APPENDIX
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A1 - CROSS CONNECTION AND BACKFLOW PREVENTION POLICY

The City uses the Colorado Cross Connection Control Manual (CCCCM), latest edition, for backflow prevention assembly requirements, in accordance with the regulations of the Environmental Protection Agency (EPA), Safe Drinking Water Act, Colorado Primary Drinking Water Regulations (CPDWR), and the currently adopted Plumbing Code and *City of Greeley Charter and Code, Title 20: Public Works and Utilities*, section 20-191. Backflow prevention assemblies protect the City of Greeley's treated water supply from hazards that originate from plumbing connections that may impair or alter the treated water. Selection of the proper backflow assembly to install is critical, and assemblies shall be selected on the degree of hazard introduced by the plumbing connection that presents a risk to the treated water supply. The following hazard conditions could present a risk to the treated water supply:

1. High Hazard – Any condition, device, or practice that may introduce waterborne disease organisms or chemical, physical, or radioactive substances to the treated water supply and present a risk to public heath.

2. Low Hazard – Any condition, device, or practice that may cause an aesthetic nuisance such as objectionable taste, color, or odor to be introduced into the treated water supply.

The following table presents the Water and Sewer Department standards for selection of appropriate backflow prevention assemblies:

Type of Establishment	Minimum Required Backflow Assembly
- Normal single family dwelling; 1 to 2-story dwellings up to 2 units with standard fixtures; no additional hard-plumbed connections; no other identified health hazards.	None
- Residential water only fire sprinkler systems 2" in diameter or smaller	Double Check (DC)
- Water only fire sprinkler systems larger than 2" diameter.	Double Check Detector Assembly (DCDA)
- All institutional, commercial, or industrial establishments. - Multi-family dwellings with 3-stories or more. - Multi-family dwellings with 3 units or more. - Any type of establishment, including single family, with connections that present a risk to the treated water supply. Such connections include, but are not limited to, boiler systems, solar panels with circulated water or chemicals, hard-plumbed hot tubs/pools, evaporative coolers, any type of irrigation system[1], and fire sprinkler systems with chemicals.[2]	Reduced Pressure Principle (RP)

[1] Depending upon the system design, irrigation systems shall have one of the following backflow assemblies: 1) air gap, 2) Pressure Vacuum Breaker (PVB), or 3) Reduced Pressure Principle (RP).
[2] Backflow prevention assemblies for commercial fire sprinkler systems shall include a Double Check Detector Assembly (DCDA) or Reduced Pressure Principle Detector Assembly (RPDA) as appropriate; residential fire sprinkler taps that are two-inch (2") in diameter or less are not required to install a detector assembly.

Backflow prevention assemblies are subject to the following requirements:

1. Backflow prevention assemblies shall be in conformance with and installed according to the CCCCM, latest edition, and these Criteria, installed and tested prior to Certificate of Occupancy, and re-tested every year thereafter.

2. All backflow prevention assembly models shall carry the American Society of Sanitary Engineering (ASSE) or the University of Southern California Foundation for Cross Connection Control and Hydraulic Research (USCFCCC & HR) approval seal.

3. All backflow prevention assemblies shall be reviewed and accepted by the City of Greeley Water and Sewer Department prior to installation. Product information sheets for each assembly shall be submitted to the Water and Sewer Department for review and acceptance a minimum of one (1) week prior to scheduled installation. The submittal shall state the method of assembly installation (horizontal or vertical) and the proposed use of the water in the building.

4. Domestic line backflow prevention assemblies shall be located inside the building in a mechanical room accessible at any time for repair or testing, for which the line serves. It may be advisable to place irrigation backflow assemblies in these rooms as well to protect them from damage.

5. Fire sprinkler line backflow prevention assemblies shall be located inside the building for which the fire sprinkler line services. In instances where locating the assembly in the building is not feasible, the assembly may be located outside provided it is protected from freezing. Pit installations shall be designed by a Professional Engineer experienced in fire protection systems. The pit design plans shall be reviewed and accepted by the Union Colony Fire Rescue Authority and City of Greeley-Water & Sewer Department

6. In instances where locating a reduced pressure assembly in the building served is not feasible, the assembly may be located outside provided it is protected from freezing. Reduced pressure assemblies must be located in an above-grade heated enclosure. Enclosures shall be designed by a Professional Engineer. The enclosure plans shall be reviewed and accepted by the City of Greeley Water & Sewer Department

7. Where a routine annual inspection of the plumbing system is not performed on ¾" multi-family water services and fire sprinkler lines or in **ANY** case where a cross connection potential exists, all service connections inside the building shall be fitted with an approved backflow prevention assembly.

8. The City Water & Sewer Department, as the responsible water purveyor, reserves the right to make all final decisions regarding interpretations of the CCCCM. If any conflict arises between the CCCCM and the City requirements, the City requirements shall prevail.

A2 - COMPOUND TAP EXEMPTION POLICY FOR IRRIGATION OF MULTIPLE OUTLOTS

An exemption for a compound tap for the irrigation of multiple outlots within a subdivision may be allowed under the following conditions:

1. All outlots are owned by the same owner or a property-owners' association, and there is little chance of the properties being sold off individually. If outlots are sold off at some future time, each property owner must acquire a separate water tap at that time. Costs of the new taps will be spread among all lot owners. There will be no refund for Plant Investment Fees (PIFs) previously paid for a tap that now may be oversized.

2. A permanent arrangement for One-Call location of the irrigation lines must be provided that meets all requirements of the Colorado One-Call State Law (Senate Bill 00-184). The existing law requires that all underground facility owners be registered with the Colorado Notification Association.

3. The property owner must obtain a revocable permit(s) from the City of Greeley Public Works Department for use of the public right-of-way. Revocable permits are approved by City Council and shall include:

    a. An identified permit holder.
    b. Accepted Construction Drawings on file with the City.
    c. Owner recognition that if the permit is revoked, additional water taps must be purchased for each outlot.

4. PIFs and any additional raw water must be paid for all irrigation outlots.

5. The property owner acknowledges that pressure and water delivery may suffer when a single tap is used to irrigate multiple lots.

6. "IRR" shall be stamped in the concrete on the curb on both sides of the street where the irrigation conduit crosses the right-of-way or easement.

A3 - POLICIES IMPACTING DESIGN AND CONSTRUCTION

Water Services

1. If a stubbed tap is the wrong size, it must be changed at the main either by redrilling, downsizing, or abandoning and drilling a new tap of the appropriate diameter. The City does not permit downsizing of potable water services at the meter. Potable water services must be the same diameter from the main, through the meter, to five (5) feet beyond the meter. Listed below are acceptable procedures for acquiring the correct water service diameter:

    a. Redrilling. This procedure is applicable for taps that need to be upsized to a larger diameter. The corporation stop from the existing tap shall be removed and a new tap of the appropriate larger diameter shall be drilled in the same hole where the existing tap was located.
    b. Downsizing. This procedure is applicable for taps that need to be downsized to a smaller diameter. The corporation stop from the existing tap shall be removed and a bushing of the appropriate outside and inside diameters shall be installed in the same hole where the prior tap was located. The smaller service corporation stop shall be threaded into the bushing.
    c. Abandonment and New Drill. This procedure is applicable for taps that need to be upsized to a larger diameter or downsized to a smaller diameter. The existing tap shall be abandoned per approved abandonment procedures (see below). A new tap of the correct diameter shall be drilled a minimum of two (2) feet from the abandoned tap.
    d. 5/8" Taps. The 5/8-inch (5/8") tap was the minimum water tap size prior to the ¾-inch (3/4") tap becoming the minimum size. Therefore, a 5/8-inch (5/8") water tap shall be treated like a ¾-inch (3/4") unless a property owner proposes to serve more than one (1) dwelling unit with a 5/8-inch (5/8") tap. In this situation no additional plant investment would be due to serve two (2) units; however, the City charges a drilling fee (Labor and Materials) to install a new ¾-inch (3/4") tap on the main. The property owner must abandon the 5/8-inch (5/8") water at his/her own expense
2. If a lead or galvanized steel service line is found at any point in the development or construction process, notify the City. The line must be abandoned at the main.
3. City maintenance responsibility for water services shall be the water main, corporation stop, service piping up to the curbstop, and the tube nut on the street side of the curb stop.
4. For any new water services tapping into existing mains the contractor shall notify the City 72 hours prior at 970-350-9320.

Sanitary Sewer Services

1. Per the *City of Greeley Charter and Code, Title 20: Public Works and Utilities,* section 20-365, a property requiring sanitary sewer service must connect to the sanitary sewer system if the property on which the structure to be serviced is located within four-hundred (400) feet of a sewer connection.
2. Sanitary sewer connections in either case shall be made at the property owner's expense.
3. City maintenance responsibility for sanitary sewer service ends at the main. The property owner is responsible for sewer service maintenance beyond the main connection including the service tapping saddle.

Non-potable Irrigation

1. Non-potable irrigation systems are required when the combined total open space/common space turf area for a development is two (2) acres or more, unless otherwise indicated by the City.

2. In instances where irrigation services are allowed to cross or be located in the public right-of-way, the Developer must obtain a revocable permit from the City of Greeley Public Works Department for use of the public right-of-way.
3. A permanent arrangement for the One-Call location of the irrigation lines must be provided that meets all requirements of the Colorado One-Call State Law. The existing law requires that all underground facility owners be registered with the Colorado Notification Association. The revocable permit holder must be the owner registered with the Colorado Notification Association.
4. If the permit to use the public right-of-way is revoked, additional water taps must be purchased for each lot.

Fire Sprinkler Services

1. There is no raw water dedication or plant investment fee requirements for fire sprinkler lines.
2. City maintenance responsibility for fire sprinkler lines ends at the mainline gate valve. The property owner is responsible for fire sprinkler line maintenance beyond the mainline gate valve.

Utility Crossing

If a utility must cross an existing potable water distribution, sanitary sewer collection, or non-potable irrigation main, within a development that has entered into the two (2) year warranty period, a utility crossing approval shall be required from the Water and Sewer Department. Refer to appendix section *Crossing Approval Packet* for utility crossing requirements.

Easements

1. For potable water distribution, sanitary sewer collection, or non-potable irrigation lines located in easements, future repair of paving, landscaping, or other improved surfaces subsequent to the repair of a line shall be the responsibility of the property owner/home owners' association. The City will backfill the trench to the surface but not rebuild any surface improvements or replace landscaping.
2. The City shall have the exclusive utility use of dedicated easements except for right angled utility crossings or as detailed in the easement document. Crossing utilities shall be granted the right to install, lay, construct, relocate, change the size of, replace, repair, inspect, maintain, remove and operate underground utility and all appurtenances thereto subject to the terms of said City easements. The Water and Sewer Department shall review for acceptance all utility crossing methods and work within the easements.

Inflow Reduction

1. Per Greeley Municipal Code Title 20 – Public Works and Utilities, Section 20-356, no connections to sanitary sewer mains or services shall be made from any source of stormwater or groundwater including but not limited to underdrains or pool deck drains.
2. When redeveloping a property, any existing stormwater or groundwater connections shall be removed, and the inflow source shall be rerouted to appropriate stormwater infrastructure.

Connections to Private, Undersized, or Transmission Mains

1. Wherever feasible, existing private and/or undersized potable water or sanitary sewer mains must be abandoned during the development process. New private mains will not be allowed.
2. Service connections on water transmission lines must be abandoned during the development process.
3. Existing service connections on non-standard mains must be relocated to public distribution or

collection mains as appropriate. Coordination with City of Greeley and the affected property owners will be required.

Service or Main Abandonment Procedures

1. Water Service and Main Abandonments

    a. ¾" to 2" taps on DIP or Cast Iron
        - Excavate the water main, turn off the corporation stop, cut out a 1 ft section of the service line, install a plugged tube nut at the corporation stop and crimp the existing water service line.
        - Remove the curb stop box at the property line.
    b. ¾" to 2" taps on C-900 PVC
        - Excavate the water main, remove the corporation stop, cut out a 1 ft section of the service line, plug the tapping saddle and crimp the existing water service line.
        - Remove the curb stop box at the property line.
    c. 4" and larger
        - Excavate the water main, remove the gate valve, and cap or plug the tee.
        - Contractor is responsible for notifying affected customers 24 hours prior to water shut down. Only City of Greeley Water Department personnel shall operate the main line valves.
    d. Depending on the material and condition of the service or main additional steps may be required, including abandonment of the line at the main regardless of size.
    e. If the service to be abandoned was directly tapped onto the main, the service must be abandoned at the main with the service pipe removed and a Romac repair band placed over the tap.
    f. Water service and main abandonment must be scheduled with the City 72 hours in advance at 970-350-9320.

2. Sanitary Sewer Service and Main Abandonments

    a. Sanitary sewer main and service lines shall be abandoned at the property line.
    b. Excavate the sanitary sewer service or main, remove a minimum 2 ft section of pipe, install a wing-nut plug (or approved equivalent), and pour a concrete cap over the end of pipe.
    c. Abandoned sanitary sewer mains and service lines that discharge into a manhole shall be filled with sandbags and sealed inside the manhole with non-shrink grout.
    d. Sanitary sewer service and main abandonment must be scheduled with the City 72 hours in advance at 970-350-9322.

Project or Permit Number: _____

A4 - VARIANCE REQUEST FORM

This Variance Request Form shall be submitted to Engineering Development Review (EDR) and approved by the Stormwater Manager, Water & Sewer Chief Engineer, or Public Works Director as appropriate before a Land Grading Permit, Building Permit, Traffic Control Permit, and/or Right-of-Way Permit will be issued. Additional pages may be added as needed.

OWNER AND PROPERTY INFORMATION		
Applicant/Owner Name:	Phone:	
Address:	Email:	
City:	State:	Zip:
Engineer Name:	Phone:	
Address:	Email:	
City:	State:	Zip:
PROJECT AND VARIANCE INFORMATION		
Project Name:		
City Project No.:		
Site Street Address:		
Site Legal Description:		
Code or Volume and Design Criteria Section to be Varied (list subsections and specific requirements):		
VARIANCE JUSTIFICATION		
1. Provide the variances proposed to replace the Design Criteria or Code and technical sources to support the variances.		
2. Provide an explanation of why the variance is necessary for the reasonable use of the property. Include special or unusual conditions which justify the variance and alternatives considered that would meet the Design Criteria or Code.		
3. Summarize impacts to safety and traffic & explain how the variance will not unacceptably compromise public safety, health, & welfare.		

4. Explain how the variance is not contrary to best engineering practices to the intent and general purpose of the Design Criteria or Code.
5. Explain how the variance will not result in a significant impact to the public due to maintenance of the improvements.
6. Describe proposed mitigation measures, if applicable and/or necessary.
CERTIFICATION SIGNATURES
Stamp and Signature of Design Engineer: Date:

Variance Request Status: Granted _____ Denied _____

Reason for denial: _____

By: _____ Title: _____

Printed Name: _____ Date: _____

Additional Comments: _____

_____

A5 - PERMANENT {EASEMENT TYPE} EASEMENT AND COVENANT

This Permanent **{EASEMENT TYPE}** Easement and Covenant is made this _____ day of _____, 202_ ("Effective Date"), between **{NAME AS IT APPEARS ON TITLE COMMITMENT}**, a **{Entity Type and jurisdiction (LLC, Corporation, etc.)}(if business)}**, whose address is {Address} ("Grantor") and the **CITY OF GREELEY, COLORADO, a Colorado home rule municipality,** whose address is 1000 10th Street, Greeley, Colorado 80631 ("City").

Grantor, who owns, subject to existing easements, interests, and encumbrances, real property known by Weld County parcel number {Parcel #} and legally described as:

{Legal Description per title commitment} ("Property").

For consideration, the receipt and sufficiency of which is acknowledged, Grantor hereby conveys to City, a Permanent {Easement Type} Easement and Covenant ("Easement and Covenant") in, on, under, and across the property depicted in **Exhibit A** ("Easement Area"), attached hereto and incorporated herein, for the purposes of:

1. Surveying, locating, installing, using, operating, maintaining, marking, inspecting, repairing, altering, removing and replacing {drainage, waterline, sewer, etc.} improvements and appurtenances thereto ("Improvements");

2. Marking the location of the Easement Area;

3. Cutting and clearing trees, brush, debris and other obstructions on the Easement Area; and

4. Access across contiguous property owned by Grantor by means of existing roads, lanes, and setbacks, or other reasonable route as determined by City and approved by Grantor, which approval cannot be unreasonably withheld, so that City may conduct the activities described in paragraphs 1 through 3, above ("City's Activities").

{Following initial installation of the Improvements,} City shall at City's expense:

5. Insofar as practicable, restore the surface of the ground to its condition existing prior to City's Activities, as agreed upon by both parties. Restoration of the surface of the ground will be considered complete when Grantor, through Grantor's contractor, determines at least 70% of previously existing ground cover is mature enough to control soil erosion and can survive harsh weather conditions, and support the growing conditions existing prior to the City's Activities, in accordance with the City's best management practices.

6. For any agricultural use, such as growing crops or livestock operations, that exists in the Easement Area as of the Effective Date ("Allowed Agricultural Operations"), pay Grantor for actual damage to growing crops and livestock operations caused by City's Activities. The amount paid shall be calculated based on records provided by Grantor of Allowed Agricultural Operations.

7. Place gates and locks, to be controlled by City, in existing fences that cross the Easement Area.

COG REM PE _____
Project: _____
Parcel: _____

Grantor reserves the right to use and occupy the Easement Area for any purpose which will not interfere with City's Activities, provided that {, except for the uses and improvements approved by City ("Encroachment") described on Exhibit B,} Grantor shall not:

8. Construct or allow the construction of any structures with the Easement Area;

9. Install any landscaping, fences, or other improvements that require excavation deeper than one (1) foot below the surface of the Easement Area or alters the ground level within the Easement Area, without prior written consent of City;

10. Install any berms or other improvements that require fill dirt more than one (1) foot above the surface of the Easement Area or alter the ground level within the Easement Area, without prior written consent of City;

11. Except in connection with Allowed Agricultural Operations, plant or allow any trees, shrubs or landscaping that exceeds three (3) feet in height when mature within the Easement Area, without prior written consent of City;

12. Impound water or other substances within the Easement Area;

13. Store or dispose of any dangerous, toxic or hazardous substances within the Easement Area; or

14. Allow use or crossing of the Easement Area by any entity other than City, including utilities, without prior written consent of City.

15. The City is not responsible for any costs associated with improvements built after the Effective Date.

The easements and rights granted in this Easement and Covenant, the restrictions imposed, and the agreements, and covenants contained shall be easements, rights, restrictions, agreements, and covenants running with the land, shall be recorded against the Property, and shall be binding upon and inure to the benefit of Grantor and City, and their respective heirs, executors, administrators, successors, assigns, agents, licensees, invitees, and representatives, including, without limitation, all subsequent owners of the Property, or any portion thereof, and all persons claiming under them.

[Signature Pages Follow]

DRAFT

GRANTOR:

Company
Entity Type

By: _____ Date: _____

Printed Name: _____ Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

Acknowledged before me on this _____ day of _____, 202_, by

_____ as _____, as Grantor.

WITNESS MY HAND AND MY SEAL

MY COMMISSION EXPIRES _____

_____
Notary Public

CITY:

CITY OF GREELEY, COLORADO
a Colorado home rule municipality

By: _____ Date: _____
_____, Real Estate Manager

COG REM PE _____
Project: _____
Parcel: _____

DRAFT

A6 - WATER & SEWER PLANS & PLATS CHECKLIST

1. GENERAL FOR ALL SHEETS:

☐ Sheets are 22” x 34” or 24” by 36” PDF
☐ Legend describing line types, symbols, abbreviations, etc.
☐ Final Plans - City acceptance signature blocks, as appropriate
☐ Stamped plans - checked, sealed, signed and dated by the Design Engineer
☐ Bar scale
☐ North arrow
☐ Key map
☐ Benchmarks
☐ Checked final construction plan requirements for other City Departments

2. COVER SHEET:

☐ Project name and location
☐ City case or project number as assigned by City Planning Department
☐ Sheet index
☐ Vicinity map
☐ Legend
☐ Name/contact information of Owner, Developer, Design Engineer, Land Surveyor, Landscape Architect, etc.
☐ City recognized project benchmarks and two (2) horizontal control points (northings and eastings)
☐ Signature line for all Ditch Companies or end users if a ditch is not controlled by a ditch company as appropriate

3. NOTES SHEET:

☐ Project applicable water, sewer, and non-potable notes. See section 13: GENERAL NOTES
☐ Project applicable general construction notes from other City Departments

4. UTILITY PLAN:

☐ Proposed and existing streets and alleys with labeled names and right-of-way width
☐ Lot and block numbers
☐ Property lines
☐ Proposed and existing utilities on and within 100 feet of the project site
☐ Proposed and existing easements including name and width; Recording information for existing easements
☐ Storm drainage facilities
☐ Phasing boundaries for utilities and structures
☐ Proposed and existing water, sewer, and non-potable points of connection to existing systems
☐ Water, sewer, and non-potable appurtenances - manholes, hydrants, valves, irrigation structures, services, etc.
☐ Labeled water, sewer, and non-potable pipe diameter, pipe material, and year of installation, if available
☐ Labeled utilities to be abandoned

☐ Lots identified to have shallow sewer as defined in criteria, if any

☐ Geotechnical bore locations on the plan view

5. CONDUIT PLAN:

☐ All checklist items under section 4: UTILITY PLAN are provided on the conduit plan

☐ Location shown for all conduits crossing right-of-way or easement

☐ Labeled conduit diameter

☐ Labeled number of conduits at a single crossing location

☐ Labeled depth of cover for conduit installation

☐ Labeled utility designated for each conduit

☐ The following note: All utility conduit crossings of potable water, sanitary sewer and non-potable irrigation lines shall be encased in High Density Polyethylene (HDPE) or fusible C900-16 PVC Pipe, with minimum Standard Dimension Ratio (SDR) 11 across the entire easement or right-of-way width. The encasement joint shall be butt fused. Flexible joints are not allowed.

6. CONSTRUCTION PLAN VIEW –POTABLE AND NON-POTABLE WATER:

☐ Minimum horizontal design scale of 1" = 50'

☐ Horizontal alignment of water line and all appurtenances

☐ Proposed and existing streets and alleys with labeled names and right-of-way width

☐ List name of adjacent deve

☐ Lot and block numbers

☐ Property lines

☐ Proposed and existing easements including name and width

☐ All other proposed and existing utilities and facilities

☐ Phasing boundaries for utilities and structures

☐ Indicated proposed method of connection to existing system

☐ Mainline appurtenances shown and labeled – valves, fittings, hydrants, services, meters, thrust blocks, restrained pipe lengths, etc.

☐ Labeled potable and non-potable water line pipe diameter, pipe material, and year of installation

☐ Match lines labeled with corresponding sheet number

☐ Size and location (by station) of services

☐ Key map

☐ North arrow

☐ Bar scale

☐ Pipe or street centerline stationing

☐ Stationing provided for all mainline appurtenances

☐ Horizontal location information provided for all mainline appurtenances (ie. northings/eastings, station offset)

7. CONSTRUCTION PROFILE VIEW – POTABLE AND NON-POTABLE WATER:

☐ Minimum vertical design scale of 1" = 10'

☐ Vertical alignment of water line and all appurtenances

☐ All existing and proposed utility crossings shown and labeled including diameter

☐ Phasing boundaries

☐ Mainline appurtenances shown and labeled – valves, vertical deflections, water line lowerings, etc.

☐ Labeled clearance distance between profiled water line and all crossing utilities

☐ Labeled water line diameter, pipe material, pipe class, and length of pipe between fittings

☐ Match lines labeled with corresponding sheet number

☐ Stationing provided for all mainline appurtenances

☐ Labeled top of pipe elevations on proposed fittings, valves, and points of vertical deflection

☐ Labeled depth of cover between top of water line and finished grade

☐ Existing and proposed ground lines

☐ Phasing boundaries for water line, if any

8. CONSTRUCTION PLAN VIEW – SANITARY SEWER:

☐ Minimum horizontal design scale of 1" = 50'

☐ Horizontal alignment of sewer line and all appurtenances

☐ Proposed and existing streets and alleys with labeled names and right-of-way width

☐ Lot and block numbers

☐ Property lines

☐ Proposed and existing easements including name and width

☐ All other proposed and existing utilities and facilities

☐ Phasing boundaries for utilities and structures

☐ Indicated proposed method of connection to existing system

☐ Mainline appurtenances shown and labeled – manholes, services, etc.

☐ Labeled sewer line pipe diameter, pipe material, and year of installation (if available)

☐ Match lines labeled with corresponding sheet number

☐ Size and location (by station) of services

☐ Key map

☐ North arrow

☐ Bar scale

☐ Pipe or street centerline stationing

☐ Stationing provided for all manholes

☐ Horizontal location information provided for all manholes (ie. northings/eastings, station offset)

☐ Lots identified that have shallow sewer, if any

9. CONSTRUCTION PROFILE VIEW – SANITARY SEWER:

☐ Minimum vertical design scale of 1" = 10'

☐ Vertical alignment of sewer line and all appurtenances

☐ All existing and proposed utility crossings shown and labeled including diameter

☐ Phasing boundaries

☐ Mainline appurtenances shown and labeled – manholes, length of pipe between manholes, pipe slopes, manhole rim elevations, all mainline and service invert elevations, etc.

☐ Labeled clearance distance between profiled sewer line and all crossing utilities

☐ Labeled sewer line diameter and pipe material

☐ Match lines labeled with corresponding sheet number
☐ Stationing provided for all manholes
☐ Existing and proposed ground lines
☐ Phasing boundary, if any, for sewer line
☐ Identified lengths of shallow sewer main, if any

10. STANDARD DRAWING (DETAIL) SHEET(S):

☐ Project applicable, City of Greeley Water and Sewer Department Standard Drawings
☐ Project applicable Standard Drawings from other City Departments
☐ All non-standard details including details of any connections, crossings, special fittings, project specific installation detail, etc.

11. LANDSCAPE PLANS:

☐ No plants with mature growth greater than 3 ft in potable water/sanitary sewer/non-potable easements
☐ No shrubs within 5 ft or trees within 10 ft of meters, hydrants, manholes, mains, services or firelines
☐ Show and label irrigation taps and meters, including size
☐ Show all sanitary sewer services and potable water services, meters, and curbstops
☐ The following note: No plant material with mature growth greater than three (3) feet in height shall be planted within potable water, sanitary sewer, or non-potable irrigation easements.
☐ The following note: No shrubs shall be planted within five (5) feet or trees within ten (10) feet of potable and non-potable water meters, fire hydrants, sanitary sewer manholes, or potable water, sanitary sewer, or non-potable irrigation mains and services.

12. PLAT:

☐ Labeled and dimensioned all proposed and existing potable water/sanitary sewer/non-potable easements
☐ Recording information for existing easements
☐ Lots identified that have shallow sewer

13. GENERAL NOTES:

The following potable water, sanitary sewer, and non-potable irrigation general notes shall be put on Construction Drawings as applicable:

☐ All construction work to be accepted by the City shall conform to the City of Greeley Construction Specifications and Design Standards.
☐ All over lot grading in the right-of-way or easement shall be completed prior to installing potable water, sanitary sewer, or non-potable irrigation lines.
☐ Contractor shall verify all utility locations prior to construction. Call Utility Notification Center of Colorado at 1-800-922-1987 or dial 811 for utility locates 48 hours prior to any excavation work.
☐ Maintain a minimum of ten (10) feet horizontal clear distance separation between potable water mains/services and sanitary sewer or non-potable irrigation mains/services. Potable water mains/services are to be located 18-inches minimum above the sanitary sewer or non-potable irrigation mains/services. If field conditions vary from those shown on these plans and the

sanitary sewer or non-potable mains/services cannot be located below the water main or service, a clear vertical distance of eighteen (18) inches below cannot be maintained, or a minimum ten (10) foot horizontal separation cannot be achieved, the City shall be contacted immediately to review the situation.

- ☐ In all instances where a water line lowering, potable or non-potable, is required due to unforseen field conditions, a detailed drawing shall be provided to the City for acceptance prior to performing the work.
- ☐ Where potable water, sanitary sewer, and non-potable irrigation lines are located in common utility easement areas, there shall be no other utilities located horizontally within ten (10) feet of either line except at approved crossings.
- ☐ Contractor shall notify the City one (1) week prior to commencing work after City accepted Construction Drawings have been distributed and a preconstruction meeting has been held with the City.
- ☐ Contractor shall pothole all existing utilities to be crossed by potable water, sanitary sewer, or non-potable irrigation lines at least 24 hours prior to crossing to ensure 18" minimum clearance for open cut crossings and 36" minimum clearance for bored crossings. Horizontal and vertical location of crossed existing utilities shall be recorded on the As-Constructed Record Drawings.
- ☐ Should any variations before or during construction to the potable water distribution, sanitary sewer collection, or non-potable irrigation system designs be considered, notice must first be given to the City to determine if it needs acceptance by the City. If so, a new plan shall be drawn and submitted to the City for acceptance by the Design Engineer 72 hours prior to construction.
- ☐ Final construction plans are valid for construction one (1) year from the date of City signature acceptance.
- ☐ All potable water mains, services, and hydrant lines shall have a minimum cover of five (5) feet and a maximum cover of six (6) feet unless otherwise indicated on the accepted Construction Drawings.
- ☐ All non-potable water mains and services shall have a minimum cover of three and a half (3.5) feet and a maximum cover of six (6) feet unless otherwise indicated on the accepted Construction Drawings.
- ☐ All new water mains shall be bulkheaded and tested and approved prior to connection to the existing water system. Valves which pass testing for pressure and leakage at the time of installation and the testing was performed in the presence of the City may be considered as a bulkhead.
- ☐ Verification Survey - Top of pipe elevations at all potable and non-potable water line valves, and sanitary sewer manhole inverts shall be surveyed and provided to the City by the Design Engineer for acceptance prior to paving construction. The verification survey shall also provide sewer pipe slopes and length and proposed finished ground elevations at all valve boxes and manhole rim elevations.
- ☐ All utility conduit crossings of potable water, sanitary sewer and non-potable irrigation lines shall be encased in High Density Polyethylene (HDPE) pipe, with a minimum Standard Dimension Ratio (SDR) 11 across the entire easement or right-of-way width. The encasement joint shall be butt fused. Flexible joints are not allowed.
- ☐ For any new water services tapping into existing mains the contractor shall notify the City 72 hours prior at 970-350-9320.
- ☐ Water service and main abandonment must be scheduled with the City 72 hours in advance at 970-350-9320.
- ☐ Sanitary sewer service and main abandonment must be scheduled with the City 72 hours in advance at 970-350-9322

14. SERVICE OR MAIN ABANDONEMENTS

☐ Refer to appendix section *A3 – Policies Impacting Design and Construction* for service and main abandonment procedures. Include notes on Construction Drawings, as appropriate, for project specific abandonment.