

**UPDATE #1
TO THE
TECHNICAL DRAINAGE STUDY
FOR
PARKWAY WEST OFFICE PARK**

**DRC Job# SN 21-114
CLV DS #05551-1**

**Prepared for:
Compass Development
3145 St Rose Parkway, Suite 200
Henderson, Nevada 89052
Ph: (702) 767-9205**

**Prepared by:
DRC Surveying Nevada, Inc.
7080 La Cienega Street, Ste. 200
Las Vegas, Nevada 89119
Ph: (702) 270-6119**

**Submitted to:
City of Las Vegas
Department of Development Services
333 N. Rancho Drive
Las Vegas, NV 89103**

November 2022

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

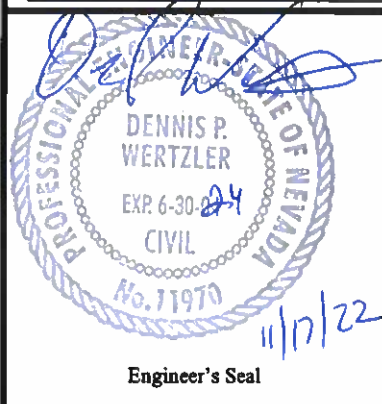
Name of Development: Parkway West Office Park DATE: November 17, 2022Location of development: a) Descriptive (Cross Streets) North/South Desert Crossing Ct East/West Center Crossing Rdb) Sect. 19 Twn. 20S Rng 60EName of Owner: Compass Development Assessors Parcel No.: 138-19-419-009Telephone No.: (702) 767-9205Facsimile No.: -Address: 3145 St Rose Parkway, Suite 200Henderson, NV 89052Contact Person-Name: Dennis WertzlerTelephone No: 702-274-3250Email: Dwertzler@drc-lasvegas.comFirm: DRC Surveying Nevada, IncAddress: 7080 La Cienega Street, Suite 200 Las Vegas, Nevada 89119

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading
☐	Parcel Map	☐	Planned Unit Development	☐	Other (Please Specify below)
☐	Large Parcel Map	☒	Building Permit		

1. Total Owned Land Area: At Site: 3.53 AC Being Developed/Disturbed 3.53 AC2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? YES ☐ NO ☒3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? YES ☒ NO ☐4. Proposed type of development (Residential, Commercial, Etc.)? Commercial5. Approximate upstream land area, which drains to the subject site? 14± acres6. Has the site drainage been evaluated in the past? YES ☒ NO ☐ If yes, please documentation:TDS for Crossing Care Campus (DS4821C) and The Crossings Business Center Phase VII (DS2950B)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site:

With the exception of the very small areas directly adjacent to the road, the entire site drains and discharges into the existing concrete channel directly north of this site.8. Briefly describe your proposed schedule for the subject project: ASAP

Submit this form as part of the required drainage study to the local entity which has jurisdiction over The subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

* Review and concurrence of the Clark County Regional Flood Control District is Required.

Local Entity File No.

Revision

Date

REFERENCE:

STANDARD FORM 1



CITY OF LAS VEGAS

MINIMUM DRAINAGE STUDY CRITERIA STANDARD FORM 2 CHECKLIST SUPPLEMENT

(Revised 5/18/11)

The following checklist is intended as a supplemental guide for the engineer preparing a Technical Drainage Study submittal to the City of Las Vegas. This supplement focuses on requirements specific to the City of Las Vegas. The requirements presented are in addition to the Clark County Regional Flood Control District (CCRFCD) Manual Standard Form 2. The listed items are the minimum information required prior to the City performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the CCRFCD Hydrologic Criteria and Drainage Design Manual (Design Manual).

An appointment must be made to preview this checklist in conjunction with CCRFCD Standard Form 2 prior to the City accepting a new drainage study for review. The engineer must contact the Flood Control Section at (702) 229-6541 to schedule a submittal appointment.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT

Yes	No	
☒	☐	A notarized letter from the adjacent property owner(s) allowing off-site grading. (A copy of the letter must be received prior to final acceptance of the drainage study.)
☒	☐	Copies of all conditions of approval for development related to this property. (e.g. zoning, use permit, tentative map, etc.) Verify compliance with conditions.
☒	☐	An electronic copy of the complete submittal is required to be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output device replicating your submittal. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats. If figures are in color, they must be scanned in color and saved as a separate file. by initial here, the engineer on record acknowledges that the electronic copy is an identical replicate of the original hard copy submitted to the City of Las Vegas.

II. GRADING PLAN INFORMATION

Yes	No	
☒	☐	(1) 24" X 36" copy of the Grading Plan, (including all Detail Sheets) sealed by the engineer.
☒	☐	Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street. Note: Proposed top of curb elevations must be provided for both sides of roadways even if only half street construction is required.
☒	☐	Label existing topography at a minimum 5 foot elevation interval including adjacent developments, finished floor elevations of existing buildings and top of existing curbs extending 100 feet around the perimeter of the site. (*Measured from the centerline of the adjacent roadway.)

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

II. GRADING PLAN INFORMATION		
Yes	No	
X		Proposed on-site and off-site storm drains and other flood control facilities with plan and profile sheets for public storm drains showing the class of pipe, (Class III, IV, V, etc.), design hydraulic grade line, (HGL) and 100 year storm flow. A public drainage easement must be provided over on-site storm drains conveying off-site flows. An overflow path must be provided over all storm drains.
X		All existing and "to be constructed" walls with cross-sections showing wall type, (e.g. block wall, retaining wall, flood wall, etc.), with limits clearly defined, adjacent ground elevations. Wall heights must meet current ordinances and in no case exceed 14 feet above the adjacent property.
X		Street slopes for both interior and perimeter streets. Note: The minimum slope for a roadway is 0.4 percent, a minimum 18-inch storm drain must be provided where minimum slopes cannot be met.
N/A		Back of lot elevations and lot drainage pattern for all lots including common lots.
N/A		Sites with a grade difference two feet above or below existing ground are required to have approval from City of Las Vegas Current Planning. Current Planning approval is required prior to final approval of the drainage study.
X		On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners. (The project must pass flows through the site every 600 feet where the project is blocking flow paths.)
N/A		This project uses a solid grouted stem wall (or approved alternate) at the back of sidewalk to provide erosion protection for landscaped areas where the depth of flow in the roadway exceeds the back of walk elevation. A corresponding cross-section detail is included.
X		Commercial and Common Lot Landscape areas are not allowed to drain over the sidewalk. The grading plans show flow lines with grades and sidewalk under drains for all landscape areas draining to the public ROW.

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
N/A		Concrete valley gutters are required in parking lots with slopes less than 1 percent. Slopes through cul-de-sac must be at a 1 percent minimum where flow is drained through the cul-de-sac.
N/A		Ten-foot wide public drainage easements to be privately maintained are allowed for flow less than 20 cfs. The depth of flow entering the easement must be checked using the submerged weir calculation.
N/A		The limits of the flood zones and the base flood elevations (BFE) must be shown on all grading plans for all developments within a Special Flood Hazard Zone A, AO, AE, etc.
X		Minimum finish floor elevation is 6 inches above highest adjacent top of curb. Finish floor calculations must include allowances for super elevations on curves and velocity head for tee intersections.
X		Finished floor elevations for buildings adjacent to public drainage easements must be a minimum of 18 inches above the Q100 weir of submerged weir elevation, whichever is greater.

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
N/A		Lots with "B and C Type Drainage" that drain from one lot to another through a drainage easement shall be required to install an underground nuisance drainage system or a 2-foot valley gutter. 16" x 24" minimum block wall openings are required for both options.
N/A		Bubblers are required across 80 foot and greater ROW streets. When flows exceed 10 cfs, bubblers larger than 18 inches will be required up to a maximum of 36". Inlets must be sized to match the pipe size provided.

- Contact the Flood Control Section regarding the drainage study review fee. These fees are payable at the time of submittal.
- The Drainage Study must be conditionally approved prior to submitting improvement plans to the Civil and Planning Development of the Department of Building and Safety for review.

This document is intended as an aid in preparing Technical Drainage Studies for the City of Las Vegas. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all-inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

DRC Surveying Nevada, Inc

Civil Engineering • Land Surveying • Planning
7080 La Cienega Street, Ste. 200
Las Vegas, NV 89119

November 17, 2022

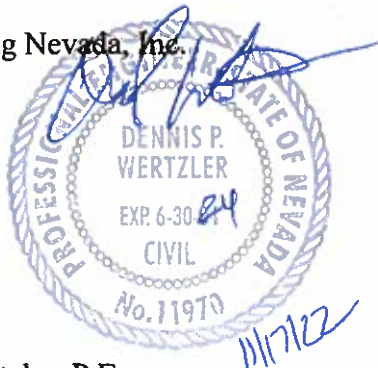
Albert Sung, P.E.
Department of Public Works

Subject: Update #1 to the Technical Drainage Study for Parkway West Office Park (DS05551-1)

Dear Mr Sung,

Since this project' TDS was approved in May, we have gone through multiple entity reviews during which we have made minor changes to a variety of onsite grades. For example, through the ADA review, some of the ADA stalls locations in front of the buildings were slightly tweaked for travel distances and spacing which thereby cause the grades to be adjusted to meet ADA requirements. Additionally some of the planter areas changed thereby us adjusting the grades. At the Northwest and the Northeast corners of the site, the LVVWD has a water line running east west so they wanted us to tweak a few grades so there high clearance vehicles could traverse that area if needed in an emergency repair situation. The adjustment of the grade tags were minor and will not affect the designed hydraulic conditions of the approved TDS for this project. The basins stayed the same, the building protections stayed the same, the driveway high points stayed the same and the discharge points stayed the same. The edits have no affect on the flow generated, direction of flows, velocity of flow, and depth of flows adjacent to our buildings finished floors.

Sincerely,
DRC Surveying Nevada, Inc.



Dennis P. Wertzler, P.E.
President

Chad Lark, E.I.