

CITY OF LAS VEGAS			DATE:
INTER-OFFICE MEMORANDUM			November 3, 2022
TO: Land Development Services Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:		COPIES TO:
Summerlin West Village 27 Parcel M - Mass Grading			H2OFlo Engineering, LLC
Cross Streets:	Lake Mead Boulevard & Street Y		GCW Engineers/Surveyors
File Number:	F:\Depot\DSMemos\DS5619A.doc		Bart Anderson, P.E., DevCo
Parcel Number:	Portion of 137-21-501-001		
Zoning Action:	N/A		
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	10/25/2022	11/3/2022	See Comments Below	\$400.00	5014716: \$400
TOTAL FEES (LDDRS):				\$400.00	----

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:
X	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.

- The project proposes to mass grade **Parcel M** with numbers of temporary swales and berms at various locations of the parcel. Prior to final plan approval the developer must complete a maintenance and liability agreement for the interim drainage improvements (berms or channels) and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. Once the drainage study is conditionally approved, the engineer must submit an estimate of the quantities for constructing the facility and an exhibit that adequately shows the location and limits of the drainage facility to *City's Land Development Section* (229-6371) to begin the agreement and bond process.

In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.
- In all the exhibits such as FIG 3, FIG 4, FIG 5, FIG 6, FIG 7, FIGURE 8a, FIGURE 8b, FIGURE 9a and FIGURE 9b, show and delineate the *Village 27 / BLM Boundary* line clearly in the next submittal. This is to make sure that the proposed wash improvements along the north side of Parcel M do not encroach into the BLM jurisdiction.
- The subject engineer, GCW has also submitted another drainage study for "*Summerlin Village 27 Parcel M & E Boundary Drainage Improvements*" which proposed a 20'-wide concrete drainage channel along the northern boundary of Parcel M and the adjacent Parcel E. It appears that the subject improvements of mass grading will go before the concrete channel construction.

If indeed the mass grading goes first, it becomes an interim condition, the slope of the proposed berm facing the BLM conservation area must be armored for erosion protection, otherwise, mud flows will be inundating into the BLM property causing damage to natural conservation landscape.

Address and resolve in the next submittal.

4. The *Study* stated that a storm drain proposed along the north side of the existing *4125 Zone North Reservoir* is a temporary system. However, the *Study* did not address what it means by “temporary”, will it be removed or replaced in the future or abandoned in place?
5. The *Study* did not address any ultimate condition storm drain system for Parcel M. Shouldn’t this be a good time to design and construct the permanent onsite storm drain system with the rough grading? Address the timeline of constructing the overall onsite storm drain system in the next submittal.
6. **Figure 3 Existing Condition Map:** The HEC-1 Existing Condition Q_{100} flows do not match the flows shown on the Figure 3 summary table for CP3, CP4, CP5, A-1R.
7. **Figure 5 Interim Condition Map:** The HEC-1 Interim Condition Q_{100} flows do not match the flows shown on the Figure 5 summary table for CP5.
8. Facility P-8 (swale), velocity is greater than 5 ft/s (5.46 ft/s), check swale velocity/ lining.
9. Facility P-14 (swale), velocity is greater than 5 ft/s (6.76 ft/s), check swale velocity/ lining.
10. Facility P-7C, (Interim Summary Description table) clarify both side slope, only states the 2:1 not the 8:1 as shown in the cross section calculations.
11. Facility P-7B, (Interim Summary Description table) clarify both side slope, only states the 2:1 not the 4:1 as shown in the cross section calculations.
12. The flow in the Facility P-5 storm drain (25.37 ft/s) exceeds the maximum velocity allowed (25 ft/s) per the *CCRFCD Hydrologic & Hydraulic Design Manual*. Consider using a larger diameter pipe to reduce the flow velocity.
13. Provide cross sections for all proposed facilities. For example, there is no cross section for Facility P-6 to show how the 172 cfs will be conveyed through the proposed swale.
14. SDMH at STA 13+92.37 is more than 18’-deep require a special structural detail and calculation. Submit structural design and calculation to *City Building & Safety Department* for review and approval prior to the final approval of the drainage study.
15. **Sheet PP10** and the grading plans show a Reservoir staging area that belongs to LVVWD and is labeled as “Protect in Place”, but the area also shows proposed grading. Clarify what is to be done here.
16. Add RG to the Abbreviations list.

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/AYS

T/R/S: T20S/R59E/21
AREA K-21