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|----------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>CITY OF LAS VEGAS</b>                                                   |                                    | <b>DATE:</b>                                                                                      |
| <b>INTER-OFFICE MEMORANDUM</b>                                             |                                    | <b>December 12, 2022</b>                                                                          |
| <b>TO:</b><br>Land Development Services<br>Department of Building & Safety |                                    | <b>FROM:</b><br>Albert Sung, P.E.<br>Flood Control Project Engineer<br>Department of Public Works |
| <b>SUBJECT:</b>                                                            | Drainage Study for:                | <b>COPIES TO:</b>                                                                                 |
|                                                                            | <b>Owens Self Storage</b>          | Dwyer Engineering                                                                                 |
| <b>Cross Streets:</b>                                                      | NWC of Owens Avenue & I-15 Freeway | 120 W. Owens Las Vegas, LLC                                                                       |
| <b>File Number:</b>                                                        | F:\Depot\DSMemos\DS5626A.doc       | Bart Anderson, P.E., DevCo                                                                        |
| <b>Parcel Number:</b>                                                      | 139-22-404-005                     | CCRFCD                                                                                            |
| <b>Zoning Action:</b>                                                      | 22-0221-SDR1                       |                                                                                                   |
| <b>FEMA Flood Zone</b>                                                     | YES                                | NO <b>X</b>                                                                                       |
| <b>Proposed Storm Drain</b>                                                | YES                                | NO <b>X</b>                                                                                       |

| HISTORY                   | DATE RECEIVED | DATE REVIEWED | COMMENTS                   | REVIEW FEES     | FEES PAID<br>Payment Trn # |
|---------------------------|---------------|---------------|----------------------------|-----------------|----------------------------|
| 1 <sup>st</sup> Submittal | 11/21/2022    | 12/12/2022    | See Comments Below         | \$400.00        | 5044813: \$400             |
|                           |               |               | <b>TOTAL FEES (LDDRS):</b> | <b>\$400.00</b> | ----                       |

#### REMARKS:

The Drainage Study for the subject project has been reviewed and:

|          |                                                                                                |
|----------|------------------------------------------------------------------------------------------------|
|          | is approved subject to conformance to all City standards and the following conditions:         |
| <b>X</b> | must be resubmitted or supplemented including the following:                                   |
|          | is conditionally approved subject to Clark County Regional Flood Control District concurrence. |
|          | is conditionally approved subject to Clark County Public Works Department concurrence.         |

1. Provide a copy of the zoning/planning conditions associated with this site (**22-0221-SDR1**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.
3. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

4. **Figure 7 to Figure 10:** Reading with the *Grading Plan (C4.00)*, it appears that the existing offsite scarp to the west of the subject property (ie, EXOF1) drains through the subject site in a sheet flow manner. However, the hydrologic basin maps all show that the offsite flows are contained outside of the subject site without any inundation which is seemingly wrong.

Revise all drainage basin maps, the routing model in the HEC-1 runs and the *Summary Tables* accordingly in the next submittal.

5. **Grading Plan (C4.00):** There are two discharge points for the proposed project: one at the northeast corner and one close to the southeast corner of the site. This means that there are at least two subbasins instead of one as shown in Figure 9 and Figure 10.

Revise Figure 9 and Figure 10 to provide for at least two subbasins such as FUTON1 and FUTON2 to simulate a more accurate hydrologic model. Revise all subsequent calculations accordingly.

6. In Figure 9 and Figure 10, add a *Concentration Point CP2* at the south discharge point. Revise the *Summary Tables* accordingly.
7. At the south discharge point, provide a concrete flume from the proposed riprap pad to the concrete wall of the existing Regional Concrete Channel.

Provide connection detail of the concrete flume to the existing concrete wall of the Regional Channel in the next submittal.

8. At the north discharge point, it is not clear how the CP1 flow (28cfs) discharge to the existing channel. The flow is substantial and needs to be channelized. Provide construction note, details and sections to clearly show the proposed method of discharge.
9. **Detail Section A/7:** Provide hydraulic calculation to prove that the L-curb along the northern boundary contains the 100-year onsite flow. No flow is allowed to overflow the curb and spill over the new retaining wall into the adjacent property. Review and revise accordingly.
10. **Detail Section B/7:** Per the detail, the subject site accepts offsite flow from the west, provide a minimum 10'-wide public drainage easement (privately maintained by the property owner) to convey the flow through the site.
11. **Detail Section C/8:** Per the detail, the proposed development will create flow against the existing scarp in the adjacent property which may damage the scarp over time. The engineer should consider some offsite grading to eliminate the damaging situation and obtain a notarized letter of permission for the work from the adjacent property owner prior to the final approval of the drainage study.
12. **Detail Section C/8:** Provide hydraulic calculation to demonstrate that the L-curb along the east boundary will contain the 100-year onsite flow. No flow is allowed to overflow the curb and spill over the proposed retaining wall.
13. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

**NOTE:** Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

**END OF REMARKS**  
AYS

T/R/S: T20S/R61E/22  
AREA M-22