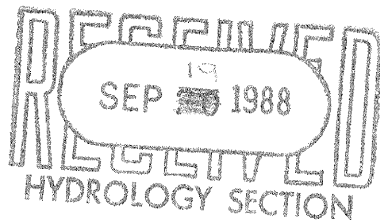


## GRADING PLAN

The Grading Plan hereon shows contours, spot elevations and temporary erosion control measures required to implement the rough grading of Tracts 2A-1, 2A-3 and 2A-4. This plan represents an addendum to the Grading and Drainage Plan for Market Centre East provided by Espey, Huston and Associates, Inc. All improvements shown on this plan were constructed with Phase One of Market Centre East. The intent of this plan is to regrade the existing pad site located on Tracts 2A-3 and 2A-4 to provide fill material required to rough grade Tract 2A-1. Since all drainage improvements were provided by Phase One of this project, only temporary erosion control improvements will be required with the rough grading project. As shown by the plan, temporary erosion control berms and sedimentation ponds will be constructed by the earthwork contractor. All ponds are sized to hold the 10-year, 6-hour volume as established by the approved drainage report. Each site will be seeded with native vegetation to mitigate soil erosion. The attached calculations are provided to verify sedimentation pond sizing.



PROJECT NAME MARKET CENTRE EAST TR 2A1, 2A3, 2A4 JOB NO. 10617  
SUBJECT POND SIZING - HYDROLOGY  
BY DL CK. BY            APPROVED BY            DATE 9-19-88 PAGE 1 OF 1

SIZE TEMPORARY SEDIMENTATION PONDS FOR EACH SITE. USE CITY OF ALBQ DPM CRITERIA ;  
VOL II , CHAPTER 22.

RAINFALL :  $P_{100} = 2.45''$   $P_{10} = 1.61''$

SOIL : TIJERAS - GROUP 'B'

RUNOFF COEF (CN) : USE 80 (COMPACTED SOIL)

TIME OF CONCENTRATION : 10 MINUTES

DIRECT RUNOFF :  $R_{10} = 0.35$   $R_{100} = 0.70$

RUNOFF :  $Q = \frac{45.4 AR}{T_c}$  (CFS)

VOLUME :  $V = 3630 AR$  (CF)

HYDROLOGY : BASIN 'A' (TR 2A-1)

$A = 2.7 \text{ AC} \pm$

$Q_{100} = 8.6 \text{ CFS}$   $Q_{10} = 4.3 \text{ CFS}$

$V_{100} = 6860 \text{ CF}$   $V_{10} = 3430 \text{ CF}$

POND SIZE = 3600 CF

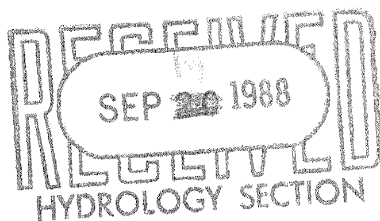
BASIN 'B' (TR 2A3, 2A4)

$A = 3.6 \text{ AC} \pm$

$Q_{100} = 11.4 \text{ CFS}$   $Q_{10} = 5.7 \text{ CFS}$

$V_{100} = 9148 \text{ CF}$   $V_{10} = 4574 \text{ CF}$

POND SIZE = 4600 CF



NOTES:



ESPEY,  
HUSTON &  
ASSOCIATES, INC.  
Engineering & Environmental Consultants

# DRAINAGE INFORMATION SHEET

PROJECT TITLE: OfficeMax - Market Center East ZONE ATLAS/DRNG, FILE#: K-21/116B  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: A portion of Tract 2A4A1A of the Horne Development Addition  
CITY ADDRESS: 40 Hotel Cir NE

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Roger Martinez, Jr.  
ADDRESS: PO Box 90606 87199 PHONE: 345-2010  
OWNER: OfficeMax CONTACT: Mr. George Rainhart  
ADDRESS: 2325 San Pedro NE #2B PHONE: 884-9110  
ARCHITECT: George Rainhart, AIA CONTACT: George Rainhart  
ADDRESS: 2325 San Pedro NE #2B PHONE: 884-9110  
SURVEYOR: Harris Surveying CONTACT: Tony Harris  
ADDRESS: \_\_\_\_\_ PHONE: 889-8056  
CONTRACTOR: HART Construction CONTACT: DOUG  
ADDRESS: \_\_\_\_\_ PHONE: 884-9110

## TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN  
☐ CONCEPTUAL GRADING & DRAINAGE PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☒ ENGINEER'S CERTIFICATION  
☐ OTHER

## PRE-DESIGN MEETING:

☐ YES  
☒ NO  
☐ COPY PROVIDED

## CHECK TYPE OF APPROVAL SOUGHT:

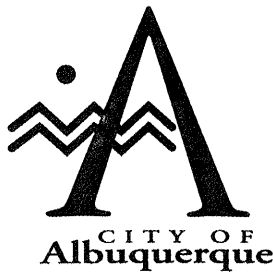
☐ SKETCH PLAT APPROVAL  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D APPROVAL  
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ FOUNDATION PERMIT APPROVAL  
☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATION OF OCCUPANCY APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ S.A.D. DRAINAGE REPORT  
☐ DRAINAGE REQUIREMENTS  
☐ OTHER \_\_\_\_\_ (Specify)

DATE SUBMITTED: \_\_\_\_\_

BY: \_\_\_\_\_

Roger Martinez, Jr.

30 day Temp CO. issued on 9.3.96  
Ag.



September 24, 1996

Martin J. Chávez, Mayor

Roger Martinez, Jr.  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

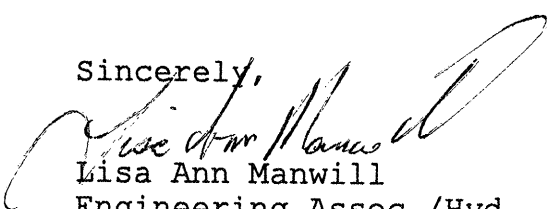
**RE: MARKET CENTER EAST (K21/D16B). ENGINEER'S CERTIFICATION FOR  
CERTIFICATION OF OCCUPANCY APPROVAL. ENGINEER'S  
CERTIFICATION DATED SEPTEMBER 3, 1996.**

Dear Mr. Martinez:

Based on the information provided on your September 3, 1996  
submittal, the above referenced project is approved for  
Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me  
at 768-3622.

Sincerely,

  
Lisa Ann Manwill  
Engineering Assoc./Hyd.

c: Andrew Garcia  
File

Good for You, Albuquerque!



1. INPUT  
START TIME=0.0  
HYDROGRAPH FOR OFFICEMAX NORTHEAST OF I-40 AND EUBANK  
PROPOSED IMPROVEMENTS ARE A PARKING LOT AND BUILDINGS  
RAINFALL  
TYPE=1 RAIN QUARTER=0.0 IN  
RAIN ONE=2.23 IN RAIN SIX=2.90 IN  
RAIN DAY=3.65 IN D=0.03333 HR  
HYDROGRAPH FOR BASIN D  
PROPOSED ASPHALT PARKING LOT  
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0012616 SQ MI  
PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00  
TP=0.1333 HR MASS RAINFALL=-1  
ID=1 CODE=1  
PRINT HYD  
HYDROGRAPH FOR EXISTING BASIN C  
BASIN WILL CONTINUE TO DRAIN THROUGH EXISTING SIDEWALK CULVERT  
COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.00061015 SQ MI  
PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00  
TP=0.1333 HR MASS RAINFALL=-1  
ID=2 CODE=1  
PRINT HYD  
ADD HYD ID=3 HYD NO=101.3 ID=1 ID=2  
PRINT HYD ID=3 CODE=1  
FINISH

2. OUTPUT  
HYMHO PROGRAM (HYMHO184) - AMAFCA Hydrologic Model -  
January, 1994  
RUN DATE (MON/DAY/YR) = 03/13/1996  
START TIME (HR-MIN-SEC) = 15:49:14 USER NO.=  
M\_GOODWIN.01  
INPUT FILE = OFCMAX.DAT

START TIME=0.0  
HYDROGRAPH FOR OFFICEMAX NORTHEAST OF I-40 AND EUBANK  
PROPOSED IMPROVEMENTS ARE A PARKING LOT AND BUILDINGS

RAINFALL  
TYPE=1 RAIN QUARTER=0.0 IN  
RAIN ONE=2.23 IN RAIN SIX=2.90 IN  
RAIN DAY=3.65 IN D=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON  
NOAA ATLAS 2 - PEAK AT 1.40 HR  
DT = 0.33333 HOURS END TIME =  
5.999400 HOURS  
.0284 .0345 .0000 .0055 .0110 .0167 .0225  
.0738 .0809 .0882 .0858 .1035 .1115 .1197  
.1262 .1370 .1461 .1555 .1653 .1754 .1860  
.1971 .2086 .2207 .2334 .2469 .2530 .2596  
.2667 .2818 .3156 .3677 .4425 .5446 .6787  
.8498 1.0629 1.3228 1.5642 1.6650 1.7500 1.8257  
1.8946 1.9579 2.0168 2.0718 2.1233 2.1719 2.2176  
2.2608 2.3018 2.3405 2.3773 2.4122 2.4453 2.4767  
2.4850 2.4927 2.5002 2.5074 2.5143 2.5210 2.5275  
2.5338 2.5400 2.5459 2.5518 2.5575 2.5630 2.5685  
2.5738 2.5790 2.5841 2.5891 2.5940 2.5988 2.6036  
2.6082 2.6128 2.6173 2.6218 2.6262 2.6305 2.6347  
2.6389 2.6431 2.6471 2.6512 2.6552 2.6591 2.6630  
2.6668 2.6706 2.6743 2.6780 2.6817 2.6853 2.6889  
2.6925 2.6960 2.6995 2.7029 2.7063 2.7097 2.7131  
2.7164 2.7197 2.7229 2.7262 2.7294 2.7325 2.7357  
2.7388 2.7419 2.7450 2.7480 2.7511 2.7541 2.7570  
2.7600 2.7629 2.7658 2.7687 2.7716 2.7745 2.7773  
2.7801 2.7829 2.7857 2.7885 2.7912 2.7939 2.7966  
2.7993 2.8020 2.8046 2.8073 2.8099 2.8125 2.8151  
2.8177 2.8202 2.8228 2.8253 2.8279 2.8304 2.8329  
2.8353 2.8378 2.8402 2.8427 2.8451 2.8475 2.8499  
2.8523 2.8547 2.8571 2.8594 2.8618 2.8641 2.8664  
2.8687 2.8710 2.8733 2.8756 2.8779 2.8801 2.8824  
2.8846 2.8868 2.8890 2.8912 2.8934 2.8956 2.8978  
2.9000

HYDROGRAPH FOR BASIN D  
PROPOSED ASPHALT PARKING LOT  
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0012616 SQ MI  
PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00  
TP=0.1333 HR MASS RAINFALL=-1  
K = .072649HR TP = .133300HR K/TP RATIO =  
.545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = 4.9809 CFS UNIT VOLUME = .9969  
B = 526.28 PRO = 2.2300  
AREA = .001262 SQ MI IA = .10000 INCHES INF  
= .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
METHOD - DT = .033330  
PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH  
101.10  
RUNOFF VOLUME = 2.64141 INCHES = .1777  
ACRE-FOOT  
PEAK DISCHARGE RATE = 4.24 CFS AT 1.500 HOURS  
BASIN AREA = .0013 SQ. MI.

HYDROGRAPH FOR EXISTING BASIN C  
BASIN WILL CONTINUE TO DRAIN THROUGH EXISTING SIDEWALK  
CULVERT  
COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.00061015 SQ MI  
PER A=0.00 PER B=0.00 PER C=0.00 PER D=100.00  
TP=0.1333 HR MASS RAINFALL=-1  
K = .072649HR TP = .133300HR K/TP RATIO =  
.545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = 2.4089 CFS UNIT VOLUME = .9949  
B = 526.28 PRO = 2.2300  
AREA = .000610 SQ MI IA = .10000 INCHES INF  
= .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
METHOD - DT = .033330  
PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH  
101.20  
RUNOFF VOLUME = 2.64141 INCHES = .0860  
ACRE-FOOT  
PEAK DISCHARGE RATE = 2.06 CFS AT 1.500 HOURS  
BASIN AREA = .0006 SQ. MI.

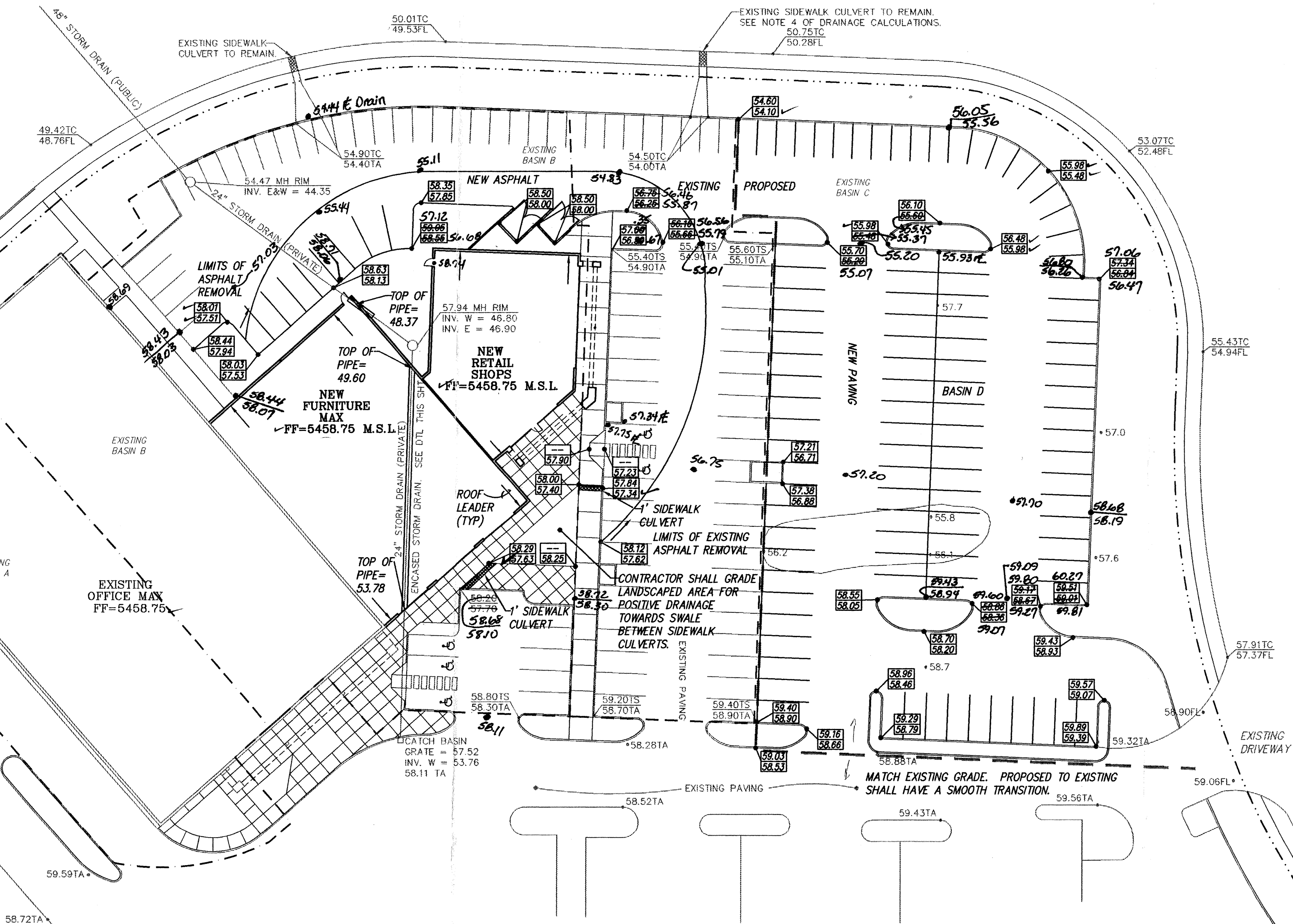
ADD HYD ID=3 HYD NO=101.3 ID=1 ID=2  
PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH  
101.30  
RUNOFF VOLUME = 2.64114 INCHES = .2637  
ACRE-FOOT  
PEAK DISCHARGE RATE = 6.30 CFS AT 1.500 HOURS  
BASIN AREA = .0019 SQ. MI.

FINISH  
NORMAL PROGRAM FINISH END TIME (HR-MIN-SEC) =  
15:49:16

3. EXISTING BASINS A, B, & C IMPERVIOUS AREA'S REMAIN EQUIVALENT  
SEE DRAINAGE CALCULATIONS FOR OFFICEMAX ON MARKET CENTER EAST.  
SHEET C1 OF 22 DATED 11/01/93.

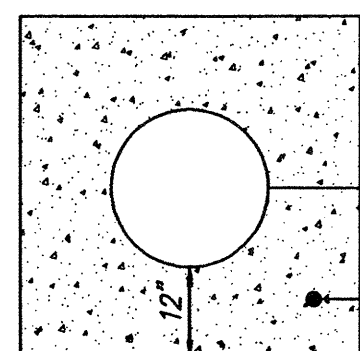
4. EXISTING SIDEWALK CULVERT IS CAPABLE OF CONVEYING BASINS C & D  
CAPACITY Q = 6.67 cfs  
DEVELOPED FLOW Q = 6.30 cfs



#### RECORD DRAWING

I hereby certify that the information contained on this drawing has been revised in accordance with information furnished by the by the contractor, Vilger Enterprises, and by the surveyor, Harris Surveying, and reflects the construction as actually accomplished. This plan as constructed is in substantial compliance with the Approved Plan.

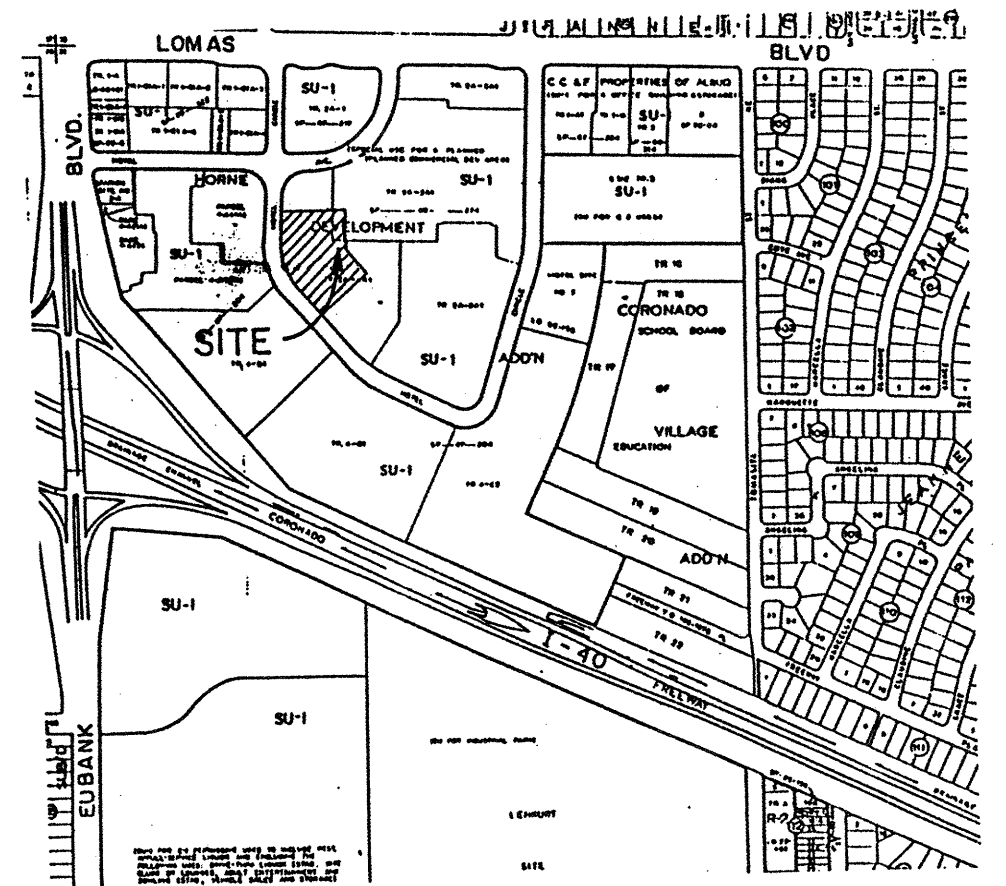
Mark Goodwin 9/3/96  
Mark Goodwin NMPE 8948



#### CONCRETE ENCASED STORM DRAIN DETAIL

N.T.S.

CONTRACTOR SHALL ENCASE STORM DRAIN UNDER PROPOSED BUILDING.



VICINITY MAP

ZONE MAP: K-21-Z

TBM (TEMPORARY BENCHMARK)

A SQUARE CHISELED ON TOP OF CONCRETE CURB LOCATED AT END CURB RETURN AT THE INTERSECTION OF LOMAS BLVD., NE AND MORRIS STREET NE. ELEV. = 5579.817

ACS BENCHMARK

STATION MARK IS A STANDARD NMSC BRASS TABLET STAMPED "STA. I-40-3" AND SET IN CONCRETE MONUMENT FLUSH WITH THE GROUND.

TO REACH STATION FROM INTERSECTION AT EUBANK BLVD. AND CENTRAL AVE., GO NORTH ON EUBANK 0.7 MILE TO BRIDGE OVER INTERSTATE 40. STATION IS LOCATED IN THE MEDIAN OF EUBANK BLVD., AT THE SOUTH END OF THE BRIDGE.

X = 415,675.15 Y = 1,485,440.00 Z = 5452.804

LEGAL DESCRIPTION

A PORTION OF TRACT 244A1A OF THE HORNE DEVELOPMENT ADDN.

NOTES

1. TOP OF STORM DRAIN PIPE ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS.

LEGEND

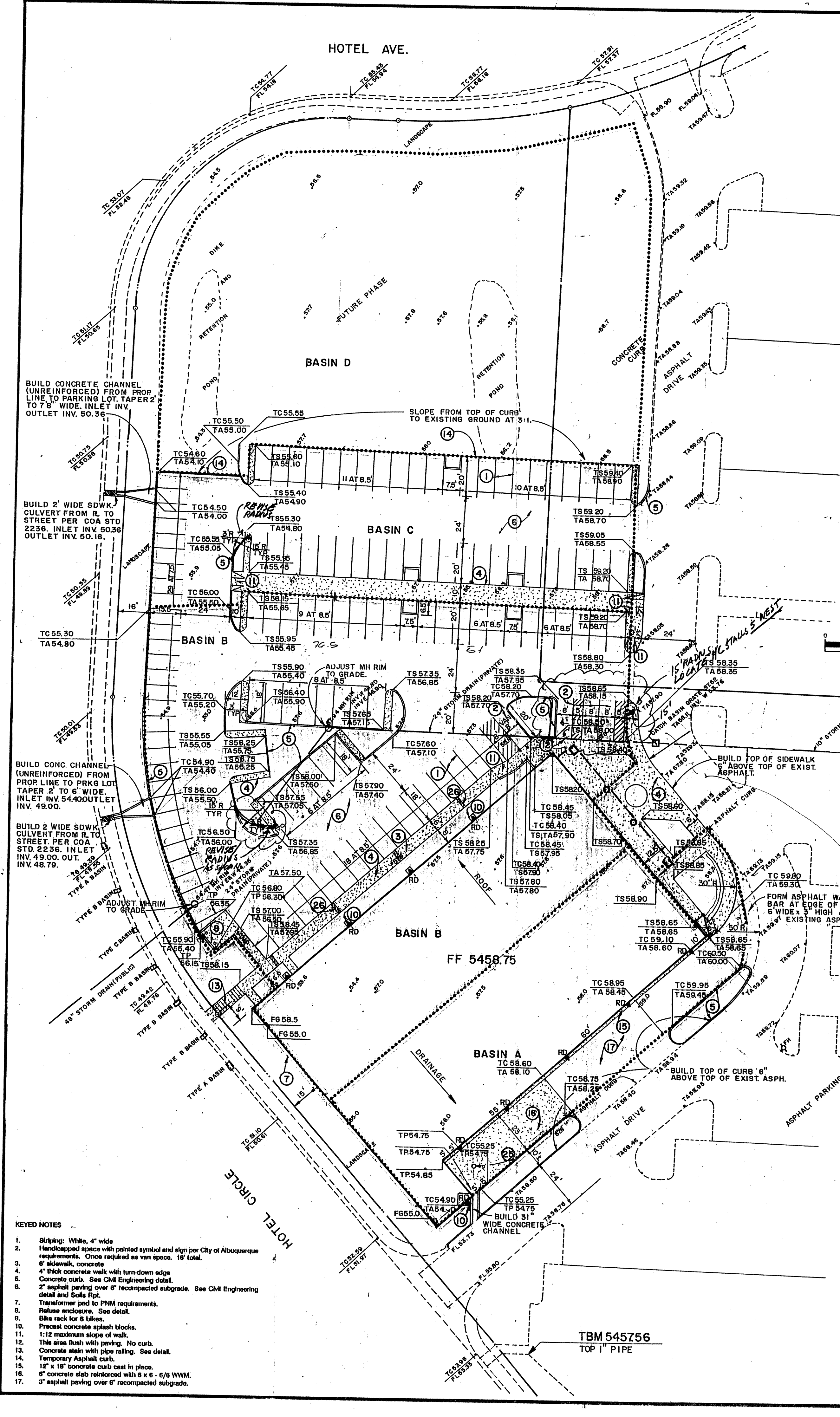
- PROPERTY LINE
- AS-BUILT
- PROPOSED-SPOT ELEVATION
- ASPHALT SWALE
- PROPOSED CONTOUR
- PROPOSED FINISHED FLOOR
- PROPOSED EXTENDED STEM WALL
- PROPOSED RETAINING WALL
- EXISTING SPOT
- EXISTING CONTOUR

SEP - 3 1996

#### OFFICEMAX ADDITION GRADING & DRAINAGE PLAN

dmg D. MARK GOODWIN & ASSOCIATES, P.A.  
CONSULTING ENGINEERS & SURVEYORS  
P.O. BOX 90608  
ALBUQUERQUE, NEW MEXICO 87199  
(505) 345-2010

Designed: RMJ Drawn: MCG Checked: DMG Sheet 1 of 1  
Scale: 1" = 30' Date: 03/96 Job: 96020



### CONCRETE CHANNEL

### PRIVATE FACILITY APPROVALS

**NOTICE TO CONTRACTOR**

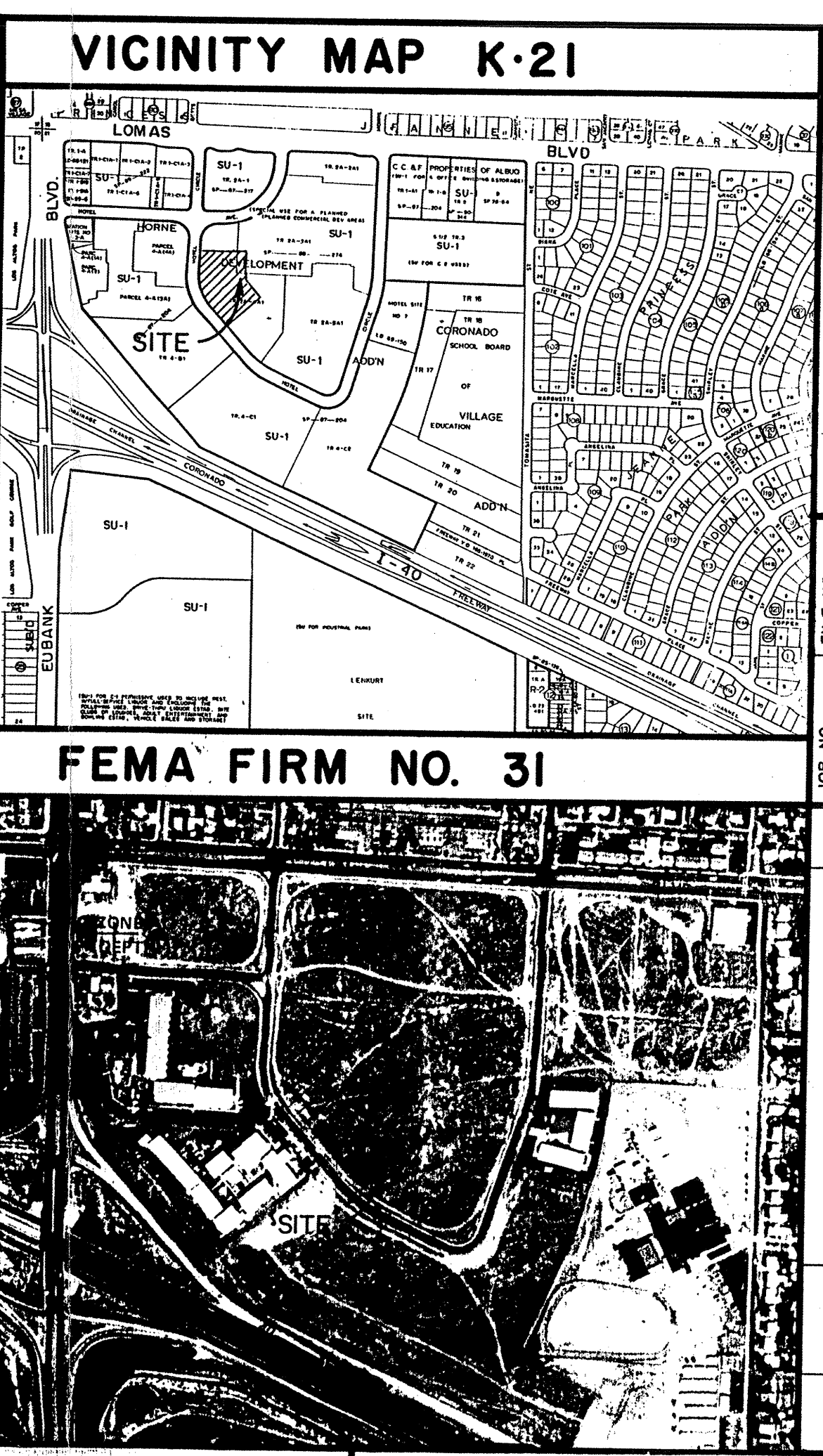
- An excavation/construction permit will be required before beginning any work within the City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- All work within the City right-of-way, detailed on these plans to be performed, except as otherwise 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 |      |      |
| INSPECTOR      |      |      |
| A.C.E./ FIELD  |      |      |

SCALE 1"=30'

### 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  |
| NA  | FEMA FIRM BOUNDARY      |
| --- | DRAINAGE BASIN BOUNDARY |
| --- | EXISTING CONTOUR        |
| --- | PROPOSED CONTOUR        |
| --- | EXISTING ELEVATION      |
| --- | PROPOSED ELEVATION      |
| --- | AS-BUILT ELEVATION      |



|               |                  |
|---------------|------------------|
| FILE NO. 9306 | DATE 9/03        |
| JOB NO. 9306  | DESIGN DATE 9/03 |
| BY JJB        | CHECK DATE 9/03  |
| NO. 1         | REVISIONS        |
| NO. 2         | NO. 1            |
| NO. 3         | NO. 2            |
| NO. 4         | NO. 3            |
| NO. 5         | NO. 4            |
| NO. 6         | NO. 5            |
| NO. 7         | NO. 6            |
| NO. 8         | NO. 7            |
| NO. 9         | NO. 8            |
| NO. 10        | NO. 9            |
| NO. 11        | NO. 10           |
| NO. 12        | NO. 11           |
| NO. 13        | NO. 12           |
| NO. 14        | NO. 13           |
| NO. 15        | NO. 14           |
| NO. 16        | NO. 15           |
| NO. 17        | NO. 16           |
| NO. 18        | NO. 17           |
| NO. 19        | NO. 18           |
| NO. 20        | NO. 19           |
| NO. 21        | NO. 20           |
| NO. 22        | NO. 21           |
| NO. 23        | NO. 22           |
| NO. 24        | NO. 23           |
| NO. 25        | NO. 24           |
| NO. 26        | NO. 25           |
| NO. 27        | NO. 26           |
| NO. 28        | NO. 27           |
| NO. 29        | NO. 28           |
| NO. 30        | NO. 29           |
| NO. 31        | NO. 30           |
| NO. 32        | NO. 31           |
| NO. 33        | NO. 32           |
| NO. 34        | NO. 33           |
| NO. 35        | NO. 34           |
| NO. 36        | NO. 35           |
| NO. 37        | NO. 36           |
| NO. 38        | NO. 37           |
| NO. 39        | NO. 38           |
| NO. 40        | NO. 39           |
| NO. 41        | NO. 40           |
| NO. 42        | NO. 41           |
| NO. 43        | NO. 42           |
| NO. 44        | NO. 43           |
| NO. 45        | NO. 44           |
| NO. 46        | NO. 45           |
| NO. 47        | NO. 46           |
| NO. 48        | NO. 47           |
| NO. 49        | NO. 48           |
| NO. 50        | NO. 49           |
| NO. 51        | NO. 50           |
| NO. 52        | NO. 51           |
| NO. 53        | NO. 52           |
| NO. 54        | NO. 53           |
| NO. 55        | NO. 54           |
| NO. 56        | NO. 55           |
| NO. 57        | NO. 56           |
| NO. 58        | NO. 57           |
| NO. 59        | NO. 58           |
| NO. 60        | NO. 59           |
| NO. 61        | NO. 60           |
| NO. 62        | NO. 61           |
| NO. 63        | NO. 62           |
| NO. 64        | NO. 63           |
| NO. 65        | NO. 64           |
| NO. 66        | NO. 65           |
| NO. 67        | NO. 66           |
| NO. 68        | NO. 67           |
| NO. 69        | NO. 68           |
| NO. 70        | NO. 69           |
| NO. 71        | NO. 70           |
| NO. 72        | NO. 71           |
| NO. 73        | NO. 72           |
| NO. 74        | NO. 73           |
| NO. 75        | NO. 74           |
| NO. 76        | NO. 75           |
| NO. 77        | NO. 76           |
| NO. 78        | NO. 77           |
| NO. 79        | NO. 78           |
| NO. 80        | NO. 79           |
| NO. 81        | NO. 80           |
| NO. 82        | NO. 81           |
| NO. 83        | NO. 82           |
| NO. 84        | NO. 83           |
| NO. 85        | NO. 84           |
| NO. 86        | NO. 85           |
| NO. 87        | NO. 86           |
| NO. 88        | NO. 87           |
| NO. 89        | NO. 88           |
| NO. 90        | NO. 89           |
| NO. 91        | NO. 90           |
| NO. 92        | NO. 91           |
| NO. 93        | NO. 92           |
| NO. 94        | NO. 93           |
| NO. 95        | NO. 94           |
| NO. 96        | NO. 95           |
| NO. 97        | NO. 96           |
| NO. 98        | NO. 97           |
| NO. 99        | NO. 98           |
| NO. 100       | NO. 99           |

### LEGAL DESCRIPTION

TRACT 2A-4A1, HORNE DEVELOPMENT ADDITION

### PERMANENT BENCHMARK

ACS II-K21, ELEVATION 5467.171

### 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         |
| DEVELOPED PHASE I | 10                  | D              | 18165          | 1.69                 | 3.57        | 2558          | 1.49        |
|                   | 100                 | D              | 18165          | 2.64                 | 5.25        | 3996          | 2.19        |
|                   | 10                  | B              | 2520           | 0.46                 | 1.45        | 97            | 0.08        |
|                   | 100                 | B              | 40330          | 1.69                 | 3.57        | 5680          | 3.31        |
|                   |                     | TOTAL          | 42850          |                      |             | 5777          | 3.39        |
|                   | 100                 | B              | 2520           | 1.08                 | 2.92        | 227           | 0.17        |
|                   | 100                 | D              | 40330          | 2.64                 | 5.25        | 8873          | 4.96        |
|                   |                     | TOTAL          | 42850          |                      |             | 9100          | 5.03        |
|                   | 10                  | B              | 320            | 0.46                 | 1.45        | 12            | 0.01        |
|                   | 100                 | D              | 16690          | 1.69                 | 3.57        | 2351          | 0.65        |
|                   |                     | TOTAL          | 17010          |                      |             | 2363          | 0.66        |
|                   | 100                 | B              | 320            | 1.08                 | 2.92        | 29            | 0.02        |
| DEVELOPED FUTURE  | 100                 | D              | 16690          | 2.64                 | 5.25        | 3671          | 2.01        |
|                   |                     | TOTAL          | 17010          |                      |             | 3700          | 2.03        |
|                   | 10                  | B              | 35170          | 0.46                 | 1.45        | 1348          | 1.17        |
|                   | 100                 | B              | 35170          | 1.08                 | 2.92        | 3165          | 2.35        |
|                   | AS SHOWN ABOVE      |                |                |                      |             |               |             |
|                   | AS SHOWN ABOVE      |                |                |                      |             |               |             |
|                   | AS SHOWN ABOVE      |                |                |                      |             |               |             |
|                   | AS SHOWN ABOVE      |                |                |                      |             |               |             |
|                   | 10                  | B              | 1750           | 0.46                 | 1.45        | 67            | 0.06        |
|                   | 100                 | D              | 33420          | 1.69                 | 3.57        | 4707          | 2.74        |
|                   |                     | TOTAL          | 35170          |                      |             | 4774          | 2.80        |
|                   | 100                 | B              | 1750           | 1.08                 | 2.92        | 158           | 0.12        |
|                   | 100                 | D              | 33420          | 2.64                 | 5.25        | 7352          | 4.03        |
|                   |                     | TOTAL          | 35170          |                      |             | 7510          | 4.15        |

### CHANNEL FLOW

Broadcrested Weir  
 $Q = CLH^{1.5}$   
where  $C = 2.8$   
 $H = 0.45$  ft.  
Basin A  
 $L = 2.59$  ft., Use 2'-7"  
Basin B  
 $L = 5.95$  ft., Use 6'  
Basin C + D  
 $L = 7.69$  ft., Use 7'-8"

### SIDEWALK CULVERT FLOW

Mannings Flow  
 $Q = 1.486 \cdot AR^{.666} \cdot S^{.5}$   
where  $n = 0.013$   
 $d = 0.45$  ft.  
 $S = 0.02$  ft/ft  
Basin B  
 $W = 1.59$  ft., Use 24"  
Basin C + D  
 $W = 1.95$  ft., Use 24"

### DRAINAGE NOTES

- The proposed construction is to take place within an area for which a master plan drainage report (K21/D16) was prepared by Espey-Huston in 1987. There have been several updates to the plan as the project phases have developed.
- After completion of this project there will be one pad (Basin D) within the block that is not developed. The storm drainage system being built with this project is sized for a fully developed Basin D.
- The proposed drainage scheme provides a very slight modification to the one shown in the Master Drainage Plan. The Master Drainage Plan indicates the flows from Basins A thru D is to be routed to the street (Hotel Circle) via entrance drives. The plan shown hereon indicates that some of the flows will be routed to the street via sidewalk culverts. The end result, that the flow will be received by existing catch basins in the street, is identical.
- The site is not located in a designated flood hazard area per FEMA FIRM No. 31 dated Oct. 14, 1983

### 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.

Job title

OfficeMax

MARKET CENTER EAST

ALBUQUERQUE, NEW MEXICO

project manager

GEORGE RAINHART

sheet title

GRADING & DRAINAGE PLAN

job no.

09/10/93

by

JJB

REV 10/20/93

10/10/93

sheet 2

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