City of Albuquerque

April 4, 2000

J. Graeme Means, PE
Jeff Mortensen & Associates, Inc
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Rinconada Mesa Subdivision
Conceptual Grading and Drainage Plan
Engineer's Stamp dated 3-14-00 (F10/D10)

Dear Mr. Means,

Based upon the information provided in your submittal dated 3-15-00, the above referenced conceptual grading and drainage plan is acceptable and is approved for Site Development Plan for Subdivision and Site Development Plan for Building Permit.

Please be advised that a more comprehensive grading and drainage submittal to Hydrology will be necessary prior to DRB approval of the Preliminary Plat. Please include a copy of the Infrastructure List with that submittal.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 25, 2000

J. Graeme Means, P. E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109

RE: ***Grading and Drainage Plan for Rinconada Mesa Subdivision (F10/D10) Submitted for Preliminary and Final Plat Approval, Rough Grading and Work Order Approval, Engineer's Stamp Dated 8/2/00.***

Dear Mr. Means:

Based on the information provided, the above referenced Grading and Drainage Plan for Rinconada Mesa Subdivision dated August 2, 2000 is approved for Preliminary Plat action.

The above referenced plan is also approved for Rough Grading. As you are aware, a topsoil disturbance permit must be obtained before any grading may occur on this site.

Prior to Final Plat sign-off, the Subdivision Improvements Agreement (SIA) must be in place. The Grading and Drainage Certification is required prior to the release of the SIA, or financial guarantees, for this subdivision.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Arlan Collatz, Collatz, Inc.
DRB 1000352
File

City of Albuquerque

August 29, 2000

J. Graeme Means, P. E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109

RE: ***Grading and Drainage Plan for Rinconada Mesa Subdivision (F10/D10) Submitted for Preliminary and Final Plat Approval, Rough Grading and Work Order Approval, Engineer's Stamp Dated 8/2/00, Revised on 8/29/00.***

Dear Mr. Means:

Based on the information provided, the above referenced Grading and Drainage Plan for Rinconada Mesa Subdivision dated August 2, 2000 is approved for Preliminary Plat action.

The above referenced plan is also approved for Rough Grading. As you are aware, a topsoil disturbance permit must be obtained before any grading may occur on this site.

Prior to Final Plat sign-off, the Subdivision Improvements Agreement (SIA) must be in place. The Grading and Drainage Certification is required prior to the release of the SIA, or financial guarantees, for this subdivision.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan Calongne

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: DRB 1000352
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 15, 2002

J. Graeme Means, P.E.
Jeff Mortensen & Assoc..
6010-B Midway Park Blvd NE
Albuquerque, New Mexico 87109

RE: RINCONADA MESA SUBDIVISION (F-10/D10)
Engineers Certification For Release of Financial Guaranty
Engineers Stamp dated 8/2/2000 Rev. 8/29/2000
Engineers Certification dated 4/9/2002

Dear Mr. Means:

Based upon the information provided in your Engineers Certification dated 4/9/2002, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty for the above referenced project.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
SAB

C: Arlene Portillo, PWD – #663981
File

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE = 1

B. $P_{6,100} = P_{360} = 2.20$ IN.

C. TOTAL AREA (A_T) = 743,360 SF (17.07 AC)

D. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
A	743,360/17.07	100

E. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
B	149,755/3.44	20
C	149,755/3.44	20
D	443,850/10.10	60

II. EXISTING CONDITION

A. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

$E_W = 0.44$ IN.

$V_{100} = (E_W/12)A_T$

$V_{100} = (0.44/12)(743,360) = 27,260$ CF

B. PEAK DISCHARGE

$Q_P = Q_{PA}A_A+Q_{PB}A_B+Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100} = (1.29)(17.07) = 22.0$ CFS

III. DEVELOPED CONDITION

A. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

$E_W = [(0.67)(3.44)+(0.99)(3.44)+(1.97)(10.19)]/(17.07) = 1.51$ IN.

$V_{100} = (E_W/12)A_T$

$V_{100} = (1.51/12)(743,360) = 93,540$ CF

B. PEAK DISCHARGE

$Q_P = Q_{PA}A_A+Q_{PB}A_B+Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100} = (2.03)(3.44)+(2.87)(3.44)+(4.37)(10.19) = 61.4$ CFS

C. SITE BASIN CALCULATIONS

$Q_{TOTAL} = 61.4$ CFS

$A_{TOTAL} = 17.1$ AC

BASIN	AREA	%	Q_{100}
A	2.9 AC	17	10.4
B	2.1 AC	12	7.4
C	1.5 AC	09	5.5
D	2.5 AC	15	9.2
E	1.2 AC	07	4.3
F	2.4 AC	14	8.6
G	2.6 AC	15	9.2
H	1.7 AC	10	6.1
I	0.2 AC	01	0.7
TOTAL	17.1 AC	100	61.4

D. ANALYSIS POINT SUMMARY

ANALYSIS POINT	CONTRIBUTING BASINS	CONTRIBUTING AREA	Q_{100}
AP-1	L-1	0.2 AC	0.4 CFS
AP-2	L-1, F	2.6 AC	9.0 CFS
AP-3	L-1, F,G	5.2 AC	18.2 CFS
AP-4	D	2.5 AC	9.2 CFS
AP-5	D, E	3.7 AC	13.5 CFS
AP-6	L-1, D,E,F,G,H	10.6 AC	37.8 CFS
AP-7	L-2	1.5 AC	3.7 CFS
AP-8	L-2, B	3.6 AC	11.1 CFS
AP-9	L-3	0.1 AC	0.3 CFS
AP-10	L-3, A	3.0 AC	10.7 CFS
AP-11	L-2,L-3,A,B,C	8.1 AC	27.3 CFS

TOTAL FLOW TO STORM DRAIN = AP 6 + AP 11 = 37.8 + 27.3 = 65.1 CFS

IV. OFFSITE FLOWS

A. FUTURE DEVELOPMENT ON TRACT A-1

A = 14.76 AC

ASSUME MULTIFAMILY ATTACHED (70 % D, 15 % C, 15 % B)

$Q_{100} = (2.03)(2.20)+(2.87)(2.20)+(4.37)(10.27) = 55.7$ CFS

B. BASIN L-1

$A_T = 8,000$ SF/0.18 AC; $A_B = 7,000$ SF/0.16 AC;

$A_D = 1,000$ SF/0.02 AC

$Q_{100} = (2.03)(0.16)+(4.37)(0.02) = 0.4$ CFS

C. BASIN L-2

$A_T = 63,500$ SF/1.46 AC; $A_B = 49,500$ SF/1.14 AC;

$A_D = 14,000$ SF/0.32 AC

$Q_{100} = (2.03)(1.14)+(4.37)(0.32) = 3.7$ CFS

D. BASIN L-3

$A_T = 6,100$ SF/0.14 AC; $A_B = 5,300$ SF/0.12 AC;

$A_D = 800$ SF/0.02 AC

$Q_{100} = (2.03)(0.12)+(4.37)(0.02) = 0.3$ CFS

V. COMPARISON

$\Delta V_{100} = 93,540 - 27,250 = 66,290$ CF (INCREASE)

$\Delta Q_{100} = 61.4 - 22.0 = 39.4$ CFS (INCREASE)

VI. STREET CAPACITY CALCULATIONS

(USING HAESTAD FLOWMASTER 6.0, MANNINGS EQUATION: n = 0.017)

A. AP-2: $Q_{100} = 9.0$ CFS; s = 0.0050;

SECTION C-C: 28' F-F W/MOUNTABLE CURB AND GUTTER (ROLL TYPE);
DEPTH = 0.33 FT (CURB HEIGHT)
F = 0.80 (SUBCRITICAL: NO HYDRAULIC JUMP POTENTIAL)
OKAY TO USE MOUNTABLE CURB AND GUTTER (ROLL TYPE) UPSTREAM FROM AP-2;
USE STANDARD CURB AND GUTTER DOWNSTREAM FROM AP-2

B. AP-4: $Q_{100} = 9.2$ CFS; s = 0.0060;

SECTION C-C: 28' F-F W/MOUNTABLE CURB AND GUTTER (ROLL TYPE);
DEPTH = 0.33 FT (CURB HEIGHT)
F = 0.88 (SUBCRITICAL: NO HYDRAULIC JUMP POTENTIAL)
OKAY TO USE MOUNTABLE CURB AND GUTTER (ROLL TYPE) UPSTREAM FROM AP-4;
USE STANDARD CURB AND GUTTER DOWNSTREAM FROM AP-4

C. AP-8: $Q_{100} = 11.1$ CFS; s = 0.0100;

SECTION A-A: 32' F-F W/MOUNTABLE CURB AND GUTTER (ROLL TYPE);
DEPTH = 0.32 FT (LESS THAN CURB HEIGHT)
F = 1.11 (SUPERCRITICAL: SPECIFIC ENERGY = 0.41 FT < R.O.W. HEIGHT)
OKAY TO USE MOUNTABLE CURB AND GUTTER (ROLL TYPE) UPSTREAM FROM AP-8;
USE STANDARD CURB AND GUTTER DOWNSTREAM FROM AP-8

D. AP-6: $Q_{100} = 37.8$ CFS; s = 0.0050;

SECTION B-B: 28' F-F W/STANDARD CURB AND GUTTER;
DEPTH = 0.62 FT (LESS THAN CURB HEIGHT);
F = 0.92 (SUBCRITICAL: NO HYDRAULIC JUMP POTENTIAL)

E. AP-11: $Q_{100} = 27.3$ CFS; s = 0.0050;

SECTION B-B: 28' F-F W/STANDARD CURB AND GUTTER;
DEPTH = 0.55 FT (LESS THAN CURB HEIGHT);
F = 0.89 (SUBCRITICAL: NO HYDRAULIC JUMP POTENTIAL)

VII. SUMP CONDITION

A. INLET CALCULATIONS

METHODOLOGY FROM U.S.D.O.T. FEDERAL HIGHWAY ADMINISTRATION URBAN DRAINAGE MANUAL (HEC-22)

$Q_{100} = 65.1$ CFS

MAXIMUM DEPTH = CURB HEIGHT = 0.90 FT (MEASURED FROM TC TO GRATE)
6 INLETS TOTAL (4 SINGLE A, 2 DOUBLE C)
ASSUME GRATES 100 % CLOGGED (WORST CASE)
ALL FLOWS WILL ENTER CURB OPENINGS

$Q_i = 0.67hL(2gd_o)^{0.5}$ (EQ. 4-35)

h = CURB OPENING HEIGHT = 0.5 FT
L = LENGTH OF OPENING = 7 FT (PER INLET)
$g = 32.2$ FT/S^2
d_o = EFFECTIVE DEPTH AT CENTER OF OPENING = 0.65 FT
$Q_i = 15.2$ CFS PER INLET
15.2 CFS/INLET x 6 INLETS = 91.2 CFS > Q_{100}

B. EMERGENCY OVERFLOW CALCULATIONS

BECAUSE INLETS ARE LOCATED AT A SUMP CONDITION, AN EMERGENCY OVERFLOW IS PROVIDED WITHIN 67TH STREET. OVERFLOW SPILLWAY CALCULATIONS WERE PERFORMED USING HAESTAD FLOWMASTER 6.0 ASSUMING A BROAD CRESTED WEIR AS FOLLOWS:

MAX HEADWATER ELEVATION = 5115.35 (MAX W.S.L.)
CREST ELEVATION = 5114.50 (FL @ OVERFLOW)
TAILWATER = 5114.82 (FL + 1.00' @ SOUTH BOUNDARY)
CREST SURFACE: PAVED
CREST LENGTH: 30' (STREET WIDTH @ OVERFLOW)
DISCHARGE = 71.3 CFS (> Q_{100})

VIII. OFFSITE DOWNSTREAM STORM DRAIN CALCULATIONS (MANNING'S EQUATION)

A. 42" RCP @ S = 0.0037
n = 0.013

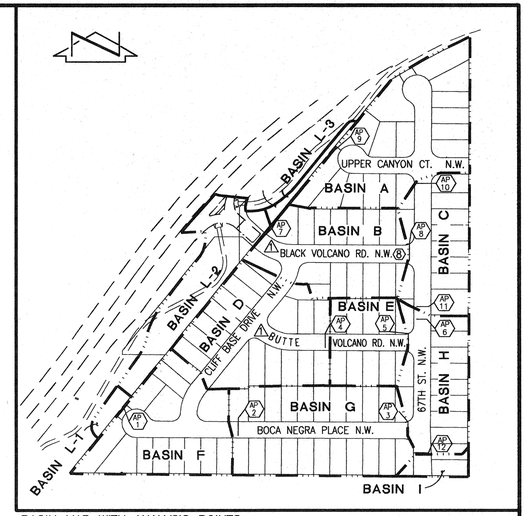
$Q_{100} = 65.1$ CFS

$Q_{CAP} = 65.8$ CFS > Q_{100}

B. 54" RCP @ S = 0.0035
n = 0.013

$Q_{100} = 65.1 + 55.7 = 120.8$ CFS

$Q_{CAP} = 125.1$ CFS > Q_{100}



BASIN MAP WITH ANALYSIS POINTS

SCALE : 1" = 200'±

SITE BASIN CALCULATIONS

BASIN	AREA	%	Q_{100}
A	2.9 AC	17	10.4
B	2.1 AC	12	7.4
C	1.5 AC	09	5.5
D	2.5 AC	15	9.2
E	1.2 AC	07	4.3
F	2.4 AC	14	8.6
G	2.6 AC	15	9.2
H	1.7 AC	10	6.1
I	0.2 AC	01	0.7
TOTAL	17.1 AC	100	61.4

ANALYSIS POINT SUMMARY

ANALYSIS POINT	CONTRIBUTING BASINS	CONTRIBUTING AREA	Q_{100}
AP-1	L-1	0.2 AC	0.4 CFS
AP-2	L-1, F	2.6 AC	9.0 CFS
AP-3	L-1, F,G	5.2 AC	18.2 CFS
AP-4	D	2.5 AC	9.2 CFS
AP-5	D, E	3.7 AC	13.5 CFS
AP-6	L-1, D,E,F,G,H	10.6 AC	37.8 CFS
AP-7	L-2	1.5 AC	3.7 CFS
AP-8	L-2, B	3.6 AC	11.1 CFS
AP-9	L-3	0.1 AC	0.3 CFS
AP-10	L-3, A	3.0 AC	10.7 CFS
AP-11	L-2,L-3,A,B,C	8.1 AC	27.3 CFS

TOTAL FLOW TO STORM DRAIN = AP 6 + AP 11 = 37.8 + 27.3 = 65.1 CFS

08-02-2000
08-29-2000

File Path: D:\DWG\RIN\2000016A\
File Name: 016281.DWG
Plot Date: 08-24-2000
Plot Time: 1:14 pm

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

CALCULATIONS AND BASIN MAP
RINCONADA MESA

DESIGNED BY	G.M.
DRAWN BY	J.Y.R.
APPROVED BY	J.G.M.

NO.	DATE	BY	REVISIONS
1	08/00	G.M.	REVISE STREET NAMES

JOB NO. 2000.016.2
DATE 08-2000
SHEET 2 OF 6

SCALE: 1" = 50'

50' 0 100'
25' 50'

UNSER BLVD. N.W. (156' R.O.W.)

PUBLIC STREET RIGHT-OF-WAY TO BE DEDICATED TO THE CITY OF ALBUQUERQUE

EXISTING STREET

EXISTING TRAIL

APPROXIMATE LOCATION TRAIL CONNECTION AND SOUND WALL (TO BE DESIGNED AND GRADED AT DRC LEVEL)

PUBLIC RIGHT-OF-WAY FOR PUBLIC WATER AND TRAIL ACCESS

PUBLIC RIGHT-OF-WAY N 39°13'54" E 425.94'

SURPLUS CITY PROPERTY TO BE INCORPORATED INTO THIS SUBDIVISION

T.B.M. #1 ELEV.=5133.36

T.B.M. #2 ELEV.=5131.49

T.B.M. #3 ELEV.=5121.89

T.B.M. #4 ELEV.=5113.41

24" SIDEWALK CULVERT INV @ R =22.00

2'-0" WALL OPENING INV @ 22.00

24" SIDEWALK CULVERT INV. 24.00

N39°15'41"E 50.12'

N39°15'26"E 69.35'

N39°10'42"E 547.08'

S00°17'04"W 229.48'

L=1.49'
R=1731.34'
D=00°02'57"
LC=1.49'
LC BRG=S64°20'23"W

L=246.95'
R=2021.11'
D=07°00'02"
LC BRG=S60°51'46"W
LC=246.79'

N 89°29'56" W 1104.88'

S 00°18'59" W 907.65'

BASIN A (Q100=10.4cfs)

BASIN B (Q100=7.4 cfs)

BASIN C (Q100=4.3 cfs)

BASIN D (Q100=9.2 cfs)

BASIN E (Q100=4.3 cfs)

BASIN F (Q100=8.6cfs)

BASIN G (Q100=9.2 cfs)

BASIN H (Q100=7.4 cfs)

BASIN I

BASIN L-1 (Q100=3.4cfs)

BASIN L-2 (Q100=3.7cfs)

BASIN L-3 (Q100=50.3cfs)

UPPER CANYON CT. N.W.

BLACK VOLCANO RD. N.W.

BUTTE VOLCANO RD. N.W.

BOCA NEGRA PLACE N.W.

67th STREET N.W.

66th ST. N.W. (66' ROW)

BASE DR. N.W.

CLIFF

PRIVATE DRAINAGE EASEMENT

PUBLIC DRAINAGE EASEMENT

FUTURE ROAD CONSTRUCTION

WATER SURFACE LIMITS @ MAXIMUM EMERGENCY OVERFLOW @ 5115.35

POINT OF EMERGENCY OVERFLOW @ FL=14.35; MAX. W.S.L.=5115.35 (ELEVATION IS BELOW ALL BUILDING PADS)

LOT 50-P1 PAD@ 17.7
LOT 49-P1 PAD@ 19.7
LOT 48-P1 PAD@ 16.7
LOT 47-P1 PAD@ 17.7
LOT 46-P1 PAD@ 20.0
LOT 45-P1 PAD@ 20.6
LOT 44-P1 PAD@ 19.9
LOT 43-P1 PAD@ 18.4
LOT 42-P1 PAD@ 17.5
LOT 41-P1 PAD@ 17.0
LOT 40-P1 PAD@ 16.6
LOT 39-P1 PAD@ 15.5
LOT 38-P1 PAD@ 15.8
LOT 37-P1 PAD@ 16.3
LOT 36-P1 PAD@ 16.7
LOT 35-P1 PAD@ 17.7
LOT 34-P1 PAD@ 19.2
LOT 33-P1 PAD@ 21.0
LOT 32-P1 PAD@ 21.7
LOT 31-P1 PAD@ 22.6
LOT 30-P1 PAD@ 22.6
LOT 29-P1 PAD@ 22.2
LOT 28-P1 PAD@ 21.8
LOT 27-P1 PAD@ 21.8
LOT 26-P1 PAD@ 22.6
LOT 25-P1 PAD@ 23.2
LOT 24-P1 PAD@ 23.6
LOT 23-P1 PAD@ 24.0
LOT 22-P1 PAD@ 24.3
LOT 21-P1 PAD@ 26.5
LOT 20-P1 PAD@ 27.4
LOT 19-P1 PAD@ 30.00
LOT 18-P1 PAD@ 28.5
LOT 17-P1 PAD@ 28.5
LOT 16-P1 PAD@ 24.0
LOT 15-P1 PAD@ 22.0
LOT 14-P1 PAD@ 28.2
LOT 13-P1 PAD@ 19.4
LOT 12-P1 PAD@ 19.2
LOT 11-P1 PAD@ 19.0
LOT 10-P1 PAD@ 18.8
LOT 9-P1 PAD@ 18.5
LOT 8-P1 PAD@ 18.3
LOT 7-P1 PAD@ 18.1
LOT 6-P1 PAD@ 17.9
LOT 5-P1 PAD@ 17.6
LOT 4-P1 PAD@ 17.4
LOT 3-P1 PAD@ 17.2
LOT 2-P1 PAD@ 16.9
LOT 1-P1 PAD@ 16.5
LOT 106-P1 PAD@ 20.9
LOT 105-P1 PAD@ 21.5
LOT 104-P1 PAD@ 19.6
LOT 103-P1 PAD@ 18.0
LOT 102-P1 PAD@ 17.7
LOT 101-P1 PAD@ 16.7
LOT 100-P1 PAD@ 16.2
LOT 99-P1 PAD@ 16.0
LOT 98-P1 PAD@ 15.7
LOT 97-P1 PAD@ 15.5
LOT 96-P1 PAD@ 15.5
LOT 95-P1 PAD@ 15.7
LOT 94-P1 PAD@ 16.0
LOT 93-P1 PAD@ 16.2
LOT 92-P1 PAD@ 16.5
LOT 91-P1 PAD@ 16.8
LOT 90-P1 PAD@ 17.0
LOT 89-P1 PAD@ 18.0
LOT 88-P1 PAD@ 18.0
LOT 87-P1 PAD@ 20.3
LOT 86-P1 PAD@ 21.4
LOT 85-P1 PAD@ 19.4
LOT 84-P1 PAD@ 19.1
LOT 83-P1 PAD@ 18.8
LOT 82-P1 PAD@ 18.5
LOT 81-P1 PAD@ 18.3
LOT 80-P1 PAD@ 18.1
LOT 79-P1 PAD@ 17.9
LOT 78-P1 PAD@ 17.6
LOT 77-P1 PAD@ 17.4
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LOT 75-P1 PAD@ 16.9
LOT 74-P1 PAD@ 16.5
LOT 73-P1 PAD@ 16.4
LOT 72-P1 PAD@ 16.8
LOT 71-P1 PAD@ 16.4
LOT 70-P1 PAD@ 16.3
LOT 69-P1 PAD@ 16.1
LOT 68-P1 PAD@ 15.8
LOT 67-P1 PAD@ 15.6
LOT 66-P1 PAD@ 15.5
LOT 65-P1 PAD@ 15.5
LOT 64-P1 PAD@ 15.5
LOT 63-P1 PAD@ 15.5
LOT 62-P1 PAD@ 15.5
LOT 61-P1 PAD@ 15.5
LOT 60-P1 PAD@ 15.6
LOT 59-P1 PAD@ 15.8
LOT 58-P1 PAD@ 16.0
LOT 57-P1 PAD@ 16.3
LOT 56-P1 PAD@ 16.5
LOT 55-P1 PAD@ 16.7
LOT 54-P1 PAD@ 16.7
LOT 53-P1 PAD@ 17.0
LOT 52-P1 PAD@ 17.2
LOT 51-P1 PAD@ 17.3

SEE DETAIL FOR STORM INLET DESIGN INFORMATION

NEW 27.3' PUBLIC WATER, PUBLIC SANITARY SEWER AND PUBLIC DRAINAGE EASEMENT

REFER TO SHEET 4 FOR OFF-SITE STORM DRAIN

EXISTING 30' PUBLIC WATER AND PUBLIC SANITARY SEWER EASEMENT

NEW 30' PUBLIC DRAINAGE EASEMENT

NEW 25' PUBLIC WATER AND SANITARY SEWER EASEMENT

STORM DRAIN MANHOLE, TYP.

42" SD

OWNED BY CITY OF ALBUQ.

FILL ALL VOIDS IN 6' CMU WALL TO THE MINIMUM ELEVATION OF 15.6

TRACT A-1, LANDS OF ALBUQUERQUE PUBLIC SCHOOLS (FILED 02-23-1995, 95C-67)

LEGEND

INC	IN CONCRETE
CMU	CEMENT MASONRY UNIT
BW	BARBED WIRE
CLF	CHAINLINK FENCE
EC	ELECTRIC CABINET
EM	ELECTRIC METER
EPB	ELECTRIC PULL BOX
FH	FIRE HYDRANT
MLP	METAL LIGHT POLE
MSG	METAL SIGN, GENERAL
SDT	SMALL CONIFEROUS TREE
SDT	SMALL DECIDUOUS TREE
SGP	STEEL GUARD POST
SCV	SPRINKLER CONTROL VALVE
NG	NATURAL GRADE
TC	TOP OF CURB
TA	TOP OF ASPHALT
EA	EDGE OF ASPHALT
FL	FLOWLINE
TCO	TOP OF CONCRETE
TW	TOP OF WALL
TR	TELEPHONE RISER
TS	TRAFFIC SIGN
WCR	WHEELCHAIR RAMP
WV	WATER VALVE
WHB	WATER HOT BOX
WM	WATER METER
WMH	WATER MANHOLE
WPP	WOOD POWER POLE
WVA	WATER VAULT
PATT CONC.	PATTERNED CONCRETE
SASMH	SANITARY SEWER MANHOLE
SAS	SANITARY SEWER
SD	STORM DRAIN
+ 16.20	EXISTING SPOT ELEVATION
	EXISTING CONTOUR
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	EXISTING TREE, SHRUB LINE
58.45	PROPOSED SPOT ELEVATION
57	PROPOSED CONTOUR
	PROPOSED RETAINING WALL
	PROPOSED CMU WALL (CAN RETAIN 18" MAX)
	PROPOSED SLOPE
	HIGH POINT
	ROOF DRAINAGE
	FLOWLINE
	STANDARD (8") CURB AND GUTTER
	MOUNTABLE CURB AND GUTTER (ROLL TYPE)
	DRAINAGE BASIN BOUNDARY
	PROPOSED CONCRETE RETAINING CURB (CAN RETAIN UP TO 18")
TGW15.8	TOP OF GARDEN WALL ELEV
TRW15.8	TOP OF RETAINING WALL ELEV
AP 1	ANALYSIS POINT
	MAX LIMITS OF EMERGENCY OVERFLOW WATER SURFACE LEVEL

NOTE:
CMU WALL MAY BE CONSTRUCTED IN LIEU OF RETAINING CURB.

NOTE:
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN IS BASED UPON THE BOUNDAY AND TOPOGRAPHIC SURVEY PERFORMED BY JEFF MORTENSEN AND ASSOC. ON AUGUST 26, 1999.

ROUGH GRADING APPROVAL

CITY HYDROLOGY DATE

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER
08-24-2000

DRB PROJECT # 1000352

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

GRADING PLAN
RINCONADA MESA

DESIGNED BY G.M.	NO.	DATE	BY	REVISIONS
DRAWN BY J.Y.R.	1	08/00	G.M.	REVISE STREET NAMES, EXTEND SIDEWALK CULVERT,
APPROVED BY J.G.M.				ADD EMERGENCY WATER LIMITS SHADING, ADD "MIN"
				TO RETAINING WALL ELEVS., ADD CURB ELEVATIONS,
				SHOW FUTURE DRIVEPAD LOCATIONS

JOB NO. 2000.016.2
DATE 08-2000
SHEET 3 OF 6

File Path: E:\MWA\MKM\2000\016\2\
File Name: 0162GR1.DWG
Plot Date: 08-29-2000
Plot Time: 07:57 am