



County of Los Alamos

Los Alamos, NM 87544
www.losalamosnm.us

Council Meeting Staff Report

August 6, 2024

Agenda No.:	B.
Indexes (Council Goals):	Quality Excellence - Infrastructure Asset Management, Quality of Life - Mobility
Presenters:	Juan Rael; Eric Ulibarri; Justin Gibson
Legislative File:	18962-24

Title

Discussion and Possible Action of Roadway Improvement Alternatives to Trinity Drive from Oppenheimer Drive to Knecht Street

Recommended Action

I move that Council select alternative(s) _____ [1, 2, 3 and/or 4] for further consideration for Trinity Drive roadway improvements and direct the County Manager to return with a Resolution of support for the selected preferred alternative.

County Manager's Recommendation

The County Manager recommends that Council approve the motion and include the preferred design alternative as presented.

Body

Following completion of a Road Safety Audit in 2016, Los Alamos County was awarded \$4.25 million in Federal Highway Safety Improvement Program (HSIP) funding through the New Mexico Department of Transportation (NMDOT) for design, right-of-way acquisition and construction of safety improvements along the section of Trinity Drive (NM502) from Oppenheimer Drive to Knecht Street. Trinity Drive (NM 502) is a state-owned highway.

Los Alamos County contracted with Wilson & Company Inc. for preliminary engineering to develop roadway alternatives for the project area based on review of the 2016 Safety Audit recommendations. A survey of existing conditions, traffic data collection and an engineering analysis was completed to develop possible alternative improvements to this section of the Trinity Drive corridor.

The alternatives proposed have been developed in accordance with the goals of the Road Safety Audit to address roadway safety issues related to multi-modal safety and mobility. County planning documents including the Downtown Master Plan and Bicycle Transportation Plan, as well as state and national design standards were utilized in the development of project alternatives. Attachment A details the alternatives analyzed. The recommended alternatives are summarized as follows:

1. Alternative 1 (Road Diet): Includes one 12-ft lane in each direction with a center 14-ft two-way left-turn lane, on-street bike lanes in both directions, and 5-ft minimum width sidewalks.
2. Alternative 2 (Hybrid 1): Includes one 11-ft westbound lane, two 11-ft eastbound lanes, a center 12-ft two-way left-turn lane, a two-way multi-use path on the north side and a 5-ft minimum width sidewalk on the south side of Trinity Drive.
3. Alternative 3 (Hybrid 2): Includes one 12-ft westbound lane, two 11-ft eastbound lanes, a center 14-ft two-way left-turn lane, on-street bike lanes in both directions, and 5-ft minimum width sidewalks.
4. Alternative 4 (Side Path): Includes one 11-ft westbound lane, two 11-ft eastbound lanes, a center 12-ft two-way left-turn lane, separated 5-ft off-street bike side path in both directions, and 5-ft

minimum width sidewalks on both sides.

A public meeting was held in conjunction with a regularly scheduled Transportation Board Meeting on June 6, 2024. Transportation Board and public comments were received during this time and have helped form the alternatives presented. See Attachment B for a log of public input received.

Staff is requesting that County Council review and provide input of the alternatives presented. Following input from County Council, staff will return to a future Council meeting to address any outstanding questions, comments, present any refinements of the selected alternative(s), and request approval of a resolution of support for the selected preferred alternative. NMDOT typically requires a resolution of support from the local governing body to illustrate the community's support of the project and allows the project to proceed to final design and subsequent bidding and construction.

Alternatives

Council may select one or more of the proposed alternatives for further consideration with or without recommendations for modification.

Fiscal and Staff Impact/Planned Item

The project is funded through a Federal Highway Safety Improvement Program (HSIP) grant through a New Mexico Department of Transportation (NMDOT) cooperative agreement in the amount of \$4.25 million for design, right-of-way acquisition and construction. The project is currently programmed in the County's Capital Improvement Program (CIP) and no County matching funds are required. The project is being managed by Public Works Engineering staff.

Attachments

A - Presentation

B - Log of Public Input Received

NM 502 Trinity Drive Study Roadway Alternatives

Incorporated County of Los Alamos

Public Works Department
Wilson & Company

August 06, 2024

LOS ALAMOS

NM 502 Trinity Drive Study

Study Limits

- Study Limits: NM 502 (Trinity Drive) from Oppenheimer Drive to Knecht Street
- Length: approx. 0.5 miles
- Posted Speed Limit: 35 mph
- Roadway Classification: Principal Arterial



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NM 502 Trinity Drive Study

Project Purpose

- Analyze the existing conditions, develop alternatives for improvements along the corridor and identify the recommended alternative for NM 502 (Trinity Drive)
- This study will include three phases leading up to the project preliminary and final design stages:
 - Phase A provides an initial evaluation of existing conditions and project alternatives
 - Phase B provides a detailed evaluation of alternatives selected to advance from Phase A
 - Phase C involves the preparation of an environmental document such as a Programmatic Categorical Exclusion (PCE) and its subsequent processing through NEPA

NM 502 Trinity Drive Study

Purpose of Meeting

- Introduce project
- Introduce potential alternatives
- Public input – we want to hear from you!



Supports Council Goals

Priority Areas in the 2023 Strategic Leadership Plan

- Protecting, maintaining, and improving our open spaces, recreational and cultural amenities
- Enhancing support and opportunities for the local and new business economy
- Improve and expand access to alternative modes of travel
- Revitalize downtown by facilitating development opportunities
- Evaluate the County's infrastructure to prioritize funding



Supports Downtown Plans

Key Vision Elements in the 2021 Downtown Plan

- Pedestrian and bicycle improvements along NM 502 (Trinity Drive) including buffered sidewalks, bike lanes, landscaping, and pedestrian furnishings



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Supports Bicycle Transportation Plans

Council Strategic and Comp Plan Goals in the 2017 Bicycle Transportation Plan

- Enhance and facilitate bicycle use for residents and visitors
- Improve the public image of bicycling as a safe mode of travel
- Incorporate bike facilities in new and existing roadways
- Improve bicycle facility safety, design, and maintenance
- Integrate planned bicycle improvements and connections into the planning and design of new land development and redevelopment
- Future Consideration: Shared Use corridor along NM 502 (Trinity Drive)



Supports Road Safety Audit

Recommendations and Conclusions in the 2016 Road Safety Audit

- Study Limits: NM 502 (Trinity Drive) from Oppenheimer Drive to 15th Street
- Consideration of a road diet such as going from existing five-lane roadway to a three-lane roadway to promote multi-modal safety
- Incorporate a lane reduction and/or speed reduction along Trinity Drive
- Incorporate bike facilities to encourage ridership on bike paths or lanes

Recommended Countermeasure

Conduct a supplemental traffic count (completed)

Install median refuge island and marked crosswalk at the Ashley Pond/Trinity Drive location

Reduce speed limit/enforcement

Incorporate access management to reduce driveway conflicts (turning movement restrictions with geometric improvements)

Sidewalk ramp improvements, pedestrian countdown and audible pedestrian indications at intersections

Construct bus pull-outs in appropriate locations

Supplementary Route 1 bus route in clockwise direction

Public Outreach/Enforcement/Temporary Traffic control and supplementary parking during special events

Reconstruct sidewalks, provide buffers, and ADA ramps in areas of sufficient right-of-way

Install a traffic signal and incorporate into LAC coordinated signal system on Trinity Drive (future consideration)

Install a Pedestrian Hybrid Beacon and marked crosswalk (Future consideration)

Road Diet or other changes to the typical section on Trinity Drive for multi-modal safety and operational considerations

NM 502 Trinity Drive Study

Project Schedule: (Phases developing concurrently)

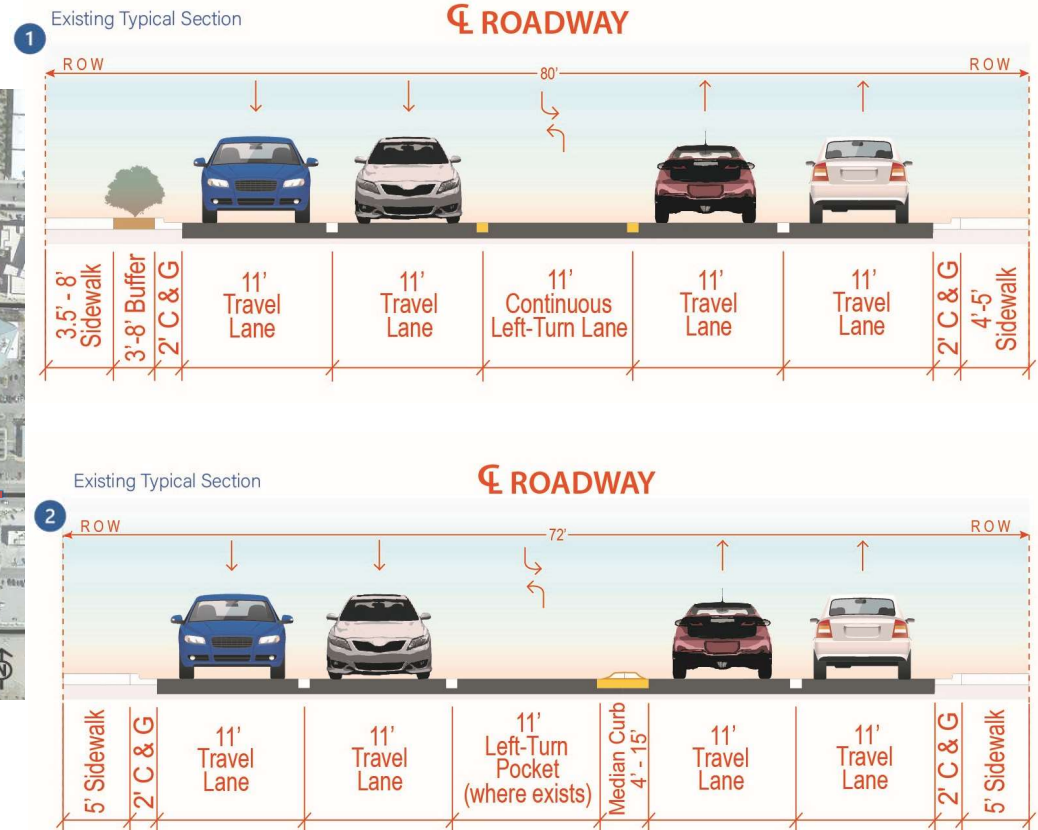
- Project Kick-off: February 2024
- Data Acquisition and Alternative Analysis: February – ongoing
- Public Meeting: June 2024
- Environmental Review and Coordination: May –ongoing
- Preliminary Design: September – December 2024
- Final Design Phase: March 2025

Existing Conditions

NM 502 Trinity Drive

Within Corridor Limits

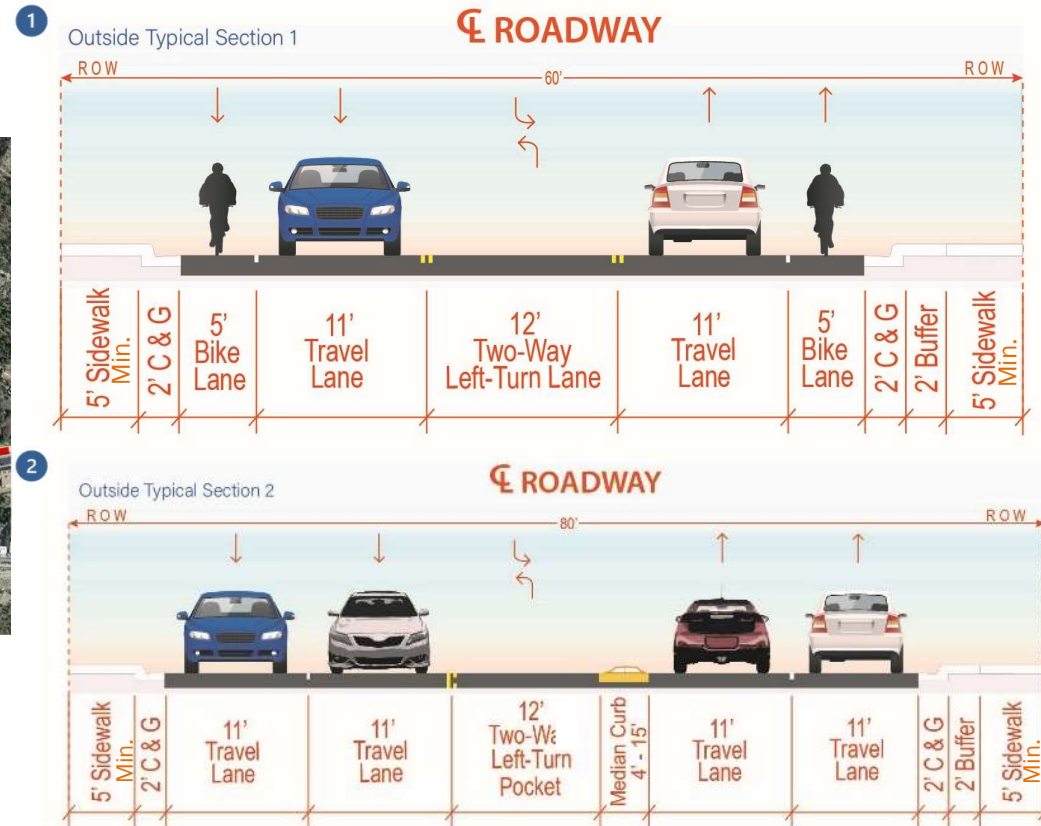
Typical Sections



NM 502 Trinity Drive

Outside Corridor Limits

Typical Sections

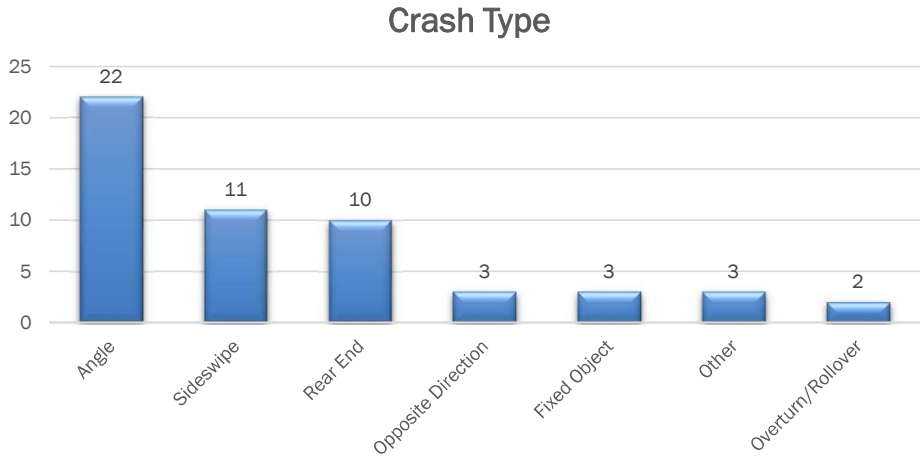


*PDO – Property Damage Only

Crash History

NM 502 Trinity Drive

Year	Crash Severity		Total
	Injury	PDO*	
2014-2020	25 (46%)	29 (54%)	54 (100%)

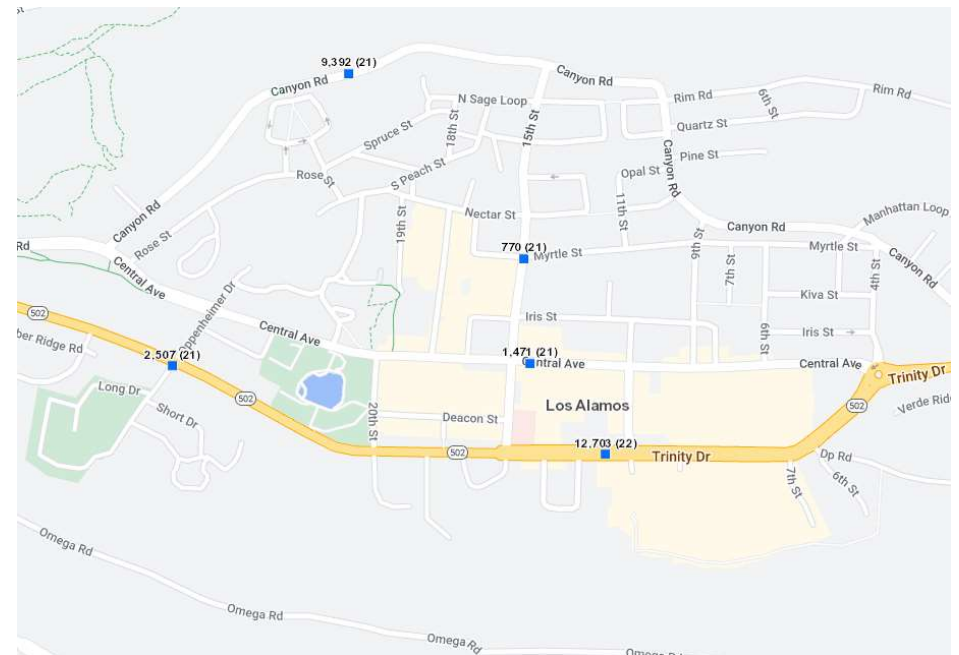


Traffic Volumes

NM 502 Trinity Drive

Year	AADT
2022	12,703
2021	11,269
2020	9,894

Source: NMDOT Traffic Count Database



Existing Modal Split

NM 502 Trinity Drive

Intersection	Vehicles		Pedestrians		Bicycles	
	Total	Percentage	Total	Percentage	Total	Percentage
Oppenheimer Drive and Trinity Drive	13,550	99.22%	101	0.74%	5	0.04%
20 th Street and Trinity Drive	13,427	99.76%	27	0.20%	5	0.04%
15 th Street and Trinity Drive	13,467	99.66%	44	0.33%	2	0.01%
Knecht Street and Trinity Drive	13,114	99.50%	63	0.48%	3	0.02%

NM 502 Trinity Drive Study

Design Criteria:

- Minimum Lane Width for Principal Arterial – 11 ft
- Posted Speed Limit – 35 mph
- Meet all American with Disabilities Requirements Including:
 - 5% (1:20) maximum trail grade on independent trail alignments
 - Surface must be “firm and stable”
- Crosswalk visibility enhancements to improve bicycle and pedestrian safety
- Lighting, only where needed for safety

Potential Alternatives

Description of Alternatives

Widening Paved Shoulders – Eliminated

Benefits

- Increases effective turning radii at intersections
- Provides space for maintenance operations and snow storage
- Provides an increased level of comfort for bicyclists

Cons

- Requires additional right-of-way (typically 10-ft throughout the corridor) for each 5-ft bicycle lane
- Requires reconstruction of the existing curb and gutter, retaining walls, sidewalk, turnouts, ADA ramps, and bicycle lanes
- Impacts to buildings such as the Century Link building located on the south side of Trinity Drive by pushing the new sidewalk adjacent to the structure



Description of Alternatives

Roundabouts – Eliminated

Benefits

- Improve safety
- Promote lower speeds and traffic calming
- Reduce conflict points

Cons

- Expensive
- The intersecting roadways (Oppenheimer Drive, 20th St. 15th St.) are typically 3 – 4 feet lower in elevation as you approach from the south
- This elevation difference does not allow the driver to have the required sight distance to navigate the roundabout



Description of Alternatives

Alternative 1: Road Diet

Benefits

- Reduction of rear-end and left-turn crashes
- Reduces right-angle crashes as side street vehicles cross three versus five travel lanes
- Fewer lanes for pedestrians to cross
- Opportunity to install pedestrian refuge islands, bicycle lanes, or transit stops
- Traffic calming and more consistent speeds

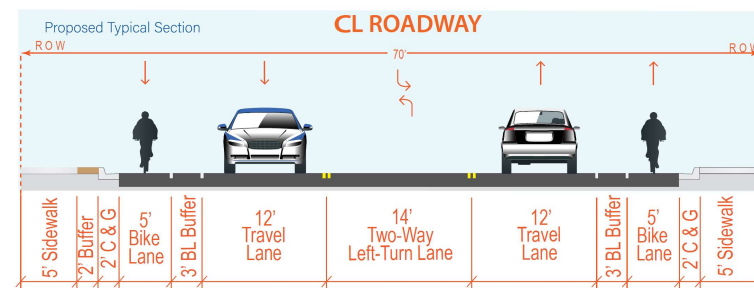
Cons

- Loss of passing opportunities
- Reduce the existing five-lane cross section to a three-lane section
- Increase travel delay

Before



After



Includes: one 12-ft lane in each direction with a 14-ft two-way left-turn lane (TWLTL), 5-ft bike lanes, 5-ft sidewalk, and standard curb and gutter

Description of Alternatives

Alternatives 2 and 3: Hybrid

Benefits

- Reduction of rear-end and left-turn crashes
- Reduces right-angle crashes as side street vehicles cross four versus five travel lanes
- Fewer lanes for pedestrians to cross
- Opportunity to install pedestrian refuge islands, bicycle lanes, or transit stops
- Traffic calming and more consistent speeds
- Provides additional eastbound lane which serves as right turn lane

Cons

- Loss of passing opportunities
- Reduce the existing five-lane cross section to a four-lane section
- Increase travel delay

Alternative 2: Hybrid 1



Alternative 3: Hybrid 2



Includes: one lane in the westbound direction, and two lanes in the eastbound direction with a 12-14-ft two-way left-turn lane (TWLTL), bike lanes or multiuse path, 5-ft sidewalk, and standard curb and gutter

Description of Alternatives

Alternative 4: Sidepath

Benefits

- Reduction of rear-end and left-turn crashes
- Fewer lanes for pedestrians to cross
- Opportunity to install sidepath away from travel lanes
- Traffic calming and more consistent speeds
- Provides additional eastbound lane which serves as right turn lane

Cons

- Loss of passing opportunities
- Reduce the existing five-lane cross section to a four-lane section
- Increase travel delay
- Sidepath will need to raise / lower at turnouts

Before

Existing Typical Section



After

Sidepath Typical Section



Includes: one lane in the westbound direction, and two lanes in the eastbound direction with a 12-ft two-way left-turn lane (TWLTL), 5-ft sidepath, 6-ft sidewalk, and standard curb and gutter

Alternatives Matrix

Evaluation Criteria	No-Build Alternative	Road Diet Alternative	Hybrid Alternative 1	Hybrid Alternative 2	Sidepath Alternative
Traffic Operations	(++)	(o)	(+)	(+)	(+)
Multimodal	(-)	(++)	(++)	(++)	(++)
Safety	(o)	(++)	(++)	(++)	(++)
LAC Master Plan	(-)	(++)	(++)	(++)	(++)
ROW	(++)	(++)	(++)	(++)	(- -)
Cost	(o)	(-)	(-)	(-)	(- -)

Positive, Good	(++)	
Above Average	(+)	
Average	(o)	
Below Average	(-)	
Negative, Poor	(- -)	

Public Input

Comments / Contacts:

Please submit all comments by **August 20, 2024** to:

Public Works Department
1000 Central Avenue, Suite 160
Los Alamos, NM 87544

or

Phone: (505) 662-8150; Fax: (505) 662-8109

Email comments to: lacpw@lacnm.us

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Questions?



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