

DRAINAGE PLAN:

LEGAL DESCRIPTION: LOT 7-B, BLOCK C, INTERSTATE INDUSTRIAL PARK, UNIT 1

SITE AREA: 1.6733 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35043C0138 H) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD.

EXISTING DRAINAGE CONDITIONS:

THE LOT IS CURRENTLY VACANT. THE LOT GENERALLY DRAINS FROM EAST TO NORTHWEST TO ACADEMY PARKWAY. THERE ARE NO OFFSITE FLOWS DRAINING TO THE SITE, BUT THERE IS AN EXISTING 4 INCH STORM DRAIN ALONG THE NORTH LOT LINE THAT DRAINS THE LOT TO THE EAST THROUGH THE PROPERTY TO ACADEMY PARKWAY.

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH SECTION 22 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM), ENTITLED "DRAINAGE, FLOOD CONTROL, AND EROSION CONTROL." THE DESIGN STORM USED FOR BOTH UNDEVELOPED AND DEVELOPED CONDITIONS IS THE 100-YEAR, 24-HOUR STORM EVENT FOR RUNOFF VOLUME COMPUTATIONS AND THE 100-YEAR, 6-HOUR FOR PEAK RUNOFF COMPUTATIONS. THE SITE IS LOCATED IN ZONE 2 SO THE 100-YEAR, 24-HOUR STORM EVENT IS 2.75 INCHES AND THE 100-YEAR, 6-HOUR STORM EVENT IS 2.35 INCHES.

DEVELOPED DRAINAGE CONDITIONS:

THE LOT WILL BE DEVELOPED INTO AN OFFICE BUILDING WITH ASSOCIATED PARKING AREAS. THE SITE WILL CONTINUE TO DRAIN FROM THE EAST TO THE NORTHWEST TO ACADEMY PARKWAY. THE FIRST FLUSH RUNOFF FROM THE IMPERVIOUS AREA WAS CALCULATED FOR A STORM OF 0.34 INCHES. THE TOTAL FIRST FLUSH VOLUME TO BE RETAINED ON SITE IS 1,525 CUBIC FEET. THERE ARE FOUR SEPARATE FIRST FLUSH PONDS THAT RETAIN RUNOFF FROM THE IMPERVIOUS AREA. ONCE THE PONDS ARE FULL, THEN THE RUNOFF WILL OVERFLOW THE PONDS THROUGH CURB CUTS TO THE PAVEMENT AND WILL DISCHARGE TO ACADEMY PARKWAY THROUGH THE DRIVEWAY. THE RUNOFF WILL CONTINUE IN ACADEMY PARKWAY TO THE WEST AND THEN TURN NORTH IN THE STREET TO A CONCRETE DRAINAGE CHANNEL THAT DISCHARGE TO THE NORTH DIVERSION CHANNEL.

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT				WEIGHTED E (in)	100-YEAR PRECIPITATION				
		A (%)	B (%)	C (%)	D (%)		V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(24-hr) (acre-ft)	V(24-hr) (cu-ft)	Q (cfs)
EXISTING CONDITIONS											
SITE	1.6733	100.00	0.00	0.00	0.00	0.53	0.07	3,219	0.07	3,219	2.61
TOTAL RUNOFF	1.67						0.07	3,219	0.07	3,219	2.61
PROPOSED CONDITIONS											
SITE	1.6733	0.00	13.10	13.10	73.80	1.81	0.25	11,023	0.29	12,816	6.99
TOTAL RUNOFF	1.67						0.25	11,023	0.29	12,816	6.99
EXCESS PRECIP.		0.53	0.78	1.13	2.12	E _i (in)					
PEAK DISCHARGE		1.56	2.28	3.14	4.7	Q _h (cfs)					

WEIGHTED E (in) = (E_A)(%A) + (E_B)(%B) + (E_C)(%C) + (E_D)(%D)

V_{6HR} (acre-ft) = (WEIGHTED E)(AREA)/12

V_{24HR} (acre-ft) = V_{6HR} + (A₁)(P_{100YR} - P_{6HR})/12

Q (cfs) = (Q_h)(A₁) + (Q_h)(A₂) + (Q_h)(A₃) + (Q_h)(A₄)

1.23 Acc.

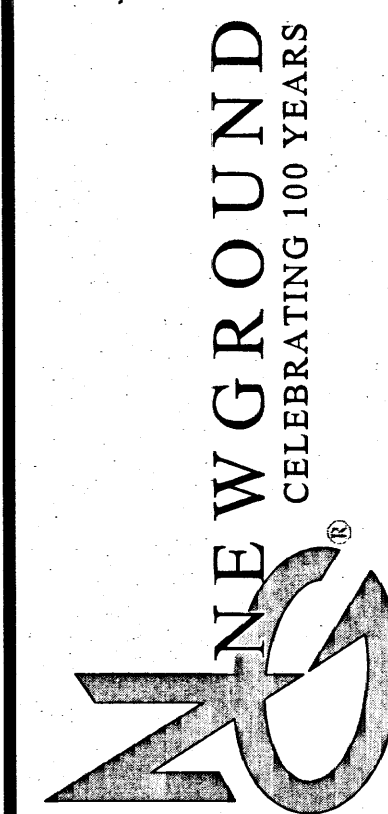
ZONE = 2

P_{6HR} (in.) = 2.35

P_{24HR} (in.) = 2.75

P_{100YR} (in.) = 3.95

1 Doc



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CONCEPTUAL GRADING AND DRAINAGE PLAN
US EAGLE FCU
OSUNA ROAD NE
ALBUQUERQUE, NM

DATE
08/17/15
JOB NO.
29358-0000
SHEET

C-01