MCKINLEY GRADE SEPARATION PROJECT
STUDY SESSION
JUNE 28, 2017

What is an "At-Grade Crossing"?

Also known as a 'railroad crossing' - a location where a roadway and sidewalk cross railroad tracks at the same level as the street. Drop-down gates and red flashing lights are used to stop traffic when a train approaches.

What is a "Grade Separation"?

A bridge that allows the public to travel under or over the railroad, or a railroad to travel under or over the roadway.

September 26, 2007 Study Session

In the approved and published Project Study Report (PSR), 4 alternatives were presented; 2 were determined feasible:

- ☐ **Alternative 1: Elevated McKinley Street & Sampson Avenue**
- ☑ **Alternative 2: Elevated Railroad Tracks**
- ☐ **Alternative 3: Elevated McKinley Street without direct connection to Sampson Avenue**
- ☑ **Alternative 4: Elevated McKinley Street with direct connection to Sampson Avenue**

McKinley / BNSF Crossing

Train Volumes				
	Freight	Metrolink *	Amtrak	Total
2011	42 **	23	3	68
2035 (Projected)	91	42	4	137

* Includes 91/Perris Valley and Inland Empire-Orange County Lines (normal operating schedule)

** Year 2011 freight train volume was factored up by 2.71% consistent with SCAG growth factors

Train Length & Speed			
	Freight	Metrolink	Amtrak
Train Length - 2011	5,000 ft	500 ft	1,000 ft
Train Length - 2035 (Projected)	6,500 ft	700 ft	1,000 ft
Train Speed	40 mph	55 mph	55 mph

McKinley / BNSF Crossing

Vehicle Delay & Gate-Down

	Vehicle Delays Per Day (hours)	Gate-Down Time Per Day (minutes)
2010	56.72	105.35
2035 (Projected)	322.63	261.45

Vehicle Emissions

	PM_{10} Particulate Matter	NO_X Nitrogen Oxide	ROG Reactive Organic Gas	CO Carbon Monoxide
2010	4.86	315.64	136.02	1.68
2035 (Projected)	27.63	1,795.56	773.75	9.57

McKinley / BNSF Crossing

McKinley Railroad Crossing Accidents Record *			
	Accident Type	**Position**	**User Condition**
9/20/2016	Pedestrian vs Train	Stopped on crossing	Fatality
1/22/2016	Pedestrian vs Train	Moving over crossing	Fatality
8/3/2005	Bicycle vs Train	Moving over crossing	Fatality
12/4/2001	Auto vs Train	Stopped on crossing	Fatality
5/16/2001	Truck vs Train	Moving over crossing	Vehicle Damage only
2/24/2001	Truck vs Train	Stopped on crossing	Vehicle Damage only
2/15/2000	Pedestrian vs Train	Stopped on crossing	Fatality
8/13/1983	Pedestrian vs Train	Moving over crossing	Injured

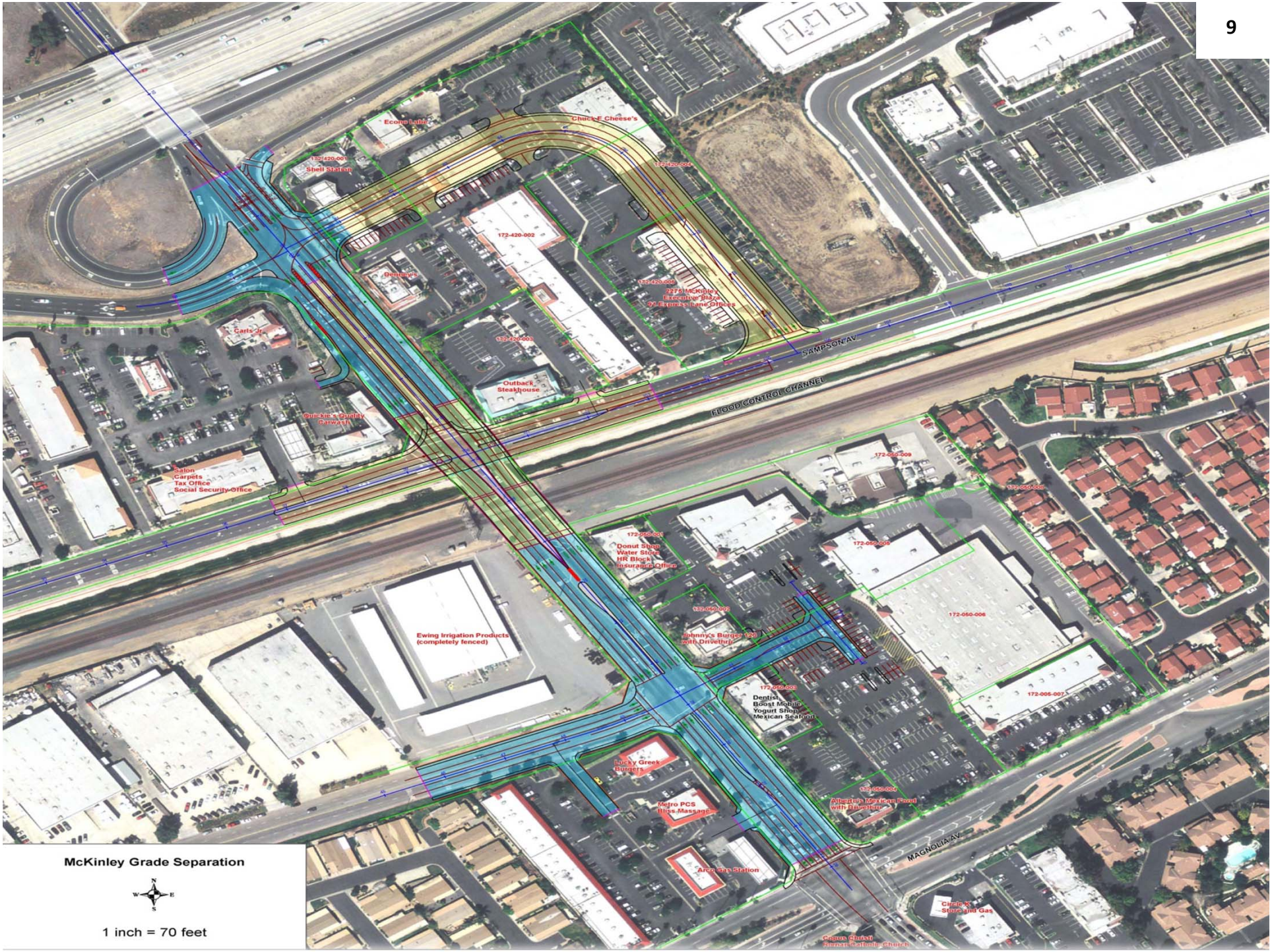
* Federal Railroad Administration

Grade-Separated Intersections

- **Increase capacity** and **uninterrupted flow** by avoiding collisions and avoiding congestion delays
- **Reduce noise** disturbances generated by train horns and automatic warning device
- **Eliminate vehicle-train conflict** and delay
- **Increase Safety**
- **Minimize emergency response times** thus improving emergency services

Alternative Analysis

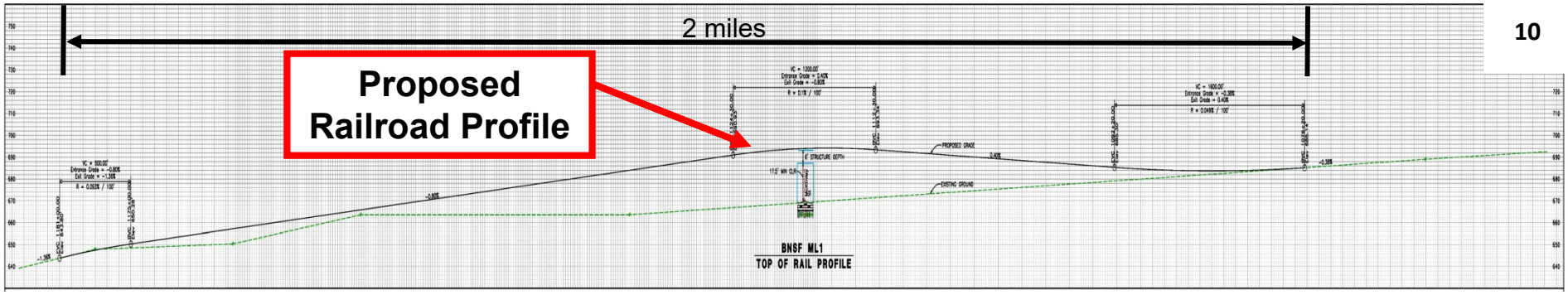
	Advantages	Disadvantages	Feasible?
Road Over Tracks	• Requires moderate utility relocations • Moderate impact to vehicular traffic during construction • No temporary tracks required during construction (cost savings) • Accommodates future high speed rail tracks • Promotes positive roadway drainage	• Wider impact on areas further away from the tracks • Requires significant right-of-way acquisition • Eliminates direct connectivity between Sampson & McKinley	**YES**
Road Under Tracks	• Zero visual impact • No temporary tracks during construction	• More properties may have no, or limited, access to McKinley • Requires significant utility relocations • Requires temporary tracks and multi-phased rail bridge construction	**NO** Due to channel along the tracks
Tracks Over Road	• Minimal property takes • Less impact on access for surrounding properties • Maintains connectivity between Sampson & McKinley	• Greater visual impact • Longer temporary tracks during construction • Very costly • BNSF has the right to reject during design	**YES** Risk that BNSF may reject design
Tracks Under Road	• Zero visual impact • Less impact on access for surrounding properties	• Same as Road under tracks	**NO** Rejected by BNSF



McKinley Grade Separation

N
W E
S

1 inch = 70 feet



Proposed new BNSF Railway (west boundary)

Proposed new BNSF railway (east boundary)

Project Cost And Funding

Cost Estimate

- McKinley Street over Railroad Tracks: $ 96,709,000
- Railroad Tracks over McKinley Street: $101,115,000

Current Funding Sources

☑	$ 400,000	Projects of National & Regional Significance Federal Funds
☑	$ 2,000,000	Transportation Development Act State Funds
☑	$ 1,400,000	TUMF
☑	$84,450,000	SB 132 – Funds available for encumbrance and liquidation until June 30, 2023

McKinley Grade Separation

OPTION 1: Road Over Tracks

- The design of the bridge would be developed with input from the community, County of Riverside, Caltrans, BNSF, and City Council
  - Input would be limited to the look and aesthetic details of the bridge
- The City must complete design and procure necessary right-of-way within 1½ years

OPTION 2: Tracks Over Road

- The design of the bridge would be developed with input from the community, County of Riverside, and City Council
- BNSF must approve the proposed design to ensure conformance with operation and safety regulations/standards
- The City must complete design and procure necessary right-of-way within 1½ years

McKinley Grade Separation

OPTION 3: RFP for Design Services

- Issue a Request For Proposal (RFP) for Design Services
- Allow the design team(s) to submit proposals for design services on Option 1 and Option 2, and to provide an updated cost estimate for each option
- Allow for design innovations that consider an alternate option that offers time or cost savings superior to Option 1 or Option 2

Council Direction

Desired option to proceed ….

- **OPTION 1:** Road Over Tracks
- **OPTION 2:** Tracks Over Road
- **OPTION 3:** RFP for Design Services with alternative options