

NM 314 and Courthouse Rd Reconstruction Project

A300191

Public Information Meeting
May 23, 2018
Los Lunas, New Mexico



Public Meeting Agenda

- Project Team Introduction
- Purpose and Need
- Project History
- Design Alternatives
 - Eliminated Alternatives
 - Current Alternatives
- Updated Safety Analysis
- Updated Capacity Analysis
- Decision Matrix
- Project Schedule



Project Team



Leslie Fortier, PDE



Patrick Byrd PM

Parametrix

Jerry Parker
Jeff Fredine



Sean Wolfe
Bobby Ortiz

Terracon

Mike Anderson

Project Stakeholders

- Federal Highway Administration
- New Mexico Department of Transportation (NMDOT)
 - District 3
 - Rail Bureau
- Village of Los Lunas
- Valencia County
- Rio Metro
- Railrunner



National Environmental Policy Act NEPA

- Categorical Exclusion
- Cultural Resources Survey
- Biological Survey
- Public Involvement
- Completed before Final Design and Construction
- To be approved by NMDOT and FHWA



Project Area



Project Purpose & Need



To improve safety for the many modes of transportation, which converge at the NM 314/Courthouse Road intersection. These include vehicular traffic, at-grade rail operations, high pedestrian traffic, multi-use trail users, and both bus and rail transit users.

Need

- *There is a lack of auxiliary lanes on NM 314 at Courthouse.*
- *The skewed approach on Courthouse Rd limits sight-distance and increases crash risks.*
- *ADA deficiencies with pedestrian/multi-use crossings at the intersection.*
- *Prepare at-grade rail crossing for quiet zone designation*
- *Reduction of crash occurrences*

2016 Road Safety Audit

A **Road Safety Audit (RSA)** is **defined** as "the formal **safety** performance examination of an existing or future **road** or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential **road safety** issues and identifies opportunities for improvements in **safety** for all **road** users."



2016 Road Safety Audit Team

- NMDOT

- Afshin Jian, State Traffic Engr
- Gregory Clarke, District 3
- Hooshang Tavanaiepour, District 3
- Rais Rizvi, District 3
- Bill Craven, Rail Bureau Manager
- George Hicks, Rail Bureau
- Robert Fine, Rail Bureau

- HERZOG

- Scott Reif

- Los Lunas

- Rudy Archuleta, Public Works Director
- Michael Jaramillo, Project Coordinator

- Lee Engineering

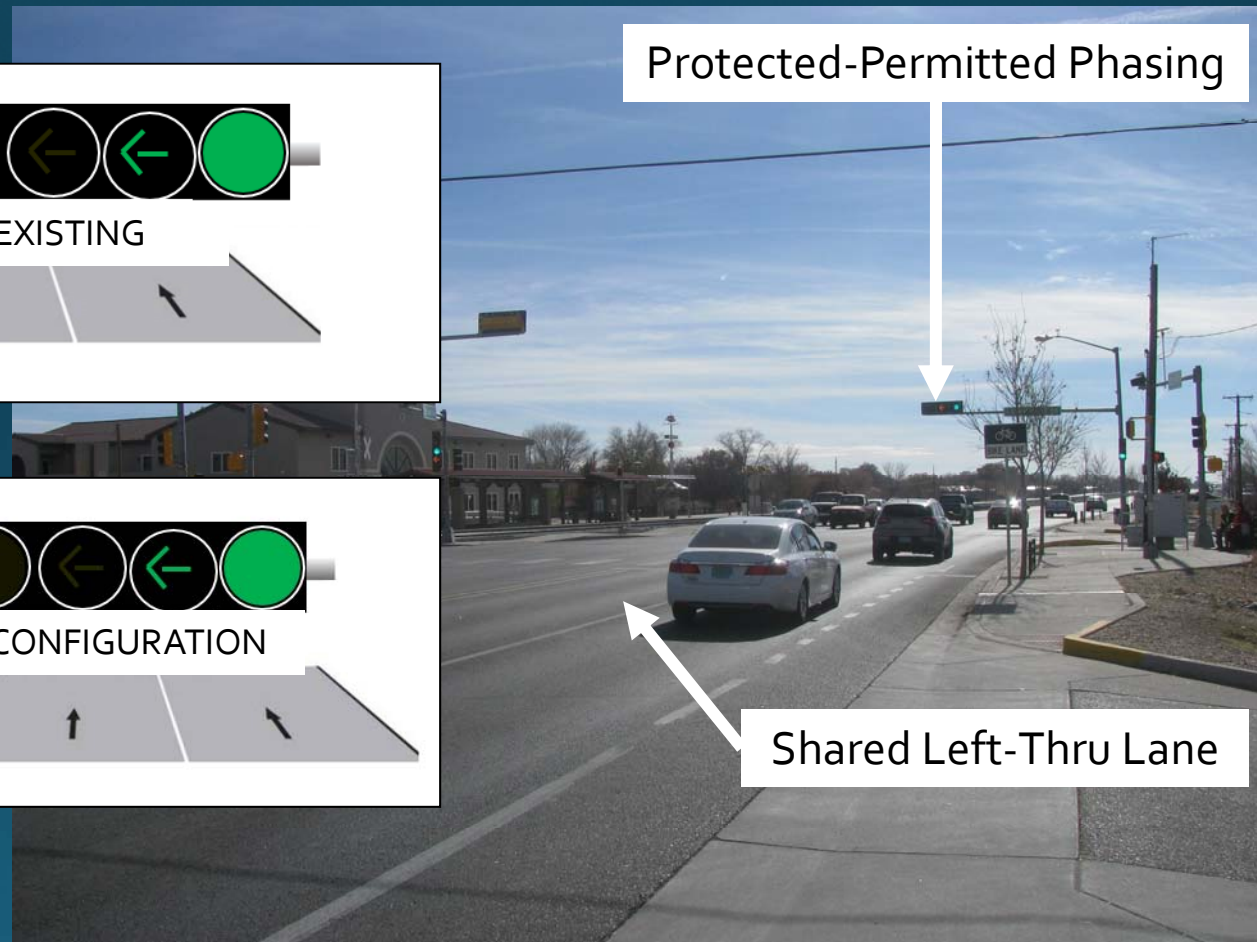
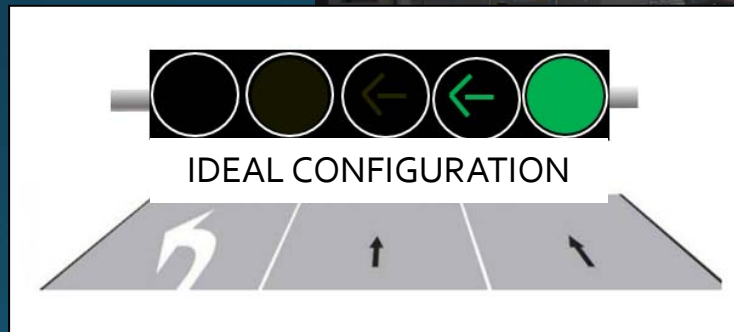
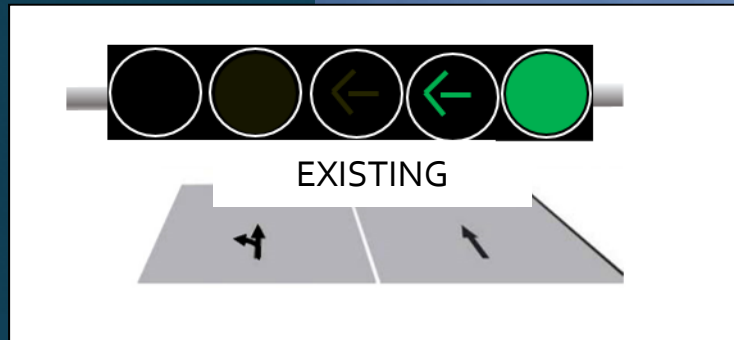
- Paul Barricklow
- Patrick Byrd



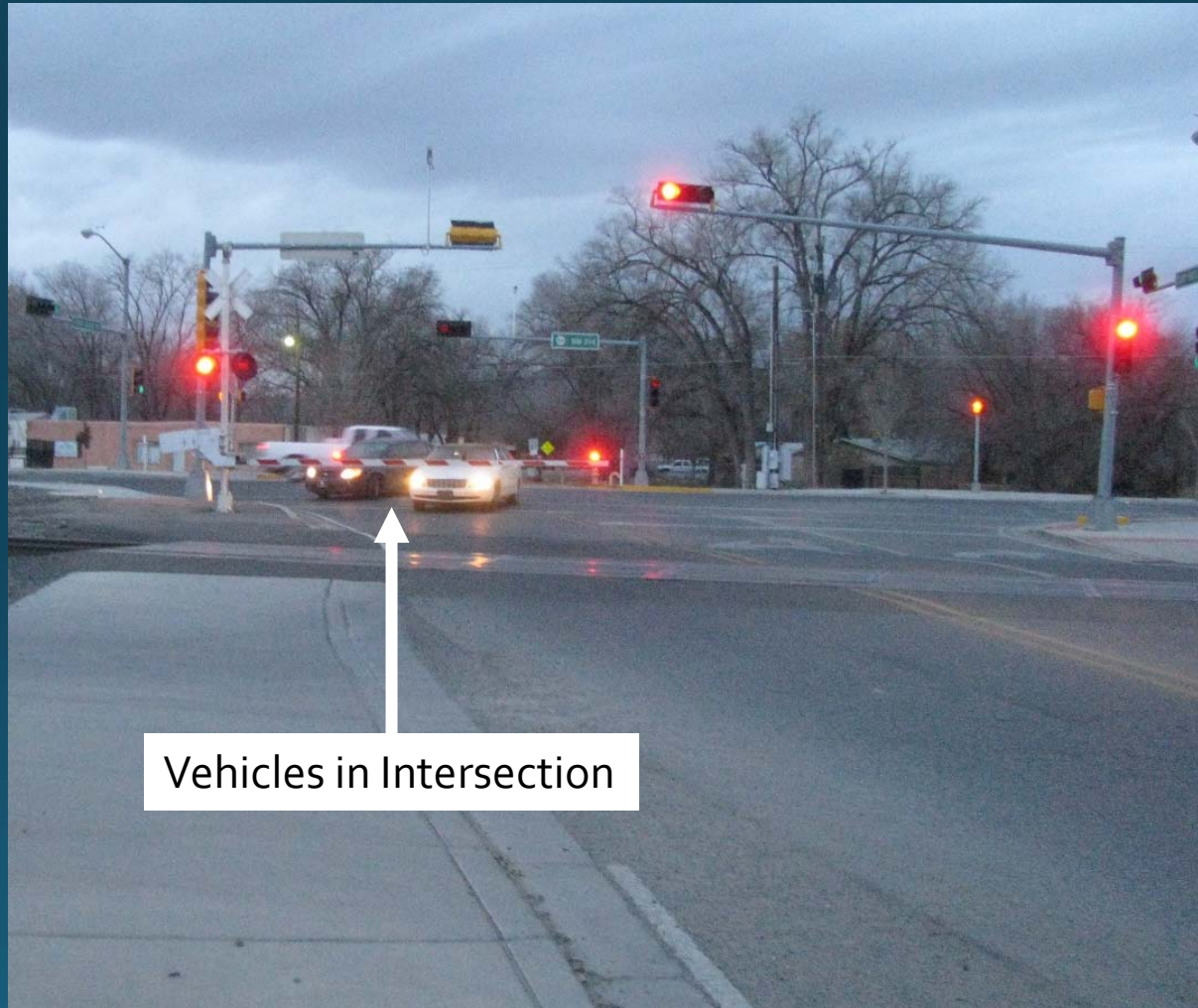
Railroad Crossing Pavement Markings



Protected-Permitted Phasing without Exclusive Turn Lane



Railroad Crossing Warning Beacons and Turn Restrictions



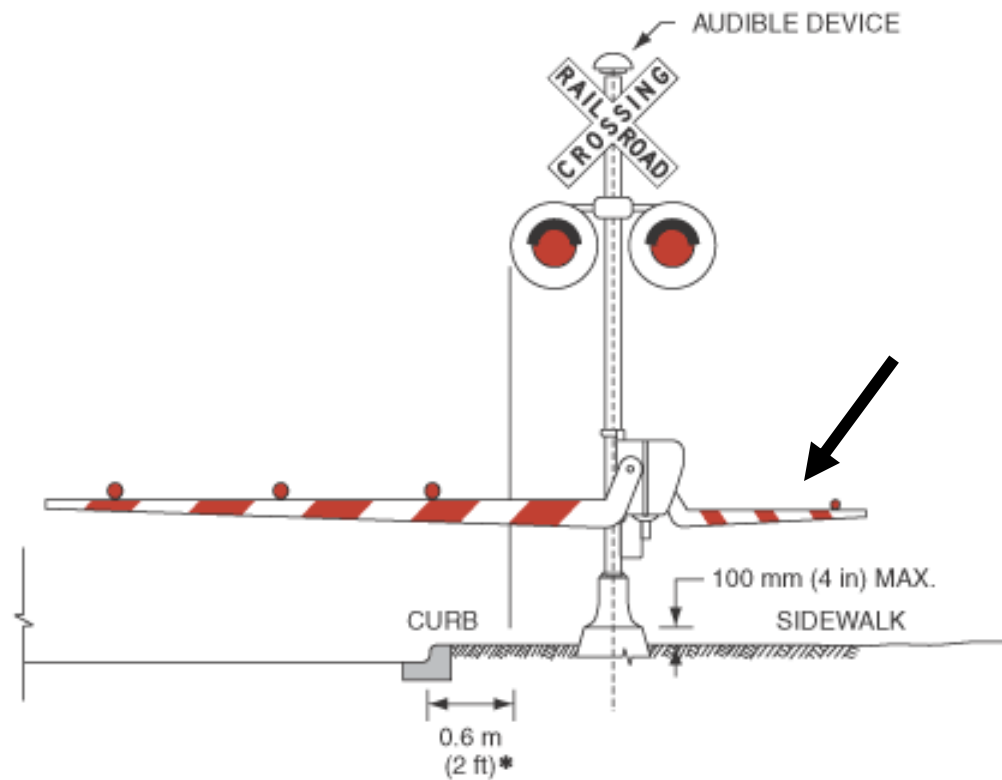
Railroad Crossing Warning Beacons and Turn Restrictions



Wayward Pedestrian Crossings



Example of Pedestrian Gate Control



Railroad Crossing Arms and Intersection Skew



Pre-signal Operations



Advanced
Mastarm

RSA Recommended Short Term Solutions

- Update westbound approach striping (Completed)
- Eliminate driveway to temporary lot (Completed)
- Add NB right-turn & SB left-turn LED restriction indications (Completed)
- Signal timing adjustments
- At-grade rail crossing should be brought to ADA standards
- Intersection lighting repaired



RSA Recommended Long Term Solutions

- Left-turn and right-turn lanes on NM 314
- Removal of westbound skew
- Crossing improvements
 - Quiet Zone compliant Quad Gate
 - Channelized Approaches
- Adjacent access management
- Pedestrian control at rail crossing
- Pre-signal with pre-emption plan
- At-grade rail crossing should be brought to ADA standards
- Intersection lighting



Alternative 1 (Eliminated)



Benefits

- Avoids Utility Relocation
- Low ROW Impact
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314

Challenges

- Widening Encroaches Rail ROW
- Expensive Utility Relocation
- Does Not Address Skew

Alternative 2 (Eliminated)



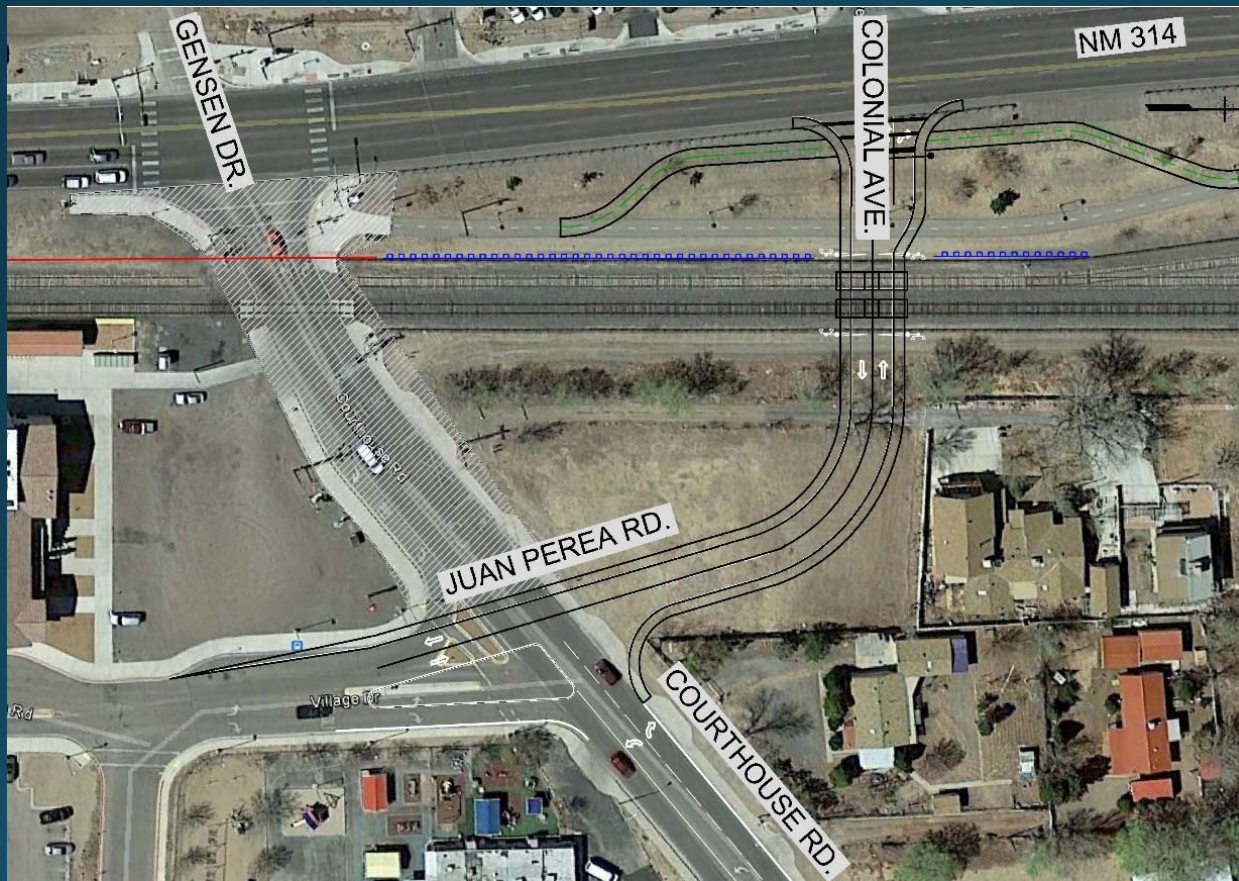
Benefits

- Avoids Utility Relocation
- Lower ROW Impact
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right-Turn Lanes on NM 314

Challenges

- Widening Encroaches Rail ROW
- Expensive Utility Relocation

Alternative 3A (In Consideration)



Benefits

- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment

Challenges

- Some ROW/Property Impacts
- Curvature on Juan Perea Road
- Changes Functionality of Roads
- Poor Operations of One Movement

Alternative 3B (In Consideration)



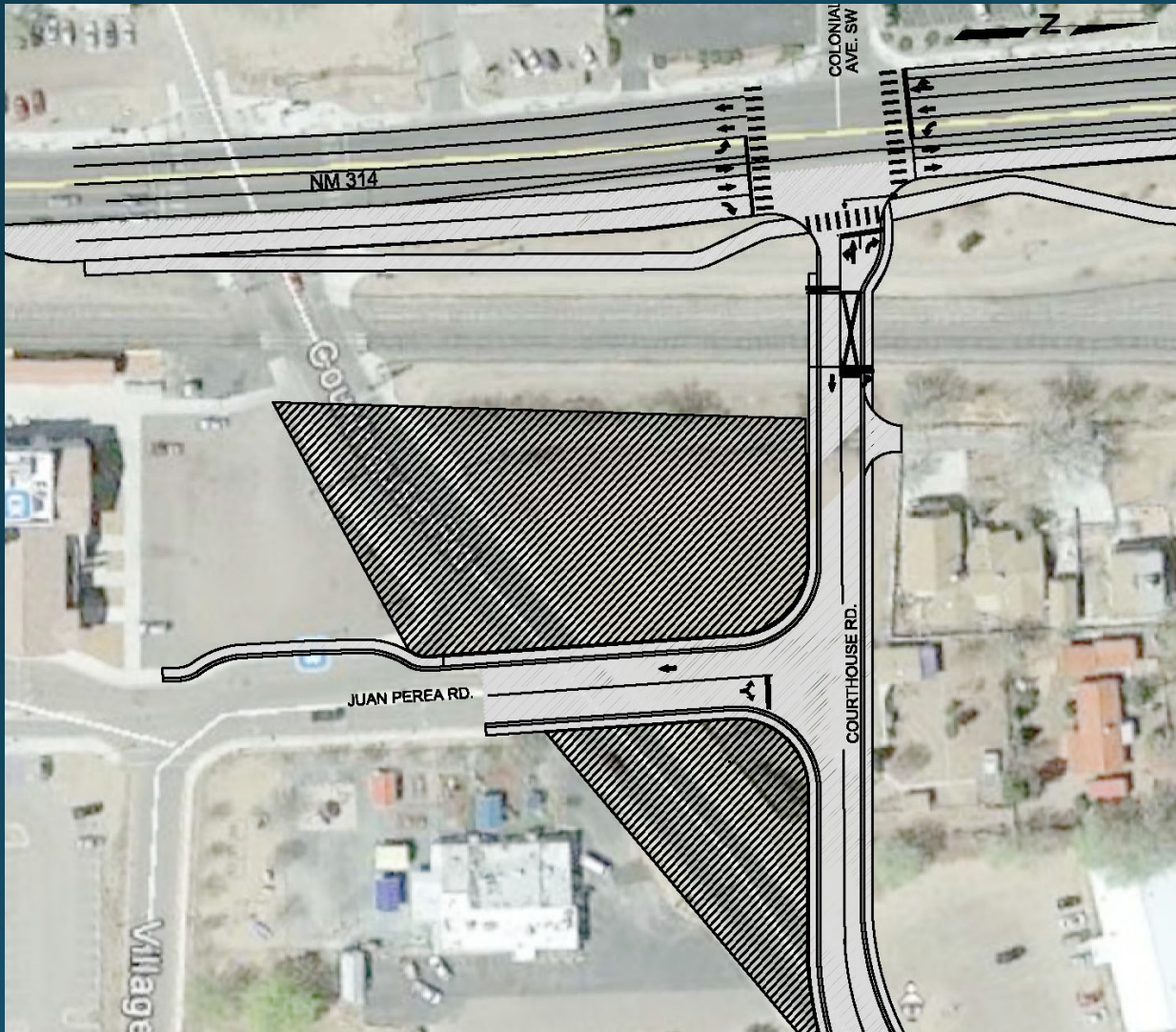
Benefits

- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Roundabout Safety Benefits

Challenges

- Some ROW/Property Impacts
- Curvature on Juan Perea Road
- Changes Functionality of Roads
- Accommodation of Adjacent Access

Alternative 3C (In Consideration)



Benefits

- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Maintains Courthouse Function & Orientation
- Better Approach Visibility

Challenges

- Greater ROW/Property Impacts
- Residence Impact

Alternative 3D (In Consideration)



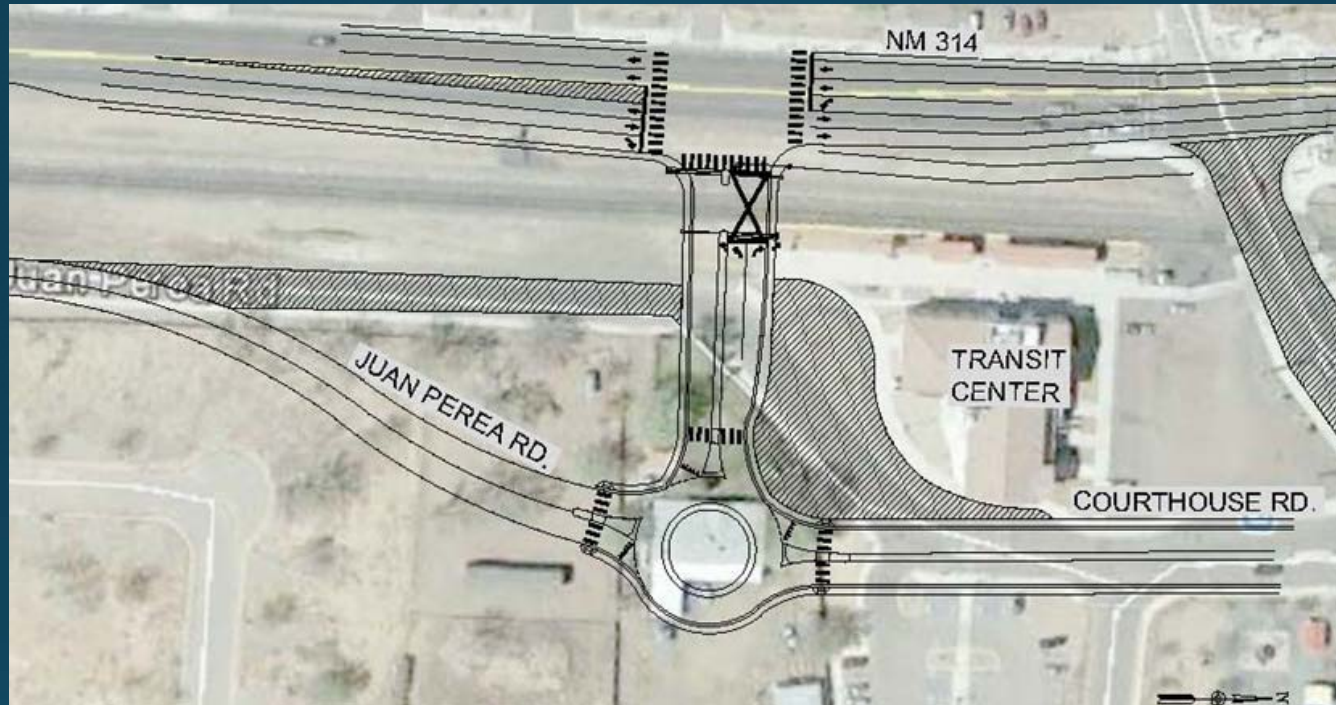
Benefits

- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Maintains Courthouse Function & Orientation
- Better Approach Visibility
- Roundabout Safety Benefits

Challenges

- Greater ROW/Property Impacts
- Residence Impact
- Accommodation of Adjacent Access

Alternative 4 (Eliminated)



Benefits

- Avoids Utility Relocate
- Pedestrian & Rail Upgrades
- Removes Skew
- Safety Benefits of Roundabout

Challenges

- Greatest ROW Impacts
- Rail runner Platform Impacts
- Transit Drop-off Impacts
- Access Impacts

Road Safety Audit (Update)

- Update Crash Review
- Traffic Capacity Analysis
 - 2040 Traffic demands
 - Added School of Dreams Academy Traffic
 - Updated to Latest Analysis Procedures
- Design Alternative Comparison
- Final Design Alternative to be Recommended

NM 314 / COURT HOUSE ROAD ROAD SAFETY AUDIT (RSA)



Final Report
May 2016

Prepared for:
The New Mexico
Department of Transportation



Prepared by:
Lee Engineering, LLC



Updated Crash Review (2013 to 2016)

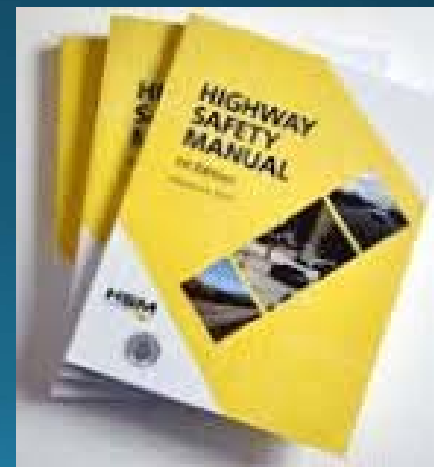
NM 314 and Court House Rd.		
By Year	Total Crashes	17
	2013	6
	2014	4
	2015	4
	2016	3
By Crash Type	Angle	3
	Rear End	1
	Sideswipe	1
	Opposite Direction/One Left	5
	Fixed Object	1
	Same Direction/Both Going Stria	1
	Same Direction/One Right	2
	Same Direction/Both Left	1
	Vehicle Backing	1
	Other	1
	% Opposite Direction/One Left	29%
By Time of Day	Daylight	15
	Night	1
	Dawn/Dusk	1
	% DayLight	88%
By Severity	PDO	12
	Injury	5
	Fatality	0
	% PDO	71%
By Cause	Improper Backing	1
	Other Improper Turn	1
	Driver Inattention	2
	Failure to Yield the Right of Way	8
	Following Too Close	4
	Improper Driving/Turn	1
	Failure to Yield the Right of Way	47%

- 3 to 6 Crashes Yearly (2013 to 2016)
- Angle Related Crashes the Most Frequent Type
- Crashes Occur During Daytime
- No Fatal Crashes
- Failure to Yield Most Common Cause



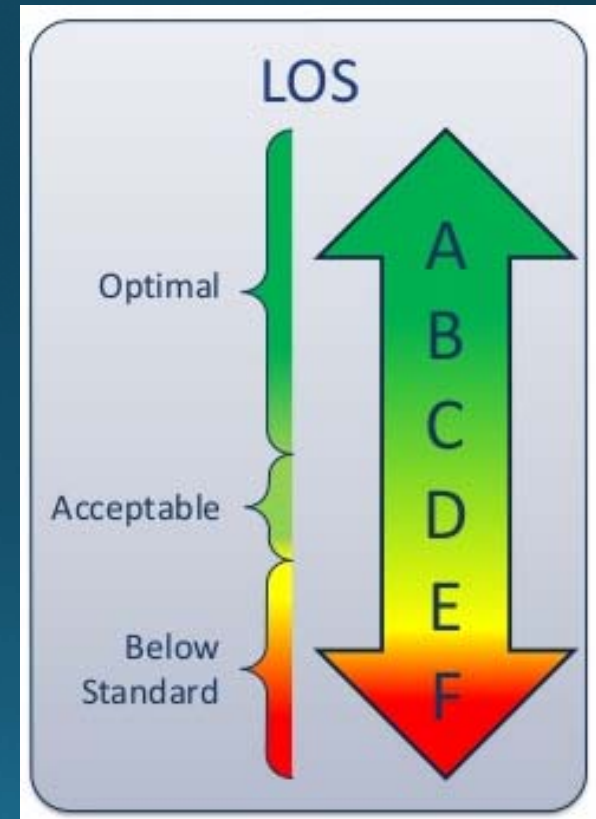
Crash Reduction Strategies

- Removing Intersection Skew
10% Reduction in Overall Crashes
- Added Left-turn Lanes of Two Approaches
17% to 48% Reduction in Overall Crashes
- Added Right-Turn Lane
5% to 13% Reduction of Injury Crashes and
2% to 6% Reduction of High Severity Crashes
- Roundabout versus Traditional
12% to 39% Crash Reduction and
Up to a 76% Reduction in Severe Crashes



Updated Traffic Capacity Analysis

- Both 2014 and 2040 Traffic Demands Were Analyzed
- Level of Service for Most Alternatives Range From A to D
- Juan Perea Road and Courthouse Road Intersection Operates at LOS F During AM Peak for Alternative 3A



Graphic Source: Florida Department of Transportation

Evaluation Criteria

- ROW Impacts
- Traffic Operations
- Safety
- Utility Impacts
- Constructability
- Environmental Impacts
- Access Impacts
- Public Support
- Cost



EVALUATION

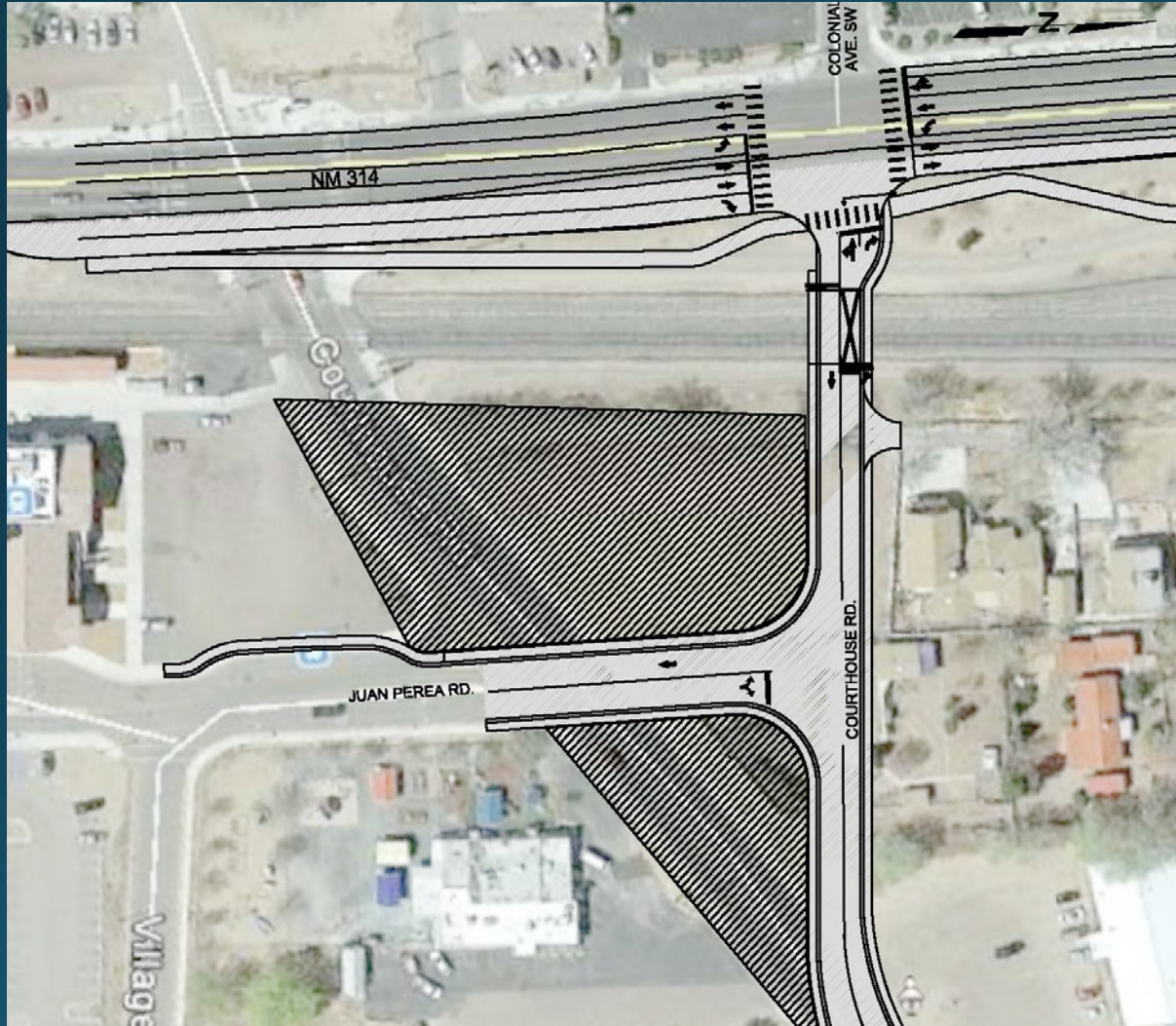
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<input type="checkbox"/>	EXCELLENT
<input type="checkbox"/>	VERY GOOD
<input type="checkbox"/>	GOOD
<input type="checkbox"/>	AVERAGE

A red pen is shown marking the 'OUTSTANDING' checkbox.

Decision Matrix

ALTERNATIVES	ROW	TRAFFIC OPERATIONS	SAFETY	UTILITIES	CONSTRUCTABILITY	ENVIRONMENTAL	ACCESS CHANGES	Public Support	CONSTRUCTION COST
NO-BUILD ALTERNATIVE	↔ None required	↔ Acceptable LOS	↓↓ No safety improvements	↔ No changes	↔ N/A	↔ No impacts	↔ No changes	Pending Public Meeting	\$0
3A	↓ 0.40 ROW Required	↓ Mostly Acceptable LOS Except for One Movement	↑ -Removes Intersection Skew -Adds NM 314 auxiliary lanes -Upgrades pedestrian and rail -Approach visibility to new intersection limited due to curvature	↔ Some Utility Impact	↑ Courthouse can remain open during construction	↓ Some property impacts and change in Courthouse Road function and orientation	↑ Some access impacts		\$2.48 Million
3B	↓ 0.45 ROW Required	↔ Acceptable LOS	↑ -Removes intersection skew -Adds NM 314 auxiliary lanes -Upgrades pedestrian and rail -Approach visibility to new intersection limited due to curvature -Roundabout Safety Benefits	↔ Some Utility Impact	↓ May require closure of Courthouse	↓ Some property impacts and change in Courthouse Road function and orientation	↔ With larger intersection footprint access impacts more challenging		\$2.70 Million
3C	↓↓ 0.75 ROW Required Including Residence	↔ Acceptable LOS	↑↑ -Removes intersection skew -Adds NM 314 auxiliary lanes -Upgrades pedestrian and rail -Approach visibility better to new intersection with no curvature	↔ Some Utility Impact	↑ Courthouse can remain open during construction	↓↓ Greater property impacts including residence acquisition; Courthouse function and orientation maintained	↑ Some access impacts		\$2.52 Million
3D	↓↓ 0.80 ROW Required Including Residence	↔ Acceptable LOS	↑↑ -Removes intersection skew -Adds NM 314 auxiliary lanes -Upgrades pedestrian and rail -Approach visibility better to new intersection with no curvature -Roundabout Safety Benefits	↔ Some Utility Impact	↓ May require closure of Courthouse	↓↓ Greater property impacts including residence acquisition; Courthouse function and orientation maintained	↓ With larger intersection footprint access impacts more challenging		\$2.83 Million

Alternative 3C (In Consideration)



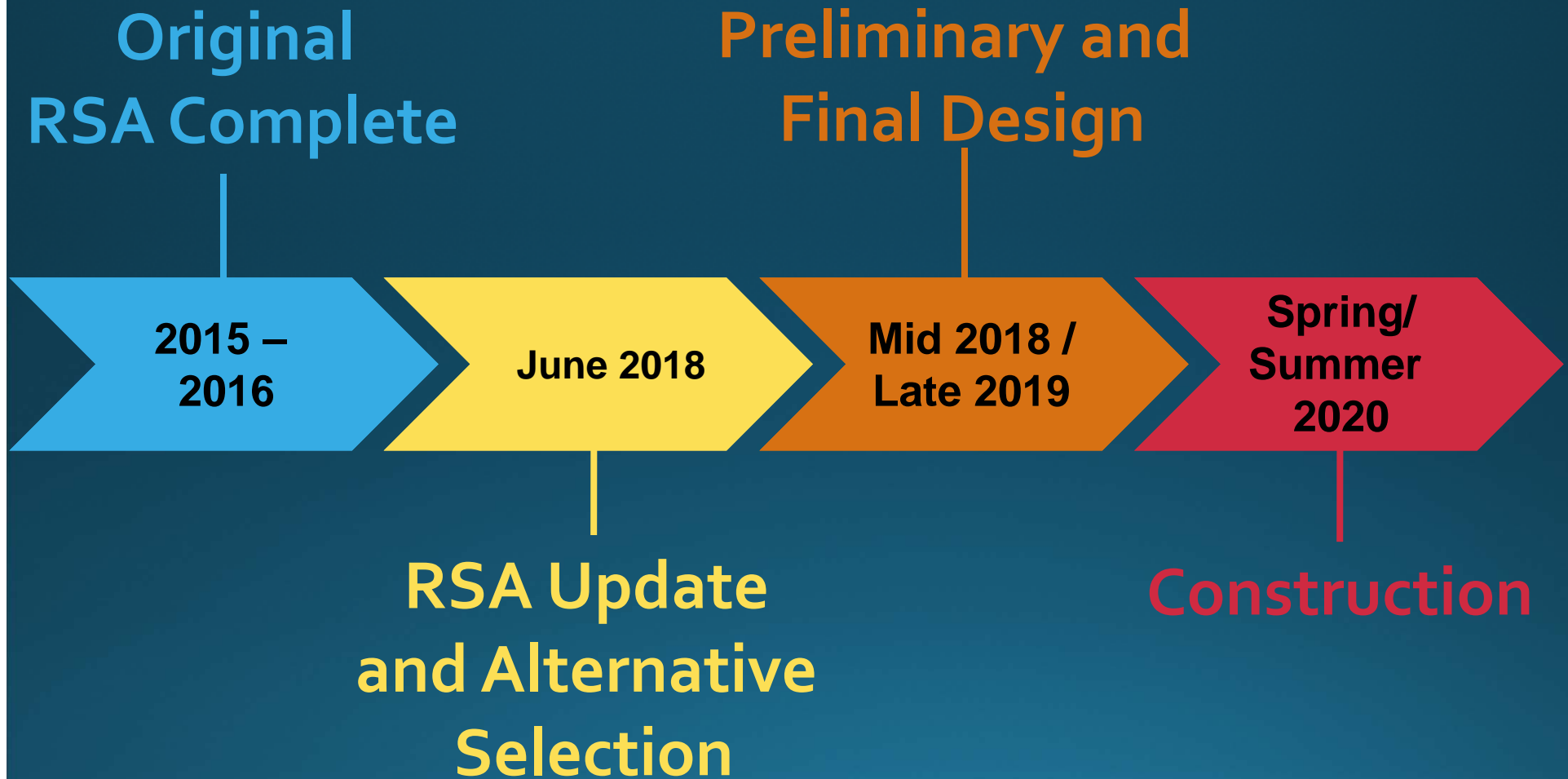
Benefits

- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Maintains Courthouse Function & Orientation
- Better Approach Visibility

Challenges

- Greater ROW/Property Impacts
- Residence Impact

Project Timeline



Comments

Send Comments to:

NM 314/Courthouse Road Intersection

Parametrix

9600 San Mateo Blvd. NE

Albuquerque, NM 87113

jfredine@parametrix.com

505-998-5552



Follow Up and Additional Outreach

- NMDOT Website:

<http://dot.state.nm.us/content/nmdot/en/ProjectsD3.html#nm314courthouse>

- E-mail Notification (E-mail List from Public Meeting Sign-In)
- On-going Coordination with Stakeholders
- One-on-One Property Owner Meetings



Questions?

