

**SUPPLEMENT TO THE
2nd RESPONSE TO COMMENTS
ON THE
TECHNICAL DRAINAGE STUDY
LONE MOUNTAIN REGIONAL PARK PHASE V
EQUESTRIAN PARK AND TRAIL**

865-006

August 2014

Prepared For:

**J.W. Zunino & Associates, LLC
3191 S. Jones Blvd.
Las Vegas, NV 89146
Phone: (702) 253-9390
Fax: (702) 253-1016**



G. C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS

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1555 S. Rainbow Blvd
Las Vegas, Nevada 89146
Phone: (702) 804-2000
Fax: (702) 804-2299**

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Lone Mountain Regional Park Phase V Equestrian Park and Trail Date: August 2014

Location of Development: a) Descriptive (Cross Streets) North/South: Red Coach
East/West: Conquistador

b) Section: 1, 6, 7 Township: 20S Range: 59E, 60E

c) APN : 137-01-501-002,137-01-601-002,138-06-301-001,138-06-201-008,138-06-201-007,138-06-101-001
138-06-101-001,138-07-103-002,138-07-103-004,138-07-199-001,138-01-101-003

Name of Owner: Clark County Real Property Management

Telephone No.: _____ Fax No.: _____ E-Mail Address: _____

Address: 500 South Grand Central Parkway, Las Vegas, NV 89155

Contact Person-Name: Rachael R. Dennis, P.E. Telephone No.: (702) 804-2000

* E-Mail Address: Rdennis@gcwallace.com Fax No.: (702) 804-2299

Firm: G. C. WALLACE COMPANIES

Address: 1555 S. Rainbow Blvd; Las Vegas, NV 89146

Type of Land Development/Land Disturbance Process:

<input type="checkbox"/>	Rezoning	<input type="checkbox"/>	Subdivision Map	<input type="checkbox"/>	Clearing and Grading Only
<input type="checkbox"/>	Parcel Map	<input type="checkbox"/>	Planned Unit Development	<input checked="" type="checkbox"/>	Other (Please specify below)
<input type="checkbox"/>	Large Parcel Map	<input type="checkbox"/>	Building Permit	<input type="checkbox"/>	Equestrian Park and Trail

1. Total Owned Land Area: At Site: +/- 285 acres Being Developed/Disturbed: +/- 7.5 acre

2. 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.): Equestrian Park and Trail

5. Approximate upstream land area which drains to the subject site: +/- 95 acres

6. Has the site drainage been evaluated in the past? YES NO If yes, please identify documentation: Lone Mountain Heights CLV 2904; Jensen and Hickam HTE 07-29544; Lone Mountain Ranch Estates HTE 07-19861; Jensen & Helena HTE 05-15072; Lone Mtn Reg. Park Phase 4 (Area 2) HTE 10-21347; Lone Mtn Park Phase 4 (Area 5) HTE 07-3452; Lone Mtn Park HTE 98-5605

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: 1) Jensen Street between Helena Avenue and Solitaria Drive, 2) CCRFCD 84" RCP Culvert @ Alexander Road, 3) Alexander Road, and 4) CC-215 Interim Beltway Channel/Gravel Pit.

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.

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

Revision	Date

Local Entity File No. _____

REFERENCE: STANDARD FORM 1

Rachael Dennis

From: Glenn S. Hale [Glenn.Hale@ClarkCountyNV.gov]
Sent: Thursday, August 14, 2014 10:19 AM
To: Rachael Dennis
Cc: Ryan Belsick; Layne Weber
Subject: RE: Lone Mountain Park

Morning Rachael

Thanks for double checking the table for any corrections. Please submit the revised table and supporting calculations in a supplemental letter. The supplement must be submitted at the counter and logged in as received. Since there was a revision to the hydraulic calculations, then the submittal must be signed, sealed and dated by a registered engineer.

I am putting together the approval letter today, so I'll add in the supplement to the letter as well.

Thanks
Glenn Hale, P.E.

From: Rachael Dennis [mailto:RDennis@gcwallace.com]
Sent: Thursday, August 14, 2014 10:07 AM
To: Glenn S. Hale
Cc: Ryan Belsick
Subject: Lone Mountain Park

Glenn,

Thanks for the phone call yesterday afternoon. I reviewed the following ditch calcs and the table summary on the figure as discussed:

OFF2B (max) – No revisions required

OFF6BR (max) – No revisions required

OFF7D2R (max) – No revisions required

OFF7E2-1R (max) – No revisions required

OFF10F (min) – The calculation shows the wrong Manning's n and has been corrected as attached. The attached table shows in red the revisions required. Changes to the depth and velocity are minor.

OFF11B – No revisions required

Each ditch calculation has a riprap calculation to calculate the minimum riprap required and then a separate calculation was also calculated using the appropriate Manning's n. If you look at the Riprap calculation for depth and velocity, it will not match the values in the table. The table is a summary of the ditch calculation results with the more appropriate Manning's n. In the case of OFF10F (min), I have attached a .pdf of the revised normal depth calculation and updated table. Since the changes are so minor, do you still want me to send over a hard copy? Let me know.

Thanks,
Rachael Dennis

Rachael R. Dennis, PE
Project Manager - Flood Control Division



1555 South Rainbow Boulevard
Las Vegas, Nevada 89146-2903
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D 702.804.2248 (direct)

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Note - Any files contained within are to be used for information ONLY.
Accuracy or design information to be verified from approved original
plans. Use of electronic media is at the sole risk of the user.

TRAPEZOIDAL CHANNEL

OFF10F (min)

Flow "Q"	16 cfs
Manning's "n"	0.035
Slope (%)	2.93
Bottom Width	0.0 ft
Side Slope (Lt)	3.0 H:1V
Side Slope (Rt)	2.0 H:1V
Radius	0.0 ft

OUTPUT:

Velocity	4.80 ft/sec
Depth	1.16 ft
Freeboard	1.13 ft
Total Depth	2.29 ft
Froude No.	1.11 ft
Superelevation	0.00 ft

Normal depth calculations using Manning's equation

$F_b = 1 + 0.025Vd^{1/3}$ Supercritical; $0.5 + V^2/2g$ Subcritical



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