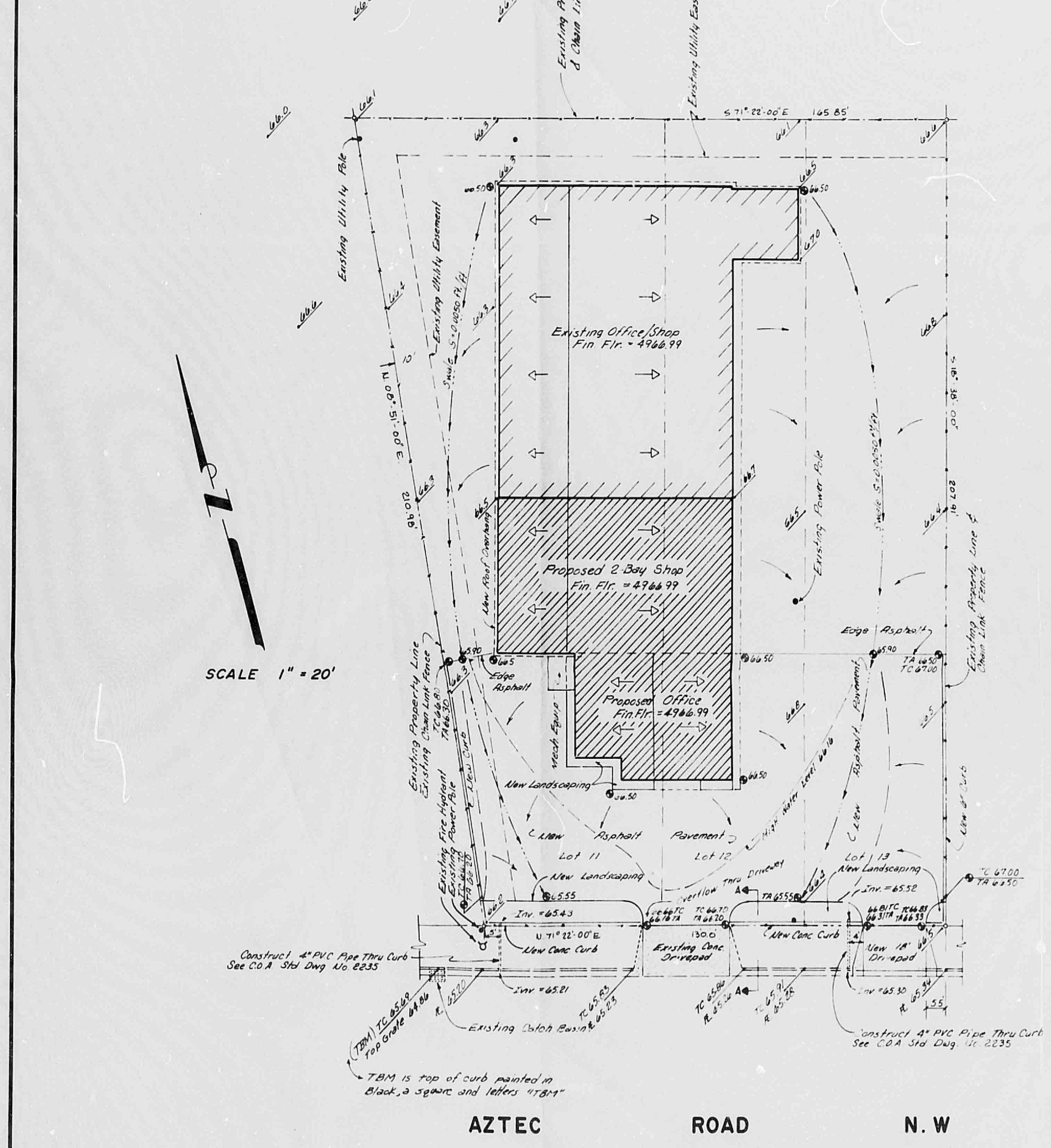
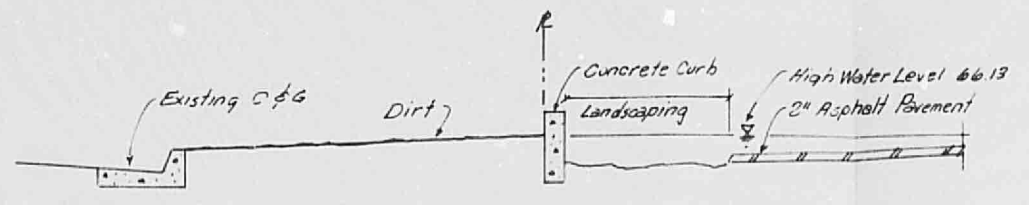
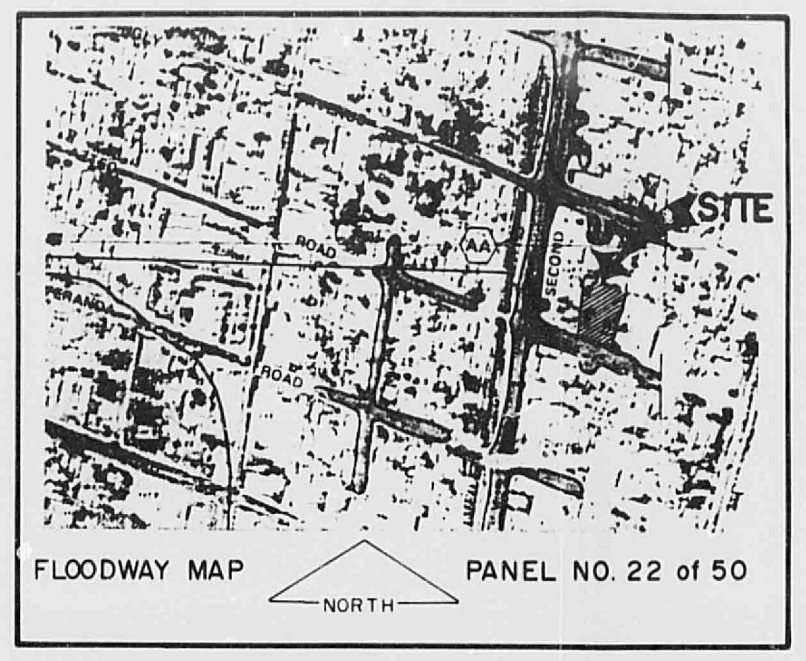
PUBLIC WORKS/HYDROLOGY

G14/D42

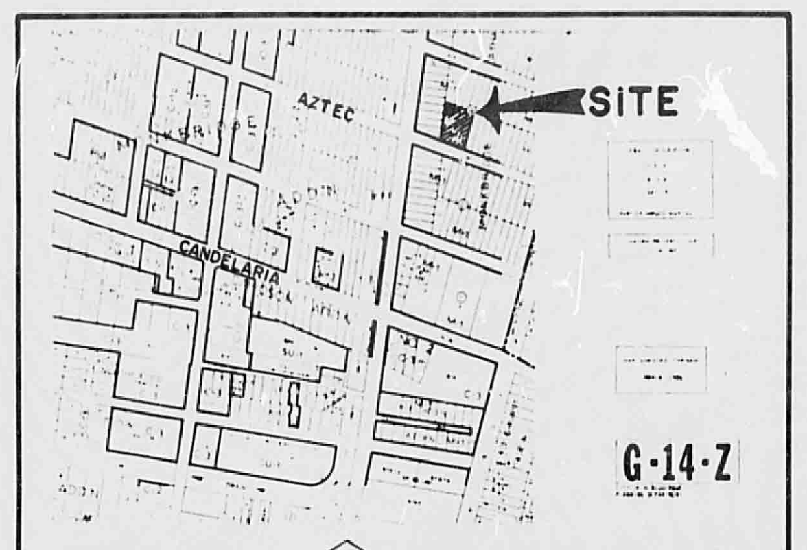

Existing Office/Shop
Fin. Flr. = 4966.99
Proposed 2-Bay Shop
Fin. Flr. = 4966.99
Proposed Office
Fin. Flr. = 4966.99
Mech. Equip.
New Roof Overhang
Existing Utility Easement
Existing Property Line & Chain Link Fence
Existing Power Pole
Swale S = 0.0050 ft/ft
Edge Asphalt
New Landscaping
New Asphalt Pavement
High Water Level 66.16
Lot 11
Lot 12
Lot 13
Overflow Thru Driveway
Existing Fire Hydrant
Existing Power Pole
New Curb
Inv. = 65.43
Inv. = 65.52
New Conc Curb
Existing Conc Drivepad
New 18' Drivepad
N 71° 22' 00" E
130.0'
N 08° 51' 00" E
210.98'
207.91'
Construct 4" PVC Pipe Thru Curb See C.O.A. Std Dwg No. 2235
Inv. = 65.21
Inv. = 65.30
Existing Catch Basin
(TBM) TC 65.69 Top Grate 64.86
TBM is top of curb painted in Black, a square and letters "TBM"
SCALE 1" = 20'
AZTEC ROAD N.W


Existing C&G
Dirt
Concrete Curb
Landscaping
High Water Level 66.13
2" Asphalt Pavement

SECTION A-A



FLOODWAY MAP — NORTH — PANEL NO. 22 of 50


AZTEC
SITE
G-14-Z

VICINITY MAP — NORTH — ZONE ATLAS NO. G-14

LEGAL DESCRIPTION:

ALL OF LOTS 11, 12, AND 13, IN BLOCK B, AS SHOWN AND DESIGNATED ON THE AMENDED AND SUPPLEMENTAL REPLAT OF BLOCKS A, B, AND C (FORMERLY BLOCKS 19 AND 20), OF THE MONKBRIDGE ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO. SAID REPLAT WAS FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO. SAID REPLAT WAS FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON APRIL 13, 1937 ON PAGE 22, BOOK D.

BENCH MARK:

STATION 4-G14, LOCATED AT THE INTERSECTION OF CANDELARIA ROAD AND SECOND STREET, N.W., IN THE SOUTHEAST QUADRANT OF THE INTERSECTION. A SQUARE CHISELED ON TOP OF THE CONCRETE CURB AT THE ESE CURB RETURN. ELEVATION 4968.23 FEET (MSLD 1929)

EROSION CONTROL PLAN:

DURING CONSTRUCTION OF THE BUILDING, ALL RUNOFF FROM THE SITE SHALL BE CONTAINED IN PONDS, DIKES OR OTHER SUITABLE CONTAINMENT FACILITIES CAPABLE OF RETAINING THE 10-YEAR UNDEVELOPED RUNOFF VOLUME.

CITY OF ALBUQUERQUE
DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986.
3. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL AND COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITIES OF THE OWNER OF THE PROPERTY SERVED.
7. THE ADDRESS OF THE PROPERTY SERVED IS 127 AZTEC ROAD NW.

APPROVALS:

DESIGN APPROVAL Carlos A. Montoya — HYDROLOGY SECTION — DATE 3-3-87

INSPECTION APPROVAL ____________ CONSTRUCTION SECTION — DATE

ACCEPTANCE ____________ CONSTRUCTION SECTION/PERMITS — DATE

Pond Calculations:

1 Discharge of Westerly Pipe Overflow = 66.16 Inv. = 65.43
$H = (66.16 - 65.43) - 0.17 = 0.56$ $A = 0.0855$
$Q = CA(2gh)^{1/2} = 0.6 \times 0.0855 (2 \times 32.2 \times 0.56)^{1/2} = 0.31$ CFS

2. Discharge of Easterly Pipe Overflow = 66.16 Inv. = 65.52
$H = (66.16 - 65.52) - 0.17 = 0.47$ $A = 0.0855$
$Q = 0.6 \times 0.0855 (2 \times 32.2 \times 0.47) = 0.28$ CFS

3 Total Positive Discharge = $0.31 \times 0.28 = 0.59$ CFS

4 Pond Volume $V = 1/3\ BH$ Where B = Area of Pond Surface
West side Surface Area = 1312 SF H = 0.73
$V = 1/3 \times 1312 \times 0.73 = 319$ CF
East Side Surface Area = 1562 SF H = 0.64
$V = 1/3 \times 1562 \times 0.64 = 333$ CF
Total Volume = 319 + 333 = 652 CF

DRAINAGE CALCULATIONS

SOIL INFORMATION:

DRAINAGE CALCULATIONS

SOIL INFORMATION: (REFER TO SCS SOIL SURVEY OF BERNALILLO COUNTY)
SOIL IS Gm, GLENDALE CLAY LOAM, HYDROLOGIC SOIL GROUP "A"

CURVE NUMBERS: (REFER TO DPM PLATE 22.2 C-2)

	CN	EXISTING AREA	NEW AREA
EXISTING PERVIOUS	70	-	-
BUILDINGS AND PAVEMENT	98	5680	17244
LANDSCAPING	61	-	630
UNPAVED GRAVEL	85	-	-
UNPAVED DIRT	82	25073	12879
TOTAL AREAS		30753	30753

WEIGHTED CURVE NUMBER (CN_w):
EXISTING $CN_w = 85$ DEVELOPED $CN_w = 91$

DIRECT RUNOFF: (REFER TO D.P.M. PLATE 22.2 C-4)
EXISTING $Q_D = 1.0$ DEVELOPED $Q_D = 1.6$

RUNOFF COEFFICIENTS: (REFER TO "NOTICE OF EMERGENCY RULE", CITY OF ALBUQUERQUE, JANUARY 14, 1986)

	"C"	EXISTING AREA	NEW AREA
UNDEVELOPED	0.40	25073	12879
LAWNS AND LANDSCAPING	0.25	-	630
ROOFS	0.90	5680	9694
STREETS, DRIVES, WALKS	0.95	-	7550
TOTAL AREAS		30753	30753

WEIGHTED "C" FACTORS: EXISTING "C" = 0.49 DEVELOPED "C" = 0.69

TIME OF CONCENTRATION: (REFER TO D.P.M., SECTION 22.2, PAGE 3) USE THE MINIMUM TIME OF CONCENTRATION OF TEN (10) MINUTES.

RAINFALL, 100-YEAR, 6-HOUR: (REFER TO D.P.M. PLATE 22.2 D-1)
$R_6 = 2.2$ INCHES.

RAINFALL INTENSITY: (REFER TO DPM PLATE 22.2 D-2)
$I = R_6 \times 6.84 \times Tc^{-0.51} = 2.2 \times 6.84 \times 10^{-0.51} = 4.65$ IN/HR.

EXISTING CONDITIONS:

RUNOFF BY RATIONAL EQUATION, $Q = CIA$
$Q = 0.49 \times 4.65 \times 0.706 = 1.61$ CFS

VOLUME BY SCS METHOD, $V = A(Q_D/12)$.
WHERE A = AREA IN SQUARE FEET.

$V = 30753\ (1.0 / 12) = 2563$ CF

DEVELOPED CONDITIONS:

$Q = 0.69 \times 4.69 \times 0.706 = 2.28$ CFS

$V = 30753\ (1.6 / 12) = 4100$ CF

PRE-DESIGN CONFERENCE FINDINGS:

1. EXISTING STORM DRAIN AND CATCH BASINS IN SECOND AND AZTEC. OUTFALL IS TO ALAMEDA DRAIN.
2. SECOND STREET IS AN EXISTING 100-YEAR FLOOD HAZARD ZONE AO-1. ALL FINISH FLOORS MUST BE 2.0' HIGHER THAN AVERAGE FLOWLINE IN FRONT OF PROPERTY IN AZTEC STREET.
3. AN APPROVED GRADING AND DRAINAGE PLAN IS REQUIRED PRIOR TO HYDROLOGY SIGNOFF ON BUILDING PERMIT.
4. SITE IS AN INFILL SITE, BUT RUNOFF RATE SHOULD BE REDUCED AS MUCH AS POSSIBLE THROUGH DETENTION POND INCORPORATED INTO LANDSCAPE AREAS OR DEPRESS PARKING LOT WITH A CATCH BASIN AND SUBSURFACE PIPE OUTLET THROUGH STREET CURB. DISCHARGE ALL RUNOFF THROUGH DRIVEPADS OR CURB DRAINS. NO FLOWS BE ALLOWED OVER TOP OF CURBS OR SIDEWALKS.

LEGEND:

EXISTING	NEW	DESCRIPTION
665	● 6650	Spot Elevation
	← · — · ←	Swale
	—•—·—•—	Property Line w/Fence
	←	Sheet Flow Direction
	TA	Top of Asphalt
	TC	Top of Curb
	℄	Flowline
	◁—	Roof Flow

REVISED 3/15/88

NO. 4570
2/21/89
JACOB A. VIGIL

Frank D. Lovelady
2/4/88

GRADING AND DRAINAGE PLAN
PROPOSED SHOP AND OFFICE ADDITION FOR
G.E.W. SHEET METAL
127 AZTEC ROAD, N.W.
ALBUQUERQUE, NEW MEXICO

2 of 10

R# 26 DATE 3-26-02 OP E.S.P.

CITY OF ALBUQUERQUE

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11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/08/02

CITY OF ALBUQUERQUE
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PLANS/PLATS ON FILE

FILE DESC: G14/D42

PLANS/PLATS 1

E 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F