

LEGEND	Existing	Proposed
Spot Elevation	x 42'	43.27
Top of Curb	TC	TC
Flow Line Invert	FL	FL
Finished Floor Elevation FFE		FFE
Contour Line	---	---
Property Line	---	---
Lot Number	3	3
Structure	---	---
Curb and Gutter	---	---
Drainage basin boundary	◇ ◇	◇ ◇
Roof drain		---
Retaining wall		---

PHASE I
PHASE II

SEE WORK ORDER FOR STREET PLAN & PROFILE, DRAINAGE

ALAMOGORDO DRIVE, NW

CORONA DRIVE, NW

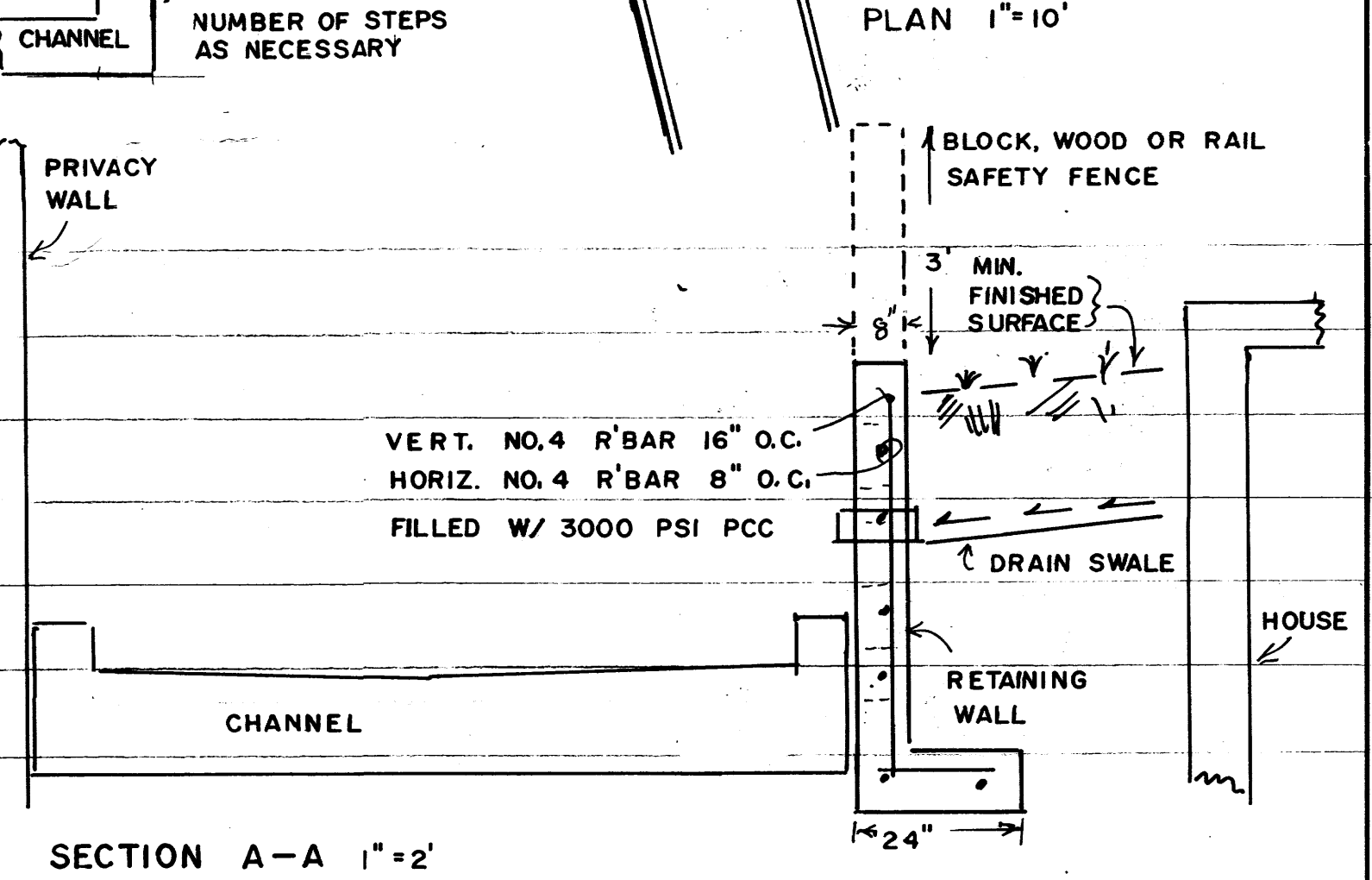
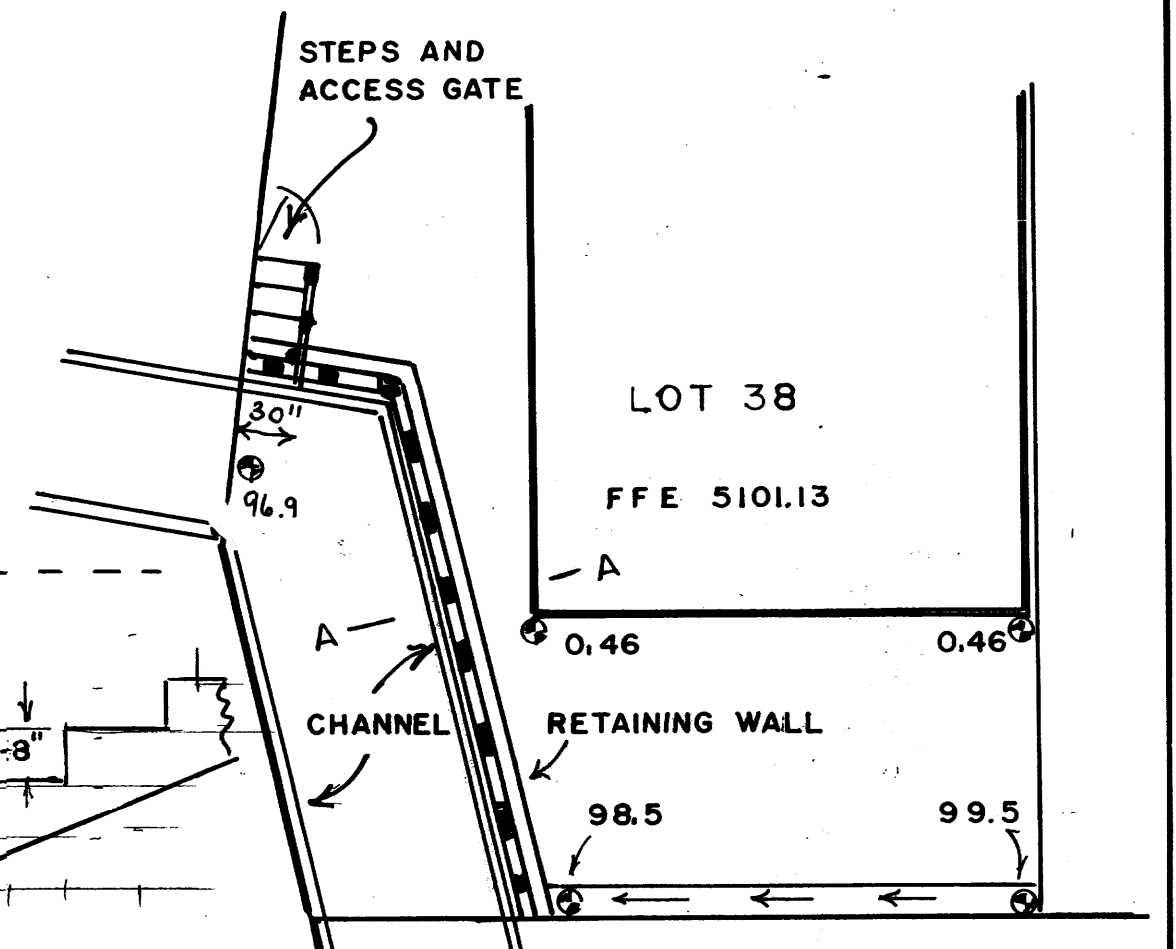
V SIDEWALK CULVERTS (2)
DRW 2236 TWO-24"

V SIDEWALK CULVERTS (3)
THREE-24"

V SIDEWALK CULVERTS (3)
DRW 2236 THREE-24"

Approximate level of standing water for
overflow to occur onto Ouray Road

SEE WO 585482 FOR FINAL GRADE ON STREET
SEE WO 585482 FOR INLET AND STORM DRAIN RATHER THAN SIDEWALK
CULVERTS AND CHANNEL



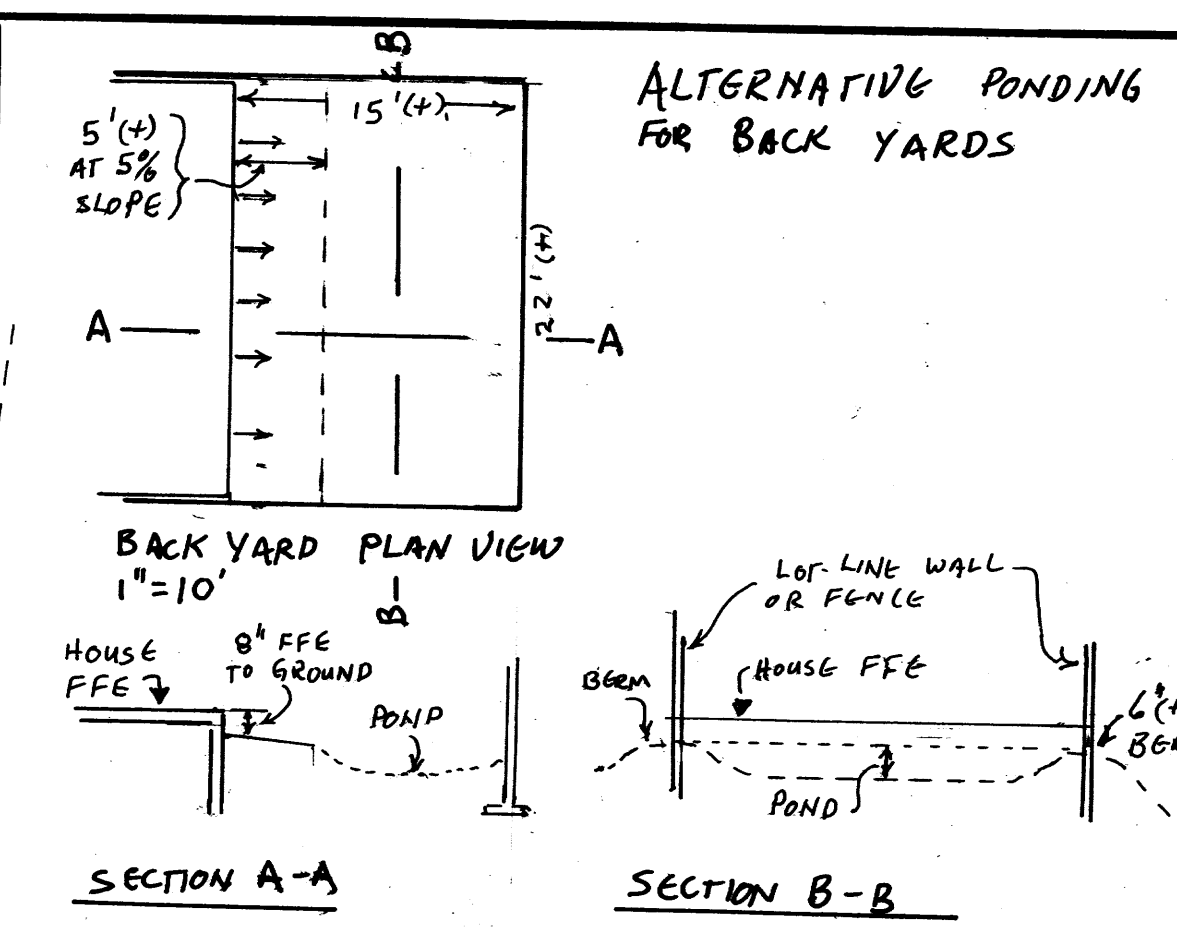
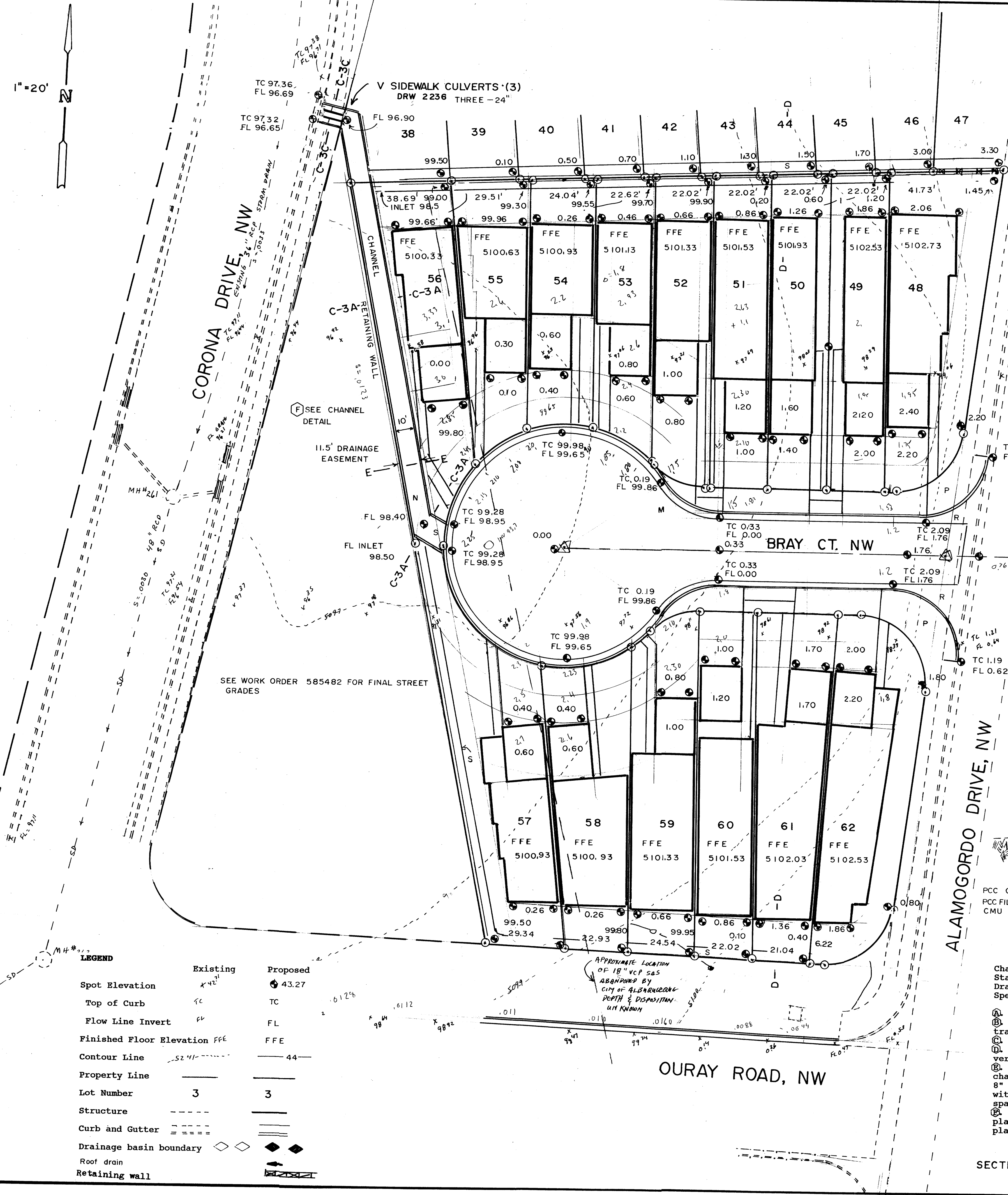
ADD ALAMOGORDO RUNNING OPEN	MRK	DEC 31, 2001
ADD RETAINING WALL, LOT 38	MRK	MAY 26, 2001
CHANGE BACK LOT PAVED SWALE TO 18"	MRK	DEC 11, 1998
ADD SW CULVERT SIZE, PHASE LINE	MRK	JAN 21, 1998
ADD SIDEWALK CULVERT NOTE	MRK	DEC 24, 1997
ADD SIDEWALK CULVERTS	MRK	DEC 4, 1997
Preliminary APPROVALS, REVISIONS	Marvin R Kortum	October 15, 1997
	BY	DATE
MARVIN R. KORTUM, P.E. Civil Engineering NM PE 6519 1605 Speakman Drive, S.E. Albuquerque, New Mexico 87123 (505) 299-0774		

WESTERN BREEZE SUBDIVISION
LOTS 37-47 - VIA SHANE-
GRADING AND DRAINAGE PLAN

WORK ORDER NO.
601581

H11/D23

H-11 4 6



ALTERNATIVE GRADING FOR LOTS 27 TO 62, BACK YARD LOT PONDING.

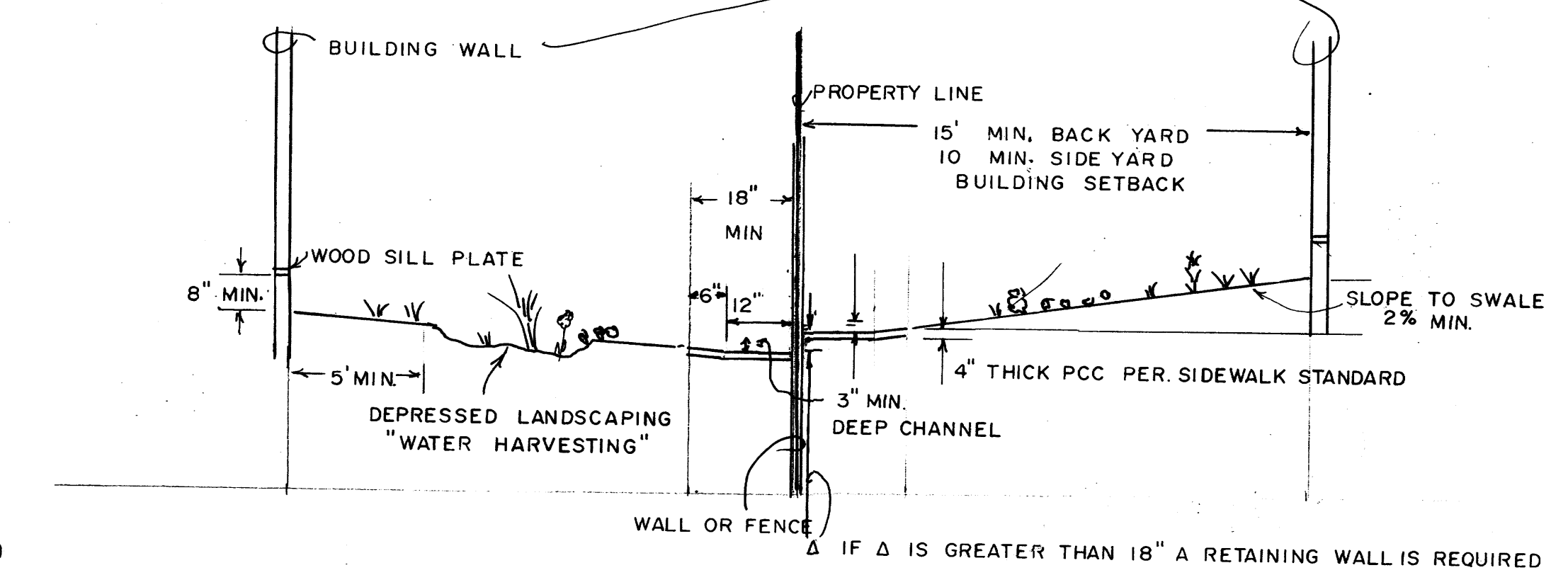
- BACK YARD PAVED SWALES ARE NOT REQUIRED.
- LOTS WITH DIRECT ACCESS FROM THE BACK YARD TO THE STREET OR DRAINAGE CHANNEL WILL BE GRADED SO THAT THE RUNOFF FROM THE LOT WILL FLOW TO THE STREET OR DRAINAGE CHANNEL (LOTS 27, 30, 31, 37, 38, 45, 46 & 47).
- LOTS WITHOUT DIRECT ACCESS FROM THE BACK YARD TO THE STREET OR DRAINAGE CHANNEL SHALL BE GRADED SO AS TO RETAIN THE RUNOFF FROM THE 6 HOUR-100 YEAR STORM. A POND COVERING ONE-THIRD OF THE BACK YARD AREA WOULD BE 1.86 INCHES DEEP, BASED ON 2/3 OF THE LOT BEING LANDSCAPED, AND 1/3 BEING IMPERVIOUS. INITIAL GRADING SHALL INCLUDE LOT LINE BERMS 4 FEET WIDE, WITH THE TOP OF THE LOWEST BERM BEING 8 INCHES (.67 FEET) LOWER THAN THE DESIGN FINISHED FLOOR ELEVATION, AND THE LOW ELEVATIONS IN THE BACK YARD OVER 1/3 OF THE BACK YARD AREA BEING 6 INCHES (.5 FEET) LOWER THAN THE TOP OF THE LOWEST BERM. AS SHOWN ON THE DRAWING, THESE LOTS ARE 28, 29, 32-36, 39-44, 51-55, AND 58-61.

BACK YARD RUNOFF AND PONDING REQUIREMENTS

YARD AREA 22x15' = 330 SF TREATMENT D 33% = 110 SF
TABLE A-8, DPM 22.2 TREATMENT B 67% = 220 SF

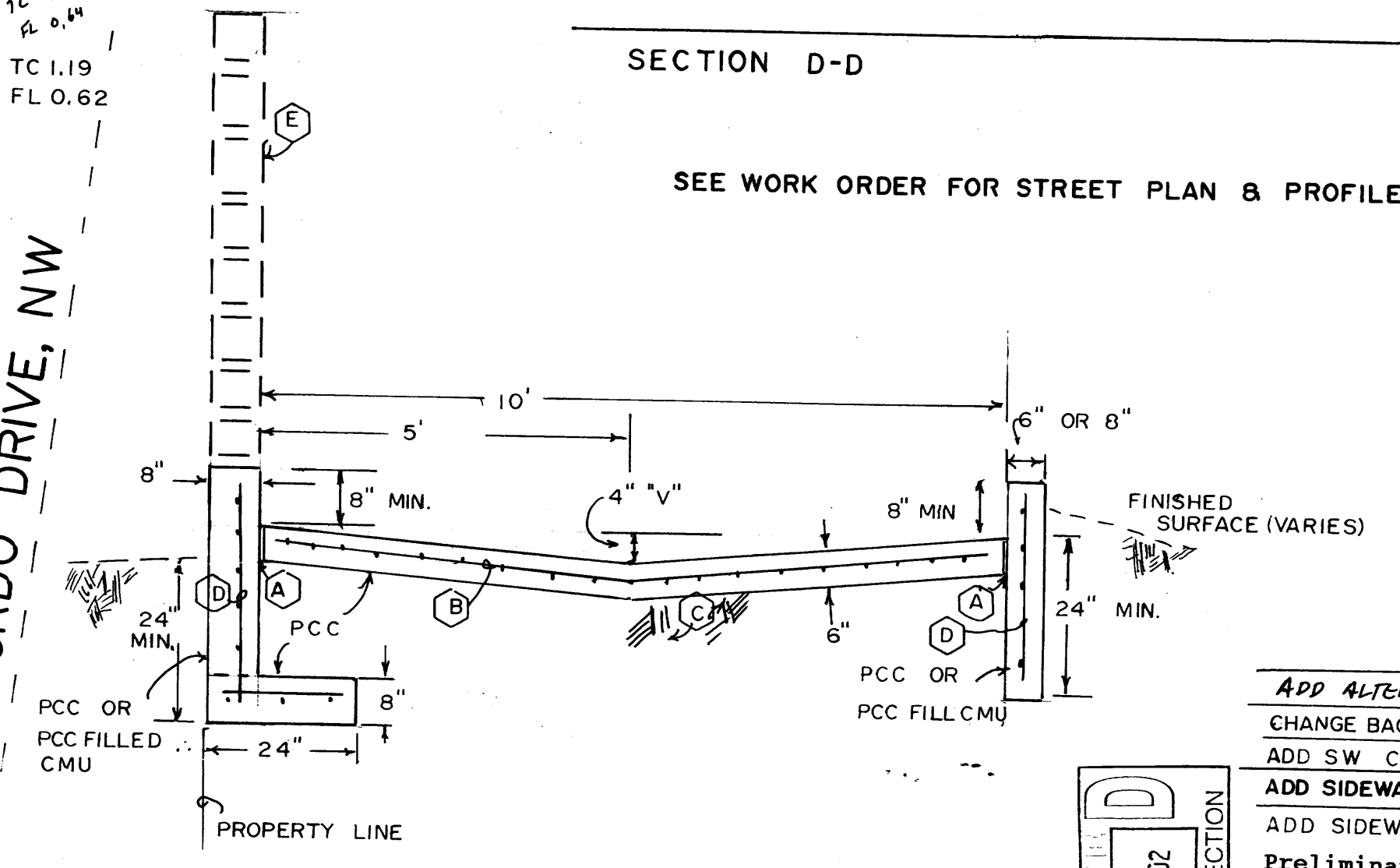
B 220 SF x .53' x 1/2 = 7.72 CF
D 110 SF x .80' x 1/2 = 7.33 CF TOTAL = 15.05 CF

EFFECTIVE POND AREA 1/3 x 330 = 110 SF, DEPTH = 15.05 / 110 = .136' = 1.86"



SEE ALTERNATIVE PONDING FOR BACK YARDS ABOVE

A paved drainage swale will be constructed within the rear and side yards to permit runoff of local precipitation and minor flows. Longitudinal slope of the swale may vary from a minimum slope of .005 feet/foot (.5%) to a maximum slope of 20%. The surface of the swale may be patterned, colored or otherwise treated to blend in with landscaping. The swale capacity must remain sufficient to carry the required flow. Runoff will not include roof runoff because all roof runoff is to be directed to the street.



Channel shall be constructed according to City of Albuquerque Standard Specification and standard drawing 2260, Typical Lining for Drainage Basements, and 2265, Channel Expansion Joint with Sleeper. Specific notes are as follows:

- Expansion joint, see drawing 2260.
- No. 4 Rebars at 6" on center longitudinally and 12" on center transverse.
- 6" Compacted soil, 95% per ASTM D 1557.
- No. 4 Rebars at 8" on center horizontally and 16" on center vertical.
- A block garden wall or other fence may be placed on top of the channel wall to a height of 6 feet. The block wall may be place with 8" or 6" concrete masonry blocks. A reinforced (two no. 4 rebars with portland cement fill) pilaster will be required at a 12 feet spacing for the garden wall.
- Channel expansion joints with sleeper, drawing 2265, shall be placed at 20 feet spacing in the channel. Expansion joints shall be placed in the side walls at the same locations.

ADD ALTERNATIVE PONDING OPTION			
CHANGE BACK LOT PAVED SWALE TO 18"	MRK	DEC 11, 1998	
ADD SW CULVERT SIZES, PHASE LINE	MRK	JAN 21, 1998	
ADD SIDEWALK CULVERT NOTES	MRK	DEC 24, 1997	
ADD SIDEWALK CULVERTS	MRK	DEC 4, 1997	
Preliminary APPROVALS, REVISIONS	Marvin R Kortum	October 15, 1997	DATE
MARVIN R. KORTUM, P.E.			
Civil Engineering NM PE 6519			
1605 Speakman Drive, S.E. Albuquerque, New Mexico 87123 (505) 299-0774			

WESTERN BREEZE SUBDIVISION
LOTS 48-62 - VIA PATRICIA -
GRADING AND DRAINAGE PLAN

WORK ORDER NO.
601581

H11/D23 H-11 5 6

- LEGEND**
- Spot Elevation: Existing (x), Proposed (43.27)
 - Top of Curb: TC
 - Flow Line Invert: FL
 - Finished Floor Elevation: FFE
 - Contour Line: 52.41, 44
 - Property Line
 - Lot Number: 3
 - Structure: ---
 - Curb and Gutter: ---
 - Drainage basin boundary: ◇ ◇
 - Roof drain: ---
 - Retaining wall: ---

PURPOSE:

The purpose of this grading and drainage plan is to obtain approval for a construction of a new subdivision of 62 lots for townhouses.

DISCUSSION:

A. The new subdivision, WESTERN BREEZE, is to be located on the northwest mesa, about one thousand feet east of the intersection of Coors Road and Ouray Road, NW.

B. The area is presently vacant and unimproved. History of past development on the site is unknown, but it appears that surface is relatively undisturbed from its natural condition. The March 1980 City of Albuquerque aerial photograph and topographic map shows much of the vegetation that presently exists on the site. The most significant surface disturbances occur within the easement for the overhead high voltage electrical power transmission lines which cross the site near the mid-point. There is significant surface trash and piles of soil and gravel at scattered places throughout the site. These materials must be removed or carefully placed to prevent interference with future construction.

DRAINAGE CONSIDERATIONS:

A. The site is not located within the limits of the 100-year flood, see Flood Insurance Rate Map, panel 327 of 825, effective date, September 20, 1996. Drainage from the site flows to the sub-surface storm drain within the Corona Drive right-of-way. The Corona Drive storm system drains into the Rio Grande adjacent to the Interstate 40 bridge over the Rio Grande.

B. The site itself is a small drainage basin, with very little runoff due to the numerous depressions and a lower surface elevation than the Corona Drive curb. What little runoff there is would leave the basin by sheet flow to the west, entering the right-of-way of Corona Drive over the existing sidewalk and curb. The small basin of about 4.6 acres is defined by the west curb and sidewalk of Alamogordo Drive along the east; the south curb and gutter of Quail Road along the north; the asphalt surface without curb and gutter along the Ouray Road right-of-way on the south; and the east curb and gutter of Corona Drive along the northern two thirds of the west side. The southern one third of the west side is a vacant lot between the site and the curb and gutter of Corona Drive.

C. The proposed development of the subdivision will entail very little change to the surface. There will be three feet or more of fill over the west and south portion of the site, with some cut along the eastern portion of the site. Runoff will be mostly directed to the new streets and turn-arounds to be constructed, with runoff from the street entering the Corona Drive right-of-way over surface channels, entering the east gutter of Corona Drive, then flowing into the existing catch basins for the sub-surface storm drain system. All roof and driveway runoff will be directed to the streets. Provision for drainage of the back of the lots which do not have surface access to the front of the lots will be by easements across adjacent lots toward the streets.

D. Estimates of land use are based on the proposed plat and expected building configurations. Building configurations are based on the maximum permitted size using the required setbacks (20 feet from the front lot line, 15 feet from the rear lot line, 10 feet from side lot lines adjacent to public right-of-way, and 10 feet between blocks of attached buildings, with no more than 8 buildings being in an attached block. Building sizes are also limited by the requirement that there be a minimum of 750 square feet of usable open space on each lot, the usable open space being defined in Chapter 14 of the City of Albuquerque Zoning, Planning and Building Code as follows:

"USABLE OPEN SPACE. An area on the same lot as a dwelling, in relation to which it serves to permanently provide light and air, as well as visual, psychological, and recreational needs for open space. Usable open space may include, but is not limited to lawns, decorative plantings, native plants, open balconies, covered patios open on at least two sides, walkways, active and passive recreational areas, fountains, swimming pools, wooded areas and water courses. Usable open space does not include public right-of-way, parking lots, off street parking, driveways, other private vehicular surfaces, or buildings other than swimming pool rooms. Such space shall be available for entry and use by the residents involved."

Table A (tables A-1, A-2 and A-3) shows the building sizes and other structures for each lot used to estimate the runoff for the subdivision. Actual house configurations may vary as to shape and location, but total ground cover area can not be significantly greater without a variance or waiver.

E. Estimates of the areas contributing to the runoff basin are shown in the attached tables B-1, B-2 and B-3 for the three sub-basins. There is very little mixing of runoff between the three sub-basins because of the separation wall between the three areas. Table B-4 shows estimated runoff from the back and side yards of connecting lots which will have a common drainage easement.

F. Surface channels will be used to direct the flow from each basin to the gutter on Corona Drive, and to the catch basins within the immediate vicinity of each channel. The depth of flow within these channels at various section are shown on the tables C-1 through C-3C, and D. The maximum estimated depth is from one to two inches, so a channel with an eight inches high curb will be adequate to carry the estimated runoff plus any sediment or trash which may accure without serious threat or hazard to down stream properties. Table D shows the flow within the backyard drainage swale, showing the depth of flow at the minimum allowable slope of .005 feet/feet. The actual runoff in the channel will be less in the upper reaches and in the drainage easements where fewer houses are contributing. The swale has the required capacity, to include provision of about 400 percent for silting and sedimentation.

G. No off-site flows enter the property. The east edge of the property is near the ridge line of the natural levee formed along the upper bank of the Rio Grande. The paved street with 8" high curbs and gutters along the Alamogordo Drive right-of-way directs what little runoff which does come from the east away from the site, either down Quail Road on the north side, or down Ouray Road on the south side of the subdivision site.

SOILS:

Soils on the subdivision are identified by reference C as Madurez-Wink association, gently sloping. The soils are suited for residential buildings and associated infrastructure. The soils have moderate shrink swell and low strength for streets, so imported material may be required for streets and driveways. Soils may be susceptible to consolidation, particularly when wetted, so care must be taken to direct runoff and landscape watering away from building foundations.

CONCLUSIONS:

A. The proposed construction is not within a designated 100 year floodplain.

B. Construction as proposed will not increase the hazard from flooding to downstream facilities.

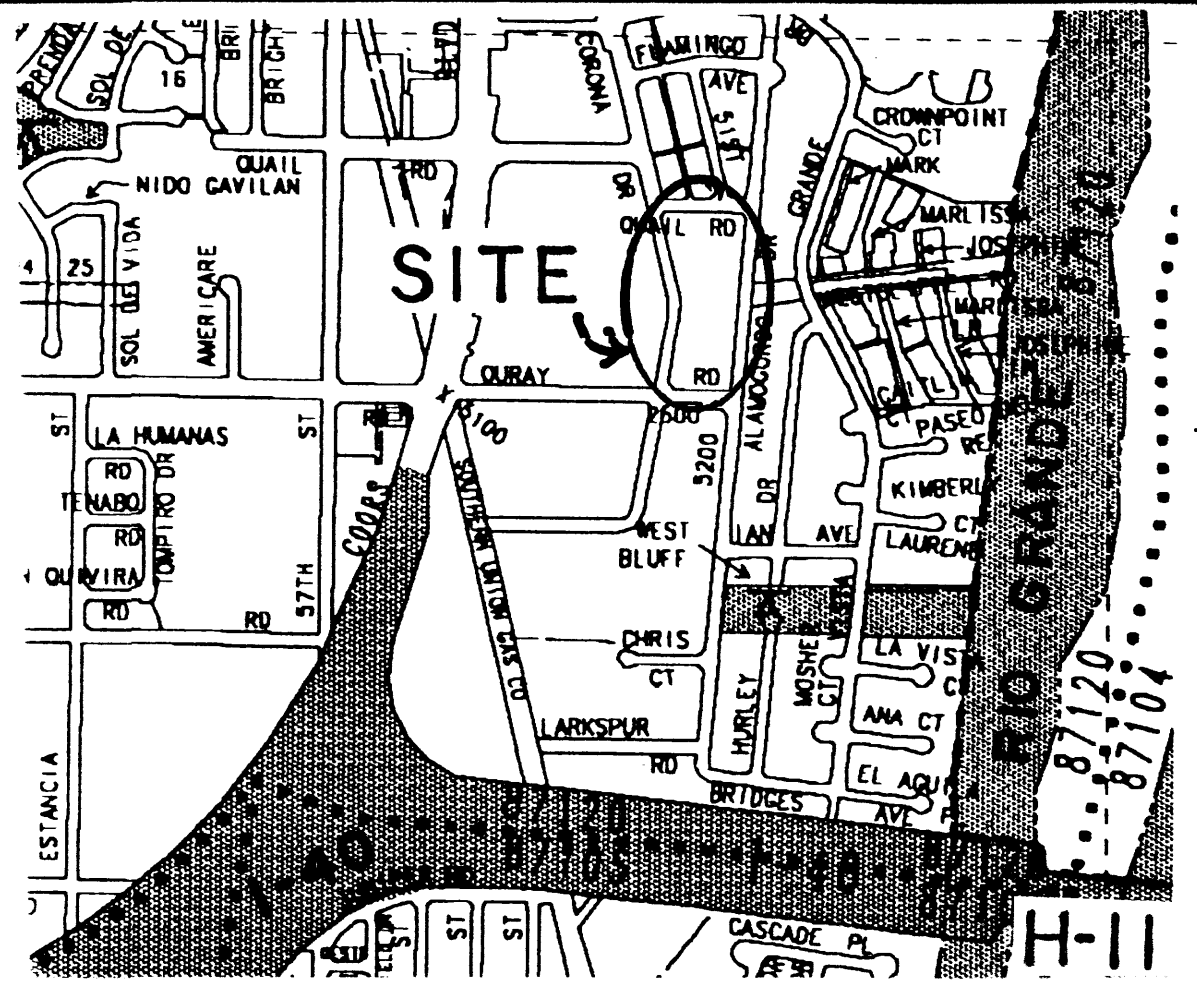
C. The proposed grading and construction will protect the property from any off-site or on-site runoff.

REFERENCES:

A. Standard Specifications for Public Works Construction, City of Albuquerque.

B. Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque...Bernalillo County...AMAFCA, January 1993.

C. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, USDA-SCS.



LEGAL DESCRIPTION
WESTERN BREEZE SUBDIVISION, IN SECTION 11, T10N, R2E, NMPM, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

Topography by Marvin R Kortum, June, 1997.

BENCHMARK: ACS 17-H11, located in the SW corner of the intersection of Alamogordo Drive and Quail Road, NW. Elevation 5104.760

NOTES: TABLE B

- Runoff factors from Section 22.2, DPM, January, 1993
- Land use descriptions: A. Uncompacted soil
B. Landscaped
C. Compacted soil
D. Impervious areas
- Peak runoff = Area (acres) x factor (cfs/acre) = CFS
- Total runoff = Area (SF) x factor (inches) / 12 (inches/foot) = CF
- Peak and total runoff is based on 6 hour, 100 year frequency storm
- Line 5 estimates additional contribution for 10 day storm, equation a-9, Section 22.2, DPM [V10 day=V360+ADx(P10 day-P360)/12]; P10 day=3.67'', P360=2.20''so P10-P360=1.47

TABLE C

- Ft(vertical)/1000 Ft(horizontal)
- Ft(horizontal)/1 Ft(vertical)
- Froude No. (Fn)=velocity/(g x area/top width)^{3/5}
- Sequent depth for rectangular level channel, y2=((y1/2)x(((1+8 x Fn²)-.5) -.1)
- Sequent depth for sloping rectangular channel y2=((y1/2)/cos slope angle) x (((1+8(((10^{-0.27} x slope angle))² x Fn²)-.5-1)
- Correction factor for trapezoidal channel, figure 3.4
- Reference: Richard H French, Open Channel Hydraulics, 1985

WESTERN BREEZE SUBDIVISION DECEMBER 11, 1998

Ditch capacities of portland cement concrete channel.
Q=Area x Velocity; Velocity=1.486/n x (Rh)^{2/3}.6667 x (s)^{1/3}.5

Mannings	Ditch	Side	Bottom	Depth	Top	Area	Wetted	Hydraulic	Velocity	Capacity	Froude #
n	Slope	side 1	side 2	width	width	SF	Perimeter	Radius	FT	CFS	V/(g/L) ^{1/3} .5
(A)	(B)	FT	FT	FT	FT	FT	FT	FT			(C)

TABLE C-4, FOR CHANNEL WHICH DRAINS BACK YARDS CHANNEL SECTION AT SECTION C-4--C-4, PORTLAND CEMENT CONCRETE CHANNEL

1	0.013	3.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	1.641	0.349	0.82
2	0.013	5.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	2.119	0.450	1.06
3	0.013	10.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	2.996	0.636	1.50
4	0.013	20.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	4.237	0.900	2.13
5	0.013	50.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	6.700	1.423	3.36
6	0.013	100.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	9.475	2.013	4.75
7	0.013	200.000	2	0	1.0	0.18	1.4	0.2	1.582	0.134	13.400	2.846	6.72

REQUIRED Q100 = .3 CFS

CHANGE CHANNEL SECTION & TABLE D-D FOR 18" SWALE DEC11,1998

NO CHANGE SH.1, ADD PHASE LINE SH.3 MRK JAN 21, 1998

NO CHANGE MRK DEC 24, 1997

ADD SIDEWALK CULVERTS MRK DEC 4, 1997

Preliminary APPROVALS, REVISIONS Marvin R Kortum October 15, 1997 BY DATE

MARVIN R. KORTUM, P.E.
Civil Engineering
NM PE 6519
1605 Speakman Drive, S.E.
Albuquerque, New Mexico 87123
(505) 299-0774

WESTERN BREEZE SUBDIVISION
LOTS 1-62
RUNOFF AND DRAINAGE CALCULATIONS

DEC 14 1998
HYDROLOGY

H11/D23

H-11 16

DECEMBER 4, 1997

RUNOFF FOR WESTERN BREEZE SUBDIVISION
TOTAL AREA IS 4.6082 ACRES.

TABLE B-1

Runoff Estimate: For on-site Basin B-1 (LEVY COURT) of 1.7733 acres

Runoff Factors		CURRENT USE		PROPOSED USE	
Land use	Peak	Total	Area Percent	Peak	Total
	CFS/acre	inches	SF	CFS	CF
1 A	1.29	0.44	77244.53	1.000	2.3
2 B	2.03	0.67	0.00	0.000	0.0
3 C	2.87	0.99	0.00	0.000	0.0
4 D	4.37	1.97	0.00	0.000	0.0
5	1.47				0.0
TOTALS			77244.53	1.000	2.3
			1.7733 acre		1.7733 acre

TABLE B-2

Runoff Estimate: For On-site Basin B-2 (WESTERN BREEZE COURT) of 1.5347 acres.

Runoff Factors		CURRENT USE		PROPOSED USE	
Land use	Peak	Total	Area Percent	Peak	Total
	CFS/acre	inches	SF	CFS	CF
1 A	1.29	0.44	66849.68	1.000	2.0
2 B	2.03	0.67	0.00	0.000	0.0
3 C	2.87	0.99	0.00	0.000	0.0
4 D	4.37	1.97	0.00	0.000	0.0
5	1.47				0.0
TOTALS			66849.68	1.000	2.0
			1.5347 acre		1.5346 acre

TABLE B-3

Runoff Estimate: For On-site Basin B-3 (BRAY COURT) of 1.3002 acres.

Runoff Factors		CURRENT USE		PROPOSED USE	
Land use	Peak	Total	Area Percent	Peak	Total
	CFS/acre	inches	SF	CFS	CF
1 A	1.29	0.44	56635.32	1.000	1.7
2 B	2.03	0.67	0.00	0.000	0.0
3 C	2.87	0.99	0.00	0.000	0.0
4 D	4.37	1.97	0.00	0.000	0.0
5	1.47				0.0
TOTALS			56635.32	1.000	1.7
			1.3002 acre		1.3002 acre

TABLE B-4

Runoff Estimate: For On-site Basin of maximum back yard runoff of .1205 acres (lots 1-13 or 14-26).

Runoff Factors		CURRENT USE		PROPOSED USE	
Land use	Peak	Total	Area Percent	Peak	Total
	CFS/acre	inches	SF	CFS	CF
1 A	1.29	0.44	5250.00	1.000	0.2
2 B	2.03	0.67	0.00	0.000	0.0
3 C	2.87	0.99	0.00	0.000	0.0
4 D	4.37	1.97	0.00	0.000	0.0
5	1.47				0.0
TOTALS			5250.00	1.000	0.2
			0.1205 acre		0.1205 acre

TABLE C

CHANNEL CAPACITIES
WESTERN BREEZE SUBDIVISION
DECEMBER 4, 1997

Ditch capacities of portland cement concrete channel.
Q=Area x Velocity; Velocity=1.486/n x (Rh)^{2/3}.6667 x (s)^{1/3}.5

Mannings	Ditch	side	Bottom	Depth	Top	Area	Wetted	Hydraulic	
n	Slope	slope	width	width	width	SF	Perimeter	Radius	
	(A)	(B)	FT	FT	FT		FT	FT	
TABLE C-1, FOR CHANNEL FROM LEVY CUTOFF									
CHANNEL SECTION AT SECTION C-1-C-1, PORTLAND CEMENT CONCRETE CHANNEL									
0.013	77.500	0	6.0	0.05	6.0	0.3	6.100	0.049	
0.013	77.500	0	6.0	0.10	6.0	0.6	6.200	0.097	
0.013	77.500	0	6.0	0.15	6.0	0.9	6.300	0.143	
0.013	77.500	0	6.0	0.20	6.0	1.2	6.400	0.187	
0.013	77.500	0	6.0	0.67	6.0	4.0	7.340	0.548	
							REQUIRED Q =	1.7	

REQUIRED Q100 = 7.1 CFS

TABLE C-2, FOR CHANNEL FROM WESTERN BREEZE COURT CHANNEL SECTION AT SECTION C-2--C-2, PORTLAND CEMENT CONCRETE CHANNEL

1	0.013	117.000	0	6.0	0.05	6.0	0.3	6.100	0.049	5.248	1.574	4.14	0.27	0.31	0.23
2	0.013	117.000	0	6.0	0.10	6.0	0.6	6.200	0.097	8.241	4.945	4.59	0.60	0.69	0.51
3	0.013	117.000	0	6.0	0.15	6.0	0.9	6.300	0.143	10.684	9.616	4.86	0.96	1.11	0.81
4	0.013	117.000	0	6.0	0.20	6.0	1.2	6.400	0.187	12.808	15.369	5.05	1.33	1.54	1.12
5	0.013	117.000	0	6.0	0.67	6.0	4.0	7.340	0.548	26.173	105.214	5.63	5.01	5.78	4.22

REQUIRED Q100 = 6.1 CFS

TABLE C-3, FOR CHANNEL FROM BRAY COURT CHANNEL SECTION AT SECTION C-3A--C-3A, PORTLAND CEMENT CONCRETE CHANNEL

1	0.013	20.000	0	10.0	0.10	10.0	1.0	10.200	0.098	3.437	3.437	1.92	0.23	0.26	0.19
2	0.013	20.000	0	10.0	0.12	10.0	1.2	10.240	0.117	3.871	4.645	1.97	0.28	0.32	0.24
3	0.013	20.000	0	10.0	0.13	10.0	1.3	10.260	0.127	4.078	5.301	1.99	0.31	0.36	0.26
4	0.013	20.000	0	10.0	0.20	10.0	2.0	10.400	0.192	5.386	10.771	2.12	0.51	0.59	0.43
5	0.013	20.000	0	10.0	0.67	10.0	6.7	11.340	0.591	11.382	76.260	2.45	2.01	2.33	1.70

REQUIRED Q100 = 5.1 CFS

CHANNEL SECTION AT SECTION C-3B--C-3B, PORTLAND CEMENT CONCRETE CHANNEL

1	0.013	10.000	0	10.0	0.10	10.0	1.0	10.200	0.098
2	0.013	10.000	0	10.0	0.15	10.0	1.5	10.300	0.146
3	0.013	10.000	0	10.0	0.16	10.0	1.6	10.320	0.155
4	0.013	10.000	0	10.0	0.20	10.0	2.0	10.400	0.192
5	0.013	10.000	0	10.0	0.67	10.0	6.7	11.340	0.591

TABLE A OCTOBER 15, 1997
WESTERN BREEZE SUBDIVISION
LOT SIZE AND LAND USE

TABLE A-1: VIA KEITH *LEVY COURT*

LOT #	LOT AREA	GARAGE SIZE			DRIVEWAY SIZE			SIDEWALK, STREET TO HOUSE			HOUSE SIZE (RECTANGLE EQUIVALENT)			HOUSE AREA (TOTAL)	LOT OPEN AREA -GARAGE-DRIVE	ADDITIONAL IMPERVIOUS OPEN AREA	IMPERVIOUS AREA LAND TR D	LANDSCAPED AREA LAND TR B	
		SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF					SF	SF
1	2640.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	28.00	24.00	672.00				848.00	
2	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	25.25	30.00	757.50	1308.00	300.00	1792.00	757.50	
3	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	24.93	31.00	772.83	782.50	300.00	1877.50	772.83	
4	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	24.65	32.00	788.80	767.17	300.00	1892.83	767.17	
5	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	24.37	32.40	789.59	751.20	300.00	1908.80	751.20	
6	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	24.10	32.70	788.07	750.41	300.00	1909.59	750.41	
7	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	23.84	33.00	786.72	751.93	300.00	1906.72	751.93	
8	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	23.59	33.40	787.91	752.09	300.00	1907.91	752.09	
9	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	18.34	37.00	678.58	861.42	300.00	1798.58	861.42	
10	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	40.00	160.00	18.27	40.00	730.80	809.20	300.00	1850.80	809.20	
11	2200.00		17.00	20.00	340.00	16.00	22.00	352.00	4.00	33.00	132.00	26.60	18.00	478.80	875.60	300.00	1756.40	875.60	
12	2200.00		17.00	20.00	340.00	16.00	20.00	320.00	4.00	22.00	88.00	28.84	18.00	519.12	831.44	300.00	1756.56	831.44	
13	2200.00		17.00	20.00	340.00	16.00	26.00	416.00	4.00	27.00	108.00	24.00	26.00	624.00	820.00	300.00	1798.00	820.00	
14	3001.54		17.00	20.00	340.00	16.00	34.00	544.00	4.00	70.00	280.00	32.00	18.00	576.00	1541.54	300.00	2040.00	1541.54	
15	2884.01		17.00	20.00	340.00	16.00	26.00	416.00	4.00	57.00	228.00	20.00	17.00	340.00	1788.01	300.00	1624.00	1788.01	
16	2200.00		17.00	20.00	340.00	16.00	21.00	336.00	4.00	27.00	108.00	27.00	18.00	486.00	804.00	300.00	1804.00	804.00	
17	2200.00		17.00	20.00	340.00	16.00	33.00	528.00	4.00	25.00	100.00	25.58	22.00	562.76	750.36	300.00	1849.64	750.36	
18	2200.00		17.00	20.00	340.00	16.00	31	496.00	4.00	43.00	172.00	18.36	36.00	660.96	703.04	300.00	1968.96	703.04	
19	2200.00		17.00	20.00	340.00	16.00	30	480.00	4.00	40.00	160.00	18.58	36.00	668.88	871.12	300.00	1798.88	871.12	
20	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	23.84	33.00	786.72	753.28	300.00	1906.72	753.28	
21	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.10	32.70	788.07	751.93	300.00	1908.07	751.93	
22	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.37	32.30	787.15	752.85	300.00	1907.15	752.85	
23	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.64	32.00	788.48	751.52	300.00	1908.48	751.52	
24	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.93	31.00	772.83	767.17	300.00	1812.83	767.17	
25	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	25.23	30.00	756.90	783.10	300.00	1876.90	783.10	
26	2720.04		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	20.00	29.00	580.00	1480.04	300.00	1700.00	1480.04	
TOTAL	59645.59				8840.00			9168.00			4016.00			18325.38	23312.21	7800.00	48149.38	11494.21	

LOTS 1-26, VIA-KEITH *LEVY COURT*

RIGHT-OF-WAY				17598.94
TOTAL PERVIOUS (LAND TREATMENT B) SF				660.00
TOTAL IMPERVIOUS (LAND TREATMENT D) SF				16938.94
LAND USE SUMMARY	SF	ACRES	PERCENT	
PRIVATE AREA	59645.59	1.37	77.22%	
PUBLIC R. O. W.	17598.94	0.40	22.78%	
TOTAL AREA	77244.53	1.77	100.00%	
LAND TREATMENT B	12156.21	0.28	15.74%	
LAND TREATMENT D	65088.32	1.49	84.26%	
TOTAL	77244.53	1.77	100.00%	

Estimates of land use are based on the proposed plat and expected building configurations. Building configurations are based on the maximum permitted size using the required setbacks (20 feet from the front lot line, 15 feet from the rear lot line, 10 feet from side lot lines adjacent to public right-of-way, and 10 feet between blocks of attached buildings, with no more than 8 buildings being in an attached block. Building sizes are also limited by the requirement that there be a minimum of 750 square feet of usable open space on each lot, the usable open space being defined in Chapter 14 of the City of Albuquerque Zoning, Planning and Building Code as follows:

"USABLE OPEN SPACE. An area on the same lot as a dwelling, in relation to which it serves to permanently provide light and air, as well as visual, psychological, and recreational needs for open space. Usable open space may include, but is not limited to lawns, decorative plantings, native plants, open balconies, covered patios open on at least two sides, walkways, active and passive recreational areas, fountains, swimming pools, wooded areas and water courses. Usable open space does not include public right-of-way, parking lots, off street parking, driveways, other private vehicular surfaces, or buildings other than swimming pool rooms. Such space shall be available for entry and use by the residents involved."

Table A (tables A-1, A-2 and A-3) shows the building sizes and other structures for each lot used to estimate the runoff for the subdivision. Actual house configurations may vary as to shape and location, but total area covered with impervious materials can not be greater without a variance or waiver.

TABLE A-2: VIA-SHANE *WESTERN BREEZE COURT*

LOT #	LOT AREA	GARAGE SIZE			DRIVEWAY SIZE			SIDEWALK, STREET TO HOUSE			HOUSE SIZE (RECTANGLE EQUIVALENT)			HOUSE AREA (TOTAL)	LOT OPEN AREA -GARAGE-DRIVE	ADDITIONAL IMPERVIOUS OPEN AREA	IMPERVIOUS AREA LAND TR D	LANDSCAPED AREA LAND TR B	
		SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF	AREA SF	WIDE LF	LENGTH LF					SF	SF
27	2600.00		17.00	20.00	340.00	16.00	22	352.00	4.00	37.00	148.00	20.00	26.00	520.00	1388.00	300.00	1660.00	940.00	
28	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.63	32.00	788.16	751.84	300.00	1908.16	751.84	
29	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	24.36	32.40	789.26	750.74	300.00	1909.26	750.74	
30	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	19.09	36.00	687.24	852.76	300.00	1807.24	852.76	
31	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	18.83	36.00	677.88	862.12	300.00	1797.88	862.12	
32	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	23.58	33.50	789.93	750.07	300.00	1909.93	750.07	
33	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	23.34	33.80	786.89	751.11	300.00	1908.89	751.11	
34	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	24.00	96.00	24.83	24.00	595.92	818.80	300.00	1777.20	818.80	
35	2200.00		17.00	20.00	340.00	16.00	20	320.00	4.00	26.00	104.00	28.94	18.00	520.92	828.04	300.00	1775.96	828.04	
36	2200.00		17.00	20.00	340.00	16.00	22	352.00	4.00	70.00	280.00	18.00	28.00	504.00	824.00	300.00	1956.00	824.00	
37	3004.04		17.00	20.00	340.00	16.00	32	512.00	4.00	70.00	280.00	18.00	28.00	504.00	1648.04	300.00	1936.00	1648.04	
38	3879.00		17.00	20.00	340.00	16.00	33	528.00	4.00	40.00	160.00	26.00	37.00	962.00	2049.00	300.00	2280.00	2049.00	
39	2200.00		17.00	20.00	340.00	16.00	23	368.00	4.00	40.00	160.00	24.23	30.60	741.44	750.56	300.00	1909.44	750.56	
40	2200.00		17.00	20.00	340.00	16.00	23	368.00	4.00	58.00	232.00	24.59	30.10	740.16	751.84	300.00	1980.16	751.84	
41	2245.54		17.00	20.00	340.00	16.00	26	416.00	4.00	58.00	232.00	22.02	33.50	737.67	751.87	300.00	2025.67	751.87	
42	2461.99		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	22.02	47.70	1050.35	751.64	300.00	2170.35	751.64	
43	2484.92		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	22.02	48.80	1074.58	750.34	300.00	2194.58	750.34	
44	2503.67		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	22.02	49.60	1092.19	751.48	300.00	2212.19	751.48	
45	2523.98		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	17.02	57.00	970.14	893.84	300.00	2090.14	893.84	
46	3078.99		17.00	20.00	340.00	16.00	20	320.00	4.00	43.00	172.00	20.00	58.00	1160.00	1258.99	300.00	2292.00	1258.99	
47	3608.78		17.00	20.00	340.00	16.00	20	320.00	4.00	40.00	160.00	19.00	58.00	1102.00	1846.78	300.00	2222.00	1846.78	
TOTAL	52590.91				7140.00			7376.00			3624.00			17293.05	20781.86	6300.00	41733.05	10857.86	

LOTS 27-47, VIA-SHANE *WESTERN BREEZE COURT*

RIGHT-OF-WAY				14257.77
TOTAL PERVIOUS (LAND TREATMENT B) SF				396.00
TOTAL IMPERVIOUS (LAND TREATMENT D) SF				13861.77
LAND USE SUMMARY	SF	ACRES	PERCENT	
PRIVATE AREA	52590.91	1.21	78.67%	
PUBLIC R. O. W.	14257.77	0.33	21.33%	
TOTAL AREA	66848.68	1.53	100.00%	
LAND TREATMENT B	11253.86	0.26	16.83%	
LAND TREATMENT D	55594.82	1.28	83.17%	
TOTAL	66848.68	1.53	100.00%	

1"=20'

LEGEND	Existing	Proposed
Spot Elevation	X	43.27
Top of Curb	TC	TC
Flow Line Invert	FL	FL
Finished Floor Elevation	FFE	FFE
Contour Line	52.41	44
Property Line		
Lot Number	3	3
Structure	---	---
Curb and Gutter	---	---
Drainage basin boundary	◇	◇
Roof drain		
Retaining wall		

- NOTES
- EXISTING STANDARD CURB AND GUTTER.
 - EXISTING WHEEL CHAIR RAMP.
 - EXISTING VALLEY GUTTER.
 - EXISTING ASPHALT SURFACE.
 - EXISTING PORTLAND CEMENT SIDEWALK.
 - EXISTING CATCH BASIN INLET.

G. NO WALLS, FENCE, LANDSCAPING OR OTHER ITEMS OR STRUCTURES WILL BE PLACED WITHIN THE 35' SIGHT TRIANGLE ON THE CORNER LOTS.

J. ALL HOUSE AND GARAGE ROOF TO DRAIN TO THE STREET

K. HOUSE AND GARAGE SIZES SHOWN ON THE DRAWING ARE GENERAL AND ARE BASED ON THE MAXIMUM ALLOWABLE GROUND PRINT FOR THE FIRST STORY OF THE BUILDING. ROOF OR OTHER OVERHANGS ARE NOT SHOWN. A MINIMUM OF 750 SF OF USABLE OPEN SPACE IS REQUIRED FOR EACH LOT, AND BUILDING OUTLINES SHOWN ALLOW FOR THE 750 SF OF OPEN SPACE. BUILDING SETBACKS SHOWN ARE BASED ON REQUIRED SETBACKS FOR THE ZONING. AREAS NOT SHOWN AS IMPERVIOUS AREAS (HOUSE, GARAGE, DRIVEWAY, SIDEWALKS, ADDITIONAL 300 SF FOR PATIO, ETC.) ARE CONSIDERED LANDSCAPED. ALL LANDSCAPING MUST BE PERVIOUS. IF GROUND COVERS SUCH AS GRAVEL, BARK OR OTHER MATERIAL IS USED AND A FABRIC IS USED, THE FABRIC MUST BE A PERVIOUS MATERIAL, NOT A PLASTIC SHEETING.

L. FINISHED FLOOR ELEVATIONS (FFE) SHOWN ON THE DRAWING ARE THE TOP SURFACE OF THE SLAB, CONSIDERING SLAB ON GRADE CONSTRUCTION. THE FINISHED EARTHWORK ELEVATION SHOULD BE BASED ON THE THICKNESS OF THE SLAB TO BE USED (EARTH PAD ELEVATION IS FFE LESS THE SLAB AND UNDER SLAB MATERIAL THICKNESS). ALTERNATIVE CONSTRUCTION METHODS MAY DICTATE DIFFERENT EARTH GRADING.

M. MOUNTABLE CURB, ROLL TYPE, DRAWING 2415.

N. DRAINAGE CHANNEL, DRAWINGS 2260 AND 2261.

P. WHEEL CHAIR RAMP, DRAWING 2441.

R. VALLEY GUTTER, DRAWING 2420.

S. SWALE WITHIN THE BACK AND SIDE YARDS, SEE DETAIL SECTION D-D, SHEET 5, GRADING AND DRAINAGE PLAN. THE PAVED DRAINAGE SWALE WILL BE CONSTRUCTED WITHIN THE REAR AND SIDE YARDS TO PERMIT RUNOFF OF LOCAL PRECIPITATION AND MINOR FLOWS. LONGITUDINAL SLOPE OF THE SWALE MAY VARY FROM A MINIMUM SLOPE OF .005 FEET/FEET (.5%) TO A MAXIMUM SLOPE OF 20%. THE SURFACE OF THE SWALE MAY BE PATTERNED, COLORED OR OTHERWISE TREATED TO BLEND IN WITH LANDSCAPING. THE SWALE CAPACITY MUST REMAIN SUFFICIENT TO CARRY THE REQUIRED FLOW. RUNOFF WILL NOT INCLUDE ROOF RUNOFF BECAUSE ALL ROOF RUNOFF IS TO BE DIRECTED TO THE STREET.

T. ALL BACK AND SIDE YARDS SETBACKS ARE CONSIDERED DRAINAGE EASEMENTS. NOTATIONS ARE SHOWN ON THE PLAN.

U. A RETAINING WALL IS REQUIRED ALONG A PORTION OF THE SOUTH BOUNDARY LINE OF THE SUBDIVISION. OTHER WALLS CAN BE GARDEN TYPE WALLS IF THE DIFFERENCE IN EARTH SURFACE ELEVATIONS ON EITHER SIDE OF THE WALL IS LESS THAN 18 INCHES

V. SIDEWALK CULVERT, SEE DRAWING 2236.

V SIDEWALK CULVERT
DRW 2236
ONE - 24"

V SIDEWALK CULVERTS (6)
DWG 2236
SIX - 24"

V SIDEWALK CULVERTS (2)
DWG 2236
TWO - 24"

PHASE I

PHASE II

CHANGE BACK LOT PAVED SWALE TO 18"	MRK	DEC 11, 1998
ADD SW CULVERT SIZE, PHASE LINE	MRK	JAN 21, 1998
ADD SIDEWALK CULVERT NOTE	MRK	DEC 24, 1997
ADD SIDEWALK CULVERTS	MRK	DEC 4, 1997

Preliminary APPROVALS, REVISIONS Marvin R Kortum October 15, 1997

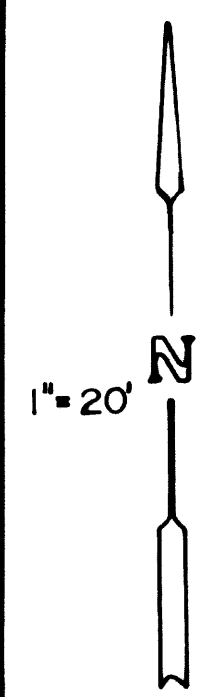


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WESTERN BREEZE SUBDIVISION
LOTS 1-28 - VIA KEITH -
GRADING AND DRAINAGE PLAN

H11/D 23

H-11 3 6



LEGEND		
	Existing	Proposed
Spot Elevation	X 42'	43.27
Top of Curb	TC	TC
Flow Line Invert	FL	FL
Finished Floor Elevation	FFE	FFE
Contour Line	52' 41'	44'
Property Line		
Lot Number	3	3
Structure	---	---
Curb and Gutter	=====	=====
Drainage basin boundary	◇ ◇	◆ ◆
Roof drain		→
Retaining wall		▬

PHASE I
PHASE II

SEE WORK ORDER FOR STREET PLAN & PROFILE, DRAINAGE

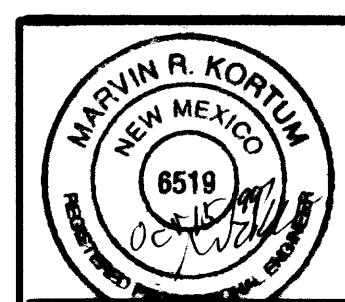
SEE WO 585482 FOR FINAL GRADE ON STREET
SEE WO 585482 FOR INLET AND STORM DRAIN RATHER THAN SIDEWALK
CULVERTS AND CHANNEL

Approximate level of standing water for
overflow to occur onto Ouray Road.

CORONA DRIVE, NW

ALAMOGORDO DRIVE, NW

CHANGE BACK LOT PAVED SWALE TO 18"	MRK	DEC 11, 1998
ADD SW CULVERT SIZE, PHASE LINE	MRK	JAN 21, 1998
ADD SIDEWALK CULVERT NOTE	MRK	DEC 24, 1997
ADD SIDEWALK CULVERTS	MRK	DEC 4, 1997
Preliminary	Marvin R Kortum	October 15, 1997
APPROVALS, REVISIONS	BY	DATE



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WESTERN BREEZE SUBDIVISION
LOTS 37-47 - VIA SHANE -
GRADING AND DRAINAGE PLAN

WORK ORDER NO.
601581

H11/D23 H-11 4 6

