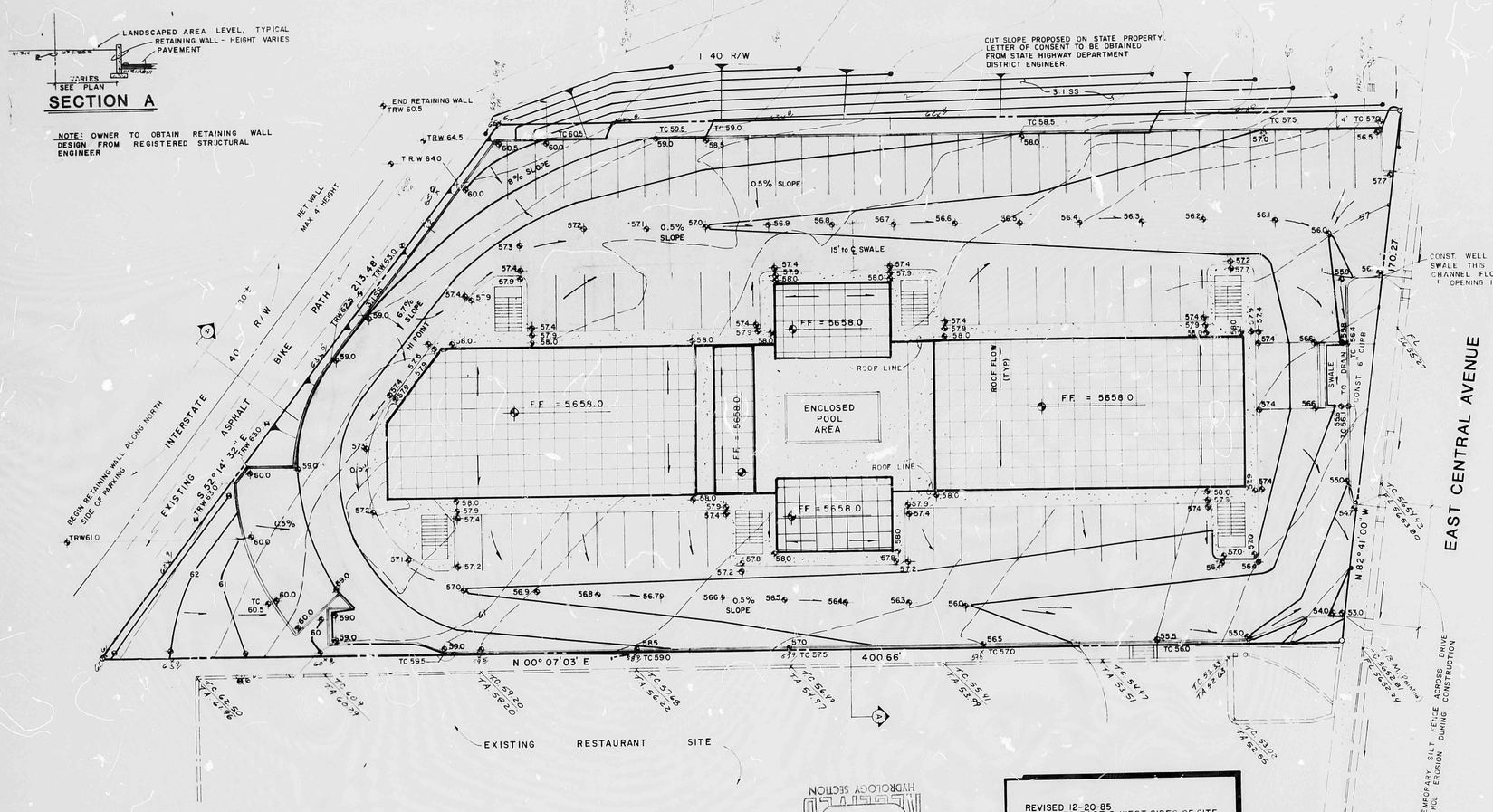
HYDROLOGY L22/D25 MOTEL SITE

L22/D25

Motel Site

Plan

SCALE: 1" = 20'



RECEIVED JAN 06 1986 HYDROLOGY SECTION

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REVISED 12-20-85
REGRADED EAST & WEST SIDES OF SITE TO ELIMINATE RETAINING WALLS
CHRIS WEISS DATE

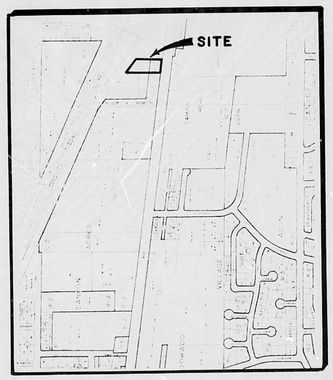
REVISED 11-15-85
RETAINING WALLS MOVED FROM R. TO EDGE OF PAVEMENT
WALT HINES DATE

LEGEND

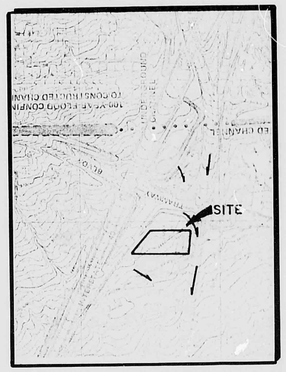
- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- 12.7 X — EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- 12.5 — PROPOSED SPOT ELEVATION
- 10 — PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- L.A. — LANDSCAPED AREA
- T.G.W. — TOP OF GRADE WALL (LESS THAN 18" HIGH)
- T.R.W. — TOP OF RETAINING WALL (MORE THAN 18" HIGH)
- T.A. — TOP OF ASPHALT
- T.C. — TOP OF CURB
- F.L. — FLOW LINE
- F.F. — FINISHED FLOOR

CONSTRUCTION NOTES

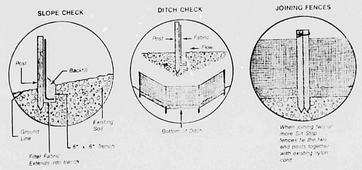
1. Before construction, the Contractor shall check and verify pertinent figures shown herein and shall make all applicable field measurements. Should any conflict, error or discrepancy be discovered, the contractor shall notify the Engineer of once to resolve the problem. It is recommended that the Contractor meet with the Engineer for a pre-design conference to discuss the scope of work and critical areas involved.
2. The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
3. The Contractor shall check the site plan for locations of existing utilities within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to Line Locating Service, 765-1234, for any work that may interfere with said utilities.



VICINITY MAP L-22



FLOOD HAZARD BOUNDARY MAP



SILT FENCE DETAIL

SCOPE:

The proposed improvements consist of a 70 unit motel, asphalt parking area, curb and gutter, and landscaped areas.

The present site is now being used as a go-cart tract, all of which will be razed when the motel is built. It is surrounded by Central on the south, I-40 bike path of the north, Tramway Blvd. on the east and a McDonalds Restaurant on the west.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES:

LEGAL: Site is a 1.34 acre unplatted area at the N.W. intersection of Tramway and Central. Meets and bounds as noted on plan.

SURVEYOR: Dave Clausen Survey Co., Albuquerque, N.M. August, 1985.

B.M.: ACS Brass Cap 2-I22 located at the intersection of Central and Tramway on the center median on the west side. Elevation = 5659.96

T.B.N.: Top of curb on Central Avenue at west property line extension. Elevation = 5652.81

SOILS: SCS soils Map # 32. Soil, type TgE, soil/hydrologic group 'B'

FLOOD HAZARD: According to FEMA Map #37, there are no flood hazard areas for at least 2 miles to the west

OFF-SITE DRAINAGE: The site is bounded on the north by Interstate 40, on the east by the Tramway Blvd. exit ramp and on the south by Central Ave. all of which isolate the site from surface runoff. The McDonald's site to the west is at a lower elevation with curb to keep runoff from this site from flowing across the property line.

EROSION CONTROL: Contractor is responsible for erecting temporary fabric silt fences at points shown on plan to control sediment from leaving the site.

CALCULATIONS: Guidelines were established by a similar motel located adjacent to the west side of McDonalds*. The following design criterion was used. Because the Fairgrounds relief system further west on Central Ave. relieves flooding from this area and the increased runoff (1.7 cfs) from this site will have an insignificant impact on the overall carrying capacity and water surface elevation of Central Ave., free discharge of runoff was used in determining flow patterns for the site.

Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100 year-6 hour storm, using the Rational Formula to compare the existing and proposed runoff rates.

*Plan for Waffle House Inc. designed by Tom Mann & dated 5-84

RATIONAL METHOD -- Q = CIA

Area of site: 58,497 sq.ft. = 1.34 Ac.

Run-off Coefficients

Existing Site:

A imp. = 0.82Ac
% imp. = 61%
"C" = 0.63 (DPM 22.2 C-1)

Developed Site:

A imp. = 1.24 Ac
% imp. = 92%
"C" = 0.88 (DPM 22.2 C-1)

Rainfall Intensity:

$I = P_6 (6.84)^{-0.51} = 5.3$" per hour
where P_6 = 2.5" (DPM 22.2 D-1)
T_c = 10 minutes

Existing Conditions:

$Q_{100} = (0.63)(5.3)(1.34) = 4.5$ cfs

$V_{100} = (4.5)(50T_r)(60 \text{ sec/min})/2 = 6,750$ cu. ft.

Developed Conditions:

$Q_{100} = (0.88)(5.3)(1.34) = 6.2$ cfs

$V_{100} = (6.2)(50)(60)/2 = 9,300$ cu. ft.

SUMMARY:

$Q_{100} = (6.2)-(4.5) = 1.7$ cfs (increase)
$V_{100} = (9300)-(6750) = 2550$ cu. ft. (increase)

DOWNSTREAM CAPACITY: See comments under "CALCULATIONS"

REVISED 10-1-85:
- FLOWS DIVERTED AWAY FROM CANOPY
- PLANTER AREAS MADE LEVEL
- LEGAL DESCRIPTION PROVIDED BY SURVEYOR

Walter G. Hines 10-2-85
WALT HINES DATE

L22/D25

REVISED 11-1-85
- SITE PLAN CHANGED TO REFLECT A DECREASE IN THE NUMBER OF UNITS
- POOL AREA MOVED BETWEEN UNITS

Walter G. Hines 11-1-85
WALT HINES DATE

WEISS-HINES ENGINEERING INC.
1100 ALVARADO N.E. SUITE B
ALBUQUERQUE, NEW MEXICO 87110
(505) 268-3444

REVISIONS	DATE

DESIGNED WHJ/CW 8-85
DRAWN WHJ "
CHECKED CW "

DRAINAGE / GRADING PLAN
MOTEL SITE
13317 CENTRAL N.E.

WHI ENGINEERING

WALTER G. HINES N.M. REGISTERED PROFESSIONAL ENGINEER 5351

SHEET 1 OF