

The Town of Bennett Downtown Planning Study

December 2010



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1. Planning Process

Brief Description of the Project

The Town of Bennett initiated the Downtown Planning Study in order to analyze and explore future possibilities for the historic center of Bennett. Several planning efforts converged to facilitate this study which includes: 1) SH79 realignment through Town, 2) downtown land use study, civic center development, and overlay district, 3) a regional trail plan, and 4) community parking facility.

Background Plans & Studies

Bennett has two major state highways that bisect the Town center and historic retail corridor of Town. In particular SH79 is a primary agriculture and commercial trucking route that currently zigzags through the Town core. The large truck and trailer circulation through Town presents several undesirable conditions including traffic congestion, limited and/or undefined pedestrian circulation routes, and an increased noise and emissions. In 2007, a Board initiated transportation study was completed which analyzed

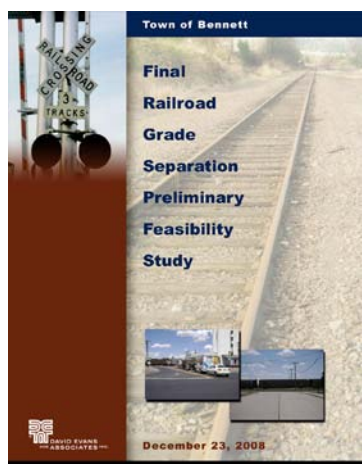


Figure 1.1
Railroad Grade Separation Study

four separate scenarios for rerouting SH79 through Town in order to relocate the large truck traffic out of the historic commercial center along E. Colfax Avenue. The preferred alternative alignment was identified through public forums conducted in 2008. This new route altered the transportation system and impacted land use and development within the Town's historic center. The impacts of these changes needed to be evaluated and better understood to capture future possibilities for the Town center. One of the objectives of the Downtown Planning Study was to analyze the impacts of these changes.

In early 2009, the Town completed a Master Plan for Parks, Trails and Open Space. One of the recommendations of the plan was a regional trail system that would

include a connection from the Antelope Hills subdivision to the historic center of Town. In 2010, the Town initiated planning for the regional trail system and was awarded grants from Arapahoe and Adams Counties Open Space programs. The timing of project funding allowed the trail planning to be included in the larger Downtown Planning Study.

Additionally in 2010, a partnership was formed with Colorado State University to implement a grant to design a civic building for housing the fire district and Town center facilities in a new location more central to the Town center. This new civic center location was within the Downtown Planning Study boundaries and strongly influences the Study area.

Finally, in 2010, the Town was awarded a grant from the Denver Regional Council of Governments to look at a community parking facility that could support commuters along the I-70 corridor traveling into the metro area. As the other planning influences converged, this parking lot quickly became a multi-modal parking facility that could address shared parking at a location within the redesigned and refocused Downtown Planning Area.

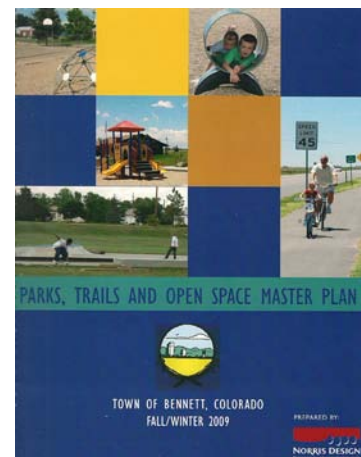


Figure 1.2 Parks , Trails & Open
Space Master Plan

Project Approach

With the foresight of Town staff and elected leadership, a coordinated planning effort was possible benefiting the following projects:

- State Highway 79 Realignment
- The Bennett Regional Trail Plan
- Commuter Parking Facility Development
- Downtown Land Use Study
- Civic Center Development

With this approach, local and adjacent community residents of the I-70 corridor would have an opportunity to comment and guide the progress of each project in one effort. This allowed the planning team to identify new opportunities including potentially shared facilities.

The Downtown Planning Study proposes a vision and framework through which the Town of Bennett can address future growth while ensuring that the voice of the community is recognized. It offers an organized look and recommendations for the Town as they embark on development and improvements to the Town infrastructure. It should serve as a visionary tool as the Town navigates future public facilities, private development, and the transportation and recreation needs of the community. Details and recommendations from each planning study are in the following sections.

Planning Timetable

Town of Bennett Downtown Planning Study - Implementation & Timeline		11 May-10	May 15 -Mid June, 2010	Late June, 2010	Early July, 2010	Late July, 2010	Early August, 2010	Mid August, 2010	Late August, 2010	Early September, 2010	Mid Sept., 2010	Late Sept., 2010	Mid Oct., 2010	Late October, 2010	November, 2010
Team Lead															
Approval to Move Forward	Stuart McArthur														
Develop Background Data/Mapping/Transportation/Infrastructure/Zoning	MK/CS/KP														
Staff/Team Coordination meetings - scheduled as needed, generally in between public meetings.	Team		Review/plan		Review/Prepare		Review/Prepare		Review/Prepare			Review/Prepare			
Town Hall Meetings - State of Planning Progress	MK/CS/KP/Staff			#1 Initial						#2 Middle		#3 Extra		#4 Final	
Develop Alternative Scenarios x3	CS							#2			#3			#4 (if needed)	
Steering Committee Meetings	Team					#1									
Revise Alternatives	CS					#1		#2			#3			#4 (if needed)	Finalize Plan
General Communication Outreach - website, newspaper, facebook, etc. (Town hall meeting will assist in determining the best approaches)	Staff/MK		Notification		Expand		Notification/Update		Update		Notification	Update		Update	Final Communication
Contact Property Owners/Stakeholder Meetings as needed - Special Districts, Individual Agencies, Businesses	MK/Staff/SM				Initiate Contact		Schedule Meetings		Meetings			Meetings			

Figure 1.3 Planning Study Timetable

Planning Team & Responsibilities

The selection of the planning team was facilitated by Stuart McArthur, Town Administrator, and included consultants with expertise in land planning, transportation engineering, community character development, and trail planning.

The planning team was lead by Project Manager and Land Planner Melissa Kendrick of Kendrick Consulting Inc. Her responsibilities included establishing a project timeline, conducting community meetings and activities, team coordination,

analysis of zoning and land use components, and contributing to the final 'Downtown Planning Study' document.

Craig Schreiber of Land Art provided conceptual design services including graphics, images, and land use plans. This collection of graphic illustrations and planning concepts were instrumental in communicating the team's ideas while documenting the evolution of this planning effort. Mr. Schreiber's concepts and ideas were used as a tool to initiate important discussion with residents and stakeholders about land use, Town character, circulation patterns, and main street elements.

Karl Packer, P.E., PTOE of TransEng, Inc. was the Transportation Engineer for this project. Karl evaluated the final alternatives alignment for SH79 presented in the "Railroad Grade Separation Preliminary Feasibility Study" to determine the one preferred alignment. Using the preferred alignment and the proposed land use concepts, Karl conducted a traffic impact evaluation to offer direction for the future roadway network improvements, projected intersection control, and required roadway cross sections.

Brea Pafford of Kora Design was responsible for the regional trail component of this project. She incorporated requirements established by the open space grants and presented proposed trail alternatives as part of the planning and design process. Brea also provided coordination and technical assistance in the preparation of this document.

Community Input (Process & Summary)

The planning process included three (3) Town meetings and four (4) steering committee meetings. In an effort to reach a broader section of the community, the second Town meeting was conducted via a booth at the annual Town Harvest Festival. Elected officials joined the planning team to answer questions and discuss the proposed plans with dozens of citizens visiting the fair. The Town calendar which is posted on the Town's website was utilized to convey important information and dates; and the newspaper reported progress throughout the process. In addition to community input, staff met with organizations including the Chamber of Commerce, Adams County Mayor and Managers, REAP, Arapahoe and Adams County Long Range Planning Departments, and the Denver Regional Council of Governments to present ideas of the downtown planning study.

Other input and data were collected via questionnaires and surveys on several topics including parking, commuting, and trail use. A windshield survey was done to try and capture those commuters utilizing a local parking lot as a parking facility.

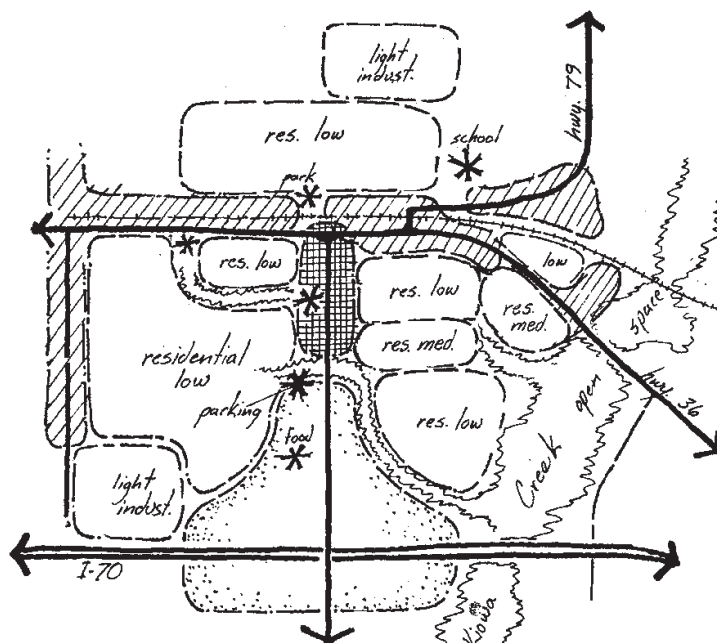


Figure 1.4 Land Use Concept Study

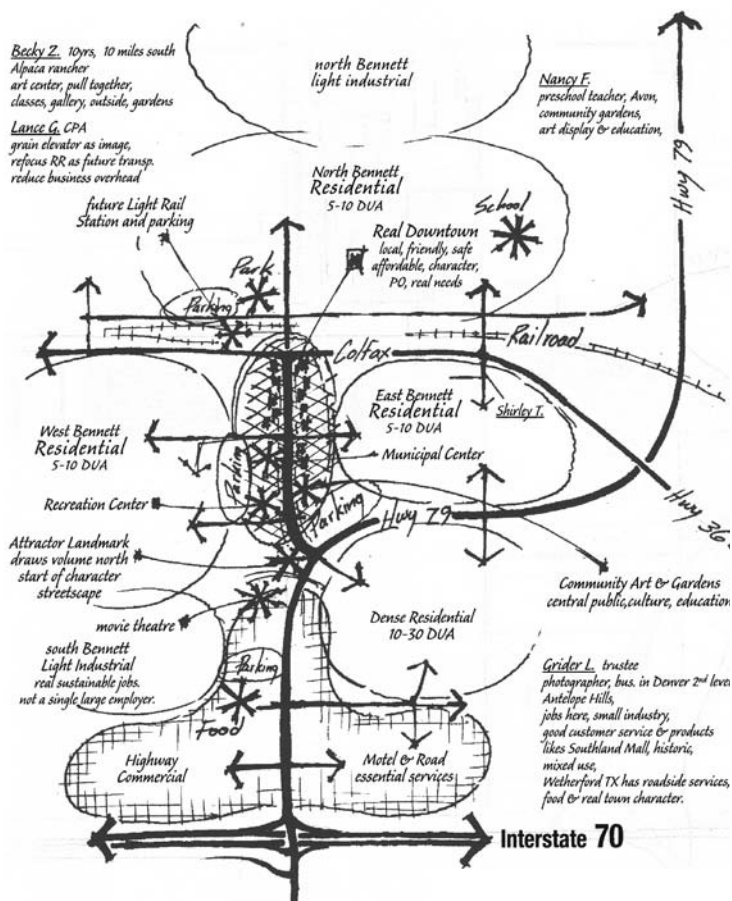


Figure 1.5 Community Preferred Downtown Bennett Concept Plan

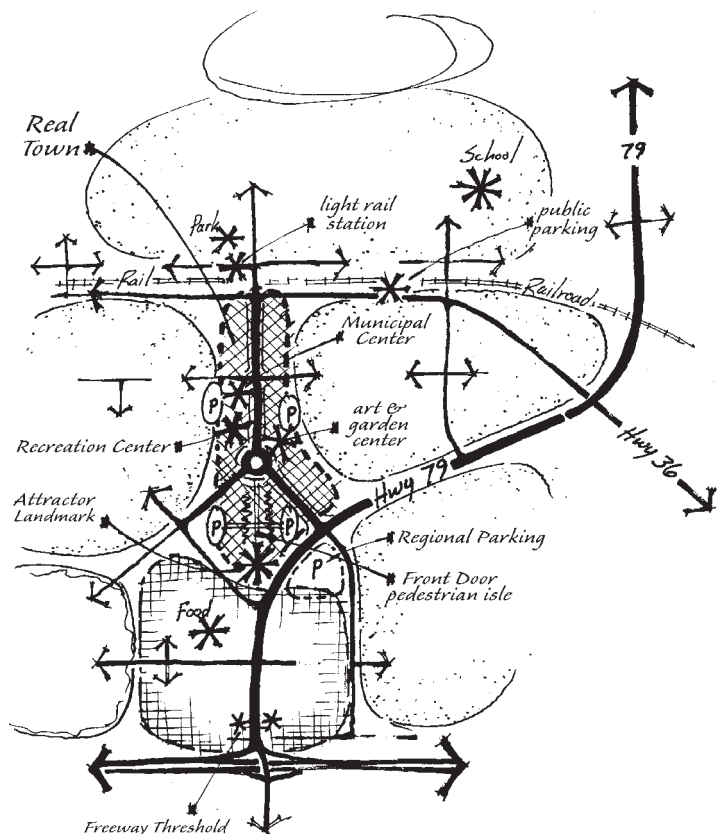


Figure 1.6 Downtown Bennett Concept Plan Alternative

Guiding Principles

The following guiding principles were developed as a collaborative effort between the planning team, elected officials, and community members. These principles were constantly referenced by the team as the planning process developed.

- Create a downtown identity as the Town will inherently grow.
- Protect and enhance the historic residential and commercial center of Town.
- Identify opportunities for a high-intensity, pedestrian-oriented, and mixed use growth through a balance of retail, business, civic, and residential opportunities.
- Provide trail connections throughout the Downtown core that increase accessibility for residents and visitors of Bennett while protecting the natural environment.
- Improve the transportation network through safety improvements that are well integrated with land use and development opportunities.
- Reduce vehicular travel by providing the infrastructure to support ride sharing opportunities.

2. Transportation Analysis

Introduction and Purpose

The purpose for the transportation analysis associated with the Bennett Downtown Planning had two goals;

- First to review the State Highway 79 “Railroad Grade Separation Preliminary Feasibility Study” alignment alternatives and determine a preferred alignment.
- Second to provide conceptual transportation infrastructure needs for future growth by using the preferred State Highway 79 alignment to project traffic volumes associated with the development of Bennett Downtown area.

Town. Trains crossing require lengthy stops for motorists who have no alternative routes. Furthermore, State Highway 79 provides Bennett and the areas north of Bennett with a vital access to I-70 and US36 (Colfax Avenue). Additionally, State Highway 79 carries over ten percent truck traffic, which generally traverses through the heart of Town. This has led the Town of Bennett to look for an alternative route for State Highway 79.

The Town of Bennett commissioned the “Railroad Grade Separation Preliminary Feasibility Study” (The Feasibility Study) which was completed by David Evans and Associates Inc. in December 2008. The Feasibility Study goal was to find conceptually feasible locations of roadway grade separated crossings of the UPRR tracks in and near Bennett. The crossing location alternatives were evaluated based on design and construction factors, environmental constraints, community impacts, mobility, and safety. The Feasibility Study concluded with providing four (4) conceptually feasible alternative locations. Further reviews of these alternatives were conducted with this study. Each alternative was taken to the public meetings and discussed with the public. The four alternatives included:

“The Western Alignment”

The Western Alignment improved 38th Avenue and crossed the tracks west of McKinley Drive and curved back to intersect with SH79 south of the Recreation Center. This alternative added a significant amount of roadway to the network and was anticipated to increase travel times. The alternative did allow for the trucks to be routed further from the center of Town. During public meetings, the Western alignment was the second most popular alternative with residents.

“West- Central Alignment”

The West-Central Alignment crossed over the Union Pacific tracks at 1st Street / Converse Road. The alignment required the improvement of a portion of 38th Avenue. This

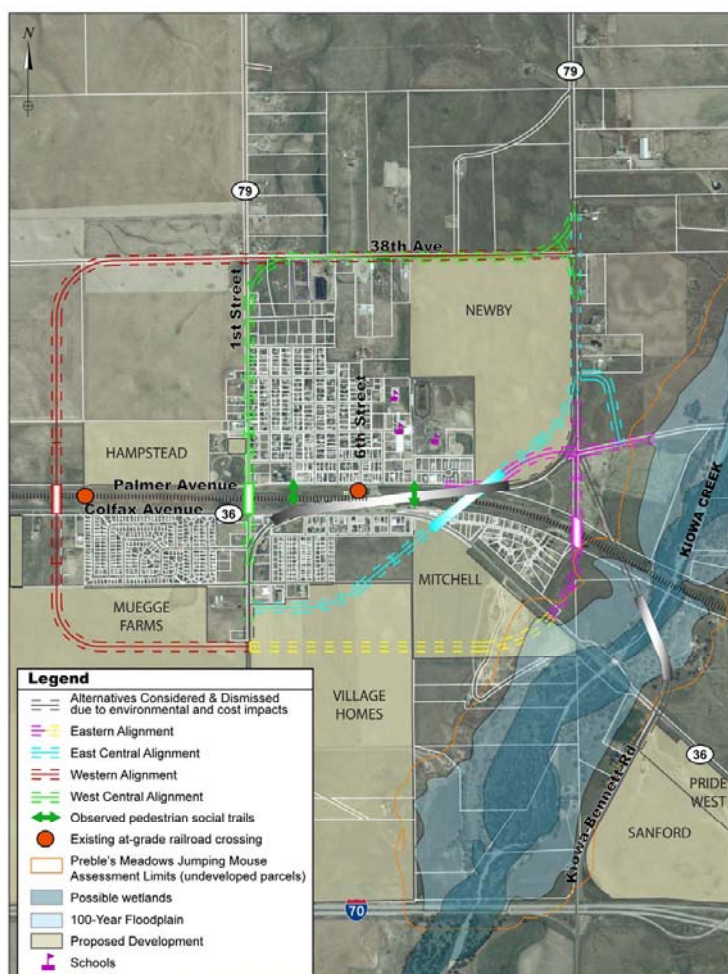


Figure 2.1 SH79 Alignment Alternatives by David Evans & Associates

SH79 Alignment

The State Highway 79 alignment winds through Bennett, leading to an at-grade crossing of the Union Pacific Railroad (UPRR). Generally, the UPRR tracks divide the

alternative provided an efficient and logical transportation connection and utilized the greatest portion of SH79 south of US36. This alignment received a significant amount of public concern and was not popular with residents due to the inherent introduction of the heavy vehicle traffic onto 1st Street directly adjacent to several blocks of residential homes, a retirement community, a church, and a park. This alternative had potentially the highest community impacts.

“The East Central Alignment”

The East Central Alignment was removed from further study due to the high costs, community impact, and the lack of a direct connection to US36. The route necessary to access US36 could have caused significant driver confusion and added significant delays. The alternative was also one of the higher cost alternatives, having a bridge span that had to cross at an acute angle to the tracks, then over US36. Although this alternative was included with the finalists, it was determined by the Feasibility Study that the East Central Alignment was likely not feasible and was not recommended for further analysis.

“Eastern Alignment”

The Eastern alignment crosses over the tracks at the Kiowa Bennett Road alignment. South of the UPRR tracks, the roadway curves to intersect US36. This alignment provided the most direct route to connect with US36. South of US36, this alternative suggested an optional road curving east-west to connect to SH79 near the Bennett Recreation Center.

After consideration of each alternative, and with three public meetings to gather input from the community, only the Eastern Alignment grade separated crossing met the minimum feasibility evaluation criteria and provided these additional benefits:

- Provide opportunity for a direct connection with US36 after crossing UPRR;
- Utilize existing right-of-way for vehicular crossing located south of Old Victory Road and north of the UPRR

tracks;

- Limit truck traffic to outside of the residential influence areas of Bennett;
- Maintain relatively high speeds with the preferred alignment between Old Victory Road and US36;
- Create opportunities for development corridors with this alignment;
- Continue SH79 as a through-road for safety and efficiency.

Eastern Alignment Modification to Optional Connection

Further considerations of the Eastern Alignment include discussions of SH79 continuing south of US36. The segment of the Eastern Alignment south of US36 was projected in the Feasibility Study to be an optional connector roadway, not an extension of the State Highway.

In discussions with the engineers for the Feasibility Study, the primary purpose of this optional roadway connector alignment was to respect boundaries of preliminary land planning that had occurred south of the optional connection roadway. However, development of this planning area is no longer valid. So this constraint is eliminated because the plan has expired.

A number of variations of the southern connection were examined during the Downtown Planning Study including a sweeping radius following the western edge of Kiowa Creek floodplain, and an alignment south to curve into a “Tee” intersection with SH79 at Market Avenue. These variations were determined to be infeasible due to their significant impacts to existing homes and structures or infringements within the floodplain.

A logical extension of SH79 can be envisioned using a modified alignment of this optional connecting roadway segment and using one thousand foot radius curves into the existing SH79. The conceptual alignment of this

roadway would allow for a posted speed of 40 MPH. The Revised Optional Eastern Alignment is depicted on Figure 2.2.

Existing Roadways and Major Transportation Network Components

The Bennett area major roadway transportation network generally consists of two east-west roadways and one north-south roadway. The Union Pacific Railroad Company (UPRR) freight train tracks run east-west through Town and provide a limited number of at grade crossings.

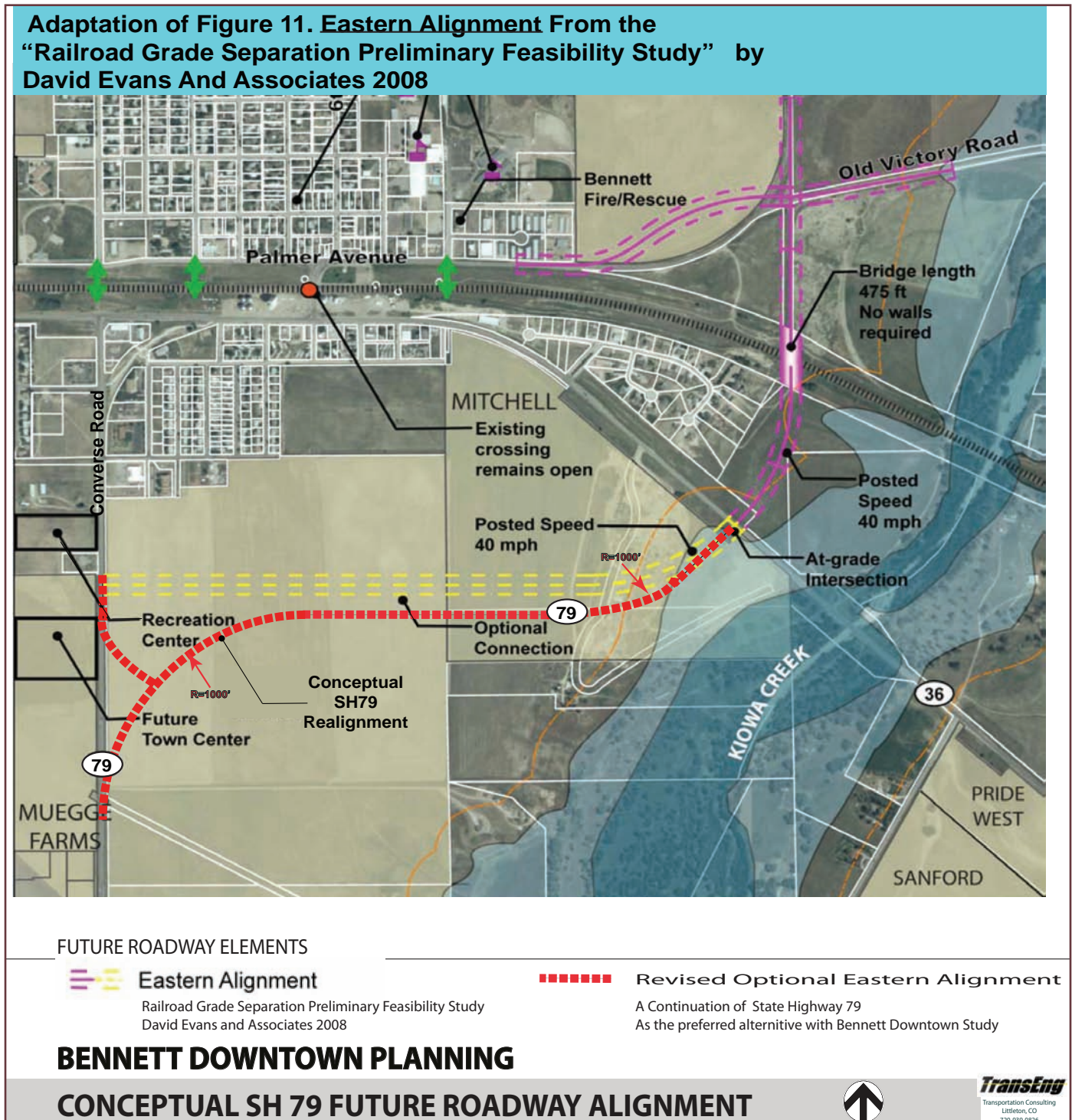


Figure 2.2 SH79 Proposed Alignment

US36 (Colfax Avenue)

US36 is an east-west state highway generally one and a quarter miles north of I-70 through the center of Bennett. US36 has over 200 miles of continuity connecting from the Kansas state line to Rocky Mountain National Park, but regionally, US36 provides a connection between the nearby communities of Byers, Strasburg, and Watkins. In the area of Bennett, US36 generally runs parallel to, and just south of, the Union Pacific Railroad Company (UPRR) freight train tracks. US36 is posted 55 MPH just east and west of Bennett and 35 MPH through Town. US36 in this area is categorized by Colorado Department of Transportation as a “NR-B” (non-rural arterial) State Highway. Colfax currently carries an average daily traffic (ADT) of about 5,740 vehicles per day between Adams Street and Converse Road.

UPRR Freight Train crossings

Access from across the tracks occurs in two (2) locations within the Town of Bennett. An at-grade crossing occurs at Palmer Street (West of McKinley Drive) and another at-grade crossing occurs on Adams Street (State Highway 79). Both locations include crossing gates and lights.

Interstate 70

I-70 is a four (4) lane east-west interstate highway which locally connects the greater metropolitan Denver area with Bennett and the eastern plains communities. A full interchange exists with stop sign controlled intersections at SH79 (Converse Road). The existing interchange bridge over I-70 consists of one travel lane in each direction (approximately a 26 foot deck). All ramp interchanges consist of a single lane approach. Interstate 70 is posted 75 MPH near the Converse Road Interchange

State Highway 79

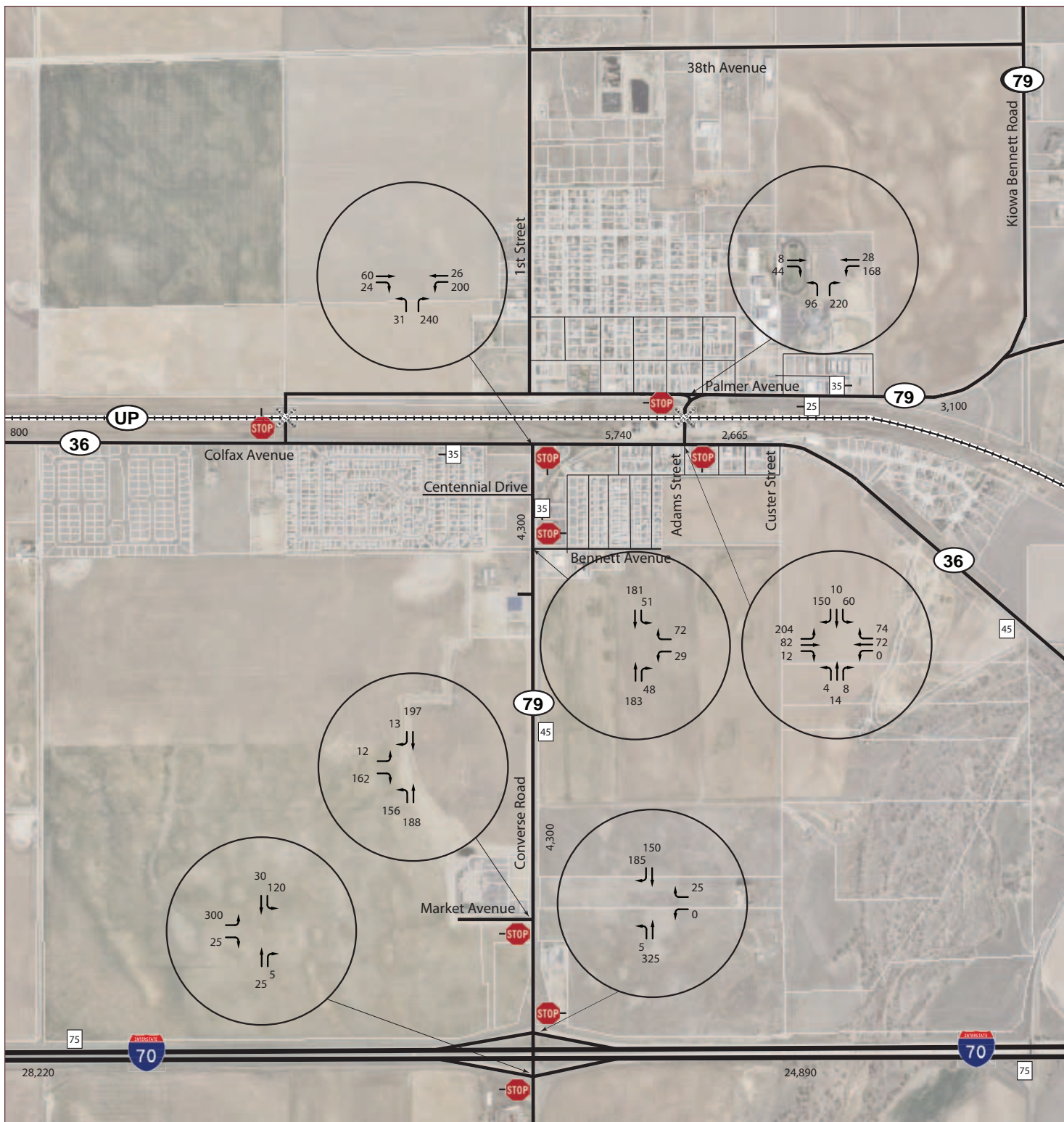
SH79 is a north-south state highway that generally bisects Bennett. SH79 connects from I-70 north along Converse Road to US36, then overlaps a section of the east-west US36 corridor, then travels north-south along Adams

Street and has free movement to curve to Palmer Avenue and curve to continue north-south along Kiowa-Bennett road to Keensburg and State Highway 52. Within the Bennett area, SH79 consists of two (2) travel lanes with additional turn lanes available at most intersections. Roadway speeds vary from 45 MPH near the edge of Town along the Kiowa Bennett Road, to 25 MPH along the Palmer Ave. and Adams St. sections, and 45-55 MPH along the Converse Road portion. State Highway 79 currently carries an average daily traffic (ADT) of about 4,300 vehicles per day between Bennett Avenue and Colfax Avenue.

Previous Traffic Studies

Existing Regional and Area Traffic Studies were reviewed and assisted in the preparation of traffic analysis for the Bennett Downtown Study area. These reports include:

- The Railroad Grade Separation Preliminary Feasibility Study Bennett, CO, December 2008 (*David Evans And Associates, Inc.*)
- Arapahoe County 2035 Transportation Plan, September 2010 Draft, (*David Evans And Associates, Inc.*)
- Hampstead Collection Residential Development Traffic Impact Analysis, March 2006, Update February 2007, (*Carter Burgess*)
- Loves Travel Shop Traffic Analysis Report, September 2009, (*LSC Transportation Consultants Inc.*)
- SH-79 King Soopers – Bennett Colorado Revised Traffic Impact Study, August 2002, (*Kimley-Horn and Associates Inc.*)
- The Village at Kiowa Creek, Traffic Impact Analysis and Addendum, May 2006, (*Felsburg Holt & Ullevig*)
- Design Guidelines Highway 79 Corridor, Town of Bennett Colorado, June 2001, (*Coover-Clark & Associates, John M. Mullins & Associates, Inc.*)
- Bennett High School Expansion, September 2005, (*LSC Transportation Consultants Inc.*)
- Bennett Library Expansion, October 2008, (*LSC Transportation Consultants Inc.*)



EXISTING ROADWAY NETWORK ELEMENTS LEGEND

≡ TRAFFIC VOLUME
 ## ≡ PM PEAK HOUR
 *When necessary, Traffic Volumes have been increased to balance with higher counts at upstream intersections

Average Daily Traffic

- STOP SIGN CONTROLLED INTERSECTION
- AT GRADE RAIL CROSSING
- POSTED SPEED LIMIT

BENNETT DOWNTOWN PLANNING

EXISTING ROADWAYS AND PEAK HOUR TRAFFIC (2010)



Figure 2.3 Traffic Volumes

Existing Traffic Volumes

New peak hour traffic counts were taken at Palmer/SH79 and Adams/US 36. Recent Average Daily Traffic (ADT) volume data was obtained from Colorado Department of Transportation; and both ADT and peak hour traffic counts were obtained from recent Bennett area traffic studies. It is noted that area peak hour traffic volumes from 2008, 2009, and 2010 are generally lower than volumes from 2006 and 2007. This is likely an effect of economic conditions. To remain conservative for planning purposes, the higher turning volume traffic counts have been utilized when available.

Existing Peak Hour traffic volumes were generally observed on SH79 and US36 to be higher in the PM period than the AM period. Recent Peak Hour Traffic Volume counts and area traffic impact studies confirm that Bennett's PM peak hour traffic volumes are generally higher than AM traffic volumes. The use of PM peak hour was therefore used as the design hour traffic volume in analysis and to determine future improvement needs. Recent PM peak hour and ADT traffic volume is depicted on Figure 2.3.

Existing PM Peak Hour Levels of Service

Existing PM Peak Hour traffic volumes at study intersections were analyzed using Levels of Service (LOS) methodology defined by the Highway Capacity Manual, Transportation Research Board, and as incorporated in the Synchro traffic modeling software. The "Level of Service" is a description of an average vehicle delay under the operational conditions of volume to capacity of a roadway or intersection approach. Levels of Service generally expressed as a letter grade A through F. By definition, LOS "A" means short delays of less than 10 seconds, and LOS "E" depicts delays of 35 to 50 seconds, showing that specific approach is at capacity. LOS "F" indicates over capacity operation where delays exceed 50 seconds (at two-way stop controlled

intersections) and back ups are expected to occur.

Results of existing PM peak hour traffic LOS analysis at the intersections depicted in Figure 2.3 indicate all level of service approaches at 'B' or better with the exception of the eastbound I-70 off ramp to SH79, which operates at Level of Service 'C' (18.7 seconds).

Future Conditions without Bennett Downtown Development

Rerouted Trips

The SH79 grade separated crossing improvements will re-route some of the existing traffic away from the Historic Palmer Avenue – Adams Street corridor. Utilizing existing traffic volumes from the intersections of Palmer Avenue/SH79, Adams Street/US36, and Adams Street/Converse Road it is estimated that about eighty percent of the existing through traffic (from SH79 south of US36 to SH79 north of US36) would likely prefer and be rerouted to this future SH79 grade separated crossing and continued connection. Similarly 80% of traffic observed turning east onto US36 from Adams/SH36 is estimated to be more likely to be rerouted to this more direct SH79 grade separated crossing and intersection with US36.

Background growth

Traffic volumes from sources outside Bennett, or background traffic volumes, are anticipated to continue to grow and add traffic to the roadway network regardless of any development activity within the Town of Bennett. According to Colorado Department of Transportation, State Highway 79 traffic volume is expected to grow at a rate of 2% per year, or 150% over the next twenty years (a 20-year growth factor of 1.5). US36 is projected to have similar growth with a 20-year growth factor of 1.48. Background traffic volumes for through movements SH79 and US36 were increased respectively to reflect future background growth.

Traffic from Downtown Planning Study Area

Study Land Use Areas

Using the land planning concepts developed within this Downtown Planning Study; the land use areas contained within the proposed Land Use Concept Plan (Figure 5.4) were estimated to be developed by 2030. For the purposes of this traffic analysis, the land use areas depicted were utilized as individual traffic analysis zones creating their own traffic characteristics, traffic routing, and access. The specific size or quantity of what developed within a zone was estimated based on professional judgment of a likely footprint or number of units for that particular area. The traffic analysis zones do not reflect the land uses "maximum allowable floor area ratio" (FAR) of 1.0, but a likely resulting ratio. These traffic analysis zone characteristics were entered into the "Traffix" traffic modeling software program, to build a regional traffic model for the Town of Bennett.

Trip Generation

Development site generated traffic estimates were determined using average statistical trip generation rates for similar uses as published in the Trip Generation, 8th Edition, 2008 by the Institute of Transportation Engineers (ITE). For purpose of this analysis, it was assumed that the development in areas/zones A,B, C, D, E, F, and G (Freeway and historic downtown commercial) would consist of the ITE Trip Generation categorical uses of "Shopping Center", "Free Standing Retail"

Zone	ITE CODE	ITE Category	Qty	Unit	Trip Generation Rates (1)					Vehicle - Trips Generated				
					Average Weekday	AM Peak Hour		PM Peak Hour		Average Weekday	AM Peak Hour		PM Peak Hour	
						In	Out	In	Out		In	Out	In	Out
A (west)	814	Specialty Retail	100	KSF	44.32	3.28	3.56	1.19	1.52	4,432	328	356	119	152
A (west)	715	Single Tenant Offi	100	KSF	11.57	1.60	0.20	0.26	1.47	1,157	160	20	26	147
A (east)	810	Specialty Retail	100	KSF	44.32	3.28	3.56	1.19	1.52	4,432	328	356	119	152
A (east)	715	Single Tenant Offi	100	KSF	11.57	1.60	0.20	0.26	1.47	1,157	160	20	26	147
B	814	Business Park	10	AC	149.79	16.03	2.83	3.37	13.47	1,498	160	28	34	135
C (west)	820	Shopping Center	150	KSF	42.94	0.61	0.39	1.83	1.90	6,441	92	59	275	285
C (east)	820	Shopping Center	150	KSF	42.94	0.61	0.39	1.83	1.90	6,441	92	59	275	285
D	820	Shopping Center	100	KSF	42.94	0.61	0.39	1.83	1.90	4,294	61	39	183	190
D	815	Free Standing Dis	105	KSF	57.24	0.72	0.34	2.50	2.50	6,010	76	36	263	263
E	820	Shopping Center	150	KSF	42.94	0.61	0.39	1.83	1.90	6,441	92	59	275	285
F1 (se)	814	Specialty Retail	50	KSF	44.32	3.28	3.56	1.19	1.52	2,216	164	178	60	76
F2 (sw)	814	Specialty Retail	50	KSF	44.32	3.28	3.56	1.19	1.52	2,216	164	178	60	76
F3 (ne)	814	Specialty Retail	50	KSF	44.32	3.28	3.56	1.19	1.52	2,216	164	178	60	76
F4 (nw)	814	Specialty Retail	50	KSF	44.32	3.28	3.56	1.19	1.52	2,216	164	178	60	76
G	814	Specialty Retail	50	KSF	44.32	3.28	3.56	1.19	1.52	2,216	164	178	60	76
H	110	Light Industrial	106	AC	51.80	6.23	1.28	1.60	5.66	5,491	661	135	169	600
I	-	existing	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	-
J	110	Light Industrial	100	AC	51.80	6.23	1.28	1.60	5.66	5,180	623	128	160	566
K	210	Single-Family Deta	500	DU	9.57	0.19	0.56	0.64	0.37	4,785	94	281	318	187
L	770	Business Park	85	AC	149.79	16.03	2.83	3.37	13.47	12,732	1,363	240	286	1,145
M	210	Single-Family Deta	300	DU	9.57	0.19	0.56	0.64	0.37	2,871	56	169	191	112
N	210	Single-Family Deta	400	DU	9.57	0.19	0.56	0.64	0.37	3,828	75	225	255	149
O	210	Single-Family Deta	320	DU	9.57	0.19	0.56	0.64	0.37	3,062	60	180	204	120
P	210	Single-Family Deta	180	DU	9.57	0.19	0.56	0.64	0.37	1,723	34	101	115	67
Q	-	existing	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	-
R	210	Single-Family Deta	100	DU	9.57	0.19	0.56	0.64	0.37	957	19	56	64	37
S	-	existing	-	-	-	-	-	-	-	-	-	-	-	-
		Total								94,012	5,353	3,435	3,652	5,405

Notes: Source: 1) "Trip Generation", Institute of Transportation Engineers, 8th Ed
 AC= Acre (43,560sf)
 KSF = Thousand Square Feet
 DU = Dwelling Units

Table 2.1 Trip Generation Table

and “Specialty Retail” uses. Zone ‘A’ also included “Single Tenant Office” category uses. Development in zones M, N, O, P, (Medium and Low Density Residential) was assumed to develop with the ITE categorical uses of “Single-Family Detached Residential” homes. Development of additional areas in zone L would consist of the ITE categorical use “Business Park”, while development of zones H and R were considered to be out of the twenty-year development to add to the SH79 traffic network.

Trip Distribution

Trip Distribution was based on existing and historic traffic patterns as well as the proposed developments proximity to specific roadways and transportation corridors. In general, trips were distributed with the following percentages and orientations:

- 10 percent on State Highway 79 (Kiowa Bennett Road) north of Bennett
- 5 percent on Old Victory Road east of Bennett
- 8 percent on SH36 (Colfax) east of Bennett
- 10 percent on SH36 (Colfax) west of Bennett
- 2 percent on Brick Center Road southwest of Bennett
- 10 percent on Converse Road south of Bennett
- 40 percent on Interstate 70 west of Bennett
- 15 percent on Interstate 70 east of Bennett
- 15 percent on Interstate 70 east of Bennett

Future Traffic Conditions with Development And Future Roadway Infrastructure Needs

Addition of the background traffic to the assigned development traffic results in the total traffic on the roadway network. The total expected traffic for example intersections is depicted In Figure 2.5.

Traffic analysis was performed on the projected 2035 PM Peak Hour traffic volumes in order to provide conceptual infrastructure improvements to the roadway network. The analysis was accomplished using ‘Synchro’ traffic analysis software.

Roadway and Intersection Improvements for Acceptable Levels of Service in 2035

I-70 Ramps Eastbound / State Highway 79 will require signalization to operate with acceptable levels of service. The I-70 overpass will need to be improved to a six-lane section which would include dual southbound left turns (eastbound on ramp), two (2) northbound and two (2) southbound travel lanes. Additionally, dual eastbound left turns (eastbound off ramp) appear to be needed.

I-70 Ramps Westbound / State Highway 79 will require signalization to operate with acceptable levels of service. Although the intersection can operate acceptably with a single northbound left turn (to westbound I-70 on ramp), a dual southbound right turn (to westbound I-70 on ramp) is

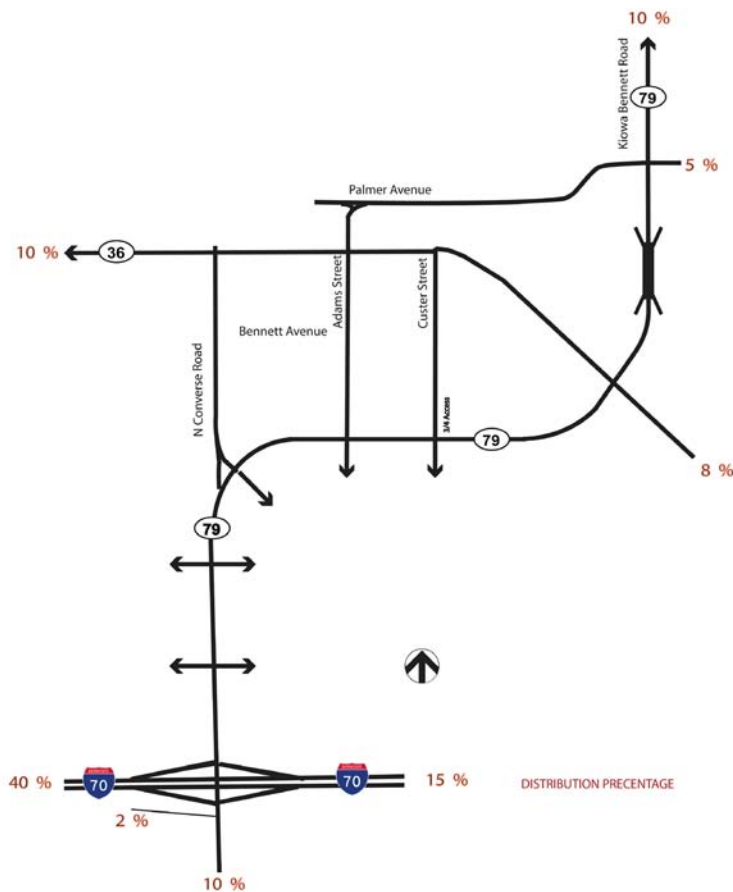
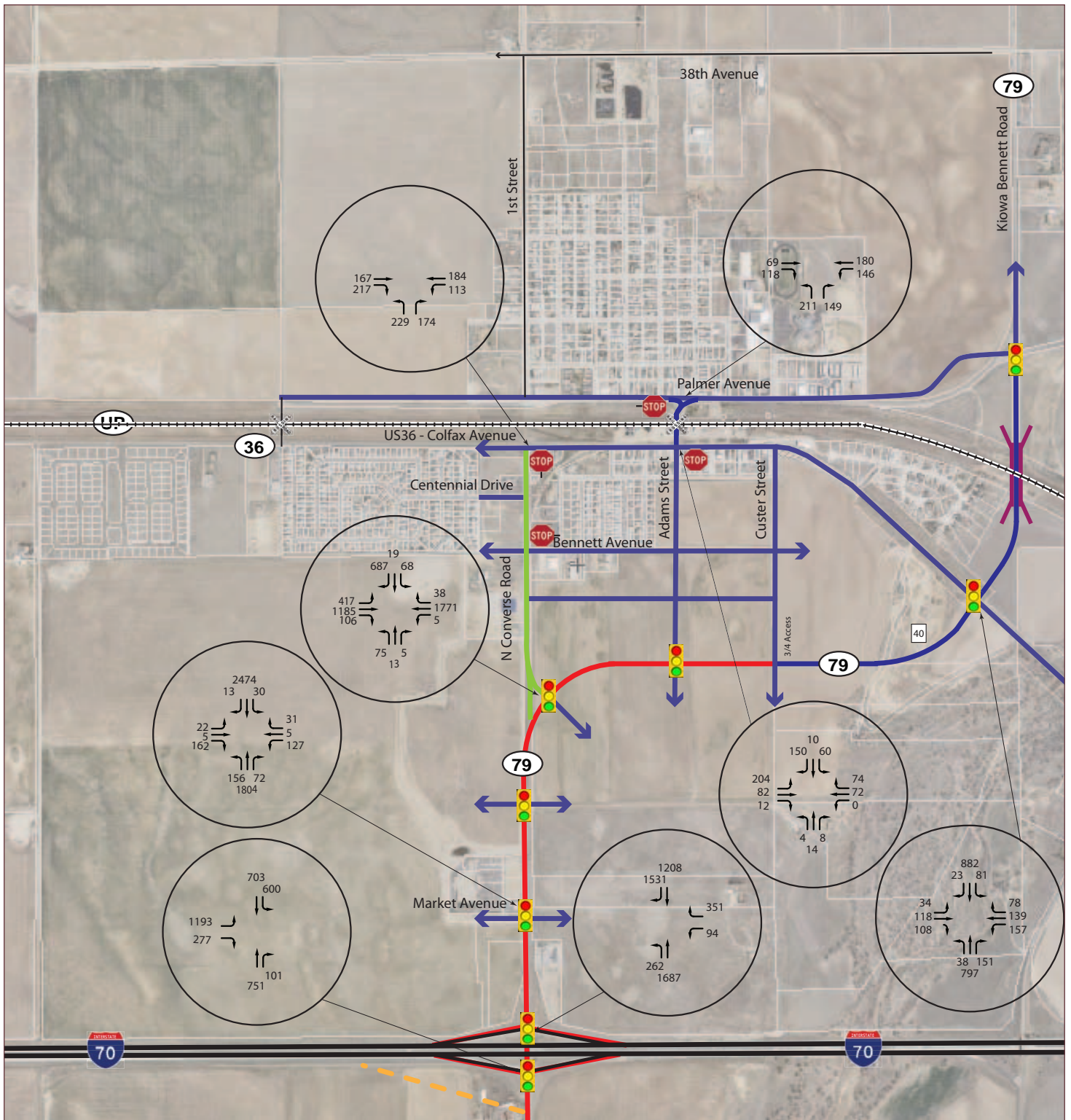


Figure 2.4 Trip Distribution Plan



FUTURE ROADWAY NETWORK ELEMENTS

- Arterial (Four Lane)
High Volume
Moderate to High Travel Speed
- Commercial Collector
Two Lanes with Turn lanes
at Intersections
Moderate to low speeds
- "Main-Street" Commercial
Two to Four Lane Walkable Collector
With Aux Turn Lanes
Low Speeds - Ped Friendly
- - - Future Roadway Needs

- POTENTIAL TRAFFIC SIGNAL
- STOP SIGN CONTROLLED INTERSECTION
- AT GRADE RAIL CROSSING
- SPEED LIMIT



**BENNETT DOWNTOWN PLANNING
FUTURE ROADWAY NETWORK (2035)**



Figure 2.5 Future Roadway Network (2035)

needed. This additional ramp lane should be continuous back to Market Avenue.

State Highway 79 / Market Avenue will require signalization to operate with acceptable levels of service. This is the most congested through-volume segment of SH79, and would benefit from three southbound travel lanes and two northbound travel lanes.

State Highway 79/ Converse Road will require signalization for acceptable operations. The roadway should be planned for a dual eastbound left turn ultimately (State Highway 79 to N Converse Road), and an added free traffic lane for the southbound Converse road transition to State Highway 79.

State Highway 79/ Adams Street may warrant future signalization based on SH79 (major road) left turn volumes onto Adams Street. If not signalized in the long range future, left turns onto or across SH79 will experience long delays during peak hours. SH79 should be two (2) through-lanes in each direction at this intersection.

State Highway 79/ Custer Street intersection is not projected to have sufficient traffic volume to warrant a traffic signal in the 25-year future. It is likely that this intersection will be restricted to three-quarter movement (no left out).

Converse Road / US36 is projected to operate with acceptable levels of service under 2035 traffic volumes with existing lane geometry and stop control.

US36/ Adams Street is unlikely to warrant a traffic signal under future 2035 traffic conditions, but would likely have improved operations if the stop sign were placed on Colfax instead of Adams.

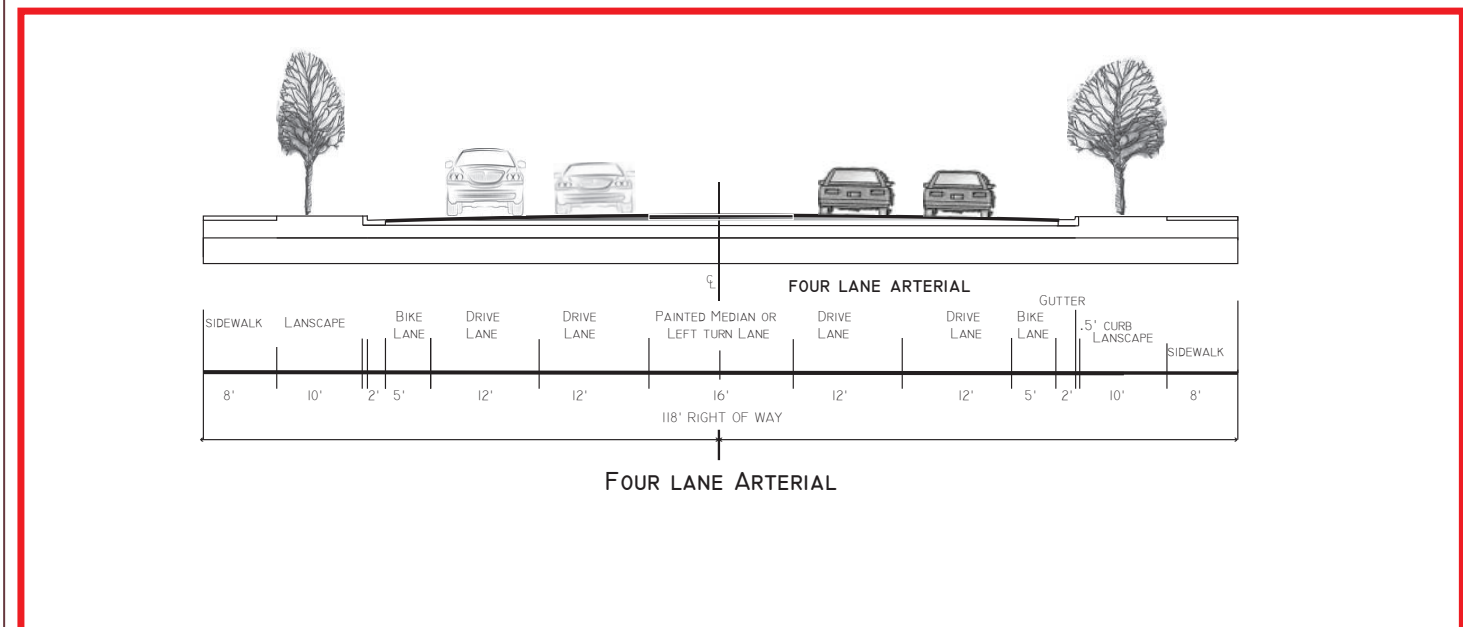
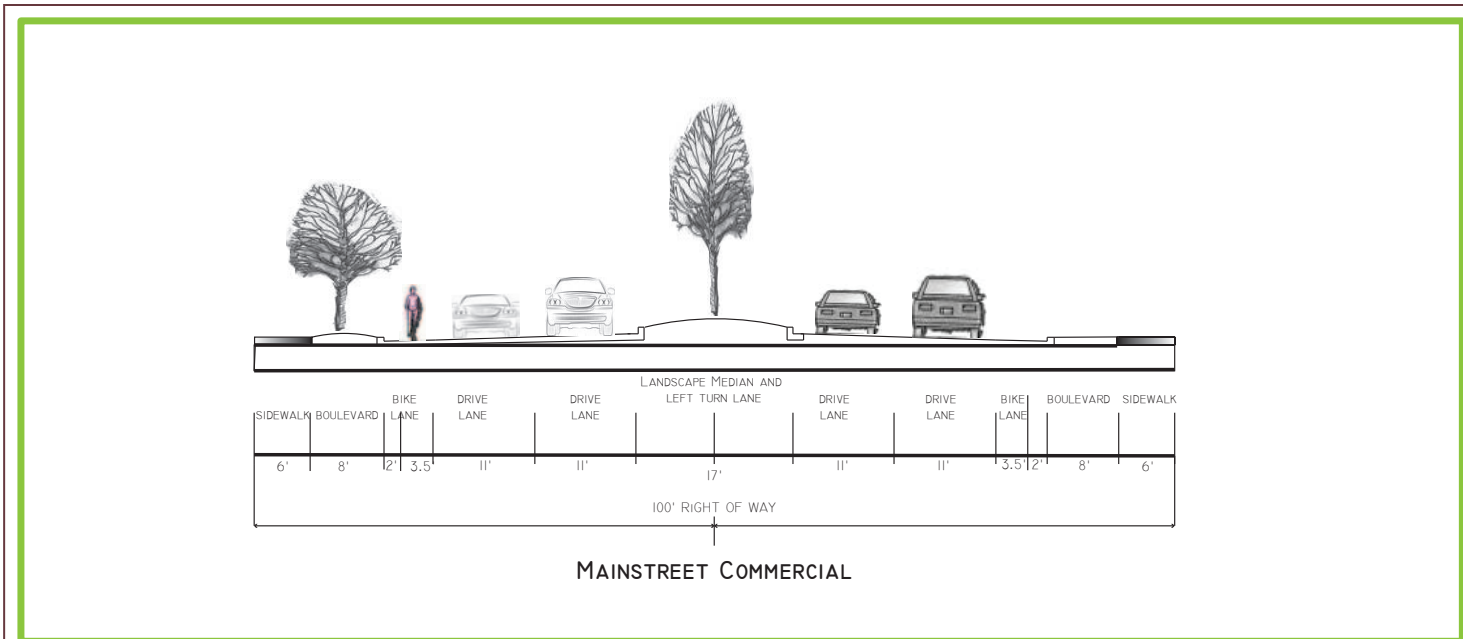
US36/SH79 is projected to operate with a traffic signal under future 2035 traffic conditions. Traffic analysis indicates the intersection will operate acceptably with one (1) lane in each direction on State Highway 79.

SH79/Palmer Avenue/Old Victory Road is questionable whether the intersection would have sufficient traffic volume to warrant a traffic signal in the 25-year future. However, this intersection is close enough to the school and pedestrian crossings that other signal warrants may occur and should likely be planned for. A single through-lane in each direction, with separate left and right turn lanes, is projected to provide acceptable traffic operations.

Roadway cross sections have been developed for the Bennett Downtown Study Plan and are depicted in Figure 2.6.

Conclusion

Based on the traffic analysis and estimated development as described in this study, the Bennett downtown area can maintain acceptable traffic operations with the improvements recommended herein through year 2035. Nearing year 2035, unless alternate regional access is developed to I-70, the State Highway 79 corridor will begin to experience significant congestion at I-70.



TYPICAL CROSS SECTIONS

Arterial (Four Lane)
High Volume
Moderate to High Travel Speed

"Main-Street" Commercial
Two to Four Lane Walkable Collector
With Aux Turn Lanes
Low Speeds - Ped Friendly

BENNETT DOWNTOWN PLANNING
FUTURE ROADWAY SECTIONS



Figure 2.6 Proposed Roadway Cross Sections

3. Regional Trail Network

The following section introduces the central concepts contained in the 'Bennett Regional Trail Plan' document.

Background

The Bennett Regional Trail Plan has been in the minds and hearts of community residents for many years. With an effort to begin implementing recommendations from the 2009 'Parks, Trails & Open Space Master Plan', the Town applied for and was awarded two (2) grants through the Arapahoe and Adams County's Open Space Grant Programs. Funding from these grants was used to develop the 'Bennett Regional Trail Plan'.

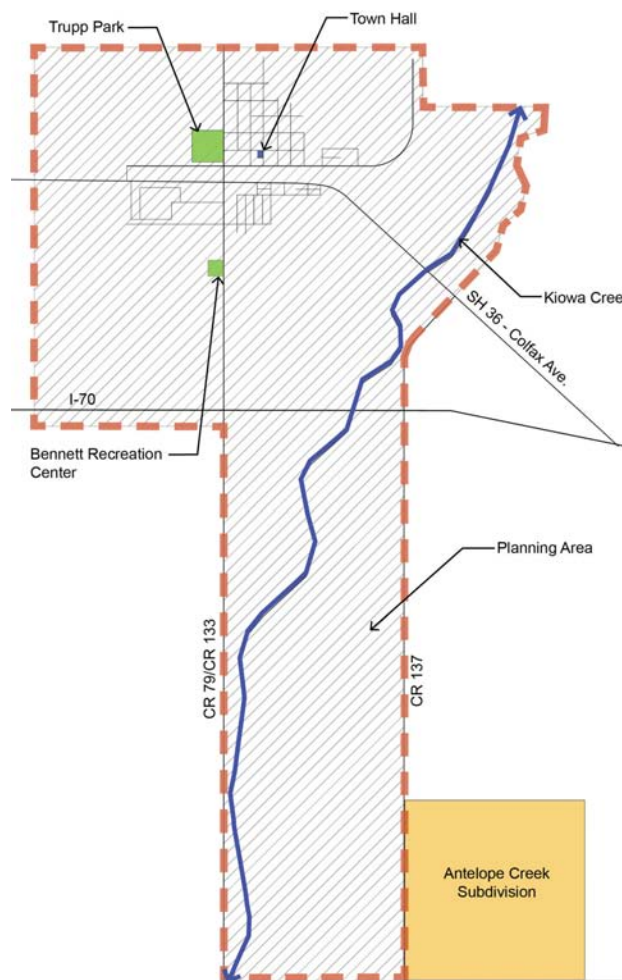


Figure 3.1 Trail Planning Area

Guiding Principals

The guiding principals behind developing a Regional Trail Plan include:

- Identify a trail network system that incorporates off road greenway trails, bike routes, and on-street bike lanes.

- Provide for transportation alternatives, recreation, and open space networks.
- Create a network that traverses the Town and serves as a starting point for a wider regional trail network.
- Connect important origins and destinations including neighborhoods, shopping centers, schools, parks & natural areas, transit stops, etc.
- Identify key open space corridors and essential trail easements.

Community Input

The community was deeply involved in the regional trails planning process. Stakeholders, community members, and area residents were asked to provide input at different stages on topics including trail head amenities, locations and types of trail facilities, trail routing, and design. The methods to acquire feedback included various presentations, poster board displays, and a trail questionnaire. The results from the 11 completed questionnaires follow.

When asked where future trails should be located; the following comments were given:

- between Bennett & Strasburg;
- through and encircling the Town including the Antelope Hills Subdivision;
- along Kiowa Creek, I-70, woodland and wildlife areas; and
- from Antelope Hills to King Soopers/Bennett Marketplace.

When asked how new trails would be used:

- 55% recreation;
- 28% both travel and recreation; and
- 17% did not respond

When asked 'do you have children who rely on the existing trail/pathways to get around Town?':

- 55% no; and
- 45% yes

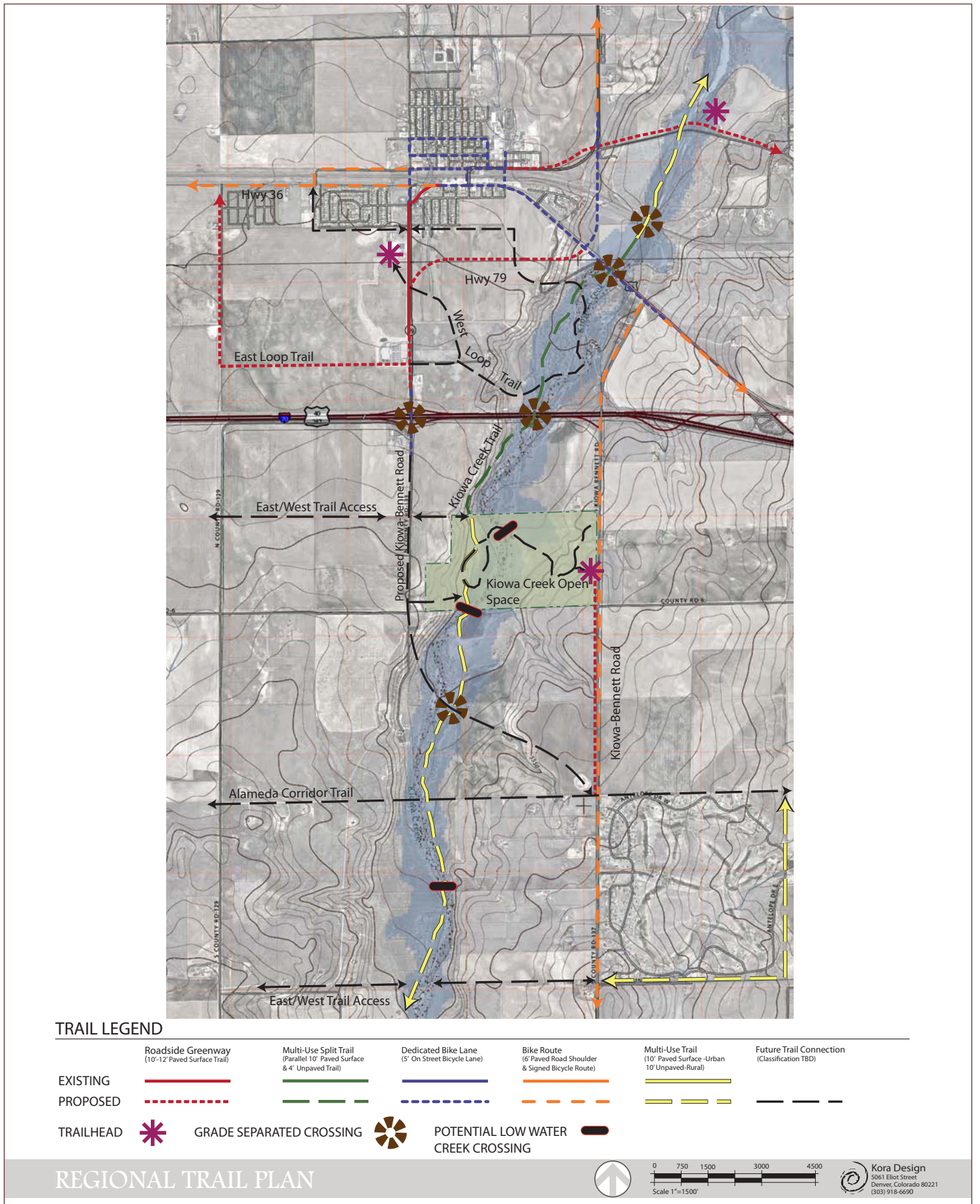


Figure 3.2 Bennett Regional Trail Plan

Regional Trail Plan

The Bennett Regional Trail Plan performs a very important function in achieving the community's vision for a multi-modal transportation network (see Figure 3.2). It connects residential neighborhoods to schools, business, and recreation opportunities through a system of parks, recreation facilities, open space and trails. Connection between existing and planned development is another function of the interconnected trail system.

It is anticipated that the trail network will be used by people of all ages and abilities including area residents and regional visitors. Whether utilizing the trails for recreation or to commute to and from destinations; the trails should accommodate a diverse user group including: runners/walkers, bicyclist, pet owners, in-line skaters, persons with disabilities, equestrians, wildlife viewers, and nature enthusiasts.

Proposed Trail Network

The Town of Bennett currently has one existing paved surface trail west of SH79 between Palmer Ave. and the King Soopers/Bennett Marketplace parking lot. This trail segment is frequently used (despite the lack of shade and shelter along the trail) and it served as a building block in the development of the Regional Trail Network. The proposed network consists of nine (9) trail routes and three (3) trailheads that were identified as preferred routes based on input from area residents, Town staff, and Downtown Planning Study team members. The proposed trail network is shown in Figure 3.3.

Trail Routes

1. Neighborhood-School Bike Route
2. East Town Loop Trail
3. West Town Loop Trail
4. Bennett-Strasburg Trail
5. Kiowa Creek Trail
6. Kiowa-Bennett Bike Route
7. Watkins-Strasburg Bike Route
8. Kiowa-Bennett Road/ SH79 Trail
9. Alameda Trail

Trailheads

- A. Downtown Trailhead/Parking Facility
- B. Arapahoe County Trailhead
- C. Adams County Trailhead

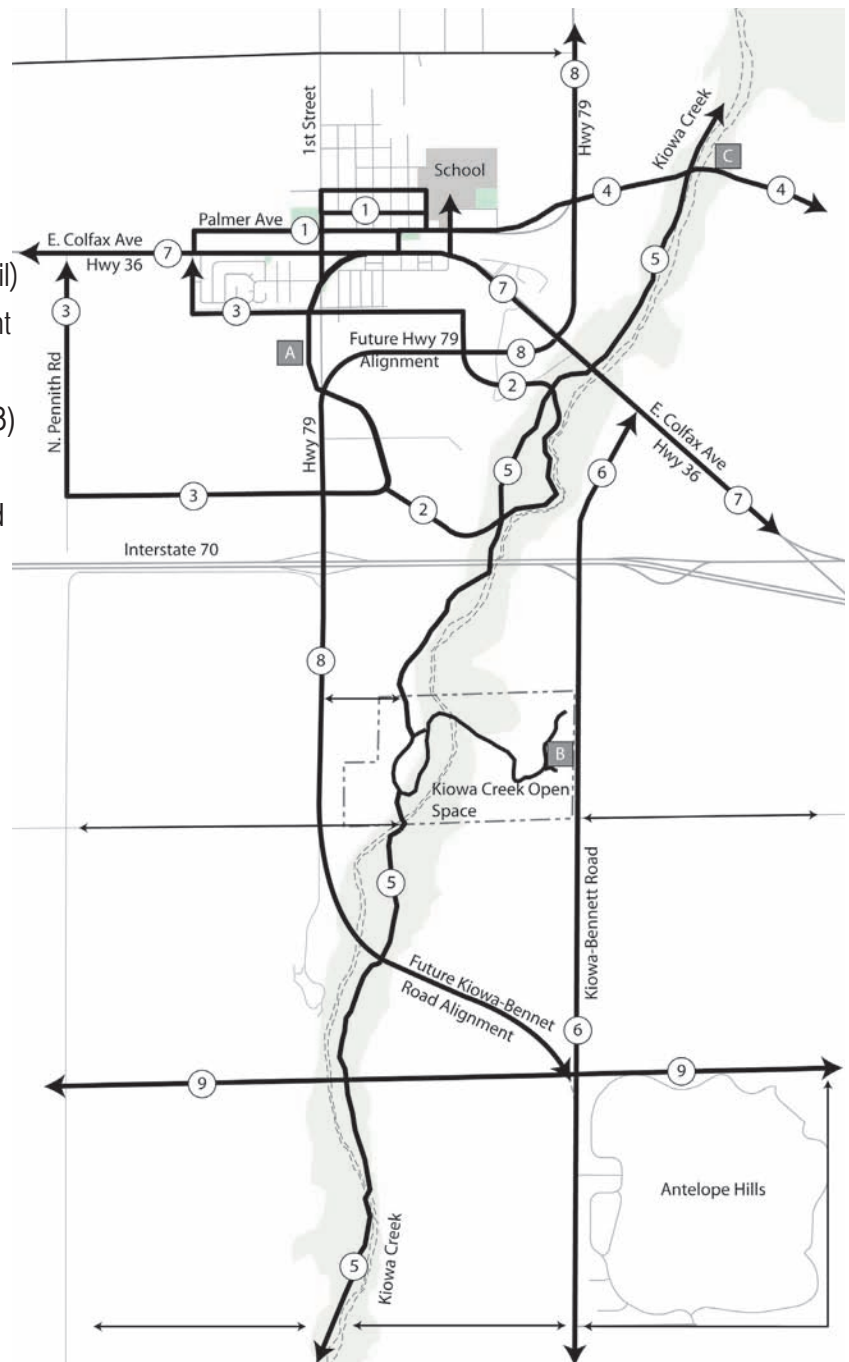


Figure 3.3 Proposed Regional Trail Network

Trail Route Descriptions

The following trail descriptions provide details concerning trail routes and connections. Refer to the 'Bennett Regional Trail Plan' for additional information including identified opportunities and constraints.

1. Neighborhood School Bike Route

This on street bike route provides a direct connection for the neighborhoods and the existing trail located south of the tracks to the residential neighborhood, current Town facilities, Trupp Park, and the school campus north of the railroad line. This route will also include a designated location for users to cross the UP railroad tracks via a concrete walk adjacent to the paved roadway (see Figure 3.4).

Potential Trail Connections

- Bennett-Strasburg Trail (4)
- Watkins-Strasburg Bike Route (7)
- East Town Loop Trail (2)
- West Town Loop Trail (3)

2. East Town Loop Trail

This trail route will include a multi-use trail that is located within future open space and greenbelts. This will be a key trail link to connect the Downtown Trailhead/Parking Facility with Arapahoe County's Kiowa Creek North Open Space (see Figure 3.5).

Potential Trail Connections

- Neighborhood-School Bike Route (1)
- Watkins-Strasburg Bike Route (7)
- West Town Loop Trail (3)
- Kiowa Creek Trail (5)
- Kiowa-Bennett Road/ SH79 Trail (8)



Figure 3.4 Neighborhood-School Bike Route



Figure 3.5 East Town Loop Trail

3. West Town Loop Trail

This roadside greenway trail will provide access to future development between I-70, US Highway 36, and State Highway 79. This trail will be accessible from the proposed civic center and downtown trail head (see Figure 3.6).

Potential Trail Connections

- Neighborhood-School Bike Route (1)
- Watkins-Strasburg Bike Route (7)
- East Town Loop Trail (2)
- Kiowa-Bennett Road/ SH79 Trail (8)

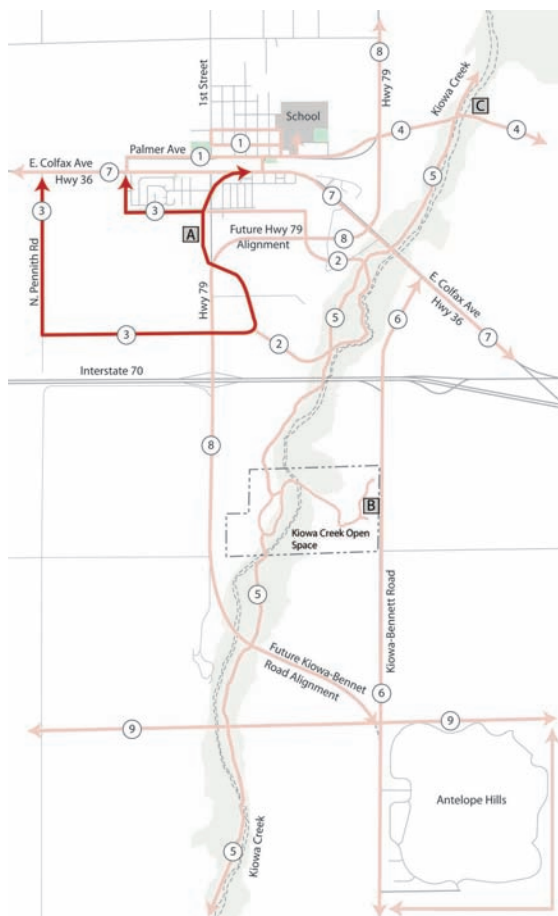


Figure 3.6 West Town Loop Trail

4. Bennett-Strasburg Trail

This trail segment will provide a regional trail connection between Bennett and Strasburg; which is a community located approximately six (6) miles to the east. It will consist of a roadside greenway trail along Old Victory Road to a point where it intersects with the Watkins-Strasburg Bike Route. This trail will also be accessible from the proposed Adams County Trailhead that is planned near Kiowa Creek (see Figure 3.7).

Potential Trail Connections

- Neighborhood-School Bike Route (1)
- Kiowa Creek Trail (5)
- Kiowa-Bennett Road/ SH79 Trail (8)



Figure 3.7 Bennett-Strasburg Trail

5. Kiowa Creek Trail

This trail will run adjacent to Kiowa Creek and will provide a connection from Bennett’s Downtown to the Kiowa Creek Open Space, residential properties, and neighborhoods south of I-70. It is comprised of a Multi-Use Single Trail that transitions to a Split Trail between the Kiowa Creek Open Space and US Highway 36. This trail will be accessible from both the Arapahoe County and Adams County Trailheads (see Figure 3.8).

Potential Trail Connections

- Kiowa Creek Open Space Trail
- Kiowa-Bennett Road/ SH79 Trail (8)
- Alameda Trail (9)
- East Town Loop Trail (2)
- Watkins-Strasburg Bike Route (7)
- Bennett-Strasburg Trail (4)



Figure 3.8 Kiowa Creek Trail

6. Kiowa Bennett Bike Route

This on-street Bike Route will run north-south along Kiowa-Bennett Road from the Antelope Hills Subdivision to US Highway 36. It will serve to provide access for users to the Kiowa Creek Open Space and the Watkins-Strasburg Bike Route (see Figure 3.9). As an alternative, additional user groups could be served by this trail route by constructing a multi-use trail for the trail segment between Antelope Hills Subdivision and the Kiowa Creek North Open Space.

Potential Trail Connections

- Watkins-Strasburg Bike Route (7)
- Kiowa Creek Open Space Trail
- Kiowa-Bennett Road/ SH79 Trail (8)
- Alameda Trail (9)



Figure 3.9 Kiowa Bennett Bike Route

7. Watkins-Strasburg Bike Route

This Bike Route will provide a regional connection from Watkins to Strasburg running east-west along the US Highway 36 Road corridor. It will consist of a signed bike route that transitions to a dedicated bike lane through the downtown core (see Figure 3.10).

Potential Trail Connections

- West Town Loop Trail (3)
- Kiowa-Bennett Road/ SH79 Trail (8)
- Neighborhood-School Bike Route (1)
- Kiowa-Bennett Bike Route (6)
- Kiowa Creek Trail (5)



Figure 3.10 Watkins-Strasburg Bike Route

8. Kiowa-Bennett Road/ SH79 Trail

This trail will run adjacent to the proposed SH79 alignment north of I-70 and the Arapahoe County 2035 Transportation Plan alignment of Kiowa-Bennett Road. It will consist of a roadside greenway trail to the south of the US Highway 36 intersection and a dedicated bike lane that transitions to a bike route to the north of US36. This trail will be accessible from the proposed Downtown Trailhead/Parking Facility and will have three (3) grade-separated bridge crossings located at I-70, Kiowa Creek, and the UP Railroad (see Figure 3.11).

Potential Trail Connections

- East Town Loop Trail (2)
- West Town Loop Trail (3)
- Kiowa Creek Trail (5)
- Watkins-Strasburg Bike Route (7)
- Bennett-Strasburg Trail (4)
- Kiowa-Bennett Bike Route (6)
- Alameda Trail (9)



Figure 3.11 Kiowa-Bennett Road/ SH79 Trail

9. Alameda Trail

The Alameda Trail corridor identified in the Arapahoe County Open Space Master Plan will serve as one of the primary east-west routes south of I-70; ultimately connecting several of the eastern plain's linear riparian systems (see Figure 3.12).

Potential Trail Connections

- Kiowa Creek Trail (5)
- Kiowa-Bennett Road/ SH79 Trail (8)
- Kiowa-Bennett Bike Route (6)
- Antelope Hills Subdivision Perimeter Trail

East-West Access Corridors

East-west trail connectors will need to be provided as the Town continues to develop and grow; especially south of I-70. These trail connections will provide access to the Kiowa Creek Trail for existing and future residents and should occur at mile or half mile increments (see Figure 3.13).

Trail Access

Trailheads are critical to the trail network system. The trailhead serves as a link between various transportation systems and the trail network while establishing access points that are available to everyone. Trailheads should be highly visible and should take into consideration the diversity of trail users and the overall function of the specific trail. For example, a trailhead with access to an equestrian path might also accommodate trailer parking and access to drinking water for horses.



Figure 3.12 Alameda Trail



Figure 3.13 East-West Access Corridors

Trailheads provide the necessary useful information to tell the user where they are along certain trails, where specific trails lead, and more importantly, how to get there. The three (3) proposed trailheads shown in Figure 3.3 will provide parking and other amenities that might include: drinking fountains, trash receptacles, picnic shelter, restrooms, benches, trail signs, and maps. For more detailed information on trailheads and additional trail access points refer to the 'Bennett Regional Trail Plan' document.

Trail Classifications

The trails within the Regional Trail Network have been grouped into two (2) categories: Shared-Use Trails and Bike Routes/Bike Lanes. The specifics for each category follows:

Shared Use Trails

Shared use paths will accommodate multiple user groups including pedestrians, cyclists, and equestrians and are typically located within open space corridors or adjacent to roadways with a designated landscape strip, tree lawn, tree grates or landscape buffer separating the trail path from the road edge. Roadside greenways, detached sidewalks, and multi-use trail classifications are included in this group. (Refer to Figures 3.14-3.16 for typical cross sections)

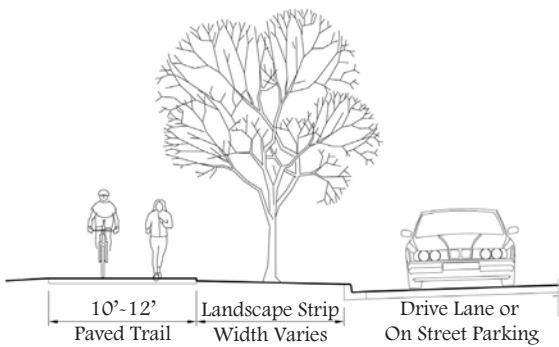


Figure 3.14 Roadside Greenway Trail/ Sidewalk

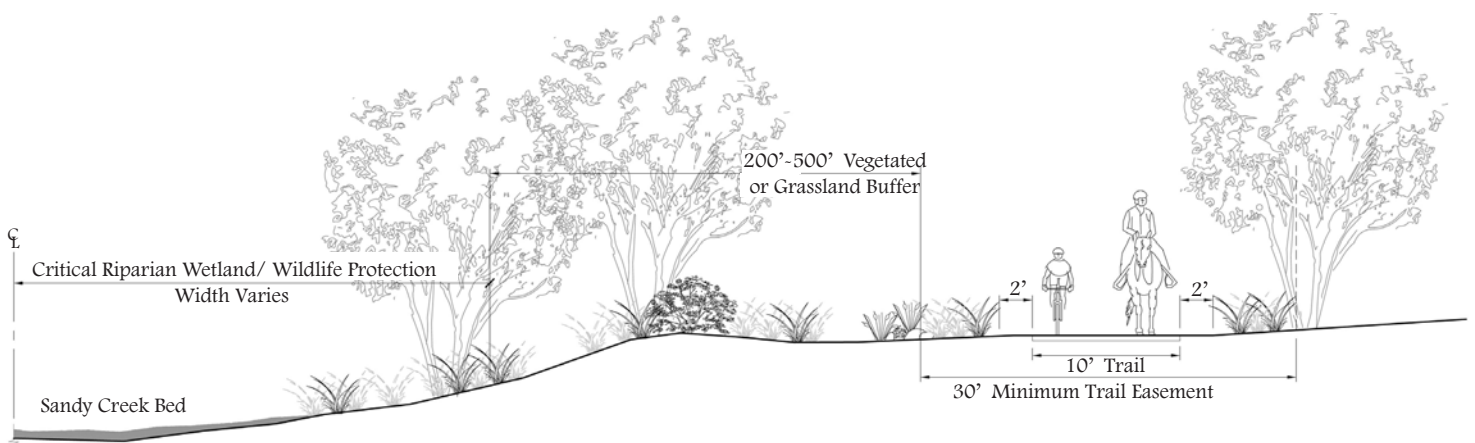


Figure 3.15 Multi-Use Trail

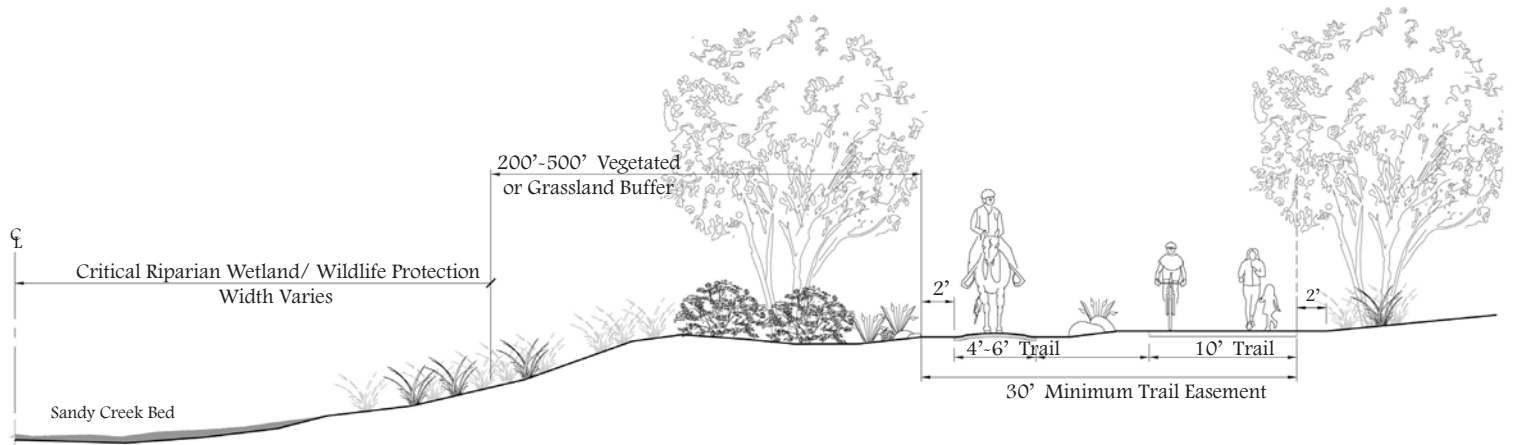


Figure 3.16 Multi-Use Split Trail

Shared Use Trail Design

	Roadside Greenways & Sidewalks	Multi-Use Split Trail		Multi-Use Single Trail
		Paved	Unpaved	
Width	10'-12'	10'	4'-6'	8'-10'
Surface	Concrete /Asphalt	Concrete/Asphalt	Gravel, Crushed Stone	Urban-Concrete/Asphalt Rural-Gravel, Crushed Stone, or compacted natural surface
Vertical Clearance	10'	10'	10'-12'	10'-12'
Trail Shoulder Width	2'	2'	2'	2'
Maximum Slope	8% (5% preferred)	8%	8%	8%
Cross Slope	2%	2%	2%	2%

Bike Routes & Bike Lanes

Bike lanes and bike routes will accommodate a single user group; the cyclist. They are on-road routes including local roads and highways. Design requirement will vary based on roadway grade, speed limits, and traffic volume. Bike lanes and bike routes shall be in compliance with AASHTO requirements. (Refer to Figures 3.17-3.18 for typical cross sections)

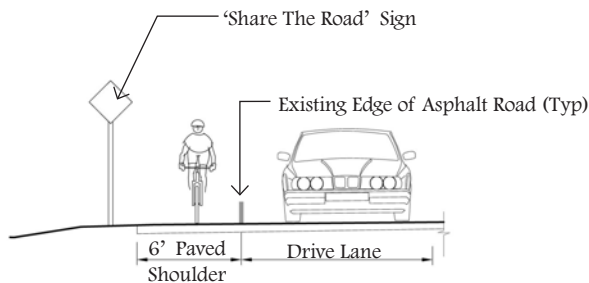


Figure 3.17 Signed Bike Route

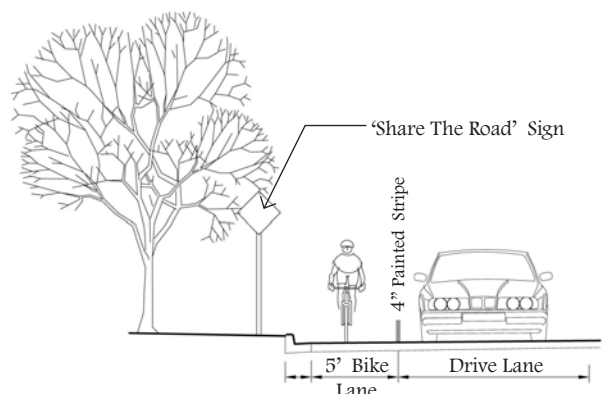


Figure 3.18 Dedicated Bike Lane

Conclusion

Based on community input from questionnaires and community meetings, there is a strong need for additional local and regional trail routes. The construction of new trails will provide additional transportation and recreational choices for residents and adjacent communities in Adams and Arapahoe Counties. Highest priority should be given to trail routes that provide safe travel routes from residential neighborhoods to the school and between neighborhoods and commercial corridors especially those divided by I-70.

Recommendations

- Consider planting drought tolerant deciduous shade trees along the existing SH79 trail at a spacing of one tree per 40 linear feet of the trail.
- Utilize volunteer community members to plant trees.
- Focus efforts on constructing segments of trail that will connect Antelope Hills Subdivision, Kiowa Creek Open Space, and Bennett's Downtown.
- Implement additional trail segments as funding becomes available or when development and infrastructure improvements take place.
- Consider modifications and/or upgrades to existing facilities to implement these initial trail segments.
- Begin discussions with landowners along the Kiowa Creek to negotiate trail easements. With upgrades to the Converse Road Bridge & Kiowa-Bennett Road Bridge over I-70 not likely to happen for several years, the safest and likely most cost effective method to get trail users across the interstate will be under the I-70 Bridge that spans the Kiowa Creek floodplain.
- Continue seeking annual grant funding from the respective County Open Space programs and organizations like the Great Outdoors Colorado (GOCO) for trail development & construction.
- Prior to design and development of the Kiowa Creek Trail, additional detailed site information will be needed.
- Plan for the costs of Topographic and Boundary Surveys in addition to environmental studies that will identify potential impacts of trail routes associated with critical wildlife habitat, established wetlands and riparian areas.
- Utilize and upgrade as necessary existing roadways to provide safe access for bicyclist.
- Work with CDOT to improve Kiowa-Bennett Road and the bridge over I-70 as a safe on-street bike route.
- Work with landowners along Kiowa Creek to preserve floodplain, agriculture lands, and the riparian environment.
- Work with adjacent communities and counties to pursue development of proposed regional trail routes.
- Pursue with Adams County the Kiowa Creek Trail link from I-70 north to the proposed Adams County Trailhead
- Pursue with Arapahoe County the Kiowa Creek Trail link from I-70 south to the Kiowa Creek North Open Space, continuing on to connect with the recently acquired Kiowa Creek South Open Space at the southern county boundary.
- Encourage future developments that will have an impact on the existing I-70/Converse Road Bridge to contribute funds for future bridge improvements that incorporate a safe on-street bike route.

4. Parking Facility

General Overview

The Town leadership identified the need for a community parking facility to serve commuters living in the I-70 corridor and working in the greater Denver area. When the grant was awarded through DRCOG, the project coincided with the larger Downtown Planning Study and expanded the commuter parking to include parking for the proposed civic center, possible commercial parking, and proposed trailhead parking for local and regional trails

Community Input

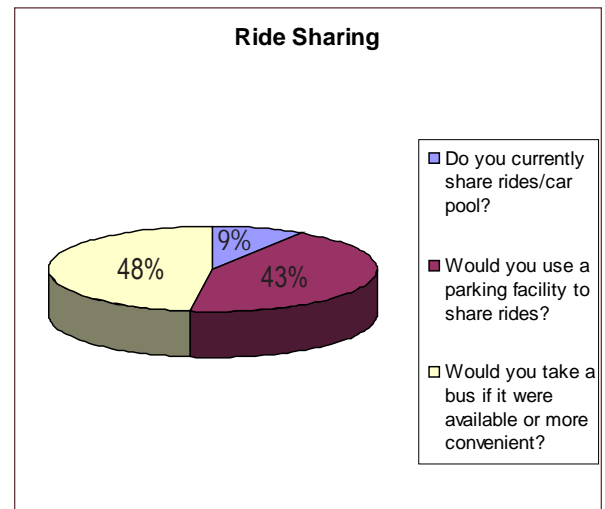
The community input consisted of three (3) Town meetings and four (4) steering committee meetings along with a questionnaire that was mailed in the August utility bills specifically targeting property owners within Bennett. These questionnaires were available and collected at all public meetings.

Parking Questionnaires Results

We received 115 completed questionnaires representing 275 people which probably included children as the questionnaire did not ask to separate adults from children. The respondents were all within the zip code and receiving utility service through the Town of Bennett.

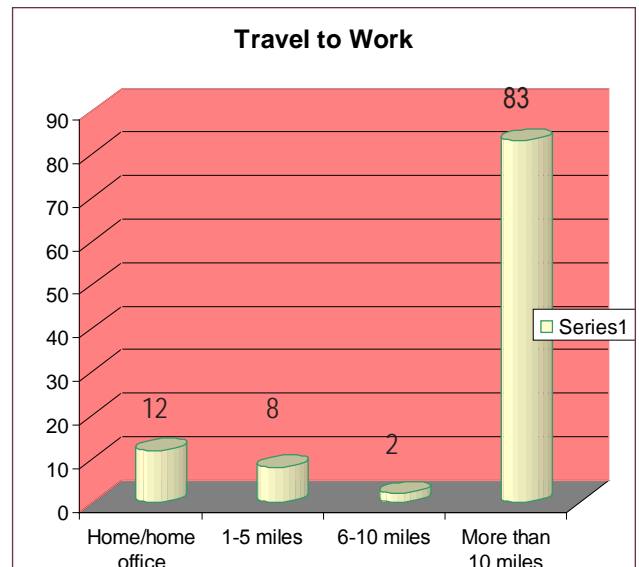
The three (3) important questions that addressed commuter parking and ride sharing follow:

Ride Sharing	Percent
Do you currently share rides/car pool?	9%
Would you use a parking facility to share rides?	43%
Would you take a bus if it were available or more convenient?	48%



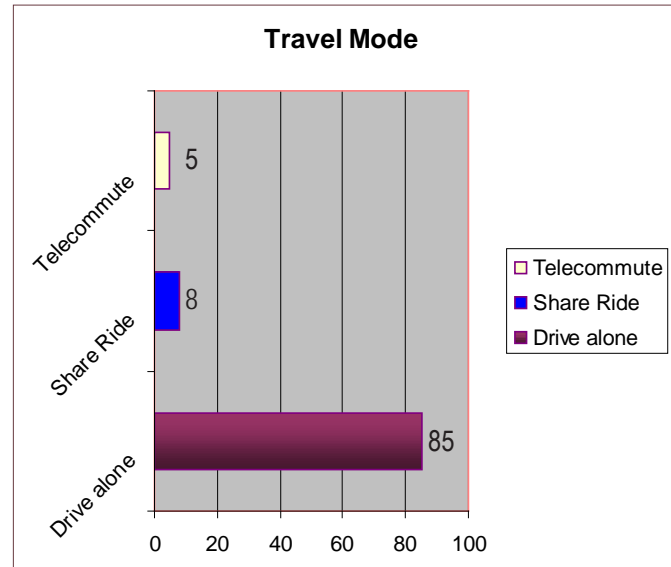
The following chart addresses the number of minutes it takes the respondents to commute to work based upon the distance they have to travel.

Travel to Work	Number	Time in Minutes
Retired	5	N/A
Home/home office	12	N/A
1-5 miles	8	5-20
6-10 miles	2	10
More than 10 miles	83	20-70
Total	105	



The following chart addresses the number of respondents who are traveling alone by vehicle, telecommuting, and sharing a ride to work.

Travel Mode	Number
Telecommute	5
Share Ride	8
Drive Alone	85
Total	98



Questionnaire Summary

The ride sharing data demonstrates that there is a strong demand for ride sharing (approximately 43%) compared to the number of people currently sharing rides (approximately 9%). Additionally, the data show that there is a strong demand for bus service as an alternative to current transportation choices (approximately 48%). The Travel Mode data illustrate that over 80% of the respondents are driving alone as their commuting option.

The travel to work data collected demonstrates that most people (almost 83%) travel further than 10 miles to work and the range is from 20 minutes to over an hour of travel time. These results illustrate a demand for alternatives to driving alone and support the idea of a commuter parking facility.

Parking Demand Analysis

In addition to the questionnaire, the project team approached the commuter parking demand from several sources. Research was conducted through communities of a similar size and distance from the Denver Metropolitan area to see if they had any facilities to support shared parking. We contacted the Towns of Lochbuie, Keenseburg, and Hudson. Each of which meet the characteristics and are all along I-76 and approximately 30 minutes from Denver. None of these Towns had any support for shared parking

formally or informally. We received a parking study through DRCOG for the Town of Nederland which is a similar size, but appeared to be too dissimilar to Bennett in terms of the distance from the metro area with a large impact from the local ski area. The team determined that Nederland’s findings weren’t relevant to the Town of Bennett.

Another strategy was to distribute a windshield survey on cars parked in the King Soopers parking lot to determine whether people were utilizing the site as an informal parking facility for shared parking. We did not receive a response from this survey.

None of the respondents from the parking questionnaire indicated they used King Soopers parking, however, a few indicated it would be a good location for shared parking, if it were available.

Existing Public Parking Areas

This Study analyzed the existing supply of public parking in order to evaluate how to meet the projected commuter demand. The Study only looked at public parking and an evaluation of private parking may be needed in the future.

Current public parking areas in Bennett are generally associated with existing public facilities and adjacent streets (See Figure 4.1 for details). In some areas, on street

parking is prevalent. The following list indicates the locations and the estimated public parking count:

1. The Bennett Recreation Center, located about three-quarters of a mile north of I-70 on Converse Road (State Highway 79), includes a gravel parking lot that could accommodate up to 112 parked vehicles. The facility is not fully built out with proposed ball fields and a future outdoor pool on the board for future phases. Currently, the facility rarely has more than fifteen (15) vehicles in the parking lot during the average weekday demonstrating that there is a current excess in parking available. This Study concludes that this excess parking could be utilized for commuter parking until a time when the Recreation Center approaches full build out.

2. The Bennett Community Center is located about one half mile west of Converse Road on Colfax Avenue. The Community Center parking lot is not formally striped; however the front parking lot appears that it could accommodate about 55 vehicles. This facility operates with some daytime programs and community meetings in addition to hosting evening events. The Town plans to improve this lot in 2011.

3. Trupp Park is located northwest of Palmer Avenue and 1st Street. The gravel lot associated with the park could accommodate about 40 parked passenger vehicles. On-street parking also occurs on the gravel shoulder along Palmer Avenue and at on paved 1st Street adjacent to the park. The lot is rarely full as most park users appear to prefer the on street parking near the ball fields.

4. The Bennett High School, middle school and elementary school campus is located along 7th Street and 8th Street in the northeast part of Town. Each school has parking lot areas associated with it and parking also occurs on adjacent public streets. During the day, most school lots are

near capacity. For purposes of this evaluation, the School parking areas were not considered to be appropriate for general public parking. It is also noted that any future expansion of the school campus would likely require evaluation of additional parking needs.

5. The Bennett Library is located on 7th Street across from the school campus. The Library has a modest parking lot with about nine (9) parking spaces.

Summary

A total of 207 public parking spaces were calculated to exist within the Town of Bennett. Based upon the proposed Parking Plan, the Recreation Center currently provides the best central location to the downtown area with approximately 100 spaces available during weekdays for potential commuter parking.

Local Special Transit

The Town does support a special transit service that consists of a small 20-person bus that currently operates twice per week on Tuesdays and Fridays. The service takes users to Aurora one of those days for doctor's appointments and on the other day for local services such as grocery shopping and personal appointments. Senior citizens largely utilize the service, but it is available to any local residents.

The service is funded through grants so the level of service is dependent upon funding and fluctuates accordingly. In finding an appropriate funding source, the bus service could be utilized as infrastructure to transport commuters and travelers to and from the parking facilities as they are established.

Ride Arrangers

The Ride-A-Rangers program is run through DRCOG and available in the Town of Bennett. The program operates as a data base where interested riders can be matched

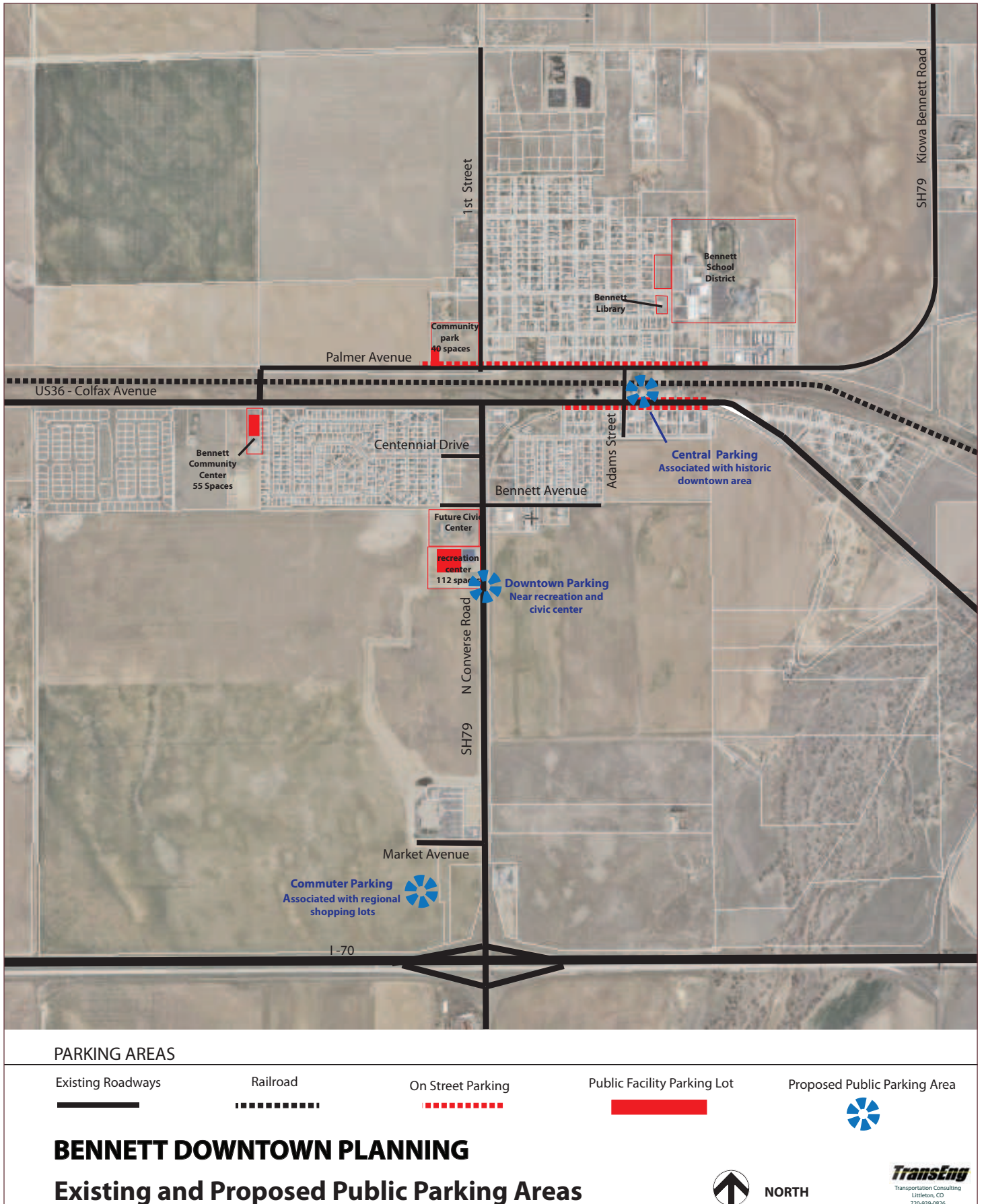


Figure 4.1 Proposed Locations for Parking Facility

with other users with similar travel needs. The program requires riders to enter into the database to get started. Based upon the responses from the questionnaire, there appears to be a demand for ride sharing that far exceeds the current number of people sharing rides (refer to previous Ride Sharing Chart).

Conclusion

1. Parking Plan - Locations and Characteristics

As a result of the Downtown Planning Study, three (3) possible locations were selected for parking facilities as demonstrated in Figure 4.1. The locations were based upon the following characteristics:

- Direct access to the new civic center location near the current Bennett Recreation Center,
- Convenient site location adjacent to I-70 and the SH79 interchange possibly using existing parking at King Soopers or new development in this location,
- Vacant railroad property that is central to the historic commercial center and may serve in a temporary capacity is determined to be economically feasible option.

2. Commuter Parking Demand

The parking questionnaire results indicate that approximately 40 people would utilize a commuter parking facility at least part time, if it were available. Assuming that the ride sharing would be in pairs, there is an estimated demand for approximately 20 spaces.

3. Trailhead Parking Demand

The downtown trail head parking is designed to be at the proposed civic center location. Staff is unable to accurately predict a parking count for trailhead parking, because this study precedes trail development. Through research with Adams and Arapahoe Counties, there is not a standard parking ratio for trailhead parking and parking counts are determined on a site-by-site basis depending upon numerous variables such as: length of trail; location to housing;

and proximity to other trail heads. The Study concludes that at the time trail design and parking facilities are finalized, a clear determination of trailhead parking demand can be determined.

Recommendations

Parking Program

A change in driving behavior takes a concerted effort on behalf of interested drivers, as well as the Town in supporting new driving behavior. This Study concludes that a parking program is necessary that goes beyond merely a parking facility, but addresses education and infrastructure to support new behavior and choices. As outlined above, public education is necessary so drivers are aware of programs such as Ride Arrangers and the Special Transit bus. The program can be initiated and grown through public awareness, signage programs, and program monitoring.

This study is estimating that 20 spaces are required to meet commuter parking demand. Since the parking plan has three (3) possible locations for these 20 spaces, at the time the parking is developed, a calculation of parking demand in the specific location will need to be determined.

Relationship to Downtown Planning Study

The Parking Plan has a dynamic relationship with the Downtown Planning Study so that as the downtown area develops, the parking will be an integral part of the development. In particular, moving the parking away from the interstate and into the developing mixed use Main Street environment is desirable in bringing large numbers of travelers in the downtown commercial center of Bennett

Initial Phase

This Study estimates that 20 spaces are required to meet current commuter parking demand. Since the Parking Plan has three (3) possible locations for these 20 spaces, a calculation of parking demand in the specific location will need to be determined at the time the parking facility is implemented. Staff estimates that there is excess parking

in the I-70 location at King Soopers, the Bennett Community Center, and at the Bennett Recreation Center. It is conceivable that designated commuter parking could be developed in all locations as the first phase of this program.

At the time the parking program begins, negotiations with King Soopers, and the Bennett Recreation Center would need to be undertaken to determine their supply as compared to current demand. Additionally, since a commuter parking program is new to the Town of Bennett, monitoring of the actual demand will need to be undertaken with the opportunity to expand parking in the future. Should demand increase or the excess parking be absorbed by the existing facilities, then additional parking facilities could be developed.

As the trailhead parking is needed, these additional spaces could be added to this first phase or the additional demand could trigger the need for expanded parking facilities. Additionally, this study recommends a parking study be conducted to determine the supply and demand for private commercial parking which may impact the design of the proposed parking plan and the analysis conducted in this Downtown Planning Study.

5. Downtown Development

Architectural Character

The Town of Bennett originally developed with the support of the Union Pacific Railroad that bisects and serves the agricultural and commercial communities. The grain silos continue to dominate the landscape giving the Town identity and history. The commercial buildings in the central business district along Palmer Avenue and E. Colfax Avenue have developed since these early days in the Town's history.



Figure 5.2 Grain Silo

The design and aesthetic of these buildings reflect their functionality and the architecture is utilitarian and not elaborate or decorative. The buildings are small in scale and the businesses are generally operated by local owners serving the local community. These properties provide important affordable commercial space for the community and allow entrepreneurs an important starting place in growing a new business.



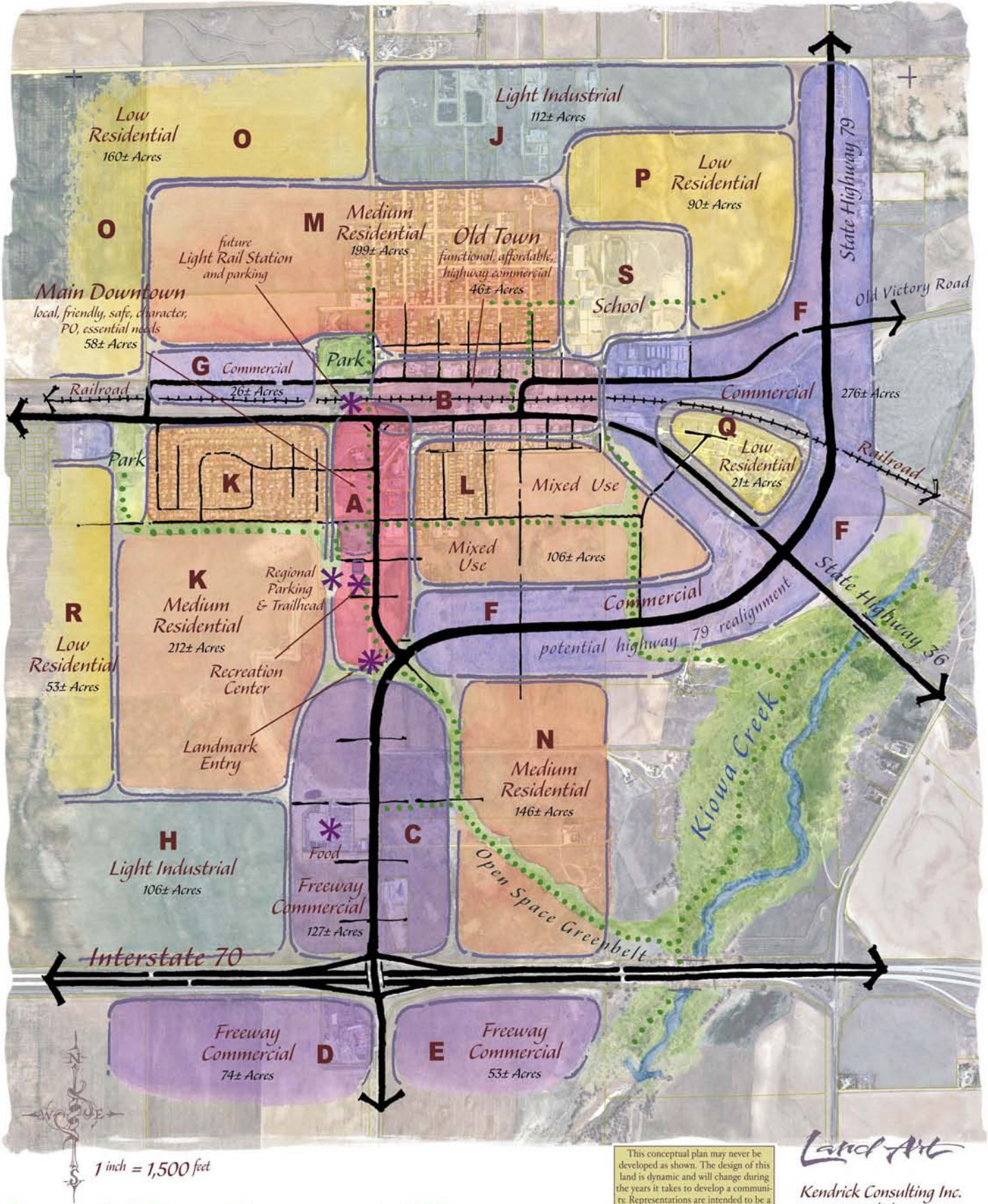
Figure 5.1 Existing Old Town Architecture

These characteristics also apply to the residential communities within the planning area. Homes are generally modest in size and include a mixture of wood frame construction, manufactured, and mobile homes reflecting the need for affordable housing within the community. The residential community consists largely of single family detached housing with a couple of multifamily housing projects in this planning area. The neighborhoods have evolved from the historic center outward to the periphery.

The Town is currently influenced by Interstate 70 that runs east and west and brings a high volume of people through the area. Regional shopping began to develop in the past five (5) years serving the needs of a broader community with businesses such as King Soopers and Conoco. This area is labeled as Freeway Commercial in the Land Use Plan. The buildings are larger in scale than the central business district and their designs are representative of their corporate orientation. Large parking lots that serve the businesses are typical of this regional scale retail development.



Figure 5.3 Typical Town Vernacular



This conceptual plan may never be developed as shown. The design of this land is dynamic and will change during the years it takes to develop a community. Representations are intended to be a catalyst for further study. The Town of Bennett reserves the right to make planning revisions.

Land Art
Kendrick Consulting Inc.
Regional Planning

Land Use Concept Plan

Figure 5.4 Proposed Land Use Plan

Land Use Concept Plan

The land use concept plan addresses future infrastructure and civic improvements while identifying opportunities for higher density development that is orientated to the proposed Main Street and Old Town land use areas. (See Figure 5.4). It addresses the Town's future needs with a central civic/municipal complex with the proposed shared parking facility that accommodates commuters, trail users, and other Main Street uses. To accomplish this, the plan looks to reroute the SH79 so that the existing highway corridor can be converted into a vibrant pedestrian oriented and mixed-use district. The proposed trail network traverses the Town via planned open space corridors and an improved roadway network. Increased residential density near the core of the Town will allow for diverse housing

opportunities that will appeal to both young adults and the increasing retirement age population. Lower density residential opportunities are reserved for the outlying edges of the downtown area. Light Industrial and Commercial uses were incorporated and focused along major highway corridors leading into Town.

Proposed Land Use Categories

1. Main Street – Land Use Area A

Characteristics

Through the public process, old and new residents of Bennett alike expressed their desire for a central gathering place where people can participate in their daily lives with a sense of place that defines their Town. Without a retail



DOWNTOWN MAINSTREET CONCEPT PLAN



and commercial core, the Town might just be a bedroom community that lacks the dining and living areas that complete a home. Through the public input process, residents expressed a desire for a place where residents and visitors can get essential and discretionary goods and services rather than drive into the metropolitan area.

The Mainstreet Area of the Land Use Plan (Area A) was designed to address this need. The plan focuses attention on a pedestrian oriented environment where accessibility and visibility are key. Retail is designed on a smaller scale with the buildings on the street creating energy and vitality through art, food, music, and entertainment. (See plan and perspective concepts drawings for details.)

2. Old Town Commercial-Land Use Area B



Characteristics

Old Town is the historic commercial center of Bennett. This area is bisected by the railway line where transportation continues to allow easy access to farming goods and services. This historic core continues to be a vital area for affordable and accessible commercial properties. This plan envisions street improvements in keeping with the Main Street themes where sidewalks, street trees, lighting, and parking all create an urban spine that revitalizes this important commercial center.

Uses and Activities

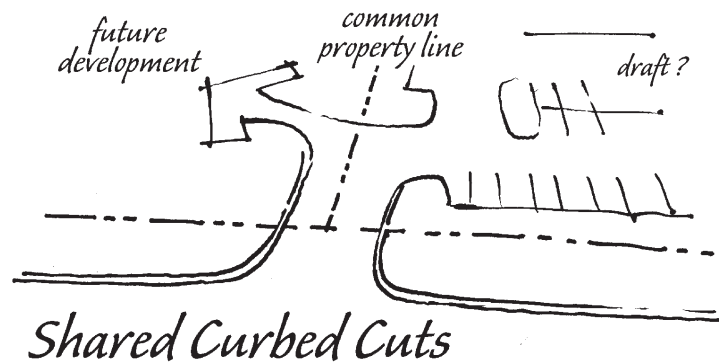
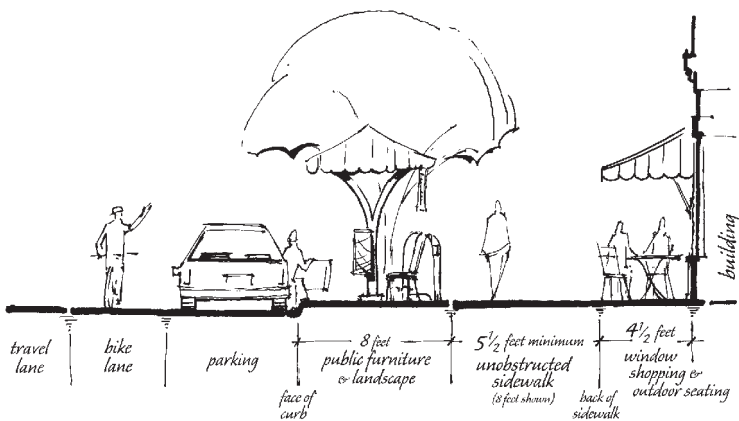
Primary: Retail and convenience stores, restaurants, personal and business services, and professional offices.

Secondary: Residential uses including single family detached, attached and multifamily.

Uses and Activities

Primary: Small scale retail, restaurant, entertainment, public facilities, recreation, personal and business services, and professional offices. Residential uses include single family attached and small multi-family, live/work units, and vertical mixed use with ground floor retail.

Secondary: N/A



3. Residential Neighborhoods—Land Use Areas K, M, N, O, P, and R

Characteristics

Neighborhoods will contain a variety of housing types, combined with non-residential secondary land uses that are complementary and supportive.

The average gross density (i.e., dwelling units per acre) will vary in the Low Residential category up to seven (7) du/acre. Medium Residential will vary up to 12 du/acre. Small multi-family units may be attached floor to ceiling (stacked units) for densities exceeding 12 du/acre. They must comply with all height restrictions and be similar in scale and character to single-family dwellings in order to be compatible with the neighborhoods in which they are to be located.

Secondary uses in Low and Medium Residential are intended to serve the neighborhood and should be developed and operated in harmony with its residential characteristics. Neighborhoods should meet a wide variety of every-day living needs, encourage walking to gathering places and services, and integrate into the larger community. Other supporting land uses, such as parks and recreation areas, religious institutions, and schools may be included in Low and Medium Residential areas.

Uses and Activities

Primary: Single family detached, single family attached (duplexes, triplexes, four-plexes, townhouses and row houses) and small multifamily units.

Secondary: Support services such as neighborhood commercial centers with locally oriented shops and services, parks and recreation facilities, places of worship and schools.

4. Mixed Use-Land Use Area L

Characteristics

Land Use Area L is adjacent to Main Street (Area A), Old Town Bennett (Area B), and the Commercial Mixed Use (Area F). Consequently, Area L will include complementary and supportive services that may include a variety of residential and commercial development.

Uses and Activities

Primary: Residential uses include single family detached, attached (duplexes, triplexes, four-plexes, townhouses and row houses) and multi-family. Live/work units are contemplated to accommodate home based and small businesses. Supportive services with locally oriented retail and businesses, parks and recreation facilities, places of worship, and schools

Secondary: N/A

5. Freeway Commercial – Land Use Areas C, D and E

Characteristics

Freeway commercial land uses accommodate larger scale retail uses and cater to a regional population traveling along the I-70 corridor, as well as, north and south along SH79. These uses typically are served by automobile travel with associated parking.

Uses and Activities

Primary: Uses include general merchandise, “big-box” centers, truck stops, auto dealerships, hotels and motels, restaurants, and grocery stores

Secondary: N/A

6. Commercial Mixed Use Corridor – Land Use Areas F and G

Characteristics

These areas are adjacent to the realignment of SH79 and E. Colfax Avenue serving a high volume of vehicular traffic on a regional route including semi-tractor trailers. This area is a concentration of employment including business and light industrial areas. The commercial areas include activities that serve numerous neighborhoods and employment centers. Residential is secondary and needs to be compatible with the commercial uses along this corridor.

Uses and Activities

Primary: Commercial uses include grocery stores, medium scale retail such as a department store, convenience stores, personal and business services. Workplace uses such as research and development offices, major service and office center complexes, warehousing and light industrial uses, and educational facilities.

Secondary: Supporting uses that complement the primary uses, such as restaurants, childcare, convenience shopping, and residential uses.

7. Light Industrial – Land Use Area H and J

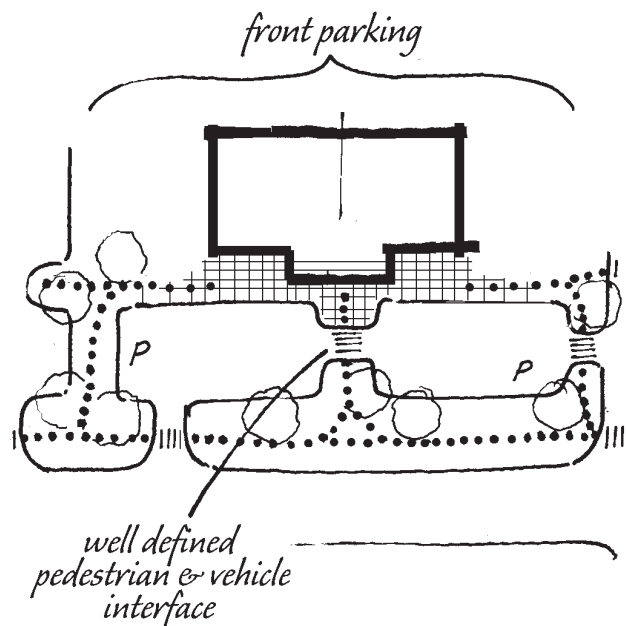
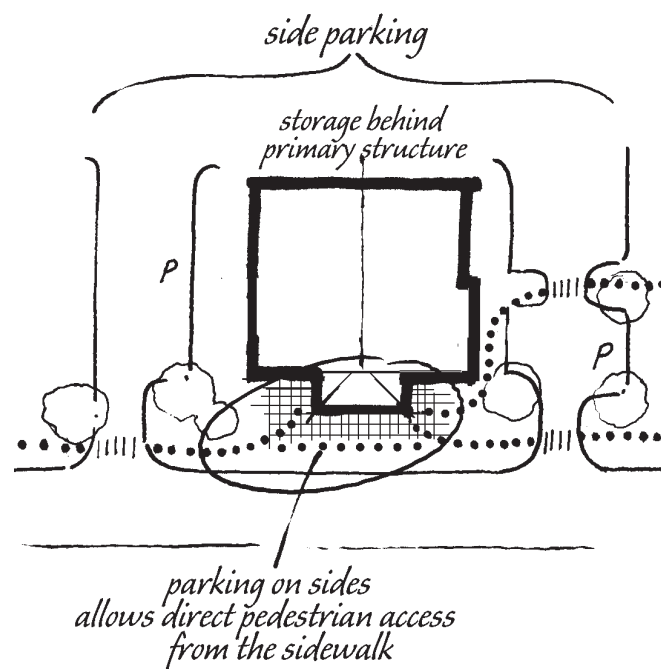
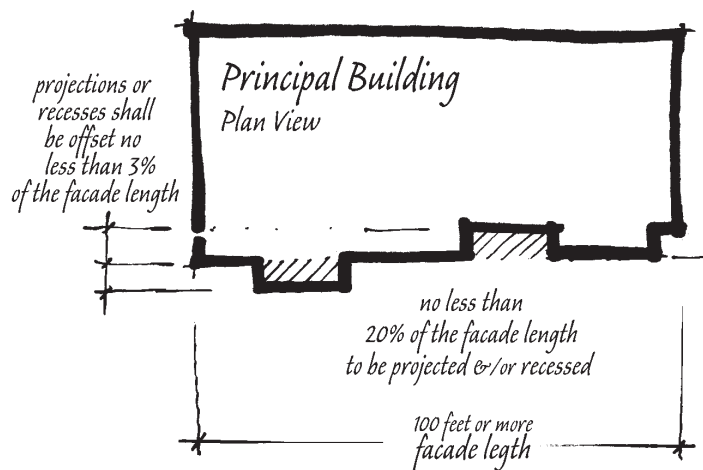
Characteristics

The light industrial areas serve as employment centers for the Town through the allowance of a wide variety of land uses that contribute to the employment base. The light industrial centers should integrate buildings, outdoor spaces, and transportation facilities. Minimal dust, fumes, odors, refuse, smoke, vapor, noise, lights, and vibrations extended from these centers.

Uses and Activities

Primary: Light industrial uses include warehousing, research and development, educational, and medical institutions.

Secondary: N/A



6. Recommended Next Steps

Zoning Overlay Districts

Background

In 2000, the Town of Bennett adopted a new Comprehensive Plan setting out goals and strategies for future development of the Town and surrounding areas. The Plan recommended that the existing central business district be designated as a Special Planning District. This recommendation reflects the fact that many of the properties were developed prior to the adoption of zoning and they may not comply with the current zoning requirements. With the Downtown Planning Study, this area is now the Old Town Area B of the Land Use Plan.

2009 Study

In 2009, the Town undertook an evaluation of the existing zoning for the commercial properties along Palmer Avenue and E. Colfax Avenue in the central business district. The purpose of the evaluation was to address property owner concerns regarding their inability to redevelop or expand their businesses because of the current zoning requirements.

The area under consideration at the time was approximately 12.4 acres in size and straddles the Union Pacific Railroad property on both the north and south sides. On the northern boundary, the area is Palmer Avenue from 4th Street on the west end to 8th Street on the east end. On the southern boundary, the area is E. Colfax Avenue from S. 1st Avenue (Highway 79) on the west to Custer Street on the east.

The study found that properties in area were zoned R-1-Single Family Residential, MH-Mobile Home, C-General Commercial, I-1-Light Industrial, and P-Public. Based upon the current zoning requirements, the following constraints were identified that may make redevelopment difficult:

- Small lot sizes and/or irregularly shaped lots;
- Lack of proper building setback or ability to meet setbacks;
- Lack of consistent off-street parking improvements;
- Existing non-conforming uses; and
- Lack of landscape areas or the ability to provide required landscaping.

(Refer to the Zoning Analysis Table on the next page for a list of the challenges and issues in more detail.)

Zoning Conclusion

Through the Downtown Planning Study, the steering committee recommended that a zoning overlay district be developed for the Main Street Area (Area A) and Old Town Bennett (Area B) to expand the work done in 2009 and address zoning issues that support and enhance new development and redevelopment within these two important commercial areas. The recommendation of this Downtown Planning Study is that Area A and B are included in the Special Planning District as a zoning overlay district. This work is a high priority because, the new zoning tools directly impact any future development that may occur in these two (2) areas.

Zoning Analysis Table

Challenges	Issues
Residential single family homes are zoned Commercial	Mitigation of off-site impacts as new uses develop adjacent to residential homes. May need more refined and specific design language.
Commercial zoning requires a 20% open space and 30% Floor Area Ratio (FAR) for the site	Many of these properties were not developed with these constraints
Commercial zoning requires 15' front, 15' rear and 10' side setback	Many of these properties were not developed with these constraints
Accessory structures also have setback requirements	Same problem. Identify which ones specifically.
Maximum height for primary structures within the Commercial Zone (C) is 50 feet.	Should not be a problem based upon current structures and the existing character of the area.
Maximum height for accessory structures on properties zoned Commercial (C) is 12 feet.	This could be a problems, I think of the service garage on Colfax.
There may be some uses allowed by right or conditional use that are not appropriate in a mixed use area such as this.	Possibly need to identify what those are. Establish a refined list of principle permitted uses and conditional uses for this district.
There are a wide variety of parking conditions including parking adjacent to State Highway, on-street, off-street, unimproved parking.	Need input from CDOT about redevelopment constraints, use of their roadway.
Many properties don't appear to meet the parking standards in terms of surface material or screening requirements.	Need to consider impacts to meeting the existing standards such as: changing gravel parking to pavement and requiring more on site parking.
Community character concerns.	What is the existing character the Town would like to preserve or enhance?
Most properties don't appear to meet the landscaping regulations.	Evaluate the existing landscaping requirements and what they mean for this environment since many sites appear to be out of compliance.

Financing Strategies

An important outcome of the Downtown Planning Study is the conceptual Mainstreet component of the plan coupled with the Old Town historic commercial center. These components support the small, one-of-a-kind businesses that are seen as the backbone of the Town and establish a context for additional retail and restaurants. With these new possibilities comes the need for financing strategies and community development models to implement these plans as they evolve.

To explore the maturation of a Downtown plan, the Steering Committee visited the Town of Castle Rock, because there are many similarities between where Bennett is currently positioned and how the Town of Castle Rock has grown in the past 10 years. In particular, the committee was interested in the economic development tools of their plan. The results of that visit have helped to shape a vision of utilizing a sound economic development model for the implementation of a master plan. While this study is not a master plan, it informs any future comprehensive planning for this

Downtown Area and the need for a financing strategy.

The following financing tools are considered options in the economic development model:

1. Downtown Development Authority (DDA)

A DDA is a quasi-municipal corporation, authorized by the Board of Trustees and managed by a Board of Directors appointed by the Board of Trustees. It is funded primarily through Tax Increment Financing (TIF), funds generated by the incremental increase of sales and property taxes in the district. These TIF funds, upon creation of a DDA, must be physical or economic, if approved by the Board. The implementation of a development project can be financed by bonds or advances from the Town that are repaid by the TIF. If approved by the Town, and the voters, the DDA can also impose up to five (5) mill property tax for operations of the DDA.

2. Urban Renewal Authority (URA)

Urban renewal authorities are generally established to eliminate blighted areas for development or redevelopment by purchasing, rehabilitating, and selling land for development. A URA can fund real estate development, rehab financing, and infrastructure and is funded through a tax-increment financing on property and/or sales tax.

3. Business Improvement District (BID)

A business improvement district is a quasi-municipal corporation, which supports management, marketing, advocacy, and economic development. A BID can also issue bonds for capital improvements. BIDs are funded through an assessment or mil levy on commercial property.

4. Community Development Corporation (CDC)

A CDC is a grassroots 501©3 nonprofit organization that can help advance real estate and infrastructure improvements. They can provide organizational focus and expertise to advance commercial and housing development. CDC's are able to diversify funding for both operations

and projects through access to charitable and government grants, earning income through services and projects, contracting for services to cities, towns, and other agencies. They can target resources to specific properties and work within and outside of assessment districts or other restrictive boundaries. They can have the flexibility to respond to opportunities that an uncertain market may bring.

Financing Conclusion

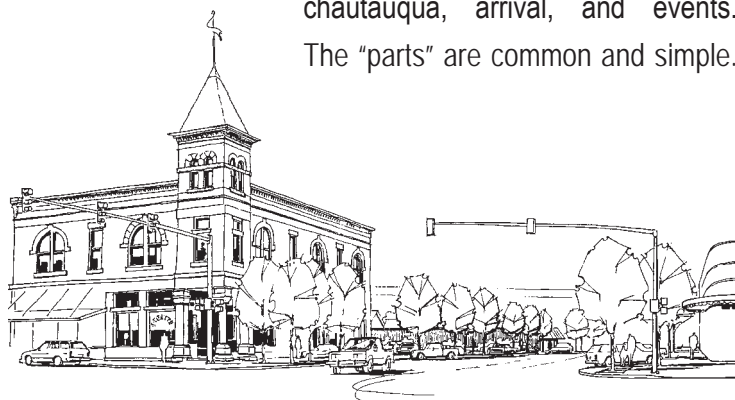
When the Town is ready to implement the Downtown Plan, a key recommendation is to seek technical assistance in creating an appropriate economic development model. The model should address the economic realities at the time of development. This assistance can come through many forms such as organizations like Downtown Colorado Inc (DCI), the Department of Local Affairs and/or PUMA (Progressive Urban Management Associates). Staff has had a preliminary conversation with DCI in order to evaluate the menu of options for technical assistance.

Design Guidelines

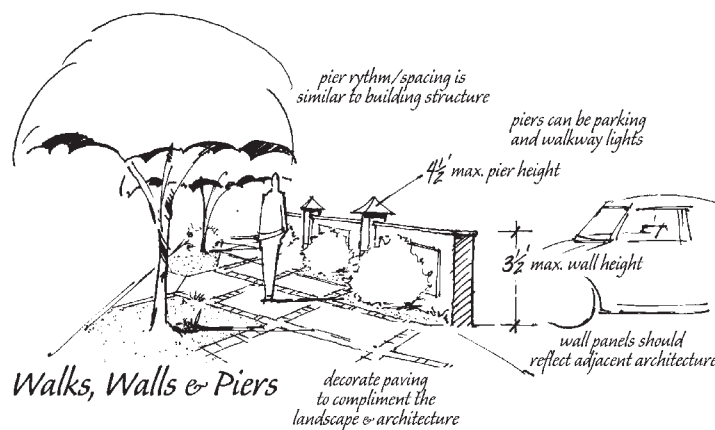
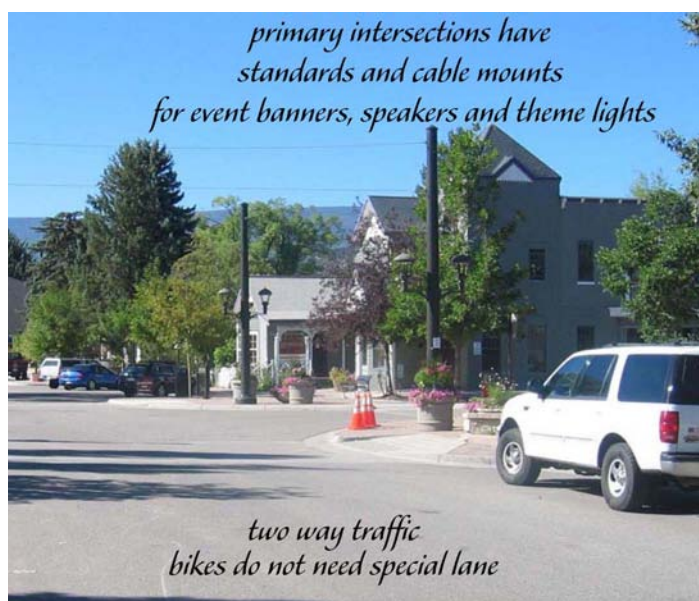
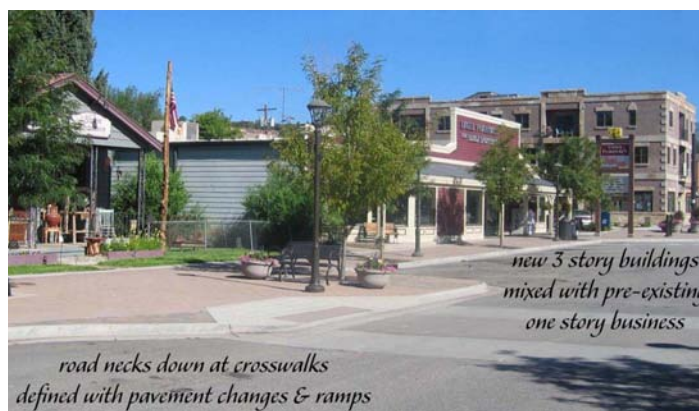
Design guidelines will be fundamental in providing direction to how places work. They should address the Town's strategies for creating a fun, interesting, functional, and flexible environment. In general, they provide a quality benchmark for topics such as: road layouts that prioritize pedestrians; public spaces that are safe and attractive; and buildings that are at an appropriate scale and density to support local services. The following paragraphs concentrate on key elements that should be incorporated into future design guidelines.

Main Street and Old Town

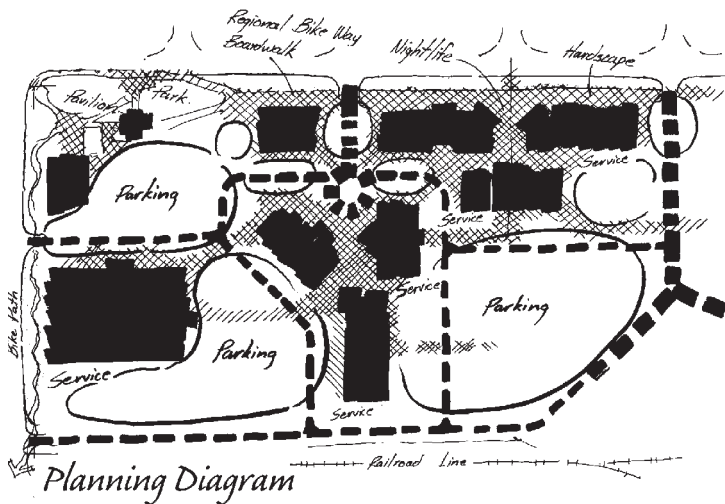
The Main Street should serve as a spine that sets the standard and creates the space for street fairs, parades, display, respite, announcement, chautauqua, arrival, and events. The "parts" are common and simple.



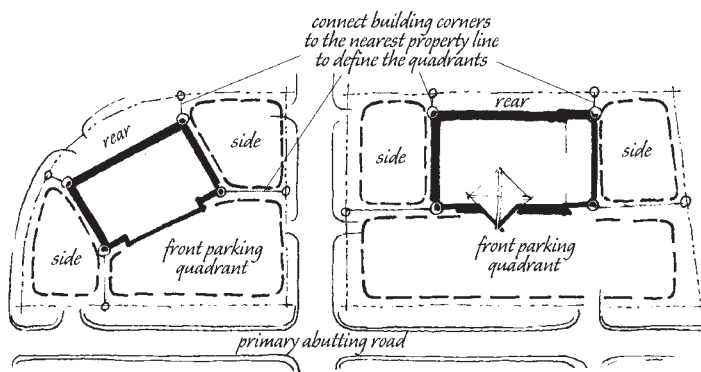
Trees give the street a ceiling for shade and windows for green seasonal color, rustling sound and repetition. Street lights create rhythm and illumination allowing night life to emerge. Benches, tables, water fountains, tree grates, bike racks, trash containers, bollards, kiosks, theme walls, and planters are the street furniture of a public room. The street organizes and controls pedestrians and vehicles in an energetic and enlivening way. Pavement can be artistic and beg attention or can recede in its basic function, depending on the desired outcome.



Commercial Development Corridors



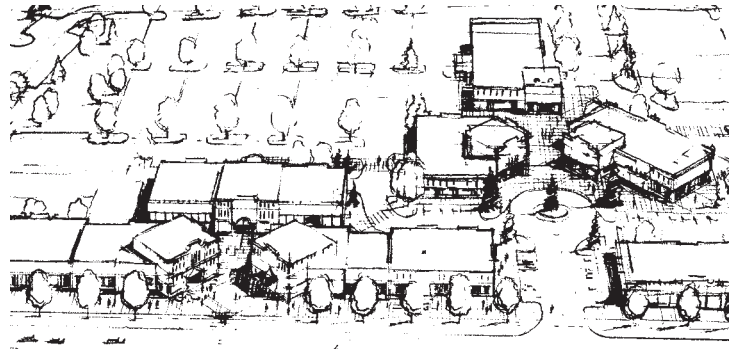
The Freeway Commercial Area is designed to expand the opportunity for regional business activity in Bennett. This area currently serves as the gateway to Bennett and needs to acknowledge and enhance this threshold. Design guidelines need to be developed for this area which consider some of the elements depicted in the following illustrations and come through a public process. In particular, this Use Area needs to provide continuity between the larger scale regional development and the smaller scale commercial and residential areas of Bennett progressing from I-70 along SH79 into Main Street.



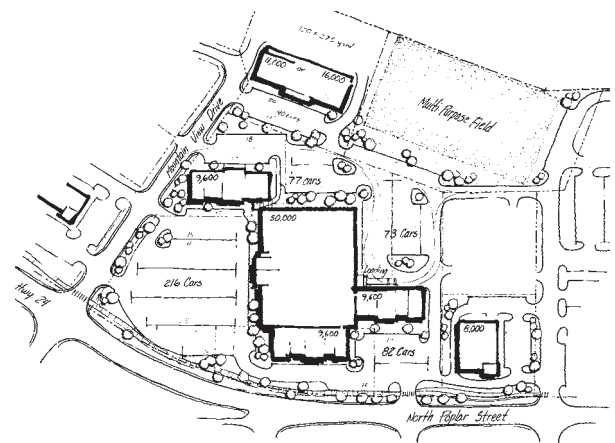
Future elements to be included within the design guidelines for commercial development should include:

- Establish a logical and interconnected system of streets, sidewalks, and pathways that create better orientation, mobility, and safety.

- Buildings should be the dominant visual element seen along the street with parking lots oriented to reduce their visual impact from streets.



- Create human scale relationship between buildings and the pedestrian areas.
- Orient parking lots away from street frontages to reduce their visual impacts with buildings being the dominant visual element along the street.
- Design new buildings to compliment the railroad and agriculture structures that have been a part of Bennett's architectural vernacular.
- Prioritize native landscape materials, design, and irrigation to be appropriate for the rural prairie environment. Ideal plant and ground-cover applications will help shade, protect, and screen, which improve the human experience.
- Coordinate signage keeping it simple in type styles and graphic imagery and not a dominant element in the overall street scene as seen historically.



Final Thoughts

The Downtown Planning Study has been an important opportunity for the Town to analyze and explore future possibilities for the historic center of Bennett. Because of the convergence of funding partners, this Study has been successful in addressing the important objectives set forth by the Town in terms of transportation, regional trail design, commuting behavior, and a civic center.

Through the public process, old and new residents alike expressed their desire for a central gathering place where people can participate in their daily lives with a sense of place that defines their Town. The proposed Land Use Plan is an important jumping off place for organizing these activities and informing future decision making. This Study is intended to be a first step in the comprehensive plan update as the Town moves forward boldly into creating their future.

The Town leadership is very grateful to Arapahoe and Adams Counties, DRCOG and CSU in supporting these important planning activities and look forward to future opportunities.