DRAINAGE INFORMATION SHEET

PROJECT TITLE: Lomita Encantada ZONE ATLAS/DRNG. FILE #: (K-11 / D44)

LEGAL DESCRIPTION: Lot 3 & Por lot 2, Bellevue Addn - Lots 4A, 5A, 6A, Tr 4 Replat of Bellevue & Tr. B" Kimballs, Inc.

CITY ADDRESS: 200 Mezcal NW (CIRCLE)

ENGINEERING FIRM: Santiago Romero Jr & Assoc CONTACT: Tom Romero

ADDRESS: 1124 La Poblana NW PHONE: 345-2733

OWNER: Clyde Milligan CONTACT: Clyde Milligan

ADDRESS ~~201~~ Mezcal NW PHONE: 836-1919

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: Santiago Romero Jr & Assoc CONTACT: Tom Romero

ADDRESS: 1124 La Poblana NW PHONE: 345-2733

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES DRB NO. 86-512

NO EPC NO.

X ~~COPY OF CONFERENCE RECAP SHEET PROVIDED~~ Comments 10/14/'86 attached PROJECT NO.

TYPE OF SUBMITTAL:

- ✓ DRAINAGE REPORT
- ✓ DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAIN. PLAN
- ✓ GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

- SKETCH PLAT APPROVAL
- ✓ PRELIMINARY PLAT APPROVAL
- SITE DEVELOPMENT PLAN APPROVAL
- ✓ FINAL PLAT APPROVAL
- BUILDING PERMIT APPROVAL
- FOUNDATION PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY APPROVAL
- ROUGH GRADING PERMIT APPROVAL
- GRADING/PAVING PERMIT APPROVAL
- OTHER (SPECIFY)

DATE SUBMITTED: Resubmittal 11/13/'86

BY: Thomas H Romero

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

November 24, 1986

Tom Romero
Santiago Romero, Jr. & Associates
2828 Twelth Street, NW Suite B
Albuquerque, New Mexico 87104

RE: DRAINAGE PLAN FOR LOMITA ENCANTADA SUBDIVISION
(K-11/D44) RECEIVED NOVEMBER 12, 1986

Dear Mr. Romero:

The following items are approved:

1. Referenced draiange plan dated October 6, 1986.

2. Infrastructure listing dated November 12, 1986.

If you should have any questions, please call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

File No. 86-12

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103 250

March 4, 1987

Clyde Milligan
201 Mezcal NW
Albuquerque, NM 87107

REF:SV-87-16
DRB-86-512

Santiago Romero Jr. & Assoc., agents for Clyde Milligan, requests Sidewalk Variance for Tract "B" Kimbal Inc., Lots 3, 4A, 5A, 6A and Tract A, Bellevue Addition, zoned RT-R-2 (City) and located on Esperanza Drive NW between Mezcal Circle NW and 53rd NW, containing approximately 2.25 acres. (K-11)

At the March 3, 1987, Development Review Board meeting, the Sidewalk Variance was approved.

1. Temporary deferral of sidewalk installation is acceptable provided sidewalks are constructed at the earlier of the following dates:

   A. When a structure is constructed on a lot, a lot by lot basis, or

   B. Two years following execution of the Subdivision Improvements Agreement covering construction of the sidewalks.

2. Financial guarantees are required for all sidewalks prior to Final Plat approval which are temporarily deferred for the initial deferral and any subsequently approved deferral.

3. Handicapped ramps may not be deferred.

If you have any questions, please call me at 768-3860.

Richard Dineen, Chairman
Development Review Board

cc:Traffic Engineering
City Engineering
Transportation
Santiago Romero Jr. & Assoc., 2828 12th Street NW, ST. "A", 87107
File

K11/D44

Santiago Romero Jr. & Associates, Inc.
ENGINEERING • SURVEYING

6139 Edith Blvd. NE
Albuquerque, New Mexico 87107
(505) 345-2733

December 31, 1987

Job No. 86-12

Mr. Fred Aguirre, P.E.
Engineering Group
Hydrology Section
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: LOMITA ENCANTADA SUBDIVISION
CITY ENGINEER & AMAFCA PLAT SIGNATURE

Dear Mr. Aguirre:

Transmitted herewith for your signature is the mylar original for the referenced subdivision. This plat was delegated to you by DRB prior to Planning Department signature. A copy of the acceptance letter for project no. 3122 is attached hereto for your examination.

Upon your signing the plat please contact me and I will make arrangements to transmit the plat and a mylar reproducible to Planning Department for their signature.

Sincerely,
SANTIAGO ROMERO JR., AND ASSOCIATES, INC.

Thomas A. Romero, C.E.T.
Vice President

TAR/dr
CC: Mr. Clyde Milligan

Plat signed by FJA 1/13/88

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Mayor
Ken Schultz

December 21, 1987

CERTIFICATE OF COMPLETION AND ACCEPTANCE

Clyde F. & Louisa A. Milligan
204 Mescall Circle N.W.
Albuquerque, NM 87105

RE: PROJECT NO. 3122, Lomita Encantada, (MAP NO. K-11)

Dear Mr. Milligan:

This is to certify that the City of Albuquerque accepts Project No. 3122 as being completed according to approved plans and construction specifications and accepts for continuous maintenance all public infrastructure improvements constructed as part of Project No. 3122.

The project is described as follows:

- Sewer: Installed new 8" PVC main in Esperanza Ct. from Mezcal Pl. east to end of cul-de-sac then east thru drain easement to 53rd St. N.W. - 7 new services.

  Paved Esperanza Ct. east from Mezcal Pl. to end of cul-de-sac and in drain easement to 53rd St. N.W.

- The warranty period will be in effect for a period of three (3) years.

Sincerely,

Russell B. Givler, P.E.
Chief Construction Engineer
Construction Mgmt. Division
Engineering Group
Public Works Department

RBG:jla

xc: Santiago Romero Jr. & Associates
Jones Industries
Phil Fischer, Engineering Group, PWD
Ray Pang, Engineering Group, PWD
Terri Martin, Engineering Group, PWD
Jeanette Barrett, Special Assessments
Jim Olsen, Operations Group, PWD
Sam Cummins, Operations Group, PWD
Dean Wall, Operations Group, PWD
Anthony Lopez, Operations Group, PWD
Jon Ertsgaard, Engineering Group, PWD
Dave Parks, Engineering Group, PWD
Tom Kennerly, Operations Group, PWD
Josie Gutierrez, New Meter Sales, Finance Group, PWD
Claudia Gallegos, Standby Clerk, Finance Group, PWD
Della Gallegos, Engineering Group, PWD
Fred Gomez, Engineering Group, PWD
Judy Aguilar, Engineering Group, PWD
f/Project 3122
f/Readers

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

November 24, 1986

Tom Romero
Santiago Romero, Jr. & Associates
2828 Twelth Street, NW Suite B
Albuquerque, New Mexico 87104

RE: DRAINAGE PLAN FOR LOMITA ENCANTADA SUBDIVISION
(K-11/D44) RECEIVED NOVEMBER 12, 1986

Dear Mr. Romero:

The following items are approved:

1. Referenced draiange plan dated October 6, 1986.

2. Infrastructure listing dated November 12, 1986.

If you should have any questions, please call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

Santiago Romero, Jr. & Associates, Inc.
ENGINEERING • SURVEYING
ph. (505) 345-2733 (505) 344-6828

La Chamisa Compound
2828 12th St. N.W. Suite B
Albuquerque, New Mexico 87107

Job No. 86-12

November 12, 1986

Mr. Carlos Montoya, P.E.
Public Works Hydrology
One Civic Plaza N.W.
Albuquerque, New Mexico

RE: LOMITA ENCANTADA SUBDIVISION PLAT
RESUBMITTAL

Dear Mr.Montoya:

Attached hereto please find the resubmitted plat for the Lomita Encantada Subdivision. Please note that the plat reflects the additional easements requested in your attached letter. Also, please find the revised infrastructure improvement list which now includes the Std C & G and new pavement within the 30' P.U.E. and Drainage Easement.

Sincerely,
SANTIAGO ROMERO JR., AND ASSOCIATES INC.

Thomas A. Romero, C.E.T.
Vice-President

TAR/drm

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

October 14, 1986

Tom Romero
Santiago Romero, Jr. & Associates
2828 Twelth Street, NW Suite B
Albuquerque, New Mexico 87104

RE: DRAINAGE PLAN FOR LOMITA ENCANTADA SUBDIVISION
(K-11/D44) RECEIVED OCTOBER 6, 1986

Dear Mr. Romero:

I have reviewed the referenced plan and infrastructure list and forward the following comments:

1. The infrastructure list does not include the improvements downstream of the sidewalk culvert.

2. Lot 1 drains across Tract B-1. Need a private drainage easement for this runoff.

3. The plat does not indicate the public drainage easement for the 30 foot public utility easement.

If you have any questions, please call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

Santiago Romero, Jr. & Associates, Inc.
ENGINEERING • SURVEYING
ph. (505) 345-2733 (505) 344-6828

La Chamisa Compound
2828 12th St. N.W. Suite B
Albuquerque, New Mexico 87107

Job No. 86-12

October 6, 1986

Mr. Carlos Montoya, P.E.
Public Work Hydrology
400 Marquette N.W.
Albuquerque, New Mexico 87107

RE: Lomita Encantada Subdivision, K-11
Drainage Plan Resubmittals

Dear Mr. Montoya:

Transmitted herewith are two prints for each of the following:

1. Drainage Plan, revised, dated 10/6/86.
2. Paving Plan and Profile sheet reflecting storm sewer improvements.
3. Plat, revised, reflecting easements.
4. Infastructure Improvement Listing.

The above contain those items addressed in comments pertaining to this project. The only encroachment agreement or covenant for the maintenance of the improvements for drainage within the 30' public utility easement.

Sincerely,
SANTIAGO ROMERO JR., AND ASSOCIATES INC.

Thomas A. Romero, C.E.T.
Vice-President

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

September 29, 1986

Tom Romero
Santiago Romero, Jr. & Associates
2828 Twelth Street, NW Suite B
Albuquerque, New Mexico 87104

RE: DRAINAGE PLAN FOR LOMITA ENCANTADA SUBDIVISION
(K-11/D44) RECEIVED SEPTEMBER 12, 1986

Dear Mr. Romero:

I have reviewed the referenced plan and forward the following comments:

1. The 15 LF 18" storm sewer note indicates that a P & P sheet is attached. This sheet was not attached to the drainage package.

2. Between the proposed retaining wall and existing wall on the south property line, a channel is to be constructed. I am concerned that the saturated soils could possibly cause structural problems. Please address this concern.

3. Lots 5, 6, and 7 need private drainage easements across Tract B-2.

4. Lot 1 needs a private drainage easement across Tract B-1.

5. Please indicate the sidewalk drain standard drawing number. Please show the inverts for the sidewalk drain.

6. The channel from the sidewalk culvert to 53rd Street needs to be upgraded to present City standards.

7. Please address erosion and sediment transport for the 10 foot private drainage easement on the south property line.

8. The following items concern the plat which was submitted with the drainage report.

   A. Please show the 10 foot private drainage easement on the south property line.

   B. Please indicate the public drainage easement between Tracts B-1 and B-2.

If you have any questions regarding these comments, please call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

DRAINAGE REPORT

FOR

LOMITA ENCANTADA

SEPTEMBER 1986

PREPARED FOR:

CLYDE F. MILLIGAN

201 MEZCAL N.W.

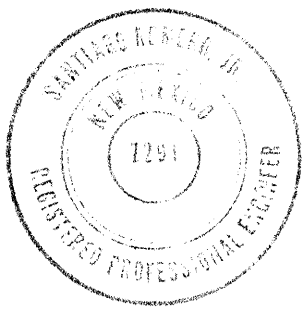
ALBUQUERQUE, NEW MEXICO

PREPARED BY:

SANTIAGO ROMERO JR., & ASSOCIATES INC.

2828 12TH STREET N.W.

ALBUQUERQUE, NEW MEXICO 87107



9/8/86

Santiago Romero Jr., P.E. & L.S.

DRAINAGE REPORT
FOR
LOMITA ENCANTADA

FIGURES

DRAINAGE REPORT
FOR
LOMITA ENCANTADA
CLYDE F. MILLIGAN

PURPOSE AND SCOPE:

This drainage report has been prepared to outline the treatment of storm water flowing to and generated within the Lomita Encantada Subdivision. It has been prepared in accordance with the guideline of the City of Albuquerque's Development Process Manual (DPM, Chapter 22, entitled "Drainage and Flood Control".

SITE LOCATION AND DESCRIPTION:

The site is located between Mezcal Circle N.W. and 53rd St. N.W. approximately one block North of Central Avenue. The site contains approximately 2.8 acres. It slopes from Northwest to Southeast at approximately 7%. The soil on the site consists of Madurez (MWA). The location of the soil type is indicated on the attached copy of the Soil Survey of Bernalillo County prepared by the Soil Conservation Service (Figure 2). This soil type is classified as hydrologic soil Group "B".

METHOD OF ANALYSIS:

The site consists of 3 small basins, each contributing runoff to 53rd St. N.W. The design consideration addressed in this report was to assure that the storm runoff created by this development would not exceed the drainage or storm water carrying capacity of 53rd St. N.W. No on site detention was considered for this development since it was determined that 53rd St. N.W. does have the capacity to carry flows generated by this development. The point of analysis for 53rd St. N.W. did not have any other off-site flows contributing to it other than this development.

Peak flow rates for the developed basins were determined by application of the Rational Method.

Rainfall intensities were determined by applying plates 22.2 D-1 and 22.2. D-2 of the DPM. The 100 year intensity was determined to be 4.65 in 1 hour.

EXISTING DRAINAGE CONDITIONS:

Flooding on this site does not exist; however this site has experienced erosion as a result of the storm drainage inlets at the intersection of Mezcal Circle N.W. and Esperanza Dr. N.W. being plugged. The storm water would top the curb and sidewalk and flow through the site to 53rd St. N.W. This problem was reported to the City and the inlets and system have been cleaned. No similar problems have occured since.

DEVELOPED DRAINAGE CONDITIONS:

The street grades proposed would create a water block at this intersection. The off-site flows would continue to utilize the inlets at this intersection. One of the two inlets will be relocated to accomadate the intersection construction.

In the event that the inlets would be plugged or unable to accept the flows, storm water would be carried down Esperanza Ct. N.W. to the sidwalk drain, through the drainage easement and onto 53rd. St. The homes within the development would be protected.

EROSION CONTROL PLAN:

The Contractor shall be required to prevent the build-up of soils eroded from the site onto existing streets as a result of storm water runoff. The Contractor shall also be required to prevent the loss of soil due to wind. The Contractor will not be allowed to remove the curb and gutter or inlet at the intersection of Mezcal and Esperanza Ct. N.W. until adequate provisions have been installed to assure that no downstream properties are in danger of flooding during this phase of the construction.

LOMITA ENCANTADA TOWNHOME SUBDIVISION
DRAINAGE PLAN COMPUTATIONS

A. BASIC ASSUMPTIONS

1. Discharge from proposed subdivision will drain onto 53rd St. N.W. by way of existing paved alley way (presently private, to be granted as utility easement to city). → drainage
2. Subdivision comprises two drainage basins (on site). A third basin (off site) discharges runoff onto above-mentioned alley way and 53rd St. thereto.
3. Total discharge from three areas onto 53rd St. should never exceed the hydraulic capacity of the street at the point where the discharges from the three basins meet.

B. CONTRIBUTING AREAS

1. Basin 'A'

   a. Total area: 33,600 sq. ft.
   b. Paved areas: (streets, sidewalks and drive-pads) = 15,400 sq. ft.
   c. Roof areas: 7,200 sq. ft.
   d. Lawns and landscaping: 11,000 sq. ft.

2. BASIN 'B'

   a. Total area: 29,100 sq. ft.
   b. Paved area: 2,800 sq. ft.
   c. Roof area: 10,600 sq. ft.
   d. Lawns and landscaping: 10,200 sq. ft.
   e. Undeveloped: 5,500 sq. ft.

3. BASIN 'C'

   a. Total area: 15,000 sq. ft.
   b. Paved area: 4,970 sq. ft.
   c. Roof area: 4,775 sq. ft.
   d. Undeveloped area: 5,255 sq. ft.

C. RUNOFF COEFFICIENTS (Reference: Notice of emergency rule dated 2/19/86) (Composite C)

1. BASIN 'A'

$$C_A = \frac{15,400}{33,600}(0.95) + \frac{7,200}{33,600}(0.90) + \frac{11,000}{33,600}(0.25)$$

$$= 0.71$$

2. BASIN 'B'

CB = 0.58

3. BASIN 'C'

Cc = 0.14

D. TIME OF CONCENTRATION

$Tc = 0.0078\ L^{0.77}/S\ 0.385$

1. BASIN A
   L = 210' S = 3.33% Tc_A = 18' min.
2. BASIN B
   L = 440' S = 3.91% Tc_A = 3.0' min.
3. BASIN C
   L = 210' S = 3.15% Tc_C = 1.4' min.

USE Tc = 10' FOR ALL BASINS

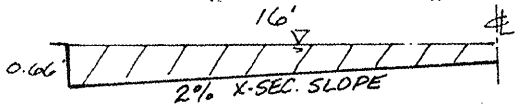
E. RAINFALL INTENSITY

1. Rainfall Volume: 2.2 (100 yr. freq.) Plate 22.2 D-1
   Therefore i = 2.2 (6.84) (10) - 0.51 = 4.65 in.

F. PEAK RUNOFF FLOW

1. BASIN A
   QA = 0.71 (4.65) 0.77
   = 2.55 cfs
2. BASIN B
   QB = 1.8 cfs
3. BASIN C
   QC = 0.22 cfs

G. STREET DRAINAGE CAPACITY (53rd St. N.W.)



S = 3.02%, N = 0.017, A = 8.0

$Q = A \times \frac{1.486}{N} \times R^{2/3} \times S^{1/2}$

Q = 58 cfs (1/2 st. width)

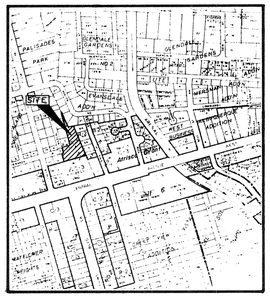
H. CONCLUSION: The capacity of the street is not exceeded by the 100 year runoff generated by this subdivision under developed conditions.


LOMITA
ENCANTADA
SUBDIVISION
Town of Grant unit 6
Atrisco
CEMETERY
K-11-Z

FIG. NO 1

GRADING AND DRAINAGE PLAN
FOR
LOMITA ENCANTADA SUBDIVISION

(MR. & MRS. CLYDE MILLIGAN OWNERS)



LOCATION MAP K-11

FLOODWAY MAP: PANEL 27

LOMITA ENCANTADA TOWNHOME SUBDIVISION
DRAINAGE PLAN COMPUTATIONS

A. BASIC ASSUMPTIONS

1. Discharge from proposed subdivision will drain onto 53rd St. N.W. by way of existing paved alley way (presently private, to be granted as utility easement to city).
2. Subdivision comprises two drainage basins (on site). A third basin (off site) discharges runoff onto above-mentioned alley way and 53rd St. thereto.
3. Total discharge from three areas onto 53rd St. should never exceed the hydraulic capacity of the street at the point where the discharges from the three basins meet.
4. Contribution from areas West of this subdivision is collected at inlet on intersection of Esperanza Road and Mezcal Circle.

B. CONTRIBUTING AREAS

1. Basin 'A'
   a. Total area: 33,600 sq. ft.
   b. Paved areas: (streets, sidewalks and drive-pads) = 15,400 sq. ft.
   c. Roof areas: 7,200 sq. ft.
   d. Lawns and landscaping: 11,000 sq. ft.

2. BASIN 'B'
   a. Total area: 29,100 sq. ft.
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C. RUNOFF COEFFICIENTS (Reference: Notice of emergency rule dated 2/19/86) (Composite C)

1. BASIN 'A'

$C_A = \frac{15,400}{33,600}(0.95) + \frac{7,200}{33,600}(0.90) + \frac{11,000}{33,600}(0.25)$

$= 0.71$

2. BASIN 'B'

$C_B = 0.58$

3. BASIN 'C'

$C_C = 0.14$

D. TIME OF CONCENTRATION

$Tc = 0.0076\ L^{0.77}/S^{0.385}$

1. BASIN A
   L = 210' S = 3.33% T_{CA} = 18' min.
2. BASIN B
   L = 440' S = 3.91% T_{CA} = 3.0' min.
3. BASIN C
   L = 210' S = 3.15% T_{CC} = 1.4' min.

USE Tc = 10' FOR ALL BASINS

E. RAINFALL INTENSITY

1. Rainfall Volume: 2.2 (100 yr. freq.) Plate 22.2 D-1
   Therefore I = 2.2 (6.84) (10) - 0.51 = 4.65 in.

F. PEAK RUNOFF FLOW

1. BASIN A
   $Q_A = 0.71\ (4.65) = 0.77$
   $= 2.55$ cfs
2. BASIN B
   $Q_B = 1.1$ cfs
3. BASIN C
   $Q_C = 0.22$ cfs

G. STREET DRAINAGE CAPACITY (53 RD. ST., ½ WIDTH)

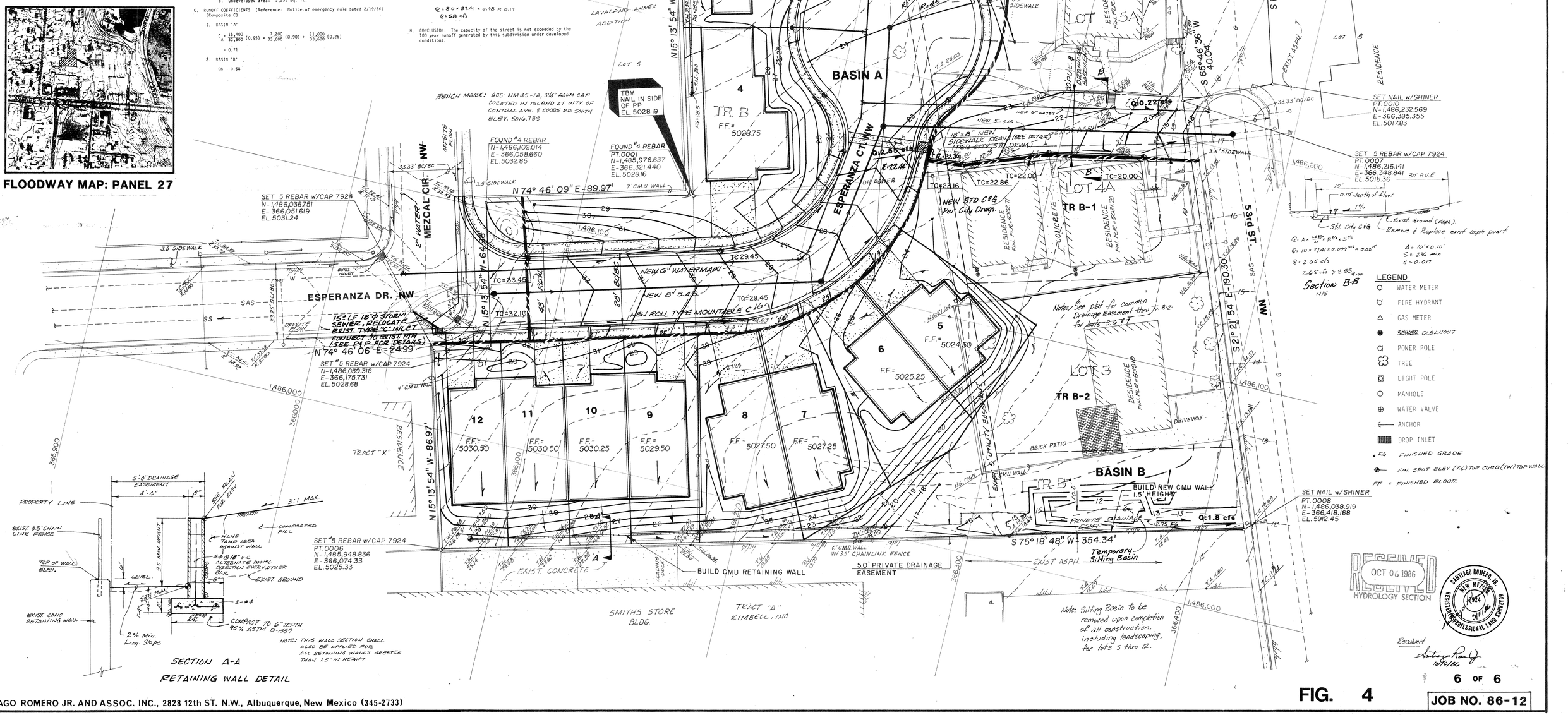
1. Longitudinal slope: 3.02%
2. Manning Coefficient: 0.017
3. Flow rate:

$Q = A\times\frac{1.486}{n}\times R^{2/3}\times S^{1/2}$

$Q = 8.0\times 87.41\times 0.48\times 0.17$

$Q = 58$ cfs

H. CONCLUSION: The capacity of the street is not exceeded by the 100 year runoff generated by this subdivision under developed conditions.



RECEIVED
OCT 06 1986
HYDROLOGY SECTION

SANTIAGO ROMERO JR. NEW MEXICO 7924 REGISTERED PROFESSIONAL LAND SURVEYOR

Recommit
10/6/86

6 OF 6

FIG. 4

JOB NO. 86-12

SANTIAGO ROMERO JR. AND ASSOC. INC., 2828 12th ST. N.W., Albuquerque, New Mexico (345-2733)