

ZONE ATLAS PAGE C-17
NTS



INTRODUCTION:

THE PROJECT IS LOCATED NORTH OF PASEO DEL NORTE BETWEEN THE NORTH DIVERSION CHANNEL AND WASHINGTON ST. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF THE PASEO DEL NORTE SPORTS COMPLEX AND REQUEST DRB SITE PLAN FOR BUILDING PERMIT APPROVAL.

EXISTING CONDITIONS:

THE SITE IS CURRENTLY UNDEVELOPED AND HAS PREVIOUSLY BEEN INCLUDED IN AN APPROVED DRAINAGE PLAN (C-17 / D019 OFFICE WAREHOUSE DATED 10/22/1997). THE SITE IS BORDERED BY A DESIGNATED FEMA FLOODZONE TO THE NORTH. THE SITE CURRENTLY DRAINS FROM NORTHEAST TO THE SOUTHWEST. THE HIGHEST POINT OF THE SITE IS IN THE NORTHEAST CORNER AT AN ELEVATION OF APPROXIMATELY 5095. THE LOW POINT OF THE SITE IS IN THE SOUTHWEST CORNER AT AN ELEVATION OF APPROXIMATELY 5072. TWO EXISTING STORM DRAINS OUTFALL ONTO THE SITE NEAR THE NORTHEAST CORNER OF THE SITE AND IN THE SOUTHEAST CORNER OF THE SITE. WITH NO CLEAR DISCHARGE POINT, THE SITE SHEET FLOWS ONTO THE ADJACENT PROPERTY AT AN UNDEVELOPED FLOW OF APPROXIMATELY 16.01 CFS (PER THE PREVIOUSLY MENTIONED DRAINAGE MANAGEMENT PLAN).

AMAFCA NORTH DOMINGO BACA ARROYO:

IMMEDIATELY NORTH OF THE SITE, FLOWS IN THE NORTH DOMINGO BACA ARROYO ARE CONTAINED VIA A LEVEE. AMAFCA HAS REQUESTED A 15' ACCESS EASEMENT TO ALLOW FOR INSPECTION OF THE TOE OF THE LEVEE DUE TO A FEMA REQUIREMENT. THE SITE PLAN HAS BEEN MODIFIED TO ACCOMMODATE THE REQUEST. SEE SECTION "C" ON GRADING PLAN FOR MORE DETAIL.

OFFSITE FLOWS:

THE OFFSITE FLOW OF 4.0 CFS FROM THE EAST WAS DETERMINED BY VISUAL OBSERVATION DURING SITE VISITS. THE BASIN RUNS BETWEEN THE RAILROAD TRACKS FROM THE SITE TO WASHINGTON. NO ROOF DRAINS FROM THE EXISTING WAREHOUSES DAYLIGHT INTO THE BASIN. IT IS CLEAR FROM THE EXISTING CONDITION OF THE 24" CULVERT THAT NOT MUCH FLOW IS CONVEYED ONTO OUR SITE. THE OFFSITE FLOW OF 26 CFS FROM THE SOUTH WAS DETERMINED BY THE DRAINAGE REPORT PREPARED FOR PASEO DEL NORTE PROJECT USING EXISTING FLOWS AND FLOW PATTERNS.

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 2. 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 "AHYMO SUMMARY DATA TABLE" AND "BASIN DATA TABLE" THIS SHEET. PIPE SIZING BETWEEN POND "A" AND POND "B" WAS BASED ON THE ORIFICE EQUATION. THE WEIR OUTLET FOR POND "B" WAS BASED ON THE WEIR EQUATION.

PROPOSED CONDITIONS:

IT WAS DETERMINED THAT THE MAXIMUM ALLOWABLE DISCHARGE FROM OUR SITE IS APPROXIMATELY 46.0 CFS. THIS IS DERIVED FROM EXISTING ONSITE CONDITIONS PLUS THE ADDITIONAL OFFSITE FLOWS. THE OFFSITE FLOWS WILL BE CONVEYED THROUGH OUR SITE. BASIN 2 ALONG WITH THE OFFSITE FLOWS ARE CONVEYED TO POND "A" VIA A SWALE ALONG THE SOUTHERN PORTION OF THE SITE. POND "A" ULTIMATELY OUTFALLS INTO A 24" PIPE WHERE IT IS ROUTED TO POND "B". POND "B" MITIGATES THE DISCHARGE FROM BASIN 1 AND POND "A". A WEIR ON THE WEST SIDE POND "B" OUTFALLS TO THE ADJACENT PROPERTY AT A MAXIMUM DISCHARGE RATE OF 46.0 CFS. THE FIRST FLUSH DEVELOPED BY THE IMPERVIOUS AREA IS RETAINED IN POND "B". THE EMERGENCY OVERFLOW CAPACITY OF THE POND "B" WEIR IS APPROXIMATELY 57.7 CFS. THIS WAS DETERMINED BY TOTAL DEVELOPED FLOWS OUR SITE CONTRIBUTES ALONG WITH THE OFFSITE FLOWS. ONCE THE SITE OUTFALLS ONTO THE ADJACENT PROPERTY, IT WILL CONTINUE ON ITS HISTORIC FLOW PATH.

POND "A":

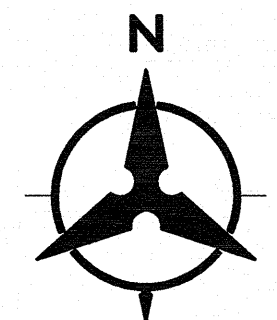
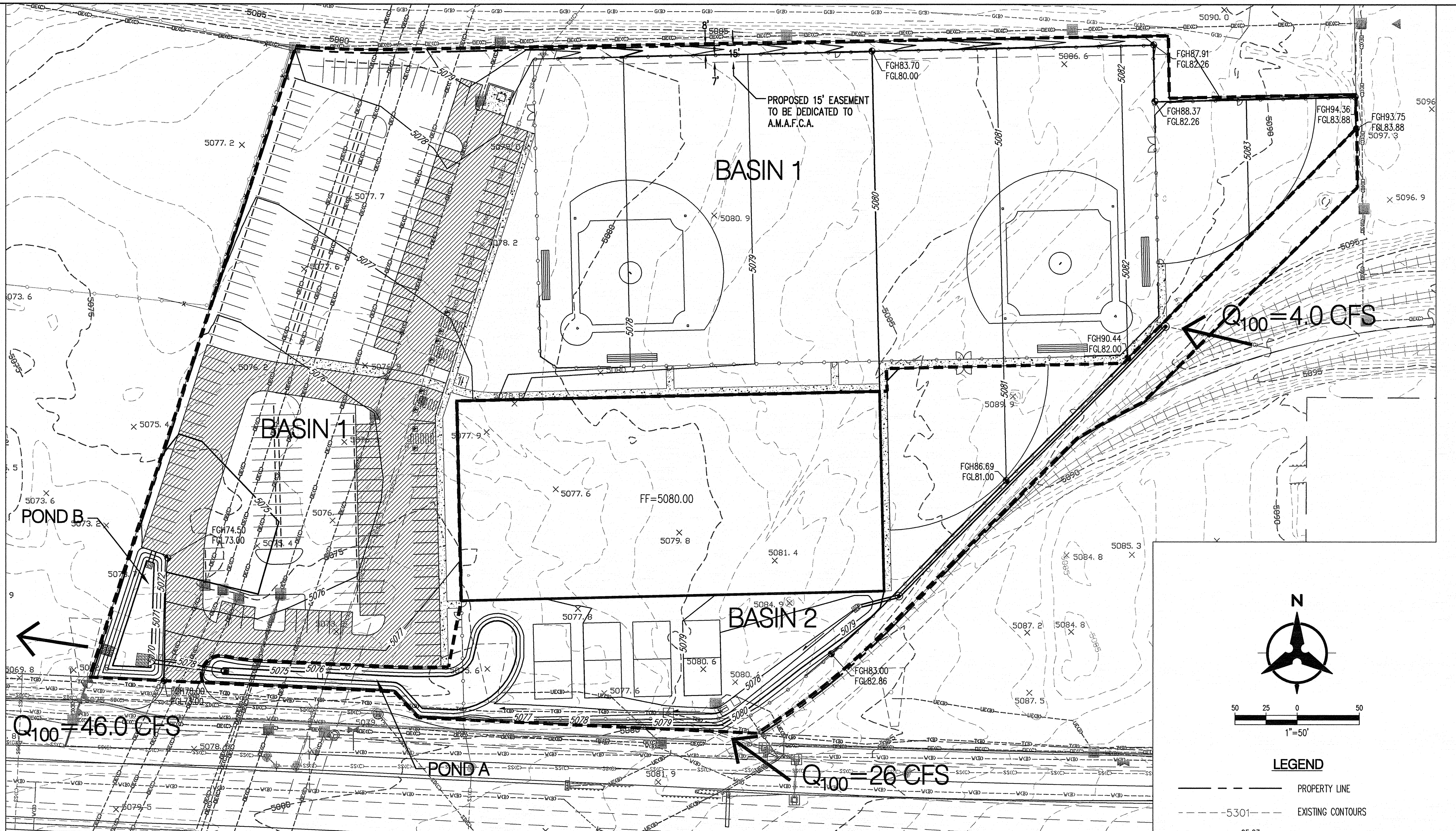
BOTTOM OF POND: 5074.5 FT
TOP OF POND: 5077.5 FT
MAXIMUM WATER SURFACE ELEVATION: 5077.1 FT

POND "B":

BOTTOM OF POND: 5070 FT
TOP OF POND: 5073 FT
MAXIMUM WATER SURFACE ELEVATION: 5072.7 FT

CONCLUSION:

THE PEAK DISCHARGE FROM OUR SITE IS 46.0 CFS WHICH IS EQUAL TO THE ALLOWABLE DISCHARGE. THEREFORE, WE ARE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL.



50 25 0 50
1"=50'

LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- PROPOSED SPOT ELEVATION
TC=TOP OF CURB, FL=FLOW LINE
TW=TOP OF WALL, BW=BOTTOM OF WALL
EX=EXISTING, TG=TOP OF GRADE
- PROPOSED DIRECTION OF FLOW
- WATER BLOCK
- PROPOSED RETAINING WALL
- PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED CURB & GUTTER
- EASEMENT
- PROPOSED LIGHTING
- PROPOSED STORM DRAIN LINE

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)												- Ver. S4.01a, Rel: 01a												RUN DATE (MON/DAY/YR) =10/29/2014											
INPUT FILE = P:\20150146\CDP\Hydro\AHYMO\Resubmittal\100YR.HYM												USER NO.= AHYMO_Temp_User:20122010																							
				FROM				TO				PEAK		RUNOFF		TIME TO		CFS				PAGE		=		1									
		HYDROGRAPH		ID				ID		AREA		DISCHARGE		VOLUME		RUNOFF		PEAK		PER															
COMMAND		IDENTIFICATION		NO.				NO.		(SQ MI)		(CFS)		(AC-FT)		(INCHES)		(HOURS)		ACRE								NOTATION							
*S AHYMO FILE FOR ALBUQUERQUE SPORTS COMPLEX - ALBUQUERQUE,NM, BH PROJ # 20150146																																			
*S 100 YEAR - 6 HOUR STORM																																			
*S																																			
*S INPUT FILE -- P:\20150146\CDP\HYDRO\AHYMO\Resubmittal\100YR.HYM																																			
*S OUTPUT FILE -- P:\20150146\CDP\HYDRO\AHYMO\Resubmittal\100YR.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		-		1		0.00992		23.08		0.716		1.35395		1.5										3.636 PER IMP= 16.00									
*S BASIN 2																																			
COMPUTE NM HYD		B2		-		2		0.00462		12.17		0.409		1.65814		1.5										4.116 PER IMP= 50.00									
*S*****																																			
*S ADDITION OF OFFSITE SOUTH TO BASIN 2																																			
ADD HYD		SOUTH B2		-		20		0.01321		38.24		1.353		1.91989		1.5																			
*S ADDITION OF OFFSITE EAST TO BASIN 2																																			
ADD HYD		EAST B2		-		21		0.01505		42.27		1.471		1.83319		1.5																			
*S ROUTE BASIN 2 & OFFSITE EAST & SOUTH TO POND A. OUTFLOW BASED ON 24" ORIFICE																																			
ROUTE RESERVOIR		PONDA		-		10		0.01505		26.68		1.465		1.82575		1.65										MAX VOLUME = 0.318 AC-FT									
*S ADDITION OF POND A TO BASIN 1																																			
ADD HYD		PAB1		-		22		0.02497		46.51		2.182		1.6383		1.55																			
*S ROUTE BASIN 1 TO POND B. OUTFLOW BASED ON WEIR																																			
ROUTE RESERVOIR		PONDB		-		11		0.02497		45.97		2.296		1.72419		1.55										MAX VOLUME = 0.154 AC-FT									

AHYMO SUMMARY DATA TABLE

PASEO DEL NORTE SPORTSPLEX						
Developed Conditions Basin Data Table						
This table is based on the DPM Section 22.2, Zone: 2						
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages			
			A	B	C	D
PROPOSED BASINS						
BASIN 1	276626	6.35	0.0%	0.0%	84.0%	16.0%
BASIN 2	128788	2.96	0.0%	0.0%	50.0%	50.0%
TOTAL	405414	9.31	-	-	-	-

PREPARED BY:

MATTHEW SATCHES

10/30/14

UNDER SUPERVISION OF:

BRUCE STIDWORTHY



DATE: OCTOBER 30, 2014

DRAINAGE MANAGEMENT PLAN

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