

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: 12/13/2021		
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:	
		Autonation USA Las Vegas		Foresite Group, LLC	
Cross Streets:	N Juliano Road and W Centennial Parkway		Las Vegas ANUSA, Autonation USA		
File Number:	F:\Depot\DSMemos\DS5531A.doc		Bart Anderson, P.E., DevCo		
Parcel Number:	12520804003, 12520804004, 12520804005, 12520804007				
Zoning Action:					
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	12/13/2021	12/28/2021	See Comments Below	\$400	4575137: \$400
TOTAL FEES (LDDRS):				\$400	----

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 following are comments pertaining to the subject site specific drainage study and grading plans:

1. This study requires an overall quality control review prior to resubmitting. A meeting with Flood Control is required before resubmitting. The following comments are provided to assist in the review of the project and do not represent everything that needs to be addressed in this Study prior to resubmittal. A complete detailed review of this Study will be provided at the next submittal, as the condition of this Study did not allow for a full detailed review.
2. Please follow Section 204 from the Hydrologic Criteria and Drainage Design Manual (HCDDM) ([http://gustfront.ccrfcd.org/pdf_arch1/hcddm/current%20manual%20\(complete\)/hcddm.pdf](http://gustfront.ccrfcd.org/pdf_arch1/hcddm/current%20manual%20(complete)/hcddm.pdf)) to prepare the drainage study, drainage plan, calculation and exhibits.
3. Incorrect APN is listed on Standard Form 1 and in the report. Revise accordingly.
4. Provide CCRFCD Standard Form 2 Checklist. Make sure the drainage/grading plan follows the items listed in the checklist.
5. The proposed grading shows several local low spots and highpoints throughout the site and does not seem to allow for all onsite flow to reach the proposed discharge locations.
6. Provide Existing Interim and Developed Condition Drainage Exhibits showing contours, basins, hydraulic section locations and all proposed facilities. Include tables showing the values calculated in the HEC-1 and the depth and velocity calculations.

7. Provide referenced materials from previously approved technical drainage studies must be included as part of study.
8. Provide sheets from the HCDDM to support the CN values used in Standard Form 4.
9. Provide information regarding the program used for the Hydraulic Analysis Reports or provide the equations used in calculations.
10. Address BMP requirements for the proposed parking lot based on criteria from Section 1500 of the HCDDM. Provide supporting calculations.
11. The HEC-1 model rainfall intensity used is 2.93 in for the 100-year design storm event and a ratio of 0.59 for the 10-year design storm event. The supporting documents provided show that the 100-year rainfall intensity should be 3.07 in and the ratio for the 10-year storm event should be 0.54. Revise HEC-1 model to reflect rainfall and ratio based on your calculation.
12. Provide cross sections that include the information used with the provided hydraulic analysis reports along with formulas used to determine the flow depth and velocity.
13. The proposed Centennial Parkway cross sections consider 9 additional feet of ROW width lowering the velocity and depth of flow in the street at section 1. Discuss this change in ROW or provide updated calculations. Please note that cross sections should stop at R/W. Also, address dry lane criteria and V*D in existing, interim and future condition.
14. The following Finished Floor (FF) does not meet the minimum depth of 2x the flow depth above the adjacent top of curb (TC):

Sheet	TC	FF Shown	FF Required
C-2	2521.9	2522.0	2522.82
15. Please follow Section 204 from HDCCM to prepare the drainage study, drainage plan, calculations and exhibits. The grading plans provided are generally unclear and require notes and callouts to show how flow within the site is intended to be conveyed. Provide notes for all items such as landscape areas, curb openings and sidewalk underdrains, as well as details and cross sections. Make sure to use Clark County Area Uniform Standard Drawings. Use City of Las Vegas General notes and cover sheet.
16. Provide calculations for the proposed beehive inlet and proposed landscape swale. Please refer to HCDDM for clogging factor.
17. Clarify the notes shown on the grading plans, for example 200 at the beehive inlet does not seem to reference any notes shown on the sheets.

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

T/R/S: T19S/R60E/S20
 AREA G-20