

# **PUBLIC MEETING/OPEN HOUSE**

**August 31, 2010**

**Reconstruction of:  
Jackson Boulevard (SD 44) from  
Mountain View Road to Chapel Lane in Rapid City**

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## Jackson Boulevard

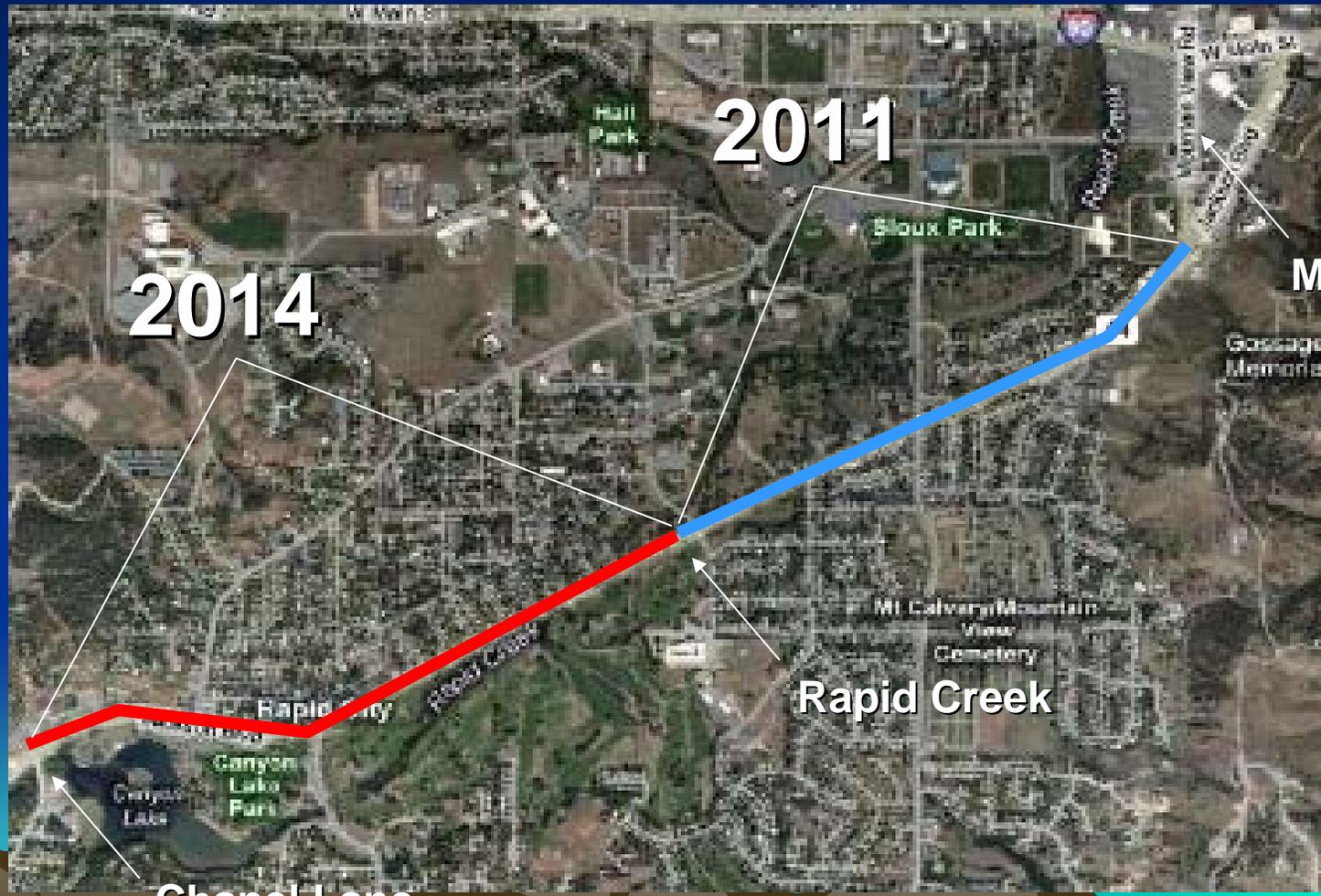
- This is 4<sup>th</sup> Public Meeting on this Project
- Primary purpose of this meeting: public comment on two (2) design alternatives for intersection of Jackson Boulevard and Mountain View.
- Other purposes:
  - Cover design features that have already been established
  - Discuss project timeframes
  - Start construction sequencing discussion

## Jackson Boulevard

# SCOPE OF WORK

- **Grading**
- **Concrete Pavement with Bike Lanes**
- **Sidewalk**
- **Storm Sewer**
- **Lighting**
- **Traffic Signals**
- **2 Water Mains - City**
- **Sanitary Sewer - City**

# Jackson Boulevard PROPOSED DESIGN Project Locations



## Jackson Boulevard

# Estimated Total Costs

(do not include new City utilities)

- Rapid Creek to Mountain View (2011)  
\_ \$ 7.5 Million
- Chapel Lane to Rapid Creek (2014)  
\_ \$ 7.1 Million

## Jackson Boulevard

# Schedule

## Mountain View Rd. to Rapid Creek

- Landowners Meeting 2009 (most completed)
- Land appraisal underway
- Land negotiations fall 2010 into 2011
- Construction Traffic Mtgs. fall 2010 into 2011
- Construction start late 2011
- Construction duration 1 ½ to 2 ½ years

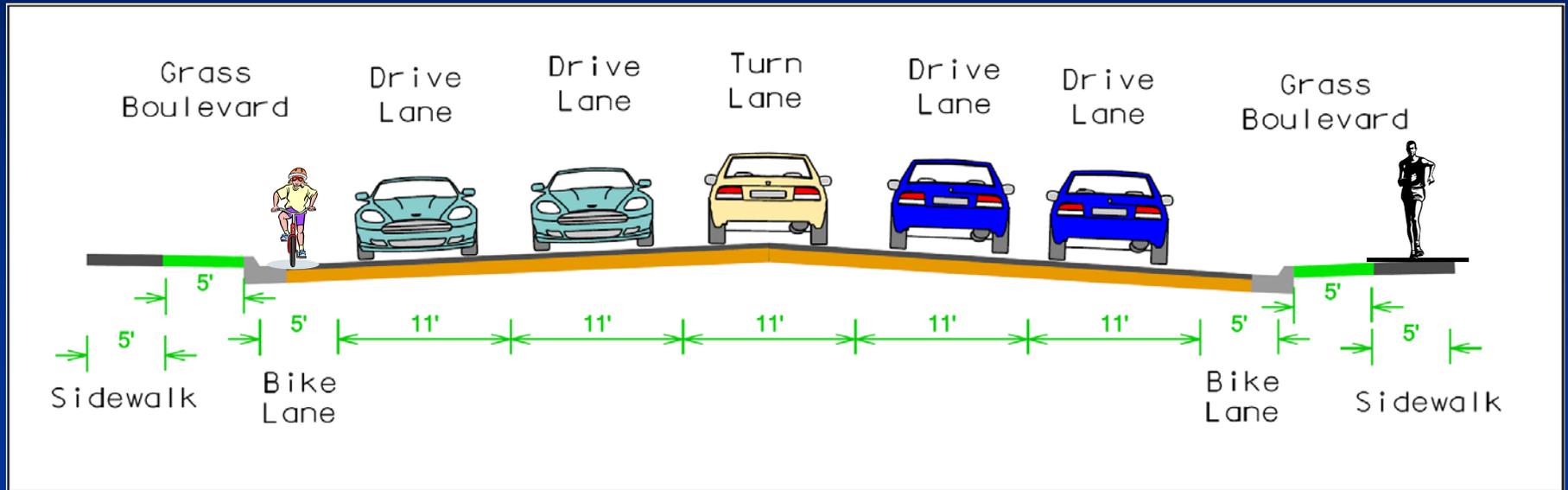
## Jackson Boulevard

# BACKGROUND INFORMATION

- Originally constructed in 1963
- Concrete Pavement repairs in 1992 and 1999.
- Pavement in poor condition throughout
- Current Traffic :
  - 11,000 vehicles/day west of Sheridan Lake Road
  - 21,000 vehicles/day east of Sheridan Lake Road
- Projected Traffic (2027): 15,000 and 29,000 vehicles/day
- Truck Traffic: 4.3 %
- Posted Speed Limit 35 mph

# Jackson Boulevard

## TYPICAL SECTION



# Jackson Boulevard

## Right of Way

- Minimal Right of Way impact to most landowners
  - Most of the highway will be built within the existing right of way
  - Temporary construction easements will be needed
- A few locations will require the purchase of property
- Access Management will be used to improve the safety and efficiency of the highway

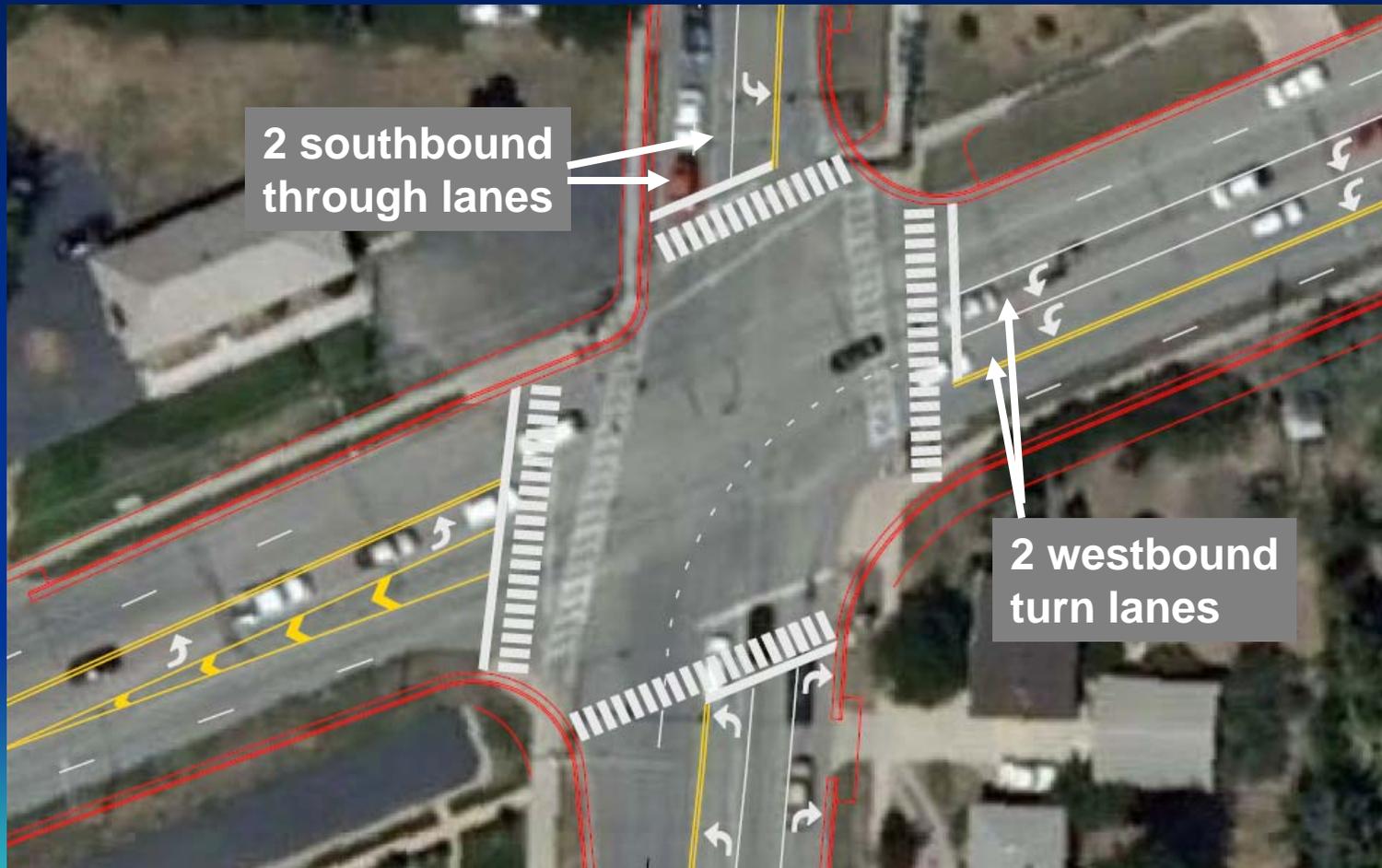
# Jackson Boulevard

The Rapid Creek Bridge will not be reconstructed



# Jackson Boulevard

## Intersection with Sheridan Lake Rd.



# Jackson Boulevard/ Mountain View

## Flaws in existing intersection

Intersection is difficult for pedestrians to cross

- No curb ramps
- No ped signals
- No ped refuge
- angled crossings are longer

Southbound left turners:

- Not at signaled location
- Turners stopped by westbound traffic queue at signal

Southbound motorists have skewed approach:

- Angle is  $37^\circ$  vs.  $60^\circ$  min.
- Signals visible to both SB and WB motorists



## Jackson Boulevard/ Mountain View

# NEW INTERSECTION

### POSITIVE EFFECTS OF INTERSECTION RE-DESIGN

- Squared intersections typically safer for motorists & peds
- Improved visibility of signals for SB and WB motorists
- Addition of SB left turn lane improves traffic flow in area (i.e. - less cutting through Safeway parking lot)
- Provide pedestrian crossings

### NEGATIVE EFFECTS OF INTERSECTION RE-DESIGN

- Intersections are typically expensive to build
- Additional Right of Way needed
- Potential loss of some on-street parking

# Jackson Boulevard/ Mountain View

## NEW INTERSECTION

### INTERSECTION DESIGN OPTIONS ELIMINATED:

(all of these back traffic up through Fulton during peak hour)

- Option 1
- Option 1A
- Option 2
- Option 3A
- Option 4
- Option 5

### DESIGN OPTIONS STILL BEING CONSIDERED:

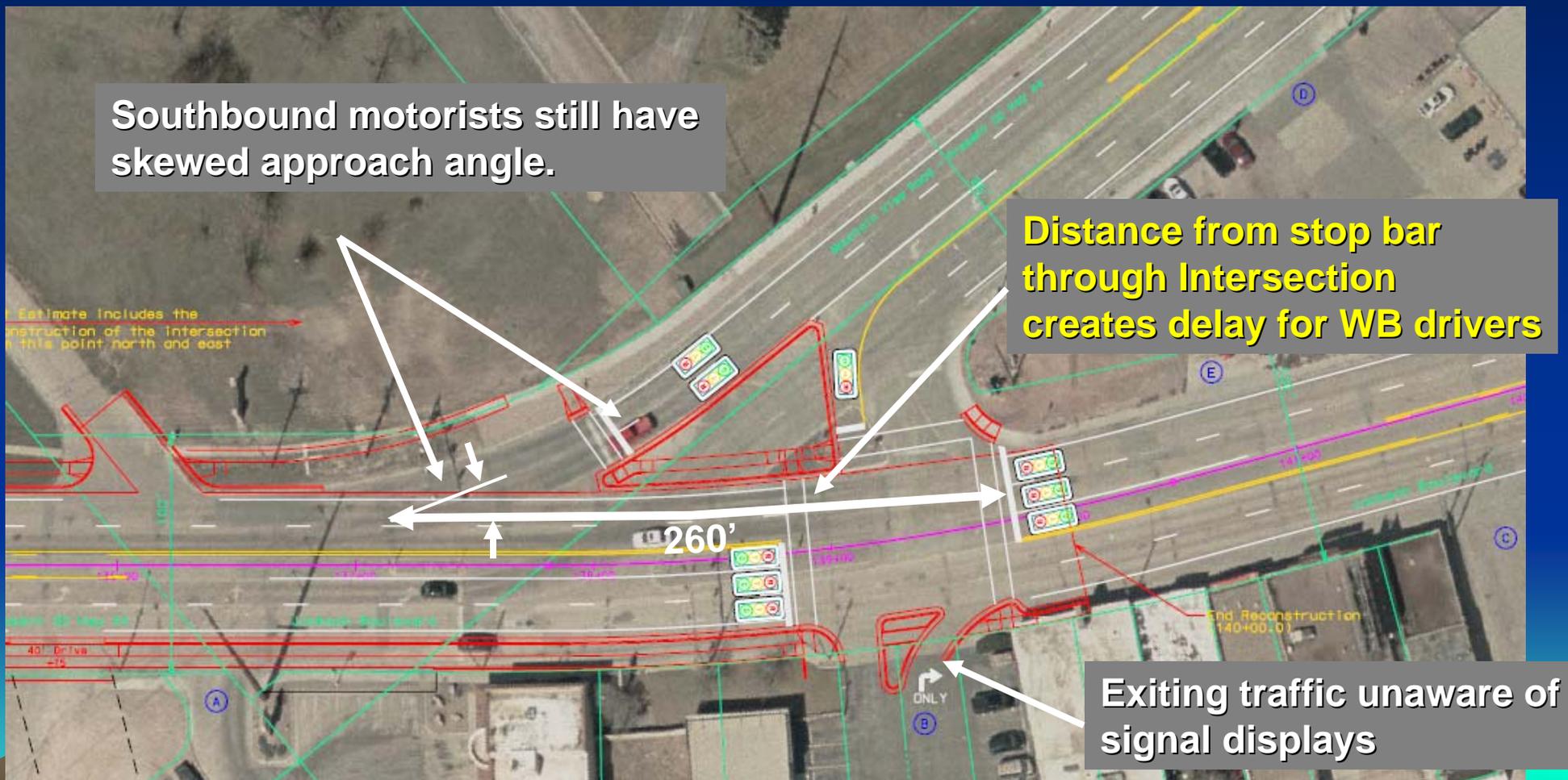
(neither of these back traffic up through Fulton during peak hour)

- Option 3 – previously presented to Public Works Committee
- Option 6 – developed to save some on-street parking

# Jackson Boulevard/ Mountain View

## Design – Option 1 - eliminated

(Skewed intersection with island on south leg)



Southbound motorists still have skewed approach angle.

Distance from stop bar through Intersection creates delay for WB drivers

Exiting traffic unaware of signal displays

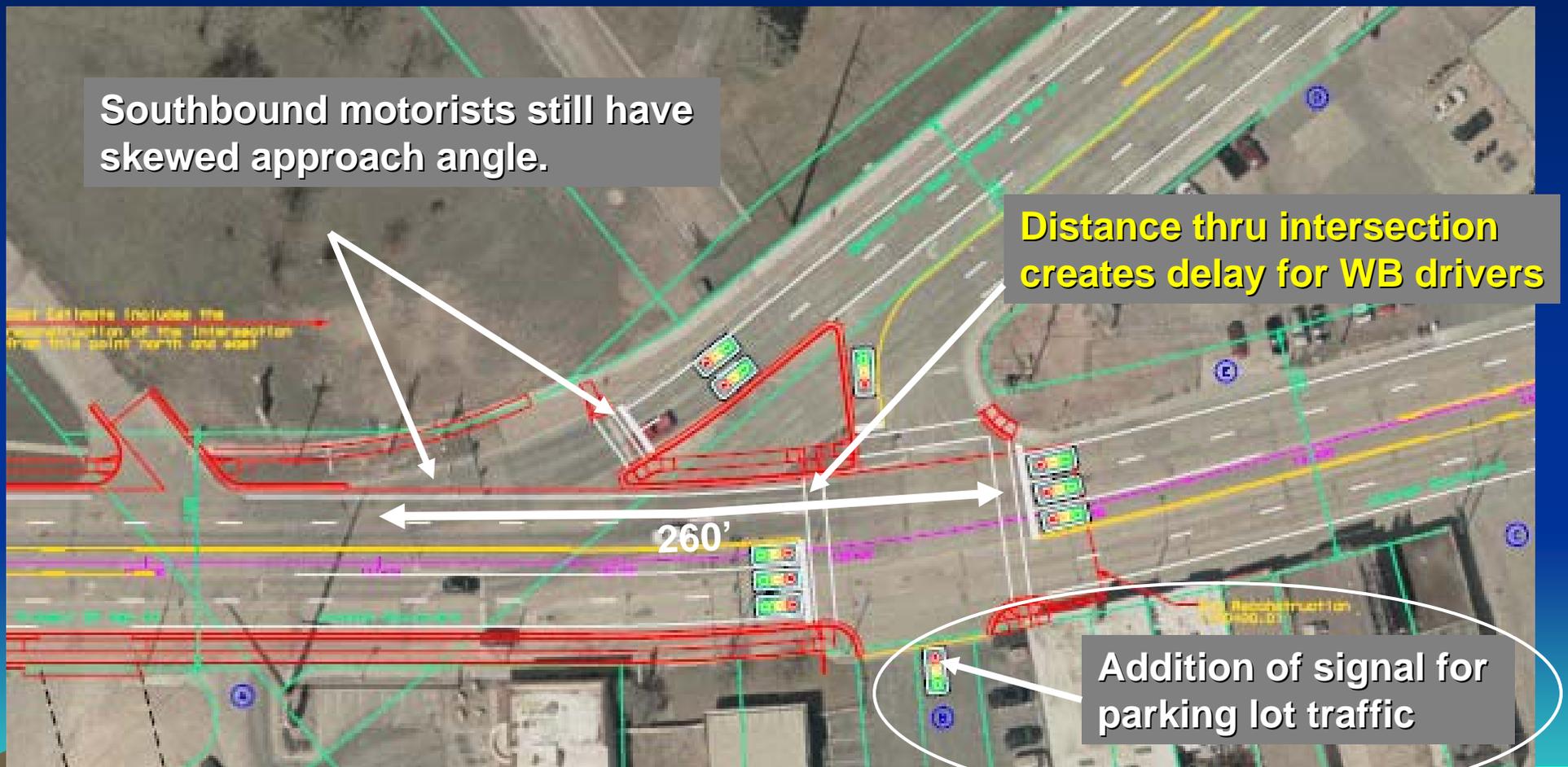
Estimate includes the construction of the intersection at this point north and east

End Reconstruction 140+00.01

260'

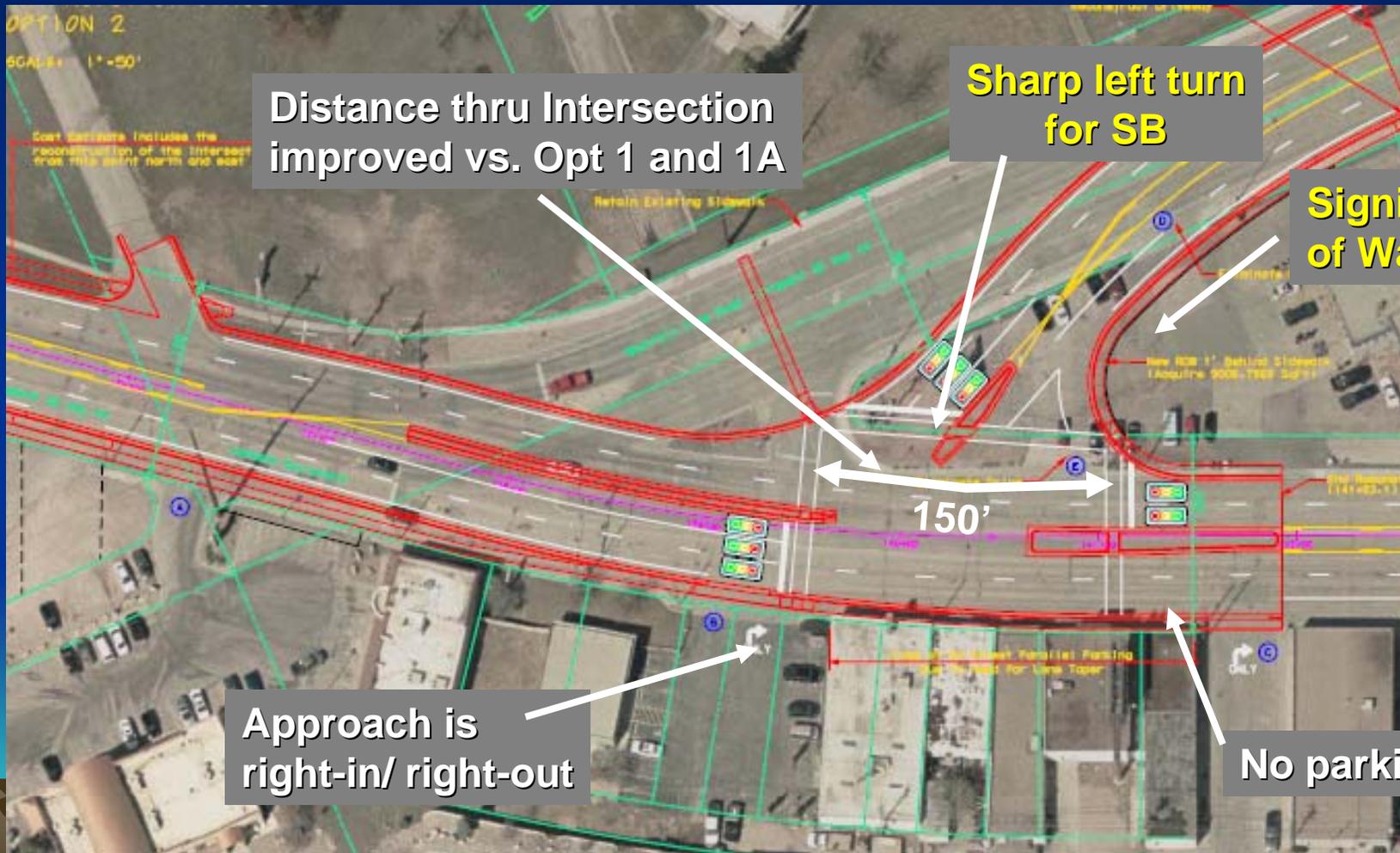
# Jackson Boulevard/ Mountain View

## Design – Option 1a - Eliminated (same as Option 1 but a signal added to south leg)



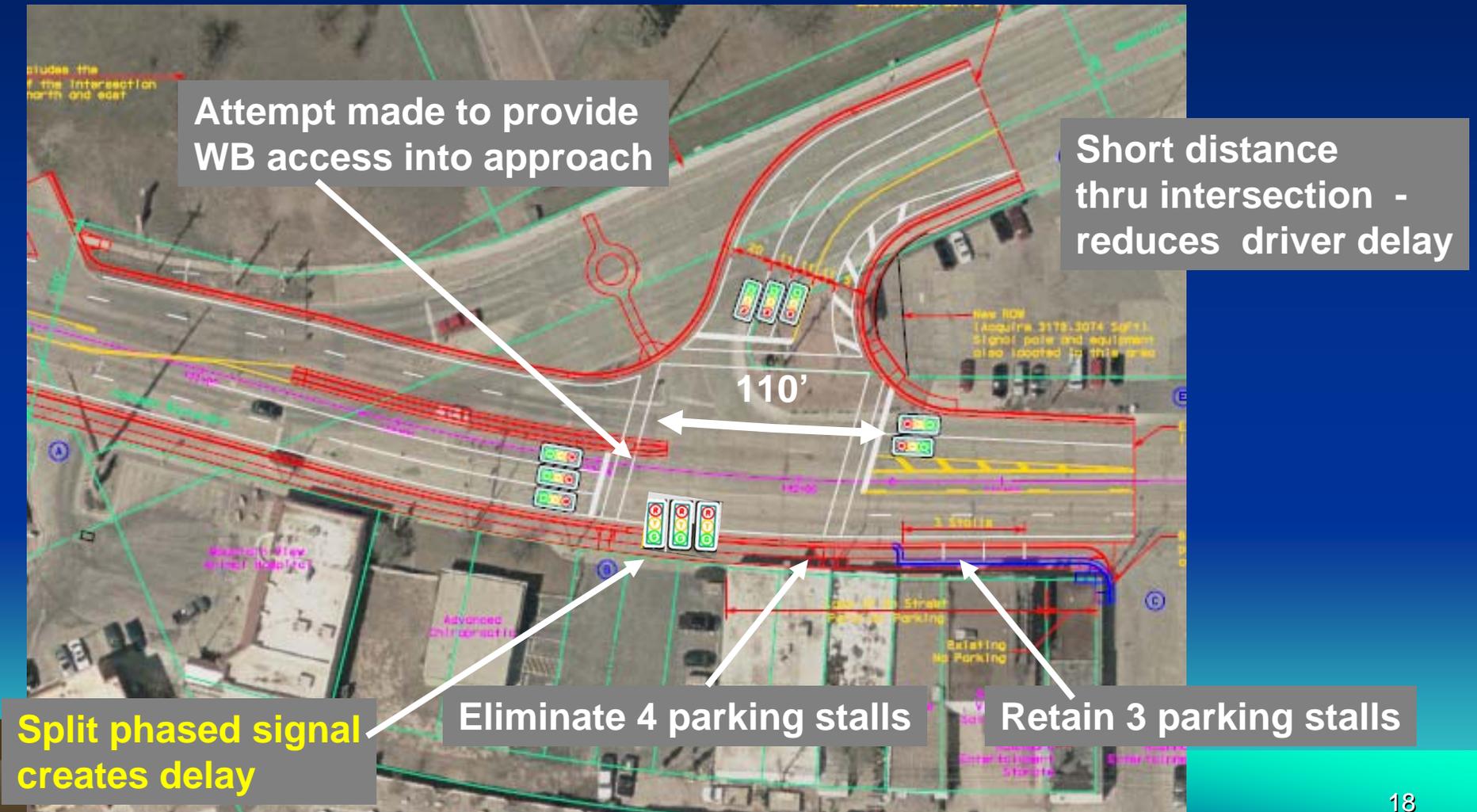
# Jackson Boulevard/ Mountain View

## Design – Option 2 - Eliminated (Skew improved to minimum standards - 60°)



# Jackson Boulevard/ Mountain View

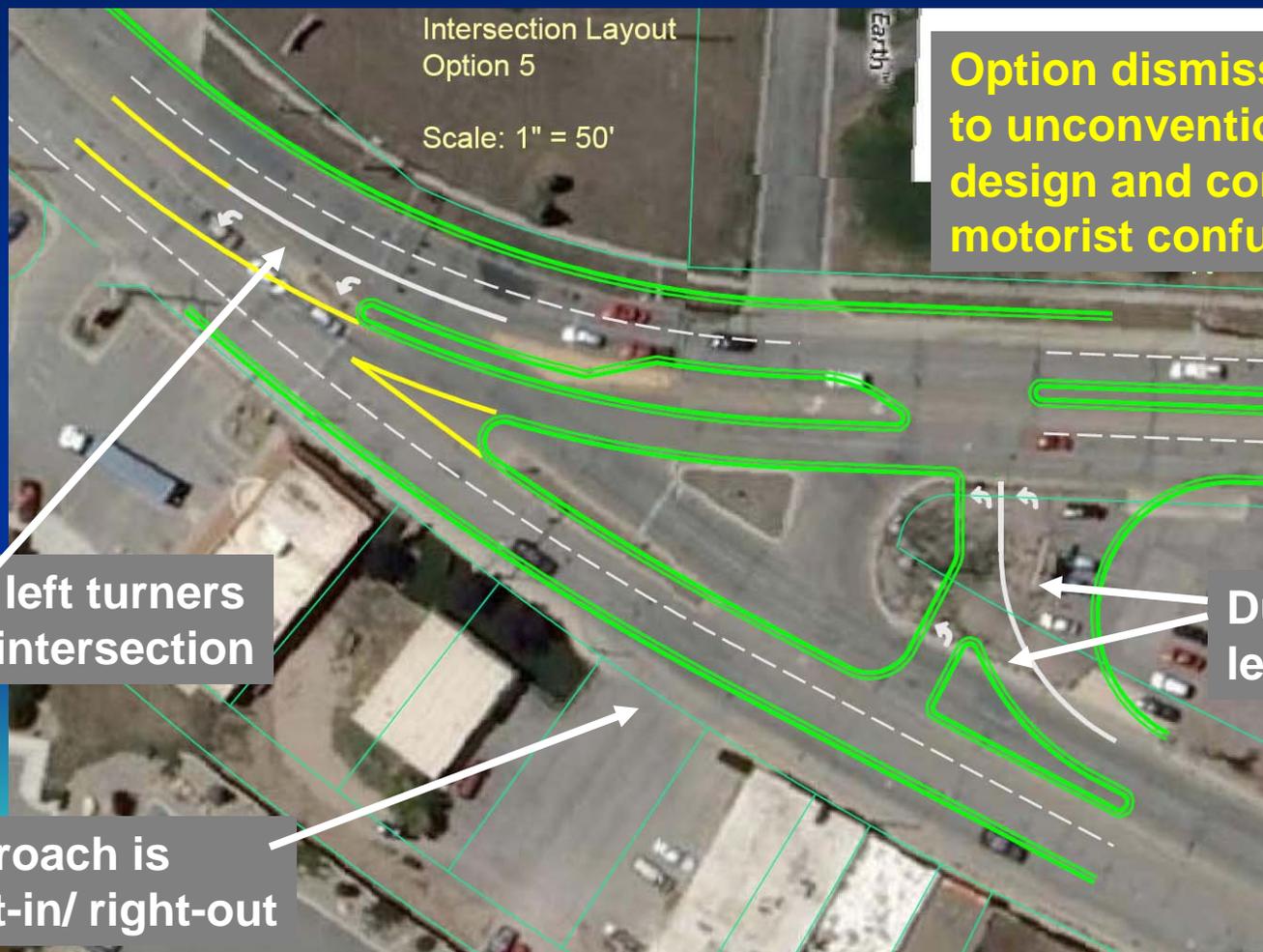
## Design – Option 3a - Eliminated (same as Option 3, but skewed 40' west)



# Jackson Boulevard/ Mountain View

## Design – Option 4 - Eliminated

(Hwy 44 as thru-route with 2 EB thru-lanes on Jackson)



Intersection Layout  
Option 5  
Scale: 1" = 50'

Option dismissed due to unconventional design and concern with motorist confusion.

Southbound left turners carried past intersection

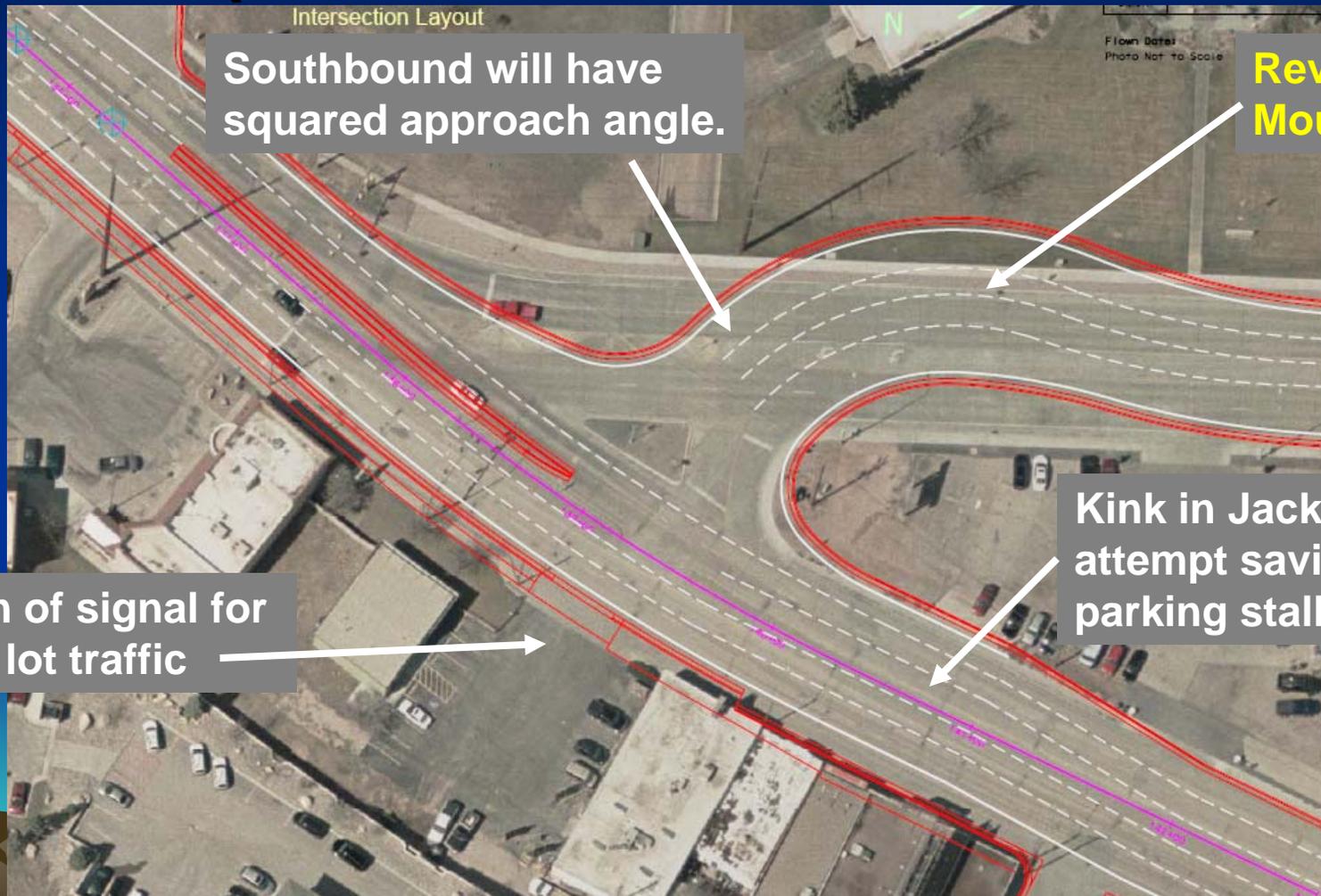
Dual westbound left turns

Approach is right-in/ right-out

# Jackson Boulevard/ Mountain View

## Design – Option 5 - Eliminated

(Reverse curve – line up with approach)



Southbound will have squared approach angle.

Reverse curve on Mountain View Rd

Kink in Jackson Blvd to attempt saving 3- 4 on-street parking stalls

Addition of signal for parking lot traffic

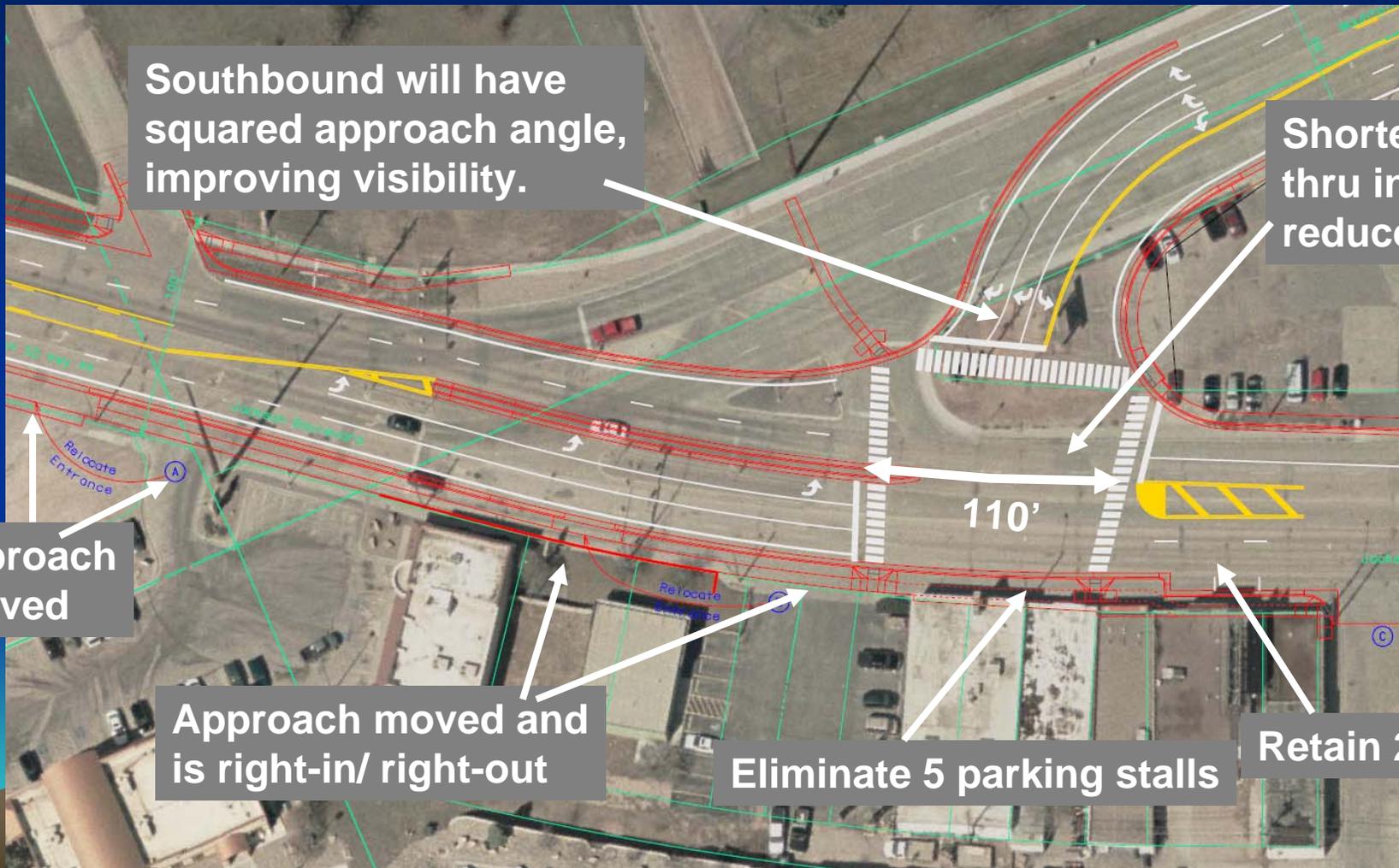
# Jackson Boulevard/ Mountain View NEW INTERSECTION

## DESIGN OPTIONS STILL BEING CONSIDERED

- Option 3 – previously presented to Public Works Committee
- Option 6 – developed to save some on-street parking

# Jackson Boulevard/ Mountain View

## Design – Option 3 (Near 90 degree intersection)



Southbound will have squared approach angle, improving visibility.

Shorter distance thru intersection - reduces driver delay

Approach moved

Approach moved and is right-in/ right-out

Eliminate 5 parking stalls

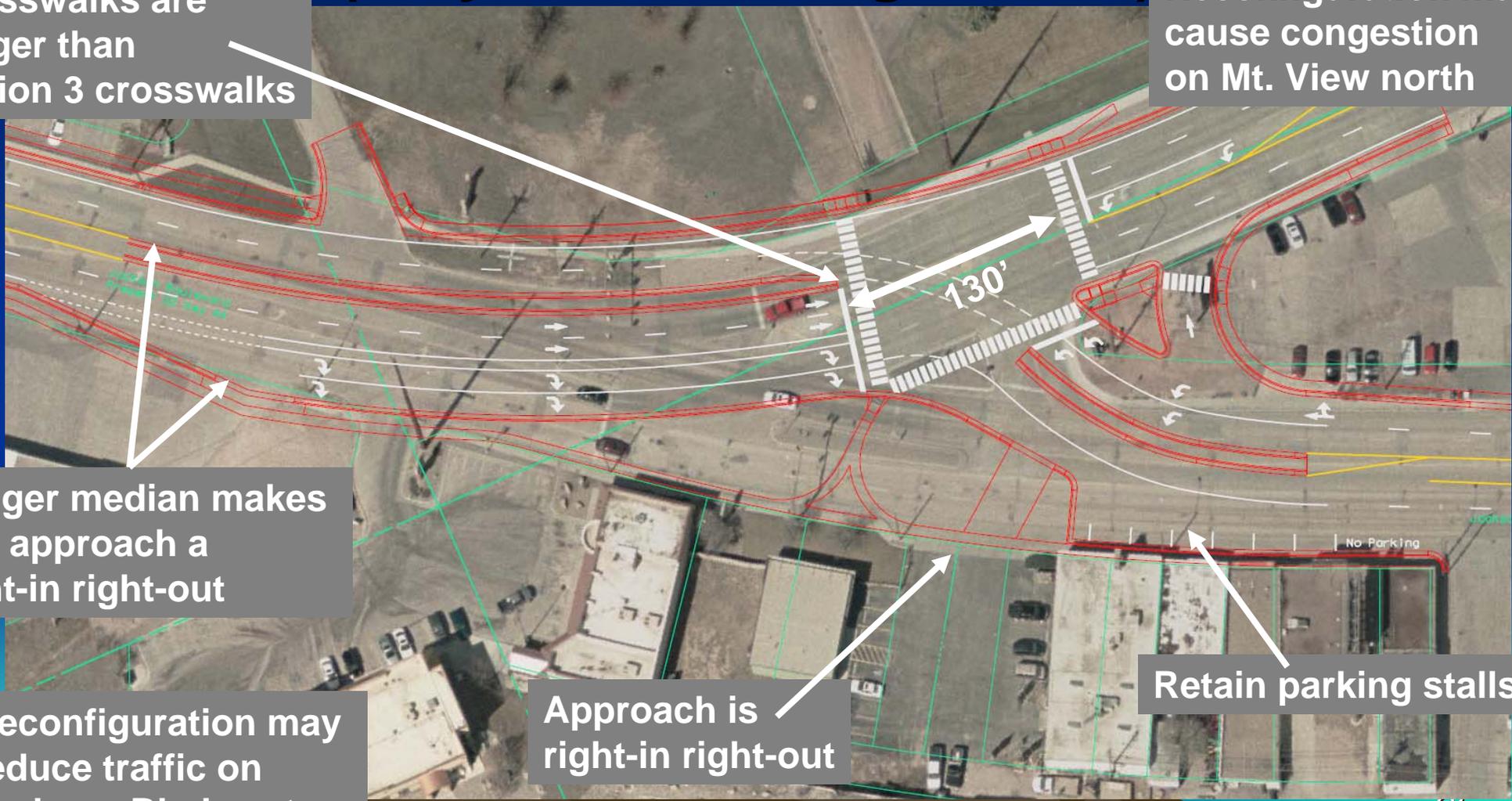
Retain 2 parking stalls

# Jackson Boulevard/ Mountain View

## Design – Option 6 (Hwy 44 as through-route)

Crosswalks are longer than Option 3 crosswalks

Reconfiguration may cause congestion on Mt. View north



Longer median makes this approach a right-in right-out

Reconfiguration may reduce traffic on Jackson Blvd east

Approach is right-in right-out

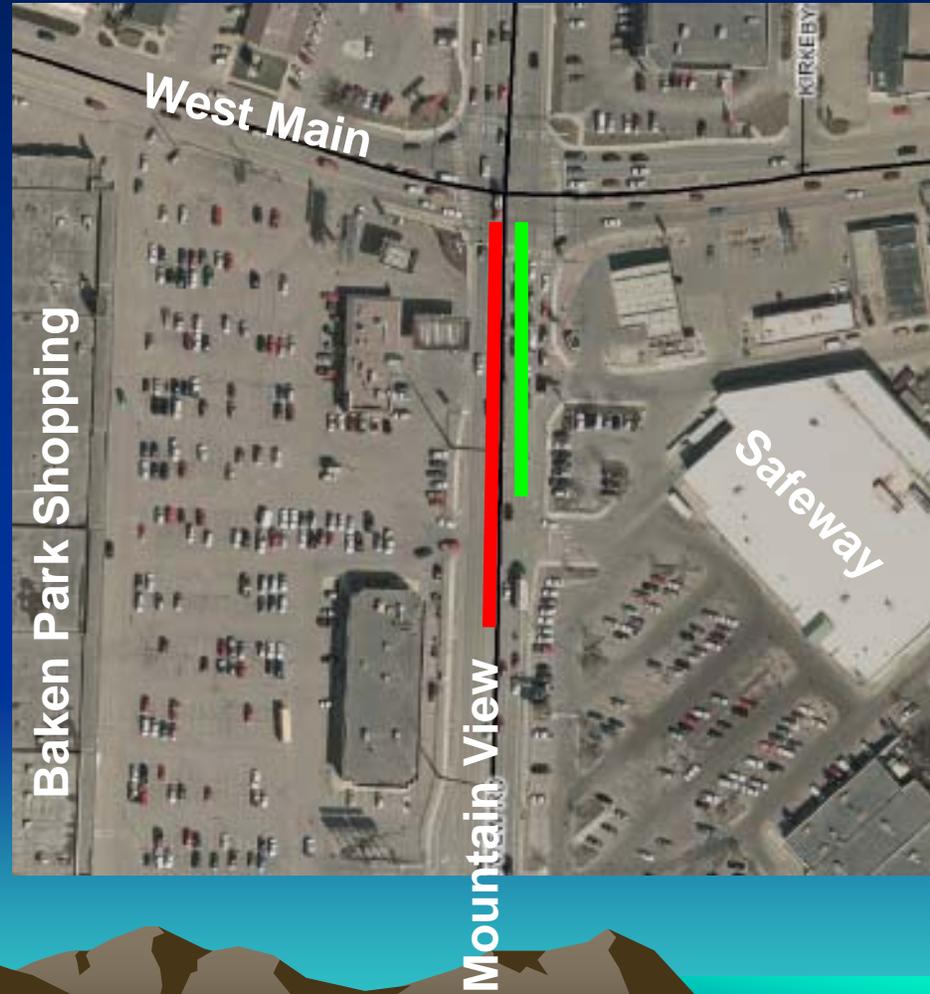
Retain parking stalls

## Jackson Boulevard

# Effect of Option 6 to traffic at West Main

NB traffic queue at  
West Main signal

- Current – 240'
- After - 340'



# Jackson Boulevard/ Mountain View

## NEW INTERSECTION

### OPTION 3

- Designed to accommodate current traffic patterns
- Eliminates 5 on-street parking locations
- Requires approval by City Council – loss of parking
- Shorter crosswalks

### OPTION 6

- May change current traffic patterns ~ (10 – 20% diverted to Mountain View, reducing LOS at Mt. View and W. Main)
- Eliminates no on-street parking locations
- Does not require approval by City Council
- Longer crosswalks

# Jackson Boulevard/ Mountain View

## COMPARISON FOR OPTIONS 3 AND 6

Item	Option 3	Option 6
Annual User* Cost (\$M)	\$0.303	\$0.374
Construction Cost (\$M)	\$0.542	\$0.617
40 Year User Cost (\$M)	\$12.1	\$15.0
Removal of on-street Parking?	Yes	No

\* User Cost based on avg vehicle delay and DOL costs of \$.20/min (cars) and \$.27/min (trucks)

# Jackson Boulevard Construction Timeframes

- Summer 2011 – Contract Letting
- Fall 2011 – complete temporary widening on south side
- 2012 – construct from Sheridan Lake Road to Mountain View
- Sequencing options west of Sheridan Lake Road
  - 1 ½ year option: Close Jackson Boulevard
  - 2 ½ year option: Construct Jackson Blvd ½ width, keeping 2 lanes open at all times

# Jackson Boulevard Construction Sequences

- Sheridan Lake Rd to Mt. View
- Widen south in fall 2011
- Build westbound
- Build eastbound
- Finished in 2012



# Jackson Boulevard Construction Sequences

- Rapid Creek to Sheridan Lake Rd
- Close Option\*
  - 4 months 2012
- Open Option\*
  - 7 months in 2013

\* Sheridan Lake Rd and 32<sup>nd</sup> remain open for both options



# Jackson Boulevard

QUESTIONS?