



April 7, 2015

Project No.: 011-10-15-46.003.1  
SENT VIA: EMAIL

Mr. Nicholas J. Ponticello  
Ponticello Enterprises Consulting Engineers, Inc.  
1216 Fortna Avenue  
Woodland CA 95776

SUBJECT: Nishi Site—Stormwater and Flooding Review

Dear Nick:

West Yost Associates (West Yost) is pleased to provide this review letter of the Nishi Site's stormwater and flooding plan.

This review and comment letter is based on the:

- Project Description provided in the Notice of Preparation (NOP) of a Draft EIR and Scoping Meeting for the Nishi Gateway Project (January 28, 2015). Specifically, this review is based on the Drainage and Flooding Section of the Project Description.
- Nishi-Gateway – Draft Memorandum, Preliminary Site Water, Sewer and Drainage Infrastructure Concepts (February 27, 2015).

## **PROJECT DESCRIPTION DRAINAGE REVIEW COMMENTS**

There are two drainage channels on the Nishi Site, including a segment of the Old Putah Creek Channel, and a drainage ditch. Each of these is discussed more below.

The Nishi Site is correctly stated as not in a FEMA Special Flood Hazard Area, except the part of the site that is the Old Putah Creek Channel. Table 3-1 of the NOP allocates 3.3 acres of land for the Old Putah Creek Channel. Figure 3 of the NOP shows the Old Putah Creek Channel Area as a Park/Greenway. Additionally, the California Department of Water Resources Best Available Maps (various flood maps) shows no other floodplains covering the Nishi Site (even 200-year or 500-year floodplains). Park/Greenway is an appropriate use for a FEMA Special Flood Hazard Area.

The Old Putah Creek channel on the Project Site was historically part of Putah Creek, but now it is an isolated channel segment. The main channel of Putah Creek flows south of the City of Davis (City), and flows originating from the watershed west of the City do not enter the Old Putah Creek Channel. The Project Site's segment of the Old Putah Creek Channel is also isolated from other upstream sections of the Old Putah Creek Channel by fill placed west of the Union Pacific Railroad (UPRR). Consequently, there is only a small area tributary to the Project Site's Old Putah Creek Channel segment. The Project Site's segment of the Old Putah Creek Channel receives the runoff from the Nishi Site (46.9 acres, via the drainage ditch discussed below), the West Olive Drive Area (10.8 acres), the

ramp for the bike path under the railroad (less than one acre), and about 58 acres within the UC Davis Campus west of the Nishi Site (via the drainage ditch discussed below), for a total area of about 117 acres. From the Nishi Site, the Old Putah Creek Channel flows eastward. East of Drummond Lane, the Old Putah Creek Channel receives additional runoff from other areas of the City. The channel enters a 72-inch storm drain under Mace Boulevard and Chiles Road, and ultimately flow in another open channel to the Yolo Bypass.

It is stated in the Project Description that runoff generally flows in a southwesterly direction and accumulates on-site near the intersection of Interstate-80 (I-80) and the UPRR. The Project Description does not mention the drainage ditch that flows through the Nishi Site. This drainage ditch flows from the intersection of I-80 and the UPRR to the northeast, enters the I-80 right-of-way, and enters an 18-inch corrugated metal pipe that in turn discharges to the Old Putah Creek Channel. Additionally, off-site flows from about 58 acres of land on the UC Davis campus west of the UPRR enters the drainage ditch through a 24-inch drain crossing under the UPRR near the intersection of I-80 and the UPRR.

It is important that the existing drainage ditch and the discharge from the Nishi Site be correctly included in the existing condition evaluation for the CEQA review. Incorrectly assuming there is no existing discharge off-site when there actually is could lead to the need to oversize the proposed on-site detention basin.

It is stated in the Project Description that the proposed project would provide stormwater storage and conveyance facilities that would “likely” consist of the following components: Water Quality and Detention Volume. The language is vague as to what stormwater facilities will actually be part of the project (see the review of the drainage infrastructure concepts below).

Water Quality: The Nishi Site is currently in agricultural production. Thus, there may be fertilizer, herbicides, pesticides, and sediment in the runoff for existing conditions. With development, the types of pollutants may change to urban pollutants such as nutrients, pesticides, oil and grease, organic compounds, trash, and sediment. Water Quality is to be addressed through implementation of Low Impact Development (LID) measures consistent with the City’s Stormwater Quality Control Standards. LID measures can be implemented on the Nishi Site and will reduce impacts to stormwater quality. No LID measures can eliminate all pollutants, but LID measures used on-site can achieve the current engineering standard levels of treatment. However, deferring to the future the identification and sizing of specific LID measures means they cannot currently be fully evaluated. It is recommended that LID measures be implemented consistent with current City and industry standards for protection of stormwater quality.

Detention Volume: A land area of 4.0 acres has been allocated for on-site stormwater detention. In the Project Description, details of the sizing of the basin are deferred to the CEQA evaluation (provided in the Nishi-Gateway – Draft Memorandum, Preliminary Site Water, Sewer and Drainage Infrastructure Concepts (February 27, 2015), reviewed below). The City drainage standards require a detention basin to be sized for the 100-year storm event. The proposed 4.0 acre detention basin area should provide adequate area for the required detention basin (see the review of the drainage infrastructure concepts below).

## **NISHI-GATEWAY – DRAFT MEMORANDUM, PRELIMINARY SITE WATER, SEWER AND DRAINAGE INFRASTRUCTURE CONCEPTS STORMWATER REVIEW COMMENTS**

Drainage facilities for the Nishi site are conceptually described in this document. The detention basin is preliminarily sized to be 4.4 acre-feet. It is concluded that this storage volume can be implemented within the 4 acre site dedicated to the basin. The basin would discharge to the channel adjacent to Interstate 80, which in turn flows to the old Putah Creek channel as described above. Although this drainage plan is presented at a conceptual level, it can successfully be implemented on the Nishi site. There are no fatal flaws with the proposed drainage plan.

Issue: Because the improvements described in the Project Description and Nishi-Gateway – Draft Memorandum, Preliminary Site Water, Sewer and Drainage Infrastructure Concepts (February 27, 2015) are preliminary and may be changed in a future drainage study, the Nishi Project could result in upstream, on-site, or downstream increased flow rates, runoff volumes, or water surface elevations (WSEs) that could result in increased flooding.

Stormwater quality is to be protected through LID measures, including at-source drainage management features, reduction of new impervious areas, and disconnection of new impervious areas.

### **SUMMARY AND RECOMMENDATIONS**

From this preliminary review, it appears that a storm drain system can be successfully implemented on the Nishi site. No fatal flaws were identified through this review.

Recommended Action: Because the proposed drainage improvements are conceptual, the Applicant should develop a final drainage plan and construct final drainage improvements that:

- Meet all of the City, County, State, Federal drainage and flood control requirements.
- The final Drainage Plan should ensure that there are no increases in the water surface elevations that cause increased flooding depths or areas upstream or downstream of the Nishi site.
- The final Drainage Plan should use current, accurate topographic mapping of the Project site.
- The final Drainage Plan should present the results both graphically and in a tabular format that clearly quantify potential changes in water surface elevations and flooding depths to an accuracy of 0.01 foot.
- The final Drainage Plan should protect stormwater quality through compliance with the City and current industry standard LID measures and water quality best management practices.

We are happy to discuss these comments with the Applicant and/or their drainage engineer.

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Sincerely,

WEST YOST ASSOCIATES



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