STAFF REPORT 08/21/2023 **PERMIT NO. 678**

ITEM: This Floodplain Permit Application is for the construction of Franklin Woods Blvd. and the construction of an 8" sanitary sewer extension and manhole in Zone A floodplain of a tributary of the Little River near the intersection of 36th Ave. NW and Franklin Road. This work is being done for the proposed Franklin Woods Addition.

BACKGROUND:
APPLICANT: Raven Investments, LLC
BUILDER: TBD
ENGINEER: SMC Consulting Engineers

The applicant is requesting a floodplain permit for the construction of a road to be built across the Zone A floodplain of a tributary to the Little River and to install an 8" sanitary sewer extension and manhole. The proposed site is located at the northeast corner of the intersection of 36th Avenue N.W. and Franklin Road in Norman, Oklahoma. The site is bound by the existing developments of Crystal Spring Addition and Community Christian School to the north, 36th Avenue NW to the west, and Franklin Road to the South. The site is also bound by undeveloped pastureland to the southeast and Frontage Road for Interstate No. 35 (I-35) to the east. The proposal is for mixed-use development of approximately 60.48 acres that will include commercial/offices, light industrial, multifamily residential, and single-family residential. The proposed development will be served with public streets, waterlines, sanitary sewer, stormwater collection and conveyance systems as well as multiple detention ponds for stormwater management.

The two main components of the application are a road across the floodplain constructed with a 10' x 4' RCB to convey the waters of the creek as well as the manhole and sanitary sewer extension that will extend into the Zone A flood zone. The proposed construction of the road on the northwest corner of the development includes an excavation volume of 2,993.96 CY and a fill volume of 2,943.64 CY, resulting in a net decrease in fill of approximately 50 CY in addition to the volume of the 100 linear feet of 10' x 4' RCB, bringing the total increase of storage capacity in the floodplain to just under 200 CY. Installation of the sanitary sewer line in the southeast corner of the development will involve trenching through the floodplain to install the 8" line and returning the disturbed areas to the original grade. According to the plans, the new proposed manhole will be located outside the floodplain.

The applicant submitted a flood study report that calculated base flood profiles for the Little River tributary under existing and proposed conditions using HEC-RAS modeling. The stormwater runoff from the upstream, offsite drainage areas and onsite drainage areas will be conveyed through the tributary and through the proposed culvert under the boulevard and discharging south to the Tributary G of the Little River. According to the report, the proposed 100-year flood profiles will be contained within the proposed common area and WQPZ drainage easement for Franklin Woods Addition. As a result of the proposed improvements, the HEC-RAS model shows that the BFE will be decreased slightly and should not cause adverse impacts up or downstream of the project.

STAFF ANALYSIS:
Site located in Little River Basin or its Tributaries? Yes ✓ no__

According to the latest FIRM, the site of the proposed work is located in the Tributary G of the Little River floodplain (Zone A). At the proposed site, the BFE is approximately 1157.0 ft.

Applicable Ordinance Sections:		Subject Area:
36-533	(e)2(a)……	Fill restrictions
	(e)2(e)…..……	Compensatory storage
	(e)2(j)…..……	Utilities constructed to minimize flood damage
	(e)2(l)…..……	In/exfiltration of flood waters in utility systems
	(f)3(a)(8)…..……...	No rise considerations

(e)2(a) and (e)2(e) Fill Restrictions in the Floodplain and Compensatory Storage – Fill is restricted because storage capacity is removed from floodplains, natural drainage patterns are adversely altered, and erosion problems can develop. Compensatory storage must be provided within the general location of any storage that is displaced by fill or other development activity and must serve the equivalent hydrologic function as the portion which is displaced with respect to the area and elevation of the floodplain.

According to the plans submitted by the applicant, excavation quantities exceed fill quantities by approximately 50 CY in addition to the storage of the 100 linear feet of the RCB, satisfying the ordinance requirements.

(e)2(j) and (e)2(l) Utilities constructed to minimize flood damage and to prevent in/exfiltration of flood waters in utility systems. All public utilities and facilities shall be constructed to minimize flood damage. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters.

The sewer line pipe joints have gaskets making the system watertight, and the entire system is leak tested prior to going into service. The new proposed manhole is being constructed out of the floodplain and is shown with an elevation greater than the BFE satisfying these requirements.

(f)3(a)(8) No Rise Considerations – For proposed development within any flood hazard area (except for those designated as regulatory floodways), certification that a rise of no more than 0.05 ft. will occur in the BFE on any adjacent property as a result of the proposed work is required. For proposed development within a designated regulatory floodway, certification that no increase in the BFE on any adjacent property as a result of the proposed work is required.

The project engineer has demonstrated through HEC-RAS modeling that there will be a decrease in the 100-year water surface elevation as a result of the improvements in the floodplain of the tributary satisfying this requirement.

RECOMMENDATION: Staff recommends Floodplain Permit Application #678 be approved.

ACTION TAKEN: _____