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Utilities Policy Advisory Committee

Utility Infrastructure for an Urban Planning Area Assignment



**Analysis and Recommendations to the
Colorado Springs Utilities Board**

February 20, 2019

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Utilities Policy Advisory Committee

Utility Infrastructure for an Urban Planning Area Assignment Analysis and Recommendations

1. Executive Summary

In August 2018, the Colorado Springs Utilities Board directed the Utilities Policy Advisory Committee (UPAC) to study utility infrastructure for an urban planning area. Deliverables include analysis and responses to considerations, potential recommendations for utility standards in an urban planning area and policy recommendations. In September, UPAC began the assignment as a follow up from UPAC's Colorado Springs Utilities' Role in Economic Development assignment previously completed (2014-2015). Recommendations from the economic development assignment were considered for appropriateness during the current assignment.

For the purpose of the current assignment, an urban planning area is the Urban Planning Team Planning Area as defined by the City of Colorado Springs and as illustrated by the map located on page 5. Due to the short period of time allotted for UPAC to complete the assignment, the scope of UPAC's work was narrowed to downtown Colorado Springs with the goal of applying relevant outcomes to other areas of Colorado Springs Utilities' service territory.

According to the Downtown Partnership of Colorado Springs' Experience Downtown Plan of Development and Experience Downtown Master Plan, downtown is currently home to 16 catalytic sites, four influence sites and 42 large scale developments that are planned or underway. Downtown Colorado Springs brings in eleven times the tax revenue per square mile compared to the rest of the City. Our vibrant downtown is also home to some of Colorado Springs Utilities' oldest infrastructure.

UPAC studied information relevant to urban redevelopment situation analysis, downtown development activity, urban infill challenges, the draft PlanCOS for the City of Colorado Springs and population growth.

Additional topics considered during the assignment include:

- Potential funding sources
- Potential utility infrastructure upgrades for change of use and increased capacity
- Relocating existing utility infrastructure
- Line extension and service standards
- Development and design of the utility system

- Aging infrastructure
- Utility infrastructure capacity
- Easements and clearances (to include narrow alleys)
- Urban redevelopment areas (form-based code sector)
- Master planning areas
- Maintaining operability of existing utilities
- Undergrounding of existing overhead electric infrastructure
- Adaptive re-use and infill development
- Safety and water flow for fire suppression
- Balancing anticipated growth

The guiding principles developed during the UPAC economic development assignment (2014-2015) were used to help determine specific recommendations of the current assignment. The Economic Development Guiding Principles are:

- Optimize existing utility infrastructure
- Grow the customer base across all industries
- Ensure economic development programs have a neutral or positive impact to all ratepayers
- Partner with local entities to support community priorities
- Ensure a business-friendly culture by:
 - Eliminating policies and standards that no longer provide value
 - Proactively communicating rationale behind policies
 - Offering alternative development solutions within the boundaries of Tariffs, URRs and City Code
 - Providing greater access to existing utilities infrastructure and capacity information

UPAC recommends implementing a master plan approach to consider upgrades or changes in utility infrastructure in urban planning areas. Such an approach enables collaborative planning that will bring about efficient and innovative redevelopment as well as maintenance for utility infrastructure in a holistic manner. Master plan funding would be based on the previously mentioned guideline to have a neutral or positive impact to all ratepayers. Benefits of a master plan include: increased efficiencies; intentional coordination with the municipal government and other stakeholders; alignment with other infrastructure master plans; objective prioritization of required utility upgrades and redevelopment areas; fair and equitable cost sharing; improved finished product esthetics; and the same approach can be applied to other areas of Colorado Springs Utilities' service

territory. Additionally, a planful approach of leveraging existing utility infrastructure presents an economic advantage to rate payers.

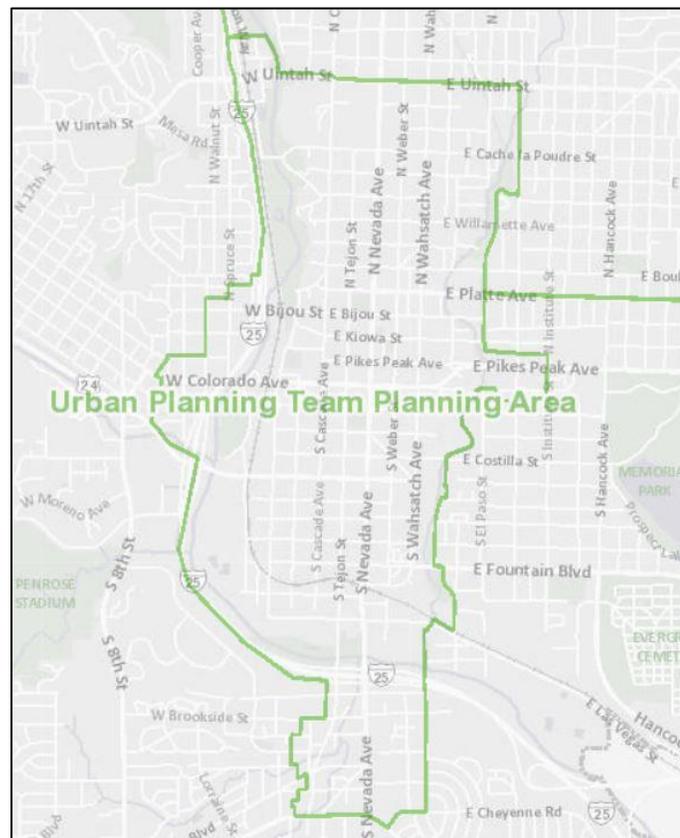
The master plan approach identifies scope and objectives in alignment with established economic development principles for urban planning area development. It also outlines processes for modernizing utility infrastructure in preparation for redevelopment.

The policy recommendation is the addition of an Urban Planning Area Utility Infrastructure Master Plan Guideline (G-12) applicable to the current Infrastructure (I-6) policy. The proposed guideline indicates the development and maintenance of an Urban Planning Area Utility Infrastructure Master Plan in which objectives and principles for urban planning area development are identified. The Master Plan should align with Colorado Springs Utilities' Strategic Plan, Integrated Resource Plans, PlanCOS and other City plans. Proposed components of the Master Plan are outlined in section eight of this white paper.

2. Assignment Scope

Review and recommend best practices for utility system upgrades and options for utility standards in urban redevelopment areas to benefit existing and new customers.

3. Urban Planning Area Map



4. Current Policy

Excellence in Governance - Infrastructure (I-6) Policy

INSTRUCTIONS		
Category:	Utilities Board Instructions to the Chief Executive Officer	Date of Adoption: May 16, 2018
Policy Title (Number):	Infrastructure (I-6)	Revision Date:
Monitoring Type:	Internal	Revision Number:
Monitoring Frequency:	Semi-Annual	

The Chief Executive Officer shall direct that annual, five-year and twenty-year infrastructure plans are developed for each utility service. Accordingly, the CEO shall:

1. Use a reasonable planning period to meet obligation to serve requirements for current and future customers.
2. Base plans on operational and regulatory requirements to provide safety, system reliability and security.
3. Maintain an organization-wide long-range infrastructure plan that considers the annual impact to the typical customer bill, maintains strong financial metrics, and sequences infrastructure projects to the extent operationally and financially practical.
4. Plan for replacement of aging infrastructure, information and operational technology upgrades, utility relocations for public works and road projects, life extension of existing systems and services to approved contract customers.
5. Coordinate infrastructure planning with the Municipal Government's Strategic Plan, Comprehensive Plan and Annexation Policy and other governmental agency plans.

5. Key Discussion Points

Urban Redevelopment Situation Analysis

- Substantial demand to develop in the urban core
- Infill and redevelopment are addressed in multiple community and master plans
- Significant urban infill challenges for developers and builders
- Utility upgrades and relocations are currently addressed project by project

PlanCOS (Colorado Springs Comprehensive Plan)

- Aligns with other City plans
- Identifies priority areas, including urban core
- Provides goals and recommendations



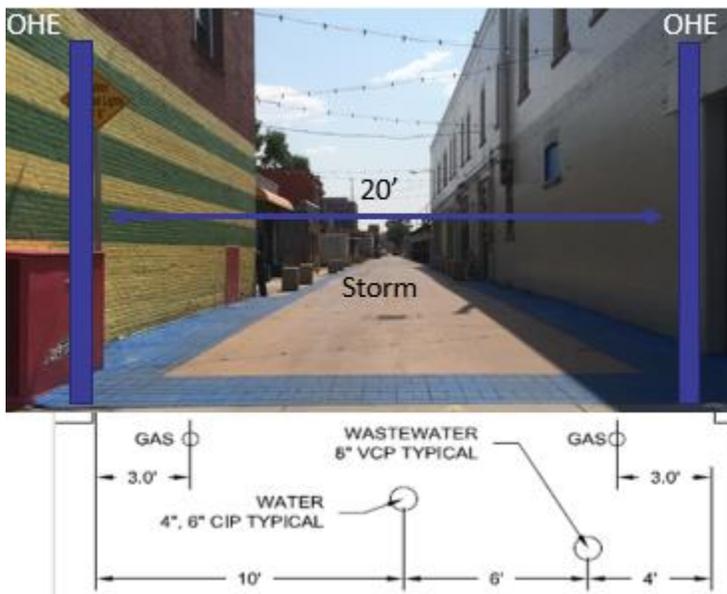
Redevelopment Recovery of Investment Case Studies

- Urban redevelopment is far more complex and often more costly than greenfield development
- Redevelopment provides ongoing additional revenue for Colorado Springs Utilities
- Economic advantage to rate payers

Utilities Infrastructure Challenges for Urban Redevelopment

- Narrow alleys, easement widths
- Aging infrastructure
- Overhead electric infrastructure
- Water flow for fire suppression as development occurs
- Inevitable inefficiencies of making upgrades project by project

Typical alley cross section



Typical utility excavation



Utility master planning approach has been successful in peer cities

UPAC received information about master plans being utilized in Omaha, Nebraska and Denver, Colorado.

Objectives for Utility Infrastructure in Urban Planning Area

- Establish a clear vision
- Identify principles, approach and timeline
- Align with City plans for redevelopment, SmartCOS, Stormwater
- Define criteria for prioritizing zones for utility infrastructure upgrades
- Develop a more efficient approach to urban infrastructure upgrades
- Be innovative with standards without compromising safety and maintainability
- Avoid duplicating existing inefficiencies
- Keep the plan flexible and dynamic
- Monitor performance measures
- Review the plan regularly to identify needed adjustments

6. Utility Infrastructure for an Urban Planning Area Considerations and Responses

1. What is the definition of and criteria for “urban planning area”?

For the purpose of the current assignment, an urban planning area is the Urban Planning Team Planning Area as defined by the City of Colorado Springs and illustrated by the map on page five.

2. What are the highest priority areas for utility system upgrades based on infrastructure age, condition, capacity and location requirements?

A master plan will utilize objective scoring criteria based on a variety of critical factors.

3. What are the benefits of considering utility infrastructure age, condition, capacity and location requirements in determining where approved urban plans should be established?

Prioritization and alignment with city planning efforts ensures the optimal use of limited resources by maximizing potential utility and tax revenues and minimizing cost/rate impacts.

4. What are utility industry best practices for infrastructure and standards in urban corridors?

A utility infrastructure master planning approach to urban redevelopment has been used successfully in peer cities. Colorado Springs has unique challenges and opportunities, however lessons from other utilities and cities will be incorporated into a master plan.

5. How should Colorado Springs Utilities collaborate with stakeholders to develop urban planning areas?

The City and other communities’ partners and stakeholders will be involved in the formulation and ongoing coordination and maintenance of a master plan.

6. *What are the benefits of dense redevelopment for new and existing customers?*

Dense development generates more revenue from utilities infrastructure helping alleviate rate pressures for all customers.

7. *What are options for aligning utility infrastructure plans with approved urban planning areas?*

The development of prioritization criteria will consider community master planning efforts.

8. *How would utility infrastructure upgrades be planned differently for a designated urban planning area?*

A master plan will replace piecemeal, reactive infrastructure upgrades with wholistic assessments and strategically coordinated infrastructure upgrades.

9. *How could utility standards for redevelopment and infill areas be established while maintaining reliability and safety requirements?*

A master plan will include alternative infrastructure solutions that address the unique circumstances of downtown urban redevelopment.

10. *What are funding options for utility system upgrades in urban planning areas?*

A master plan will evaluate and coordinate all potential funding sources.

11. *What are the limitations of planning from a greenfield perspective in an urban planning area?*

Urban redevelopment is far more complex and often more costly than greenfield development. A master plan approach will address the critical components of utility infrastructure age, condition and capacity requirements.

7. Policy Recommendations

The addition of an Urban Planning Area Utility Infrastructure Master Plan Guideline (G-12) applicable to the Infrastructure (I-6) policy.

GUIDELINES			
Guideline:	Urban Planning Area Utility Infrastructure Master Plan (G-12)	Date of Adoption:	TBD
Applicable Policy Title (Number):	Infrastructure (I-6)	Revision Date:	
		Revision Number:	

Urban Planning Area Utility Infrastructure Master Plan

1. Develop and maintain an Urban Planning Area Utility Infrastructure Master Plan which identifies objectives, strategies and principles for urban planning area redevelopment.
2. The Master Plan will align with Colorado Springs Utilities' Strategic Plan, Integrated Resource Plans, PlanCOS and other City master plans.

8. Proposed Master Plan Components¹

Scope, Objectives and Principles

Scope:

Establish an objective, transparent strategy to address utility infrastructure challenges in the downtown area both holistically and innovatively without compromising safety and maintainability while benefiting current and future ratepayers.

- The strategy will place priority on the best interests of Colorado Springs Utilities and our customers and will coordinate with the City's plans for urban development, such as the City's PlanCOS Comprehensive Plan, SmartCOS and stormwater plans.

Objectives:

- Determine best solutions for utility infrastructure utilization to include future utility usage and revenue growth without negatively impacting current or future customers
- Determine methods to cost-effectively modernize utility infrastructure
- Prioritize utility infrastructure needs determined by defined criteria
- Outline funding opportunities and assign fair, equitable costs
- Develop and maintain a living, working document

Principles:

- Optimize existing utility infrastructure
- Grow the customer base across all industries
- Ensure economic development programs have a neutral or positive impact to all ratepayers
- Explore funding options

¹ Preliminary; proposed components may change as the Master Plan progresses and lessons learned are implemented.

- Partner with local entities to support community priorities
- Ensure a business-friendly culture by:
 - Eliminating policies and standards that no longer provide value
 - Proactively communicating rationale behind policies
 - Offering alternative development solutions within the boundaries of Tariffs, URRs and City Code
 - Providing greater access to existing utilities infrastructure and capacity information

Stakeholders and Plan Alignment

Stakeholders

- Internal
 - CEO and Leadership Team
 - Management Team
 - Project teams from all four services
- External
 - City of Colorado Springs
 - Economic Development
 - Planning and Development, Urban Planning Division
 - Public Works
 - Water Resources Engineering (Stormwater)
 - Streets
 - Office of Innovation and Sustainability, SmartCOS
 - Telecommunications and fiber companies
 - Economic development partners
 - Colorado Springs Chamber & EDC
 - Downtown Partnership
 - Property owners, developers and neighborhood associations

Plan Alignment

- Colorado Springs Utilities
 - Strategic Plan
 - Electric Integrated Plan
 - Gas Integrated Plan
 - Integrated Water Resource Plan
 - Wastewater Integrated Master Plan
 - Service distribution and collection system plans
 - Integrated Long-range Infrastructure Plan
 - Five-year Service Business Plans

- Line Extension and Service Standards
- Other
 - City Code
 - City's PlanCOS Comprehensive Plan
 - SmartCOS Plan
 - Public Works plans
 - Experience Downtown Colorado Springs Master Plan
 - Experience Downtown Colorado Springs Plan of Development

Existing Utility Infrastructure Conditions Analysis

- Identification of active and planned utility infrastructure projects
- Current utility infrastructure asset management plans
 - Renewal/replacement schedules
- Analysis of current existing utility infrastructure
 - Inventory
 - Condition
 - Capacity
 - Age
 - Location
 - Safety
- Challenges
 - Water flow for fire suppression
 - Physical separation of infrastructure
 - Aged infrastructure
 - Overhead electric lines
 - Narrow alleyways
 - Lot to lot development/easements
 - Project by project focus

Future Utility Infrastructure Needs Analysis

- Future growth assumptions and forecasts
 - Land use
 - Density
 - Terms (5, 10, 20-year outlook)
- Utility demand/capacity analysis
 - Low, mid, high ranges
- Utility infrastructure costs
 - Low, mid, high ranges
- Challenges

- Difficulty anticipating future utility needs – land use/density
- Difficulty anticipating where growth will occur
- Utility capacity constraints
- Lack of utility infrastructure

Utility Infrastructure Options and Recommendations

- Potential solutions to address existing utility infrastructure and utility infrastructure needed for future growth
 - Asset management plan reprioritization
 - Replacements
 - Repairs
 - Innovative, safe alternatives
 - Joint trenching to support dense development
 - Internal vault rooms to support dense development
 - Lining water and wastewater lines as a more cost-effective solution than replacement
 - Standards variance and solutions team
 - No change needed – current utility infrastructure can support anticipated future growth

Implementation Plan

- Analyze all funding opportunities
 - Obligation to serve
 - Reprioritize utility infrastructure asset management plans
 - Capital/Operating and Maintenance (O&M) expense
 - Existing funding sources
 - System Improvement Program (SIP) – Electric undergrounding cost sharing
 - Business Improvement District (BID)
 - Metro District
 - Tax Increment Financing (TIF)
 - Urban Renewal Authority (URA) designation
 - Opportunity zones
 - Potential new funding sources
 - Recovery of investment
- Evaluate fair, equitable cost sharing opportunities based on defined criteria
 - Obligation to serve
 - Colorado Springs Utilities requirements
 - Age of infrastructure

- Safety, (i.e. water flow for fire suppression, access for maintenance/repair)
 - Capacity
- Development requirements
- Other funding mechanisms in place
- City initiated projects
- Ensure development has a neutral or positive impact to all ratepayers
 - Such analysis must be supported by clearly articulated assumptions and be based upon objective criteria
- Performance measures and plan review
- Long-term process
 - Maintain a living, adaptable plan
 - Roles and responsibilities
 - Master Plan updates provided to the Economic Development Sub-Committee (a sub-committee of the Finance and Strategic Planning Committees)

9. About the Utilities Policy Advisory Committee

UPAC is a seven-member citizens committee appointed by the Utilities Board. UPAC develops policy recommendations for consideration by the Utilities Board.

UPAC meetings are held on the first Wednesday of each month at 8:00 a.m. in the Blue River Board Room on the fifth floor of the South Tower in the Plaza of the Rockies (121 S. Tejon Street). All meetings are open to the public. Citizens are invited to comment during general discussion near the end of each meeting.

Meeting agendas, minutes, presentations and recordings can be accessed at csu.org.

UPAC Members as of February 2019:

Rex Adams, Chair

Scott Harvey, Vice Chair

Rich Kramer, Member

Balu Bhayani, Member

Gary Burghart, Member

James Colvin, Member

Larry Barrett, Member

Reginald Ash, Alternate Member

Nicole Inabinet, Alternate Member