Bernie.
What do you think? Please comment.
LDC

February 22, 1996

Need Address of Building Units

Dennis A. Lorenz, PE
Brasher & Lorenz, Inc.
4425 Juan Tabo Blvd. NE
Suite 202
Albuquerque, NM 87111

RE: FERNANDEZ TOWNHOMES (J19-D40)

Dear Mr. Lorenz:

Based on the information provided on your submittal dated January 26, 1996, the above referenced project was approved for Final Plat, SO #19 Permit, and Building Permit on February 2, 1996.

Usually, a Financial Guarantee would be required to construct the rear yard concrete swale. The City is willing to waive the Financial Guarantee requirement with the following conditions:

1. The permit office will be instructed not to inspect any portion of the building (Footings) until you have certified the construction of the rear yard concrete swales.

2. A letter of understanding from the Owner to the City Hydrology Division that the rear yard concrete swales will be constructed and certified prior to any building construction.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File
c. Bob Williams

DRAINAGE INFORMATION SHEET

PROJECT TITLE: FERNANDEZ TOWNHOMES ZONE ATLAS/DRNG. FILE #: J19- D40

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOT 39A BLOCK 11, SNOW HEIGHTS ADDN

CITY ADDRESS: PENNSYLVANIA ST NE

ENGINEERING FIRM: BRASHER & LORENZ, INC. CONTACT: Dennis A. Lorenz, PE

ADDRESS: 4425 Juan Tabo Blvd. NE Suite 202 PHONE: 296-0422

OWNER: PELAYO FERNANDEZ CONTACT: SEE ARCHITECT

ADDRESS: _____ PHONE: _____

ARCHITECT: RICK BENNETT CONTACT: SAME

ADDRESS: 1118 PARK SW PHONE: 242-1859

SURVEYOR: PRECISION SURVEYS CONTACT: L. MEDRANO

ADDRESS: 2929 COORS NW PHONE: 839-0569

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
X DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER: _____

PRE-DESIGN MEETING:

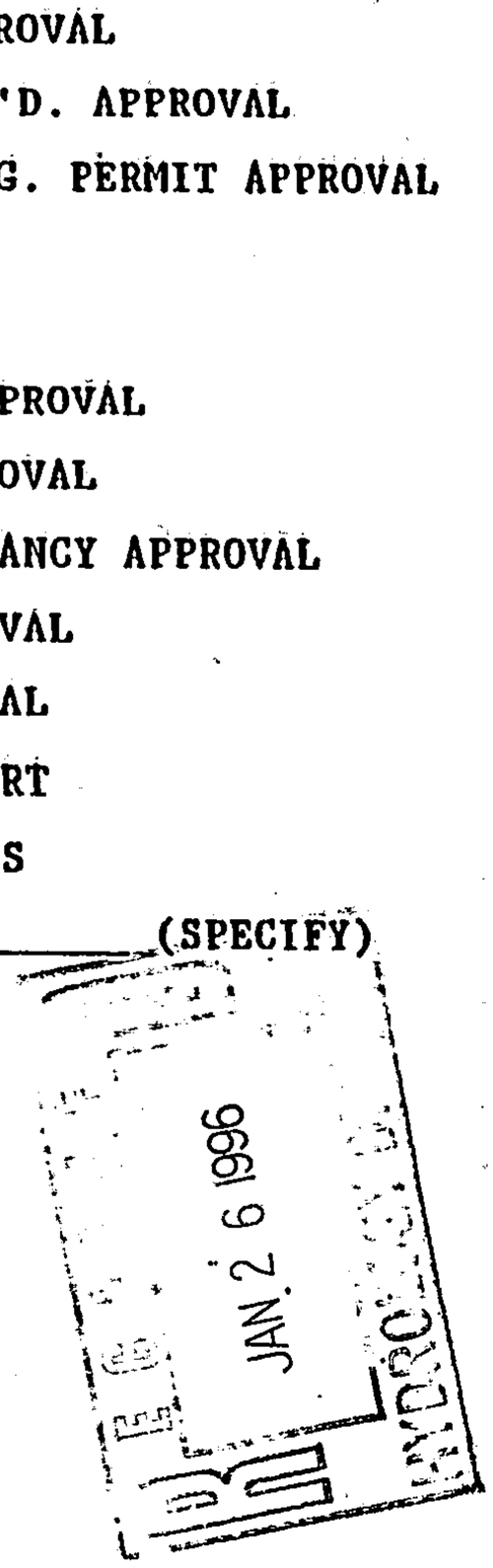
X YES
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
X PRELIMINARY PLAT APPROVAL
___ S. DEV. PLAN FOR SUB'D. APPROVAL
___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
X FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 1.24.96

BY: Dennis A. Lorenz



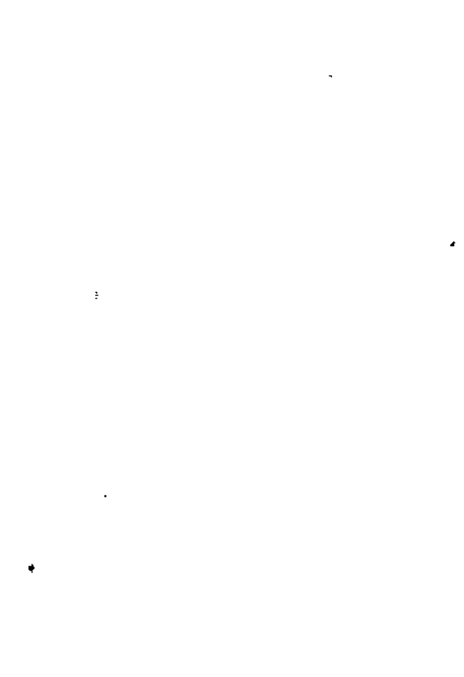
SUPPLEMENTAL CALCULATIONS

FOR

FERNANDEZ TOWNHOMES

BRASHER & LORENZ, INC.

JANUARY 1996



DOWNSTREAM CAPACITY

The Fernandez Townhomes are located on Pennsylvania Street NE immediately south of the Embudo Channel. All flow conveyed by Pennsylvania from the north discharge into the Embudo at the existing bridge, just north of the site. The project site will discharge into Pennsylvania through 2 sidewalk culverts (see Plan). Site runoff will be conveyed by street flow to the intersection with Constitution where off-site Basins "A" and "B" combine (see Off-site Drainage Basin Map). Existing storm drainage improvements are located at the intersection to drain street flow. The storm improvements discharge into the Embudo Channel west of Pennsylvania, just north of I-40.

The subject project is an infill project, being the last parcel of undeveloped land within the contributing watershed. Undeveloped peak runoff is estimated at 1.2 cfs. Development will increase the peak runoff to 1.7 cfs, and increase of 0.5 cfs.

The following calculations demonstrate that the storm drain system located at Constitution and Pennsylvania functions only as a means to drain low level storms and nuisance flows. A modified inlet with an overflow channel provide the outfall for the watershed. The combined capacity of the inlet/storm drain system is estimated at 39 cfs, leaving the remaining 151 cfs to drain through the overflow channel. As shown by the calculations, the channel has excess capacity to drain developed peak runoff. Unfortunately, the inlet/overflow section at the west curb on Pennsylvania does not efficiently remove flows from the street. Flows must backup and drain over the existing curb prior to entering the channel. The backwater pool provides additional headwater to force more water through the existing modified inlet, however we estimate that approximately 151 cfs will flow over the curb into the channel. Based on visual inspection of the channel the backwater pool is not expected to encroach on private property. The channel is located in public right-of-way, with a 12"-24" wall located along the north and west edge of the channel which prohibits flow from escaping the channel or right-of-way.

In summary, although the downstream facilities are not optimum, adequate capacity does exist to support this project.

PROJECT NAME Fernandez Townhouses JOB NO. 5063

SUBJECT Inlet + channel capacity

BY _____ CHECKED BY _____ DATE _____ PAGE 1 OF _____

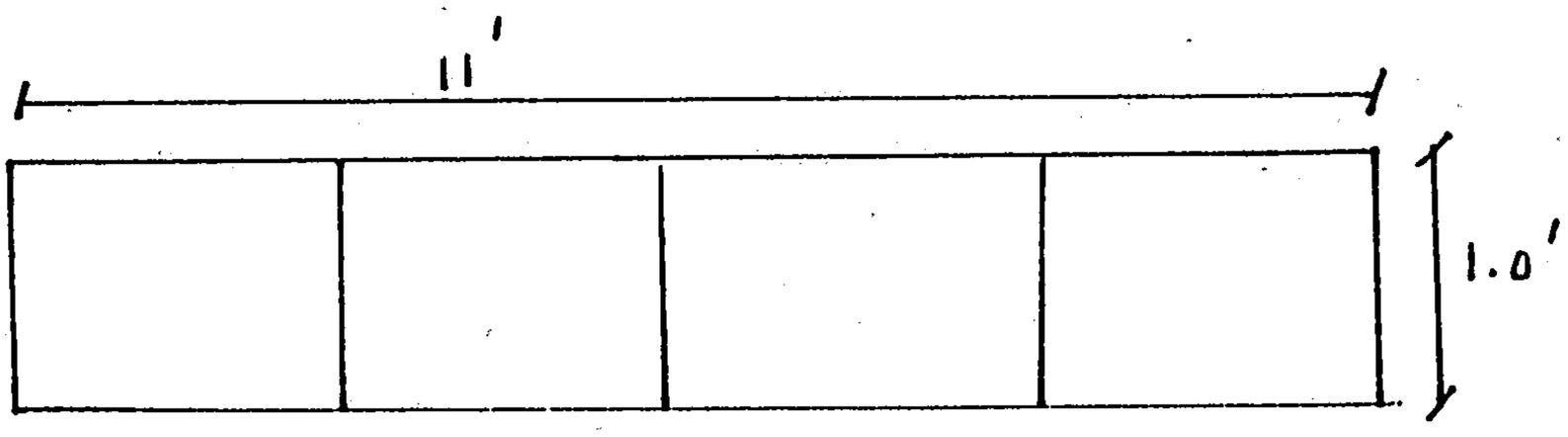
Q_{100} = 189.6 cfs

Inlet on North side of Constitution + Pennsylvania

7.5 cfs fall into inlet from Table 22.3 of DPM

Q_{100} for next inlet

Q_{100} = 189.6 - 7.5 = 182.1 cfs



Weir EQN

$Q = C L H^{3/2}$

Determine 'C' per Table 5-3, "Handbook of Hydraulics," Brater + King

C = 2.85 H = 1.0 L = 11.0'

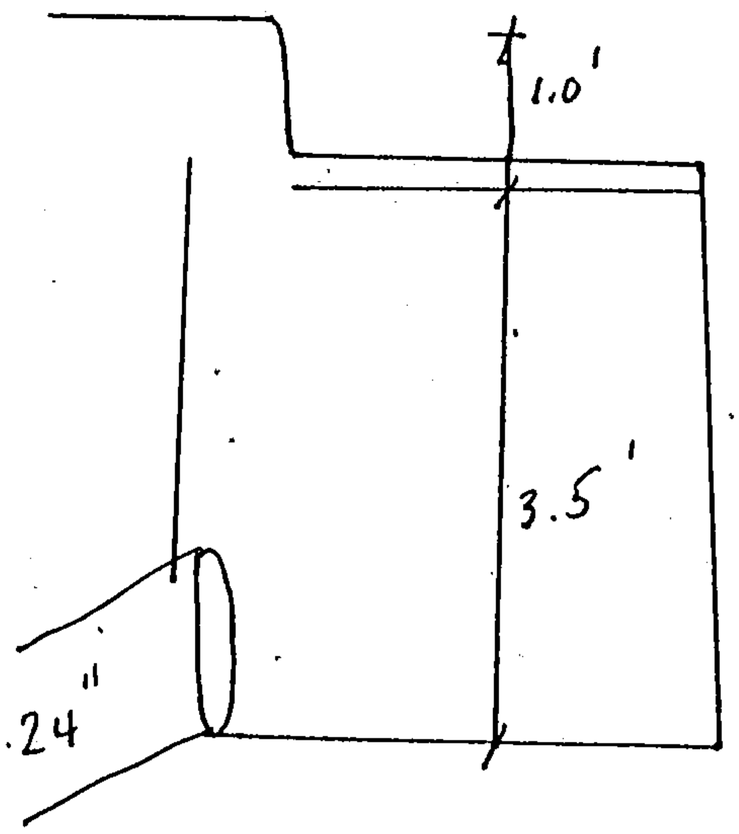
$Q = 2.85 (11.0) (1.0)^{3/2}$

= 31.35 cfs

PROJECT NAME Fernandez Townhouse JOB NO. 5063

SUBJECT Inlet & Drainage Channel Capacity

BY _____ CHECKED BY _____ DATE _____ PAGE 2 OF _____



use orifice EQN to find Q of pipe

$Q = CA\sqrt{2gh}$

C = coef discharge from Brater + King Table 4-5

$h = 4.5'$

$g = 32.2\ f/s^2$

$A = 3.142\ ft^2$

$C = 0.61 \pm$

$Q_{pipe} = CA\sqrt{2gh}$

$= 0.61(3.142)\sqrt{2(32.2)(4.5)}$

$= 32.6\ cfs$

pipe can handle flow from Inlet

overflow from Inlet flow into Drainage Channel

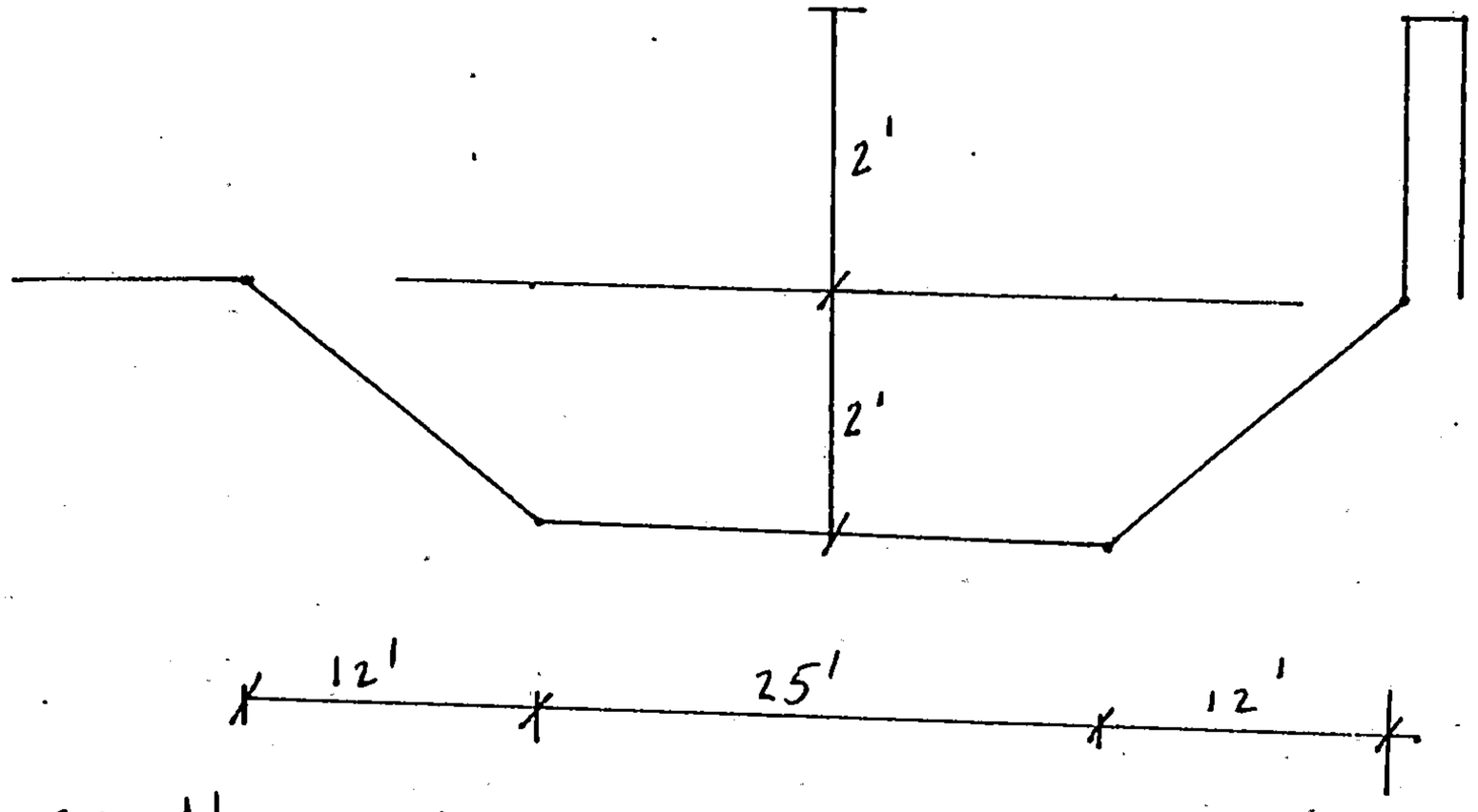
$Q = 182.1 - 31.35 = 150.75\ cfs$

PROJECT NAME Fernandez Townhouse JOB NO. 5063

SUBJECT Inlet + Drainage Channel Capacity

BY _____ CHECKED BY _____ DATE _____ PAGE 2 OF _____

Drainage Channel Capacity



use Manning's EQN

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

$A = 74.33\ ft^2$

$R = \frac{49.33'}{74.33} = 0.6637$

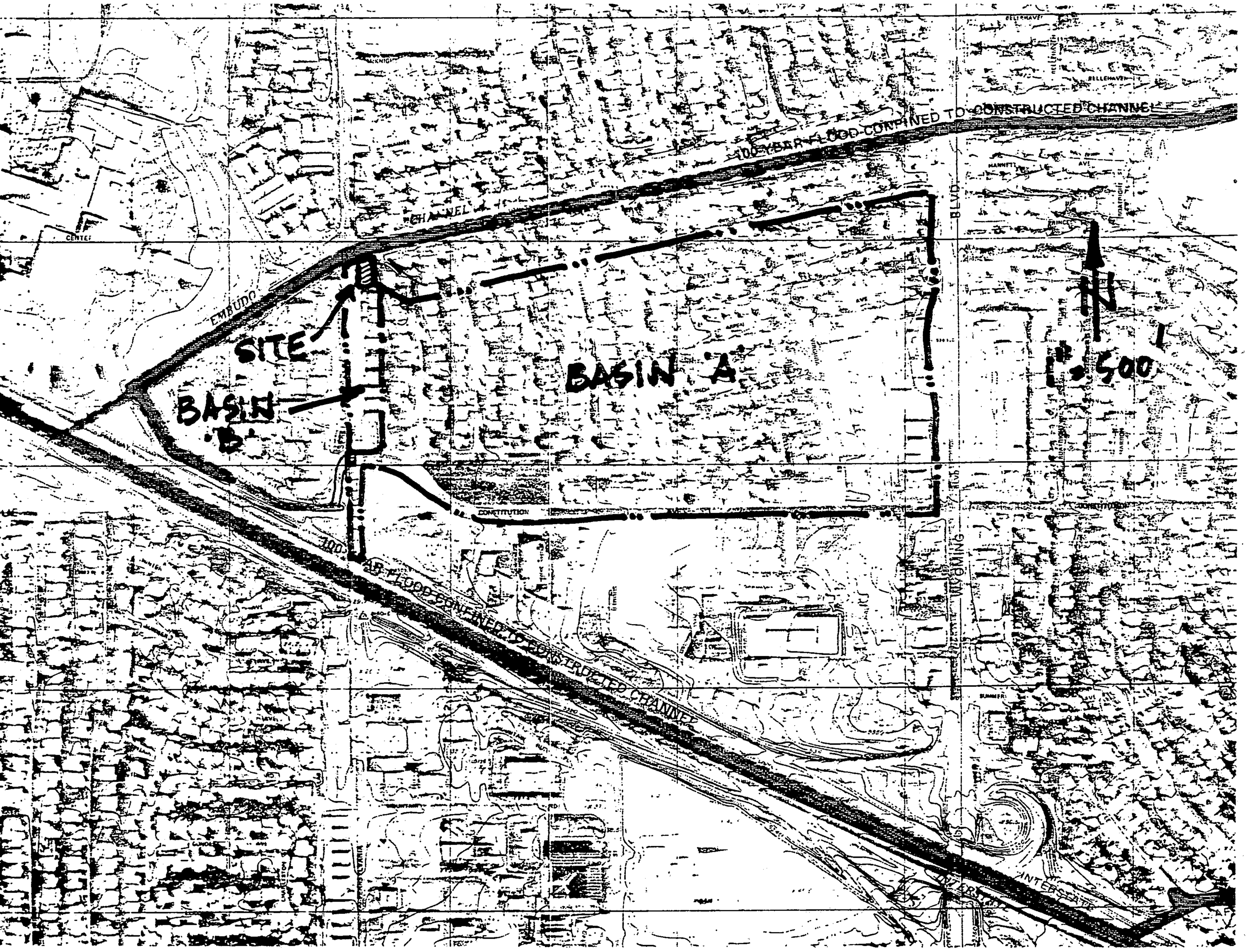
$S = 0.02$

$n = 0.013$

$$Q = \frac{1.49}{0.013} (74.33)(0.6637)^{2/3} (0.02)^{1/2}$$

$Q = 916.7, cfs \quad > Q_{100}$

$\therefore$ any flow overflow from inlet will be handle by Drainage Channel and will not impact any private property


100-YEAR FLOOD-CONFINED TO CONSTRUCTED CHANNEL
CHANNEL
EMBUDO
SITE
BASIN 'B'
BASIN 'A'
1,500'
BLVD
CONSTITUTION
100-YEAR FLOOD-CONFINED TO CONSTRUCTED CHANNEL
INTERSTATE

```
    AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
         RUN DATE (MON/DAY/YR) = 01/16/1996
         START TIME (HR:MIN:SEC) = 11:58:38     USER NO.= BRASHERE.I01
         INPUT FILE = SNOW.DAT

*S            Lot 39A, BLK 11, SNOW HEIGHTS ADDITION (SNOW.DAT)
*S            100-YEAR  6 HOUR RAINFALL
START               TIME=0.0 PUNCH CODE=0  PRINT LINE=0
RAINFALL            TYPE=1  RAIN QUARTER=0   RAIN ONE=2.05
                          RAIN SIX=2.53  RAIN DAY=2.90  DT=0.033333

 COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT =     .033333 HOURS       END TIME =     5.999940 HOURS
    .0000   .0031   .0063   .0095   .0128   .0161   .0196
    .0231   .0267   .0304   .0342   .0380   .0420   .0461
    .0503   .0546   .0591   .0637   .0684   .0733   .0784
    .0836   .0890   .0947   .1006   .1067   .1131   .1198
    .1269   .1343   .1422   .1479   .1539   .1604   .1743
    .2055   .2534   .3223   .4162   .5397   .6971   .8931
   1.1323  1.3535  1.4461  1.5243  1.5939  1.6571  1.7154
   1.7695  1.8200  1.8674  1.9120  1.9540  1.9938  2.0314
   2.0670  2.1008  2.1329  2.1633  2.1922  2.1995  2.2064
   2.2130  2.2193  2.2254  2.2313  2.2369  2.2424  2.2477
   2.2528  2.2577  2.2626  2.2673  2.2719  2.2763  2.2807
   2.2850  2.2891  2.2932  2.2972  2.3012  2.3050  2.3088
   2.3125  2.3161  2.3197  2.3232  2.3266  2.3300  2.3334
   2.3367  2.3399  2.3431  2.3463  2.3494  2.3524  2.3555
   2.3584  2.3614  2.3643  2.3672  2.3700  2.3728  2.3756
   2.3783  2.3810  2.3837  2.3864  2.3890  2.3916  2.3941
   2.3967  2.3992  2.4017  2.4041  2.4066  2.4090  2.4114
   2.4138  2.4161  2.4184  2.4208  2.4230  2.4253  2.4276
   2.4298  2.4320  2.4342  2.4364  2.4385  2.4407  2.4428
   2.4449  2.4470  2.4491  2.4512  2.4532  2.4552  2.4573
   2.4593  2.4613  2.4632  2.4652  2.4671  2.4691  2.4710
   2.4729  2.4748  2.4767  2.4786  2.4804  2.4823  2.4841
   2.4860  2.4878  2.4896  2.4914  2.4932  2.4949  2.4967
   2.4984  2.5002  2.5019  2.5036  2.5054  2.5071  2.5088
   2.5104  2.5121  2.5138  2.5154  2.5171  2.5187  2.5204
   2.5220  2.5236  2.5252  2.5268  2.5284  2.5300

SEDIMENT BULK       CODE=1  BULK FACTOR=1.05
* OFFSITE DRAINAGE BASIN "A"
COMPUTE NM HYD      ID=1   HYD NO= A   DA=0.10196 SQ MI
                         PER A=0.0  PER B=20.0  PER C=20.0
                         PER D=60.0  TP=0.28396 HR MASSRAIN=-1

    K =   .155649HR    TP =   .283960HR    K/TP RATIO =   .548136     SHAPE CONSTANT, N =  7.054422
    UNIT PEAK =   112.85    CFS   UNIT VOLUME =    1.000       B =   523.83      P60 = 2.0500
    AREA =      .061176 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333


    K =   .252072HR    TP =   .283960HR    K/TP RATIO =   .887703     SHAPE CONSTANT, N =  3.996037
    UNIT PEAK =   50.974    CFS   UNIT VOLUME =    .9998       B =   354.91      P60 = 2.0500
    AREA =      .040784 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.05000 AT PEAK FLOW.

PRINT HYD           ID=1 CODE=5

                                HYDROGRAPH FROM AREA A

 TIME   FLOW     TIME   FLOW     TIME   FLOW     TIME   FLOW     TIME   FLOW
 HRS    CFS      HRS    CFS      HRS    CFS      HRS    CFS      HRS    CFS
 .000     .0    1.833  134.4    3.667    4.1    5.500    1.9    7.333     .1
 .167     .0    2.000   88.1    3.833    3.5    5.667    1.9    7.500     .0
 .333     .0    2.167   60.0    4.000    3.1    5.833    1.9    7.667     .0
 .500     .0    2.333   35.0    4.167    2.7    6.000    1.9    7.833     .0
 .667     .0    2.500   21.7    4.333    2.5    6.167    1.8    8.000     .0
 .833     .0    2.667   15.6    4.500    2.3    6.333    1.0    8.167     .0
1.000    1.0    2.833   12.0    4.667    2.2    6.500     .4    8.333     .0
1.167    4.0    3.000    9.4    4.833    2.1    6.667     .3    8.500     .0
1.333   14.3    3.167    7.4    5.000    2.0    6.833     .2    8.667     .0
1.500  101.2    3.333    6.0    5.167    1.9    7.000     .1    8.833     .0
1.667  181.8    3.500    4.9    5.333    1.9    7.167     .1    9.000     .0

    RUNOFF VOLUME =     1.86659 INCHES     =      10.1502 ACRE-FEET
    PEAK DISCHARGE RATE =     181.77 CFS  AT    1.667 HOURS   BASIN AREA =    .1020 SQ. MI.


* OFFSITE DRAINAGE BASIN "B"
COMPUTE NM HYD      ID=2   HYD NO= B   DA=0.0028696 SQ MI
                         PER A=0.0  PER B=20.0  PER C=20.0
                         PER D=60.0  TP=0.133333HR MASSRAIN=-1

    K =   .072666HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
    UNIT PEAK =   6.7959    CFS   UNIT VOLUME =    .9976       B =   526.28      P60 = 2.0500
    AREA =      .001722 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333


    K =   .120263HR    TP =   .133333HR    K/TP RATIO =   .901978     SHAPE CONSTANT, N =  3.928677
    UNIT PEAK =   3.0164    CFS   UNIT VOLUME =    .9959       B =   350.39      P60 = 2.0500
    AREA =      .001148 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

    BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.05000 AT PEAK FLOW.

PRINT HYD           ID=2 CODE=5

                                HYDROGRAPH FROM AREA B

 TIME   FLOW     TIME   FLOW     TIME   FLOW     TIME   FLOW     TIME   FLOW
 HRS    CFS      HRS    CFS      HRS    CFS      HRS    CFS      HRS    CFS
 .000     .0    1.500    7.8    3.000     .1    4.500     .0    6.000     .1
 .167     .0    1.667    4.0    3.167     .1    4.667     .0    6.167     .0
 .333     .0    1.833    2.4    3.333     .1    4.833     .0    6.333     .0
 .500     .0    2.000    1.6    3.500     .1    5.000     .0    6.500     .0
 .667     .0    2.167     .8    3.667     .1    5.167     .1    6.667     .0
 .833     .0    2.333     .4    3.833     .1    5.333     .1
1.000     .1    2.500     .3    4.000     .1    5.500     .1
1.167     .2    2.667     .2    4.167     .1    5.667     .1
1.333    2.0    2.833     .1    4.333     .1    5.833     .1

    RUNOFF VOLUME =     1.86660 INCHES     =       .2857 ACRE-FEET
    PEAK DISCHARGE RATE =       7.80 CFS  AT    1.500 HOURS   BASIN AREA =    .0029 SQ. MI.


*ON-SITE DRAINAGE BASIN 1
COMPUTE NM HYD      ID=3  HYD NO= 1   DA=0.0005601347 SQ MI
```

```
                                PER A=0.0  PER B=10.0  PER C= 90.0
                                PER D=0.0  TP=0.1333333 HR MASSRAIN =-1

     K =   .110392HR    TP =   .133333HR    K/TP RATIO =   .827940     SHAPE CONSTANT, N =  4.310344
     UNIT PEAK =   1.5769    CFS   UNIT VOLUME =    .9920      B =   375.36      P60 = 2.0500
     AREA =      .000560 SQ MI    IA =    .36500 INCHES    INF =    .87200 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

     BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR = * 1.05000 AT PEAK FLOW.

PRINT HYD           ID=3 CODE 5

                                    OUTFLOW HYDROGRAPH REACH     1.00

  TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
   HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
   .000       .0           .667       .0          1.333       .2          2.000       .2          2.667       .0
   .167       .0           .833       .0          1.500      1.2          2.167       .1          2.833       .0
   .333       .0          1.000       .0          1.667       .7          2.333       .0          3.000       .0
   .500       .0          1.167       .0          1.833       .3          2.500       .0

     RUNOFF VOLUME =     1.23066 INCHES      =        .0368 ACRE-FEET
     PEAK DISCHARGE RATE =       1.22 CFS  AT    1.500 HOURS    BASIN AREA =    .0006 SQ. MI.


*ON-SITE DRAINAGE BASIN 1*
COMPUTE NM HYD      ID=4  HYD NO= 1*   DA=0.0005601347 SQ MI
                                PER A=0.0  PER B=15.0  PER C= 15.0
                                PER D=70.0  TP=0.1333333 HR MASSRAIN =-1

     K =   .072667HR    TP =   .133333HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   1.5476    CFS   UNIT VOLUME =    .9922      B =   526.28      P60 = 2.0500
     AREA =      .000392 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333


     K =   .120264HR    TP =   .133333HR    K/TP RATIO =   .901978     SHAPE CONSTANT, N =  3.928677
     UNIT PEAK =   .44159    CFS   UNIT VOLUME =    .9688      B =   350.39      P60 = 2.0500
     AREA =      .000168 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

     BULKING FACTOR APPLIED TO HYDROGRAPH.  FACTOR =  1.05000 AT PEAK FLOW.

PRINT HYD           ID=4 CODE 5

                                    HYDROGRAPH FROM AREA 1*

  TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW          TIME      FLOW
   HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS           HRS       CFS
   .000       .0          1.333       .4          2.667       .0          4.000       .0          5.333       .0
   .167       .0          1.500      1.6          2.833       .0          4.167       .0          5.500       .0
   .333       .0          1.667       .8          3.000       .0          4.333       .0          5.667       .0
   .500       .0          1.833       .5          3.167       .0          4.500       .0          5.833       .0
   .667       .0          2.000       .4          3.333       .0          4.667       .0          6.000       .0
   .833       .0          2.167       .2          3.500       .0          4.833       .0          6.167       .0
  1.000       .0          2.333       .1          3.667       .0          5.000       .0          6.333       .0
  1.167       .0          2.500       .0          3.833       .0          5.167       .0

     RUNOFF VOLUME =     1.99911 INCHES      =        .0597 ACRE-FEET
     PEAK DISCHARGE RATE =       1.61 CFS  AT    1.500 HOURS    BASIN AREA =    .0006 SQ. MI.

*

FINISH

     NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 11:58:39
```

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =01/16/1996
INPUT FILE = SNOW.DAT USER NO.= BRASHERE.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S	Lot 39A, BLK 11, SNOW HEIGHTS ADDITION (SNOW.DAT)									
*8	100-YEAR 6 HOUR RAINFALL									
START										
RAINFALL TYPE= 1										TIME= .00
SEDIMENT BULK										RAIN6= 2.530
										PK BF = 1.05
COMPUTE NM HYD	A	-	1	.10196	181.77	10.150	1.86659	1.667	2.786	PER IMP= 60.00
COMPUTE NM HYD	B	-	2	.00287	7.80	.286	1.86660	1.500	4.247	PER IMP= 60.00
COMPUTE NM HYD	1.00	-	3	.00056	1.22	.037	1.23066	1.500	3.405	PER IMP= .00
COMPUTE NM HYD	1*	-	4	.00056	1.61	.060	1.99911	1.500	4.494	PER IMP= 70.00
FINISH										

MAN-MADE CHANNELS

VARIABLES LIST:

Y - FLOW DEPTH	B - CHANNEL BOTTOM WIDTH	S - CHANNEL SLOPE
Q - FLOWRATE	M - CHANNEL SIDE SLOPE	N - CHANNEL ROUGHNESS

VARIABLE TO BE SOLVED (Y,Q,B,M,S OR N) ? Q

```
Y (FT)      ? .25                    RESULTS
B (FT)      ? 0                      ================
M (FT/FT)   ? 4                      Q=        0.70 CFS
S (FT/FT)   ? .01                    A=        0.25 SF
N (FT^1/6)  ? .013                   P=        2.06 FT
                                     V=        2.80 FPS
                                     F=        1.40      SUPER-CRITICAL FLOW
```

<Shift> <Prt Sc> print <Return> repeat <Space Bar> back to menu

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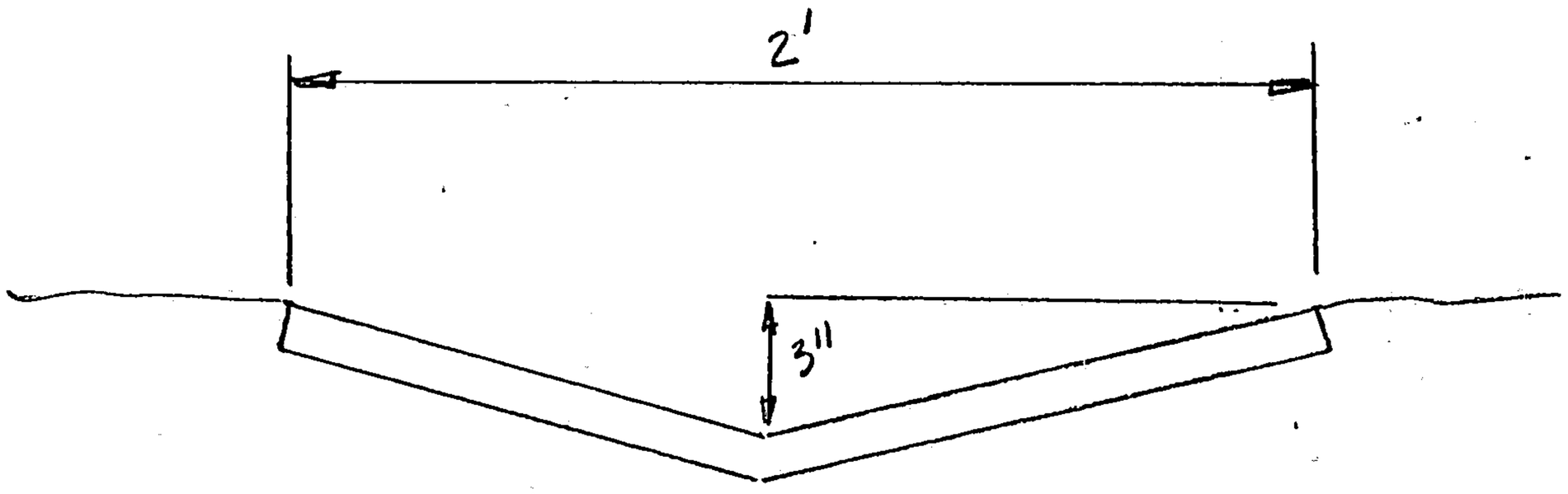


TYP EASEMENT CHANNEL

NTS

BASIN 'B' Q_{100} = 0.1 CFS

BASIN 'C' Q_{100} = 0.5 CFS

Q_{MAX} = 0.7 CFS

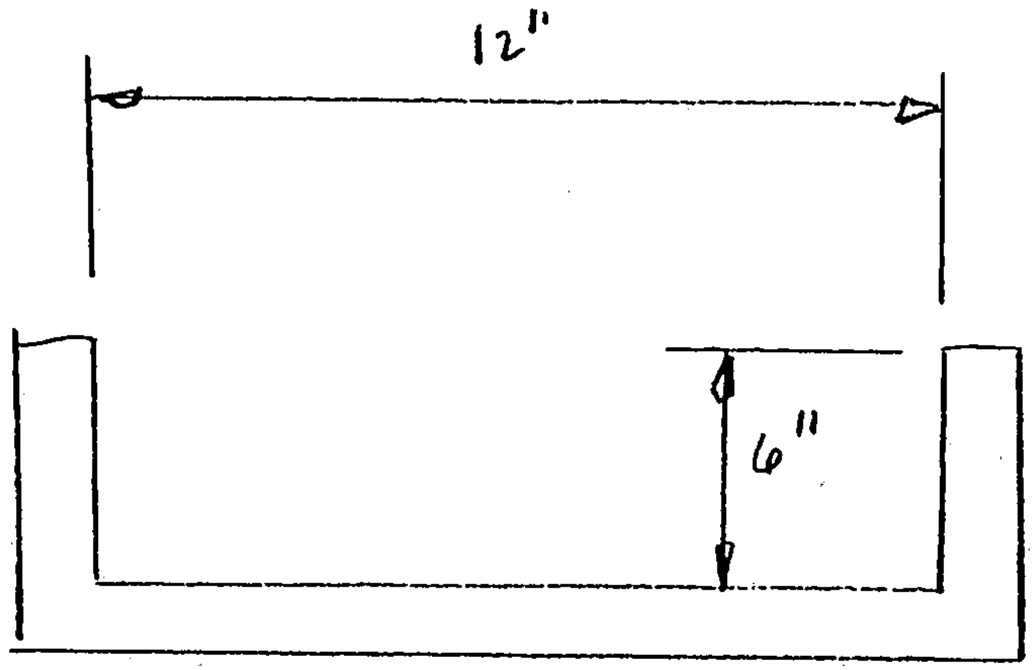
MAN-MADE CHANNELS

```
VARIABLES LIST:
        Y - FLOW DEPTH          B - CHANNEL BOTTOM WIDTH      S - CHANNEL SLOPE
        Q - FLOWRATE            M - CHANNEL SIDE SLOPE        N - CHANNEL ROUGHNESS

VARIABLE TO BE SOLVED (Y,Q,B,M,S OR N) ? Q


Y (FT)      ? .5                          RESULTS
B (FT)      ? 1                       ==================
M (FT/FT)   ? 0                       Q=       2.27 CFS
S (FT/FT)   ? .01                     A=       0.50 SF
N (FT^1/6)  ? .013                    P=       2.00 FT
                                      V=       4.54 FPS
                                      F=       1.13      SUPER-CRITICAL FLOW


<Shift> <Prt Sc> print          <Return> repeat          <Space Bar> back to menu
```



TYP S/W CULVERT CHANNEL

NTS

BASIN 'B' Q_{100} = 0.1 CFS

BASIN 'C' Q_{100} = 0.5 CFS

Q_{MAX} = 2.27 CFS

PROJECT TITLE: FERNANDEZ TOWNHOMES ZONE ATLAS/DRNG. FILE #: J19-D40

DRB #: _____ EPC #: Z95-114 WORK ORDER #: _____

LEGAL DESCRIPTION: LOTS 39 + 40, BLK 11, SNOW HEIGHTS ADD'N

CITY ADDRESS: PENNSYLVANIA NE

ENGINEERING FIRM: BRASHER & LORENZ, INC. CONTACT: Dennis A. Lorenz, PE

ADDRESS: 4425 Juan Tabo Blvd. NE Suite 202 PHONE: 296-0422

OWNER: PELAYO FERNANDEZ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: RICK BENNETT CONTACT: SAME

ADDRESS: 1118 PARK SW PHONE: 242-1859

SURVEYOR: PRECISION CONTACT: LARRY MEDRAND

ADDRESS: 2929 COORS NW PHONE: 869-4153

CONTRACTOR: NA CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
X CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER: _____

PRE-DESIGN MEETING:

X YES
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ S. DEV. PLAN FOR SUB'D. APPROVAL
X S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11-29-95

BY: Dennis A. Lorenz

RECEIVED
NOV 30
HYDROLOGY

BRASHER & LORENZ, INC.
CONSULTING ENGINEERS

4425 JUAN TABO BLVD NE SUITE 202 ALBUQUERQUE, NM 87111 PHONE (505) 296-0422 FAX (505) 296-0466

November 29, 1995

Lisa Ann Manwill
Engineering Associate, Hydrology Department
City of Albuquerque
PO Box 1293
Albuquerque, New Mexico 87102

SUBJECT: CONCEPTUAL GRADING & DRAINAGE PLAN FOR FERNANDEZ TOWNHOUSES (J19-D40)

Dear Lisa:

Attached please find 1 copy of the revised Conceptual Grading and Drainage Plan for the subject project. I have received your letter dated November 8, 1995 and have the following response to your comments:

1. Since this Plan supports a Site Development Plan which required review by EPC, surely you can understand why an architect would not develop construction plans prior to Site Development Plan approval. Typically at this stage of a project's development the architect has a preliminary design and can safely commit to a floor plan and building elevations and disclose this information to EPC and DRB in the Site Development Plan. Design details, including roof design, typically are not available until final construction plans are prepared. In order to satisfy your request to identify year yard flows I have met with the architect and developed a roof drainage design, which is disclosed on the Plan. Downspout locations are not known, but the ridge lines are, and a developed flow rate is provided for the rear yard.

2. Section "A" is provided on the Plan detailing a concrete swale within a private drainage easement. The easement will be granted by replat.

Please process the plan approval at your earliest convenience. If there is anything I can do to assist your timely review, please call.

Sincerely,

BRASHER & LORENZ, INC.

Dennis A. Lorenz, PE

/dl

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

November 8, 1995

Dennis A. Lorenz, PE
Brasher & Lorenz, Inc.
4425 Juan Tabo Blvd. NE
Suite 202
Albuquerque, NM 87111

RE: FERNANDEZ TOWNHOMES (J19-D40) CONCEPTUAL GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 10-30-95.

Dear Mr. Lorenz:

Based on the information provided on your submittal dated September 28, 1995, City Hydrology has the following comments:

1. In response to your letter dated October 30, 1995: If buildings have not yet been designed, how did you come up with a footprint? I want to know how much water you are discharging to the rear yard. Show roof drain locations.

2. Cross lot drainage will require a concrete channel and proper easements and covenants.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

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

February 2, 1996

Dennis A. Lorenz, PE
Brasher & Lorenz, Inc.
4425 Juan Tabo Blvd. NE
Suite 202
Albuquerque, NM 87111

RE: FERNANDEZ TOWNHOMES (J19-D40) DRAINAGE PLAN FOR FINAL PLAT, SO #19 PERMIT, AND BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 1-17-92.

Dear Mr. Lorenz:

Based on the information provided on your submittal dated January 26, 1996, the above refernced project is approved for Final Plat, SO #19 Permit, and Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Arlene Portillo
Andrew Garcia
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Decmber 14, 1995

Dennis A. Lorenz, PE
Brasher & Lorenz, Inc.
4425 Juan Tabo Blvd. NE
Suite 202
Albuquerque, NM 87111

RE: FERNANDEZ TOWNHOMES (J19-D40) CONCEPTUAL GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 11-29-95.

Dear Mr. Lorenz:

Based on the information provided on your submittal dated November 30, 1995, the above refernced project is approved for Site Development Plan for Building Permit.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: FERNANDEZ TOWNHOMES ZONE ATLAS/DRNG. FILE #: J-19/D40

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOTS 39 + 40, BLK 11, SNOW HEIGHTS

CITY ADDRESS: PENNSYLVANIA NE

ENGINEERING FIRM: BRASHER & LORENZ, INC. CONTACT: Dennis A. Lorenz, PE

ADDRESS: 4425 Juan Tabo Blvd. NE Suite 202 PHONE: 296-0422

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: RICK BENNETT CONTACT: SAME

ADDRESS: 1118 PARK PHONE: 242-1959

SURVEYOR: NA CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: NA CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
X CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER: _____

PRE-DESIGN MEETING:

___ YES
X NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
X S. DEV. PLAN FOR SUB'D. APPROVAL
___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 9-26-95

BY: Dennis A. Lorenz

RECEIVED
SEP 28 1995
HYDROLOGY DIVISION

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

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: J19 DATE: 3-31-86

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: 1420 Bolna Ave.

STREET ADDRESS (IF KNOWN): Lot 29A Block 11

SUBDIVISION NAME: Snow Heights

APPROVAL REQUESTED:

____	PRELIMINARY PLAT	____	FINAL PLAT
____	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
____	OTHER	____	ROUGH GRADING

	WHO	REPRESENTING
ATTENDANCE:	Jeff Mortensen	
	Carlos Armijo	

FINDINGS:

① DRAINAGE PLAN PER DPM

② Free discharge to Pennsylvania, however, engineer must address
(1) in fill site
(2) Downstream channel to Embudo
(3) site does not affect downstream drainage system.
(4) Bottom of drainage basin
(5) Not flood zone

③ Site is next to arroyo channel

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:	Carlos Armijo	SIGNED:	Jeffrey S. Mortensen
TITLE:		TITLE:	P.E.
DATE:	3-31-86	DATE:	03-31-86

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

April 29, 1986

Jeff Mortensen
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR 1420 PENNSYLVANIA STREET, NE
(J-19/D40) ENGINEER'S STAMP DATED APRIL 18, 1986

Dear Jeff:

Based on the information provided on your April 22, 1986 submittal, the above referenced drainage plan is approved for Building Permit.

Please attach a copy of this approved drainage plan to the construction sets before Hydrology will sign off.

If I can be of further assistance, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant/Hydrology

BJM/bsj

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

October 4, 1995

Dennis A. Lorenz, PE
Brasher & Lorenz, Inc.
4425 Juan Tabo Blvd. NE
Suite 202
Albuquerque, NM 87111

RE: FERNANDEZ TOWNHOMES (J19-D40) CONCEPTUAL GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED 9-26-95.

Dear Mr. Lorenz:

Based on the information provided on your submittal dated September 28, 1995, City Hydrology has the following comments:

1. Address offsite flows. If there are no offsite flows, please state in your narrative.

2. Show roof drain locations.

3. Plan only shows existing contours.

4. What does the long dashed line in the backyard indicate? I do not see this line type in your legend.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

September 16, 1986

Jeff Mortensen, P.E.
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR 1420 PENNSYLVANIA STREET, NE
(J-19/D40) ENGINEER'S STAMP DATED SEPTEMBER 1, 1986

Dear Tom:

Based on the information provided on your resubmittal of September 4, 1986, revisions as indicated are acceptable for Building Permit approval.

Please attach a copy of this approved plan to the construction plans priro to sign-off by the Hydrology Section.

If I can be of further assistance, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

September 16, 1986

Jeff Mortensen, P.E.
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR 1420 PENNSYLVANIA STREET, NE
(J-19/D40) ENGINEER'S STAMP DATED SEPTEMBER 1, 1986

Dear Tom:

Based on the information provided on your resubmittal of September 4, 1986, revisions as indicated are acceptable for Building Permit approval.

Please attach a copy of this approved plan to the construction plans priro to sign-off by the Hydrology Section.

If I can be of further assistance, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: 1420 PENNSYLVANIA ZONE ATLAS/DRNG. FILE #: J-19

LEGAL DESCRIPTION: LOT 39A, BLOCK 11, SNOW HEIGHTS

CITY ADDRESS: 1420 PENNSYLVANIA ST. N.E.

ENGINEERING FIRM: TOM MANN + ASSOC CONTACT: LEONARD P. LITTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

OWNER: CONTACT ARCHITECT CONTACT: BILL BUCKLEY

ADDRESS: PHONE:

ARCHITECT: BILL BUCKLEY CONTACT: BILL BUCKLEY

ADDRESS: 3625 CENTRAL N.E. PHONE: 255-9196

SURVEYOR: TOM MANN + ASSOC CONTACT: LEONARD P. UTTE

ADDRESS: 811 DALLAS N.E PHONE: 265-5611

CONTRACTOR: NOT KNOWN CONTACT:

ADDRESS: PHONE:

RECEIVED
SEP 04 1986
HYDROLOGY SECTION

PRE-DESIGN MEETING:

✓ YES

__ NO

✓ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. J-19/D40

TYPE OF SUBMITTAL:

__ DRAINAGE REPORT

✓ DRAINAGE PLAN

__ CONCEPTUAL GRADING & DRAINAGE PLAN

✓ GRADING PLAN

__ EROSION CONTROL PLAN

__ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

__ SKETCH PLAT APPROVAL

__ PRELIMINARY PLAT APPROVAL

__ SITE DEVELOPMENT PLAN APPROVAL

__ FINAL PLAT APPROVAL

✓ BUILDING PERMIT APPROVAL

__ FOUNDATION PERMIT APPROVAL

__ CERTIFICATE OF OCCUPANCY APPROVAL

__ ROUGH GRADING PERMIT APPROVAL

__ GRADING/PAVING PERMIT APPROVAL

✓ OTHER REVISED PLAN (SPECIFY)

DATE SUBMITTED: 9-4-86

BY: Leonard P. Utter

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

April 29, 1986

Jeff Mortensen
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR 1420 PENNSYLVANIA STREET, NE
(J-19/D40) ENGINEER'S STAMP DATED APRIL 18, 1986

Dear Jeff:

Based on the information provided on your April 22, 1986 submittal, the above referenced drainage plan is approved for Building Permit.

Please attach a copy of this approved drainage plan to the construction sets before Hydrology will sign off.

If I can be of further assistance, please feel free to call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant/Hydrology

BJM/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: 1420 PENNSYLVANIA ZONE ATLAS/DRNG. FILE #: J-19/D40

LEGAL DESCRIPTION: LOT 39A, BLOCK 11, SNOW HEIGHTS

CITY ADDRESS: 1420 PENNSYLVANIA ST. N.E.

ENGINEERING FIRM: TOM MANN + ASSOC CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E. PHONE: 265-5611

OWNER: _____ CONTACT: BILL BUCKLEY

ADDRESS: _____ PHONE: _____

ARCHITECT: BILL BUCKLEY CONTACT: BILL BUCKLEY

ADDRESS: 3625 CENTRAL N.E. PHONE: 255-9196

SURVEYOR: TOM MANN + ASSOC CONTACT: LEONARD P. UTTER

ADDRESS: 811 DALLAS N.E PHONE: 265-5611

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

RECEIVED
APR 22 1986
HYDROLOGY SECTION

PRE-DESIGN MEETING:

✓ YES

___ NO

✓ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. —

EPC NO. —

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

✓ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

✓ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

✓ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 4-

BY: Leonard P. Utter

DRAINAGE INFORMATION SHEET

PROJECT TITLE: FERNANDEZ TOWN HOUSES ZONE ATLAS/DRNG. FILE #: J19 - D40

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOT 39A, BLK 11, SNOW HEIGHTS ADDN

CITY ADDRESS: PENNSYLVANIA ST NE

ENGINEERING FIRM: BRASHER & LORENZ, INC. CONTACT: Dennis A. Lorenz, PE

ADDRESS: 4425 Juan Tabo Blvd. NE Suite 202 PHONE: 296-0422

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: RICK BENNETT (AGENT) CONTACT: SAME

ADDRESS: 1118 PARK SW PHONE: 242-1859

SURVEYOR: NA CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: NA CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
X CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER: _____

PRE-DESIGN MEETING:

X YES
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
X S. DEV. PLAN FOR SUB'D. APPROVAL
___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 10-30-95

BY: Dennis A. Lorenz

RECEIVED
NOV - 1 1995
HYDROLOGY DIVISION

BRASHER & LORENZ, INC.
CONSULTING ENGINEERS

4425 JUAN TABO BLVD NE SUITE 202 ALBUQUERQUE, NM 87111 PHONE (505) 296-0422 FAX (505) 296-0466

October 30, 1995

Lisa Ann Manwill
Engineering Associate, Hydrology Department
City of Albuquerque
PO Box 1293
Albuquerque, New Mexico 87102

SUBJECT: CONCEPTUAL GRADING & DRAINAGE PLAN FOR FERNANDEZ TOWNHOUSES (J19-D40)

Dear Lisa:

Attached please find 1 copy of the revised Conceptual Grading and Drainage Plan for the subject project. I have received your letter dated October 4, 1995 and have the following response to your comments:

1. No off-site flows impact the property. A note has been added to the Plan stating this.

2. This is a conceptual plan, therefore the buildings have not been designed yet. The final Grading and Drainage Plan will identify exact roof drain locations, as required for building permit. How did you come up w/ a foot print?

3. It is designers choice as to whether the grading information shown on the plan is given by spot elevations, contours, or a combination of both. Since this is a conceptual plan we have chosen to use spot elevations.

4. As shown by note on the Plan, the long dashed line along the east property line represents a public utility easement.

Please process the plan approval at your earliest convenience. If there is anything I can do to assist your timely review, please call.

Sincerely,

BRASHER & LORENZ, INC.

Dennis A. Lorenz, PE

/dl

RECEIVED
NOV - 1 1995