FILE 77-120

CLIFFORD PROPERTIES
Two San Pedro Park, Suite 2201
2201 San Pedro Drive, NE
Albuquerque, New Mexico 87110

September 23, 1977

Mr. Berry F. Davis
335 Jefferson, SE
Albuquerque NM 87108

Re: Clifford Properties (Parcel #3)

Dear Mr. Davis:

The purpose of this letter is to seek authorization for the construction of a temporary diversion dike at the south edge of Parcel 2A in the Panorama Heights Subdivision. We would assume the financial responsibility for such construction.

The dike will be used to divert exiting runoff from the south edge of Parcel 2A to a point farther west where it will enter a proposed concrete lined drainage easement within Parcel 3. The dike will be approximately 220 feet long, two feet high, with a top width of four feet and side slopes of one foot horizontal to one foot vertical. The dike is temporary and will only be required until construction begins on Parcel 2A. The attached development plan shows the location of the proposed temporary improvements.

If you concur with this request, please sign and return the attached copy of this letter. Thank you.

Sincerely,

Jack J. Clifford

Jack J. Clifford, President

JJC:mhs

REQUEST APPROVED:

Berry F. Davis

Berry F. Davis, Owner
Parcel 2A

BOHANNAN-HUSTON INC.
ENGINEERS PLANNERS PHOTOGRAMMETRISTS
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000

October 26, 1977

Mr. Bruno Conegliano
Assistant City Engineer - Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Drainage Report for Panorama Heights, Parcel Three

Dear Mr. Conegliano:

Enclosed for your review and approval are three copies of the above-referenced drainage report.

Major features of this report include:

1. Relocation of an existing earth channel at the east edge of the property.

2. Temporary construction of an earth dike off the property to divert upland flow to a proposed drainage easement.

3. Temporary construction of a desilting pond to clean upland water.

4. Controlled discharge from parking lots.

5. Limited use of total back yard retention.

6. Construction of a centrally located detention pond to serve four apartment sites.

Also enclosed is a copy of a letter from Mr. Berry Davis, owner of the adjacent property to the north, giving permission for the construction of a temporary diversion dike on his property, if such a dike becomes necessary.

Sincerely,

Raymond W. Macy

Raymond W. Macy, P.E.
Design Engineer

cc: Mr. Vern Hagen

Enclosure

RWM/kb
Job No. 77-120

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

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

November 23, 1977

Ray Macy
Bohannan & Huston & Assoc.,Inc.
4125 Carlisle Blvd.,NE
Albuquerque, New Mexico

Dear Ray:

I finally had a chance to go and take a look at the site of Panorama Heights Addition. I do not have any major objections to the manner in which you propose to handle the off site flow from the north, except to note that quite likely Basin 1 will not contribute its flow to the diversion channel; Rather, that flow will be routed to Indian School Rd. On the other hand the flow from Durant St. may be greater than anticipated because I did not recognize any devices which would cause the flow to go south. Be as it may I do not think that the proposed 10 ft. temporary drainage easement would be adequate to handle the indicated 100 + cfs (which incidentally seems a reasonable estimate of the discharge). The major objection that I have pertains to the "on site" handling of the runoff. I have outlined to you in a previous letter discussing the drainage of Puerto del Cielo, my thinking regarding on site ponding. My visit in the field has if any, streghtened my attitude, since the runoff from the Sunburst Apartments does not appear to be controlled in the least, in contravention to the Amafca Resolution.

Since grades does not appear to be a problem, I will have to request full on site management of the runoff and not without provisions for infiltration and total volume control.

If you want to discuss the matter further feel free to contact me.

Very truly yours,

Bruno Conegliano
Asst. City Engineer - Hydrology

cc; V.M. Kimmick
Jim Smith
Drainage file

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

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

December 7, 1977

Michial Emery
Bohannan-Huston Inc.
4125 Carlisle Blvd.,NE
Albuquerque, New Mexico 87107

Dear Michial:

This letter follows our conversation of today in the offices of AMAFCA regarding some of the drainage reports that have been reviewed in my office. I want to confirm acceptance of the drainage reports for the following subdivisions.

1. La Charles Villa for the Gary L. Watson Company

2. Crestview V. and Casa Grande Park for H.G. Pickard and Associates

3. Panorama Heights Parcel 3 for Jack M. Clifford & Company

4. Leesure Acres for Sproul Investment Corporation

Very truly yours,

Bruno Conegliano
Asst. City Engineer-Hydrology

BC/gm

cc; Jim Smith
V.M. Kimmick
Drainage file

Telephones (505) 265-8055
265-7673

LAW OFFICES
DAVID FRENCH BOYD, JR.
VANCE MAUNEY, P.A.
WALTER L. REARDON, JR.
THOMAS S. WATROUS
SCOTT H. MABRY, P.A.
CHESTER A. PASNEWSKI

TWO PARK CENTRAL TOWER
300 SAN MATEO, N. E., SUITE 800
ALBUQUERQUE, NEW MEXICO 87108

March 23, 1978

City of Albuquerque
P. O. Box 1293
Albuquerque, N.M. 87103

Attn: City Engineer

Gentlemen:

I represent the owners of Tracts B, C and F, replat of a portion of Panorama Heights Addition to the City of Albuquerque. My clients understand that Parcel 3 of Panorama Heights Addition is undergoing a drainage study which will have the effect of changing the surface water runoff on Parcels B, C and F.

In order to avoid any damage to the development which is presently planned on Tracts B and C, it is respectfully requested that the city not approve any changes which will in any way alter the water flow on Parcels B, C and F.

Truly yours,

Vance Mauney

VM/mls

cc: Albuquerque National Bank
cc: Dr. O. J. Rollag
cc: Mrs. Joan C. Ellison

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

April 3, 1978

Vance Mauney
Two Park Central Tower
300 San Mateo, N.E. Suite 800
Albuquerque, New Mexico 87108

RE: Panorama Heights Addition, Parcel 3

Dear Mr. Mauney:

In reply to your letter dated 3-28-78 regarding the development of Parcel 3 of Panorama Heights Addition be advised that in accord with the AMAFCA Res. 72-2 and with the City drainage policy Resolution 59-1978 no change in existing runoff condtitons will result from the development of the referenced Parcel.

Very truly yours,

V.M. Kimmick
City Engineer

cc; Rip Orr
Malcomb de Vesty
Bruno Conegliano
Mike Emery

Late

July 8, 1978

Ralph Lorby

Mr. ~~Joe F. Fritz~~, Chairman
Land Controls Board
Environmental Planning Commission
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Subject: Panorama Heights Planned Residential Development Z-71-158 Amended

Dear Mr. Fritz and Members of the Commission:

I am a home owner in Casa Hermosa Townhome Development and am also Secretary-Treasurer of our Homeowners Association. Our complex is located immediately south of the subject planned residential development on Nakomis Drive between Lomas Blvd. and Constitution Ave. Over a year ago several members of our Association attended the Commission's hearing for development of this property, and we also worked with Mr. Vern Hagen of Realty Research, Inc. and Jack M. Clifford Company when these firms were involved in the planning stages of the property. Our discussions with Mr. Hagen resulted in several modifications of the development plans for which we are very grateful. The only aspects of the development, which were not approved at that time, were the drainage and contouring on the property. Preparation of the land for construction has begun.

I am writing because of my personal concern for the elevation of the property. My home is immediately adjacent to the development, and is separated from it by a five foot wall, which is intended to provide privacy for my home and patio. The developer of the property, which is already about three feet higher than my own, has been allowed to raise the elevation of the land to a point above the wall behind my house and almost to the level of my roof. Although construction has not yet begun, it is obvious that the home to be built next to mine will provide the resident with a direct view through my patio doors into 70 percent of my house. Privacy in my patio and in most of my home will be practically non-existent. I am very upset and so will the buyer of the new home.

I would like to invite members of the Commission to my house to personally confirm my reason of concern for the development. Any action by the Commission, before construction begins, would be appreciated.

Sincerely yours,

Bob Keeling

Bob Keeling

BK:BK

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

MAYOR
David Rusk

January 18, 1979

Mr. Don P. Schlegel
Schlegel & Lewis Architects
1620 Central S.E.
Albuquerque, N.M. 87106

372-D15

Re: Panorama Heights Unit 3

Dear Mr. Schlegel:

The information supplied on the site grading plan is not sufficient to verify that on Type A sites the required detention volume of 710 cubic feet is provided,nor that a volume of 210 cubic feet is provided on Type B sites. The site grading plans must show on a large scale (1"=10') the proposed grading and the conveyance of all the runoff to the detention areas. Field inspection indicates that Lot 10, Block 1 does not have the indicated rundown and that the orifices required have not been installed. This office must be able to verify the compliance with the drainage report. Sufficient information must be supplied to this purpose.

Sincerely,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs

cc - Dick Heller
Drainage File

BOHANNAN-HUSTON INC.
ENGINEERS PLANNERS PHOTOGRAMMETRISTS
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000

January 26, 1979

Mr. Chet Hearn
5353 Wyoming Blvd., N.E.
Suite 130
Albuquerque, NM 87109

Re: Panorama Heights, Unit 3

Dear Chet:

This is in regards to your telephone conversation with Ron R. Bohannan on the referenced subdivision. The items needing action are as follows:

1. Construction of parking lot drains on Lots 25 and 24, Block 2, Lot 10 and 4, Block 1.

2. Reconstruction of parking lot drain on Lot 18, Block 1.

3. Indication that the builders will install orifice plates, and header curb to elevations and specifications on plans.

4. Paving of parking lots after builders have finished fine grading.

These items need to be addressed to insure compliance with drainage report and policies of the City.

If you have any questions, please contact Ron R. Bohannan or me of this office.

Sincerely,

Michial M. Emery, P.E.
Vice President

cc: Mr. Bruno Conegliano

RRB/mna
Job No. 77-120

BOHANNAN-HUSTON INC.
4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000

January 25, 1979

RECEIVED
FEB 01 1979
CITY ENGINEERS

Mr. Bruno Conegliano
City Hydrologist
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Panorama Heights, Unit 3

Dear Mr. Conegliano:

This letter is to address the letter sent to Don P. Schlegel on January 18, 1979, by you.

Upon field inspection of the subdivision, a punch list was tabulated to correct any problems arising from drainage. This list includes installation of drains on Lots 24 and 25, Block 2, Lots 10 and 4, Block 1, reconstruction of drain on Lot 8, Block 1. In regards to the construction phasing of the drainage facilities, the orifice plates will be installed at the time the header curb is built. This is to be built and paid for by the builder. In addition, the parking lot will be fine graded during the phase that the builder finishes fine grading, usually after the foundations have been completed.

If you have any further questions, please contact Ron R. Bohannan or me of this office.

Sincerely,

Michial M. Emery

Michial M. Emery, P.E.
Vice President

cc: Mr. Chet Hearn
Mr. Jim Pond

RRB/mna
Job No. 77-120

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

February 15, 1979

Mr. Frank Hines, President
Hines Corporation
1520 La Tuna Place S.E.
Albuquerque, N.M. 87123

Re: Apartment Project at 1924 Vassar N.E.

Dear Mr. Hines:

I have received a complaint regarding the undercutting of the bank on the east side of the referenced project. Field inspection has revealed that it will be very difficult to comply with the approved site grading plan due to the excavation that has been performed and that a small retaining wall may be necessary to preserve and protect the integrity of the property to the east. Please advise of the steps that you intend to take in order to either bring the site in compliance with the grading plan or provide the necessary protection to the east.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs

cc - Dick Heller
Mac DeVesty
Drainage File

BOHANNAN-HUSTON INC.
ENGINEERS PLANNERS PHOTOGRAMMETRISTS
1125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000

March 2, 1979

Mr. Bruno Conegliano
City Hydrologist
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Panorama Heights Unit 3 Grading Plan

Dear Mr. Conegliano:

In order to allow construction of units with alternate floor plans on Lots 2, 3, 5, and 6, Block 1 of Panorama Heights Unit 3, some minor changes were necessary on the grading plan. These changes have been indicated on the enclosed sheet.

The revised grading on these four lots still conforms to the grading and drainage requirements established in the approved drainage report.

Please review the enclosed sheet and sign in the space indicated if it is acceptable. If it is unacceptable or you have any questions, please contact me or David Millikan at this office. Your prompt attention to this matter will be appreciated.

Sincerely,

Michial M. Emery

Michial M. Emery, P.E.
Vice President

Enclosure

DM/kb
Job No. 77-120.2

November 12, 1979

Mr. Fred Aguirre
City of Albuquerque
Flood Control - Plan Check Division
400 Marquette N. W.
Albuquerque, New Mexico 87102

Dear Fred:

We are enclosing site plan revisions for drainage purposes in the Panorama Subdivision on the following lots:

1. 13228 Mountain Place N. E.
2. 13208 Mountain Place N. E.
3. 13224 Mountain Place N. E.
4. 13219 Mountain Place N. E.
5. 13212 Mountain Place N. E.
6. 13216 Mountain Place N. E.
7. 13220 Mountain Place N. E.
8. 13109 Mountain Road N. E.
9. 13223 Mountain Place N. E.
10. 13200 Mountain Road N. E.

Due to unexpected conditions encountered during construction, these sites cannot be built as the original plans indicated; we have, therefore, revised the drainage techniques to a scheme which can be built. The new plans conform in concept to the original approved report by either detaining 710 cu. ft. of water for slow release (as specified in the approved drainage plan) -- or -- by retaining 100% of the developed run-off.

Because these conditions were not discovered until construction had begun, it is critical that these revisions be processed as quickly as possible, so as not to delay an orderly construction sequence. We would appreciate your help in expediting these change approvals.

Thank you very much.

James C. Lewis

JCL/lks
enclosures
cc: Frank Hines

Hines Corporation
1520 La Tuna Pl. SE
Albuquerque, New Mexico 87123
298-4444

Nov. 16, 1979

Dick Heller
City Engineer

Dear Dick,

We have had very slow response from your drainage section in the past on our requests for assistance on drainage plans. We are attempting to comply with the city requirements as closely as possible for drainage, but many times the terrain is not exactly like the engineers drew it. We then do the best job we can with existing contours, and have our architect recalculate and submit it to your people.

I must state that your drainage people have not been as cooperative as we would like, and also they are somewhat unrealistic in field inspection, i.e. failing the drainage plan for being one inch off; the corners of a pond not cut exactly square as shown on a drawing.

These are just two of the instances related to me, however I know personally that drainage plans have set on desks for 10 days after I was told it would be checked the day I was there.

Please help us get these plans approved and let me know if we can do anything to assist you.

Sincerely,

Frank Hines

Frank L. Hines

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

November 29, 1979

Mr. Frank Hines
Hines Corporation
1520 La Tuna Pl. S.E.
Albuquerque, New Mexico 87123

Dear Frank:

Thank you for your letter of November 16, 1979. I am sorry to hear that you feel my staff has been uncooperative and slow in responding to your needs concerning drainage requirements. The problems are apparently not as minor, however, as you have outlined to me.

Insofar as delays in processing and approving plans are concerned, I regret the problem, but with our limited staff, there is little which can be done. We make every effort to insure that plans are reviewed as expeditiously as possible. The problem of discrepancies between the plans approved in our office and the actual on-site configuration, though, is another matter.

Rather than the slight variations described in your letter regarding on-site inspections, our field investigations often have revealed whole-sale changes of the approved grading plan. These unauthorized changes make it virtually impossible for us to give final approval. Although we understand your dilema regarding the design being inappropriate for the actual terrain, this factor should be addressed and solved prior to our field inspection. As is the case in any endeavor, better preparation early will save a lot of time and trouble later. Our staff will be glad to assist you in any way possible.

Finally, as you are aware, final drainage approval for the revised grading has not been secured for several multi-family units under construction by you and located in the 13,000 blocks of Mountain Rd. and Mountain Pl. Though we will be happy to work with you on this matter, please be aware that these plans will be reviewed in the normal manner.

I hope I have been helpful to you in answering some of your questions regarding our operations and policies. I am sure you'll agree that adequate and properly constructed drainage areas are an important factor in Albuquerque's ever expanding boundaries. If I can be of more assistance, do not hesitate to contact me.

Sincerely,

Richard S. Heller

Richard S. Heller
City Engineer

RSH/FA/tsl

cc: B. Conegliano
F. Aguirre
File
City Attorney's Office

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

November 29, 1979

Mrs. Kasman
73 LeJano Drive
Los Alamos, N.M. 87547

Re: 415 Dorado Ct. S.E.

Dear Mrs. Kasman:

Contrary to what you have been told, ponding was required and was a condition for approval of the construction plans for the above-referenced lot.

This letter is to advise you that compliance with the approved grading plan is mandatory and should be corrected immediately. I will be expecting to hear from you concerning the corrective measures you plan to take within 30 days.

If you have any questions, please don't hesitate to contact my office.

Very truly yours,

Fred J. Aguirre
Civil Engineer

FJA/fs

cc R. S. Heller, City Engineer
Bruno Conegliano, Asst. C.E.-Hydrology
Drainage File
File

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

November 29, 1979

Mr. Steele L. Arthur
409 Dorado Ct. S.E.
Albuquerque, N.M. 87123

Re: 409 Dorado Ct. S.E.

Dear Mr. Arthur:

Contrary to what you have been told, ponding was required and was a condition for approval of the construction plans for the above-referenced lot.

This letter is to advise you that compliance with the approved grading plan is mandatory and should be corrected immediately. I will be expecting to hear from you concerning the corrective measures you plan to take within 30 days.

If you have any questions, please don't hesitate to contact my office.

Very truly yours,

Fred J. Aguirre
Civil Engineer

FJA/fs

cc - R. S. Heller, City Engineer
Bruno Conegliano, Asst. C.E.-Hydrology
Drainage File
File

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

November 29, 1979

Mr. Frank Hines
Hines Corporation
1520 La Tuna Pl. S.E.
Albuquerque, New Mexico

RE: 409 & 415 Dorado Court S.E.

Dear Mr. Hines:

I have been notified that your organization informed the owners of the above referenced addresses that ponding was not required for their lots (reference above). We have written the owners that compliance with the approved grading plan is mandatory and that corrective measure be taken immediately.

Because ponds were not provided, the runoff from both lots are draining onto the backyard and into the rear pond of 408 Rainbow Court S.E. This pond was not designed to handle this added runoff and could possibly cause damage to the property.

If you have any questions concerning the above, please don't hesitate to contact me.

Very truly yours,

Fred Aguirre
Civil Engineer

FA/tsl

cc: F. Aguirre, Civil Engineer
Drainage File
City Attorney's Office

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

MAYOR
David Rusk

Fred

December 14, 1979

Mr. A. H. Reger
415 Dorado Ct. S. E.
Albuquerque, New Mexico 87123

Re: 415 Dorado Ct. S. E.

Dear Mr. Reger:

Contrary to what you have been told, ponding was required and was a condition for approval of the construction plans for the above referenced lot.

This letter is to advise you that compliance with the approved grading plan is mandatory and should be corrected immediately. I will be expecting to hear from you concerning the corrective measures you plan to take within 30 days.

If you have any questions, please do not hesitate to contact my office.

Very truly yours,

Fred J. Aguirre
Civil Engineer
Engineering Division

FJA:pp

copy: R. S. Heller, City Engineer
Bruno Conegliano, Asst. City Engineer-Hydrology
Drainage File

City of • Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

December 14, 1979

Mrs. Loretta Steele
409 Dorado Ct. S. E. #A
Albuquerque, New Mexico 87123

Re: 409 Dorado Ct. S. E.

Dear Mrs. Steele:

Contrary to what you have been told, ponding was required and was a condition for approval of the construction plans for the above referenced lot.

This letter is to advise you that compliance with the approved grading plan is mandatory and should be corrected immediately. I will be expecting to hear from you concerning the corrective measures you plan to take within 30 days.

If you have any questions, please do not hesitate to contact my office.

Very truly yours,

Fred J. Aguirre
Civil Engineer
Engineering Division

FJA:pp

copy: R. S. Heller, City Engineer
Bruno Conegliano, Asst. City Engineer-Hydrology
Drainage File

WILLIAM L. HISS
P. O. BOX 68
PALO ALTO, CA 94302
(415) 321-5078

December 19, 1979

Mr. Fred Aguirre
City Engineer's Office
P.O. Box 1293
Albuquerque, NM 87103

Dear Mr. Aguirre:

I am involved in the purchase of a new four-plex apartment house located at 13208 Mountain Place, Albuquerque. I inspected the property a few weeks ago. As a result, I am concerned about the stability and erosion resistance of the slope and cut on the south and, in particular, the west sides of this building.

A large part of the water falling on the parking area in front (north side) of the building will accumulate and run off onto the unprotected (bare) and steeply sloping, surface immediately west and north of the front of the building. Gullying has already commenced from the small amount of rainfall this fall. One can surmise that a hard rain would cut deep gulleys into this surface. The material removed will be transported to the extreme west and south parts of the lot where it will fill-up the low spots. Eventually, the grade will be raised higher than that of the adjace . property. At some point, the concrete block walls will probably fail inviting law suits from neighbors to the south and west.

Water falling on this roof during periods of intense precipitation (spring and summer thunderstorms) will cascade off of the roof through the drainage parts onto the unprotected land surface immediately adjacent to the building. Substantial erosion will occur as the water runs down the steeply sloping fill bank. The remaining scenario will be similar to that described above.

The problem could be alleviated but not eliminated by protecting the top and steeply sloping surfaces from erosion and by channeling the runoff to safe disposal sites.

I would appreciate it if you would inspect this property and advise me of your findings. Thank you.

Sincerely yours,

W L Hiss

replied 1-23-80

83 Le Jano Drive - W.R.
Los Alamos, NM 87544

December 22, 1979

Mr. Fred J. Aguirre
Asst. Hydrology Eng.
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

SUBJECT: Four-plex at 409 Dorado Ct., S.E., Albuquerque, NM

Dear Mr. Aguirre:

We and Loretta D. Steele are owners of a four-plex built by Hines Construction Company at the above address. We received letters dated November 29 and December 14, 1979, from you informing us of an alleged violation of the approved grading plan.

Mr. Hines informed us that the building site passed final inspection, and the grading was possibly damaged when the new four-plex adjoining our lot was built on Rainbow Ct. There were truck loads of dirt dumped on our lot during the construction. Hines Construction and we believe that our grading was altered when the grading was done on the adjoining lot. As we recall, before construction began on the Rainbow Ct. four-plex, water did collect on our lot.

This particular building on Rainbow Court was built at too low an elevation---much lower than all surrounding lots---and thereby has created a natural pool for collecting water from all surrounding lots. We feel this is the major cause of the problem.

Because of the time span between inspection and complaint, we believe that our lot should be resurveyed by either the City of Albuquerque or the construction company that built the four-plex on Rainbow Ct. This should tell us what, if anything, needs to be done.

You have told me during our phone conversations that you are unfamiliar with our lot. Has anyone looked at it? Has anyone looked at the other lots in the subdivision? Our lot receives runoff from other lots in the subdivision. We hope you are investigating the problem in the entire area, not just 409 Dorado Ct., S.E.

I would appreciate an early reply so that this matter can be resolved to both our satisfaction.

Sincerely yours,

Keith R. Kasman

Keith R. Kasman

Meta-Ann Kasman

Meta-Ann Kasman

Xc: Loretta D. Steele
409-A Dorado Ct., S.E.

P.S. Attached are copies of your two letters. Note our correct address in Los Alamos.

13208 Mountain Place N.E

Conditional on plans 1-8-80
(adequate protection must be taken to prevent erosion
submit information/detail concerning above item)

~~On 10-23-80 a reinspection was made by our office.~~ The site in question has been landscaped in a terrace like design, there is no configuration of a pond in the rear portion, and at the southwest corner a drain pipe has been installed to drain water onto Casa Hermosa which is illegal

13212 Mountain Place N.E.

~~On 10-23-80 a reinspection was made by our office.~~ From our reinspection We found that there is ponding taking place on the Northwest corner of the building, also water draining along the east boundary line along the east side of the Northeast building was entering in between the two buildings. The pond configuration didn't have a uniform bottom.

13216 Mountain Place N.E.

~~On 10-23-80 a reinspection was made by our office.~~ From our reinspection we found that there is ponding taking place at the Northwest corner of the building, also the rear pond configuration is sloped down towards the far west corner of the lot, pond bottom is not uniform.

13220 Mountain Place N.E.

From our reinspection we found that the pond is also sloped to the far west corner with no uniform pond bottom.

13228 Mountain Place Approved on 10-23-80

1100 Nakomis N.E.
1108 Nakomis N.E.
} no ponding provision on the asphalt as shown on plan

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

MAYOR
David Rusk

January 23, 1980

Mr. William L. Hiss
P. O. Box 68
Palo Alto, California 94302

Dear Mr. Hiss:

This letter is in response to your inquiry dated December 19, 1979 concerning the property at 13208 Mountain Place, N.E., Albuquerque.

As of January 8, 1980, the revised drainage plans for this address have received conditional approval. The condition states that "adequate protection must be taken to prevent erosion adjacent to the structure". This conditional approval will not be removed until a detailed plan of compliance is received by me.

Landscaping and splash pads are a matter for you and the contractor to work out.

Further, this office recommends that you personally ascertain as to whether or not a permanent certificate of occupancy has been issued by the City of Albuquerque before occupying said property. The City office that handles "Certificates of Occupancy" is located at 123 Central Avenue, N. W., Code Administration Division, and the office phone number is 505-766-7529.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely yours,

Fred J. Aguirre
Civil Engineer

FJA:pp

SCHLEGEL AND LEWIS, ARCHITECTS 1620 Central SE
Albuquerque
87106
(505) 247-1529

March 6, 1980

Mr. Richard Heller
Engineering Department
City of Albuquerque
400 Marquette Avenue N. W.
Albuquerque, New Mexico

RECEIVED
MAR 06 1980
CITY ENGINEER

RE: SU-ZONING UPDATE - PANORAMA 96 (96 Units)

As per our telephone conversation of March 5, 1980, we are requesting approval of these changes to the Proposed Panorama 96 Project.

Please find enclosed copies of (1) previously approved plan and (2) proposed change to the previous plan.

In addition, the following table provides comparative information regarding the square footages to be changed.

		PREVIOUS	PROPOSED
1.	Total Heated Area	58,000 S.F.	58,000 S.F.
2.	Bldg. on Ground	29,000 S.F.	41,664 S.F.
3.	Parking Area	49,000 S.F.	44,565 S.F.
4.	Open Area	93,000 S.F.	84,771 S.F.
	TOTAL	229,000 S.F.	229,000 S.F.

Please note a change of 8,229 S.F. from open space to hard surface.

Therefore:

$V = (A)\ (R)\ (C)$

V = Additional Volume
R = Rainfall
C = Difference between C open & C hard

$V = (8229\ S.F.)(\frac{2.8}{12})(60\%) = 1{,}152\ C.F.$

Major Pond Area = 10,000 S.F.

$(\frac{1{,}152}{10{,}000}\ S.F.)(12) = 1.4$ inches

Additional depth to previously proposed major ponding area is 1.4 inches.

APPROVED
CITY OF ALBUQUERQUE
Municipal Development Department

Richard S. Heller
City Engineer

3/12/80
Date

subject to submission of a comprehensive grading plan that conforms to the volumes outlined hereon and the drainage pattern and volumes indicated on the approved drainage report. RSH

SCHLEGEL AND LEWIS, ARCHITECTS 1620 Central SE
Albuquerque
87106
(505) 247-1529

Please contact us for any further information that may be needed.

Your attention to this matter is greatly appreciated.

Sincerely,

Joseph C. Brawley

JCB/lks
enclosure

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

November 14, 1980

Hines Corporation
1520 La Tuna Place S.E.
Albuquerque, N.M. 87123

Gentlemen:

A review of our records indicates that this office has never given a final drainage approval at See attached sheet. Further, I have noted that the building is being occupied without a Certificate of Occupancy which is contrary to Section 306 of the City Building Code.

In order to provide fair, effective enforcement of drainage policy, it is imperative that I, or one of my staff, make a final inspection of all buildings prior to occupancy. Please make immediate arrangements with me to allow for an inspection of the above mentioned property.

If arrangements for an inspection and approval of your site are not completed within 30 days from the above date, this office will no longer process plans from your firm for the purpose of obtaining a building permit. In addition, no other on-site inspections will be made for Certificate of Occupancy requests.

If you have any questions concerning this matter, do not hesitate to call me.

Sincerely,

Fred J. Aguirre

Fred J. Aguirre, P.E.
Civil Engineer

cc - Barbara Stevenson
City Attorney's Office

13219 Mountain Place N.E.
13209 " " "
13232 " " "
13224 " " "
13109 " " "
13223 " " "
13200 " " "

Hines Corporation
1520 LA TUNA PLACE SE, ALBUQUERQUE, NM 87123

November 19, 1980

Schlegel & Lewis, Arch.
1620 Central S.E.
Albuquerque, N.M. 87103

Dear Jim:

We had a meeting today with Fred Aguirre and Bernie Montoya, City Drainage Engineers, concerning the following addresses in Panorama Heights Subdivision:

1100 Nakomis N.E.
1108 Nakomis N.E.
13209 Mountain Place N.E.
13219 Mountain Place N.E.
13109 Mountain Place N.E.
13204 Mountain Place N.E.
13200 Mountain Road N.E.

The city has no record of any approved drainage plans being submitted by your firm for these addresses. Will you please inspect these sites, and determine how the drainage is presently being accomplished. The units were built approximately one year ago, and are now occupied. We need to disturb the present landscaping, etc., as little as possible. You then need to submit these drainage plans to the City of Albuquerque in order for us to obtain a Certificate of Occupancy.

If you have any questions, please call us or the City Drainage Engineer.

Sincerely,

Frank Hines

Frank L. Hines

cc: Fred J. Aguirre

Hines Corporation
1520 LA TUNA PLACE SE. ALBUQUERQUE, NM 87123

November 21, 1980

City of Albuquerque
Public Works Department
P.O.Box 1293
Albuquerque, N.M. 87103

Attn: Mr. Bernie Montoya, Drainage Engineer

Dear Bernie:

Will you please inspect the following sites for drainage, and inform us of your results.

13219 Mountain Place N.E.
13209 Mountain Place N.E.
13232 Mountain Place N.E.
13224 Mountain Place N.E.
13223 Mountain Place N.E.
13109 Mountain Place N.E.

Thank you.

Sincerely,

Frank Hines

Frank L. Hines

PER OUR MEETING of JUNE 26, 1981 CONCERNING DRAINAGE REJECTS FOR THE REFERENCED ADDRESSES, WE ARE ENCLOSING A RECENT FIELD SURVEY SUPERIMPOSED ON THE INDIVIDUALLY APPROVED GRADING PLAN. EXCEPTIONS ARE: 1100 NARCISS & 1108 NARCISS AND 1321 S 4TH PLACE R.F WHICH DID NOT HAVE AN APPROVED REVISED GRADING PLAN. ~~ALSO~~, ALSO INCLUDED IS A DETAILED LIST OF ITEMS AT VARIANCE WITH THE APPROVED PLANS.

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

July 6, 1981

Mr. Frank Hines
Hines Corporation
1520 La Tuna Place S.E.
Albuquerque, N.M. 87123

RE: 13204, 13208, 13212, 13216, 13220, 13224, 13223, 13219 MOUNTAIN PLACE N.E., 13200 MOUNTAIN ROAD N.E. and 1108 & 1100 NAKOMIS DR. N.E.

Dear Mr. Hines:

Per our meeting of June 26, 1981 concerning drainage rejects for the referenced addresses, we are enclosing a list of items at variance with the approved plans. Also included for your reference is a recent survey conducted by this department. This survey is indicated in red on the enclosed plans.

The following alternatives were offered to you to satisfy our drainage requirements. They are:

(1.) Comply with the originally approved grading and drainage plan and have the City inspect and certify or have your Engineer inspect and certify.

(2.) Have your Engineer evaluate the existing conditions at each address for compliance with the approved drainage requirements (drainage requirements in effect on October 1977).

(a) For sites in compliance, submit as-built plans with a letter of certification from the Engineer.

(b) Sites not in compliance, submit a revised grading & drainage plan for our approval and subsequent inspection and certification. Inspection and certification can also be done by your Engineer.

HAND DELIVERED TO MR. HINES ON 7/6/81

Until one of the alternatives is complied with or a bond is executed in the amount of 100% of the renovation construction naming the City as beneficiary, this office will continue to invoke Section 205-2 (Refuse to issue any more permits to the Owner or Contractor until violation is corrected) for violation under Section 306 (Certificate of Occupancy) of the 1978 City of Albuquerque Building Code.

If you have any questions concerning the above, please feel free to contact me.

Very truly yours,

Fred J. Aguirre

Fred J. Aguirre
Civil Engineer, P.E.

FA/tsl

Enclosures

cc: Barbara Stephenson, City Attorneys Office
Charles Wall, M.D.D.
Charles Easterling, Engineering/Hydrology
Drainage File

13204 Mountain Place N.E.

(1) Front pond and contributing drainage basin not built per plan.

13208 Mountain Place N.E.

(1) Pond not built per plan.

(2) Unauthorized pond outlet at the Southwest corner of site.

13212 Mountain Place N.E.

(1) Pond A and contributing drainage basin not built per plan.

13216 Mountain Place N.E.

(1) Pond B and contributing drainage basin not built per plan.

(2) Pond A not built per plan.

13220 Mountain Place N.E.

(1) Pond A and contributing drainage basin not built per plan.

(2) Pond B and contributing drainage basin not built per plan.

13224 Mountain Place N.E.

(1) Pond A and contributing drainage basin not built per plan.

13223 Mountain Place N.E.

(1) Pond B-2 not built per plan.

(2) Drainage basin A not built per plan.
(a) 6" water block not provided.

(3) Pond A-1 not built per plan.

13219 Mountain Place N.E.

(1) Revised plan submitted December 18, 1979, rejected January 8, 1980.

(2) Parking lot pond and contributing drainage basin not built per plan. See originally approved grading plan by Bohannan dated January 1978.

13200 Mountain Road N.E.

(1) Pond B not built per plan.

(2) Pond A and contributing drainage basin not built per plan.

1108 Nakomis Dr. N.E.

(1) Parking lot pond and contributing drainage basin not built per plan. See approved grading plan by Bohannan dated January 1978.

1100 Nakomis Dr. N.E.

(1) Parking lot and contributing drainage basin not built per plan. See approved grading plan by Bohannan dated January 1978.

Fred FYI LRF

ENCHANTMENT ENGINEERING, INC. J 22 - D15

9910 Indian School N. E.
PHONE 294-6888

CIVIL CONSULTING ENGINEERS
J.W. BETTIS, REG. P.E. & L.S.

MAIL TO BOX 11871
ALBUQUERQUE, NEW MEXICO 87192

July 14, 1981

RECEIVED
JUL 20 1981
CITY ENGINEER

City of Albuquerque,
Albuquerque, N. M.

Att: Charles Easterling, Engineer/Hydrology, and to
Fred J. Aguirre. Assistant.

Gentlemen-

At the request of Mr. Frank Hines, I have examined the properties listed in your letter of July 6, 1981 to Mr. Hines.

After careful study concerning drainage from these properties, my conclusions are as follows:
While none of these properties are finished in the exact manner as shown on approved drainage drawings, some should be considered acceptable.

13204 Mountain Place N. E.

Front pond and contributing basin were built as per drawing marked in red by Mr. Aguirre, and adequately handles drainage. I therefore accept method of drainage for this property.

13208 Mountain Place N. E.

All run-off from this property has been diverted to the large pond along the South side of this property, pond being of sufficient volume to contain the run-off. Unauthorized pond outlet as shown on red-marked drawings returned by Mr. Aguirre does not drain into Casa Hermosa. This pipe exiting on to Casa Hermosa drains properties to the South of properties in this report. However drainage discharges from this property thru the block wall onto the property at 1100 Nakomis Dr. N. E., and will be adequately blocked, since pond storage is adequate without the discharge and it would not be possible to provide positive drainage to this pond.

13212 Mountain Place N. E.

Buildings constructed on this property were built about 0.8' lower than plans, however ponding is adequate to contain drainage. Ponds as shown on Mr. Aguirre's marked up plan automatically drain to rear when a depth of about 3" is reached, I therefore recommend acceptance of this property.

ENCHANTMENT ENGINEERING, INC.
9910 Indian School N. E.
PHONE 294-6839
CIVIL CONSULTING ENGINEERS
J.W. BETTIS, REG. P.E. & L.S.
MAIL TO BOX 11571
ALBUQUERQUE, NEW MEXICO 87192

13216 Mountain Place N. E.

This property drains almost wholly to the back yard pond. Pond A with entire back yard area infiltration will adequately contain required run-off. Telephone riser at Southwest corner prevents pond modification. This property is acceptable.

12223 Mountain Place N. E.

This property lacks pond B-2, a portion of this area drains into pond B-1 which overflows into parking area. The remainder of Area B-2 drains around the North side of the buildings and into pond A, which also recieves drainage from the parking area. Pond A discharges to Street as per plan. Water block was not constructed as per plan and if constructed would create a hazzard to cars. Since water reaches pond A from parking lot without any assistance from water block it is therefore not needed. This property is acceptable.

1100 and 1108 Nakomis Drive N. E.

These Two (2) properties are basically the same. Both are Marginally ponded and both have huge grassed areas in front. Drainage control is therefore adequate, and I would accept these two (2) properties.

J.W.Bettis, Reg.P.E.& L.S. N.M. # 3441

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 3441 NEW MEXICO JOHN W. BETTIS

July 28, 1981

Mr. John Bettis, P.E.
Enchantment Engineering, Inc.
9910 Indian School N.E.
Albuquerque, New Mexico 87112

Re: Letter of Certification Dated July 14, 1981

Dear Mr. Bettis:

Your Letter of Certification has been rejected based on the reasons listed on the attached memo from Mr. Aguirre.

Please be advised that the Certification we are requesting is for compliance with the drainage requirements in effect on October of 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977 [redacted]. ~~In other words~~, Your Certification must be based on specific codes, ordinances and requirements, not on a personal evaluation of the sites.

Before this office can accept your Letter of Certification, we must have the information requested by Mr. Aguirre supporting your approval.

If you have any questions concerning the above, please feel free to call me.

Sincerely,

Charles Easterling, P.E.
Principal Assistant City Engineer/Hydrology

CE:FA:gc
7824A
cc f/Reading
Barbara Stephenson, City Attorney's Office
Charles Wall, Municipal Development Department
Marion Cottrell, City Councillor
Richard Heller, City Engineer

CC: Mr. Easterling, Principal Assistant City Engineer/Hydrology

F. J. Aguirre, Civil Engineer P.E.

Mr. Bettis' Letter of Certification Dated July 14, 1981

To summerize my comments below, Mr. Bettis failed to comply with my letter of July 6, 1981, to Mr. Hines requiring that as-built drawings accompany the Engineer's Letter of Certification. Furthermore, ~~he did not indicate or provide us with any~~ supporting data ~~(for the addresses listed below)~~ were provided demonstrating compliance with the drainage requirements in effect on October of 1977 and specified in the approved Panorama Heights Unit 3 Drainage Report dated October, 1977. Therefore, I recommend that his Letter of Certification dated July 14, 1981 be rejected. Also, Mr. Bettis' list of addresses is not complete per my letter of July 6, 1981 to Mr. Hines.

The following are my comments:

✓ 13204 Mountain Place, N.E.

Mr. Bettis' letter of acceptance for this site was not accompanied with an as-built plan or the necessary hydrologic and hydraulic calculations supporting his approval nor did he address the following items in his letter:

1. The elimination of the front pond
2. The expanded drainage basin contributing to the rear pond and the adequacy of said pond for the increased runoff
3. The data to support the agreement of the site with the drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 dated October, 1977.

The following information will be required to verify his approval of this site:

1. As-built grading and drainage plan
2. Outline the contributory drainage areas, including roof areas
3. Flow lines with arrows and spot elevations
4. Calculations showing developed and undeveloped volumetric flow rate
5. Pond volume calculations
6. That pond volume(s) balance with ~~excess~~ contributing ~~to the pond~~ ~~to the drainage basin~~. (NO CORRECTIONS HERE)
7. Positive discharge of ponds with required rate calculations and orfice calculations, if applicable
8. Details of ponds
9. Data supporting the adequacy of the wall structure to support the ponded water if the wall is intended to be used as part of the pond
10. Data to support the agreement of the site with the drainage requirements in effect on October, 1977 and specified in the Panorama Heights Unit 3 Drainage Report dated October 1977.
11. Outline and indicate the 100 year water surface elevation on the drainage plan. POND'S

OVER

NOTE: THE CERTIFICATE OF OCCUPANCY FOR THIS SITE WAS ISSUED THEREFORE, I SUGGEST WE PREPARE A LETTER FOR THE OWNER OUTLINING OUR CONCERNS AND STEPS NECESSARY TO CORRECT THEM.

NOTE: SINCE THE CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED
[redacted] FROM THE HYDROLOGY SECTION),
(WITHOUT OUR APPROVAL) I SUGGEST WE CONTACT THE
OWNER OF THE SITE BY LETTER OUTLINING OUR CONCERNS
AND THE NECESSARY STEPS TO CORRECT THEM.

13208 Mountain Place, N.E.

To begin with, I am not sure if he is certifying this site since there is no mention in his letter specifically stating so.

He indicates in his letter that the existing pond is of sufficient volume to handle the contributing basin runoff. However, he failed to submit the supporting data needed to substantiate his findings. The following information will be required to verify his findings:

1. As-built grading and drainage plan
2. Outline the contributory drainage areas, including roof areas
3. Flow lines with arrows and spot elevations
4. Calculations showing developed and undeveloped volumetric flow rate
5. Pond volume calculations
6. That pond volumes balance with areas contributing to the pond
7. Positive discharge of ponds with required rate calculations and orfice calculations, if applicable
8. Details of ponds
9. Data supporting the adequacy of the wall structure to support the ponded water if the wall is intended to be used as part of the pond
10. Data to support the agreement of the site with the drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977.
11. Outline and indicate the 100 year water surface elevation of the PONDS drainage plan.

In Paragraph 13208 Mountain Place N.E., there appears to be a contradiction. It being;

"Unauthorized pond outlet as shown on red-marked drawings returned by Mr. Aguirre does not drain into Casa Hermosa. This pipe exiting onto Casa Hermosa drains properties to the south of properties in this report."

Also, his last sentence is somewhat confusing. I do not understand the point he is trying to make.

13212 Mountain Place, N.E.

An as-built grading and drainage plan with sufficient grades will be required to substantiate his conclusion that the entire site drains to the rear once a specific elevation is reached. The following items will also be required with the as-built plan:

1. Outline the contributory drainage areas, including roof areas
2. Flow lines with arrows and spot elevations
3. Calculations showing developed and undeveloped volumetric flow rate
4. Pond volume calculations
5. That pond volumes balance with areas contributing to the pond
6. Positive discharge of ponds with required rate calculations and orfice calculations, if applicable
7. Details of ponds

8. Data supporting the adequacy of the wall structure to support the ponded water if the wall is intended to be used as part of the pond
9. Data to support the agreement of the site with the drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977.
10. Outline and indicate the 100 year water surface elevation on the drainage plan. pond(s)

13216 Mountain Place, N.E.

Mr. Bettis' approval of this site failed to address Pond B. The following items will be required to verify his approval of this site:

1. As-built grading and drainage plan
2. Outline the contributory drainage areas, including roof areas
3. Flow lines with arrows and spot elevations
4. Calculations showing developed and undeveloped volumetric flow rate
5. Pond volume calculations
6. That pond volumes balance with areas contributing to the pond
7. Positive discharge of ponds with required rate calculations and orfice calculations, if applicable
8. Details of ponds
9. Data supporting the adequacy of the wall structure to support the ponded water if the wall is intended to be used as part of the pond
10. Data to support the agreement of the site with the drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977.
11. Outline and indicate the 100 year water surface elevation on the drainage plan. pond(s)

13223 Mountain Place, N.E., 1100 and 1108 Nakomis

I assumed he meant 13223 and not 12223 Mountain Place, N.E. as he indicated in he letter.

His approval of the site does not indicate whether or not the as-built conditions satisfy the requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977. The following information will be required to verify his approval of these sites:

1. As-built grading and drainage plan
2. Outline the contributory drainage areas, including roof areas
3. Flow lines with arrows and spot elevations
4. Calculations showing developed and undeveloped volumetric flow rate
5. Pond volume calculations
6. That pond volumes balance with areas contributing to the pond
7. Positive discharge of ponds with required rate calculations and orfice calculations, if applicable
8. Details of ponds
9. Data supporting the adequacy of the wall structure to support the ponded water if the wall is intended to be used as part of the pond
10. Data to support the afreement of the site with the drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977. pond(s)
11. Outline and indicate the 100 year water surface elevation on the drainage plan.

Barbara Stephenson/City Attorney's Office
Charles Hall, Mun. Dev. Dept.

Richard Heller/City Engineer
Marion Cottrell/City Councillor
Reading File

July 28, 1981

Mr. Frank L. Hines, President
Hines Corporation
12800 Lomas N.E. Suite C
Albuquerque, New Mexico

Re: Mr. Bettis' Letter of Certification Dated July 14, 1981

Dear Mr. Hines:

Your Engineer's Letter of Certificaton was rejected for lack of supporting data. Mr. Bettis failed to supply this office with the as-built plans required in my letter of July 6, 1981 to you, nor did he substantiate his approval of this site with the drainage requirements in effect on October of 1977 and specified in the approved Panorama Heights, Unit 3 drainage report (ATTACHED) dated October, 1977. (Attached is a copy of the letter and memo sent to Mr. Bettis detailing our rejects.) Also, Mr. Bettis' letter of certification did not address 13220 Mountain Place, 13224 Mountain Place, 13219 Mountain Place and 13200 Mountain Rd. N.E.

~~We will once again state~~ The City's position regarding the alternatives you have to satisfy drainage requirements and therefore relaxing the penalties being invoked against is:

1. Comply with the originally approved grading and drainage plan and have the City inspect and certify or have your engineer inspect and certify.

2. Have your engineer evaluate the existing conditions at each address for compliance with the approved drainage requirements (drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977).

   a) For sites in compliance, submit as-built plans with a letter of certification from the engineer.

   b) Sites not in compliance submit a revised grading and drainage plan for our approval and subsequent inspection and certification. Inspection and certification can also be done by your engineer.

3. Provide a bond in the amount of 100% of the renovation construction naming the City as beneficiary.

PLEASE BE ADVISED THAT OUR COMMENTS REGARDING 13204 MOUNTAIN PLACE N.E. WILL BE TAKEN UP WITH THE OWNER OF THE LOT.

~~IN MY ABSENCE SUGGESTION~~ ~~AT THE SUGGESTION OF MR ABSENCE WE PLACE~~ BONDED

Until one of the alternatives is satisfied, this office ~~will~~ must continue to invoke Section 205-2 for violations under Section 306 of the 1978 City of Albuquerque Building Code.

If you have any questions concerning the above, please feel free to call me.

Sincerely yours,

Charles M. Easterling, P.E.
Principal Asst. City Engineer/Hydrology

FA/CME/fs
7883A
cc: Barbara Stephenson/City Attorney's Office
Charles Wall, Mun. Dev. Dept.
Marion Cottrell, City Councillor
Richard Heller, City Engineer
Reading File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David P. Rush

August 4, 1981

RECEIVED
AUG 05 1981
CITY ENGINEER

Mr. Frank Hines
Hines Corporation
12800 Lomas, N.E.
Albuquerque, New Mexico 87102

Dear Mr. Hines:

It seems we do in fact have some confusion regarding the drainage requirements for the Mountain Place, N.E. townhouses. The Hydrology Section of the Engineering Division feels strongly they must enforce the drainage requirements in effect as of October, 1977 and specified in the approved Panorama Heights Unit 3 drainage report. They also feel quite strongly that a registered professional engineer must certify that these specific requirements have been met and that the drainage improvements on the properties will function as required by the above mentioned report. Mr. Bettis' personal certification does not accomplish this requirement, as I think you must agree.

To avoid a war of letters and memos, I will suggest that Mr. Bettis bring the as-built drawings with the necessary calculations that will show compliance with the Panorama Heights Unit 3 drainage report to the Engineering Division. With that information, assuming all calculations are correct, and Mr. Bettis' certification, the Hydrology Section will then sign off for the certificate of occupancy and release any restrictions placed on the processing of your plans.

I will assure you the intent and policy of this Department is not to discriminate. With provision of the information referenced above, we can quickly resolve this problem. I will offer my service to arrange the meeting between Mr. Bettis and Mr. Easterling if you desire. Please advise.

Finally, you are correct about the certificate of occupancy for 13204 Mountain Place and that property will be removed from discussion.

Sincerely,

Charles D. Wall, Deputy Director
Municipal Development Department

CDW/nat
cc: Marion Cottrell, President, City Council
Carl P. Rodolph, Director/MDD
Richard S. Heller, City Engineer/MDD
Charles Easterling, Engineering Division/MDD

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

August 10, 1981

Mr. Frank L. Hines, President
Hines Corporation
12800 Lomas N.E., Suite C
Albuquerque, New Mexico

RE: Mr. Bettis' Letter of Certification dated July 14, 1981

Dear Mr. Hines:

Your Engineer's Letter of Certification was rejected for lack of supporting data. Mr. Bettis failed to supply this office with the as-built plans required in Mr. Aguirre's letter of July 6, 1981 to you, nor did he substantiate his approval of this site with the drainage requirements in effect in October of 1977 and specified in the approved Panorama Heights, Unit 3 drainage report (attached) dated October, 1977. (Attached is a copy of the letter and memo sent to Mr. Bettis detailing our rejects.) Also, Mr. Bettis' Letter of Certification did not address 13220 Mountain Place, 13224 Mountain Place, 13219 Mountain Place and 13200 Mountain Road N.E.

Please be advised that our comments regarding 13204 Mountain Place will be taken up with the owner of the lot.

The City's position regarding the alternatives you have to satisfy approved drainage requirements and therefore relaxing the penalties being invoked is:

1. comply with the originally approved grading and drainage plan and have the City inspect and certify or have your engineer inspect and certify.
2. have your engineer evaluate the existing conditions at each address for compliance with the approved drainage requirements (drainage requirements in effect on October, 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated October, 1977).

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

a. For sites in compliance, submit as-built plans with a Letter of Certification from the engineer.
b. Sites not in compliance submit a revised grading and drainage plan for our approval and subsequent inspection and certification. If desired, inspection and certification can be done by your engineer.

3. Provide a bond in the amount of 100% of the renovation construction naming the City as beneficiary.

Until one of the alternatives is satisfied, this office must continue to invoke Section 205-2 for violations under Section 306 of the 1978 City of Albuquerque Building Code.

If your have any questions concerning the above, please feel free to call me.

Sincerely,

Charles M. Easterling, P.E.
Principal Assistant City Engineer/Hydrology

CME:FA:gc
7999A
cc Barbara Stephenson, City Attorney's Office
Charles Wall, Municipal Development Department
Marion Cottrell, City Councillor
Richard Heller, City Engineer
f/Reading

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

August 10, 1981

Mr. John Bettis, P.E.
Enchantment Engineering, Inc.
9910 Indian School N.E.
Albuquerque, New Mexico 87112

Re: Letter of Certification Dated July 14, 1981

Dear Mr. Bettis:

Your Letter of Certification has been rejected based on the reasons listed on the attached memo from Mr. Aguirre.

Please be advised that the Certification we are requesting is for compliance with the drainage requirements in effect on October of 1977 and specified in the approved Panorama Heights, Unit 3 Drainage Report dated (attached) October, 1977. Your Certification must be based on specific codes, ordinances and requirements, not on a personal evaluation of the sites.

Before this office can accept your Letter of Certification, we must have the information requested by Mr. Aguirre supporting your approval.

If you have any questions concerning the above, please feel free to call me.

Sincerely,

Charles Easterling, P.E.
Principal Assistant City Engineer/Hydrology

CE:FA:gc
7824A
cc f/Reading
Barbara Stephenson, City Attorney's Office
Charles Wall, Municipal Development Department
Marion Cottrell, City Councillor
Richard Heller, City Engineer

ENCHANTMENT ENGINEERING, INC.

9910 Indian School N. E.
PHONE 294-8551

CIVIL CONSULTING ENGINEERS
J.W. BETTIS, REG. P.E. & L.S.

MAIL TO BOX 11871
ALBUQUERQUE, NEW MEXICO 87192

November 2, 1981

R. S. Heller, City Engineer,
Municipal Development Department,
City of Albuquerque,
Albuquerque, New Mexico.

Att: Fred J. Aguirre

Revisions to drainage on the following properties as per revised drainage plan dated October 1981, has now been completed and meets or exceeds the requirements of the above drainage plan.

Properties completed to-dateare as follows:

13212, 13216, 13220, 13224, 13223 and 13219 Mountain Place N. E., and 1100 and 1108 Nakomis Drive N. E.

J.W.Bettis,Reg.P.E.& L.S. N.M. # 3441

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR
NO. 3441
NEW MEXICO
JOHN W. BETTIS

ENCHANTMENT ENGINEERING, INC.
CIVIL CONSULTING ENGINEERS
J.W. BETTIS, REG. P.E. & L.S.

1517 EUBANK N.E.
PHONE 294-8859

MAIL TO BOX 11571
ALBUQUERQUE, NEW MEXICO 87192

November 2, 1981

R.S.Heller, City Engineer
Municipal Development Department
City of Albuquerque, New Mexico

Attn: Fred Aguirre

Revisions to drainage on the following property per the revised drainage plan dated October 1981 has now been completed and meets or exceeds the requirements of the aforementioned drainage plan.

Property address: 13200 Mountain Road, N.E.

J. W. Bettis
Reg. P.E. & L.S. #3441

December 8, 1981

Mr. Frank Hines, President
Hines Corporation
12800 Lomas Boulevard, N.E.
Albuquerque, New Mexico 87112

RE: 13208 Mountain Place, N.E.

Dear Frank:

After reviewing your situation regarding drainage requirements at 13208 Mountain Place N.E., I find I may be able to relax some ponding regulations providing that you obtain a private drainage easement. The easement must run with the land and ~~designed~~ to convey the 100 yr. peak discharge from the referenced site into the City's right-of-way.

In order to demonstrate compliance with the alternative, there are some necessary construction details and supporting data which must be reviewed by me. Please have your engineer contact me so that I may discuss the needed items with him.

I am sure we can work something out and I will be looking forward to meeting with your representative.

Sincerely,

Fred J. Aguirre, P.E.
Civil Engineer/Hydrology

cc: Charles Wall, Municipal Development Department
Barbara Stephenson, City Attorney's Office
Charles Easterling, Engineering Division/MDD
Drainage File
Reading File

Fred -
Please put this in the form of a memo to me and at least mention some of the other alternatives given to Frank. I will then write Frank and explain the options w/ some help from Barbara.
Thanks
Charlie
12/8/81

Hines Corporation
12800 LOMAS BLVD. NE, ALBUQUERQUE, NM 87112
LICENSE NO. 11891
(505) 298-4444

December 15, 1981

City of Albuquerque
P.O. Box 1293
Albuquerque, N.M. 87103

Attn: Charles Wall

Dear Charlie,

We are still trying to get a building permit for a four-plex at 1815 Mary Ellen NE.

Our architect originally submitted the plans for a permit in May 1981, but Mr. Fred Aguirre would not approve the drainage until the problems on Mountain Place were resolved.

Mr. Larry Titman informed me that since the plans were not approved within the six month limitation, they have been discarded and we must start over again.

This of course means another plan check fee for us, plus the time required to re-check the plans. I guess the question is, is Mr. Aguirre going to approve the drainage plans this time since the prior drainage problems are solved.

Will you let me know as soon as possible so we can start the process again.

Best Holiday Wishes.

Sincerely,

Frank L. Hines

cc:
Schlegel & Lewis Architects

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

January 5, 1982

Mr. Frank L. Hines, President
Hines Corp.
12800 Lomas Blvd. NE
Albuquerque, N. M. 87112

RE: Your December 15, 1981
communication:
1815 Mary Ellen NE

Dear Frank:

I have reviewed the status of the referenced subject. The following are my findings and suggestions on alternative routes which you may want to pursue.

The new set of plans for the subject four-plex was submitted on December 17, 1981 and is currently going through the process. It has received approval from Refuse, Traffic Engineering and Mechanical. There are minor rejects from Electrical, Plumbing Code, Zoning and Fire. A grading plan has not yet been submitted for review. I am confident that your architect will be able to resolve these items with minimal delay.

In reference to the "prior drainage problems," while we appreciate the fact that the majority have been corrected, there remains one significant problem which must be addressed. I am referring to 13208 Mountain Place NE. The available options to correct the drainage problem at this site are:

1. Comply with the originally approved drainage plan.

2. Submit a different plan which complies with the minimal requirements.

3. We would be willing to relax some ponding regulations provided that you obtain a private drainage easement. The easement must run with the land and be designed to convey the 100 year peak discharge from the site into the City's right-of-way.

Should you decide to pursue the third option, there are some necessary construction details and supporting data which have to be reviewed by Fred Aguirre. Please ask your engineer to contact Fred and discuss the needed items directly with him. While we are willing to work with you or your representatives to achieve an appropriate solution to this last remaining obstacle, I am sure that you appreciate the fact that, as public officials, we cannot close our eyes to a situation which may adversely impact this site as well as adjacent properties.

We are not going to withold a building permit on the four-plex at 1815 Mary Ellen NE until drainage requirements have been fully addressed for 13208 Mountain Place NE. However, I do want to reiterate your personal commitment to us that you are going to address this issue in a timely fashion. For the purpose of reaching a clear understanding on this matter, I believe 45 days from the receipt of this letter is an adequate and equitable time frame for you to resolve the drainage problem at 13208 Mountain Place NE.

I hope the above adequately addresses your concerns. Should you have further questions, please feel free to contact me or Chuck Easterling again.

Sincerely,

Charles D. Wall
Deputy Director/MDD

CW:rec

cc: Chuck Easterling
Fred Aguirre
Barbara Stephenson
Drainage file
Carl Rodolph

RECEIVED AUG 24 1982 CITY ENGINEER

634

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE REF. NO._____

August 23, 1982

TO: Richard S. Heller, City Engineer, MDD/ENG

FROM: Fabrizio Bertoletti, Acting Director, MDD/ADM

SUBJECT: 1100 NAKOMIS, N. E., 13208 MOUNTAIN PL., N. E. -- DRAINAGE PROBLEM--MR. FRANK HINES--

Attached is a copy of the surveys of the two properties in question, as well as a copy of the Drainage Easement Agreement.

As per Mr. Rodolph's instructions, please provide a survey to establish spot elevations and a design of the proposed drainage improvements. We have permission from both property owners to enter their properties for surveying purposes.

The drainage improvements proposed and agreed to by Mr. Frank Hines are basically as follows:

1. At the SW corner of Lot 29 design a catch basin 2' X 2' with grate.
2. Connect catch basin to 6" P.V.C. under block wall along W property line of Lot 25.
3. Continue with 6" P.V.C., buried to appropriate depth, directly west with eventual discharge onto City R.O.W. of Nakomis Drive. (Pipe should, of course, go under the sidewalk on Nakomis.)

to large to go thru curb.

Please give me a time estimate for this project and send me the design upon completion. Should you require further information to accomplish the above, please let me know as soon as possible.

Enclosures

FB/mg

cc: Carl Rodolph, Director, MDD
Chuck Easterling, Hydrology

RSH	RHS	ADM	
HRO		SUR	
CDS		COUN	
DES		SEC	
INSP		FILE	
HYDRO		RETURN	

Go!

MUNICIPAL DEVELOPMENT DEPARTMENT

REQUEST FOR SURVEY — ENGINEERING DIVISION — JOB NUMBER _____

REQUESTED BY:

CITY ENGINEER	☐	WATER RESOURCES	☐
ASST. CITY ENGINEER-DESIGN	☐	DEVELOPER	☐
ASSOC. DESIGN ENGINEER	☐	Hydrology	✓

PURPOSE OF SURVEY:

STREET DESIGN(CURB & GUTTER)	☐	WATER LINE EXTENSION	☐
SANITARY SEWER EXTENSION	☐	RIGHT OF-WAY LOCATION	☐
STORM SEWER EXTENSION	☐	PUBLIC COMPLAINT	☐
SANITARY SEWER REPLACEMENT	☐	catchbasin design	✓

TYPE OF INFORMATION REQUIRED:

PROFILE	✓	MH RIM-INVERT ELEVATION	☐
CROSS SECTION	☐	FLOOR ELEVATION	☐
TOPOGRAPHIC	☐	T.C. & FL ELEVATION	✓
RIGHT-OF-WAY	☐	LINE AND GRADE	☐
PROPERTY SURVEY	☐	STORM INLET INFO	☐
PLANE TABLE	☐	TOP FOOTING (BLOCK WALL)	☐
_____	☐	_____	☐

LOCATION DATA: Nakomis & Mountain Rd.

SURVEYOR INSTRUCTION: See project plan for more detail need a profile starting at the Flowline of Nakomis T.C. and then every 25 feet unless breaks are closer. Need profile on centerline of easement. 275 ± feet going east

CONTRACTOR:

WORK DATA ATTACHED

FIELD BOOK	Hydrology #@ 1	PROJECT PLANS	✓
SUBDIVISION (PLATS)		RIGHT-OF-WAY MAPS	
BENCH MARKS (ACS)	3J22 at Longs & Chelwood 2K22	WORK SKETCHES	

Barrie J Montoya — REQUESTOR SIGNATURE — 8-26-82 — DATE

APPROVED: CHIEF SURVEYOR — DATE

SURVEY WORK DATA:

DESIGN SURVEYS				CONSTRUCTION SURVEYS			
PROFILE	278'	L.F. 4	HRS.	C & G	L.F.		HRS.
X-SECT		SQ. FT.	HRS.	SEWER	L.F.		HRS.
TOPO		SQ. FT.	HRS.	WATER	L.F.		HRS.
MISC.			HRS.	MISC.			HRS.

SURVEYOR'S COMMENTS: ~~Need~~ ELEV Rad 1 MILE FROM 3-J22 TO JOB SITE.

Dig down to footing on all wall crossings to determine elevation at bottom

[signature] — SURVEYOR — 8-30-82 — DATE

BOOK No.

Hydrology # 1

℄ PROFILE
ON 10' EASEMENT
@ NAKOMIS &
MOUNTAIN Rd.

8-30-82

P.C 6 Archuleta
π A. GONZALES
Θ O. CHAVEZ
G M. ABEYTA.

STA	+	HI INST	−	ELEV
				83.98
	1.58	85.46		
TP #14			12.40	73.06
	3.43	76.49		
B.M			11.63	64.86

REMARKS

STA	+	HI INT	−	ELEV	REMARKS
		51.95			
TP#8				12 50 39.45	
	0.55	40.00			
TP#9				11.91 28.09	
	1.37	29.46			
TP#10				10.04 19.42	
	0.86	20.28			
TP#11				12.33 07.95	
	1.07	09.02			
TP#12				12.81 5696.21	
	0.12	96 33			
TP#13				12.45 83.88	

STA +	HI 44.21	HT —	ELEV	REMARKS
1+00		4.2	40.01	
1+25		4.1	40.71	
1+44		2.26	42.45	TOP FOOTING WALL
TP#7		2.36	42.45	
	9.50 51.95			
1+45		7.80	44.15	
1+75		6.7	45.25	
2+00		6.0	45.95	
2+25		5.2	46.75	
2+50		4.6	47.35	
2+78		3.34	48.61	TOP FOOTING WALL

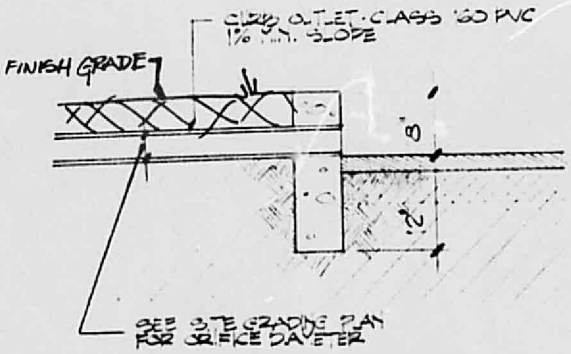
STA +	HI INT —	ELEV	REMARKS
	3236		
TP#6		0.40 3196	
	12 85 4421		
0+00	12 35	5132.46	EA:7 ft ON & EASEMENT
	11.70	5133.11	T.C
0+04.7	11.41	5133.40	Edge of Sidewalk
0+10	9.8	5135.01	
0+22.5	8.7	5136.11	
0+32	5.7	5139.11	
0+50	5.3	5139.51	
0+75	5.2	5139.61	

STA	+	HI	INT	−	ELEV	REMARKS
					564.77	BM # 3-522
		12.95	77.72			
TP #1				0.68	77.04	
		12.03	89.07			
TP #2				0.13	88.94	
		13.23	570.17			
TP #3				0.43	570.74	
		12.41	14.15			
TP #4				0.23	13.92	
		11.53	25.45			
TP #5				2.80	22.65	
		9.71	32.36			

℄ PROFILE
ON 10' EASEMENT
@ NAKOMIS &
MOUNTAIN Rd.

8-30-82

P.C 6 ARCHUNDÉ
π A. GONZALES
θ O. CHAVEZ
θ M. ABEYTA.



DETAIL CURB OUTLET

STATE OF NEW MEXICO
John P. Schlegel
No. 218
REGISTERED ARCHITECTS

DRAINAGE REPORT
FOR
PANORAMA HEIGHTS
PARCEL 3
ZONE ATLAS SHEET J-22

OCTOBER 1977

PREPARED FOR

JACK M. CLIFFORD AND COMPANY
2201 SAN PEDRO DR., N.E.
ALBUQUERQUE, NEW MEXICO 87110

PREPARED BY

BOHANNAN-HUSTON, INC.
4125 CARLISLE BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO 87107

Raymond W. Macy

Raymond W. Macy, P. E.
N.M.P.E. No. 6414

TABLE OF CONTENTS

DRAINAGE REPORT
FOR
PANORAMA HEIGHTS

PURPOSE

The purpose of this report is to determine the undeveloped and developed runoff generated by a 100-year frequency storm falling within and upland from Panorama Heights. Recommendations for development are presented whenever drainage is a necessary consideration.

PROJECT LOCATION AND DESCRIPTION

Panorama Heights lies approximately 1,300 feet north of Lomas Boulevard and 1,100 feet south of Indian School Road. It is bordered on the east by Tramway Boulevard and on the west by Nakomis.

The area contains nearly 14 acres and has sparse amounts of native grass. The natural terrain slopes from east to west at an approximate grade of 5%.

Panorama Heights will be developed as a multi-family housing area. The east end, adjacent to Tramway, will contain an apartment complex, while the central and west end will be characterized by tri-plex and four-plex units.

HYDROLOGY

Peak runoff rates were determined using the rational formula for a 100-year frequency storm. Rainfall intensities were selected from curves presented in the Master Plan of Drainage, 1963, for the Albuquerque area. Detention basin

volume requirements were based on the modified rational method analysis as presented in Practices in Dentention of Urban Storm Water Runoff, produced by the American Public Works Association. Calculations are provided in the Appendix.

EXISTING DRAINAGE

A. East of Tramway Boulevard

Runoff originating within and east of the Todd Subdivision (Zone Atlas Sheet J-23) concentrates at the intersection of Jewett Drive and Durant Avenue. During the 100-year storm approximately 190 CFS is anticipated at this intersection. The runoff is expected to divide, with nearly 100 CFS continuing west to Tramway Boulevard and the remaining portion moving south on Jewett Drive. Another basin exists between the north edge of the Todd Subdivision and Indian School Road. Approximately 50 CFS will leave this basin, cross Tramway Boulevard near Indian School Road then enter a recently constructed earth channel which parallels the west edge of Tramway Boulevard. Runoff in this channel continues to the southeast corner of Panorama Heights where it day-lights into an existing arroyo which continues west across open land.

B. North of Panorama Heights

Two Parcels of land affect the drainage. One parcel, near the southwest corner of Tramway Boulevard and Indian School Road is presently being developed and will be known as the Sunburst Apartments. Nine CFS leaves this area and flows south across an undeveloped parcel toward Panorama Heights. The undeveloped parcel contains approximately six acres and con-

tributes another eleven CFS to Panorama Heights. Part of this runoff enters Panorama Heights through a natural arroyo while the rest drains to the west edge of the six acre parcel and combines with runoff from the Sunburst Apartments before entering Panorama Heights.

C. Within Panorama Heights

Runoff originating within Panorama Heights presently exits at the south property line onto undeveloped land and at the west boundary onto Nakomis.

PROPOSED DRAINAGE AFTER DEVELOPMENT

The Tramway Channel which is planned for construction along the east side of Tramway Boulevard will eliminate runoff from the east. Until the channel is constructed an interim solution is proposed: Construct a frontage road along the east edge of Panorama Heights (This will be necessary for access to apartments) and move the existing earth channel at this location to the east edge of the Frontage Road. Provide a temporary drainage easement along the south edge of Panorama Heights to intercept runoff in the relocated earth channel and carry it west to a point where the natural arroyo leaves the south edge of Panorama Heights.

It seems apparent from discussions with the architect that the six acres of land immediately north of Panorama Heights will be under construction within the next year. Development of this property will allow its runoff to drain to the western edge where it will be collected in a 10' wide drainage easement and carried south toward Panorama Heights.

The existing arroyo which crosses this property and enters Panorama Heights will be completely abandoned. In anticipation of this scheme, a drainage easement will be provided at the north edge of Panorama Heights to meet the drainage easement in the adjacent property.

It is possible that Panorama Heights will be developed before, after, or concurrently with the adjacent north six acres. In the event of either of the last two, no special measures are required (other than the drainage easement) for the construction of Panorama Heights. However, if Panorama Heights is developed before the north six acres then two problems must be overcome. First is to divert runoff traveling in the natural arroyo within the north six acres to where the drainage easement will be located in Panorama Heights. This could be accomplished by obtaining permission from the owner of the six acre parcel to build a temporary dike on his property to divert the water, or as an alternative, the water could be allowed to enter Panorama Heights on a lot which would be left vacant until the north six acres is developed.

The second problem concerns silt removal of the upland flow. No matter whether the upland flow enters Panorama Heights at one location or two, it will be necessary to remove the silt carried by the upland flow. This will require construction of a temporary desilting basin, or basins at the north edge of Panorama Heights. As soon as the north six acre parcel is developed the basin(s) may be removed, a permanent drainage easement constructed and the lot(s) developed.

As stated in the AMAFCA drainage resolution 1972-2, development should not increase the rate of runoff. In accordance with this, basin detention, permanent back yard retention and parking lot detention will be used to control runoff from the property.

Basin detention will be used in the northeast corner of Panorama Heights to control runoff from four apartment sites. This area contains approximately 2.6 acres. The detention basin will be designed to contain all runoff coming to it while releasing 2.0 CFS through an outlet pipe to the street gutter. The spillway, consisting of concrete curbs and a paved invert, will begin on the crest of the basin and end at the street curb. A pedestrian crossing will be provided which allows runoff from the spillway to pass beneath the sidewalk. The spillway is used as a safety measure only in the event that the outlet pipe should become clogged.

Retention ponding will be used on the thirteen lots indicated on Plate IV . Of these thirteen lots, two will have apartment units. Rear yard retention ponding will contain the runoff from the remaining eleven lots. Parking lot runoff from five of these lots will flow directly onto the street, while six of these lots will have parking lot detention as well as rear yard ponding.

All the remaining lots will use parking lot detention with controlled discharge to the street. Plate IV and the Appendix show discharges of 0.30 CFS for Unit Type "A" and 0.20 CFS for Unit Type "B".

All the runoff from the lots will be collected on the streets on the parcel and will be dischared onto Nakomis.

RECOMMENDATIONS

1. Construct a Frontage Road along the east edge of the property. Divert the existing drainage channel at this location to the east edge of the Frontage Road.

2. Provide a temporary drainage easement at the south-east corner of the parcel to receive flows from the diverted channel (Item 1, Above). Continue the temporary easement westward until it joins the natural arroyo which moves south, away from Panorama Heights.

3. Provide temporary access to Tramway Boulevard across the diverted channel (Item 1, Above). Utilize culverts under the crossing.

4. Provide a ten foot drainage easement at the north edge of the parcel to coincide with the drainage easement from the adjacent north six acres.

5. If Panorama Heights is developed before the north six acres:

   a. Receive permission from adjacent property owner to divert upland waters to the drainage easement (Item 4 Above). Place a temporary desilting basin within Panorama Heights to remove the silt before allowing the upland runoff to discharge onto the internal street system. Remove basin and replace with concrete lined easement upon development of the north six acres.

b. In the event that owner's permission (Item 5.a. Above) is not granted, provide temporary desilting basins at the location of the drainage easement and where the natural arroyo enters the north edge of the property.

6. Provide drainage controls within Panorama Heights as outlined in this report.

UNDEVELOPED RUNOFF (PANORAMA HEIGHTS)

Length of watercourse = 1255 ft = L

Slope of basin in percent = 5.1% = S

Ground factor = 1.8 (poor vegetation) = B

Time of Concentration = Tc

$Tc = \log^{-1}[.3641(B) + .3854(\log L) - .197(\log S) - .3613]$

$Tc = \log^{-1}[.3641(1.8) + .3854(\log 1255) - .197(\log 5.1) - .3613]$

Tc = 22.3 minutes

$\text{Intensity} = I = \frac{189}{Tc + 25} = \frac{189}{22.3 + 25} = 4.0$ inches/hr

Q = CIA

where Q = flow in CFS

I = rainfall intensity

C = runoff factor

A = Area in acres

C = 0.35, I = 4.0, A ≅ 14.0 acres (all areas planimetered)

Q = (.35)(4.0)(14.0) = 19.6 CFS

PROJECT NAME PANORAMA HEIGHTS SHEET 1 OF

PROJECT 77-120 BY LH DATE 6-16-77

SUBJECT DRAINAGE REPORT CH'D DATE

UNDEVELOPED RUNOFF OF AREA TO BE DETAINED [8 APT BLDGS IN N.E. CORNER OF PARCEL]

Area = 114,950 ft² = 2.6 Acres = A

L = 360 ft

S = 5.1%

B = 1.8

$T_c = \log^{-1}[.3641(1.8) + .3854(\log 360) - .197(\log 5.1) - .3613]$

T_c = 13.8 minutes

$I = \frac{189}{13.8 + 25}$ = 4.87 inches/hour

Q = CIA

C = 0.35, I = 4.87, A = 2.6

Q = (.35)(4.87)(2.6) = 4.4 CFS

DEVELOPED RUNOFF OF AREA TO BE DETAINED - FOR COMPUTATIONS IN TABLE 1

L = 330 ft

S = 5.1%

B = .77

$T_c = \log^{-1}[.3641(.77) + .3854(\log 330) - .197(\log 5.1) - .3613]$

T_c = 5.6 minutes → use 10 min

$I = \frac{189}{10 + 25}$ = 5.4 inches/hour

runoff factor:

paving area = 59,840 ft² = 52%

landscaping area = 114950 - 59840 = 55,110 ft² = 48%

C = (.52)(.95) + (.48)(.35) = 0.66

Q = CIA

C = 0.66, I = 5.4, A = 2.6

Q = (.66)(5.4)(2.6) = 9.3 CFS

Pond to be designed to limit runoff to 2 CFS

(SEE TABLE 1)

PROJECT NAME PANORAMA HEIGHTS SHEET 2 OF

PROJECT NO. 77-120 BY LH DATE 6-16-77

SUBJECT DRAINAGE REPORT CH'D DATE

TABLE I

MAXIMUM VOLUME OF DETENTION

$I = \frac{189}{Tc + 25}$ $Q = CIA$ $C = .66$ (runoff factor)

$A = 2.6$ acres (area)

Storm Duration (Tc)	Intensity (I)	Runoff Rate (Q)	Volume of Runoff (Q)(Tc)(60)	Discharge Rate (Qout)	Discharge Volume (Qout)(Tc)(60)	Δ volume
10 min	5.4 in/hr	9.3 CFS	5580 cf	2 cfs	1200 CF	4380 CF
15	4.73	8.12	7300	2	1800	5500
20	4.20	7.21	8650	2	2400	6250
25	3.78	6.49	9750	2	3000	6750
30	3.44	5.90	10600	2	3600	7000
35	3.15	5.41	11350	2	4200	7150
40	2.91	4.99	12000	2	4800	7200 *
45	2.70	4.63	12500	2	5400	7100
50	2.52	4.32	12960	2	6000	6960

Volume to be stored on site at peak = 7200 CF

PROJECT NAME PANORAMA HEIGHTS SHEET 3 OF

PROJECT NO. 77-120 BY LH DATE 6-16-77

SUBJECT DRAINAGE REPORT CH'D DATE

ORIFICE SIZING FOR OCTAGONAL AREA

$Q = CA\sqrt{2gh}$

where C = orifice coefficient = 0.6
A = area required
g = gravitational constant = 32.2 ft/sec²
h = head = 1.1 ft
Q = runoff = 2 CFS

$2 = (0.6)(A)\sqrt{(2)(32.2)(1.1)}$

$A = 0.4$ ft

for a pipe:

$A = \pi r^2$

$r = \sqrt{\frac{A}{\pi}} = \sqrt{\frac{0.4}{\pi}} = .36\text{ ft} = 4.3''$

diameter of orifice = 8.6"

SPILLWAY CALCULATIONS

$Q = CLH^{3/2}$

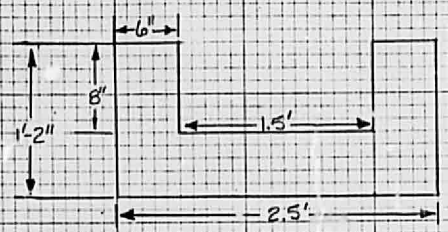
where C = spillway coefficient = 2.63
L = width of spillway
H = height of spillway = 6" = 0.62'
Q = runoff = 9.3 cfs

$9.3 = (2.63)(L)(.50)^{3/2}$

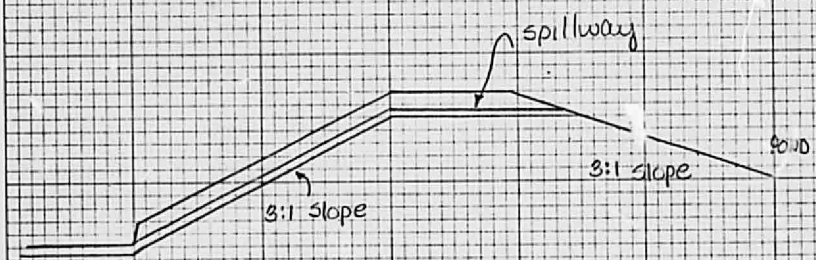
$L = 10.0'$

PROJECT NAME PANORAMA HEIGHTS SHEET 4 OF
PROJECT NO. 77-120 BY LH DATE 6-16-77
SUBJECT DRAINAGE REPORT CH'D DATE

SPILLWAY DETAILS



STANDARD CURB AND GUTTER

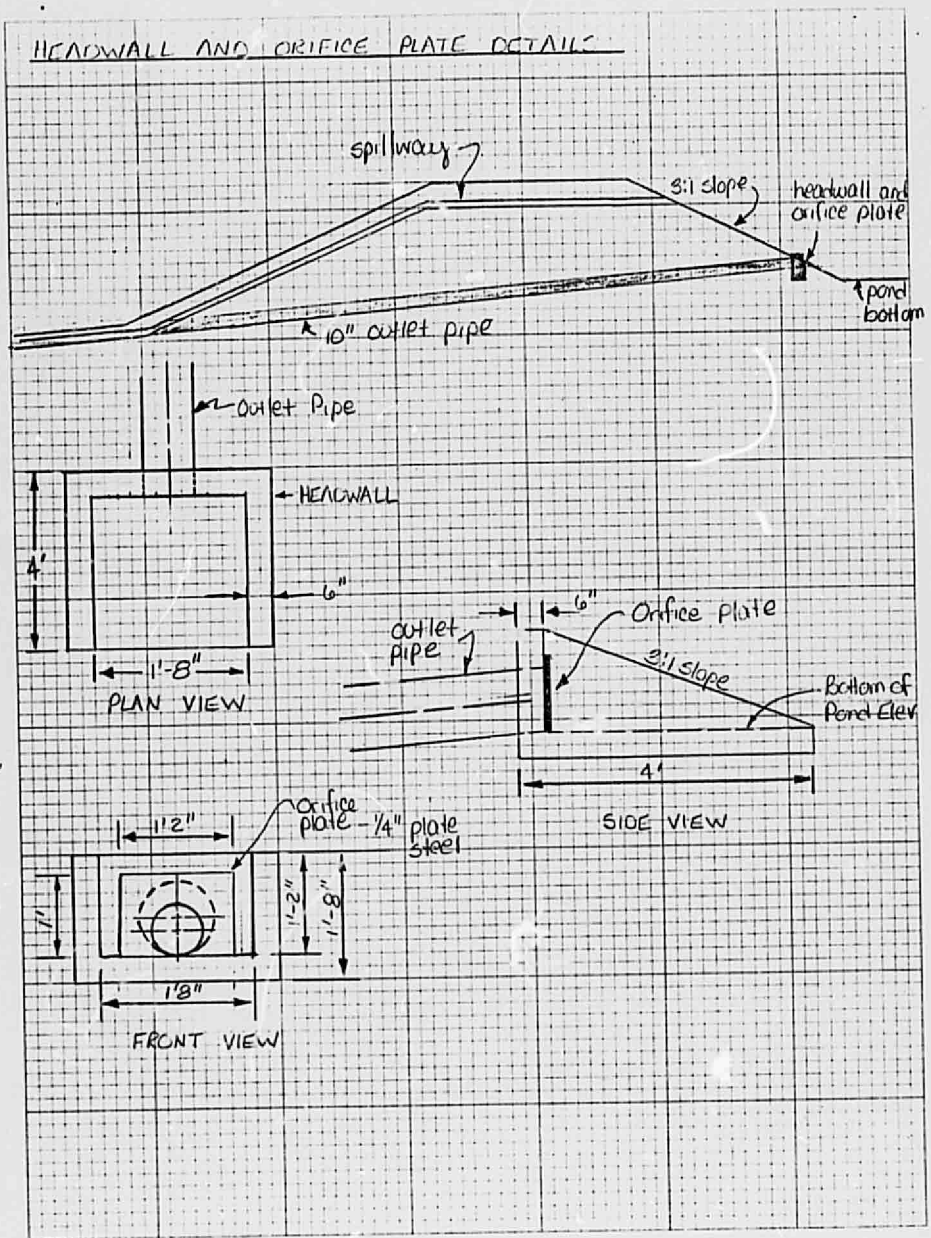


PROJECT NAME PANORAMA HEIGHTS SHEET 5 OF

PROJECT NO. 77-120 BY LH DATE 6-20-77

SUBJECT DRAINAGE REPORT CH'D DATE

HEADWALL AND ORIFICE PLATE DETAILS



PROJECT NAME PANORAMA HEIGHTS SHEET 6 OF

PROJECT NO. 77-120 BY LH DATE 6-20-77

SUBJEC: DRAINAGE REPORT CH'D DATE

DEVELOPED RUNOFF

Runoff from the road:

Length of street = 1680 ft
Width of street = 32 ft
} area = 1680' x 32' = 53760 ft²

culdesac area = 5280 ft²
driveway area = 3300 ft²
sidewalk area = 14,400 ft²
landscaping area = 14,700 ft²

Total pavement area = 76,740 ft²
Total landscaping area = 14,700 ft²
} total area = 91,440 ft²

Runoff factor

pavement 84% C = 0.95
landscaping 16% C = 0.35

$C = (0.95)(0.84) + (0.35)(0.16) = 0.85$

$L = 1680'$

$S = 3.8\%$

$B = 0.77$

$T_c = \log^{-1}[.3641(.77) + .3854(\log 1680) - .197(\log 3.8) - .361]$

$T_c = 11.2$ minutes

$I = \frac{189}{25 + 11.2} = 5.2$

$Q = CIA$

$C = 0.85 \quad I = 5.2 \quad A = 91,440\ ft^2 = 2.1\ acres$

$Q = (0.85)(5.2)(2.1)$

$Q = 9.3\ cfs$

PROJECT NAME	Panorama Heights	SHEET 7	OF
PROJECT NO.	77-120	BY LH	DATE 8-4-77
SUBJECT	Drainage Report	CH'D	DATE

13 lots have backyard ponding. Two have total retention with no runoff. The remaining 11 have runoff from the parking lots with 6 having controlled discharge. The 5 left have a total direct runoff of 1.23cfs

Total direct runoff = 9.3 cfs from the road
+ 2.0 cfs from the detention basin
+ 1.23 cfs from 6 parking lots
12.5 CFS

undeveloped runoff = 19.6 cfs

difference = 19.6 - 12.5 = 7.1 cfs : can runoff the remaining lots

of the remaining lots
15 type A
12 type B
1.5B = A

$15(1.5B) + 12B = 7.1$ cfs
$22.5B + 12B = 7.1$ cfs
$34.5B = 7.1$ cfs
$B = 0.20$ cfs the runoff each type B unit can discharge
$12B = 2.4$ cfs
7.1 cfs - 2.4 = 4.7 cfs remaining
$\frac{4.7}{15A} = 0.30$ cfs the runoff for each type A unit

PROJECT NAME Panorama Heights SHEET 8 OF
PROJECT NO. 77-120 BY LH DATE 8-4-77
SUBJECT Drainage Report CH'D DATE

Total developed runoff = 12.5 cfs direct runoff

15(0.3) cfs from type A unit

12(0.2) cfs from type B unit

19.6 cfs

PARKING LOT DETENTION CALCULATIONS

TYPICAL TYPE A UNIT

Area = 13,500 ft² = 0.31 acres

parking = 2900 ft²
roof = 3000 ft²
sidewalk = 900 ft²
} total pavement = 6800 ft² = 50.4%

landscaping = 13500 - 6800 = 6700 = 49.6%

Runoff factor:

C = (0.95)(0.504) + (0.35)(0.496)

C = 0.65

TYPICAL TYPE B UNIT

Area = 6600 ft² = 0.15 acres

parking = 1820 ft²
roof = 1500 ft²
sidewalk = 180 ft²
} total pavement = 3500 = 53%

landscaping = 6600 - 3500 = 3100 ft² = 47%

Runoff factor:

C = (0.95X0.53) + (0.35)(0.47)

C = 0.67

PROJECT NAME Panorama Heights SHEET 9 OF

PROJECT NO. 77-120 BY LH DATE 8-4-77

SUBJECT Drainage Report CH'D DATE

Maximum Volume to be Stored in Parking Lots

100 year Storm Duration (min)	Intensity (in/hr)	Peak Flow Rate (cfs)	Storm Runoff Volume (ft^3)	Discharge Rate (cfs)	Release Volume (ft^3)	Required Storage Volume (ft^3)
TYPE A	C = 0.65	A = 0.31 acres				
10	5.40	1.09	650	0.30	180	470
15	4.73	0.95	860	0.30	270	590
20	4.20	0.85	1015	0.30	360	655
25	3.78	0.76	1140	0.30	450	690
30	3.44	0.69	1250	0.30	540	710 *
35	3.15	0.63	1330	0.30	630	700
TYPE B	C = 0.67	A = 0.15 acres				
10	5.40	0.54	325	0.20	120	205
15	4.73	0.48	428	0.20	180	248
20	4.20	0.42	506	0.20	240	266
25	3.78	0.38	570	0.20	300	270 *
30	3.44	0.34	622	0.20	360	262

Maximum storage volume for type A parking lot = 710 ft^3

Maximum storage volume for type B parking lot = 270 ft^3

Orifice sizing for parking lot detention:

$Q = CA\sqrt{2gh}$

$C = 0.6 \quad g = 32.2 \quad h = 0.67$

① $Q = 0.30$ (type A)

$0.30 = (0.6)A\sqrt{(2)(32.2)(0.67)}$

$A = .076$ ft

$A = \pi r^2$

$r = \sqrt{\frac{A}{\pi}} = \sqrt{\frac{.076}{\pi}} = 0.156\text{ ft} = 1.9" \approx 2.0"$

diameter of orifice = 4.0" ←

② $Q = 0.2$ cfs (type B)

$0.20 = (0.60)A\sqrt{(2)(32.2)(.67)}$

$A = .051$ ft

$r = \sqrt{\frac{.051}{\pi}} = 0.127\text{ ft} = 1.5"$

diameter of orifice = 3.0" ←

PROJECT NAME Panorama Heights SHEET 11 OF

PROJECT NO. 77-120 BY LH DATE 8-4-77

SUBJECT Drainage Report CH'D DATE

FLOWS FROM TODD SUBDIVISION

Runoff Adjustments: Use 0.7 for unponded and 0.45 for ponded areas

AREA A-4 45.1 ACRES

B GROUND FACTOR 0.77 assumed

L LENGTH OF FLOW 1900'

S SLOPE 4% assumed

$T_c = \text{Log}^{-1}[0.3641(0.85) + 0.3854(\text{Log } 1900) - 0.197(\text{Log } 4) - 0.3613]$

$T_c = 11.59$ min.

$I = 189/25 + T_c = 5.17$ in/hr.

C Runoff Factor - Adjusted $= (0.7)\left(\frac{15}{45}\right) + (0.45)\left(\frac{30}{45}\right) = 0.53$

Q FLOW = CIA $= 0.53(5.17)(45.1) = 123.6$ cfs

Q = 123.6 cfs

AREA A-5 54.8 ACRES

B = 0.77 same as above

L = 4100'

S = 4% same as above

$T_c = \text{Log}^{-1}[0.3641(0.85) + 0.3854(\text{Log } 4100) - 0.197(\text{Log } 4) - 0.3613]$

$T_c = 15.6$ min

$I = 189/25 + T_c = 4.667$ in/hr.

$C = 0.7\left(\frac{23}{54.8}\right) + (0.45)\left(\frac{31.8}{54.8}\right) = 0.55$

Q = CIA $= 0.55(4.66)(54.8) = 140.45$ ½ to Fourmway

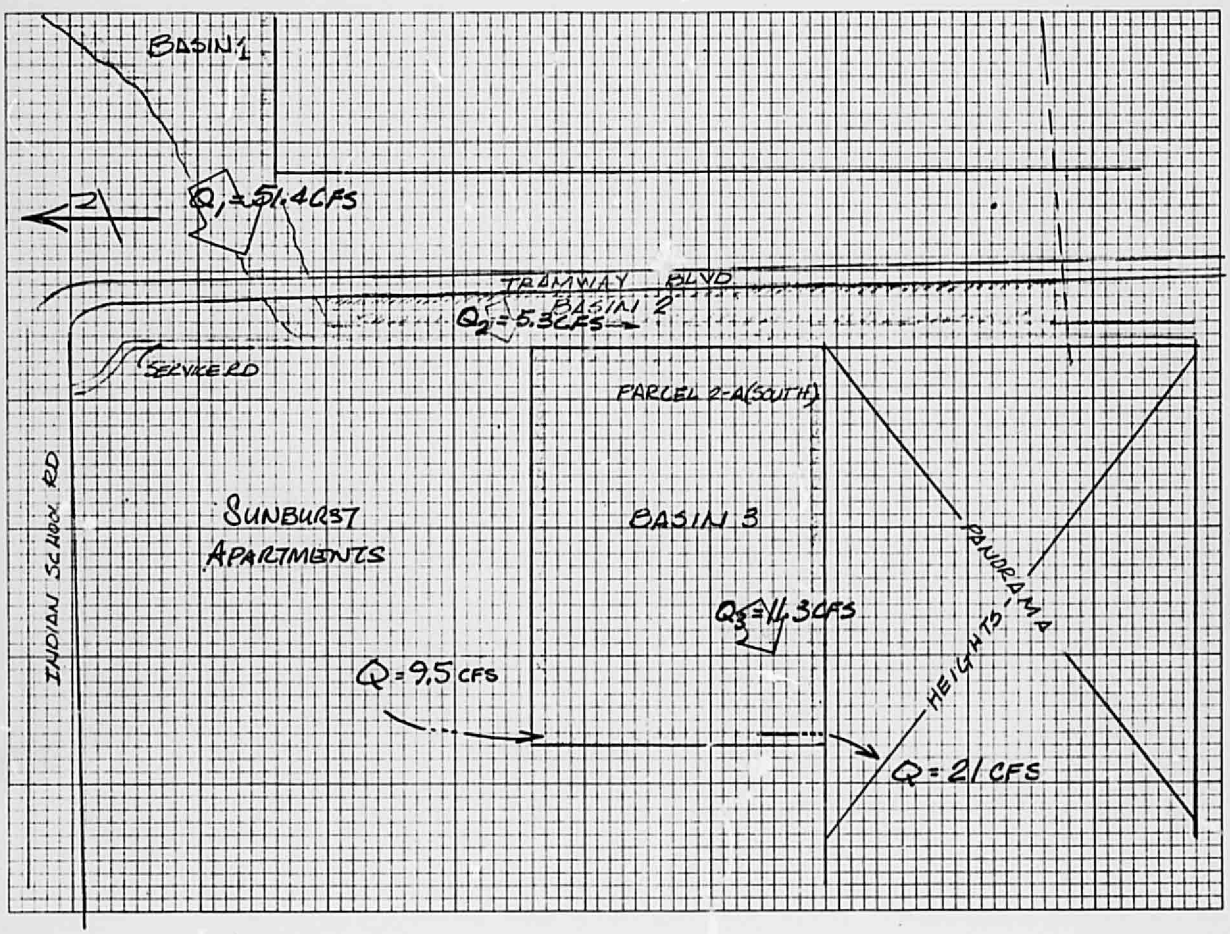
Q = 70.22 cfs

Total Q = 193.8 cfs

PROJECT NAME Panorama Heights SHEET 12 OF

PROJECT NO. 77-120 BY JWP DATE 9/1/77

SUBJECT Upland Drainage CH'D DATE



PROJECT NAME PAN HTS SHEET 13 OF
PROJECT NO. 77-120 BY DATE
SUBJECT DRAINAGE CHKD DATE

BASIN 1

TOPO SCALE 1" = 200'

AIRPHOTO SCALE = $\frac{2960}{3.05}$ = 1" = 970.5'

DISTANCE ON PHOTO FROM N. EDGE OF LOMAS TO N. BOUNDARY OF SUBDIVISION IN QUESTION = 2.78" = 2697.97'

FROM EAST BOUNDARY OF TRAMWAY TO WEST BOUNDARY OF JUDY (STREET) = 0.17" = 165'

W. Boundary Lomas to ℄ STREET IN SUB-QUESTION THAT DRAINS ONTO P.H. 1.45" = 1407.2'

AREA OF BASIN

PLANIMETER SET @ 20.00

READINGS

5.92	5.37	
5.41		+
4.54	4.625	
4.53		+
8.92	8.895	
8.87		+
5.43	5.445	
5.57		+
5.46		

24.245 EAST OF TRAMWAY

2" = 1.0 on PLANIM = 87,700 FT²

200 x 400

AREA = 19,397,000 FT²

44.53 ACRES

0.6

0.1

WEST OF TRAMWAY 100' x 1300' OF CHANNEL, SAY 10' WIDE

= 14000 FT² = 0.32 ACRE

A (BASIN) TOTAL DRAINAGE AREA = 44.53 + 0.32 = 44.85 ACRES

I $I = \frac{LB}{2 + Tc}$

$I = 2.88$

$Q = (0.40)(2.8)(44.53)$

$Q = 51.36$ cfs

$Tc = Log^{-1}[0.3641 B + 0.3854 Log(L) - 0.197 Log(S) - 0.3613]$

B = GROUND FACTOR 1.75 (Between Bare Soil & Poor Grass)

L = LENGTH TO FARTHEST PT. = 7,160'

S = SLOPE FROM 6190 TO 5820 OVER 7700'

= 7.7% slope

adjust for channel flatness to 6%

$Tc = Log^{-1}[.3641(1.75) + .3854(Log(7160)) + .197(Log(6)) - 0.3613] = 40.5$

+6.5

PROJECT NAME	PAN HTS	SHEET 14	OF
PROJECT NO.	77-120	BY	DATE
SUBJECT	DRAINAGE	CH'D	DATE

BASIN 2

AREA WEST OF TRAMWAY EAST OF CHANNEL } 126.7' x 80' = 2.33 ACRES L=80' S=4% B=1.8

T_c = 8.14 min I=5.7 in/min Q=5.32 cfs

BASIN 3

SOUTHERLY PORTION OF PARCEL 2-A AREA=1.51 ACRES

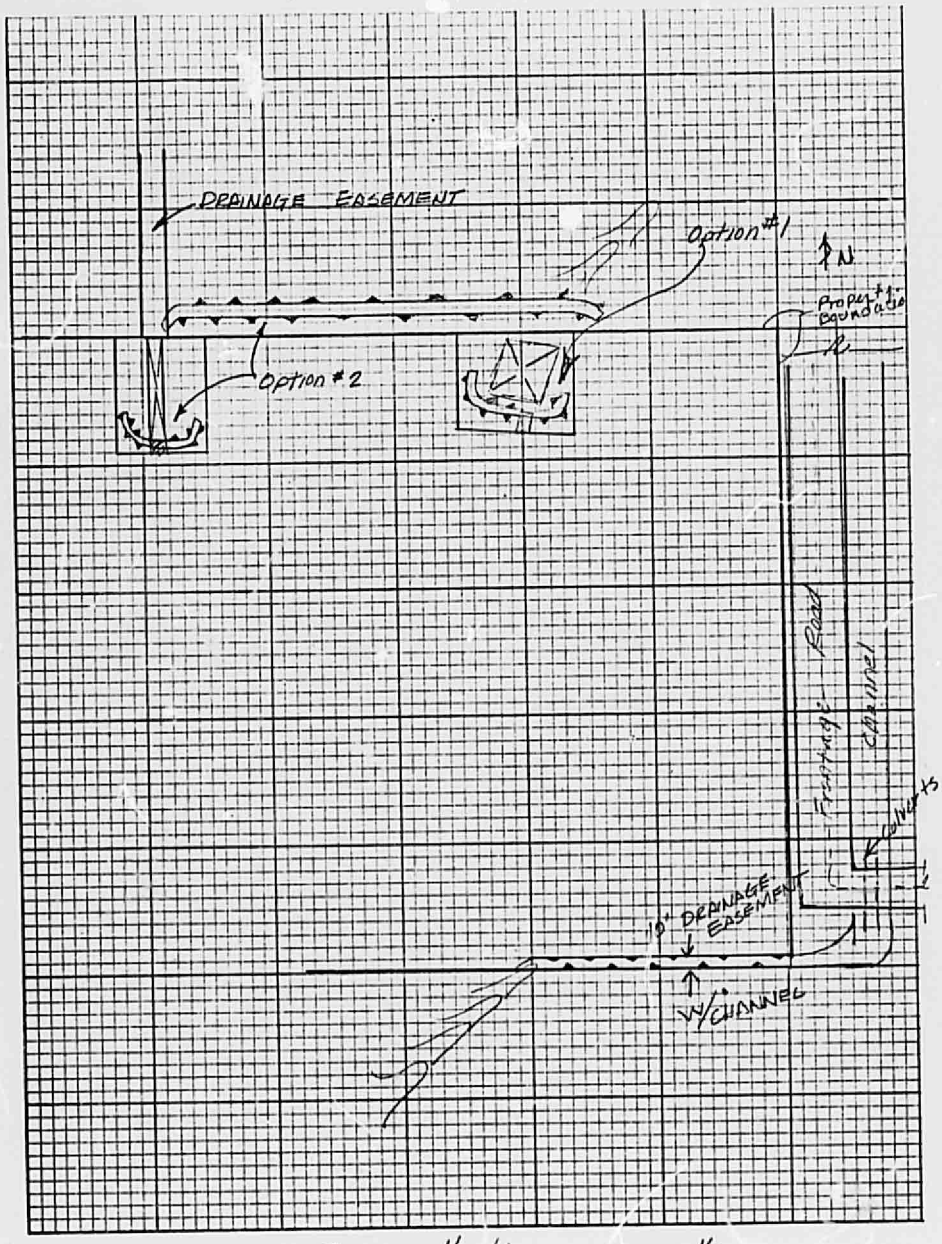
L=780' B=1.8 S=5%

T_c = 18.6 I=4.33 IN/MIN Q=(0.4)(4.33)(6.51)=11.3 cfs

PROJECT NAME PAN AM'S SHEET 15 OF

PROJECT NO. 77-120 BY DATE

SUBJECT DRAINAGE CH'D DATE

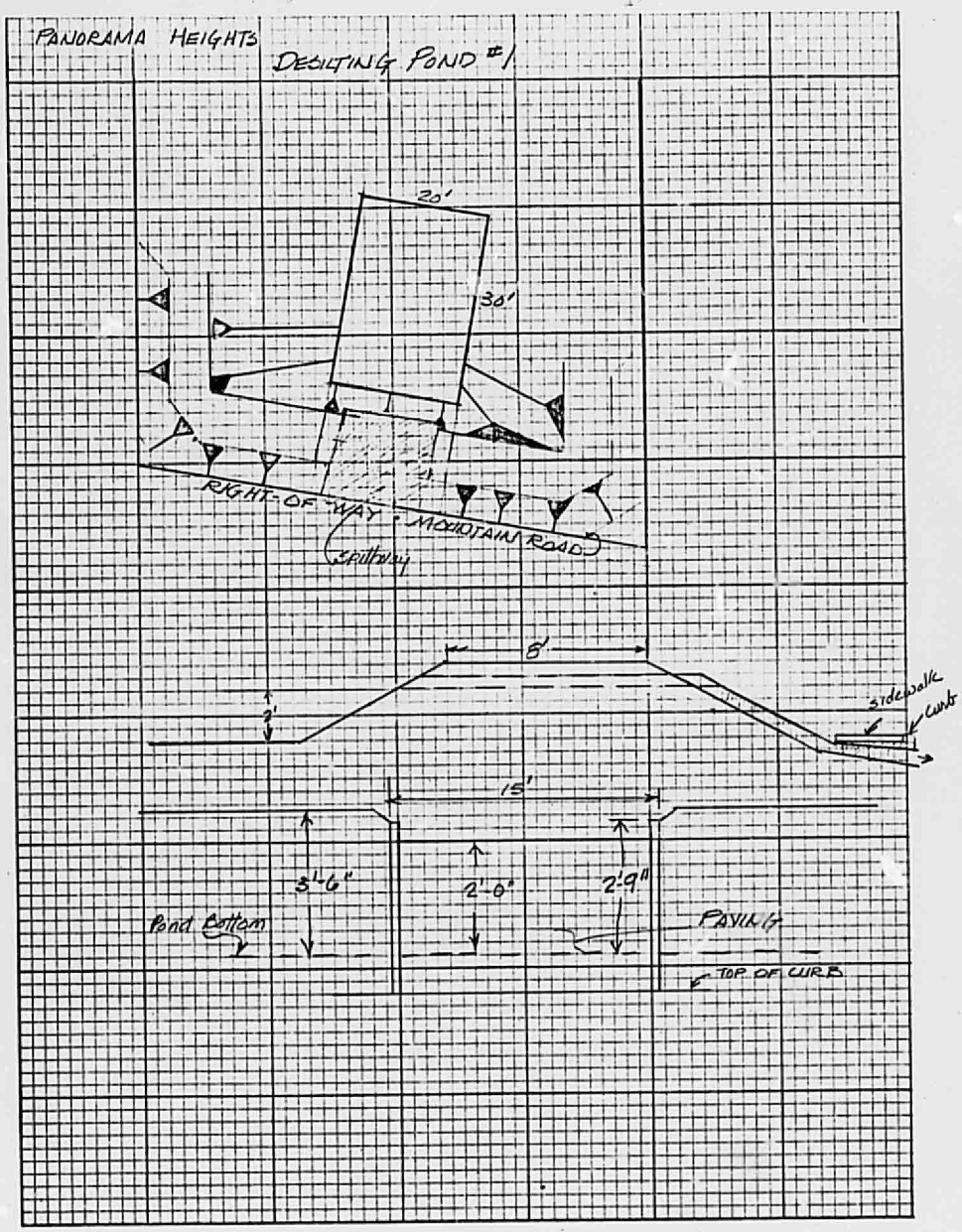


PROJECT NAME Panorama Heights SHEET 16 OF

PROJECT NO. 77-120 BY JJH DATE 11/9/77

SUBJECT Option Layout CH'D DATE

PANORAMA HEIGHTS DESILTING POND #1



PROJECT NAME PANORAMA HEIGHTS - SHEET 17 OF

PROJECT NO. 77-120 BY JP DATE 9/6/77

SUBJECT DESILTING BASINS Option #1 CH'D DATE

DESILTING BASIN #1

Max Velocity Across Pond (Seelye Design Manual) = 1.0 fps

X-Section Area of flow (see dwg) $20 \times 2.5 = 50 ft^2$

$Q = 5.0$ $\quad$ Velocity $= \frac{5.0}{50} = 0.10 < 1.0$ ✓ OK

Time to cross Basin $\frac{30'}{0.10 fps} = 300 sec = 5 min.$

Particle Settling time

4"/min Discharge Height = "1" Time required $\frac{9}{4} = 2.25 min$

5 min available > 2.25 min ✓ OK

Spillway / Wier

Wier Coefficient $C = 2.63$ $\quad$ Length $L = 15'$

Discharge Height $H = 9"$

Broad-Crested Wier Formula $Q = CLH^{3/2} = 72.475$

✓ OK

PROJECT NAME Panorama Heights SHEET 18 OF

PROJECT NO. 77-120 BY WP DATE 9/6/77

SUBJECT Desilting Basin Option #1 CH'D DATE

PANORAMA HEIGHTS — DESILTING BASIN - ALTERNATIVE No. 1

Q @ inlet = 5.0 cfs — FROM SCHMIDT, 6.5 acres of PARCEL 2-A (PLATE I)
S = 6 %
B undeveloped = 1.8
L = 650 FT.

$T_c = \text{Log}^{-1}[0.364(1.8) + 0.3854(\text{Log } 650) - 0.197(\text{Log } 6) - 0.3613] = 17.3$ min.

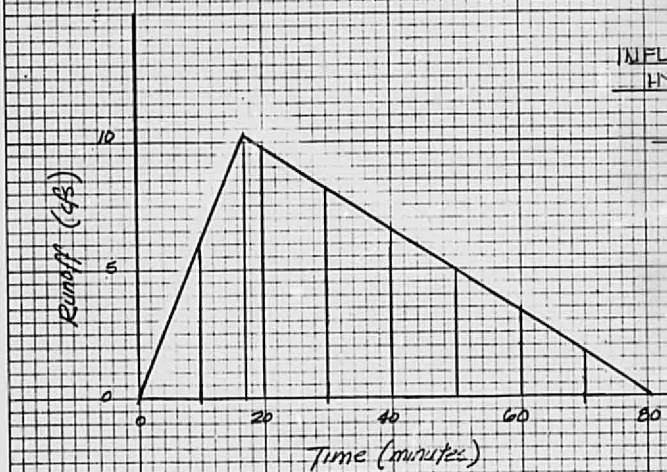
$I = \frac{189}{25 + T_c} = 4.47$ in/hr.

$Q = CIA = (0.35)(4.47)(6.5) = 10.16$ cfs

TOTAL Volume of Rainfall $= (3")\left(\frac{1ft}{12"}\right)(6.5 \text{ acre})\left(43560 \frac{ft^2}{1 \text{ acre}}\right)(0.35) = 24775$

INFLOW HYDROGRAPH

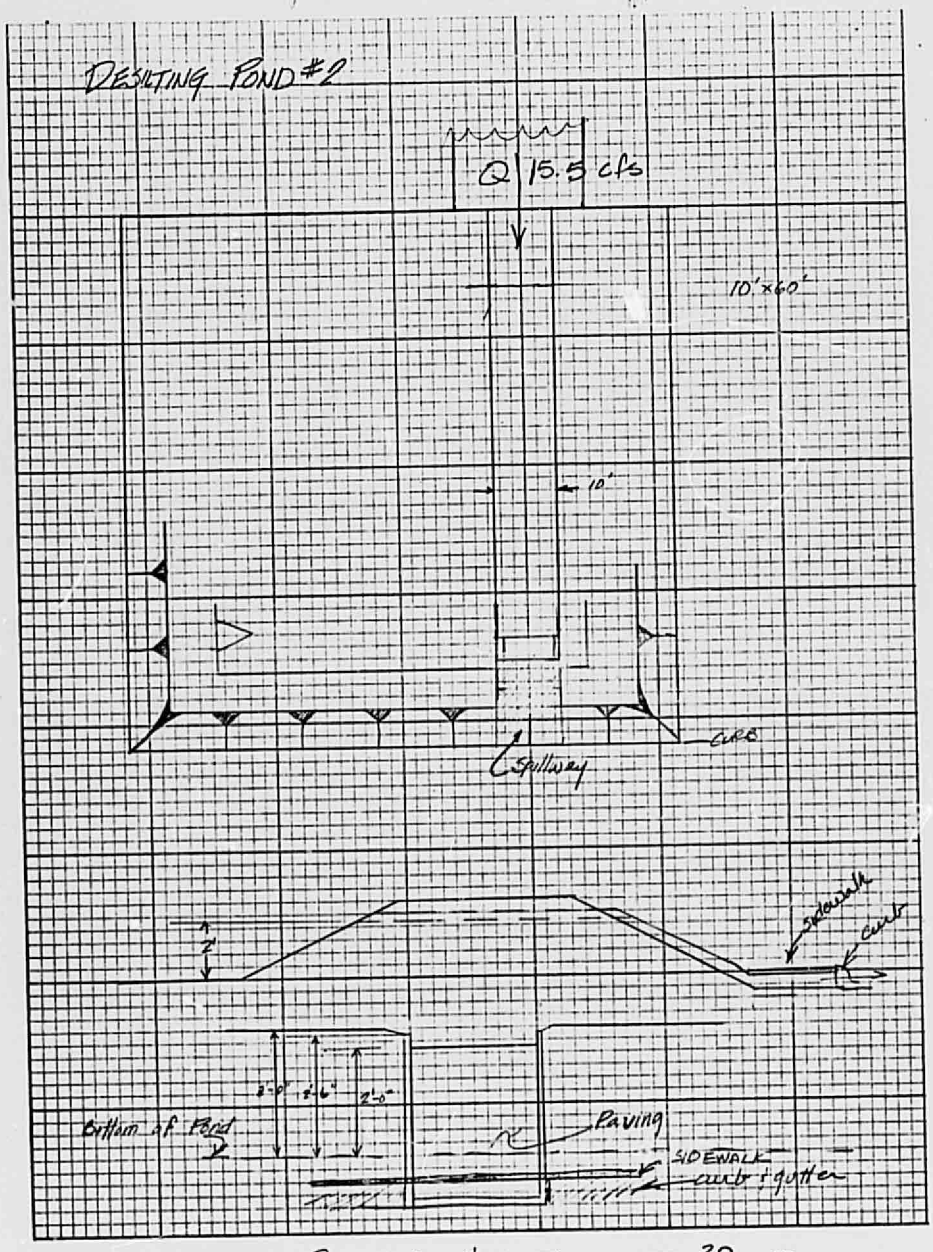
Time	Runoff
0	0
10	6.6
20	9.8
30	8.1
40	6.5
50	5.0
60	3.5
70	1.7
80	0.1



VOLUME @ Peak Rainfall (T_c = min)
Area under curve 0→Peak = $(\frac{1}{2})(10.16 cfs)(17.3 min)(60 \frac{sec.}{min}) = 5273$ cu.ft.
Area under curve Peak→T_{total} = $V_{TOTAL} - V_{0\to Peak} = 24775 - 5273 = 19502$ cu.ft.
Time to amass this volume = $\frac{1}{2}(10.16 cfs)\,t$. solve for t. $t = 64$ min.
Total time = $T_c + t = 81$ min.

PROJECT NAME PANORAMA HEIGHTS — SHEET 19 OF
PROJECT NO. 77-120 — BY JHP — DATE 9/1/77
SUBJECT Desilting Basin Options — CH'D — DATE

DESILTING POND #2



PROJECT NAME Panorama Heights — SHEET 20 OF ____

PROJECT NO. 77-120 — BY JVT — DATE 9/7/11

SUBJECT Desilting Basin Options — CH'D ____ — DATE ____

Pond #2

DESILTING POND #2

$Q_c = 15.5$ cfs

Max Velocity Across Basin 1.0 fps

X-section Flow = $10' \times 2' = 20^{sf}$ $Q = 15.5$ $Vel = \frac{15.5}{20.0} = 0.78$ fps OK

Time to cross Basin $\frac{60'}{0.78 fps} = 77.4$ sec. 1.29 min

Particle settling 1"/min. Discharge Ht. = 4"

1.0 min req'd 1.29 min available → ok

Spillway & Weir

Coeff 2.63 Length 10' Height 4"

$Q = CLH^{3/2} = 2.63(10)(.33)^{3/2} = 30.07$ cfs OK

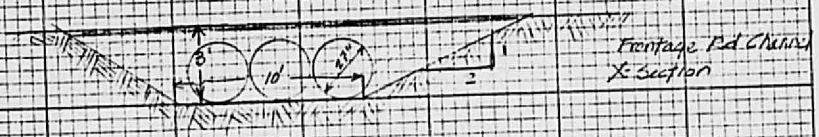
PROJECT NAME PAN H7S SHEET 21 OF

PROJECT NO. 77-120 BY DATE

SUBJECT DRAINAGE CH'D DATE

DRAINAGE EASEMENT - SOUTHEAST CORNER LOT

Temporary Easement to turn water from channel along Frontage Road and release it 300' away at a location 230' along the South Boundary. Total width of easement 10'. Flow capacity 100 cfs.



x	BW	CHS	D=VR	V=I
2	5	4%	1.47	8.55
2	6	4%	1.26	9.4
2	10	4%	1.06	7.76 fps

CULVERTS: Corrugated Metal Pipe

From Hydro-Conduit Cat. Curves for CMP, n culvert discharge Q=50 cfs (½ of flow) and a 42" inlet control requires a minimum size of 27" in dia., projecting inlet, unsubmerged outlet.

HW÷5.L = 11.2' (outlet control)

Allowable control HW = 3' 11.2-4 = 7.2

Set HW @ 3+4 = 7

Check for smallest culvert. 3@27" dia. carrying 33⅓ cfs each will produce HW÷5 = 5.6 HW = 5.6-4 = 1.6 ~OK

DRAINAGE EASEMENT 10' = BW+2D D=3 BW=4'

BW=6' SS=1:1 Depth of Flow = 1.49 Velocity

BW 4 SS 1 CHS 4 Depth of Flow

PROJECT NAME Panorama Heights SHEET 22 OF

PROJECT NO. 11.190 BY DATE 9/2/11

SUBJECT Southwest Drainage Easement CH'D DATE

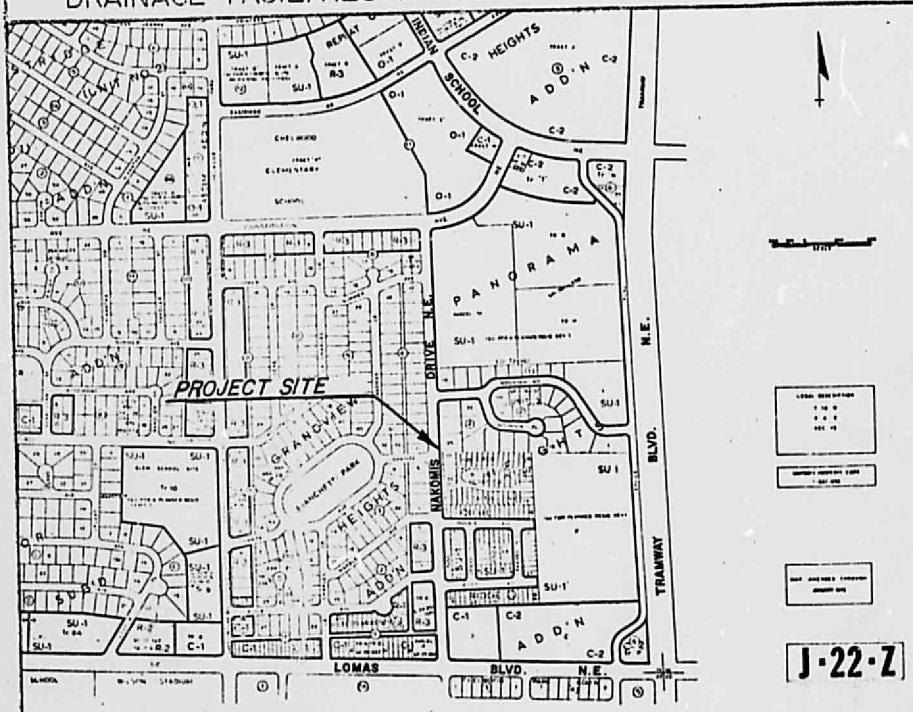
PLATE I
LOCATION MAP

PANORAMA HEIGHTS
Parcel 3

J-22-Z

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



LOCATION MAP

APPROVAL:

P.N.M	DATE	Pvt. City Engr
MOUNTAIN BELL	DATE	

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 31 "
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to RESIDENTIAL street use.

APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

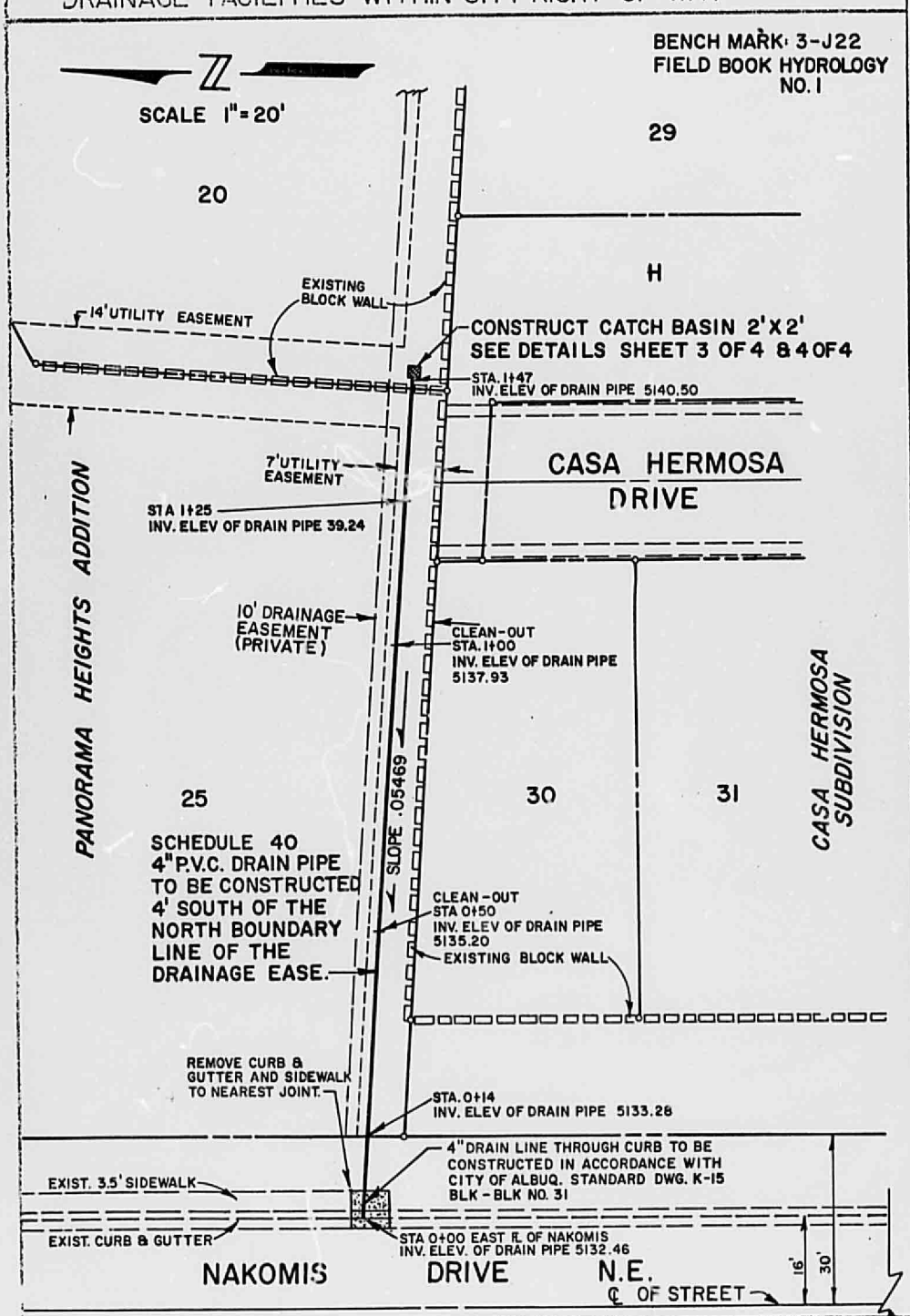
TITLE: **PANORAMA HEIGHTS ADDITION CATCH BASIN & DRAIN LINE**

PERMIT NO. SHEET 1 OF 4

MAP NO. J-22

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

TITLE: PANORAMA HEIGHTS ADDITION CATCH BASIN & DRAIN LINE

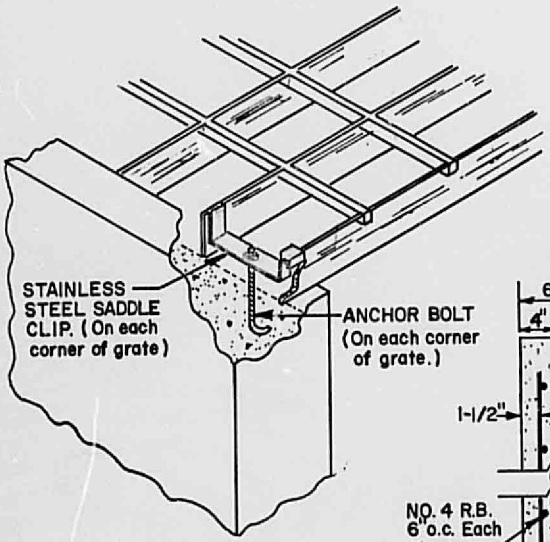
PERMIT NO.

SHEET 2 OF 4

MAP NO. J-22

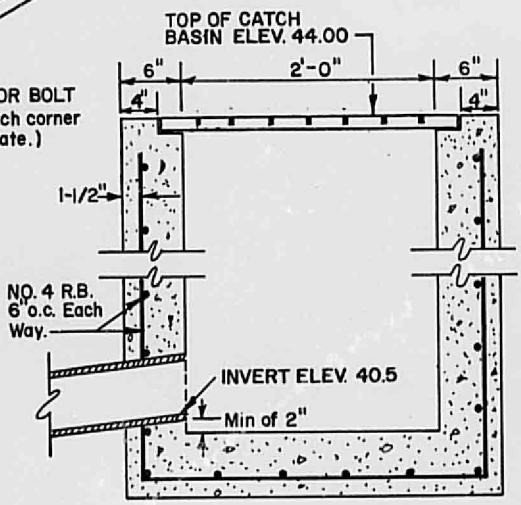
CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



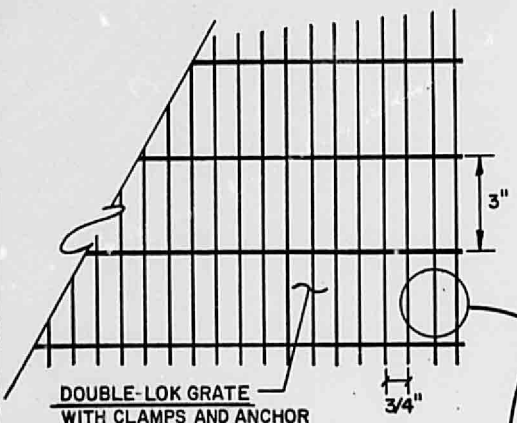
FASTENING DETAIL

NO SCALE



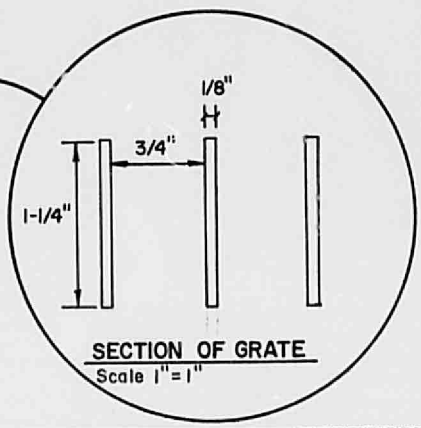
SECTION A-A

Scale 1"=1'-0"



GRATE DETAIL

Scale 1"=4"



SECTION OF GRATE

Scale 1"=1"

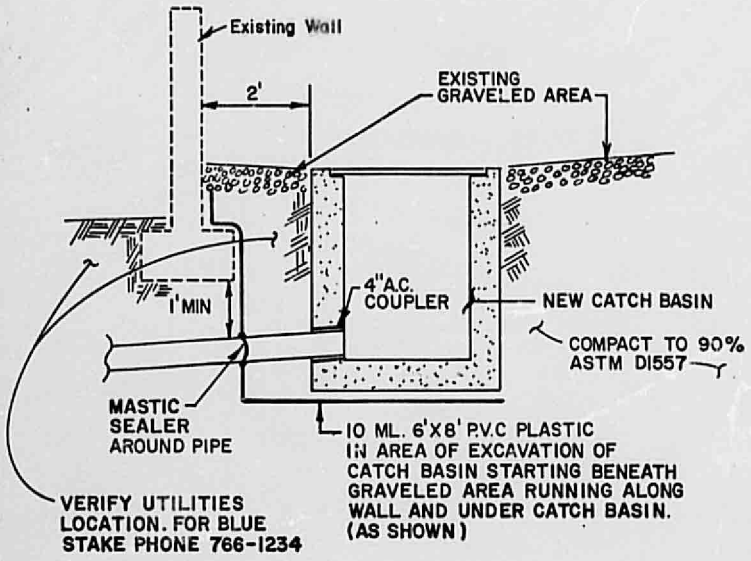
APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

TITLE: PANORAMA HEIGHTS ADDITION CATCH BASIN & DRAIN LINE

PERMIT NO. SHEET 3 OF 4

MAP NO. J-22

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



NOTES:

1. COMPACTION SHALL BE NOT LESS THAN 90% ASTM D1557. BEGINNING AROUND CATCH BASIN, AND ALONG ENTIRE LENGTH OF DRAIN LINE.
2. CATCH BASIN SHALL BE MAINTENANCED PERIODICLLY BY OWNER TO PREVENT CLOGGING OF DRAIN LINE.

APPROVALS	NAME	DATE	TITLE: PANORAMA HEIGHTS ADDITION CATCH BASIN & DRAIN LINE	
A.C.E./DESIGN				
INSPECTOR			PERMIT NO. SHEET 4 OF 4	MAP NO. J-22
A.C.E./FIELD				