F17-D25

5 PLANS

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

April 24, 1979

Mr. Ron Roy Bohannan
Bohannan-Huston, Inc.
4125 Carlisle Blvd. N.E.
Albuquerque, New Mexico 87107

Re: Drainage Report for Lakeview Apartments

Dear Mr. Bohannan:

I have reviewed the drainage report for the captioned project and I am in general agreement with the proposal submitted. I am nevertheless disturbed by the lack of care exercised in the preparation of the report as is evident by a number of errors and inconsistencies.

For instance, the depth of flow in the 50 ft. utility drainage and roadway easement is shown on Plate 1 to be 15 ft. - 45 ft., where obviously it is meant 0.15 and 0.45 ft. respectively. On Plate 2., Q2 = 988cfs should read instead 98.8cfs. In the body of report it is indicated that no offsite flow enters the parcel while drawing 2 by Schlegel & Lewis (Plate 3 of the report?) shows a culvert under the entrance dri with the notation: ("divert culvert to landscaped area.") On Page 2 discussing the development drainage, the first sentence is inconsistent: either total retention is provided or only the difference between undeveloped and developed runoff. The text of the report does not include the recommendations included in the two sheets inserted between Sheet 3 of 4 and 4 of 4 of the computations, where a 3 ft. high wall at the south end of the property is suggested, etc. The site grading plan, Drawing 2 by Schlegel & Lewis is poorly legible and is an insufficient document to allow accurate construction, verification of the drainage provisions and field inspection of the same.

Similar problems have been encountered in a number of drainage reports and plans prepared by your firm which have resulted in a number of unnecessary repeated reviews of your proposals.

Since my office is already taxed beyond endurance by the regular flow of studies submitted I would greatly appreciate your cooperation in the form of quality control and supervision.

The above notwithstanding, I will approve the site development plan in the expectation that a corrected report will be submitted for the permananet record of this office and of AMAFCA.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/ms

cc - Gerald Davenport
Dick Heller
Rich Leonard
Drainage File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 16, 1981

F17-D25

Ms. Valinda Parker
Facilities Division
Public Service Company of New Mexico
Alvarado Square
Albuquerque, New Mexico 87158

Re: MONTGOMERY PLAZA SUBSTATION

Dear Ms. Parker:

The report submitted for the Montgomery Plaza Substation does not address the concerns expressed with the review of the planning action; specifically, the protection of the property from erosion by the Elena Gallegos Grant Line Channel.

Additional concerns that must be resolved are:

1. Conveyance of the offsite flows to the grant line channel (the runoff must be discharged to the flowline of the channel in a more erosive manner and not simply released at the property line as shown on the drawings).

2. Storage of "on-site" flows. Given the slope of the ground as shown on the proposed grading plan, the runoff would not be detained by the recommended 4" gravel layer. The water would flow west and accumulate against the boundary wall. The City also requires that positive discharge be provided through a small outlet facility, conveying the runoff to the flowline of the grant line channel.

Very truly yours,

Bruno Conenliano
Assistant Hydrology Engineer

BC/fs

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HRO		SUR	
CDS		COUN	
DES		SEC	
RISP		FILE	
HYDRO		RETURN	

RECEIVED
SEP 16 1981
CITY ENGINEER

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer ENGINEERING DIVISION Telephone (505) 766-7467

F17/025

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

January 11, 1982

RECEIVED
JAN 1 3 1982
CITY ENGINEER

City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Attention: Charles M. Easterling
Princ. Asst. City Engr./Hydrology

Gentlemen:

Subject: Montgomery Plaza Substation
Your letter of October 6, 1981

Your letter of October 6, 1981, requesting a statement from PNM which would hold the City of Albuquerque harmless for drainage related damages to the Montgomery Plaza Substation Site has been presented to the upper management in my department. The consequent response to this request is that PNM should not have to commit to a hold harmless statement.

I explained PNM's position regarding this matter to Mr. Fred Aguirre during a phone conversation on January 8, 1982. He in turn requested that I convey this to you.

Since our last conversation on September 21, 1981, regarding the Montgomery Plaza Substation, I have had a survey done on the north portion of our proposed substation boundary. This survey defines the exact location of the Elena Gallegos Grant Line Channel in relation to our proposed site and also defines the limits of PNM's line easement and the channel's drainage easement to the north of our proposed substation site.

I feel that the submittal, for Mr. Aguirre's review, of a revised drainage plan drawing which defines these existing easement boundaries will demonstrate that the buffer zone provided by PNM's 20 ft. wide line easement on the north of the substation boundary will be sufficient

to provide adequate flood damage protection to the site. The submittal of this revised drainage plan will also comply with the original findings of the EPC review hearing notification of decision dated July 21, 1981.

If you have any questions, please do not hesitate to call me.

Sincerely,

Robert L. Perlichek
Substation Engineer

RLP:lmm
cc: Mr. Fred Aguirre, City of Albuquerque, Asst. City Engr./Hydrology
Mr. D. E. Hines
Mr. C. J. McCan
Ms. V. Parker

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 6, 1982

Mr. Ross Aragon
2524 Georgene NE
Albuquerque, New Mexico 87112

Re: Racquetball Courts for Ross Aragon, Dated 9/81
(File No. F18-D20)

Dear Mr. Aragon:

The construction plans for the referenced project has been rejected in order to reevaluate the approved drainage report for compliance with the present drainage requirements.

This policy applies to any drainage report or plan that has been on file with this office for more than a year and has not precipitated any development since the granting of approval.

This practice is usually beneficial to the owner in that new drainage criteria tends to be less restrictive than its historical requirements.

Your report will be reevaluated and comments will be promptly forwarded regarding the status of your plan.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Jim Leyman, MSM Consultants, Inc.

RECEIVED
SEP 16 1981
ENGINEERING

MONTGOMERY PLAZA SUBSTATION

Ponding Volume Calculations

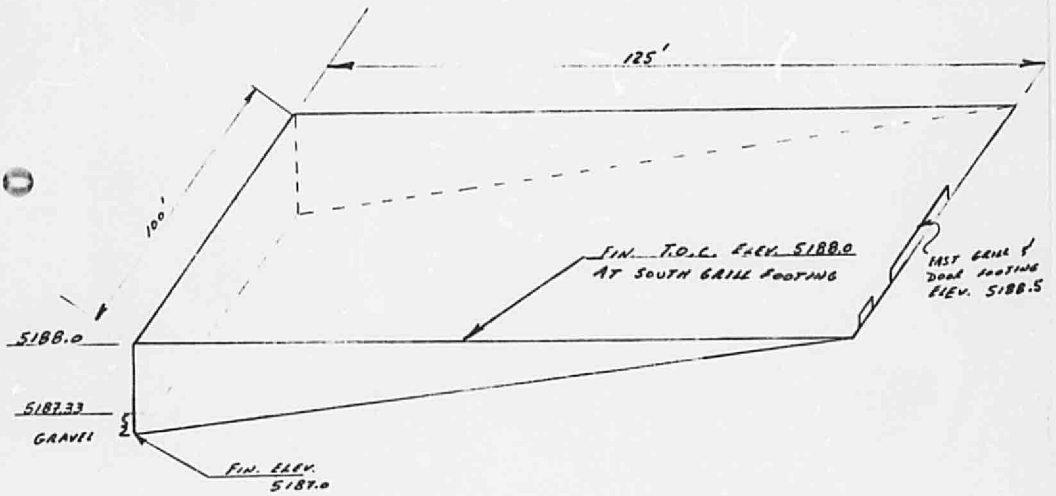
and

Off-site Flow Calculations

Montgomery Plaza Substation

Ponding Volume Calculations
Assumptions:

1. 4 in. uniform gravel debth within substation enclosure
2. 40% voids in gravel for volume retainage
3. Equipment foundations occupy 343 ft^3 of effective volume
4. Total volume of water and transformer oil (in case of oil spill) will reach elev. 5188.00 before spilling over south side grill footing
5. Transformer oil volume = 5000 gal. = 670 ft^3
6. 10 year 10 day rain to be contained = 4 in. debth over area



Volume to be contained during 10 year 10 day rain

$V_R = (0.33)(100)(125) + 670 = 4795\ ft^3$
(transformer oil)

Substation effective volume = VT = $(0.33)(0.4)(100)(125) + 0.5(0.667)(100)(125) - 343$
(Gravel debth; Voids; Equip. Foundations)

VT = 1665 + 4169 - 343 = 5491 > 4795

Montgomery Plaza Substation

Off-site Flow Calculations
Assumptions:

1. The tributary area includes the northern portion of the Montgomery Plaza Shopping Center Parking Lot asphalt surface (C = 0.90) A = 110,814 ft^2 = 2.54 acres
2. Rainfall intensity (i) for off-site flow calculation considered to be 5.7 in. rain/hr.
3. Trapezoidal cross section pitch (section 'A-A') with 1: $\sqrt{3}/3$ side slope will be used to transfer off-site flow between limits of substation site
4. 3 in. gravel used for ditch lining
5. Curb cuts to be used in gravel retaining curb at entry and exit points of trapezoidal ditch
6. First 10 ft of ditch to have a 4 in. concrete lining

$P = b + 2y\sqrt{1+z^2}$

$A = (b+2y)y$

Off-site flow calculation:

$Q = C\,i\,A = (0.90)(5.7)(2.54) = 13.03\ ft^3/sec$

$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$ Where: $P = 2\sqrt{3}y$ $b = \frac{2\sqrt{3}}{3} Y$ $A = \sqrt{3}y^2$

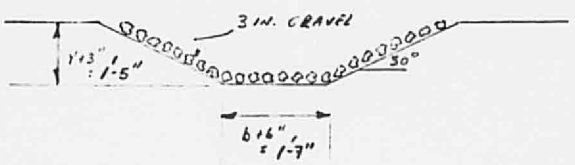
$R = A/P = y/2$

For trapezoidal cross section

N = 0.029 for gravel
S = 0.026 ditch bottom slope

$= 13.03 = \frac{1.49}{0.029} \sqrt{3}\ y^2(y/2)^{2/3}(0.026)^{1/2}$

$y^{8/3} = 1.44$ ft
$y = 1.15$ ft
$b = \frac{2\sqrt{3}}{3}(1.15) = 1.33$ ft

$A = \sqrt{3}\,(1.15)^2 = 2.03\ ft^2$ Velocity = V = Q/A = 13.03/2.03

= 6.4 ft/sec,