



DATE: September 8, 2023
FILE NUMBER: MAPN-23-0002 – Karman Line Land Use Plan
RE: Master Plan – 3rd Review
Colorado Springs Utilities
(Mike Gackle, 719-668-8262, mgackle@csu.org)
(Bryan English, 719-668-8119, benglish@csu.org)

Action Items:

1. Provide Master Utility Plan illustrating proposed primary utility extensions and facilities, including points of connection, routing, alignments and looping, where applicable. For the reason stated below, include wastewater infrastructure to the extent possible; additionally, subject to annexation, provision of a Wastewater Model will be required in conjunction with the first Development Plan.
 - a. Springs Utilities is currently evaluating wastewater service options that will directly impact this property and the surrounding area and basin as part of the Banning Lewis Ranch Studies and Alternative Analysis. Staff expects to have a clearer understanding of wastewater conveyance and treatment by Q2 or Q3 2023 that will result in the selection of interim and long-term service alternative(s). Once selected, a more defined path for service, schedule, and developer responsibilities for this development and property can be established.

Item addressed. Please review additional comments below.

Water

- Storage tanks are not shown. Storage tank locations to be determined based on continuing analyses. Initial construction would require a temporary hydro-pneumatic pump station which eliminates the need for an initial storage tank. Future tanks would likely be ground storage facilities and owner/developer may be required to dedicate land or acquire sufficiently sized sites to accommodate elevated or ground storage facilities whether located onsite or offsite.
- Pump station location would be coordinated with Springs Utilities Water Planning and must provide both acceptable suction-side and discharge-side pressures, while minimizing additional parallel water mains. Owner/developer would be required to obtain property for the pump station at or near the required location, which is expected to be offsite.
- Future improvements would occur as development progresses. When the first water storage tank is constructed to serve the area, the temporary hydro-pneumatic pump station would be converted to pump directly to the new storage tank. Advanced cost recovery

agreements would be established to begin collecting funds for new facilities that would be modified or constructed in the future. Future facilities include pump stations, storage tanks, water mains and all associated appurtenances.

Wastewater

- Attached map shows the location of the proposed Karman Line Annexation in relation to planned wastewater infrastructure. Planned wastewater infrastructure represents the lead alternative from the Banning Lewis Ranch Study and is subject to change – no designs, nor definitive plans have been made at this time to construct the planned infrastructure. Karman Line is envisioned to connect to the planned infrastructure and would pay a pro-rata share of costs for the entire downstream infrastructure to the Las Vegas Street Water Resource Recovery Facility (LVSWRRF).
 - There is a future adjustment to the Bradley Road alignment due to completion of the future Gary Bostrom Reservoir that needs to be accounted for in the planned infrastructure routing. The Bradley Road realignment may also impact the southwest corner of the development, potentially trigger revisions to the Land Use Plan, including alterations to planning areas and roadway alignments.
 - Owner/developer would extend wastewater infrastructure on the property to serve additional development areas upstream of the planned wastewater infrastructure.
 - Lift station(s) and associated force main(s) may be phased (smaller initial phase to larger future phases) to ensure proper operation of the lift station(s) and force main facilities.
 - Owner/developer responsible for dedicating land and/or easements via plat and/or separate instrument and/or acquiring land and/or easements for all lift station(s) and force main facilities that are not located in a suitable right of way.
 - All gravity wastewater mains, including interceptors, trunk lines and collection lines would be sized for design build-out conditions.
2. Provide a phasing map or exhibit showing the proposed or anticipated development and construction phasing for the entire development.
- Item addressed. Phasing plan appears to be consistent with prior information provided.
 - Phase 1 area in southwest corner of property appears to adequately align with planned facilities and minimizes immediate water main construction and water quality concerns.

- Phase 1 area in northwest corner of property (P-21, Light Industrial/Office) presents significant water quality concerns and further evaluation would be required.

3. Complete/submit HGL Request Form

Item addressed.

4. Complete/submit Wastewater Master Facilities Form

Item addressed.

5. Provide and show 10-acre site for new electric substation. Site should be located somewhere within the southwest corner of the development along Bradley Rd and in relatively close proximity to Springs Utilities' existing 230kV transmission lines located west of and running directly adjacent to main property's western boundary.

Item addressed. Proposed substation site in northwest corner of property is generally acceptable. Significant mainline extensions from substation to initial development areas may be required and may increase developer-required cost contributions (i.e. Revenue Guarantee Contract) depending on phasing. Please refer to [Utilities Rules and Regulations](#) for more information concerning Revenue Guarantee Contracts.

Information Items:

- Water
 - Initial development of property requires full redundancy with two (2) transmission mains connected to and extending from approved locations on Springs Utilities' existing water system, with at least one (1) pump station and one (1) storage tank.
 - Depending on connection points, parallel transmission main alignments may exist
 - Full buildout requires two (2) pump stations and two (2) storage tanks.
 - Multiple transmission main alignments and storage tank configurations are possible.
 - Storage tanks do not provide redundancy.
 - With no existing elevated storage tanks (EST) within Springs Utilities' water distribution system, Springs Utilities initial preference is ground storage tanks (GST); however, GSTs would have to be located offsite, present water quality concerns and require long segments of water mains without service connections.
 - ESTs could be located onsite and would greatly reduce water quality concerns and better support development phasing.
 - Further discussion with staff and key stakeholders is necessary to determine support for using ESTs subject to the property's annexation.
 - Estimated timeframe for design and construction of GSTs and/or ESTs is 2-4 years.

- Natural Gas
 - Provision of natural gas to property requires design and construction of significant 150# natural gas main extensions from Springs Utilities' existing 150# system to the property and at least one (1) onsite district regulator station (DRS).
 - Estimated design and construction timeframe is 3-5 years.
 - Owner responsible for providing small site for DRS (DRS vault is typically 14'x7' and must maintain minimum separation requirements from certain surface improvements) .
 - Springs Utilities continues to review and monitor impacts of Clean Heat Plan on the provision of natural gas service.
 - Springs Utilities reserves the right to refuse new connections to its natural gas service system if state or federal regulations dictate or if Springs Utilities determines such action is necessary or desirable to meet greenhouse gas emission reduction targets.

- Electric
 - Provision of electric service to the property requires design and construction of dual-circuit 230kV transmission main extension from Springs Utilities' existing 230kV transmission system located directly west and adjacent to the core development area and an onsite electric substation.
 - Estimated design and construction timeframe is 3-5 years.
 - It may be possible to facilitate initial interim service through 600-amp extension from existing Springs Utilities' facilities.
 - Owner's expense.
 - May qualify as a stranded asset.
 - May be radial feed with capacity/SFE limitations.
 - Springs Utilities recommends owner/developer consider full electrification, including heat-pump systems and infrastructure, considering the yet unknown impacts of the Clean Heat Plan on the provision of natural gas service.

- Owner/developer may be assessed stranded-asset costs for any public utility facilities that cross land where connections are unlikely to occur and do not generate critical revenue to cover operation and maintenance expenses incurred by Springs Utilities.

- Contact Customer Contract Administration (CCA) at 719.668.8111 for an estimate of Development Charges, fees, Recovery Agreement Charges or other utility related costs that may apply to this development.
 - In instances where metered water and/or wastewater connections existed on the property, please contact CCA to discuss distribution of Water and/or Wastewater Development Charges to eligible lots.

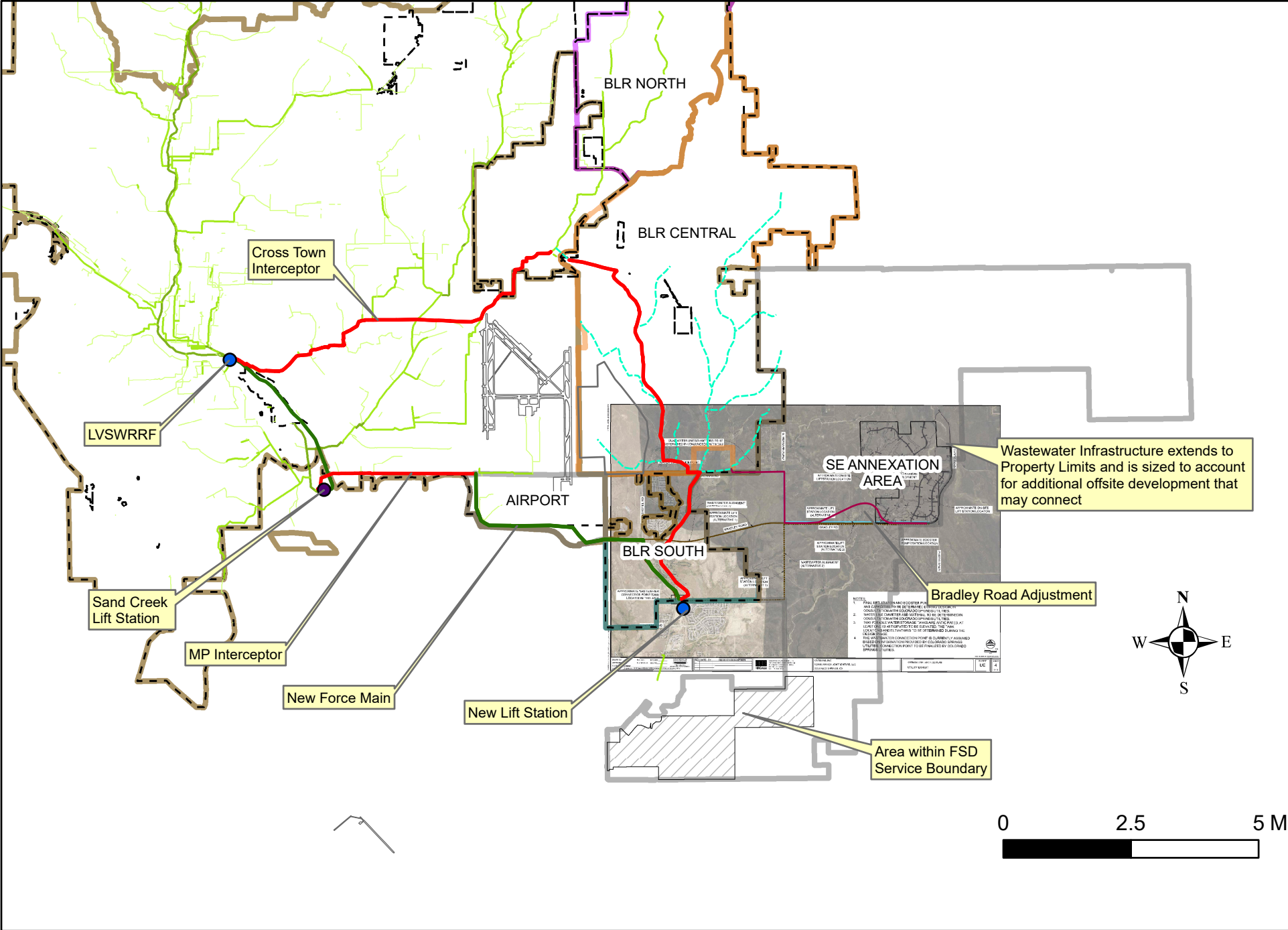
- When new water meters are proposed to serve the project or additional demand added to existing water meters, a Commercial Water Meter Sizing form will be required to be submitted to Colorado Springs Utilities prior to Service Contract issuance and building permit approval.

- Colorado Springs Utilities requires an Application for Gas and Electric Line Extension to be submitted along with a Load Data form or an Application for Gas Service Line Approval and/or Application for Elevated Pressure Approval prior to electric and natural gas system design for service to the project.

Refer to the Colorado Springs Utilities Line Extension and Service Standards or contact Field Engineering at 719.668.4985.

- Colorado Springs Utilities may require an extension contract and payment of contributions-in-aid of construction (or a Revenue Guarantee Contract) for the extension of electric facilities needed to serve the development. Regarding natural gas extensions, Colorado Springs Utilities may require an extension contract and an advance payment for the estimated cost to construct the necessary gas extensions.
- Improvements, structures and trees must not be located directly over or within 6 feet of any underground gas or electric distribution facilities and shall not violate any provision of the National Electric Safety Code (NESC) or any applicable natural gas regulations or Colorado Springs Utilities' policies.
- Improvements, structures and trees shall not be located under any overhead utility facility, shall not violate NESC clearances, and shall not impair access or the ability to maintain utility facilities.
- Landscaping shall be designed to provide the required clearances for utility facilities, to allow continuous access for utility equipment, and to minimize conflicts with such facilities.
- Colorado Springs Utilities requires wastewater and water construction drawings when new wastewater and water facilities are proposed. Plans can be submitted electronically to Utilities Development Services via www.csu.org.
- The water distribution system facilities must meet the Colorado Springs Utilities' criteria for fire flow, water quality, service interruption and pressure. To meet service interruption criteria, no more than fifty (50) homes on a dead-end water main line are permitted. The static pressure of the water distribution system shall be a minimum of 60 psi. Colorado Springs Utilities will assess the need for a Water Quality Plan based on information presented in the Development Plan. Colorado Springs Utilities may require a new or updated Water Quality Plan where construction phasing or the water system design differ from the approved Development Plan.
- Given the State of Colorado greenhouse gas emission reduction targets required by Senate Bill 21-264 known as the Clean Heat Plan, Springs Utilities strongly recommends subdivision construction meet the requirements of the Senate Bill, including:
 - Improved building insulation standards & construction methods
 - High efficiency (>95%) natural gas appliances
 - Electrification, including
 - High efficiency (heat pump) electric space & water heating
 - Demand side management programs
 - Distributed energy resources, such as rooftop solar & battery storage

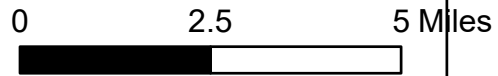
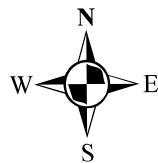
BLR SAA Planning Area Map



Wastewater Infrastructure extends to Property Limits and is sized to account for additional offsite development that may connect

Bradley Road Adjustment

Area within FSD Service Boundary



- NOTES:
1. FULL LIFE CYCLE COSTS AND OPERATING AND MAINTENANCE COSTS FOR THE PROPOSED WASTEWATER TREATMENT PLANT AND RELATED INFRASTRUCTURE ARE PROVIDED IN THE ATTACHED COST ESTIMATE REPORT.
 2. THE PROPOSED WASTEWATER TREATMENT PLANT AND RELATED INFRASTRUCTURE IS DESIGNED TO SERVE THE PLANNING AREA AND IS SUBJECT TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY'S (DEQ) REVIEW AND APPROVAL.
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