogenous fungus and seeds (Shenk and Sivert 1998).

The meadow vole is another habitat generalist associated with moist habitats that include lush, grassy fields, marshes, swamps, woodland glades, and mountain meadows (Whitaker 1988). On the eastern plains and along foothills where the meadow vole's range overlaps PMJM range, meadow voles are most common in marshy wetlands and along riparian corridors. This species eats mostly green plants during the warmer months and switches to dried grasses, buds, twigs, and bark during the colder months while the PMJM is hibernating. Thus the meadow vole is not considered a direct competitor with the PMJM (Fitzgerald et al. 1994).

Another generalist species encountered, although less common than the meadow vole or the house mouse, was the deer mouse. The deer mouse is a habitat generalist, adapted to exploit degraded environments. Because of this adaptation, deer mice are present in all habitat types, including plains prairies, brushy areas, and woodlands (Whitaker 1988). Typically, deer mice do not occur in the well-developed and undisturbed wetlands used by the PMJM. As with its habitat selection, the diet of the deer mouse is very general; e.g., insects, carrion, endogenous fungi, and bone. Seeds (69 to 76 percent) and insects (14 to 25 percent) comprise the bulk of the species' diet (Fitzgerald et al. 1994).

Based on the results of the surveys, it is believed that the proposed project would not have a negative impact on the PMJM or its habitat. PMJM are not believed to occur within the project area for the following reasons:

- No PMJM were captured during the survey.
- The project area exhibited signs of extensive human disturbance.
- The area exhibits a lack of habitat characteristics associated with PMJM.
- Introduced and weedy plant species were prevalent.

- A shrub-dominated mid-story was not present.
- The percentage of open/empty traps was high (80.5 percent).
- No PMJM populations are known to exist in the vicinity of the project area.

In general, the high percentage of open and empty traps suggests that the project area does not offer suitable habitat for most rodent species or for large populations of even the more generalist species.

E.1.6 Surveyor Qualifications

Robert Magill has a bachelor's degree in wildlife biology and a master's degree in wildlife management. He has conducted capture-recapture small mammal studies in interior Alaska, on the Pawnee Grasslands of northeastern Colorado, and in the Great Basin Desert of southwestern Idaho. Mr. Magill received his certification to conduct surveys for the PMJM from USFWS in May 2000.

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Plate 1. Floodplain along Dry Creek, just north of US 287



Plate 2. Chinese elm and green ash within the stream channel of Dry Creek. Note leafy spurge and tires.



Plate 3. Dense herbaceous vegetation and downed woody debris



Plate 4. Dry Creek proximity to scrap metal yard (in background)



Plate 5. Heavily grazed pasture adjacent to portions of Dry Creek

E.2 Ute Ladies'-Tresses (*Spiranthes diluvialis*) Presence/Absence Analysis, November 16, 2000

E.2.1 Introduction

The EA conducted pursuant to potential US 287 improvements addressed the potential for Ute ladies'-tresses (*Spiranthes diluvialis* Sheviak) to occur within an area north of Fort Collins, in Larimer County, Colorado. The EA addresses three alternatives, two of which would widen the existing highway along US 287 north of Fort Collins from State Highway 1 (SH 1) to the LaPorte Bypass (Figure E-1). The third alternative (Alternative B) angles south of US 287 from the LaPorte Bypass and connects with North College Avenue north of SH 1.

The Ute ladies'-tresses was listed as a threatened species in 1992 (57 Federal Register 2053, January 17, 1992) under the authority of the Endangered Species Act of 1973 (as amended). Ute ladies'-tresses is a perennial, terrestrial orchid with stems 8 to 20 inches tall, arising from tuberous, thickened roots. The inflorescence is a 3- to 15-cm-long spike with white petals and blooms in July through September (Spackman et al. 1997). The plant occurs at altitudes below 6,800 feet in seasonally moist soils and wet meadows near springs, lakes, or perennial streams and their associated floodplains in certain areas along the Front Range in Colorado. Typical habitats include old stream channels and alluvial terraces, subirrigated meadows, and other areas where the soil is saturated to within 46 centimeters (18 inches) of the surface at least temporarily during the spring or summer growing season (USFWS 1995).

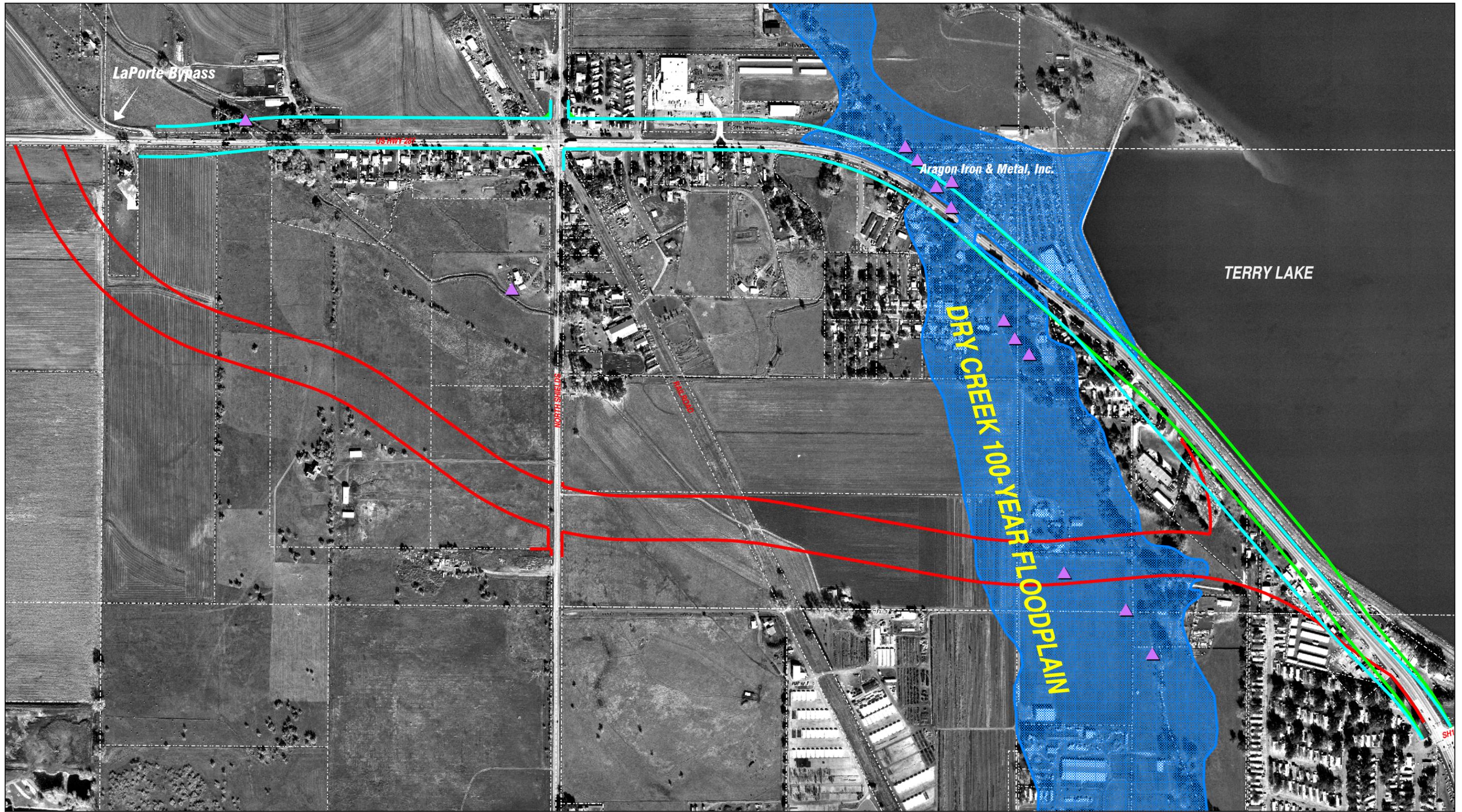
This species is typically associated with silty, sandy, gravelly, or cobbly soils, and occasionally highly organic soils or peat. It prefers well-drained soils with a high moisture content that may contain some gleying or mottling but are not anaerobic or permanently saturated. The Ute ladies'-tresses orchid occurs with grasses, sedges, rushes, and shrubs or riparian trees such as willows. It rarely occurs in deep shade, preferring open glades or pastures and meadows in full sunlight. Commonly associated species in areas along the Front Range include horsetail, milkweed, verbena, agalinis, lobelia, blue-eyed grass, arrowgrass, carpet bentgrass, reedgrass, and goldenrod (USFWS 1995).

E.2.2 Methods

The potential for the Ute ladies'-tresses orchid to occur within the project area was evaluated by means of habitat analysis and field investigations. Field sites were investigated in late July 1999 and August 2000 (flowering period) in accordance with 1995 USFWS guidelines (Figure E-1). The surveys were conducted in conjunction with wetland inventories and delineations.

E.2.3 Results

Potentially suitable habitats within the US 287 improvement project area include Dry Creek and the wet meadows that are prominent south of US 287 near North Shields Street. Dry Creek habitats were considered unsuitable because of down-cutting that has occurred to the point where there is no floodplain and the areas are heavily shaded, or because in areas where a floodplain does exist, the vegetation consists of dense stands of cattail and bulrush. Such sites are deemed unsuitable or having low potential as habitat for Ute ladies'-tresses (USFWS 1995). No Ute ladies'-tresses plants were observed during the field investigations.

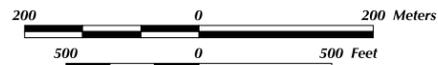


LEGEND

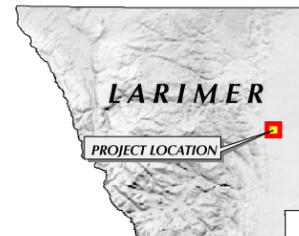
-  Property Boundaries
-  Dry Creek 100-Year Floodplain
-  Spiranthes Survey Locations
-  Alternative A4 Right-of-Way
-  Alternative A5 Right-of-Way
-  Alternative B Right-of-Way


 Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Floodplain information provided by FEMA. Map produced November 20, 2000; reproduced March 1, 2004 by JFSA.



SCALE - 1:8250



**US 287-SH 1 to the LaPorte Bypass:
 Spiranthes Survey Locations**

FIGURE E-1

Meadows adjacent to North Shields Street and between North Shields Street and the LaPorte Bypass also provide potential habitat for Ute ladies'-tresses (Figure E-1). Plate 6 and Plate 7 illustrate the habitats surveyed. These areas are frequently disturbed by grazing and haying, which reduces suitability for orchids. Portions of these meadows are dominated by dense stands of saltgrass (*Distichlis stricta*), and such areas have been deemed unsuitable for Ute ladies'-tresses because of saline conditions (USFWS 1995). In addition, much of the area is poorly drained because of soils dominated by clay (Natural Resources Conservation Service 1980). No orchids were detected in these areas during field observations. The Colorado Natural Heritage Program located no records of Ute ladies'-tresses orchids occurring within the project area.

The lack of historical records, the primarily unsuitable habitat of the project area, and the lack of orchids detected during field investigations led to the conclusion that the Ute ladies'-tresses does not occur within the project area being considered for roadway improvements.

E.2.4 Surveyor Qualifications

Loren Hettinger of J.F. Sato and Associates of Littleton, Colorado, conducted this survey. Dr. Hettinger holds a Ph.D. in botany from the University of Alberta Canada, an M.S. in biology from New Mexico State University in Las Cruces, and a B.S. degree in biology from Fort Lewis College in Durango, Colorado. He has conducted surveys for *Spiranthes diluvialis* along the Front Range of Colorado, specifically along Clear Creek west of the Denver metro area and along the South Platte River and its tributaries north and east of Denver, Colorado.

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Plate 6. Dry Creek habitats, north edge of Fort Collins, Colorado (2 photos)



Plate 7. Pastureland adjacent to North Shields Street near Dry Creek (2 photos)



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix F Wetland Finding

Wetland Finding
US 287 from SH 1 to LaPorte Bypass Improvement Project
Project Number STA 2873-100
Larimer County, Colorado

Prepared by:

J.F. Sato and Associates, Incorporated
5898 South Rapp Street
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March 12, 2004

APPENDIX F

Wetland Finding
March 12, 2004
US 287 from SH 1 to LaPorte Bypass Improvement Project
Project Number STA 2873-100
Larimer County, Colorado

F.1 Introduction

This wetland finding for the US 287 from SH 1 to the LaPorte Bypass Improvement project (STA 2873-100) has been written in compliance with Executive Order 11990, "Protection of Wetlands," and is in accordance with 23 CFR 771, 777 and Technical Advisory T6640.8A that mandate wetlands be avoided wherever possible and impacts be minimized to the extent practicable during highway projects. The project consists of improving US 287 from SH 1 to the LaPorte Bypass north of Fort Collins, Colorado (see Figure F-1 for location), and is addressed by the Environmental Assessment prepared by J.F. Sato and Associates for Region 4, Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA).

Wetlands and Other Waters of the US are regulated under Section 404 of the Clean Water Act (CWA) and administered by the US Army Corps of Engineers (COE). Regulation is limited to jurisdictional areas defined by COE CFR 33, Section 323 guidelines (COE-DoD 1996). Past litigation (Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers, No. 99-1178, January 9, 2001 [SWANCC]) limited jurisdictional wetlands to those wetlands that are contiguous with or connected by surface water flow to Waters of the US or other jurisdictional wetlands. Permitting or reporting may be required for any dredge or fill activities that affect these COE jurisdictional areas. Executive Order 11990 (Protection of Wetlands) requires that federal agencies "take action to minimize the destruction, loss or degradation of wetlands." No exclusion of isolated (nonjurisdictional) wetlands is indicated in the Executive Order. Further guidance by FHWA regulations (CFR 23 Sections 771 and 777), and Technical Advisory T6640.8A (Section V,G,12) direct that impacts on wetlands will be avoided wherever possible and minimized to the extent practicable during highway construction projects. CDOT requires mitigation for all wetlands, including nonjurisdictional wetlands. Legislation was submitted in the last year (February 27, 2003) to the US Senate (S-473) and the US House of Representatives (HR-962) that would restore the isolated wetlands to federal jurisdiction.

F.2 Project Location

The proposed project would occur on US 287 between mileposts (MPs) 348.50 and 350.35, and is north of the city of Fort Collins from the LaPorte Bypass intersection (approximately 1 mile east of LaPorte in Larimer County) to the intersection with SH 1 (Figure F-1).

F.3 Project Description

This road currently consists of two undivided travel lanes, each 12 feet (4.9 m) wide, with varying widths of shoulders (0 to 4 feet [1.6 meters]). Three signalized intersections occur in this

segment and include SH 1, North Shields Street, and the LaPorte Bypass. The purpose of the proposed project is to improve the mobility and safety of travel conditions for US 287 through this area. The project plans consist of widening the highway to four 12-foot lanes, two in each direction, with deceleration and merge lanes at major intersections. A 10-foot-wide shoulder or a sidewalk would be constructed for bicycle/pedestrian use.

F.4 Project Alternatives

Three action alternatives were considered in the environmental assessment for the project. Two of the alternatives (A4 and A5) consist of widening US 287 and only differed in whether widening occurs to the north or south of the existing road. Wetlands were avoided to the extent practicable in engineering designs, but because wetlands occur on both sides of US 287 at Dry Creek, and immediately adjacent to the road right-of-way along the Little Cache La Poudre Ditch, complete avoidance was not possible. Minimization of impacts included keeping the roadway cross-section relatively narrow while still meeting the purpose and need of the project. A third alternative (B) evaluated the potential for a new road to be constructed that looped south from the LaPorte Bypass to join US 287 approximately 1,000 feet north of its intersection with SH 1. This alternative would impact the most wetlands and Other Waters of the US (7.76 acres; 3.14 hectares).

Alternative A4 was determined to be the Preferred Alternative, and would impact the least amount of wetlands (0.25 acre; 0.10 hectare). Of the alternatives analyzed, Alternative A4 also is the least damaging and most practicable for preserving wetlands in accordance with the COE guidelines on Section 404 of the Clean Water Act. Through the analysis of the project, it was determined that discharges into the aquatic ecosystem could not be avoided; however, impacts would be minimized to the extent possible to this system (Dry Creek), and mitigation plans are intended to improve the habitat and wetland value.

F.5 Wetlands

F.5.1 Wetlands Considerations

Section 404 (b)(1) of the Clean Water Act (CWA) provides guidelines that essentially protect aquatic ecosystems that include the precept that dredged or fill material should not be discharged into an aquatic ecosystem unless it can be demonstrated that such discharge would not have unacceptable adverse impacts either individually or in combination with known and/or probable impacts of other activities on the aquatic ecosystems of concern. Therefore no such discharge shall be permitted if there is a practicable alternative to the proposed action that would have less impact on aquatic ecosystems. Part of the screening criteria included impacts on wetlands and Other Waters of the US to ensure that the impacts on these areas were included in the evaluation. Selecting the practicable alternative(s) that would cause the least impact on wetlands and Other Waters of the US meets the intent of CWA Section 404 (b)(1) guidelines.

F.5.2 General Descriptions

Wetlands and Other Waters of the US were identified initially by aerial photographic interpretation and from Cooper and Merrit (1996), who mapped wetlands for Larimer County. Field investigations were conducted by Loren Hettinger, J.F. Sato and Associates, Littleton, Colorado, on August 9 and 25, 2000, at which time data were recorded on the plant species,

soils, and hydrology in accordance with COE (1987) guidelines. Wetlands are mapped in Figure F-2. The most prominent plant species were noted for each wetland area. Taxonomic nomenclature follows Weber and Wittmann (2001). Wetland indicator values of plant species follow Reed et al. (1996). Soils observations included identifying features in the top 12 to 18 inches (30 to 46 cm) that indicate anaerobic conditions including gleyed horizons (gray colors) and chromas (color brightness) of less than 2 indicating frequent saturation; mottles and/or aerated root channels (bright colors in an otherwise darker matrix) that indicate a fluctuating water table. Soils colors were defined using a Munsell Color Chart (1992). Soil units considered wetland types, such as Histosols (e.g., Longmont Series), were also noted (NRCS 1980). Hydrologic inferences including active flow, evidence of flows, and a water table or moisture in the soil profile were also recorded. A listing of these characteristics for each wetland type is provided in section F.11.

Wetland functions were designated for each wetland type using FHWA (1983) and Wetland Evaluation Technique (WET) methods developed by Adamus et al. (1987). Wetland functions designated for project wetlands include groundwater recharge, groundwater discharge, flood-flow alteration, sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, production export, aquatic diversity/abundance, habitat quality (aquatic and wildlife species diversity/abundance), and recreation, including uniqueness/heritage.

Two principal wetland classes (Cowardin et al. 1979) were identified during field investigations: Palustrine forested (PFO) with emergent inclusions (PFO/EM) and Palustrine emergent (PEM). Palustrine emergent wetlands in the project area were comprised of sedge-dominated wetlands along an irrigation canal; an area of wet meadow, part of which is used for pasture and hay production; and a cattail marsh that has formed from road-impounded drainage. Photographs depicting the PFO and PEM wet meadow wetland types are provided in Plate 1 through Plate 3. Other Waters of the US in the project area include Dry Creek channel and Terry Lake on the north side of US 287 (Figure F-1).

F.5.2.1 PFO and PFO/EM Wetlands

This wetland occurs along Dry Creek and is characterized by dense stands of peach-leaved willow (*Salix amygdaloides*) and a variety of herbaceous species, depending on the width of the floodplain and the flow channel (Plate 2 and Plate 3). The active flow channel was generally 6.5 to 9.8 feet (2 to 3 meters) wide with a narrow border of wetland vegetation (e.g., mannagrass [*Glyceria striata*]) with a dominant overstory of peach-leaved willow. Infrequently, the channel widens to form a saturated floodplain with small backwater flows, and may be up to 39.3 feet (12 meters) wide. This condition occurs near the bridge immediately north of US 287. PEM inclusions in these areas are characterized by broad-leaved cattail (*Typha latifolia*), duckweed (*Lemna minor*), arrowhead (*Sagittaria latifolia*), and mannagrass. Vegetation, soils, and hydrologic characteristics are provided in section F.11.

F.5.2.2 PEM Wetlands

Emergent wetlands occur as a narrow band along the Little Cache La Poudre Ditch and are dominated by Emory sedge (*Carex emoryi*), with occasional occurrences of showy milkweed (*Aesclepias speciosa*) and smooth brome (*Bromopsis inermis*). These areas are also marked by occasional large (48- to 60-inch diameter) plains cottonwood trees (*Populus deltoides* ssp.

monilifera), as well as Chinese or Siberian elm (*Ulmus pumila*), especially near homesteads (Figure F-2). Soils were saturated from adjacent flows in the ditch.

Meadows that are used for pasture and hay production are sufficiently saturated either from irrigation or near-surface groundwater to support wetland species and are considered to be jurisdictional to Section 404. Characteristic plant species consist of dense stands of Baltic rush or wiregrass (*Juncus balticus*) and saltgrass (*Distichlis stricta*), with lesser amounts of curly dock (*Rumex crispus*), redtop (*Agrostis gigantea*), and foxtail (*Hordeum jubatum*). This wetland type is most prominent south of US 287 in the North Shields Street area (Figure F-2, Plate 1). Soils were saturated often within 8 inches of the surface.

A cattail marsh occurs north of US 287 at the LaPorte Bypass. This wetland is supported by water that is impounded by the roadbed of the highway and an access road to private property. Broad-leaved cattail is the dominant species of this site. The soil profile was saturated to near or at the surface.

F.5.2.3 Functions

The primary functions of PFO and PFO/EM wetlands along Dry Creek include providing bank stability and erosion control, flood-flow control/alteration, wildlife habitat (diversity abundance), groundwater recharge, and sediment/toxicant retention. Of these functions, providing bank stability, flood flow control-alteration, and wildlife habitats are the most valuable. Wetlands along ditches and canals are only minimally valuable for flood-flow alteration and sediment stabilization, or as wildlife habitat. These wetlands are confined to ~1 to 3 feet in width, and often are mowed by ditch companies, which limits their function and plant diversity, but they are valuable for bank stabilization. Sedge and grass cover along the banks provides some invertebrate habitat, and songbirds use the cottonwood and Chinese elm trees for nesting.

Wet meadows provide a number of valuable functions, including production export and wildlife diversity/abundance (habitat quality). Sediment/toxicant removal and nutrient removal may also occur, but not at a high capacity. Cooper and Merritt (1996) noted that this wetland type is highly productive and species-rich, and as such provides rich forage for herbivorous animals and habitat for numerous songbirds and birds of prey. The cattail marsh is functional in improving water quality (e.g., runoff from the highway), as emergent marshes of cattail have a high capacity for sediment/toxicant retention.

F.5.2.4 Jurisdictional Status

Whether the wetlands that occur in the project area are jurisdictional to Section 404 of the CWA or not was reviewed with Scott Franklin (October 2000) and Terry McKee of the COE (Denver Regulatory Office), which involved determining the connection with Other Waters of the US in connection with the SWANCC court ruling that changed the status of isolated waters (McKee 2001). Because surface connections were not evident for PEM wetlands, 404 jurisdiction was not indicated. The PFO and PFO/EM wetlands of Dry Creek and Dry Creek itself are considered jurisdictional to Section 404 of the CWA because Dry Creek is a tributary of the Cache La Poudre River. Terry Lake is also considered jurisdictional to Section 404 because of recreational use, and connection to regulated waters (McKee 2001).

F.6 Wetland Impacts

The area of wetlands was established from surveys of pin flags that were placed at the wetland-upland boundaries during the delineations. Permanent impacts from road construction were determined using Geographic Information System (GIS) technology to overlay the extent of disturbance based on engineering designs onto the wetland mapping (Figure F-3). Based on these measurements, approximately 0.09 acre (0.04 hectare) of PFO and 0.16 acre (0.06 hectare) of PEM wetlands for a total of 0.25 acre (0.10 hectare) would be permanently impacted by construction actions of the A4 Alternative. Most of the impacts would occur from the relocation of Dry Creek that is needed to accommodate the roadway expansion. Approximately 350 feet (91 meters) would need to be relocated (Plate 3).

Permanent impacts of 0.25 acre (0.10 hectare) would require an Individual 404 Permit from the COE prior to construction being initiated.

Another 0.01 acre (0.004 hectare) of PFO and 0.23 acre (0.09 hectare) of PEM wetlands were estimated to be affected by construction support and erosion control activities. Temporary impacts such as impacts from replacing culverts and disturbances from placing and removing exclusion fencing, silt fencing, and erosion control material within 10 feet of the edge of fill (toe-of-slope) would be reclaimed using wetland plantings. These could include on-site transplant plugs of plant material from adjacent areas, or live commercial plantings such as tubules. Indirect impacts from surface runoff would be controlled using erosion and sediment control measures according to CDOT Best Management Practices (BMPs), as specified in specification numbers 107.25 and 208 from *Standard Specifications for Road and Bridge Construction*, and drainage control studies to determine locations and sizes of detention basins. A stormwater management plan (SWMP) will also be developed for use during construction to control accelerated erosion and sedimentation, as well as contamination from construction equipment. Equipment would only be serviced in upland areas that are designated to reduce the potential for wetlands and drainage areas to be impacted by fuel, equipment wash, grease, and cleaning agents. Weed control in construction areas must be implemented as part of construction operations; CDOT Section #217 covers herbicide treatments for weed control.

F.7 Wetland Mitigation

F.7.1 Concept

Mitigation measures to offset impacts from the project are planned to be implemented along Dry Creek north of US 287 (Figure F-3). Dry Creek would need to be rerouted in conjunction with roadway construction, as it parallels the right-of-way in this area. The mitigation concept is to increase the width of the floodplain in the section of the creek that is redeveloped, thereby increasing the amount of wetland area that is established. Both PFO and PEM wetlands would be established to provide a number of functions, including water quality enhancement, flood storage capacity, and wildlife habitat. The mitigation area is approximately 320 feet (107 meters) long and 40 feet (12 meters) wide. An average of 6 feet is assumed for the active channel. Therefore, at 34 x 320 feet, approximately 0.25 acre (0.11 hectare) of wetlands would be established at this site.

F.7.2 Specifications

Material Salvage – Smaller trees and shrubs (<3 inches DBH; 7.6 centimeters) and emergent vegetation (except broad-leaved cattail and weedy species) of the impacted wetland area would be salvaged for use in the mitigation site. This material would be removed using a backhoe, placed in an upland storage site near the mitigation site, and covered to maintain moisture until planted. An SWMP would be prepared for this project to protect the creek from increased sediment loads and contaminants (e.g., equipment fuel, grease) that are likely to occur during earthmoving. Creek flows would likely need to be placed into a pipe or similar device during construction to minimize sedimentation and contamination, as well as to dry the soils for earthwork.

Earthwork – The stream construction must attain a floodplain that averages 40 feet (12.2 meters) wide. As indicated on Figure F-3, this width may vary to increase the wetland diversity of the site. The active channel should average 6 feet (1.8 meters) wide and 1 foot (0.30 meter) deep. Banks should be constructed at a maximum of 2:1 slope, and reinforced with willow wattles and/or stakes (Figure F-4). Earth from the newly constructed stream channel would be used as fill in the existing creek.

Planting – Salvaged plant material should be placed in the constructed area as soon as possible. The suitable habitat for eastern cottonwood trees, peach-leaved willow, and sandbar willow will be developed along the banks and on the outer edge of the floodplain. The suitable planting area for the emergent herbaceous species occurs between this outer area and the active channel, and riparian species would be planted on the upper part and top of the banks. Species planting specifications are as follows.

Trees and shrubs:

- Plains cottonwood (*Populus deltoides* ssp. *monilifera*) whips or stakes – 1/10 square feet.
- Peach-leaved willow (*Salix amygdaloides*) whips or stakes – 1/10 square feet.

Sandbar willow (*S. exigua*) stakes or whips – Sandbar willow stakes would be harvested on the project site or purchased, and placed in the soil and wattles according to the specifications illustrated in Figure F-4 ranging from 2,000 to 3,000 stems per acre (809 to 1,214 per hectare), depending on spacing requirements on the willow wattles.

Emergents (herbaceous species):

- Bulrush (*Scirpus americanus*) on-site plugs or tubulings (e.g., 10 cubic inches) – 12- to 18-inch centers
- Cloaked bulrush (*S. pallidus*) as above
- Hard-stemmed bulrush (*Schoenoplectus acutus*) as above
- Burreed (*Sparganium eurycarpum*) as above
- Arrowhead (*Sagittaria latifolia*) as above
- Emory sedge (*Carex emoryi*) as above

The upper part of the banks would be planted with a riparian mix including box elder (*Acer negundo*), water birch (*Betula fontinalis*) (on bank), wild rose (*Rosa woodsii*), golden current (*Ribes aureum*), serviceberry (*Amelanchier alnifolia*), and native grasses (western wheatgrass [*Pascopyrumsmithii*], saltgrass [*Distichlis spicata*], little bluestem [*Schizachyrium scoparium*]). Planting rates should be similar to those listed above for trees, shrubs, and herbaceous species.

Erosion protection material must be placed onto the site during planting and before water of the creek is routed into this newly constructed area. The area of the new channel must be covered with fabric that would gradually decompose to minimize the amount of sedimentation that is carried into the water during construction. Similarly banks and the floodplain must be protected from accelerated erosion and from plantings being washed out during high flows the first year.

F.8 Monitoring

Monitoring of the mitigation sites would be conducted by CDOT Region 4 biologists or qualified contractors for three to five years, or as specified in the COE 404 permit conditions. Quantitative data on plant composition and percent ground cover would be obtained each growing season from transects (e.g., point-intercept method), with the number of sample points determined from statistical adequacy analyses. Belt transects would be used to obtain cover and live-dead counts for shrubs and trees. Monitoring criteria would be developed in conjunction with the COE, and would likely include a percent (e.g., 75%) comparison to undisturbed (existing) sites on Dry Creek upstream of the mitigation site. Weed control measures should be implemented as needed to control reinvasions (i.e., Canada thistle) of the sites. If the wetland is not developing as planned, remediation measures to correct problems would be implemented.

F.9 Contingencies

Should wetlands not develop as planned and the sites appear unsuitable for the mitigation measures as designed, another site such as Hickory Park would need to be chosen in conjunction with the city of Fort Collins and Larimer County. This site is approximately 1 mile south of US 287 on Dry Creek and has potential for wetlands to be enhanced along the creek and an area surrounding a pond.

F.10 Conclusions

Based on the above considerations, it is determined that there are no practicable alternatives to the proposed new construction in wetlands, and that the proposed action includes all practicable measures to minimize harm to wetlands, which may result from such use. All of the wetland losses (0.25 acre; 0.10 hectare) are to be mitigated with in-kind, 1:1 replacement. The wetland replacement mitigation area would occur north of US 287 on Dry Creek, and would consist of reconstructing the streambed and floodplain that is impacted by the expansion of the roadbed.

The mitigation plan designed for this site includes development of wetlands that also have similar functions, but include increased value for wildlife habitat by decreasing the

dominance of introduced plant species, including weeds, and increasing native species and vegetation structural diversity.

F.10.1 Literature Cited

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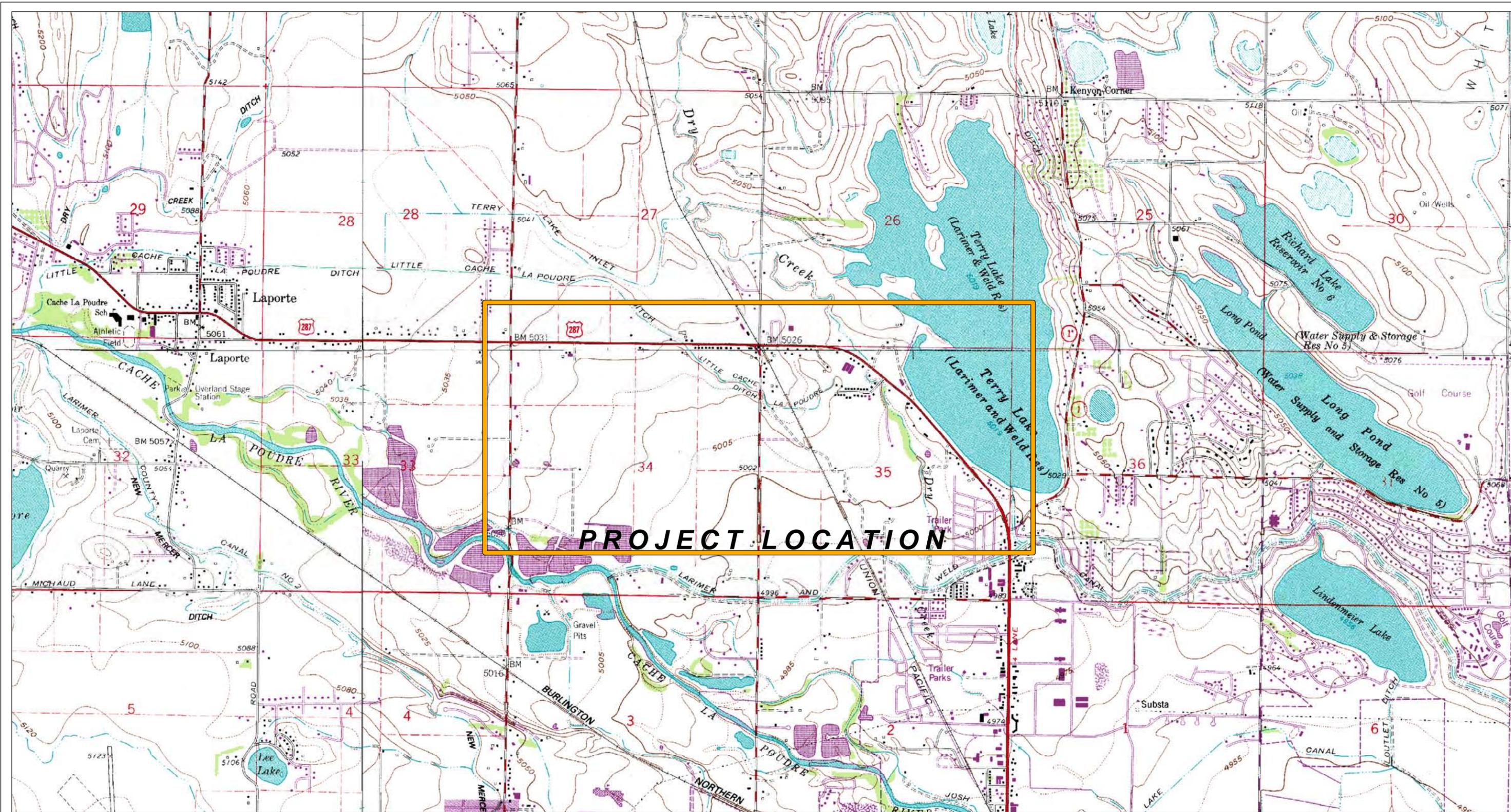
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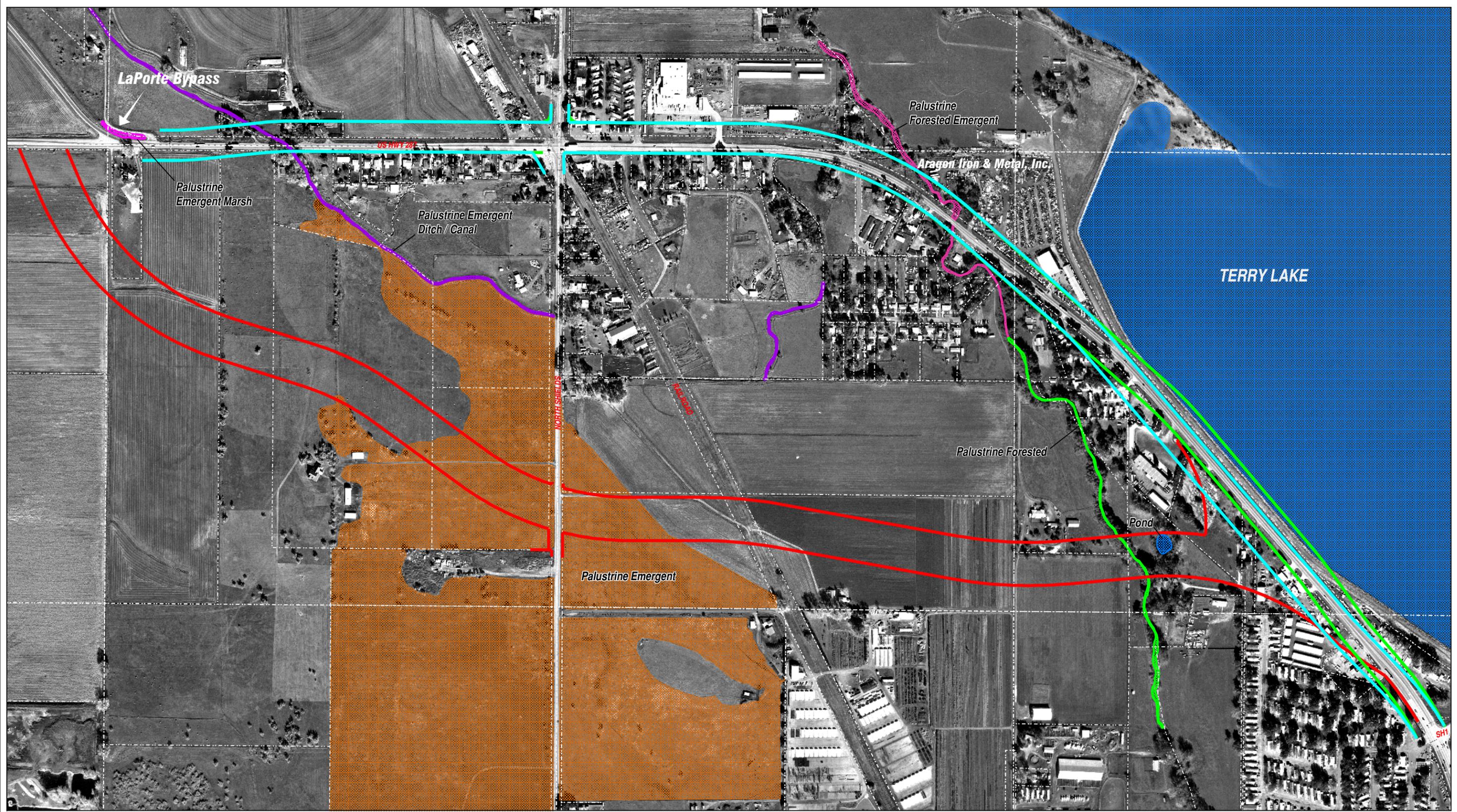
SCALE - 1:24,000

SOURCE:
7.5' Quadrangles provided by the USGS.
Map produced February 27, 2004 by JFSA.



**US 287 - SH 1 to the LaPorte Bypass:
Project Location -
Wellington & Fort Collins 7.5' Quadrangles**

FIGURE F-1



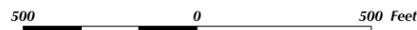
LEGEND

- Pond
- Palustrine Forested / Emergent
- Palustrine Forested
- Palustrine Emergent Marsh
- Palustrine Emergent Ditch/Canal
- Palustrine Emergent
- Open Water
- Property Boundaries
- Alignment A4 Right-of-Way
- Alignment B Right-of-Way



Coordinate System: Stateplane, Zone 3451
 Projection: Lambert Conformal Conic
 Units: US Survey Feet
 Datum: NAD83

SOURCE:
 Land use & parcel boundary information provided by the Larimer County GIS Department. Aerial photography provided by Datamap, Inc. Map produced November 20, 2000 by JFSA.



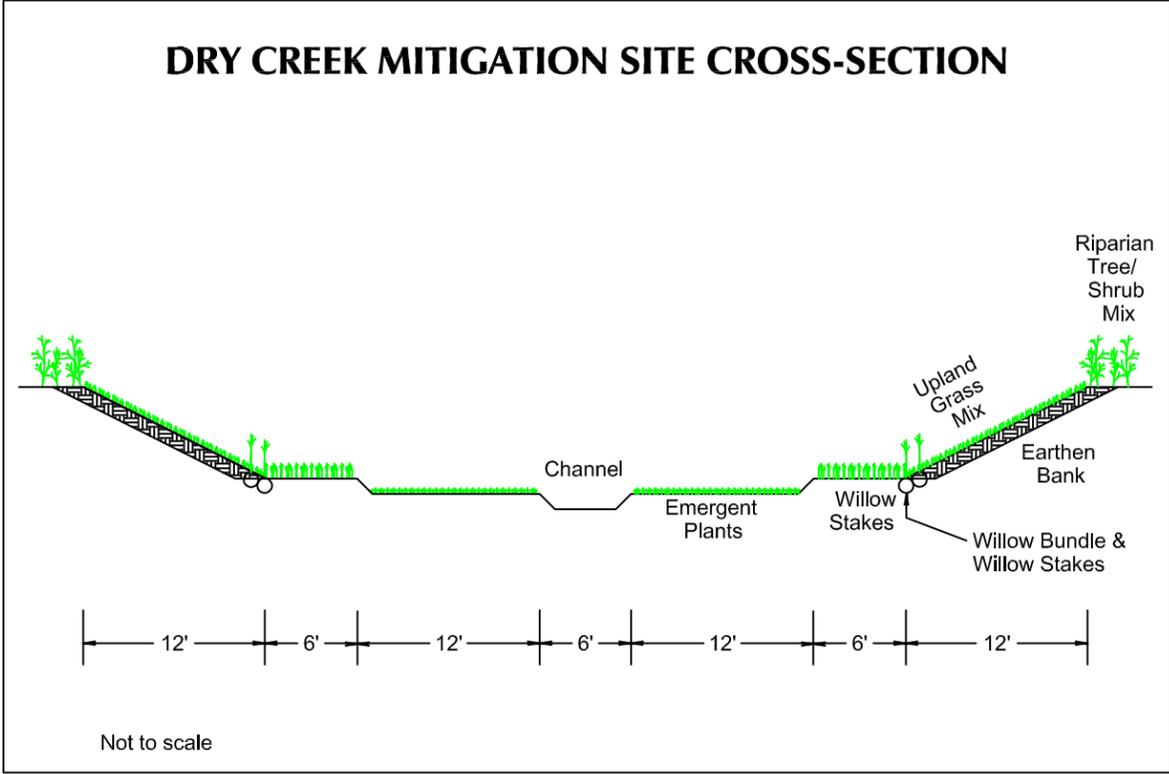
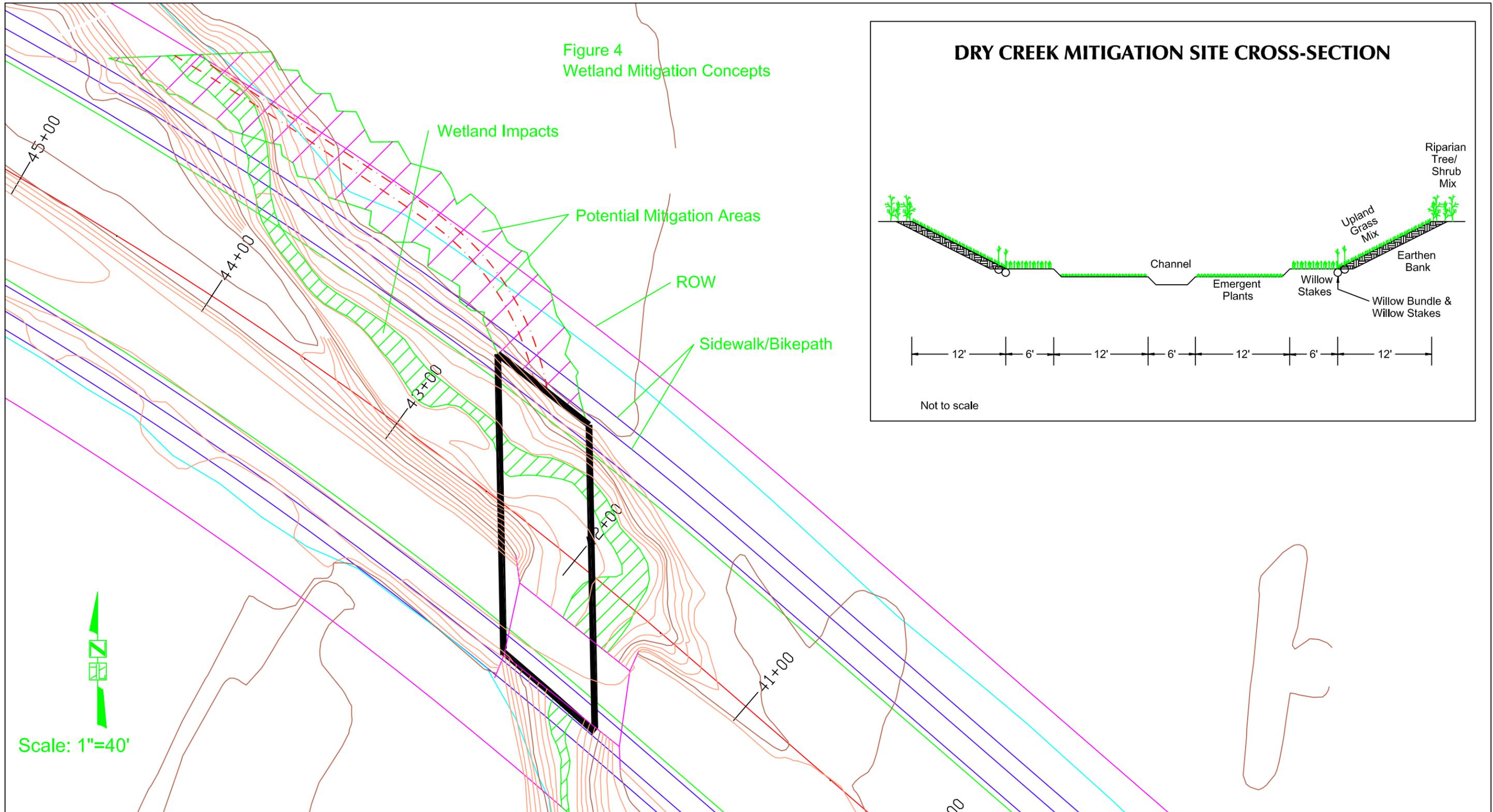
SCALE - 1:6300



**US 287-SH 1 to the LaPorte Bypass:
 Wetlands**

FIGURE F-2

Figure 4
Wetland Mitigation Concepts

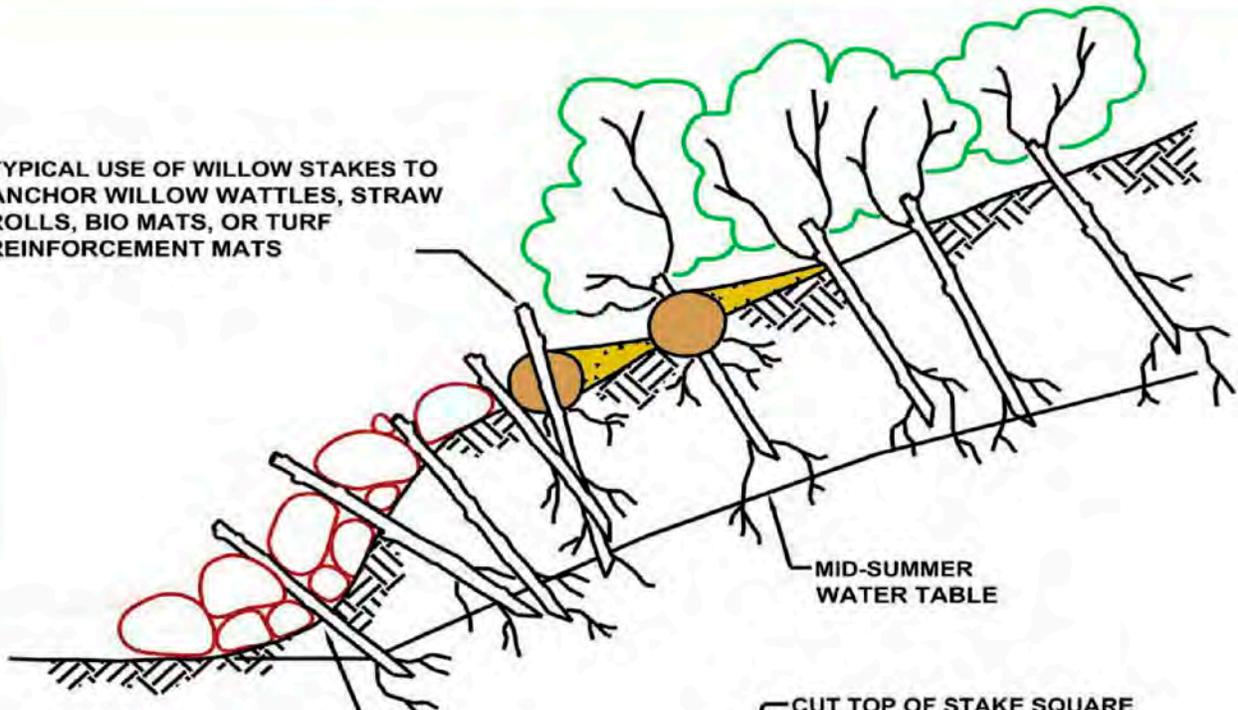


**US 287-SH 1 to the LaPorte Bypass:
Wetland Impact and Mitigation Areas of Dry Creek**

Figure F-3

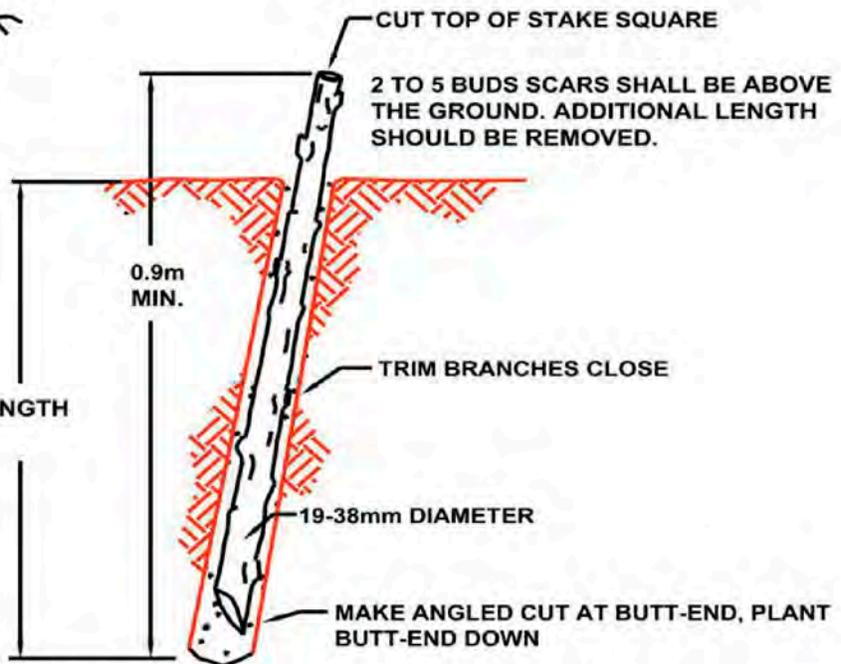
Figure F-4. Willow Stake Detail

TYPICAL USE OF WILLOW STAKES TO ANCHOR WILLOW WATTLES, STRAW ROLLS, BIO MATS, OR TURF REINFORCEMENT MATS



TYPICAL - DRIVE OR PLANT WILLOW STAKES THROUGH OPENINGS IN RIPRAP

PLANT 2/3 TO 3/4 OF STAKE LENGTH INTO THE GROUND



NOTES:

1. HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
3. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION, USE A PILOT BAR IN FIRM SOILS.
4. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
5. TAMP THE SOIL AROUND THE STAKE.



Plate 1. Palustrine Emergent (PEM) Wet Meadow Wetlands



Plate 2. Palustrine Forested/Emergent (PFO) Wetlands at Dry Creek



Plate 3. Palustrine Forested/Emergent (PFO/EM) Wetlands at Dry Creek

F.11 Wetland Characteristics

Vegetation, Soil, and Hydrologic Characteristics of Palustrine Forested/Emergent Wetlands (Dry Creek)

Vegetation		
Stratum	Plant	Species Wetland Indicator ^a
Tree	Peach-leaved willow (<i>Salix amygdaloides</i>)	OBL
	Silverleaf poplar (<i>Populus albus</i>)	NI
Herbaceous	Broad-leaved cattail (<i>Typha latifolia</i>)	OBL
	Emory sedge (<i>Carex emoryi</i>)	OBL
	Arrowhead (<i>Sagittaria latifolia</i>)	OBL
	Showy milkweed (<i>Aesclepias speciosa</i>)	FACW
	Duckweed (<i>Lemna minor</i>)	OBL
	Watercress (<i>Nasturtium officinale</i>)	OBL
	Mannagrass (<i>Glyceria striata</i>)	OBL
	Thickspike wheatgrass (<i>Elymus lanceolatus</i>)	NI
	Quackgrass (<i>Elytrigia repens</i>)	FAC

^a OBL = Obligate to wetland conditions (>99%); FACW = Facultative wet, usually occurs in wetlands (67%–99%) but may occur in nonwetlands; FAC = Facultative, equally likely to occur in wetlands or nonwetlands; FACU = Facultative upland, usually occurs in nonwetlands (67%–99%); UPL = Upland, obligate to upland conditions; NI = No indicator value provided (Reed et al. 1996).

Soils		
Horizon	Color	Texture
A (2 in)	Black (10YR 3/1 – 7.5YR 3/1)	Silty loam
B (2 to 12 in)	Reddish black (2.5YR 2.5/1)	Silty loam

Hydrology
Soils were saturated by stream flow at wetland-water interfaces and were moist through the upper limit of wetland.

**Vegetation, Soil, and Hydrology Characteristics of Palustrine Emergent Wetlands
(Little Cache La Poudre Ditch)**

Vegetation		
Stratum	Plant	Wetland Indicator
Tree	Eastern cottonwood (<i>Populus deltoides</i>)	FAC
	Chinese elm (<i>Ulmus pumila</i>)	UPL
Herbaceous	Emory sedge (<i>Carex emoryi</i>)	OBL
	Showy milkweed (<i>Aesclepias speciosus</i>)	FAC

Soils		
Horizon	Color	Texture
A (5 cm; 2 in)	Dark brown (7.5YR 3/2)	Silty loam
B (5 to 30 cm; 12 in)	V. dark gray (7.5YR 3/1)	Silty loam

Hydrology
Hydrology is controlled by the amount of water that occurs in the ditch or canal and is often a function of irrigation demand. Saturation generally occurs within ~1 to 2 feet of the flow channel.

Vegetation, Soil, and Hydrology Characteristics of Palustrine Emergent (Wet Meadows)

Vegetation		
Stratum	Plant	Wetland Indicator
Herbaceous	wiregrass (<i>Juncus balticus</i>)	FACW
	saltgrass (<i>Distichlis spicata</i>)	FACW
	curly dock (<i>Rumex crispus</i>)	FAC
	redtop (<i>Agrostis gigantea</i>)	FACW
	plantain (<i>Plantago major</i>)	FAC
	foxtail (<i>Hordeum jubatum</i>)	FACW

Soils		
Horizon	Color	Texture
A (6 to 8 in)	Reddish brown (5YR 5/3)	Sandy clay loam
	Strong brown (7.5YR 5/6)	Clay loam
B (>8 in)	Dark gray (7.5YR 4/1)	Clay loam
	Black (7.5YR 4/1) with brown mottles (7.5YR 5/3)	

Hydrology
Saturated for most of the growing season within the rooting depth and frequently within 8 inches of the surface. Soils were moist at depths of 6 to 8 inches. These areas are wet at the soil surface early in the spring and within the rooting depth of plants later through the growing season. Soils generally are poorly drained because of the relatively high clay content, which also facilitates wetland conditions.

Vegetation, Soil, and Hydrology Characteristics of Palustrine Emergent (Cattail Marsh)

Vegetation		
Stratum	Plant	Wetland Indicator
Herbaceous	Cattail (<i>Typha latifolia</i>)	OBL

Soils		
Horizon	Color	Texture
Undifferentiated	Black (10YR 2/1)	Silty loam

Hydrology
Emergent marshes are saturated throughout the growing season.

F.12 Wetland Mitigation Site Selection Form, Colorado Department of Transportation

Attachment to Wetland Finding Report

Project Name/No. US 287 – SH 1 to La Porte Bypass Subaccount STA 2873-100
 Region 4 Author Loren Hettinger Firm J.F. Sato & Associates Date March 1, 2004

Mitigation Options Available	(1) Mitigation bank available? ___ No ___ Yes/No _____ (2) Project impacts in 1°, 2° service area? ___ No _____ (3) HUC units ___ NA _____ (4) On-site mitigation available? ___ yes/no <u>In conjunction with rerouting and reconstruction of Dry Creek</u> (5) Off-site mitigation available? ___ yes/no <u>Possibly in conjunction with City of Fort Collins flood control projects</u> (6) In-lieu fee arrangement available? ___ yes/no _____ In-lieu fee sponsor _____ (7) Mitigation ratio(s) other than 1:1 involved? ___ yes/no _____ Ratio(s) _____
-------------------------------------	---

Site Characteristics	Impact Site	Mitigation Site
(8) Geographic location	Sec. 34, 35; T 8 N, R 69 W @ US 287	Sec. 35 – Dry Creek
(9) Wetland community type, pct (10) Functions, values	PFO/EM (80%) and PEM (20%) Bank stability and erosion control for area runoff, groundwater recharge, some sediment toxicant retention, and wildlife habitat, potential as recreational amenity	
(11) Size of impacts, pct of total area?	0.25 ac; <1% of total furnished by Dry Creek	N/A

Wildlife Habitat	(12) T&E species habitat present? _____ yes/no (13) Species? Status? (14) Migratory Bird Treaty Act? Nesting habitat throughout PFO wetlands (15) Other wildlife issues? Other species of the Dry Creek area include raccoon, fox, coyote, white-tailed deer, various bird species (16) Status of aquatic resource? Flows through commercially developed area into urban area downstream (17) Special aquatic site? Not listed (18) Unique? Quality? Ranking? (19) Watershed, ecosystem issues? Note the potential for Dry Creek to carry floods into urban area of Fort Collins and issue.	_____ yes/no
-------------------------	---	---------------------

Other	(20) Likelihood of success?	_____ N/A	_____
	(21) Interagency agreement?	_____ N/A	_____
	(22) Project logistics, size/scope?	_____ N/A	_____
	(23) Cost considerations?	_____ N/A	_____
	(24) Buffer used?	_____ N/A	_____

Water Issues	(25) Individual 404 permit condition? _____
	(26) 494(b)(1) Guidelines? _____
	(27) NWP gen., reg. conditions? _____
	(28) Regulatory letters? _____
	(29) SB 40? _____
	(30) Water rights issues? _____

NEPA Issues	(31) Cumulative impact issues? _____
	(32) Agency policy, input? _____
	(33) Public involvement? _____

(34) Basis for Decision

[Describe those factors from the front side that are instrumental in the selection of the chosen mitigation decision.]

(35) Decision

(36) Contingency Plans



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix G Community Letters and CDOT Responses

To : CDOT

From:

Clive Tyler

317 N. US 287

Fort Collins Co 80524

SEPTEMBER 19, 2000

I am Clive Tyler a resident at 317 N. US. HWY. 287, Ft. Collins , and I have two main concerns regarding the widening of North US. HWY. 287, Fort Collins, CO 80524. One being the buy out of my property and lost of potential investments and the destruction of another state's environmental resource.

I am currently in the path of Plan B and will have to be bought out and moved or if Plan A is executed I will be effected in a numerous environmental ways. I have listed below my main concerns that will effect me and my horses.

- 1. Environmental issues 1.** The increase of pollutants and of gasoline and diesel fumes. My property at 317 borders Dry Creek which in turn flows into one of the main irrigation water canals which is used for crops and livestock. Both myself and my neighbors currently have horses drinking from Dry Creek.

Environmental issues 2. The reconstruction of the Terry Lake dam and the effect of the existing water table. Because we are directly across from Terry Lake, our water table is 10 to 12 feet below the surface of the soil. My existing well is positioned at the correct distance below the surface to irrigate and provide water for my horses. This water not only runs into Dry Creek but continues under ground in all directions. Many older homes in this area have wells. The existing forest is dependent on this water source for survival.

Environmental issue 3. Impact on environmental issues and wildlife area. This land is part of one of the last urban forests in the Ft Collins area. There are ancient trees that are a 100 years old, which host a unique nesting habitat for rare wood ducks and other wild life. These ducks nest in the large trees here because of the protection and for the water source from Dry Creek. This

urban forest is also on many southern flight paths for migration for a number of species of birds. Other animals that would be effected would be the Fox and deer come to drink from the creek and den in this area. Muskrat and beavers are present in the creek area as well. This is a true self contained environment.

Environmental issues 4. The property is located in the flood zone. Most of my property is only 3 to 4 ft. above flood plan. Again reinforces a poor choice for such development. with new information regarding flooding is flood plan current and accurate.

- 2 **Negative noise levels and the additional impact of more traffic.** Traffic is already growing on 287 and the additional traffic of this area would increase additional noise and increase stress levels for animals and humans. Also the added risk of accidents and life threatening situations. There is currently no left turning lane or traffic light. Imagine waiting for a Semi-truck speeding down 287 and my vehicle at a full stop waiting for traffic to clear to turn into my property. With a legal speed a limit of 45 miles per hour and vehicles pushing a 50 mph speed limit it becomes a extremely dangerous situation for a persons life as cars and trucks pass me to the left it only leaves a big surprise for the semi truck who can not maneuver around or slow down in time. (this is from past experience that I personally have had).

Other obvious concerns that need to be addressed.

4. **Additional noise and air pollution of diesel trucks**

Situation Description

I live at 317 N. US Hwy 287. I would like to take the opportunity to express my concerns for the type of growth that is happing just north of Fort Collins. I live just 5 mile north of town in a very unique area. I have 8 acres and live in a 100 year old home that backs onto beautiful farm lands and horse arenas with terrific views. First I would like to express my opinion about the widening of HWY 287 before I get to and facts.

My property 317 N. HWY is land that is situated in the middle and is surrounded by 4 residential sites. The other three sides around my property are properties that are Eight to Ten acre ranches. estimated values of \$250,000

\$350,000 and \$500,000 with potential estimated properties value increase to up to \$1,000,000 in the next ten years. My property has been increasing in value at a rate of \$30,000 per year. Surrounding neighbors with Horse arenas, a tree farm and alfalfa fields valued in the millions. To take our opportunity of increase fare market value and our future investments should be compensated.

One of the many concerns that I and my neighbors have are of devaluation of property values, especially when other residential estates and properties in the county are actually increasing in value. These homes and properties are unique in that they are very close to the City of Fort Collins for easy access, have large acreage for horses, have rare rich soils and include rare irrigation rights.

It is my opinion that the city of Fort Collins, County, and State have the responsibility of planning for the future of this area. Hot topics of too much and too fast growth are realities of this area.

The county should recognize the uniqueness of the properties north of Ft. Collins. And establish long plan ideas on how to protect these areas. I believe that rich agricultural land, lakes, ponds and water irrigation establish properties should not be push out and replaced with additional Highways, which would lead to rezoning of new land next to the new highway. Rich soils should not be paved over with shopping centers and large housing developments. This is the last rich resource in this part of area. It's why, out of all of Colorado this became the Choice place to establish a community when the settles first came here, can we not learn from our past?

It is in the best interest of the state to treasure and prize this area as a incredible asset to the state. This north and northwestern area is very unique in that it is a prime horse and agriculture usage area, with granted irrigation rites and complex canals. The land and lakes in this area are the last of these resources that the state has, after that it is either mountains or dry plains areas without the availability of either the rich soils , mature forest, vegetation growth, natural animal environments and plentiful water on top and below the earth surface.

Properties of this nature in other over developed and fast growth cites such as Albuquerque, are estimated at over \$1,000,000 for a few acres.

I believe and understand that the state and consultants have there work cut out for them in working with all the parties involved and what is in the best

interest for the state. I will except the current widening if it stays on the original 287 route with additional protection from noise and air pollution.

I protest against Plan B that diverts the 287 Hwy to the south and cutting through rich and rare land. I only ask of you to look into this matter and make the right decisions by not cutting south and only widening the existing route of 278.

I would think a earth barrier and a slower speed limit would provide protection from any negative impact.

Please feel free to contact me for any discussion or if you need any additional information.

Thank you for you time, I do care about the area. I believe if we all work for the good of the state, the area will grow to be a desirable place to work and live.

Best regards,

Clive Tyler

317 N. HWY 287 Ft. Collins Co 80524

phone 970-493-3511

Fax 970-493-4511

email designcollective@worldnet.att.net

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Region 4



1420 2nd Street
Greeley, CO 80631
(970) 350-2171
FAX: (970) 350-2179

January 19, 2001

Mr. Clive Tyler
317 N. U.S. 287
Fort Collins, CO 80524

Dear Mr. Tyler,

I appreciate your attendance and comments provided at the September 21, 2000 Public Workshop for the U.S. 287 State Highway 1 to the LaPorte Bypass Environmental Assessment (EA). We plan to have the EA document available for public review in early 2001; we will publish notices of the availability that will identify locations where the EA can be reviewed or we can send a copy to you at your request for a fee to cover the printing and mailing costs. We anticipate holding a public hearing on the document to formally record any comments. This event will be held no soon than two weeks after the EA is published and you will receive notice of the location and time in the mail and the event will be announced in the local newspapers.

CDOT has evaluated the direct, indirect and cumulative impacts in the EA and are confident that your issues have been addressed. The document has seven chapters and the concerns that you have expressed are covered in depth in Chapter 3, Impacts and Mitigation. This chapter is divided into specific sections for each receptor and, from your letter, it appears that you will want to focus on the air quality, land use, socio-economics, water resources, ecology, threatened, endangered and species status species, and noise sections. Within each receptor the potential for impacts relating to the three build alternatives under consideration (A4, A5 and B) and the no action alternative are discussed and mitigation measures are proposed. Please note that your concerns for both water table levels and floodplain related issues are included in the water resources section.

If relocations are necessary, economic value will be assessed on a case by case basis in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) and the Uniform Relocation Act Amendments of 1987 (Public Law 100-17) to ensure appropriate compensation. Plans for growth in the area developed by Larimer County and the City of Ft. Collins (the study area is part of the Urban Growth area) are incorporated in the planning and assessment of potential impacts relating to each alternative during the EA process.

All of the issues that you raised in your letter play a role in helping to identify the preferred alternative. CDOT will identify a preferred alternative using all available information and based on desire to meet the purpose and need of the project while maintaining the natural and human environmental integrity of the area. I greatly appreciate your involvement in the EA process.

If you have any additional questions or concerns, please contact me at (970)350-2171.

Sincerely,

Bethani Plogstra
Project Manager, Region 4
Colorado Department of Transportation

Fort Collins NURSERY_{Inc.}

WHOLESALE DIVISION

2224 N. Shields • Fort Collins, Colorado 80524 • 1-800-794-1289 • 970/484-1289 • Fax: 970/484-1386



September 25, 2000

J.F. Sato & Associates
5898 S. Rapp Street
Littleton, CO 80120
Attn: Michelle Li

Dear Michelle,

Comments regarding US 287 Bypass from SH1 to LaPorte, following workshop #2.

I support both Alternative A's over Alternative B for the obvious reason that Alternative B divides the property owned by BHSLOW, LLC, a limited liability company owned by key employees of Fort Collins Nursery. This piece of property divided down the middle as shown on your maps would change the property to a piece of ground that was no longer usable for the purpose of field growing trees. If this alternative were selected it would force Fort Collins Nursery to either relocate or quit growing trees for a now established market. Either choice would cause dramatic emotional and financial issues for the management of Fort Collins Nursery, although, a CDOT right-of way acquisition representative was at the workshop and assured me we would get a "fair" settlement. I asked him what if the appraisers came in miles apart? His response, "CDOT would pick the most fair appraisal." When I asked what he meant by that, his response, "The lowest appraisal."

In addition to opposition to Alternative B based on the impact to my property I found several points of opposition in your environmental analysis.

- Alternative B would require 8 times as much cropland to be gobbled up as either of the other alternatives. In Colorado croplands are beginning to be viewed as an endangered entity. (e.g. Amendment 24 on the upcoming ballot)
- Alternative B would effect up to 5 ½ times the area of Wetlands as either of the other alternatives. Wetlands have already been deemed important enough to require Federal control.
- Your records indicate commercial right-of-way acquisition for Alternative B would be 10.9 acres while Alternative A5 would be only 7.6 acres of commercial land. I question your methods in coming up with these values since the bulk of the acquisition for Alternative B is through a very rural setting.
- Alternative A's are exactly in US 287 present path so that the noise and aesthetic impacts would be minimal. However, if Alternative B were selected I believe both of these issues would be a severe contrast with the existing rural atmosphere.

To Alternative B's credit, for CDOT it appeared to be the most economical solution to the problem. I was also presented with the argument that economically Alternative B could be good for me, and perhaps it would be. However, when choices become purely economical we have to ask does the price really account for all the aesthetic, emotional and environmental costs.

Sincerely,

Gary Epstein, General Manager, Ft Collins Nursery Wholesale

712

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION
Region 4



1420 2nd Street
Greeley, CO 80631
(970) 350-2171
FAX: (970) 350-2179

February 9, 2001

Mr. Gary Epstein
General Manager, Ft. Collins Nursery Wholesale
2224 N. Shields
Fort Collins, CO 80524

Dear Mr. Epstein,

I appreciate your comments in your letter dated September 25, 2000 on the U.S. 287 State Highway (S.H.) 1 to the LaPorte Bypass Environmental Assessment (EA) and your attendance at our Public Workshop in September. This letter is being written to update you on the EA process. We plan to have the EA document available for public review in early 2001; we will publish notices of the availability that will identify locations where the EA can be reviewed. We anticipate holding a public hearing on the document to formally record any comments. This event will be held no sooner than two weeks after the EA is published and you will receive notice of the location and time in the mail and the event will be announced in the local newspapers.

CDOT has evaluated the direct, indirect and cumulative impacts in the EA and are confident that your issues have been addressed. The document has seven chapters and the concerns that you have expressed are covered in depth in Chapter 3, Impacts and Mitigation. This chapter is divided into specific sections for each receptor and, from your correspondence, it appears that you will want to focus on the prime farmlands, wetlands, land use, socio-economics, noise, and aesthetics resources sections. Within each receptor the potential for impacts relating to the three build alternatives under consideration (A4, A5 and B) and the no action alternative are discussed and mitigation measures are proposed.

All of the issues that you raised in your correspondence play a role in helping to identify the preferred alternative. CDOT will identify a preferred alternative using all available information and based on desire to meet the purpose and need of the project while maintaining the natural and human environmental integrity of the area. I greatly appreciate your involvement in the EA process.

If you have any additional questions or concerns, please contact me at (970)350-2171.

Sincerely,

Bethani Ploegstra
Project Manager, Region 4
Colorado Department of Transportation

To : CDOT / Jf Sato and Associates

From:
Clive Tyler
317 N. US 287
Fort Collins Co 80524



January 25, 2001

Regarding: US287 from SH1 to LaPorte Bypass

I am Clive Tyler a resident at 317 N. US. HWY. 287, Ft. Collins , and I have attended the meetings and read the reports of the new development of North US Hwy 287 in Fort Collins. Main concerns regarding the widening of North US. HWY. 287:

One being the buy out of my property and loss of potential investments and the destruction of another state's environmental resource.

I am currently in the path of Alternative B and will have to be bought out or my land divided in 1/2. And if Alternative A5 or A4 is executed I will be affected in numerous environmental ways such as additional noise and air pollution. I have listed below my main concerns that will affect my life and my horses.

Currently the land here is about 8 acres and is a unique environment as it has a high table water from Terry Lake, which is located higher than my property. This supplies water to a small urban forest area, which in turn supplies habitat and food sources for wildlife. The land here has a large amount of wetlands and 100 year old trees combined with Dry Creek running through the north to south length.

I just received, from the City of Fort Collins, a Natural Land Resource Enhancement Fund / Grant this will enable us to establish food source and natural habitat for existing wildlife, red fox, muskrat, beaver, birds, waterfowl, fish/trout and minnows. This spring, we will be starting plantings of plant life for existing wildlife, as well as clean up of Dry Creek.

During surveys and estimates. archeologist agree that there are remains of old irrigation systems and a old barn that should be preserved. The property is one of the first dairy farms, in this area, that provided for the City of Fort Collins. The barn and out building do would qualify for historical preservation, which is in process on the state and national levels. Also, the lost of a irrigation pond and all of existing irrigation entrance areas should be addressed. It is possible I may loose valuable money from my existing water rights, which are highly valued in todays market.

Logically I'm against any division or destruction of any historical or natural resource here. Already property values of this kind are truly unique and hard to find so close

to the old downtown area. This establishes a high market value on the property base, off of supply and demand, and not valued as just 8 acres and a house. Also where the road is suggested to come through is on a piece of property that is zoned for multi housing. This part of the property is valued even higher than pasture areas.

I am self-employed and selected this property and home as part of my future investment to supplement future retirement. By division of the land or buy out this would take significant future moneys from me. Proof of investment is documented and has a high increase value at a rapid rate.

I am for the development of existing route 287, as the road does need to be attended to and upgraded for existing and future traffic, as well as safety.

A suggestion that would help protect my existing property and lifestyle would be to offer me soil from the development and construction to help in the construction of a earth berm along the northern side of my property.

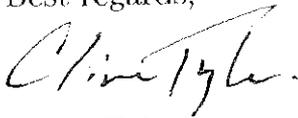
This would dramatically drop noise levels and diesel pollutants from invading the existing property. These pollutants have also been proven to cause respiratory problems in horses and wildlife.

Please consider my request. I am glad to help in any way in making this transition work for the state, city as well as my property.

Please feel free to contact me for any discussion, or if you need any additional information.

Thank you for you time. I do care about the area. I believe if we all work for the good of the state, the area will grow to be a desirable place to work and live.

Best regards,



Clive Tyler

317 N. HWY 287 Ft. Collins Co 80524

phone 970-493-3511

Fax 970-493-4511

email designcollective@worldnet.att.net

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION
Region 4



1420 2nd Street
Greeley, CO 80631
(970) 350-2171
FAX: (970) 350-2179

February 13, 2001

Mr. Clive Tyler
317 N. U.S. 287
Fort Collins, CO 80524

Dear Mr. Tyler,

Thank you for your letter dated January 25, 2001 regarding the U.S. 287; S.H. 1 to the LaPorte Bypass Environmental Assessment. I realize that the letter I sent at the end of January probably crossed your in the mail and at the cost of being repetitive, I would like to restate where we are in the process and our proposed schedule. In early 2001 we will publish the EA document that will be available for public and agency review for a period of 30 days. We will publish notices that identify local locations where the EA can be reviewed or we can send a copy to you at your request for a fee to cover the printing and mailing costs. A public hearing will be held to formally record any comments regarding the EA document. The public hearing will be held no soon than two weeks after the EA is published and you will receive notice of the location and time in the mail and the event will be announced in the local newspapers.

EA document includes an assessment of the direct, indirect and cumulative impacts and proposed mitigation related to the three build alternatives evaluated (A4, A5 and B) and the no action alternative. The document has seven chapters and the concerns that you have expressed are covered in depth in Chapter 3, Impacts and Mitigation; we are confident that your issues have been addressed. This chapter is divided into specific sections for each receptor and, from your letter, it appears that you will want to focus on the air quality, land use, socio-economics, water resources, ecology, threatened, endangered and species status species, and noise sections.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) and the Uniform Relocation Act Amendments of 1987 (Public Law 100-17) will be used to assess each property on a case by case basis to ensure appropriate compensation. Future development and growth plans scenarios developed by Larimer County and the City of Ft. Collins (the study area is part of the Urban Growth Area) are a part of assessing the economic compensation if the acquisition of property is required for the selected alternative.

The issues that you raised in your letter have been analyzed in the Alternatives Analysis and the Environmental Analysis phases of the EA. Each has helped define the ability of the alternatives to meet the Purpose and Need of the project while minimizing the impacts to the human and natural environment. The preferred alternative will be selected based on all available information. Documentation of the data and associated analysis will be provided in the EA document. I greatly appreciate your continued involvement in the EA process.

If you have any additional questions or concerns, please contact me at (970)350-2171.

Sincerely,

Bethani Ploegstra
Project Manager, Region 4
Colorado Department of Transportation



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix H Open House Handouts



Public Workshop Welcome!

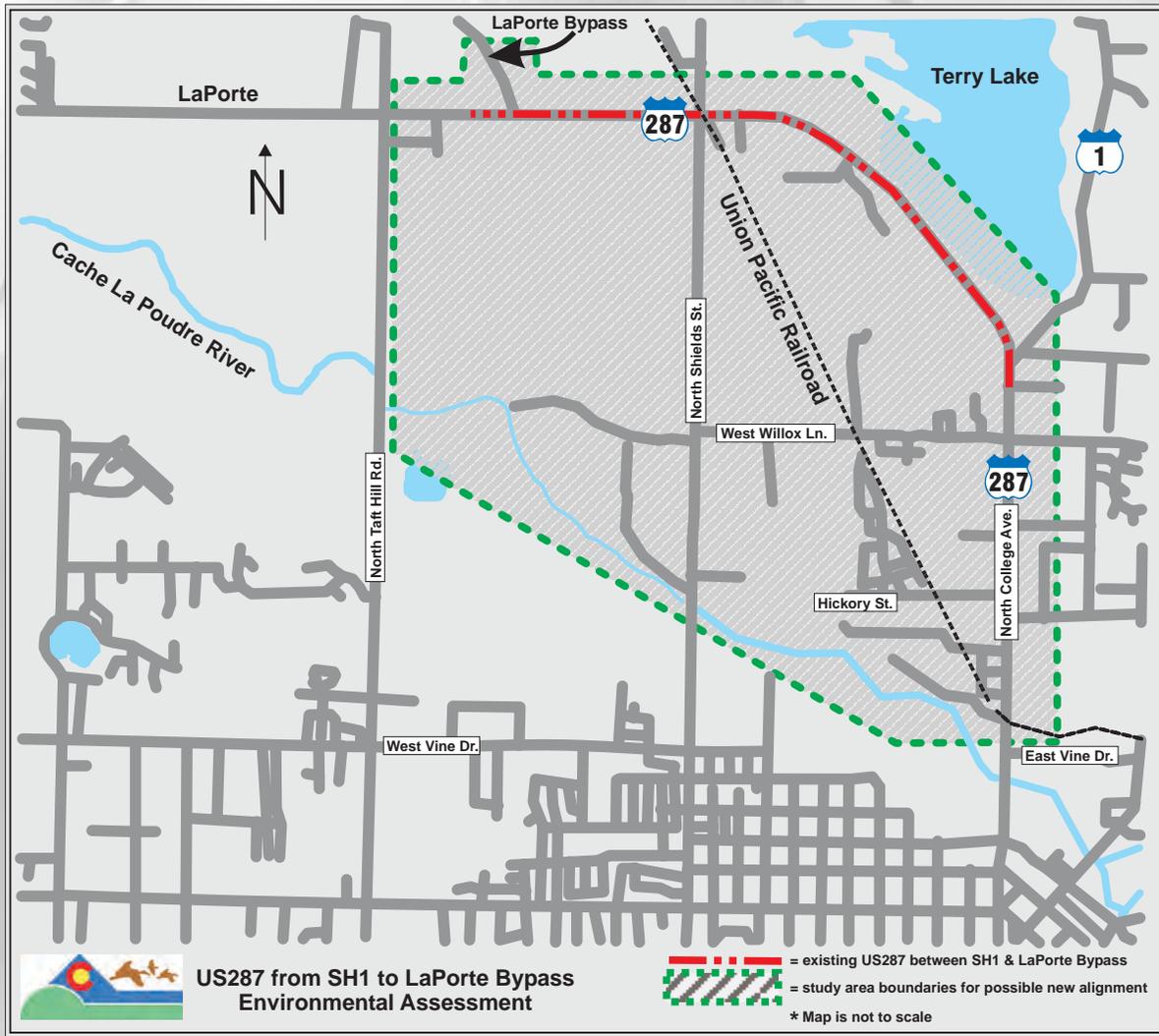
Please sign the attendance roster.

Do read the handout.

Do visit our displays.

If you have any questions, please ask one of our CDOT representatives or consultants.

Study Area



**If you wish to make a written statement or comment,
please fill out the form in the back of this handout.**

**You may also contact our website: www.us287-north-of-fort-collins.com
to review the project newsletter or e-mail comments.**



US287 from SH1 to LaPorte Bypass

Public Workshop #1

May 4, 2000 4:30 pm to 7:30 pm

Workshop Goals

The primary goals of this workshop are to introduce the project and solicit your input on the alternatives that are being considered to help address mobility and safety concerns along U.S. 287 between State Highway (SH) 1 and the LaPorte Bypass. Materials presented at the workshop illustrate the Purpose and Need of the project, the range of alternatives to be studied (including no action), the project process and the project schedule. The Colorado Department of Transportation (CDOT) welcomes your comments and/or questions. Project team members from both CDOT and the environmental consultant, J.F. Sato and Associates, are present to discuss the project with you.

Project Background and Purpose and Need

Planning and construction of improvements along U.S. 287 have been ongoing for more than 20 years. Improvements began in the early 1970's with the widening of U.S. 287 from two lanes to four lanes between Ft. Collins and Loveland. Farther to the North, the LaPorte Bypass construction was completed in 1988. The section of U.S. 287 between SH1 and the LaPorte Bypass, the last section of U.S. 287 that requires improvement, has been identified as a bottleneck inhibiting an efficient flow of traffic for several years. There will be numerous traffic access, safety, circulation, and capacity problems as the area grows and traffic increases. In 1996, traffic volumes along this segment of U.S. 287 varied from 16,800 Average Daily Traffic (ADT) between SH1 and Shields Street and 15,700 ADT between Shields Street and the LaPorte Bypass. These volumes during peak hours cause the highway to operate at Level of Service (LOS) "E" which is indicative of heavy congestion and significant delay. With continued growth in traffic, the road will soon reach a LOS "F" condition which means stop and go traffic and speeds near 20 mph during the peak hours of operation. Traffic turning on and off the road will experience considerable delay and be forced to take risks to get in the traffic stream.

Environmental Assessment

CDOT, Region 4, has initiated an Environmental Assessment (EA) for potential improvements of U.S. 287 between SH1 and the LaPorte Bypass. CDOT is in the process of conducting an environmental assessment that will investigate solutions to improving mobility and safety on the two lane segment of U.S. 287 between SH1 and the LaPorte Bypass.

The National Environmental Policy Act (NEPA) of 1969 mandated that any environmental impacts associated with federal-aid projects be disclosed to the public prior to a decision being made on that project. This process allows the public an opportunity to provide input that will help shape the final decision for the recommended alternative. An EA is prepared when the level of the impacts is not clear.

Alternative Analysis

The general alternatives include: taking no action, widening the existing U.S. 287 corridor between SH1 and the LaPorte Bypass from two to four lanes or constructing a new U.S. 287 alignment. CDOT has identified ten potential alignments, including four along the existing U.S. 287 between SH1 and the LaPorte Bypass, for investigation on how each would help alleviate the mobility and safety concerns on U.S. 287 and to identify potential impacts to both the human and natural environment. As a result of the initial alternative analysis of each alternative, CDOT anticipates that three alignments (two on the existing alignment and one new alignment) will be carried forward for a detailed environmental analysis of potential impacts and mitigation planning. In addition, the No Action alternative will be evaluated along with the alternatives that would result in construction improvements. CDOT intends to complete the in-depth environmental analysis and identify the preferred alternative in Fall of 2000.

The preferred alternative will:

- *Increase capacity to carry existing and future traffic more efficiently and at a higher Level of Service*
- *Investigate opportunities for alternate modes of transportation*
- *Improve Safety*



US287 from SH1 to LaPorte Bypass

Glossary of Terms

Alternative Analysis-process by which alternatives identified through the scoping process will be screened to determine how well each meets the project's Purpose and Need.

(ADT) Average Daily Traffic -average two-way traffic, in number of vehicles.

Capacity-maximum rate of flow at which vehicles can traverse a point on one lane of roadway during one hour.

CDOI-Colorado Department of Transportation.

Design Hourly Volume-peak hour traffic (rush hour) whether in the morning or afternoon hour.

EA-an Environmental Assessment is a written statement prepared when the level of the impacts is not clear. The document discloses the effects on the environment that could result from a proposed action (planning and/or decision making).

Environmental Analysis-in-depth environmental (both human and natural) analysis of alternatives advanced through the alternative analysis.

FHWA-Federal Highway Administration.

FONSI-Finding of No Significant Impact; possible final decision on an EA indicating that the preferred alternative has no significant impacts on the environment that cannot be appropriately mitigated.

LOS-Level of Service is a qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

LOS A- free-flow operations

LOS B- reasonably free-flow operations

LOS C- noticeable traffic

LOS D- speeds decline and congestion begins to form

LOS E- maximum service flow (full capacity)

LOS F- heavy congestion, significant delays, stop-and-go traffic

Mobility-the ability of traffic to move unimpeded through a highway or roadway corridor.

NEPA-the National Environmental Policy Act of 1969 is our nation's basic charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. In accordance with NEPA, all federal agencies must prepare a written statement on the environmental impacts of a proposed action. The provisions to ensure that federal agencies act according to the letter and spirit of NEPA are in the Council on Environmental Quality (CEQ) regulations for implementing NEPA (43 CFR 1500-1508).



US287 from SH1 to LaPorte Bypass

Glossary of Terms (con't)

No Action Alternative-alternative that represents projected conditions within the study area without the implementation of improvement and that serves as a baseline for comparison of “build” alternatives.

Preferred Alternative-alternative identified through the EA process that is the action recommended to meet the Purpose and Need of the project

Purpose and Need-the underlying reason for conducting the studies and analyses; the purpose and need to which the agency is responding by proposing alternative solutions.

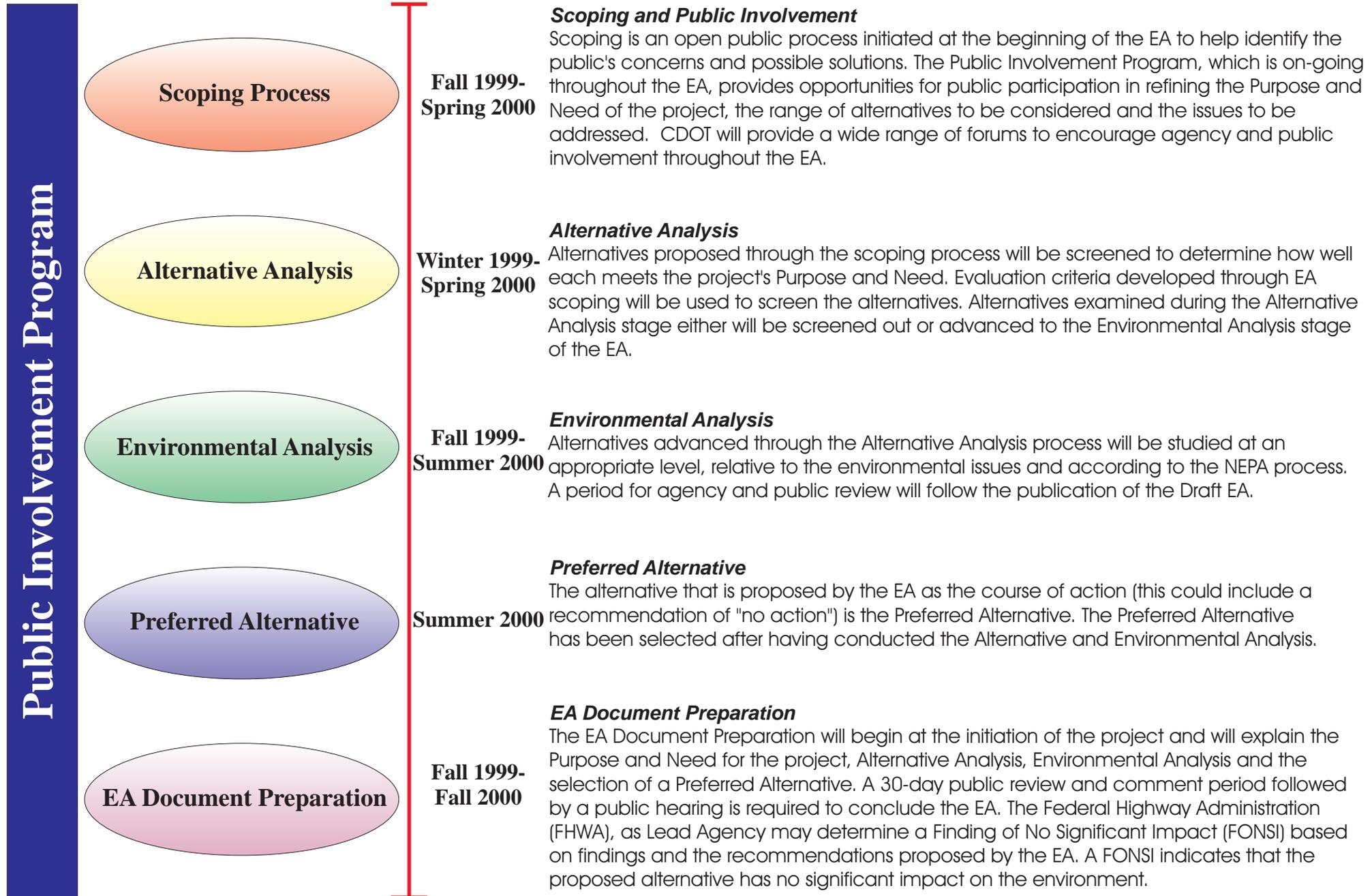
Right of Way-a general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Scoping-an open public process initiated at the beginning of the EA to help identify the public's concerns and recommended solutions.

Threatened and Endangered Species-endangered species are those that are in danger of becoming extinct; threatened species are those that are in danger of being listed as Endangered.

4(f)-publicly owned land including public parks, recreation areas, wildlife/waterfowl refuges or land of a historic site of National, State or local significance.

Environmental Assessment (EA) Process





Environmental Assessment Process

Alternatives Analysis

- Conceptual Design
- Threatened & Endangered Species
- Public Parks and Natural Areas - 4(f)
- Hazardous Materials Sites (remediation needed)
- Land Use Impacts
- Preliminary Right-of-Way Procurement Costs
- Preliminary Roadway and Bridge Costs



Environmental Analysis

- | | |
|-----------------------------------|-------------------------|
| • Air Quality | • Socioeconomics |
| • Geology and Soils | • Environmental Justice |
| • Hydrology and Water Quality | • Visual Resources |
| • Floodplains and Wetlands | • Recreation Areas |
| • Ecology | • Hazardous Materials |
| • Threatened & Endangered Species | • Archaeology |
| • Traffic Analysis | • History |
| • Noise | • Paleontology |
| • Land Use | • Cost |
| • Farmlands | - Mitigation |
| • Right-of-Way | - Construction/ROW |
| | - Maintenance |



Finding of No Significant Impact (FONSI)

Document describing preferred alternative and summarizing mitigation measures that minimize impacts



Alternative Analysis

Alternative	Suitable Habitat for Threatened & Endangered Species	Public Park & Natural Areas (4(f))	Hazardous Materials (Remediation Recommended by EPA Records)	¹ Maintenance Responsibility for Existing U.S. 287	Requires Additional Railroad Crossing or an Overpass	Estimated Residential Relocations (Houses/Mobile Homes)	Estimated Commercial/Industrial Relocations	Preliminary ROW Procurement Costs (in millions)	Crosses Approved Future Residential Development	Large Farm Land Parcel Disruption	Socioeconomics/Environmental Justice Issues	Preliminary Roadway, Bridge, & Utility Costs (in millions)	Preliminary ROW, Roadway, Bridge & Utility Costs (in millions)	Retained for Detailed Environmental Analysis	
Existing U.S. 287 Alignment Alternatives	A1 Holding Centerline	Avoids T&E Habitat	Avoids 4(f) Properties	To be Defined	CDOT	No	20/5	6	\$5.8 M	No	NA	To Be Defined	\$19.1 M	\$29.9 M	No
	A2 Holding South ROW	Avoids T&E Habitat	Avoids 4(f) Properties	To be Defined	CDOT	No	2/11	3	² \$2.2 M	No	NA	To Be Defined	\$23.6 M	\$25.8 M	To be Determined
	A3 Holding North ROW	Avoids T&E Habitat	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	CDOT	No	21/15	7	\$6.1 M	No	NA	To Be Defined	\$10.4 M	\$16.5 M	No
	A4 Meandering	Avoids T&E Habitat	Avoids 4(f) Properties	To be Defined	CDOT	No	6/9	3	\$2.1 M	No	NA	To Be Defined	\$10.6 M	\$12.7 M	Yes
New Route Alternatives	B	Avoids T&E Habitat	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	County	Yes	1/16	5	\$2.0 M	No	6	To Be Defined	\$12.6 M	\$14.6 M	Yes
	C	Avoids T&E Habitat	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	County	Yes	2/60	0	\$2.0 M	No	7	Substantial Socioeconomic & Environmental Justice Impacts	³ \$11.5 M	³ \$13.5 M	No
	E	Avoids T&E Habitat	Avoids 4(f) Properties	Avoids Hazardous Materials Sites	County	Yes	18/0	2	\$5.1 M	No	4	To Be Defined	³ \$13.2 M	³ \$18.3 M	No
	F	Crosses T&E Species Habitat (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	1/7	7	\$2.7 M	No	3	To Be Defined	³ \$14.5 M	³ \$17.2 M	No
G	Crosses T&E Species Habitat (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	15/8	7	\$5.3 M	Yes • Harris Subdivision • Summit Enterprises MRD	3	To Be Defined	³ \$17.2 M	³ \$22.5 M	No	
H	Crosses T&E Species Habitat (Prebles Meadow Jumping Mouse)	Potential Conflicts With Hickory Park Natural Areas Hickory Village Park, McMurry Natural Area & North Shields Pond Natural Area	Impacts a Hazardous Materials Site	County	Yes	6/11	7	\$7.5 M	Yes • Harris Subdivision • Summit Enterprises MRD	5	To Be Defined	³ \$17.0 M	³ \$24.5 M	No	

¹Larimer County is not in favor of assuming maintenance responsibility for the existing U.S. 287 if a new alignment is built.

²The cost doesn't include the relocation of Terry Lake Dam. Relocating the dam will require both a feasibility analysis as well as a detailed analysis of farming/irrigation impacts.

³Costs do not assume potential railroad crossing overpass.

**U.S. 287 – SH 1 to LaPorte Bypass
Alternative Analysis Criteria**

Threatened and Endangered (T&E) Species

Federally listed T&E species and designated critical habitat are protected by the Endangered Species Act (ESA;1973, as amended). This Act requires that each Federal agency shall insure that any action that is authorized, funded, or carried out by such agency will not likely jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitats of such species.

Suitable habitat for Preble’s meadow jumping mouse (PMJM), a federally-listed threatened species, was indicated for portions of the project area by the Colorado Division of Wildlife. A habitat suitability analysis was conducted of these areas, to more specifically locate sites with potential to support this species. Areas that meet the criteria for suitable habitat, as determined by the U.S. Fish and Wildlife Service (USFWS) and scientific literature, require live-trapping surveys and written documentation of results in order to obtain clearance for the area from the U.S. Fish and Wildlife Service. Should a confirmed location of a T&E species be determined another practicable and feasible alternative should be selected for the project. If there is no other reasonable alternative, CDOT-FHWA would be required to enter into a Section 7 consultation process with the USFWS under the ESA before the project could be authorized. This process requires that actions be taken to minimize impacts to the extent possible, and that mitigation plans to offset such impacts be developed.

Public Park & Natural Areas

Section 4 (f) of the Department of Transportation (DOT) Act (49 U.S.C. 303) states that the taking of publicly-owned land from a park, recreation area, wildlife or waterfowl refuge, cannot be approved unless there is no feasible and prudent alternative. Properties within the project area meeting 4(f) criteria include Hickory Park Natural Area, Hickory Village park, McMurry Natural Area, and North Shields Pond Natural Area.

Hazardous Materials

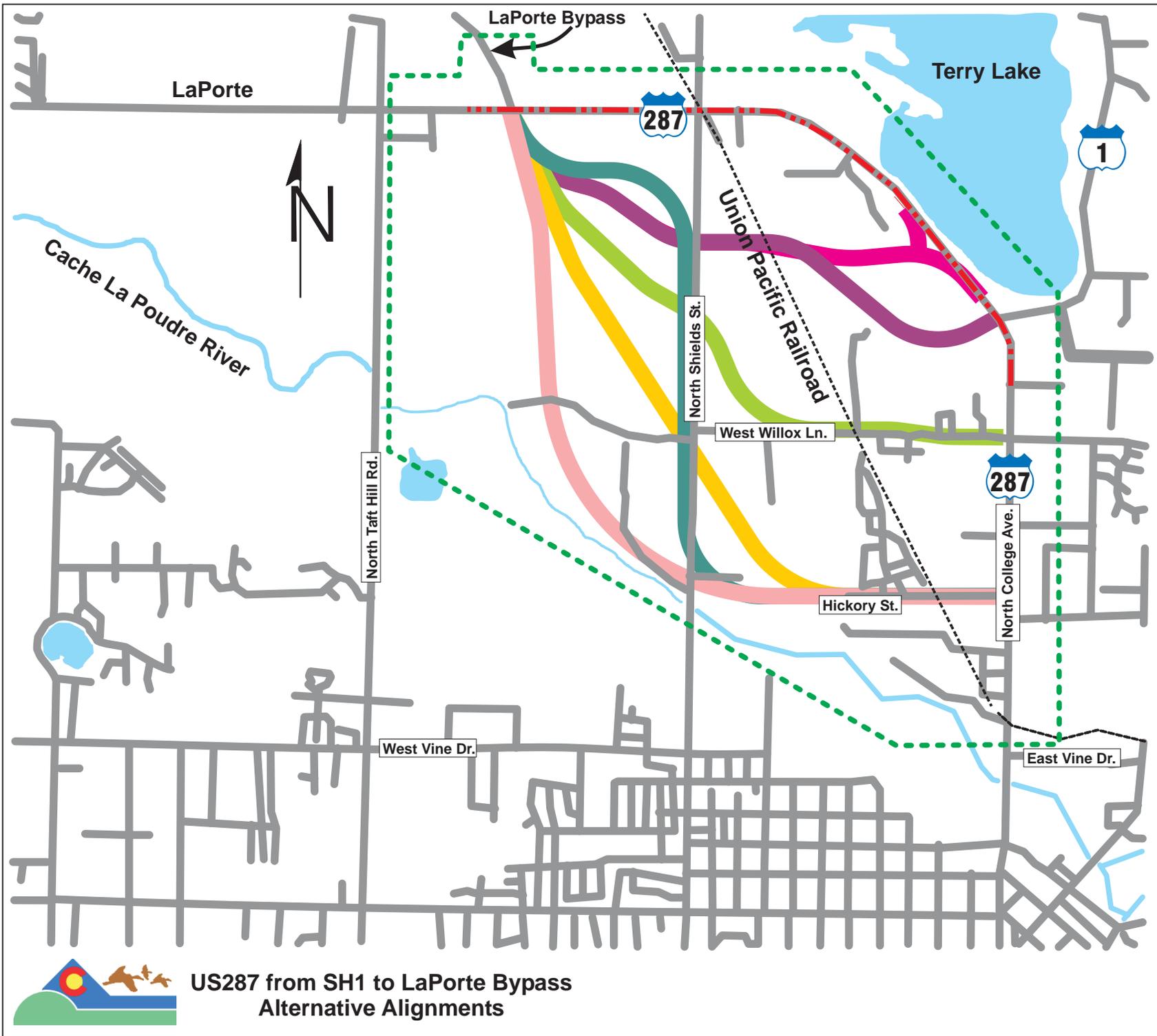
Sites that have been identified as containing hazardous materials are generally not acquired by CDOT for new right-of-way (ROW). Hazardous materials are defined as those that are contaminated by spills or leaks (e.g., gasoline storage tanks), landfills and dumps, industrial processing that has generated material classified as hazardous. These sites are regulated by the Environmental Protection Agency and Colorado Department of Health and Environment (CDHE), and the application of the Resource Conservation Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) guidelines on hazardous materials. The locations and type of materials within the study area were identified through an ASTM and CDOT database search.

Maintenance Responsibility for Existing U. S. 287

Alternatives that would occur on the existing U.S. 287 right-of-way would be maintained by CDOT. Should a new road be constructed on another or new alternative, and the existing highway abandoned by CDOT, maintenance would still be required, and Larimer County would likely assume this responsibility.

**U.S. 287 – SH 1 to LaPorte Bypass
Alternative Analysis Criteria**

Additional Railroad Crossings or Overpasses	Crossing the Burlington Northern Railroad spur at new locations with a state highway may require an overpass instead of an at-grade crossing. Such crossings are regulated by the PUC. Overpasses would be needed if train speeds at such crossings are 20 mph or greater. The cost and feasibility, in terms of connection and traffic flows on adjacent roads, will need to be included in this analysis.
Residential and Commercial Relocations	Structures where the proposed ROW would be within 5 feet or less, were counted as relocations. Commercial buildings as well as houses and mobile homes were included in this tally. Impacts to individual lots would need to be evaluated in order to determine if use of the property would be impaired by a partial take of the property.
Approved Future Residential Development	Residential developments that have been approved by Larimer County, and would be directly impacted by the alternatives, include Harris Subdivision and Summitt Enterprises MRD. Both developments have been approved by the County, and parts of each would be impacted by several alternatives.
Farmland Parcels	Large farmlands that would be bisected by an alternative, whereby the farming practice such as tillage, crop, and/or irrigation patterns would be disrupted were included in the assessment.
Socioeconomic/Environmental Justice Issues	The project area was designated by the EPA as an area where environmental justice and/or socioeconomic issues need to be addressed. Alternatives that would cause relocations of homes or disrupt communities within this area were noted. The magnitude of impacts from the alternatives will be addressed in detail during the course of the EA at which time each home and community will be identified, and analyzed in terms of environmental justice criteria.
Roadway and Bridge Construction Costs	The costs for construction were included to assess how practicable and feasible each alternative would be in relation to overall budget allocations. Although a preliminary engineering design has not been developed, the needs of the roadway to meet the purpose of the project in terms of design speed and traffic flow in relation to intersections were included in the cost estimates.
Right-of-Way (ROW) Procurement Costs	As with construction costs, proposed ROW procurement costs were included in the alternatives analysis to help determine how feasible and practicable each alternative would be in relation to budget allocation. The proposed ROW width and length were used for this estimate, based on the purpose of the project and design speeds and traffic flow.



Legend

-  = existing US287 between SH1 & LaPorte Bypass (Alignment A)
-  = study area boundaries for possible new alignment
-  = Alignment B
-  = Alignment C
-  = Alignment E
-  = Alignment F
-  = Alignment G
-  = Alignment H

* Map is not to scale



**US287 from SH1 to LaPorte Bypass
Alternative Alignments**

Proposed Alignments for Alternative Analysis

There are four alternative alignments along the existing U.S. 287; the letter “A” identifies each.

Alignment A1 – This alternative has a design speed of 50 mph and is designed holding the existing centerline of the roadway constant, indicating that the roadway would be extended both North and South of the existing edge of pavement. It requires two culvert structures and possibly a short bridge, would impact the Southern edge of the Terry lake Dam, uses most of the existing U.S. 287 roadbed, and crosses the railroad.

Alignment A2 – This alternative has a design speed of 50 mph and is designed holding the South Right-Of-Way (ROW) constant indicating that the roadway would be extended to the North of the existing edge of pavement. It requires two culvert structures and possibly a short bridge, relocation of the Terry Lake Dam, uses most of the existing U.S. 287 roadbed, and crosses the railroad.

Alignment A3 – This alternative has a design speed of 50 mph and is designed holding the North Right-Of-Way (ROW) constant indicating that the roadway would be extended to the South of the existing edge of pavement. It requires two culvert structures and possibly a short bridge, relocation of the Terry Lake Dam, uses most of the existing U.S. 287 roadbed, and crosses the railroad.

Alignment A4 – This alternative has a design speed of 50 mph and is designed with a meandering Right-of-way (ROW) indicating that the roadway would potentially be extended to the North of the existing edge of pavement in certain places, to the South in others or widened in both directions on a case by case evaluation to minimize impacts while designing the most efficient roadway. It requires two culvert structures and possibly a short bridge, uses most of the existing U.S. 287 roadbed, and crosses the railroad.

There are six new alignments identified by the letters “B” through “H”.

Alignment -B – This alternative has a design speed of 60 mph and would require the widening of U.S. 287 between SH1 and the proposed intersection with the new alignment. It requires a culvert structure, totally new roadbed, and crosses railroad.

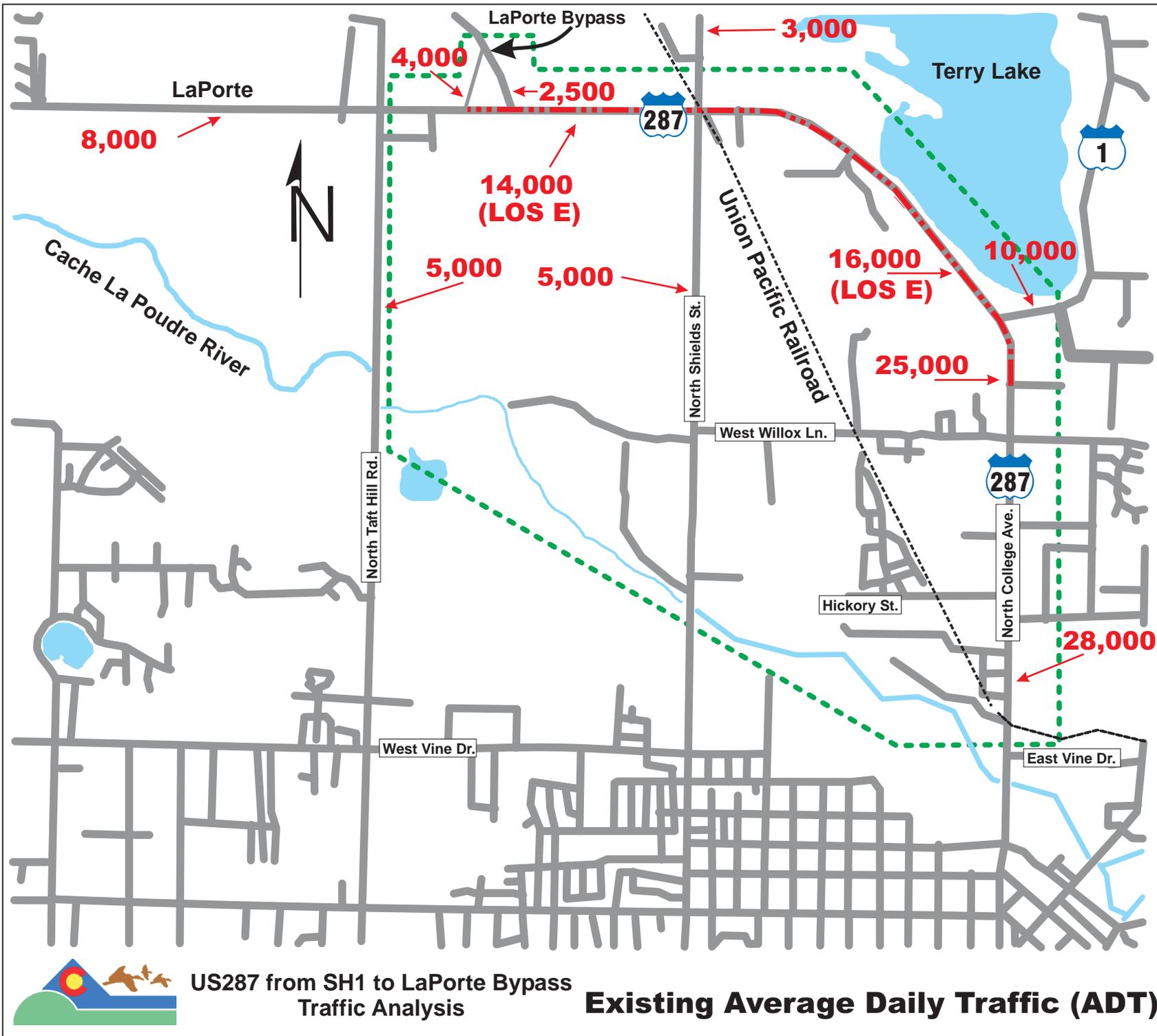
Alignment C – This alternative has a design speed of 60 mph and starts at the intersection of Willox Lane and U.S. 287. Construction would require improvements to the existing intersection, the alternative passes through a trailer park on the East side of U.S. 287, requires a culvert structure, totally new roadbed, and crosses the railroad.

Alignment E – This alternative has a design speed of 70 mph and starts at the intersection of Willox Lane and U.S. 287. It requires improvements or replacement of a culvert structure, partially uses the existing roadbed, and crosses the railroad.

Alignment -F – This alternative has a design speed of 70 mph and starts at the intersection of Hickory Rd. and U.S. 287. It requires a culvert structure, presents an awkward intersection of two roads and stream, briefly uses the existing roadbed, and crosses the railroad.

Alignment -G – This alternative has a design speed of 60 mph and starts at the intersection of Hickory Rd. and U.S. 287. It requires either a culvert structure lengthening or replacement, uses much of the existing roadbed, may require frontage road for local residences, and crosses the railroad.

Alignment -H – This alternative has a design speed of 70 mph and starts at the intersection of Hickory Rd. and U.S. 287. It requires a culvert structure, briefly uses the existing roadbed, and crosses railroad.



Legend

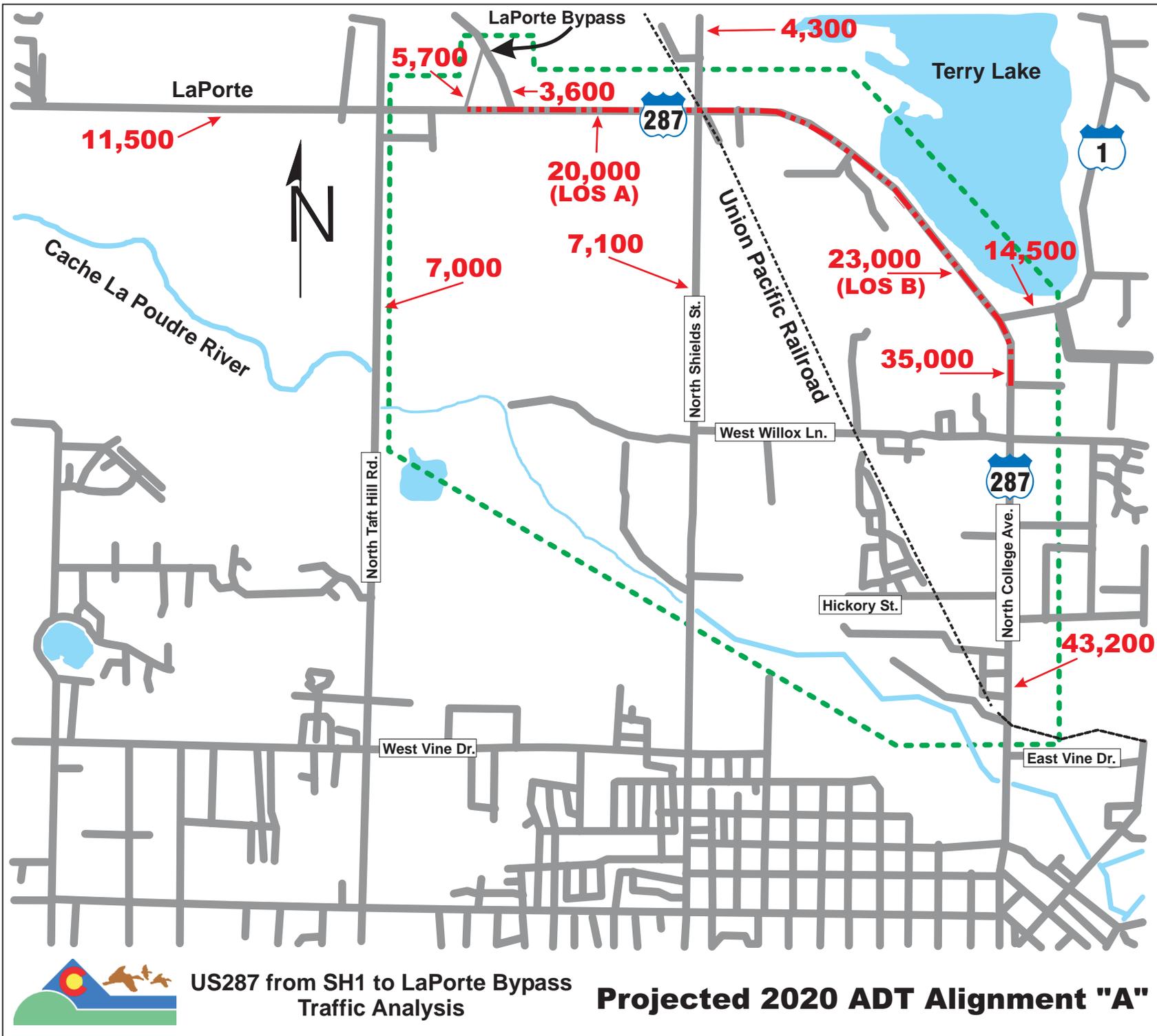
- = existing US287 between SH1 & LaPorte Bypass (Alignment A)
- = study area boundaries for possible new alignment

* Map is not to scale



US287 from SH1 to LaPorte Bypass
Traffic Analysis

Existing Average Daily Traffic (ADT)



Legend

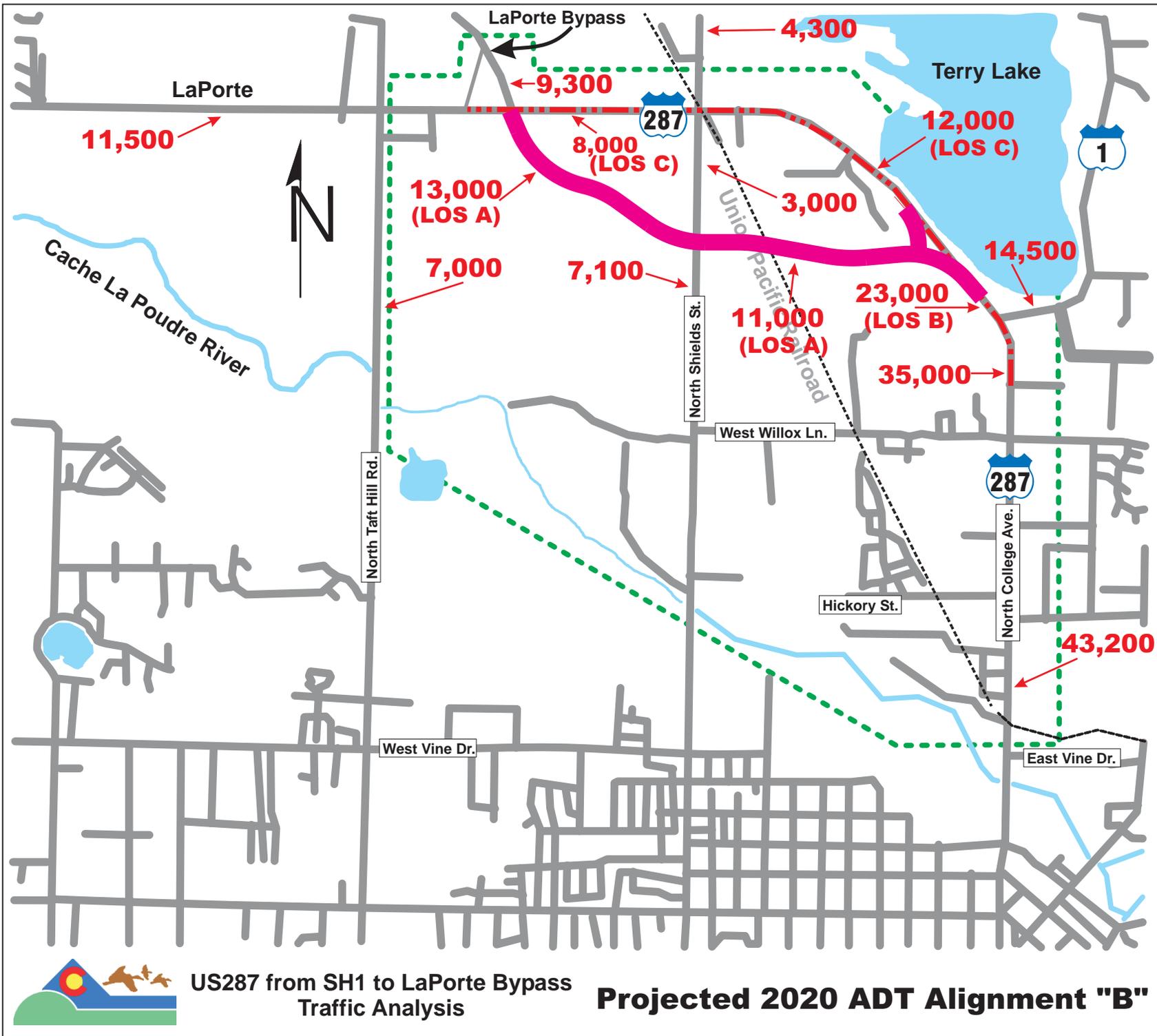
- = existing US287 between SH1 & LaPorte Bypass (Alignment A)
- = study area boundaries for possible new alignment

* Map is not to scale



US287 from SH1 to LaPorte Bypass
Traffic Analysis

Projected 2020 ADT Alignment "A"



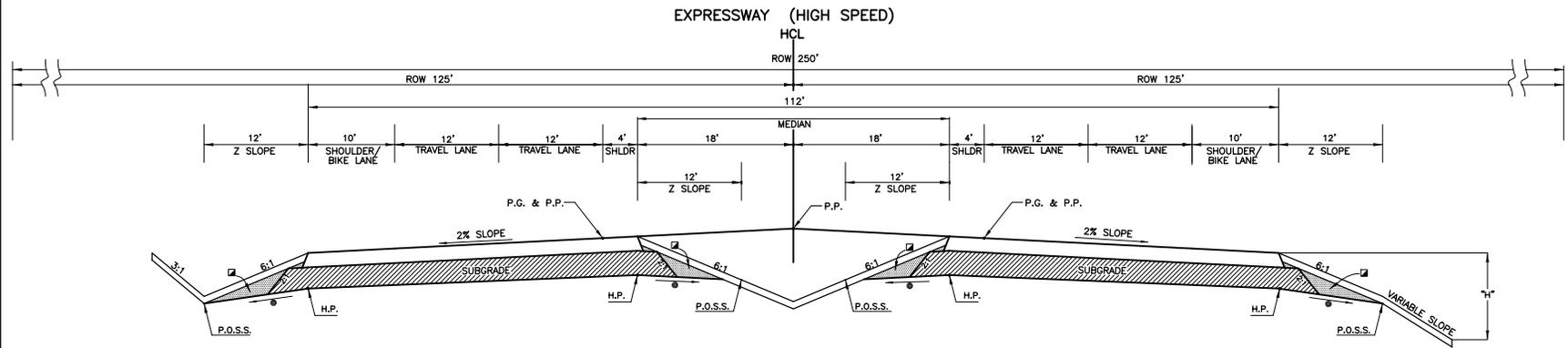
Legend

- = existing US287 between SH1 & LaPorte Bypass (Alignment A)
- = study area boundaries for possible new alignment
- = Alignment B

* Map is not to scale



PROPOSED TYPICAL SECTION FOR NEW ALIGNMENT

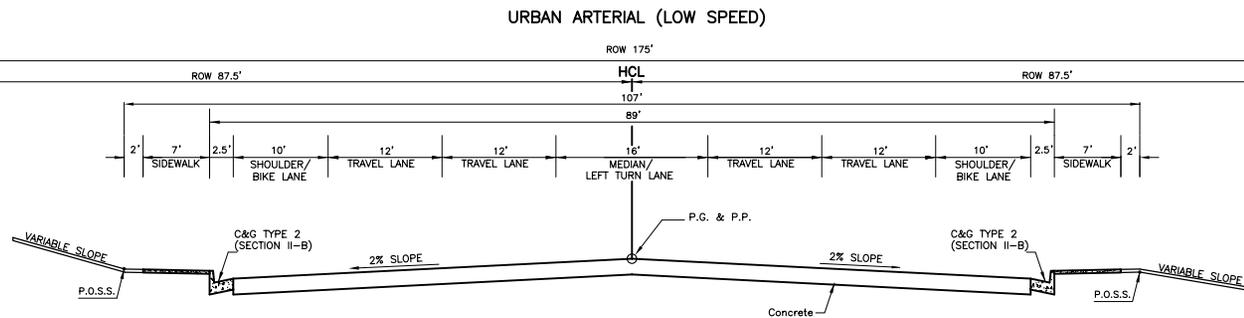


LEGEND

- 50:1 OR STEEPER (0.02 ft/ft)
- ▣ TOPSOIL EMBANKMENT MATERIAL OR AGGREGATE BASE COURSE
- H.P. HINGE POINT
- P.O.S.S. POINT OF SLOPE SELECTION
- P.G. & P.P. PROFILE GRADE & PIVOT POINT

Computer File Information		Sheet Revisions		Colorado Department of Transportation		As Constructed		Project No./Code			
Creation Date:	4/26/00	Initials:	ATH	 J. F. Sato and Associates 5898 South Rapo Street Littleton, Colorado 80120 Phone: (303) 797-1200 FAX: (303) 797-1187		 18500 East Colfax Avenue Aurora, Colorado 80011 Phone: (303) 757-9371 FAX: (303) 757-9746		No Revisions: _____ Revised: _____ Void: _____		Designer: ATH Structure _____ Detailer: ATH Numbers _____ Sheet Subset: _____ Subset Sheets: _____ of _____	
Last Modification Date:		Initials:									
Full Path:	SERVER1\9994\JFSA										
Drawing File Name:	Display4										
Acad Ver.:	R14	Scale:	N.T.S.	Units:	ENGLISH	REGION 4	BP				

PROPOSED TYPICAL SECTION FOR EXISTING ALIGNMENT



- LEGEND**
- 50:1 OR STEEPER (0.02 ft/ft) TOPSOIL EMBANKMENT MATERIAL OR AGGREGATE BASE COURSE
 - H.P. HINGE POINT
 - P.O.S.S. POINT OF SLOPE SELECTION
 - P.G. & P.P. PROFILE GRADE & PIVOT POINT

Computer File Information		Sheet Revisions		Colorado Department of Transportation		As Constructed		TYPICAL SECTION SH 287		Project No./Code	
Creation Date:	4/26/00	Initials:	ATH					No Revisions:			
Last Modification Date:		Initials:						Revised:	Designer:	ATH	Structure Numbers
Full Path:	SERVER1:\9994\JFSA								Detailer:	ATH	
Drawing File Name:	Display3								Sheet Subset:		Subset Sheets: of
Acad Ver.: R14	Scale: N.T.S.	Units: ENGLISH									Sheet Number



REGION 4

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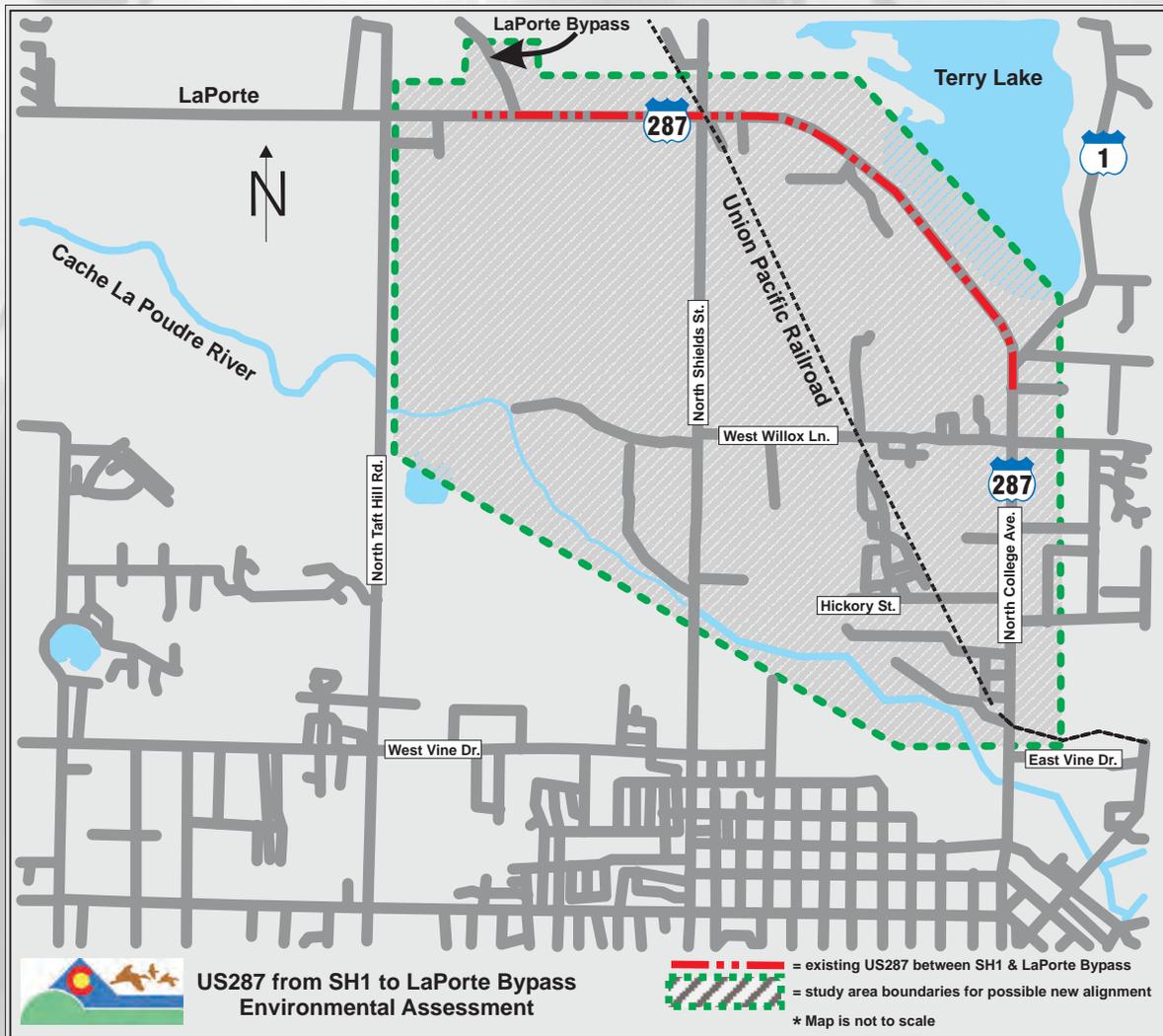
Public Workshop #2

September 21, 2000

Welcome!

- Please sign the attendance roster.
- Do read the handout.
- Do visit our displays.
- If you have any questions, please ask one of our CDOT representatives or consultants.

Study Area



If you wish to make a written statement or comment, please fill out the form in the back of this handout.

You may also contact our website: www.us287-north-of-fort-collins.com to review the project newsletter or e-mail comments.



Environmental Assessment Process

Alternatives Analysis

- Conceptual Design
- Threatened & Endangered Species
- Public Parks and Natural Areas - 4(f)
- Hazardous Materials Sites (remediation needed)
- Land Use Impacts
- Preliminary Right-of-Way Procurement Costs
- Preliminary Roadway and Bridge Costs

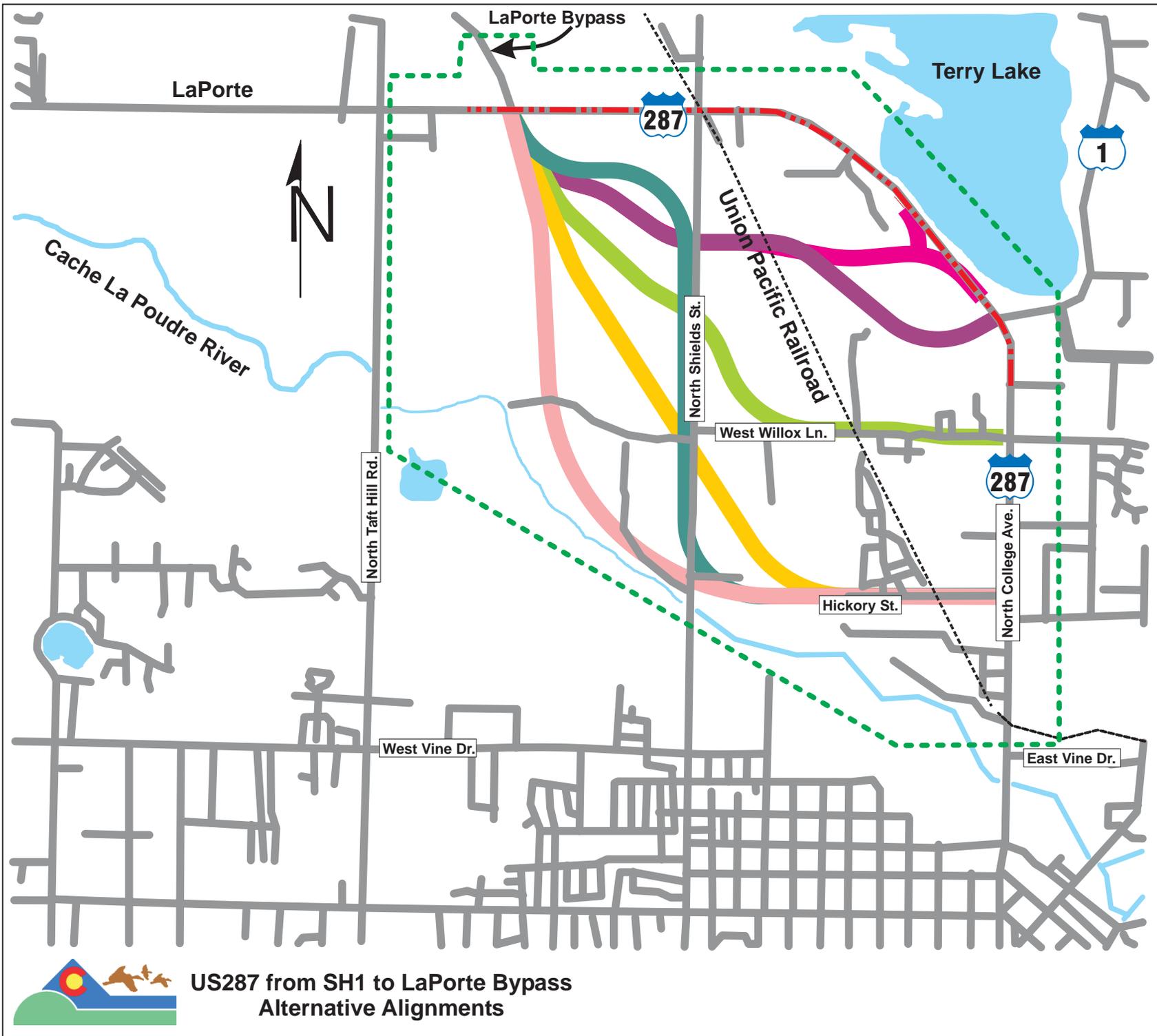


Environmental Analysis

- | | |
|-----------------------------------|-------------------------|
| • Air Quality | • Socioeconomics |
| • Geology and Soils | • Environmental Justice |
| • Hydrology and Water Quality | • Visual Resources |
| • Floodplains and Wetlands | • Recreation Areas |
| • Ecology | • Hazardous Materials |
| • Threatened & Endangered Species | • Archaeology |
| • Traffic Analysis | • History |
| • Noise | • Paleontology |
| • Land Use | • Cost |
| • Farmlands | - Mitigation |
| • Right-of-Way | - Construction/ROW |
| | - Maintenance |



If a Finding of No Significant Impact (FONSI) is determined, a document describing the preferred alternative and summarizing mitigation measures that minimize impacts will be prepared.



Legend

- - - = existing US287 between SH1 & LaPorte Bypass (Alignment A)
- - - = study area boundaries for possible new alignment
- = Alignment B
- = Alignment C
- = Alignment E
- = Alignment F
- = Alignment G
- = Alignment H

* Map is not to scale



**US287 from SH1 to LaPorte Bypass
Alternative Alignments**

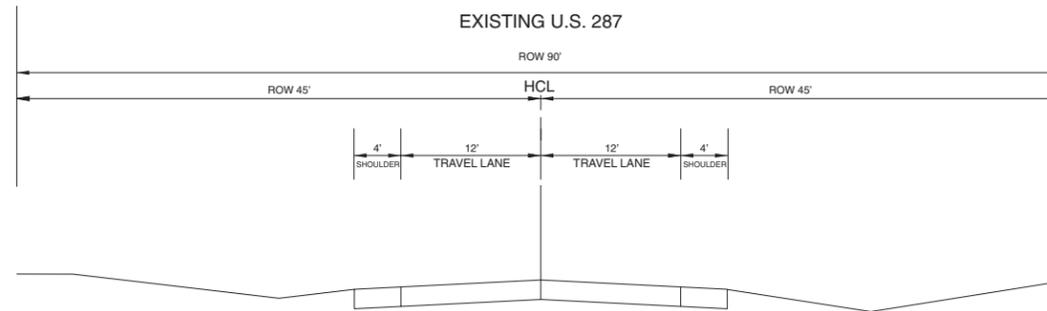


Environmental Analysis Evaluation

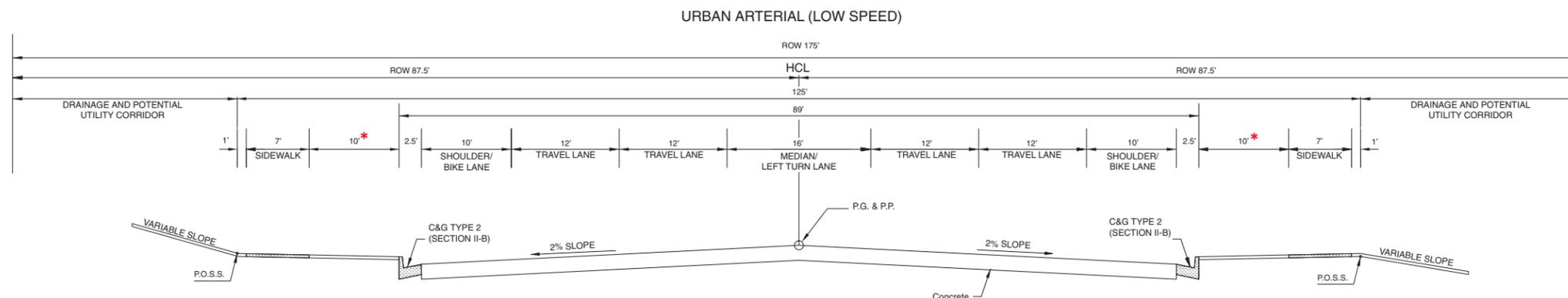
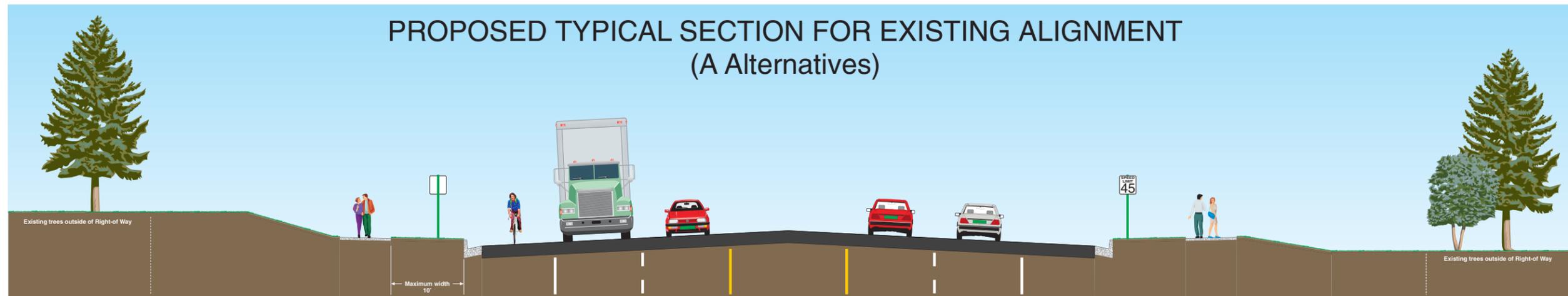
Constraints & Issues	Alternatives Retained for Environmental Analysis		
	Alternative A4	Alternative A5	Alternative B
Socio-economics	• Negligible Impacts	• Negligible Impacts	• Potential Impacts
Environmental Justice	• Potential Issue	• Potential Issue	• Potential Issue
Right-of-Way Acquisition and Relocations (by Land Use)	<ul style="list-style-type: none"> • Commercial 14.2 acres • Single Family Resident 2.1 acres • Cropland 5.5 acres • Pasture Impacts 0.01 acre • Multifamily Residential 3.4 acres • Commercial Relocations 7 • Single Family Residential Relocations 6 • Mobile Home Relocations 20 	<ul style="list-style-type: none"> • Commercial 7.6 acres • Single Family Resident 1.2 acres • Cropland 5.5 acres • Pasture 0.5 acres • Multifamily Residential 2.8 acres • Commercial Relocations 5 • Single Family Residential Relocations 5 • Mobile Home Relocations 20 	<ul style="list-style-type: none"> • Commercial 10.9 acres • Single Family Resident 3.7 acres • Cropland 39.2 acres • Pasture 0 acres • Multifamily Residential 0 acres • Commercial Relocations 4 • Single Family Residential Relocations 2 • Mobile Home Relocations 0
Traffic & Safety	<ul style="list-style-type: none"> • 2000 Existing conditions from SH-1 to Shields --16,000 AADT/LOS E • 2000 Existing conditions from Shields to LaPorte Bypass -- 14,000 AADT/LOS E • 2020 Projections from SH-1 to Shields --23,000 AADT/LOS B • 2020 Projections from Shields to LaPorte Bypass -- 20,000 AADT/LOS A • Accidents should be reduced as a result of wider highway section, center turn lane, improved access design, and improved visibility • Design Hourly Volume = 1380 	<ul style="list-style-type: none"> • 2000 Existing conditions from SH-1 to Shields --16,000 AADT/LOS E • 2000 Existing conditions from Shields to LaPorte Bypass -- 14,000 AADT/LOS E • 2020 Projections from SH-1 to Shields --23,000 AADT/LOS B • 2020 Projections from Shields to LaPorte Bypass -- 20,000 AADT/LOS A • Accidents should be reduced as a result of wider highway section, center turn lane, improved access design, and improved visibility • Design Hourly Volume = 1380 	<ul style="list-style-type: none"> • New Alignment • 2020 Projections from SH-1 to Shields -- 11,000 AADT/LOS A • 2020 Projections from Shields to LaPorte Bypass -- 13,000 AADT/LOS A • Old Alignment • 2020 Projections from SH-1 to Shields -- 12,000 AADT/LOS C • 2020 Projections from Shields to LaPorte Bypass -- 8,000 AADT/LOS C • Conditions would persist as the frequency of accidents is not volume related • Design Hourly Volume = 780
Visual/Aesthetics	• Moderate project setting contrast within residential viewsheds	• Moderate project setting contrast within residential viewsheds	• Width of cross section and presence of traffic would contrast with the rural setting • Severe project setting contrast within residential viewsheds
Air Quality	• Based on the projected (2020) Levels of Service for highway segments and intersections, air quality impacts are not anticipated	• Based on the projected (2020) Levels of Service for highway segments and intersections, air quality impacts are not anticipated	• Based on the projected (2020) Levels of Service for highway segments and intersections, air quality impacts are not anticipated
Noise	Potential Impacts to Residential Receptors	Potential Impacts to Residential Receptors	Potential Impacts to Residential and Commercial Receptors
Hazardous Materials/Waste	• 2 potential sites	• No known sites	• 2 potential sites
Prime Farmlands	• Under Investigation	• Under Investigation	• Under Investigation
Cultural Resources	• No Issues	• No Issues	• Possible Historic Farmstead located east of Shields (midway between Shields and U.S.287)
Section 4(f)/6(f)	• No Resource	• No Resource	• No Resource
Ecology & Threatened & Endangered Species	• Potential habitat identified, but no species found (Preble's Meadow Jumping Mouse, Ute Ladies Tresses Orchid)	• Potential habitat identified, but no species found (Preble's Meadow Jumping Mouse, Ute Ladies Tresses Orchid)	• Potential habitat identified, but no species found (Preble's Meadow Jumping Mouse, Ute Ladies Tresses Orchid)
Wetlands	• 0.71 Acres	• 1.46 Acres	• 8.32 Acres
Flood Plain 100 years	• Further analysis needed to determine potential impact	• Further analysis needed to determine potential impact	• Further analysis needed to determine potential impact



US287 from SH1 to LaPorte Bypass



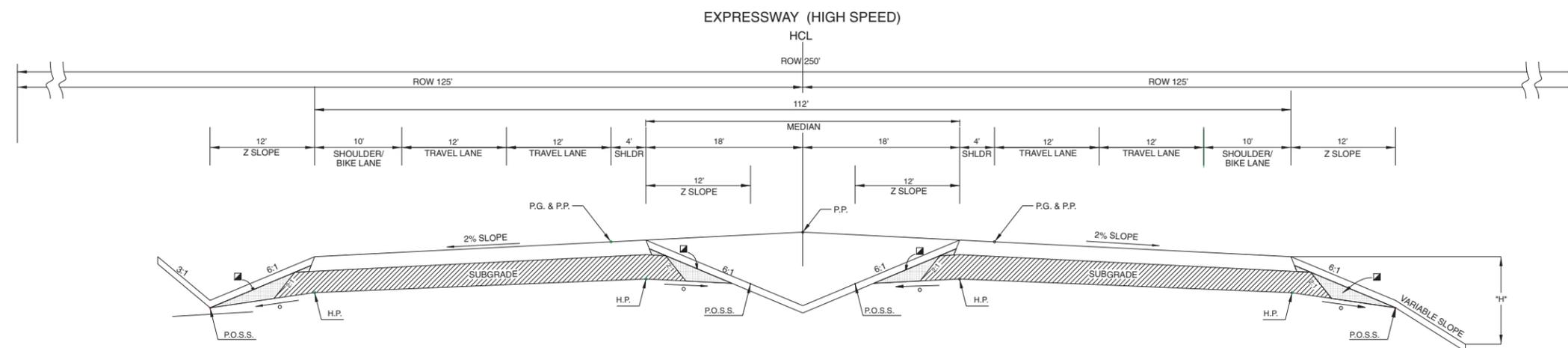
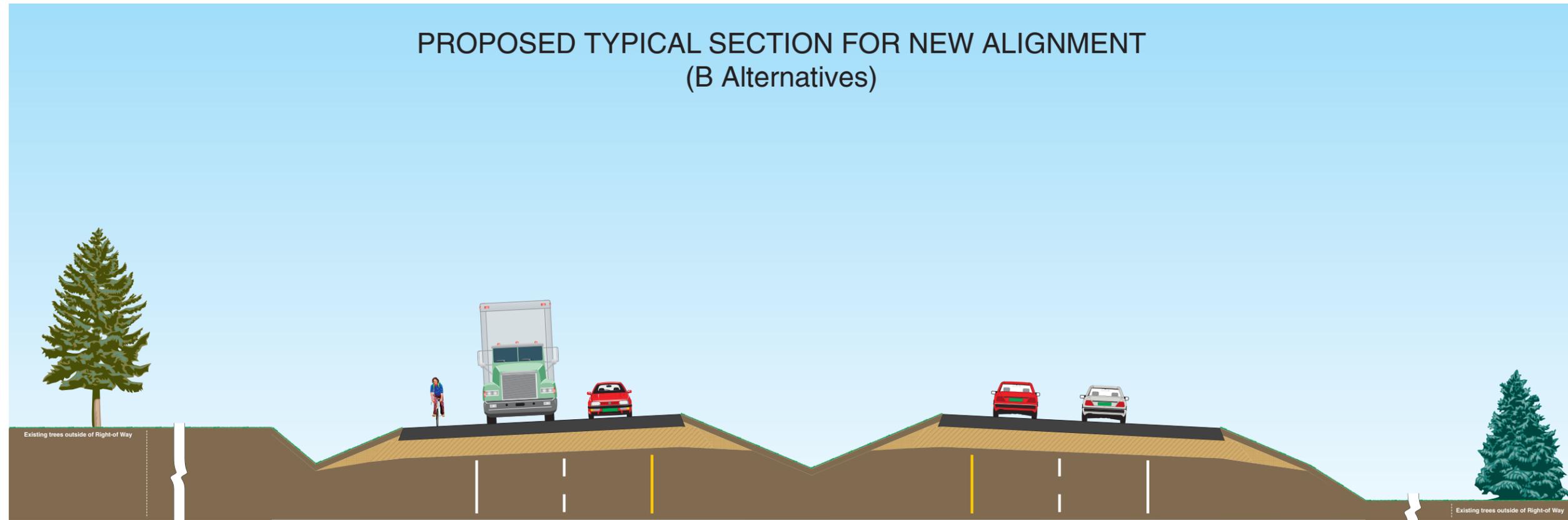
PROPOSED TYPICAL SECTION FOR EXISTING ALIGNMENT (A Alternatives)



* WHERE SPACE PERMITS



PROPOSED TYPICAL SECTION FOR NEW ALIGNMENT (B Alternatives)





US287 from SH1 to LaPorte Bypass

Glossary of Terms

Alternative Analysis-process by which alternatives identified through the scoping process will be screened to determine how well each meets the project's Purpose and Need.

(ADT) Average Daily Traffic -average two-way traffic, in number of vehicles.

Capacity-maximum rate of flow at which vehicles can traverse a point on one lane of roadway during one hour.

CDOI-Colorado Department of Transportation.

Design Hourly Volume-peak hour traffic (rush hour) whether in the morning or afternoon hour.

EA-an Environmental Assessment is a written statement prepared when the level of the impacts is not clear. The document discloses the effects on the environment that could result from a proposed action (planning and/or decision making).

Environmental Analysis-in-depth environmental (both human and natural) analysis of alternatives advanced through the alternative analysis.

FHWA-Federal Highway Administration.

FONSI-Finding of No Significant Impact; possible final decision on an EA indicating that the preferred alternative has no significant impacts on the environment that cannot be appropriately mitigated.

LOS-Level of Service is a qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

LOS A- free-flow operations

LOS B- reasonably free-flow operations

LOS C- noticeable traffic

LOS D- speeds decline and congestion begins to form

LOS E- maximum service flow (full capacity)

LOS F- heavy congestion, significant delays, stop-and-go traffic

Mobility-the ability of traffic to move unimpeded through a highway or roadway corridor.

NEPA-the National Environmental Policy Act of 1969 is our nation's basic charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. In accordance with NEPA, all federal agencies must prepare a written statement on the environmental impacts of a proposed action. The provisions to ensure that federal agencies act according to the letter and spirit of NEPA are in the Council on Environmental Quality (CEQ) regulations for implementing NEPA (43 CFR 1500-1508).



US287 from SH1 to LaPorte Bypass

Glossary of Terms (con't)

No Action Alternative-alternative that represents projected conditions within the study area without the implementation of improvement and that serves as a baseline for comparison of “build” alternatives.

Preferred Alternative-alternative identified through the EA process that is the action recommended to meet the Purpose and Need of the project

Purpose and Need-the underlying reason for conducting the studies and analyses; the purpose and need to which the agency is responding by proposing alternative solutions.

Right of Way-a general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Scoping-an open public process initiated at the beginning of the EA to help identify the public's concerns and recommended solutions.

Threatened and Endangered Species-endangered species are those that are in danger of becoming extinct; threatened species are those that are in danger of being listed as Endangered.

4(f)-publicly owned land including public parks, recreation areas, wildlife/waterfowl refuges or land of a historic site of National, State or local significance.



US 287 from SH 1 to the LaPorte Bypass Environmental Assessment



Appendix I
Project Newsletters/
Factsheets

FACT SHEET

U.S. 287-SH1 TO LA PORTE BYPASS ENVIRONMENTAL ASSESSMENT OCTOBER 1999

The Colorado Department of Transportation (CDOT) has retained J.F. Sato and Associates (JFSA) to perform the Environmental Assessment for US 287-SH1 to La Porte Bypass.

US 287-SH1 to La Porte Bypass Background

Planning and construction of improvements along US 287 have been ongoing for more than 20 years. Improvements began in the early 1970's with the widening of U.S. 287 from two lanes to four lanes between Ft. Collins and Loveland. Farther to the North, the La Porte Bypass construction was completed in 1988. The section of US 287 between SH1 and the La Porte Bypass, the last section of U.S. 287 that requires improvement, has been identified as a bottleneck inhibiting an efficient flow of traffic for several years. At present, there are numerous traffic access issues as well as circulation and capacity problems that are anticipated to worsen as the area grows and traffic increases. In 1996, traffic volumes along this segment of US 287 varied from 16,800 Average Daily Traffic (ADT) between SH1 and Shields Street and 15,700 ADT between Shields Street and the La Porte Bypass. These volumes far exceed the capacity of this road to adequately accommodate traffic.

Coordination/Public Involvement

Coordination of this effort will be through CDOT and its consultant, JFSA. As part of the Scoping Process, and in compliance with the National Environmental Policy Act (NEPA), input will be solicited from all identified Federal, State, Local and private agencies that might have any interest in the project, as well as the public at large.

Future Public Workshops will be advertised and updates on the status of the EA will be provided

through a quarterly Project Newsletter.

Proposed Action

US 287, between SH1 and the La Porte Bypass, has been selected by the Northern Front Range Transportation Board for improvements, perhaps widening the current road from two to four lanes. CDOT has initiated an EA to evaluate the potential impacts of reasonable alternatives. The general alternatives include: taking no action, widening the existing US 287 corridor between SH1 and the La Porte Bypass from two to four lanes or constructing a new US 287 alignment.

The preferred alternative will:

- *Increase capacity to carry existing and future traffic more efficiently and at a higher Level of Service*
- *Investigate opportunities for alternate modes of transportation*
- *Improve Safety*

The EA will be conducted in compliance with NEPA and will encourage public involvement throughout the process. CDOT is committed to maintaining the environmental integrity, both natural and social, of the study area.

Project Schedule

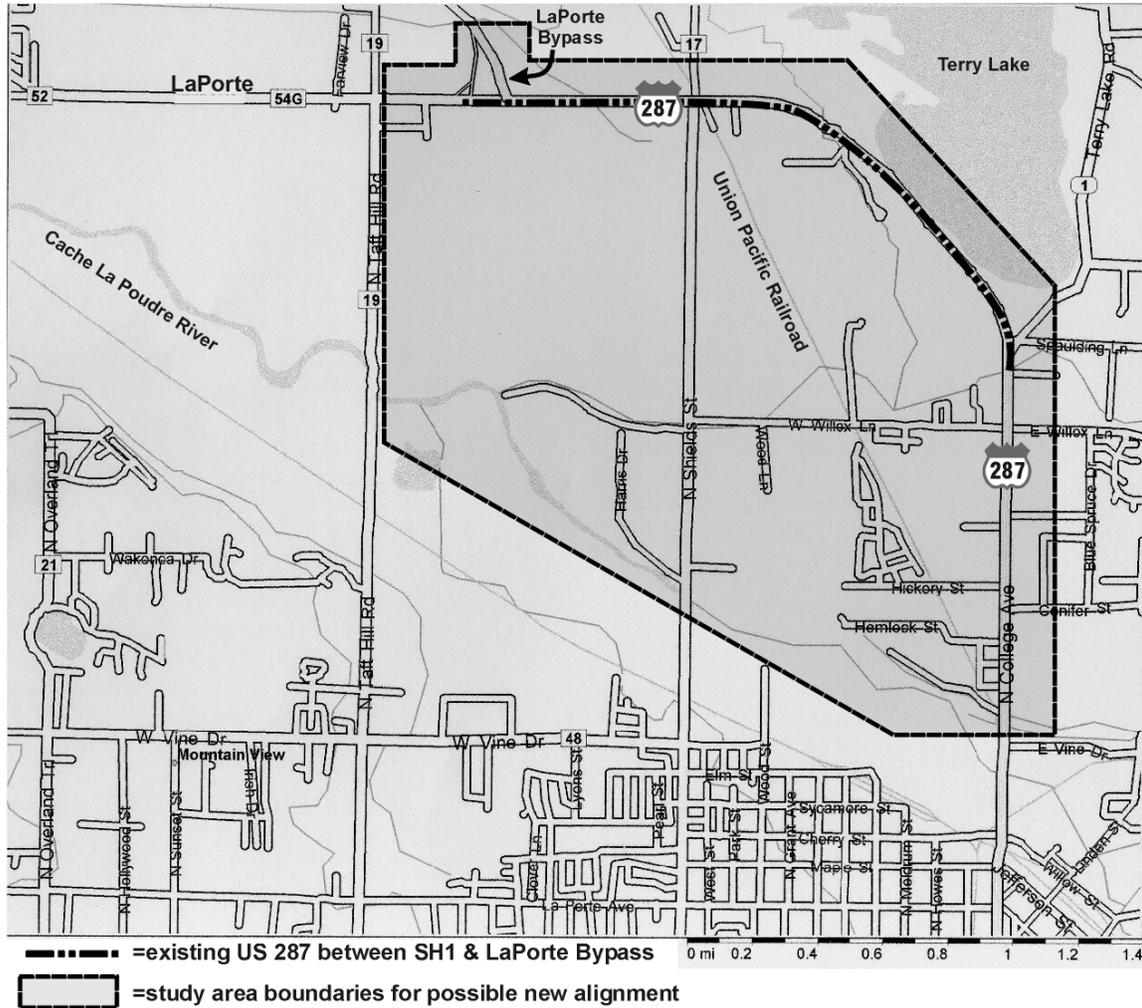
A tentative schedule of the EA process is listed below to give you an outline of the anticipated project progression.

- Scoping Process:
Fall 1999-Spring 2000
- Alternative Analysis:
Winter 1999-Spring 2000
- Environmental Analysis:
Fall 1999-Summer 2000
- EA Document:
Fall 1999-Fall 2000

How to Get Involved Please contact Michelle Li with any questions or comments that you may have regarding the U.S. 287-SH1 to La Porte Bypass project or to be added to the mailing list. Michelle Li's e-mail address is mli@jfsato.com and mailing address is:

J.F. Sato & Associates
5898 S. Rapp St.
Littleton, CO 80120
Tel: (303)797-1200; Fax: (303)797-1187

Project Study Area



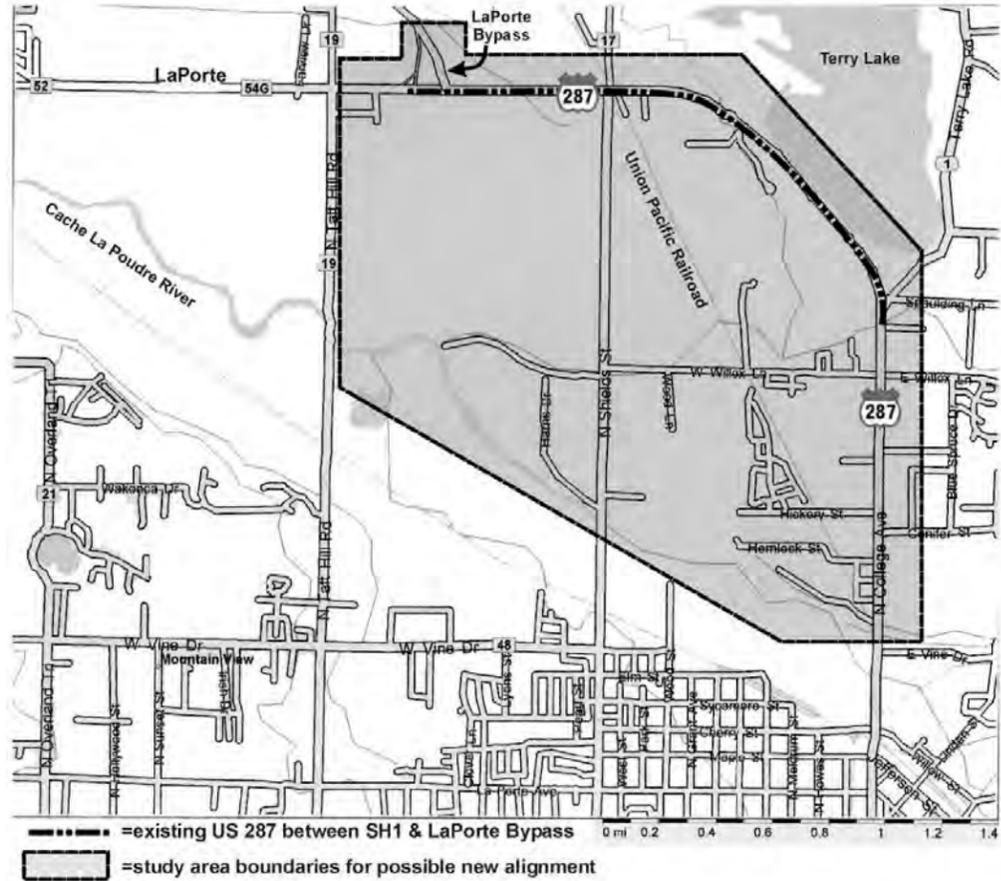
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US287 from SH1 to LaPorte Bypass

PROJECT FACTSHEET #2 U.S. 287- STATE HIGHWAY 1 TO LAPORTE BYPASS ENVIRONMENTAL ASSESSMENT FEBRUARY 2000



This is the second in a series of factsheets designed to keep you up-to-date about the Environmental Assessment (EA) that the Colorado Department of Transportation (CDOT) is conducting for U.S. 287 between State Highway (SH) 1 and the LaPorte Bypass. The EA will investigate solutions to improving mobility and safety on the two lane segment of U.S. 287 from SH1 to the LaPorte Bypass. J.F. Sato and Associates (JFSA) is the environmental consultant for the project.

Scoping (please refer to graphic on p.2)
CDOT is currently in the Scoping phase of the project. Scoping is an early and open public process for determining the range of issues to be addressed in the study and for identifying the significant issues related to a proposed action. Formal Scoping will conclude March 31, 2000. Public involvement is on-going throughout the project to keep interested individuals, groups and agencies informed about the project and solicit input at key milestones in the process.

In order to solicit input and help in issue identification, CDOT has held meetings with federal, state and local agencies. Among the participants were representatives from the Lead Agencies, CDOT and the Federal Highway Administration, as well as the Corps of Engineers, Colorado Division of Wildlife, Larimer County, City of Fort Collins and the North Front Range MPO. In addition, to provide extensive public outreach, CDOT and JFSA have extended the offer to hold small group meetings with various special interest groups and individuals to provide a project overview, solicit input and identify issues or concerns. For example a meeting was recently held with the North College Avenue Business Association, composed of local business owners, where CDOT and JFSA presented the project, solicited input and answered questions. If you are interested in a small group meeting with the project team, please contact Michelle Li from JFSA at (303)797-1200 or e-mail mli@jfsato.com.

Alternative Analysis
Alternatives identified through scoping will be developed and screened to determine how well each meets the Purpose and Need of the project and to

compare the potential environmental impacts. CDOT will develop evaluation criteria based on public and agency input, design criteria, and critical environmental receptors. (Please refer to the EA Process Graphic on p.2)

CDOT plans to complete the Alternative Analysis in late Spring of 2000 and will hold an Open House to discuss the results. The Open House will present the alternatives considered and those that have been advanced into the Environmental Analysis stage for a more in-depth investigation of potential impacts and mitigation measures.

Environmental Data
Currently, CDOT is gathering data on both the human and natural environment and is working with local, state and federal agencies. The types of data being collected include, but are not limited to: land use, wetlands, floodplains, Threatened and Endangered Species, socio-economics, historic sites and soils. This data will be used to determine the potential environmental impacts associated with the alternatives which will help guide the decision making process. Identifying potential environmental impacts early in the study will also aid with future development of mitigation plans.

Opportunities For Public Involvement
Please feel free to contact Jeff Manuel, Environmental Unit Manager, CDOT Region 4, or Michelle Li, Deputy Project Manager for JFSA, with any questions or comments you may have regarding this project, to request a small group meeting or to be added to the mailing list. Jeff's mailing address is 1420 2nd St., Greeley, CO 80631 and his e-mail is Jeff.Manuel@dot.state.co.us. Michelle's e-mail is Mli@jfsato.com and the mailing address is 5898 S. Rapp St., Littleton, CO, 80120.

You can also visit the project website at "US287-North-of-Fort-Collins.com" to review the previous Factsheet or e-mail your comments. CDOT will host an Open House after completing the Alternatives Analysis in late Spring of 2000. Announcements for the Open House will be in the next Project Factsheet, local papers and posted at public buildings and on the project website.

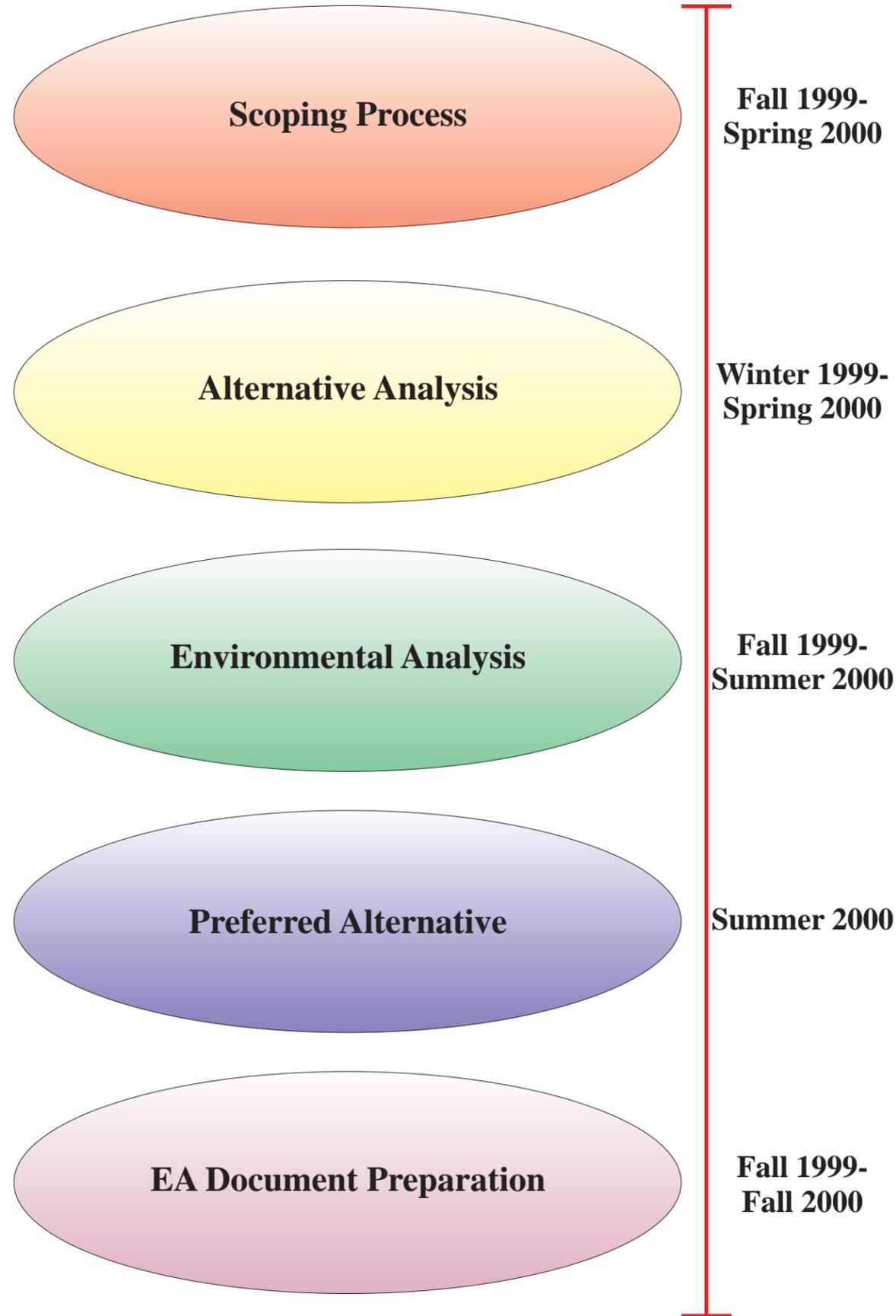
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Environmental Assessment (EA) Process

Public Involvement Program



Scoping and Public Involvement

Scoping is an open public process initiated at the beginning of the EA to help identify the public's concerns and possible solutions. The Public Involvement Program, which is on-going throughout the EA, provides opportunities for public participation in refining the Purpose and Need of the project, the range of alternatives to be considered and the issues to be addressed. CDOT will provide a wide range of forums to encourage agency and public involvement throughout the EA.

Alternative Analysis

Alternatives proposed through the scoping process will be screened to determine how well each meets the project's Purpose and Need. Evaluation criteria developed through EA scoping will be used to screen the alternatives. Alternatives examined during the Alternative Analysis stage either will be screened out or advanced to the Environmental Analysis stage of the EA.

Environmental Analysis

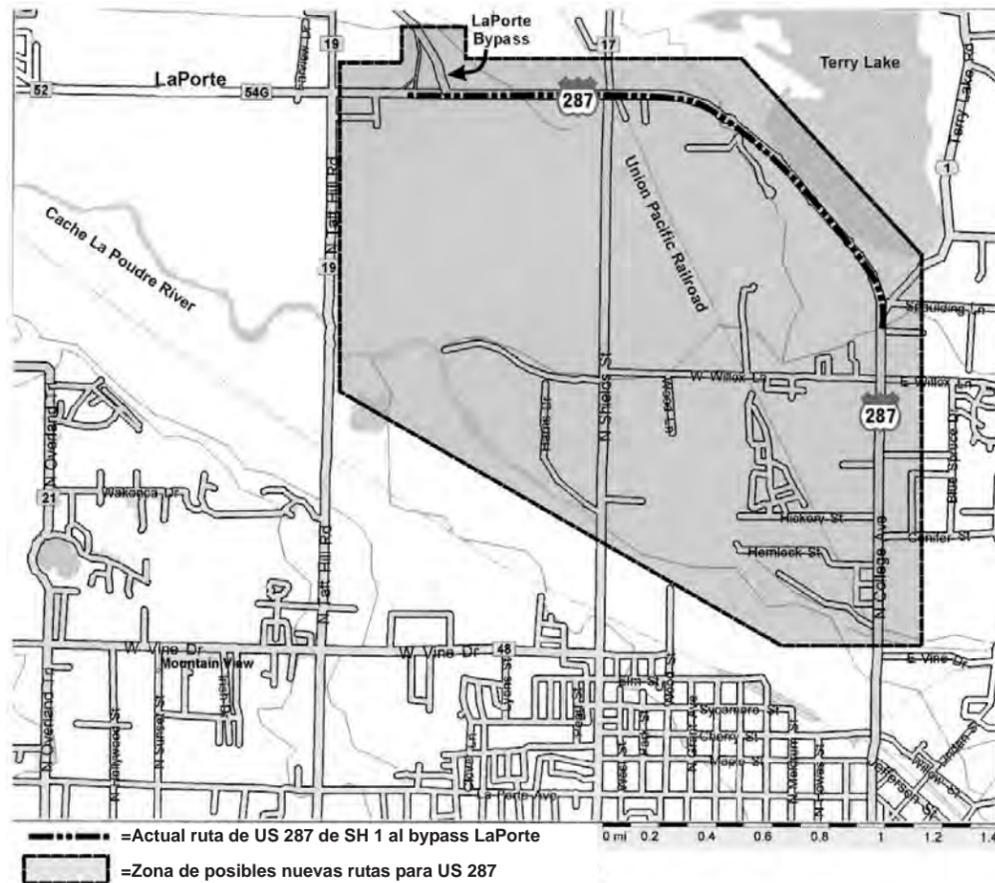
Alternatives advanced through the Alternative Analysis process will be studied at an appropriate level, relative to the environmental issues and according to the NEPA process. A period for agency and public review will follow the publication of the Draft EA.

Preferred Alternative

The alternative that is proposed by the EA as the course of action (this could include a recommendation of "no action") is the Preferred Alternative. The Preferred Alternative has been selected after having conducted the Alternative and Environmental Analysis.

EA Document Preparation

The EA Document Preparation will begin at the initiation of the project and will explain the Purpose and Need for the project, Alternative Analysis, Environmental Analysis and the selection of a Preferred Alternative. A 30-day public review and comment period followed by a public hearing is required to conclude the EA. The Federal Highway Administration (FHWA), as Lead Agency may determine a Finding of No Significant Impact (FONSI) based on findings and the recommendations proposed by the EA. A FONSI indicates that the proposed alternative has no significant impact on the environment.



US287 from SH1 to LaPorte Bypass

BOLETIN DE INFORMACION No. 2 MEJORAS A U.S. HIGHWAY 287 DE SH 1 AL BY-PASS LAPORTE EVALUACION AMBIENTAL FEBRERO 2000

Este es el segundo Boletín de Información cuyo propósito es mantener al público bien informado sobre el estado actual de la Evaluación Ambiental (EA) que el Colorado Department of Transportation (CDOT) está llevando a cabo para posibles mejoras a U.S. Highway 287 (US 287) desde State Highway 1 (SH 1) al Bypass de LaPorte. La EA investigará alternativas para mejorar las condiciones de tránsito y seguridad en el tramo de dos vías de US287 entre SH 1 y el Bypass de LaPorte. J.F. Sato & Associates (JFSA) es la firma consultora para el proyecto.

“Scoping” (Por favor referirse al gráfico en la página 2) CDOT está actualmente en la fase de “Scoping”. Esta fase inicial es un proceso público para determinar las cuestiones que deben ser incluidas en la EA, y para identificar cualquier problema relacionado a alguna acción propuesta. Esta fase terminará el 31 de Marzo del 2000. La participación pública continuará durante todo el proyecto para mantener bien informados a individuos, grupos, y oficinas de gobierno sobre la marcha del proyecto, y para obtener su participación en etapas cruciales del proceso.

CDOT organizó varias reuniones con representantes del gobierno federal, estatal, y municipal para discutir el Proyecto. Participaron en estas reuniones representantes de CDOT y la Federal Highway Administration (FHWA), las “Lead Agencies” del proyecto (Oficinas Principales que financian y dirigen el proyecto). También participaron en estas reuniones representantes del U.S. Army Corps of Engineers, Colorado Division of Wildlife, Larimer County, City of Fort Collins, y North Front Range MPO.

Además, con el fin de proporcionar al público mayores oportunidades para conocer y dar su opinión sobre el proyecto, CDOT y JFSA han organizado reuniones con varios grupos y personas que tienen algún interés especial (special interest groups). En estas reuniones CDOT y JFSA presentan una descripción general del proyecto y escuchan opiniones sobre diferentes aspectos del proyecto, lo que ayuda a identificar cuestiones importantes relacionadas al proyecto. Por ejemplo, hace poco hubo una reunión con la North College Avenue Business Association formada por dueños de negocios ubicados en la zona del proyecto. En esta reunión representantes de CDOT y JFSA explicaron el proyecto y contestaron muchas preguntas. Si Ud. tiene interés en una reunión por favor llame a Michelle Li de JFSA al teléfono 303-797-1200 o escriba un e-mail a mli@jfsato.com.

Análisis de Alternativas
Las alternativas identificadas en el proceso de “scoping” serán desarrolladas y clasificadas para determinar como cada alternativa satisface el Propósito y Necesidad del proyecto, y para comparar los

posibles impactos ambientales de cada alternativa. CDOT desarrolla los criterios de evaluación en base a las opiniones del público y de las oficinas de gobierno mencionadas, criterios de diseño, y factores ambientales críticos. (Por favor referirse al Gráfico en la página 2 sobre el proceso de EA)

CDOT planea terminar el Análisis de Alternativas a fines de la primavera del 2000, cuando organizará una reunión abierta (open house) para presentar y discutir los resultados. Se presentarán todas las alternativas consideradas y las alternativas que fueron desarrolladas a mayor nivel con investigaciones más detalladas de todos los posibles impactos ambientales y medidas de mitigación.

Datos sobre el Medio Ambiente

CDOT está actualmente recopilando información sobre el medio ambiente tanto humano como natural con la colaboración de oficinas de gobierno municipal, estatal y federal. El tipo de información que se está recopilando incluye pero no se limita a datos sobre: uso de la tierra, pantanos, tierras inundadas por crecidas, especies naturales amenazadas y en peligro de extinción, datos socio-económicos, sitios de valor histórico, y suelos. Esta información será utilizada para determinar posibles impactos ambientales relacionados a cada alternativa, lo cual guiará el proceso de toma de decisiones. Identificación de posibles impactos ambientales muy al comienzo del estudio será muy útil en el desarrollo de planes de mitigación.

Oportunidades de Participación

Por favor llame en cualquier momento ya sea a Jeff Manuel, Jefe de la Unidad Ambiental de CDOT-Region 4, o a Michelle Li, Sub-gerente de Proyecto de JFSA, para hacer cualquier pregunta o comentario sobre el proyecto, para solicitar una reunión, o para ser incluido en al “mailing list”. La dirección de Jeff es 1420 Second Street, Greeley, CO 80631 y su e-mail es: Jeff.Manuel@dot.state.co.us. El e-mail de Michelle es Mli@Jfsato.Com y su dirección es 5898 South Rapp Street, Littleton, CO 80120.

Ud. también puede visitar el website del proyecto en “US287-North-of-Fort-Collins.com” para leer el Boletín anterior o para enviar comentarios por e-mail. Como dijimos anteriormente, CDOT invitará a una reunión abierta (open house) a fines de la primavera del 2000. Avisos sobre esta reunión abierta se publicaran en el próximo Boletín, en diarios locales, y en avisos en oficinas públicas, y en el website del proyecto.

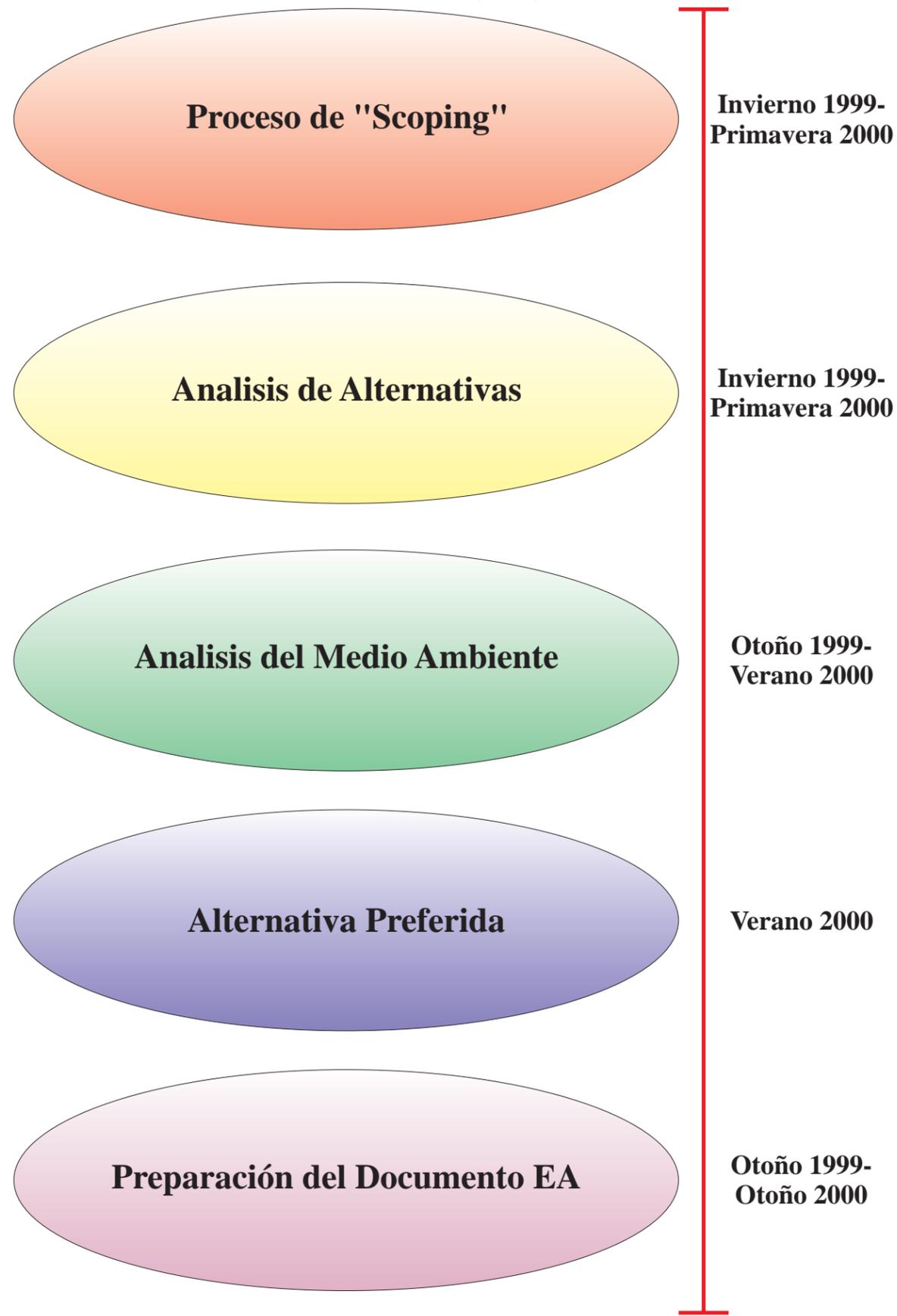
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Environmental Assessment (EA) Process

Public Involvement Program



"Scoping" y Participación Pública

"Scoping" es un proceso pública al comienzo de la EA que ayuda identificar cualquier preocupación pública y posibles soluciones. El Programa de Participación Pública, que es un programa continuo durante la EA, ofrece oportunidades de participación pública para definir más claramente el Propósito y Necesidad del proyecto, para identificar todas las alternativas que deben ser incluidas así como los problemas que deben ser investigados. CDOT ofrecerá una variedad de forums para alentar la participación de oficinas de gobierno y del público en general.

Análisis de Alternativas

Las alternativas propuestas en el proceso de "scoping" serán clasificadas y ordenadas para determinar que tan bien cada alternativa satisface el Propósito y Necesidad del proyecto. Criterios de evaluación desarrollados en la fase de "Scoping" serán utilizados para seleccionar alternativas. Las alternativas examinadas en la fase de Análisis de Alternativas serán ya sea excluidas o pasadas al nivel del Analysis Ambiental de la EA.

Analisis del Medio Ambiente

Las alternativas que pasarón por el proceso de Analisis de Alternativas serán estudiadas a un nivel apropiado, relativo a asuntos ambientales y de acuerdo al proceso NEPA. Oficinas Públicas y privadas revisarán el borrador del informe de EA tan pronto éste sea publicado.

Alternativa Preferida

La alternativa que sea recomendada como el Course of Action (que podría incluir la recomendación de No Action) será la Alternativa Preferida. La Alternativa Preferida será seleccionada mediante el Analisis de Alternativas y Analisis Ambiental.

Preparación del Documento EA

La preparación del Documento EA comenzará al principio del proyecto y explicará el Propósito y Necesidad del proyecto, los Analisis de Alternativas y Analisis Ambiental, y la selección de la Alternativa Preferida. Un periodo de 30 días para revisión y comentarios seguido de una Audiencia Pública concluye la EA. La FHWA como Oficina Principal puede determinar un Findinig of No Significant Impact (FONSI) para el proyecto en base a los resultados y recomendaciones de la EA. Un FONSI indica que la Alternativa recomendada no causará ningún impacto significativo en el medio ambiente.



US287 from SH1 to LaPorte Bypass

PROJECT FACTSHEET #3 U.S. 287- SH1 TO LAPORTE BYPASS ENVIRONMENTAL ASSESSMENT July 2000

This is the third in a series of factsheets reporting on the status of the project. This factsheet provides you with a summary of the information from the first Public Workshop held on May 4, 2000 and an update of the Environmental Assessment.

Project Background

The Colorado Department of Transportation (CDOT) is conducting an Environmental Assessment (EA) for the 2.4 mile stretch of U.S. 287 between State Highway 1 (SH1) and the LaPorte Bypass. The EA will investigate solutions to improving mobility and safety on the two-lane segment of U.S. 287 from SH1 to the LaPorte Bypass. CDOT has been working closely with local, state, and federal agencies and the public as they move forward through the environmental assessment process.

Alternative Analysis

CDOT held a Public Workshop on May 4, 2000 to present the alternatives, discuss the results of initial screening and solicit public comments. CDOT had considered ten potential alignments; four along the existing U.S. 287 widening either to the north, south, both north and south or meandering, and six new alignments that connected U.S. 287 to the LaPorte Bypass as well as the No Action alternative (please refer to p. 4 for a map showing each of the alternatives). All ten alternatives were evaluated through a process based on the following criteria:

- impacts to habitat suitable for threatened and endangered species
- impacts to public parks and natural areas
- impacts to areas containing hazardous materials
- maintenance responsibilities for the route
- necessity of a new railroad crossing or overpass
- estimated residential relocations
- estimated commercial/industrial relocations
- preliminary Right-of-Way (ROW) procurement costs
- impacts to approved future residential development
- disruption to large farm land parcels

- socio-economic or environmental justice issues
- preliminary estimate of roadway, bridge and utility costs

The initial evaluation resulted in two alignments to be carried forward into the environmental analysis, the meandering alignment along the existing U.S. 287 and Alignment B, a new route that connects to U.S. 287 just north of SH1 and passes to the south of the existing U.S. 287 to the LaPorte Bypass (please refer to page 4). These preliminary results were presented at the May 4th Public Workshop.

Workshop results suggest that the public would like CDOT to also consider a combination of the meander alignment and relocating Terry Lake Dam to the north in order to lessen potential impact on the southern side of the roadway. CDOT has agreed to evaluate this combination alignment based in the same criteria to determine if it should be taken into further detailed environmental analysis.

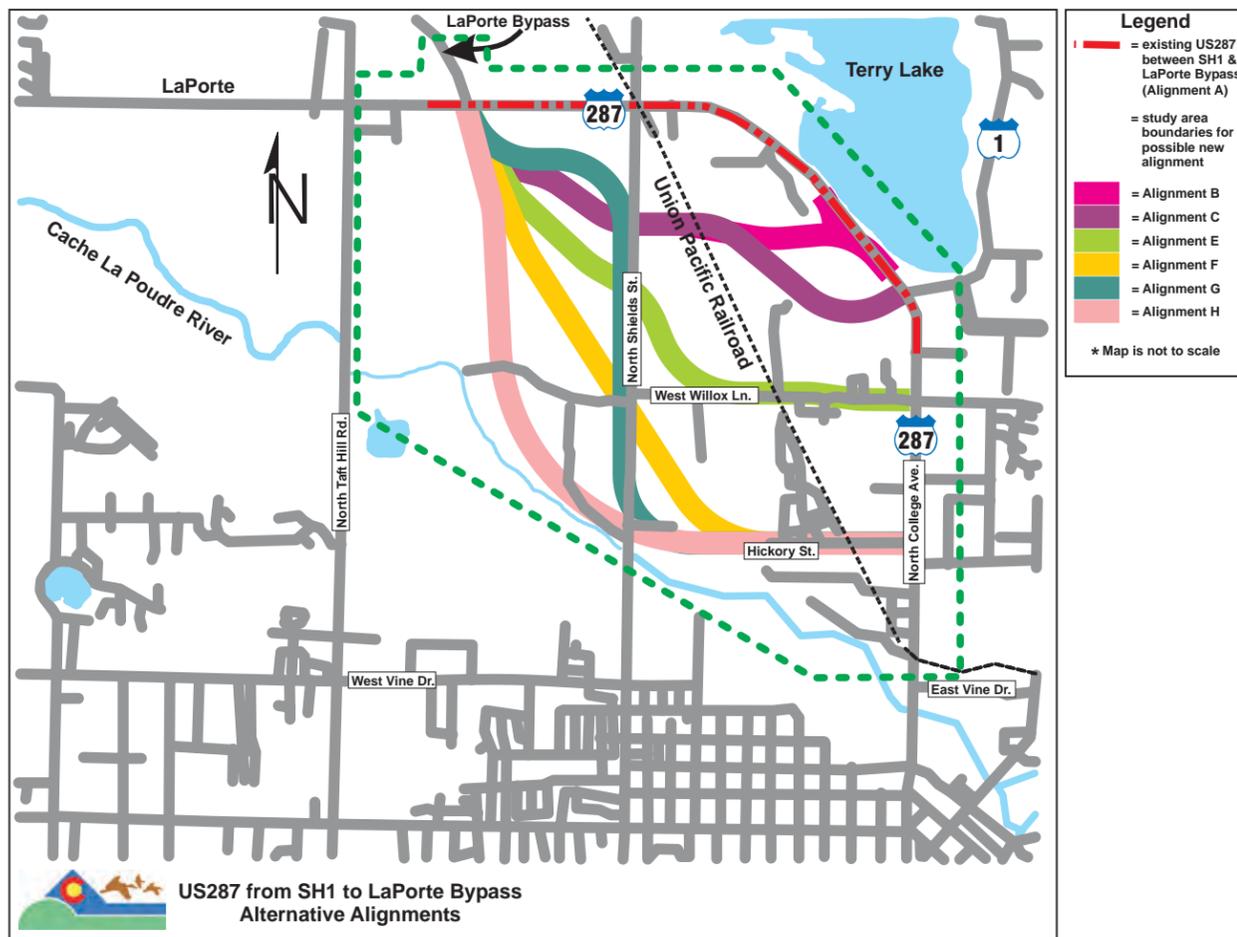
Environmental Analysis

(please refer to graphic on p.3)

CDOT is proceeding with the environmental analysis stage of the process. CDOT will gather and analyze data on a wide range of factors, such as:

- residential and commercial impacts
- land use
- noise
- hazardous materials
- wetlands
- floodplains
- threatened and endangered species
- socio-economics
- historic sites
- soils
- environmental justice

These factors will be weighed, along with construction and design constraints, including cost, in helping to identify a preferred alternative. CDOT will present its findings of the environmental analysis at a Public Workshop to be held some time in September 2000.



US287 from SH1 to LaPorte Bypass
Alternative Alignments

J.F. Sato and Associates
5898 South Rapp Street
Littleton, Colorado 80120

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Summary of the Public Workshop May 4, 2000

The purpose of the first Public Workshop was to provide an opportunity for the public to learn more about the environmental process and the project and to offer their comments, opinions, ideas and concerns about the study and possible alignments. The workshop was announced in several ways: newspaper ads and articles, notices posted in the area, and invitations sent out to those on the mailing list.

The Public Workshop was held at the Holiday Inn located at Mulberry near I-25. The Public Workshop was an informal setting that included six stations with subject matter displays manned by team members. Participants were invited to review the materials and discuss any aspect of the project with project team members. At the workshop, the six stations were: Sign-in and Orientation, Project Purpose and Need and the Environmental Assessment Process, Schedule and Public Involvement Program, Traffic and Safety, Alternatives Comparison, and Natural Resource Mapping. CDOT and project team members were present at each station to provide information and answer any questions that the attendees had. Twenty-nine people attended the workshop and over twenty comments were received. The comments are grouped by topic and summarized below.

Project Process comments and questions centered on the decision making process, including how different screening factors are weighed.

Schedule questions and comments focused on how soon the construction would begin and if the date would be effected by different funding scenarios.

Public Involvement many attendees expressed appreciation for CDOT's efforts in public outreach including interest in the website and further opportunities for involvement.

Traffic and Safety support was expressed for improving mobility and safety on U.S. 287. Several attendees had questions about how the functionality of the railroad crossing at the intersection of Shields with U.S. 287 could be affected and whether modifications to the crossing would be required as a result of potential improvements to US 287.

Alternatives support was expressed for examining the meander alignment along the existing U.S. 287, a combination of the meander and the relocation of Terry Lake Dam and Alternative B in the environmental analysis.

Access and Acquisition comments and questions focused on how access would be provided from each of the different alternatives. This included interest in how access would be maintained if the existing alignment was improved and how it would be provided if a new alignment was chosen. Attendees also asked how CDOT's acquisition process worked. Concern was expressed over the potential acquisition of land on the north side of the existing U.S. 287.

Environmental Concerns participants were interested in the local natural resource mapping. Many attendees expressed general interest in the environmental research methods and findings. Several residents asked about potential noise and visual impacts that could result from the construction of the different alternatives.

Use of the Comments

Both agency and public comments have been compiled and will be reviewed by CDOT and the project team. The comments will be considered as the EA progresses.

Opportunities For Public Involvement

Please feel free to contact Bethani Ploegstra, Project Manager for CDOT, or Michelle Li, Deputy Project Manager for JFSA, with any questions or comments you may have regarding this project, to request a small group meeting or to be added to the mailing list. Bethani's mailing address is 1420 2nd St., Greeley, CO 80631 and her e-mail is: Bethani.Ploegsrt@dot.state.co.us. Michelle's e-mail is Mli@jfsato.com and the mailing address is 5898 S. Rapp St., Littleton, CO, 80120. You can also visit the project website at: www.US287-North-of-Fort-Collins.com to review the previous Factsheets or e-mail your comments.

The next Public Workshop will be held in September 2000. CDOT will announce the date, location and time of the workshop via mailings, newspaper ads, local postings and on the project website.

Public Involvement Program

Scoping and Public Involvement Fall 1999-Spring 2000
Scoping is an open public process initiated at the beginning of the EA to help identify the public's concerns and possible solutions. The Public Involvement Program, which is on-going throughout the EA, provides opportunities for public participation in refining the Purpose and Need of the project, the range of alternatives to be considered and the issues to be addressed. CDOT will provide a wide range of forums to encourage agency and public involvement throughout the EA.

Alternative Analysis Winter 1999-Spring 2000
Alternatives proposed through the scoping process will be screened to determine how well each meets the project's Purpose and Need. Evaluation criteria developed through EA scoping will be used to screen the alternatives. Alternatives examined during the Alternative Analysis stage either will be screened out or advanced to the Environmental Analysis stage of the EA.

Environmental Analysis Fall 1999-Summer 2000
Alternatives advanced through the Alternative Analysis process will be studied at an appropriate level, relative to the environmental issues and according to the NEPA process. A period for agency and public review will follow the publication of the Draft EA.

(We are currently here in the process)

Preferred Alternative Summer 2000
The alternative that is proposed by the EA as the course of action (this could include a recommendation of "no action") is the Preferred Alternative. The Preferred Alternative has been selected after having conducted the Alternative and Environmental Analysis.

EA Document Preparation Fall 1999-Fall 2000
The EA Document Preparation will begin at the initiation of the project and will explain the Purpose and Need for the project, Alternative Analysis, Environmental Analysis and the selection of a Preferred Alternative. A 30-day public review and comment period followed by a public hearing is required to conclude the EA. The Federal Highway Administration (FHWA), as Lead Agency may determine a Finding of No Significant Impact (FONSI) based on findings and the recommendations proposed by the EA. A FONSI indicates that the proposed alternative has no significant impact on the environment.



US287 from SH1 to LaPorte Bypass

Project Fact Sheet #4 U.S. 287- S.H. 1 to LaPorte Bypass Environmental Assessment November 2000

This is the fourth in a series of fact sheets reporting on the status of the U.S. 287 from State Highway 1 (S.H.1) to the LaPorte Bypass Environmental Assessment (EA). This Fact Sheet provides you with a summary of information resulting from the second Public Workshop held on September 21st and the remaining Environmental Assessment schedule.

Spanish through local newspaper ads and invitations sent out to those on the mailing list. The purpose of the second Public Workshop was to present information and solicit input on the following:

- Alternatives retained for further detailed environmental analysis
- Environmental findings to date
- Environmental analysis
- Evaluation criteria
- Initial alternatives comparison
- Summary of issues resulting from scoping

Project Background

The Colorado Department of Transportation (CDOT) has been conducting an Environmental Assessment (EA) to investigate alternatives that would improve mobility and safety on the approximately 2-mile stretch of U.S. 287 between S.H. 1 and the LaPorte Bypass. Through scoping and alternatives analysis, three alternatives (A4, A5 & B), in addition to the No Action Alternative, have been carried forward into environmental analysis. As shown on the map on page 4, Alternatives A4 and A5 meander along the existing U.S. 287, the difference being A5 would relocate Terry Lake Dam, and Alternative B would construct a new roadway corridor.

The informal setting included seven subject matter displays in which participants wrote their comments on Post-it notes and adhered them to the appropriate exhibit. Displays included: Alternative A4, Alternative A5, Alternative B, environmental findings, evaluation criteria, and typical sections. CDOT and project team members were present to provide information and answer any questions that the attendees had.

Summary of the 2nd Public Workshop September 21, 2000

The Public Workshop was held at the Holiday Inn located at Mulberry near I-25. It was announced in English and

Fifty-three people attended the workshop and about forty comments were received from Post-it notes. In addition, eleven comments were received through letters, comment forms, and telephone calls. The comments are grouped by topic and summarized on the next page.



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5898 South Rapp Street
Littleton, Colorado 80120

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Page 4

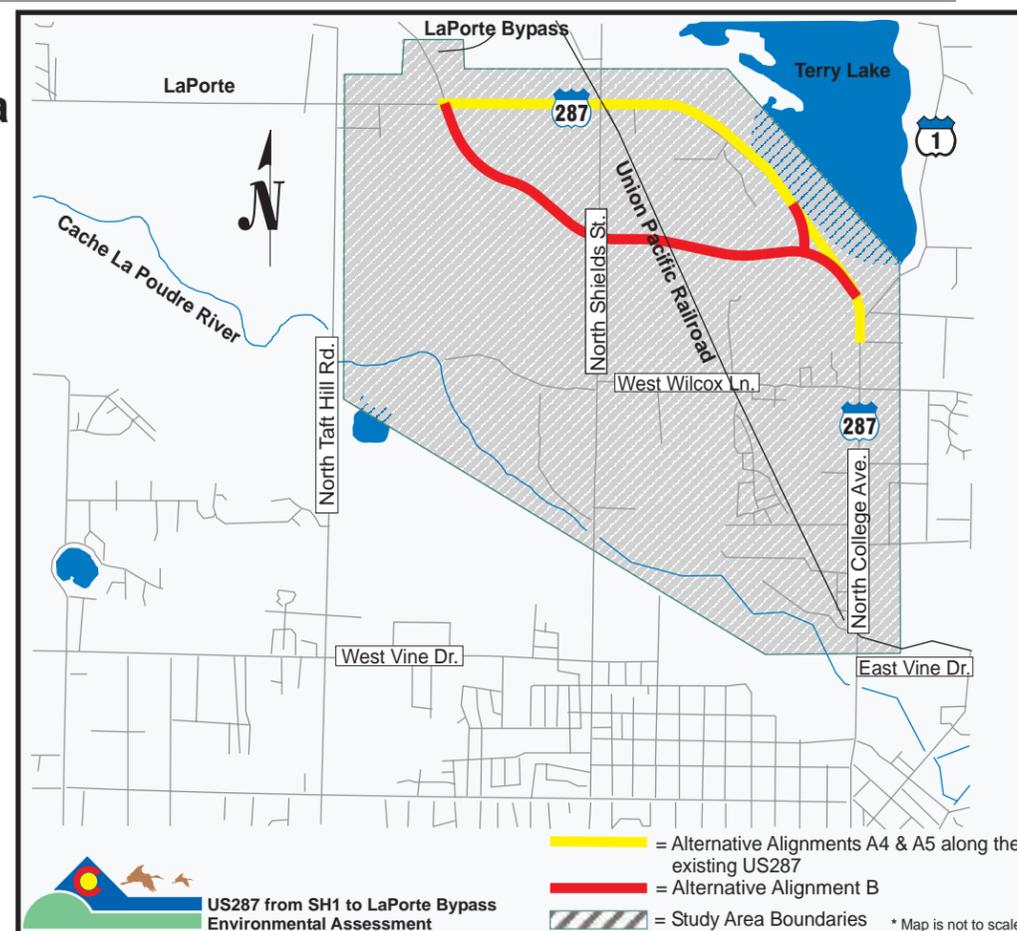
Project Study Area Ft. Collins, CO

Alternative Descriptions

A4: Meandering alignment along the existing U.S. 287, which avoids Terry Lake Dam

A5: Meandering alignment along the existing U.S. 287, which relocates Terry Lake Dam to the northeast

B: A new route connecting S.H. 1 to the LaPorte Bypass, south of the existing U.S. 287



US287 from SH1 to LaPorte Bypass
Environmental Assessment

Yellow line = Alternative Alignments A4 & A5 along the existing US287
Red line = Alternative Alignment B
Hatched area = Study Area Boundaries * Map is not to scale



Environmental

Comments focused on impacts to wetlands, pollutant runoff, noise, and disruption of wildlife. With regards to Alternative B, concerns focused on segregation of farmland, visual resources, and historic resources.

Noise

Concerns focused on truck noise, particularly jake brakes, and the impacts to humans and wildlife. Attendees felt that an earthen berm and restricting truck traffic would help reduce noise levels, as well as reduce accident risk.

Access

All in attendance at the open house acknowledged the current access problems. Attendees opposed a raised median for the following reasons: limited turn movements, lack of roads in the area to turn around, and inconsistency with other roads in the area. Business owners were concerned with having sufficient access in both directions and entrances to accommodate semi-trailers.

Design

Comments supported the proposed typical sections as displayed at the open house, opposed the raised median, and liked the sidewalk. In addition, there was concern over the proposed speed limit along the new route (Alt. B).

Alternatives A4 and A5

Comments received in support of A4 and A5 include: maintaining noise and traffic within the existing corridor, minimal wetland disruption, it maintains the open space, and it does not disrupt current agricultural uses. However, negative comments were expressed towards the high number of home and business impacts. One concern noted the potential negative effects A5 could have on the water table.

Alternative B

Comments received in support of B focused on the limited impacts to homes and businesses compared to the other alternatives. However, opposing comments include the following: it would destroy more croplands and wetlands, there would be more aesthetic impacts, and it would disrupt current agricultural practices.

Use of the Comments

Both agency and public comments have been compiled and will be reviewed by CDOT and the project team. The comments are being considered as the EA progresses.



Opportunities For Public Involvement

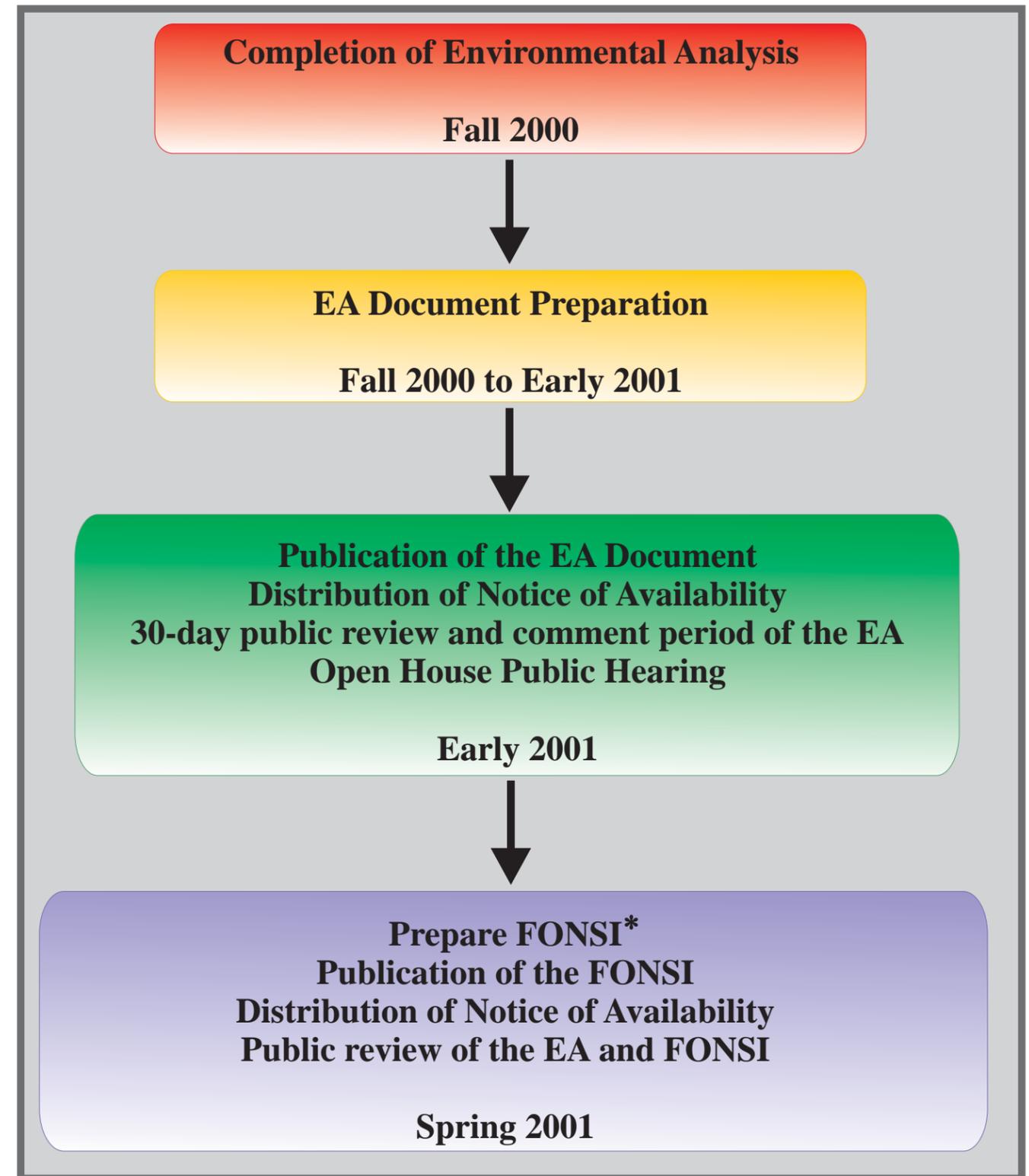
Please feel free to contact Bethani Ploegstra, Project Manager for CDOT, or Michelle Li, Deputy Project Manager for JFSA, with any questions or comments you may have regarding this project or to be added to the mailing list.

Bethani's mailing address is:
 Bethani Ploegstra
 1420 2nd Street
 Greeley, CO 80631
 E-mail: Bethani.Ploegsrt@dot.state.co.us

Michelle's mailing address is:
 Michelle Li
 5898 S. Rapp Street
 Littleton, CO, 80120
 E-mail: Mli@jfsato.com

You can also visit the project website at www.US287-North-of-Fort-Collins.com to review the previous fact sheets or e-mail your comments.

Remaining Environmental Assessment Schedule



*The Federal Highway Administration (FHWA), as the Lead Agency may determine a Finding of No Significant Impact (FONSI) based on findings and the recommendations proposed by the EA. A FONSI indicates that the proposed alternative has no significant impact on the environment. Relevant comments received during the public comment period and the hearing will be addressed and incorporated into the FONSI.



US287 from SH1 to LaPorte Bypass

Project Fact Sheet #4 U.S. 287- S.H. 1 to LaPorte Bypass Environmental Assessment November 2000 Update

This is an update on the fourth fact sheet from November 2000 reporting on the status of the U.S. 287 from State Highway 1 (S.H.1) to the LaPorte Bypass Environmental Assessment (EA). This fact sheet provides you with a summary of information resulting from the second Public Workshop held on September 21, 2000 and the remaining Environmental Assessment schedule.

at Mulberry near I-25. It was announced in English and Spanish through local newspaper ads and invitations sent out to those on the mailing list. The purpose of the second Public Workshop was to present information and solicit input on the following:

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The informal setting included seven subject matter displays in which participants wrote their comments on Post-it notes and adhered them to the appropriate exhibit. Displays included: Alternative A4, Alternative A5, Alternative B, environmental findings, evaluation criteria, and typical sections. CDOT and project team members were present to provide information and answer any questions that the attendees had.

Summary of the 2nd Public Workshop September 21, 2000

The Public Workshop was held at the Holiday Inn located

Fifty-three people attended the workshop and about forty comments were received from Post-it notes. In addition, eleven comments were received through letters, comment forms, and telephone calls. The comments are grouped by topic and summarized on the next page.



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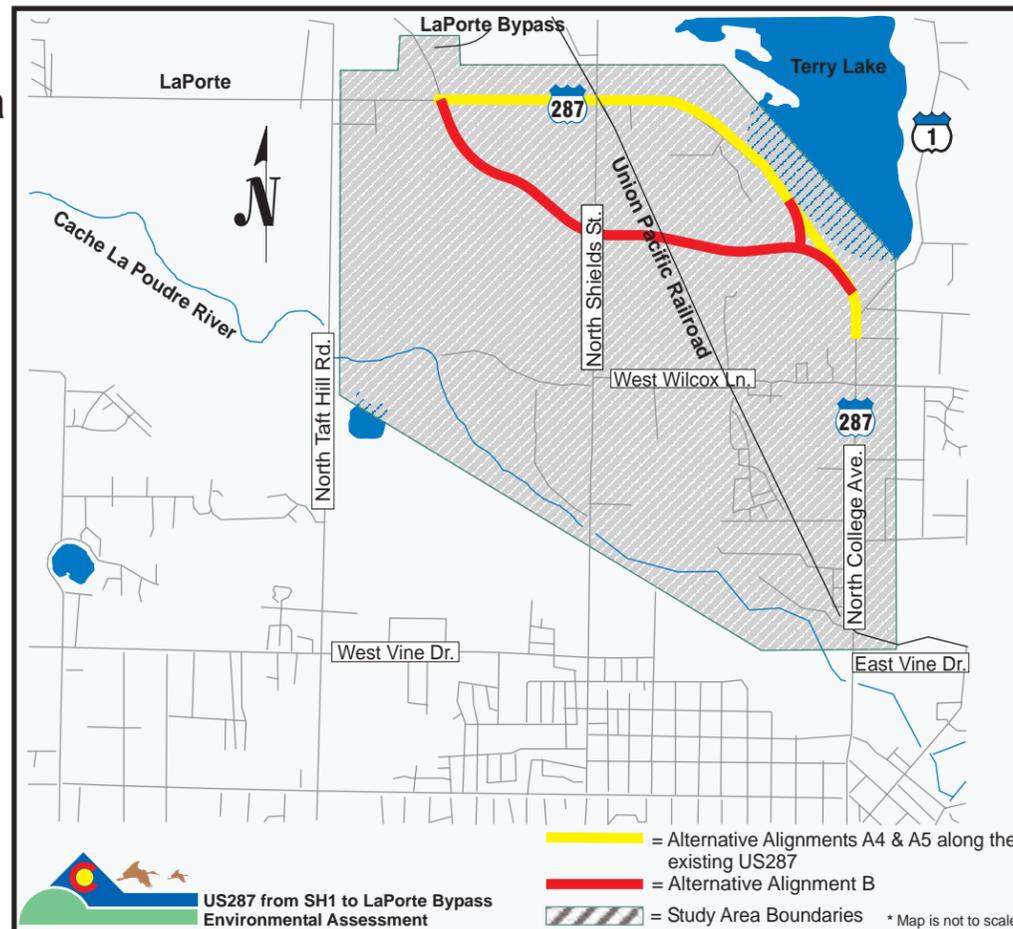
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A5: Meandering alignment along the existing U.S. 287, which relocates Terry Lake Dam to the northeast

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Environmental

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Alternatives A4 and A5

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Use of the Comments

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Opportunities For Public Involvement

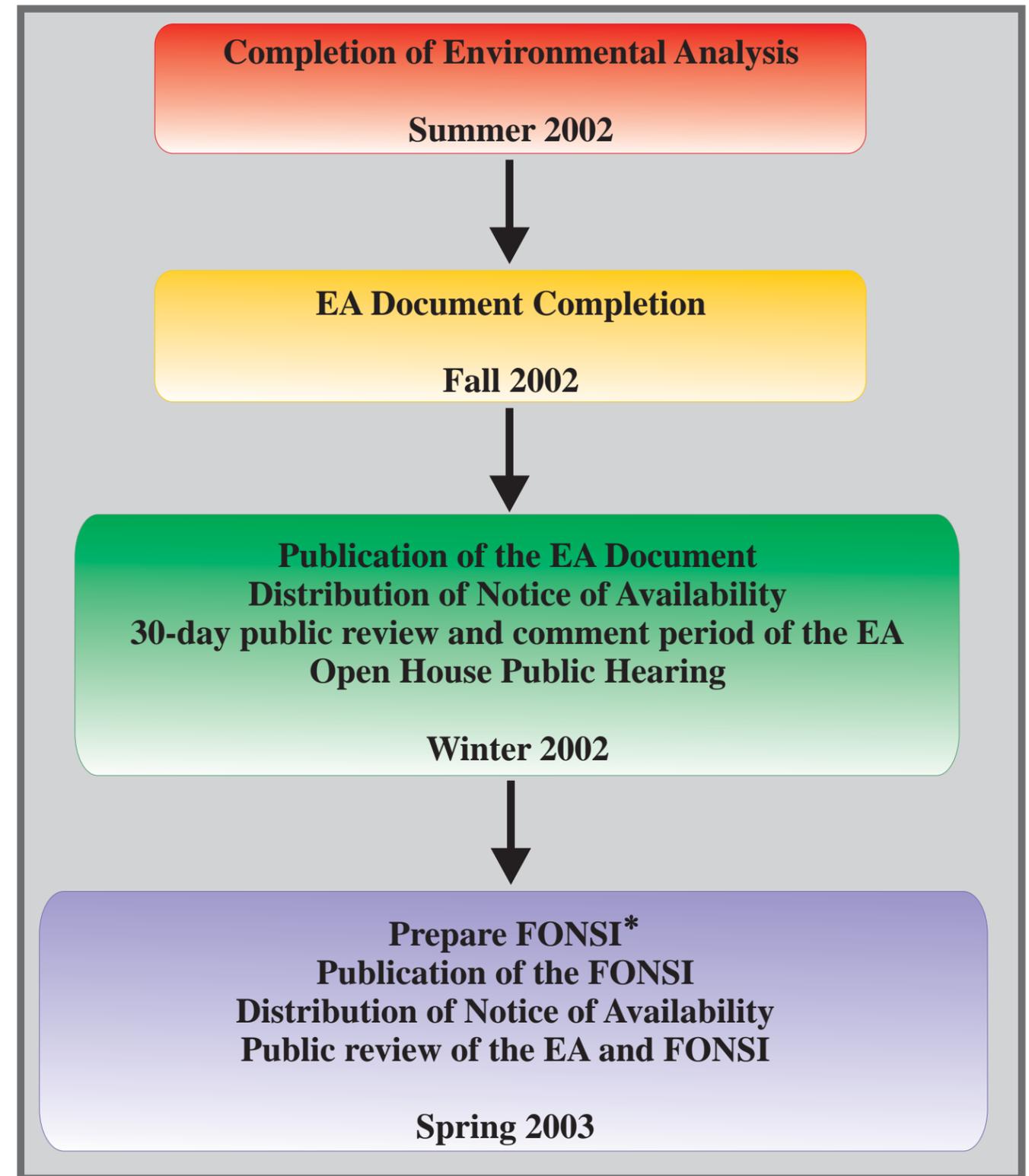
Please contact Bethani Ploegstra, Project Manager for CDOT, or Michelle Li, Deputy Project Manager for JFSA, by **October 14, 2002** with any questions or comments you may have regarding this project or to be added to the mailing list.

Bethani's mailing address is:
 Bethani Ploegstra
 1420 2nd Street
 Greeley, CO 80631
 E-mail: Bethani.Ploegsrt@dot.state.co.us

Michelle's mailing address is:
 Michelle Li
 5898 S. Rapp Street
 Littleton, CO, 80120
 E-mail: Mli@jfsato.com

You can also visit the project website at www.US287-North-of-Fort-Collins.com to review the previous fact sheets or e-mail your comments.

Remaining Environmental Assessment Schedule



*The Federal Highway Administration (FHWA), as the Lead Agency may determine a Finding of No Significant Impact (FONSI) based on findings and the recommendations proposed by the EA. A FONSI indicates that the proposed alternative has no significant impact on the environment. Relevant comments received during the public comment period and the hearing will be addressed and incorporated into the FONSI.



BOLETÍN DE INFORMACIÓN No. 4
U.S. Highway 287 de SH1 el Bypass LaPorte
EVALUACIÓN AMBIENTAL
NOVIEMBRE 2000

Este es el cuarto Boletín de Información para informar al público sobre el estado actual del proyecto. Este boletín contiene un resumen de la información obtenida en la segunda Reunión Pública del 21 de Septiembre del 2000, y da el programa del proyecto.

evaluación ambiental del proyecto, y escuchar opiniones, comentarios, ideas y preguntas sobre el estudio y posibles alineamientos de la carretera.

La Reunión Pública que tuvo lugar en el Holiday Inn de Mulberry Street cerca a I-25 fue anunciada en varios diarios locales, e invitaciones enviadas por correo a las personas registradas en la "mailing list" del proyecto. La reunión informal incluyó siete muestras temáticas. Los participantes escribieron sus comentarios en notas Post-it que se pegaban en la muestra apropiada. Las muestras incluían: alternativas consideradas, secciones típicas, receptores ambientales, Alternativa A4, Alternativa A5, y Alternativa B. Personal de CDOT y del consultor daban información y contestaban cualquier pregunta.

Cincuenta y tres personas asistieron a la reunión y se recibió cerca de cuarenta comentarios escritos en notas Post-it. Además, once comentarios se recibieron por carta, en formularios, o por teléfono. A continuación se presenta un resumen de todos los comentarios agrupados en "temas".

Medio Ambiente - Los comentarios enfocaron los posibles impactos a pantanos, contaminación de aguas de drenaje, ruido, y posible destrucción de la fauna. En

Antecedentes del Proyecto

El Colorado Department of Transportation (CDOT), Región 4 esta haciendo una Evaluación Ambiental (EA) para mejoras de 2.4 millas de US 287 entre SH1 y el Bypass LaPorte. Después de las fases iniciales de "scoping" y análisis de alternativas, tres alternativas (A4, A5 & B) y la Alternativa de No-Proyecto han pasado al nivel de evaluación ambiental. Como se muestra en el mapa de la página 4, las Alternativas A4 y A5 siguen la ruta existente de US 287, pero la Alternativa A5 requiere mover la presa de Terry Lake y la Alternativa A4 significa la construcción de un nuevo corredor vial.

Resumen de la segunda Reunión Pública del 21 de Septiembre, 2000

El propósito de la segunda reunión fue mantener al público ampliamente informado del procedimiento de



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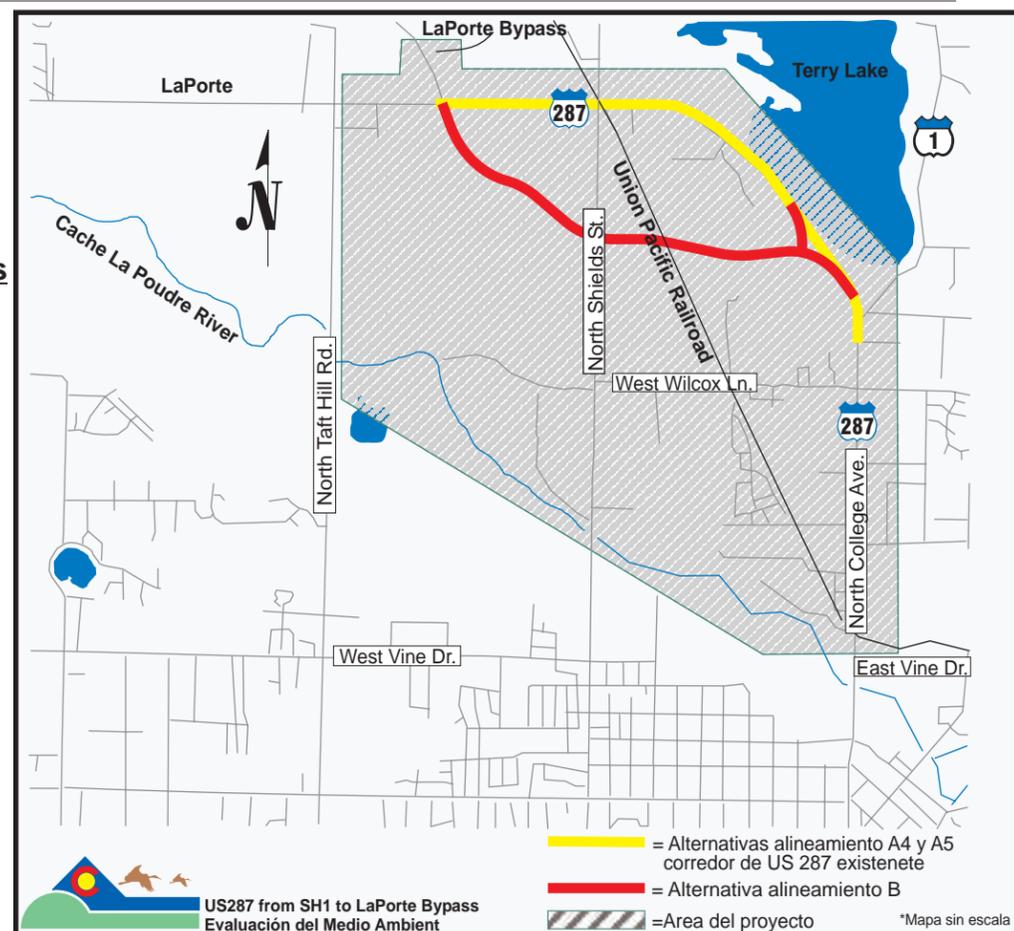
Area Del Proyecto
Fort Collins, CO

Descripción de Alternativas

A4: Corredor de US 287 existente, alineamiento que evita la represa de Terry Lake

A5: Corredor de US 287 existente, alineamiento con reubicación de la represa de Terry Lake

B: Nuevo alineamiento conectando SH 1 y LaPorte Bypass, al sur del corredor existente de US 287





cuanto a la Alternativa B, los comentarios enfocaron la división de tierras agrícolas, efectos visuales y sitios históricos.

Ruido - Los comentarios enfocaron la cuestión de ruido de camiones, especialmente los frenos "jake" y su impacto en residentes y fauna. Los participantes indicaron que una berma de tierra y la restricción de tráfico de camiones ayudarían a reducir el nivel de ruido, así como el riesgo de accidentes.

Ingresos - Todos los participantes reconocieron los serios problemas de ingreso que actualmente existen. Los participantes se oponen a una berma central alzada ya que limitaría los movimientos de vuelta, la falta de carreteras en la zona para servir como rutas de regreso, y el diseño de otras carreteras existentes. Los dueños de negocios en la zona del proyecto se preocupan por suficientes ingresos en ambas direcciones con entradas para semi-trailers.

Diseño - Los comentarios apoyan la sección típica que se mostró en la reunión, se oponen a una berma central alzada, y favorecen con gusto un sendero peatonal/ciclista. Además, hubo inquietud sobre el límite de velocidad propuesto en la nueva ruta (Alt. B)

Alternativa A4 y A5 - Comentarios en apoyo de la ruta A4 y A5 indican que esta ruta mantiene ruido y tráfico dentro del corredor actual de US 287, produce una mínima destrucción de pantanos, mantiene terrenos naturales abiertos, y no destruye usos agrícolas actuales. Sin embargo, esta alternativa afectará gran número de residencias y negocios.. Un comentario hizo mención del posible efecto negativo que A5 tendría en el nivel del agua subterránea.

Alternativa B - Comentarios en favor de Alternativa B indican que el impacto a residencias y negocios es mucho menor. Sin embargo, destruirá mucho mas tierras de cultivo, mas pantanos, y destruirá usos agrícolas actuales.

Uso de los Comentarios

Tanto estos comentarios del público como los comentarios de entidades públicas han sido compilados y serán revisados por CDOT y el equipo del proyecto. Todos los comentarios se están tomando en cuenta en el procedimiento de la Evaluación Ambiental (EA) ahora en marcha.



Oportunidades de Participación Pública

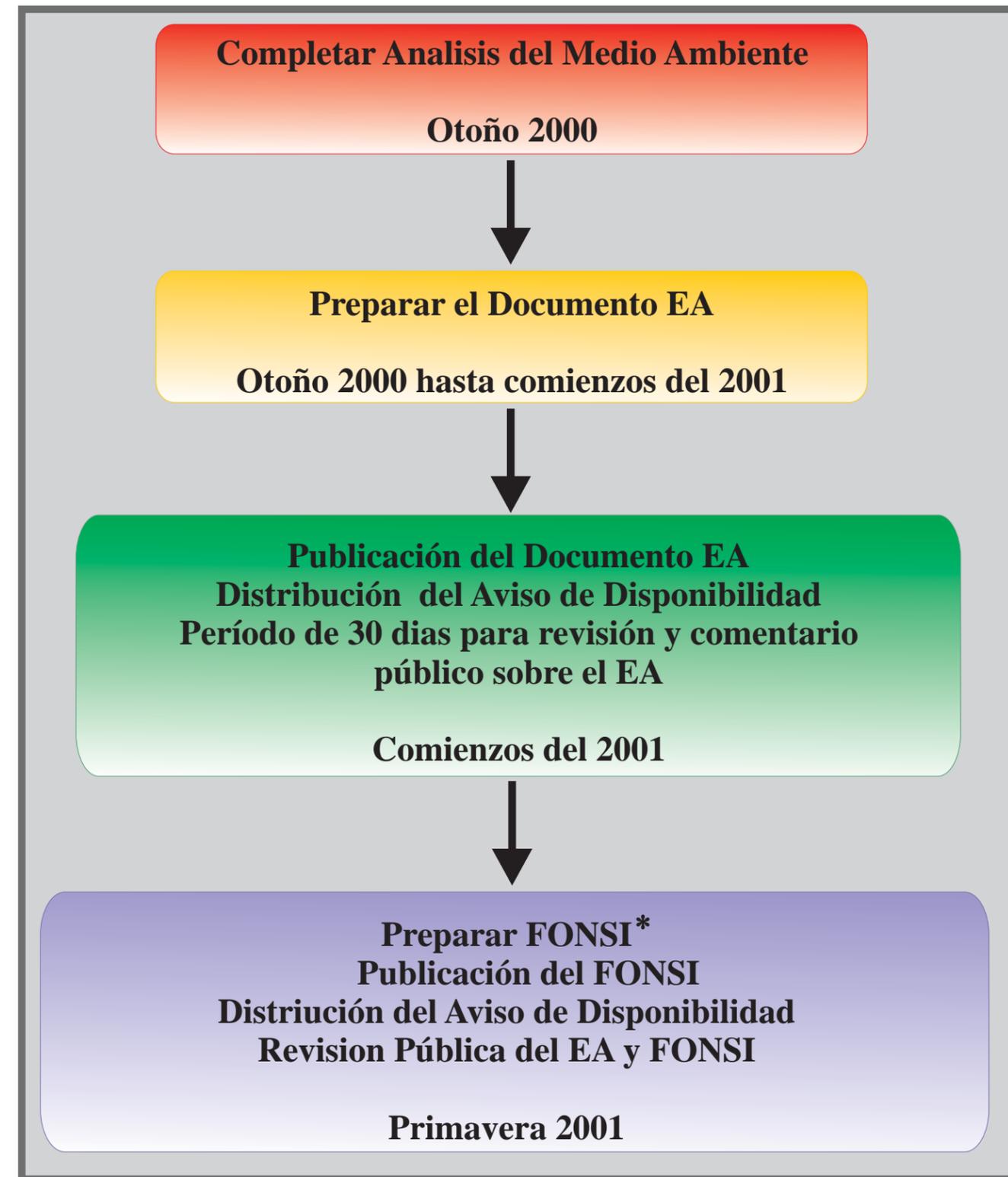
Por favor llame en cualquier momento ya sea a Bethani Ploegstra,, Jefe de Proyecto de CDOT , o a Michelle Li Sub-gerente de Proyecto de JFSA, para hacer cualquier pregunta o comentario sobre el proyecto, o para ser incluido en la "mailing list".

Bethani Ploegstra
1420 2nd Street
Greeley, CO 80631
E-mail: Bethani.Ploegsrta@dot.state.co.us

Michelle Li
5898 S. Rapp Street
Littleton, CO, 80120
E-mail: Mli@jfsato.com

Ud. también puede visitar el website del proyecto en US287-North-of-Fort-Collins.com para leer el Boletín anterior o para enviar comentarios por e-mail.

Programa de la Evaluación Ambiental (EA)



*La FHWA (Federal Highway Administration -Oficina Federal de Carretares) como Entidad Principal del proyecto puede declarar un Finding of No Significant Impact (FONSI) en base a los resultados y recomendaciones de la EA. Un FONSI indica que la Alternativa recomendada no causará ningún impacto ambiental significativo. Comentarios que se reciban durante el período de revisión y audiencia públicas serán tenidos en cuenta e incorporados en el FONSI.

Queremos que usted sepa...
...We want you to know...

 US 287 from SH 1 to LaPorte Bypass



— = Alternatives A4 & A5
along US 287
Alternativas A4 y A5
a lo largo de US 287

— = Alternative B
Alternativa B

Please contact us if you have any questions,
or to be added to the mailing list:

Comuníquese con nosotros si tiene alguna pregunta
o desea agregar su nombre a nuestra lista de correo:

Bethani Ploegstra, CDOT - 970.350.2171;
bethani.ploegstra@dot.state.co.us
Michelle Li, JF Sato & Associates - 303.797.1200;
mli@jfsato.com
<http://www.us287-north-of-fort-collins.com>



US 287 from SH 1 to LaPorte Bypass

Project Update

The Colorado Department of Transportation (CDOT) has been conducting an Environmental Assessment (EA) to find ways to improve safety and travel along US 287 from SH 1 to the LaPorte Bypass. Your participation is greatly appreciated.

In the next few months you will have



more opportunities for involvement

- What Will Happen: • Publication of EA document for public and agency review and comment
- Public Hearing
- When Will It Happen: Spring 2004
- Where Will It Happen: To be announced
- How Will You Know: Mailings, Newspaper Ads
- Why: Because your comments are important!**



US 287 desde SH 1 hasta LaPorte Bypass

Noticias Sobre El Proyecto

El Departamento de Transporte de Colorado (CDOT) ha estado realizando una Evaluación Ambiental (EA) para determinar diversas maneras de mejorar la seguridad y el transporte a lo largo de US 287 desde SH 1 hasta LaPorte Bypass. Agradecemos mucho su participación.

En los próximos meses tendrá más



oportunidades para participar

- Qué Sucederá: • Publicación del documento de EA para revisión y comentarios del público y de las distintas organizaciones interesadas
- Audiencia Pública
- Cuándo Sucederá: En la Primavera de 2004
- Dónde Sucederá: Se anunciará próximamente
- Cómo Se Enterará: Circulares Enviadas por Correo, Anuncios en Periódicos
- Por qué: ¡Porque sus comentarios son importantes!**