

EXHIBIT A – 96th Avenue Improvements

Second Creek CLOMR – LOMR

The District Engineer will provide a CLOMR and subsequent LOMR for the Second Creek drainage way with the design and installation of the 96th Avenue Roadway and Bridge. The report(s) will be completed per State and Federal requirements and processed with the appropriate local agencies. The reports and construction documents will include but not limited to:

- Creek Survey: Existing conditions survey of Second Creek channel: (Survey will include channel width and required distance for up and down stream review. Area to be determined with Public Works prior to survey)
- CLOMR: Study Report and calculations required to meet local, state and federal requirements.
- Channel improvement plans: (Anticipated Drop Structures and incorporation of the existing Second Creek Trail system into the design and construction documents. Final configuration to be reviewed and determined with the Commerce City Public Works division).
- Environmental Consultation/Study (FEMA requirement).
- 404 Permitting: The District Engineer has included the scope of service fees for a 404 permit. The determination if a 404 permit is required will be completed with the site investigation in the initial project phase. If the permit is not required the fees will be reduced accordingly.
- Bridge Hydraulic Design: Provided for design of bridge span and height.
- LOMR: Final Field Survey w/hydraulic remodel upon construction completion.
- Permitting fee: Permitting fee included based on the price requirement to process the reports and plans.

96th Avenue – Second Creek Bridge:

The Second Creek Bridge at 96th Avenue (the “Bridge”) will be designed to meet City requirements. The Bridge will include architectural details and features similar to the bridge crossing Second Creek at 104th Avenue.

The Bridge will provide a phased construction plan set. The construction plan set will provide construction documents for the northern half of 96th Avenue and requirements needed to minimize the future construction of the southern half of 96th Avenue. The plans include, but are not limited to:

- Design of the full East and West Bridge abutments.
- The northern lane decking and barrier guards
- Structural design for the Bridge towers for the northern half. If required in the design of the Bridge, the South Towers will also be included.
- Landscape walls and tie in for Second Creek Channel Improvements
- Bridge Lighting

- Sidewalk along northern portion of the Bridge
- Conduit for future utilities
- Incorporation of the existing Second Creek Trail system.

The design intent for construction of the Bridge is to remain within the limits of the agreed upon construction estimate between the District and the City. The District Engineer shall design the Bridge accordingly to meet City standards and requirements and to provide for future completion of the Bridge. The District Engineer will work with its sub-consultants to try to minimize disturbance to Second Creek Channel to the extent possible. Review of the construction documents, cost and phasing will be performed directly with the City's Public Works Department.

96th Avenue Construction plans:

The roadway plans for 96th Avenue will begin at approximately Nucla Street and conclude at Tower Road. All construction documents will be designed to meet the City's Engineering Construction Standards and Specifications. The construction plan documents will include, but not be limited to, the following:

Reports:

- **96th Avenue Drainage Report:** Drainage report will be provided in accordance with the City requirements.
- **Environmental Study:** All information found in the Environmental phase will be included with the 96th Avenue Construction Documents. This report will include required Phase 1 and Phase 2 studies. The District Engineer's wetlands consultant will perform a wetland determination and habitat assessment.
- **Construction Specifications:** Construction specifications will be prepared for the Project with regard to items proposed within the plan set for the 96th Avenue design.

Construction Documents:

- **Cover Sheet – Construction Quantities:** This plan will include all material requirements itemized in a construction quantities list based on a standard construction bidding process. Included on the construction quantities page will be associated earthwork volumes for the development project.
- **General Construction Notes:** All development and construction requirements required for the northern half of the road section.
- **Roadway Sections:** This document will provide roadway cross sections indicating the proposed road section at locations along 96th Avenue as well as the full build.
- **Existing Conditions Mapping:** The Existing Conditions map created in the Project base mapping phase will be included in the plan set. The plans will include all information as noted in that scope-of-services phase.
- **Right-Of-Way Plan:** The ROW Plan will provide the existing right-of-way and the right-of-way acquisition locations for 96th Avenue.
- **Demolition Plans:** Demolition plans are anticipated at Nucla Street, Buckley Road and Tower Road. The requirements and exact locations for demolition will be reviewed with the City's Public Works Department prior to design.

- **96th Avenue Plan and Profiles:** Plan Profiles for 96th Avenue will commence at the intersection of 96th Avenue and Nucla Street and proceeding easterly to Tower Road. Plans will show full roadway section but only design information for northern half of road section. Plans will include all vertical and horizontal control to build the plans. Included on the plans will be the curb return profiles and elevations. Intersection grading plans will be provided for Tower Road, Landmark and Telluride Avenue.
- **96th Avenue Cross Sections:** Roadway cross-sections will be provided from Nucla Street to Tower Road. Interval spacing will be provided at 50' increments.
- **Grading Plans:** Grading plans will account for all grading required for 96th Avenue, Second Creek Bridge and slope grading required with the design and construction of 96th Avenue northern phase. Grading plans will provide a full grading section of the roadway or percentage that allows just the northern half of 96th Avenue to be constructed as determined by the City.
- **Storm Water Management Plans:** Plans will provide all erosion control and Best Management Practices ("BMPs") required in conjunction with the construction of 96th Avenue. Plans will include all construction specific BMP details in accordance with City requirements and specifications.
- **Storm Drainage Plan and Profiles:** Plans will include plan and profiles for storm drainage system and inlets for 96th Avenue.
- **Storm Drainage Pond Plans:** Water quality ponds will be set forth on individual construction plans within the plan set. Provided on the plans will be detailed grading, pond volumes, outlet structures, rip-rap pads and sizing, overflow weirs, bench mark and associated details required for construction. Locations of the water quality/detention ponds will be determined by the Public Works Department to ensure locations will not negatively impact existing amenities in Second Creek or future developments.
- **Horizontal Control Plan:** Design for half section of the median, northern section of 96th Avenue, proposed and future entry sections for the northern half of 96th Avenue.
- **Traffic Signalization Plans:** Traffic signalization plans will be provided for intersection lighting and signalization. Plans will include locations of mast arm pedestals in the final location and any additional requirements required with the phasing of 96th Avenue. The intersection plan for Tower Road will specifically include the location of the mast arm pedestals, conduit requirements and span wire traffic signal design.
- **Signage and Striping Plan:** Signage and stripping required for the phasing of 96th Avenue and Tower Road.
- **Utility Relocation Plans:** Plans will provide for relocation of existing utilities and pedestals within the proposed 96th Avenue Right-of-Way.
- **Conduit Plan:** A conduit plan will be provided for location and sizing for all dry utilities and the proposed signalized locations along 96th Avenue.
- **96th Avenue Lighting Plan:** The light pole locations will be provided at a spacing distance per City requirements or at a distance agreed to by the City's Public Works Department.
- **Construction Details:** All details required to complete the construction documents.
- **Second Creek Bridge Plans:** Plans will be included in the overall construction documents from previous phase. Documents included will meet the need of the Second Creek Bridge construction and phasing. Plans will include but not be limited to head wall design, girder

design, tower design, decking design, traffic rail design, landscaping wall design and all details and structural details required for the construction and phasing of the Bridge.

- **96th Avenue Cost Estimate:** A quantity list and cost estimate will be provided with each plan set. The cost estimate will include all public improvements associated for 96th Avenue, Second Creek Bridge and Second Creek Channel improvements.

Additional Services:

- **Public Meetings and Coordination:** The District Engineer and associated sub-consultants will attend meetings and coordinate with project stakeholders as necessary to ensure an effective, efficient project design. Meetings shall include public hearings and presentations as scheduled with the City and meetings associated with the design review of the construction documents.
- **Second Creek Bridge Peer Review:** The District Engineer will work with City Public Works staff in selection for a Structural Engineering firm to provide peer review of the Second Creek Bridge plans on behalf of the City.
- **Right-of-Way/Utility/Construction Exhibits and Legal Descriptions:** The District Engineer will provide legal descriptions and exhibits for locations along 96th Avenue requiring additional right-of-way or utility easements associated with the development of 96th Avenue.
- **Right-of-Way/Easement Field Staking:** The District Engineer will provide field survey locates for right-of-way acquisition, easement acquisition, utility locates on a need basis for the City and the shareholders associated with the development of 96th Avenue.
- **Reproduction:** The District Engineer will provide blue line prints and reports per City requirements for review. Additional prints will be made available for public meetings and presentations. Color documents can be provided for public meetings and City use. Final approved Mylars will be provided under this scope of services.