

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: February 1, 2023
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:
Las Vegas Academy		Kleinfelder
Cross Streets:	NEC of 7 th Street and Clark Avenue	Clark County School District
File Number:	F:\Depot\DSMemos\DS5643A.doc	Bart Anderson, P.E.; DevCo
Parcel Number:	139-34-710-038, 139-34-710-039, 139-34-701-010, 139-34-712-018	
Zoning Action:	22-0593-SDR1 & 22-0593-VAC1	
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	1/17/2023	2/1/2023	See Comments Below	\$400.00	5109349: \$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.

1. Provide a copy of the zoning/planning conditions associated with this site (**22-0593-SDR1 and 22-0593-VAC1**) 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. **FIGURE 7, FIGURE 8 and FIGURE 9:** The drainage maps must show the entirety of the offsite basin(s), otherwise the labeled basin areas and flows cannot be verified. If the offsite basins and flows are referenced from other maps or studies, then provide a note for source referencing in the next submittal.
3. In the report, **Section 4.1.1 Offsite Watershed Condition** it states sub-basins ST7N and BGR-1 flows combine at CP4 and they continue through sub-basin BGR-2 and combine at CP5. However, this statement is not representative of what's shown in **FIGURES 7, 8 and 9**. Address and revise in the next submittal.
4. In the report, Page 25, *Table 6.5 (Interim Condition 100-Year Culvert Normal Depth Summary)*: First column, there is no Section 12 and 18 anywhere on the basin drainage maps. Review and revise accordingly.

5. In the report, same page, same table: The values in the "D (FT)" column are seemingly incorrect. Perform a better quality control in the next submittal.
6. **FIGURE 8.** Provide a hydraulic cross section for the proposed swale adjacent to the New Student Union and the Theater.
7. **FIGURE 9:** Onsite *Basin ON2-D* has several locations where flow is conveyed offsite. Break *ON2-D* up to calculate the various flow concentration points discharging offsite at such as the sidewalk underdrain east of the sports field, the driveway east of the parking garage and at *South 9th Street*.
8. General comment on the HEC-1 models for all drainage conditions – Provide HEC-1 routing for combination points.
9. *Flow Masters Calculations:* No analysis is shown for existing condition. The flow master calculations for interim condition are duplicated and shown on both the Existing and Interim conditions sections.
10. The grading plans proposed a few feet of pavement cut and replacement along *7th Street* and *10th Street*. As both streets are currently fully improved, explain if it is because of bad condition of pavement or it needs to open up the street for installing utilities lines in the next submittal.
Consult with *City Land Development* for the required width of repaving or overpaving.
11. **Sheet C3.01:** The high point in the proposed valley gutter (3.73 FG/HP) along the north side of the **New Gymnasium** is higher than the proposed finished floor at FF=2003.6 which is not acceptable. Raise the FF to be at least six inches above the adjacent high point.
12. **Sheet C3.02:** At the southeast corner of the **New Student Courtyard & Amphitheater**, (5) 2.0' Type CM2 inlets are labeled on the plan. However, it is not understood where those Type CM2 inlets can fit in. Address and resolve in the next submittal.
13. **Sheet C3.02:** The area inlets had been called out with various type such as 24"x24" SDDI, 3.0'x3.0' NDOT Type II and even Type CM2 with the same **Construction Note 31**. Explain why can't use the same type of inlet to be consistent?
14. In the grading plans, **Construction Note 31** refers to detail on *Sheet C6.02*. However, *Sheet C6.02* is not provided. It appears that *Sheet C4.XX* is mislabeled as *Sheet C6.XX*. Clarify and perform better quality control of plans in the next submittal.
15. **Sheet C3.02:** At the southeast corner of the **New Student Union**, a flow line elevation (96.14FL) is lower than the adjacent roadway elevation of 96.72TC/96.22FL. Review and revise accordingly.
16. Proposed **Student Union and Theatre** do not meet finished floor due to the swales adjacent the buildings. The report notes that "adjacent building wall will require flood proofing". The grading plans do not call out or detail any flood proofing.
17. 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.
18. Provide a note on all grading plans: All onsite storm drains and the associated facilities are privately owned and to be privately maintained by the *School District*.

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/R61E/34
AREA M-34