STAFF REPORT 06/20/2023 **PERMIT NO. 673**

ITEM: Floodplain Permit application is for the construction of a private driveway at 2451 60th Ave. NW in the 10-Mile Flat Creek Floodplain. This permit was postponed at the June 5, 2023 meeting pending additional information and modifications to be made by the applicant.

BACKGROUND:
APPLICANT: Jason Vincent
BUILDER: Armor Asphalt
ENGINEER: Earl Gary Keen, P.E.

The applicant is requesting a floodplain permit for constructing a gravel driveway to serve lots addressed as 2401, 2421, and 2501 60th Ave. NW. These lots are partially located in the Ten-Mile Flat Creek floodplain. The applicant owns the properties through a trust and has obtained a 50-foot wide roadway easement crossing the property addressed as 2401 60th Ave. NW. The owner plans to access these properties not from 60th Ave. NW but rather from Rock Creek Road to the south due to the high cost of constructing suitable culverts and entryways from 60th Ave. NW. The high cost is related to the fact that the bar ditch along 60th Ave. NW is a major drainage way. He currently plans to build a barn and residence on the middle lot of the three separate 5-acre lots indicated in the site plans for this permit application. The house and barn will be located outside the 100-year floodplain, but according to the engineer, the applicant plans on elevating the structures to two feet above the BFE. The engineer has indicated that while no plans currently exist to develop the additional two lots, that may change in the future.

As outlined in the submitted plans, the proposed driveway will a 12' wide gravel driveway with a six-inch thick layer of crushed rock. To avoid any compensatory storage requirements, the owner proposed to excavate six inches of soil prior to placing six inches of crushed rock. The owner will transport the soil removed to portions of his lots that are located outside of the floodplain. This includes all soil removed from the road, the bar ditches and any other soil removed from the floodplain. Bar ditches will be constructed to aid in draining water from the property and to protect the roadway by reducing moisture in the subgrade. Additionally, based on concerns raised by the Floodplain Permit Committee in previous meetings, the owner has proposed to place T-posts with reflectors along both sides of the drive so that the road is visible during flooding conditions. At the deepest point during a 100-year flood event, water could be expected to cover the road by up to 14 inches. The roadway is located at the edge of the floodplain, so floodwater velocities would be expected to be very low.

Update:
From the updated engineering report submitted by Gary Keen, P.E. following a meeting with City staff, himself and the applicant, Jason Vincent:

"Staff members explain a policy of restricting the level of development in a floodplain to the minimum necessary and suggested that the length of driveways and roads in the floodplain be minimized. Accordingly, this revised proposal calls for reducing the length of roadways and driveway to be constructed in the floodplain in this development. First, the proposed driveway has been largely changed to a private road, which is to named and addressed in accordance with the City's policy. The owner is agreeable to building the private road according to the City's private road standard (sic). In addition, the owner is agreeable to arranging for the private road to serve the first three lots north of Rock Creek Road. This private road will not serve the 4th lot north of Rock Creek Road, which is currently addressed as 2501 60th Avenue NW. As part of this development, a private driveway will be constructed to serve the 3rd lot north of Rock Creek Road. This lot is currently addressed as 2451. Furthermore, the location of the proposed house and barn on lot 2451 has been changed, and this change has resulted in a further reduction of the length of driveway and private road located in the floodplain.

During the previous Floodplain Committee Meeting, concerns were expressed about portions of the proposed roadways/ driveways being subject to flooding during a one percent chance flood. Currently, this amended proposal is to elevate all roads and driveway constructed pursuant to this application such that the top of the gravel road will be a minimum of 0.25 feet (3") above the base flood elevation (BFE).

Soil used to elevate the portion of the road/ driveway located in the floodplain will be obtained onsite for areas located within the floodplain. An extra-wide bar-ditch will be constructed on the west side of the private road to drain to Rock Creek Road. This bar-ditch will be construted to a depth 1.5 feet lower than the historic ground elevation or lower. One of the objectives of this wide bar-ditch is to provide a source of fill dirt and to meet the requirement for compensatory floodplain storage. During construction of this bar ditch, 499 cubic yards of soil will be removed from below the BFE in floodplain. Fill placed below the BFE when constructing the private road is calculated to be 274 cubic yards and fill placed below the BFE in construction of the driveway is 85 cubic yards for a total of 359 cubic yards, which is less that the 499 cubic yards of storage created during the construction of the private road.

In case it is discovered during construction that additional fill or compensatory storage is required, then soil can be removed from lot 2501, within the floodplain as shown on the exhibit . Removing soil two inches deep within the floodplain of lot 2501 will generate an additional 373 cubic yards of compensatory storage, if needed.

The owner intends to obtain all other permits required by the City of Norman, which includes a permit for the approach connecting to Rock Creek Road."

Staff has reviewed the amended plans and drawings and finds the information provided in the engineering report to be accurately represented.

STAFF ANALYSIS:
Site located in Little River Basin or its Tributaries? yes__ no✓

According to the DFIRM, the vast majority of the new road will be in the 10 Mile Flat Creek floodplain Zone AE. The BFE along the planned road drive is ~1128.0 feet.

Applicable Ordinance Sections:		Subject Area:
36-533	(e)(2)(a)……..……..	Fill Restrictions in the Floodplain
	(e)(2)(e)...……..….	Compensatory storage
	(f)(3)(a)(8) ……	No Rise Considerations

(e)(2)(a) and (e)(2)(e) Fill Restrictions in the Floodplain and Compensatory Storage – The use of fill in the floodplain is restricted. However, the placement of fill is allowed to elevate structures and construct drives and roads providing access to the structures. The applicant has indicated through their engineer's report that 6 inches of soil will be excavated before the 6 inches of crushed rock are brought in for the road construction, so additional compensatory storage should not be necessary. All spoils from construction and excavation will be removed from the floodplain.

(f)(3)(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 must be provided. For proposed development within a regulatory floodway, certification of no increase in the BFE is required. The engineer has certified that the project will not cause a rise in the BFE which meets this ordinance requirement.

RECOMMENDATION: Staff recommends that Floodplain Permit Application #673 be approved.

ACTION TAKEN: _____