CLARK COUNTY BOARD OF COMMISSIONERS

ZONING / SUBDIVISIONS / LAND USE

AGENDA ITEM

Petitioner: Nancy A. Amundsen, Director, Department of Comprehensive Planning

Recommendation: CP-22-900294: Conduct a public hearing, adopt the Flood Control Master Plan Amendment, and authorize the Chair to sign a Resolution amending the Plan. (For possible action)

FISCAL IMPACT:

None by this action.

BACKGROUND:

The Flood Control Master Plan determines future community needs and promotes effective control of floods and services to meet those needs. Clark County Public Works is proposing this Master Plan Amendment (MPA) to revise the Plan for the Harry Reid Airport area of Clark County. The Regional Flood District Board of Directors held a public hearing and unanimously adopted the MPA to amend the Plan for the Harry Reid Airport area on March 10, 2022.

Nevada Revised Statutes (NRS) 543.597, subsection 6 states: "If a proposed amendment to the master plan is adopted unanimously by the board, and by the governing body of the local government in whose jurisdiction will be located the structures necessary to carry out the purposes of the amendment, after a public hearing by each, the amendment becomes effective and no other hearing or approval is required by any other board or commission, including those responsible for decisions relating to planning or zoning."

To complete the adoption process, staff recommends that the Board of County Commissioners adopt an amendment to the Flood Control Master Plan.

All documents for this item are available for review at the Clark County Regional Flood Control District, 600 S. Grand Central Parkway, Suite 300, Las Vegas, NV 89155.

Cleared For Agenda
06/08/22

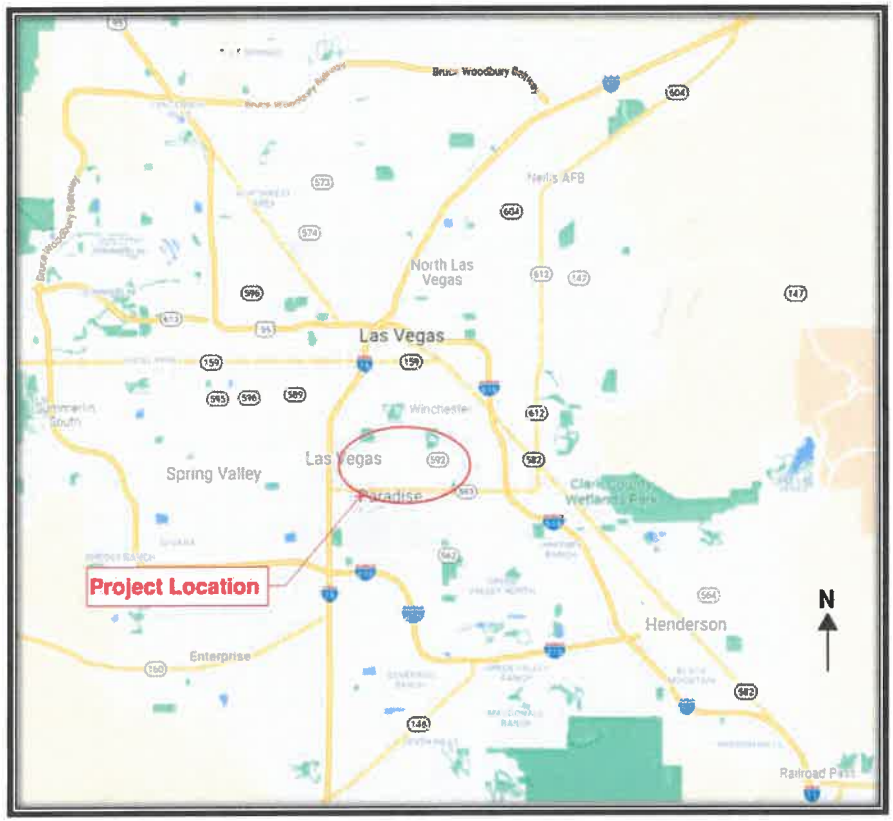
2022 AMENDMENT TO THE 2018 LAS VEGAS VALLEY MASTER PLAN UPDATE FOR HARRY REID AIRPORT PEAKING BASIN AND OUTFALLS AND VAN BUSKIRK SYSTEM

ATKINS

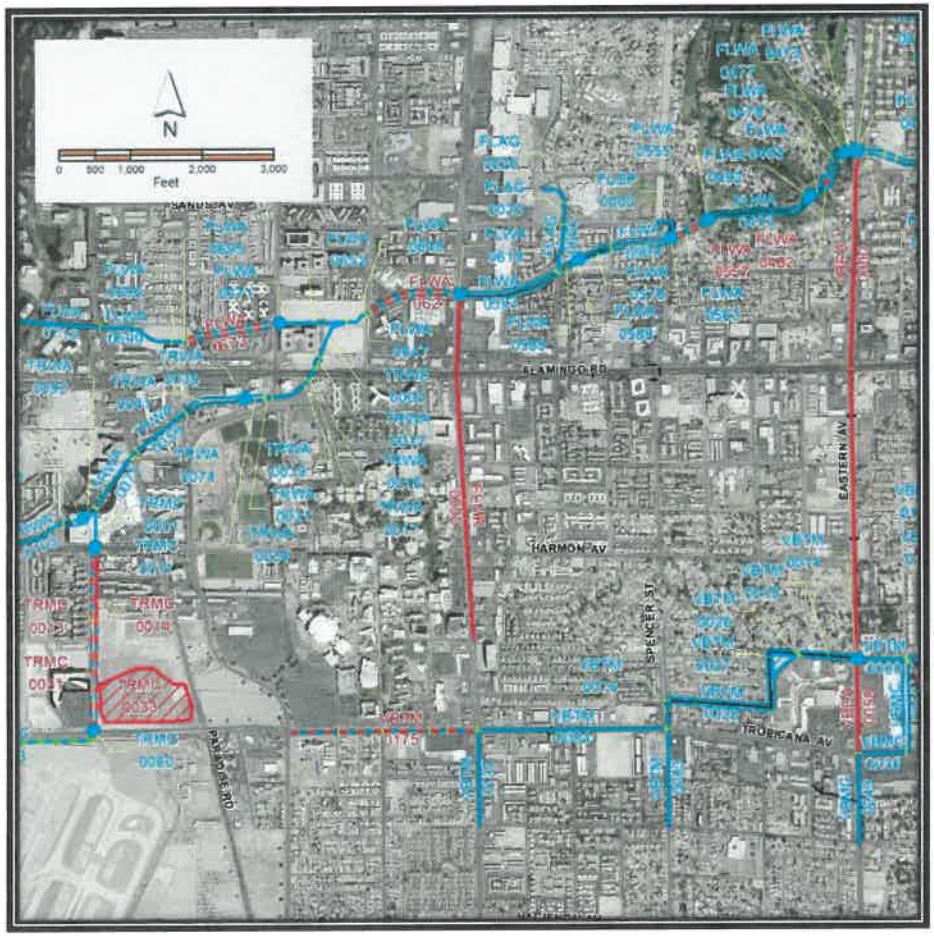
CLARK COUNTY NEVADA

REGIONAL FLOOD CONTROL DISTRICT

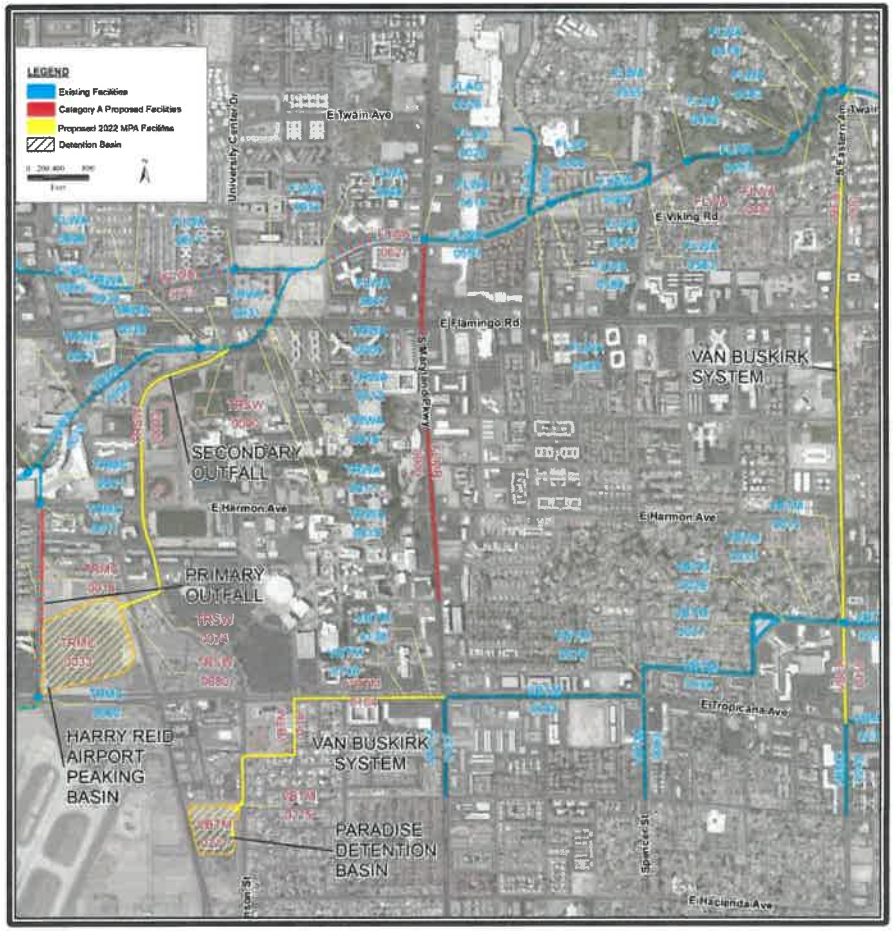
Jacobs



VICINITY MAP

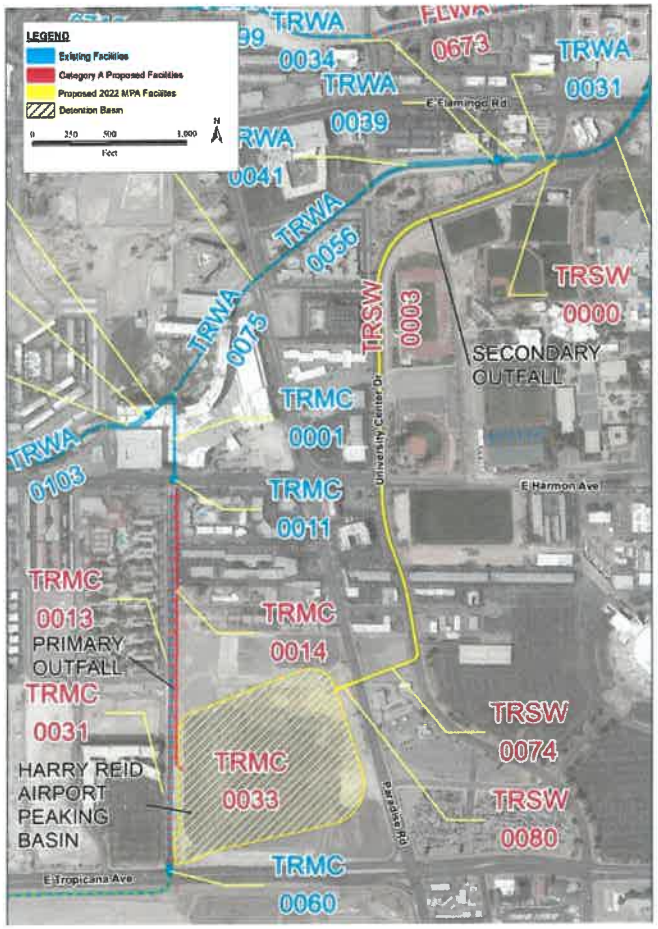


2018 MPU Facilities



2022 MPA Facilities

Harry Reid Airport Peaking Basin and Outfalls

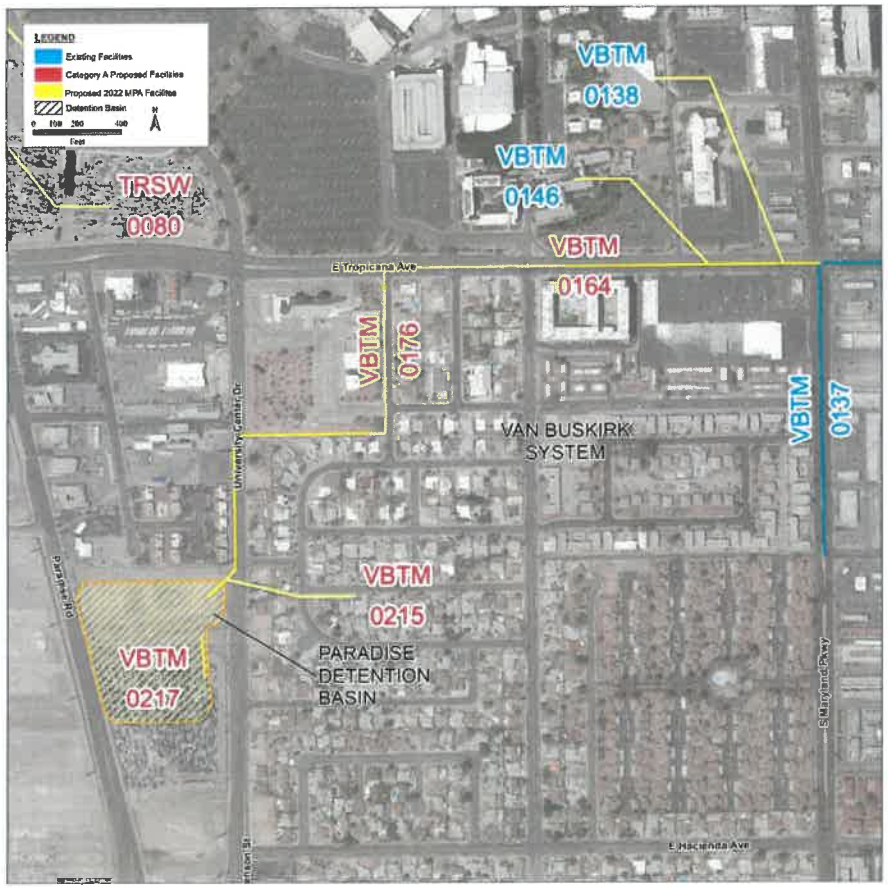


Facility Changes

- TRMC 0033 – Harry Reid Airport Peaking Basin formerly known as McCarran Airport Peaking Basin, Volume change from 170 ac-ft to 223.5 ac-ft
- TRSW 0000-0080 – Secondary Outfall Facilities, addition of approximately 5000 ft of facilities from the Harry Reid Airport Peaking Basin to Tropicana Wash

2018 MPU			2022 MPA		
TROPICANA WASH – MCCARRAN AIRPORT			**TROPICANA WASH – HARRY REID AIRPORT**		
ID/ River Mile	**E/P**	**Facility Description**	**ID/ River Mile**	**E/P**	**Facility Description**
TRMC 0033	P	170 AC-FT MCCARRAN AIRPORT PEAKING BASIN	TRMC 0033	P	223.5 AC-FT HARRY REID AIRPORT PEAKING BASIN
TROPICANA WASH – SWENSON			**TROPICANA WASH – SWENSON**		
ID/ River Mile	**E/P**	**Facility Description**	**ID/ River Mile**	**E/P**	**Facility Description**
TRSW 0000		N/A	TRSW 0000	P	8' X 4' RCB
TRSW 0003		N/A	TRSW 0003	P	6' X 4' RCB
TRSW 0074		N/A	TRSW 0074	P	54" RCP
TRSW 0080		N/A	TRSW 0080	P	4' X 2' RCB OUTLET WITH 24" ORIFICE

Van Buskirk System



Facility Changes

- VBTM 0176 – 0217 – Addition of Paradise Detention Basin and outfall facilities to Van Buskirk system
- VBTM 0164 – 0175 – Modification of existing and proposed facilities in Tropicana due to lower peak flow from Paradise Detention Basin.

2018 MPU			2022 MPA		
VAN BUSKIRK – TOMPKINS AVENUE			VAN BUSKIRK – TOMPKINS AVENUE		
ID/ River Mile	E/P	Facility Description	ID/ River Mile	E/P	Facility Description
VBTM 0164		N/A	VBTM 0164	P	5' X 6' RCB (REPLACES VBTM0151 TO 0163)
VBTM 0175	P	10' X 5' RCB (REPLACES VBTM0138 TO 0174)	VBTM 0175		ID Mile Not Used
VTBM 0176		N/A	VTBM 0176	P	42" RCP
VTBM 0215		N/A	VTBM 0215	P	36" RCP OUTLET WITH 18" ORIFICE
VTBM 0216		N/A	VTBM 0216	P	620 CFS SPILLWAY
VTBM 0217		N/A	VTBM 0217	P	52 AC-FT PARADISE DETENTION BASIN

Van Buskirk System

Facility Changes

- VBEA 0000 - 0058 – Modification of proposed facilities in Eastern due to lower peak flow from Paradise Detention Basin.

2018 MPU			2022 MPA		
VAN BUSKIRK – EASTERN AVENUE			VAN BUSKIRK – EASTERN AVENUE		
ID/ River Mile	E/P	Facility Description	ID/ River Mile	E/P	Facility Description
VBEA 0000	P	10' X 6' RCB	VBEA 0000	P	8' X 5' RCB
VBEA 0058	P	14' X 6' RCB	VBEA 0058	P	12' X 5' RCB

MPA Estimated Costs for Proposed Changes

ID Miles	2018 MPU	2022 MPA	Difference
Current System: TRMC 0033, VBTM 0175, VBEA 0000, 0058	$23,725,000	--	
Proposed Modifications: TRMC 0033, VBTM 0164, VBEA 0000, 0058	--	$18,626,000	
Proposed Added System: TRSW 0000-0080, VBTM 0176-0217	--	$8,138,000	
Total:	**$23,725,000**	**$26,764,000**	**$3,039,000**

The proposed amendment to the MPU is consistent with the general principles set forth in NRS 543.597 and subsection 3 of NRS 543.590, and this MPA represents the most cost-effective structural and regulatory means for correcting existing problems of flooding within the area and dealing with the probable effects of future development.

Questions?

ATKINS

Member of the SNC-Lavalin Group

Master Plan Amendment for Harry Reid Airport Peaking Basin and Outfalls and Van Buskirk System

February 2022

Las Vegas Valley Master Plan Amendment

PROFESSIONAL ENGINEER-STATE OF NEVADA
MATTHEW S. BAIRD
EXP. 12-31-22
CIVIL
No. 13684

2/14/2022

Matthew S Baird, PE, CFM

Digitally signed by Matthew S Baird, PE, CFM
DN: C=US, E=Matt.Baird@atkinsglobal.com, O="Atkins North America, Inc.", CN="Matthew S Baird, PE, CFM"
Reason: I attest to the accuracy and integrity of this document
Date: 2022.02.14 09:35:16-08'00'

Notice

This document and its contents have been prepared and are intended solely as information for and use in relation to Drainage of the Harry Reid Airport Peaking Basin and the Van Buskirk System.
WS Atkins, Inc. and Jacobs assume no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Executive Summary

The Master Plan Amendment (MPA) for the Harry Reid (formerly McCarran) Airport Peaking Basin and Outfalls and Van Buskirk System details the hydrology and amended facilities for the drainage areas around the Harry Reid Airport which are affected by the proposed infrastructure in the Tropicana Avenue & University Center Drive Grade Separation (TUGS) project and the extension of Tompkins Avenue from Kelch Drive to Paradise Road (TKP). The Harry Reid Airport Peaking Basin will be amended to further accommodate increased storage needs. Additionally, a second outfall to the basin is proposed in order to comply with the drain time requirements from the Federal Aviation Administration.

The Van Buskirk System of the MPA impacts the VBTM alignment. Multiple facilities in the VBTM alignment were scheduled to be replaced with larger capacity facilities, however these planned facilities conflict with the proposed TUGS project. The Paradise Detention Basin is proposed upstream of the VBTM alignment and will reduce the size of the required downstream storm drain facilities and enable the design and construction of the TUGS project.

The 2018 MPU facilities are shown on **Figure 3-1**, the facilities to be amended are shown on **Figure 3-2**, and the updated 2022 MPA facilities are shown on **Figure 3-3.** A summary of the facility changes proposed with this MPA include:

Removed Facilities from 2018 MPU:

- Van Buskirk – Tompkins Avenue Existing Facility (VBTM 0174)

Facilities from 2018 to be modified:

- Harry Reid Airport Peaking Basin formerly known as McCarran Airport Peaking Basin (TRMC 0033)
- Van Buskirk – Tompkins Avenue (VBTM 0175 becomes 0164)
- Van Buskirk – Eastern Avenue facilities to be downsized (VBEA 0000,0058)

Added facilities to 2018 MPU:

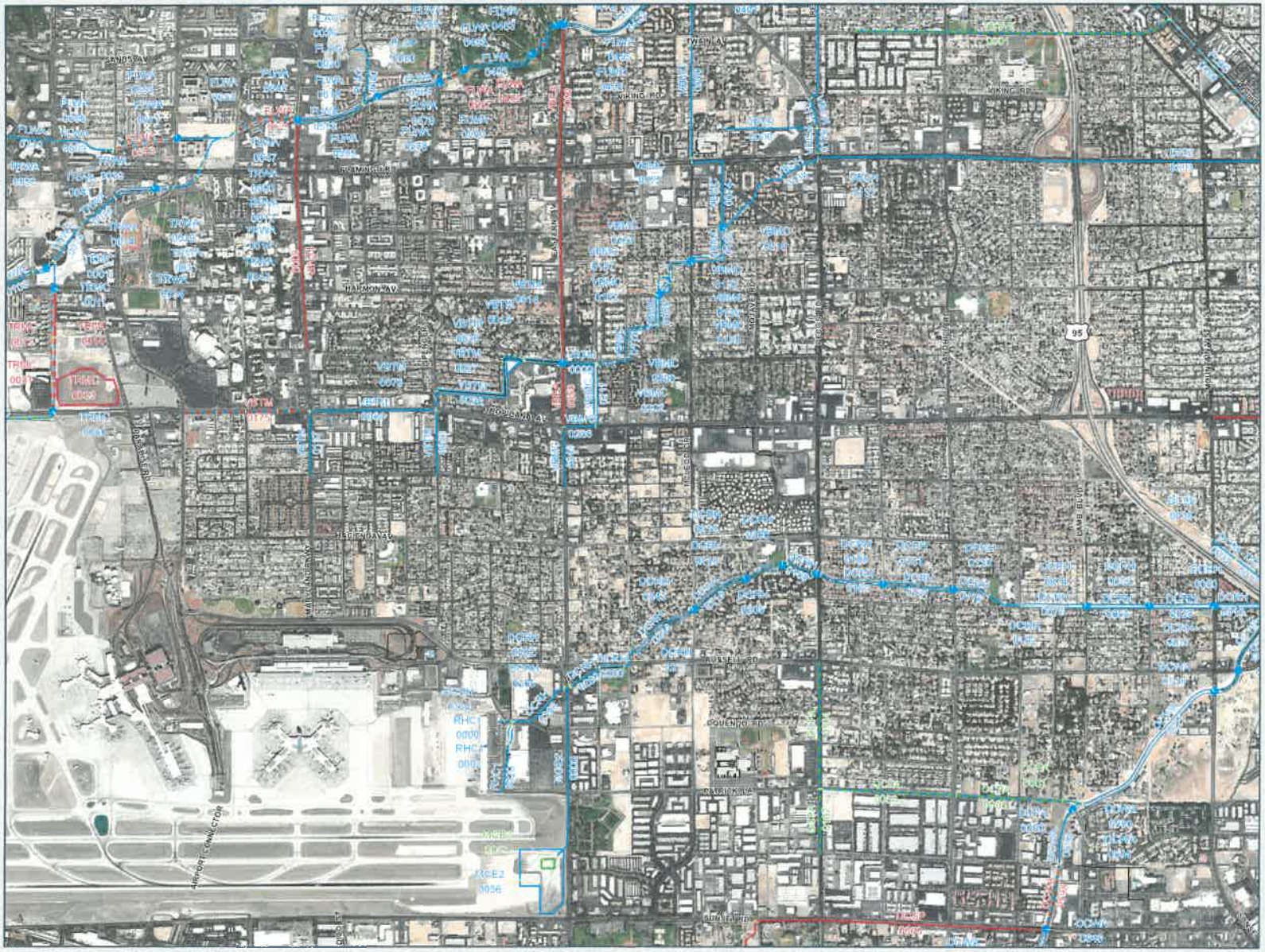
- Harry Reid Airport Peaking Bains secondary outfall (TRSW 0000-0080)
- Paradise Detention Basin and Outfall System (VBTM 0176-0217)

The estimated costs for these proposed changes are as follows:

Master Plan Amendment Estimated Cost

ID Miles	2018 MPU ($ x 1000)	2022 MPA ($ x 1000)	Difference ($ x 1000)
Current System: TRMC 0033, VBTM 0175, VBEA 0000, 0058	$23,725	--	
Proposed Modifications: TRMC 0033, VBTM 0164, VBEA 0000, 0058	--	$18,626	
Proposed Added System: TRSW 0000-0080, VBTM 0176-0217	--	$8,138	
Total:	**$23,725**	**$26,764**	**$3,039**

The total cost of the 2022 MPA is $26.764 million, an increase of $3.039 million from the estimated value of $23.725 million identified in the 2018 MPU. The proposed amendment to the MPU is consistent with the general principles set forth in NRS 543.597 and subsection 3 of NRS 543.590, and the MPA represents the most cost-effective structural and regulatory means for correcting existing problems of flooding within the area and dealing with the probable effects of future development. These facilities do not adversely affect the continued implementation of the MPU.



REGIONAL FLOOD CONTROL DISTRICT

2016
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE
Figure 3-1

FIGURE F-35
FLOOD CONTROL FACILITIES

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Detention Basin
- Culvert or Bridge Crossing
- Stormdrain
- Lined Channel
- Unlined Channel
- Levee/Dike
- Natural Wash/Floodway
- ID-Mile Separator

Remove & Replace/Parallel Facilities

Category A	Category B
Channel	Channel
Stormdrain	Stormdrain
Crossing	Crossing

N

0 500 1,000 2,000 3,000
Feet

Scale 1 Inch = 2,000 feet

AerialSource:Esri World Imagery 2017

ATKINS

Louis Berger

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
DC95		**DUCK CREEK - US 95 BRANCH**						
0017	E	84" RCP			CDCC420	DUCK3A		
0032	E		713		CDCC420	DUCK3A		
	E	84" RCP	59		CDCC420	DUCK3A		
DCPA		**DUCK CREEK - PATRICK COLLECTOR**						
	E	PARALLEL 78" & 86" RCP	450	1030	CDCC340W	DUCK3A	1.57	1.59
0001		ADD 1 48" RCP	450		CDCC340W	DUCK3A	1.57	
0008	PQ	12' X 6' RCB (REPLACES DCPA0009)		1131	CDCC340W	DUCK3A		
	E	PARALLEL 54" & 66" RCP (REPLACE W/DCPA0008)	2210		CDCC340W	DUCK3A		
		10' X 5' RCB (REPLACES DCPA0051)	2860			DUCK3A	1.04	
0061	E	86" RCP (REPLACE W/DCPA0050)	2960	618		DUCK3A	1.04	
0104		8' X 4' RCB (REPLACES DCPA0105)		252	DCC370	DUCK3A		0.49
0105	E	60" RCP (REPLACE W/DCPA0104)		252	DCC370	DUCK3A	0.53	
	E	48" RCP (REPLACE W/DCPA0107)			DCC330	DUCK3A		0.50
	PQ	8' X 5' RCB (REPLACES DCPA0106)	1360	398	DCC330	DUCK3A		
DCRH		**DUCK CREEK - RAWHIDE CHANNEL**						
0000	E	GABION CHNL 20'W 10'D 2:1 SS		1302	CDCC400W	DUCK3B		
	E	CONC CHNL 15'W 6'D 1.5:1 SS	930	1302	CDCC400W	DUCK3B	2.62	2.30
0027	E	2: 9' X 5' RCBC @ MOUNTAIN VISTA		1302	CDCC400W	DUCK3B		1.40
		CONC CHNL 15'W 6'D 1.5:1 SS	1260	1302	CDCC400W	DUCK3B	2.62	1.80
	E	2: 9' X 5' RCBC @ PALM AVE	80		CDCC400W	DUCK3B		1.50
	E	CONC CHNL 10'W 6'D 1.5:1 SS			CDCC400W	DUCK3B		1.60
0074	E	2: 9' X 5' RCBC @ LAMB BLVD			CDCC390	DUCK3B		
	E	CONC CHNL 10'W 6'D 1.5:1 SS			CDCC390	DUCK3B		2.40
	E	2: 8' X 5' RCBC @ ANNIE OAKLEY	740		CDCC390	DUCK3B		0.85
	E		120		CDCC390	DUCK3B		0.90
0130	E	2: 12' X 4' RCBC @ SANDHILL RD	80		CDCC390	DUCK3B		0.50
0131	E	CONC CHNL 11'W 3.5'D 1.5:1 SS	1410			DUCK3B		1.60
	E	2: 12' X 4' RCBC @ PEARL AVE	80		CDCC380	DUCK3B		
		CONC CHNL 11'W 3.5'D 1.5:1 SS		792	CDCC380	DUCK3B	1.46	
0188	E	2: 12' X 4' RCBC @ PECOS RD	200		CDCC380	DUCK3B		
	E	CONC CHNL 17'W 5.3'D 1.5:1 SS	450			DUCK3B	1.46	
	E	2: 8' X 4' RCBC @ SAGEBRUSH RD	240		CDCC380	DUCK3B	1.48	
		CONC CHNL 12'W 5'D 1.1 SS		792	CDCC380	DUCK3B	1.48	1.30
	E	CONC CHNL 11'W 5'D 1.5:1 SS	340		CDCC380	DUCK3B	1.48	
0218	E	2: 8' X 4' RCBC @ MOJAVE RD	86	792	CDCC380	DUCK3B	1.46	
	E	CONC CHNL 11'W 5'D 1.5:1 SS			CDCC380	DUCK3B	1.46	
0243	E	2: 8' X 4' CIP RCBC @ MCLEOD DR	120			DUCK3B	1.46	
0244		CONC CHNL 11'W 4'D 1.5:1 SS	1570		CDCC349	DUCK3B	1.46	
		2: 12' X 4' RCBC @ TOPAZ ST	480	469	CDMC060S	DUCK3A		
0280		CONC CHNL 10'W 5'D 2:1 SS	510	469	CDMC060S	DUCK3A		
0289		15' X 4' RCB	110	469	CDMC060S	DUCK3A	0.59	0.70
	E	TRANSITION STRUCTURE		469	CDMC060S	DUCK3A		
0305	E	3: 8' X 4' RCB	125	469	CDMC060S	DUCK3A		0.60
0306	E	10' X 5' RCB	1471	469	CDMC060S			0.49
0314	E	7' X 4' RCB		469	CDMC060S	DUCK3A	0.59	1.00
DCSP		**DUCK CREEK - SUNSET PARK**						
0000			6095		CDCC170	DUCK3A		0.70
		12' X 5' RCB	5340		CDCC180	DUCK3A		1.20
DCWA		**DUCK CREEK WASH**						
0471	E	GABION CHNL 75'W 12'D 2:1 SS WITH DROP STRUCTURES	1120	5582	CDCC360*	DUCK5B	20.94	0.47
0508	E	FREE SPAN BRIDGE 140'W 15'D @ RUSSELL	100	5582	CDCC360*	DUCK5B	20.94	0.51
	E	GABION CHNL 75'W 12'D 2:1 SS	670	5582	CDCC360*	DUCK5B	20.94	0.51
	E	2 SPAN BRIDGE 90'W 15' - 16'D @ MTN VISTA		5582	CDCC360	DUCK5B	20.84	
	E	CONC CHNL 60'W 7.5' - 16'D 0:1 SS		5582	CDCC360		20.84	1.76
0580	E	CONC CHNL 71' - 79'W 8'D 0:1 SS	200	5470	CDDCC190	DUCK5B	19.32	2.01
0584	E	2 SPAN BRIDGE 130'W 15'D @ GVP/PATRICK		5470	CDDCC190		18.62	0.59
	E	38' X 13.5' RCAP	1140	5470	CDDCC190	DUCK5B		0.93
0597	E	NATURAL/GABION WASH W/ DROP STRUCT. (REPL W/DCWA0598)		5470	CDDCC190	DUCK5B		
0598	P	GABION CHNL 45'W 8'D 2:1 SS (REPLACES DCWA0597)		5470	CDDCC190	DUCK5B	18.62	1.60
0545	E	3 SPAN BRIDGE 45'W 15'D @ SUNSET	100	5114	CDCC280W*	DUCK4C		1.70
	E	CONC CHNL 35'W 9'D 2:1 SS	547	5114	CDCC280W*	DUCK4C	11.78	0.50

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
FLAG		**FLAMINGO WASH - ALGONQUIN**						
0000	E	72" RCP	665	432	FW21	FLAM3A	0.47	
0020	E		318	432	FW21	FLAM3A	0.47	0.50
	E	60" RCP	427	432	FW21	FLAM3A	0.47	1.10
FLBS		**FLAMINGO - BOULDER HIGHWAY SOUTH**						
	E	UNLINED MEDIAN CHNL 0'W 4.5'D 4.5:1 SS	4060	694	CB4	FLAM3A	1.38	
	E	…IED MEDIAN CHNL 0'W 3.5'D …:1 SS	8950	348	CB4N	FLAM3A	0.63	0.70
FLMR		**FLAMINGO MARYLAND PARKWAY**						
	P	…P	4950		FW19	FLAM3A	0.45	
FLSP		**FLAMINGO WASH - SPENCER**						
	E	…P	420	432	FW21	FLAM3A	0.47	
FLWA		**FLAMINGO WASH**						
0423	E	CONC CHNL 50'W 6.5'D 0:1 SS			CFW23W	FLAM5B		0.76
0455	E	CHNL 50'-75'W 9.5'D 0:1 SS	170		CFW23W	FLAM5B	17.42	1.83
0459	E	CHNL 75-93'W 9.5'D 0:1 SS	347		CFW23W	FLAM5B	17.42	1.50
0471		3: 10' X 8' RCBC @ EASTERN	110	1841	CFW22W	FLAM5B	14.32	
0472	E	… RCBC @ EASTERN	110	3409	CFW22W	FLAM5B	14.32	0.50
	E	…S CHNL 60'W 15'D 2:1 SS	109	5247	CFW22W	FLAM5B	14.32	0.41
0477	E	…N BRIDGE 47'W 15'D		5247	CFW22W	FLAM5B	14.32	0.80
0478	E	GRASS CHNL 60'W 15'D 2:1 SS	520	5247	CFW22W	FLAM5B	14.32	0.41
0481	E	…CMAP @ TIOGA (REPLACE W/FLWA0482)		5247	CFW22W	FLAM5B	14.32	
0482		…K 6' RCBC @ TIOGA (REPLACES FLWA0481)		5247	CFW22W	FLAM5B	14.32	
0483	E	…S CHNL 60'W 15'D 2:1 SS	300	5247	CFW22W	FLAM5B	14.32	
0492	E	3 SPAN BRIDGE 47'W 15'D		5247	CFW22W	FLAM5B	14.32	
0493		…S CHNL 60'W 15'D 2:1 SS	1520	5247	FW22W	FLAM5B	14.32	0.46
0555		…N BRIDGE 47'W 15'D			CFW21	FLAM5B		0.50
0556	E	EARTH CHNL 60'W 15'D 2:1 SS (REPLACE W/FLWA0557)	520	5328	CFW21	FLAM5B		0.54
0557	P	GABION CHNL 30'W 12'D 2:1 SS (REPLACES FLWA0556)	520	5328	CFW21	FLAM5B	13.02	0.54
0563		…SPAN BRIDGE 35'W 10'D @ SPENCER	120		CFW21	FLAM5B		0.83
0564	E	CONC CHNL 35'W 6'D 0:1 SS			CFW21	FLAM5B		1.43
0578	E	…CHNL 50'W 20'D 1:1 SS WITH DROP STRUCTURES	440	5328	CFW21	FLAM5B	13.02	
0588	E	FREE SPAN BRIDGE 50'W 20'D @ TAMARUS	120		CFW21	FLAM5B		1.20
0580	E	…CHNL 50'W 20'D 1:1 SS WITH DROP STRUCTURES		5328	CFW21	FLAM5B		0.43
0593	E	…CHNL 40'W VARIES 8'D TO 12'D 0:1 SS	1390	5142	CFW19	FLAM4C1	11.50	
0519	E	…K 10' RCBC @ MARYLAND	119	4825	CFW18	FLAM4C1	10.84	1.10
0520		…H CHNL 60'W 20'D 1:1 SS (REPLACE W/FLWA0521)		4825		FLAM4C1	10.84	0.43
0521		…CHNL 50'W 7'D 1:1 SS (REPLACES FLWA0520)	1300	4825	CFW18	FLAM4C1	10.84	0.42
0647	E	4: 10' X 8' RCB		4825	CFW18	FLAM4C1	10.84	
0648	E	…12.5' RDAP	300	4825	CFW18	FLAM4C1	10.84	0.50
0652	E	…12' X 8' RCAP	865		CFW18W	FLAM3B	5.96	0.75
0671	E	3: 10' X 8' RCBC @ SWENSON	156		CFW18W	FLAM3B		1.40
0572	E	…H CHNL 27'W 4'D 2.5:1 SS (REPLACE W/FLWA0673)	1230		CFW18W	FLAM3B	5.96	
0673		…CHNL 25'W 2.5'D 2:1 SS (REPLACES FLWA0672)	1230		CFW18W	FLAM3B	5.96	
0695	E	6: 12' X 8' RCB			CFW18W	FLAM3B	5.96	0.35
0595	E	…K 8' RCB	150		CFW18W	FLAM3B		
0629	E	2: 12' X 8' RCB	1056		CFW18W	FLAM3B	5.96	0.82
	E	…K 10' RCB	1440			FLAM3B	5.44	0.53
LVW1		**LAS VEGAS WASH - BRANCH 1 (TROPICANA CHANNEL)**						
0176		…P		676	GB12	FLAM3A		
LVW2		**LAS VEGAS WASH - BRANCH 2 (JOHNSON CHANNEL)**						
0303	E	…P			65	FLAM3A		
MCE2		**MCCARRAN - EAST BRANCH 2**						
	E	…P OUTLET						
0056	E	100 AC…						
RNC1		**DUCK CREEK - RAWHIDE - TRIBUTARY 1**						
0000	E	7' X 4' RCB	111	270	DMC050	DUCK3A		
0002	E	…STABILIZED CHNL 110'W 5'D 3:1 SS	409	270	DMC050	DUCK3A	0.31	0.40
	E	…RCB			DMC050	DUCK3A	0.31	
TRMC		**TROPICANA WASH - MCCARRAN AIRPORT**						
0001	E	… X 4' RCB	539		CTW105	FLAM3A	4.84	0.30
0011	E	…4' RCBC @ HARMON	80		CTW105	FLAM3A		0.20

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
TRMC		**TROPICANA WASH - MCCARRAN AIRPORT**						
		EARTH CHNL 18'W 5'D 2:1 SS (REPLACE W/TRMC0015)		727	DTRMC	FLAM3A	4.34	0.45
	P	CONC CHNL 17'W 6'D 0:1 SS (REPLACES TRMC0012)	2098		DTRMC	FLAM3A	4.34	0.65
0014		15" RCP	1875	58		FLAM3A	4.34	0.20
	E	EARTH CHNL 18'W 5'D 2:1 SS (REPLACE W/TRMC0031)	1466	727	DTRMC	FLAM3A	4.34	0.45
0031	P	TRANS CONC CHNL 54'W 6'D TO 17'W 6'D 0:1 SS (REPL TRMC0030)			DTRMC	FLAM3A	4.34	0.20
0033	P	170 AC-FT MCCARRAN AIRPORT PERMANENT BASIN			DTRSW	FLAM5B	3.47	
0050	E	5: 10' X 8' RCBC @ TROPICANA AVE			CMC11	FLAM3B	3.47	0.30
0052	PQ	…1 10' X 6' RCB			CMC09	FLAM3D	2.30	
0053	E				CMC03	FLAM3B		0.59
TRWA		**TROPICANA WASH**						
		2: 20' X 7.5' RCAP			CTW11	FLAM3B		
0012		CONC CHNL 45'W TO 72'W 6'D TO 9.5'D			CTW11	FLAM3B		
0016		1: 12' X 5' RCB		1509	CTW11	FLAM3B	6.48	1.05
		2: 16.5' X 5' RCB		1509	CTW11	FLAM3B	6.18	
0019	E	5: 14' X 5' RCB	560	3018	CTW11	FLAM3B		1.40
	E	6: 12' X 4' RCB	110		CTW11	FLAM3B		
0034	E	CONC CHNL 87'W 8.5'D 0:1 SS	264		CTW11	FLAM3B		0.93
0038	E	4: 12' X 8' RCBC @ ACCESS ROAD	46	3018	CTW11	FLAM3B		
0041		CONC CHNL 80'W 5.5'D 0:1 SS	882		CTW11	FLAM3B		0.83
0058		6: 12' X 4' RCB			CTW10	FLAM3B	5.74	
0074	E	10: 10' X 4' RCB			CTW10	FLAM3B	5.74	
	E		820		CTW10	FLAM3B	5.74	0.30
	E	GRASS CHNL 30'W 5'D 4:1 SS	210	1836	CTW8	FLAM3B	1.77	
0096		2: 25' X 10' RCAC				FLAM3E		
0097	E	GRASS CHNL 30'W 5'D 4:1 SS			CTWD	FLAM3B		
	E	3: 16' X 7' RCAP			CTW9	FLAM3B		0.44
VBCH		**VAN BUSKIRK CHANNEL**						
		8' X 5' RCB	5490		CVB16	FLAM3A		1.09
0111	E	6' X 3' RCB				FLAM3A	1.16	
	E	10' X 4' RCB	550		CVB15	FLAM3A	0.65	
	E					FLAM3A	0.65	
	E	9' X 4' RCB	2450	370	CVB15	FLAM3A	0.65	
VBEA		**VAN BUSKIRK - EASTERN AVE**						
0000	P	10' X 6' RCB	3020	896	CVB11	FLAM3A	2.85	
0058	P	14' X 6' RCB	5370	896	CVB11	FLAM3A	2.85	0.50
VBMC		**VAN BUSKIRK - MCLEOD DRIVE**						
0000	E	2: 6' X 5' RCB		931	CVB13	FLAM3A		
0072	E	2: 6' X 3' RCB				FLAM3A	2.81	2.18
0074		10' X 5' RCB	1950			FLAM3A	2.81	
0110	E	10' X 4.5' RCBC @ HILDEBRAND AVENUE/ROCHELLE			FROM-C	FLAM3A	2.51	
	E	CONC CHNL 10'W 5'D 1:1 SS		653	FROM-C	FLAM3A	2.51	0.95
	E	2: 9' X 5' RCBC @ UNIVERSITY AVENUE			FROM-C	FLAM3A		
	E	CONC CHNL 12'W 6'D 0:1 SS		653	FROM-C	FLAM3A	2.51	
				653	FROM-C	FLAM3A	2.51	
		CONC CHNL 12'W 6'D 0:1 SS	270			FLAM3A		
0181	E	18 AC-FT OFFLINE VAN BUSKIRK "C" DETENTION BASIN			C-SPLT	FLAM3A	2.51	
		12' X 6' RCBC @ HARRISON				FLAM3A	2.51	
0185	E	CONC CHNL 10'W 7'D 0:1 SS				FLAM3A	2.51	0.50
	E	CONC CHNL 12'W 7'D 0:1 SS		857	CVB8	FLAM3A	2.51	0.40
0209		12' X 5' RCBC @ TOPAZ	331			FLAM3A		
		CONC CHNL 12'W 7'D 0:1 SS		857		FLAM3A		0.75
0211		CONC CHNL 40'W 6'D 1:1 SS			VBMC0234	FLAM3A		0.75
0236		2: 7' X 2' RCB			VBMC0236	FLAM3A	2.11	0.59
0249		66" RCP	1240	405		FLAM3A		1.09
VBTM		**VAN BUSKIRK - TOMPKINS AVENUE**						
0000				394	SITE_AR	FLAM3A	1.37	0.75
0014	E	2: 9' X 3' RCBC @ EASTERN		394	SITE_AR	FLAM3A		0.89
0015		CONC CHNL 10'W 5'D 0:1 SS		394	SITE_AR	FLAM3A		
0026		12" RCP OUTLET		394	SITE_AR	FLAM3A		
0027	E	12 AC-FT OFFLINE VAN BUSKIRK "A" DETENTION BASIN		547		FLAM3A		
0029	E	COND CHNL 10'W 6.5'D 0:1 SS	2580	547		FLAM3A	1.37	0.55

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
VBTM		**VAN BUSKIRK - TOMPKINS AVENUE**						
		2: 6' X 6' RCB	400		SPENCER	FLAM3A	1.30	
	E	39" RCP	1360	186	VB4	FLAM3A		
0084	E	10' X 5' RCB	2540		CVB4	FLAM3A	1.30	1.00
0137	E	54" RCP	1330	178	VB3	FLAM3A	0.38	1.00
0138	E	… 4' RCB (REPLACE W/VBTM0175)	420	717	CVB2	FLAM3A	0.75	1.19
0146	E	… RCP (REPLACE W/VBTM0175)	290	717	CVB2	FLAM3A	0.75	1.49
0151	E	… RCP (REPLACE W/VBTM0175)	680	717	CVB2	FLAM3A	0.75	0.88
0163	E	… RCP (REPLACE W/VBTM0175)	610	717	CVB2	FLAM3A	0.75	0.89
0174	E	… 30" RCP (REPLACE W/VBTM0175)	580	717	CVB2	FLAM3A	0.75	1.29
0175	P	… X 5' RCB (REPLACES VBTM0138 TO 0174)	2620	717	CVB2	FLAM3A	0.75	1.10
VBTW		**VAN BUSKIRK - TWAIN**						
	E	16" RCP (REPLACE W/VBTW0001)		379		FLAM3A		0.70
		84" RCP (REPLACES VBTW0000)	6640	379		FLAM3A		
VBVR		**VAN BUSKIRK - VIKING ROAD**						
	E	54" RCP	1995					

*The HEC-1 node shown identifies the controlling concentration point for the associated facility and is located upstream of this facility due to decreasing peak flow with increasing tributary area caused by storm distribution transitions, depth area reduction factors, or attenuation of flow from routing
**As-built or design slopes were used when available. All other slopes are based on existing topography. The user should verify the facility slope listed prior to performing any facility specific analysis.
^ For parallel facilities, the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e. HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow)

REGIONAL FLOOD CONTROL DISTRICT

2018 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

FACILITY INVENTORY FIGURE F-35

LEGEND

ID (Facility Identifier) — AABB
Parent Stream Name
Stream Name
Mile — 0000
Distance Above Confluence with Parent Stream (Miles)
Miles in Hundredths

Existing Facility.......... E
Proposed or Modified Facility.......... P
Contingency Level
Category A.......... P
Category B.......... PQ

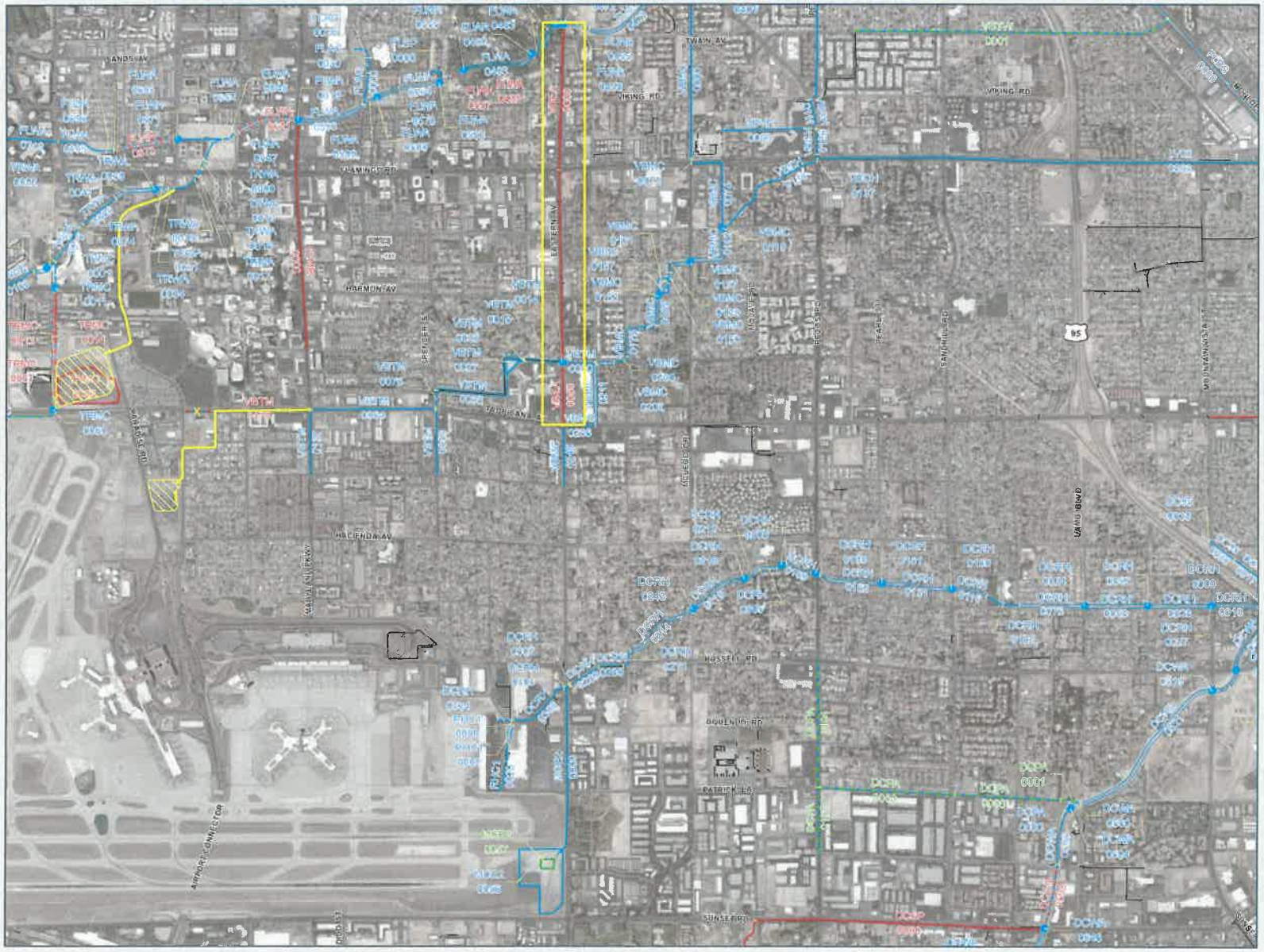
Bottom Width.......... W
Depth.......... D
Side Slope, H:V.......... SS

Construction Features

Cast in Place Concrete Pipe.......... CIPCP
Corrugated Metal Arch Pipe Culvert.......... CMAP
Corrugated Metal Pipe Culvert.......... CMPC
High Density Polyethylene.......... HDPE
Horizontal Elliptical Reinforced Concrete Pipe.......... HERCP
Reinforced Concrete Arch Pipe.......... RCAP
Reinforced Concrete Arch Culvert.......... RCAC
Reinforced Concrete Box.......... RCB
Reinforced Concrete Box Culvert.......... RCBC
Reinforced Concrete Pipe.......... RCP
Reinforced Concrete Pipe Culvert.......... RCPC
Storm Sewer Pipe.......... SSP

ATKINS

Louis Berger



REGIONAL FLOOD CONTROL DISTRICT

HARRY REID AIRPORT PEAKING BASIN AND OUTFALLS AND VAN BUSKIRK SYSTEM MPA
FIGURE 3-2 - Amended Facilities

FIGURE F-35

FLOOD CONTROL FACILITIES

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Detention Basin
- Culvert or Bridge Crossing
- Stormdrain
- Lined Channel
- Unlined Channel
- Levee/Dike
- Natural Wash/Floodway
- 10-Mile Separator
- Added MPA Facilities

Remove & Replace/Parallel Facilities

Category A	Category B
Channel	Channel
Stormdrain	Stormdrain
Crossing	Crossing

N

0 500 1,000 2,000 3,000
Feet

Scale 1 inch = 2,000 feet

Aerial Source:Esri World Imagery 2017

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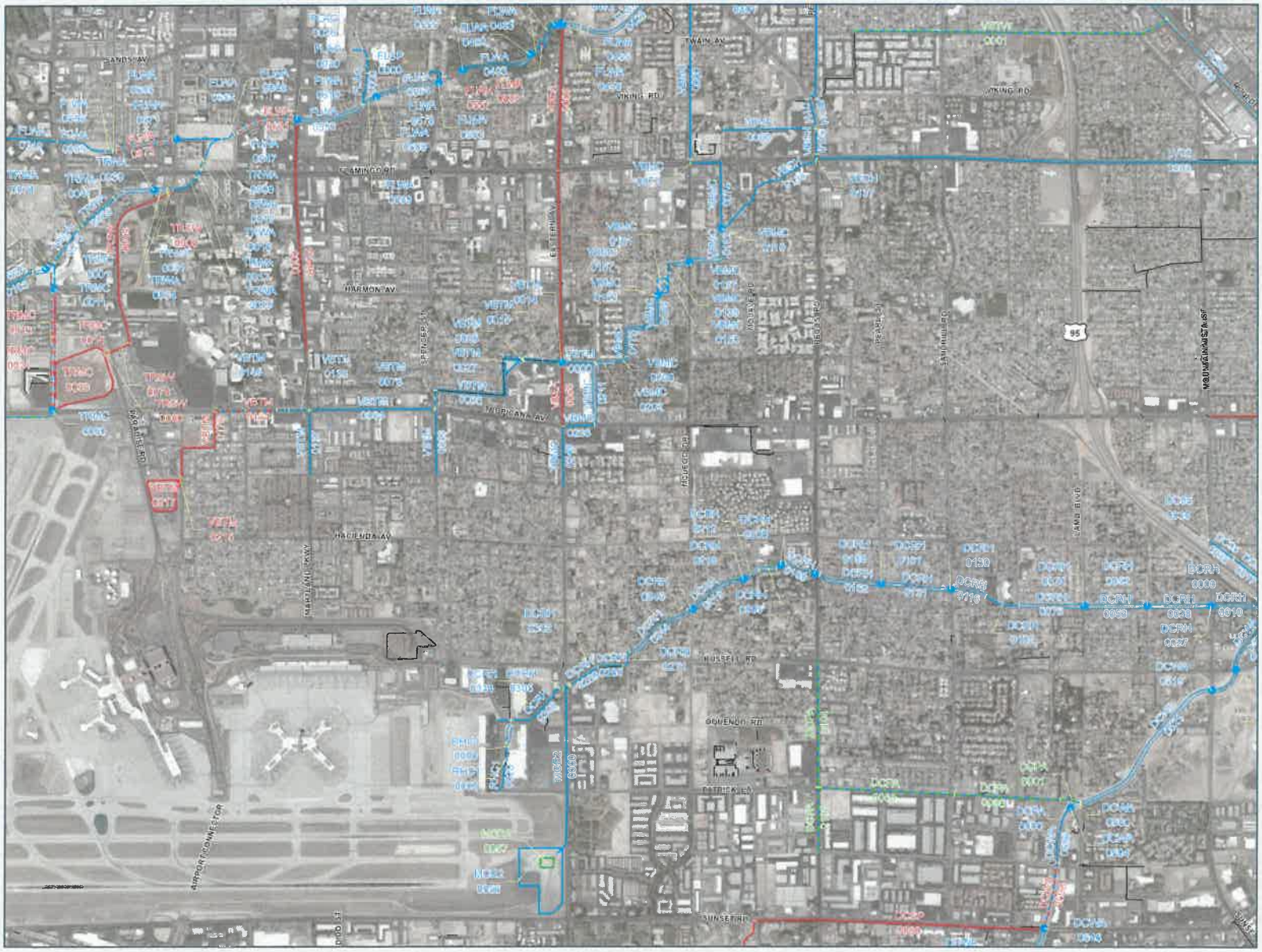

REGIONAL FLOOD CONTROL DISTRICT

HARRY REID AIRPORT PEAKING BASIN AND OUTFALLS AND VAN BUSKIRK SYSTEM MPA
FIGURE 3-3 - 2022 MPA
FACILITY OVERVIEW

FIGURE F-35

FLOOD CONTROL FACILITIES

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Detention Basin
- Culvert or Bridge Crossing
- Stormdrain
- Lined Channel
- Unlined Channel
- Levee/Dike
- Natural Wash/Floodway
- ID-Mile Separator

Remove & Replace/Parallel Facilities

Category A	Category B
Channel	Channel
Stormdrain	Stormdrain
Crossing	Crossing

N

0 500 1,000 2,000 3,000
Feet

Scale 1 inch = 2,000 feet

Aerial Source:Esri World Imagery 2017

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ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%)**
DCUS		DUCK CREEK - US 95 BRANCH						
[illegible]	E	72" RCP	[illegible]	[illegible]	CDCC420	DUCK3A	[illegible]	1.13
[illegible]	E	84" RCP	[illegible]	[illegible]	CDCC420	DUCK3A	0.79	0.53
DCPA		DUCK CREEK - PATRICK COLLECTOR						
[illegible]	E	PARALLEL 78" & 60" RCP	450	1030	CDCC360W	DUCK3A	[illegible]	[illegible]
0001	PD	ADD'L 48" RCP	450	191	CDCC360W	DUCK3A	1.57	1.50
0008	[illegible]	12' X 5' RCB (REPLACES DCPA0009)	2210	1131	CDCC340W	DUCK3A	[illegible]	[illegible]
[illegible]	E	PARALLEL 54" & 66" RCP (REPLACE W/DCPA0008)	2210	1131	CDCC340W	DUCK3A	[illegible]	1.09
0055	PD	10' X 5' RCB (REPLACES DCPA0054)	[illegible]	[illegible]	CDCC370	DUCK3A	[illegible]	0.80
[illegible]	E	66" RCP (REPLACE W/DCPA0055)	[illegible]	618	CDCC370	DUCK3A	1.04	0.80
0104	[illegible]	8' X 4' RCB (REPLACES DCPA0105)	[illegible]	252	DCC370	DUCK3A	0.53	0.40
[illegible]	E	60" RCP (REPLACE W/DCPA0104)	[illegible]	252	DCC370	DUCK3A	[illegible]	0.40
0108	E	60" RCP (REPLACE W/DCPA0107)	1360	[illegible]	DCC330	DUCK3A	[illegible]	0.50
[illegible]	PD	8' X 5' RCB (REPLACES DCPA0106)	1360	356	DCC330	DUCK3A	[illegible]	0.59
DCRH		DUCK CREEK - RAWHIDE CHANNEL						
[illegible]	[illegible]	CONC CHNL 15W 6D 1.5:1 SS	930	[illegible]	CDCC400W	DUCK3B	[illegible]	2.30
[illegible]	E	2 9' X 5' RCBC @ MOUNTAIN VISTA	80	[illegible]	CDCC400W	DUCK3B	[illegible]	1.40
0028	[illegible]	[illegible]	[illegible]	[illegible]	CDCC400W	DUCK3B	[illegible]	[illegible]
[illegible]	E	2 9' X 5' RCBC @ PALM AVE	80	[illegible]	CDCC400W	DUCK3B	2.02	1.50
[illegible]	E	CONC CHNL 10W 6D 1.5:1 SS	[illegible]	[illegible]	CDCC400W	DUCK3B	[illegible]	1.60
0074	E	2 9' X 5' RCBC @ LAMB BLVD	50	1096	[illegible]	DUCK3B	[illegible]	[illegible]
[illegible]	[illegible]	CONC CHNL 16W 6D 1.5:1 SS	1330	[illegible]	[illegible]	DUCK3B	[illegible]	2.40
[illegible]	E	2 8' X 5' RCBC @ ANNIE OAKLEY	740	[illegible]	CDCC390	DUCK3B	2.00	0.85
0116	E	CONC CHNL 15W 5D 1.5:1 SS	[illegible]	1096	CDCC390	DUCK3B	[illegible]	0.89
[illegible]	E	2 12' X 4' RCBC @ SANDHILL RD	[illegible]	[illegible]	[illegible]	DUCK3B	2.00	0.50
0131	P	CONC CHNL 11W 3.5D 1.5:1 SS	1410	[illegible]	CDCC390	DUCK3B	[illegible]	1.60
0161	E	2 12' X 4' RCBC @ PEARL AVE	[illegible]	792	CDCC380	DUCK3B	1.46	1.30
[illegible]	E	[illegible]	[illegible]	[illegible]	CDCC380	DUCK3B	[illegible]	1.50
[illegible]	E	2 12' X 4' RCBC @ PECOS RD	[illegible]	792	CDCC380	DUCK3B	1.46	0.90
0189	E	CONC CHNL 17W 5.3D 1.5:1 SS	[illegible]	792	CDCC380	DUCK3B	1.46	1.80
[illegible]	E	2 8' X 4' RCBC @ SAGEBRUSH RD	240	792	CDCC380	DUCK3B	1.46	1.20
0205	[illegible]	CONC CHNL 12W 5D 1:1 SS	370	[illegible]	CDCC380	DUCK3B	1.46	[illegible]
[illegible]	E	CONC CHNL 11W 5D 1.5:1 SS	340	702	CDCC380	DUCK3B	1.46	[illegible]
0216	[illegible]	2 8' X 4' RCBC @ MOJAVE RD	[illegible]	792	CDCC380	DUCK3B	1.46	1.00
[illegible]	E	CONC CHNL 11W 5D 1.5:1 SS	[illegible]	[illegible]	CDCC380	DUCK3B	1.46	[illegible]
0243	E	2 8' X 4' CIP RCBC @ MCLEOD DR	120	792	CDCC380	DUCK3B	[illegible]	1.20
0244	E	CONC CHNL 11W 4D 1.5:1 SS	[illegible]	792	CDCC380	DUCK3B	1.46	1.20
0271	E	2 12' X 4' RCBC @ TOPAZ ST	460	469	CDMC0605	[illegible]	0.73	0.60
0280	[illegible]	CONC CHNL 10W 5D 2:1 SS	510	469	CDMC0605	DUCK3A	0.59	[illegible]
[illegible]	E	15' X 4' RCB	710	469	CDMC0605	DUCK3A	[illegible]	0.70
0302	E	TRANSITION STRUCTURE	50	469	CDMC0605	DUCK3A	0.59	1.00
0305	E	2 8' X 4' RCB	125	469	CDMC0605	DUCK3A	[illegible]	0.80
[illegible]	E	10' X 5' RCB	1471	469	CDMC0605	DUCK3A	[illegible]	0.40
0334	E	7 X 4' RCB	277	469	CDMC0605	[illegible]	0.59	1.00
DCSP		DUCK CREEK - SUNSET PARK						
[illegible]	P	12' X 8' RCB	[illegible]	1298	CDCC170	DUCK3A	2.15	0.70
[illegible]	P	[illegible]	[illegible]	1030	CDCC160	[illegible]	[illegible]	[illegible]
DCWA		DUCK CREEK WASH						
[illegible]	[illegible]	GABION CHNL 35W 12D 2:1 SS	420	5582	CDCC360	DUCK5B	20.94	0.51
0519	E	2 SPAN BRIDGE 50W 15' - 18D @ MTN VISTA	100	5582	CDCC360	DUCK5B	[illegible]	0.52
0521	E	CONC CHNL 60W 7.5' - 18D 0:1 SS	[illegible]	5582	CDCC360	DUCK5B	[illegible]	[illegible]
[illegible]	E	CONC CHNL 2T - 72W 8D 0:1 SS	200	5470	CCDCC190	DUCK5B	18.62	2.01
0594	E	2 SPAN BRIDGE 130W 15D @ GVR/PATRICK	70	5470	CCDCC190	DUCK5B	[illegible]	[illegible]
0596	[illegible]	58' X 13.5' RCAP	1140	5470	CCDCC190	DUCK5B	[illegible]	0.93
0597	E	[illegible]TURAL GABION WASH W/DROP STRUCT. (REPLACE W/DCWA0598)	[illegible]	5470	[illegible]	DUCK5B	18.62	1.60
0598	[illegible]	GABION CHNL 55W 6D 2:1 SS (REPLACES DCWA0597)	[illegible]	5470	CCDCC190	DUCK5B	[illegible]	1.40
FLAG		FLAMINGO WASH - ALGONQUIN						
0000	E	72" RCP	465	432	FW21	FLAM3A	0.47	0.50
[illegible]	[illegible]	66" RCP	[illegible]	432	FW21	FLAM3A	[illegible]	0.50
0026	E	96" RCP	427	[illegible]	FW21	FLAM3A	[illegible]	1.30
FLBS		FLAMINGO - BOULDER HIGHWAY SOUTH						
[illegible]	E	UNLINED MEDIAN CHNL 6W 8.5D 4.5:1 SS	4020	684	CB4	FLAM7B	1.78	1.30

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%)**
FLMR		FLAMINGO MARYLAND PARKWAY						
0030	[illegible]	[illegible]P	4850	[illegible]	FW10	FLAM3A	0.44	[illegible]
FLSP		FLAMINGO WASH - SPENCER						
[illegible]	E	[illegible]P	420	432	FW21	FLAM3A	0.47	[illegible]
FLWA		FLAMINGO WASH						
0423	E	[illegible] CHNL 50W 9.8D 6:1 SS	1686	[illegible]	CFW23W	FLAM3A	17.?8	[illegible]
0455	E	[illegible] CHNL 50-75W 9.8D 0:1 SS	179	[illegible]	CFW23W	FLAM3A	[illegible]	[illegible]
0478	E	[illegible] CHNL 60W 15D 2:1 SS	529	5267	CFW22W	FLAM3A	14.17	0.47
0481	E	[illegible]MAP @ TIOGA (REPLACE W/FLWA0482)	50	5267	CFW22W	FLAM3A	14.17	0.87
0482	P	4 20' X 6' RCBC @ TIOGA (REPLACES FLWA0481)	[illegible]	5267	CFW22W	FLAM3A	14.17	0.87
0483	E	[illegible] CHNL 60W 15D 2:1 SS	399	5267	CFW22W	FLAM3A	14.17	[illegible]
0492	E	[illegible] BRIDGE 47W 15D	[illegible]	5267	CFW22W	FLAM3A	14.17	[illegible]
0493	E	[illegible] CHNL 60W 15D 2:1 SS	1520	5267	CFW22W	FLAM3A	14.17	0.46
0555	E	3 SPAN BRIDGE 47W 15D	10	5252	[illegible]	FLAM3A	13.78	[illegible]
0556	E	[illegible] CHNL 60W 15D 2:1 SS (REPLACE W/FLWA0557)	520	5252	CFW21	FLAM3A	[illegible]	0.54
0557	P	[illegible]N CHNL 30W 12D 2:1 SS (REPLACES FLWA0556)	520	5252	CFW21	FLAM3A	[illegible]	0.54
0561	E	[illegible] SPAN BRIDGE 35W 10D @ SPENCER	[illegible]	5252	[illegible]	FLAM3A	13.78	0.87
0564	E	CONC CHNL 35W 9D 0:1 SS	[illegible]	5252	CFW21	FLAM3A	13.78	[illegible]
0578	E	[illegible] CHNL 50W 20D 1:1 SS WITH DROP STRUCTURES	440	5252	CFW21	FLAM3A	13.78	[illegible]
0588	E	[illegible] SPAN BRIDGE 50W 20D @ TAMARUS	[illegible]	5252	CFW21	FLAM3A	13.78	[illegible]
0589	E	[illegible] CHNL 50W 20D 1:1 SS WITH DROP STRUCTURES	[illegible]	[illegible]	CFW21	FLAM3A	13.78	0.47
0593	E	CONC CHNL 40W VARIES 6D TO 12D 0:1 SS	1340	5142	CFW19	FLAM3A	11.90	[illegible]
0619	E	3 12' X 10' RCBC @ MARYLAND	119	4825	CFW18	FLAM3A	10.?4	[illegible]
0620	E	EARTH CHNL 50W 20D 1:1 SS (REPLACE W/FLWA0621)	1300	4825	CFW18	FLAM3A	10.94	[illegible]
0621	P	CONC CHNL 50W 7D 1:1 SS (REPLACES FLWA0620)	1300	4825	CFW18	FLAM3A	10.94	0.42
0647	E	4 10' X 8' RCB	[illegible]	4825	CFW18	FLAM3A	10.94	[illegible]
0648	[illegible]	36' X 12.5' RCAP	309	4825	CFW18	FLAM3A	10.04	[illegible]
0652	E	[illegible] 8' RCAP	[illegible]	3855	CFW10W	FLAM3A	5.99	0.75
0671	E	3 10' X 8' RCBC @ SWENSON	156	[illegible]	CFW10W	FLAM3A	[illegible]	1.40
0672	E	EARTH CHNL 25W 4D 2.5:1 SS (REPLACE W/FLWA0673)	1230	3855	CFW10W	FLAM3A	5.96	0.80
0673	[illegible]	[illegible] CHNL 25W 7.5D 2:1 SS (REPLACES FLWA0672)	1230	3856	CFW10W	FLAM3A	[illegible]	[illegible]
0695	E	[illegible] 8' RCB	[illegible]	[illegible]	CFW10W	FLAM3A	[illegible]	[illegible]
0696	E	5 12' X 8' RCB	159	3858	CFW10W	FLAM3A	5.96	[illegible]
0699	E	2 12' X 7' RCB	[illegible]	3855	CFW10W	FLAM3A	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] 10' RCB	1440	[illegible]	CFW17	FLAM3A	5.46	[illegible]
LV01		LAS VEGAS WASH - BRANCH 1 (TROPICANA CHANNEL)						
[illegible]	[illegible]	[illegible]	2659	[illegible]	[illegible]	FLAM3A	0.83	1.60
LV02		LAS VEGAS WASH - BRANCH 2 (MONSON CHANNEL)						
[illegible]	[illegible]	[illegible]P	[illegible]	264	B5	FLAM3A	[illegible]	[illegible]
MCE2		MCCARRAN - EAST BRANCH 2						
0000	[illegible]	[illegible]P OUTLET	3560	[illegible]	CDMCDB	DUCK3A	[illegible]	0.70
0056	E	100 AC-FT MCCARRAN DETENTION BASIN		[illegible]	CDMC056	DUCK3A	1.78	
0057	[illegible]	[illegible]IDE TO 150 AC-FT MCCARRAN DETENTION BASIN		1109	CDMC050	DUCK3A	[illegible]	
RHC1		DUCK CREEK - RAWHIDE - TRIBUTARY 1						
0000	E	7 X 4' RCB	[illegible]	279	DMC060	DUCK3A	[illegible]	[illegible]
[illegible]	E	BANK-STABILIZED CHNL 119W 5D 3:1 SS	408	[illegible]	DMC060	DUCK3A	0.31	0.40
[illegible]	E	[illegible]CB	[illegible]	279	DMC060	DUCK3A	[illegible]	[illegible]
TRMC		TROPICANA WASH - HARRY REID AIRPORT						
0001	E	[illegible] 4' RCB	530	[illegible]	CTW105	FLAM3A	3.59	0.30
0011	[illegible]	2 16' X 4' RCBC @ HARMON	[illegible]	[illegible]	CTW105	FLAM3A	3.59	0.26
0012	E	EARTH CHNL 16W 5D 2:1 SS (REPLACE W/TRMC0013)	950	[illegible]	DTRMC	FLAM3A	[illegible]	0.45
0013	P	CONC CHNL 17W 6D 0:1 SS (REPLACES TRMC0012)	[illegible]	[illegible]	DTRMC	FLAM3A	[illegible]	[illegible]
0014	P	[illegible]P	[illegible]	[illegible]	TRMCDB	FLAM3A	[illegible]	0.20
0030	E	EARTH CHNL 16W 5D 2:1 SS (REPLACE W/TRMC0031)	1490	[illegible]	DTRMC	FLAM3A	4.20	0.45
0031	P	[illegible]ITION CONC CHNL 54W 8D TO 17W 6D 0:1 SS (REPLACES T	400	806	DTRMC	FLAM3A	4.20	0.20
[illegible]	[illegible]	[illegible]C-FT HARRY REID AIRPORT PEAKING BASIN		1827	DTRSW	[illegible]	[illegible]	
0060	E	[illegible] 4' RCBC @ TROPICANA AVE	120	2433	DMC11	FLAM3B	4.20	[illegible]
0062	PO	[illegible] 10' X 8' RCB	7100	593	CMC9	[illegible]	[illegible]	0.50
[illegible]	E	[illegible] 4' RCB	7100	1205	CMC9	FLAM3A	[illegible]	[illegible]
TRSW		[illegible]						
[illegible]	[illegible]	[illegible] RCB	313	76	DTRSO	FLAM3A	4.20	[illegible]
[illegible]	[illegible]	[illegible] RCB	3781	76	DTRSO	FLAM3A	4.20	[illegible]

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%)**
TRSW		TROPICANA WASH - SWENSON						
0074	P	54" RCP	[illegible]	[illegible]	DTRSO	FLAM3A	4.20	1.00
0080	[illegible]	[illegible]	[illegible]	76	DTRSO	FLAM3A	4.20	0.50
TRWA		TROPICANA WASH						
0000	E	[illegible]	640	2980	CTW11	FLAM3A	5.04	[illegible]
0012	[illegible]	CONC CHNL 45W TO 72W 6D TO 8.5D	175	2980	CTW11	FLAM3A	5.04	1.00
0018	E	[illegible]	[illegible]	1490	CTW11	FLAM3A	6.04	1.05
[illegible]	E	2 18.5' X 5' RCB	[illegible]	1400	CTW11	FLAM3A	6.04	1.05
[illegible]	E	5 14' X 5' RCB	[illegible]	2980	CTW11	FLAM3A	6.04	1.40
[illegible]	[illegible]	6 12' X 4' RCB	[illegible]	2980	CTW11	FLAM3A	6.04	0.28
[illegible]	E	CONC CHNL 87W 8.5D 0:1 SS	[illegible]	2980	CTW11	FLAM3A	6.04	0.93
[illegible]	E	6 12' X 8' RCBC @ ACCESS ROAD	40	2980	CTW11	FLAM3A	6.04	[illegible]
0041	E	CONC CHNL 80W 5.5D 0:1 SS	842	2980	CTW11	FLAM3A	[illegible]	[illegible]
0056	E	9 12' X 4' RCB	[illegible]	2686	CTW10	FLAM3A	[illegible]	[illegible]
[illegible]	E	[illegible]	120	2686	CTW10	FLAM3A	[illegible]	[illegible]
0075	E	[illegible]	820	[illegible]	CTW10	FLAM3A	5.80	[illegible]
[illegible]	E	GRASS CHNL 30W 5D 4:1 SS	[illegible]	1895	CTW9	FLAM3B	1.77	0.90
[illegible]	E	2 25' X 10' RCAC	[illegible]	1836	CTW9	FLAM3B	1.77	0.90
0097	E	GRASS CHNL 30W 5D 4:1 SS	300	[illegible]	CTW9	FLAM3B	1.77	[illegible]
0103	E	3 16' X 7' RCAP	[illegible]	1836	CTW9	FLAM3B	[illegible]	0.44
VBCH		VAN BUSKIRK CHANNEL						
[illegible]	E	[illegible]	5490	[illegible]	[illegible]	FLAM3A	[illegible]	[illegible]
0111	E	6' X 3' RCB	630	[illegible]	CVB18	FLAM3A	1.16	[illegible]
0126	E	10' X 4' RCB	[illegible]	370	CVB15	FLAM5A	0.65	1.00
0137	E	10' X 3' RCB	[illegible]	370	CVB15	FLAM5A	[illegible]	1.50
0138	E	[illegible]	[illegible]	370	CVB15	FLAM5A	0.65	1.00
[illegible]		[illegible]						
0000	[illegible]	8' X 5' RCB	[illegible]	531	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	P	12' X 5' RCB	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VBMC		VAN BUSKIRK - MCLEOD DRIVE						
[illegible]	E	2 6' X 6' RCB	3850	926	[illegible]	FLAM2A	3.00	0.50
[illegible]	[illegible]	2 6' X 3' RCB	[illegible]	834	CVB12	FLAM2A	[illegible]	2.18
0074	E	10' X 5' RCB	1950	834	[illegible]	FLAM5A	2.82	0.56
0110	E	10' X 4.5' RCBC @ HILDEBRAND AVENUE/ROCHELLE	90	653	FROM-C	FLAM2A	[illegible]	0.70
0112	[illegible]	CONC CHNL 10W 6D 1:1 SS	[illegible]	[illegible]	FROM-C	FLAM3A	[illegible]	[illegible]
[illegible]	[illegible]	2 9' X 5' RCBC @ UNIVERSITY AVENUE	110	653	FROM-C	FLAM3A	2.52	[illegible]
0139	[illegible]	CONC CHNL 12W 5D 0:1 SS	559	653	FROM-C	FLAM3A	2.52	0.99
[illegible]	[illegible]	CONC CHNL 8W 10D 0:1 SS	[illegible]	[illegible]	FROM-C	FLAM3A	2.52	[illegible]
[illegible]	[illegible]	CONC CHNL 12W 6D 0:1 SS	[illegible]	[illegible]	CVB9	FLAM3A	[illegible]	1.50
[illegible]	[illegible]	16 AC-FT OFFLINE VAN BUSKIRK "C" DETENTION BASIN		[illegible]	C-SPLT	FLAM3A	[illegible]	
0153	[illegible]	12' X 6' RCBC @ HARRISON	[illegible]	814	CVB9	FLAM3A	2.52	[illegible]
0165	[illegible]	CONC CHNL 10W 7D 0:1 SS	576	814	CVB9	FLAM3A	[illegible]	0.50
0175	E	CONC CHNL 12W 7D 0:1 SS	1250	814	CVB9	FLAM3A	2.52	0.40
[illegible]	[illegible]	12' X 5' RCBC @ TOPAZ	331	814	CVB9	FLAM3A	[illegible]	0.70
0202	[illegible]	CONC CHNL 12W 7D 0:1 SS	357	814	CVB9	FLAM3A	2.52	0.75
0211	[illegible]	CONC CHNL 40W 5D 1:1 SS	1310	250	VBMC0236	FLAM3A	2.12	0.75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	VBMC0235	FLAM3A	2.12	0.50
0249	E	55" RCP	1240	405	CVBP6	FLAM5A	0.81	1.00
VBTM		VAN BUSKIRK - TOMPKINS AVENUE						
[illegible]	E	[illegible]	[illegible]	[illegible]	SITE_AR	FLAM3A	0.75	0.75
0014	E	2 5' X 3' RCBC @ EASTERN	[illegible]	[illegible]	SITE_AR	FLAM3A	0.75	0.80
0015	E	CONC CHNL 10W 3D 0:1 SS	[illegible]	[illegible]	SITE_AR	FLAM3A	0.75	0.70
[illegible]	E	12" RCP OUTLET	[illegible]	[illegible]	SITE_AR	FLAM3A	0.75	
[illegible]	E	12 AC-FT OFFLINE VAN BUSKIRK "A" DETENTION BASIN		[illegible]	[illegible]	FLAM3A	0.75	
0038	E	CONC CHNL 10W 6.5D 0:1 SS	2580	[illegible]	[illegible]	FLAM3A	0.75	[illegible]
0076	E	2 6' X 6' RCB	409	[illegible]	SPENCER	FLAM3A	[illegible]	0.50
0083	E	[illegible]	[illegible]	[illegible]	VB4	FLAM3A	[illegible]	1.00
0084	E	[illegible]	2640	[illegible]	CVB4	FLAM3A	1.31	1.00
[illegible]	E	54" RCP	[illegible]	178	VB3	FLAM3A	0.30	1.00
[illegible]	E	7 X 4' RCB	420	188	[illegible]	FLAM5A	[illegible]	1.19
[illegible]	[illegible]	[illegible]	[illegible]	188	CVB3	FLAM5A	[illegible]	1.49
[illegible]	E	[illegible]	[illegible]	188	CVB3	FLAM5A	0.83	0.88

ID / Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%)**
VBTM		VAN BUSKIRK - TOMPKINS AVENUE						
0153	E	60" RCP (REPLACE W/VBTM0164)	658	[illegible]	CVB3	FLAM5A	0.83	0.89
0154	P	5' X 6' RCB (REPLACES VBTM0151 TO 0153)	1310	198	VB3	FLAM5A	[illegible]	0.46
[illegible]	P	87" RCP	2040	76	[illegible]	FLAM3A	[illegible]	[illegible]
0215	P	36" RCP OUTLET WITH 18" ORIFICE	155	28	DCVB2	FLAM3A	0.83	0.76
0216	[illegible]	620 CFS SPILLWAY		620	CVB2	FLAM5A	0.83	
0217	P	52 AC-FT PARADISE DETENTION BASIN		620	[illegible]	[illegible]	[illegible]	
VBTW		VAN BUSKIRK - TWAIN						
0000	E	18" RCP (REPLACE W/VBTW0001)	5549	[illegible]	CB2	FLAM3A	0.74	[illegible]
[illegible]	PO	84" RCP (REPLACES VBTW0000)	5540	379	[illegible]	[illegible]	[illegible]	[illegible]
VBVR		VAN BUSKIRK - VIKING ROAD						
[illegible]	E	54" RCP	[illegible]					[illegible]

*The HEC-1 node shown identifies the controlling concentration point for the associated facility and is located upstream of this facility due to decreasing peak flow with increasing tributary area caused by storm distribution transitions, depth area reduction factors or attenuation of flow from routing.
**As-built or design slopes were used when available. All other slopes are based on existing topography. The user should verify the facility slope listed prior to performing any facility specific analysis.
For parallel facilities the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e. HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow)

Changes from the 2018 MPU

REGIONAL FLOOD CONTROL DISTRICT

2022 MPA TO THE 2018 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

FACILITY INVENTORY FIGURE F-35T

LEGEND

ID (Facility Identifier) AABB
Parent Stream Name
Stream Name
Mile 0000
Distance Above Confluence with Parent Stream (Miles)
Miles in Hundredths

Existing Facility....E
Proposed or Modified Facility....P
Contingency Level
Category A....P
Category B....PO

Bottom Width....W
Depth....D
Side Slope, H:V....SS

Construction Features

Cast in Place Concrete Pipe.... CIPCP
Corrugated Metal Arch Pipe Culvert.... CMAP
Corrugated Metal Pipe Culvert.... CMPC
High Density Polyethylene.... HDPE
Horizontal Elliptical Reinforced Concrete Pipe.... HERCP
Reinforced Concrete Arch Pipe.... RCAP
Reinforced Concrete Arch Culvert.... RCAC
Reinforced Concrete Box.... RCB
Reinforced Concrete Box Culvert.... RCBC
Reinforced Concrete Pipe.... RCP
Reinforced Concrete Pipe Culvert.... RCPC
Storm Sewer Pipe.... SSP

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