



**CITY COUNCIL EXECUTIVE COMMITTEE MEETING
CITY COUNCIL CHAMBERS, THIRD FLOOR, CITY HALL,
#1 CITY HALL PLACE, PUEBLO, COLORADO 81003.**

**MONDAY, MARCH 6, 2023
5:30 PM**

Individuals Requiring Special Accommodations Should Notify the City's ADA Coordinator at (719) 553-2295 by Noon on the Friday Preceding the Meeting.

Executive Committee meetings are special meetings of the City Council and are informal Council meetings for the purpose of receiving information and discussion among Council Members; no official action is taken at such meetings. The public is invited to attend, but public comment is generally not received unless otherwise noted.

Agenda

CALL TO ORDER

PRESENTATIONS

- | | |
|--|-----------|
| A. CITY UPDATE | 5:30 p.m. |
| Laura Solano, Chief of Staff | |
| 5 minute presentation | |
| B. FOUNTAIN CREEK WATERSHED DISTRICT UPDATE | 5:35 p.m. |
| Alli Schuch - Executive Director | |
| 15 minute presentation | |
| C. CITY-COUNTY LIBRARY DISTRICT - RENOVATION UPDATE | 6:00 p.m. |
| Sherri Baca - Executive Director | |
| Nick Potter - Director of Community Relations & Development | |
| 15 minute presentation | |
| D. PCC UPDATE | 6:25 p.m. |
| Patty Erjavec - President | |
| Lynne Ross - Human Anatomy Learning Center Coordinator | |
| Eva Tapia - Simulation Center Director | |
| 15 minute presentation | |
| E. ARPA - TURN THE LIGHTS ON FOR SAFETY | 6:50 p.m. |
| Laura Solano, Chief of Staff | |
| Julie Rodriguez - Sr. Community Affairs Manager - Black Hills Energy | |
| Crystal Estrada - Board President | |
| Crimestoppers | |
| Chris Noeller, Chief of Police | |

5 minute presentation

F. HOME - ARP ALLOCATION PLAN

7:00 p.m.

Bryan Gallagher, Director of Housing and Citizen Services

10 minute presentation

G. BEAUTIFICATION PROJECT UPDATE

7:20 p.m.

Steven Meier, Director of Parks and Recreation

Bill Zwick & Rebecca Knapp - Streetscape Committee/Keep Pueblo Beautiful

10 minute presentation

H. STORMWATER DESIGN CRITERIA MANUAL UPDATE

7:40 p.m.

Jeff Hawkins, Manager Stormwater

Ian Paton - President - Wright Water Engineers Inc.

20 minute presentation

ADJOURNMENT



Fountain Creek Watershed Flood Control and Greenway District

Fourteen years of progress managing, administering, and funding improvements in the watershed

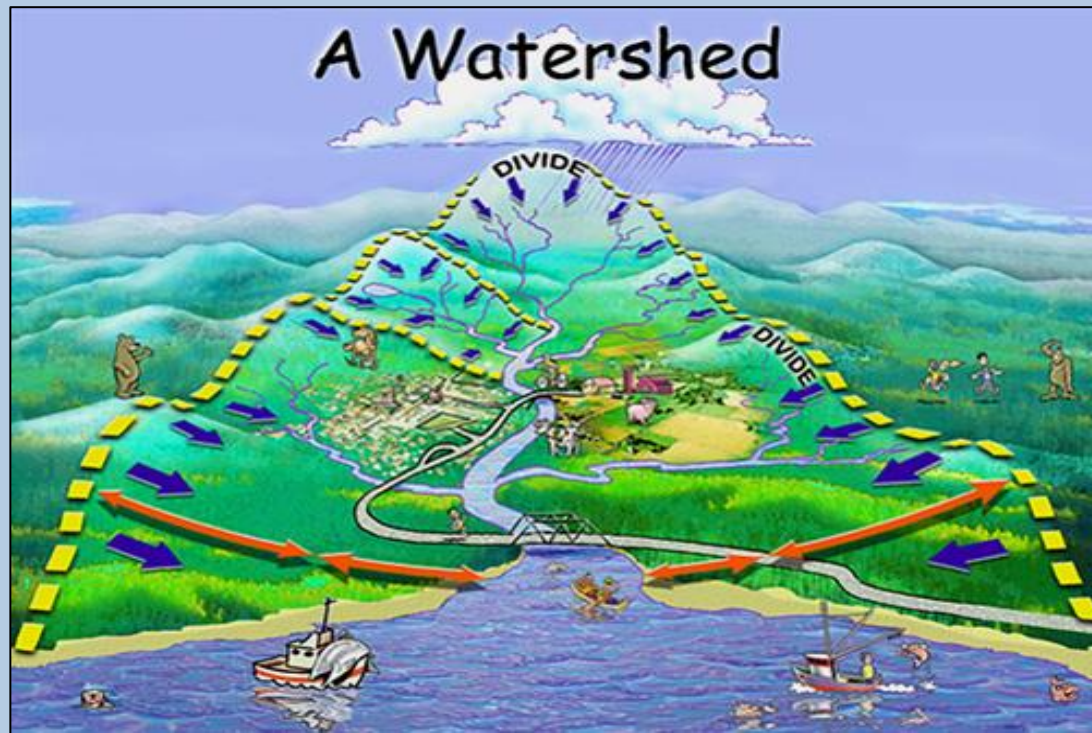
**Alli Schuch
Executive Director**





What is a Watershed?

An area of land that drains into
a common water body



Many downstream neighbors...

The ocean starts in Colorado

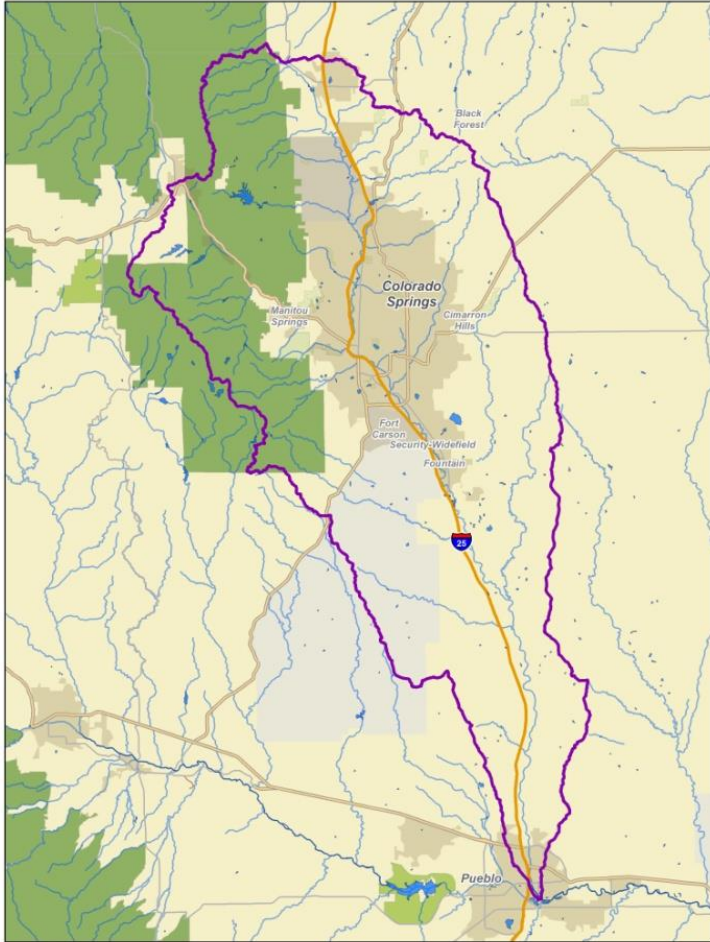


This map illustrates the Arkansas River Watershed in Colorado, highlighting the river and its extensive network of tributaries. The watershed's boundary is shown in a thick black line. Major cities and towns are marked with black dots and labeled, including Leadville, Buena Vista, Nathrop (historical), Salida, Canon City, Florence, Westcliffe, Pueblo, Fountain, Falcon, Monument, Ramah, Limon, Hugo, Cheyenne, Kit Carson, Eads, Kiowa, Sheridan Lake, Lamar, Holyoke, Two Buttes, Springfield, Campo, Kim, BACA, Las Animas, Otero, Rocky Ford, Fowler, Boone, and Trinidad. The map also displays county boundaries and names: Lake, Chaffee, Fremont, Custer, Huerfano, Las Animas, Lincoln, Cheyenne, Kit Carson, Kiowa, and Bent. Major roads are indicated by yellow lines, and the Arkansas River is shown in blue. The map is credited to Carrie Adair 2020.

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodaststyrielsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

- 5

Snapshot of the Fountain Creek Watershed



- 927 square miles of land and water
- Two counties, seven municipalities
- Elevation drop 14,000' to 4,600' in 70 miles
- Extremes in slopes, soil types, temperature, precipitation, ecosystems and multitudes of water uses
- Second most studied watershed in the US



Monument Branch Tributary flows into Monument Creek August 2003



Monument Branch Tributary flows into Monument Creek November 2005



Consequences of Unmanaged Streams

Erosion



Sedimentation





District Formation

- **29-member Consensus Committee + Task Force – 2 years of monthly meetings**
- **Identified needs for additional funding and more dedicated management**



District Formation

- **SBo9-141 under Title 32 of the CRS.**
- **Authorized to manage, administer, and fund the capitol improvements necessary in the Fountain Creek Watershed to:**
 - **Mitigate flooding, erosion, and sedimentation**
 - **Address water quality issues**
 - **Improve drainage**
 - **Protect open space**
 - **Develop public recreational opportunities**



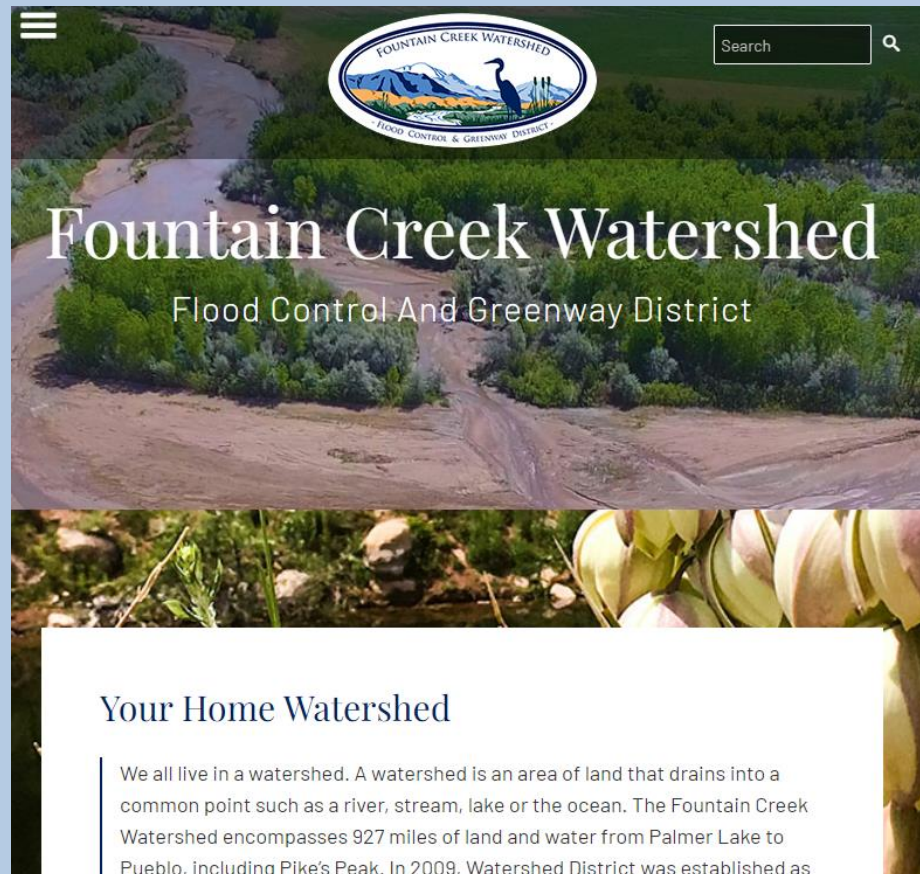
District Committees

- Board of Directors
- Monetary Mitigation Fund Advisory Committee
- Technical Advisory Committee
- Citizen Advisory Group
- Outreach Committee
- Finance Committee
- Contracts Committee
- Hiring Committee





Website and Social Media





Comprehensive Planning Projects

- 1) Fountain Creek Corridor Restoration Master Plan (C 10/2011)
- 2) Fountain Creek Corridor Fish Marking Study (C 3/2012)
- 3) Drainage Criteria Public Policy (C 6/2012)
- 4) USGS Flood Control Study (C 2/2013)
- 5) USGS Post-Burn Water Quality Evaluation (C 9/2014)
- 6) CDPHE-funded Outreach Communications Plan (C 3/2015)
- 7) Upper Fountain Ck/Cheyenne Ck Restoration Master Plan (C 6/2015)
- 8) Water Rights Protection Task (C 10/2015)
- 9) Monument Creek Watershed Restoration Master Plan (C 11/2016)
- 10) Flood Control Alternatives Evaluation (C 12/2016)
- 11) Fountain Creek Corridor WARSSS Assessment (C 3/2017)
- 12) District Design Criteria Manual (C 9/2017)
- 13) Flood Control Alternatives Needs Assessment (C 3/2017)
- 14) Floodplain Management Opportunities Study (C 2019)



Other Planning Projects

- 1) Fountain Creek Watershed Stormwater Management Study (C 5/2011)
- 2) GOCO River Corridor Regional Grant Application (C 4/2012)
- 3) District Financing Feasibility Study (C 2/2013)
- 4) Atlas 14 24-Hour Fountain Creek Watershed Design Storms Eval (C 7/2017)
- 5) City of Fountain Reservoir Feasibility Study (C 9/2017)
- 6) Pueblo County/Pueblo West Williams Creek Channel Assessment (C 3/2019)
- 7) Southmoor Dr. Bank Stabilization Assessment (C 10/2020)
- 8) Water Activity Enterprise 2018, 2019, 2020, 2021, 2022 Capital Improvement Plans (C 11/2021)
- 9) Greenway Master Plan (C 12/2022)



Construction Projects

\$31M+
in project costs

- 1) Pueblo Sediment Collection/Removal (C 12/2011)
- 2) Pueblo Off-Channel Detention Basin (C 12/2011)
- 3) Frost Ranch Bank Stabilization (C 4/2014)
- 4) Pueblo Levee Dredging (C 8/2017)
- 5) Masciantonio Trust Bank Stabilization (C 4/2018)
- 6) HY47 Bank Stabilization and Channel Realignment (C 11/2018)
- 7) Pinon Bridge Bank Stabilization and Channel Realignment (C 6/2019)
- 8) Barr Farm Phase I Bank Stabilization and Channel Realignment (C 6/2020)
- 9) Barr Farm Phase II Bank Stabilization, Channel Realignment (C 6/2020)
- 10) Overton Road Bank Stabilization (C 6/2020)
- 11) Pueblo Channel at 13th Bank Stabilization, Channel Realignment (C 6/2021)
- 12) Fountain Creek at Hanson Trailhead (C 6/2021)
- 13) Pueblo Levee Floodplain Restoration (C 12/2022)



Highway 47 Bank Restoration

Cost: \$6 million Completed: November 2018

Before



After





Masciantonio Trust Bank Restoration

Cost: \$2 million

Completed: April 2018

Before



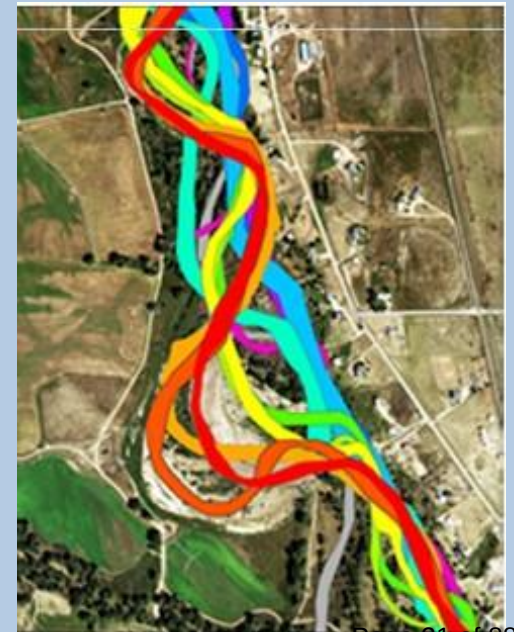
After





Current Projects

- Eagleridge design and construct
- Southmoor Dr. design and construct
- Frost Ranch analysis
- Wood Valley analysis
- GEI In Lieu Fee study
- Project Effectiveness
- Strategic Planning





Ongoing/Annual District Business

- Annual Audit
- Capitol Improvement Plan Development
- Board/MMF/TAC/CAG/Outreach Meetings
- Grants
- Outreach
- Budget and project oversight
- Community relations, meetings



Award-Winning Outreach Programming

- Great American Cleanup (April 15)
- Creek Week (10th Anniversary! Sept 30-Oct 8)
- Scoop the Poop
- Pollinator Party
- Brewshed Alliance – monthly Liquid Lectures



Looking Ahead



Two Objectives:

1. Continue to plan, manage, and deliver SDS Monetary Mitigation Fund projects within the Corridor.
2. Support member governments and communities within the watershed



Challenges

- **MMF \$ is running out. What to do with remaining \$9M?**
- **\$1B in project work identified**
- **Sustainable funding**



Funding Solutions

1. Pursue mil levy through the fall of 2024 and get funded
2. Pursue mil levy through fall of '24 and don't get funded
3. Pursue mil levy, terminate before fall '24
4. Don't pursue mil levy, seek funds elsewhere
 - a. Increased funding from District Members
 - b. Pursue grant funds
 - c. Sales tax
 - d. Other options



Menu of Potential Support

Regional stormwater management planning and coordination

- Master plans, drainage basin planning studies.
- Coordination and management of plans



Menu of Potential Support

Planning and delivery of multi-use and greenway corridor restoration projects

- Channel work along greenway corridors and waterways
- Plan, design, identify funds for these value-adds
- Coordinate cross-jurisdictional work



Menu of Potential Support

Planning and project management for smaller stormwater capital projects

- Fund or partially fund and manage delivery services for smaller member governments



Menu of Potential Support

Fire Mitigation Project Planning and Management

- Support planning and management of fire mitigation projects through project management and/or funding and grant identification



Menu of Potential Support

Public Outreach and Education for Regional Water Quality

- Provide regional campaigns, literature and support for all members, including MS4 permit related outreach



Menu of Potential Support

Creek Cleanup and Tree Canopy Building Events

- Coordinate and facilitate cleanups and necessary resources
- Coordinate and facilitate tree planting events



Menu of Potential Support

Monitoring and Maintenance of Projects

- Provide monitoring and maintenance of projects within the Corridor and for smaller municipalities



Menu of Potential Support

Regional 404 and Floodplain Permitting Management

- Assist with coordination and communication between member governments and agencies



Menu of Potential Support

Regional Training Support

- Coordination and funding support for training in water quality management, wetland and habitat management, forest management and other relevant topics.



Menu of Potential Support Wetland Banking

- Manage and oversee wetlands mitigation and restoration projects that can be built and monitored.



Powerful



Magical



Scarce



WATER IS EVERYTHING





Questions Comments Input

Thank You!

Alli Schuch

fountainckdist@gmail.com

719-650-7474





Rawlings Library Grand Opening Week

Monday, March 20

All day | Self-guided tours

Tuesday, March 21

3-8 p.m. | Open house

Wednesday, March 22

11 a.m. | Ribbon cutting

Thursday, March 23

1 p.m. | Cornerstone and time capsule ceremony

Friday, March 24

**6:30 p.m. | Special Pecha Kucha featuring
the departments of Rawlings Library**

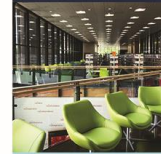
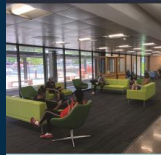


PUEBLO CITY-COUNTY

Library District

Rawlings Library, 100 E. Abriendo Ave.

www.pueblolibrary.org | (719) 562-5600



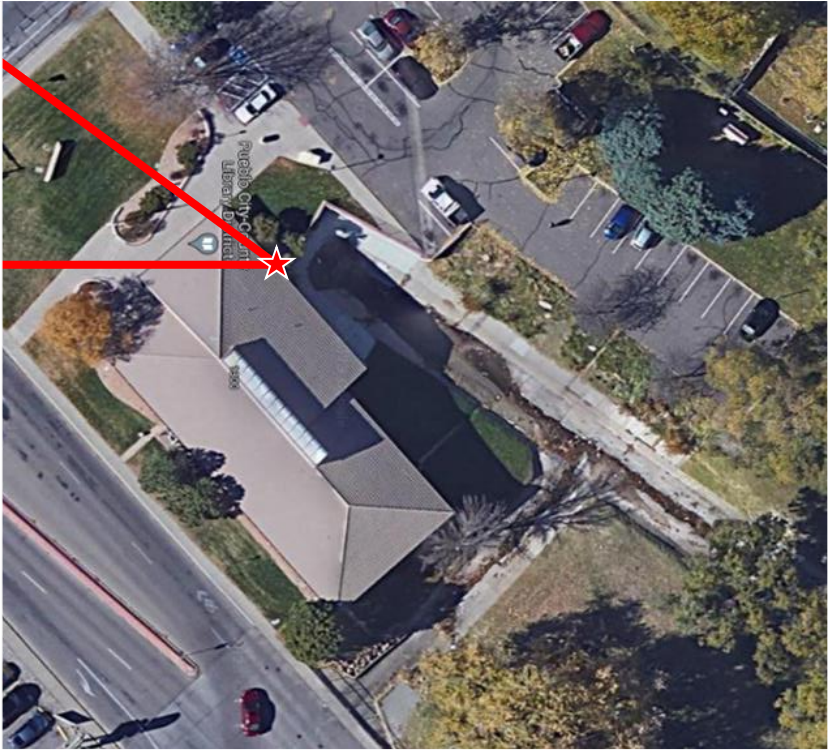
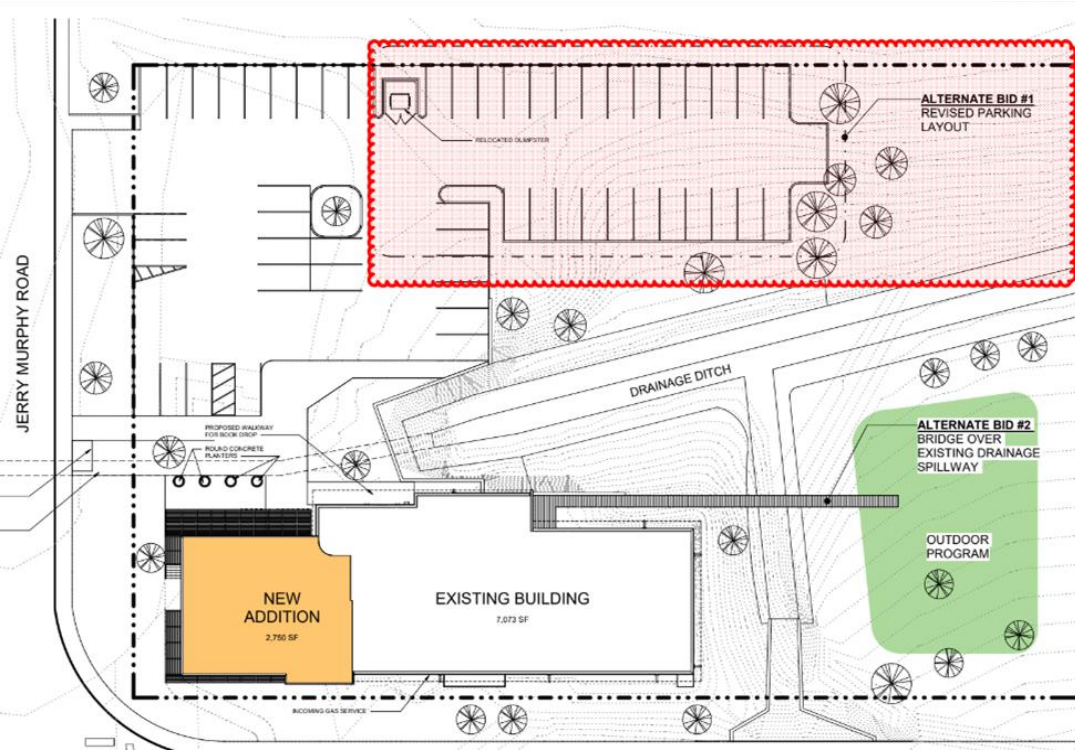
Pueblo City-County Library District

Barkman Library Renovation & Expansion

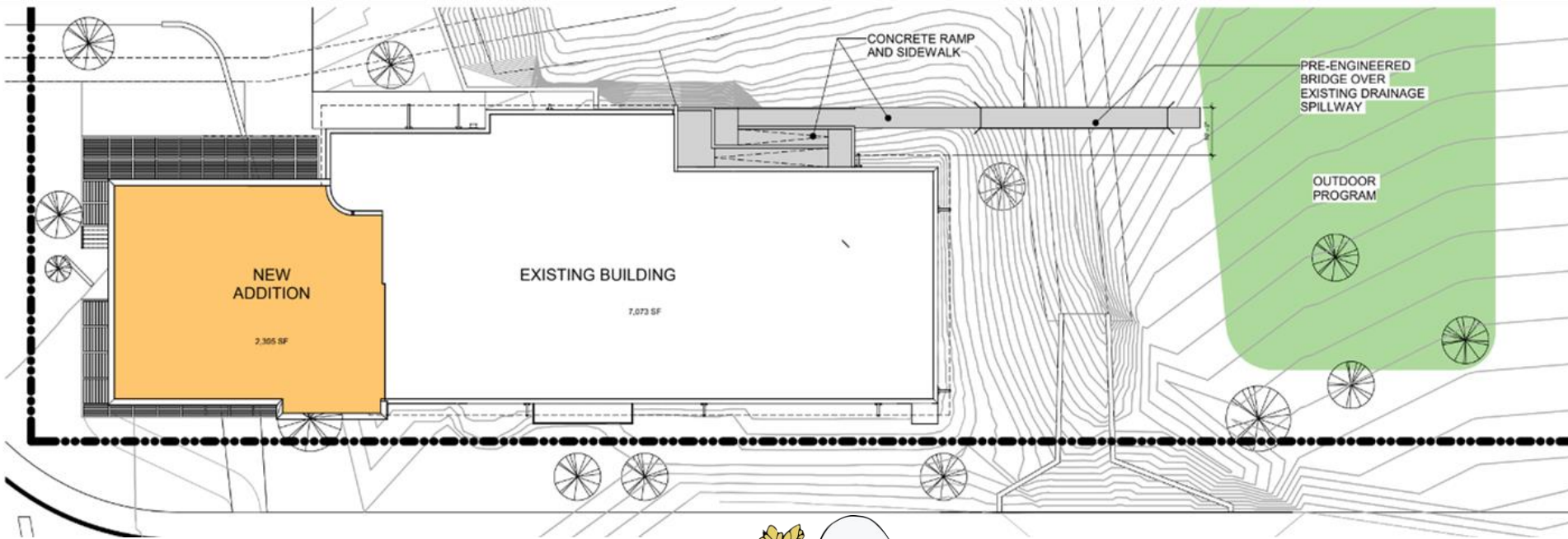


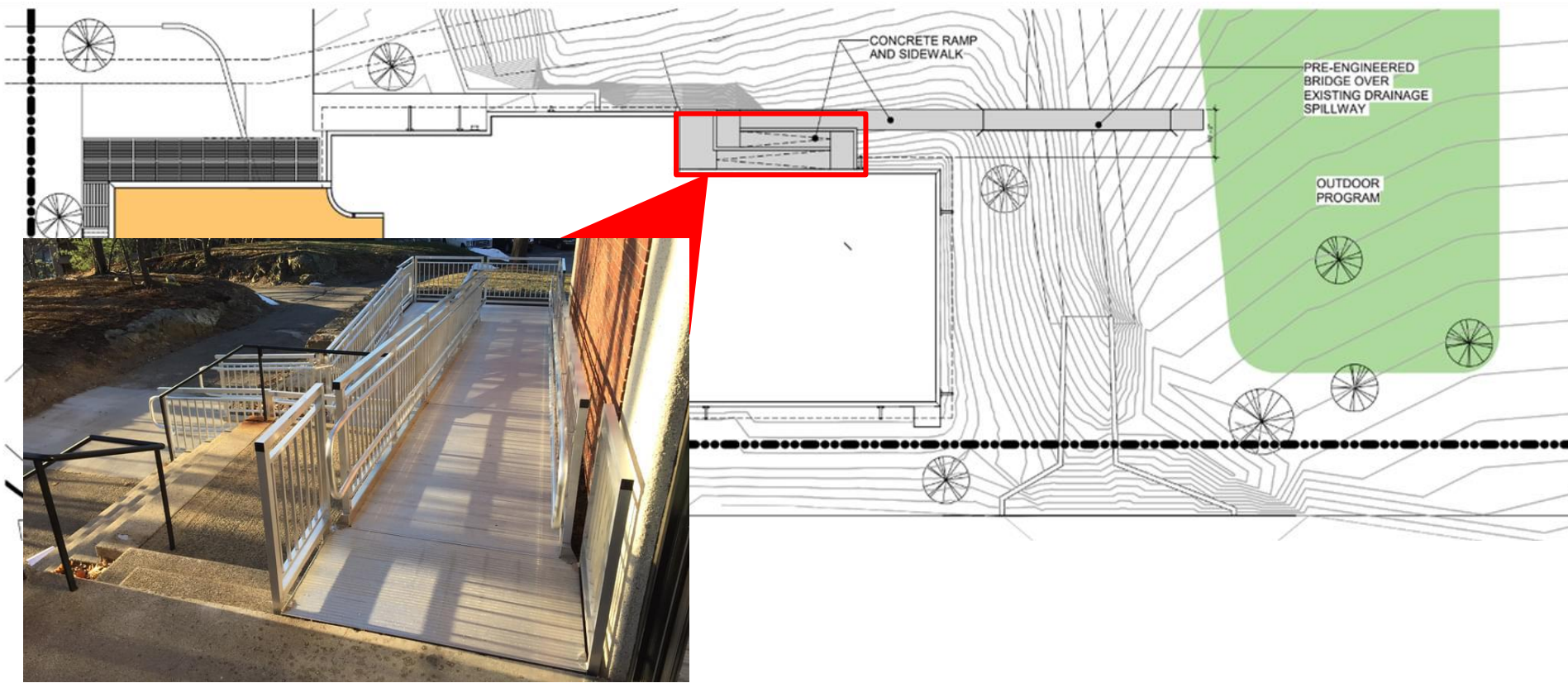


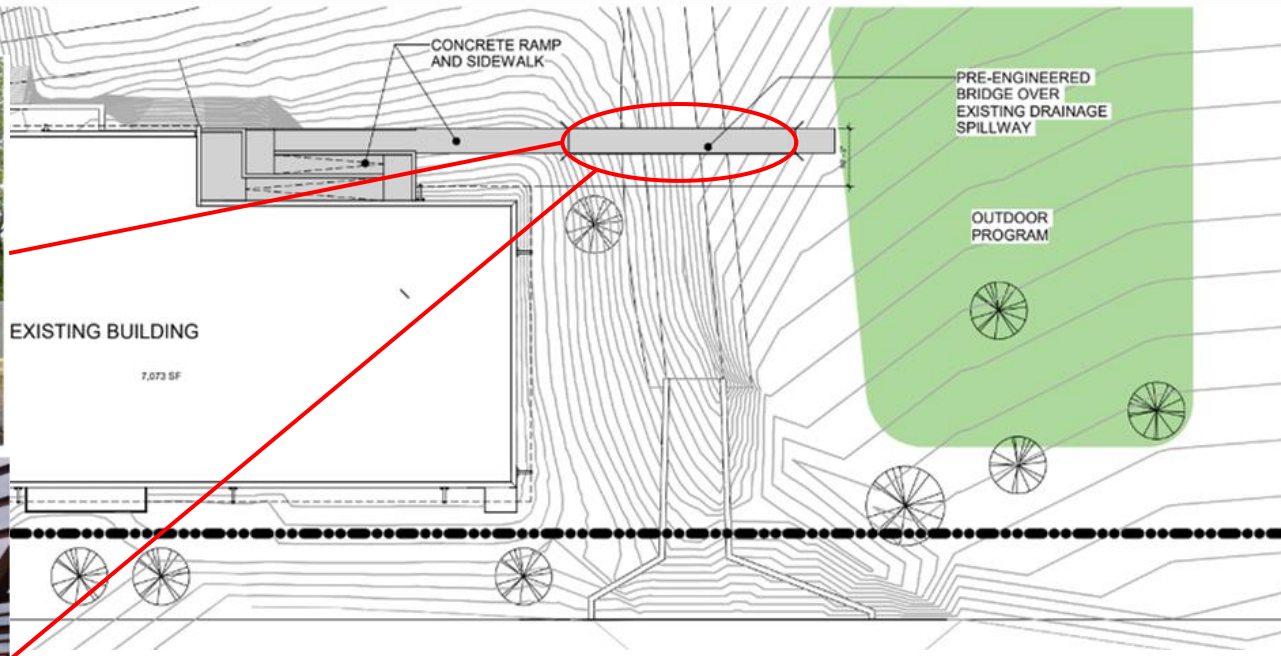
Expanded Parking Lot



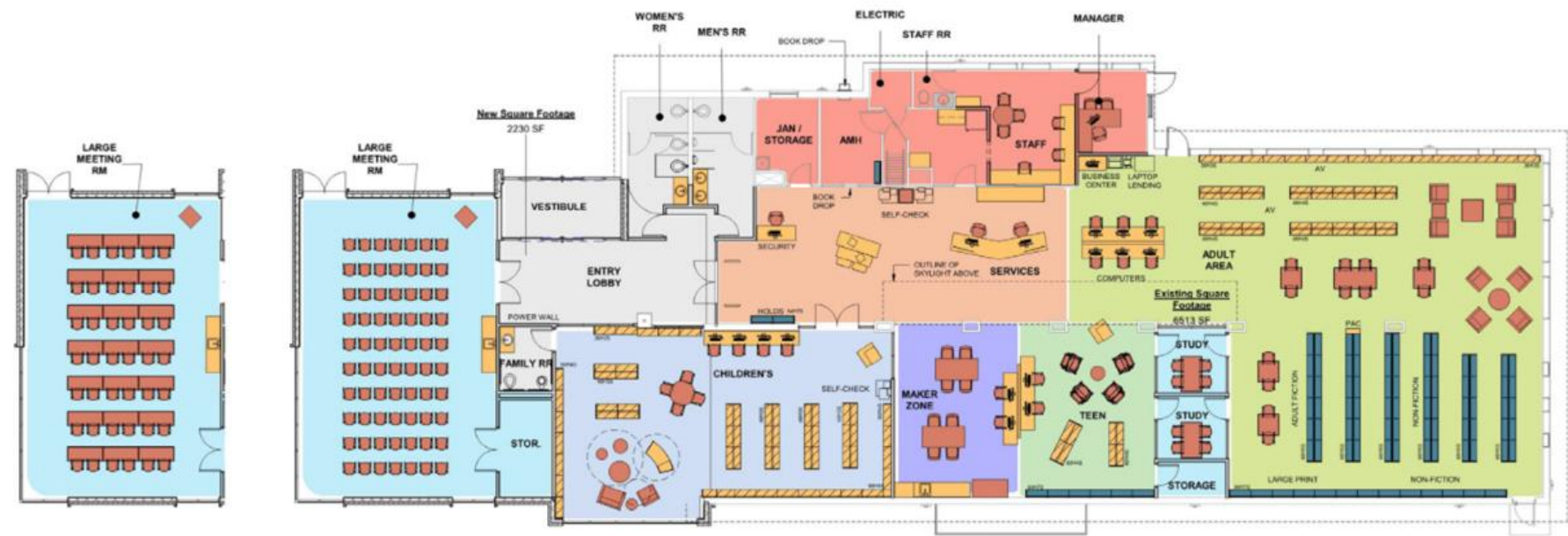
Barkman Library ADA Ramp and Pedestrian Bridge







Barkman Library Redesigned Layout



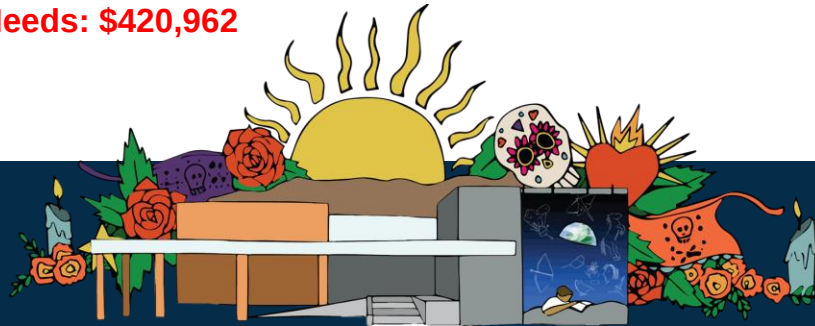
Barkman Renovation and Expansion Budget

Construction:	\$3,102,200
Library Interiors:	\$150,000
Professional Fees:	\$284,680
Technology & Equipment:	\$253,000

Total Project Costs:
\$3,789,880

Identified Funds: \$3,368,918

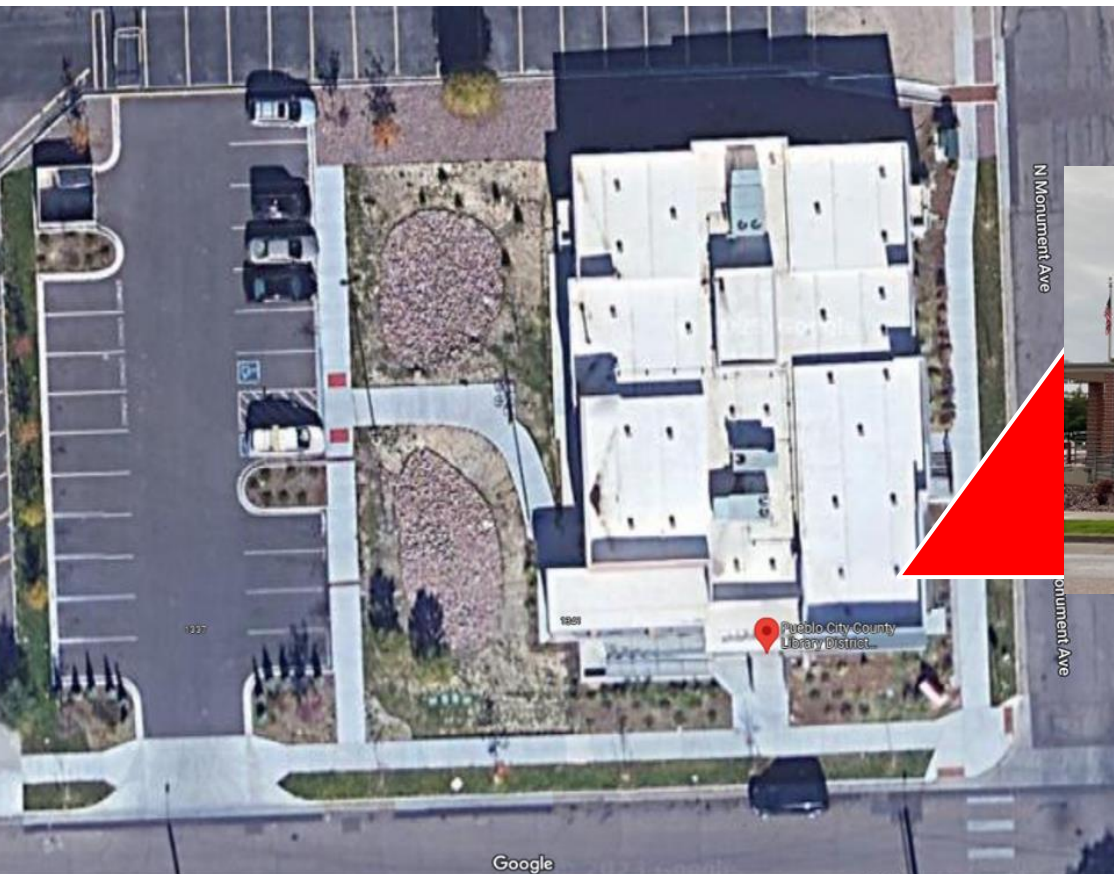
Fundraising Needs: \$420,962



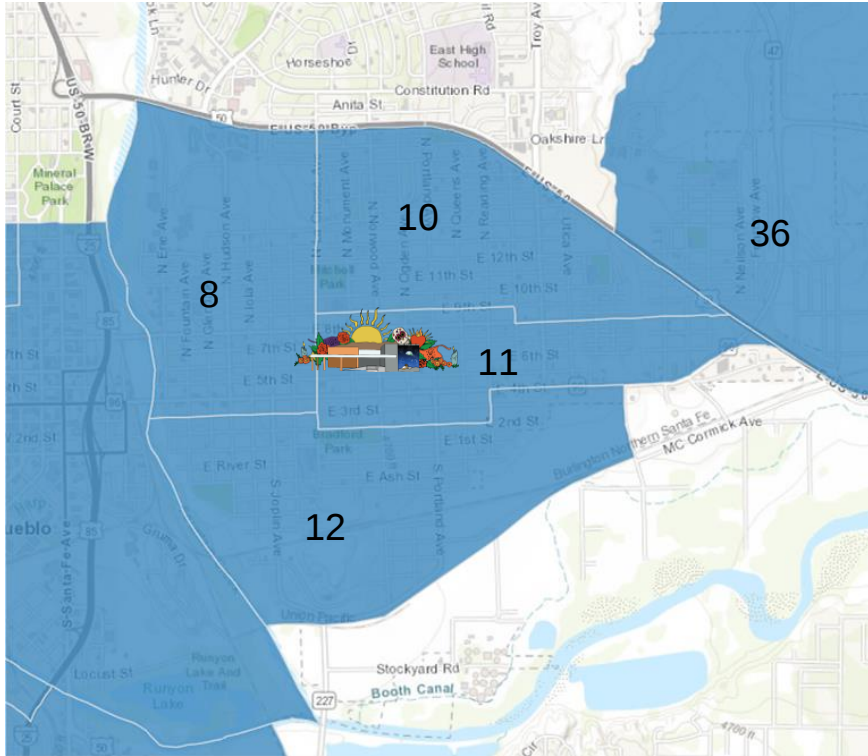
Pueblo City-County Library District

Patrick A. Lucero Library Renovation & Expansion





Pueblo's East Side as a Qualified Census Tract



The Lucero Library serves five QCT areas in Pueblo County.

These low-income neighborhoods have 50 percent of households with incomes below 60 percent of the Area Median Gross Income or have a poverty rate of 25 percent or more.

The neighborhoods served by the Lucero Library reside in Difficult Development Areas. These neighborhoods are areas with high land, construction and utility costs relative to the area median income and are based on Fair Market Rents, income limits, the 2010 census counts, and 5-year American Community Survey (ACS) data.

Lucero Library's Impact

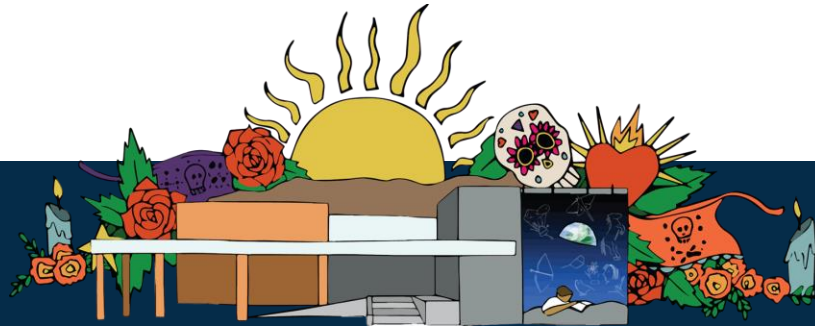
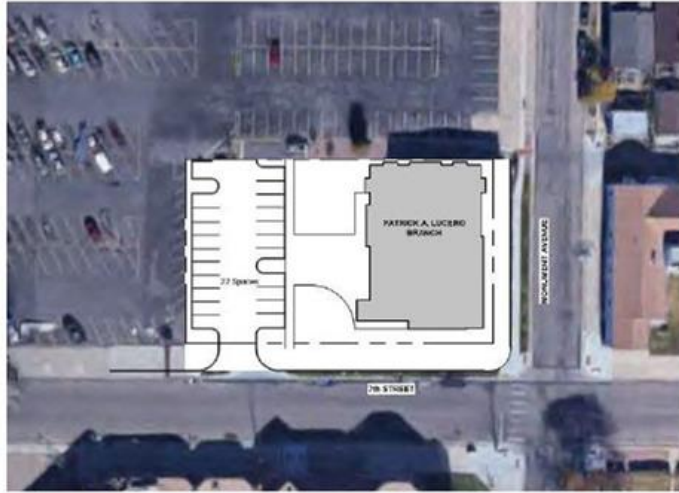
- Nearly 150,000 visits per year
- More than 100,000 library materials checked out per year
- Gang prevention programming
- After school programming for kids of all ages
- After school snacks for children
- Community connectivity hub
- English classes
- Free information, education, and entertainment materials and services



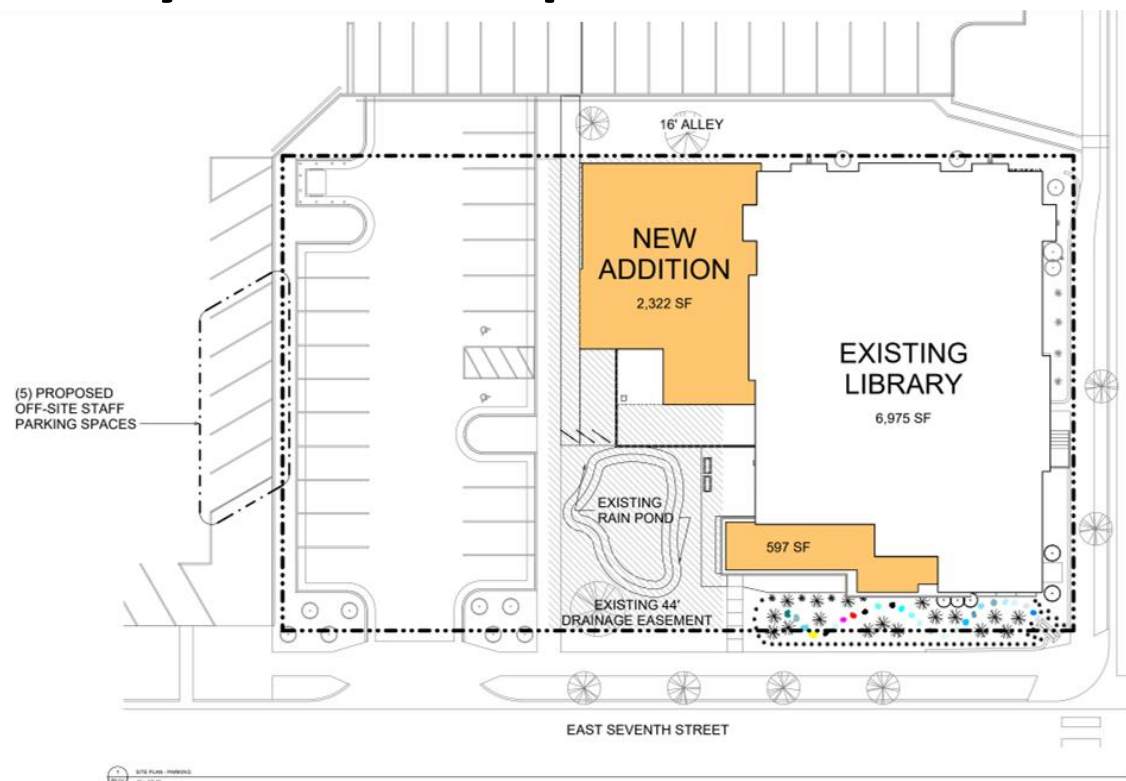
Proposed Library Site Plan Updates



Existing Lucero Library Site



Proposed Library Site Plan Updates



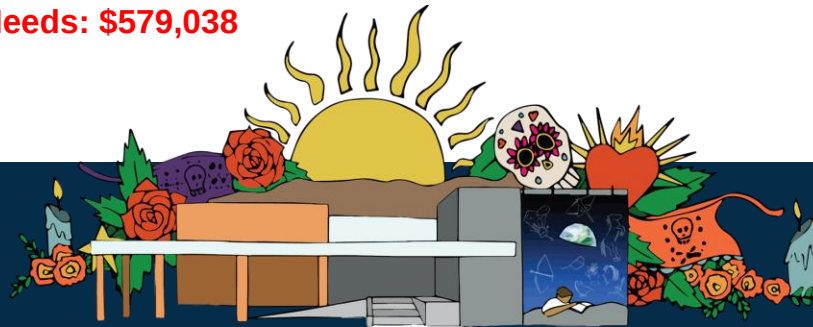
Lucero Renovation and Expansion Budget

Construction:	\$3,102,200
Library Interiors:	\$150,000
Professional Fees:	\$284,680
Technology & Equipment:	\$253,000

Total Project Costs:
\$3,789,880

Identified Funds: \$3,210,842

Fundraising Needs: \$579,038





Thank you!

Sherri Baca, Executive Director
(719) 562.5625
sherri.baca@pueblolibrary.org

Nick Potter, Director of Community Relations &
Development
(719) 562.5605
nick.potter@pueblolibrary.org

Lights On For Safety!

Let's Light Up Pueblo!



What is *Lights on for Safety!*

Today's Presenters:

Julie Rodriguez - Black Hills Energy

Patti Olenick – Black Hills Energy

Chief Chris Noeller - Pueblo Police Department

Crystal Estrada - Pueblo Crime Stoppers

What is *Lights on for Safety!*

A public/private program designed to increase safety for our local small businesses while providing energy management education.

Partners: Black Hills Energy

City of Pueblo

- Mayor Gradisar
- Pueblo Police Department

Pueblo Crime Stoppers

How *Lights on for Safety* works?

- ❑ Small businesses can apply for assistance beginning **April 3, 2023**.
- ❑ The process will begin with an initial **FREE** energy audit and lighting assessment conducted by a trained energy advisor from Franklin Energy.
- ❑ The Pueblo Police Department will also conduct a **FREE** crime prevention through environmental design assessment to help advise the small businesses on changes/updates to defer crime on their property.
- ❑ The audits will provide solutions that will increase customer safety and help save energy by providing interior/exterior lighting and cameras.

Budget for *Lights on for Safety!*

\$400,000

Cash donation by the City of Pueblo and Black Hills Energy

- Mayor requests approval of \$200,000 ARPA funds for the City's 50% match to BHE's \$200,000 contribution to Crime Stoppers of Pueblo
- Funds are for equipment and installation.
- We plan to assist approximately 40 businesses.
- Funds for equipment and installation will be paid directly to the contractor.

\$10,000

- Administration fee paid to Crime Stoppers of Pueblo by Black Hills Energy.

Promotion for Lights on for Safety!

Press conference week of March 27

- Mayor Gradisar
- Police Chief Noeller
- Crime Stoppers of Pueblo
- Black Hills Energy

Application process opens April 3, 2023

Questions
and
Thank you!

HOME-ARP ALLOCATION PLAN



Pueblo Consortium:
City of Pueblo
Pueblo County

March 6, 2023

THE HOME-AMERICAN RESCUE PLAN (ARP)

SEC. 3205. HOMELESSNESS ASSISTANCE AND SUPPORTIVE SERVICES PROGRAM.

Provides \$5 billion of supplemental HOME funds to assist individuals or households who are homeless, at risk of homelessness and other vulnerable populations by providing housing, rental assistance, supportive services, and non-congregate shelter.

City of Pueblo, CO HOME-ARP Allocation \$3,090,925

QUALIFYING POPULATIONS

Homeless, as defined in section 103(a) of the McKinney-Vento Homeless Assistance Act

At-risk of homelessness, as defined in section 401(1) of the McKinney-Vento Homeless Assistance Act

Fleeing, or attempting to flee, domestic violence, dating violence, sexual assault, stalking, or human trafficking, as defined by the Secretary

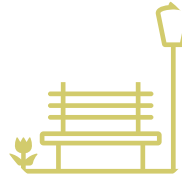
Other populations who do not qualify under any of the populations above but meet one of the following criteria:

- (a) Other families requiring services or housing assistance to prevent homelessness
- (b) Those at greatest risk of housing instability

HUD HOME-ARP DEFINITION HOMELESS



an individual or family who lacks a fixed, regular, and adequate nighttime residence



an individual or family with a primary nighttime residence that is a public or private place not meant for human habitation, including a car, park, abandoned building, bus or train station, airport, or camping ground



an individual or family living in shelter designated to provide temporary living arrangements



an individual who resided in a shelter or place not meant for human habitation and who is exiting an institution where he or she temporarily resided



an individual or family who will imminently lose their housing, including housing they own, rent, or live in without paying rent, are sharing with others, and rooms in hotels or motels

HUD HOME-ARP DEFINITION AT RISK OF HOMELESSNESS

Income at or below 30% AMI,
Lacks sufficient resources to attain
housing stability and meets at least
one of these criteria:



Multiple Moves: Has moved because of economic reasons two or more times during the 60 days immediately preceding the application for assistance



Doubled Up: Is living in the home of another because of economic hardship



Hotel/Motel: Lives in a hotel or motel and the cost is not paid for by charitable organizations or by federal, state, or local government programs for low-income individuals



Overcrowded Housing: Lives in a single room occupancy (SRO) or efficiency apartment unit where two or more persons reside or where there are more than one-and-a-half persons per room



Exiting Institution: Is exiting a publicly funded institution or system of care (e.g., jail, prison, psychiatric hospital, etc.)

ELIGIBLE ACTIVITIES



PRODUCTION
OR
PRESERVATION
OF AFFORDABLE
HOUSING



TENANT-BASED
RENTAL
ASSISTANCE
(TBRA)



SUPPORTIVE
SERVICES,
HOMELESS
PREVENTION
SERVICES, AND
HOUSING
COUNSELING



PURCHASE AND
DEVELOPMENT
OF NON-
CONGREGATE
SHELTER



NONPROFIT
OPERATING
AND CAPACITY
BUILDING

HOME-ARP ALLOCATON PLAN				
GRANT AMOUNT - \$3,090,925				
ELIGIBLE ACTIVITIES		%	CITY	COUNTY
PLANNING	\$154,546	5		
ADMINISTRATION	\$309,092	10	\$268,910	\$40,182
NON-PROFIT ADMINISTRATION	\$154,546	5		
CONSTRUCTION OF RENTAL HOUSING	\$2,000,000	64.7		
CLIENT SERVICES	\$472,741	15.3		
Preference given to Chronic Homelessness				

PUEBLO CONSORTIUM ALLOCATION PLAN

Outreach:
(2) Public Meetings
(8) Stakeholder Sessions

PROPOSED BEAUTIFICATION **PROJECT**

Developed by:

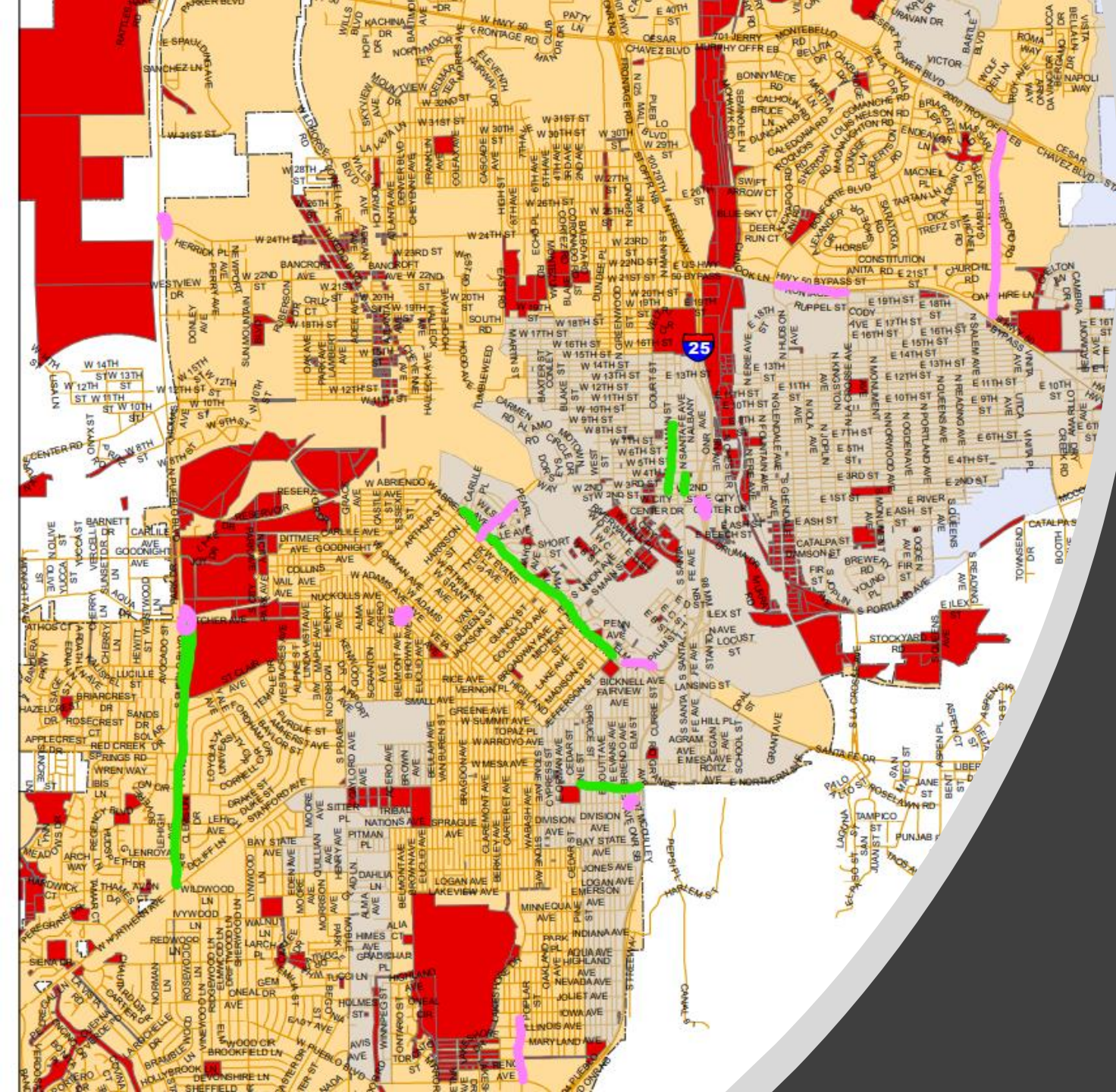
- **Streetscape Committee**
- **Keep Pueblo Beautiful**
&
- **PARKS AND RECREATION DEPARTMENT**

Members:

Bill Zwick

Rebecca Knapp

Steven Meier



Project Locations

Beautification Projects

1/25/23

	New Sites		
1	I-25/ City Center, north side of interchange (CDOT-to match southside)	\$	500,000
2	US 50 Bypass between Hudson/Bonforte and N. La Crosse Ave (CDOT - trees & irrigation)		150,000
3	Troy Ave. Median - 1 mile		700,000
4	24 th Street Pueblo Blvd. NE and SE of intersection (CDOT, SUP req)		150,000
5	Thatcher/SH96 and Pueblo Blvd./SH45. NW, NE, and SE corners (maybe SW corner if feasible)		200,000
6	Thatcher/SH96 and Veta. ROW along curve		250,000
7	Lincoln / 4 th St. median from W. 4 th Street Bridge/Chapa to Evans Ave. New curb and stamped concrete (CDOT, SUP req)		100,000
8	Washington and Abriendo Ave. landscape to screen or buffer residential neighborhood		200,000
9	McCulley and Abriendo Ave./I-25 (CDOT, SUP req)		250,000
10	Lake Ave. from Iowa Ave. to Pueblo Blvd		2,500,000
	Sub-total	\$	4,800,000
	Renovations to Existing Sites		
11	Main Street, City Center to 8 th Street (new landscape & irrigation)	\$	1,500,000
12	Santa Fe Ave., City Center to 4 th St. (3 blocks)		300,000
13	Abriendo Parkway		75,000
14	Northern Ave., Orman to Elm (landscape & irrigation) (complete redo - \$2M)		150,000
15	Pueblo Blvd. East side from Thatcher to Northern Ave. (irrigation & trees)		100,000
	Sub-total		2,125,000
16	FT Gardner Position – ongoing expense		\$75,000



Questions?

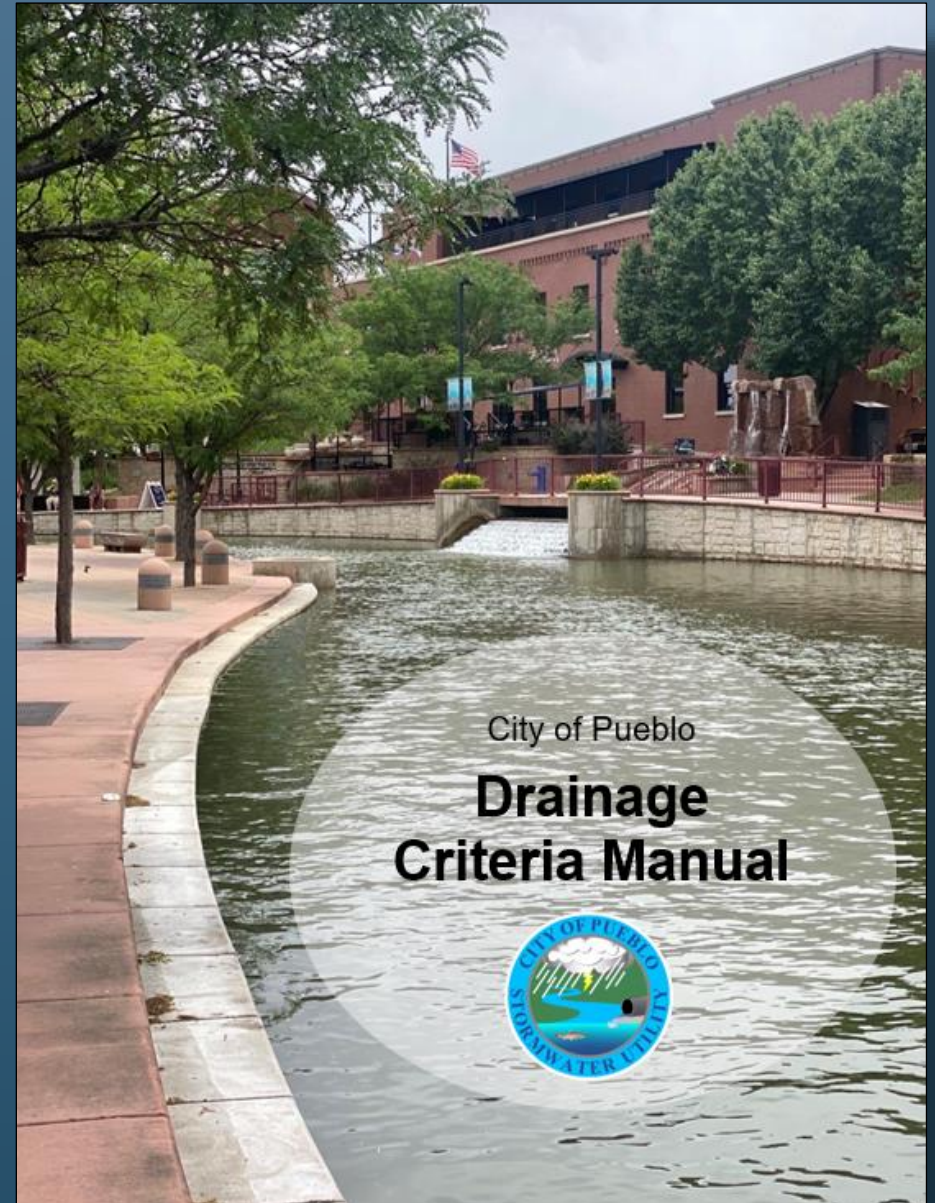
City of Pueblo Drainage Criteria Manual

City Council Work Session
3/6/2023



What is the Drainage Criteria Manual?

- Document that provides practical guidance and specific engineering criteria to:
 - Reduce flooding and improve the quality of stormwater runoff in the City
 - Select and design effective stormwater drainage infrastructure



Goals of the Updated Manual

- First and foremost:
 - Promote the protection of public health, safety and welfare



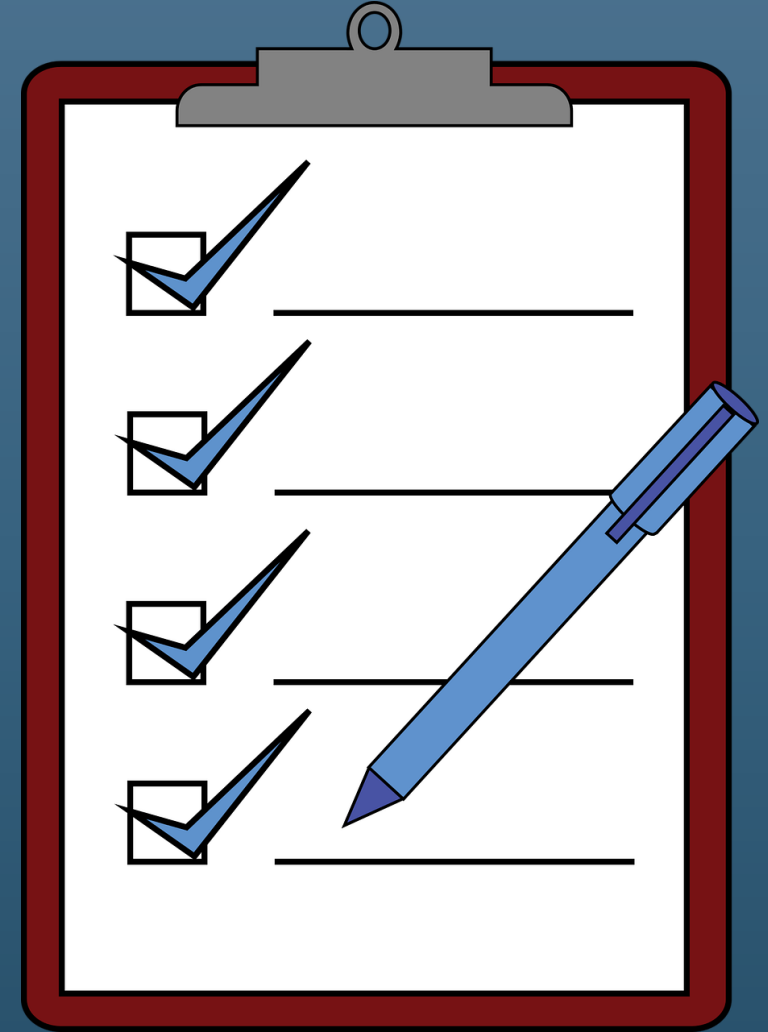
Goals of the Updated Manual

- Provide standard of practice guidance for drainage engineering in Pueblo
- Reduce potential for drainage problems and flooding with future development



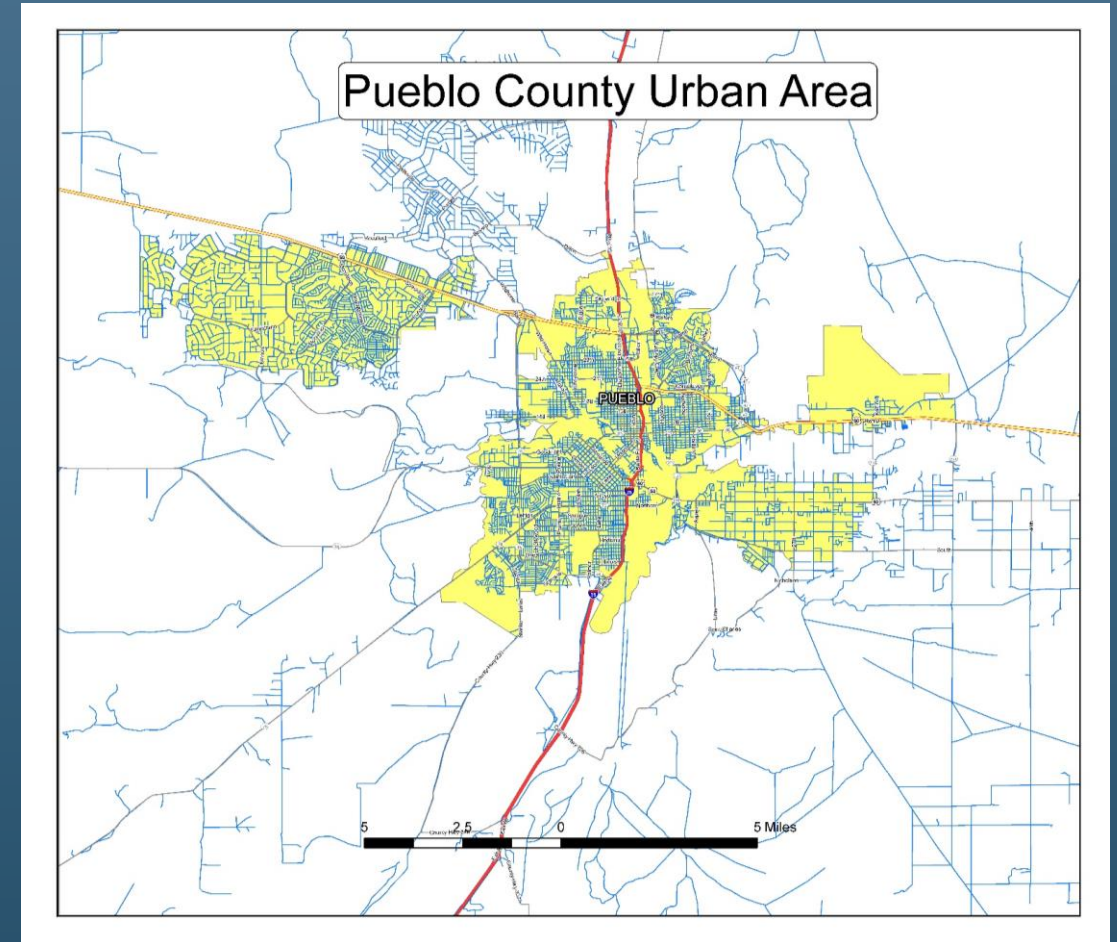
Goals of the Updated Manual

- Promote a streamlined, efficient process for:
 - Private sector design engineers
 - Design and submittals to City
 - City of Pueblo
 - Review and approval of submittals to City



Goals of the Updated Manual

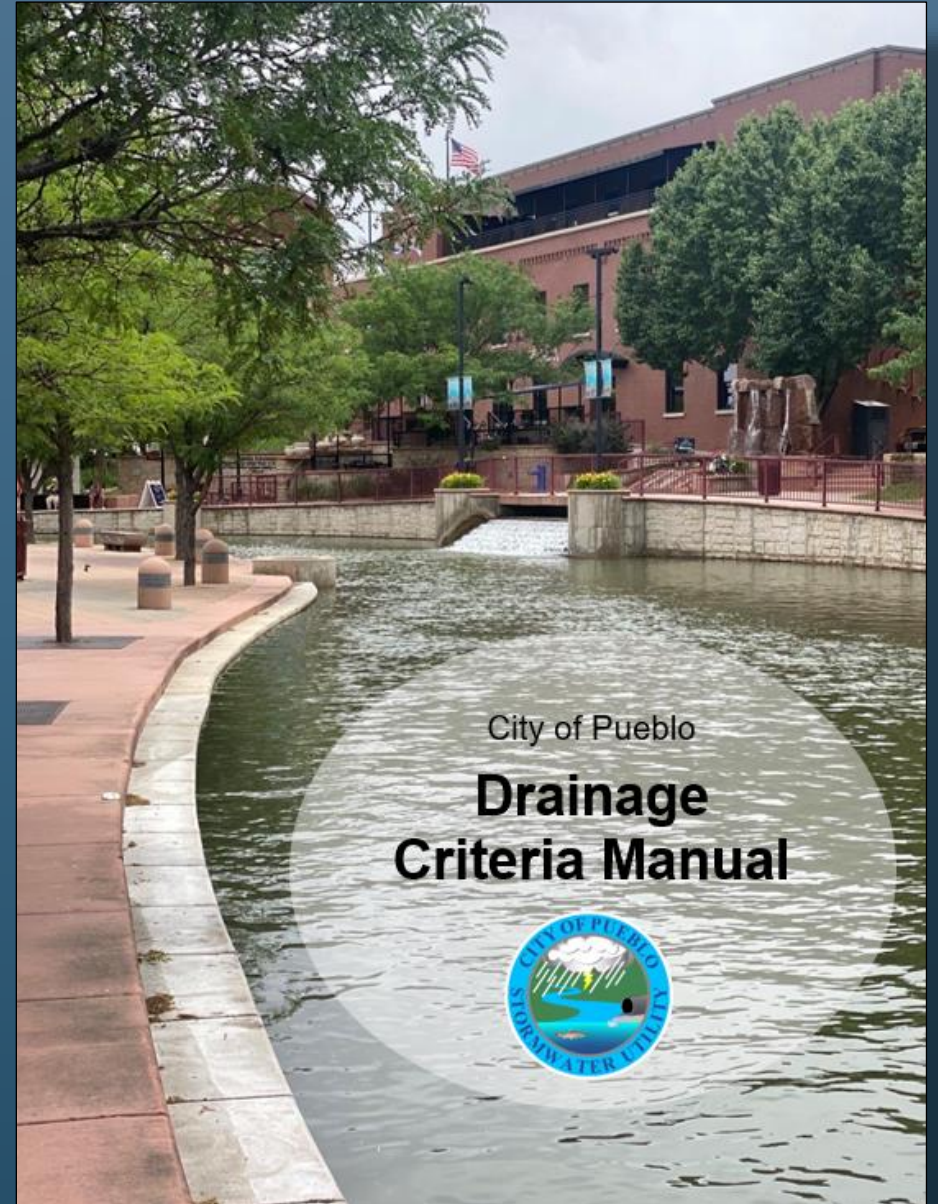
- Facilitate City's regulatory compliance
 - Meet requirements of Colorado Department of Public Health and Environment (CDPHE) Municipal Separate Storm Sewer (MS4) permit
 - Regulates quality of stormwater runoff



CDPHE Map of Urbanized Areas for MS4 Permit

Updated Drainage Criteria Manual

- Draft Drainage Criteria Manual (DCM) is nearly complete
- Developed working closely with City of Pueblo staff
- Worked with development community by facilitating conversations and addressing comments



Major Changes from Previous Storm Drainage Design Criteria and Drainage Policies

Current Pueblo Manual

- 1. General Provisions
- 2. Drainage Policy
- 3. Submittals
- 4. Drainage Design Criteria

Updated Manual

- 1. General Provisions
- 2. Stormwater Management Principles and Policies
- 3. Drainage Report and Construction Drawing Submittal Requirements
- 4. Floodplains
- 5. Rainfall
- 6. Runoff
- 7. Streets
- 8. Inlets

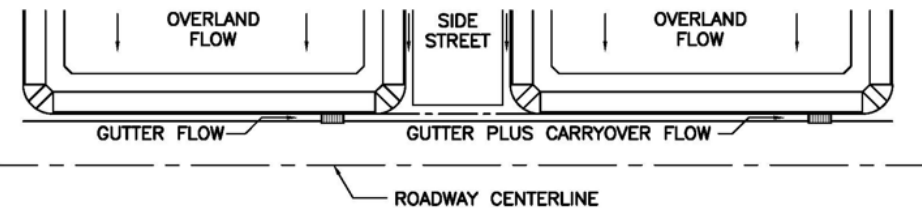
- 9. Storm Drains
- 10. Open Channels
- 11. Hydraulic Structures
- 12. Culverts and Bridges
- 13. Detention (Storage)
- 14. Stormwater Quality
- 15. Construction Site Stormwater Management and Erosion Control

Examples of Updates

- New, standardized calculation methods
 - Runoff
 - Inlet Sizing

DESIGN PEAK FLOW FOR SWALE OR ONE-HALF OF STREET BY THE RATIONAL METHOD
Pueblo-Inlet, Version 1.00 (August 2022)

Project: _____





[Show Details](#)
[Clear Worksheet](#)

Design Flow: ONLY if already determined through other methods (local peak flow for 1/2 of street OR grass-lined channel): *If you enter flows in Row 14, select "Street Inlet" or "Area Inlet" button, skip the rest of this sheet, and click "Add New Inlet" at bottom.		Minor Storm 	Major Storm 	cfs
Geographic Information: Enter data in the blue cells				
Site Type: ☒ Site is Urban ☐ Site is Rural		Flows Developed For: ☒ Street Inlet ☐ Area Inlet in a Swale		
Subcatchment Area = acres Percent Imperviousness = % NRCS Soil Type = A, B, C, or D				
		Slope (ft/ft) 	Length (ft) 	
Overland Flow =				
Gutter Flow =				

FILL IN THIS SECTION
 <--
 OR...
 FILL IN THE SECTIONS BELOW.
 <--



DRAFT FOR INTERNAL REVIEW

RATIONAL METHOD TO ESTIMATE PEAK RUNOFF

How do I use the Pueblo-Rational Workbook?

Pueblo-Rational, Version 1.00 (June 2022)
City of Pueblo Stormwater Utility
Pueblo, Colorado
www.pueblo.us

Click here for history of revisions to this workbook

Purpose: This workbook applies the Rational Method to estimate stormwater runoff and peak flows from small urban catchments (typically less than 90 acres)

Function:

1. To calculate the runoff coefficient, C for a catchment
2. To calculate the time of concentration, and then compare with the regional time of concentration limit (calibrated to CUHP). The smaller of the two is recommended as the rainfall duration for use with the Rational Method.
3. To calculate the design rainfall intensity and resulting peak flow rate.

Content: The workbook consists of the following sheets:

Rational Calcs	Performs Rational Method calculations, Q = CIA
Weighted C	Supporting tool to calculate area-weighted runoff coefficients from sub-areas.
Weighted Slope	Supporting tool to calculate length-weighted slope from multiple flow reaches.
Weighted Tc	Supporting tool to calculate reach-weighted time of concentration from multiple flow reaches.
Design Info	Supporting information from the MHFD Urban Storm Drainage Criteria Manual (USDCM)

Acknowledgements:

Workbook Development Team:
 Derek Rapp, P.E. -- Peaks Stormwater Engineering, LLC
 Ian Paton, P.E. and Stacy Wilson -- Wright Water Engineering, Inc.

City of Pueblo Stormwater Utility:
 Jeff Hawkins, PE, CFM Director of Stormwater
 John Sakariason, PLS, Stormwater Coordinator
 Robert Jagger, Deputy City Attorney

Mile High Flood District (MHFD)
 The basis for this workbook is the MHFD-Rational workbook and the Urban Storm Drainage Criteria Manual which were developed through research by the MHFD. A special thank you goes to: Holly Piza, P.E. and Ken MacKenzie, P.E.

Comments?

Revisions?

Direct all comments regarding this spreadsheet workbook to:

Check for revised versions of this or any other workbook at:

[Pueblo email](#)

[Downloads](#)

Examples of Updates

- New, standardized calculation methods
- Detention pond sizing

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

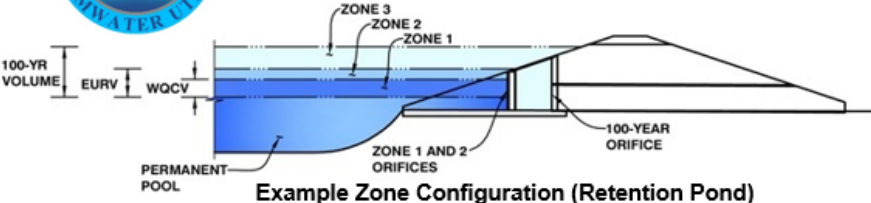


Project: _____

Basin ID: _____

Pueblo-Detention, Version 1.00 (August 2022)

[Clear Workbook](#)



Example Zone Configuration (Retention Pond)

Depth Increment = ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft ²)	Optional Override Area (ft ²)	Area (acre)	Volume (ft ³)	Volume (ac-ft)

Watershed Information

Select BMP Type

Watershed Area = acres

Watershed Length = ft

Watershed Length to Centroid = ft

Watershed Slope = ft/ft

Watershed Imperviousness = percent

Percentage Hydrologic Soil Group A = percent

Percentage Hydrologic Soil Group B = percent

Percentage Hydrologic Soil Groups C/D = percent

Target WQCV Drain Time = hours

Location for 1-hr Rainfall Depths = Central - Public Works Department

Examples of Updates

- New, standardized checklists for submittals



City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
stormwater@pueblo.us

DRAFT DRAINAGE REPORT CHECKLIST

INCOMPLETE SUBMITTALS PROLONG THE REVIEW PROCESS	
Drainage Report Submittal Checklist and Review Sheet	
Applies to Part I & II Subdivision Plans and Commercial Site Plans	
Project Location:	
Owner Name:	
Owner Email:	
Owner Phone:	
Owner Address:	
Engineer Name:	
Engineer Email:	
Engineer Phone:	
Engineer Address:	
Date Submitted:	
Submitted by (firm):	
Contact:	Phone:

Review Requirements (All reports will be rejected if missing these requirements)

Complete	Review Requirements
	Cover letter prepared by the professional engineer responsible for the preparation of the report.
	P.E. Certification: Signed and sealed certification statement indicating that the engineer of record has completely reviewed this drainage report.
	The drainage report and plan follow the formatting set forth in this checklist and the City of Pueblo Drainage Criteria Manual (DCM).
	The design follows the criteria set forth by the City of Pueblo's DCM.
	The design meets the City of Pueblo's MS4 permit

Questions?