New Mexico Department of Transportation
Highway Safety Improvement Program
Application for Safety Improvement Project

CN A300650

NMDOT

(Click on boxes to add text or select from pull down menu) This is initial HSIP funding request.

Application Completed By: Tom Menicucci Date: December 11, 2009

Contact Information

MPO Ref. 63.0
Rio Grande & Candalaria Blvd Intersection Safety Improvements
Request:
FY 2011 $150,000
FY 2012 $1,000,000
$1,150,000

Requesting Agency: City of Albuquerque Contact: Tom Meniucci

Address: P.O. Box 1293
Attn: Council Services

City: Albuquerque State: New Mexico Zip Code: 87103

Phone: 505 768-3126 Email: tmenicucci@cabq.gov

Project Information: **Rio Grande & Candelaria Intersection Safety Improvements**

Route: Intersection of Rio Grande Boulevard and Candelaria Boulevard NMDOT District: 3
(If using a street name, please include the Fed, State or Local route number if applicable)

Termini: (If using street names, please include mileposts when possible)
Beginning: _____ End: _____

Is project in an Urban Area: Yes If Yes, Name of City/Town: Albuquerque Urban Area, City of Albuquerque

Funding: Total estimated cost of project including costs for Engineering Study, Design, Right of Way Acquisition, Utility Relocation, Permits (Environmental or otherwise) and construction.

Estimated Cost: $1,150,000

Describe Existing Condition:

The Rio Grande Boulevard and Candelaria Road intersection is located within the North Valley of Albuquerque, NM. A total of 29 reported collisions occurred within the project area between 2004-2006. The intersection collision rate was 1.61 crashes MEV, which is below the 2.00 crashes per MEV considered acceptable. However the accident severity index was 0.45. as compared to 0.29 throughout the remainder of the City.

It is believed this is the result of speeding through the intersection. The predominant types of collisions are rear end and angle collisions which represent 62% of the collisions at the intersection and are consistent with signalized intersections. Four of the collisions involved pedestrians and bicyclists. Driver inattention is the primary contributing factor (40%) cited for the collisions. Though fatalities do occur at the intersection there has not been a death in the last three years.

The intersection is located within an area of residential developments. A regional attraction, the Rio Grande Nature Center State Park, is located approximately one half mile west of the intersection. Rio Grande Boulevard is an urban minor Arterial aligned from north to south. The road provides continuous access from Central Ave to Alameda Boulevard. Within the vicinity of the intersection Rio Grande Boulevard is comprised of five lanes: two northbound; two southbound; and one center dual left-turn lane. Rio Grande is also a bicycle

route and has on-street bicycle lanes in each direction. Pedestrian facilities (sidewalks) are located within all four quadrants. The intersection is signal controlled with permitted turn-phasing and pedestrian actuation at all approaches.

Candelaria Road, aligned from east to west is an urban minor arterial east of the intersection and a local roadway to the west that provides access from the Rio Grande to Tramway Boulevard. Within the area, the road is comprised of a two lane section to the west and to the east. Candelaria is designated a bike route east of the intersection.

The intersection's westbound movement operates with an unacceptable amount of delay during the AM Peak Hour. This is largely a result of left-turning traffic on Candelaria Road not having an adequate number of gaps to clear the existing volumes. The afternoon peak hour (school peak for traffic egressing a nearby high school) indicates that operations are acceptable during the peak hour of school egress but are poor at the east leg of the intersection for a 15-minute period.

The intersection's approaches and geometry are within normal ranges and the pavement and sidewalks are in good condition. However, all four, intersection returns are deficient resulting in vehicle off-tracking onto the sidewalk and pedestrian ramps. Nor does the spacing with nearby intersections conform to standards. A residential street intersection is located 195-feet to the south of the intersection, well below the minimum 400 foot spacing required between an arterial street intersection and an adjacent non-continuous intersection. There are also numerous driveways located nearby. Also, the existing sidewalk does not adhere to standards for a minor arterial and the pedestrian ramps and pedestrian push buttons, located in all four quadrants of the intersection, are not compliant with ADA standards.

Traffic flow along Rio Grande Boulevard and Candelaria Road routinely exceeds the posted speed limit. The average travel speeds along the corridor and the 85th percentile speeds are not in compliance with the posted speed limit for either roadway. The straight alignments of the roadways, wide sections, level grades, and lateral clearances to obstructions are conditions that allow drivers to feel comfortable at speeds above the posted speed limit.

Describe Proposed Improvement: (Explain how improvements will reduce or eliminate hazardous conditions)

(Click on box and begin typing, the box will expand as needed)

The city is proposing to convert the intersection from a signalized crossing to a single lane roundabout. This will improve operations and reduce both the number and severity of collisions (number and severity) as compared to a signalized intersection. The roundabout raised central-island and circulatory roadway would result in reduced travel speeds. The approach medians on all four segments of the intersections would allow the pedestrians to cross only one half of the intersection at a time.

The analysis using SIDRA 3.2 indicates that acceptable traffic flow could be achieved using a single lane roundabout. The roundabout would have a 100 foot inscribed diameter, 20 foot circular roadway, and an entry speed of 20 miles per hour. The single entry lanes to the roundabout will require lane drops at the north, south, and east approaches to the intersection. The north and east approaches will require standard lane drops using merge tapers prior to the intersection. The south approach outside turn lane will function as a right-turn only lane drop. Design consideration will also need to be made for the private driveways in the vicinity of the intersection. There are a significant number of right-turns in the northbound and westbound directions. Therefore, right-turn bypass lanes will be included to maintain two lanes of traffic northbound and westbound. Operationally these lanes are not required, but they would not require traffic to merge prior to the intersection.

Traffic Volume Data

AADT (2006) Rio Grande South of Intersection: VPD (15,500), 20 %Heavy Commercial

Rio Grande North of Intersection VPD (9,800) 22% Heavy Commercial

Candelara East of Intesection VPD (7030) 21% Heavy Commercial

Candelaria West of Intersection VPD (2100) 20 % Heavy Commercial

DHV (Year) _____ % Heavy Commercial During DHV _____

Crash Data

By Severity	# of Crashes	% of Total
Fatality	0	0
Injury	13	45
PDO	16	55
Total	29	100

By Condition	# of Crashes
Day light	22
Twilight	1
Night	6
Wet Road	2
Dry Road	27
Alcohol Involved	1

By Condition	# of Crashes
Run-Off Road	0
Crossing Centerline	1
Overturn	NA
Fixed Object	2
Excessive Speed	3
Animal Collision	0

If the conditions warranting the safety improvement are based on the experiences of district or local government maintenance, traffic, risk management or other personnel and crash data is not available or reliable, please describe the condition and provide support in the form of pictures, maintenance reports or logs, etc.
(Click on box and begin typing, the box will expand as needed)

N/A

Project Ownership

Lead Agency: ☐ District _ ☒ City City of Albuquerque

☐ County _____ ☐ Other _____

Is project in an Urban Area: ☒Yes ☐ No If yes, Name of City/Town: City of Albuquerque

Is project in an MPO? ☐ No ☒ Albuquerque MPO ☐ El Paso MPO ☐ Farmington MPO

☐ Las Cruces MPO ☐ Santa Fe MPO

Project Classification

Will improvements include: (Check all that apply)

Geometric/Roadside Improvements:

- ☒ Intersection Realignment
- ☐ Horz. Curve Correction
- ☐ Vertical Curve Correction
- ☐ Accel./Decel. Lanes
- ☒ ADA & Sidewalk, Upgrade
- ☐ ADA & Sidewalk, New
- ☐ Drainage, Remove Standing Water
- ☐ Clearzone Hazard Removal
- ☒ Crosswalks, Upgrade
- ☐ Crosswalks, New
- ☐ Wildlife Fencing, New
- ☐ Shoulder Rumble Strips
- ☐ Centerline Rumble Strips
- ☐ Shoulder Stabilization
- ☐ Slope Stabilization
- ☐ Rock Fall Mitigation

Barriers

- ☐ Metal Barrier, Upgrade
- ☐ Metal Barrier, New
- ☐ End Treatment, New/Upgrade
- ☐ Cable Barrier, Upgrade
- ☐ Cable Barrier, New
- ☐ Concrete Wall Barrier

Will barrier be installed: ☐ Outside Shoulders ☐ Median ☐ Both

Signing & Pavement Markings

- ☒ Signing, Replace Existing
- ☒ Signing, Advance Warning
- ☐ Signing, Curve Delineation
- ☒ Markings, Replace Existing
- ☐ Markings, Hazard Delineation
- ☐ Markings, Curve Delineation
- ☐ ITS Warning System Install

Signals and Lighting

- ☐ Signal, Upgrade
- ☐ Signal, New
- ☐ Roadway Lighting, Upgrade
- ☐ Roadway Lighting, New
- ☒ Intersection Lighting, Upgrade
- ☐ Intersection Lighting, New
- ☐ Pedestrian Lighting, Upgrade
- ☐ Pedestrian Lighting, New

Other Improvements Not Listed

Project Development

Is Project Currently under development? ☐ Yes ☒ No

If Yes: Control No. _____ Project No. _____

Current Construction Estimate _____

Expected Letting Date: _____ STIP FY: _____ Current STIP Funding _____

Design Region: _ PDE: _____

Is Project Consultant Designed: ☐ Yes ☐ No

If Yes, Consultant: _____ Project Manager: _____

If Project is a Local Lead, Has a Local Government Agreement been initiated? ☐ Yes ☒ No

Has Survey and Mapping Been Completed? ☐ Yes ☒ No
If No, When will survey be completed? Spring-Summer 2011

Environmental Impacts:
☐ None (Within existing ROW & Ex. Roadway Prism)
☐ Minor (Within existing ROW but work outside of Ex. Roadway Prism)
☒ Major (Horiz., Vert. & Intersection Realignments, ROW Acquisition Required)

Right of Way Impacts:
☐ None (No ROW Acquisition or Easements Required)
☐ Minor (CME's or TCP's Required)
☒ Major (New ROW Acquisition)

Have existing ROW maps been obtained? ☒ Yes ☐ No
If No, Has a Property Survey Been Ordered? ☐ Yes ☐ No

Utilities Impacts:
☐ None (Proposed work will not disturb utilities or no utilities present)
☒ Minor (Minor relocations that do not require reimbursement)
☐ Major (Major relocations that require design and/or reimbursement)

Hs the NMDOT Utilities Section been contacted? ☐ Yes ☒ No

Railroad Impacts:
☒ None (Proposed work will not disturb railroad or not near a railroad)
☐ Minor (In the vicinity of a railroad, but does not cross or impact railroad)
☐ Major (Impacts to railroad that require design and/or railroad approval)

Has the NMDOT Rail Section been contacted? ☐ Yes ☒ No

Comprehensive Transportation Safety Plan Strategies

1. Aggressive Driving and Speeding
5. Intersection Crashes
6. Facilities Involving Lane Departures
10. Special Users

Internal Use Only:

Project Accepted ☐ Yes ☐ No

Funding Type: ☐ Hazard Elimination ☐ Rumble Strips ☐ Intersection Improvements
☐ Pedestrian Safety ☐ HSIP ☐ High Risk Rural Roads

Project Created in Safety Program Subset ☐ Yes ☐ No Date: _____ By:_____

CN:_____ Project No._____

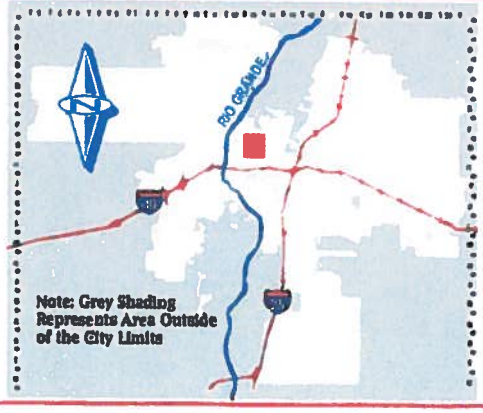
PPMS Form Sent to Project Scheduling ☐ Yes ☐ No Date: _____ By: _____

Project Added to STIP Amendment Date: _____ Fiscal Year _____

For more current information and more details visit: http://www.cabq.gov/gis

Albuquerque Geographic Information System

Map amended through: 3/10/2009



Zone Atlas Page:

G-13-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet