

DESIGN CRITERIA & CONSTRUCTION REGULATIONS



APRIL 2004

BY:

TST, INC. CONSULTING ENGINEERS



FORWARD

PURPOSE OF THIS MANUAL

The Town of Johnstown has prepared this manual to provide guidance to engineers and contractors for the acceptable design and installation of principle public infrastructure. The criteria and standards included in this manual shall be considered minimum requirements for infrastructure improvements. The Town reserves the right to require more stringent criteria or standards when conditions warrant and when in the best interests of the citizens of the Town. The Town may mandate supplemental information from other generally accepted sources such as the Colorado Department of Transportation, Urban Drainage and Flood Control District, or the City of Greeley.

STATUS OF THE TOWN

Construction of public improvements or private utilities within the public right-of-way shall be defined as one of the following; 1) public improvements designed and constructed by others and dedicated to the Town, 2) private utilities or public utilities not dedicated to the Town, or 3) public improvements designed and constructed for the Town by a contractor. The first designation will be defined by a contractual relationship between the Town and the developer (refer to the Public Improvements Development Agreement). The Town shall not presume any relationship with the design engineer, other consultants, or the contractor. The developer shall be solely responsible for the performance of his consultants and contractors. The second designation will be defined by the work permit issued by the Town or by a separate agreement. The third designation will be defined by appropriate professional design services contracts and construction contracts.

AUTHORITY

The authority of the Town to mandate standards for the design and construction of public infrastructure is from Section _____ of the Johnstown Municipal Code. Further reference is made to the Annexation Agreement, Water and Sewer Agreement and the Public Improvements Development Agreement associated with each proposed development. Finally, these standards shall apply to any work to be performed within the public right-of-way as exercise of the police powers of the Town of Johnstown as described in the Colorado Revised Statues.

SUBMITTAL REQUIREMENT

Reference is made to the Town of Johnstown Municipal Code and the Public Improvements Development Agreement regarding the submittal of required engineering designs, technical documents, and associated development documents.

REVIEW PROCESS

The Town Engineer shall be principally responsible for the review and acceptance of technical documents submitted in support of public infrastructure improvements. Documents will be reviewed for general conformance with the criteria and standards identified in this manual. Review and acceptance of the documents shall not relieve the applicant, design engineer, or contractor of ultimate responsibility for total compliance.

CONSTRUCTION INSPECTION

The Town shall periodically inspect all public improvements work or any other work within the public right-of-way. Inspection will be performed for general conformance to the standards presented in this manual and with the drawings accepted by the Town. The contractor shall keep a copy of this manual and the approved construction plans (bearing the acceptance signature of the Town as well as the seal of the design engineer) on the site at all times.

PERMITS AND FEES

From time to time the Town may adopt ordinances regarding construction related permits. Such permits may include, but not be limited to, grading permits, street cut permits, utility connection permits, etc... Inquiry should be made with the Town regarding any pertinent permits. Permits required by County, State, or Federal agencies shall be the sole responsibility of the contractor.

PROTECTION OF THE PUBLIC AND PUBLIC INFRASTRUCTURE

The design and construction of new infrastructure and/or modification of existing infrastructure shall be performed in a manner that does not interfere with the safety, health, and welfare of the public. Adequate precautions shall be taken to safeguard the public from physical hazards and contaminations. The Town of Johnstown, by acceptance of designs or inspection of construction, shall not be responsible for any unsafe conditions. Further, the design and construction of improvements within the Town shall protect existing infrastructure from damage or interruption of service. No water valve shall be operated by anyone other than the designated Town representative. No work shall be performed within the right-of-way of any existing street without a traffic control plan accepted by the Town. No existing street pavement or sidewalk shall be cut without the written approval of the Town.

CONSTRUCTION SITES

Work hours within the limits of the Town shall be from 7:00 AM to 5:00 PM, Monday through Friday, and 8:00 AM to 4:00 PM on Saturday except for public holidays observed by the Town of Johnstown. Weekend or holiday work shall only be allowed by prior written permission of the Town, but shall not be unreasonably disallowed. Construction sites shall be kept clear of debris and trash and a regular program of trash pickup and removal shall be implemented. Mud, soil, or other debris shall be cleared from public streets and sidewalks every day, more if mandated by the Town Inspector to alleviate dust or hazard. At all times the contractor shall keep a list of emergency phone numbers including police, fire department, ambulance, Johnstown Water and Sewer Department, and other area utility providers. Finally, the Town may allow the contractor to connect to the existing potable water system for construction water. Any connection to the Town system or use of the Town water shall be by prior arrangement with the Water Department. Connection to the Town's water system or use of Town water without prior arrangement may result in criminal prosecution.

AS-BUILT AND RECORD DOCUMENTS

This section addresses the As-Built Drawings and Record Documents for the construction of all commercial and residential building projects as well as miscellaneous appurtenances within the Town of Johnstown.

As-Built and Record Drawings shall be maintained and kept in the contractor's field office and also kept separately from documents used for construction. The contractor shall provide file and/or racks for storage of documents as well as provide storage space for samples. Identify file documents and samples in accordance with the specification's section numbers. Maintain documents and samples in a clean, dry legible condition and in good order. Do not use As-Built and Record Drawings for construction purposes. Documents shall be made available for inspection by the Town, upon request.

When recording documents label each drawing "AS-BUILT RECORD DRAWING" in neat large printed letters. All as-built record information shall be recorded concurrently with construction progress. Backfill of work will not be allowed until all as-built information has been verified and recorded. When labeling project records mark legibly with a dark ink or pencil. Water based ink or ink that is subject to smearing shall not be allowed.

When recording drawings to show actual as-built construction include field dimensions, elevations, details, changes made by a Town approved modification, details not on the original drawings, horizontal and vertical locations of underground utilities and appurtenances referenced to a minimum of two permanent surface improvements and the depths of various elements in relation to project datum.

Submit as-built drawings to the project engineer to review and prepare final As-Built Record Drawings. When submitting final As-Built Record Drawings accompany the submittal to the Project Engineer with a transmittal letter in duplicate containing the date, project title and number, the contractors name, address, telephone number, the index containing title and number of each Record Document and the signature of the contractor or his/her authorized representative. All As-Built Record Drawings submitted to the Town for approval shall be on 24" x 36" blueline or blackline form.

Final acceptance of the utility lines will not be given until the As-Built Record Drawings have been submitted to and accepted by the Town.

The two (2) year warranty period will not begin until the Town gives initial acceptance. No certificates of occupancy will be issued for structures connecting to water and sanitary sewer until the Town gives initial acceptance of the As-Built Record Drawings. The site developer will be responsible for utility locates until the Town gives final acceptance of As-Built Record Drawings.

When project filings are approved by the Town to be completed in phases only paper copies of As-Built will be required at the completion of the phase. Mylars, disks and paper copies will be required at the end of the filing for all completed phases.

DESIGN CRITERIA & CONSTRUCTION REGULATIONS MANUAL

TABLE OF CONTENTS

PART I: STORM DRAINAGE CRITERIA & DETAILS

SECTION 1: DRAINAGE POLICY

SECTION 2: SUBMITTAL REQUIREMENTS

SECTION 3: HYDROLOGY STANDARDS

SECTION 4: INLETS

SECTION 5: STORM SEWERS

SECTION 6: STREETS

SECTION 7: CULVERTS

SECTION 8: OPEN CHANNELS

SECTION 9: DETENTION

SECTION 10: FLOODPLAIN ISSUES

SECTION 11: EROSION CONTROL

SECTION 12: CONSTRUCTION SPECIFICATIONS

SECTION 13: STORM DRAINAGE & EROSION CONTROL DETAILS

PART II: STREET DESIGN, CONSTRUCTION STANDARDS & DETAILS

SECTION 1: STREET DESIGN AND CONSTRUCTION POLICIES

SECTION 2: DESIGN CRITERIA

SECTION 3: PAVEMENT DESIGN

SECTION 4: STREET CUTS

SECTION 5: TESTING

SECTION 6: INSPECTION

SECTION 7: CONSTRUCTION SPECIFICATIONS

SECTION 8: STREET DETAILS

PART III: WATER SYSTEM DESIGN, SPECIFICATIONS & DETAILS

SECTION 1: TOWN POLICY

SECTION 2: DESIGN CRITERIA & HYDRAULIC ANALYSIS PARAMETERS

SECTION 3: WATER DISTRIBUTION FACILITIES

SECTION 4: NONPOTABLE IRRIGATION SYSTEM

SECTION 4: WATER SYSTEM CONSTRUCTION SPECIFICATIONS

SECTION 5: WATER DISTRIBUTION SYSTEM DETAILS

PART IV: SANITARY SEWER SYSTEM DESIGN & SPECIFICATIONS

SECTION 1: DESIGN CRITERIA FOR SANITARY SEWER SYSTEM

SECTION 2: TESTING SANITARY SEWER SEWER COLLECTION SYSTEM

SECTION 3: AS-BUILT AND RECORD DOCUMENTS

SECTION 4: MANHOLES

SECTION 5: GRAVITY SANITARY SEWER COLLECTION SYSTEM

SECTION 6: SANITARY SEWER SERVICE LINES

SECTION 7: SANITARY SEWER SYSTEM DETAILS

PART V: GENERAL SPECIFICATIONS & STANDARD DETAILS

SECTION 1: CONSTRUCTION SPECIFICATIONS

SECTION 2: MISCELLANEOUS DETAILS