

DS #:

4821-1

APN:

138-19-419-006

PROJECT:

Crossing Care Campus - Update #1

SUBMITTAL:

Supplement

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 11, 2017
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:
	Crossing Care Campus – Update #1	DRC Surveying Nevada, Inc.
Cross Streets:	NWC Center Crossing Rd & Desert Crossing Ct	Crossing Business Center 8, LLC
File Number:	F:\Depot\DSMemos\DS4821E.doc	Bart Anderson, P.E., DevCo
Parcel Number:	138-19-419-006	CCRFC
Zoning Action:	CRG-65728	
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	8/16/2016	8/30/2016	Not Approved	\$400.00	455008: \$400
2 nd Submittal	10/17/2016	10/27/2016	Not Approved	\$400.00	461971: \$400
3 rd Submittal	11/8/2016	12/6/2016	Conditional Approval	\$400.00	464670: \$400
CCRFC	1/24/2017	2/6/2017	Concurrence Recv'd	N/C	N/C
4 th Submittal	4/11/2017	4/24/2017	Not Approved	\$100.00	481386: \$100
Supplement	4/26/2017	5/11/2017	See Comments Below	N/C	N/C
TOTAL FEES (LDDRS):				\$1,300.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.

- Sheet GP2:** The proposed 20'-wide public drainage easement (privately maintained) must be dedicated and recorded by separate document prior to the final approval of the improvement plans. Provide an exhibit and legal description of the proposed easement to Ms. Rae Heller of City of Las Vegas Right-of-Way at (702-229-2139) for guidance of the recordation process.

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, conditional acceptance 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.

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

ays

T/R/S: T20S/R60E/19
AREA L-19

Andrew Whittaker

From: Albert Sung [YSung@LasVegasNevada.GOV]
Sent: Tuesday, April 25, 2017 5:11 PM
To: Andrew Whittaker
Subject: RE: Supplement to Update for Crossing Care Campus

Andrew,

I understand that there were only two comments in the last review. So I agree that you may submit the response as a supplement which means no fee will be required. Just send a runner with the package anytime, no appointment required. However, the review time will still be two weeks because my current load is pretty heavy.



Albert Sung, P.E.
City of Las Vegas – Dept. of Public Works City Engineer Division
Development Services Center (DSC) 7th Floor
333 N. Rancho Drive, Las Vegas NV89106
(702) 229-6541

From: Andrew Whittaker [<mailto:awhittaker@tce-lv.com>]
Sent: Tuesday, April 25, 2017 2:39 PM
To: Albert Sung
Subject: Supplement to Update for Crossing Care Campus

Hi Albert,

Do we need to schedule a meeting to submit a Supplement to the Update for Crossing Care Campus (DS 4821)?
Do you need a check for \$100 for a Supplement?

Regards,

Andy

Andrew E. Whittaker, P.E.
DRC Surveying Nevada, Inc.
702-270-6119

**SUPPLEMENT #1 TO
UPDATE #1 TO THE
TECHNICAL DRAINAGE STUDY
FOR
CROSSING CARE CAMPUS**

**DRC Job# SN 15-823
CLV # DS4821**

**Prepared for:
The Calida Group
10777 W. Twain Avenue, Suite 115
Las Vegas, Nevada 89135
Ph: (702) 990-3906
Fx: (702) 925-5506**

**Prepared by:
DRC Surveying Nevada, Inc.
7080 La Cienega Street, Ste. 200
Las Vegas, Nevada 89119
Ph: (702) 270-6119
Fax: (702) 932-6129**

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

April 2017

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Crossing Care Campus Date: August 5, 2016

Location of Development: a) Descriptive (Cross Streets): North/South Desert Crossing Ct East/West Center Crossing Rd
b) Sect. 19 Twn. 20S Rng. 60E

Name of Owner: Crossing Business Center 8, LLC

Assessor's Parcel Number: 138-19-419-006

Telephone Number: _____

Facsimile Number: _____

Address: 444 S. Flower St. #2100, Los Angeles, CA 90071

Contact Person - Name: Dennis Wertzler, P.E.

Telephone Number.: (702) 270-6119

* Email Address: dwertzler@drc-lasvegas.com

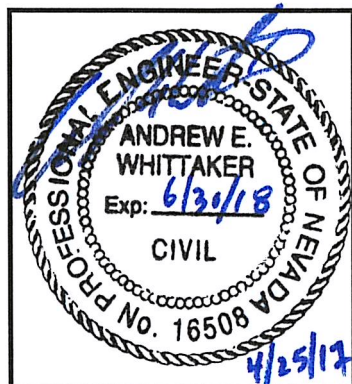
Firm: DRC Surveying Nevada, Inc.

Address: 7080 La Cienega Street, Ste. #200, Las Vegas, NV 89119

Type of Land Development/Land Disturbance Process:

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

- Total Owned Land Area: At site: 11.01 acres +/- Being Developed/Disturbed: 11.01 acres +/-
- Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? : YES** NO
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control Master Plan Facility? : YES** NO
- Proposed type of development (Residential, Commercial, Etc.): Commercial
- Approximate upstream land area which drains to the subject site: _____ sq. mi.
- Has the site been evaluated in the past? YES NO If yes, please identify documentation:
The Crossings Business Park Phase VII
- If known, please identify the proposed point(s) of runoff from the site: _____
- 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 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.

Revisions	Date
Addendum #1	10/17/2016
Addendum #2	11/7/2016
Update #1	04/06/2017
Supp #1 to Update #1	04/25/2017

Local Entity File Number _____

Engineer's Seal

REFERENCE:

STANDARD FORM 1

DRC Surveying Nevada, Inc

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

April 25, 2017

Albert Sung, P.E.
City of Las Vegas
Land Development Services
333 N. Rancho Drive
Las Vegas, NV 89103

**Subject: Technical Drainage Study for Crossing Care Campus
DRC # SN 15-823**

**Re: Supplement #1 to Update #1 to the Technical Drainage Study for Crossing
Care Campus
DRC Job #: SN 15-823
CLV # DS4821**

Dear Mr. Sung,

We have received the review comments for the above-mentioned study dated April 24, 2017. The comments are restated and addressed below.

- 1. Sheet GP2: Provide a minimum 20'-wide public drainage easement (privately maintained) enclosing the proposed interim swale for the southwest corner of the site to the proposed discharge point. It is understood that this drainage easement will be temporary and can be vacated and replaced with a permanent easement once the future building in the next phase is finalized.**

The grading plan was revised to show a public drainage easement (privately maintained) as requested. The alignment of the swale was revised to be within a future drive aisle so that the easement would less likely need to be changed.

- 2. Sheet GP2 and GP4: A proposed 18" storm drain connecting Drop Inlet #3 and SDMH #1 is at an awkward angle, ie, against the main flow direction of the downstream storm drain mainline. Review and revise the storm drain accordingly in the next submittal.**

The grading plan and storm drain calculations (Standard Form 6) were revised to show an additional manhole between Drop Inlet #3 and SDMH #1 so that the angle of the storm drain is not against the main flow direction.

DRC Surveying Nevada, Inc
Supplement #1 to Update #1 to the
Technical Drainage Crossing Care Campus

The grading plans were revised and provided in the appendix of this report. If there are any other questions or additional information necessary, please contact this office at (702) 270-6119.

Sincerely,
DRC Surveying Nevada, Inc.



Andrew E. Whittaker, P.E.

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: April 24, 2017
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	is conditionally approved subject to Clark County Public Works Department concurrence.

- Sheet GP2:** Provide a minimum 20'-wide public drainage easement (privately maintained) enclosing the proposed interim swale from the southwest corner of the site to the proposed discharge point. It is understood that this drainage easement will be temporary and can be vacated and replaced with a permanent drainage easement once the future building in the next phase is finalized.
- Sheets GP2 and GP4:** A proposed 18" storm drain connecting *Drop Inlet #3* and *SDMH #1* is at an awkward angle, ie, against the main flow direction of the downstream storm drain mainline. Review and revise the storm drain accordingly in the next submittal.

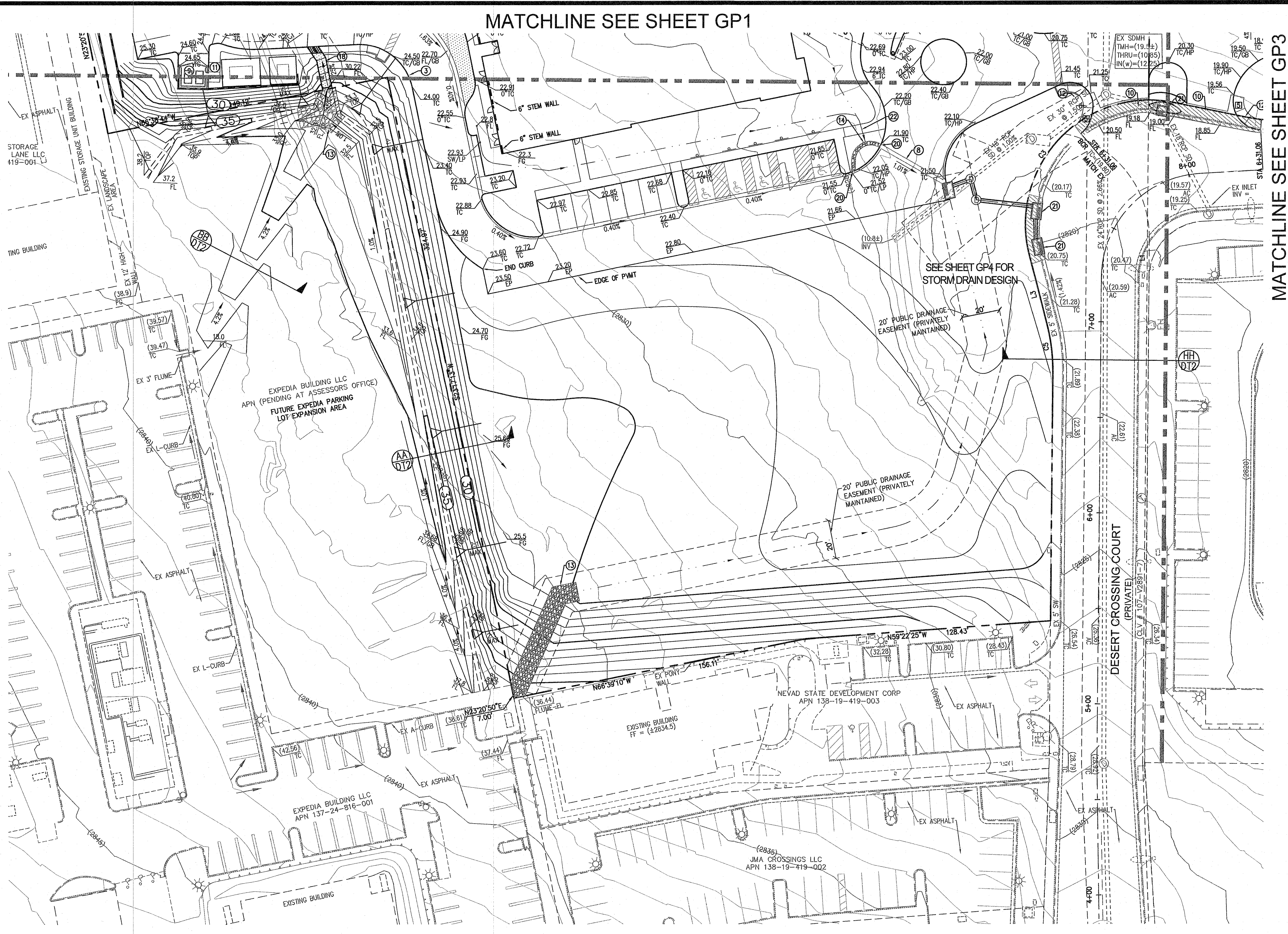
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END OF REMARKS
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T/R/S: T20S/R60E/19
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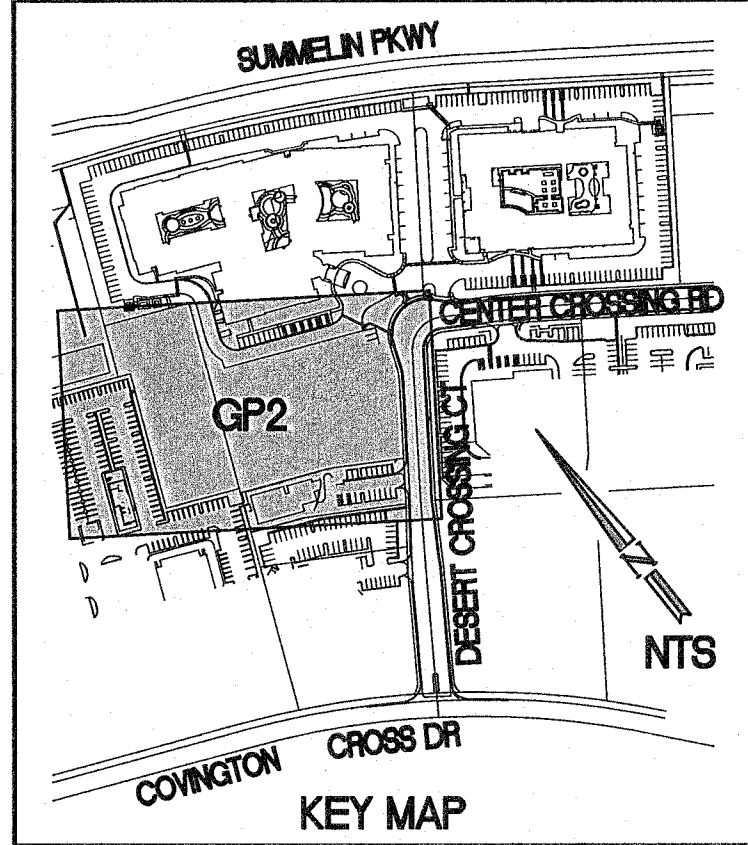
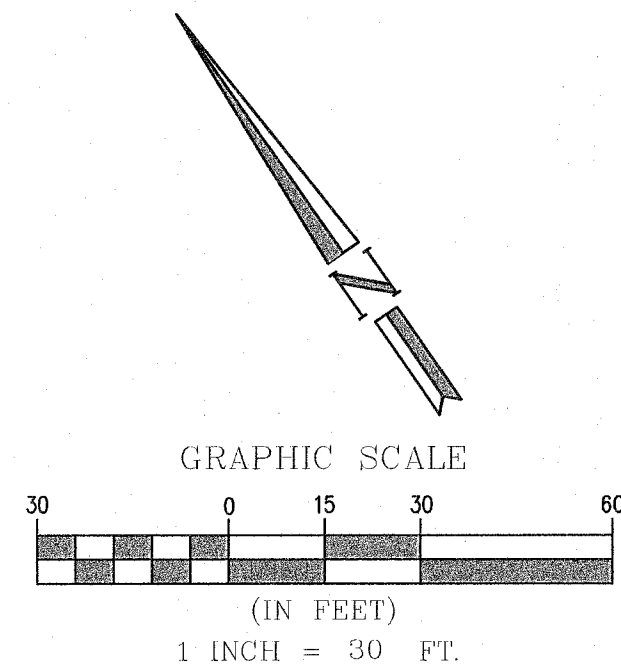
STORM DRAIN HYDRAULIC CALCULATIONS																									Page: 1 of 1	
Location: CROSSING CARE CAMPUS						Condition: see below						Calculated By: A. Whittaker						Date: 4/25/17								
Conduit Data					Flow Data								Energy Loss Data						Energy and Hydraulic Data					Comment		
Station		Size Ft	Inverts		Length Ft	A Ft²	n	ψ	Q CFS	V F/S	H _v V²/2g	S _f FT/FT	AVG S _f	Pipe H _f	Transitions						Pipe		Transition		Press	
From	To		D/S	U/S											H _f	H _j	H _m	H _e	H _c	Total	U/S EGL	U/S HGL	U/S EGL	U/S HGL	Flow ?	
18" RCP (SOUTH STORM DRAIN 1)																Starting EGL And HGL				19.42	19.28				BEGIN HGL FROM WSPG STA. 82.29	
0	11	1.5	13.49	14.04	11	1.77	0.013	0.0049	5.4	3.06	0.14	0.003	0.003	0.03						0.03	19.45	19.31			Yes	
11	11	1.5	14.04	14.24	5	1.77	0.013	0.0049	5.4	3.06	0.14	0.003	0.003				0.058			0.06	19.51	19.37			Yes	
11	41	1.5	14.24	15.25	30	1.77	0.013	0.0049	5.4	3.06	0.14	0.003	0.003	0.08						0.08	19.59	19.45			Yes	
36	36	1.50	15.25	15.45	5	1.77	0.013	0.0049	5.4	3.06	0.14	0.003	0.003				0.058			0.06	19.65	19.50			Yes	
36	46	1.50	15.45	15.75	10	1.77	0.013	0.0049	2.3	1.30	0.14	0.003	0.003	0.01						0.01	19.66	19.52			Yes	
S _f = ψ*H _v /R ^{1.33} ψ=(2g (n²))/2.21H _m = K _m *H _v n= 0.013																										
Date: 4/25/2017File: SF6.XLSStandard Form 6																										

FILENAME: C:\DOCUMENTS\14WHITT-1_CROSSINGS-11\mp\Acad\pub_3856\SN15-823 GP.dwg, LAST SAVED ON: Apr 25 2017 11:04am PLOTTED BY: AWHITAKER, ON: Apr 25 2017 14:0pm



MATCHLINE SEE SHEET GP1

MATCHLINE SEE SHEET GP3



- CONSTRUCTION NOTES**
1. CONSTRUCT 18" "L" CURB PER USD NO. 219 (ON-SITE ONLY)
 2. CONSTRUCT SPILL CURB WITH 6" ASPHALT LIP PER DETAIL 10 ON SHEET DT1
 3. CONSTRUCT "A" TYPE 6" CURB PER USD NO. 219
 4. CONSTRUCT AC PAVEMENT PER DETAIL 4 ON SHEET DT1
 5. CONSTRUCT 6" CURB FACE PER DETAIL 9 ON SHEET DT1
 6. CONSTRUCT SIDEWALK (4-INCH THICK) PER USD NO. 234
 7. CONSTRUCT SIDEWALK DRAIN PER USD NO. 236
 8. CONSTRUCT 2" VALLEY GUTTER PER DETAIL 5 ON SHEET DT1
 9. CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL PLANS
 10. CONSTRUCT COMMERCIAL DRIVEWAY PER STD DWG. NO. 228 WITH GEOMETRICS OF USD NO. 222.1 AND 225
 11. CONSTRUCT PRIVATE SIDEWALK RAMP PER ADA STANDARDS
 12. CONSTRUCT SIDEWALK RAMP PER USD NO. 235, (CASE 1)
 13. INSTALL RAMP D50 = 12" (24" THICK)
 14. INSTALL RAMP D50 = 3" (6" THICK)
 15. CONSTRUCT 2" U CHANNEL PER DETAIL 6 ON SHEET DT1
 16. CONSTRUCT 3" U CHANNEL PER DETAIL 6 ON SHEET DT1
 17. CONSTRUCT 4" U CHANNEL PER DETAIL 6 ON SHEET DT1
 18. CONSTRUCT 6" U CHANNEL PER DETAIL 6 ON SHEET DT1
 19. CONSTRUCT 8" U CHANNEL PER DETAIL 6 ON SHEET DT1
 20. CONSTRUCT 1-FT CURB OPENING PER DETAIL 8 ON SHEET DT1
 21. INSTALL STORMWATER QUALITY MANAGEMENT STAMP PER USD 421
 22. CONSTRUCT NON CURB AREA SIDEWALK UNDERDRAIN PER DETAIL 1 ON SHEET DT1

APPROVED	DATE	BY
REVISION	DATE	BY
REV	DATE	BY

THE CALIDA GROUP

10777 W TWAIN AVE., SUITE 115, LAS VEGAS NV, 89135
TEL: (702) 990-3906 FAX: (702) 925-5506

DRC **DRC Surveying Nevada, Inc.**
7080 LA CIENEGA ST., STE #200
LAS VEGAS, NEVADA 89119
(702) 270-6119

CROSSINGS CARE CAMPUS

GRADING PLAN 2

DRAWN BY: DPW
DESIGNED BY: DPW
CHECKED BY: DPW
PROJECT NO: SM15-823

DENNIS P. WERTZLER
CIVIL
EXP. 8/30/18
4/25/17

SHEET
GP2
4 OF 20 SHEETS
DRAWING #
XXXX

DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. CONTRACTOR TO NOTIFY ENGINEER OF ANY CHANGES OR DISCREPANCIES.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300
TOLL FREE 1-800-227-2929

No.	GRADE (%)	"A"(FT)	"B"(FT)	P.T.
1	-6.0 TO -5.01	4.5	21.5	
2	-5.0 TO -4.01	4.5	15.0	
3	-4.0 TO -3.01	4.5	12.0	
4	-3.0 TO -2.01	4.5	9.5	
5	-2.0 TO 2.0	8.0	8.0	
6	2.01 TO 3.0	9.5	4.5	
7	3.01 TO 4.0	12.0	4.5	
8	4.01 TO 5.0	15.0	4.5	
9	5.01 TO 6.0	21.5	4.5	

NOTE:
B TO A = NEGATIVE (-)
A TO B = POSITIVE (+)

SIDEWALK RAMP
PER STD. DWG. NO. 235 - CASE 1

LEGEND

EXISTING TEXT (TEXT)
PROPOSED TEXT FFXXXXXX
PAD ELEVATION PAD=XXXX.XX
PROPERTY LINE
RETAINING WALL
CUT/FILL TRANSITION LINE
EXISTING CONTOUR
EDGE OF PAVEMENT
SAWCUT LINE
AC REMOVAL
CONCRETE REMOVAL
SIGHT VISIBILITY ZONE

ABBREVIATIONS

ADI AREA DRAIN INLET
EXT EXTENDED
FG FINISH GRADE
FL FLOW LINE
FTG FOOTING
GB GRADE BREAK
GF GARAGE FLOOR
HP HIGH POINT
LSA LANDSCAPE AREA
SD STORM DRAIN
SW SIDEWALK
TC TOP OF CURB
TF TOP OF FOOTING
TW TOP RETAINING WALL
VG VALLEY GUTTER

NOTE
ALL STORM DRAINS AND ASSOCIATED FACILITIES ARE PRIVATELY MAINTAINED BY THE PROPERTY OWNER

NOTE
ADD 2800 FEET TO ALL TAGS

BENCHMARK
CITY OF LAS VEGAS BENCHMARK NO. 0LV0030NW6
RIVET & PLATE IN THE TOP OF CURB NORTHWEST CORNER OF TOWN CENTER DRIVE AND CONINGTON CROSS DRIVE.
ELEVATION = 856.034 METERS (PUBLISHED NAVD 88 DATUM)
ELEVATION = 2808.51 US SURVEY FEET (CALCULATED)

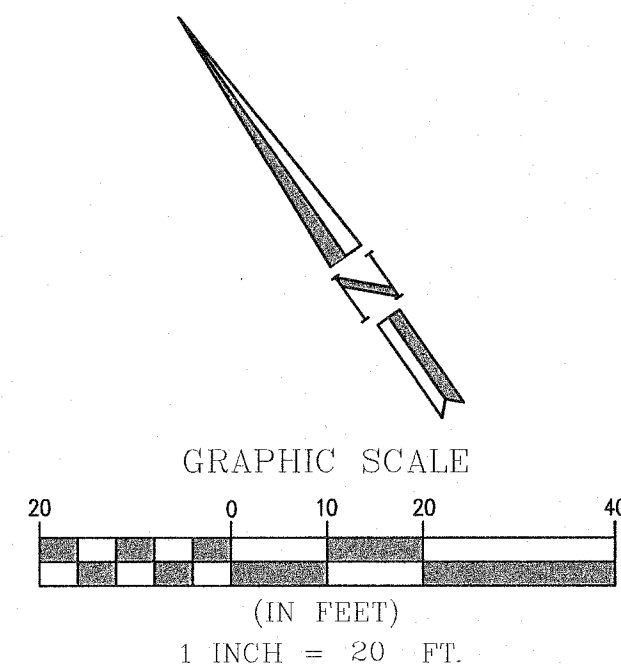
GENERAL NOTES

1. SEE SHEET NT FOR ADDITIONAL NOTES, LEGEND AND QUANTITY ESTIMATE.
2. SEE SHEET UP1 FOR UTILITY LOCATIONS.
3. SEE SHEETS DT1 FOR CONSTRUCTION DETAILS.
4. THE CONTRACTOR SHALL VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES AND SURFACE FEATURES PERTINENT TO THIS PROJECT PRIOR TO CONSTRUCTION. THE CONTRACTOR MUST NOTIFY THE DESIGN ENGINEER IF ANY DISCREPANCIES ARE ENCOUNTERED.
5. CONSTRUCTION SHALL COMPLY WITH SOILS REPORT PROJECT NUMBER: E-15-223 PREPARED BY: NOVA GEOTECHNICAL DATED: 01-08-2016 UPDATED: N/A

DRAINAGE STUDY NOTE:

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT CITY OF LAS VEGAS FOR THIS PROJECT. (DS4821)

Dennis P. Wertzler 4/25/17
DENNIS P. WERTZLER PE NO. 11970 DATE



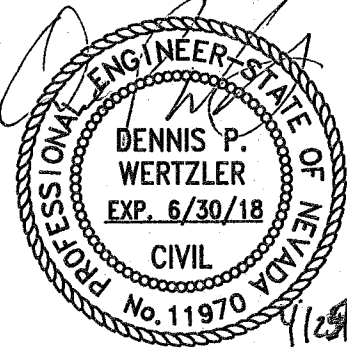
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DRC  **DRC Surveying Nevada, Inc.**
7080 LA CIENEGA ST., STE #200
LAS VEGAS, NEVADA 89119
(702) 270-6119

CROSSINGS CARE CAMPUS

GRADINING PLAN 4

DRAWN BY: DPW
DESIGNED BY: DPW
CHECKED BY: DPW
PROJECT NO: SN15-823



SHEET
GP4
6 OF 20 SHEETS
DRAWING #
XXXX

I CERTIFY THAT THIS GRADING PLAN IS IN
CONFORMANCE WITH THE APPROVED DRAINAGE STUDY
ON FILE AT CITY OF LAS VEGAS FOR THIS PROJECT.
(DS4821) *2*



 4/29/99
 DENNIS P WERTZLER PE NO. 11970 DATE