

Proposed Condition Flow Rate Summary		
Basin/Concentration Point ID	Area (ac)	Q ₁₀₀ (cfs)
ENP	3.5	<1
EPA	17.1	16
EPB1	31.6	26
EPB2	46.4	36
EFA1	2.7	8
EFA2	2.4	7
EC8A	N/A	21
EC8B	N/A	55
Q = EPA + EPB1 + EPB2 + EFA1 + EFA2	N/A	55

Ultimate Condition Flow Rate Summary			
Basin/Concentration Point ID	Area (ac)	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)
ENP	3.5	<1	<1
EPA	17.1	40	18
EPB1	31.6	50	16
EPB2	46.4	67	22
EFA1	2.7	8	4
EFA2	2.4	7	4
EC8A	N/A	50	16
EC8B	N/A	108	39
Q = EPA + EPB1 + EPB2 + EFA1 + EFA2	N/A	108	39

Subbasin Prorated Flow Rate Summary					
Basin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
ENP	<1	n/a	3.50	n/a	n/a
EPB1	26	n/a	31.60	0.8	n/a
EFA2	7	4	2.40	2.9	1.7
Subbasin ID	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/acre)	10-yr Unit Flow (cfs/acre)
ENP(a)	<1	n/a	1.43	n/a	n/a
ENP(b)	<1	n/a	2.07	n/a	n/a
TOTAL	<1	n/a	3.50	n/a	n/a
EPB1(c)	5	n/a	5.76	0.8	n/a
EPB1(d)	9	n/a	10.71	0.8	n/a
EPB1(e)	12	n/a	15.14	0.8	n/a
TOTAL	26	n/a	31.60	0.8	n/a
EFA2(f)	3	2	0.92	2.9	1.7
EFA2(g)	4	2	1.48	2.9	1.7
TOTAL	7	4	2.40	2.9	1.7

Proposed Condition 100-Year Street Flow Summary					
Section ID	Q ₁₀₀ (cfs)	Slope (%)	Depth (ft)	Velocity (fps)	DxV
SC1	4	0.50	0.53	1.83	1.0
SC2	3	0.50	0.39	1.71	0.7
SC3	8	0.50	0.52	2.15	1.1

Proposed Condition 10-Year Street Flow Summary						
Section ID	Q ₁₀ (cfs)	Slope (%)	Depth (ft)	Velocity (fps)	DxV	Dry Lane (ft)
SC1	2	0.50	0.35	1.56	0.5	17.5
SC2	2	0.50	0.35	1.56	0.5	17.5
SC3	4	0.50	0.43	1.83	0.8	13.5

Proposed Condition Onsite Hydraulic Section Summary					
Section ID	Q ₁₀₀ (cfs)	Section Description	Slope (%)	Depth (ft)	Velocity (fps)
Section D1	12.0	3:1 SS V-Ditch	0.50	1.18	2.86
Section D2	9.0	3:1 SS V-Ditch	0.50	1.06	2.66
Section D3	55.0	3:1 SS V-Ditch	0.50	2.09	4.18
Section D4	4.0	3:1 SS V-Ditch	0.54	0.77	2.24
Sections down to Proposed Sump Inlets					
Section D1-Sump	12.0	5-ft Grouted Riprap Trap Channel with 3:1 Side Slopes	33.33	0.22	9.62
Section D2-Sump	9.0	5-ft Grouted Riprap Trap Channel with 3:1 Side Slopes	33.33	0.19	8.69
Section D3-Sump	55.0	Grouted Riprap V-Ditch with 3:1 Side Slopes	20.00	1.12	14.55

Recommended Flood Control Facilities Summary				
Facility ID	Facility Description	Source of Flows	Q _{Design} (cfs)	Notes
Proposed Condition				
LAT1a	Proposed 36" RCP Stub	EC8A	21	Analyzed by HY8 and WSPG
LAT1b	Proposed 36" RCP	EC8A + EFA2	28	Analyzed by WSPG
LAT1c	Proposed 18" RCP	EFA2	7	Analyzed by lateral loss equations.
LAT2	Proposed 48" RCP	EFA1	8	Analyzed by lateral loss equations.
LAT3	Proposed 42" RCP Stub	EC8B	55	Analyzed by HY8 in the proposed condition.
LAT4	Proposed 18" RCP Stub	n/a	0	Provided for ultimate low point curb inlet.
Ultimate Condition				
LAT1a	Proposed 36" RCP Stub	EC8A	50	Analyzed by WSPG
LAT1b	Proposed 36" RCP	EC8A + EFA2	57	Analyzed by WSPG
LAT1c	Proposed 18" RCP	EFA2	7	Analyzed by lateral loss equations.
LAT2	Proposed 48" RCP	EFA1	8	Analyzed by lateral loss equations.
LAT3	Proposed 42" RCP Stub	EC8B	108	Analyzed by lateral loss equations in the ultimate condition.
LAT4	Proposed 18" RCP Stub	EFA1	8	Analyzed by lateral loss equations in the ultimate condition.

Recommended Flood Control Facility (Inlets & Laterals) 100-Yr Summary						
Facility ID	Facility Description	Source of Flows	Approaching Flow (cfs) Q ₁₀₀	Facility Flow (cfs) Q ₁₀₀	Surface/Bypass Flow (cfs) Q ₁₀₀	Notes
D1	Proposed 7.5-ft Type DM2 in sump with 36" RCP Lateral	EFA2	7	7	0	Ponding depth limited to 0.50-ft
D2	Proposed 7.5-ft Type DM2 in sump with 48" RCP Lateral	EFA1	8	8	0	Ponding depth limited to 0.50-ft
D3	Proposed NDOT Type 2 (2x2.5') Area Drain with 18" RCP Lateral	EFA2	7	7	0	

Recommended Flood Control Facility (Inlets & Laterals) 10-Yr Summary						
Facility ID	Facility Description	Source of Flows	Approaching Flow (cfs) Q ₁₀	Facility Flow (cfs) Q ₁₀	Surface/Bypass Flow (cfs) Q ₁₀	Notes
D1	Proposed 7.5-ft Type DM2 in sump with 36" RCP Lateral	EFA2	4	4	0	Ponding depth limited to 0.46-ft to meet drylane
D2	Proposed 7.5-ft Type DM2 in sump with 48" RCP Lateral	EFA1	4	4	0	Ponding depth limited to 0.46-ft to meet drylane

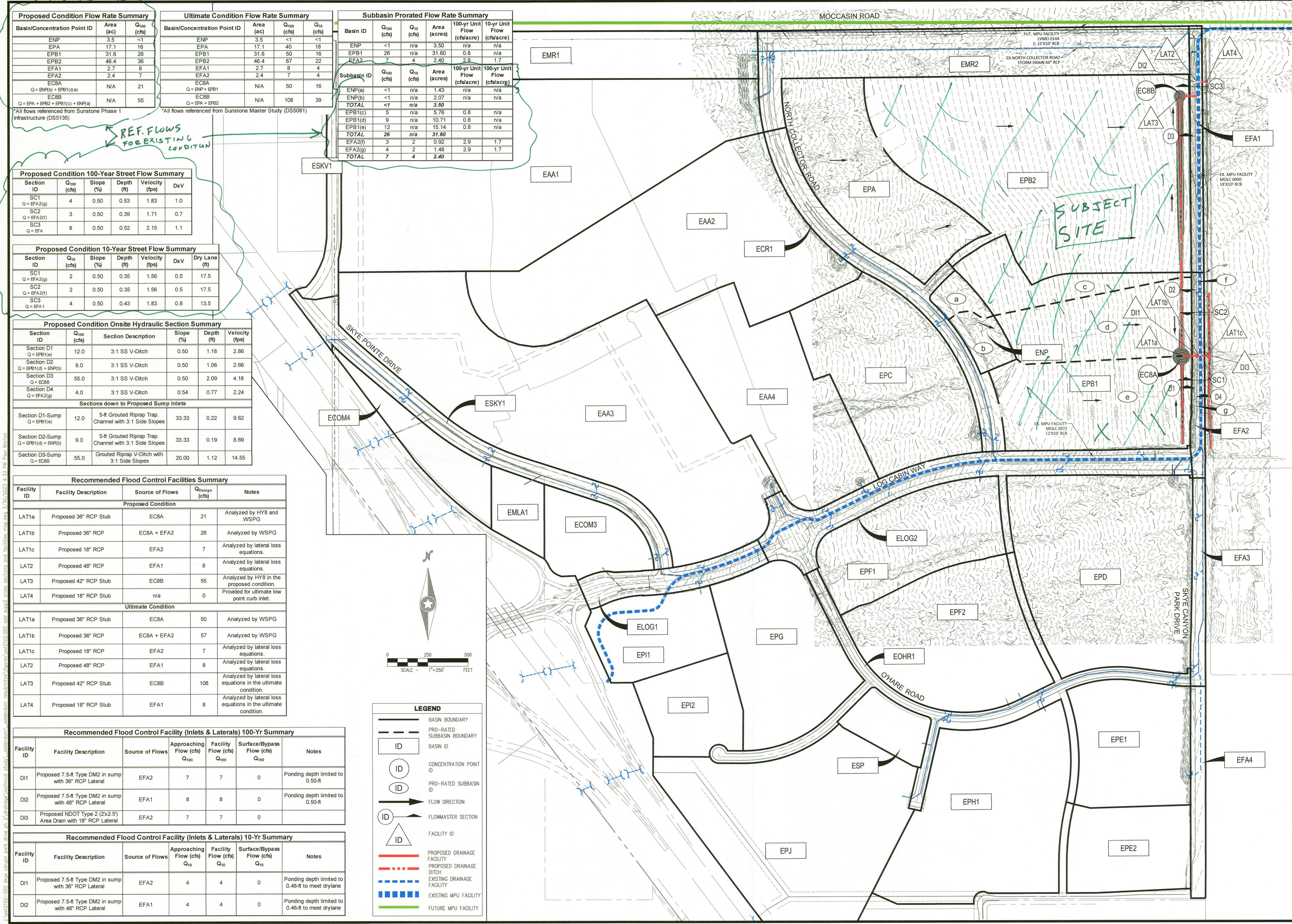
LEGEND

- BASIN BOUNDARY
- - - PRO-RATED SUBBASIN BOUNDARY
- ID BASIN ID
- ID CONCENTRATION POINT ID
- ID PRO-RATED SUBBASIN ID
- FLOW DIRECTION
- ID FLOWMASTER SECTION
- ID FACILITY ID
- PROPOSED DRAINAGE FACILITY
- - - PROPOSED DRAINAGE DITCH
- EXISTING DRAINAGE FACILITY
- EXISTING MPU FACILITY
- FUTURE MPU FACILITY

North Arrow

Scale: 1" = 250' FEET

0 250 500



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NO.	DESCRIPTION	DATE	BY	APP.

SC EAST LANDCO, LLC
SUNSTONE PHASE 2 N. SKYE CANYON PARK DR.
FACILITIES MAP

DATE: DEC 2022
 DRAFTER: CRW
 DESIGNER: PLM
 CHECKED: LL
 PROJECT NO.
EST2102.000

EXHIBIT E
 SHEET 1 OF 1