

BELFORD NORTH METROPOLITAN DISTRICT – COMPARK SOUTH

SITE IMPROVEMENT PLAN – AMENDMENT NO. 1

SP21-028

- **Roadway and Drainage Improvements – Belford Avenue**
- **Bridge Construction Plans – Belford Avenue over Happy Canyon Creek**
- **Drainage Improvements – Happy Canyon Creek**

April 8, 2021

NARRATIVE

INTENT

The proposed Amendment No. 1 is for the approval of the Construction Drawings (CD's) for the improvements to Belford Avenue from future Wolf Fox Street to the eastern property boundary of Compark Village South Filing No. 1. The improvements will include the roadway and drainage improvements for one-half of Belford Avenue (Major Collector - 110-foot ROW), the bridge over Happy Canyon Creek, and the drainage and channel improvements for Happy Canyon Creek. When the improvements are complete, along with the extension of Belford east to Chambers through the Chambers High Point property, an important regional connection will be completed for the Town.

BACKGROUND:

The application is an amendment to the existing Compark Village South Filing No. 1 CD's, which were approved by the Town of Parker in late 2020. The CD's were part of the approvals for the Compark Village South Filing No. 1 Minor Development Plat, which was recorded in November of 2020. These improvements included the extension of the south one-half of Belford Avenue (a 110-foot ROW Major Collector) from Peoria Street east through the property to the future Wolf Fox Street. The CD's for the improvements also included roadway and drainage improvements and the construction of the crossing of Green Acres Tributary (as well as the associated drainage improvements). These improvements are underway and are anticipated to be completed in late 2021. The amendment will extend these improvements to the eastern boundary of the Compark Village South Filing No. 1 property.

SCOPE:

The submittal for the Amendment includes the CD's for Belford Avenue (a 110-foot ROW Major Collector), the south half of which will be constructed from the currently planned termination point, at Wolf Fox Street, to the eastern boundary of the Compark Village South Filing No. 1 boundary. The improvements will include the roadway and drainage improvements associated with Belford Avenue as well as the bridge crossing Happy Canyon Creek.

PROPOSED BELFORD AVENUE IMPROVEMENTS

Belford Avenue is a major collector with a 110-ft Right-Of-Way. The proposed Amendment No. 1 will construct 1,135 LF of the south half of Belford Avenue from Wolf Fox Street to the proposed Happy Canyon bridge. A full spectrum detention pond and storm sewer system will be constructed with Belford Ave. The detention pond will be located within Compark Village South Filing No. 1 Tract G adjacent to Happy Canyon Creek. The proposed detention pond will provide detention and water quality for the full build out of Belford Ave. from Wolf Fox Street to 165 ft east of Happy Canyon Creek bridge and a portion of Tract G.

PROPOSED BELFORD AVENUE BRIDGE OVER HAPPY CANYON CREEK

The proposed Amendment includes a two-span bridge carrying Belford Avenue over Happy Canyon Creek and a new regional trail. The bridge will be constructed to accommodate the ultimate Major Collector roadway section and will not require future widening or modifications when the northern half of Belford Avenue is constructed. Prestressed concrete girders and concrete deck are detailed for the superstructure, topped with an asphalt overlay, concrete sidewalks on both sides and Town of Parker's standard aesthetic bridge rail. The substructure will be abutments on concrete drilled caissons and a multi-column pier founded on concrete drilled caissons. These components are all common construction methods for bridges in the Town and surrounding area that will align with the Town's aesthetics and established maintenance practices. The bridge will provide a safe and attractive connection across the Happy Canyon floodplain as well as a safe extension of the regional trail network in the area.

PROPOSED HAPPY CANYON CREEK DRAINAGE AND CHANNEL IMPROVEMENTS

Happy Canyon Creek channel improvements will be made upstream and downstream of Belford Avenue and the Cherokee Trail south of E-470 will be reconstructed with a new multi-cell box culvert crossing. Happy Canyon Creek channel improvements include consideration for the future Regional Trail located along the west abutment and under the new bridge for Belford Avenue, three new grouted sloping boulder drop structures including steel sheet pile for grade control, select overbank grading along the channel itself and regrading a portion of the active low-flow channel including toe protection to preserve the existing embankment upstream of the new Belford Avenue bridge. The main objective for the drop structure design, minor channel improvements and associated revetment is to provide grade control, stabilization and minimize disturbance impacts to existing wetlands to prepare for future development improvements that may occur upstream. The new Cherokee Trail multi-cell reinforced concrete box culvert crossing will provide additional capacity for a variety of minor storm events to be passed under the trail rather than frequent trail overtopping that is experienced today. Overtopping revetment has been sized and provided on the adjacent side slopes to provide protection for larger storm events that will overtop the trail.

SUMMARY:

The proposed Amendment No. 1 will provide for the extension of the improvements to Belford Avenue from future Wolf Fox Street to the eastern property boundary of Compark Village South Filing No. 1. The improvements will include the roadway and drainage improvements for one-half of Belford Avenue (Major Collector - 110-foot ROW), the bridge over Happy Canyon Creek, and the drainage and channel improvements for Happy Canyon Creek. When the improvements are complete, along with the extension of Belford east to Chambers through the Chambers High Point property, an important regional connection will be completed for the Town.