

From: Rael, Rudy E.

To: "tecnm@yahoo.com"

Cc: Carrillo, Abiel X.

Subject: 407 Mesilla St SE

Date: Wednesday, November 16, 2016 10:24:00 AM

Mr. Thompson,

This email is being sent in lieu of an attached comment letter in order to expedite our response to previous comments.

Response to these comments should continue to be included in the resubmittal. A reply to these comments via email will not be considered a resubmittal.

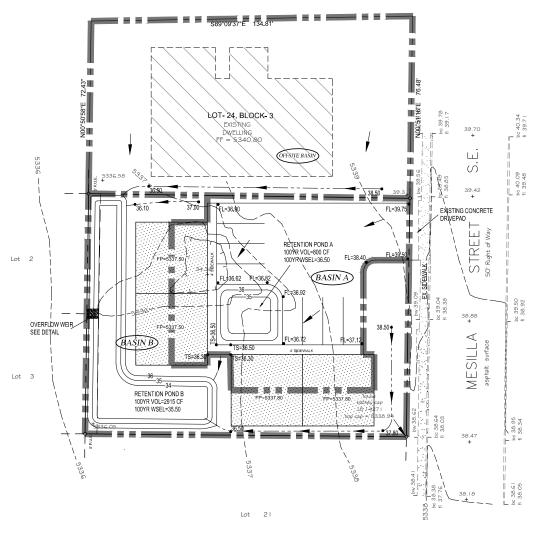
Based upon the information provided in your submittal received 11/3/16, the above referenced Grading and Drainage plan dated 11/2/16 cannot be approved for Grading Permit or Building Permit until the following comments are addressed:

- Raise the weir by 4", enlarge the weir by 4' per our conversation on 11/16/16.
- Provide a detail of the swale.
- Provide a spot elevation on the sidewalk where the overflow from pond A to pond B is located.
- Provide a statement concerning any future fence must show an opening where the weir and the swale overflow.

If you should have any questions feel free to contact me or Abiel Carrillo at 924-3986.

Rudy E. Rael, CE, CFM
Engineer Associate, Hydrology
Planning Department
600 2nd St. NW Suite 201
Albuquerque NM 87102
(505) 924-3977

ZUNI ROAD S.E.



100-YEAR HYDROLOGIC CALCULATIONS

		LAND TREATMENT				WEIGHTED	100-YEAR PRECIPITATION				
BASIN	AREA	Α	В	С	D	E	V (6-hr)	V (6-hr)	V(24-hr)	V(24-hr)	Q
#	(acre)	(%)	(%)	(%)	(%)	(in)	(acre-ft)	(cu-ft)	(acre-ft)	(cu-ft)	(cfs)
				E	XISTING	CONDITIONS					
OFF-SITE	0.2304	0.00	62.20	0.00	37.80	1.46	0.03	1,225	0.03	1,383	0.81
ON-SITE	0.3108	0.00	100.00	0.00	0.00	0.92	0.02	1,038	0.02	1,038	0.81
TOTAL RUNOFF	0.54						0.05	2,263	0.06	2,421	1.62
				PR	OPOSED	CONDITION	S				
ON-SITE A	0.1551	0.00	0.00	41.00	59.00	1.92	0.02	1,082	0.03	1,248	0.68
ON-SITE B	0.1557	0.00	48.60	0.00	51.40	1.66	0.02	938	0.02	1,084	0.60
TOTAL RUNOFF	0.31						0.05	2,020	0.05	2,331	1.28
EXCESS PRECIP.		0.66	0.92	1.29	2.36	E _i (in)					
PEAK DISCHARGE		1.87	2.6	3.45	5.02	Q _{Pi} (cfs)					
							ZONE = 3				
WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$							P_{6-HR} (in.) = 2.60				
V _{6-HR} (acre-ft) = (WEIGHTED E)(AREA)/12							P _{24-HR} (in.) = 3.10				
V _{10DAY} (acre-ft) = V _{6-HR} + (A _D)(P _{10DAY} - P _{6-HR})/12							P _{10DAY} (in.) = 4.90				
$Q (cfs) = (Q_{PA})(A_A) + (Q_{PA})(A_B) + (Q$									(111.)		

DRAINAGE PLAN:

LEGAL DESCRIPTION: LOTS 22-A-1, BLOCK 3, EMIL MANN ADDITION

SITE AREA: 0.3108 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0354H) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.

EXISTING DRAINAGE CONDITIONS:

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH SETION 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 RUNDFF. THE SITE IS LOCATED IN ZONE 3 SO THE 100-YEAR, 24-HOUR STORM EVENT IS 3.10 INCHES. UNDER EXISTING CONDITIONS LOT 22-A-1 IS ASSUMED TO BE LAND TREATMENT B, SINCE THE LOT HAS BEEN PREVIOUSLY GRADED

LOT 22-A-1 IS LOCATED IN SOUTHEAST ALBUQUEROUE, AT 407 MESILLA STREET. CURRENTLY THE SITE IS UNDEVELOPED. THE PROPERTY DRAINS FROM SOUTHEAST TO NORTHWEST TO A DEPRESSED AREA AT THE NORTHWEST CORNER OF THE PROPERTY. ANY RUNOFF NOT CONTAINED IN THE DEPRESSED AREA CONTINUES WEST THROUGH THE ADJACENT PROPERTIES TO THE WEST. THE EXISTING PEAK RUNOFF FROM LOT 22-A-1 UNDER EXISTING CONDITIONS IS 0.81 CFS AND 1.038 CUBIC FEET OF RUNOFF VOLUME DURING A 100-YEAR, 24-HOUR STORM

OFFSITE FLOWS FROM LOT 24, LOCATED DIRECTLY NORTH OF LOT 22-A-1, DRAINS ONTO LOT 22-A-1 TO THE DEPRESSED AREA AT THE NORTHWEST CORNER OF THE PROPERTY. EXISTING CONDITION PEAK RUNOFF FROM LOT 24 IS 0.81 CFS AND 1,383 CUBIC FEET OF RUNOFF VOLUME DURING A 100-YEAR, 24-HOUR STORM.

DEVELOPED DRAINAGE CONDITIONS:

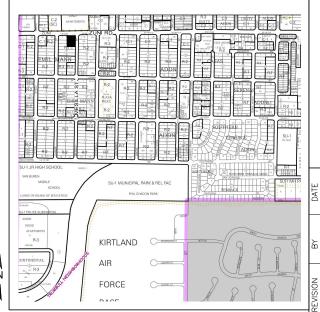
THIS PROJECT INVOLVES THE ADDITION OF 4 MODULAR TOWNHOMES WITH 4' WIDE SIDEWALK AND ONSITE GRAVEL PARKING LOT. AFTER THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AN INCREASE IN IMPERVIOUS AREA RESULTS IN AN INCREASE IN RUNOFF VOLUMES AND FLOW RATES FROM EXISTING CONDITIONS. THE TOTAL RUNOFF FROM THE SITE AFTER DEVELOPMENT IS 1.28 CFS AND 2,332 CUBIC FEET RUNOFF VOLUME DURING THE DESIGN STORM.

LOT 22-A-1 HAS TWO DRAINAGE BASINS, A AND B. THE PROPOSED DRAINAGE PLAN INCLUDES THE CONSTRUCTION OF ONSITE RETENTION PONDS. ONE IN EACH DRAINAGE BASIN. THE COMBINATION OF THESE PONDS WILL HOLD THE 100-YEAR, 24-HOUR RAINFALL EVENT INCLUDING THE RUNOFF FROM THE OFFSITE BASIN TO THE NORTH.

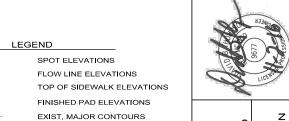
BASIN A INCLUDES THE PARKING AREA AND THE FRONT HALF OF THE TOWNHOMES. RUNOFF FROM BASIN A DRAINS TO POND A, WHICH IS LOCATED IN THE LANDSCAPED AREA AT THE SOUTHWEST CORNER OF THE PARKING LOT. THE TOTAL RUNOFF DRAINING TO POND A FROM BASIN A IS 0.68 CFS AND 1,248 CUBIC FEET OF VOLUME. POND A HAS A CAPACITY OF 800 CUBIC FEET, WHICH IS LESS THAN THE DESIGN STORM. POND A WILL HAVE A MAXIMUM DEPTH OF 1.5 FEET. ANY STORM EVENT GREATER THAN THE CAPACITY OF POND A WILL PASS THROUGH THE EMERGENCY SPILLWAY TO THE SOUTH TO POND B. THE EMEGRENCY SPILLWAY IS A DEPRESSION IN THE SIDEWALK AT THE SOUTHWEST CORNER OF THE POND.

BASIN B INCLUDES RUNOFF FROM THE BACK HALF OF THE TOWNHOMES AND THE LANDSCAPED AREA ADJACENT TO THE BUILDINGS. RUNOFF FROM BASIN B WILL DRAIN TO POND B, WHICH IS LOCATED ALONG THE WEST LOT LINE AND AT THE SOUTHWEST CORNER OF THE SITE. THE FLOWS GENERATED BY BASIN B ARE 1,084 CUBIC FEET AND 0.60 CFS. ALL FLOWS FROM LOT 24 ARE DIVERTED AROUND BASIN A AND INTO POND B IN BASIN B VIA A SWALE. FLOWS GENERATED BY LOT 24 ARE 1,383 CUBIC FEET AND 0.8 CFS. POND B IS DESIGNED TO FULLY RETAIN ALL FLOWS GENERTED BY LOT 24, BASIN B AND THE OVERFLOW VOLUME FROM BASIN A, DURING A 100-YEAR, 24-HOUR RAINFALL EVENT. THE STORAGE VOLUME PROVIDED BY POND B IS 2,915 CUBIC FEET. POND B WILL HAVE A MAXIMUM DEPTH OF 1.5 FEET. IN THE EVENT OF A STORM GREATER THAN THE CAPAPCITY OF POND B, A 6-INCH DEEP, COBBLE-LINED WEIR, SIZED TO PASS THE COMBINED 100-YEAR PEAK FLOW OF 2.09 CFS, WILL BE CONSTRUCTED TO ALLOW PEAK FLOWS GREATER THAN THE 100-YEAR STORM TO DISCHARGE TO THE WEST. WHICH FOLLOWS THE HISTORIC FLOW

SINCE ALL RUNOFF WILL BE RETAINED ONSITE, THE FIRST FLUSH VOLUME WILL ALSO BE CONTAINED IN THE PROPOSED RETENTION PONDS



ZONE ATLAS MAP L-19-Z





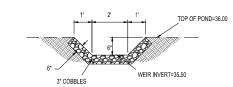
39.75

FL=39.75

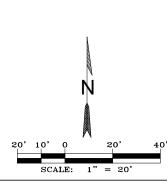
TS=39.75

FP=39.75

EARTH SWALE



OVERFLOW WEIR DETAIL



PLAN ,BL DRAINAGE 24 , SE MESILLA ST. SERQUE, NEW I AND GRADING ALBUQI LOTS REVIEW SHEET No.

1 of 1