CHAPTER 1 – BACKGROUND AND PURPOSE

1.1 Introduction

The following report documents all assessments, analyses, conclusions and recommendations of the Initial Evaluation of Alternatives phase for any proposed improvements to the US 550 corridor from Paseo del Volcan to NM 313.

1.2 Project Area and Background

The US 550 corridor is a significant commuter, local, and regional roadway operated by The New Mexico Department of Transportation (NMDOT). The east-west connector locally serves the Town of Bernalillo, serves the commuting needs of communities like Rio Rancho, Santa Fe, and Albuquerque, and provides regional connectivity to the Farmington Area. NMDOT categorizes this roadway as a limited access principal urban arterial from Paseo del Volcan to NM 313. The corridor traverses several different governmental boundaries including Sandoval County, Town of Bernalillo, City of Rio Rancho, and borders the Santa Ana Pueblo. **Figure 1.1** shows a vicinity map indicating area roadways, project study extents, and major study intersections and **Figure 1.2** indicates adjacent jurisdictions along US 550.

The goal of the US 550 corridor project is to reduce congestion on this heavily traveled east-west Rio Grande crossing route, increase safety, and investigate the potential for providing facilities for alternative modes of travel to potentially help stem the predicted vehicular demand growth.

The corridor has been studied several times in the past including the following:

- The Mid Region Council of Governments (MRCOG) and the NMDOT jointly commissioned a 2007 Phase 1A Initial Connectivity Study focusing on a long term transportation strategy for the greater regional area surrounding the US 550 corridor. This study reviewed potential general design mitigation from a more regional perspective by assessing the feasibility of creating new east-west corridors north and south of US 550 as well as the potential for constructing improvements on US 550. The study recommended improvements on US 550 as well as the continued development of a southern corridor. Additionally, transit improvements were recommended for all alternatives. No specific cross-sections and intersection geometry requirements were given. Recommended US 550 improvements also included frontage roads, a pedestrian bridge across the Rio Grande, and parallel access roads.
- NMDOT also commissioned a Phase 1A Operational Improvement study for US 550 from NM 528 to I-25. The scope of this study was to investigate potential corridor improvements that will mitigate congestions and improve safety. Potential mitigation alternatives included I-25 interchange improvements, corridor widening, signal improvements, access management options, and auxiliary lane improvements. A comparison matrix was provided as well as cost estimates for each alternative reviewed.
- The NMDOT also had an operational analysis conducted on US 550 from NM 528 to Sheriff's Posse Road in 2011. The study included a warrant study for signalized traffic control at Sheriff's Posse Road, and investigated potential frontage road options that would connect Sheriff's Posse Road to the Jemez Dam Road signal. It was determined that the Sheriff's Posse Road intersection did not warrant signal control at that time. This warrant study has been re-investigated as part of this report with results reported in the Traffic Operations Report and Section 3.5 of this report.

1.3 Purpose and Need

Project Purpose Statement
The purpose of the US 550 corridor project is to reduce congestion on this heavily traveled east-west Rio Grande crossing route, increase connectivity and safety, minimize access conflicts, create economic development opportunities, and investigate the potential for providing facilities for alternative modes of travel.

In establishing the purpose for the project, the following needs have been identified for the US 550 corridor:

1. Regional Connectivity - US 550 is a crucial east-west connecting corridor for the northern Albuquerque metropolitan area. US 550 not only provides local connections for the Town of Bernalillo (NM 313), Santa Ana Pueblo and Rio Rancho (NM 523), but also provides an important commuter connection to City of Albuquerque and Santa Fe job centers which includes an important river crossing and direct access to I-25. US-550 also provides an intra-city connection between the Albuquerque metropolitan area and Farmington, New Mexico. Therefore a large number of heavy vehicles and truck trailers use this facility.
2. Economic Development - Land use along US 550 currently transitions from a denser commercial corridor between I-25 and Don Tomas to less dense and more undeveloped parcels from Don Tomas to Paseo del Volcan. With the steady expansion of Rio Rancho, it is likely that most of the undeveloped parcels along this corridor will be developed for commercial use and thus will contribute greater local traffic demand to the corridor. Commuter demands will likely also increase as there are many undeveloped parcels south (Rio Rancho) and north of US 550 (Santa Ana Pueblo)
3. Safety - An initial review of crash incidents along the corridor from the last three years indicate a high rate of rear end crashes which tends to indicate congestion issues along the corridor. Additionally, the high number of closely spaced full movement driveways can also contribute to

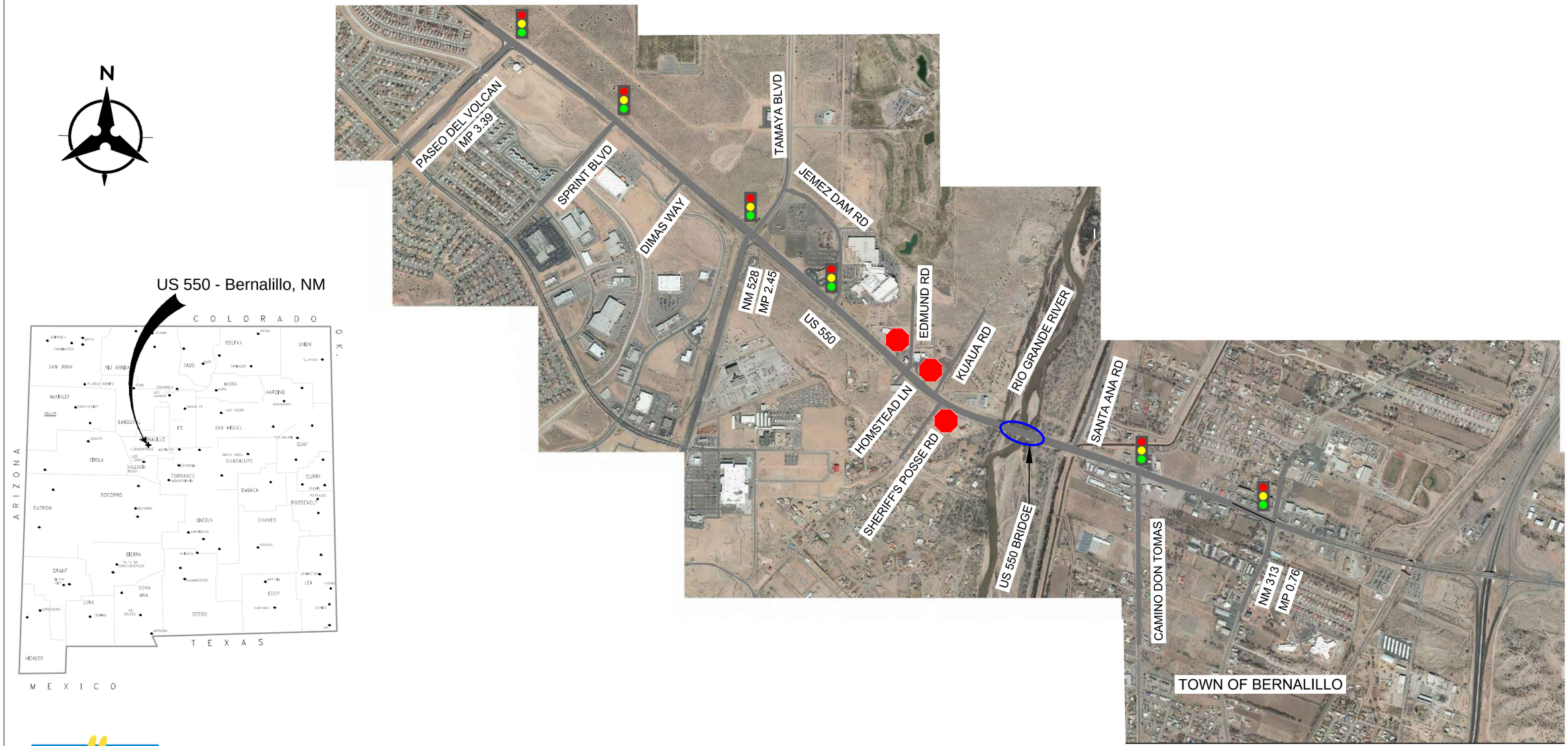
these crashes as well. Therefore, a detailed crash analysis using the 2010 Highway Safety Manual (HSM) is an important aspect of this study. Based on this safety assessment recommendation will be given that would mitigate crash rates within the Project area.

4. Access Management - An initial survey of corridor access on US 550 yields very dense full-movement driveway spacing especially from NM 313 to the Rio Grande Bridge. The driveway density is well beyond those recommended by the NMDOT access management manual for a primary urban arterial (325 to 450-foot average spacing for 40 to 45 mph). As mentioned this corridor has a great potential for significant growth in local, daily commuter, and regional traffic demands. Therefore it is paramount that an access management plan be formulated to dictate safe future driveway and intersection access.
5. Multi-Modal Travel – Currently the corridor is very vehicle-centric with no bicycle lanes, and many lengths of the corridor without sidewalks. While there is a transit hub located east of NM 313 that includes a park-and-ride and a Railrunner station, this hub could be further utilized with the expansion of commuter and local bus routes, a park-and-ride located on the west side of the river crossing, and possibly use of Bus Rapid Transit for commuter travelers.

In order to develop alternatives to address the purpose and need established for this project, the efforts initiated under the Phase A evaluations include assessing existing corridor conditions along US 550 from Paseo del Volcan to NM 313. The areas of assessment include traffic capacity and operations, transit, pedestrian and bicycle facilities, bridge structures, drainage, environmental, public feedback, safety, and access management. As part of this process, the Phase A Report will result in a collection of short-term and long-term recommendations for potential projects. These recommendations will include preliminary cost estimates so that future funding decisions can be made. In addition, several long-term design options will be identified to address the existing and future traffic congestion typically found in the area. Aligned with the project purpose, these alternatives will be focused on improving access, mobility, and safety for all modes of travel.

1.4 Public Involvement

A public involvement plan/context sensitive solutions (PIP/CSS) plan was prepared for the US 550 Corridor Study. Public involvement and consideration of the project setting and context are fundamental components of the *Location Study Procedures*– the policy document followed by NMDOT to comply with federal transportation planning and environmental impact assessment rules and regulations. The PIP/CSS Plan is a dynamic document that will evolve as the project progresses. This project is currently funded through Phase A. The PIP/CSS plan will be updated as Phases B and C are funded. It is expected that new issues will be identified as stakeholders become informed and involved in the process. Methods to involve stakeholders may also change to maximize outreach and to provide the best opportunities for input. In the end, context sensitive solutions strives to incorporate public involvement and active stakeholder participation into the project development process in order to produce transportation projects that fit within the context of a community, provide visual enhancements where possible, and respond to the needs of the community and traveling public.



NMDOT

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Bohannan Huston
www.bhinc.com 800.877.5332

LEGEND

= SIGNALIZED STUDY INTERSECTION

= STOP SIGN STUDY INTERSECTION

KEY MAP

US 550 TRAFFIC OPERATIONS AND SAFETY DRAFT REPORT

Figure 1.1 Vicinity Map

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Figure 1.2 US 550 Jurisdictional Map