

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: K 20 DATE: 6/26/87
PLANNING DIVISION NOS: EPC: _____ DRB: _____
SUBJECT: Addn to Four Plex
STREET ADDRESS (IF KNOWN): 124 General Arnold NE
SUBDIVISION NAME: Lot 31 Blk 3 Waggoner DENISON

APPROVAL REQUESTED:

<input type="checkbox"/> PRELIMINARY PLAT	<input type="checkbox"/> FINAL PLAT
<input type="checkbox"/> SITE DEVELOPMENT PLAN	<input checked="" type="checkbox"/> BUILDING PERMIT (ADDN)
<input type="checkbox"/> OTHER	<input type="checkbox"/> ROUGH GRADING

ATTENDANCE:	WHO	REPRESENTING
	<u>FRED J. ASQUIRE</u>	_____
	<u>FRANK LOUEROY</u>	_____
	_____	_____

FINDINGS:

1. An approved drainage plan is required for the proposed addition. The plan will need to provide the following information:
 - EVALUATION OF ANY OFF SITE FLOW CONDITIONS.
 - SUFFICIENT GRADES ON SITE TO DEMONSTRATE FLOW PATTERN
 - ~~NO OBJ~~
2. PONDING REQUIREMENTS can be waived based on the latest AMDS study for VOLUME II that is under review.
3. No objection to drainage over sidewalks if the flow conditions ~~are~~ ARE NEGLIGIBLE.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: <u>[Signature]</u>	SIGNED: <u>[Signature]</u>
TITLE: _____	TITLE: _____
DATE: <u>6/26/87</u>	DATE: <u>6/26/87</u>

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Garage Addition To Four Plex ZONE ATLAS/DRNG. FILE #: K-20

LEGAL DESCRIPTION: Lot 31, Block 4, Waggoman-Denison Addition

CITY ADDRESS: 124 General Arnold, NE

ENGINEERING FIRM: Lovelady & Associates CONTACT: Frank Lovelady

ADDRESS: 7408 Morrow Ave. NE 87110 PHONE: 883-7973

OWNER: Dan Ervin CONTACT: Dan Ervin

ADDRESS: 1128 Turner Drive NE PHONE: 2965065

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Lovelady & Associates CONTACT: Frank D. Lovelady

ADDRESS: 7408 Morrow Ave. NE PHONE: 883-7973

CONTRACTOR: _____ CONTACT: _____

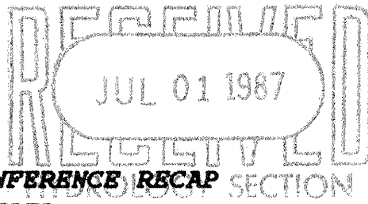
ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

YES DRB NO. _____

NO EPC NO. _____

COPY OF CONFERENCE RECAP SHEET PROVIDED PROJECT NO. _____



TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

DRAINAGE REPORT

SKETCH PLAT APPROVAL

DRAINAGE PLAN

PRELIMINARY PLAT APPROVAL

CONCEPTUAL GRADING & DRAIN. PLAN

SITE DEVELOPMENT PLAN APPROVAL

GRADING PLAN

FINAL PLAT APPROVAL

EROSION CONTROL PLAN

BUILDING PERMIT APPROVAL

ENGINEER'S CERTIFICATION

FOUNDATION PERMIT APPROVAL

CERTIFICATE OF OCCUPANCY APPROVAL

ROUGH GRADING PERMIT APPROVAL

DATE SUBMITTED: July 1, 1987

GRADING/PAVING PERMIT APPROVAL

BY: Frank D. Lovelady
Frank D. Lovelady, P.E.

OTHER _____ (SPECIFY)

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

July 1, 1987

Frank Lovelady, P.E.
Lovelady & Associates, Inc.
7408 Morrow Avenue, NE
Albuquerque, New Mexico 87110

RE: 124 GENERAL ARNOLD, NE
(K-20/D35)

Dear Frank:

The referenced plan dated June 30, 1987, is approved. Please advise your client to attach copies of the approved plan to the construction plan sets.

Mr. Rick Duran will sign for Hydrology upon compliance with the above.

If you should have any questions regarding the above, please feel free to call me at 768-2650.

Cordially,

For

Fred J. Aguirre, P.E.
Hydrologist

FJA/bsj

PUBLIC WORKS DEPARTMENT

Walter Nickerson, P.E., City Engineer

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

DOCUMENT NAME: MAYOR

Mr. Daniel J. Ervin
1128 Turner NE
Albuquerque, NM 87123

RE: DRAINAGE PLAN

Dear Mr. Ervin,

I appreciate your writing to me to express your concern over your drainage problem, or, rather, what you no doubt consider to be the City's problem with your drainage.

I have taken this matter up with my staff to see if there isn't some way to obviate the need for a drainage plan in this instance. Unfortunately, I find that the drainage ordinance is very specific and requires that all proposed additions exceeding 500 square feet have a drainage report approved by our Hydrology Section before a Building Permit can be issued.

I understand your impatience in this matter, and your reluctance to spend \$600 on what seems to you to be an unnecessary formality. Let me assure you, Mr. Ervin, that the drainage investigation and plan are as much for your benefit as for your neighbors'.

I suggest that you contact Fred Aguirre, the City Hydrologist, who will be glad to advise you, and lend any assistance he can.

Again, I appreciate your writing me, and I only wish I could have been more help. Please keep me informed of your progress, and let me know if I can be of help in the future.

With regards,
Ken Schultz
Mayor
City of Albuquerque

On March 25, 1987 a request for Building Permit was submitted. Rick Duran made a field inspection to determine what requirements would be imposed. Further research revealed that a drainage plan was approved on December 20, 1976. The approved plan indicated that there was a ponding area on the top Southwest corner of lot called for. Field inspection shows that no such pond exists. Also, no formal inspections by hydrology were conducted prior to 1979. Records also show that a Certificate of Occupancy was issued. Date of C.O. issued is not shown.

Mr. Dan Ervin was advised that an updated Drainage plan would be required because:

1. Proposed addition square footage was over 500[#] (1200[#] to be exact). Ordinance requires a drainage plan for additions of 500 sq feet and over.
2. Non-conformance of the 1976 approved plan justified a revised plan.

RECEIVED
ALBUQUERQUE, N.M.

JUN 01 1987

PLANNING DEPT.
ADMIN. DIV.

May 22, 1987

Dear Mr. Gill:

Since March 24, 1987 I have tried to obtain a building permit to built garages in front of my 4 plex located at 124 General Arnold NE, Alb. N.M. (check #8703717)

At this point I have been approved by every department except the Hydrology dept. whom is requesting a drainage plan of water run off. The cost for this is minumum of \$600.00. This is a paved parking lot which has no problem with water drainage.

I own the property north of this parking lot and talked to Jerry Banister which owns the lot directly south and doesn't see any problem.

I do not see a need for an additional expense of \$600.00 to survey a paved parking lot. The purpose of building garages is to up grade the area and to add security to my tenants.

I would like your attention and help on this matter.

Sincerely,

Daniel J. Ervin

Daniel J. Ervin
1128 Turner NE
Albuquerque, NM 87123
Phone (296-5065)

CC: K. Schultz

*Charles Lee
Asst. to Dept. CAD*

*Recd
From Jim Gill 6/3/87
Jim asked me to call
Ervin.*

PRE-DESIGN CONFERENCE FINDINGS:

- AN APPROVED DRAINAGE PLAN IS REQUIRED FOR THE PROPOSED ADDITION. THE PLAN WILL NEED TO PROVIDE THE FOLLOWING INFORMATION:
 - EVALUATION OF ANY OFF-SITE FLOW CONDITIONS.
 - SUFFICIENT GRADES ON SITE TO DEMONSTRATE FLOW PATTERNS.
- PONDING REQUIREMENTS CAN BE WAIVED BASED ON THE LATEST AMDS STUDY FOR VOLUME II THAT IS UNDER REVIEW.
- NO OBJECTION TO DRAINAGE OVER SIDEWALK IF THE FLOW CONDITIONS ARE NEGLIGIBLE.

DRAINAGE COMMENTS:

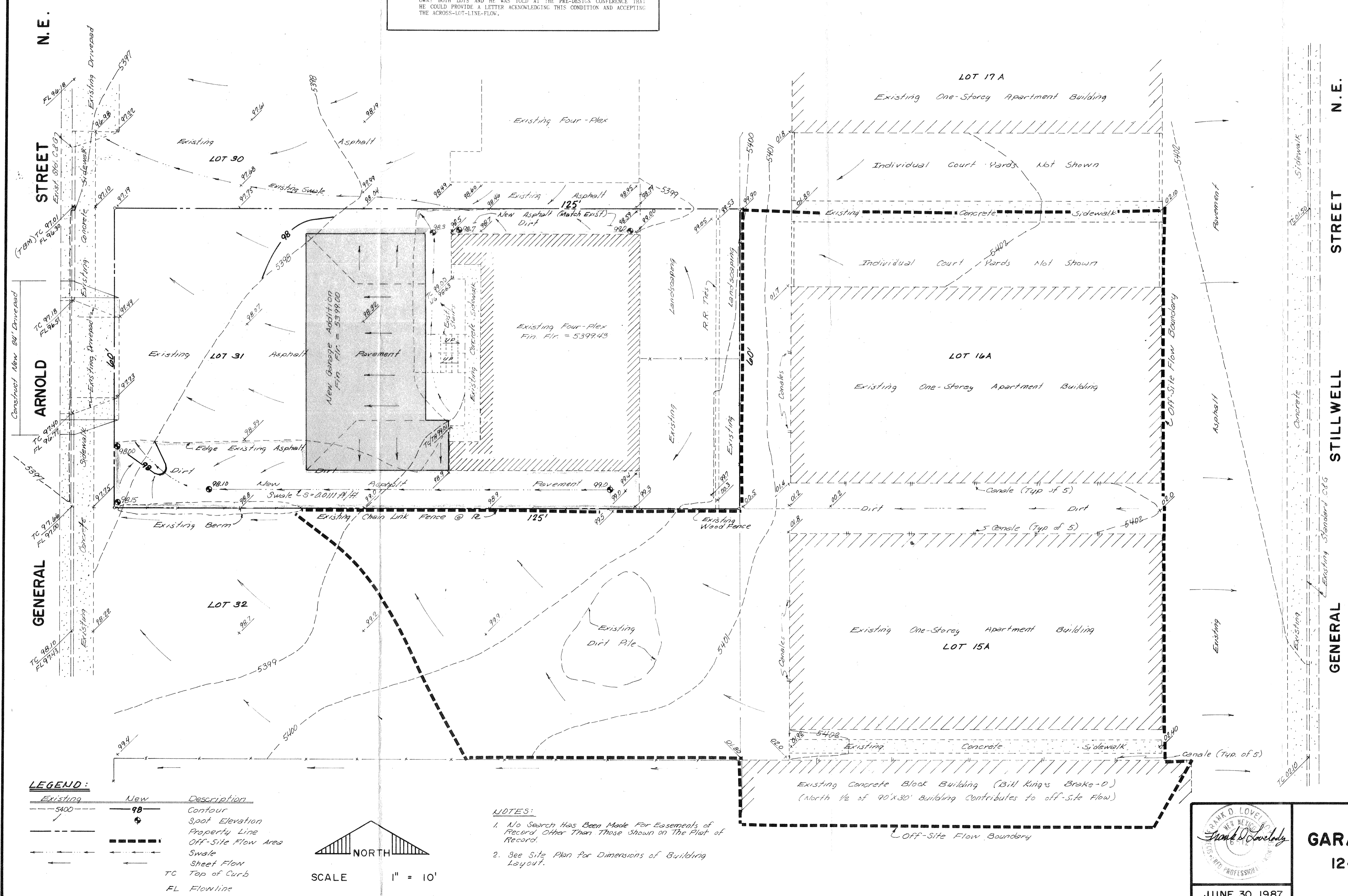
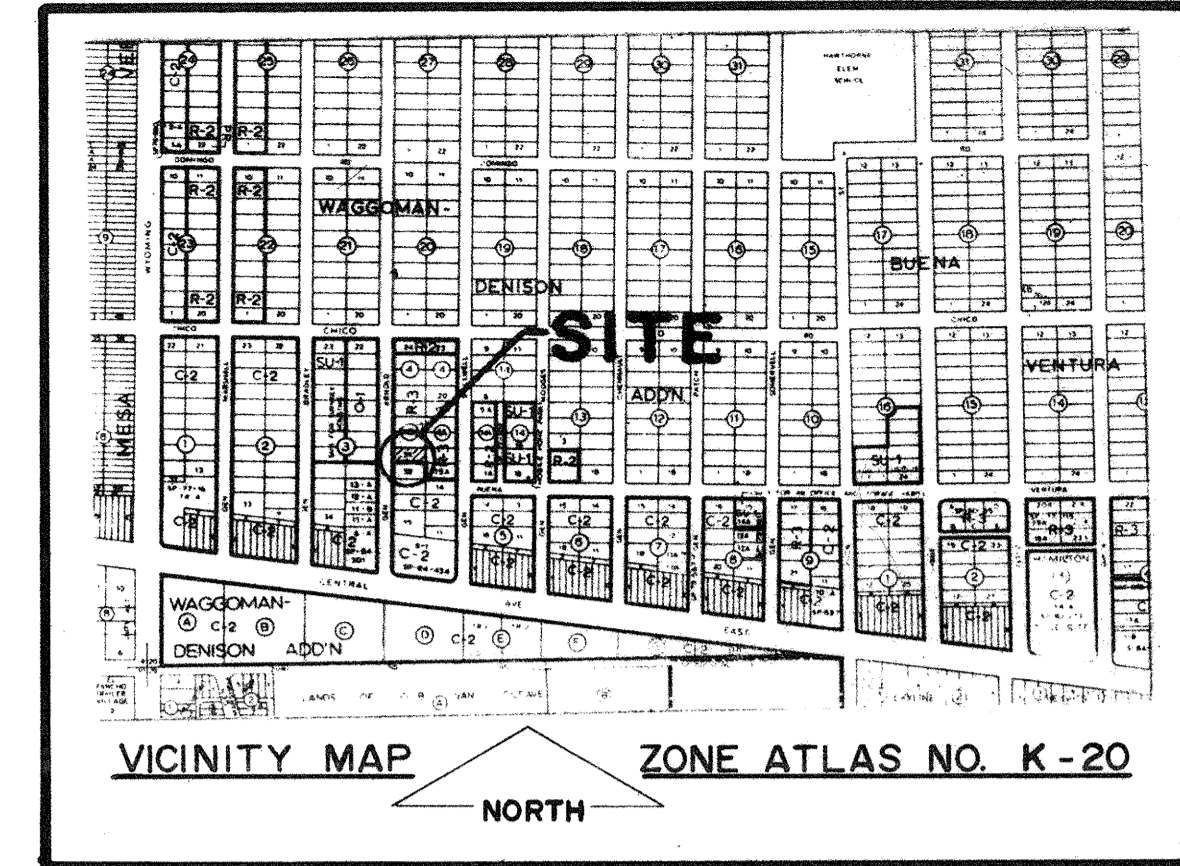
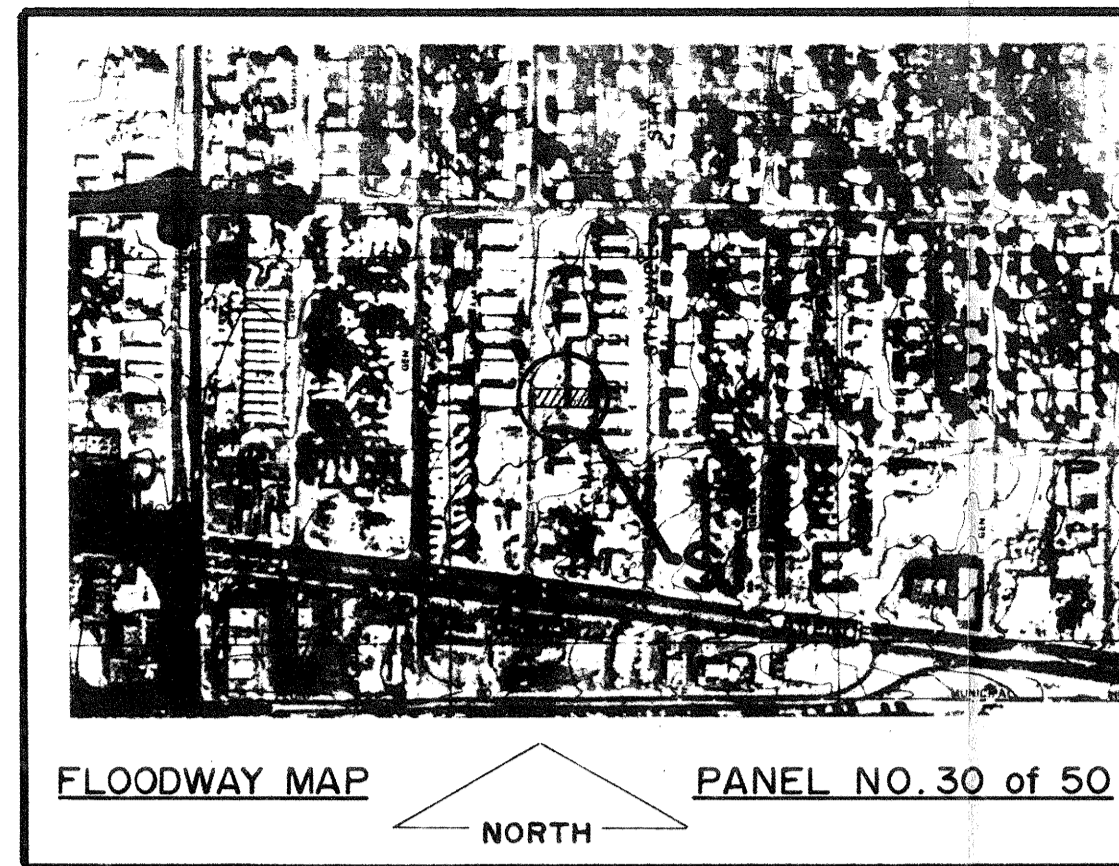
- THE SITE DOES NOT LIE WITHIN OR ADJACENT TO A DESIGNATED FLOOD HAZARD AREA.
- THE FLOODWAY MAP SHOWS FLOODING AT CENTRAL AVENUE AND WYOMING BLVD. HOWEVER, THE LATEST AMDS STUDY FOR VOLUME II SHOWS THAT RECENTLY INSTALLED DRAINAGE FACILITIES HAVE ELIMINATED ANY FLOODING IN THAT AREA.
- THERE IS SOME OFF-SITE FLOW COMING FROM THE APARTMENTS, COMMERCIAL BUILDING AND VACANT LOT EAST AND SOUTH OF THE SITE. IT SHOULD BE NOTED THAT WHEN LOT 32 IS DEVELOPED, THE OFF-SITE FLOW WILL BE REDUCED BY APPROXIMATELY TWO-THIRDS. ALL EXISTING OFF-SITE FLOW IS ACCEPTED. THE EXISTING SITE IS AN INFILL SITE.
- THE GARAGE ADDITION IS TO BE CONSTRUCTED OVER EXISTING ASPHALT PAVEMENT.
- DRAINAGE FROM THE NORTH SIDE OF THE LOT (INCLUDING SOME OFF-SITE FLOW) ENTERS A SWALE THAT IS CENTERED ON THE NORTH PROPERTY LINE. AS IT CLEARS THE APARTMENTS IT CURVES OR TO LOT 30 IN THE DIRECTION OF THE EXISTING DRIVEPAD. THE PORTION OF THE SWALE NEXT TO THE FOUR-PLEX WILL BE PAVED.
- DRAINAGE FROM THE SOUTH SIDE OF THE LOT (INCLUDING THE REMAINING OFF-SITE FLOW) WILL BE TRANSPORTED IN A PAVED ASPHALT SWALE TO THE DRIVE PAD WHICH IS TO BE WIDENED FROM 16 FEET TO 24 FEET WIDE.
- SOME OF THE RUNOFF BETWEEN THE ABOVE-DESCRIBED SWALES WILL CROSS THE SIDEWALK BUT THE QUANTITY WILL BE NEGLIGIBLE AND WILL CROSS AS SHEET FLOW RATHER THAN CONCENTRATED.
- FLOW WILL CROSS THE LOT LINE INTO LOT 30. HOWEVER, THE SAME PARTY OWNS BOTH LOTS AND HE WAS TOLD AT THE PRE-DESIGN CONFERENCE THAT HE COULD PROVIDE A LETTER ACKNOWLEDGING THIS CONDITION AND ACCEPTING THE ACROSS-LOT-LINE-FLOW.

BENCH MARK:

BENCH MARK IS 8-K20, LOCATED AT THE INTERSECTION OF CHICO AND GENERAL STILLWELL, NE, IN THE NE QUADRANT OF THE INTERSECTION. A SQUARE CHISELED ON THE ENE CURB RETURN. ELEVATION 5400.395 FEET.
 TEMPORARY BENCH MARK (TBM) LOCATED NEAR THE NORTHEAST CORNER OF THE SITE ON TOP OF CURB. X'S ARE AND LETTERS "TBM" PRINTED IN BLACK ON TOP OF CURB. ELEVATION 5497.01.

LEGAL DESCRIPTION:

LOT NUMBERED THIRTY-ONE (31) IN BLOCK NUMBERED FOUR (4), WAGGOMAN-DENISON ADDITION.



DRAINAGE CALCULATIONS

I. REFERENCES:

- CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) VOLUME 2, DESIGN CRITERIA, CHAPTER 22.
- FLOODWAY MAP, PANEL 30 OF 50, (FEMA), OCTOBER 14, 1983.
- SOIL SURVEY OF BERNALILLO COUNTY, NEW MEXICO, U.S. SOIL CONSERVATION SERVICE, JUNE, 1977.

II. ON-SITE RUNOFF CHARACTERISTICS:

A. UNDEVELOPED RUNOFF COEFFICIENT:

TYPE OF SURFACE	AREA	"C" VALUE	AREA("C")
STREETS, DRIVES, WALKS	3679	0.95	3488
ROOFS	1708	0.90	1537
LAWNS & LANDSCAPING	1200	0.25	300
UNDEVELOPED	963	0.40	385
TOTAL AREA	7500	0.1722	

WEIGHTED "C" VALUE = 5670/7500=0.76
 PERCENT IMPERVIOUS = 71%

B. DEVELOPED RUNOFF COEFFICIENT:

TYPE OF SURFACE	AREA	"C" VALUE	AREA("C")
STREETS, DRIVES, WALKS	3645	0.95	3443
ROOFS	2910	0.90	2619
LAWNS & LANDSCAPING	1200	0.25	300
UNDEVELOPED			
TOTAL AREA	7500	0.87	6562

WEIGHTED "C" VALUE = 6562/7500=0.87
 PERCENT IMPERVIOUS = 87%

C. RAINFALL, 100-YR., 6-HR. (REF. A., PLATE 22.2 D-1)
 $R_6 = 2.4$ INCHES

D. TIME OF CONCENTRATION: 10 MINUTES

E. RAINFALL INTENSITY, I (REF. A., PLATE 22.2 D-2)
 $I = R_6 \times 6.84 \times (T_c)^{-0.51} = (2.4) \times 6.84 (10)^{-0.51} = 5.07 \text{ IN/HR}$

F. SOIL TYPE (REF. I.C., SHEET NO. 31) SOIL IS MVA, MADUREZ -WINK ASSOCIATION, HYDROLOGIC SOIL GROUP "B"

G. RUNOFF CURVE NUMBER (CN) (REF. I.A., PLATE 22.2 C-2)
 UNDEVELOPED CN: RESIDENTIAL; ROOFS, PAVEMENT CN=98;
 LANDSCAPING, CN=61; UNPAVED AREAS, CN=62 WEIGHTED CN=(5337*98+1200*61+923*82)/7500=90
 DEVELOPED CN: WEIGHTED CN=(6555*98+1200*61)/7500=95

H. DIRECT RUNOFF, Q_p, INCHES (REF. I.A., PL. 22.2 C-4)
 UNDEVELOPED Q_p = 1.5 IN. DEVELOPED Q_p = 1.9 IN.

III. ON-SITE PEAK DISCHARGE BY RATIONAL EQUATION:

A. EXISTING CONDITIONS:
 $Q_{100} = 0.76 \times 5.07 \times 0.17 = 0.66 \text{ CFS}$
 $Q_{10} = 0.657 \times 0.66 = 0.43 \text{ CFS}$

B. DEVELOPED CONDITIONS:
 $Q_{100} = 0.87 \times 5.07 \times 0.17 = 0.75 \text{ CFS}$
 $Q_{10} = 0.657 \times 0.75 = 0.49 \text{ CFS}$

IV. ON-SITE VOLUME BY S.C.S. METHOD:

A. EXISTING CONDITIONS:
 $V_{100} = \text{AREA} (Q_p/12) = 7500 (1.5/12) = 938 \text{ CF}$
 $V_{10} = 0.657 \times 938 = 616 \text{ CF}$

B. DEVELOPED CONDITIONS:
 $V_{100} = \text{AREA} (Q_p/12) = 7500 (1.9/12) = 1188 \text{ CF}$
 $V_{10} = 0.657 \times 1188 = 781 \text{ CF}$

V. OFF-SITE FLOW:

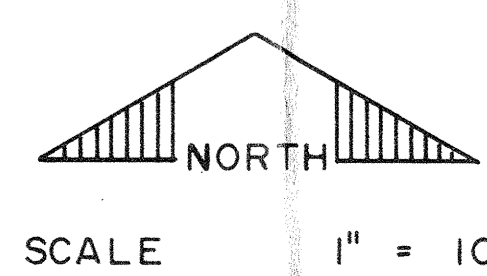
A. AREA
 AREA = 14200 SF (APPROX) = 0.33 AC.
 BUILDINGS = 7350 SF SIDEWALKS = 375 SF
 UNPAVED AREAS = 6475 SF

B. OFF-SITE PEAK RUNOFF:
 $C = (7350 \times 0.90 + 3750 \times 0.95 + 6475 \times 0.40) / 14200 = 0.67$
 $Q_{100} = CIA = 0.67 \times 5.07 \times 0.33 = 1.12 \text{ CFS}$
 $Q_{10} = 0.657 \times 1.12 = 0.74 \text{ CFS}$

C. OFF-SITE VOLUME:
 WEIGHTED CN = (7725*98 + 6475*82)/14200 = 91
 DIRECT RUNOFF (FROM PLATE 22.2 C-4) = 1.6 INCHES
 $V_{100} = 14200(1.6/12) = 1893 \text{ CF}$
 $V_{10} = 0.657 \times 1893 = 1244 \text{ CF}$

LEGEND:

Existing	New	Description
---	---	Contour
•	•	Spot Elevation
---	---	Property Line
---	---	Off-Site Flow Area
---	---	Swale
---	---	Sheet Flow
---	---	Top of Curb
---	---	Flowline



NOTES:

- No Search Has Been Made For Easements of Record Other Than Those Shown on the Plat of Record.
- See Site Plan for Dimensions of Building Layout.

FRANK D. LOVELL
 NEW MEXICO
 LICENSED PROFESSIONAL ENGINEER
 JUNE 30, 1987

DRAINAGE PLAN
GARAGE ADDITION TO FOUR-PLEX
 124 GENERAL ARNOLD STREET, N.E.
 ALBUQUERQUE, NEW MEXICO

