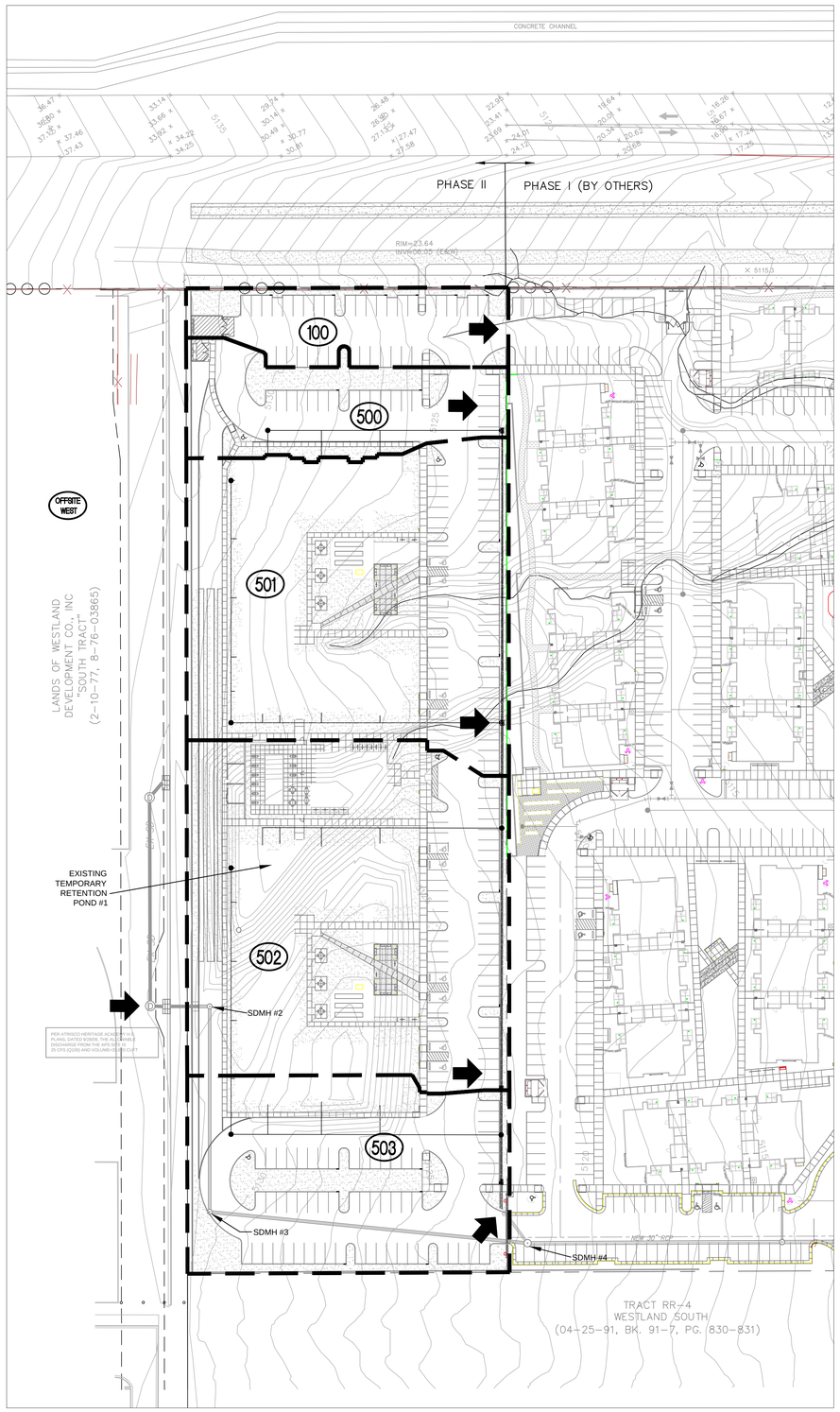


DRAINAGE PLAN:

LEGAL DESCRIPTION: TRACT RR3A1 PLAT FOR WESTLAND SOUTH
SITE AREA: 5.4 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FIRM MAP DATED AUGUST 16, 2012 (MAP NUMBER 35001C0338H) INDICATES THAT THE SITE IS AN AREA OF MINIMAL FLOOD HAZARD (ZONE X).

EXISTING DRAINAGE CONDITIONS:

THE SITE HAS NOT BEEN PREVIOUSLY DEVELOPED. THE EXISTING LAND SLOPES FROM WEST TO EAST AT APPROXIMATELY 3%. THE ATRISCO HERITAGE ACADEMY HIGH SCHOOL TO THE WEST OF THE SITE IS ALLOWED TO DISCHARGE ONTO THIS SITE UNTIL A STORM DRAIN CONNECTION OUTFALL IS BUILT. IN THE MEANTIME, THE EXISTING TEMPORARY RETENTION POND #1 WAS BUILT TO MITIGATE THE OFFSITE FLOW FROM THE HIGH SCHOOL SITE.

THIS DRAINAGE PLAN REFERENCES THE "VALLE DE ATRISCO APARTMENT DEVELOPMENT DRAINAGE MANAGEMENT PLAN" BY MARK GOODWIN & ASSOCIATES, DATED SEPTEMBER 2018. THE DRAINAGE MANAGEMENT PLAN COMPLETED HYDROLOGIC AND HYDRAULIC ANALYSIS FOR THIS SITE AND THE ADJACENT CONNECTING SITE TO THE EAST. DEVELOPED FLOWRATES FOR THIS SITE ARE OBTAINED DIRECTLY FROM THE DRAINAGE MANAGEMENT PLAN. IN ADDITION, THE STORM DRAIN SYSTEM DESIGN FOR THIS SITE HAS BEEN DESIGNED WITH THE DRAINAGE MANAGEMENT PLAN.

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH THE HYDROLOGIC AND HYDRAULIC CRITERIA IN SECTION 22 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL. THE 100-YEAR DESIGN STORM IS USED FOR BOTH UNDEVELOPED AND DEVELOPED CONDITIONS.

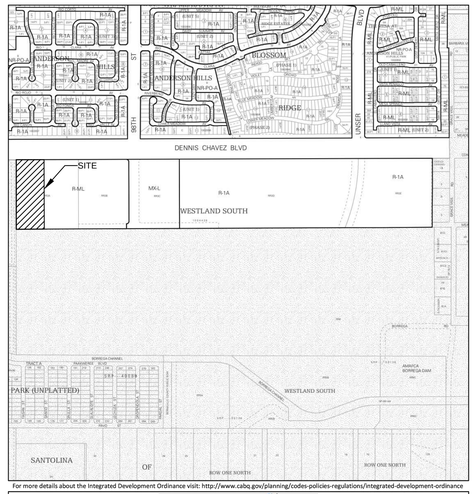
DEVELOPED DRAINAGE CONDITIONS:

THIS SITE (PHASE II) AND THE ADJACENT CONNECTING SITE TO THE EAST (PHASE I) WILL BE DEVELOPED INTO AN APARTMENT COMPLEX. AS DETERMINED BY THE DRAINAGE MANAGEMENT PLAN, THIS SITE WILL ACCEPT 25 CFS OF OFFSITE FLOW FROM THE HIGH SCHOOL SITE VIA AN ONSITE STORM DRAIN SYSTEM AND PHASE II WILL DISCHARGE ONSITE DEVELOPED FLOW INTO THE STORM DRAIN WHICH CONNECTS TO PHASE I.

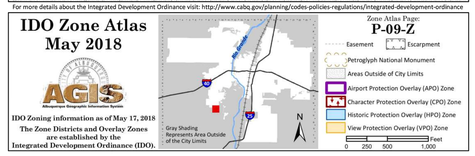
FIRST FLUSH VOLUME = 5.4 ACRES (0.34") = 6665 CF
THIS VOLUME WILL BE PROVIDED BY OFFSITE OUTFALL POND BUILT WITH THE "VALLE DE ATRISCO APARTMENT DEVELOPMENT DRAINAGE MANAGEMENT PLAN".

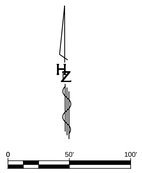
CEJA VISTA APARTMENT COMPLEX PHASE II
BASIN SUMMARY

BASIN ID	DESCRIPTION OF FLOW DIRECTION	ALLOWABLE Q (CFS)	ACTUAL Q (CFS)
OFFSITE WEST	Allowable discharge from high school site enters onsite storm drain system at SDMH#2	25.00	25.00
100	Onsite basin surface flows east toward Phase I	1.85	1.57
500	Onsite basins surface flow east and are intercepted by drainage inlets into the onsite storm drain system and flows toward SDMH #4	2.55	2.01
501		6.20	6.37
502		6.96	7.23
503		3.76	4.17
	TOTAL Q AT SDMH #4 =	**44.47**	**44.77**



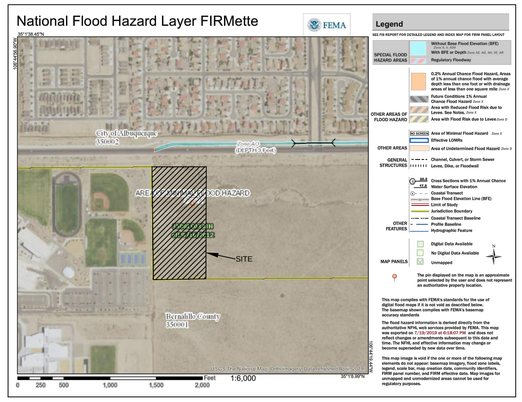
For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance





LEGEND

- FLOW DIRECTION
- BASIN BOUNDARY
- 500 BASIN ID



Inlet Worksheet (Sump Condition)

Objective: Design a Type C or Type D Inlet in Sump Condition for a 100-year flow

1 Inlet to collect peak flow amount before overtopping headwall.

2 Grate Dimensions

35.5
18.5" 18.5
35.5"

**Net dimensions of open area of a single grate.
(Total Area less Area of Bars)

Weir Perimeter = 9.0 ft
Area of Orifice = 4.6 sf

3 Calculate Orifice and Weir Flow into Grate at Design Depth

Orifice Equation		Weir Equation	
Q = 0.6 x A x (2 x g x h)^1/2		Q=2.65 x P x H^1/2	
Where		Where	
A =	4.6 sq. ft.	P=	9.0 ft
g =	32.2 ft *2/sec	H=	0.5 ft
h =	0.5 ft		
Therefore		Therefore	
Q =	15.5 cfs	Q =	16.9 cfs

Orifice Equation controls
Grate Capacity = 15.5 cfs

4 Apply 25% Clogging Factor to determine allowable design flow into inlet

15.5 x 0.75 **12 cfs**

Therefore Capacity of Single CiD Inlet in Sump Condition = 12 cfs

Capacity of Double CiD Inlet in Sump Condition = 23 cfs

*Grate Capacities do not account for curb opening inflow. Therefore, inlet capacities are the same for Type C and Type D inlets.

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SEAL

PROJECT

CEJA VISTA
10 001 CEJA VISTA ROAD SW
ALBUQUERQUE, NM 87121

40% CONSTRUCTION DOCUMENTS

REVISIONS

DRAWN BY	NV
REVIEWED BY	SE
DATE	09/18/2019
PROJECT NO	19-0019

DRAWING NAME
Drainage Plan

SHEET NO
C104

Plotted: 9/18/2019 5:53:57 PM, By:Villa, Nina
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