890014

DRAINAGE INFORMATION SHEET

PROJECT TITLE: TA LIN INFILL ZONE ATLAS/DRNG. FILE #: K19/D77

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOTS D1 & E1, BLK 10, LA MESA ADDN.

CITY ADDRESS: 230 LOUISIANA SE

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: BOUNPHONG LIMARY CONTACT: SAME

ADDRESS: 230 LOUISIANA SE PHONE: _____

ARCHITECT: JOSEPH LEO GODKIN CONTACT: JOE GODKIN

ADDRESS: 3901 INDIAN SCHOOL NE PHONE: 266-6058

87110

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: NOT KNOWN CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- X DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- X GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION
- ____ OTHER

PRE-DESIGN MEETING:

- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
AUG 26 1992
HYDROLOGY DIVISION

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SKETCH PLAT APPROVAL
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY APPROVAL
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ S.A.D. DRAINAGE REPORT
- ____ DRAINAGE REQUIREMENTS
- ____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 08-26-92

BY: JEFFREY G. MORTENSEN

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

November 13, 1989

Jeff Mortensen
Jeff Mortensen & Associates
811 Dallas NE
Albuquerque, NM 87110

RE: ENGINEER CERTIFICATION FOR TA-LIN (K19-D77) ENGINEER'S CERTIFICATION STATEMENT DATED 10/31/89

Dear Mr. Mortensen:

Based on the information provided on your November 2, 1989 submittal, certification for the above referenced drainage is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2650.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM:jc
WP+881

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 14, 1992

Jeff Mortensen
Jeff Mortensen & Associates Inc.
6010-B Midway Park Blvd., NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR AN ADDITION TO TA LIN SUPER MARKET (K-19/D77)
ENGINEER'S STAMP DATED AUGUST 26, 1992

Dear Mr. Mortensen:

Based on the information provided on your August 26, 1992 submittal, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required.

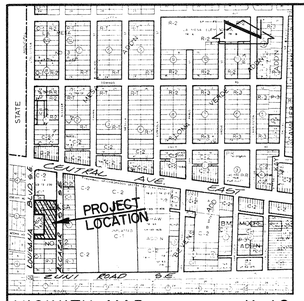
If I can be of further assistance, please feel free to contact me at 7868-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Assistant

cc: Alan Martinez, Drainage Inspector - PWD
file

BJM:jc
WP+81



VICINITY MAP K-19

SCALE : 1" = 800'

LEGEND

⊕ 5.10	AS-BUILT SPOT ELEVATION
TC. / FL.	TOP OF CURB / FLOWLINE
T.A.	TOP OF ASPHALT
	EXISTING FLOWLINE
F.F.	FINISHED FLOOR
TSW	TOP OF SIDEWALK
	PROPOSED CONSTRUCTION
⊕	PROPOSED SPOT ELEVATION
TC 21.28	PROPOSED TOP OF CURB ELEVATION
24	PROPOSED CONTOUR
	PROPOSED CONCRETE

LEGAL DESCRIPTION

LOTS D-1 & E, BLOCK 10, LA MESA No. 2 ADDITION, ALBUQUERQUE, NEW MEXICO

PROJECT BENCHMARK

A STANDARD A.C.S. BRASS CAP SET IN CONCRETE MARKED "7-K10.1974.A.C.S." LOCATED IN THE NOSE OF THE EAST MEDIAN OF CENTRAL AVE. AT THE INTERSECTION OF LOUISIANA BLVD. & CENTRAL AVE. ELEVATION = 5323.31 FEET (M.S.L.D.)

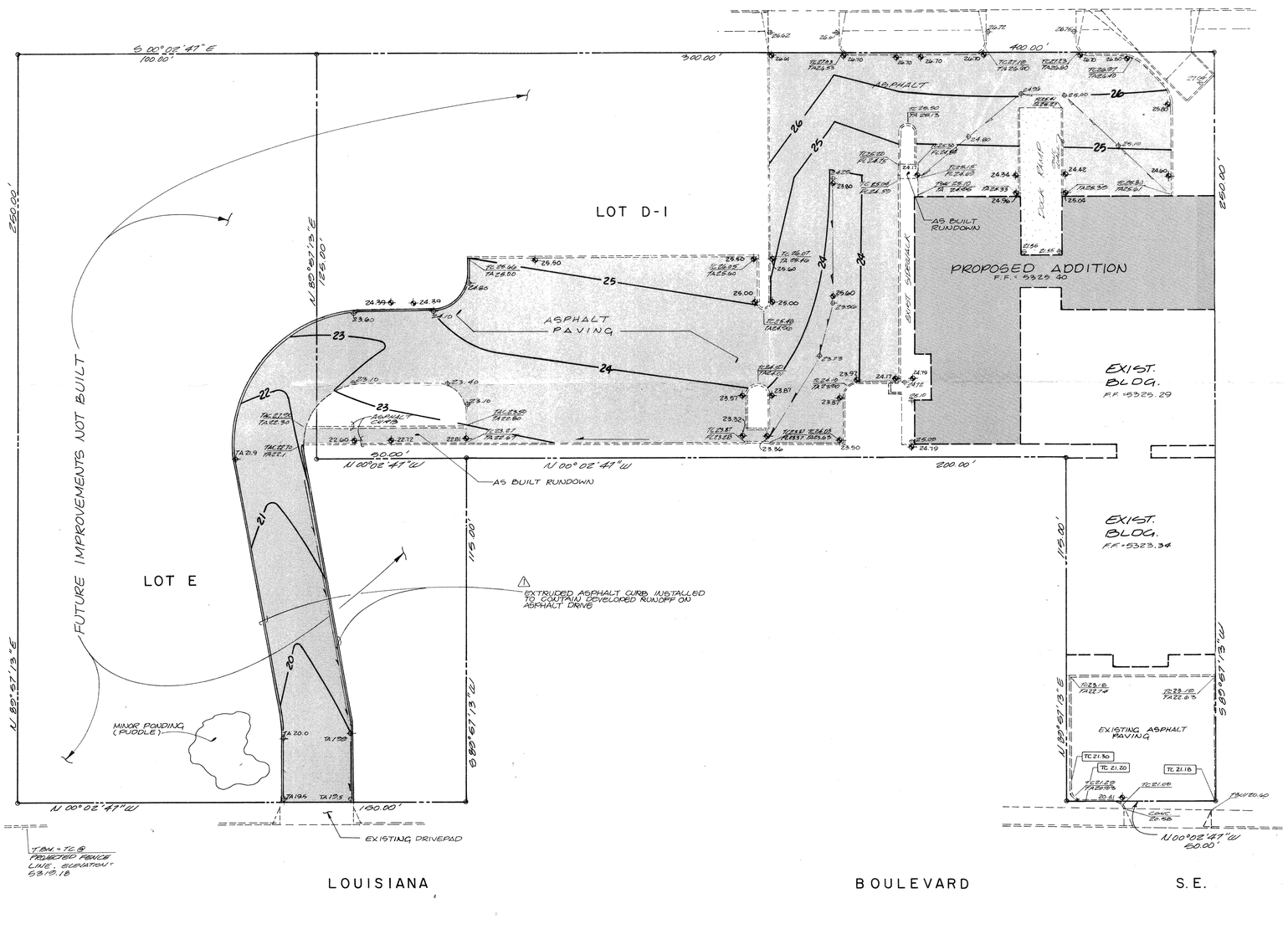
TEMPORARY BENCHMARK

TBM = TOP OF CURB NEAR N.W. CORNER OF LOT E AS SHOWN HEREON. ELEVATION = 5319.18 FEET (M.S.L.D.)

PROPERTY ADDRESS

230 LOUISIANA BLVD. S.E.

SCALE : 1" = 20'



DRAINAGE CERTIFICATION

The as-built elevations shown hereon demonstrate that portions of this site were constructed in substantial compliance with the approved grading and drainage plan prepared by Espey-Huston and Associates, Inc., and dated 11-15-88. The area on the east side of the proposed building addition around the dock ramp has deviated significantly from the approved plan. The as-built grades do provide for positive drainage from this area to the north, therefore, this does not appear to represent a problem. Another major departure from the approved plan is the construction of the asphalt drive connecting the parking lot to Louisiana Boulevard S.E. The approved design calls for an inverted section which was not constructed. Consequently, runoff being discharged from the contributing paved surfaces either runs along the south edge of this drive within an unpaved shoulder or accumulates in a shallow depression (puddle) located at the northwest corner of the site. The runoff carried along the southerly side of the asphalt drive discharges to Louisiana Boulevard S.E. through the existing drivepad. There is no evidence of overflow runoff from the shallow depression (puddle) into Louisiana Boulevard S.E.

This information is being presented for the purpose of obtaining a Certificate of Occupancy for the completed construction. The project, as constructed, appears to satisfy the intent of the approved grading and drainage plan in that the developed runoff is being discharged to Louisiana Boulevard S.E.

Jeffrey G. Mortensen, NMPE No. 8547 — 03.28.89 Date

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

CERTIFICATION UPDATE

An extruded asphalt curb has been installed along the asphalt drive. This remedial measure will keep developed runoff from leaving the paved surfaces and eroding unpaved areas into Louisiana Boulevard S.E. This eliminates the discharge of developed runoff to the minor depression discussed above as well as the flow of developed runoff within the "unpaved shoulder".

Jeffrey G. Mortensen, NMPE 8547 — 10-31-89 Date

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

RECEIVED NOV 07 1989 HYDROLOGY SECTION

JEFF MORTENSEN & ASSOCIATES, INC.
811 DALLAS, N.E. □ ALBUQUERQUE, NM 87110
□ ENGINEERS □ TELEPHONE (505) 265-5611 □

DRAINAGE CERTIFICATION

TA-LIN

DESIGN BY	J.G.M.
DRAWN BY	C.V.M.
APPROVED BY	J.G.M.

No.	Date	By	Revision
1	10/89	J.G.M.	UPDATE FOR AC CURB

JOB NO. 890012
DATE 3-1989
SHEET 1 OF 1

CALCULATIONS

I. CRITERIA

Criteria for hydrologic calculations is per the Rational and SCS methods of estimating storm runoff as outlined in the City of Albuquerque "Development Process Manual", Volume II, Chapter 22.

Rainfall: P100/6 hour = 2.35 in.
P10/6 hour = 1.54 in.

Rainfall Intensity: I = 6.84P(Tc^-.51) (in/hr)

where P = rainfall (in)
Tc = time of conc.(min)

Time of Concentration: Tc = 0.0078(L^0.77)/S^0.385 (min.)

where L = length (ft.)
S = slope (ft./ft.)

Soil: Madurez-Wink Assoc, Group 'B'

SCS curve number: CN per DPM, Vol. II, plates 22.2 C2 & C3

Rational "C" factor: "C" factor by Notice of Emergency Rule

Runoff: Q = CIA (c.f.s.) - Rational Method

where A = basin area (ac.)
I = intensity (in/hr)
C = "C" factor

Volume: 3630AR (c.f.) - SCS Method

where A = basin area (ac.)
R = direct runoff (in.)

SIDEWALK CULVERT SIZING

Determine culvert width using weir equation:

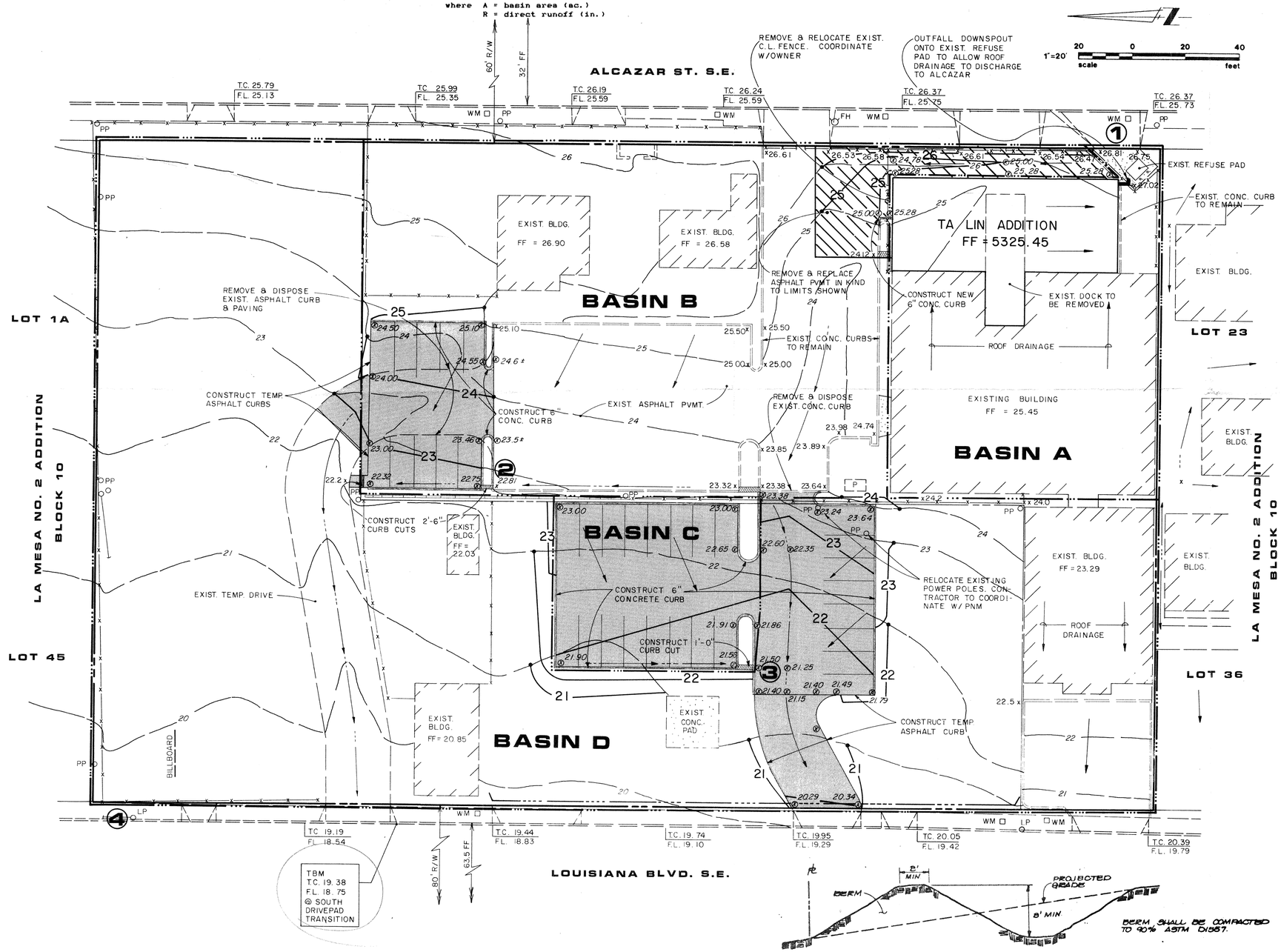
Q = 3.33LH^1.5

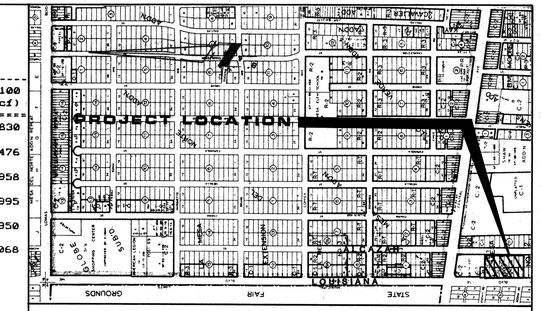
Where L = culvert width (ft)
H = culvert height (ft)

AP	Q100	H	L	USE
2	3.0	0.5	2.5	2.5
3	0.6	0.5	0.5	1.0

HYDROLOGY

AP	Basin	Area (ac)	Tc (min)	i 100 (in/hr)	C	CN	R 10 (in)	R 100 (in)	Q 10 (cfs)	Q 100 (cfs)	V 10 (cf)	V 100 (cf)
1	A	0.28	10	4.97	0.90	95	1.10	1.80	0.8	1.2	1118	1830
2	B	0.62	10	4.97	0.82	85	0.50	1.10	1.7	2.5	1125	2476
3	C	0.12	10	4.97	0.95	98	1.40	2.20	0.4	0.6	610	958
4	D	0.75	10	4.97	0.82	85	0.50	1.10	2.0	3.1	1361	2995
4	B,C,D	1.49	10	4.97	0.83	85	0.50	1.10	4.0	6.1	2704	5950
4	Exist Site	1.77	10	4.97	0.82	85	0.50	1.10	4.7	7.2	3213	7068





VICINITY MAP: K-19 SCALE: 1" = 800'

GRADING AND DRAINAGE PLAN

The Grading and Drainage Plan shown hereon identifies the improvements required to manage developed stormwater runoff from the Ta Lin Supermarket site. The purpose of this plan is to provide detail necessary to allow for construction of the proposed improvements and to establish criteria for the management of stormwater on the site.

As shown by the Vicinity Map, the project is located between Louisiana Boulevard and Alcazar Street just south of Central Avenue. The area contains approximately 1.77 acres and is presently partially developed. The existing site contains several small buildings, the existing Ta Lin Supermarket, and areas of asphaltic paving. The existing topography slopes from east to west at approximately 3 present. All existing runoff flows across the site and discharges into Louisiana Boulevard.

As shown by Plate 30 of 50 of the FIRM for Albuquerque, New Mexico, the western edge of the site apparently lies within a flood hazard zone. However, this Flood Hazard Zone was removed by implementation of the improvements recommended by the "Restudy of the Albuquerque Master Drainage Study, Volume II", prepared by Bohannan Huston, Inc., 1987. Because of these drainage improvements, this site has been granted free discharge of developed runoff by the City/County Floodplain Administrator.

The proposed improvements consist of: addition to the existing Ta Lin Supermarket, paving, sidewalks, landscaping, and drainage facilities. Since free discharge is allowed, all stormwater will be routed overland by paved swales to Louisiana Boulevard where it will be conveyed by street flow to the Fairgrounds Storm Drainage System.

The contractor will be required to implement a temporary erosion control plan during the construction phase of the project. The plan shall consist of a ditch-dike system as detailed hereon, and shall be located along the west boundaries of the site. The contractor is required to maintain the temporary erosion control system until all paving and drainage improvements are in place. The contractor is required to obtain a topsoil disturbance permit from Environmental Health Division prior to performing any earthwork operations.

The calculations shown hereon analyze the 10-year and 100-year/6-hour design storms falling within the project site for both existing and developed conditions. The SCS method of estimating runoff is used as outlined in the "Development Process Manual, Volume II, Chapter 22".

LEGAL DESCRIPTION

Lots D-1 & E-1, Block 10, La Mesa Addition

PROPERTY ADDRESS

230 Louisiana Boulevard SE

PROJECT BENCHMARK

A standard ACS brass cap set in concrete marked "7-K19, 1974, ACS", located in the nose of the east median of Central Avenue at the intersection of Louisiana Boulevard and Central Avenue.ELEV.=5323.31

LEGEND

TC. 26.37	EXISTING TOP OF CURB ELEVATION
x 25.50	EXISTING SPOT ELEVATION
26	EXISTING CONTOUR
23.38	PROPOSED SPOT ELEVATION
22	PROPOSED CONTOUR
	SWALE
	DIRECTION OF FLOW
	BASIN BOUNDARY
	TEMPORARY EROSION CONTROL BERM
	NEW ASPHALT PAVEMENT
	ASPHALT PAVEMENT REMOVE & REPLACE

TEMPORARY EROSION CONTROL BERM DETAIL

RECEIVED
DEC 3 1990
HYDROLOGY DIVISION

NO.	REVISION	BY	DATE

12-3-90
11-6-90

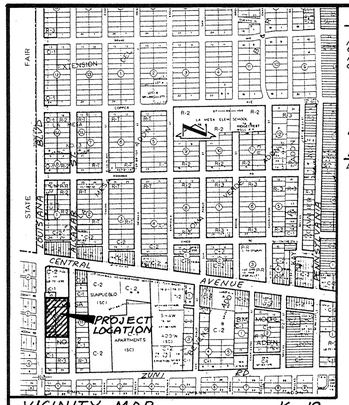
TAI LIN ADDITION

GRADING PLAN

ESPEY, HUSTON & ASSOC. INC.
Engineers • Planners • Surveyors
317 COMMERCIAL STREET N.E.
ALBUQUERQUE, NEW MEXICO 87102
(505) 842-1909

SHEET OF

151070



VICINITY MAP K-19
SCALE: 1" = 800' (APPROX.)

PROJECT BENCH MARK

A STANDARD A.C.S. BRASS CAP SET IN CONCRETE MARKED "T. K19. 1974 ACS", LOCATED IN THE NOSE OF THE EAST MEDIAN OF CENTRAL AVENUE AT THE INTERSECTION OF LOUISIANA BOULEVARD AND CENTRAL AVENUE.
ELEV. = 5323.308 FEET (M.S.L.D.)

T.B.M.

TOP OF CURB NEAR THE NW CORNER OF PROPERTY AS SHOWN BELOW
ELEV. = 5319.18 FEET (M.S.L.D.)

LEGAL DESCRIPTION

LOTS D-1 & E-1, BLOCK 10, LA MESA ADDITION

LEGEND

20	EXIST. CONTOUR LINE
⊕	EXIST. SPOT ELEVATION
20	PROPOSED CONTOUR LINE
⊕	PROPOSED SPOT ELEVATION
	EXIST. FLOWLINE
	PROPOSED FLOWLINE
	EXIST. DIRECTION OF RUNOFF
	PROPOSED DIRECTION OF RUNOFF
	EXIST. ROOF DRAINAGE
	PROPOSED ROOF DRAINAGE
	PROPOSED HIGH POINT
	PROPOSED CONCRETE
	PROPOSED ASPHALT
TC	TOP OF CURB
TA	TOP OF ASPHALT
TSW	TOP OF SIDEWALK
FL	FLOWLINE
WM	EXIST. WATER METER
PP	EXIST. POWER POLE
LP	EXIST. LIGHT POLE

Construction Notes:

1. Two (2) working days prior to any excavation, contractor must contact New Mexico One Call System, 260-1990, for location of existing utilities.
2. Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
3. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning safety and health.
4. All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
5. If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. the engineer has undertaken no field verification of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line in or near the area of the work in advance of and during excavation work. The contractor is fully responsible for any and all damage caused by its failure to locate, identify and preserve any and all existing utilities, pipelines, and underground utility lines. In planning and conducting excavation, the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.
6. The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.

Erosion Control Measures:

1. The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing temporary berms at the property lines and wetting the soil to keep it from blowing.
2. The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
3. The contractor shall secure "topsoil disturbance permit" Prior to beginning construction.

DRAINAGE PLAN

The following items concerning the Ta-Lin Infill Drainage Plan are contained hereon:

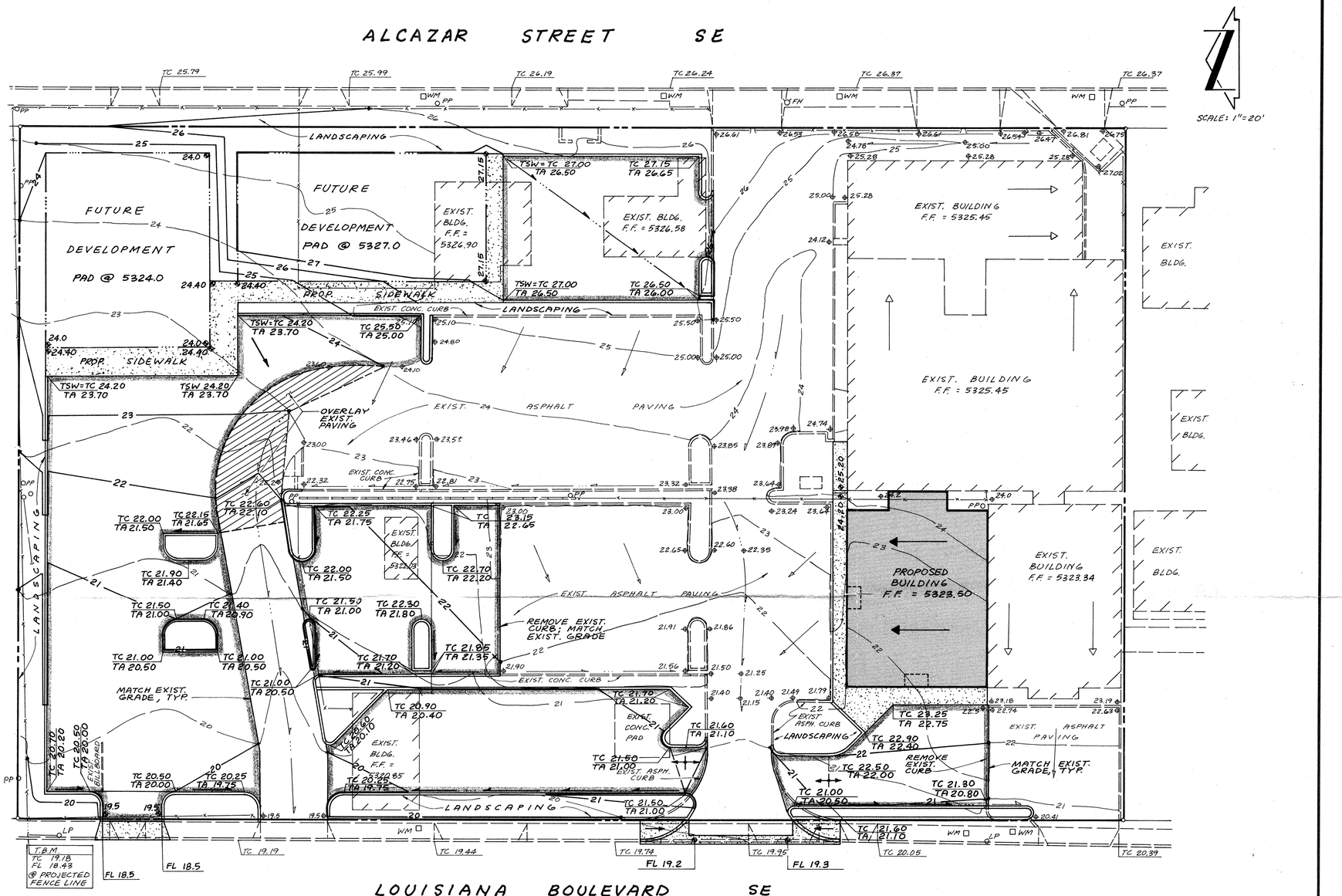
1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located on the east side of Louisiana Boulevard S.E., just south of the intersection with East Central Avenue. At present, the site is partially developed. The proposed development of this site consists of expanding the parking lot, constructing a building addition, and setting aside two pad sites for future development. Much of the surrounding area is also developed, making this a modification to an existing site within an infill area.

As shown by Panel 30 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps prepared for the City of Albuquerque, dated October 14, 1983, this site does not lie within a designated flood zone. Flooding is designated within Louisiana Boulevard adjacent to the site. This site does contribute runoff to that designated flood hazard zone. The 11-6-90 submittal for this site, prepared by Espey-Huston & Associates, identified that the existing flood hazard zone, as identified above, was removed through the implementation of improvements presented in the "Restudy of the Albuquerque Master Drainage Study, Volume 2" prepared by Bohannan-Huston, Inc. 1987. Furthermore, this site contributes runoff to the Fairgrounds Stormwater Relief System which has also served to reduce flooding in the neighborhood surrounding the New Mexico State Fair Property. It is based upon the removal of the floodplain, combined with the fact that this is a modification to an existing site within an infill area, that the free discharge of runoff from this site is still appropriate.

The grading plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, 4) future development (pad sites) and 5) continuity between existing and proposed grades. As shown by this plan, the site is currently developed with buildings and asphalt paving. The proposed expansion of the parking lot will demolish several of the existing buildings which are not of recent vintage. The proposed development also includes a small building addition at the northwest corner of the existing building complex. Lastly, two future pad sites have been identified for future development. It is fully realized that a separate submittal will be required for the construction of a building on these two pad sites. The calculations which appear below consider the pad sites to be roof area for the purpose of this submittal. As shown by this plan, the site presently drains from east to west onto Louisiana Boulevard S.E. The proposed improvements will not alter this existing drainage pattern and will continue to discharge the developed runoff from the site via existing and/or proposed drivepads. Because of this, the existing drainage patterns of the site will not be altered by the proposed construction.

The calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The peak discharge has been calculated by the Rational Method, while the volume of runoff generated has been calculated using the SCS Method. Both Methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, combined with the Mayor's Emergency Rule dated January 14, 1986. As shown by these calculations, the proposed improvements will result in an increase in runoff generated by this site. There are no offsite flows impacting this property, hence calculations of offsite flows are not included. As stated above, the developed runoff generated by this site will be freely discharged to Louisiana Boulevard S.E.



CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 31: MWA, Madurez
Hydrologic Soil Group: B
Existing Pervious CN = 61 (DPM Plate 22.2 C-2 Open Space: good condition)
Developed Pervious CN = 61 (DPM Plate 22.2 C-2

Time of Concentration/Time to Peak

$T_c = 0.0078\ L^{0.77}/S^{0.385}$ (Kirpich Equation)

$T_p = T_c = 10$ min.

Point Rainfall

$P_6 = 2.35$ in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: Q = CiA

where C varies
$i = P_6\ (6.84)\ T_c^{-0.51} = 4.97$ in/hr
$P_6 = 2.35$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

SCS Method

Volume: V = 3630(DRO) A

Where DRO = Direct runoff in inches
A = area, acres

Existing Condition

A_{total} = 100,500 sf = 2.31 Ac
Roof area = 17,246 sf (0.17)
Paved area = 28,972 sf (0.29)
Landscaped area = 54,282 sf (0.54)
C = 0.64 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.64(4.97)2.31 = 7.3$ cfs
A_{imp} = 46,218 sf; % impervious = 46 %
Composite CN = 78 (DPM Plate 22.2 C-3)
DRO = 0.75 in (DPM Plate 22.2 C-4)
V_{100} = 3630 (DRO)A = 6290 cf

Developed Condition

A_{total} = 100,500 sf = 2.31 Ac
Roof area = 25,600 sf (0.25)
Paved area = 61,900 sf (0.62)
Landscaped area = 13,000 sf (0.13)
C = 0.85 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.85(4.97)2.31 = 9.8$ cfs
A_{imp} = 87,500 sf; % impervious = 87.1%
Composite CN = 92 (DPM Plate 22.2 C-3)
DRO = 1.5 in (DPM Plate 22.2 C-4)
V_{100} = 3630 (DRO)A = 12,580 cf

Comparison

$\Delta Q_{100} = 9.8 - 7.3 = 2.5$ cfs (increase)
$\Delta V_{100} = 12,580 - 6,290 = 6290$ cf (increase)

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JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

GRADING & DRAINAGE PLAN

TA LIN INFILL

DESIGNED BY JGM
DRAWN BY CEN
APPROVED BY JGM

NO.	DATE	BY	REVISIONS

JOB NO. 890014
DATE 08-92
SHEET 1 OF 1