

<b>CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM</b>		<b>DATE:</b> December 27, 2021
<b>TO:</b> Land Development Services Department of Building & Safety		<b>FROM:</b> Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
<b>SUBJECT:</b>	Drainage Study for:	<b>COPIES TO:</b>
<b>Moccasin Homestead West</b>		Strive Engineering
<b>Cross Streets:</b>	SWC of Moccasin Road & Homestead Road	Century Communities Nevada LLC
<b>File Number:</b>	F:\Depot\DSMemos\DS5528A.doc	Bart Anderson, P.E., DevCo
<b>Parcel Number:</b>	125-05-502-014	CCRFCD
<b>Zoning Action:</b>	21-0528-TMP1; 21-0528-VAR1 to -VAR8 & 21-0528-DVN1; -DVN2	CCPW
<b>FEMA Flood Zone</b>	YES NO <b>X</b>	
<b>Proposed Storm Drain</b>	YES <b>X</b> NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 <sup>st</sup> Submittal	12/9/2021	12/23/2021	See Comments Below	\$400.00	4568853: \$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.

**The City's policy is to minimize public drainage easements. Every attempt should be made by the developer/engineer to eliminate the use of public drainage easement which will cause perpetual maintenance issue. It appears that the proposed grading design can be revised to provide Type-A drainage pattern instead of the proposed Type-B drainage.**

**It is advised for the engineer to have a web meeting with City staff to resolve the onsite grading design prior to the submittal of the next addendum**

1. 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 *City Planning* approval with the next submittal.
2. 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>

3. The site is also adjacent to the jurisdiction of *Clark County* to the west. The engineer must coordinate with *Clark County Public Works Department (CCPW)* and incorporate any concerns for boundary conditions along the south and west borders. CCPW concurrence is required prior to the final approval of the study.
4. The HEC-1 model intensity used was 1.58 which is the intensity for 10-year not 100-year. The presented HEC-1 model flows are 10-year and 0.57 of 10 year. Rather than 100 and 10 year.
5. **Proposed Condition Drainage Map PR-01:** Tables should state the studies that flows are referenced from.
6. **Proposed Condition Drainage Map PR-01:** Per the reference material, the CP-A should be 3/28. However, the basin map says 3/27. Clarify discrepancies.
7. **Proposed Condition Drainage Map PR-01:** Basin map proposed condition summary map is inconsistent with HEC-1. For example, basin MOC flows on summary table are 1/1 and in the HEC-1 they are calculated at 1/<1. For HOM-N the summary tables list <1/<1 and in the HEC-1 they are calculated at 1/<1.
8. Cross section C – Q100 Trails End Full-Street Proposed cross section flowmaster was analyzed at 122 cfs. Per CP-D and the summary table, it should be analyzed at 124 cfs which is also inconsistent with the Proposed Condition Flow Rate Summary Table on the exhibit.
9. **GR-01:** Properly fill out the Flood Zone Information.
10. **GR-01:** *Detail Section A/DT-01* shows a 5'-landscape easement behind the 10'-wide *Multi-Use Trail*, however, the plan view does not reflect such a landscape area. Review and revise accordingly.
11. **GR-01:** Provide construction note for the proposed drop inlet in *Moccasin Road*. Provide plan & profile for the street and inlet.
12. **GR-02:** The *City Council* of the *City of Las Vegas* adopted an amendment to Title 20 of the Municipal Code in which Section 20.10.030 requires all public drainage easements to be concrete lined.  
  
Revise all proposed drainage easements and the pertinent detail sections to be fully concrete-lined in the next submittal.
13. **GR-02:** Show gutter slopes around the cul-de-sac.
14. The grading plans present L-curb and no depressed curb proposed for driveways. Review and revise accordingly.
15. **DT-01:** *Detail Sections B2, B3, E, and H*, should call out that the proposed block wall will be 3 course solid grouted.
16. **DT-01:** *Detail Section E* refers to a 5.0' WIDE VALLEY GUTTER DETAIL ON SHEET DT-02. This detail does not exist.
17. *Cross Section J/DT-01* shown along the north of Lot 7 does not match the *Detail J* provided on Sheet DT-01.
18. *Detail J/DT-01:* The proposed U-channel can go as deep as 2' and it is at the boundary with adjacent property which can cause tripping hazard. Provide wrought iron fencing along the U-channel for safety issue.
19. *Grading Construction Note #3* "CONSTRUCT 3' WIDE VALLEY GUTTER PER DETIIL B ON SHEET DT-02", this detail does not exist.
20. Block wall openings must be 16" x 48". The detail on DT-02 BLOCK WALL OPENING needs to designate this size.

21. Private streets must be public drainage easements. Provide a note on the grading plans: "Note: All private streets are P.U.E., Public Sewer Easements and Public Drainage Easements to be privately maintained by the HOA".
22. All drainage easements must be **PUBLIC** drainage easements to be privately maintained and common lots to be labeled on the grading plans and to be dedicated as such in the final map.
23. The engineer must provide a table on the grading plans that shows a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected.
24. Provide preliminary plan and profile sheets for all proposed perimeter streets. Plan and profile sheets must show existing and proposed grade at centerline, but may be preliminary in all other respects. These plans are necessary to determine the effect of the proposed development on the adjacent properties.

**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: T19S/R60E/05  
AREA G-05