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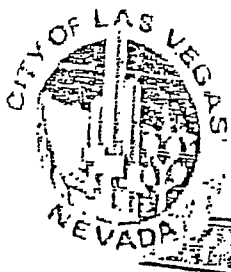
APN: 126-12-101-002

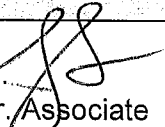
PROJECT: Sky e Canyon - Phases 3B & 3C Infrastructure - Update #2

SUBMITTAL: GHW

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 5, 2020
TO: Land Development Services Department of Building & Safety		FROM: Jennifer Shinn, P.E.  Flood Control, Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for:	
	Skye Canyon – Phases 3B & 3C Infrastructure – Update #2	
Cross Streets:	NWC of Skye Village Road & Skye Canyon Park Drive	
File Number:	F:\Depot\DSMemos\DS4953E.doc	
Parcel Number:	126-12-101-002	
Zoning Action:		
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO
COPIES TO:		Westwood Professional Services
		M F Land LLC / Ninety-Five Management LLC
		Bart Anderson, P.E., DevCo
		CCRFCD

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	2/8/2017	3/9/2018 & 5/15/2018	Not Approved	\$400.00	493315: \$400
2 nd Submittal	9/11/2018	10/10/2018	Conditional Approval	\$400.00	498970: \$400
3 rd Submittal	5/30/2019	6/13/2019 & Revised 9/26/2019	See Comments Below	\$100.00	3151006: \$100
4 th Submittal	2/20/2020	2/20/2020	Approved	N/C	N/C
5 th Submittal	3/11/2020	4/9/2020	Conditional Approval	\$100.00	\$100
6 th Submittal	4/30/2020	5/5/2020	Conditional Approval	N/C	N/C
TOTAL FEES (LDDRS):				\$1000.00	----

REMARKS:

6th Submittal: Update #2 Supplement to decrease oversized pipe

5th Submittal: Update #2 to address Land Use changes, upsize facilities accordingly, and shifts in SD alignment due to utility conflicts

4th Submittal: CCRFCD Concurrence

3rd Submittal: Update #1 to shift the storm drain alignment in Iron Mountain Road 1-ft to the north from Station "IMR" 107+46.33 to Station "IMR" 83+26.07

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

	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
X	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 conditions are repeated until they are complete:

1. **This drainage study is acceptable in concept**; however, City of Las Vegas will not formally accept the study until the Clark County Regional Flood Control District (CCRFCD) has issued a letter of

concurrence. The engineer should contact the CCRFCD to confirm that they have begun their review.

2. All special structures and mainline storm drain connection require details and structural calculations to be reviewed by the *City of Las Vegas Building & Safety Department*. Approval by the *Building Department* must be obtained prior to the final approval of the subject drainage study.
3. *Skye Canyon Phases 3B & 3C* onsite developments are to be flood protected by *Detention Basin 2* and the *Skye Canyon Phase 3A Infrastructure*. No occupancy permits within onsite *Phases 3B & 3C* will be issued prior to the substantial completion of *Detention Basin 2 with the outfall facility (from Detention Basin 2 in Iron Mountain Road to Skye Village Road)* and the substantial completion of the *Skye Canyon Phase 3A Infrastructure*.
4. The future MPU facility within *Skye Village Road* north of the *Skye Village/Grand Canyon/Iron Mountain* intersection to the proposed MPU facility at the *Kyle Canyon interchange* area shall be substantially complete before occupancy of residential Units beyond *Phases 3A, 3B and 3C*. This includes residential development within *Phases 4 & 6* and the development of *Phase 5* as shown on the *Development Phasing Exhibit* dated 12/4/2017.
5. The implementation of the CCRFCD Master Plan for the *Skye Canyon Master Development* is being progressed with the recent 90% design submittal of the *Moccasin Rd. CCRFCD Flood Control Facility – US95/Kyle Canyon Rd Interchange to Moccasin Rd. (Skye Canyon Developer Funded)* and the *Moccasin Rd. CCRFCD Flood Control Facility – Moccasin Rd to CCRFCD Facility LVUP 1076/1077(CCRFCD Funded)*. Once building permits are released for 75% of the *Skye Canyon Development* west of *US-95* these critical facilities shall be substantially complete in accordance with the provisions of *Title 19.02.130 D*.
6. The implementation of the CCRFCD Master Plan is being progressed with the recent bid opening of the *NDOT US-95* facilities from the *CC-215 interchange* north to the *Kyle Canyon interchange*. Construction of the associated CCRFCD MPU facilities allows for the utilization of the existing MPU facilities constructed with the *Horse Interchange*. The development of *Phases 3A, 3B and 3C* west of *US-95* shall maximize the flow collection into this facility prior to allowing flows to cross *US-95* using the existing culvert system.
7. *Flood Control* acknowledges that the new *Skye Canyon Master Plan Amendment (MPA)* was included as a part of the 2018 MPU process. Any changes not incorporated in the 2018 MPU must be approved by *City of Las Vegas* and *Clark County Regional Flood Control District (CCRFCD)* and shall be adopted by the *City of Las Vegas City Council* prior to the final approval of the subject improvement plans.
8. The subject *Phases 3B and 3C Infrastructure Drainage Study* addresses the included street improvements of *Iron Mountain Road, Skye Canyon Park Drive, Shaumber Road*, culvert crossings and storm drain systems with the streets. Technical drainage studies will be required for the future onsite parcels as they develop.
9. *Phase 3A, 3B, and 3C* include storm drain improvements that will be abandoned in the future. These abandoned facilities will impact the adjoining *Phase 3B and 3C* development parcels. The individual parcel development shall address the impact and removal of these improvements as well as include the removal of these items in the associated improvements and Bond.
10. The project proposed to build temporary drainage facilities including drainage berms/swales over the *Phases 3B, 3C* site and along the west side of *Shaumber Road*. Prior to the final plans approval the developer must complete a **Maintenance and Liability Agreement** for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for construction the facility and an exhibit that adequately shows the location and limits of the drainage facilities to *City Flood Control* for approval. Once the drainage study is conditionally

approved, the engineer/developer should contact the *City's Land Development Section* (702-229-6371) to begin the agreement process.

In order for the maintenance bond to be released in the future, a drainage update/letter will be required to justify that the berms/swales are no longer necessary and can be removed.

11. The interim channels adjacent to the infrastructure roadways are the Maintenance responsibility of the Master Developer.

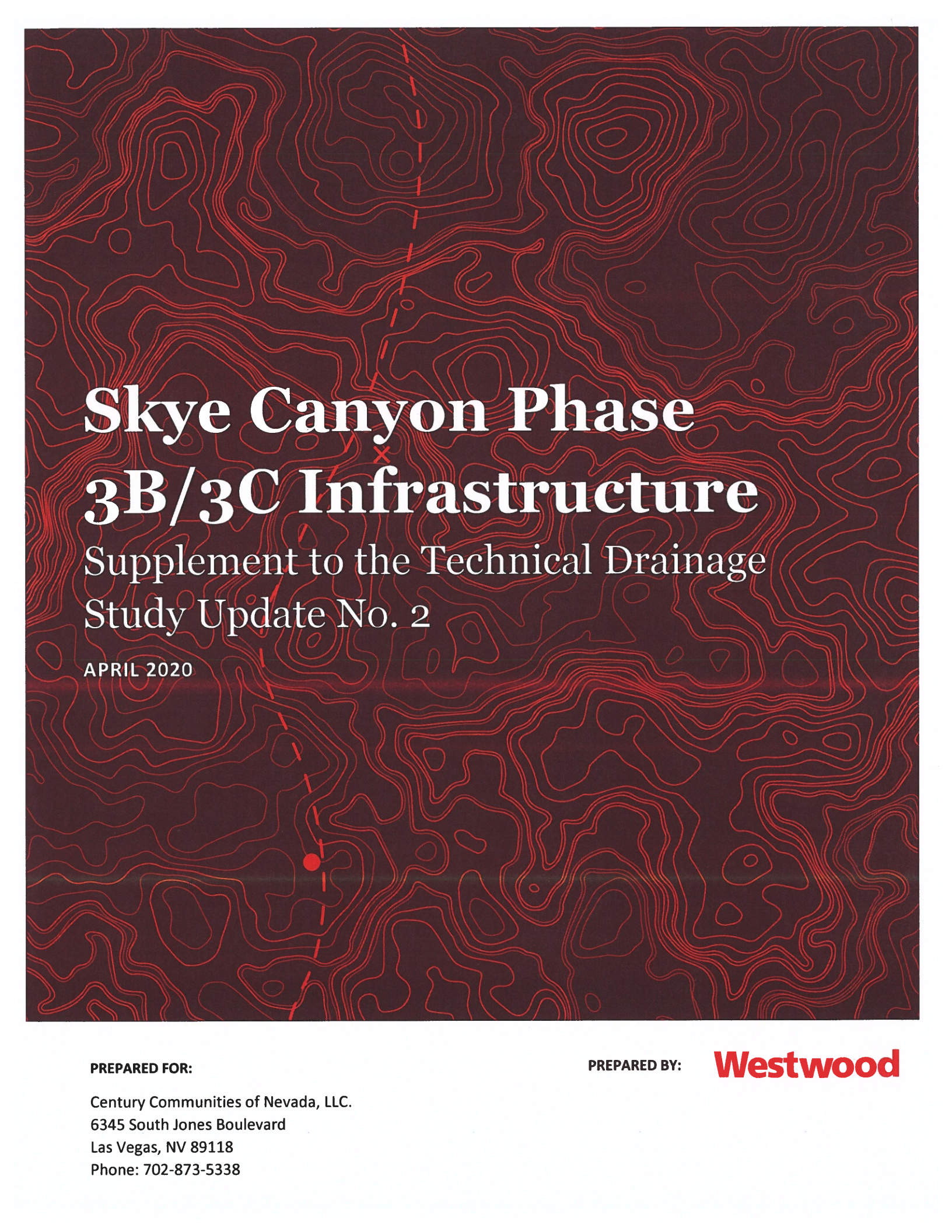
NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained 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/pbj/jks

T/R/S: T19S/R59E/12

AREA: F-12



Skye Canyon Phase 3B/3C Infrastructure

Supplement to the Technical Drainage
Study Update No. 2

APRIL 2020

PREPARED FOR:

Century Communities of Nevada, LLC.
6345 South Jones Boulevard
Las Vegas, NV 89118
Phone: 702-873-5338

PREPARED BY:

Westwood

Skye Canyon Phase 3B/3C Infrastructure

Supplement to the Technical Drainage Study Update No. 2

City of Las Vegas, Nevada

Prepared For:

Century Communities of Nevada, LLC.
6345 South Jones Boulevard
Las Vegas, NV 89118
Phone: 702-873-5338

Prepared By:

Westwood Professional Services
5740 S. Arville Street, Suite 216
Las Vegas, NV 89118
Phone: (702) 284-5300
Fax: (702) 284-5339



Project Number: CEN1904.000
Date: April 2020

Lant Leavitt, P.E.
NV Professional Engineer No. 18287
Assisted by: Abhusan Achhami

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon – Phase 3B/3C Infrastructure (Update #2) Date: April 2020
 Location of Development: Supplement
 a) Descriptive (Cross Streets): North/South: Skye Village Road
East/West: Grand Canyon Drive
 b) Section: 7 Township: 19 South Range: 60 East
 c) APN: 125-07-201-007 and a portion of 125-07-101-009

Name of Owner/Developer: Century Communities of Nevada, LLC
 Telephone No.: 702-873-5338 Fax No.: 702-220-6566 E-mail Address: Todd.Winner@centurycommunities.com
 Address: 6345 S. Jones Boulevard, Las Vegas, NV 89118

Contact Person – Name: Lant Leavitt, P.E. Telephone No.: 702-284-5300
 *E-mail Address: Lant.Leavitt@westwoodps.com Fax No.: 702-284-5399
 Firm: Westwood Professional Services, Inc.
 Address: 5740 S. Arville Street, Suite 216; Las Vegas, NV 89118

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	☐ Roadway & Storm Drain Infrastructure

- Total Owned Land Area: At Site: 665 Acres Being Developed/Disturbed: 20 Acres +/-
- Is a portion or all of the subject property located in a FEMA Flood Hazard Area? ☐ Yes** ☒ No
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No
- Proposed type of development (Residential, Commercial, Etc.): Roadway & Storm Drain Infrastructure
- Approximate upstream land area which drains to the subject site: 1800 acre +/-
- Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: Master Drainage Study for Skye Canyon Update #4 (SHG, DS4420)
- If known, please briefly identify the proposed discharge point(s) of runoff from the site: Skye Village Road thru MOHU 0036.
- Briefly describe your proposed schedule for the subject project: ASAP Upon Substantial Completion of Detention Basin 2 Facilities.
Phase 3B/3C – Roadway Infrastructure per this TDS; Future Phase 3B/3C Residential Subdivisions to follow by separate TDS.



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.

***Newly Required Field**

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

Revision	Date

REFERENCE: **SHG Job No. OLY1609.000**

STANDARD FORM 1

Updated 05/01/2008

OLY1609.000

April 21, 2020

Jennifer Shinn, P.E.
Flood Control Project Engineer
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, NV 89106

**Subject: Supplement to the Technical Drainage Study Update No. 2 for
Skye Canyon Phase 3B/3C Infrastructure
(DS 4953)**

Ms. Shinn:

The following supplement is submitted to address revisions to the Skye Canyon Park Drive storm drain system.

Purpose

The conditionally approved Skye Canyon Park Drive storm drain system proposed a 72-in RCP from Skye Canyon Park Drive Station 65+21.82 upstream to the culvert entrance. A 72-in RCP is necessary to convey flow into the culvert entrance in the interim condition due to the headwater elevation produced by the ponded condition. However, once the flow is in the storm drain system, a 72-in RCP is oversized as shown by the relatively low HGL in the pipe. The purpose of this supplement study is to revise the size of the storm drain pipe downstream of the initial 72-in RCP reach to a 60-in RCP. The following revisions are proposed:

- Proposed storm drain system manhole location has been moved upstream from Station 62+67.49 to 61+67.70.
- Proposed storm drain system pipe size from Station 61+67.70 to 65+21.82 has been revised from 72-in to 60-in.

Hydraulics

The pipe size from the culvert entrance to Station 61+67.70 remains a 72-in RCP. The proposed pipe size from Station 61+67.70 downstream to the junction at Skye Canyon Park Drive, Station 65+21.82, is revised to a 60-in RCP. The WSPG model for the storm drain is revised to include these changes. WSPG model results show that the HGL for the system is still within the pipe and meets the same criteria requirements as the previous design. Also, the 18-in lateral model at Station 65+21.82 has been revised even though the change is relatively insignificant. The downstream tailwater for that model changed less than 0.1-ft due to the HGL in the junction structure. Revised WSPG models are provided in Appendix B.

The revised improvement plans are included with this submittal to support the conclusions detailed in this study. If you have any questions or require additional information, please contact us at (702) 284-5300.

Respectfully Submitted,
WESTWOOD PROFESSIONAL SERVICES

A handwritten signature in black ink, appearing to read 'Lant Leavitt', with a stylized flourish at the end.

Lant Leavitt, P.E.,
Flood Control Division

cc: Mark Failla, P.E., CFM
Jerry Slater, P.E.
Joshua Johnson, P.E.

APPENDIX

Appendix A – Conditional Approval Letter & CLV Communication

Appendix B – Hydraulic Computations

- WSPGW Model for SCPD
- WSPGW Model for SCPD-L

Appendix C – Improvement Plans and CD of Electronic Copy

APPENDIX A

CLV Conditional Approval Letter & Communication

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: April 9, 2020
TO: Land Development Services Department of Building & Safety			FROM: Jennifer Shinn, P.E. Flood Control, Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for:		COPIES TO:
	Skye Canyon – Phases 3B & 3C Infrastructure – Update #2		Westwood Professional Services
Cross Streets:	NWC of Skye Village Road & Skye Canyon Park Drive		M F Land LLC / Ninety-Five Management LLC
File Number:	F:\Depot\DSMemos\DS4953E.doc		Bart Anderson, P.E., DevCo
Parcel Number:	126-12-101-002		CCRFCD
Zoning Action:			
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
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			TOTAL FEES (LDDRS):	\$1000.00	----

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5th Submittal: Update #2 to address Land Use changes, upsize facilities accordingly, and shifts in SD alignment due to utility conflicts

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3rd Submittal: Update #1 to shift the storm drain alignment in Iron Mountain Road 1-ft to the north from Station "IMR" 107+46.33 to Station "IMR" 83+26.07

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END OF REMARKS

Ays/pbj/jks

T/R/S: T19S/R59E/12

AREA: F-12

Lant Leavitt

From: Jennifer Shinn <jshinn@LasVegasNevada.GOV>
Sent: Thursday, April 16, 2020 10:31 AM
To: Lant Leavitt
Cc: Rhonda Miller
Subject: RE: Skye Canyon Phase 3B & 3C Update #2

Hi Lant,

Yes, I'll accept it as a supplement. I won't be able to pick up the physical submittal until next Thursday, so email me the revised plans and models so I can review it ASAP and issue a new conditional approval letter. Have you submitted to CCRFCD yet?

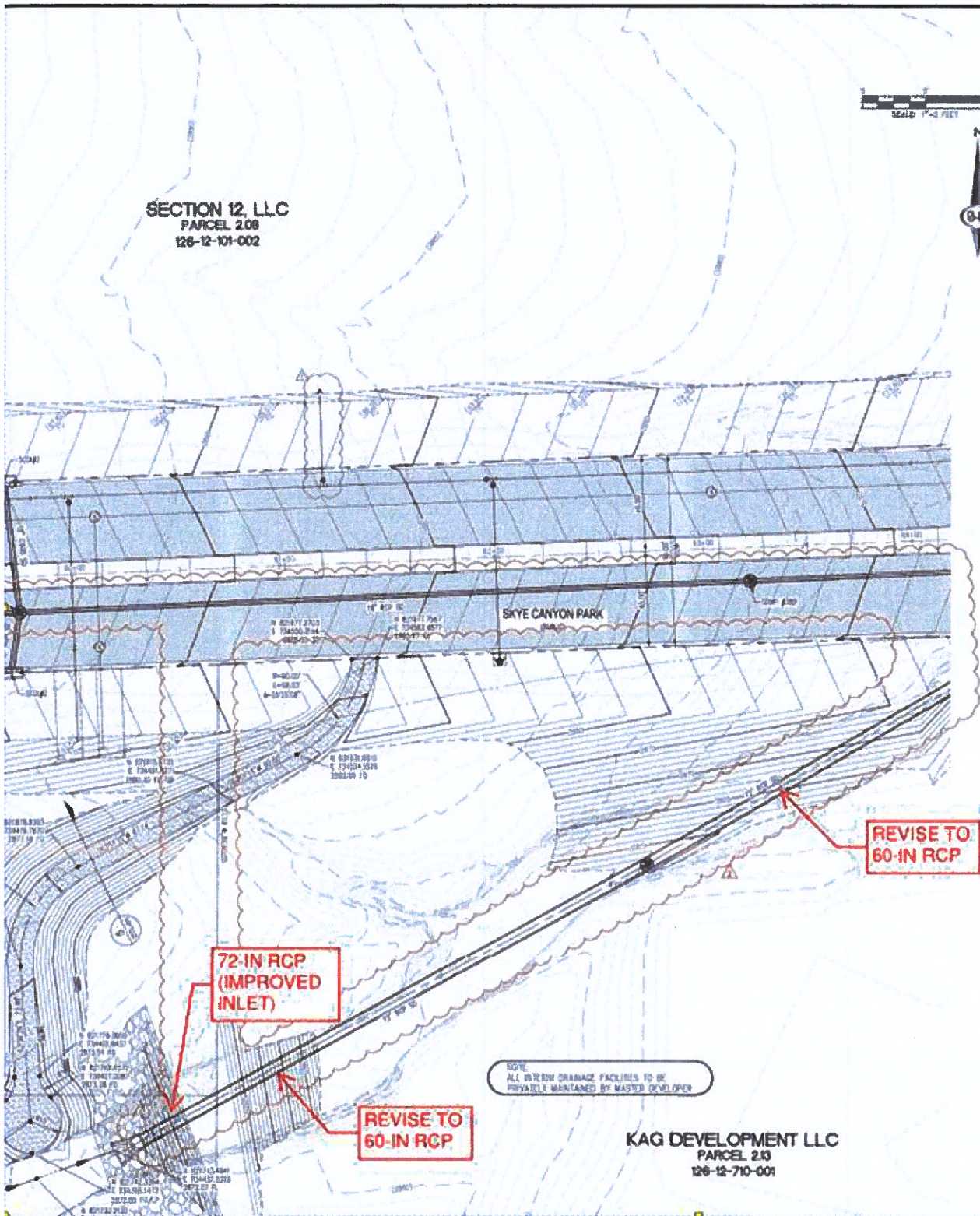
----- Original message -----

From: Lant Leavitt <Lant.Leavitt@westwoodps.com>
Date: 4/16/20 10:16 AM (GMT-08:00)
To: Jennifer Shinn <jshinn@LasVegasNevada.GOV>
Cc: Rhonda Miller <Rhonda.Miller@westwoodps.com>
Subject: RE: Skye Canyon Phase 3B & 3C Update #2

CAUTION: This email originated from an **External Source**. Please use caution before opening attachments, clicking links, or responding to this email. **Do not sign-in with your City of Las Vegas account credentials.**

Hi Jennifer,

The storm drain pipe proposed in the existing wash alignment southwest of Skye Canyon Park Drive/Skye Village Road is sized larger than it needs to be. Our client is wondering if we can do a supplement to the subject approved study to revise this. The pipe size would stay the same at the culvert entrance (72-in) to function as an improved inlet then would reduce in size to a 60-in, see screenshot below. The existing downstream pipe in Skye Canyon Park Drive is also a 60-in. Please let me know if it would be possible to address this as a supplement.



SCALE: 1"=40' FEET



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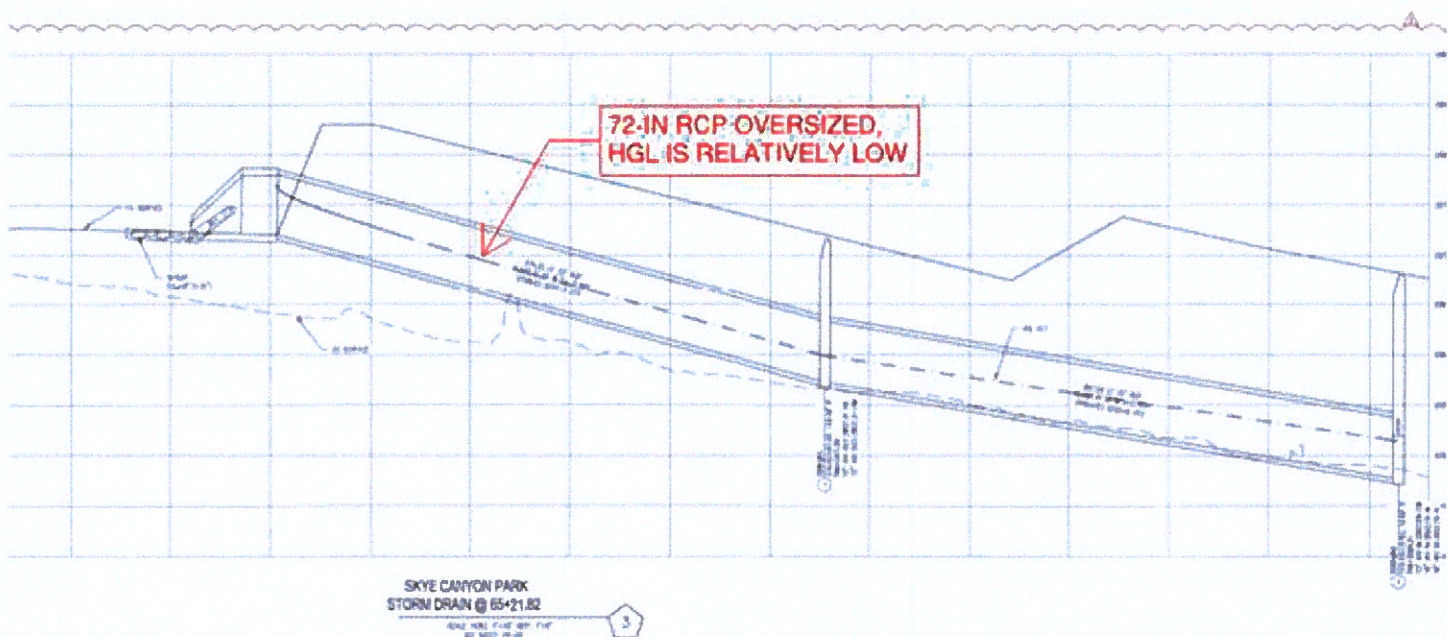
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REVISIONS TO THIS PLAN SHALL BE MADE BY THE ENGINEER OR HIS REPRESENTATIVE.

1

I CERTIFY THAT THE DATA SUBMITTED FOR THIS PROJECT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NOTE:
PROPERTY OWNER IS RESPONSIBLE FOR THE ACCURACY OF THE DATA SUBMITTED.



Thanks,

Lant Leavitt, P.E.
PROJECT MANAGER II
 lant.leavitt@westwoodps.com

Direct (702) 284-5360
Main (702) 284-5300

Westwood
Multi-Disciplined Surveying & Engineering
 5740 S. Arville Street, Suite 216 | Las Vegas, NV 89118

westwoodps.com
 (888) 937-5150

From: Jennifer Shinn <jshinn@LasVegasNevada.GOV>
Sent: Monday, April 13, 2020 11:14 AM
To: Lant Leavitt <Lant.Leavitt@westwoodps.com>
Subject: Skye Canyon Phase 3B & 3C Update #2

Hi Lant,

Here is the Conditional Approval Letter for DS4953.

Thanks,
 Jennifer

APPENDIX B

Hydraulic Computations

WSPGW Model for SCPD

Ultimate Condition WSPG Summary									
Mainline in Skye Canyon Park Drive at Southern Boundary of Project Site									
WSPG Station	Equivalent Roadway Station	Improvement Plan Sheet	Storm Drain Dimension	Invert Elevation (ft)	Q ₁₀₀ (cfs)	WSE (ft)	Velocity (ft/s)	FG Elevation	HGL Check ¹
1000.00	N/A	PP-06	60" RCP	2836.81	354.00	2840.45	23.10	2855.00	OK
1055.47	69+39.	PP-06	60" RCP	2838.47	354.00	2842.22	22.41	2855.60	OK
1090.90	69+03.57	PP-06	60" RCP	2839.48	354.00	2843.31	21.94	2856.00	OK
1090.90	69+03.57	PP-06	60" RCP	2839.49	341.00	2842.99	23.23	2856.00	OK
1395.73	65+98.77	PP-05	60" RCP	2846.84	341.00	2850.27	23.76	2865.00	OK
1472.68	65+21.82	PP-05	60" RCP	2848.68	341.00	2852.07	24.07	2868.45	OK
1472.68	65+21.82	PP-05	60" RCP	2848.69	326.00	2852.07	24.07	2868.45	OK
1872.62	61+67.7	LAT-01	60" RCP	2863.37	326.00	2866.51	25.14	2877.40	OK
1872.63	61+67.7	LAT-01	72" RCP	2863.38	326.00	2866.15	25.60	2877.40	OK
2034.21	N/A	LAT-01	72" RCP	2872.07	326.00	2876.99	13.15	2883.00	OK
2034.21	N/A	LAT-01	72" RCP	2872.07	326.00	2876.99	13.15	2883.00	OK

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING

PAGE 1

CARD	SECT	CHN	NO OF	AVE	PIER	HEIGHT	1	BASE	ZL	ZR	INV	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CODE	NO	TYPE	PIER/PIP	WIDTH	DIAMETER	WIDTH	DROP														

CD	18	4	4	0		1.500															
CD	24	4	4	0		2.000															
CD	60	4	4	0		5.000															
CD	72	4	4	0		6.000															

W S P G W

PAGE NO 1

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

HEADING LINE NO 2 IS -

HEADING LINE NO 3 IS -

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

W S P G W

PAGE NO 2

WATER SURFACE PROFILE - ELEMENT CARD LISTING

W S ELEV

2840.000

ELEMENT NO	1	IS	A	SYSTEM	OUTLET	*	STATION	INVERT	SECT	60	W S ELEV	2840.000
ELEMENT NO	2	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	3	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	4	IS	A	JUNCTION	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	5	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	6	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	7	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	8	IS	A	JUNCTION	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	9	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000
ELEMENT NO	10	IS	A	JUNCTION	U/S DATA	*	STATION	INVERT	SECT	60	RADIUS	.000

Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
6.500	6.500	2842.490	2842.490	90.000	-84.000
		RADIUS	ANGLE		
		.000	.000		

ELEMENT NO	5	IS	A	REACH	U/S DATA	*	STATION	INVERT	SECT	60	N	.013	ANGLE	.000	ANG PT	MAN H	0
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U/S DATA		STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
		1872.630	2863.380	72	0	0	.014	.000	.000	.000	.000	.000	.000
W S P G W PAGE NO 3													
WATER SURFACE PROFILE - ELEMENT CARD LISTING													
ELEMENT NO	11	IS A REACH	*	*									
U/S DATA	STATION	INVERT	SECT	N									
	2034.210	2872.070	72	.013									
ELEMENT NO	12	IS A SYSTEM HEADWORKS	*	*									
U/S DATA	STATION	INVERT	SECT	W S ELEV									
	2034.210	2872.070	72	.000									

Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING

Date: 4-20-2020 Time: 2:52:56

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Height/Dia.-FT	Base Wt I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	2836.810	3.642	2840.452	354.00	23.10	8.29	2848.74	.00	4.82	4.45	5.000	.000	.00	.0
55.470	.0299					.0230	1.28	3.64	2.19	3.34	.013	.00	.00	PIPE
1055.470	2838.470	3.751	2842.221	354.00	22.41	7.80	2850.02	.00	4.82	4.33	5.000	.000	.00	.0
35.430	.0285					.0217	.77	3.75	2.07	3.40	.013	.00	.00	PIPE
1090.900	2839.480	3.828	2843.308	354.00	21.94	7.48	2850.79	.00	4.82	4.24	5.000	.000	.00	.0
JUNCT STR	.0000					.0228	.00	3.83	1.98		.013	.00	.00	PIPE
1090.900	2839.490	3.500	2842.990	341.00	23.23	8.38	2851.37	.00	4.79	4.58	5.000	.000	.00	.0
304.830	.0241					.0251	7.67	3.50	2.29	3.52	.013	.00	.00	PIPE
1395.730	2846.840	3.428	2850.268	341.00	23.76	8.77	2859.04	.00	4.79	4.64	5.000	.000	.00	.0
76.950	.0238					.0262	2.02	3.43	2.38	3.54	.013	.00	.00	PIPE
1472.680	2848.680	3.389	2852.069	341.00	24.07	9.00	2861.07	.00	4.79	4.67	5.000	.000	.00	.0
JUNCT STR	.0000					.0292	.00	3.39	2.44		.013	.00	.00	PIPE
1472.680	2848.690	3.093	2851.783	326.00	25.56	10.14	2861.93	.00	4.75	4.86	5.000	.000	.00	.0
19.532	.0367					.0367	.72	3.09	2.78	3.09	.014	.00	.00	PIPE
1492.212	2849.407	3.093	2852.500	326.00	25.56	10.14	2862.64	.00	4.75	4.86	5.000	.000	.00	.0
380.408	.0367					.0359	13.67	3.09	2.78	3.09	.014	.00	.00	PIPE
1872.620	2863.370	3.137	2866.507	326.00	25.14	9.81	2876.32	.00	4.75	4.83	5.000	.000	.00	.0
JUNCT STR	.9756					.0358	.00	3.14	2.70		.014	.00	.00	PIPE

SCPD.OUT

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Height/Dia.-FT	Base Wt I.D.	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR Type Ch
1872.630	2863.380	2.766	2866.146	326.00	25.60	10.17	2876.32	.00	4.92	5.98	6.000	.000	.00 0 .0
33.006	.0538					.0295	.97	2.77	3.09	2.38	.013	.00	PIPE
1905.636	2865.155	2.867	2868.022	326.00	24.44	9.27	2877.30	.00	4.92	5.99	6.000	.000	.00 0 .0
26.456	.0538					.0260	.69	2.87	2.89	2.38	.013	.00	PIPE
1932.092	2866.578	2.976	2869.554	326.00	23.30	8.43	2877.98	.00	4.92	6.00	6.000	.000	.00 0 .0
21.140	.0538					.0229	.48	2.98	2.69	2.38	.013	.00	PIPE
1953.233	2867.715	3.090	2870.804	326.00	22.22	7.66	2878.47	.00	4.92	6.00	6.000	.000	.00 0 .0
17.183	.0538					.0202	.35	3.09	2.50	2.38	.013	.00	PIPE
1970.416	2868.639	3.209	2871.848	326.00	21.18	6.97	2878.81	.00	4.92	5.99	6.000	.000	.00 0 .0
14.112	.0538					.0178	.25	3.21	2.33	2.38	.013	.00	PIPE
1984.527	2869.398	3.335	2872.733	326.00	20.20	6.33	2879.07	.00	4.92	5.96	6.000	.000	.00 0 .0
11.644	.0538					.0157	.18	3.33	2.16	2.38	.013	.00	PIPE
1996.172	2870.024	3.467	2873.491	326.00	19.26	5.76	2879.25	.00	4.92	5.93	6.000	.000	.00 0 .0
9.614	.0538					.0139	.13	3.47	2.01	2.38	.013	.00	PIPE
2005.786	2870.541	3.607	2874.149	326.00	18.36	5.23	2879.38	.00	4.92	5.88	6.000	.000	.00 0 .0
7.896	.0538					.0123	.10	3.61	1.86	2.38	.013	.00	PIPE
2013.682	2870.966	3.756	2874.722	326.00	17.51	4.76	2879.48	.00	4.92	5.81	6.000	.000	.00 0 .0
6.411	.0538					.0109	.07	3.76	1.72	2.38	.013	.00	PIPE

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Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

Date: 4-20-2020 Time: 2:52:56

SCPD.OUT

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Height/ Dia.-FT or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2020.093	2871.311	3.913	2875.224	326.00	16.69	4.33	2879.55	.00	4.92	5.72	6.000	.000	.00	0 .0
5.097	.0538					.0097	.05	3.91	1.59	2.38	.013	.00	.00	PIPE
2025.190	2871.585	4.082	2875.667	326.00	15.91	3.93	2879.60	.00	4.92	5.60	6.000	.000	.00	0 .0
3.907	.0538					.0086	.03	4.08	1.47	2.38	.013	.00	.00	PIPE
2029.097	2871.795	4.263	2876.058	326.00	15.17	3.58	2879.63	.00	4.92	5.44	6.000	.000	.00	0 .0
2.796	.0538					.0077	.02	4.26	1.35	2.38	.013	.00	.00	PIPE
2031.893	2871.946	4.459	2876.405	326.00	14.47	3.25	2879.65	.00	4.92	5.24	6.000	.000	.00	0 .0
1.717	.0538					.0069	.01	4.46	1.23	2.38	.013	.00	.00	PIPE
2033.610	2872.038	4.674	2876.712	326.00	13.79	2.95	2879.67	.00	4.92	4.98	6.000	.000	.00	0 .0
.600	.0538					.0062	.00	4.67	1.12	2.38	.013	.00	.00	PIPE
2034.210	2872.070	4.915	2876.985	326.00	13.15	2.69	2879.67	.00	4.92	4.62	6.000	.000	.00	0 .0

WSPGW Model for SCPD-L

Ultimate Condition WSPG Summary									
Lateral to Mainline in Skye Canyon Park along Southern Boundary of Project Site									
WSPG Station	Equivalent Roadway Station	Improvement Plan Sheet	Storm Drain Dimension	Invert Elevation (ft)	Q ₁₀₀ (cfs)	WSE (ft)	Velocity (ft/s)	FG Elevation	HGL Check ¹
1479.77	65+20.88	PP-05	18" RCP	2852.19	15.20	2852.94	17.25	2868.50	OK
1672.68	63+21.82	PP-05	18" RCP	2868.47	15.20	2869.36	13.85	2878.00	OK
2021.58	59+72.92	PP-04	18" RCP	2885.03	15.20	2886.44	8.82	2894.50	OK
2021.58	59+72.92	PP-04	18" RCP	2885.04	7.20	2888.26	4.07	2894.50	OK
2376.48	56+18.72	PP-03	18" RCP	2902.13	7.20	2902.74	10.77	2911.40	OK
2643.77	53+52.79	PP-03	18" RCP	2912.82	7.20	2913.56	8.34	2922.20	OK
2911.06	50+85.21	PP-03	18" RCP	2918.16	7.20	2919.20	5.51	2927.80	OK
2911.06	50+85.21	PP-03	18" RCP	2918.17	7.20	2919.20	5.51	2927.80	OK

T1 SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
T2 BY OLYMPIA COMPANIES

T3 LATERAL TO SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

S0	1479.7702852.190	18	.013	2852.069
----	------------------	----	------	----------

20	1473.7	61021.120	10	.013	2052.003
R	1672.680	2868.470	18	.013	1

R	2021.5702885.030	18	.013	1
R	2021.5702885.030	18	.013	1

2021.5802885.040	18	18	18.013	4.0	2885.0402885.040	80.0-85.0
JX						

JA	2021.5602883.040	18	18	18.013	4.0	2883.0402883.040	80.0-83.0
R	2376.4802902.130	18	18	.013			7.0 1

K	2578.4802502	150	18	.013	1
R	2643.7702912	820	18	.013	1

N	2043.7702912.820	18	.013	1
R	2911.0592918.160	18	.013	1

N	2911.0592918	18	.013		
JX	2911.0602918	170	18.013	0.1	7.0
					2918.170
					-90.0

JA	2911.0602918.170	18	18.013	0.1	7.0	2918.170	-90.0
SH	2911.0602918.170	18	.013				

[illegible]

CD	18	4	0	0.000	1.500	0.000	0.000	0.000	0.00
0					0.100				

00T.0

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height/ I.D.	No Wth Pts/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR Type Ch
1479.770	2852.190	.748	2852.938	15.20	17.25	4.62	2857.56	.00	1.41	1.50	1.500	.000	.00 0 .0
46.061	.0844												
1525.831	2856.077	.748	2856.825	15.20	17.25	4.62	2861.45	.00	1.41	1.50	1.500	.000	.00 0 .0
77.550	.0844												
1603.381	2862.622	.765	2863.387	15.20	16.76	4.36	2867.75	.00	1.41	1.50	1.500	.000	.00 0 .0
33.791	.0844												
1637.172	2865.473	.795	2866.268	15.20	15.98	3.97	2870.23	.00	1.41	1.50	1.500	.000	.00 0 .0
16.856	.0844												
1654.028	2866.896	.826	2867.722	15.20	15.24	3.61	2871.33	.00	1.41	1.49	1.500	.000	.00 0 .0
10.864	.0844												
1664.892	2867.813	.859	2868.671	15.20	14.53	3.28	2871.95	.00	1.41	1.48	1.500	.000	.00 0 .0
7.788	.0844												
1672.680	2868.470	.893	2869.364	15.20	13.85	2.98	2872.34	.00	1.41	1.47	1.500	.000	.00 0 .0
163.384	.0475												
1836.064	2876.225	.893	2877.119	15.20	13.85	2.98	2880.10	.00	1.41	1.47	1.500	.000	.00 0 .0
85.859	.0475												
1921.922	2880.301	.910	2881.211	15.20	13.55	2.85	2884.06	.00	1.41	1.47	1.500	.000	.00 0 .0
42.621	.0475												
42.621	.0475												

SCPD-L.OUT

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

LATERAL TO SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

*****															No Wth
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Height/Dia.-FT	Base Wt or I.D.	ZL	Prs/Pip	
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
1964.544	2882.323	.948	2883.271	15.20	12.92	2.59	2885.86	.00	1.41	1.45	1.500	.000	.00	0 .0	
19.593	.0475	-	-	-	-	.0375	.73	.95	2.52	.89	.013	.00	.00	PIPE	
1984.137	2883.253	.988	2884.241	15.20	12.32	2.36	2886.60	.00	1.41	1.42	1.500	.000	.00	0 .0	
12.113	.0475	-	-	-	-	.0333	.40	.99	2.33	.89	.013	.00	.00	PIPE	
1996.250	2883.828	1.031	2884.859	15.20	11.74	2.14	2887.00	.00	1.41	1.39	1.500	.000	.00	0 .0	
8.364	.0475	-	-	-	-	.0297	.25	1.03	2.15	.89	.013	.00	.00	PIPE	
2004.613	2884.225	1.077	2885.302	15.20	11.20	1.95	2887.25	.00	1.41	1.35	1.500	.000	.00	0 .0	
6.064	.0475	-	-	-	-	.0265	.16	1.08	1.97	.89	.013	.00	.00	PIPE	
2010.677	2884.513	1.127	2885.640	15.20	10.67	1.77	2887.41	.00	1.41	1.30	1.500	.000	.00	0 .0	
4.482	.0475	-	-	-	-	.0238	.11	1.13	1.80	.89	.013	.00	.00	PIPE	
2015.159	2884.726	1.182	2885.907	15.20	10.18	1.61	2887.52	.00	1.41	1.23	1.500	.000	.00	0 .0	
3.260	.0475	-	-	-	-	.0216	.07	1.18	1.63	.89	.013	.00	.00	PIPE	
2018.419	2884.881	1.244	2886.124	15.20	9.70	1.46	2887.59	.00	1.41	1.13	1.500	.000	.00	0 .0	
2.193	.0475	-	-	-	-	.0197	.04	1.24	1.45	.89	.013	.00	.00	PIPE	
2020.612	2884.985	1.316	2886.300	15.20	9.25	1.33	2887.63	.00	1.41	.99	1.500	.000	.00	0 .0	
.958	.0475	-	-	-	-	.0185	.02	1.32	1.26	.89	.013	.00	.00	PIPE	
2021.570	2885.030	1.410	2886.440	15.20	8.82	1.21	2887.65	.00	1.41	.71	1.500	.000	.00	0 .0	
JUNCT STR	1.0000	-	-	-	-	.0114	.00	1.41	1.00	-	.013	.00	.00	PIPE	
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WATER SURFACE PROFILE LISTING

Date: 4-29-2020 Time: 9:22:38

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

LATERAL TO SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

SCPD-L OUT

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.-FT	Height/ Base or I.D.	Wt ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2021.580	2885.040	3.221	2888.261	7.20	4.07	.26	2888.52	.00	1.04	.00	1.500	.000	.00	0 .0
33.344	.0482					.0047	.16	3.22	.00	.58	.013	.00	.00	PIPE
2054.924	2886.646	1.777	2888.423	7.20	4.07	.26	2888.68	.00	1.04	.00	1.500	.000	.00	0 .0
HYDRAULIC JUMP														
2054.924	2886.646	.576	2887.221	7.20	11.53	2.06	2889.29	.00	1.04	1.46	1.500	.000	.00	0 .0
235.830	.0482					.0482	11.36	.58	3.11	.58	.013	.00	.00	PIPE
2290.754	2898.002	.576	2898.577	7.20	11.53	2.06	2900.64	.00	1.04	1.46	1.500	.000	.00	0 .0
56.134	.0482					.0469	2.63	.58	3.11	.58	.013	.00	.00	PIPE
2346.888	2900.705	.584	2901.289	7.20	11.30	1.98	2903.27	.00	1.04	1.46	1.500	.000	.00	0 .0
29.592	.0482					.0428	1.27	.58	3.02	.58	.013	.00	.00	PIPE
2376.480	2902.130	.606	2902.736	7.20	10.77	1.80	2904.54	.00	1.04	1.47	1.500	.000	.00	0 .0
144.814	.0400					.0400	5.79	.61	2.82	.61	.013	.00	.00	PIPE
2521.294	2907.922	.606	2908.527	7.20	10.77	1.80	2910.33	.00	1.04	1.47	1.500	.000	.00	0 .0
57.777	.0400					.0390	2.26	.61	2.82	.61	.013	.00	.00	PIPE
2579.071	2910.233	.614	2910.846	7.20	10.58	1.74	2912.58	.00	1.04	1.48	1.500	.000	.00	0 .0
31.897	.0400					.0357	1.14	.61	2.75	.61	.013	.00	.00	PIPE
2610.969	2911.508	.636	2912.145	7.20	10.09	1.58	2913.73	.00	1.04	1.48	1.500	.000	.00	0 .0
13.986	.0400					.0314	.44	.64	2.56	.61	.013	.00	.00	PIPE
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WATER SURFACE PROFILE LISTING
SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

LATERAL TO SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Height/ Dia.-FT	Base Wt or I.D.	No Wth Prs/Pip
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Date: 4-29-2020 Time: 9:22:38

SCPD-L.OUT

L/Elem	Ch Slope	Invert Elev	Depth (FT)	Water Elev	Q (cfs)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow width	Top Height/Dia.-FT	Base Wt I.D.	No Wth Prs/Pip	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2624.954	2912.068	.660	2912.727	.660	2912.727	7.20	9.62	1.44	2914.16	.00	1.04	1.49	1.500	.000	.00
8.552	.0400							.0276	.24	.66	2.39	.61	.013	.00	PIPE
2633.506	2912.410	.684	2913.094	.684	2913.094	7.20	9.17	1.31	2914.40	.00	1.04	1.49	1.500	.000	.00
5.917	.0400							.0243	.14	.68	2.23	.61	.013	.00	PIPE
2639.423	2912.646	.710	2913.356	.710	2913.356	7.20	8.74	1.19	2914.54	.00	1.04	1.50	1.500	.000	.00
4.347	.0400							.0213	.09	.71	2.08	.61	.013	.00	PIPE
2643.770	2912.820	.737	2913.557	.737	2913.557	7.20	8.34	1.08	2914.64	.00	1.04	1.50	1.500	.000	.00
156.645	.0200							.0200	3.13	.74	1.94	.74	.013	.00	PIPE
2800.415	2915.950	.737	2916.686	.737	2916.686	7.20	8.34	1.08	2917.77	.00	1.04	1.50	1.500	.000	.00
58.970	.0200							.0192	1.13	.74	1.94	.74	.013	.00	PIPE
2859.385	2917.128	.755	2917.883	.755	2917.883	7.20	8.08	1.01	2918.90	.00	1.04	1.50	1.500	.000	.00
23.387	.0200							.0173	.40	.76	1.85	.74	.013	.00	PIPE
2882.772	2917.595	.784	2918.379	.784	2918.379	7.20	7.70	.92	2919.30	.00	1.04	1.50	1.500	.000	.00
11.221	.0200							.0152	.17	.78	1.72	.74	.013	.00	PIPE
2893.993	2917.819	.815	2918.634	.815	2918.634	7.20	7.35	.84	2919.47	.00	1.04	1.49	1.500	.000	.00
6.737	.0200							.0134	.09	.81	1.60	.74	.013	.00	PIPE
2900.730	2917.954	.847	2918.800	.847	2918.800	7.20	7.00	.76	2919.56	.00	1.04	1.49	1.500	.000	.00
4.370	.0200							.0119	.05	.85	1.48	.74	.013	.00	PIPE

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Program Package Serial Number: 7189

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

LATERAL TO SKYE CANYON PARK MAINLINE (ULTIMATE CONDITION)

Date: 4-29-2020 Time: 9:22:38

PAGE 5

Station	Invert Elev	Depth (FT)	Water Elev	Q (cfs)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow width	Top Height/Dia.-FT	Base Wt I.D.	No Wth Prs/Pip	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
L/Elem	Ch Slope													
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

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2905.100	2918.041	.880	2918.921	7.20	6.68	.69	2919.61	.00	1.04	1.48	1.500	.000	.00	0	.0
2.863	.0200	- -	- -	- -	- -	.0105	.03	.88	1.38	.74	.013	.00	.00	PIPE	
2907.963	2918.098	.916	2919.014	7.20	6.37	.63	2919.64	.00	1.04	1.46	1.500	.000	.00	0	.0
1.799	.0200	- -	- -	- -	- -	.0093	.02	.92	1.28	.74	.013	.00	.00	PIPE	
2909.762	2918.134	.954	2919.088	7.20	6.07	.57	2919.66	.00	1.04	1.44	1.500	.000	.00	0	.0
.982	.0200	- -	- -	- -	- -	.0082	.01	.95	1.18	.74	.013	.00	.00	PIPE	
2910.744	2918.154	.995	2919.148	7.20	5.79	.52	2919.67	.00	1.04	1.42	1.500	.000	.00	0	.0
.315	.0200	- -	- -	- -	- -	.0073	.00	.99	1.09	.74	.013	.00	.00	PIPE	
2911.059	2918.160	1.039	2919.199	7.20	5.51	.47	2919.67	1.50	1.04	1.38	1.500	.000	.00	0	.0
JUNCT STR 10.2500		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
----- WARNING - Junction Analysis - Large Lateral Flow(s) -----															
2911.060	2918.170	.116	2918.286	.10	1.59	.04	2918.32	1.50	.12	.80	1.500	.000	.00	0	.0
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

APPENDIX C

Improvement Plans and CD of Electronic Copy

EST1609.000

April 21, 2020

Jennifer Shinn, P.E.
City of Las Vegas
333 Rancho Drive (7th Floor)
Las Vegas, NV 89101

**Subject: Supplement to the Technical Drainage Study Update for
Skye Canyon Phase 3B/3C Infrastructure**

Ms. Shinn:

This letter certifies that all items provided on electronic submittal CD matches 100% of the Supplement to the *Technical Drainage Study Update for Skye Canyon Phase 3B/3C Infrastructure* bound paper version.

Respectfully Submitted,
WESTWOOD PROFESSIONAL SERVICES



Lant Leavitt, P.E.
Project Manager – Water Resources Department



CONSTRUCTION NOTES

STORM DRAIN NOTESNOTES

1. ALL ROP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
2. PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR ROR/ICA.
3. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
4. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
5. ALL PIPES ARE PUBLICLY MAINTAINED IN PUBLIC ROW.
6. ADD SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
7. DIMENSIONS ARE TO BE BACK OF CURB, FACE OF CURB, OR FACE OF MEDIAN UNLESS OTHERWISE NOTED.
8. SEE T-SHETS FOR TYPICAL SECTIONS.
9. SEE T-SHETS FOR WATER AND SEWER PLAN AND PROFILES.

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL).

LEGEND

STORM DRAIN LATERAL # (SEE LAT SHEETS)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4953 ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

[Signature] 4/24/20
DERICK YORO, P.E. 16396 DATE

FLOOD ZONE
THE PROJECT SITE IS LOCATED WITHIN
DESIGNATED ZONE 'X' (OUTSIDE THE 5
FLOOD PLAIN) ON THE FLOOD INSURANCE
MAP (FIRM) PANEL: 32003C1750E, DATED
SEPTEMBER 27, 2002

NOTE: PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 126408 FIRST APPROVED DATE: _____

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before you
Under Ground.
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S-I-G
SLATER
HANIFAN
GROUP
a **Westwood** team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
FAX (702) 284-5399
PHONE (702) 284-5300

NINETY-FIVE MANAGEMENT LLC

**SKYE CANYON PHASE 3BC
SKYE CANYON PARK
CONSTRUCTION PLAN - ARROYO GRADING**

DATE: 4/17/20

DRAFTER: HF

DESIGNER: HF

CHECKED: DY

PROJECT NO.

OLY1609-000



ENGINEER - ST

DERICK D.J.

YORO
Exp: 06/30/2020

CIVIL

No. 16398

DD 25

PP-07

SHEET 11 OF 46

107V7513

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