



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 25, 1994

James D. Hughes, P.E.
Community Sciences Corp.
P.O. Box 1328
Corrales, N.M. 87048

RE: DRAINAGE REPORT FOR RINCONADA PT UNIT 1 & 2 (G-10/D10)
RECEIVED JULY 18, 1994 FOR FINAL PLAT APPROVAL
ENGINEERS STAMP DATED 7-15-94

Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology approves this project for Final Plat.

Engineer's Certification of grading & drainage per DPM checklist must be approved before the Financial Guaranty will be released.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Fred Aguirre

WPHYD/8424/jpc



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 5, 1994

James D. Hughes, P.E.
Community Sciences Corp.
P.O. Box 1328
Corrales, N.M. 87048

RE: GRADING PLAN FOR RINCONADA PT UNIT 2 (G-10/D10)
RECEIVED SEPTEMBER 26, 1994 FOR FINAL PLAT APPROVAL
ENGINEERS STAMP DATED 9-1-94

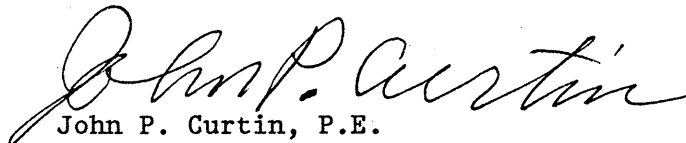
Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology approves Unit 2 for Final Plat.

Engineer's Certification of grading & drainage per DPM checklist must be approved before the Financial Guaranty will be released.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,


John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Fred Aguirre
Andrew Garcia

WPHYD/8424/jpc



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 23, 1995

William & Nicole Tucker
3524 Running Bird Ct NW
Albuquerque, NM 87120

RE: GRADING COMPLAINT AT RINCONADA POINT- UNIT 2 (G-10/D10)

Dear Mr & Mrs Tucker:

City Hydrology has reviewed the approved Grading Plan, dated 9-1-94, and it complies with the City design criteria in the Development Process Manual. The City has no criteria which requires the developer to construct a retaining wall between Lot 21 and Lot 41, If the grade difference between the lots can be graded with a 3H:1V slope.

The Engineer has not certified the grading for this subdivision yet. If you are concerned about the grades on your lot, You should discuss them with the Engineer (Stephen Crawford of Community Sciences Corp at 897-0000) and the Developer (Bo Johnson of Curb Inc at 881-9190).

The City is not a party to the Covenant that you referenced. Check the Covenant to discover what enforcement provisions were included. I believe that section 2 refers to an 18" grade difference at the property line which does not exist between Lot 21 and 41.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Andrew Garcia
Edward & Raymunda Van Hoven, 4500 Aztec NE #51, Albuquerque, NM 87110
Stephen Crawford, Community Science Corp, P.O.Box 1328, Corrales NM 87048
Bo Johnson, Curb Inc, 6301 Indian School Rd NE #680, Albuquerque, NM 87110



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 26, 1995

**Bo Johnson, PE
Bokay Const & Mgmt
5905 Azuelo Ct NW
Albuquerque, NM 87120**


**RE: ENGINEER'S CERTIFICATION FOR RINCONADA POINT UNIT 1(G10-D10)
RECEIVED MAY 9, 1995 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 5-8-95**

Dear Mr. Johnson:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification of grading & drainage and releases the Financial Guaranty for City Project Number 4933.90. Contact the DRC Chairman, Billy Goolsby, for the actual Financial Guaranty Release.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,


**John P. Curtin, P.E.
Civil Engineer/Hydrology**

**c: Andrew Garcia
Billy Goolsby, CPN 4933.90**



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 26, 1995

**Bo Johnson, PE
Bokay Const & Mgmt
5905 Azuelo Ct NW
Albuquerque, NM 87120**

**RE: ENGINEER'S CERTIFICATION FOR RINCONADA POINT UNIT 2(G10-D10)
RECEIVED MAY 9, 1995 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 5-8-95**

Dear Mr. Johnson:

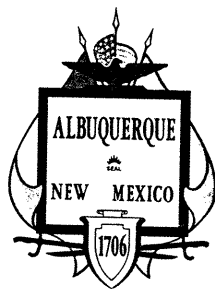
Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification of grading & drainage and releases the Financial Guaranty for City Project Number 4933.91. Contact the DRC Chairman, Billy Goolsby, for the actual Financial Guaranty Release.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

**John P. Curtin, P.E.
Civil Engineer/Hydrology**

**c: Andrew Garcia
Billy Goolsby, CPN 4933.91**



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 12, 1995

Andy Riemenschneider
Gordan and Associates
P. O. Box 2467
Santa Fe, New Mexico 87504

RE: REVISED DRAINAGE REPORT FOR RINCONADA POINT UNIT 4 (G10/D10)
SUBMITTED FOR PRELIMINARY PLAT APPROVAL AND GRADING PERMIT APPROVAL,
ENGINEER'S STAMP DATED 12/4/95.

Dear Mr. Riemenschneider:

Based on the information provided in the submittal of December 4, 1995, the above referenced plan is approved for Preliminary Plat and Grading permit approval.

The Final Plat must show a Private Drainage Easement for the pond on Tract A-1. A Drainage Covenant will also be required to guarantee that the pond will be privately maintained.

As you are aware, the plan must be signed off for Rough Grading and a topsoil disturbance permit will be required before any rough grading may occur. An Engineer's Certification is required per the D. P. M. prior to the release of financial guarantees.

If you have any questions, please do not hesitate to call me at 768-2666.

Sincerely,

Susan M. Calongne, P.E.

City/County Floodplain Administrator

c: Andrew Garcia, City Hydrology
Bo Johnson, Curb Inc.
Larry Caudill, Environmental Health
File



Martin J. Chávez, Mayor

August 7, 1996

Bo K. Johnson, P.E.
Curb, Inc.
6301 Indian School, #628
Albuquerque, New Mexico

RE: ENGINEER'S CERTIFICATION FOR RINCONADA POINT, UNIT IV (G10/D10)
ENGINEER'S STAMP DATED 7/10/96.

Dear Mr. Johnson:

Based on the information provided in the submittal of July 17, 1996, the above referenced plan is adequate to satisfy the requirement for Subdivision Certification for release of financial guarantees per the Infrastructure List dated November 14, 1995.

If you should have any questions, or if I may be of further assistance to you, please call me.

Sincerely,

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

c: Terri Martin
File

Good for You, Albuquerque!



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I. PURPOSE AND SCOPE

As discussed in the preceding drainage report, Curb, Inc. is currently planning the development of Rinconada Point Units 1 & 2. The proposed development consists of approximately 18.4 acres and is to be subdivided into 110 lots.

This revised drainage report is intended to supersede and update all previously submitted drainage reports and addendum's pertaining to Rinconada Point Units 1 & 2. These include the originally submitted report entitled, "Drainage Report for Rinconada Point Units 1 & 2", dated March 1993, and the subsequently submitted addendum entitled "Addendum No. 1 to Drainage Report for Rinconada Point Units 1 & 2", dated June 1993. The preparation of this revised report was necessary due to: 1) minor changes in the original on-site hydrology caused by the recently approved proposed park site relocation; and, 2) minor changes to the off-site hydrology upstream of the Existing Ouray Storm Drain.

The previous park site fronted along the south side of Vista Alegre Street near Ladera West Unit 3 Subdivision. That site was abandoned due to complaints from local neighborhood associations. The new site is located at the northeast quadrant of the intersection of Ouray Road and Painted Rock Drive and contains approximately of 4.83 acres. The park relocation caused changes to on-site land treatments and to the geometric configuration of sub-basins adjoining the new site.

As addressed in Addendum No. 1 to the original drainage report, problems existed regarding the capacity of the existing Ouray Storm Drain. Although the system was supposedly designed to take a maximum of 95 c.f.s. from Rinconada Point, our initial analysis placed the hydraulic grade line above the street grade where the piped flows will converge. We subsequently conducted a more detailed hydrologic analysis of the upstream conditions in order to take advantage of a possible reduction of flow that results from both an existing pond on the west side of Unser Blvd., and by accounting for the timing of the peak discharges at our proposed junction manhole in Ouray. After the submission of Addendum No. 1, the upstream hydrology was altered to incorporate another contributing drainage basin to the existing pond. This minor change slightly lowered the peak discharge in the Ouray Road Storm Drain from that listed in Addendum No. 1.

II. SITE DESCRIPTION AND HISTORY

Rinconada Point Units 1 & 2 is a replat of El Rancho Atrisco de Los Santos, Tracts 6-A and 7-A1. The development is bounded by Ouray Road on the south, the Rinconada Channel on the north, Ladera West Units 1-4 on the east, and Unser Blvd. on the west. The site is bisected by two PNM easements and one Plains Electric easement which collectively trend north-south across the property.

The site slopes generally to the southeast with an average slope of approximately 2%. The soil is classified by the Soil Conservation Service as "Bluepoint Loamy Sands (BCC) which are "Type A" hydrologic group soils. The

Rinconada Channel has removed a previously shown flood plain along the north side of the site. This is now indicated on the current City of Albuquerque Floodway Map.

Previous studies for undeveloped flows were conducted for the existing storm drain in Ouray Road. These design flows are being maintained in the fully developed condition.

Per the development requirements for Ladera West Units 3 & 4, a drainage report entitled, "Drainage Report for Ladera West Units 3 & 4 Subdivision" was prepared by Community Sciences Corporation. As part of this report, dated August 1993, an off-site master drainage plan was prepared for Tracts 6-A and 7-A-1 since a major portion of these tracts drain into Ladera West Units 3 & 4 under natural conditions. Additionally, per city requirements, a runoff detention pond was designed and constructed in the far southeast corner of Tract 7-A-1 adjacent to Ouray Road and Ladera West Unit 1. The pond was designed to mitigate fully developed flows from the Rinconada Point development.

Finally, the currently effective Flood Insurance Rate Map (FIRM) indicates a flood hazard area along a small, natural channel in the southerly portions of Tracts 6-A and 7-A-1. The drainage to that flood hazard area has most likely been diverted by the subsequent construction of Unser Blvd. as well as a detention pond on the west side of Unser Blvd. Both the detention pond and that portion of Unser Blvd. drain through inlets to the Ouray Storm Drain. Proper documentation however has apparently either not been provided to FEMA, or the documentation has not yet been approved by FEMA, since the flood hazard area remains on the most current FIRM.

III. DESIGN CRITERIA

A. Flood Control Regulations

The drainage plan presented in this report has been designed to comply with AMAFCA resolution 80-15, which requires that proposed land development projects be designed such that no flooding of private properties will occur during any storm up to and including the 100-year frequency event. Additionally, this drainage plan has been designed to comply with current "City of Albuquerque Drainage Ordinance" and Chapter 22 of the Development Process Manual (DPM), and subsequently adopted general policies of the City of Albuquerque.

1. 100-year storm

- a. Storm water flow depth not to exceed the top of curb in any street.
(Appendix C, Table 2)
- b. Jump depth to be contained within right-of-way.
(Appendix C, Table 2)

2. 10-year storm:

- a. Local street - velocity times depth less than 6.5
- b. Arterial streets:
 - i. Flow not to exceed a depth of 0.50
 - ii. Velocity times depth less than 6.5
 - iii. One driving lane in each direction free of storm water

B. Engineering Parameters

In accordance with AMAFCA criteria, all hydrologic analysis is based on the 100-year frequency, 6-hour duration storm, as represented in Section 22.2, Hydrology, of the "Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993".

Ten-year, 6-hour values were also used for subcatchments, in accordance with City drainage policies regarding street flow.

The four rainfalls pertinent to the study are as follows:

	<u>10-Year</u>	<u>100-Year</u>
One-Hour	<u>1.26"</u>	<u>1.87"</u>
Six-Hour	<u>1.47"</u>	<u>2.20"</u>

IV. COMPUTATIONAL PROCEDURES

The analysis approach follows standard engineering practice. Key points of confluence were selected and the associated individual and aggregate contributing basins were subsequently defined.

Hydrological computations were accomplished by means of the March 1993 version of AHYMO Computer Program as developed by AMAFCA. The input parameters and resulting flows for the basins are summarized on Table 1. Summary and detailed AHYMO printouts are contained in Appendix C.

Times of concentration were estimated using the Upland Method and then converted to times to peak (Lg), in accordance with the above referenced Section 22.2 which also establishes the minimum time of concentration as 12 minutes.

Flow characteristics for conveyance swales, channels, and streets were analyzed based on the Manning equation for uniform flow. Streets are assumed to have a 2% cross slope from lip of gutter to crown and a curb and gutter per City of Albuquerque Standard details. Finished grade at the right-of-way is 0.33' above top of curb.

V. OFF-SITE DRAINAGE

As previously mentioned, flows generated within Unser Blvd. near the project site will be contained within the right-of-way, eventually discharging to the Rinconada Channel or the Ouray Road Storm Drain. A water block will be provided at the future intersection of Vista Alegre Street and Unser Blvd. Likewise, a water block is to be provided at the future intersection of Painted Rock Drive and Ouray Road.

In order to take advantage of a possible reduction in flow in the Ouray Storm Drain, a detailed analysis of upstream hydrology was performed for contributing catchment basins west of Unser Blvd. (see off-site drainage basin map, Appendix B). Relevant portions of post developed AHYMO input files for both the Parkwest and Rinconada Point Subdivisions were combined and incorporated into a single input file in order to determine actual peak flows in the Ouray Storm Drain. The single input file also incorporated the routing of two large sub-basins (133.3 and 133.4) through an existing detention pond on the west side of Unser Blvd. (see off-site drainage basin map, Appendix B). This was under taken because initial analysis of the Ouray system indicated a lack of capacity at the published design flows. Our analysis has indicated that due to the existing detention pond on the west side of Unser Blvd., and by accounting for the difference in timing of the peak discharges, the Ouray Storm Drain does in fact have the capacity to take post developed flows from Rinconada Point (see Ahymo output, Appendix C, and hydraulic grade line calculations, Table 3, Appendix D).

VI. ON-SITE DRAINAGE

Post-developed conditions were considered for El Rancho Atrisco, Phase II, Tracts 6-A and 6-A-1 utilizing and adhering to the previously approved drainage report entitled, "Drainage Report for Ladera West Units 3 & 4 Subdivision", prepared by Community Sciences Corporation and dated August 1993.

This preceding drainage report dealt mainly with the mitigation of flows produced from the development of Tract 4 and a portion of Tract 7, El Rancho Atrisco de Los Santos. The City of Albuquerque however, required as part of the report, a post-developed master drainage plan for Tracts 6-A and 7-A-1. Refer to Appendix A for "Ultimate Design for Tracts 6-A and 7-A-1", a narrative taken directly from the report. Also, for comparison, both the original, updated, and final versions of the "Master Drainage Plan for Tracts 6-A and 7-A-1" are included in pockets in the back of this report. The final version incorporates the park relocation

Tracts 6-A and 7-A-1 were divided into several drainage basins in the original Drainage Master Plan. The original numbering scheme, geometry, orientation, and location of these areas were collectively used as a basis for the updated and final versions of the master drainage plan. The only deviations from this occurred due to the minor changes in ultimate subdivision geometry, and the relocation of the proposed park site. Previous areas 101, 109 and 111 were further divided into areas 101.01, 101.02, 109.01, 109.02, 111.01 and 111.02 respectively. Comparison of the three Master Drainage Plans will indicate any other minor deviations in area geometry and orientation.

In the final version of the master drainage plan, areas 103, 104, 105, 106, 110, 111.01, and 111.02 were considered "attached multiple unit residential" for land treatments. Likewise, the land treatment for areas 101.01, 101.02, 113, and 114.01 was classified as "single family residential. Area 115 was classified as commercial and areas 112 and 114.02 were classified as paved parking. Three different treatments were used for areas 102, 109.01, and 109.02 and they are paved street, landscaped area, and natural area, respectively. Finally, area 116 was expanded in area to encompass the new park site entirely. To accommodate this required a reduction in the areal extent of areas 110 and 114.02. In compliance with the preceding drainage report, area 104 was considered to drain both to San Benito Street and Vista Alegre Street which adds a degree of conservation to the street capacity calculations. Additionally, area 103 is considered to drain entirely to San Benito Street.

In accordance with the approved master drainage plan for Tracts 6-A and 7-A-1, the combined flows from areas 103 and 104 can enter Ladera West Unit 4 via San Benito Street. This flow of 24 c.f.s. will combine with on-site flows in Ladera West Unit 4 to produce a total of 41 c.f.s. in San Benito at Todo Santos Street. The combined flows from areas 101.01, 101.02, and 102 will produce a flow of 23.26 c.f.s. at the proposed sump inlets in Vista Alegre Street. Areas 104, 105 and 106 will produce a flow of 36.43 c.f.s. at the pipe inlet adjacent to Vista Alegre Street. These two flows will converge at a junction manhole in Vista Alegre Street and flow southerly in a storm drain which will ultimately discharge to the existing detention pond encompassing area 109.01. The storm drain will collect the flows from sub-basin 111.01 (previous park site) at an inlet located

where the pipe crosses into area 111.02. Likewise flows from area 111.02 will drain to an inlet/junction manhole located near the southeast corner of area 111.02. Flows from areas 112 and 113 will be collected via inlets into another storm drain which will ultimately join the previously mentioned storm drain from Vista Alegre (see Off-site Storm Drain Sheets 18 and 19 included in the back of this report). Below the intersection of the two pipes, the storm drain will discharge a flow of 122.35 c.f.s. to the detention pond. Area 110 will surface flow into the pond. The total peak inflow to the pond will be 132.73 c.f.s. while the 100-year peak outflow will be 15.88 c.f.s. at an elevation of 31.27 feet. Area 109.02 will discharge 6.44 c.f.s. to an existing concrete rundown which drains to Ladera West Unit 1.

Per the previous drainage report, a maximum of 97 c.f.s. is allowed to discharge to the existing 60" Ouray Storm Drain from the proposed development. Areas contributing flows to the storm drain in Ouray Road are 114.01, 114.02, 115 and 116 (new park site). Flows generated from areas 114.01 and 114.02, a total of 38.22 c.f.s., will be collected via sump inlets in Painted Rock Drive. Area 115, the proposed commercial site, will discharge flows to a storm drain pipe on the west side of Painted Rock Drive adjacent to the sump. These two flows will converge at a junction manhole in Painted Rock Drive and flow easterly to a inlet/manhole located west of the existing detention pond. Flows generated within area 116, the new proposed park site, will converge at the inlet/manhole structure. The combined flows from areas 114.01, 114.02, 115, and 116 will then discharge to the Ouray Storm Drain. The storm drain will discharge a total of 86.54 c.f.s. to the existing Ouray storm drain at this point (see Off-site Storm Drain Sheet 19 included in the back of this report, and Table 4, Appendix D).

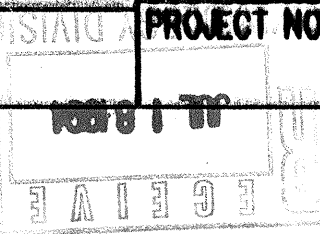
VII. EROSION CONTROL

Control of excessive soil erosion into city streets and drainage improvements during construction will be accomplished by use of temporary lot line (water-trap) berms and temporary sediment traps or ponds (see Final Grading Plan sheets 4, 5 & 6 located in the back of this report). The lot line berms will be windrowed into place following mass grading operations and left in place until each home is constructed and sold. Similarly, the temporary sediment traps will be placed at the upper terminus of improved streets, as well as the upstream end of open culverts, and they will all be located within temporary drainage easements. The temporary sediment traps will be removed when all final developed conditions are achieved.

II. ULTIMATE DESIGN FOR TRACTS 6 & 7

Post-developed conditions were also considered for El Rancho Atrisco Tracts 6 and 7. The tracts were divided into basins as seen on the drainage area map preceding "TABLES" at the end of this section and the Drainage Master Plan at the end of this report. Areas 103, 104, 105, 106, 110, 111, and 116 were considered "attached multiple unit residential" according to the DPM Section 22.2. Likewise, areas 101, 113, and 114 were classified as "single family residential" and area 115 "commercial". Area 104 was considered to drain to both San Benito Street and to the south to Vista Alegre which adds a degree of conservation to the street capacity calculations.

The combined flows of Areas 103 and 104 can enter Ladera West Unit 4 at San Benito Street. This flow of 22 cfs will combine with the on-site flow of 17 cfs for a total of 39 cfs in San Benito at Todos Santos Street. The combined flows from Areas 101, 104, 105, and 106 will produce a street flow in Area 102 (Vista Alegre) at the west side of Ladera West Unit 3 of 52 cfs. This flow will be collected in a storm drain through Area 111 and discharged into a detention pond in area 109. Storm drains from Areas 112 and 113 can be connected to the drain through 111. Finally, Area 110 will flow into Area 109 for a total flow into the pond of 132 cfs. The pond's primary discharge will be limited to the 26 cfs capacity of the down stream facilities as established in the previous drainage report to Ladera West Units 1 and 2. Areas 114, 115, and 116 have a combined flow of 97 cfs and are to be discharged to the 60" Ouray Road Storm Drain. This meets the 97 cfs capacity currently allowed (see copy of "El Rancho Atrisco Basins" in Appendix C). The location of the pond is heavily influenced by the natural terrain as it relates to the existing construction of Ouray Road. The hydraulic grade line (elevation 36.43...see Storm Drain Profile in Appendix C) in Ouray Road, at the southeast corner of Tract 7, is about 4' higher than the low spot which is located 450' north of Ouray on the east side of Tract 7. This prevents using the Ouray Road storm drain as the primary outfall for the entire area. The pond is to function as a normal detention pond with an emergency spillway to Ouray Road under developed conditions. The pond will be graded to its ultimately developed design as part of the Unit 3 construction. No developed property will drain to the pond as a result of the Ladera West Unit 3 and 4 construction, so the pond will function as a privately maintained temporary retention facility until Tracts 6 and 7 are developed. The undeveloped peak 100 year flow into the pond will be 62 cfs. Since the pond has about 5.5 ac. ft. of storage below the emergency spillway invert and the undeveloped 100 yr. 10 day volume is only 2.5 ac. ft. there will be more than enough capacity in the temporary facility to accommodate the undeveloped runoff plus vast amounts of sediment.



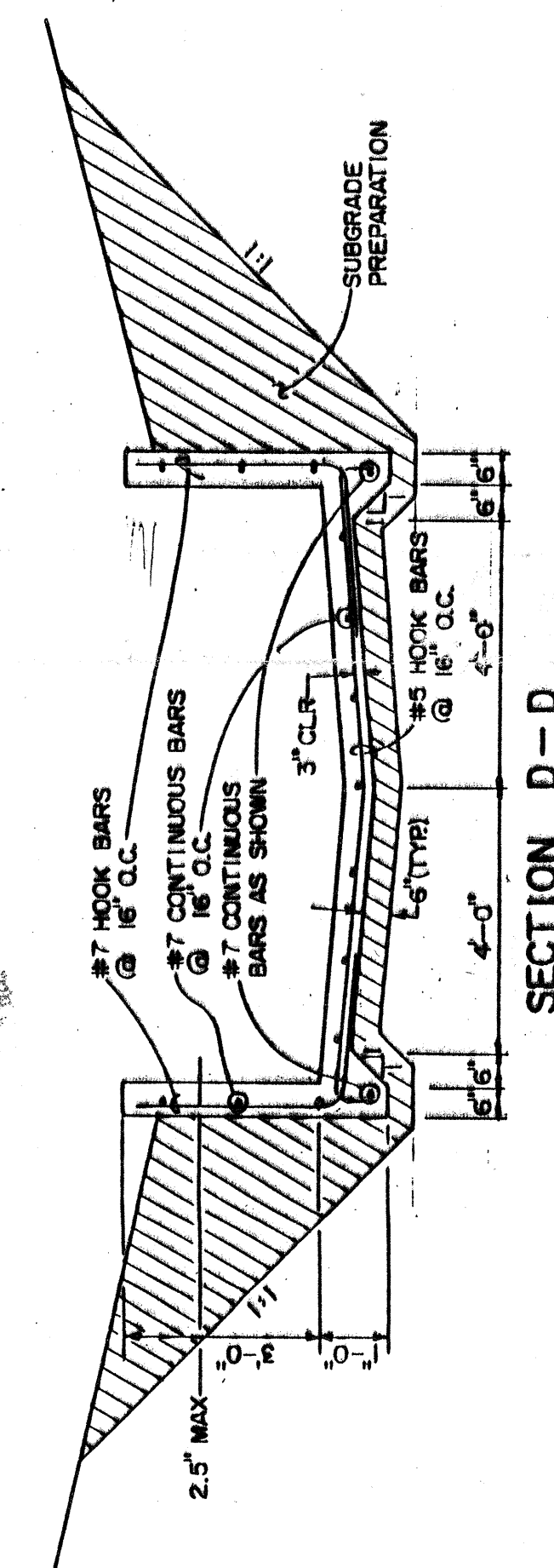
SCALE:
1" = 50', HORIZ
1" = 10', VERT.

**CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWR	6-23-94
TRANSPORTATION	N/A RWR	6-23-94	WASTE WATER	N/A RWR	6-23-94
HYDROLOGY	Kurtz	6-23-94	A.M.A.F.C.A.		

PROJECT NO.	4933.90	MAP NO.	G-10	SHEET	18	OF	19
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DESIGNED BY		KCD	DATE	OCT. 1983
DRAWN BY		AM	DATE	OCT. 1983
CHECKED BY			DATE	
<div style="text-align: center;"> </div>				
NO.		DATE	REVISIONS	
1		8/93	DESIGN	
<div style="display: flex; justify-content: space-between;"> <div> <p>ENGINEER'S SEAL</p> <p>77DH</p> </div> <div> <p>SURVEY INFORMATION</p> <p>FIELD NOTES</p> </div> <div> <p>BENCH MARKS</p> </div> <div> <p>AS BUILT INFORMATION</p> </div> </div>				
<p>COMMUNITY SCIENCES</p> <p>8/93</p>		<p>BENCHMARK: STATION IS AN ACS BISS TABLET STAMPED "2-08"</p> <p>SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON TOP</p> <p>OF A VOLCANIC OUTCROP TO REACH THE STATION FROM THE</p> <p>INTERSECTION OF COORS RD. AND CURRY RD. NW QD WEST ON</p> <p>THE DIRT ROAD TO THE TOP OF THE DETENTION DAM ALONG THE</p> <p>N. BANK OF DAM 0.6 MI. TO A DIRT CROSS ROAD. TURN RIGHT,</p> <p>GO N. ON DIRT ROAD 0.5 MI. S/D 1929 ELEVATION= 5334.50</p>		
		<p>RECORDED BY</p> <p>DATE</p>		
		<p>DATE</p>		



INLET CAPACITY CALCULATIONS
TABLE 2

$Q_{100} = 19.49$ CFS

ORIFICE EQ.

$$Q_o = CA(2gh)^{1/2}$$

$$C = 0.65$$

$$\text{CLOGGING FACTOR} = 0.60$$

WEIR EQ.

$$Q_o = C_e L_w h^{3/2}$$

$$C_e = 2.65$$

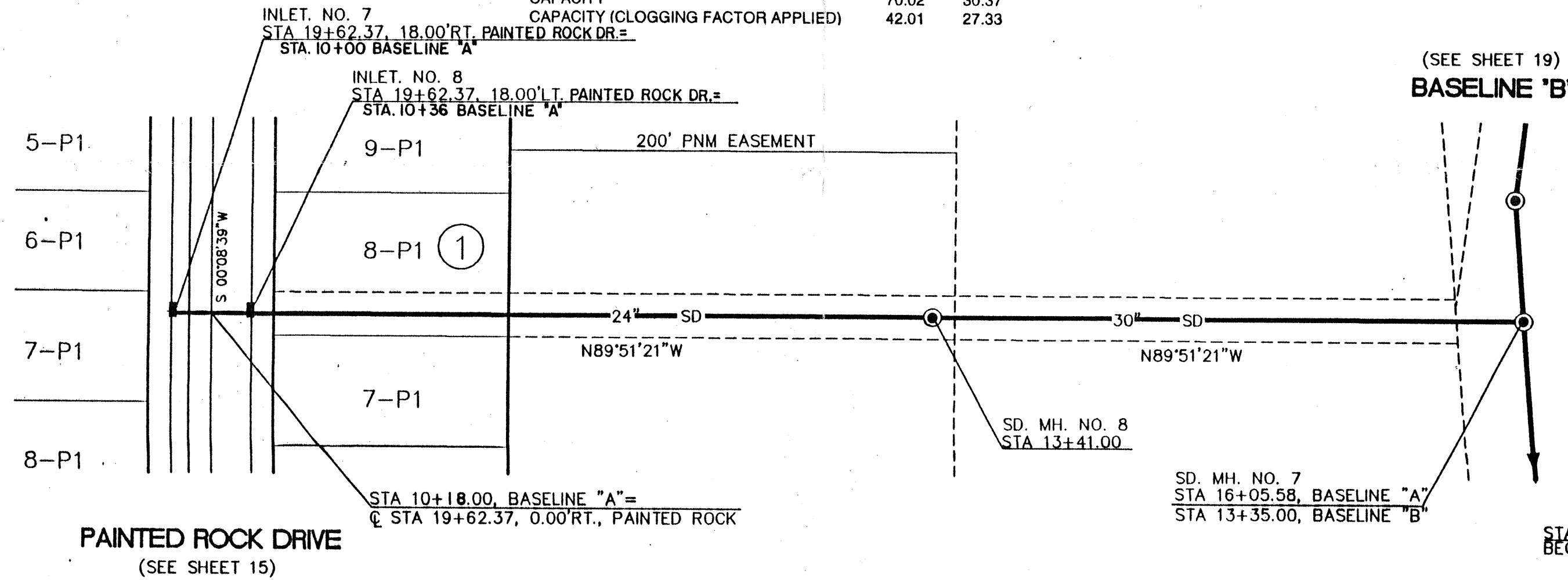
$$\text{CLOGGING FACTOR} = 0.90$$

INLET PAIR	H _o (ft.)	AREA (sq. ft.)	L _w (ft.)	Q _o (cfs)	Q _w (cfs)
7 & 8	0.67 (O) 0.54 (W)	16.4	21.67	70.02	30.37

CAPACITY (CLOGGING FACTOR APPLIED)

70.02
42.01

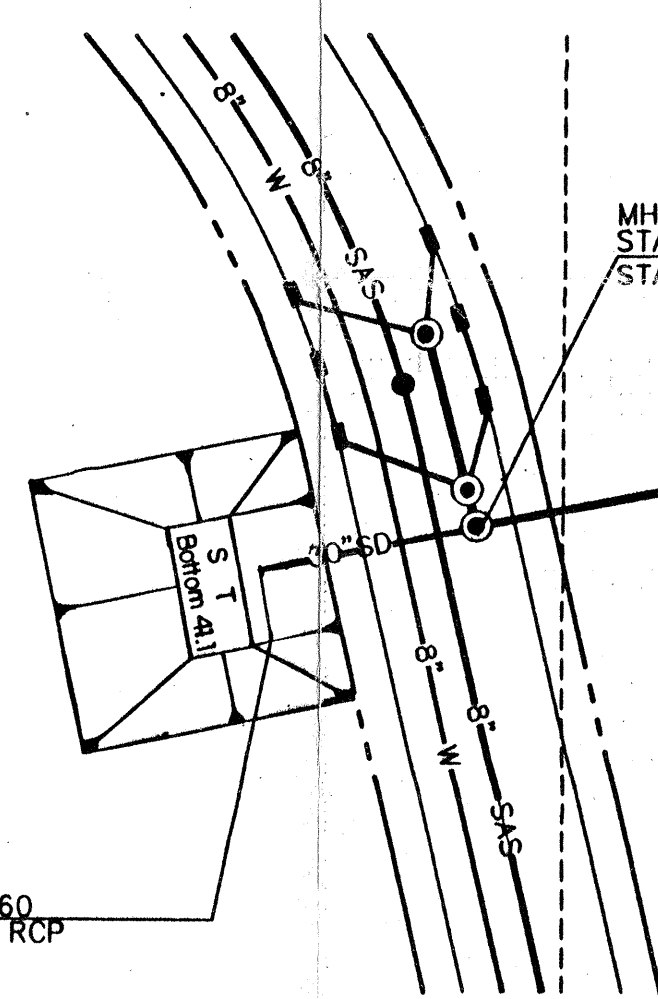
30.37
27.33



BASELINE 'A'

PAINTED ROCK DRIVE
(SEE SHEET 15)

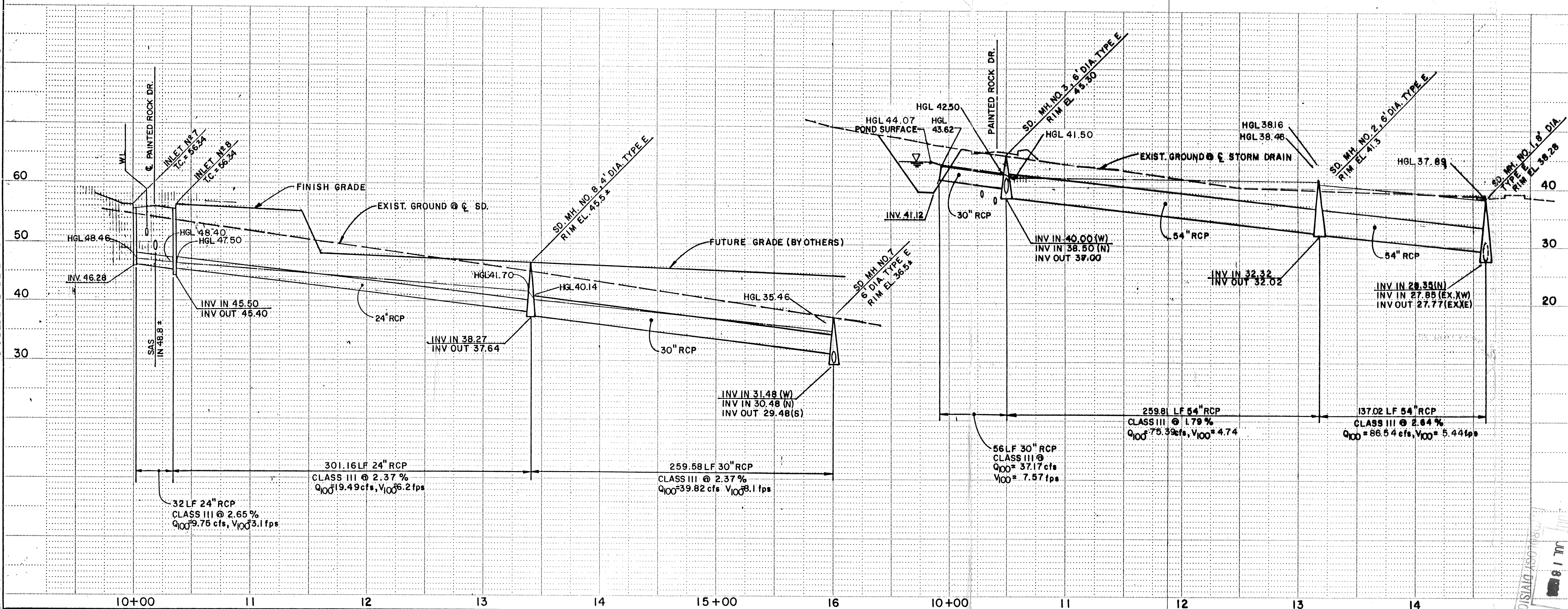
BASELINE 'B'
(SEE SHEET 19)



BASELINE 'C'

OURAY ROAD N.W.
(SEE SHEET 11)

DESCRIPTION	PROPOSED	EXISTING
SANITARY SEWER LINE	—	—
ENCASEMENT	—	—
SANITARY SEWER MANHOLE	—	—
SAS SERVICE CONNECTION	—	—
STORM DRAIN LINE	—	—
STORM DRAIN MANHOLE	—	—
STORM DRAIN RILETS	—	—
WATER LINE	—	—
GATE VALVE	—	—
BUTTERFLY VALVE	—	—
FIRE HYDRANTS	—	—
REDUCERS	—	—
WATER SERVICE/ METER	—	—
TEES	—	—
CROSSES	—	—
BENDS	—	—
CAPS & PLUGS	—	—



SCALE:
1" = 50', HORIZ.
1" = 10', VERT.

community
sciences
corporation

2010-057

LAND PLANNING
2.0, Rev. 1/28

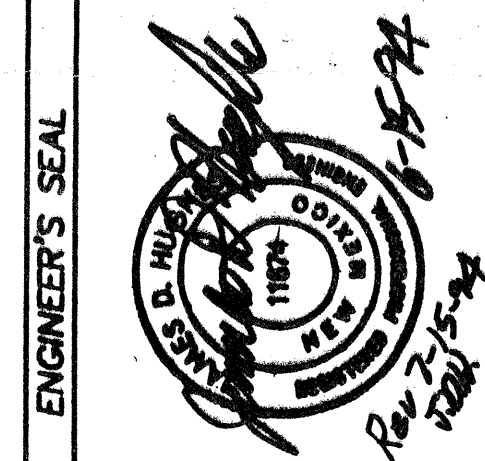
ENGINEERING
Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

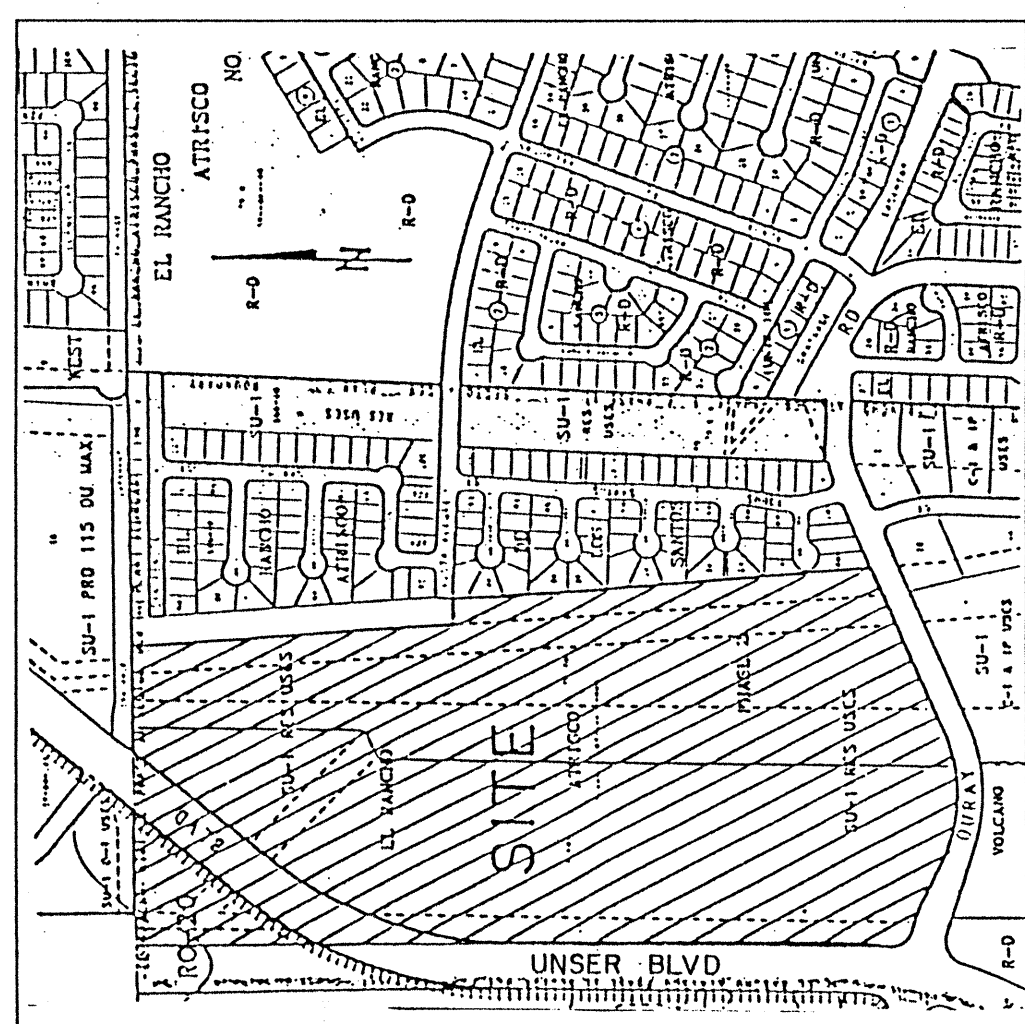
TITLE: RINCONADA POINT - UNIT 1
OFFSITE STORM DRAIN
BASELINES "A" & "C"

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRG CHAIRMAN			WATER	R.W. Kame	6-23-94
TRANSPORTATION			WASTE WATER	R.W. Kame	6-23-94
HYDROLOGY			M.A.F.C.A.		

PROJECT NO. 4933.90
MAP NO. G-10
SHEET 19 OF 19

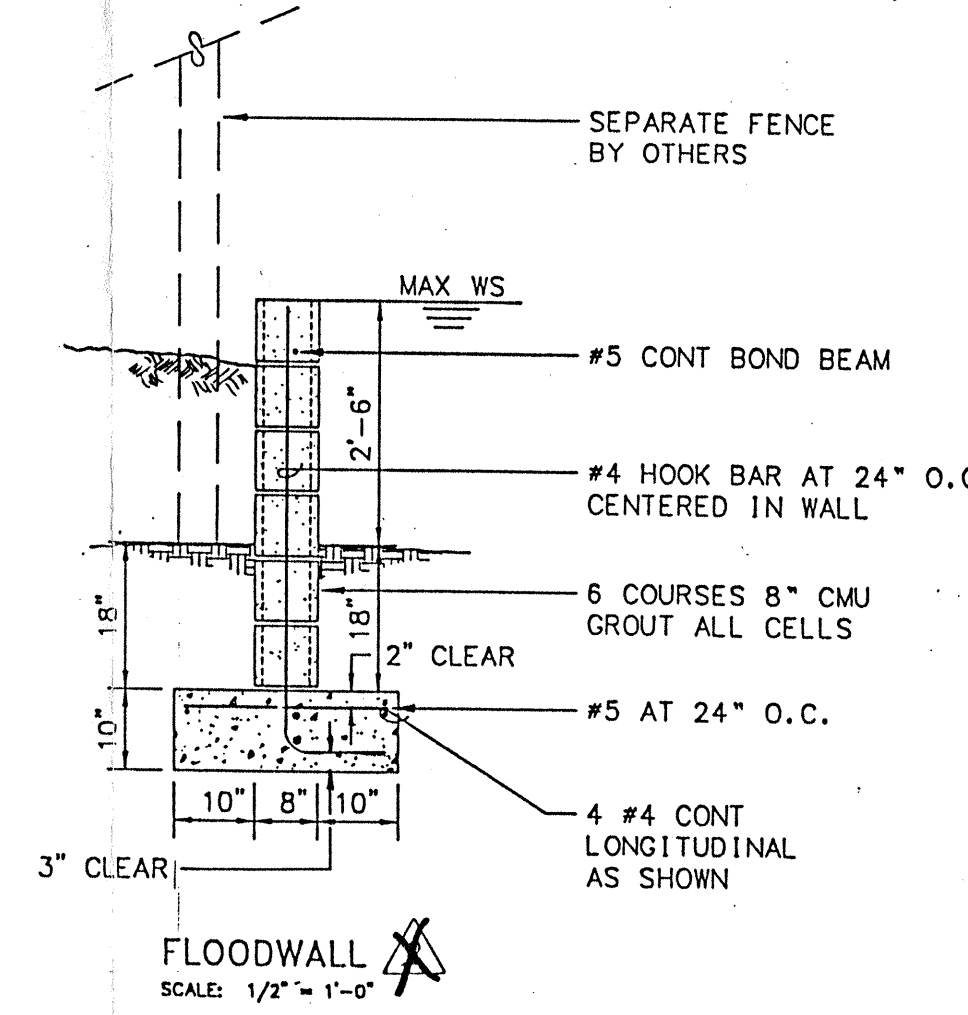
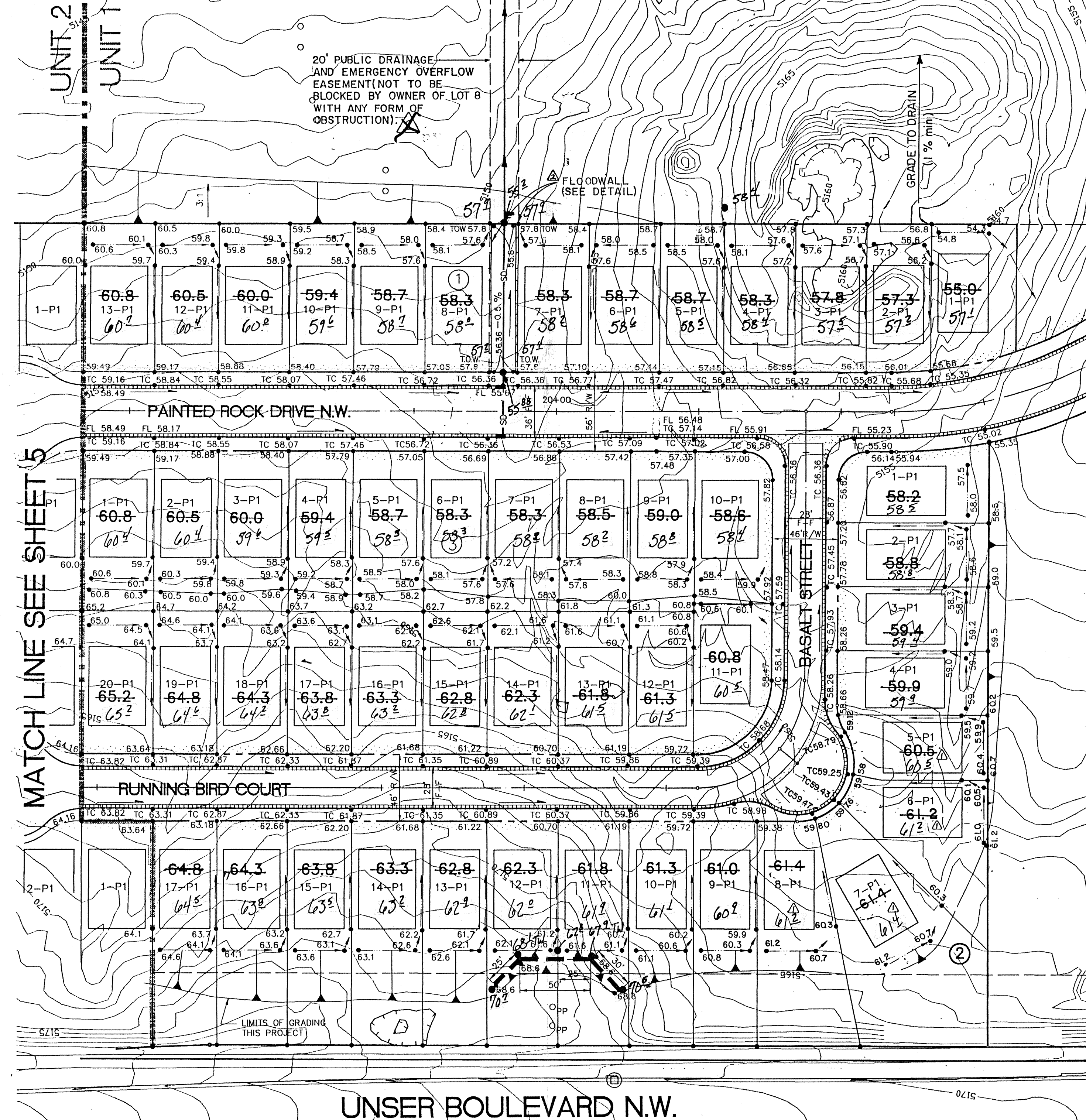
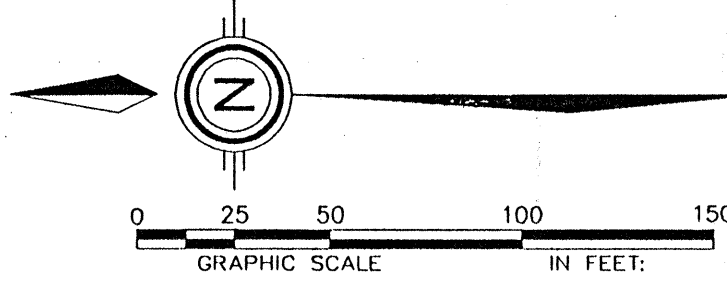


NO.	DATE	REVISIONS	BY
1	MAY 1993	DESIGN	
2	MAY 1993		



VICINITY MAP G-10-Z
APPROXIMATE SCALE: 1"=700'

**RICONADA POINT
UNITS 1 AND 2**
COMPRISED OF
A PORTION OF TRACTS 6-A AND 7-A-1,
EL RANCHO ATRISCO PHASE II
SITUATE WITHIN
TOWN OF ATRISCO GRANT
PROJECTED SECTION 3, T.10N., R.3E., N.M.P.M.
CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
DRB-94-125



**RICONADA POINT UNIT 1
GRADING CERTIFICATION NOTES:**

- AS-BUILT PLANS AND CERTIFICATION FOR THE STREETS AND PUBLIC UTILITIES WILL BE SUPPLIED SEPARATELY BY THE CITY SURVEYOR. THE SUBDIVISION IMPROVEMENTS WERE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED CONSTRUCTION PLANS. THE STREET ELEVATIONS SHOWN ON THIS PLAN ARE A SUBSTANTIALLY CORRECT REPRESENTATION OF AS-BUILT GRADES. ALL THE PUBLIC IMPROVEMENT CONSTRUCTION STAKING WAS PERFORMED BY THE CITY SURVEYOR. THE AS-BUILT SPOT ELEVATIONS SHOWN HEREON WERE PREPARED BY COMMUNITY SCIENCES CORP. UNDER THE SUPERVISION OF BO K. JOHNSON, N.M.P.E. #5922.
- ON-SITE CONDITIONS THAT EXISTED AT THE TIME OF THE AS-BUILT SURVEY AND INSPECTION CONDUCTED ON APRIL 5, 1995 ARE AS FOLLOWS:
A. THERE ARE 50 HOUSES UNDER CONSTRUCTION ON THE SITE.
B. SIDEWALK GRADES AT THE PROPERTY LINE ARE 0.33' ABOVE THE TOP OF THE ADJACENT CURB.
C. AT THE TIME OF CONSTRUCTION, ALL PADS HAD BEEN STAKED WITH FIVE BLUETOPS EACH AND HAD BEEN GRADED AS SHOWN HEREON.
D. THE SIDE AND REAR YARD SWALES ON ALL OF THE LOTS HAD BEEN GRADED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN. FINE GRADING OF EACH REARYARD SWALE INTO THE SIDE YARD SWALES AND THEN POSITIVELY TOWARD THE STREETS IS TO TAKE PLACE AS A MATTER OF LANDSCAPING AND DRESSING OF EACH LOT.
- INSPECTION PERIOD WAS AS REQUIRED AND FOR THE DURATION OF THE PROJECT.
- SURVEYING WAS PERFORMED BY THE CITY OF ALBUQUERQUE AND COMMUNITY SCIENCES CORP.
- SOIL TESTING WAS PERFORMED BY VINYARD AND ASSOCIATES.

I, BO K. JOHNSON, N.M.P.E. #5922, HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE GRADING AND DRAINAGE OF THE RICONADA POINT UNIT 1 SUBDIVISION IS IN SUBSTANTIAL COMPLIANCE WITH THE CONSTRUCTION DRAWINGS APPROVED BY THE CITY OF ALBUQUERQUE DATED 7/12/94, SUBJECT TO THE CONSIDERATIONS NOTED ABOVE.

BO K. JOHNSON, N.M.P.E. #5922
REGISTERED PROFESSIONAL ENGINEER
DATE 5-8-95

LEGEND

- TC 98.43 PROPOSED TOP OF CURB ELEVATION
- 99.0 PROPOSED SPOT ELEVATION
- 09.0 EXISTING SPOT ELEVATION (GRID & TC)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED CONCRETE VALLEY GUTTER
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- EXISTING STANDARD CURB & GUTTER
- EXISTING CONTOUR W/ INDEX ELEVATION
- PROPOSED SLOPE
- DRAINAGE BASIN DIVIDE
- UNIT BOUNDARY
- SWALE
- FLOW ARROW
- PROPOSED RETAINING WALL
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- WATER BLOCK (HIGH POINT)
- POWER POLE
- MANDATORY DRIVEWAY LOCATION

LOT GRADING SPECIFICATIONS:

- CROSS LOT DRAINAGE WILL NOT BE PERMITTED. IF LOCAL CONDITIONS SHOULD DICTATE A RELAXATION OF THIS RULE, THEN THE APPROPRIATE PUBLIC OR PRIVATE DRAINAGE EASEMENTS WILL BE DEDICATED ON THE PLAT.
- CRITERIA FOR SETTING LOT ELEVATION CONTROL GRADES SHALL INCLUDE THE FOLLOWING:
A. ALL DRAINAGE SWALES AND YARD AREAS SHALL HAVE MINIMUM SLOPES OF 1% AND MAXIMUM SLOPES OF 4 HORIZONTAL TO 1 VERTICAL.
B. BUILDING PADS SHALL BE SET AT LEAST 0.2' ABOVE THE HIGHEST ELEVATION OF ADJACENT SWALES.
C. PAD ELEVATIONS WILL BE ASSUMED TO BE EQUAL TO FINISHED FLOOR OF GARAGE. MINIMUM DRIVEWAY SLOPES SHALL BE 1% AND DRIVEWAY SLOPES SHALL NOT EXCEED 14%.
D. USABLE YARD AREAS SHALL HAVE MINIMUM DIMENSIONS OF 30' X 15'. SHALL HAVE MINIMUM SLOPES OF 1% AND MAXIMUM SLOPES OF 5%.
- WHERE YARD GRADES OF ADJACENT LOTS AT PROPERTY LINES CANNOT BE MATCHED USING THE ABOVE CRITERIA, RETAINING WALL SHALL BE PROVIDED TO ACCOMMODATE GRADE DIFFERENTIALS.

NOTE: CONTRACTOR SHALL OBTAIN A TOP SOIL DISTURBANCE PERMIT PRIOR TO GRADING

EARTHWORK ESTIMATE

CUT = 88,960 CY
FILL = 65,175 CY
C/F = 1.36

APPROVED FOR ROUGH GRADING

John Ruston 4-26-94
DATE

DATE: 4-26-94	DESIGNED: CSC	LAND PLANNING: P.O. Box 1328	ENGINEERING: Corrales, N.M. 87048	SURVEYING: Corrales, N.M. 87048
SCALE: 1" = 50'	DRAWN: CSC	JOB NO.: 29104		

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

**TITLE: RICONADA POINT - UNIT 1
GRADING & EROSION CONTROL PLAN**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	<i>B.K. Johnson</i>	7-12-94	WATER	<i>NA RWE</i>	6-23-94
TRANSPORTATION	<i>NA RWD</i>	6-23-94	WASTE WATER	<i>NA RWE</i>	6-23-94
HYDROLOGY	<i>NA RWD</i>	6-23-94	M.A.F.C.A.		

PROJECT NO.	MAP NO.	SHEET OF
4933.90	G-10	4 OF 19

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS	
CONTRACTOR	DATE	CONTRACTOR	DATE	NO.	BY	NO.	DATE	NO.	DATE
STAKE BY	DATE	SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON TOP OF A VOLCANIC OUTCROP. TO REACH THE STATION FROM THE INTERSECTION OF COORS RD. AND OURAY RD. NW GO WEST ON THE DIRT ROAD TO THE TOP OF THE DETENTION DAM ALONG THE N. BANK OF DAM 0.5 MI. TO A DIRT CROSS ROAD, TURN RIGHT, GO N. ON DIRT ROAD 0.5 MI. SLD 1929 ELEVATION= 5334.50	DATE	1	COMMUNITY SCIENCES	1164	4-26-94	DESIGNED BY	DATE
INSPECTOR BY	DATE							DRAWN BY	DATE
FIELD CHECK BY	DATE							CHECKED BY	DATE
REVISIONS									

100% **WATER SOLUBLE**

ENGINEER'S SEAL		BENCH MARKS		AS BUILT INFORMATION	
		FIELD NOTES NO. BY DATE 1 COMMUNITY SERVICES 1/93		BENCHMARK: STATION IS AN ACS BASS TABLE STAMPED "2-09" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON TOP OF A VOLCANIC OUTCROP. TO REACH THE STATION FROM THE INTERSECTION OF COORS RD. AND QUARRY RD. NW GO WEST ON THE DIRT ROAD TO THE TOP OF THE DENTITION DAM, ALONG THE N. BANK OF DAM 0.6 MI. TO A DIRT CROSS ROAD, TURN RIGHT, GO N. ON DIRT ROAD 0.5 MI. 1929 ELEVATION= 5334.50	
ENGINE DATE 4/94 DRAWN BY LJD DATE 4/94 CHECKED BY JDH DATE 4/94		DESIGNED BY KCD/JDH DATE 4/94 DRAWN BY LJD DATE 4/94 CHECKED BY JDH DATE 4/94		MICRO-FILM INFORMATION RECORDED BY NO.	