

Improvement Standards Updates

November 2016

The existing Improvement Standards have been updated and the changes are listed below. In addition to the listed items, the Improvement Standards were edited for consistency and flow. Abbreviations “ft. and in.” were replaced with the markings ‘ for ft. and “ for in. All sections have been combined into one document, which includes the Table of Contents (TOC). For ease of use, hyperlinks have been set up to allow online users the ability to select a section from the TOC and take them to that section; it will also take them back to the TOC.

Section 1 – Purpose and Definitions

- 1.1 Purpose – Re-worded for grammatical flow.
- 1.2 Design Practice – Changed “as required by the Engineering Services Manager” amended to “as required by the City Engineer”.
- 1.3 Definitions – Director, changed “Engineering Services Manager” to “City Engineer”; changed “Director of Public Works” to “Director of Public Services”

Section 2 – General Requirements

- 2-2 Approved Plans - Changed “Director” to “City Engineer”
- 2-4 Work in City Rights of Way, Easements and Waterways – Changed “Department of Public Works” to “Department of Public Services”
- 2-5 Improvement Plan Submittal – “Five (5) sets of plans” changed to “Six (6) sets of plans (seven (7) sets if landscaping plans are included”); replaced “Director” with “City Engineer”
- 2-6 Improvement Plan Resubmittal – Changed “three complete sets of plans” to “Four (4) sets of plans”; Plans which involve trunk drainage shall consist of “five (5) sets” instead of “four sets”; changed “Director” to “City Engineer”
- 2-7 Plan Check and Inspection Fee – Added “Any City costs incurred over and above the deposit will be charged to the developer”
- 2-8 Plan Approval – Changed “Director” to “City Engineer”
- 2-9 Final Plans Required - Changed “Director” to “City Engineer”
- 2-10 Improvement Plan Revisions During Construction - Changed “Director” to “City Engineer”
- 2-11 Record Drawings – Changed “submit 3 sets and a set of reproducible” to “submit 2 sets of full-size, 2 sets of half-size, and a CD or USB drive with PDF’s”
- 2-12 Pad Certification - Changed “submit 3 sets” to “submit 2 sets of full-size, 2 sets of half-size, and a CD or USB drive with PDF’s.”; changed “Section 9-8” to “Section 9-7” and, Standard Drawing “1-10” to “1-1”
- 2-14 Change in Consulting Engineer - Changed “Director” to “City Engineer”
- 2-16 Tunnel Safety Requirements – “State of California Division of Industrial Safety” is now “State of California Industrial Relations”
- 2-17 Existing Utilities - Changed “Director” to “City Engineer”
- 2-20 Inspection Requirements – shall be inspected during construction by the “Director” changed to “Construction Inspector”; 3rd paragraph Changed “Director” to “City Engineer”;

Section 3 – Plan Sheet Requirements

- 3-1 Paper Details – Removed “F.A.S. sheets” (obsolete reference)

- 3-3 Title Sheet – Added “N. Assessor’s Parcel Number”; “O. City Planning Reference Number”; “P. Waste Discharger Identification Number (WDID#)”
- 3-4 Title Block – Added “City Planning Reference Number” at the end of paragraph 1
- 3-6 Plan Details – Added “K. Project Conditions”
- 3-7 Required Notes – Added <http://usanorth811.org> ; changed Department of “Public Works” to “Public Services”; added “Contractor shall restore any damaged or destroyed survey markings” per California Business and Professions Code 8759-8774.5

Section 4 – Street Types

- 4-1 Street Types - Changed “Director” to “City Engineer”; Removed 4-1, I – 80’ street detail.
- 4-2 Street Class – Numbering “1. 2. 3.” Changed to “A. B. C.” for document consistency
- 4-3 Structural Sections – The following changes were made under “B. The minimum allowable thickness of roadbed section shall be as follows”
 - 1. and 2., 6 in. aggregate base changed to 8” aggregate base
 - 5. 3 in. asphalt changed to 4” asphalt
 - 6. 2 in. asphalt changed to 3” asphalt
 - 8. a. 5 ½ in. of asphaltic concrete equals 2 in. changed to 6” of asphaltic concrete equals 3”
- 4-4 Profile Standards - Changed “Director” to “City Engineer”
- 4-5 Partial Streets - Changed “Director” to “City Engineer”
- 4-10 Sight Distance at Intersections - Changed “Director” to “City Engineer”
- 4-12 Right of Way Widths - Changed “Director” to “City Engineer”
- 4-13 Bus Turnouts - Changed “Director” to “City Engineer”
- 4-14 Intersection Widening - Changed “Director” to “City Engineer”
- 4-15 Partial Pavement Widening - Changed “Director” to “City Engineer”
- 4-17 Developer’s Pavement, Signal, and Street Light Responsibility - Changed “Director” to “City Engineer”
- 4-18 City Cost Participation - Changed “Director” to “City Engineer”
- 4-21 Testing Material - Changed “Director” to “City Engineer”
- 4-25 Trees – Added “Right of Way Approved Plant List”
- 4-26 Commercial, Industrial, and Multifamily Driveways - Changed “Director” to “City Engineer”
- 4-28 Sidewalks – Title changed from “Handicap Ramps” to “Sidewalk Ramps”; reworded with current ADA language; Changed “Director” to “City Engineer”; added “Any retrofits to existing ramps must comply with the requirements of the California Building Code”
- 4-29 Curb and Gutter - Changed “Director” to “City Engineer”; added reference to Standard Drawing 3-15A
- 4-31 Sidewalks - Changed “Director” to “City Engineer”
- 4-33 Privately Owned Bridges - Changed “Director” to “City Engineer”
- 4-34 Residential Street Name Sign - Numbering “1. 2. 3.” changed to “A. B. C.” for document consistency; updated sign finish/color material being used; added lower case letters to be 3”; referenced the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) Standards
- 4-35 Major Street Intersections Street Name Signs – Changed “The signs shall be attached at lower mast arm of the traffic signal light using standard manufactured clamp brackets” to “The signs shall be attached where the mast arm meets the pole, using the banding method”; letter size changed from “6” upper case and 4 ½” lower case to 8” upper and 6” lower; referenced New MUTCD Standards; removed “When no signal or mast arms are available, major streets name signs shall comply with Section 4-35”

- 4-36 Overhead Street Names – “4-36 Not a Through Street” was removed and replaced with “4-36 Overhead Street Names”
- 4-37 Traffic Stripes and Paving Markings – This is an added section to address updated standards
- 4-38 Painted Traffic Stripes and Pavement Markings – This is an added section to address updated standards
- 4-39 Performed Traffic Stripes and Pavement Markings – This is an added section to address quality of workmanship

Section 5 – Drainage

- 5-1 General – This is an added section that explains the City’s drainage requirements per state regulations and references the following:
 - City of Rocklin Construction Standards
 - Stormwater Quality Design Manual for the Sacramento and South Placer County Regions
 - Latest edition of the State of California Department of Transportation Standard Specifications
 - City of Rocklin Post Construction/Low Impact Development (LID) Manual
- 5-6 Pipeline Alignment Requirements – Angular changes when necessary shall not exceed “90°” to “7.5%”
- 5-6(a) Construction Staking – This is an added section to provide additional clarification
- 5-7 Pipeline Acceptance Criteria – Added “flushed and vactored” requirements
- 5-8 Drainage Easements – Removed reference to Standard Drawing 4-29
- 5-10 Drainage Structures –
 - A.-1. - Removed “non-reinforced concrete pipe”; added reference to State Specification 64-1
 - A.-3. - Changed “Director” to “City Engineer”
 - B.-3. – Added “Manhole covers greater than 24” shall have 2 piece lids”
 - B.- 4. – Standard Drawing changed from “4-11” to “4-8”
 - B.-6. – Replaced with current LID Measures
 - C. Manholes – Installation is a new section to provide clarification and consistency; sections D-H are reorganized due to the addition of section C.
 - D.-1. – Standard Drawings changed from “4-9 and 4-10” to “4-6 and 4-7”; Changed “Director” to “City Engineer”
 - E.-3. - Changed “Director” to “City Engineer”
 - F. Headwalls, Wingwalls, Endwalls, Trash Racks and Railings
 - F.-2. Standard Drawings changed from “4-30 and 4-31” to “4-15 and 4-16”; Changed “Director” to “City Engineer”
 - F.-3. – Removed reference to “Standard Drawing 4-35” and replaced with reference to “California Transportation Standard Specification 70-5 and California Transportation Standard Plans D94A and D94B”
 - G.-1. – Removed “corrugated steel pipe” and added SDR-35 pipe
 - G.-2. - Changed “Director” to “City Engineer”
 - G.-3 - Changed “Director” to “City Engineer”
- 5-11 Temporary Drainage Diversions – Replaced “Public Works” with Public Services”
- 5-12 Channels and Outfall Design - Changed “Director” to “City Engineer”;

Added the following sections to be consistent with current best management practices and updated state requirements:

- 5-12 D. Detention and Retention Basins
- 5-12 E. Access for Maintenance

- 5-13 Pipe Installation
- 5-14 Channel Lining Installations
- 5-15 Abandoning Storm Drains

Section 6 – Domestic Water Supply System - Added reference to NFPA 24 and the City of Rocklin Fire & Life Safety Standards in 6-1 Introduction – “Design of water facilities shall conform to the requirements set forth in the most recent standards of the Placer County Water Agency (PCWA), the National Fire Protection Association (NFPA 24), and the City of Rocklin Fire & Life Safety Standards”. Removed the following sections due to the references made in 6.1:

- 6-3 Water Supply Pressure
- 6-4 Required Fire Flows
- 6-5 Distribution System Layout Requirements

Section 7 – Sanitary Sewer Design – No changes to this section

Section 8 – Street Lights

- 8-6 Street Light Design Details
 - E.-1. – Updated type “A” to current City product requirements
 - E.-2. – Updated type “B” to current City product requirements
 - E.-4. – Added “Contact Public Services Department to request street light numbers”
 - F. Luminaries – Removed “The luminaries shall be induction type with internal ballasts” replaced with “The luminaries shall be LED type with internal driver”
 - F. 1-4 – Reformatted and updated LED information and current City product type being used
 - G. – Added the letter “G” to “Service” paragraph
 - H. Pull Boxes (updated formatting after adding section G)
 - H.-2-3 – Combined into one paragraph (2.)
 - H.-4 – (is now H.-3)
 - K.-4 – Added All “empty” conduits
 - L. – Removed “5. Lamps”
 - M.-1. - Changed “3” diameter PVC to “2” diameter PVC
 - M. 2. - Changed from a “#6” telecommunication pull box to a “#5”

Section 9 – Grading

- 9-1 Introduction – Renamed from “General Requirements” and added additional, detailed information and references
- 9-2 Plan Sheet Details
 - F. – Added “Contour lines shall be in maximum increments of 2’ “
 - N. – Changed from Standard Drawing “1-11” to “1-1”
 - O. – Added the following:
 - “6. Silt retention and erosion control details as necessary and specified in these Design Standards.”
 - “7. Location of temporary protective fencing for environmentally sensitive areas such as: creeks, wetlands, vernal pools, perennial streams and preserve areas.”
- 9-3 Boundary Grading
 - A. Fills – Added “All fill material shall achieve 90% relative compaction certified by a registered Geotechnical Engineer
 - A.-2 – Added “A notarized” ; added “If right-of-entry cannot be obtained, a retaining wall shall be placed as near to the property line as practicable”

- 9-4 Interior Grading – C. changed from “Cross Lot Surface Flow” to “Interior Grading” with extensive detail added
- 9-5 Retaining Walls – Added “Any retaining wall greater than 4’ from the bottom of the footing to the top of the wall will require a building permit”; removed “Redwood retaining walls shall conform to the Standard Drawing 2-3 as a minimum design. When fences are to be constructed atop redwood retaining walls, 6” x 6” posts at 4’ centers shall be used. All 6” x 6” posts shall extend above the retaining wall and act as fence posts. Alternate designs meeting UBC standards will be considered.”
- 9-6 Grading at Trees – Added extensive information to this section (see Improvement Standards)
- 9-7 Certifying Pad Elevations – Changed See City Standard Drawing “1-11” to “1-1”
- The following sections are new additions to address state requirements:
 - 9-8 Rough Grading Plan Requirements
 - 9-9 Rolling Terrain Grading
 - 9-10 Stormwater Pollution Prevention Plan (SWPPP)

Section 10 – Sound Barrier Design

- 10-5 Design Requirements – Added to clarify design life and loading conditions

Section 11 – Bikeways – This is a new section to clarify future bikeway design per the California Manual on Uniform Traffic Control Devices (MUTCD)

Section 12 – Survey Monuments

- This section was previously “Section 11 – Survey Monuments”
- C. – Added “located at the center of all cul-de-sacs and elbow points.”

Section 13 – Landscaping

- This section was previously “Section 12 – Landscaping”
- 13-4 Sidewalks
 - B. – Added “one to two percent (1 – 2%), not to exceed two percent (2%)”
 - E. – Reworded to comply with ADA, Caltrans Standard Plans, the California Building Code and City Standard Drawings 3-12 and 3-13
- 13-7 Irrigation
 - Removed “Sprinkler heads used in turfed play areas shall be equipped with protective covers” which resulted in reorganizing of items K – U.
 - P.-1. – Added “The City recommends using Wilkins, Model 975XL2”, or City approved equivalent
 - Q.-1. – Changed bulleted items to a. b. c. format for consistency
- 13-9 Lighting
 - 13.-B. – All street, park, trail, and paseo lighting shall be vandal resistant, “and have high pressure sodium vapor lamps” changed to “and LED lamps.”