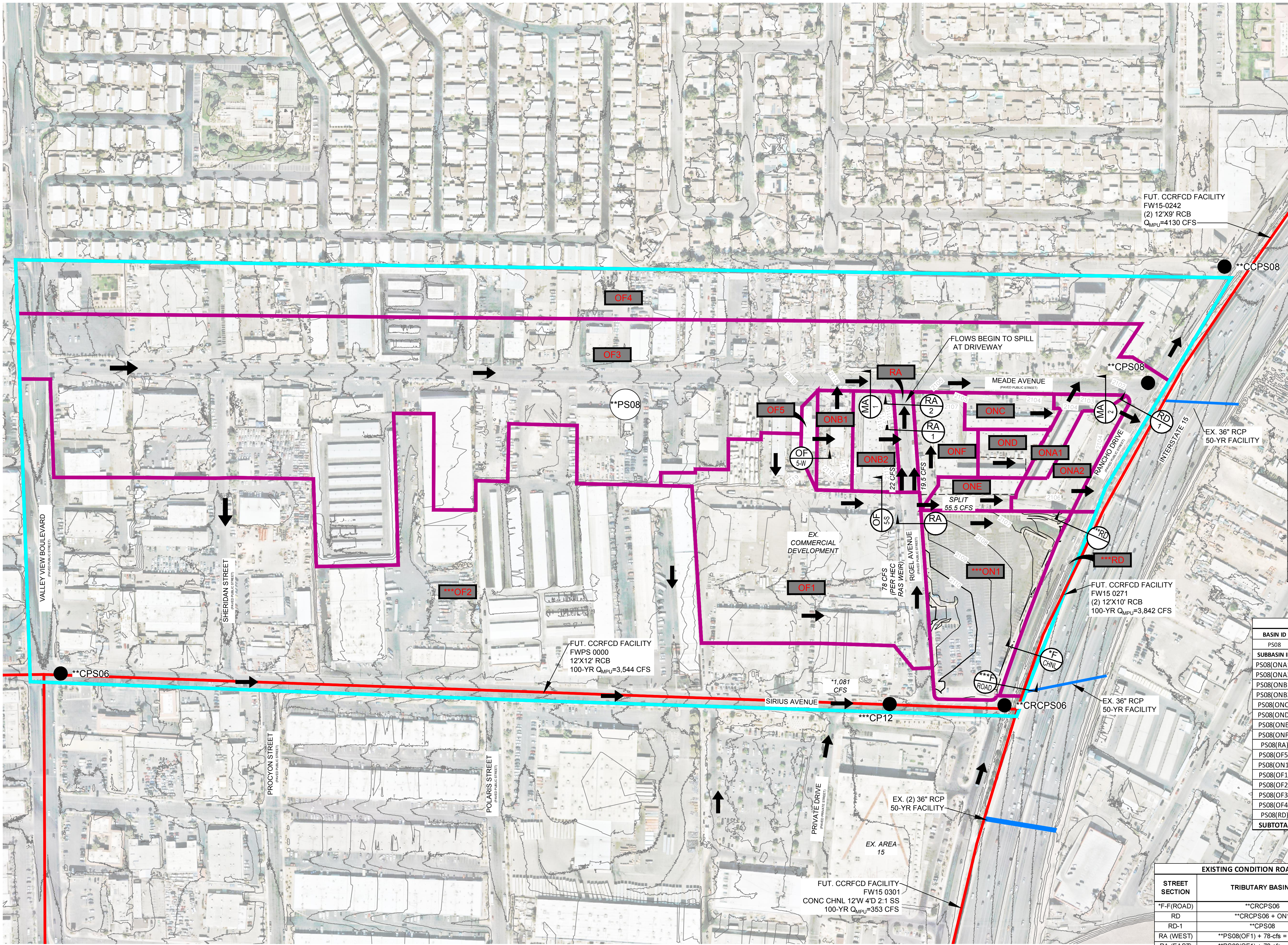


Plotted By: zofrea Chirra Sheet Set: kha Layout: EX-1 December 22, 2021 04:03:41pm K:\LAV Civil\092965009 - Area 15 Offsite Lots (Fisher Brothers)\Reports\DRAINAGE\01_TDS\Figures\CAD\EX_recover.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



GRAPHIC SCALE IN FEET
0 75 150 300

NORTH

LEGEND

XXX

BASIN ID

XXXX

PRORATED BASIN ID

BASIN BOUNDARY

PRORATED BASIN BOUNDARY

FUTURE CCRFCD REGIONAL FACILITY

EXITING DRAINAGE FACILITY

FLOW ARROW

CONCENTRATION POINT

SECTION ID

* REFERENCED FROM AREA 15 STUDY (DS-4921)
** REFERENCED FROM CITY OF LAS VEGAS CENTRAL NEIGHBORHOOD STUDY
***REFERENCED FROM AREA 15 EVENT PARKING LOT (DS-5288)

NOTE:
1,081-CFS REFERENCED FOR FLOWRATE AT INTERSECTION OF PRIVATE DRIVEWAY & SIRIUS AVENUE. REFER TO APPENDIX D FOR REFERENCE Q.

Existing / Proposed Condition Flow Summary			
Basin ID / Comb Pt	Area / Tributary Area (ac)	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)
**CPS06	N/A	1045	405
*CP05	N/A	31	18
*EX10	N/A	7	4
***CP12	N/A	1158	459
Q = 1081-CFS + **PS08(OF2)			
**CRCP506	N/A	2538	873
**PS08	114.56	235	100
**CPS08	N/A	2582	917
**CCPS08	N/A	3762	1226

Existing Condition Prorated Flow Summary					
BASIN ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	AREA (ac)	Q ₁₀₀ (cfs/ac)	Q ₁₀ (cfs/ac)
PS08	235	100	114.6	2.05	0.87
SUBBASIN ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	AREA (ac)	Q ₁₀₀ (cfs/ac)	Q ₁₀ (cfs/ac)
PS08(ON1)	1	0.5	0.6	2.05	0.87
PS08(ON2)	2.5	1	1.1	2.05	0.87
PS08(ONB1)	2	1	0.8	2.05	0.87
PS08(ONB2)	2	1	1.0	2.05	0.87
PS08(ONC)	1	0.5	0.7	2.05	0.87
PS08(OND)	1	0.5	0.6	2.05	0.87
PS08(ONE)	1	0.5	0.6	2.05	0.87
PS08(ONF)	2.5	1	1.2	2.05	0.87
PS08(RA)	1	<1	0.4	2.05	0.87
PS08(OF5)	1	<1	0.3	2.05	0.87
PS08(ON1)	9	4	4.4	2.05	0.87
PS08(OF1)	19	8	9.2	2.05	0.87
PS08(OF2)	77	33	37.5	2.05	0.87
PS08(OF3)	84	36	40.9	2.05	0.87
PS08(OF4)	29	12	14.2	2.05	0.87
PS08(RD)	2	1	1.1	2.05	0.87
SUBTOTAL	235	100	114.6	-	-

EXISTING CONDITION ROADWAY HYDRAULIC SECTIONS SUMMARY TABLE						
STREET SECTION	TRIBUTARY BASINS	CHANNEL SLOPE %	Q ₁₀₀ (cfs)	FLOW DEPTH (ft)	VELOCITY (ft/s)	D ² /s
*F-F(ROAD)	**CRCP506	0.70	2,538	3.58	10.46	37.45
RD	**CRCP506 + ON1	0.60	2,547	7.25	9.26	67.14
RD-1	**CPS08	0.25	2,582	7.41	7.48	55.43
RA (WEST)	**PS08(OF1) + 78-cfs = 97 cfs	1.00	22.0	0.63	3.34	2.10
RA (EAST)	**PS08(OF1) + 78-cfs = 97 cfs	1.00	19.5	0.50	2.92	1.46
RA-1 (CAPACITY)	(WEST) +(EAST) + 1/2OF5 + 1/2ONB2+RA = 43 cfs - (SPLIT 25 cfs)=18 cfs	0.70	18.0	0.50	2.80	1.40
RA-2 (CAPACITY)	RA-1 (CAPACITY) + 1/2ONB2 = 19 cfs - SPLIT 14 cfs) = 5 cfs	0.30	5.0	0.49	1.59	0.78
MA-1	OF5+1/2OF3+ONB1	3.30	86.5	0.64	6.18	3.96
MA-2	(WEST)+(EAST)+OF5+ONB1+ONB2+RA+ ONF+ONC+OF3	0.30	135.0	1.02	3.51	3.58

SECTIONS F-F(ROAD) & RD: FLOW DEPTH TAKEN FROM CHANNEL FLOWLINE
OFFSET CROWN AT RANCHO FOR SECTION F-F
78-CFS PER RAS ANALYSIS FLOWS NORTH IN RIGEL AVENUE

CHANNEL HYDRAULIC SECTIONS SUMMARY TABLE							
ID	TRIBUTARY BASINS	CHANNEL SLOPE %	Q ₁₀₀ (cfs)	FLOW DEPTH (ft)	VELOCITY (ft/s)	D ² /s ft ² /s	TYPE
*F-F(CHNL)	Channel Capacity	0.70	270	3.00	6.43	19.29	TRAP 7' BW, 4:1 SS
OF5(West)	1/2 OF5	2.00	0.5	0.07	2.55	0.18	RECT 3' BW, 0:1SS
OF5(South)	1/2 OF5	3.00	0.5	0.20	1.58	0.32	TRAP 0' BW, 8:1 SS
RD-1 (CHNL)	Channel Capacity	0.25	302	4.62	3.01	13.91	TRAP 7' BW, 4:1 SS

Kimley»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
6671 LAS VEGAS BOULEVARD S., SUITE 320, LAS VEGAS, NV 89119
PHONE: 702-862-3600
WWW.KIMLEY-HORN.COM

KHA PROJECT
092965009

DATE
12/22/2021

SCALE
AS SHOWN

DESIGNED BY
RRO

DRAWN BY
CZ

CHECKED BY
RRO

AREA 15
OFFSITE LOTS
PREPARED FOR
AREA 15 LAS VEGAS, LLC.
CITY OF LAS VEGAS

OVERALL
EXISTING CONDITION
DRAINAGE MAP

EX-1

REVISIONS

DATE

BY