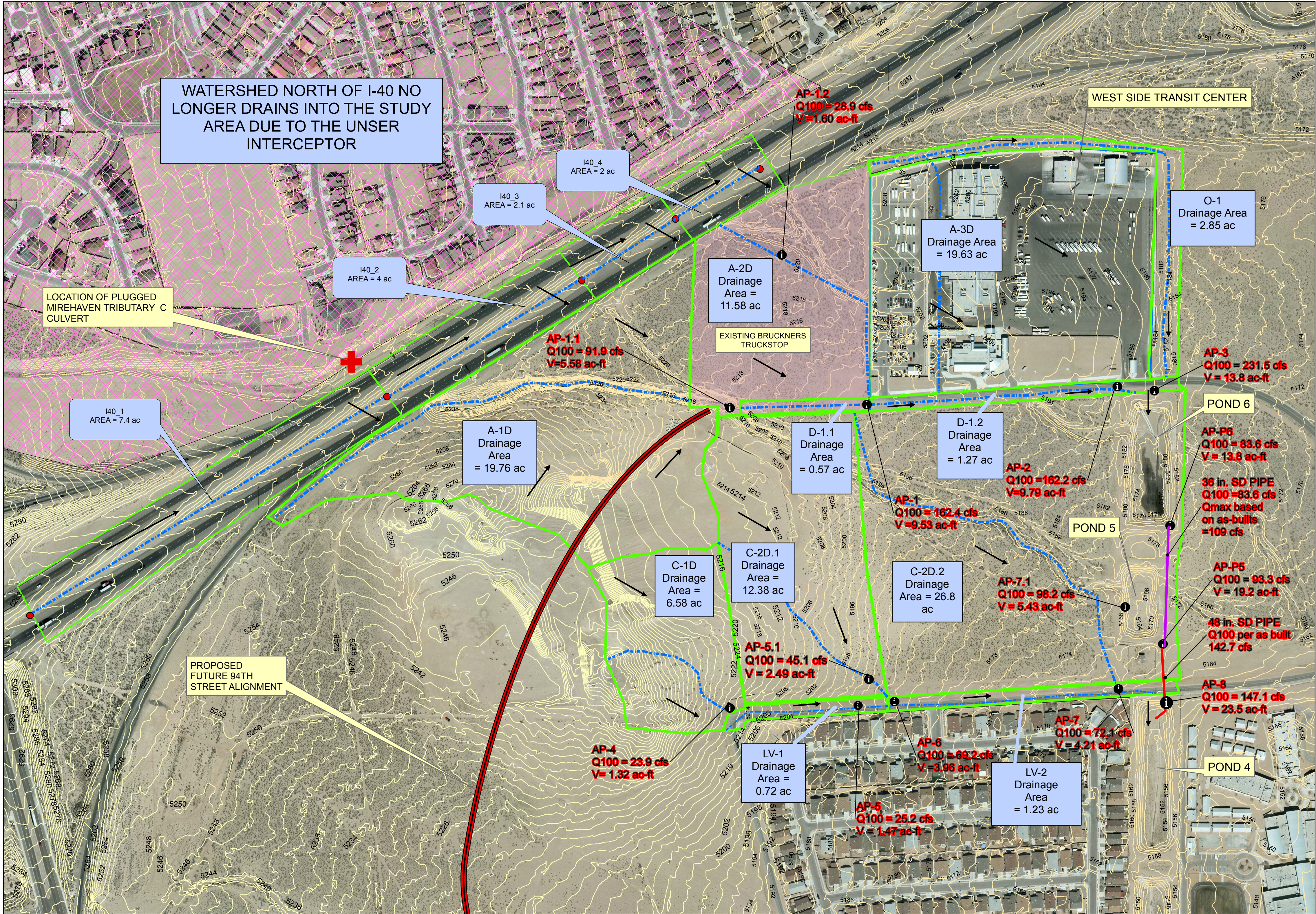




LEGEND

- SUBBASIN BOUNDARY
- LONGEST FLOWPATH FOR Tc
- SUBBASIN ID
- ANALYSIS POINT
- FLOW DIRECTION
- I-40 MEDIAN DROP INLETS

EX POND 6 RATING CURVE		
Elevation	Storage	Discharge
ft.	ac-ft.	cfs
5170	0	0
5171	0.14	4
5172	0.83	6.2
5173	1.77	7.9
5174	2.79	9.2
5175	3.87	10.4
5176	5.04	11.5
5177	6.27	79.5
5178	7.46	86.1
5179	9.01	93.2

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

EX POND 4 RATING CURVE		
Elevation	Storage	Discharge
ft.	ac-ft.	cfs
5147	0	0
5148	0.08	0
5149	0.51	3
5150	1.3	5.7
5151	2.29	7.5
5151.9	3.26	8.7
5152	3.37	11.7
5152.5	3.94	50.6
5153	4.52	92.5
5154	5.76	104.3
5155	7.18	115.9
5156	8.51	124.6

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

EX POND 5 RATING CURVE		
Elevation	Storage	Discharge
ft.	ac-ft.	cfs
5160	0	0
5160	0.02	4
5162	0.37	6.5
5163	0.76	8.2
5164	1.19	9.7
5164.5	1.42	41.6
5165	1.66	93
5165.5	1.89	106.3
5166	2.12	116.7
5167	2.74	132.6
5168	3.35	146.8
5168.8	3.87	157.2
5169	4.01	160
5170	4.73	172

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

DEVEX Option 1 POND 5 RATING CURVE WITH 12 IN. ORIFICE		
Elevation	Storage	Discharge
ft.	ac-ft.	cfs
5160	0	0
5161	0.02	3.8
5162	0.37	5.3
5163	0.76	6.5
5164	1.19	7.6
5164.5	1.42	8.0
5165	1.66	8.5
5165.5	1.89	8.9
5166	2.12	9.3
5167	2.74	10.0
5168	3.35	10.7
5168.8	3.87	11.2
5169	4.01	11.3
5170	4.73	12.0

DATA FROM MASTER DRAINAGE PLAN FOR THE WEST SIDE TRANSIT FACILITY

DEVEX - Option 1 Summary of Input and Output Parameters											
Sub-basin	Area	Weighted Curve Number	Percent of Hydrologic Soil Group				% Impervious	Tc	Q100	cfs/acre	V100
	(acres)		A	B	C	D	%	(mins)	(cfs)		(ac-ft)
A-1D	19.8	90	58	42	0	0	90	12	72.20	3.65	3.99
A-2D	11.6	90	53	47	0	0	90	12	42.30	3.65	2.34
A-3D	19.6	89	28	72	0	0	90	12	71.40	3.64	3.95
C-1D	6.6	89	100	0	0	0	90	12	24.00	3.65	1.33
C-2D.1	12.4	90	86	14	0	0	90	12	45.10	3.64	2.50
C-2D.2	26.8	91	58	42	0	0	90	12	98.20	3.66	5.43
D-1.1	0.6	87	37	63	0	0	90	12	2.10	3.78	0.120
D-1.2	1.3	87	37	63	0	0	90	12	4.62	3.64	0.256
LV-1	0.7	87	32	68	0	0	90	12	2.60	3.61	0.15
LV-2	1.2	87	32	68	0	0	90	12	4.42	3.61	0.25
O-1	2.9	66	72	27	0	0	0	16	1.00	0.35	0.08
H40_1	7.4	89	0	100	0	0	90	18	21.90	2.97	1.49
H40_2	4.0	89	0	100	0	0	90	12	14.40	3.64	0.80
H40_3	2.1	89	0	100	0	0	90	12	7.55	3.64	0.42
H40_4	2.0	83	100	0	0	0	90	12	7.03	3.56	0.39

Summary of Pond Routings												
Pond	Model Description	Design Volume	100 Yr-24 Hr Peak Storage Volume	100 Yr-24 Hr Inflow Volume	100 Yr-24 Hr Outflow Volume	100 Yr-24 Hr Inflow	100 Yr-24 Hr Outflow	Elevation of Emergency Spillway	100 Yr-24 Hr Peak Water Surface Elevation	Freeboard from Emergency Spillway	Available Storage	Comments
		ac-ft	ac-ft	ac-ft	cfs	cfs	cfs	ft	ft	ft	ac-ft	
		a						a		b		
Pond 4	DEVEX 2 Conditions Modeled with most current data using HEC-HMS	8.51	6.07	23.5	23.5	215.9	106.9	5155.1	5154.2	0.9	2.44	Watershed modeled as fully developed commercial/business site at 90% impervious, using latest NOAA 14 100-Yr-24hr rainfall depth of 2.52 in. Basin C-2D.2 drains to Pond 5 with existing outfall structure
Pond 5	"	4.73	1.59	5.4	5.4	98.2	78.4	5168.8	5164.86	3.9	3.14	
Pond 6	"	9.01	6.90	13.8	13.8	231.4	83.1	5177.9	5177.5	0.4	2.11	
Pond 4	DEVEX Option 1	8.51	4.93	23.5	23.5	147.1	96.4	5155.1	5153.33	1.8	3.58	Watershed modeled as fully developed commercial/business site at 90% impervious, using latest NOAA 14 100-Yr-24hr rainfall depth of 2.52 in. Basin C-2D.2 drains to Pond 5 with modified outfall restricting discharge using a 12" outlet pipe as principal spillway
Pond 5	DEVEX Option 1	4.73	3.14	5.43	5.4	98.2	10.5	5168.8	5167.66	1.1	1.59	
Pond 6	DEVEX Option 1	9.01	6.90	13.8	13.8	231.4	83.1	5177.9	5177.5	0.4	2.11	

a- All values reported on this table are taken directly from The Master Drainage Plan for the West Side Transit Facility 100Yr-24Hr rainfall depth based on latest NOAA Atlas 14 data

b- Freeboard = Elevation of Emergency Spillway - Peak Water Surface Elevation

a- All values reported on this table are taken directly from The Master Drainage Plan for the West Side Transit Facility

100 Yr 24 Hr rainfall depth based on latest NOAA Atlas 14 data

b- Freeboard = Elevation of Emergency Spillway - Peak Water Surface Elevation

DEVEX CONDITIONS HEC-HMS INPUT PARAMETERS																													
General Subbasin Data			Time of Concentration (Tc) Data																		Log Time Results				Tc and Results				
			Upper Reach or Entire Reach (p @ 40% length)									Middle Reach (400 to 1600-ft length)									Log Time	Log Time Actual	Final Tc	Tp	Composite CN				
Sub-basin	Sub-area	Sub-area Area	L	Lca	Sc	Kc	Top Elevation	Bottom Elevation	Length (L)	Slope (S)	Kx1	Kx2	V1	V2	Elevation @ Overend of water course	Slope (S2)	Kx3	Kx4	V3	V4	Tc (hours)	Tc (minutes)	hours	hours	hours	hours	hours	hours	
																													a
A-10	19788	0.009	2	1.642	N.A.	0.0022	1.4457	5258	5252	400	0.0156	1.0	1.22	5700	1.262	0.0338	2.0	3.68	0.5	0.5	0.18	0.02	0.13	90					
A-20	11581	0.0181	2	986	N.A.	0.0444	1.2671	5221	5210	400	0.0255	1.0	1.67	5507	586	0.0051	2.0	1.43	0.5	0.5	0.18	0.02	0.13	90					
A-30	16989	0.0037	2	878	N.A.	0.0207	1.4032	5203.2	5193	400	0.0160	1.0	1.65	5185	478	0.0167	2.0	2.59	0.5	0.5	0.12	0.02	0.13	89					
C-10	6.81	0.0103	2	832	N.A.	0.0483	0.9199	5256	5250	400	0.0159	1.0	1.22	5220	432	0.0064	2.0	5.27	0.5	0.5	0.11	0.02	0.13	89					
C-01	12.376	0.0783	2	1.261	N.A.	0.0222	1.4281	5216	5210	400	0.0159	1.0	1.22	5188	861	0.0256	2.0	3.20	0.5	0.5	0.17	0.02	0.13	90					
C-02	26.803	0.0419	2	1.544	N.A.	0.0333	1.5436	5205	5192	400	0.0157	1.0	1.67	5170	1.144	0.0291	2.0	3.77	0.5	0.5	0.17	0.02	0.13	91					
D-1.1	0.596	0.0009	2	460	N.A.	0.0130	1.0571	5212	5207	400	0.0235	1.0	1.12	5206	60	0.0167	2.0	2.58	0.5	0.5	0.11	0.02	0.13	87					
D-1.2	1.268	0.0020	2	953	N.A.	0.0130	1.3881	5206	5198	400	0.0235	1.0	1.41	5186	553	0.0217	2.0	2.95	0.5	0.5	0.13	0.02	0.13	87					
LV-1	0.721	0.0011	2	607	N.A.	0.0348	1.2222	5127	5196	400	0.0325	1.0	2.29	5187	207	0.0886	2.0	3.93	0.5	0.5	0.06	0.02	0.13	87					
LV-2	1.225	0.0019	2	967	N.A.	0.0248	1.4328	5188	5175	400	0.0235	1.0	1.80	5164	597	0.0245	2.0	2.79	0.5	0.5	0.12	0.02	0.13	87					
M-1	2.882	0.0045	2	1.870	N.A.	0.0371	1.4742	5214	5200	400	0.0268	0.7	1.51	5182	1479	0.0212	2.0	5.23	0.5	0.5	0.17	0.02	0.18	86					
M-1.3	3.284	0.0115	2	1.479	N.A.	0.0371	1.2039	5276	5273.5	400	0.0261	0.7	0.55	5250	1079	0.0212	2.0	3.0	0.5	0.5	0.12	0.02	0.20	89					
M-2	1.369	0.0012	2	806	N.A.	0.0199	1.0650	5200	5242	400	0.0268	0.7	0.99	5234	406	0.0197	2.0	3	0.5	0.5	0.15	0.02	0.13	89					
M-3	2.075	0.0032	2	409	N.A.	0.0171	0.6681	5234	5228	400	0.0176	0.6	0.86	5227	9	0.1111	2.0	7	0.5	0.5	0.13	0.02	0.13	89					
M-4	1.9796	0.0031	1	343	N.A.	0.0176	0.9000	5227	5221	341	0.0176	0.7	0.93	5221	1	0.0000	2.0	0	0.5	0.5	0.10	0.02	0.13	83					
a) All measurements were obtained from the Drainage Basin Maps, based on Lidar contour mapping dated 2010.																													
b) Obtained from Table F-6 in the DPM, pg. 22-64.																													
c) Obtained from Table F-6 in the DPM, pg. 22-64.																													
d) Vz= 1/16"x0.5" - determined from V=K*(S/100)^0.5																													
e) See DPM, pages 22-63 through 22-65 for following formulas:																													
f) L < 4000 ft: $T_c = 1.49 L^{0.77} + 2.14 \sqrt{L} / (3.28 \sqrt{S}) \text{ seconds}$																													
L is between 4,000 ft and 12,000 ft, then:																													
$T_c = [(12,000 / L)^{0.37} (72,000 K^2 C^2 V^3 S) + (L - 4000) K^2 C^2 V^3 S / (552.2 \sqrt{S} \cdot 0.165)]$ (ignore upper reach - K is insignificant for long lengths and assume middle reach for this equation)																													
f) L > 12,000 ft, then:																													
$T_c = 4.73 (2676 / L)^{0.11} (L / 1000)^{0.5} (S / 0.000625)^{0.5} (2676 / V)^{0.33}$																													
g) For F-6 is computed to be less than 22 hours, then use 0.2 hours DPM pg. 22-36																													
h) For F-075, per DPM pg. 22-36																													
i) For A-151's 24"x36"x3/4" S, per DPM pg. 22-65																													
j) For C-01's 50"x50" S (L/K)(K^2 C^2 V^3 S) + (L/K)(S^2 C^2 V^3 S) + (L/K)(S^2 C^2 V^3 S), per DPM pg. 22-65																													