

WELCOME TO THE MEETING



We will begin shortly!

- Please turn your video off and mute your microphones to prevent any lagging during the presentation.
- We will be taking questions at the end of the presentation – If you would rather type your message, please use the chat at any time and we will include those questions in our discussion at the end.

If you are a Public Official, please introduce yourself in the chat!

This meeting will be recorded and the slides will be available on the City of Rio Rancho Website at <https://rrnm.gov/> Recording will be available by request.

IDALIA ROAD PHASE I-A/B STUDY CN A300201 PUBLIC MEETING NO. 2



May 4th, 2022



IDALIA ROAD PHASE I-A/B STUDY

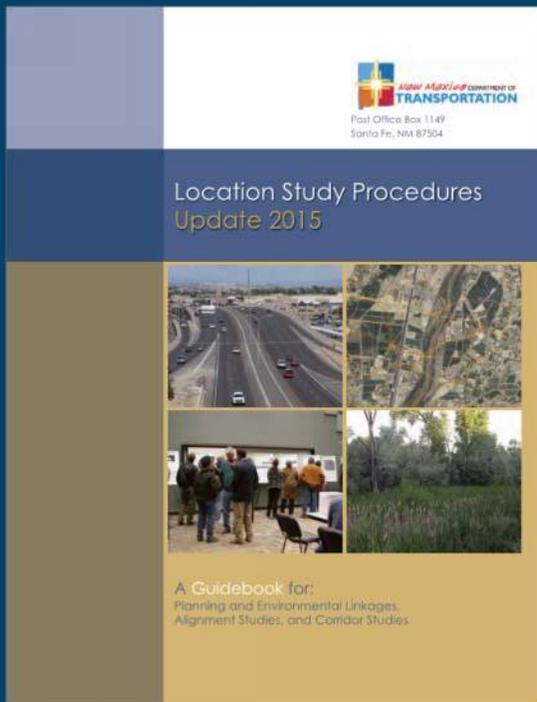
- Study Team
- City of Rio Rancho
 - BJ Gottlieb – Director of Public Works & City Engineer
 - Jamie Marrufo – Deputy Director of Public Works
 - Arnell Friedt – Project Manager
- Consultant Team
 - Andrew E. Gallegos – WHPacific/NV5 Project Manager
 - Adam Miera – WHPacific/NV5 Traffic Engineer
 - Kevin Rucker – WHPacific/NV5 Roadway Designer
 - Sheila Johnson - WHPacific/NV5 Drainage Manager
 - Austin Schmidt - WHPacific/NV5 Drainage Engineer
 - Eric Johnson – NV5 Environmental Lead
 - Mikaela Buscher – NV5 Biologist & NEPA Analyst



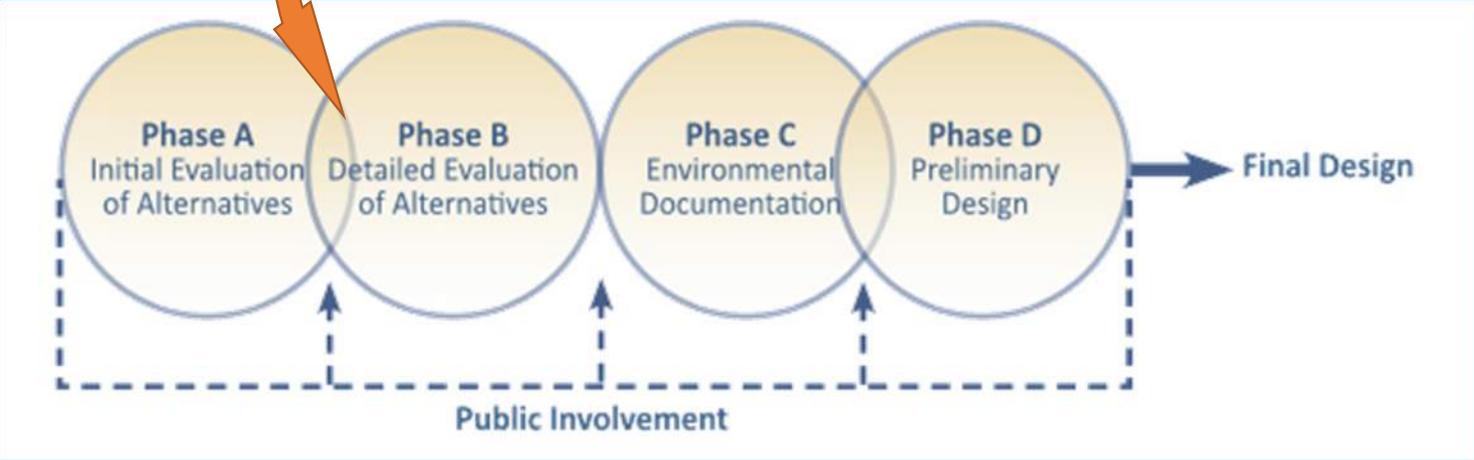
IDALIA ROAD PHASE I-A/B STUDY



NMDOT Study Procedures



**We are Here
May 4th, 2022**



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A EVALUATION



MEETING AGENDA

1. Existing Conditions Recap
2. Purpose and Need Statement
3. Alternative Review Process
4. Project Alternatives
 1. Roadway
 2. Access
 3. Drainage
5. Project Schedule
6. Questions and Answer



Loma Colorado Blvd. intersection

US 491 ALIGNMENT STUDY PURPOSE AND NEED



PURPOSE AND NEED STATEMENT

“The purpose of this project is to correct the physical deficiencies, improve safety, accommodate future traffic demands, and provide multi-modal accessibility within the Idalia Road study corridor. This includes updating intersection geometry for improved sight distance at intersections, providing connectivity for multi-modal users, and upgrading the drainage facilities as required to accommodate the full buildout of the typical section for the corridor.”

The Needs Include The Following:

STUDY NEEDS:

- Roadway Geometry Deficiencies – **Is a Need**
 - Intersection Geometry
 - Curb Ramps at Intersection and Sidewalks
 - Roadway conditions (pavement, curb, sidewalk)
 - Drainage deficiencies
- Safety – **Is a Need**
 - Access Management in corridor and property access
 - Pedestrian crossings and accessibility
- System Connectivity – **Is a Need**
 - Pedestrian and Bicycle Accessibility (Multi-modal & Access)
 - Safe Crossings at intersections (Cross-Walks and locations to cross)

IDALIA ROAD PHASE I-A/B STUDY EXISTING CONDITIONS RECAP



IDALIA ROAD PHASE I-A/B STUDY

EXISTING CONDITIONS RECAP



- Existing Conditions:

- Roadway conditions, no sidewalk or curb and gutter
- Drainage issues at crossing structures and erosion adjacent to roadway
- Travel Demand and Congestion
- Safety and Access Management
- Pedestrian accessibility and crossings
- Speeding
- Noise



IDALIA ROAD PHASE I-A/B STUDY PHASE I-A EVALUATION



Alternative Evaluation Matrix

- The alternatives screening narrows the list of alternatives that will be carried into the Detailed Evaluation Phase (Phase I-B).

Four Primary Steps:

- Selection of Evaluation Criteria:
 - Responsiveness to the Purpose and Need
 - Operational Performance
 - Safety
 - Right-of-Way Impacts
 - Construction Costs, etc.
- Selection of Scoring system for each Criteria
- Scoring and Ranking of Each Alternative
- Determination of Alternative to Proceed to Phase I-B

EVALUATION FACTOR	Urban Alternative 1: NO BUILD	Urban Alternative 2B.1: TWO-WAY LEFT TURN LANE	Urban Alternative 2B.2: BLUFF RD CONNECTION	Urban Alternative 2B.3: MEDIAN ACCESS CONTROL
SATISFIES PURPOSE & NEED	0	5	5	4
SAFETY	0	3	4	3

EVALUATION FACTOR	Broadmoor Blvd. Intersection Alternative 1 Dual-Lane Roundabout	Loma Colorado Blvd. Intersection Alternative 2 Signalized Intersection	Loma Colorado Blvd. Intersection Alternative 3 Dual-Lane Roundabout	Kim Rd. Intersection Alternative 2 Conventional Intersection	Kim Rd. Intersection Alternative 3 Single-Lane Roundabout
ENVIRO. IMPACTS	4	3	3	3	3
PUBLIC INPUT	0	0	0	0	0
ROW REQUIREMENTS	4	3	4	3	3
CONSTRUCTABILITY	4	3	4	3	3
UTILITIES	3	3	3	3	3
CONSTRUCTION COSTS	4	3	4	3	3
EVALUATION SCORE	26	25	25	25	26

SAMPLE EVALUATION MATRIX

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



• Proposed Roadway Typical Sections



• Roadway Characteristics

- Urban Minor Arterial Roadway Classification
- 2-11' Driving Lanes (1 in each direction) w/curb and gutter
- 6' bicycle lanes
- 6' sidewalks w/landscape buffers
- 80' Wide Existing Right-of-way
- 40 mph Posted Speed Limit
- New Turning Lanes at city roads and major intersections
- Improved vertical geometry for drainage conveyance



Idalia Rd. (east of Iris Rd.)

IDALIA ROAD PHASE I-A/B STUDY

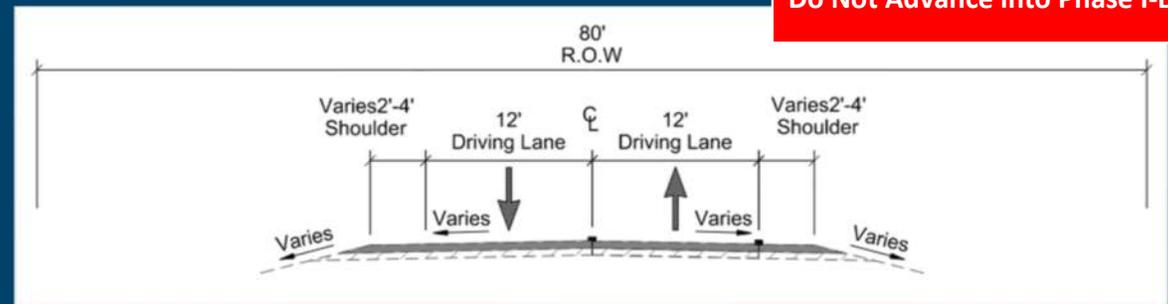
PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Intersection Alternative 1: No-Build

- **Roadway Issues**
 - 2-Lane Roadway with no curb and gutter or bicycle lanes
 - No medians for left turn movements
 - No access control
- **Multimodal Accessibility**
 - Missing Sidewalk and pedestrian access
 - Variable-Width Shoulders
 - Some Crossing opportunities at signalized intersections
- **Other Features**
 - Some Street lighting
 - Power Poles within clear zone
 - Signalized Intersections at Broadmoor Blvd. and Loma Colorado Blvd.

Do Not Advance into Phase I-B



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS

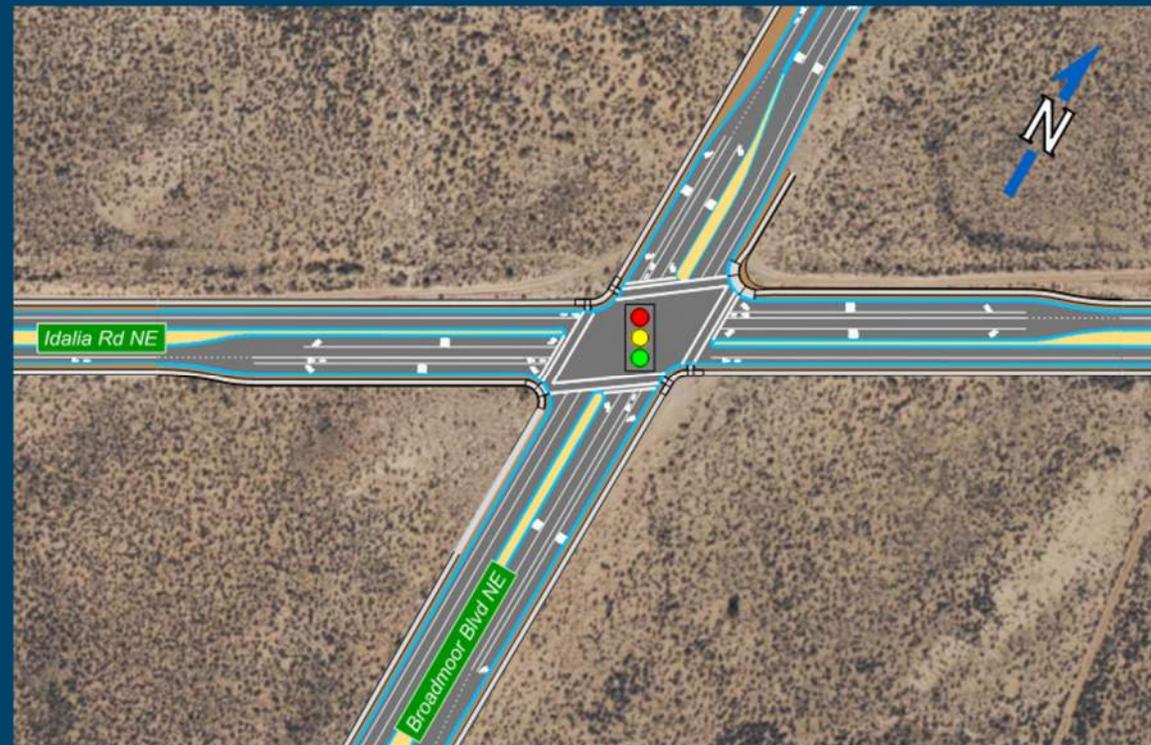


Recommended to move into Phase I-B

29/40

Broadmoor Blvd Intersection Alternative 2 – Signalized Intersection

- *Benefits*
 - *Upgraded intersection geometry and asphalt pavement*
 - *New signal equipment, lighting, and drainage facilities*
 - *Less area required to construct*
- *Challenges*
 - *Signals require on-going maintenance*
 - *Does not reduce speeding along corridor*
 - *Less safe for pedestrians than roundabouts*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Broadmoor Blvd Intersection Alternative 3 Dual Lane Roundabout

Recommended to move into Phase I-B

30/40

• Benefits

- Upgraded intersection geometry and concrete pavement
- New lighting and drainage facilities
- Safe pedestrian crossings and Rapid Flashing Beacons
- Reduction in speed for all vehicular traffic
- Improved traffic operations
- Decreased vehicular crash and mortality rates than signalized intersection
- Opportunities for landscaping

• Challenges

- More area (ROW) required to construct
- More challenging to construct
- More up-front costs
- Learning curve for navigating geometry



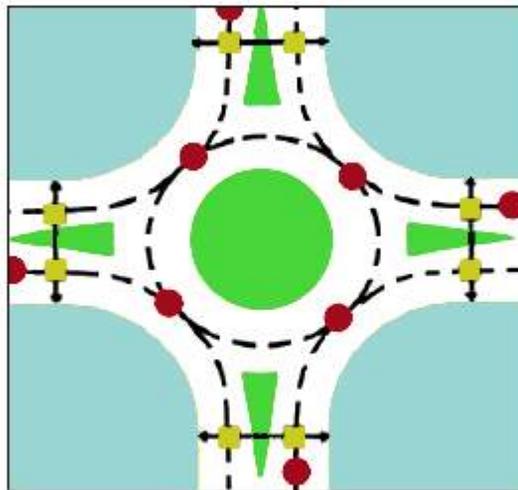
IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Conflict Points

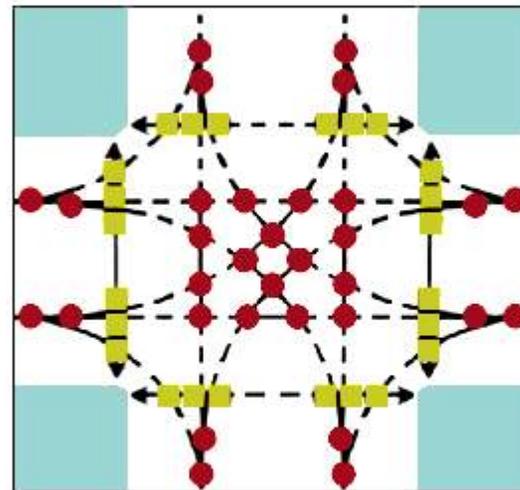
Roundabout



● 8 Vehicle conflicts

■ 8 Pedestrian conflicts

Intersection



● 32 Vehicle conflicts

■ 24 Pedestrian conflicts

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Broadmoor Blvd. Intersection

PRIMARY EVALUATION FACTOR	Intersection Alternative No. 1: No Build	Broadmoor Blvd. Intersection Alternative 2 Signalized Intersection	Broadmoor Blvd. Intersection Alternative 3 Dual-Lane Roundabout
SAFETY	<ul style="list-style-type: none"> No Safety Benefits 	<ul style="list-style-type: none"> Increased Sight Distance and geometry at Intersections New Left Turn Lanes New signals and pedestrian crossings at intersections 	<ul style="list-style-type: none"> Controlled and reduced speeds at Intersection and within corridor. Roundabout geometry promotes increased safety Pedestrian crossings and ADA curb ramps
ROW REQUIREMENTS	<ul style="list-style-type: none"> No Right-of-way Impacts 	<ul style="list-style-type: none"> 0.40 AC. Required. Less ROW required than Alternative B. 	<ul style="list-style-type: none"> 1.40 AC. Required. More ROW required than Alternative A.
CONSTRUCTABILITY	<ul style="list-style-type: none"> No Construction Required 	<ul style="list-style-type: none"> Can construct intersection with temporary signal span and detours. Less difficult to construct. 	<ul style="list-style-type: none"> May need to close intersection altogether due to complex geometry. More difficult to construct.
CONSTRUCTION COSTS	<ul style="list-style-type: none"> No Construction Costs 	<ul style="list-style-type: none"> \$1.75M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and signals Less Costly than Alternative B. 	<ul style="list-style-type: none"> \$1.95M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and rapid flashing beacons More costly than Alternative A.
EVALUATION SCORE	Do Not Advance	22	Recommend to Move into Phase I-B
			29
			30

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Recommended to move into Phase I-B

28/40

Loma Colorado Blvd Intersection Alternative 2 – Signalized Intersection

- *Benefits*
 - *Upgraded intersection geometry and asphalt pavement*
 - *New signal equipment, lighting, and drainage facilities*
 - *Less area required to construct*
- *Challenges*
 - *Signals require on-going maintenance*
 - *Does not reduce speeding along corridor*
 - *Less safe for pedestrians than roundabouts*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Loma Colorado Blvd Intersection Alternative 3:

Dual-Lane Roundabout

Recommended to move into Phase I-B

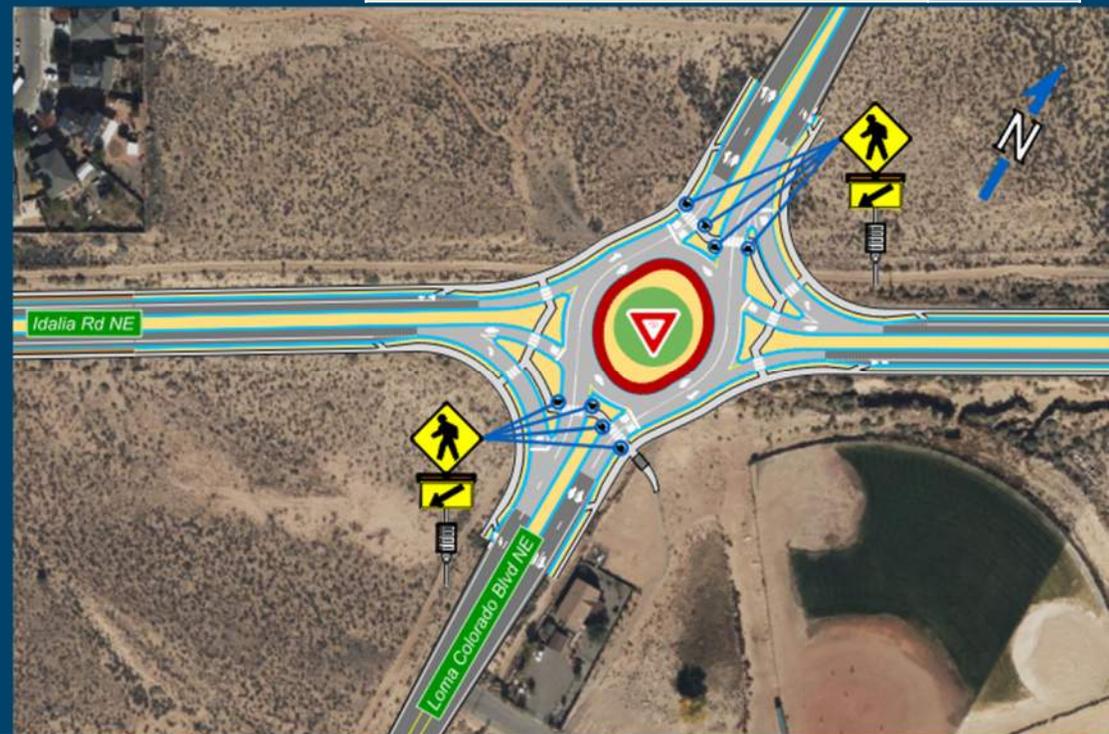
30/40

• Benefits

- Upgraded intersection geometry and concrete pavement
- New lighting and drainage facilities
- Safe pedestrian crossings and Rapid Flashing Beacons
- Reduction in speed for all vehicular traffic
- Improved traffic operations
- Decreased vehicular crash and mortality rates than signalized intersection
- Opportunities for landscaping

• Challenges

- More area (ROW) required to construct
- More challenging to construct
- More up-front costs
- Learning curve for navigating geometry



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Loma Colorado Blvd. Intersection

PRIMARY EVALUATION FACTOR	Intersection Alternative No. 1: No Build	Loma Colorado Blvd. Intersection Alternative 2 Signalized Intersection	Loma Colorado Blvd. Intersection Alternative 3 Dual-Lane Roundabout
SAFETY	<ul style="list-style-type: none"> No Safety Benefits 	<ul style="list-style-type: none"> Increased Sight Distance and geometry at intersections New Left Turn Lanes New signals and pedestrian crossings at intersections 	<ul style="list-style-type: none"> Controlled and reduced speeds at Intersection and within corridor. Roundabout geometry promotes increased safety Pedestrian crossings and ADA curb ramps
ROW REQUIREMENTS	<ul style="list-style-type: none"> No Right-of-way Impacts 	<ul style="list-style-type: none"> 1.75 AC. Required. Less ROW required than Alternative B. 	<ul style="list-style-type: none"> 2.51 AC. Required. More ROW required than Alternative A.
CONSTRUCTABILITY	<ul style="list-style-type: none"> No Construction Required 	<ul style="list-style-type: none"> Can construct intersection with temporary signal span and detours. Less difficult to construct. 	<ul style="list-style-type: none"> May need to close intersection altogether due to complex geometry. More difficult to construct.
CONSTRUCTION COSTS	<ul style="list-style-type: none"> No Construction Costs 	<ul style="list-style-type: none"> \$1.75M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and signals Less Costly than Alternative B. 	<ul style="list-style-type: none"> \$1.95M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and rapid flashing beacons More costly than Alternative A.
EVALUATION SCORE	Do Not Advance	Recommend to Move Into Phase I-B	Recommend to Move Into Phase I-B
	22	28	30

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



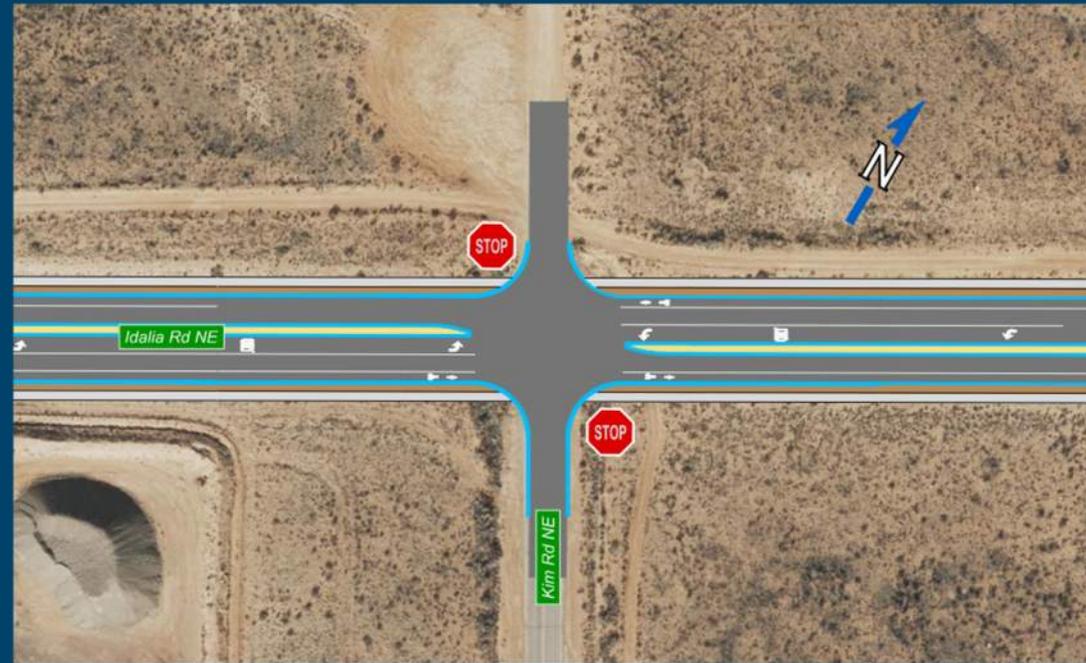
Kim Rd Intersection Alternative 2

Conventional Intersection

- *Benefits*
 - *Upgraded intersection geometry and pavement*
 - *Upgraded lighting and drainage facilities*
 - *Less area required to construct*
 - *New turning lanes in median*
- *Challenges*
 - *Signals require on-going maintenance*
 - *Does not reduce vehicular speeds at intersection*
 - *Less safety for pedestrians than roundabouts*

Recommended to move into Phase I-B

29/40



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS

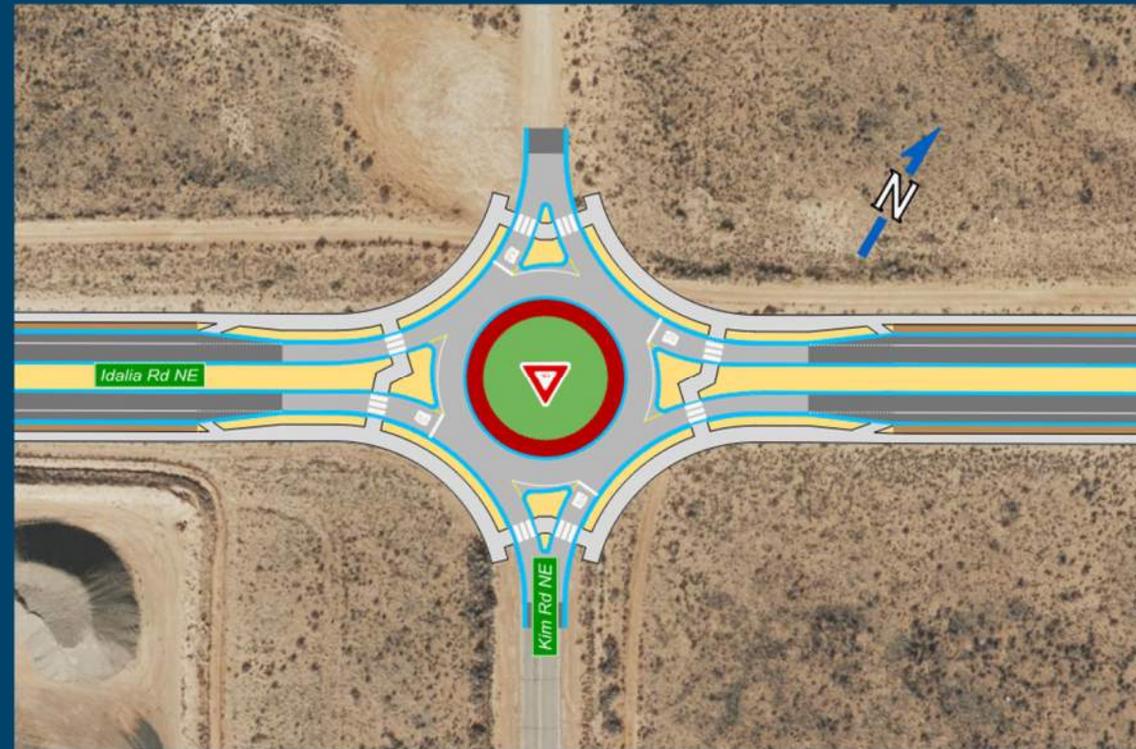


Kim Rd Intersection Alternative 3 Single Lane Roundabout

Recommended to move into Phase I-B

30/40

- **Benefits**
 - Upgraded intersection geometry and concrete pavement
 - New lighting and drainage facilities
 - Safe pedestrian crossings and Rapid Flashing Beacons
 - Reduction in speed for all vehicular traffic
 - Improved traffic operations
 - Decreased vehicular crash and mortality rates than stop-controlled intersection
 - Opportunities for landscaping
- **Challenges**
 - More area (ROW) required to construct
 - More challenging to construct
 - More up-front costs
 - Learning curve for navigating geometry



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Kim Rd. Intersection

PRIMARY EVALUATION FACTOR	Intersection Alternative No. 1: No Build	Kim Rd. Intersection Alternative 2 Conventional Intersection	Kim Rd. Intersection Alternative 3 Single-Lane Roundabout
SAFETY	<ul style="list-style-type: none"> No Safety Benefits 	<ul style="list-style-type: none"> Increased Sight Distance and geometry at Intersections New Left Turn Lanes New signals and pedestrian crossings at intersections 	<ul style="list-style-type: none"> Controlled and reduced speeds at Intersection and within corridor. Roundabout geometry promotes increased safety Pedestrian crossings and ADA curb ramps
ROW REQUIREMENTS	<ul style="list-style-type: none"> No Right-of-way Impacts 	<ul style="list-style-type: none"> 0.00 AC. Required. Less ROW required than Alternative B. 	<ul style="list-style-type: none"> 0.24 AC. Required. More ROW required than Alternative A.
CONSTRUCTABILITY	<ul style="list-style-type: none"> No Construction Required 	<ul style="list-style-type: none"> Can construct intersection with temporary signal span and detours. Less difficult to construct. 	<ul style="list-style-type: none"> May need to close intersection altogether due to complex geometry. More difficult to construct.
CONSTRUCTION COSTS	<ul style="list-style-type: none"> No Construction Costs 	<ul style="list-style-type: none"> \$1.30M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and signals Less costly than Alternative B. 	<ul style="list-style-type: none"> \$1.7M for Intersection Costs include Roadway, Curb, sidewalk, lighting, and rapid flashing beacons More costly than Alternative A.
EVALUATION SCORE	Do Not Advance	Recommend to Move into Phase I-B	Recommend to Move into Phase I-B
	0	22	30

MEETING REMINDER



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IDALIA ROAD PHASE I-A/B STUDY PHASE I-A INITIAL ALTERNATIVES ANALYSIS



NMDOT State Access Management Manual (SAMM)

- *“The SAMM encourages few direct access points, greater separation of driveways, and better driveway design and location are the basic elements of access management.”*
- *Conflicts are reduced along the highway, thereby reducing the accident potential, which results in a safer highway environment.*
- *Traffic flow is smoother which maintains desired travel speeds resulting in short and safer travel.*
- *Uniform standards are established which ensures equal application of access requirements for property owners.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS

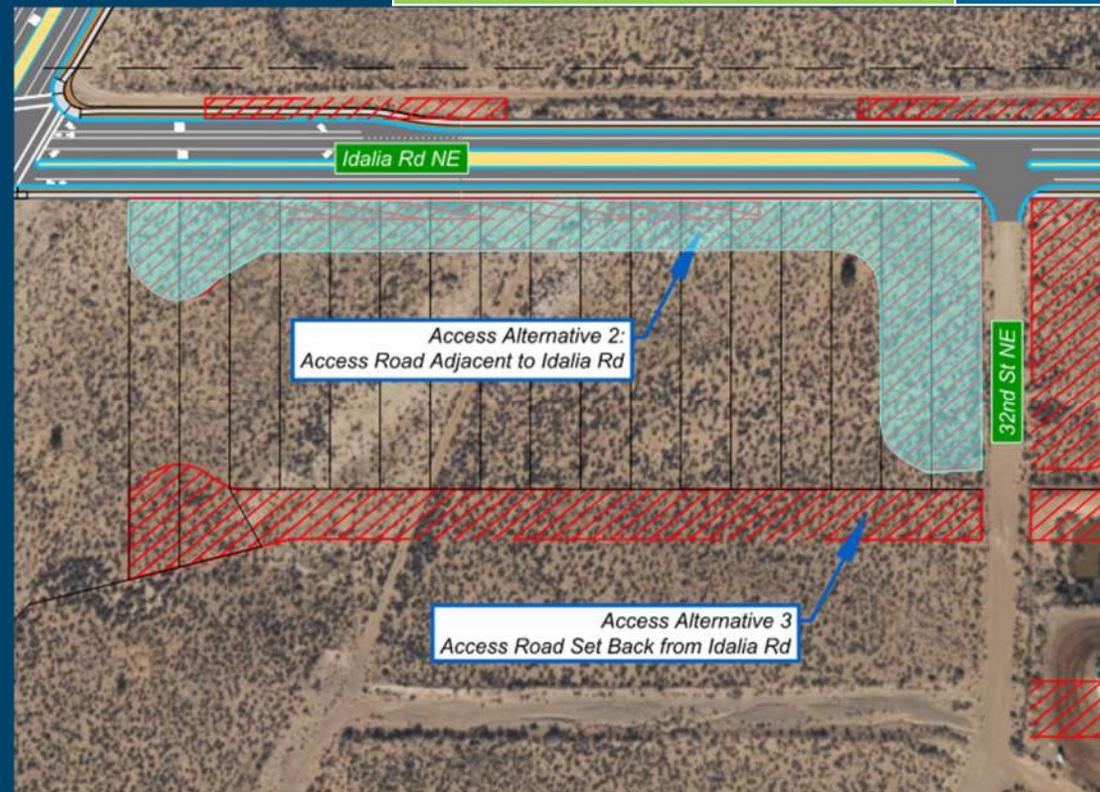


Recommended to move into Phase I-B

15/30

Property Access Alternative 2 Adjacent Access Road

- *Benefits*
 - *Access provided in accordance with the NMDOT State Access Management Manual (SAMM)*
 - *Access to all properties adjacent to Idalia.*
- *Challenges*
 - *More area (ROW) required*
 - *More challenging to construct*
 - *More costly to construct*
 - *14.62 AC required for acquisition.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS

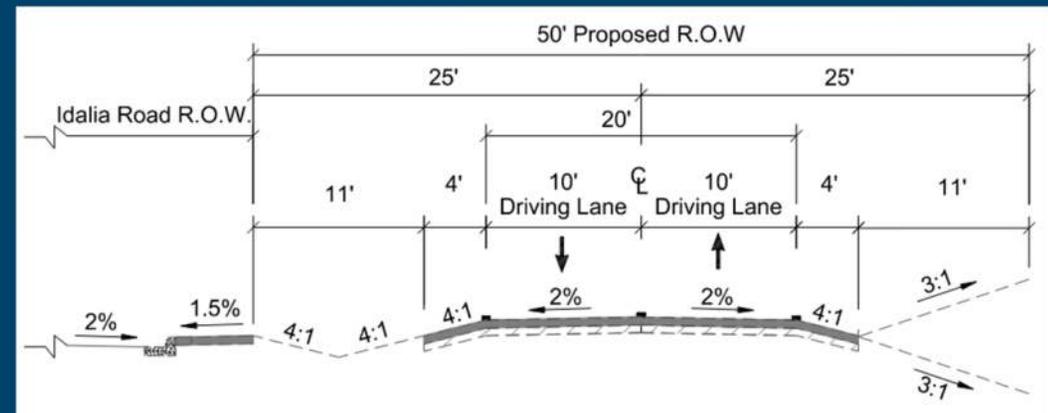


Recommended to move into Phase I-B

15/30

Property Access Alternative 2 Adjacent Access Road

- *Benefits*
 - *Access provided in accordance with the NMDOT State Access Management Manual (SAMM)*
 - *Access to all properties adjacent to Idalia.*
- *Challenges*
 - *More area (ROW) required*
 - *More challenging to construct*
 - *More costly to construct*
 - *14.62 AC required for acquisition.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Recommended to move into Phase I-B

18/30

Property Access Alternative 3

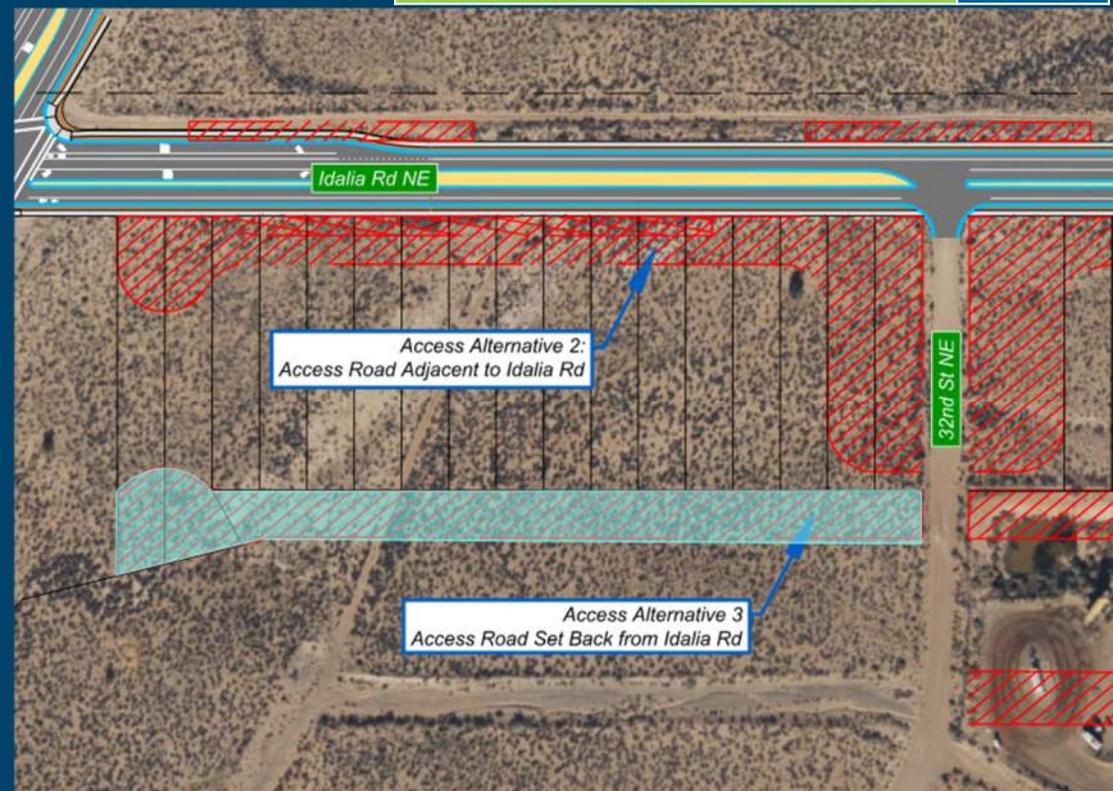
Offset Access Road

- *Benefits*

- *Access provided in accordance with the NMDOT State Access Management Manual (SAMM)*
- *Access to all properties adjacent to Idalia.*
- *Less area (ROW) required to construct*
- *Less costly to construct*

- *Challenges*

- *11.64 AC required for acquisition.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



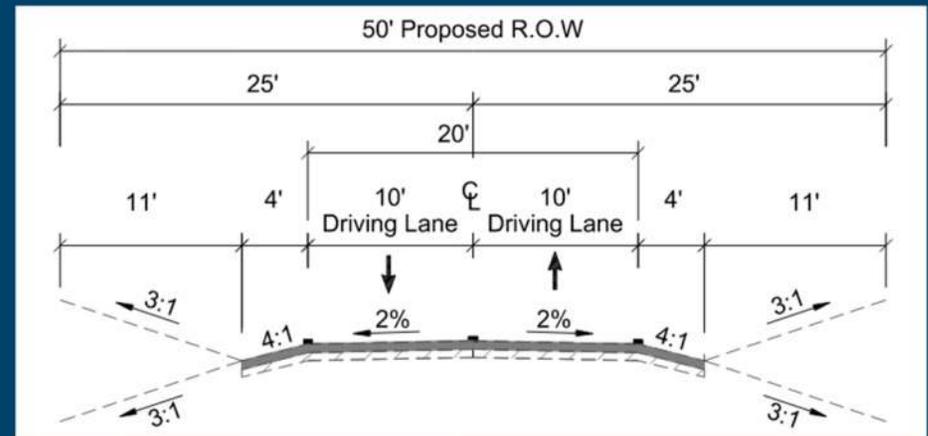
Recommended to move into Phase I-B

18/30

Property Access Alternative 3

Offset Access Road

- *Benefits*
 - *Access provided in accordance with the NMDOT State Access Management Manual (SAMM)*
 - *Access to all properties adjacent to Idalia.*
 - *Less area (ROW) required to construct*
 - *Less costly to construct*
- *Challenges*
 - *11.64 AC required for acquisition.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Property Access

EVALUATION FACTOR	Corridor Access Alternative No. 1: No Build	Corridor Access Alternative 2: Adjacent Access to Exist. ROW	Corridor Access Alternative 3: Access Behind Properties
SATISFIES PURPOSE & NEED	<ul style="list-style-type: none"> No Improvements to Existing Access Properties will be landlocked and unusable 	<ul style="list-style-type: none"> New graded access road for future city street. Alternative will improve access to adjacent properties 	<ul style="list-style-type: none"> New graded access road for future city street. Alternative will improve access to adjacent properties
ROW REQUIREMENTS	<ul style="list-style-type: none"> No Right-of-way Impacts. Does not provide access to properties. 	<ul style="list-style-type: none"> 14.62 AC. Required. 20% more ROW is required than Alternative 3. Access Road will impact less property owners. 	<ul style="list-style-type: none"> 11.64 AC. Required. 20% less ROW required than Alternative 2. Access Road will impact more property owners.
CONSTRUCTION COSTS	<ul style="list-style-type: none"> No Construction Costs required. 	<ul style="list-style-type: none"> \$1.114M Costs include ROW Estimated costs only. More costly than Alternative B. 	<ul style="list-style-type: none"> \$887K Costs include ROW Estimated costs only. Less costly than Alternative A.
EVALUATION SCORE	Do Not Advance	Recommend to Move Into Phase I-B	Recommend to Move Into Phase I-B
	10	15	18

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



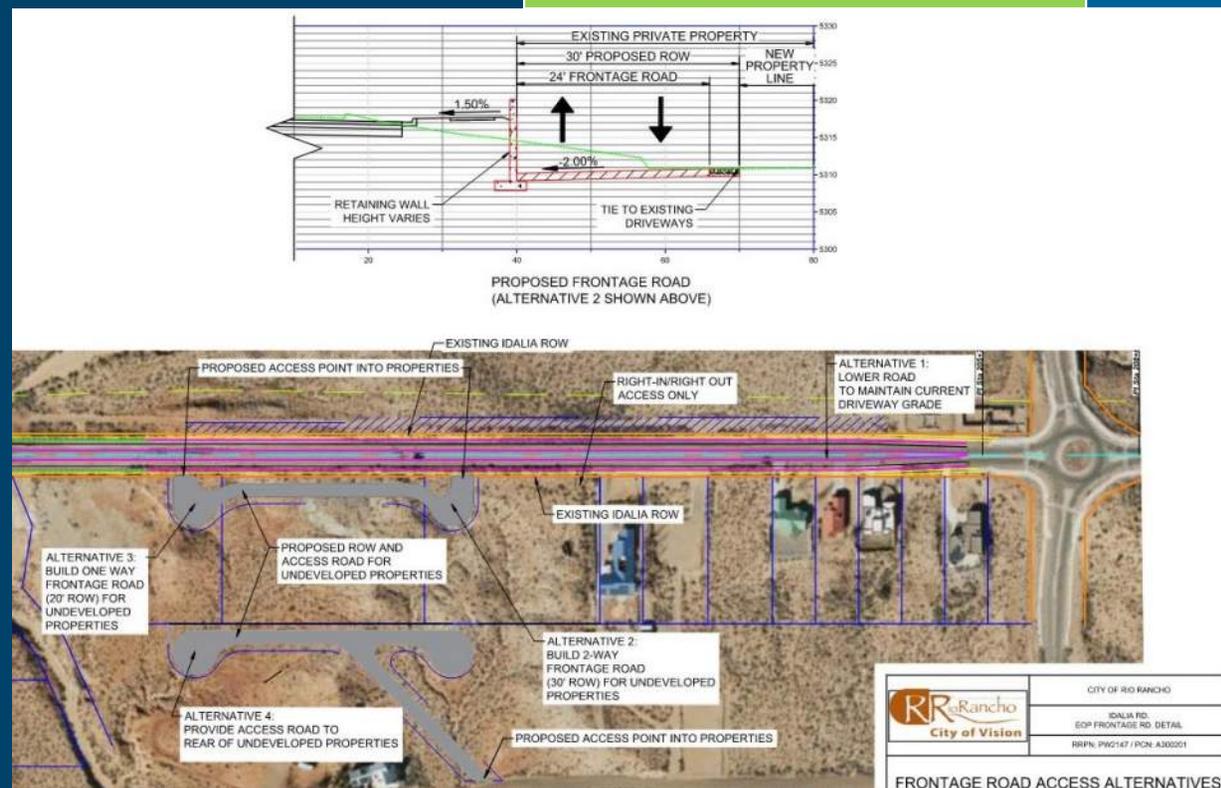
End of Project Access:

Recommend Alternatives 2, 3, and 4 to move into Phase I-B

26/40
24/40

Property Access Alternatives

- Alternative 1: No-Build
- Alternative 2: Lower Road and maintain existing driveway grades
- Alternative 3: Build 2-way Frontage Road from Idalia
- Alternative 4: Build 1-way Frontage Road from Idalia
- Alternative 5: Provide access to back of properties



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – End of Project Property Access

EVALUATION FACTOR	Corridor Access Alternative No. 1: No Build	Corridor Access Alternative 2: Adjacent Access to Exist. ROW	Corridor Access Alternative 3: Access Behind Properties	Corridor Access Alternative 3: Access Behind Properties	Corridor Access Alternative 3: Access Behind Properties
SATISFIES PURPOSE & NEED	<ul style="list-style-type: none"> No Improvements to Existing Access Some Properties will be Landlocked and unusable 	<ul style="list-style-type: none"> Lower Road will flatten slopes for existing driveways for existing homes. Access to existing homes will not change Left-in and Left-out turning movement for existing driveways may be closed due to median curb for safety. Combine with any other Alternatives. 	<ul style="list-style-type: none"> 2-way frontage road for residents will provide access directly in front of their undeveloped properties. Consolidating the access for the property owners will limit number of potential conflict points and increase safety. Combine with Alternative 2. 	<ul style="list-style-type: none"> 2-way frontage road for residents will provide access directly in front of their undeveloped properties. Consolidating the access for the property owners will limit number of potential conflict points and increase safety. Combine with Alternative 2. 	<ul style="list-style-type: none"> Provide Access Road behind undeveloped properties Combine with Alternative 2.
ROW REQUIREMENTS	<ul style="list-style-type: none"> No Right-of-way Impacts 	<ul style="list-style-type: none"> 0 AC. Required. Temporary Construction Easements may be required. 	<ul style="list-style-type: none"> 0.59 AC. Required. Frontage road will require 30' of ROW More ROW required than Alternative 4 but less than Alternative 5. 	<ul style="list-style-type: none"> 0.44 AC. Required. Frontage road will require 30' of ROW Less ROW required than Alternative 3 and Alternative 5. 	<ul style="list-style-type: none"> 1.25 AC. Required. Most ROW required of all Alternatives.
CONSTRUCTION COSTS	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> \$60K Costs include drivepad and earthwork costs only. 	<ul style="list-style-type: none"> \$256K Costs include ROW Estimated costs, pavement, and earthwork. More costly than Alternative 4 but less than Alternative 5. 	<ul style="list-style-type: none"> \$205K Costs include ROW Estimated costs, pavement, and earthwork. Less costly than Alternative 4 and Alternative 5. 	<ul style="list-style-type: none"> \$810K Costs include ROW Estimated costs only. More costly than all other Alternatives due to terrain and needed ROW.
EVALUATION SCORE	Do Not Advance	Recommend to Move Into Phase I-B	Recommend to Move Into Phase I-B	Recommend to Move Into Phase I-B	Do Not Advance
	5	26	24	24	20

IDALIA ROAD PHASE I-A/B STUDY PHASE 1-A INITIAL ALTERNATIVES ANALYSIS



Drainage Alternative – No Build

Do Not Advance into Phase I-B



IDALIA ROAD PHASE I-A/B STUDY

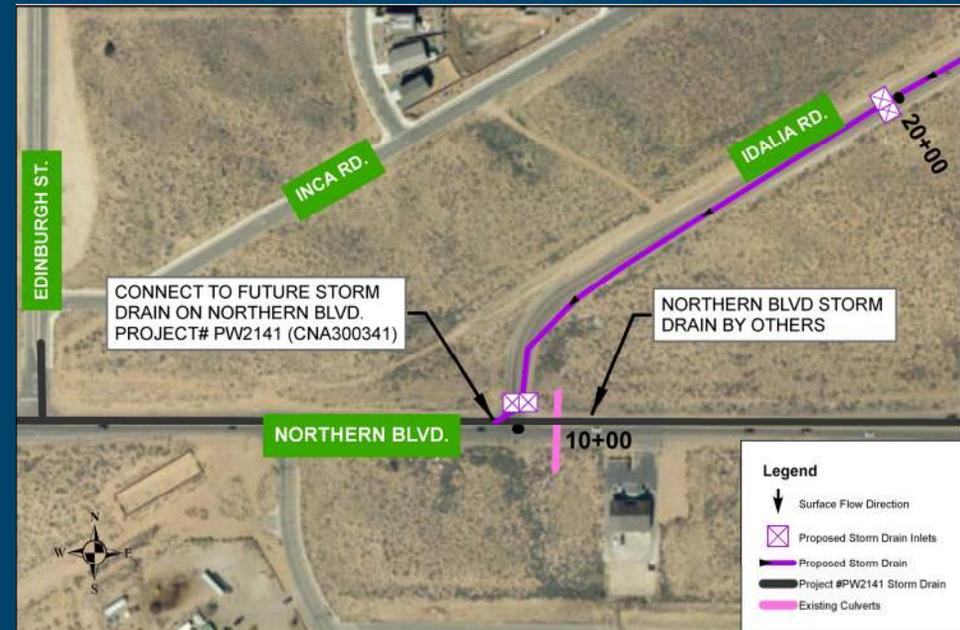
PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Recommended to move into Phase I-B

Northern Boulevard Drainage Alternative A

- **Benefits:**
 - Roadway drainage will be contained in storm drain under road.
- **Challenges:**
 - Available room for additional drainage in Northern Blvd. storm drain must be confirmed
 - Coordination with design team working on Northern Boulevard storm drain



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Alt. A Recommended to move into Phase I-B
Alt. C Recommended to move into Phase I-B

Broadmoor Drainage Alternative A

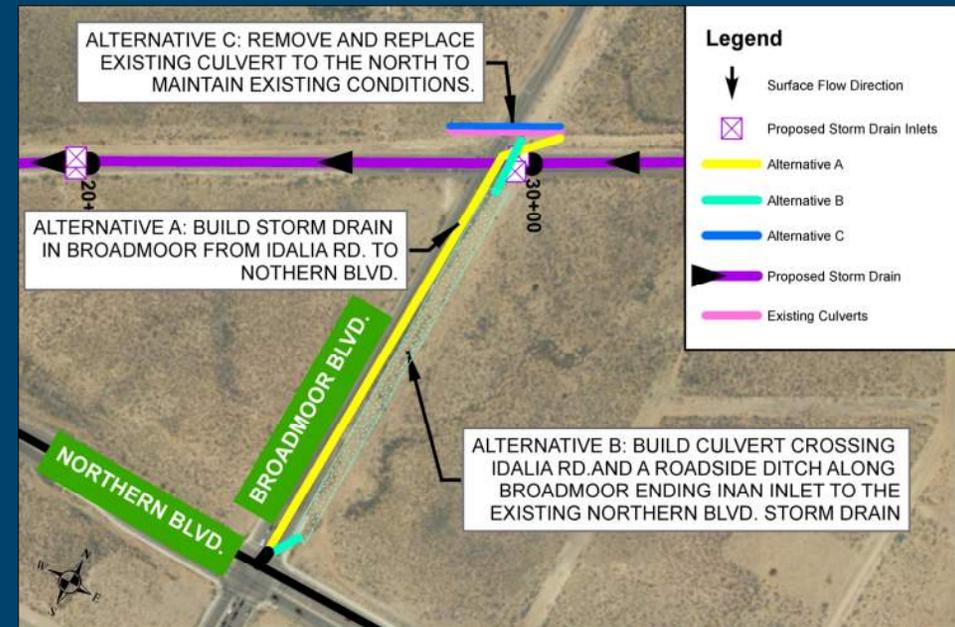
- **Benefits:**
 - Drainage will be contained in storm drain within road.
 - Will not require future demolition. Complies with master drainage plan for surrounding area.
- **Challenges:**
 - Increased cost.

Broadmoor Drainage Alternative B

- **Benefits:**
 - New structures designed for appropriate flow.
 - Complies with master drainage plan for surrounding area.
- **Challenges:**
 - Increased cost and Footprint.
 - Only an interim solution.

Broadmoor Drainage Alternative C

- **Benefits:**
 - Significantly Reduced Cost.
- **Challenges:**
 - Only a temporary solution, that will at some point require storm drain construction as noted in Alternative A.



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Broadmoor Blvd. Drainage Alternatives

EVALUATION FACTOR	No Build Drainage Alternative	Idalia Road at Broadmoor Boulevard Drainage Alternative A	Idalia Road at Broadmoor Boulevard Drainage Alternative B	Idalia Road at Broadmoor Boulevard Drainage Alternative C
SATISFIES PURPOSE & NEED	<ul style="list-style-type: none"> Drainage deficiencies would remain. Scour channels along the roadway would remain and worsen. Large scour at major arroyos would remain and worsen. 	<ul style="list-style-type: none"> Storm drain facilities cross Idalia Road and extend along Broadmoor to Northern Boulevard stub-out. storm drain available for development east of Broadmoor. Runoff contained in pipe, reducing erosion potential along Broadmoor. Culvert at Idalia removed 	<ul style="list-style-type: none"> Storm drain facilities cross Idalia Road and outlet to a ditch extending along Broadmoor to Northern Boulevard stub-out. interim inlet structure would be constructed at the Northern Boulevard stub-out. Potential erosion/scour along the ditch parallel to Broadmoor. Potential for sediment deposition at inlet structure 	<ul style="list-style-type: none"> Existing 36-inch diameter culvert - replaced and move north (nearer gas line) Sized to convey existing condition runoff. Interim solution that would ultimately need to be removed. Drainage facilities are not available for development east of Broadmoor
SAFETY	<ul style="list-style-type: none"> As the offsite areas developed, drainage facilities would be inadequate and runoff would increase, with the potential for flooding. Existing scour channels adjacent to Idalia would encroach on the roadway. 	<ul style="list-style-type: none"> Storm Drain provides reduced driving hazard. 	<ul style="list-style-type: none"> Pipe outlet, ditch, and inlet structure are potential hazards to drivers. 	<ul style="list-style-type: none"> Off-site runoff and sediment would be collected prior to entering the street.
ROW REQUIREMENTS		<ul style="list-style-type: none"> Within the right of way. 	<ul style="list-style-type: none"> Within the right of way. 	<ul style="list-style-type: none"> ROW required north of proposed roadway
CONSTRUCTION COSTS		<ul style="list-style-type: none"> Costs include drainage items for this alternative only Ultimate solution - highest cost, but no interim construction to be removed 	<ul style="list-style-type: none"> Costs include drainage items for this alternative only Interim construction - ditch would be replaced with storm drain in future. 	<ul style="list-style-type: none"> Costs include drainage items for this alternative only. Interim solution - Ultimately Alt A would need to be constructed and this work abandoned.
EVALUATION SCORE	No Build Alternative does not move forward	Recommended to move into Phase I-B	Recommended to move into Phase I-B	Recommended to move into Phase I-B
	13	27	24	20

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



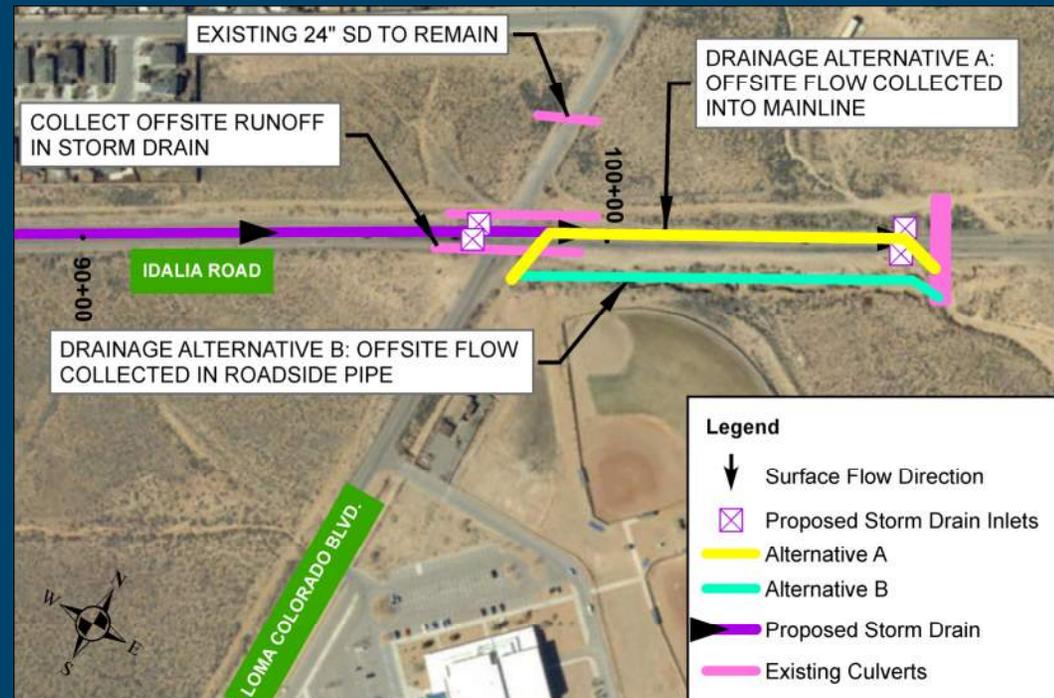
Alt A. Recommended to move into Phase I-B
Alt B. Recommended to move into Phase I-B

Loma Colorado Drainage Alternative A

- **Benefits:**
 - *Drainage will be contained in the storm drain within the road.*
- **Challenges:**
 - *Increased storm drain size under road.*

Loma Colorado Drainage Alternative B

- **Benefits:**
 - *Drainage will be contained within a pipe and removed from public space.*
 - *Reduced pipe size under roadway.*
- **Challenges:**
 - *Increased cost of placing two pipes instead of one.*



IDALIA ROAD PHASE I-A/B STUDY

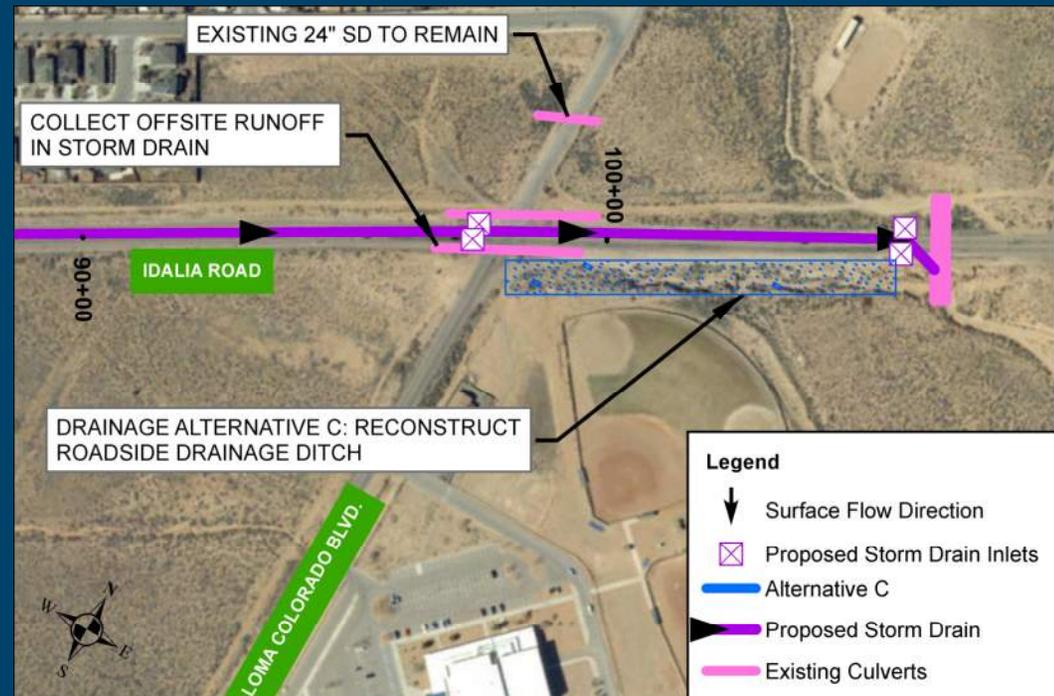
PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Recommended to move into Phase I-B

Loma Colorado Drainage Alternative C

- **Benefits:**
 - *Reduced pipe size under roadway.*
- **Challenges:**
 - *Cost of materials.*
 - *Large quantities of rock lining required to stabilize channel.*
 - *An open channel will remain next to the school.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Loma Colorado Blvd. Drainage Alternatives

EVALUATION FACTOR	No Build Drainage Alternative	Loma Colorado / Idalia Road Drainage Alternative A	Loma Colorado / Idalia Road Drainage Alternative B	Loma Colorado / Idalia Road Drainage Alternative C
SATISFIES PURPOSE & NEED	<ul style="list-style-type: none"> Drainage deficiencies would remain. Scour channels along the roadway would remain and worsen. Large scour at major arroyos would remain and worsen. 	<ul style="list-style-type: none"> 72-inch storm drain in Idalia from Loma Colorado to Lomitas Negras Tributary. Offsite runoff from the south and north, as well as roadway runoff would be brought into the 72-inch storm drain large inlet structure into Lomitas Negras Tributary Surface flow causing severe erosion would be directed into a storm drain. 	<ul style="list-style-type: none"> 36-inch storm drain in Idalia Road / 66-inch storm drain parallel to Idalia on the south side of the sidewalk Extends from Loma Colorado to Lomitas Negras Tributary. Offsite runoff from the south would be collected in the 66-inch storm drain. Roadway runoff would be drained in a 36-inch storm drain within the roadway. Two inlet structures into Lomitas Negras Tributary are needed. Surface flow causing severe erosion is directed to storm drain. 	<ul style="list-style-type: none"> 36-inch storm drain in Idalia Road to drain roadway runoff extending from Loma Colorado to Lomitas Negras Tributary. Offsite runoff from the south would be collected a lined roadside ditch adjacent to Idalia Road. Two inlet structures into Lomitas Negras Tributary would be needed. Private cost sharing may be an option for the ditch construction which is draining runoff from private property.
SAFETY	<ul style="list-style-type: none"> As the offsite areas developed, drainage facilities would be inadequate and runoff would increase, with the potential for flooding. Existing scour channels adjacent to Idalia would encroach on the roadway. 	<ul style="list-style-type: none"> The severe erosion adjacent to Idalia is threatening to encroach on the roadway pavement, causing a significant safety hazard. Draining this runoff to a storm drain would significantly improve safety 	<ul style="list-style-type: none"> The severe erosion adjacent to Idalia is threatening to encroach on the roadway pavement, causing a significant safety hazard. deep erosion cut is a Pedestrian hazard Draining runoff to a storm drain would significantly improve safety 	<ul style="list-style-type: none"> The severe erosion adjacent to Idalia is threatening to encroach on the roadway pavement, causing a significant safety hazard. Draining this runoff via a lined channel would significantly improve safety, although the lined ditch parallel to Idalia and adjacent to the Middle School presents a higher hazard than Alternatives A and B. may need easement from Rio Rancho Middle School - More easement required than Alternatives A and B.
ROW REQUIREMENTS		<ul style="list-style-type: none"> Within existing ROW or easement 	<ul style="list-style-type: none"> May need coordination or easement from Rio Rancho Middle School 	
CONSTRUCTION COSTS		<ul style="list-style-type: none"> Costs include drainage items for this alternative only for comparison purposes. 	<ul style="list-style-type: none"> Costs include drainage items for this alternative only for comparison purposes. 	<ul style="list-style-type: none"> Costs include drainage items for this alternative only for comparison purposes.
EVALUATION SCORE	No Build Alternative does not move forward	Recommended to move into Phase I-B	Recommended to move into Phase I-B	Recommended to move into Phase I-B
	0	5	5	4
	0	5	5	4
	5	5	3	2
	5	5	4	4
	13	26	22	20

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



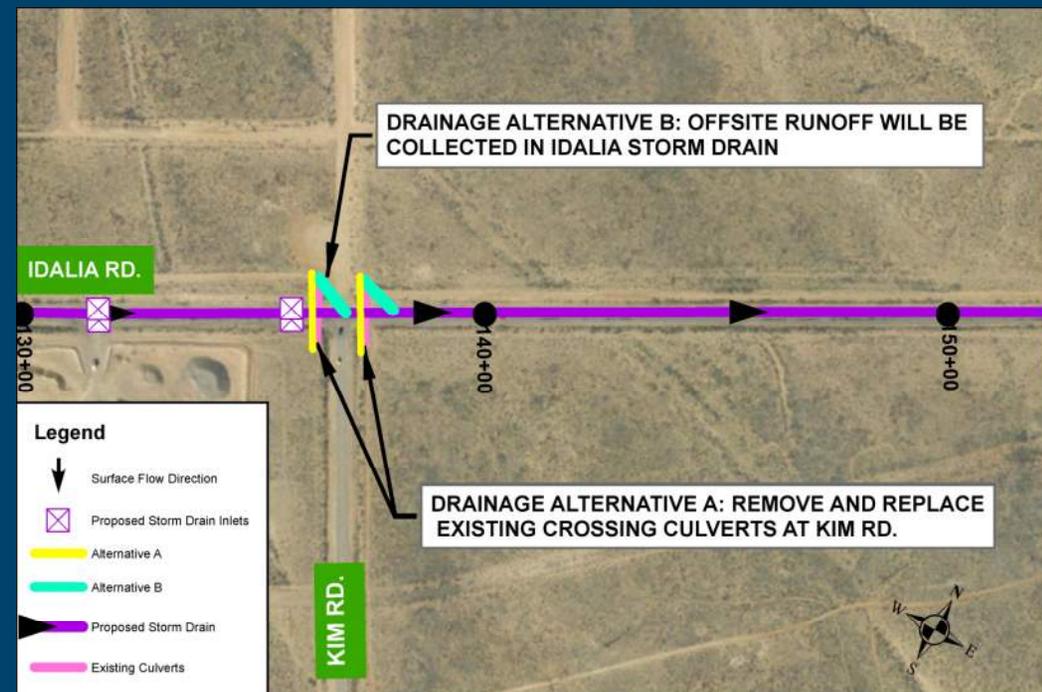
Recommended to move into Phase I-B

Kim Rd. Drainage Alternative A

- **Benefits:**
 - *Drainage will continue to cross under Idalia and drain to its existing location.*
- **Challenges:**
 - *Crossing water may require additional grading east of intersection.*

Kim Rd. Drainage Alternative B

- **Benefits:**
 - *Drainage will be contained in storm drain within the road.*
- **Challenges:**
 - *Increased storm drain size under road.*
 - *Increased cost due to larger pipe sizes.*



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – Kim Rd. Drainage Alternatives

EVALUATION FACTOR	No Build Drainage Alternative	Kim Road Drainage Alternative A	Kim Road Drainage Alternative B
SATSIFIES PURPOSE & NEED	<ul style="list-style-type: none"> ● Drainage deficiencies would remain. ● Scour channels along the roadway would remain and worsen. ● Large scour at major arroyos would remain and worsen. 	<ul style="list-style-type: none"> ● Idalia road runoff will be collected with a storm drain in the street (36-inch), ultimately draining east to La Barranca Arroyo. ● Existing culverts on each side of Kim Road will be removed and replaced. Median type inlets will be used on the upstream side to collect offsite runoff. ● Interim drainage solution until regional facilities are installed. ● Offsite runoff will likely overtop Idalia road in very large storms. ● Drainage on Kim Road, south of Idalia, will continue as it currently does. 	<ul style="list-style-type: none"> ● Idalia road runoff will be collected with a storm drain in the street, draining to La Barranca Arroyo. ● Off-site runoff from the north will be directed into (upsized) 54-inch roadway storm drain, conveying the stormwater to La Barranca Arroyo. ● Median type inlets will be used to collect offsite runoff. ● Drainage on Kim Road, south of Idalia, will continue as it currently does, but the contributing runoff from Idalia Road and the off-site to the north will be redirected to a storm drain.
SAFETY	<ul style="list-style-type: none"> ● As the offsite areas developed, drainage facilities would be inadequate and runoff would increase, with the potential for flooding. ● Existing scour channels adjacent to Idalia would encroach on the roadway. 	<ul style="list-style-type: none"> ● Proposed solution will reduce ponding at the intersection, greatly improving safety 	<ul style="list-style-type: none"> ● Proposed solution will reduce ponding at the intersection, greatly improving safety ● Runoff to Kim Road will be reduced, thus lessening flooding and improving safety
ROW REQUIREMENTS		<ul style="list-style-type: none"> ● Additional ROW may be needed on Kim Road 	<ul style="list-style-type: none"> ● No Additional ROW needed.
CONSTRUCTION COSTS		<ul style="list-style-type: none"> ● Costs include drainage items for this alternative only for comparison purposes. 	<ul style="list-style-type: none"> ● Costs include drainage items for this alternative only for comparison purposes.
EVALUATION SCORE	No Build Alternative does not move forward 13	Recommended to move into Phase I-B 22	Recommended to move into Phase I-B 26

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Iris Road Drainage Alternatives A

- **Benefits:**
 - *The roadway drainage for adjacent homeowners will be improved and will no longer flow down homeowners' driveways.*
- **Challenges:**
 - *Storms in excess of the design storm may still have flows entering homeowner property.*

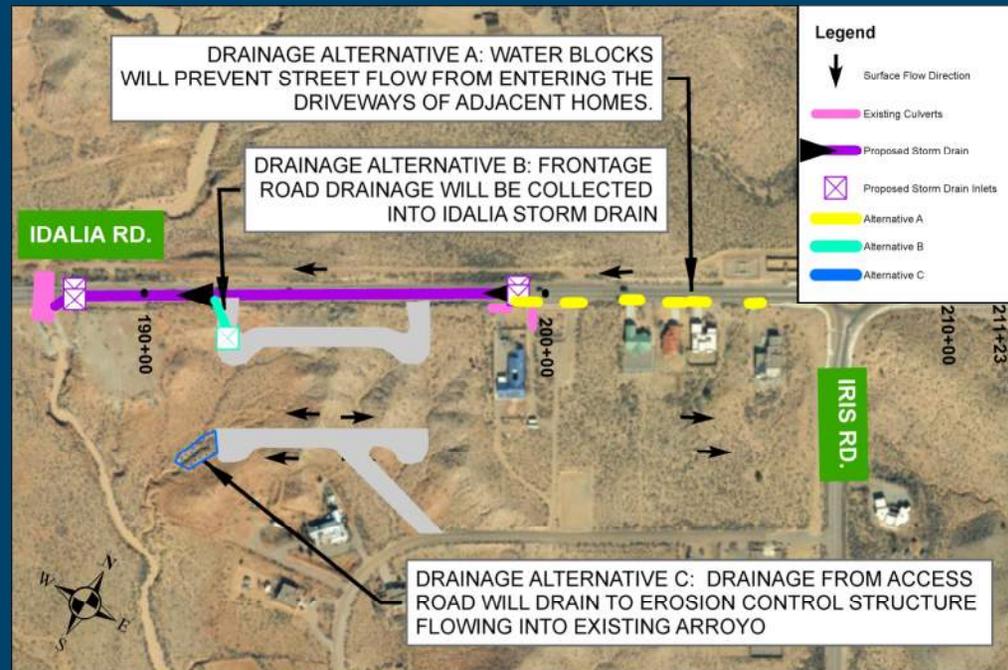
Iris Road Drainage Alternatives B

- **Benefits:**
 - *Frontage road drainage will be contained in storm drain.*
- **Challenges:**
 - *The additional inlet will require maintenance, especially before development of the surrounding area.*

Iris Road Drainage Alternatives C

- **Benefits:**
 - *Utilizing the existing channel will reduce construction cost.*
- **Challenges:**
 - *Structures may need to be replaced in the future as the area becomes more developed.*

Alternative Selection will depend on selection of Roadway Alternatives



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Evaluation Summary – End of Project Drainage Alternatives

EVALUATION FACTOR	No Build Drainage Alternative	Althea Court to Iris Road Drainage Alternative A	Althea Court to Iris Road Drainage Alternative B	Althea Court to Iris Road Drainage Alternative C
SATISFIES PURPOSE & NEED	<ul style="list-style-type: none"> ● Drainage deficiencies would remain. ● Scour channels along the roadway would remain and worsen. ● Large scour at major arroyos would remain and worsen. 	<ul style="list-style-type: none"> ● Idalia road runoff will drain west on Idalia and water blocks at the residential driveways to prevent road runoff from spilling into the private property. ● Driveways to homes may be somewhat steeper. ● Inlets and storm drain would be constructed to drain to existing arroyo at approximate Station 157+50 via rundown. 	<ul style="list-style-type: none"> ● Alternative B provides a Frontage road for the private property approx 2000 ft west of Iris. The Frontage Road would be much lower than Idalia Road and a retaining wall. Frontage Road would be cross-sloped toward the retaining wall and would slope to the west. ● At the west end of the Frontage Road, runoff would drain to a storm drain inlet and then to roadway storm drain. 	<ul style="list-style-type: none"> ● Runoff from the private property south of Idalia drains south to the new access road - collecting in a ditch, approx half draining to the west and half to the east ● Idalia road drainage will remain within the roadway prism. ● At the west end of the Access Road, the stormwater would drain into a small existing arroyo tributary to the main arroyo via a riprap rundown. ● sediment will drift across the Access Road from the earthen ditch.
SAFETY	<ul style="list-style-type: none"> ● As the offsite areas developed, drainage facilities would be inadequate and runoff would increase, with the potential for flooding ● Existing scour channels adjacent to Idalia would encroach on the roadway. 	<ul style="list-style-type: none"> ● This option would reduce runoff onto private property, but there would likely be more runoff in the roadway. Rio Rancho drainage criteria would be met. 	<ul style="list-style-type: none"> ● Frontage Road and retaining wall adjacent to Idalia may cause increased driving hazard. 	<ul style="list-style-type: none"> ● Ditch could fill with sediment and runoff will overtop and spill across the Access Road.
ROW REQUIREMENTS		<ul style="list-style-type: none"> ● No additional ROW expected. 	<ul style="list-style-type: none"> ● ROW would be required for Frontage Road. 	<ul style="list-style-type: none"> ● ROW Required. ● In addition to that required for the roadway, ROW will be required for the ditch - the catch slope on the north side will extend quite a way back onto private property.
CONSTRUCTION COSTS		<ul style="list-style-type: none"> ● Costs include drainage items for this alternative only for comparison purposes. 	<ul style="list-style-type: none"> ● Costs include drainage items for this alternative only for comparison purposes. 	<ul style="list-style-type: none"> ● Costs include drainage items for this alternative only for comparison purposes.
EVALUATION SCORE	No Build Alternative does not move forward	Recommended to move into Phase I-B	Recommended to move into Phase I-B	Do not advance
	13	29	26	18

IDALIA ROAD PHASE I-A/B STUDY PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Environmental Studies

- National Environmental Policy Act (NEPA)
- NMDOT Location Study Procedures
- Field studies and data collection
- Public involvement



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Key Environmental Studies

- Physical Environment:
 - Geology, Soils, Water, Air
- Biological Environment:
 - Vegetation, Wildlife, and Endangered Species
- Cultural Resources:
 - Archaeological Sites, Historic Building
- Human Environment:
 - Socioeconomics, Environmental Justice, Local Community

Other Environmental Considerations

- Land Use
- Noise



IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



Current Study Schedule

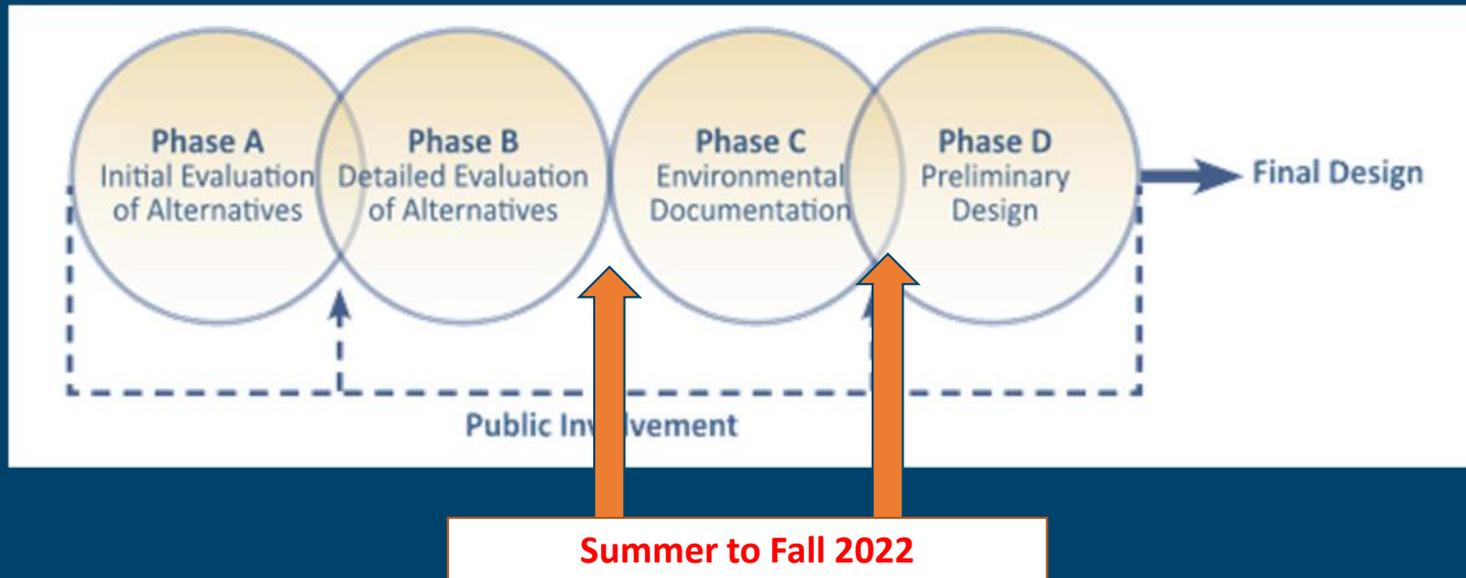
- Existing Conditions Analysis – December 2021
 - Public Meeting No. 1 (December 16th, 2021)
- Phase I-A (Initial Screening of Alternatives) – Spring 2022
 - Public Meeting No. 2 (May 4th, 2022)
- Phase I-B (Detailed Evaluation of Alternatives and Recommendations) – Summer 2022
- Final Phase I-A/B Report – Submit Summer 2022
- Preliminary Design – Begin Fall 2022
 - Public Meeting No. 3 (TBD - Fall 2022)

IDALIA ROAD PHASE I-A/B STUDY

PHASE I-A INITIAL ALTERNATIVES ANALYSIS



- **Next Steps**



QUESTIONS OR COMMENTS?



Call Us

505-278-7066

Email Us

Mikaela.Buscher@nv5.com

Mail Us

NV5

Attn. Mikaela Buscher

4374 Alexander Blvd. NE, Suite K

Albuquerque, NM 87107

Comments are requested by

May 18th

- If you have a question about the project, please raise your virtual hand and the moderator will call on you.
 - ❖ To raise your hand: Go to the reactions button at the bottom of the screen and select "Raise Hand"
- If you feel more comfortable typing your question, our moderator will be fielding questions from the discussion window.
- If you have any additional questions after the meeting, please use to contact information on this slide!