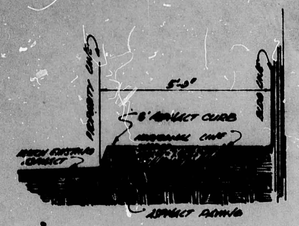
HYDROLOGY E17/D1r ALLIED INDUSTRIAL DISTRIBUTORS

E17/D47

ALLIED INDUSTRIAL DISTRIBUTORS

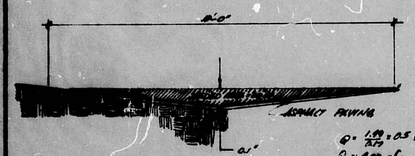
2 PLANS

LOT 14 INTERSTATE INDUSTRIAL UNIT 1



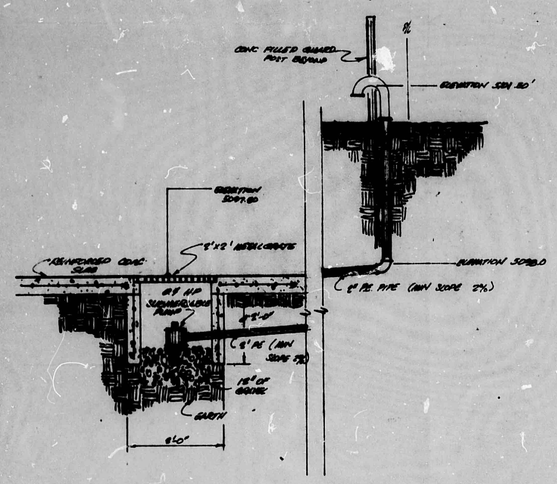
SECTION C-C

Q=CIA = 0.63 cfs
A=5000 ft², I=5.4, C=1.0
Q = 49/2677 A R^2/3 S^1/2 A=1.13, R= S=
Q = 1.13 cfs > 0.63



SECTION D-D

R = A/P = 7/26 = .5
Q = 1.49/n R^2/3 S^1/2 = 0.07 1/s x 0.07 1/s
Q = 4.98 cfs
MUST 4.98 > 1.95



SECTION B-B

DRAINAGE CALCULATIONS

EXISTING Conditions
AREA = 0.3963 ac. 17,263 sq. FT.
S.C.S. soil "EAB" TYPE "B"
C = 0.34 Time of Concentration use 10 min
Intensity = 5.4 "/hr Q = C I A
Q = .34 x 5.4 x 0.3963
Q = 0.73 cfs

DEVELOPED CONDITIONS

AREAS		"C"
BUILDING	8625 sq. FT	1.0
PAVING	6068 sq. FT	1.0
Landscaping	2570 sq. FT.	0.4

Tc = 10 minutes Intensity = 5.4 "/hr

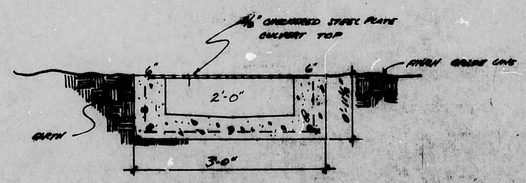
Q_B = 1.07 cfs Q_P = 0.75 cfs Q_{LS} = 0.13 cfs

Total Q = 1.95 cfs

CHANNEL RELEASE CALCULATION

$Q = C_d \cdot A \cdot \sqrt{2gH}$

Cd for square edge opening = 0.6
Area for 2' x 8" opening = 1.33 sq ft
Head maximum = 8"
$Q = 0.6 \times 1.33 \times \sqrt{64.4 \times .67}$
Q = 5.28 cfs



SECTION A-A

DRAINAGE CULVERT DETAIL (PER CITY STANDARD K-16-1)

FF 5101.3

existing pavement to be removed

RECEIVED
OCT 20 1983
ENGINEERING

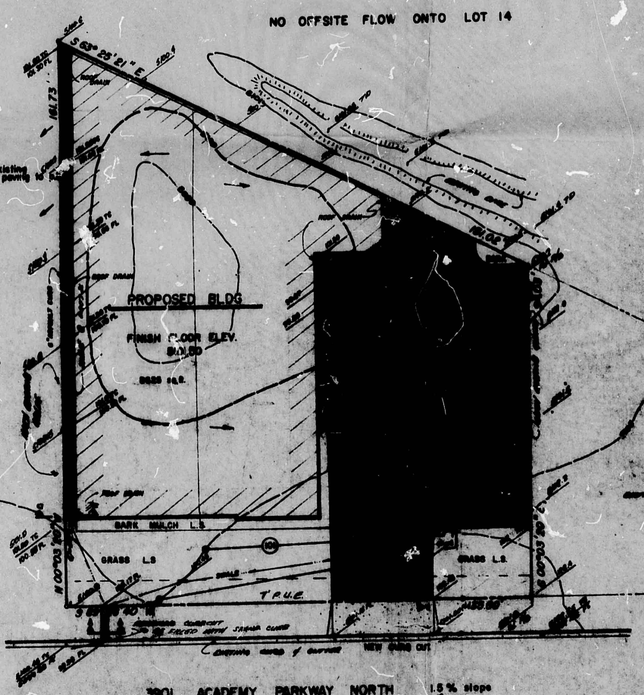
NO OFFSITE FLOW ONTO LOT 14

VICINITY MAP
6-17

GRADING AND DRAINAGE PLAN

NO PONDING REQUIRED

NO OFFSITE FLOW ONTO LOT 14



LEGEND

B.M.
P.K.
Pk of bolt on hydrant on West Side ELEV = 5101.87

ELEVATION TIED TO CITY GRID
B-6 FT CHISLED "Z" @ CORNER & ADDRESSES
ELEV. 5140.04

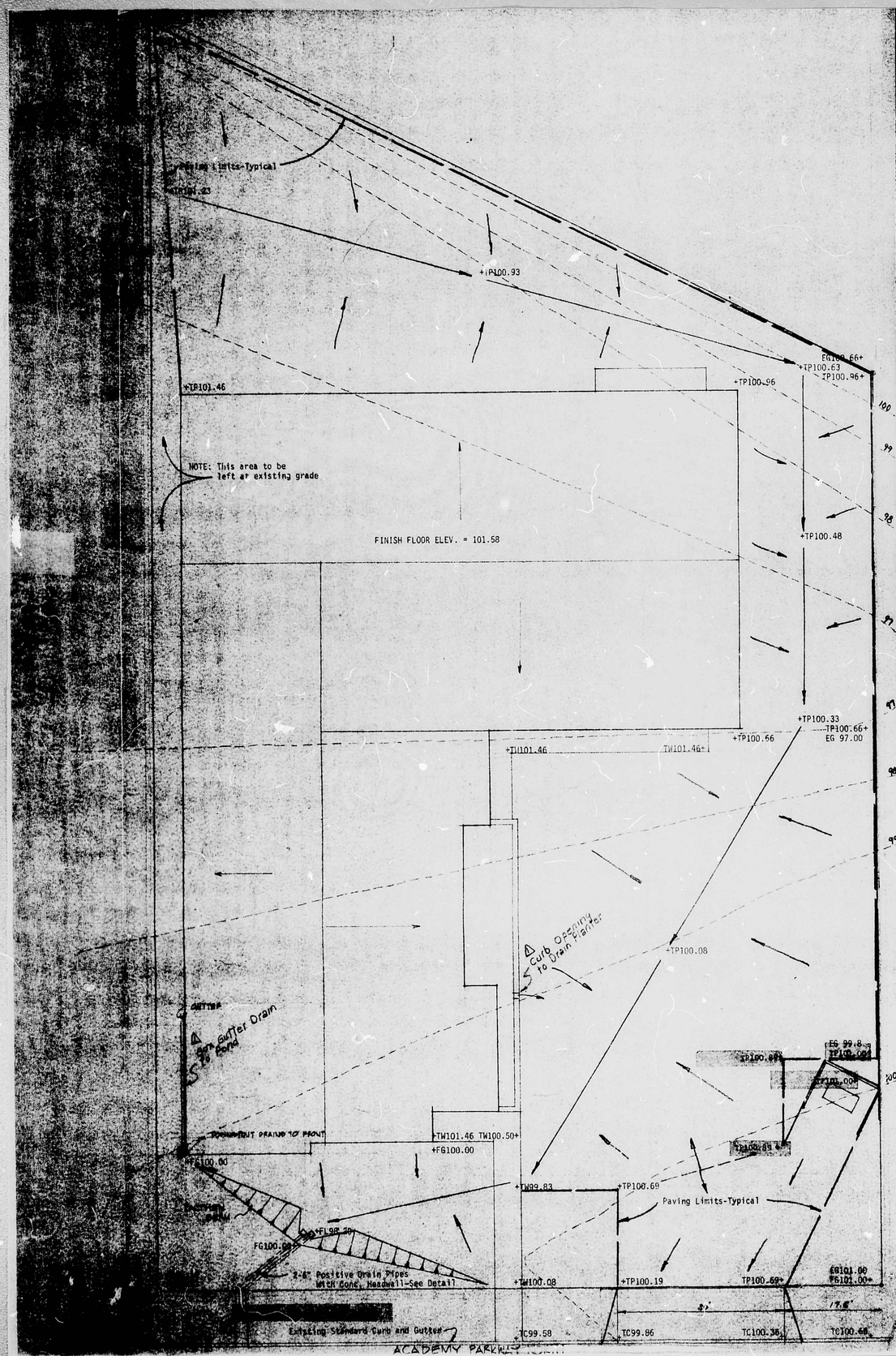
STATE OF NEW MEXICO
JESSE A. PACHECO, JR.
No. 260
REGISTERED ARCHITECT

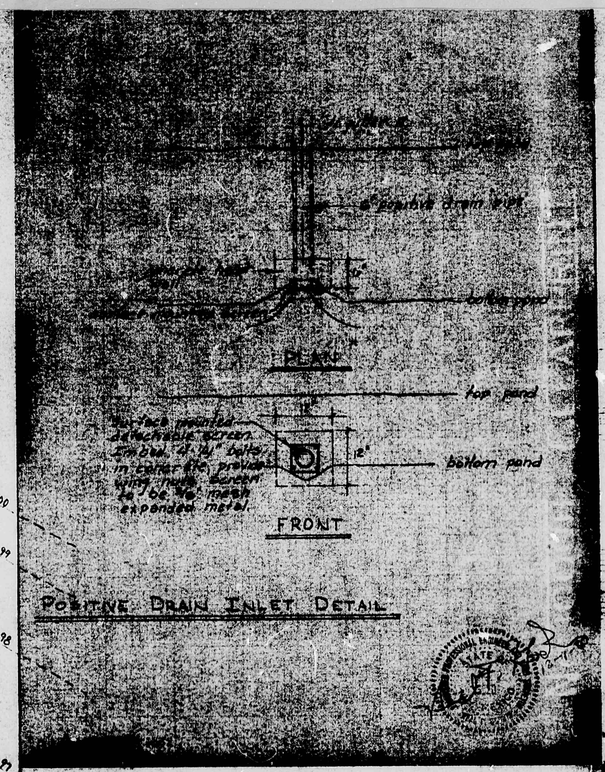
Pacheco Group Architects
ALBUQUERQUE

DURA BILT PRODUCTS, INC.
GENERAL CONTRACTORS LICENSE NO. 1044
4000 JEFFERSON NE PH 344-0789 ALBUQUERQUE NM 87109

ALLIED MUNICIPAL INSPECTORS

E17/047





POSITIVE DRAIN INLET DETAIL

LEGEND FOR GRADING PLAN

EG = Existing Grade
FG = Finish Grade
TP = Top of Paving
TW = Top of Walk
FL = Flowline Elev.
+ = Drainage Swale Elev.
= Sheet Flow Direction

DRAINAGE CALCULATIONS

1. Natural Site = 25262 Sq. Ft.
2. Uncontrolled area of drainage to street or offsite to the West = 3387 Sq. Ft.
3. Developed Site routed to front yard catchment and positive outlet pipes = 21875 Sq. Ft. @ C = 0.90 = 0.50 Acres
4. Volume generated from developed Site = 21875(0.90)0.20 = 3938 Cu. Ft.
5. Discharge from Developed Site
   L = 300' Condition = Paved Slope = 0.50%
   Therefore: t = 8 minutes and i = 4.5 inches per hour
   Q = 0.50(0.90)4.5 = 2.03 Cu. Ft./Sec.
6. Discharge Pipes Required by Orifice Formula = $Q = Cd(A_{sq.ft.})\sqrt{2gh}$
   Using h = 1' and Cd = 0.80 Then A = 0.32 Sq. Ft. for 2.03 CFS
   USE 2-6" Pipes $A = 2(3.14)0.25^2 = 0.38$ Sq. Ft.
   Capacity of two 6" pipes on a hydraulic slope of 3%± = 2.32 Cu. Ft./Sec.
   THEREFORE: No Ponding will occur

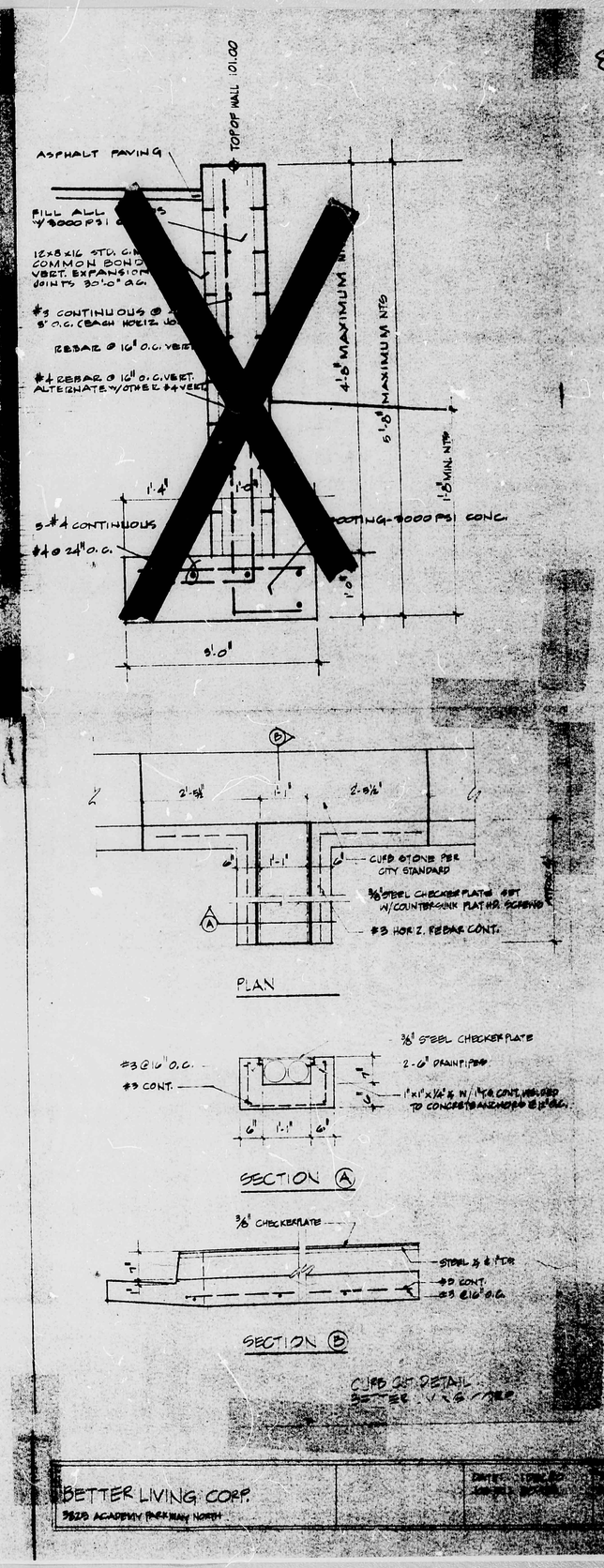
NOTES:

1. All slopes to be constructed on this lot shall be a maximum of 3:1
2. No offsite flows will enter this lot from the North, West, or South. At such time as the lot to the East is filled so that it can drain properly to the street, there may be some very minor flows enter this lot from there.
3. The finish Grade along the eastern boundary will be feathered out to existing grade on the lot to the east (Lot 34). This property is also owned by Better Living Corporation, see affidavit.

* AT A SLOPE NOT TO EXCEED 4" TO 12".

Revised 5-8-81 VGS

GRADING PLAN
SCALE: 1"=10'-0"



PLAN

SECTION (A)

SECTION (B)

CURB CUT DETAIL
BETTER LIVING CORP.

BETTER LIVING CORP.
3820 ACADEMY PARKWAY NORTH