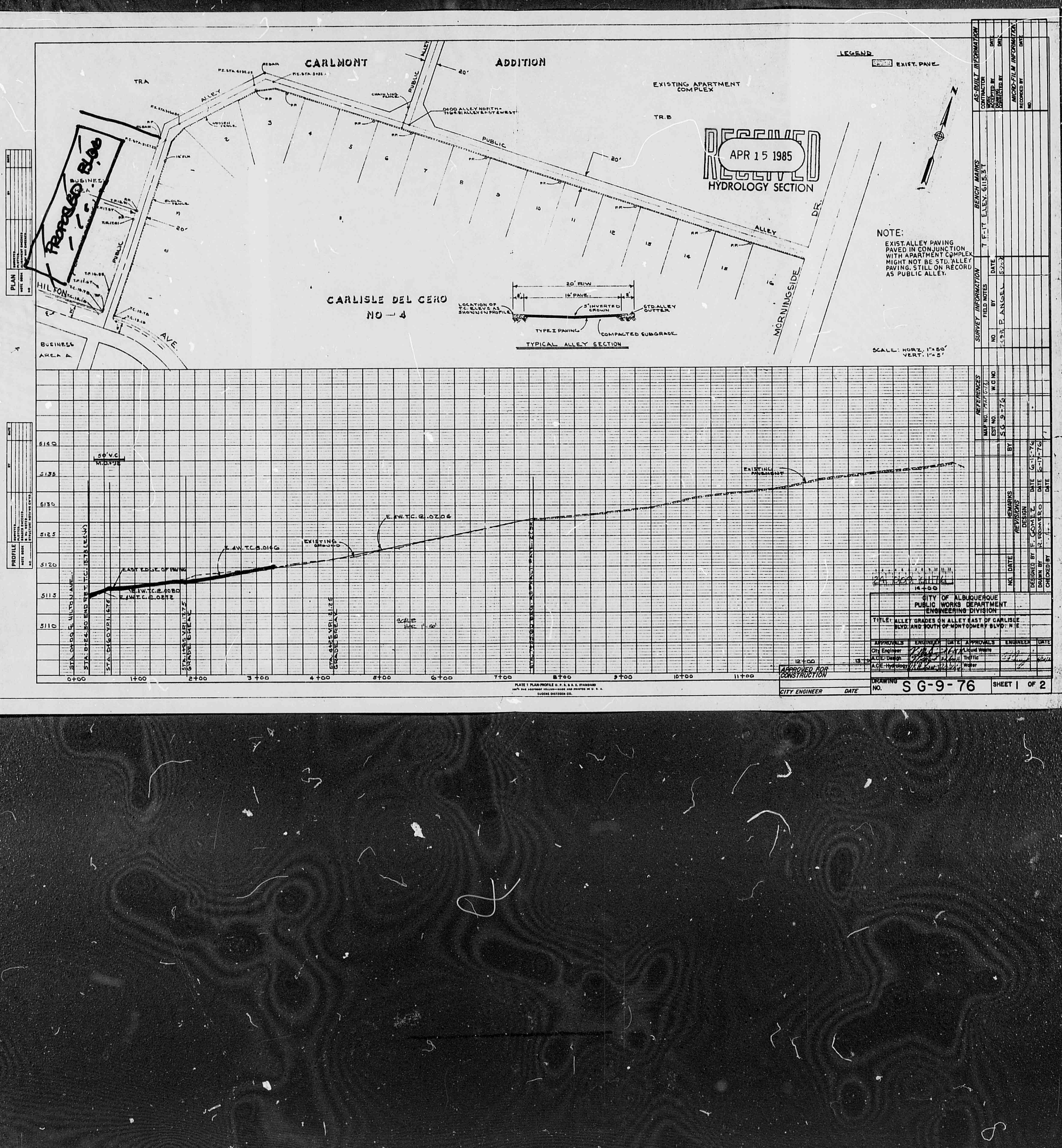
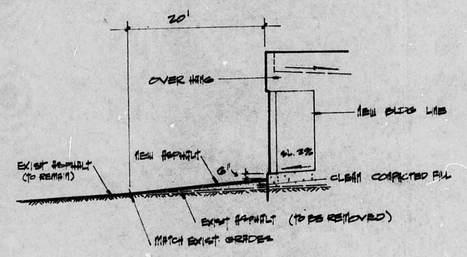
ydrology G17/D26 CARLISLE BUSINESS CENTER

G17 / D26

CARLISLE BUSINESS CENTER

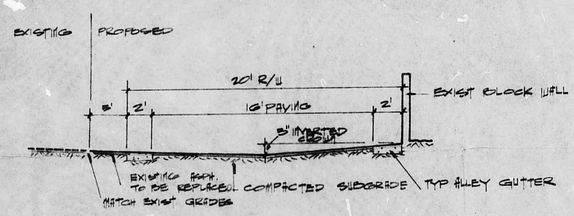
2 PLANS


CARLMONT ADDITION
LEGEND
EXIST. PAVE.
EXISTING APARTMENT COMPLEX
TR.A
TR.B
ALLEY
PUBLIC
20'
PROPOSED BLDG.
BUSINESS AREA
HILTON AVE.
BUSINESS AREA A
CARLISLE DEL CERO NO — 4
MORNINGSIDE DR.
RECEIVED
APR 15 1985
HYDROLOGY SECTION
NOTE:
EXIST. ALLEY PAVING PAVED IN CONJUNCTION WITH APARTMENT COMPLEX MIGHT NOT BE STD. ALLEY PAVING. STILL ON RECORD AS PUBLIC ALLEY.
20' R/W
16' PAVE.
3" INVERTED CROWN
STD. ALLEY GUTTER
TYPE I PAVING
COMPACTED SUBGRADE
TYPICAL ALLEY SECTION
SCALE: HORZ. 1"=50' VERT. 1"=5'
BENCH MARKS
T F-17 ELEV. 6115.37
SURVEY INFORMATION
FIELD NOTES
NO. BY DATE
1978 P. ANGEL 5/22/
AS-BUILT INFORMATION
CONTRACTOR
MICRO-FILM INFORMATION
RECORDED BY DATE NO.
REFERENCES
MAP NO. MAP 1978
EST. NO. W.O. NO.
SG 9-76
REMARKS
REVISIONS
NO. DATE BY
DESIGNED BY F. GOMEZ DATE 6-1-76
DRAWN BY R. ROMERO DATE 6-17-76
CHECKED BY DATE
PROFILE
PLAN
50' V.C.
EXISTING PAVEMENT
E.I.W.T.C. @ .0206
E.I.W.T.C. 0.0146
EXISTING GROUND
EAST EDGE OF PAVING
E.I.W.T.C. @ .0080
E.I.W.T.C. @ .0272
STA. 0+00 ℄ HILTON AVE.
STA. 0+24.50 END RET. T.C. 1575 (E.I.W.)
STA. 0+60 VPI. 1576
STA. 1+95 VPI. 1575 GRADE BREAK
STA. 4+25 VPI. 1575 GRADE BREAK
SCALE HOR. 1"=50'
0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00
5140 5135 5130 5125 5120 5115 5110
APPROVED FOR CONSTRUCTION
CITY ENGINEER DATE
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
TITLE: ALLEY GRADES ON ALLEY EAST OF CARLISLE BLVD. AND SOUTH OF MONTGOMERY BLVD. N.E.
APPROVALS ENGINEER DATE
City Engineer
A.C.E.-Design
A.C.E.-Hydrology
Liquid Waste
Traffic
Water
DRAWING NO. S G-9-76
SHEET 1 OF 2
PLATE 1 PLAN-PROFILE U. P. S. & S. S. STANDARD
EUGENE DIETZGEN CO.



SECTION A-A

1" = 10' SCALE

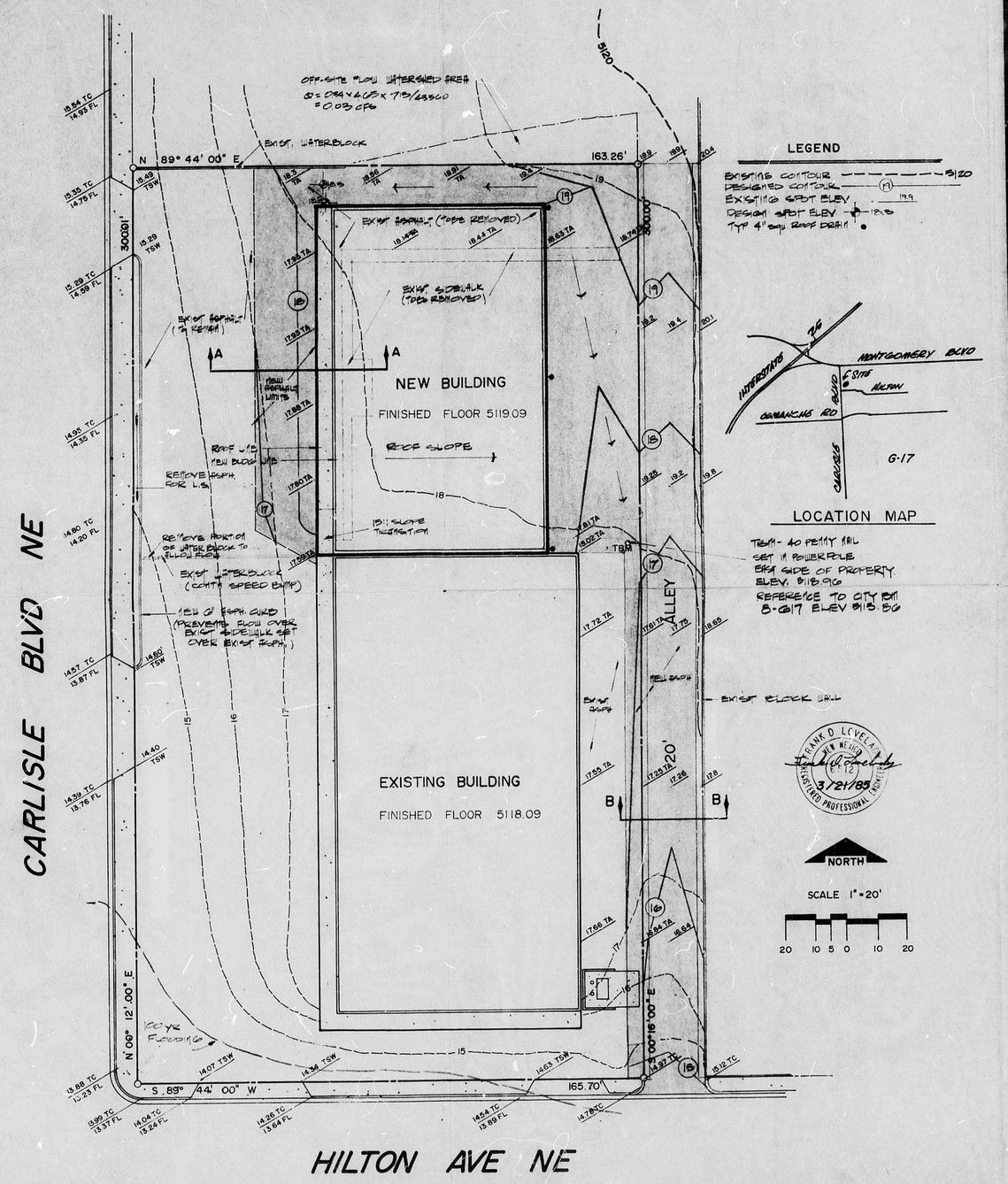


SECTION B-B (TYP ALLEY X-SECTION)

1" = 10' SCALE

LEGAL DESCRIPTION

LOT 4, BLOCK 1, HILTON ADDITION.



GRADING AND DRAINAGE PLAN

DRAINAGE CALCULATIONS

I. REFERENCES:

A. City of Albuquerque Development Process Manual (DPM) Volume 2, Design Criteria, Chapter 22, Drainage, Flood Control and Erosion Control.

B. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, United States Department of Agriculture, Soil Conservation Service.

C. Floodway, Floodway Boundary and Floodway Map, City of Albuquerque, New Mexico, Panel 23 of 50.

II. GENERAL INFORMATION:

A. Soil Type (Ref.B., Sheet No. 21) Soil type isWeB(Wink-Embudo complex) and Emb (Embudo gravelly fine sandy loam, both of which are in Hydrologic Soil Group "B".

B. Imperviousness:

Type of Surface	Existing Area Sq.Ft.	Existing Area Acres	Proposed Area Sq.Ft.	Proposed Area Acres
Building roof	13175	0.302	21050	0.483
Concrete Surfaces	0	0	0	0
Asphalt Surfaces	29044	0.667	28024	0.643
Landscaping	0	0	270	0.006
Undeveloped surface	7125	0.164	0	0
Site total	49344	1.133	49344	1.133
Percent impervious		85.6%		99.5%

C. "C" Factor (See Ref. A., Plate 22.2 C-1)
1. Undeveloped "C" Factor = 0.82
2. Developed "C" Factor = 0.99

D. Rainfall, 100-year, 6-hour, R_6; (See Ref.A., Plate 22.2 D-1) R_6 = 2.2 inches.

E. Time of Consentration, T_c; By Kirpich Equation.

$T_c = 0.0078\ (L^{0.77}/S^{0.385})$ L = 180 Delta El. = 4.9ft.

S = 4.9/180 = 0.027 ft./ft.

$T_c = 0.0078\ (180^{0.77}/0.027^{0.385}) = 1.7$ Minutes

Use 10 minutes as the minimum time of concentration.

F. Rainfall Intensity, I; (See Ref. A, Plate 22.2 D-2)

$I = R_6 \times 6.84 \times T_c^{-0.51} = 2.2 \times 6.84 \times (10)^{-0.51}$

I = 4.65 In/Hr

III. PEAK DISCHARGE:

A. Existing Conditions. (Use Rational Equation)

$Q_{100} = 0.82 \times 4.65 \times 1.133 = 4.32$ cfs

$Q_{10} = 0.657 \times 4.32 = 2.84$ cfs (Ref.A., Pl.22.2 D-1)

B. Developed Conditions.

$Q_{100} = 0.99 \times 4.65 \times 1.133 = 5.22$ cfs

$Q_{10} = 0.657 \times 5.22 = 3.43$ cfs

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