

SOUTHERN BLACKSTONE AVENUE SMART MOBILITY PLAN EXISTING CONDITIONS REPORT

Prepared for CITY OF FRESNO

Submitted by

COMMUNITY DESIGN + ARCHITECTURE

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1. Introduction

This report provides a summary of existing conditions in the Southern Blackstone Corridor area that will inform the development of concept alternatives for a complete streets¹ framework and implementation and funding recommendations that will be developed during following phases of the project. The report is organized into four sections:

- 1. **Introduction:** Provides background information about the Blackstone corridor's history, the project's purpose and draft goals, and project area demographics.
- **2. Corridor-Wide Conditions:** Provides information about existing land use context and multimodal transportation conditions at a corridor-wide scale.
- 3. Existing Conditions by Activity Center and Corridor Sub-Segment: Provides a detailed summary of land use context and transportation conditions in each of the three Activity Centers and their corridor sub-segments identified for the purpose of this project.
- **4.** Conclusion and Next Steps: Provides a summary of key issues and opportunities for the development of design concepts during the next phase of the project.

1.1 Corridor History

The North Blackstone Avenue stretches from the northern edge of Downtown and runs due north for about nine miles to the northern suburban neighborhoods of Fresno. The project area comprises the sub-section of North Blackstone Avenue between Dakota Avenue in the north and SR 180 in the south (referred to here as Blackstone Avenue/Abby Street Corridor or Corridor).

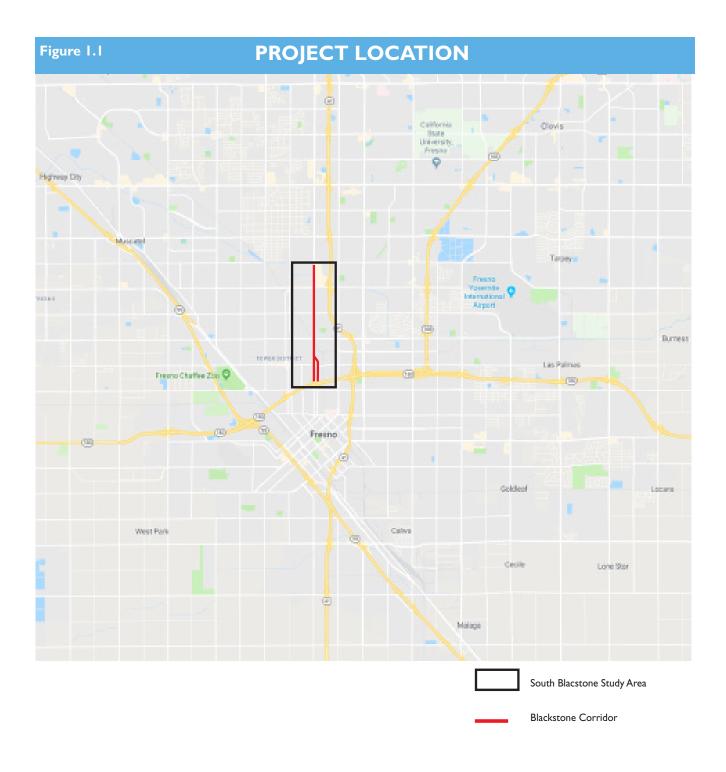
In its past, Blackstone Avenue initially provided access to a residential enclave built for wealthy attorneys in the late 1800s, which is why it was named after the famous English jurist Sir William Blackstone. Early in the 20th Century, when streetcars fostered the development of commercial uses and middle-class neighborhoods in locations that stretched further and further north, and the corridor became an important link to places north of Fresno, such as Madera County and Yosemite, Blackstone Avenue became part of State Route 41. As a consequence, the street was widened to the state highway standards of the time. After World War II the large Manchester Center, Fresno's first major, suburban shopping center, came to Blackstone Avenue, as did a multitude of smaller strip mall developments. The first McDonald's franchised by Ray Croc arrived on Blackstone in 1955.

With the construction of a new State Route 41 freeway one quarter mile to the east of Blackstone Avenue, the street is no longer part of the state route system and now owned and operated by the City of Fresno.

(Text above taken from City's RFP for this project and edited for this report).

Ĺ

¹ Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. (Source: Smart Growth America)



1.2 Project Purpose

Purpose of the Southern Blackstone Smart Mobility project is to develop a framework for complete streets improvements along Blackstone Avenue between Dakota Avenue and SR 180. The framework will be based on a community-driven process and include design concepts and feasible, coordinated steps to implement the envisioned improvements along Blackstone Avenue with the aim of increasing the effective range of public transit and to serve the needs of all modes² and users, particularly bicyclists and pedestrians. The framework will also be supportive of transit-oriented, mixed-use development as envisioned for the Blackstone Avenue corridor by the Fresno General Plan.

The draft objectives below were developed from those listed in the request for proposals for the project and will be further refined based on stakeholder and community input during the course of the project:

- 1. Increase access and safety for all travel modes and all users, including the elderly, disabled, low-income, students and youth.
- 2. Identify and address deficiencies in the street design that impact business opportunities and performance within Activity Center areas and along the corridor.
- Identify multimodal access and safety improvements for pedestrians and bicyclists as well as transit riders.
- 4. Identify potential sidewalk and streetscape enhancements to support pedestrian comfort, access to transit, and access to businesses and services.
- 5. Identify potential treatments that support the management of traffic speeds within Activity Centers along the corridor.
- Integrate on-street and off-street parking with recommended multimodal improvements.
- 7. Identify opportunities for gateway improvements and directional signage.
- 8. Recommend locally feasible implementation and funding strategies for recommended multimodal improvements.

1.3 Project Funding

The Southern Blackstone Smart Mobility Plan project is funded primarily through a Caltrans Sustainable Transportation Planning grant from the State of California Department of Transportation (Caltrans).

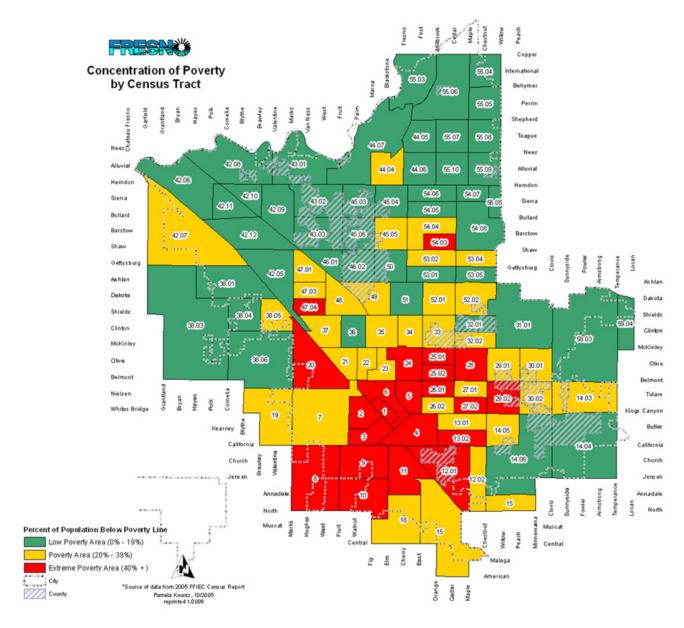
1.4 Project Area and Demographics

The following is a slightly edited version of the information provided in the City's Request for Proposals for the Southern Blackstone Avenue Smart Mobility Plan:

² A (travel) mode represents a means of transportation, such as driving, taking transit, or walking.

Figure 1.2

CENSUS TRACT POVERTY MAP

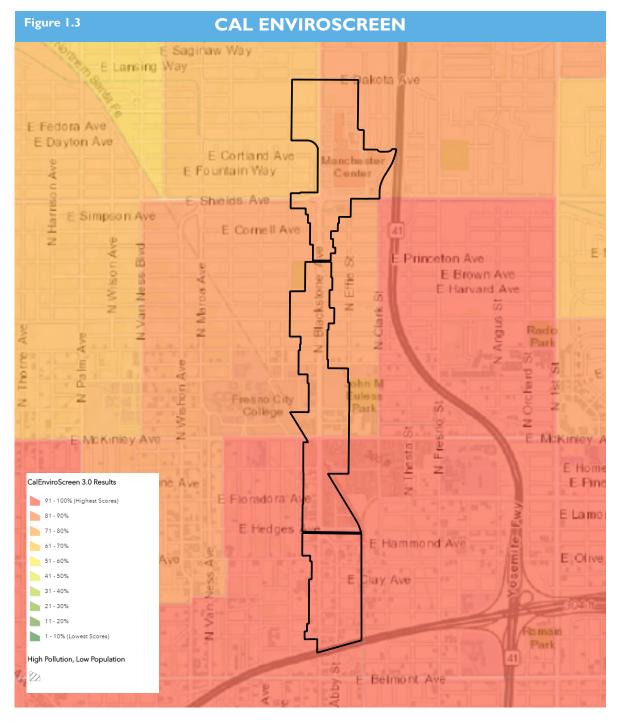


Overall Blackstone Avenue Corridor

The entire 8-mile length of the Blackstone BRT corridor (The FAX 'Q' service), designated in the Fresno General Plan adopted in 2014, from Divisadero Street in Downtown Fresno to Audubon Drive at its northern end, represents a higher poverty microcosm of Fresno. Both, the Blackstone Avenue corridor and its adjoining commercial districts and neighborhoods one half mile east and west of Blackstone, encompass over 2,100 businesses and 50,000 residents; about 10% of Fresno's total population. The poverty rate in this corridor area is 34% as compared to 29% for the City as a whole. The median household income is less than \$32,000 compared to \$42,000 for the City. Ten of the eleven census tracts along the corridor have poverty rates above the average for the City of Fresno, which is approximately 150% higher than the state of California's poverty rate. Neighborhoods in the Blackstone environs are racially mixed and fairly representative of Fresno as a whole. Over half of residents in the Blackstone corridor area identify as Hispanic or Latino, and less than 30% identify as non-Hispanic White. 9% of residents identify as Asian or Pacific Islander alone, and 7% identify as African American.

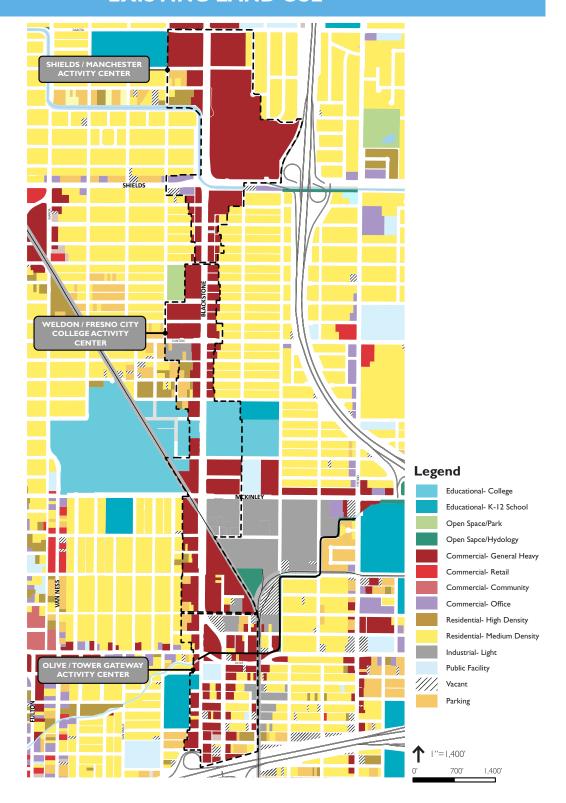
Blackstone Avenue Corridor in the Project Area

Within the 2.5-mile project focus area from Dakota Avenue to Divisadero Street, the most recent five-year American Community Survey data for the six census tracts for the study area through which the corridor passes show a population of 30,193. Latinos are the majority in all but one, with large Asian (ranging from 4% to 20%) and African American (ranging from 5% to 11 %) populations. The average household median incomes in the various tracts range from \$17,050 to \$35,406, far below the state average of \$58,650 (ACS 2013 5-year data). 98% of the students at Susan B. Anthony elementary school qualified for the federal free and reduced-price meal program in 2014, another clear indicator of poverty. Finally, CalEnviroScreen 2.0 shows all the census tracts in the top 15% most disadvantaged communities in the state (with two in the top 5%).





EXISTING LAND USE



2. Corridor-Wide Conditions

2.1 Land Use Context

The project area encompasses the 2.5-mile southern segment of the North Blackstone Avenue corridor from Dakota Avenue to State Route 180 and includes several proposed affordable housing and mixed-use infill development projects, nearly 1,000 small and mid-size businesses, vacant sites, and many buildings in need of renovation.

The Blackstone Corridor impacts the quality of access to several public use locations, including schools, parks, and institutions. The Fresno City College facilities, the JE Young Academic Center, and the Susan B. Anthony elementary school are directly adjacent to the Corridor, with Design Science early high school, Fort Miller middle school, Heaton elementary school and Lafayette Park being located just a short distance off the Corridor. The development of multimodal design concepts for this project will consider safe routes to school approaches as some neighborhoods along the corridor are served by nearby public education facilities that draw students from both sides of the corridor (e.g. Susan B. Anthony and Heaton elementary schools).

2.2 Zoning and Development Code

The policy framework of the Fresno General Plan emphasizes rehabilitation, intensification, and reuse of vacant and underutilized land along the length of Blackstone Avenue and Abby Street. For the area south of Shields Avenue, Fresno's Development Code designates the vast majority of properties fronting onto Blackstone Avenue and Abby Street and within the remainder of the three Activity Centers as Neighborhood Mixed-Use (NMX). The area north of Shields Avenue is designated as a mix of Regional Mixed-Use (RMX) and Commercial Regional (CR).

The development and design standards for the primary zoning type, Neighborhood Mixed-Use (NMX), allow and encourage a mix of housing, retail, office, and active public spaces in a pedestrian-oriented environment. The policy framework's intention for districts zoned as Mixed-Use are to:

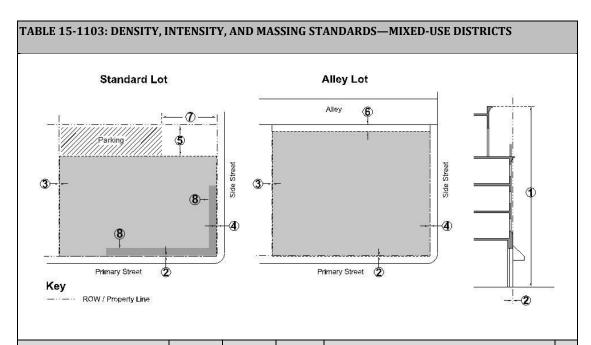
- Transform certain auto-oriented boulevards and corridors into vibrant, diverse, and attractive corridors that support a mix of pedestrian-oriented retail, office, and residential uses in order to achieve an active social environment within a revitalized streetscape.
- Reduce the need for driving to access shopping, services, and employment and minimize air pollution from vehicle miles traveled.
- Improve access to a greater range of facilities and services for surrounding residential neighborhoods.
- Establish development and design standards for these centers and corridors that will
 create a unified, distinctive, and attractive urban character, with appropriate transitions to adjacent residential neighborhoods.

(Source: 2018 Citywide Development Code, Chapter 15, Part II, Article 11)

The Development Code for the Mixed-Use development call for buildings to be situated close to the main street (a maximum setback of 10 feet), and have active frontages, particularly in proximity of BRT stops. The code also allows for higher intensity buildings with 1.5 - 2.0 FAR and a maximum height of 75 feet (see Figure 2.1).

Figure 2.2

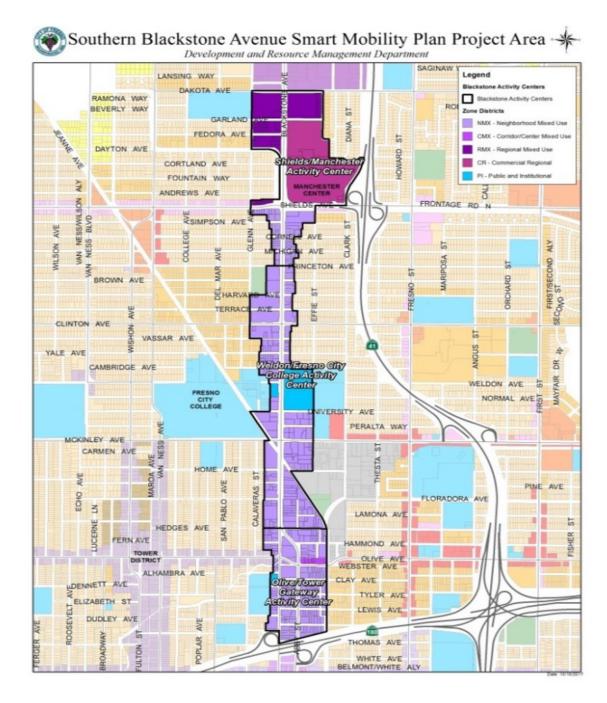
DEVELOPMENT STANDARDS



District	NMX	CMX	RMX	Additional Regulations	
Floor Area Ratio (max.)	1.5	1.5	2.0	§15-309, Determining Floor Area Ratio	
				§15-310, Determining Residential Density	
Residential Density, du/ac (min./max.)	12/16	16/30	30/45	Min. res. density shall not be required for the following: projects on lots less than 20,000 sq. ft. in area; projects further than 1,000 feet from a planned or existing BRT route; and projects which submit a Development Permit application prior to January 1, 2019.	
Maximum Height (ft.)	40	60	75	§15-1104-B, RS Transition Standards and §15-2012, Heights and Height Exceptions	1
Setbacks (ft.)					
Front (min./max.)	-/10	-/10	-/10		2
Interior Side (min.)	-	-	-		3
Street Side (min.)	-	-	-	§15-313, Determining Setbacks and Yards	4
Rear (min.)	-	-	-	§15-1104-B, RS Transition Standards	(5)
Alley (min.)	3	3	3	§15-1104-D, Parking Setback §15-2305, Areas to be Landscaped	6
Parking, from back of sidewalk or curb (min.)	30	30	30	g15 2505, fricas to be Balluscapeu	7
Minimum Frontage Coverage (%)	60	70	80	§15-317, Determining Frontage Coverage	
Corner Frontage (ft., measured from property corner)	15	30	50	§15-1104-C, Corner Frontage	8
Minimum On-Site Open Space (% of Lot Area)	15	10	8	§15-1104-E, On-Site Open Space	

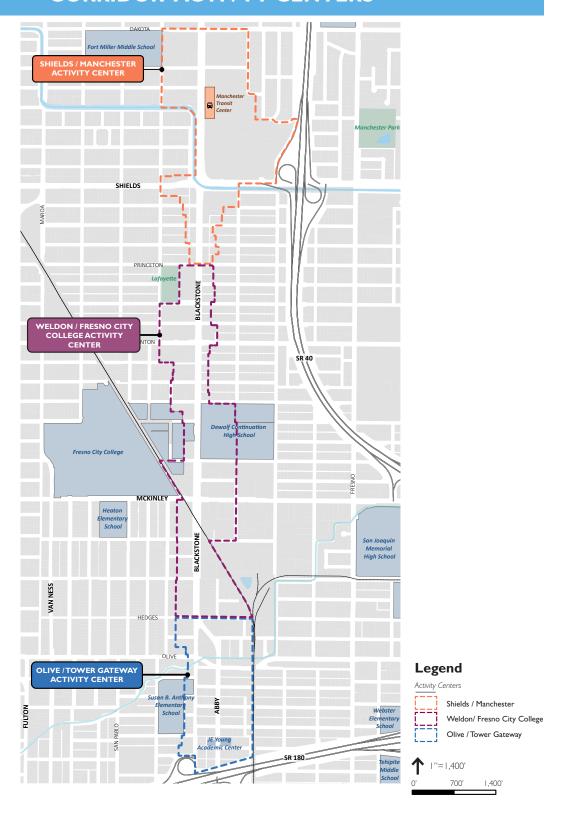
Source: Fresno Citywide Development Code, 2017

ZONING





CORRIDOR ACTIVTY CENTERS



2.3 Activity Centers

The City's General Plan (adopted in 2014) envisions the revitalization of the central core area, and the corridors leading into the Downtown area. It hopes to locate substantial growth in the Downtown, activity centers and along the corridors, to support greater use of transit in Fresno. Blackstone Avenue is currently the most prominent major street corridor connecting the Downtown area to the northern areas of Fresno, including the major commercial centers concentrated between Herndon and Nees Avenues. The street is part of the first phase BRT route (Fax 'Q') in the City and contains many "opportunity sites" that have the potential to be developed as activity centers. The Smart Mobility Project RFP identifies three activity centers covering the southern part of the Blackstone corridor as:

- Shields/Manchester Activity Center includes the Manchester Center Mall and extends from Dakota Avenue to Princeton Avenue.
- Weldon/Fresno City College Activity Center includes Ratcliffe Stadium, and Fresno City College, covering the corridor from Princeton Avenue to Hedges Avenue.
- *Olive/Tower Gateway Activity Center* includes the One-way couplet, the Susan B Anthony elementary school, and ends at the SR 180 Freeway overpass.

2.4 Transportation Conditions

Introduction

The Blackstone Avenue/Abby Street Corridor is an important north-south route for automobiles and transit. It is also a designated truck route. The posted speed limit for both streets is 40 mph. At the southern end of the project area, Blackstone Avenue and Abby Street both connect to State Route 180 via loop ramps. Three of the Corridor's major east-west cross streets – Olive, McKinley and Shields Avenues – connect to State Route 99 to the west and two – McKinley and Shields Avenues – connect to State Route 41 to the east. South of Hedges Avenue, Blackstone Avenue and Abby Street function as a one-way couplet, with traffic on Blackstone Avenue traveling in the southbound direction and northbound traffic traveling on Abby Street.

Figure 2.5 and Table 2.1 provide an overview of the typical right-of-way³ widths for Blackstone Avenue and Abby Street within the project area. The cross sections in Appendix A provide additional detail about how the available right-of-way is distributed between different modes and design elements, such as travel and turn lanes, medians, and sidewalks and their respective widths.

Intersections with major cross streets include Shields Avenue, Clinton Avenue, McKinley Avenue, Olive Avenue and the ramps to State Route 180. Additional signalized intersections are located at Dakota Avenue, Princeton Avenue, and Weldon Street.

A more detailed discussion of the cross section and transportation conditions is included in Section 3 of this report.

³ The public right of way is typically a strip of land that contains the public street, sidewalks, and utilities. The edge of the right of way is also the property line for the abutting property.

	Activity Center	Blackstone Segments	Right-of-Way (feet)
I	Shields/	E Dakota Ave- E Shields Ave	126'
2	Manchester Activity Center	E Shields Ave- E Princeton Ave	109'
3		E Princeton Ave- E Clinton Ave	109' -112'
4	Weldon/Fresno	E Clinton Ave- E Cambridge Ave	
5	City College Activity Center	E Cambridge- E McKinley Ave	113' - 139'
6	7 .ca, Coco.	E McKinley Ave- E Hedges Ave	120' - 145'
7		E Hedges Ave -E Webster Ave North End	151'
8	Olive/Tower	E Hedges Ave -E Webster Ave (Blackstone)	70' - 76'
9	Gateway	E Hedges Ave -E Webster Ave (Abby)	77' - 79'
10	Activity Center	EWebster Ave- E Harvey Ave (Blackstone)	70'
П		EWebster Ave- E Harvey Ave (Abby)	78' -80'

Table 2.1 Segment Rights-of-Way

Driving

Historically, the Blackstone Avenue and Abby Street Corridor have been an important transportation corridor for automobile and truck traffic within the City of Fresno. With the construction of the State Route 41 freeway to the east, however, the role of carrying heavy north- and southbound volumes of traffic has somewhat shifted to that new facility, opening up the possibility of redesigning Blackstone Avenue and Abby Street in the project area to better serve non-motorized modes and transit. In this context, it is important to establish an understanding of the remaining present-day role of the Corridor for automobile and truck traffic, and the capacity of travel and turn lanes that needs to be preserved in any redesign.

For this purpose, the following eight (8) intersections and nine (9) roadway sections were analyzed within the project area:

Intersections

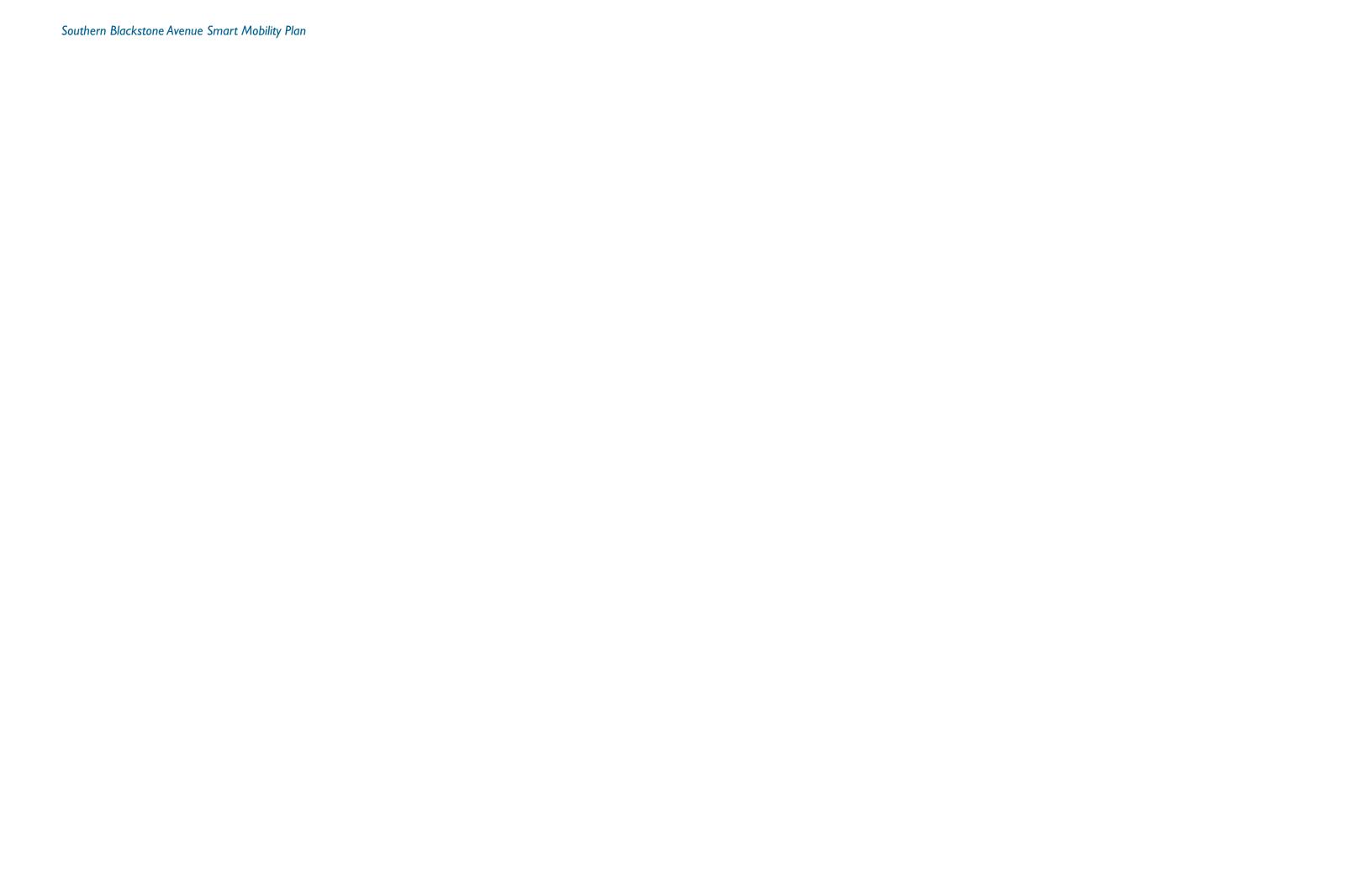
- Blackstone Avenue /Dakota Avenue
- Blackstone Avenue / Shields Avenue
- Blackstone Avenue / Clinton Avenue
- Blackstone Avenue / McKinley Avenue
- Blackstone Avenue / Olive Avenue
- Blackstone Avenue / SR-180 WB Ramps
- Abby Street/Olive Avenue
- Abby Street/SR-180 EB Ramps

Roadway Segments

- Palm Avenue between Belmont Avenue and Shields Avenue
- Van Ness Boulevard between South of Clinton Avenue and Shields Avenue

BY CHARACTERISTICS

CORRIDOR SEGMENTS



- Fulton Street between Belmont Avenue and Wishon Avenue
- Wishon Avenue between Fulton Street and Shields Avenue
- Van Ness Avenue between Belmont Avenue and Shields Avenue
- Blackstone Avenue between I-180 WB Ramps and Shields Avenue
- Abby Street between I-180 EB Ramps and Blackstone Avenue
- Fresno Street between I-180 WB Ramps and Shields Avenue

Figures 2.6 through 2.18 provide various results from the existing conditions assessment of street and intersection characteristics conducted for this project.

Average Daily Traffic Volumes

Figure 2.6 provides an overview of the Average Daily Traffic (ADT) volumes for each of the study segments in the project area.

Intersection Control Devices and Dedicated Left-Turn Lanes

Figure 2.8 includes an overview of signalized intersections along the Corridor. Intersections with dedicated left-turns on Blackstone/Abby and their cross streets include the following:

- Blackstone and Dakota: Northbound (NB) and Southbound (SB)
- Blackstone and Shields NB / SB and Eastbound (EB) and Westbound (WB)
- Blackstone and Clinton: NB / SB and EB / WB
- Blackstone and McKinley: NB / SB and EB / WB
- Blackstone and Olive: SB / WB
- Blackstone and SR 180 Westbound Ramps: WB
- *Abby and Olive: EB*

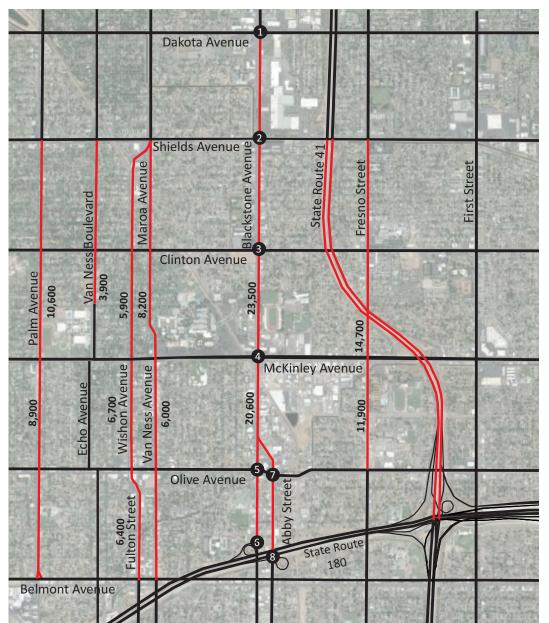
AM and PM Peak Turning Movements

Of particular interest in consideration of the driving mode are *Figures 2.6, 2.9* and *2.10* and *Table 2.2. Figures 2.9* and *2.10* show existing AM and PM peak hour turning movements at key study area intersections. At each of these intersections, left turn movements from Blackstone Avenue onto the cross streets are greater than 100 vehicles per hour in the AM peak hour, the PM peak hour, or both. This is considered to be an indication that these turning movements need to be maintained in any redesign of Blackstone Avenue. Two of these major cross streets, Shields Avenue and McKinley Avenue, are also designated truck routes.

At other intersections along Blackstone Avenue, consideration could be given to removing or shortening left turn lanes in order to allow right-of-way space currently occupied by these turn lanes to be used for another purpose. Potential locations for removing or shortening left turns will be considered on a case-by-case basis where turn volumes are expected to be low and infrequent, and acceptable alternate routes exist. A list of proposed locations will be developed during the concept development phase of the project.

Figure 2.6

AVERAGE DAILY TRAFFIC VOLUMES





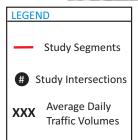




Figure 2.7 INTERSECTION TRAFFIC VOLUMES

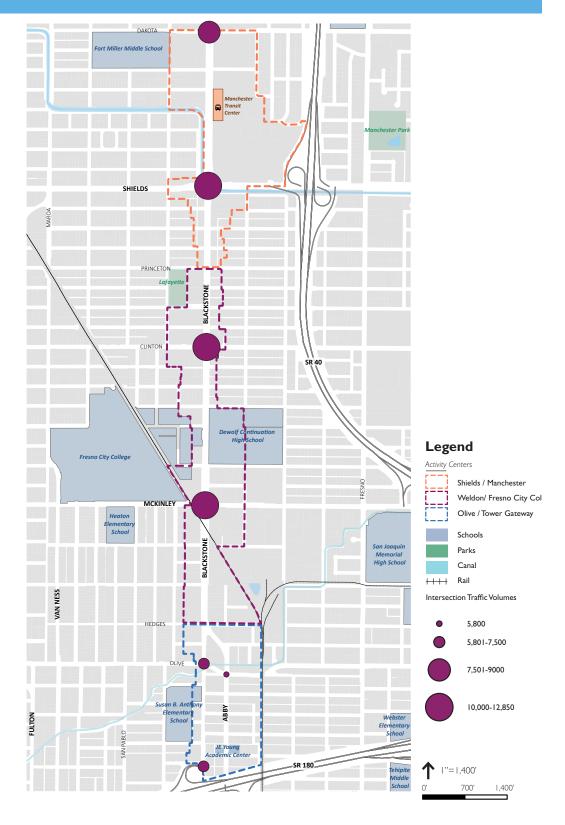


Figure 2.8 INTERSECTION CONTROL DEVICES

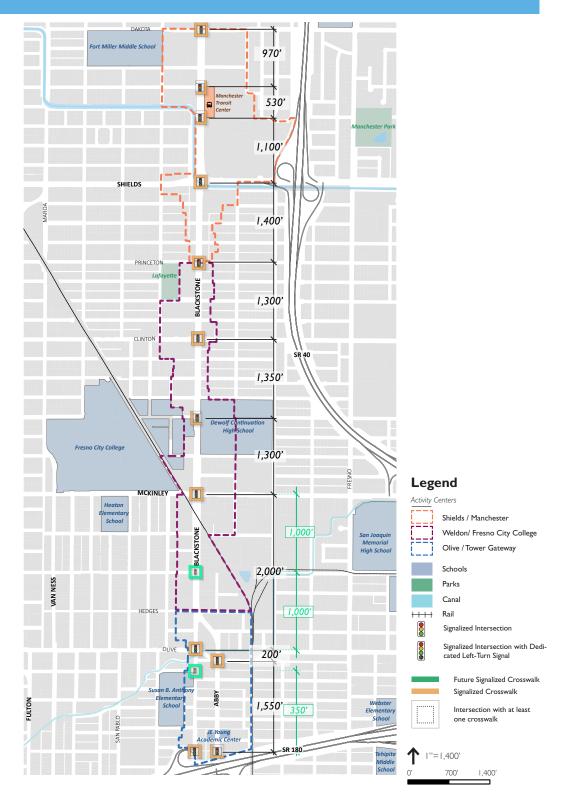


Figure 2.9 VEHICULAR INTERSECTION MOVEMENTS AM PEAK





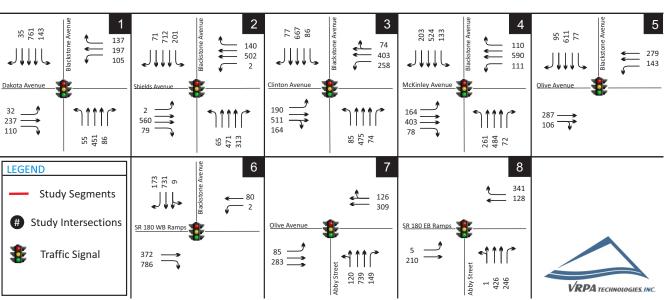
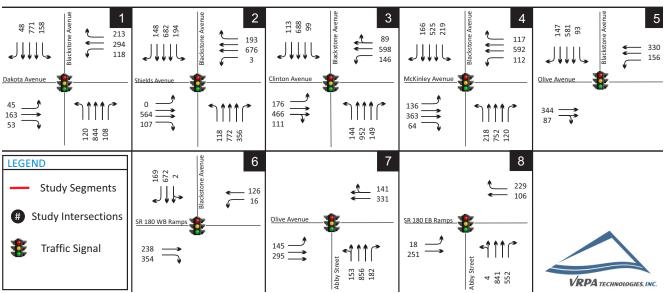


Figure 2.10 VEHICULAR INTERSECTION MOVEMENTS PM PEAK







Intersection	Control	Control LOS H		Existing	
				DELAY	LOS
I. Blackstone Avenue / Dakota Avenue	Signalized	D	AM	21.5	С
1. Blackstone Avenue / Dakota Avenue			PM	22.9	С
2. Blackstone Avenue / Shields Avenue	Signalized	D	AM	17.3	В
2. Diackscone Avenue / Silielus Avenue			PM	21.7	С
3. Blackstone Avenue / Clinton Avenue	Signalized	D	AM	43.4	D
3. Blackstoffe Avenue / Clintoff Avenue			PM	32.0	С
4. Blackstone Avenue / McKinley Ave-	Signalized	D	AM	36.3	D
nue			PM	30.8	С
5. Blackstone Avenue / Olive Avenue	Signalized	D	AM	16.8	В
5. Blackstoffe Avenue / Olive Avenue			PM	16.9	В
6. Blackstone Avenue / State Route 180	Signalized	С	AM	14.6	В
W Ramps			PM	13.2	В
7. Abby Street / Olive Street	Signalized	D	AM	17.2	В
7. ADDY Street / Olive Street			PM	18.5	В
8. Abby Street / State Route 180 EB	Signalized	С	AM	10.4	В
Ramps			PM	11.7	В

DELAY is measured in seconds

LOS = Level of Service / BOLD denotes LOS standard has been exceeded

For signalized, all-way stop, and roundabout controlled intersections, delay results show the average for the entire intersection.

For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

Table 2.2 Intersection Capacity Level of Service

Intersection Level of Service

Table 2.2 indicates that all of the key study area intersections operate at Level of Service (LOS) D or better in the AM and PM peak hours. Since this meets the City of Fresno's target for peak hour level of service, it would appear that a reduction in the number of through-lanes could be considered during the concept development phase of the project. The general assessment of the feasibility of this approach will include consideration of potential impacts on the length of queues at intersections.

Roadway Capacity on Blackstone/Abby and Parallel Corridors

Additional information for the development of multimodal concepts that involve a potential reduction in the number of travel lanes can be gleaned from analyzing the roadway capacity on Blackstone Avenue and parallel surface streets. For this analysis of the roadway capacity

on Blackstone Avenue and the parallel north-south streets, the 2018 Average Daily Traffic (ADT) on each roadway was compared to its daily carrying capacity. The results are shown in *Table 2.3*. All roadways in the study area are below capacity, including Blackstone Avenue. The total excess capacity in the corridor can be determined by subtracting the total ADT from the total available capacity and the resulting excess capacity is 87,000 vehicles per day. In order to take advantage of this excess capacity for the design of Blackstone Avenue (and presumably a reduced number of through lanes), it would have to be assumed that drivers will divert to parallel streets, such as Palm Avenue or Fresno Street, as the reduced number of lanes lead to increased delays and slower speeds.

Roadway	2018 Average Daily Traffic	Number of Through Lanes	Daily Capacity at LOS E	Percent of Capacity Utilized
Palm Avenue	10,600	4	32,319	32.8%
Van Ness Boulevard	3,900	2	17,766	22.0%
Wishon Avenue	5,900	2*	10,152	58.1%
Maroa Avenue	8,200	2*	10,152	80.8%
Blackstone Avenue	23,500	6	51,300	45.8%
Fresno Street	14,700	4	32,319	45.5%
Total	66,800		154,008	43.4%

^{*} One-Way Street

Table 2.3 ADT Carrying Capacity

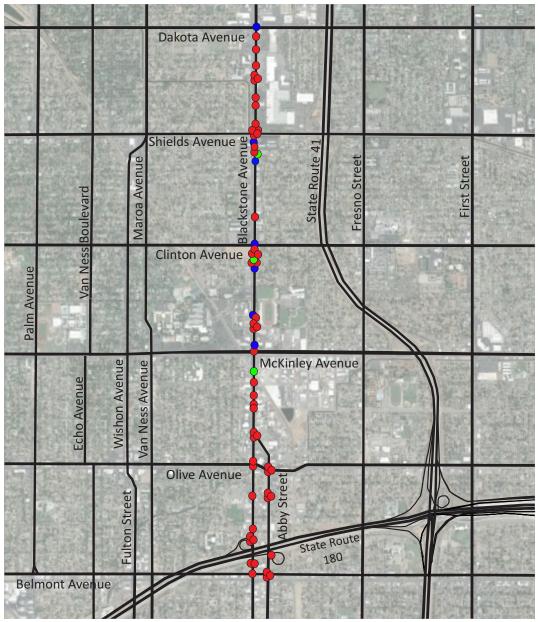
Traffic Collisions

A collision analysis is shown in the *Table 2.4* and *Figure 2.11* for the period from 2013 to 2017. The accident rates include total numbers of collisions, injury collisions and fatal collisions listed by the primary accident cause.

The figure shows that the roadway segments between Dakota and Shields Avenues (along the Manchester Center) and just south of the railroad crossing have a relative higher number of accidents than other study segments. Most of the other depicted accidents appear to occur at or close to the following intersections:

- Shields Avenue
- Clinton Avenue
- Weldon and University Avenues
- Blackstone Avenue/Abby Street merge area
- Olive Avenue/Abby Street
- Clay Avenue/Abby Street
- SR 180 WB On/Off Ramps

Figure 2.11 VEHICULAR INTERSECTION MOVEMENTS PM PEAK





Primary Collision Factor	Total Collisions	Injury Collisions	Fatal Collisions	Percent of Total Collisions on Segment
R-O-W AUTO	12	9	1	22.6%
LANE CHANGE	2	2	0	3.8%
NOT DRIVER	0	0	0	0.0%
IMPROP TURN	8	2	0	15.1%
UNSAFE SPEED	11	3	1	20.8%
WRONG SIDE	2	1	0	3.8%
DRVR ACL/DRG	7	2	0	13.2%
OTHER HAZ	2	2	0	3.8%
STRTNG/BCKNG	1	0	0	1.9%
UNKNOWN	1	0	0	1.9%
STOP SGN/SIG	2	0	0	3.8%
TOO CLOSE	0	0	0	0.0%
R-O-W PED	1	1	0	1.9%
PED VIOL	2	1	1	3.8%
OTHER IMPROP DRV	2	1	0	3.8%
IMPROP PASS	0	0	0	0.0%
Total	53	24	3	100.0%

Source: SWITRS data

Table 2.4 Type of Collisions on Blackstone Avenue

The substantial number of accidents indicates that there is a need for improvements at specific locations. Of the accident causes, unsafe speeds, improper turns, and auto right-of-way (yielding) issues stand out as primary causes of the types of accidents that could be influenced by roadway design changes. Since unsafe speeds are a leading cause of accidents, traffic calming efforts could provide a safer traveling environment. This could also include a change in the posted speed limit from 40 mph to a lower speed that is substantiated by a traffic engineering study and appropriately coordinated with geometric changes in the overall design of the Corridor as well as the presence of non-motorized users within the right-of-way. The auto right-of-way (yielding) and improper turn categories do not readily suggest corrective solutions associated with a redesign of the roadway setting. These changes will have to be substantiated with a traffic engineering study.

Transit

Figure 2.12 shows existing transit routes along Blackstone Avenue/Abby Street, on cross streets, and on nearby parallel surface streets. All shown bus routes are serviced by Fresno Area Express (FAX). Since early 2018, the length of Blackstone Avenue/Abby Street is serviced by the City's first Bus Rapid Transit (BRT) Route 1, also referred to as the "Q", which provides bus service at 10-minute headways at peak hour during weekdays and 15-minute headways on weekends. The Manchester Transit Center, located on Blackstone Avenue at the Manchester Mall north of Shields Avenue, includes stops for the BRT line in both directions of travel and functions as a major transfer point between Routes 1, 28, and 34. Some stretches of Blackstone Avenue also include local bus services (see Figure 2.12). Transfers between routes on Blackstone and east-west routes occur at Shields Avenue, Clinton Avenue, McKinley Avenue, and Olive Avenue, which further highlights the importance of safe pedestrian crossings at these major intersections.

Figure 2.12

TRANSIT NETWORK

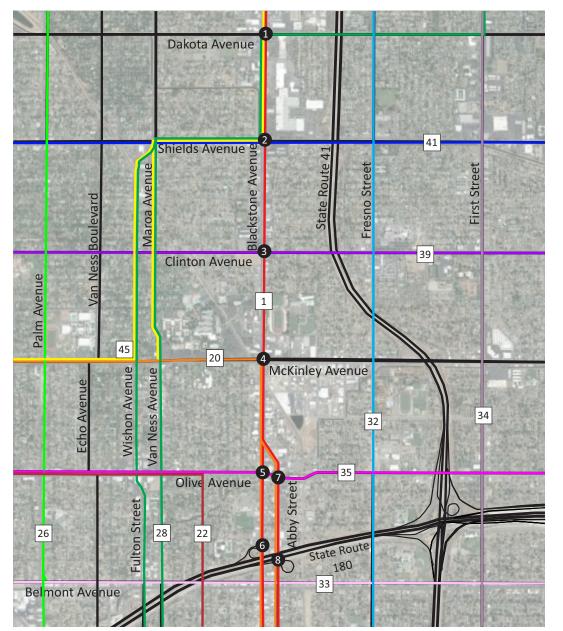
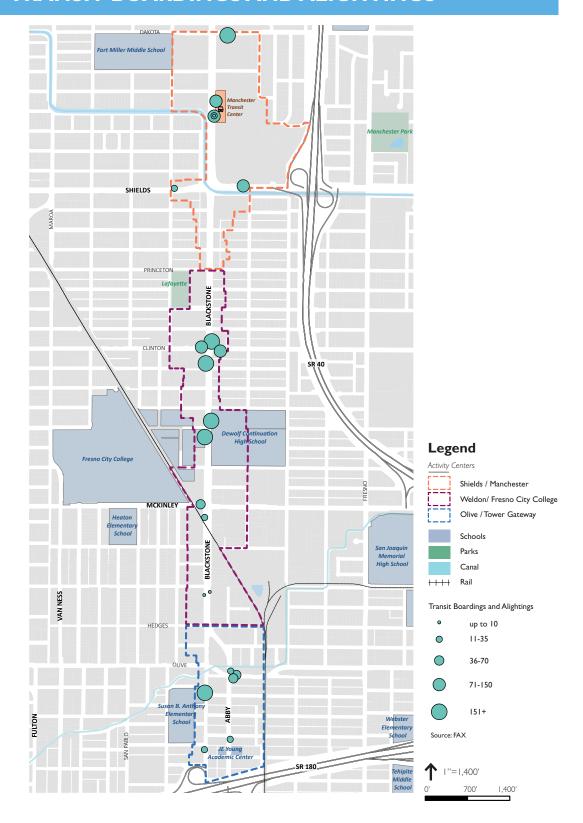








Figure 2.13 TRANSIT BOARDINGS AND ALIGHTINGS



The presence of BRT service along Blackstone Avenue presents both an opportunity and a challenge. The opportunity is that implementation of further multimodal improvements and the mid and long-term intensification of land uses has the potential to increase ridership of the Q and may warrant further service enhancements. The challenge is that if the number of through lanes is reduced along Blackstone Avenue, the resulting increases in intersection delay could also affect travel times for BRT buses. Treatments such as queue bypass lanes at key intersections could be considered to reduce such delays to buses.

Figure 2.13 illustrates the combined bus boarding and alighting activity at each BRT and local stops along Blackstone Avenue/Abby Street and at corridor-adjacent stops of cross routes. This information will be used both during the concept design and implementation plan development phases of the project. Bus stops with high boarding and alighting activity require particular attention with respect to the design of improvements that facilitate pedestrian and bicycle access to transit and could therefore warrant assignment of a higher level of implementation priority.

Biking

Fresno's Active Transportation Plan (ATP) identifies the lengths of Blackstone Avenue and Abby Street in the project area as streets on which only bicycle riders classified as "strong and fearless" on the scale used to identify Bicycle Level of Traffic Stress⁴ as feeling safe riding a bike on either of the two streets.

Bicycle Facilities

Figure 2.14 provides an overview of existing and planned bicycle facilities along Blackstone Avenue and nearby streets.

While north of McKinley Avenue, the ATP calls for a future parallel bicycle facility on a route parallel to the Blackstone Corridor that is reasonably close by (N Effie Street), south of McKinley Avenue, such parallel routes (N San Pablo Avenue/Fresno Street) are far off the Corridor and not useful to bicyclists who are looking for safe access to destinations along Blackstone Avenue/Abby Street. These potentially long-term poor bicycle travel conditions would make it difficult for bicyclists to access the future mixed-use development envisioned by the City's General Plan and already present safety and access for those bicycling along or across the Blackstone Corridor by today.

⁴ The ATP defines the Bicycle Level of Traffic Stress as follows: Bicycle level of traffic stress (LTS) criteria span from 1 to 4, with 1 being the least stressful and 4 being the most stressful: LTS 1: Most children and older adult riders can tolerate this level of stress and feel safe and comfortable. LTS 1 roadways typically require more separation from traffic. LTS 2: This is the highest level of stress that the mainstream adult population will tolerate while still feeling safe. LTS 3: Bicyclists who are considered "enthused and confident" but still prefer having their own dedicated space for riding will tolerate this level of stress and feel safe while bicycling. LTS 4: For bicyclists, this is tolerated only by those characterized as "strong and fearless," which comprises a small percentage of the population. These roadways have high speed limits, multiple travel lanes, limited or non-existent bike lanes and signage, and large distances to cross at intersections.

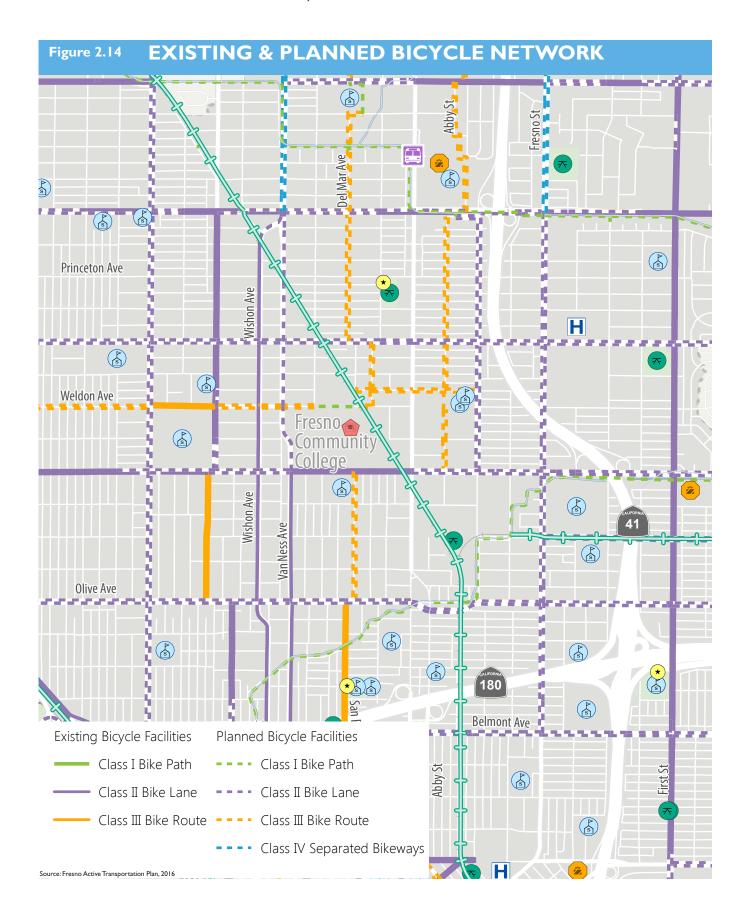
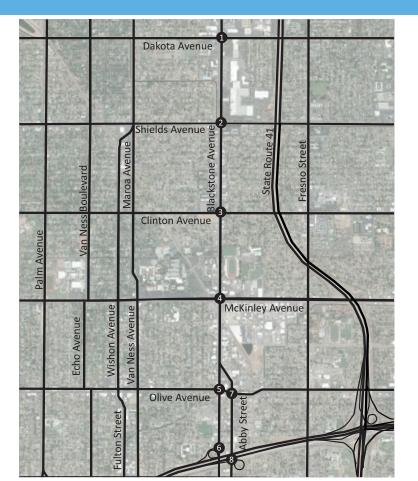
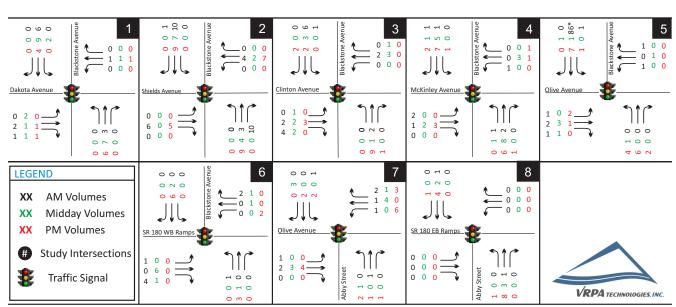


Figure 2.15 BICYCLE INTERSECTION MOVEMENTS



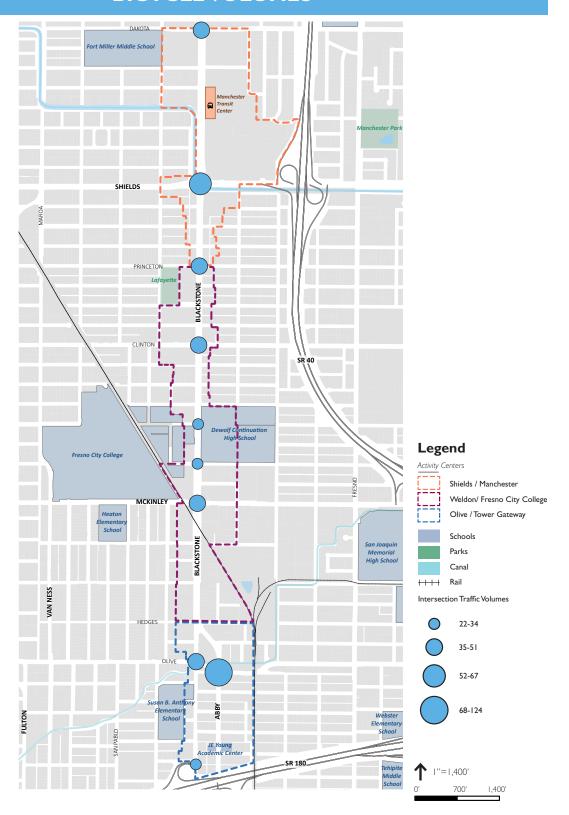




^{*} The Mall to Mall Bike Ride was happening during this count period, resulting elevated bicycle traffic. By averaging the southbound through traffic volumes from the two adjacent intersections, an estimation of 1 bicycle was obtained to provide a more accurate representation of typical bicycle traffic at this intersection during the AM Peak Hour.



BICYCLE VOLUMES



Bicycle Counts and Accidents Involving Bicyclists

The potential need for better accommodating bicyclists along the Corridor is underscored by the results of the AM and PM peak bicycle traffic counts that were conducted for this project in the Month of May 2018 (*Figures 2.15* and *2.16*). The number demonstrate that even in spite of the Corridor's high Bicycle Level of Stress rating ("strong and fearless") a number of people choose to or need to travel by bicycle. The current bicycling conditions are also reflected in the overview of locations of accidents along Blackstone Avenue/Abby Street that have involved bicyclists (*Figure 2.10*). *Figure 2.10* shows accidents that have involved bicyclists. Due to the relative low number of accidents that have involved bicyclists, no clear pattern is discernible that would point to a specific location and condition there that cause the accidents that have occurred.

However, the results of the bicycle traffic counts point to the need of including options for the safe accommodation of bicyclist in the range of design concepts that will be developed in the next phase of the project. Such improvements would not only be expected to make bicycle travel safer for bicyclists that already travel the Corridor but also to increase the number of cyclists along the Corridor. Some of that increase could be expected to occur due to bicyclists diverting from less convenient or direct routes and some of the increase could occur due to bicyclists who would switch from another mode if safe bicycle facilities were available. Based on the predominant lack of existing or planned nearby parallel bicycle facilities (see *Figure 2.14*), it does not appear that bicycle accommodations on Blackstone Avenue/Abby Street would create a duplication of convenient bicycle routes that are available on other streets.

Walking

The walking environment along the Blackstone Avenue/Abby Street Corridor presents significant challenges with respect to both pedestrian comfort and safety.

Sidewalks

With exception of sub-segments of Blackstone Avenue and Abby Street in the couplet area (south of Hedges Avenue), where sidewalks reach widths of up to 12 feet, the vast majority of sidewalks along Blackstone Avenue north of Olive Street are 5 to 6 feet wide with few exceptions (also see discussion of pedestrian conditions in Section 3. Existing Conditions by Activity Center and Sub-Segment below). There are also some gaps in the continuity of sidewalks along the Corridor. Figure 3.1, 3.5, and 3.9 in Section 3. Existing Conditions by Activity Center and Sub-Segment provide an overview of key characteristics of the existing pedestrian environment along Blackstone Avenue and Abby Street.

In addition to the very narrow sidewalks, typical sidewalk characteristics include the following:

- Frequent and often very wide driveways that cross the sidewalk.
- The sloping pavement at the edges of and throughout driveways creates a condition that is not only uncomfortable and difficult to navigate for seniors, wheelchair users, and persons pushing strollers but also all pedestrians.
- Utility poles and (cobra-head type) roadway light fixtures are located in the narrow sidewalk surface at some distance from the curb, further narrowing the sidewalk width available for pedestrian travel.

- The presence of curb ramps at crosswalks across cross streets is inconsistent and the numerous curb ramps appear to require upgrading to current ADA standards.
- The quality of the sidewalk surface material is inconsistent and includes new concrete, aging concrete, and asphalt.

Crosswalks

In light of the number of lanes to cross and the volumes and speed of approaching traffic (currently 40 mph per the posted speed limit), only signalized crosswalks can be considered as providing a safe way to cross Blackstone Avenue and Abby Street. This also applies to crosswalks across the major cross streets of Blackstone Avenue/Abby Street, including Dakota Avenue, Shields Avenue, Clinton Avenue, McKinley Avenue, Olive Avenue and the ramps to State Route 180. Signalized crosswalks across Blackstone Avenue and the cross street are also provide at, Princeton Avenue and Weldon Street.

Figure 2.17 provides an overview of the location and spacing of signalized crossings along the Corridor. The spacing between signalized crosswalks averages between 1,300 to 1,400 feet. Between McKinley Avenue and Olive Avenues, this distance increases to 2,700 feet. Assuming a mid-block location as the start of a pedestrian journey, these numbers mean that pedestrians (or bicyclists) would have to travel between 650 and 700 feet or more in order to reach the nearest signalized crosswalk. While there is no absolute rule for the spacing of crosswalks, best practices for complete streets design discuss a spacing of a city block (often 200+ feet) as desirable. From Figure 2.17 it is clear that the distances along the Blackstone/Abby Corridor far exceed this dimension, a condition that explains why pedestrians are regularly observed along the Corridor to cross the street in places where no signalized or striped crosswalk is provided.

While the typical cross-sections of Blackstone Avenue north of Hedges Avenue include 5-foot wide medians that separate turn lanes from the travel lanes going in the opposite direction, these medians do not extend to the striped crosswalks across Blackstone Avenue and can therefore not function as pedestrian refuges or waiting space for persons who are unable to cross the street during a single pedestrian signal phase.

Pedestrian Counts and Accidents Involving Pedestrians

Figures 2.18 illustrates the overall levels of existing pedestrian traffic in the AM and PM peak hours at the study intersections. It indicates the presence of a substantial amount of pedestrian traffic on the Corridor, especially in the area from Dakota Avenue to Olive Avenue. Figure 2.19 provides detailed counts for the different crosswalks at a subset of the studied intersections.

Figure 2.11 shows accidents that have involved pedestrians. Due to the relative low number of accidents that have involved pedestrians, no clear pattern is discernible that would point to a specific locations and conditions there that cause the accidents that have occurred.

As in the case of bicycling, improvements to the safety and comfort of pedestrians would be expected to provide better service to the existing pedestrians as well as attract additional pedestrian trips through a change in the mode of travel, particularly for very short trips. In addition, it is expected that improvements to pedestrian facilities would support travel by transit, since walking to and from bus stops at the origin and destination end of travel are key consideration in trips made by transit.

DISTANCE BETWEEN SIGNALS

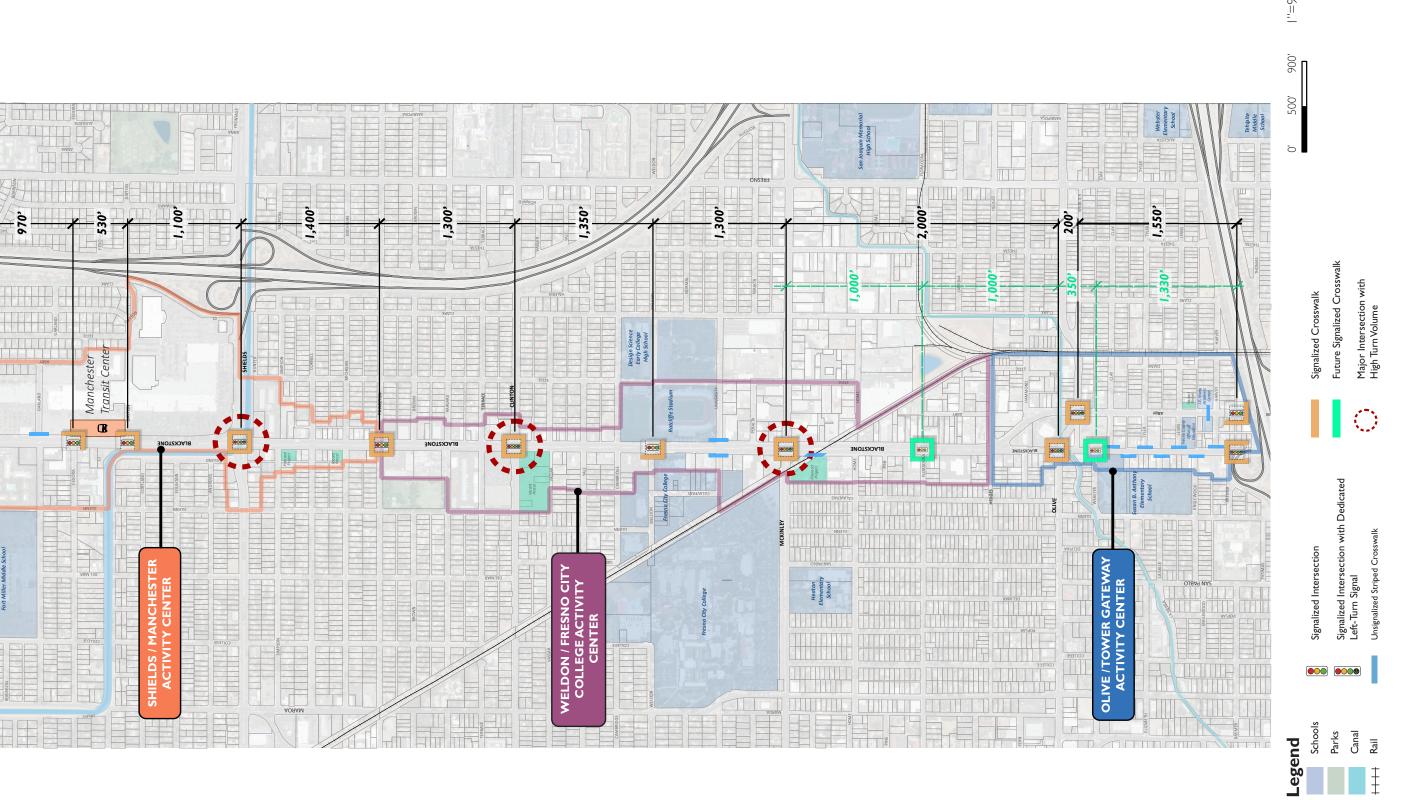
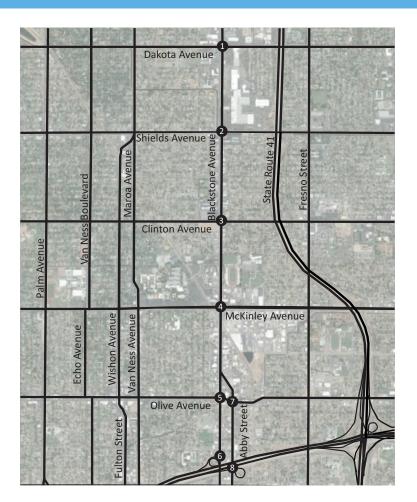


Figure 2.18 PEDESTRIAN INTERSECTION MOVEMENTS



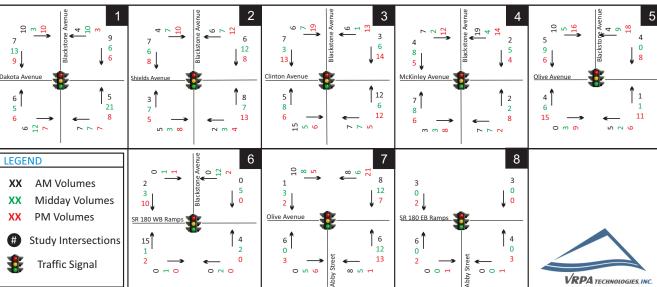
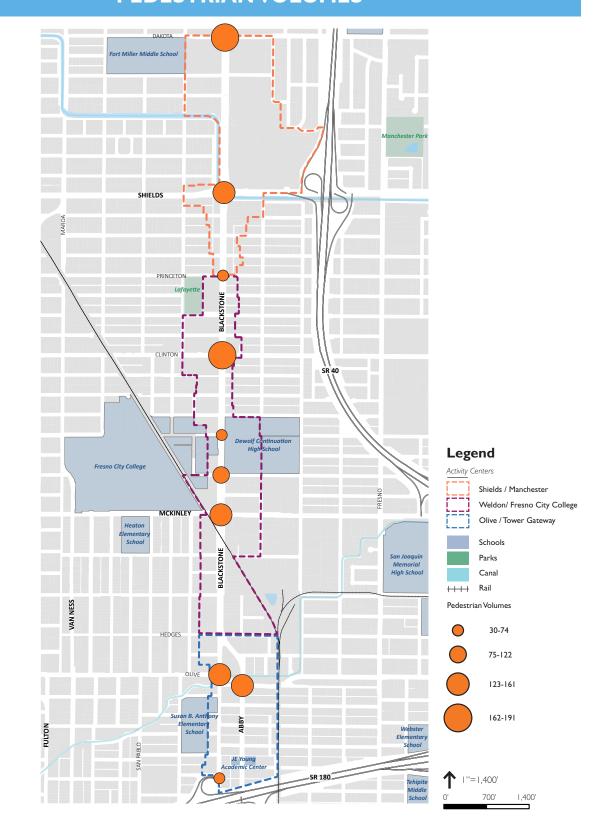


Figure 2.19

PEDESTRIAN VOLUMES



Planned Transportation Improvement Projects

The following information about planned and funded transportation projects in the project area was provided by the City of Fresno:

- Pedestrian Countdown Equipment and Accessible Pedestrian Signals along the BRT Route (ATP funded).
- Midtown Trail Project This project includes a proposed trail along the Herndon Canal the will connect to a 7.1-mile segment from Blackstone and Shields to the Clovis Old Town Trail. That leg of the project is also funded by ATP and runs on Shields from Blackstone to Clovis.
- New traffic signal, including signalized crosswalks, at the Floradora Avenue intersection.
- New traffic signal, including signalized crosswalks, at the Webster Avenue intersection.
- Undergrounding of overhead utilities between SR 180 and Clinton Avenue.

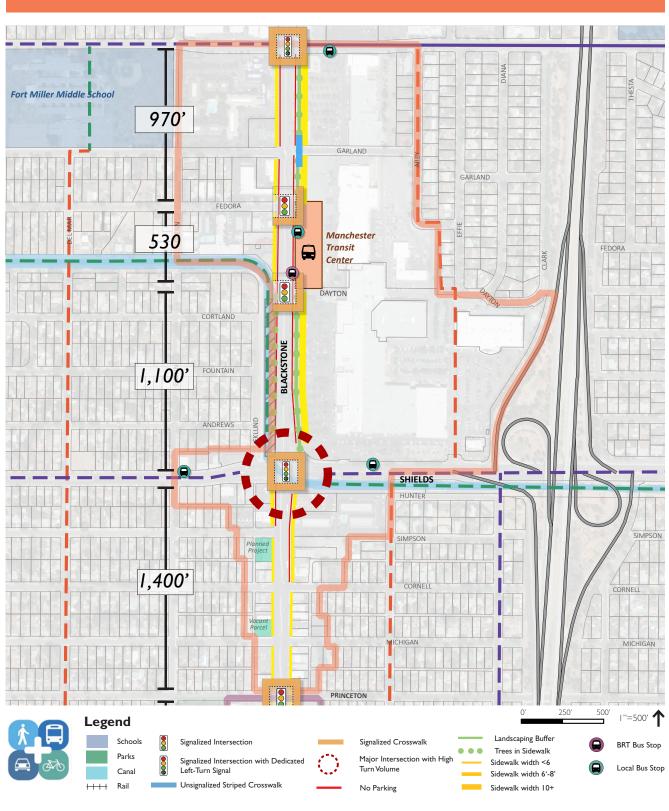


Figure 3.1 SHIELDS / MANCHESTER ACTIVITY CENTER

3. Existing Conditions by Activity Center and Sub-Segment

The following section of the Existing Conditions Report provides a summary of land use context and multimodal transportation conditions for each of the three activity centers and its street sub-segments.

The segmentation of Blackstone Avenue into these sub-segments is based on both similarities or dissimilarities between sub-segments with respect to the adjacent land use context and the typical street cross-section. This means that sub-segments are sometimes identified on the account of differences in the adjacent land use context or the size and orientation of parcels even when the cross-sections of adjacent roadway sub-segments are similar or identical. In other cases, the street-cross sections of adjacent sub-segments may be different but their land use context similar. In either case, the identification of sub-segments is intended to support the identification of multimodal treatments that support the adjacent existing (short-term) and future (long-term) land use context as appropriate.

3.1 Shields/Manchester Activity Center

The Shields/Manchester Activity Center is located between Dakota Avenue and Princeton Avenue. It includes the Manchester Center Shopping Center and the Manchester Transit Center, a major transfer point for BRT and local bus routes operated by Fresno Area Express (FAX). The Shields/Manchester Activity Center includes the following sub-segments:

- Shields/Manchester Sub-Segment #1: E Dakota Avenue to E Dayton Avenue
- Shields/Manchester Sub-Segment #2: E Dayton Avenue to E Shields Avenue
- Shields/Manchester Sub-Segment #3: E Shields Avenue to E Princeton Avenue

Figure 3.1 provides a summary of key conditions throughout the Shields/Manchester Activity Center.

Shields/Manchester Sub-Segment #1: E Dakota Avenue to E Dayton Avenue

Land Use Context and Key Destinations

• The two blocks along Blackstone Avenue has regional serving retail and a hotel (Manchester North Mall and the Hotel Fresno) facing the street. Most of the retail consists of national/regional franchises, including a large Sears store. The land use frontage along the segment is dominated by surface parking. The area also includes the Manchester Transit Center, which serves as a key transit transfer point for FAX. Beginning at the northern end of the segment, the Herndon Canal parallels Blackstone Avenue along its west-side.

Frontage Conditions

• The frontage along the segment is dominated by surface parking, with a few buildings near the street. Most of these buildings do not front Blackstone Avenue.

Proposed New or Infill Development

• There are potential long-term plans for the redevelopment of the property at the southwestern corner of the Blackstone/Dakota intersection.

Transportation

Figure 3.2 shows the typical cross-section for Blackstone Avenue in this sub-segment between Dakota Avenue and Dayton Avenue.

Key Driving Conditions:

- Posted Speed: 40 mph.
- Signalized intersection at Dakota Avenue, with designated single left-turn lanes in north and southbound directions.
- Signalized intersection with designated single left turn lane (southbound) at Dayton Avenue (major entrance to Sears and Manchester Shopping Center parking lot).
- 3-travel lanes in each direction.
- Turn-lanes on Blackstone Avenue in each direction span the length of the blocks, are separated from oncoming traffic by a 5-foot wide, paved median.
- Parking allowed on west side of the street; Continuous right-turn lane on east side (no parking).

Key Pedestrian Conditions:

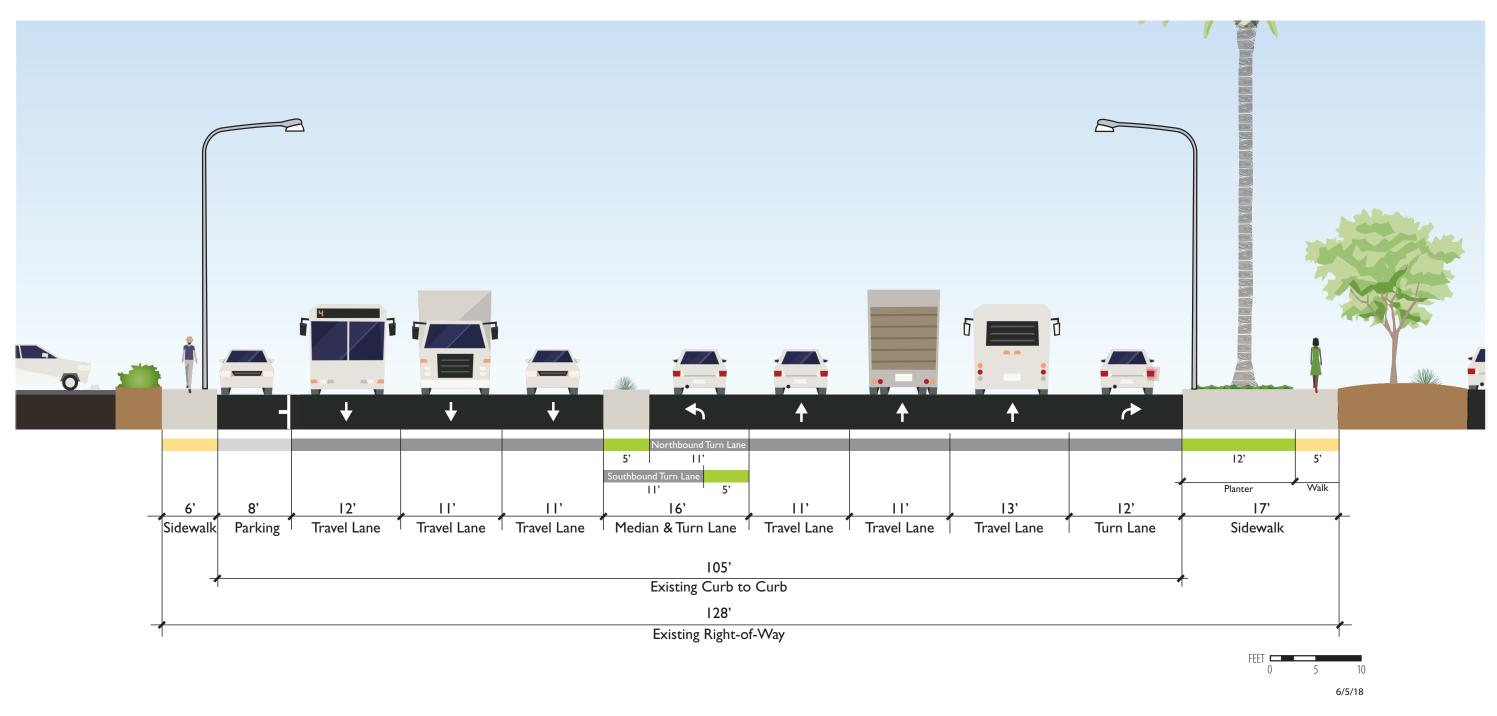
- Signalized crosswalks at Dakota, Fedora and Dayton Avenues.
- Sidewalks are narrow on both the east and west sides of Blackstone Avenue. 6-foot sidewalk on west side is adjacent to curb; 5-foot sidewalk on east side is separate from roadway by 12-foot wide landscape strip.
- Sidewalk on east side provides access to Manchester Transit Center.
- Sidewalks on both sides crossed by very wide driveways into adjacent parking lots.
- Property-side of sidewalks typically buffered from parking lots by landscape strips; except along Sears parking lot where pedestrians are exposed to adjacent drive aisles in parking lot.
- No clear pedestrian connection from Manchester Transit Center through parking lot to Sears entrance.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

- Dakota Avenue existing bike lanes east of Blackstone Avenue; planned bike lanes west of Blackstone Avenue.
- Future continuation of Mid-town Trail along banks of irrigation canal on west side of Blackstone Avenue.

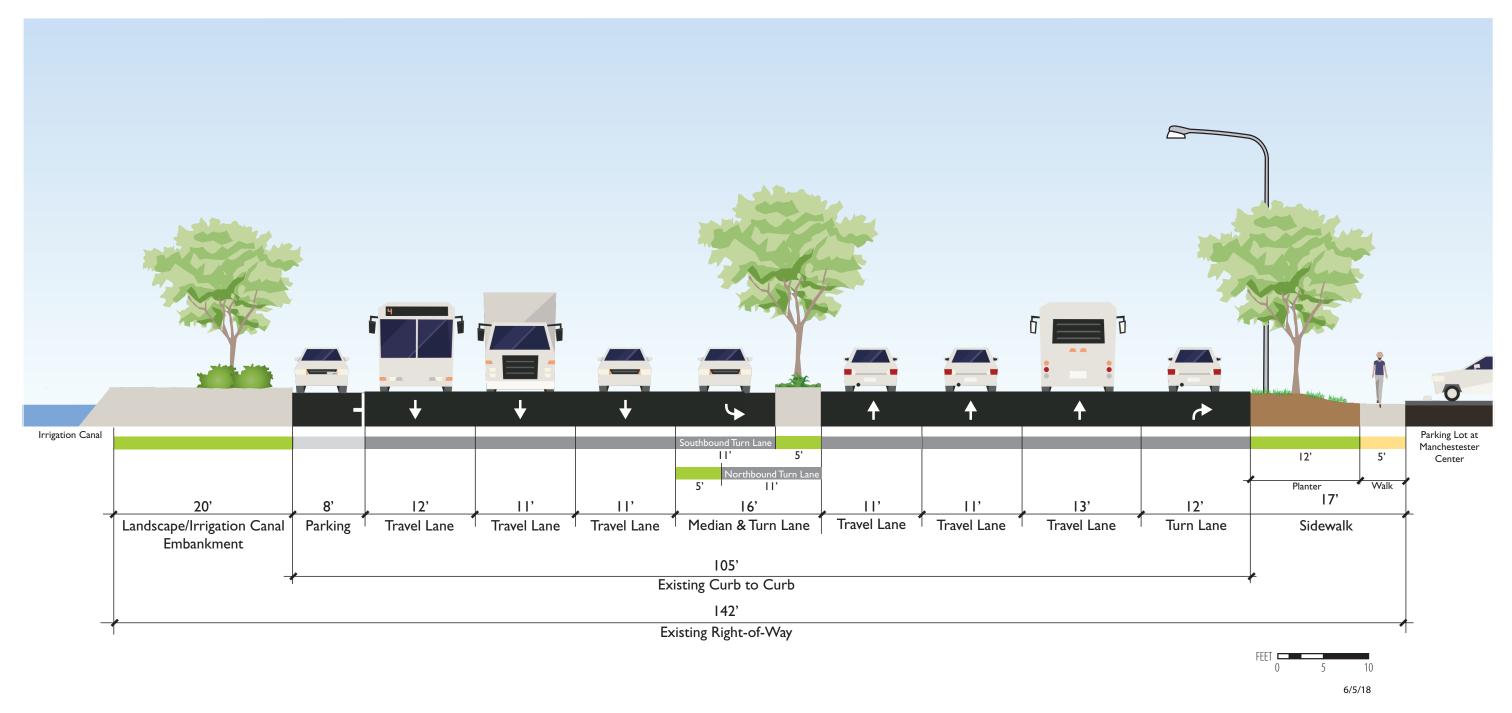
SHIELDS / MANCHESTER STREET SECTIONS

Figure 3.2



SHIELDS / MANCHESTER STREET SECTIONS

Figure 3.3



Key Transit Conditions:

- Routes operating on Blackstone Avenue: Routes 1 (BRT), 28, 45.
- Manchester Transit Center accommodates Route 1 BRT stops in both directions, and offers transfers to Routes 28, and 34. Transit Center was recently modernized and has upgraded transit environment and amenities to accommodate new BRT.

Shields/Manchester Sub-Segment #2: E Dayton Avenue to Shields Avenue

Land Use Context and Key Destinations

 The use along the block is limited to the east side with the Manchester Center currently being renovated as a destination retail and entertainment center. The west side has the Herndon Canal.

Frontage Conditions

• The frontage condition is similar to the previous block with surface parking for the Manchester Center. The Center's renovation plan indicates a retail building at the corner of Shields and Blackstone Avenue, however, the building will likely front the parking lot rather than the street. The Herndon canal frontage is limited, as there is no sidewalk, and the canal embankment is separated by a row of trees and landscaping from the street.

Proposed New or Infill Development

• Manchester Shopping Center: After decades of decline, The Manchester Shopping Center is currently undergoing a multi-million dollar remodeling and upgrade effort that has already resulted in the construction of new buildings that line the edge of an access road between Blackstone Avenue and the main mall building, which continues to undergo major façade and interior improvements. Plans for the mall property also include the construction of a standalone restaurant space at the north-east-ern corner of the recently reconfigured Blackstone/Shields intersection, where a right turn slip lane was removed (along with its counterparts at other corners of the intersection) and the gained land made available for new development.

Transportation

Figure 3.3 shows the typical cross-section for Blackstone Avenue in this sub-segment between Dayton Avenue and Shields Avenue.

Key Driving Conditions:

- Posted Speed: 40 mph.
- Major signalized intersection at Shields Avenue, where the City is currently installing east and west-bound dual left-turns lanes at the intersection. Shields Avenue provides access to State Route 41 (one quarter mile to the east of Blackstone Avenue).
- 3-travel lanes in each direction.

- Combination of 5-foot wide, paved median along turn- and bus merge lanes (south-bound, south of Dayton Avenue) and 300-foot long tree-lined median.
- Parking is allowed on west side of the street; Continuous right-turn lane on east side (no parking).

Key Pedestrian and Streetscape Conditions:

- Signalized crosswalks at Shields Avenue.
- Pedestrian conditions have recently been improved at this intersection by removing
 the slip lanes at each corner of the intersection. This has significantly reduced the
 exposure of pedestrians to turning vehicles and shortened the total crossing distance for pedestrians across both Shields and Blackstone Avenue.
- No sidewalk on west side of street north of Shields Avenue (walking along canal embankment currently is prohibited); 5-foot sidewalk on east side is separate from roadway by 12-foot wide landscape strip.
- Sidewalk on east side provides access to Manchester Transit Center to the north.
- Property-side of sidewalks mostly exposed to adjacent drive aisles in parking lot.
- No clear pedestrian connection from Blackstone Avenue through parking lot to new main entrance of shopping center.
- 300-foot long tree-lined section of median.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

- Shields Avenue existing bike lanes in eastbound direction, east and west of the Shields/Blackstone Avenue intersection; planned bike lanes in westbound direction east and west of the Shields/Blackstone Avenue intersection.
- Planned connection at Shields Avenue to Mid-town Trail (east of Shields Avenue) and future continuation of trail along banks of irrigation canal to the west.

Key Transit Conditions:

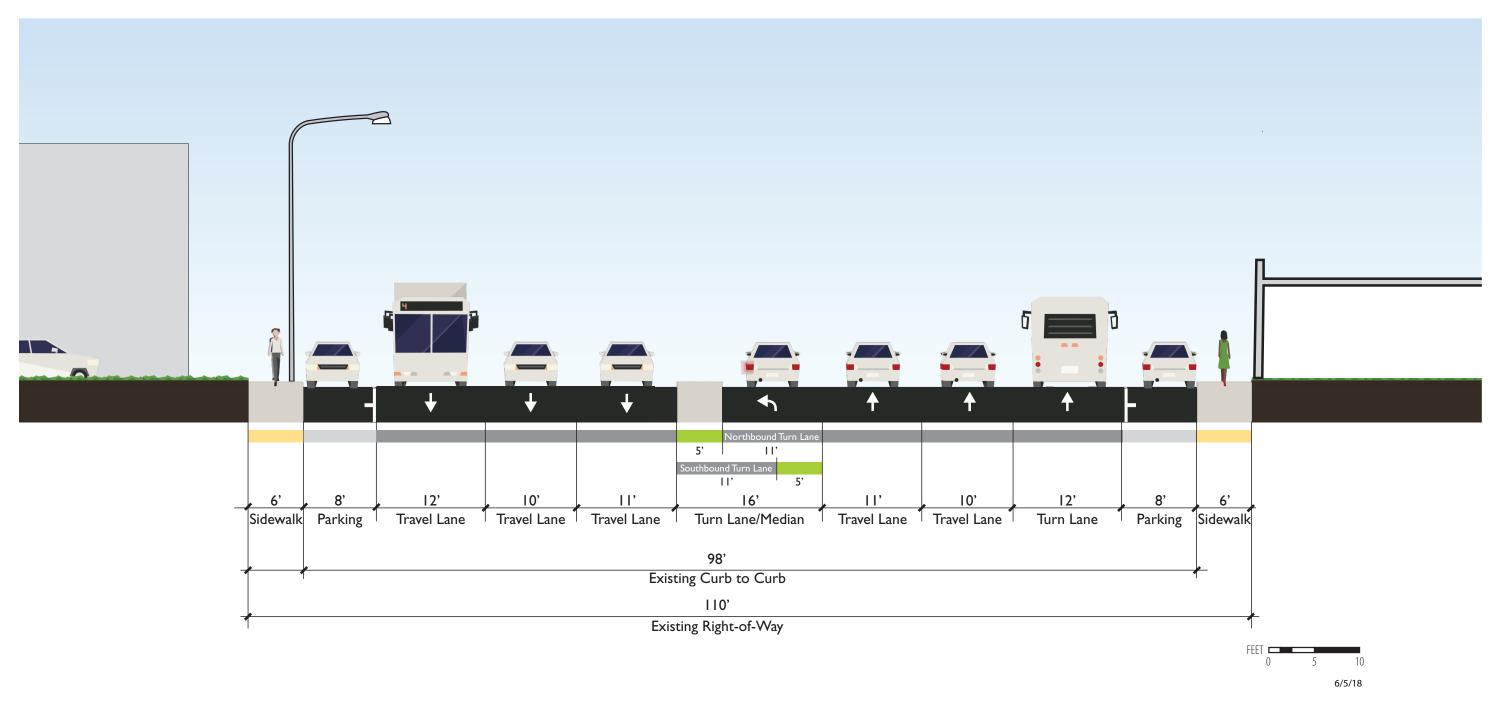
- Routes operating on Blackstone Avenue: Routes 1 (BRT), 28, 45.
- Manchester Transit Center is located just north of this segment (see Segment #1 A above).
- Cross Route Transfers: to Route 41 on Shields Avenue.

Shields/Manchester Sub-Segment #3: E Shields Avenue to E Princeton Avenue

Land Use Context and Key Destinations

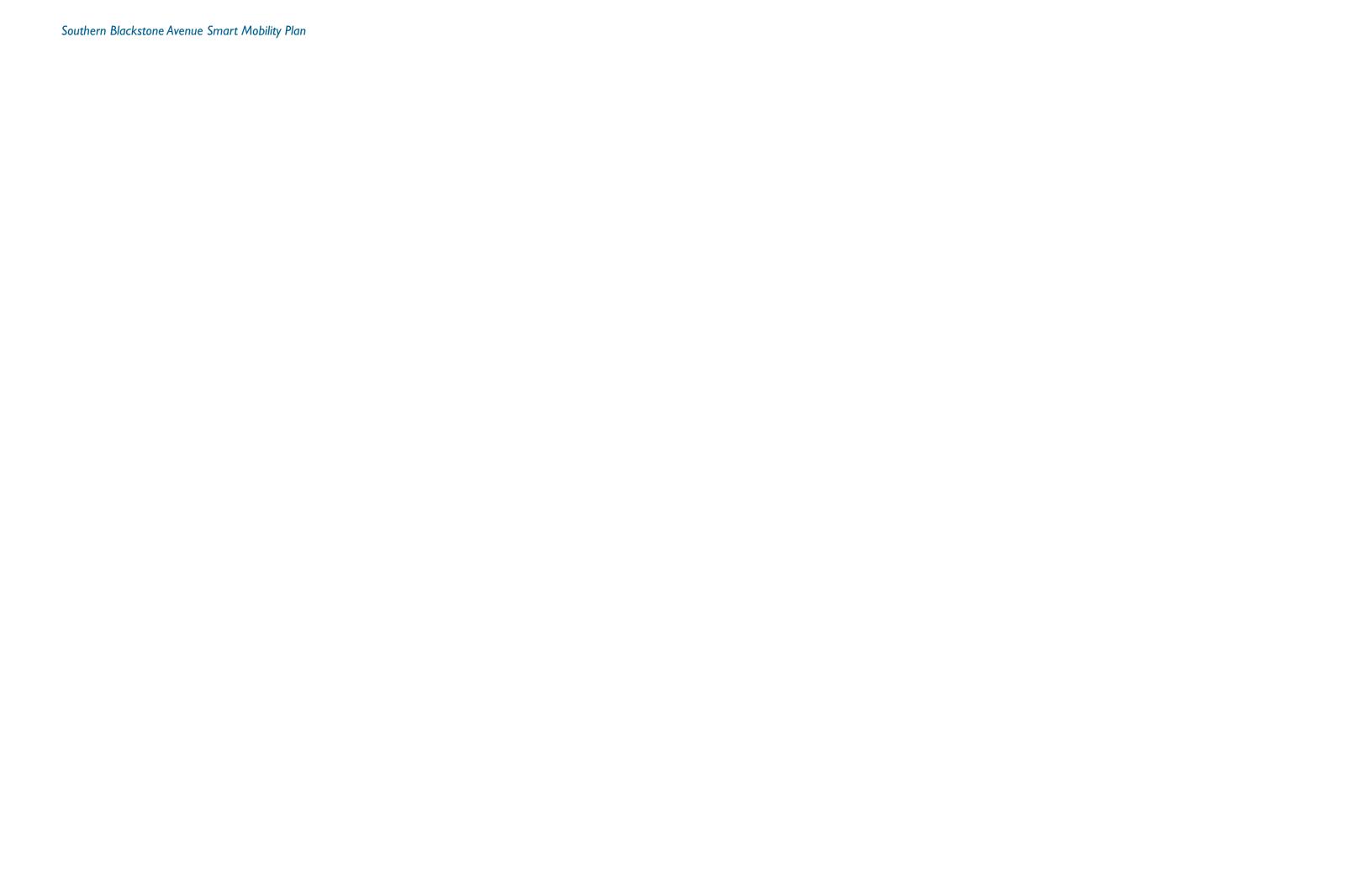
• The land-use pattern begins to significantly change south of Shields Avenue. The

Figure 3.4



Shields/Manchester Sub-Segment #3: E Shields Avenue to E Princeton Avenue

Typical Right-of-Way Section (Looking North)



parcels facing Blackstone are smaller and shallower, with more local businesses. A few non-retail uses also front the street.

Frontage Conditions

• The frontage consists of a mix of buildings directly fronting and siding on to Blackstone Avenue. There are more frequent curb cuts to allow vehicular access to the different businesses. The buildings are a mix of single and double story buildings.

Proposed New or Infill Development

- 3039 North Blackstone Avenue: A mixed-use development project is proposed for a site located at the southwest corner of the Blackstone Avenue/Simpson Avenue intersection. The development, a joint venture between the Fresno Housing Authority and Fresno Metro Ministry, will include ground floor commercial space on Blackstone Avenue and 45 units of affordable housing.
- A vacant lot is located at the northwestern corner of the Blackstone/Michigan intersection. Plans for the future of the site are currently not known.

Transportation

Figure 3.4 shows the typical cross-section for Blackstone Avenue in this sub-segment between Shields Avenue and Princeton Avenue.

Key Driving Conditions:

- Posted Speed: 40 mph.
- Major signalized intersection at Shields Avenue, where the City is currently installing east and west-bound dual left-turns lanes at the intersection. Shields Avenue provides access to State Route 41 (one quarter mile to the east of Blackstone Avenue).
- Signalized intersection with designated single left-turn lanes (both directions) at Princeton Avenue.
- 3-travel lanes in each direction.
- Turn-lanes in each direction located at all cross street span the length of the blocks; Turn-lanes are separated from oncoming traffic by a 5-foot wide, paved median.
- Parking is allowed on both sides of the street.

Key Pedestrian Conditions:

- Signalized crosswalks at Shields and Princeton Avenues.
- Pedestrian conditions have recently been improved at this intersection by removing
 the slip lanes at each corner of the intersection. This has significantly reduced the
 exposure of pedestrians to turning vehicles and shortened the total crossing distance for pedestrians across both Shields and Blackstone Avenue.
- Sidewalks on both sides are narrow (6 feet) and located adjacent to the curb (no buffering landscape strip or rows of street trees).

- Sidewalks on both sides are frequently crossed by wide driveways into adjacent parking lots, causing sidewalks to slope significantly where driveways are located.
- Curb ramps are provided at signalized intersections but are inconsistently present at unsignalized crosswalks.
- Property-side of sidewalks is typically exposed to adjacent paved parking lot surface or abuts buildings.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

• Shields Avenue – (see description for Sub-segment #1B above).

Key Transit Conditions:

- Routes operating on Blackstone Avenue: Route 1 (BRT); No stops in this sub-segment
- Cross Route Transfers: to Route 41 on Shields Avenue.

3.2 Weldon/Fresno City College Activity Center

The Weldon/Fresno City College Activity Center is located between E Princeton Avenue and E Hedges Avenue. It includes the Fresno City College campus, which is attended by approximately 34,000 students and establishes a major node of activity in the area. The remainder of the activity center includes many auto-oriented existing uses. The Weldon/Fresno City College Activity Center includes the following sub-segments:

- Sub-Segment Weldon/FCC #1: E Princeton Avenue to E Terrace Avenue
- Sub-Segment Weldon/FCC #2: E Terrace Avenue to E Home Avenue
- Sub-Segment Weldon/FCC #3: E Home Avenue to E Hedges Avenue

Figure 3.5 provides a summary of key conditions throughout the Weldon/Fresno City College Activity Center.

Weldon/FCC Sub-Segment #1: E Princeton Avenue to E Terrace Avenue

Land Use Context and Key Destinations

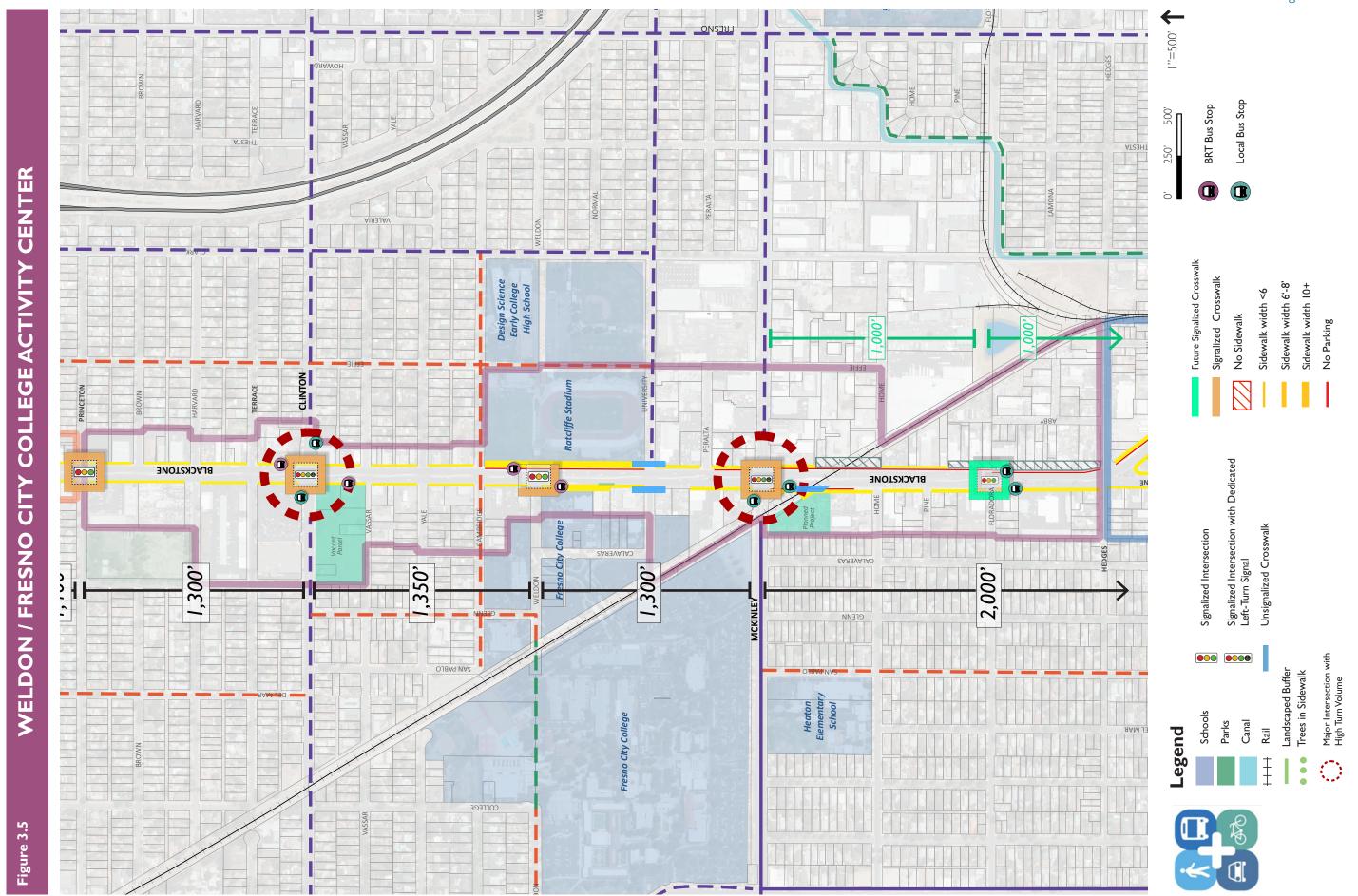
• The land-use pattern is slightly different than the previous segment, with more auto service and sales business, and larger parcels fronting the street.

Frontage Conditions

• With the buildings being set back, the frontage is dominated with surface lots and nominal landscaping.

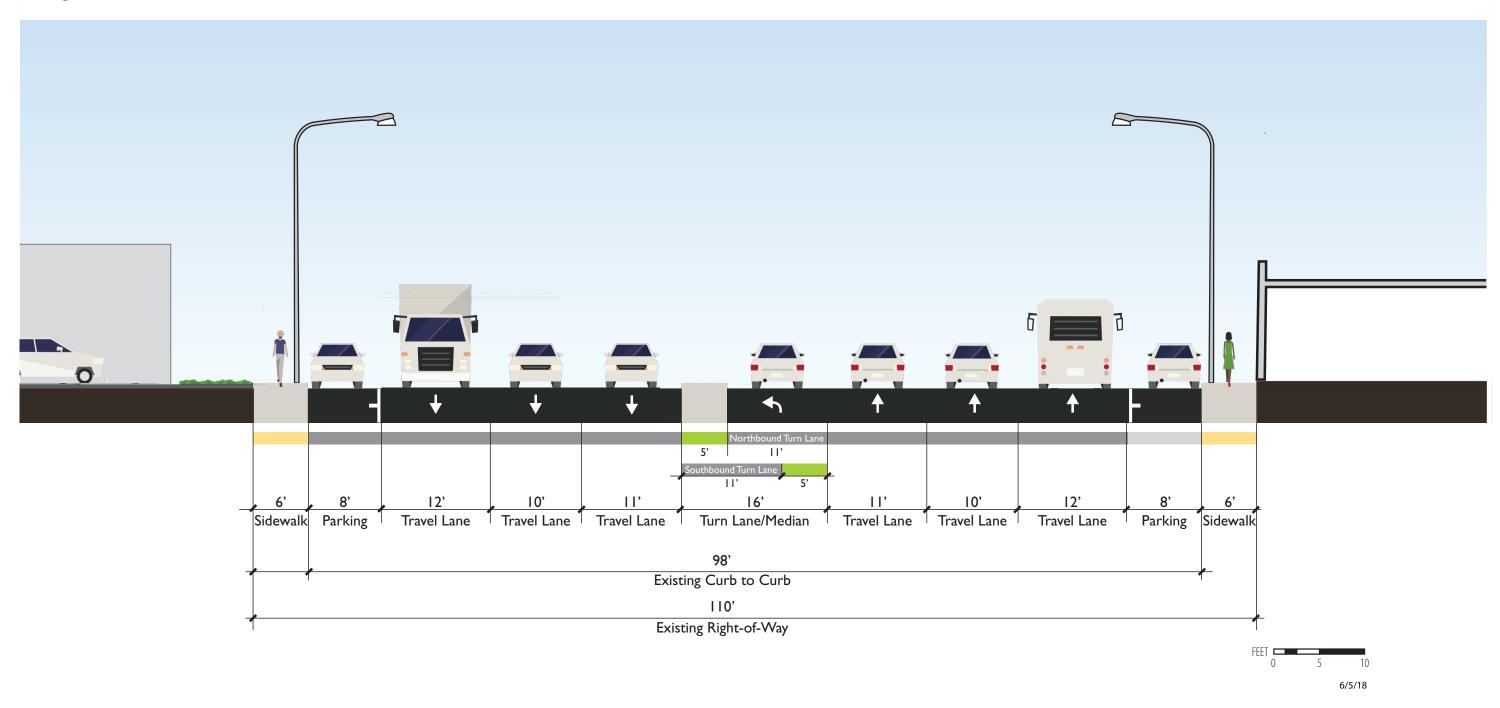
Proposed New or Infill Development

None known.



WELDON / FRESNO CITY COLLEGE STREET SECTIONS

Figure 3.6



Transportation

Figure 3.6 shows the typical cross-section for Blackstone Avenue in this sub-segment between Princeton Avenue and Terrace Avenue. The characteristics of street sub-segment is very similar to that of the Shields/Manchester Sub-Segment #3.

Key Driving Conditions:

- Posted Speed: 40 mph.
- Signalized intersection with designated single left-turn lanes (both directions) at Princeton Avenue.
- 3-travel lanes in each direction.
- Turn-lanes in each direction located at all cross street span the length of the blocks; Turn-lanes are separated from oncoming traffic by a 5-foot wide, paved median.
- Parking is allowed on both sides of the street.

Key Pedestrian Conditions:

- Signalized crosswalks at Princeton Avenue.
- Sidewalks on both sides are narrow (6 feet) and located adjacent to the curb (no buffering landscape strip or rows of street trees).
- Sidewalks on both sides are frequently crossed by wide driveways into adjacent parking lots, causing sidewalks to slope significantly where driveways are located.
- Curb ramps are provided at signalized intersections but are inconsistently present at unsignalized crosswalks across cross streets.
- Property-side of sidewalks is typically exposed to adjacent paved surfaces in parking lots or abuts buildings.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

No bicycle facilities in this sub-segment.

Key Transit Conditions:

Routes operating on Blackstone Avenue: Route 1 (BRT); No stops in this sub-segment.

Weldon/FCC Sub-Segment #2: E Terrace Avenue to E Home Avenue

Land Use Context and Key Destinations

• This segment is dominated with several chain establishments with Walgreens, Smart & Final, and several fast food restaurants fronting the street. The segment also includes Radcliff Stadium, and State Center Community College District(SC-CCD) offices. The segment also has two of the BRT stop locations – The Weldon and Clinton stations. The south-end of the segment beyond McKinley has the railway crossing. The Heaton primary school on McKinley Avenue, a few blocks

from Blackstone, has an attendance zone that extends to the east side of Blackstone Avenue.

Frontage Conditions

• The frontage conditions vary intermittently with some buildings being set back from the street, and some siding on to the street. Most businesses have maintained landscape buffers fronting Blackstone. The section of the segment fronting Radcliff Stadium and the SCCCD/FCC offices has wide sidewalks, and plaza space on private property. Some of the auto-service business encroach on to the sidewalk.

Proposed New or Infill Development

- Fresno City College: Fresno City College is experiencing a period of strong growth in their student body and is implementing ongoing planning efforts to expand and reorganize its campus. FCC's plans with significance for the Southern Blackstone Smart Mobility project include:
 - The construction of a new Math & Sciences building at the corner of Blackstone Avenue and Weldon Street.
 - The potential orientation of the main entrance to the campus to the intersection of Blackstone and Weldon.
 - The potential expansion of campus frontage along Blackstone Avenue south of Weldon Street.
 - Potential interest in reopening Ratcliffe Stadium to the larger public if a partner could be identified for financing the major ADA upgrades that are required for this step.
 - While some college related uses will remain in the campus area located east of Blackstone Avenue, all academic program will be located west of the street after the new Math & Sciences building has been completed.
- 1501 North Blackstone Avenue: The proposed redevelopment site located on the south-west corner of the McKinley-Blackstone Avenue intersection, includes 7,500 square feet of ground floor retail and 88 housing units, including 87 affordable units.
- Other Opportunity Sites: A vacant block is located on the western side of Blackstone Avenue between Clinton and Vassar Avenues. A past development proposal for this site did not come to fruition. Plans for the future of the site are currently unknown.

Transportation

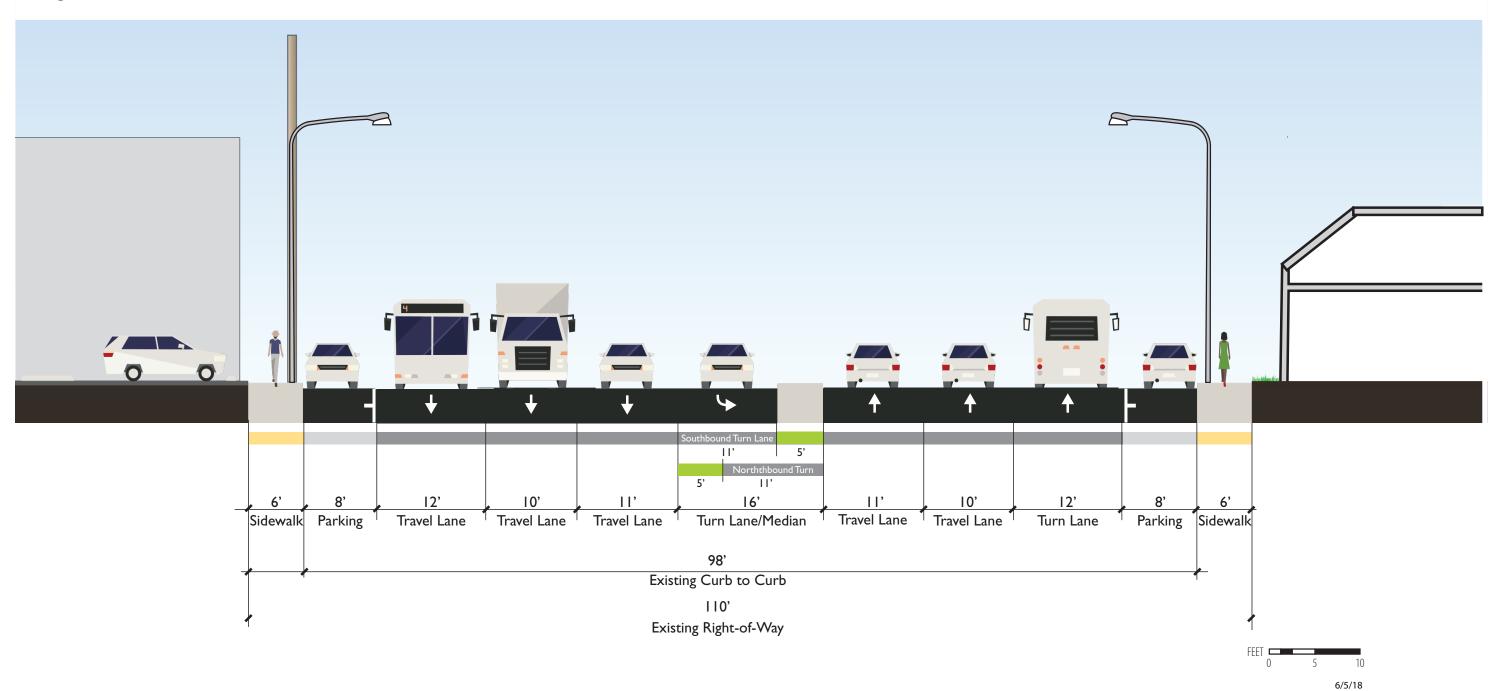
Figure 3.7 shows the typical cross-section for Blackstone Avenue in this sub-segment between Terrace Avenue and Home Avenue.

Key Driving Conditions:

• Posted Speed: 40 mph.

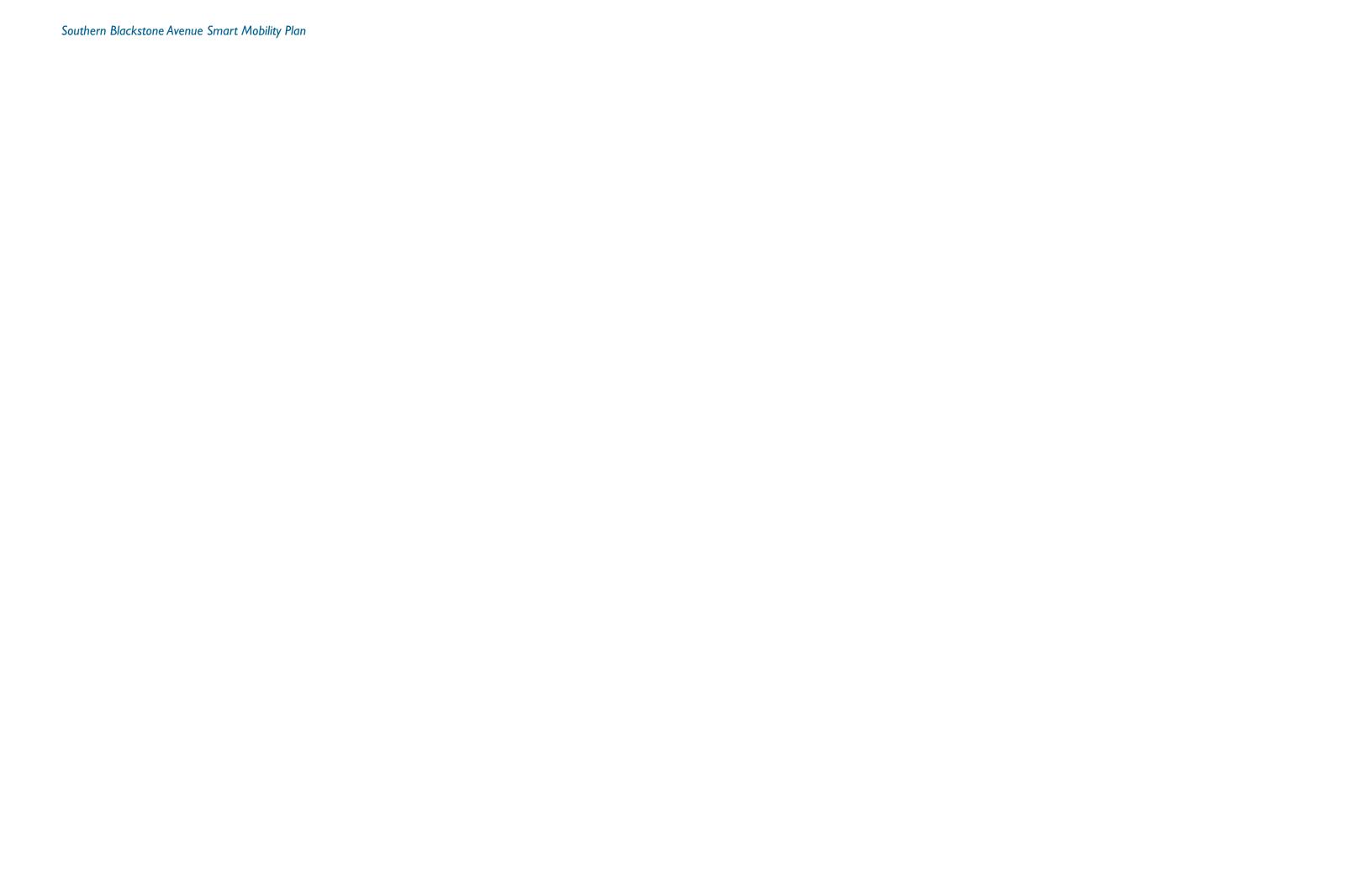
WELDON / FRESNO CITY COLLEGE STREET SECTIONS

Figure 3.7



Weldon/FCC Sub-Segment #2: E Terrace Avenue to E Home Avenue Typical Right-of-Way Section (Looking North)

Southern Blackstone Avenue Smart Mobility Project



- Signalized intersection with designated single left-turn lanes (both directions) at Clinton Avenue; Clinton Avenue provides access to State Route 99 to the west.
- Major signalized intersection with designated single left-turn lanes (both directions) at McKinley Avenue; McKinley Avenue provides access to State Route 41 to the east.
- 3-travel lanes in each direction; Northbound curbside lane south of McKinley is 17 feet wide as parking is not allowed.
- Turn-lanes in each direction located at all cross street span the length of the blocks; Turn-lanes are separated from oncoming traffic by a 5-foot wide, paved median.
- Left-turn lane south of railroad crossing appears to serve only one property.
- Parking is allowed on both sides of the street (north of McKinley Avenue); Parking
 is not allowed along frontage of Ratcliffe Stadium block and south of McKinley
 Avenue on the east side of the street.

Key Pedestrian Conditions:

- Signalized crosswalks at Clinton and McKinley Avenues.
- Sidewalks on both sides are narrow (6 feet) and located adjacent to the curb (no buffering landscape strip or rows of street trees, except as noted below).
- Atypical sidewalk conditions exist along the frontage of Ratcliffe Stadium (12- to 17-foot wide) and just south of Weldon Avenue (10-foot sidewalk buffered from street by landscape strip).
- Gap in sidewalk continuity at railroad crossing along east side of the street (no paved sidewalk, no curb north and south of railroad crossing).
- Railroad crossing at McKinley Avenue on the west side of Blackstone Avenue is paved but does not include pedestrian gates.
- Sidewalks on both sides are regularly crossed by wide driveways into adjacent parking lots – except for Ratcliffe Stadium block), causing sidewalks to slope significantly where driveways are located.
- Curb ramps are provided at signalized intersections and at most unsignalized crosswalks across cross streets.
- North of McKinley Avenue: Property-side of sidewalks is often buffered from adjacent parking lots by landscape strips of varying widths; some car repair and sale businesses abut the sidewalk with paved surfaces of parking lots or car repair yards.
- South of McKinley Avenue: Property-side of sidewalks is typically exposed to paved surfaces in adjacent paved parking lots or car repair yards or abut buildings.
- Sidewalk gaps along Home Avenue west of Blackstone Avenue.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

- McKinley Avenue Existing bicycle lanes in both directions west of Blackstone Avenue; planned bicycle lanes in both directions east of Blackstone Avenue.
- Clinton Avenue Planned bicycle lanes on (in both directions).
- Cambridge Avenue Planned bicycle routes (in both directions) and through the Fresno City College Campus (Weldon Avenue).

Key Transit Conditions:

- Routes operating on Blackstone Avenue: Route 1 (BRT) with stops at Clinton and McKinley Avenues; Route 20 (south of McKinley Avenue, with a southbound (only) stop at McKinley Avenue.
- Cross Route Transfers: to Route 39 on Clinton Avenue and to Route 20 on McKinley Avenue.

Weldon/FCC Sub-Segment #3: E Home Avenue to E Hedges Avenue

Land Use Context and Key Destinations

 The land uses in this segment are primarily auto-services. The east side has older buildings, and deep narrow lots, with many parcels having access from Abby Street in the rear. There are a couple of appliance repair and home furnishing stores as well in the southern end. On the west side, the parcels are larger and have a few auto-service chain stores.

Frontage Conditions

- The frontage conditions in this segment varies significantly between either side of the street. On the east side the frontage is dominated by parking and curb-cuts. With buildings being closer to the street, the parking, and movable advertising signs encroach any walking space for most of the street. The buildings are typically setback 15-20 feet with most of their entrances fronting Blackstone Avenue. The curb is marked as no parking for the entire segment.
- The west side frontage has a sidewalk along the entire segment, although the width varies from black to block. Most of the buildings are setback consistently beyond 30 feet from the back of sidewalk, with surface parking between the building and Blackstone Avenue. The level of encroachment is less than the east side, and onstreet parking is allowed along Blackstone Avenue.

Proposed New or Infill Development

• None known.

Transportation

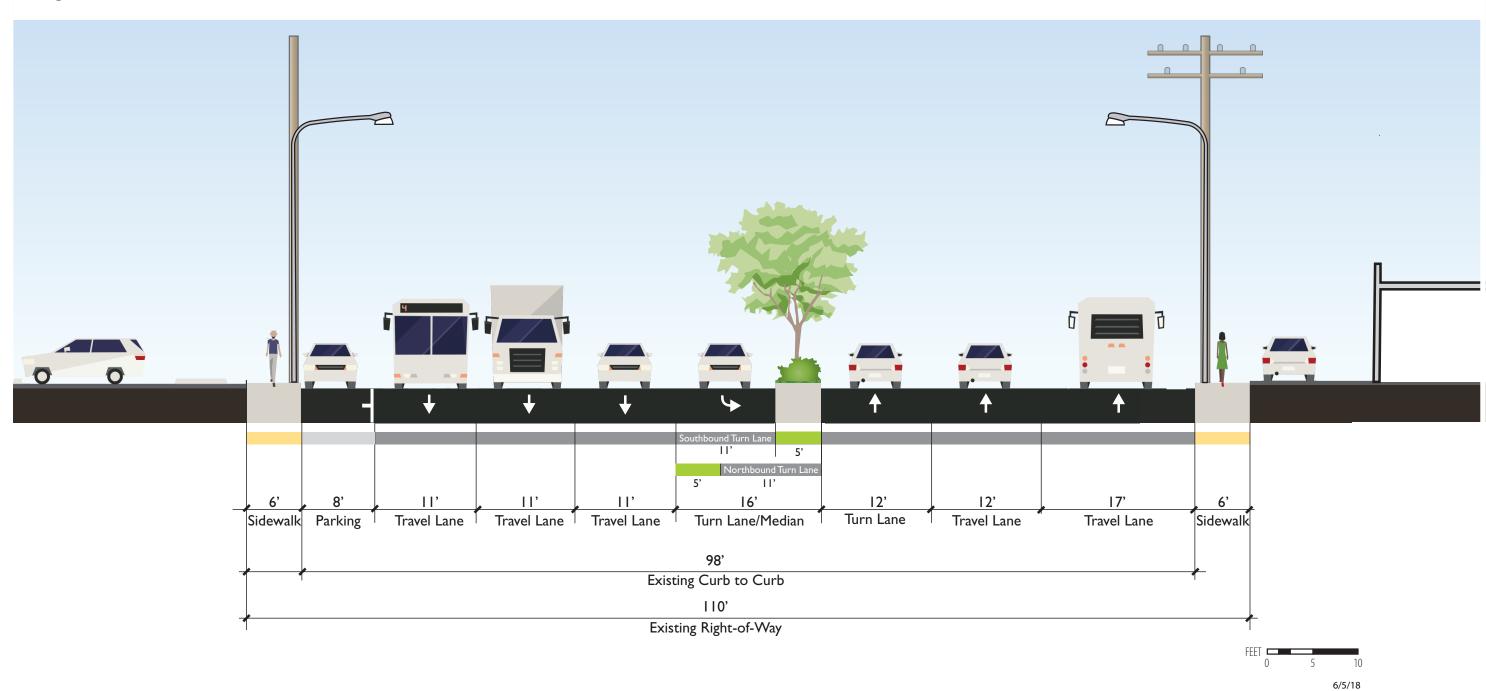
Figure 3.8 shows the typical cross-section for Blackstone Avenue in this sub-segment between Home Avenue and Hedges Avenue.

Key Driving Conditions:

• Posted Speed: 40 mph.

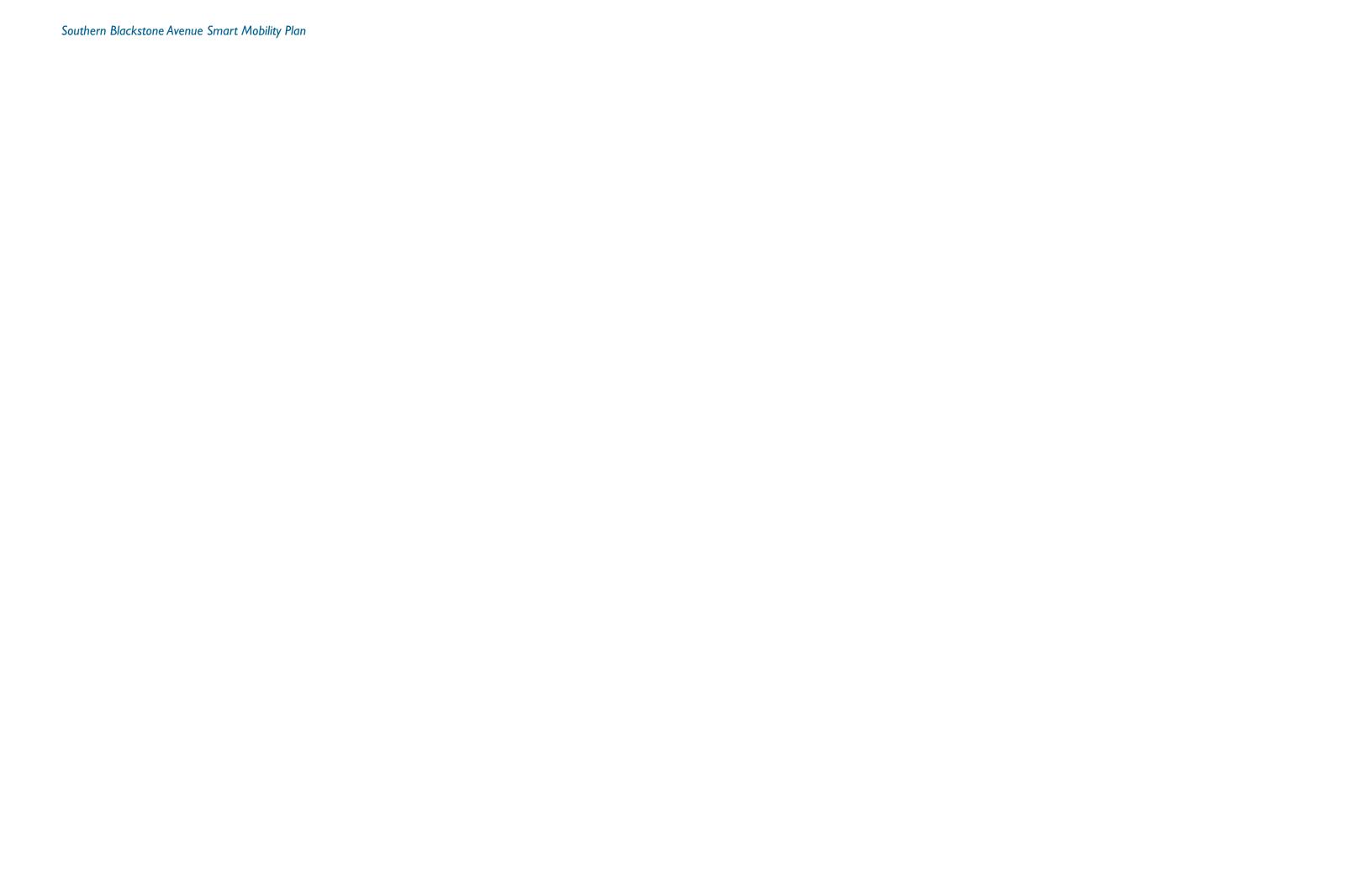
WELDON / FRESNO CITY COLLEGE STREET SECTIONS

Figure 3.8



Weldon/FCC Sub-Segment #3: E Homes Avenue to E Hedges Avenue Typical Right-of-Way Section (Looking North)

Southern Blackstone Avenue Smart Mobility Project



- Most cross streets terminate at Blackstone as unsignalized T-intersections.
- Somewhat complex, unsignalized intersection at Blackstone and Hedges Avenue at merge point between southbound Blackstone Avenue and northbound Abby Street.
- 3-travel lanes in each direction; Northbound curbside lane is 17 feet wide as parking is not allowed.
- Turn-lanes north of Floradora Avenue located at all cross streets and span the length of the blocks; Turn-lanes are separated from oncoming traffic by a 5-foot wide, paved median.
- The City has obtained funding to install a traffic signal at Blackstone Avenue and E. Floradora Avenue.
- 400-foot long, 16-foot wide, tree-lined median segment between Floradora and Hedges Avenues .
- Parking is allowed on west side of the street; Parking is not allowed on east side of the street.

Key Pedestrian Conditions:

- No signalized crosswalks in this sub-segment.
- Intersection of Blackstone and Hedges Avenues at Blackstone/Abby merge point lacks safe crosswalks across Blackstone Avenue.
- Sidewalks on both sides are narrow (6 feet in most locations) and located adjacent to the curb (no buffering landscape strip or rows of street trees).
- The width of the sidewalks is impeded by street lampposts, signposts, and vehicles parked on adjacent surface parking lots effectively narrowing the clear walking area to less than 4 feet in places.
- Sidewalks on the east side of Blackstone Avenue are paved with asphalt instead of concrete, making them blend together with the asphalted surfaces of adjacent auto repair yards and parking lots.
- The eastern sidewalk ends in a stretch of sloped, broken up asphalt at the corner of Hedges Avenue that does not connect to the concrete sidewalk along the northside of Hedges Avenue.
- Sidewalks on both sides are frequently crossed by wide driveways (30 feet plus, with some measuring between 40 and 60 fee in width). into adjacent car repair yards and parking lots, causing sidewalks to slope significantly where driveways are located.
- Curb ramps are provided at most unsignalized crosswalks across cross streets but are geometrically challenged due to the narrow sidewalk width.
- Property-side of sidewalks is typically exposed to paved surfaces in adjacent paved parking lots or car repair yards.

- 400-foot long, 16-foot wide, tree-lined median segment between Floradora and Hedges Avenues.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

No existing or planned bicycle facilities in this sub-segment.

Key Transit Conditions:

Routes operating on Blackstone Avenue: Route 1 (BRT) – No stops in this sub-segment; Route 20 with stops just south of Floradora Avenue and a southbound (only) stop at Hedges Avenue.

3.3 Olive/Tower Gateway Activity Center

The Olive/Tower Gateway Activity Center is located between Hedges Avenue and State Route 180. It is centered on the Olive Avenue intersection, serves as an entrance into the successful Tower District neighborhood to the west, and includes Susan B. Anthony elementary school, which is attended by 460+ students. This segment of the corridor functions as a one-way couplet, with Blackstone Avenue carrying southbound traffic, and Abbey Avenue carrying northbound traffic. The Weldon/Fresno City College Activity Center includes the following sub-segments:

- Sub-Segment Olive/Tower Gateway #1 Blackstone: E Hedges Avenue to E Olive Avenue
- Sub-Segment Olive/Tower Gateway #2 Blackstone: E Olive Avenue to SR 180
- Sub-Segment Olive/Tower Gateway #3 Abby Street: E Hedges Avenue to SR 180

Figure 3.9 provides a summary of key conditions throughout the Olive/Tower Gateway Activity Center.

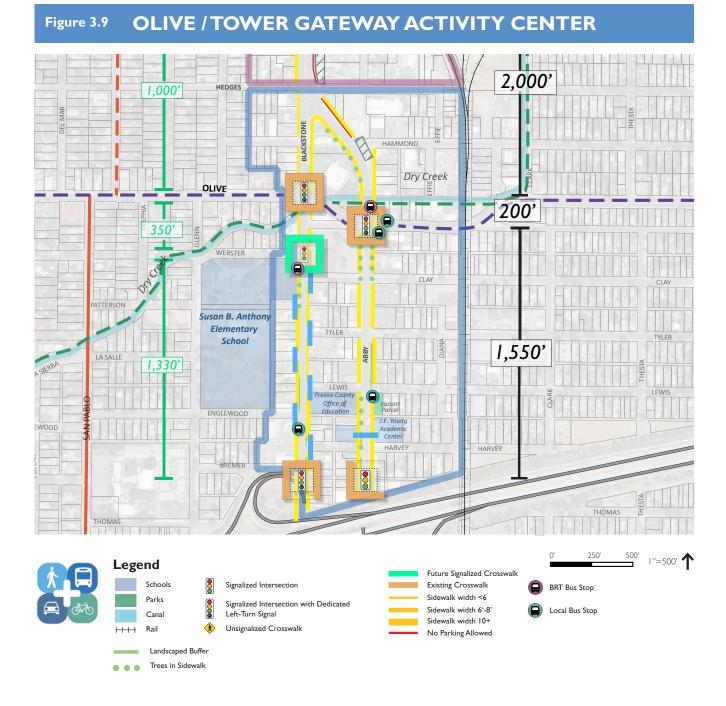
Olive/Tower Gateway Sub-Segment #1 - Blackstone: E Hedges Avenue to E Olive Avenue

Land Use Context and Key Destinations

• The land uses along this segment are fairly varied, based on the street segments that make up the couplet. On Blackstone Avenue the auto-services businesses extend from the north. There are a few local retail establishments dispersed between the auto-service and sales establishments. Rite-Aid and McDonalds are located at the north end, between the couplet streets. The Susan B Anthony elementary school also fronts Blackstone Avenue. Its attendance zone includes the area between Blackstone Avenue and the railroad tracks as well as areas south of SR 180.

Frontage Conditions

• The frontage on Blackstone Avenue, particularly on the west side has buildings fronting the sidewalks oriented towards Blackstone. On the east side the buildings are setback with parking fronting the street. The sidewalks have ornamental street lights that continue from the Downtown.



Proposed New or Infill Development

None known.

Transportation

Figure 3.10 shows the typical cross-section for Blackstone Avenue in this sub-segment between Hedges Avenue and Olive Avenue.

Key Driving Conditions:

- Posted Speed: 40 mph.
- One-way operation (southbound).

- Somewhat complex, unsignalized intersection at Blackstone and Hedges Avenue at merge point between southbound Blackstone Avenue and northbound Abby Street.
- Signalized intersection with designated single left-turn lane (southbound direction) at Olive Avenue. Olive Avenue provides access to State Route 99 to the west.
- 3-travel lanes in southbound direction; plus 2 curbside lanes that function mainly as turn lanes in this sub-segment.
- Slip lane from Abby Street south of Hedges Avenue is received by eastern curbside lane on Blackstone Avenue.
- Parking is allowed along a short segment south of Hedges Avenue; Parking not allowed on east side of the street.

Key Pedestrian Conditions:

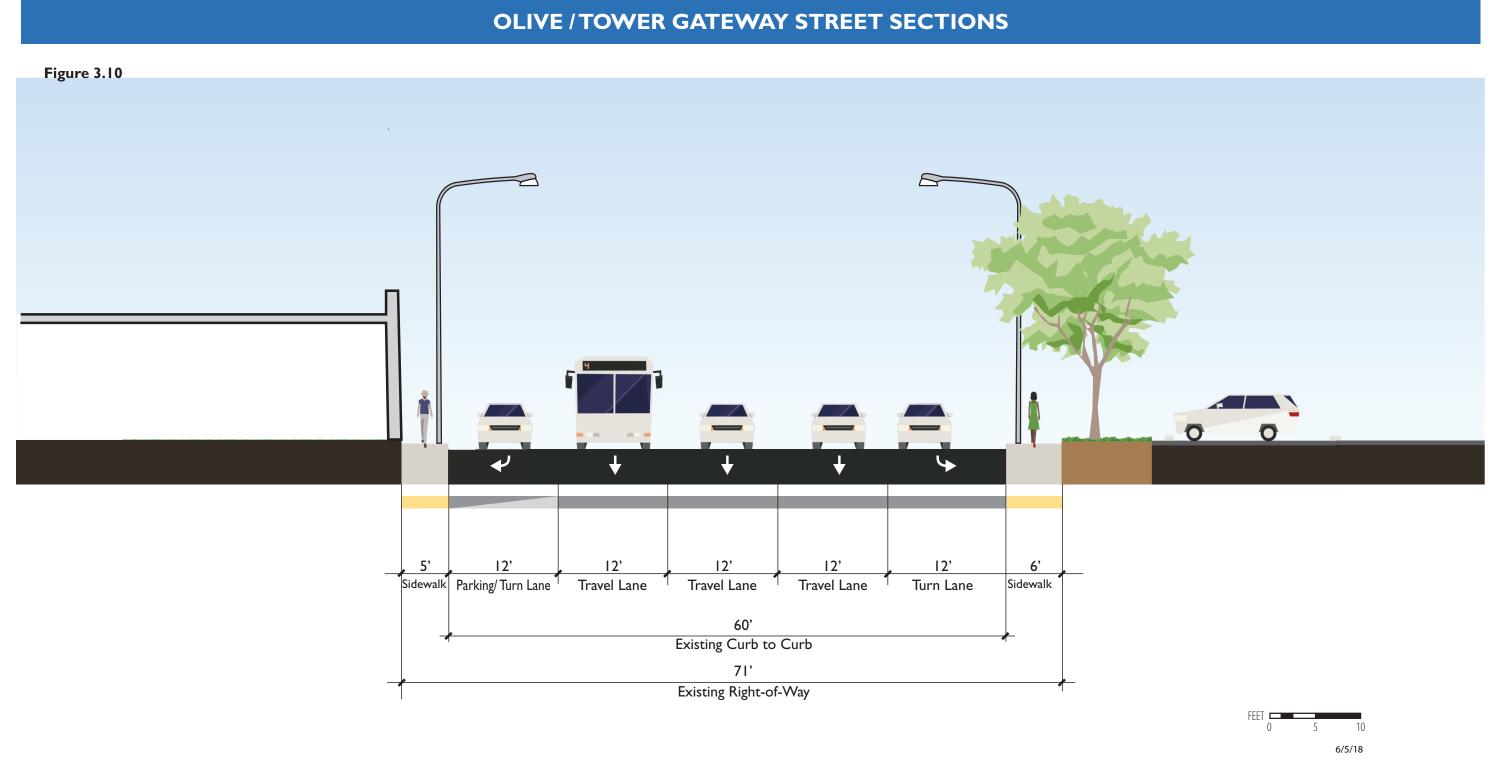
- Signalized crosswalks at Olive Avenue.
- Intersection of Blackstone and Hedges Avenues at Blackstone/Abby merge point lacks marked crosswalks across Blackstone Avenue.
- Sidewalks on west side are extremely narrow (5 feet) and appear to not meet ADA standards for clear width in places where street lights and sign poles are located in the sidewalk. Sidewalks on east side are 6 feet wide (wider were provided by adjacent businesses) and located adjacent to the curb (without buffering landscape strip or rows of street trees).
- No sidewalks along the Blackstone-side edge of a landscaped triangular island at the merge point between southbound Blackstone Avenue and northbound Abby Street.
- Northern end of eastern sidewalk only allows connection to Abby Street but not traveling onto Blackstone Avenue north of Hedges Avenue.
- Sidewalks on both sides are crossed by driveways in a few locations.
- Curb ramps are provided at Olive Avenue and unsignalized crosswalks across cross streets but are geometrically challenged due to the narrow sidewalk width.
- Property-side of sidewalks on the west side are typically fronted onto by buildings;
 Property-side of sidewalks on the east side are buffered from adjacent parking lots by wider landscape strips.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

• Olive Avenue – Planned bike lanes (in both directions).

Key Transit Conditions:

- Routes operating on Blackstone Avenue: Route 1 (BRT) No stops in this sub-segment; Route 20 with a southbound stop at Hedges Avenue.
- Cross Route Transfers: to Route 35 on Olive Avenue.



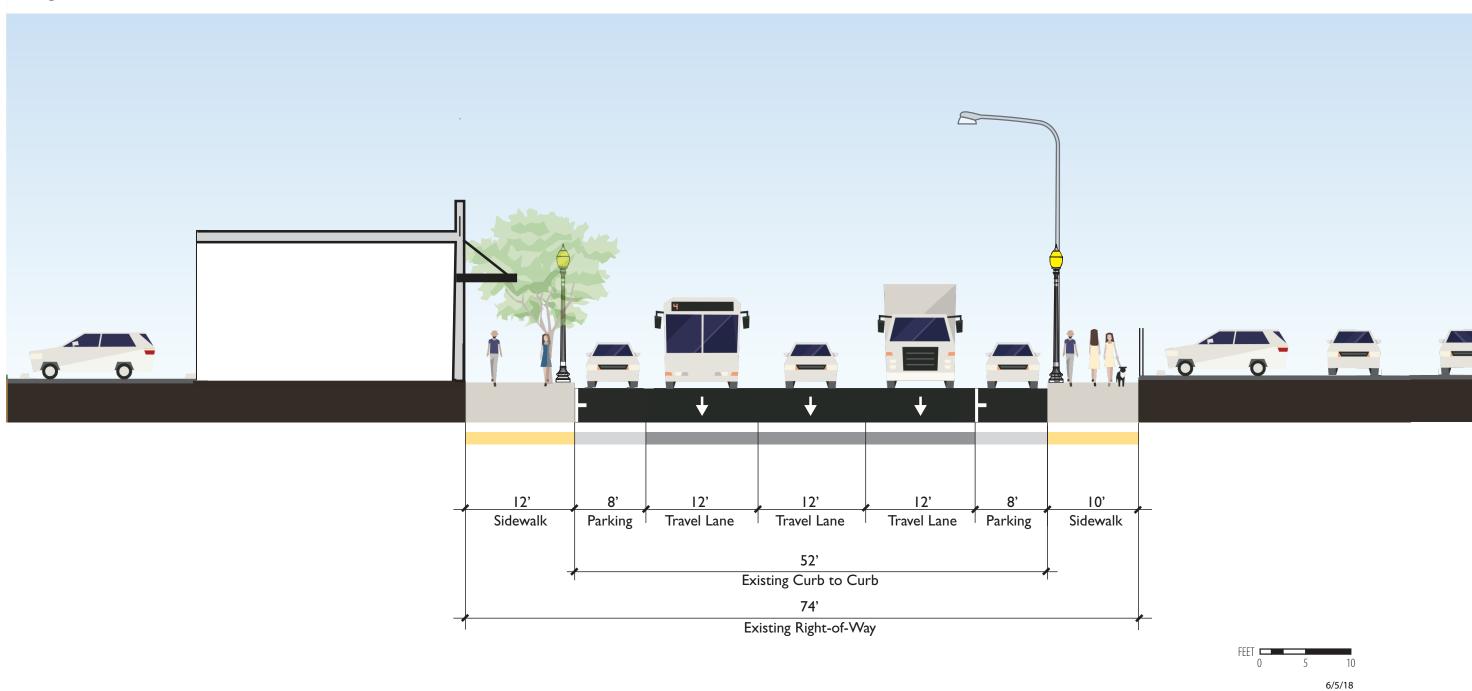
Olive/Tower Gateway Sub-Segment #1 - Blackstone: E Hedges Avenue to E Olive Avenue

Typical Right-of-Way Section (Looking North)

Southern Blackstone Avenue Smart Mobility Project

OLIVE / TOWER GATEWAY STREET SECTIONS

Figure 3.11



Olive/Tower Gateway Sub-Segment #2 - Blackstone: E Olive Avenue to State Route 180

Typical Right-of-Way Section (Looking North)

Southern Blackstone Avenue Smart Mobility Project

Olive/Tower Gateway Sub-Segment #2 - Blackstone: E Olive Avenue to State Route 180

Land Use Context and Key Destinations

 The varied land uses extend along Blackstone Avenue, up to SR180. Auto-services businesses is still the dominant use with few local retail establishments dispersed between.

Frontage Conditions

• Similar to the uses, the frontage is similar to the previous segment. The west side has buildings fronting the sidewalks oriented towards Blackstone. On the east side the buildings are setback with parking fronting the street.

Proposed New or Infill Development

• Property located between Blackstone Avenue and Abby Street, north of Clay Avenue. Existing building and site are slated for remodeling into a health clinic.

Transportation

Figure 3.11 shows the typical cross-section for Blackstone Avenue in this sub-segment between Olive Avenue and State Route 180.

Key Driving Conditions:

- Posted Speed: 40 mph.
- One-way operation (southbound).
- Signalized intersection with designated single left-turn lane (southbound direction) at Olive Avenue; Olive Avenue provides access to State Route 99 to the west.
- Signalized intersection at Bremer Avenue; Bremer Avenue provides access to and from State Route 180 at this intersection (in westbound direction).
- 3-travel lanes in southbound direction.
- Parking is allowed on both sides of the street except near SR 180 on/off ramp.

Key Pedestrian Conditions:

- Signalized crosswalks at Olive and Bremer Avenues.
- No unsignalized crosswalks across Blackstone Avenue.
- The City has obtained to install a traffic signal at Blackstone Avenue and Webster Avenue.
- Crosswalk at SR 180 off ramp is not signalized.
- Sidewalks on the west side are typically 12 feet wide (except for block south of Olive Avenue intersection 6 feet) and include a 6-foot wide landscape strip between the curb and walkway along a block.
- Sidewalks on the east side are typically 10 feet wide. The sidewalk is narrower (approximately 6 feet) on the block between Tyler and Lewis Avenues. The side-

walk in the segment is frequently impeded by street light posts, further narrowing the clear walking area.

- Some blocks include landscape strips with street trees between the roadway and paved portion of the sidewalk.
- Sidewalks on the western side of the street are crossed by driveways in a number of locations; Sidewalks on the east side of the street have frequent, wide defunct driveways, causing sidewalks to slope significantly where driveways are located.
- Curb ramps are provided at Olive and Bremer Avenues and unsignalized crosswalks across cross streets but are geometrically challenged due to the narrow sidewalk width.
- No curb ramps are provided at crosswalks across alleys on the east side of the street.
- Property-side of sidewalks on the west side are fronted onto in a variety of ways
 including buildings, landscaped setbacks (at BRT stop), and paved parking lots;
 Property-side of sidewalks on the east side are typically lined by tall fences that
 separate sidewalk and adjacent parking lots or car sales lots.
- Street lighting is provided by cobra-head type light fixtures.
- Pedestrian-scale, decorative light fixtures provide additional lighting along sidewalks on both sides of the street.

Key Bicycle Conditions:

• Olive Avenue – Planned bike lanes (in both directions).

Key Transit Conditions:

- Routes operating on Blackstone Avenue: Route 1 (BRT) with a stop just south of Webster Avenue (at Susan B. Anthony Elementary); Route 20 with a stop just south of Englewood Avenue.
- Cross Route Transfers: to Route 35 on Olive Avenue.

Olive/Tower Gateway Sub-Segment #3 – Abby Street: E Hedges Avenue to State Route 180

Land Use Context and Key Destinations

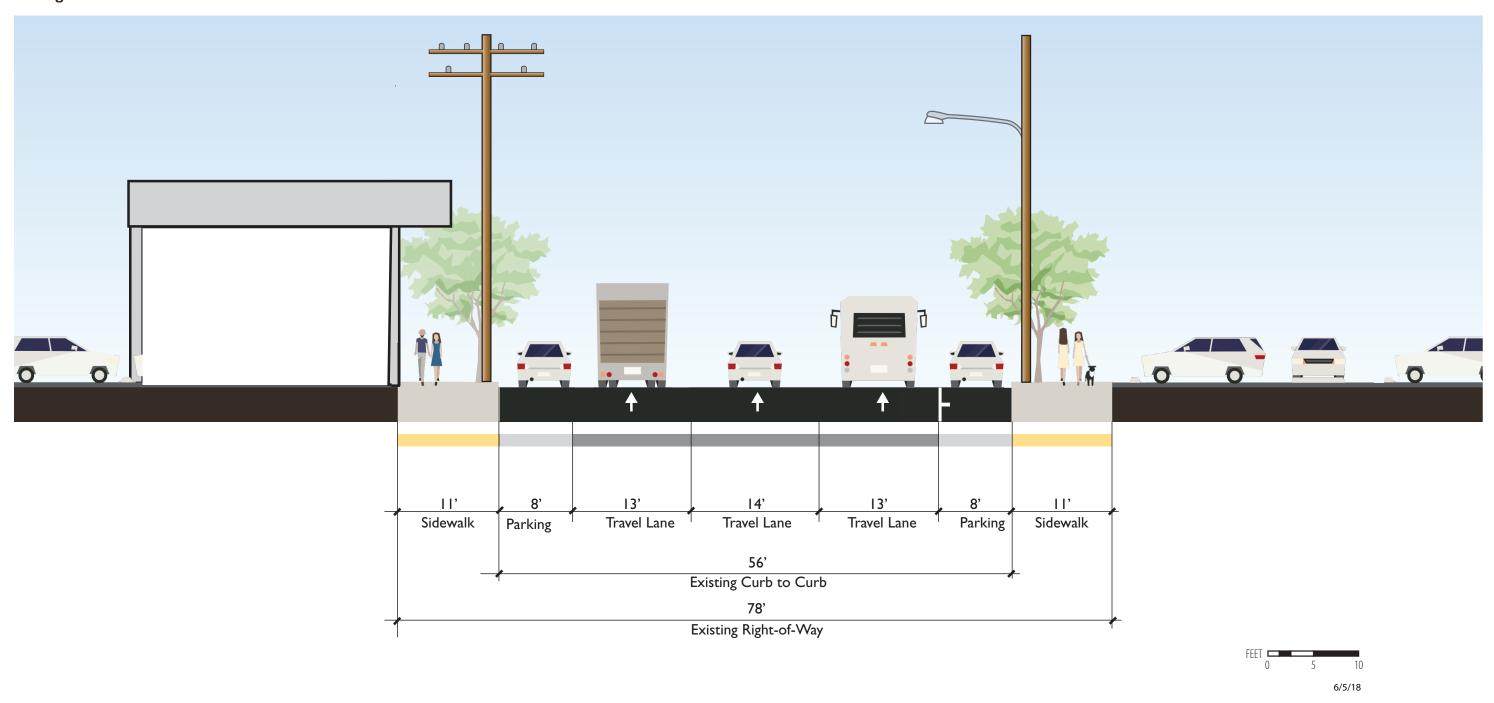
• On Abby Street the Land-uses are more varied with some auto-sales in the northern area that give way to small office and service establishments, along with a few of single family homes. The *J.E. Young Academic Center* is located on Abby Street with facilities on either side of the street.

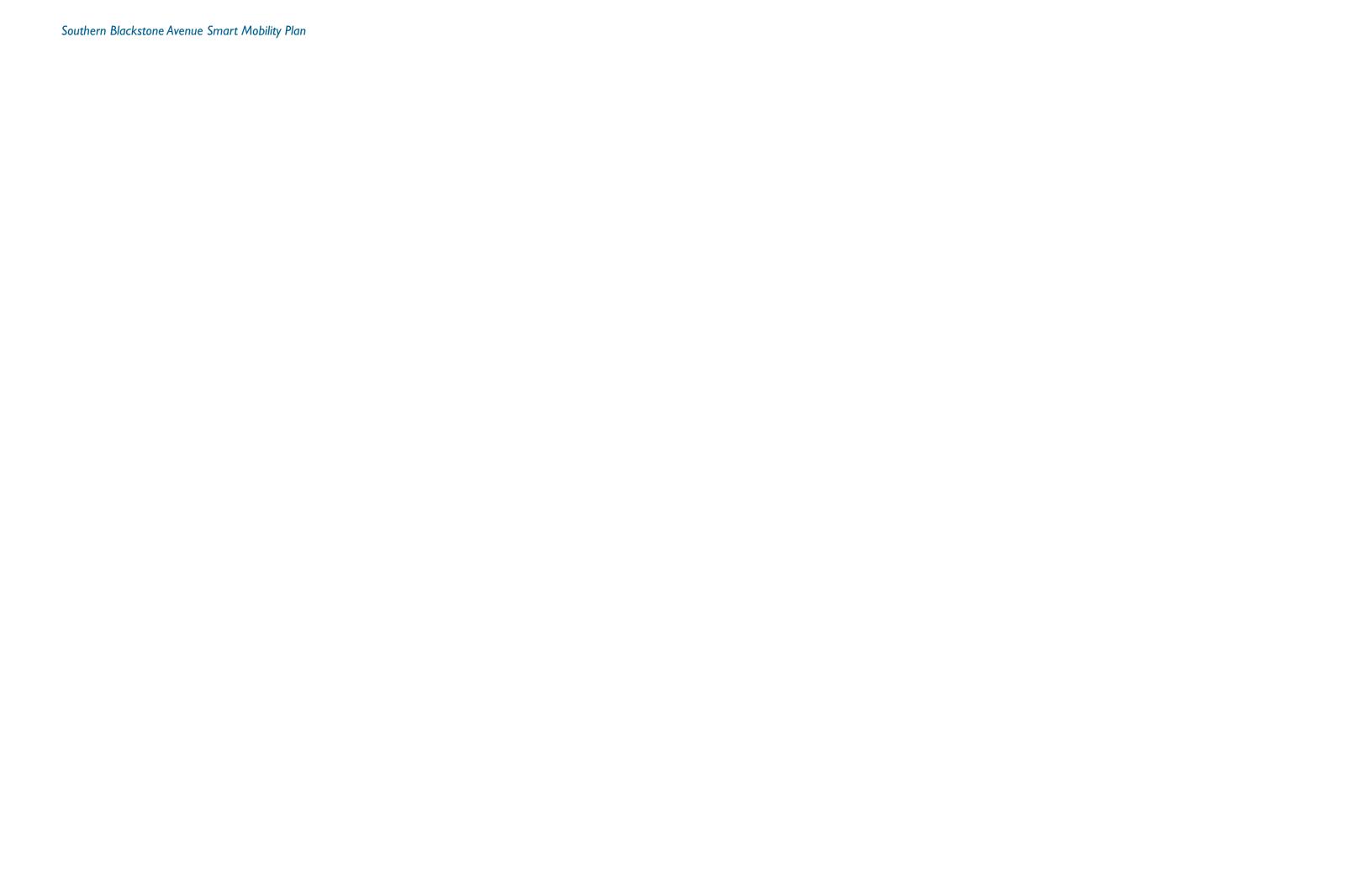
Frontage Conditions

On Abby Street the frontages are relatively similar on either side. There is a relative
mix of setbacks along Abby, with most buildings oriented towards the cross streets.
Most of the surface parking lots have curb cuts along the street, rather than onto the
cross streets.

OLIVE / TOWER GATEWAY STREET SECTIONS

Figure 3.12





Proposed New or Infill Development

 Other Opportunity Sites: A vacant block is located at the northeastern corner of the Abby Street/Olive Avenue intersection. A second vacant lot is located at the at the northeastern corner of the Abby Street/Lewis Avenue intersection. Plans for the future of both sites are currently unknown.

Transportation

Figure 3.12 shows the typical cross-section for Blackstone Avenue in this sub-segment between Olive Avenue and State Route 180.

Key Driving Conditions:

- Posted Speed: 40 mph.
- One-way operation (northbound).
- Signalized intersection at Olive Avenue; Olive Avenue provides access to State Route 99 to the west.
- Signalized intersection at Bremer Avenue; Bremer Avenue provides access to and from State Route 180 to the west (in westbound direction); Note: on- and off ramps from State Route 180 in the eastbound direction occurs at an intersection on Abby Street just south of SR 180 (outside of the project area).
- 3-travel lanes in northbound direction.
- Parking is allowed on both sides of the street.

Key Pedestrian Conditions:

- Signalized crosswalks at Olive and Bremer Avenues.
- Unsignalized, marked (school) crosswalk at Harvey Avenue. No other marked crosswalks across Abby Street.
- Sidewalks on both sides are typically 11 feet wide.
- Some blocks include up to 7-foot wide landscape strips between the roadway and paved portion of the sidewalk, which narrows the width available for walking to 4 feet.
- Some blocks have short rows of street trees or include distantly planted individual street trees.
- No sidewalks along the Abby-side edge of a landscaped triangular island at the merge point between southbound Blackstone Avenue and northbound Abby Street.
- Northern end of western sidewalk only allows connection to Blackstone Avenue but not traveling onto Blackstone Avenue north of Hedges Avenue.
- No sidewalk along the landscaped triangle at the intersection of Abby Street and Hammond Avenue, forcing pedestrians to detour around the landscaped area using a straight spur of Abby Street that connects to Hammond Avenue.

Southern Blackstone Avenue Smart Mobility Plan

- Sidewalks on both sides of the street are crossed by wide driveways in numerous locations.
- Curb ramps are typically provided at all street corners: Notable exception are the crosswalks across Hammond and Hedges Avenue associated with the eastern sidewalk.
- Property-side of sidewalks on the west side is fronted onto in a variety of ways including buildings, landscaped setbacks, and paved parking lots.
- Street lighting is provided by cobra-head type light fixtures.

Key Bicycle Conditions:

• Olive Avenue – Planned bike lanes (in both directions).

Key Transit Conditions:

- Routes operating on Abby Street: Route 1 (BRT) with a stop just north of Olive Avenue; Route 20 with a stop just south of Lewis Avenue.
- Cross Route Transfers: to Route 35 on Olive Avenue.

4. Takeaways and Next Steps

4.1 Takeaways

The following paragraphs provide an overview of the key takeaways from the review of existing conditions along the Blackstone Avenue/Abby Street Corridor in the project area.

Key Transportation Issues

- Majority of sidewalks are too narrow and too exposed to fast-moving vehicular traffic to be comfortable and inviting to pedestrian travel.
- Gaps in sidewalk continuity significantly impede pedestrian travel from the couplet portion of the Corridor to Blackstone Avenue (north of McKinley).
- Gap in sidewalk continuity and lack of pedestrian gates at railroad crossing.
- Poor definition of sidewalk areas through auto-oriented business frontages.
- With few exceptions in the couplet area, the majority of the Corridor lacks any
 streetscape elements that promote pedestrian comfort and convenience; street
 design does not provide any sense of place (no street trees, no pedestrian amenities,
 roadway lighting only, narrow paved medians).
- Distances between signalized crosswalks are very high.
- Lack of highly visible striping for existing crosswalks throughout the Corridor.
- Bicyclists are frequently observed on the Corridor but comfortable bicycle travel for users of all ages and abilities is not supported by facilities on Blackstone Avenue.
- Traffic speeds are high and the leading cause for the majority of accidents.
- Heavy turn volumes at key intersections (Shields, Clinton, and McKinley Avenues) need to be accommodated in any redesign of the Corridor.
- The above conditions reduce the incentives for neighboring residents and customers to take the Q service and other local transit for travel to businesses and destinations along the Blackstone Avenue Corridor.

Key Opportunities for Multimodal Improvements

- Wide width of travel lanes south of Hedges Avenue provide opportunity for shifting space to other modes. Some potential for lane width reductions of lanes north of Hedges Avenue.
- Underutilized on-street parking lane along stretches of the Corridor.
- Potential for elimination or shortening of left turn lanes that are not located at intersections with major left-turn movements (Shields, Clinton, and McKinley Avenues).

- Overall vehicular lane capacity on Blackstone and parallel corridors exceeds
 overall demand, allowing for a potential reduction in the number of travel lanes
 for automobiles. Additional assessment of traffic conditions at intersections will be
 necessary to determine of a reduction in the number of lanes is feasible for portions
 of the Blackstone Avenue/Abby Street corridor.
- Roadway geometry at Blackstone Avenue/Abby Street merge area includes excess paved areas between the roadway curbs.
- Many location-specific opportunities for improving pedestrian safety and the quality of the pedestrian environment that will be explored in the next phase of the project.

Key Land Use related Opportunities for Multimodal Improvements

- Where properties along the Corridor redevelop in the near-term and in other locations over time, these can make property-side contributions to the quality of the pedestrian environment, including easements for wider sidewalks (where necessary) and building frontages that activate and engage the sidewalk and street.
- Existing parking lots and auto repair yards could be buffered from the back of sidewalks through private initiative (potentially supported by City programs).
- Underutilized parking areas along the back of sidewalks could be converted to temporary "parklet"-type uses that activate the sidewalk.

4.2 Next Steps

During a Multi-day Charrette in June of 2018, a comprehensive range of community members and stakeholders, as well as the interested general public provided their input on transportation, land use, and urban design related issues and desired project outcomes as they saw them. The Charrette included two workshops, a corridor walking tour, and numerous focused meetings with interested parties.

After the provided input has been reviewed with the Project Team, the Consultant Team will prepare concept alternatives for the Southern Blackstone Avenue complete street framework. The results of this work will be presented to the public in August of 2018.