

OUTLET CHANNEL - DETAIL

NO SCALE

CONSTRUCTION NOTES

CONCRETE SHALL BE 4000 PSI @ 28 DAYS
COMPACT SUBGRADE TO 95% OF MAXIMUM
PLACE 1/2\"/>

ENGINEER'S CERTIFICATION

THE SITE HAS BEEN COMPLETED IN SUBSTANTIAL COMPLIANCE WITH THE ORIGINAL
APPROVED GRADING AND DRAINAGE PLAN AS EXCEPT IDENTIFIED BY AS-CONSTRUCTED
SPOT ELEVATIONS SHOWN ON THE GRADING AND AS FOLLOWS:

- THE SINGLE 6\"/>

LARRY D. READ P.E.



DISCUSSION

THIS PLAN IS AN UPDATE OF THE GRADING AND DRAINAGE PLAN
APPROVED IN 1987. THE SITE IS LOCATED ON THE SOUTHWEST
CORNER OF ATRISCO DRIVE NW AND MILNE ROAD NW. THE SITE
IS NOT WITHIN A DEFINED 100 YEAR FLOOD PLAIN AS SHOWN ON
FEMA PANEL 350002-0023.

THE SITE HAS BEEN DEVELOPED IN ACCORDANCE WITH THE 1987
PLAN EXCEPT THE FACILITY IDENTIFIED AS "FUTURE BUILDING
LOCATION" SHOWN EAST OF THE MAIN BUILDING WAS NEVER
CONSTRUCTED.

THIS PLAN UPDATED THE GRADING AND DRAINAGE PLAN BY
REMOVING THE "FUTURE EXPANSION" AND SHOWS GRADING AND
DRAINAGE INFORMATION FOR A PROPOSED TEMPORARY
BUILDING WEST OF THE EXISTING BUILDING. THIS PROPOSED
TEMPORARY BUILDING WILL ADD APPROXIMATELY 1800 S.F.
OF FLOOR SPACE TO THE SITE.

THE MAJORITY OF THE DEVELOPED SITE DRAINS NORTH THROUGH
THE PARKING LOT INTO MILNE ROAD NW VIA THE WESTERN MOST
DRIVEPAD. THIS AREA INCLUDES THE PARKING LOT AND LAWN
EAST OF THE EXISTING BUILDING. THE BALANCE OF THE SITE
INCLUDES THE BUILDING, LAWN SOUTH OF THE EXISTING BUILDING,
THE WEST SERVICE DRIVE, AND THE DIRT AREA PROPOSED AS THE
SITE FOR THIS BUILDING. THIS AREA DRAINS WEST INTO A 20'
WIDE UNPAVED PUBLIC ALLEY THAT DISCHARGES INTO MILNE ROAD NW.
MILNE ROAD NW CONVEYS THE RUNOFF TO THE WEST INTO THE
REGIONAL DETENTION POND CONSTRUCTED AS PART OF THE LADERA
POND SYSTEM. SEE BASIN 16, LADERA STUDY AREA, 1980, BY
BY TERRA SOL, INC. UNDER THE ALTERNATE DRAINAGE CONCEPTS
PORTION OF THE DESIGN. THIS DETENTION POND WAS SIZED TO HOLD
DEVELOPED RUNOFF FROM THE DRAINAGE BASIN THAT INCLUDES
THIS SITE.

THIS SITE IS NOT AFFECTED BY RUNOFF FROM OFFSITE. THE BASIN
TO THE EAST THAT INCLUDES ATRISCO DRIVE NW DRAINS THROUGH
THE CHANNEL ADJACENT TO THE WEST SIDE OF ATRISCO (ALSO THE
EAST SIDE OF THE PARKING LOT FOR THIS SITE). RUNOFF FROM
THE BASIN SOUTH OF THIS SITE IS INTERCEPTED BY AN EXISTING
DIRT ROAD AT THE SOUTH PROPERTY LINE OF THIS SITE AND
DIRECTED TO THE PUBLIC ALLEY AND ROADSIDE CHANNEL
DISCUSSED ABOVE.

DRAINAGE CALCULATIONS

THE FOLLOWING CALCULATIONS ARE BASED ON PROCEDURES
DETAILED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS
MANUAL, SECTION 22.2, REVISED JANUARY, 1993. THIS SITE IS
IN ZONE 1 AS SHOWN ON FIGURE A-1.

EXISTING ON-SITE CONDITIONS:

TREATMENT TYPE	AREA (acres)	UNIT RUNOFF (cfs/ac)	MAX Q (cfs)	UNIT VOL (in/ac)	TOTAL VOL. (cf)
A	0.000	1.29	0.00	0.44	0.00
B	0.487	2.03	0.99	0.67	1184
C	0.097	2.87	0.28	0.99	349
D	0.983	4.37	4.30	1.97	7030
TOTAL AREA 1.567 ac		Q(100) = 5.57 cfs		V(100) = 8563 cf	
Q(10) = 0.667 x 5.57 = 3.72 cfs		V(10) = 0.667 x 8563 = 5712 cf			

PROPOSED ON-SITE CONDITIONS:

TREATMENT TYPE	AREA (acres)	UNIT RUNOFF (cfs/ac)	MAX Q (cfs)	UNIT VOL (in/ac)	TOTAL VOL. (cf)
A	0.000	1.29	0.00	0.44	0.00
B	0.487	2.03	0.99	0.67	1184
C	0.052	2.87	0.15	0.99	187
D	1.028	4.37	4.49	1.97	7351
TOTAL AREA 1.567 ac		Q(100) = 5.63 cfs		V(100) = 8722 cf	
Q(10) = 0.667 x 5.63 = 3.76 cfs		V(10) = 0.667 x 8722 = 5818 cf			

INCREASE IN RUNOFF DUE TO THIS PROJECT

Q(100) = 0.06 cfs
Q(10) = 0.04 cfs
V(100) = 159 cfs
V(10) = 106 cfs

KEYED NOTES

1. EXISTING ASPHALT DRIVE.
2. EXISTING PARKING LOT.
3. EXISTING SIDEWALKS.
4. FOOTING DETAIL. SEE ARCH. PLANS
5. NEW CONC. SIDEWALK.
6. NEW CONC. RAMP 6\"/>

LEGAL DESCRIPTION

TRACT A, BLOCK 1, SLOAN'S ACRES
ALBUQUERQUE, BERNALILLO COUNTY NEW MEXICO

NOTICE TO CONTRACTOR

1. ALL CONSTRUCTION DETAILED ON THESE PLAN SHALL BE BUILT
IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD
SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL
CONTACT LINE LOCATING SERVICE @ 260-1990 FOR LOCATION
OF EXISTING UTILITIES. THIS SERVICE REQUIRES AT LEAST
TWO WORKING DAYS.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND
PROTECTING ALL UTILITIES. SHOWN OR NOT SHOWN ON
THESE PLANS. ANY DAMAGE TO UTILITIES BY THE CONST-
RUCTION EFFORTS SHALL BE REPAIRED OR REPLACED BY THE
CONTRACTOR AT HIS OWN EXPENSE.
4. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING EROSION
CONTROL BERMS, SILT FENCES, SEDIMENT DAMS OR PONDS IN
ORDER TO PREVENT SOIL FROM ERODING FROM THE SITE INTO
ADJACENT PUBLIC OR PRIVATE LANDS. DISTURBED SOIL SHALL
BE WATERED AND/OR COVERED TO PREVENT IT FROM BLOWING
FROM THE SITE.

LEGEND

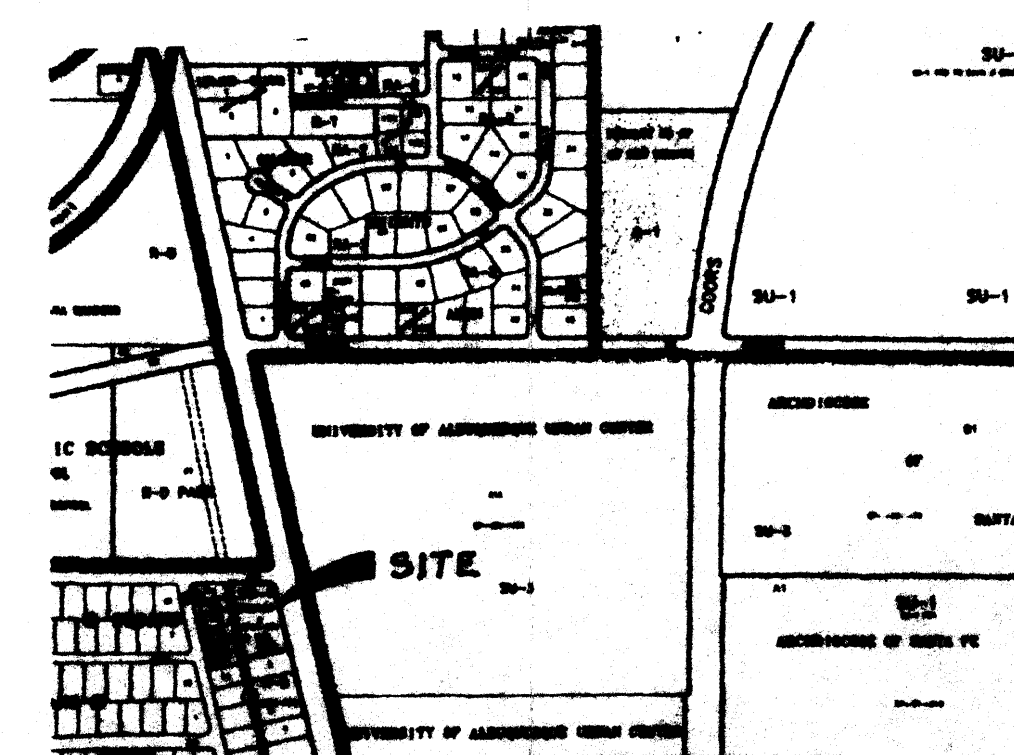
- 12--- EXISTING CONTOUR
- TC 11.69
FL 11.69 EXISTING SPOT ELEVATION
(TC - TOP OF CURB)
(FL - FLOWLINE)
(TS - TOP OF SIDEWALK)
(FG - EARTH ELEVATION)
- FG 13.85 DESIGN SPOT ELEVATION
(SEE ABBREVIATIONS ABOVE)
- EXISTING SWALE FLOWLINE
- DESIGN SWALE FLOWLINE
- SURFACE FLOW DIRECTION
- FL 13.07 AS-CONSTRUCTED SPOT
ELEVATION
(SEE ABBREVIATIONS ABOVE)

LARRY READ & ASSOCIATES

Civil Engineers

P. O. Box 90233
Albuquerque, New Mexico 87199-0233
(505) 858-3165

VICINITY MAP



ZONE ATLAS PAGE F-11-Z

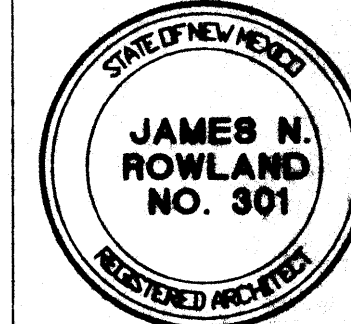
PROJECT BENCHMARKS

TEMPORARY BENCHMARK: NAIL SET IN POWER POLE
AT THE SOUTHEAST CORNER
OF LOT 10-B. ELEV. 5112.37
ACS BENCHMARK: "ACS BM 5-F11" LOCATED APPROX.
220' SOUTH OF THE INTERSECTION
OF STATE ROAD 448 AND UNNAMED
PAVED ROAD TO THE EAST ALONG THE
NORTH BOUNDARY OF UNIVERSITY OF
ALBUQUERQUE ON EAST R/W LINE OF
SR 448. ELEV. 5109.177.



GRADING PLAN
1" = 20'-0"

jnr
PARTNERS, INC.
855 Luna Circle NW Albuquerque NM 87102
Phone (505)243-5700 Fax (505)242-8214



Date: 8/23/96
Drawn by: LDR
Checked by: LDR

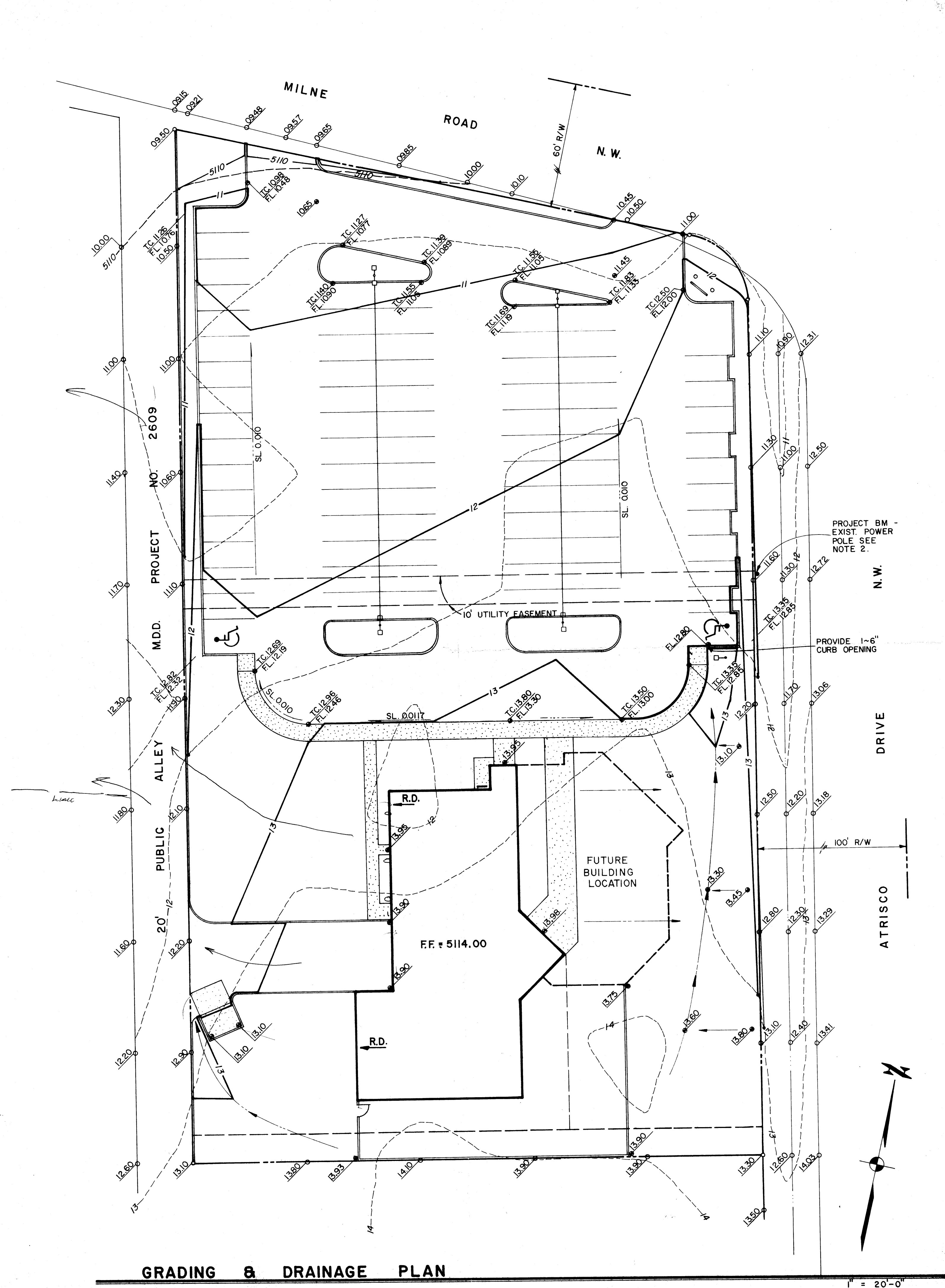
Project Name: Project #: 52196

OUR SAVIOUR LUTHERAN CHURCH
CHILD CARE BUILDING

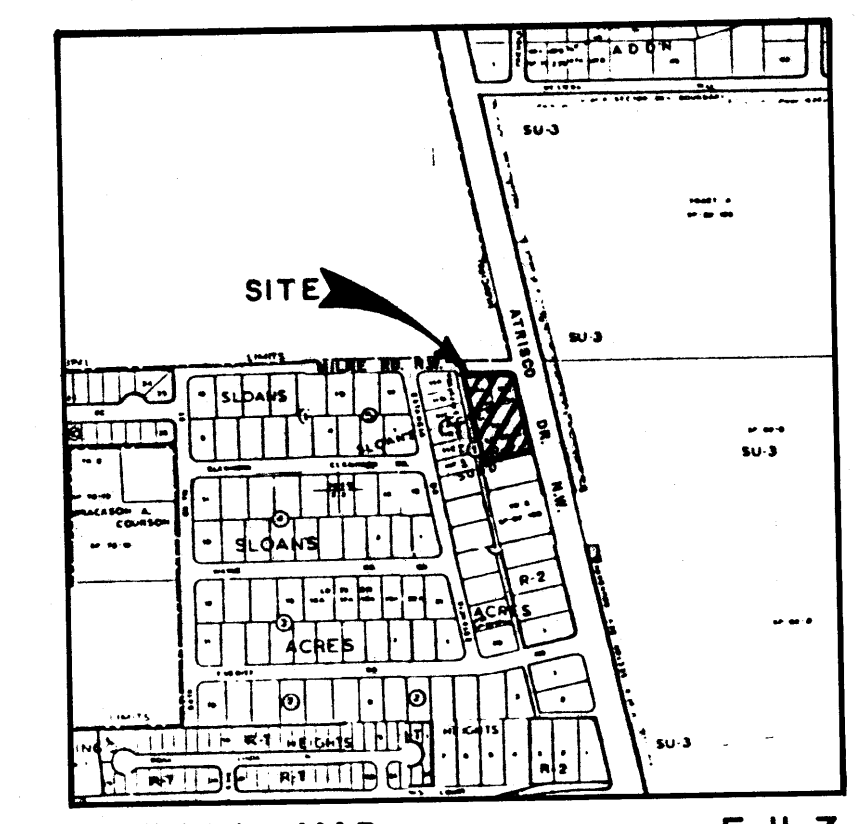
Sheet Title
GRADING AND DRAINAGE PLAN

Sheet #:

C1



- LEGEND**
- PROPERTY LINE (R/W)
 - BUILDING (NEW)
 - CURB (NEW)
 - CONC. WALK (NEW)
 - SPOT ELEVATION (EXIST.)
 - SPOT ELEVATION (NEW)
 - CONTOUR (EXIST.)
 - CONTOUR (NEW)



VICINITY MAP
FLOOD HAZARD BDY. MAP
F-11-Z
PANEL 14

DRAINAGE PLAN

OUR SAVIOR LUTHERAN CHURCH

The site is located on the southwest corner of the intersection of Atrisco Drive and Milne Road N.W. containing approximately 1.567 acres. The site is presently undeveloped and slopes from southeast to northwest with an average slope of 1 percent. Flows from the site discharge to Milne Road and to the 20 ft. public alley abutting the west side of the property. Milne Road conveys all of these flows via a 20" concrete valley gutter located approximately 470 ft. west of the northwest property corner to a sump ("south sump") designed to detain all developed flows. (See "Basin 16, Ladera Study Area, Alternate Drainage Concepts, September, 1980" Report by Consultants Terra Sol Inc.). Proposed development of the site includes a building with associated parking areas and landscaping.

Off-site flows have no impact on the proposed development. Adjacent areas north, south, east and west of the site are prevented from contributing flows to the site by existing grades. All developed on-site flows will be diverted around the proposed building and be transported as surface flows through the parking areas and landscaping to Milne Road.

CALCULATIONS:
 Area = 1.567 acres
 I = 2.2 in./hr. Plate 22.2 D-2
 6-hour, 100-year rainfall = 2.2 in. Plate 22.2 D-1
 i = (2.2)(2.2) = 4.84 in./hr.

EXISTING ON-SITE CONDITIONS:

SURFACE TYPE	"C" VALUE	A (ACRES)	"C" X A	COMPOSITE "C" = C X A / A
Streets, Drives, Walks	0.95	-0-	-0-	
Roofs	0.90	-0-	-0-	
Lawns & Landscaping	0.25	-0-	-0-	
Undeveloped	0.40	1.567	0.627	
TOTAL		1.567	0.627	0.40

Q(100) = (0.40)(4.84)(1.567) = 3.03 cfs
 Q(10) = (0.657)(3.03) = 1.99 cfs
 CW = 79 Plate 22.2 C-2
 Direct Runoff = 0.68 in. Plate 22.2 C-4
 V(100) = (0.68)(1.567)(43560)/12 = 3868 cu. ft.
 V(10) = (0.657)(3868) = 2541 cu. ft.

PROPOSED ON-SITE CONDITIONS:

SURFACE TYPE	"C" VALUE	A (ACRES)	"C" X A	COMPOSITE "C" = C X A / A
Streets, Drives, Walks	0.95	0.86	0.82	
Roofs	0.90	0.14	0.13	
Lawns & Landscaping	0.25	0.57	0.14	
Undeveloped	0.40	-0-	-0-	
TOTAL		1.57	1.09	0.69

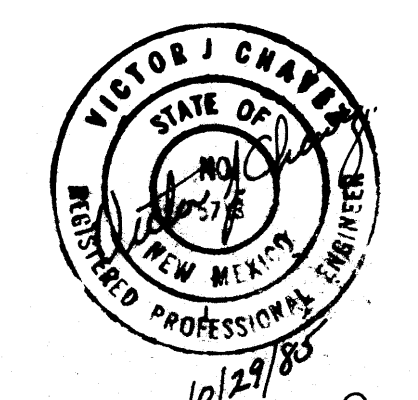
Q(100) = (0.69)(4.84)(1.567) = 5.23 cfs
 Q(10) = (0.657)(5.23) = 3.44 cfs
 CW = 85 Plate 22.2 C-3
 Direct Runoff = 1.00 in. Plate 22.2 C-4
 V(100) = (1.00)(1.567)(43560)/12 = 5688 cu. ft.
 V(10) = (0.657)(5688) = 3737 cu. ft.

NOTICE TO CONTRACTOR

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 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.
- CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL DURING THE CONSTRUCTION PHASE, INCLUDING ANY PROVISIONS THAT NEED TO BE TAKEN TO DIVERT ANY SEDIMENT FROM ENTERING THE CITY RIGHT-OF-WAY, I.E., WINDROWS, SILT FENCING, OR APPROVED EQUAL.
- CURB AND GUTTER SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THE CONTRACT WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- WHEN CONSTRUCTION UNDER THIS PROJECT CONNECTS TO EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL PROVIDE AN EASY RIDING CONNECTION.

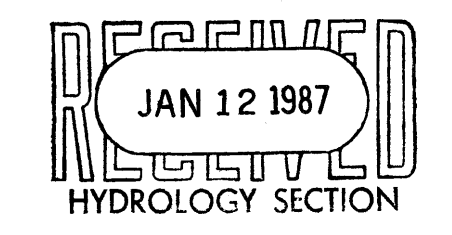
LEGAL DESCRIPTION:
 TRACT "A", BLOCK 1, SLOAN'S ACRES, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

- NOTES:**
- TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN IS BASED ON A SURVEY PREPARED BY CARL R. HARRINGTON, SOUTHWEST SURVEYING CO., INC., ON JANUARY 12, 1984. NMLS NO. 7909.
 - PROJECT BENCH MARK: NAIL IN POWER POLE AT SOUTHEAST CORNER OF LOT 10-B. ELEVATION = 5112.37.
 - BENCH MARK: STEEL NAIL R/W MARKER STAMPED "ACS BM 5-F11", LOCATED APPROX. 220' SOUTH OF THE INTERSECTION OF STATE ROAD 448 AND AN UN-NAMED PAVED ROAD EAST ALONG NORTH BOUNDARY OF UNIVERSITY OF ALBUQUERQUE ON EAST R/W LINE STATE ROAD 448. ELEVATION = 5109.131.



GRADING & DRAINAGE PLAN

1" = 20'-0"



OUR SAVIOR