

Steve Jones

From: Steve Jones
Sent: Thursday, May 03, 2012 4:04 PM
To: Abigail Mayrena (AMayrena@regionalflood.org)
Cc: okwon@lasvegasnevada.gov; Todd Steadham (tsteadham@shg-inc.com)
Subject: RE: Kyle Canyon exhibits
Attachments: Exhibit J - Regional Facilities Map.pdf

Abi,

Facility U4 is intended to be constructed in the ultimate condition when Sheep Mountain Parkway is improved. Prior to Sheep Mountain Parkway improvements, the discharge from the regional detention basin Facility P01W (Facility P04W) is maintained in the existing southern arroyo and conveyed thru the Kyle Canyon site to the Hualapai Way alignment where it is conveyed north. Therefore, rather than revising the regional alignment after Sheep Mountain Parkway is complete and proposing a new developer financed (Category B) regional facility, Facility U4 has been changed to a future local facility and the regional alignment has been changed to match the proposed drainage condition presented in the CLV conditionally approved drainage study. Per the March 22, 2012 meeting with you and Andrew, this was determined an acceptable regional alignment to replace U4.

The attached Exhibit J and its summary table of West Regional Facilities has been updated accordingly. Note the only flow identified in the updated summary table that has not been updated is for Facility P22W; however, the flow reported and utilized for conceptual sizing of this facility included outflow from Detention Basin P01W which is considered conservative. Therefore, the reported flow and conceptual size for P22W is considered acceptable and the flow returns to as reported in the summary table at the next downstream facility (north of the intersection of Hualapai and Iron Mountain).

Let me know if you have any questions, comments or concerns. Thanks,

Steve Jones, P.E.
Assistant Project Manager

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LAS VEGAS
5740 S. ARVILLE STREET #216
LAS VEGAS, NEVADA 89118
PHONE: (702) 284-5300
FAX: (702) 284-5399
www.shg-inc.com

PHOENIX
11801 N. TATUM BLVD. #124
PHOENIX, ARIZONA 85028
PHONE: (602) 687-9664
FAX: (602) 687-9693

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From: Abigail Mayrena [<mailto:AMayrena@regionalflood.org>]
Sent: Monday, April 30, 2012 10:09 AM
To: Steve Jones
Cc: Oh Sang Kwon ,P.E. (okwon@lasvegasnevada.gov)
Subject: Kyle Canyon exhibits

As discussed last week, can you revise U4 to be a Category B facility. I'll need the revised exhibits before I can process your concurrence letter. Can you also send the revised exhibits to CLV.

Thanks,

Abigail Mayrena, P.E., CFM
Senior Engineer

Clark County Regional Flood Control District
600 South Grand Central Pkwy, Suite 300
Las Vegas, Nevada 89106

AMayrena@regionalflood.org

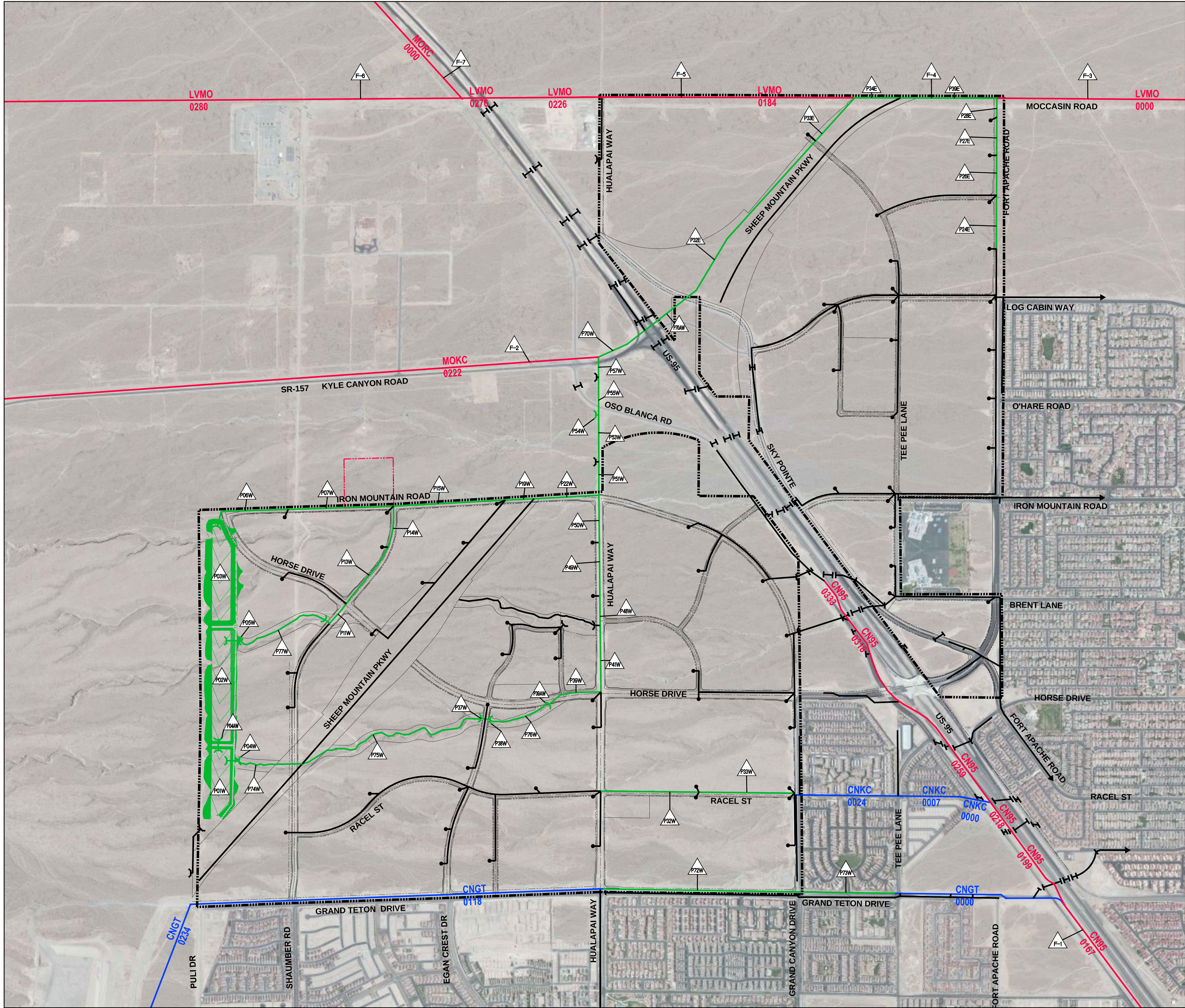
702-685-0000 (phone)

702-685-0001 (fax)

www.regionalflood.org



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Summary of Regional Facilities Kyle Canyon West					Flow Breakdown
Facility ID	Q ₁₀₀ (cfs)	Design Slope (%)	Length (ft)	Description	
P01W	777	N/A	N/A	Orifice Size: (2) 30-inch (into P74W & P02W) Total Storage Volume: 54.41 acre-ft Debris Volume: 4.41 acre-ft 100-year Storage Volume: 50 acre-ft 100-year Water Surface Elevation: 3040.70-ft PMF Flow: 3.145 cfs PMF Spillway Length: 200'-4 @ 3'-4 depth 18-inch RCP Low Flow Pipe at Bottom	PT1/DET1
P02W	363	N/A	N/A	Orifice Size: 27-inch (into P77W) Total Storage Volume: 38.44 acre-ft Debris Volume: 1.44 acre-ft 100-year Storage Volume: 30.00 acre-ft 100-year Water Surface Elevation: 3030.85-ft PMF Flow: 3.145 cfs PMF Spillway Length: 200'-4 @ 3'-4 depth 18-inch RCP Low Flow Pipe at Bottom	PT2/DET2
P03W	549	N/A	N/A	Orifice Size: 30-inch (into P05W) Total Storage Volume: 60.17 acre-ft Debris Volume: 4.17 acre-ft 100-year Storage Volume: 55 acre-ft 100-year Water Surface Elevation: 3011.28-ft PMF Flow: 3.310 cfs PMF Spillway Length: 215'-4 @ 3'-4 depth 18-inch RCP Low Flow Pipe at Bottom	PT3/DET3
P04W	68	5.2	100	30-inch RCP	DIV-1
P04W	80	1.0	0	30-inch RCP	DIV-1
P05W	49	3.0	100	27-inch RCP	DIV-2
P06W	76	3.6	901	30-inch RCP	DIV-3
P07W	100	3.6	1419	42-inch RCP	DIV-3 + WL3
P11W	147	1.7	345	48-inch RCP	WML7 + DIV-2 + AROY4 + WPRK4
P13W	198	3.5	950	48-inch RCP	SH-HO
P14W	232	3.5	561	54-inch RCP	SH-HO + WLSA
P15W	338	3.6	1558	60-inch RCP	SH-HO
P19W	489	3.6	386	5'-4 wide by 5'-4 high RCB	IR-SH + WML5 + HORSE1B + WL4
P22W	631	3.6	877	6'-4 wide by 5'-4 high RCB	IR-SH + SM-IR
P32W	532	3.6	1323	56-inch RCP	RA-HU
P33W	602	3.6	1287	72-inch RCP	RA-HU + WL1-B + WL2A-A
P37W	204	N/A	63	60-inch RCP Inlet	RSHEPA + AROY2 + WPRK3 + WML3B-B + DIV-1 + AROY1 + WPRK5
P38W	267	3.0	64	60-inch RCP	RSHEPA + AROY2 + WPRK3 + WML3B + EGAN2 + DIV-1 + AROY1 + WPRK5
P39W	277	N/A	60	72-inch RCP Inlet	RSHEPA + AROY2 + WPRK3 + WML3B + EGAN2 + AROY3 + WPRK2B + DIV-1 + AROY1 + WPRK5
P39W	277	3.0	700	60-inch RCP	RSHEPA + AROY2 + WPRK3 + WML3B + EGAN2 + AROY3 + WPRK2B + DIV-1 + AROY1 + WPRK5
P41W	317	0.5	895	7'-4 wide by 5'-4 high RCB	SH-HO
P48W	531	0.5	397	10'-4 wide by 5'-4 high RCB	SH-HO + WML5 + WSCHL2 + STRT5 + SHEEP1-B + AROY5
P49W	578	0.5	719	10'-4 wide by 5'-4 high RCB	HU-HO + WML5 + WSCHL2 + STRT5 + SHEEP1-B + AROY5 + WMLA1-A
P50W	630	0.5	637	10'-4 wide by 5'-4 high RCB	HU-HO + WML5 + WSCHL2 + STRT5 + SHEEP1-B + AROY5 + WMLA1-A + WMLA1-B
P51W	1128	0.5	373	10'-4 wide by 5'-4 high RCB	HU-IR
P53W	1160	0.5	755	10'-4 wide by 5'-4 high RCB	WPT40
P54W	1310	N/A	70	10'-4 wide by 5'-4 high RCBs	COFFP1
P55W	1620	0.5	461	14'-4 wide by 5'-4 high RCB	COFFP2
P57W	1578	0.5	327	14'-4 wide by 5'-4 high RCB	CKC5
P70W	3324	3.0	707	14'-4 wide by 5'-4 high RCB, Crossing of US-95, Designed for Larger Ultimate Condition Flow	CKC5
P70A	3477	3.0	879	14'-4 wide by 5'-4 high RCB, Crossing of US-95, Designed for Larger Ultimate Condition Flow	CKC6
P72W	584	N/A	2670	8'-4 wide by 5'-4 high RCB	Facility E-30 + E-31
P73W	707	N/A	1253	10'-4 wide by 5'-4 high RCB	Previous GCW Design
P74W	79	N/A	520	Existing Arroyo	DIV-1 + AROY1 + WPRK5
P75W	204	N/A	2352	Existing Arroyo	RSHEPA + AROY2 + WPRK3 + WML3B-B + DIV-1 + AROY1 + WPRK5
P76W	277	N/A	846	Existing Arroyo	RSHEPA + AROY2 + WPRK3 + WML3B + EGAN2 + AROY3 + WPRK2B + DIV-1 + AROY1 + WPRK5
P77W	77	N/A	1334	Existing Arroyo	DIV-2 + AROY4 + WML7-G
F-2	2708	N/A	N/A	Future Offsite Regional Facility (By Others)	CNW35-G

Summary of Regional Facilities Kyle Canyon East					Flow Breakdown
Facility ID	Q ₁₀₀ (cfs)	Design Slope (%)	Length (ft)	Description	
P24E	507	0.5	721	8'-4 wide by 5'-4 high RCB	R2FTLC + EML3-A
P28E	641	0.5	537	9'-4 wide by 5'-4 high RCB	R2FTLC + FORT2-A + EML3 + EML2B + TP4B + STRT7
P27E	703	0.5	513	10'-4 wide by 5'-4 high RCB	R2FTLC + FORT2-A + EML3 + EML2B + TP4B + STRT7 + EML4-A
P28E	760	0.5	400	10'-4 wide by 5'-4 high RCB	FT-MJO
P32E	3553	2.4	2585	14'-4 wide by 5'-4 high RCB	CKC8 + OFFT
P33E	3687	2.4	783	14'-4 wide by 5'-4 high RCB, Designed to convey larger Ultimate Condition Flow	CKC8 + OFFT + EMLA2
P34E	3787	2.9	619	14'-4 wide by 5'-4 high RCB, to be replaced by Facility F-4	ENVE1 + OFF2 + HU-L3
P39E	3880	2.6	1296	14'-4 wide by 5'-4 high RCB, to be replaced by Facility F-4	CKC8 + OFFT + EMLA3 + ENVE1 + OFF2 + HU-L3 + SHEEP2 + SHEEP3
F-3	10872	N/A	N/A	Future Offsite Regional Facility (By Others)	CP-3
F-4	10869	N/A	N/A	Future Onsite Regional Facility (By Others), Replaces Facilities P34E & P39E	CNW84-C
F-5	10298	N/A	N/A	Future Onsite Regional Facility (By Others), Replaces Facility P31E	C213B-5
F-6	N/A	N/A	N/A	Future Offsite Regional Facility (By Others)	N/A
F-7	N/A	N/A	N/A	Future Offsite Regional Facility (By Others)	N/A

NOTES:

ALL FACILITIES IDENTIFIED AS CATEGORY 'B' ARE TO BE CONSTRUCTED BY THE KYLE CANYON MASTER PLAN.

STORM DRAIN CROSSING AT U.S. HIGHWAY 95 IS TO BE CONSTRUCTED BY KYLE CANYON MASTER PLAN, AND IS PLANNED TO BE THE PERMANENT FACILITY IN THE REGIONAL ALIGNMENT.

ADDITIONAL CCRFCD MPU FACILITIES IDENTIFIED ON THE EXHIBIT AS CATEGORY 'B' HAVE NOT BEEN IDENTIFIED WITH 2008 MPU ID TAGS SINCE THEY ARE CONSIDERED ADDED MPU FACILITIES TO BE INCORPORATED IN A FUTURE MPA.

FLOW COLLECTED BY THE CN95 MPU REGIONAL FACILITY IS CONVEYED SOUTH WITH NO FLOW SPLIT TO THE EAST.

PER 2008 MPU, FUTURE CCRFCD FACILITIES IN THE KYLE CANYON ROAD AND MOCCASIN ROAD ALIGNMENTS ARE TO TIE INTO PROPOSED FACILITIES IN SHEEP MOUNTAIN PARKWAY & MOCCASIN.

EXHIBIT J

KYLE CANYON MASTER DRAINAGE STUDY (RFCDD SUPP)
CCRFCD REGIONAL FACILITIES MAP

WCR0902.004