

RESOLUTION ENACTING THE LARIMER COUNTY URBAN AREA STREET STANDARDS AND REPEALING THE 2001 LARIMER COUNTY URBAN AREA STREET STANDARDS

The Petition of the Larimer County Engineering Department to enact the Larimer County Urban Area Street Standards (LCUASS) and to repeal the 2001 Larimer County Urban Area Street Standards has been filed with the Board of County Commissioners of the County of Larimer.

On June 28, 2021, in the County Board Hearing Room of the Larimer County Courthouse, Fort Collins, Colorado and via video conference and in person, the Board of County Commissioners of the County of Larimer (BCC) conducted a public hearing on the Petition. The Board of County Commissioners having heard the testimony and information presented at the hearing and having considered and carefully weighed the same now makes the following findings:

1. The proposed amendments were considered by the Larimer County Planning Commission at a public hearing on May 19, 2021.
2. The Planning Commission recommended that the amendments be adopted as set out in the Planning Commission minutes for May 19, 2021.
3. Notice of this hearing was advertised by posting in the officially designated area at Larimer.org no less than twenty-four hours in advance of the hearing.
4. The Larimer County Urban Area Street Standards (LCUASS) are a comprehensive, urban-level, set of engineering design and construction standards used within the city limits and growth management areas of the Cities of Fort Collins and Loveland. The standards represent a collaborative effort between Larimer County, Fort Collins, and Loveland and allow the entities to implement a consistent set of engineering design standards in the region. They are implemented through intergovernmental agreements between the County and Fort Collins and Loveland. The LCUASS guides the design of both private developments and public engineering capital projects within these areas.
5. Since the original inception of the standards in 2001, there has been revisions and updates in October 2002, 2007, 2013, 2014, and 2016.
6. The general provisions Chapter 1 of the LCUASS (Section 1.6 – Amendments and Revisions to Standards) outlines how changes to the document shall be made. This section describes “Policy Revisions” as major changes that will cause significant increased cost or controversy and describes “Technical Revisions” as minor additions, revisions, and corrections necessary to better conform to current engineering and/or construction standards or practices.
7. The LCUASS state that “Policy Revisions” require a public hearing for each entity. For “Technical Revisions”, the LCUASS allows for the Fort Collins and Loveland Engineer to approve technical changes, without a public hearing process but the Local Entity Engineer

must still report such technical revisions to the Governing Body. However, in the case of unincorporated Larimer County, the Standards state that any revision, whether “policy” or “Technical”, shall become effective only after approval by the Larimer County Board of County Commissioners, following receipt of recommendation from the Larimer County Staff”.

8. REVISION PROCESS:

It has been over 5 years since the last revision to the Standards in 2016, which included mostly technical revisions, and 14 years since the last major revision in 2007. With the changes in industry standards, design tools, software, and jurisdictional policies since the last major update, the partnering jurisdictions decided it was time for a more comprehensive update to reflect these changes and to resolve less substantive items.

The 2021 revision process began in 2019 and has included a representative from each jurisdiction who have met in monthly coordination meetings to review in detail all 24 chapters and associated appendices. All three entities have been gathering public input and have been working with their organizations and technical advisory groups on the changes to ensure accuracy and general support. Because there are many proposed changes throughout the Standards, the team is proposing to repeal the current version and reenact a new version with updated text, figures, and drawings.

9. SUMMARY OF 2021 REVISIONS:

Most of the document applies consistently to all three entities. There are some sections and appendices that only apply to one or more of the entities due to differing policies, requirements, interests and/or viewpoints. Changes to the appendices are proposed as part of this process to reflect the changes made in the main body of the document. Many of the appendices are intended to be for reference only and so they include a note stating “Appendix Forms and Information are for Reference Only. Contact Local Entity Engineer for Original Forms and Current Information.”

A summary of the more substantial proposed revisions is below. The more detailed modifications summary table is in Appendix A. The proposed final versions of the changes to each chapter, appendices, figures, and drawings at the LCUASS website at <https://www.larimer.org/lcuass-adoption>.

10. 2021 REVISION SUMMARY:

Chapter 1 – General Provisions

Technical corrections and text revisions. Allow technical corrections to be made administratively as long as they are not policy related or adding cost. Text revised in Section 1.9.2 to clarify off- site, adjacent, and on-site improvements for the Street Construction Policy. Section 1.9.3.B was re-written to clarify street oversizing and third-party reimbursements for the City of Loveland. Section 1.9.4 was updated for

changes that was approved by City of Fort Collins regarding variances to LOS standards that the City of Loveland would also like to adopt.

Chapter 2 – Submittal and Review Procedures

Technical corrections and text revisions. Text revised in Section 2.2.2 to change the title from Public Improvement Construction Plans to Civil Construction Plans.

Chapter 3 – Information Requirements for Construction Plans

Technical corrections and text revisions. Text revised in Section 3.2.6 to allow electronic PE stamps per Colorado Board of Registration Requirements.

Chapter 4 – Transportation Impact Studies

Removed link volume levels of service (LOS) requirements to be consistent with CDOT, other jurisdictions, and standard practices for traffic impact studies (Loveland only). Section 4.6 revised to allow mitigation that is reasonably related and proportional to impact that is not feasible (or not desired by the Local entity) to address the specific LOS issue. Added Section 4.6.8 Alternative Mitigation Strategies for intersections that do not meet overall level of service standards, and reasonably related and proportional mitigation to address the level of service is not possible or not desired by the Local Entity, an Alternative Mitigation Strategy may be requested and considered. Section 4.6 and 4.6.8 were already adopted by the City of Fort Collins that the City of Loveland would also like to adopt.

Chapter 5 – Soil Investigations and Report

Technical corrections and text revisions. Fill requirements text modified in Section 5.2.1.C to be consistent with industry standard practices.

Chapter 6 – Permits

Technical corrections and text revisions. Text in Section 6.17.A.11 modified to change notification from 24 hours to 48 hours for erosion control inspection. Additionally, text change to specify that the Public Improvements Opinion of Cost are to be signed and stamped by a professional engineer (PE).

Chapter 7 – Street Design and Technical Criteria

Sight distance requirements changed to be consistent with the CDOT State Highway Access Code criteria. Striped buffered bike lane and protected bike lane options on arterial roadways added to the cross-section figures. 5' (min.) sidewalk and 8' (min.) parkway width added to the Fort Collins cross section figures.

Chapter 8 – Intersections

Technical corrections and text revisions. Text in Section 8.2.17 revised to indicate that roundabouts shall be designed in accordance with LCUASS Appendix I.

Chapter 9 – Access Requirements and Design Criteria

Technical corrections and text revisions. Section 9.4.10, change in use updated to be consistent with CDOT criteria (20% or 100 total daily trips).

Chapter 10 – Pavement Design and Report

Technical corrections and text revisions to be consistent with current practices.

Chapter 11 – Structures

Technical corrections and text revisions to be consistent with current practices.

Chapter 12 – Utility Installations

Technical corrections and text revisions to be consistent with current practices. Section 12.2.3 access covers shall be ¼ inch below the finished roadway surface.

Chapter 13 – Street Naming and Addressing

Technical corrections and text revisions to be consistent with current practices. Website addresses updated. Road Naming Criteria title changed in Table 13-1.

Chapter 14 – Traffic Control Devices

Technical corrections and text revisions to be consistent with current practices.

Chapter 15 – Street Lighting

Technical corrections and text revisions to be consistent with current practices. Section 15.1.2 Replaced “\$300 design electrical deposit” text with “required electrical design deposit”.

Chapter 16 – Pedestrian Facilities

Technical corrections and text revisions to be consistent with current practices. Loveland is removing Industrial areas exception for sidewalk facilities unless otherwise approved by the Local Entity Engineer Section 16.2.1.D.

Chapter 17 – Bicycle Facilities

Technical corrections and text revisions to be consistent with current practices. Bicycle detection text added to Section 17.2.4.

Chapter 18 – Neighborhood Traffic Safety

Technical corrections and text revisions to be consistent with current practices.

Chapter 19 – Parking

Technical corrections and text revisions. Figure 19-6 revised where Local Entity Engineer can vary parking setback distance requirements on a case-by-case basis.

Chapter 20 – Public Improvements Cost Estimate

Section 20.2 Remove Option of Cost and reference form.

Chapter 21 – Reserved

Chapter 22 -Materials & Construction Specifications

Technical corrections and text revisions to be consistent with current practices.

Chapter 23 – Inspection and Testing Procedures

Technical corrections and text revisions.

Chapter 24 – Acceptance/Warranty Procedures and Record Drawings

Technical corrections and text revisions. Section 24.3.4 Failure to Complete Repair section modified to require a 15% fee for the value of the work or a \$500 administrative fee whichever is greater.

Chapter 25 – Reconstruction and Repair

Technical corrections and text revisions to be consistent with current practices. Section 25.2.4 Flow fill will be required on soft surface potholing per the discretion of the Local Entity Engineer.

Appendix A - Standard Drawings

The updates to Appendix A include technical revisions and corrections to meet the current industry standards and practices and to be consistent with the changes being made to the various chapters listed within this document.

Appendix B – Forms: Reimbursement, Permits, Licensing

The updates to Appendix B include updated forms to be consistent with current practices.

Appendix C – Fort Collins Streetscape Design Standards

The updates to Appendix C include technical revisions and corrections to meet the current industry standards and practices.

Appendix E – Standard Notes, Approval Blocks, Checklists

The updates to Appendix E include updates to notes, signature blocks, and checklists be consistent with current practices.

Appendix I – Roundabout Design Manual

Technical revisions and corrections to meet the current practices.

Appendix M – ADA Curb Ramps (Loveland Only)

New ADA curb ramp details for Loveland.

11. The LCUASS are the governing road standards within Fort Collins and Loveland City limits as well as their growth management areas. The Standards are also referenced and used as part of other local jurisdictions road standards. Since the Standards are used as a design

tool for many jurisdictions in the region, the LCUASS revision team made efforts to provide the public, and key stakeholders, information on the proposed changes to gather input and comments. The team has not received any negative comments as of the Planning Commission hearing.

12. The public outreach effort on the proposed changes included:

- Information on the proposed changes was kept up to date on the County Engineering website under the LCUASS web page. The “Spot Lights” and “Hot Topics” Sections were used to highlight the effort.
- There was a subscription to the LCUASS where interested parties could receive emails on any updates or notices regarding the Standards. There are currently 174 registered users that include public and private planners & engineers, consultants, developers, and contractors.
- Regular notifications regarding the revisions were emailed to the registered users of the LCUASS with links to the changes and requests for review and comments through email messages or by phone.
- Two Open Houses (in a virtual format due to COVID19 protocols) were held.
- Social Media & Newsletters

13. The internal outreach effort on the proposed changes included a number of formal meetings as outlined in the June 28, 2021, Board of County Commissioners’ Agenda. There were also many internal staff meetings within the County, City of Loveland and Fort Collins to gain input from specific work groups & departments, technical advisory committees, and others that use the document on a day-to-day basis.

14. The revisions are not known to be controversial. The revisions are needed for consistency with current industry standards, federal & State permits, approved master plans, common methodologies, procedures & policies.

15. Adoption of the update is important to maintain the collaborative effort between jurisdictional entities using the Larimer County Urban Area Streets Standards and to implement a consistent set of engineering design standards in the region.

16. Updates to the Larimer County Urban Area Streets Standards is periodically necessary due to changes in national, state and regional references, refinement of design standards, and identification of items needing correction or clarification within the document.

17. The changes are considered to include both policy and technical revisions where any anticipated increased cost to persons affected by the revision are considered to be an acceptable amount necessary in order to provide acceptable levels of service and safety, and to comply with national, state and regional permits, references, requirements, and standards.

RESOLUTION

WHEREAS, the Board of County Commissioners has made its findings upon the Petition and upon the recommendation of the Larimer County Engineering Department and Larimer County Planning Commission, which findings precede this Resolution and are incorporated herein and made a part hereof; and

WHEREAS, the Board of County Commissioners has carefully considered the Petition, information and testimony presented to it and has given the same such weight as in its discretion deems proper, and is now fully advised in the premises;

NOW, THEREFORE BE IT RESOLVED:

That the request to adopt the proposed Larimer County Urban Area Street Standards and to repeal the 2001 Larimer County Urban Area Street Standards in its entirety is hereby approved, effective August 1, 2021.

Dated: 7/13/2021

BOARD OF COUNTY COMMISSIONERS,
LARIMER COUNTY, COLORADO

By: John Kefalas
Chair

ATTEST:

Elyse Keneally
Deputy Clerk to the Board



Date: 6.30.21
Approved as to form:

[Signature]
County Special Counsel

Revisions to the Larimer County Urban Area Street Standards (2021)

Appendix A

Standard Page Item Description/How Changed
2021 LCUASS Revisions Summary:

Section 1.6	Page 1-4	Technical Corrections	Text to allow technical corrections to be made administratively as long as they are not policy related or adding cost
Section 1.7	Page 1-5	Definitions	Bicycle Lane (Protected) and (Buffered) definitions added
Section 1.7	Page 1-13	Civil Construction Plans	Public Improvement Construction Plans text changed to Civil Construction Plans
Section 1.7	Page 1-16	Vehicles Per Hour	VPH - Vehicles Per Hour definition added
Section 1.9.2	Page 1-18	Street Construction Policy	On-site and Off-site requirements text revised to clarify off-site, adjacent, and on-site improvements
Section 1.9.3.B	Page 1-21	Reimbursement Policy (Loveland)	Section re-written to clarify street oversizing and third-party reimbursements. Developer to contact the City Engineer's office in writing to begin the discussion for entering into a Street Oversizing Agreement. the revised section also provides the steps to be taken in the process; sets the expectation for reimbursement timing; and addresses the construction cost adjustments. Other notable changes for this process is the requirement for the Developer to contact the Third Party/Parties to reach a private reimbursement agreement without the City's involvement. If the parties are unable to reach a private agreement the Developer may then contact the City for approval to begin the City's Third Party Reimbursement Agreement process. The process was also listed in order of required occurrence. The Construction Cost adjustments for inflation was changed to the Colorado Department of Transportation Cost Index.
Section 1.9.4	Page 1-25	Variances	Updated for changes that was approved by City of Fort Collins regarding variances to LOS standards that City of Loveland would also like to adopt.
Section 2.1.2	Page 2-1	Text Revision	Move "Construction Traffic Control Plans" to Section 2.2.6 for more appropriate chapter location
Section 2.2.2	Page 2-2	Text Revision	Change title from Public Improvement Construction Plans to Civil Construction Plans.
Section 2.2.3	Page 2-2	Landscape Plans	Revise Section 8 to indicate "Landscape Plans to comply with Local Entity's current requirements"
Section 2.2.11	Page 2-3	Mylar Requirements	Mylar Requirements. "Refer to each Local Entity for the specific mylar requirements"
Section 2.2.12	Page 2-4	Field Change Request Form	Minor Field Change Request Form
Section 2.3.2	Page 2-6	Text Revision	Text removed and instead reference Loveland Municipal Code Title 18
Section 3.1.2	Page 3-1	Text Revision	Change "Final Mylar Drawings" to "Final Drawings" and update to keep up with technology updates.
Section 3.1.3	Page 3-1	Text Revision	Vertical Datum. Change to "Local Entity's Vertical Datum"
Section 3.1.4	Page 3-1	Text Revision	Expiration of Plan Set - Change title to be consistent with what title is decided for Section 2.2.2
Section 3.2.2	Page 3-2	Plan Site Option	22"x34" Plans as an option so 11"x17" can be true half-size
Section 3.2.6	Page 3-3	Electronic PE Stamps	Remove "wet stamped" plan requirements & allow electronic PE stamps per Colorado Board of Registration requirements
Section 3.2.7	Page 3-4	Scale Requirements	Instead of 1"=30' for all Signing & Striping Plans. "Plans should be legible as determined by the Local Entity Engineer
Section 3.2.7	Page 3-4	Scale Requirements	Remove scale requirements for Key Map & Vicinity Map. Instead Key Map & Vicinity Map shall be legible
Section 3.2.12	Page 3-4	Legend of Symbols	Legend of Symbols. Each symbol & line type should be on the cover sheet or each sheet
Section 3.3.1	Page 3-5	Indemnification Statement	Indemnification Statement. For Loveland, use signature block instead
Section 3.3.1.F	Page 3-5	Project Title	Preamble (Project Title) - Layout doesn't follow what FC uses for Utility Plans. Loveland only
Section 3.3.4.A.7	Page 3-9	Text Revision	Add language "Shall conform to local, state, and federal requirements including SB18-167"
Section 3.3.4.D	Page 3-9	Cross-Sections	Cross-Sections - Two sections (e. and f.) should be Loveland only
Section 4.1.4.D	Page 4-3	Text Revision	Removed outdated requirements with text revisions
Section 4.1.5	Page 4-5	Link Volume Worksheets	Removed link volume requirements and link volume worksheets
Section 4.2.1.B.10	Page 4-6	Bike and Ped Connections	Added text. Thompson School District does not generally provide busing for students within 1.5 miles of an elementary school
Section 4.3.3.A	Page 4-10	Link Volumes	Removed link volume requirements for a Master TIS
Section 4.3.3.B	Page 4-11	Link Volumes	Removed link volume requirements for a Full TIS
Section 4.3.3.C	Page 4-12	Link Volumes	Removed link volume requirements for an Intermediate TIS
Section 4.3.4.A	Page 4-12	Text Revision	Removed GDP and PDP text
Section 4.3.4.A	Page 4-13	Link Volumes	Removed link volume requirements
Section 4.3.4.C	Page 4-16	Link Volumes	Removed link volume requirements
Section 4.3.4.D	Page 4-17	Link Volumes	Removed link volume requirements
Section 4.4.2.B.2	Page 4-19	Text Added	Added text. Signal timing parameters for the existing conditions will be the actual signal timing in effect
Section 4.5.1.C	Page 4-24	ACF Link Volumes	Removed link volume requirements
Section 4.5.3.A.2	Page 4-25	Link Congestion	Removed link volume requirements

Revisions to the Larimer County Urban Area Street Standards (2021)

Standard	Page	Item	Description/How Changed
Table 4-1	Page 4-26	Table 4-1	Removed Table 4-1 (Roadway Links) requirements associated with link volumes
Section 4.6	Page 4-33	LOS Mitigation Measures	Section 4.6 revised to allow mitigation that is reasonably related and proportional to impact that is not feasible (or not desired by the Local entity) to address the specific LOS issue. This revision is already adopted by the City of Fort Collins that the City of Loveland would also like to adopt this as well. Adopts Fort Collins' Transportation Demand Management Measures (TDM) also for Loveland City Limits and GMA
Section 4.6.8	Page 4-34	Alternative Mitigation Strategies	Added Section 4.6.8 Alternative Mitigation Strategies for Intersections that do not meet overall level of service standards, and reasonably related and proportional mitigation to address the level of service is not possible or not desired by the Local Entity, an Alternative Mitigation Strategy may be requested and considered. This section is already adopted by the City of Fort Collins that the City of Loveland would also like to adopt.
Section 5.2.1.C	Page 5-2	Fill Requirements	Lower values to have a liquid limit greater than 30 and a plasticity index greater than 15 for higher quality fill for ROW grading. Fort Collins only
Section 5.4.1	Page 5-4	Text Revision	Fix reference error and reference Table 5.1
Section 5.5.1	Page 5-5	Text Revision	change PICPs to "Civil Construction Plans"
Section 5.6.1.B	Page 5-6	Waiver	The requested waiver shall be signed and stamped by a Colorado Professional Engineer
Section 5.6.2.A	Page 5-7	Low Impact Development	Add low impact development systems text; over-watering lawns, subsurface irrigation, etc.
Section 5.6.2.A.9.b	Page 5-7	Drain Lines	Drain lines may be installed in the same trench as the sanitary sewer, except in Loveland city limits
Section 6.1.1.E	Page 6-1	Permits Required	Change to "Construction Management Plans (Fort Collins only)". Also do we want to include F. "Lane rental fees (Fort Collins only)"
Section 6.1.1.F	Page 6-2	Hazardous Materials	Hazardous Materials. Changed wording to "All moving of hazardous materials must be permitted through the State of Colorado"
Section 6.1.1.I	Page 6-2	Delete Section I	Delete section I: Grading, Excavating, and Fill Permit in Loveland
Section 6.1.2	Page 6-2	Blasting Permits	Add language that indicates Blasting Permits are to be acquired through the local Fire Authority
Section 6.1.7.A.6	Page 6-4	Affected Area	Add language to Refer to Chapter 25, Reconstruction and Repair for additional information
Section 6.1.7.A.11	Page 6-4	Erosion Control Inspector	Change notification from 24 hours to 48 hours
Section 6.1.7.B.1	Page 6-5	Traffic Control Plan Text	"Plan" changed to "Traffic Control Plan (TCP)"
Section 6.1.7.B.3	Page 6-5	Text Revision	"Engineer" changed to "Local Entity Engineer"
Section 6.1.7.B.4.b	Page 6-5	Text Revision	Change text from "One Call" to "Colorado 811"
Section 6.1.7.B.7	Page 6-6	Text Revision	"Engineer" changed to "Local Entity Engineer"
Section 6.1.7.B.8	Page 6-6	Text Revision	"faxing" changed to "emailing"
Section 6.1.8.A	Page 6-7	Text Revision	Stop work fine changed from a specific dollar amount to "Per the Local Entity's requirements"
Section 6.1.8.B	Page 6-7	Mitigation Expenses	Title changed to "Mitigation Expenses for Unsafe or Untimely Performance"
Section 6.1.9.A	Page 6-8	Insurance Requirements	Text changed to "Developer is responsible to provide insurance prior to any work"
Section 6.1.10	Page 6-9	Licensing	Loveland to be included in Licensing. "Licensing in Fort Collins and Loveland (City Limits)"
Section 6.2.1	Page 6-10	Application	Delete Appendix E-6 reference
Section 6.2.2.4	Page 6-11	Public Improvements Opinion of Cost	Public Improvements Opinion of Cost are to be signed and stamped by a P.E.
Section 6.2.3	Page 6-11	Construction Coordination Meeting	Separate preconstruction meetings for utilities, if needed, are the responsibility of the Developer to coordinate
Section 6.2.3.B	Page 6-11	DCP Meeting	Text changed to "For the items required prior to the DCP meeting, contact the Local Entity Engineer..."
Section 6.2.4	Page 6-12	Text Revision	Delete 1 -4. Already taken care of through the routing process
Section 6.2.4	Page 6-13	DCP Signature	Added "DCP" text to 11 and 12 (i.e. "Applicant's signature on the DCP")
Section 6.2.5	Page 6-13	Text Revision	Wording changed to improve grammar. "DCP" text also used instead of "permit"
Section 6.2.6.B	Page 6-14	Text Revision	Reference surety agreement
Section 6.2.6.C	Page 6-14	Reduction of Surety	Reduction of the surety based on the level of completion of the project
Section 6.2.6.C.3	Page 6-14	Text Revision	"Engineering Division" changed to "Local Entity Engineer"
Section 6.3.1	Page 6-15	Text Revision	"Public Improvement Construction Plans" changed to "Civil Construction Plans"
Section 6.3.2	Page 6-15	Text Revision	Text changed to "The permit application and information is available on the Local Entity's website"
Section 6.4	Page 6-17	Text Revision	Removed text and instead reference to contact the local entity for the revocable encroachment permit application
Section 6.5.1	Page 6-17	Text Revision	Refer to local entity for permit requirements
Section 6.5.2.A	Page 6-18	Moving Buildings Notification	Notification of house move changed from 24 hours to 72 hours. Also applicant required to obtain all necessary permits...
Section 6.5.2.B	Page 6-19	Text Revision	Text added. Permits are issued for a single move, which can contain multiple structures.
Section 6.6	Page 6-20	Text Revision	Permit for house numbers on curbs text deleted

Revisions to the Larimer County Urban Area Street Standards (2021)

Standard	Page	Item	Description/How Changed
Section 6.6.A	Page 6-20	Text Revision	"floggers" changed to "flaggers"
Section 6.6.B	Page 6-21	Stockpiling Permit	Stockpiling Permit text removed. Instead refer to Local Entity for permit application and requirements
Section 6.7	Page 6-22	Fees	Deleted text on fees. Instead refer to Local Entity for current requirements and fees
Section 7.5.1.I	Page 7-II	Landscaping	Landscaping - Adding language on Waterwise Landscape
Section 7.2.1	Page 7-1	Signs at Future Road Extensions	Signs shall be placed at the end of roads planned for future road extensions
Section 7.2.3.B	Page 7-3	Residential Driveways on Collectors	No direct access to residential driveways from Major Collector Streets (Loveland only)
Section 7.4.1.A.2	Page 7-4	Minimum Tangent Length	Minimum Tangent Length. In constrained or re-development areas allowed some flexibility on the minimum tangent length (see text)
Table 7-2	Page 7-7	Detached Sidewalks	Table 7-2 Loveland. Detached sidewalks required for all streets other than alleys.
Table 7-2	Page 7-7	Residential Driveways on Collectors	Restrict direct access on Minor Collector Streets for residential driveways
Table 7-3	Page 7-8	Stopping Sight Distance	Table 7-3 Fort Collins. Use CDOT State Highway Access Code for Stopping Sight Distance
Table 7-3	Page 7-8	K values	Table 7-3 Fort Collins. Use current AASHTO K values for vertical curves
Table 7-4	Page 7-10	K values	Table 7-4 Loveland. Loveland to use current AASHTO K values?
Table 7-5	Page 7-11	Minimum Arc Length	Min. Arc Length for Lanes and primary access alleys = 100'
Section 7.4.1.B.2	Page 7-12	Minimum Flowline Grades	Minimum Flowline Grades. Minimum FL grade of cul-de-sacs shall be 1.0 percent
Section 7.4.1.B.3	Page 7-12	Grade Breaks	Grade Breaks. Change from 0.4 percent to 0.5 percent
Section 7.4.1.B.6	Page 7-12	Vertical Clearance	Vertical Clearance. Minimum vertical clearance changed from 13.5 feet to 16.5 feet
Section 7.4.1.C.1	Page 7-13	Stopping Sight Distance	Stopping sight distance changed to be consistent with Use CDOT State Highway Access Code
Table 7-6	Page 7-13	Stopping and Passing Sight Distance	Stopping and Passing sight distance changed to be consistent with Use CDOT State Highway Access Code
Section 7.5.1.D	Page 7-16	Barrier Curb	All barrier curb shall be full depth and not glue down unless otherwise approved by the Local Entity Engineer
Section 7.6.4.C	Page 7-19	Temporary Turnarounds	Temporary turnarounds shall be paved on an all-weather recycled asphalt surface as approved by the Local Entity Engineer
Section 7.7.3.B	Page 7-20	Subdrains	Subdrains systems must be owned and maintained by a private party other than the Local Entity
Section 7.7.3.C.1.k	Page 7-20	Subdrains	Subdrain designer required to show locations of proposed sub drain and plan to avoid conflicts (i.e. Tree roots, etc.
Section 7.8.4	Page 7-23	Vertical Clearance	Vertical Clearance. Change from 13.5 feet to 14.0 feet.
Figure 7-1F	Figure 7-1F	Bike Lanes	Added striped buffered bike lane and protected bike lane options
Figure 7-2F	Figure 7-2F	Bike Lanes	Added striped buffered bike lane and protected bike lane options
Figure 7-2.5F	Figure 7-2.5F	Bike Lanes	Added striped buffered bike lane and protected bike lane options
Figure 7-3F	Figure 7-3F	Bike Lanes	Added striped buffered bike lane and protected bike lane options
Figure 7-4F	Figure 7-4F	Bike Lanes	Added Buffered bike lanes
Figure 7-5F	Figure 7-5F	Bike Lanes	Added Buffered bike lanes
Figure 7-6F	Figure 7-6F	Bike Lanes	Added Buffered bike lanes. Added 5' (min.) sidewalk width and 8' (min.) parkway width
Figure 7-7F	Figure 7-7F	Bike Lanes	Added 5' (min.) sidewalk width and 8' (min.) parkway width
Figure 7-8F	Figure 7-8F	Bike Lanes	Added 5' (min.) sidewalk width and 8' (min.) parkway width
Figure 7-9F	Figure 7-9F	Sidewalk Width	Added 5' (min.) sidewalk width
Figure 7-1L	Figure 7-1L	Bike Lanes	6 Lane Arterial. Added striped buffered bike lane option
Figure 7-2L	Figure 7-2L	Bike Lanes	4 Lane Arterial. Added striped buffered bike lane option
Figure 7-3L	Figure 7-3L	Bike Lanes	2 Lane Arterial. Added striped buffered bike lane option
Figure 7-4L	Figure 7-4L	See updated figure	Major Collector/Commercial Collector. See updated figure
Figure 7-5L	Figure 7-5L	See updated figure	Minor Collector. See updated figure
Figure 7-6L	Figure 7-6L	See updated figure	Commercial/Industrial Local. See updated figure
Figure 7-7L	Figure 7-7L	See updated figure	Residential Local Street. See updated figure
Figure 7-8L	Figure 7-8L	See updated figure	Lane. See updated figure. Also included affordable housing text.
Figure 7-9L	Figure 7-9L	See updated figure	Alley Option (Drainage to Center). See updated figure
Figure 7-10L	Figure 7-10L	See updated figure	Alley Option (Drainage to One Side). See updated figure
Figure 7-11L	Figure 7-11L	See updated figure	Rural Road. See updated figure
Figure 7-16	Figure 7-16	Sight Distance	Updated Sight Distance requirements to be consistent with CDOT State Highway Access Code
Figure 7-17	Figure 7-17	Vertical Curves	New Vertical Curve Chart

Revisions to the Larimer County Urban Area Street Standards (2021)

Standard	Page	Item	Description/How Changed
Figure 7-18	Figure 7-18	Vertical Curves	New Vertical Curve Chart
Figure 7-22L	Figure 7-22L	Hammerhead Turnaround	Remove Hammerhead Turnaround figure
Figure 7-29L	Figure 7-29L	Alternate Cross Section	Remove Affordable Housing Alternate Cross Section. See text in Figure 7-8L instead
Figure 7-30L	Figure 7-30L	Alternate Cross Section	Remove Affordable Housing Alternate Cross Section. See text in Figure 7-8L instead
Figure 7-31L	Figure 7-31L	Alternate Cross Section	Remove Affordable Housing Alternate Cross Section. See text in Figure 7-8L instead
Figure 7-32L	Figure 7-32L	Alternate Cross Section	Remove Affordable Housing Alternate Cross Section. See text in Figure 7-8L instead
Figure 7-33L	Figure 7-33L	Alternate Cross Section	Remove Affordable Housing Alternate Cross Section. See text in Figure 7-8L instead
Figure 7-35L	Figure 7-35L	Gated Entry	New Gated Entry Figure (Loveland Only)
Section 8.2.5	Page 8-2	Definition	Added definition of vph (vehicles per hour) to "Definitions of Terms" in Section 1.7
Section 8.2.6.C	Page 8-3	Text Revision	Modified text in Section C to further describe Figure 8-19
Section 8.2.7.B	Page 8-3	Text Revision	Modified text in Section B from "want" to "recommend"
Section 8.2.8.B	Page 8-4	Text Revision	Refer to Local Entity Engineer for which Bus turning template to use
Section 8.2.8.C	Page 8-4	Text Revision	Refer to LCUASS Appendix I for roundabout turning template requirements
Section 8.2.10.B.3	Page 8-6	Glue down Curb	Glue down Curb. Change text from "left-turn lane" to "auxiliary lane" to leave possibilities open
Section 8.2.14.B	Page 8-7	Text Revision	Reworded text to read better
Section 8.2.16	Page 8-8	Roadway Narrowing	Roadway Narrowing may not be used on Major Collectors or Arterials without a Formal Variance per Section 1.9.4
Section 8.2.17	Page 8-8	Roundabouts	Roundabouts shall be designed in accordance with LCUASS Appendix I
Figure 8-4	Figure 8-4	See figure	Traffic Volume Guidelines for Right Turn Lanes
Figure 8-5	Figure 8-5	See figure	Decel Lane Requirements
Figure 8-7	Figure 8-7	See figure	Opposing Left Turn Bay Configurations
Figure 8-19	Figure 8-19	See figure	Right Turn Island modified to accommodate WB 67
Figure 8-20.1	Figure 8-20.1	See figure	Required Spot Elevations for Curb Ramps
Figure 9-1	Figure 9-1	See figure	Figure 9-1 Access Spacing is missing from the on-line version
Section 9.3.3	Page 9-7	Sight Distance	Section 9.3.3 Sight Distance - reference the CDOT State Highway Access Code
Section 9.3.7.E	Page 9-8	Cross slope	Maximum cross slope per latest ADA requirements
Section 9.3.7.H	Page 9-9	Garage Doors	In Loveland, garage doors that face an alley shall not be in an area that is between 5 feet and 20 feet from the edge of pavement of the alley
Section 9.4.6.A	Page 9-10	Driveways	Driveways shall be concrete pavement within the public right-of-way
Section 9.4.10	Page 9-11	Change in Use	Change in use updated to be consistent with CDOT State Highway Access Code (SHAC) criteria (20% or 100 total daily trips)
Section 10.1.2	Page 10-1	AASHTO Design	Update to reference latest AASHTO. Also added "Mechanistic Empirical" design procedures may be substituted
Table 10-1	Page 10-3	Flexible Pavement Design Criteria	Added a note 7 to the Min. Structural Number in Table 10-1
Section 10.4.2	Page 10-6	Asphalt Thickness	Referenced 10-1 and deleted alternate composite section text
Section 10.4.2.A.1	Page 10-7	Text Revision	Changes 1/2" to 0.5 inch (Typical)
Section 10.5.1.B.3	Page 10-9	Text Revision	Referenced latest edition of the CDOT Pavement Design Manual
Section 11.1.1	Page 11-1	Text Revision	Remove old AASHTO structural standards from list
Section 11.1.3.A	Page 11-2	Text Revision	Working Stress Design (WSD) text modified
Section 11.2.1	Page 11-2	Text Revision	Text modified to clarify for spans greater than 20 feet
Section 11.2.4.B.3	Page 11-3	Pedestrian Load	Pedestrian load reduced from 85 psf to 75 psf per AASHTO Manual
Section 11.2.5.B.2	Page 11-5	Design Live Loads	Design live loads per AASHTO
Section 11.3.2	Page 11-8	Bicycle Railing	Railings per AASHTO
Section 12.1	Page 12-1	Utility Locations	City of Fort Collins graphic revision showing utilities
Section 12.2.1	Page 12-1	Text Revision	Add sentence for Loveland see the Water and Wastewater Development Standards latest edition
Section 12.2.3.A	Page 12-1	Access Covers	Add language to adjust 1/4 inch below the finished surface per Drawing 1201
Section 12.2.3.B	Page 12-1	Access Covers	Add language facilities located within the sidewalk should be ADA compliant
Section 12.2.5.A	Page 12-2	PVC Sleeves	Add language indicating PVC sleeves should extend from ROW to ROW
Section 12.2.5.D	Page 12-2	Private Utilities	Private utilities shall be outside of the public ROW unless otherwise approved by the Local Entity Engineer
Section 12.2.6	Page 12-3	Text Revision	Delete Sections A and B since they just refer to other sections

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Standard	Page	Item	Description/How Changed
Section 12.2.6.C	Page 12-3	Text Revision	Move this section to "Intersections"
Section 12.3.2.A	Page 12-4	Other Systems	Refer to Local Entity's regulations for other systems (Cable TV, telephone, Broadband, Fiber Optic, Wireless Communications, etc.)
Section 12.3.2.C	Page 12-4	Pole and Sign Locations	Pole and sign locations shall conform to the MUTCD and AASHTO requirements
Section 12.3.3	Page 12-5	Utility Crossings with Bridge Structures	Include fiber optics, broadband, wireless communications, etc.
Section 13.2.1	Page 13-1	Name Selection System	Update website link address
Section 13.2.2	Page 13-1	Street Naming Criteria	Update website link address
Section 13.2.3	Page 13-1	Major Street Names	Include Fort Collins website link address
Table 13-1	Page 13-2	Road Naming Criteria	Change title to "Standardization of Road Naming Criteria"
List of Figures	Page 14-ii	Text Revision	Update List of Figures to contain figures referenced in the text
Section 14.2.1.B2	Page 14-3	Streetlight Fixtures	Streetlight fixtures as approved by the Local Entity
Section 14.2.1.B11	Page 14-4	Ped Buttons	Ped buttons per ADA Standards
Section 14.3.1.F	Page 14-5	Signs	Signs shall comply with the MUTCD
Section 14.3.2.B	Page 14-7	Signs	Add text to include detached sidewalk
Section 14.3.3.E	Page 14-9	Signs	Also reference CDOT guide
Section 14.4.2.G	Page 14-11	Striping	Coordinate with Appendix I to match roundabout signing and striping standards
Figure 14-3A	Figure 14-3A	See figure	Sample Signal Plan & Notes
Figure 14-3B	Figure 14-3B	See figure	Sample Signal Plan & Notes
Section 15.1.2	Page 15-1	Street Lighting Design Deposit	Replaced "\$300 design electrical deposit" with "required electrical design deposit"
Section 16.1.2	Page 16-1	Text Revision	Added Standards for Transportation Facilities as Published by the US Access Board and the Guidance on the 2010 Standards for Accessible Design
Section 16.2.1.D	Page 16-2	In-Fill Sidewalk	Loveland to remove Industrial areas exception for sidewalk upgrades and replace with unless otherwise approved by the Local Entity Engineer
Section 16.2.1.G	Page 16-2	Text Revision	Change sidewalk thickness to 6" minimum. This was missed in the previous update.
Section 16.2.1.H	Page 16-2	Text Revision	Change 1/4 inch per foot cross slope to less than or equal to 2%
Section 16.2.1.H.3	Page 16-3	Text Revision	added "ramp" to text for clarify
Section 16.3.1.A.2	Page 16-3	Text Revision	Added text "Driveways shall be positioned as to not preclude the necessary mid-block ramp"
Section 16.6.2	Page 16-5	Text Revision	Added accessible paths to the text
Section 17.1.1	Page 17-1	Text Revision	Included MUTCD and NACTO "Urban Bikeway Design Guide" in references
Section 17.1.6	Page 17-1	Text Revision	Replace "utility" with "requirements and"
Section 17.2.1	Page 17-2	Bike Lanes	Included protected bike lanes on arterial roadways in Fort Collins
Section 17.2.4	Page 17-3	Bicycle Detection	Added bicycle detection text
Section 17.2.5	Page 17-3	Bike Facilities	Text revisions for bike facilities at intersections
Section 17.3.1.B	Page 17-4	Text Revision	Changed text to be consistent with Figure 7-14
Section 17.3.2.A	Page 17-4	Bike Paths	Added text bike paths shall be routed to avoid the removal of any significant trees. Where possible bike paths should be a min. of 4' from tree
Section 17.3.2.C	Page 17-4	Trees, Vegetation	Add text that clarifies that vegetative material to be removed does not include significant trees
Section 17.3.9.A	Page 17-6	Text Revision	replace "utilities department" with "requirements and standards"
Section 17.3.10.C	Page 17-7	Text Revision	Removed text indicating slopes greater than 6 percent
Section 17.3.11B	Page 17-8	Text Revision	Revised text on Pedestrian and Bicycle Crossings to be consistent with current practices
Section 17.3.15.A	Page 17-9	Text Revision	Added text that curb ramps shall meet ADA requirements
Section 17.4.1.B	Page 17-10	Private Bike Facilities	For private bike parking facilities refer to LMC (Loveland only)
Section 18.1	Page 18-1	Traffic Calming	All traffic calming shall be approved by the local fire authority
Section 18.1.3	Page 18-1	Roundabouts	Added Appendix I reference for roundabouts
Section 18.3.4	Page 18-3	Roundabouts	Added Appendix I reference for mini roundabouts
Chapter 19	entire chapter	Text Revisions	Misc. formatting indentions and text alignment to be consistent
Figure 19-1	Figure 19-1	See figure	Center Island Parking in Cul-De-Sac
Figure 19-2L	Figure 19-2L	See figure	Standard Cul-De-Sac Center Area Parking

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Standard	Page	Item	Description/How Changed
Figure 19-3	Figure 19-3	See figure	Off Street Straight In Cul-De-Sac Parking
Figure 19-6	Figure 19-6	Off Street Parking Setback	Local Entity Engineer can vary parking setback distance requirements on a case-by-case basis
Section 20.2	Page 20-1	Opinion of Cost	Remove opinion of cost items and reference form
Chapter 21	reserved	Reserved for later	Reserved for later. No changes
Section 22.2.3.D	Page 22-9	Flash Fill	Flash fill may be used if approved by the City Engineer on a case-by-case basis
Section 22.2.3.E	Page 22-9	Bedding Requirements	Reference each local entity's specific bedding requirements
Section 22.4.4.B	Page 22-26	Borings	Reference Chapter 25 for borings
Section 23.1.3.B.2	Page 23-5	Text Revisions	Formatting revisions
Section 23.14.2.C	Page 23-8	Text Revision	CDOT Spec section checked. Modified section reference number reference
Table 23-1	Page 23-4	Utility Line Testing	Removed the differences between utility main and service trench testing requirements. Same testing requirements for both trenches
Section 24.1.1.E	Page 24-1	Text Revisions	Misc. text revisions
Section 24.1.1.H	Page 24-1	Text Revisions	Misc. text revisions
Section 24.2.4	Page 24-2	Text Revisions	Misc. text revisions
Section 24.3.4	Page 24-3	Failure to Complete Repair	15% fee for the value of the work or \$500 administrative fee whichever is greater
Section 24.4.3	Page 24-4	Inspection and Punch list	Developer shall have 10-days to provide the Local Entity with a plan and schedule to complete the repairs
Section 25.1.6.A	Page 25-1	Text Revision	Renaming PICPs as Civil Construction Plan
Section 25.2.4	Page 25-5	Flow Fill of Borings	Flow fill will be required on soft surface potholing per the discretion of the Local Entity
Section 25.2.5.C.3.b	Page 25-6	Borings	If there are multiple bore holes within an area, the Local Entity may require the area to be sawcut, removed and patched
Section 25.5.1.A	Page 25-8	Street Cuts and Patching	Temporary concrete patch may be used for winter patching of street cuts when temperatures are below requirements for asphalt patching
Section 25.5.1.I	Page 25-9	Trench Plates	The use of steel trench plates may be granted by the Local Entity. Asphalt or rubber trench plate ramps should be used with steel plates
Table 25-1	Page 25-11	Patch Requirements	Minimum Patch Requirements. 6 foot minimum width on residential transverse patches
Appendix A	See redlines	Standard Drawings	Technical revisions and corrections to meet the current industry standards and practices
Appendix B	See redlines	Forms: Reimbursement, Permits, Licensing	The updates to Appendix B include updated forms to be consistent with current practices.
Appendix C	See redlines	FC Streetscape Design Standards	Misc. text revisions. See redlines
Appendix E	See redlines	Standard Notes, Approval Blocks, Checklists	The updates to Appendix E include updates to notes, signature blocks, and checklists be consistent with current practices
Appendix I	See redlines	Roundabout Design Manual	The updates to Appendix I includes technical revisions and corrections to meet the current practices
Appendix M	See details	ADA Curb Ramp Details (Loveland Only)	New ADA curb ramp details for Loveland