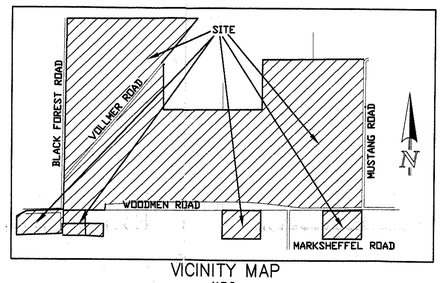
DEVELOPED CONDITIONS
WOODMEN HEIGHTS
MASTER DEVELOPMENT DRAINAGE PLAN
JUNE, 2004

PIPE RUN SUMMARY

0	36" RCP @ 1.00%	5A	72" RCP @ 1.00%	10	48" RCP @ 1.00%	17	72" RCP @ 1.00%	25	66" RCP @ 1.00%	33	36" RCP @ 1.00%	41	60" RCP @ 1.00%		
1	18" RCP @ 1.00%	6	48" RCP @ 1.00%	11	48" RCP @ 1.00%	18	48" RCP @ 1.00%	26	66" RCP @ 1.00%	34	78" RCP @ 1.00%	42	42" RCP @ 1.00%		
2	36" RCP @ 1.00%	7	42" RCP @ 1.00%	12	30" RCP @ 1.00%	19	30" RCP @ 1.00%	27	24" RCP @ 1.00%	35	42" RCP @ 1.00%	43	36" RCP @ 1.00%		
3	54" RCP @ 1.00%	7A	78" RCP @ 1.00%	12A	48" RCP @ 1.00%	20	36" RCP @ 1.00%	28	66" RCP @ 1.00%	36	78" RCP @ 1.00%	44	54" RCP @ 1.00%		
3A	54" RCP @ 1.00%	8	42" RCP @ 1.00%	13	36" RCP @ 1.00%	21	36" RCP @ 1.00%	29	18" RCP @ 1.00%	37	42" RCP @ 1.00%	45	54" RCP @ 1.00%		
3B	66" RCP @ 1.00%	8A	66" RCP @ 1.00%	14	66" RCP @ 1.00%	22	30" RCP @ 1.00%	30	72" RCP @ 1.00%	38	84" RCP @ 1.00%				
4	66" RCP @ 1.00%	8B	72" RCP @ 1.00%	15	66" RCP @ 1.00%	23	36" RCP @ 1.00%	31	36" RCP @ 1.00%	39	42" RCP @ 1.00%				
5	42" RCP @ 1.00%	9	42" RCP @ 1.00%	16	48" RCP @ 1.00%	24	36" RCP @ 1.00%	32	72" RCP @ 1.00%	40	48" RCP @ 1.00%				

VICINITY MAP
N.T.S.



PARCEL RUNOFF SUMMARY

0	Q5 = 19 CFS Q100 = 40 CFS	7	Q5 = 64 CFS Q100 = 116 CFS	14	Q5 = 22 CFS Q100 = 51 CFS	21	Q5 = 82 CFS Q100 = 170 CFS	28	Q5 = 1.0 CFS Q100 = 8.7 CFS
1	Q5 = 1.0 CFS Q100 = 1.5 CFS	8	Q5 = 5.5 CFS Q100 = 20 CFS	15	Q5 = 66 CFS Q100 = 138 CFS	22	Q5 = 40 CFS Q100 = 73 CFS	29	Q5 = 90 CFS Q100 = 164 CFS
2	Q5 = 64 CFS Q100 = 176 CFS	9	Q5 = 64 CFS Q100 = 116 CFS	16	Q5 = 1.5 CFS Q100 = 14.1 CFS	23	Q5 = 59 CFS Q100 = 106 CFS		
3	Q5 = 56 CFS Q100 = 151 CFS	10	Q5 = 11.5 CFS Q100 = 21 CFS	17	Q5 = 22 CFS Q100 = 46 CFS	24	Q5 = 1.5 CFS Q100 = 13.3 CFS		
4	Q5 = 51 CFS Q100 = 140 CFS	11	Q5 = 21 CFS Q100 = 43 CFS	18	Q5 = 22 CFS Q100 = 54 CFS	25	Q5 = 8.6 CFS Q100 = 32 CFS		
5	Q5 = 38 CFS Q100 = 74 CFS	12	Q5 = 40 CFS Q100 = 110 CFS	19	Q5 = 0.6 CFS Q100 = 9.2 CFS	26	Q5 = 55 CFS Q100 = 100 CFS		
6	Q5 = 51 CFS Q100 = 92 CFS	13	Q5 = 59 CFS Q100 = 94 CFS	20	Q5 = 28 CFS Q100 = 58 CFS	27	Q5 = 24 CFS Q100 = 53 CFS		

OFFSITE RUNOFF SUMMARY

OS-A	Q5 = 41 CFS Q100 = 96 CFS
OS-B	Q5 = 20.5 CFS Q100 = 52.5 CFS
OS-1	Q5 = 65 CFS Q100 = 163 CFS
OS-2	Q5 = 216 CFS Q100 = 610 CFS
OS-3	Q5 = 216 CFS Q100 = 610 CFS
OS-4	Q5 = 809 CFS Q100 = 2286 CFS
OS-5	Q5 = 72 CFS Q100 = 340 CFS

PREVIOUSLY COTTONWOOD DRAINAGE BASIN (2.08 AC.)

COTTONWOOD CREEK

DET. SITE ALT. 'C'

PER DBPS, ALTERNATIVE REGIONAL DETENTION POND. NECESSARY FOR INCREASE OF DEVELOPED FLOWS TRIBUTARY TO SAND CREEK NORTH OF WOODMEN HEIGHTS.

OS-1 / 109

SF 3.5-7.99 DU/AC 53.7 ACRES

SF 3.5-7.99 DU/AC 30.6 ACRES

SCHOOL 12.0 ACRES

PARK 5.0 AC

MF 8-11.99 DU/AC 18.7 ACRES

SF 3.5-7.99 DU/AC 33.7 ACRES

MF 8-11.99 DU/AC 13.7 ACRES

SF 3.5-7.99 DU/AC 29.3 ACRES

OS-2 / 600

OS-3 / 600

IMPROVED RIPRAP CHANNEL
BW=25', d=3', S=1.2%
3' DROPS @ 270' INTERVALS
Q100=600 cfs
CHANNEL DIVERSION

Q100=2630 cfs
Q10 = 770 cfs

OS-4 / CHAN

MUSTANG ROAD (60' R.O.W.)

MAIN STEM SAND CREEK BASIN BOUNDARY

MAJOR PUBLIC ASSEMBLY 24.6 ACRES

SAND CREEK CHANNEL IMPROVEMENTS PER SAND CREEK DBPS:

(2) CHECK STRUCTURES
(2) DROP STRUCTURES
TRIPLE 10X10 BOX CULVERT AT MARKSHEFFEL ROAD CROSSING

MAIN STEM SAND CREEK BASIN BOUNDARY

OS-A / 100.9

BLACK FOREST ROAD

REMOVE EXISTING 30" CMP'S REDIRECT FLOW INTO PIPE 5

EXISTING 18" RCP AND 36" CMP CULVERTS TO REMAIN UNTIL REPLACED OR EXTENDED WITH BLACK FOREST ROAD IMPROVEMENTS

RUNOFF DISCHARGED FROM OS-A NOT TO EXCEED HISTORIC RATES Q5= 41 Q100= 96

P

SF 3.5-7.99 DU/AC 39.2 ACRES

VOLLMER ROAD

OPEN CHANNEL OR 72" RCP

SF 3.5-7.99 DU/AC 67.1 ACRES

SF 3.5-7.99 DU/AC 52.4 ACRES

SECONDARY SCHOOL 23.6 ACRES

PARK 6.7 ACRES

16.1 ACRES

MAJOR PUBLIC ASSEMBLY 14.9 ACRES

MAJOR PUBLIC ASSEMBLY 17.3 ACRES

KENOSHA DRIVE (60' R.O.W.)

OS-5 / 323

REMOVE EXISTING 42" CMP'S REPLACE W/ 2-60" CMP W/ FES

MAIN STEM SAND CREEK BASIN BOUNDARY

SAND CREEK

OPEN CHANNEL OR 72" RCP

IMPROVED GRASSLINED CHANNEL
BW=20', d=3', S=1.3%
Q100=370 cfs
ALTERNATIVE TO PIPE SYSTEM

EXIST. 60" RCP CULVERT TO BE RELOCATED. AN ADDITIONAL 60" RCP IS REQUIRED TO CONVEY RUNOFF.

MF 12-15.99 DU/AC 18.7 ACRES

EXIST. 48" RCP CULVERT CONSTRUCTED WITH EL PASO COUNTY WOODMEN SAFETY PROJECT 'A'

OS-B / 54.9

NEIGHBORHOOD COMMERCIAL/ OFFICE 21.2 ACRES

REGIONAL DETENTION FACILITY NO. 6 16.3 ACRES

NEIGHBORHOOD COMMERCIAL/ OFFICE 26.6 ACRES

NEIGHBORHOOD COMMERCIAL/ OFFICE 21.7 ACRES

REGIONAL DETENTION FACILITY NO. 3 25.5 ACRES

14.3 ACRES

NEIGHBORHOOD COMMERCIAL/ MULTI-FAMILY 16.7 ACRES

COMMUNITY COMMERCIAL/ OFFICE 24.3 ACRES

MAJOR PUBLIC ASSEMBLY 50.4 ACRES

EAST FORK SAND CREEK BASIN

REEL ANNEX.

RUNOFF DISCHARGED FROM OS-B NOT TO EXCEED HISTORIC RATES Q5= 20.5 Q100= 52.5

WOODMEN ROAD

71 ACRE-FT FACILITY SAND CREEK DETENTION BASIN #6

APPROXIMATE LOCATION OF RELOCATED ELECTRIC LINE/POLES AND CORRESPONDING PROPOSED UTILITY EASEMENT.

224 ACRE-FT FACILITY SAND CREEK DETENTION BASIN #3

COMMUNITY COMMERCIAL/ OFFICE 32.8 ACRES

OFFICE 4.8 ACRES

NEIGHBORHOOD COMMERCIAL/ OFFICE/ MULTI-FAMILY 22.9 ACRES

OPEN SPACE 7.4

MF 8-11.99 DU/AC 13.8 ACRES

COMMUNITY COMMERCIAL/ OFFICE 37.7 ACRES

EAST FORK SAND CREEK BASIN

BANNING LEWIS RANCH PHASE 1

MARKSHEFFEL ROAD (60' R.O.W.)

FUTURE REALIGNMENT

MARKSHEFFEL ROAD

300 150 0 300 600

SCALE: 1" = 300'

6880 PROPOSED INDEX CONTOUR
EXIST. INDEX CONTOUR
4 PARCEL DESIGNATION
36 PIPE ROUTING
STORM SEWER PIPE
NATURAL CHANNEL
C PROPOSED LAND USE
OS-3 / 600 OFFSITE DRAINAGE BASIN
P PROPOSED POND
WQ PROPOSED WATER QUALITY POND
BASIN/PARCEL BOUNDARY
BASIN/PARCEL BOUNDARY

DEVELOPED CONDITIONS
WOODMEN HEIGHTS
2077.00
8/03/04
SHEET 1 OF 1

CLASSIC CONSULTING ENGINEERS & SURVEYORS
6385 Corporate Drive, Suite 304
Colorado Springs, Colorado 80919
(719)785-0790
(719)785-0799 (Fax)