



DS#

1885-1

DS INDEX

APN

125-35-802-007 & -803-002

PROJECT

Canyon Ridge Christian Church Phase 2B

SUBMITTAL

4th (See Box #1 for Previous Submittals)



anning.doc

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: May 3, 1999
TO: Land Development Services Department of Public Works		FROM:  Dennis W. Stransky, P.E. Flood Control Section Department of Public Works
SUBJECT: Canyon Ridge Christian Church Lone Mountain and Jones		COPIES TO: G. C. Wallace Canyon Ridge Christian Church Development Fund Cheri Edelman, P. E., DEVCO
FILE NO.	F:\Depot\DSMEMOS\DS1885D.doc	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES
1 st Submittal	07/03/96	07/17/96	Not Acceptable	\$250
2 nd Submittal	08/28/96	09/09/96	Accepted	\$250
3 rd Submittal	1/14/98	1/20/98		\$100.00
4 th Submittal	4/27/1999	5/3/1999	See Below	\$100.00
TOTAL FEES:				\$700.00

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is acceptable in concept subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	must have Clark County Regional Flood Control concurrence

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment and accepted by the City of Las Vegas Flood Control Section. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the City of Las Vegas reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction.

PLANS SENT TO LAND DEVELOPMENT yes  (initial)

END OF REMARKS	T/R/S	19/60/35
dws	AREA	G35



G.C. WALLACE, INC.
Engineering/Architecture

G. C. WALLACE, PE/SE, PLS
JAMES A. DUDDLESTEN, PE
MARIE RAINWATER
MICHAEL D. ROSS, PE
CHRISTOPHER W. ANDERSON, PE
CALVIN L. BLACK, PE, PLS
BENJAMIN C. SMITH, PE
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RAY G. FLAKE, PE
RANDALL K. GREMLICH, PE
KENNETH M. HANIFAN, PE
SALLY HENSLEY
ROBERT J. HERMAN
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DONALD L. HOTCHKISS JR., PE
MICHAEL KIDD, PLS
KRISTOFER D. KORPI
PAUL R. LARSON, PE
JIANG LI, PE
LLOYD B. MATHESON
DOUG MCCARTNEY, PE
TIMOTHY MCCOY, PE
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JOHNNIE R. PATE, JR., PE
JERRY E. PRUITT, PE
AL L. ROBINSON, PE
RICHARD A. E. STRUTZ
MILO L. TERZICH, PE
ROBERT WOODSON, PE

398.480

April 27, 1999

Dennis Stransky, P.E.
Project Manager
City of Las Vegas Public Works Department
Engineering Planning Division
731 South Fourth Street
Las Vegas, NV 89101

**Subject: Drainage Study for Canyon Ridge Christian Church
Phase II Addition, D.S. 1885**

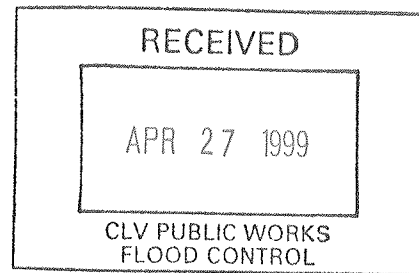
Gentlemen:

This letter is intended to serve as an update to the original drainage study submittal for Canyon Ridge Christian Church. The *Conceptual Drainage Study for Canyon Ridge Church and Technical Drainage Study for Canyon Ridge Christian Church Phase 1* was approved by the City of Las Vegas on September 10, 1996. The Canyon Ridge Christian Church is located on the northwest corner of Jones Boulevard and Lone Mountain Road. The location of the Canyon Ridge Christian Church is shown on the attached vicinity map (Figure 1).

The proposed Phase 2 Addition will include the construction of additional parking areas, a ministry building, and a basketball court recreational area. The proposed Phase 2 Additions are shown on Figure 2. The drainage patterns are consistent with those presented in the approved *Conceptual Drainage Study for Canyon Ridge Church*.

A portion of the 3-foot high berm will be relocated north of the proposed parking area (west) and basketball court. Offsite flows have remained generally consistent with the Phase 1 drainage study. As stated in the original study, the berm will protect the site from approximately 20 cfs during the 100-year storm. The offsite flows will be collected in the proposed Phase II addition parking area (east) and travel through the site to Lone Mountain Road. The total 100-year flow through the parking area to Lone Mountain Road is estimated at 25 cfs with a flow depth of approximately 0.5 feet for both the interim and ultimate build-out conditions. The proposed finished floor elevation for the ministry building has adequate freeboard (twice the depth of flow) above the parking lot swale flowline. The attached calculation for Section 1 shows the freeboard to the finished floor.

The construction of the proposed Phase 2 Addition will not significantly alter the established drainage patterns or peak flows of the approved Canyon Ridge Christian Church site.



G-35
1885-1
\$100

G.C. WALLACE, INC.

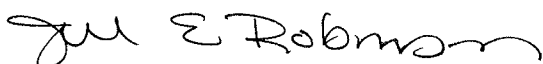
City of Las Vegas Department of Public Works
Engineering Planning Division
April 27, 1999
Page 2

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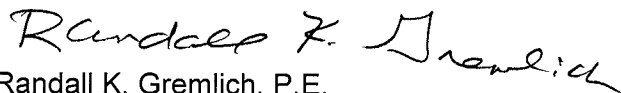
Please find attached two copies of the grading plans for the subject project. If you have any questions or need additional information, please do not hesitate to contact us at 804-2000.

Very truly yours,

G. C. WALLACE, INC.



Jill E. Robinson, E.I.
Designer



Randall K. Gremlich, P.E.
Project Manager

JER

Encl.

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

398.480

Name of Development: Canyon Ridge Christian Church - Phase II Addition Date: April 1999

Location of Development: a) Descriptive Northwest Corner of Lone Mountain Road & Jones Boulevard
b) Sect. 35 Twn. 19S Rng. 60E

Name of Owner: Church Development Fund, Inc. Assessors Parcel No: 125-35-802-001 thru 007
Contact Person-Name: Randall K. Gremlich, P.E. Telephone No: 804-2000

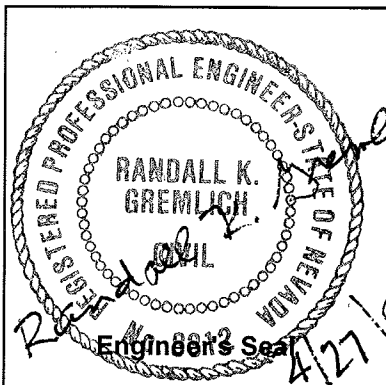
Firm: G. C. Wallace, Inc.

Address: 1555 South Rainbow Boulevard, Las Vegas, NV 89146

Type of Land Development/Land Disturbance Process:

- ☐ Rezoning ☐ Subdivision Map ☐ Clearing and Grading Only
☐ Parcel Map ☐ Planned Unit Development ☒ Other (Please specify below)
☐ Large Parcel Map ☐ Building Permit Church

1. Total Owned Land Area: At Site: 34.1 ± ac. Being Developed/Disturbed: 2.2 ac.
2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? YES* NO
3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? YES* NO
4. Proposed type of development (Residential, Commercial, Etc.)? Church
5. Approximate upstream land area which drains to the subject site? 178.9 ± ac.
6. Has the site drainage been evaluated in the past? YES NO If yes, please identify documentation: Conceptual Drainage Study for Canyon Ridge Church and Technical Drainage Study for Canyon Ridge Christian Church - Phase 1.
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: South through driveway entrance to Lone Mountain Road and east to existing washes toward Jones Boulevard.
8. Briefly describe your proposed schedule for the subject project: May 1999



Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

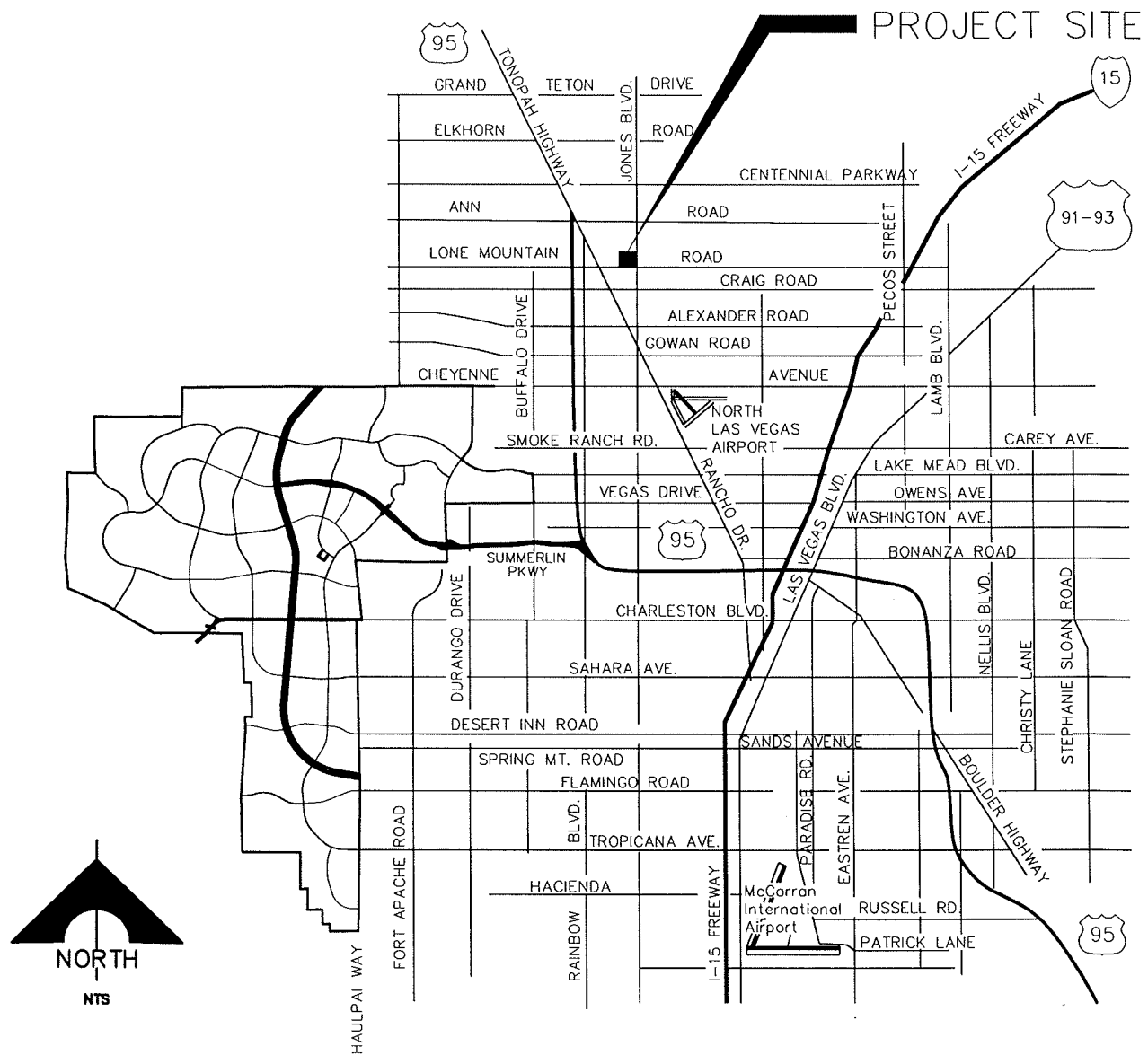
Review and concurrence of the Clark County Regional Flood Control District is required.

Revision	Date

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1



CANYON RIDGE CHRISTIAN CHURCH

FIGURE 1
VICINITY MAP



G.C. WALLACE, INC.
Engineering/Architecture

1555 SOUTH RAINBOW BLVD., LAS VEGAS, NEVADA 89102

Parking Area Swale CROSS SECTION ①

Worksheet for Irregular Channel

Project Description	
Worksheet	Misc. Cross Section
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.005000 ft/ft
Discharge	25.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.48 ft
Elevation Range	0.00 to 1.50
Flow Area	9.9 ft ²
Wetted Perimeter	41.81 ft
Top Width	41.80 ft
Actual Depth	0.48 ft
Critical Elevation	0.46 ft
Critical Slope	0.006101 ft/ft
Velocity	2.52 ft/s
Velocity Head	0.10 ft
Specific Energy	0.57 ft
Froude Number	0.91
Flow Type	Subcritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	1+47.00	0.016

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	1.50
0+53.00	0.50
0+75.00	0.00
0+97.00	0.50
1+47.00	1.50

$$WSE = 75.5 + 0.48 = 75.98$$

$$\approx 76'$$

$$2 \times d = 1.0'$$

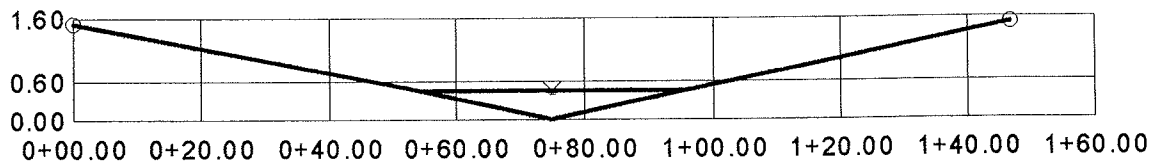
$$WSE = 75.5 + 1.0 = 76.5$$

$$FF = 80.15 \checkmark OK$$

Parking Area Swale CROSS SECTION ① Cross Section for Irregular Channel

Project Description	
Worksheet	Misc. Cross Section
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.005000 ft/ft
Water Surface Elevation	0.48 ft
Elevation Range	0.00 to 1.50
Discharge	25.00 cfs



V:10.0
H:1
NTS



DS# 1885-1

DS INDEX

APN 125-35-802-007 & -803-002

PROJECT Canyon Ridge Christian Church Phase 2B

SUBMITTAL 5th (See Box #1 for Previous Submittals)



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 3, 2001
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	
	Canyon Ridge Christian Church – Phase 2B	
Cross Streets:	NWC Lone Mountain and Jones	
FILE NO.:	F:\Depot\DSMEMOS\DS1885E.doc	
Parcel Number:	125-35-802-007 and -803-002	
Zoning Action:		
FEMA Flood Zone	YES	No X
Proposed Storm Drain	YES	No X
COPIES TO:		G. C. Wallace, Inc. Canyon Ridge Christian Church Cheri Edelman, P.E., DEVCO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES
1 st Submittal	7/3/1996	7/17/1996	Not Acceptable	\$250.00
2 nd Submittal	8/28/1996	9/9/1996	Accepted	\$250.00
3 rd Submittal	1/14/1998	1/20/1998	Accepted	\$100.00
4 th Submittal	4/27/1999	5/3/1999	Accepted	\$100.00
5 th Submittal	1/23/2001	2/3/2001	See Comments Below	\$100.00
			TOTAL FEES (LDDRS):	\$800.00

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is acceptable in concept subject to conformance to all City standards and the following conditions.
	must be resubmitted or supplemented including the following:
	must have Clark County Regional Flood Control District concurrence

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment and accepted by the CLV Flood Control Section. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the City of Las Vegas reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

PLANS SENT TO LAND DEVELOPMENT Yes (initial)

END OF REMARKS

ays

T/R/S: T19S/R60E/35
AREA G35



G. C. WALLACE, INC.
Engineers / Planners / Surveyors

G. C. WALLACE, PE/SE, PLS
JAMES A. DUDDLESTEN, PE
MICHAEL D. ROSS, PE
CHRISTOPHER W. ANDERSON, PE
CALVIN L. BLACK, PE, PLS
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RICHARD G. CLARKE
TODD G. CORMIER, PE
JOHN L. ELTSCHLAGER, PE
ALLAN P. FAJARDO, PE
ERIC G. GILES, PE
RANDALL K. GREMLICH, PE
PASCAL HAYES, PE
J. P. HIGGINS, PLS, WRS
DANNY E. HILL, PLS
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D. G. NEEL, PLS
JOHNNIE R. PATE JR., PE
BRIAN K. REED, PE
LUDWIG I. SMEETS, PE
DENNIS W. SOLANO, PLS
RICHARD A. E. STRUTZ
ROBERT J. WOODSON, PE
KENNETH T. YAMADA
CHRISTOPHER R. ZRINYI, PE

AFFILIATE OFFICE IN
SACRAMENTO, CA

398.4801

January 22, 2001

Randy L. Fultz, P.E.
Flood Control Project Manager
City of Las Vegas
Engineering Planning Division
731 South Fourth Street
Las Vegas, Nevada 89101

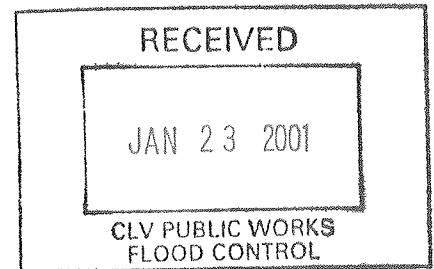
Subject: Canyon Ridge Christian Church, Phase IIB Addition

Dear Mr. Fultz:

The original drainage study for the Canyon Ridge Christian Church (DS 1885) was approved by the City of Las Vegas on September 10, 1996. Since that time two small amendments for the site reflecting small additions to the complex have been reviewed and accepted by the City. It is proposed at this time to construct a two-story building on the site consisting of approximately 12,000 square feet to serve as office space. This letter constitutes an amendment to the approved drainage study to address this construction.

The proposed building footprint covers approximately 6,000 square feet (0.14 acres) and is located approximately 50 feet southeast of the main auditorium adjacent to another existing office building. The location is shown on the attached Figure 1 and Figure 2. The land for the proposed building is currently covered by desert landscaping.

The increase in runoff from the site due to the construction of the building is insignificant. The grading will allow for positive drainage away from the building. The proposed finished floor elevation is 81.10 which is above the adjacent grade. Therefore, no adverse impacts are anticipated due to the construction of this building.





G.C. WALLACE, INC.

Engineers / Planners / Surveyors

City of Las Vegas
Engineering Planning Division
January 22, 2001
Page 2

398.4801

If you have any questions about this proposed building construction, please contact us. Two copies of the improvement plans are attached.

Very truly yours,

G. C. WALLACE, INC.

Randall K

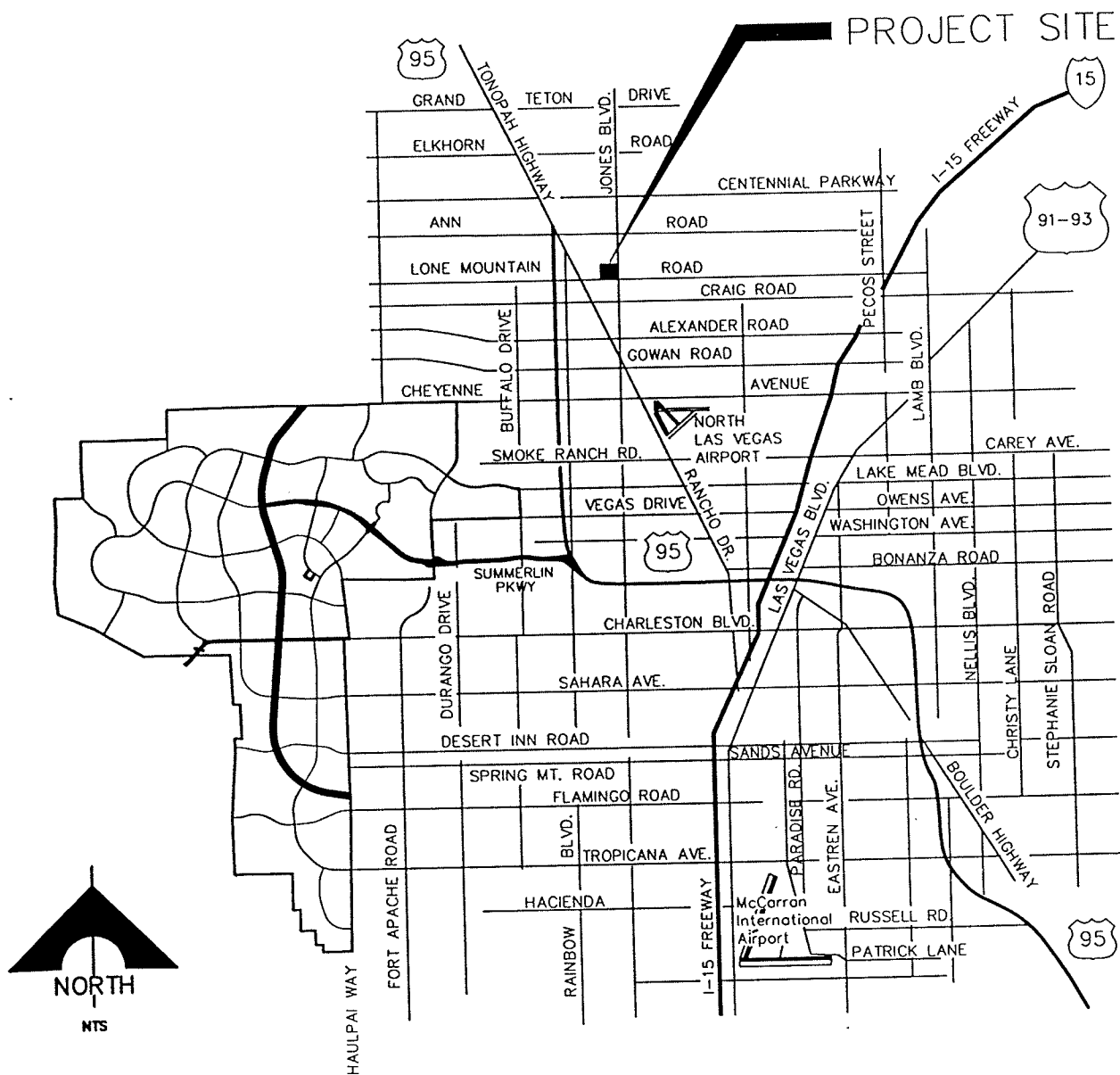
Randall K. Gremlich, P.E.
Project Manager

RKG:jj

Encl.

pc: John Walker, GCW





CANYON RIDGE CHRISTIAN CHURCH

FIGURE 1
VICINITY MAP



G.C. WALLACE, INC.

Engineering/Architecture 1555 SOUTH RAINBOW BLVD., LAS VEGAS, NEVADA 89102



DS#

1885-1

DS INDEX

APN

125-35-802-007 & -803-002

PROJECT

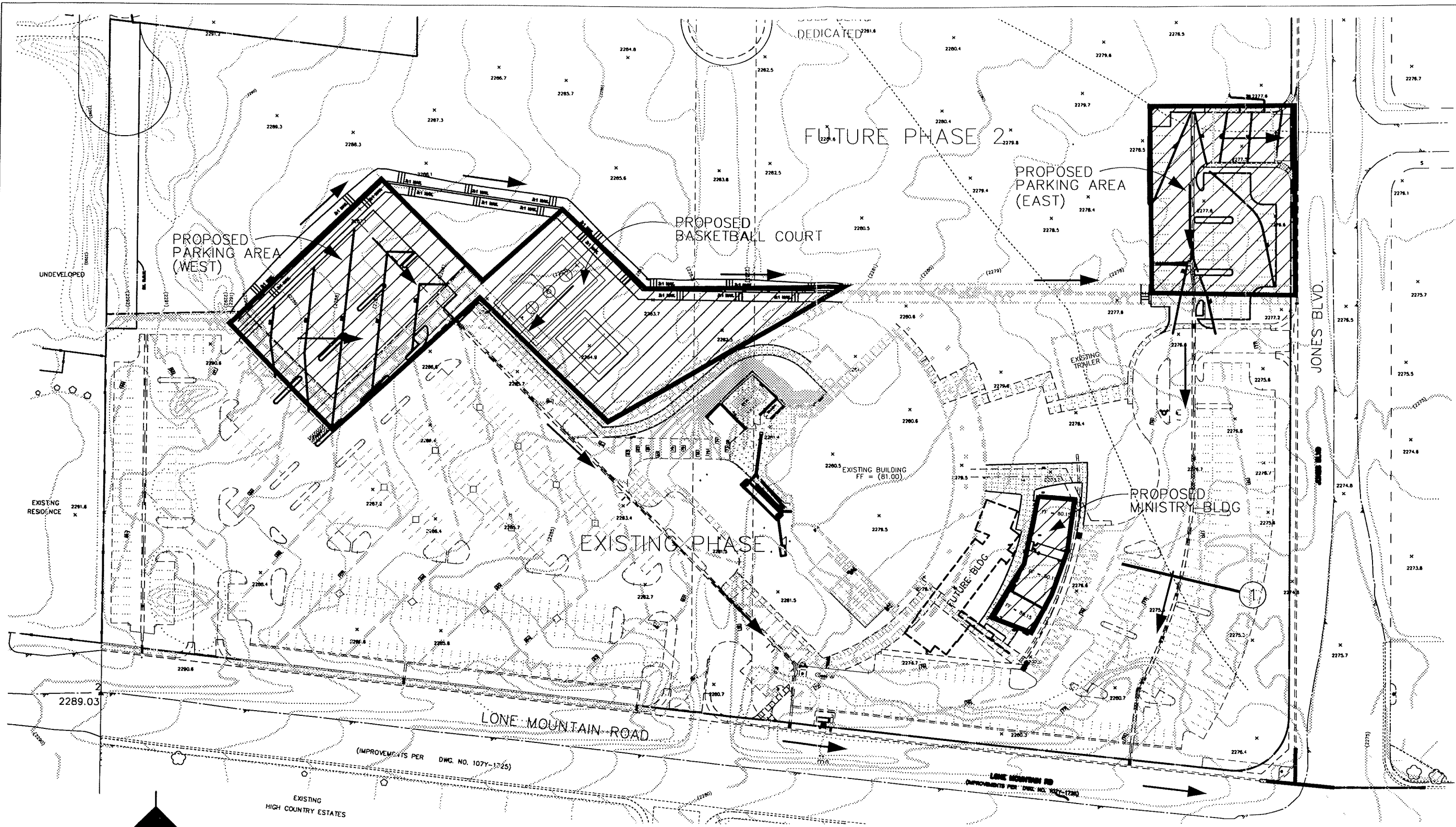
Canyon Ridge Christian Church Phase 2B

SUBMITTAL

Grading Plans



manning.doc



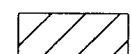
GRAPHIC SCALE



(IN FEET)

1 inch = 100 ft.

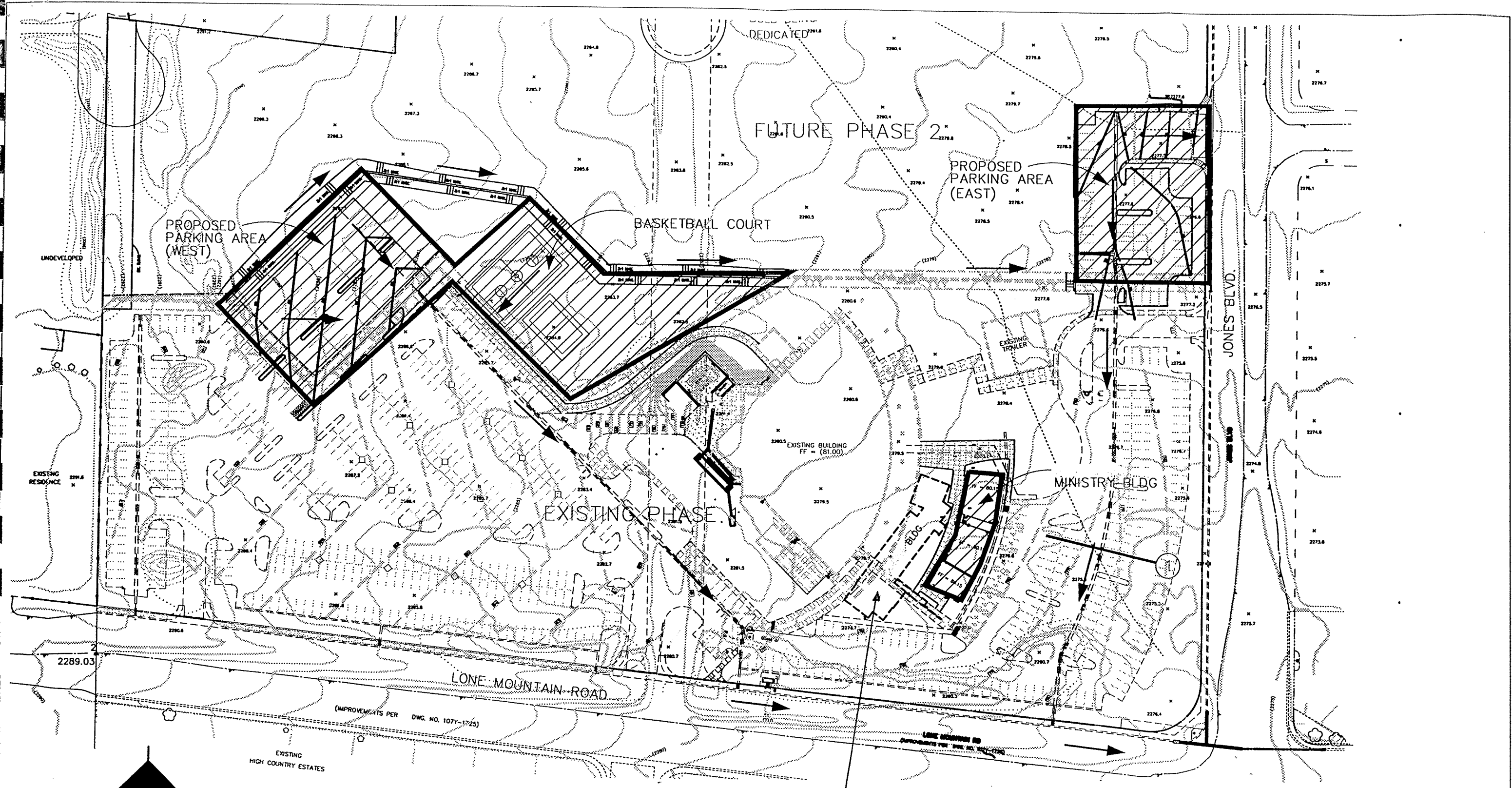
LEGEND

-  PHASE2 ADDITION
-  FLOW DIRECTION
-  CROSS SECTION

CANYON RIDGE CHRISTIAN CHURCH

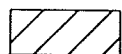
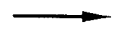
FIGURE 2

PHASE 2 ADDITION



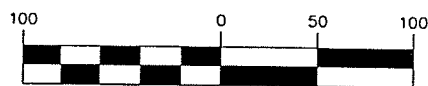
SITE

LEGEND

-  PHASE2 ADDITION
-  FLOW DIRECTION
-  CROSS SECTION



GRAPHIC SCALE



(IN FEET)

1 inch = 100 ft.

CANYON RIDGE CHRISTIAN CHURCH

FIGURE 2
PHASE 2 ADDITION



G.C. WALLACE, INC.
Engineering/Architecture

1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89102