NORTH COLLEGE AVENUE IMPROVEMENTS - PHASE 1





Prepared by:







and







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> February, 2002 FHU Reference No. 00-230







North College Avenue Improvements - Phase 1

Recreation Engineering & Planning



ACKNOWLEDGEMENT

A sincere acknowledgement to City Council, Transportation Board, and to all of the Technical Advisory Committee members for their diligent efforts throughout the conceptual design process. Without the input and help of City Council, Transportation Board, and Committee members, the successful completion of the conceptual design would not have been achieved

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INTRODUCTION

In 1997, the residents of Fort Collins approved the Building Community Choices (BCC) ¹/₄ cent sales tax to construct improvements along North College Avenue. The specific ballot language describes the project as follows: "This is a four phase project to improve the safety of pedestrians and vehicles on North College Avenue. Phase I will focus on the ¼ to ½ mile north of Jefferson Street. Anticipated improvements may include: 1) drainage improvements; 2) widening roadway to provide better and safer facilities for bicyclists and pedestrians; 3) constructing medians for access control; and/or 4) improving to full arterial street standards including curb, gutter, and sidewalk. Planning, design, right-of-way acquisitions and other project costs may also be included." Specific boundaries for this project are between the Jefferson Street and Vine Drive intersections along North College Avenue.

A project team of individuals from several City departments, the Colorado Department of Transportation (CDOT) and consultant staffs was assembled as a Technical Advisory Committee (TAC) to perform an alternatives analysis. Four alternatives were developed and evaluated by the TAC. A preferred alternative that best met the objectives of the ballot initiative was selected by the TAC, and approved by Transportation Board, Planning & Zoning Board, City Council and CDOT, and was carried forward to conceptual design. The alternatives analysis process has been summarized as a separate document -North College Avenue Improvement-Phase 1 Alternatives Analysis Report, dated September 2001.

П. PUBLIC INVOLVEMENT

During the preparation of the conceptual design plans, meetings with the business and property owners within the corridor were held both in an open house format and at their business establishments. Numerous property and business owner meetings and four open houses were held. Project update and approval presentations were given to City Council, Transportation Board and Planning and Zoning Board throughout the project. Presentations were given to the Downtown Development Authority, Downtown Business Association, Chamber of Commerce and the Landmark Preservation Commission.

III. BUDGET/FUNDING

The City of Fort Collins has an available budget of \$2,797,000 for design and construction of Phase 1 of the North College Avenue Improvements project. A total of \$445,000 is available from Congestion Mitigation and Air Quality (CMAQ) monies, and must be used specifically for bicycle and pedestrian improvements. There is \$335,000 available for the purpose of right-of-way acquisition and preliminary/final design engineering fees. A total of \$2,017,000 will be available for construction of the remainder of the project. Building Community Choices will fund design, construction and right-of-way purchases. A summary of the project budget is presented in Table 1.

Table 1. Phase 1 Budget

Funding Source	Improvements	Amount
CMAQ	Bicycle/Pedestrian Construction	\$445,000
BCC	Engineering and R.O.W. Acquisition	\$335,000
BCC	Construction	\$2,017,000
Total		\$2,797,000







IV. **CONCEPTUAL DESIGN – VISION PLAN**

Conceptual Design

The project corridor is characterized by its primarily commercial adjacent land use with multiple access locations. Businesses include fast food restaurants, automobile service centers and municipal offices. This corridor is at the northerly limit of the downtown commercial business district.

The corridor currently serves a variety of transportation needs:

- . to 43.000 vpd.
- . significant draw for recreational use. Commuter bicyclists make use of the roadway as well.
- . with approximately 6.5% of the traffic being large, heavy vehicles.
- The Burlington Northern Santa Fe Railroad (BNSF) crosses North College Avenue just to the north . of the Cherry Street/Willow Street intersection with gating and integrated signalization with the street signal system. Trains cross an average of 8 times a day.
- The Union Pacific Railroad operates a spur service line that crosses North College Avenue in a . operates approximately 2 to 4 trains a day.

The preferred alternative balances the needs of these multiple modes of travel, thereby creating a vision for the corridor. Important features of the Vision Plan include the following (see Figure 1):

Drainage

A recent Fort Collins construction project has re-directed flows that originally passed into the North College Avenue storm sewer system. Since a smaller quantity of stormwater is now passing through the system, it is anticipated that the existing system is adequate to carry the flows. However, the existing system within the project boundaries will be affected by proposed intersection design and street widening, and will require inlets and cross culverts to be removed and replaced. The proposed drainage improvements should effectively control damage to personal property from storm runoff and ensure safe passage on North College Avenue, Proposed drainage patterns will remain close to the historic patterns.

The intent of the proposed plan is to remove and replace curb inlets along the project area and connect them to the existing storm sewer system. In order to utilize a majority of the existing system and minimize the construction within the roadway, new inlets will connect to existing inlets when possible. These existing inlets will be modified into manholes and the existing connections to the trunk line will remain. The existing main trunk-line, from Laporte Street northward to the Poudre River, will be used to pass the accumulated flow collected from North College Avenue, parts of Laporte Street, Jefferson Street, Maple Street, and Cherry Street. An area inlet is proposed to the northeast of Willow Street to address current ponding problems to the west of the BNSF railroad tracks. The condition of the existing system will be analyzed in the next stage of design to verify that it is adequate. If the capacity or condition warrants upgrading, then the existing system will be upgraded.

North College Avenue is a principal north-south arterial within the City of Fort Collins street network and carries between 18,000 to 29,000 vehicles per day (vpd), with year 2020 projections of 28,000

Pedestrian and bicycle use is growing. Access to the Poudre Trail, just north of Cherry Street, is a Jefferson Street and North College Avenue, north of Jefferson Street, is a designated truck route

NW/SE direction, south of Cherry Street. This line serves a single customer, the cement plant, and









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CONCEPTUAL DESIGN – VISION PLAN (CONTINUED) IV.

Roadway/Traffic Circulation

North College Avenue will always serve a variety of vehicle types, from passenger cars to recreational vehicles and delivery vans to large trucks. As a result, the Vision Plan includes roadway laneage features to sufficiently accommodate the anticipated year 2020 traffic volumes.

North College Avenue will include the following roadway features:

- A single westbound free-flow right turn lane from Jefferson Street onto North College Avenue.
- Three northbound through lanes on North College Avenue from Jefferson Street to the former power plant entrance.
- A single southbound left turn lane from North College Avenue onto Jefferson Street.
- Eastbound double left turn lanes from Cherry Street onto North College Avenue.
- Separate westbound lanes for left turn and through movements from Jefferson Street.

The northbound left turn movement onto Cherry Street will be closed in the future based on anticipated operational and safety factors.

Pedestrian/Bicyclists/Streetscape Enhancements

Improvements proposed for North College Avenue are based upon a palette of treatments whose application depends upon the conditions in any given area. The factors that dictate their usage include availability of right-of-way and potential for right-of-way acquisition, an 'urban' or 'open' character as defined by adjacent land use and proximity to Old Town, and on requirements for pedestrian and bicycle facilities. The following streetscape features are included in the vision plan:

- 15' Urban Section with 8' Off-Street Bike Path The 15' urban section is intended to carry the character of the current sidewalk treatments utilized in Old Town northward on North College Avenue. In order to provide for bicyclist safety, an off-street bike path composed of colored concrete is shown. A combination of concrete, colored concrete and special paying define the sidewalk itself, and are also used to create special corner treatments at street crossings. A concrete band in addition to signage will delineate the bicycle path from the pedestrian sidewalk. Pedestrian lighting and street tree plantings will also help to define this edge. In cases where additional area exists between the 15' paved section and the right-of-way, the paved section will be extended to the right-of-way, or the remainder will be landscaped, depending upon specific site conditions.
- 8' Sidewalk with 7' Tree Lawn and 8' Off-Street Bike Path This treatment is intended for areas that are more 'open' in character, and farther north from Old Town. The pedestrian corridor is expanded to a 23' width, but consists of an 8' concrete sidewalk, and a 7' planting area that separates pedestrians from the 8' off-street bike path.

- 8' Sidewalk with 8' Off-Street Bike Path Where space is limited due to right-of-way constraints, and an off-street bike path is still desired, the 15' urban section with 8' off-street bike path will be reduced to an 8' sidewalk with 8' off-street bike path. A concrete band in addition to signage will delineate the bicycle path from the pedestrian sidewalk. No trees will be planted in these areas due to space constraints.
- 8' Sidewalk with 7' Tree Lawn This treatment is intended for areas that are more 'open' in character, • and farther north from Old Town. The pedestrian corridor remains a 15' width, but consists of an 8' concrete sidewalk with a 7' planting area that separates pedestrians from the street.
- 10' Path with 7' Tree Lawn Similar to the 8' sidewalk, this treatment is intended for areas that are more 'open' in character, and farther north from Old Town. Increasing the width of the sidewalk to 10' functions to create a shared path for pedestrians and recreational cyclists, allowing for a connection between Old Town and the recreational multi-use path along the Poudre River.
- 8' Attached Sidewalk In areas where right-of-way or physical conditions prohibit wider pedestrian corridors, an 8' attached concrete sidewalk will be utilized.
- Railroad Crossings Pedestrian and bicycle tracks at the railroad crossings are designed for a perpendicular path intersection with the tracks. Proper sight-lines for vehicular, pedestrian and bicycle traffic are essential, and any tree plantings need to take this into account. Plantings will be a combination of turf, groundcover and/or low shrubs.
- Median Medians with a width exceeding 3' between splash plates will be planted with trees and shrubs.
- Enhanced Crosswalk Crosswalks along North College Avenue will be a 12' width, consisting of a field of colored concrete bordered by colored, stamped concrete.
- Special Paving at Corners At designated corners (usually in association with the 15' urban character sidewalk) special paving, concrete bands and colored concrete will be used to create corner treatments. In addition to surface treatments, there is the potential for extra planting, raised planter boxes and pedestrian benches.

All corners in the project are provided with accessible ramps that match the design of the special corner paving, with paver infill and concrete banding. Should conditions change in regards to development or available right-of-way, these can be expanded to provide the larger nodes previously described.









CONCEPTUAL DESIGN – VISION PLAN (CONTINUED) IV.

- Pedestrian Connection to Recreational Trail at the Poudre River An accessible path to the recreational trail will be provided. Provision is made for the use of retaining walls to minimize impact within this area, especially regarding the existing historic grotto at the former power plant site. To anticipate pedestrians crossing the steeper landscaped areas at the south end of the bridge in order to reach the recreational trail, these areas will be fenced at the top, and designed to minimize erosion caused by pedestrians. Provision of landscape boulders will provide an informal method of hardening the slope to traffic, and contributing to an aesthetic planting area and for pedestrian safety.
- Treatment Additions Throughout the corridor there are areas where additional space is available between the proposed improvements and the right-of-way boundary. If this space is greater than 3' in width, they should be planted appropriately to provide a vegetation buffer. If this space is less than 3' in width, the paving treatment adjacent to it should be extended to the building face or edge of surfacing.

Access Management

Access management techniques have been employed with this Vision Plan to complement those established in the access management agreement signed in April of 2000. Some of the access management features include:

- Medians in North College Avenue,
- Consolidated and delineated driveway access. •
- An alley connecting Maple Street and Cherry Street, and
- A cul-de-sac in the northeast guadrant of North College Avenue and Willow Street to improve vehicle circulation for affected businesses.

Right-of-Way

The existing right-of-way (R.O.W.) along North College Avenue varies from a minimum of 92 feet to a maximum of 167 feet based upon Geographic Information System mapping. Several areas have been identified for R.O.W. purchase and/or acquiring pedestrian access easements due to either roadway widening and/or the addition of sidewalk and bike paths. The anticipated R.O.W. needs for the Vision Plan are presented in Figure 2 and are tabulated in Table 2.

Table 2. Phase 1 Required Right-of-Way and/or Easements

Parcel	Business Owner	Area (SF)	Comment		
1	1 A Classic Touch 410.0		Sidewalk at northeast corner of Jefferson/College		
2 A Classic Touch 25.0			Sidewalk at the UPRR crossing		
3	Schraders Country Store	970.0	Sidewalk along North College at the UPRR crossing		
4	Just Office Furniture	405.0	Sidewalk at the northeast corner of Willow/College		
5 Rapid Lube		1,305.0	Sidewalk along North College at the BNSF crossing		
6	J&M Precision Auto	10,075.0	Entire parcel at the northwest corner of Cherry/College		
7	City of Fort Collins	7,855.0	Entire parcel between parcel 6 & 8-existing City property		
8 J&M Precision Auto 1,100.0 Sidewalk along North College at the BNSF crossing					
Total of Right-of-Way Purchase = 14,290 * Approximate Cost = \$118,000 *					
* Excludes City-Owned Property (Parcel 7)					

Based upon these costs, the City must purchase approximately 14,290 square feet of land for the project at an anticipated total cost of about \$118,000.

There are several additional locations along the corridor where R.O.W. acquisition and/or easement negotiation may be required. These areas have not been tabulated above. Resolution will be addressed in the next step of project development:

- First, R.O.W. purchases from the Burlington Northern Santa Fe (BNSF) railroad and the Union Pacific Railroad (UPRR) for sidewalk crossings are not required.
- Second, the proposed alley that connects Maple Street and Cherry Street falls within a 20' easement already owned by the City.
- Third, the City's Parks Department currently owns the land for the cul-de-sac in the northeast guadrant of North College Avenue and Willow Street, and has agreed to the proposed plan.
- Finally, the bicycle and pedestrian connections to the Poudre River Trail are on City owned property.

Additional easements may be required along the corridor to provide for construction activities and permanent slopes. These areas will be determined during the preliminary and final design phases. It is recommended that, as a part of preliminary design, title searches of the properties within the corridor be performed to verify limits of existing R.O.W. and to determine actual R.O.W. acquisitions.

V. **OPINION OF PROBABLE COST – VISION PLAN**

A conceptual opinion of probable cost was prepared for the Vision Plan using unit cost data from the CDOT 2000 Cost Data Manual and on input from City of Fort Collins staff. Due to the conceptual nature of the project, several items were quantified as percentage items of the total cost of construction, including signing and striping, construction signing and traffic control, mobilization, and utility relocations. A 20% contingency was included to cover miscellaneous items that were not guantified and for unknown issues that may arise during preliminary and final design. Other costs include 18% for design and construction engineering, 1% for Art in Public Places along the corridor, and anticipated R.O.W. costs.











The conceptual opinion of probable cost for the Vision Plan is presented in Table 3. This estimate includes the costs for concrete pavement in the southbound left turn lane at Jefferson Street, eastbound receiving lanes on Jefferson Street, and the westbound right turn lane from Jefferson Street, as well as inside the Jefferson Street and Cherry Street intersections. A 2-inch mill and overlay from Jefferson Street to the former power plant entrance is also included. The total anticipated cost is \$4,452,000, which is approximately \$1,655,000 greater than the available budget for the project. In order to meet the available budget, a "fiscally constrained" conceptual design was developed that would still provide a cohesive project and that would fit the goals of the ballot initiative. The Vision Plan elements not included on the Fiscally Constrained Plan could be added in the future as a separate project when additional funding becomes available.

Table 3. Conceptual Opinion of Probable Cost – Phase 1 Vision Plan

Item Description	Unit	Quantity	Unit Cost	Total
Removal of Drainage Structure	EACH	15.0	\$500.00	\$7,500
Removal of Median Cover	SY	450.0	\$8.00	\$3,600
Removal of Asphalt Mat	SY	5755.0	\$3.00	\$17,265
Removal of Asphalt Mat (Transition Pavement)	SY	870.0	\$3.00	\$2,610
Removal of Asphalt Mat (Planing)	SY	10690.0	\$2.00	\$21,380
Earthwork	CY	6625.0	\$20.00	\$132,500
Hot Bituminous Pavement (8" widening)	TONS	2115.0	\$55.00	\$116,325
Hot Bituminous Pavement (2' wide 8" patch for transition)	TONS	385.0	\$55.00	\$21,175
Hot Bituminous Pavement (2" overlay)	TONS	1175.0	\$55.00	\$64,625
Concrete Pavement (10 Inch)	SY	3405.0	\$70.00	\$238,350
Concrete Pavement (6 Inch) (Alley)	SY	755.0	\$50.00	\$37,750
Gutter Type 2 (4 Foot)	LF	425.0	\$17.00	\$7,225
Concrete Pavement (6 Inch) (Driveways)	SY	790.0	\$50.00	\$39,500
Curb and Gutter Type 2 Sec IB	LF	530.0	\$12.00	\$6,360
Curb and Gutter Type 2 Sec IIB	LF	4600.0	\$16.00	\$73,600
Curb and Gutter Type 4 Sec B	LF	1795.0	\$17.00	\$30,515
Concrete Sidewalk	SF	27745.0	\$3.75	\$104,044
Colored Concrete Bike Path	SF	10800.0	\$4.50	\$48,600
8" Colored Concrete Band	SF	560.0	\$7.00	\$3,920
Street Corner Paving	SF	1860.0	\$12.00	\$22,320
Street Corner Concrete Bands	SF	890.0	\$7.00	\$6,230
Poudre Bike Connection Pavement	SF	1600.0	\$3.75	\$6,000
Poudre Bike Connection Walls	LF	60.0	\$200.00	\$12,000
Poudre Bike Connection Fencing	LF	80.0	\$12.00	\$960
Landscape Boulders (pedestrian connections to Poudre)	TONS	25.0	\$220.00	\$5,500
Enhanced Crosswalk Stamped Colored Concrete	SF	2485.0	\$14.00	\$34,790
Enhanced Crosswalk Concrete Field	SF	5635.0	\$10.00	\$56,350
Median Splash Plate	SF	3425.0	\$7.00	\$23,975
Shrub Bed	SF	11965.0	\$4.00	\$47,860
Ornamental Tree	EACH	15.0	\$400.00	\$6,000
Street Tree	EACH	45.0	\$450.00	\$20,250
Tree Grate	EACH	15.0	\$1,300.00	\$19,500









North College Avenue Improvements – Phase 1

	Quantity	Unit Cost	Total
	165.0	\$7.00	\$1,155
	900.0	\$12.00	\$10,800
	6900.0	\$0.50	\$3,450
	1.0	\$131,500.00	\$131,500
-1	17.0	\$4,500.00	\$76,500
-1	1.0	\$3,000.00	\$3,000
-	2.0	\$2,000.00	\$4,000
-1	6.0	\$1,000.00	\$6,000
	710.0	\$40.00	\$28,400
-1	27.0	\$3,200.00	\$86,400
-1	10.0	\$3,000.00	\$30,000
	1.0	\$312,500.00	\$312,500
	120.0	\$800.00	\$96,000
	40.0	\$800.00	\$32,000
-1	1.0	\$184,000.00	\$184,000
-1	1.0	\$206,000.00	\$206,000
		(A)	\$2,450,284
	2.00%	of A	\$49,006
		Subtotal (B)	\$2,499,290
	10.00%	of B	\$249,929
	1	Subtotal (C)	\$2,749,219
	5.00%	of C	\$137,461
	1	(CBI)	\$2,886,680
			\$118,000
	2.00%	of CBI	\$57,734
	20.00%	of CBI	\$577,336
	1	(CI)	\$3,639,750
	10.00%	of CI	\$363,975
	8.00%	of CI	\$291,180
			\$655,155
		(RC)	\$4,295,000
			\$24,000
			\$48,000
			\$48,000 \$20,000
			\$20,000



VI. CONCEPTUAL DESIGN - FISCALLY CONSTRAINED PLAN

The Fiscally Constrained Plan created for Phase 1 of the North College Improvements project is one that provides for the goals of the original scope, yet at a reduced scale to meet the currently available project budget. Any modifications of the ultimate design have been proposed in a phased manner, allowing for the eventual realization of the complete Vision Plan. The Fiscally Constrained Plan is primarily the same as the Vision Plan between Jefferson Street and Cherry Street. North of Cherry Street, three key areas were found that would eliminate a majority of the \$1,655,000 in excess cost:

- The first key area is at the BNSF railroad crossing. The cost incurred by replacing and installing new railroad gating and signals for a wider roadway section as proposed in the Vision Plan is approximately \$700,000 alone. An alignment modification was made such that North College Avenue transitions to the existing roadway alignment at the railroad crossing, thereby allowing the existing gating to remain in place.
- The second key area is at the cul-de-sac parking area at the northeast quadrant of North College Avenue and Willow Street. An alternative circulation driveway should still be constructed; however, parking and amenities such as sidewalk and curb and gutter are not necessary at this time.
- The third key area is between the former power plant entrance and the Poudre River Bridge. Sidewalk currently exists on both sides of North College Avenue in this location, and the proposed streetscape improvements that extend the "open" character of the project to the Poudre River Bridge are not necessary at this time.

Important features of the Fiscally Constrained Plan that <u>differ</u> from the Vision Plan include the following (see Figure 3):

- At Willow Street, the 3rd northbound lane is striped as an exclusive right turn lane, thereby requiring northbound through vehicles from Jefferson Street to merge before the Willow Street/Cherry Street intersection.
- North of the Cherry Street/Willow Street intersection, the alignment is slightly modified to meet the
 existing roadway alignment at the railroad using guidelines from the AASHTO Policy on Geometric
 Design of Highways and Streets discussion on the design of low-speed urban streets. This means that
 the west curb line, sidewalk, and the median between Cherry Street and the BNSF crossing are
 different from the Vision Plan.
- There is no new median to the north of the BNSF crossing.
- The cul-de-sac in the northeast quadrant of North College Avenue and Willow Street has been modified to a 24' wide asphalt driveway for business access.
- All construction ends at the former power plant access and existing conditions will remain north of that location. The exception to this is creating an accessible connection from the existing sidewalk adjacent to the former power plant building to the recreational path along the Poudre River for both cyclists and pedestrians.

The east curb line and sidewalk from Cherry Street to the former power plant entrance can be constructed in the ultimate location so that no modifications will need to be made in the future when the remainder of the Vision Plan is constructed. A separate opinion of probable cost was prepared for the Fiscally Constrained Plan and is presented in Table 4. The right-of-way impacts for both the Vision Plan and the Fiscally Constrained Plan are the same. This estimate reflects minimum pavement reconstruction, eliminating concrete pavement in the southbound left turn lane and eastbound receiving lanes at Jefferson Street, and eliminating a 2-inch mill and overlay from Jefferson Street to the former power plant entrance. Costs for concrete pavement at the Jefferson Street and Cherry Street intersections and in the westbound right turn lane are included. The total anticipated cost of the Fiscally Constrained Plan is \$3,201,000.

If sufficient additional funding can be obtained, it is strongly recommended that construction include concrete pavement in the southbound left turn lane and eastbound receiving lanes at Jefferson Street, and a 2-inch mill and overlay from Jefferson Street to the former power plant entrance to minimize future maintenance issues and to provide a smooth finished roadway. An additional \$137,000 and \$147,000 is required for the concrete lanes and the mill and overlay, respectively, a total of \$284,000.

The anticipated cost of the Fiscally Constrained Plan still exceeds the available budget by approximately 14.4%. This conceptual cost estimate will be refined as the project moves forward through the preliminary and final engineering design phases and may result in some cost savings. The City recognizes the budget shortfall, and has identified potential sources of additional funding for the project, including possible surplus CMAQ and BCC funds from other projects within the City. Furthermore, CDOT's records indicate that North College Avenue is scheduled for maintenance improvements in 2004, suggesting state maintenance funds may be available for pavement rehabilitation in the same time frame as construction of the project. The cost estimate presented is at a conceptual planning level. Once costs are refined in the preliminary design process, the amount of additional funds required for construction can be determined.

Figure 4 illustrates perspective views of existing and proposed conditions of the Vision and Fiscally Constrained Plans.

















North College Avenue Improvements – Phase 1





Figure 4. Perspective Sketches





FISCALLY CONSTRAINED PLAN VIEW NORTH ON COLLEGE AVE. AT JEFFERSON ST.





EXISTING

VISION AND FISCALLY CONSTRAINED PLANS VIEW SOUTH ON COLLEGE AVE. AT MAPLE ST.

EXISTING





VISION PLAN AND FISCALLY CONSTRAINED PLANS VIEW NORTH TO RAILROAD TRACKS



VISION PLAN VIEW SOUTH ON C

VISION PLAN VIEW NORTH ON COLLEGE AVE. AT JEFFERSON ST.







EXISTING



VIEW SOUTH ON COLLEGE AVE. AT BRIDGE



VI. CONCEPTUAL DESIGN – FISCALLY CONSTRAINED PLAN (CONTINUED)

Table 4. Conceptual Opinion of Probable Cost – Phase 1 Fiscally Constrained Plan

Item Description	Unit	Quantity	Unit Cost	Total
Removal of Drainage Structure	EACH	14.0	\$500.00	\$7,000
Removal of Median Cover	SY	425.0	\$8.00	\$3,400
Removal of Asphalt Mat	SY	4580.0	\$3.00	\$13,740
Removal of Asphalt Mat (Transition Pavement)	SY	870.0	\$3.00	\$2,610
Removal of Asphalt Mat (Planing)(Transition Pavement)	SY	1905.0	\$2.00	\$3,810
Earthwork	CY	4330.0	\$20.00	\$86,600
Hot Bituminous Pavement (8" widening)	TONS	1105.0	\$55.00	\$60,775
Hot Bituminous Pavement (2' wide 8" patch for transition)	TONS	385.0	\$55.00	\$21,175
Hot Bituminous Pavement (2" overlay)(Transition Pavement)	TONS	210.0	\$55.00	\$11,550
Concrete Pavement (10 Inch)	SY	2415.0	\$70.00	\$169,050
Concrete Pavement (6 Inch) (Alley)	SY	755.0	\$50.00	\$37,750
Gutter Type 2 (4 Foot)	LF	425.0	\$17.00	\$7,225
Concrete Pavement (6 Inch) (Driveways)	SY	745.0	\$50.00	\$37,250
Curb and Gutter Type 2 Sec IB	LF	530.0	\$12.00	\$6,360
Curb and Gutter Type 2 Sec IIB	LF	3370.0	\$16.00	\$53,920
Curb and Gutter Type 4 Sec B	LF	1455.0	\$17.00	\$24,735
Concrete Sidewalk	SF	16215.0	\$3.75	\$60,806
Colored Concrete Bike Path	SF	10800.0	\$4.50	\$48,600
8" Colored Concrete Band	SF	560.0	\$7.00	\$3,920
Street Corner Paving	SF	1860.0	\$12.00	\$22,320
Street Corner Concrete Bands	SF	890.0	\$7.00	\$6,230
Poudre Bike Connection Pavement	SF	1600.0	\$3.75	\$6,000
Poudre Bike Connection Walls	LF	60.0	\$200.00	\$12,000
Poudre Bike Connection Fencing	LF	80.0	\$12.00	\$960
Landscape Boulders (pedestrian connections to Poudre)	TONS	25.0	\$220.00	\$5,500
Enhanced Crosswalk Stamped Colored Concrete	SF	2485.0	\$14.00	\$34,790
Enhanced Crosswalk Concrete Field	SF	5635.0	\$10.00	\$56,350
Median Splash Plate	SF	2870.0	\$7.00	\$20,090
Shrub Bed	SF	10815.0	\$4.00	\$43,260
Ornamental Tree	EACH	12.0	\$400.00	\$4,800
Street Tree	EACH	35.0	\$450.00	\$15,750
Tree Grate	EACH	15.0	\$1,300.00	\$19,500
Tree Grate Concrete Surround	SF	165.0	\$7.00	\$1,155
Paving Field at Tree Grate	SF	900.0	\$12.00	\$10,800
Irrigated Tree Lawn	SF	4100.0	\$0.50	\$2,050
Irrigation	LS	1.0	\$126,500.00	\$126,500
Inlet Type R	EACH	15.0	\$4,500.00	\$67,500
Inlet Type C	EACH	1.0	\$3,000.00	\$3,000
Manhole (Slab Base)	EACH	2.0	\$2,000.00	\$4,000
Modified Inlet to Manhole	EACH	6.0	\$1,000.00	\$6,000

Item Description	Unit	Quantity	Unit Cost	Total
Reinforced Concrete Pipe	LF	670.0	\$40.00	\$26,800
Pedestrian Lighting	EACH	27.0	\$3,200.00	\$86,400
Street Lighting	EACH	10.0	\$3,000.00	\$30,000
Traffic Signalization (includes 25% for conduit)	LS	1.0	\$312,500.00	\$312,500
Rubber Railroad Pad (BNSF)	LF	120.0	\$800.00	\$96,000
Concrete Railroad Pad (UPRR)	LF	40.0	\$800.00	\$32,000
Railroad flashers & gates (2 lanes) (BNSF)	EACH	0.0	\$184,000.00	\$0
Railroad cantilever & gates (3 lanes) (BNSF)	EACH	0.0	\$206,000.00	\$0
TOTAL OF BID ITEMS			(A)	\$1,712,531
Signing and Striping		2.00%	of A	\$34,251
			Subtotal (B)	\$1,746,782
Construction Signing and Traffic Control	of B	\$174,678		
			Subtotal (C)	\$1,921,460
Mobilization		5.00%	of C	\$96,073
TOTAL COST OF CONSTRUCTION BID ITEMS			(CBI)	\$2,017,533
Right-of-Way (14,290 SF)				\$118,000
Utilities		2.00%	of CBI	\$40,351
Contingencies & Misc. Items		20.00%	of CBI	\$403,507
TOTAL OF CONSTRUCTION ITEMS			(CI)	\$2,579,391
Construction and Design Engineering Costs				
Construction Engineering		10.00%	of CI	\$257,939
Design Engineering		8.00%	of CI	\$206,351
Subtotal Engineering Costs				\$464,290
TOTAL ROADWAY COSTS			(RC)	\$3,044,000
Art in Public Places (1% of BCC construction money)				\$24,000
Real Estate, Appraisal, and Legal Services				
Stormwater Patching				
Engineering Design (In-House)				
Engineering Construction Management (6 months)				\$25,000
TOTAL PROJECT COSTS				\$3,201,000

Cost Comparison

Plan-Budget	Dollar Amount	Dollar Amount Over Budget	Percent Over Budget
Vision Plan	\$4,452,000	\$1,655,000	59.2%
Fiscally Constrained Plan	\$3,201,000	\$404,000	14.4%
Project Budget	\$2,797,000		







North College Avenue Improvements – Phase 1



ALLOCATION OF FUNDING VII.

As discussed previously, funding of this Fiscally Constrained Phase 1 construction will come from two principal sources - Congestion Mitigation and Air Quality (federal funding through CDOT) and Building Community Choices funds (City of Fort Collins). Appropriation of these funds comes with conditions that they be used for specific applications:

Congestion Mitigation and Air Quality (CMAQ)

CMAQ funding is limited to construction that contributes to air quality improvements including the development of alternative modes of transportation such as transit, bus, commuter rail, bicycle, etc. This project's application of these requirements would be met through the bicycle/pedestrian facilities that might include such items as:

- Extension of railroad pads at the BNSF and the UPRR for perpendicular pedestrian/bicycle crossings.
- The Poudre River Trail bicycle path connections.
- The construction of sidewalks and bike paths (including pedestrian lights, curb ramps, crosswalks or other facilities).
- The construction of curb and gutter that defines the edge of the bicycle and pedestrian facilities.

Building Community Choices

The construction of all remaining improvements proposed in the Fiscally Constrained Plan that are not funded with CMAQ monies will be funded with local Building Community Choices funds.

Remainder of the Vision Plan

A future phase of construction that would complete the remaining pieces of the Vision Plan is recommended as funding becomes available. Future traffic demands are expected to necessitate the extension of the third northbound through lane at the Cherry Street/Willow Street intersection, to the former power plant entrance as proposed in the Vision Plan. This would require the roadway to be widened at the BNSF railroad crossing. The east curb line and sidewalk would be constructed in the ultimate location in the Fiscally Constrained Plan, so no modifications will be necessary along the east curb line. The following improvements will be necessary to complete the Vision Plan:

- Modifications to the west curb line, sidewalk, and median between Cherry Street and the BNSF crossing.
- A new median to the north of the BNSF crossing.
- The installation of new railroad gating and signals at the BNSF railroad. •
- Improvements to the circulator access driveway in the northeast guadrant of North College Avenue and Willow Street to provide additional parking. This parking area would not only serve the adjacent businesses, but also the Aztlan Recreation Center and the northern downtown area.

It is estimated that the construction of the remainder of the Vision Plan would require an additional \$1,251,000 (in 2002 dollars) to complete.

VIII. DESIGN ISSUES

The following list of design issues will require special attention during the preliminary and final design phases of this project.

- Vehicle access movements at A Classic Touch- Shared access for A Classic Touch and the public parking lot along Jefferson Street is proposed. Specific modifications to the parking lot to allow for shared access and grading of the area between A Classic Touch and the parking lot need to be addressed in the next phase of design. Access to the back of A Classic Touch will need to be available in this same area.
- Urban design at A Classic Touch Currently the area available for redevelopment surrounding A Classic Touch is limited relative to right-of-way availability due to the historic nature of the building. This site is currently limited to a shared-use sidewalk that transitions into an off-street bike path and sidewalk to the north, eventually becoming the 15' urban sidewalk with an 8' off-street bike path beyond the railroad tracks. If additional right-of-way can be secured, the pedestrian area to the north and south of the building can be expanded to accommodate a larger pedestrian cross-section as well as tree planting (which is currently precluded due to bicycle/pedestrian usage in the narrow area).
- Poudre Trail Connection- The pedestrian and bicycle connections to the Poudre Trail fall within the floodplain limits. It will be necessary to design both of these improvements to meet the City of Fort Collins floodplain requirements. In addition, the bicycle path is currently proposed to wind through the grotto and next to the former power plant building. A more detailed look at the grades and impacts of the bicycle connection should be completed given the historical significance of the grotto.

Further details and approximate limits of roadway, urban design, and pavement improvements for Phase 1 of the North College Avenue Improvements project are presented in the following set of conceptual design plans.









INDEX OF SHEETS

SHEET NO.	DWG. NO.	DESCRIPTION
1	ΠL01	TITLE SHEET
2-4	TYP-01 TO TYP-03	TYPICAL SECTIONS
5-11	PLN-1 TO PLN-7	ROADWAY PLANS
12-15	DR-1 TO DR-4	DRAINAGE PLANS
16-21	SSS-1 TO SSS-6	EXISTING SIGNING AND STRIPING PLANS
22-27	SSS-7 TO SSS-12	PROPOSED SIGNING AND STRIPING PLANS
28-29	SSS-13 TO SSS-14	SIGNAL PLANS
30-32	DET-1 TO DET-3	STREETSCAPE DETAILS
3335	T-1 TO T-3	TRUCK TURNING MOVEMENTS



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EXISTING OLD TOWN BENCH AND LITTER RECEPTACLE





EXISTING OLD TOWN PEDESTRIAN REFUGE IN MEDIAN WITH 2'X2' SCORED CONCRETE.



EXISTING OLD TOWN MEDIAN NOSE WITH 8"X8" CONCRETE PAVERS



EXISTING OLD TOWN PEDESTRIAN REFUGE IN MEDIAN



EXISTING OLD TOWN CORNER DETAIL SHOWING PAVING PATTERNS AND CONCRETE WORK FOR RADIAL APPLICATION.



EXISTING OLD TOWN BULB-OUT SHOWING PAVING PATTERNS AND PLANTING AREAS.



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EXISTING OLD TOWN BULB-OUT SHOWING PAVING PATTERNS AND TREE GRATE.



EXISTING OLD TOWN RAMP SHOWING PAVING PATTERN, CONCRETE WORK AND STREET NAME



EXISTING OLD TOWN TRAFFIC ISLAND PAVED WITH TREES AND TREE GRATES.



EXISTING OLD TOWN RAMP SHOWING PAVING PATTERN, CONCRETE WORK AND STREET NAME







