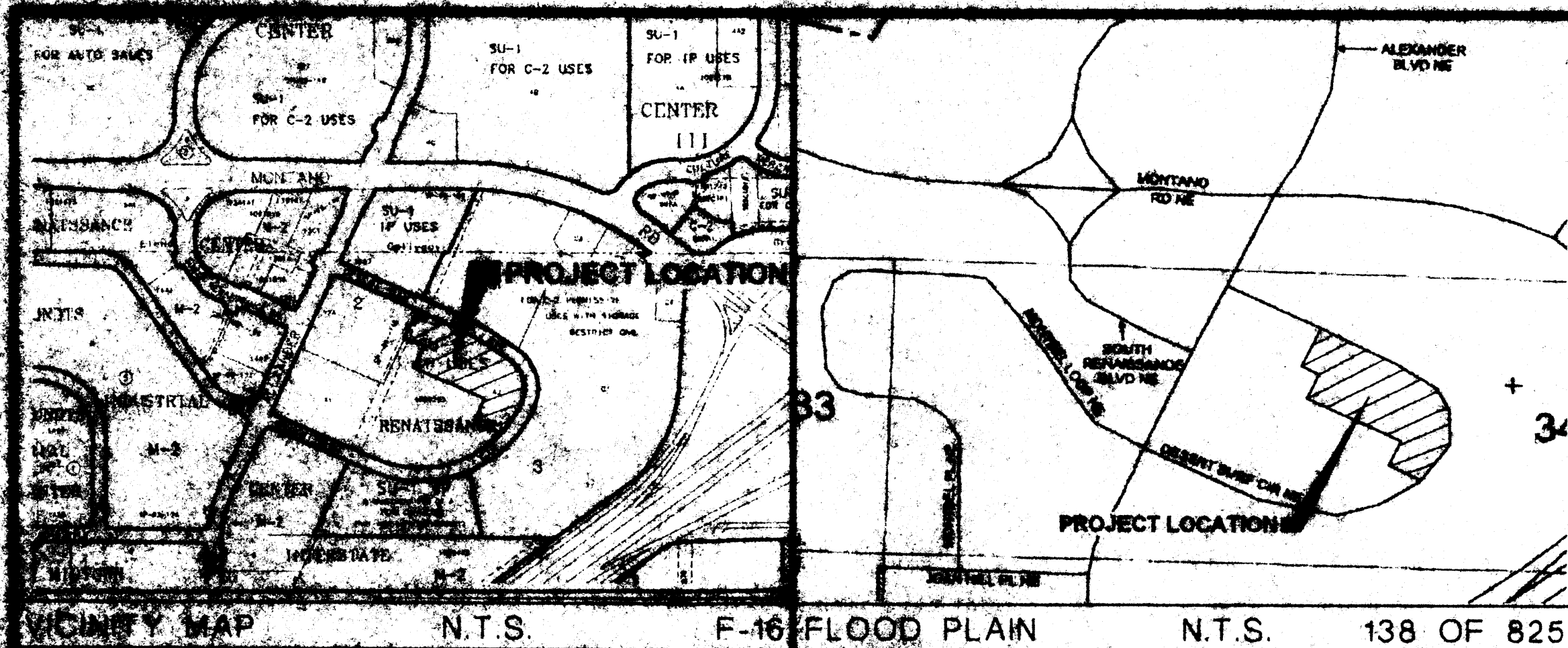




Legal Description

PARCEL A-2 PLAT FOR PARCEL A-1 AND PARCEL A-2 RENAISSANCE III, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

UPC

1016-081-273-081-361-15

Drainage Calculations

Drainage Calculations				
Date: September 16, 2004				
Drawn: September 22, 2004				
Checked: September 22, 2004				
Project: Renaissance Industrial Center Phase III				
Site: 2.36 Acres				
Design: 100yr 6-hr event				
Area	A	B	C	D
Roof Area	0.00	0.00	0.00	0.00
Paved Area	1.00	2.00	3.00	4.00
Grass Area	0.00	0.00	0.00	0.00
Water Area	0.00	0.00	0.00	0.00
Total Area	2.36	2.36	2.36	2.36
Impervious Fraction	1.20	1.13	2.18	
Volume (100 yr)	11004.35	9801.93	18983.82	
Volume (10 yr)	7372.91	6438.29	12437.76	
Q (100 yr)	8.11	6.81	11.07	
Q (10 yr)	5.48	4.43	7.42	

Benchmark

4.00 BRIDGE GAP
N = 305.820.05
T = 1.521.871.35

ELEV = 5038.90

Local Benchmark

THE LOCAL PROJECT BENCHMARK IS THE NORTHWEST CORNER.

ELEV = 5038.90

Engineer's Statement

I, the Engineer of Record, certify that I have personally visited the site and the existing grades and contours depicted on this plan match what presently exists at the present location.

MARTIN J. GARCIA, DATE: 9/17/04

Design Narrative

The property legal description is Parcel A-2 Renaissance Industrial Center Phase III and is located on the south side of Desert Surf Circle NE. The 2.36 acre site is currently being used as overflow parking for Express Scripts. The site does not lie within a designated Flood Hazard Zone.

The site slopes from South to North. Desert Surf Circle slopes from West to East and contains a 42" storm drain line with drop inlets adjacent to this site. Historically a controlled release of 0.1 cfs per acre above and beyond the existing runoff has been allowed. Site runoff discharge is limited by the capacity of the Renaissance pond next to the Beach Water Park. The calculations shown on the tables analyze both the existing and developed conditions for the 100yr 6-hr event. The grading scheme utilizes a flat grading scheme that allows for intermediate ponding on the North end of the new parking lot with a controlled discharge to the street.

Comparison of Developed vs. Existing

EXISTING CONDITIONS

Q₁₀₀ = 8.11 cfs

V₁₀₀ = 11,004 cfs

DEVELOPED CONDITIONS

Q₁₀₀ = 11.07 cfs

V₁₀₀ = 16,563 cfs

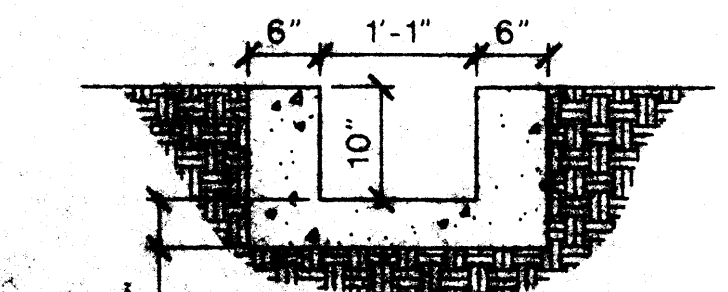
Q₁₀₀ = 11.07 - 8.11 = 2.96 cfs

V₁₀₀ = 16,563 - 11,004 = 7,559 cf

ALLOWABLE DISCHARGE

8.11 + 0.1 (2.36) = 8.35 cfs

SIDEWALK CULVERT CAPACITY



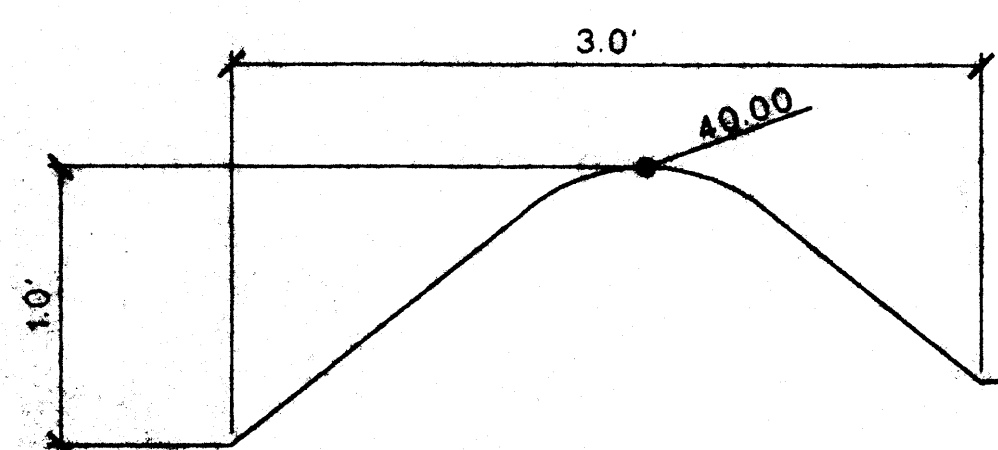
$$Q = \frac{1.49}{n} (AR^{\frac{2}{3}} S^{\frac{1}{2}})$$

$$n = .015, A = 0.90 \text{ ft}^2, R^{\frac{2}{3}} = 0.48$$

$$S^{\frac{1}{2}} = .19$$

$$Q = \frac{1.49}{.015} (0.90)(.48)(.19) = 8.08$$

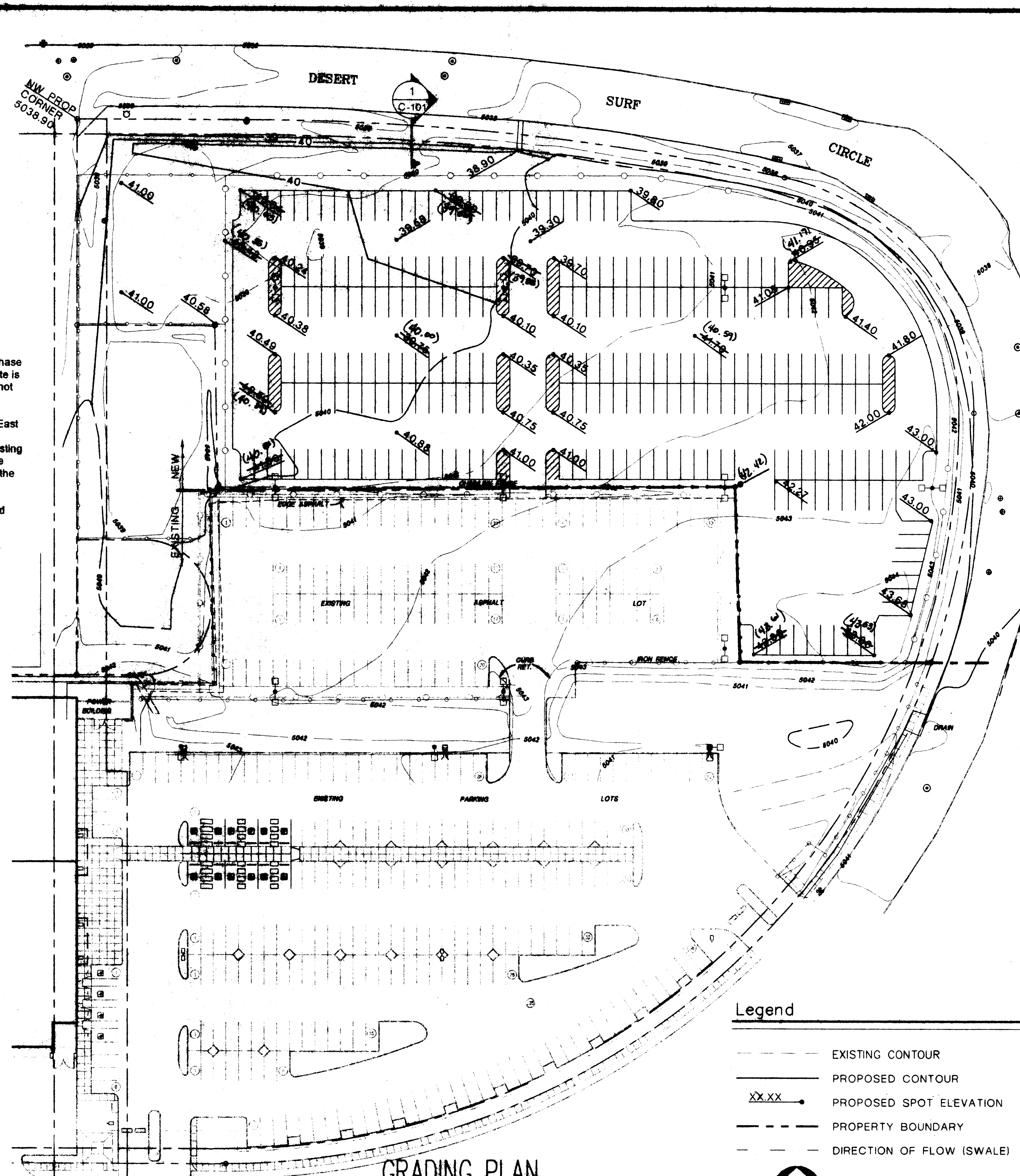
$$Q = 8.08 \text{ cfs cfs}$$



BERM SECTION

NO SCALE

1
C-101



GRADING PLAN

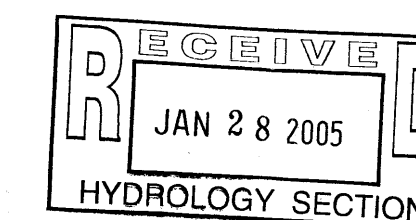
SCALE: 1" = 40'-0"

Legend

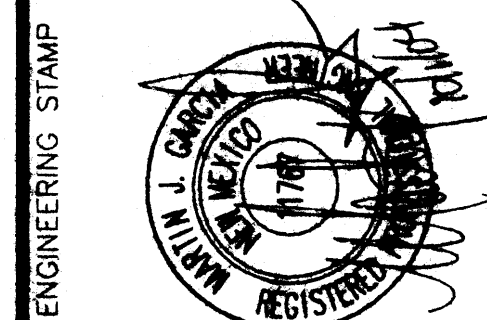
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPERTY BOUNDARY
- DIRECTION OF FLOW (SWALE)



20 0 20 40 80
1" = 40'



ABQ
ENGINEERING, INC.
6739 ACADEMY RD NE
ALBUQUERQUE, NM 87109
505-255-7802
Engineers • Planners
Construction Services



PARKING LOT EXPANSION FOR
EXPRESS SCRIPTS
4500 ALEXANDER BLVD N.E.
ALBUQUERQUE, NEW MEXICO

REV NO REV DATE DESCRIPTION
PROJECT NUMBER: 24147
DATE: SEPTEMBER 28, 2004
DESIGNED BY: F. PHILLIPS
DRAWN BY: F. PHILLIPS
CHECKED BY: M. GARCIA
CAD FILE NAME: 147GRAD.DWG

SHEET TITLE

GRADING PLAN

C-101

SHEET

of

KEY NOTES

- EXISTING CONC CURB TO REMAIN.
- REMOVE EXISTING CURB AND LANDSCAPING, SAW CUT CURBS.
- PAINT OUT EXISTING PARKING STALL STRIPING.
- EXISTING LIGHT POLE, ADD SECOND ARM & FIXTURE TO MATCH EXIST. ELECTRIFY.
- LINE OF 100'-0"X150'-0" POTENTIAL FUTURE EXPANSION OF EXISTING BUILDING.
- TRACT LINE PRIOR TO REPLANTING.
- EXISTING TRASH ENCLOSURE TO REMAIN.
- EXISTING 30'-0" WIDE PRIVATE DRAINAGE EASEMENT.
- EXISTING CHAIN LINK FENCE TO REMAIN.
- EXISTING MANHOLE TO REMAIN.
- EXISTING 60" DIA REIN. CONC PIPE, UNDERGROUND PONDING.
- NEW LIGHT POLE W/ 20" DIA X8'-0" S REINFORCED CONC BASE W/2'-0" ABOVE GRADE, SEE DETL C1.2; W/TWO ARMS AND FIXTURES, MATCH TO EXISTING POLES & FIXTURES. PROVIDE SAME SIZE WIRE & BURIED CONDUIT & ELECTRIFY. EXISTING PANEL, PROVIDE PLASTIC FIVE CONDUIT.
- NEW PARKING LOT STRIPING - 4" WIDE, TYP. W/CHLORINATED RUBBER, ALKID PAINT. MATCH EXISTING COLOR.
- TRAFFIC ISLAND - PAINTED W/4" WIDE STRIPING, TYP.
- 3" ASPHALTIC CONC PAVING ON 6" COMPACTED BASE COURSE & SUBGRADE.
- EDGE OF ASPHALT PAVING.
- NEW CONC HEADER CURB, SEE DETL C1.4.
- BREAK IN CURB FOR DRAINAGE RUNDOWN.
- REINFORCED CONC DRAINAGE RUNDOWN, SEE DETL C1.5 & C1.6.
- 6" HIGH CHAIN LINK FENCE AROUND DETENTION POND, PAINT BLK.
- 8" HIGH CHAIN LINK SECURITY FENCE, PAINT BLACK.
- EXISTING SLIDING/ROLLING GATE - 8' HIGH, TO BE RELOCATED AS INDICATED.
- RELOCATED SLIDING/ROLLING GATE.
- 1'-6"X1'-0" DEEP W/24 BARS CONT. CONC RUNNER PAD FOR SLIDING GATE.
- NEW 20'-0" WIDE X 8'-0" HIGH SLIDING/ROLLING GATE, PAINT BLACK.
- ENGINEERED FILL FREE OF ALL DELETERIOUS MATERIALS. CONTRACTED TO 95% SOLIDIFIED PROCTOR, ASTM D-1557, TYP.
- CONCRETE HEAD WALL FOR 6" PVC OUTLET PIPE. SEE DETAIL C1.1.
- 6" PVC PIPE OUTLET; CAP INLET W/1-1/2" DIA. HOLE IN CAP. CONNECT OUTLET TO EXISTING 60" DIA R.O.P. BY CORING AN 8" DIA & INV. ELEV. 24.00 IN CONC BULWARK. INSERT 6" PVC IN ROWS PACE W/NOV SHRINK GROUT.
- 8'-0"X6'-0" SWING GATE, ACCESS FOR POND MAINTENANCE. PAINT BLACK.
- EMERGENCY OVERFLOW, PLACE CONC HEADER CURB UNDER GATE TOP CURB & ELEV. 28.00. SEE DETL C1.4 & C1.6.
- #4 BARS @ 12" O.C.E.W., TYPICAL.
- #4 BAR(S) CONTINUOUS.
- ANCHOR BOLTS, AS PER MFG SPECIFICATIONS.
- #4 BAR GRID.

GRADING LEGEND

- EXISTING SPOT ELEVATION ON ASPHALT TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION
- PROPOSED SPOT ELEVATION ON ASPHALT
- EXISTING CONTOUR
- PROPOSED CONTOUR

LEGAL DESCRIPTION

TRACT 16A RENAISSANCE CENTER II

LANDSCAPE LEGEND

- 5 GAL. SHRUB IN 5'-0" WIDE X 4' DEEP BARK MULCH BED W/CONTINUOUS EDGING, SPACED @5'-0" FROM BACK OF CURB
- 4" CALIPER (MIN.) TREE
- (ALL W/ BUBBLER TYPE IRRIGATION)

PLANTING SCHEDULE

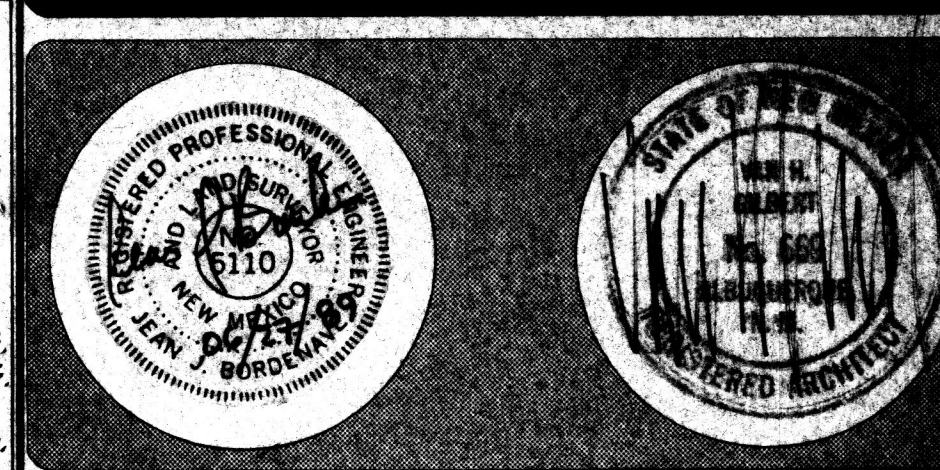
#	SIZE	PLANT
4	5 GAL	ELAEOGNEUS
4	5 GAL	COTONBASTER
4	5 GAL	BARBERRY
1	4" CALIPER	RUSSIAN OLIVE

REVISIONS

- LANDSCAPE CHANGE - 6-29-89
- CONCRETE BUMPERS - 6-29-89
- MISSING NOTE BUBBLE - 6-29-89
- 6" THICKS CHANGED - 7-26-89
- 175' CURB DELETED - 7-26-89

Van H. Gilbert Architect AIA

Architect
1100 Grandview NW, Suite 100, Atlanta, GA 30309



JONES INTERCABLE

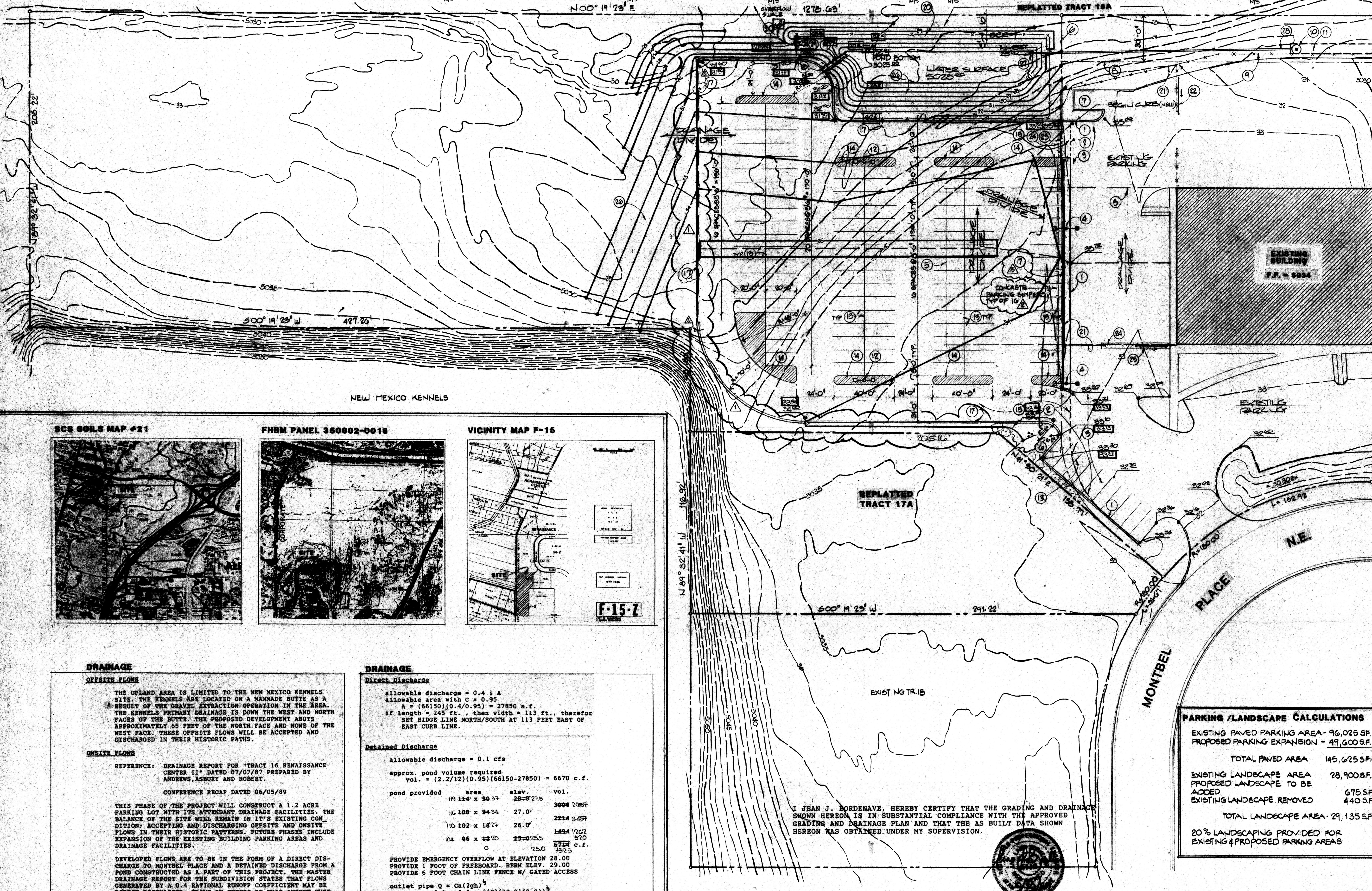
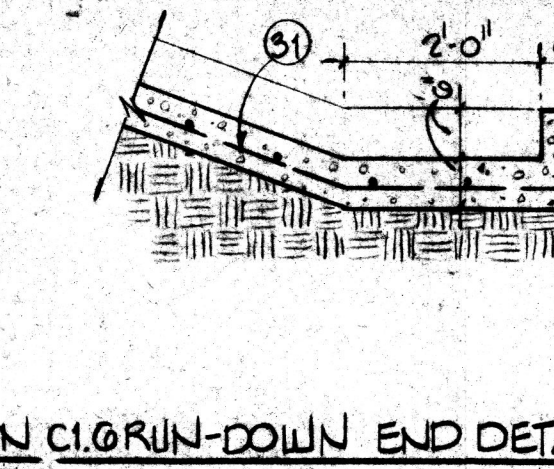
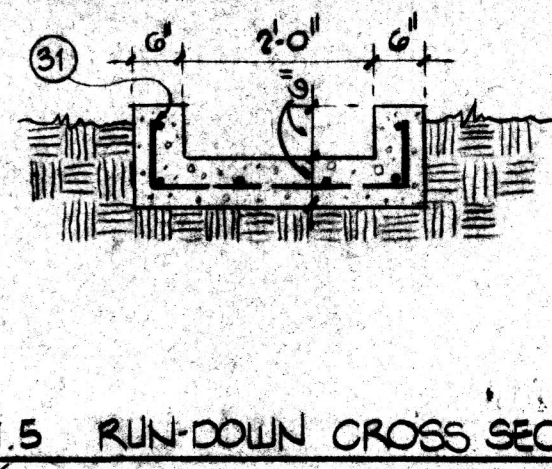
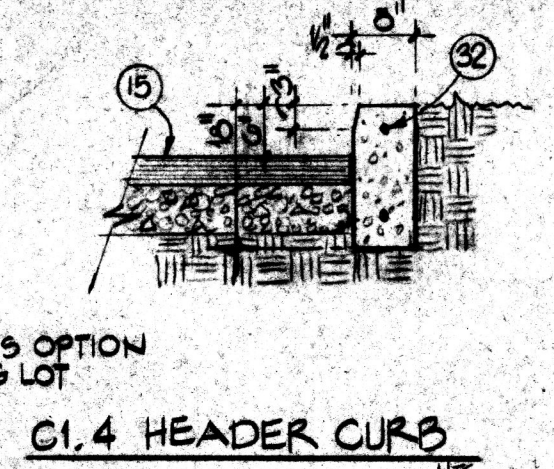
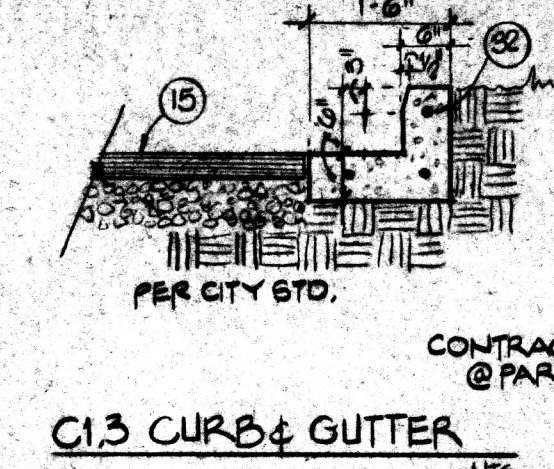
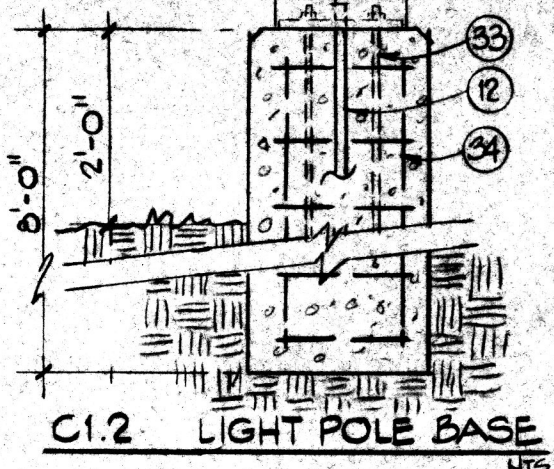
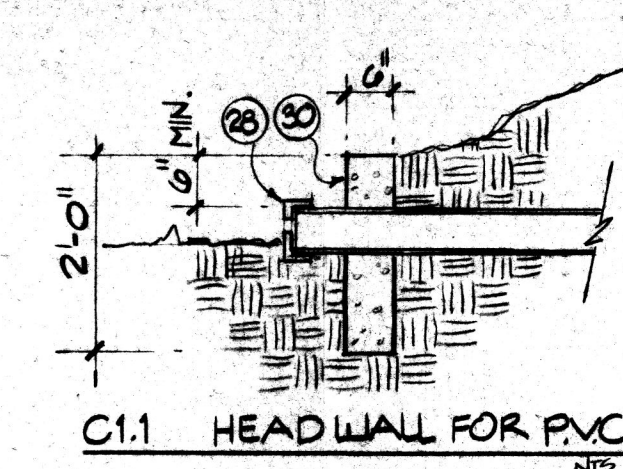
PARKING EXPANSION STUDY

HYDROLOGY SECTION

Date: 26 JUN 89 Drawn By: MEH

SITE PLAN GRADING PLAN

Sheet 1 of 1

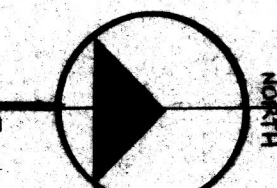


I, JEAN J. BORDENAVE, HEREBY CERTIFY THAT THE GRADING AND DRAINAGE SHOWN HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN AND THAT THE AS BUILT DATA SHOWN HEREON WAS OBTAINED UNDER MY SUPERVISION.



SITE PLAN / GRADING PLAN / DRAINAGE PLAN / LANDSCAPE PLAN

1"=30'-0"



DRAINAGE

OFFSITE FLOWS

THE UPLAND AREA IS LIMITED TO THE NEW MEXICO KENNELS SITE. THE KENNELS ARE LOCATED ON A MANMADE BUTTE AS A RESULT OF THE GRAVEL EXTRACTION OPERATION IN THE AREA. THE KENNELS PRIMARY DRAINAGE IS DOWN THE WEST AND NORTH FACES OF THE BUTTE. THE PROPOSED DEVELOPMENT ABUTS APPROXIMATELY 55 FEET OF THE NORTH FACE AND NONE OF THE WEST FACE. THESE OFFSITE FLOWS WILL BE ACCEPTED AND DISCHARGED IN THEIR HISTORIC PATHS.

ONSITE FLOWS

REFERENCE: DRAINAGE REPORT FOR "TRACT 16 RENAISSANCE CENTER II" DATED 07/07/87 PREPARED BY ANDREWS, ASBURY AND ROBERT.

CONFERENCE RECAP DATED 06/05/89

THIS PHASE OF THE PROJECT WILL CONSTRUCT A 1.2 ACRE PARKING LOT WITH ITS ATTENDANT DRAINAGE FACILITIES. THE BALANCE OF THE SITE WILL REMAIN IN ITS EXISTING CONDITION, ACCEPTING AND DISCHARGING OFFSITE AND ONSITE FLOWS IN THEIR HISTORIC PATTERNS. FUTURE PHASES INCLUDE EXPANSION OF THE EXISTING BUILDING PARKING AREAS AND DRAINAGE FACILITIES.

DEVELOPED FLOWS ARE TO BE IN THE FORM OF A DIRECT DISCHARGE TO MONTBEL PLACE AND A DETAINED DISCHARGE FROM A POND CONSTRUCTED AS A PART OF THIS PROJECT. THE MASTER DRAINAGE REPORT FOR THE SUBDIVISION STATES THAT FLOWS GENERATED BY A 0.4 RATIONAL RUNOFF COEFFICIENT MAY BE DIRECT DISCHARGED. FLOWS IN EXCESS OF THIS AMOUNT MUST BE DETAINED WITH AN ALLOWABLE DISCHARGE RATE OF 0.1 CFS PER ACRE.

THE FOLLOWING COMPUTATIONS DEMONSTRATE CONFORMANCE OF THE PROPOSED CONSTRUCTION TO ABOVE STATED CRITERIA.

COMPUTATIONS

total site area = 154,300 s.f.
phase I area = 66,150 s.f.

DRAINAGE

Direct Discharge

allowable discharge = 0.4 i a
allowable area with C = 0.95
A = (66150)(0.4/0.95) = 27850 s.f.
if length = 245 ft., then width = 113 ft., therefor
SET RIDGE LINE NORTH/SOUTH AT 113 FEET EAST OF EAST CURB LINE.

Detained Discharge

allowable discharge = 0.1 cfs
approx. pond volume required
vol. = (2.2/12)(0.95)(66150-27850) = 6670 c.f.
pond provided

area	elev.	vol.
119 114' x 30' 3"	28'-0" 23.5	3004 2087
116 108' x 24' 3"	27.0'	2214 3.457
110 102' x 18' 7"	26.0'	1494 1/262
104 96' x 12' 20"	25'-0" 25.5	520
0	25.0	130.5

PROVIDE EMERGENCY OVERFLOW AT ELEVATION 28.00
PROVIDE 1 FOOT OF FREEBOARD. BERM ELEV. 29.00
PROVIDE 6 FOOT CHAIN LINK FENCE W/ GATED ACCESS

outlet pipe Q = $C_a(2gh)^{1/2}$
 $0.1 = 0.6 a ((2)(32.2)(2.8))^{1/2}$
 $a = 0.0124$ s.f.

PROVIDE A 1 1/2 INCH O.D. IN CAP OF 6 INCH PVC PIPE.
CONNECT PIPE TO 60 INCH RCP OUTLET PIPE.