

DRAINAGE CALCULATIONS

I. REFERENCES:

- SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, NEW MEXICO IN COOPERATION WITH BERNALILLO COUNTY, NEW MEXICO AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY.
- FLOODWAY, FLOOD BOUNDARY AND FLOODWAY MAP, CITY OF ALBUQUERQUE, NEW MEXICO, PANEL 14 OF 50.
- ZONE ATLAS PAGE E-11-2.

II. GENERAL INFORMATION:

- SITE LIES IN ZONE ONE(1) (SEE REF. A, PAGE A-1)
- 100 YEAR, 6 HOUR RAINFALL CRITERIA
- TIME OF CONCENTRATION, T_c ; $T_c = 0.2$ hr(12 MINUTES).

III. IMPERVIOUSNESS:

TREATMENT	TYPES OF SURFACES	EXISTING SQ.FT	ACRES	PROPOSED SQ.FT	ACRES
A	UNDEVELOPED	0	0.0000	0	0.0000
B	LANDSCAPING	13,784	0.3160	19,631	0.4507
C	COMPACTED/VACANT	55,077	1.2644	0	0.0000
D	IMPERVIOUS	68,854	1.5807	118,064	2.7104
	TOTAL AREA (TA)	137,695	3.1610	137,695	3.1610

IV. PEAK DISCHARGE 100 YEAR (REF. A, TABLE A-9):

TREATMENT	TYPES OF SURFACES	EXISTING CFS/AC	Qp(100)	PROPOSED CFS/AC	Qp(100)
A	UNDEVELOPED	1.29	0.00	1.29	0.00
B	LANDSCAPING	2.03	0.64	2.03	0.91
C	COMPACTED/VACANT	2.87	3.63	2.87	0.00
D	IMPERVIOUS	4.37	6.91	4.37	11.84
	PEAK DISCHARGE FROM SITE		11.18 CFS		12.76 CFS

V. PEAK DISCHARGE 10 YEAR (REF. A, TABLE A-9):

TREATMENT	TYPES OF SURFACES	EXISTING CFS/AC	Qp(10)	PROPOSED CFS/AC	Qp(10)
A	UNDEVELOPED	0.24	0.00	0.24	0.00
B	LANDSCAPING	0.78	0.24	0.78	0.34
C	COMPACTED/VACANT	1.49	1.88	1.49	0.00
D	IMPERVIOUS	2.89	4.57	2.89	7.83
	PEAK DISCHARGE FROM SITE		6.69 CFS		8.18 CFS

VI. WEIGHTED "E" 100 YEAR, 6 HR. (REF. A, TABLE A-8):

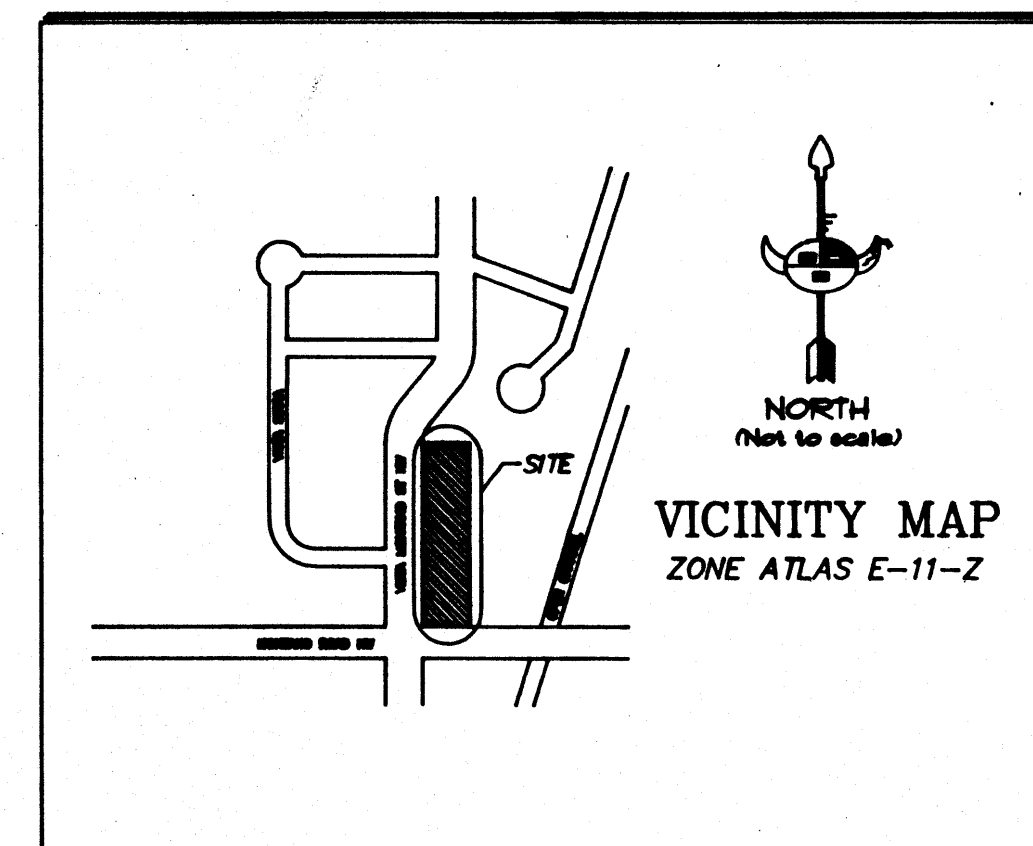
TREATMENT	TYPES OF SURFACES	EXISTING E	EXA/TA	PROPOSED E	EXA/TA
A	UNDEVELOPED	0.44	0.00	0.44	0.00
B	LANDSCAPING	0.67	0.07	0.67	0.10
C	COMPACTED/VACANT	0.99	0.40	0.99	0.00
D	IMPERVIOUS	1.97	0.99	1.97	1.69
	WEIGHTED "E" FACTOR		1.45 IN		1.78 IN

VII. VOLUME 100 YEAR, V(360) (REF. A, TABLE A-8):

EXISTING	$1.71 \times 1.0 / 12 =$	0.38 AC. FT.
		16,616 CU.FT
PROPOSED	$1.78 \times 1.0 / 12 =$	0.47 AC. FT.
		20,478 CU.FT

GENERAL NOTES:

- An excavation/construction permit will be required before beginning any work within the City right-of-way. Approved copy of this plan must be submitted at the time of application for permit.
- All work detailed in this plan to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with City of Albuquerque Interim Standard Specification for Public Works Construction 1985.
- Two working days prior to any excavation, contractor must contact line locating Services at (505) 260-1990 for locating existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all construction. 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 residential street use.
- Maintenance of these facilities shall be the responsibility of the Owner of property served.

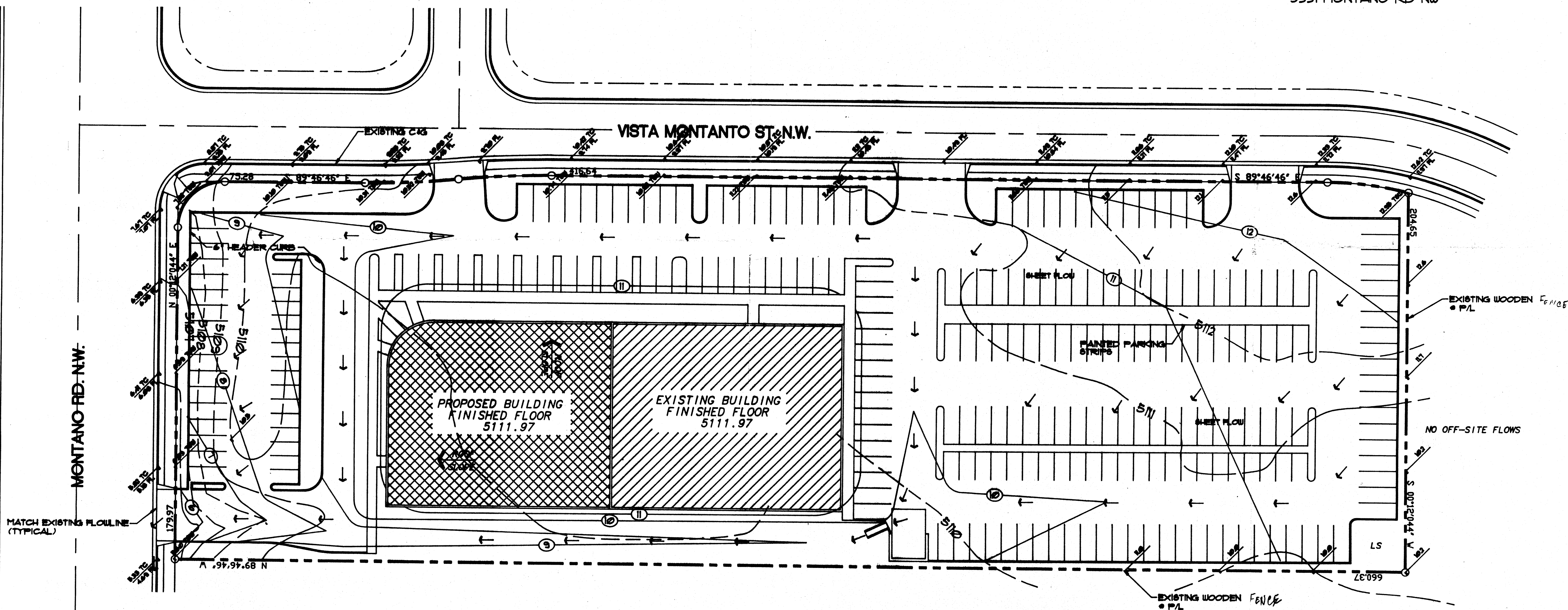


LEGAL DESCRIPTION

A PORTION OF TRACT 3
HAMMOND SUBDIVISION
ALBUQUERQUE, BERNALILLO COUNTY,
NEW MEXICO.

CITY ADDRESS

5331 MONTANO RD NW



EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION; HE SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF TO LEAVE THE SITE AND ENTERING ADJACENT PROPERTY.
- ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER THE PUBLIC STREETS.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY OR ALL SEDIMENT WITHIN THE PUBLIC STREETS THAT HAVE BEEN ERODED FROM THE SITE AND DEPOSITED THERE.

SYMBOL LEGEND

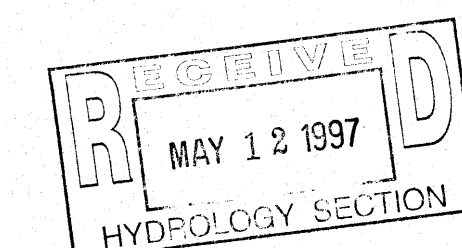
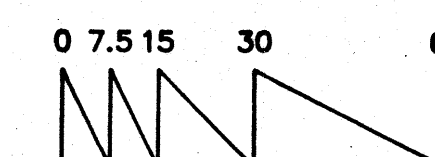
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
ASBUILT SPOT ELEVATION	--- 5102 ---
PROPERTY LINE	---
EASEMENT LINE	---
FLOW DIRECTION	---
EXISTING SPOT ELEVATION	---

ABBREVIATION LEGEND

TOP OF CONC DOCK	- TD
TOP OF CURB	- TC
TOP OF ASPHALT	- TA
FINISHED GRADE	- FG
FLOWLINE	- FL
TOP OF CONC. PAD	- TPC
LANDSCAPING	- LS

CONCEPTUAL GRADING & DRAINAGE PLAN

SCALE: 1"=30.0'



PROJECT NAME: PROPOSED ADDITION FOR THE GALVARY TEMPLE ASSEMBLY OF GOD CHURCH ALBUQUERQUE, NEW MEXICO

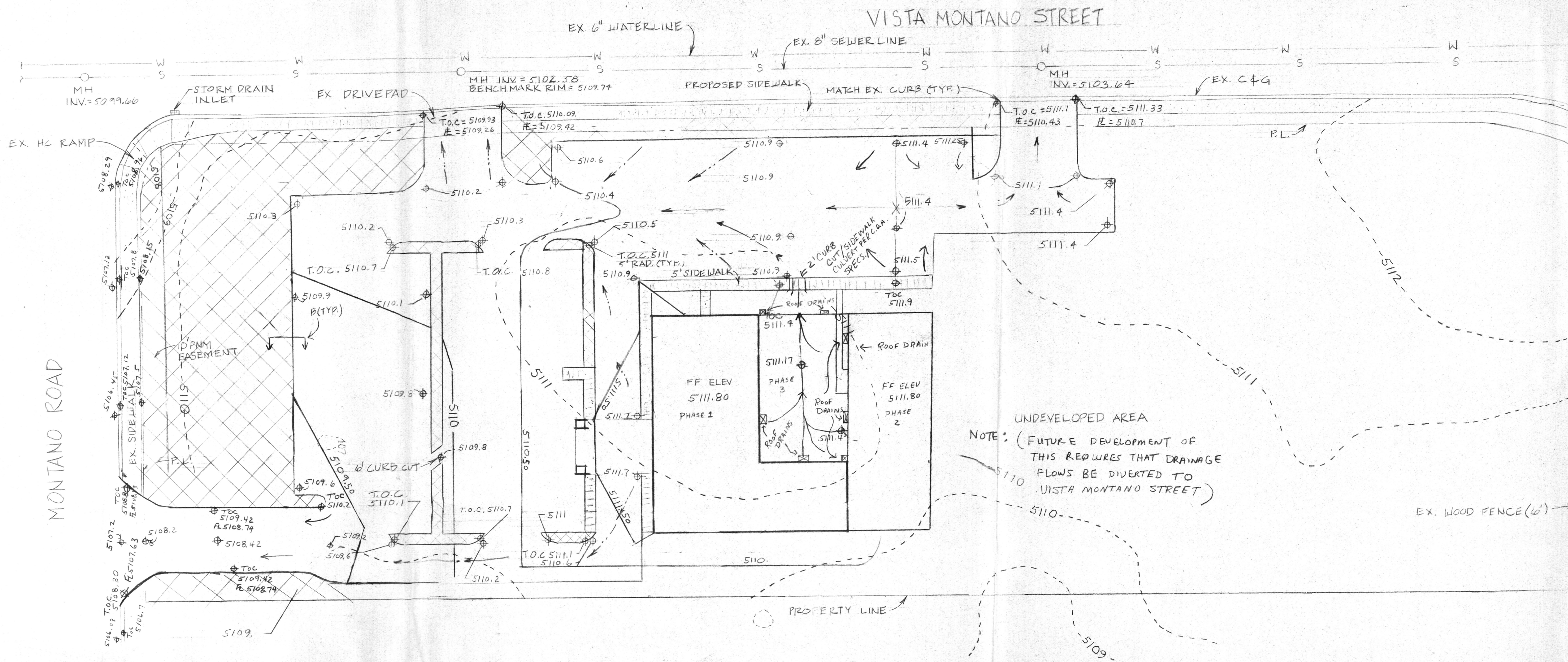
SHEET NO: 1

CONCEPTUAL GRADING & DRAINAGE PLAN

HOOD & COMPANY

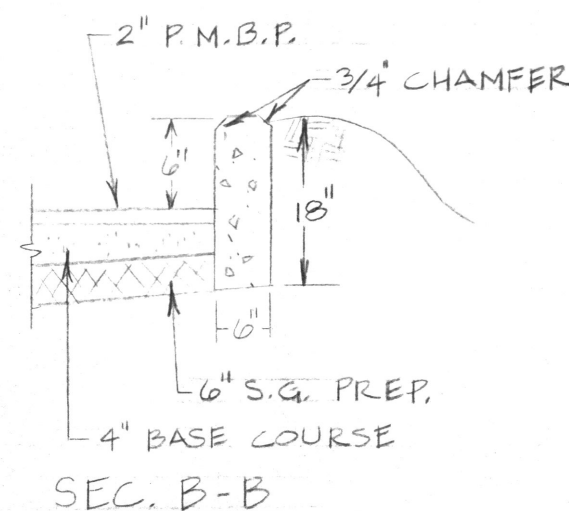
DEVELOPMENT CONSULTANTS - GENERAL CONTRACTORS

530 MONTANO ST. N.E. • ALBUQUERQUE, N.M. • 87102 • (505) 260-1371



LEGEND

- MANHOLE
- ⊕ POINT ELEV.-FINISH GRADE
- GRADE TO DRAIN
- S110 — FINISH GRADE CONTOURS
- - - EXIST. GRADE CONTOURS
- CUT-OFF TYPE CURB
- LANDSCAPING
- BUILDING LINE
- CONCRETE WALK
- PROPERTY LINE
- W WATER LINE
- S SEWER LINE



LEGAL DESCRIPTION

PORTION OF TRACT 3 OF HAMMOND SUBDIVISION, CITY OF ALBUQUERQUE.

BENCH MARK

CENTER OF MANHOLE RIM AT INTERSECTION OF VISTA MONTANO AND VISTA VALLE AVE.
ELEV. = 5109.74

EXISTING DRAINAGE CONDITIONS

EXISTING DRAINAGE IS PRIMARILY SHEET FLOW. APPROXIMATELY 65% OF THE FLOW IS IN A SOUTH EASTERLY DIRECTION ONTO ADJACENT TRACT 25D OF TAYLOR RANCH. THE REMAINDER OF THE DRAINAGE FLOW IS APPROX. 25% ONTO VISTA MONTANO AND 10% ONTO MONTANO ROAD. MOST OF THE DRAINAGE EVENTUALLY ENDS UP ON MONTANO ROAD.

DRAINAGE FROM PARKING LOT DRIVEWAYS AND BUILDING

BUILDING 25% at 0.90
PAVING 73% at 0.95
LANDSCAPING 2% at 0.25
C=0.92
A=1.21 acres
T_c= Use 10 minutes (per chap. 22.4, pg.4, DPM)
I= 5.40
Q= 6.01 CFS

FINAL DESTINATION: MONTANO ROAD VIA PROPOSED CONCRETE CHANNEL AT S.E. END OF LOT.

DRAINAGE FROM UNDEVELOPED AREA

LANDSCAPING 4% at 0.25
UNDEVELOPED 96% at 0.40
C=0.39
A=1.45 acres
T_c= Use 10 minutes
I= 5.40
Q= 3.05 CFS

FINAL DESTINATION: TRACT 25D OF TAYLOR RANCH.

DRAINAGE FROM DRIVE PADS AND LANDSCAPING AREAS FRONTING VISTA MONTANO AND MONTANO

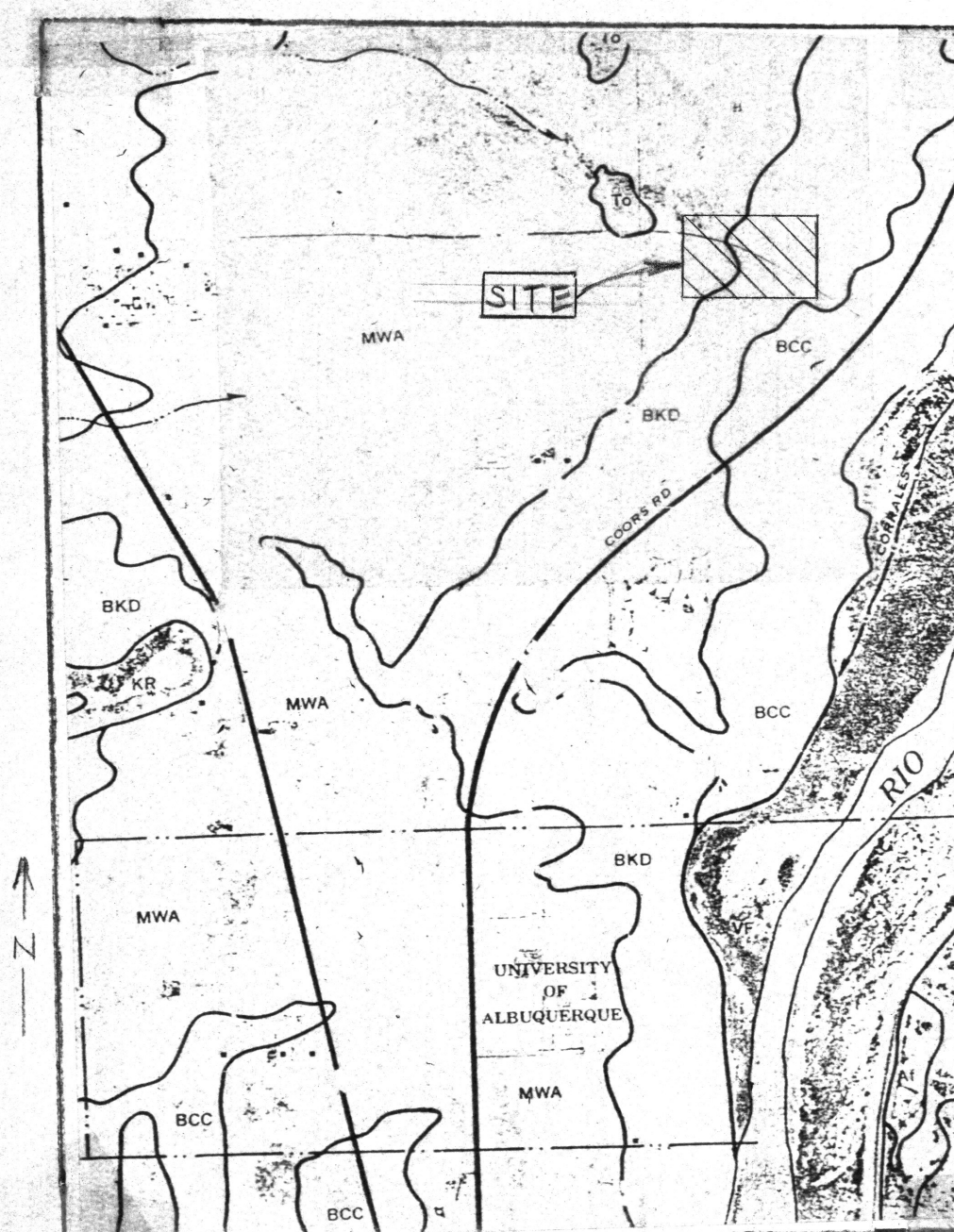
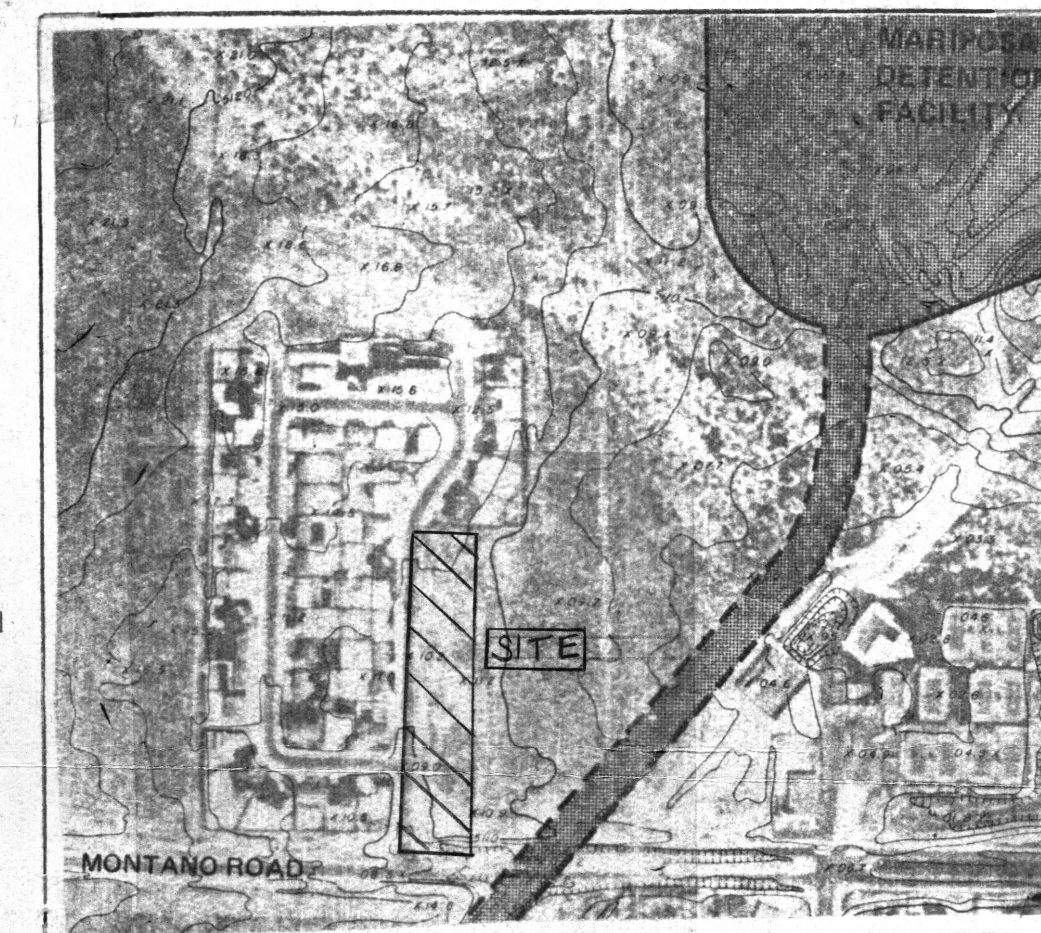
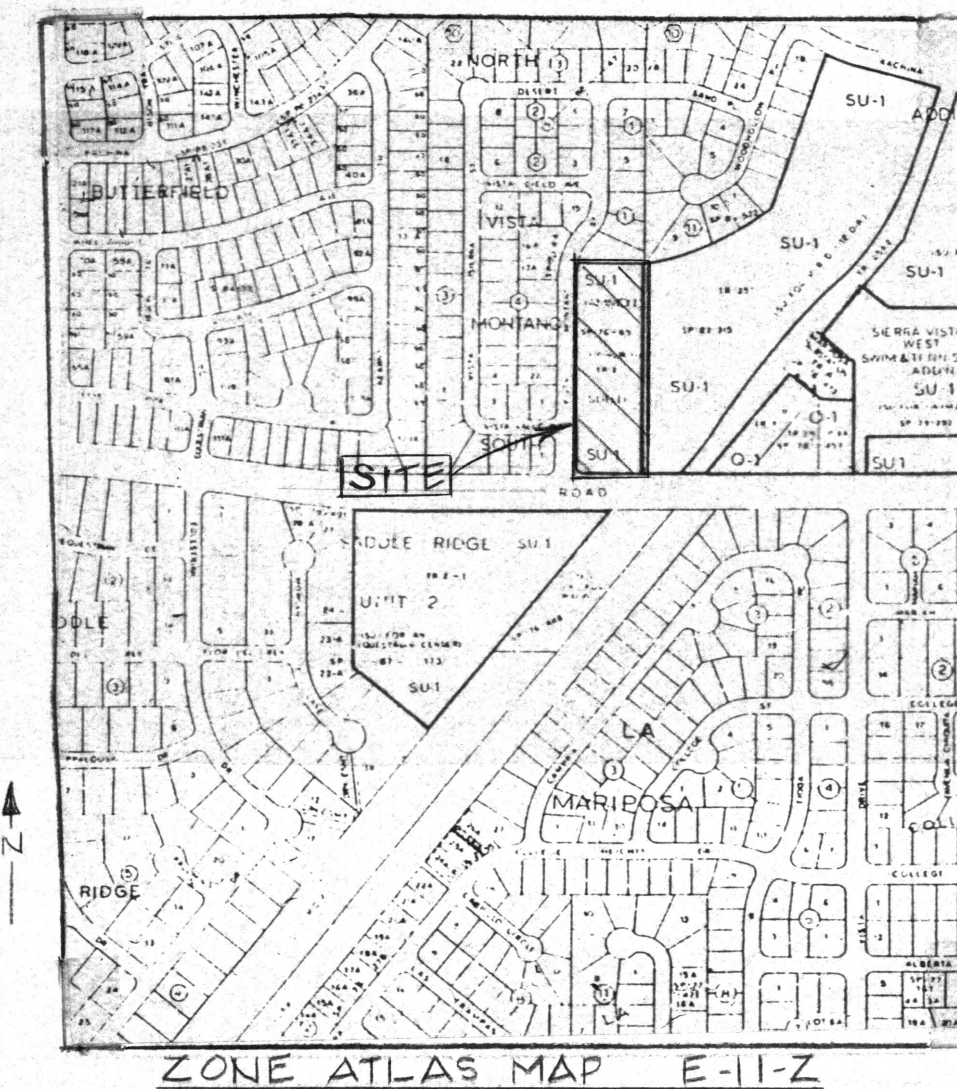
PAVING 38% at 0.95
LANDSCAPING 62% at 0.25
C=0.52
A=0.53 acres
T_c= Use 10 minutes
I= 5.40
Q= 1.49 CFS

TOTAL PROPOSED FLOW = 10.55 CFS

NOTE: REFER TO SHEET A1 FOR DIMENSIONED SITE PLAN.

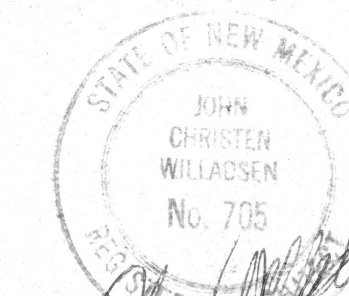
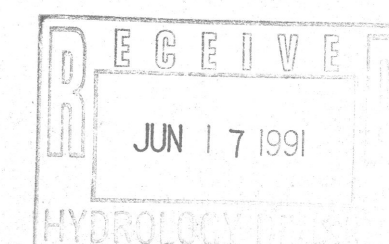
NOTICE TO CONTRACTOR

- An excavation/construction permit will be required before beginning any work within city right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with City of Albuquerque Interim Standard Specifications for Public Works Construction, 1985.
- Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all constructions. 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 RESIDENTIAL street use.
- Maintenance of these facilities shall be the responsibility of the Owner of the property served.



BERN. COUNTY SOILS MAP

SCALE: 1" = 30'
CONTOUR INTERVAL - 1'



DATE 1-15-90
JOB No.
DRAWN BY

REVISIONS
2-14-90

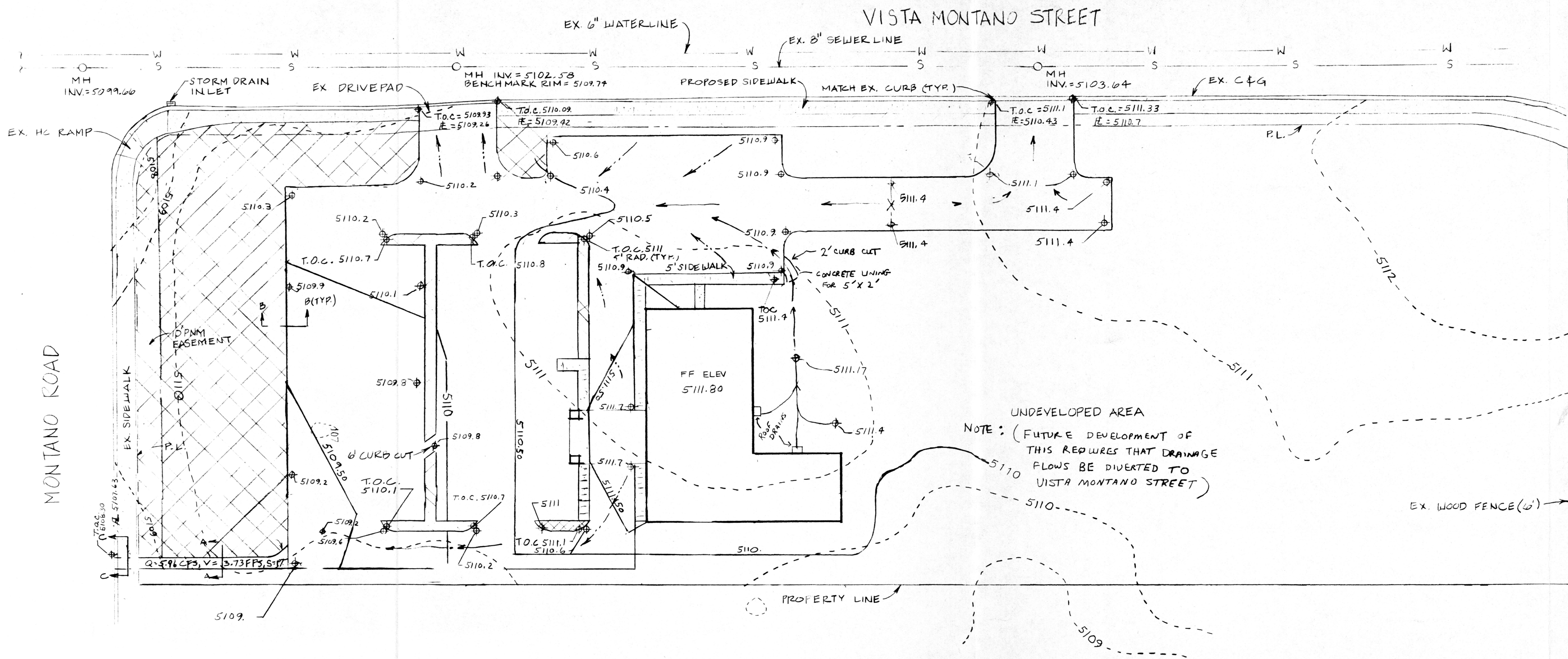
PROJECT

ENGINEERS
INC.
CIVIL-ARCHITECTURAL-MINING • SURVEYING
SILVER CITY, N.M. 88062
P.O. BOX 5080
210 ARIZONA ST.

TITLE
CALVARY TEMPLE ASSEMBLY OF GOD
5951 MONTANO RD NW, ALBUQUERQUE, NM.
DRAINAGE/GRADING PLAN JAN. 15, 1990

(SEAL)

SHEET
C1
OF



LEGAL DESCRIPTION
PORTION OF TRACT 3 OF HAMMOND SUBDIVISION, CITY OF ALBUQUERQUE.

BENCH MARK
CENTER OF MANHOLE RIM AT INTERSECTION OF VISTA MONTANO AND VISTA VALLE AVE.
ELEV. = 5109.74

EXISTING DRAINAGE CONDITIONS
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DRAINAGE FROM PARKING LOT DRIVEWAYS AND BUILDING

BUILDING	16% at 0.90
PAVING	82% at 0.95
LANDSCAPING	2% at 0.25
C=0.93	
A=1.01 acres	
T _c =6.8 minutes	
I=6.35	
Q=5.96 cfs	

FINAL DESTINATION: MONTANO ROAD VIA PROPOSED CONCRETE CHANNEL AT S.E. END OF LOT.

DRAINAGE FROM UNDEVELOPED AREA

LANDSCAPING	2% at 0.25
UNDEVELOPED	98% at 0.40
C=0.40	
A=1.82 acres	
T _c =4.3 minutes	
I=7.54	
Q=5.49 cfs	

FINAL DESTINATION: TRACT 25D OF TAYLOR RANCH.

DRAINAGE FROM DRIVE PADS AND LANDSCAPING AREAS FRONTING VISTA MONTANO AND MONTANO

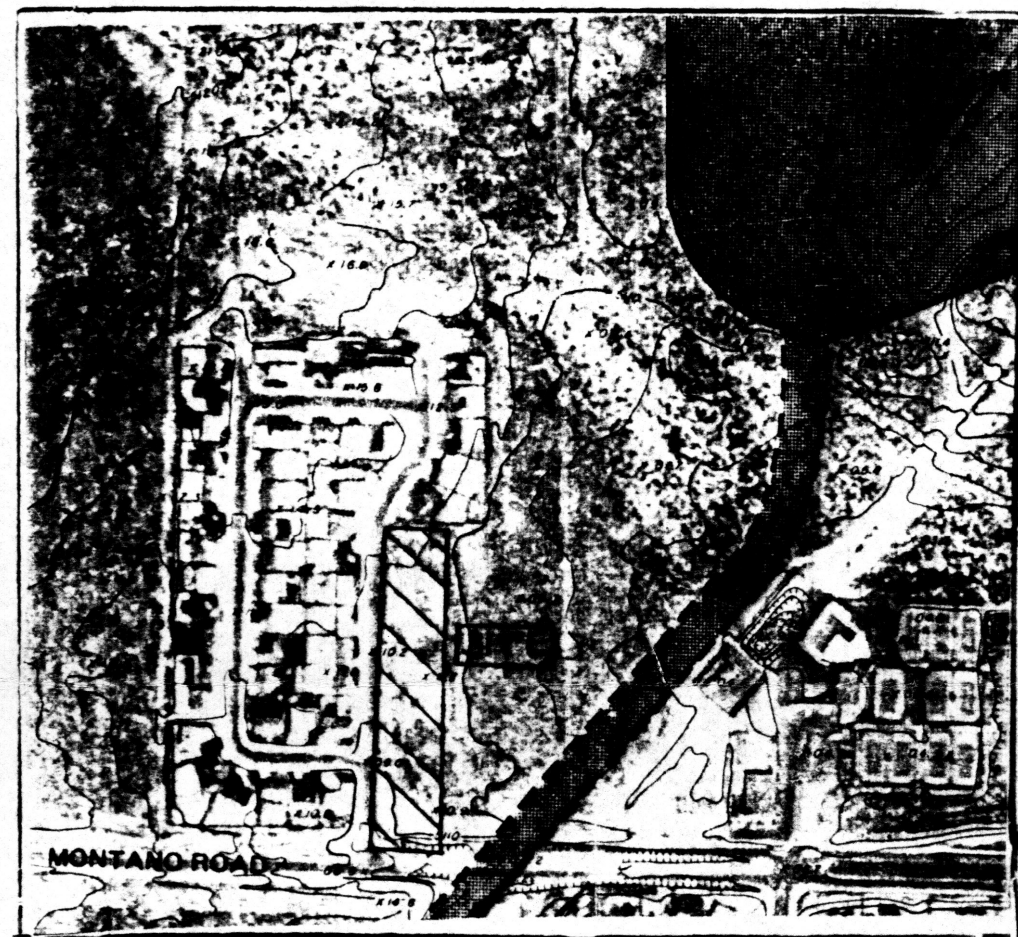
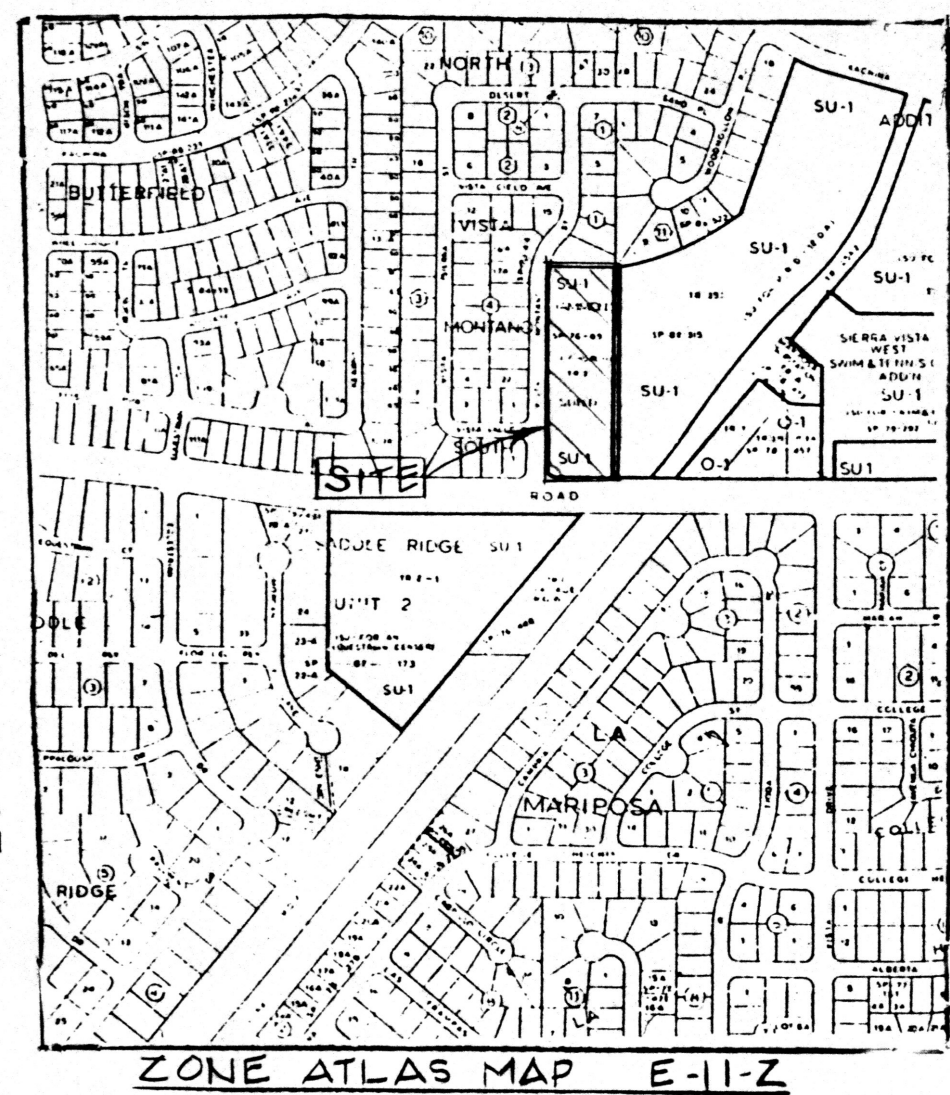
PAVING	15% at 0.95
LANDSCAPING	85% at 0.25
C=0.36	
A=0.27 acres	
T _c =0.89 minutes	
I=10.787	
Q=0.73 cfs	

TOTAL PROPOSED FLOW = 12.18 cfs.

NOTE: REFER TO SHEET A1 FOR DIMENSIONED SITE PLAN.

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BERN COUNTY SOILS MAP

MAY 16 1991

SCALE: 1" = 30'
CONTOUR INTERVAL: 1'

APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

STATE OF NEW MEXICO
JOHN CHRISTEN
WILLIAMS
No. 705

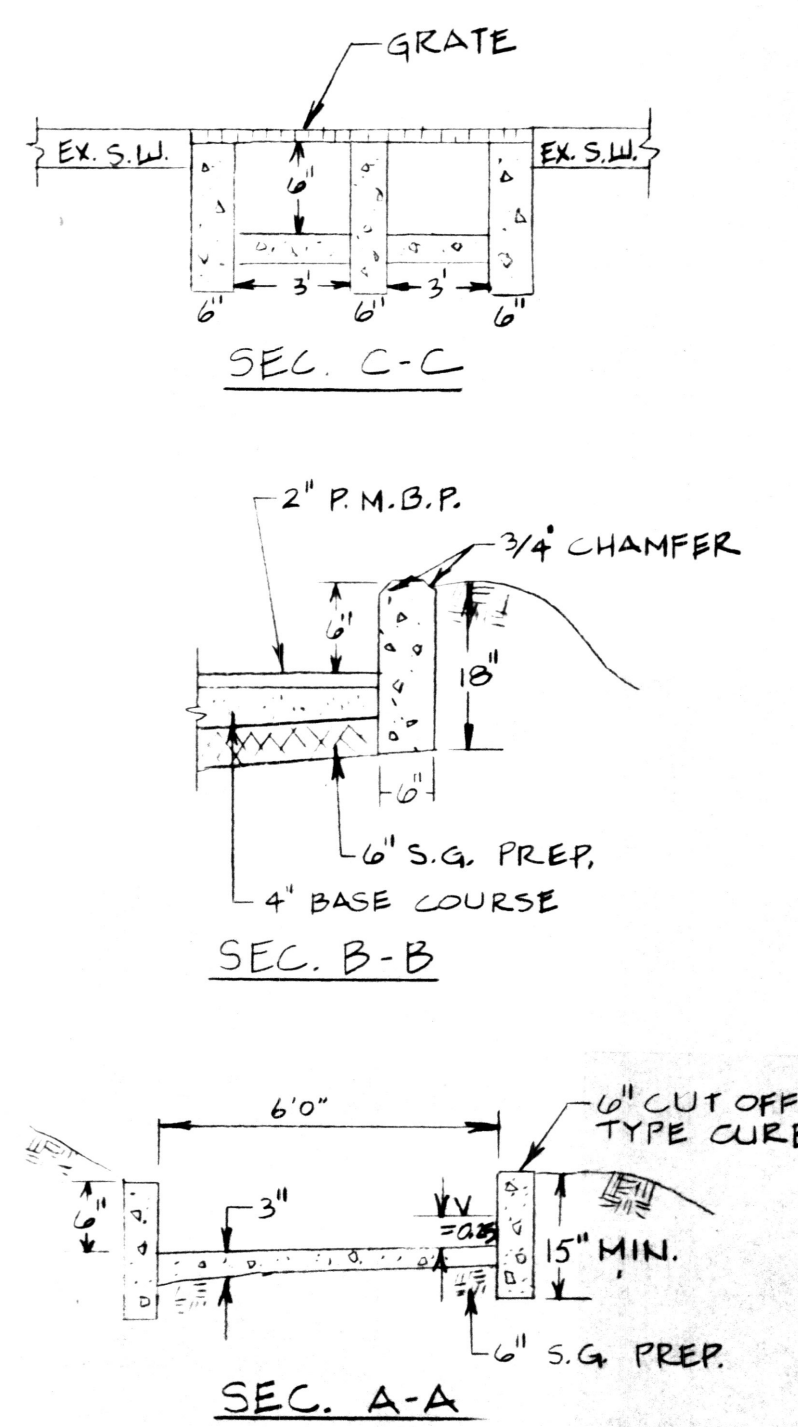
DATE 1-15-90
JOB No.
DRAWN BY
REVISIONS
2-14-90

PROJECT

ENGINEERS INC.
CIVIL-ARCHITECTURAL-MINING - SURVEYING
P.O. BOX 5050
210 ARIZONA ST.
SILVER CITY, N.M. 88061
505-535-5335

TITLE
CALVARY TEMPLE ASSEMBLY OF GOD
5921 MONTANO RD NW, ALBUQUERQUE, NM.
DRAINAGE/GRADING PLAN JAN. 15/1990

(SEAL)
SHEET
C1
OF



This is to certify that I, David D. Maxwell, am a Registered Professional Engineer in the State of New Mexico and that the as built conditions are in close compliance with the original Drainage/Grading Plan drawings (sealed 2/14/90)



David D. Maxwell
N.M.P.E. #8768