PROJECT BENCHMARK

THE STATION IS A STANDARD CITY OF ALBUQUERQUE DISK SET IN A DRILLED HOLE IN THE SIDEWALK, MARKED "5-K 14 ACS". STATION IS LOCATED AT THE INTERSECTION OF BROADWAY BLVD. & LEAD AVE. IN THE S.W. QUADRANT OF THE INTERSECTION.
ELEVATION = 4965.213 FEET (M.S.L.D.)

TBM

ELEVATION AT N.E. CORNER OF CONCRETE SIDEWALK ON A LINE PROJECTED FROM THE S.E. PROPERTY CORNER AS SHOWN ON THE DRAWING BELOW.
ELEVATION = 5004.26 FEET

LEGAL DESCRIPTION

LOTS 1A, 1B, 2A, 2B, 3A & 3B
BLOCK 29, HUNINGS HIGHLAND ADDITION

VICINITY MAP   K-14
SCALE : 1" = 800'

PROJECT SITE

LEGEND

Symbol	Description
⊕	PROPOSED SPOT ELEVATION
+	EXISTING SPOT ELEVATION
—97—	PROPOSED CONTOUR
—997—	EXISTING CONTOUR
	PROPOSED CONCRETE
	PROPOSED ASPHALT
—x—x—	EXISTING CHAINLINK FENCE
	EXISTING BLOCK WALL
	PROPERTY LINE
	PROPOSED WALL

DRAINAGE PLAN

The following items concerning the High Street Apartments Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the southwest quadrant of the intersection of Lead Avenue S.E. and High Street S.E. At present, the site is undeveloped. Much of the surrounding area is currently developed, thereby making this an infill site. As shown by Plate K-14 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. Downstream flooding is not apparent, and therefore does not appear to be a problem. At present, the site flows from east to west onto the public alley located west of the project site. From that point, runoff spills onto the adjoining lots located west of the public alley. No offsite flows enter the site along the north and east property lines since the existing streets route runoff away from the project site. No offsite flows enter the site along the south property lines since the existing wall routes runoff away from the project site. No offsite flows enter the site along the west property line since the existing public alley is graded in a manner which will route runoff away from the project site.

The Grading Plan shows 1) existing and proposed grades indicated by contours at 1'0" intervals, 2) continuity between existing and proposed grades, and 3) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements consist of the construction of new apartment buildings along with adjacent paving and landscaping. Flows generated by the proposed improvements will be routed from east to west onto the public alley located west of the project site. The public alley will be improved to accept runoff from the project site. The proposed improvements consist of the repaving of the public alley and the construction of a single 'D' storm drain inlet which will connect to the existing 15" RCP storm drain system located in Lead Avenue S.E. which is the outfall for this site and the proposed public alley improvements (City Project No. 3171). The Developer is providing cross lot drainage for the proposed drainage pattern. Based upon the fact that this site is an infill site and the elimination of runoff discharged onto the adjoining lots located west of the public alley and the proximity of downstream improvements, the free discharge of runoff from this site is appropriate.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge and the SCS Method has been used to quantify the volume of runoff. Both methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II and the Mayor's Emergency Rule adopted January 14, 1986. As shown by these calculations, the proposed improvements will increase the total discharge from this site by approximately 0.5 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate: 30, Cu - Cut and fill land
Hydrologic Soil Group: A
Existing Pervious CN = 54 (DPM Plate 22.2 C-2
    Pasture or Range Land: fair condition)
Developed Pervious CN = 39 (DPM Plate 22.2 C-2)

Time of Concentration/Time to Peak

$T_C = 0.0078 \ L^{0.77}/S^{0.385}$ (Kirpich Equation)

$T_p = T_C = 10$ min.

Point Rainfall

$P_6 = 2.26$ in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: $Q = CiA$

where C varies
    $i = P_6 (6.84) \ T_C^{-0.51} = 4.78$ in/hr
    $P_6 = 2.26$ in (DPM Plate 22.2D-1)
    $T_C = 10$ min (minimum)
    A = area, acres

SCS Method

Volume: $V = 3630(DRO) \ A$

Where DRO = Direct runoff in inches
    A = area, acres

Existing Condition

$A_{total} = 21,250$ sf = 0.49 Ac
$C = \underline{0.40}$ (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = (0.40)(4.78)(0.49) = 1.0$ cfs
$A_{imp} = -0-$ sf; % impervious = -0- %
Composite CN = 54 (DPM Plate 22.2 C-3)
DRO = 0.1 in (DPM Plate 22.2 C-4)
$V_{100} = 3630 (DRO) A = 180$ cf

Developed Condition

$A_{total} = 21,250$ sf = 0.49 Ac
Roof area = 4560 sf   (0.21)
Paved area = 7050 sf   (0.34)
Landscaped area = 9640 sf   (0.45)
$C = \underline{0.62}$ (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = (0.62)(4.78)(0.49) = 1.5$ cfs
$A_{imp} = 11,610$ sf; % impervious = 55 %
Composite CN = 72 (DPM Plate 22.2 C-3)
DRO = 0.5 in (DPM Plate 22.2 C-4)
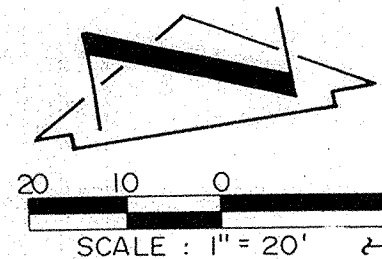$V_{100} = 3630 (DRO) A = 890$ cf

Comparison

$\Delta Q_{100} = 1.5 - 1.0 = 0.5$ cfs (increase)
$\Delta V_{100} = 890 - 180 = 710$ cf (increase)
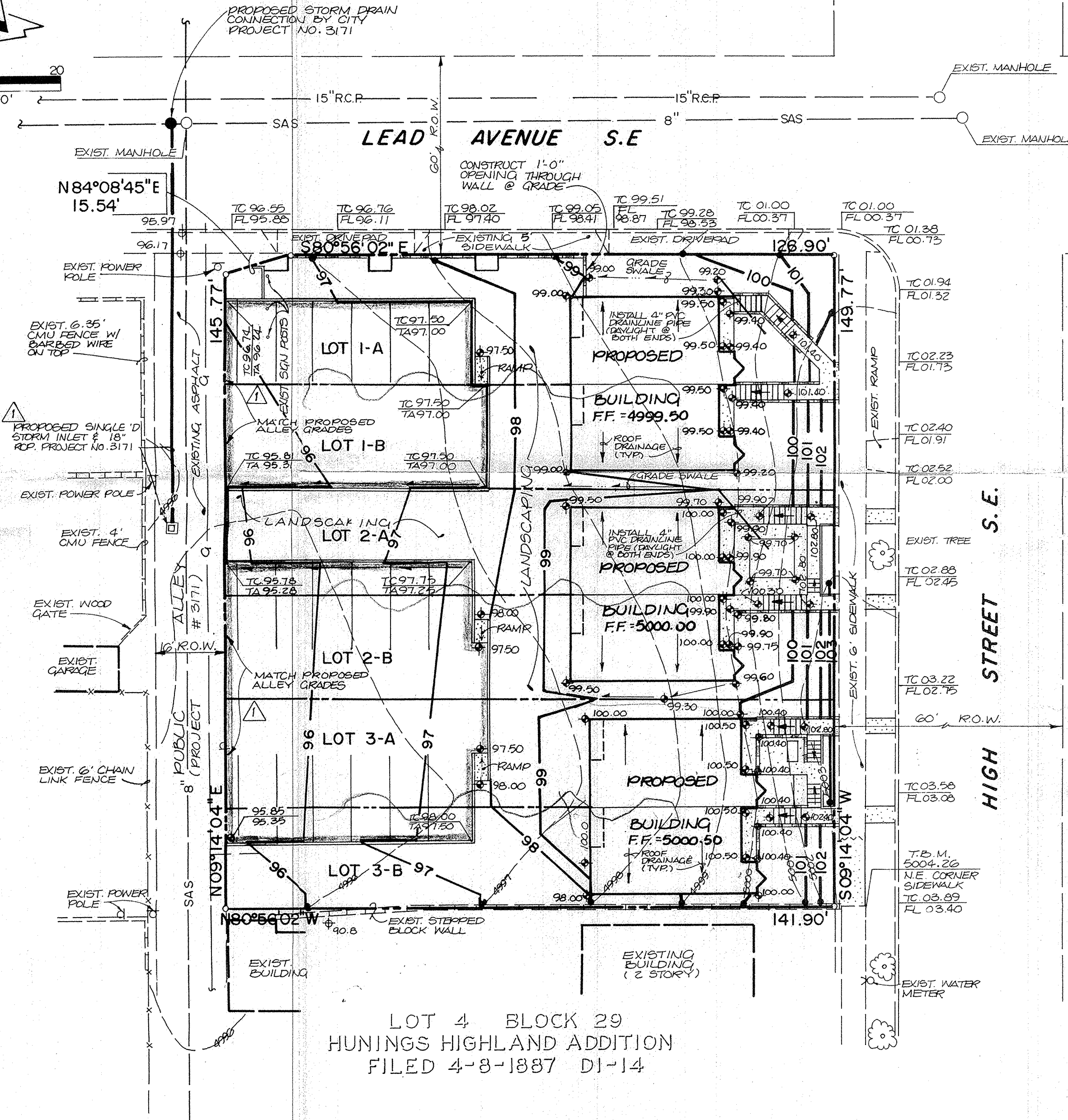
CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
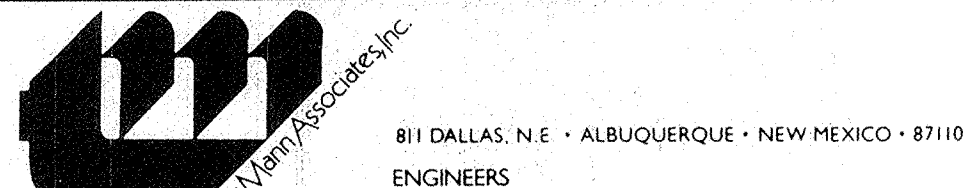
EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.

2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

LEAD   AVENUE   S.E.

SCALE : 1" = 20'

15" R.C.P.   15" R.C.P.

N84°08'45"E 15.54'

LOT 1-A
LOT 1-B
LOT 2-A
LOT 2-B
LOT 3-A
LOT 3-B

LANDSCAPING

PROPOSED BUILDING F.F. = 4999.50
PROPOSED BUILDING F.F. = 5000.00
PROPOSED BUILDING F.F. = 5000.50

HIGH STREET S.E.

60' R.O.W.

LOT 4   BLOCK 29
HUNINGS HIGHLAND ADDITION
FILED 4-8-1887 D1-14

EXISTING BUILDING (2 STORY)

Rick:
Four plex or duplex

NOTE : THIS PLAN TO BE USED FOR GRADING AND DRAINAGE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS REGARDING WALLS, BUILDINGS AND STEPS.
REFER TO CITY PROJECT # 3171 FOR ALLEY GRADES

JEFFREY G. MORTENSEN   NEW MEXICO   8547   PROFESSIONAL ENGINEER
02-26-87
02-26-87

RECEIVED   FEB 26 1987   HYDROLOGY SECTION

811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110
ENGINEERS

NO.	DATE	BY	REVISIONS
1	02/87	LPU	REVISE PROPOSED GRADES ALONG EAST SIDE OF ALLEY AND STORM DRAIN LOCATION AS PER D.R.C. COMMENTS.

DESIGNED BY: L.P.U.
DRAWN BY: S.G.H.
APPROVED: J.G.M.

JOB NO. 50562
DATE 01-87

GRADING AND DRAINAGE PLAN
HIGH STREET APARTMENTS

FILE NO.
SHEET 1 OF 1