

P.O. Box 1293 Albuquerque, NM 87103

September 26, 1996

Martin J. Chávez, Mayor

Joe Kelley, PE
Chavez-Grievess
5639 Jefferson NE
Albuquerque, NM 87109

RE: ENGINEER'S CERTIFICATION FOR RJ PINO POST OFFICE (C-12/D3B5)
RECEIVED SEPTEMBER 5, 1996 FOR CERTIFICATE OF OCCUPANCY
ENGINEER'S STAMP DATED 9/4/96

Dear Mr. Kelley:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed before the Engineer's Certification will be accepted:

Verify that the water block at the entrance on Paradise Blvd is adequate. Provide a copy of a letter from the Methodist Church granting permission to grade on their land and accepting the grading scheme proposed. Based on the AHYMO output, $Q_{100} = 2.90$ cfs at keyed note 2 instead of 6.31 cfs.

What replaced the sidewalk culvert at keyed note 8? City Std Dwg 2235 limits pipe penetrations of the curb to 4" maximum to prevent damage to the curb. Provide as-built elevations for all significant locations outlined in the DPM checklist. If an as-built elevation matches the proposed elevation exactly, then a check mark may be used to indicate that the elevation has been checked. Indicate how as-built elevation are shown on the Certification.

If you have any questions about this project, You may contact me at 768-2727.

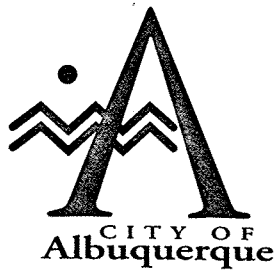
Sincerely,

John P. Curtin, P.E.
Civil Engineer, Hydrology

c: Andrew Garcia

Good for You, Albuquerque!





P.O. Box 1293 Albuquerque, NM 87103

May 7, 1996

Martin J. Chávez, Mayor

Joe Kelley, PE
Chavez-Grieves
5639 Jefferson NE
Albuquerque, NM 87109

RE: DRAINAGE REPORT FOR RJ PINO POST OFFICE (C-12/D3B5)
RECEIVED MAY 1, 1996 FOR WORK ORDER
ENGINEER'S STAMP DATED 4/26/96

Dear Mr. Kelley:

Based on the information included in the submittal referenced above, City Hydrology accepts the Drainage Report for Work Order.

The following comments must be addressed before the Engineer's Certification will be accepted:

Verify that the water block at the entrance on Paradise Blvd is adequate. Assume that the Methodist Church discharges 10.8 cfs per the "Grading & Drainage Plan for ALBUQUERQUE WEST" by Leverton - Easterling, Inc. dated 9-10-84, revised 10-17-84.

Provide a copy of a letter from the Methodist Church granting permission to grade on their land and accepting the grading scheme proposed. Correct minor drafting errors on Grading & Drainage Plan (see attached copy).

If you have any questions about this project, You may contact me at 768-2727.

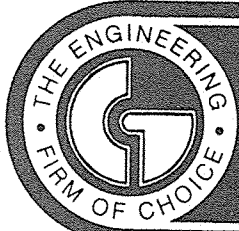
Sincerely,

John P. Curtin, P.E.
Civil Engineer, Hydrology

c: Andrew Garcia
Fred Aguirre

Good for You, Albuquerque!





CHAVEZ • GRIEVES
CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

GRADING AND DRAINAGE PLAN

FOR

RICHARD J. PINO POST OFFICE

ALBUQUERQUE, NEW MEXICO



APRIL, 1996

Pino Post Office Drainage Report

LOCATION

This site is located in west Albuquerque on the southwest corner of Paradise Blvd and Davenport Street.

LEGAL DESCRIPTION

Albuquerque West, Unit 1, Block A, Lots 1 and 2.

SURROUNDING DEVELOPMENT

The site is in a developing commercial area south of Paradise Blvd. The area north of Paradise Blvd. is fully-developed residentially. A day care center has been planned south of the site, and a new car wash has been built east of the site. An existing church is adjacent to the site on the west, but a 100' wide undeveloped area exists on the church property between the church buildings and the church's east property line. A new school is southeast of the site. Except for these developments, the area surrounding the site is vacant land.

FLOOD HAZARD ZONES

As shown by Panel 3500020008 of the National Flood Insurance Rate Maps for the City of Albuquerque, dated October 14, 1983, the site is in a designated flood hazard zone C. Zone C designates "areas of minimal flooding."

RELATED REPORTS

Isaacson and Arfman prepared a drainage report for Albuquerque West Unit 1, dated January 1990 (pages A-15 and A-16 are excerpts from that report). The drainage basin that discharges to Analysis Point 1 of that report includes the subject site, and is 4.36 acres in size. Analysis point 1 on page A-14a is taken at the same location as in the Arfman report. That report indicated that the capacity at Analysis Point 1 was 3.8 cfs. That report also indicated that the entire church property west of the subject site discharges north to Paradise Blvd., and none of it discharges onto the adjacent Post Office site. That report quantified the amount of the church runoff at 8.8 cfs.

*Essterling
Report*

Pino Post Office Drainage Report

Community Sciences prepared a report dated April 5, 1994 for Richland Hills Subdivision (page A-17 is an excerpt from the report) that reevaluated the amount of runoff discharging to the intersection of Paseo del Norte and Richland Hills Road, downstream of the subject tract. In that report, it was found that additional capacity was available at Analysis Point 1. As shown on page A-17, the discharge allowed at that point is 8.53 cfs.

Easterling and Associates prepared a report dated March 8, 1995 for an addition to the Paradise Hills United Methodist Church (excerpt on page A-19) showing developed runoff from the church site discharging to the east onto the subject site. The runoff was quantified as 8.80 cfs in that report.

EXISTING SITE CONDITIONS AND DRAINAGE PATTERN

The site is sparsely vegetated with desert grass and brush, and slopes down to the east at about 5%. As noted in a site investigation on November 21, 1995, both developed and undeveloped runoff discharge onto the subject tract from the church site on the west. At the west property line, the existing ground is 3' lower than the existing paved surfaces of Paradise Blvd. A smaller amount of runoff also enters the site from the Paradise Blvd and Davenport rights-of-way. Downstream from the site, on Education Place, there is a public storm drainage system that extends up to within 500' of Davenport. All runoff from this site goes to that public system.

PROPOSED SITE CONDITIONS AND DRAINAGE PATTERN

This site will be developed as an area post office. The new site will consist primarily of impervious surfaces, with 8% landscaped area. A private storm drain system will be built on-site, and the storm inlets will provide controlled discharges that create detention ponding in the parking lot. The storm drain system will discharge into Davenport Street via a sidewalk culvert. From there, runoff will be conveyed across the street via an existing valley gutter on Davenport, which aligns with Education Place. From that point the runoff will discharge down Education Place to the existing public storm drainage system.

The off-site runoff that discharges across the west property line is supposed to be diverted to Paradise Blvd per the Arfman report. It is not possible to divert this off-site runoff to Paradise Blvd as shown in that prior report without installing a pump or placing significant amounts of fill on that property. At the same time, it is not possible to accept this runoff and convey it through the subject site because it raises the discharge at Analysis Point 1 above the acceptable level of 8.53 cfs as determined by the Community Sciences report.

Pino Post Office Drainage Report

The solution to this awkward situation is that the church site pond its own runoff on its own site until such time as it develops the remainder of its property. As shown by the calculations on page A-18, the retention volume required is 19,602 c.f. As shown by the grading plan for the church on page A-19, this volume can be accommodated easily on the undeveloped portion of the church property by constructing an interim retention pond. A berm of approximately 3' maximum height is sufficient to create the pond and retain the runoff. As shown on page A-19, the berm has been designed such that it will overflow into the Paradise Hills Blvd right-of-way in the event of a storm larger than the design storm. At the time the church chooses to develop this vacant portion of their property, they can fill their site and discharge freely to Paradise Blvd--the retention pond will no longer be necessary.

The waterblock at the Davenport/Paradise Blvd intersection will be maintained when Davenport is widened as part of this project. As shown on the Arfman report, the waterblock does not permit runoff on Paradise Blvd. to cross into the watershed to the south.

The street capacity of Paradise Blvd was examined to insure that ultimate runoff will remain in the Paradise Blvd right-of-way and not enter the subject site. At Analysis Point 2, as indicated on page A-14a, the ultimate design storm runoff is 15.10 cfs (calculated on page A-13), and the street capacity at the top of curb is 56.33 cfs (calculated on page A-12). The ultimate runoff includes runoff from the church property, as well as runoff produced within the Paradise Blvd right-of-way. As these calculations show, the ultimate runoff is retained within the right-of-way.

The critical point of discharge for the developed runoff from this site is Analysis Point 1 on page A-14a. The allowed discharge is 8.53 cfs per Community Sciences' report (page A-17), while the design discharge will be 8.22 cfs as calculated on page A-11. The amount of runoff produced by the developed site is greater than this due to the increased impervious area. However, the on-site runoff was reduced to acceptable levels by on-site detention ponding. Two significant detention ponds were created in the on-site parking areas by installing a storm drain system with controlled discharges at the storm inlets. One minor detention pond was created in a landscaped area by installing a sidewalk culvert. The pond designs are on pages A-4, A-6, and A-8. The controlled discharges from the storm inlets were created by installing metal plates over the pipe outlets as calculated on page A-14b, while the controlled discharge from the landscaped pond was created by installing a pipe outlet as calculated on page A-14c.

Pino Post Office Drainage Report

HYDROLOGY/HYDRAULICS

The runoff calculations and design have been done in accordance with Section 22.2 of the Development Process Manual of the City of Albuquerque, January 1993. The computerized hydrologic model, AHYMO, was used to calculate storm runoff. Retention volume calculations for the 100-year, 10-day storm were made in accordance with equation a-9.