

STAFF REPORT

ITEM: Floodplain Permit Application for the removal of the aerial crossing and reroute of the sanitary sewer line that crosses Bishop Creek near 727 East Boyd Street.

APPLICANT: City of Norman Utilities

ENGINEER: Nathan Madenwald, P.E.

BACKGROUND

The project involves rerouting an existing sanitary sewer line away from an aging aerial crossing over Bishop Creek near Boyd Street. The proposed work includes installation of a new sanitary sewer alignment by open-cut methods, construction of a new manhole to facilitate the reroute, removal of the existing aerial crossing, and abandonment of remaining portions of the existing sewer line in place. Disturbed areas will be restored to original grade following construction.

As noted in the engineer's certification letter, the proposed work will not alter the existing channel alignment, channel flow line, or floodplain conveyance. Temporary excavation and construction activities will be confined to the immediate work area, and any disturbed stream banks will be stabilized and restored to prevent erosion. The engineer has certified that the project will not result in any increase in the Base Flood Elevation.

STAFF ANALYSIS

The project is located within the Bishop Creek floodplain (Zone AE). Based on submitted documentation and engineering certification, the proposed improvements will not result in a rise in the Base Flood Elevation and will maintain existing floodplain conveyance.

Work consists primarily of utility improvements and removal of an existing aerial crossing that has reached the end of its service life. The project replaces vulnerable infrastructure with a more resilient configuration designed to minimize future flood damage and maintenance concerns.

APPLICABLE ORDINANCE SECTIONS (36-533)

- (e)(2)(a) - Fill restrictions in the floodplain
- (e)(2)(e) - Compensatory storage
- (e)(2)(j) - Utilities constructed to minimize flood damage
- (e)(2)(l) - Sanitary sewage systems
- (f)(3)(8) - No-rise considerations

DETAILED ORDINANCE ANALYSIS

(e)(2)(a) and (e)(2)(e) - Fill Restrictions and Compensatory Storage

Temporary excavation associated with installation of the sewer line will be backfilled to existing grade. No permanent fill is proposed that would reduce flood storage capacity. Disturbed areas will be restored following construction. The new manhole will occupy 1.24 cubic yards of volume, however, removing the existing concrete piers and anchors will compensate by removing 12.25 cubic yards of material.

(e)(2)(j) - Utilities Constructed to Minimize Flood Damage

The project replaces an exposed aerial sewer crossing with a buried system designed to reduce vulnerability to flood flows. Installation of new pipe and appurtenances will minimize risk of damage during flood events and improve long-term reliability of the sanitary sewer system.

(e)(2)(l) – Sanitary Sewer Systems

The sanitary sewer will be constructed using watertight pipe and joints designed to minimize infiltration of floodwaters and prevent discharge into floodwaters, consistent with ordinance requirements and standard City specifications. The new manhole will be located below the BFE, but will be covered with a watertight cover to prevent infiltration of flood waters into the Sanitary Sewer system or exfiltration of sewage into floodwaters. Specifications are in the application packet.

(f)(3)(8) – No-Rise Requirement

The Utilities Engineer provided a No-Rise Certification.

RECOMMENDATION

Staff recommends approval of floodplain permit application #737.

ACTION TAKEN:
