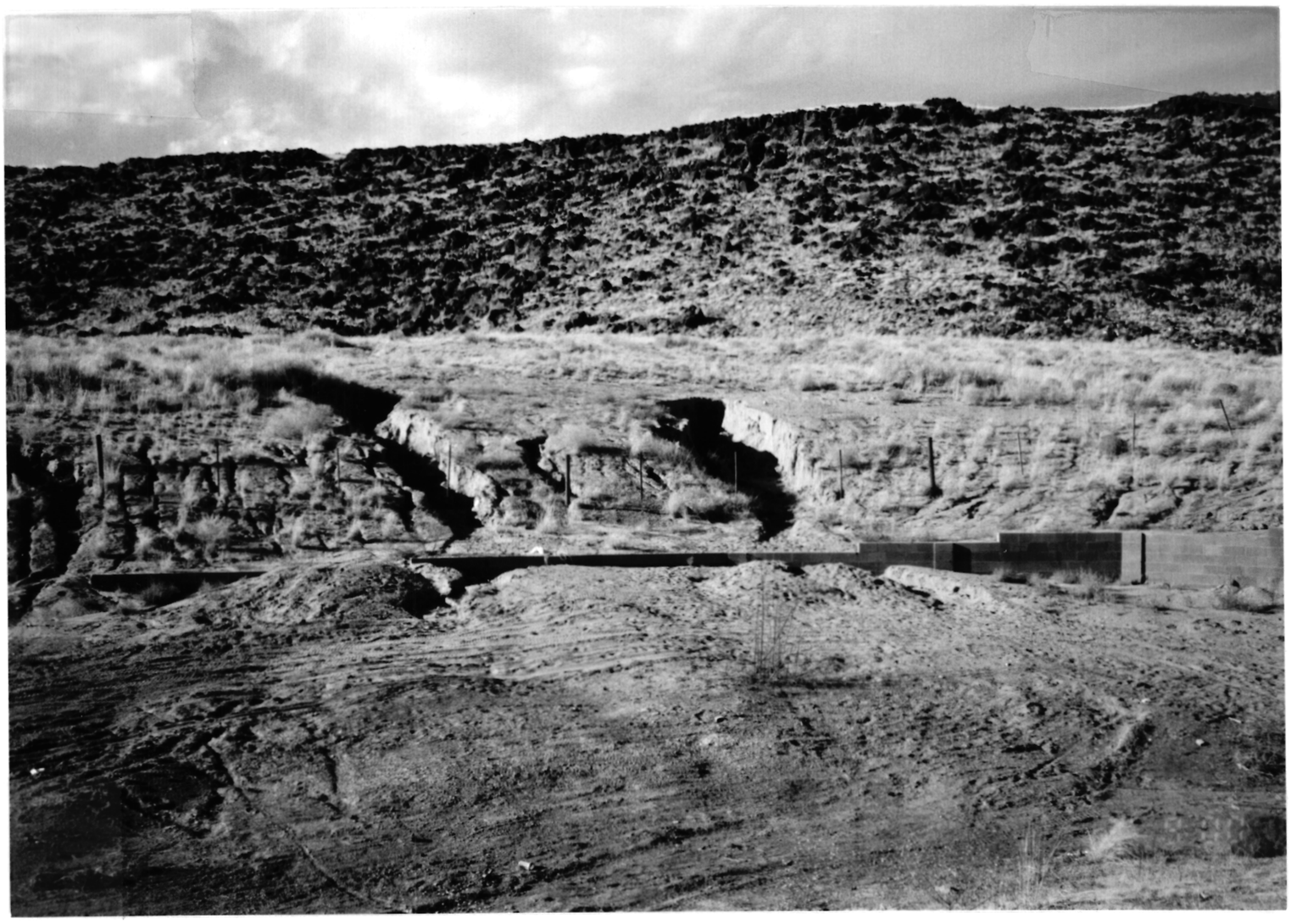
ParKwest #5

JPC
2-9-00



Looking W from Lava Bluff Dr at retainning Wall at access ramp.

Drainage Problems reported by Ramon Gallegos of Storm Maintenance



Looking W

STORM DRAINAGE PROJECTS

BASIC SERVICE 1/4 CENT

MAP NO. (DIST)	PROJECT NO. (JOB NO.)	PROJECT DESCRIPTION	COST D=Design C=Const. L=Land	AMOUNT APPROP. & RESOLUTION	AMOUNT ENCUMBERED	AMOUNT SPENT TO DATE	EXPENSE FY 97 PLANNED (ACTUAL)	EXPENSE FY 98 PLANNED (ACTUAL)	EXPENSE FY99 PLANNED (ACTUAL)	COMMENTS/START DATE	PROJ. MGR. (A/E)
	7206130	**STORM DRAIN IMPROVEMENTS** **MENAUL/MILDRED COMBINED DETENTION BASIN, PUMP STATION AND STORM DRAIN IMPROVEMENTS. (4252,4271,4272)** ***** VALLEY PROJECTS *****		12,938,550 R-332-72-91	1,699,055	6,225,816	1,500,000 (1,794,703)	2,400,000 (1,428,163)	2,060,000 (2,208,926)	A COMBINED PROJECT TO SOLVE PROBLEM BETWEEN MENAUL, GRIEGOS, 4TH ST. AND R.R. TRACKS. APPROPRIATION REPRESENTS ORIGINAL PROJECT COSTS FOR: AMDS VOL I 141-01B; 111-01C; 124-03C; 119-01D; 121-01D; 130-01B; 129-01D..	
206 (2)	(4271)	**CLAREMONT POND & 2ND ST. NORTH S.D. IMPRS. PHASE III - CANDELARIA S.D. IMPRS. & COMMERCIAL DIVERSION** ***** VALLEY PROJECTS *****	D = 120,000 C=1,750,000 L = 20,000							CONTRACT ASSIGNED FROM SCANLON TO AAR. CLOMR APPROVED BY FEMA 9/3/97. CONDORE LOW BID @ $2,038,446.37 NTP 1-4-99 FINAL INSPECTION 7-28-99 LOMR SUBMITTED FOR REVIEW	CURTIN (AAR)



Looking W

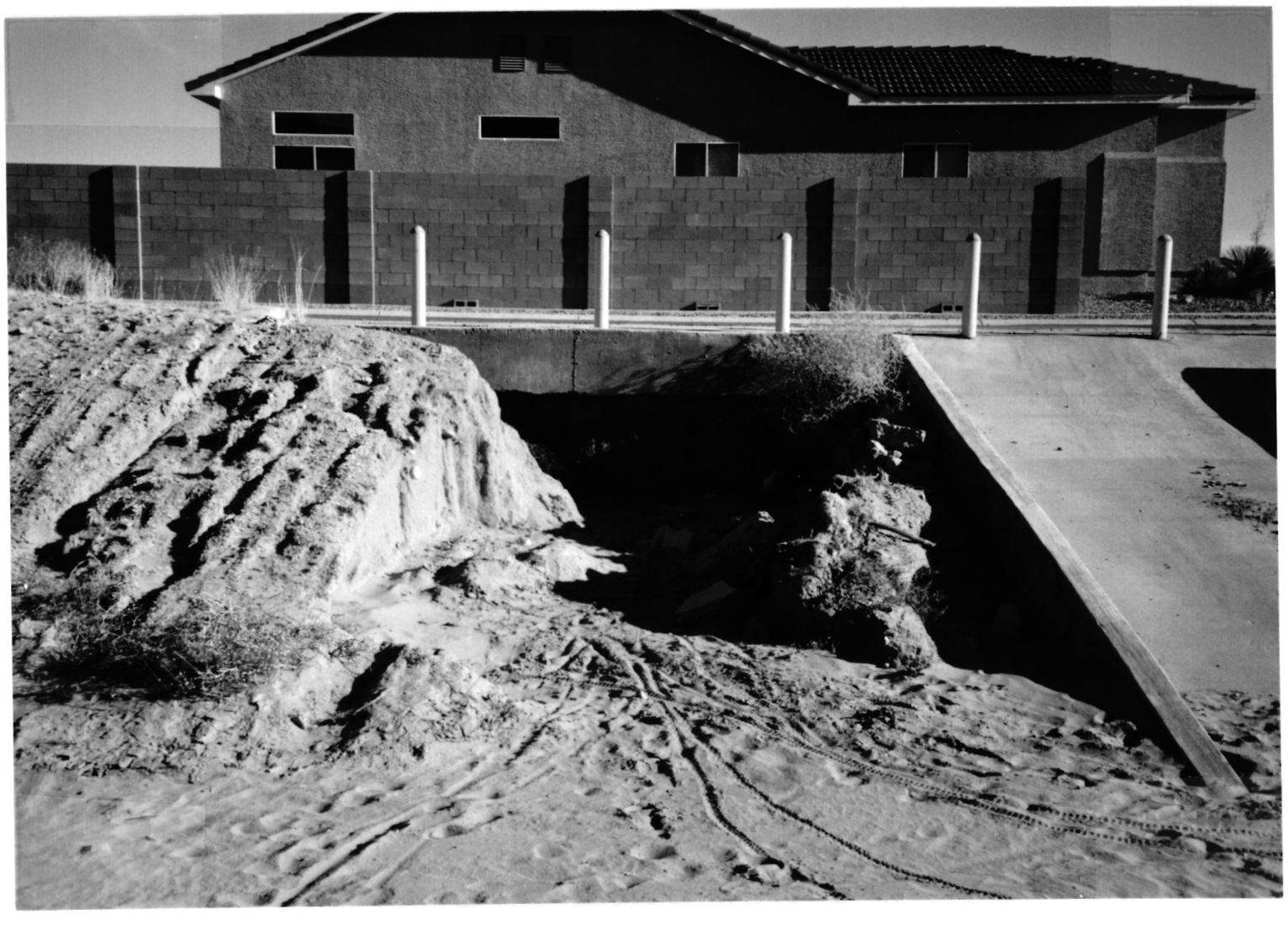
STORM DRAINAGE PROJECTS

1999 G. O. BOND

MAP NO. (DIST)	PROJECT NO. (JOB NO.)	PROJECT DESCRIPTION	COST D=Design C=Const. L=Land	AMOUNT APPROP. & RESOLUTION	AMOUNT ENCUMBERED	AMOUNT SPENT TO DATE	EXPENSE FY 97 PLANNED (ACTUAL)	EXPENSE FY 98 PLANNED (ACTUAL)	EXPENSE FY99 PLANNED (ACTUAL)	COMMENTS/START DATE	PROJ. MGR. (A/E)
N/A		ADVANCE PLANNING/ENGINEERING		300,000							
ALL		NPDES STORM WATER MONITORING/TESTING	N/A	100,000							MEINZ
N/A		PUBLIC WORKS FUNDING	N/A	500,000							
N/A		ECONOMIC DEVELOPMENT - HYDROLOGY		150,000							
(2,3,5)		PUMP STATION REHABILITATION		2,000,000							BOBERG (MOLZEN)
(1)		VALLEY GARDENS DRAINAGE REHABILITATION		900,000						SAC MEETING 11/17/99	MONTOYA (SMITH)
116 (4)		DIP REPLACEMENT/CROSSING STRUCTURES		300,000						SAC MEETING 12-2-99 RAY STREET @ NORTH PINO ARROYO	BOBERG (BHI)
122 (2)		DOMINGO BACA ARROYO, N.DIV CHANNEL TO PASEO DEL NORTE		1,000,000						SAC MEETING 12-22-99	CURTIN (SMITH)
113 (9)		SOUTH EUBANK STORM DRAINAGE SYSTEM		1,000,000						PASE II, MANZANO MESA PARK TO CENTRAL	MEINZ (SMITH)
105 (1)		AMOLE DEL NORTE, PHASE IIIE CENTRAL TO 98TH STREET		1,000,000						PHASE IIIE, FROM BRIDGE & 86TH ST TO 96TH & CENTRAL	BOBERG (GREINER)
120 (1)		WEST MESA DIVERSION: I-40 TO BLUEWATER ROAD		1,300,000						PHASE I CONSTRUCTED. PHASE II S.D. IN 64TH STREET	MONTOYA (SMITH)
114 (3)		OSAGE/LA MEDIA PUMP STATION AND COLLECTION SYSTEM		1,000,000						ATRISCO PARK AGREEMENT SIGNED BY BERNALILLO COUNTY	MONTOYA (BHI)
(3)		SOUTH BROADWAY/ SAN JOSE DRAIN REHABILITATION		1,600,000						SCOPING IN PROCESS W/BHI	CURTIN



Looking E at S end of 45' curb opening



Looking E at N end of 45' curb opening

DESIGN SCHEDULE

1998						1999						2000											
Fiscal Year 1999												Fiscal Year 2000											
1st Fiscal Quarter			2nd Fiscal Quarter			3rd Fiscal Quarter			4th Fiscal Quarter			1st Fiscal Quarter			2nd Fiscal Quarter			3rd Fiscal Quarter			4th Fiscal Quarter		
Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
			AMOLE DEL NORTE SD, PH IIID																				
			CONSTRUCTION COMPLETE																				
												AMOLE DEL NORTE SD, PHASE IIIE											
												PRELIM		DRC	FINAL		DRC	ADV, BID & AWD			CONSTRUCTION		
			WASHINGTON CROSSING @ DOMINGO BACA ARROYO																				
DRC		FINAL		DRC SIGNOFF		EASEMENT ACQUISITION										ADV, BID, & AWARD		CONSTRUCTION					
Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun



Looking NW at 45' Curb opening & 10' rundown



Looking W at drop structure

STORM DRAINAGE PROJECTS

1997 G. 0. BOND

MAP NO. (DIST)	PROJECT NO. (JOB NO.)	PROJECT DESCRIPTION	COST D=Design C=Const. L=Land	AMOUNT APPROP. & RESOLUTION	AMOUNT ENCUMBERED	AMOUNT SPENT TO DATE	EXPENSE FY 97 PLANNED (ACTUAL)	EXPENSE FY 98 PLANNED (ACTUAL)	EXPENSE FY99 PLANNED (ACTUAL)	COMMENTS/START DATE	PROJ. MGR. (A/E)
105 (1)	7218110 (4076)	**AMOLE DEL NORTE STORM SYSTEM** ***** VALLEY PROJECT *****	D = 50,000 C = 600,000 L = 25,000	735,741 R-275-8-98	33,123	698,160	NA	0 (530)	694,000 (697,630)	AMOLE DEL NORTE PHASE IIID (BRIDGE BLVD) ALB. UNDERGROUND LOW BID WAS $694,609 PHASE IIIIE - '99 BOND	BOBERG (GREINER)
122 (2)	7218130 (5720)	DIP REPLACEMENT/CROSSING STRUCTURE	D = 52,000 C = 500,000 L = 0	500,000 R-275-8-98	11,927	67,174	NA	0 (23,292)	475,000 (43,881)	WASHINGTON CROSSING STRUCT. @ DOMINGO BACA ARROYO BOD OPENIONG 11/23/99 CONDORE WASLOW BID $1,022,270.	CURTIN (SMITH)
	7218150	ECONOMIC DEVELOPMENT	N/A	300,000 R-275-8-98	0	0	NA	0 (0)	0 (0)		
	7218160	ATRISCO PARK AREA REDEVELOPMENT	N/A	200,000 R-275-8-98	0	0	NA	0 (0)	0 (0)		
(2)	7218190	ALAMEDA DITCH PLAN		75,000							



Lookings at dirt Channel on NPS



Looking S where dirt channel enters NPS Land

DESIGN SCHEDULE

1998						1999						2000											
Fiscal Year 1999												Fiscal Year 2000											
1st Fiscal Quarter			2nd Fiscal Quarter			3rd Fiscal Quarter			4th Fiscal Quarter			1st Fiscal Quarter			2nd Fiscal Quarter			3rd Fiscal Quarter			4th Fiscal Quarter		
Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
			AVENIDA DE CESAR CHAVEZ SD, PH II																				
			CONSTRUCTION COMPLETE																				
						WEST MESA DIVERSION, PH I																	
						RIGHT-OF-WAY			ADV, BID, AWARD			CONSTRUCTION											
												WYOMING BLVD. STORM DRAIN									SHELF PLANS		
												ANALYSIS & REPORT			PRELIM			DRC		FINAL		DRC	
Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun

Park West Unit 5 (H-9/01A4)

Note to File: 1-26-00

Terri Martin said that Sivage Thomas & NPS made a private deal concerning Tract A-3 and the S.I.A. for the concrete channel along Lava Bluff Dr has been closed out.

John P. Austin

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 26, 1999

Janice Honeycutt
8004 Creekwood NW
Albuquerque, NM 87120

RE: DRAINAGE COMPLAINT
8004 Creekwood NW
Parkwest Unit 5 (H-9/D1A4)

Dear Ms. Honeycutt:

In response to your complaint that water ponds in the backyard, I visited your address on August 25, 1999. While there, I observed the following problems:

1. The swales in the private drainage easements on the east and west sides of your property have not be graded properly. It appears that the swales have been filled in. Attached are some details and photos that indicate what I observed.

2. The center of the backyard appears to be lower than the rest. This may cause water to pond instead of draining to the street in front of the house.

3. It appears that the shared swales have not been graded properly for most of the lots on the south side of Creekwood. This could cause cross-lot drainage to enter your lot from the lots uphill from you.

These problems are a private matter between you, your neighbors and your builder. I am sending a copy of this letter to your builder in the hope that you will be able to solve your problems together.

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

Sincerely,

John P. Curtin, P.E.
Project Manager, PWD/Hyd

c: Robert Lupton, Sivage-Thomas, 5141 Masthead St NE 87109

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

12.0
20–P1
50'x55'

11.5
21–P1
50'x55'

11.4
22–P1
50'x55'

12.2
3–P1
50'x55'

11.7
2–P1
50'x55'

11.1
1–P1
50'x55'

13.5
18–P1
50'x55'

12.6
19–P1
50'x55'

10.7
20–P1
50'x55'

Creek Wood

8004

DRIVE

UNSER

STONEWOOD

34' R/W

22' F-F

3+00

15+00

A A

B B

1 2 3 4

FL 08.80

FL 08.68

FL 07.69

FL 07.47

FL 07.26

Photo

MIN. TOP OF BACK OF SI

1" = 40'

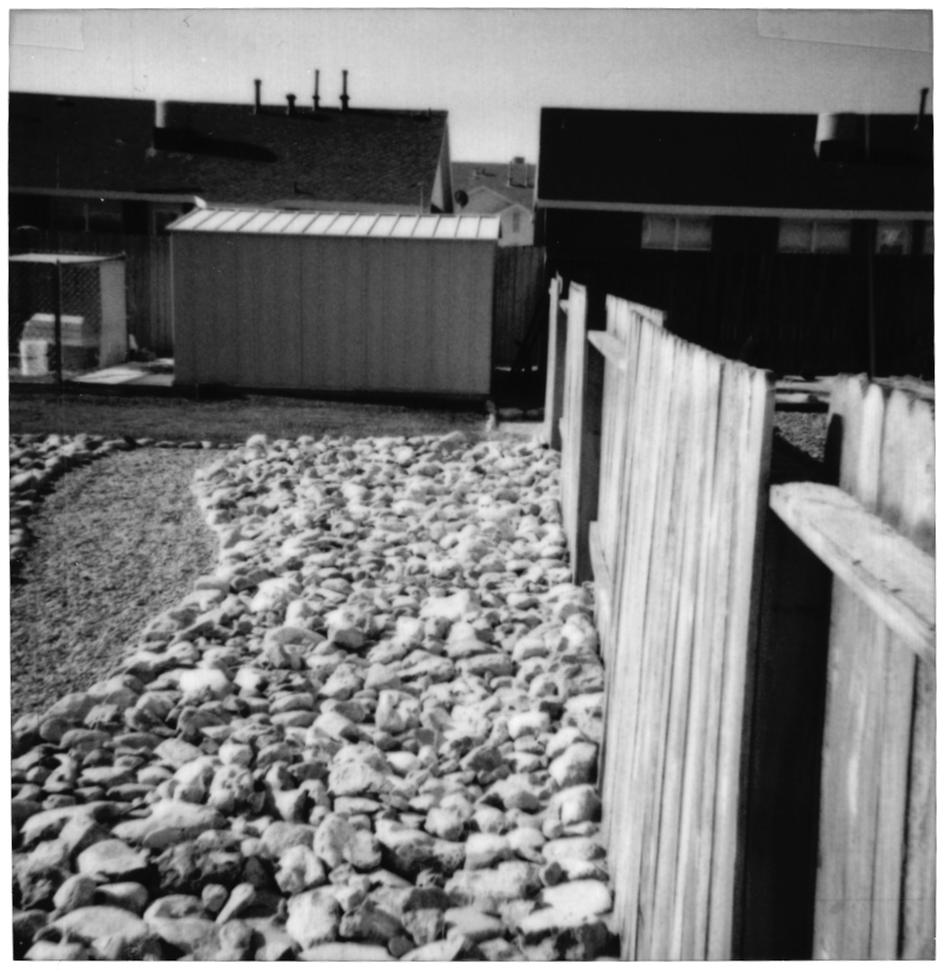
10' DRAINAGE CHAI
PER C.O.A. DWG. 2

Parkwest Unit 5 (H9/01A4)
8004 Creekwood NW



~~West~~ East Swale in back yard. Looking South
JPC 8-25-99

(1)



West swale in back yard. Looking South
JPC 8-25-99

(2)



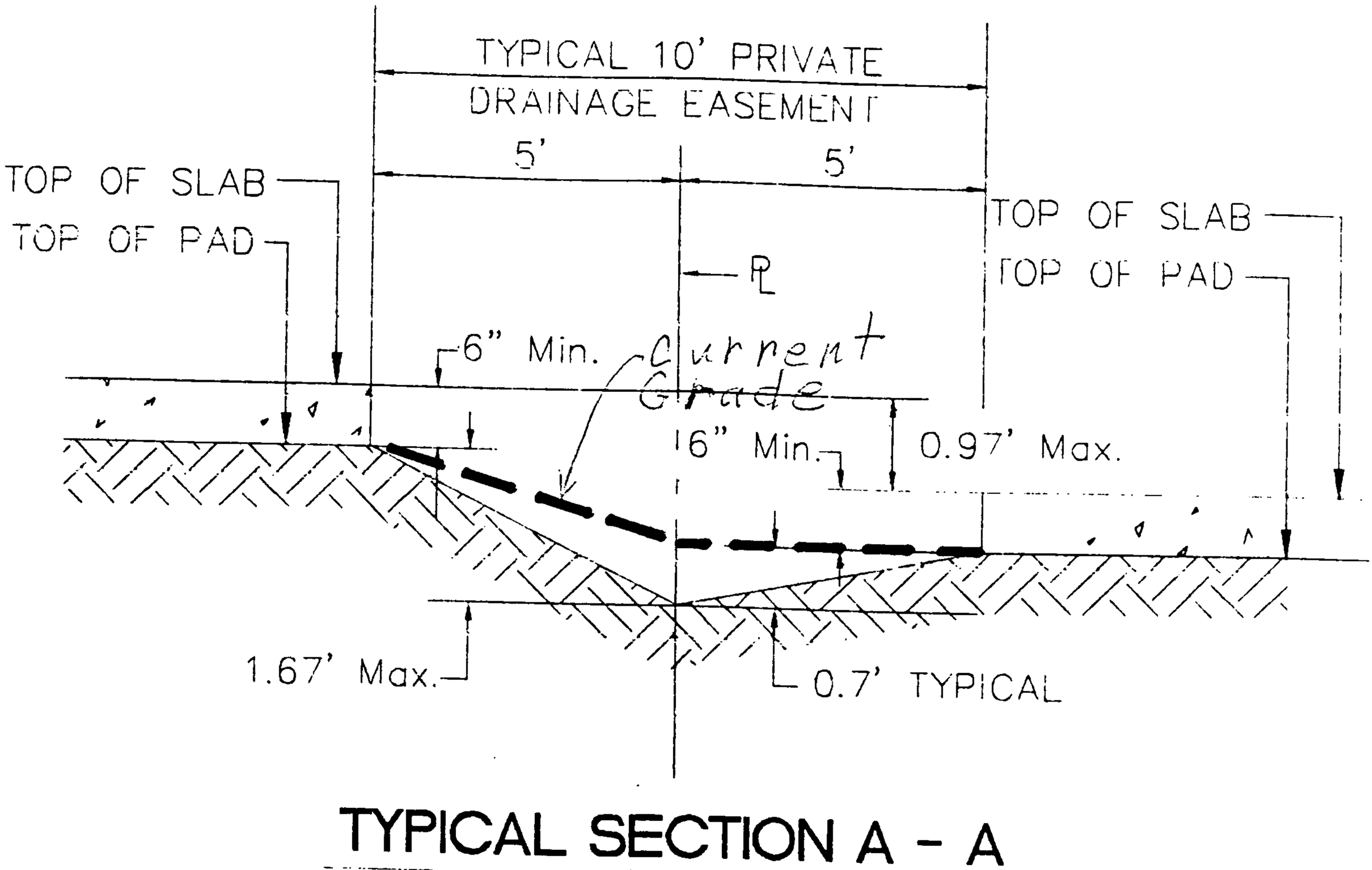
Swale on East Side of 8004 Creekwood.
JPC 8-25-99

(3)



Looking South @ swale on west side of 8004
JPC 8-25-99

(4)

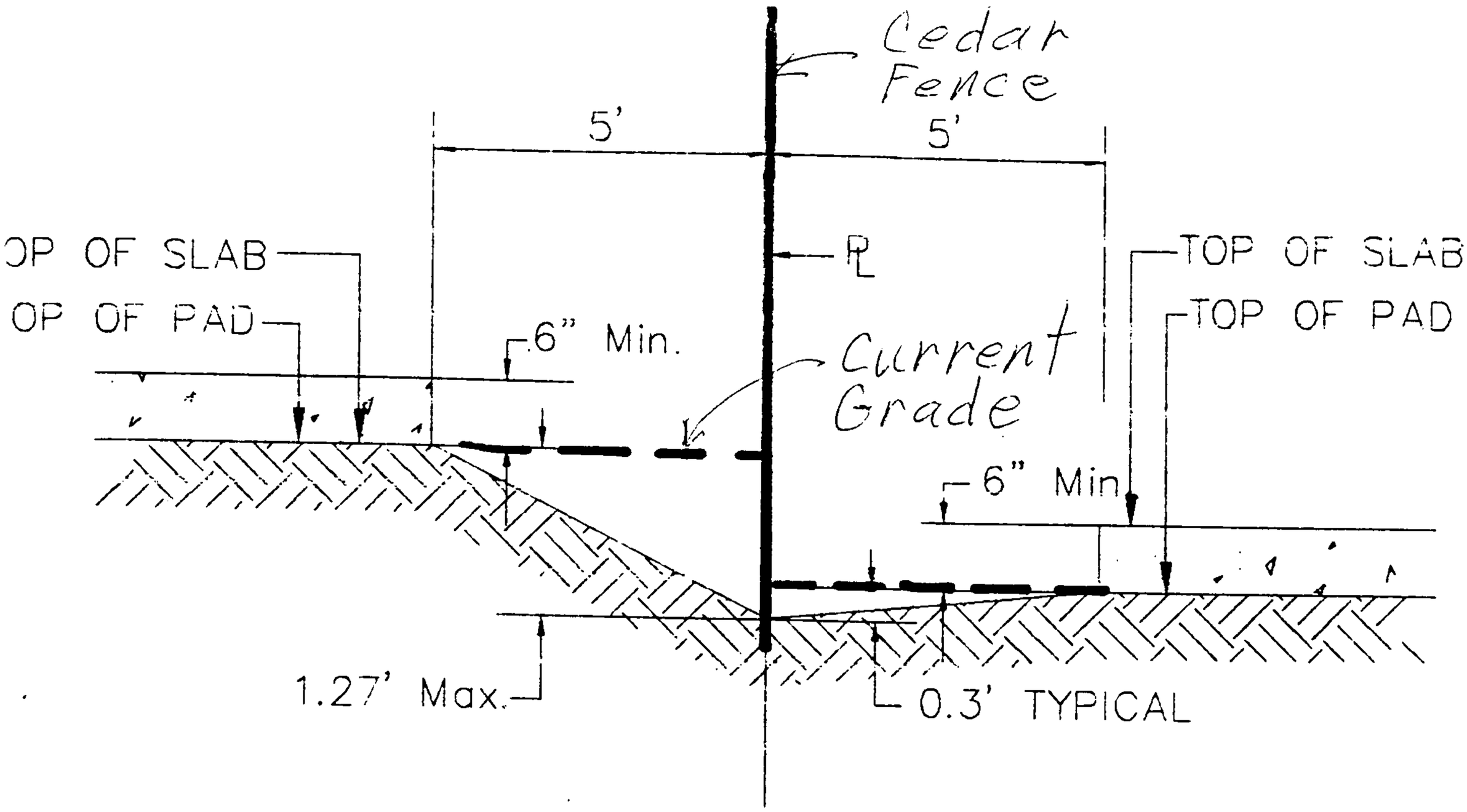


TYPICAL SECTION A - A

N.T.S. Between Houses

NOTE: FENCES ARE ALLOWED ON THE PROPERTY LINE WITHIN THE PRIVATE DRAINAGE EASEMENT.

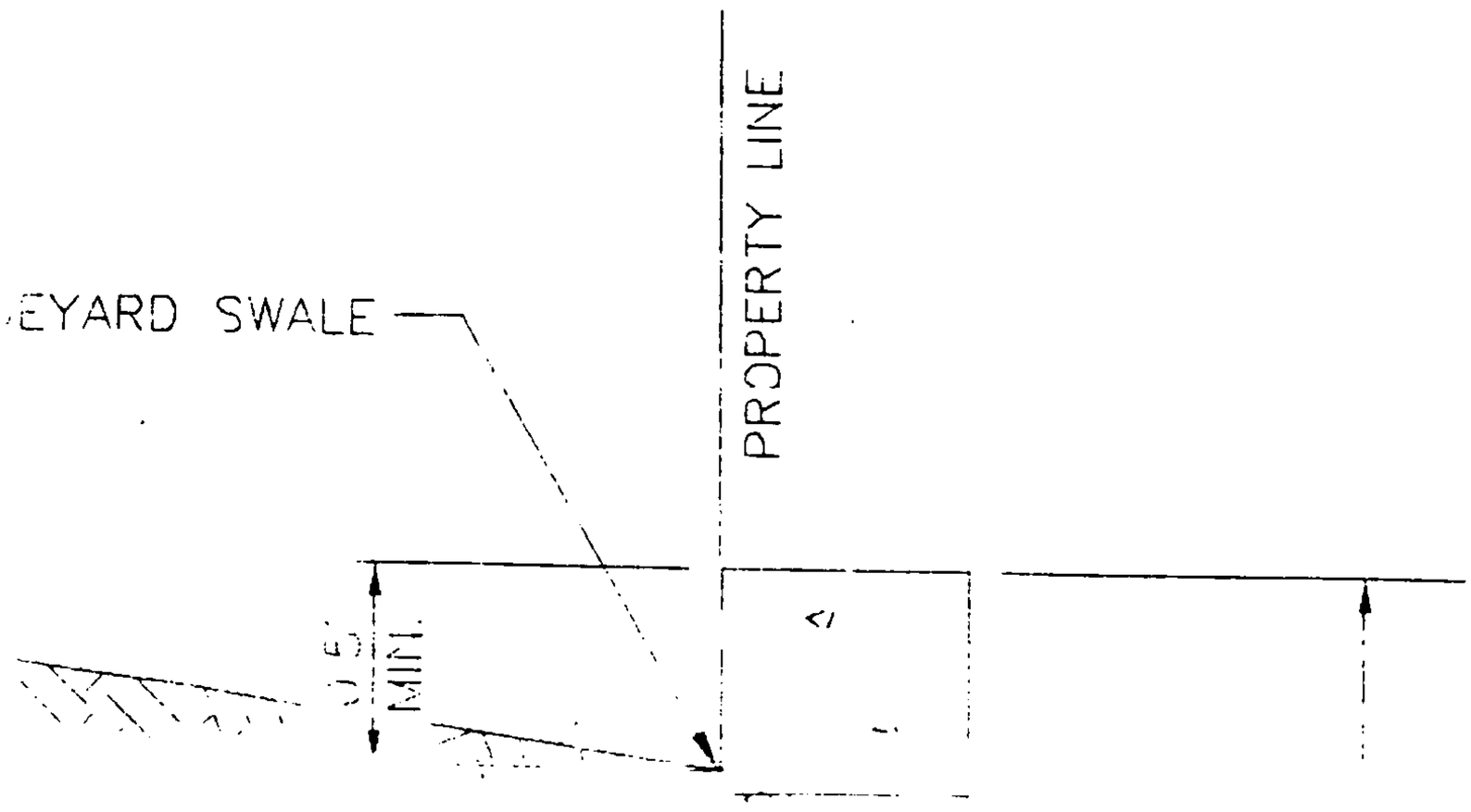
REAR YARD



TYPICAL SECTION B - B

N.T.S.

BACK YARD



SIVAGE THOMAS HOMES

Mr. Billy Goolsby, P.E.
DRC Chairman
CITY OF ALBUQUERQUE
City Engineering-Project Review
400 Marquette NW
Albuquerque, New Mexico 87103

November 07, 1995

SUBJECT: ParkWest Subdivision, Unit 5 - Subdivision Improvements Agreement

Dear Mr. Goolsby:

In regards to the above-referenced subject, enclosed please find Development Review Board (DRB) Required Infrastructure Listing revised November 07, 1995 and Project Cost Estimate as prepared by the undersigned.

The SIA was recorded recently and Work Orders issued yesterday. On November 03, 1995 it was indicated by the Hydrology Dept. (Fred Aguirre) that posting of a financial guaranty (FG) of a possible drainage channel improvement will be necessary in order to sign off on the plat for the subject project. The circumstances are such that the intent of the National Park Service is to acquire Tract A-3 as shown on the Plat. Tract A-3 is for construction of an earthen lined drainage channel. Hydrology Dept. has approved this plan provided the NPS acquires the land within the next two years. Should the NPS not acquire Tract A-3 within this time period, then the Hydrology Dept. wants a City Standard lining for this drainage way. In the interim, the Hydrology Dept. is asking for a FG as a separate FG from the Infrastructure items, an issue addressed at the DRB meeting today.

We are requesting the amount of the necessary Financial Guaranty be calculated and, if possible, received by us today in order to attempt recording of the Plat this week given that Hydrology has been the only remaining Public Works Dept. to sign the Plat for over a week now.

During the course of your processing should a concern be noted, please contact me by telephone as soon as possible. Thank you for your consideration of this request.

Sincerely,

SIVAGE THOMAS HOMES, INC.

Ellery A. Biathrow, Jr., P.E.
Development Director

NOV - 7 1995

EAB/ms

Enclosures: as stated
rc: Hydrology Dept. (F. Aguirre)

F.N.: A.WD95C01.ParkWt#5-Cpmtr-COA 11479561 5141 Masthead Street NE Albuquerque, New Mexico 87109 (505) 821-3511 Fax(505) 821-3973
A New Mexico Corporation

PARKWEST UNIT 5

DRAINAGE CHANNEL (PROPOSED NATIONAL PARK SERVICE LANDS)

ITEM	DESCRIPTION	UNITS	QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT	AS-BUILT QUANTITY	AS-BUILT AMOUNT
0602.03	CHNL LIN,8",RPCC	SF	15094	5.90	$89,050	_____	$_____

D.R.B. Cas). DRB-93-303
D.R.C. Project No. _____
Date Submitted January 21, 1994
Prel. Plat Approved _____
Prel. Plat Expires _____

EXHIBIT "A" Unit 5 SIA Package

to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LISTING

for ParkWest Units 1 through 5 Revised 06-07-94

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed for the above development. This summary is not necessarily a complete listing. During the design process, if the City determines that appurtenant items have not been included in the summary, those items will be included in the listing and related financial guarantee if the items normally are Subdivider responsibility. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility are the responsibility of the Subdivider and will be included in the financial guarantee provided to the City.

UNIT 1

SIZE	TYPE IMPROVEMENT	LOCATION	FROM	TO
STREETS:				
Per design	Left turn lane	98th Street at Parkwest Drive		
20' F-F in;	Residential paving	ParkWest Drive	98th Street	Meadowbrook Avenue
24' F-F out	Mountable curb & gutter			
	Sidewalk 4' both sides**			
	(Mountable curb @ median)			
36' F-F	Residential paving	ParkWest Drive	Meadowbrook Avenue	Windward Drive
	Mountable curb & gutter			
	Sidewalk 4' both sides			
25' F-F*	Residential paving	Meadowbrook Avenue	ParkWest Drive	SW corner Lot 1, Block 1 (U3)
	Mountable curb & gutter			
	Sidewalks 4' both sides**			
24' F-F	Residential paving	Stonehaven Drive	ParkWest Drive	Brookstone Drive
	Mountable curb & gutter			
	Sidewalk 4' both sides**			
25' F-F*	Residential paving	Brookstone Drive	Fieldstone Avenue	Lot 13, Block 3
	Mountable curb & gutter			
	Sidewalk 4' both sides except dead-end stem**			
25' F-F*	Residential paving	Fieldstone Avenue	Lot 40, Block 3	45' into Lot 31, Block 3
	Mountable curb & gutter			
	Sidewalk 4' both sides except dead-end stems**			
25' F-F*	Residential paving	Stonecreek Avenue	Brookstone Drive	Lot 21, Block 3
	Mountable curb & gutter			
	Sidewalk 4' both sides except dead-end stem**			
25' F-F*	Residential paving	Sunstone Drive	Stonecreek Avenue	Fieldstone Avenue
	Mountable curb & gutter			
	Sidewalk 4' both sides except dead-end stem**			
27' F-F*	Residential paving	Windward Drive	ParkWest Drive	NW corner Lot 9, Block 1 (Unit 3)
	Mountable curb & gutter			
	Sidewalk 4' ~~both sides~~* ← south side 5/16/94			

* An additional 1' is required if standard curb & gutter is needed for drainage

** Construction to be deferred

WATER				
12"	Water PVC line	ParkWest Drive	98th Street	Lot 5
8"	Water PVC line	Meadowbrook Avenue	ParkWest Drive	SW corner Lot 1, Block 1 (Unit 3)

8"	Water PVC line	Windward Drive	Park' Drive	NW corner Lot 9, Block 1 (Unit 3)
8"	Water PVC line	Stonehaven Drive	Parkwest Drive	Brookstone Drive
6"	Water PVC line	Brookstone Drive	Fieldstone Avenue	Stonecreek Avenue
6"	Water PVC line	Fieldstone Avenue	Sunstone Drive	Brookstone Drive
6"	Water PVC line	Stonecreek Avenue	Brookstone Drive	Sunstone Drive
6"	Water PVC line	Sunstone Drive	Stonecreek Avenue	Fieldstone Avenue
4"	Water PVC line	Stubs	Lots 13, 21, 31, 40, Block 3	

SANITARY SEWER:

8"	SAS gravity line	ParkWest Drive	98th Street	Windward Drive
8"	SAS gravity line	Meadowbrook Avenue	ParkWest Drive	SW corner Lot 1, Block 1 (Unit 3)
8"	SAS gravity line	Stonehaven Drive	ParkWest Drive	Brookstone Drive
8"	SAS gravity line	Brookstone Drive	Fieldstone Avenue	Lot 13, Block 3
8"	SAS gravity line	Fieldstone Avenue	Lot 40, Block 3	Unser Blvd.
8"	SAS gravity line	Stonecreek Avenue	Brookstone Drive	Lot 21, Block 3
8"	SAS gravity line	Sunstone Drive	Stonecreek Avenue	Fieldstone Avenue
8"	SAS gravity line	Windward Drive	ParkWest Drive	NW corner Lot 9, Block 1 (Unit 3)

DRAINAGE:

Per design	Concrete lined channel with appurtenances, trainer dikes and transition improvements at west boundary (including appropriate easements), and concrete lined transition area improvements west of Unser Blvd.	AMAFCA R/W	Unser Boulevard	West boundary (SW corner Lot 17, Block 8, Unit 5)
Per design	Concrete lined channel in AMAFCA R/W and related work shall have a separate financial guarantee to the City of Albuquerque for issuance of separate work orders from the remainder of Unit 1 infrastructure.			
Per design	As-built survey and certification to FEMA as to adequacy of the complete floodplain improvements and obtaining the LOMR from FEMA. LOMR REQUIRED FOR RELEASE OF FINANCIAL GUARA- FOR THE CHANNEL.			
Per design	Storm drain with appurtenances	ParkWest Drive	Meadowbrook Avenue	98th Street
Per design	Surface rundown	Lot 31, Block 3	Fieldstone Avenue	Unser Blvd
Per design	Temporary desiltation pond	West boundary Unit 1	Windward Drive	Meadowbrook Avenue
Per design	Storm drain and/or surface rundown	ParkWest Drive	Windward Drive	Drainage channel

MISCELLANEOUS:

Per DPM	Residential street lights			

UNIT 2

SIZE	TYPE IMPROVEMENT	LOCATION	FROM	TO
STREETS:				
20' F-F in; 24' F-F out	Residential paving Mountable curb & gutter Sidewalk 4' south side** (Mountable curb @ median)	Lava Bluff Drive	Unser Boulevard	150' west of Unser Blvd.
32' F-F	Residential paving Mountable curb & gutter Sidewalk 4' south/east side**	Lava Bluff Drive	150' west of Unser Blvd	SW corner Lot 1, Block 20 (U4)
27' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Monument Drive	Lava Bluff Drive	SW corner Lot 1, Block 24 (U4)
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Lava Reach Avenue	Lava Bluff Drive	Monument Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Dark Mesa Avenue	Lava Bluff Drive	Monument Drive
27' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Basalt Avenue	Lava Bluff Drive	Monument Drive

* An additional 1' is required if standard curb & gutter is needed for drainage
** Construction to be deferred

WATER:

12"	Water PVC line	Lava Bluff Drive	Unser Boulevard	SW corner Lot 1, Block 20 (U4)
6"	Water PVC line	Monument Drive	Lava Bluff Drive	SW corner Lot 1, Block 24 (U4)
6"	Water PVC line	Lava Reach Avenue	Lava Bluff Drive	Monument Drive
6"	Water PVC line	Dark Mesa Avenue	Lava Bluff Drive	Monument Drive
6"	Water PVC line	Basalt Avenue	Lava Bluff Drive	Monument Drive

SANITARY SEWER:

8"	SAS gravity line	Monument Drive	Lava Bluff Drive	SW corner Lot 1, Block 24 (U4
8"	SAS gravity line	Easement Lot 13, Bl 24	Monument Drive	Unser Boulevard
8"	SAS gravity line	Lava Reach Avenue	Monument Drive	NE corner Lot 12, Block 22
8"	SAS gravity line	Dark Mesa Avenue	Monument Drive	SE corner Lot 1, Block 22
8"	SAS gravity line	Basalt Avenue	SE corner Lot 1, Block 21	Monument Drive

DRAINAGE:

Per design	Storm drain with appurtenances	Basalt Avenue	Drainage R/W between Lava Bluff Dr and Tract A	Monument Drive
Per design	Storm drain with appurtenances	Monument Drive	Basalt Avenue	Lot 13, Block 25-24
Per design	Storm drain with appurtenances	Lot 13, Block 24	Monument Drive	Unser Blvd
Per design	Storm drain with appurtenances	Lava Bluff Drive	200' E. of Unser Blvd	Unser Blvd
Per design	Detention/desiltation pond with appurtenances	Drainage right-of-way between Lava Bluff Drive and Tract A		
Per design	Temporary desiltation pond and diversion berm	South boundary Unit 2	Lava Bluff Drive	Monument Drive

MISCELLANEOUS:

Per DPM	Residential street lights			

UNIT 3

SIZE	TYPE IMPROVEMENT	LOCATION	FROM	TO
STREETS:				
Per design	Left turn lane	98th Street at Windward Drive		
36' F-F	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Windward Drive	98th Street	Wedgewood Avenue
27' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Windward Drive	Wedgewood Avenue	NE corner Lot 1, Block 5 (U1), south side
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides except dead-end stem**	Meadowbrook Avenue	SE corner Lot 44, Block 5	Lot 19, Block 5
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Brookstead Drive	Meadowbrook Avenue	Skybrook Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Skybrook Drive	Brookstead Drive	Meadowbrook Avenue
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides except island**	Wedgewood Avenue	Windward Drive	Lot 9, Block 7
22' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' around perimeter of street; not along perimeter of median island and dead-end stem**	Wedgewood Court	Wedgewood Avenue	Around median island
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides except cul-de-sac bulb**	Gardenbrook Place	Windward Drive	Cul-de-sac (35' radius)
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides except cul-de-sac bulb**	Millstream Place	Windward Drive	Cul-de-sac (35' radius)

* An additional 1' is required if standard curb & gutter is needed for drainage
** Construction to be deferred

SE corner Lot 56, Block 8, North side; TO

SIDEWALK/WALKWAY per ARC Design

Park Site east of Lot 56, Block 8

Windward Drive

CENTER OF DRAINAGE (South side of channel)

WATER:				
8"	Water PVC line	Windward Drive	98th Street	NE corner Lot 1, Block 5 (U1)
~~8~~ 6"	Water PVC line	Meadowbrook Avenue	SE corner Lot 44, Block 5 (Unit 1)	~~Skybrook Drive~~ Brookstead
~~6"~~	~~Water PVC line~~	~~Meadowbrook Avenue~~	~~Skybrook Drive~~	~~Brookstead Drive~~
6"	Water PVC line	Brookstead Drive	Meadowbrook Avenue	Skybrook Drive
6"	Water PVC line	Skybrook Drive	Brookstead Drive	Meadowbrook Avenue
6"	Water PVC line	Stub	Brookstead Drive	Lot 19, Block 5
8"	Water PVC line	Wedgewood Avenue	Windward Drive	West boundary
6"	Water PVC line	Wedgewood Court	Wedgewood Avenue	Around median island
6"	Water PVC line	Gardenbrook Place	Windward Drive	Cul-de-sac
6"	Water PVC line	Millstream Place	Windward Drive	Cul-de-sac
SANITARY SEWER:				
8"	SAS gravity line	Windward Drive	98th Street	NE corner Lot 1, Block 5 (U1)
8"	SAS gravity line	Meadowbrook Avenue	SE corner Lot 44, Block 5 (Unit 1)	Lot 19, Block 5
8"	SAS gravity line	Brookstead Drive	Meadowbrook Avenue	Skybrook Drive
8"	SAS gravity line	Skybrook Drive	Brookstead Drive	Meadowbrook Avenue
8"	SAS gravity line	Wedgewood Avenue	Windward Drive	West boundary
8"	SAS gravity line	Wedgewood Court	Wedgewood Avenue	Around median island
8"	SAS gravity line	Gardenbrook Place	Windward Drive	Cul-de-sac
8"	SAS gravity line	Millstream Place	Windward Drive	Cul-de-sac
8"	SAS gravity line	Easement on Lot 9-P1	Wedgewood	98TH
DRAINAGE:				
Per design	Storm drain w/appurtenances	West end of park	Windward Drive	Drainage channel
Per design	Flood wall at west boundary			
MISCELLANEOUS:				
Per DPM	Residential street lights			

UNIT 4

SIZE	TYPE IMPROVEMENT	LOCATION	FROM	TO
STREETS:				
32' F-F	Residential paving Mountable curb & gutter Sidewalk 4' east side**	Lava Bluff Drive	NW corner Lot 1, Block 19	SW corner Lot 1, Block 16
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Petroglyph Avenue	Lava Bluff Drive	Monument Drive
27' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides except bulb**	Monument Drive	Petroglyph Avenue	NW corner Lot 16, Bl 16 (U2)
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Cliffview Avenue	Lava Bluff Drive	Monument Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' both sides**	Escarpment Avenue	Lava Bluff Drive	Monument Drive

* An additional 1' is required if standard curb & gutter is needed for drainage

** Construction to be deferred

WATER:				
12"	Water PVC line	Lava Bluff Drive	NW corner Lot 1, Block 19 (Unit 2)	SW corner Lot 1, Block 16 (Unit 5)
6"	Water PVC line	Petroglyph Avenue	Monument Drive	Lava Bluff Drive
6"	Water PVC line	Cliffview Avenue	Lava Bluff Drive	Monument Drive
6"	Water PVC line	Escarpment Avenue	Lava Bluff Drive	Monument Drive
6"	Water PVC line	Monument Drive	Petroglyph Avenue	NW corner Lot 16, Bl 16 (U2)
SANITARY SEWER:				
8"	SAS gravity line	Lava Bluff Drive	SW corner Lot 1, Block 16 (Unit 5)	Petroglyph Avenue
8"	SAS gravity line	Petroglyph Avenue	Lava Bluff Drive	Monument Drive

8"	SAS gravity line	Monument Drive	Petro[illegible] Avenue	SW corner Lot 1, Block 24 (U2)
8"	SAS gravity line	Easement Lot 9, Bl 16	Monument Drive	Unit 5
8"	SAS gravity line	Cliffview Avenue	Monument Drive	SW corner Lot 1, Block 19
8"	SAS gravity line	Escarpment Avenue	Monument Drive	NE corner Lot 12, Block 17

DRAINAGE:

Per design	Temporary desiltation pond	South boundary	Lava Bluff Drive	East boundary

MISCELLANEOUS:

Per DPM	Residential street lights

UNIT 5

SIZE	TYPE IMPROVEMENT	LOCATION	FROM	TO
STREETS:				
Per design	Crossing structure	ParkWest Drive across drainage channel		
36' F-F	Residential paving Mountable curb & gutter Sidewalks 4' both sides	ParkWest Drive	Windward Drive	Lava Bluff Drive
32' F-F	Residential paving Mountable curb & gutter Sidewalk 4' east side except bulb**	Lava Bluff Drive	ParkWest Drive	NE corner Lot 20, Block 14
20' F-F	Residential paving Mountable curb & gutter	Lava Bluff Drive	Around island	
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' south side**	Lava Bluff Drive	ParkWest Drive	Westbrook Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalk 4' east side**	Westbrook Drive	Lava Bluff Drive	Cascade Park Avenue
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Cascade Park Avenue	Westbrook Drive	Oakbrook Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides except dead-end stem**	Oakbrook Drive	Cascade Park Avenue	Creekwood Avenue
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Creekwood Avenue	Lava Bluff Drive	Stonewood Drive
20' F-F	Residential paving Mountable curb & gutter	Creekwood Avenue bulb	Around island	
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Smokerise Avenue	ParkWest Drive	Stonewood Drive
25' F-F*	Residential paving Mountable curb & gutter Sidewalks 4' both sides**	Saddlebrook Avenue	ParkWest Drive	Stonewood Drive
22' F-F	Residential paving Standard curb & gutter Sidewalk 4' west side**	Stonewood Drive	Saddlebrook Avenue	Smokerise Avenue

* An additional 1' is required if standard curb and gutter is needed for drainage

** Construction to be deferred

WATER:

12"	Water PVC line	ParkWest Drive	Unit 1	Lava Bluff Drive
12"	Water PVC line	Lava Bluff Drive	ParkWest Drive	NE corner Lot 20, Block 14 (U4)
6"	Water PVC line	Lava Bluff Drive bulb	Around island	
8"	Water PVC line	Lava Bluff Drive	ParkWest Drive	Westbrook Drive
6"	Water PVC line	Westbrook Drive	Lava Bluff Drive	Cascade Park Avenue
6"	Water PVC line	Cascade Park Avenue	Westbrook Drive	Oakbrook Drive
6"	Water PVC line	Oakbrook Drive	Lot 9, Block 8	Creekwood Avenue
8"	Water PVC line	Creekwood Avenue	Lava Bluff Drive	ParkWest Drive
6"	Water PVC line	Creekwood Avenue	ParkWest Drive	Stonewood Drive
6"	Water PVC line	Creekwood Avenue bulb	Around island	
6"	Water PVC line	Saddlebrook Avenue	ParkWest Drive	Stonewood Drive
6"	Water PVC line	Smokerise Avenue	ParkWest Drive	Stonewood Drive
6"	Water PVC line	Stonewood Drive	Smokerise Avenue	Saddlebrook Avenue

6" [illegible] Stonewood Drive Saddlebrook Smokerise

SANITARY SEWER:

8"	SAS gravity line	ParkWest Drive	SW corner Lot 14, Block 14	Creekwood Avenue
8"	SAS gravity line	Lava Bluff Drive	NW corner Lot 20, Block 14	Westbrook Drive
8"	SAS gravity line	Westbrook Drive	Lava Bluff Drive	Cascade Park Avenue
8"	SAS gravity line	Cascade Park Avenue	Westbrook Drive	Oakbrook Drive
8"	SAS gravity line	Oakbrook Drive	Lot 9, Block 8	Creekwood Avenue
8"	SAS gravity line	Creekwood Avenue	NE corner Lot 9, Block 9	Stonewood Drive
8"	SAS gravity line	Saddlebrook Avenue	NE corner Lot 1, Block 11	Stonewood Drive
8"	SAS gravity line	Smokerise Avenue	ParkWest Drive	Stonewood Drive
8"	SAS gravity line	Stonewood Drive	Saddlebrook Avenue	Smokerise Avenue
8"	SAS gravity line	Easement	Smokerise Avenue	Unit 4

DRAINAGE:

Per design	Surface rundown	Drainage R/W east of Lot 12, Block 11	Saddlebrook Avenue	Drainage channel
Per design	Surface rundown	Westbrook Drive R/W and Lava Bluff Drive R/W	Cascade Park Avenue	Drainage R/W between Lava Bluff Drive and Tract A

Alternate channel & covenants to be financially guaranteed by separate agreement 11-07-95

MISCELLANEOUS:

Per DPM	Residential street lights

NOTES:

1. Catch basins and other appurtenances included with RCP storm sewer
2. Water infrastructure to include valves, fittings, valve boxes, and fire hydrants as required
3. Sanitary sewer to include manholes, service connections as required
4. Design engineer to provide a Grading and Drainage Certification (including private retaining walls as shown on grading plan) prior to requesting City of Albuquerque approval of constructed infrastructure items and/or release of final Financial Guarantee.
5. Internal 4' sidewalks deferred

Prepared By: Ellery G. Biathrow Jr
Print Name: Ellery A. Biathrow, Jr., P.E.
Firm: Sivage Thomas Homes, Inc.

Development Review Board Member Approvals

DWH 6/7/94

Transportation Department — 4-12-94 DWH 11/7/95

Utility Development — RWK 11-7-95 RWK 6-7- Robert W. Kane 4-12-94

City Engineer/~~AMAFCA~~ — 6/7/94 11/7/95

AMAFCA — 4/4/94

~~Cultural/Recreational Services~~ — 4-12-94 11/7/95

Planning/DRB Chairman — 6/11/9- 4-12-94 11-7-95

PARKS & GENERAL SERVICES

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 23, 1995

James D. Hughes, PE
Community Sciences Corp
P.O. Box 1328
Corrales, NM 87048

RE: GRADING PLAN FOR PARKWEST UNIT 5 (H-9/D1A4)
RECEIVED OCTOBER 19, 1995 FOR FINAL PLAT
ENGINEER'S STAMP DATED 5-25-95

Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology accepts the Grading Plan for Final Plat. Submit a copy of the Grading Plan to DRB for their approval.

Engineer's Certification of grading & drainage per DPM checklist must be accepted by City Hydrology 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: Andrew Garcia
Fred Aguirre, DRB 93-303
Ellery Biathrow, SIVAGE THOMAS HOMES, 5141 Masthead NE 87109

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE INFORMATION SHEET

PROJECT TITLE: PARKWEST SUBDIVISION ZONE ATLAS/DRNG. FILE #: ~~G9~~ H9/D14

LEGAL DESCRIPTION: TRACTS I, II-A, II-B, III, AND IV LAURELWOOD II SUBDIVISION Parkwest Unit 5

CITY ADDRESS: UNSER BLULEVARD AND 98TH STREET

ENGINEERING FIRM: Community Sciences Corporation CONTACT: JAMES D. HUGHES, P.E.

ADDRESS: P.O. Box 1328, Corrales, N. M. 87048 PHONE: 897-0000

OWNER: SIVAGE THOMAS HOMES CONTACT: ~~LARRY COLLINS~~ George Philipson

ADDRESS 5141 MASTHEAD NE PHONE: 821-3511

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: N/A CONTACT:

ADDRESS: PHONE:

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

_____ YES

__X__ NO

_____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 93-303

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT

____ DRAINAGE PLAN

_____ CONCEPTUAL GRADING AND DRAINAGE PLAN

__✓__ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

RECEIVED

JAN 19 1995

DATE SUBMITTED:

BY:

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

__✓__ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

____ OTHER _____(SPECIFY)

community sciences corporation

September 11, 1995

City of Albuquerque
Hydrology Department
Attn: John Curtin
P. O. Box 1293
Albuquerque, NM 87103

Re: DRC Comments on Parkwest Unit 5, DRC #4886.94, DRB 93-303, Map #G-9

Dear Mr. Curtin:

Enclosed please find for the above referenced project:

1. Original Mylars
2. Your Comment Set
3. One Extra Blue Print Set
4. Supporting Hydrology

The additional revisions that were requested by Dan Hogan and Fred Aguirre are as follows:

1. FF elevations are to be minimum 2' above the highest elevation of right-of-way for street adjacent to lot.

2. Maintenance agreement w/N.P.S., written signature.

3. Increase channel freeboard to 2' minimum.

4. Increase weir opening from street to pond, so overflow from channel doesn't go down side streets

These changes have been made to the enclosed construction plans. Details of how they were made are as follows:

1. Finished Floor (FF) elevations on the lots next to the channel were added to sheets 5 and 6 of the Unit 5 plans, to sheet 4 of the Unit 4 plans, and to Sheet 4 of the Unit 2 plans, and the pad, swale, and rear property corner elevations were raised relative to the FF's setting each FF 2' above the highest front Right-of-way elevation. Everything else was set assuming the standard Sivage Thomas Homes (STH) practice of setting the FF 8" above the pad.

2. Ellery Biathrow of STH provided the maintenance agreement separately.

3. The typical channel cross-section and the associated hydraulic calculations were revised on Sheets 13, 14 and 15. The design flow was reduced by subtracting the portion of the pond inflow hydrograph which drains directly into the pond without entering the channel. The peak 100-year flow was increased to account for the actual amount of sediment (13 cfs ± from AHYMO) that flows into the channel. Enclosed, there are supplemental sediment transport calculation which indicate that the man made channel has capacity to transport sediment at only about half of the rate at which it is being delivered to the channel. This is primarily due to a conservative channel roughness (n=0.045) assumption which is necessary to

P.O. Box 1328
Corrales, New Mexico 87048
Tel (505) 897-0000 Fax (505) 898-5195

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS

account for the, vegetation that is to be planted in the earth lined channel. In the event that the channel silts in, the flow will go into the adjacent street which will flow at a much faster velocity since it has no vegetation, thus allowing the street to transport the sediment. The cut-off wall on the typical channel section and on the profiles was raised one half of a foot. The channel side slopes were steepened on the typical section and the invert was lowered on the profile. The channel invert and cut-off wall elevations were deleted from the plan views (Sheets 5, 6, 13, 14 & 15) because the elevations and offsets are on the profile, so the elevations in the plan view were redundant and wrong.

4. A 45' wide curb cut was shown on Sheet 15 at the rundown into the pond. However, since the street next to the pond is not to be built until Unit 4, the details of ballards and a concrete collection channel along the top of the pond slope will be specified in the Unit 4 plan set. The Weir capacity is:

$$Q = 2.7 \text{ X } 45' \text{ X } (1.0)^{1.5} = 121.5 \text{ cfs}$$

Because the capacity of the 45' wide opening is greater than the 120 cfs design flow, the drainage will no longer spill over into the side streets to the east.

In addition to the changes requested by Fred and Dan, the supporting pond routing calculations that you requested are enclosed and the rest of the plan changes that you requested have been made. Additionally the pond design data was added to sheet 15.

Please call immediately if you have any further concerns or questions.

Sincerely,

James D. Hughes, P. E.
Vice President

cc: Ellery Biathrow, STH

CSC#143-18-635/143-18AQ.REP

KK# 145-18-639

Suplemental Calculations for Parkwest Unit 5

Channel Adjacent to National Parks Service.

From the drainage report, two offsite basins contribute drainage to the channel along Lava Bluff Drive (132.11 and 133.51, with 133.52 draining directly to the pond). The task at hand is to compare the sediment transport rates from the offsite basins with the rate of the channel adjacent to Lava Bluff Drive.

Basin ID #	Washload (PPM w)	Q (clear water) (cfs)	Man Made Channel V (fps)	Y (ft)	Width (ft)	Qs (cfs)	Qs Incoming (cfs)
132.11	42,151	11.54	2.81	0.43	9.51	0.13	0.49
133.51	31,948	95.23	5.79	0.86	19.02	6.28	12.56
Total	33,050	106.77	5.95	0.90	19.86	7.46	—

Where $q_s = a V^b Y^c (1-C_f)^d = 0.0002 V^{4.9} Y^{0.19} (1-C_f)^{-2.55}$

and $Q_s = q_s \times \text{Width}$

The Channel Transports only Half of The Sediment Delivered

Prepaired 8-28-95 James D. Bagley

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1*****************************************  ************************************
*                                                                               *
 *  HEC-2 WATER SURFACE PROFILES          *  *  U.S. ARMY CORPS OF ENGINEERS     *
*                                                                               *
 *                                        *  *  HYDROLOGIC ENGINEERING CENTER    *
*                                                                               *
 *  Version  4.6.2;  May 1991             *  *  609 SECOND STREET, SUITE D       *
*                                                                               *
 *                                        *  *  DAVIS, CALIFORNIA 95616-4687     *
*                                                                               *
 *  RUN DATE   28AUG95    TIME  11:17:58  *  *        (916) 756-1104            *
*                                                                               *
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X    X  XXXXXXX  XXXXX           XXXXX
X    X  X       X    X          X    X
X    X  X       X               X
XXXXXXX  XXXX   X        XXXXX   XXXXX
X    X  X       X               X
X    X  X       X    X          X
X    X  XXXXXXX  XXXXX           XXXXXXX
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THIS RUN EXECUTED 28AUG95 11:17:58

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version  4.6.2;  May 1991
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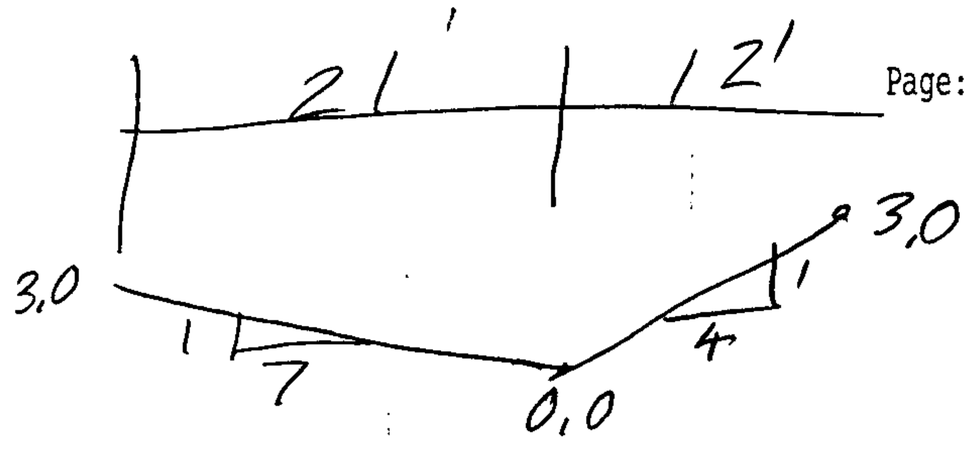
```
T1      parkwest 5 CHANEL NEXT TO LAVA BLUFF DR. @ N. P. S.
T2      SUPERCRITICAL ANALYSIS
T3      7+64 TO 13+00

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

          2.0                               0.018                                 0.3

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

    1.0           -1.                                           -1.
```




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 NC                      0.04
 QT     3.0    11.54     95.23     106.77
 X1     0.00   3.00      0.00      33.0
 GR     3.00   0.00      0.00      21.0        3.00        33.00
1
    28AUG95      11:17:58                                          PAGE    2

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *PROF 1

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS

 *SECNO  .000
      .000      .86       .86       .77       .30       .99       .12       .00       .00      3.00
     11.5        .0      11.5        .0        .0       4.1        .0        .0        .0      3.00
      .00       .00      2.81       .00      .000      .040      .000      .000       .00     14.95
   .017852       0.        0.        0.         0        20         8       .00      9.51     24.46


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    28AUG95      11:17:58                                          PAGE    3

 T1      parkwest 5 CHANEL NEXT TO LAVA BLUFF DR. @ N. P. S.
 T2      SUPERCRITICAL ANALYSIS
 T3      13+00 TO POND

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

           3.0                 1.0       0.030                                 0.3

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

    2.0             -1.                                   -1.


1
    28AUG95      11:17:58                                          PAGE    4

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *PROF 2

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
```

*SECNO .000

.000	1.73	1.73	1.78	.30	2.25	.52	.00	.00	3.00
95.2	.0	95.2	.0	.0	16.4	.0	.0	.0	3.00
.00	.00	5.79	.00	.000	.040	.000	.000	.00	8.90
.030241	0.	0.	0.	0	32	6	.00	19.02	27.91

1
28AUG95 11:17:58 PAGE 5

T1 parkwest 5 CHANEL NEXT TO LAVA BLUFF DR. @ N. P. S.
T2 SUPERCRITICAL ANALYSIS
T3 13+00 TO POND

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	4.0		1.0		0.030			0.3		

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.		-1.				-1.			

1
28AUG95 11:17:58 PAGE 6

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
-SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 3

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS

*SECNO .000

.000	1.81	1.81	1.87	.30	2.36	.55	.00	.00	3.00
106.8	.0	106.8	.0	.0	17.9	.0	.0	.0	3.00
.00	.00	5.95	.00	.000	.040	.000	.000	.00	8.36
.030114	0.	0.	0.	0	32	6	.00	19.86	28.22

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28AUG95 11:17:58 PAGE 7

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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

7+64 TO 13+00

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
.000	.00	.00	.00	.00	11.54	.86	.77	.99	178.52	2.81	4.11	.86
.000	.00	.00	.00	.00	95.23	1.73	1.78	2.25	302.41	5.79	16.44	5.48
.000	.00	.00	.00	.00	106.77	1.81	1.87	2.36	301.14	5.95	17.94	6.15

1
28AUG95 11:17:58 PAGE 8

7+64 TO 13+00

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
.000	11.54	.86	.00	.00	.56	9.51	.00
.000	95.23	1.73	.86	.00	1.43	19.02	.00
.000	106.77	1.81	.08	.00	1.51	19.86	.00

Y
0.43'
0.86'
0.90

1
28AUG95 11:17:58 PAGE 9

SUMMARY OF ERRORS AND SPECIAL NOTES

Hydraulic Depth $Y = \frac{Area}{Topwid}$

143-18-635

community sciences corporation

April 28, 1995

Diane Souder
Chief of External Affairs
Petroglyph National Monument
123 Fourth Street, SW
Albuquerque, NM 87102

Re: Parkwest EA
Lava Bluffs Drive Overflow Capacity Assessment

Ms. Souder;

I am writing this letter as one of the design engineers for the Parkwest subdivision. The subject EA has a preferred alternate which recommends a natural earth channel be constructed adjacent to Lava Bluffs Drive in order to convey off-site flows (from NPS property) into the project's drainage detention pond. I have reviewed comments made by AMAFCA relative to this channel and your response to those comments. The maintenance related issues of degradation (cutting deeper) and agradation (filling in with silt) were mentioned.

In the extremely unlikely event of complete agradation of the natural earth channel adjacent to Lava Bluffs Drive, the entire off-site flow of 133.5cfs would enter the street and combine with the "designed" street flow of 12.3cfs, resulting in a total flow of 145.8cfs. The attached plan sheet shows a normal depth calculation which indicates a flow depth of 0.96 feet which will be entirely contained within the right-of-way.

The street capacity is not the only downstream constraint to be analyzed. Since the "designed" street flow of 12.3cfs was programmed to hit a sump area and enter the drainage detention pond, the effects of having 145.8cfs entering that same area were evaluated. Immediately north and east of the "sump" area there street high points which can function as overflow "relief" areas. Our proposed design of a retaining/flood wall adjacent to lots 1-P1, and 12-P1, Block 18, Unit 4 will allow the water surface to rise to an elevation of 11.7 in the area of the sump. The POND-2 program was used to calculate the amount of water which would flow north and east in the streets and west through the opening designed in the screen wall for the detention pond. At elevation 11.7, the entire 145.8cfs can be safely conveyed away from the "sump" area without flooding any homes in the vicinity.

Replaced by 45' Weir to Pond

In summary, during the 100 year storm, if the natural earth channel completely filled in and all off-site flows jumped into Lava Bluffs Drive, no homes in the downstream areas of the Parkwest subdivision would be flooded.

Very truly yours,

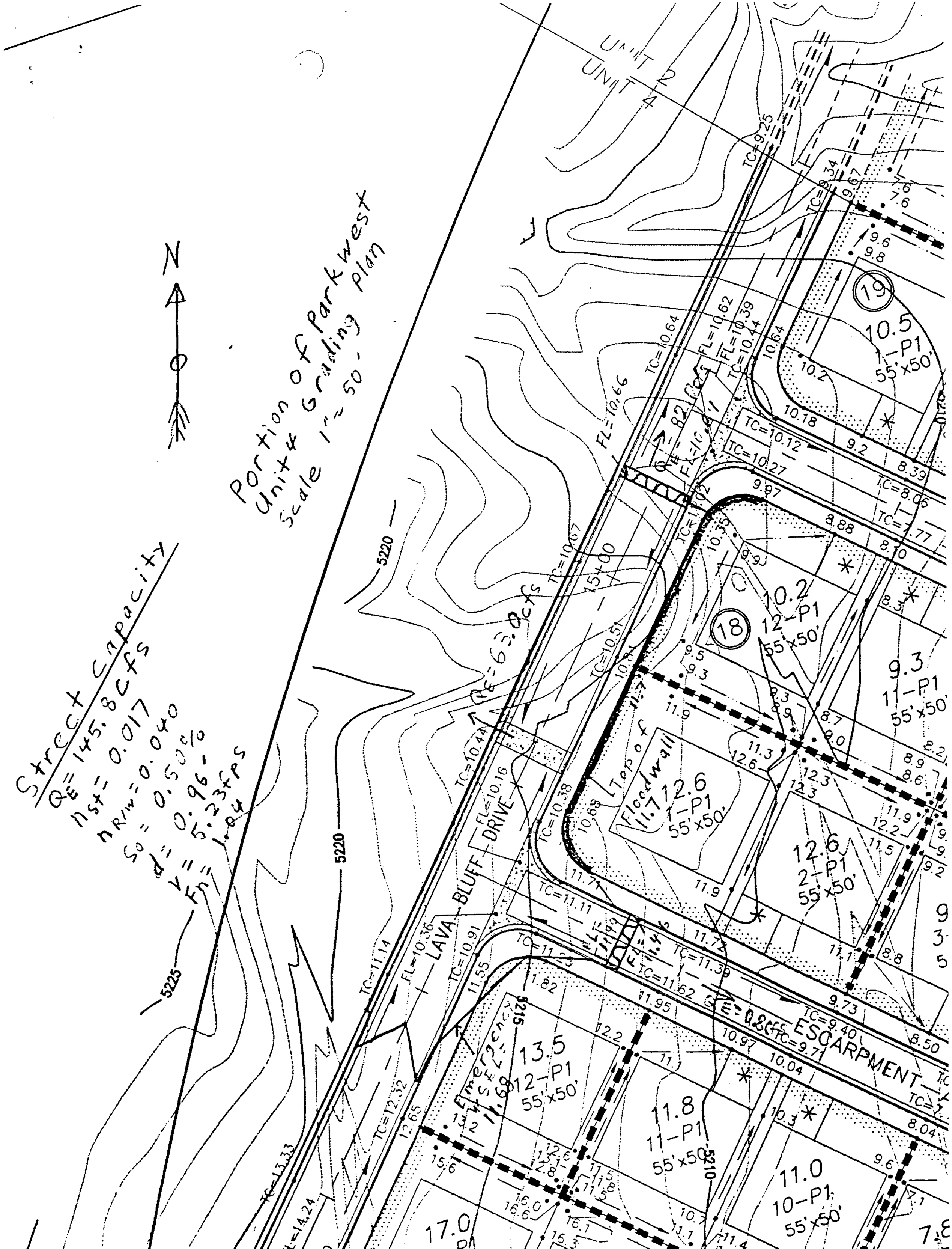
Stephen L. Crawford, PE
Vice President

STEPHEN L. CRAWFORD
NEW MEXICO
18274
REGISTERED PROFESSIONAL ENGINEER

CSC#143-18-635/143-18AN.REP

P.O. Box 1328
Corrales, New Mexico 87048
Tel (505) 897-0000 Fax (505) 898-5195

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS


N
Portion of parkwest
Unit 4 Grading plan
Scale 1" = 50'
Street Capacity
Q = 145.8 cfs
nst = 0.017
nRW = 0.040
Sx = 0.50%
d = 0.96'
V = 5.23 fps
Fr = 1.04
UNIT 2
UNIT 4
LAVA BLUFF DRIVE
ESCARPMENT
Top of Floodwall
Emergency SPILLWAY
DRIVE
5220
5225
5215
5210
TC=9.25
TC=9.34
TC=10.64
FL=10.62
FL=10.39
TC=10.44
FL=10.66
TC=10.67
TC=10.51
TC=10.44
FL=10.16
TC=10.38
TC=10.12
TC=10.27
TC=11.02
TC=11.11
TC=11.14
FL=10.36
TC=10.91
TC=11.23
TC=11.39
TC=11.62
TC=9.40
TC=9.71
TC=12.32
TC=13.33
TC=14.24
Q = 63.8 cfs
15+00
19
10.5
1-P1
55'x50'
18
10.2
12-P1
55'x50'
17
12.6
1-P1
55'x50'
16
12.6
2-P1
55'x50'
15
13.5
12-P1
55'x50'
14
11.8
11-P1
55'x50'
13
9.3
11-P1
55'x50'
12
11.0
10-P1
55'x50'

Outlet Structu File: NPS1   .STR

POND-2 Version: 4.01   S/N: 88020607
Date Executed: 04-18-1995   Time Executed: 12:03:03

***** COMPOSITE OUTFLOW SUMMARY ****

Elevation (ft)	Q (cfs)	Contributing Structures
9.69	0.0	+01
10.66	24.8	+01 +03
11.02	47.3	+01 +03
11.46	105.7	+01 +03
11.68	145.2	+01 +03
11.70	149.0	+01 +03

Replaced by 45' Weir to Pond.

Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

Outlet Structure File: C:NPS1 .STR
Planimeter Input File: C:NPS .VOL
Rating Table Output File: C:NPS1 .PND

Min. Elev.(ft) = 9.69 Max. Elev.(ft) = 11.7 Incr.(ft) = 2.3

Additional elevations (ft) to be included in table:
* *
10.66 11.02 11.46 11.68

****
SYSTEM CONNECTIVITY
****

Structure	No.		Q Table		Q Table
INLET BOX	01	+	00	->	02
WEIR-XY	03	+	02	->	04

Outflow rating table summary was stored in file C:NPS1 .PND

Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

>>>>>> Structure No. 01 <<<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

E1 elev.(ft)?	9.69
E2 elev.(ft)?	13.00
Invert elev.(ft)?	9.69
Weir length (ft)?	8.67
Weir coefficient?	3.0
Orifice area (sq.ft)?	11.56
Orifice coefficient?	.65
Start transition elev.(ft) @ ?	11.00
Transition height (ft)?	2.0

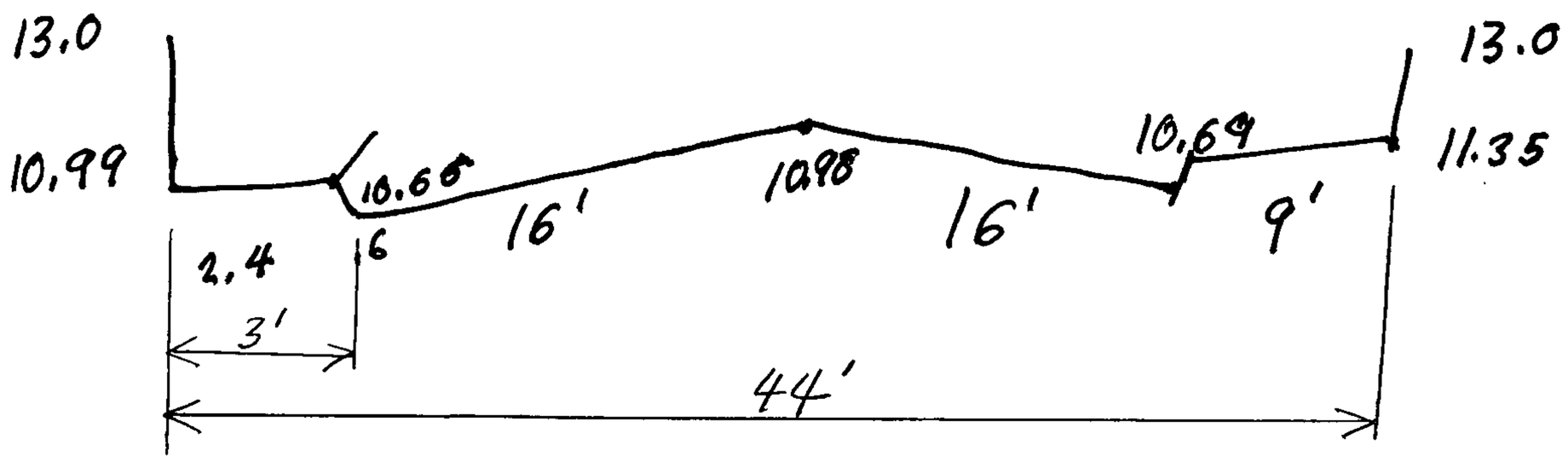
Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

>>>>>> Structure No. 03 <<<<<<
(Input Data)

WEIR-XY
Weir - Defined by X, Y Coordinates
E1 (ft) =10.66 E2 (ft) =13.0

X dist.(ft)	Y elev.(ft)
0	13
0	10.99
2.4	10.99
3	10.66
19	10.98
35	10.69
35.6	11.02
44	11.35
44	13



Outlet Structure File: NPS1   .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

Outflow Rating Table for Structure #01
INLET BOX   Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
9.69	0.0	Weir: H = 0.0
10.66	24.8	Weir: H = .97
11.02	39.7	Transition: H = 1.33
11.46	55.3	Transition: H = 1.77
11.68	63.0	Transition: H = 1.99
11.70	63.7	Transition: H = 2.01

Weir   Cw = 3   Weir length = 8.67 ft
Orifice Co = .65   Orifice area = 11.56 sq.ft.
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
Transition interpolated between elev. 11 and 13 ft
Weir equation = Orifice equation @ elev.= 12.00832 ft

Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

Outflow Rating Table for Structure #03
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
9.69	0.0	E < Y min= 10.66
10.66	0.0	E = Y min= 10.66
11.02	7.6	W(ft)= 35.6 Max. D(ft)= .36
11.46	50.4	W(ft)= 44.0 Max. D(ft)= .8
11.68	82.1	W(ft)= 44.0 Max. D(ft)= 1.02
11.70	85.3	W(ft)= 44.0 Max. D(ft)= 1.04

63.7
+ 85.3
149.0 cfs

Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

Outflow Rating Table 02
Table 02 = 00 + 01

Elevation (ft)	Q (cfs)	Contributing Structures
9.69	0.0	+01
10.66	24.8	+01
11.02	39.7	+01
11.46	55.3	+01
11.68	63.0	+01
11.70	63.7	+01

Outlet Structure File: NPS1 .STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 04-18-1995 Time Executed: 12:03:03

Outflow Rating Table 04
Table 04 = 02 + 03

Elevation (ft)	Q (cfs)	Contributing Structures
9.69	0.0	+01
10.66	24.8	+01 +03
11.02	47.3	+01 +03
11.46	105.7	+01 +03
11.68	145.2	+01 +03
11.70	149.0	+01 +03

Project Title: ParkWest ubdivision, Unit 5
EPC #:

Zone Atlas/Drng. File #: H-Z-9:
Work Order #: 4886.94

Legal Description: Tract A of ParkWest Unit 1
Address: 98th Street and Unser Blvd. NW

Engineering Firm: n/a
Address: N/a

Contact: n/a
Phone: n/a

Owner: Sivage Thomas Homes, Inc.
Address: 5141 Masthead N.E., Alb. NM 87109

Contact:Ellery A. Biathrow, Jr., P.E.
Phone: 821-3511

Architect: n/a
Address: N/a

Contact: n/a
Phone: n/a

Surveyor: n/a
Address: N/a

Contact: n/a
Phone: n/a

Contractor: n/a
Address: N/a

Contact: n/a
Phone: n/a

Type of Submittal:

_____ Drainage Report
_____ Drainage Plan
_____ Conceptual Grading & Drainage Plan
_____ Grading Plan
_____ Erosion Control Plan
_____ Engineer's Certification
__X__ Other
_____ Drainage Report

Pre-Design Meeting:

_____ Yes
_____ No
_____ Copy Provided

Check Type of Approval Sought:

_____ Sketch Plat Approval
_____ Preliminary Plat Approval
_____ S. Dev. Plan for Sub'd. Approval
_____ S. Dev. Plan for Bldg. Permit Approval
_____ Sector Plan Approval
_____ Final Plat Approval
_____ Foundation Permit Approval
_____ Building Permit Approval
_____ Certificate of Occupancy Approval
_____ Grading Permit Approval
_____ Paving Permit Approval
_____ S.A.D. Drainage Report
_____ Drainage Requirements
__X__ Other _Maintenance_____ (Specify)

Date Submitted: 08-10-95

By: Ellery A. Biathrow, Jr., P.E.

F.N.: F.COA.COAPW001

SIVAGE THOMAS HOMES
3807 Atrisco N.W. Albuquerque, NM 87120

Phone 836-7400

LETTER OF TRANSMITTAL

TO COA - PWD - Hydrology

DATE	JOB NO.
8-10-95	
ATTENTION Fred	
RE: Parkwest 5	

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via hand delivery the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☒ below

COPIES	DATE	NO.	DESCRIPTION
1		3	Agreement — Construct/maintain
1	7-24-95	1	Letter of Intent to Acquire

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit_____copies for approval

☐ For your use ☐ Approved as noted ☐ Submit_____copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return_____corrected prints

☒ For review and comment ☐ _____

☐ FOR BIDS DUE _____ 19_____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Should the Infrastructure listing be amended?

Please advise.

COPY TO_____

SIGNED: Elley

PRODUCT 240-3 NEBS Inc., Groton, Mass. 01471.

If enclosures are not as noted, kindly notify us at once.

Agreement to Construct and Maintain

Private Drainage Channel

Tract A-3 ParkWest Subdivision

98th Street N.W. and Unser Blvd., N.W.

WHEREAS, the United States of America acting through the United States Department of the Interior, National Park Service, Petroglyph (NPS) is being granted a 11 foot wide land Tract (A-3) in the ParkWest Subdivision for the purposes of floodway and storm drainage works as identified as Tract A-3 as shown on the ParkWest Subdivision, Unit 5 plat filed for public record in Bernalillo County, New Mexico on the __th day of August, 1995 in Volume ___, Folio ___ (Instrument No. 95_____); and,

WHEREAS, Sivage Thomas Homes, Inc. (STH) as a part of its subdivision development of ParkWest Subdivision, Unit 5, is to construct an earthen lined channel within Tract A-3, a land area to be transferred the NPS by special warranty deed at the time of request by the NPS, hereinafter known as the Project; and,

WHEREAS, STH has requested that NPS assume ownership and maintenance responsibilities of the Project that is to be constructed by STH; and

WHEREAS, STH has provided financial guaranties to the City of Albuquerque for the construction of a channel conforming to design standards of the City of Albuquerque;

NOW THEREFORE for good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. STH will:

   a. Cause to be designed, with engineer's seal and signature, and to be constructed an earthen channel, approximately 1,800 feet in length as shown on the Improvements for Grading, Drainage, and Utilities for ParkWest Subdivision, Unit 5 bearing the COA Project No. 4886.94.

   b. Provide final plans and specifications for construction of the Project to the NPS for review and approval prior to construction.

   c. Administer, test, and inspect, or otherwise observe construction to assure construction is in conformance with the plans and specifications.

   d. Permit the inspection of construction by a NPS and COA representatives, to include an engineer and testing firm hired by NPS at NPS's expense.

e. Provide a financial guaranty to the City of Albuquerque in an amount sufficient to pay for design and construction of a lined channel in the event NPS does not take ownership of Tract A-3 prior to September 30, 1998. The financial guaranty will be a separate guaranty from the guaranty provided for typical improvements contained within the infrastructure plan set.

f. Obtain approval for the project from the COA and any necessary approvals from Federal agencies.

g. Provide an engineer's certification to COA that the Project has been constructed in accordance with the approved plans and specifications, together with a "Record" set of drawings (mylar) of the completed project within 30 days of final acceptance.

h. Require its contractor to provide liability insurance naming COA as an additional insured. The amount of liability insurance coverage shall be $1,000,000.00.

i. Maintain the alignment and grade of the earthen channel during the period of ownership by STHI.

j. Cause a new design of a lined channel conforming to the design standards of the City of Albuquerque to be completed, submit for review and approval the new design, and construct the lined channel by August 01, 1998 if the NPS has not acquired ownership of Tract A-3 by May 31, 1998.

2. City of Albuquerque will:

a. Review and approve the March, 1995 plans and specifications for the Project as prepared by STH's engineer.

b. Review and approve the plans and specifications for the lined channel in Tract A-3 as prepared by STH's engineer.

3. This Agreement shall be construed according to the laws of the State of New Mexico.

AGREED TO AND ACCEPTED BY:

City of Albuquerque

By: _____

Sivage Thomas Homes, Inc.

By: _____

F.N.: A.WD95C01.ParkWt01.Des.08099501

ACKNOWLEDGEMENT FOR NATURAL PERSON

STATE OF NEW MEXICO)
)ss
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this _____ day of _____, 1994, by _____, _____ of the City of Albuquerque, a political subdivision of the State of New Mexico.

_____

Notary Public

My Commission Expires: _____

(Seal)

ACKNOWLEDGEMENT FOR CORPORATION

STATE OF NEW MEXICO)
)ss
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this __th day of August, 1995, by _____, Vice President of Sivage Thomas Homes, Inc., a New Mexico corporation.

_____

Notary Public

My Commission Expires: October 29, 1995

(Seal)

F.N.: A.WD95C01.ParkWt01.Des.08099501

United States Department of the Interior

NATIONAL PARK SERVICE
Petroglyph National Monument
123 Fourth Street SW
Room 101
Albuquerque, New Mexico 87102

IN REPLY REFER TO

L1425(PETR)

July 24, 1995

Mr. George Phillipson
Vice-President for Development
Sivage Thomas Homes
5141 Masthead Street NE
Albuquerque, New Mexico 87109

Dear George:

The purpose of this letter is to inform you of our intent to acquire by donation 0.33 acres of land within Unit 5 of Park West Subdivision. This property is defined as Tract A III.

In order to acquire the property a legal description of the property and the execution of a warranty deed will be required. We will also need to see a title policy showing that Sivage Thomas Homes has title acceptable to the United States.

At such time as the National Park Service acquires the property we will assume attendant maintenance responsibilities.

Sincerely,

Stephen E. Whitesell
Superintendent

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

2600 PROSPECT N.E. ALBUQUERQUE N.M. 87107
TELEPHONE (505) 884-2215

TO: CLAIRE KOOPMAN, DRB

FR: KURT BROWNING, AMAFCA

RE: DRB COMMENTS FOR 8-15-95

1. DRB 93-303 : PARK WEST UNITS. Any existing AMAFCA easements requiring vacation require Board approval with supporting documentation. AMAFCA would like to review the grading and drainage plan as it pertains to the Ladera Channel. Any connections to the channel must be approved by AMAFCA. The existing easement located at the west end of the Ladera Channel (on Wastella property) should be clearly shown. Outside of the Ladera Channel, all easements and drainage ROW to be dedicated to the City, National Park Service or private entity. Please coordinate with City Hydrology. The drainage ROW west of Lava Bluff Drive is dedicated to? Tract A-3? Also, Note 14 on the plat needs revising? Please review.

COMMUNITY SCIENCES CORPORATION
P.O. Box 1328
CORRALES, NEW MEXICO 87048-1328

(505) 897-0000 • FAX (505) 898-2305

LETTER OF TRANSMITTAL

TO Storm Water Maintenance
9805 Central NE
Alb. NM

DATE 7-28-95 JOB NO. 143-26-60

ATTENTION Glenn Jorgensen

RE: Parkwest Unit 5
DRC Plans of the Pond

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☑ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
			Sheets 15, 16 of 39
			John C. -
			these plans reflect
			the changes that will
			satisfies maintance requirements
			thanks for your help
			Glenn J.

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ 19_____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS If you find the changes to be in agreement with our previous discussions, then please write a brief memo to John Curtain to that effect. If there are problems with the changes then please call me at 897-0000 and I will see to it that your concerns are promptly addressed.

COPY TO Ellery @ S.T.H.

SIGNED: Doug Douglas

40% Pre-Consumer Content • 10% Post-Consumer Content

PRODUCT 240 NEBS Inc., Groton, Mass. 01471.

If enclosures are not as noted, kindly notify us at once.

FIGURE 6

CITY OF ALBUQUERQUE
NOTICE OF D.R.C. MEETING

5-30-95
(DATE)

PROJECT NO: 4886.94
ZONE ATLAS: G,H-9

PROJECT NAME: PARKWEST SUBD, UNIT 5
LOCATION: (98TH & UNSER)

TYPE OF PROJECT: AHBA ✓ CIP ___ PWC ___ SAD ___ ALL PRIVATE ___

Contact Person: Billy McCARTY Phone: 897-0000
Firm: COMMUNITY SCIENCES

X Scheduled with the D.R.C. on 6-2-95 at 9:00 A.M. in Conf. Room 302
___ No DRC Meeting Scheduled. Please return any comments by ___

The Project Is Scheduled For:
/ / Design Report Review / / Final Plan Review (Approved Infra. List)
/ / Pre-Design Meeting /X/ Signoff of Plans (Mylars Required)
/ / Preliminary Plan Review / / ___

The Project Relates To:
/✓/ Water /✓/ San. Sewer /✓/ Paving /✓/ Storm Drainage / / ___

The Attached Package Includes;
/D/ Drawings /S/ Spec's /E/ Estimate /R/ Report /M/ Memo Only

Indicated below are the Departments/Divisions that have received project documents and/or are invited to attend. It will be the Project Managers responsiblity to notify consulting engineering firms of date and time of scheduled meetings.

/D/	DRC Chairman	Project Review Section	All
/D/	Traffic Repres	Transportation Development	All
/D/	Water Repres.	Utility Design	All
/D/	Hydro Repres.	Hydrology	All
/D/	Const. Repres.	Construction	All
/ /	Bill Coleman	Traffic Operations	
/ /	Dick Salas	Street Maintenance	
/ /	Sergio Miranda	Water (Shutoff Plan)	ALL WATER SHUTOFF
/ /	Diane Scena	Parks & Recreation	ALL LANDSCAPING
/ /	Joe Luehring	Utility Coordinator	ALL PWC & CIP
/ /	Sheryl Germack	Transit Department	CIP/Memo
/ /	Rick Roybal	Construction Coordinator	CIP/Memo
/ /	Jim Fink	Line Maintenance	CIP-SAS/Memo
/ /	Joe Dellalonga	City Architect	ARCHITECTURAL
/ /	Lee Lunsford	SAD Engineer	SAD/Memo
/ /	Brett Locke	Transportation Develop.	CIP/Memo
/ /	Roger Green	Utility Design	CIP/WATER & SAS
/ /	Mike Minturn	General Services Dept.	BUILDINGS
/ /	Greg Smith	PWD/Legal	DWGS & SPECS
/ /	Richard Sertich	Planning Department	CIP/Memos
/ /	CIP Manager	CIP	CIP/Memos
/ /	___	___	___
/ /	___	___	___

RG/tm (WP+123400) Rev. 11/05/91

DRAINAGE INFORMATION SHEET

PROJECT TITLE: PARKWEST SUBDIVISION ZONE ATLAS/DRNG. FILE #: G9

LEGAL DESCRIPTION: ~~TRACTS I, II-A, II-B, III, AND IV LAURELWOOD II SUBDIVISION~~ Parkwest Unit 5

STREET ADDRESS: UNSER BLULEVARD AND 98TH STREET

ENGINEERING FIRM: Community Sciences Corporation CONTACT: JAMES D. HUGHES, P.E.

ADDRESS: P.O. Box 1328, Corrales, N. M. 87048 PHONE: 897-0000

OWNER: SIVAGE THOMAS HOMES CONTACT: LARRY COLLINS

ADDRESS 5141 MASTHEAD NE PHONE: 821-3511

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: N/A CONTACT:

ADDRESS: PHONE:

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

_X_ NO

_____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 93-303

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

_X_ DRAINAGE REPORT (Suplimentt)

____ DRAINAGE PLAN

_____ CONCEPTUAL GRADING AND DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

Please insert this supliment into the drainage report Packets

DATE SUBMITTED: JUN - 2 1995

BY:

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

_____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

_X_ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

_X_ OTHER DRC (SPECIFY)

community sciences corporation

June 2, 1995

Mr. John P. Curtin, P.E.
City of Albuquerque
Civil Engineer/Hydrology
P. O. Box 1293
Albuquerque, NM 87103

Re: Supplemental Drainage Calculations for Parkwest Units 2, 4 and 5 (G, H-9)

Dear Mr. Curtin;

The following calculations and construction plans contain the final design for inlets, hydraulic grade line calculations, and rear yard pond sizing for Parkwest units 2, 4 and 5.

BACK YARD POND CALCULATIONS

Required Pond Volume (100 year - 10 day)

Area = 35'x50' = 1750ft^2
Treatment = 50%B and 50%C
Excess Precipitation = 0.67" for "Type B" and 0.99 for "Type C"

Weighted Excess = (0.67" + 0.99") ÷ 2 = 0.83"
Required Volume = [0.83" x 1750ft2] ÷ 12 = 121ft^3

Typical Pond Dimensions:

Bottom = 1' wide x 40' long
Sides = 3:1
Depth = 0.9'

Volume = [0.9(6.4 + 1)/2]40 = 133ft^3

INLET CAPACITY CALCULATIONS FOR UNITS 2, 4, AND 5

Inlets No. 1 and 2 at Monument Drive and Lava Reach.

Q_{100} = 55.10 cfs
d = 0.63 ft
So = 1.00%

Each Type A, double grate, single throat inlet intercepts 9.00 cfs per DPM Plate 22.3 D-6.

P.O. Box 1328
Corrales, New Mexico 87048
Tel (505) 897-0000 Fax (505) 898-5195

CSC#143-26-062/143-26AK.REP

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS

Inlets No. 3 and 4 at Monument Drive sump

1/2 Q_{100} = 24.48 cfs

Type A, double grate, double throat inlet

Weir Capacity	Orifice Capacity
$Q = 2.7 LH^{1.5}$	$Q = 0.65A (2gH)^{0.5}$
L = 10.67ft	$A = 4.92ft^2$ (with 40% clogging)
H = 0.90ft	H = 0.91'

Pool depth is contained within the right-of-way.

Inlet No. 5 at Lava Bluff Drive.

Q_{100} = 8.9 cfs
d = 0.28ft
So = 3.63%

Type A, double grate, single throat inlet intercepts 4.0 cfs per DPM Plate 22.3 D-6.

The remaining 4.9 cfs will be intercepted by existing inlets in the Unser Boulevard intersection.

If you have any further comments or questions, please call me at 897-0000.

Sincerely,

James D. Hughes, P.E.
Vice President

enclosures:

1) HGL Calculations for Monument Drive and Basalt Avenue Storm Drain.
2) HGL Calculations for Baseline C Storm Drain.
3) Pockets for sheets 16, 35, 37, 38, and 39 of the Parkwest Unit 5 construction plans.

CSC#143-26-062/143-26AK.REP

HGL Calculations for Monument Drive and Basalt Avenue Storm Drain

STORM DRAIN ANALYSIS PLUS

Original version by Los Angeles County Public Works
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ersion
Serial Number

May 24, 1995 9:35:49

Input file : PARKW.DAT
Output file: PARKW.OUT

INPUT FILE LISTING

```
T1 PARKWEST STORM DRAIN
T2 BY SMB DATE: 3/8/95
SO   1000.00  57.20  1                          58.07
 R   1133.00  62.00  1      .013
JX   1136.48  62.00  1  3   .013    31.3          64.90        73.0
 R   1137.25  63.10  1      .013                                     1
TS   1137.25  63.10  2      .013
 R   1272.51  69.00  2      .013
JX   1272.51  69.00  2  3  3.013    23.4    23.3  72.85  72.85 12.0  90.
TS   1272.51  69.00  3      .013
 R   1275.94  73.77  3      .013                          23.0        1
 R   1328.30  74.38  3      .013
 R   1332.30  74.68  3      .013                          32.0        1
 R   1552.37  77.25  3      .013                          10.5
JX   1552.37  77.25  3  4  4.013     9.0     9.0  77.35  77.35 66.0  21.0
 R   1556.37  77.35  3      .013                                     1
 R   1852.37  80.31  3      .013                          14.1
 R   1856.37  80.41  3      .013                                2.5  1
 R   2013.24  81.89  3      .013                          18.4
 R   2017.24  82.19  3      .013                          90.0        1
 R   2099.53  84.44  3      .013
 R   2103.53  84.64  3      .013                          22.6        1
 R   2519.53  96.00  3      .013
 SH             3
1                                                        SP
```

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

```
0 CARD  SECT  CHN   NO OF  AVE PIER  HEIGHT 1  BASE    ZL    ZR   INV   Y(1)  Y(2)  Y(3)  Y(4)  Y(5)  Y(6)  Y(7)  Y(8)  Y(9)  Y(10)

  CODE   NO   TYPE  PIERS   WIDTH    DIAMETER  WIDTH            DROP

  CD      1    4                      3.50
  CD      2    4                      2.50
  CD      3    4                      2.00
  CD      4    4                      1.50
 ERROR MESSAGE NUMBER  7 IN SEQUENCE CHECKING THRU CHANNEL DEFINITION DATA
 INVALID CARD CODE ENCOUNTERED WHILE PROCESSING CD AND PTS CARDS - CODE =
```

1 PAGE NO 1

0 WATER SURFACE PROFILE - TITLE CARD LISTING

0HEADING LINE NO 1 IS -

0 PARKWEST STORM DRAIN

EADING LINE NO 2 IS -

0 BY SMB DATE: 3/8/95

0HEADING LINE NO 3 IS -

0

1 PAGE NO 2

0 WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1000.00	57.20	1	58.07

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1133.00	62.00	1	.013	.00	.00	.00	0

ELEMENT NO 3 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1136.48	62.00	1	3	0	.013	31.3	.0	64.90	.00	73.00	.00

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1137.25	63.10	1	.013	.00	.00	.00	1

ELEMENT NO 5 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N
	1137.25	63.10	2	.013

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1272.51	69.00	2	.013	.00	.00	.00	0

ELEMENT NO 7 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1272.51	69.00	2	3	3	.013	23.4	23.3	72.85	72.85	12.00	90.00

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 8 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N
	1272.51	69.00	3	.013

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 9 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1275.94	73.77	3	.013	.00	23.00	.00	1

ELEMENT NO 10 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1328.30	74.38	3	.013	.00	.00	.00	0

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 11 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1332.30	74.68	3	.013	.00	32.00	.00	1

ELEMENT NO 12 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1552.37	77.25	3	.013	.00	10.50	.00	0

ELEMENT NO 13 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1552.37	77.25	3	4	4	.013	9.0	9.0	77.35	77.35	66.00	21.00

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 14 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1556.37	77.35	3	.013	.00	.00	.00	1

ELEMENT NO 15 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1852.37	80.31	3	.013	.00	14.10	.00	0

ELEMENT NO 16 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1856.37	80.41	3	.013	.00	.00	2.50	1

ELEMENT NO 17 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2013.24	81.89	3	.013	.00	18.40	.00	0

ELEMENT NO 18 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2017.24	82.19	3	.013	.00	90.00	.00	1

0 ELEMENT NO 19 IS A REACH * * *

	U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
		2099.53	84.44	3	.013	.00	.00	.00	0

0 ELEMENT NO 20 IS A REACH * * *

	U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
		2103.53	84.64	3	.013	.00	22.60	.00	1

0 ELEMENT NO 21 IS A REACH * * *

	U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
		2519.53	96.00	3	.013	.00	.00	.00	0

0 ELEMENT NO 22 IS A SYSTEM HEADWORKS * *

	U/S DATA	STATION	INVERT	SECT	W S ELEV
		2519.53	96.00	3	.00

1 PAGE NO 4

0 WATER SURFACE PROFILE - ELEMENT CARD LISTING

NO EDIT ERRORS ENCOUNTERED-COMPUTATION IS NOW BEGINNING

** WARNING NO. 2 ** - WATER SURFACE ELEVATION GIVEN IS LESS THAN OR EQUALS INVERT ELEVATION IN HDWKDS, W.S.ELEV = INV + DC.

1 PAGE 1

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

0 STATION	INVERT ELEV	DEPTH OF FLOW	W.S. ELEV	Q	VEL	VEL HEAD	ENERGY GRD.EL.	SUPER ELEV	CRITICAL DEPTH		HGT/ DIA	BASE/ ID NO.	ZL	NO PIER	AVBP
R															
0 L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0 1000.00	57.20	1.96	59.16	100.5	18.18	5.14	64.29	.00	3.07		3.50	.00	.00	0	.0
0															
0 1000.00	57.20	1.96	59.16	100.5	18.18	5.14	64.29	.00	3.07		3.50	.00	.00	0	.0
0															
5.63	.03609					.02746	.15			1.80			.00		
1005.63	57.40	1.96	59.37	100.5	18.08	5.08	64.45	.00	3.07		3.50	.00	.00	0	.0
0															
0 36.86	.03609					.02568	.95			1.80			.00		
0 1042.49	58.73	2.04	60.78	100.5	17.24	4.62	65.39	.00	3.07		3.50	.00	.00	0	.0
0															
0 25.17	.03609					.02270	.57			1.80			.00		
0 1067.66	59.64	2.13	61.77	100.5	16.44	4.20	65.97	.00	3.07		3.50	.00	.00	0	.0
0															
0 18.37	.03609					.02010	.37			1.80			.00		
0 1086.03	60.30	2.21	62.52	100.5	15.67	3.82	66.34	.00	3.07		3.50	.00	.00	0	.0
0															
0 13.91	.03609					.01783	.25			1.80			.00		
0 1099.94	60.81	2.31	63.11	100.5	14.94	3.47	66.58	.00	3.07		3.50	.00	.00	0	.0
0															
0 10.64	.03609					.01585	.17			1.80			.00		
0 1110.59	61.19	2.41	63.60	100.5	14.25	3.16	66.75	.00	3.07		3.50	.00	.00	0	.0
0															
0 8.14	.03609					.01412	.11			1.80			.00		
0 1118.73	61.48	2.51	64.00	100.5	13.59	2.87	66.87	.00	3.07		3.50	.00	.00	0	.0
0															
0 6.13	.03609					.01263	.08			1.80			.00		
0 1124.85	61.71	2.63	64.34	100.5	12.95	2.61	66.94	.00	3.07		3.50	.00	.00	0	.0
0															
0 4.41	.03609					.01134	.05			1.80			.00		
0 1129.26	61.87	2.76	64.62	100.5	12.35	2.37	66.99	.00	3.07		3.50	.00	.00	0	.0
0															
2.73	.03609					.01026	.03			1.80			.00		

1 PAGE 2

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

0 STATION	INVERT	DEPTH	W.S.	Q	VEL	VEL	ENERGY	SUPER	CRITICAL		HGT/	BASE/	ZL	NO	AVBP
R															
	ELEV	OF FLOW	ELEV			HEAD	GRD.EL.	ELEV	DEPTH		DIA	ID NO.		PIER	
0 L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0 1131.99	61.96	2.90	64.87	100.5	11.78	2.15	67.02	.00	3.07		3.50	.00	.00	0	.0
0															
0 1.01	.03609					.00938	.01			1.80			.00		
0 1133.00	62.00	3.07	65.07	100.5	11.22	1.96	67.03	.00	3.07		3.50	.00	.00	0	.0
0															
0JUNCT STR	.00000												.00		
0 1136.48	62.00	1.32	63.32	69.2	20.88	6.78	70.09	.00	2.61		3.50	.00	.00	0	.0
0															
0 .40	1.42853					.04889	.02			.57			.00		
0 1136.88	62.57	1.36	63.94	69.2	19.93	6.17	70.11	.00	2.61		3.50	.00	.00	0	.0
0															
0 .37	1.42853					.04296	.02			.57			.00		
0 1137.25	63.10	1.41	64.51	69.2	19.00	5.61	70.12	.00	2.61		3.50	.00	.00	0	.0
0															
0TRANS STR	.00000					.03931	.00						.00		
0 1137.25	63.10	1.79	64.89	69.2	18.43	5.28	70.16	.00	2.44		2.50	.00	.00	0	.0
0															
0 31.96	.04362					.03745	1.20			1.70			.00		
0 1169.21	64.49	1.83	66.32	69.2	18.01	5.04	71.36	.00	2.44		2.50	.00	.00	0	.0
0															
0 41.21	.04362					.03458	1.43			1.70			.00		
0 1210.42	66.29	1.91	68.20	69.2	17.17	4.58	72.79	.00	2.44		2.50	.00	.00	0	.0
0															
0 25.68	.04362					.03113	.80			1.70			.00		
0 1236.10	67.41	2.01	69.42	69.2	16.37	4.17	73.59	.00	2.44		2.50	.00	.00	0	.0
0															
0 17.62	.04362					.02825	.50			1.70			.00		
0 1253.72	68.18	2.12	70.30	69.2	15.61	3.79	74.08	.00	2.44		2.50	.00	.00	0	.0
0															
0 12.13	.04362					.02602	.32			1.70			.00		
0 1265.84	68.71	2.25	70.96	69.2	14.89	3.44	74.40	.00	2.44		2.50	.00	.00	0	.0
0															
0 6.67	.04362					.02517	.17			1.70			.00		

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

0 STATION	INVERT	DEPTH	W.S.	Q	VEL	VEL	ENERGY	SUPER	CRITICAL		HGT/	BASE/	ZL	NO	AVBP
R															
	ELEV	OF FLOW	ELEV			HEAD	GRD.EL.	ELEV	DEPTH		DIA	ID NO.		PIER	
0 L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0 1272.51	69.00	2.44	71.44	69.2	14.19	3.13	74.57	.00	2.44		2.50	.00	.00	0	.0
0															
0JUNCT STR	.00000					.01413	.00						.00		
0 1272.51	69.00	8.02	77.02	22.5	4.58	.33	77.35	.00	1.61		2.50	.00	.00	0	.0
0															
0TRANS STR	.00000					.00645	.00						.00		
0 1272.51	69.00	7.64	76.64	22.5	7.16	.80	77.44	.00	1.69		2.00	.00	.00	0	.0
0															
0 3.43	1.39070					.00989	.03			.39			.00		
0 1275.94	73.77	3.03	76.80	22.5	7.16	.80	77.60	.00	1.69		2.00	.00	.00	0	.0
0															
0 52.36	.01165					.00989	.52			1.51			.00		
0 1328.30	74.38	2.94	77.32	22.5	7.16	.80	78.11	.00	1.69		2.00	.00	.00	0	.0
0															
0 4.00	.07500					.00989	.04			.83			.00		
0 1332.30	74.68	2.81	77.49	22.5	7.16	.80	78.29	.00	1.69		2.00	.00	.00	0	.0

```
0
0   220.07   .01168                                  .00989     2.18                 1.51                  .00
0  1552.37    77.25    2.47    79.72    22.5    7.16     .80    80.52   .00    1.69          2.00    .00   .00   0    .0
0
0JUNCT STR    .00000                                  .00514      .00                                      .00
0  1552.37    77.25    3.40    80.65     4.5-   1.43      .03    80.68   .00     .75          2.00    .00   .00   0    .0
0
0     4.00   .02500                                  .00040      .00                 .48                  .00
0  1556.37    77.35    3.30    80.65     4.5    1.43      .03    80.68   .00     .75          2.00    .00   .00   0    .0
0
0   135.40   .01000                                  .00039      .05                 .60                  .00
0  1691.77    78.70    2.00    80.70     4.5    1.43      .03    80.74   .00     .75          2.00    .00   .00   0    .0
0
0    18.86   .01000                                  .00037      .01                 .60                  .00
0  1710.63    78.89    1.81    80.71     4.5    1.50      .04    80.74   .00     .75          2.00    .00   .00   0    .0
0
0    10.84   .01000                                  .00036      .00                 .60                  .00
1                                                                                                    PAGE    4
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WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

```
0 STATION    INVERT   DEPTH     W.S.       Q       VEL     VEL     ENERGY   SUPER  CRITICAL          HGT/   BASE/    ZL   NO  AVBP
R
                ELEV   OF FLOW   ELEV                      HEAD   GRD.EL.   ELEV    DEPTH             DIA    ID NO.      PIER
0 L/ELEM        SO                                     SF AVE     HF                    NORM DEPTH                    ZR
**********************************************************************************************************************************
0  1721.47    79.00     1.71     80.71     4.5    1.58      .04    80.75   .00     .75          2.00    .00   .00   0    .0
0
0     8.75   .01000                                  .00039      .00                 .60                  .00
0  1730.23    79.09     1.62     80.71     4.5    1.65      .04    80.75   .00     .75          2.00    .00   .00   0    .0
0
0     7.70   .01000                                  .00043      .00                 .60                  .00
0  1737.93    79.17     1.54     80.71     4.5    1.73      .05    80.75   .00     .75          2.00    .00   .00   0    .0
0
0     6.86   .01000                                  .00047      .00                 .60                  .00
0  1744.79    79.23     1.47     80.70     4.5    1.82      .05    80.76   .00     .75          2.00    .00   .00   0    .0
0
0     6.21   .01000                                  .00053      .00                 .60                  .00
0  1751.00    79.30     1.41     80.70     4.5    1.91      .06    80.76   .00     .75          2.00    .00   .00   0    .0
0
0     5.78   .01000                                  .00059      .00                 .60                  .00
0  1756.78    79.35     1.35     80.70     4.5    2.00      .06    80.76   .00     .75          2.00    .00   .00   0    .0
0
0     5.23   .01000                                  .00066      .00                 .60                  .00
0  1762.01    79.41     1.29     80.70     4.5    2.10      .07    80.77   .00     .75          2.00    .00   .00   0    .0
0
0     4.88   .01000                                  .00075      .00                 .60                  .00
0  1766.89    79.46     1.24     80.69     4.5    2.20      .08    80.77   .00     .75          2.00    .00   .00   0    .0
0
0     4.42   .01000                                  .00085      .00                 .60                  .00
0  1771.31    79.50     1.19     80.69     4.5    2.31      .08    80.77   .00     .75          2.00    .00   .00   0    .0
0
0     4.17   .01000                                  .00096      .00                 .60                  .00
0  1775.48    79.54     1.15     80.69     4.5    2.42      .09    80.78   .00     .75          2.00    .00   .00   0    .0
0
0     3.91   .01000                                  .00108      .00                 .60                  .00
0  1779.40    79.58     1.10     80.68     4.5    2.54      .10    80.78   .00     .75          2.00    .00   .00   0    .0
0
0     3.53   .01000                                  .00123      .00                 .60                  .00
1                                                                                                    PAGE    5
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WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

0 R	STATION	INVERT ELEV	DEPTH OF FLOW	W.S. ELEV	Q	VEL	VEL HEAD	ENERGY GRD.EL.	SUPER ELEV	CRITICAL DEPTH	HGT/ DIA	BASE/ ID NO.	ZL PIER	NO	AVBP
0	L/ELEM	SO					SF AVE	HF		NORM DEPTH			ZR		
0	1782.93	79.62	1.06	80.68	4.5	2.66	.11	80.79	.00	.75	2.00	.00	.00	0	.0
0	3.37	.01000					.00139	.00		.60			.00		
0	1786.29	79.65	1.02	80.67	4.5	2.79	.12	80.79	.00	.75	2.00	.00	.00	0	.0
0	2.96	.01000					.00158	.00		.60			.00		
0	1789.25	79.68	.98	80.66	4.5	2.93	.13	80.80	.00	.75	2.00	.00	.00	0	.0
0	2.76	.01000					.00179	.00		.60			.00		
0	1792.01	79.71	.95	80.65	4.5	3.07	.15	80.80	.00	.75	2.00	.00	.00	0	.0
0	2.34	.01000					.00204	.00		.60			.00		
0	1794.36	79.73	.91	80.64	4.5	3.22	.16	80.80	.00	.75	2.00	.00	.00	0	.0
0	HYDRAULIC JUMP												.00		
0	1794.36	79.73	.60	80.33	4.5	5.66	.50	80.83	.00	.75	2.00	.00	.00	0	.0
0	16.66	.01000					.01025	.17		.60			.00		
0	1811.02	79.90	.60	80.50	4.5	5.66	.50	81.00	.00	.75	2.00	.00	.00	0	.0
0	21.62	.01000					.01055	.23		.60			.00		
0	1832.64	80.11	.59	80.70	4.5	5.78	.52	81.22	.00	.75	2.00	.00	.00	0	.0
0	19.73	.01000					.01163	.23		.60			.00		
0	1852.37	80.31	.57	80.88	4.5	6.06	.57	81.45	.00	.75	2.00	.00	.00	0	.0
0	2.18	.02500					.01169	.03		.48			.00		
0	1854.55	80.36	.59	80.95	4.5	5.81	.52	81.48	.00	.75	2.00	.00	.00	0	.0
0	1.82	.02500					.01030	.02		.48			.00		
0	1856.37	80.41	.61	81.02	4.5	5.54	.48	81.50	.00	.75	2.00	.00	.00	0	.0
0	63.58	.00943					.00962	.61		.61			.00		

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN
BY SMB DATE: 3/8/95

0 R	STATION	INVERT ELEV	DEPTH OF FLOW	W.S. ELEV	Q	VEL	VEL HEAD	ENERGY GRD.EL.	SUPER ELEV	CRITICAL DEPTH	HGT/ DIA	BASE/ ID NO.	ZL PIER	NO	AVBP
0	L/ELEM	SO					SF AVE	HF		NORM DEPTH			ZR		
0	1919.95	81.01	.61	81.62	4.5	5.54	.48	82.10	.00	.75	2.00	.00	.00	0	.0
0	26.96	.00943					.01007	.27		.61			.00		
0	1946.91	81.26	.60	81.86	4.5	5.72	.51	82.37	.00	.75	2.00	.00	.00	0	.0
0	16.78	.00943					.01127	.19		.61			.00		
0	1963.69	81.42	.58	82.00	4.5	6.00	.56	82.56	.00	.75	2.00	.00	.00	0	.0
0	10.71	.00943					.01288	.14		.61			.00		
0	1974.40	81.52	.56	82.08	4.5	6.29	.61	82.70	.00	.75	2.00	.00	.00	0	.0
0	8.04	.00943					.01472	.12		.61			.00		
0	1982.44	81.60	.54	82.14	4.5	6.60	.68	82.81	.00	.75	2.00	.00	.00	0	.0
0	6.72	.00943					.01682	.11		.61			.00		

0	1989.16	81.66	.52	82.18	4.5	6.92	.74	82.93	.00	.75		2.00	.00	.00	0	.0
0																
0	5.86	.00943					.01923	.11			.61			.00		
0	1995.02	81.72	.50	82.22	4.5	7.26	.82	83.04	.00	.75		2.00	.00	.00	0	.0
0																
0	5.17	.00943					.02199	.11			.61			.00		
0	2000.19	81.77	.49	82.25	4.5	7.61	.90	83.15	.00	.75		2.00	.00	.00	0	.0
0																
0	4.71	.00943					.02514	.12			.61			.00		
0	2004.90	81.81	.47	82.28	4.5	7.98	.99	83.27	.00	.75		2.00	.00	.00	0	.0
0																
0	4.30	.00943					.02875	.12			.61			.00		
0	2009.20	81.85	.45	82.31	4.5	8.37	1.09	83.40	.00	.75		2.00	.00	.00	0	.0
0																
0	4.04	.00943					.03290	.13			.61			.00		
0	2013.24	81.89	.44	82.33	4.5	8.78	1.20	83.53	.00	.75		2.00	.00	.00	0	.0
0																
0	2.19	.07500					.03298	.07			.36			.00		
1															PAGE	7

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN

BY SMB DATE: 3/8/95

0 R	STATION	INVERT ELEV	DEPTH OF FLOW	W.S. ELEV	Q	VEL	VEL HEAD	ENERGY GRD.EL.	SUPER ELEV	CRITICAL DEPTH		HGT/ DIA	BASE/ ID NO.	ZL	NO PIER	AVBP
0	L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0	2015.43	82.05	.45	82.51	4.5	8.39	1.09	83.60	.00	.75		2.00	.00	.00	0	.0
0																
0	1.81	.07500					.02890	.05			.36			.00		
0	2017.24	82.19	.47	82.66	4.5	8.00	.99	83.65	.00	.75		2.00	.00	.00	0	.0
0																
0	27.00	.02734					.02697	.73			.47			.00		
0	2044.24	82.93	.47	83.40	4.5	8.00	.99	84.39	.00	.75		2.00	.00	.00	0	.0
0																
0	4.14	.02734					.02701	.11			.47			.00		
0	2048.37	83.04	.47	83.51	4.5	8.01	1.00	84.51	.00	.75		2.00	.00	.00	0	.0
0																
0	51.16	.02734					.02900	1.48			.47			.00		
0	2099.53	84.44	.45	84.89	4.5	8.40	1.10	85.99	.00	.75		2.00	.00	.00	0	.0
0																
0	.04	.05000					.03089	.00			.40			.00		
0	2099.57	84.44	.45	84.90	4.5	8.39	1.09	85.99	.00	.75		2.00	.00	.00	0	.0
0																
0	3.96	.05000					.02890	.11			.40			.00		
0	2103.53	84.64	.47	85.11	4.5	8.00	.99	86.10	.00	.75		2.00	.00	.00	0	.0
0																
0	.00	.05000					.02697	.00			.40			.00		
0	2103.53	84.64	.47	85.11	4.5	8.00	.99	86.10	.00	.75		2.00	.00	.00	0	.0
0																
0	334.57	.02731					.02697	9.02			.47			.00		
0	2438.11	93.78	.47	94.25	4.5	8.00	.99	95.24	.00	.75		2.00	.00	.00	0	.0
0																
0	30.09	.02731					.02624	.79			.47			.00		
0	2468.19	94.60	.48	95.07	4.5	7.84	.96	96.03	.00	.75		2.00	.00	.00	0	.0
0																
0	20.76	.02731					.02390	.50			.47			.00		
0	2488.95	95.17	.49	95.66	4.5	7.48	.87	96.53	.00	.75		2.00	.00	.00	0	.0
0																
0	9.66	.02731					.02089	.20			.47			.00		
1															PAGE	8

WATER SURFACE PROFILE LISTING

PARKWEST STORM DRAIN

BY SMB DATE: 3/8/95

0 STATION	INVERT	DEPTH	W.S.	Q	VEL	VEL	ENERGY	SUPER	CRITICAL		HGT/	BASE/	ZL	NO	AVBP
R															
	ELEV	OF FLOW	ELEV			HEAD	GRD.EL.	ELEV	DEPTH		DIA	ID NO.		PIER	
0 L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0 2498.61	95.43	.51	95.94	4.5	7.13	.79	96.73	.00	.75		2.00	.00	.00	0	.0
0															
0 5.96	.02731					.01828	.11			.47			.00		
0 2504.57	95.59	.53	96.12	4.5	6.80	.72	96.84	.00	.75		2.00	.00	.00	0	.0
0															
0 4.18	.02731					.01599	.07			.47			.00		
0 2508.75	95.71	.55	96.25	4.5	6.48	.65	96.90	.00	.75		2.00	.00	.00	0	.0
0															
0 3.03	.02731					.01399	.04			.47			.00		
0 2511.77	95.79	.56	96.35	4.5	6.18	.59	96.95	.00	.75		2.00	.00	.00	0	.0
0															
0 2.25	.02731					.01225	.03			.47			.00		
0 2514.03	95.85	.58	96.43	4.5	5.89	.54	96.97	.00	.75		2.00	.00	.00	0	.0
0															
0 1.75	.02731					.01072	.02			.47			.00		
0 2515.78	95.90	.60	96.50	4.5	5.62	.49	96.99	.00	.75		2.00	.00	.00	0	.0
0															
0 1.31	.02731					.00938	.01			.47			.00		
0 2517.09	95.93	.63	96.56	4.5	5.36	.45	97.00	.00	.75		2.00	.00	.00	0	.0
0															
0 .97	.02731					.00822	.01			.47			.00		
0 2518.06	95.96	.65	96.61	4.5	5.11	.41	97.01	.00	.75		2.00	.00	.00	0	.0
0															
0 .69	.02731					.00720	.00			.47			.00		
0 2518.75	95.98	.67	96.65	4.5	4.87	.37	97.02	.00	.75		2.00	.00	.00	0	.0
0															
0 .45	.02731					.00631	.00			.47			.00		
0 2519.20	95.99	.69	96.69	4.5	4.64	.33	97.02	.00	.75		2.00	.00	.00	0	.0
0															
0 .25	.02731					.00553	.00			.47			.00		
0 2519.45	96.00	.72	96.72	4.5	4.43	.30	97.02	.00	.75		2.00	.00	.00	0	.0
0															
0 .08	.02731					.00484	.00			.47			.00		

0 STATION	INVERT	DEPTH	W.S.	Q	VEL	VEL	ENERGY	SUPER	CRITICAL		HGT/	BASE/	ZL	NO	AVBP
R															
	ELEV	OF FLOW	ELEV			HEAD	GRD.EL.	ELEV	DEPTH		DIA	ID NO.		PIER	
0 L/ELEM	SO					SF AVE	HF			NORM DEPTH			ZR		
0 2519.53	96.00	.75	96.75	4.5	4.21	.28	97.02	.00	.75		2.00	.00	.00	0	.0
0															
1															

HGL Calculations for Baseline C Storm Drain

STORM DRAIN ANALYSIS PLUS

Original version by Los Angeles County Public Works
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Version
Serial Number

May 24, 1995 9:36:36

Input file : BASE-C.DAT
Output file: BASE-C.OUT

INPUT FILE LISTING

```
T1 PARKWEST STORM DRAIN ALONG BASELINE C
T2 BY SMB DATE: 3/8/95
SO   1000.00  64.90  1                              65.07
 R   1183.09  67.00  1      .013
 SH                  1
1                                                    SP
                                  WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING                          PAGE    1
0 CARD  SECT  CHN   NO OF  AVE PIER  HEIGHT 1  BASE    ZL    ZR   INV   Y(1)  Y(2)  Y(3)  Y(4)  Y(5)  Y(6)  Y(7)  Y(8)  Y(9)  Y(10)

  CODE   NO   TYPE  PIERS   WIDTH    DIAMETER  WIDTH            DROP

  CD      1    4                        2.00
 ERROR MESSAGE NUMBER  7 IN SEQUENCE CHECKING THRU CHANNEL DEFINITION DATA
 INVALID CARD CODE ENCOUNTERED WHILE PROCESSING CD AND PTS CARDS - CODE =
                                                                                                             PAGE NO   1
                              WATER SURFACE PROFILE - TITLE CARD LISTING
0HEADING LINE NO 1 IS -
0                               PARKWEST STORM DRAIN ALONG BASELINE C
0HEADING LINE NO 2 IS -
0                               BY SMB DATE: 3/8/95
0HEADING LINE NO 3 IS -
0
1                                                                                                            PAGE NO   2
0                              WATER SURFACE PROFILE - ELEMENT CARD LISTING
0 ELEMENT NO   1 IS A SYSTEM OUTLET     *         *     *
                     U/S DATA   STATION    INVERT  SECT                                          W S ELEV
                                1000.00   64.90    1                                              65.07
0 ELEMENT NO   2 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT            N                                RADIUS  ANGLE  ANG PT  MAN H
                                1183.09   67.00    1             .013                                 .00    .00     .00     0
0 ELEMENT NO   3 IS A SYSTEM HEADWORKS                  *                 *
                     U/S DATA   STATION    INVERT  SECT                                      W S ELEV
                                1183.09   67.00    1                                          .00
 NO EDIT ERRORS ENCOUNTERED-COMPUTATION IS NOW BEGINNING

 ** WARNING NO. 2 ** - WATER SURFACE ELEVATION GIVEN IS LESS THAN OR EQUALS INVERT ELEVATION IN HDWKDS, W.S.ELEV = INV + DC
1                                                                                                            PAGE    1
                                                WATER SURFACE PROFILE LISTING
                          PARKWEST STORM DRAIN ALONG BASELINE C
                          BY SMB DATE: 3/8/95

STATION    INVERT   DEPTH     W.S.       Q       VEL     VEL     ENERGY   SUPER  CRITICAL          HGT/   BASE/    ZL   NO  AVBP
R
            ELEV   OF FLOW    ELEV                      HEAD   GRD.EL.   ELEV    DEPTH            DIA    ID NO.       PIER
0 L/ELEM    SO                                      SF AVE     HF                 NORM DEPTH                ZR
*************************************************************************************************************************
```

```
0  1000.00    64.90    1.88    66.78    31.3   10.21    1.62    68.40   .00    1.88          2.00    .00    .00   0    .0
0
0     6.71   .01147                                    .01766     .12                2.00                  .00
0  1006.71    64.98    2.00    66.98    31.3    9.96    1.54    68.52   .00    1.88          2.00    .00    .00   0    .0
0
0   176.38   .01147                                    .01896     3.34               2.00                  .00
0  1183.09    67.00    3.35    70.35    31.3    9.96    1.54    71.90   .00    1.88          2.00    .00    .00   0    .0
0
1
```

TABLE 2

FLOW CHARACTERISTICS AT KEY LOCATIONS

STREET	LOCATION	ST. WIDTH	% SLOPE	Q100	Dn	Dc	Vn	Vc	AREA	TOP WIDTH	EG	F	*POOL DEPTH
WEDGEWOOD CT	5+50	22 MOUNT	1.58	4.66	0.23	0.25	2.31	1.82	2.01	20.77	0.31	1.31	0.31
STONEWOOD	SADDLEBROOK	22 STAND	0.50	26.46	0.56	0.54	3.16	3.40	8.38	22.29	0.72	0.91	
GARDENBROOK	WINDWARD	25 MOUNT	2.72	11.62	0.28	0.34	3.60	2.43	3.23	25.74	0.48	1.79	0.45
MILLSTREAM	WINDWARD	25 MOUNT	2.50	12.26	0.28	0.34	3.58	2.47	3.42	25.81	0.48	1.73	0.46
SKYBROOK	LOT 41	25 MOUNT	1.00	11.41	0.32	0.33	3.60	2.42	3.23	26.15	0.48	1.81	0.44
MEADOWBROOK	13+00	25 MOUNT	2.42	8.06	0.25	0.29	3.10	2.21	2.60	23.67	0.40	1.65	0.38
STONECREEK	SUNSTONE	25 MOUNT	0.60	9.90	0.33	0.32	2.12	2.33	4.67	26.25	0.40	0.89	
FIELDSTONE	SUNSTONE	25 MOUNT	2.34	7.75	0.25	0.29	3.03	2.13	2.56	23.47	0.39	1.62	0.38
WESTBROOK	CREEKWOOD	25 MOUNT	2.00	3.67	0.20	0.23	2.38	1.81	1.54	18.10	0.29	1.44	0.29
OAKBROOK	20+00	25 MOUNT	2.24	12.47	0.29	0.35	3.49	2.48	3.57	25.87	0.48	1.66	0.47
OAKBROOK	CREEKWOOD	25 MOUNT	1.07	12.47	0.33	0.35	2.77	2.48	4.50	26.21	0.45	1.18	0.47
CREEKWOOD	OAKBROOK	25 MOUNT	2.95	9.38	0.26	0.31	3.47	2.30	2.71	24.15	0.44	1.83	0.41
LAVA BLUFF	PARKWEST	25 MOUNT	3.00	4.10	0.20	0.24	2.85	1.85	1.44	17.47	0.32	1.75	0.31
SMOKERISE	STONEWOOD	25 MOUNT	1.50	14.41	0.32	0.36	3.26	2.64	4.43	26.18	0.49	1.40	0.50
CREEKWOOD	STONEWOOD	25 MOUNT	1.04	12.05	0.32	0.34	2.71	2.46	4.44	26.19	0.44	1.16	0.46
SADDLEBROOK	STONEWOOD	25 MOUNT	2.95	12.69	0.28	0.35	3.82	2.53	3.32	25.77	0.51	1.88	0.47
PETROGLYPH	MONUMENT	25 MOUNT	2.40	9.90	0.27	0.32	3.25	2.33	3.05	25.66	0.43	1.66	0.43
ESCARPMENT	MONUMENT	25 MOUNT	4.00	9.90	0.27	0.32	3.35	2.33	2.95	25.26	0.44	1.73	0.43
CLIFFVIEW	MONUMENT	25 MOUNT	3.88	9.47	0.25	0.31	3.35	2.30	2.46	23.01	0.48	2.08	0.41
DARK MESA	5+00	25 MOUNT	5.51	6.25	0.20	0.27	3.98	2.02	1.57	18.28	0.45	2.39	0.35
DARK MESA	MONUMENT	25 MOUNT	4.00	6.25	0.21	0.27	3.53	2.02	1.77	19.45	0.41	2.06	0.35
LAVA REACH	4+47	25 MOUNT	4.43	5.82	0.21	0.27	3.60	1.97	1.62	18.55	0.41	2.15	0.35
LAVA REACH	MONUMENT	25 MOUNT	4.00	5.82	0.21	0.27	3.47	1.97	1.68	18.92	0.39	2.05	0.35
WEDGEWOODE AVE	WINDWARD DR	26 STAND	1.80	21.27	0.41	0.48	3.99	2.97	5.33	26.21	0.66	1.56	0.65
MEADOWBROOK	14+00	26 STAND	0.50	22.47	0.52	0.49	2.77	3.05	8.12	26.26	0.64	0.88	
MEADOWBROOK	PARKWEST	26 STAND	1.50	27.31	0.46	0.53	4.17	3.26	6.55	26.23	0.73	1.47	0.74
SUNSTONE	FIELDSTONE	26 STAND	0.60	23.23	0.51	0.50	2.96	3.09	7.84	26.26	0.64	0.95	
SE SPUR	SUMP	26 STAND	1.02	30.98	0.51	0.56	3.90	3.38	7.94	26.26	0.75	1.25	0.78
CREEKWOOD	PARKWEST	26 STAND	0.50	30.98	0.58	0.56	3.16	3.38	9.81	26.30	0.74	0.91	
MONUMENT	18+00	27 MOUNT	2.40	19.79	0.33	0.41	4.12	1.96	4.81	28.25	0.60	1.76	0.48
MONUMENT	N. OF SUMP	27 MOUNT	2.90	4.74	0.21	0.25	2.92	1.90	1.62	18.60	0.34	1.74	0.32
BASALT	MONUMENT	27 MOUNT	3.88	6.03	0.21	0.27	3.46	1.96	1.74	19.29	0.40	2.03	0.34
WINDWARD	18+00	28 STAND	1.00	54.61	0.63	0.71	4.74	3.97	11.53	28.32	0.98	1.31	
WINDWARD	PARKWEST	28 STAND	3.25	8.95	0.30	0.36	3.66	2.22	2.45	21.38	0.51	1.91	0.46
MONUMENT	PHASE LINE U5	28 STAND	0.50	29.29	0.57	0.54	2.99	3.25	9.80	28.29	0.70	0.90	
MONUMENT	11+00	28 STAND	3.16	35.29	0.44	0.58	5.62	3.43	6.28	28.22	0.93	2.10	0.81
MONUMENT	14+00	28 STAND	1.00	49.29	0.60	0.67	4.52	3.85	10.89	28.31	0.92	1.28	0.96
MONUMENT	LAVA REACH	28 STAND	1.00	55.10	0.63	0.71	4.75	3.98	11.59	28.32	0.98	1.31	
LAVA BLUFF	PHASE LINE U5	32 MOUNT	2.50	9.91	0.27	0.32	3.31	2.18	2.99	25.42	0.44	1.70	0.41
LAVA BLUFF	SUMP	32 MOUNT	2.50	12.33	0.29	0.35	3.49	2.28	3.53	27.64	0.48	1.72	0.45
LAVA BLUFF	25+50	32 MOUNT	6.54	9.13	0.22	0.31	4.64	2.16	1.97	20.53	0.56	2.64	0.40
LAVA BLUFF	OURAY	32 MOUNT	1.82	9.13	0.28	0.31	2.86	2.16	3.19	26.25	0.40	1.45	0.40
PARKWEST	STONEHAVEN	36 MOUNT	0.50	7.84	0.32	0.29	1.70	2.11	4.62	31.69	0.37	0.78	
PARKWEST	LOT 10	36 MOUNT	0.55	7.82	0.32	0.29	1.69	2.11	4.61	31.65	0.37	0.78	
PARKWEST	N. CHANNEL	36 STAND	0.55	50.66	0.66	0.65	3.47	3.59	14.61	36.34	0.85	0.96	
PARKWEST	S. CHANNEL	36 STAND	0.50	14.84	0.46	0.43	2.07	2.42	7.17	36.23	0.52	0.82	

*** POOL DEPTH = Dc + (1.25Vc^2)/(2g)**

The maximum discharge from the park site (Basin 117) to Parkwest Drive shall be limited to 5.7 cfs. Any additional flow due to future development

100-YEAR POST DEVELOPMENT SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993 RUN DATE (MON/DAY/YR) =11/26/1993
INPUT FILE = PW100PO.DAT USER NO.= COMMSC_B.T93

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
*S	PARKWEST-100 YEAR POST DEVELOPMENT										
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
COMPUTE NM HYD	14.00	-	1	.80000	419.68	23.643	.55414	1.732	.820	PER IMP=	.00
SED WASH LOAD	14.00	1								WASH CONC.(PPM-w) =	23698
*S ROUTE L14 THROUGH 131											
ROUTE	14.01	1	2	.80000	363.29	23.643	.55414	1.865	.710		
COMPUTE NM HYD	131.00	-	3	.28020	157.76	9.442	.63179	1.765	.880	PER IMP=	.00
SED WASH LOAD	131.00	3								WASH CONC.(PPM-w) =	36673
*S BASINS L14 AND 131 ENTERING THE SITE											
ADD HYD	131.01	2& 3	3	1.08020	513.75	33.085	.57428	1.832	.743		
SEDIMENT TRANSP	131.01	3		SED ID = 1		PEAK CONC.(PPM-w) =	167305	TOTAL SED.(TONS) =			7168.86
COMPUTE NM HYD	130.20	-	4	.06900	71.38	1.970	.53534	1.532	1.616	PER IMP=	.00
SED WASH LOAD	130.20	4								WASH CONC.(PPM-w) =	29288
SEDIMENT TRANSP	130.20	4		SED ID = 2		PEAK CONC.(PPM-w) =	42900	TOTAL SED.(TONS) =			109.35
*S TOTAL FLOW TO CHANNEL ENTERING THE SITE											
ADD HYD	131.02	3& 4	5	1.14920	527.45	35.055	.57195	1.832	.717		
*S FLOW ENTERING SW CORNER											
COMPUTE NM HYD	130.21	-	6	.00900	7.48	.211	.43919	1.532	1.299	PER IMP=	.00
SED WASH LOAD	130.21	6								WASH CONC.(PPM-w) =	8817
COMPUTE NM HYD	133.30	-	7	.03700	45.50	1.263	.64008	1.532	1.921	PER IMP=	.00
COMPUTE NM HYD	133.40	-	8	.25500	119.11	7.104	.52233	1.732	.730	PER IMP=	.00
*S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH											
ADD HYD	133.01	7& 8	9	.29200	138.33	8.367	.53725	1.698	.740		
COMPUTE NM HYD	132.11	-	10	.00930	11.54	.318	.64079	1.532	1.939	PER IMP=	.00
SED WASH LOAD	132.11	10								WASH CONC.(PPM-w) =	42151
SEDIMENT TRANSP	132.11	10		SED ID = 3		PEAK CONC.(PPM-w) =	134621	TOTAL SED.(TONS) =			54.70
COMPUTE NM HYD	133.51	-	11	.06700	95.23	2.637	.73808	1.532	2.221	PER IMP=	.00
SED WASH LOAD	133.51	11								WASH CONC.(PPM-w) =	31948
SEDIMENT TRANSP	133.51	11		SED ID = 4		PEAK CONC.(PPM-w) =	276738	TOTAL SED.(TONS) =			1030.67
ADD HYD	133.50	10&11	10	.07630	106.77	2.955	.72622	1.532	2.186		
COMPUTE NM HYD	133.52	-	11	.04850	68.88	1.909	.73808	1.532	2.219	PER IMP=	.00
SED WASH LOAD	133.52	11								WASH CONC.(PPM-w) =	21674
SEDIMENT TRANSP	133.52	11		SED ID = 5		PEAK CONC.(PPM-w) =	264216	TOTAL SED.(TONS) =			692.68
*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND											
ADD HYD	133.50	10&11	11	.12480	175.65	4.864	.73083	1.532	2.199		
*S FLOW ENTERING STREET AT NW CORNER OF SITE											
COMPUTE NM HYD	133.53	-	13	.00250	3.26	.089	.66738	1.532	2.036	PER IMP=	.00
SED WASH LOAD	133.53	13								WASH CONC.(PPM-w) =	39613
COMPUTE NM HYD	133.54	-	14	.01730	22.38	.616	.66738	1.532	2.021	PER IMP=	.00
SED WASH LOAD	133.54	14								WASH CONC.(PPM-w) =	8286
SEDIMENT TRANSP	133.54	14		SED ID = 6		PEAK CONC.(PPM-w) =	57448	TOTAL SED.(TONS) =			40.35
COMPUTE NM HYD	101.00	-	7	.00650	13.98	.473	1.36302	1.499	3.360	PER IMP=	47.60
*S OFFSITE FLOW PLUS AREA 101											
ADD HYD	101.01	6& 7	6	.01550	21.27	.683	.82658	1.499	2.144		
COMPUTE NM HYD	102.00	-	7	.00540	11.62	.393	1.36302	1.499	3.361	PER IMP=	47.60
COMPUTE NM HYD	103.00	-	8	.00570	12.26	.414	1.36302	1.499	3.361	PER IMP=	47.60
COMPUTE NM HYD	104.00	-	4	.00880	18.92	.640	1.36302	1.499	3.359	PER IMP=	47.60
ADD HYD	104.12	6& 7	6	.02090	32.89	1.076	.96517	1.499	2.459		
ADD HYD	104.13	6& 8	6	.02660	45.15	1.490	1.05041	1.499	2.652		
*S FLOW EXITING AREA 104 TO CHANNEL											
ADD HYD	104.14	6& 4	6	.03540	64.07	2.130	1.12812	1.499	2.828		
COMPUTE NM HYD	105.00	-	7	.00600	12.90	.436	1.36302	1.499	3.361	PER IMP=	47.60

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COMPUTE NM HYD	106.00	- 8	.00670	14.41	.487	1.36302	1.499	3.360	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT PARKWEST										
ADD HYD	105.01	7& 8 7	.01270	27.31	.923	1.36298	1.499	3.360		
*S FLOW EXITING AREA 107 TO CHANNEL										
COMPUTE NM HYD	107.00	- 8	.00690	14.84	.502	1.36302	1.499	3.360	PER IMP=	47.60
*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH										
ADD HYD	107.01	6& 8 6	.04230	78.91	2.631	1.16643	1.499	2.915		
COMPUTE NM HYD	108.00	- 1	.00460	9.90	.334	1.36302	1.499	3.362	PER IMP=	47.60
COMPUTE NM HYD	110.00	- 8	.00620	13.33	.451	1.36302	1.499	3.360	PER IMP=	47.60
ADD HYD	110.01	1& 8 8	.01080	23.23	.785	1.36297	1.499	3.361		
COMPUTE NM HYD	109.00	- 4	.00360	7.75	.262	1.36302	1.499	3.364	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT UNSER										
ADD HYD	108.01	4& 8 4	.01440	30.98	1.047	1.36297	1.499	3.362		
*S TOTAL ON-SITE FLOW TO 98TH STREET SD										
ADD HYD	108.02	4& 7 1	.02710	58.29	1.970	1.36297	1.499	3.361		
COMPUTE NM HYD	111.10	- 4	.00250	5.93	.204	1.52843	1.499	3.706	PER IMP=	55.00
*S FLOW TO BRIDGE EXCLUDING UNIT 3										
ADD HYD	111.11	4& 5 4	1.15170	529.27	35.259	.57402	1.832	.718		
*S FLOW TO BRIDGE INCLUDING UNIT 3										
ADD HYD	111.12	4& 6 4	1.19400	551.68	37.890	.59501	1.832	.722		
COMPUTE NM HYD	112.00	- 15	.00170	3.67	.124	1.36302	1.499	3.371	PER IMP=	47.60
COMPUTE NM HYD	113.00	- 16	.00580	12.47	.422	1.36302	1.499	3.361	PER IMP=	47.60
COMPUTE NM HYD	114.00	- 17	.00690	14.84	.502	1.36302	1.499	3.360	PER IMP=	47.60
ADD HYD	114.01	15&16 15	.00750	16.14	.545	1.36294	1.499	3.363		
ADD HYD	114.02	15&17 15	.01440	30.98	1.047	1.36296	1.499	3.361		
COMPUTE NM HYD	116.10	- 16	.00410	8.82	.298	1.36302	1.499	3.363	PER IMP=	47.60
ADD HYD	116.01	15&16 15	.01850	39.80	1.345	1.36296	1.499	3.362		
COMPUTE NM HYD	116.20	- 16	.00240	5.17	.174	1.36302	1.499	3.366	PER IMP=	47.60
ADD HYD	116.02	15&16 15	.02090	44.97	1.519	1.36295	1.499	3.362		
COMPUTE NM HYD	117.00	- 16	.00490	10.69	.363	1.39061	1.499	3.408	PER IMP=	50.00
*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE										
ADD HYD	116.03	15&16 15	.02580	55.66	1.883	1.36819	1.499	3.371		
*S TOTAL FLOW IN CHANNEL AT BRIDGE										
ADD HYD	111.12	4&15 4	1.21980	569.17	39.773	.61136	1.798	.729		
COMPUTE NM HYD	111.20	- 5	.00150	3.56	.122	1.52844	1.499	3.712	PER IMP=	55.00
ADD HYD	111.00	4& 5 4	1.22130	570.36	39.895	.61249	1.798	.730		
*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.										
ADD HYD	111.00	4& 7 4	1.23400	579.15	40.818	.62021	1.798	.733		
COMPUTE NM HYD	120.00	- 15	.00670	14.41	.487	1.36302	1.499	3.360	PER IMP=	47.60
COMPUTE NM HYD	119.00	- 16	.00560	12.05	.407	1.36302	1.499	3.361	PER IMP=	47.60
ADD HYD	119.01	15&16 15	.01230	26.45	.894	1.36298	1.499	3.360		
COMPUTE NM HYD	118.00	- 16	.00590	12.69	.429	1.36302	1.499	3.361	PER IMP=	47.60
*S TOTAL FLOW IN RUNDOWN TO CHANNEL										
ADD HYD	118.01	15&16 15	.01820	39.14	1.323	1.36298	1.499	3.360		
*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE										
ADD HYD	111.00	4&15 2	1.25220	591.74	42.141	.63101	1.798	.738		
COMPUTE NM HYD	115.00	- 15	.00190	4.10	.138	1.36302	1.499	3.370	PER IMP=	47.60
COMPUTE NM HYD	121.00	- 16	.00270	5.82	.196	1.36302	1.499	3.365	PER IMP=	47.60
ADD HYD	121.01	15&16 15	.00460	9.91	.334	1.36290	1.499	3.367		
COMPUTE NM HYD	122.00	- 16	.00090	2.42	.089	1.85049	1.499	4.204	PER IMP=	90.00
*S ON-SITE FLOW TO POND										
ADD HYD	122.01	15&16 15	.00550	12.33	.423	1.44263	1.499	3.504		
*S TOTAL FLOW TO POND										
ADD HYD	122.02	11&15 11	.13030	187.62	5.288	.76088	1.499	2.250		
*S ROUTE HYDOGRAPH THRU POND										
ROUTE RESERVOIR	133.50	11 12	.13030	4.46	4.807	.69177	2.498	.054	AC-FT=	4.772
COMPUTE NM HYD	123.00	- 15	.00220	5.90	.217	1.85049	1.499	4.189	PER IMP=	90.00
ADD HYD	123.01	15&13 15	.00470	9.13	.306	1.22110	1.499	3.035		
*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDINC OFFSITE SHEET FLOW										
ADD HYD	123.02	15&14 15	.02200	31.32	.922	.78567	1.499	2.224		

COMPUTE NM HYD	124.10	-	16	.00460	9.90	.334	1.36302	1.499	3.362	PER IMP= 47.60
COMPUTE NM HYD	124.20	-	17	.00460	9.90	.334	1.36302	1.499	3.362	PER IMP= 47.60
ADD HYD	124.12	16&17	16	.00920	19.79	.669	1.36296	1.499	3.362	
COMPUTE NM HYD	124.30	-	17	.00440	9.47	.320	1.36302	1.499	3.362	PER IMP= 47.60
ADD HYD	124.13	16&17	16	.01360	29.26	.989	1.36296	1.499	3.362	
COMPUTE NM HYD	124.40	-	17	.00280	6.03	.204	1.36302	1.499	3.365	PER IMP= 47.60
ADD HYD	124.14	16&17	16	.01640	35.29	1.192	1.36295	1.499	3.362	
COMPUTE NM HYD	124.50	-	17	.00290	6.25	.211	1.36302	1.499	3.365	PER IMP= 47.60
ADD HYD	124.15	16&17	16	.01930	41.54	1.403	1.36295	1.499	3.363	
COMPUTE NM HYD	124.60	-	17	.00360	7.75	.262	1.36302	1.499	3.364	PER IMP= 47.60
ADD HYD	124.16	16&17	16	.02290	49.29	1.665	1.36295	1.499	3.363	
COMPUTE NM HYD	124.70	-	17	.00270	5.82	.196	1.36302	1.499	3.365	PER IMP= 47.60
ADD HYD	124.17	16&17	16	.02560	55.10	1.861	1.36294	1.499	3.363	
COMPUTE NM HYD	124.80	-	17	.00330	7.10	.240	1.36302	1.499	3.364	PER IMP= 47.60
ADD HYD	124.18	16&17	16	.02890	62.21	2.101	1.36294	1.499	3.363	
COMPUTE NM HYD	124.90	-	17	.00220	4.74	.160	1.36302	1.499	3.368	PER IMP= 47.60
ADD HYD	124.19	16&17	16	.03110	66.95	2.261	1.36294	1.499	3.364	
*S UNPONDED FLOW TO INLETS AT OURAY										
ADD HYD	124.01	15&16	15	.05310	98.27	3.183	1.12377	1.499	2.892	
*S TOTAL ONSITE FLOW TO OURAY SD										
ADD HYD	124.02	12&15	12	.18340	100.61	7.990	.81685	1.499	.857	
COMPUTE NM HYD	133.20	-	15	.02100	56.15	2.073	1.85049	1.499	4.178	PER IMP= 90.00
*S EXISTING FLOW TO OURAY SD										
ADD HYD	133.01	15& 9	14	.31300	167.35	10.439	.62536	1.632	.835	
*S TOTAL FLOW TO OURAY STORM DRAIN										
ADD HYD	133.02	12&14	3	.49640	257.82	18.429	.69611	1.532	.812	
FINISH										

CITY OF ALBUQUERQUE.
NOTICE OF D.R.C. MEETING

4-28-95 (DATE) 5th

PROJECT NO: 4886.94
ZONE ATLAS: H-09

PROJECT NAME: LAKE WEST SUBD UNIT 5
LOCATION: (98TH ST. NW)

TYPE OF PROJECT: AHBA ✓ CIP ___ PWC ___ SAD ___ ALL PRIVATE ___

Contact Person: Billy McCarty Phone: 897-0000
Firm: Community Sciences

✓ Scheduled with the D.R.C. on 5-9-95 at 1:30 in Conf. Room 302
___ No DRC Meeting Scheduled. Please return any comments by ___

The Project Is Scheduled For:
/ / Design Report Review / / Final Plan Review (Approved Infra. List)
/ / Pre-Design Meeting / / Signoff of Plans (Mylars Required)
/✓/ Preliminary Plan Review / / ___

The Project Relates To:
/✓/ Water /✓/ San. Sewer /✓/ Paving / / Storm Drainage / / ___

The Attached Package Includes:
/D/ Drawings /S/ Spec's /E/ Estimate /R/ Report /M/ Memo Only

Indicated below are the Departments/Divisions that have received project documents and/or are invited to attend. It will be the Project Managers responsiblity to notify consulting engineering firms of date and time of scheduled meetings.

/D/ DRC Chairman	Project Review Section	All
/D/ Traffic Repres	Transportation Development	All
/D/ Water Repres.	Utility Design	All
/D/ Hydro-Repres.	Hydrology	All
/D/ Const. Repres.	Construction	All
/D/ Bill Coleman	Traffic Operations	
/ / Dick Salas	Street Maintenance	
/D/ Sergio Miranda	Water (Shutoff Plan)	ALL WATER SHUTOFF
/D/ Diane Scena	Parks & Recreation	ALL LANDSCAPING
/ / Joe Luehring	Utility Coordinator	ALL PWC & CIP
/ / Jim Hamel	Transit Department	CIP/Memo
/ / Rick Roybal	Construction Coordinator	CIP/Memo
/ / Jim Fink	Line Maintenance	CIP-SAS/Memo
/ / Joe Dellalonga	City Architect	ARCHITECTURAL
/ / Lee Lunsford	SAD Engineer	SAD/Memo
/ / Brett Locke	Transportation Develop.	CIP/Memo
/ / Roger Green	Utility Design	CIP/WATER & SAS
/ / Mike Minturn	General Services Dept.	BUILDINGS
/ / Greg Smith	PWD, Legal	DWGS & SPECS
/ / Richard Sertich	Planning Department	CIP/Memos
/ / CIP Manager	CIP	CIP/Memos
/ / ___	___	___
/ / ___	___	___

COURTESY

RG/tm (WP+123400) Rev. 11/15/91

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 18, 1995

James D. Hughes, PE
Community Sciences Corp
P.O. Box 1328
Corrales, NM 87048

RE: GRADING PLAN FOR PARKWEST UNIT 5 (H-9/D1A4)
RECEIVED MARCH 27, 1995 FOR GRADING PERMIT
ENGINEER'S STAMP DATED 3-14-95

Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology accepts the Grading Plan and approves a Grading Permit for Parkwest 5. This plan has no legal status until it is approved by DRB. The following comments must be addressed before Final Plat:

All back yard ponds must be designed to contain the 100 year - 10 day volume. Indicate on the Plan the required volume for each pond. Provide calculations for pond design.

AMAFCA must approve any discharge to their easement. Submit a copy of the Special Use Permit issued by the National Park Service before grading on the National Monument property.

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: Andrew Garcia
Kurt Browning, AMAFCA
Ellery Biathrow, SIVAGE THOMAS HOMES, 5141 Masthead NE 87109

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE INFORMATION SHEET

PROJECT TITLE: PARKWEST SUBDIVISION UNIT 5 ZONE ATLAS/DRNG. FILE #: ~~H-9~~ H9/D14

LEGAL DESCRIPTION: PARKWEST UNIT 5 comprised of TRACT A PARKWEST UNIT 1

CITY ADDRESS: UNSER BLVD. and 98TH STREET

ENGINEERING FIRM: Community Sciences Corporation CONTACT: James D. Hughes, P.E.

ADDRESS: P.O. Box 1328, Corrales, N. M. 87048 PHONE: 897-0000

OWNER: SIVAGE THOMAS HOMES CONTACT: Ellery Biathrow

ADDRESS: 5141 Masthead NE PHONE: 821-3511

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: N/A CONTACT:

ADDRESS: PHONE:

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

____ YES DRB NO. 93-303

__X__ NO EPC NO.

_____ COPY OF CONFERENCE RECAP SHEET PROVIDED PROJ. NO.

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT

_____ DRAINAGE PLAN

_____ CONCEPTUAL GRADING AND DRAINAGE PLAN

__X__ GRADING PLAN

__X__ EROSION CONTROL PLAN

_____ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

__X__ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

OTHER _____(SPECIFY)

Mar. 21

3-14-95

DATE SUBMITTED: 3-24-95

BY: Billy McCarty

Volume

POND-2 Version: 4.01
S/N: 88020607

PARKWEST POND BUILT WITH UNIT 5
REDO OF PLANIMETER FILE JUNE 14, 1995 BY SMB
DISK FILE 14318 NEW POND DESIGN

CALCULATED 08-24-1995 08:33:20
DISK FILE : C:PKWST .VOL

Planimeter scale: 1 inch = 1 ft.

Elevation (ft)	Planimeter (sq.in.)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (acre-ft)	Volume Sum (acre-ft)
197.90	0.00	0.00	0.00	0.00	0.00
198.00	360.00	0.01	0.01	0.00	0.00
200.00	9,888.00	0.23	0.28	0.19	0.19
202.00	22,788.00	0.52	1.09	0.73	0.92
204.00	31,575.00	0.72	1.86	1.24	2.16
206.00	40,062.00	0.92	2.46	1.64	3.80
208.00	47,575.00	1.09	3.01	2.01	5.81
209.00	55,837.00	1.28	3.56	1.19	6.99
Elevations With Areas Interpolated From The Closest Two Planimeter Readings					
201.60	-----	0.45	1.00	0.53	0.72
208.43	-----	1.17	3.40	0.49	6.30

$$IA = (\text{sq.rt}(Area1) + ((Ei-E1)/(E2-E1))*(\text{sq.rt}(Area2)-\text{sq.rt}(Area1)))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

$$Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + \text{sq.rt.}(Area1*Area2))$$

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

OUTLET STRUCTURE

LR 143-18-635
143-26-060

Outlet Structure File: PKWSTBOX.STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 08-23-1995 Time Executed: 13:14:05

****
UPDATED POND BY SMB JUNE, 95
USING CONSTRUCTION DWGS FOR ELEVATIONS

****

***** COMPOSITE OUTFLOW SUMMARY ****

Elevation (ft)	Q (cfs)	Contributing Structures
200.80	0.0	
201.60	0.0	+1
202.10	1.4	+1
202.60	1.9	+1
203.10	2.4	+1
203.60	2.7	+1
204.10	3.1	+1
204.60	3.4	+1
205.10	3.6	+1
205.60	3.9	+1
206.10	4.1	+1
206.60	4.3	+1
207.10	4.5	+1
207.60	4.7	+1
208.10	4.9	+1
208.43	5.1	+1

Outlet Structure File: PKWSTBOX.STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 08-23-1995 Time Executed: 13:14:05

****
UPDATED POND BY SMB JUNE, 95
USING CONSTRUCTION DWGS FOR ELEVATIONS

****

Outlet Structure File: C:PKWSTBOX.STR
Planimeter Input File: C:PKWST .VOL
Rating Table Output File: C:PKWSTBOX.PND

Min. Elev.(ft) = 201.6 Max. Elev.(ft) = 208.43 Incr.(ft) = .5

Additional elevations (ft) to be included in table:
* *
200.8 208.43

****
SYSTEM CONNECTIVITY
****

Structure	No.		Q Table		Q Table
INLET BOX	1	+	2	->	4

Outflow rating table summary was stored in file C:PKWSTBOX.PND

Outlet Structure File: PKWSTBOX.STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 08-23-1995 Time Executed: 13:14:05

****
UPDATED POND BY SMB JUNE, 95
USING CONSTRUCTION DWGS FOR ELEVATIONS

****

>>>>> Structure No. 1 <<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

E1 elev.(ft)?	201.6
E2 elev.(ft)?	208.45
Invert elev.(ft)?	201.6
Weir length (ft)?	2.438? → 9.31" Dia Hole
Weir coefficient?	3.3 ?
Orifice area (sq.ft)?	.371 → 8¼" Dia Hole
Orifice coefficient?	.65
Start transition elev.(ft) @ ?	201.84
Transition height (ft)?	.24

Outlet Structure File: PKWSTBOX.STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 08-23-1995 Time Executed: 13:14:05

****
UPDATED POND BY SMB JUNE, 95
USING CONSTRUCTION DWGS FOR ELEVATIONS

****

Outflow Rating Table 4
Table 4 = 2 + 1

Elevation (ft)	Q (cfs)	Contributing Structures
200.80	0.0	
201.60	0.0	+1
202.10	1.4	+1
202.60	1.9	+1
203.10	2.4	+1
203.60	2.7	+1
204.10	3.1	+1
204.60	3.4	+1
205.10	3.6	+1
205.60	3.9	+1
206.10	4.1	+1
206.60	4.3	+1
207.10	4.5	+1
207.60	4.7	+1
208.10	4.9	+1
208.43	5.1	+1
208.43	5.1	+1

Pond Structure Parkwest U.S

KK 143-18-63I
143-26-060

Outlet Structure File: PKWSTBOX.STR

POND-2 Version: 4.01 S/N: 88020607
Date Executed: 08-23-1995 Time Executed: 13:14:05

****
UPDATED POND BY SMB JUNE, 95
USING CONSTRUCTION DWGS FOR ELEVATIONS

****

Outflow Rating Table for Structure #1
INLET BOX Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
200.80	0.0	E < Inv.El.= 201.6
201.60	0.0	Weir: H = 0.0
202.10	1.4	Orifice: H = .5
202.60	1.9	Orifice: H = 1.0
203.10	2.4	Orifice: H = 1.5
203.60	2.7	Orifice: H = 2.0
204.10	3.1	Orifice: H = 2.5
204.60	3.4	Orifice: H = 3.0
205.10	3.6	Orifice: H = 3.5
205.60	3.9	Orifice: H = 4.0
206.10	4.1	Orifice: H = 4.5
206.60	4.3	Orifice: H = 5.0
207.10	4.5	Orifice: H = 5.5
207.60	4.7	Orifice: H = 6.0
208.10	4.9	Orifice: H = 6.5
208.43	5.1	Orifice: H = 6.83

7 5/16" Sq hole

Weir Cw = 3.3 Weir length = 2.438 ft → ~~9.3" Dia Hole~~
Orifice Co = .65 Orifice area = .371 sq.ft. → ~~8¼" Dia Hole~~
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
Transition interpolated between elev. 201.84 and 202.08 ft
Weir equation = Orifice equation @ elev.= 201.8405 ft

143-18-635

143-26-060

143-26-030

```
*S                  PARKWEST-100 YEAR POST DEVELOPMENT  THE 24 HR STORM
START               TIME=0.0 HR PUNCH CODE=0
RAINFALL            TYPE=2 RAIN QUARTER=0.0
                    RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                    RAIN DAY=2.66 IN DT=0.05 HRS
*                   ******************************************
*                   ******************************************
*                   ******************************************
COMPUTE NM HYD      ID=7 HYD NO=133.3 DA=0.0370 SQ MI
                    PER A=51.89 PER B=6.49 PER C=41.62 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=7 CODE=1
COMPUTE NM HYD      ID=8 HYD NO=133.4 DA=0.2550 SQ MI
                    PER A=80.00 PER B=0.00 PER C=20.00 PER D=0.00
                    TP=-0.3518 HR MASS RAIN=-1
PRINT HYD           ID=8 CODE=1
*S FLOW ENTERING OURAY STORM DRAIN FROM BASINS 133.3 AND 133.4
ADD HYD             ID=8 HYD NO=133.01 ID I=7 ID II=8
PRINT HYD           ID=8 CODE=1
*                   ******************************************
```

```
*S ROUTE BASIN 133.4 HYDOGRAPH THRU POND WEST SIDE OF UNSER
ROUTE RESERVOIR     ID=9  HYD NO=133.00 INFLOW ID=8  CODE=5
                    OUTFLOW (CFS)   STORAGE (AC FT)   ELEV (FT)
                       0.0             0.00            00.00
                       1.2             0.01            01.50
                       3.2             0.01            02.00
                       5.3             0.03            02.50
                       7.4             0.04            03.00
                       9.3             0.07            03.50
                      10.9             0.09            04.00
                      15.0             0.13            04.50
                      17.0             0.17            05.00
                      18.0             0.22            05.50
                      62.1             0.29            06.00
                      73.7             0.36            06.50
                      99.8             0.45            07.00
                     134.2             0.56            07.50
                     161.5             0.69            08.00
                     176.7             0.85            08.50
                     190.5             1.03            09.00
                     203.3             1.25            09.50
                     215.2             1.49            10.00
                     226.5             1.77            10.50
                     237.2             2.09            11.00
                     247.4             2.44            11.50
                     257.2             2.83            12.00
                     266.6             3.26            12.50
PRINT HYD           ID=9 CODE=1
*                   ******************************************
*                   ******************************************
*                   ******************************************
COMPUTE NM HYD      ID=10 HYD NO=132.11 DA=0.0093 SQ MI
                    PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=10 CODE=1
```

```
SED WASH LOAD       ID=10 K=0.17 C=0.25
                    P=1.0 LS=0.758
                    IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT TRANS      ID=10 IDS=3 CODE=1
                    A=0.0002 B=4.19 C=0.19 D=-2.55
                    NUMB WASH=-1 NUMB SECTIONS=9
                    FLOW     VELOCITY   WIDTH
                    (CFS)      (FPS)    (FT)
                     1.00      2.06      4.06
                     2.00      2.46      5.26
                     3.00      2.73      6.11
                     4.00      2.93      6.82
                     6.00      3.25      7.92
                     8.00      3.48      8.85
                    10.00      3.67      9.62
                    12.00      3.84     10.30
                    14.00      3.99     10.92
PRINT HYD           ID=10 CODE=1
PRINT HYD           ID=10 CODE=1
COMPUTE NM HYD      ID=11 HYD NO=133.51 DA=0.0670 SQ MI
                    PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=11 CODE=1
SED WASH LOAD       ID=11 K=0.16 C=0.25
                    P=1.0 LS=0.470
                    IMPERVIOUS=0.0 FACTOR=3.0
PRINT HYD           ID=11 CODE=1
SEDIMENT TRANS      ID=11 IDS=4 CODE=1
                    A=0.0002 B=4.19 C=0.19 D=-2.55
                    NUMB WASH=-1 NUMB SECTIONS=9
                    FLOW     VELOCITY   WIDTH
                    (CFS)      (FPS)    (FT)
                     5.00      2.91      8.75
                    10.00      3.61     10.08
                    25.00      4.77     12.68
                    40.00      5.42     14.57
                    55.00      5.96     16.02
                    70.00      6.36     17.31
                    85.00      6.65     18.49
                   100.00      6.96     19.50
                   115.00      6.74     24.19
PRINT HYD           ID=11 CODE=1
ADD HYD             ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD           ID=10 CODE=1
COMPUTE NM HYD      ID=11 HYD NO=133.52 DA=0.0485 SQ MI
                    PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=11 CODE=1
SED WASH LOAD       ID=11 K=0.14 C=0.25
                    P=1.0 LS=0.375
                    IMPERVIOUS=0.0 FACTOR=3.0
PRINT HYD           ID=11 CODE=1
SEDIMENT TRANS      ID=11 IDS=5 CODE=1
                    A=0.0002 B=4.19 C=0.19 D=-2.55
                    NUMB WASH=-1 NUMB SECTIONS=9
```

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

```
PRINT HYD           ID=11 CODE=1
*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
ADD HYD             ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD           ID=11 CODE=1
*                   ****************************************
*                   ****************************************
*                   ****************************************
COMPUTE NM HYD      ID=15 HYD NO=115.00 DA=0.0019 SQ MI
                    PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=15 CODE=1
COMPUTE NM HYD      ID=16 HYD NO=121.00 DA=0.0027 SQ MI
                    PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=16 CODE=1
ADD HYD             ID=15 HYD NO=121.01 ID I=15 ID II=16
PRINT HYD           ID=15 CODE=1
COMPUTE NM HYD      ID=16 HYD NO=122.00 DA=0.0009 SQ MI
                    PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
                    TP=-0.1333 HR MASS RAIN=-1
PR    HYD           ID=16 CODE=1
*S ON-SITE FLOW TO POND
ADD HYD             ID=15 HYD NO=122.01 ID I=15 ID II=16
PRINT HYD           ID=15 CODE=1
*S TOTAL FLOW TO POND
ADD HYD             ID=11 HYD NO=122.02 ID I=11 ID II=15
PRINT HYD           ID=11 CODE=1
PUNCH HYD           ID=11
*S ROUTE HYDOGRAPH THRU PARKWEST POND
ROUTE RESERVOIR     ID=12  HYD NO=133.50 INFLOW ID=11  CODE=5
```

Pond Routing

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0.0	0.00	5201.60
0.9	0.11	5201.84
1.4	0.25	5202.10
1.9	0.53	5202.60
2.4	0.83	5203.10
2.7	1.16	5203.60
3.1	1.51	5204.10
3.4	1.89	5204.60
3.6	2.29	5205.10
3.9	2.72	5205.60
4.1	3.17	5206.10
4.3	3.65	5206.60
4.5	4.14	5207.10

```
                    4.7             4.66            5207.60
                    4.9             5.20            5208.10
                    5.1             5.58            5208.43
PRINT HYD           ID=12 CODE=1
*                   ******************************************
*S ROUTE RESERVOIR OUTFALL THRU PIPE
************************************************************
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1 SLP=0.0377
                      DIA=2.0 FT  N=0.017
COMPUTE TRAVEL TIME  ID=5  REACH NO=1  NO VS=1  L=876 FT
                    SLP=0.0377
ROUTE               ID=5  HYD NO.133.51  INFLOW ID=12  DT=0.0
PRINT HYD           ID=5 CODE=1
************************************************************
COMPUTE NM HYD      ID=15 HYD NO=123.00 DA=0.0022 SQ MI
                    PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=15 CODE=1
*S FLOW ENTERING STREET AT NW CORNER OF SITE
COMPUTE NM HYD      ID=13 HYD NO=133.53 DA=0.0025 SQ MI
                    PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=13 CODE=1
SED WASH LOAD       ID=13 K=0.17 C=0.25
                    P=1.0 LS=0.824
                    IMPERVIOUS=0.0 FACTOR=3.0
PRINT HYD           ID=13 CODE=1
*                   ******************************************
ADD HYD             ID=10 HYD NO=123.01 ID I=13 ID II=15
PRINT HYD           ID=10 CODE=1
COMPUTE NM HYD      ID=14 HYD NO=133.54 DA=0.0173 SQ MI
                    PER A=15.00 PER B=70.00 PER C=15.00 PER D=0.00
                    TP=-0.1333 HR MASS RAIN=-1
PRINT HYD           ID=14 CODE=1
SED WASH LOAD       ID=14 K=0.09 C=0.25
                    P=1.0 LS=0.251
                    IMPERVIOUS=0.0 FACTOR=3.0
PRINT HYD           ID=14 CODE=1
SEDIMENT TRANS      ID=14 IDS=6 CODE=1
                    A=0.0002 B=4.19 C=0.19 D=-2.55
                    NUMB WASH=-1 NUMB SECTIONS=9
                    FLOW     VELOCITY   WIDTH
                    (CFS)       (FPS)     (FT)
                     2.00       1.63      12.78
                     5.00       2.06      17.99
                    10.00       2.41      24.53
                    14.00       2.58      28.75
                    17.00       2.70      31.28
                    20.00       2.79      33.67
                    23.00       2.88      35.74
                    27.00       2.99      38.25
                    30.00       3.06      39.98
PRINT HYD           ID=14 CODE=1
*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDINC OFFSITE SHEET FLOW
ADD HYD             ID=15 HYD NO=123.02 ID I=10 ID II=14
```

```
PRINT HYD             ID=15 CODE=1
COMPUTE NM HYD        ID=16 HYD NO=124.00 DA=0.0311 SQ MI
                      PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
                      TP=-0.1333 HR MASS RAIN=-1
PRINT HYD             ID=16 CODE=1
*S UNPONDED FLOW TO INLETS AT OURAY
ADD HYD               ID=15 HYD NO=124.01 ID I=15 ID II=16
PRINT HYD             ID=15 CODE=1
*S TOTAL ONSITE FLOW TO OURAY SD
ADD HYD               ID=12 HYD NO=124.02 ID I=5 ID II=15
PRINT HYD             ID=12 CODE=1
*                     ****************************************
COMPUTE NM HYD        ID=15 HYD NO=133.2 DA=0.0210 SQ MI
                      PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
                      TP=-0.1333 HR MASS RAIN=-1
PRINT HYD             ID=15 CODE=1
*S EXISTING FLOW TO OURAY SD
ADD HYD               ID=14 HYD NO=133.01 ID I=15 ID II=9
PRINT HYD             ID=14 CODE=1
*S TOTAL FLOW TO OURAY STORM DRAIN
ADD HYD               ID=15 HYD NO=133.02 ID I=12 ID II=14
PRINT HYD             ID=15 CODE=0
*S ROUTE FLOW THRU OURAY STORM DRAIN
**********************************************************
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1 SLP=0.0278
                      DIA=5.0 FT  N=0.017
COMPUTE TRAVEL TIME   ID=16  REACH NO=1  NO VS=1  L=836 FT
                      SLP=0.0278
ROUTE                 ID=16  HYD NO.133.03  INFLOW ID=15  DT=0.0
PRINT HYD             ID=16 CODE=1
**********************************************************
**********************************************
*S START NEW SUB-BASIN NETWORK
*S SUB-BASIN 114.01  (SINGLE FAMILY RESIDENTIAL)
COMPUTE NM HYD        ID=3 HYD NO=114.01 DA=0.0158 SQ MI
                      PER A=0.0 PER B=21.5 PER C=21.5 PER D=57.0
                      TP=-0.1333 HR MASS RAIN=-1
PRINT HYD             ID=3 CODE=1
*                     ****************************************
*S SUB-BASIN 114.02  (PAVED PARKING AREA)
COMPUTE NM HYD        ID=4 HYD NO=114.02 DA=0.0023 SQ MI
                      PER A=0.0 PER B=5.0 PER C=5.0 PER D=90.0
                      TP=-0.1333 HR MASS RAIN=-1
PRINT HYD             ID=4 CODE=1
*                     ****************************************
*S STREET FLOW IN PAINTED ROCK DRIVE AT SUMP NEAR OURAY ROAD
ADD HYD               ID=1 HYD NO=114.03 ID I=3 ID II=4
PRINT HYD             ID=1 CODE=1
*                     ****************************************
*S SUB-BASIN 115.00  (COMMERCIAL SITE)
COMPUTE NM HYD        ID=3 HYD NO=115.01 DA=0.0139 SQ MI
                      PER A=0.0 PER B=5.0 PER C=5.0 PER D=90.0
                      TP=-0.1333 HR MASS RAIN=-1
PRINT HYD             ID=3 CODE=1
*                     ****************************************
```

```
*S SUB-BASIN 116.00  (MULTIPLE UNIT RESIDENTIAL ATTACHED)
COMPUTE NM HYD       ID=4 HYD NO=116.00 DA=0.0049 SQ MI
                     PER A=0.0 PER B=15.0 PER C=15.0 PER D=70.0
                     TP=-0.1333 HR MASS RAIN=-1
PRINT HYD            ID=4 CODE=1
*                    **********************************************
*                    **********************************************
ADD HYD              ID=2 HYD NO=116.10 ID I=3 ID II=4
PRINT HYD            ID=2 CODE=1
*                    **********************************************
*S TOTAL DISCHARGE TO OURAY STORM DRAIN
*                    **********************************************
ADD HYD              ID=5 HYD NO=116.20 ID I=1 ID II=2
PRINT HYD            ID=5 CODE=0
*                    **********************************************
*                    **********************************************
*S TOTAL COMBINED FLOW IN OURAY STORM DRAIN
*                    **********************************************
ADD HYD              ID=1 HYD NO=116.30 ID I=5 ID II=16
PRINT HYD            ID=1 CODE=1

FINISH
```

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 08/24/1995
START TIME (HR:MIN:SEC) = 07:58:22 USER NO.= DAGGETTK.S94
INPUT FILE = our10024.dat

```
*S              PARKWEST-100 YEAR POST DEVELOPMENT  THE 24 HR STORM
START           TIME=0.0 HR PUNCH CODE=0
RAINFALL        TYPE=2 RAIN QUARTER=0.0
                RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                RAIN DAY=2.66 IN DT=0.05 HRS
```

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .050000 HOURS END TIME = 24.000000 HOURS

.0000	.0025	.0050	.0076	.0103	.0131	.0160
.0190	.0222	.0254	.0289	.0324	.0362	.0401
.0443	.0487	.0534	.0584	.0637	.0695	.0758
.0837	.0924	.1176	.1773	.2798	.4384	.6668
.9790	1.2253	1.3366	1.4295	1.5109	1.5836	1.6495
1.7096	1.7648	1.8156	1.8624	1.9057	1.9458	1.9548
1.9631	1.9708	1.9780	1.9848	1.9912	1.9973	2.0031
2.0087	2.0140	2.0191	2.0240	2.0287	2.0333	2.0377
2.0420	2.0462	2.0502	2.0542	2.0580	2.0617	2.0653
2.0689	2.0724	2.0757	2.0791	2.0823	2.0855	2.0886
2.0916	2.0946	2.0976	2.1005	2.1033	2.1061	2.1088
2.1115	2.1142	2.1168	2.1193	2.1219	2.1244	2.1268
2.1293	2.1316	2.1340	2.1363	2.1386	2.1409	2.1431
2.1453	2.1475	2.1497	2.1518	2.1539	2.1560	2.1580
2.1601	2.1621	2.1641	2.1660	2.1680	2.1699	2.1718
2.1737	2.1756	2.1774	2.1793	2.1811	2.1829	2.1847
2.1864	2.1882	2.1899	2.1916	2.1933	2.1950	2.1967
2.1984	2.2000	2.2020	2.2039	2.2059	2.2078	2.2097
2.2117	2.2136	2.2155	2.2174	2.2193	2.2212	2.2231
2.2249	2.2268	2.2287	2.2305	2.2324	2.2342	2.2361
2.2379	2.2398	2.2416	2.2434	2.2452	2.2470	2.2488
2.2506	2.2524	2.2542	2.2559	2.2577	2.2595	2.2612
2.2630	2.2647	2.2665	2.2682	2.2700	2.2717	2.2734
2.2751	2.2768	2.2785	2.2802	2.2819	2.2836	2.2853
2.2870	2.2887	2.2903	2.2920	2.2937	2.2953	2.2970
2.2986	2.3002	2.3019	2.3035	2.3051	2.3068	2.3084
2.3100	2.3116	2.3132	2.3148	2.3164	2.3180	2.3196
2.3212	2.3227	2.3243	2.3259	2.3274	2.3290	2.3305
2.3321	2.3336	2.3352	2.3367	2.3383	2.3398	2.3413
2.3428	2.3444	2.3459	2.3474	2.3489	2.3504	2.3519
2.3534	2.3549	2.3563	2.3578	2.3593	2.3608	2.3622
2.3637	2.3652	2.3666	2.3681	2.3695	2.3710	2.3724
2.3739	2.3753	2.3767	2.3782	2.3796	2.3810	2.3824
2.3839	2.3853	2.3867	2.3881	2.3895	2.3909	2.3923
2.3937	2.3951	2.3965	2.3978	2.3992	2.4006	2.4020
2.4033	2.4047	2.4061	2.4074	2.4088	2.4101	2.4115
2.4128	2.4142	2.4155	2.4168	2.4182	2.4195	2.4208
2.4222	2.4235	2.4248	2.4261	2.4274	2.4287	2.4300
2.4314	2.4327	2.4340	2.4352	2.4365	2.4378	2.4391
2.4404	2.4417	2.4430	2.4442	2.4455	2.4468	2.4480
2.4493	2.4506	2.4518	2.4531	2.4543	2.4556	2.4568

2.4581 2.4593 2.4606 2.4618 2.4630 2.4643 2.4655
2.4667 2.4680 2.4692 2.4704 2.4716 2.4728 2.4740
2.4753 2.4765 2.4777 2.4789 2.4801 2.4813 2.4825
2.4837 2.4849 2.4860 2.4872 2.4884 2.4896 2.4908
2.4919 2.4931 2.4943 2.4955 2.4966 2.4978 2.4990
2.5001 2.5013 2.5024 2.5036 2.5047 2.5059 2.5070
2.5082 2.5093 2.5105 2.5116 2.5127 2.5139 2.5150
2.5161 2.5172 2.5184 2.5195 2.5206 2.5217 2.5229
2.5240 2.5251 2.5262 2.5273 2.5284 2.5295 2.5306
2.5317 2.5328 2.5339 2.5350 2.5361 2.5372 2.5383
2.5394 2.5404 2.5415 2.5426 2.5437 2.5448 2.5458
2.5469 2.5480 2.5490 2.5501 2.5512 2.5522 2.5533
2.5544 2.5554 2.5565 2.5575 2.5586 2.5596 2.5607
2.5617 2.5628 2.5638 2.5649 2.5659 2.5669 2.5680
2.5690 2.5700 2.5711 2.5721 2.5731 2.5741 2.5752
2.5762 2.5772 2.5782 2.5792 2.5803 2.5813 2.5823
2.5833 2.5843 2.5853 2.5863 2.5873 2.5883 2.5893
2.5903 2.5913 2.5923 2.5933 2.5943 2.5953 2.5963
2.5973 2.5982 2.5992 2.6002 2.6012 2.6022 2.6031
2.6041 2.6051 2.6061 2.6070 2.6080 2.6090 2.6099
2.6109 2.6119 2.6128 2.6138 2.6148 2.6157 2.6167
2.6176 2.6186 2.6195 2.6205 2.6214 2.6224 2.6233
2.6243 2.6252 2.6261 2.6271 2.6280 2.6290 2.6299
2.6308 2.6318 2.6327 2.6336 2.6346 2.6355 2.6364
2.6373 2.6383 2.6392 2.6401 2.6410 2.6419 2.6428
2.6438 2.6447 2.6456 2.6465 2.6474 2.6483 2.6492
2.6501 2.6510 2.6519 2.6528 2.6537 2.6546 2.6555
2.6564 2.6573 2.6582 2.6591 2.6600

* ***\

K = .352269HR TP = .351800HR K/TP RATIO = 1.001334 SHAPE CONSTANT, N = 3.525551
UNIT PEAK = 233.54 CFS UNIT VOLUME = 1.000 B = 322.19 P60 = 1.8700
AREA = .255000 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 133.40

RUNOFF VOLUME = .52015 INCHES = 7.0740 ACRE-FEET
PEAK DISCHARGE RATE = 118.13 CFS AT 1.750 HOURS BASIN AREA = .2550 SQ. MI.

*S FLOW ENTERING OURAY STORM DRAIN FROM BASINS 133.3 AND 133.4
ADD HYD ID=8 HYD NO=133.01 ID I=7 ID II=8
PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .53516 INCHES = 8.3342 ACRE-FEET
PEAK DISCHARGE RATE = 137.20 CFS AT 1.700 HOURS BASIN AREA = .2920 SQ. MI.

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*S ROUTE BASIN 133.4 HYDOGRAPH THRU POND WEST SIDE OF UNSER
ROUTE RESERVOIR ID=9 HYD NO=133.00 INFLOW ID=8 CODE=5

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0.0	0.00	00.00
1.2	0.01	01.50
3.2	0.01	02.00
5.3	0.03	02.50
7.4	0.04	03.00
9.3	0.07	03.50
10.9	0.09	04.00
15.0	0.13	04.50
17.0	0.17	05.00
18.0	0.22	05.50
62.1	0.29	06.00
73.7	0.36	06.50
99.8	0.45	07.00
134.2	0.56	07.50
161.5	0.69	08.00
176.7	0.85	08.50
190.5	1.03	09.00
203.3	1.25	09.50
215.2	1.49	10.00
226.5	1.77	10.50
237.2	2.09	11.00
247.4	2.44	11.50
257.2	2.83	12.00
266.6	3.26	12.50

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	.00	.000	.00
.25	.00	.00	.000	.00
.50	.00	.00	.000	.00
.75	.00	.00	.000	.00
1.00	.00	.00	.000	.00
1.25	.00	.00	.000	.00
1.50	91.65	6.13	.309	65.22
1.75	132.64	7.51	.563	134.92
2.00	78.17	6.77	.408	87.62
2.25	38.72	5.76	.257	41.06
2.50	19.16	5.53	.224	20.25
2.75	11.20	4.78	.152	16.10
3.00	8.65	3.88	.085	10.50
3.25	6.74	3.21	.052	8.19
3.50	5.28	2.59	.032	5.67
3.75	4.14	2.33	.023	4.60
4.00	3.25	2.11	.014	3.65
4.25	2.56	1.89	.010	2.76
4.50	2.02	1.66	.010	1.82
4.75	1.59	1.65	.010	1.78
5.00	1.25	1.47	.010	1.18
5.25	.99	1.34	.009	1.08
5.50	.78	1.08	.007	.86
5.75	.62	.85	.006	.68
6.00	.49	.67	.004	.54
6.25	.38	.53	.004	.42
6.50	.30	.42	.003	.33
6.75	.24	.33	.002	.26
7.00	.19	.26	.002	.21
7.25	.15	.21	.001	.16
7.50	.12	.16	.001	.13
7.75	.09	.13	.001	.10
8.00	.07	.10	.001	.08
8.25	.06	.08	.001	.06
8.50	.05	.06	.000	.05
8.75	.04	.05	.000	.04
9.00	.03	.04	.000	.03
9.25	.02	.03	.000	.02
9.50	.02	.02	.000	.02
9.75	.01	.02	.000	.02
10.00	.01	.02	.000	.01
10.25	.01	.01	.000	.01
10.50	.01	.01	.000	.01
10.75	.01	.01	.000	.01
11.00	.00	.00	.000	.00

PEAK DISCHARGE = 134.915 CFS - PEAK OCCURS AT HOUR 1.75
MAXIMUM WATER SURFACE ELEVATION = 7.513
MAXIMUM STORAGE = .5634 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=9 CODE=1

PARTIAL HYDROGRAPH 133.00

RUNOFF VOLUME = .53516 INCHES = 8.3342 ACRE-FEET
PEAK DISCHARGE RATE = 134.92 CFS AT 1.750 HOURS BASIN AREA = .2920 SQ. MI.

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COMPUTE NM HYD ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .135774HR TP = .133300HR K/TP RATIO = 1.018563 SHAPE CONSTANT, N = 3.465582
UNIT PEAK = 22.173 CFS UNIT VOLUME = 1.000 B = 317.81 P60 = 1.8700
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD ID=10 K=0.17 C=0.25
P=1.0 LS=0.758
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 18.9 (TONS) WASH LOAD CONCENTRATION = 41928 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS ID=10 IDS=3 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 41928 (PPM-w)

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TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.050	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.100	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.150	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.200	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.250	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.300	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.350	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.400	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.450	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.500	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.550	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.600	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.650	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.700	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.750	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.800	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.850	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.900	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.950	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.000	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.050	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.100	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.150	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.200	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.250	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.300	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.350	1.00	2.062	.120	4.07	41928.	.01	32134.	71463.	1.0290	.43
1.400	4.48	3.021	.209	7.09	41928.	.12	66627.	103257.	1.0435	3.33
1.450	9.05	3.586	.273	9.25	41928.	.34	90499.	125313.	1.0541	10.62
1.500	11.41	3.793	.298	10.10	41928.	.48	99806.	133925.	1.0584	20.52
1.550	10.85	3.746	.292	9.91	41928.	.44	97643.	131923.	1.0573	29.78
1.600	8.90	3.572	.271	9.20	41928.	.33	89906.	124765.	1.0538	36.91
1.650	6.83	3.355	.245	8.31	41928.	.23	80666.	116223.	1.0496	41.95
1.700	5.06	3.117	.219	7.40	41928.	.15	70619.	106941.	1.0452	45.35
1.750	3.63	2.863	.193	6.56	41928.	.09	60278.	97398.	1.0407	47.55
1.800	2.55	2.624	.170	5.73	41928.	.05	51207.	89032.	1.0369	48.96
1.850	1.84	2.414	.150	5.07	41928.	.03	43623.	82043.	1.0337	49.88
1.900	1.43	2.270	.138	4.57	41928.	.02	38718.	77525.	1.0317	50.55
1.950	1.18	2.160	.128	4.28	41928.	.02	35173.	74261.	1.0303	51.09
2.000	1.01	2.066	.120	4.07	41928.	.01	32245.	71565.	1.0291	51.52
2.050	.88	2.001	.114	3.83	41928.	.01	30333.	69807.	1.0283	51.89
2.100	.77	1.942	.109	3.64	41928.	.01	28621.	68231.	1.0276	52.21
2.150	.68	1.883	.104	3.47	41928.	.01	26988.	66729.	1.0270	52.48
2.200	.60	1.824	.100	3.32	41928.	.01	25388.	65256.	1.0263	52.72
2.250	.53	1.765	.095	3.19	41928.	.00	23817.	63812.	1.0257	52.93
2.300	.47	1.708	.090	3.06	41928.	.00	22368.	62479.	1.0251	53.10
2.350	.42	1.657	.086	2.92	41928.	.00	21080.	61295.	1.0246	53.26
2.400	.37	1.606	.082	2.79	41928.	.00	19865.	60178.	1.0242	53.39
2.450	.33	1.558	.079	2.67	41928.	.00	18719.	59124.	1.0237	53.50

2.500	.29	1.511	.075	2.55	41928.	.00	17637.	58129.	1.0233	53.60
2.550	.26	1.465	.072	2.43	41928.	.00	16617.	57192.	1.0229	53.69
2.600	.23	1.421	.068	2.32	41928.	.00	15656.	56308.	1.0225	53.77
2.650	.20	1.378	.065	2.22	41928.	.00	14748.	55474.	1.0222	53.83
2.700	.18	1.336	.062	2.12	41928.	.00	13893.	54688.	1.0218	53.89
2.750	.16	1.296	.060	2.02	41928.	.00	13087.	53947.	1.0215	53.94

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
2.800	.14	1.257	.057	1.93	41928.	.00	12327.	53249.	1.0212	53.98
2.850	.12	1.219	.054	1.85	41928.	.00	11610.	52590.	1.0209	54.02
2.900	.11	1.182	.052	1.76	41928.	.00	10935.	51970.	1.0207	54.06
2.950	.10	1.146	.050	1.68	41928.	.00	10298.	51385.	1.0204	54.09
3.000	.08	1.112	.047	1.61	41928.	.00	9699.	50834.	1.0202	54.11
3.050	.07	1.078	.045	1.54	41928.	.00	9133.	50315.	1.0200	54.13
3.100	.07	1.045	.043	1.47	41928.	.00	8601.	49826.	1.0198	54.15
3.150	.06	1.014	.041	1.40	41928.	.00	8099.	49365.	1.0196	54.17
3.200	.05	.983	.039	1.34	41928.	.00	7627.	48931.	1.0194	54.18
3.250	.05	.953	.038	1.28	41928.	.00	7181.	48522.	1.0192	54.20
3.300	.04	.925	.036	1.22	41928.	.00	6762.	48136.	1.0191	54.21
3.350	.04	.897	.034	1.16	41928.	.00	6367.	47774.	1.0189	54.22
3.400	.03	.870	.033	1.11	41928.	.00	5995.	47432.	1.0188	54.23
3.450	.03	.843	.031	1.06	41928.	.00	5644.	47110.	1.0187	54.24
3.500	.02	.818	.030	1.01	41928.	.00	5314.	46807.	1.0185	54.24
3.550	.02	.793	.029	.97	41928.	.00	5003.	46521.	1.0184	54.25
3.600	.02	.769	.027	.93	41928.	.00	4710.	46252.	1.0183	54.25
3.650	.02	.746	.026	.88	41928.	.00	4434.	45999.	1.0182	54.26
3.700	.02	.723	.025	.84	41928.	.00	4175.	45761.	1.0181	54.26
3.750	.01	.702	.024	.81	41928.	.00	3930.	45536.	1.0180	54.27
3.800	.01	.680	.023	.77	41928.	.00	3700.	45325.	1.0179	54.27
3.850	.01	.660	.022	.74	41928.	.00	3483.	45126.	1.0178	54.27
3.900	.01	.640	.021	.70	41928.	.00	3279.	44938.	1.0178	54.27
3.950	.01	.620	.020	.67	41928.	.00	3087.	44762.	1.0177	54.28
4.000	.01	.602	.019	.64	41928.	.00	2906.	44595.	1.0176	54.28
4.050	.01	.562	.017	.58	41928.	.00	2542.	44261.	1.0175	54.28
4.100	.00	.477	.013	.45	41928.	.00	1839.	43616.	1.0172	54.28
4.150	.00	.371	.009	.31	41928.	.00	1122.	42958.	1.0169	54.28

AT PEAK FLOW OF 11.406 WITH TIME AT 1.50 HOURS: BEDMAT = 14.14 (TONS) = .0065 (AC-FT bulked)
TOTAL SED = 20.52 (TONS) = .0094 (AC-FT bulked)
PEAK BULKING FACTOR = 1.058353 = 133925. (PPM-w)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCETRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	18.86	.0052	.0087	41928.	
BEDMAT =	35.42	.0098	.0163	75940.	
TOTAL SEDIMENT =	54.28	.0151	.0249	111856.	1.047526

SEDIMENT TRANSPORT CAPACITY: 2.67984 AC-FT/SQ MI (bulked) = 9.1198 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .124915HR TP = .133300HR K/TP RATIO = .937100 SHAPE CONSTANT, N = 3.773853
UNIT PEAK = 170.79 CFS UNIT VOLUME = 1.001 B = 339.80 P60 = 1.8700
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25
P=1.0 LS=0.470
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 118.3 (TONS) WASH LOAD CONCENTRATION = 31946 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS ID=11 IDS=4 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 31946 (PPM-w)

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TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.050	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.100	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.150	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.200	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.250	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.300	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.350	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.400	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.450	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.500	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.550	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.600	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.650	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.700	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.750	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.800	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.850	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.900	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.950	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.000	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.050	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.100	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.150	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.200	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.250	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.300	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.350	9.74	3.582	.272	10.01	31946.	.36	88388.	115011.	1.0490	7.11
1.400	39.74	5.411	.505	14.54	31946.	3.28	179369.	201007.	1.0949	63.25
1.450	76.80	6.499	.662	17.84	31946.	9.13	239496.	258115.	1.1313	213.31
1.500	95.20	6.866	.723	19.18	31946.	12.56	259015.	276702.	1.1444	417.83
1.550	89.20	6.742	.705	18.77	31946.	11.33	251875.	269900.	1.1395	603.01

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.600	72.55	6.414	.646	17.51	31946.	8.43	235505.	254317.	1.1287	741.96
1.650	55.74	5.982	.579	16.08	31946.	5.67	212259.	232218.	1.1141	836.64
1.700	41.89	5.499	.516	14.75	31946.	3.57	184325.	205705.	1.0977	897.58
1.750	30.70	5.054	.453	13.40	31946.	2.22	161051.	183652.	1.0849	936.36
1.800	22.16	4.616	.394	12.19	31946.	1.35	138709.	162513.	1.0732	960.50
1.850	16.33	4.224	.346	11.18	31946.	.83	118839.	143738.	1.0633	975.90
1.900	12.66	3.901	.308	10.54	31946.	.55	103133.	128914.	1.0558	986.42
1.950	10.21	3.635	.278	10.12	31946.	.38	90733.	117222.	1.0501	994.03
2.000	8.48	3.439	.255	9.68	31946.	.29	82239.	109218.	1.0463	999.87
2.050	7.20	3.272	.236	9.34	31946.	.22	75281.	102664.	1.0432	1004.50
2.100	6.22	3.124	.219	9.07	31946.	.17	69289.	97023.	1.0405	1008.25
2.150	5.42	2.988	.205	8.86	31946.	.14	63960.	92007.	1.0382	1011.33
2.200	4.74	2.879	.193	8.52	31946.	.11	59790.	88084.	1.0365	1013.90
2.250	4.15	2.800	.185	7.99	31946.	.09	56767.	85241.	1.0352	1016.07
2.300	3.63	2.718	.177	7.53	31946.	.08	53711.	82366.	1.0339	1017.90
2.350	3.17	2.634	.169	7.13	31946.	.06	50644.	79483.	1.0326	1019.44
2.400	2.78	2.548	.161	6.78	31946.	.05	47591.	76613.	1.0313	1020.73
2.450	2.43	2.461	.153	6.47	31946.	.04	44575.	73778.	1.0301	1021.82
2.500	2.13	2.373	.145	6.20	31946.	.03	41616.	70998.	1.0288	1022.73
2.550	1.86	2.285	.137	5.96	31946.	.03	38735.	68291.	1.0277	1023.50
2.600	1.63	2.197	.129	5.76	31946.	.02	35948.	65673.	1.0265	1024.14
2.650	1.43	2.110	.121	5.58	31946.	.02	33270.	63157.	1.0254	1024.68
2.700	1.25	2.023	.114	5.42	31946.	.01	30711.	60754.	1.0244	1025.13
2.750	1.09	1.938	.107	5.28	31946.	.01	28280.	58472.	1.0234	1025.52
2.800	.96	1.861	.100	5.11	31946.	.01	26173.	56494.	1.0226	1025.84
2.850	.84	1.800	.096	4.86	31946.	.01	24546.	54966.	1.0219	1026.11
2.900	.73	1.741	.091	4.62	31946.	.01	23017.	53532.	1.0213	1026.34
2.950	.64	1.684	.086	4.40	31946.	.01	21581.	52184.	1.0208	1026.54
3.000	.56	1.629	.082	4.18	31946.	.00	20233.	50919.	1.0202	1026.71
3.050	.49	1.575	.078	3.98	31946.	.00	18967.	49732.	1.0197	1026.85
3.100	.43	1.524	.074	3.78	31946.	.00	17780.	48617.	1.0193	1026.98
3.150	.38	1.474	.071	3.60	31946.	.00	16665.	47572.	1.0188	1027.08
3.200	.33	1.425	.067	3.42	31946.	.00	15619.	46590.	1.0184	1027.17
3.250	.29	1.379	.064	3.26	31946.	.00	14638.	45670.	1.0181	1027.25
3.300	.25	1.333	.061	3.10	31946.	.00	13718.	44807.	1.0177	1027.32
3.350	.22	1.290	.058	2.95	31946.	.00	12854.	43997.	1.0174	1027.37
3.400	.19	1.247	.055	2.80	31946.	.00	12045.	43238.	1.0171	1027.42
3.450	.17	1.206	.052	2.67	31946.	.00	11285.	42526.	1.0168	1027.46
3.500	.15	1.167	.050	2.54	31946.	.00	10573.	41858.	1.0165	1027.50
3.550	.13	1.129	.047	2.41	31946.	.00	9906.	41232.	1.0162	1027.53
3.600	.11	1.092	.045	2.29	31946.	.00	9280.	40645.	1.0160	1027.56
3.650	.10	1.056	.043	2.18	31946.	.00	8694.	40095.	1.0158	1027.58
3.700	.09	1.021	.041	2.08	31946.	.00	8144.	39580.	1.0156	1027.60
3.750	.08	.988	.039	1.97	31946.	.00	7629.	39097.	1.0154	1027.62
3.800	.07	.955	.037	1.88	31946.	.00	7146.	38644.	1.0152	1027.63
3.850	.06	.924	.035	1.79	31946.	.00	6693.	38220.	1.0150	1027.65
3.900	.05	.894	.033	1.70	31946.	.00	6269.	37822.	1.0148	1027.66
3.950	.04	.864	.032	1.62	31946.	.00	5872.	37450.	1.0147	1027.67
4.000	.04	.836	.030	1.54	31946.	.00	5500.	37101.	1.0145	1027.68
4.050	.03	.808	.029	1.46	31946.	.00	5151.	36774.	1.0144	1027.68

4.100	.03	.782	.027	1.39	31946.	.00	4824.	36467.	1.0143	1027.69
4.150	.03	.756	.026	1.32	31946.	.00	4518.	36180.	1.0142	1027.69
4.200	.02	.731	.025	1.26	31946.	.00	4231.	35912.	1.0141	1027.70
4.250	.02	.707	.024	1.20	31946.	.00	3962.	35660.	1.0140	1027.70
4.300	.02	.684	.022	1.14	31946.	.00	3711.	35424.	1.0139	1027.71
4.350	.02	.662	.021	1.08	31946.	.00	3475.	35203.	1.0138	1027.71
4.400	.01	.640	.020	1.03	31946.	.00	3254.	34996.	1.0137	1027.71
4.450	.01	.619	.019	.98	31946.	.00	3047.	34802.	1.0136	1027.72
4.500	.01	.599	.018	.93	31946.	.00	2854.	34620.	1.0135	1027.72
4.550	.01	.579	.017	.89	31946.	.00	2672.	34450.	1.0135	1027.72
4.600	.01	.536	.016	.79	31946.	.00	2293.	34095.	1.0133	1027.72
4.650	.00	.462	.012	.63	31946.	.00	1713.	33551.	1.0131	1027.72
4.700	.00	.377	.009	.47	31946.	.00	1147.	33021.	1.0129	1027.72

AT PEAK FLOW OF 95.196 WITH TIME AT 1.50 HOURS: BEDMAT = 376.78 (TONS) = .1730 (AC-FT bulked)
TOTAL SED = 417.83 (TONS) = .1918 (AC-FT bulked)

PEAK BULKING FACTOR = 1.144361 = 276702. (PPM-w)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCETRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	118.26	.0328	.0543	31946.	
BEDMAT =	909.47	.2525	.4176	202420.	
TOTAL SEDIMENT =	1027.72	.2854	.4719	222874.	1.108224

SEDIMENT TRANSPORT CAPACITY: 7.04276 AC-FT/SQ MI (bulked) = 23.9674 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .72588 INCHES = 2.9538 ACRE-FEET
PEAK DISCHARGE RATE = 106.60 CFS AT 1.500 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .125089HR TP = .133300HR K/TP RATIO = .938402 SHAPE CONSTANT, N = 3.768399
UNIT PEAK = 123.50 CFS UNIT VOLUME = 1.001 B = 339.42 P60 = 1.8700
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
P=1.0 LS=0.375
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 57.5 (TONS) WASH LOAD CONCENTRATION = 21672 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS ID=11 IDS=5 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 21672 (PPM-w)

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TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.050	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00

.100	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.150	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.200	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.250	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.300	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.350	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.400	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.450	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.500	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.550	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.600	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.650	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.700	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.750	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.800	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.850	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.900	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.950	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.000	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.050	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.100	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.150	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.200	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.250	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.300	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.350	7.05	3.386	.212	9.82	21672.	.26	87846.	105912.	1.0447	4.69
1.400	28.76	5.038	.382	14.93	21672.	2.31	175184.	189984.	1.0885	42.58
1.450	55.55	6.006	.495	18.67	21672.	6.32	231699.	244557.	1.1222	143.58
1.500	68.85	6.353	.539	20.10	21672.	8.75	251986.	264179.	1.1355	282.41
1.550	64.53	6.248	.525	19.66	21672.	7.94	245953.	258342.	1.1314	408.63
1.600	52.50	5.919	.485	18.29	21672.	5.80	226550.	239579.	1.1189	501.53
1.650	40.35	5.514	.437	16.75	21672.	3.87	202648.	216487.	1.1043	564.14
1.700	30.34	5.114	.391	15.18	21672.	2.50	179496.	194143.	1.0909	605.19
1.750	22.24	4.701	.345	13.71	21672.	1.55	156092.	171579.	1.0782	631.06
1.800	16.05	4.306	.303	12.29	21672.	.94	134296.	150586.	1.0669	647.04
1.850	11.83	3.933	.266	11.32	21672.	.58	114547.	131581.	1.0572	657.11
1.900	9.17	3.645	.237	10.60	21672.	.38	100067.	117657.	1.0503	663.97
1.950	7.39	3.432	.217	9.95	21672.	.28	90003.	107985.	1.0457	669.00
2.000	6.14	3.250	.199	9.49	21672.	.21	81653.	99962.	1.0419	672.83
2.050	5.22	3.092	.185	9.15	21672.	.16	74644.	93231.	1.0388	675.85
2.100	4.51	2.989	.175	8.60	21672.	.13	70192.	88956.	1.0368	678.32
2.150	3.93	2.905	.168	8.04	21672.	.11	66611.	85519.	1.0353	680.38
2.200	3.43	2.821	.161	7.57	21672.	.09	63084.	82134.	1.0338	682.10
2.250	3.01	2.735	.153	7.16	21672.	.07	59555.	78748.	1.0323	683.55
2.300	2.63	2.646	.146	6.80	21672.	.06	56033.	75368.	1.0308	684.75
2.350	2.30	2.557	.139	6.49	21672.	.05	52545.	72022.	1.0293	685.75
2.400	2.02	2.466	.131	6.22	21672.	.04	49116.	68732.	1.0279	686.59
2.450	1.76	2.376	.124	5.98	21672.	.03	45768.	65522.	1.0265	687.28
2.500	1.54	2.285	.117	5.77	21672.	.03	42523.	62409.	1.0251	687.86
2.550	1.35	2.195	.110	5.58	21672.	.02	39397.	59412.	1.0238	688.34
2.600	1.18	2.105	.104	5.42	21672.	.02	36405.	56543.	1.0226	688.74
2.650	1.04	2.017	.097	5.28	21672.	.01	33556.	53813.	1.0215	689.07
2.700	.91	1.946	.092	5.05	21672.	.01	31329.	51679.	1.0206	689.35
2.750	.79	1.882	.088	4.81	21672.	.01	29393.	49823.	1.0198	689.58

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
2.800	.69	1.821	.083	4.57	21672.	.01	27573.	48079.	1.0191	689.78
2.850	.61	1.761	.079	4.35	21672.	.01	25863.	46440.	1.0184	689.94
2.900	.53	1.703	.075	4.14	21672.	.00	24257.	44901.	1.0177	690.08
2.950	.47	1.647	.072	3.94	21672.	.00	22747.	43455.	1.0171	690.20
3.000	.41	1.593	.068	3.75	21672.	.00	21330.	42097.	1.0166	690.30
3.050	.36	1.541	.065	3.56	21672.	.00	19999.	40822.	1.0161	690.39
3.100	.31	1.491	.062	3.39	21672.	.00	18750.	39625.	1.0156	690.46
3.150	.27	1.442	.059	3.22	21672.	.00	17577.	38502.	1.0151	690.52
3.200	.24	1.395	.056	3.07	21672.	.00	16476.	37447.	1.0147	690.57
3.250	.21	1.349	.053	2.92	21672.	.00	15443.	36458.	1.0143	690.62
3.300	.18	1.305	.051	2.78	21672.	.00	14474.	35530.	1.0139	690.66
3.350	.16	1.262	.048	2.64	21672.	.00	13565.	34659.	1.0135	690.69
3.400	.14	1.221	.046	2.51	21672.	.00	12712.	33843.	1.0132	690.72
3.450	.12	1.181	.044	2.39	21672.	.00	11913.	33077.	1.0129	690.74
3.500	.11	1.142	.041	2.27	21672.	.00	11163.	32359.	1.0126	690.76
3.550	.09	1.105	.039	2.16	21672.	.00	10459.	31685.	1.0123	690.78
3.600	.08	1.068	.037	2.06	21672.	.00	9800.	31054.	1.0121	690.79
3.650	.07	1.033	.036	1.96	21672.	.00	9182.	30462.	1.0119	690.80
3.700	.06	1.000	.034	1.86	21672.	.00	8602.	29907.	1.0116	690.81
3.750	.06	.967	.032	1.77	21672.	.00	8059.	29387.	1.0114	690.82
3.800	.05	.935	.031	1.68	21672.	.00	7550.	28899.	1.0112	690.83
3.850	.04	.904	.029	1.60	21672.	.00	7072.	28442.	1.0110	690.84
3.900	.04	.875	.028	1.52	21672.	.00	6625.	28014.	1.0109	690.85
3.950	.03	.846	.026	1.45	21672.	.00	6206.	27613.	1.0107	690.85
4.000	.03	.818	.025	1.38	21672.	.00	5813.	27237.	1.0106	690.85
4.050	.02	.792	.024	1.31	21672.	.00	5445.	26884.	1.0104	690.86
4.100	.02	.766	.023	1.25	21672.	.00	5100.	26554.	1.0103	690.86
4.150	.02	.741	.022	1.19	21672.	.00	4777.	26245.	1.0102	690.86
4.200	.02	.716	.021	1.13	21672.	.00	4474.	25955.	1.0101	690.87
4.250	.01	.693	.020	1.07	21672.	.00	4190.	25683.	1.0099	690.87
4.300	.01	.670	.019	1.02	21672.	.00	3925.	25429.	1.0098	690.87
4.350	.01	.648	.018	.97	21672.	.00	3676.	25190.	1.0098	690.87
4.400	.01	.627	.017	.92	21672.	.00	3443.	24967.	1.0097	690.87
4.450	.01	.606	.016	.88	21672.	.00	3224.	24758.	1.0096	690.88
4.500	.01	.561	.014	.78	21672.	.00	2768.	24321.	1.0094	690.88
4.550	.00	.484	.011	.63	21672.	.00	2067.	23651.	1.0091	690.88
4.600	.00	.395	.008	.46	21672.	.00	1384.	22997.	1.0089	690.88

AT PEAK FLOW OF 68.853 WITH TIME AT 1.50 HOURS: BEDMAT = 262.47 (TONS) = .1205 (AC-FT bulked)
TOTAL SED = 282.41 (TONS) = .1297 (AC-FT bulked)
PEAK BULKING FACTOR = 1.135481 = 264179. (PPM-w)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCETRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	57.46	.0160	.0264	21672.	
BEDMAT =	633.41	.1759	.2908	196259.	
TOTAL SEDIMENT =	690.88	.1918	.3172	210319.	1.100503

SEDIMENT TRANSPORT CAPACITY: 6.54035 AC-FT/SQ MI (bulked) = 22.2576 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .73055 INCHES = 4.8625 ACRE-FEET
PEAK DISCHARGE RATE = 175.46 CFS AT 1.500 HOURS BASIN AREA = .1248 SQ. MI.

*
*
*
COMPUTE NM HYD ID=15 HYD NO=115.00 DA=0.0019 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 3.5706 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .000904 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 2.6490 CFS UNIT VOLUME = .9962 B = 354.67 P60 = 1.8700
AREA = .000996 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 115.00

RUNOFF VOLUME = 1.58264 INCHES = .1604 ACRE-FEET
PEAK DISCHARGE RATE = 4.05 CFS AT 1.500 HOURS BASIN AREA = .0019 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=121.00 DA=0.0027 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 5.0740 CFS UNIT VOLUME = .9971 B = 526.28 P60 = 1.8700
AREA = .001285 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 3.7643 CFS UNIT VOLUME = .9979 B = 354.67 P60 = 1.8700
AREA = .001415 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 121.00

RUNOFF VOLUME = 1.58264 INCHES = .2279 ACRE-FEET
PEAK DISCHARGE RATE = 5.75 CFS AT 1.500 HOURS BASIN AREA = .0027 SQ. MI.

ADD HYD ID=15 HYD NO=121.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 121.01

RUNOFF VOLUME = 1.58251 INCHES = .3882 ACRE-FEET
PEAK DISCHARGE RATE = 9.81 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=122.00 DA=0.0009 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 3.1979 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .000810 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = .23946 CFS UNIT VOLUME = .9466 B = 354.67 P60 = 1.8700
AREA = .000090 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 122.00

RUNOFF VOLUME = 2.26606 INCHES = .1088 ACRE-FEET

PEAK DISCHARGE RATE = 2.38 CFS AT 1.500 HOURS BASIN AREA = .0009 SQ. MI.

*S ON-SITE FLOW TO POND
ADD HYD ID=15 HYD NO=122.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 122.01

RUNOFF VOLUME = 1.69431 INCHES = .4970 ACRE-FEET
PEAK DISCHARGE RATE = 12.19 CFS AT 1.500 HOURS BASIN AREA = .0055 SQ. MI.

*S TOTAL FLOW TO POND
ADD HYD ID=11 HYD NO=122.02 ID I=11 ID II=15
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 122.02

RUNOFF VOLUME = .77123 INCHES = 5.3595 ACRE-FEET
PEAK DISCHARGE RATE = 187.64 CFS AT 1.500 HOURS BASIN AREA = .1303 SQ. MI.

PUNCH HYD ID=11
*S ROUTE HYDOGRAPH THRU PARKWEST POND
ROUTE RESERVOIR ID=12 HYD NO=133.50 INFLOW ID=11 CODE=5

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0.0	0.00	5201.60
0.9	0.11	5201.84
1.4	0.25	5202.10
1.9	0.53	5202.60
2.4	0.83	5203.10
2.7	1.16	5203.60
3.1	1.51	5204.10
3.4	1.89	5204.60
3.6	2.29	5205.10
3.9	2.72	5205.60
4.1	3.17	5206.10
4.3	3.65	5206.60
4.5	4.14	5207.10
4.7	4.66	5207.60
4.9	5.20	5208.10
5.1	5.58	5208.43

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5201.60	.000	.00

.25	.00	5201.60	.000	.00
.50	.00	5201.60	.000	.00
.75	.00	5201.60	.000	.00
1.00	.00	5201.60	.000	.00
1.25	.87	5201.61	.003	.02
1.50	187.64	5203.98	1.424	3.00
1.75	61.13	5206.92	3.965	4.43
2.00	18.06	5207.50	4.555	4.66
2.25	8.41	5207.65	4.717	4.72
2.50	4.29	5207.68	4.746	4.73
2.75	2.22	5207.65	4.713	4.72
3.00	1.16	5207.59	4.650	4.70
3.25	.61	5207.51	4.571	4.67
3.50	.34	5207.43	4.484	4.63
3.75	.20	5207.34	4.394	4.60
4.00	.13	5207.26	4.303	4.56
4.25	.08	5207.17	4.211	4.53
4.50	.07	5207.08	4.119	4.49
4.75	.05	5206.99	4.028	4.45
5.00	.05	5206.89	3.938	4.42
5.25	.05	5206.80	3.848	4.38
5.50	.06	5206.71	3.759	4.34
5.75	.06	5206.62	3.671	4.31
6.00	.06	5206.53	3.583	4.27
6.25	.07	5206.44	3.497	4.24
6.50	.07	5206.35	3.411	4.20
6.75	.07	5206.26	3.326	4.17
7.00	.07	5206.17	3.242	4.13
7.25	.07	5206.09	3.158	4.09
7.50	.07	5206.00	3.076	4.06
7.75	.07	5205.90	2.994	4.02
8.00	.07	5205.81	2.912	3.99
8.25	.07	5205.72	2.832	3.95
8.50	.07	5205.64	2.752	3.91
8.75	.06	5205.54	2.673	3.87
9.00	.06	5205.45	2.595	3.81
9.25	.06	5205.36	2.518	3.76
9.50	.06	5205.28	2.442	3.71
9.75	.06	5205.19	2.367	3.65
10.00	.06	5205.10	2.293	3.60
10.25	.06	5205.01	2.221	3.57
10.50	.06	5204.92	2.149	3.53
10.75	.06	5204.83	2.077	3.49
11.00	.06	5204.75	2.007	3.46
11.25	.06	5204.66	1.937	3.42
11.50	.06	5204.57	1.867	3.38
11.75	.05	5204.48	1.799	3.33
12.00	.05	5204.39	1.732	3.28
12.25	.05	5204.31	1.666	3.22
12.50	.05	5204.22	1.601	3.17
12.75	.05	5204.14	1.537	3.12
13.00	.05	5204.05	1.474	3.06
13.25	.05	5203.96	1.413	2.99
13.50	.05	5203.88	1.353	2.92
13.75	.05	5203.79	1.294	2.85

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.05	5203.71	1.237	2.79
14.25	.05	5203.63	1.181	2.72
14.50	.05	5203.55	1.126	2.67
14.75	.05	5203.47	1.073	2.62
15.00	.05	5203.39	1.020	2.57
15.25	.05	5203.31	.968	2.53
15.50	.05	5203.23	.918	2.48
15.75	.05	5203.16	.868	2.43
16.00	.05	5203.08	.819	2.38
16.25	.04	5203.00	.772	2.30
16.50	.04	5202.93	.726	2.23
16.75	.04	5202.85	.681	2.15
17.00	.04	5202.78	.639	2.08
17.25	.04	5202.71	.597	2.01
17.50	.04	5202.65	.557	1.95
17.75	.04	5202.58	.519	1.88
18.00	.04	5202.51	.481	1.81
18.25	.04	5202.45	.445	1.75
18.50	.04	5202.39	.411	1.69
18.75	.04	5202.33	.377	1.63
19.00	.04	5202.27	.345	1.57
19.25	.04	5202.21	.314	1.51
19.50	.04	5202.16	.284	1.46
19.75	.04	5202.11	.255	1.41
20.00	.04	5202.06	.228	1.32
20.25	.04	5202.01	.202	1.23
20.50	.04	5201.97	.179	1.15
20.75	.04	5201.93	.157	1.07
21.00	.04	5201.89	.136	.99
21.25	.04	5201.85	.117	.93
21.50	.04	5201.82	.100	.82
21.75	.04	5201.79	.085	.69
22.00	.04	5201.76	.072	.59
22.25	.04	5201.73	.062	.51
22.50	.04	5201.72	.053	.43
22.75	.04	5201.70	.045	.37
23.00	.04	5201.69	.039	.32
23.25	.04	5201.67	.034	.27
23.50	.03	5201.66	.029	.24
23.75	.03	5201.65	.025	.21
24.00	.03	5201.65	.022	.18
24.25	.01	5201.64	.019	.15
24.50	.00	5201.63	.016	.13
24.75	.00	5201.63	.014	.11
25.00	.00	5201.63	.011	.09
25.25	.00	5201.62	.010	.08
25.50	.00	5201.62	.008	.07
25.75	.00	5201.62	.007	.06
26.00	.00	5201.61	.006	.05
26.25	.00	5201.61	.005	.04
26.50	.00	5201.61	.004	.03

26.75	.00	5201.61	.003	.03
27.00	.00	5201.61	.003	.02
27.25	.00	5201.61	.002	.02
27.50	.00	5201.60	.002	.02
27.75	.00	5201.60	.002	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	5201.60	.002	.01
28.25	.00	5201.60	.001	.01
28.50	.00	5201.60	.001	.01
28.75	.00	5201.60	.001	.01
29.00	.00	5201.60	.001	.01
29.25	.00	5201.60	.001	.01
29.50	.00	5201.60	.001	.00

PEAK DISCHARGE = 4.732 CFS - PEAK OCCURS AT HOUR 2.45
MAXIMUM WATER SURFACE ELEVATION = 5207.680
MAXIMUM STORAGE = 4.7466 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .77117 INCHES = 5.3591 ACRE-FEET
PEAK DISCHARGE RATE = 4.73 CFS AT 2.450 HOURS BASIN AREA = .1303 SQ. MI.

****
S ROUTE RESERVOIR OUTFALL THRU PIPE
****
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.0377
DIA=2.0 FT N=0.017

RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.10	.06	.18	.89
.21	.17	.76	1.22
.31	.31	1.78	1.45
.42	.47	3.20	1.62
.52	.65	4.99	1.76
.63	.84	7.12	1.85
.73	1.04	9.54	1.93
.83	1.24	12.20	1.97
.94	1.45	15.04	2.00
1.04	1.66	18.00	2.00
1.15	1.86	21.02	2.00
1.25	2.07	24.02	2.00
1.35	2.27	26.92	2.00
1.46	2.46	29.64	2.00

1.56	2.63	32.07	2.00
1.67	2.80	34.09	2.00
1.77	2.94	35.54	2.00
1.88	3.06	36.13	2.00
2.00	3.14	36.13	2.00

COMPUTE TRAVEL TIME ID=5 REACH NO=1 NO VS=1 L=876 FT
SLP=0.0377

TRAVEL TIME TABLE

REACH= 1.0

WATER DEPTH FEET	AVERAGE AREA SQ.FT.	FLOW RATE CFS	TRAVEL TIME HRS
.104	.062	.18	.0862
.208	.174	.76	.0553
.313	.314	1.78	.0429
.417	.475	3.20	.0361
.521	.651	4.99	.0317
.625	.839	7.12	.0287
.730	1.037	9.54	.0264
.834	1.240	12.20	.0247
.938	1.447	15.04	.0234
1.042	1.655	18.00	.0224
1.146	1.863	21.02	.0216
1.251	2.067	24.02	.0209
1.355	2.265	26.92	.0205
1.459	2.456	29.64	.0202
1.563	2.635	32.07	.0200
1.668	2.799	34.09	.0200
1.772	2.943	35.54	.0202
1.876	3.061	36.13	.0206
2.000	3.142	36.13	.0212

ROUTE ID=5 HYD NO.133.51 INFLOW ID=12 DT=0.0
PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH REACH .13

RUNOFF VOLUME = .77117 INCHES = 5.3591 ACRE-FEET
PEAK DISCHARGE RATE = 4.73 CFS AT 2.500 HOURS BASIN AREA = .1303 SQ. MI.

****

COMPUTE NM HYD ID=15 HYD NO=123.00 DA=0.0022 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 7.8171 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .001980 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = .58535 CFS UNIT VOLUME = .9808 B = 354.67 P60 = 1.8700
AREA = .000220 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.00

RUNOFF VOLUME = 2.26606 INCHES = .2659 ACRE-FEET
PEAK DISCHARGE RATE = 5.80 CFS AT 1.500 HOURS BASIN AREA = .0022 SQ. MI.

*S FLOW ENTERING STREET AT NW CORNER OF SITE
COMPUTE NM HYD ID=13 HYD NO=133.53 DA=0.0025 SQ MI
PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .130992HR TP = .133300HR K/TP RATIO = .982685 SHAPE CONSTANT, N = 3.593448
UNIT PEAK = 6.1344 CFS UNIT VOLUME = .9990 B = 327.09 P60 = 1.8700
AREA = .002500 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66636 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 3.23 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

SED WASH LOAD ID=13 K=0.17 C=0.25
P=1.0 LS=0.824
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 5.0 (TONS) WASH LOAD CONCENTRATION = 39459 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66636 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 3.23 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

* **********
ADD HYD ID=10 HYD NO=123.01 ID I=13 ID II=15
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 123.01

RUNOFF VOLUME = 1.41507 INCHES = .3547 ACRE-FEET
PEAK DISCHARGE RATE = 9.03 CFS AT 1.500 HOURS BASIN AREA = .0047 SQ. MI.

COMPUTE NM HYD ID=14 HYD NO=133.54 DA=0.0173 SQ MI
PER A=15.00 PER B=70.00 PER C=15.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .132127HR TP = .133300HR K/TP RATIO = .991200 SHAPE CONSTANT, N = 3.562053
UNIT PEAK = 42.157 CFS UNIT VOLUME = 1.001 B = 324.83 P60 = 1.8700
AREA = .017300 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

SED WASH LOAD ID=14 K=0.09 C=0.25
P=1.0 LS=0.251
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 7.0 (TONS) WASH LOAD CONCENTRATION = 8253 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

SEDIMENT TRANS ID=14 IDS=6 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
2.00	1.63	12.78
5.00	2.06	17.99
10.00	2.41	24.53
14.00	2.58	28.75
17.00	2.70	31.28
20.00	2.79	33.67
23.00	2.88	35.74

27.00 2.99 38.25
30.00 3.06 39.98
Use wash load from SED WASH LOAD command - Concentration = 8253 (PPM-w)

* * * * * * * * * * * * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.050	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.100	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.150	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.200	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.250	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.300	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.350	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.400	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.450	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.500	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.550	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.600	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.650	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.700	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.750	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.800	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.850	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.900	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
.950	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.000	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.050	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.100	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.150	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.200	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.250	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.300	.00	.000	.000	.00	8253.	.00	0.	8253.	1.0000	.00
1.350	2.05	1.642	.097	12.87	8253.	.01	17131.	25105.	1.0097	.30
1.400	8.86	2.353	.163	23.04	8253.	.12	34750.	42442.	1.0167	2.50
1.450	17.67	2.722	.204	31.82	8253.	.32	45649.	53168.	1.0212	8.08
1.500	22.19	2.857	.221	35.18	8253.	.44	49786.	57241.	1.0229	15.64
1.550	21.01	2.822	.217	34.37	8253.	.41	48653.	56126.	1.0224	22.66
1.600	17.19	2.706	.202	31.43	8253.	.31	45200.	52726.	1.0210	28.03
1.650	13.19	2.551	.185	27.89	8253.	.21	40352.	47955.	1.0190	31.76
1.700	9.80	2.401	.168	24.27	8253.	.14	36130.	43800.	1.0173	34.28
1.750	7.06	2.241	.152	20.68	8253.	.09	31577.	39319.	1.0154	35.91
1.800	4.98	2.058	.135	17.96	8253.	.05	26721.	34541.	1.0135	36.91
1.850	3.61	1.913	.121	15.57	8253.	.03	23148.	31025.	1.0121	37.56
1.900	2.80	1.793	.110	14.17	8253.	.02	20384.	28306.	1.0110	38.01
1.950	2.31	1.700	.102	13.32	8253.	.02	18335.	26290.	1.0102	38.36
2.000	1.96	1.622	.095	12.65	8253.	.01	16720.	24700.	1.0096	38.64
2.050	1.69	1.570	.091	11.87	8253.	.01	15681.	23678.	1.0092	38.87
2.100	1.48	1.520	.086	11.25	8253.	.01	14733.	22745.	1.0088	39.07
2.150	1.30	1.472	.082	10.73	8253.	.01	13837.	21864.	1.0084	39.23
2.200	1.15	1.424	.078	10.28	8253.	.01	12969.	21010.	1.0081	39.37

2.250	1.01	1.375	.074	9.88	8253.	.00	12121.	20176.	1.0078	39.48
2.300	.89	1.332	.071	9.44	8253.	.00	11390.	19457.	1.0075	39.58
2.350	.79	1.291	.068	9.00	8253.	.00	10710.	18787.	1.0072	39.67
2.400	.69	1.251	.065	8.58	8253.	.00	10069.	18158.	1.0070	39.74
2.450	.61	1.212	.062	8.19	8253.	.00	9467.	17565.	1.0067	39.80
2.500	.54	1.174	.059	7.81	8253.	.00	8901.	17008.	1.0065	39.85
2.550	.47	1.138	.056	7.45	8253.	.00	8368.	16484.	1.0063	39.90
2.600	.42	1.102	.053	7.10	8253.	.00	7866.	15991.	1.0061	39.94
2.650	.37	1.068	.051	6.78	8253.	.00	7395.	15527.	1.0060	39.97
2.700	.32	1.035	.049	6.46	8253.	.00	6951.	15091.	1.0058	40.00
2.750	.29	1.003	.046	6.16	8253.	.00	6534.	14680.	1.0056	40.02

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
2.800	.25	.972	.044	5.88	8253.	.00	6142.	14295.	1.0055	40.04
2.850	.22	.942	.042	5.61	8253.	.00	5774.	13932.	1.0053	40.06
2.900	.20	.912	.040	5.35	8253.	.00	5427.	13591.	1.0052	40.07
2.950	.17	.884	.038	5.10	8253.	.00	5101.	13270.	1.0051	40.09
3.000	.15	.857	.037	4.87	8253.	.00	4794.	12969.	1.0050	40.10
3.050	.13	.830	.035	4.64	8253.	.00	4506.	12685.	1.0048	40.11
3.100	.12	.804	.033	4.43	8253.	.00	4235.	12419.	1.0047	40.12
3.150	.10	.779	.032	4.22	8253.	.00	3980.	12168.	1.0046	40.12
3.200	.09	.755	.030	4.03	8253.	.00	3741.	11933.	1.0046	40.13
3.250	.08	.732	.029	3.84	8253.	.00	3516.	11711.	1.0045	40.14
3.300	.07	.709	.028	3.66	8253.	.00	3304.	11503.	1.0044	40.14
3.350	.06	.687	.026	3.49	8253.	.00	3105.	11307.	1.0043	40.14
3.400	.06	.666	.025	3.33	8253.	.00	2918.	11124.	1.0042	40.15
3.450	.05	.645	.024	3.18	8253.	.00	2743.	10951.	1.0042	40.15
3.500	.04	.625	.023	3.03	8253.	.00	2578.	10788.	1.0041	40.15
3.550	.04	.606	.022	2.89	8253.	.00	2422.	10635.	1.0041	40.16
3.600	.03	.587	.021	2.76	8253.	.00	2276.	10492.	1.0040	40.16
3.650	.03	.568	.020	2.63	8253.	.00	2139.	10357.	1.0039	40.16
3.700	.03	.551	.019	2.51	8253.	.00	2010.	10230.	1.0039	40.16
3.750	.02	.534	.018	2.39	8253.	.00	1889.	10111.	1.0039	40.16
3.800	.02	.517	.017	2.28	8253.	.00	1775.	9999.	1.0038	40.16
3.850	.02	.501	.016	2.18	8253.	.00	1668.	9894.	1.0038	40.16
3.900	.02	.486	.016	2.08	8253.	.00	1568.	9795.	1.0037	40.17
3.950	.01	.470	.015	1.98	8253.	.00	1473.	9702.	1.0037	40.17
4.000	.01	.456	.014	1.89	8253.	.00	1384.	9615.	1.0037	40.17
4.050	.01	.442	.014	1.80	8253.	.00	1301.	9532.	1.0036	40.17
4.100	.01	.428	.013	1.72	8253.	.00	1222.	9455.	1.0036	40.17
4.150	.01	.415	.012	1.64	8253.	.00	1149.	9383.	1.0036	40.17
4.200	.01	.402	.012	1.56	8253.	.00	1079.	9315.	1.0035	40.17
4.250	.01	.374	.011	1.41	8253.	.00	938.	9176.	1.0035	40.17
4.300	.00	.319	.008	1.11	8253.	.00	685.	8926.	1.0034	40.17
4.350	.00	.252	.006	.78	8253.	.00	430.	8676.	1.0033	40.17

AT PEAK FLOW OF 22.187 WITH TIME AT 1.50 HOURS: BEDMAT = 13.27 (TONS) = .0061 (AC-FT bulked)
TOTAL SED = 15.64 (TONS) = .0072 (AC-FT bulked)

PEAK BULKING FACTOR = 1.022912 = 57241. (PPM-w)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCETRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	6.95	.0019	.0032	8253.	
BEDMAT =	33.22	.0092	.0153	38232.	
TOTAL SEDIMENT =	40.17	.0112	.0184	45868.	1.018141

SEDIMENT TRANSPORT CAPACITY: 1.06609 AC-FT/SQ MI (bulked) = 3.6280 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDINC OFFSITE SHEET FLOW
ADD HYD ID=15 HYD NO=123.02 ID I=10 ID II=14
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.02

RUNOFF VOLUME = .82630 INCHES = .9695 ACRE-FEET
PEAK DISCHARGE RATE = 31.22 CFS AT 1.500 HOURS BASIN AREA = .0220 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=124.00 DA=0.0311 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 58.445 CFS UNIT VOLUME = .9989 B = 526.28 P60 = 1.8700
AREA = .014804 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 43.359 CFS UNIT VOLUME = 1.001 B = 354.67 P60 = 1.8700
AREA = .016296 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.00

RUNOFF VOLUME = 1.58264 INCHES = 2.6251 ACRE-FEET
PEAK DISCHARGE RATE = 66.10 CFS AT 1.500 HOURS BASIN AREA = .0311 SQ. MI.

*S UNPONDED FLOW TO INLETS AT OURAY
ADD HYD ID=15 HYD NO=124.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 124.01

RUNOFF VOLUME = 1.26928 INCHES = 3.5946 ACRE-FEET
PEAK DISCHARGE RATE = 97.32 CFS AT 1.500 HOURS BASIN AREA = .0531 SQ. MI.

*S TOTAL ONSITE FLOW TO OURAY SD
ADD HYD ID=12 HYD NO=124.02 ID I=5 ID II=15
PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 124.02

RUNOFF VOLUME = .91538 INCHES = 8.9536 ACRE-FEET
PEAK DISCHARGE RATE = 99.90 CFS AT 1.500 HOURS BASIN AREA = .1834 SQ. MI.

* **********
COMPUTE NM HYD ID=15 HYD NO=133.2 DA=0.0210 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 74.618 CFS UNIT VOLUME = .9990 B = 526.28 P60 = 1.8700
AREA = .018900 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 5.5874 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .002100 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 133.20

RUNOFF VOLUME = 2.26606 INCHES = 2.5380 ACRE-FEET
PEAK DISCHARGE RATE = 55.26 CFS AT 1.500 HOURS BASIN AREA = .0210 SQ. MI.

*S EXISTING FLOW TO OURAY SD
ADD HYD ID=14 HYD NO=133.01 ID I=15 ID II=9
PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .65129 INCHES = 10.8721 ACRE-FEET
PEAK DISCHARGE RATE = 159.70 CFS AT 1.700 HOURS BASIN AREA = .3130 SQ. MI.

*S TOTAL FLOW TO OURAY STORM DRAIN
ADD HYD ID=15 HYD NO=133.02 ID I=12 ID II=14
PRINT HYD ID=15 CODE=0

PARTIAL HYDROGRAPH 133.02

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	5.6	12.000	3.9	18.000	2.3	24.000	.6
.050	.0	6.050	5.5	12.050	3.9	18.050	2.3	24.050	.6
.100	.0	6.100	5.5	12.100	3.9	18.100	2.3	24.100	.5
.150	.0	6.150	5.6	12.150	3.9	18.150	2.3	24.150	.4
.200	.0	6.200	5.5	12.200	3.9	18.200	2.3	24.200	.3
.250	.0	6.250	5.5	12.250	3.9	18.250	2.2	24.250	.2
.300	.0	6.300	5.5	12.300	3.9	18.300	2.2	24.300	.2
.350	.0	6.350	5.5	12.350	3.8	18.350	2.2	24.350	.2
.400	.0	6.400	5.5	12.400	3.8	18.400	2.2	24.400	.2
.450	.0	6.450	5.4	12.450	3.8	18.450	2.2	24.450	.2
.500	.0	6.500	5.4	12.500	3.8	18.500	2.2	24.500	.2
.550	.0	6.550	5.4	12.550	3.8	18.550	2.2	24.550	.1
.600	.0	6.600	5.4	12.600	3.8	18.600	2.2	24.600	.1
.650	.0	6.650	5.3	12.650	3.8	18.650	2.1	24.650	.1
.700	.0	6.700	5.3	12.700	3.8	18.700	2.1	24.700	.1
.750	.0	6.750	5.3	12.750	3.7	18.750	2.1	24.750	.1
.800	.0	6.800	5.3	12.800	3.7	18.800	2.1	24.800	.1
.850	.0	6.850	5.3	12.850	3.7	18.850	2.1	24.850	.1
.900	.0	6.900	5.2	12.900	3.7	18.900	2.1	24.900	.1
.950	.0	6.950	5.2	12.950	3.7	18.950	2.1	24.950	.1
1.000	.0	7.000	5.2	13.000	3.7	19.000	2.1	25.000	.1
1.050	.0	7.050	5.2	13.050	3.7	19.050	2.0	25.050	.1
1.100	.0	7.100	5.2	13.100	3.6	19.100	2.0	25.100	.1
1.150	.3	7.150	5.1	13.150	3.6	19.150	2.0	25.150	.1
1.200	2.7	7.200	5.1	13.200	3.6	19.200	2.0	25.200	.1
1.250	10.3	7.250	5.1	13.250	3.6	19.250	2.0	25.250	.1
1.300	23.0	7.300	5.1	13.300	3.6	19.300	2.0	25.300	.1
1.350	46.8	7.350	5.1	13.350	3.6	19.350	2.0	25.350	.1
1.400	93.6	7.400	5.1	13.400	3.6	19.400	2.0	25.400	.1
1.450	149.5	7.450	5.0	13.450	3.5	19.450	2.0	25.450	.1
1.500	220.4	7.500	5.0	13.500	3.5	19.500	1.9	25.500	.1
1.550	229.6	7.550	5.0	13.550	3.5	19.550	1.9	25.550	.1
1.600	226.0	7.600	5.0	13.600	3.5	19.600	1.9	25.600	.1
1.650	217.2	7.650	5.0	13.650	3.5	19.650	1.9	25.650	.1
1.700	207.2	7.700	5.0	13.700	3.5	19.700	1.9	25.700	.1
1.750	195.9	7.750	4.9	13.750	3.5	19.750	1.9	25.750	.1
1.800	182.6	7.800	4.9	13.800	3.4	19.800	1.9	25.800	.1
1.850	167.4	7.850	4.9	13.850	3.4	19.850	1.9	25.850	.1

1.900	151.7	7.900	4.9	13.900	3.4	19.900	1.8	25.900	.1
1.950	136.1	7.950	4.9	13.950	3.4	19.950	1.8	25.950	.1
2.000	121.7	8.000	4.9	14.000	3.4	20.000	1.8	26.000	.1
2.050	107.6	8.050	4.9	14.050	3.4	20.050	1.8	26.050	.0
2.100	94.4	8.100	4.8	14.100	3.4	20.100	1.8	26.100	.0
2.150	81.5	8.150	4.8	14.150	3.3	20.150	1.7	26.150	.0
2.200	62.2	8.200	4.8	14.200	3.3	20.200	1.7	26.200	.0
2.250	54.9	8.250	4.8	14.250	3.3	20.250	1.7	26.250	.0
2.300	48.0	8.300	4.8	14.300	3.3	20.300	1.7	26.300	.0
2.350	42.2	8.350	4.8	14.350	3.3	20.350	1.7	26.350	.0
2.400	37.3	8.400	4.8	14.400	3.3	20.400	1.7	26.400	.0
2.450	33.0	8.450	4.8	14.450	3.3	20.450	1.6	26.450	.0
2.500	29.3	8.500	4.8	14.500	3.3	20.500	1.6	26.500	.0
2.550	26.5	8.550	4.7	14.550	3.2	20.550	1.6	26.550	.0
2.600	25.9	8.600	4.7	14.600	3.2	20.600	1.6	26.600	.0
2.650	25.2	8.650	4.7	14.650	3.2	20.650	1.6	26.650	.0
2.700	24.5	8.700	4.7	14.700	3.2	20.700	1.6	26.700	.0
2.750	23.2	8.750	4.7	14.750	3.2	20.750	1.5	26.750	.0
2.800	22.0	8.800	4.7	14.800	3.2	20.800	1.5	26.800	.0
2.850	20.2	8.850	4.6	14.850	3.2	20.850	1.5	26.850	.0
2.900	18.7	8.900	4.6	14.900	3.2	20.900	1.5	26.900	.0
2.950	17.6	8.950	4.6	14.950	3.1	20.950	1.5	26.950	.0
3.000	16.7	9.000	4.6	15.000	3.1	21.000	1.5	27.000	.0
3.050	16.0	9.050	4.6	15.050	3.1	21.050	1.4	27.050	.0
3.100	15.3	9.100	4.6	15.100	3.1	21.100	1.4	27.100	.0
3.150	14.8	9.150	4.6	15.150	3.1	21.150	1.4	27.150	.0
3.200	14.3	9.200	4.5	15.200	3.1	21.200	1.4	27.200	.0
3.250	13.9	9.250	4.5	15.250	3.1	21.250	1.4	27.250	.0
3.300	13.4	9.300	4.5	15.300	3.1	21.300	1.4	27.300	.0
3.350	13.0	9.350	4.5	15.350	3.1	21.350	1.4	27.350	.0
3.400	12.2	9.400	4.5	15.400	3.1	21.400	1.3	27.400	.0
3.450	11.5	9.450	4.5	15.450	3.0	21.450	1.3	27.450	.0
3.500	11.1	9.500	4.5	15.500	3.0	21.500	1.3	27.500	.0
3.550	10.7	9.550	4.4	15.550	3.0	21.550	1.3	27.550	.0
3.600	10.5	9.600	4.4	15.600	3.0	21.600	1.2	27.600	.0
3.650	10.3	9.650	4.4	15.650	3.0	21.650	1.2	27.650	.0
3.700	10.1	9.700	4.4	15.700	3.0	21.700	1.2	27.700	.0
3.750	9.9	9.750	4.4	15.750	3.0	21.750	1.1	27.750	.0
3.800	9.7	9.800	4.4	15.800	3.0	21.800	1.1	27.800	.0
3.850	9.4	9.850	4.4	15.850	3.0	21.850	1.1	27.850	.0
3.900	9.2	9.900	4.4	15.900	3.0	21.900	1.1	27.900	.0
3.950	9.0	9.950	4.3	15.950	2.9	21.950	1.1	27.950	.0
4.000	8.8	10.000	4.3	16.000	2.9	22.000	1.0	28.000	.0
4.050	8.6	10.050	4.3	16.050	2.9	22.050	1.0	28.050	.0
4.100	8.5	10.100	4.3	16.100	2.9	22.100	1.0	28.100	.0
4.150	8.2	10.150	4.3	16.150	2.9	22.150	1.0	28.150	.0
4.200	7.6	10.200	4.3	16.200	2.9	22.200	1.0	28.200	.0
4.250	7.9	10.250	4.3	16.250	2.8	22.250	1.0	28.250	.0
4.300	7.4	10.300	4.3	16.300	2.8	22.300	.9	28.300	.0
4.350	7.6	10.350	4.3	16.350	2.8	22.350	.9	28.350	.0
4.400	7.1	10.400	4.3	16.400	2.8	22.400	.9	28.400	.0
4.450	7.4	10.450	4.2	16.450	2.8	22.450	.9	28.450	.0
4.500	6.9	10.500	4.2	16.500	2.8	22.500	.9	28.500	.0
4.550	7.2	10.550	4.2	16.550	2.7	22.550	.9	28.550	.0
4.600	6.7	10.600	4.2	16.600	2.7	22.600	.8	28.600	.0

4.650	7.0	10.650	4.2	16.650	2.7	22.650	.8	28.650	.0
4.700	6.5	10.700	4.2	16.700	2.7	22.700	.8	28.700	.0
4.750	6.8	10.750	4.2	16.750	2.7	22.750	.8	28.750	.0
4.800	6.4	10.800	4.2	16.800	2.7	22.800	.8	28.800	.0
4.850	6.7	10.850	4.2	16.850	2.6	22.850	.8	28.850	.0
4.900	6.2	10.900	4.2	16.900	2.6	22.900	.8	28.900	.0
4.950	6.5	10.950	4.2	16.950	2.6	22.950	.8	28.950	.0
5.000	6.2	11.000	4.1	17.000	2.6	23.000	.8	29.000	.0
5.050	6.2	11.050	4.1	17.050	2.6	23.050	.7	29.050	.0
5.100	6.2	11.100	4.1	17.100	2.6	23.100	.7	29.100	.0
5.150	6.2	11.150	4.1	17.150	2.6	23.150	.7	29.150	.0
5.200	6.1	11.200	4.1	17.200	2.6	23.200	.7	29.200	.0
5.250	6.1	11.250	4.1	17.250	2.5	23.250	.7	29.250	.0
5.300	6.0	11.300	4.1	17.300	2.5	23.300	.7	29.300	.0
5.350	6.0	11.350	4.1	17.350	2.5	23.350	.7	29.350	.0
5.400	6.0	11.400	4.1	17.400	2.5	23.400	.7	29.400	.0
5.450	5.9	11.450	4.1	17.450	2.5	23.450	.7	29.450	.0
5.500	5.9	11.500	4.0	17.500	2.5	23.500	.7	29.500	.0
5.550	5.8	11.550	4.0	17.550	2.4	23.550	.7	29.550	.0
5.600	5.8	11.600	4.0	17.600	2.4	23.600	.6	29.600	.0
5.650	5.8	11.650	4.0	17.650	2.4	23.650	.6	29.650	.0
5.700	5.7	11.700	4.0	17.700	2.4	23.700	.6	29.700	.0
5.750	5.7	11.750	4.0	17.750	2.4	23.750	.6	29.750	.0
5.800	5.7	11.800	4.0	17.800	2.4	23.800	.6	29.800	.0
5.850	5.6	11.850	4.0	17.850	2.4	23.850	.6	29.850	.0
5.900	5.6	11.900	3.9	17.900	2.4	23.900	.6	29.900	.0
5.950	5.6	11.950	3.9	17.950	2.3	23.950	.6	29.950	.0

RUNOFF VOLUME = .74886 INCHES = 19.8258 ACRE-FEET
PEAK DISCHARGE RATE = 229.55 CFS AT 1.550 HOURS BASIN AREA = .4964 SQ. MI.

*S ROUTE FLOW THRU OURAY STORM DRAIN
****
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.0278
DIA=5.0 FT N=0.017

RATING CURVE PIPE SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	MAX WIDTH FT
.00	.00	.00	.00
.26	.39	1.74	2.22
.52	1.09	7.56	3.06
.78	1.96	17.58	3.63
1.04	2.97	31.62	4.06
1.30	4.07	49.36	4.39
1.56	5.25	70.43	4.64
1.82	6.48	94.36	4.81
2.08	7.75	120.65	4.93
2.35	9.04	148.73	4.99
2.61	10.35	178.00	5.00
2.87	11.64	207.80	5.00
3.13	12.92	237.43	5.00

3.39	14.16	266.12	5.00
3.65	15.35	292.98	5.00
3.91	16.47	317.02	5.00
4.17	17.49	337.02	5.00
4.43	18.39	351.33	5.00
4.69	19.13	357.21	5.00
5.00	19.63	357.21	5.00

COMPUTE TRAVEL TIME ID=16 REACH NO=1 NO VS=1 L=836 FT
SLP=0.0278

TRAVEL TIME TABLE

REACH= 1.0

WATER DEPTH FEET	AVERAGE AREA SQ.FT.	FLOW RATE CFS	TRAVEL TIME HRS
.261	.390	1.74	.0520
.521	1.086	7.56	.0333
.782	1.961	17.58	.0259
1.042	2.966	31.62	.0218
1.303	4.069	49.36	.0191
1.563	5.246	70.43	.0173
1.824	6.479	94.36	.0159
2.084	7.749	120.65	.0149
2.345	9.043	148.73	.0141
2.606	10.345	178.00	.0135
2.866	11.641	207.80	.0130
3.127	12.918	237.43	.0126
3.387	14.159	266.12	.0124
3.648	15.348	292.98	.0122
3.908	16.467	317.02	.0121
4.169	17.492	337.02	.0121
4.429	18.395	351.33	.0122
4.690	19.130	357.21	.0124
5.000	19.635	357.21	.0128

ROUTE ID=16 HYD NO.133.03 INFLOW ID=15 DT=0.0
PRINT HYD ID=16 CODE=1

OUTFLOW HYDROGRAPH REACH .13

RUNOFF VOLUME = .74886 INCHES = 19.8257 ACRE-FEET
PEAK DISCHARGE RATE = 235.50 CFS AT 1.550 HOURS BASIN AREA = .4964 SQ. MI.

****
****
*S START NEW SUB-BASIN NETWORK
*S SUB-BASIN 114.01 (SINGLE FAMILY RESIDENTIAL)
COMPUTE NM HYD ID=3 HYD NO=114.01 DA=0.0158 SQ MI
PER A=0.0 PER B=21.5 PER C=21.5 PER D=57.0
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420

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      UNIT PEAK =   35.556    CFS   UNIT VOLUME =    .9988       B =   526.28      P60 = 1.8700
      AREA =      .009006 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


      K =   .118429HR    TP =   .133300HR    K/TP RATIO =   .888442     SHAPE CONSTANT, N =  3.992480
      UNIT PEAK =   18.077    CFS   UNIT VOLUME =    1.001       B =   354.67      P60 = 1.8700
      AREA =      .006794 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

   PRINT HYD           ID=3 CODE=1

                                PARTIAL HYDROGRAPH   114.01


      RUNOFF VOLUME =     1.73415 INCHES     =       1.4613 ACRE-FEET
      PEAK DISCHARGE RATE =      35.36 CFS  AT   1.500 HOURS   BASIN AREA =   .0158 SQ. MI.

*                     ******************************************
*S SUB-BASIN 114.02  (PAVED PARKING AREA)
COMPUTE NM HYD        ID=4 HYD NO=114.02 DA=0.0023 SQ MI
                      PER A=0.0 PER B=5.0 PER C=5.0 PER D=90.0
                      TP=-0.1333 HR MASS RAIN=-1

   K =   .072649HR    TP =   .133300HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   8.1725    CFS   UNIT VOLUME =    .9978       B =   526.28      P60 = 1.8700
   AREA =      .002070 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


   K =   .118429HR    TP =   .133300HR    K/TP RATIO =   .888442     SHAPE CONSTANT, N =  3.992480
   UNIT PEAK =   .61196    CFS   UNIT VOLUME =    .9808       B =   354.67      P60 = 1.8700
   AREA =      .000230 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD             ID=4 CODE=1

                                PARTIAL HYDROGRAPH   114.02

   RUNOFF VOLUME =     2.26606 INCHES     =        .2780 ACRE-FEET
   PEAK DISCHARGE RATE =      6.07 CFS  AT   1.500 HOURS   BASIN AREA =   .0023 SQ. MI.

*                     ******************************************
*S STREET FLOW IN PAINTED ROCK DRIVE AT SUMP NEAR OURAY ROAD
ADD HYD               ID=1 HYD NO=114.03 ID I=3 ID II=4
PRINT HYD             ID=1 CODE=1

                                PARTIAL HYDROGRAPH   114.03
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RUNOFF VOLUME = 1.80171 INCHES = 1.7392 ACRE-FEET
PEAK DISCHARGE RATE = 41.43 CFS AT 1.500 HOURS BASIN AREA = .0181 SQ. MI.

* **********
*S SUB-BASIN 115.00 (COMMERCIAL SITE)
COMPUTE NM HYD ID=3 HYD NO=115.01 DA=0.0139 SQ MI
PER A=0.0 PER B=5.0 PER C=5.0 PER D=90.0
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 49.390 CFS UNIT VOLUME = .9989 B = 526.28 P60 = 1.8700
AREA = .012510 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 3.6983 CFS UNIT VOLUME = .9979 B = 354.67 P60 = 1.8700
AREA = .001390 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 115.01

RUNOFF VOLUME = 2.26606 INCHES = 1.6799 ACRE-FEET
PEAK DISCHARGE RATE = 36.58 CFS AT 1.500 HOURS BASIN AREA = .0139 SQ. MI.

* **********
*S SUB-BASIN 116.00 (MULTIPLE UNIT RESIDENTIAL ATTACHED)
COMPUTE NM HYD ID=4 HYD NO=116.00 DA=0.0049 SQ MI
PER A=0.0 PER B=15.0 PER C=15.0 PER D=70.0
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 13.542 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003430 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992480
UNIT PEAK = 3.9112 CFS UNIT VOLUME = .9979 B = 354.67 P60 = 1.8700
AREA = .001470 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 116.00

RUNOFF VOLUME = 1.94369 INCHES = .5079 ACRE-FEET

PEAK DISCHARGE RATE = 11.74 CFS AT 1.500 HOURS BASIN AREA = .0049 SQ. MI.

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*                ********************************************
*                ********************************************
ADD HYD          ID=2 HYD NO=116.10 ID I=3 ID II=4
PRINT HYD        ID=2 CODE=1
```

PARTIAL HYDROGRAPH 116.10

RUNOFF VOLUME = 2.18200 INCHES = 2.1878 ACRE-FEET
PEAK DISCHARGE RATE = 48.32 CFS AT 1.500 HOURS BASIN AREA = .0188 SQ. MI.

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*                ********************************************
*S TOTAL DISCHARGE TO OURAY STORM DRAIN
*                ********************************************
ADD HYD          ID=5 HYD NO=116.20 ID I=1 ID II=2
PRINT HYD        ID=5 CODE=0
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PARTIAL HYDROGRAPH 116.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.5	10.000	.5	15.000	.4	20.000	.4
.050	.0	5.050	.5	10.050	.5	15.050	.4	20.050	.4
.100	.0	5.100	.5	10.100	.5	15.100	.4	20.100	.3
.150	.0	5.150	.5	10.150	.5	15.150	.4	20.150	.3
.200	.0	5.200	.5	10.200	.5	15.200	.4	20.200	.3
.250	.0	5.250	.5	10.250	.5	15.250	.4	20.250	.3
.300	.0	5.300	.5	10.300	.5	15.300	.4	20.300	.3
.350	.0	5.350	.5	10.350	.5	15.350	.4	20.350	.3
.400	.0	5.400	.5	10.400	.5	15.400	.4	20.400	.3
.450	.0	5.450	.5	10.450	.5	15.450	.4	20.450	.3
.500	.0	5.500	.5	10.500	.5	15.500	.4	20.500	.3
.550	.0	5.550	.5	10.550	.5	15.550	.4	20.550	.3
.600	.0	5.600	.5	10.600	.5	15.600	.4	20.600	.3
.650	.0	5.650	.5	10.650	.5	15.650	.4	20.650	.3
.700	.0	5.700	.5	10.700	.5	15.700	.4	20.700	.3
.750	.0	5.750	.5	10.750	.5	15.750	.4	20.750	.3
.800	.0	5.800	.5	10.800	.5	15.800	.4	20.800	.3
.850	.0	5.850	.5	10.850	.5	15.850	.4	20.850	.3
.900	.0	5.900	.6	10.900	.5	15.900	.4	20.900	.3
.950	.0	5.950	.6	10.950	.5	15.950	.4	20.950	.3
1.000	.0	6.000	.6	11.000	.5	16.000	.4	21.000	.3
1.050	.0	6.050	.6	11.050	.5	16.050	.4	21.050	.3
1.100	.0	6.100	.6	11.100	.5	16.100	.4	21.100	.3
1.150	.2	6.150	.6	11.150	.5	16.150	.4	21.150	.3
1.200	2.1	6.200	.7	11.200	.5	16.200	.4	21.200	.3
1.250	7.8	6.250	.7	11.250	.5	16.250	.4	21.250	.3
1.300	17.4	6.300	.7	11.300	.5	16.300	.4	21.300	.3
1.350	32.1	6.350	.7	11.350	.5	16.350	.4	21.350	.3

1.400	53.8	6.400	.7	11.400	.5	16.400	.4	21.400	.3
1.450	78.5	6.450	.7	11.450	.5	16.450	.4	21.450	.3
1.500	89.7	6.500	.7	11.500	.5	16.500	.4	21.500	.3
1.550	79.0	6.550	.7	11.550	.5	16.550	.4	21.550	.3
1.600	61.5	6.600	.7	11.600	.5	16.600	.4	21.600	.3
1.650	48.5	6.650	.7	11.650	.5	16.650	.4	21.650	.3
1.700	40.2	6.700	.7	11.700	.5	16.700	.4	21.700	.3
1.750	34.6	6.750	.7	11.750	.5	16.750	.4	21.750	.3
1.800	30.5	6.800	.7	11.800	.5	16.800	.4	21.800	.3
1.850	27.1	6.850	.7	11.850	.5	16.850	.4	21.850	.3
1.900	24.4	6.900	.6	11.900	.5	16.900	.4	21.900	.3
1.950	22.0	6.950	.6	11.950	.5	16.950	.4	21.950	.3
2.000	20.0	7.000	.6	12.000	.5	17.000	.4	22.000	.3
2.050	17.9	7.050	.6	12.050	.5	17.050	.4	22.050	.3
2.100	13.9	7.100	.6	12.100	.5	17.100	.4	22.100	.3
2.150	9.8	7.150	.6	12.150	.5	17.150	.4	22.150	.3
2.200	7.3	7.200	.6	12.200	.5	17.200	.4	22.200	.3
2.250	5.8	7.250	.6	12.250	.5	17.250	.4	22.250	.3
2.300	4.8	7.300	.6	12.300	.5	17.300	.4	22.300	.3
2.350	4.1	7.350	.6	12.350	.5	17.350	.4	22.350	.3
2.400	3.6	7.400	.6	12.400	.5	17.400	.4	22.400	.3
2.450	3.1	7.450	.6	12.450	.5	17.450	.4	22.450	.3
2.500	2.7	7.500	.6	12.500	.5	17.500	.4	22.500	.3
2.550	2.4	7.550	.6	12.550	.5	17.550	.4	22.550	.3
2.600	2.1	7.600	.6	12.600	.5	17.600	.4	22.600	.3
2.650	1.9	7.650	.6	12.650	.5	17.650	.4	22.650	.3
2.700	1.7	7.700	.6	12.700	.5	17.700	.4	22.700	.3
2.750	1.5	7.750	.6	12.750	.5	17.750	.4	22.750	.3
2.800	1.3	7.800	.6	12.800	.5	17.800	.4	22.800	.3
2.850	1.2	7.850	.6	12.850	.5	17.850	.4	22.850	.3
2.900	1.1	7.900	.6	12.900	.5	17.900	.4	22.900	.3
2.950	1.0	7.950	.6	12.950	.5	17.950	.4	22.950	.3
3.000	.9	8.000	.6	13.000	.5	18.000	.4	23.000	.3
3.050	.9	8.050	.6	13.050	.5	18.050	.4	23.050	.3
3.100	.8	8.100	.6	13.100	.5	18.100	.4	23.100	.3
3.150	.7	8.150	.6	13.150	.5	18.150	.4	23.150	.3
3.200	.7	8.200	.6	13.200	.5	18.200	.4	23.200	.3
3.250	.7	8.250	.6	13.250	.5	18.250	.4	23.250	.3
3.300	.6	8.300	.6	13.300	.5	18.300	.4	23.300	.3
3.350	.6	8.350	.6	13.350	.5	18.350	.4	23.350	.3
3.400	.6	8.400	.6	13.400	.5	18.400	.4	23.400	.3
3.450	.6	8.450	.6	13.450	.5	18.450	.4	23.450	.3
3.500	.6	8.500	.6	13.500	.4	18.500	.4	23.500	.3
3.550	.5	8.550	.6	13.550	.4	18.550	.4	23.550	.3
3.600	.5	8.600	.6	13.600	.4	18.600	.4	23.600	.3
3.650	.5	8.650	.6	13.650	.5	18.650	.4	23.650	.3
3.700	.5	8.700	.6	13.700	.5	18.700	.4	23.700	.3
3.750	.5	8.750	.6	13.750	.5	18.750	.4	23.750	.3
3.800	.5	8.800	.6	13.800	.5	18.800	.4	23.800	.3
3.850	.5	8.850	.6	13.850	.4	18.850	.4	23.850	.3
3.900	.5	8.900	.6	13.900	.4	18.900	.4	23.900	.3
3.950	.5	8.950	.6	13.950	.4	18.950	.4	23.950	.3
4.000	.5	9.000	.6	14.000	.4	19.000	.4	24.000	.3
4.050	.4	9.050	.6	14.050	.4	19.050	.4	24.050	.3
4.100	.4	9.100	.6	14.100	.4	19.100	.4	24.100	.2

4.150	.4	9.150	.6	14.150	.4	19.150	.4	24.150	.1
4.200	.4	9.200	.6	14.200	.4	19.200	.4	24.200	.1
4.250	.4	9.250	.6	14.250	.4	19.250	.4	24.250	.1
4.300	.4	9.300	.6	14.300	.4	19.300	.4	24.300	.0
4.350	.4	9.350	.6	14.350	.4	19.350	.4	24.350	.0
4.400	.4	9.400	.6	14.400	.4	19.400	.4	24.400	.0
4.450	.4	9.450	.6	14.450	.4	19.450	.4	24.450	.0
4.500	.4	9.500	.6	14.500	.4	19.500	.4	24.500	.0
4.550	.4	9.550	.5	14.550	.4	19.550	.4	24.550	.0
4.600	.4	9.600	.5	14.600	.4	19.600	.4	24.600	.0
4.650	.4	9.650	.6	14.650	.4	19.650	.4	24.650	.0
4.700	.5	9.700	.5	14.700	.4	19.700	.4	24.700	.0
4.750	.5	9.750	.5	14.750	.4	19.750	.4	24.750	.0
4.800	.5	9.800	.5	14.800	.4	19.800	.4	24.800	.0
4.850	.5	9.850	.5	14.850	.4	19.850	.4	24.850	.0
4.900	.5	9.900	.5	14.900	.4	19.900	.4	24.900	.0
4.950	.5	9.950	.5	14.950	.4	19.950	.4		

RUNOFF VOLUME = 1.99546 INCHES = 3.9270 ACRE-FEET
PEAK DISCHARGE RATE = 89.74 CFS AT 1.500 HOURS BASIN AREA = .0369 SQ. MI.

```
*                  **********************************************
*                  **********************************************
*S TOTAL COMBINED FLOW IN OURAY STORM DRAIN
*                  **********************************************
ADD HYD            ID=1 HYD NO=116.30 ID I=5 ID II=16
PRINT HYD          ID=1 CODE=1
```

PARTIAL HYDROGRAPH 116.30

RUNOFF VOLUME = .83512 INCHES = 23.7528 ACRE-FEET
PEAK DISCHARGE RATE = 314.51 CFS AT 1.550 HOURS BASIN AREA = .5333 SQ. MI.

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FINISH
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NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:58:35

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =08/24/1995
INPUT FILE = our10024.dat USER NO.= DAGGETTK.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
*S	PARKWEST-100 YEAR POST DEVELOPMENT THE 24 HR STORM									
START										TIME= .00
RAINFALL TYPE= 2										RAIN24= 2.660
COMPUTE NM HYD	133.30	-	7	.03700	44.96	1.260	.63864	1.500	1.899	PER IMP= .00
COMPUTE NM HYD	133.40	-	8	.25500	118.13	7.074	.52015	1.750	.724	PER IMP= .00
*S FLOW ENTERING OURAY STORM DRAIN FROM BASINS 133.3 AND 133.4										
ADD HYD	133.01	7& 8	8	.29200	137.20	8.334	.53516	1.700	.734	
*S ROUTE BASIN 133.4 HYDOGRAPH THRU POND WEST SIDE OF UNSER										
ROUTE RESERVOIR	133.00	8	9	.29200	134.92	8.334	.53516	1.750	.722	AC-FT= .563
COMPUTE NM HYD	132.11	-	10	.00930	11.41	.317	.63937	1.500	1.916	PER IMP= .00
SED WASH LOAD	132.11	10								WASH CONC.(PPM-w) = 41928
SEDIMENT TRANSP	132.11	10	SED ID = 3		PEAK CONC.(PPM-w) = 133925					TOTAL SED.(TONS) = 54.28
COMPUTE NM HYD	133.51	-	11	.06700	95.20	2.637	.73789	1.500	2.220	PER IMP= .00
SED WASH LOAD	133.51	11								WASH CONC.(PPM-w) = 31946
SEDIMENT TRANSP	133.51	11	SED ID = 4		PEAK CONC.(PPM-w) = 276701					TOTAL SED.(TONS) = 1027.72
ADD HYD	133.50	10&11	10	.07630	106.60	2.954	.72588	1.500	2.183	
COMPUTE NM HYD	133.52	-	11	.04850	68.85	1.909	.73789	1.500	2.218	PER IMP= .00
SED WASH LOAD	133.52	11								WASH CONC.(PPM-w) = 21672
SEDIMENT TRANSP	133.52	11	SED ID = 5		PEAK CONC.(PPM-w) = 264178					TOTAL SED.(TONS) = 690.88
*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND										
ADD HYD	133.50	10&11	11	.12480	175.46	4.863	.73055	1.500	2.197	
COMPUTE NM HYD	115.00	-	15	.00190	4.05	.160	1.58264	1.500	3.333	PER IMP= 47.60
COMPUTE NM HYD	121.00	-	16	.00270	5.75	.228	1.58264	1.500	3.329	PER IMP= 47.60
ADD HYD	121.01	15&16	15	.00460	9.81	.388	1.58251	1.500	3.331	
COMPUTE NM HYD	122.00	-	16	.00090	2.38	.109	2.26606	1.500	4.137	PER IMP= 90.00
*S ON-SITE FLOW TO POND										
ADD HYD	122.01	15&16	15	.00550	12.19	.497	1.69431	1.500	3.462	
*S TOTAL FLOW TO POND										
ADD HYD	122.02	11&15	11	.13030	187.64	5.360	.77123	1.500	2.250	
*S ROUTE HYDOGRAPH THRU PARKWEST POND										
ROUTE RESERVOIR	133.50	11	12	.13030	4.73	5.359	.77117	2.450	.057	AC-FT= 4.747
*S ROUTE RESERVOIR OUTFALL THRU PIPE										
ROUTE	.13	12	5	.13030	4.73	5.359	.77117	2.500	.057	
COMPUTE NM HYD	123.00	-	15	.00220	5.80	.266	2.26606	1.500	4.120	PER IMP= 90.00
*S FLOW ENTERING STREET AT NW CORNER OF SITE										
COMPUTE NM HYD	133.53	-	13	.00250	3.23	.089	.66636	1.500	2.018	PER IMP= .00
SED WASH LOAD	133.53	13								WASH CONC.(PPM-w) = 39459
ADD HYD	123.01	13&15	10	.00470	9.03	.355	1.41507	1.500	3.002	
COMPUTE NM HYD	133.54	-	14	.01730	22.19	.615	.66636	1.500	2.004	PER IMP= .00
SED WASH LOAD	133.54	14								WASH CONC.(PPM-w) = 8253
SEDIMENT TRANSP	133.54	14	SED ID = 6		PEAK CONC.(PPM-w) = 57240					TOTAL SED.(TONS) = 40.17
*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDINC OFFSITE SHEET FLOW										
ADD HYD	123.02	10&14	15	.02200	31.22	.970	.82630	1.500	2.217	
COMPUTE NM HYD	124.00	-	16	.03110	66.10	2.625	1.58264	1.500	3.321	PER IMP= 47.60
*S UNPONDED FLOW TO INLETS AT OURAY										
ADD HYD	124.01	15&16	15	.05310	97.32	3.595	1.26928	1.500	2.864	
*S TOTAL ONSITE FLOW TO OURAY SD										
ADD HYD	124.02	5&15	12	.18340	99.90	8.954	.91538	1.500	.851	

COMPUTE NM HYD	133.20	-	15	.02100	55.26	2.538	2.26606	1.500	4.111	PER IMP= 90.00

*S EXISTING FLOW TO OURAY SD

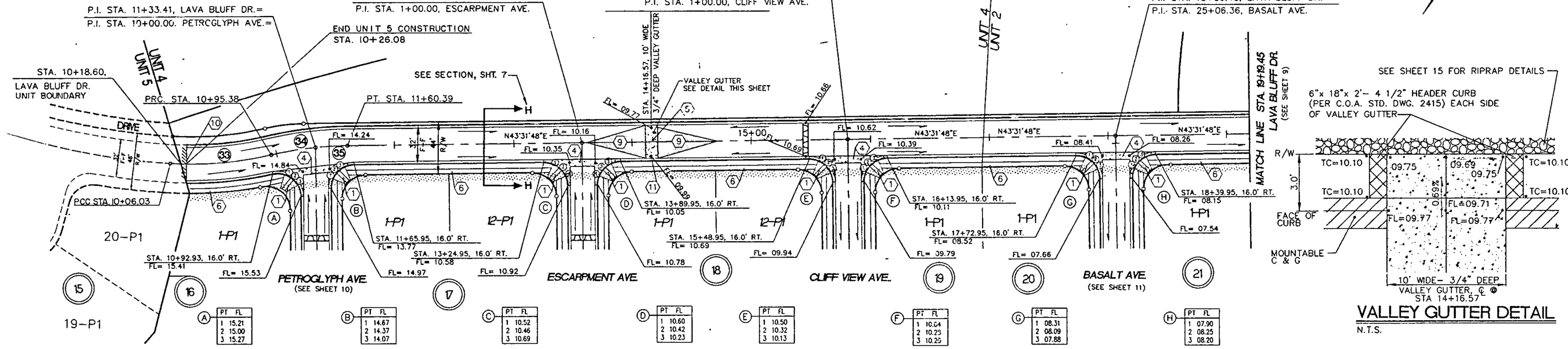
COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE - (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 2 NOTATION
ADD HYD	133.01	15& 9	14	.31300	159.70	10.872	.65129	1.700	.797	
*S TOTAL FLOW TO OURAY STORM DRAIN										
ADD HYD	133.02	12&14	15	.49640	229.55	19.826	.74886	1.550	.723	
*S ROUTE FLOW THRU OURAY STORM DRAIN										
ROUTE	.13	15	16	.49640	235.50	19.826	.74886	1.550	.741	
*S START NEW SUB-BASIN NETWORK										
*S SUB-BASIN 114.01 (SINGLE FAMILY RESIDENTIAL)										
COMPUTE NM HYD	114.01	-	3	.01580	35.36	1.461	1.73415	1.500	3.497	PER IMP= 57.00
*S SUB-BASIN 114.02 (PAVED PARKING AREA)										
COMPUTE NM HYD	114.02	-	4	.00230	6.07	.278	2.26606	1.500	4.120	PER IMP= 90.00
*S STREET FLOW IN PAINTED ROCK DRIVE AT SUMP NEAR OURAY ROAD										
ADD HYD	114.03	3& 4	1	.01810	41.43	1.739	1.80171	1.500	3.576	
*S SUB-BASIN 115.00 (COMMERCIAL SITE)										
COMPUTE NM HYD	115.01	-	3	.01390	36.58	1.680	2.26606	1.500	4.112	PER IMP= 90.00
*S SUB-BASIN 116.00 (MULTIPLE UNIT RESIDENTIAL ATTACHED)										
COMPUTE NM HYD	116.00	-	4	.00490	11.74	.508	1.94369	1.500	3.742	PER IMP= 70.00
ADD HYD	116.10	3& 4	2	.01880	48.32	2.188	2.18200	1.500	4.016	
*S TOTAL DISCHARGE TO OURAY STORM DRAIN										
ADD HYD	116.20	1& 2	5	.03690	89.74	3.927	1.99546	1.500	3.800	
*S TOTAL COMBINED FLOW IN OURAY STORM DRAIN										
ADD HYD	116.30	5&16	1	.53330	314.51	23.753	.83512	1.550	.921	
FINISH										

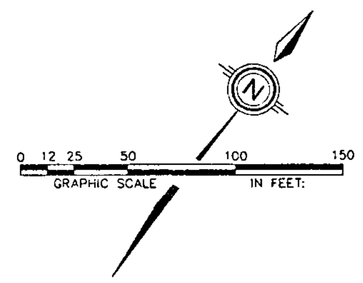
COMMUNITY SCIENCES CORPORATION – CORRALES, NEW MEXICO – (505) 897-0000

(33) ℄ CURVE DATA
R = 300.00'
L = 76.78'
Δ = 014°39'52"
CH= 76.57'
CH. BEARING= N38°26'50"E

(34) ℄ CURVE DATA
R = 300.00'
L = 38.03'
Δ = 007°15'46"
CH= 38.00'
CH. BEARING= N34°44'47"E

(35) ℄ CURVE DATA
R = 300.00'
L = 26.98'
Δ = 005°09'08"
CH= 26.97'
CH. BEARING= N40°57'14"E





SEE SHEET 15 FOR RIPRAP DETAILS

VALLEY GUTTER DETAIL
N.T.S.

LEGEND

- FL=74.11 — PROPOSED CURB FLOWLINE ELEVATION
- 73.6 — EXISTING SPOT ELEVATION (GRND & TC)
- PROPOSED VALLEY GUTTER/ SIDEWALK
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- CROWN TRANSITION
- WATER BLOCK (HIGH POINT)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED SLOPE
- FLOW ARROW

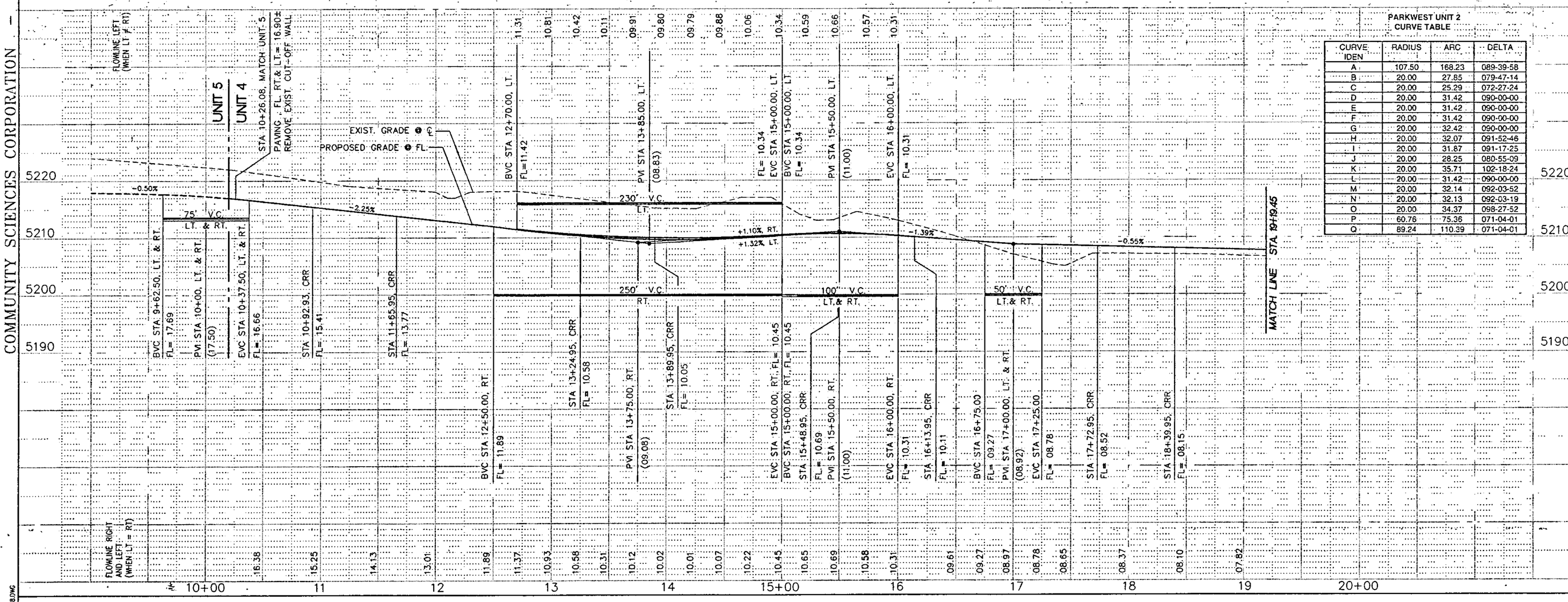
KEYNOTES:

1. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE II.
2. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE I.
3. MOUNTABLE TO STANDARD CURB TRANSITION PER COA STD. DWG. 2418
4. CONC. VALLEY GUTTER PER COA STD. DWG. 2420
5. SPECIAL CONC. VALLEY GUTTER PER C.O.A. STD. DWG. 2422
6. FUTURE 4' SIDEWALK, BY OTHERS
7. PROPOSED 4' SIDEWALK, THIS CONTRACT
8. PROPOSED 6' SIDEWALK, THIS CONTRACT
9. 50' CROWN TRANSITION PER C.O.A. STD. DWG. 2401
10. CUT-OFF WALL (FULL STREET WIDTH, 24" DEEP x 8" THICK) PER C.O.A. STD. DWG. NO. 2415
11. DEPRESS GUTTER TO MATCH VALLEY GUTTER FROM STA 14+11.57 TO STA 14+21.57

LAVA BLUFF DRIVE N.W.

MOUNTABLE CURB & GUTTER W/ RESIDENTIAL PAVING
(SEE SHEET 7 FOR STREET SECTION)

NOTE: NOT FOR CONSTRUCTION FOR GRADING AND EROSION CONTROL ONLY



PARKWEST UNIT 2 CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
A	107.50	168.23	089-39-58
B	20.00	27.85	079-47-14
C	20.00	25.29	072-27-24
D	20.00	31.42	090-00-00
E	20.00	31.42	090-00-00
F	20.00	31.42	090-00-00
G	20.00	32.42	090-00-00
H	20.00	32.07	091-52-46
I	20.00	31.87	091-17-25
J	20.00	28.25	080-55-09
K	20.00	35.71	102-18-24
L	20.00	31.42	090-00-00
M	20.00	32.14	092-03-52
N	20.00	32.13	092-03-19
O	20.00	34.37	098-27-52
P	60.76	75.36	071-04-01
Q	69.24	110.39	071-04-01

PARKWEST UNIT 4 CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
A	20.00	35.59	101-56-49
B	20.00	31.42	090-00-00
C	20.00	31.42	090-00-00
D	20.00	31.42	090-00-00
E	20.00	31.42	090-00-00
F	20.00	31.42	090-00-00
G	20.00	32.42	092-52-03
H	20.00	29.62	084-50-32
I	20.00	35.19	100-48-11
J	20.00	26.83	076-50-57
K	20.00	30.62	087-43-13
L	20.00	31.42	090-00-00
M	20.00	21.99	036-00-00

APPROVED FOR ROUGH GRADING (± 1 FT.)

CITY HYDROLOGY — 4-12-95 DATE

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING P.O. Box 1328 ENGINEERING SURVEYING Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST–UNIT 5 (OFFSITE GRADING)
GRADING & EROSION CONTROL PLAN
LAVA BLUFF DRIVE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWE	6-5-95
TRANSPORTATION	N/A RHP	6-02-95	WASTE WATER	N/A RWE	6-5-95
HYDROLOGY	[signature]	4-19-95	A.M.A.F.C.A.		
PARKS & REC.					

PROJECT NO. 4886.94 | MAP NO. G,H-9 | SHEET 8 OF 39

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY S.R.L. DATE MARCH, 1995
DRAWN BY A.M. DATE MARCH, 1995
CHECKED BY J.D.H. DATE MARCH, 1995

ENGINEER'S SEAL — [signature] 4-19-95 — Rev 5-25-95

AS BUILT INFORMATION
CONTRACTOR
WORK STARTED ON DATE
WORK ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE

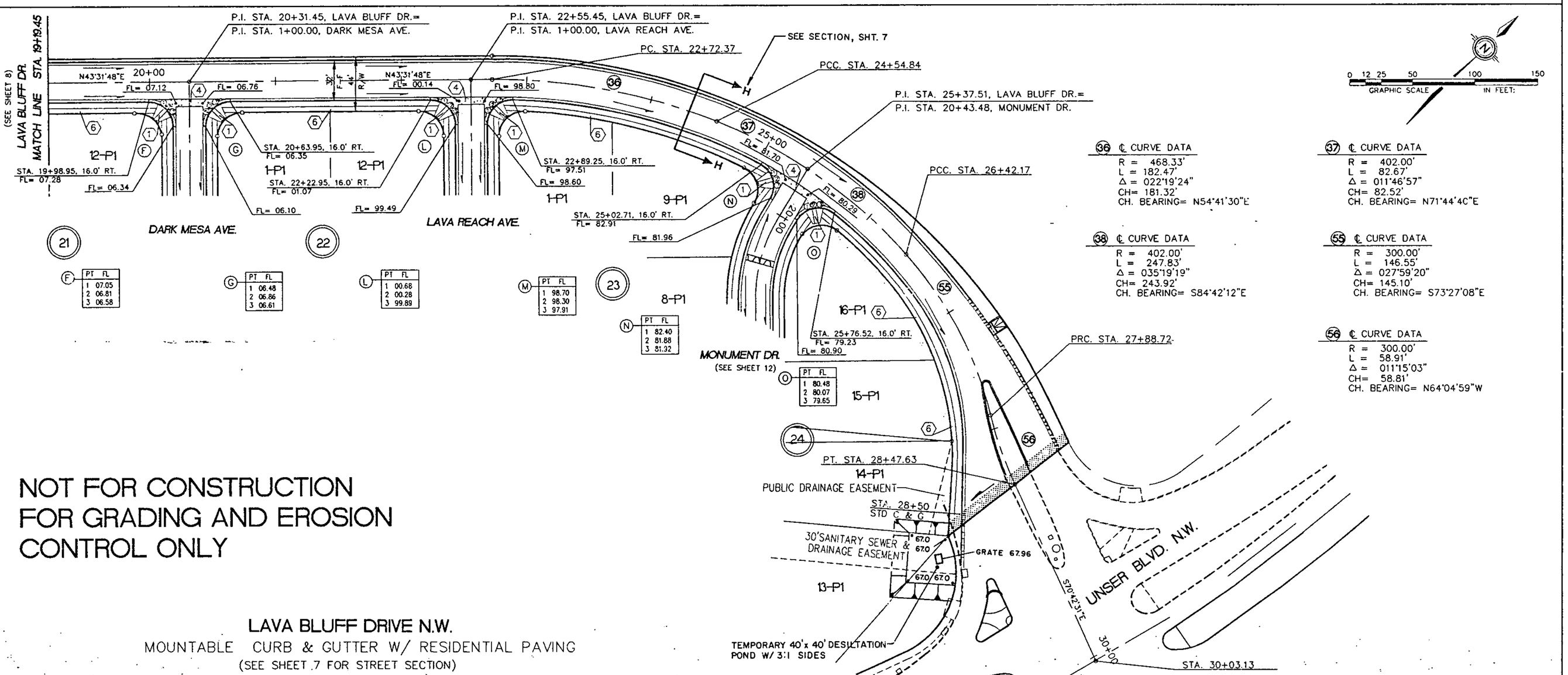
BENCH MARKS
ACS BRASS TABLET STAMPED "2-GS" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON TOP OF A VOLCANIC OUTCROP TO REACH THE STATION FROM THE INTERSECTION OF COORS RD. & QUIRAY RD. NW, GO WEST ON QUIRAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO ± 1E TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE
1 COMMUNITY SCIENCES

14326DNG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

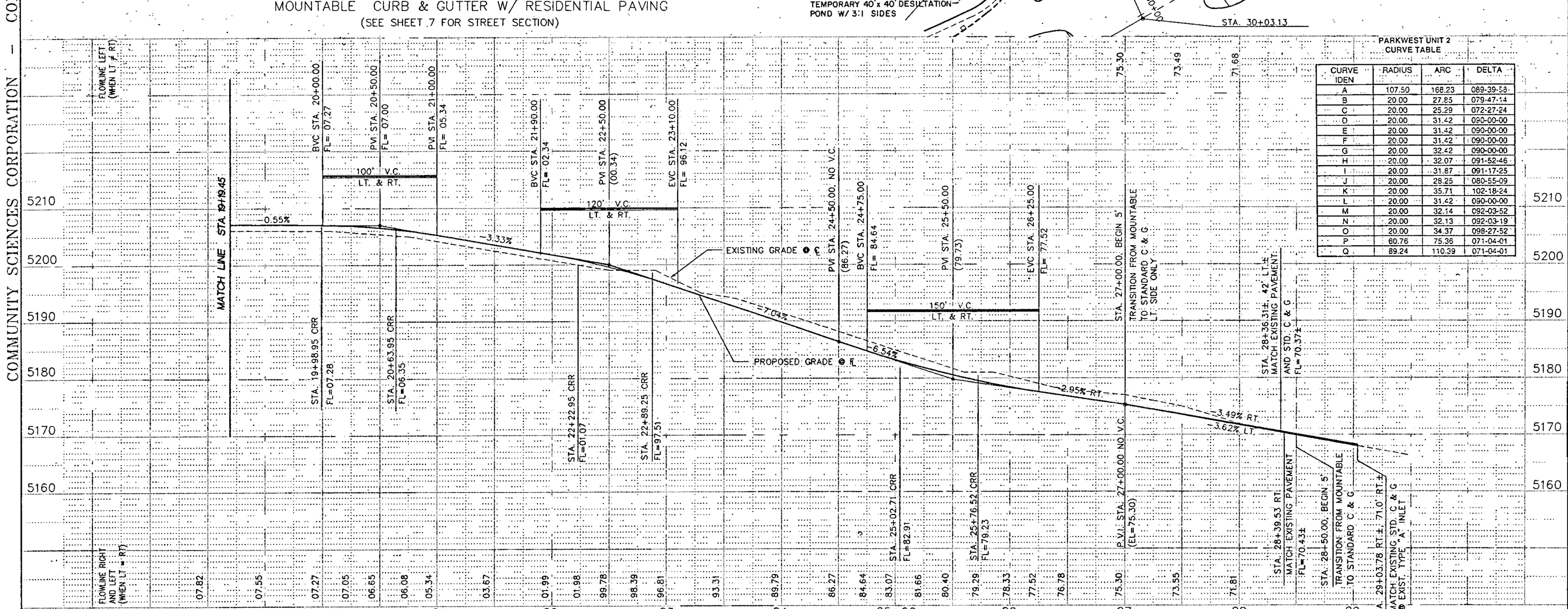


NOTE: NOT FOR CONSTRUCTION FOR GRADING AND EROSION CONTROL ONLY

LAVA BLUFF DRIVE N.W.

MOUNTABLE CURB & GUTTER W/ RESIDENTIAL PAVING

(SEE SHEET 7 FOR STREET SECTION)



PARKWEST UNIT 2
CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
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F	20.00	31.42	090-00-00
G	20.00	32.42	090-00-00
H	20.00	32.07	091-52-46
I	20.00	31.87	091-17-25
J	20.00	28.25	080-55-09
K	20.00	35.71	102-18-24
L	20.00	31.42	090-00-00
M	20.00	32.14	092-03-52
N	20.00	32.13	092-03-19
O	20.00	34.37	098-27-52
P	60.76	75.36	071-04-01
Q	89.24	110.39	071-04-01

LEGEND

- ● FL=74.11 PROPOSED CURB FLOWLINE ELEVATION
- 73.6 ● EXISTING SPOT ELEVATION (GRND & TC)
- PROPOSED VALLEY GUTTER/ SIDEWALK
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- CROWN TRANSITION
- WATER BLOCK (HIGH POINT)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED SLOPE
- FLOW ARROW

KEYNOTES:

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3. MOUNTABLE TO STANDARD CURB TRANSITION PER COA STD. DWG. 2418
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10. CUT-OFF WALL (FULL STREET WIDTH, 24" DEEP x 8" THICK) PER C.O.A. STD. DWG. NO. 2415

AS BUILT INFORMATION
CONTRACTOR
WORK INSPECTIONS — DATE
ACCEPTANCE BY — DATE
VERIFICATION BY
DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS
ACS BRASS TABLET STAMPED "2-09" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON 10th OF A VOLCANIC OUTCROP TO REACH THE STATION FROM THE INTERSECTION OF COORS RD. & OURAY RD. NW, GO WEST ON OURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN R&LT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5314.50 FEET

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

ENGINEER'S SEAL
ROBERT D. HUGHES 10174 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER
5-9-95

REVISIONS	BY	DATE
REMARKS		
DESIGN	S.R.L.	MARCH, 1995
DESIGNED BY	S.R.L.	MARCH, 1995
DRAWN BY	A.M.	MARCH, 1995
CHECKED BY	J.D.H.	MARCH, 1995

APPROVED FOR ROUGH GRADING (± 1 FT.)
CITY HYDROLOGY — 4-12-95 DATE

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

community sciences corporation
LAND PLANNING P.O. Box 1328 ENGINEERING SURVEYING Corrales, N.M. 87048

JOB NO.: 14326-041

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5 (OFFSITE GRADING)
GRADING & EROSION CONTROL PLAN
LAVA BLUFF DRIVE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWK	6-5-95
TRANSPORTATION	N/A RWK	6-02-95	WASTE WATER	N/A RWK	6-5-95
HYDROLOGY	[signature]	9-1995	A.M.A.F.C.A.		
PARKS & REC.					

PROJECT NO. 4886.94 MAP NO. C,H-9 SHEET 9 OF 39

1432653.DWG

COMMUNITY SCIENCES CORPORATION – CORRALES, NEW MEXICO – (505) 897-0000

P.I. STA. 10+00.00, PETROGLYPH AVE.=
P.I. STA. 11+33.41, LAVA BLUFF DR.

(SEE SHEET 8) LAVA BLUFF DR

FUTURE UNIT 4

FUTURE UNIT 5

39 ℄ CURVE DATA
R = 120.00'
L = 88.94'
Δ = 042°27'58"
CH= 86.92'
CH. BEARING= S67°42'11"E

40 ℄ CURVE DATA
R = 120.00'
L = 128.69'
Δ = 061°26'40"
CH= 71.31'
CH. BEARING= N60°20'30"E

41 ℄ CURVE DATA
R = 1596.20'
L = 46.90
Δ = 001°41'01"
CH= 46.90
CH. BEARING= N30°27'40"E

42 ℄ CURVE DATA
R = 1596.20'
L = 226.48'
Δ = 008°07'47"
CH= 226.29'
CH. BEARING= N35°22'04"E

43 ℄ CURVE DATA
R = 1596.20'
L = 104.81
Δ = 003°45'43"
CH= 104.79'
CH. BEARING= N41°18'49"E

PT	FL
1	14.67
2	14.37
3	14.07

PT	FL
1	15.21
2	15.00
3	15.27

PT	FL
1	11.14
2	10.88
3	10.91

PT	FL
1	08.95
2	08.68
3	08.41

PT	FL
1	00.52
2	00.39
3	00.53

PT	FL
1	99.45
2	99.81
3	00.16

PT	FL
1	95.20
2	95.00
3	95.16

PT	FL
1	94.43
2	94.71
3	94.98

M: R=35.00' L=21.99' Δ=36°00'00"

STA. 10+34.79, 12.5' LT. FL= 14.97
STA. 10+41.54, 12.5' RT. FL= 15.53
STA. 12+43.79, 12.5' RT. FL= 11.45
STA. T+32.50, 35.0' RT. FL= 10.94
STA. 1+62.00, 35.0' RT. FL= 11.09
℄ STA. 1+62.00
STA. 1+62.00, 35.0' LT. FL= 09.97
STA. 1+32.38, 35.0' LT. FL= 09.22
STA. 13+52.50, 12.5' RT. FL= 08.14
PT STA. 14+36.66
PC STA. 14+80.30
P.I. STA. 12+98.79, PETROGLYPH AVE.=
P.I. STA. 1+00.00, PETROGLYPH LOOP
PC STA. 13+47.72
STA. 16+30.16, 12.5' LT. FL= 00.67
FL= 00.64
FL= 00.51
STA. 16+55.90, 12.5' RT. BEGIN TRANSITION FROM 25' F-F
STA. 17+08.65, 14.0' RT. END TRANSITION TO 28' F-F
P.I. STA. 16+55.90, MONUMENT DR.=
P.I. STA. 5+87.00, ESCARPMENT DR.
PRC. STA. 16+08.99
STA. 19+16.64, 14.0' LT. FL= 94.15
STA. 18+52.84, 14.0' LT. FL= 95.31
STA. 16+95.57, 14.0' LT. FL= 99.10
P.I. STA. 18+82.38, MONUMENT DR.=
P.I. STA. 5+54.87, CLIFFVIEW DR.
PRC. STA. 19+87.18
SEE SECTION, SHT. 7
CLIFFVIEW AVE.
ESCARPMENT DR.
MATCH LINE BASALT AVE. STA 20+00.00
(SEE SHEET 11) BASALT AVE.
S88°56'10"E
N43°31'48"E
15+00
1-P1 2-P1 3-P1 4-P1 5-P1 6-P1 7-P1 8-P1 9-P1 10-P1 11-P1 12-P1 13-P1 14-P1 15-P1 16-P1 19-P1 20-P1

NOTE: NOT FOR CONSTRUCTION FOR GRADING AND EROSION CONTROL ONLY

PETROGLYPH AVENUE AND MONUMENT DRIVE N.W.
MOUNTABLE & STANDARD CURB & GUTTER W/ RESIDENTIAL PAVING
(SEE SHEET 7 FOR STREET SECTION)

GRAPHIC SCALE 0 12 25 50 100 150 IN FEET

LEGEND

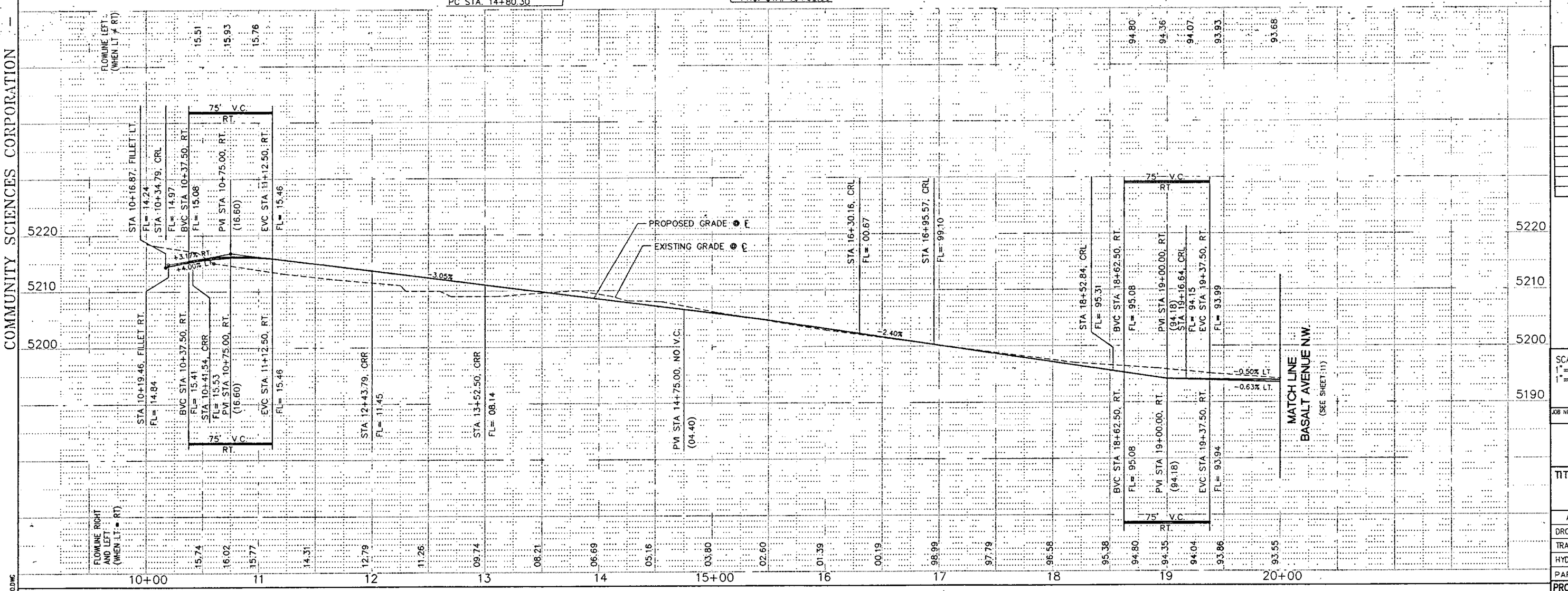
- ● FL=74.11 PROPOSED CURB FLOWLINE ELEVATION
- 73.6 ● EXISTING SPOT ELEVATION (GRND & TC)
- PROPOSED VALLEY GUTTER/ SIDEWALK
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- CROWN TRANSITION
- WATER BLOCK (HIGH POINT)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED SLOPE
- "FLOW" ARROW

KEYNOTES:

1. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE II.
2. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE I.
3. MOUNTABLE TO STANDARD CURB TRANSITION PER COA STD. DWG. 2418
4. CONC. VALLEY GUTTER PER COA STD. DWG. 2420
5. SPECIAL CONC. VALLEY GUTTER PER C.O.A. STD. DWG. 2422
6. FUTURE 4' SIDEWALK, BY OTHERS
7. PROPOSED 4' SIDEWALK, THIS CONTRACT
8. PROPOSED 6' SIDEWALK, THIS CONTRACT
9. 50' CROWN TRANSITION PER C.O.A. STD. DWG. 2401
10. CUT-OFF WALL (FULL STREET WIDTH, 24" DEEP x 8" THICK) PER C.O.A. STD. DWG. NO. 2415
11. CONC. VALLEY GUTTER PER COA STD. DWG. 2421

PARKWEST UNIT 4 CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
A	20.00	35.59	101-56-49
B	20.00	31.42	090-00-00
C	20.00	31.42	090-00-00
D	20.00	31.42	090-00-00
E	20.00	31.42	090-00-00
F	20.00	31.42	090-00-00
G	20.00	32.42	092-52-03
H	20.00	29.62	084-50-32
I	20.00	35.19	100-48-11
J	20.00	26.83	076-50-57
K	20.00	30.62	087-43-13
L	20.00	31.42	090-00-00
M	20.00	21.99	036-00-00



SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

BENCH MARKS

ACS BRASS TABLET STAMPED "2-G9" 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. & QUARAY RD. NW, GO WEST ON QUARAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.

SLD 1929 ELEVATION = 5334.50 FEET

AS BUILT INFORMATION

CONTRACTOR

		DATE
MARK BY		
INSPECTORS		
FIELD CHANGES BY		DATE
VERIFICATION BY		
SURVEYING		
CORRECTED BY		DATE

MICRO-FILM INFORMATION

RECORDED BY DATE

NO.

ENGINEER'S SEAL

RONALD D. HUBBELL NEW MEXICO 11014 REGISTERED PROFESSIONAL ENGINEER

Rev 5-25-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY S.R.L. DATE MARCH, 1995
DRAWN BY A.M. DATE MARCH, 1995
CHECKED BY J.D.H. DATE MARCH, 1995

APPROVED FOR ROUGH GRADING (± 1 FT.)

CITY HYDROLOGY 4-12-95 DATE

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5 (OFFSITE GRADING)
GRADING & EROSION CONTROL PLAN
PETROGLYPH AVE. & MONUMENT DRIVE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	WIA RWK	6-5-95
TRANSPORTATION	WIA DAO	6-02-95	WASTE WATER	WIA RWK	6-5-95
HYDROLOGY	[signature]	9-19-95	A.M.A.F.C.A.		
PARKS & REC.					

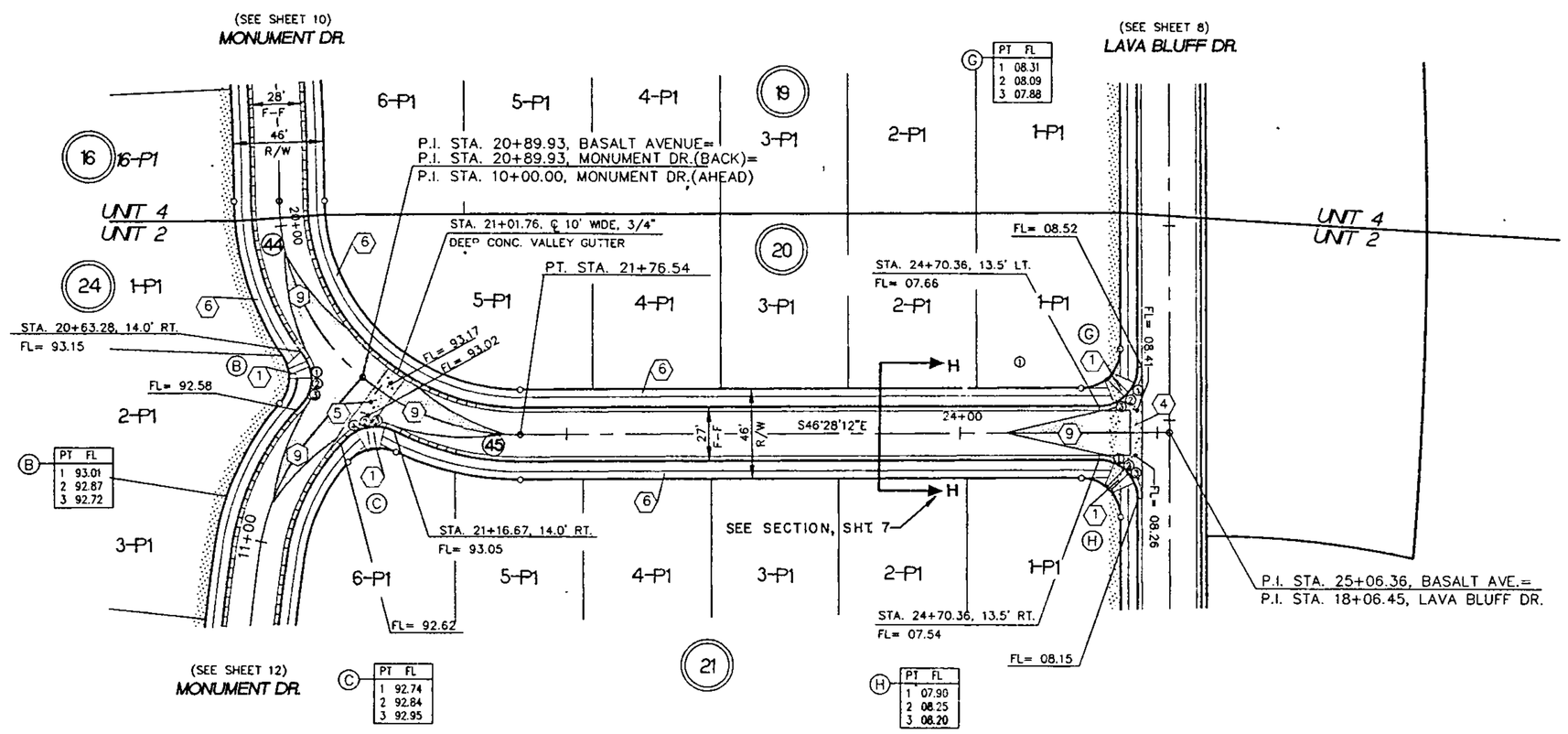
PROJECT NO. 4886.94 MAP NO. G,H-9 SHEET 10 OF 39

14326C1D.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

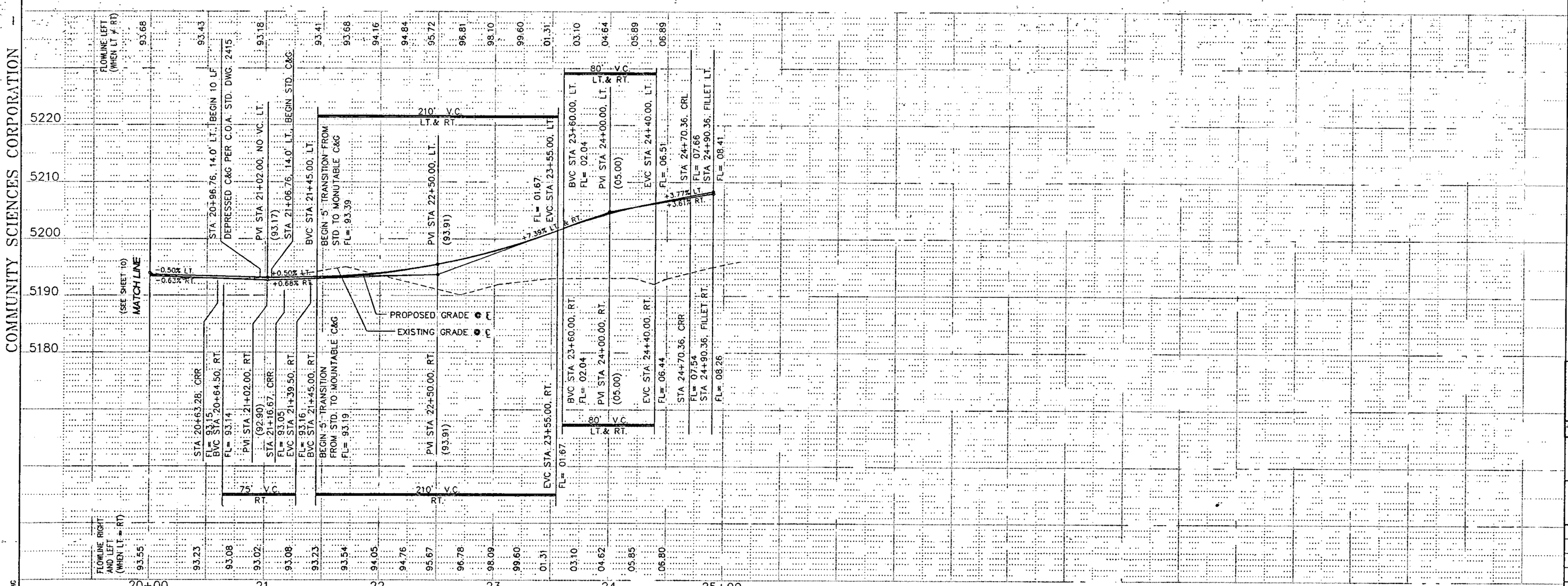
(44) ℄ CURVE DATA
R = 121.00'
L = 102.74'
Δ = 048°39'03"
CH= 99.68'
CH. BEARING= N18°52'09"E

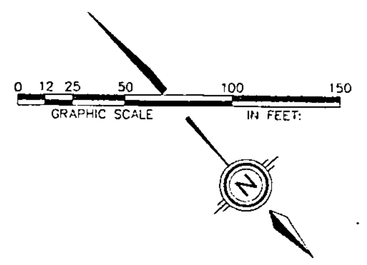
(45) ℄ CURVE DATA
R = 121.00'
L = 86.61'
Δ = 041°00'50"
CH= 84.78'
CH. BEARING= S25°57'47"E



BASALT AVENUE N.W.

MOUNTABLE CURB & GUTTER W/ RESIDENTIAL PAVING
(SEE SHEET 7 FOR STREET SECTION)





NOTE: NOT FOR CONSTRUCTION FOR GRADING AND EROSION CONTROL ONLY

LEGEND

- ● FL=74.11 — PROPOSED CURB FLOWLINE ELEVATION
- 73.6 ● — EXISTING SPOT ELEVATION (GRND & TC)
- PROPOSED VALLEY GUTTER/ SIDEWALK
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- CROWN TRANSITION

KEYNOTES:

1. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE II.
2. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE I.
3. MOUNTABLE TO STANDARD CURB TRANSITION PER COA STD. DWG. 2418
4. CONC. VALLEY GUTTER PER COA STD. DWG. 2420
5. SPECIAL CONC. VALLEY GUTTER PER C.O.A. STD. DWG. 2422
6. FUTURE 4' SIDEWALK, BY OTHERS
7. PROPOSED 4' SIDEWALK, THIS CONTRACT
8. PROPOSED 6' SIDEWALK, THIS CONTRACT
9. 50' CROWN TRANSITION PER C.O.A. STD. DWG. 2401
10. CUT-OFF WALL (FULL STREET WIDTH, 24" DEEP x 8" THICK) PER C.O.A. STD. DWG. NO. 2415

PARKWEST UNIT 2 CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
A	107.50	168.23	089-39-58
B	20.00	27.85	079-47-14
C	20.00	25.29	072-27-24
D	20.00	31.42	090-00-00
E	20.00	31.42	090-00-00
F	20.00	31.42	090-00-00
G	20.00	32.42	090-00-00
H	20.00	32.07	091-52-46
I	20.00	31.87	091-17-25
J	20.00	28.25	080-55-09
K	20.00	35.71	102-16-24
L	20.00	31.42	090-00-00
M	20.00	32.14	092-03-52
N	20.00	32.13	092-03-19
O	20.00	34.37	098-27-52
P	60.76	75.36	071-04-01
Q	89.24	110.39	071-04-01

APPROVED FOR ROUGH GRADING (± 1 FT.)
CITY HYDROLOGY — DATE 4-12-96

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5 (OFFSITE GRADING)
GRADING & EROSION CONTROL PLAN
BASALT AVENUE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWK	6-5-95
TRANSPORTATION	N/A EHP	6-02-95	WASTE WATER	N/A RWK	6-5-95
HYDROLOGY	J Curtin	9-19-95	A.M.A.F.C.A.		
PARKS & REC.					

PROJECT NO. 4886.94 | MAP NO. G,H-9 | SHEET 11 OF 39

AS BUILT INFORMATION
CONTRACTOR
WORK STARTED — DATE
STREET LIGHTS ACCEPTANCE BY — DATE
VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE

BENCH MARKS
ACS BRASS TABLET 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. & OURAY RD. NW, GO WEST ON OURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

MICRO-FILM INFORMATION
RECORDED BY — DATE
NO

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

ENGINEER'S SEAL
Ra 5-25-95
7-14-95

NO.	DATE	REMARKS
		REVISIONS
		DESIGN
		DESIGNED BY S.R.L. DATE MARCH, 1995
		DRAWN BY A.M. DATE MARCH, 1995
		CHECKED BY J.D.H. DATE MARCH, 1995

14326D1.DWG

COMMUNITY SCIENCES CORPORATION - (505) 897-0000 - CORRALES, NEW MEXICO

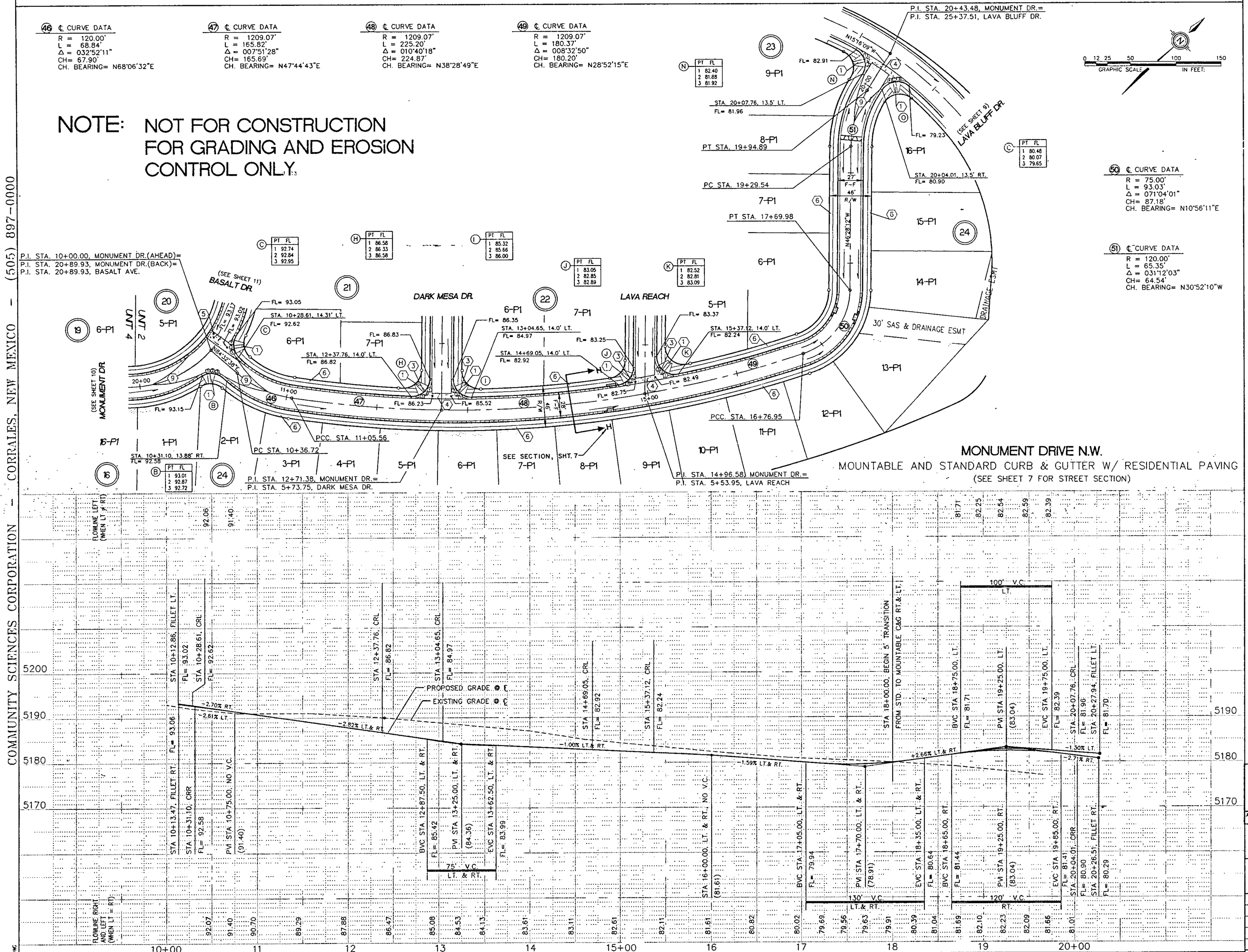
(46) ℄ CURVE DATA
R = 120.00'
L = 68.84'
Δ = 032°52'11"
CH= 67.90'
CH. BEARING= N68°06'32"E

(47) ℄ CURVE DATA
R = 1209.07'
L = 165.82'
Δ = 007°51'28"
CH= 165.69'
CH. BEARING= N47°44'43"E

(48) ℄ CURVE DATA
R = 1209.07'
L = 225.20'
Δ = 010°40'18"
CH= 224.87'
CH. BEARING= N38°28'49"E

(49) ℄ CURVE DATA
R = 1209.07'
L = 180.37'
Δ = 008°32'50"
CH= 180.20'
CH. BEARING= N28°52'15"E

NOTE: NOT FOR CONSTRUCTION FOR GRADING AND EROSION CONTROL ONLY.



MONUMENT DRIVE N.W.
MOUNTABLE AND STANDARD CURB & GUTTER W/ RESIDENTIAL PAVING
(SEE SHEET 7 FOR STREET SECTION)

GRAPHIC SCALE: 0 12 25 50 100 150 IN FEET

LEGEND
- FL=74.11 — PROPOSED CURB FLOWLINE ELEVATION
- 73.6 — EXISTING SPOT ELEVATION (GRND & TC)
- PROPOSED VALLEY GUTTER/ SIDEWALK
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- CROWN TRANSITION
- WATER BLOCK (HIGH POINT)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED SLOPE
- FLOW ARROW

(50) ℄ CURVE DATA
R = 75.00'
L = 93.03'
Δ = 071°04'01"
CH= 87.18'
CH. BEARING= N10°56'11"E

(51) ℄ CURVE DATA
R = 120.00'
L = 65.35'
Δ = 031°12'03"
CH= 64.54'
CH. BEARING= N30°52'10"W

KEYNOTES:
1. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE II.
2. WHEELCHAIR RAMP PER COA STD. DWG. 2441 CASE I.
3. MOUNTABLE TO STANDARD CURB TRANSITION PER COA STD. DWG. 2418
4. CONC. VALLEY GUTTER PER COA STD. DWG. 2420
5. SPECIAL CONC. VALLEY GUTTER PER C.O.A. STD. DWG. 2422
6. FUTURE 4' SIDEWALK, BY OTHERS
7. PROPOSED 4' SIDEWALK, THIS CONTRACT
8. PROPOSED 6' SIDEWALK, THIS CONTRACT
9. 50' CROWN TRANSITION PER C.O.A. STD. DWG. 2401
10. CUT-OFF WALL (FULL STREET WIDTH, 24" DEEP x 8" THICK) PER C.O.A. STD. DWG. NO. 2415

PARKWEST UNIT 2 CURVE TABLE

CURVE IDEN	RADIUS	ARC	DELTA
A	107.50	168.23	089-39-58
B	20.00	27.85	079-47-14
C	20.00	25.29	072-27-24
D	20.00	31.42	090-00-00
E	20.00	31.42	090-00-00
F	20.00	31.42	090-00-00
G	20.00	32.42	090-00-00
H	20.00	32.07	091-52-46
I	20.00	31.87	091-17-25
J	20.00	28.25	080-55-09
K	20.00	35.71	102-18-24
L	20.00	31.42	090-00-00
M	20.00	32.14	092-03-52
N	20.00	32.13	092-03-19
O	20.00	34.37	098-27-52
P	60.76	75.36	071-04-01
Q	89.24	110.39	071-04-01

APPROVED FOR ROUGH GRADING (± 1 FT.)

CITY HYDROLOGY — DATE 4-12-95

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING P.O. Box 1328 ENGINEERING SURVEYING Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5 (OFFSITE GRADING)
GRADING & EROSION CONTROL PLAN
MONUMENT DRIVE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER —	N/A RWL	6-5-95
TRANSPORTATION	N/A RHD	6-02-95	WASTE WATER	N/A RWL	6-5-95
HYDROLOGY	[signature]	4-19-95	A.M.A.F.C.A.		
PARKS & REC.					

PROJECT NO. 4886.94 MAP NO. G,H-9 SHEET 12 OF 39

AS BUILT INFORMATION
CONTRACTOR — DATE
WORK STAKE BY — DATE
ADDITIONS OR CHANGES BY — DATE
FIELD VERIFICATION BY — DATE
DRAWING CORRECTED BY — DATE

MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS
ACS BRASS TABLET STAMPED "2-G9" 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. & OURAY RD. NW, GO WEST ON OURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

ENGINEER'S SEAL
D. HUGHES 10104 REGISTERED PROFESSIONAL ENGINEER STATE OF NEW MEXICO
[signature] 4-25-95

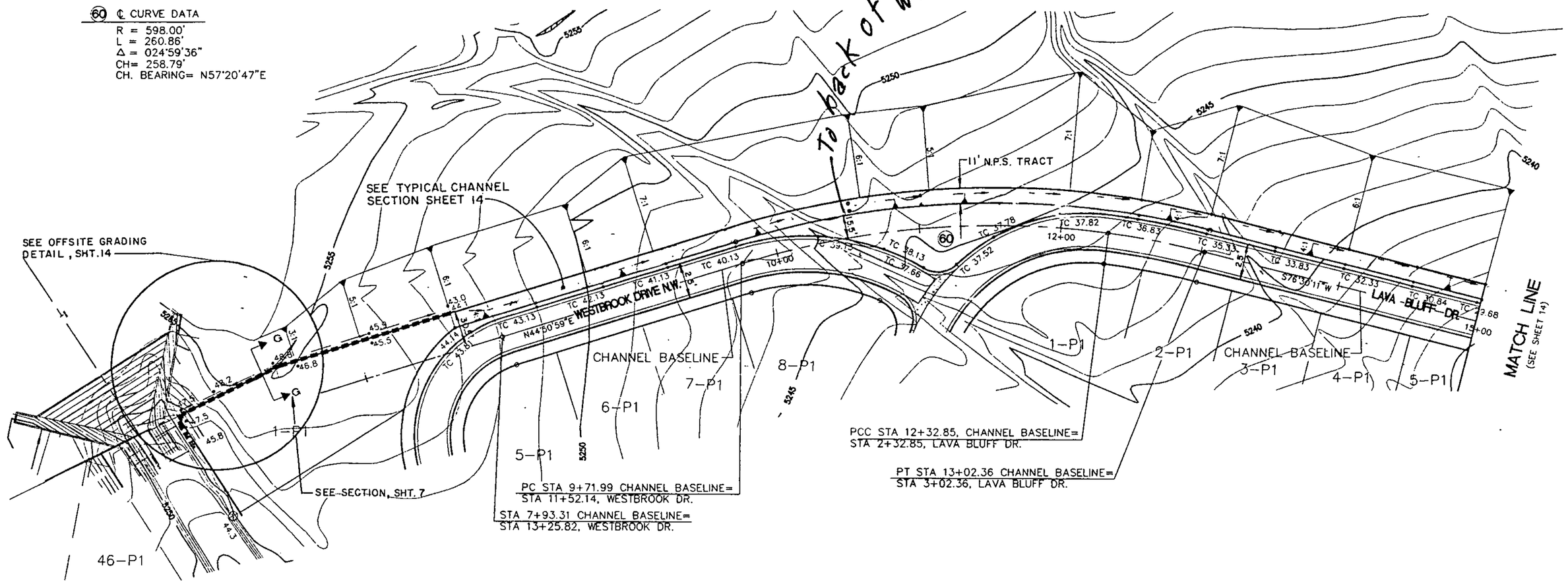
NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

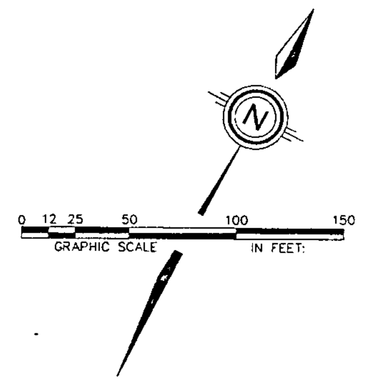
DESIGNED BY S.R.L. DATE MARCH, 1995
DRAWN BY A.M. DATE MARCH, 1995
CHECKED BY J.D.H. DATE MARCH, 1995

14326C12.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

℄ CURVE DATA
R = 598.00'
L = 260.86'
Δ = 024°59'36"
CH= 258.79'
CH. BEARING= N57°20'47"E



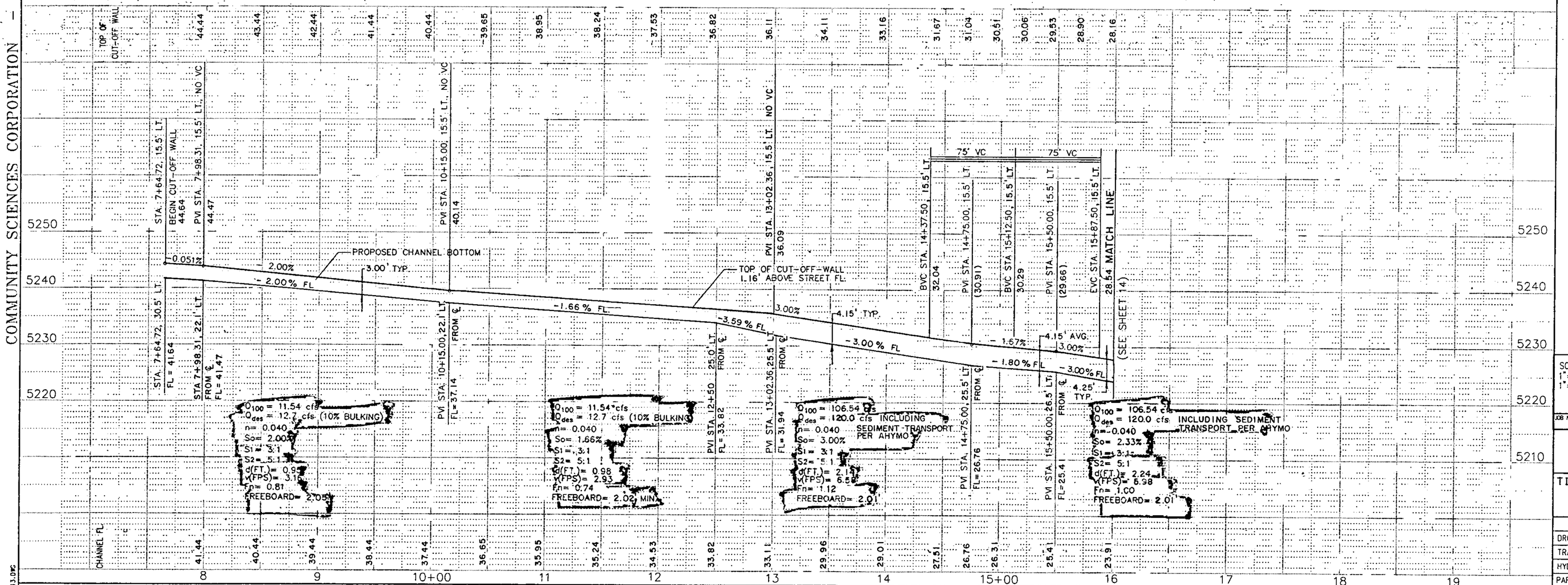


LEGEND

- TC 98.43 — PROPOSED TOP OF CURB ELEVATION
- 99.0 — PROPOSED SPOT ELEVATION
- 09.0 ⊕ — EXISTING SPOT ELEVATION (GRND & TC)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED CONCRETE VALLEY GUTTER
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- 4973 — EXISTING CONTOUR W/ INDEX ELEVATION
- PROPOSED SLOPE
- DRAINAGE BASIN DIVIDE
- UNIT BOUNDARY
- SWALE
- FLOW ARROW
- PROPOSED RETAINING WALL
- 30" SD — EXISTING STORM DRAIN
- 30" SD — PROPOSED STORM DRAIN
- WATER BLOCK (HIGH POINT)

CHANNEL ALONG WESTBROOK DR. AND LAVA BLUFF DR.

(SEE SHEET 14 FOR TYPICAL CROSS SECTION)



1432613.DWG

APPROVED FOR ROUGH GRADING (± 1 FT.)

CITY HYDROLOGIST — DATE 4-12-95

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING P.O. Box 1328 ENGINEERING SURVEYING Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5
CHANNEL PLAN & PROFILE
GRADING AND EROSION CONTROL PLAN

APPROVALS	ENGINEER	DATE
DRC CHAIRMAN		
TRANSPORTATION	N/A	
HYDROLOGY		9-19-95
PARKS & REC.		

APPROVALS	ENGINEER	DATE
WATER	N/A	6-5-95
WASTE WATER	N/A	6-5-95
A.M.A.F.C.A.		

PROJECT NO. 4886.94 | MAP NO. G,H-9 | SHEET 13 OF 39

DESIGNED BY S.R.L. DATE MARCH, 1995
DRAWN BY A.N. DATE MARCH, 1995
CHECKED BY J.D.U.H. DATE MARCH, 1995

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
1	9-6-95	General Revisions	DJW

ENGINEER'S SEAL
Rev. 5-25-95 4-14-95

AS BUILT INFORMATION

CONTRACTOR	
WORK	DATE
SURVEY BY	
THOMPSON'S	
ACCEPTANCE BY	DATE
CITY	
VERIFICATION BY	DATE
DRAWINGS	
CORRECTED BY	DATE

MICRO-FILM INFORMATION

DATE	
RECORDED BY	
NO.	

BENCH MARKS

ACS BRASS TABLET 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. & CURRY RD., NW, GO WEST ON CURRY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.

SLD 1929 ELEVATION = 5334.50 FEET

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

COMMUNITY SCIENCES CORPORATION - (505) 897-0000 - CORRALES, NEW MEXICO

(28) ℄ CURVE DATA
R = 674.13'
L = 48.04'
Δ = 004°04'59"
CH = 48.03'
CH-BEARING = S78°32'41"W

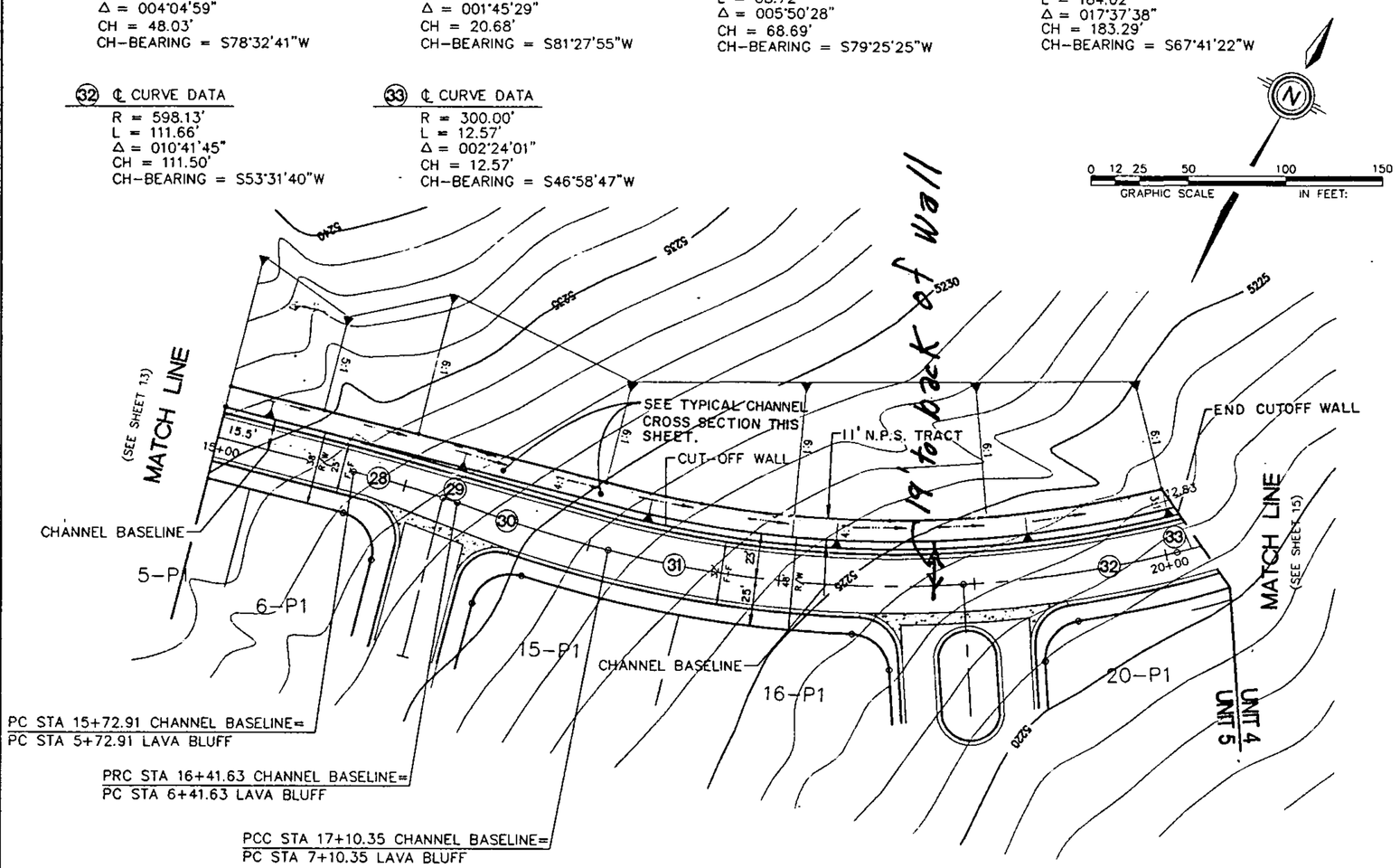
(29) ℄ CURVE DATA
R = 674.13'
L = 20.68'
Δ = 001°45'29"
CH = 20.68'
CH-BEARING = S81°27'55"W

(30) ℄ CURVE DATA
R = 674.13'
L = 68.72'
Δ = 005°50'28"
CH = 68.69'
CH-BEARING = S79°25'25"W

(31) ℄ CURVE DATA
R = 598.13'
L = 184.02'
Δ = 017°37'38"
CH = 183.29'
CH-BEARING = S67°41'22"W

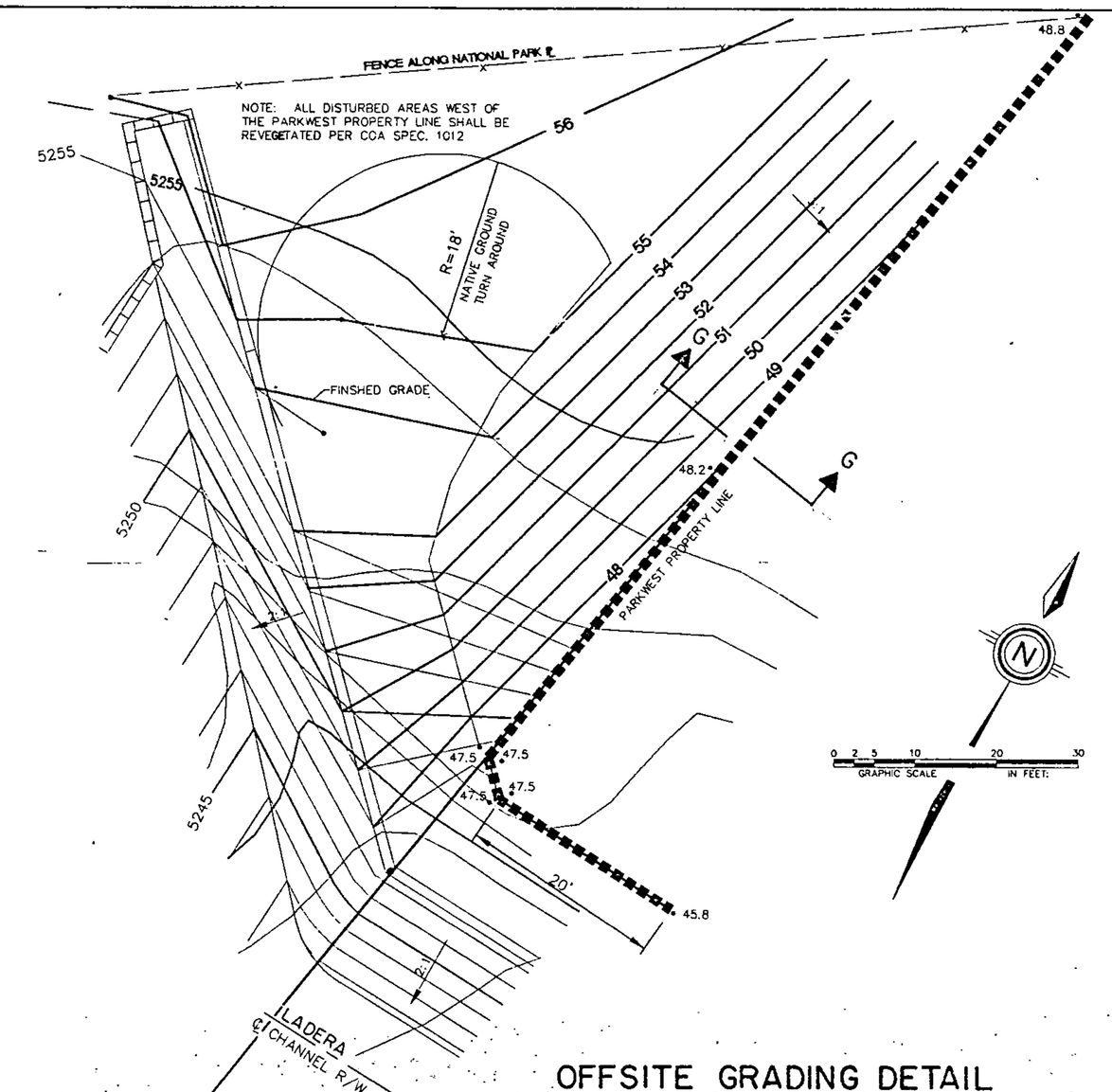
(32) ℄ CURVE DATA
R = 598.13'
L = 111.66'
Δ = 010°41'45"
CH = 111.50'
CH-BEARING = S53°31'40"W

(33) ℄ CURVE DATA
R = 300.00'
L = 12.57'
Δ = 002°24'01"
CH = 12.57'
CH-BEARING = S46°58'47"W



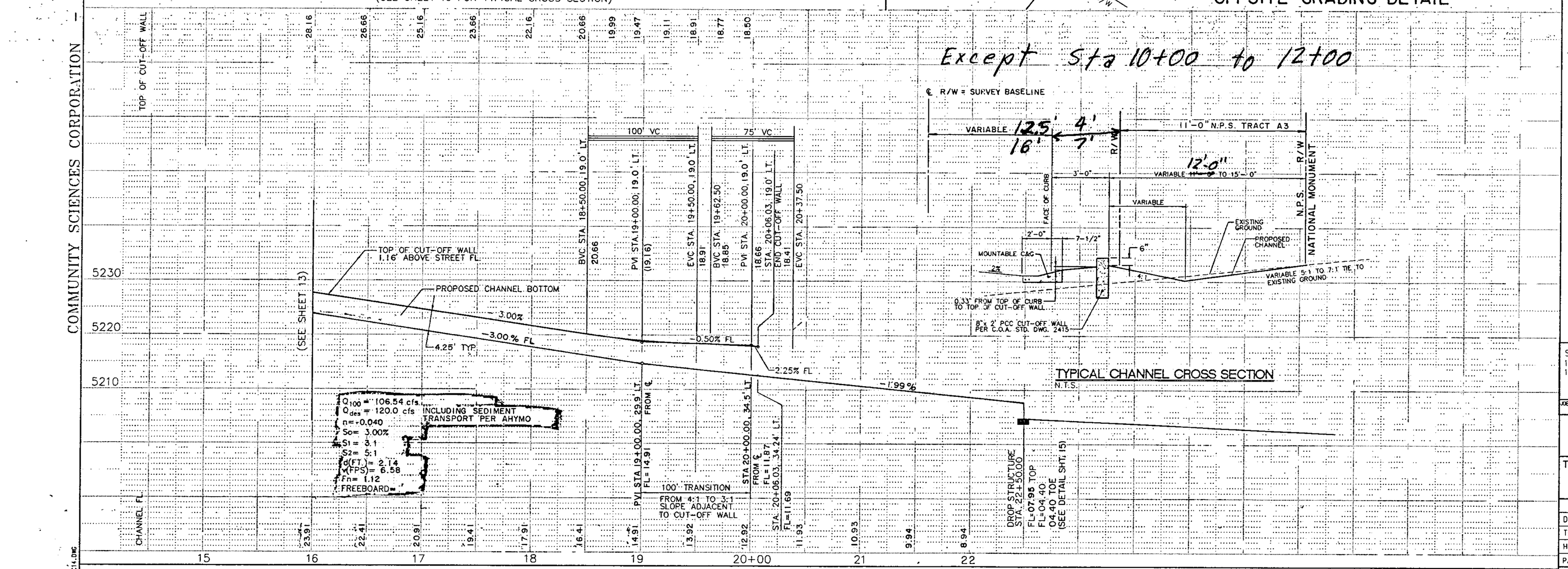
CHANNEL ALONG WESTBROOK DR. AND LAVA BLUFF DR.

(SEE SHEET 16 FOR TYPICAL CROSS SECTION)



OFFSITE GRADING DETAIL

Except Sta 10+00 to 12+00



TYPICAL CHANNEL CROSS SECTION

N.T.S.

LEGEND

- • TC 98.43 PROPOSED TOP OF CURB ELEVATION
- • 99.0 PROPOSED SPOT ELEVATION
- 09.0 ⊗ EXISTING SPOT ELEVATION (GRND & TC)
- TEMPORARY EROSION CONTROL BERM
- PROPOSED CONCRETE VALLEY GUTTER
- EXISTING CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- PROPOSED STANDARD CURB & GUTTER
- 4973 EXISTING CONTOUR W/ INDEX ELEVATION
- PROPOSED SLOPE
- DRAINAGE BASIN DIVIDE
- UNIT BOUNDARY
- SWALE
- FLOW ARROW
- PROPOSED RETAINING WALL
- 30" SD EXISTING STORM DRAIN
- 30" SD PROPOSED STORM DRAIN
- WATER BLOCK (HIGH POINT)
- CUT-OFF WALL

APPROVED FOR ROUGH GRADING (± 1 FT.)

J. Austin CITY HYDROLOGY 4-12-95 DATE

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

JOB NO.: 14326-041

community sciences corporation
LAND PLANNING P.O. Box 1328 ENGINEERING SURVEYING Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST-UNIT 5
CHANNEL PLAN & PROFILE
GRADING AND EROSION CONTROL PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWL	6-5-95
TRANSPORTATION	N/A RHD	6-02-95	WASTE WATER	N/A RWL	6-5-95
HYDROLOGY			A.M.A.F.C.A.		
PARKS & REC.					

PROJECT NO. 4886.94 MAP NO. G,H-9 SHEET 14 OF 39

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

BENCH MARKS
AGS BRASS TABLET 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. & DURAY RD. NW, GO WEST ON DURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.

AS BUILT INFORMATION
CONTRACTOR
WORK BY DATE
INSPECTOR'S FIELD NOTES BY DATE
VERIFICATION BY DATE
CORRECTED BY DATE
RECORDED BY DATE
NO.

MICRO-FILM INFORMATION

SLD 1929 ELEVATION = 5334.50 FEET

ENGINEER'S SEAL
Rev 5-25-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	DATE MARCH, 1995
1	9-6-95	General Revisions	DESIGNED BY S.R.L.
			DRAWN BY A.M. DATE MARCH, 1995
			CHECKED BY J.D.H. DATE MARCH, 1995

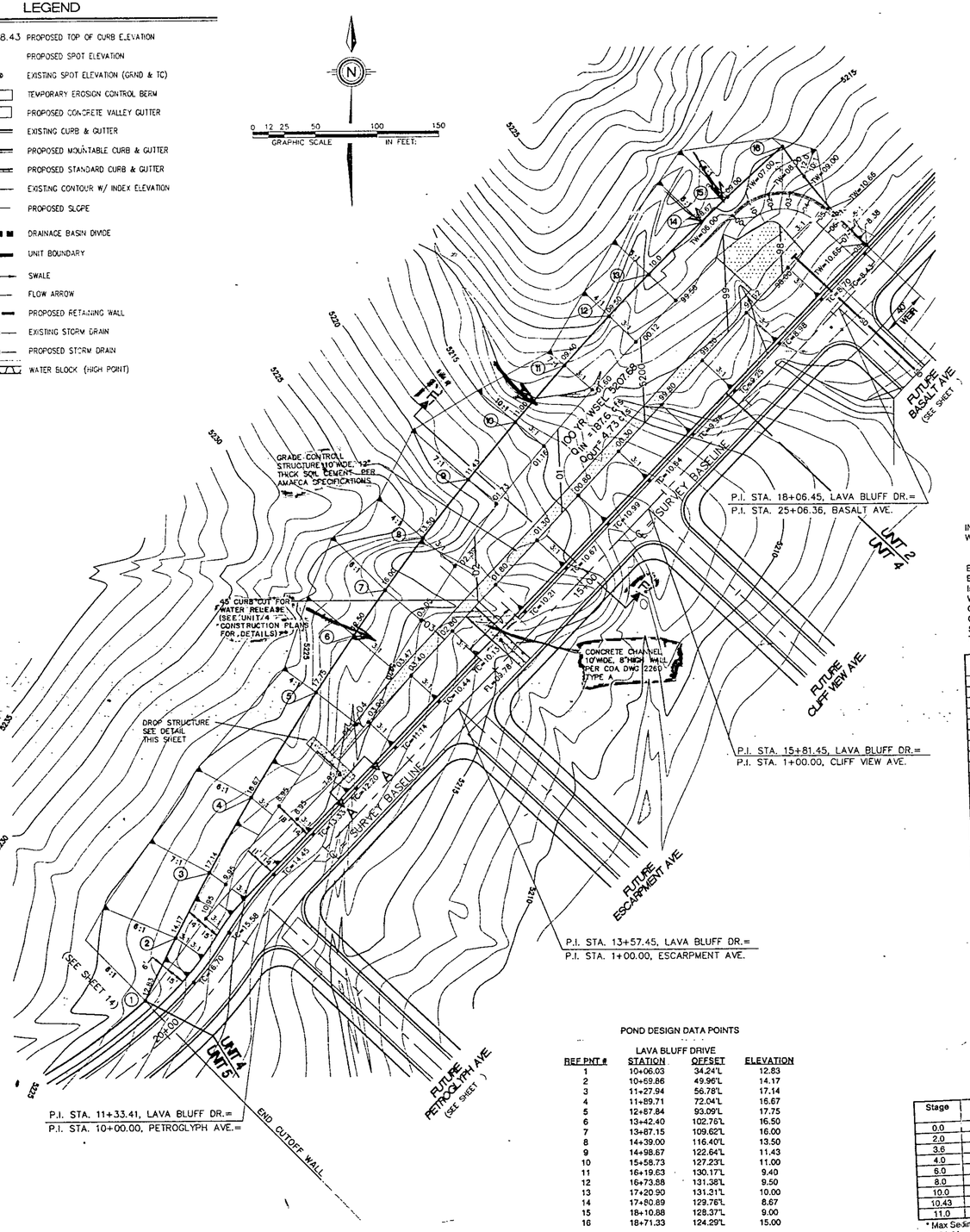
DLW

14326C14.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

LEGEND

- TC 98.43 PROPOSED TOP OF CURB ELEVATION
- 99.0 PROPOSED SPOT ELEVATION
- 09.0 EXISTING SPOT ELEVATION (GRND & TC)
- TEMPORARY EROSION CONTROL BERM
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- FLOW ARROW
- PROPOSED RETAINING WALL
- 30" SD EXISTING STORM DRAIN
- 30" SD PROPOSED STORM DRAIN
- WATER BLOCK (HIGH POINT)



AHYMO Reservoir Routing
W/Max Sediment Loading

*S Route Hydrograph Thru Parkwest Pond
Route Reservoir ID=12 HYD NO=133.50 INFLOW ID=11
CODE=5

OUTFLOW (CFS)	SOTRAGE (AC FT)	ELEV (FT)
0.0	0.00	5201.60
0.9	0.11	5201.84
1.4	0.25	5202.10
1.9	0.53	5202.60
2.4	0.83	5203.10
2.7	1.16	5203.60
3.1	1.51	5204.10
3.4	1.89	5204.60
3.6	2.29	5205.10
3.9	2.72	5205.60
4.1	3.17	5206.10
4.3	3.65	5206.60
4.5	4.14	5207.10
4.7	4.65	5207.60
4.9	5.20	5208.10
5.1	5.58	5208.43

Peak Discharge= 4.732 - Peak Occurs at Hour 2.45
Maximum Water Surface Elevation= 5207.680
Maximum Storage= 4.7466 AC FT
Incremental Time =.050000hrs

RESERVOIR OUTLET
MODELING BY POND2

Structure No. 1
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

E1 elev.(ft)?	201.6
E2 elev.(ft)?	208.45
Invert elev.(ft)?	201.6
Weir length (ft)?	2.438
Orifice area (sq.ft)?	.371
Orifice coefficient?	.65
Start transition elev. (ft) @ ?	201.84
Transition height (ft)?	.24

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)
200.80	0.0	0.41
201.60	0.0	0.72
201.84	0.9	0.83
202.10	1.4	0.97
202.60	1.9	1.25
203.10	2.4	1.55
203.60	2.7	1.88
204.10	3.1	2.23
204.60	3.4	2.61
205.10	3.6	3.01
205.60	3.9	3.44
206.10	4.1	3.89
206.60	4.3	4.37
207.10	4.5	4.86
207.60	4.7	5.38
208.10	4.9	5.92
208.43	5.1	6.30
208.43	5.1	6.30

Peak Inflow = 187.6 cfs
Peak Outflow = 4.6 cfs
Peak Elevation = 207.40 ft

POND DESIGN DATA POINTS

LAVA BLUFF DRIVE

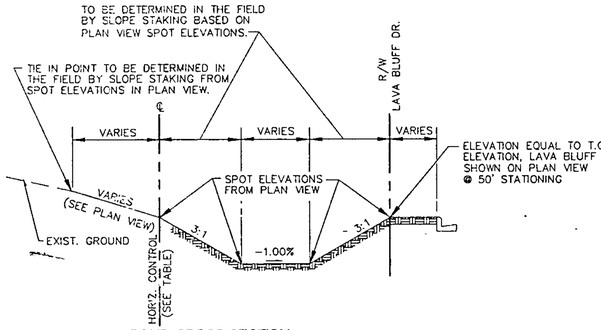
REF PNT #	STATION	OFFSET	ELEVATION
1	10+06.03	34.24'L	12.83
2	10+59.86	49.96'L	14.17
3	11+27.94	56.78'L	17.14
4	11+89.71	72.04'L	16.67
5	12+87.84	93.09'L	17.75
6	13+42.40	102.76'L	16.50
7	13+87.15	109.62'L	16.00
8	14+39.00	116.40'L	13.50
9	14+98.67	122.64'L	11.43
10	15+58.73	127.23'L	11.00
11	16+19.63	130.17'L	9.40
12	16+73.88	131.36'L	9.50
13	17+20.90	131.31'L	10.00
14	17+80.89	129.76'L	8.67
15	18+10.88	128.37'L	9.00
16	18+71.33	124.29'L	15.00

RESERVOIR VOLUME

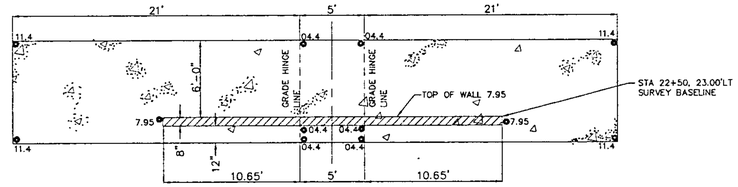
Pond Bottom el = 5198.00
Emergency Overflow el 5208.43

Stage	V (ac-ft)	*Sediment V (ac-ft)	**Clear Water V (ac-ft)
0.0	0.0		0.0
2.0	0.19	0.19	0.0
3.6	0.72	0.72	0.0
4.0	0.92	0.72	0.20
6.0	2.16	0.72	1.44
8.0	3.80	0.72	3.08
10.0	5.81	0.72	5.09
10.43	6.30	0.72	5.58
11.0	6.99	0.72	6.27

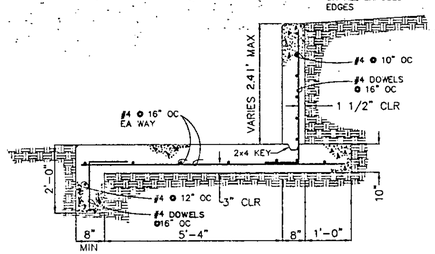
* Max Sediment at el. 5201.6 = .072 ac-ft
** With Max sediment Load



POND CROSS SECTION
SECTION F-F
N.T.S.



DROP STRUCTURE
PLAN VIEW
N.T.S.



DROP STRUCTURE
SECTION A-A
N.T.S.

APPROVED FOR ROUGH GRADING (± 1 FT.)

CITY HYDROLOGY DATE

SURVEY INFORMATION

BENCH MARKS
ACS BRASS TABLET 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. & QUIRAY RD. NW, GO WEST ON QUIRAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

CONTRACTOR
WORK STAKED BY
ACCEPTANCE BY
FIELD VERIFICATION BY
AS-BUILTS BY
DRAWINGS CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY
NO.
DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
1	9-6-95	REVISIONS	DLW
		DESIGN	
		General Revisions	

DESIGNED BY S.R.L. DATE MARCH 1995
DRAWN BY A.M. DATE MARCH 1995
CHECKED BY DATE

DATE: JUNE, 1995
SCALE: AS SHOWN
JOB NO.: 14326-PRE

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

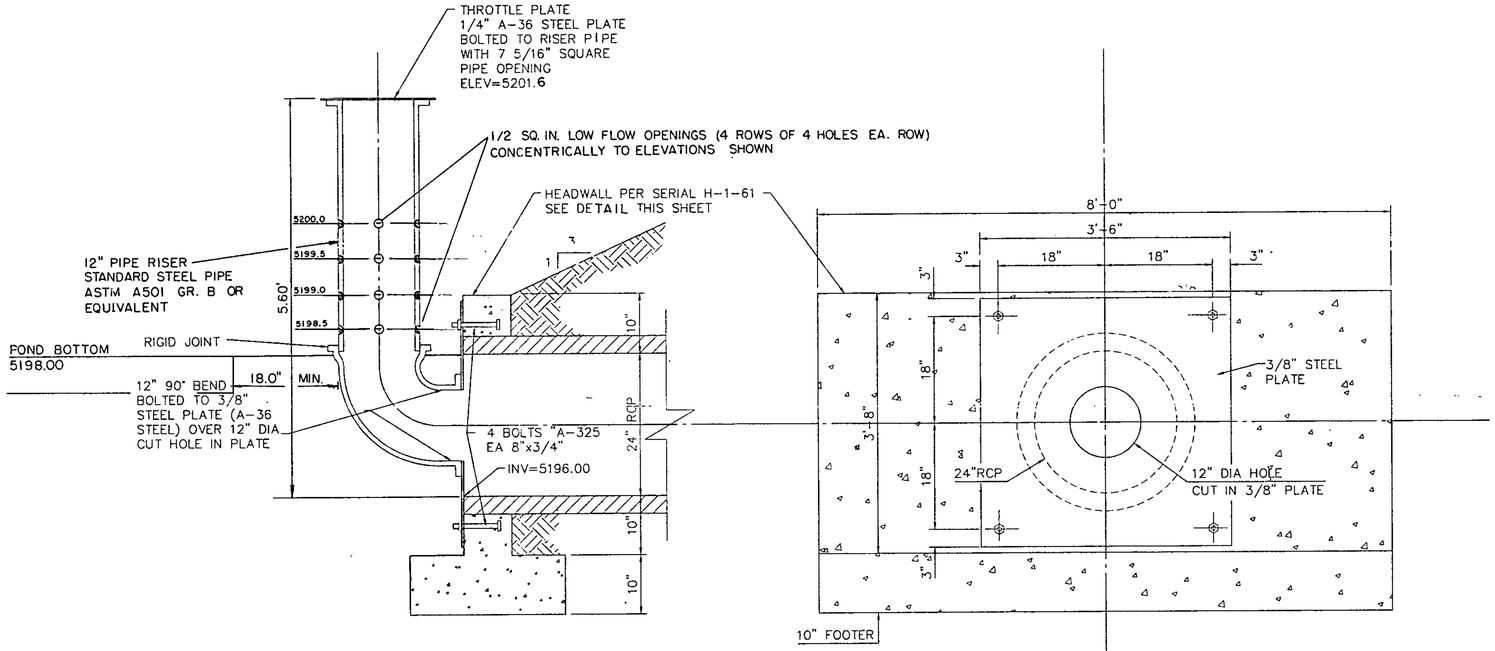
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST- UNIT 5
GRADING AND EROSION CONTROL PLAN
POND AND POND DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWK 7-28-95	
TRANSPORTATION	N/A RHO	7-28-95	WASTE WATER	N/A RWK 7-28-95	
HYDROLOGY	[signature]	9-19-95	A.M.A.F.C.A.		
PARKS & REC					

PROJECT NO. 4886.94 MAP NO. G, H9 SHEET 15 OF 39

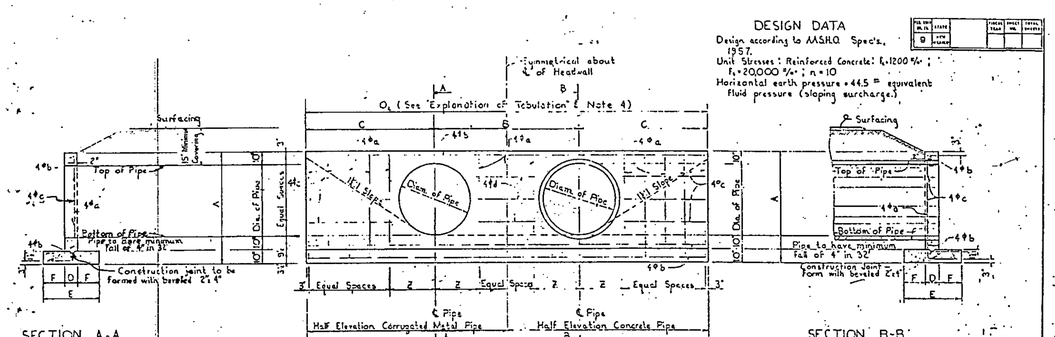
14326
14326C15.DWG



NOTE: ALL EXPOSED METAL TO BE HOT DIP GALVANIZED

POND OUTFALL CONTROL STRUCTURE DETAILS

NTS



SECTION A-A
(TYPICAL ALONG ℄ OF
CORRUGATED METAL PIPE)

ELEVATION - HEADWALL FOR DOUBLE CULVERT

SECTION B-B
(TYPICAL ALONG ℄ OF
CONCRETE PIPE)

BAR BENDING DIAGRAMS
(See table for bars required).

CONCRETE HEADWALLS

Bar spacings shown are approximate only. Quantities shown are for two headwalls.

Diam. of Pipe	DIMENSIONS A	B	C	D	E	F	O	REQUIRED FOR TWO HEADWALLS WITH ONE PIPE: 49a bars No.	Length	x Spacing	Z	49b bars No.	Length	Spacing	49c bars No.	Length	Spacing	Quantities Concrete C.Y.	Concrete C.F.T.	Concrete C.M.C.	Steel Lbs.	ADD FOR EACH ADDITIONAL PIPE: 49e bars No.	49d bars No.	Length	Spacing	Quantities Concrete C.Y.	Concrete C.F.T.	Concrete C.M.C.	Steel Lbs.	Diam. of Pipe
18"	4'-0"	3'-0"	5'-5"	8"	2'-2"	1	8'-6"	11	2	4'-6"	3'-5"	1'-0"	1'-1"	8	O_1-3"	4	2'-0"	11'-5"	75	1.74	1.80	4	2	1'-0"	1'-4"	29	0.73	0.73	15"
24"	4'-6"	4'-0"	6'-0"	8"	2'-6"	1	9'-12"	11	2	5'-0"	3'-8"	1'-3"	1'-4"	8	O_1-2"	4	2'-6"	11'-1"	88	2.29	2.36	4	2	1'-3"	1'-7"	35	1.02	1.10	24"
30"	5'-0"	5'-0"	6'-6"	8"	2'-8"	1	11'-5"	11	2	5'-6"	4'-2"	1'-5"	1'-6"	8	O_1-3"	8	3'-3"	11'-3"	113	3.05	3.18	4	4	1'-5"	1'-5"	47	1.43	1.50	30"
36"	5'-6"	6'-0"	7'-1"	8"	2'-8"	1	12'-6"	11	2	6'-0"	4'-11"	1'-7"	1'-8"	8	O_1-3"	8	4'-0"	11'-5"	148	4.02	4.19	6	4	2'-3"	1'-5"	63	1.85	2.02	36"
42"	6'-0"	7'-0"	7'-6"	10"	3'-0"	1	13'-0"	11	2	6'-6"	5'-5"	1'-9"	2'-3"	8	O_1-3"	8	4'-6"	11'-6"	167	5.68	5.96	6	4	2'-9"	1'-6"	73	2.65	2.93	42"
48"	6'-6"	8'-0"	7'-11"	10"	3'-4"	1	13'-6"	10	2	6'-9"	5'-8"	1'-11"	2'-5"	8	O_1-3"	12	4'-3"	11'-3"	215	6.92	7.28	6	6	3'-0"	1'-3"	86	3.31	3.67	48"
54"	7'-0"	9'-0"	8'-0"	10"	3'-6"	1	14'-0"	10	2	7'-0"	6'-5"	2'-1"	2'-10"	8	O_1-3"	12	5'-0"	11'-5"	257	8.12	8.57	8	6	3'-6"	1'-5"	106	3.95	4.34	54"
60"	7'-6"	10'-0"	8'-5"	10"	3'-9"	1	15'-0"	10	2	7'-6"	7'-2"	2'-4"	3'-4"	8	O_1-3"	12	5'-6"	11'-6"	305	9.51	10.04	10	6	3'-9"	1'-6"	129	4.68	5.22	60"

EXPLANATION OF TABULATION

$O_1 = 2C - E$ $\quad O_n = 2C + E$

$O_n = 2C + 2B$ $\quad O_n = 2C + (n-1)B$

Where n = number of sizes

DESIGN DATA

Design according to AASHTO Spec's., 1957.

Unit Stresses: Reinforced Concrete: f_c=1200 #/in²; f_s=20,000 #/in²; n=10

Horizontal earth pressure = 44.5 # equivalent fluid pressure (sloping surcharge.)

No.	Rev.	State Proj. No.	Fed. Aid Proj. No.	Sheet No.	Total Sheets
0					

GENERAL NOTES

1. Workmanship and materials to conform to NMHTD standard specifications.
2. Design based on a minimum concrete compressive strength of 3000 pounds per square inch at 28 days. Chamfer all exposed edges 3/4" unless noted otherwise.
3. All reinforcing steel to be deformed bars, conforming to AASHTO M-31, Grade 60. All dimensions refer to the centerline of bar.
4. While the detail on this drawing are for a typical culvert with 2 pipes, this drawing applies to culvert headwalls with any number of pipes. The central portion of the wall of length "B" is repeated as many times as required by the number of pipes.

No.	Revision	Date	By
1	Revised note 4	1/2/96	KC
2	General facing revision	10/30/96	KC
3	Eliminate 24" pipe	1/8/97	KC

NEW MEXICO
STATE HIGHWAY DEPARTMENT

PIPE CULVERT
HEADWALLS

SERIAL H-1-61

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

BENCH MARKS

ACS BRASS TABLET STAMPED "2-69" SET IN A 2" IRON PIPE 1 FT. ABOVE GROUND LOCATED ON TOP OF A VOLCANIC JU CROP TO REACH THE STATION FROM THE INTERSECTION OF COPPER RD. & QURAY RD. NW, GO WEST ON QURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.

SLO 1329 ELEVATION = 5334.50 FEET

CONTRACTOR — DATE
WORK STARTED BY — DATE
INSPECTOR'S CLEARANCE BY — DATE
VERIFICATION BY — DATE
CORRECTED BY — DATE
MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

ENGINEER'S SEAL

DONALD M. HUGHES — 11874 — REGISTERED PROFESSIONAL ENGINEER — NEW MEXICO

Rev 5-25-95

NO.	DATE	REMARKS / REVISIONS / DESIGN	BY
	DATE	DESIGN	DESIGNED BY K.C.D.
	DATE MARCH 1995		DRAWN BY R.A.C.
	DATE MARCH 1995		CHECKED BY

DATE: JUNE 1995
SCALE: AS SHOWN
DESIGNED: SMB
DRAWN:
JOB NO. 143-26

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

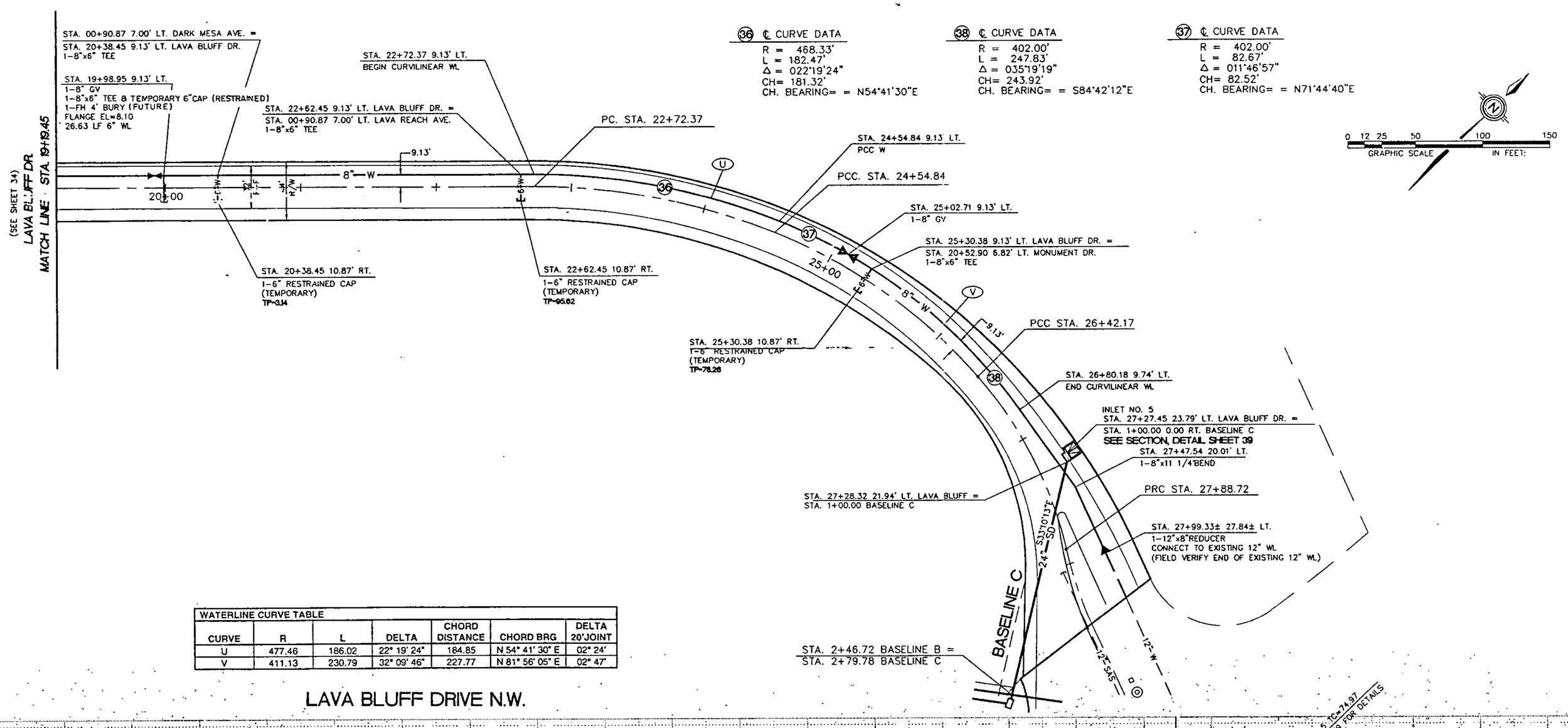
TITLE: PARKWEST UNIT 5
GRADING AND EROSION CONTROL PLAN
DRAINAGE STRUCTURE DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION	N/A DHP	7-28-95	WASTE WATER		
HYDROLOGY	Martin	9.19.95	A.M.A.F.C.A.		

PROJECT NO. 4886.94 | MAP NO. G, H9 | SHEET 16 OF 39

14326
14326C16.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000



WATERLINE CURVE TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	DELTA 20'JOINT
U	477.46	186.02	22° 19' 24"	184.85	N 54° 41' 30" E	02° 24'
V	411.13	230.79	32° 09' 46"	227.77	N 81° 56' 05" E	02° 47'

LAVA BLUFF DRIVE N.W.

RESTRAINING LENGTHS	
FITTING	LR (FT)
6"-11¼" Bend	2
6"-22½" Bend	3
6"-45° Bend	7
8"-11¼" Bend	2
8"-22½" Bend	4
6" GV	46
8" GV	60
8X6 Reducers	25 L/33 S
8X8 Tee	9 Run/20 Branch
8X6 Tee	5 Run/17 Branch
8" Cross	9
8X8X4 Tee	5/17
6X6X6 Tee	6/20
6" Dead Ends	46
8" Dead Ends	60
12x8 Reducers	45 Run/68 Branch

LR = LENGTH TO BE RESTRAINED EACH SIDE OF THE FITTING. FOR TEES, ALL THREE LEGS SHALL BE RESTRAINED FOR A DISTANCE OF "LR". FOR REDUCERS, "LR" IS GIVEN FOR THE LARGER DIAMETER SIDE OF THE FITTING AND NO RESTRAINING IS REQUIRED ON THE SMALL SIDE OF THE FITTING. GATE VALVES SHALL BE MECHANICALLY RESTRAINED AND INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2333 IN ADDITION TO THE MECHANICALLY RESTRAINED LENGTHS. ALL CAPS SHALL BE INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2320. RESTRAIN ALL JOINTS ON FIRE HYDRANTS.

UTILITY LEGEND

DESCRIPTION	PROPOSED	EXISTING
SANITARY SEWER LINE	8" SAS	8" SAS
ENCASEMENT		
SANITARY SEWER MANHOLE		
SAS SERVICE CONNECTION	S	S
STORM DRAIN LINE	SD 30"	SD 30"
STORM DRAIN MANHOLE		
STORM DRAIN INLETS		
WATER LINE	W 6"	W 6"
GATE VALVE		
BUTTERFLY VALVE		
FIRE HYDRANTS		
REDUCERS		
WATER SERVICE/ METER		
TEES		
CROSSES		
BENDS		
CAPS & PLUGS		
GAS LINES	N/A	2" H.P.
OVERHEAD ELECTRICAL LINE	N/A	OHE
UNDERGROUND ELECTRICAL	N/A	UE
OVERHEAD TELEPHONE	N/A	OHT
UNDERGROUND TELEPHONE	N/A	UT
CABLE TELEVISION	N/A	CATV
POWER OR TELEPHONE POLE	N/A	
WATERLINE CURVILINEAR ID	V	

AS BUILT INFORMATION
CONTRACTOR
WORK STARTED ON: DATE
STAKED BY
INSPECTED BY
FIELD VERIFICATION BY DATE
REVISIONS AS REQUESTED BY
FIELD CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ACS BRASS TABLET 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. & OURAY RD. NW, GO WEST ON OURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM. ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD.. TURN RIGHT. GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

ENGINEER'S SEAL
JOHN D. HERRERA 9889 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER
5-5-95

NO.	DATE	REMARKS
		REVISIONS
		DESIGN

DESIGNED BY BDM DATE MARCH 1995
DRAWN BY AAL, M.V DATE MARCH 1995
CHECKED BY JDH DATE

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

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST - UNIT 5
OFFSITE UTILITY PLAN & PROFILE
LAVA BLUFF DRIVE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	R.W. Kane	6-5-95
TRANSPORTATION	N/A CHP	6-02-95	WASTE WATER	R.W. Kane	6-5-95
HYDROLOGY	[signature]	9-19-95	A.M.A.F.C.A.		

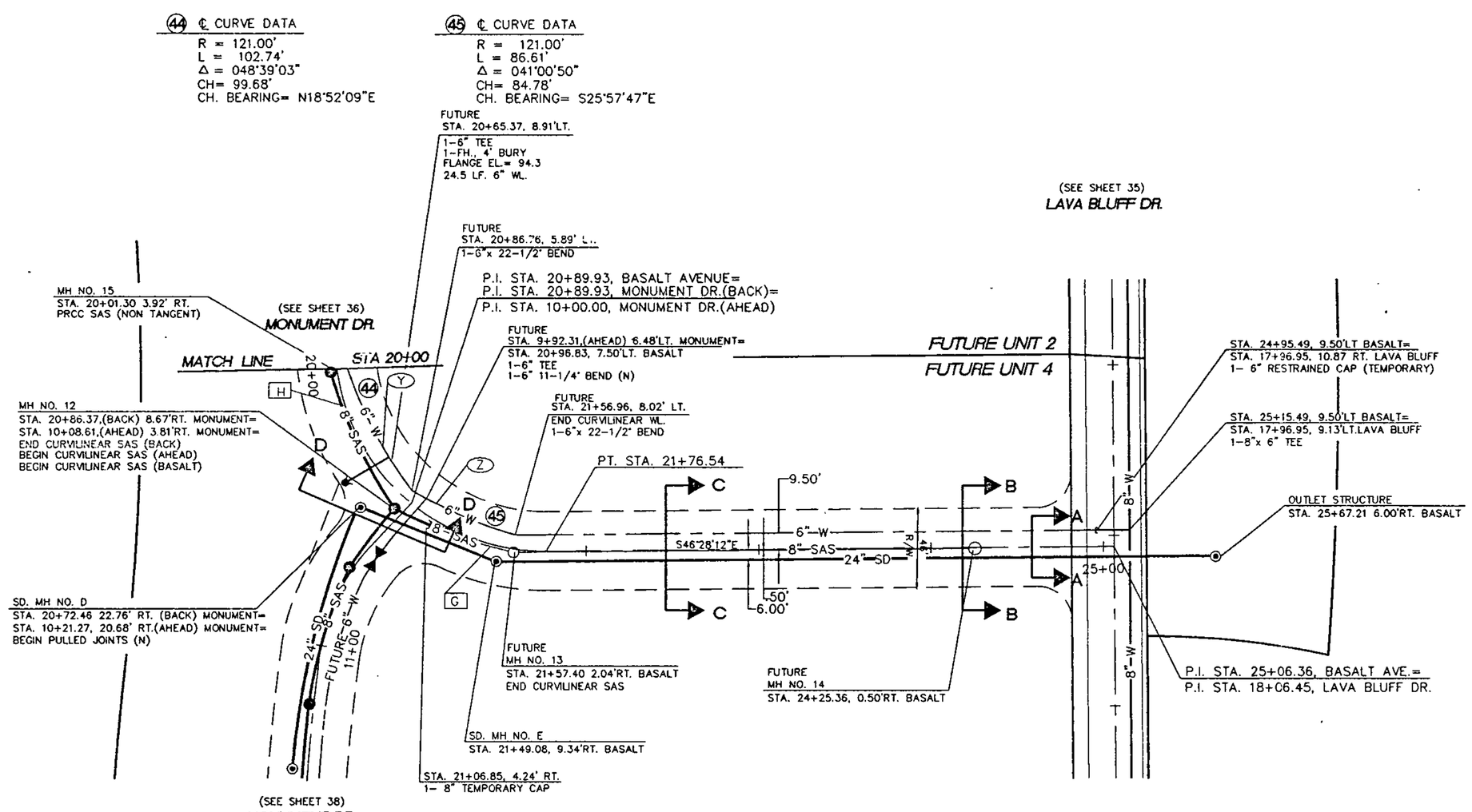
PROJECT NO. 4886.94 MAP NO. G, H9 SHEET 35 OF 39

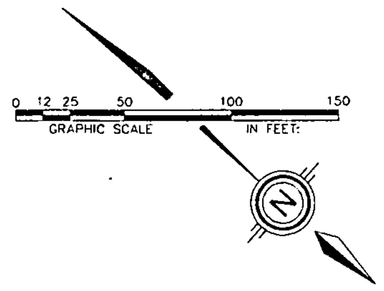
14326
14326C35.DWG
XREF: ***.DWG

COMMUNITY SCIENCES CORPORATION – CORRALES, NEW MEXICO – (505) 897-0000

(44) ℄ CURVE DATA
R = 121.00'
L = 102.74'
Δ = 048°39'03"
CH= 99.68'
CH. BEARING= N18°52'09"E

(45) ℄ CURVE DATA
R = 121.00'
L = 86.61'
Δ = 041°00'50"
CH= 84.78'
CH. BEARING= S25°57'47"E





UTILITY LEGEND

DESCRIPTION	PROPOSED	EXISTING
SANITARY SEWER LINE	—8" SAS—	—8" SAS—
ENCASEMENT		
SANITARY SEWER MANHOLE		
SAS SERVICE CONNECTION	—S—	—S—
STORM DRAIN LINE	—SD—30"—	—SD—30"—
STORM DRAIN MANHOLE		
STORM DRAIN INLETS		
WATER LINE	—W—6"—	—W—6"—
GATE VALVE		
BUTTERFLY VALVE		
FIRE HYDRANTS		
REDUCERS		
WATER SERVICE/ METER		
TEES		
CROSSES		
BENDS		
CAPS & PLUGS		
FUTURE FIRE HYDRANT		
FUTURE WATER		
FUTURE MANHOLE		
GAS LINES	N/A	2" H.P.
OVERHEAD ELECTRICAL LINE	N/A	
UNDERGROUND ELECTRICAL	N/A	
OVERHEAD TELEPHONE	N/A	
UNDERGROUND TELEPHONE	N/A	
CABLE TELEVISION	N/A	
POWER OR TELEPHONE POLE	N/A	
WATERLINE CURVILINEAR ID.	(A)	
SANITARY SEWER CURVILINEAR ID.	[B]	
STORM DRAINAGE CURVILINEAR ID.	⟨C⟩	

WATERLINE CURVE TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	DELTA 20'JOINT
Y	250.00	79.95	18° 19' 20"	79.61	S 16° 29' 36" W	04° 35'
Z	250.00	65.46	15° 00' 07"	65.27	S 22° 22' 28"E	04° 35'

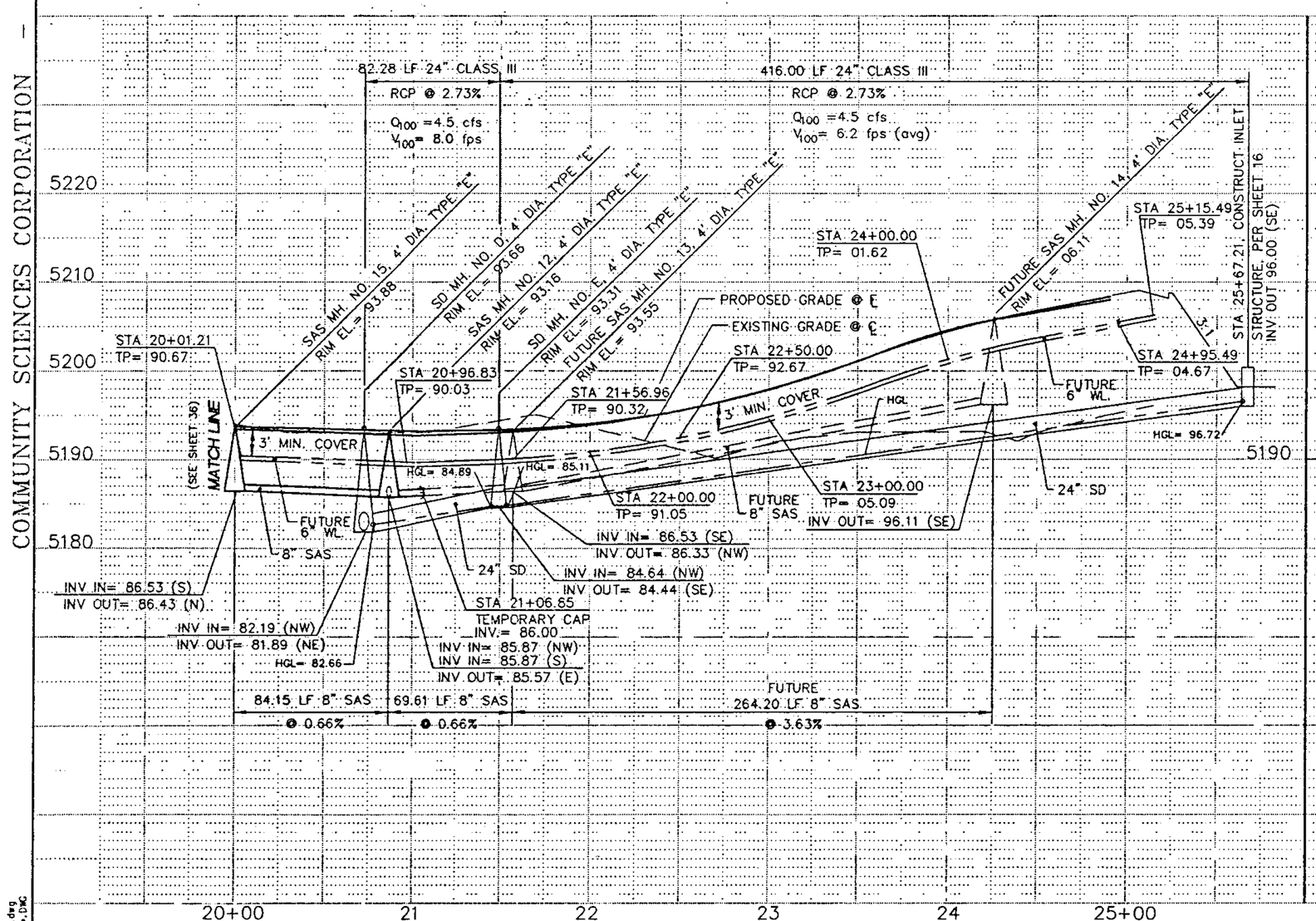
SANITARY SEWER CURVE TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	DELTA 20'JOINT
G	275.00	73.61	15° 20' 14"	73.39	S 25° 33' 00" E	04° 10'
H	275.00	88.15	18° 21' 55"	87.77	S 19° 16' 57" W	04° 10'

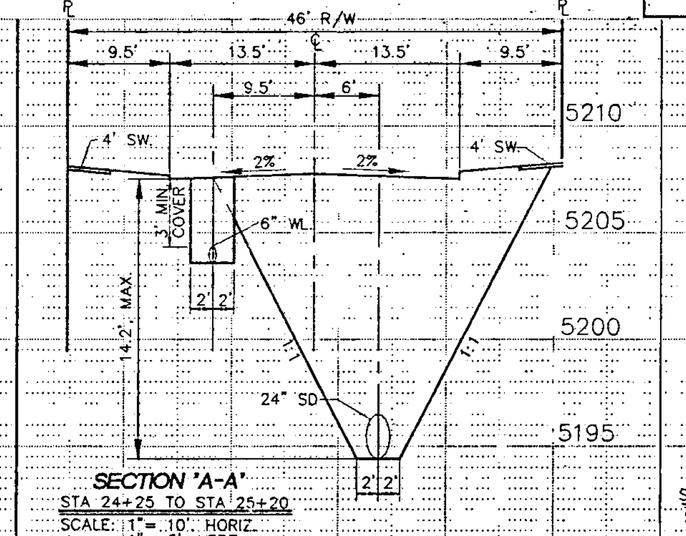
RESTRAINING LENGTHS

FITTING	LR (FT)
6"-11¼" Bend	2
6"-22½" Bend	3
6"-45° Bend	7
8"-11¼" Bend	2
8"-22½" Bend	4
6" GV	46
8" GV	60
8X6 Reducers	25 L/33 S
8X8 Tee	9 Run/20 Branch
8X6 Tee	5 Run/17 Branch
8" Cross	9
8X6X4 Tee	5/17
6X6X6 Tee	6/20
6" Dead Ends	46
8" Dead Ends	60
12x8 Reducers	45 Run/68 Branch

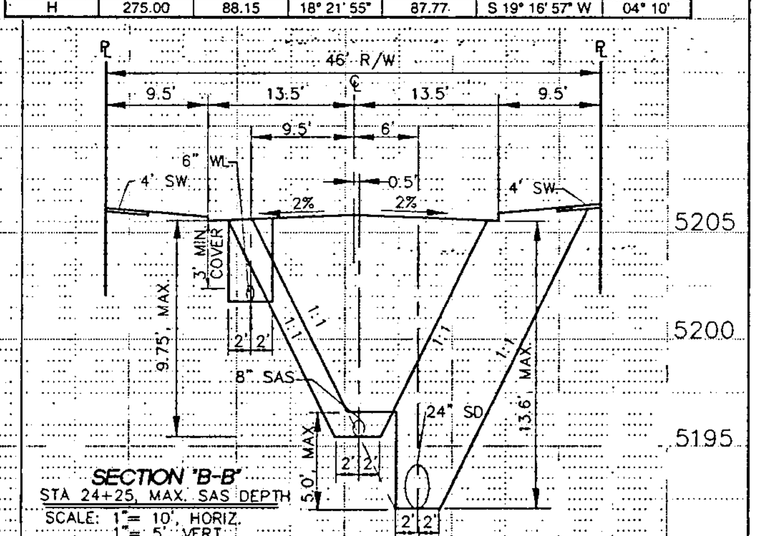
LR = LENGTH TO BE RESTRAINED EACH SIDE OF THE FITTING. FOR TEES, ALL THREE LEGS SHALL BE RESTRAINED FOR A DISTANCE OF "LR". FOR REDUCERS, "LR" IS GIVEN FOR THE LARGER DIAMETER SIDE OF THE FITTING AND NO RESTRAINING IS REQUIRED ON THE SMALL SIDE OF THE FITTING. GATE VALVES SHALL BE MECHANICALLY RESTRAINED AND INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2333 IN ADDITION TO THE MECHANICALLY RESTRAINED LENGTHS. ALL CAPS SHALL BE INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2320. RESTRAIN ALL JOINTS ON FIRE HYDRANTS.

BASALT AVENUE N.W.

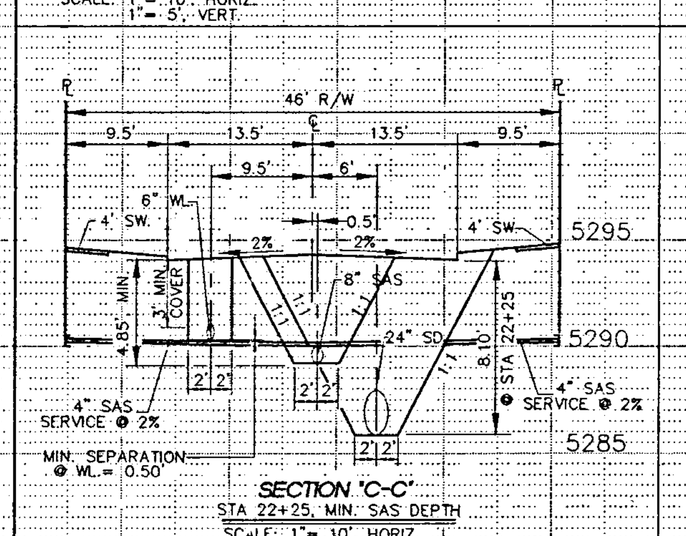




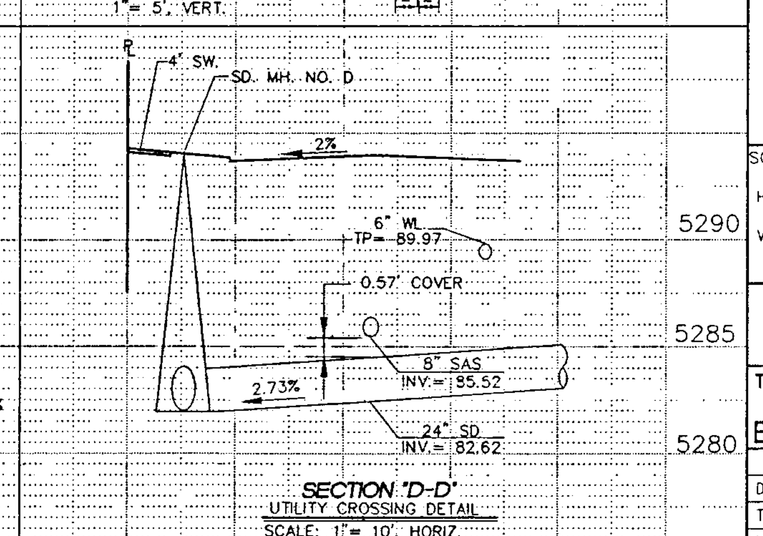
SECTION 'A-A'
STA 24+25 TO STA 25+20
SCALE: 1"= 10' HORIZ. 1"= 5' VERT.



SECTION 'B-B'
STA 24+25, MAX. SAS DEPTH
SCALE: 1"= 10' HORIZ. 1"= 5' VERT.



SECTION 'C-C'
STA 22+25, MIN. SAS DEPTH
SCALE: 1"= 10' HORIZ. 1"= 5' VERT.



SECTION 'D-D'
UTILITY CROSSING DETAIL
SCALE: 1"= 10' HORIZ. 1"= 5' VERT.

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

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST - UNIT 5
OFFSITE UTILITY PLAN & PROFILE
BASALT AVENUE N.W.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	R.W. Kane	6-5-95
TRANSPORTATION	N/A		WASTE WATER	R.W. Kane	6-5-95
HYDROLOGY		6-02-95	A.M.A.F.C.A.		
		9-19-95			

PROJECT NO. 4886.94 MAP NO. G, H9 SHEET 37 OF 39

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

BENCH MARKS
ACS BRASS TABLET 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. & QURAY RD. NW, GO WEST ON QURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLO 1929 ELEVATION = 5334.50 FEET

AS BUILT INFORMATION
CONTRACTOR
WORK BY
INSPECTOR'S ACCEPTANCE BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ENGINEER'S SEAL
JAMES D. HUGHES 11674 REGISTERED PROFESSIONAL ENGINEER STATE OF NEW MEXICO
5-5-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY	BDM
		DRAWN BY	AM, WLV
		CHECKED BY	J.D.H.

DATE MARCH 1995
DATE MARCH 1995
DATE MARCH 1995

14326527.dwg
XREF: ***.DWG

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

(46) ℄ CURVE DATA
R = 120.00'
L = 68.84'
Δ = 032°52'11"
CH= 67.90'
CH. BEARING= N68°06'32"E

(47) ℄ CURVE DATA
R = 1209.07'
L = 165.82'
Δ = 007°51'28"
CH= 165.69'
CH. BEARING= N47°44'43"E

(48) ℄ CURVE DATA
R = 1209.07'
L = 225.20'
Δ = 010°40'18"
CH= 224.87'
CH. BEARING= N38°28'49"E

(49) ℄ CURVE DATA
R = 1209.07'
L = 180.37'
Δ = 008°32'50"
CH= 180.20'
CH. BEARING= N28°52'15"E

(50) ℄ CURVE DATA
R = 75.00'
L = 93.03'
Δ = 071°04'01"
CH= 87.18'
CH. BEARING= N10°56'11"E

GRAPHIC SCALE 0 12 25 50 100 150 IN FEET:

SANITARY SEWER CURVE TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	DELTA 20' JOINT
B	400.00	105.58	15° 07' 22"	105.27	S 20° 23' 51" W	02° 52'
C	1212.07	472.47	22° 20' 03"	469.49	S 39° 07' 34" W	00° 56'
D	275.00	39.94	08° 19' 19"	39.91	N 50° 37' 51" W	04° 10'
E	300.00	83.64	15° 58' 30"	83.37	S 60° 30' 00" W	03° 49'
F	300.00	43.19	08° 14' 58"	43.16	S 80° 58' 27" W	03° 49'

STORM DRAIN FULLED JOINT TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	PULL / 8' JOINT
A	500.00	160.87	18° 26' 02"	160.17	N 57° 50' 47" E	1/2"
B	1218.07	300.01	14° 06' 03"	299.25	N 41° 19' 40" E	1/2"
C	1218.07	224.07	10° 32' 23"	223.75	N 29° 00' 07" E	3/16"

FUTURE STA. 9+92.31,(AHEAD) 6.48'LT. MONUMENT=
STA. 20+96.83, 7.50'LT. BASALT
1-6" TEE
1-6" 11-1/4° BEND (N)

P.I. STA. 10+00.00, MONUMENT DR.(AHEAD)=
P.I. STA. 20+89.93, MONUMENT DR.(BACK)
P.I. STA. 20+89.93, BASALT AVENUE

(SEE SHEET) BASALT AVE.

MH NO. 12
STA. 10+08.61,(AHEAD) 3.81'RT. MONUMENT=
STA. 20+86.37,(BACK) 8.67'RT. MONUMENT=
END CURVILINEAR SAS (BACK)
BEGIN CURVILINEAR SAS (AHEAD)
BEGIN CURVILINEAR SAS (BASALT)

FUTURE STA. 10+09.73, 6.18' LT.
BEGIN CURVILINEAR WL.
STA. 10+28.61, 6.53' LT.
1-6" G.V. FUTURE
PC STA. 10+36.72
FUTURE STA. 10+50.56, 7.94' LT.
1-8" 11-1/4° BEND (FIELD ADJUST TO FIT)
PCC STA. 11+34.90, 7.00' LT. (NON-TANGENT) FUTURE
MH NO. 10
PCC STA. 11+34.71, 3.00' RT. (NON-TANGENT)

STA. 14+97.61, 18.93'LT. MONUMENT=
STA. 5+35.15, 2.41'RT. LAVA REACH
1- TEMPORARY 8" PLUG
STA. 12+68.24, 19.00'RT. MONUMENT=
STA. 5+59.96, 3.00'LT. DARK MESA
1- TEMPORARY 8" PLUG
FUTURE STA. 12+78.39, 7.00'LT. MONUMENT=
STA. 5+66.76, 7.00'LT. DARK MESA
1-6" TEE
20 LF 6"WL., WITH CAP
FUTURE INLET NO. 1
STA. 14+62.55, 14.00' LT.
TYPE "A" DOUBLE GRATE, SINGLE THROAT

STA. 17+68.78, 0.51' RT.
1-TEMPORARY 8" PLUG
INV= 71.87
MH NO. 2
STA. 17+47.64, 3.99' RT. MONUMENT=
STA 1+00.00, 0.0' RT. BASELINE "B"
STA. 17+47.71, 6.50' LT.
1-6" 22-1/2° BEND
1-6" 11-1/4° BEND
FUTURE
FUTURE INLET NO. 3
STA. 17+42.75, 14.00' LT.
TYPE "A" DOUBLE GRATE, DOUBLE THROAT
FUTURE STA. 17+12.09, 9.05' LT.
1-6" 22-1/2° BEND
END CURVILINEAR WL.
FUTURE STA. 16+65.17, 10.00' LT.
1-6" 22-1/2° BEND
STA. 15+92.58, 10.00'LT.
BEGIN CURVILINEAR WL.

FUTURE STA.15+37.12, 8.74' LT.
1-6" G.V.
1-6" TEE
1-FH, 6' BURY
FLANGE EL.= 83.02
6.76LF 6" WL.

EXIST. INLET
STA. 2+46.43, 3.30' RT. BASELINE "B"=
STA 2+90.81, 0.0'RT. BASELINE "C"
24" PIPE PENETRATION INTO EXIST. INLET
CONSTRUCT 8" LF 24" CLASS III
RCP @ 1.10%, INV= 72.94
TEMPORARY PLUG

EXIST. INLET
STA. 2+45.39±, 7.00' RT. BASELINE "B"
30" PIPE PENETRATION INTO EXIST. INLET
INLET NO. 4
STA. 17+42.75, 14.00' RT.
TYPE "A" DOUBLE GRATE
DOUBLE THROAT
(SEE NOTE THIS SHEET)
MH NO. 4
STA. 17+11.56, 1.17' RT.
END CURVILINEAR SAS (NON-TANGENT)

INLET NO. 5
STA 1+00.00, 0.0'RT. BASELINE "C"
STA. 27+22.83, 26.73' LT. LAVA BLUFF=
SEE SHEET 35, SEE DETAIL ON SHEET 39

MH NO. 1
STA.29+17.70, 3.60' RT. LAVA BLUFF=
STA 3+32.59±, 0.0'RT. BASELINE "B"
CONSTRUCT MH. OVER EXIST.12"SAS
PLUG EXIST. SAS @ N.W. END OF MH.
FORM MH. INVERT FOR SMOOTH TRANSITION TO INV. OUT

STA. 15+07.15, 7.00'LT. MONUMENT=
STA. 5+45.17, 9.06'LT. LAVA REACH
1-6" TEE
20 LF 6" WL w/ cap
END CURVILINEAR WL. (S & W)
(NON-TANGENT)

MH NO. 6
STA. 14+95.93, 3.00' RT. MONUMENT=
STA. 5+57.02, 0.10' RT. LAVA REACH
END CURVILINEAR SAS (LAVA REACH)

SD MH NO. A
STA. 16+93.14, 10.85' RT.
END PULLED JOINTS (S)

PCC. STA. 16+76.95
MH NO. 5
STA. 16+06.01, 3.00' RT.
PCC. SAS

SD. MH NO. C
PCC STA. 11+75.00, 9.00' RT. (NON-TANGENT)
PCC. STA. 11+05.56
MH NO. 11
PCC STA. 10+51.47, 2.05' RT.= (NON-TANGENT)
SD. MH NO. D
STA. 10+21.27, 20.68' RT.(AHEAD) MONUMENT=
STA. 20+72.46 22.76' RT. (BACK) MONUMENT=
BEGIN PULLED JOINTS (N)
MH NO. 8
STA. 12+68.41, 3.00' RT. MONUMENT=
STA 5+76.73, 3.00' RT. DARK MESA
FUTURE INLET NO. 2
STA. 14+56.38, 14.00' RT.
TYPE "A" DOUBLE GRATE, SINGLE THROAT
SD MH NO. B
STA. 14+72.79, 9.00' RT.

SEE DETAIL SHEET 39

EX. SD. MH
EX. SAS MH.
EX. CATCH BASIN

MONUMENT DRIVE N.W.

BASELINE "B" N51°43'34"E
BASELINE "C" S31°01'13"E
30' DRAINAGE ESMT

WATERLINE CURVE TABLE						
CURVE	R	L	DELTA	CHORD DISTANCE	CHORD BRG	DELTA 20'JOINT
AA	250.00	40.01	09° 10' 11"	39.97	S 80° 56' 43" W	04° 35'
BB	250.00	80.02	18° 20' 22"	79.68	S 60° 26' 49" W	04° 35'
CC	1202.07	142.65	05° 47' 58"	142.57	S 46° 53' 03" W	00° 57'
DD	1202.07	227.43	10° 50' 26"	227.09	S 38° 03' 51" W	00° 57'
EE	1199.07	71.99	03° 26' 23"	71.98	S 26° 52' 31" W	00° 57'
FF	390.00	41.93	05° 09' 37"	41.92	S 16° 13' 46" W	02° 56'

INLET #4. STA 17+42.75, 14.00' RT. FUTURE TYPE A DOUBLE THROAT, DOUBLE GRATE. TEMPORARY TOP ELEVATION TO BE FIELD ESTABLISHED TO PROVIDE POSITIVE DRAINAGE. REBAR PROTRUDING FROM TOP OF WALLS TO BE BENT OVER TO THE INSIDE OF INLET AND ADDITIONAL #4 REBAR ADDED AT 4" O.C.E.W. TO FORM A TEMPORARY GRATE TOP. THE INLET STRUCTURE IS TO BE COMPLETED LATER BY SEPARATE PROJECT.

156.86 LF 24" RCP CLASS III @ 1.00% Q_{100} = 4.5 cfs V_{100} = 7.16 fps (avg.)
296.0 LF 24" SAS CLASS III @ 1.00% Q_{100} = 4.5 cfs V_{100} = 3.75 fps (avg.)
220.07 LF 24" RCP CLASS III @ 1.17% Q_{100} = 22.5 cfs V_{100} = 7.16 fps
135.26± LF 30" RCP CLASS III @ 4.36% Q_{100} = 69.2 cfs V_{100} = 16.31 fps
Q_{100} = 22.5 cfs V_{100} = 7.16 fps 52.36 LF 24" RCP CLASS III @ 1.17%

SAS MH. NO. 12, 4' DIA. TYPE "E" RIM EL.= 93.16
SD MH. NO. 9, 4' DIA. TYPE "E" RIM EL.= 93.60
SAS MH. NO. 11, 4' DIA. TYPE "E" RIM EL.= 92.27
SD MH. NO. 10, 4' DIA. TYPE "E" RIM EL.= 89.94
SD MH. NO. C, 4' DIA. TYPE "E" RIM EL.= 88.68
SAS MH. NO. 8, 4' DIA. TYPE "E" RIM EL.= 86.17
SD MH. NO. B, 4' DIA. TYPE "E" RIM EL.= 82.75
SAS MH. NO. 6, 4' DIA. TYPE "E" RIM EL.= 82.67
SAS MH. NO. 5, 4' DIA. TYPE "E" RIM EL.= 81.74
SD MH. NO. A, 4' DIA. TYPE "C" RIM EL.= 80.28
SAS MH. NO. 4, 4' DIA. TYPE "E" RIM EL.= 80.11
SD INLET NO. 4 RIM EL.= 80.21
SAS MH. NO. 2, 4' DIA. TYPE "E" RIM EL.= 79.77
STA 17+47.64, 3.99' RT. STA 1+00.00, 0.0' RT. BASELINE "B"
CONST. MH W/ MANHOLE COVER & TYPE "D" GRATE SCADA EL.= 67.50±
SAS MH. NO. 11, 4' DIA. TYPE "E" ADJUST TO GRADE

STA 9+92.31 TP= 90.03
STA 10+28.61 TP= 89.62
STA 12+78.39 TP= 01.54
STA 15+07.15 TP= 79.53
STA 15+37.12 TP= 79.24
STA 16+65.17 TP= 77.57
STA 17+12.09 TP= 76.85
STA 17+47.71 TP= 76.50
PROPOSED GRADE @ ℄
EXISTING GRADE @ ℄
3' MIN. COVER
HGL=82.33 HGL=81.02 HGL=80.68 HGL=79.72 HGL=80.65 HGL=77.49 HGL=77.32 HGL=76.80 HGL=71.44 HGL=64.89 HGL=65.07

INV IN= 85.87 (S)
INV IN= 85.87 (NW)
INV OUT= 85.57 (E)
6" WL
8" SAS
24" RCP
INV IN= 82.19 (NW)
INV OUT= 81.89 (NE)
INV IN= 85.31 (W)
INV OUT= 85.21 (E)
INV IN= 83.54 (W)
INV OUT= 83.44 (NE)
INV IN= 80.41 (SW)
INV OUT= 80.31 (NE)
INV IN= 77.92 (NW)
INV IN= 77.92 (SW)
INV OUT= 77.62 (NE)
INV IN= 77.35 (W)
INV IN= 77.35 (S)
INV IN= 77.35 (SW)
INV OUT= 77.25 (NE)
INV IN= 74.93 (NW)
INV IN= 74.73 (NW)
INV OUT= 74.63 (NE)
INV IN= 73.39 (SW)
INV OUT= 73.29 (NE)
INV IN= 74.68 (S)
INV OUT= 74.38 (N)
INVIN= 72.10 (SW)
INV OUT= 71.90 (NE)
INV IN= 71.51 (S)
INV IN= 71.51 (NW)
INV OUT= 71.21 (NE)
INV IN= 72.85
INV IN= 73.77 (S)
INV OUT= 69.00 (NE)
INV IN= 63.10 (SW)
INV IN= 64.90 (NW)
INV OUT= 62.0± EXIST 12" SAS
INV IN= 59.10 (SE)
INV OUT= 58.11± EXIST 12" SAS

39.19 LF 8" SAS @ 0.66%
79.64 LF 8" SAS @ 2.10%
130.03 LF 8" SAS @ 4.25%
224.08 LF 8" SAS @ 1.29%
106.35 LF 8" SAS @ 1.17%
101.58 LF 8" SAS @ 1.17%
33.04 LF 8" SAS @ 1.17%
228.58 LF 8" SAS @ 5.30%

10+00 11 12 13 14 15+00 16 17 1+00 2 3 4
5200 5190 5180 5170 5160 5150

UTILITY LEGEND		
DESCRIPTION	PROPOSED	EXISTING
SANITARY SEWER LINE	—8" SAS—	—8" SAS—
ENCASEMENT		
SANITARY SEWER MANHOLE		
SAS SERVICE CONNECTION	—S—	—S—
STORM DRAIN LINE	—SD—30"—	—SD—30"—
STORM DRAIN MANHOLE		
STORM DRAIN INLETS		
WATER LINE	—W—6"—	—W—6"—
GATE VALVE		
BUTTERFLY VALVE		
FIRE HYDRANTS		
REDUCERS		
WATER SERVICE/ METER		
TEES		
CROSSES		
BENDS		
CAPS & PLUGS		
FUTURE FIRE HYDRANT		
FUTURE WATER		
FUTURE MANHOLE		
GAS LINES	N/A	—2" H.P.—
OVERHEAD ELECTRICAL LINE	N/A	—OHE—
UNDERGROUND ELECTRICAL	N/A	—UE—
OVERHEAD TELEPHONE	N/A	—OHT—
UNDERGROUND TELEPHONE	N/A	—UT—
CABLE TELEVISION	N/A	—CTV—
POWER OR TELEPHONE POLE	N/A	

RESTRAINING LENGTHS	
FITTING	LR (FT)
6"-11¼° Bend	2
6"-22½° Bend	3
6"-45° Bend	7
8"-11¼° Bend	2
8"-22½° Bend	4
6" GV	46
8" GV	60
8X6 Reducers	25 L/33 S
8X8 Tee	9 Run/20 Branch
8X6 Tee	5 Run/17 Branch
6" Cross	9
8X8X4 Tee	5/17
6X6X6 Tee	6/20
6" Dead Ends	46
8" Dead Ends	60
12x8 Reducers	45 Run/68 Branch

LR = LENGTH TO BE RESTRAINED EACH SIDE OF THE FITTING. FOR TEES, ALL THREE LEGS SHALL BE RESTRAINED FOR A DISTANCE OF "LR". FOR REDUCERS, "LR" IS GIVEN FOR THE LARGER DIAMETER SIDE OF THE FITTING AND NO RESTRAINING IS REQUIRED ON THE SMALL SIDE OF THE FITTING. GATE VALVES SHALL BE MECHANICALLY RESTRAINED AND INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2333 IN ADDITION TO THE MECHANICALLY RESTRAINED LENGTHS. ALL CAPS SHALL BE INSTALLED WITH CONCRETE BLOCKING PER COA STD DWG 2320. RESTRAIN ALL JOINTS ON FIRE HYDRANTS.

AS BUILT INFORMATION
CONTRACTOR
WORK STAKE BY DATE
INSPECTOR'S INITIALS BY DATE
FIELD VERIFICATION BY DATE
DRAWING NO.
CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
AGS BRASS TABLET 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. & QUARAY RD., NW, GO WEST ON QUARAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT, CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM, ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT, GO NORTH ON THE DIRT RD. 0.5 MI.
SLD 1929 ELEVATION = 5334.50 FEET

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE
1 COMMUNITY SCIENCES

ENGINEER'S SEAL
JAMES D. HUGHES 11674 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 5-25-95

NO.	REMARKS	BY	DATE
	REVISIONS		
	DESIGN		
	DESIGNED BY	BDM, JJD	DATE MARCH 1995
	DRAWN BY	AM, WLV	DATE MARCH, 1995
	CHECKED BY	J.D.H.	

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

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING
P.O. Box 1328 Corrales, N.M. 87048

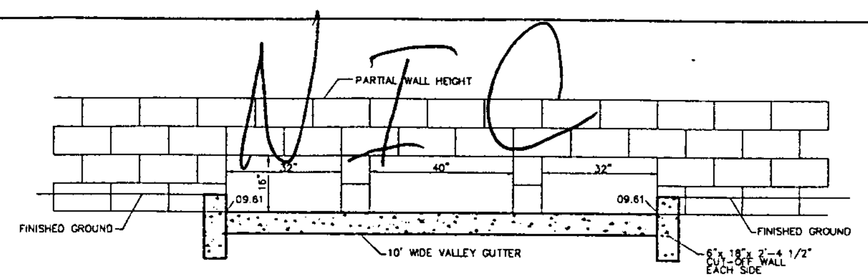
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST - UNIT 5
OFFSITE UTILITY PLAN & PROFILE
MONUMENT DRIVE N.W.

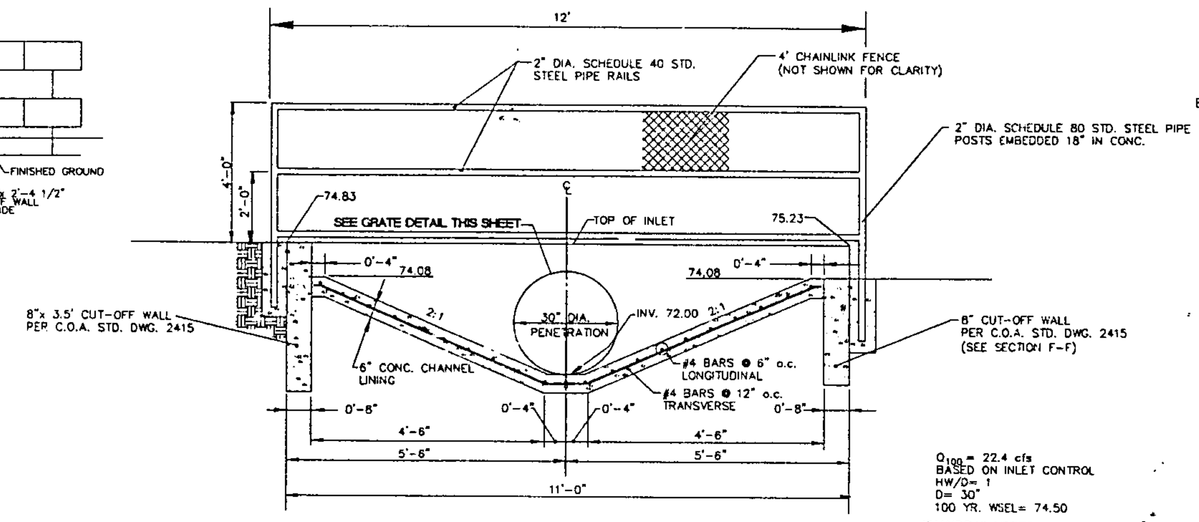
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	A.W. Kane	6-5-95
TRANSPORTATION	N/A RHD	6-02-95	WASTE WATER	R.W. Kane	6-5-95
HYDROLOGY	J. Curtin	9-19-95	A.M.A.F.C.A.		

PROJECT NO. 4886.94 MAP NO. G, H9 SHEET 38 OF 39

14326 14326CUR.DWG 3REF - **.DWG



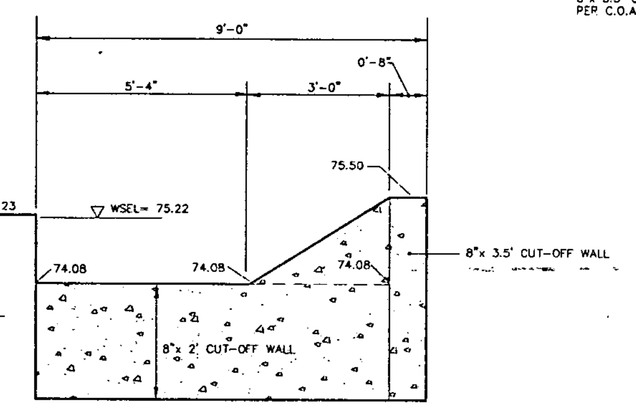
POND WALL PENETRATION DETAIL
N.T.S.
(SEE SHEET 15)



Q_{100} = 22.4 cfs
BASED ON INLET CONTROL
HW/D= 1
D= 30"
100 YR. WSEL= 74.50

4'HANDRAIL NOTES:

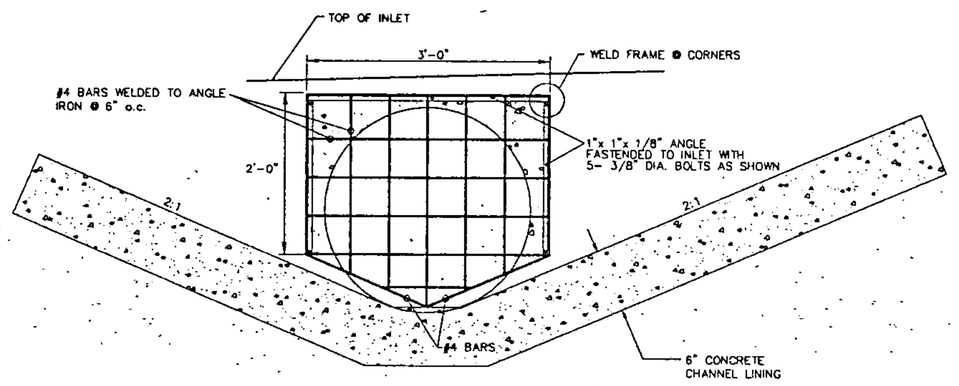
1. ALL POSTS, RAILS, PLATES, ANGLES, BOLTS, ETC., SHALL BE OF STRUCTURAL STEEL AND GALVANIZED PER COA STANDARDS.
2. INSTALL CHAIN LINK FABRIC ON OUTSIDE OF PIPE RAIL.
3. TENSION BARS AND THREE (3) CLAMPS AT EACH END POST.
4. TACK WELD CHAIN LINK FABRIC AT 3 POINTS ALONG EACH FRAME MEMBER.
5. PAINT ALL FIELD WELDS WITH GALVANIZED COATING.
6. PAINT GUARDRAIL WITH WELLBORN MAPLENUT COLOR OR APPROVED EQUIVALENT.



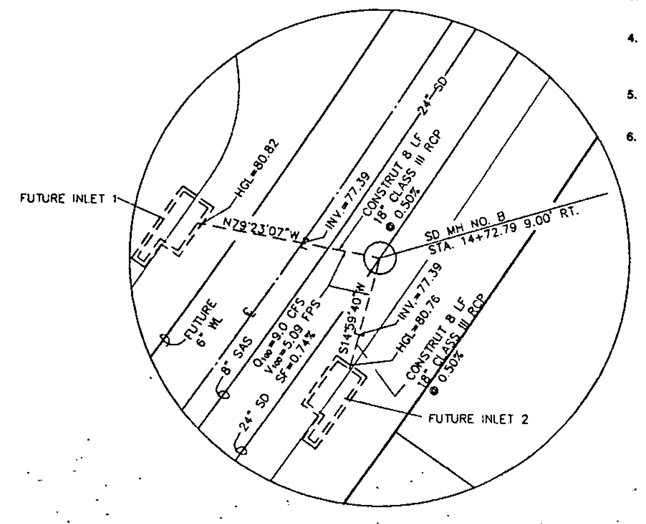
WEIR CALCULATIONS
Q_{100} = 22.4 cfs
C= 3.0'
WEIR DEFINED BY XY COORDINATES
H= 1.14'
WSEL= 75.22

SECTION F-F
INLET NO. 5 WEIR DETAIL
N.T.S.

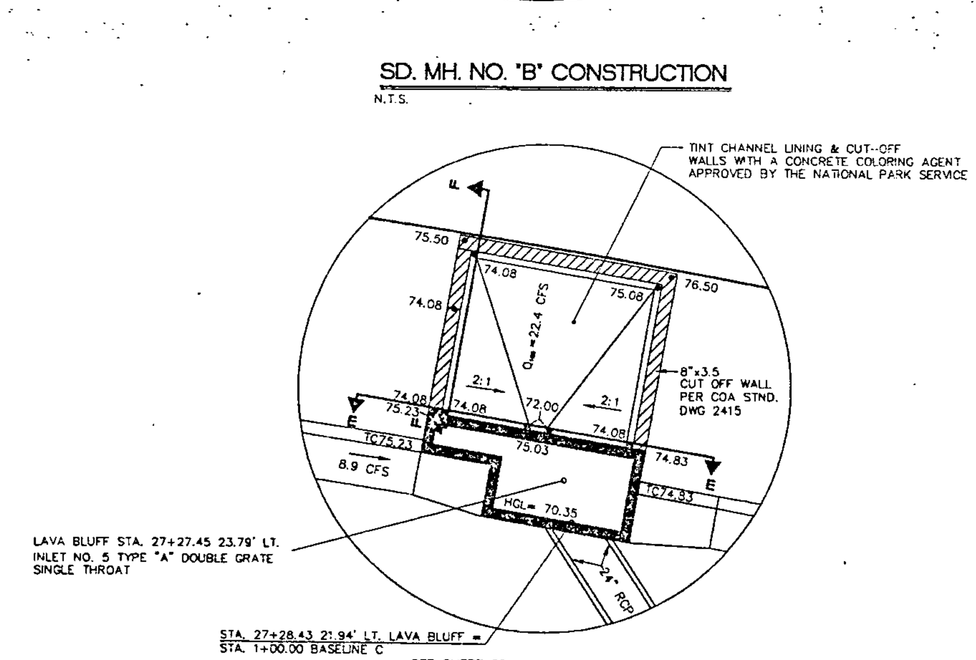
SECTION E-E
INLET NO. 5 PENETRATION DETAIL
N.T.S.



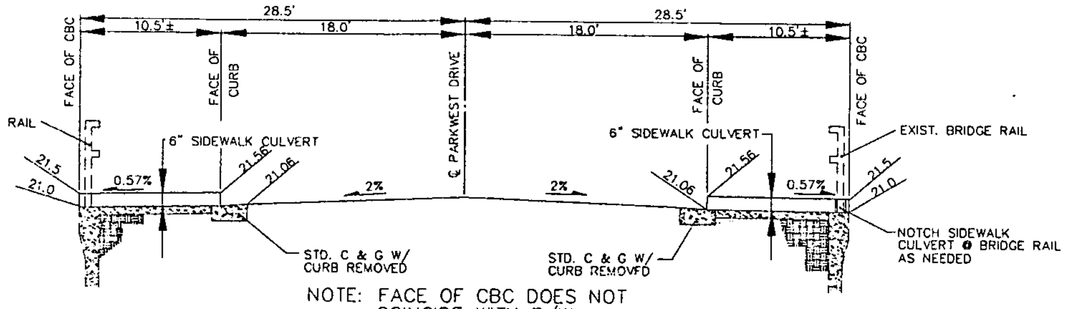
GRATE DETAIL
N.T.S.



SD. MH. NO. "B" CONSTRUCTION
N.T.S.

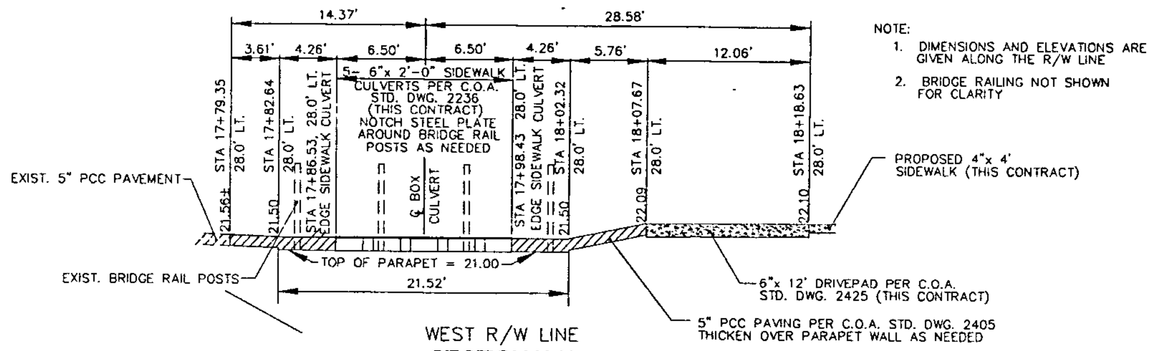


INLET NO. 5
NTS



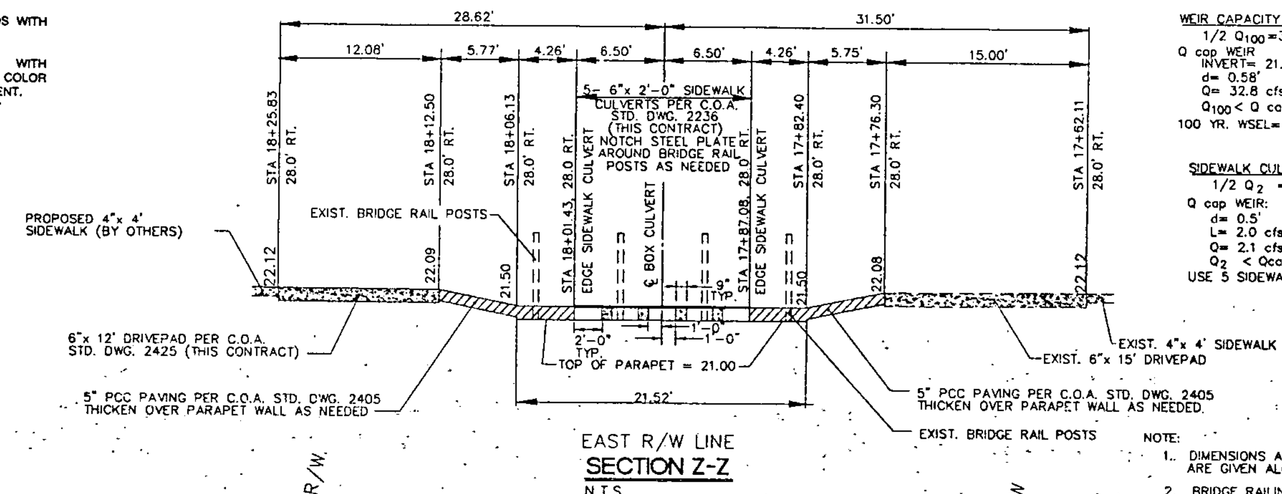
NOTE: FACE OF CBC DOES NOT COINCIDE WITH R/W

SECTION X-X
N.T.S.



NOTE:
1. DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG THE R/W LINE
2. BRIDGE RAILING NOT SHOWN FOR CLARITY

WEST R/W LINE
SECTION Y-Y
N.T.S.

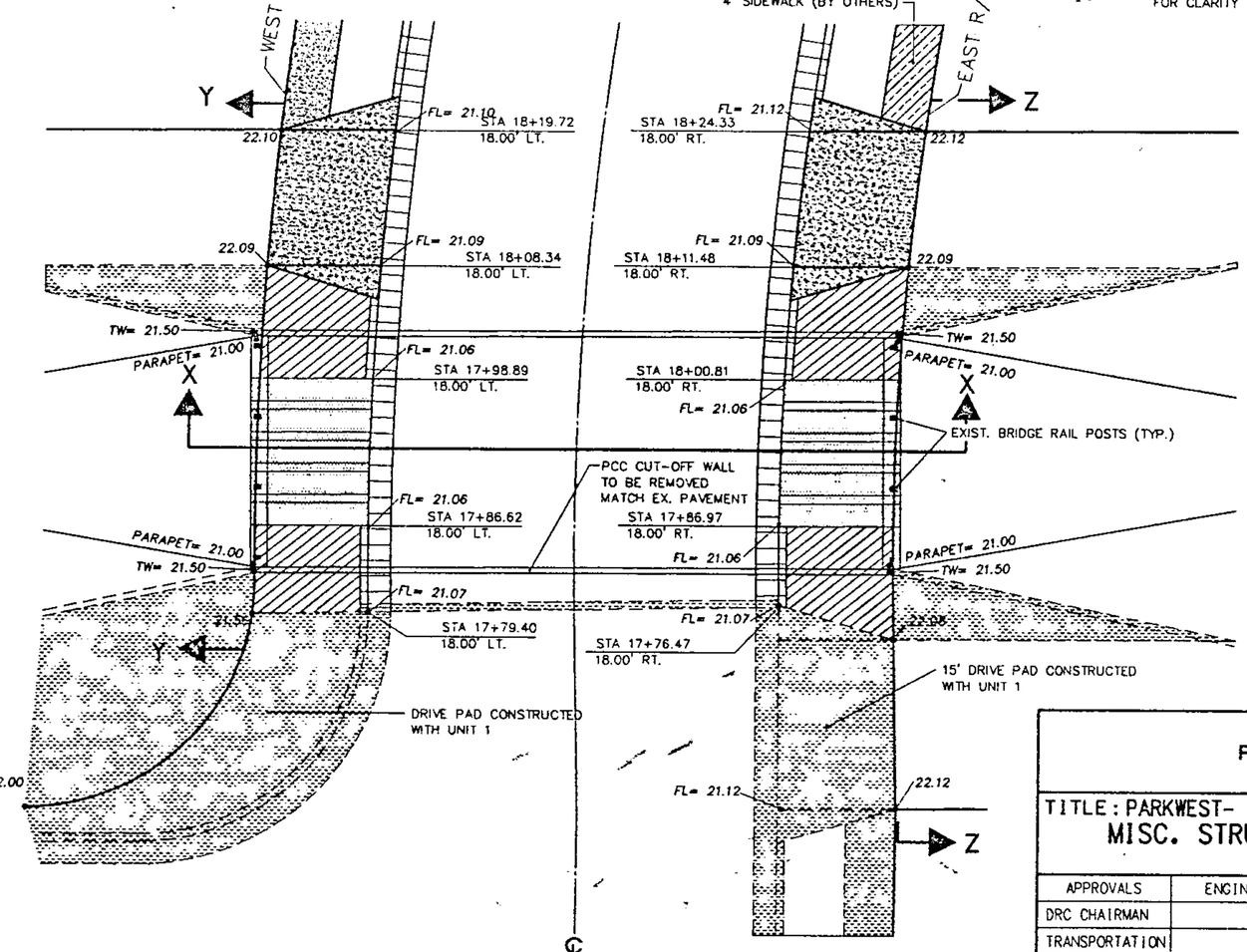


WEIR CAPACITY
1/2 Q_{100} =32.75 cfs
Q cap WEIR
INVERT= 21.50
d= 0.58'
Q= 32.8 cfs
Q_{100} < Q cap
100 YR. WSEL= 22.08

SIDEWALK CULVERT CAPACITY
1/2 Q_2 =10.5 cfs
Q cap WEIR:
Q_1= 0.5'
Q_2= 2.0 cfs
Q_3= 2.1 cfs / CULVERT
Q_2 < Qcap
USE 5 SIDEWALK CULVERTS / SIDE

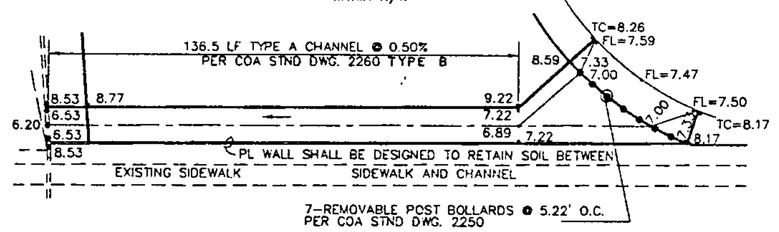
EAST R/W LINE
SECTION Z-Z
N.T.S.

NOTE:
1. DIMENSIONS AND ELEVATIONS ARE GIVEN ALONG THE R/W LINE
2. BRIDGE RAILING NOT SHOWN FOR CLARITY

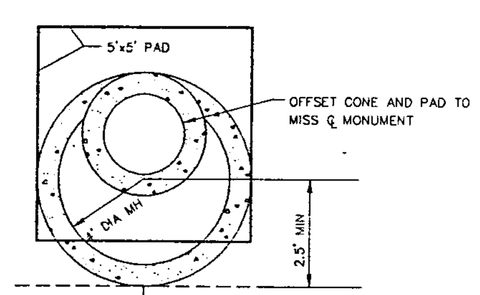


LADERA CHANNEL CROSSING PLAN VIEW
NTS

NOTE:
1. SEE SECTIONS Y-Y & Z-Z FOR R/W STATIONS & OFFSETS



SADDLEBROOK RUNDOWN
N.T.S.



MH. #'s 29,30,31,32,43,45 & 47

SPECIAL MH. DETAIL
N.T.S.

LEGEND

- EXIST. CONCRETE
- STANDARD CURB & GUTTER
- 5" PCC PAVING PER C.O.A. STD. DWG. 2405
- 5= SIDEWALK CULVERTS EACH SIDE PER C.O.A. STD. DWG. 2236
- 12' WIDE DRIVE PADS PER C.O.A. STD. DWG. 2425
- 4' SIDEWALK THIS CONTRACT
- 4' SIDEWALK BY OTHERS

BENCH MARKS

ACS BRASS TABLET 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. & OURAY RD. NW. GO WEST ON OURAY RD. ABOUT 0.7 MI. TO THE END OF PAVEMENT. CONTINUE WEST ON THE DIRT RD. TO THE TOP OF THE DETENTION DAM. ALONG THE NORTH BANK OF THE DAM 0.6 MI. TO A DIRT CROSS RD., TURN RIGHT. GO NORTH ON THE DIRT RD. 0.5 MI.
SLO 1929 ELEVATION = 5334.50 FEET

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE
1	COMMUNITY SCIENCES	

CONTRACTOR
WORK STAKED BY
STAKING ACCEPTANCE BY
FIELD VERIFICATION BY
DRAWINGS CORRECTED BY
RECORDED BY
DATE
DATE
DATE
DATE
DATE
NO.

MICRO-FILM INFORMATION

ENGINEER'S SEAL
CHARLES D. HUGHES 11674 REGISTERED PROFESSIONAL ENGINEER
5-25-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	B.O.M.
			A.M.
			J.D.H.

DESIGNED BY B.O.M. DATE MARCH, 1995
DRAWN BY A.M. DATE MARCH, 1995
CHECKED BY J.D.H. DATE MARCH, 1995

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: PARKWEST- UNIT 5
MISC. STRUCTURAL AND DRAINAGE DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A RWE	6-5-95
TRANSPORTATION			WASTE WATER	N/A RWE	6-5-95
HYDROLOGY	[signature]	9-19-95	A.M.A.F.C.A.		

PROJECT NO. 4886.94
MAP NO. G, H9
SHEET 39 OF 39

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000

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05SHT