

<b>CITY OF LAS VEGAS</b>		<b>DATE:</b>
<b>INTER-OFFICE MEMORANDUM</b>		<b>March 18, 2022</b>
<b>TO:</b> Land Development Services Department of Building & Safety		<b>FROM:</b> Peter Jackson, CFM Flood Control Section Department of Public Works
<b>SUBJECT:</b>	Drainage Study for:	<b>COPIES TO:</b>
<b>Surelink RV &amp; Boat Storage</b>		Balova Engineering
<b>Cross Streets:</b>	Simmons St. and Holly Ave.	Holly & Simmons, LLC
<b>File Number:</b>	F:\Depot\DSMemos\DS5546A.doc	Bart Anderson, P.E., DevCo
<b>Parcel Number:</b>	139-20-817-001	
<b>Zoning Action:</b>	21-0348-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 Payment Trn #
1 <sup>st</sup> Submittal	2/15/2022 & 3/9/2022	3/18/2022	See Comments Below	\$400	\$400
<b>TOTAL FEES (LDDRS):</b>				<b>\$400</b>	<b>----</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. The Recorded Final Map for Twin Lakes Business Park (Book 136/ Page 83) shows easements that need to be reflected on the plans. It appears that the existing Radio Towers has extensive easements and underground facilities across the site that may impact the proposed improvements. Provide documentation of limitations and or approval of proposed structures and canopies. Label Document Number or Book and Page Number for all existing easements on the grading plan.
2. Flood Control acknowledges the existing Q100 = 298 cfs base flow identified at the Simmons St. and Holly Ave. intersection.
3. The referenced Twin Lakes Business Park drainage study (DS 2116) showed a 10' drainage easement for the Twin Lakes Ranch residential development to accommodate existing drainage from this site, the existing flow accommodated by the easement is identified as 3 cfs per this submittal. Provide flow depth calculations for Wild Jan, Ellington and Robin to show the impact of the additional 4 cfs that outlets to Twin Lakes Ranch Subdivision. As an alternative, adjust the drainage area so that the developed flow maintains the 3 cfs flow rate. Include the information on Exhibit DR2.
4. The Developed condition Drainage Map (DR2) does not match the Grading Plan (C2). The majority of Basin ND3 drains into ND2. Revise the HEC-1 analysis to match the proposed improvements. Provided updated Report, Tables, Exhibits and on-site calculations based upon the proposed improvements. Include the information on Exhibit DR2.

5. The study includes the BMP Swale capacity at the northeast corner of the site at the existing 10' wide parcel segment that drains onto Holly Ave. Provide the Q100 swale calculations. Revise the Detail F to accommodate the revised flows. Include the information on Exhibit DR2.
6. Provide orifice calculation for proposed wall opening(s) based upon the update flow rates.
7. Provide a 5' concrete transition Detail where Section F/C3 meets the back of sidewalk at the proposed sidewalk underdrain.
8. Provide revised Cross Section on the 10' Drainage swale to match the proposed plan slopes.
9. Provide flow depth calculations along the south and east sides of the project adjacent to the existing properties. Include the information on Exhibit DR2.
10. Update the Grading Plans to provide TC elevations at regular intervals at the upstream elevation adjacent to each adjacent property to show that there is positive drainage away from the existing grades shown at the block walls of the Twin Lakes Ranch Residential development. Update Detail Sheet C4 to reflect minimum slopes.
11. Verify that the FFE's for the existing homes along Wild Jan Drive are correct. It appears that some of the existing homes are split level where the lowest FFE is not shown.
12. Label all proposed contours on the Grading Plans.
13. Landscape areas are not allowed to drain over the sidewalk. Provide flow lines with grades and sidewalk underdrains for all landscape areas draining to the street. Revise all pertinent details accordingly.
14. Provide a detail on the flood wall for Section B/C4 *Holly Ave* and add 8" CMU solid grouted 3 courses above the adjacent sidewalk grades or provide Concrete wall design details.
15. Provide a cross section perpendicular to Section H/C4.
16. Provide adequate bedding for the rip-rap section as outlined in Section 705.4.3 of the CCRFCD's *Hydrologic Criteria and Drainage Design Manual*. Revise the rip-rap details accordingly.
17. Label Document Number or Book and Page Number for the existing Drainage Easement into Twin Lakes Ranch development shown on the grading plan, Sheet C3.
18. Provide the standard drainage compliance note on the grading plan: "*I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT (DS5546)*".
19. Provide a Note on all Grading Plans: *Post-Construction BMPs (PCBMPs) / Control Measures noted on the Grading Plans are mandatory permanent regulatory stormwater pollution controls. These PCBMPs must be installed per the approved plans and must be permanently maintained.*
20. Update the Stormwater Management Notes to the current version with the Improvement Plan submittal to Building Department – Land Development.

**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**  
HDR/PBJ

T/R/S: T20S/R61E/S20  
AREA M-20