DS #: 5249

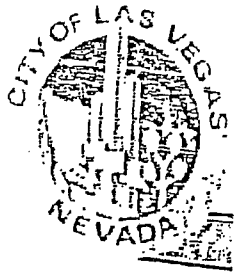
APN: 139-28.210.007

PROJECT: Mabel Hoggard Elementary School

SUBMITTAL: 1st

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: March 9, 2020
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: **Mabel Hoggard Elementary School**		**COPIES TO:** Atkins
Cross Streets:	NEC of Washington Blvd. & Tonopah Road		Clark County School District
File Number:	F:\Depot\DSMemos\DS5249A.doc		Bart Anderson, P.E., DevCo
Parcel Number:	139-28-210-007		
Zoning Action:	SDR-76079; VAR-78137; VAR-76077 & PMP-78198		
FEMA Flood Zone	YES	NO **X**	
Proposed Storm Drain	YES **X**	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	2/13/2020	3/9/2020	See Comments Below	$400.00	3744256: $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 (**SDR-76079; VAR-78137; VAR-76077 & PMP-78198**) 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. Identify Project location on all exhibits including the MPU maps.
3. Provide contours and flow arrows on ***Figure 8 Existing Drainage Exhibit*** and ***Figure 9 Ultimate Drainage Exhibit***.
4. On ***Figure 9 Ultimate Drainage Exhibit***, show the existing storm drain system within *Virginia City Avenue* that the onsite system is tying into.
5. The WSPGW provided for the *Ultimate Condition* does not match the provided ***C5.01 Storm Drain Plan***. The junction structures on the exhibit do not appear to match those in the model, and the invert elevations shown on the plans range from 2063.00 to 2059.72 while the WSPG model runs a system that has a much steeper elevation change from 2063.937 to 2052.37. Provide reference material of any other upstream or downstream systems modeled and provide explanation/clarification.

6. The WSPG for the proposed system in *Tonopah Drive* shows 14 cfs at the downstream end of the system, but should be modeling 15 cfs.
7. On Page 23 of the *Study*, the table for ultimate conditions flow summary is wrongfully referenced as 'Table 5'. That summary table is 'Table 4' on Page 24.
8. On *Standard Form 4* for existing condition, lag time for sub basin EX-ON 6 does not match the value input on the HEC-1 model.
9. On *Standard Form 4* for ultimate condition, lag time for sub basin U-ON 2 does not match the value input on the HEC-1 model.
10. On *Standard Form 4* for ultimate condition, area for sub basin U-ON 2 does not match the value input on the HEC-1 model.
11. It appears that the onsite catch basin will have approximately 1' of ponding before it can overflow to perimeter streets, 1' of water in a school is problematic, the engineer should try to reduce the ponding depth to 6".
12. **Sheet C4.01**: A dual 12"-storm drain is proposed under a building. Obtain approval from *City Building Department* prior to the final approval of the subject drainage study.
13. **Sheet C4.01**: Provide TC/FL elevations at all control points such as the beginning of curbs in *Tonopah Drive*.
14. **Sheet C4.02**: At the northeast corner of the plan, it is unclear how an elevation tag of "63.36EG" drains to the adjacent *Virginia City Avenue*. Review and resolve in the next submittal.
15. **Sheet C4.02**: An onsite storm drain is proposed (adjacent to the *Kindergarten Building*) to tie into an existing 24"-storm drain in *Tonopah Drive*. Provide a storm drain manhole for the connection. Revise all pertinent plans and construction notes accordingly.
16. **Sheet C4.02**: Replace an existing NDOT Type 2 drop inlet with a Type CM drop inlet with equivalent capacity for continuous L-curb & gutter in *Tonopah Drive*.
17. **Sheet C6.01 & Sheet C6.02**: Label the depth of the two proposed drop inlets in *Tonopah Road*. Provide Street Name on all pertinent plan & profile sheets.
18. **Sheet C8.00** was not included in this submittal and is referenced for most onsite cross sections, therefore not all cross sections could be verified.
19. Show the HGL on the storm drain plan/profile sheets for the systems within *Tonopah Drive* and *Virginia City Avenue*.
20. The following Finished Floors do not meet the twice the depth of flow, or minimum 6" above the adjacent TC:

Location	TC	FF Shown	FF Required
Central Plant	2066.87	2067.00	2067.37
Kindergarten Building	2066.69	2066.80	2067.19

21. Note that all the drop inlets lengths are in the multiple of 2.5'. Revise all pertinent construction notes accordingly.
22. Provide a separate chapter for the BMP calculations to show that the requirement for the large site is being met. Identify the proposed BMP landscape swales clearly on the grading plans.

23. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

24. Provide a note on the 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/28
AREA M-28