

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: September 14, 2023
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. <i>JS for</i> Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: Bracken Elementary School	COPIES TO: Taney Engineering
Cross Streets:	NEC of 27 TH Street and Jansen Avenue	Clark County School District
File Number:	F:\Depot\DSMemos\DS5700A.doc	Bart Anderson, P.E., DevCo
Parcel Number:	139-25-202-001	
Zoning Action:	XX-XXX-SDR	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	8/30/2023	9/13/2023	See Comments Below	\$400.00	5418530: \$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 (**xx-xxxSDR**) 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. The referenced 1997 City Wide Study is not appropriate for this site. The drainage study needs to reference the 2005 Central Neighborhood Flood Control Master Plan and identify any flow impacts. In the existing condition, Eastern Avenue is not a drainage basin cut-off. Provide flow split calculations to show existing flow impacts to the school site. The 2005 Central Neighborhood Flood Control Master Plan and the 2018 Master Plan Update show Eastern Avenue as a cut off. These planning tools do not take into account existing flooding.
3. The 2005 Central Neighborhood Flood Control Master Plan shows on adopted flow of 762 cfs during the 100-yr event street flow at Eastern and Searles. Provide flow split analysis for Searles and Demetrius at the Eastern intersections.
4. Based upon revised flow rates that take into account the existing impacts, provide updated flow depth calculations and exhibits. Verify that the Building Finish Floor meets the flow depth criteria.
5. **Worksheet for H – South BMP SWALE – 100YEAR:** The flow of Basin DON2 is 8 cfs as shown on Figure 7 - Developed Condition. This does not match the input of 7 cfs in the calculations. Clarify in the next submittal.

6. Per the Drainage Design Manual, use a Manning's N-Value of 0.016 for the entire street cross section. Revise all flow calculations accordingly.
7. **Grading Plans:** Where onsite pavement drains toward a curb, provide "L-type" curb and gutter.
8. **Sheet G2:** Show FL at Spill curb.
9. **Sheet G3:** Clarify locations of "L-type & R-type" curb and gutter along 27th Street.
10. **Sheet G3:** Show Sidewalk Grades at key locations (typical). Include sidewalk grades at PVC pipe underdrains. The typical detail calls out 0.75' of elevation change from sidewalk to flow line.
11. **Sheet G4:** It appears that section I/GD1 is creating a "no-man's land". Coordinate dual walls with the Community Development-Planning.
12. **Sheet G5:** Identify the surface improvements, pavements, grass, etc. Earthen swales less than 1% do not properly drain. Identify the proposed improvement from South of site to the courtyard.
13. Update Grading Certification to include the drainage study number (DS5700).
14. Add Note #6 in the **Storm Water Management Notes** block in all pertinent grading plans with the following as *Standard Note #6*:

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.

***** The City of Las Vegas Flood Control is standardizing the file naming of drainage studies and plans during the digitizing process. When saving the project files in the CD or thumb drive, please follow the system below:**

If drainage study only contains one combined file, use the following naming convention in Document Title:

- 1st Submittal DS and Plans (for first and original submittal);**
- 2nd Submittal DS and Plans (for second submittal (addendum #1)) etc.**

If drainage study contains multiple files, use the following naming convention in Document Title:

- 1st Submittal DS (for the report of the drainage study)**
- 1st Submittal Plan 1 (could be the drainage condition maps)**
- 1st Submittal Plan 2 (could be the improvement plans) etc.**

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.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, final approval of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

END OF REMARKS
JRT

T/R/S: T20S/R61E/S25
AREA M-25