Town of Frederick
Board of Trustees Agenda

Frederick Town Hall
Board Chambers
401 Locust Street
Tuesday, February 27, 2024

7:00 PM

Livestreaming of the Board of Trustees regular meetings have been transitioned to the Town of Frederick website. Work Sessions are not livestreamed. The livestream for the regular meeting can be accessed at www.frederickco.gov/civicmedia

Public Comment will only be taken in person unless an accommodation is requested through the Town Clerk's Office. If you require an accommodation or have questions about making public comment please contact the Town Clerk's Office:

Kelly Green, Deputy Town Clerk
kgreen@frederickco.gov
720-382-5500

Or

Emily Nitcher, Assistant Town Clerk
enitcher@frederickco.gov
720-382-5500

Built on What Matters.

Town of Frederick
Board of Trustees Agenda

Frederick Town Hall
Board Chambers
401 Locust Street
Tuesday, February 27, 2024

6:30 P.M.

Work Session

7:00 P.M.

Regular Meeting

Call to Order – Roll Call:

Pledge of Allegiance:

Approval of Agenda:

Special Presentations:

Public Comment: This portion of the agenda is provided to allow members of the audience to provide comments to the Town Board. Please sign in and the Mayor will call you. If your comments or concerns require an action, that item(s) will need to be placed on a later Agenda. Please limit the time of your comments to three (3) minutes.

Staff Reports:

A. Administrative Report – Bryan Ostler, Town Manager

Consent Agenda: Consent Agenda items are considered to be routine and will be enacted by one motion and vote. There will be no separate discussion of Consent Agenda Items unless a Board member so requests, in which case the item may be removed from the Consent Agenda and considered at the end of the Consent Agenda.

Action Agenda:

B. Resolution 24-R-11 A Resolution of the Town of Frederick, Colorado Approving an Intergovernmental Agreement Between the Town of Frederick and the Town of Firestone for

Weld County Roads 13 and 20 Intersection Operation Improvement Project– Jason Berg, Civil Engineer

C. Resolution 24-R-12 A Resolution of the Town of Frederick, Colorado, Adopting the Town of Frederick Potable Water Infrastructure Master Plan– Sarah Watson, Civil Engineer

D. Resolution 24-R-13 A Resolution of the Board of Trustees of the Town of Frederick, Colorado, Approving a Subrecipient Agreement for Community Development of Block Grant Funds – Max Daffron, Economic Development Manager

E. Resolution 24-R-14 A Resolution of the Board of Trustees of the Town of Frederick, Colorado, Approving the Agreement for Community Development Block Grants Funds Between the Town of Frederick and Brigit's Village – Max Daffron, Economic Development Manager

Mayor and Trustee Reports:

Executive Session:

For the purpose of determining positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and/or instructing negotiators under C.R.S. Section 24-6-402(4)(e)(1) concerning water storage agreements.

Adjournment:

Town of Frederick
Admin Report 2.27.24

Upcoming Board of Trustees Work Sessions:

The following is the schedule for upcoming meetings, though topics are subject to be changed or rescheduled:

- March 05, 2024 – Work Session
- March 12, 2024 – Regular Meeting
- March 19, 2024 – Work Session
- March 26, 2024 – Regular Meeting

Effective, Efficient & Strategic Government Operations

- The Parks, Recreation, Open Space and Trails Commission held their Regular Meeting on February 14 at the Bella Rosa Golf Course. Discussions included an update on the Comprehensive and Downtown Plans, updates on the Frederick Recreation Area and other park capital projects, and a discussion on water conservation/Audubon certifications as a management goal during planning efforts.
- Parks & Open Space welcomed Jordan Davison as the new Open Space and Trails Manager on February 26.
- Advertisement for the new Parks Planning and Development Coordinator position closed February 14 with over 25 applicants. Staff will continue recruitment in the coming weeks with the goal of having them on the team by April 1.
- Facilities staff is continuing work on the Police Department and are currently wrapping up electrical rough-in and data.
- During February 1 and February 13, Frederick's snow plows logged 1,641 miles. Street sweeping operations are now in effect on arterial roads to clean up after the snow events.
- Fleet received several additional oil and air hose reels, which will benefit both FFFPD and the Parks and Golf mechanic.
- Road grading operations are currently taking place along County Roads 5, 14, 16, and 17.
- Public Works crews are attending the 51st Annual Rocky Mountain Asphalt Conference & Equipment Show in Denver.

- Streets & Stormwater staff assisted the Police Department with a concrete spill along Highway 52 on the I-25 overpass.
- Out of concern for resident safety, the traffic lights and Colorado Boulevard and Godding Hollow had their controllers and processors replaced and were reprogrammed for better detection.
- Implementation of TEAM groups and channels for Communications & Engagement.
- Communications & Engagement Training:
    - PII/IT ongoing
    - 3CMA Webinar – Media Training Local Government Leaders
    - Host Lunch and Learn for interdepartmental training February 7

Community and Economic Vitality

- Bella Rosa Staff are attending the Colorado Golf Show at the Downtown Denver Convention Center from February 16-18. More information will follow in the next Board Report.
- The following is a list of all active development applications currently under review by the Town's Planning Department, Engineering Department, Legal Counsel, Frederick-Firestone Fire Protection District, and external review agencies.

Project Name (Date of Application)	***General Location***	***Brief Description***	***Project Type***
Bear Industrial Business Park, Replat 4, Lot 12A (1/2/24)	4109 Bruin Boulevard	Proposed warehouse/office building for construction contracting company with outdoor storage component.	Site Plan
Carriage Hills Filing 1, Replat A, Block 6, Lot 1 – 10 (3/6/23)	6500 – 6554 11th Street	Building design review for single-family detached and attached housing.	Construction Document Review
Clearview Villages (10/31/23)	Southwest corner of Godding Hollow and Silver Birch	Water demand analysis for the subdivision.	Water Demand Analysis
CWCWD 30" Waterline Easement (9/29/22)	Between Tipple Parkway and Highway 52 from Colorado Boulevard to Wheatland Boulevard.	30" waterline easement proposed.	
Dreamers Ridge Phase 1, Replat A (7/3/23)	Southwest of Godding Hollow and Colorado 5.	Proposed new tracts B, C and a new Lot 1. Lot 1 proposed as a 70-acre residential estate lot.	Minor Subdivision
Eagle Business Park Filing 4C, Lot 1 (1/16/24)	7200 Eagle Boulevard	Create a site plan document that reflects changes already made to the site such as the lot expansion.	Site Plan Amendment
Eagle Business Park Filing 5, Lot 3&4 (10/16/23)	4609 & 4701 Falcon Place	Proposed St Vrain Sanitation District administration maintenance facility.	Subdivision Amendment; Site Plan
Evezich Amendment 2, Lot 3A (10/23/23)	131 Aspen Drive	Proposed "Brigit's Village" 40-unit affordable mixed-use residential building.	Site Plan
Frederick West Business Center, Filing 2., Block 2, Lot 6 (1/2/24)	7701 Miller Drive	Proposed building addition to the west side of an existing building.	Site Plan Amendment
Glacier Business Park, Amendment 1, Block 4, Lot 5	3771 Monarch St. Suite E	Proposed dog daycare and kenneling facility.	Conditional Use

Project Name (Date of Application)	*General Location*	*Brief Description*	*Project Type*
(2/5/24)			
Indian Peaks, Filing 12, Lot 1 (7/17/23)	8123 Indian Peaks Avenue	Proposed replacement of aboveground extended detention basin with an underground detention facility and the modification of right-of-way landscaping with a waterwise design.	Site Plan Amendment
Columbine Heights (8/9/23)	Currently "Johnson Farms/Sindle Hill Energy Minor"	Proposed single-family detached residential community.	Preliminary Development Plan; Preliminary Plat
Meadowlark Business Park, Filing 3, Replat B, Block 1, Lot 1 (12/15/23)	5681 Iris Parkway	Proposed 6,000 sf storage warehouse addition.	Site Plan Amendment
Meadowlark Business Park, Replat A, Block 1, Lot 2 (8/21/23)	5978 Iris Parkway	Proposed 20,250 sf industrial building as phase 1. Phase 2 to include the addition of an outdoor storage area. Phase 3 to include removal or storage to be replaced with a 20,500 sf building and additional parking.	Site Plan
Miners Park Town Centre (3/6/23)	Northeast corner of Colorado Boulevard and Highway 52.	Planned development directly south of downtown Frederick.	Construction Document Review; Final Plat; Rezone
Silverstone Filing 7	Currently "Miner's Village Filing 1"	Proposed development of 581 single-home residential lots.	Preliminary Plat, Preliminary Development Plan
Nelson Farms	Northeast corner of I-25 and Highway 52.	Proposed development of 236 acres as single-family detached, duplex, and townhome lots.	Preliminary Plat; Preliminary Development Plan; Subdivision Amendment
No Name Creek Estates, Filing 1, Replat C, Block 14, Lot 1-3 (11/27/23)	Eastern part of No Name Creek	Water demand analysis for the three lots listed.	Water Demand Analysis
Park n Ride Annexation (12/26/23)	Northwest corner of I-25 and Highway 52	Proposed QuikTrip	MOAPI Amendment; Site Plan; Variance
Prosperity (12/8/23)	Southeast of Tipple Parkway and Ridgeway Boulevard	Water demand analysis for the subdivision	Water Demand Analysis
Raspberry Hill Business Park Lot 12 (10/17/23)	8208 Raspberry Way	Proposed Hyundai outdoor vehicle inventory storage lot and carwash.	Site Plan
Raspberry Hill Business Park Lot 15 (12/15/23)	8360 Raspberry Way	Proposed facility for an HVAC contractor to include a warehouse/shop, office space, and an outdoor storage component.	Site Plan
Shores on Plum Creek (6/20/22)	Northwest of Highway 52 and Colorado 3 ¼	Proposed master-planned community with retail/commercial opportunities and a wide range of housing types.	Minor Subdivision; Preliminary Plat; Preliminary Development Plan; Rezone

Project Name (Date of Application)	*General Location*	*Brief Description*	*Project Type*
Silverstone Commons (9/29/23)	Currently "Silverstone Filing 1, Block 8, Lot 1". Northwest of Highway 52 and William Bailey Avenue	Proposed development of a commercial/retail project that is cohesive with the adjacent commercial/mixed-use property to the east.	Final Development Plan
Silverstone Marketplace (3/6/23)	Northwest of Colorado Boulevard and Highway 52.	Proposed commercial development centered around the new King Soopers grocer.	Final Development Plan; Final Plat; Site Plan
Wheatlands (4/4/22)	Currently "Brunemeier Annexation"	Proposed high-quality residential neighborhood that will include single-family detached and attached housing.	Preliminary Development Plan; Preliminary Plat
Wildflower Filing 1, Amendment 1, Block 27, Lot 2 (1/2/24)	3833 Tipple Parkway	Proposed United Power battery energy storage system.	Site Plan
Wyndham Hill Filing 10 (11/16/20)	Currently "6855 Aggregate Boulevard"	Proposed single-family detached housing.	Final Development Plan; Final Plat

Dynamic, Inclusive & Connected Community

- Monthly Newsletter:
  - Electronic and mailer
- Weekly Flash, featuring four articles weekly
- Daily postings on social media platforms
- Communication and Campaign Planners
- Town Event Preparation – monthly meeting
  - Sponsors commitments for 2024 totaling: $24,100
  - 12 chainsaw carver applications (carver spots are full; accepting applications for waitlist)
  - 43 food vendor applications (met with community members interested in helping with food vending.)
  - 33 market vendor applications
  - Miners Day meeting – Determining desired bands
  - Met with Arts Committee – Event participation
  - Communications & Engagement met with Parks staff for 2024 Tour & Talk locations
  - Design of event logos for Federick in Flight
- Community Partnerships
  - Carbon Valley Cares meeting February 1
  - Frederick High School Foundation meeting February 8
  - CVEM meeting February 8
- Website Updates
  - Progress on website redesign and page updates
- Town App
  - Monthly Analytics Report
  - Social Media video celebrating 1,000 downloads
- Interdepartmental Collaboration
  - Departmental project support
    - Town 2023 Annual Report print & distributed
    - Strategic Planning mtg

        - Innovation Team meeting
        - Support Town Clerk's office Election items and Comms campaign for Election
        - 2024 Scholarship submission support
        - Attend Leadership Partnership meetings
        - Explore Culture opportunities (screen savers)
        - Explore comms campaign for GPS snowplow tracking
        - Oil and Gas mtgs and associated communications
- Board Meetings:
    - Attendance at Board meetings to ensure Town communications align with Board's vision and work in progress
    - Closed captioning on Board meeting recordings
    - March 5 BOT Work Session Prep

Strategic, Reliable and Sustainable Infrastructure

- Parks maintenance staff have been working on landscape bed pruning and cleanup, annual playground maintenance, equipment maintenance and capital projects.
- Golf maintenance staff are working through winter equipment maintenance and projects on the golf course, including capital irrigation repairs.

Safe and Secure

- Liquor Compliance:
    - Recently, Officer Esther Collins, in coordination with the Department of Revenue, conducted age compliance checks on multiple establishments within the Town that sell liquor. The routine checks are conducted using a minor as a potential customer. All ten businesses passed inspection and were compliant in refusing sales of both alcohol and tobacco to the minor.
- CACP Training:
    - Last week, Commander Dave Egan successfully completed a New and Aspiring Chief's Course presented by the Colorado Association of Chiefs of Police. The 2-day course was hosted by the Broomfield Police Department and presented multiple topics of study to prepare current and future law enforcement leaders in the state as well as provided ample opportunity for networking and idea-sharing amongst professional peers.

Fiscally Responsible Governance

- Communications & Engagement work on the Police Department recruitment brochure.
- The video script has been written for the Police Department's Axon My90 roll-out.
- Communications & Engagement collaboration with the Police Department regarding page consolidation.

TOWN OF FREDERICK
Board of Trustees
Action Memorandum

Consideration of the WCR13 and WCR20 Intersection Operation Improvement Project IGA with Town of Firestone

Agenda Date: Town Board Meeting – February 27, 2024

Attachments:
a. Intergovernmental Agreement with Town of Firestone
b. Resolution 24-R-11

Finance Review: Kurtis Adams
Finance Director

Submitted by: Jason Berg
Civil Engineer

Approved for Presentation: Bryan Ostler
Town Manager

☐ Quasi-Judicial ☒ Legislative ☐ Administrative

Strategic Plan Alignment:

Strategic, Reliable and Sustainable Infrastructure – The Town is actively engaging in opportunities to enhance transportation infrastructure and further implement the Town's Transportation Master Plan through identified projects.

Summary Statement:

The attached Intergovernmental Agreement (IGA) for the WCR13 and WCR20 Intersection Operation Improvement Project with the Town of Firestone is in connection with the Fiscal Year (FY) 2024-2027 Surface Transportation Block Grant (STBG) Transportation Improvement Project (TIP) grant awarded by the Southwest Weld County Subregional Forum of the Denver Regional Coalition of Governments (DRCOG) for the Weld County Road (WCR) 13 and Weld County Road (WCR) 20 Intersection Operation Improvement project.

Detail of Issue/Request:

The WCR13 and WCR20 intersection was recognized in the Town of Frederick Transportation Master Plan (TMP) as a Tier-3 Short Term project, which are intersections identified for operational improvements and widening for high priority turn lanes. Additionally, the TMP Planning Action Committees (PAC) identified the WCR13 and WCR20 intersection as the second highest area of need in Town.

The Southwest Weld County Subregional Forum as part of DRCOG consisting of the City of Brighton, the City of Dacono, the Town of Erie, the Town of Frederick, the Town of Firestone, the Town of Lochbuie, the City of Longmont, the Town of Mead, the City of Thornton and Weld County awarded the Town of Frederick with support from the Town of Firestone the FY 2024-2027 Subregional STBG TIP grant for the design and construction of the WCR13 and WCR20 Intersection Operation Improvements project in the amount of $2,059,000 with $516,000 in Local Agency matching funds.

Frederick and Firestone staff have completed the WCR13 and WCR20 Intersection Operation Improvement Project IGA. The agreement codifies each Town's Peer Agency Support Form, included with the grant application, which outlined that the partnering Town's would split the Local Agency matching funds totaling $516,000 with each contributing $256,000. Additionally, the agreement establishes any project costs above the total grant amount that may be incurred during the project will be split evenly, 50-50 between the Towns.

Legal Comments:

The Town Attorney's Office has reviewed the IGA. The Town Attorney has drafted the resolution.

Alternatives/Options:

The Town can choose to approve the WCR13 and WCR20 Intersection Operation Improvements Project IGA with the Town of Firestone or to deny the IGA and choose to solely fund the infrastructure improvements or not to move forward with the project.

Financial Considerations:

Not entering the IGA would leave Local Agency financing of the project between the Town of Frederick and Town of Firestone uncodified and leave Frederick as the sole entity responsible for the project.

Staff Recommendation:

Staff recommends approving Resolution 24-R-11 authorizing the Town Manager to enter the IGA with the Town of Firestone.

WELD COUNTY ROAD 13 AND WELD COUNTY ROAD 20
INTERSECTION OPERATION IMPROVEMENT PROJECT
INTERGOVERNMENTAL AGREEMENT

THIS INTERGOVERNMENTAL AGREEMENT (the "Agreement") is made and entered into this _____ day of _____, 2024 between the Town of Firestone, a Colorado statutory Town, whose address is 9950 Park Avenue, Firestone, CO 80504, hereafter referred to as "Firestone," and the Town of Frederick, a Colorado statutory town, whose address is 401 Locust Street, Frederick, CO 80530, hereafter referred to as “Frederick.” Firestone and Frederick may be individually referred to as a “Party” and collectively referred to herein as “Parties.”

WHEREAS, the Parties, through their respective governing bodies, find that:

1. Weld County Road 13 forms the primary arterial corridor in the Tri-Town area of Firestone, Frederick, and _____, with both Weld County Road 13 and Weld County Road 20 identified as Principal Arterials within the Regional Roadway System.

2. With rapid growth of the Northern Front Range and within the Tri-Town area, the Frederick Transportation Master Plan has identified intersection improvements as an area of focus to improve traffic operations through signal timing, controls, and widening through the incorporation of auxiliary turn lanes on primary corridors.

3. The proposed project is necessary to alleviate congestion along the corridor and decrease pollution associated with such congestion, improve bicycle and pedestrian connectivity by creating trails and bicycle lanes where none currently exist, improve safety by including ADA curb ramps and pedestrian crossing controls where none exist, and reduce accidents associated with congestion and inadequate roadway capacity.

4. The people of the State of Colorado have authorized the Parties to exercise the powers and to cooperate and contract in the matters set out in this Agreement through the Colorado Constitution, Article XIV, Section18 (2) (a), Article XX, Section 6, and Article XI, Section 7.

5. The General Assembly of the State of Colorado has authorized and encouraged local governments to exercise the powers and to cooperate and contract in the matters set out in this Agreement through the enactment of State statutes including, but not limited to: C.R.S. Section 29-20-101, et seq., and particularly Section 29-20-105 and Section 29-20-106; Section 29-1-201, et seq., and particularly Section 29-1-201 and Section 29-1-203; and Section 31-25-101, et seq.

6. This Intergovernmental Agreement is entered into pursuant to the authority granted by the General Assembly and the people of the State of Colorado, as described above, and the subject matter and agreements contained herein are logical and

foreseeable results of the State's enactment of the foregoing statues and Constitutional provisions.

WHEREAS, Frederick, with Firestone as supporting agency, was awarded a Denver Region Coalition of Governments (DRCOG) Southwest Weld County Subregional Forum Fiscal Year (FY) 2024-2027 Transportation Improvement Project (TIP) grant (Grant) in the amount of $2,059,9000; and

WHEREAS, Firestone and Frederick desire to establish and clarify provisions relating to Party cost sharing with regard to performance of the activities outlined in paragraph 3 above; and

WHEREAS, in view of the foregoing findings of the Town of Firestone Board of Trustees and Town of Frederick Board of Trustees, it is appropriate that this Agreement be entered into.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the Parties agree as follows:

1. Project Area. The area referenced in this Agreement as Exhibit 1 is hereafter referred to as the Weld County Road 13 and Weld County Road 20 Intersection Operation Improvement project area (or "Project Area").

2. Rights-of-Way. Within their respective jurisdictions in the Project Area, each Party shall provide the other all necessary utility easements and rights-of-way for storm drainage, roadway, or multimodal improvements without charge. The requesting Party as part of the Project Area design process shall work with the providing Party's Town Engineer for review and approval of drainage, roadway, and multimodal improvements.

3. Cost Sharing.

a. Local Agency Match. The Parties understand that the DRCOG Southwest Weld County Subregional Forum FY 2024-2027 TIP grant required 20% Local Agency matching funds totaling $516,000, and per Request for Peer Agency Support forms, the Parties have agreed to split this cost at $258,000 each.

b. Additional Project Costs. The Parties understand that the implementation of this Agreement and the achievement of its purposes, including design, acquisition, and construction of the Project Area, may require additional funds in excess of the $2,575,000 ($2,059,9000 grant funds and $516,000 Local Agency matching funds) provided, and hereby agree to cost sharing of additional costs, 50% Town of Firestone and 50% Town of Frederick.

c. Non-Appropriation. Additional project costs are subject to appropriation. Notwithstanding anything contained in this Agreement to the contrary, in the event no funds or insufficient funds for any additional project

costs are appropriated and budgeted or are otherwise unavailable by any means whatsoever in any future fiscal year of Frederick or Firestone, the affected Party shall immediately notify the other Party writing of such occurrence and the affected Party's obligations under this Agreement shall terminate on the last of day of the fiscal year for which appropriations have been received or made without penalty or expense to the affected Party.

4. Parties to Exercise Good Faith. The Parties agree to devote their best efforts and to exercise good faith in implementing the provisions of this Agreement.

5. Intent of Agreement. This Agreement is intended to describe rights and responsibilities only as between the named parties hereto. It is not intended to and shall not be deemed to confer rights to any persons or entities not named as parties hereto nor to require Firestone or Frederick to annex any property or to provide any services to any land. This Agreement is not intended to limit in any way the powers or responsibilities of Weld County or of any other political subdivision of the State of Colorado not a party hereto.

6. Remedies for Default. Should any party fail to comply with the provisions of this Agreement, the other party, after providing written notification to the non-complying party and upon the failure of said party to achieve compliance to the reasonable satisfaction of the noticing party within ninety (90) days after said notice, may maintain an action in a court of competent jurisdiction for specific performance, injunctive, or other appropriate relief, excluding damages relief. In the event of such litigation, each party shall be responsible for its own costs, including attorney fees.

7. Amendment. This Agreement is the entire and only agreement between the Parties regarding the Project Area and the sharing of certain tax revenues generated therein; there are no promises, terms, conditions, or obligations other than those contained herein. The Parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement. This Agreement may be amended only by an instrument in writing signed by the Parties.

8. Severability and Reformation. If any term or condition of this Agreement shall be held to be invalid, illegal, or unenforceable, if allowed by law, in lieu of such invalid, illegal, or unenforceable provision, there shall automatically be added as part of this Agreement a provision similar in terms to such illegal, invalid, or unenforceable provision so that the resulting reformed provision is legal, valid, and enforceable. If such reformation is not possible, this Agreement shall be construed and enforced without such provision, to the extent that this Agreement is then capable of execution within the original intent of the Parties.

9. Effective Date. This Agreement shall become effective on the ____ day of _____, 2024.

IN WITNESS WHEREOF, the above Parties hereto have caused this Agreement to be executed.

TOWN OF FIRESTONE

_____
Drew Alan Peterson, Mayor

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
William P Hayashi, Town Attorney

TOWN OF FREDERICK

_____
Tracie Crites, Mayor

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
Town Attorney

TOWN OF FREDERICK, COLORADO
RESOLUTION NO. 24-R-11

A RESOLUTION OF THE TOWN OF FREDERICK, COLORADO APPROVING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE TOWN OF FREDERICK AND THE TOWN OF FIRESTONE FOR WELD COUNTY ROADS 13 AND 20 INTERESECTION OPERATION IMPROVEMENT PROJECT

WHEREAS, the Board of Trustees of the Town of Frederick, Colorado, pursuant to Colorado statute, is vested with the authority of administering the affairs of Frederick, Colorado; and,

WHEREAS, with rapid growth along the Norther Front Range and within the Tri-Town area, the Frederick Transportation Master Plan has identified intersection improvements as an area of focus to improve traffic operations; and

WHEREAS, the Denver Regional Coalition of Governments, Southwest Weld County Subregional Forum, has made a grant to the Town of Frederick and Town of Firestone to fund improvement of traffic operations through signal timing, controls, and lane widening; and

WHEREAS, the Town of Frederick and Town of Firestone wish to enter into an intergovernmental agreement to allow administration of such funds and cost-sharing; and,

WHEREAS, the Town of Frederick and the Town of Firestone have memorialized the agreement as reflected in Exhibit A.

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees of the Town of Frederick, Colorado:

1) The INTERGOVERNMENTAL AGREEMENT BETWEEN THE TOWN OF FREDERICK AND THE TOWN OF FIRESTONE FOR WELD COUNTY ROADS 13 AND 20 INTERESECTION OPERATION IMPROVEMENT PROJECT attached hereto as Exhibit A is hereby approved.

2) The mayor is authorized to execute the agreement.

INTRODUCED, READ, PASSED, AND ADOPTED THIS 27th DAY OF FEBRUARY, 2024.

ATTEST: **TOWN OF FREDERICK**

By _____ By _____
Kelly Green, Deputy Town Clerk Tracie Crites, Mayor

TOWN OF FREDERICK
Board of Trustees
Action Memorandum

Adoption of Potable Water Infrastructure Master Plan

Agenda Date: Town Board Meeting – February 27, 2024

Attachments:
a. Potable Water Infrastructure Master Plan
b. Resolution 24-R-12

Finance Review: Kurtis Adams
Finance Director

Submitted by: Sarah Watson
Civil Engineer II

Approved for Presentation: Bryan Ostler
Town Manager

☐ Quasi-Judicial ☐ Legislative ☐ Administrative

Strategic Plan Alignment:

Strategic, Reliable & Sustainable Infrastructure: This project began under the previous Strategic Plan which stated: Frederick is dedicated to investing in existing and future transportation, water, stormwater, and technology while planning for sustainable growth and development. Frederick takes steps to implement all adopted plans. Creation of a Potable Water Infrastructure Master Plan will support the Town's goal by identifying improvements needed for the Potable Water System to remain reliable and sustainable. This is still the intent of the goal.

Summary Statement:

A Potable Water Infrastructure Master Plan is one of the last plans needed to support the Town and Staff in planning and decision making regarding potable water infrastructure improvements. This plan will be used to identify future Capital Improvement Projects required to the completed by the Town to improve

our water service to existing customers and improvements that will be completed by future development.

Detail of Issue/Request:

The Town solicited statements of qualification from firms for the creation of the Town's first Potable Water Infrastructure Master Plan. Through a thorough review process completed by Engineering staff the Forsgren Associates, Inc (Forsgren) was selected as the preferred consultant and the contract award was approved by the Town Board.

The Master Plan addresses:

- Reliability and sustainability of potable water infrastructure, current and future
- Emergency response (fire protection)
- Water management and conservation
- Water quality
- Town connectivity
- Social equity
- Relationship between land use, housing, and potable water for livable communities
- Public engagement

Forsgren completed a review of our infrastructure data, a GIS mapping update, condition and reliability assessment of existing infrastructure, water quality review, hydraulic model update and analyses, community and stakeholder engagement, review of Town Design Standards and Policies, and has prepared a Master Plan Report. The draft report was provided to the Town Board ahead of the January 30th work session and staff and Forsgren presented the findings and recommendations of the study at the January 30th work session.

The Master Plan report includes a list of Capital Improvement Projects. This list is broken into two categories, the improvements that will be funded by the Town and the improvements that will be required for development. This is a 10-year CIP list. This list of Capital Improvement Projects will be incorporated into the Town's Capital Improvement Project list that is submitted as part of the annual budget request.

The Town of Frederick 10-year Capital Improvement Projects are:

No.	Description	Estimated Timing - Years	Preliminary Projected Cost	Project Goals
1	2nd Street Loop	1-2	$0.4M	Improve Reliability & Fire Flow
2	Firestone Emergency Interconnect	2-3	$1.7M	Partial Emergency Backup Water Supply
3	Bear Industrial Park Connector	3-4	$1.4M	Improve Reliability
4	Water Storage Tank	5-7	$12.6M	Additional Storage and Reliability
5	LHWD Emergency Interconnect– Phase 1	6-10	$3.8M	Partial Emergency Backup Water Supply

Legal Comments:

The Town Attorney has drafted the resolution.

Alternatives/Options:

The Town Board may decide to delay adoption of the Master Plan at this time. The Town Board may request changes to the Report prior to adoption.

Financial Considerations:

The CIP list identified in the Report will be included in the Water Rate Study that is ongoing so the Town can make sure that the rates are set appropriately, and the Town is collecting adequate funds to afford the necessary improvements.

Staff Recommendation:

Staff recommends that the Board approve Resolution 24-R-12 adopting the Potable Water Infrastructure Master Plan.

TOWN OF FREDERICK

Potable Water Infrastructure Master Plan

FEBRUARY 2024

FORSGREN Associates Inc.

Prepared by:

Mike Waresak, P.E.
Will Koger, P.E.
Pierce Powers, P.E.

FORSGREN Associates Inc.

56 Inverness Drive East, Suite 112
Englewood, CO 80112

Project No. 04-22-0195

Acknowledgements

The Town of Frederick's staff provided extremely valuable input towards the development of this report. Forsgren would specifically like to thank Civil Engineer Sarah Watson, Public Works Director Kevin Ash, as well as the Public Works and Planning Department staffs for their information and suggestions related to this report.

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FIGURES

APPENDICES

ACRONYMS

AF, AC-FT	acre-feet
AFY	acre-feet per year
ALT	alternative
AVG	average
C-BT	Colorado-Big Thompson
CCF	hundred cubic feet
CDPHE	Colorado Department of Public Health and Environment
CFS	cubic feet per second
CIP	Capital Improvements Plan
CR	County Road
CWCB	Colorado Water Conservation Board
CWCWD	Central Weld County Water District
EDU	equivalent dwelling unit
FT-MSL	feet, mean sea level
GAL	gallons
GPCD	gallons per capita per day
GPD	gallons per day
GPM	gallons per minute
HP	horsepower
KGAL	one thousand gallons
LHWD	Left Hand Water District
LTWRP	Long-Term Water Resources Plan
MG	million gallons
MGD	million gallons per day
PS	Pump Station
PSI	pounds per square inch
SFE	single family equivalent
SH	State Highway
WEP	Water Efficiency Plan
WTP	water treatment plant

EXECUTIVE SUMMARY

Frederick has experienced significant growth in recent years. With more commercial and residential development on the horizon, it is crucial to review the Town's potable water system and thoughtfully plan its continued upgrade and expansion, ensuring reliable water delivery to both current and future Town customers.

Consistent with Frederick's goals for Strategic, Reliable & Sustainable Infrastructure, this Potable Water Infrastructure Master Plan:

1. Outlines a vision for the "build-out" water system to aid in Town development reviews.
2. Provides recommendations consistent with guidance included in previously completed Town water plans.
3. Documents a Capital Improvements Plan to improve reliability and sustainability for the water system.

Potable Water System

Frederick's potable water service area is east of Interstate 25 as shown in Figure 1. The Left Hand Water District serves Frederick citizens west of the interstate. The Central Weld County Water District (CWCWD) furnishes potable water to Frederick through master meters located throughout the service area. CWCWD is responsible for water quality up to the master meters, which are the beginning points of Frederick's system. Frederick's future service area includes undeveloped areas within Town limits, and properties within the Town's planning boundaries, which extend east to County Road 19 and south to State Highway 52 as shown in Figure 1.

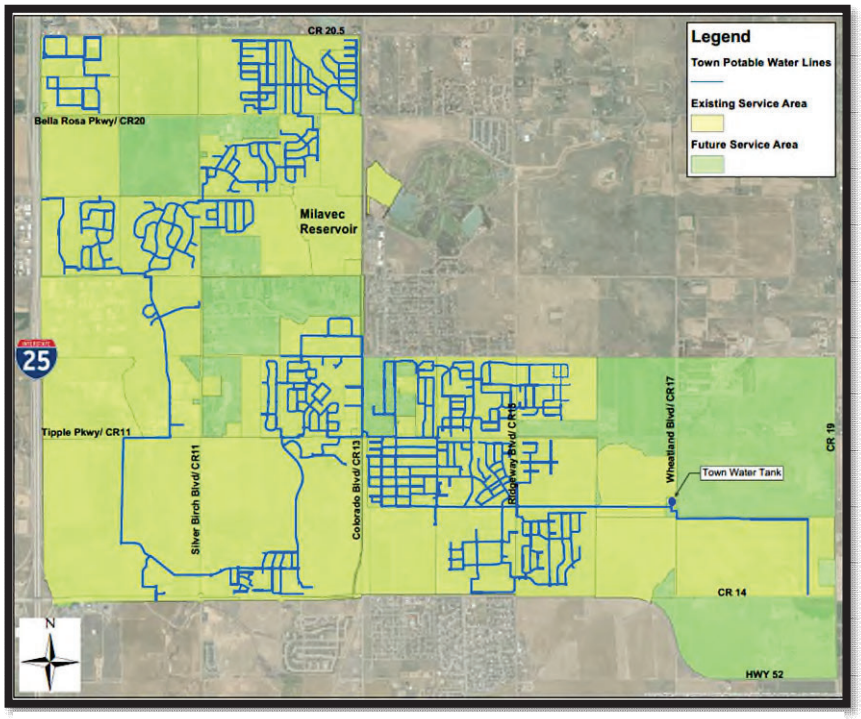


Figure 1 - Frederick Potable Water System & Service Area

The Town's system includes over 70 miles of waterlines, and one storage tank on Wheatland Boulevard (CR 17) with a volume of 2.8 million gallons (MG). Treatment is provided by

CWCWD at the Carter Lake Filter Plant located west of Berthoud. CWCWD's system also includes storage available for Frederick's use.

Infrastructure Condition Assessment

This Master Plan includes an assessment of existing infrastructure. According to the Public Works and Engineering Departments, the system has no known history of chronic water main breaks or leaks. Most of the waterlines are PVC pipes installed in 1990 or later. Based on the estimated life of PVC pipe, most of the Town's waterlines should last another 65 years. The 2.8-MG welded steel tank at Wheatland Boulevard was constructed in 1974, and a recent inspection reported minor wear with no major repairs needed. At nearly 50 years old, the tank could remain functional for another 20 years or more, provided the Town continues with preventative maintenance and repairs based on inspections conducted at least every five years.

Public Engagement for Master Plan

Town citizens were given opportunities for in-person and online surveys to offer input on the important topics and strategies they want to be addressed in the Master Plan. A summary of the public input and how the Master Plan addresses each topic is provided in Table 1 below.

Table 1
Public Input Summary

Topic	How Topic is Addressed in Master Plan
Drinking Water Quality	Provide additional loops in distribution system.
Affordability of drinking water	Recommend only improvements that are necessary and cost effective. Identify potential grant funding sources.
Water Conservation	Perform a condition assessment of existing pipes to identify water leak issues. Convert irrigation of parks from potable to non-potable water.
Back-up Water Supply	Consider emergency interconnections with neighboring systems and additional storage.

Projected Water Demands

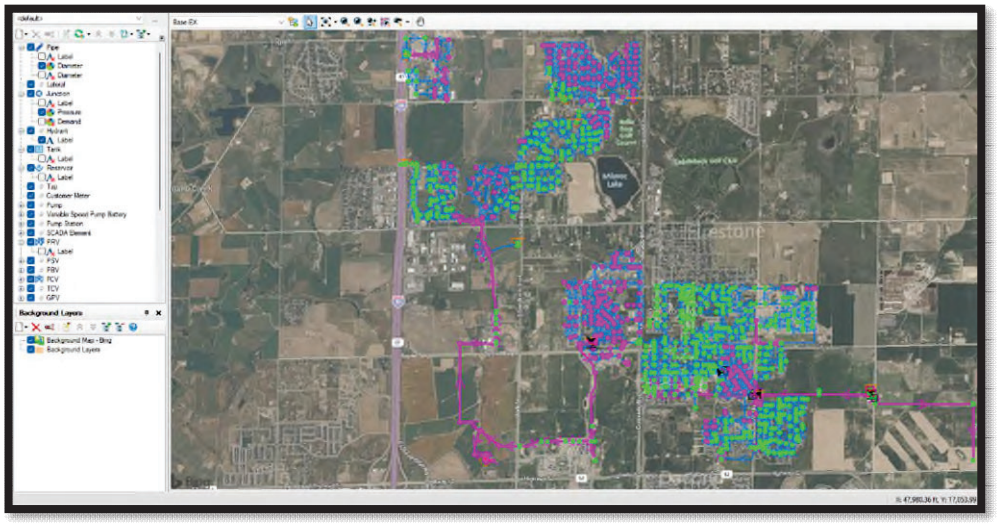
Build-out water demands (shown in Table 2) are projected for the entire Town planning area using Frederick's Land Use Code, Land Use and Zoning Plans, and dwelling unit estimates for some properties furnished by the Planning Department. The Town's Long-Term Water Supply Plan estimates that build-out will occur between 2060 and 2070, with population in the potable water service area increasing from approximately 12,000 to 42,400 people. The Town's 25/52 East Subarea Plan was utilized to estimate water demands for a strategically planned multi-use development at the Frederick interchange. CWCWD requires an additional treatment and delivery water overage of 12% be included in water supply calculations, in addition to the Town's non-revenue water losses which is estimated at 5%. Also included in Table 2 projections is the water conservation strategy to convert parks from potable to non-potable water irrigation as recommended in the Town's Water Efficiency Plan.

Table 2
Projected Average Daily Water Demand for Build-out

Year	Metered Demand (mgd)	Non-revenue water (mgd)	Treatment & Delivery Overage (mgd)	Total Avg Potable Water Supplied (mgd)
2022	1.84	0.09	0.23	2.16
2023	1.89	0.09	0.24	2.22
2033	2.30	0.11	0.29	2.70
2043	2.94	0.15	0.37	3.46
2053	3.77	0.19	0.47	4.43
2063	4.82	0.24	0.61	5.67
2070	5.72	0.29	0.72	6.72

Hydraulic Model

A hydraulic model was developed as an efficient method to size and locate infrastructure to serve the entire future service area. The model can be updated, as development or Town zoning designations change,



to confirm water infrastructure is planned and designed to accommodate other future development.

Long-Term Capital Improvements

Major infrastructure recommended for build-out of the Town planning boundaries includes:

1. Water loops to improve water quality and fire protection system capacity.
2. A network of transmission mains to convey water to future development, including from a potential future water treatment plant near Milavec Reservoir.
3. An additional storage tank to provide back-up storage.
4. Emergency interconnections with Left Hand Water District and the Town of Firestone.
5. A booster pump station near the existing tank at Wheatland Boulevard (CR 17) to serve future development in the eastern planning area.

To minimize financial burden to existing Town customers, improvements needed for specific future development are recommended to be funded by the developers. For a conceptual layout of recommended infrastructure, please refer to Exhibit 1, Long-Term Capital Improvements, attached to this Executive Summary.

10-Year Capital Improvements Plan

In collaboration with Engineering Department staff, the highest priority projects were incorporated into a recommended 10-Year Capital Improvements Plan (CIP). Table 3 below provides preliminary budget costs, estimated timing and goals for the priority projects. The budget estimates for the five projects in the 10-year CIP total nearly $20 million. Exhibit 2, Short-Term Capital Improvements, attached to this Executive Summary provides a map showing the locations of the projects included in Table 3.

Table 3
10-Year Capital Improvements Projects

No.	Description	Estimated Timing Range	[1]Preliminary Project Cost Opinion	Project Goals
1	2nd Street Loop	Years 1 to 2	$0.4M	Improve Reliability & Fire Flow
2	Firestone Emergency Interconnect	Years 2 to 3	$1.7M	Partial Emergency Backup Water Supply
3	Bear Industrial Park Connector	Years 3 to 4	$1.4M	Improve Reliability
4	Water Storage Tank	Years 5 to 7	$12.6M	Additional Storage and Reliability
5	LHWD Emergency Interconnect – Phase 1	Years 6 to 10	$3.8M	Partial Emergency Backup Water Supply

1. All cost opinions are in current dollars.

Three additional developer-funded water system improvements were also identified that could potentially occur within the next 10 years as shown in Table 4 below. The second phase of the LHWD Emergency Interconnect is on the west side of I-25 and part of LHWD's future planned improvements to be funded at least partially by developers. Refer to Exhibit 2 for locations of the developer-funded projects listed in Table 4.

Table 4
Developer-funded Improvements

No.	Description	Estimated Timing Range	Project Goals
D-1	Silverstone Marketplace/Miner's Park Loop	Years 1 to 2	Improve pressure to future developments
D-2	Booster Pump Station near existing Water Tank	TBD	Expand tank service area to future development
D-3	LHWD Emergency Interconnect –Phase 2	Years 6 to 10	Partial emergency backup water supply

Future Development Reviews

Future potable water infrastructure recommended and shown in this Master Plan is intended to provide minimum requirements to aid the Town in development reviews. Except where otherwise explicitly agreed by the Town, it is the responsibility of developers to design and construct the necessary potable water infrastructure based on the most recent available information at the time of development, and in accordance with all Town of Frederick policies, guidelines, codes, rules, and regulations.

Future Master Plan Updates

It is recommended that this Master Plan be updated every five to seven years to confirm recommendations, budget costs and project schedules.

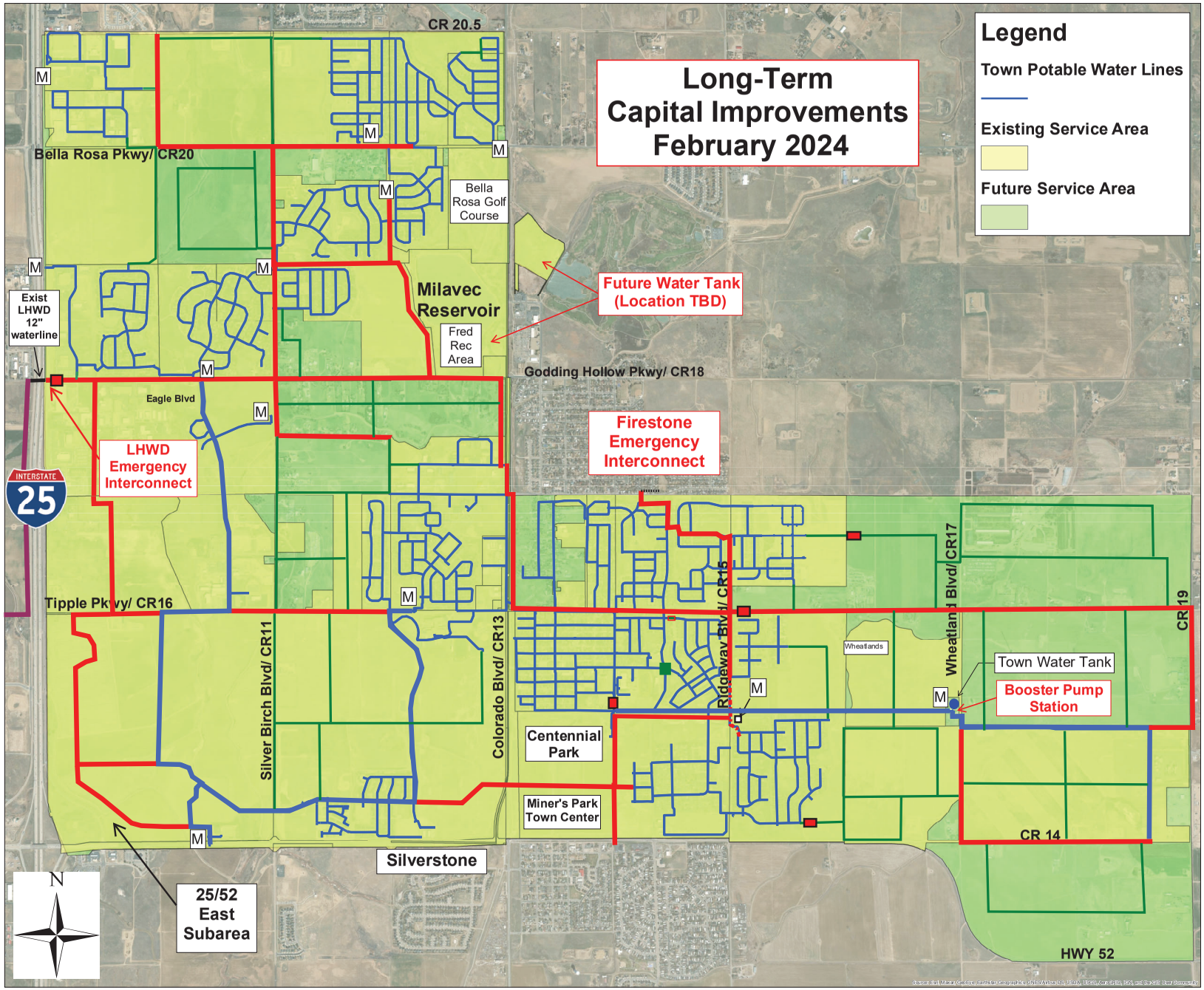
Executive Summary Attachments

Exhibit 1: Long-Term Capital Improvements Map

Exhibit 2: Short-Term Capital Improvements Map

Potable Water Infrastructure Master Plan

Exhibit 1



Potable Water Infrastructure Legend

- Existing Waterline
- Existing 12" Waterline
- Future 12" Waterline
- Future 8" Waterline
- Future LHWD Waterline
- Existing Control Valve
- Future Control Valve
- Existing Master Meter

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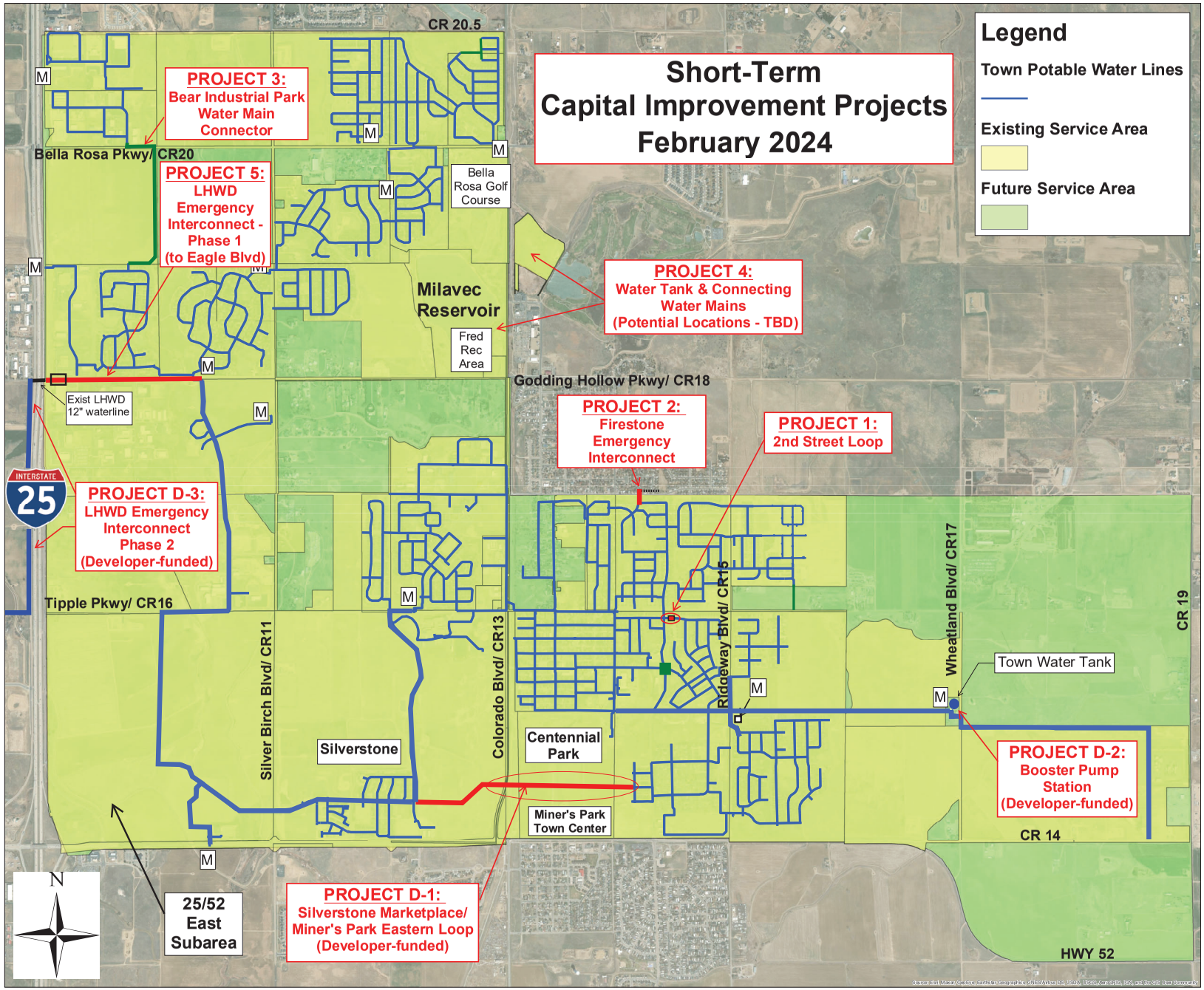
February 2024

NOTE: Locations of future waterlines shown in undeveloped areas are conceptual only and will be as determined by the developers and Town staff during the development review process.

FORSGREN Associates Inc.

Potable Water Infrastructure Master Plan

Exhibit 2



Potable Water Infrastructure Legend

- Existing Waterline
- Existing 12" Waterline
- Future 12" Waterline
- Future 8" Waterline
- Future LHWD Waterline
- Existing Control Valve
- Future Control Valve
- M — Existing Master Meter

FREDERICK COLORADO

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February 2024

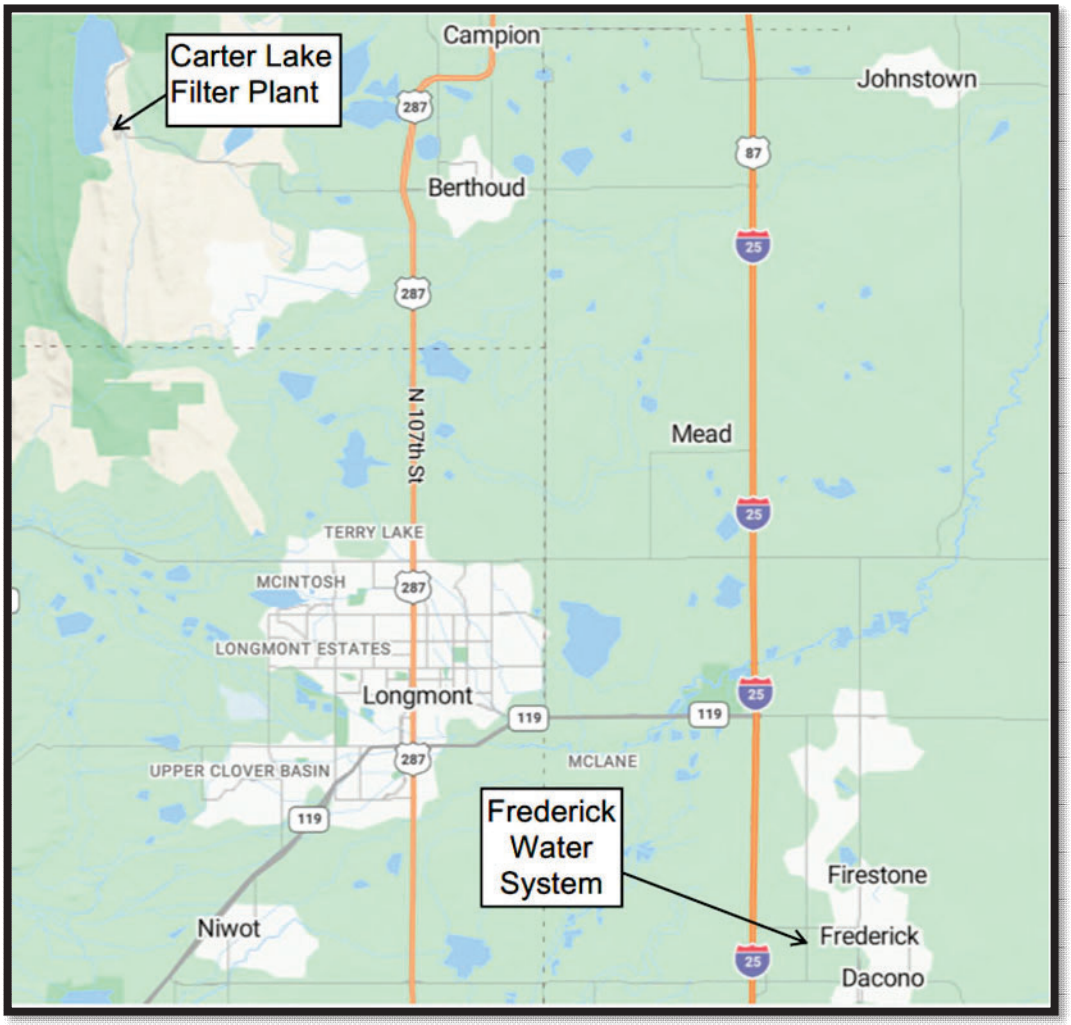
FORSGREN Associates Inc.

1.0 INTRODUCTION

1.1 Overview

The Town of Frederick is located along the Interstate 25 corridor in southern Weld County, approximately 25 miles north of Denver and 10 miles southeast of Longmont as shown in Figure 1.1, Location Map. The Town's potable water system is one of three that serves customers within Frederick's town limits. The Town purchases potable water from the Central Weld County Water District (CWCWD) and delivers water to the east side of Interstate 25 to approximately 4,600 connections. CWCWD's water is treated at the Carter Lake Filter Plant west of Berthoud. Water service for Frederick citizens west of the interstate is provided by Left Hand Water District. This Master Plan is limited to water infrastructure owned by the Town of Frederick on the east side of I-25.

Figure 1.1 Location Map



1.2 Master Plan Goals

Residential and commercial development in Frederick has accelerated in recent years. With more development on the horizon, the Town selected Forsgren Associates (Forsgren) to prepare this Potable Water Infrastructure Master Plan (MP) to address drinking water reliability and sustainability. This MP is informed by the Town's 10-year and Long-Term Water Resources Plans and is intended to be consistent with these and other water-related studies. The focus of this MP is the Town's water infrastructure and does not include evaluation of water supplies, which were evaluated in-depth in other studies. Specifically, the goals of this Master Plan are to:

1. Improve potable water service to current and future customers
2. Outline a vision for the "build-out" water system
3. Evaluate reliability and sustainability of infrastructure
4. Recommend and prioritize short-term and long-term infrastructure improvements
5. Develop estimates of project costs for recommended short-term improvements
6. Be consistent with guidance included in previously completed water plans

1.3 Coordination with Comprehensive Plan Update

The Town is in the process of updating its Comprehensive Plan to guide future development, infrastructure and amenities. Potable water is an important resource that must be managed carefully to enhance the livelihood of Frederick as laid out in the Comprehensive Plan's vision.

Public feedback related to the Comprehensive Plan Update indicates citizens would like to see more amenities and recreational opportunities while preserving Frederick's small-town character. Forsgren collaborated with Town staff and the Comprehensive Plan consultant to include potable water issues in the Comprehensive Plan public outreaches. These efforts are described in Section 3.

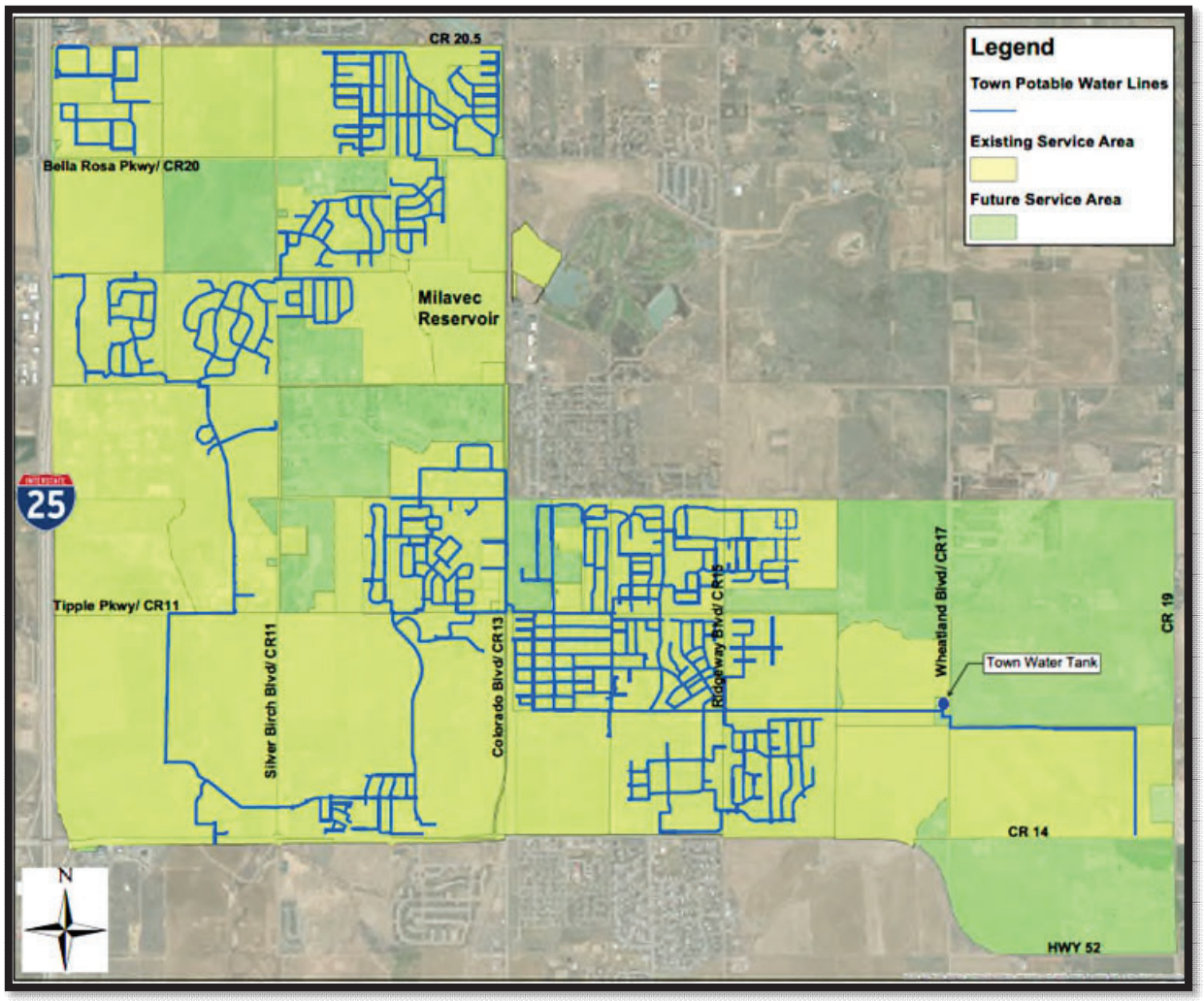
2.0 INFRASTRUCTURE CONDITION ASSESSMENT

2.1 Existing Potable Water Infrastructure

2.1.1 System Overview

Frederick's potable water system serves customers on the east side of Interstate 25 comprising approximately 10 square miles. The Town receives potable water treated at the Carter Lake Filter Plant west of Berthoud from Central Weld County Water District (CWCWD) transmission lines. The CWCWD water is supplied to Frederick through 13 master meters that connect to and feed the Town's distribution piping. An additional approximately 40 smaller CWCWD master meters serve individual Town customers, including commercial customers in the West Frederick Business Center near I-25. Due to the relatively high pressure in the CWCWD transmission mains, each of the 13 large master meters includes a pressure reducing station. See Figure 2.1 below for a map of the Town's water system.

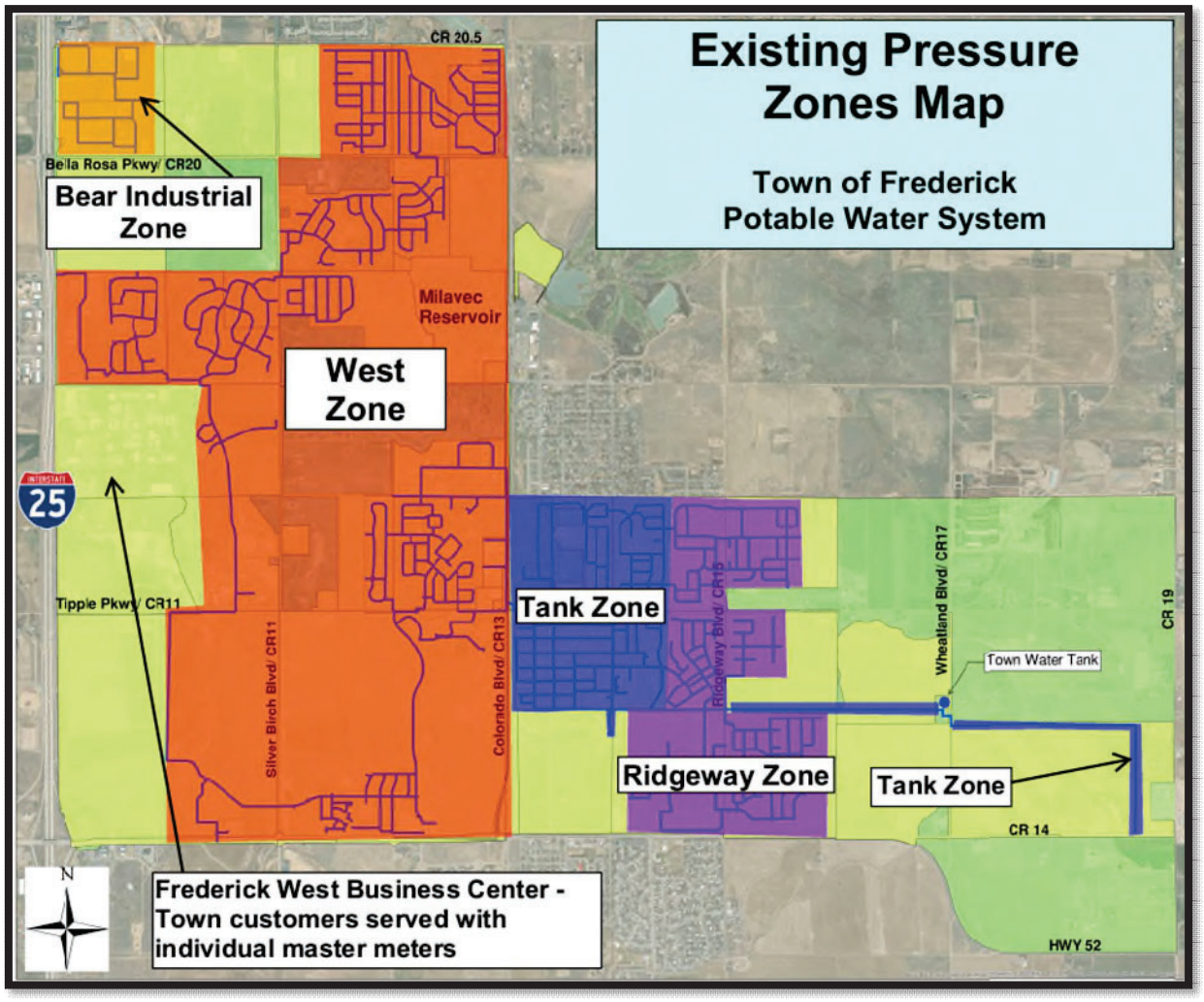
Figure 2.1 Town of Frederick, Potable Water System and Service Area Map



The Town's water system (Public Water System Identification No. CO162288) includes one 2.8-million gallon (MG) welded steel ground storage tank, over 70 miles of waterlines predominantly between 6-inch and 12-inch diameter, and associated valves, fire hydrants and approximately 4,600 service connections.

Frederick's distribution system has four separate pressure zones as shown in Figure 2.2. One pressure zone (Town Zone) serves primarily the downtown area and north of downtown, as well as one customer (Spindle Energy) east of the tank. This zone is served by the Town's existing 2.8-MG tank on Wheatland Boulevard (CR 17). One of the 13 CWCWD master meters/pressure reducing stations supplies water to the Town's tank. The ground elevations for customers in this pressure zone range from approximately 4970 to 5040 FT-MSL. The tank is at a ground elevation of 5110 FT-MSL, with a hydraulic gradient based on operating water levels in the tank of 5130 to 5150 FT-MSL. This provides system pressures ranging from 55 to 75 psi for customers in this pressure zone.

Figure 2.2 Existing Pressure Zones Map



A second pressure zone (Ridgeway Zone) serves mostly residential developments on the east and west sides of Ridgeway Boulevard (CR 15), extending from McClure Avenue to the north, and south to State Highway (SH) 52. Ground elevations range from 5080 FT-MSL at the eastern end of the Savanah development, to approximately 5000 FT-MSL at the northern limits near McClure Avenue. A CWCWD master meter/pressure reducing station on CR 15 supplies water to this zone at pressure of 90 to 100 psi.

The third and largest pressure zone (West Zone) is supplied through 10 CWCWD master meters and supplies water to most of the service area west of Colorado Boulevard. This zone has a mix of residential, commercial and institutional customers, including Frederick High School and Agilant Technologies, the largest water user in the system. Ground elevations range from approximately 5030 north of the Silverstone development to 4900 FT-MSL in The Farm neighborhood north of Bella Rosa Parkway. Pressures from the CWCWD master meters range between approximately 80 and 100 psi for this zone.

The Bear Industrial Park, located in the northeast corner of the service area adjacent to the East I-25 Frontage Road, is hydraulically disconnected from the rest of the system and receives water from one CWCWD master meter on East I-25 Frontage Road, creating the fourth isolated pressure zone (Bear Industrial Zone). This master meter/pressure reducing station supplies pressures of between 80 and 90 psi. Ground elevations in the industrial park range from approximately 4900 to 4940 FT-MSL.

There are also approximately 40 customers in the west part of the service area that have individual CWCWD master meters. These customers are part of the Town's customer base, but are isolated from the larger CWCWD master meter that supplies water to the West Pressure Zone. These customers include approximately 33 commercial customers and seven residential customers.

2.1.2 Central Weld County Water District

CWCWD serves an approximately 250-square mile service area in Weld County generally beginning south of Greeley and extending to south of Dacono. Besides Frederick, the District provides potable water to eight other communities, LHWD, and rural areas in the County. CWCWD utilizes Colorado-Big Thompson (C-BT) and Windy Gap shares to supply water for treatment at their Carter Lake Filter Plant located west of Berthoud.

Potable water from the Carter Lake Filter Plant is conveyed to Frederick through an approximately 30-mile series of large transmission mains ranging from 42-inch to 12-inch diameter. The elevation at the Filter Plant is approximately 5700 feet, which is over 600 feet higher than Frederick's potable water service area.

As discussed previously in this Section, CWCWD water is supplied to Frederick through 13 main master meters and 40 smaller master meters that serve individual customers within Frederick's water system. Due to the significant elevation difference between the Carter Lake

Filter Plant and Frederick, pressure reducing stations are provided at each master meter to reduce pressures to between 80 and 100 psi.

2.1.3 Public Works Department Input

Based on feedback from the Frederick Public Works Department, the existing potable water infrastructure appears to be in good condition with no history of chronic water main breaks. The only water leak issues have been with service lines and taps. Only one customer has complained of low pressure, but that seems to have been resolved through a new waterline loop that was installed. There have been several instances of high-pressure leaks attributed to higher feed pressure at the CWCWD master meters. Town staff addresses this by requesting CWCWD to adjust pressure reducing valve settings at the master meters.

2.2 Risk and Reliability Rating System

A risk and reliability rating system was developed to evaluate the water distribution system. Waterlines were divided into over 1,200 individual pipe segments between mainline valves, or from a valve to a pipe intersection if no valve was present. Water pipe segments at least ten feet in length were assigned an identification number based on the Town's fire hydrant grid system. A risk and reliability rating was calculated for each pipe segment using the three factors listed below.

- Condition
- Criticality
- Vulnerability

A value was assigned for each of the three Risk & Reliability factors based on Tables 2-1, 2-2 and 2-3 below, and an overall score was calculated. The highest single value from each table was given to each pipe segment. This score was used to rank the water mains from the highest risk to the lowest. The pipe condition is based solely on the estimated remaining useful life as shown in Table 2-1. Field tests were beyond the scope of this Master Plan.

Table 2-1 - Pipe Condition

Criteria	Condition Assessment	Point Rating
Remaining Useful Life < 10 yrs	Poor	4
Remaining Useful Life 11 to 20 yrs	Fair	3
Remaining Useful Life 21 to 40 yrs	Good	2
Remaining Useful Life > 40 yrs	Very Good	1

Table 2-2 - Pipe Criticality

Criteria	Criticality Assessment	Point Rating
Transmission Main from Master Meter or Tank	Extremely High	4
Medical Facility	Extremely High	4
Water-critical Business	Extremely High	4
School or Daycare	High	3
Poor Redundancy	High	3
Main Feeder or Loop	Medium	2
Good Redundancy	Low	1

Table 2-3 - Pipe Vulnerability

Criteria	Vulnerability Assessment	Point Rating
History of Pipe Breaks or Repairs	High	2
High Pressure (> 95 psi)	Medium	1
No history of pipe breaks, and less than 95 psi	Low	0

The estimated useful life of each pipe segment varies based on the pipe material as listed in Table 2-4 below. Town staff provided approximate installation dates for calculation of the remaining useful life for each pipe. In some instances, no data is available to confirm the installation date. In these cases, remaining useful life is listed as "unknown."

Table 2-4 - Pipe Useful Life Estimates

Pipe Material	Estimated Useful Life (years)
Polyvinyl Chloride (PVC)	100
Ductile Iron Pipe (DIP)	80
Asbestos Cement (AC)	70
Cast Iron Pipe (CIP)	50
DIP without cathodic protection	50

The summation of points for the three categories provides the Total Rating. The maximum possible rating is 10. Pipes with higher Total Ratings carry greater risk. Pipes with a Total Rating of 7 or more have a higher likelihood of failure and greater potential for widespread disruption of water service, and are strong candidates for replacement or rehabilitation. See the Risk & Reliability Rating spreadsheet table in the Appendix for ratings for each pipe segment.

2.3 Summary of Waterlines Assessment

Based on Town staff input, most of the distribution system is constructed of polyvinyl chloride (PVC) pipe, which has an estimated useful life of approximately 100 years. Since

most of the pipes were installed in 1990 or later, the remaining useful life is greater than 65 years for most of the distribution system. Town staff indicates no water mains have a history of breaks or repairs. For these reasons, there are no pipes with a Total Rating above 6, and the overall condition of the water mains is good with no immediate need for replacements.

The water mains in the Town's system assigned a Total Rating of 6 include:

- 12-inch PVC water transmission main from the CWCWD master meter at Highway 52 near the Indian Peaks medical facility
- 12-inch PVC water transmission main on Eagle Boulevard that supplies water to a water-critical manufacturing facility
- 12-inch PVC water main from CWCWD master meter #9066 (Raspberry)
- 12-inch and 8-inch PVC water mains from CWCWD master meter #9045 (Countryside)
- 12-inch and 8-inch PVC water mains from CWCWD mater meter #9025 (Eagle Valley)
- 8-inch PVC water main from CWCWD master meter #9013 (No Name Creek)
- 8-inch PVC water main from CWCWD master meter #9049 (Farm)
- 8-inch PVC water main from CWCWD master meter #9023 (Summitview)
- 8-inch PVC water main from CWCWD mater meter #9068 (Elementary School)
- 8-inch PVC water main from CWCWD master meter #9038 (Prairie View)

All the Town's water supply is from CWCWD master meters. Therefore, each transmission main connected to a master meter is considered critical to the Town's ability to supply water and received a Total Rating of at least 5.

The pipeline with the shortest remaining useful life is the 12-inch asbestos-cement (AC) water transmission main between the Town's water storage tank and the downtown area. This transmission main was installed in 1978 and has an estimated remaining useful life of 25 years. The Town is planning to abandon this waterline within the next couple years and utilize the existing CWCWD 14-inch AC transmission line. CWCWD plan to construct a new 30-inch transmission line that will replace their 14-inch line, allowing it to be repurposed by the Town as the main transmission line from the Town's tank. For this reason, replacement of the Town's existing 12-inch transmission main is not needed.

2.4 Water Storage Tank

Frederick owns and maintains one storage tank, located on Wheatland Boulevard (CR 17). The welded steel ground storage tank was constructed in 1974 and has a volume of 2.8 million gallons. According to Town staff, a recent inspection of Frederick's 2.8-MG tank indicated the tank has some minor wear but no significant repairs were recommended. The

life span of a welded steel tank is highly dependent on maintenance of coatings and performing minor repairs that are identified during inspections. The Town should continue to have the tank inspected at least every five years. With proper maintenance and repairs recommended after each inspection, the tank could last an additional 20 years or more.

2.5 Conclusions

Based on relatively long useful remaining lives and no history of water main breaks, water main replacements are not recommended for the ten-year planning period. A recent inspection of the tank recommended no repairs, so no improvements to the tank have been identified.

It is recommended the Town track locations of future water main breaks and update the pipe rating table every three to four years as ratings and priorities will change based on repairs and remaining useful lives. The tank should be inspected at least every five years, and any maintenance or repair items identified be corrected promptly.

3.0 PUBLIC ENGAGEMENT

3.1 Comprehensive Plan Update

Forsgren attended a joint Comprehensive Plan workshop of Frederick's Board of Trustees and Planning Commission, and Forsgren also participated in a Comprehensive Plan public engagement outreach at Town Hall to discuss and obtain public input on potable water topics.

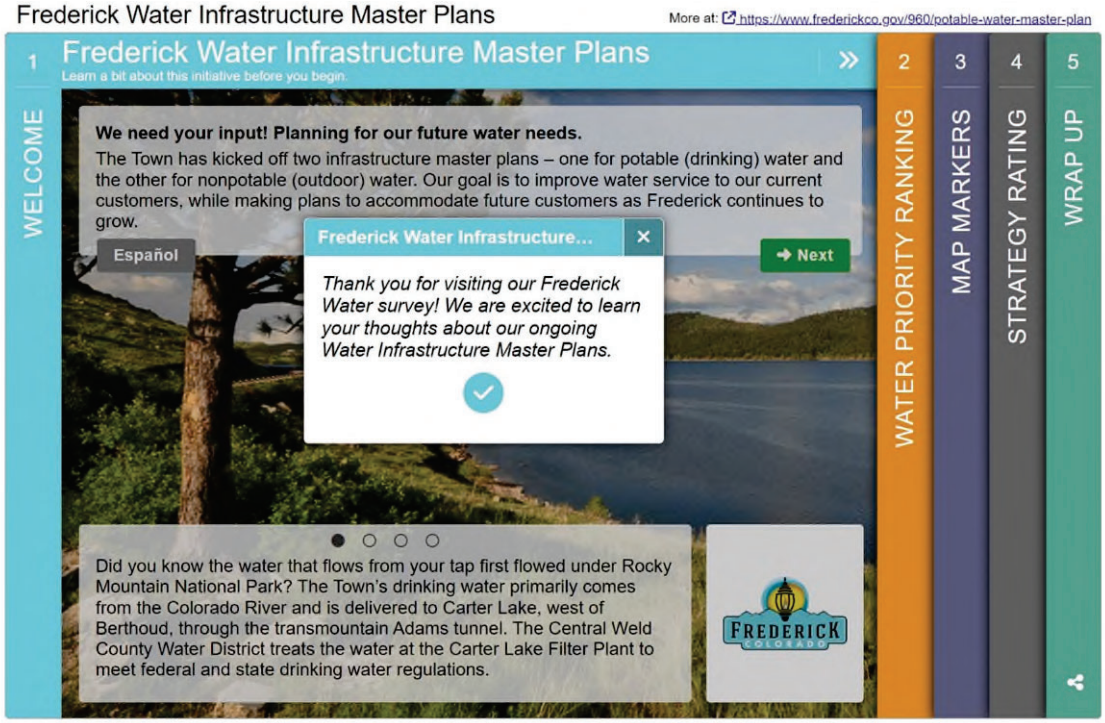
Forsgren and Town staff worked with the Comprehensive Plan consultant to incorporate several water-related questions into their public survey. Survey results showed water affordability and conservation ranked as the public's top issues. Condition of existing waterlines and water infrastructure needed to support new development were also identified as topics of interest.

3.2 Chainsaws and Chuckwagons Festival

Forsgren joined Town staff's information table at the Chainsaws and Chuckwagons event to solicit input during one of Frederick's more popular summer festivals. Forsgren and Town staff talked with festival attendees about water and listened to their ideas and concerns.

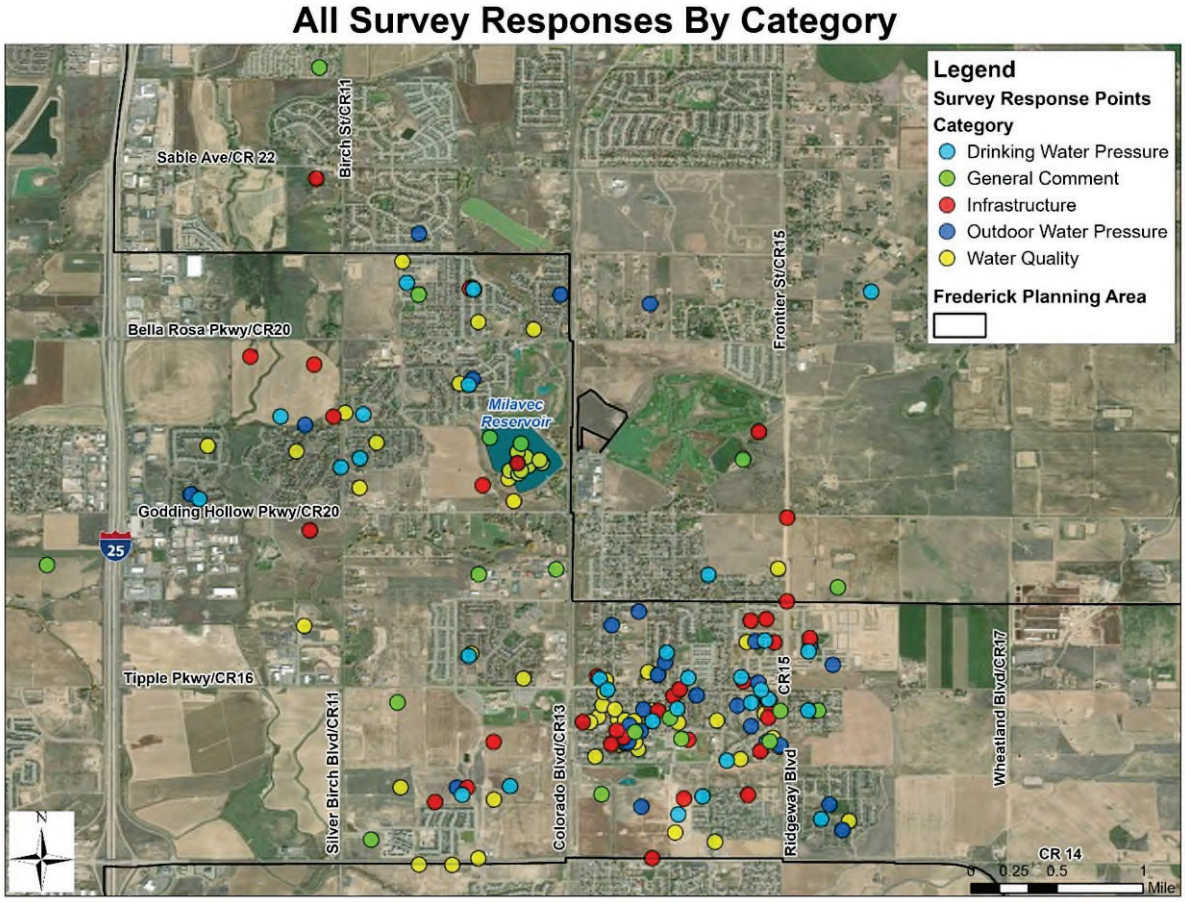
3.3 Web-based Public Survey

An online platform (Metroquest) was developed by Forsgren's subconsultant, Michael Baker International, to engage the community on water issues, including both potable and non-potable (raw) water. The Town advertised the survey on their Facebook page, website, and electronic newsletter (Frederick Flash). Flyers in English and Spanish with QR codes and website links to the MetroQuest page were distributed at public events.



The survey was active for over two months and had 111 unique participants provide input. Figure 3.1 provides a map showing the approximate locations of public input provided through the on-line platform for five water topics.

Figure 3.1 On-Line Public Survey Responses by Topic



3.3.1 Public Comments – Water Priorities

Community members were asked to rank their water priorities. Quality of drinking water scored as a top priority for the community. This was followed by affordability of water and water conservation.

Table 3-1 below shows how the participants ranked priorities from highest (No. 1) to lowest.

Table 3-1 Water Priorities Rankings, Public On-Line Survey

Priority Ranking	Water Issue
1	Quality of Drinking Water
2	Affordability of Water
3	Water Conservation
4	Back-up source for Drinking Water
5	Fire Protection
6	Condition of Existing Water Lines
7	Water for New Development
8	Water for Irrigation

3.3.2 Public Comments

The overall theme is that these participants want to see the Town being a good steward of water resources. Comments included:

- Requests to reduce water demand through native landscaping in tree lawns and right-of-way plantings
- Wanting to see improved water quality
- Reducing waste through better maintenance and quickly identifying leaks and other issues in the system, and looking to smart irrigation systems that do not irrigate during rain events

3.3.3 Drinking Water Pressure Comments

Most survey participants rated their drinking water pressure as satisfactory. Participants noted that water pressure tends to drop in the mornings and evenings, or when sprinklers are running.

3.3.4 Infrastructure Comments

The infrastructure comments pointed to a concern that as Frederick continues to grow, the water infrastructure may not be able to keep up. The concern is for adequate planning to ensure quality and consistent water supply.

3.3.5 Outdoor Water Pressure Comments

Most comments rated the outdoor water pressure as satisfactory, inconsistent or low. It is suspected the inconsistency in outdoor water pressure occurs during high irrigation times.

3.3.6 Water Quality Comments

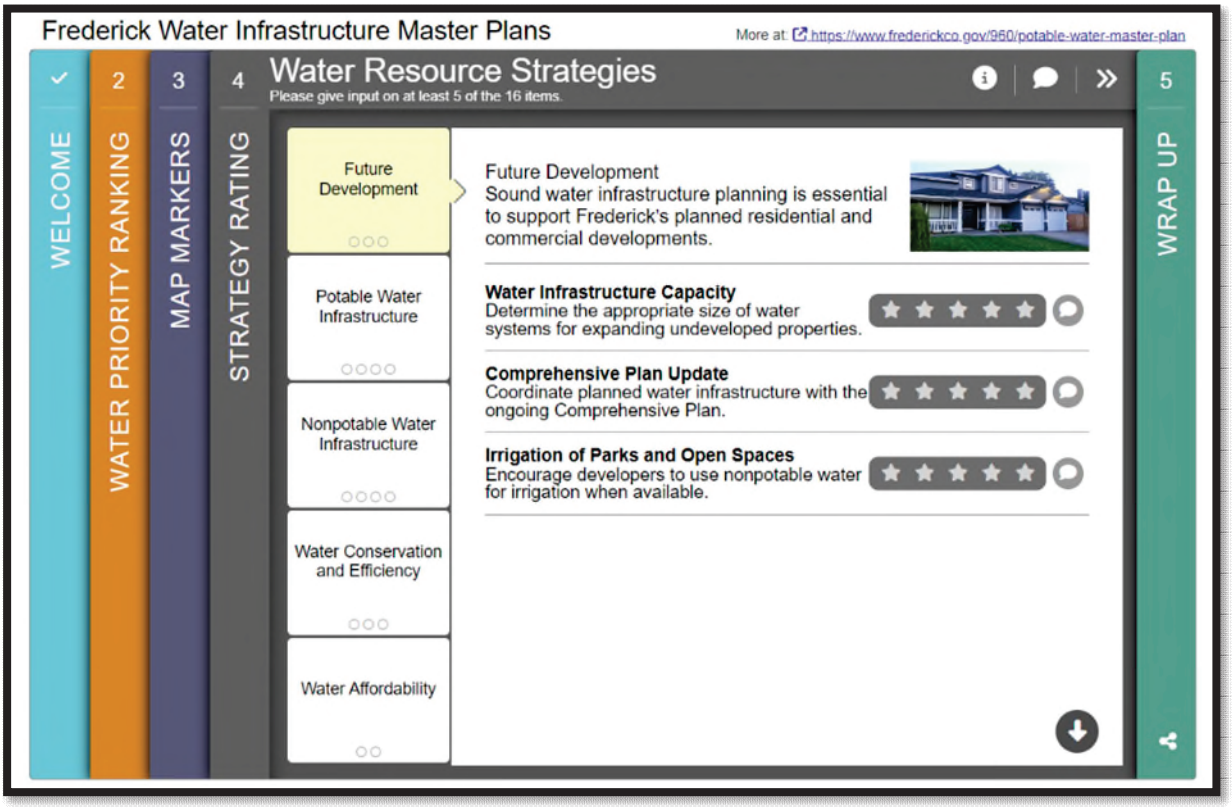
Treatment of the Town's potable water is provided by the Central Weld County Water District (CWCWD) at the Carter Lake Filter Plant. Therefore, CWCWD is responsible for water quality up to the master meter distribution points to the Town's system.

Water quality showed a great deal of interest from participants and is a top priority. Several themes emerged from these comments. Approximately 75% of the comments indicated water quality was either satisfactory or very good. A sampling of some of the potable water comments are:

- Some participants noted that the water quality is great and they have no concerns.
- Some participants noted pink and red rings and stains from the water, with several others complaining of chemical or bad smells from water.
- Several participants noted that they do not trust the water source and choose to filter the water or use bottled water.

3.4 Water Strategy Input

The strategy rating slide included five categories and a total of 16 strategies. Participants were asked to rate each strategy on a scale of 1 to 5 based on number of stars selected, with five



stars being the highest importance, and one star being the lowest importance. The five general categories for the strategies included:

1. Future Development
2. Potable Water Infrastructure
3. Non-potable Water Infrastructure
4. Water Conservation and Efficiency
5. Water Affordability

Based on input from the Water Strategy survey screen, the public indicated that topics of highest importance are:

1. Require developers to pay their fair share of water infrastructure costs.
2. Develop a multi-year Capital Improvements Plan to prioritize upgrades for replacement and expansion of existing infrastructure.
3. Convert parks and open space irrigation to non-potable water to conserve potable water.
4. Support policies that require xeriscaping or low water landscaping.

3.5 Public Engagement Conclusions

The public outreach for this Potable Water Infrastructure Master Plan provided several opportunities for the citizens of Frederick to be engaged in the Potable Water Infrastructure Master Plan. The on-line survey was especially effective in gaining insightful feedback on what aspects of the Town's water system are important to the customers. This input is incorporated into the Master Plan approaches and recommendations, and addressed as follows:

Topic	How Topic is Addressed in Master Plan
Drinking Water Quality	Provide additional loops in distribution system.
Affordability of drinking water	Recommend improvements that are necessary and cost effective, and identify potential grant funding sources.
Water Conservation	Complete a condition assessment of existing pipes to identify water leak issues. Convert irrigation of parks from potable to non-potable water.
Back-up Water Supply	Consider emergency interconnections with neighboring systems, and additional storage.

4.0 PLANNING

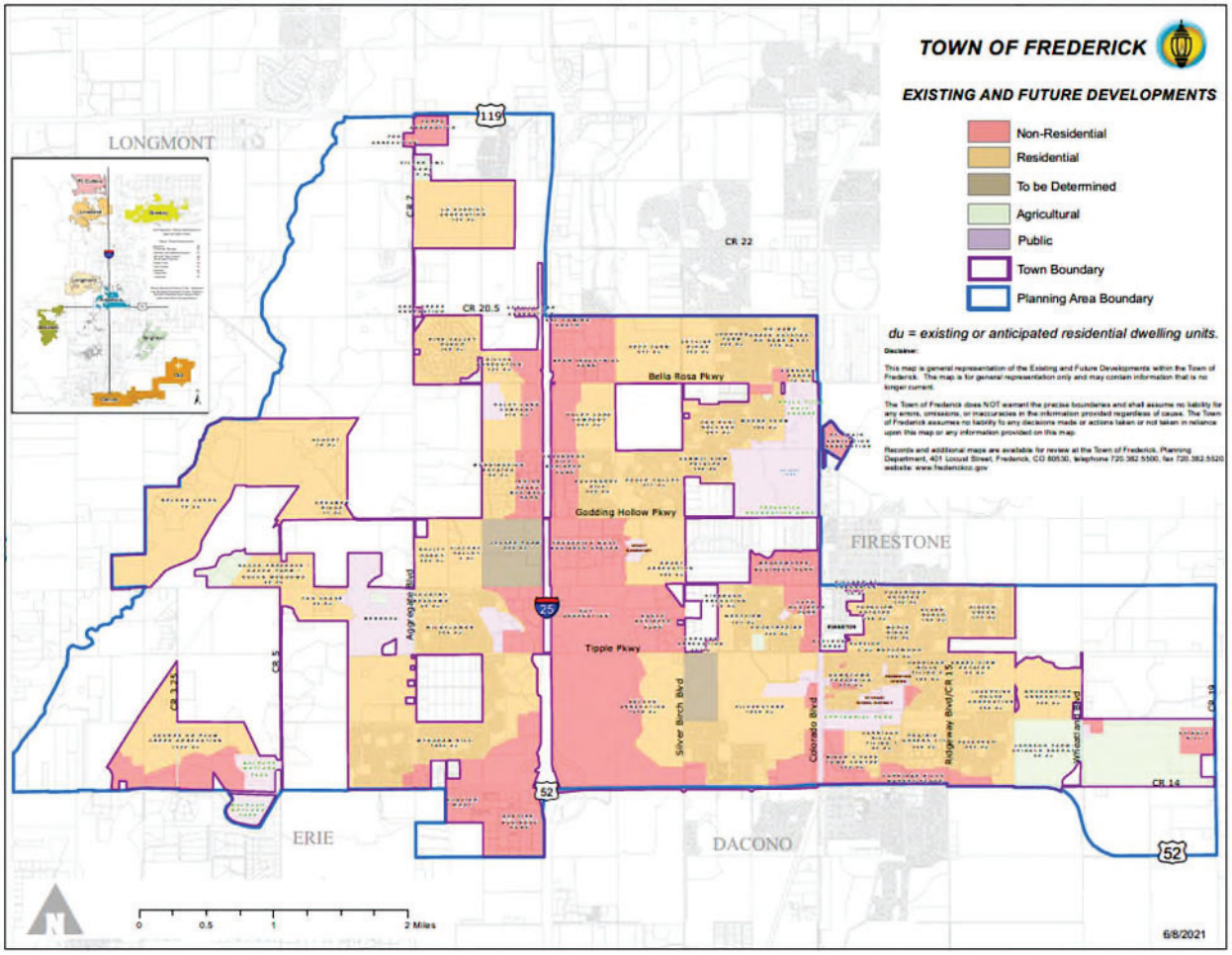
4.1 Growth Planning Overview

4.1.1 Town Planning Department Input

The Town Planning Department provided information related to development trends, targeted growth areas, and new development applications that are at various stages in the Town's review process. All undeveloped areas within the Town's planning boundary generally do not have potable water infrastructure. Potential future annexation properties and school sites were identified.

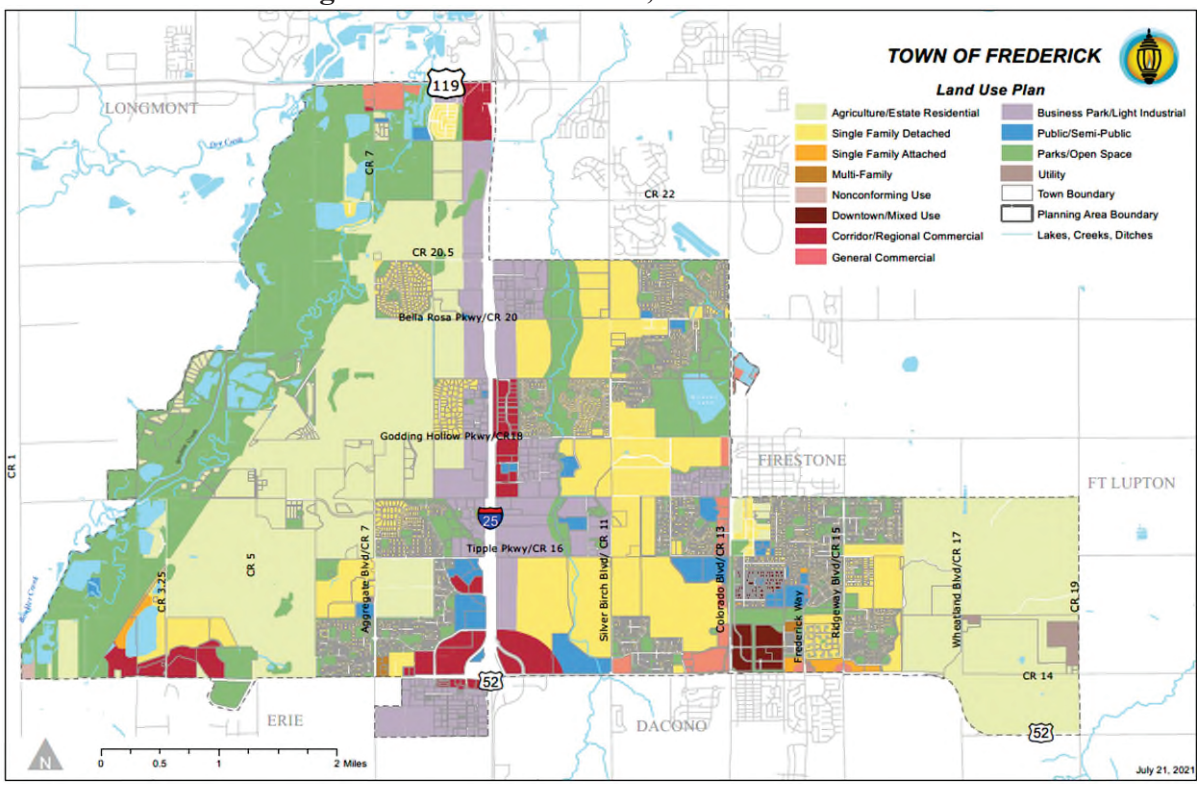
The Planning Department provided the land use and zoning exhibits shown below in Figures 4.1, 4.2 and 4.3. These exhibits include land uses and parcel sizes, and Figure 4.1 provides the expected number of dwelling units for some of the properties in the Town's planning area. The information in these Town-prepared maps was used to estimate potable water demands for future developments east of Interstate 25. Larger versions of these maps are included in the Appendix for reference.

Figure 4.1 Existing and Future Developments, Town of Frederick



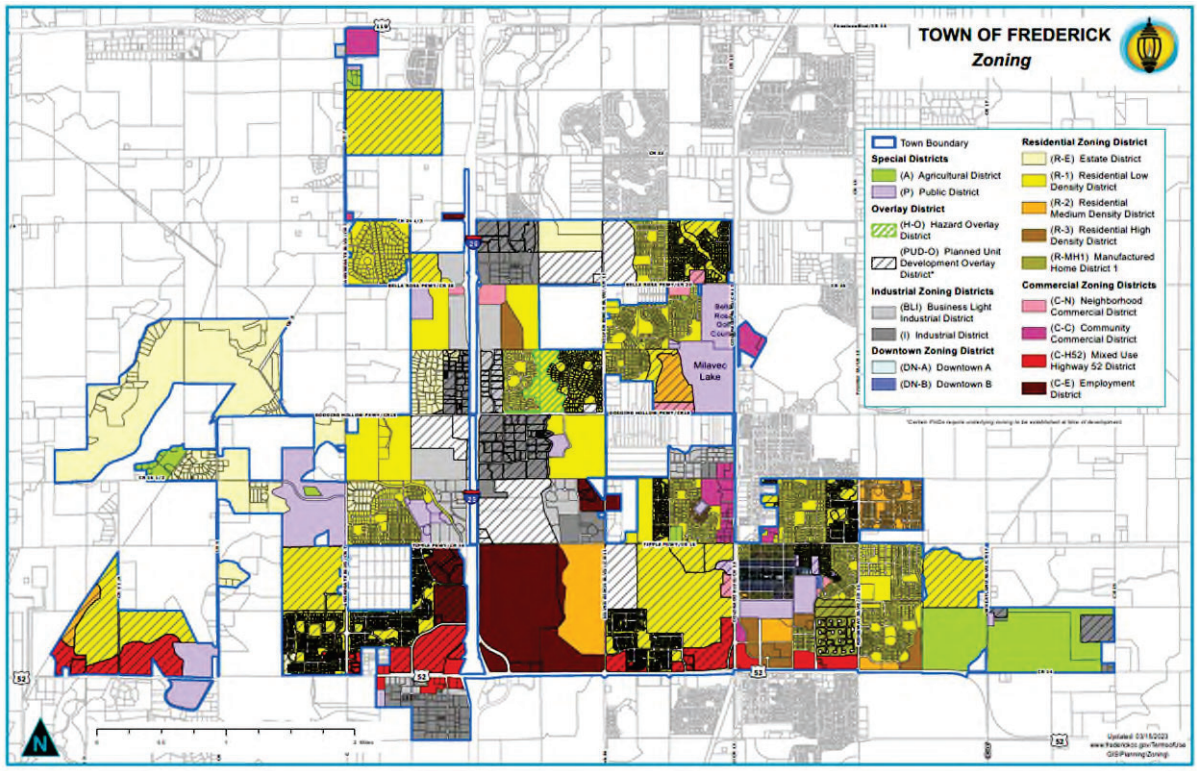
Source: Town of Frederick

Figure 4.2 Land Use Plan, Town of Frederick



Source: Town of Frederick

Figure 4.3 Zoning Map, Town of Frederick



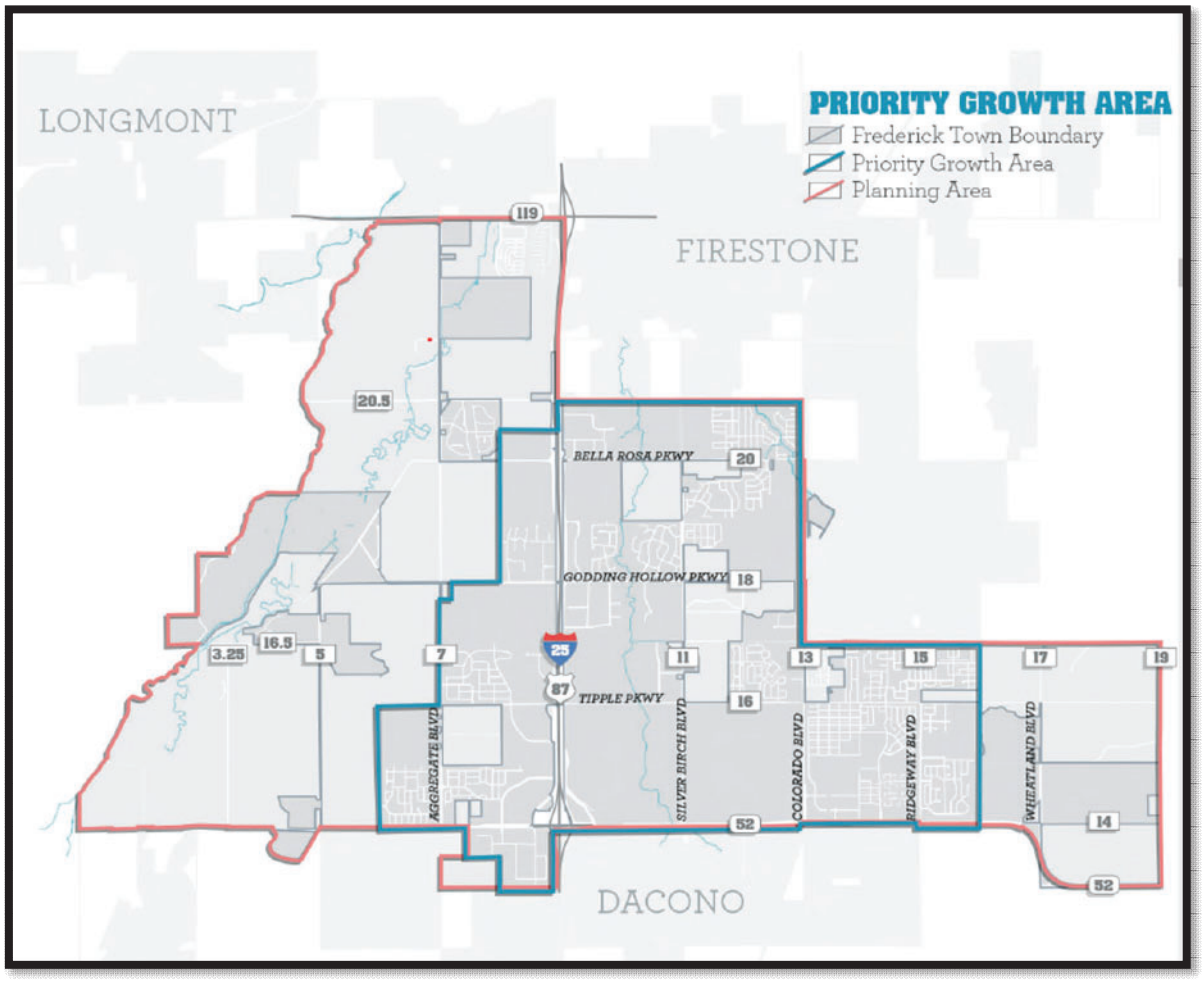
Source: Town of Frederick

4.2 Frederick Comprehensive Plan

The most recently completed Comprehensive Plan (2015) identifies a Priority Growth Area and Planning Area. See Figure 4.4 below. Most of the Priority Growth Area is east of I-25 and within the Town's potable water service area. There has been significant development in recent years in this Priority Growth Area, and the Town continues to receive development applications. For example, the Silverstone development north of State Highway (SH) 52 between Silver Birch Boulevard and Colorado Boulevard is partially constructed, with grocery and retail stores expected to begin construction soon. There are also plans for additional Silverstone residential development to the north.

A portion of the Planning Area extends east of Wheatland Boulevard to County Road (CR) 19, and south to SH 52. The Town's Land Use Plan (Figure 4.2) denotes this area as Agricultural/Estate Residential, with no official zoning designation since it is currently outside the Town limits. The timing for the development of this eastern planning area is unknown.

Figure 4.4 Priority Growth Area, Town of Frederick 2015 Comprehensive Plan



Source: Town of Frederick Comprehensive Plan, 2015

Based on housing unit inventory as of late 2022 provided at the Comprehensive Plan Update Board workshop, approximately 95% of Frederick's housing is comprised of single-family detached homes, over 4% are single-family attached (i.e., townhomes, duplexes), and less than 1% are considered multi-family apartments. However, when developments currently in the plat process are included, the Town's Comprehensive Plan consultant indicated multi-family units increase to 8% and single-family detached decrease to 88%, reflecting a trend towards more multi-family residential for future development.

The Town Planning Department anticipates the ongoing Comprehensive Plan Update may recommend increasing the residential density for some properties from single-family to multi-family. It is also anticipated that some Agricultural/Estate Residential areas in the eastern Planning Area (Figure 3.4) could change to single-family detached or single-family attached homes.

The Town has identified the I-25/SH 52 interchange as a potential large, mixed-use destination to attract both local and regional visitors. Plans for this interchange are discussed in Section 4.3.

4.3 Frederick 25/52 East Subarea Plan

Frederick is planning a mixed-use development for over 600 acres on the northeast side of the I-25/SH 52 interchange. In 2022, the Town prepared the 25/52 East Subarea Plan (by Houseal Lavigne, 3/22/22) outlining a vision for a retail and commercial center with residential units, creating an attractive gateway to the east side of Frederick.

From 25/52 Subarea Plan (Houseal Lavigne, 2022)

The 25/52 East Subarea Plan's conceptual land use for the development is summarized below in Table 4-1.

Table 4-1 25/52 East Subarea Plan – Conceptual Land Use

Description	Acres
Retail/Entertainment	140
Corporate Campus/Office	126
Mixed Residential (Single & Multi-family)	150
Public/Civic	12
Recreation	23
Industrial	192
TOTAL	643

Source: 25/52 Subarea Plan, Houseal Lavigne, 3/22/22

The Town has some potable water infrastructure in the 25/52 East Subarea, but additional infrastructure will be needed. The land use acreages shown in Table 4-1 serve as the basis for estimating water demands.

4.4 Frederick 10-Year Water Resources Plan and Long-Term Water Resources Plan

The Town's 10-Year Water Resources Plan and Long-Term Water Resources Plan (Element Water Consulting, 12/6/21 and 5/13/22 respectively) are important references for this Potable Water Infrastructure Master Plan. The 10-year Water Resources Plan lists 679 acre-ft per year (AFY) in pending potable water commitments made by the Town to 11 separate developments, and identifies 18 potable water connections, primarily at parks, that can be converted to raw water use to reduce potable demand by approximately 96 AFY.

The Long-Term Water Resources Plan (LTWRP) provides detailed potable water demand projections for Frederick. The LTWRP estimates the current Frederick population of 12,000 will grow to approximately 42,400 at build-out based on information provided by the Town's Planning Department.

The LTWRP takes a scenario-based planning approach to estimate a water demand range that integrates several factors, including various levels of water conservation and climate adjustments. The LTWRP estimates build-out occurring between 2060 and 2070, and provides estimated potable water demands of 6,650 AFY to 7,710 AFY. These projections equate to a build-out average daily demand range of approximately 5.9 MGD to 6.9 MGD. These LTWRP projections are only for customers on the east side of I-25 within the Town's potable water service area.

According to the Town's 1988 agreement with CWCWD, an additional 20% of water used downstream of the master meters needs to be supplied from the Carter Lake Filter Plant to account for system, treatment, delivery and metering losses. The LTWRP water demand projections include this additional 20%, plus an additional 5% to account for losses in Frederick's distribution system downstream of the master meters. CWCWD and Frederick recently agreed to decrease the 20% overage to 12%. Therefore, the water demand projections in this Master Plan will be based on a 12% overage for CWCWD produced water.

Table 4-2 below provides projected average daily potable water demands for Frederick's potable system based on the LTWRP estimates.

Table 4-2 Average Daily Potable Water Demand Projections[1]

Year	Low-Range Avg Daily Demand		High-Range Avg Daily Demand	
	Acre-Ft/Year (AFY)	Million Gal/Day (MGD)	Acre-Ft/Year (AFY)	Million Gal/Day (MGD)
2023	2450	2.19	2450	2.19
2033	3000	2.68	3200	2.86
2043	3850	3.44	4250	3.80
2053	4600	4.11	6000	5.36
2063	5700	5.09	7100	6.34
2070	6650	5.94	7710	6.89

1. Average daily potable water demands estimated from Figure 7 of Town of Frederick, Long Term Water Resources Plan, Element Water Consulting, May 13, 2022.

Potable water treatment for Frederick is provided at the Carter Lake Filter Plant, but the LTWRP discusses the potential need for an additional water supply and possibly a local water treatment plant to meet future demands, potentially using Milavec Reservoir for supply. This is due to limitations in the Town's current water rights. The water treatment facility may be needed as early as 2034 depending on Town conservation efforts and the success and timing of the Northern Integrated Supply Project (NISP), for which Frederick is currently a participant.

From a water supply perspective, Frederick owns Colorado-Big Thompson (C-BT) units as administered by the Northern Colorado Water Conservancy District. The Town has historically utilized C-BT water to meet potable demands, but also owns Windy Gap units from Dry Creek Reservoir, located near Carter Lake. The C-BT and the Windy Gap water supplies are treated by CWCWD at the Carter Lake Filter Plant, and conveyed to the Town's water system. The Town has recently moved forward with acquisition of additional C-BT and Windy Gap units to help meet the anticipated shortfall in water supplies needed to meet future demands.

4.5 Frederick Water Efficiency Plan

Frederick's Water Efficiency Plan (WEP) prepared by Element Water Consulting (October 2022) indicates 12,030 people were served by the Town's potable water system on the east side of I-25 as of the end of 2020. The WEP also states for 2020, average potable water residential usage was 114 gallons per day per capita (gpcd), and commercial/industrial usage averaged 24 gpcd.

The WEP includes a "non-revenue" water analysis for 2013 to 2020 that compares CWCWD master meter flows with Town water meter records to identify water losses that are unbilled. Non-revenue water is estimated as the amount of water supplied through CWCWD meters that is not billed by the Town to individual customers. The WEP indicates an uncertainty in meter records for 2017 through

2019 because the Town's metered use was greater than the amount of CWCWD delivered water. This may be due to flow meter inaccuracies or recording errors. This discrepancy was also the case for 2022. For the other years, non-revenue water averaged approximately 8.7% of CWCWD supplied water through master meters. The Town has an ongoing meter replacement program so Town meter accuracy should continue to improve as meters are replaced.

Non-revenue water due to water infrastructure leaks is expected to be minimal. The Town's Public Works Department indicated main line pipe breaks are rare, but there have been some breaks on service lines and service line taps.

The WEP lists a series of Water Efficiency Goals estimated to reduce potable water usage by approximately 160 AFY by 2030. Most of this reduction is achieved through the Town's plan to convert targeted potable irrigation accounts to raw (i.e., non-potable) water irrigation. Other Water Efficiency Activities include installation of Automatic Meter Reading (AMR) systems to improve meter and recording accuracy, several irrigation conservation programs such as turf replacement and smart irrigation controllers, and updates to Town standards for landscape design.

As the Town implements significant water conservation savings, future potable water projections for this Master Plan utilize an estimated 5% non-revenue water, which is lower than the 8.7% experienced in previous years.

5.0 CURRENT AND FUTURE WATER DEMANDS

5.1 Current Water Demands

5.1.1 Average Daily Water Demand

Table 5-1 below provides water usage for the Town's individual meters and the calculated average over the 2022 calendar year.

The Town's daily demand averaged approximately 2.1 million gallons per day (MGD) for 2022, of which approximately 1.7 MGD was for residential and commercial customers. The remainder was for parks and fire hydrant flows. Population served is estimated at approximately 12,000 people.

Table 5-1 Average Daily Water Usage, Meter Readings, 2022

Month	Customer Meters (gpd)	Parks (gpd)	Fire Hydrants (gpd)	[1]Total Avg Daily Usage (gpd)
January	708,900	367	17,773	727,040
February	678,786	1,143	25	679,954
March	723,214	1,071	15,157	739,442
April	815,030	2,364	5,346	822,740
May	2,321,500	132,633	6,461	2,460,594
June	2,592,433	140,167	29,153	2,761,753
July	3,301,333	298,300	62,366	3,661,999
August	2,983,935	296,355	77,707	3,357,997
September	2,944,406	252,406	59,749	3,256,561
October	1,899,034	122,241	28,131	2,049,406
November	816,900	13,600	8,128	838,628
December	764,167	667	3,497	768,331
Average Daily Usage	**1,712,470**	**105,110**	**26,191**	**1,843,771**

[1]Average daily usage includes meter data and does not include non-revenue water losses.

July was the highest water demand for residential and commercial customers, likely due to irrigation, with an average daily usage during July of approximately 3.3 MGD.

There are approximately 4,554 residential and commercial customers served by the Town, with approximately 4,410 residential and 144 commercial. The largest water user is the pharmaceutical company Agilant Technologies, which averaged over 1 million gallons per month and a daily average of approximately 36,500 gpd during 2022. Coal Ridge Park had the highest park usage at an average

daily demand of over 40,000 gpd during July 2022, and a total annual water usage of over 350,000 gallons.

5.1.2 Equivalent Dwelling Unit (EDU)

An Equivalent Dwelling Unit (EDU) water usage rate is established for the purpose of projecting future water demands. The EDU for this Master Plan is based on a 5/8-inch residential meter. Frederick's residences are predominantly single-family, so no distinction was made in the data analysis between single-family and multi-family. The EDU demand is calculated by dividing the total residential usage for 2022 by the total number of residential meters (4,410). The average daily residential usage for 2022 was 1.44 MGD, which equates to 326 gpd per EDU.

The hydraulic model for this Master Plan was calibrated using field testing conducted during the winter, so a winter average daily usage is also needed. For 2022, the average water demand during these winter months, not including the parks and fire hydrants, was 727,758 gpd. Excluding the commercial meters, the residential customers demand during these winter months was 632,153 gpd. Dividing this by the 4,410 residential customers results in a winter average daily usage of 143 gpd per EDU. See Table 5-2 below for the Annual and Winter EDU water demands.

Table 5-2 Equivalent Dwelling Unit (EDU) Water Demand

EDU Type	Average Daily Demand (gpd)	No. of Residential Customers	EDU Water Demand (gpd)
Annual	1,436,244	4,410	326
Winter	632,153	4,410	143

U.S. Census data for Frederick indicates an average of 2.94 people per household. At the estimated EDU of 326 gpd, this equates to 111 gpd per capita (gpcd). This is similar to the 114 gpcd shown in the Town's WEP for 2020.

5.1.3 Peaking Factors and Fire Flows

Maximum Daily Demand and Peak Hour factors are needed for fire flow and water storage analyses. Water system hydraulic capacity is evaluated for two demand scenarios: 1) Maximum Daily Demand plus Fire Flow; and 2) Peak Hour Demand. Water storage needs are evaluated based on Maximum Daily Demand plus Fire Flow.

The Town records monthly customer meter data, but daily meter data for the Town's system was not available to determine actual maximum daily demands. The Left Hand Water District (LHWD), which serves the portion of Frederick on the west side of Interstate 25, recently completed a water master plan that evaluated historical daily usage for the LHWD and determined their historical Maximum Daily Demand is approximately 2.63 times average daily demand. A slightly higher Maximum Daily Demand factor of 2.7 times the average daily demand is used for this Master Plan.

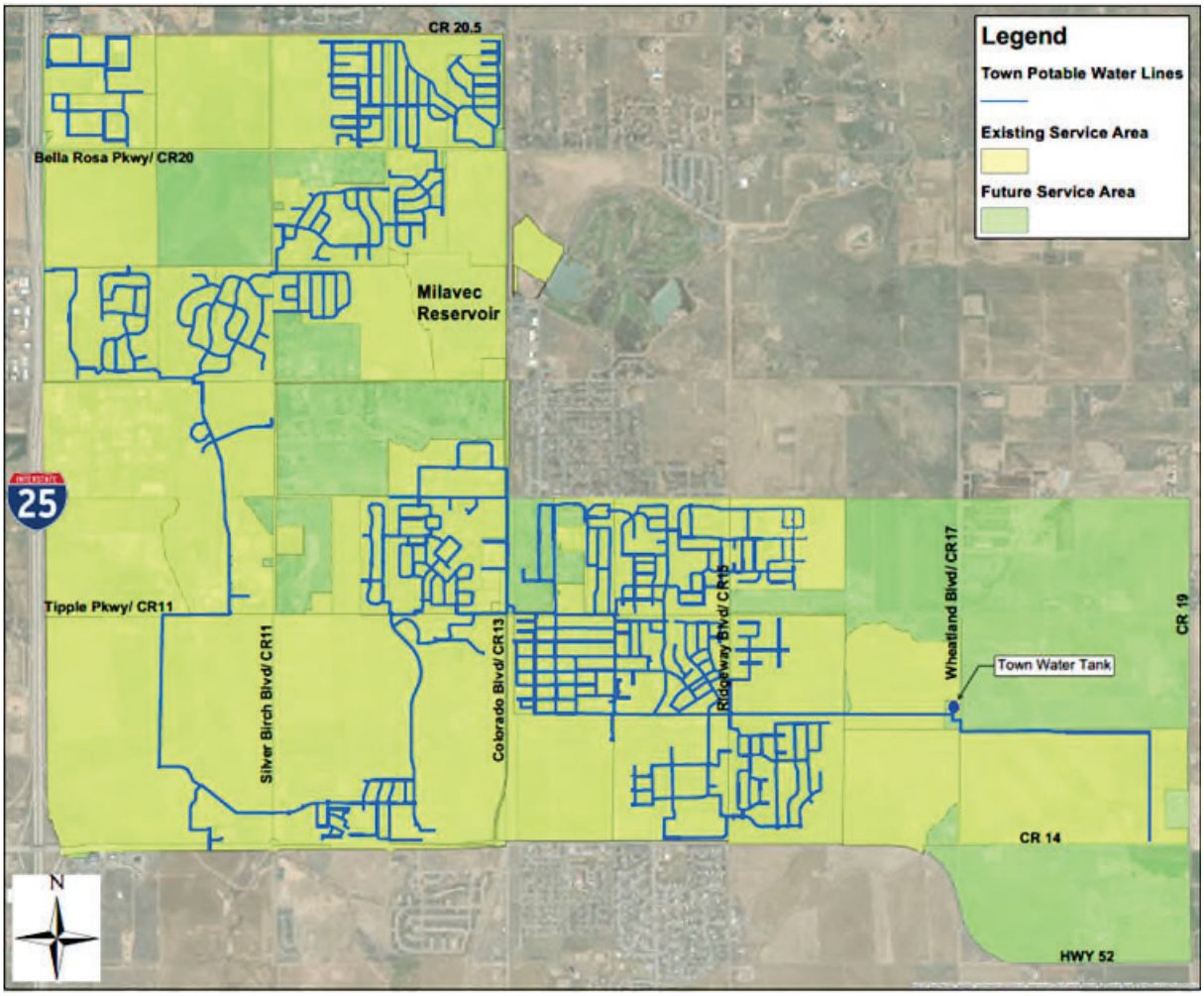
Historical hourly data for Frederick is not available for estimation of a Peak Hour Demand. Therefore, a typical Peak Hour factor of 5.0 times the Average Daily Demand will be utilized.

The Town of Frederick's Design Standards and Specifications for Potable Water Distribution list minimum fire flows of 1500 gallons per minute (gpm) for single-family residential, and 3500 gpm for multi-family residential and commercial/industrial facilities. According to the International Fire Code, the fire duration for commercial and industrial structures ranges from two to four hours, depending on the required fire flow, type of building construction and the building size.

5.2 Future Average and Peak Water Demands

Future potable water demands are estimated for "build-out" of the entire Frederick planning area east of I-25, shown as the Existing and Future Service Areas in Figure 5.1 below. The Long-Term Water Resources Plan estimates a build-out population of approximately 42,400 people.

Figure 5.1 Existing and Future Potable Water Service Areas



Town planning maps shown in Section 4 (Figures 4.1, 4.2 and 4.3) were referenced to determine zoning, land uses and parcel sizes. Figure 4.1 (Existing and Future Developments) also provides expected number of dwelling units for some of the properties in the Town's planning area, and these dwelling unit estimates were utilized for those properties. For the remaining properties in the planning area, the Town's Land Use Code specifies allowable development densities for each zoning designation, as shown in Table 5-3 below.

Table 5-3, Residential Densities, Frederick Land Use Code

Zoning	Description	Typical Residential Use	Maximum Net Density (units per acre)
R-E	Residential - Estate	Single-Family Detached	0.2
R-1	Residential Low Density	Single-Family Detached	5
R-2	Residential Medium Density	Single-Family Attached (Townhomes, Duplexes)	10
R-3	Residential High Density	Mult-Family (Apartments)	25

Potable water demand for the residential properties is estimated using one EDU for each Single-Family unit, and 0.8 EDU for each Multi-Family unit to account for a portion of future apartments having less than three bedrooms and therefore having a lower water demand.

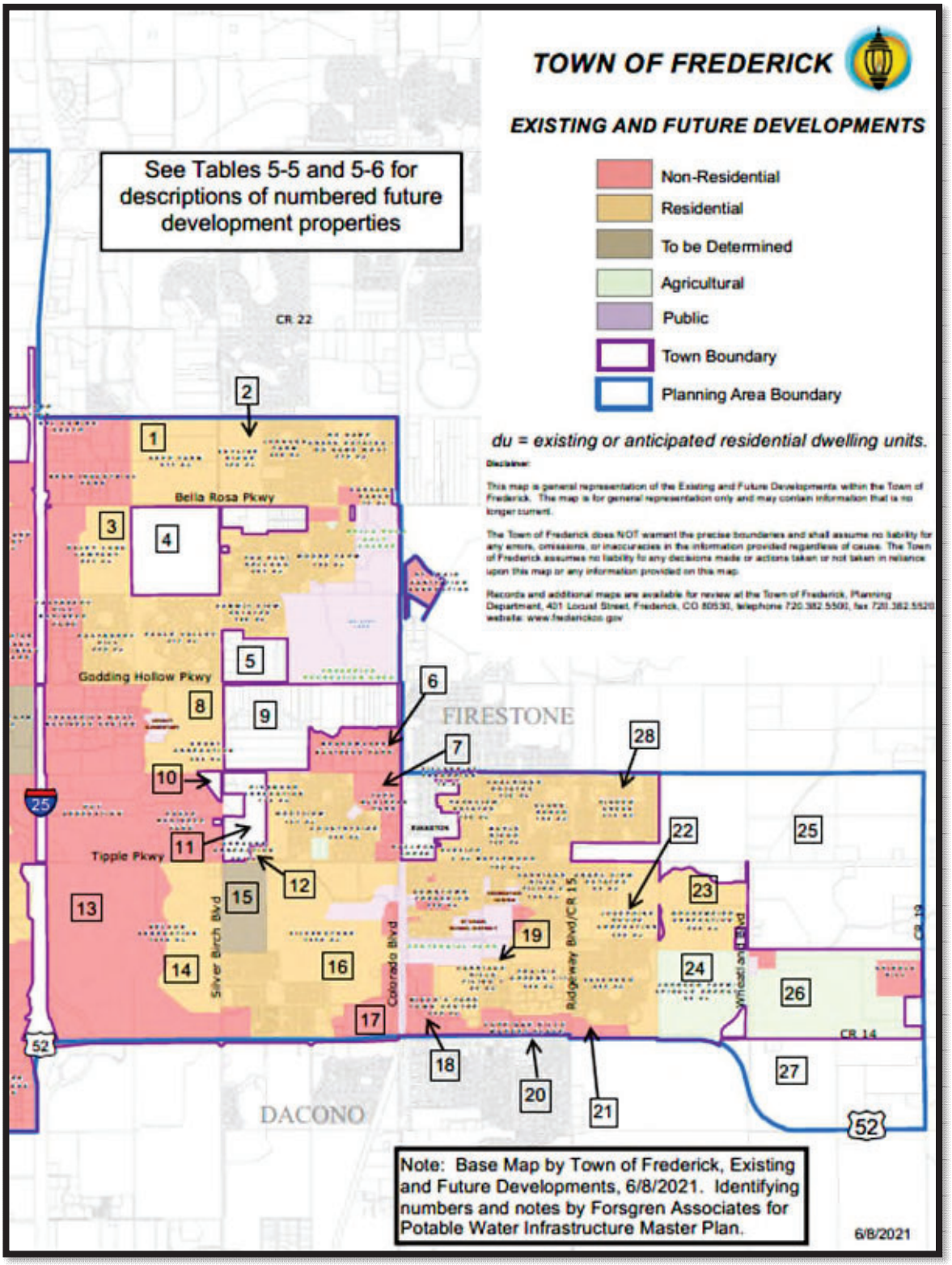
The Town does not have specific water demand criteria required for planned commercial and industrial development. Property designated as commercial is estimated at 1,100 gpd per acre for average daily demand. This is based on nearby Town of Erie's guideline of 3,000 gpd per acre for maximum daily demand, divided by the 2.7 factor used in this Master Plan to estimate average daily demand. For industrial use, 800 gpd per acre average daily demand is utilized based on recent meter usage data for an existing industrial area in Frederick. See Table 5-4 for a summary of potable water demand criteria for future development.

Table 5-4 Potable Water Demand Criteria, Future Development

Land Use	Average Daily Demand (gpd)
Residential, Single-Family	326 gpd/unit
Residential, Multi-Family	260 gpd/unit
Commercial/Public	1100 gpd/acre
Industrial	800 gpd/acre

Undeveloped and partially developed areas within Frederick's planning area east of I-25 are shown and assigned an identifying number in Figure 5.2 below. Tables 5-5 and 5-6 follow to list the estimated average daily potable water demands for each area, through build-out.

**Figure 5.2 Future Development Map,
Town of Frederick Potable Water Service Area**



Source: Base map is excerpt from Town of Frederick Existing and Future Developments Map, 6/8/2021

Table 5-5 Estimated Water Demands for Future Development Properties, Build-out of Planning Area

Area No.	Description	[1]Area (AC)	[2]Density, EDU's per acre	[3]Estimated EDU's	Demand per EDU or Acre (gpd)	Avg Daily Demand (gpd)
1	Hepp Farm	150	-	611	326	199,200
2	Skyline Ridge	58	-	304	326	99,100
3	Haley Land Company	100	-	843	326	274,800
4	WCR 11 & WCR 20	80	5	400	326	130,400
5	WCR 11 & WCR 18 (east of Godding Hol.)	57	5	285	326	92,900
6	Meadowlark Bus Park (undev.)	9	-	-	[4]800	7,200
7	Tops Business Park (undev.)	6	-	-	[4]800	4,800
8	Grant Annexation	95		484	326	157,800
9	WCR 11 & WCR 18 (south of Godding Hol.)	223	5	1115	326	363,500
10	Silver Birch Rd-light industrial	8	-	-	[4]800	6,400
11	Kickback Annexation	72	-	174	326	56,700
12	Goracke Annexation	2		20	326	6,500
13	25/52 East Subarea[6] (see Table 5-6)	643	-	-	-	1,117,900
14	Nelson Annexation	178	-	1058	326	344,900
15	Silver Birch Blvd/Tipple Pkwy	100	5	500	326	163,000
16	Silverstone future residential	263	-	1100	326	358,600
17	Silverstone Marketplace	37				[7]96,000
18	Miner's Park	52	-	400	326	130,400
19	Carriage Hills Filing 1	50	-	80	326	26,100
20	Carriage Hills Market Place	17	-	-	[5]1,100	18,700
21	East of Carriage Hills Market	13	-	-	[5]1,100	4,300
22	Josephine Roche Annex	91	-	360	326	117,400
23	Brunemeier Annexation	137	-	508	326	165,600
24	Johnson Farm/Spindle (west)	147	-	69	326	22,500
25	Northeast planning area	852	0.2	170	326	55,600
26	Johnson Farm/Spindle (east)	272	0.2	54	326	17,700
27	Southeast planning area	316	0.2	63	326	20,600
28	Hidden Creek (undeveloped)	80	-	265	326	86,400
	TOTALS (Future development)	**3958**		**8253**		**4,155,000**

Notes:

1. Property areas are approximate estimates from aerial mapping.
2. Density in EDU's per acre based on Land Use Map and Land Use Code, for properties without dwelling unit quantities listed in the Town of Frederick "Existing and Future Developments" map, 6/8/21.
3. Estimated EDU's from Town of Frederick "Existing and Future Developments" map, 6/8/21.
4. Industrial development water demand estimated at 800 gpd/acre (avg daily demand).
5. Commercial development water demand estimated at 1,100 gpd/acre (avg daily demand).
6. Refer to Table 5-6 for 25/52 East Subarea water demand breakdown.
7. Silverstone Marketplace demand obtained from developer's latest utility plan report.

Table 5-6 25/52 East Subarea, Estimated Water Demand (Area 13 in Table 5-5)

No.	[1]Development Type	[1]Approx. Area (AC)	[2]EDU's per acre	EDU's	[3]Demand per EDU or AC (gpd)	Avg Daily Demand (gpd)
A	Residential, Single-Family Attached	100	10	1000	326	326,000
B	Residential, Multi-Family	50	25	1250	260	325,000
C	Commercial	140	-	-	1100	154,000
D	Offices	126	-	-	1100	138,600
E	Industrial	192	-	-	800	153,600
F	Public/Civic	12	-	-	1100	13,200
G	Recreation	23	1	23	326	7,500
	TOTALS (future development)	**643**				**1,117,900**

Notes:

1. Development types and areas based on Frederick 25/52 East Subarea Plan, Houseal Lavigne, 3/22/22.
2. Density in EDU's per acre based on Frederick Land Use Code, except for recreation area.
3. Single-Family EDU based on 2022 meter usage. Multi-Family water demand based on 80% of Single-Family demand. Industrial development water demand estimated at 800 gpd/acre (avg daily demand). Commercial development water demand estimated at 1,100 gpd/acre (avg daily demand).

25/52 East Subarea water demand estimates shown in Table 5-6 are based on the development types and areas shown in the Town's 25/52 East Subarea Plan prepared by Houseal Lavigne, 3/22/22.

For build-out of the planning area, the future estimated average daily potable water demand for undeveloped properties is 4.16 mgd as shown in Table 5-5. Adding this future demand to the current 2022 water usage of 1.84 mgd results in a build-out demand of approximately 6.0 mgd.

To determine the water needed downstream of the CWCWD master meters or other future treated supplies, an estimated 5% non-revenue water losses is added to the demand. This results in a projected potable water demand downstream of CWCWD master meters or other future treated supplies of 6.3 mgd.

To estimate the water supplied to the treatment facilities, CWCWD and Frederick have agreed to a 12% overage to account for treatment, delivery and meter losses. This results in a total estimated water supplied to the treatment facility(s) of 7.06 mgd to meet Frederick's long-term needs.

Table 5-7 below provides an estimated water usage projection for build-out occurring in 2070. Long-term projections are dependent on many variables. Actual water usage and growth rates may be less or greater than the amounts shown in the table.

Table 5-7 Projected Potable Water Usage
Average Daily Demand for Frederick Planning Area

Year	Est. Metered Demand (mgd)	Non-revenue water (mgd)	Treatment & Delivery Overage (mgd)	Total Avg Daily Potable Water Supplied (mgd)
2022	1.84	0.09	0.23	2.16
2023	1.89	0.09	0.24	2.22
2033	2.41	0.12	0.30	2.84
2043	3.09	0.15	0.39	3.63
2053	3.96	0.20	0.50	4.65
2063	5.06	0.25	0.64	5.96
2070	6.00	0.30	0.76	7.06

Note: Long-term water demand projections are dependent on many variables. Actual water usage quantities may be less than or greater than the amounts shown depending on growth rates, economics and other factors.

One of the Town's major water conservation measures is to convert irrigation of parks from potable to non-potable (i.e., raw) water. There are currently 18 parks with potable water meters, with the highest water use between May and October.

Averaging the parks irrigation demand for the entire 2022 calendar year results in an average daily demand of 105,100 gpd. A Non-Potable Water Infrastructure Master Plan is currently underway to evaluate the capital improvements necessary to convert these parks to non-potable water irrigation.

Assuming these parks are converted by 2033 results in a slightly lower projection 6.01 mgd water needed downstream of the CWCWD master meters or other future treated supplies, including the estimated 5% non-revenue water losses. To estimate water supplied to the treatment facility(s) the additional 12% overage results in 6.72 mgd to meet Frederick's long-term water resources needs. This is within the projected range provided in the LTWRP of 5.94 mgd to 6.89 mgd (6650 AFY to 7710 AFY).

See Table 5-8 below for projections through 2070 for Frederick potable water usage through build-out, considering the conversion of the parks to non-potable water.

Table 5-8 Projected Potable Water Usage, Average Daily Demand (Including conversion of Parks to Non-Potable Water)

Year	Est. Metered Demand (mgd)	Non-revenue water (mgd)	Treatment & Delivery Overage (mgd)	Total Avg Daily Potable Water Supplied (mgd)
2022	1.84	0.09	0.23	2.16
2023	1.89	0.09	0.24	2.22
2033	2.30	0.11	0.29	2.70
2043	2.94	0.15	0.37	3.46
2053	3.77	0.19	0.47	4.43
2063	4.82	0.24	0.61	5.67
2070	5.72	0.29	0.72	6.72

Note: Long-term water demand projections are dependent on many variables. Actual water usage quantities may be less than or greater than the amounts shown depending on growth rates, economics and other factors.

6.0 WATER STORAGE

6.1 Existing Storage Facilities

The Town of Frederick owns and maintains one storage tank, located on Wheatland Boulevard/CR 17. The welded steel ground storage tank was constructed in 1974 and has a volume of 2.8 million gallons.

Central Weld County Water District (CWCWD) maintains additional potable water storage for its customers, including Frederick. The October 20, 1988 Agreement between CWCWD and Frederick indicates CWCWD will provide equalization and emergency storage for its customers totaling at least two times the average daily demand based on the last three years of water usage.

For the period of 2020 through 2022, Frederick's water imported from CWCWD averaged approximately 1.7 MGD. Per the 1988 Agreement, CWCWD should currently provide at least two times this amount, or 3.4 million gallons (MG) of storage for Frederick. CWCWD has a 5 MG ground storage tank adjacent to Frederick's tank, and approximately 17 MG of storage at the Carter Lake Filter Plant.

Frederick's tank receives potable water from CWCWD through a master meter located at the tank, which his fed from the west by a 14-inch asbestos-cement (AC) water transmission main. CWCWD is currently in the planning and design process to replace this with a 30-inch water main.

According to Town staff, a recent inspection of Frederick's 2.8 MG tank indicated the tank has some minor wear, but no significant repairs were recommended.

6.2 Pressure Zones

Frederick's potable water system is divided into four main isolated pressure zones. The Town's existing Wheatland Boulevard tank serves the downtown area and north of downtown, as well as a commercial customer east of the tank. This zone is referred to as the Tank Pressure Zone. The Ridgeway Pressure Zone serves development east and west of Ridgeway Boulevard. The third and largest pressure zone includes most of the remainder of the Town's service area west of Colorado Boulevard (West Pressure Zone) which is supplied water by 10 CWCWD master meter/pressure reducing stations. The Bear Industrial Park is the

fourth pressure zone at the northwest corner of town. This area is served by a CWCWD master meter and is disconnected from the remainder of the Town's system. See Section 2.1 of this Master Plan for additional details regarding the existing pressure zones.

Frederick's tank is located at or near the highest ground elevation within town limits, an elevation of approximately 5110 FT-MSL. Ground elevations gently slope downward in all directions away from the tank. CWCWD and the Town of Firestone also have potable water storage tanks adjacent to Frederick's tank.

Frederick's tank has a high-water operating level of 48 feet. This provides a maximum hydraulic gradient of 5158 FT-MSL. The tank level fluctuates to allow water turnover to maintain water quality, resulting in hydraulic gradient that ranges between 5130 and 5150 FT-MSL.

The tank's hydraulic gradient is sufficient to provide adequate pressure to the downtown area, which is approximately 100 to 140 feet lower in ground elevation than the tank site. System pressures in the Tank Pressure Zone typically range between 55 and 75 psi. Valves in the distribution system are currently closed to isolate the downtown area from the remainder of the distribution system.

The other portions of the Town's distribution system are pressurized by 12 master meter connections with CWCWD that operate at pressures ranging between approximately 80 psi and 100 psi. One of the master meters is dedicated to the Bear Industrial Park. CWCWD's potable water transmission pipes from the Carter Lake Filter Plant operate at even higher pressures, so each master meter is equipped with pressure reducing valves. CWCWD balances the pressure reducing valve settings to maintain adequate operating pressures throughout the system.

6.3 Recommended Storage Capacity

The Colorado Department of Public Health and Environment (CDPHE) Potable Water Design Criteria requires potable water storage to meet domestic water demands plus fire flow. It is generally recommended that a public water system have storage capacity for the maximum daily demand, plus fire flow. Utilizing the 2.7 Maximum Daily Demand factor described in Section 5.1.3, Frederick's Maximum Daily Demand for the 2019 to 2022 three-year period is 4.59 mgd (1.7 mgd x 2.7). At build-out, Average Daily Demand including 5% loss from Table 5-8 is estimated at 6.01 mgd for the year 2070. Utilizing the 2.7 factor results in a Maximum Daily Demand of 16.2 mgd. Based on these estimates, and per the 1988 Agreement, CWCWD reserves storage of at least two times the average daily demand for Frederick, which equates to 3.4 MG for 2022, and 12 MG for 2070.

6.4 Fire Flow

The Town of Frederick's Design Standards and Specifications for Potable Water Distribution lists minimum fire flows of 1500 gpm for single family residential, and 3500 gpm for multi-family residential and commercial/industrial facilities. According to the International Fire

Code, the fire duration for commercial and industrial structures ranges from two to four hours, depending on the required fire flow, type of building construction and the building size. For this storage volume analysis, a 3500-gpm fire flow at four-hour duration will be utilized, resulting in a volume of 840,000 gallons to be stored for fire flow.

6.5 Additional Storage Facilities

CWCWD currently provides storage for the entire Town service area, except the downtown area, which is served by the Town's tank on Wheatland Boulevard. CWCWD also has a 5 MG tank next to the Town's 2.8 MG tank that is hydraulically piped to supplement the Town's tank if needed. CWCWD storage for the rest of the Town's system is near the Carter Lake Filter Plant, approximately 30 miles from Frederick. For improved reliability, it is recommended additional storage facilities be supplied closer to the Town's water demands to provide backup water supply for emergency events when CWCWD may have water supply limitations due to treatment or transmission issues, or drought-related water restrictions.

6.6 Future Storage Facilities Location

As discussed previously, the Town's existing tank is at the highest ground elevation in Frederick, which makes the area around the tank a consideration for additional storage to maximize gravity feeds and minimize pumping. However, while the ground elevations are highest in this area, they are not significantly higher, and the hydraulic capability for gravity feed is limited. Therefore, conveyance of water from this eastern location to the west and north portions of the service area would require large transmission lines, likely in the range of 24-inch to 30-inch diameter, to reduce system pressure losses at peak and fire flows. These large transmission lines would be costly and could result in water quality issues during normal demands due to long detention times.

Since the Town's distribution system currently isolates the Tank pressure zone to serve primarily the downtown area, consideration for additional storage is given west of Colorado Boulevard to centralize the storage in relation to the remainder of the service area. As mentioned in Section 4.5, there may be a future need for a local water treatment plant that potentially would use Milavec Reservoir as its supply. Locating the storage in the general vicinity of Milavec Reservoir consolidates infrastructure and reduces transmission piping between the treatment plant and distribution storage. It could also allow Town-owned property to be used for the storage facilities. The exact location of the future storage tank requires further evaluation and is beyond the scope of this Master Plan.

To serve future development in the eastern planning area, a booster pump station is recommended to draw water out of the existing Town tank to create a separate pressure zone for this portion of the service area.

6.7 Water Storage Capacity Projections

The existing Frederick tank will continue to serve the downtown area, and in the future, the eastern planning area. The adjacent CWCWD 5-MG tank is hydraulically connected to provide additional storage to this portion of the Frederick service area.

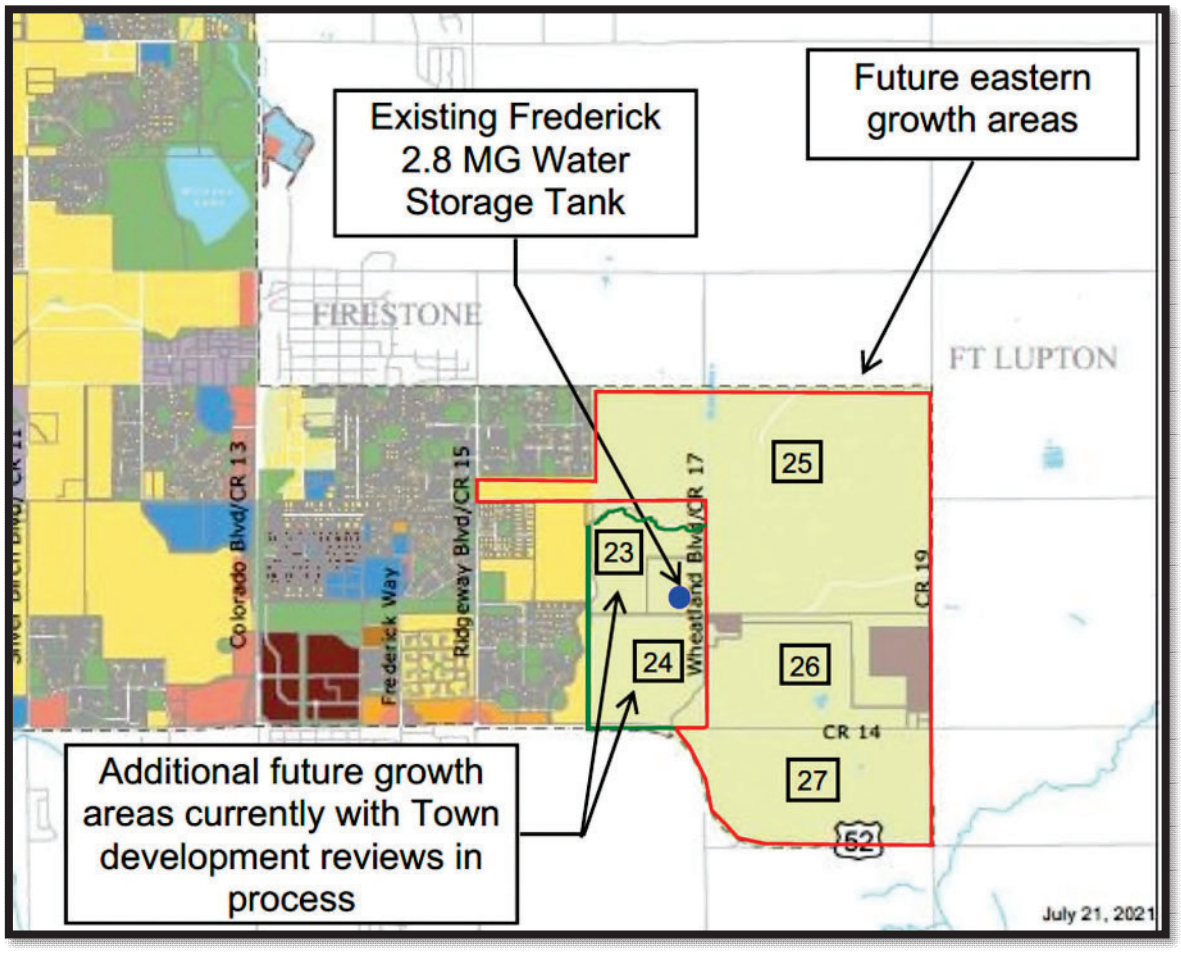
Future storage facilities would serve the remainder of the Town's service area, with backup storage from CWCWD.

Each of these two tank service areas are evaluated separately for water demand projections and storage needs.

6.7.1 Wheatland Boulevard (CR 17) Tank Service Area

The existing tank serves the downtown area through a 12-inch asbestos-cement (AC) transmission pipe between the tank and downtown. Over the past three years the tank output averaged approximately 410,000 gallons per day (gpd), which represents about 22% of the Town's entire water demand. Properties that can be developed in the future in the eastern planning area were described previously in Section 5.2 and are shown below in Figure 6.1.

Figure 6.1 Eastern Planning Area Properties



Note: Figure 6.1 base map from Town of Frederick's Existing and Future Development Map, 7/21/2021.

To estimate potable water demands, these properties have been divided into five general areas numbered 23 through 27 in the map figure. Some of the areas include multiple parcels. The Town has received development submittals for parcels immediately north/west (No. 23) and south (No. 24) of the tank.

The land use for all five of these areas is depicted as "Agricultural/Estate Residential" on the Town's Land Use Map. The Town's Land Use Code shows a maximum density of 0.2 dwelling units (du) per acre for Estate Residential (R-E). However, the Town's "Existing and Future Developments Map" shows different estimated densities for Areas 1 and 2. Build-out potable water demands have been estimated for the areas in the eastern planning area using Town land planning documents as described in Table 6-1 below.

Table 6-1 Eastern Planning Area Water Demand Estimates

Area No.	Description	Approx. Area (AC)	[1]EDU's per acre	EDU's	Demand per EDU	[2]Avg Day Demand (gpd)
23	Brunemeier Annexation	137	-	508	326	165,600
24	Johnson Farm/Spindle Energy (west)	147	-	69	326	22,500
25	Northeast planning area	852	0.2	170	326	55,600
26	Johnson Farm/Spindle Energy (east)	272	0.2	54	326	17,700
27	Southeast planning area	316	0.2	63	326	20,600
	TOTALS	**1724**		**865**	**325**	**281,100**

[1]Areas 23 and 24 residential density based on 508 du and 69 du, respectively, as listed in Town of Frederick, Existing and Future Developments map, 6/8/2021. Areas 25, 26 and 27 densities based on Town of Frederick Land Use Map.

[2]Average day demand based on 326 gpd per residential unit from 2022 Town-wide meter records.

During the past three years, the average daily demand from the existing tank to serve the downtown zone is 410,000 gpd. The downtown area is mostly built-out, but could experience minor increases in potable water demands in the future through redevelopment of existing properties. However, the additional water demand is not expected to be significant. The existing 2.8 MG tank has excess capacity to serve the eastern growth area, but is limited by its hydraulic gradient. The ground elevations in the eastern planning area are too high to be served with acceptable system pressure by gravity from this tank. A booster pump station is recommended to draw water out of the tank to adequately serve this eastern planning area.

Utilizing a nominal downtown increase of 40,000 gpd increases the future downtown average daily demand to 450,000 gpd. Combining this with the estimated 281,100 gpd demand for the additional eastern grown area results in a total of 731,100 gpd. Adding 5% non-revenue water loss and applying the 2.7 maximum daily demand factor equates to a future build-out

maximum daily demand of approximately 2.1 MGD, leaving approximately 700,000 gallons for fire flow storage in the 2.8 MG tank. Supplemental storage can be supplied by CWCWD's tank if needed. Therefore, the existing tank could serve this entire area at the estimated development densities and water demands with the addition of a booster pump station to serve the future growth.

Frederick owns an additional parcel on CR 17 just south of the existing tank. This property could be used for the booster pump station if there is not sufficient space at the current tank site.

6.7.2 West Tank Service Area

With the current tank serving downtown and future development in the eastern planning area, storage for the remainder of Frederick's service area is currently supplied by CWCWD. Additional storage in Frederick is recommended as back-up to improve reliability. Frederick's average daily demand for the past three years is approximately 1.7 MGD, with approximately 0.41 MGD being served by the existing water tank. Therefore, the remainder of the system has a current average daily demand of approximately 1.29 MGD.

Table 5-5 estimates average daily water demands for the remainder of the service area, identified in the table as properties numbering 1 through 22, and 28. The average daily demand for these properties at build-out in 2070 as listed in Table 5-5 totals approximately 3.8 mgd in future development. Combining the future demand with the current demand results in a total of approximately 5.1 mgd average daily demand for the West Tank service area at build-out. Adding 5% non-revenue water loss and applying the 2.7 factor results in a Maximum Daily Demand of 14.46 mgd. Utilizing a fire flow demand of 0.84 MG results in a total recommended storage capacity of 15.3 MG for the West Tank service area.

CWCWD already has 17 MG in storage available at the Carter Lake Filter Plant, which exceeds the build-out storage, so the storage Frederick provides is primarily to improve reliability in the event of an emergency or other limitation of CWCWD water supply. The 1988 CWCWD/Frederick agreement is referenced to estimate storage capacity to be supplied by Frederick. As discussed previously, the agreement indicates CWCWD is to supply storage for at least twice the average daily demand, which equates to 10.2 MG. This leaves a balance of 5.1 MG of storage recommended to be supplied by the Town of Frederick.

Table 6-2 below provides an estimate of storage needs for the West Tank Service Area throughout the planning period.

Table 6-2 West Tank Storage Recommendation

Year	Projected Avg Daily Demand (MGD)	Avg Daily Demand incl. 5% water loss (MGD)	Maximum Daily Demand Factor	Maximum Daily Demand (MGD)	Fire Flow Storage (MG)	Total Storage (MG)	CWCWD Storage (MG)	Recommended Town Storage, West Tank (MG)
2022	1.29	1.35	2.7	3.66	0.84	4.50	2.58	1.9
2023	1.32	1.39	2.7	3.75	0.84	4.59	2.64	1.9
2033	1.69	1.78	2.7	4.80	0.84	5.64	3.39	2.3
2043	2.27	2.39	2.7	6.44	0.84	7.28	4.54	2.7
2053	3.06	3.22	2.7	8.69	0.84	9.53	6.13	3.4
2063	4.13	4.34	2.7	11.72	0.84	12.56	8.27	4.3
2070	5.10	5.35	2.7	14.46	0.84	15.30	10.20	5.1

Based on Table 6-2, it is recommended the Town construct a 3 MG storage tank to meet projected storage needs for greater than 20 years. An additional tank could be considered for improved back-up storage around 2047. The timing of additional storage beyond the recommended 3 MG should be re-evaluated at least every five years.

6.8 Storage and Pressure Zone Summary

Frederick currently operates four pressure zones. One pressure zone is served by the Town's existing 2.8 MG tank on Wheatland Boulevard (Tank Zone), a second zone includes the Ridgeway Boulevard area (Ridgeway Zone), a third primary pressure zone west of Colorado Boulevard (West Zone) is supplied water through 10 CWCWD master meters, and a fourth pressure zone for the Bear Industrial Park (Bear Industrial Zone) that is served by a CWCWD master meter and is hydraulically disconnected from the rest of the distribution system.

Recommendations for storage and pressure zones are as follows:

Recommendations

1. Existing 2.8 MG tank continues to serve the downtown area and north of downtown, and a booster pump station is recommended to draw water from the 2.8 MG tank to serve future development in the eastern planning area. The booster pump station will create a separate pressure zone (East Zone). The timing of the booster pump station is based on development schedules and is therefore unknown.
2. Construct a new 3 MG storage tank in the general vicinity of Milavec Reservoir to provide back-up storage to CWCWD storage. The tank could be an elevated storage tank set at a sufficient height to provide acceptable distribution pressure, or a ground storage tank with an accompanying booster pump station. Ground elevations in the vicinity of Milavec Reservoir are not sufficient for gravity service from a ground

storage tank. The 3 MG tank will be integrated into the West Pressure Zone, and adjustment of the CWCWD pressure reducing stations will be needed to provide water turnover in the tank to maintain water quality.

3. Construct a 12-inch waterline between the planned Silverstone Marketplace on the west side of Colorado Boulevard to Ridgeway Boulevard to integrate the Ridgeway Pressure Zone into the West Pressure Zone. The timing of this waterline is based on development schedules.
4. Construct a connecting waterline between Bear Industrial Park and Raspberry Hill to integrate the Bear Industrial Park into the larger West Pressure Zone, which will provide a second redundant water supply feed to the industrial park.

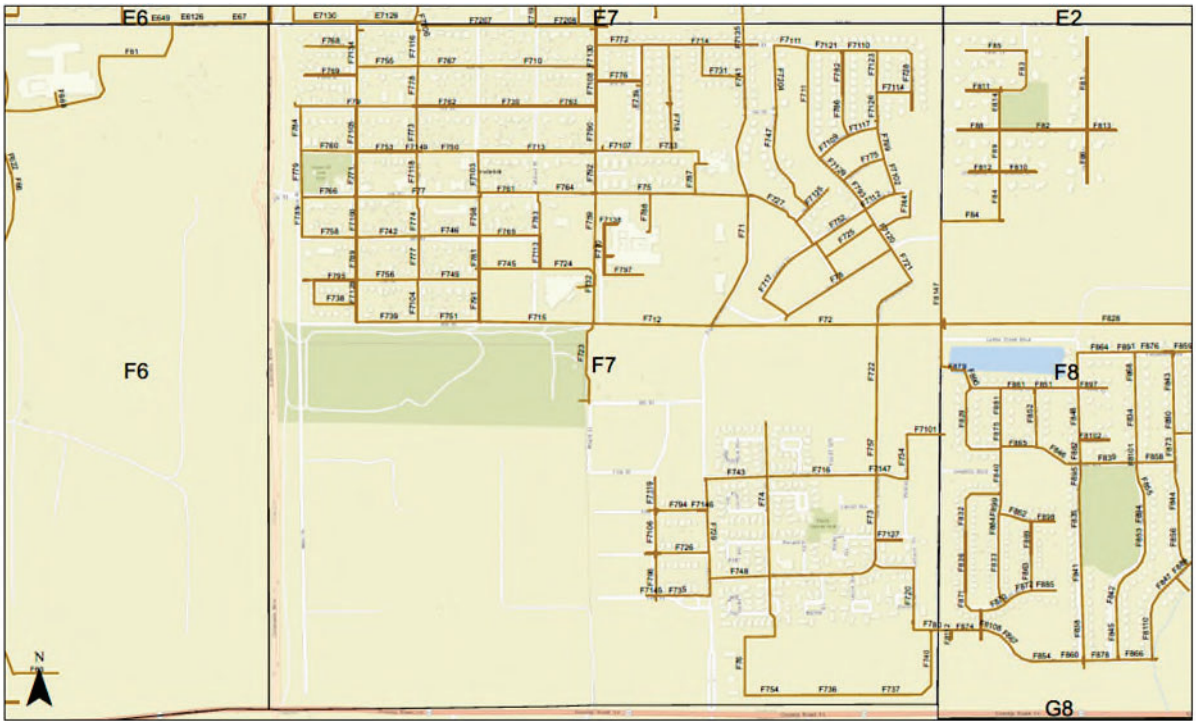
As waterlines are constructed for future development in the vicinity of the Frederick West Business Center, the customers in the business center that are currently served by individual CWCWD master meters can be connected into the West Pressure Zone system.

At build-out, it is planned the Town's system will include four pressure zones, with the current Bear Industrial and Ridgeway pressure zones being integrated into the West Pressure Zone, and the addition of the new East Pressure Zone. As waterlines are constructed in conjunction with development, it may be necessary to operate with additional pressure zones prior to build-out to accommodate developments as they progress, and to ensure adequate water turnover in the new 3 MG tank.

7.0 GIS MAPPING AND HYDRAULIC MODELING

7.1 GIS Map Update

The Town provided an existing potable water system map in ArcGIS format. Due to accuracy uncertainties in the downtown and Evanston portions of the system, these areas were surveyed for locations and elevations of valves and fire hydrants. The Town water tank elevation was also surveyed. This data was incorporated into the GIS Map file. Some additional map corrections were made based on feedback from Town staff and other maps and drawings furnished by the Town.



Frederick Potable Water System, GIS Map Update, Screenshot Sample

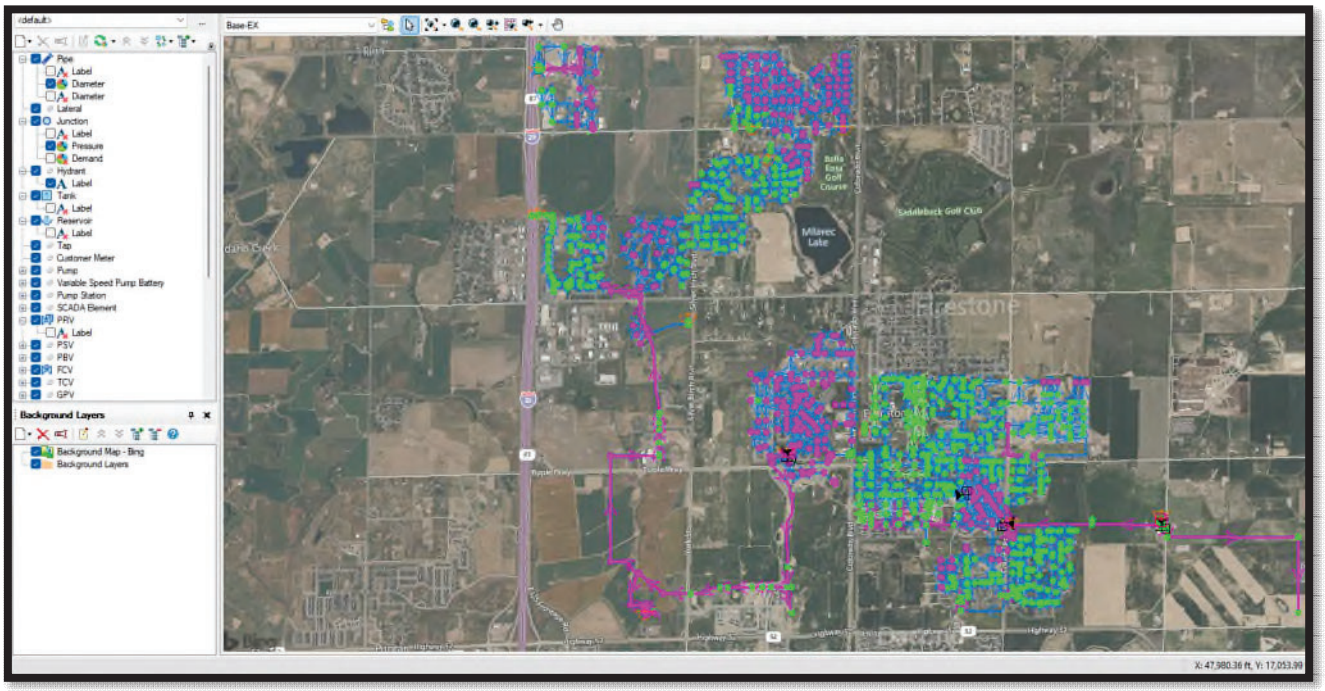
To create a GIS Map that is compatible with the Town's asset management software, water pipes were divided into over 1,200 segments based primarily on "valve to valve" pipe segments. Each segment was assigned an identifying number consistent with the Town's fire hydrant map grid numbering system. Data for each pipe was inputted into the GIS file based on information furnished by the Town, including size, material, and, if available, date of installation.

Printouts of the GIS Map are included in the Appendix to this report.

7.2 Hydraulic Model

7.2.1 Description

A computer-based hydraulic model is an important analysis tool for water systems. Forsgren updated the Town's existing WaterGEMS model with the updated GIS Map data and customer water demands based on 2022 meter usage. Typical pressure settings furnished by CWCWD for each of the master meter/pressure reducing stations were also inputted. The Town's storage tank water elevation was added, node elevations throughout the pipe network were compared to GoogleEarth data and adjusted when necessary.



Frederick Potable Water System, Hydraulic Model Update Screenshot

7.2.2 Hydraulic Model Calibration

After the steady-state hydraulic model was completed and validated, the model was calibrated using fire hydrant pressure and flow testing furnished by the Town's Public Works Department. Eight fire hydrants spanned throughout the distribution system were selected and tested during February 2023. See Figure 7.1 and Table 7-1 for the locations and results of the fire hydrant flow tests.

Fire flow scenarios were run in the model for each of the hydrants tested, and the model was adjusted to approximate field test results for flow and pressure within a reasonable margin to create the calibrated model. Because the field tests were conducted during the winter, dry weather customer water demands were used for the calibrated existing conditions model.

Figure 7.1 Fire Hydrant Test Locations for Hydraulic Model Calibration

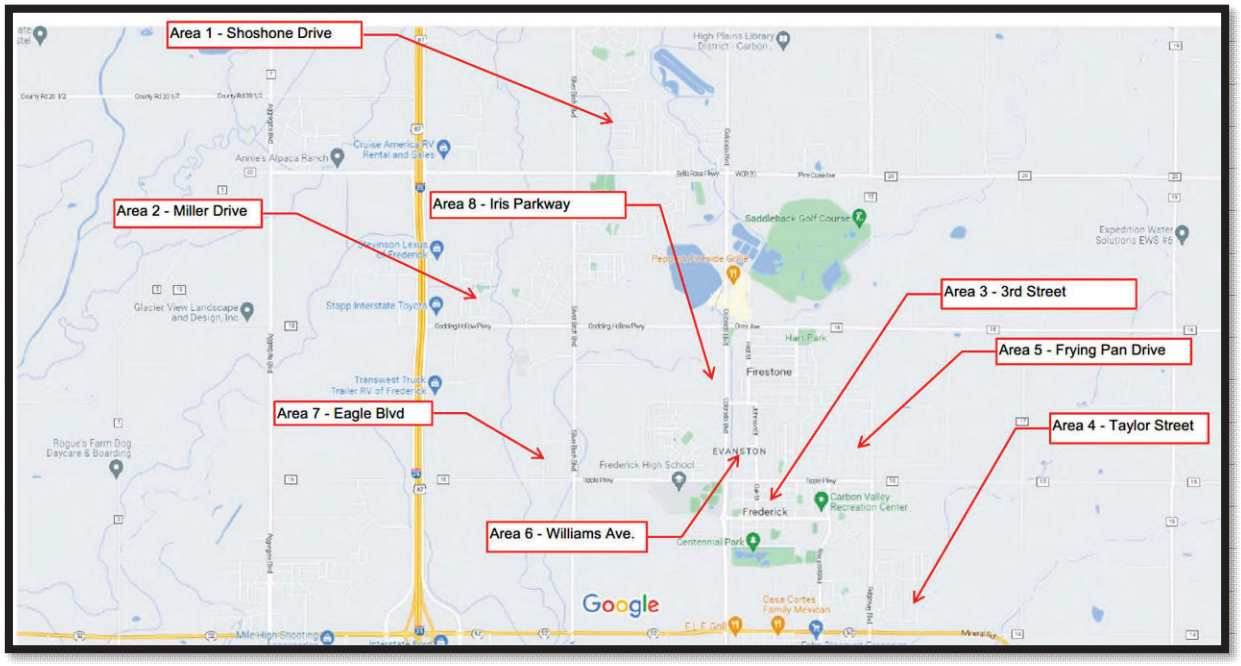


Table 7-1 Fire Hydrant Calibration Test Results

Area	Location	Flowing Hydrant		Location	Residual Hydrant
		Flow (gpm)	Pressure (psi) static/residual		Pressure (psi) static/residual
1	Shoshone/Sequoia	1455	105/75	Shoshone/Pinelands	102/102
2	8173 Miller Dr	1060	115/40	8129 Miller Dr	114/90
3	3rd St/Locust St	1130	70/45	3rd St/Walnut ST	70/48
4	6161 Taylor St	1350	110/65	6187 Taylor St	110/76
5	Across 7206 Frying Pan Dr	1000	56/35	across 7101 Frying Pan Dr	52/52
6	Williams/Abeyta	1190	78/50	Williams/Dunmire	78/76
7	Eagle Blvd/Agilent	1500	106/80	Eagle Blvd/Tipple	108/90
8	5989 Iris Parkway	1190	103/50	5969 Iris	90/90

Note: Fire hydrant testing by Town of Frederick Public Works Department, February 2023

7.2.3 Current Conditions Hydraulic Model

Several scenarios were run in the calibrated hydraulic model based on the criteria shown below in Table 7-2. See Section 5.1.3 of this report for the determination of the Maximum Daily and Peak Hour factors.

Table 7-2 Hydraulic Model Demand Scenarios

Scenario No.	Demand Scenario	Water Demands
1	Average Daily	2022 Meter Usage
2	Maximum Day plus Fire Flow	2.7 x Annual Avg Daily + Fire Flow[1]
3	Peak Hour	5.0 x Annual Avg Daily

1. Fire flows: 1500 gpm for Single-Family Residential, 3500 gpm for Commercial and Multi-Family Residential

For the Current Conditions Hydraulic Model, pressures throughout the distribution system for all scenarios listed in Table 7-2 were above acceptable minimum standards except for one scenario. For Scenario No. 2, Maximum Day plus Fire Flow, a fire flow of approximately 1700 gpm can be achieved in the downtown commercial area at a minimum pressure of 20 psi. This flow is less than the 3500 gpm listed in the Town's Engineering Standards for a commercial area. The downtown area is served by the Town's water storage tank, which is hydraulically limited by its elevation. Closed valves isolate the downtown area from other areas served by CWCWD master meters which generate higher pressures. To achieve a fire flow of 3,500 gpm downtown, one or more of these isolation valves needs to be opened, or modified to open automatically in the event of low pressure. This is reviewed further in the Future Conditions Model.

7.2.4 Future Conditions Hydraulic Model

The Future Conditions Model is a sustainability tool, allowing infrastructure to be planned for capacity to meet the Town's future expected water demands. Information from the Town's Comprehensive and Land Use Plans are incorporated to promote connectivity by serving target growth areas, including undeveloped properties within the Town's planning boundaries and the 25/52 East Subarea. The water needs of anticipated businesses and schools are also considered. The Town's plan to convert 18 potable water users to non-potable water to conserve potable water is also incorporated by eliminating these demands from the model.

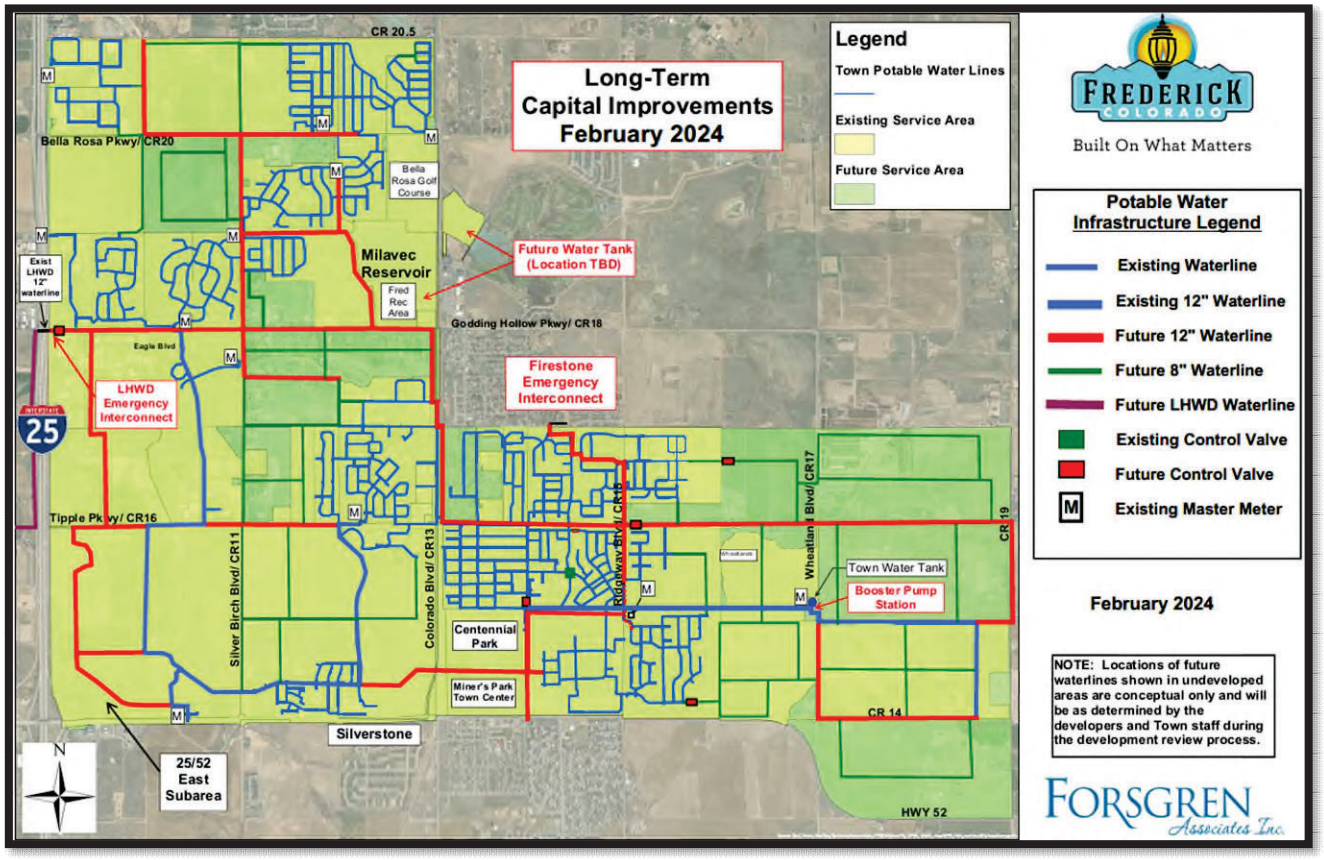
The Town's Long Term Water Supply Plan identifies the potential need for a local water treatment plant in the coming years, potentially utilizing Milavec Reservoir as a water source. Since additional water storage is recommended, locating the future storage in proximity to the future water treatment plant has merit. The model includes storage and transmission mains to accommodate a future local water treatment plant in the vicinity of Milavec Reservoir. \

7.2.5 Future Potable Water Infrastructure

To serve the future build-out development shown in Figure 5.2 at the potable water demands listed in Table 5-5, water mains were added to the model to develop a Future Conditions

model. The model assumes existing CWCWD master meters remain in operation, and CWCWD water storage continues to be available for Frederick. Water transmission mains are also positioned to convey water from a future water treatment plant that could potentially be constructed near Milavec Reservoir. Major future infrastructure improvements are shown below in Figure 7.2 and described afterwards. See the Appendix for a full-size copy of the Figure 7.2 map.

Figure 7.2 Long-Term Capital Improvements, Potable Water Infrastructure



Eastern Booster Pump Station

To serve future development in the vicinity of the existing storage tank on Wheatland Boulevard (CR 17), a Booster Pump Station is proposed. The topography of most of this area is higher than the operational hydraulic gradient of the existing tank, so pumping is necessary to achieve adequate system pressures. The existing tank has adequate capacity to serve this future development area. The timing of this booster pump station will be dependent on development. Frederick owns an additional parcel on CR 17 just south of the existing tank. This property could be used for the booster pump station if there is not sufficient space at the current tank site. This same Town-owned parcel is also a candidate for another potable water storage tank should the eastern planning area develop at a higher density than the Town's current land use planning.

Water Storage Facilities

Section 6 of this report provides an assessment and recommendations for storage facilities. A new 3 MG storage tank is recommended at a central location to serve all but the downtown and eastern planning areas, which will continue to be served by the existing 2.8 MG tank on Wheatland Boulevard. The cost opinions in this report will be based on a prestressed concrete ground storage tank with an accompanying booster pump station, both located in the general vicinity of Milavec Reservoir. This 3 MG tank will provide back-up storage to CWCWD's existing storage.

Water Transmission Mains

To convey water to the future development and improve fire flows to existing, larger transmission mains are planned at the following general locations. This network of transmission mains will also allow potable water from a potential local treatment plant near Milavec Reservoir to be conveyed throughout the service area. Refer to Figure 7.2 for transmission main locations.

- Bella Rosa Parkway (CR 20)
- Godding Hollow Parkway (CR 18)
- Tipple Parkway (CR 16)
- West of Bear Industrial Park, between CR 20 and CR 20.5
- Future Storage Tank location (vicinity of Milavec Reservoir)
- 25/52 East Subarea
- Silver Birch Boulevard (CR 11)
- Parallel to Colorado Boulevard (CR 13)
- Frederick Way
- Ridgewood Boulevard (CR 15)
- Eastern planning area, including CR 14 and CR 19

In addition, CWCWD is planning to replace their existing 14-inch waterline that feeds Frederick's existing tank on Wheatland Boulevard with a 30-inch transmission main. After the 30-inch line is completed, the 14-inch waterline can be repurposed to replace the Town's 12-inch line that currently feeds the downtown area. Upsizing this line from 12-inch to 14-inch reduces headloss and improves fire flows in the tank pressure zone.

Waterline Loops

To improve water quality and provide redundant water supply feeds, waterline loops are planned throughout the service area. The locations of most of the loops shown in Figure 7.2 are very approximate and are shown only to indicate that loops will be needed when the properties are developed. The exact location of the waterlines will be determined during the developer submittal process and reviewed by Town staff. One of the developer-driven lines is a 12-inch loop to the east between William Bailey Avenue and Linden Street, to be

constructed in conjunction with the Silverstone Marketplace and Miner's Park Town Center developments.

Two waterline loops were identified as being higher priorities and recommended as short-term improvements for the Town to construct. The locations of these recommended loops are shown below.

- 8-inch connecting waterline between the Bear Industrial Park and Raspberry Hill
- 8-inch loop at 2nd Street near Hawthorne Street (with isolation/pressure control valve)

Pressure Control Valve for Tank Pressure Zone

The hydraulic model indicates fire flows for commercial and multi-family customers are lower than the Town's standard in the downtown/tank pressure zone. To improve fire flows to commercial downtown customers, the proposed 2nd Street/Hawthorne Street waterline loop will include a normally closed control valve that will automatically open when pressure in the tank zone is low, allowing higher pressure from the CWCWD master meters to the reinforce the existing tank pressure zone. This pressure control valve provides a 3500-gpm fire flow to the commercial downtown area to meet the Town's standard.

Emergency Interconnections

The Left Hand Water District (LHWD) and the Town of Firestone receive potable water from CWCWD, but also have separate water supplies and treatment facilities. Due to the close proximity of these systems to Frederick's distribution system, these water suppliers were contacted to discuss the potential for emergency interconnections. The quantity of water that could be supplied in the event of an emergency is dependent on several factors, and it is likely neither of these suppliers would be able to supply Frederick's full potable water demand. Still, the capacity to access water in a CWCWD water shortage emergency is extremely beneficial.

After meeting with staff from the Town of Firestone and the Left Hand Water District, technically feasible locations for interconnects were identified as listed below.

1. Left Hand Water District – LHWD owns a 12-inch waterline that crosses I-25 at Godding Hollow Parkway (CR 18), connecting to a CWCWD master meter on the east side of the interstate. This CWCWD connection is currently needed to supply fire flows to LHWD's service area north of CR 18. However, LHWD's current master plan includes upgrades to waterlines along the west I-25 Frontage Road that will eliminate the need for this CWCWD feed. The timing of LHWD's waterline upgrades is dependent on development and is therefore uncertain but is expected to be in the next 6 to 10 years. After these upgrades are completed, the 12-inch waterline across I-25 could be repurposed as an emergency interconnection to feed water from LHWD

to Frederick's water system. A pressure reducing station included in LHWD's master plan can be moved north of CR 18 to increase the available pressure for the interconnection. This emergency interconnection would provide the highest benefit to portions of Frederick's system west of Colorado Boulevard.

2. Town of Firestone – The most feasible location for an emergency interconnection with Firestone is at Firestone's 10-inch waterline near the McClure Avenue and Coal Ridge Drive intersection. This emergency interconnection will primarily benefit Frederick's service area west of Colorado Boulevard, enhanced by a future 12-inch transmission line between McClure Avenue and Leyden Creek Boulevard that is included in the Long-Term Capital Improvements.

The same demand scenarios listed in Table 6-2 were run in the Future Conditions model and adequate distribution system pressure is achieved in all scenarios. The emergency interconnections with LHWD and Firestone are more effective if used in conjunction with implementation of water restrictions to limit Frederick customer demands to critical needs without irrigation. Additional hydraulic modeling analysis is recommended during the design phases of the LHWD and Firestone emergency interconnections to maximize their effectiveness in providing water to Frederick to meet critical needs during an emergency.

8.0 CAPITAL IMPROVEMENTS PLAN

Most of the planned transmission mains listed in the previous Section 7 and shown in Figure 7.2 will be constructed in conjunction with developments, so their timing is unknown. To address more time-sensitive needs, Forsgren collaborated with Town staff to identify and prioritize improvements to be included in a 10-year Capital Improvements Plan (CIP).

Five projects were selected for the 10-year CIP to be constructed by the Town of Frederick, and three additional projects were identified to meet developer projects and, therefore, would be funded by developers. The timing of developer-driven projects is less certain, although the Silverstone Marketplace 12-inch eastern waterline loop is expected to be constructed within the next two years.

Figure 8.1 below provides a map of the recommended 10-year CIP projects. A full-size copy of the map is included in the Appendix.

Figure 8.1 10-year Capital Improvements Projects, Potable Water Infrastructure

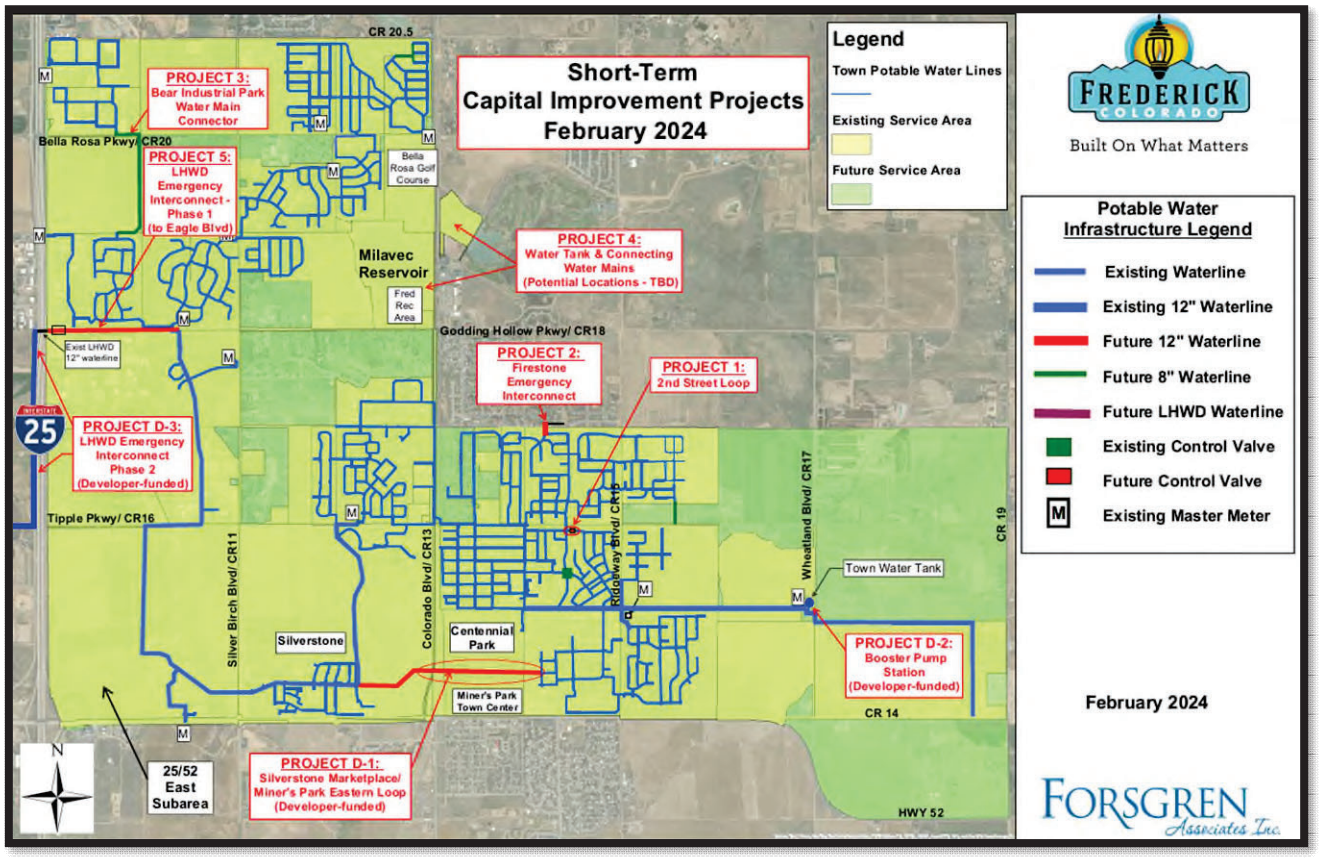


Table 8-1 below provides locations, anticipated timing and preliminary cost opinions for the 10-year CIP projects to be undertaken by the Town. Detailed preliminary cost opinions are provided in the Appendix.

Table 8-1 10-year Capital Improvements Projects, Potable Water Infrastructure

Project No.	Description	[1]Location	Estimated Timing Range	[3]Preliminary Project Cost Opinion	Project Goals
1	2nd Street Loop	2nd St at Hawthorne St	Years 1 to 2	$0.4M	Improve Reliability & Fire Flow
2	Firestone Emergency Interconnect	Coal Ridge Dr & McClure Ave	Years 2 to 3	$1.7M	Partial Emergency Backup Water Supply
3	Bear Industrial Park Connector	Bella Rosa Pkwy to Raspberry Dr	Years 3 to 4	$1.4M	Improve Reliability
4	Water Storage Tank, Pump Station & Connectors	TBD	Years 5 to 7	$12.6M	Additional Storage and Improve Reliability
5	[2]Left Hand Water District Emergency Interconnect – Phase 1	Godding Hollow Rd, East side of I-25	Years 6 to 10	$3.8M	Partial Emergency Backup Water Supply

Notes:

1. Refer to Figure 8.1 for project locations.
2. Phase 1 Left Hand Water District emergency interconnect must be planned, designed and constructed in conjunction with Phase 2 described in Table 8-2. Timing is developer-dependent and may be sooner or later than the range shown in table.
3. All cost opinions are in current dollars and do not account for future inflation or price escalations.

Three projects shown in Table 8-2 are to be funded and constructed by developers. The preliminary cost opinions are provided to indicate an order of magnitude for the anticipated costs, but actual costs will be determined by the developers.

Table 8-2 Developer-Funded Projects, Potable Water Infrastructure

Project No.	Description	[1]Location	Estimated Timing Range	[3]Preliminary Project Cost Opinion	Project Goals
D-1	Silverstone Marketplace/Miner's Park Loop	13th Street, south of Centennial Park	Years 1 to 2	$1.9M (developer funded)	Improve Pressure to future developments
D-2	Booster Pump Station near existing Water Tank	Wheatland Blvd (CR 17)	TBD	$2.9M (developer funded)	Expand tank service area to future development
D-3	[2]Left Hand Water District Emergency Interconnect – Phase 2	Bella Rosa Pkwy to Raspberry Dr	Years 6 to 10	TBD (developer funded)	Partial Emergency Backup Water Supply

Notes:

1. Refer to Figure 8.1 for project locations.
2. Phase 2 Left Hand Water District emergency interconnect must be planned, designed and constructed in conjunction with Phase 1 described in Table 8-1. Timing is developer-dependent and may be sooner or later than the range shown in table.
3. All cost opinions are in current dollars and do not account for future inflation or price escalations.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 Master Plan Summary

Based on feedback from Town staff and review of pipe ages, the Town's potable water infrastructure appears to be in sound condition, with no immediate needs for repairs or replacements. The hydraulic model of the distribution system indicates minimum pressures and fire flows meet the Town's engineering standards throughout the system, except for commercial and multi-family residential fire flow in the downtown area. The Master Plan includes a recommendation for a waterline loop at 2nd Street with a pressure control valve that will automatically increase pressure and flow downtown during a low-pressure incident to provide for commercial and multi-family fire flows to meet the Town's engineering standard.

Significant population growth is anticipated in Frederick in the coming years as properties are developed. Potable water demands are projected to increase from approximately 1.9 to 6.0 mgd at build-out of the Town's planning area. General locations for water transmission and distribution lines are provided in the Long-Term Capital Improvements Plan to accommodate future growth, with the timing of this infrastructure being driven by development. This allows Town planning and engineering staff to require that developers construct waterlines and loop connections where shown, and adequately sized to sustain future development.

A 10-year Capital Improvements Plan is provided in Section 8, pointing toward improved reliability in the short-term, with nearly $20 million in Town-funded improvements identified over the next 10 years.

9.2 Public Engagement

Several opportunities were provided for public input into the Master Plan, including in-person information meetings and an on-line survey. Feedback from the public is addressed in the Master Plan as shown in the table below.

Topic	How Topic is Addressed in Master Plan
Drinking Water Quality	Provide additional loops in distribution system.
Affordability of drinking water	Recommend improvements that are necessary and cost effective, and identify potential grant funding sources.
Water Conservation	Complete a condition assessment of existing pipes to identify water leak issues. Convert irrigation of parks from potable to non-potable water.
Back-up Water Supply	Consider emergency interconnections with neighboring systems, and additional storage.

9.3 Potential Funding Sources

There are several programs that could potentially fund the projects included in the Capital Improvements Plan. Some of these programs are listed in the table below.

Potential Funding Programs for CIP Projects

Organization	Description	Grant or Loan
Department of Local Affairs (DOLA)	Energy & Mineral Impact Assistance Fund (EIAF)	Grant
Colorado Dept of Public Health & Environment (CDPHE)	Drinking Water Revolving Fund	Low-interest Loan
CDPHE	Bipartisan Infrastructure Law (BIL)	Low-interest Loan
Colorado Water Conservation Board (CWCB)	Water Plan Grant Program	Grant

9.4 Recommendations

With the rapid pace of development in Frederick, it is important that water system improvements are planned to reliably meet both present and future needs. This Potable Water Infrastructure Master Plan will be a valuable tool for Town staff to reference in their review of new development requests to ensure that new infrastructure provides long-term water reliability, while also being consistent with the Town's land use and comprehensive plan goals.

Future potable water infrastructure recommended and shown in this Master Plan is intended to provide minimum requirements for future infrastructure to aid the Town in future development reviews. It is the responsibility of developers to design and construct the necessary potable water infrastructure based on the most recent available information at the time of development, and in accordance with all Town of Frederick policies, guidelines, codes, rules, and regulations.

APPENDICES

APPENDIX A

TOWN OF FREDERICK
POTABLE WATER INFRASTRUCTURE MASTER PLAN
WATER PIPE RISK & RELIABILITY RATING TABLE
August 15, 2023

Criteria:
Condition Rating: based on remaining life of pipe material, scale of 1 to 4, with 4 being lowest remaining life
Criticality Rating: based on criticality type, scale of 1 to 4, with 4 being most critical infrastructure
Vulnerability Rating: based on history of breaks, or high pressure, scale of 0 to 2, with 2 being most vulnerable
Risk Rating = Condition Rating + Criticality Rating + Vulnerability Rating. Maximum Risk Rating is 10.

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
C61	8	PVC	Yes	100	2004	81	main feeder or loop	1	2	1	4	
C62	8	PVC	Yes	100	2002	79	main feeder or loop	1	2	1	4	
C63	8	PVC	Yes	100	2005	82	main feeder or loop	1	2	1	4	
C64	8	PVC	Yes	100	1999	76	main feeder or loop	1	2	1	4	
C65	8	PVC	Yes	100	2013	90	main feeder or loop	1	2	1	4	
C66	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C67	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C68	8	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9013 (No Name Creek)
C69	8	PVC	yes	100	2002	79	main feeder or loop	1	2	1	4	
C610	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C611	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C612	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C613	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C614	8	PVC	no	100	2004	81	Poor redundancy	1	3	1	5	
C615	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C616	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C617	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C618	8	PVC	no	100	2001	78	main feeder or loop	1	2	1	4	
C619	8	PVC	no	100	2005	82	main feeder or loop	1	2	1	4	
C620	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C621	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C622	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C623	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C624	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C625	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C626	8	PVC	no	100	2004	81	main feeder or loop	1	2	0	3	
C627	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C628	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C629	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C630	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C631	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C632	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C633	8	PVC	yes	100	2015	92	main feeder or loop	1	2	1	4	
C634	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C635	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C636	8	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
C637	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C638	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C639	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C640	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C641	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C642	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C643	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C644	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C645	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C646	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
C647	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C648	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
C649	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
C650	8	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9049 (The Farm)
C651	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
C652	8	PVC	Yes	100	2013	90	main feeder or loop	1	2	1	4	
C653	8	PVC	Yes	100	2003	80	main feeder or loop	1	2	1	4	
C654	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C655	8	PVC	Yes	100	2005	82	main feeder or loop	1	2	1	4	
C656	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C657	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C658	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C659	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
C660	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
C661	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
C662	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C663	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C664	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C665	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C666	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
C667	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C668	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C669	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C670	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C671	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C672	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C673	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C674	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C675	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C676	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C677	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C678	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C679	8	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
C680	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
C681	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C682	8	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
C683	8	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
C684	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C685	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C686	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C687	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C688	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C689	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C690	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C691	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C692	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C693	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C694	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C695	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C696	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C697	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C698	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C699	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C6100	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6101	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6102	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6103	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C6104	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C6105	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C6106	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6107	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6108	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6109	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6110	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
C6111	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6112	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C6113	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
C6114	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6115	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6116	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6117	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6118	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6119	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6120	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
C6121	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C6122	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C6123	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6124	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C6125	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
C6126	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6127	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6128	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6129	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
C6130	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6131	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
C6132	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
C6133	8	PVC	yes	100	2019	96	Poor redundancy	1	3	1	5	
D61	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D62	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D63	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D64	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D65	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D66	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D67	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D68	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D69	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D610	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D611	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D612	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D613	8	PVC	yes	100	2004	81	Poor redundancy	1	3	1	5	
D614	8	PVC	no	100	1999	76	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9023 (Summitview)
D615	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D616	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D617	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D618	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D619	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D620	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D621	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D622	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D623	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D624	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D625	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D626	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D627	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D628	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D629	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D630	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D631	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D632	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D633	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D634	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D635	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
D636	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D637	8	PVC	no	100	2000	77	Poor redundancy	1	3	0	4	
D638	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D639	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D640	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D641	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D642	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D643	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D644	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D645	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D646	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D647	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D648	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D649	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D650	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D651	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D652	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D653	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D654	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D655	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D656	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D657	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D658	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D659	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D660	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D661	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D662	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D663	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D664	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
D665	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D666	8	PVC	yes	100	2000	77	Poor redundancy	1	3	1	5	CWCWD Master Meter turned off (#9048)
D667	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D668	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D669	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D670	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D671	8	PVC	yes	100	2004	81	main feeder or loop	1	2	0	3	
D672	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D673	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D674	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D675	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D676	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D677	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D678	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D679	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D680	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D681	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D682	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D683	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D684	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D685	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
D686	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D687	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D688	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D689	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D690	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D691	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
D692	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
D693	8	PVC	YES	100	2019	96	Poor redundancy	1	3	1	5	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
D51	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D52	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D53	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D54	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D55	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D56	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D57	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D58	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D59	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D510	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D511	8	PVC	yes	100	2012	89	good redundancy	1	1	1	3	
D512	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D513	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D514	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D515	8	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9025 (Eagle Valley)
D516	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D517	8	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9025 (Eagle Valley)
D518	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D519	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D520	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D521	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D522	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D523	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D524	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D525	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D526	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D527	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D528	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D529	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D530	8	PVC	yes	100	1999	76	good redundancy	1	1	1	3	
D531	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D532	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9025 (Eagle Valley)
D533	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D534	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D535	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D536	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D537	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D538	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D539	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D540	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D541	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D542	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D543	8	PVC	no	100	1999	76	main feeder or loop	1	2	0	3	
D544	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D545	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D546	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D547	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D548	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D549	8	PVC	yes	100	1999	76	good redundancy	1	1	1	3	
D550	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
D551	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D552	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D553	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
D554	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D555	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D556	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D557	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D558	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D559	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D560	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D561	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D562	8	PVC	no	100	1999	76	Poor redundancy	1	3	0	4	
D563	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D564	12	PVC	yes	100	1999	76	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9025 (Eagle Valley)
D565	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D566	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D567	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D568	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D569	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D570	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9066 (Raspberry)
D571	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D572	8	PVC	yes	100	2011	88	Poor redundancy	1	3	1	5	
D573	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D574	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D575	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D576	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D577	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D578	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D579	8	PVC	yes	100	2012	89	Poor redundancy	1	3	1	5	
D580	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D581	12	PVC	yes	100	2005	82	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9066 (Raspberry)
D582	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D583	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D584	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D585	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D586	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D587	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D588	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D589	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D590	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D591	8	PVC	yes	100	2012	89	Poor redundancy	1	3	1	5	
D592	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D593	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D594	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D595	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D596	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D597	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D598	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D599	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5100	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D5101	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
D5102	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5103	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5104	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5105	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D5106	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5107	8	PVC	yes	100	1999	76	Poor redundancy	1	3	1	5	
D5108	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D5109	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
D5110	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D5111	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5112	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D5113	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D5114	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D5115	8	PVC	yes	100	2011	88	main feeder or loop	1	2	1	4	
D5116	8	PVC	yes	100	2012	89	main feeder or loop	1	2	1	4	
D5117	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5118	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
D5119	8	PVC	yes	100	1999	76	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter #9025 (Eagle Valley)
D5120	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E51	12	PVC	yes	100	2014	91	Transmission Main from Master Meter, and to Water Critical Business	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC), to Agilant
E52	12	PVC	yes	100	2017	94	Transmission Main from Master Meter, and to Water Critical Business	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC), to Agilant
E53	12	PVC	yes	100	2014	91	Water Critical Business	1	4	1	6	Main feed to Agilant
E54	8	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9068 (Elem School)
E55	8	PVC	yes	100	2020	97	Poor redundancy	1	3	1	5	
E56	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E57	12	PVC	yes	100	2014	91	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E58	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E59	8	PVC	no	100	2004	81	Transmission Main from Master Meter or Tank	1	4	0	5	Main feed from CWCWD Master Meter # 9068 (Elem School)
E510	8	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9068 (Elem School)
E511	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E512	12	PVC	yes	100	2014	91	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E513	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E514	8	PVC	yes	100	2004	81	Poor redundancy	1	3	1	5	
E515	8	PVC	no	100	2004	81	Transmission Main from Master Meter or Tank	1	4	0	5	Main feed from CWCWD Master Meter #9068 (Elem School)
E516	8	PVC	yes	100	2004	81	school or daycare	1	3	1	5	Legacy Elem School
E517	8	PVC	yes	100	2004	81	Poor redundancy	1	3	1	5	
E518	12	PVC	yes	100	2017	94	Transmission Main from Master Meter, and to Water Critical Business	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC), to Agilant
E519	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E520	12	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
E52	8	PVC	yes	100	2004	81	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E521	12	PVC	yes	100	2014	91	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F51	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F52	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F53	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F54	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F55	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F56	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F57	12	PVC	yes	100	2013	90	Medical Facility	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F58	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F59	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F510	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F511	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F512	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F513	12	PVC	yes	100	2013	90	Medical Facility	1	4	1	6	Hwy 52 Urgent Care
F514	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F515	12	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
F516	12	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
F517	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F518	12	PVC	yes	100	2013	90	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F61	8	PVC	yes	100	2010	87	school or daycare	1	3	1	5	High School
F62	8	PVC	yes	100	2010	87	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F63	8	PVC	no	100	2022	99	Poor redundancy	1	3	0	4	
F64	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F65	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F66	12	PVC	yes	100	2010	87	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F67	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F68	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F69	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F610	12	PVC	yes	100	2019	96	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F611	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F612	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F613	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F614	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F615	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F616	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F617	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F618	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F619	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F620	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F621	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F622	12	PVC	yes	100	2010	87	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
F623	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F624	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F625	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F626	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F627	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F628	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F629	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F630	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F631	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F632	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F633	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F634	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F635	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F636	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F637	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F638	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F639	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F640	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F641	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F642	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F643	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F644	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F645	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F646	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F647	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
F648	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F649	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F650	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F651	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F652	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F653	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F654	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F655	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F656	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F657	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F658	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F659	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F660	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F661	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F662	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F663	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F664	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F665	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F666	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F667	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F668	8	PVC	yes	100	2010	87	school or daycare	1	3	1	5	
F669	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F670	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F671	12	PVC	no	100	2019	96	Transmission Main from Master Meter or Tank	1	4	0	5	
F672	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F673	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F674	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F675	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F676	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F677	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F678	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F679	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F680	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F681	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F682	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F683	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F684	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F685	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
F686	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	4	
F687	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
E61	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E62	8	PVC	yes	100	1985	62	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9092 (IPMC)
E63	8	PVC	yes	100	2007	84	main feeder or loop	1	2	1	4	
E64	8	PVC	yes	100	2002	79	main feeder or loop	1	2	1	4	
E65	8	PVC	yes	100	2007	84	main feeder or loop	1	2	1	4	
E66	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E67	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E68	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1	4	
E69	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E610	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
E611	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E612	8	PVC	yes	100	2004	81	main feeder or loop	1	2	1	4	
E613	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E614	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E615	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E616	12	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9045 (Countryside)
E617	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E618	8	PVC	yes	100	2002	79	good redundancy	1	1	1	3	
E619	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E620	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E621	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E622	8	PVC	yes	100	1985	62	Poor redundancy	1	3	1	5	
E623	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E624	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E625	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E626	8	PVC	yes	100	2002	79	main feeder or loop	1	2	1	4	
E627	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
E628	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E629	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
E630	8	PVC	yes	100	2018	95	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9045 (Countryside)
E631	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E632	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
E633	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E634	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E635	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E636	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E637	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E638	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E639	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E640	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E641	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E642	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E643	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E644	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E645	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E646	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1		
E647	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E648	8	PVC	yes	100	2007	84	main feeder or loop	1	2	1	4	
E649	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1	4	
E650	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E651	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E652	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E653	8	PVC	yes	100	2007	84	Poor redundancy	1	3	1	5	
E654	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E655	8	PVC	yes	100	2007	84	Poor redundancy	1	3	1	5	
E656	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E657	8	PVC	yes	100	2018	95	good redundancy	1	1	1	3	
E658	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E659	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E660	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E661	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E662	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E663	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E664	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E665	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E666	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1	4	
E667	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E668	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E669	8	PVC	yes	100	2018	95	Poor redundancy	1	3	1	5	
E670	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E671	8	PVC	yes	100	2018	95	Poor redundancy	1	3	1	5	
E672	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E673	8	PVC	yes	100	2007	84	Poor redundancy	1	3	1	5	
E674	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E675	8	PVC	yes	100	2002	79	good redundancy	1	1	1	3	
E676	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E677	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E678	8	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9045 (Countryside)
E679	8	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9045 (Countryside)
E680	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
E681	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E682	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
E683	8	PVC	yes	100	2007	84	Poor redundancy	1	3	1	5	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
E684	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1	4	
E685	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E686	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E687	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E688	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E689	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E690	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E691	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E692	8	PVC	yes	100	2002	79	main feeder or loop	1	2	1	4	
E693	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E694	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E695	8	PVC	yes	100	1985	62	main feeder or loop	1	2	1	4	
E696	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E697	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E698	8	PVC	yes	100	2018	95	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9045 (Countryside)
E699	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E6100	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6101	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6102	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6103	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E6104	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E6105	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E6106	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E6107	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E6108	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E6109	8	PVC	yes	100	2001	78	good redundancy	1	1	1	3	
E6110	8	PVC	yes	100	2003	80	main feeder or loop	1	2	1	4	
E6111	8	PVC	yes	100	2005	82	good redundancy	1	1	1	3	
E6112	8	PVC	yes	100	2002	79	good redundancy	1	1	1	3	
E6113	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E6114	8	PVC	yes	100	2003	80	good redundancy	1	1	1	3	
E6115	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
E6116	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
E6117	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6118	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6119	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6120	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6121	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6122	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6123	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6124	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6125	8	PVC	yes	100	2018	95	main feeder or loop	1	2	1	4	
E6126	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E6127	8	PVC	yes	100	1999	76	main feeder or loop	1	2	1	4	
E71	6	PVC	no	100	1978	55	main feeder or loop	1	2	0	3	
E72	6	PVC	no	100	1978	55	main feeder or loop	1	2	0	3	
E73	6	PVC	no	100	1994	71	good redundancy	1	1	0	2	
E74	6	PVC	no	100	1995	72	main feeder or loop	1	2	0	3	
E75	6	PVC	no	100	1978	55	main feeder or loop	1	2	0	3	
E76	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
E77	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
E78	6	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
E79	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
E710	8	PVC	no	100	2016	93	main feeder or loop	1	2	0	3	
E711	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
E712	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
E713	8	PVC	no	100	2019	96	good redundancy	1	1	0	2	
E714	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	**Risk Rating**	Notes
E715	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E716	6	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E717	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E718	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E719	6	PVC	no	100	1978	55	main feeder or loop	1	2	0	**3**	
E720	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	**3**	
E721	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E722	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E723	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E724	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E725	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E726	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E727	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E728	8	PVC	no	100	2017	94	main feeder or loop	1	2	0	**3**	
E729	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E730	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E731	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E732	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E733	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E734	8	PVC	no	100	2000	77	good redundancy	1	1	0	**2**	
E735	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E736	6	PVC	no	100	1995	72	main feeder or loop	1	2	0	**3**	
E737	8	PVC	no	100	2018	95	good redundancy	1	1	0	**2**	
E738	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	**3**	
E739	8	PVC	no	100	2019	96	Poor redundancy	1	3	0	**4**	
E740	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E741	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E742	8	PVC	no	100	2000	77	good redundancy	1	1	0	**2**	
E743	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E744	8	PVC	no	100	1985	62	main feeder or loop	1	2	0	**3**	
E745	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	**3**	
E746	8	PVC	no	100	2017	94	main feeder or loop	1	2	0	**3**	
E747	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E748	8	PVC	no	100	2018	95	good redundancy	1	1	0	**2**	
E749	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E750	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E751	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E752	6	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E753	4	PVC	no	100	2000	77	Poor redundancy	1	3	0	**4**	
E754	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E755	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E756	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E757	8	PVC	no	100	2017	94	Poor redundancy	1	3	0	**4**	
E758	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E759	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E760	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E761	8	PVC	no	100	2018	95	good redundancy	1	1	0	**2**	
E762	6	PVC	no	100	1978	55	good redundancy	1	1	0	**2**	
E763	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E764	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E765	8	PVC	no	100	2017	94	good redundancy	1	1	0	**2**	
E766	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E767	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E768	8	PVC	no	100	2018	95	good redundancy	1	1	0	**2**	
E769	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E770	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E771	8	PVC	no	100	2000	77	Poor redundancy	1	3	0	**4**	
E772	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	**3**	
E773	8	PVC	no	100	2018	95	good redundancy	1	1	0	**2**	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	**Risk Rating**	Notes
E774	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E775	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E776	8	PVC	no	100	2001	78	good redundancy	1	1	0	**2**	
E777	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E778	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E779	8	PVC	no	100	2000	77	good redundancy	1	1	0	**2**	
E780	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E781	6	PVC	no	100	1995	72	main feeder or loop	1	2	0	**3**	
E782	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E783	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E784	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E785	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E786	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E787	8	PVC	no	100	2017	94	main feeder or loop	1	2	0	**3**	
E788	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E789	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E790	8	PVC	no	100	2018	95	Poor redundancy	1	3	0	**4**	
E791	8	PVC	no	100	2017	94	Poor redundancy	1	3	0	**4**	
E792	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E793	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E794	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E795	8	PVC	no	100	2001	78	good redundancy	1	1	0	**2**	
E796	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E797	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E798	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E799	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E7100	8	PVC	no	100	2018	95	Poor redundancy	1	3	0	**4**	
E7101	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7102	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7103	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7104	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7105	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7106	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7107	8	PVC	no	100	2019	96	good redundancy	1	1	0	**2**	
E7108	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7109	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7110	8	PVC	no	100	1995	72	main feeder or loop	1	2	0	**3**	
E7111	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	**4**	
E7112	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	**3**	
E7113	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7114	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E7115	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E7116	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7117	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7118	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7119	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	**3**	
E7120	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7121	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7122	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7123	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7124	8	PVC	no	100	1995	72	main feeder or loop	1	2	0	**3**	
E7125	8	PVC	no	100	1995	72	main feeder or loop	1	2	0	**3**	
E7126	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7127	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	**3**	
E7128	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	**3**	
E7129	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	**3**	
E7130	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	**3**	
E21	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E22	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	**Risk Rating**	Notes
E23	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E24	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E25	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E26	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E27	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E28	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E29	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	**4**	
E10	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E211	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E212	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E213	8	PVC	no	100	2022	99	Poor redundancy	1	3	0	**4**	
E214	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E215	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E216	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	**4**	
E217	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E218	8	PVC	no	100	2020	97	main feeder or loop	1	3	0	**4**	
E219	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E220	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E221	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E222	8	PVC	no	100	2022	99	Poor redundancy	1	3	0	**4**	
E223	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E224	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E225	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E226	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E227	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E228	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E229	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E230	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E231	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	**4**	
E232	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	**4**	
E233	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E234	8	PVC	no	100	2022	99	good redundancy	1	1	0	**2**	
E235	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	**4**	
E236	8	PVC	no	100	2022	99	good redundancy	1	1	0	**2**	
E237	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E238	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E239	8	PVC	no	100	2020	97	main feeder or loop	1	3	0	**4**	
E240	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E241	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E242	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E243	8	PVC	no	100	2022	99	good redundancy	1	1	0	**2**	
E244	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E245	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E246	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E247	8	PVC	no	100	2022	99	good redundancy	1	1	0	**2**	
E248	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E249	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E250	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E251	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E252	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E253	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E254	8	PVC	no	100	2022	99	good redundancy	1	1	0	**2**	
E255	8	PVC	no	100	2022	99	good redundancy	1	2	0	**3**	
E256	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E257	8	PVC	no	100	2022	99	Poor redundancy	1	3	0	**4**	
E258	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	**3**	
E259	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	
E260	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	**3**	
E261	8	PVC	no	100	2020	97	good redundancy	1	1	0	**2**	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
E262	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	3	
E263	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	3	
E264	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E265	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	3	
E266	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E267	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	4	
E268	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E269	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E270	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E271	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E272	8	PVC	no	100	2020	97	Poor redundancy	1	3	0	4	
E273	8	PVC	no	100	2020	97	main feeder or loop	1	2	0	3	
E274	8	PVC	no	100	2022	99	main feeder or loop	1	2	0	3	
F81	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F82	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F83	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F84	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F85	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F86	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F84	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F88	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F89	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F810	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F811	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F812	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F813	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F814	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F815	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F816	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F817	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F818	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F819	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F820	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F821	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F822	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F823	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F824	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F825	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F826	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F827	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F828	12	AC	no	70	1978	25	Transmission Main from Master Meter and Tank	2	4	0	6	Main transmission from Town Tank
F829	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F830	12	AC	no	70	1978	25	Transmission Main from Master Meter and Tank	2	4	0	6	Main transmission from Town Tank
F831	12	AC	no	70	1978	25	Transmission Main from Master Meter and Tank	2	4	0	6	Main transmission from Town Tank to Spindle Energy
F832	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F833	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F834	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F835	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F836	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F837	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F838	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F839	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F840	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F841	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F842	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F843	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F844	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F845	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F846	8	PVC	no	100	2001	78	good redundancy	1	1	0	2	
F847	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F848	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F849	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F850	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F851	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F852	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F853	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F854	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F855	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F856	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F857	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F858	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F859	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F860	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F861	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F862	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F863	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F864	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F865	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F866	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F867	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F868	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F869	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F870	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F871	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F872	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F873	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F874	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F875	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F876	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F877	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F878	8	PVC	no	100	2001	78	good redundancy	1	1	0	2	
F879	8	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9038 (Prairieview)
F880	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F881	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F882	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F883	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F884	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F885	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F886	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F887	8	PVC	no	100	2003	80	Poor redundancy	1	3	0	4	
F888	8	PVC	no	100	2001	78	good redundancy	1	1	0	2	
F889	8	PVC	no	100	2003	80	good redundancy	1	1	0	2	
F890	8	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9038 (Prairie View)
F891	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F892	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F893	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F894	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F895	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F896	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F897	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F898	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F899	8	PVC	no	100	2003	80	Poor redundancy	1	3	0	4	
F8100	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F8101	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8102	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8103	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8104	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8105	8	PVC	no	100	2003	80	Poor redundancy	1	3	0	4	
F8106	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8107	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8108	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8109	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8110	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8111	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8112	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8113	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8114	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8115	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8116	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8117	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8118	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8119	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8120	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8121	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8122	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8123	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8124	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8125	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8126	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8127	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8128	8	PVC	no	100	2003	80	Poor redundancy	1	3	0	4	
F8129	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8130	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8131	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8132	12	PVC	no	100	1978	55	Transmission Main from Master Meter or Tank	1	4	0	5	
F8133	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8134	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8135	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8136	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8137	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8138	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8139	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8140	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8141	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8142	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8143	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F8144	8	PVC	no	100	2001	78	Poor redundancy	1	3	0	4	
F8145	8	PVC	no	100	2003	80	main feeder or loop	1	2	0	3	
F8146	8	PVC	yes	100	2001	78	Poor redundancy	1	3	1	5	
F91	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F92	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F93	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F94	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F95	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F96	12	PVC	NO	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F71	8	PVC	yes	100	2001	78	Transmission Main from Master Meter or Tank	1	4	1	6	Main feed from CWCWD Master Meter # 9038 (Prarie View)
F72	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F73	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F74	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F75	12	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F76	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F77	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F78	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F79	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F710	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F711	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F712	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F713	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F714	8	PVC	no	100	1996	73	main feeder or loop	1	2	0	3	
F715	12	PVC	no	70	2006	53	Transmission Main from Master Meter or Tank	1	4	0	5	
F716	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F717	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F718	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F719	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F720	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F721	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F722	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F723	12	PVC	no	100	2006	83	Poor redundancy	1	3	0	4	
F724	4	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F725	8	PVC	yes	100	2006	83	main feeder or loop	1	2	1	4	
F726	8	PVC	no	100	2005	82	main feeder or loop	1	2	0	3	
F727	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F728	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F729	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F730	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F731	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F732	10	PVC	no	100	Unknown	Unknown	Transmission Main from Master Meter or Tank	N/A	4	0	4	
F733	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F734	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
F735	8	PVC	no	100	2005	82	main feeder or loop	1	2	0	3	
F736	8	PVC	no	100	2012	89	main feeder or loop	1	2	0	3	
F737	8	PVC	no	100	2012	89	main feeder or loop	1	2	0	3	
F738	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F739	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F740	8	PVC	no	100	2012	89	main feeder or loop	1	2	0	3	
F741	8	PVC	no	100	1996	73	main feeder or loop	1	2	0	3	
F742	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F743	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F744	8	PVC	YES	100	2016	93	main feeder or loop	1	2	1	4	
F745	4	PVC	no	100	Unknown	Unknown	good redundancy	N/A	1	0	1	
F746	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F747	8	PVC	YES	100	2001	78	Poor redundancy	1	3	0	4	
F748	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F749	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F750	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F751	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F752	8	PVC	YES	100	2016	93	main feeder or loop	1	2	1	4	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F753	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F754	8	PVC	no	100	2012	89	main feeder or loop	1	2	0	3	
F755	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F756	6	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F757	8	PVC	YES	100	2000	77	main feeder or loop	1	2	1	4	
F758	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F759	10	PVC	no	100	Unknown	Unknown	Transmission Main from Master Meter or Tank	N/A	4	0	4	
F760	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F761	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F762	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F763	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F764	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F765	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F766	6	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F767	6	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F768	6	PVC	no	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F769	4	PVC	no	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F770	6	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F771	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F772	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F773	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F774	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F775	8	PVC	yes	100	2013	90	main feeder or loop	1	2	0	3	
F776	8	PVC	no	100	1993	70	good redundancy	1	1	0	2	
F777	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F778	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F779	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F780	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F781	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F782	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F783	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F784	8	PVC	no	100	Unknown	Unknown	good redundancy	N/A	1	0	1	
F785	8	PVC	no	100	Unknown	Unknown	good redundancy	N/A	1	0	1	
F786	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F787	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	.,.
F788	8	PVC	no	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F789	10	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F790	8	pvc	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F791	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F792	10	PVC	no	100	Unknown	Unknown	Transmission Main from Master Meter or Tank	N/A	4	0	4	
F793	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F794	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F795	6	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F796	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F797	6	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F798	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F799	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7100	10	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7101	8	PVC	yes	100	2000	77	Poor redundancy	1	3	1	5	
F7102	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7103	12	AC	no	100	Unknown	Unknown	Transmission Main from Master Meter or Tank	N/A	4	0	4	
F7104	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F7105	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7106	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7107	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F7108	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7109	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7110	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7111	8	PVC	yes	100	2013	90	Poor redundancy	1	3	1	5	
F7112	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7113	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7114	8	PVC	yes	100	2013	90	good redundancy	1	1	1	3	
F7115	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	2	
F7116	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F7117	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7118	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7119	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
F7120	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F7121	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7122	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F7123	8	PVC	no	100	2013	90	main feeder or loop	1	2	1	4	
F7124	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7125	8	PVC	yes	100	2001	78	Poor redundancy	1	3	1	5	
F7126	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7127	8	PVC	no	100	2000	77	Poor redundancy	1	3	0	4	
F7128	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F7129	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7130	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7131	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7132	8	PVC	no	100	2013	90	Poor redundancy	1	3	0	4	
F7133	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F7134	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7135	8	PVC	no	100	1996	73	main feeder or loop	1	2	0	3	
F7136	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F7137	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7138	6	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F7139	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7140	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7141	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7142	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7143	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7144	8	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F7145	8	PVC	yes	100	2005	82	Poor redundancy	1	3	0	4	
F7146	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7147	8	PVC	no	100	2000	77	main feeder or loop	1	2	1	4	
F7148	6	PVC	no	100	Unknown	Unknown	school or daycare	N/A	3	0	3	
F7149	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7150	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7151	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7152	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7153	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
F7154	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7155	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
F7156	6	PVC	no	100	1990	67	Poor redundancy	1	3	0	4	
F7157	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7158	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7159	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7160	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7161	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	

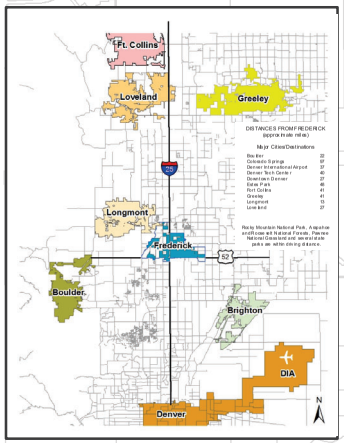
Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
F7162	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7163	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7164	8	PVC	yes	100	2016	93	main feeder or loop	1	2	1	4	
F7165	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7166	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F7167	6	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F7168	6	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F7169	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7170	12	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7171	12	AC	no	70	1978	25	Transmission Main from Master Meter or Tank	2	4	0	6	Main transmission from Town Tank
F7172	8	PVC	no	100	1993	70	Poor redundancy	1	3	0	4	
F7173	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7174	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7175	8	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7176	8	PVC	no	100	1993	70	Poor redundancy	1	3	0	4	
F7177	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7178	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7179	6	PVC	no	100	1990	67	Poor redundancy	1	3	0	4	
F7180	8	PVC	yes	100	2005	82	Poor redundancy	1	3	1	5	
F7181	6	PVC	no	100	2001	78	main feeder or loop	1	2	0	3	
F7182	6	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F7183	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7184	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7185	10	PVC	no	100	1978	55	main feeder or loop	1	2	0	3	
F7186	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7187	10	PVC	no	100	1994	71	Transmission Main from Master Meter or Tank	1	4	0	5	
F7188	8	PVC	yes	100	2005	82	main feeder or loop	1	2	1	4	
F7189	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7190	8	PVC	no	100	2006	83	Poor redundancy	1	3	0	4	
F7191	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
F7192	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7193	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7194	8	PVC	no	100	1993	70	main feeder or loop	1	2	0	3	
F7195	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7196	8	PVC	yes	100	2013	90	main feeder or loop	1	2	1	4	
F7197	8	PVC	no	100	2013	90	main feeder or loop	1	2	0	3	
F7198	8	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F7199	6	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F7200	8	PVC	no	100	1994	71	main feeder or loop	1	2	0	3	
F7201	8	PVC	no	100	1990	67	main feeder or loop	1	2	0	3	
F7202	8	PVC	yes	100	2001	78	main feeder or loop	1	2	1	4	
F7203	8	PVC	no	100	2005	82	main feeder or loop	1	2	0	3	
F7204	8	PVC	yes	100	1996	73	main feeder or loop	1	2	1	4	
F7205	8	PVC	no	100	1994	71	Poor redundancy	1	3	0	4	
F7207	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7208	8	PVC	no	100	Unknown	Unknown	main feeder or loop	N/A	2	0	2	
F7209	8	PVC	no	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F7210	8	PVC	no	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F7211	8	PVC	NO	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F7212	8	PVC	NO	100	Unknown	Unknown	Poor redundancy	N/A	3	0	3	
F7213	8	PVC	yes	100	2000	77	main feeder or loop	1	2	1	4	
F7214	8	PVC	no	100	2000	77	main feeder or loop	1	2	0	3	
C51	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
C52	8	PVC	no	100	2004	81	main feeder or loop	1	2	0	3	
C53	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C54	8	PVC	no	100	2018	95	good redundancy	1	1	0	2	
C56	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	

Pipe No.	Size (in)	Material	Pressure 95 PSI or Greater	Useful Life (yr)	Install Date	Remaining Life (yr)	Criticality Type	Condition Rating	Criticality Rating	Vulnerability Rating	Risk Rating	Notes
C57	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C58	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C59	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C510	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C511	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C512	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C513	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C514	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
C515	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C516	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C517	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C518	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C519	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C520	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C521	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C522	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C523	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C524	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C525	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C526	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C527	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C528	8	PVC	no	100	2006	83	main feeder or loop	1	2	0	3	
C529	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
C530	8	PVC	no	100	1998	75	Transmission Main from Master Meter or Tank	1	4	0	5	Main Feed from CWCWD Master Meter #9021 (TSN-Bear Ind. Park)
C531	8	PVC	no	100	2019	96	main feeder or loop	1	2	0	3	
C532	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C533	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C534	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C535	8	PVC	no	100	1998	75	main feeder or loop	1	2	0	3	
C536	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
C537	8	PVC	no	100	2018	95	main feeder or loop	1	2	0	3	
F91	12	PVC	no	100	2006	83	Transmission Main from Master Meter or Tank	1	4	0	5	
F92	12	PVC	no	100	2007	84	Transmission Main from Master Meter or Tank	1	4	0	5	
F93	12	PVC	no	100	2008	85	Transmission Main from Master Meter or Tank	1	4	0	5	
F94	12	PVC	no	100	2009	86	Transmission Main from Master Meter or Tank	1	4	0	5	

APPENDIX B

TOWN OF FREDERICK

EXISTING AND FUTURE DEVELOPMENTS



- Non-Residential
- Residential
- To be Determined
- Agricultural
- Public
- Town Boundary
- Planning Area Boundary

du = existing or anticipated residential dwelling units.

Disclaimer:

This map is general representation of the Existing and Future Developments within the Town of Frederick. The map is for general representation only and may contain information that is no longer current.

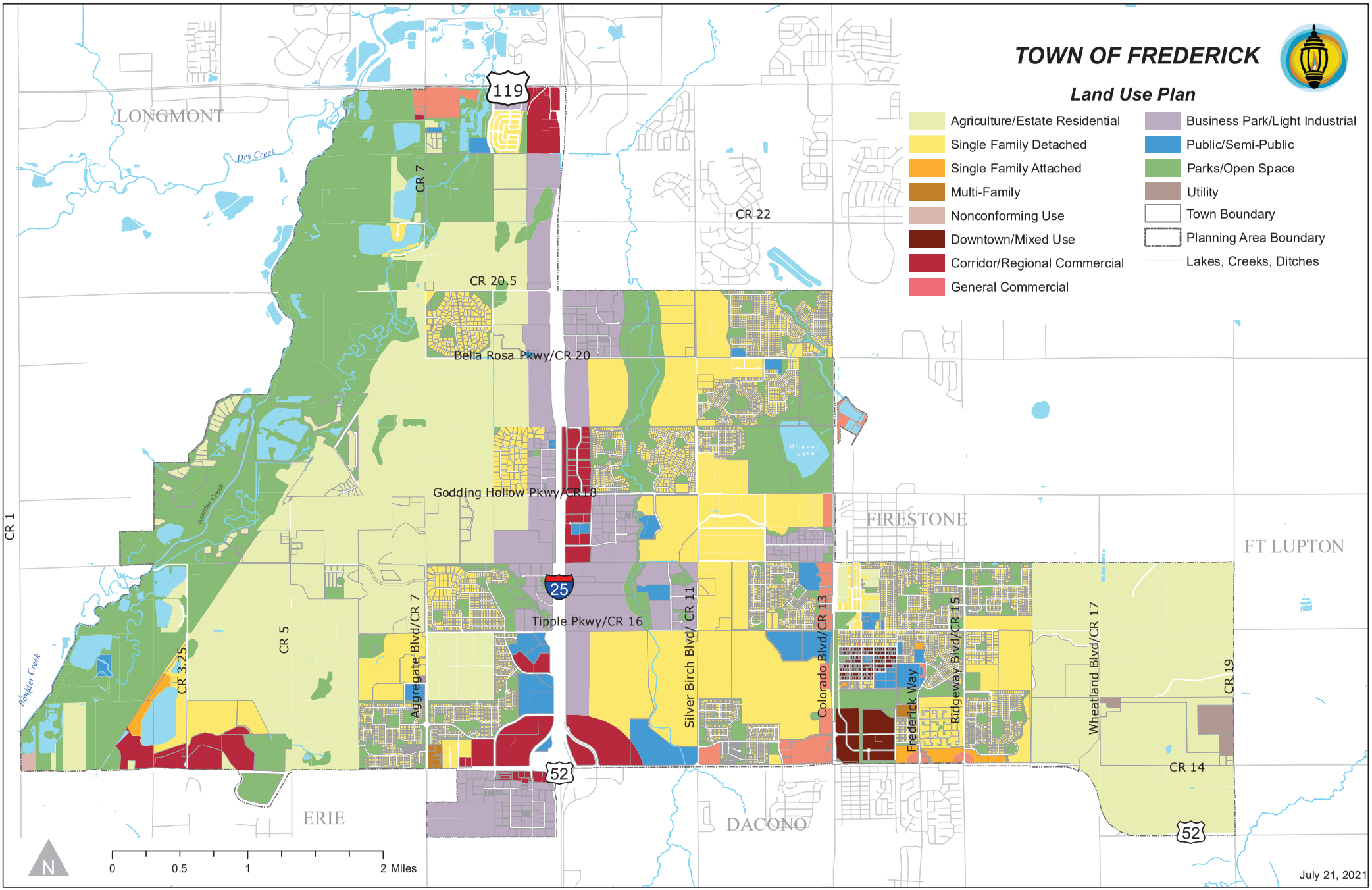
The Town of Frederick does NOT warrant the precise boundaries and shall assume no liability for any errors, omissions, or inaccuracies in the information provided regardless of cause. The Town of Frederick assumes no liability for any decisions made or actions taken or not taken in reliance upon this map or any information provided on this map.

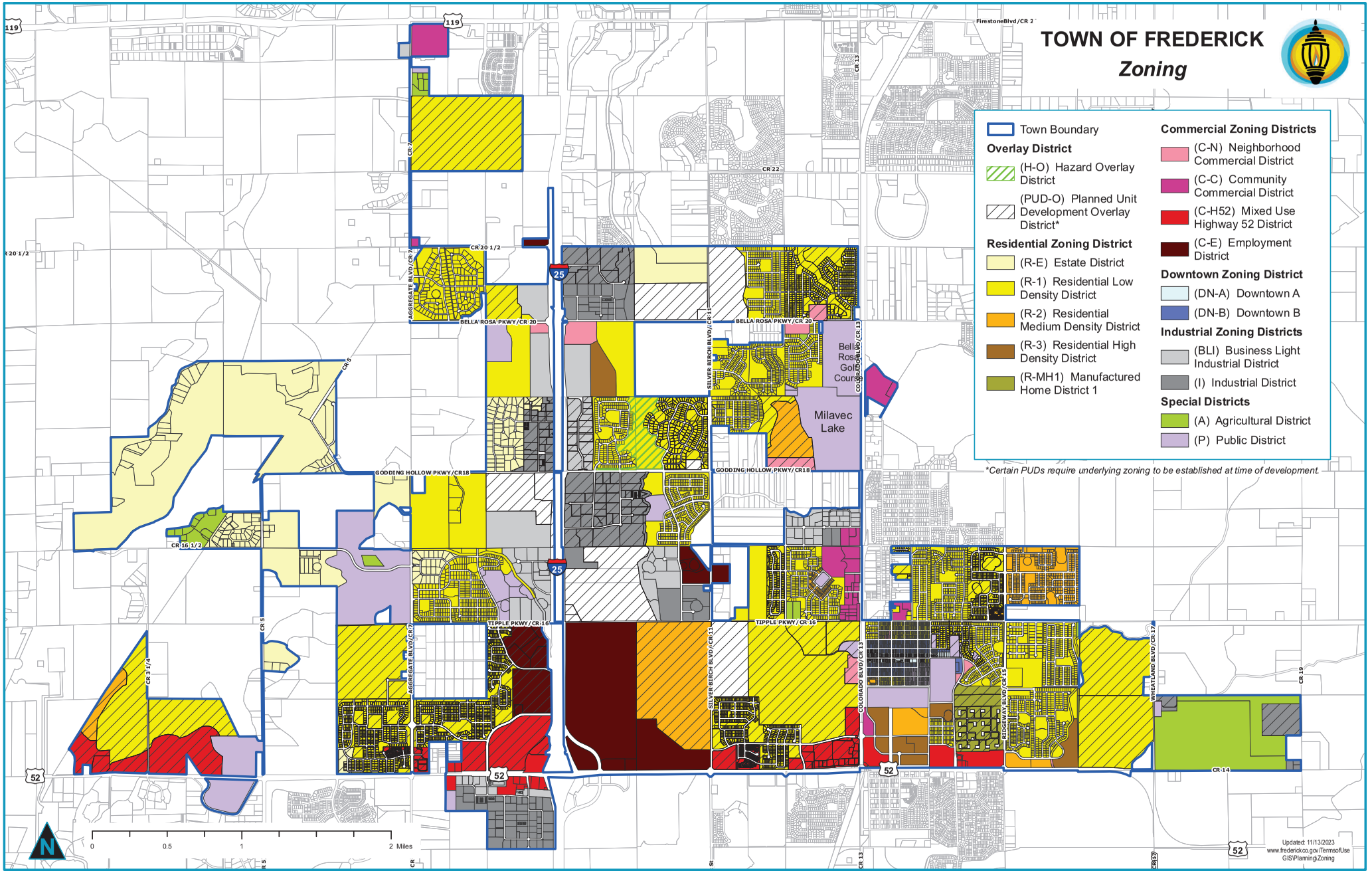
Records and additional maps are available for review at the Town of Frederick, Planning Department, 401 Locust Street, Frederick, CO 80530, telephone 720.382.5500, fax 720.382.5520 website: www.frederickco.gov

LONGMONT
ERIE
DACONO
FIRESTONE
EVANSTON
CR 22
CR 20.5
CR 7
CR 5
CR 3.25
CR 19
CR 14
119
25
52
Bella Rosa Pkwy
Godding Hollow Pkwy
Tipple Pkwy
Aggregate Blvd
Silver Birch Blvd
Colorado Blvd
Ridgeway Blvd/CR 15
Wheatland Blvd
VARRA ANNEXATION
PDK ANNEXATION
SILVER OWL LANE 5 du
LG EVERIST ANNEXATION 120 du
COAL CREEK ANNEXATION
SCHILLINGER ANNEXATION
DEL CAMINO SOUTH
RINN VALLEY RANCH 148 du
DILLON ANNEXATION 145 du
BEAR INDUSTRIAL PARK
HEPP FARM 611 du
SKYLINE RIDGE 304 du
JOHNSON FARM 240 du
NO NAME CREEK ESTATES / NO NAME WEST 376 du
CANSANO RANCH 13 du
BELLA ROSA GOLF COURSE
HALEY LAND COMPANY 270 du
HALEY LAND COMPANY 843 du
FOX RUN / MOORE FARM KELLOGG 291 du
184 du
ST VRAIN SANITATION ANNEXATION
AVOCET 12 du
NELSON LAKES 16 du
DREAMER RIDGE 11 du
MORNINGSIDE ESTATES 62 du
INDIAN PEAKS BUSINESS PARK
RASPBERRY HILL BUSINESS PARK
RASPBERRY HILL 200 du
EAGLE VALLEY 211 du
SUMMIT VIEW ESTATES 188 du
MILAVEC LAKE
FREDERICK RECREATION AREA
BALITY HARDY 292 du
VICTORY VALLEY 3 du
JESSER FARM 252 du
FREDERICK WEST BUSINESS CENTER
LEGACY ELEMENTARY
GRANT ANNEXATION 484 du
MEADOWLARK BUSINESS PARK
HAUCK PRESERVE / HAUCK FARM / HAUCK MEADOWS 40 du
FOX CHASE 22 du
COUNTRY MEADOWS 25 du
MENDOZA
WILDFLOWER 354 du
HCT ANNEXATION
EAGLE BUSINESS PARK
KICKBUSH ANNEXATION 124 du
WESTVIEW 121 du
COUNTRYSIDE 302 du
TOPS BUSINESS PARK
VILLAGE AT FREDERICK 176 du
COALRIDGE ESTATES 134 du
PARKVIEW ESTATES 158 du
CLARK RANCH 198 du
HIDDEN CREEK 375 du
MAPLE RIDGE 122 du
MAPLEWOOD 162 du
HALLECK SHREK
EVEZICH 3 du
CARRIAGE ANGEL VIEW ESTATES FILING 2 189 du
ANGEL VIEW ESTATES 63 du
DOWNTOWN FREDERICK 350 du
RECREATION CENTER
ST V RAIN SCHOOL DISTRICT
CENTENNIAL PARK
JOSEPHINE ROCHE ANNEXATION 360 du
BRUNEMEIER ANNEXATION 508 du
SPINDLE HILL
JOHNSON FARM / SPINDLE ENERGY 69 du
CARRIAGE HILLS FILING 1 80 du
PRAIRIE GREENS 1 / II 398 du
SAVANNAH 463 du
MINER'S PARK TOWN CENTRE 400 du
CARRIAGE HILLS MARKET PLACE
SORACKE ANNEXATION 20 du
NELSON ANNEXATION 1058 du
SILVERSTONE 1850 du
SHORES ON PLUM CREEK ANNEXATION 1302 du
BULRUSH WETLAND PARK
WYNDHAM HILL 1950 du
GLACIER WEST
GLACIER BUSINESS PARK

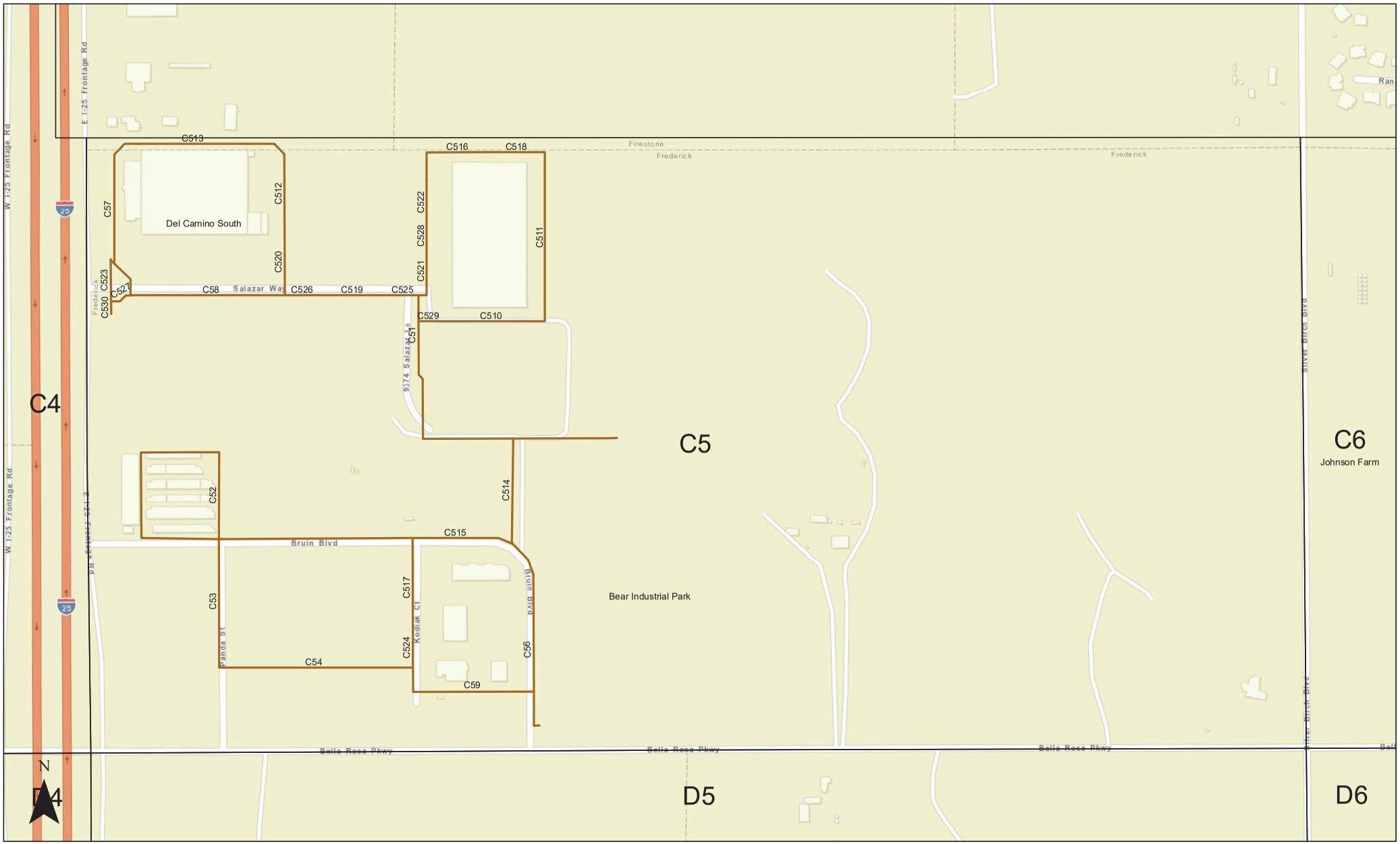
0 0.5 1 2 Miles

6/8/2021

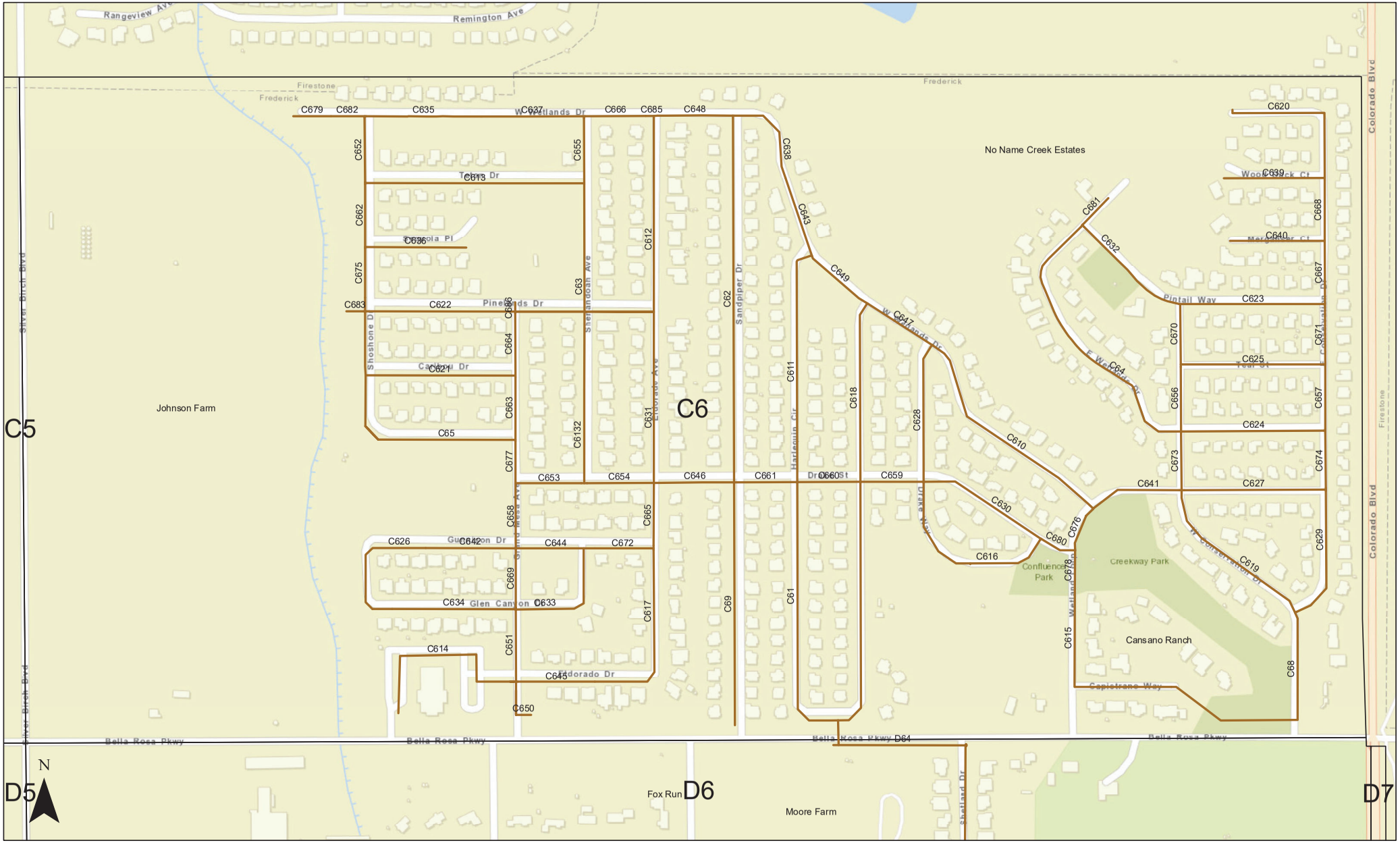

TOWN OF FREDERICK
Land Use Plan
Agriculture/Estate Residential
Single Family Detached
Single Family Attached
Multi-Family
Nonconforming Use
Downtown/Mixed Use
Corridor/Regional Commercial
General Commercial
Business Park/Light Industrial
Public/Semi-Public
Parks/Open Space
Utility
Town Boundary
Planning Area Boundary
Lakes, Creeks, Ditches
LONGMONT
Dry Creek
119
CR 7
CR 22
CR 20.5
Bella Rosa Pkwy/CR 20
Godding Hollow Pkwy/CR 18
Boulder Creek
CR 1
FIRESTONE
FT LUPTON
25
Tipple Pkwy/CR 16
Aggregate Blvd/CR 7
Silver Birch Blvd/ CR 11
Colorado Blvd/CR 13
Frederick Way
Ridgeway Blvd/CR 15
Wheatland Blvd/CR 17
CR 19
CR 14
CR 3.25
CR 5
Boulder Creek
52
ERIE
DACONO
N
0
0.5
1
2 Miles
July 21, 2021


TOWN OF FREDERICK
Zoning
Town Boundary
Overlay District
(H-O) Hazard Overlay District
(PUD-O) Planned Unit Development Overlay District*
Residential Zoning District
(R-E) Estate District
(R-1) Residential Low Density District
(R-2) Residential Medium Density District
(R-3) Residential High Density District
(R-MH1) Manufactured Home District 1
Commercial Zoning Districts
(C-N) Neighborhood Commercial District
(C-C) Community Commercial District
(C-H52) Mixed Use Highway 52 District
(C-E) Employment District
Downtown Zoning District
(DN-A) Downtown A
(DN-B) Downtown B
Industrial Zoning Districts
(BLI) Business Light Industrial District
(I) Industrial District
Special Districts
(A) Agricultural District
(P) Public District
*Certain PUDs require underlying zoning to be established at time of development.
Milavec Lake
Bella Rosa Golf Course
BELLA ROSA PKWY/CR 20
GODDING HOLLOW PKWY/CR18
TIPPLE PKWY/CR16
AGGREGATE BLVD/CR 7
SILVER BIRCH BLVD/CR 11
COLORADO BLVD/CR 13
RIDGEWAY BLVD/CR 15
WHEATLAND BLVD/CR 17
CR 22
CR 20 1/2
CR 16 1/2
CR 3 1/4
CR 5
CR 19
CR 14
25
52
119
0
0.5
1
2 Miles
Updated: 11/13/2023
www.frederickco.gov/TermsofUse
GIS\Planning\Zoning

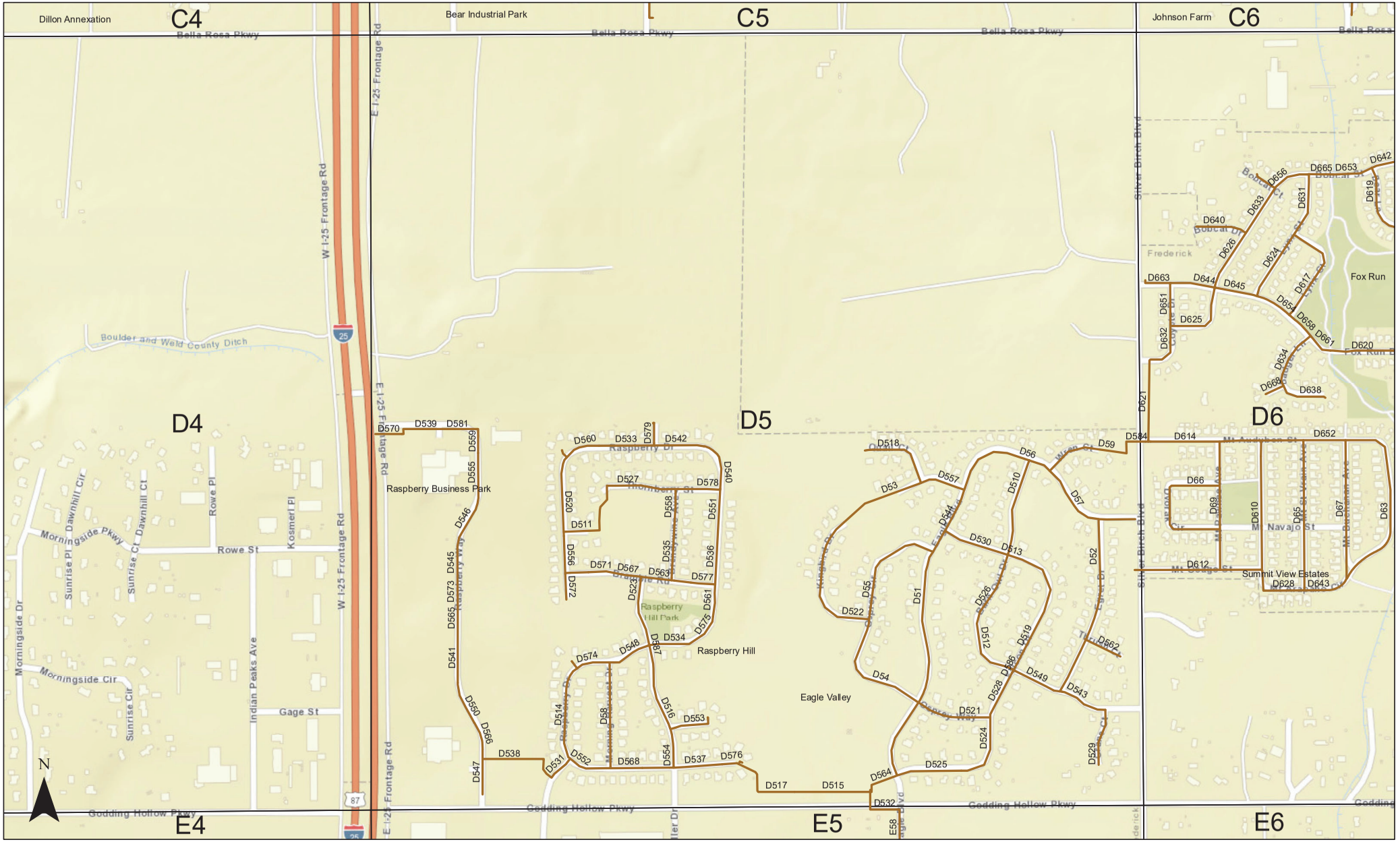
APPENDIX C



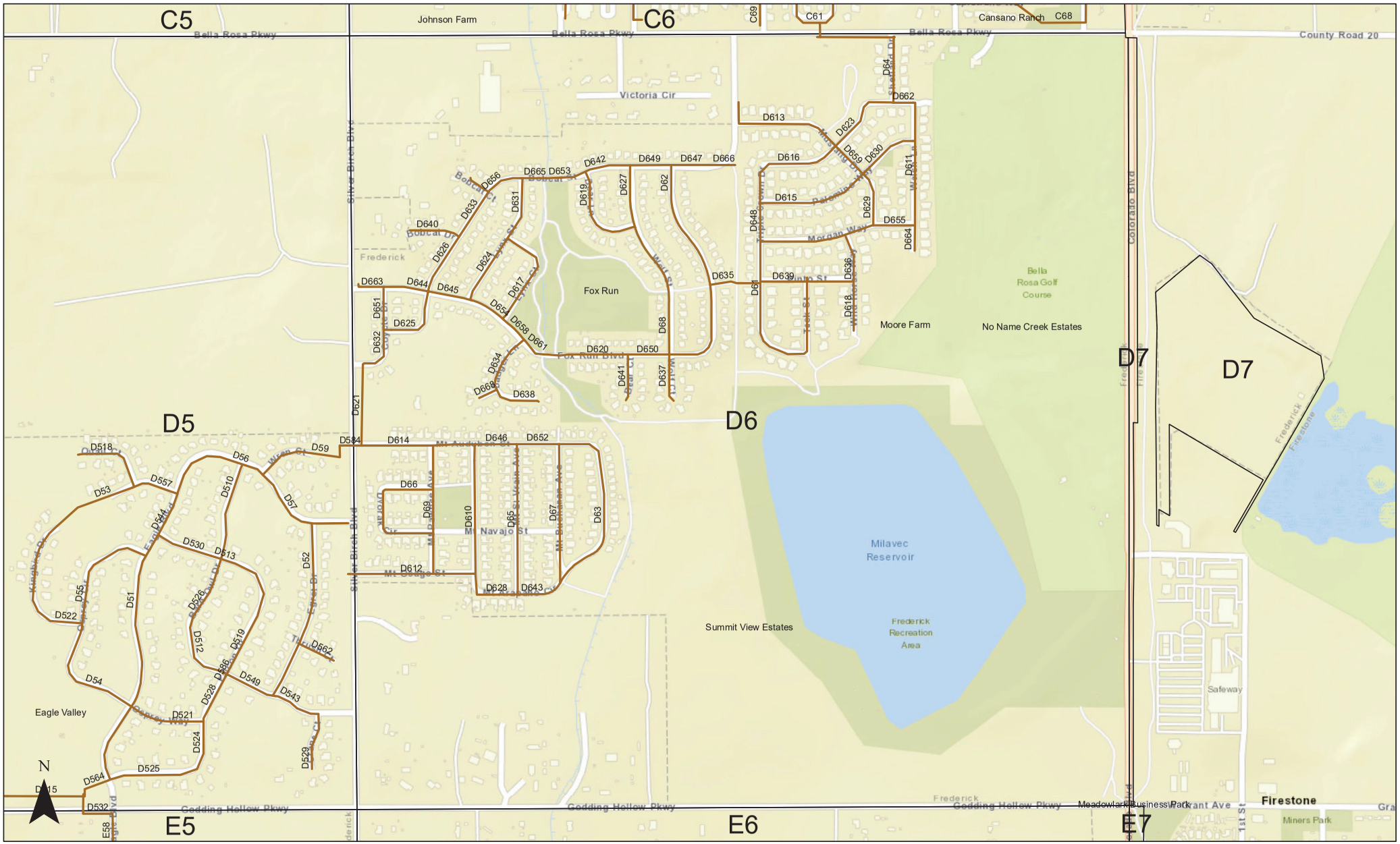
C5 PIPE SEGMENTS



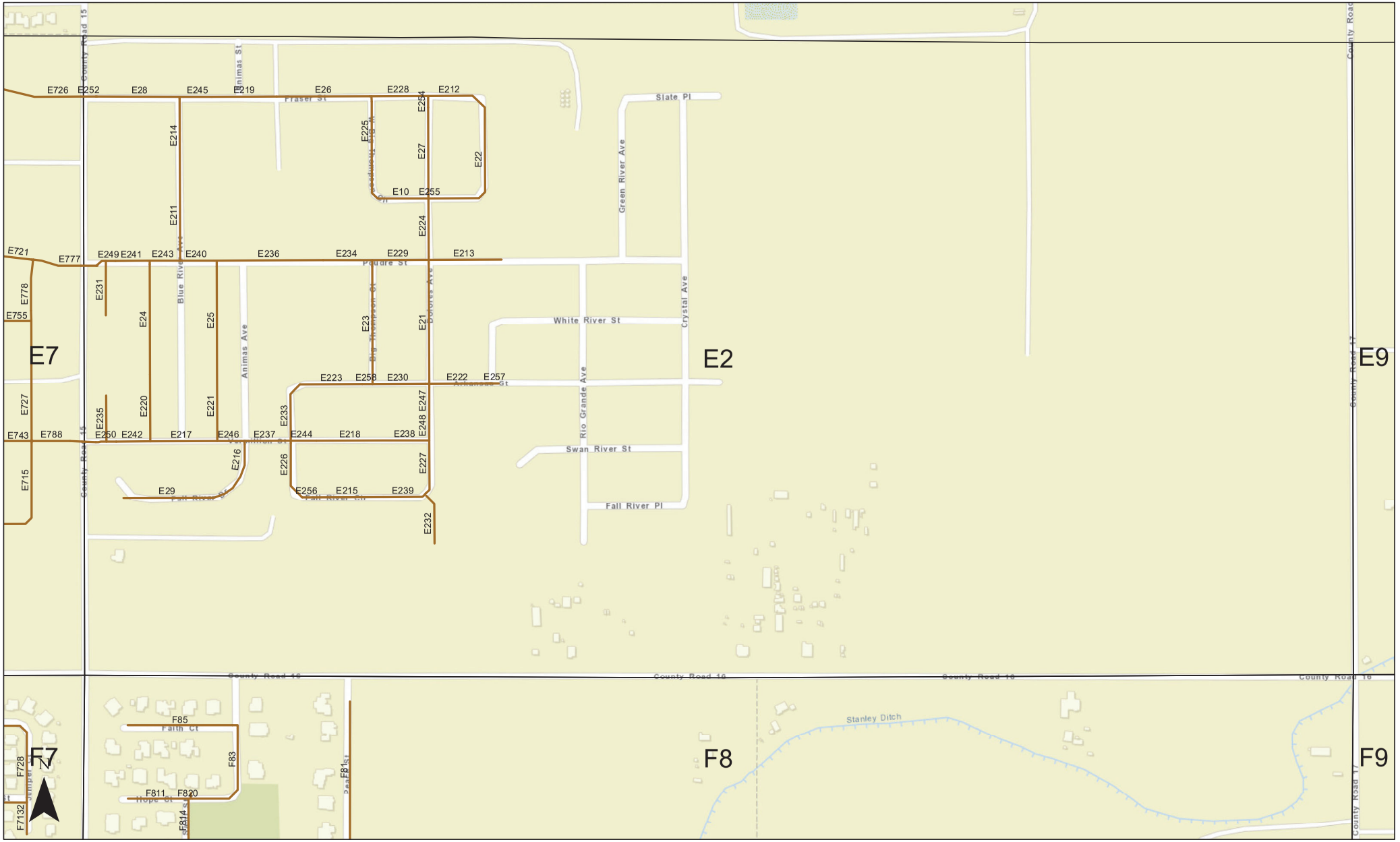
C6 PIPE SEGMENTS



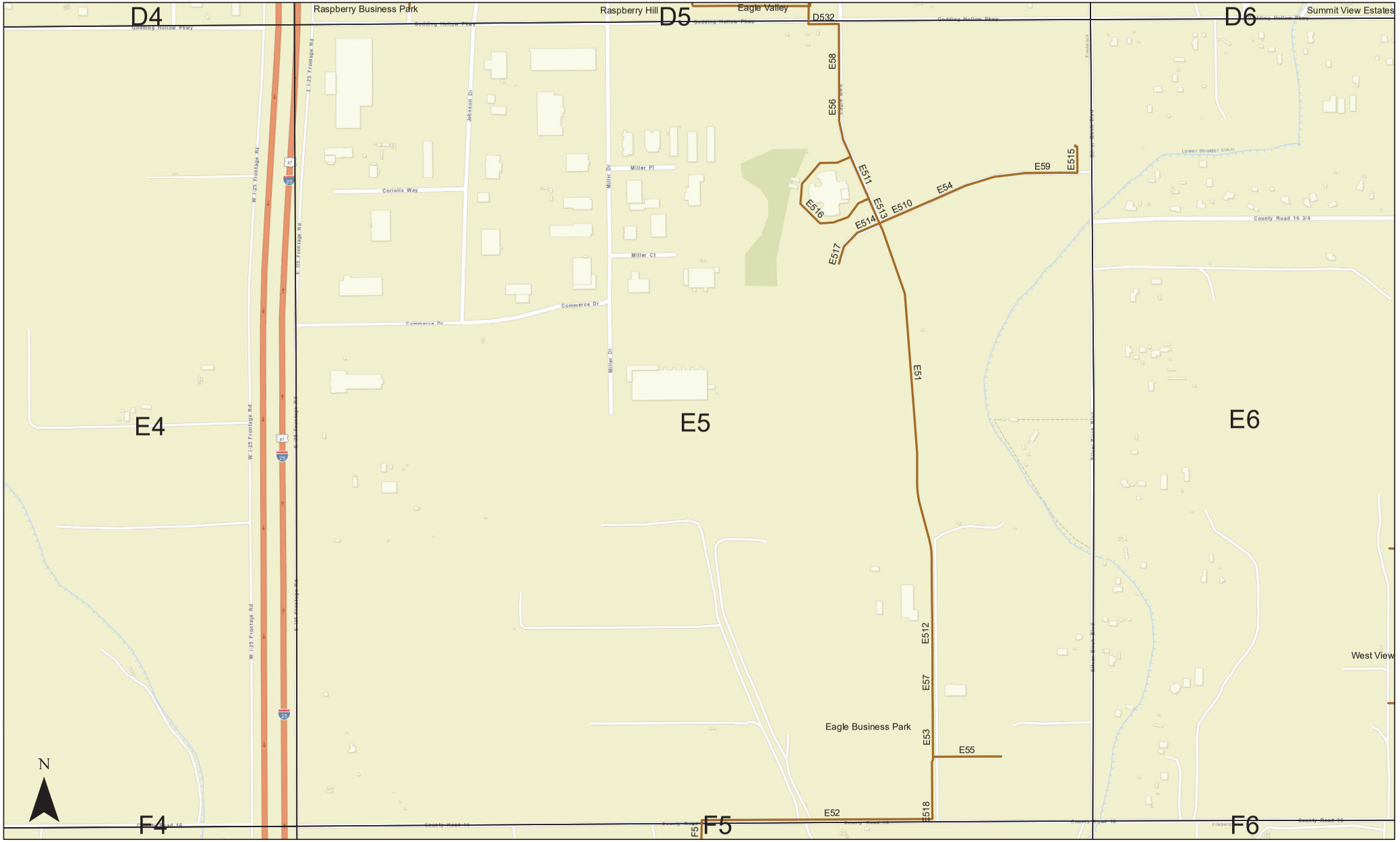
D5 PIPE SEGMENTS



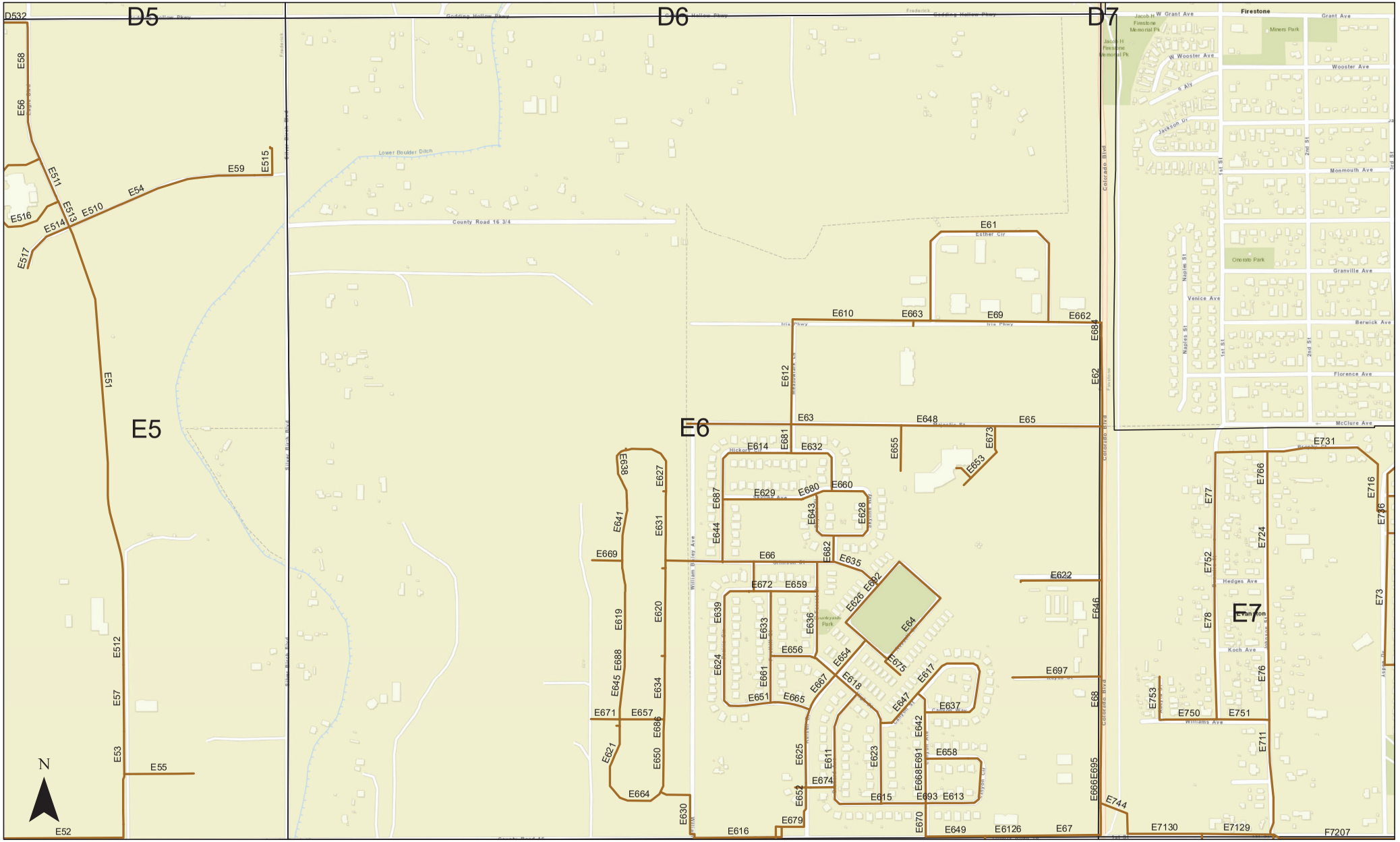
D6 PIPE SEGMENTS



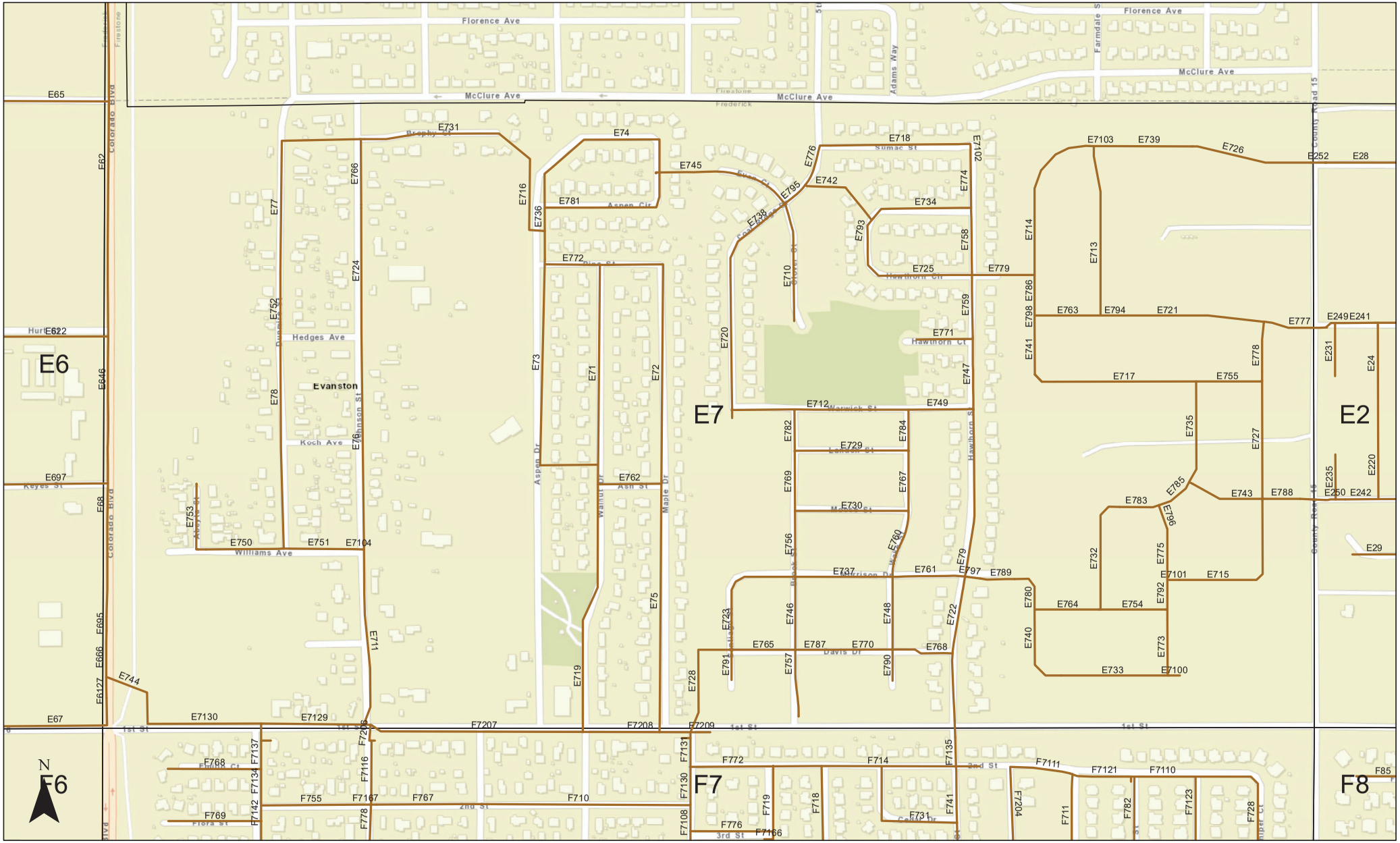
E2 PIPE SEGMENTS



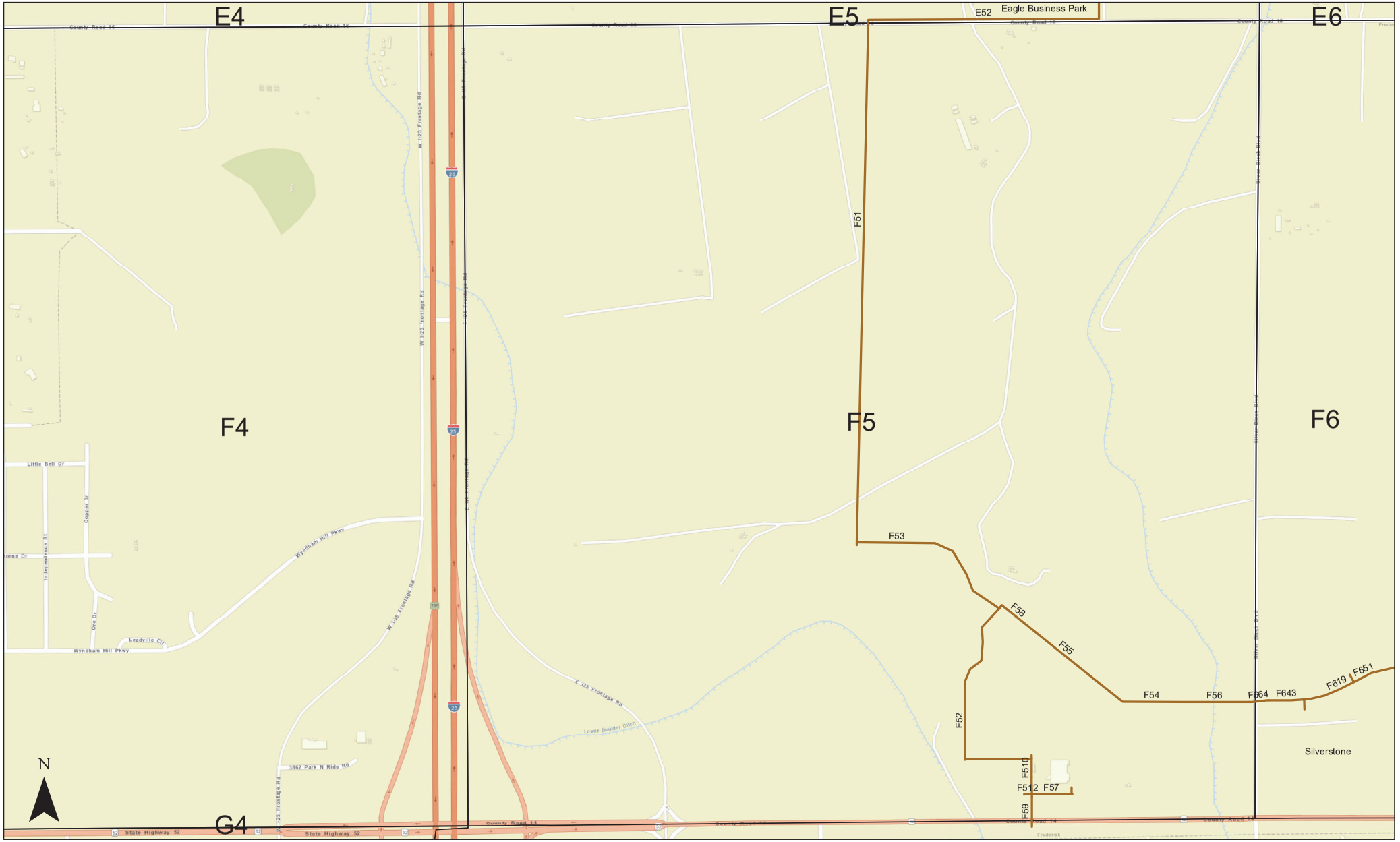
E5 PIPE SEGMENTS



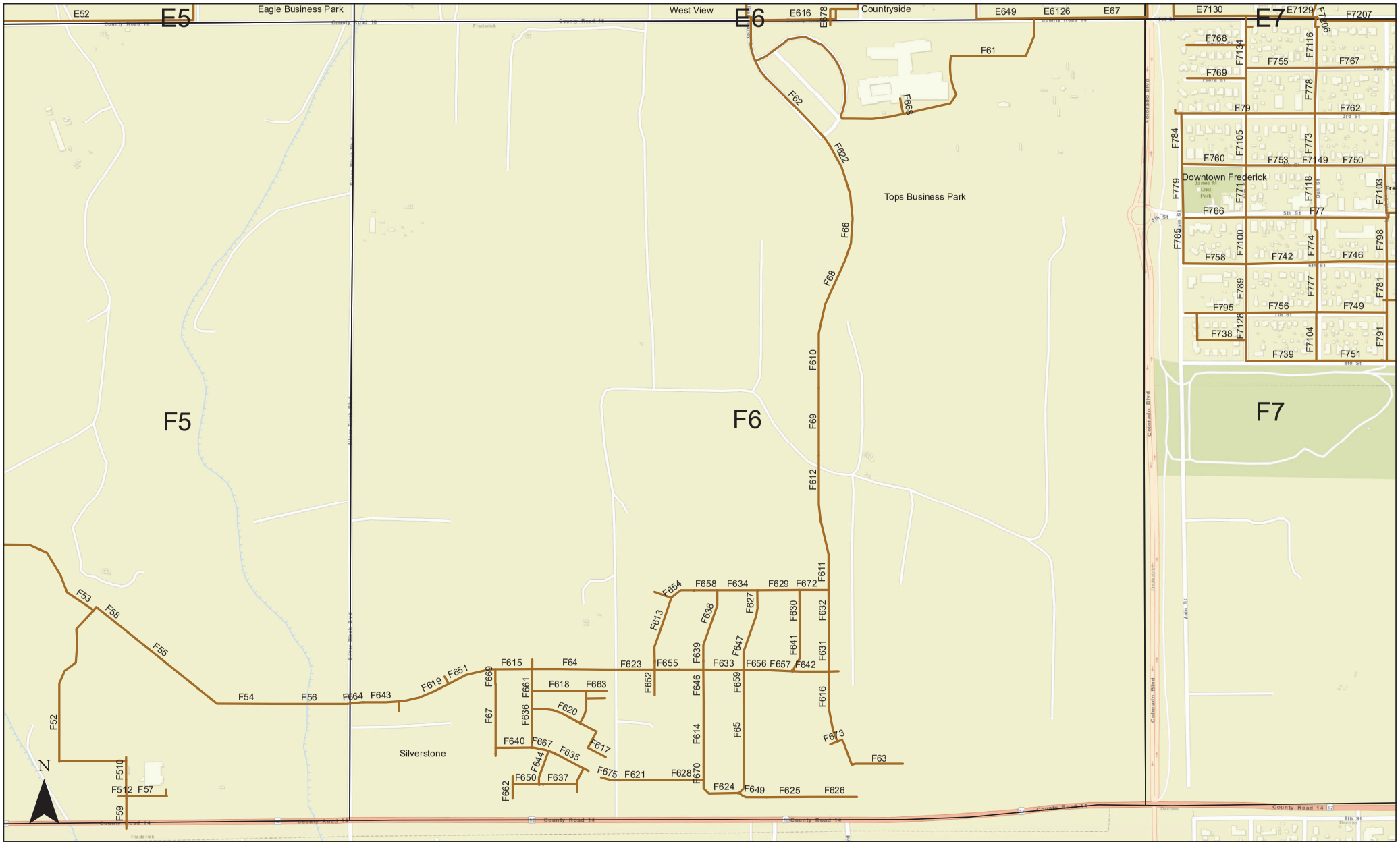
E6 PIPE SEGMENTS



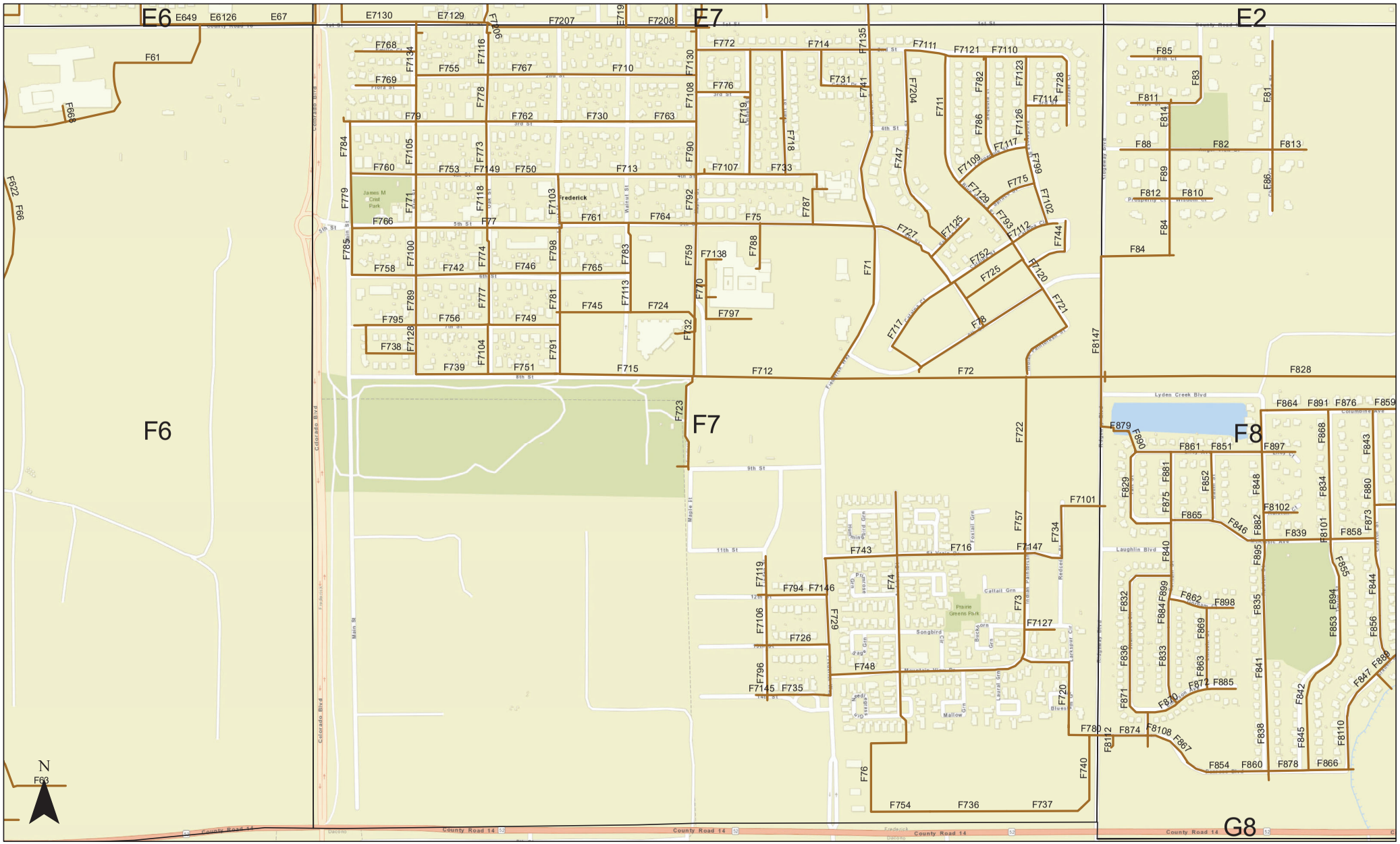
E7 PIPE SEGMENTS



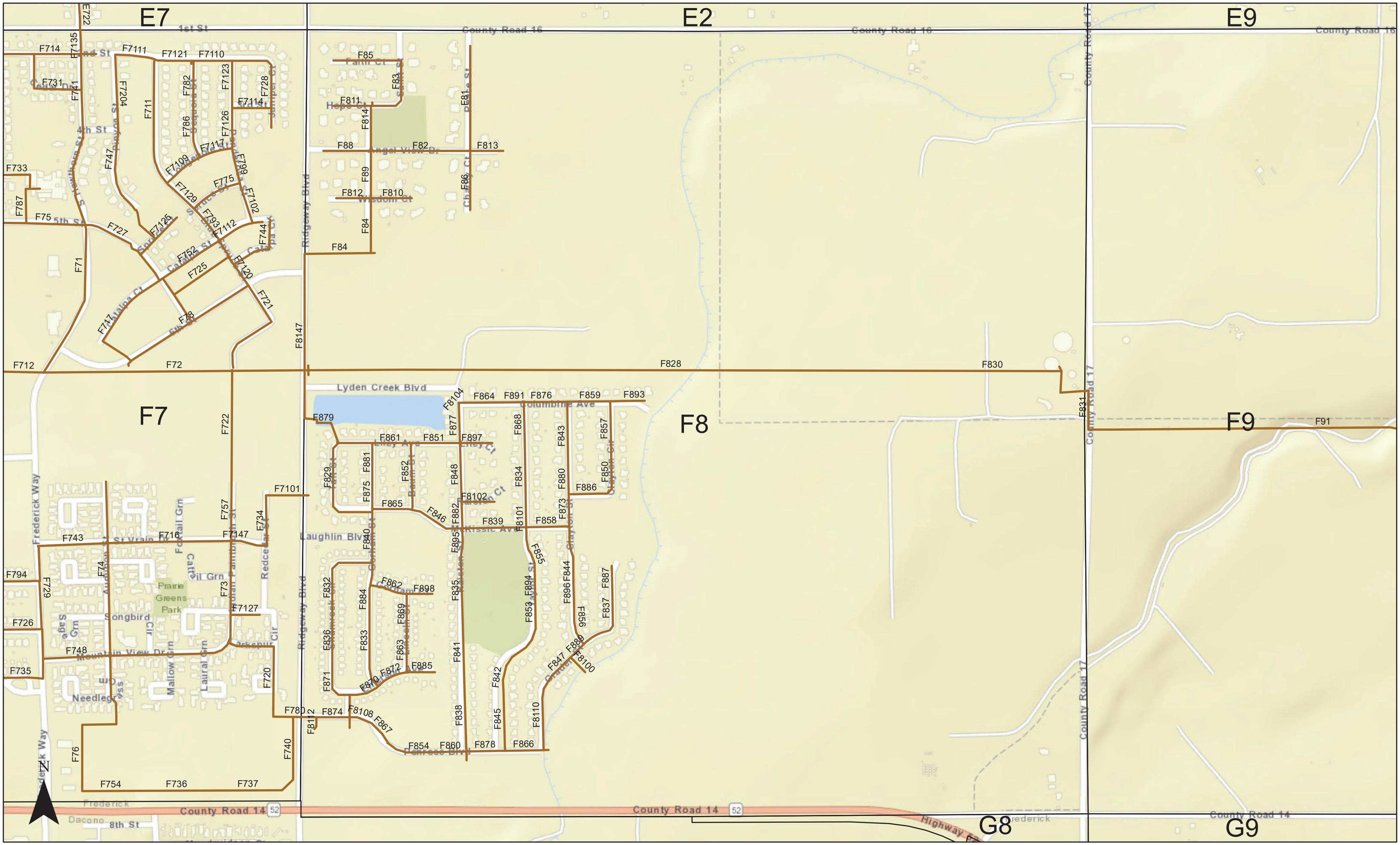
F5 PIPE SEGMENTS



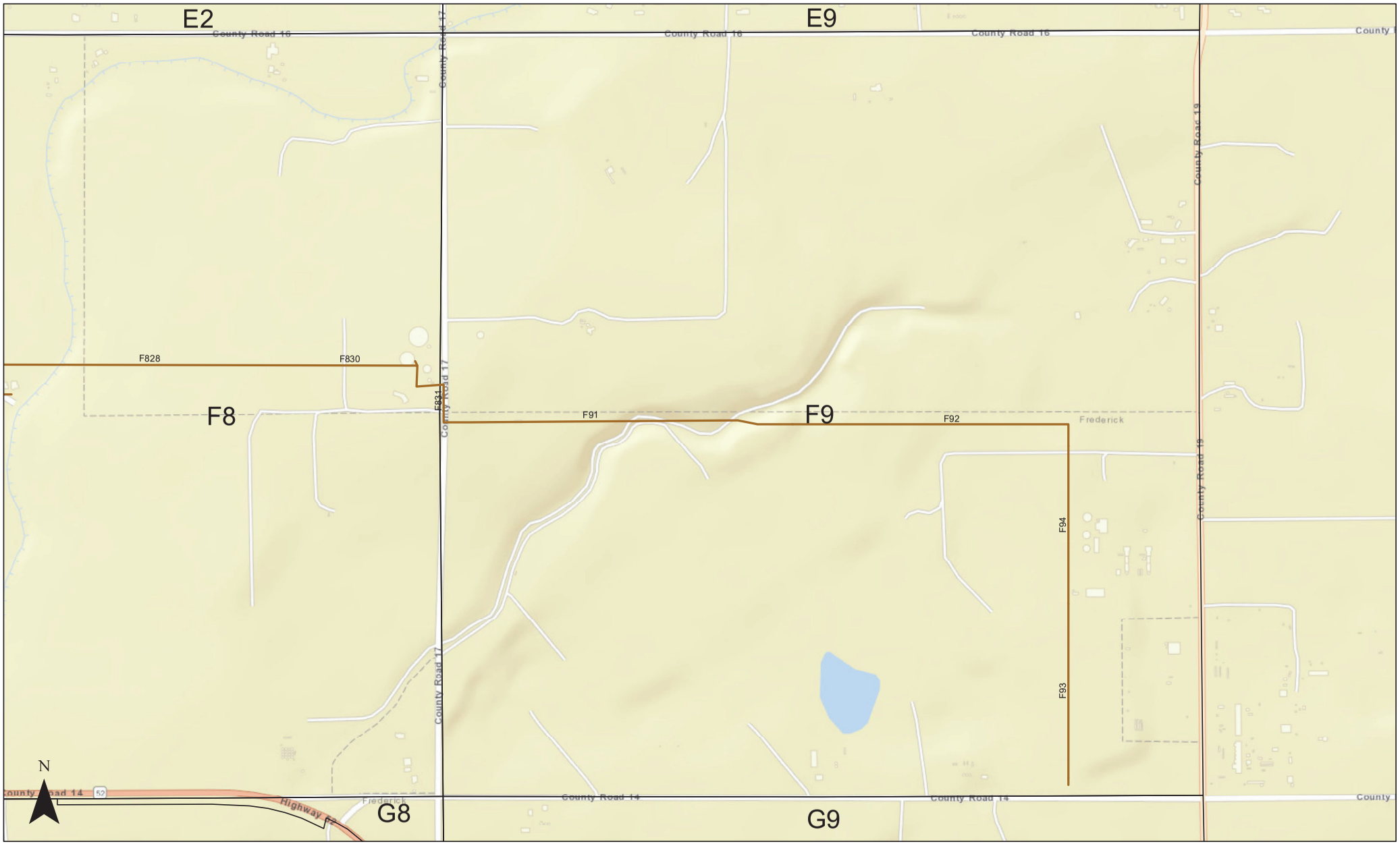
F6 PIPE SEGMENTS



F7 PIPE SEGMENTS



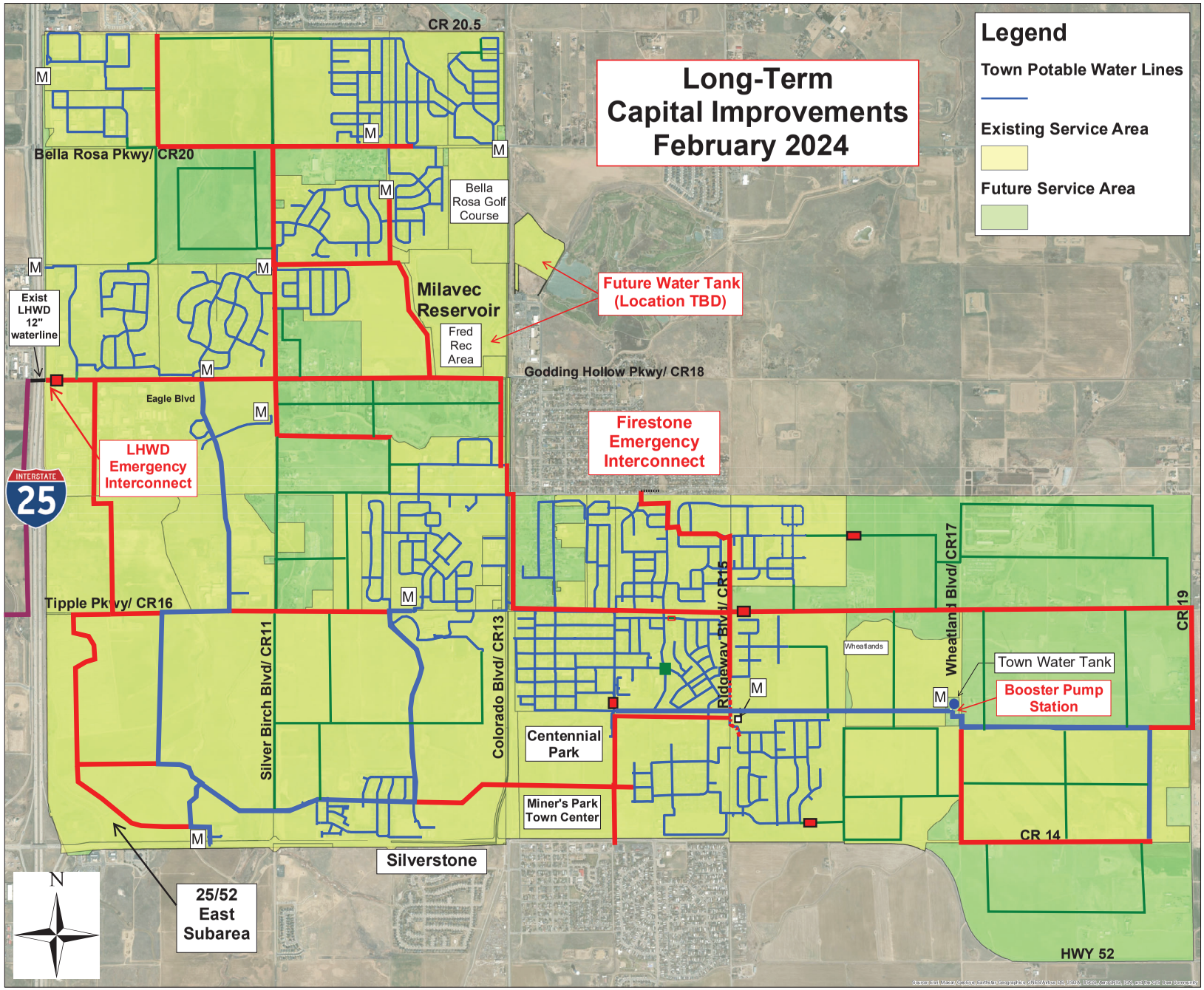
F8 PIPE SEGMENTS



F9 PIPE SEGMENTS

APPENDIX D

Potable Water Infrastructure Master Plan



Potable Water Infrastructure Legend

- Existing Waterline
- Existing 12" Waterline
- Future 12" Waterline
- Future 8" Waterline
- Future LHWD Waterline
- Existing Control Valve
- Future Control Valve
- M — Existing Master Meter

February 2024

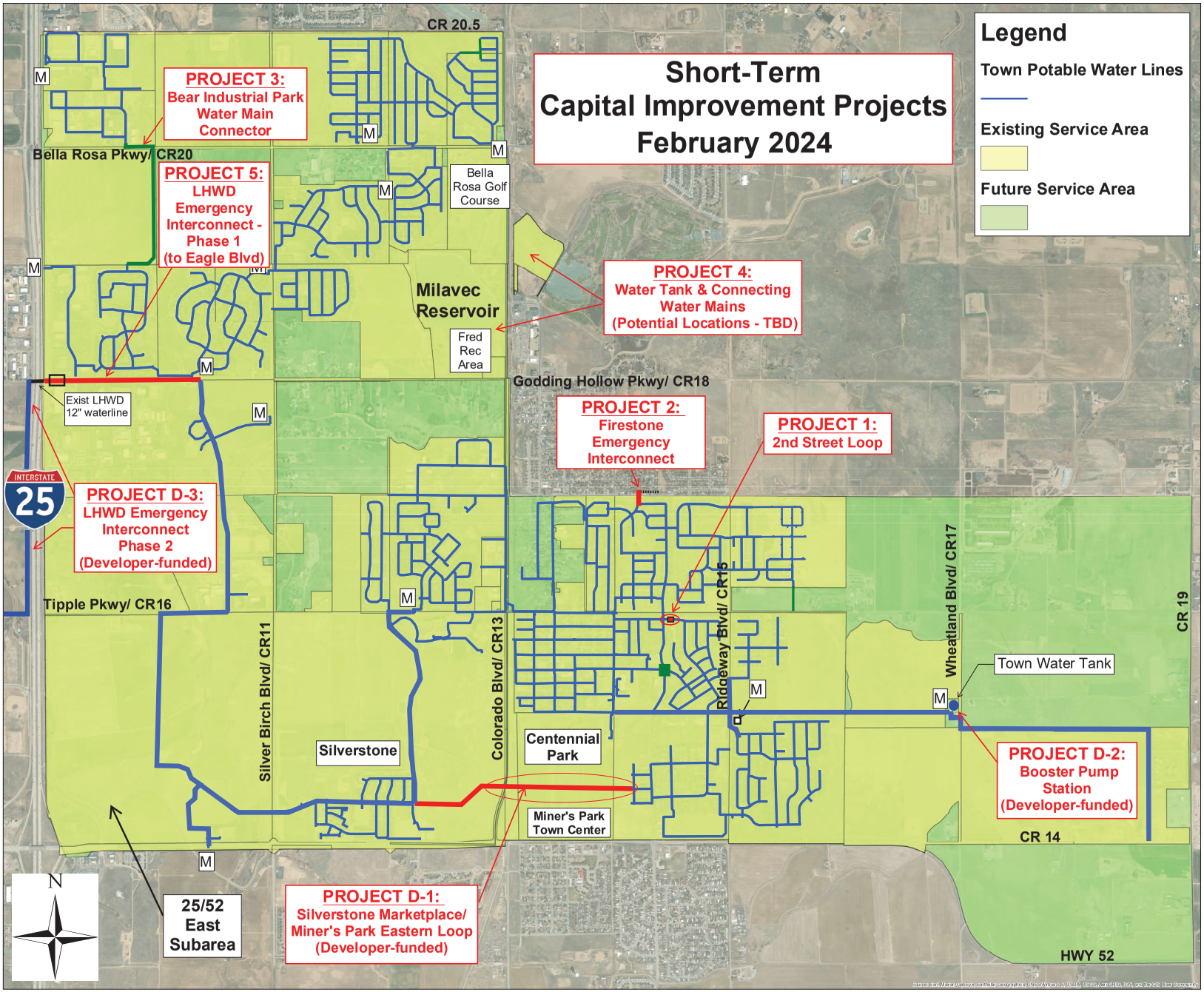
NOTE: Locations of future waterlines shown in undeveloped areas are conceptual only and will be as determined by the developers and Town staff during the development review process.

FREDERICK COLORADO
Built On What Matters

FORSGREN Associates Inc.

APPENDIX E

Potable Water Infrastructure Master Plan



FREDERICK COLORADO

Built On What Matters

Potable Water Infrastructure Legend

- Existing Waterline
- Existing 12" Waterline
- Future 12" Waterline
- Future 8" Waterline
- Future LHWD Waterline
- Existing Control Valve
- Future Control Valve
- M — Existing Master Meter

February 2024

FORSGREN Associates Inc.

APPENDIX F

Town of Frederick - Potable Water Infrastructure Master Plan

Preliminary Opinion of Probable Costs

Project No. 1 - Second Street Loop (S. Hawthorne St. - Pinyon St)

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$23,500	$23,500
2	8" Waterline	300	LF	$180	$54,000
3	8" gate valve	4	EA	$3,500	$14,000
4	Pressure control valve and vault	1	LS	$60,000	$60,000
5	Asphalt repair	400	SY	$200	$80,000
6	Connections to existing waterlines	2	EA	$4,000	$8,000
7	Erosion & sediment control	1	LS	$5,000	$5,000
8	Traffic control	1	LS	$5,000	$5,000
9	Potholing	4	EA	$800	$3,200
10	Materials testing	1	LS	$5,000	$5,000
	Sub Total				**$257,700**
	Construction Contingency (30%)			30%	$77,400
	Engineering & Permitting (25%)			25%	$64,500
	Environmental & Geotechnical			$2,000	$2,000
	Easements & ROWs			$2,000	$2,000
	Project Total				**$404,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

Town of Frederick - Potable Water Infrastructure Master Plan
Preliminary Opinion of Probable Costs
Project No. 2 - Firestone Emergency Interconnection - McClure Ave

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$96,200	$96,200
2	Interconnection vault	1	LS	$700,000	$700,000
3	12" Waterline	200	LF	$200	$40,000
4	12" gate valve	4	EA	$4,000	$16,000
5	Asphalt repair	350	SY	$200	$70,000
6	Erosion & sediment control	1	LS	$40,000	$40,000
7	Traffic control	1	LS	$60,000	$60,000
8	Potholing	20	EA	$800	$16,000
9	Materials testing	1	LS	$20,000	$20,000
	Sub Total				**$1,058,200**
	Construction Contingency (30%)			30%	$317,500
	Engineering & Permitting (25%)			25%	$264,600
	Environmental & Geotechnical			$5,000	$5,000
	Easements & ROWs			$30,000	$30,000
	Project Total				**$1,676,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

Town of Frederick - Potable Water Infrastructure Master Plan
Preliminary Opinion of Probable Costs
Project No. 3 - Bear Industrial Park Water Main Connector

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$77,200	$77,200
2	8" Waterline	3800	LF	$180	$684,000
3	8" gate valve	6	EA	$3,500	$21,000
4	Asphalt repair	100	SY	$200	$20,000
5	Connections to existing waterlines	2	EA	$4,000	$8,000
6	Erosion & sediment control	1	LS	$20,000	$20,000
7	Traffic control	1	LS	$5,000	$5,000
8	Potholing	4	EA	$800	$3,200
9	Materials testing	1	LS	$10,000	$10,000
	Sub Total				**$848,400**
	Construction Contingency (30%)			30%	$254,600
	Engineering & Permitting (25%)			25%	$212,100
	Environmental & Geotechnical			$10,000	$10,000
	Easements & ROWs			$50,000	$50,000
	Project Total				**$1,376,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

Town of Frederick - Potable Water Infrastructure Master Plan

Preliminary Opinion of Probable Costs

Project No. 4 - Water Storage Tank, Pump Station & Water Main Connectors

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$729,500	$729,500
2	3 MG prestressed concrete ground storage tank	1	LS	$3,000,000	$3,000,000
3	12" Waterline	4500	LF	$200	$900,000
4	12" gate valve	10	EA	$4,000	$40,000
5	CWCWD Master Meter and Vault	1	LS	$800,000	$800,000
6	Tank inlet and outlet piping	1	LS	$100,000	$100,000
7	Sitework	1	LS	$100,000	$100,000
8	Access Road (gravel)	1	LS	$100,000	$100,000
9	Fencing	1	LS	$100,000	$100,000
10	Landscaping	1	LS	$50,000	$50,000
11	Asphalt repair	2000	SY	$200	$400,000
12	Electrical and Controls	1	LS	$100,000	$100,000
13	Booster pump station	1	LS	$1,500,000	$1,500,000
14	Erosion & sediment control	1	LS	$50,000	$50,000
15	Revegetation	1	LS	$30,000	$30,000
16	Traffic control	1	LS	$5,000	$5,000
17	Materials testing	1	LS	$20,000	$20,000
	Sub Total				**$8,024,500**
	Construction Contingency (30%)			30%	$2,407,400
	Engineering & Permitting (25%)			25%	$2,006,200
	Environmental & Geotechnical			$50,000	$50,000
	Easements & ROWs			$80,000	$80,000
	Project Total				**$12,569,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.
5. Quantities of waterlines and associated valves and pavement repair are dependent on the location of the water tank. Quantities should be reviewed and adjusted as required after the water tank location has been identified.

Town of Frederick - Potable Water Infrastructure Master Plan

Preliminary Opinion of Probable Costs

Project No. 5 - Left Hand Water District Emergency Interconnection - Phase 1

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$214,400	$214,400
2	Interconnection vault	1	LS	$700,000	$700,000
3	12" Waterline (Godding Hollow Rd, I25 to Eagle Blvd)	3500	LF	$200	$700,000
4	Piping and valve modifications at CWCWD meter	1	LS	$50,000	$50,000
5	12" gate valve	4	EA	$4,000	$16,000
6	Asphalt repair	3000	SY	$200	$600,000
7	Erosion & sedimentation control	1	LS	$20,000	$20,000
8	Traffic control	1	LS	$30,000	$30,000
9	Potholing	10	EA	$800	$8,000
10	Materials testing	1	LS	$20,000	$20,000
	Sub Total				**$2,358,400**
	Construction Contingency (30%)			30%	$707,600
	Engineering & Permitting (25%)			25%	$589,600
	Environmental & Geotechnical			$20,000	$20,000
	Easements & ROWs			$50,000	$50,000
	Project Total				**$3,726,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

Town of Frederick - Potable Water Infrastructure Master Plan
Preliminary Opinion of Probable Costs
Project No. D-1, Silverstone Marketplace Eastern Loop (Developer-funded)

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$106,500	$106,500
2	12" Waterline	3600	LF	$200	$720,000
3	12" gate valve	8	EA	$4,000	$32,000
4	Asphalt repair	300	SY	$200	$60,000
5	Concrete repair	30	CY	$810	$24,300
6	Highway crossing (bore and jack)	100	LF	$1,700	$170,000
7	Erosion & sediment control	1	LS	$20,000	$20,000
8	Traffic control	1	LS	$10,000	$10,000
9	Potholing	10	EA	$800	$8,000
10	Materials testing	1	LS	$20,000	$20,000
	Sub Total				**$1,170,800**
	Construction Contingency (30%)			30%	$351,300
	Engineering & Permitting (25%)			25%	$292,700
	Environmental & Geotechnical			$30,000	$30,000
	Easements & ROWs			$10,000	$10,000
	Project Total				**$1,855,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

Town of Frederick - Potable Water Infrastructure Master Plan

Preliminary Opinion of Probable Costs

Project No. D-2, Booster Pump Station at Existing Storage Tank (Developer-funded)

February 2024

Item No.	Line Item Description	Quantity	Unit	Unit Price	Line Item Cost
1	Contractor mobilization & general conditions	1	LS	$166,000	$166,000
2	Booster pump station	1	LS	$1,500,000	$1,500,000
3	12" yard piping and connections	1	LS	$100,000	$100,000
4	12" gate valve	4	EA	$4,000	$16,000
5	Erosion & sediment control	1	LS	$20,000	$20,000
6	Potholing	5	EA	$800	$4,000
7	Materials testing	1	LS	$20,000	$20,000
	Sub Total				**$1,826,000**
	Construction Contingency (30%)			30%	$547,800
	Engineering & Permitting (25%)			25%	$456,500
	Environmental & Geotechnical			$20,000	$20,000
	Easements & ROWs			$10,000	$10,000
	Project Total				**$2,861,000**

Note:

1. This Preliminary Opinion of Probable Costs is Class 4 AACE for Study or Feasibility level, with accuracy range as defined by AACE.
2. Costs based on current dollars as of the date of the probable cost opinion.
3. Construction Contingency based on current project development stage.
4. The Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s) methods of determining prices or over competitive bidding or market conditions. The Engineer cannot and does not guarantee that actual costs will not vary from this Conceptual Opinion of Probable Costs.

TOWN OF FREDERICK, COLORADO
RESOLUTION NO. 24-R-12

A RESOLUTION OF THE TOWN OF FREDERICK, COLORADO, ADOPTING THE TOWN OF FREDERICK POTABLE WATER INFRASTRUCTURE MASTER PLAN

WHEREAS, the Town retained the consultant team from Forsgren Associates, Inc (Forsgren), to assist with the creation of the Potable Water Infrastructure Master Plan for the Town of Frederick; and

WHEREAS, Forsgren used a process that delivered technical expertise and involvement from staff; and

WHEREAS, the Town and Forsgren engaged in an iterative process to develop the Potable Water Infrastructure Master Plan, which sets out a list of future Capital Improvement Projects, required development funded improvements, future water infrastructure locations and recommendations and strategies for the Town to meet the demands of the community; and

WHEREAS, the Board of Trustees of the Town of Frederick, Colorado, held a public work session on January 30th, 2024, and considered the Potable Water Infrastructure Master Plan as an official document and policy of the Town of Frederick.

BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF FREDERICK, COLORADO, AS FOLLOWS:

Section 1. **Adoption of Plan.** The Board of Trustees finds adoption of the Long-Term Potable Water Infrastructure Master Plan to be in the best interest of the Town of Frederick, and hereby approves the plan, which is attached as **Exhibit A** to this Resolution.

Section 2. **Effective Date.** This resolution shall become effective immediately upon adoption.

Section 3. **Repealer.** All resolutions, or parts thereof, in conflict with this resolution are hereby repealed, provided that such repealer shall not repeal the repealer clauses of such resolution nor revive any resolution thereby.

Section 4. **Certification.** The Town Clerk shall certify to the passage of this resolution and make not less than one copy of the adopted resolution available for inspection by the public during regular business hours.

INTRODUCED, READ, PASSED AND ADOPTED THIS 27TH DAY OF FEBRUARY 2024.

ATTEST:

By: _____
Kelly Green, Deputy Town Clerk

TOWN OF FREDERICK:

By: _____
Tracie Crites, Mayor

EXHIBIT A
(Potable Water Infrastructure Master Plan)

TOWN OF FREDERICK
Board of Trustees
Action Memorandum

Tracie Crites, Mayor

Dan March, Mayor Pro Tem
Mark Lamach, Trustee
Kevin Brown, Trustee

Adam Mahan, Trustee
Windi Padia, Trustee
Chad TeVelde, Trustee

WELD COUNTY SUBRECIPIENT AGREEMENT FOR COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS

Agenda Date: Town Board Meeting – February 27, 2024

Attachments:

a. Subrecipient Agreement for Community Development Block Grant Funds between the Town of Frederick and Weld County.
b. Agreement for Community Development Block Grant Funds Between the Town of Frederick and Brigit's Village.
c. Resolution 24-R-13.
d. Resolution 24-R-14.

Finance Review: Kurtis Adams
Finance Director

Submitted by: Maxwell Daffron
Economic Development Manager

Approved for Presentation: Bryan Ostler
Town Manager

☐ Quasi-Judicial ☐ Legislative ☒ Administrative

Strategic Plan Alignment:

Fiscally Responsible Governance: The Town of Frederick plans for, identifies, leverages, and utilizes resources that reflect exemplary stewardship for those who live in Frederick and those who will seek out Frederick in the future.

Community and Economic Vitality: Frederick is a community that fosters economic recreational, cultural, and environmental vitality and builds upon and enhances a variety of economic opportunities.

Summary Statement:

To apply to be awarded Weld County Community Development Block Grant (CDBG) Program funds to the project, a Subrecipient Agreement must be executed between the Town of Frederick and Weld County. Additionally, the Town must enter into an agreement with the ultimate end user for the pass through of the CDBG Funds.

Detail of Issue/Request:

The Town of Frederick has identified an opportunity for diversity in housing within the Town. This development is a proposed 40-unit new construction apartment community in the Town of Frederick that seeks to build a community that will serve families and seniors earning between 30% and 70% of the Area Median Income (AMI).

Costs of water in the Town of Frederick and surrounding communities presented financial obstacles to the project. To assist with the potentially significant funding gap, the Town of Frederick has applied for and been granted funds from the United States Government under Title I of the Housing and Community Development Act of 1974, as amended (HCD Act), Public Law 93-383, along with the needed Colorado Housing and Finance Authority credits to make the project viable. In an effort to help these projects secure CDBG and Colorado Housing and Financing Authority (CHFA) funding, the Board of Trustees voted on January 26, 2021, to reduce building fees for the project by an amount not to exceed $535,000.

This item is a request for the Board of Trustees to authorize the Mayor to execute the attached Subrecipient Agreement for Community Development Block Grant Funds as well as the agreement between the Town and Brigit's Village. As required by HUD, Town Staff will serve as the project managers for the CDBG Funding. The CDBG funding will be utilized as a pass-through payment from Weld County to the Town, and then from the Town to the developer for the payment of water fees. The project will be required to meet several milestones to receive the full payment of CDBG funds. Those milestones are listed below.

Activity	**Milestones**	**Date**
Activity #1	Building Permit Issued	June 2024
Activity #2	Certificate of Occupancy Issued	September 2025
	Lease-up of 50% of all units	December 2025

Alternatives/Options:

The Town Board may decide to delay execution of the Subrecipient Agreement or may direct Staff to negotiate additional terms. This alternative is not preferred, as Town Staff has already spent significant time in negotiations with the developer on this project and additional delays may cause this to fall outside the CDBG allocation period with Weld County.

The Town Board may decide not to approve the Subrecipient Agreement, choosing to forgo the awarded funds. This alternative is not preferred as it may make it more difficult for the Town to participate in CDBG funding again in the future.

Financial Considerations:

The agreement(s) will be the basis by which the Town operates and pays the developer for milestones reached and completed. An internal control review will occur with all costs submitted for reimbursement, not to exceed the total CDBG grant award and subsequent contracted dollars.

Staff Recommendation:

Staff recommends Board approval of the Subrecipient Agreement, the Agreement for Community Development Block Grant Funds, and approval of Resolutions 24-R-13 and 24-R-14 as they will allow the developer to proceed with construction of the project that has been in process for several years and meets the goals of the Town Strategic Plan.

SUBRECIPIENT AGREEMENT FOR COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS

THIS AGREEMENT entered this __ day of___, 20__ by and between the Weld County Community Development Block Program (herein called the "Grantee") and Town of Frederick (herein called the "Subrecipient").

WHEREAS, the Grantee has applied for and received funds from the United States Government under Title I of the Housing and Community Development Act of 1974, as amended ("HCD Act"), Public Law 93-383; and

WHEREAS, the Grantee wishes to engage the Subrecipient to assist the Grantee in utilizing such funds; and

WHEREAS, the Grantee and Subrecipient have an executed Cooperation Agreement.

NOW, THEREFORE, it is agreed between the parties hereto that:

I. SCOPE OF SERVICE

A. Activities

The Subrecipient will be responsible to provide the following infrastructure improvements in the form of water dedication fees, water tap installation fees, and non-potable irrigation fees for low to moderate-income persons to Benefit low and moderate-income persons. The Subrecipient will be responsible for administering the Community Development Block Grant funds in a manner satisfactory to the Grantee and consistent with any standards required as a condition of providing these funds.

Program Delivery

Activity #1 The infrastructure improvements will be in the form of PAYMENT TO THE TOWN OF FREDERICK FOR THEIR facility fees to include water dedication fees, water tap installation fees, and non-potable irrigation fees for Brigit's Village, a 40-unit new construction apartment in the Town of Frederick with income restricted rents serving low to moderate-income households.

General Administration

The Subrecipient will provide general administration and monitoring of the Grant. Subrecipient will be responsible for the execution and completion of all Town-required development standards in the construction of the project.

B. National Objectives

All activities funded with CDGB funds must meet one of the CDBG program's National Objectives: benefit low- and moderate-income persons; aid in the prevention or elimination of

slums or blight; or meet community development needs having a particular urgency, as defined in 24 CFR 570.208.

The Subrecipient certifies that the activities carried out under this Agreement will be of Benefit to low- and moderate-income persons by providing adequate infrastructure that will allow for the construction of housing for low- to moderate-income persons.

C. Levels of Accomplishment – Goals and Performance Measures

The levels of accomplishment may include such measures as units rehabbed, persons or households assisted, or meals served, and should also include time frames for performance.

The Subrecipient agrees to provide the following levels of program services: reimbursement of the costs of the facility fees for Brigit's Village Apartments; to include water dedication fees, water tap installation fees, and non-potable irrigation fees.

Activity	**Milestones**	**Date**	**Amount**
Activity #1	Building Permit Issued	June 2024	Not to exceed 90%
Activity #2	Certificate of Occupancy Issued	September 2025	100%
	Lease-up of 50% of all units	December 2025	

D. Staffing

Ryan Johnson, Assistant Town Manager, Town of Frederick, will serve as the Project Manager. Max Daffron, Economic Development Manager, Town of Frederick, will assist with project management.

Any changes in the Key Personnel assigned or their general responsibilities under this project are subject to the prior approval of the Grantee.

E. Performance Monitoring

The Grantee will monitor the performance of the Subrecipient against goals and performance standards as stated above. Substandard performance as determined by the Grantee will constitute noncompliance with this Agreement. If action to correct such substandard performance is not taken by the Subrecipient within a reasonable period of time **(30 days)** after being notified by the Grantee, contract suspension or termination procedures will be initiated.

II. TIME OF PERFORMANCE

Services of the Subrecipient shall start on the date of the Notice to Proceed and end on the 31st day of December 2025. The term of this Agreement and the provisions herein shall be extended to cover any additional time period during which the Subrecipient remains in control of CDBG funds or other CDBG assets, including program income.

III. BUDGET

Line Item	Amount:
Weld County CDBG Program	$ 275,000
Town of Frederick fee waiver	$ 535,000
Owner	$ 90,000
TOTAL Facility Fees	**$ 900,000**

Any indirect costs charged must be consistent with the conditions of Paragraph VIII(C)(2) of this Agreement. In addition, the Grantee may require a more detailed budget breakdown than the one contained herein, and the Subrecipient shall provide such supplementary budget information in a timely fashion in the form and content prescribed by the Grantee. Any amendments to the budget must be approved in writing by both the Grantee and the Subrecipient.

IV. PAYMENT

It is expressly agreed and understood that the total amount to be paid by the Grantee under this Agreement shall not exceed $275,000. Drawdowns for the payment of eligible expenses shall be made as follows: request for reimbursement of facility fees may commence after a building permit for Brigit's Village has been issued and is not to exceed 90% of the grant amount. The remaining 10% may be drawn down after issuance of a certificate of occupancy for and 51% lease-up of units at Brigit's Village Apartment against the line-item budgets specified in Paragraph III herein and in accordance with performance. Expenses for general administration shall also be paid against the line-item budgets specified in Paragraph III and in accordance with performance.

For construction activities: Draw requests can be submitted no more frequently than at the following points in the work: 25% draw request when work is 35% complete; 50% draw request when work is 60% complete; 75% draw request when work is 85% complete; to reach 90% draw when work is 100% complete; remaining 10% when all lien waivers and completion reports have been submitted as required. Lien waivers are required before the final payment and certified payrolls are required at every stage of the draw schedule, if Davis Bacon requirements are in force.

Payments may be contingent upon certification of the Subrecipient's financial management system in accordance with the standards specified in 2 CFR 200.302.

V. NOTICES

Notices required by this Agreement shall be in writing and delivered via mail (postage prepaid), commercial courier, or personal delivery, or sent by facsimile or other electronic means. Any notice delivered or sent as aforesaid shall be effective on the date of delivery or sending. All notices and other written communications under this Agreement shall be addressed to the individuals in the capacities indicated below, unless otherwise modified by subsequent written notice.

Communication and details concerning this contract shall be directed to the following contract representatives:

Grantee	**Subrecipient**
Elizaeth Relford	Tracie Crites
CDBG Manager	Mayor
1111 H Street	P.O. Box 435
Greeley, CO 80632	Frederick, CO 80530
erelford@weldgov.com	tcrites@frederickco.gov
970-673-5836	720-382-5504

VI. SPECIAL CONDITIONS

All projects, regardless of scope, require an environmental review. Reviews will be completed by the County prior to issuing a notice to proceed.

If the Subrecipient wishes to extend the time given for project completion, they will need to notify the Weld County CDBG Program in writing forty-five (45) days in advance unless due to unforeseen circumstances. Weld County CDBG staff may extend the time of performance of this subrecipient agreement up to 90 days without prior approval from the Weld County Board of County Commissioners.

Progress reports will be due quarterly April 30th, July 31st, October 31st, and January 31st for the preceding quarter. In addition, a progress report must accompany each draw request detailing the progress made/activities completed with the funds being requested for reimbursement.

VII. GENERAL CONDITIONS

Code of Federal Regulations
https://www.govinfo.gov/app/collection/cfr/

**Note: Links to the Code of Federal Regulations [CFR] may be accessed through links provided in the agreement, provided as a convenience to the Subrecipient. It is, however, the Subrecipient's responsibility to ensure the links are the most current one available*

A. General Compliance

The Subrecipient agrees to comply with the requirements of Title 24 of the Code of Federal Regulations, Part 570 (the U.S. Housing and Urban Development regulations concerning Community Development Block Grants ("CDBG")) including subpart K of these regulations, except that (1) the Subrecipient does not assume the recipient's environmental responsibilities described in 24 CFR 570.604, and (2) the Subrecipient does not assume the recipient's responsibility for initiating the review process under the provisions of 24 CFR Part 52. The Subrecipient also agrees to comply with all other applicable Federal, state, and local laws, regulations, and policies governing the funds provided under this contract. The Subrecipient further agrees to utilize funds available under this Agreement to supplement rather than supplant funds otherwise available.

B. "Independent Contractor"

Nothing contained in this Agreement is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. The Subrecipient shall at all times remain an "independent contractor" with respect to the services to be performed under this Agreement. The Grantee shall be exempt from payment of all Unemployment Compensation, FICA, retirement, life and/or medical insurance and Workers' Compensation Insurance, as the Subrecipient is an independent contractor.

C. Hold Harmless

To the extent allowed by law, the Subrecipient shall hold harmless, defend, and indemnify the Grantee from any and all claims, actions, suits, charges, and judgments whatsoever that arise out of the Subrecipient's performance or nonperformance of the services or subject matter called for in this Agreement.

D. Workers' Compensation

The Subrecipient shall provide Workers' Compensation Insurance coverage for all of its employees involved in the performance of this Agreement.

E. Insurance & Bonding

The Subrecipient shall carry sufficient insurance coverage to protect contract assets from loss due to theft, fraud and/or undue physical damage, and as a minimum shall purchase a blanket fidelity bond covering all employees in an amount equal to cash advances from the Grantee.

The Subrecipient shall comply with the bonding and insurance requirements of 2 CFR 200.

F. Grantee Recognition

The Subrecipient shall insure recognition of the role of the Grantee in providing services through this Agreement. All activities, facilities, and items utilized pursuant to this Agreement shall be prominently labeled as to funding source. In addition, the Subrecipient will include a reference to the support provided herein in all publications made possible with funds made available under this Agreement.

G. Amendments

The Grantee or Subrecipient may amend this Agreement at any time provided that such amendments make specific reference to this Agreement, and are executed in writing, signed by a duly authorized representative of each organization, and approved by the Grantee's governing body. Such amendments shall not invalidate this Agreement, nor relieve or release the Grantee or Subrecipient from its obligations under this Agreement.

The Grantee may, in its discretion, amend this Agreement to conform with Federal, state, or local governmental guidelines, policies, and available funding amounts, or for other reasons. If such amendments result in a change in the funding, the scope of services, or schedule of the activities to be undertaken as part of this Agreement, such modifications will be incorporated only by written amendment signed by both Grantee and Subrecipient.

H. Suspension or Termination

In accordance with 2 CFR 200, the Grantee may suspend or terminate this Agreement if the Subrecipient materially fails to comply with any terms of this Agreement, which include (but are not limited to) the following:

1. Failure to comply with any of the rules, regulations, or provisions referred to herein, or such statutes, regulations, executive orders, and HUD guidelines, policies, or directives, as may become applicable at any time;

2. Failure, for any reason, of the Subrecipient to fulfill in a timely and proper manner its obligations under this Agreement;

3. Ineffective or improper use of funds provided under this Agreement; or

4. Submission by the Subrecipient to the Grantee reports that are incorrect or incomplete in any material respect.

In accordance with 2 CFR 200, this Agreement may also be terminated for convenience by either the Grantee or the Subrecipient, in whole or in part, by setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if in the case of a partial termination, the Grantee determines that the remaining portion of the award will not accomplish the purpose for which the award was made, the Grantee may terminate the award in its entirety.

VIII. ADMINISTRATIVE REQUIREMENTS

A. Financial Management

1. Accounting Standards

The Subrecipient agrees to comply with 2 CFR 200 and agrees to adhere to the accounting principles and procedures required therein, utilize adequate internal controls, and maintain necessary source documentation for all costs incurred.

2. Cost Principles

The Subrecipient shall administer its program in conformance with 2 CFR Part 200 as applicable. These principles shall be applied for all costs incurred whether charged on a direct or indirect basis.

B. Documentation and Record Keeping

1. Records to be Maintained

The Subrecipient shall maintain all records required by the Federal regulations specified in 24 CFR 570.506, that are pertinent to the activities to be funded under this Agreement. Such records shall include but not be limited to:

a. Records providing a full description of each activity undertaken.
b. Records demonstrating that each activity undertaken meets one of the National Objectives of the CDBG program.
c. Records required to determine the eligibility of activities.
d. Records required to document the acquisition, improvement, use or disposition of real property acquired or improved with CDBG assistance.
e. Records documenting compliance with the fair housing and equal opportunity components of the CDBG program.
f. Financial records as required by 24 CFR 570.502 and 2 CFR 200; and
g. Other records necessary to document compliance with Subpart K of 24 CFR 570.

2. Retention

The Subrecipient shall retain all financial records, supporting documents, statistical records, and all other records pertinent to the Agreement for a period of four (4) years. The retention period begins on the date of the submission of the Grantee's annual performance and evaluation report to HUD in which the activities assisted under the Agreement are reported on for the final time. Notwithstanding the above, if there is litigation, claims, audits, negotiations, or other actions that involve any of the records cited and that have started before the expiration of the four-year period, then such records must be retained until completion of the actions and resolution of all issues, or the expiration of the four-year period, whichever occurs later.

2. Client Data

The Subrecipient shall maintain client data demonstrating client eligibility for services provided. Such data shall include, but not be limited to, client name, address, income level or other basis for determining eligibility, and description of service provided. Such information shall be made available to Grantee monitors or their designees for review upon request.

4. Disclosure

The Subrecipient understands that client information collected under this contract is private and the use or disclosure of such information, when not directly connected with the administration of the Grantee's or Subrecipient's responsibilities with respect to services provided under this contract, is prohibited unless written consent is obtained from such person receiving service and, in the case of a minor, that of a responsible parent/guardian.

5. Close-outs

The Subrecipient's obligation to the Grantee shall not end until all close-out requirements are completed. Activities during this close-out period shall include, but are not limited to: making final payments, disposing of program assets (including the return of all unused materials, equipment, unspent cash advances, program income balances, and accounts receivable to the Grantee), and determining the custodianship of records. Notwithstanding the foregoing, the terms of this Agreement shall remain in effect during any period that the Subrecipient has control over CDBG funds, including program income.

6. Audits & Inspections

All Subrecipient records with respect to any matters covered by this Agreement shall be made available to the Grantee, grantor agency, and the Comptroller General of the United States or any of their authorized representatives, at any time during normal business hours, as often as deemed necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Any deficiencies noted in audit reports must be fully cleared by the Subrecipient within 30 days after receipt by the Subrecipient. Failure of the Subrecipient to comply with the above audit requirements will constitute a violation of this contract and may result in the withholding of future payments. The Subrecipient hereby agrees to have an annual agency audit conducted in accordance with current Grantee policy concerning subrecipient audits and 2 CFR 200.

C. Reporting and Payment Procedures

1. Program Income

The Subrecipient shall report monthly all program income (as defined at 24 CFR 570.500(a)) generated by activities carried out with CDBG funds made available under this contract. The use of program income by the Subrecipient shall comply with the requirements set forth at 24 CFR 570.504. By way of further limitations, the Subrecipient may use such income during the contract period for activities permitted under this contract and shall reduce requests for additional funds by the amount of any such program income balances on hand. All unexpended program income shall be returned to the Grantee at the end of the contract period. Any interest earned on cash advances from the U.S. Treasury and from funds held in a revolving fund account is not program income and shall be remitted promptly to the Grantee.

2. Indirect Costs

No indirect costs can be charged to this project.

3. Payment Procedures

The Grantee will pay to the Subrecipient funds available under this agreement based on information submitted by the Subrecipient and Grantee policy concerning payments. Payments will be made for eligible expenses actually incurred and paid for by the Subrecipient. Requests for payment by the Subrecipient must include copies of invoices for which reimbursement is being requested, and copies of Subrecipient's check for payment of the invoices. Additionally, the Progress/Inspection Report should be submitted with activity progress noted for the period for which reimbursement is being requested. In addition, the Grantee reserves the right to liquidate funds available under this contract for costs incurred by the Grantee on behalf of the Subrecipient.

4. Progress Reports

The Subrecipient shall submit regular Progress Reports to the Grantee in the form, content, and frequency as required by the Grantee.

D. Procurement

1. Compliance

The Subrecipient shall comply with the procedures delineated at 2 CFR 200.317-327 when procuring all materials, property, and/or services (including the purchase of equipment) under this agreement. It is the Subrecipient's responsibility to be familiar with the procedures for each level of procurement and to request technical assistance. The Subrecipient shall maintain inventory records of all non-expendable personal property as defined by such policy as may be procured with funds provided herein. All program assets (unexpended program income, property, equipment, etc.) shall revert to the Grantee upon termination of this Agreement.

Subrecipient shall, to the greatest extent feasible, reach out through advertising, phone or email notice, or other means, and solicit bids from, Section 3 business concerns, women-owned businesses, and minority-owned businesses.

2. OMB Standards

Unless specified otherwise within this agreement, the Subrecipient shall procure all materials, property, or services in accordance with the requirements of 2 CFR 200.

3. Travel

The Subrecipient shall obtain written approval from the Grantee for any travel outside the metropolitan area with funds provided under this Agreement.

E. Use and Reversion of Assets

The use and disposition of real property and equipment under this Agreement shall be in compliance with the requirements of 2 CFR 200 and 24 CFR 570.502, 570.503, and 570.504, as applicable, which include but are not limited to the following:

1. The Subrecipient shall transfer to the Grantee any CDBG funds on hand and any accounts receivable attributable to the use of funds under this Agreement at the time of expiration, cancellation, or termination.

2. Real property under the Subrecipient's control that was acquired or improved, in whole or in part, with funds under this Agreement in excess of $25,000 shall be used to meet one of the CDBG National Objectives pursuant to 24 CFR 570.208 until five (5) years after expiration of this Agreement [or such longer period of time as the Grantee deems appropriate]. If the Subrecipient fails to use CDBG-assisted real property in a manner that meets a CDBG National Objective for the prescribed period of time, the Subrecipient shall pay the Grantee an amount equal to the current fair market value of the property less any portion of the value attributable to expenditures of non-CDBG funds for acquisition of, or improvement to, the property. Such payment shall constitute program income to the Grantee. The Subrecipient may retain real property acquired or improved under this Agreement after the expiration of the five-year period [or such longer period of time as the Grantee deems appropriate].

3. In all cases in which equipment acquired, in whole or in part, with funds under this Agreement is sold, the proceeds shall be program income (prorated to reflect the extent to which funds received under this Agreement were used to acquire the equipment). Equipment not needed by the Subrecipient for activities under this Agreement shall be (a) transferred to the Grantee for the CDBG program or (b) retained after compensating the Grantee [an amount equal to the current fair market value of the equipment less the percentage of non-CDBG funds used to acquire the equipment].

IX. RELOCATION, REAL PROPERTY ACQUISITION, AND ONE-FOR-ONE HOUSING REPLACEMENT

The Subrecipient agrees to comply with (a) the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended ("URA"), and implementing regulations at 49 CFR 24 and 24 CFR 570.606(b); (b) the requirements of 24 CFR 570.606(c) governing the Residential Anti-displacement and Relocation Assistance Plan under section 104(d) of the HCD Act; and (c) the requirements in 24 CFR 570.606(d) governing optional relocation policies. [The Grantee may preempt the optional policies.] The Subrecipient shall provide relocation assistance to displaced persons as defined by 24 CFR 570.606(b)(2) that are displaced as a direct result of acquisition, rehabilitation, demolition, or conversion for a CDBG-assisted project. The Subrecipient also agrees to comply with applicable Grantee ordinances, resolutions, and policies concerning the displacement of persons from their residences.

X. PERSONNEL & PARTICIPANT CONDITIONS

A. Civil Rights

1. Compliance

The Subrecipient agrees to comply with Title VI of the Civil Rights Act of 1964 as amended, Title VIII of the Civil Rights Act of 1968 as amended, Section 104(b) and Section 109 of Title I of the Housing and Community Development Act of 1974 as amended, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Executive Order 11063, and Executive Order 11246 as amended by Executive Orders 11375, 11478, 12107, and 12086.

2. Nondiscrimination

The Subrecipient agrees to comply with the non-discrimination in employment and contracting opportunities laws, regulations, and executive orders referenced in 24 CFR 570.607, as revised by Executive Order 13279. The applicable non-discrimination provisions in Section 109 of the HCDA are still applicable.

3. Land Covenants

This contract is subject to the requirements of Title VI of the Civil Rights Act of 1964 (P. L. 88-352) and 24 CFR 570.601 and 570.602. In regard to the sale, lease, or other transfer of land acquired, cleared, or improved with assistance provided under this contract, the Subrecipient shall cause or require a covenant running with the land to be inserted in the deed or lease for such transfer, prohibiting discrimination as herein defined, in the sale, lease, or rental, or in the use or occupancy of such land, or in any improvements erected or to be erected thereon, providing that the Grantee and the United States are beneficiaries of and entitled to enforce such covenants. The Subrecipient, in undertaking its obligation to carry out the program assisted hereunder, agrees to take such measures as are necessary to enforce such covenant, and will not itself so discriminate.

4. Section 504

The Subrecipient agrees to comply with all Federal regulations issued pursuant to compliance with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), which prohibits discrimination against the individuals with disabilities or handicaps in any Federally assisted program. The Grantee shall provide the Subrecipient with any guidelines necessary for compliance with that portion of the regulations in force during the term of this Agreement.

B. Affirmative Action

1. Women- and Minority-Owned Businesses (W/MBE)

The Subrecipient will use its best efforts to afford small businesses, minority business enterprises, and women's business enterprises the maximum practicable opportunity to participate in the performance of this contract. As used in this contract, the terms "small business" means a business that meets the criteria set forth in section 3(a) of

the Small Business Act, as amended (15 U.S.C. 632), and "minority and women's business enterprise" means a business at least fifty-one (51) percent owned and controlled by minority group members or women. For the purpose of this definition, "minority group members" are Afro- Americans, Spanish-speaking, Spanish surnamed or Spanish-heritage Americans, Asian-Americans, and American Indians. The Subrecipient may rely on written representations by businesses regarding their status as minority and female business enterprises in lieu of an independent investigation.

2. Access to Records

The Subrecipient shall furnish and cause each of its own subrecipients or subcontractors to furnish all information and reports required hereunder and will permit access to its books, records, and accounts by the Grantee, HUD, or its agent, or other authorized Federal officials for purposes of investigation to ascertain compliance with the rules, regulations, and provisions stated herein.

3. Notifications

The Subrecipient will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or worker's representative of the Subrecipient's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. Equal Employment Opportunity and Affirmative Action (EEO/AA) Statement

The Subrecipient will, in all solicitations or advertisements for employees placed by or on behalf of the Subrecipient, state that it is an Equal Opportunity or Affirmative Action employer.

5. Subcontract Provisions

The Subrecipient will include the provisions of Paragraphs X.A, Civil Rights, and B, Affirmative Action, in every subcontract or purchase order, specifically or by reference, so that such provisions will be binding upon each of its own subrecipients or subcontractors.

C. Employment Restrictions

1. Prohibited Activity

The Subrecipient is prohibited from using funds provided herein or personnel employed in the administration of the program for: political activities; inherently religious activities; lobbying; political patronage; and nepotism activities.

2. Labor Standards

The Subrecipient agrees to comply with the requirements of the Secretary of Labor in accordance with the Davis-Bacon Act as amended, the provisions of Contract Work Hours and Safety Standards Act (40 U.S.C. 327 *et seq.*), and all other applicable

Federal, state, and local laws and regulations pertaining to labor standards insofar as those acts apply to the performance of this Agreement. The Subrecipient agrees to comply with the Copeland Anti-Kick Back Act (18 U.S.C. 874 *et seq.*) and its implementing regulations of the U.S. Department of Labor at 29 CFR 5. The Subrecipient shall maintain documentation that demonstrates compliance with hour and wage requirements of this part. Such documentation shall be made available to the Grantee for review upon request.

The Subrecipient agrees that, except with respect to the rehabilitation or construction of residential property containing less than eight (8) units, all contractors engaged under contracts in excess of $2,000.00 for construction, renovation, or repair work financed in whole or in part with assistance provided under this contract, shall comply with Federal requirements adopted by the Grantee pertaining to such contracts and with the applicable requirements of the regulations of the Department of Labor, under 29 CFR 1, 3, 5 and 7 governing the payment of wages and ratio of apprentices and trainees to journey workers; provided that, if wage rates higher than those required under the regulations are imposed by state or local law, nothing hereunder is intended to relieve the Subrecipient of its obligation, if any, to require payment of the higher wage. The Subrecipient shall cause or require to be inserted in full, in all such contracts subject to such regulations, provisions meeting the requirements of this paragraph.

3. "Section 3" Clause

a. Compliance

Compliance with the provisions of Section 3 of the HUD Act of 1968, as amended, and as implemented by the regulations set forth in 24 CFR 75, and all applicable rules and orders issued hereunder prior to the execution of this contract, shall be a condition of the Federal financial assistance provided under this contract and binding upon the Grantee, the Subrecipient and any of the Subrecipient's subrecipients and subcontractors. Failure to fulfill these requirements shall subject the Grantee, the Subrecipient, and any of the Subrecipient's subrecipients and subcontractors, their successors, and assigns, to those sanctions specified by the Agreement through which Federal assistance is provided. The Subrecipient certifies and agrees that no contractual or other disability exists that would prevent compliance with these requirements.

The Subrecipient further agrees to comply with these "Section 3" requirements and to include the following language in all subcontracts executed under this Agreement:

> "The work to be performed under this Agreement is a project assisted under a program providing direct Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701). Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to low- and very low-income residents of the project area, and that

> contracts for work in connection with the project be awarded to business concerns that provide economic opportunities for low- and very low-income persons residing in the metropolitan area in which the project is located."

The Subrecipient further agrees to ensure that opportunities for training and employment arising in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project are given to low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to low- and very low-income persons within the service area of the project or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs; and award contracts for work undertaken in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project to business concerns that provide economic opportunities for low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to business concerns that provide economic opportunities to low- and very low-income residents within the service area or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs.

The Subrecipient certifies and agrees that no contractual or other legal incapacity exists that would prevent compliance with these requirements.

b. Notifications

The Subrecipient agrees to send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or understanding, if any, a notice advising said labor organization or worker's representative of its commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

c. Subcontracts

The Subrecipient will include this Section 3 clause in every subcontract and will take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the grantor agency. The Subrecipient will not subcontract with any entity where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 75 and will not let any subcontract unless the entity has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

D. Conduct

1. Assignability

The Subrecipient shall not assign or transfer any interest in this Agreement without the prior written consent of the Grantee thereto; provided, however, that claims for money due or to become due to the Subrecipient from the Grantee under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the Grantee.

2. Subcontracts

a. Approvals

The Subrecipient shall not enter into any subcontracts with any agency or individual in the performance of this contract without the written consent of the Grantee prior to the execution of such agreement.

b. Monitoring

The Subrecipient will monitor all subcontracted services on a regular basis to assure contract compliance. Results of monitoring efforts shall be summarized in written reports and supported with documented evidence of follow-up actions taken to correct areas of noncompliance.

c. Content

The Subrecipient shall cause all of the provisions of this contract in its entirety to be included in and made a part of any subcontract executed in the performance of this Agreement.

d. Selection Process

The Subrecipient shall undertake to ensure that all subcontracts let in the performance of this Agreement shall be awarded on a fair and open competition basis in accordance with applicable procurement requirements. Executed copies of all subcontracts shall be forwarded to the Grantee along with documentation concerning the selection process.

3. Hatch Act

The Subrecipient agrees that no funds provided, nor personnel employed under this Agreement, shall be in any way or to any extent engaged in the conduct of political activities in violation of Chapter 15 of Title V of the U.S.C.

4. Conflict of Interest

The Subrecipient agrees to abide by the provisions of 2 CFR 200.317-327 and 24 CFR 570.611, which include (but are not limited to) the following:

a. The Subrecipient shall maintain a written code or standards of conduct that shall govern the performance of its officers, employees, or agents engaged in the award and administration of contracts supported by Federal funds.

b. No employee, officer, or agent of the Subrecipient shall participate in the selection, or in the award, or administration of, a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved.

c. No covered persons who exercise or have exercised any functions or responsibilities with respect to CDBG-assisted activities, or who are in a position to participate in a decision-making process or gain inside information with regard to such activities, may obtain a financial interest in any contract, or have a financial interest in any contract, subcontract, or agreement with respect to the CDBG-assisted activity, or with respect to the proceeds from the CDBG-assisted activity, either for themselves or those with whom they have business or immediate family ties, during their tenure or for a period of one (1) year thereafter. For purposes of this paragraph, a "covered person" includes any person who is an employee, agent, consultant, officer, or elected or appointed official of the Grantee, the Subrecipient, or any designated public agency.

5. Lobbying

The Subrecipient hereby certifies that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement;

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, it will complete and submit Standard Form-

LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions; and

c. It will require that the language of paragraph (d) of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all Subrecipients shall certify and disclose accordingly:

d. Lobbying Certification

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

6. Copyright

If this contract results in any copyrightable material or inventions, the Grantee and/or grantor agency reserves the right to royalty-free, non-exclusive, and irrevocable license to reproduce, publish, or otherwise use and to authorize others to use, the work or materials for governmental purposes.

7. Religious Activities

The Subrecipient agrees that funds provided under this Agreement will not be utilized for inherently religious activities prohibited by 24 CFR 570.200(j), such as worship, religious instruction, or proselytization.

XI. ENVIRONMENTAL CONDITIONS

A. Air and Water

The Subrecipient agrees to comply with the following requirements insofar as they apply to the performance of this Agreement:

- Clean Air Act, 42 U.S.C., 7401, *et seq*.
- Federal Water Pollution Control Act, as amended, 33 U.S.C., 1251, *et seq.*, as amended, 1318 relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder;
- Environmental Protection Agency (EPA) regulations pursuant to 40 CFR 50, as amended.

B. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), the Subrecipient shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

C. Lead-Based Paint

The Subrecipient agrees that any construction or rehabilitation of residential structures with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR 570.608, and 24 CFR 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint and explain the symptoms, treatment, and precautions that should be taken when dealing with lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment, and/or abatement may be conducted.

D. Historic Preservation

The Subrecipient agrees to comply with the Historic Preservation requirements set forth in the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), and the procedures set forth in 36 CFR 800, Advisory Council on Historic Preservation Procedures for Protection of Historic Properties, insofar as they apply to the performance of this agreement.

In general, this requires concurrence from the State Historic Preservation Officer for all rehabilitation and demolition of historic properties that are fifty years old or older or that are included on a Federal, state, or local historic property list.

XII. SEVERABILITY

If any provision of this Agreement is held invalid, the remainder of the Agreement shall not be affected thereby and all other parts of this Agreement shall nevertheless be in full force and effect.

XIII. SECTION HEADINGS AND SUBHEADINGS

The section headings and subheadings contained in this Agreement are included for convenience only and shall not limit or otherwise affect the terms of this Agreement.

XIV. WAIVER

The Grantee's failure to act with respect to a breach by the Subrecipient does not waive its right to act with respect to subsequent or similar breaches. The failure of the Grantee to exercise or enforce any right or provision shall not constitute a waiver of such right or provision.

XV. ENTIRE AGREEMENT

This agreement constitutes the entire agreement between the Grantee and the Subrecipient for the use of funds received under this Agreement and it supersedes all prior or contemporaneous communications and proposals, whether electronic, oral, or written between the Grantee and the Subrecipient with respect to this Agreement.

IN WITNESS WHEREOF, County and Municipality have duly executed this Agreement, which shall become effective as of the latest date written below.

ATTEST: TOWN OF FREDERICK, COLORADO

By: _____ By: _____

Kelly Green, Deputy Town Clerk Tracie Crites, Mayor

ATTEST: BOARD OF COUNTY
COMMISSIONERS
Weld County Clerk to the Board WELD COUNTY, COLORADO

BY:_____ By:_____

Deputy Clerk to the Board Mike Freeman, Chair

AGREEMENT FOR COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS BETWEEN THE TOWN OF FREDERICK AND BRIGIT'S VILLAGE

THIS AGREEMENT entered this __ day of___, 2024 is made by and between Town of Frederick, Colorado, a Colorado statutory town, whose address is 401 Locust Street, Frederick, CO 80530 ("Town"), and Brigit's Village, a Colorado nonprofit corporation "Brigit's Village." The Town and Brigit's Village may be individually referred to as a "Party" and collectively referred to herein as "Parties."

WHEREAS, the Weld County Community Development Block Grant Program has applied for and received funds from the United States Government under Title I of the Housing and Community Development Act of 1974, as amended (HCD Act), Public Law 93-383; and

WHEREAS, the Town and Weld County Community Development Block Grant Program have executed a Subrecipient Agreement for Community Development Block Grant Funds dated _____; and

WHEREAS, the Parties wish to enter into an agreement ("Agreement") for utilization of such funds by Brigit's Village to enable the construction of St. Brigit's Apartments, a 40-unit new construction apartment in the Town of Frederick with income-restricted rents serving low- to moderate-income households.

NOW, THEREFORE, it is agreed between the Parties hereto that:

I. SCOPE OF SERVICE

A. Activities

Brigit's Village will be responsible to provide funding for the development of the Brigit's Village apartment community in Frederick, Colorado ("St. Brigit's Apartments"), as defined by the grant, to benefit to low- and moderate-income persons. Brigit's Village will be responsible for administering the Community Development Block Grant funds in a manner satisfactory to the Town and consistent with any standards required as a condition of providing these funds.

Specifically, the funds must be used for payment for facility fees including water dedication fees, water tap installation fees, and non-potable irrigation fees for St. Brigit's Apartments.

B. Program Delivery

Brigit's Village commits funds to St. Brigit's Apartments, LLLP (the "Owner"), to enable the construction of St. Brigit's Apartments, a 40-unit new construction apartment in the Town of Frederick with income-restricted rents serving low- to moderate-income households.

C. General Administration

The Town will provide general administration and monitoring of the Project, in which Brigit's Village will be responsible for compliance with all Town-required development standards in the construction of their project.

St. Brigit's Apartments, LLLP. shall oversee the administration and implementation of the grant funds provided through this Agreement to ensure compliance with the Agreement and its provisions.

All activities funded with CDGB funds must meet one of the CDBG program's National Objectives: benefit low- and moderate-income persons; aid in the prevention or elimination of slums or blight; or meet community development needs having a particular urgency, as defined in 24 CFR 570.208.

Brigit's Village certifies that the activities carried out under this Agreement will meet the Benefit to Low and Moderate-Income Persons by completing the construction of housing for low to moderate-income persons.

D. Levels of Accomplishment – Goals and Performance Measures

The levels of accomplishment may include such measures as units rehabbed, persons or households assisted, or meals served, and should also include time frames for performance.

Brigit's Village agrees assure completion of the development of the St. Brigit's Apartment project.

Milestones	Date	Amount
Building Permit Issued	June 2024	Not to exceed 90%
Certificate of Occupancy Issued	September 2025	100%
Lease-up of 50% of all units	December 2025	

E. Staffing

Ryan Johnson, Assistant Town Manager, Town of Frederick, will serve as the Project Manager for the Town. Max Daffron, Economic Development Manager, Town of Frederick, will assist with project management for the Town.

Any changes in the Key Personnel assigned or their general responsibilities under this project are subject to the prior approval of the Town.

F. Performance Monitoring

The Town will monitor the performance of Brigit's Village against goals and performance standards as stated above. Substandard performance as determined by the Town will constitute noncompliance with this Agreement. If action to correct such substandard performance is not taken by Brigit's Village within a reasonable period of time **(30 days)** after being notified by the Town, contract suspension or termination procedures will be initiated.

II. TIME OF PERFORMANCE

Services related to funds provided through this Agreement shall commence on the date of the Notice to Proceed and end on the 31 day of December 2025. The term of this Agreement and the provisions herein may be extended to cover any additional time period during which the Town and/or Brigit's Village remains in control of CDBG funds or other CDBG assets, including program income.

III. BUDGET

Line Item	Amount:
Weld County CDBG Program	$ 275,000
Town of Frederick fee waiver	$ 535,000
Owner	$ 90,000
TOTAL Facility Fees	**$ 900,000**

Any indirect costs charged must be consistent with the conditions of Paragraph VIII(C)(2) of this Agreement. In addition, the Town may require a more detailed budget breakdown than the one contained herein, and Brigit's Village shall provide such supplementary budget information in a timely fashion in the form and content prescribed by the Town. Any amendments to the budget must be approved in writing by both the Town and Brigit's Village.

IV. PAYMENT

It is expressly agreed and understood that the total amount to be paid by the Town under this Agreement shall not exceed $275,000. Drawdowns for the payment of eligible expenses shall be made as follows: request for reimbursement of facility fees may commence after a building permit for Brigit's Village has been issued and is not to exceed 90% of the grant amount. The remaining 10% may be drawn down after issuance of a certificate of occupancy for and 51% lease-up of units at Brigit's Village Apartment against the line-item budgets specified in Paragraph III herein and in accordance with performance. Expenses for general administration shall also be paid against the line-item budgets specified in Paragraph III and in accordance with performance.

Milestones	Date	Amount
Building Permit Issued	June 2024	Not to exceed 90%
Certificate of Occupancy Issued	September 2025	100%
Lease-up of 50% of all units	December 2025	

For construction activities: Draw requests can be submitted no more frequently than at the following points in the work: 25% draw request when work is 35% complete; 50% draw request when work is 60% complete; 75% draw request when work is 85% complete; to reach 90% draw when work is 100% complete; remaining 10% when all lien waivers and completion reports have been submitted as required. Lien waivers are required before the final payment and certified payrolls are required at every stage of the draw schedule, if Davis Bacon requirements are in force.

Payments may be contingent upon certification of the financial management system of Brigit's Village in accordance with the standards specified in 2 CFR 200.302.

V. NOTICES

Notices required by this Agreement shall be in writing and delivered via U.S. mail (postage prepaid), commercial courier, personal delivery, or sent by facsimile or other electronic means. Any notice delivered or sent as aforesaid shall be effective on the date of delivery or sending. All notices and other written communications under this Agreement shall be addressed to the individuals in the capacities indicated below, unless otherwise modified by subsequent written notice.

Communication and details concerning this contract shall be directed to the following contract representatives:

Town	Brigit's Village
Bryan Ostler, Town Manager P.O. Box 435 Frederick, CO 80230 bostler@frederickco.gov (720) 382-5511	c/o St. Brigit's Apartments, LLLP P.O. Box 3395 Minneapolis, MN 55403 Attn: Jon Peterson jpeterson@winthrop.com (612) 384-3126

VI. SPECIAL CONDITIONS

All projects regardless of scope require an environmental review. Reviews will be completed by the County prior to issuing a notice to proceed.

If Brigit's Village wishes to extend the time given for project completion, they must notify the Town in writing 60 days in advance, unless due to unforeseen circumstances. Pursuant to the Town's agreement with Weld County, the Town must notify the County 45 days in advance of any request for extension, and County CDBG staff may then extend the time of performance of the agreement with the Town for up to 90 days without prior approval from the Weld County Board of Commissioners. In the event of any extension by the County, the Town will extend this Agreement for the same amount of time granted by the County. If the County does not grant a requested extension, the Town will not extend this Agreement.

Progress reports will be due to the Town quarterly April 30th, July 31st, October 31st, and January 31st for the preceding quarter. In addition, a progress report must accompany each draw request detailing the progress made/activities completed with the funds being requested for reimbursement.

VII. GENERAL CONDITIONS

A. General Compliance

Brigit's Village agrees to comply with the requirements of Title 24 of the Code of Federal Regulations, Part 570 (the U.S. Housing and Urban Development regulations concerning Community Development Block Grants (CDBG)) including subpart K of these regulations. Brigit's Village also agrees to comply with all other applicable Federal, state, and local laws, regulations, and policies governing the funds provided under this contract. Brigit's Village further agrees to utilize funds available under this Agreement to supplement rather than supplant funds otherwise available.

B. "Independent Contractor"

Nothing contained in this Agreement is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. Brigit's Village shall at all times remain an "independent contractor" with respect to the services to be performed under this Agreement. The Town shall be exempt from payment of all Unemployment Compensation, FICA, retirement, life and/or medical insurance, and Workers' Compensation Insurance, as Brigit's Village is an independent contractor.

C. Hold Harmless

Brigit's Village shall hold harmless, defend, and indemnify the Town from any and all claims, actions, suits, charges, and judgments whatsoever that arise out of the performance or nonperformance of Brigit's Village with regard to the services or subject matter called for in this Agreement.

D. Workers' Compensation

Brigit's Village shall provide Workers' Compensation Insurance coverage for all of its employees involved in the performance of this Agreement.

E. Insurance & Bonding

Brigit's Village shall carry sufficient insurance coverage to protect contract assets from loss due to theft, fraud, and/or undue physical damage, and as a minimum shall purchase a blanket fidelity bond covering all employees in an amount equal to cash advances from the Town.

Brigit's Village shall comply with the bonding and insurance requirements of 2 CFR 200.

F. Town Recognition

Brigit's Village shall insure recognition of the role of the Town and the County in providing services through this Agreement. All activities, facilities, and items utilized pursuant to this Agreement shall be prominently labeled as to funding source. In addition, Brigit's Village must include a reference to the support provided herein in all publications made possible with funds made available under this Agreement.

G. Amendments

The Town or Brigit's Village may amend this Agreement at any time provided that such amendments make specific reference to this Agreement, and are executed in writing, signed by a duly authorized representative of each organization, and approved by the Town's governing body. Such amendments shall not invalidate this Agreement, nor relieve or release the Town or Brigit's Village from its obligations under this Agreement.

The Town may, in its discretion, amend this Agreement to conform with Federal, state, or local governmental guidelines, policies, and available funding amounts, or for other reasons. If such amendments result in a change in the funding, the scope of services, or schedule of the activities to be undertaken as part of this Agreement, such modifications will be incorporated only by written amendment signed by both the Town and Brigit's Village.

H. Suspension or Termination

In accordance with 2 CFR 200, the Town may suspend or terminate this Agreement if Brigit's Village materially fails to comply with any terms of this Agreement, which include (but are not limited to) the following:

1. Failure to comply with any of the rules, regulations, or provisions referred to herein, or such statutes, regulations, executive orders, and HUD guidelines, policies, or directives as may become applicable at any time.

2. Failure, for any reason, of Brigit's Village to fulfill in a timely and proper manner its obligations under this Agreement.

3. Ineffective or improper use of funds provided under this Agreement; or

4. Submission by Brigit's Village to the Town reports that are incorrect or incomplete in any material respect.

In accordance with 2 CFR 200, this Agreement may also be terminated for convenience by either the Town or Brigit's Village, in whole or in part, by setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if in the case of a partial termination, the Town determines that the remaining portion of the award will not accomplish the purpose for which the award was made, the Town may terminate the award in its entirety.

VIII. ADMINISTRATIVE REQUIREMENTS

A. Financial Management

1. Accounting Standards

Brigit's Village agrees to comply with 2 CFR 200 and agrees to adhere to the accounting principles and procedures required therein, utilize adequate internal controls, and maintain necessary source documentation for all costs incurred.

2. Cost Principles

Brigit's Village shall administer its program in conformance with 2 CFR Part 200 as applicable. These principles shall be applied for all costs incurred whether charged on a direct or indirect basis.

B. Documentation and Record Keeping

1. Records to be Maintained.

Brigit's Village shall maintain all records required by the Federal regulations specified in 24 CFR 570.506 that are pertinent to the activities to be funded under this Agreement. Such records shall include but not be limited to:

a. Records providing a full description of each activity undertaken.
b. Records demonstrating that each activity undertaken meets one of the National Objectives of the CDBG program.
c. Records required to determine the eligibility of activities.
d. Records required to document the acquisition, improvement, use, or disposition of real property acquired or improved with CDBG assistance.
e. Records documenting compliance with the fair housing and equal opportunity components of the CDBG program.
f. Financial records as required by 24 CFR 570.502 and 2 CFR.200; and
g. Other records necessary to document compliance with Subpart K of 24 CFR 570.

2. Retention

Brigit's Village shall retain all financial records, supporting documents, statistical records, and all other records pertinent to the Agreement for a period of four (4) years. The retention period begins on the date of the submission of the Town's annual performance and evaluation report to HUD in which the activities assisted under the Agreement are reported on for the final time. Notwithstanding the above, if there is litigation, claims, audits, negotiations, or other actions that involve any of the records cited and that have started before the expiration of the four-year period, then such records must be retained until completion of the actions and resolution of all issues, or the expiration of the four-year period, whichever occurs later.

3. Client Data

Brigit's Village shall maintain client data demonstrating client eligibility for services provided. Such data shall include, but not be limited to, client name, address, income level or other basis for determining eligibility, and description of service provided. Such information shall be made available to Town monitors or their designees for review upon request.

4. Disclosure

Brigit's Village understands that client information collected under this contract is private and the use or disclosure of such information, when not directly connected with the administration of responsibilities of Brigit's Village or the Town with respect to services provided under this contract, is prohibited unless written consent is obtained from such person receiving service and, in the case of a minor, that of a responsible parent/guardian.

5. Close-outs

The obligation of Brigit's Village to the Town shall not end until all close-out requirements are completed. Activities during this close-out period shall include, but are not limited to: making final payments, disposing of program assets (including the return of all unused materials, equipment, unspent cash advances, program income balances, and accounts receivable to the Town), and determining the custodianship of records. Notwithstanding the foregoing, the terms of this Agreement shall remain in effect during any period that Brigit's Village has control over CDBG funds, including program income.

6. Audits & Inspections

All Brigit's Village records with respect to any matters covered by this Agreement shall be made available to the Town, grantor agency, and the Comptroller General of the United States or any of their authorized representatives, at any time during normal business hours, as often as deemed necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Any deficiencies noted in audit reports must be fully cleared by Brigit's Village within 30 days after receipt. Failure of Brigit's Village to comply with the above audit requirements will constitute a violation of this contract and may result in the withholding of future payments. Brigit's Village hereby agrees to have an annual agency audit conducted in accordance with current Town policy concerning subrecipient audits and 2 CFR 200.

C. Reporting and Payment Procedures

1. Program Income

Brigit's Village shall report monthly all program income (as defined at 24 CFR 570.500(a)) generated by activities carried out with CDBG funds made available under this contract. The use of program income by Brigit's Village shall comply with the requirements set forth at 24 CFR 570.504. By way of further limitations, Brigit's Village may use such income during the contract period for activities permitted under this contract and shall reduce requests for additional funds by the amount of any such program income balances on hand. All unexpended program income shall be returned to the Town at the end of the contract period or upon termination of this Agreement. Any interest earned on cash advances from the U.S. Treasury and from funds held in a revolving fund account is not program income and shall be remitted promptly to the Town.

2. Indirect Costs

No indirect costs can be charged to this project.

3. Payment Procedures

The Town will pay to Brigit's Village funds available under this agreement based on information submitted by Brigit's Village and Town policy concerning payments. Payments will be made for eligible expenses actually incurred and paid for by Brigit's Village. Requests for payment by Brigit's Village must include copies of invoices for which reimbursement is being requested, and a copy of the check for payment of the invoices. Additionally, the Progress/Inspection Report should be submitted with activity progress noted for the period for which reimbursement is being requested. In addition, the Town reserves the right to liquidate funds available under this contract for costs incurred by the Town on behalf of Brigit's Village.

4. Progress Reports

Brigit's Village shall submit regular Progress Reports to the Town in the form, content, and frequency as required by the Town.

D. Procurement

1. Compliance

Brigit's Village shall comply with the procedures delineated at 2 CFR 200.317-327 when procuring all materials, property, and/or services (including the purchase of equipment) under this agreement. It is the responsibility of Brigit's Village to be familiar with the procedures for each level of procurement and to request technical assistance. Brigit's Village shall maintain inventory records of all non-expendable personal property as defined by such policy as may be procured with funds provided herein. All program assets (unexpended program income, property, equipment, etc.) shall revert to the Town upon termination of this Agreement.

Brigit's Village shall, to the greatest extent feasible, reach out through advertising, phone or email notice, or other means, and solicit bids from, Section 3 business concerns, women-owned businesses, and minority-owned businesses.

2. OMB Standards

Unless specified otherwise within this Agreement, Brigit's Village shall procure all materials, property, or services in accordance with the requirements of 2 CFR 200.

3. Travel

Brigit's Village shall obtain written approval from the Town for any travel outside the metropolitan area with funds provided under this Agreement.

E. Use and Reversion of Assets

The use and disposition of real property and equipment under this Agreement shall be in compliance with the requirements of 2 CFR 200 and 24 CFR 570.502, 570.503, and 570.504, as applicable, which include but are not limited to the following:

1. Brigit's Village shall immediately transfer to the Town any CDBG funds on hand and any accounts receivable attributable to the use of funds under this Agreement at the time of expiration, cancellation, or termination of the Agreement.

2. Real property under the control of Brigit's Village that was acquired or improved, in whole or in part, with funds under this Agreement in excess of $25,000 shall be used to meet one of the CDBG National Objectives pursuant to 24 CFR 570.208 until five (5) years after expiration of this Agreement. If Brigit's Village fails to use CDBG-assisted real property in a manner that meets a CDBG National Objective for the prescribed period of time, Brigit's Village shall pay to the Town an amount equal to the current fair market value of the property, less any portion of the value attributable to expenditures of non-CDBG funds for acquisition of, or improvement to, the property. Such payment shall constitute program income to the Town. Brigit's Village may retain real property acquired or improved under this Agreement after the expiration of the five-year period.

3. In all cases in which equipment acquired, in whole or in part, with funds under this Agreement is sold, the proceeds shall be program income (prorated to reflect the extent to which funds received under this Agreement were used to acquire the equipment). Equipment not needed by Brigit's Village for activities under this Agreement shall be (a) transferred to the Town for the CDBG program or (b) retained after compensating the Town an amount equal to the current fair market value of the equipment less the percentage of non-CDBG funds used to acquire the equipment.

IX. RELOCATION, REAL PROPERTY ACQUISITION, AND ONE-FOR-ONE HOUSING REPLACEMENT

Brigit's Village agrees to comply with (a) the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (URA), and implementing regulations at 49 CFR 24 and 24 CFR 570.606(b); (b) the requirements of 24 CFR 570.606(c) governing the Residential Anti-displacement and Relocation Assistance Plan under section 104(d) of the HCD Act; and (c) the

requirements in 24 CFR 570.606(d) governing optional relocation policies. Brigit's Village shall provide relocation assistance to displaced persons as defined by 24 CFR 570.606(b)(2) that are displaced as a direct result of acquisition, rehabilitation, demolition, or conversion for a CDBG-assisted project. Brigit's Village also agrees to comply with applicable Town ordinances, resolutions, and policies concerning the displacement of persons from their residences.

X. PERSONNEL & PARTICIPANT CONDITIONS

A. Civil Rights

1. Compliance

Brigit's Village agrees to comply with Title VI of the Civil Rights Act of 1964 as amended, Title VIII of the Civil Rights Act of 1968 as amended, Section 104(b) and Section 109 of Title I of the Housing and Community Development Act of 1974 as amended, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Executive Order 11063, and Executive Order 11246 as amended by Executive Orders 11375, 11478, 12107, and 12086.

2. Nondiscrimination

Brigit's Village agrees to comply with the non-discrimination in employment and contracting opportunities laws, regulations, and executive orders referenced in 24 CFR 570.607, as revised by Executive Order 13279, in addition to the applicable non-discrimination provisions in Section 109 of the HCDA.

3. Land Covenants

This contract is subject to the requirements of Title VI of the Civil Rights Act of 1964 (P. L. 88-352) and 24 CFR 570.601 and 570.602. In regard to the sale, lease, or other transfer of land acquired, cleared, or improved with assistance provided under this contract, Brigit's Village shall cause or require a covenant running with the land to be inserted in the deed or lease for such transfer, prohibiting discrimination as herein defined, in the sale, lease, or rental, or in the use or occupancy of such land, or in any improvements erected or to be erected thereon, providing that the Town and the United States are beneficiaries of and entitled to enforce such covenants. Brigit's Village, in undertaking its obligation to carry out the program assisted hereunder, agrees to take such measures as are necessary to enforce such covenant, and will not itself so discriminate.

4. Section 504

Brigit's Village agrees to comply with all Federal regulations issued pursuant to compliance with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), which prohibits discrimination against the individuals with disabilities or handicaps in any Federally assisted program. The Town shall provide Brigit's Village with any guidelines necessary for compliance with that portion of the regulations in force during the term of this Agreement.

B. Affirmative Action

1. Approved Plan

Brigit's Village agrees that it shall be committed to carry out pursuant to the Town's specifications an Affirmative Action Program in keeping with the principles as provided in President's Executive Order 11246 of September 24, 1966. The Town shall provide Affirmative Action guidelines to Brigit's Village to assist in the formulation of such program. Brigit's Village shall submit a plan for an Affirmative Action Program for approval prior to the award of funds.

2. Women- and Minority-Owned Businesses (W/MBE)

Brigit's Village will use its best efforts to afford small businesses, minority business enterprises, and women's business enterprises the maximum practicable opportunity to participate in the performance of this contract. As used in this contract, the terms "small business" means a business that meets the criteria set forth in section 3(a) of the Small Business Act, as amended (15 U.S.C. 632), and "minority and women's business enterprise" means a business at least fifty-one (51) percent owned and controlled by minority group members or women. For the purpose of this definition, "minority group members" are Afro-Americans, Spanish-speaking, Spanish surnamed or Spanish-heritage Americans, Asian-Americans, and American Indians. Brigit's Village may rely on written representations by businesses regarding their status as minority and female business enterprises in lieu of an independent investigation.

3. Access to Records

Brigit's Village shall furnish and cause each of its own subrecipients or subcontractors to furnish all information and reports required hereunder and will permit access to its books, records, and accounts by the Town, HUD, or its agent, or other authorized Federal officials for purposes of investigation to ascertain compliance with the rules, regulations, and provisions stated herein.

4. Notifications

Brigit's Village will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or worker's representative of the commitments of Brigit's Village hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5. Equal Employment Opportunity and Affirmative Action (EEO/AA) Statement

Brigit's Village will, in all solicitations or advertisements for employees placed by or on behalf of Brigit's Village, state that it is an Equal Opportunity or Affirmative Action employer.

C. Employment Restrictions

1. Prohibited Activity

Brigit's Village is prohibited from using funds provided herein or personnel employed in the administration of the program for: political activities; inherently religious activities; lobbying; political patronage; and nepotism activities.

2. Labor Standards

Brigit's Village agrees to comply with the requirements of the Secretary of Labor in accordance with the Davis-Bacon Act as amended, the provisions of Contract Work Hours and Safety Standards Act (40 U.S.C. 327 *et seq.*), and all other applicable Federal, state, and local laws and regulations pertaining to labor standards insofar as those acts apply to the performance of this Agreement. Brigit's Village agrees to comply with the Copeland Anti-Kick Back Act (18 U.S.C. 874 *et seq.*) and its implementing regulations of the U.S. Department of Labor at 29 CFR 5. Brigit's Village shall maintain documentation that demonstrates compliance with hour and wage requirements of this part. Such documentation shall be made available to the Town for review upon request.

Brigit's Village agrees that, except with respect to the rehabilitation or construction of residential property containing fewer than eight (8) units, all contractors engaged under contracts in excess of $2,000.00 for construction, renovation, or repair work financed in whole or in part with assistance provided under this contract, shall comply with Federal requirements adopted by the Town pertaining to such contracts and with the applicable requirements of the regulations of the Department of Labor, under 29 CFR 1, 3, 5, and 7 governing the payment of wages and ratio of apprentices and trainees to journey workers; provided that, if wage rates higher than those required under the regulations are imposed by state or local law, nothing hereunder is intended to relieve Brigit's Village of its obligation, if any, to require payment of the higher wage. Brigit's Village shall cause or require to be inserted in full, in all such contracts subject to such regulations, provisions meeting the requirements of this paragraph.

3. "Section 3" Clause

a. Compliance

Compliance with the provisions of Section 3 of the HUD Act of 1968, as amended, and as implemented by the regulations set forth in 24 CFR 75, and all applicable rules and orders issued hereunder prior to the execution of this contract, shall be a condition of the Federal financial assistance provided under this contract and binding upon the Town, Brigit's Village, and any of the subrecipients and subcontractors of Brigit's Village. Failure to fulfill these requirements shall subject the Town, Brigit's Village, and any of the subrecipients and subcontractors of Brigit's Village, their successors, and assigns, to those sanctions specified by the Agreement through which Federal assistance is provided. Brigit's Village certifies and agrees that no contractual or other disability exists that would prevent compliance with these requirements.

Brigit's Village further agrees to comply with these "Section 3" requirements and to include the following language in all subcontracts executed under this Agreement:

> "The work to be performed under this Agreement is a project assisted under a program providing direct Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 1701). Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to low- and very low-income residents of the project area, and that contracts for work in connection with the project be awarded to business concerns that provide economic opportunities for low- and very low-income persons residing in the metropolitan area in which the project is located."

Brigit's Village further agrees to ensure that opportunities for training and employment arising in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project are given to low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to low- and very low-income persons within the service area of the project or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs; and award contracts for work undertaken in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project to business concerns that provide economic opportunities for low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to business concerns that provide economic opportunities to low- and very low-income residents within the service area or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs.

Brigit's Village certifies and agrees that no contractual or other legal incapacity exists that would prevent compliance with these requirements.

b. Notifications

Brigit's Village agrees to send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or understanding, if any, a notice advising said labor organization or worker's representative of its commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

c. Subcontracts

Brigit's Village will include this Section 3 clause in every subcontract for the construction of the Brigit's Village apartments and will take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the grantor agency. Brigit's Village will not subcontract with any entity where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 75 and will not let any subcontract unless the entity has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

D. Conduct

1. Assignability

Brigit's Village shall not assign or transfer any interest in this Agreement without the prior written consent of the Town thereto; provided, however, that claims for money due or to become due to Brigit's Village from the Town under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the Town.

2. Subcontracts

a. Approvals

Brigit's Village shall not enter into any subcontracts with any agency or individual in the performance of this contract without the written consent of the Town prior to the execution of such agreement.

b. Monitoring

Brigit's Village will monitor all subcontracted services on a regular basis to assure contract compliance. Results of monitoring efforts shall be summarized in written reports and supported with documented evidence of follow-up actions taken to correct areas of noncompliance.

c. Content

Brigit's Village shall cause all of the provisions of this contract in its entirety to be included in and made a part of any subcontract executed in the performance of this Agreement.

d. Selection Process

Brigit's Village shall undertake to ensure that all subcontracts let in the performance of this Agreement shall be awarded on a fair and open competition basis in accordance with applicable procurement requirements. Executed copies of all subcontracts shall be forwarded to the Town along with documentation concerning the selection process.

3. Hatch Act

Brigit's Village agrees that no funds provided, nor personnel employed under this Agreement, shall be in any way or to any extent engaged in the conduct of political activities in violation of Chapter 15 of Title V of the U.S.C.

4. Conflict of Interest

Brigit's Village agrees to abide by the provisions of 2 CFR 200.317-327 and 24 CFR 570.611, which include (but are not limited to) the following:

a. Brigit's Village shall maintain a written code or standards of conduct that shall govern the performance of its officers, employees, or agents engaged in the award and administration of contracts supported by Federal funds.

b. No employee, officer, or agent of Brigit's Village shall participate in the selection, or in the award, or administration of, a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved.

c. No covered persons who exercise or have exercised any functions or responsibilities with respect to CDBG-assisted activities, or who are in a position to participate in a decision-making process or gain inside information with regard to such activities, may obtain a financial interest in any contract, or have a financial interest in any contract, subcontract, or agreement with respect to the CDBG-assisted activity, or with respect to the proceeds from the CDBG-assisted activity, either for themselves or those with whom they have business or immediate family ties, during their tenure or for a period of one (1) year thereafter. For purposes of this paragraph, a "covered person" includes any person who is an employee, agent, consultant, officer, or elected or appointed official of the Town, Brigit's Village, or any designated public agency.

5. Lobbying

Brigit's Village hereby certifies that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement;

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, grant, loan, or cooperative agreement, it will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions; and

c. It will require that the language of paragraph (d) of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements), and that any and all Subrecipients shall certify and disclose accordingly.

d. Lobbying Certification

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

6. Copyright

If this contract results in any copyrightable material or inventions, the Town and/or grantor agency reserves the right to royalty-free, non-exclusive, and irrevocable license to reproduce, publish, or otherwise use and to authorize others to use, the work or materials for governmental purposes.

7. Religious Activities

Brigit's Village agrees that funds provided under this Agreement will not be utilized for inherently religious activities prohibited by 24 CFR 570.200(j), such as worship, religious instruction, or proselytization.

XI. ENVIRONMENTAL CONDITIONS

A. Air and Water

Brigit's Village agrees to comply with the following requirements insofar as they apply to the performance of this Agreement:

- Clean Air Act, 42 U.S.C., 7401, *et seq*.
- Federal Water Pollution Control Act, as amended, 33 U.S.C., 1251, *et seq*., as amended, 1318 relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
- Environmental Protection Agency (EPA) regulations pursuant to 40 CFR 50, as amended.

B. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), Brigit's Village shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

C. Lead-Based Paint

Brigit's Village agrees that any construction or rehabilitation of residential structures with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR 570.608, and 24 CFR 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint and explain the symptoms, treatment, and precautions that should be taken when dealing with lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment, and/or abatement may be conducted.

D. Historic Preservation

Brigit's Village agrees to comply with the Historic Preservation requirements set forth in the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), and the procedures set forth in 36 CFR 800, Advisory Council on Historic Preservation Procedures for Protection of Historic Properties, insofar as they apply to the performance of this agreement.

In general, this requires concurrence from the State Historic Preservation Officer for all rehabilitation and demolition of historic properties that are fifty years old or older or that are included on a Federal, state, or local historic property list.

XII. SEVERABILITY

If any provision of this Agreement is held invalid, the remainder of the Agreement shall not be affected thereby, and all other parts of this Agreement shall nevertheless be in full force and effect.

XIII. SECTION HEADINGS AND SUBHEADINGS

The section headings and subheadings contained in this Agreement are included for convenience only and shall not limit or otherwise affect the terms of this Agreement.

XIV. WAIVER

The Town's failure to act with respect to a breach by Brigit's Village does not waive its right to act with respect to subsequent or similar breaches. The failure of the Town to exercise or enforce any right or provision shall not constitute a waiver of such right or provision.

XV. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the Town and Brigit's Village for the use of funds received under this Agreement and supersedes all prior or contemporaneous communications and proposals, whether electronic, oral, or written between the Town and Brigit's Village with respect to this Agreement.

IN WITNESS WHEREOF, Town and Brigit's Village have duly executed this Agreement, which shall become effective as of the latest date written below.

ATTEST: TOWN OF FREDERICK, COLORADO

By: _____ By: _____
Kelly Green, Deputy Town Clerk Tracie Crites, Mayor

BRIGIT'S VILLAGE
By: _____
Its: _____

TOWN OF FREDERICK, COLORADO

RESOLUTION NO. 24-R-13

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF FREDERICK, COLORADO, APPROVING A SUBRECIPIENT AGREEMENT FOR COMMUNITY DEVELOPMENT OF BLOCK GRANT FUNDS

WHEREAS, the Town of Frederick is eligible to participate in grant funding opportunities from the Weld County Community Development Block Grant Program ("CDBG"); and,

WHEREAS, the Town of Frederick Strategic Plan specifically states that Frederick is a community that fosters economic, recreational, cultural, and environmental vitality and builds upon and enhances a variety of economic opportunities; and,

WHEREAS, Brigit's Village is a proposed 40-unit new construction apartment community in the Town of Frederick, seeking to build a community that will serve families and seniors earning between 30% and 70% of the Area Median Income (AMI); and,

WHEREAS, to assist with the potentially significant funding gap due to rising development costs including the cost of water, the Town of Frederick applied for, and was granted $275,000 for Weld County CDBG funding, and,

WHEREAS, the application requires a resolution of support from the Board of Trustees, authorizing the Town of Frederick as the subrecipient of CDBG funds; and,

WHEREAS, this CDBG agreement requires the Board of Trustees to authorize the Mayor to execute a Subrecipient Agreement for Community Development Block Grant Funds substantively similar to the attached.

WHEREAS, the funds provided by Weld County are intended to be a pass through to the developer of the project, to defray the costs of the project in addition to the waiver of fees previously approved by the Town; and,

WHEREAS, the terms for the passthrough to Brigit's Village to effectuate the CDBG funding purpose will require an agreement between the Town and the Developer; and,

WHEREAS, the additional agreement will require similar authorization as the CDBG agreement.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF FREDERICK, COLORADO, AS FOLLOWS:

1. The Town Board is supportive of a grant of $275,000 for Weld County CDBG funding to be utilized for this project.

2. The Mayor is hereby authorized to execute the Subrecipient Agreement for Community Development Block Grant Funds subject to finalization with the Town Attorney's Office in substantially the same form as attached.

3. Effective Date. This resolution shall become effective immediately upon adoption.

4. Repealer. All resolutions, or parts thereof, in conflict with this resolution are hereby repealed, provided that such repealer shall not repeal the repealer clauses of such resolution nor revive any resolution thereby.

RESOLVED THIS ____ DAY OF _____, 2024.

TOWN OF FREDERICK, COLORADO

_____
Mayor Tracie Crites

ATTEST:

BY: _____
Kelly Green, Deputy Town Clerk

APPROVED AS TO FORM:

_____
Jason Meyers, Town Attorney

TOWN OF FREDERICK, COLORADO

RESOLUTION NO. 24-R-14

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE TOWN OF FREDERICK, COLORADO, APPROVING THE AGREEMENT FOR COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS BETWEEN THE TOWN OF FREDERICK AND BRIGIT'S VILLAGE.

WHEREAS, the Town of Frederick Strategic Plan specifically states that Frederick is a community that fosters economic, recreational, cultural, and environmental vitality and builds upon and enhances a variety of economic opportunities; and,

WHEREAS, the Town of Frederick applied for Community Development Block Grant ("CDBG") funding as a partner with Brigit's Village, a Colorado nonprofit corporation, for a proposed 40-unit new construction apartment community in the Town of Frederick, seeking to build a community that will serve families and seniors earning between 30% and 70% of the Area Median Income (AMI); and,

WHEREAS, to assist with the potentially significant funding gap due to rising development costs including the cost of water, the Town of Frederick applied for, and was granted $275,000 for Weld County CDBG funding, and,

WHEREAS, the application requires a resolution of support from the Board of Trustees, authorizing the Town of Frederick as the subrecipient of CDBG funds; and,

WHEREAS, the pass through of the CDBG funding requires the Board of Trustees to authorize the Mayor to execute an Agreement for Community Development Block Grant Funds between the Town of Frederick and Brigit's Village substantively similar to the attached.

WHEREAS, the funds provided by Weld County are intended to be a pass through to the developer of the project to defray the costs of the project in addition to the waiver of fees previously approved by the Town; and,

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF FREDERICK, COLORADO, AS FOLLOWS:

1. The Town Board is supportive of utilizing the $275,000 in CDBG funding to supplement the cost of water for the completion of the project.

2. The Mayor is hereby authorized to execute the Agreement for Community Development Block Grant Funds Between the Town and Brigit's Village subject to finalization with the Town Attorney's Office in substantially the same form as attached.

3. Effective Date. This resolution shall become effective immediately upon adoption.

4. Repealer. All resolutions, or parts thereof, in conflict with this resolution are hereby

repealed, provided that such repealer shall not repeal the repealer clauses of such resolution nor revive any resolution thereby.

RESOLVED THIS ____ DAY OF _____, 2024.

TOWN OF FREDERICK, COLORADO

_____
Mayor Tracie Crites

ATTEST:

BY: _____
Kelly Green, Deputy Town Clerk

APPROVED AS TO FORM:

_____
Jason Meyers, Town Attorney