

CR 38 - This four-legged intersection is currently unsignalized (see Figure A-12). CR 36 intersects US 85 at an oblique angle (50 degrees). It will be realigned to an intersection angle of 75 degrees or more when traffic volumes increase to a level that safety problems can be anticipated (*long-term priority*).

CR 38.5/CR 29 - This four-legged intersection is currently unsignalized (see Figure A-13). CR 29 intersects US 85 at an oblique angle (50 degrees), and at the same point, CR 38.5 intersects from the west. This intersection should be simplified before higher traffic volumes complicate operations (*long-term priority*). The west side access from CR 29 and CR 38.5 will be closed, but the connection between these roads will remain. CR 29 on the east side will become a RIRO with the closure of the median.

Rural Accesses - Between CR 36 and CR 29/CR 38.5, there are two median openings which serve fields and residences. These median openings will be closed over time (except where the same owner has property on both sides of US 85) as the public road intersections to the north and south are improved to adequate standards.

Gilcrest (CR 40 to CR 42)

This section of US 85 serves the developed portions of the Town of Gilcrest, which is a member of the UFRRPC. No changes in land use are specifically planned, but there are existing operational problems which are addressed in the Plan. Traffic volumes will increase on all intersecting roadways because of continued growth in the community.

There are currently three intersections with US 85 in the developed portion of Gilcrest: Elm Street, Main Street, and CR 31. Railroad Street is the frontage road on the west side of US 85 through Gilcrest. These two roads are very close together and the intersections are dangerous because southbound US 85 traffic can turn onto Railroad Street at a relatively high speed (30 mph or more). In addition, the CR 31 intersection is used by many students from Valley View High School, and the oblique angle for left turn movements to northbound US 85 is unsafe. In the future, this situation will get worse as traffic volumes increase, and signalization of any of these intersections along US 85 would be very complicated. To rectify this situation, the Plan will consolidate access to US 85 at Elm Street and CR 42, which are proposed to be signalized. The proposed geometry will be simplified (particularly at Elm Street) to reduce confusion and improve safety at these locations. The intersection at Main Street will be closed, and the median will be closed at CR 31 to create a RIRO intersection.

CR 40 - This four-legged intersection is currently unsignalized (see Figure A-13). CR 40 intersects US 85 at an oblique angle (50 degrees). It will be realigned to an intersection angle of 75 degrees or more when traffic volumes increase to a level that safety problems can be anticipated (*long-term priority*). In addition, the frontage road (Railroad Street) on the west side will be relocated farther away from US 85 to simplify operations at each intersection. The east side intersection cannot be shifted to any great extent because of its proximity to the UPRR tracks.

Elm Street - This four-legged intersection is currently unsignalized (see Figure A-13). Elm Street intersects US 85 at an oblique angle (50 degrees). The intersection with US 85 will be realigned to an intersection angle of 75 degrees or more. Elm Street should be paved north to at least Main Street. Fifth Street will be paved between Elm Street and Railroad Street so that the frontage road connection at Elm Street can be terminated. South of Elm Street, Railroad Street will end at Fourth Street, (access to existing homes will be maintained). The intersection will be signalized when it is warranted for traffic or safety reasons (*medium priority*). On the east side of US 85, the frontage road is also close to US 85, but the use of the road is less. Gilcrest and CDOT should work together so that future development preserves the opportunity for a better approach to this side of the Elm Street intersection.

Main Street - This four-legged intersection is currently unsignalized (see Figure A-13). This intersection will be closed (*medium priority*). Southbound traffic will be directed to Elm Street, while northbound traffic will use CR 42. The additional traffic on Elm Street, will require that it be paved, at least to the south of Main Street.

CR 31 - This four-legged intersection is currently unsignalized (see Figure A-13). The median of US 85 should be closed (*high priority*) in the near future to address current operational problems. On the west side, CR 31 should be shifted to the northeast into vacant land so that there is more separation between US 85 and Railroad Street to create a safer intersection for southbound US 85 traffic turning onto Railroad Street.

CR 42 - This four-legged intersection is currently unsignalized (see Figure A-14). CR 42 intersects US 85 at an oblique angle (50 degrees). When the median at CR 31 is closed, this will be the primary access from the high school to the north. It will be realigned to an intersection angle of 75 degrees or more (*high priority*). It will also be signalized when it is warranted for traffic or safety reasons.

Rural Accesses - In this section, there is one median opening which serves a field. The median opening will be closed as the public road intersections to the north and south are improved to adequate standards.

CR33/CR 44 to CR 37/CR 48

This is a rural section of US 85 in Weld County between Gilcrest and LaSalle and is part of the UFRRPC area. The primary land use is agriculture, with scattered residences to serve this use. No changes in land use are specifically planned, but minor increases in traffic volumes are expected on the intersecting roadways. As with the section of US 85 south of Gilcrest, the county roads intersect US 85 at an oblique angle (50 degrees).

SH 256/CR 44/CR 33 - These two four-legged intersections are currently unsignalized (see Figure A-14). Both roads intersect US 85 at oblique angles (50 degrees). Because of the close spacing between these intersections, the CR 33 intersection will be closed (*medium priority*). This will eliminate an at-grade railroad crossing in addition to the intersection. CR 33 from SH 256 to the railroad tracks can be vacated. East of the railroad tracks, a new connection from CR 33 will be needed to CR 44. The UPRR has indicated that their right-of-way might be

used for this connection. The CR 256/CR 44 intersection will be realigned to an intersection angle of 75 degrees or more (**high priority**). There has been coordination with Weld County about development on the west side which may help effect the improvement. There is currently a safety problem at this intersection so these improvements should be done as soon as funding can be made available.

CR 35/CR 46 - This four-legged intersection is currently unsignalized (see Figure A-15). Both approaches to US 85 are at right angles. However, the connections between these two county roads are unconventional. This configuration would not be usable for significant levels of traffic. The recommended improvement would be much the same as has been recommended for other oblique angle intersections (**long-term priority**).

CR 37/CR 48 - This four-legged intersection is currently unsignalized (see Figure A-15). It also has a connection of CR 48 to the immediate south. All approaches to US 85 are at right angles. However, the connections between these two county roads are unconventional. This configuration would not be usable for significant levels of traffic. The recommended improvement (**long-term priority**) will create perpendicular approaches. The existing portion of CR 48 parallel to US 85 will become a frontage road.

Field and Residential Accesses - Between CR 44 and CR 48, there are a total of four median openings which serve fields. These median openings will be closed over time as the public road intersections to the north and south are improved to adequate standards.

LaSalle (UPRR Overpass to South Platte River)

US 85 through LaSalle was reconstructed several years ago (1994) to solve drainage problems and improve the roadway cross section. A new concrete street was built which included raised medians from First Avenue north to Fifth Avenue with the provision for on-street parking. There are wide sidewalks on each side with driveways for all access points. The intersection of US 85 and First Avenue is currently signalized. LaSalle is a member of the North Front Range Transportation and Air Quality Planning Council (NFRT & AQPC).

The Access Control Plan does not include any changes to existing street intersections (see Figure A-16). In the future, the capacity of the First Avenue intersection may need to be increased by creating dual left turn lanes on the west approach. This can be accomplished by removing parking for a block. In addition, the Town of LaSalle will work to improve the Sunset Drive intersection. Sunset Drive is a narrow street which intersects US 85 at a 60 degree angle. Future residential development is planned on the southwest side of the town, and traffic from this development will find Sunset Drive the shortest access route. As more traffic uses this intersection, it should be straightened and the frontage road on the west side closed.

Some of the access points along US 85 are no longer used, with chains or parked trailers blocking their use. It would be expensive to permanently close these because the sidewalk would need to be rebuilt. This should be done as necessary to address any safety concerns with their use.

CR 52/CR 394 - This four-legged intersection is currently unsignalized (see Figure A-16). CR 52/CR 394 intersects US 85 at an oblique angle (65 to 70 degrees). This intersection is used by a large number of trucks carrying cattle to a feed lot to the west, and the auxiliary lanes do not have sufficient length. In addition, the grade between US 85 and the at-grade railroad crossing immediately to the east is too steep. This intersection will be realigned to an angle of 75 degrees or more (**medium priority**), and the existing grade and auxiliary lane deficiencies will be addressed at the same time.

Evans (42nd Street to US 34)

This section of US 85 traverses the City of Evans, which is a member of NFRT & AQPC. Commercial establishments have developed on both sides of US 85, and the West Service Road has been built on the west side of US 85 to serve these businesses. There are two signalized and two unsignalized intersections in this section, but there are no access points providing direct property access. No specific changes in land use are planned, but there are existing operational problems which are addressed in the Plan. Traffic volumes will increase on all intersecting roadways because of continued growth in the Evans/Greeley area.

42nd Street - This four-legged intersection is currently unsignalized (see Figure A-17). The traffic volumes on 42nd Street are already sufficient that signalization is warranted (**high priority**). When it is signalized (or as soon afterward as possible), the frontage road immediately west of US 85 should be relocated to the west to eliminate a second signalized intersection adjacent to US 85. West Service Road is the approach from the north and Brantner Road approaches from the south.

39th Street - This four-legged intersection is currently unsignalized (see Figure A-17). The US 85 median will be closed (**high priority**) to create a RIRO intersection on the east side only. The west side approach from West Service Road will be closed entirely.

37th Street - This four-legged intersection is currently signalized (see Figure A-17). Operations at this location are complicated by a second signal serving the West Service Road intersection immediately west of US 85. These two signals must be coordinated and the resulting cycle length during high volume periods is very long. In order to simplify operations, the West Service Road intersection will be closed (**medium to long-term priority**). Traffic on the West Service Road will be directed to St. Vrain Street to the west to access 37th Street. In addition to improving St. Vrain Street north of 37th Street, 36th Street will also be improved and paved.

31st Street - This four-legged intersection is currently signalized (see Figure A-17). A situation very similar to that at 37th Street exists at this intersection in that there is also a second signal serving the West Service Road intersection immediately west of US 85 and a third signal serving the State Street intersection immediately east of US 85. These three signals must be coordinated, and the resulting cycle length during high volume periods is very long. In order to simplify operations, both the West Service Road intersection and the State Street intersection will be closed (**medium to long-term priority**). On the west side of US 85, new frontage road connections will need to be built both north and south of 31st Street. There is

currently undeveloped land on the north side, but the south side will need to wait for redevelopment of the existing mixed commercial area to create the envelope for a new road. On the east side of US 85, a new frontage road intersection will require some business relocations south of 31st Street.

US 34 Interchange - The interchange, which connects US 85 with SH 34, is very complicated and is in need of upgrading. An assessment of potential improvement alternatives will require a separate Feasibility Study and, as such, was considered beyond the scope of this study.

Greeley (22nd Street to CR 66)

The City of Greeley is by far the largest community in Weld County and a member of the NFRT & AQPC. It is the one of the main centers for commercial activity along the North Front Range. This section of US 85 traverses a mixed use area of Greeley, just east of the central business district. There are five signalized and three unsignalized intersections in this section, and one additional access point directly serves a property. Second Avenue lies immediately west of US 85 and serves as a frontage road from 13th Street south. No changes in land use are specifically planned, but there are existing operational problems which are addressed in the Plan. Traffic volumes will increase on all intersecting roadways because of continued growth in the Evans/Greeley area.

22nd Street - This four-legged intersection is currently signalized (see Figure A-18). 2nd Avenue is the frontage road immediately to the west of US 85, and its intersection with 22nd Street is not currently signalized. When traffic increases sufficiently that signalization of this second intersection is warranted for volume or safety reasons, the frontage road should be relocated away from US 85 to simplify operations (***long-term priority***).

18th Street - This four-legged intersection is currently signalized (see Figure A-18). Operations at this location are complicated by a second signal serving the 2nd Avenue intersection (frontage road) immediately west of US 85. As with the two intersections in Evans, these two signals must be coordinated and the resulting cycle length during high volume periods is very long. An overpass will be built at this location, with US 85 being elevated (***long-term priority***). This will eliminate the delays currently experienced at this intersection.

16th Street - This four-legged intersection is currently signalized (see Figure A-18). Operations at this location are also complicated by a second signal serving the 2nd Avenue intersection immediately west of US 85. In order to simplify operations, the 2nd Avenue intersection will be closed (***long-term priority***). From the south, traffic destined to 16th Street will use 18th Street and 3rd Avenue (which must be widened and improved), while traffic from the north will use 15th Street to get to 3rd Avenue.

13th Street - This four-legged intersection is currently unsignalized (see Figure A-18). The US 85 median will be closed (***high priority***) to create a RIRO intersection on both the east and west sides.

8th/5th Streets - These two four-legged intersections are currently signalized (see Figure A-18). Turn arrow indications are currently needed on US 85 at 5th Street (**high priority**). Ultimately, a split-diamond interchange will be built to serve both locations (**long-term priority**). 1st Avenue on the east side will be used as a one-way frontage road northbound between the two cross streets. A new frontage road will be needed on the west side for southbound traffic. Two configurations for the intersection at 5th Street were analyzed. The preferred alternative (see Figure A-18) has shorter travel distance for the primary users, although it will require several business relocations on the east side.

"O" Street - This location is a complicated interchange on the northeast side of Greeley. US 85, 8th Avenue (US 85 Business), and "O" Street all come together. Conventional ramps accommodate the US 85 movements. In 1989, the City of Greeley completed a comprehensive study of this interchange (Final Report, Highway 85/"O" Street Interchange, Alternatives Analysis and Conceptual Design, Turner Collie & Braden, Inc., August 1989). This study called for a three phase improvement program. The first phase was completed within a few years and involved several intersection improvements to improve safety. Ultimately, the plan calls for an overpass structure to carry "O" Street entirely over the US 85 interchange (**medium priority**). Various ramp improvements will also be completed to provide connections for some movements. No additional studies of this location were deemed necessary for the Access Control Plan.

11th Avenue - This is a "T" intersection which is currently unsignalized (see Figure A-20). It intersects US 85 at an oblique angle. This intersection will be closed (**medium priority**), and 11th Avenue will be relocated to the west to intersect with CR 66.

CR 66 to CR 80

This is a rural section of US 85 in Weld County between Greeley and Ault and is part of the UFRRPC area. The Town of Eaton is in this section. Eaton has been working to complete a new Comprehensive Plan which shows areas slated for future growth. The primary land use in the rural area is agriculture, with scattered residences to serve this use. No changes in land use are specifically planned, but increases in traffic volumes are expected on the intersecting roadways. As discussed with previous rural sections of the corridor, all public road intersections will need auxiliary lane improvements to bring them up to State Highway Access Code standards.

CR 66 - This four-legged intersection is currently unsignalized (see Figure A-20). Full protection of the at-grade railroad crossing (crossing gates and automatic lights) will be installed in the near future. It will be signalized when it is warranted for traffic or safety reasons (**medium priority**).

SH 392 (Lucerne) - This four-legged intersection is currently signalized (see Figure A-20). There will be improvements to the auxiliary lanes, as appropriate (**medium priority**).

CR 70 - This four-legged intersection is currently unsignalized (see Figure A-21). There will be improvements to the auxiliary lanes, as appropriate (**medium priority**).

CR 72 - This four-legged intersection is currently unsignalized (see Figure A-21). There will be improvements to the auxiliary lanes, as appropriate (*medium priority*).

Oak Street (Eaton) - Oak Street is a loop road on the southern end of Eaton which has two "T" intersections with US 85, both of which are currently unsignalized (see Figure A-22). The southern intersection is expected to have a fourth leg extending west of US 85 and will be signalized when it is warranted for traffic or safety reasons (*long-term priority*). The northern intersection will be converted to a 3/4 configuration when traffic conditions dictate (*medium priority*).

Collins Street (CR 74) - This four-legged intersection is currently signalized (see Figure A-22). No major changes are anticipated in the future, although auxiliary lane improvements may be necessary in the future as traffic volumes increase.

1st Street - This four-legged intersection is currently unsignalized (see Figure A-22). No major changes are anticipated in the future, although auxiliary lane improvements may be necessary in the future as traffic volumes increase.

2nd Street - This four-legged intersection is currently unsignalized (see Figure A-22). A raised median will be constructed at this intersection, and it will be converted to a RIRO configuration when traffic conditions dictate (*medium priority*).

3rd Street - This "T" intersection is currently unsignalized (see Figure A-22). A raised median will be constructed at this intersection, and it will be converted to a RIRO configuration when traffic conditions dictate (*medium priority*).

4th Street - This "T" intersection is currently unsignalized (see Figure A-22). No major changes are anticipated in the future, although auxiliary lane improvements may be necessary in the future as traffic volumes increase.

5th Street - This four-legged intersection is currently unsignalized (see Figure A-22). No major changes are anticipated in the future, although auxiliary lane improvements may be necessary in the future as traffic volumes increase.

7th Street - This "T" intersection is currently unsignalized (see Figure A-22). The intersection will be converted to a 3/4 configuration when traffic conditions dictate (*medium priority*).

CR 76 - This four-legged intersection is currently unsignalized (see Figure A-22). This intersection will be signalized when it is warranted for traffic or safety reasons (*long-term priority*). As described in the following paragraph, CR 37 traffic will use this intersection in the future.

CR 37 - This "T" intersection is currently unsignalized (see Figure A-22). Full protection of the at-grade railroad crossing (crossing gates and automatic lights) will be installed in the near future. There will be improvements to the auxiliary lanes, as necessary (*medium priority*). At a later date, the intersection and at-grade railroad crossing will be closed and a connection will be built south to CR 76 (*long-term priority*). This will improve safety for both the railroad crossing and the intersection.

CR 78 - This four-legged intersection is currently unsignalized (see Figure A-23). There will be improvements to the auxiliary lanes, as appropriate (*medium priority*).

CR 80 - This four-legged intersection is currently unsignalized (see Figure A-23). There will be improvements to the auxiliary lanes, as appropriate (*medium priority*).

Field and Residential Accesses - In this section, there are a total of 15 median openings that serve residences or field accesses which approach from either one or both sides of US 85. These median openings will be closed over time as the public road intersections to the north and south are improved to adequate standards.

5.2 Cost Estimates

Based on the segment descriptions in the previous section, cost estimates (1999 dollars) were developed for the recommended improvements at public road intersections. Because the recommendations are conceptual at this point, detailed cost estimates could not be determined. Therefore, the following basis was used to develop cost estimates, which are for construction cost only and do not include right-of-way acquisitions or displacements/relocations:

- Interchanges - All recommended interchanges were either a traditional diamond or a single point urban, with the exceptions of 104th Avenue, SH 60 and 5th/8th Street in Greeley. The cost estimate for a diamond interchange that does not require a railroad grade separation is \$12 million, while a railroad grade separation increases the cost estimate to \$15 million. A single point interchange was estimated to cost approximately \$16 million. The cost estimate for the interchange at 104th Avenue is \$30 million, while the cost estimate for the split diamond concept proposed at 5th/8th Street in Greeley is \$18 million. The flyover concept recommended at SH 60 has a cost estimate of \$10 million.
- Grade Separation - The access control plan recommends grade separations at 18th Street and at "O" Street in Greeley. The cost estimate for highway grade separations that require a grade separation of the railroad is \$9 million. If a railroad grade separation is not necessary, then the cost estimate for a highway grade separation is \$6 million.
- Traffic Signals - The estimated cost for a traffic signal on US 85 is \$200,000 and at ramp intersections is \$150,000.

- Railroad Crossings - The estimated cost for automatic railroad crossing protection (gates and lights) is \$150,000.
- Unit Cost of Pavement - The estimated unit cost of pavement for lengthening left turn deceleration lanes is \$7.37 per square foot, while for right turn deceleration/acceleration lanes is \$7.54 per square foot. For any new public road or the realigning of public roads, the unit cost of pavement is estimated to be \$7.45 per square foot.

The cost estimates for access improvements along the corridor are presented in Appendix C. As previously noted, they represent construction cost only and do not include cost for right-of-way acquisitions or displacement/relocations.

Table 3 presents the estimated total cost (in 1999 dollars) for all recommended improvements in the southern section (I-76 to WCR 2), the middle section (WCR 2.5 to WCR 394/WCR 52) and the northern section (Evans to WCR 80) of the corridor. As shown, the total cost of implementing all improvements is estimated to be approximately \$230 million. Improvements in the southern section, at \$112 million, account for almost half of the total cost estimate; improvements in the middle section are approximately \$76.6 million, while improvements in the northern section are approximately \$41.3 million.

Table 3
Total Cost Estimates By Section

Corridor Section	Total Cost Estimate ¹
Southern Section (I-76 to CR 2)	\$ 112.0 million
Middle Section (WCR 2.5 to CR 394/ CR 52)	\$ 76.6 million
Northern Section (Evans to CR 80)	\$ 41.3 million
Entire Corridor (I-76 to CR 80)	\$ 229.9 Million
¹ None of the cost estimates include cost for right-of-way acquisitions or displacement/relocations. All cost estimates in 1999 dollars.	

In the southern section, proposed interchanges at 104th Avenue, 120th Avenue, 136th Avenue, 144th Avenue, Bromley Lane and CR 2 account for \$107 million of the total estimated cost of improvements. The remaining \$5 million are for acceleration/deceleration lanes, signalization, a new frontage road between 104th and 112th Avenues and frontage road improvements in the vicinity of Bromley Lane.

Interchanges at CR 6, 8, and 14.5 and the flyover at SH 60 account for approximately \$48 million of the \$76 million in improvements proposed in the middle section of the corridor. In the Town of Platteville, new roadway construction, traffic signals and improved acceleration/deceleration lanes have an estimated cost of \$7.5 million. The realignment of county roads between Platteville and LaSalle represents another \$7.5 million in proposed improvements. The remaining \$13.1 million in improvements are for a new frontage road on the west side of US 85 between CR 2 and CR 8 and for acceleration / deceleration lanes at public road intersections.

Between Evans and CR 80, \$33 million of the estimated \$41.3 million for proposed improvements in the northern section, are for the 5th/8th Street split diamond interchange and the grade separations at 18th Street and "O" Street. In Evans, realignment of frontage roads at 37th and 31st Streets and signalization of 42nd Street have an estimated cost of \$1.6 million. In Eaton, the access and roadway improvements have an estimated cost of \$1.8 million and include new roadways, signalization, and improved acceleration / decelerations lanes. Improved acceleration / deceleration lanes at public road intersections account for most of the remaining estimated cost for improvements in the northern section of the corridor.