

Paul Sloan

DRAINAGE INFORMATION SHEET

889-3030
Architect Studio

PROJECT TITLE: 617 TRUMAN WAREHOUSE ZONE ATLAS/DRNG. FILE: J17-D18

LEGAL DESCRIPTION: Lot 24, BLOCK 2, PUEBLO ALTO ADDITION

CITY ADDRESS: 617 TRUMAN STREET, N.E.

ENGINEERING FIRM: LARRY READ & ASSOCIATES CONTACT: LARRY READ

ADDRESS: 12836-B LOMAS BLVD., NE PHONE: 237-8421

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PREDESIGN MEETING:

____ YES
X NO

DRB NO. _____
EPC NO. _____

____ COPY OF CONFERENCE RECAP SHEET

PROJECT NO. _____

PROVIDED

TYPE OF TRANSMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ PRELIMINARY GRADING AND DRAINAGE

____ GRADING PLAN

____ EROSION CONTROL PLAN

X 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: FEBRUARY 23, 1999

BY: LARRY READ

RECEIVED
FEB 23 1999
HYDROLOGY SECTION



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 29, 1999

Larry Read
Larry Read & Associates
12836-B Lomas Blvd NE
Albuquerque, New Mexico 87122

RE: GRADING AND DRAINAGE PLAN FOR 617 TRUMAN WAREHOUSE (J-17/D18)
ENGINEER'S STAMP DATED 2/23/99.

Dear Mr. Read:

Based on the information provided on your February 23, 1999 submittal, the above referenced site is approved for building permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer's Certification per the DPM will be required.

If I can be of any further assistance, please feel free to contact me at 924-3330.

Sincerely,

Andrew Garcia
Drainage Inspector

c: file

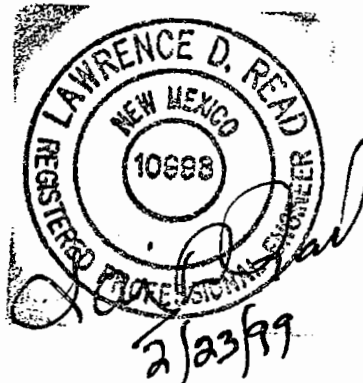
ENGINEER'S CERTIFICATION REPORT

for

617 TRUMAN STREET, N.E.

Albuquerque, New Mexico

February 22, 1999



R **E** **C** **E** **I** **V** **E** **D**
FEB 23 1999
HYDROLOGY SECTION

PREPARED BY
LARRY D. READ, PE
12836-B Lomas Blvd., NE
ALBUQUERQUE, NEW MEXICO 87112
(505) 237-8421

ENGINEER'S CERTIFICATION REPORT

for

617 TRUMAN STREET, N.E.

Albuquerque, New Mexico

February 22, 1999

PURPOSE

The existing site was constructed in 1990 or 1991 based on an approved grading plan, City of Albuquerque Drainage File J17-D18, prepared by another engineer. However, it appears the Engineer's Certification was never completed. This report is to provide current Drainage Analyses as well as a current Record Drawing of constructed conditions to obtain approval of this Engineer's Certification from PWD Hydrology for the purpose of obtaining a Certificate of Occupancy.

LOCATION & DESCRIPTION

This facility has been constructed at 617 Truman Street, N.E.. The legal description is Lot 24, Pueblo Alto Addition.

The site is 0.17 acres approximately, and contains a vacant 2,400 square foot metal building shell. With the exception of 3 tree wells between the sidewalk and property line, the site is entirely paved with asphalt pavement.

EXISTING DRAINAGE CONDITIONS

In order to analyze runoff from the site, it has been divided into two drainage basins. The west drainage basin (Onsite Basin A) includes the western half of the building and a portion of the 20' paved alley south of the building. The eastern drainage basin (Onsite Basin B) includes the eastern half of the building and balance of the lot. The drainage basins are shown on the Existing Grades Plan.

Basin A drains west into an unpaved area of the alley west of the site. The runoff flows south into

a 10-foot wide, 6-inch deep concrete channel that conveys the runoff south through four 24-inch with sidewalk culverts into Lomas Blvd. Basin B drains into the paved, inverted swale, alley along the southern property line. The alley then conveys the runoff west into the paved concrete channel discussed above.

Once the runoff enters Lomas Blvd. it flows west about 5 blocks and it is intercepted in a Double 'C' Storm Inlet at the southeast corner of Jefferson and Lomas.

OFFSITE DRAINAGE

The site north of this parcel drains east into Truman Street. A small asphalt berm assures runoff from that site is directed into the street and does not cross this site. The site west of this parcel drains west into Manzano Street so there is no offsite drainage impacting this site.

As discussed above, all runoff from this site is directed to the concrete channel at the southwest corner of this site. This channel appears to have been constructed in a 20-foot wide public alley and provides sufficient capacity to convey all runoff to Lomas Blvd.

FLOOD PLAIN STATUS

As shown on FIRM Panels 350001C0354 D, effective September 20, 1996, no portion of the existing building or site is included in a 100-year floodplain.

METHODOLOGY

The hydrology for this project was analyzed using the January 1993 revision of the City of Albuquerque Development Process Manual, Section 22.2 as follows:

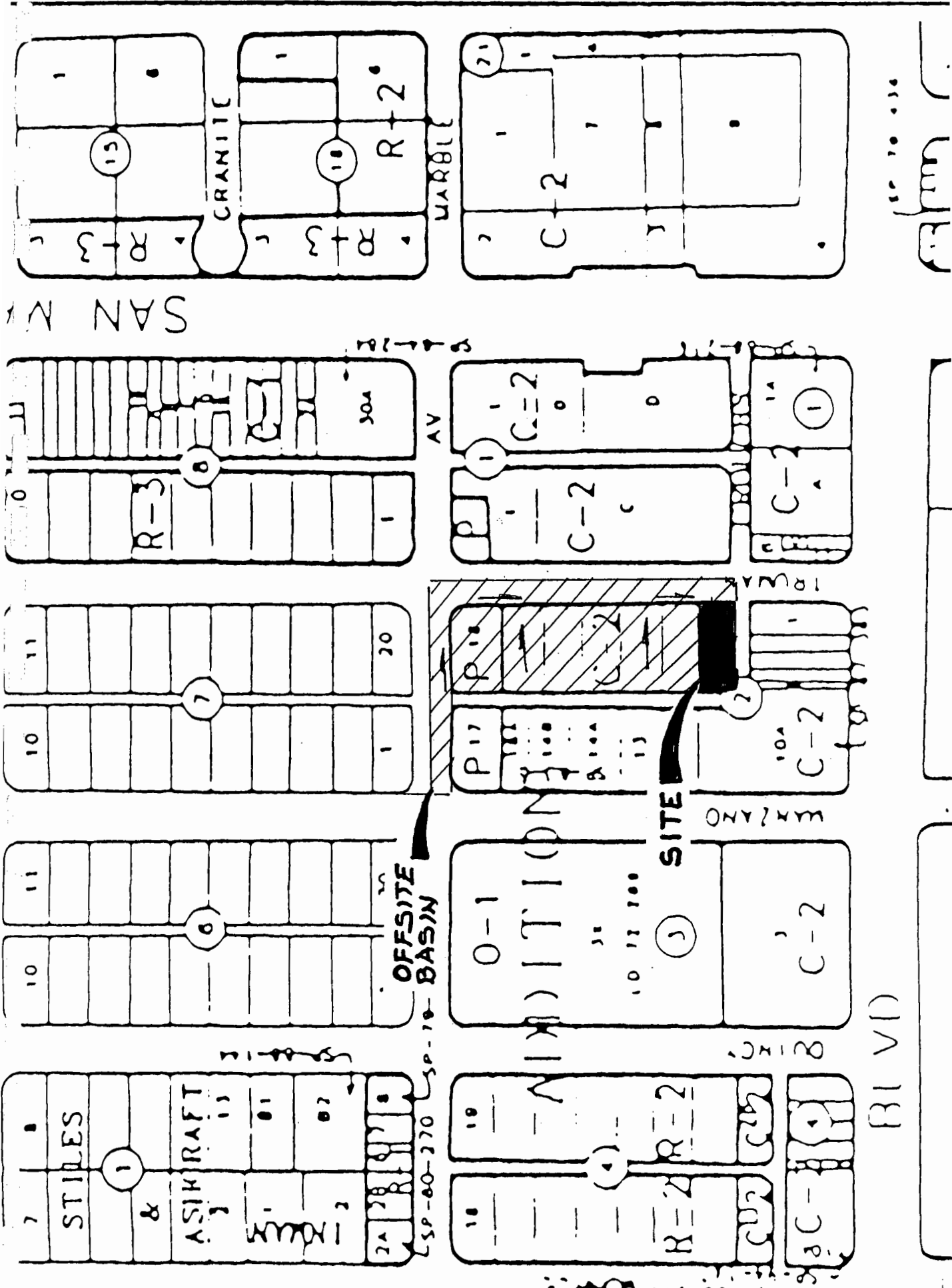
The specific values used for this analysis are as follows:

- Precipitation Zone 2

- Design Storm 100-year, 6-hour duration
 $i = 2.35$ inches ($t_c = 0.2$ hours)

The AHYMO computer model of the runoff volumes and peak flow rates is included in the Appendix for reference.

APPENDIX A
DRAINAGE CALCULATIONS



OFFSITE DRAINAGE BASIN MAP
SCALE 1" = 200'

AHYMO PROGRAM (AHYMO 97) -

- Version: 1997.02c

RUN DATE (MON/DAY/YR) = 02/22/1999

START TIME (HR:MIN:SEC) = 08:53:37

USER NO. = AHYMO-I-9702a0100001A-SH

INPUT FILE = D:\AHYMO\617TRUM.TXT

START TIME=0 PUNCH=0 PRINT LINES=-6

*S COMPUTE 100 YR. 6 HR. HYDROGRAPHS FOR 617 TRUMAN NE

*S 617TRUM.DAT - HYMO PER JAN 1993 DPM REVISIONS

*S

LOCATION ALBUQUERQUE, NEW MEXICO (ZONE 2)

City of Albuquerque soil infiltration values (LAND FACTORS) used for computations.

Land Treatment	Initial Abstr.(in)	Unif. Infiltr.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

*S

*S

*S

RAINFALL TYPE=-1 RAIN QUAR=0 RAIN ONE=2.01 RAIN SIX=2.35
RAIN DAY=2.75 DT=0.03

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .030000 HOURS END TIME = 6.000000 HOURS

*S

*S

*S

*S COMPUTE RUNOFF FOR EXISTING (DEVELOPED) CONDITIONS

*S

*S

*S

*S

*S

*S ONSITE BASIN 1

COMPUTE NM HYD ID=1 HYD NO= 101.1 DA=0.000126 SQ MI
PER A=0 PER B=0 PER C=34 PER D=66 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .32906 CFS UNIT VOLUME = .9669 B = 526.28 P60 = 2.0100
AREA = .000083 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .12354 CFS UNIT VOLUME = .8940 B = 383.55 P60 = 2.0100
AREA = .000043 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=1 CODE=10

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.4	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.1	3.300	.0	4.800	.0		
.600	.0	2.100	.0	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 1.78019 INCHES = .0120 ACRE-FEET
PEAK DISCHARGE RATE = .35 CFS AT 1.500 HOURS BASIN AREA = .0001 SQ. MI.

*S

*S ONSITE BASIN 2

COMPUTE NM HYD ID=2 HYD NO= 102.1 DA=0.000269 SQ MI
PER A=0 PER B=0 PER C=0 PER D=100 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.0644 CFS UNIT VOLUME = .9889 B = 526.28 P60 = 2.0100
AREA = .000269 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=2 CODE=10

PARTIAL HYDROGRAPH 102.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	.8	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.3	3.300	.0	4.800	.0		
.600	.0	2.100	.1	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 2.11656 INCHES = .0304 ACRE-FEET
PEAK DISCHARGE RATE = .82 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

*S

*S OFFSITE

COMPUTE NM HYD

ID=3 HYD NO= 103.1 DA=0.002836 SQ MI
PER A=0 PER B=0 PER C=10 PER D=90 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 10.100 CFS UNIT VOLUME = .9987 B = 526.28 P60 = 2.0100
AREA = .002552 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .81785 CFS UNIT VOLUME = .9836 B = 383.55 P60 = 2.0100
AREA = .000284 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD

ID=3

CODE=10

PARTIAL HYDROGRAPH 103.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	8.3	3.000	.1	4.500	.0	6.000	.1
.300	.0	1.800	2.9	3.300	.1	4.800	.0	6.300	.0
.600	.0	2.100	1.4	3.600	.1	5.100	.0	6.600	.0
.900	.0	2.400	.3	3.900	.0	5.400	.0		
1.200	.1	2.700	.2	4.200	.0	5.700	.1		

RUNOFF VOLUME = 2.01763 INCHES = .3052 ACRE-FEET
PEAK DISCHARGE RATE = 8.26 CFS AT 1.500 HOURS BASIN AREA = .0028 SQ. MI.

*S

*S

*S

*S

*S TOTAL RUNOFF TO CONCRETE CHANNEL

*S

*S

*S

ADD HYD

ID=4

HYD NO = 104.1 ID I = 1 ID II = 2

PRINT HYD

ID=4

CODE=10

PARTIAL HYDROGRAPH 104.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.500	1.2	3.000	.0	4.500	.0	6.000	.0
.300	.0	1.800	.4	3.300	.0	4.800	.0		
.600	.0	2.100	.2	3.600	.0	5.100	.0		
.900	.0	2.400	.0	3.900	.0	5.400	.0		
1.200	.0	2.700	.0	4.200	.0	5.700	.0		

RUNOFF VOLUME = 2.00828 INCHES = .0423 ACRE-FEET
PEAK DISCHARGE RATE = 1.17 CFS AT 1.500 HOURS BASIN AREA = .0004 SQ. MI.

*S

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 08:53:37

CONCRETE CHANNEL CAPACITY

Worksheet for Rectangular Channel

Project Description	
Project File	c:\haestad\fmw\617 trum.fm2
Worksheet	CONCRETE CHANNEL CAPACITY
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.013
Channel Slope	0.011000 ft/ft
Bottom Width	10.00 ft
Discharge	1.17 cfs

Results	
Depth	0.06 ft
Flow Area	0.62 ft ²
Wetted Perimeter	10.12 ft
Top Width	10.00 ft
Critical Depth	0.08 ft
Critical Slope	0.005951 ft/ft
Velocity	1.87 ft/s
Velocity Head	0.05 ft
Specific Energy	0.12 ft
Froude Number	1.32
Flow is supercritical.	

\leftarrow 0.06 ft \leftarrow 6" Channel Depth - OK
 Energy Line = $0.06 + 0.05 = 0.11'$ - OK

CAPACITY IN TRUMAN ST

Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\617trum.fm2
Worksheet	CAPACITY IN TRUMAN ST
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope	0.007300 ft/ft			
Elevation range: 99.06 ft to 100.00 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	100.00	0.00	29.80	0.017
13.70	99.73			
13.80	99.06			
29.80	99.38			
Discharge	8.26	cfs		

Results			
Wtd. Mannings Coefficient	0.017		
Water Surface Elevation	99.42	ft	
Flow Area	3.25	ft ²	
Wetted Perimeter	16.41	ft	
Top Width	16.05	ft	
Height	0.36	ft	
Critical Depth	99.42	ft	
Critical Slope	0.007392	ft/ft	
Velocity	2.54	ft/s	
Velocity Head	0.10	ft	
Specific Energy	99.52	ft	
Froude Number	0.99		
Flow is subcritical.			
Water elevation exceeds lowest end station by 0.04 ft.			

Depth $99.06 - 99.42 = 0.36'$
 $< \text{Top of Curb OK}$

Energy Line $= 0.36' + 0.10' = 0.46'$
 OK

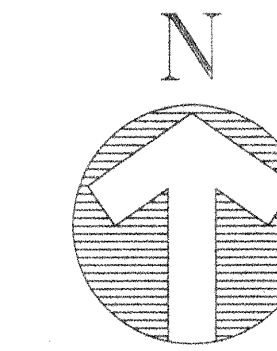
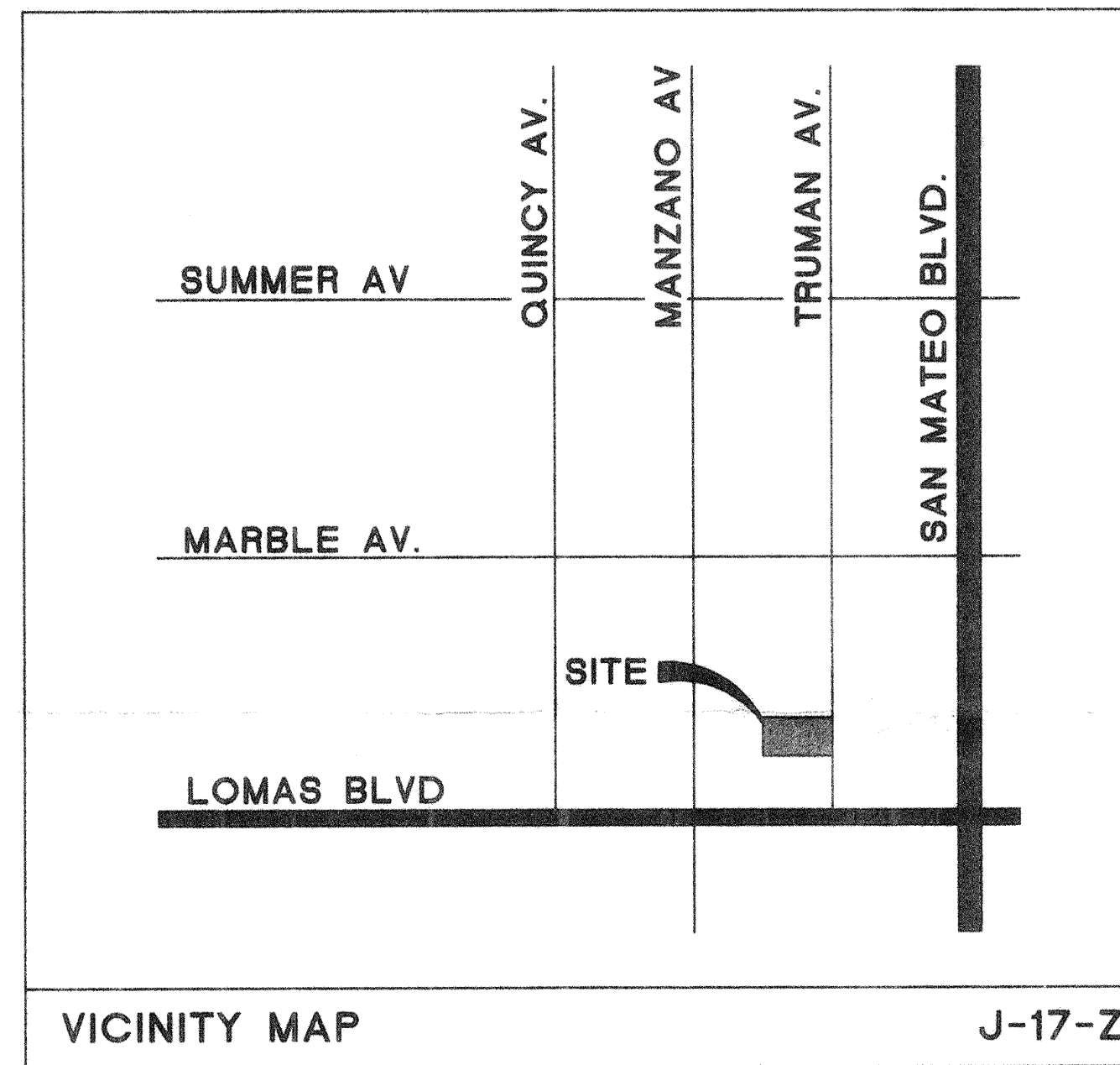
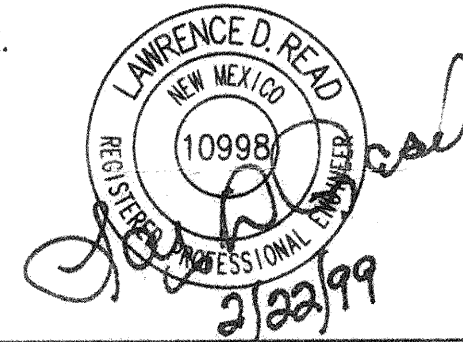
APPENDIX B
EXISTING GRADES PLAN

ENGINEER'S CERTIFICATION

THE SITE, ORIGINALLY DESIGNED BY ANOTHER ENGINEER, HAS BEEN COMPLETED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN COA FILE J17-D18 EXCEPT AS FOLLOWS:

- THE ROOF GUTTER AND DOWN SPOUT SYSTEM IS NOT CURRENTLY IN PLACE. RUNOFF FROM THE WEST HALF OF THE ROOF FALLS INTO THE DIRT ALLEY WEST OF THE BUILDING. IT THEN RUNS SOUTH INTO THE CONCRETE CHANNEL AT THE SOUTHWEST CORNER OF THE SITE.
- THE "AS-CONSTRUCTED" SURVEY OF THE SITE WAS FURNISHED BY RIO RANCHO SURVEYS, INC. ON FEBRUARY 16, 1998. THIS SURVEY INDICATES SLIGHTLY DIFFERENT SPOT ELEVATIONS THAN THE DESIGN. IN NO CASE DO THE CONSTRUCTED SPOT ELEVATIONS CHANGE THE DRAINAGE PATTERNS FROM THE APPROVED GRADING PLAN.

LARRY D. READ P.E.



SCALE 1":10'

NOTE:

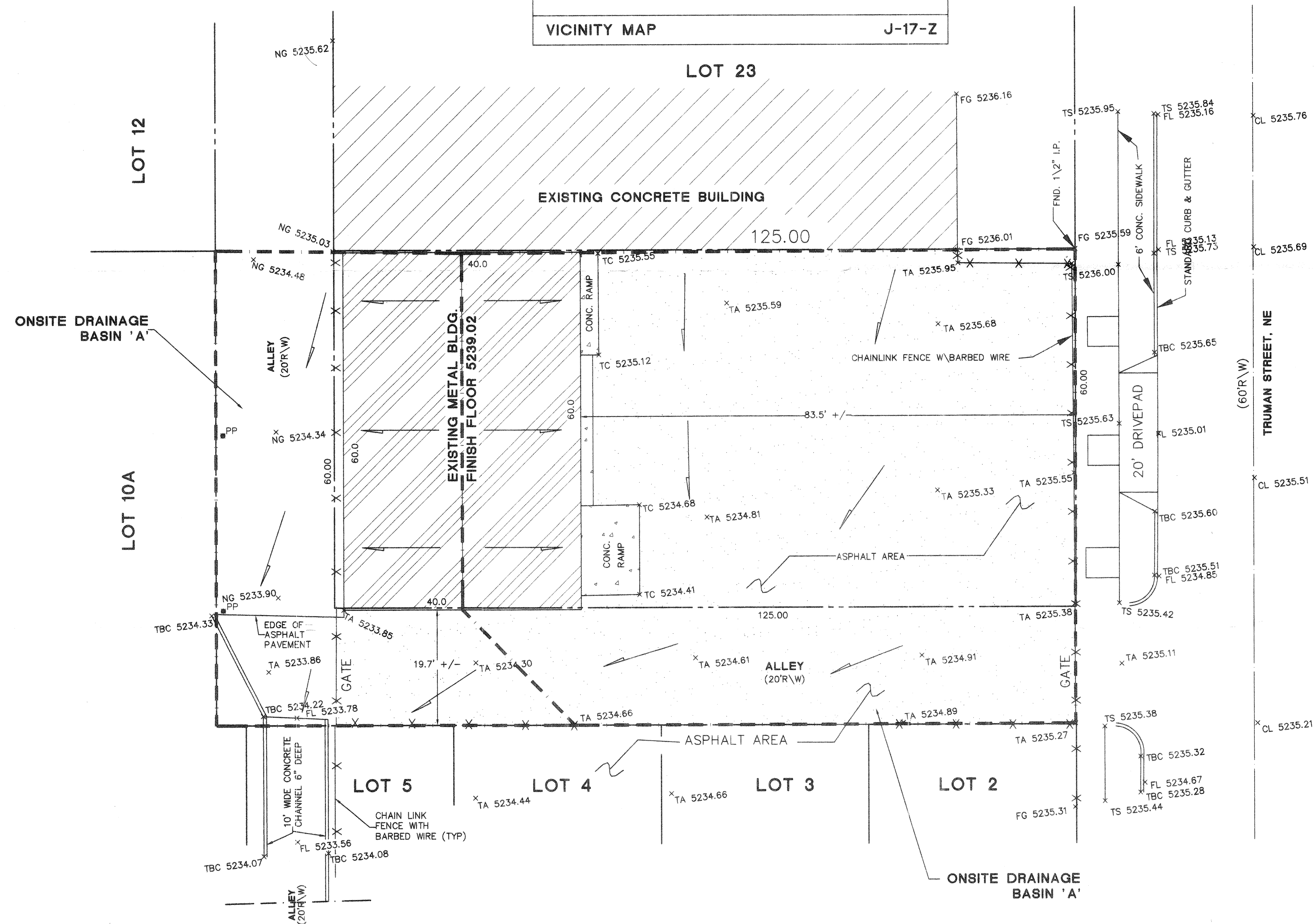
- 1) THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY DATA SHOWN WAS TAKEN FROM THE PLAT OF RECORD.
- 2) THE ELEVATIONS FOR THIS SURVEY WERE ESTABLISHED BY USE OF THE ACS CAP 14-K18A' LOCATED AT THE INTERSECTION OF LOWMEYER BLVD. AND SAN MATEO BLVD.
- 3) THE TBM FOR THIS SITE IS A NAIL SET IN THE BACK OF CURB ON THE EAST SIDE OF TRUMAN STREET ACROSS FROM THE SITE. THE ELEVATION OF THE NAIL IS 5235.90.

LEGAL DESCRIPTION

LOT 24, PUEBLO ALTO ADDITION

ABBREVIATIONS

TA	TOP OF ASPHALT PAVEMENT
TS	TOP OF CONCRETE SIDEWALK
TC	TOP OF CONCRETE SLAB
TBC	TOP BACK OF CONCRETE CURB
FG	FINISH GRADE - GRADED EARTH
NG	NATURAL GRADE - UNGRADED EARTH
FF	FINISH FLOOR ELEVATION
FL	FLOW LINE ELEVATION



THESE DOCUMENTS WERE PREPARED FOR THIS SPECIFIC PROJECT ONLY. ARCHITECTS STUDIO LLC. LIMITS ITS LIABILITY TO THIS SPECIFIC PROJECT, AND DOES NOT EXTEND TO REUSE OF THESE DOCUMENTS FOR OTHER PROJECTS.

617 TRUMAN ST. WAREHOUSE

Albuquerque, New Mexico

LDR

9903.00 02/19/99

EXISTING
GRADES

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