

Interstate 5 Transportation Concept Report

Corridor Description

Definition of a Corridor

The Transportation Research Board offers the following definition of a corridor:

“Broadly defined, a corridor generally refers to a geographic area that accommodates travel or potential travel. Normally, a corridor is considered to be a ‘travel shed,’ an area where trips tend to cluster in a general linear pattern, with feeder routes linking to trunk lines that carry longer distance trips in a metropolitan area.”

(Reference: Transportation Research Board, National Research Council: NCHRP Report 435, “Guidebook for Transportation Corridor Studies: A Process for Effective Decision-Making,” Washington, D.C., 1999.)

This section provides the purpose of a corridor study, defines the I-5 corridor and regions, and why there is a need to study the I-5 corridor.



I-5 SHASTA. Aerial photo at Cypress and Jct SR 44 in the City of Redding.

Purpose of a Corridor Study

A corridor study is the first step in planning for the future of a transportation facility. By defining the corridor’s needs, the corridor plan will help focus planning efforts on the most significant problems and act as catalyst for discussion about how best to invest in the corridor.

The Transportation Concept Report (TCR) is a California Department of Transportation (Caltrans) report that includes an analysis of a transportation corridor. The report promotes a continuing, cooperative, and comprehensive planning process.

A TCR establishes a 20-year consensus-based concept for how California highways should operate and broadly identifies the nature and improvements needed to attain that operating condition. A TCR considers a variety of factors that influence travel demand and behavior including: land uses, development policies, housing growth, economic conditions, local arterials, alternative transportation modes, and environmental conditions. The TCR process is a cooperative one, working with numerous internal and external stakeholders, as well as a

review of the land use and transportation plans of Federal, State, regional, and local agencies.

As a long-range plan, the TCR is intended to help identify potential future issues on the State highway system before they occur and present possible improvement options to address the identified issues; however, the report does not commit funding to projects. Given the long-range planning horizon covered by a TCR, it is not practical to identify specific features or resources for projects. Rather, the TCR presents concepts for highway improvements that may be used to develop projects as the forecasted issues materialize. Information in TCRs is used during the preparation of Regional Transportation Plans (RTPs), General Plans, Project Initiation Documents (PIDs), the State Transportation Improvement Program (STIP), and other regional or local traffic improvement programs.

The I-5 Study Corridor

When the original Interstate Highway System was envisioned, a main north-south route was planned for the westernmost portion on the United States. This route was eventually called Interstate 5 (I-5). The primary north-south transcontinental route on the West Coast, the interstate is 1381 miles and stretches from San Ysidro, California on the Mexican border to Blaine, Washington, on the Canadian border. **Table 1** depicts the length of I-5 (estimated continuous driving time off approximately 20 hours and 13 minutes). This freeway links the majority of the metropolitan areas in California, Oregon, and Washington States. Additionally, once across the borders, I-5 connects to multiple roads in Canada and Mexico. As the primary west coast thoroughfare, I-5 serves many route purposes: international trade, defense highway, goods movement, commuter link, and access to major recreational opportunities.

In California I-5, which covers 797 miles, begins at the Mexican-United States International Border (San Ysidro, CA) and ends at the California-Oregon state line in Siskiyou County. It is a main transportation facility and the backbone of the State's economy, running through the major cities of San Diego, Los Angeles, Stockton, Sacramento, and Redding. The agency that owns and operates the interstate system in California is Caltrans (FHWA has an oversight and management role). Caltrans is made up of twelve districts, and I-5 transverses seven of these districts (2, 3, 6, 7, 10, 11, and 12).

This TCR focuses on the District 2 portion of I-5. Within District 2, I-5 is about 174 miles in length and passes through Tehama, Shasta, and Siskiyou counties. **Table 2** displays the postmiles. The I-5 Corridor in District 2 is as follows:

- Extends from the Glenn/Tehama County line through Shasta County to the Siskiyou County/Oregon State Line
- Includes north-south routes (in entirety or portions lying with District 2): US 97, SR 99, SR 263, SR 265, and SR 273
- Contains portions of the following north-south/east-west routes feeding into I-5 within the Redding Urban area: SR 44, SR 151, and SR 299
- Consists of portions of SR 299 and SR 89 serving as a detour in the event of I-5 closure in the Sacramento River Canyon
- Parallels the Union Pacific Railroad ("I-5 Corridor" line)

I-5 Designations in District 2:

- Interstate/Principal Arterial
- National Highway System (High Priority)
- Interregional Road System
- Strategic Highway Network
- National Network for Trucks (part of the Surface Transportation Assistance Act (STAA))
- High Emphasis Route
- Freeway and Expressway System
- Intermodal Corridor of Economic Significance
- Lifeline Route
- National Scenic Byway Volcanic Legacy-All American Road
- Blue Star Memorial Highway
- Corridor of the Future
- Nornlaki Highway

TABLE 1 Length of I-5

Area	Miles
Tehama County	40.6
Shasta County	64.9
Siskiyou County	68.9
Corridor Total	174.4
State Total	796.53
Entire Route	1,381.29
Source: California Department of Transportation, Transportation System Information Program	

TABLE 2 I-5 County Postmiles

County	Postmiles
Tehama	R0.00/42.115
Shasta	R0.00/67.019
Siskiyou	0.00/R69.293
Source: California Department of Transportation, Transportation System Information Program	

- Incorporates portions of SR 3 in Yreka and SR 36 in Red Bluff that are parallel to I-5
- Includes principal north-south connections in the local road network: 99W, Rawson Road, McCoy Road/Hooker Creek Road, Jellys Ferry Road/Balls Ferry Road, Deschutes Road, Airport Road, Churn Creek Road, Bechelli Lane, Shasta View Drive, Hilltop Drive, Old Oregon Trail, Twin View Boulevard, Cascade Boulevard, Mt. Shasta Boulevard, and Old Highway 99

I-5 Corridor Regions

I-5 provides a unique traveling experience in California, Caltrans District 2. The interstate runs across the Northern Sacramento Valley, winds through the Sacramento River Canyon, passes through the Shasta Valley, and tops the crest of the Siskiyou Mountains. These four regions in District 2 are described as follows:

NORTHERN SACRAMENTO VALLEY:

This 67-mile region runs from the Glenn/Tehama County Line to Mountain Gate (just north of Redding). Key issues in this region include: highest traffic volumes in the District, largest population centers including the only urban area, greatest growth potential, congested conditions in the Redding urban area, and the highest concentration of interchanges.

SACRAMENTO RIVER CANYON:

This 46-mile region runs from Mountain Gate in Shasta County to Dunsmuir in Siskiyou County. Key issues in this region include: high percentage of truck traffic, no parallel links, limited detours (detours can exceed 115 miles), limited services, limited development, high Federal/State land ownership, sensitive environmental/cultural/historical locations, harsh winter conditions, curvilinear sections, portions of divided alignment with major differences in elevation and mostly mountainous terrain.

SHASTA VALLEY:

This 43-mile region runs from Dunsmuir in Siskiyou County to Yreka in Siskiyou County. Key issues in this region include: high percentage of truck traffic, a steep summit at Black Butte, harsh winter conditions, high winds conditions and widely varying types of terrain.

SISKIYOU MOUNTAINS:

This 18-mile region runs from Yreka in Siskiyou County to the California/Oregon Border. Key issues with this region include: high percentage of truck traffic, limited detours, limited services, limited development, harsh winter conditions, high winds, steep grades and a combination of mountainous and rolling terrain.



*NORTHERN SACRAMENTO VALLEY.
Red Bluff area in Tehama County*



*SACRAMENTO RIVER CANYON. Near
Castella in Shasta County.*



*SHASTA VALLEY. Black Butte Summit in
Siskiyou County.*



*SISKIYOU MOUNTAINS. Anderson Grade
in Siskiyou County.*

Need for this Corridor Plan

There are a number of factors contributing to the need to develop an I-5 corridor plan in District 2 including:

1. I-5 has national and global significance.

I-5 spans the West Coast, originating at the nation's busiest international border crossing at San Ysidro (San Diego), California, and culminating at Blaine, Washington near the Canadian border. This freeway connects all the major population centers of the western United States, including San Diego, Santa Ana, Anaheim, Los Angeles, Sacramento, Portland, and Seattle. This makes I-5 the nexus of international trade with the Pacific Rim, North America, and Latin America. I-5 also is listed in the Strategic Highway Network in recognition of its importance to National Defense. Additionally, I-5 has the federal designation of National Highway System-High Priority Corridor in recognition of its critical role in the nation's commerce.

2. I-5 has regional significance in District 2.

According to the "Fix 5 Voter Survey" (Godbe Research, 2007), 83% of Shasta and Tehama County (valley residents between Corning and Mountain Gate) households surveyed use I-5 on a weekly basis and close to half use I-5 on a daily basis. The majority of traffic on I-5, particularly in the Redding urban area, is local traffic. I-5 is the most viable route available from Red Bluff to Redding. I-5 is the only north-south route available in the Sacramento River Canyon. Development restrictions such as railroads and rivers make it difficult to create additional local roads. I-5 also provides critical access to other highways (3, 36, 44, 89, 96, 97, 99, 151, 263, 265, 273, and 299) and principal north-south connections (99W, Rawson Road, McCoy Road/Hooker Creek Road, Jellys Ferry Road/Balls Ferry Road, Deschutes Road, Airport Road, Churn Creek Road, Bechelli Lane, Shasta View Drive, Hilltop Drive, Old Oregon Trail, Twin View Boulevard, Cascade Boulevard, Mt. Shasta Boulevard, and Old Highway 99).

3. I-5 has had few significant upgrades in District 2 since its original construction.

Yesterday's facility no longer meets today's demands. The corridor still contains most of

the original interchanges and bridges. Of the 174.4 lane miles of I-5 in District 2, less than 5% has had any capacity added. Furthermore, construction to add capacity is becoming increasingly difficult, from an economical, environmental, and political perspective.

4. I-5 traffic has doubled in the last 20 years in Tehama and Shasta Counties.

The rate of interregional growth has been constant over the last 20 years with truck traffic volume percentages ranging from 12% in the City of Redding Jct SR 44 segment to 30% in most of the Sacramento River Canyon. The rate of regional (local) traffic growth has accelerated in Tehama and Shasta Counties due to local development.

5. I-5 has experienced substantial population growth along the corridor.

Over 50 years, the three states (California, Oregon, and Washington) traversed by I-5 grew 182% in population. California alone grew from 11 million in 1950 to 37 million in 2005 (235% increase). Between 2005 and 2025, the State's population is expected to increase from 37 million to 47 million. The most urbanized counties along I-5 in District 2, Tehama and Shasta Counties combined are expected to increase from 238,000 in 2005 to 315,000 in 2025. The majority of growth has and will continue to be in close proximity to I-5.

6. I-5 has been affected by local land use and transportation decisions.

Most new housing has been low density in suburban or small rural communities. Commercial growth has concentrated in existing urban areas. Modest effort has gone into development of frontage roads and parallel roads in the corridor. Recently, many large developments have consumed available capacity at previously rural locations. Development patterns and lack of local routes have created heavy dependence on I-5 from local traffic.

7. I-5 mainline has not been recently studied.

It has been over 20 years since there has been a comprehensive mainline review of I-5 in District 2. The relevance of operational conditions and anticipated improvements as

seen 20 years ago is often questioned in light of current trends. This plan creates a framework for District 2 and its stakeholders to identify and address the most pressing problems on I-5 in a priority manner. This plan will act as a catalyst for a consensus-based process on how best to invest in I-5, so it can continue to be an asset to the people of California and the world.

8. I-5 has the public's attention.

Being the main north-south route, the public is aware of the growing congestion on I-5. This growing awareness is shown by letters to local newspapers, media coverage, the current local planning studies connected to the corridor, the community impact from route closures, and the discussion among local and regional agencies.

9. I-5 has affected commuters.

Local communities along the corridor have experienced a substantial amount of growth in the retail and service sectors. Since these jobs tend to be lower paying, workers earning these salaries cannot afford to buy (or even rent) housing near their employment and may even find themselves priced out of home ownership altogether. This has resulted in homes being purchased further away and is leading to longer commute times and congestion in the corridor.

10. I-5 has an impact on our economy.

For over half a century, the interstate has played an important role in the nation's economy and quality of life. And yet today, it has come to be taken for granted. Until recently, I-5 in District 2 had significant excess capacity. However, now this has changed and residents, business leaders and elected officials now need to consider how to keep I-5 working in the future. Improving I-5 is certainly a wise investment choice for the people of California. The growth of the economy and the community are dependent on an interstate that grows along with them.

11. I-5 has not had adequate funding.

The lack of funding for I-5 is true for transportation funding (State and Federal) in general. Additionally, there is currently no local impact fee for mainline I-5 or sales tax measure within District 2 dedicated to improving mainline I-5. Without significant new funding to build capacity increasing projects, congestion on the I-5 corridor will become a critical problem for the region within the next decade.



I-5 SHASTA. North Cottonwood Northbound On-Ramp.



I-5 SHASTA. At the Pit River Bridge.



I-5 SISKIYOU. SR 89 Overcrossing near McCloud.

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