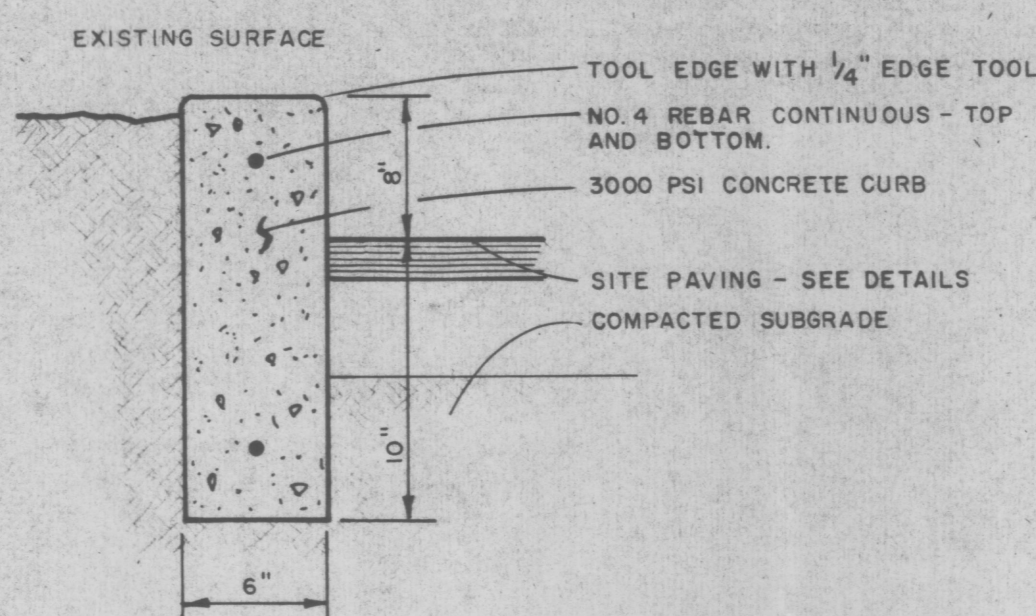
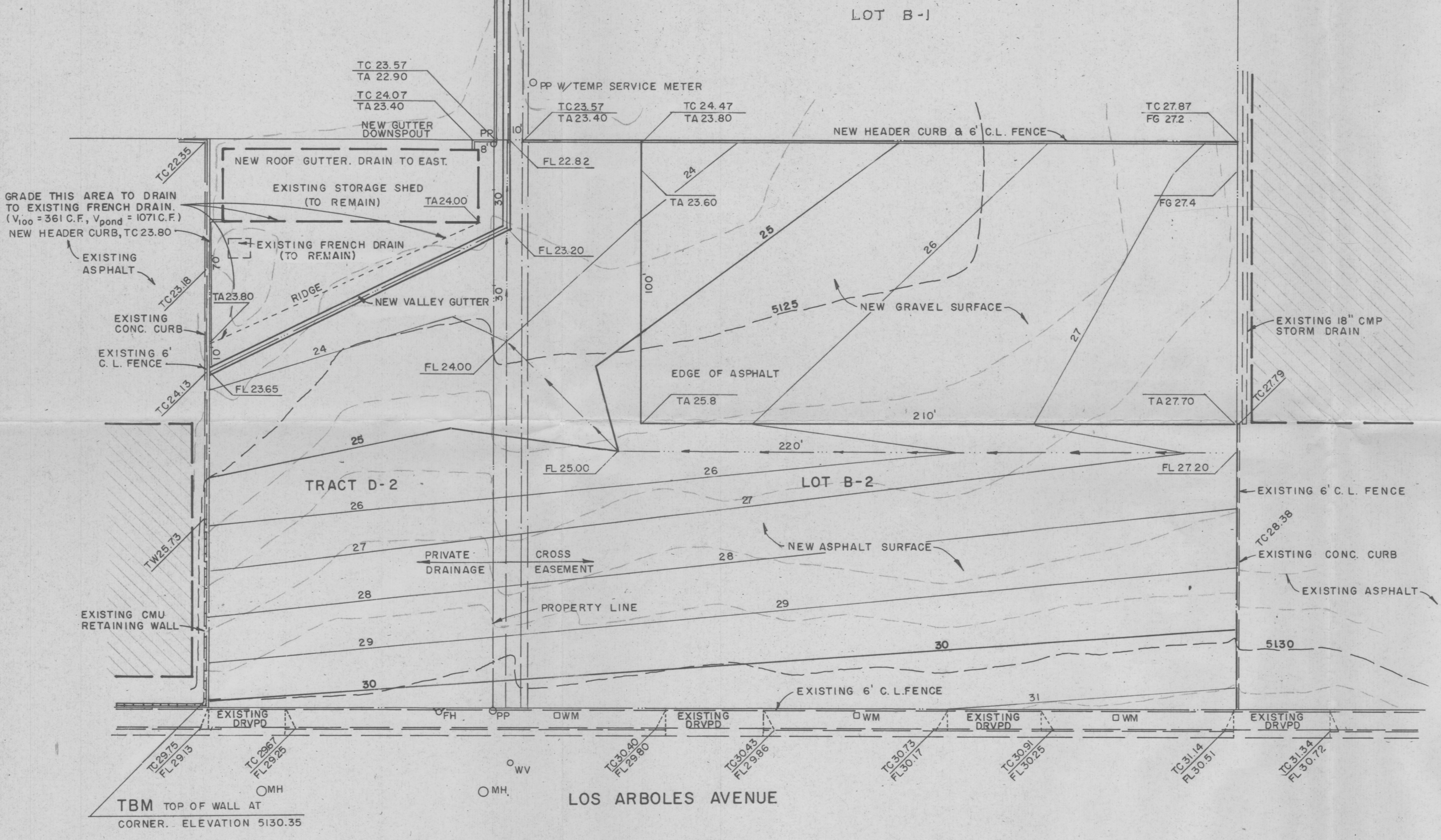
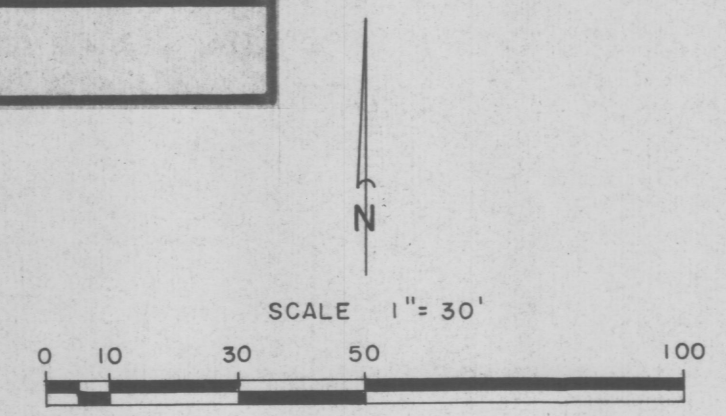


MATTHEW AVENUE
EXISTING DRIVEPAD
NEW 3-BARREL (EACH 2' WIDE)
SIDEWALK CULVERT PER COA
STD. DETAIL 2236
EXISTING STD. C&G & SIDEWALK
NEW HEADER CURB
EXISTING 6" C.L. FENCE
NEW VALLEY GUTTER
EXISTING 6" C.L. FENCE
10' CHANNEL TRANSITION
5' UTILITY EASEMENT
10' OVERHEAD & UNDERGROUND UTILITY ESMT
2' PUBLIC WATER & SANITARY SEWER ESMT
10' PRIVATE DRAINAGE EASEMENT
EXISTING ASPHALT
EXISTING 6" C.L. FENCE
EXISTING ASPHALT
EXISTING CONC. CURB
EXISTING 6" C.L. FENCE
EXISTING CMP RETAINING WALL
TBM TOP OF WALL AT
CORNER. ELEVATION 5130.55



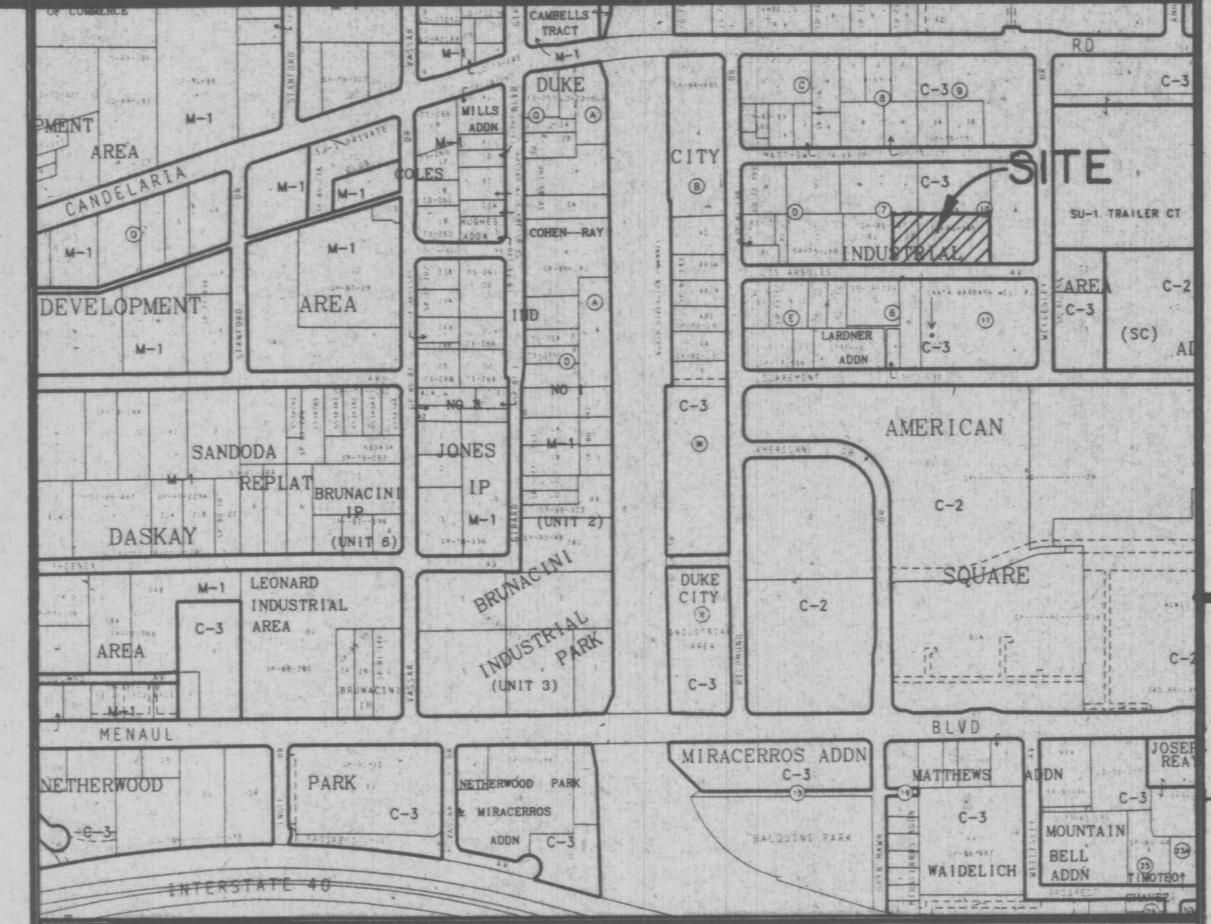
HEADER CURB



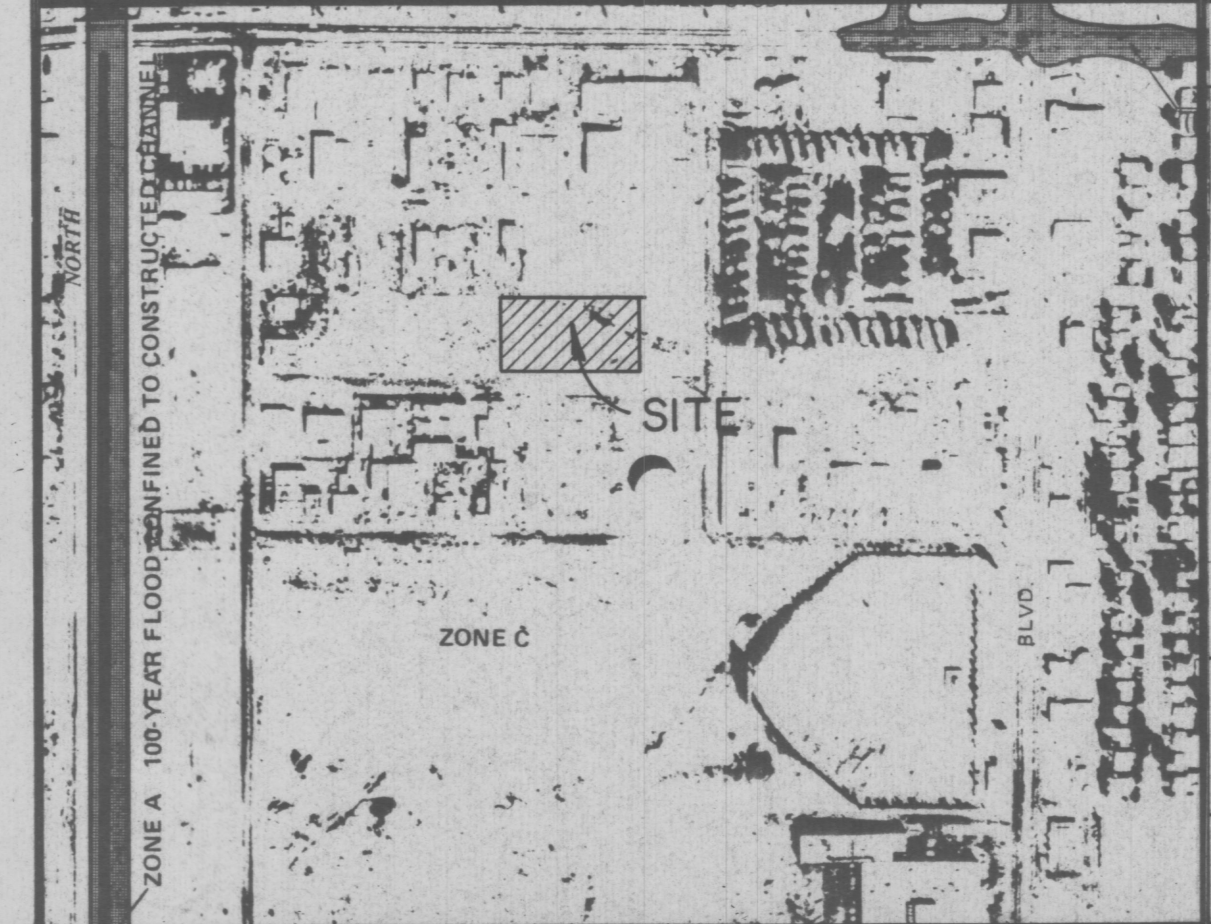
LEGEND

- TBM TEMPORARY BENCHMARK
- FF FINISH FLOOR
- FG FINISH GRADE
- FL FLOW LINE
- TA TOP OF ASPHALT
- TCP TOP OF CONCRETE
- TC TOP OF CURB
- TP TOP OF PAD
- TS TOP OF SIDEWALK
- TW TOP OF WALL
- FH FIRE HYDRANT
- WM WATER METER
- WV WATER VALVE
- MH MANHOLE
- GM GAS METER
- GV GAS VALVE
- LP LIGHT POLE
- PP POWER POLE
- GW GUY WIRE
- RD ROOF DRAINAGE
- PED ELEC. OR TEL. PEDESTAL
- FEMA FIRM BOUNDARY
- DRAINAGE BASIN BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING ELEVATION
- PROPOSED ELEVATION
- AS-BUILT ELEVATION

VICINITY MAP H-16



FEMA FIRM NO. 23



LEGAL DESCRIPTION

TRACT D-2 & LOT B-2, BLOCK 10, DUKE CITY INDUSTRIAL AREA

PERMANENT BENCHMARK

AMAFCA MONUMENT 'NDC 17-2A' ELEVATION 5112.4

DRAINAGE DATA

CONDITION	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
	year	(TABLE 4)	sq. ft.	(TABLE 8)	(TABLE 9)	cu. ft.	cfs
EXISTING	10	C	72363	0.52	1.71	3136	2.84
	100	C	72363	1.13	3.14	6814	5.22
	10	C	26200	0.52	1.71	1135	1.03
	100	C	26200	1.13	3.14	2467	1.89
DEVELOPED	10	C	21000	0.52	1.71	910	0.82
	10	D	51363	1.34	3.14	5736	3.70
	100	C	21000	1.13	3.14	1978	1.51
	100	D	51363	2.12	4.70	9074	5.54
PH. I	10	TOTAL	72363			11052	7.05
	10	D	72363	1.34	3.14	8081	5.22
	100	D	72363	2.12	4.70	12784	7.81
	10	D	26200	1.34	3.14	2926	1.89
ULT.	100	D	26200	2.12	4.70	4629	2.83

CONSTRUCTION NOTES

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- 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.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL

- 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.
- 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.
- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

YEAROUT MECH. & ENGR., INC. GRADING & DRAINAGE PLAN

SHEET	22
OF	

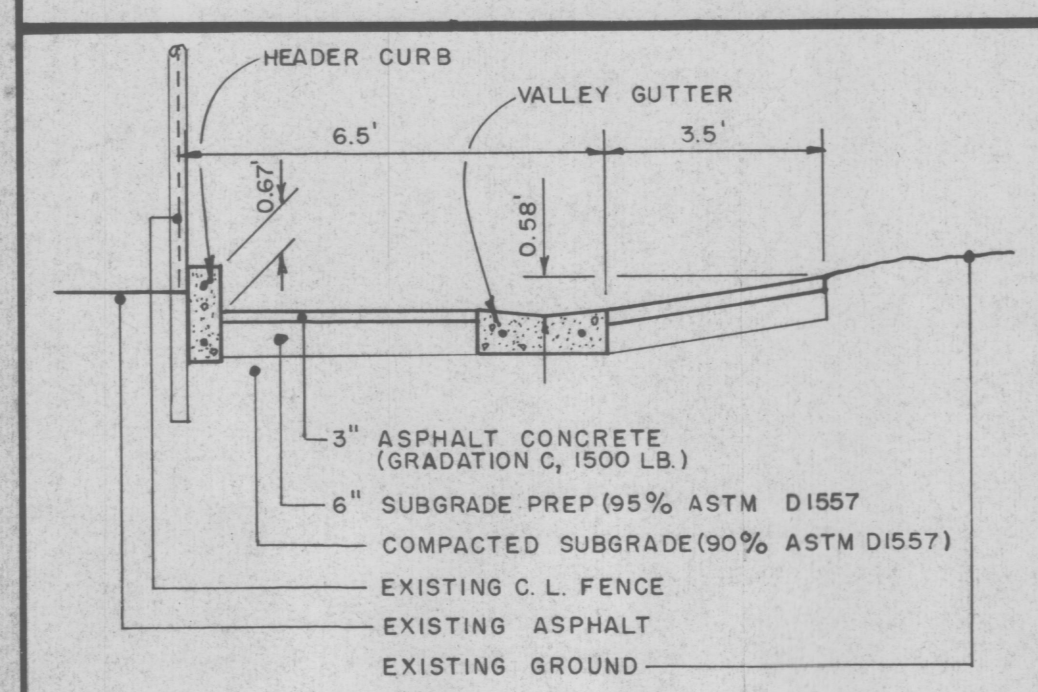
REGISTERED PROFESSIONAL ENGINEER
NO. 5110
NEW MEXICO
EXPIRATION DATE 12/31/2000

SIDEWALK CULVERT APPROVAL

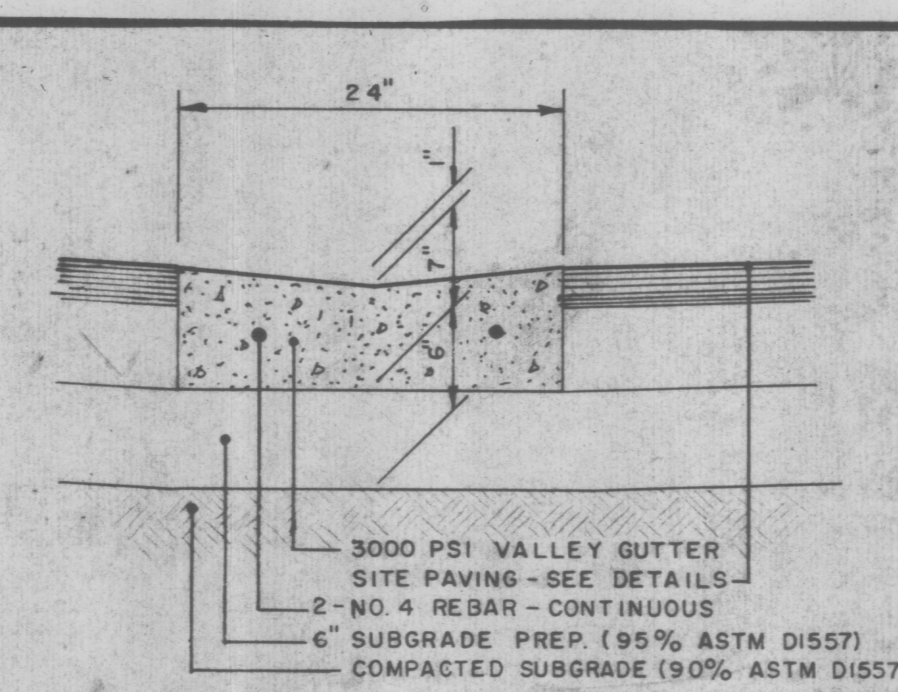
NOTICE TO CONTRACTOR

- An excavation/construction permit will be required before beginning any work within the City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- All work within the City right-of-way, detailed on these plans to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with City of Albuquerque Standard Specifications for Public Works Construction, 1986.
- Two (2) working days prior to any excavation, the Contractor must contact New Mexico One Call System 260-1990 for location of existing utilities.
- Prior to construction, the Contractor shall excavate and verify the horizontal and vertical locations 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.
- Backfill compaction shall be according to street use.
- Maintenance of these facilities shall be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE
A.C.E./ DESIGN	Brian Montoya	5/14/95
INSPECTOR		
A.C.E./ FIELD		



SECTION A-A



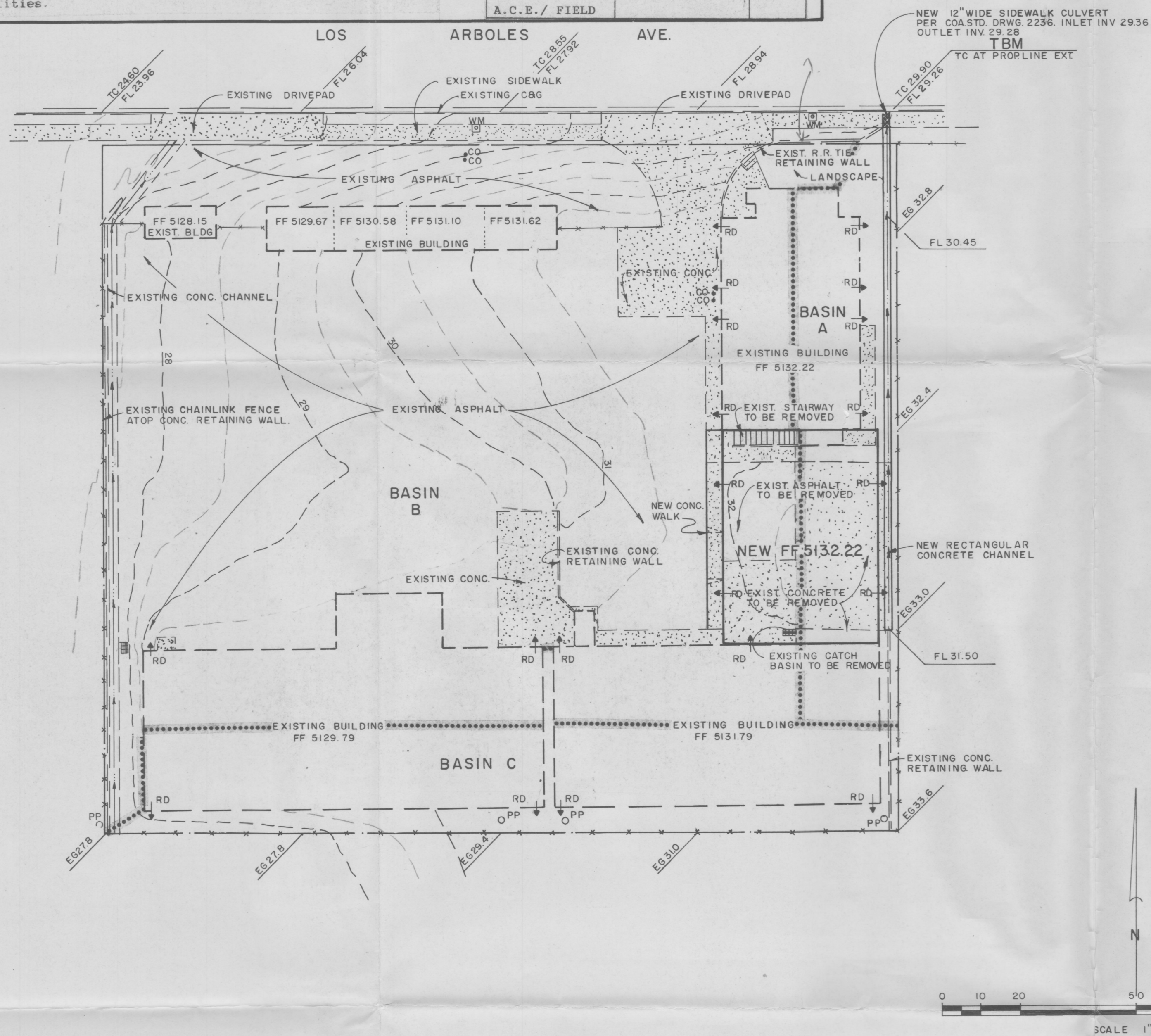
VALLEY GUTTER

PUBLIC ROW CONSTRUCTION

1. An excavation/construction permit will be required before beginning any work within the City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work within the City right-of-way, detailed on these plans to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with City of Albuquerque Standard Specifications for Public Works Construction, 1986.
3. Two (2) working days prior to any excavation, the Contractor must contact New Mexico One Call System 260-1990 for location of existing utilities.

4. Prior to construction, the Contractor shall excavate and verify the horizontal and vertical locations 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.
5. Backfill compaction shall be according to arterial street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE
A.C.E./ DESIGN	Benny Montoya	9/9/94
INSPECTOR		
A.C.E./ FIELD		



GRADING 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 CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL

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.

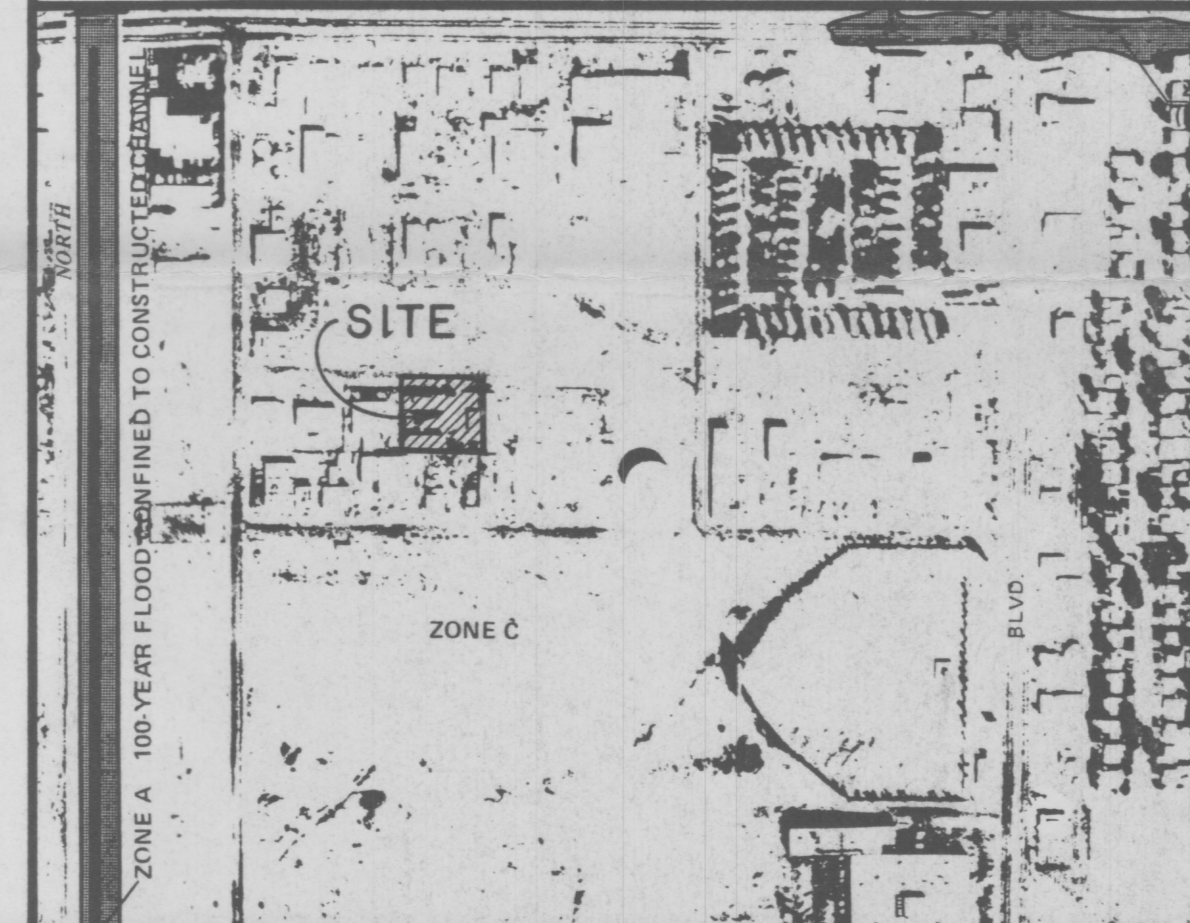
LEGEND

TBM	TEMPORARY BENCHMARK
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOW LINE
TA	TOP OF ASPHALT
TCP	TOP OF CONCRETE
TC	TOP OF CURB
TP	TOP OF PAD
TS	TOP OF SIDEWALK
TW	TOP OF WALL
FH	FIRE HYDRANT
WM	WATER METER
WV	WATER VALVE
MH	MANHOLE
GM	GAS METER
GV	GAS VALVE
LP	LIGHT POLE
PP	POWER POLE
GW	GUY WIRE
RD	ROOF DRAINAGE
PED	ELEC. OR TEL. PEDESTAL
-----	FEMA FIRM BOUNDARY
-----	EXISTING CONTOUR
-----	PROPOSED CONTOUR
XXX(E)	EXISTING ELEVATION
XXX	PROPOSED ELEVATION
AS-BUILT	ELEVATION

VICINITY MAP H-16



FEMA FIRM NO. 23



LEGAL DESCRIPTION

LOT D, BLOCK 6, DUKE CITY INDUSTRIAL AREA

PERMANENT BENCHMARK

ACS 1-G-16 ELEVATION 5119.15

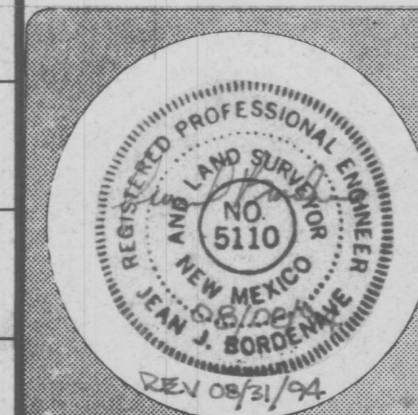
DRAINAGE DATA

CONDITION	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
	year	(TABLE 4)	sq. ft.	in.	(TABLE 9) cfs/acre	cu. ft.	cfs
EXISTING	10	C	994	0.52	1.71	43	0.04
		D	1179	1.34	3.14	132	0.08
		TOTAL	2173			175	0.12
A	100	C	994	1.13	3.14	94	0.07
		D	1179	2.12	4.70	208	0.13
		TOTAL	2173			302	0.20
B	10	D	27420	1.34	3.14	3062	1.98
	100	D	27420	2.12	4.70	4844	2.96
	10	C	1427	0.52	1.71	62	0.06
C	100	D	3660	1.34	3.14	409	0.26
	100	TOTAL	5087			471	0.32
DEVELOPED	10	C	994	0.52	1.71	39	0.04
	100	D	2737	1.34	3.14	306	0.20
	100	TOTAL	3631			345	0.24
A	100	C	994	1.13	3.14	84	0.06
	100	D	2737	2.12	4.70	484	0.30
	100	TOTAL	3631			568	0.36
B	10	D	25962	1.34	3.14	2899	1.87
	100	D	25962	2.12	4.70	4587	2.80
	10	C	1427	0.52	1.71	62	0.06
C	100	D	3660	1.34	3.14	409	0.26
	100	TOTAL	5087			471	0.32
DEVELOPED	100	C	1427	1.13	3.14	134	0.10
	100	D	3660	2.12	4.70	647	0.39
	100	TOTAL	5087			781	0.49

DRAINAGE NOTES

1. The entire site is presently developed and over 90% of the site is impervious. The portion of the site being redeveloped is impervious.
2. The redevelopment will effect a slight increase in runoff from Basin A and an equivalent reduction in Basin B. Basin C remains unchanged. Both of the affected basins direct discharge to the street so that there is no impact on either the private or public property abutting the site.
3. Offsite flows will continue to be accepted by the site and no regrading at property lines is proposed.
4. The site is not located in a designated flood hazard area per FEMA FIRM No. 23 dated October 14, 1983.

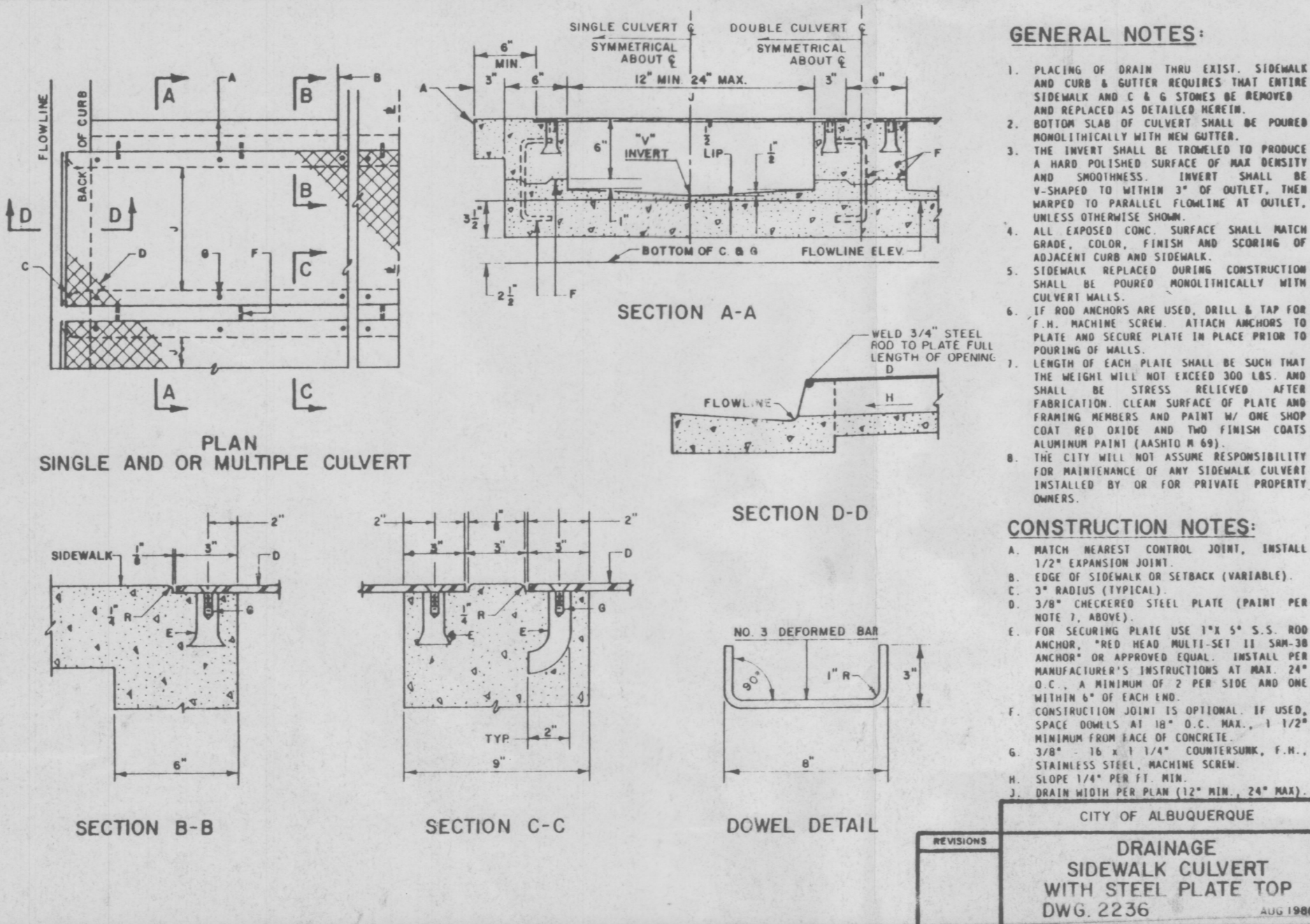
BORDENAVE DESIGNS
P.O. BOX 91194
ALBUQUERQUE, NM 87199-1194
(505) 823-1344



YEAROUT MECHANICAL & ENGINEERING INC.
3228 LOS ARBOLES AVENUE NE
ALBUQUERQUE, NEW MEXICO 87107

Date: 8/94 Drawn By: MET 9415

Sheet of GRADING & DRAINAGE PLAN



RECTANGULAR CONCRETE CHANNEL

RECTANGULAR CHANNEL (MANNING)
 $Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$
where $Q = 0.36$ cfs, $b = 1$ ft., $n = 0.015$,
 $S = 0.01$ ft/ft
therefore depth = 0.12 ft
velocity = 3 fps
Froude = 0.88
energy depth = 0.26 ft.

use 12 inch wide by 3/4 inch deep channel.

