MOBILITY, TRANSIT, CIRCULATION, AND PARKING

CHAPTER 5

5.1 INTRODUCTION

This section of the Downtown Development Plan discusses the role of mobility to support the vision and goals for the planning area. This chapter presents improvement opportunities for the main downtown thoroughfares including Colorado Boulevard, 5th Street, Main Street, Oak Street, Frederick Way, and other residential streets in the Downtown Development Plan area, including truck traffic issues, traffic calming, bicycle facilities, parking, and transit opportunities. More detail on the street furnishings and street signs is outlined in the Public Improvements, Design Standards, and Recommendations chapter.

The Downtown Development Plan strives to create a pedestrian-friendly destination in the downtown core. This chapter is intended to help create an environment that becomes the heart of the Town with an active, engaged, human oriented streetscape. Over the course of the next 20 years, in addition to the car, improved alternative modes of travel should be available to the people who live, work, shop, and play in downtown Frederick.

5.2 EXISTING TRAFFIC CONDITIONS

The Downtown Development Plan area is bounded by Colorado Boulevard on the west, 3rd Street on the north, and has a staggered boundary to the east and south (*Figure 5-1*). Surrounding the Downtown Development Plan area, the automobile dominated pattern developed over the past 40 years presents a number of challenges for preserving the traditional pedestrian friendly environment. There are three major mobility challenges to improving the downtown area. These include balancing automobile parking needs in the downtown with the preservation of the pedestrian environment, encouraging alternative forms of transportation such as bus lines and bicycles, and the utilization of traffic calming devices to improve pedestrian safety at key intersections.

COLORADO BOULEVARD

Colorado Boulevard traditionally serves as the central north-south thoroughfare for the Town of Frederick. The segment running parallel to the downtown is largely characterized by its auto-oriented nature; however, there are conceptual plans to develop the land fronting Colorado Boulevard on the west side (known as “Miner’s Village”) into a new High School and a Mixed-Use commercial center.

MOBILITY, TRANSIT, CIRCULATION, AND PARKING

Colorado Boulevard includes one lane in each direction with a raised landscaped median and left hand turn lane at every intersection. It is designated as a 4-lane arterial on the Comprehensive Plan and will develop into a 4 lane road when the need arises.

Figure 5-1: Plan area boundary

5TH STREET

5th Street (*Figure 5-2*) is the central east-west spine of downtown Frederick. The segment between Colorado Boulevard and Frederick Way is largely characterized by a mix of civic uses, open space, retail and service commercial on the west side of Locust Street, and single-family residential east of Locust. Recently, the Town of Frederick Police Department moved to a new building on 5th Street. There is currently a moderate amount of pedestrian activity on the street due primarily to the retail shops and restaurants. Pending the expected implementation of an aggressive revitalization and façade improvement program, a much higher level of pedestrian activity will probably occur in the future.

5th Street includes one lane in each direction with parallel parking on both sides.

Figure 5-2: 5th Street looking west

MAIN STREET

Prior to improvements on Colorado Boulevard, Main Street was the historic entrance into the Town of Frederick from State Highway 52, and ran parallel with the historic railroad tracks (now dismantled). Today, the segment between 3rd Street and 7th Street is largely characterized by professional services and residential uses on the east side, and a ditch on the west side of the street. There is currently little pedestrian activity on the street. There are plans to reconnect Main Street to SH52 using a realignment south of 8th Street.

Main Street includes one lane in each direction with parallel parking on both sides.

FREDERICK WAY

Frederick Way is the primary north-south route on the east side of Town. The segment intersecting with 5th Street is largely characterized by vacant land and educational facilities on the west side, and vacant land on the east side. Due to the automobile-oriented nature of this street, no increase in pedestrian traffic is encouraged or anticipated following the implementation of the Downtown Development Plan.

Frederick Way includes one lane in each direction. South of 5th Street Frederick Way has parallel parking on the west side, and north of 5th Street it has a rolled curb with parking on both sides. In the future, no parking is anticipated on Frederick Way, south of 5th Street.

OAK STREET

Oak Street is a secondary north-south axis bisecting the core of downtown, and was formerly the main north/south route through Frederick. The segmentbetween 4th Street and 6th Street is largely characterized by retail and service commercial. By contrast, single-family residential comprises the dominant land use north of 4th Street and south of 6th Street. In addition, the Town of Frederick Post Office is located on the corner of Oak Street and 4th Street. There is currently a moderate amount of automobile and pedestrian activity. Following the implementation of the Downtown Development Plan, it is likely that both pedestrian and automobile activity will increase.

Oak Street includes one lane in each direction with parallel parking on both sides.

LOCUST STREET

Locust Street (*Figure 5-3*) is a secondary street in downtown Frederick. Aside from a handful of commercial retail land uses at the 5th Street intersection, the segment between 3rd Street and 6th Street is largely characterized by single-family residential development. In addition, the Town of Frederick Administrative Offices building is located on the corner of Locust Street and 4th Street. There is currently a minimal amount of automobile and pedestrian activity. Due to the residential nature of this street, no increase in automobile or pedestrian traffic is anticipated following the implementation of the Downtown Development Plan.

Locust Street includes one lane in each direction with parallel parking on both sides.

Figure 5-3: Locust Street looking north

5.3 CIRCULATION GOALS AND OBJECTIVES

1. Preserve the historic street grid.
2. Create and strengthen pedestrian linkages, and ensure that they comply with ADA (Americans with Disabilities) standards.
3. Incorporate traffic calming measures to slow traffic and increase pedestrian safety.
4. Use enhanced safety mechanisms at pedestrian crossings.
5. Encourage the use of service alleys for truck deliveries and parking.
6. Support future express bus and passenger rail service along the Front Range corridor with easy access to and from downtown Frederick.
7. Efficiently move automobile traffic throughout the downtown area.
8. Designate Class II bicycle lanes on 4th Street, 6th Street, Elm Street, and Locust Street. If the streets are not wide enough to accommodate a Class II lane, consider a shared lane as an alternative option.
9. Provide bicycle parking throughout downtown Frederick.
10. Encourage bus transit in downtown Frederick that connects the Town to both a local and a regional transportation system.
11. Generally reduce and simplify parking requirements.
12. Develop a roundabout at the intersection of Colorado Boulevard and 5th Street to improve traffic flow into the downtown area.
13. Develop a downtown public transit facility.

5.4 SUGGESTED ROADWAY IMPROVEMENTS

COLORADO BOULEVARD - BETWEEN 3RD STREET AND 7TH STREET

The preferred scheme focuses on the expansion of Colorado Boulevard from one lane in each direction (with turn lanes at intersections), to two lanes in each direction. Travel lanes should be approximately 12 feet in width and striped 9 to 10 feet away from the curb. In addition to widening the road, the creation of a roundabout at the intersection of Colorado Boulevard and 5th Street is strongly encouraged. Also, providing pedestrian refuge islands in the landscaped median would improve pedestrian and vehicular safety without adversely impacting traffic flow. In addition, paving accents should be used at the intersection of 5th Street. Finally, improved pedestrian crosswalk devices such as audible crossing signals with count-downs should also be utilized. This street is currently designated as a major arterial in the proposed Regulating Plan for downtown Frederick.

Table 5-1 displays suggested street improvements for Colorado Boulevard:

Table 5-1: Colorado Boulevard improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12′	12′
Number of Lanes	1 Each Direction with Additional Turn Lanes	2 Lanes Each Direction
Median	Yes	Yes
Median Width	16′	Same
Parking	No	Same
Parking Width	N/A	N/A
Sidewalk	Detached path along east side	Detached sidewalk along both sides
Sidewalk Width	N/A	N/A

The primary changes along this segment of Colorado Boulevard include the addition of a round-about at the 5th Street intersection, and an extra travel lane in each direction.

5TH STREET - BETWEEN COLORADO BOULEVARD AND FREDERICK WAY

The preferred scheme focuses on making this a very pedestrian friendly street while maintaining the current flow of automobile traffic. This vision will be obtained through street landscaping and by pushing new development further back from the sidewalk edges to accommodate wider sidewalks with space for outdoor dining. In addition, the creation of a roundabout at the intersection of Colorado Boulevard and 5th Street is strongly encouraged. Furthermore, the use of accent paving at the intersections of Colorado Boulevard, Main Street, Elm Street, Oak Street, and Locust Street will substantially improve pedestrian visibility. Improved pedestrian crosswalk devices such as in-street flashing lights and audible crossing signals should also be utilized.

Table 5-2 displays suggested street improvements for 5th Street:

Table 5-2: 5th Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12′	11′
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	12′	At least 11′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	6′	10′ minimum, wherever possible

The primary changes along this segment of 5th Street include the expansion of the sidewalks, the intersection improvements, and the roundabout at Colorado Boulevard. Existing parallel parking along 5th Street will be maintained.

MAIN STREET - BETWEEN 3RD STREET AND 7TH STREET

As Main Street's importance for automobile traffic continues to decline, the focus should shift to making it pedestrian-oriented. Therefore, the preferred scheme focuses on making Main Street more pedestrian friendly through the widening of sidewalks, and the use of accent paving at the intersection of 5th Street. In addition, Main Street is an ideal candidate for the introduction of diagonal parking north of 5th Street.

Table 5-3 displays suggested street improvements for Main Street:

Table 5-3: Main Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	13′	11′
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	11′	Varies, 18′ for diagonal and 11′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	Varies	5′ minimum

The primary changes along this segment of Main Street include the expansion of the sidewalks, the addition of diagonal parking, and the intersection improvements.

ELM STREET - BETWEEN 3RD STREET AND 7TH STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street and down-playing the cut-through town traffic. This vision will be obtained through the creation of a Class II bicycle lane or shared lane on the street, as well through pedestrian safety improvements such as accent paving at the 5th Street intersection. In addition, Elm Street is an ideal candidate for the introduction of diagonal parking north of 5th Street.

Table 5-4 displays suggested street improvements for Elm Street:

Table 5-4: Elm Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	11′	10′-13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	9′	Varies, 17′ for diagonal and 11′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	5′-7′	6′ minimum

**10' automobile lane width plus minimum 5' width for Class II bicycle lane if space allows. If space is not sufficient for a Class II lane, then the minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of Elm Street include the addition of a bicycle lane or route, diagonal parking, and intersection improvements. In addition, it may be necessary to set future development 1'-3' further back from the street in order to accommodate the proposed wider sidewalks.

OAK STREET - BETWEEN 3RD STREET AND 7TH STREET

The preferred scheme focuses on making Oak Street (*Figure 5-4*) more pedestrian friendly while maintaining the current flow of automobile traffic. This vision will be obtained through the reduction of the curb-to-curb width, as well as pushing new development further back from the street to accommodate wider sidewalks. Also, as infill development occurs along the street, some existing driveway curb cuts will be eliminated, thereby increasing the on-street parking supply. A 4-way stop intersection should be studied for the intersection of 5th and Oak Street. In addition, the use of accent paving at the intersections of 4th Street, 5th Street, and 6th Street will substantially improve pedestrian visibility. Improved pedestrian crosswalk devices such as in-street flashing lights, and audible crossing signals with count-downs should also be utilized – especially at the intersection of 5th Street. Finally, Oak Street is an ideal candidate for the introduction of diagonal parking north of 5th Street.

Figure 5-4: Oak Street looking south

Table 5-5 displays suggested street improvements for Oak Street:

Table 5-5: Oak Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	13′	11′
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	9′	Varies, 18′ for diagonal and 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	5′	10′ minimum between 4th Street and 6th Street, 6′ minimum elsewhere

The primary changes along this segment of Oak Street include the expansion of the sidewalks, the addition of diagonal parking, and the intersection improvements.

LOCUST STREET - BETWEEN 3RD STREET AND 7TH STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street and down-playing the cut-through traffic. This vision will be obtained through the creation of a Class II bicycle lane or shared lane on the street, as well through pedestrian safety improvements such as accent paving at the 5th Street intersection.

Table 5-6 displays suggested street improvements for Locust Street:

Table 5-6: Locust Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	10′	10′-13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	9′	At least 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	5′	6′ minimum

**10' automobile lane width plus minimum 5' width for Class II bicycle lane if space allows. If space is not sufficient for a Class II lane, then the minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of Locust Street include the addition of a bicycle lane or route and intersection improvements.

WALNUT STREET - BETWEEN 3RD STREET AND 6TH STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street. This vision will be obtained through the creation of a shared lane on the street, as well through pedestrian safety improvements such as accent paving at the 5th Street intersection.

Table 5-7 displays suggested street improvements for Walnut Street:

Table 5-7: Walnut Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12.5′	13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	8′	At least 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	Varies	Same

**The minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of Walnut Street include the addition of a bicycle route and intersection improvements.

MAPLE STREET - BETWEEN 3RD STREET AND 5TH STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street. This vision will be obtained through the creation of a shared lane on the street, as well through pedestrian safety improvements such as accent paving at the 5th Street intersection.

Table 5-8 displays suggested street improvements for Maple Street:

Table 5-8: Maple Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12′	13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	8′	At least 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	Varies	Same

**The minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of Maple Street include the addition of a bicycle route and intersection improvements.

FREDERICK WAY – EXTENDING SOUTH ONE BLOCK FROM THE 5TH STREET INTERSECTION

In contrast to majority of downtown streets, Frederick Way will remain a primarily automobile-oriented thoroughfare with a relatively suburban street character. Therefore, the preferred scheme focuses on street landscaping and maintaining an efficient flow of automobile traffic while increasing pedestrian safety at the 5th Street intersection through the use of accent paving.

Table 5-9 displays suggested street improvements for Frederick Way:

Table 5-9: Frederick Way improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	14′	Same
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes, parallel on the west side south of 5th Street; rolled curb with parking on both sides north of 5th Street.	Parking south of 5th Street will be removed as development occurs and traffic volumes increase.
Parking Width	Varies	Same
Sidewalk	None	Yes, both sides
Sidewalk Width	Varies	Same

The primary change along this segment of Frederick Way consists of the intersection improvements at 5th Street. Bicycle lanes on this roadway are recommended. The current cross section doesn't include them, but the ROW does have adequate width to support them.

3RD STREET - BETWEEN MAIN STREET AND MAPLE STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street. This vision will be obtained through street landscaping, and the creation of a shared bicycle/auto lane on the street.

Table 5-10 displays suggested street improvements for 3rd Street:

Table 5-10: 3rd Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12.5′	13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	8′	At least 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	Varies	Same

**The minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of 3rd Street include the addition of a bicycle route and street landscaping.

4TH STREET - BETWEEN MAIN STREET AND MAPLE STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street and downplaying the cut-through traffic. This vision will be obtained through the creation of a Class II bicycle lane or shared lane on the street, as well through pedestrian safety improvements such as accent paving at the Oak Street intersection. In addition, 4th Street is an ideal candidate for the introduction of diagonal parking west of Elm Street.

Table 5-11 displays suggested street improvements for 4th Street:

Table 5-11: 4th Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	10′	10-13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	9′	Varies, 18′ for diagonal and 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	5′	6′ minimum

**10' automobile lane width plus minimum 5' width for Class II bicycle lane if space allows. If space is not sufficient for a Class II lane, then the minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of 4th Street include the addition of a bicycle lane or route, diagonal parking, and intersection improvements.

6TH STREET - BETWEEN MAIN STREET AND WALNUT STREET

The preferred scheme focuses on making 6th Street (*Figure 5-5*) more pedestrian and bicycle-friendly and downplaying the cut-through traffic. This vision will be obtained through the creation of a Class II bicycle lane or shared lane on the street, as well through pedestrian safety improvements such as accent paving at the Oak Street intersection.

Table 5-12 displays suggested street improvements for 6th Street:

Table 5-12: 6th Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	11′	10′-13′*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	9′	At least 9′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	5′-10′	6′ minimum

**10′ automobile lane width plus minimum 5′ width for Class II bicycle lane if space allows. If space is not sufficient for a Class II lane, then the minimum lane width shall be 13′ and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of 6th Street include the addition of a bicycle lane or route and intersection improvements.

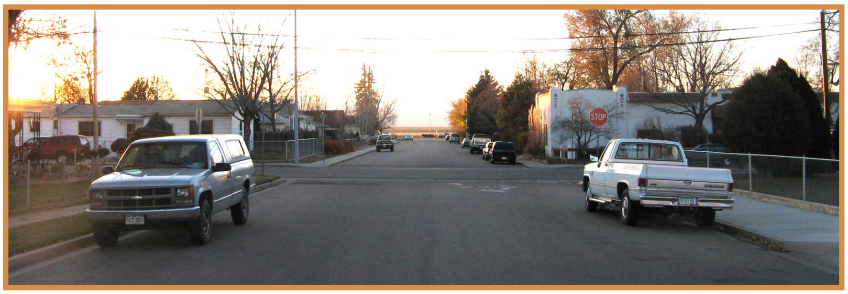

Figure 5-5: 6th Street looking west

7TH STREET - BETWEEN MAIN STREET AND LOCUST STREET

The preferred scheme focuses on making this a pedestrian and bicycle-friendly street. This vision will be obtained through street landscaping and the creation of a shared bicycle/auto lane on the street.

Table 5-13 displays suggested street improvements for 7th Street:

Table 5-13: 7th Street improvements

	Existing Conditions	Proposed (If Different)
Traffic Flow	Two Ways	Same
Lane Width	12′	13*
Number of Lanes	1 Each Direction	Same
Median	No	Same
Median Width	N/A	N/A
Parking	Yes	Same
Parking Width	8′	At least 11′ for parallel
Sidewalk	Yes	Same
Sidewalk Width	Varies	Same

**The minimum lane width shall be 13' and shared with bicycles. See 'Shared Lane Bicycle Stencil' in bicycle facilities section of this chapter.*

The primary changes along this segment of 7th Street include the addition of a bicycle route and street landscaping.

5.5 OTHER CIRCULATION IMPROVEMENT OPTIONS

ALTERNATIVE MODES OF TRANSPORTATION – BICYCLES

The bicycle is an important component to any mobility plan in Frederick. Bicycling offers enjoyment and quality of life for the residents of Frederick, and it also offers a valuable, cost effective, and environmentally sensitive form of transportation. The Transportation component of the Town of Frederick Comprehensive Plan (2006) specifies that the Town should "establish downtown Frederick as a bicycle/pedestrian system hub to enhance the viability of the downtown area". In light of this, 4th Street, 6th Street, Elm Street, and Locust Street would all be ideal candidates for Class II Bike Lanes. The compact nature of the Frederick community makes it an ideal place for promoting the use of bicycles as an easy way to access downtown Frederick for business and shopping. Therefore, bicycle facilities will need to be considered in any planning efforts encompassing this area. Accounting for this, opportunities exist to improve accessibility for cyclists in the core of Frederick in both on- and off-street improvements.

In the event that there is not physical room to provide bicycle lanes on any of the aforementioned streets, on-street bicycle facilities can still be achieved. The concept of 'Shared Lanes' has increased in popularity recently with the new approaches to traffic controls. 'Sharrows,' or 'Shared Lane Bicycle Stencils' have been developed and used in California to allow 13'-15' outside lanes to function as both bikeways and vehicle travel lanes. These markings can reduce vehicle speeds along the roadway and reinforce proper lane positioning for both vehicles and bicycles, thus increasing overall safety.

Figure 5-6: Bicycle Parking

Off-street facilities for bicycles (bicycle parking) are also integral to cyclists for accessibility and encouragement (*Figure 5-6*). Convenient bicycle parking should be provided along 5th Street between Main Street and Frederick Way, both along the street and in commercial and civic parking lots including destinations such as the Clark Plaza shopping center, the Miners Square building, and other commercial or mixed-use facilities. Bicycle racks should be placed along the street where appropriate and provided in parking lots at 5% of the number of vehicle stalls. Parking facilities in off-street locations should be visible and well lit to discourage theft or vandalism and be placed to be convenient to the cyclist.

Finally, as detailed in the Transportation chapter of the *Town of Frederick Comprehensive Plan (2006)*, the abandoned railroad right-of-way running parallel to Colorado Boulevard was acquired by the Town, and improvements to use it as a bicycle/pedestrian trail have been completed. This trail provides a safe, fast, and efficient means of accessing the downtown via bicycle from the surrounding subdivisions, and would benefit from the installation of pedestrian scaled lighting.

MASS TRANSIT

The Weld County Transportation System currently provides limited services to the elderly, disabled, and low income individuals. As the population of Frederick continues to grow, it is likely that services using this system, or systems provided by other transportation agencies, will expand to include regularly scheduled bus routes in and around downtown Frederick.

In addition, the feasibility of a Front Range corridor commuter railroad line is currently being studied by multiple entities including the Colorado Department of Transportation (CDOT), the non-profit "Front Range Commuter Rail" group, and the Rocky Mountain Rail Authority (RMRA) which lists Weld County as a member. The communal goal of these groups is to have the high-speed commuter rail system on-line by 2014. Transit Oriented Development south of downtown is encouraged to provide transit connections to the area.

The October 2008 Draft Environmental Impact Statement (EIS) proposes that the commuter rail system originate at Union Station in Denver, and then fork with one branch terminating in Fort Collins and another branch terminating in Greeley. The original study for commuter rail was part of the 2001 Transportation Alternatives Feasibility Study (TAFS), and also proposed regional bus service on I-25 prior to implementation of the commuter rail service. The Town of Frederick would be connected to the future commuter rail via a trolley that would run every 30 minutes at peak times (60 minutes at off peak) along WCR 13/WCR 8.

One other alternative being considered by the EIS is Bus Rapid Transit (BRT) service between downtown Denver and Fort Collins. If BRT is implemented, a bus stop would be located in Frederick at the intersection of I-25 and State Highway 52. As part of the bus station, parking would be available for 210 cars, and 80 carpools/vanpools.

Preliminary estimates from the EIS state that commuter rail would be approximately 37 minutes faster than driving, and BRT would be approximately 58 minutes faster than driving.

OFF STREET PARKING FACILITIES

The Downtown Development Plan suggests an intensification of development in downtown Frederick, which will create an increased demand for off-street parking. Therefore, the Plan intends to provide off-street public parking in three surface lots located strategically throughout the downtown area. These three lots are located on 3rd Street between Oak Street and Locust Street, 6th Street between Elm Street and Oak Street, and 7th Street between Elm Street and Oak Street. There is also an opportunity to create more on-street parking in some areas. In particular the option of creating diagonal parking on Main Street, Elm Street, Oak Street, and 4th Street should be explored in a separate parking study.

It is envisioned that as the community of Frederick grows in population, 5th Street will become a shopping and entertainment destination where shoppers would park once and walk around the area to do their errands. The guidelines and standards of this Downtown Development Plan encourage pedestrian and transit oriented development that will reduce the demand of standard parking requirements. In the future, when surface parking lots no longer fulfill the downtown parking demand, the Town should consider converting surface lots to structured parking. New structured parking should be designed with retail/office space at the ground level street front.

To encourage reinvestment and revitalization of downtown Frederick, parking incentives have been included in the parking standards section. Primarily these incentives focus on reduced parking requirements for commercial development.

5.6 TRAFFIC CALMING DESIGN ELEMENTS

The potential configurations described below attempt to balance the need to effectively moderate vehicle speeds and improve the pedestrian environment. They also seek to maintain acceptable circulation not only for passenger vehicles, but also for large trucks, which may decrease in numbers as alternative routes become available but will always be important users of these corridors.

These traffic calming tools include narrowing of traffic lanes, adding median refuge islands, adding accent paving at crosswalks, and implementing pedestrian crosswalk signals. The Downtown Development Plan's Chapter 4: Public Improvements, Design Standards, and Recommendations offers guidelines for implementing these traffic calming tools.

NARROWED TRAVEL LANES

Narrowing travel lanes is an effective tool to regulate vehicle speeds. Drivers have been found to travel more slowly on streets with lane widths of 10 to 11 feet versus more typical 12 foot lane widths. The effect is largely psychological. Narrower travel lanes require more attention from drivers and are often used in downtown environments with a higher degree of potential conflicts, such as pedestrians, frequent movements to and from side streets, and vehicles making parking maneuvers.

Narrower lanes also have the benefit of reducing pedestrian crossing distances and freeing up space for other uses such as parking, bike lanes, medians, and widened sidewalks. 5th Street could benefit from a decrease in lane width.

Figure 5-7: Refuge Island

Figure 5-8: Accent Paving

REFUGE ISLANDS

Medians can be used to create pedestrian "refuge islands" (*Figure 5-7*) that reduce the number of lanes a pedestrian must cross at one time. Refuge islands are extensions of the median that create a protected crosswalk area in the middle of the street. Colorado Boulevard could benefit from the use of refuge islands.

STREET TREES

Street trees offer an aesthetic alternative to the wide-open speedway feeling of a treeless arterial. Street trees planted at the sidewalk edge, or in medians, have a traffic calming effect as they create a visually enclosed and perceptually narrower street scene. Additionally they have the added benefit of reducing the effects of urban heat islands.

ACCENT PAVING

Accent paving (*Figure 5-8*) such as unit pavers, or colored concrete, can be used on crosswalks to accentuate pedestrian crossings. The change in texture gives motorists a visual and audible heightened awareness, which in turn, can slow traffic. However, care should be taken when selecting accent paving to ensure that it will be durable and stain-resistant. Lighter colored accent pavers can develop visible stains on them. A regular pressure-steam cleaning schedule can also help maintain accent paving. See Chapter 4: Public Improvements, Design Standards, and Recommendations for additional information on accent paving and pedestrian crossings.

PEDESTRIAN CROSSWALK SIGNALS

Improvements to crosswalk signals such as audible pedestrian crosswalk signals, and manually-triggered crosswalks can increase safety at pedestrian crossings. In-street crossing lights give motorists a visual heightened awareness of pedestrians, which in turn, can slow traffic; audible pedestrian crosswalk signals can improve safety for the visually impaired; and manually-triggered crosswalks can improve pedestrian and vehicular traffic flow. See Chapter 4: Public Improvements, Design Standards, and Recommendations for additional information on pedestrian crossings.