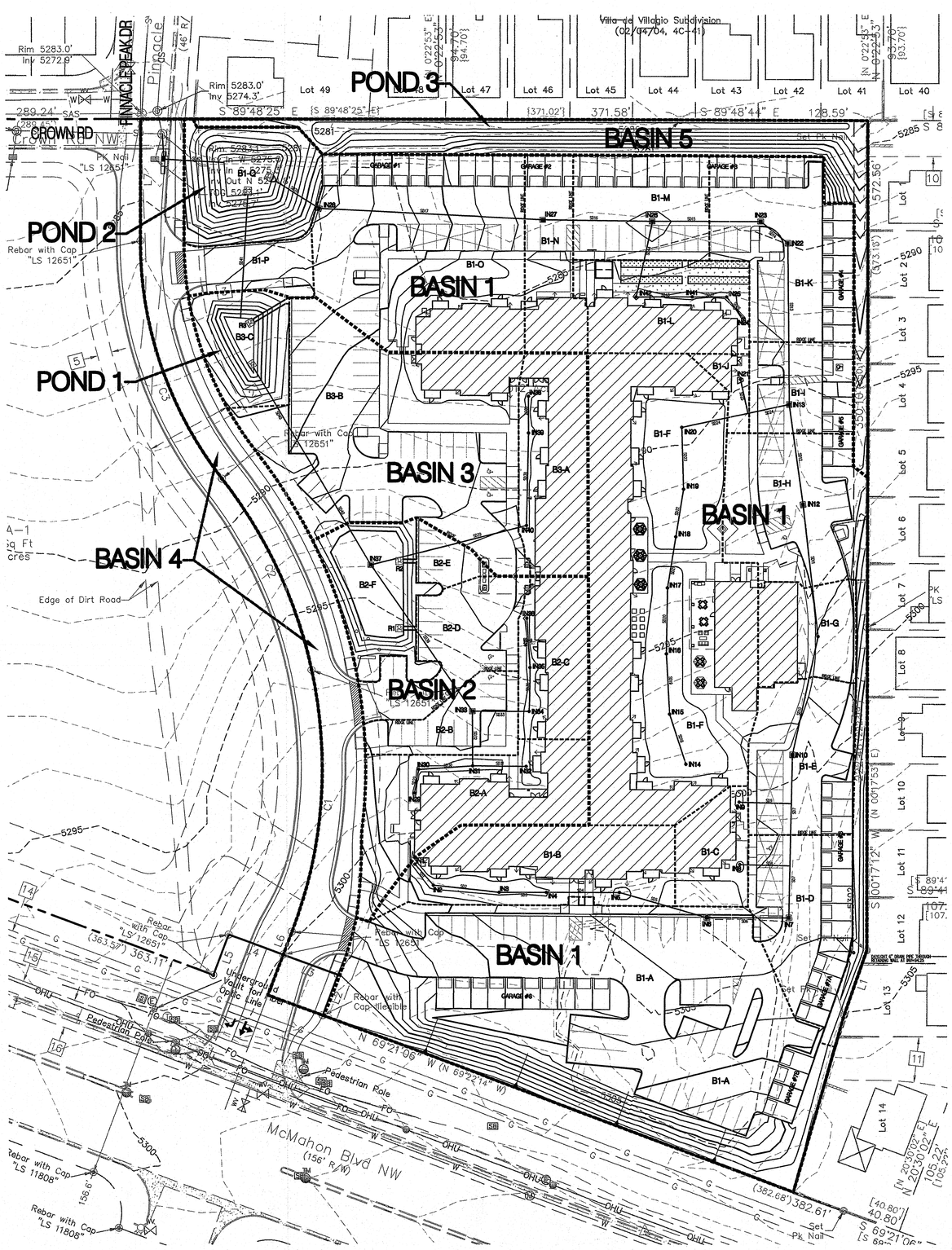
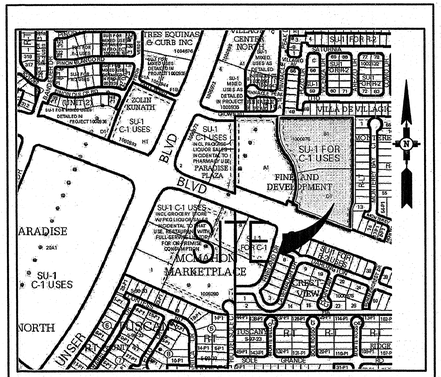
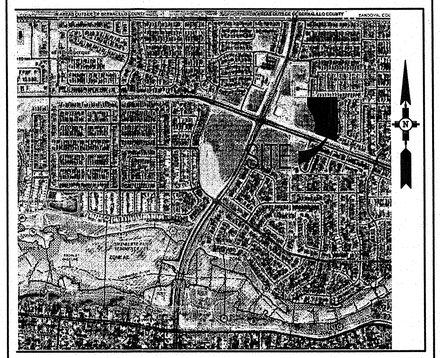


DRAINAGE MANAGEMENT PLAN



N.T.S. VICINITY MAP ZONE ATLAS A-11-2



N.T.S. FIRM MAP NUMBER 35001C0104H

AFFINITY AT ALBUQUERQUE
Existing Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 1

Basin	Area	Area	Land Treatment Percentages				Q(100yr)	Q(100yr-6hr)	WT E	V(100yr-6hr)	V(100yr-10day)
ID	(SQ. FT)	(AC.)	A	B	C	D	(cfs/ac.)	(CFS)	(inches)	(CF)	CF
Existing											
1	288227	6.62	95.0%	0.0%	5.0%	0.0%	1.37	*9.06*	*0.47*	*11229*	*11229*
TOTAL	288227	6.62									***11228.844***

POND DATA

POND #1:

POND BOTTOM: 5283.0 FEET
POND VOLUME PROVIDED: 0.131 ACRE-FEET
POND VOLUME REQUIRED: 0.106 ACRE-FEET (PER AHYMO ANALYSIS)
MAX WATER SURFACE ELEVATION: 5287.0 FEET (PER AHYMO ANALYSIS) SPILL ELEVATION: 5287.5 FEET

POND #2:

POND BOTTOM: 5277.0 FEET
POND VOLUME PROVIDED: 0.342 ACRE-FEET
POND VOLUME REQUIRED: 0.308 ACRE-FEET (PER AHYMO ANALYSIS)
MAX WATER SURFACE ELEVATION: 5283.1 FEET (PER AHYMO ANALYSIS)
SPILL ELEVATION: 5283.5 FEET

POND #3:

POND BOTTOM: 5281.00 FEET
POND VOLUME PROVIDED: 0.0257 ACRE-FEET
POND VOLUME REQUIRED: 0.0239 ACRE-FEET (PER CHAPTER 22 DPM)
MAX WATER SURFACE ELEVATION: 5281.45 FEET (PER CHAPTER 22 DPM)
SPILL ELEVATION: 5281.50 FEET

INTRODUCTION:

THE PROJECT IS LOCATED NORTHWEST OF THE INTERSECTION OF MCMAHON BLVD AND UNSER BLVD. THIS SITE IS NOT WITHIN A DEFINED FLOOD ZONE AS SHOWN ON FIRM MAP NUMBER 35001C0104H (THIS SHEET). THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF AFFINITY AT ALBUQUERQUE SENIOR HOUSING AND REQUEST GRADING PERMIT AND BUILDING PERMIT APPROVAL.

EXISTING CONDITIONS:

THE 6.62 ACRE SITE IS CURRENTLY UNDEVELOPED. EXISTING FLOW IS APPROXIMATELY EQUAL TO 9.0 CFS. THE SITE SLOPES TO THE NORTH / NORTHWEST WHERE THE RUNOFF FLOWS INTO AN EXISTING 24"STORM DRAIN IN PINNACLE PEAK DRIVE.

BASED ON A DRAINAGE STUDY FOR VILLA DE VILLAGIO SUBDIVISION DATED FEBRUARY 10, 2003 (COA HYDRO FILE #A11/D9), ALLOWABLE PEAK DISCHARGE FROM THE SITE IS APPROXIMATELY 9.0 CFS.

METHODOLOGY:

THE HYDROLOGIC ANALYSIS PROVIDED WITH THIS DRAINAGE MANAGEMENT PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 22.2 OF THE DPM. THE SITE IS LOCATED WEST OF THE RIO GRANDE WITHIN PRECIPITATION ZONE 1. ALTHOUGH THE SITE IS SMALL ENOUGH TO USE THE "SMALL WATERSHEDS" PROCEDURE GIVEN IN SECTION A.6, WE ELECTED TO USE AHYMO IN ORDER TO MODEL THE STORMWATER FLOWS THROUGH THE TWO PROPOSED PONDS ON THE SITE. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE ACTUAL CONDITIONS IN EACH ONSITE BASIN AND ARE SUMMARIZED IN THE "DEVELOPED CONDITIONS BASIN DATA TABLE" ON SHEET C-101.

ALL ONSITE STORM DRAIN PIPES ARE BE SIZED BASED ON GRAVITY FLOW USING THE MANNING'S EQUATION. DETAILED CALCULATIONS FOR PIPES AND INLETS ARE PROVIDED ON SHEET C-101.

PROPOSED CONDITIONS:

ALLOWABLE DISCHARGE (PER COA HYDRO FILE #A11/D9): 9.0 CFS
ALLOWABLE DISCHARGE WITH FINELAND DRIVE (BASIN 4): 7.1 CFS
PROPOSED DISCHARGE: 6.5 CFS
DIFFERENCE BETWEEN ALLOWABLE AND PROPOSED: .6 CFS

THE ALLOWABLE DISCHARGE FROM THE SITE WAS FOUND TO BE APPROXIMATELY 7.1 CFS WHEN CONSIDERING THE RUNOFF FROM FINELAND DRIVE (BASIN 4). WITH THE DEVELOPMENT OF THE SITE, THE PROPOSED FLOW IS APPROXIMATELY 6.5 CFS WHICH IS LESS THAN THE ALLOWABLE DISCHARGE.

TO MITIGATE PEAK FLOWS GENERATED WITH PROPOSED CONDITIONS, TWO PONDS HAVE BEEN DESIGNED ONSITE. BOTH PONDS WERE ANALYZED USING AHYMO. DISCHARGE FROM THE PONDS WAS CALCULATED USING THE ORIFICE EQUATION. SEE TABLE 2, SHEET C-101 FOR DETAILED CALCULATIONS.

POND 2 IS LOCATED AT THE NORTHWEST CORNER OF THE SITE. THE PRIMARY DISCHARGE POINT FOR POND 2 IS A NEW STORM DRAIN TO BE CONNECTED TO AN EXISTING PUBLIC STORM DRAIN MANHOLE AT THE INTERSECTION OF PINNACLE PEAK AND CROWN ROAD. IN THE EVENT THAT THE DISCHARGE PIPE IS PLUGGED, OR IN THE EVENT OF A STORM LARGER THAN THE 100 YEAR STORM, THE POND WILL OVERFLOW TO THE RIGHT-OF-WAY OF FINELAND DRIVE (AKA PINNACLE PEAK). UNDER EXISTING CONDITIONS, THE TOP OF CURB ELEVATION OF PINNACLE PEAK AT THE INTERSECTION WITH CROWN ROAD IS APPROXIMATELY 5283.78. THE EXISTING GRADE ALONG THE NORTH PROPERTY LINE OF THE SITE (DELINEATED WITH AN EXISTING CMU WALL) WHICH ADJOINS EXISTING RESIDENTIAL LOTS, VARIES BETWEEN 5281 AND 5282. THEREFORE, THE EXISTING GRADE ALONG MOST OF THE NORTH PROPERTY LINE IS ABOUT 2' LOWER THAN THE TOP OF CURB OF PINNACLE PEAK. IN ORDER TO ENSURE THAT ANY OVERFLOW FROM POND 2 DOES NOT IMPACT THE RESIDENTIAL LOTS TO THE NORTH, WE ARE PROVIDING A CAST-IN-PLACE CONCRETE WALL ALONG THE NORTH SIDE OF POND 2. THE WALL WILL BE APPROXIMATELY 3' TALL, WITH A TOP-OF-WALL ELEVATION OF 5285.0.

BASIN 5 CONSISTS OF SMALL LANDSCAPED AREAS BEHIND THE GARAGES ON THE NORTH SIDE OF THE SITE AND A SMALL PORTION OF THE EAST SIDE OF THE SITE. THERE IS NO IMPERVIOUS AREA WITHIN BASIN 5. ALL OF THE GARAGE ROOFS DRAIN TO THE PARKING LOTS AND DRIVEWAYS. FLOWS FROM BASIN 5 (PEAK DISCHARGE IS LESS THAN 1.0 CFS) WILL BE RETAINED IN A SHALLOW WATER HARVESTING AREA WITHIN THE LANDSCAPED AREA NEAR THE NORTH PROPERTY LINE. THE TOTAL VOLUME FOR THE 100 YR – 10 DAY STORM WAS CALCULATED TO BE APPROXIMATELY 1010 CF BASED ON THE CALCULATION METHOD GIVEN IN CHAPTER 22 SECTION A5 OF THE DPM.

V_{360} = (.29 ACRES X .99 INCHES) / 12 = .0239 AC-FT (APPROX 1042 CF)
A_D = 0
THEREFORE: V_{RDDAY} = .0239 AC-FT (APPROX 1042 CF)

THE WATER HARVESTING AREA WAS SIZED TO BE APPROXIMATELY 1120CF, APPROXIMATELY 10% LARGER THAN THE TOTAL VOLUME REQUIRED.

CONCLUSION:

THE PEAK DISCHARGE FROM THE SITE IS 6.5 CFS WHICH IS LESS THAN THE ALLOWABLE PEAK DISCHARGE RATE, THEREFORE WE ARE IN CONFORMANCE WITH CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST BUILDING PERMIT APPROVAL.

N

40 20 0 40
1"=40'

PREPARED BY: 7/3/14, 7/8/14
MATTHEW SATCHES

P:\20140292\CDP\Hydro\20140292DMP01.dwg
Thu, 3-Jul-2014 – 3:09:pm, Plotted by: MSATCHES

Bohannan Huston
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PROJECT
AFFINITY AT ALBUQUERQUE
FINELAND & MCMAHON
ALBUQUERQUE, NEW MEXICO

SEAL

GEORGE J. STIDWORTHY
NEW MEXICO
14523
7/8/14
REGISTERED PROFESSIONAL ENGINEER
7/8/14

FILE

DATE
JULY 3, 2014

DRAWN
MS

REVISIONS

SHEET
C-100
DRAINAGE MANAGEMENT PLAN

AFFINITY AT ALBUQUERQUE SENIOR HOUSING

Developed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 1

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	V(100yr-6hr) (CF)	V(100yr-24hr) (CF)
PROPOSED BASINS											
B1-A	43701	1.00	0.0%	0.0%	35.0%	65.0%	3.85	*3.86*	*1.63*	*5925*	*6872*
B1-B	9890	0.23	0.0%	0.0%	40.0%	60.0%	3.77	*0.86*	*1.58*	*1301*	*1498*
B1-C	3047	0.07	0.0%	0.0%	50.0%	50.0%	3.62	*0.25*	*1.48*	*376*	*427*
B1-D	7288	0.17	0.0%	0.0%	5.0%	95.0%	4.30	*0.72*	*1.92*	*1167*	*1397*
B1-E	8618	0.20	0.0%	0.0%	35.0%	65.0%	3.85	*0.76*	*1.63*	*1168*	*1355*
B1-F	32806	0.75	0.0%	0.0%	45.0%	55.0%	3.70	*2.78*	*1.53*	*4180*	*4781*
B1-G	4563	0.10	0.0%	0.0%	20.0%	80.0%	4.07	*0.43*	*1.77*	*675*	*796*
B1-H	12479	0.29	0.0%	0.0%	45.0%	55.0%	3.70	*1.06*	*1.53*	*1590*	*1819*
B1-I	4542	0.10	0.0%	0.0%	30.0%	70.0%	3.92	*0.41*	*1.68*	*634*	*740*
B1-J	1157	0.03	0.0%	0.0%	67.0%	33.0%	3.37	*0.09*	*1.31*	*127*	*139*
B1-K	10518	0.24	0.0%	0.0%	10.0%	90.0%	4.22	*1.02*	*1.87*	*1641*	*1956*
B1-L	7423	0.17	0.0%	0.0%	50.0%	50.0%	3.62	*0.62*	*1.48*	*916*	*1039*
B1-M	6715	0.15	0.0%	0.0%	0.0%	100.0%	4.37	*0.67*	*1.97*	*1102*	*1326*
B1-N	4930	0.11	0.0%	0.0%	15.0%	85.0%	4.15	*0.47*	*1.82*	*749*	*889*
B1-O	18750	0.43	0.0%	0.0%	17.0%	83.0%	4.12	*1.77*	*1.80*	*2818*	*3337*
B1-P	3095	0.07	0.0%	0.0%	0.0%	100.0%	4.37	*0.31*	*1.97*	*508*	*611*
B1-Q	7219	0.17	0.0%	0.0%	100.0%	0.0%	2.87	*0.48*	*0.99*	*596*	*596*
BASIN 1 TOTAL:	**186741**	**4.29**						***16.55***			
B2-A	10156	0.23	0.0%	0.0%	50.0%	50.0%	3.62	*0.84*	*1.48*	*1253*	*1422*
B2-B	4084	0.09	0.0%	0.0%	5.0%	95.0%	4.30	*0.40*	*1.92*	*654*	*783*
B2-C	5273	0.12	0.0%	0.0%	33.0%	67.0%	3.88	*0.47*	*1.65*	*724*	*841*
B2-D	6326	0.15	0.0%	0.0%	5.0%	95.0%	4.30	*0.62*	*1.92*	*1013*	*1213*
B2-E	1474	0.03	0.0%	0.0%	0.0%	100.0%	4.37	*0.15*	*1.97*	*242*	*291*
B2-F	5979	0.14	0.0%	0.0%	100.0%	0.0%	2.87	*0.39*	*0.99*	*493*	*493*
BASIN 2 TOTAL:	**33292**	**0.76**						***2.88***			
B3-A	7187	0.16	0.0%	0.0%	25.0%	75.0%	4.00	*0.66*	*1.73*	*1033*	*1213*
B3-B	23277	0.53	0.0%	0.0%	10.0%	90.0%	4.22	*2.26*	*1.87*	*3631*	*4330*
B3-C	4694	0.11	0.0%	0.0%	100.0%	0.0%	2.87	*0.31*	*0.99*	*387*	*387*
BASIN 3 TOTAL:	**35158**	**0.81**						***3.22***			
B4	20305	0.47	0.0%	0.0%	25.0%	75.0%	4.00	*1.86*	*1.73*	*2919*	*3426*
BASIN 4 TOTAL:	**20305**	**0.47**						***1.86***			
B5	12659	0.29	0.0%	0.0%	100.0%	0.0%	2.87	*0.83*	*0.99*	*1044*	*1044*
BASIN 5 TOTAL:	**12659**	**0.29**						***0.83***			
TOTAL	**288155**	**6.62**	-	-	-	-	-	***25.35***	-	*38864*	*45024*

TABLE 1: BASIN & SUB-BASIN DATA

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.01a, Rel: 01a RUN DATE (MON/DAY/YR) =07/03/2014

INPUT FILE = P:\20140292\CDP\Hydro\AHYMO\100YR 6-10-2014.HYM USER NO.= AHYMO_Temp_User:20122010

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.		TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
											PAGE = 1
*S	AHYMO FILE FOR AFFINITY AT ALBUQUERQUE - ALBUQUERQUE,NM , BH PROJ # 20140292										
*S	100 YEAR - 6 HOUR STORM										
*S											
*S	INPUT FILE -- P:\20140292\CDP\HYDRO\AHYMO\100YR 6-10-2014.HYM										
*S	OUTPUT FILE -- P:\20140292\CDP\HYDRO\AHYMO\100YR-NP1-SMALL.OUT										
START	TIME=0										
LOCATION	ALBUQUERQUE										
RAINFALL	TYPE=1 NOAA 14										
*S**********											
*S	----------										
*S	COMPUTE BASIN DEVELOPED CONDITIONS										
*S	----------										
*S BASIN 1											
COMPUTE NM HYD		B1	-	2	0.00669	17.23	0.592	1.66018	1.5		4.023 PER IMP= 66.00
*S BASIN 2											
COMPUTE NM HYD		B2	-	3	0.0012	3.04	0.103	1.60797	1.5		3.962 PER IMP= 60.00
*S BASIN 3											
COMPUTE NM HYD		B3	-	4	0.00126	3.35	0.117	1.73849	1.5		4.159 PER IMP= 75.00
*S BASIN 4											
COMPUTE NM HYD		B4	-	5	0.00073	1.95	0.068	1.73849	1.5		4.175 PER IMP= 75.00
*S BASIN 5											
COMPUTE NM HYD		B5	-	6	0.00045	0.91	0.026	1.08591	1.5		3.168 PER IMP= 0.00
*S**********											
*S ADDITION OF BASIN 2 TO BASIN 3											
ADD HYD		B2B3	-	20	0.00246	6.9	0.220	1.67459	1.5		
*S ROUTE BASIN B2 & B3 TO POND 1. OUTFLOW BASED ON 6" ORIFICE = SD 41											
ROUTE RESERVOIR		POND1	-	11	0.00246	1.9	0.220	1.67459	1.8		MAX VOLUME = 0.106 AC-FT
*S ADDITION OF POND1 TO BASIN 1											
ADD HYD		P1B1	-	21	0.00915	18.73	0.812	1.66401	1.5		
*S ROUTE BASIN B1 TO POND 2. OUTFLOW BASED ON 10" ORIFICE = SD 42											
ROUTE RESERVOIR		POND2	-	12	0.00915	4.25	0.812	1.66401	1.8		MAX VOLUME = 0.308 AC-FT

TABLE 2: AHYMO ANALYSIS SUMMARY TABLE

STORM DRAIN PIPE TABLE

PIPE #	INLET/SD/BASIN	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs
SD1	IN1	8	0.60%	0.94	0.17
SD2	IN2, SD1	8	0.60%	0.94	0.34
SD3	IN3, SD2	8	0.60%	0.94	0.51
SD4	IN4, SD3	8	0.60%	0.94	0.68
SD5	IN5, SD4	8	0.60%	0.94	0.86
SD6	IN6, SD5	18	0.60%	8.14	4.71
SD7	IN7, SD8, SD9, SD6	18	0.60%	8.14	5.69
SD8	IN8	6	7.00%	1.48	0.13
SD9	IN9	6	7.45%	1.53	0.13
SD10	IN10, SD7	18	0.60%	8.14	6.45
SD11	SD10	18	0.60%	8.14	6.45
SD12	IN12, SD11	18	0.60%	8.14	7.50
SD13	IN13, SD12, SD24	24	0.60%	17.52	10.59
SD14	IN22, SD13	24	0.60%	17.52	11.10
SD15	IN23, SD14	24	0.60%	17.52	11.61
SD16	IN26, SD15, SD44	24	0.60%	17.52	12.90
SD17	IN27, SD16	24	0.60%	17.52	13.37
SD18	IN14	8	0.60%	0.94	0.31
SD19	IN15, SD18	8	0.60%	0.94	0.62
SD20	IN16, SD19	8	0.60%	0.94	0.93
SD21	IN17, SD20	8	0.60%	0.94	1.24
SD22	IN18, SD21	8	0.60%	0.94	1.55
SD23	IN19, SD22	8	0.60%	0.94	1.86
SD24	IN20, SD23, SD25	8	0.60%	0.94	2.67
SD25	IN21	6	9.75%	1.75	0.51
SD26	IN24	6	0.60%	0.43	0.15
SD27	IN25, SD26	6	0.60%	0.43	0.31
SD28	IN28, SD17	24	12.35%	79.52	15.14
SD29	IN29	6	1.00%	0.56	0.21
SD30	IN30, SD29	6	1.00%	0.56	0.42
SD31	IN32	6	1.00%	0.56	0.21
SD32	IN31, SD30, SD31	8	1.00%	1.21	0.84
SD33	IN34, SD35	8	1.00%	1.21	0.47
SD34	IN36	6	1.00%	0.56	0.16
SD35	IN35, SD34	6	1.00%	0.56	0.31
SD36	IN33, SD32, SD33	10	1.50%	2.68	1.72
SD37	IN38	6	1.00%	0.56	0.22
SD38	IN39, SD37	6	1.00%	0.56	0.44
SD39	IN40, SD38	10	1.00%	2.19	0.66
SD40	IN37, SD36, SD39	10	2.20%	3.25	3.54
SD41	B3, B2	6	6.60%	SEE AHYMO ANALYSIS	
SD42	IN7, SD5, SD6	10	3.00%	SEE AHYMO ANALYSIS	
SD43	IN41, SD27	6	0.60%	0.43	0.46
SD44	IN42, SD43	6	0.60%	0.43	0.62
				Capacity Based on Manning's Eq w/ n=0.013	

TABLE 3: STORM DRAIN SIZING

INLET TABLE

Inlet #	Inlet Type	Basin	Actual Flow	Avail Head ft	Capacity* CFS
IN1	8" NYLOPLAST DOME	B1-B (1/5)	0.17	0.50	0.71
IN2	8" NYLOPLAST DOME	B1-B (1/5)	0.17	0.50	0.71
IN3	8" NYLOPLAST DOME	B1-B (1/5)	0.17	0.50	0.71
IN4	8" NYLOPLAST DOME	B1-B (1/5)	0.17	0.50	0.71
IN5	8" NYLOPLAST DOME	B1-B (1/5)	0.17	0.50	0.71
IN6	18" NYLOPAST	B1-A	3.86	0.70	2.37
IN7	18" NYLOPAST	B1-D	0.72	0.70	2.37
IN8	8" NYLOPLAST DOME	B1-C (1/2)	0.13	0.50	0.71
IN9	8" NYLOPLAST DOME	B1-C (1/2)	0.13	0.50	0.71
IN10	18" NYLOPAST	B1-E	0.76	0.50	2.00
IN12	18" NYLOPAST	B1-H	1.06	0.50	2.00
IN13	18" NYLOPAST	B1-I	0.41	0.50	2.00
IN14	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN15	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN16	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN17	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN18	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN19	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN20	8" NYLOPLAST CIRCULAR	B1-F (1/7)	0.31	0.50	0.44
IN21	8" NYLOPLAST DOME	B1-J	0.09	0.50	0.71
IN22	18" NYLOPAST	B1-K (1/2)	0.51	0.50	2.00
IN23	18" NYLOPAST	B1-K (1/2)	0.51	0.50	2.00
IN24	8" NYLOPLAST DOME	B1-L (1/4)	0.15	0.50	0.71
IN25	8" NYLOPLAST DOME	B1-L (1/4)	0.15	0.50	0.71
IN26	18" NYLOPAST	B1-M	0.67	0.50	2.00
IN27	18" NYLOPAST	B1-N	0.47	0.50	2.00
IN28	18" NYLOPAST	B1-O	1.77	0.50	2.00
IN29	8" NYLOPLAST DOME	B2-A (1/4)	0.21	0.50	0.71
IN30	8" NYLOPLAST DOME	B2-A (1/4)	0.21	0.50	0.71
IN31	8" NYLOPLAST DOME	B2-A (1/4)	0.21	0.50	0.71
IN32	8" NYLOPLAST DOME	B2-A (1/4)	0.21	0.50	0.71
IN33	18" NYLOPAST	B2-B	0.40	0.50	2.00
IN34	8" NYLOPLAST DOME	B2-C (1/3)	0.16	0.50	0.71
IN35	8" NYLOPLAST DOME	B2-C (1/3)	0.16	0.50	0.71
IN36	8" NYLOPLAST DOME	B2-C (1/3)	0.16	0.50	0.71
IN37	18" NYLOPAST	B2-D,E,F	1.17	0.50	2.00
IN38	8" NYLOPLAST DOME	B3-A (1/3)	0.22	0.50	0.71
IN39	8" NYLOPLAST DOME	B3-A (1/3)	0.22	0.50	0.71
IN40	8" NYLOPLAST DOME	B3-A (1/3)	0.22	0.50	0.71
IN41	8" NYLOPLAST DOME	B1-L (1/4)	0.15	0.50	0.71
IN42	8" NYLOPLAST DOME	B1-L (1/4)	0.15	0.50	0.71

*-NYLOPLAST INLET CAPACITIES BASED ON MANUFACTURER NOMOGRAPHS AND STANDARD DETAILS

TABLE 4: INLET SIZING

BASIN AND SUB-BASIN HYDROLOGIC ANALYSIS (TABLE 1):

THE HYDROLOGIC ANALYSIS PROVIDED WITH THIS DRAINAGE MANAGEMENT PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 22.2 OF THE DPM. BASIN AND SUB-BASIN BOUNDARIES DELINEATED PER SHEET C-100. BASIN AND SUB-BASINS WERE DEFINED FOR ANALYSIS OF SECONDARY OR UPSTREAM REACHES OF STORM DRAINS AND INLETS. AREAS, LAND TREATMENTS, AND FLOWS CAN BE SEEN IN TABLE 1, THIS SHEET.

AHYMO ANALYSIS (TABLE 2):

SEE NARRATIVE SHEET C-100.

STORM DRAIN SIZING (TABLE 3):

STORM DRAINS WERE SIZED BASED ON MANNING'S EQUATION AND GRAVITY FLOW. SIZE OF STORM DRAINS RANGE FROM 6" (FOR SMALL AREA DRAINS) TO 24" (FOR DOWNSTREAM END OF COLLECTION SYSTEM). SEE TABLE 3 (THIS SHEET) FOR STORM DRAIN REACH ANALYSIS. BASIN AND SUB-BASIN FLOWS CAN BE SEEN ON TABLE 1 (THIS SHEET).

INLET SIZING (TABLE 4):

STORM DRAIN INLETS HAVE BEEN DESIGNED IN SUMP CONDITION. TRAFFIC RATED NYLOPLAST INLETS ARE PROVIDED IN DRIVEWAYS. NON-TRAFFIC RATED NYLOPLAST DOME INLETS ARE PROVIDED IN LANDSCAPED AREAS. INLET CAPACITIES ARE BASED ON NOMOGRAPHS PROVIDED BY THE MANUFACTURER. TABLE 4 SHOWS INLET CAPACITIES AND ACTUAL FLOW TO THE INLET.

INLET 6 IS UNDERSIZED FOR THE SUB-BASIN IT IS INTENDED TO CONTAIN. ONCE CAPACITY IS REACHED, EXCESS FLOW WILL CONTINUE NORTH TO INLET 7 WHICH HAS ENOUGH CAPACITY TO ACCEPT THE ADDITIONAL FLOWS.

RUNDOWN SIZING (TABLE 5):

CONCRETE RUNDOWNS HAVE BEEN DESIGNED USING MANNING'S EQUATION AND THE WEIR EQUATION (PROVIDED IN TABLE 5). RUNDOWNS R1 & R2 OUTFALL INTO A WATER HARVESTING AREA ON THE WEST PORTION OF THE PROPERTY. RUNDOWN R3 OUTFALLS INTO POND #1.

CONCRETE RUNDOWN TABLE

Rundown #	Basin ID	Rundown Type	Actual Flow	Min Weir** Length ft	Channel Width ft	Channel Height ft	Minimum Slope	Capacity* CFS
Pond Rundowns								
R1	B2-D	Rectang	0.62	1.00	2.00	0.50	30.00%	30.10
R2	B2-E	Rectang	0.15	1.00	2.00	0.50	30.00%	30.10
R3	B3-B	Rectang	2.26	2.00	2.00	0.50	30.00%	30.10
			Weir Eq: Q=3.3L(h^1.5) - **				Capacity Based on Manning's Eq w/ n=0.013 - *	

TABLE 5: RUNDOWN SIZING

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Thu, 3-Jul-2014 - 3:09:pm, Plotted by: MSATCHES

PREPARED BY: 7/3/14, 7/16/14
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REVISIONS

SHEET
C-101
DRAINAGE MANAGEMENT PLAN