

**CITY OF EL PASO, TEXAS  
AGENDA ITEM  
DEPARTMENT HEAD'S SUMMARY FORM**

**AGENDA DATE:** April 26, 2022  
**PUBLIC HEARING DATE:** N/A

**CONTACT PERSON(S) NAME AND PHONE NUMBER:** Hannah Adele Allen (Williams), (915) 212-0118

**DISTRICT(S) AFFECTED:** Citywide

**STRATEGIC GOAL:** 7 – Enhance and Sustain El Paso's Infrastructure Network  
All

**SUBGOAL:** 7.3 – Enhance a regional comprehensive transportation system  
All

**SUBJECT:**

Presentation update and discussion on the City's Intersection Safety Improvement Program.

**BACKGROUND / DISCUSSION:**

The Intersection Safety Improvement program (ISIP) agreement is a sub-agreement stemming from our 2018 MOU with UTEP.

The implementation of the ISIP has been a collaborative effort between the City of El Paso and the University of Texas at El Paso (UTEP) aimed towards improving safety at street intersections by analyzing data for fatal and serious injury crashes.

**PRIOR COUNCIL ACTION:**

- ❖ Funding approved with FY22 Budget
- ❖ October 12, 2021 – City Council approved Resolution
- ❖ March 15, 2022 – City Council approved Interlocal Agreement extension

**AMOUNT AND SOURCE OF FUNDING:**

\$38,160.00 – General Fund - 1000-532-32020-53203 Public Access Maintenance (Intersection Safety Improvement Program funding) (no change)

**HAVE ALL AFFECTED DEPARTMENTS BEEN NOTIFIED?**  YES  NO

**PRIMARY DEPARTMENT:** Streets and Maintenance

**SECONDARY DEPARTMENT:** N/A

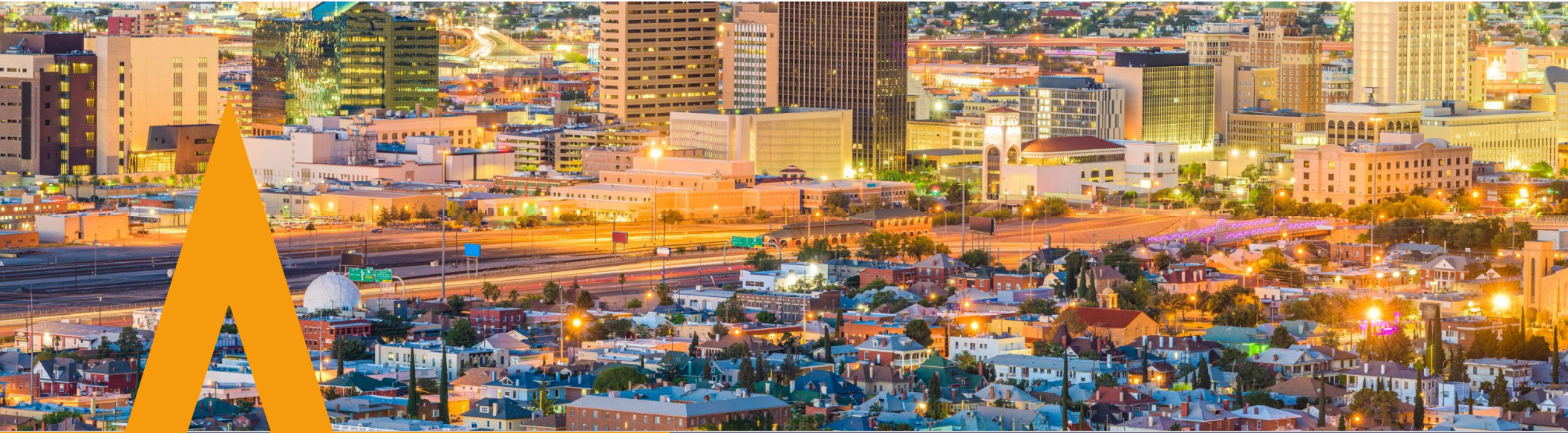
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\*\*\*\*\*REQUIRED AUTHORIZATION\*\*\*\*\*

**DEPARTMENT HEAD:**

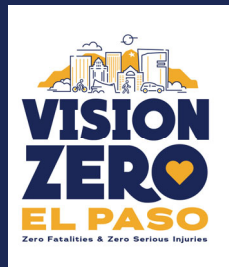
  
\_\_\_\_\_  
Richard Bristol, Director Streets and Maintenance

4-18-22



# Joint Update Presentation

## Intersection Safety Improvement Program (ISIP)



April 26, 2022



# Presentation Overview



- ❖ Program Initiatives
- ❖ Program Development
- ❖ Investment in Traffic Safety
- ❖ Vision Zero Umbrella
- ❖ Project Objective + Scope
- ❖ City + UTEP Team
- ❖ Tasks
  - ❖ Top 20 Intersections
  - ❖ Top 10 Intersections
    - ❖ Proposed Improvements Analysis
    - ❖ Proposed Improvements
- ❖ Next Steps





# Program Initiatives

Align with ALL Strategic Plan Goals:

- Goal 1. Cultivate an Environment Conducive to Strong, Sustainable Economic Development
- Goal 2. Set the Standard for a Safe and Secure City
- Goal 3. Promote the Visual Image of El Paso
- Goal 4. Enhance El Paso's Quality of Life Through Recreational Cultural and Educational Environments
- Goal 5. Promote Transparent and Consistent Communication Amongst All Members of the Community
- Goal 6. Set the Standard for Sound Governance and Fiscal Management
- Goal 7. Enhance and Sustain El Paso's Infrastructure Network
- Goal 8. Nurture and Promote a Healthy, Sustainable Community

# Program Development



# Investment in Traffic Safety



*Lee Trevino Median Enhancements\_Trawood to Montwood (2020 HSIP Project Awarded Funding, \$247,786 construction, 10% City share, for letting of FY 2022)*

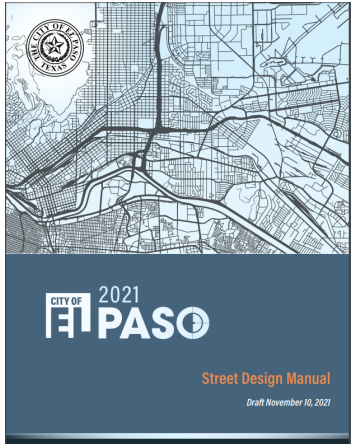


*Selective Traffic Enforcement Program*

# EL PASO VISION ZERO

Zero Fatalities & Zero Serious Injuries

ENGINEERING + EDUCATION + EVALUATION + ENFORCEMENT + EQUITY\*





## Project Objective + Scope

Previous Council Action:	Funding approved with FY22 Budget Interlocal Agreement Approved: October 12, 2021 First Amendment to Interlocal Agreement Approved: March 15, 2022
Entities:	City of El Paso & University of Texas at El Paso
Scope & Purpose:	Citywide; Produce and deliver a written Project Report with a minimum of the top 10 ranked intersections <ul style="list-style-type: none"><li>❖ Countermeasures</li><li>❖ Conceptual renderings</li><li>❖ Preliminary cost estimate</li></ul>
Project Duration:	7 months
Start of Agreement:	October 18, 2021
End:	May 17, 2022



# Program Team



Departmental  
Management



William Aguirre  
GIS Analyst



Hannah Williams Allen  
Traffic Engineering  
Associate



Alfredo Austin  
Bicycle Program  
Coordinator



Sergio Reyes  
P.E.  
Traffic Engineer



Jiann-Shing Yang  
P.E., PTOE  
City Traffic Engineer



Front Left: Diego Mendoza, UGRAD Research Assistant  
Front Center: Larissa Hernandez, Graduate Research Assistant  
Front Right: Dr. Kelvin Cheu, Ph.D., P.E., Professor  
Back Center: Arath Jauregui, UGRAD Research Assistant



# Tasks



## Review existing tools & practices

- TxDOT HSIP
  - Costs of crashes by severity
  - Cost of improvements
  - Crash reduction factors

## Data Collection & processing

- **Collision Data**
- TxDOT vs City maintained roads
- HSIP calcs
- Collision diagram template
- Signal timing plans
- Past/Present/Future project plans

## Crash Analysis (2016 – 2021)

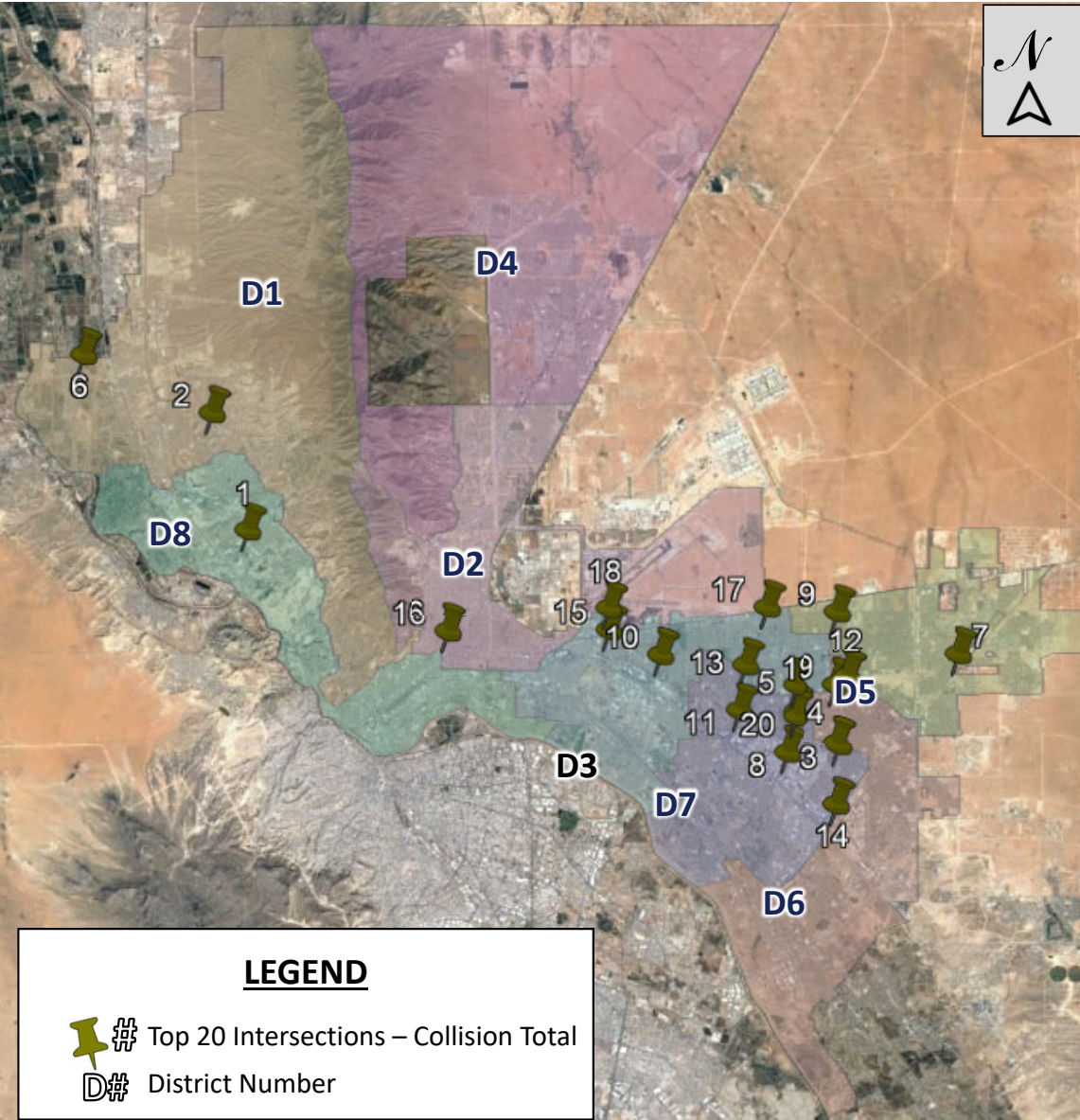
- Filtered 95k+ ↓ to 35k+
  - Out of city limits
  - On TxDOT managed/maintained roads
  - Not at intersection
- Crash severity
- Road Names
- **Crash Frequency Table**
- **Major Findings**

## Intersection Identification

- **Cost of Crash**
  - National Safety Council vs TxDOT Highway Safety Improvement Program (HSIP)
- **Ranking**
  - Top 20 Intersections

## Joint Proposed Improvements & Cost Estimation

- Tier 1
- Tier 2
- Tier 3



# Top 20 Intersections\* – Collision Total

\*City Maintained ROW\*



Ranking (#)	Road1	Road2	TOTAL	Fatal	Serious	Minor	Unknown	District
1	MESA HILLS DR	SUNLAND PARK DR	140	0	1	25	114	8
2	REDD RD	RESLER DR	118	0	1	31	86	1
3	GEORGE DIETER DR	PELLICANO DR	117	0	1	30	86	7
4	LEE TREVINO DR	VISTA DEL SOL DR	94	0	0	33	61	7
5	LEE TREVINO DR	TRAWOOD DR	85	0	0	29	56	7
6	ARTCRAFT RD	UPPER VALLEY RD	82	0	2	14	66	1
7	EDGEMERE BLVD	TIERRA ESTE RD	82	0	0	25	57	5
8	LEE TREVINO DR	ROJAS DR	81	0	1	18	62	7
9	EDGEMERE BLVD	GEORGE DIETER DR	81	0	0	21	60	3 & 5
10	HAWKINS BLVD	VISCOUNT BLVD	78	0	2	18	58	3
11	VISTA DEL SOL DR	YARBROUGH DR	78	1	0	16	61	7
12	MONTWOOD DR	TRAWOOD DR	76	0	0	24	52	6
13	MONTWOOD DR	YARBROUGH DR	73	2	0	24	47	3 & 7
14	ESTHER LAMA DR	GEORGE DIETER DR	73	0	1	24	48	6 & 7
15	AIRWAY BLVD	EDGEMERE BLVD	72	0	0	28	44	3
16	MONTANA AVE	PIEDRAS ST	67	0	1	26	40	2 & 8
17	EDGEMERE BLVD	YARBROUGH DR	65	0	0	26	39	3
18	AIRWAY BLVD	BOEING DR	59	0	2	10	47	3
19	GEORGE DIETER DR	TRAWOOD DR	58	1	1	12	44	6
20	LA QUINTA PL	LEE TREVINO DR	54	0	2	24	28	7

### LEGEND

- Top 20 Intersections – Collision Total
- District Number



# TxDOT Collision Evaluation Process Highway Safety Improvement Program (HSIP)

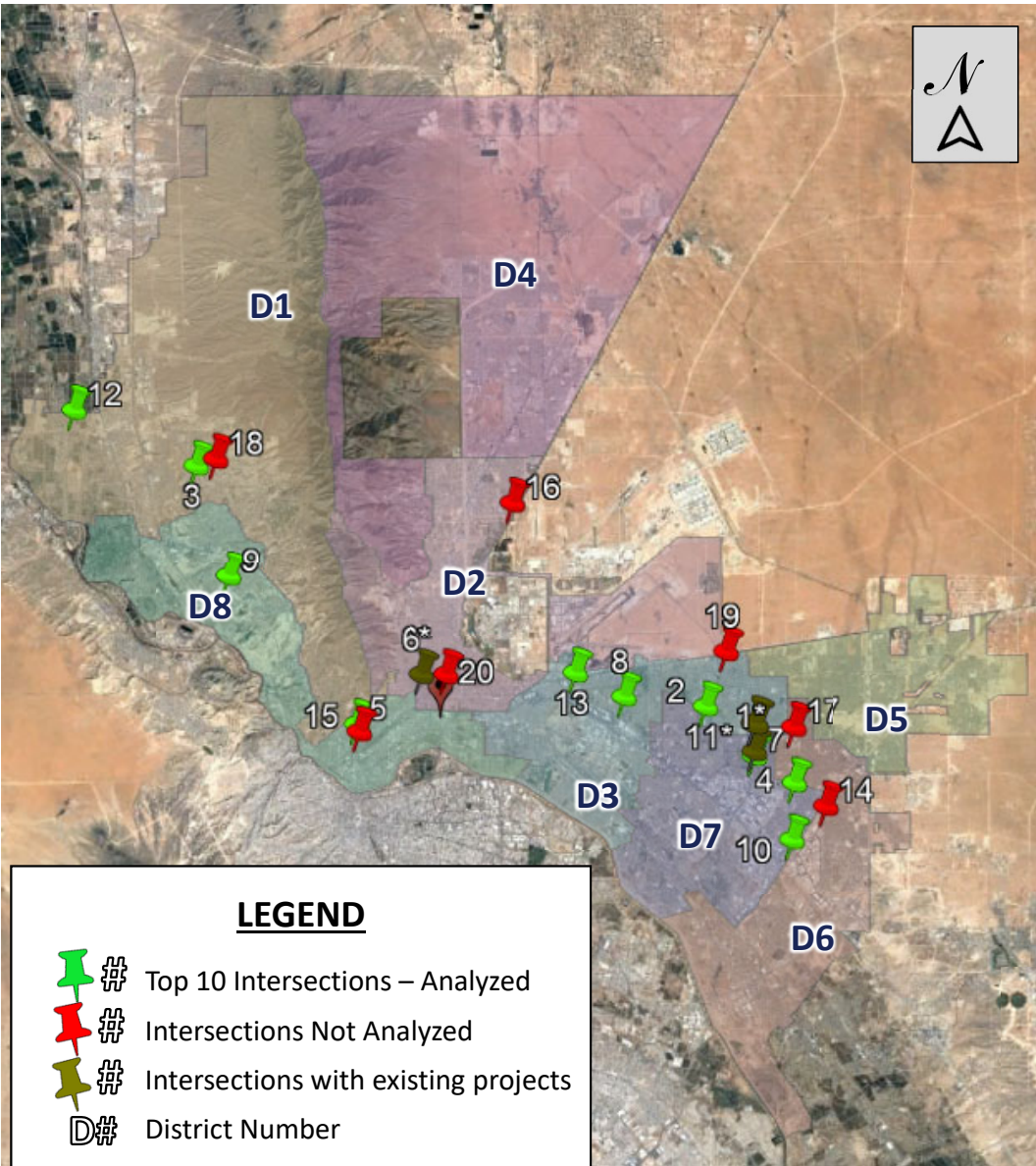


TxDOT formulas for competitive ranking process when submitting HSIP projects.



# Top 20 Intersections\* – Cost Impact

\*City Maintained ROW\*



Ranking	Road1	Road2	Cost Impact	District
1*	LA QUINTA PL	LEE TREVINO DR	\$19,880,000	7
2	MONTWOOD DR	YARBROUGH DR	\$19,880,000	3 & 7
3	REDD RD	RESLER DR	\$19,820,000	1
4	GEORGE DIETER DR	PELLICANO DR	\$19,300,000	7
5	CAMPBELL ST	MONTANA AVE	\$17,280,000	8
6*	MONTANA AVE	PIEDRAS ST	\$17,220,000	2 & 8
7	LEE TREVINO DR	VISTA DEL SOL DR	\$17,160,000	7
8	HAWKINS BLVD	VISCOUNT BLVD	\$16,760,000	3
9	MESA HILLS DR	SUNLAND PARK DR	\$16,700,000	1
10	ESTHER LAMA DR	GEORGE DIETER DR	\$16,180,000	6 & 7
11*	LEE TREVINO DR	TRAWOOD DR	\$15,080,000	7
12	ARTCRAFT RD	UPPER VALLEY RD	\$14,680,000	3
13	AIRWAY BLVD	EDGEMERE BLVD	\$14,560,000	3
14	PELLICANO DR	PULLMAN DR	\$14,160,000	6
15	KANSAS ST	MISSOURI AVE	\$14,100,000	8
16	DIANA DR	RAILROAD DR	\$13,640,000	2
17	GEORGE DIETER DR	TRAWOOD DR	\$13,640,000	6
18	REDD RD	WESTWIND DR	\$13,640,000	1
19	EDGEMERE BLVD	YARBROUGH DR	\$13,520,000	3
20	COPIA ST	MONTANA AVE	\$13,060,000	2

\*Existing Project





# Top 20 Intersections – Cost of Impact vs Collision Total

\*City Maintained ROW



Rank by Cost	Road1	Road2	Total \$	Rank by Total Collision	Total #
1*	LA QUINTA PL	LEE TREVINO DR	\$19,880,000	20	54
2	MONTWOOD DR	YARBROUGH DR	\$19,880,000	13	73
3	REDD RD	RESLER DR	\$19,820,000	2	118
4	GEORGE DIETER DR	PELLICANO DR	\$19,300,000	3	117
5	CAMPBELL ST	MONTANA AVE	\$17,280,000	24	48
6*	MONTANA AVE	PIEDRAS ST	\$17,220,000	16	67
7	LEE TREVINO DR	VISTA DEL SOL DR	\$17,160,000	4	94
8	HAWKINS BLVD	VISCOUNT BLVD	\$16,760,000	10	78
9	MESA HILLS DR	SUNLAND PARK DR	\$16,700,000	1	140
10	ESTHER LAMA DR	GEORGE DIETER DR	\$16,180,000	14	73
11*	LEE TREVINO DR	TRAWOOD DR	\$15,080,000	5	85
12	ARTCRAFT RD	UPPER VALLEY RD	\$14,680,000	6	82
13	AIRWAY BLVD	EDGEMERE BLVD	\$14,560,000	15	72
14	PELLICANO DR	PULLMAN DR	\$14,160,000	25	44
15	KANSAS ST	MISSOURI AVE	\$14,100,000	23	50
16	DIANA DR	RAILROAD DR	\$13,640,000	30	32
17	GEORGE DIETER DR	TRAWOOD DR	\$13,640,000	19	58
18	REDD RD	WESTWIND DR	\$13,640,000	26	43
19	EDGEMERE BLVD	YARBROUGH DR	\$13,520,000	17	65
20	COPIA ST	MONTANA AVE	\$13,060,000	21	51
*Existing projects			<b>BOLD</b> – Top 10 Intersections Being Analyzed		

# Proposed Improvement Process

## Collision Diagram Analysis

## Review Existing Projects + Signal Timing

## Site Investigation

**Contributing Factors (Investigator's Opinion)**

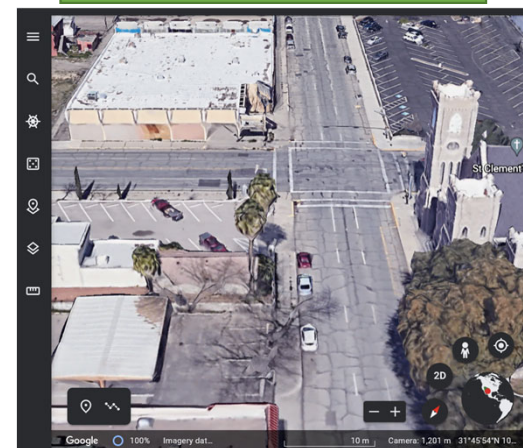
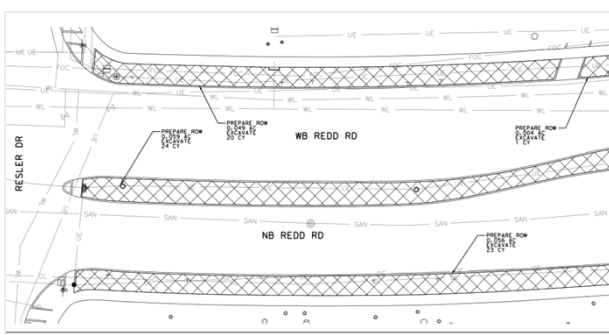
Unit	Category	Yes/No/Code	Contributing	Yes/No/Code
1	14			

**Investigator's Narrative Opinion of What Happened**  
(Must Address Driver's Viewpoint)

500 Montana is a four lane, two way, roadway for east and west bound traffic. 800 North Campbell is a three lane, one way, roadway for north bound traffic. Unit #1 was traveling west bound on the #1 lane. Unit #2 was traveling north bound on the #2 lane. The driver of unit #1 advised he was traveling north bound and when he was passing through the intersection he felt the impact. The driver of unit #2 stated she was traveling west bound and when she was going to pass through the intersection she observed unit #2. The driver of unit #1 advised she was not able to stop and collided into unit #2. The driver of unit #1 stated she did not pay attention that the traffic light was red. The driver of unit #2 was cited for a red light violation (missing the collision). No injuries were reported and no witnesses were found at the scene.

Field Diagram - Not to Scale

Not To Scale



**Accident History**

DATE TIME CASE-ID	TIME	DATE	TIME	TIME	TIME
06/21/19 1040 19-172076	08/09/19 1651 19-201203	10/27/19 0748 19-300059	12/31/19 1514 19-365116	11/06/20 2110 20-311199	07/26/21 1250 21-207119
08/15/19 0347 19-229047	03/20/20 1444 20-080122	12/30/20 1407 20-265103	06/23/21 1010 21-174080	07/08/21 2041 21-099237	04/11/19 0855 19-101050
					10/25/19 1615 19-298189
					01/25/20 1230 20-030066

**ACCIDENTS TOTALS 18**

**SYMBOLS**

- MOVING VEHICLE
- PARKED VEHICLE
- FIXED OBJECT
- FATAL COLLISION
- INJURY COLLISION

**TYPES OF COLLISION**

- HEAD ON
- REAR END
- SIDE SWIPES
- OUT OF CONTROL
- LEFT TURN
- RIGHT ANGLE

**INTERSECTION:** CAMPBELL ST. AND MONTANA AVE.  
**PERIOD:** 36 MONTHS YEAR: 2023-2022 BY: ISAAC MEDINA (UTEP) DATE: 05\_APR\_2022

**CITY OF EL PASO**  
STREETS AND MAINTENANCE / TRANSPORTATION MANAGEMENT  
TRAFFIC SIGNAL TIMING SHEET

LOCATION: MONTANA & CAMPBELL ADDRESS: 1-8-108

SYSTEM ID: 109

**Table A: Controller Timing Information**

Interval Name	Phase Description					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Minimum Green	15	15	15	15	15	15
Vehicle Detection Gap	2	2	2	2	2	2
Maximum Green	50	50	50	50	50	50
Yellow Change Interval	2	2	2	2	2	2
Red Clearance Interval	2	2	2	2	2	2
Preemption Walk	15	15	15	15	15	15
Preemption Change Interval	15	15	15	15	15	15
Preemption Full Clearance	15	15	15	15	15	15

**Table B: Detector Schedule**

Detector Name	Detector Type	Day of Week	Start	End
CAMPBELL NB	DETECTOR	ALL DAY		
MONTANA EBWB	DETECTOR	ALL DAY		

**Table C: Detector Settings**

Detector Name	Detector Type	Day of Week	Start	End
CAMPBELL NB	DETECTOR	ALL DAY		
MONTANA EBWB	DETECTOR	ALL DAY		



# Collision Diagram Analysis

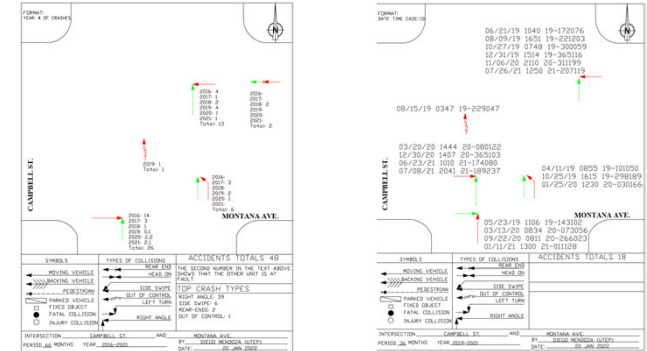
## Review Crash Report (State Database)

Unit #	3/ Contributory Factors Investigator's Opinion			3/ Vehicle Defects Investigator's Opinion			Environmental and Roadway Conditions						
	Controlled	Minor Contrib	Contributing	Minor Contrib	Contributing	Major Contrib	38 Weather Cond.	39 Light Cond.	40 Entry/Exit Road	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
1	16						1	1	97	1	1	1	17

**Investigator's Narrative Opinion of What Happened**  
(Make Additional Sheets if Necessary)

500 Montana is a four lane, two way, roadway for east and west bound traffic. 600 North Campbell is a three lane, one way, roadway for north bound traffic. Unit #1 was traveling west bound on the #1 lane. Unit #2 was traveling south bound on the #2 lane. The driver of unit #2 advised he was traveling south bound and when he was passing through the intersection he felt the impact. The driver of unit #1 stated she was traveling west bound and when she was going to pass through the intersection she observed unit #2. The driver of unit #1 advised she was not able to stop and collided into unit #2. The driver of unit #1 stated she did not pay attention that the traffic light was red. The driver of unit #1 was cited for a red light violation causing the collision. No injuries were reported and no witnesses were found at the scene.

## Crash Diagram Summary (2016 – 2021)



## Major Findings

### Rear-end

#### Contributing Factors:

- Speeding
- Driver Inattention
- Tailgating

### Left-Turn

#### Contributing Factors:

- Failed to Yield ROW
- Speeding
- Driver Inattention

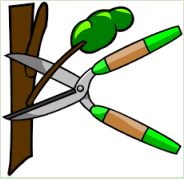
### Right Angle

#### Contributing Factors:

- Disregard Traffic Signal
- Speeding
- Driver Inattention



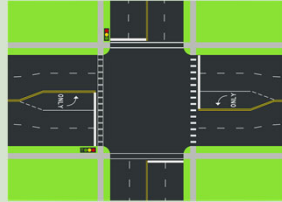
## Tier 1



Tree trimming



Install signs



Refresh markings



Install Backplates

- Realign/add signal heads
- Replace + extend cross arms
- Standardize crosswalks (Schools → Citywide)
- Rumble strips\*

## Tier 2

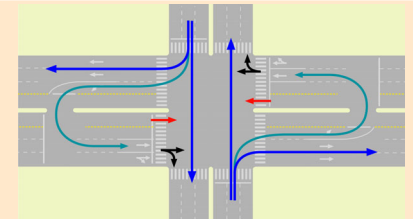
Speed Feedback Sign



Flashing Warning Sign

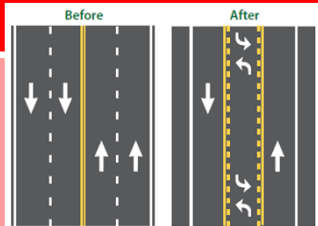


Restrict Turning Movements



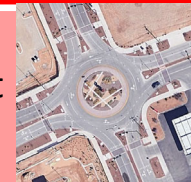
## Tier 3

Lane Reduction / Road Diet



Curb Extensions

Roundabout



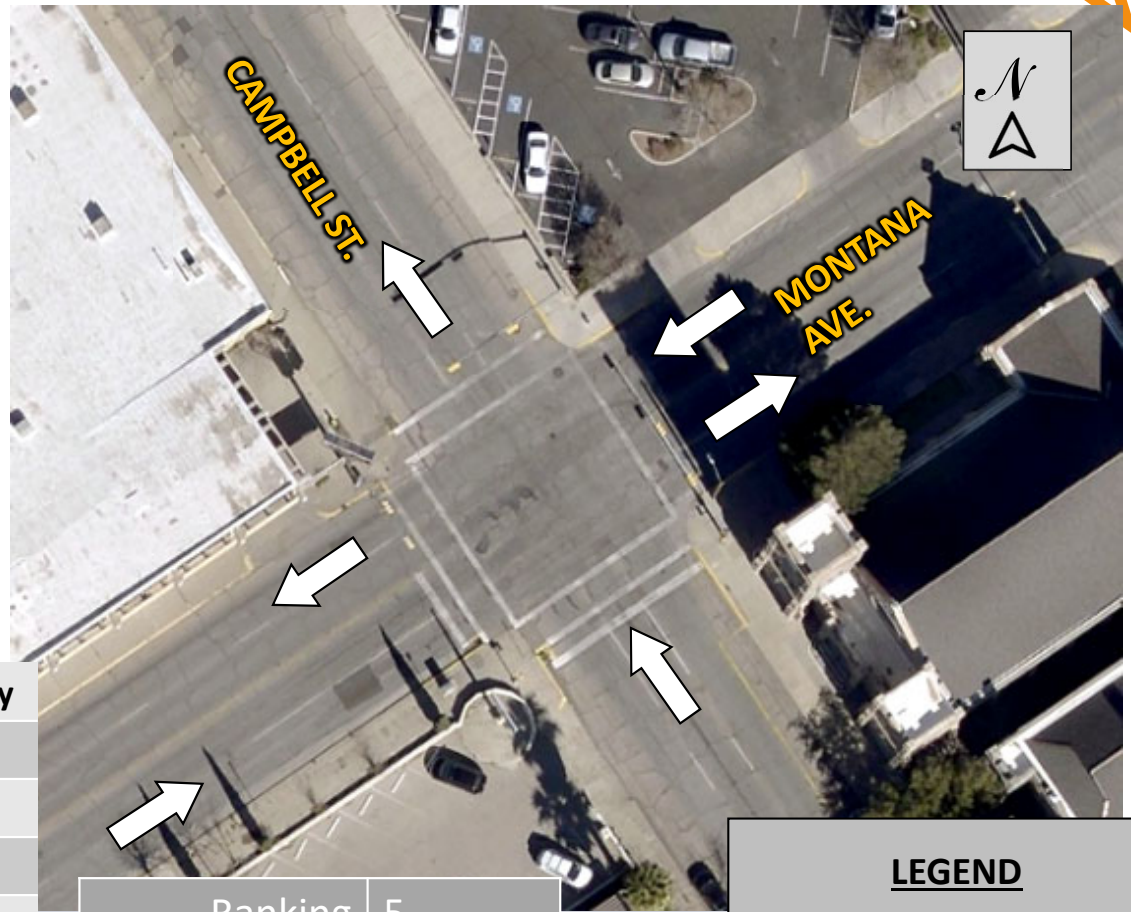
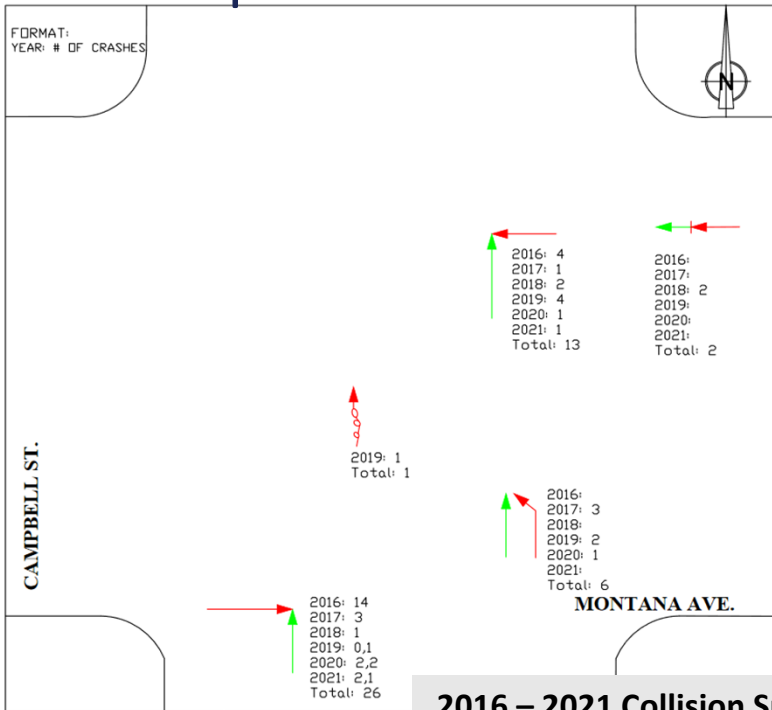
Complete Street





# Joint Proposed Improvements

## 5. Campbell St and Montana Ave – Existing Conditions



**2016 – 2021 Collision Summary**

Right Angle	39	81%
Sideswipe	6	13%
Rear-end	2	4%
Lost Control	1	2%
<b>TOTAL</b>	<b>48</b>	

**Contributing Factors**

- Speeding
- Inattention
- Disregard Traffic Signal

Ranking	5
District	8

**LEGEND**

↑ Direction of traffic

# Joint Proposed Improvements

## 5. Campbell St and Montana Ave – Proposed Improvements

Campbell St. (northbound)  
EXISTING



Campbell St. (northbound)  
PROPOSED



1. Replace mast arm with longer arm
2. Add signal head
3. Add backplates to signal heads
4. Add lane assignment signs

ALL  
APPROACHES

# Joint Proposed Improvements

## 5. Campbell St and Montana Ave – Proposed Improvements

Montana Ave (eastbound)  
EXISTING



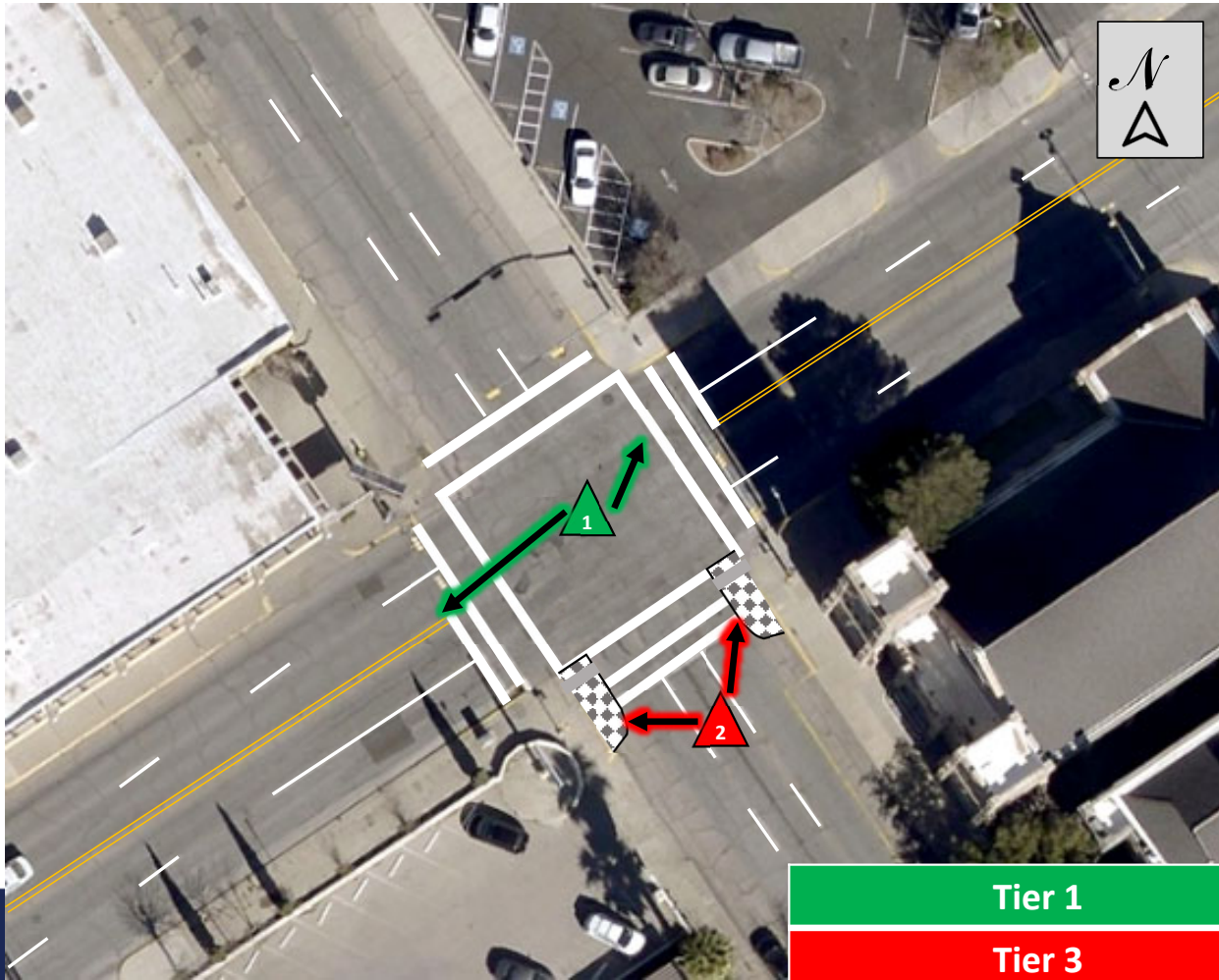
Montana Ave (eastbound)  
PROPOSED



Install Speed Feedback Sign

# Joint Proposed Improvements

## 5. Campbell St and Montana Ave – Proposed Improvements



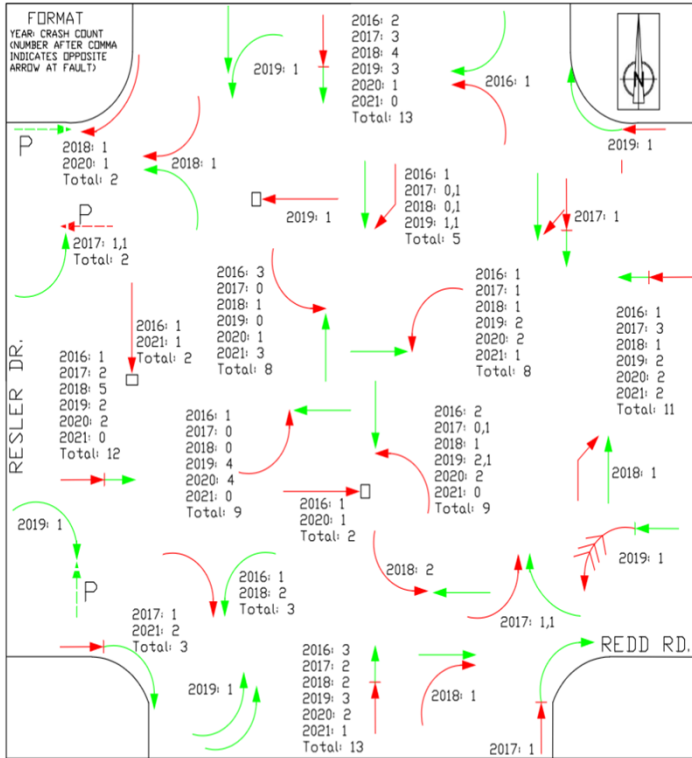
- 1. Repaint all pavement markings
- 2. Install curb extensions

Tier 1

Tier 3

# Joint Proposed Improvements

## 3. Redd Rd & Resler Dr – Existing Conditions



**2016 – 2021 Collision Summary**

Rear-end	56	47%
Sideswipe	6	5%
Left-turn	48	41%
Other	8	7%
<b>TOTAL</b>	<b>118</b>	



**Contributing Factors**

- Speeding
- Inattention

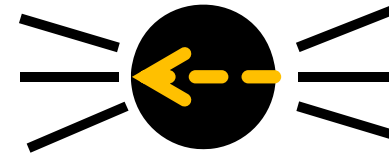
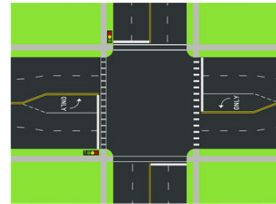
Ranking	3
District	1



## 3. Redd Rd & Resler Dr – Proposed Improvements

### Tier 1

- Refresh/Install Pavement Marking
- Install raised pavement markers (RPMs)
- Backplates
- Install flashing yellow left turn arrow + signs
- Install at-grade islands (striping + RPMs)



### Tier 2

- Install raised medians

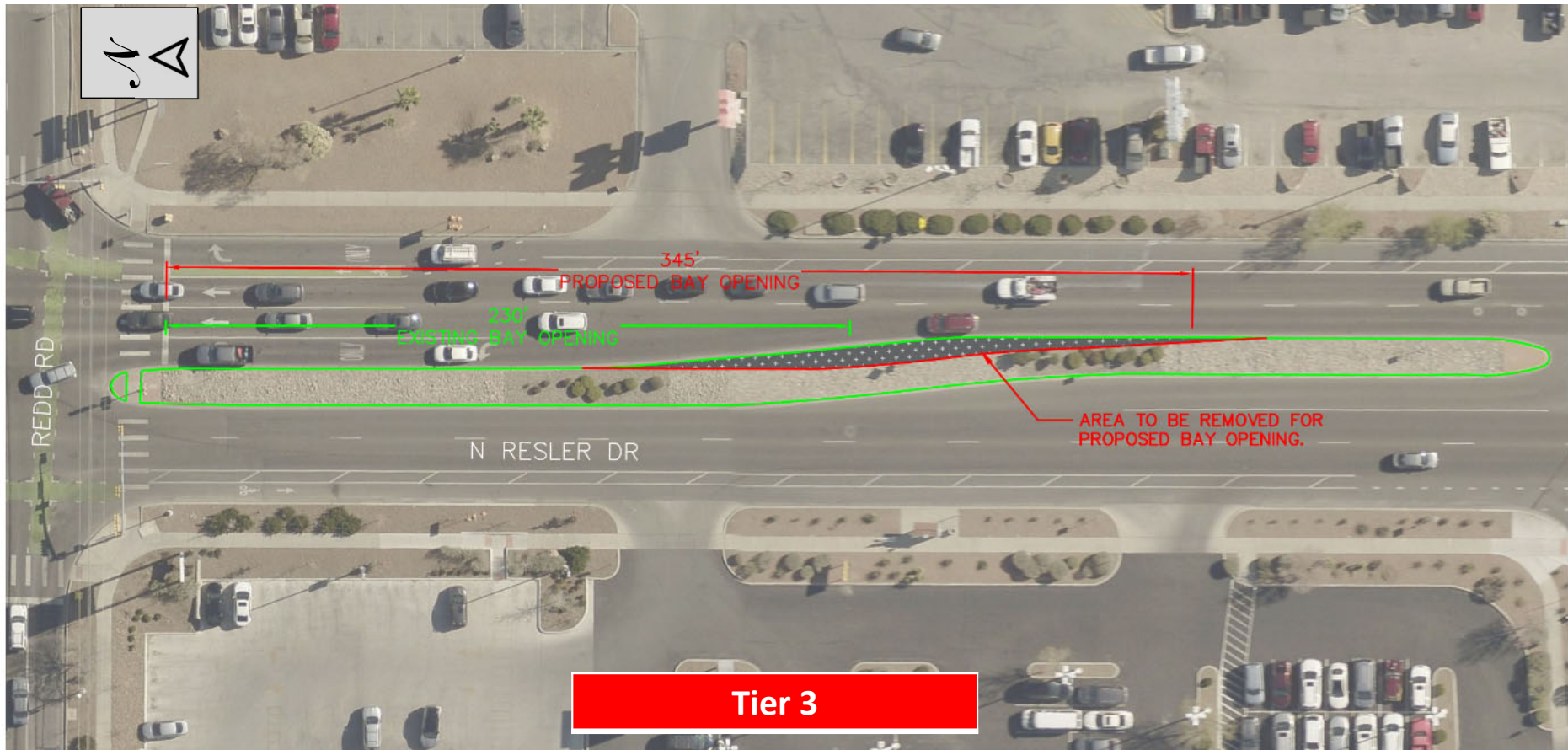


### 2019 Resurfacing Project at Redd & Resler



# Joint Proposed Improvements

## 3. Redd Rd & Resler Dr – Proposed Improvements: Extend Left Turn Bay





## Next Steps

Milestone: May 17, 2022

- ❖ Final Report
  - ❖ Countermeasures (Tiers 1 -3)
  - ❖ Conceptual renderings
  - ❖ Preliminary cost estimate
  - ❖ Finalized Benefit-Cost Analysis
- ❖ Future partnership





 **Mission**

Deliver exceptional services to support a high quality of life and place for our community

 **Vision**

Develop a vibrant regional economy, safe and beautiful neighborhoods and exceptional recreational, cultural and educational opportunities powered by a high performing government

 **Values**

Integrity, Respect, Excellence, Accountability, People



## Misión

Brindar servicios excepcionales para respaldar una vida y un lugar de alta calidad para nuestra comunidad



## Visión

Desarrollar una economía regional vibrante, vecindarios seguros y hermosos y oportunidades recreativas, culturales y educativas excepcionales impulsadas por un gobierno de alto desempeño



## Valores

Integridad, Respeto, Excelencia, Responsabilidad, Personas

# Backup



# Top 20 Intersections – Collision Total

\*City Maintained ROW\*



Ranking (#)	Road1	Road2	TOTAL	Fatal	Serious	Minor	Unknown	District
1	MESA HILLS DR	SUNLAND PARK DR	140	0	1	25	114	8
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19	GEORGE DIETER DR	TRAWOOD DR	58	1	1	12	44	6
20	LA OLIVIA PI	LEE TREVINO DR	54	0	2	24	28	7

# Top 20 Intersections – Cost Impact

\*City Maintained ROW\*



Ranking (\$)	Road1	Road2	Cost Impact	District
1*	LA QUINTA PL	LEE TREVINO DR	\$19,880,000	7
2	MONTWOOD DR	YARBROUGH DR	\$19,880,000	3 & 7
3	REDD RD	RESLER DR	\$19,820,000	1
4	GEORGE DIETER DR	PELLICANO DR	\$19,300,000	7
5	CAMPBELL ST	MONTANA AVE	\$17,280,000	8
6*	MONTANA AVE	PIEDRAS ST	\$17,220,000	2 & 8
7	LEE TREVINO DR	VISTA DEL SOL DR	\$17,160,000	7
8	HAWKINS BLVD	VISCOUNT BLVD	\$16,760,000	3
9	MESA HILLS DR	SUNLAND PARK DR	\$16,700,000	1
10	ESTHER LAMA DR	GEORGE DIETER DR	\$16,180,000	6 & 7
11*	LEE TREVINO DR	TRAWOOD DR	\$15,080,000	7
12	ARTCRAFT RD	UPPER VALLEY RD	\$14,680,000	3
13	AIRWAY BLVD	EDGEMERE BLVD	\$14,560,000	3
14	PELLICANO DR	PULLMAN DR	\$14,160,000	6
15	KANSAS ST	MISSOURI AVE	\$14,100,000	8
16	DIANA DR	RAILROAD DR	\$13,640,000	2
17	GEORGE DIETER DR	TRAWOOD DR	\$13,640,000	6
18	REDD RD	WESTWIND DR	\$13,640,000	1
19	EDGEMERE BLVD	YARBROUGH DR	\$13,520,000	3
20	CORIA ST	MONTANA AVE	\$13,060,000	2