



ALAMO MASTER PLAN - TRAFFIC STUDY

UPDATED WITH HOUSTON STREET CLOSURE

Presented by
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June 2018



STUDY BACKGROUND

- The Alamo Plaza closure is being reviewed in the context of an overall Downtown Transportation Study conducted in 2012 and updated in 2017.
- The purpose of the Downtown Transportation Study was to create a traffic model of all downtown streets and adjacent arterials to determine the capacity of the downtown network and the impacts of development growth and proposed street projects.
- Projects like Santa Rosa improvements, Cesar Chavez/Santa Rosa intersection improvements, Main & Soledad two-way conversion, San Pedro Creek bridges rebuild, San Pedro/Main Roundabout, South Alamo Complete Street, Commerce Complete Street, and the Broadway improvements from Houston St. to Josephine St. were included to determine impacts to the area.

STUDY BACKGROUND

- The study and traffic counts were updated in 2017 to review 2012 assumptions.
- The closing of Alamo Plaza and Houston St. as proposed by the Alamo Master Plan were then studied in the context of this overall Downtown Transportation Study.
- The following slides are excerpts from the overall Downtown Transportation Study results.

STUDY ALAMO TRAFFIC IN THE CONTEXT OF DOWNTOWN STREET NETWORK

Overall Downtown Transportation Study

- A model of all downtown streets and adjacent arterials during peak hours.
- Created in 2012 and updated in 2017

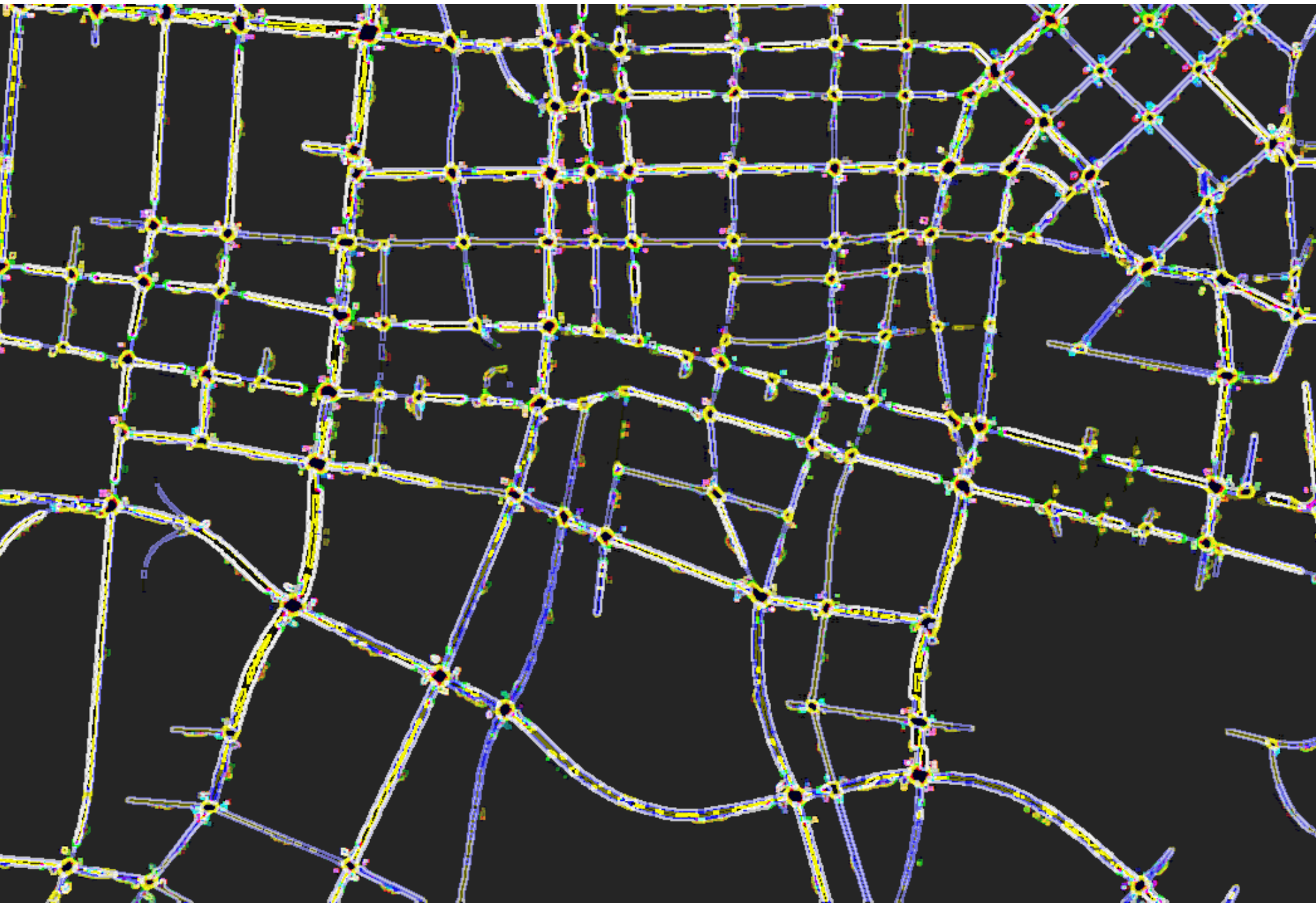
A Tool to Predict Impacts of Natural Growth & Proposed Projects

- Santa Rosa Improvements
- San Pedro Creek Bridges Rebuild
- South Alamo Complete Street
- Broadway Complete Street

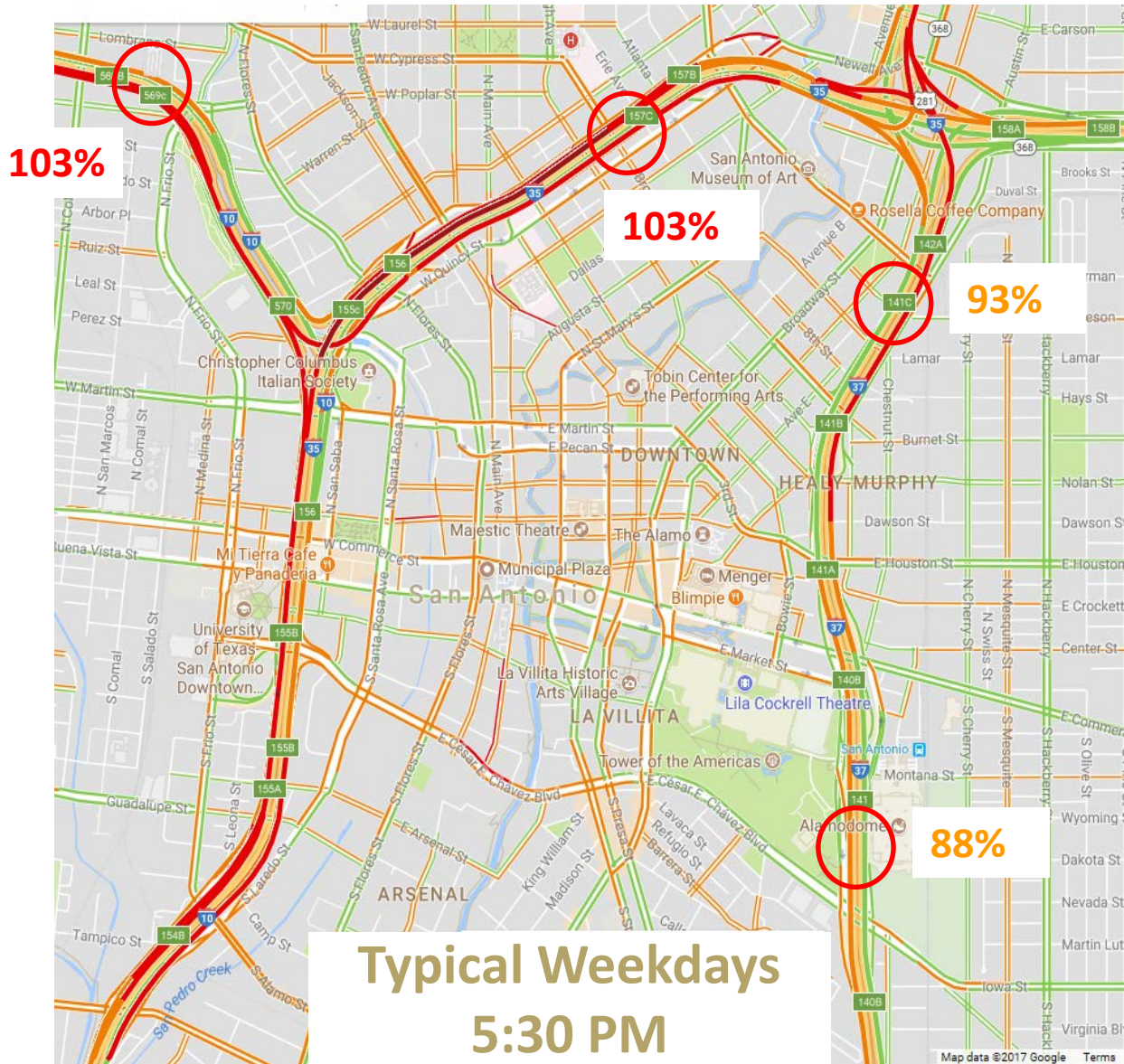
Solutions for the Closure of Alamo Plaza & Houston Street

- Closures proposed by the Master Plan
- Examined in the context of overall Downtown Transportation Study
- Estimate impacts
- Provide solutions

SCREENSHOT – DOWNTOWN TRAFFIC SIMULATION MODEL



EXISTING CONDITION – FREEWAYS ARE AT CAPACITY

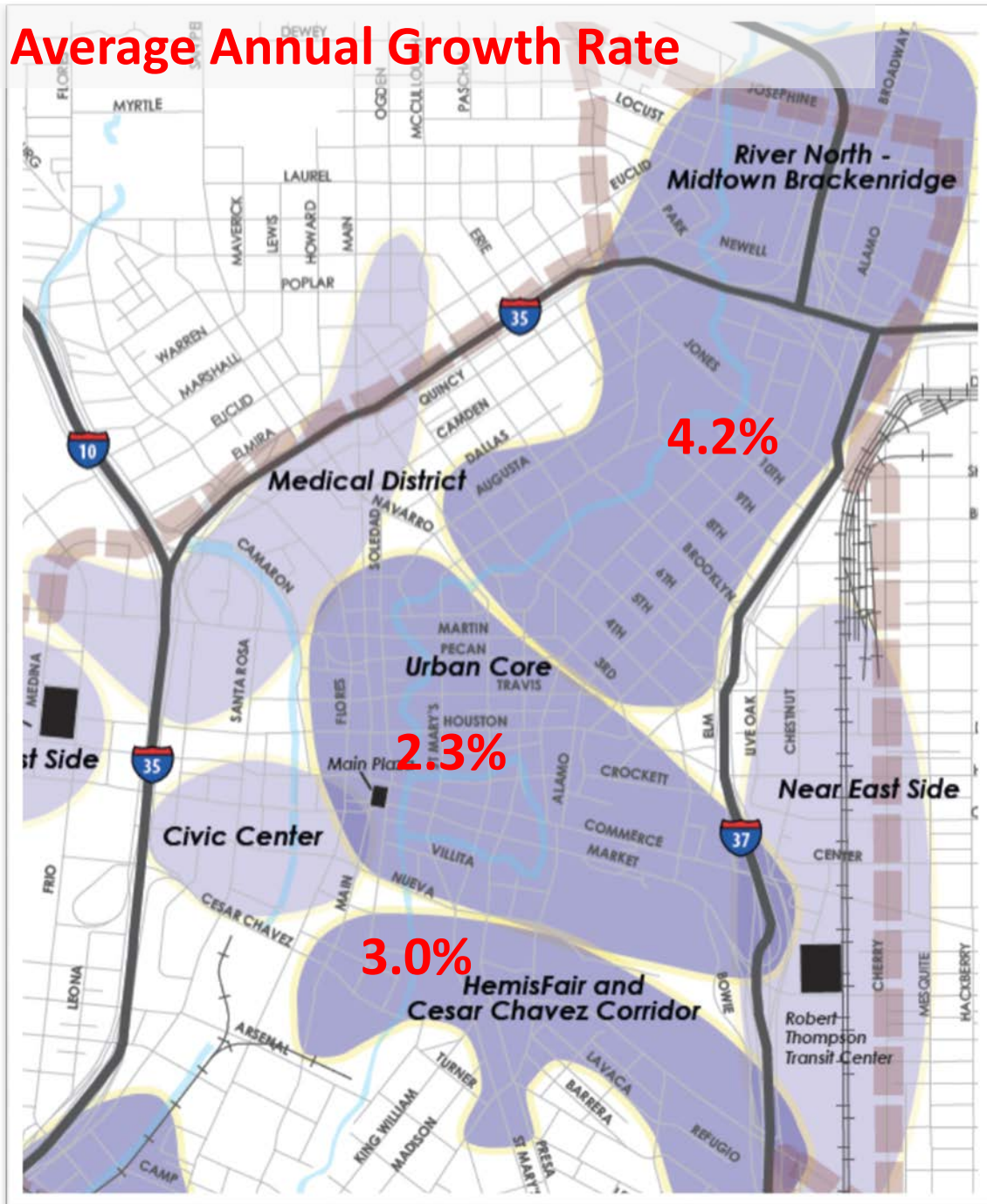


TRAFFIC VOLUMES INCREASED FROM 2012

BUT NOT AS FAST AS EXPECTED

Growth is Half the Rate Projected in 2012

Average Annual Growth Rate



2017 DOWNTOWN ACCESS

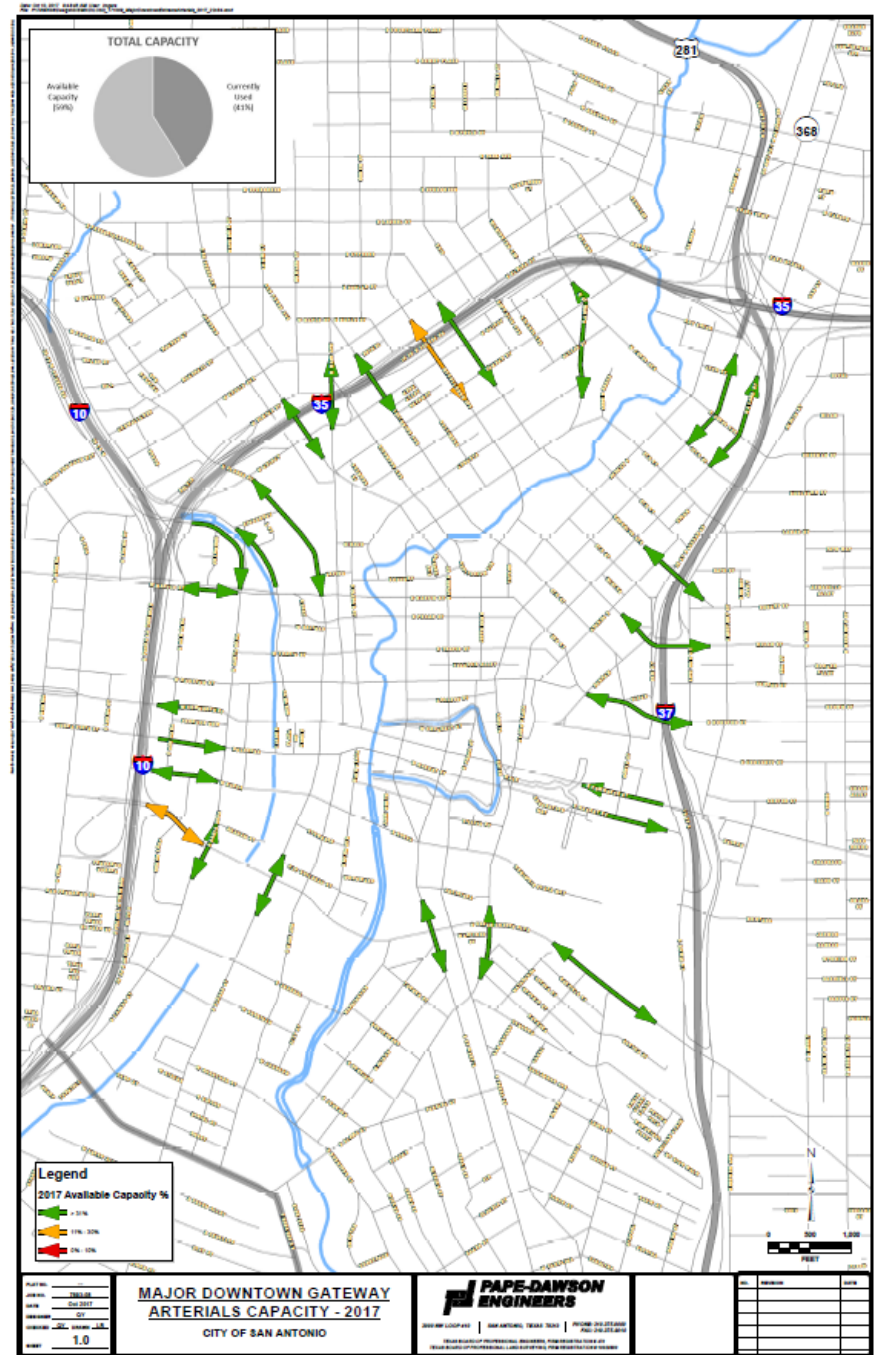
- All Major Gateway Arterials Available Capacity
- Provides for Approximately 15 – 16 More Frost Towers (460,000 SqFt)



= 6 X

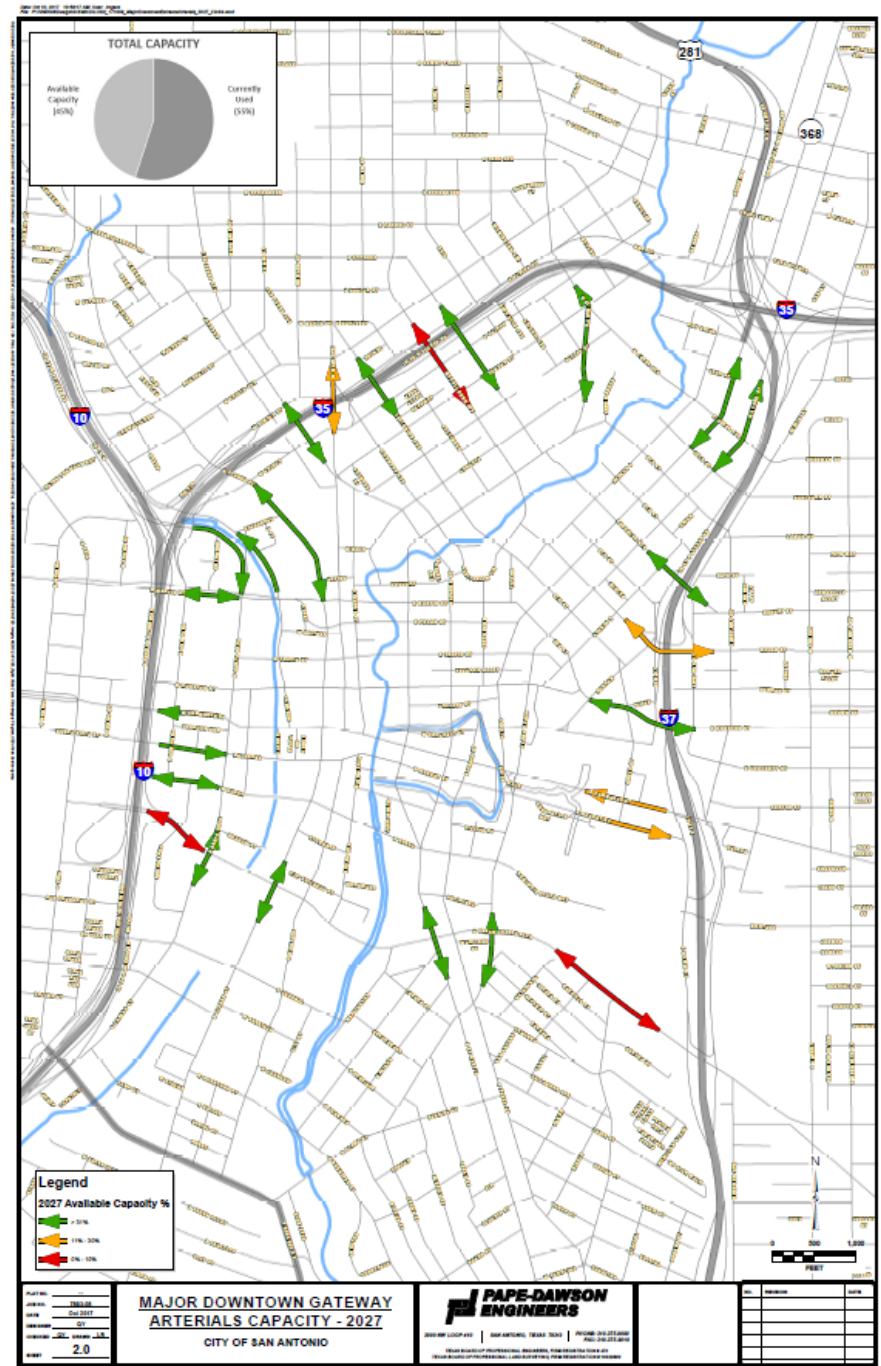


= 1,300
Apartments



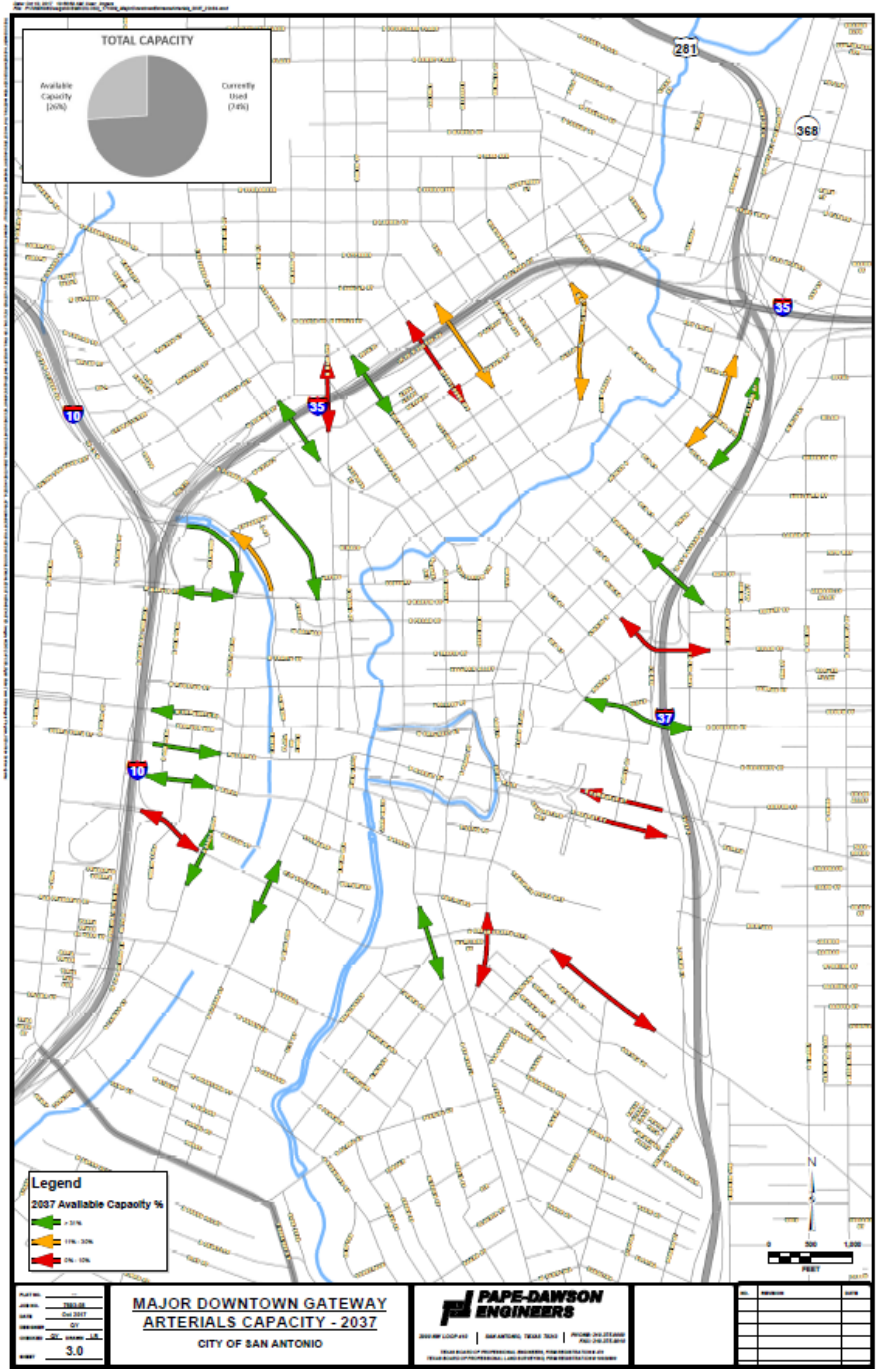
2027 DOWNTOWN ACCESS

- With 3.0% Annual Growth (The Average Growth Rate from 2012 to 2017)
- All Major Gateway Arterials Available Capacity will Provide for Approximately 12 More Frost Towers in 2027



2037 DOWNTOWN ACCESS

- Most Arterials will Approach Capacity
- Will Allow Approximately 7 More Frost Towers in 2037





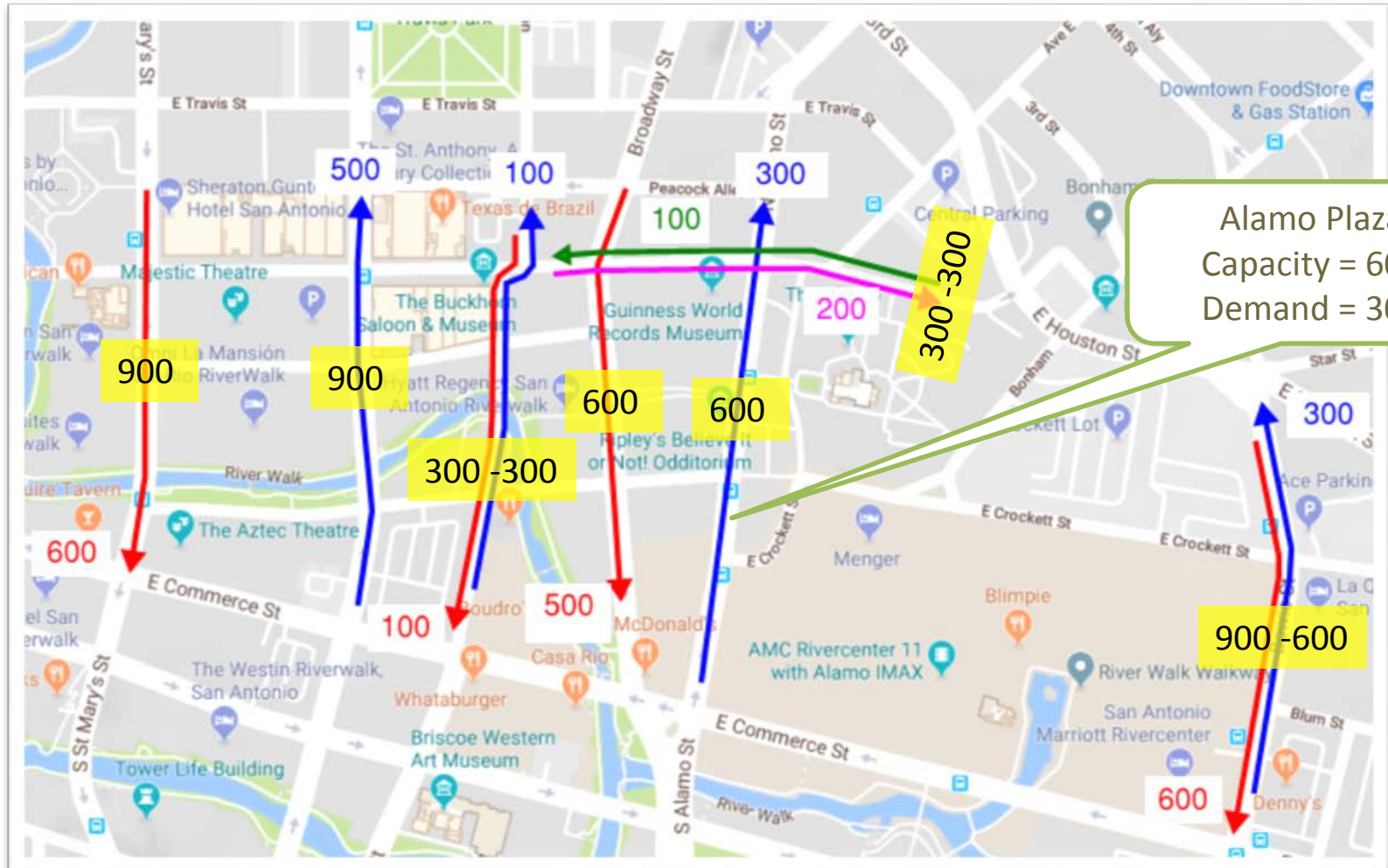
ARTERIALS ARE CRITICAL TO DOWNTOWN DEVELOPMENT

More Complete Streets IF:

- Preserve Adequate Capacities for the Major Thoroughfares
- Improve Bottleneck Intersections on these Major Thoroughfares

EXISTING VOLUMES AND CAPACITIES BETWEEN TRAVIS ST. AND COMMERCE ST.

BACKGROUND



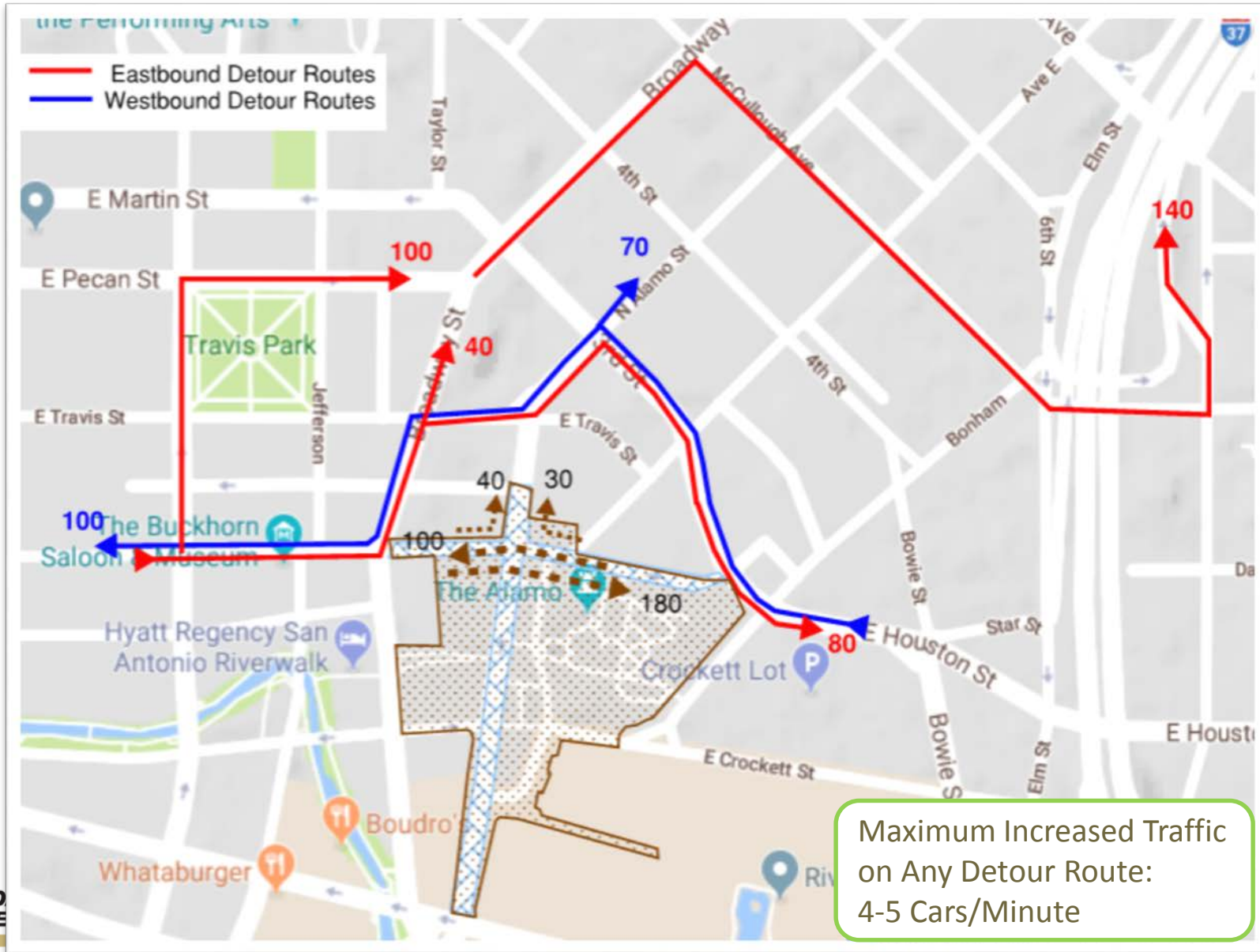
100: Existing Northbound Traffic Volume
 100: Existing Southbound Traffic Volume
 100: Existing Street Capacity

Between Travis and Commerce

- SB Capacity = 2700 Vehicle/Hour
- SB Peak Hour Demand = 1800 Vehicle/Hour
- NB Capacity = 2400 Vehicle/Hour
- NB Peak Hour Demand = 1200 Vehicle/Hour

DETOUR ROUTES & PEAK HOUR VOLUMES EAST & WEST – HOUSTON STREET

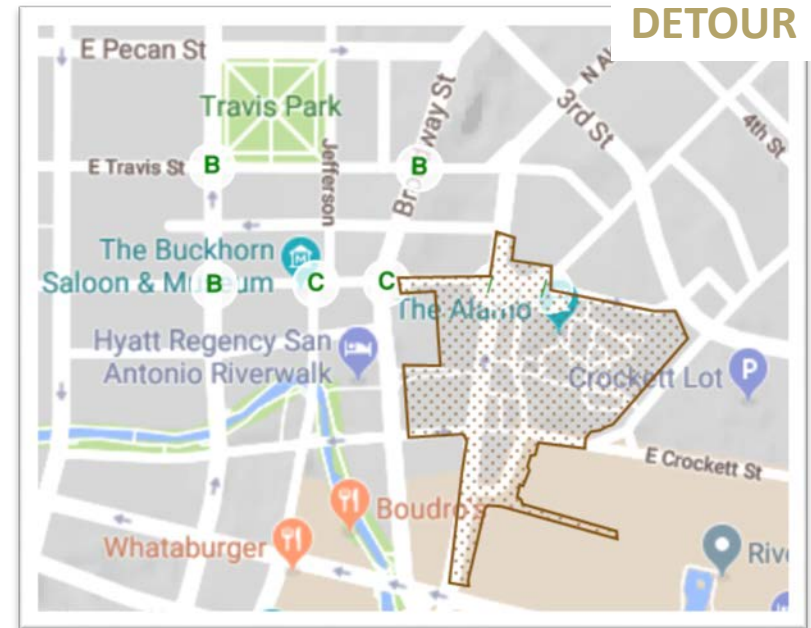
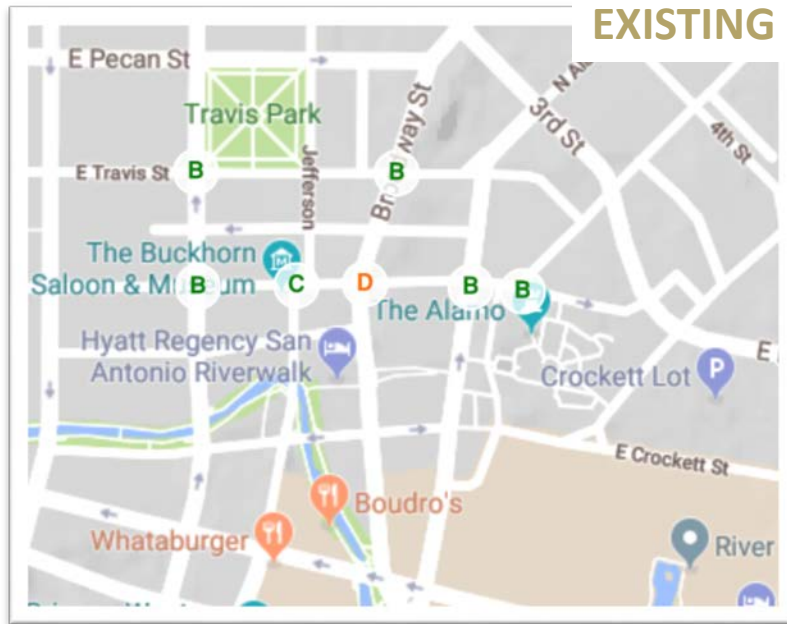
MINIMUM IMPACT



Maximum Increased Traffic on Any Detour Route:
4-5 Cars/Minute

CAPACITY & CRITICAL INTERSECTIONS LEVEL OF SERVICE

MINIMUM IMPACT

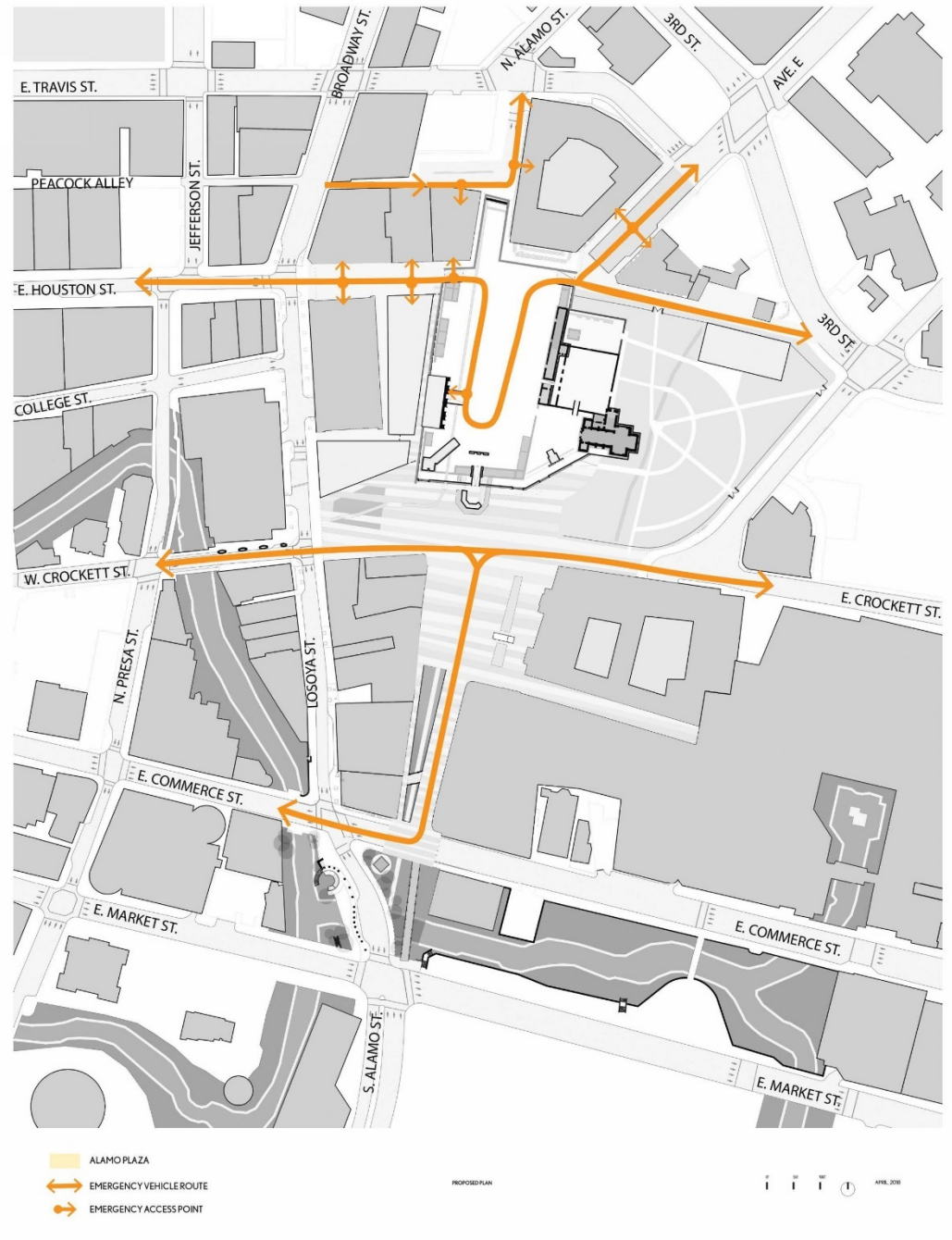


Closing Houston Street will

- Spread Traffic to Less Congested Streets
- Simplify Movements & Reduce Traffic in Critical Intersections
- Result in the Same or Better Level of Service

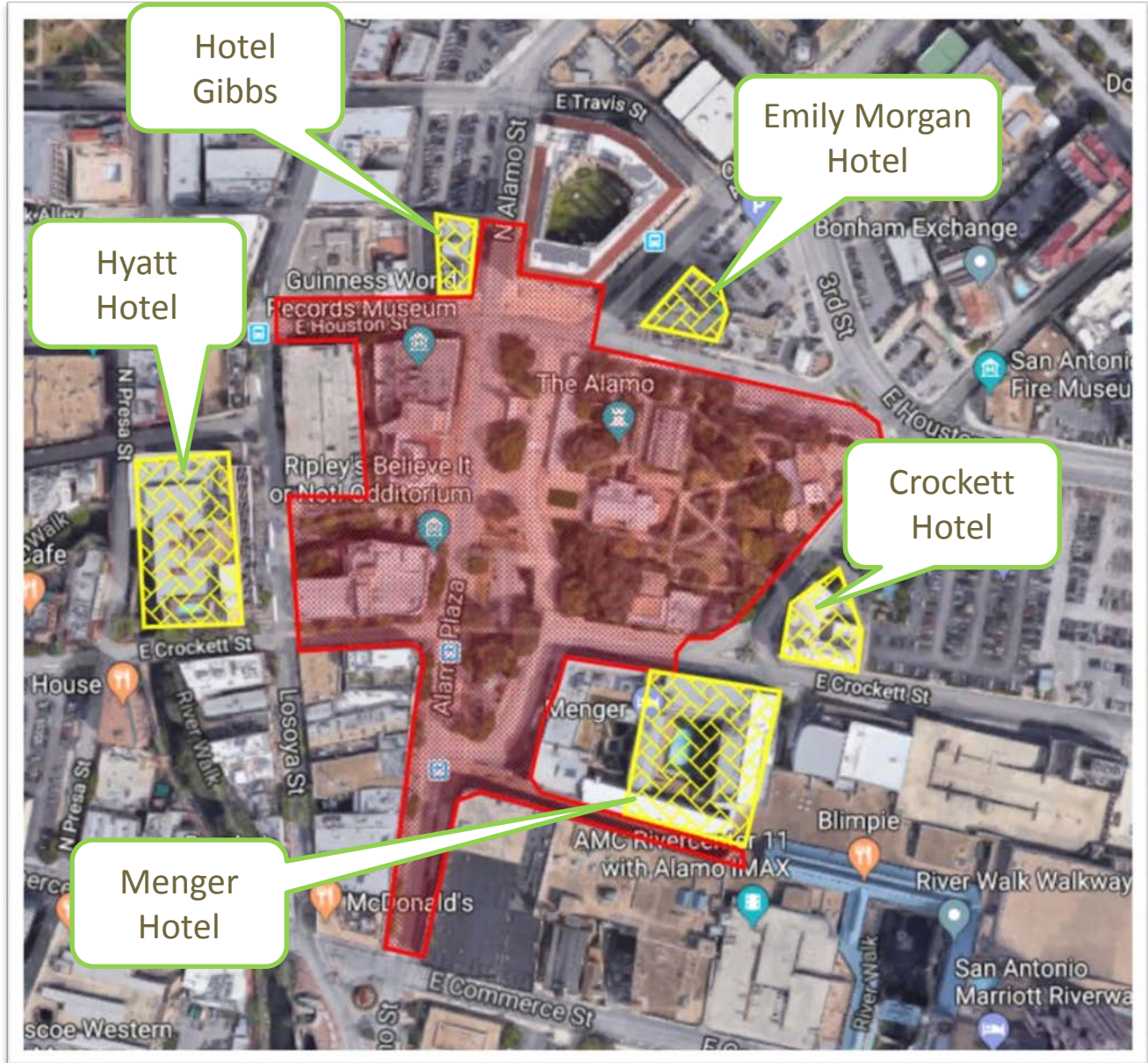
EMERGENCY ACCESS

MINIMUM IMPACT



HOTELS

HOTELS

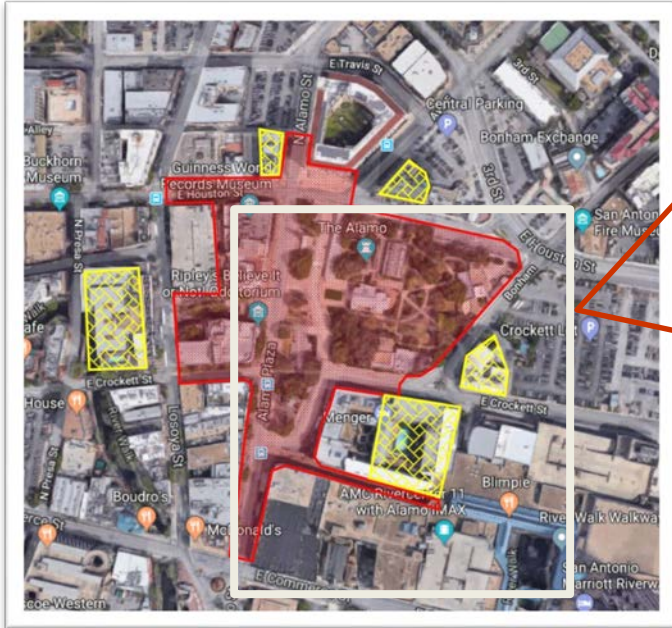


MENGER HOTEL AND CROCKETT HOTEL CIRCULATION

HOTELS

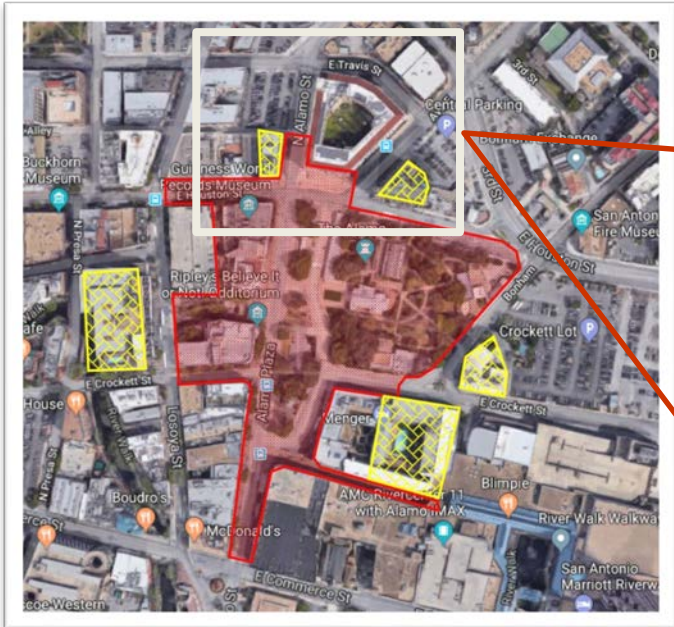
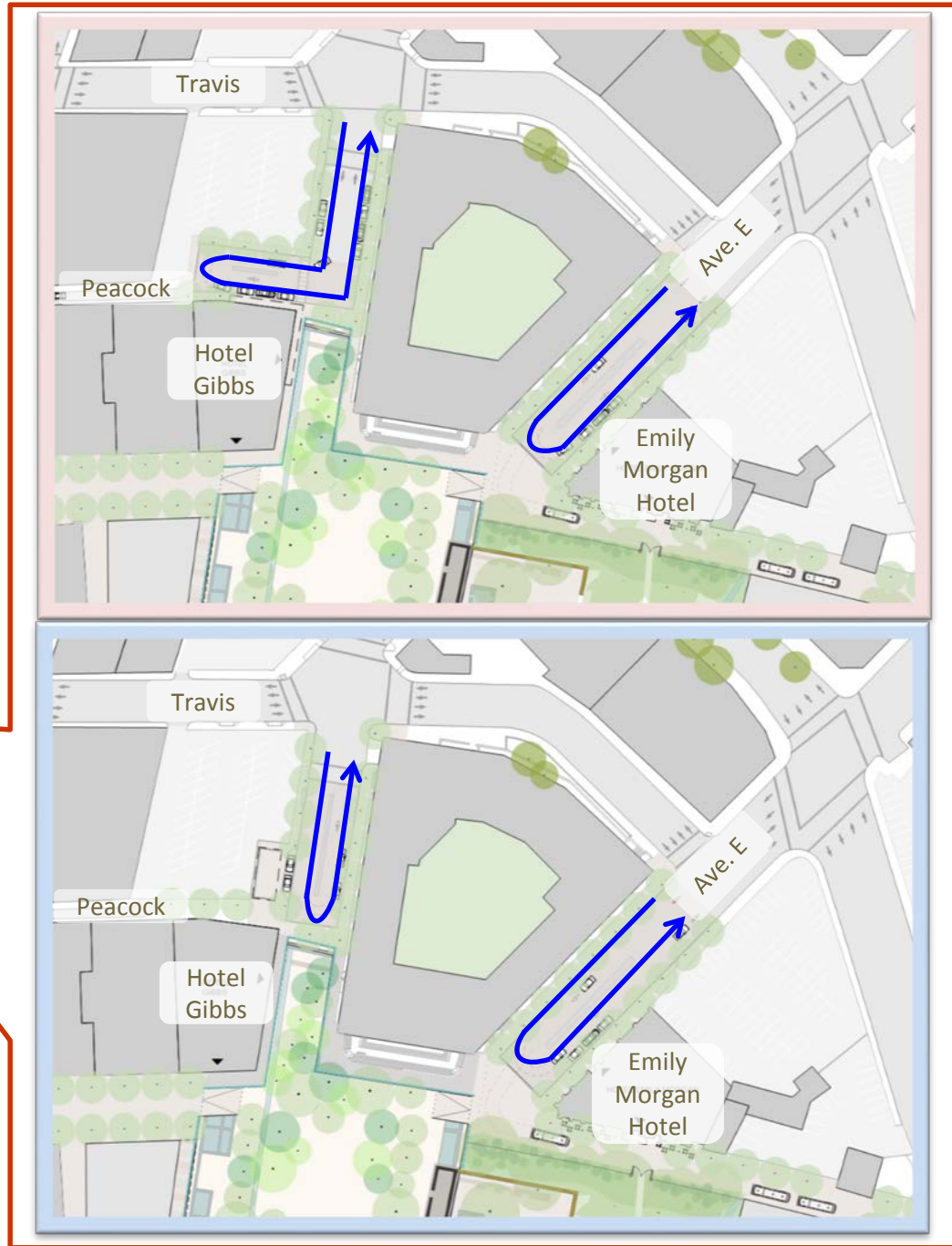
Menger Hotel

Crockett Hotel



HOTEL GIBBS AND EMILY MORGAN HOTEL CIRCULATION OPTIONS

HOTELS



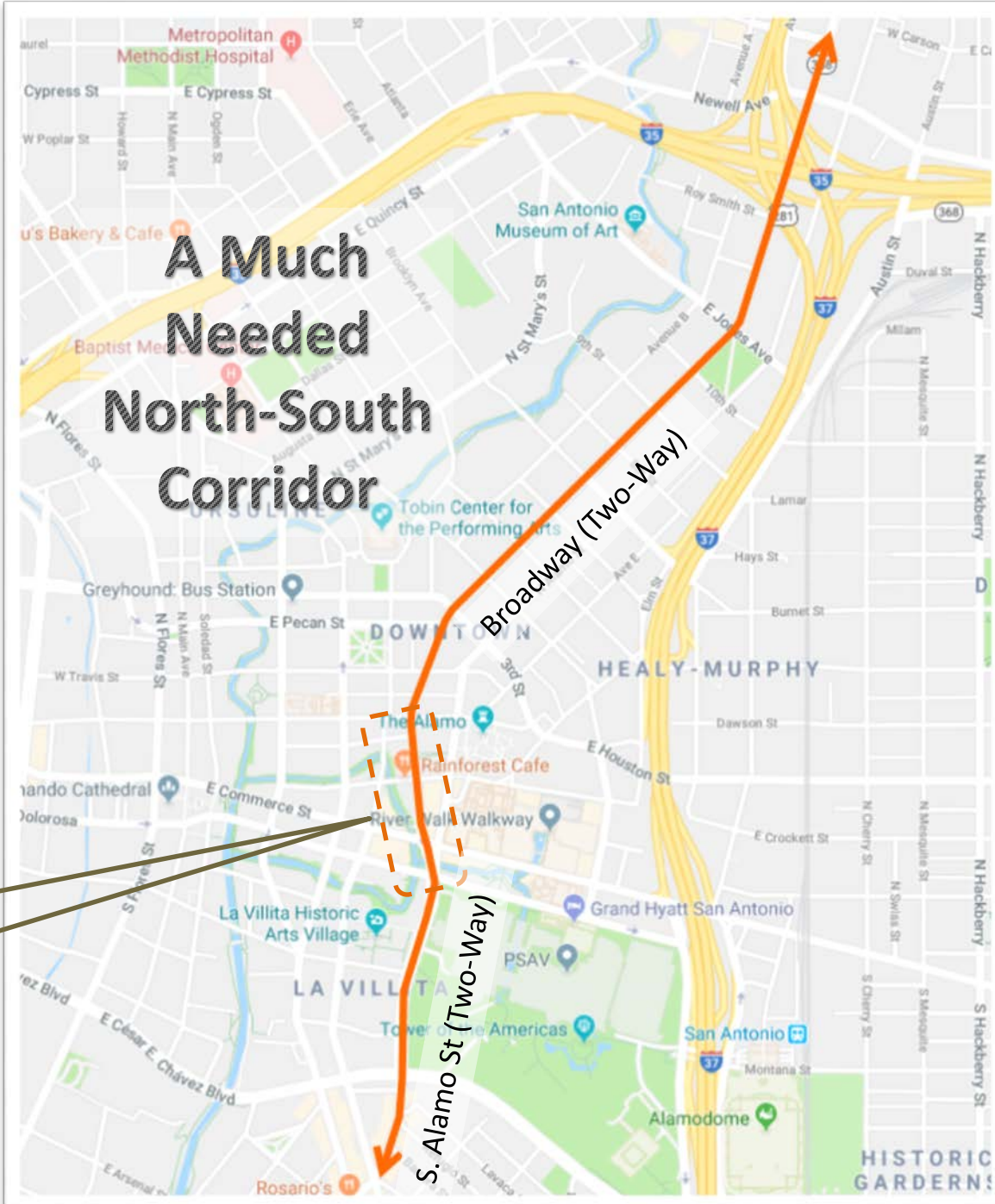
CONNECT S. ALAMO STREET AND BROADWAY

A Much Needed North-South Corridor

Broadway (Two-Way)

S. Alamo St (Two-Way)

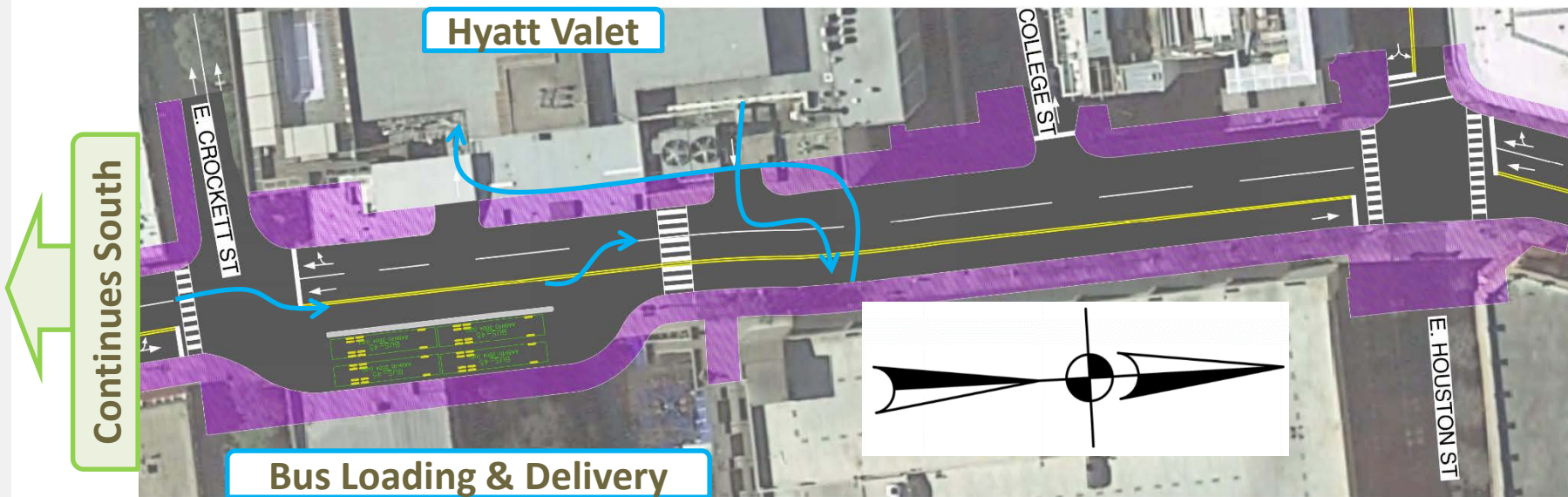
CONVERT LOSOYA
TO TWO-WAY



SUFFICIENT SPACE TO MAINTAIN TWO LANES SOUTHBOUND & ADD ONE LANE NORTHBOUND

36' PAVEMENT & 12' SIDEWALK EACH SIDE

BIGGER PICTURE



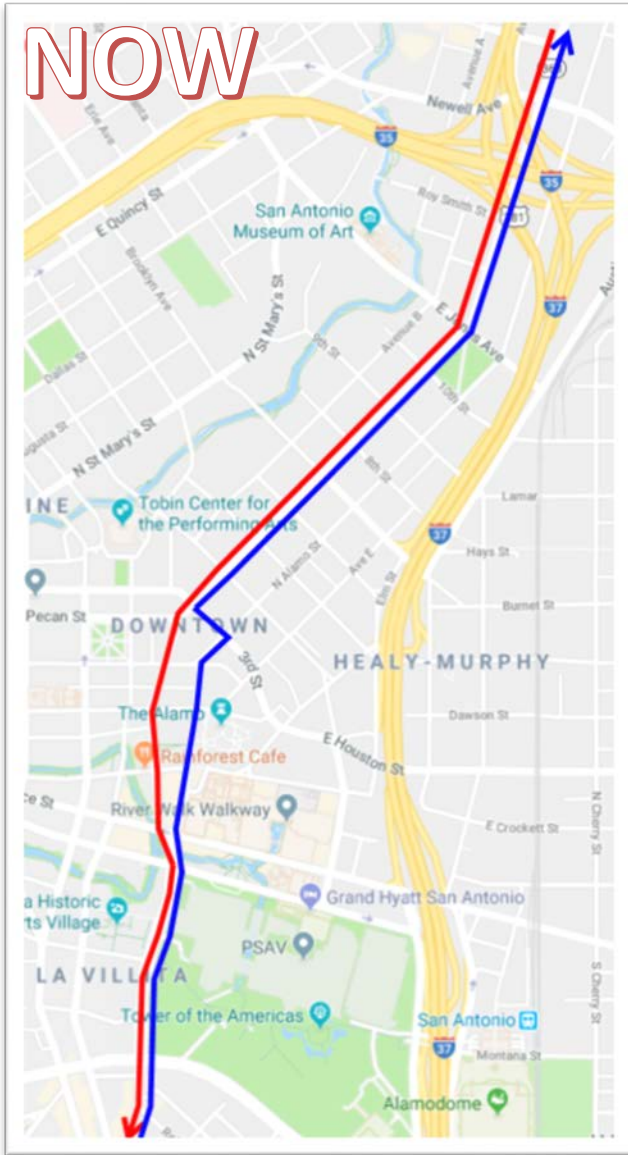
MAINTAIN TWO LANES SOUTHBOUND & ADD ONE LANE NORTHBOUND FOR 36' PAVEMENT & 12' SIDEWALKS

BIGGER PICTURE

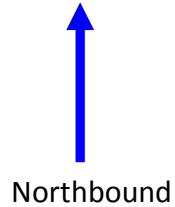
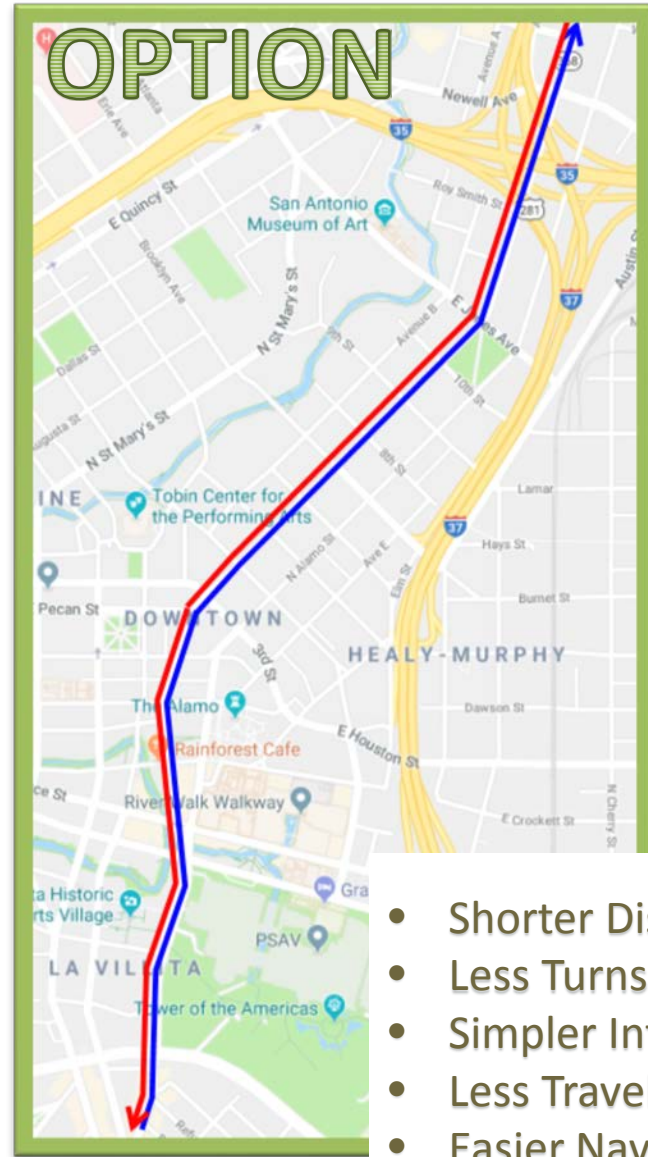


WHAT WILL CHANGE

NOW



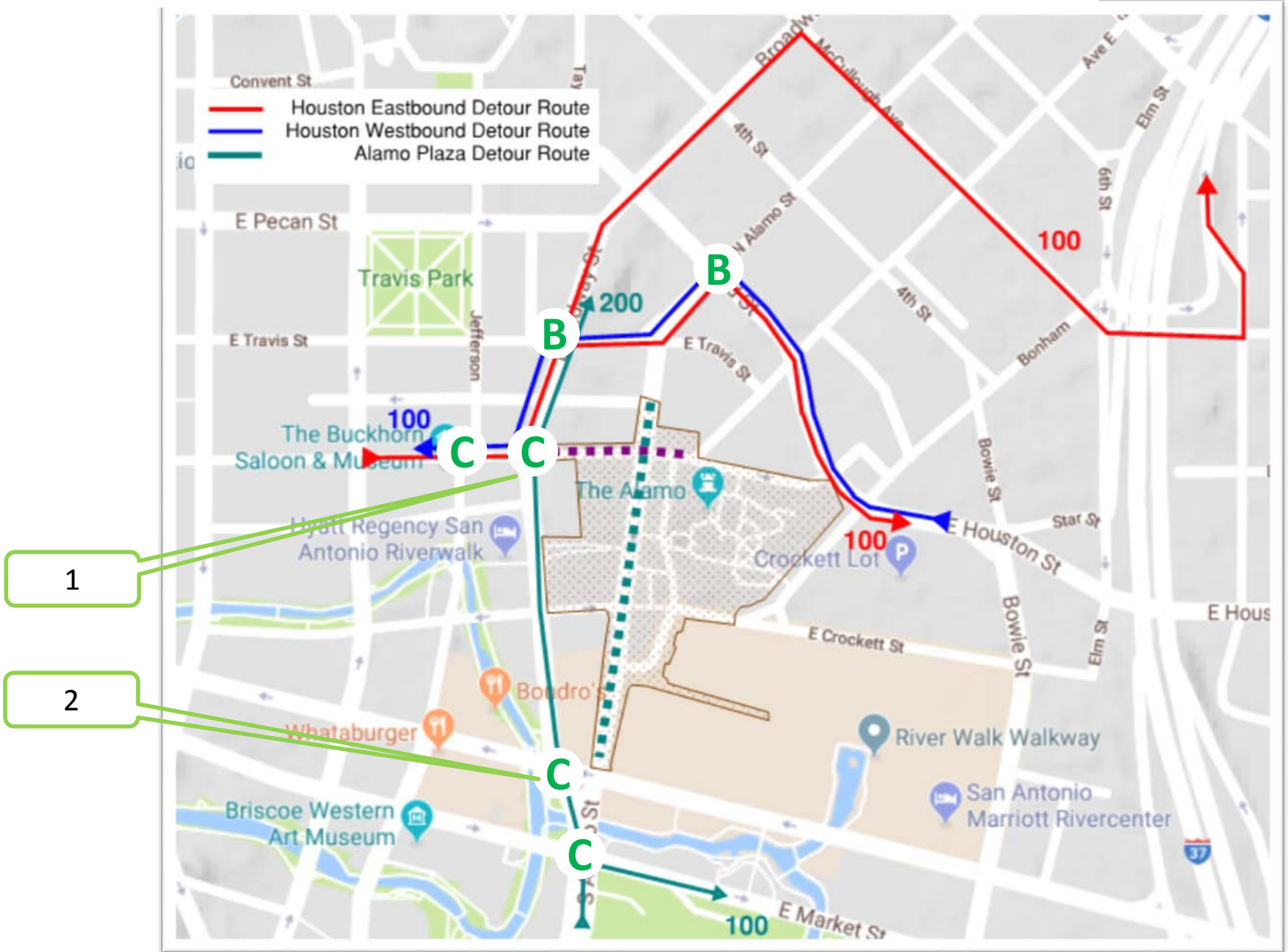
OPTION



- Shorter Distance
- Less Turns
- Simpler Intersections
- Less Travel Time
- Easier Navigation

DETOUR – LOSOYA TWO-WAY STREET

BIGGER PICTURE



1. HOUSTON – LOSOYA – BROADWAY INTERSECTION

BIGGER PICTURE

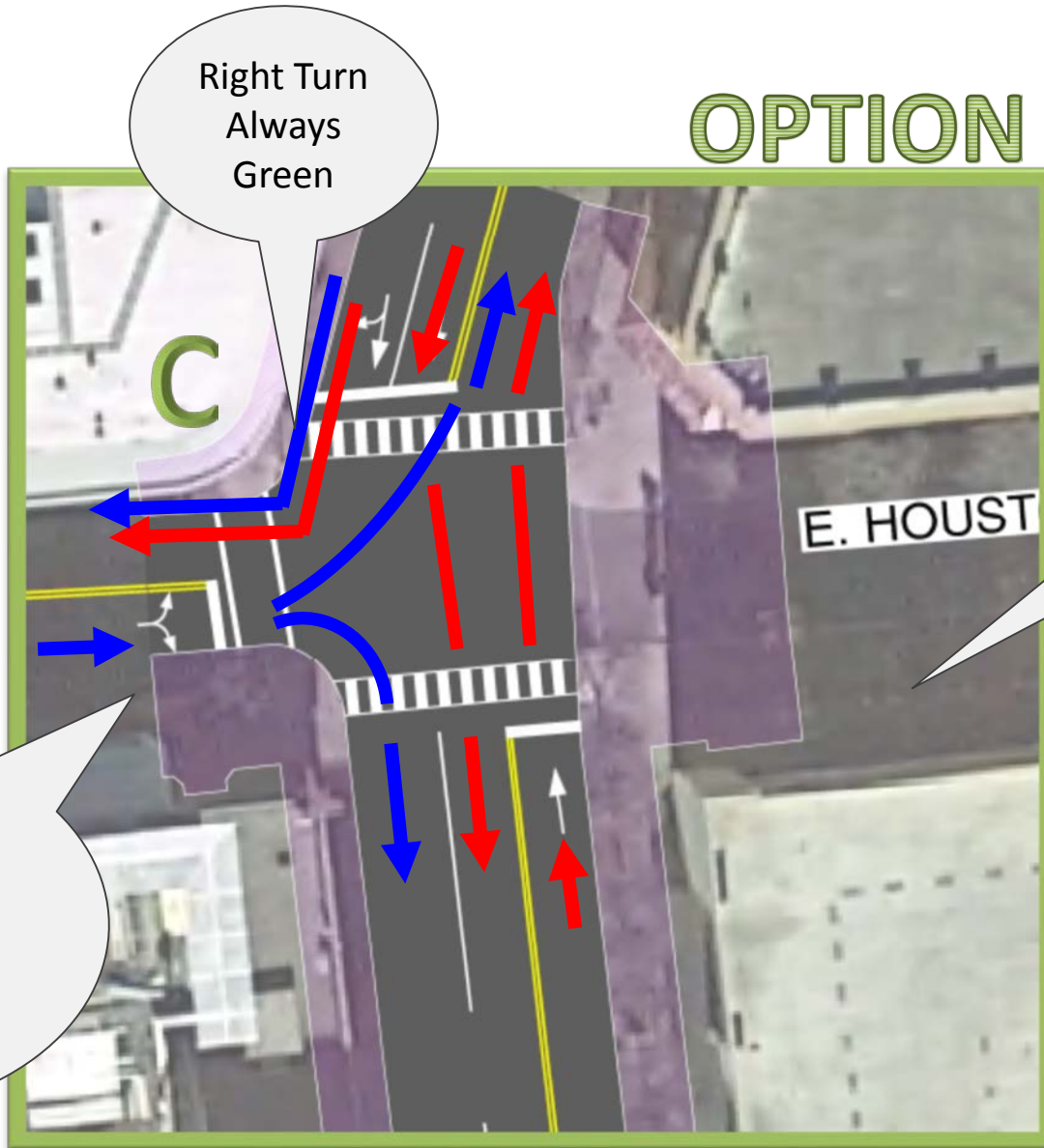


Currently, left-turn yielding can block a long queue and waste green time.

1. HOUSTON – LOSOYA – BROADWAY INTERSECTION

BIGGER PICTURE

OPTION



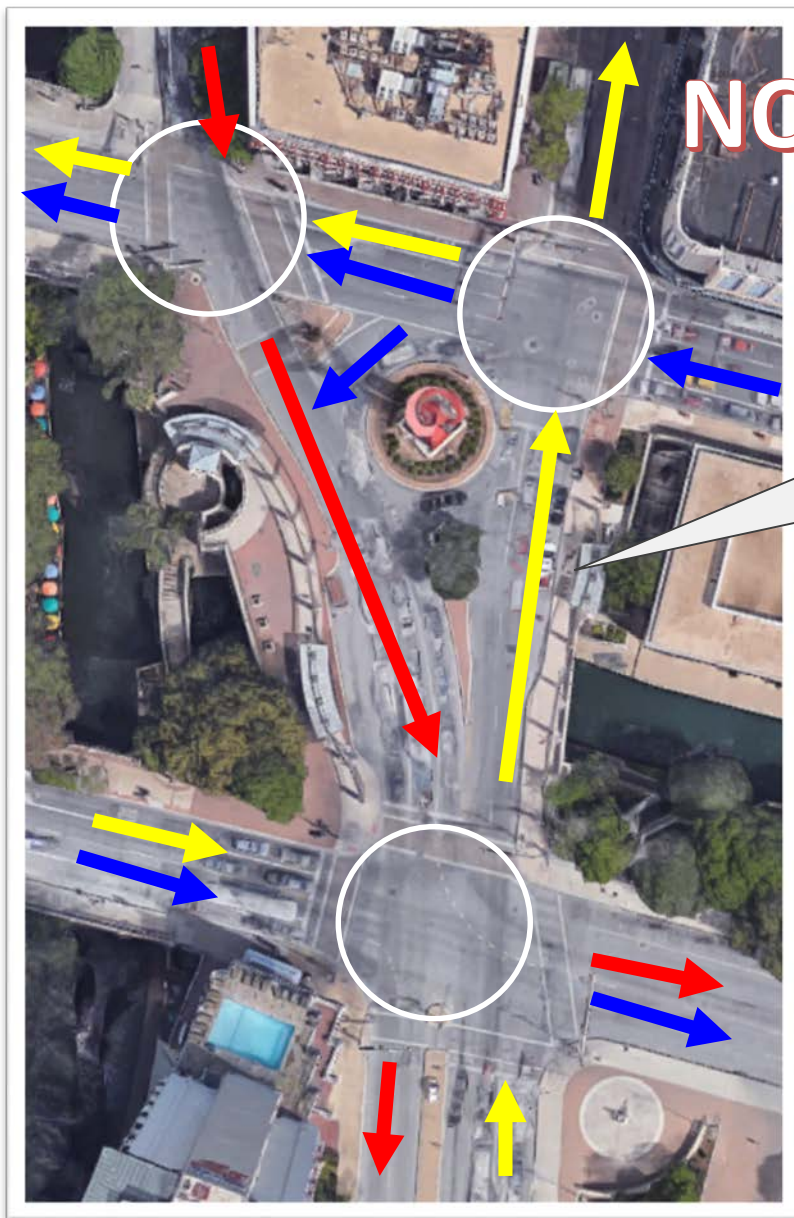
Right Turn
Always
Green

WB
Traffic
Removed

No more
conflicting yield-
and-block. Two
free movements
take turns.

2. THE “TORCH” INTERSECTION SIMPLIFIED COMMERCE – ALAMO – LOSOYA - MARKET

BIGGER PICTURE



Three clustered intersections causing more stop-and-go, more waiting, and more potential collisions.

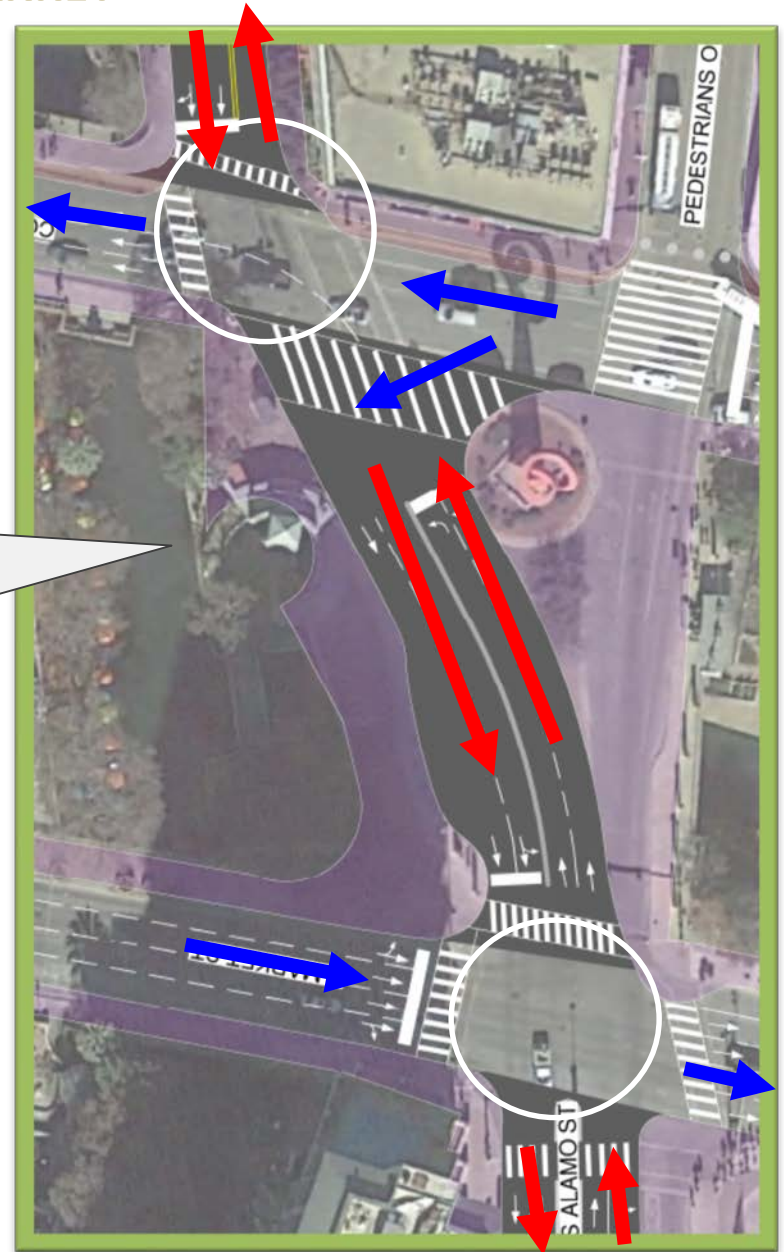
2. THE “TORCH” INTERSECTION SIMPLIFIED COMMERCE – ALAMO – LOSOYA - MARKET

OPTION

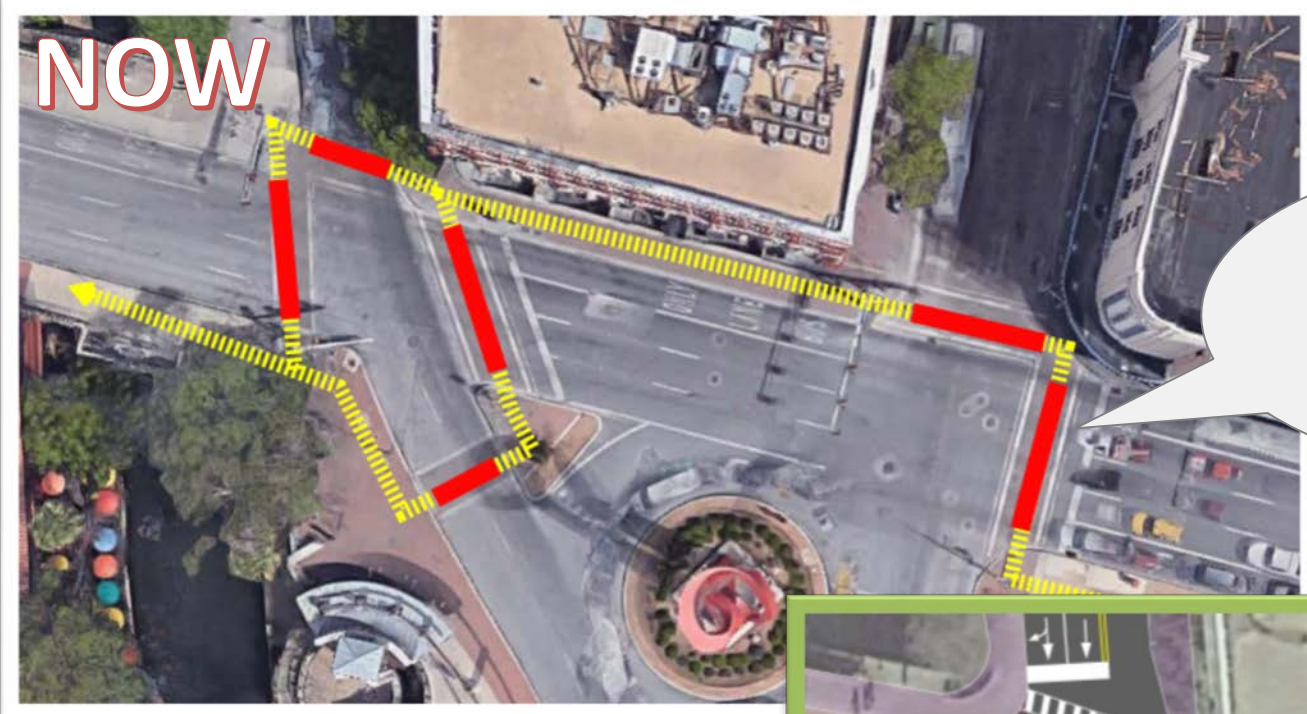
BIGGER PICTURE

Maintain
similar LOS

- Consolidates to two intersections.
- Maintains all movements.
- Simpler and more efficient.
- More intuitive for unfamiliar drivers.



2. THE "TORCH" INTERSECTION SIMPLIFIED – REDUCE PEDESTRIAN CONFLICTS COMMERCE – ALAMO – LOSOYA - MARKET



NOW

Have to wait and cross street FOUR times just to stay on Commerce Street.

Allows for a potential dedicated pedestrian phase to eliminate conflicts between turning vehicles and crossing pedestrians.

Much easier and safer to walk.



OPTION

City of San Antonio