

Thienes Engineering, Inc.

CIVIL ENGINEERING • LAND SURVEYING

March 15, 2021

David Ornelas
T&B Planning, Inc.
3200 El Camino Real Suite 100
Irvine CA 92602

RE: Moreno Valley Trade Center

Dear David:

The following is added description for storm drain requirements for the Moreno Valley Trade Center:

The project site is tabled to a storm drain system in Redlands Boulevard (Moreno MDP Line F-2). At this time, only portions of the Master Plan Storm Drain system are constructed. Recent improvements to the north of the project site (Aldi Foods) constructed a portion of the ultimate storm drain in Redlands Boulevard. This is a 60"-72" storm drain (plans prepared by Huitt-Zollars) that connects to an existing 51" storm drain in Redlands Boulevard approximately 200' north of Eucalyptus Avenue and continues approximately 350' south of Eucalyptus Avenue to where it daylight into an existing unimproved earthen channel. This storm drain and channel is located at the easterly portion of the project site.

Runoff from the offsite storm drain and the project site continues southerly in the unimproved earthen channel to an existing headwall located northerly of Dracaea Avenue. This is the upstream portion of Riverside County Flood Control and Water Conservation District storm drain Line "F-2". This is an existing 42" storm drain system that does not appear to be adequately sized for the peak flow rates specified in the recently constructed upstream storm drain system. This existing storm drain continues southerly past Brodiaea Avenue and discharges into an existing earthen channel (Line "F").

The amount of runoff in the existing 51" storm drain is not provided. The Huitt-Zollars hydrology report for the Aldi Foods site estimated peak flow rate for areas tributary to the existing 51" storm drain system as well as the ultimate condition peak flow rate from the newly constructed Aldi Foods Site. However, under interim conditions, the Aldi Foods site limits runoff to less than existing conditions. Similarly, the proposed project site will also limit runoff to less than existing conditions with the use a water quality/detention basin.

The initial drainage scenario was to daylight the offsite storm drain south of Encelia Avenue similar to how Aldi Foods daylighted the storm drain adjacent to the project site. With onsite detention on the project site, runoff would be limited to existing condition and flow southerly to the existing 42" storm drain system. This would maintain existing drainage conditions to the downstream headwall at the 42" storm drain system. In this condition, runoff not allowed into the

42" storm drain would stay on the westerly side of Redlands Avenue and ultimately continue southerly on the westerly side of the street.

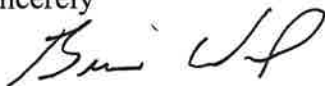
Instead of the initial scenario, the project site will be conditioned to construct the remaining section of storm drain between the existing 72" pipe near the northeasterly portion of the project site and the existing downstream 42" pipe as describe above. This portion of storm drain will be sized to convey the ultimate condition 100-year peak flow rate from the project site and upstream tributary areas. A 72" storm drain is proposed in Redlands Avenue adjacent to the project site. The storm drain will then increase to 78" at the point of connection from the project site. The 78" storm drain will continue southerly to the existing 42" storm drain system.

The existing 42" downstream storm drain system does not have the same capacity as the proposed 78" storm drain system. To avoid overburdening the existing 42" storm drain, a relief system will be designed to ensure that flow not allowed into the existing facility can discharge to the street. This will emulate existing conditions where runoff that is not currently allowed into the storm drain (via existing headwall adjacent to the Redlands Avenue) can then drain to the street. Regardless of how the storm drain systems connect, runoff exceeding the capacity of the 42" storm drain system remains on westerly surface of Redlands Avenue.

The project site will detain runoff to less than or equal to existing conditions for the 2-, 5-, 10-, and 100-year storm frequencies. This ensures that discharge from the project site will not impact downstream facilities.

Please call me if you have any further questions or comments.

Sincerely



Brian Weil
Thienes Engineering, Inc.



4/26/2021