GRADING AND DRAINAGE PLAN

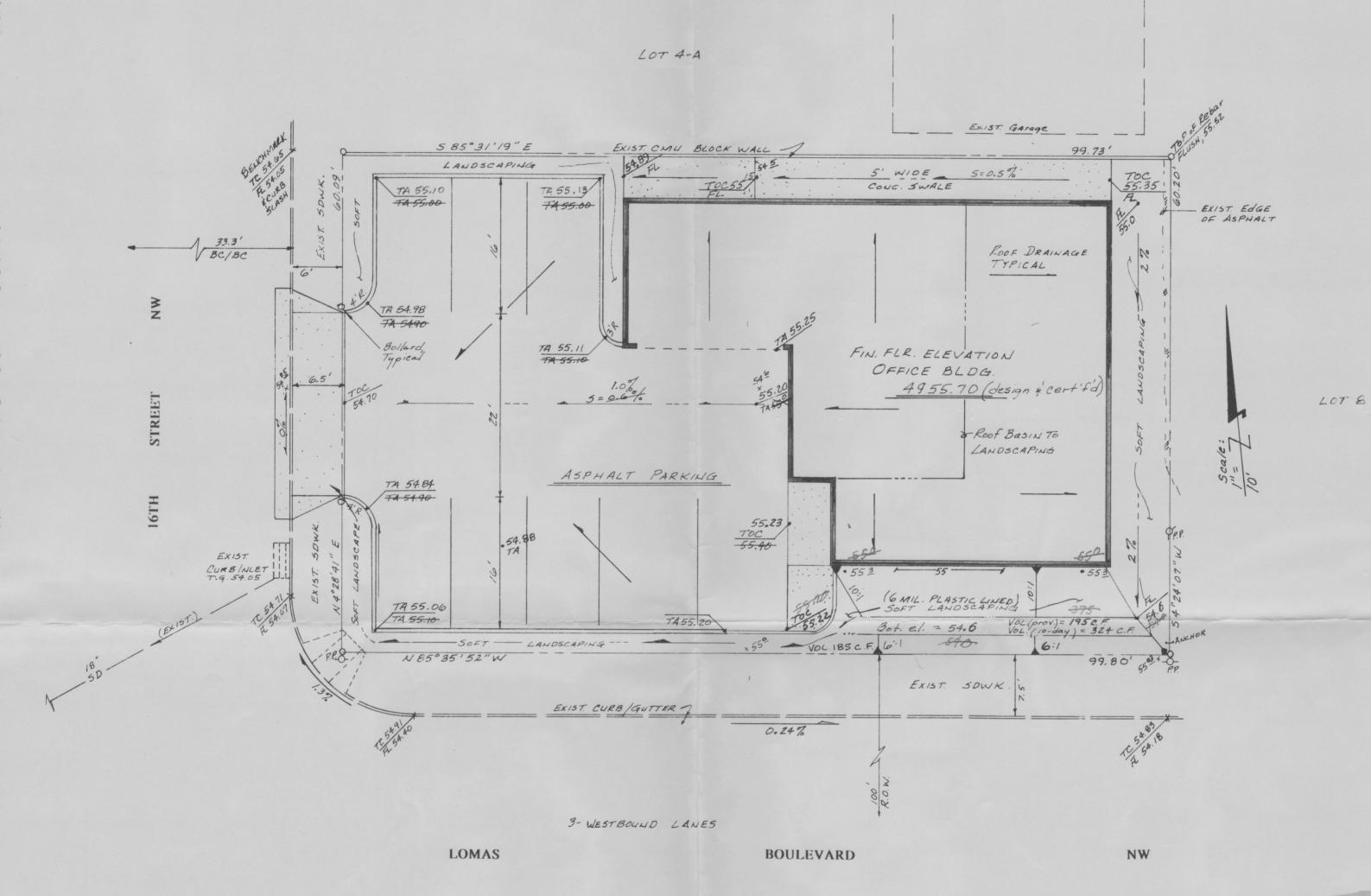
THE PROPOSED PUEBLO-STYLE OFFICE BUILDING IS LOCATED ON A VACANT UNDEVELOPED PARCEL APPROXIMATELY WITHIN 0.5 MILES NORTHWEST OF THE DOWNTOWN CORE OF THE CITY OF ALBUQUERQUE. THE PROJECT IS AN INFILL SITE WITHIN THE ESTABLISHED URBAN AREA AS IDENTIFIED BY THE BERNALILLO COMPREHENSIVE PLAN. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY OF ALBUQUERQUE DRAINAGE ORDINANCE AND FLOOD HAZARD ORDINANCE NO. 88-46. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PROPOSED PLAN SHOWS:

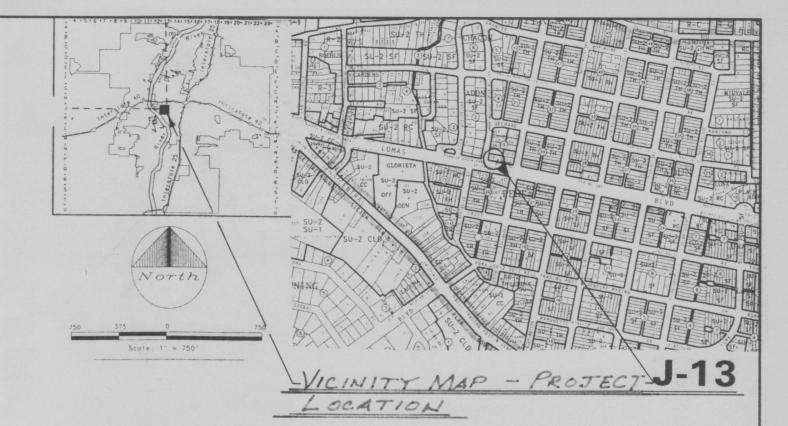
- 1.) EXISTING AND NEW SPOT ELEVATIONS RELATIVE TO C.O.A. SURVEY MONUMENTATION.
- 2.) PROPOSED IMPROVEMENTS: 1626 SQUARE FOOT OFFICE, INCLUDING A 400 SQUARE FOOT CARPORT & ASPHALT PAVING, LANDSCAPING,
- 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
- 4.) QUANTIFICATION OF EXISTING AND DEVELOPED SITE DRAINAGE

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF GENERATED BY THE PROPOSED IMPROVEMENTS. THE GENERAL SCHEME IS TO FREE-DISCHARGE STORM RUN-OFF THROUGH PROPOSED LANDSCAPING AND FROM EAST TO WEST WITHIN THE PARKING AREA. THE OUTFALL FOR DRAINAGE WILL BE THROUGH THE SINGLE DRIVEPAD ACCESS TO 16TH STREET. AN EXISTING STORM SEWER SYSTEM IS LOCATED IN LOMAS AND 16TH STREET, WITH AN EXISTING 2.2' x 4' CURB INLET LOCATED AT THE NORTH-NORTHEAST CURB RETURN.

THE PLAN DETERMINES THE RUNOFF RESULTING FROM THE 100 YEAR/6 HOUR DURATION AND 10 YEAR/6 HOUR STORMS FOR BOTH THE EXISTING AND DEVELOPED CONDITIONS. PRESENTLY, THE SITE IS BOUNDED ON THE EAST BY A JEWELRY STORE, ON THE SOUTH BY IMPROVED ARTERIAL LOMAS BLVD., AND THE NORTH BY A DEVELOPED RESIDENTIAL LOT. IMPROVED 16TH STREET IS LOCATED ON THE WEST. THE SITE IS ESSENTIALLY FLAT WITH A DECREASE IN ELEVATION FROM EAST TO WEST OF APPROXIMATELY 0.5 FEET. ESSENTIALLY, NO OFF-SITE FLOWS ENTER THE PROJECT. THE SITE IS NOT ENCUMBERED BY A DESIGNATED FLOODPLAIN, SEE MAP THIS SHEET.

THE FOLLOWING HYDROLOGICAL PROCEDURES AND CALCULATIONS ARE IN ACCORDANCE WITH SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, REVISED JANUARY 1993, FOR THE CITY OF ALBUQUERQUE, NEW MEXICO.





CONSTRUCTION NOTES

- TEMPORARY EROSION CONTROL: CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ENTER THE CITY RIGHT-OF-WAY DURING CONSTRUCTION OPERATIONS.
- CONTRACTOR SHALL BE REQUIRED TO OBTAIN A DRIVEWAY PERMIT FROM THE CITY OF ALBUQUERQUE PRIOR TO CONSTRUCTION. THE 22' DRIVEPAD SHOWN SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD DRAWING P-2425. MINIMAL CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL BE IN ACCORDANCE WITH STANDARD DRAWING P-

LEGEND

EXISTING SPOT ELEVATION × 54⁵ NEW SPOT ELEVATION NEW CONCRETE TOP OF CURB TOP OF CONCRETE FLOWLINE TOP OF ASPHALT SWALE

CALCULATIONS

I. DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY, OF THE DPM, REVISED DISCHARGE RATE: $Q = Q_P x A...$ "PEAK DISCHARGE RATES FOR SMALL WATERSHEDS" VOLUMETRIC DISCHARGE: $VOL = E_{WEIGHTED} \times A$

SOIL TYPE, 'B' - GRAVEL COMPACTED BY HAND ACTIVITY, SOIL VbA $P_{100} = 2.35$ ", ZONE 2 TC = 10 MIN.DESIGN STORM: 100YR.-6HR., 10YR.-6HR.[] = 10 YEAR VALUES

II. EXISTING CONDITIONS

EXCESS PRECIP._c = 1.13 IN. [0.52], LOT AREA = 0.128 ACRES, where PEAK DISCHARGE, $Q_{100} = 0.40$ CFS [0.22], where PEAK DISCHARGE_c = 3.14 CFS/ACRE [1.71] therefore: $VOLUME_{100} = 525 \text{ C.F.}$ [242]

III. DEVELOPED CONDITIONS

DET. LAND TREATMENTS/ PEAK DISCHARGE/WEIGHTED EXCESS PRECIP LAND PEAK DISCHARGE,

TREATMENT CFS/ACRE 0.78[0.28] 0.04AC. B 2.28[0.95] 2.12[1.34] ROOF, PAVM'T, 0.09AC D 4.70[3.14] 0.13AC.

 $E_{\text{WEIGHTED}} = 1.71 \text{ IN.}[1.01]$ $Q_{100} = 0.51 \text{ CFS}$ $Q_{10} = 0.32 \text{CFS}$ $VOL_{.100} = 807 \text{ C.F.}$ $VOL_{.10} = 477 \text{ C.F.}$

IV. DETERMINE 10-DAY VOLUME (TO LANDSCAPING)

 $P_{10-day} = 3.95"$ Area = 0.02 AC.; Area = 0.019 AC. $E_W = 2.12(.02) + 0.78(.019) \div 0.039$ = 1.47 IN. \$ VOL. 360 = 208 C.F.

Vol. 10-day = 360 + A0 * Po-day 360 Vol. 10-day = 208 + 116 = 324 C.F. Vol. provided = [10+2'-2 150'] + [3.5'+0-2 x 43'] = 375 C.F. 0.4/10'+2'=2 ×507 + " = 195 C.F.

1, Philip W. Clark, a Professional Engineer licensed in accordance with the laws of the State of New Mexico, do hereby certify that I have visited the site shown hereon and that the contours shown represent the existing ground conditions, and further certify no changes in elevations, or disturbance of the existing ground has occurred since the elevations were determined.

PHILIP W. CLARK, N.M.P.E. #10265

I, PHILIP W. CLARK, P.E., DO HEREBY CERTIFY THAT THE FINISH FLOOR ATTEST THAT THE GRADING AND DRAINAGE IS IN SUBSTANTIAL COMPLIANCE WITH THE THE APPROVED PLAN, WITH MINOR REVISIONS CONTAINED HEREIN.

Their William 6/13/94 PHILIP W. CLARK, P.E.

N.M.P.E. # 10265

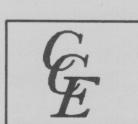
DRAINAGE FLOW DIRECTION



LEGAL DESCRIPTION: Lot 5-A, Chaco Addition, City of Albuquerque, Bernalillo County, New Mexico, filed July 17,1979, Book B16, page 157.

PROJECT BENCHMARK: Curb Slash in the Top of curb at the projection of the N.W. Property Corner, msl elevation = 4954.65 feet as tied from ACS Aluminum Cap located in the median of Lomas Blvd at the intersection of 17th Street.

PROPERTY ADDRESS: 1515 Lomas Boulevard, NW TOPOGRAPHIC SURVEY: Topographic Survey performed by Philip W. Turner, P.S., on 12/5/93.



Clark Consulting Engineers

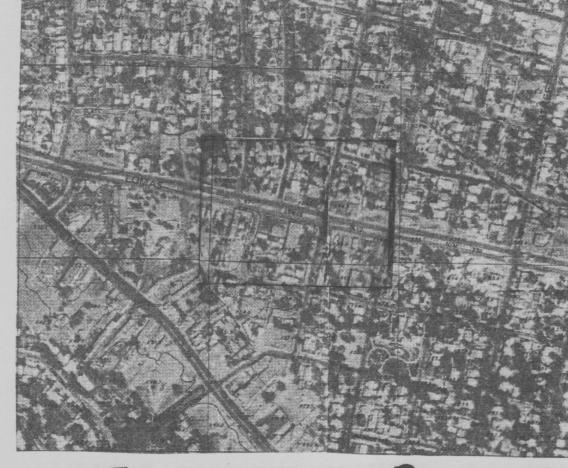
19 Ryan Road, Edgewood, New Mexico 87015 (505) 281-7419

DATE REVISION Addr. City Hydr Comments Ow Engrs Cert 6/13/94

1515 LOMAS BOULEVARD, NW LEGER OFFICE BUILDING

GRADING & DRAINAGE PLAN/ REPORT

DESIGNED BY OUR DRAWN BY OUC JOB No: Leger CHECKED BYI DATE: /2/10/93 FILE Noi /



FEMA MAP - PANEL 28

