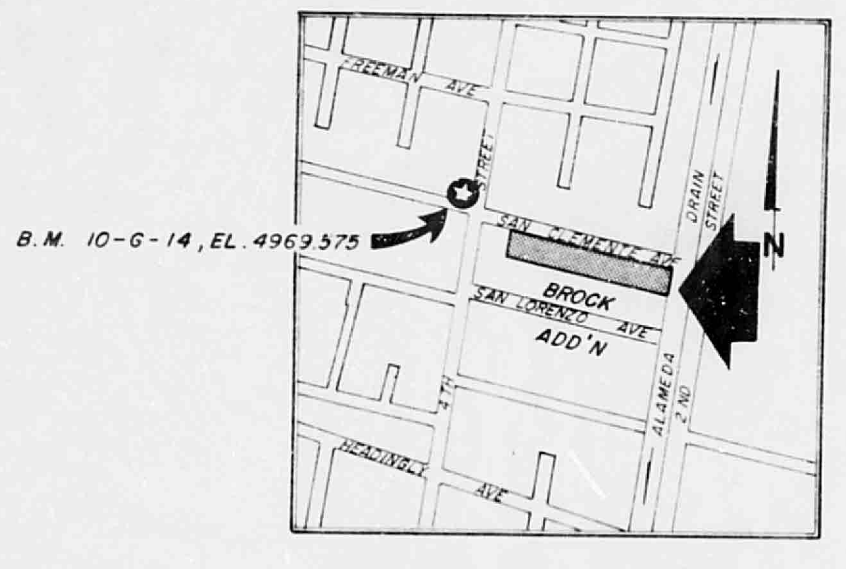
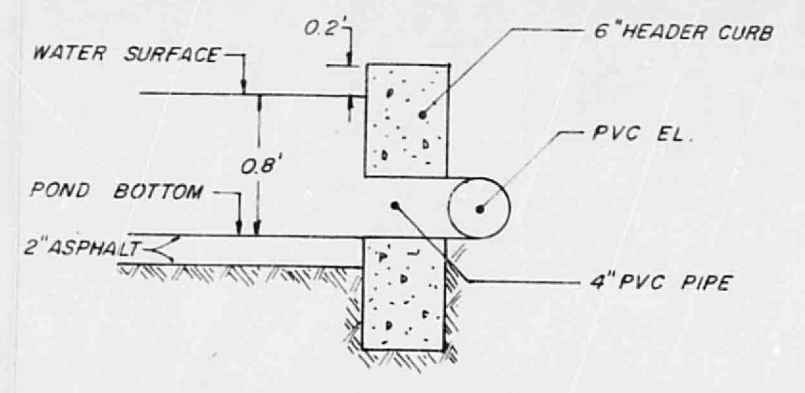
HYDROLOGY

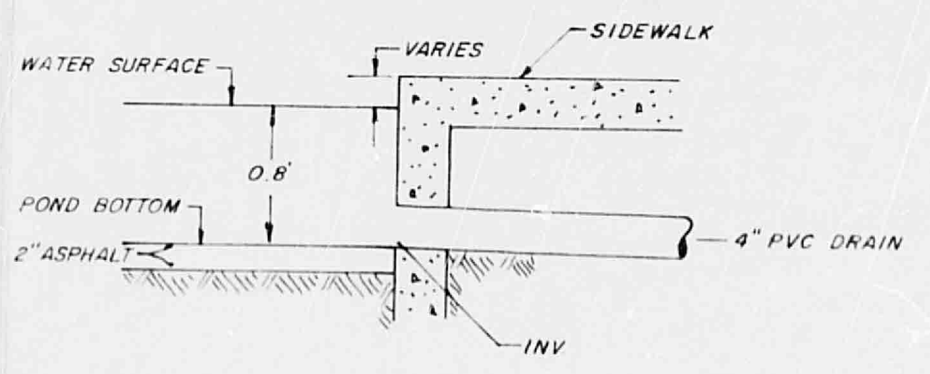
G14/D6
TWO PLANS



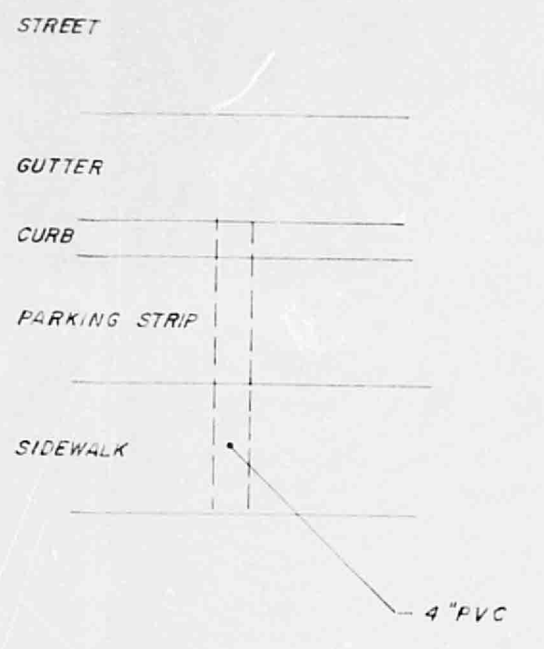
LOCATION MAP (G-14-Z)



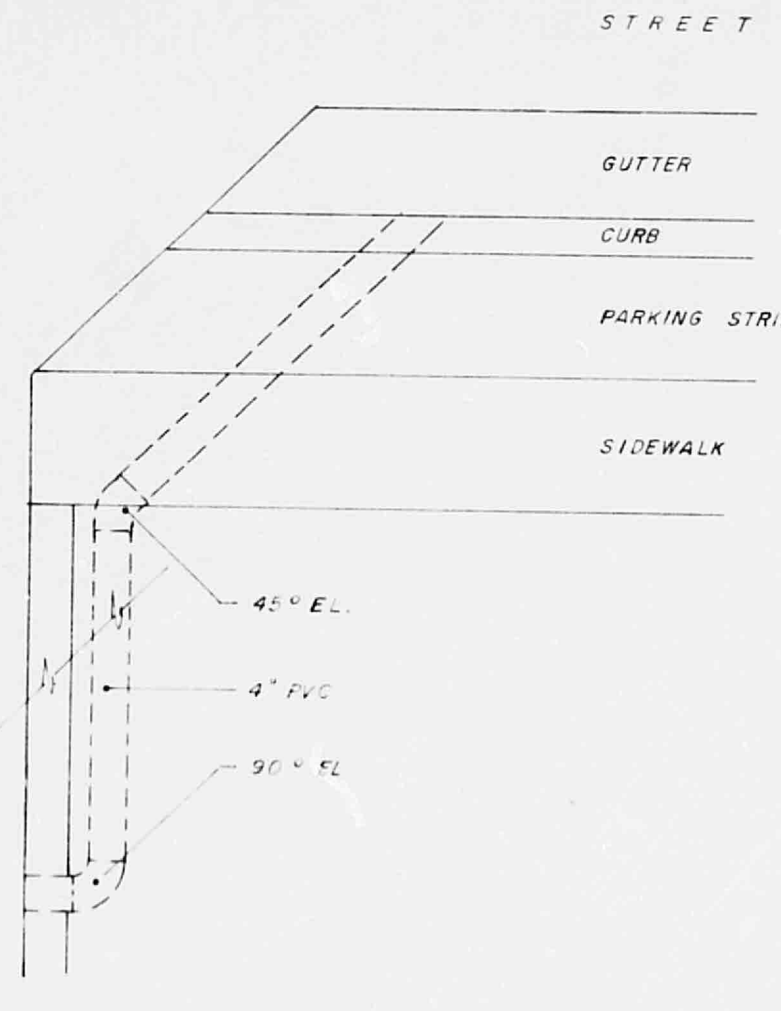
TYPICAL CROSS-SECTION REAR PONDS - NTS



TYPICAL CROSS-SECTION FRONT POND - NTS



TYPICAL PLAN FRONT POND DRAIN PIPE



TYPICAL PLAN REAR POND DRAIN PIPE

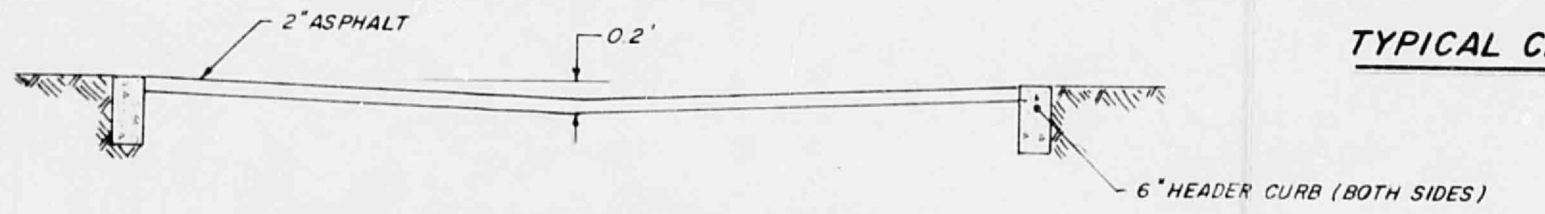
CASAS SOLANAS II DRAINAGE PLAN

Casas Solanas II is in a sensitive drainage area, in the North Valley of Albuquerque, adjacent to the Alameda Drain. The slope varies from about .75 to 2%. The street, curb, gutter and drainage design was done by the Wilson Co. in a paving assessment district. Approval has been obtained by the Wilson Co. from the M R G C D to discharge the flood waters into the Alameda drain. The site plat was approved by the S R B on Sept. 3, 1981 for the 7 each 8 plex apartments. No building is planned for lot 1 at this time.

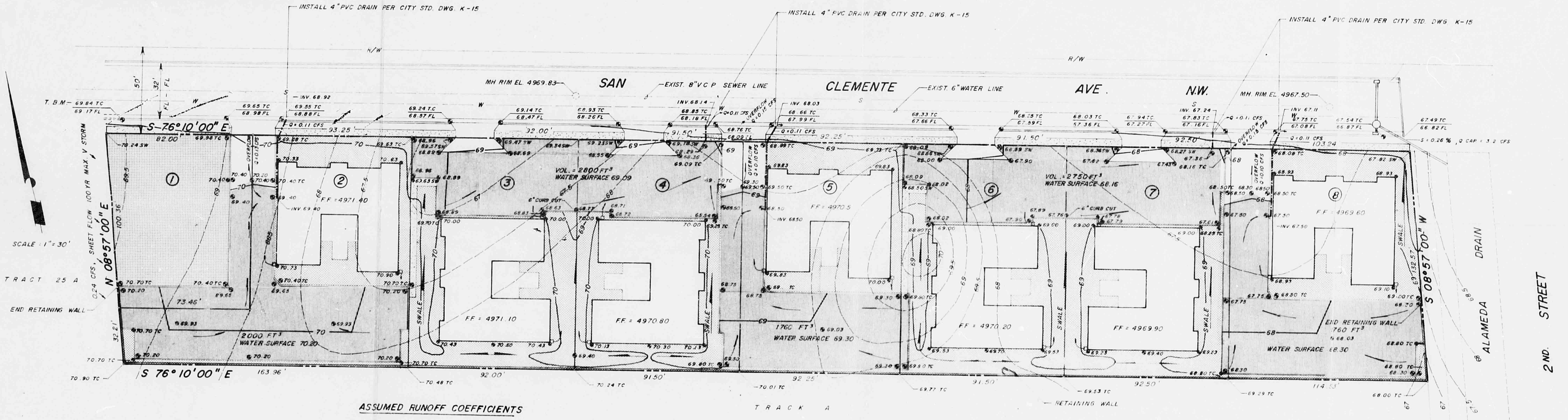
As a result of the street design, the only flow onto this property is from the west 100 foot boundary. An unpaved, Star Oil Co. gas station, area has an approximate 50' strip which drains in sheet flow across this site. No elevation changes at any of the boundaries, except for the curb side, are proposed by this design.

In order to accommodate this density of development, it is necessary to change the elevation of this property, by engineered fill, to ensure gravity flow into San Clemente Ave. and the Alameda drain. As a consequence, the traditional flow onto the rear yards of homes abutting this property to the south will cease; however, the elevations at the property line remain unchanged.

The proposed drainage plan for this property is to restrict the flow to the 100 year maximum volume flood, i.e. 2.4 inches in 6 hours. Each of the ponding volumes is contained within the paved parking area. Each pond has a defined emergency overflow which will flow onto the driveway and into San Clemente Av. Thus there is no unpaved overflow area. Each pond is positively drained by a 4 inch PVC drain, to be installed in accordance with City Std. Detail K-15. This system of flood protection will provide some minor inconvenience to the building occupants but is believed to be the only feasible approach to achieve this type of building density and still comply with the A M A F C A objectives.



TYPICAL REAR POND OVERFLOW - NTS



RECEIVED
DEC 15 1981
ENGINEERING

ASSUMED RUNOFF COEFFICIENTS

C UNDEV. = 0.40

C IMPERVIOUS = 0.90 (0.10 DEPRESSION PONDING & INFILTRATION)

C LANDSCAPED = 0.20

C COMP $= \dfrac{\Sigma_{i=1}^{n} C_i A_i}{\Sigma_{i} = A_i}$

TOTAL AREA 2.239 AC.

ASSUMED INTENSITIES INCHES / HR.

100 YR MAX. Q; I = 5.4 FOR 10 MIN.

100 YR MAX. V; I = 0.4 FOR 6 HRS.

50 YR MAX. V; I = 0.33 FOR 6 HRS.

1 YR MAX. Q; I = 1.62 FOR 10 MIN.

LOT NO.		2	3	4	5	6	7	8
IMPERVIOUS AREA	FT²	11,593	8,288	9,049	9,670	8,301	8,539	10,948
LANDSCAPED AREA	FT²	3,037	3,864	3,037	2,515	3,785	3,679	3,435
TOTAL AREA	FT²	14,630	12,152	12,086	12,185	12,086	12,218	14,383
C UNDEVELOPED		0.40	0.40	0.40	0.40	0.40	0.40	0.40
C DEVELOPED		0.75	0.68	0.72	0.76	0.68	0.69	0.73
ΔC		0.35	0.28	0.32	0.36	0.28	0.29	0.33
POND. REQUIRED	FT³	1810	1363	1436	1528	1356	1391	1732
POND. PROVIDED	FT³	2000	2800		1760	2750		1760
100 YR. UNDEV. Q.	CFS	0.72	0.60	0.60	0.60	0.60	0.61	0.71
100 YR. DEV. Q.	CFS	1.36	1.02	1.08	1.15	1.02	1.05	1.30
100 YR UNDEV. V.	FT³	1080	864	864	864	864	864	1080
100 YR DEV. V	FT³	1970	1400	1490	1555	1404	1425	1917
50 YR UNDEV. V	FT³	900	720	720	720	720	720	900
50 YR DEV. V	FT³	1810	1363	1436	1528	1356	1391	1732
1 YR UNDEV. Q	CFS	0.22	0.18	0.18	0.18	0.18	0.18	0.21

$Q_{DIS.} = C_D\ A\ \sqrt{2gh}$
$C_D = 0.5$ (ASSUMED)
$A = 0.09\ FT^2$ (4" DIA)
} SHORT PIPE

$Q_{DIS} = 0.35\sqrt{h} = 0.35\sqrt{0.633} = 0.28$ CFS.

Q_{DIS} LONG PIPES WITH TWO EL'S ASSUMED

1/2 OF ORIFICE FLOW = 0.14

$h = 0.633$ FT ALL PONDS

OVERFLOW DEPTH.

$Q = C_w\ L h^{3/2}$

$C_w = 3.33$ (ASSUMED)

FOR TRI. SECTION AVERAGE h OVER L WAS USED.

REAR PONDS @ 20'L AND 0.1'h CAN HANDLE 2.11 CFS; 100 YR Q = 1.36 CFS (POND 2)

FRONT PONDS FOR L = 10'; h = 0.16' TO HANDLE 100 YR Q.

LEGAL DESCRIPTION : GIBSON TRACT A, PORTION OF TRACT 25 a, M.R.G.C.D. MAP 33
ALBUQUERQUE, NEW MEXICO.

BENCH MARK : CITY ELEV. B.M. 10-G-14 ELEV. 4969.575, AT NW CORNER OF
SAN CLEMENTE & 4th STREET.

SURVEYED BY : SOUTHWEST SURVEYING CO., INC.

SOIL TYPE : GILA - LOS GRIEGOS QUAD.

FLOOD HAZARD MAP : 350002 0005 NOT IN HAZARD AREA
ASSUMED TIME OF CONCENTRATION 10 MIN. - SOP FOR SMALL AREAS
NO EXISTING STRUCTURES ON OR WITHIN 15' OF THIS PROPERTY.

RUNOFF CALCULATIONES

$Q = C I A$

WHERE Q = QUANTITY IN CFS
C = RUNOFF COEFF.
I = RAINFALL INTENSITY IN IN/HR.
A = AREA IN ACRES

$V = C \frac{I}{12}\, t\, A$

WHERE V = VOLUME IN FT³
C = RUNOFF COEFF.
I = RAINFALL INT. IN IN/HR.
t = TIME IN HRS.
A = AREA IN FT²

[illegible] FOR DRAINAGE
Jim Funk
SIGNATURE
12/15/81
DATE
CE/Hyd
TITLE
CONTINGENCIES

NOTE : ALL FILL TO BE PLACED IN 8" MAX. LIFTS WITH OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MODIFIED PROCTOR DENSITY OF 95%

ALL GRADING TO BE STRAIGHT LINE BETWEEN SPOT ELEVATIONS.

LEGEND :

▨	POND
x	EXISTING ELEVATION
•	PROPOSED ELEVATION
▨	LANDSCAPED ~~UNPAVED~~ AREA
↲	DOWN SPOUT
- - -	EXISTING CONTOUR
━	PROPOSED CONTOUR
- - -	EXISTING
—	PROPOSED

NO. 2934
CARROLL A. COONCE

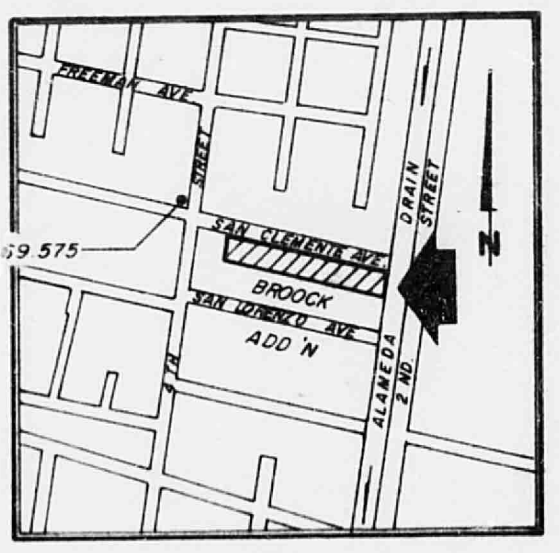
G14/D6

C. A. COONCE & ASSOC.

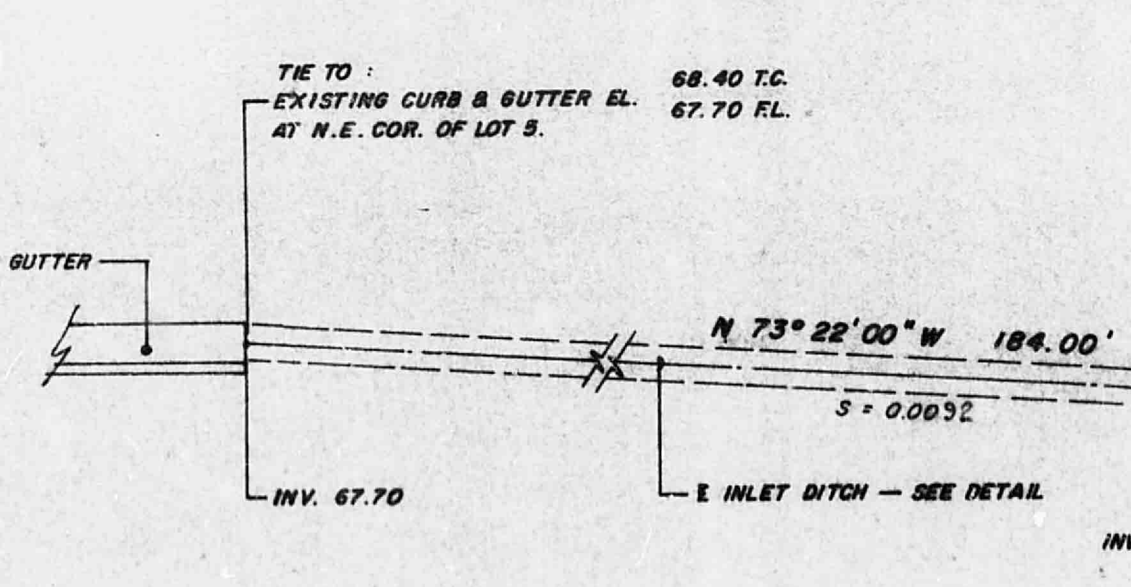
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

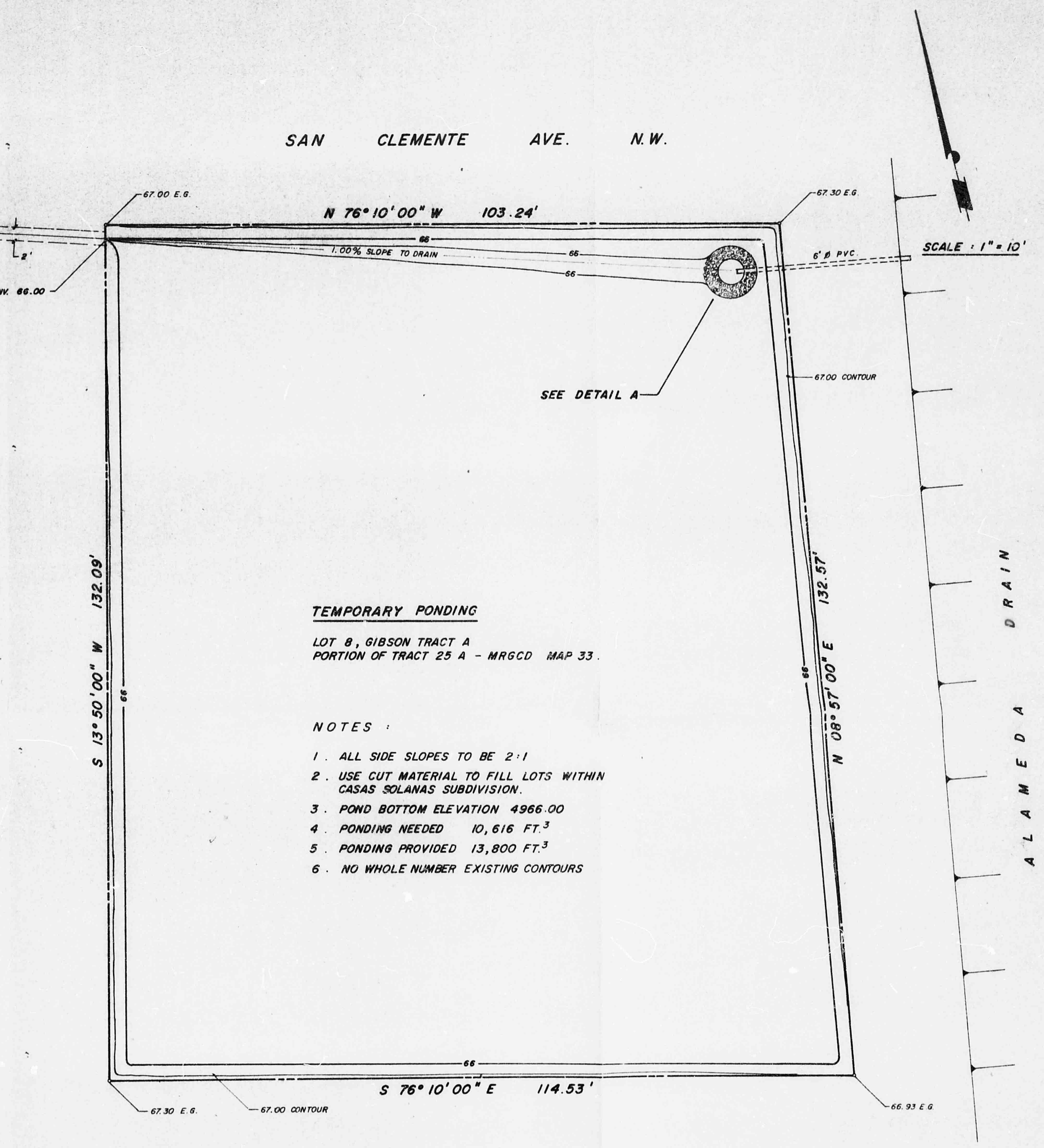
TITLE	DRAINAGE & GRADING PLAN					
PROJECT	CASAS SOLANAS II					
DATE	8-21-81	REVISED	9-24-81			SHEET 1 OF
DRAWN	V.M.	10-21-81				
CHECKED	C.A.C.	10-30-81				

BRUNING 44-132 40720



LOCATION MAP (G-14-Z)


TIE TO :
EXISTING CURB & GUTTER EL. 68.40 T.C.
AT N.E. COR. OF LOT 5. 67.70 F.L.
EXISTING CURB & GUTTER
N 73° 22'00" W 184.00'
S = 0.0092
2'
INV. 67.70
℄ INLET DITCH — SEE DETAIL

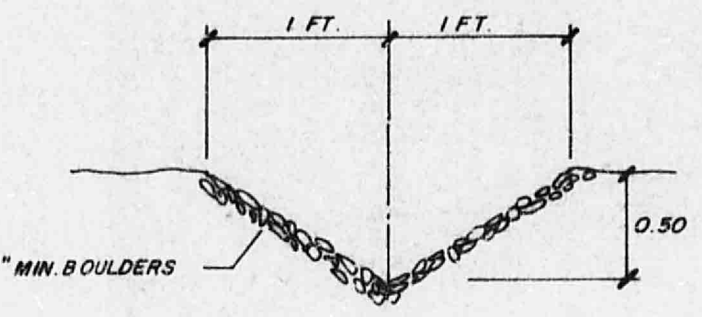


TEMPORARY PONDING

LOT 8, GIBSON TRACT A
PORTION OF TRACT 25 A - MRGCD MAP 33.

NOTES :

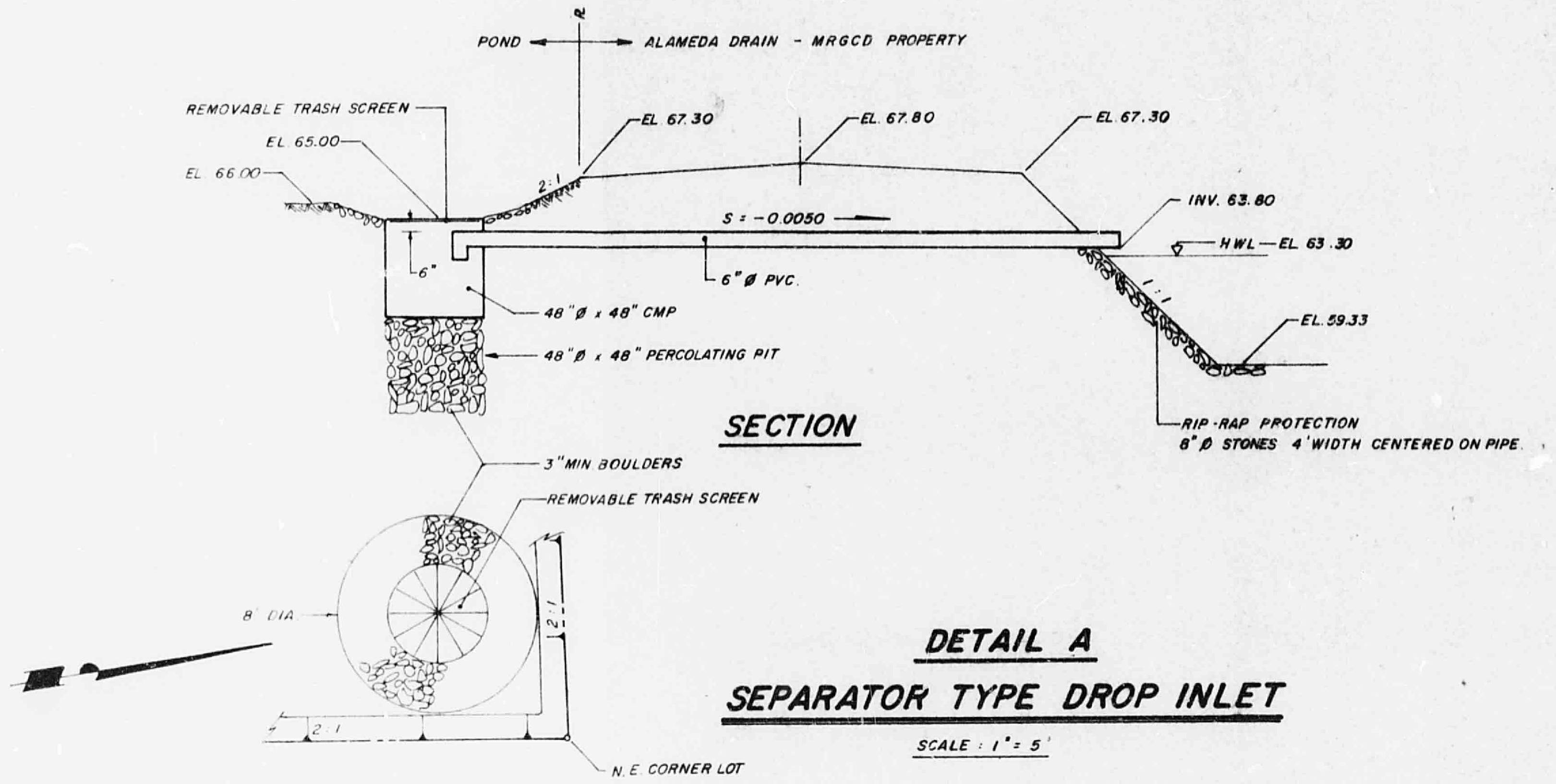
1. ALL SIDE SLOPES TO BE 2:1
2. USE CUT MATERIAL TO FILL LOTS WITHIN CASAS SOLANAS SUBDIVISION.
3. POND BOTTOM ELEVATION 4966.00
4. PONDING NEEDED 10,616 FT.^{3}
5. PONDING PROVIDED 13,800 FT.^{3}
6. NO WHOLE NUMBER EXISTING CONTOURS



INLET DITCH

FROM EXISTING CURB & GUTTER AT EAST R. OF LOT 5 TO WEST R. OF LOT 8.

RECEIVED
JAN 13 1983
ENGINEERING



DETAIL A
SEPARATOR TYPE DROP INLET
SCALE : 1" = 5'

G14/D6

C.A. COONCE & ASSOC.
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

TITLE	TEMPORARY PONDING				
PROJECT	CASAS SOLANAS II.				
DATE	11-9-82	REVISED	02-12-83		
DRAWN	V.M.				
CHECKED	C.A.C.				SHEET 1 OF 1

G14-D6

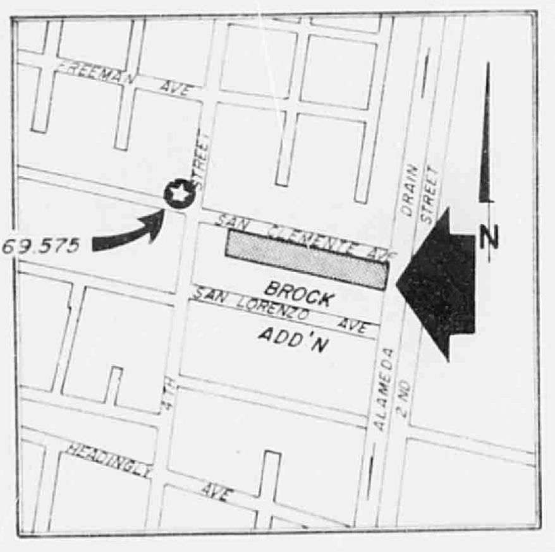
2 PLANS

HYDROLOGY

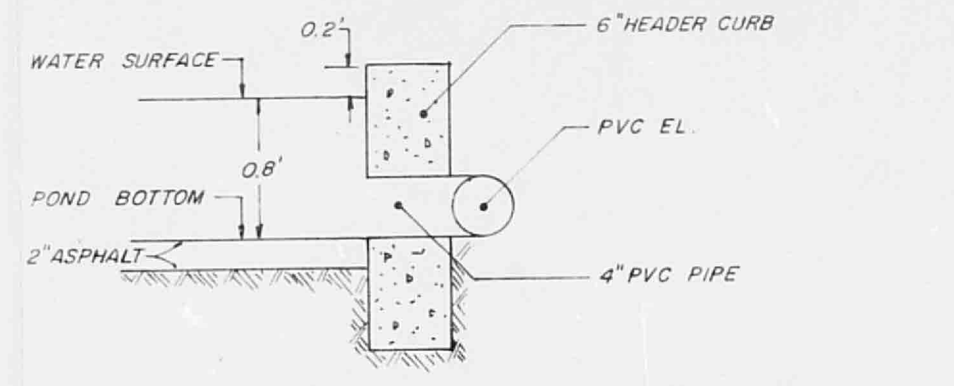
G14/D6
TWO PLANS

G14-D6

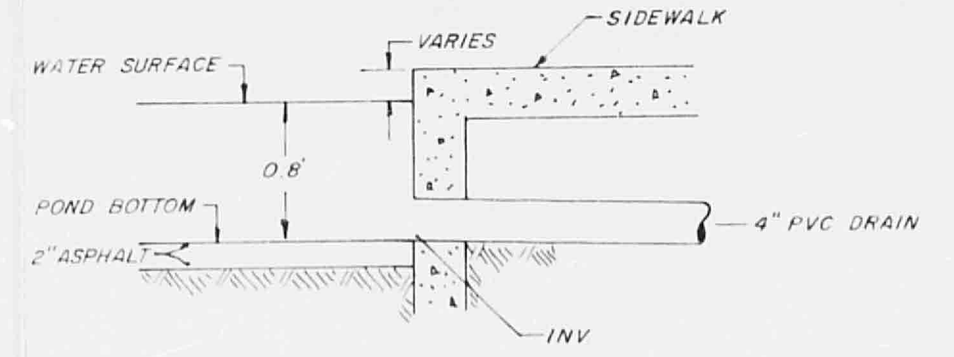
2 PLANS



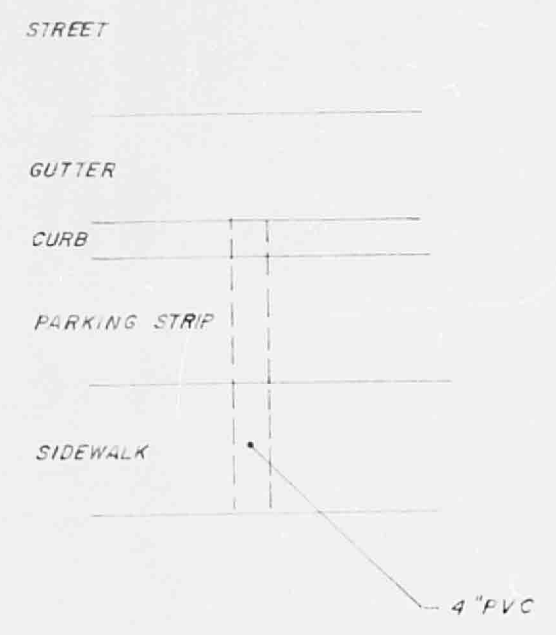
LOCATION MAP (G-14-Z)



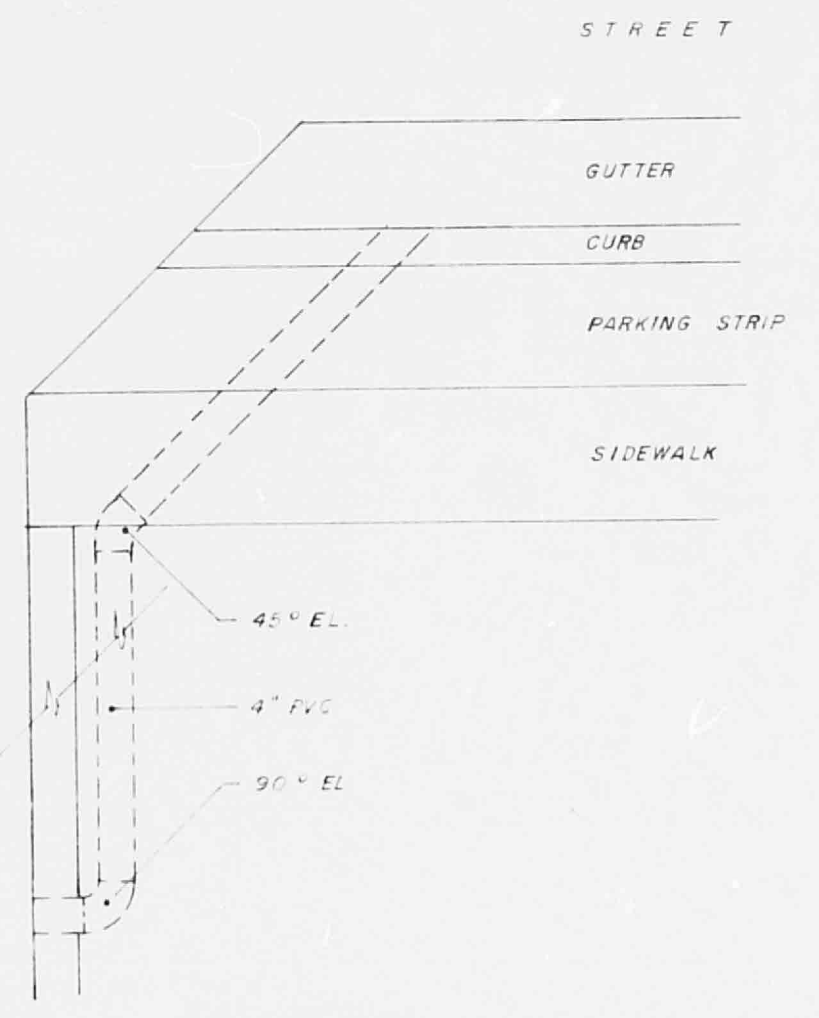
TYPICAL CROSS-SECTION REAR PONDS - NTS



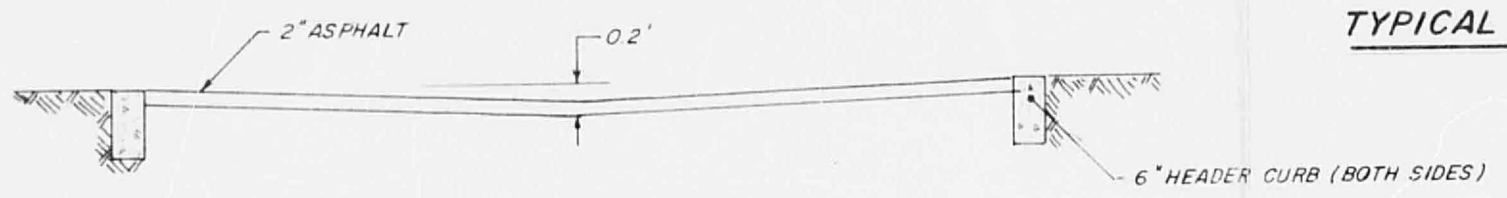
TYPICAL CROSS-SECTION FRONT POND - NTS



TYPICAL PLAN FRONT POND DRAIN PIPE



TYPICAL PLAN REAR POND DRAIN PIPE



TYPICAL REAR POND OVERFLOW - NTS

CASAS SOLANAS II DRAINAGE PLAN

Casas Solanas II is in a sensitive drainage area, in the North Valley of Albuquerque, adjacent to the Alameda Drain. The slope varies from about .75 to 2%. The street, curb, gutter and drainage design was done by the Wilson Co. in a paving assessment district. Approval has been obtained by the Wilson Co. from the M R G C D to discharge the flood waters into the Alameda drain. The site plat was approved by the S R B on Sept. 3, 1981 for the 7 each 8 plex apartments. No building is planned for lot 1 at this time.

As a result of the street design, the only flow onto this property is from the west 100 foot boundary. An unpaved, Star Oil Co. gas station, area has an approximate 50' strip which drains in sheet flow across this site. No elevation changes at any of the boundaries, except for the curb side, are proposed by this design.

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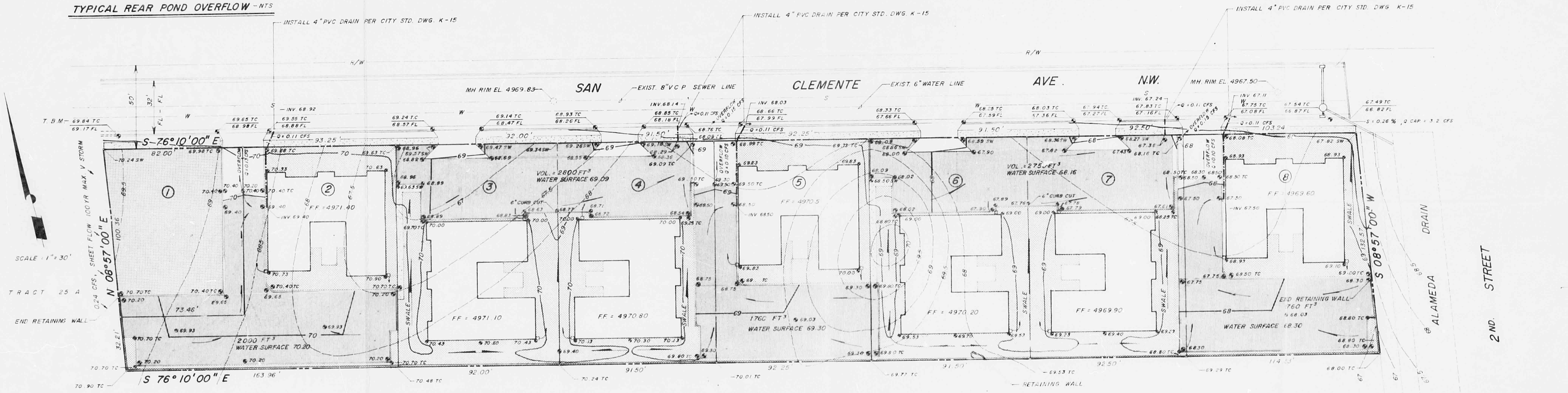

T R A C K A

B R O C K A D D I T I O N

RECEIVED
DEC 15 1981
ENGINEERING

APP[illegible] FOR DRAINAGE
12/15/81
DATE
Jim Zink
SIGNATURE
CE/Hyd
TITLE
CONTINGENCIES

ASSUMED RUNOFF COEFFICIENTS

C UNDEV. = 0.40

C IMPERVIOUS = 0.90 (0.10 DEPRESSION PONDING & INFILTRATION)

C LANDSCAPED = 0.20

$C_{COMP} = \frac{\Sigma_{i=1}^{n} C_i A_i}{\Sigma_{i} = A_i}$

TOTAL AREA 2.239 AC.

ASSUMED INTENSITIES INCHES / HR.

100 YR MAX. Q; I = 5.4 FOR 10 MIN.

100 YR MAX. V; I = 0.4 FOR 6 HRS.

50 YR MAX. V; I = 0.33 FOR 6 HRS.

1 YR MAX. Q; I = 1.62 FOR 10 MIN.

LOT NO		2	3	4	5	6	7	8
IMPERVIOUS AREA	FT²	11,593	8,288	9,049	9,670	8,301	8,539	10,948
LANDSCAPED AREA	FT²	3,037	3,864	3,037	2,515	3,785	3,679	3,435
TOTAL AREA	FT²	14,630	12,152	12,086	12,185	12,086	12,218	14,383
C UNDEVELOPED		0.40	0.40	0.40	0.40	0.40	0.40	0.40
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ΔC		0.35	0.28	0.32	0.36	0.28	0.29	0.33
POND REQUIRED	FT³	1810	1363	1436	1528	1356	1391	1732
POND PROVIDED	FT³	2000	2800		1760	2750		1760
100 YR. UNDEV. Q.	CFS	0.72	0.60	0.60	0.60	0.60	0.61	0.71
100 YR. DEV. Q.	CFS	1.36	1.02	1.08	1.15	1.02	1.05	1.30
100 YR UNDEV. V	FT³	1080	864	864	864	864	864	1080
100 YR DEV. V	FT³	1970	1400	1490	1555	1404	1425	1917
50 YR UNDEV. V	FT³	900	720	720	720	720	720	900
50 YR DEV. V	FT³	1810	1363	1436	1528	1356	1391	1732
1 YR UNDEV. Q	CFS	0.22	0.18	0.18	0.18	0.18	0.18	0.21

$Q_{DIS.} = C_D\ A\ \sqrt{2gh}$
$C_D = 0.5$ (ASSUMED)
$A = 0.09\ FT^2$ (4" DIA) } SHORT PIPE

$Q_{DIS} = 0.35\sqrt{h} = 0.35\sqrt{0.633} = 0.28$ CFS

Q_{DIS} LONG PIPES WITH TWO EL'S ASSUMED

1/2 OF ORIFICE FLOW = 0.14

$h = 0.633$ FT ALL PONDS

OVERFLOW DEPTH

$Q = C_w\ L h^{3/2}$

$C_w = 3.33$ (ASSUMED)

FOR TRI. SECTION AVERAGE h OVER L WAS USED.

REAR PONDS @ 20'L AND 0.1'h CAN HANDLE 2.11 CFS; 100 YR Q = 1.36 CFS (POND 2)

FRONT PONDS FOR L = 10'; h = 0.16' TO HANDLE 100 YR. Q.

RUNOFF CALCULATIONES

$Q = C I A$

WHERE Q = QUANTITY IN CFS
C = RUNOFF COEFF.
I = RAINFALL INTENSITY IN IN/HR.
A = AREA IN ACRES

$V = C \frac{I}{12} t\ A$

WHERE V = VOLUME IN FT³
C = RUNOFF COEFF.
I = RAINFALL INT. IN IN/HR.
t = TIME IN HRS.
A = AREA IN FT²

LEGAL DESCRIPTION : GIBSON TRACT A, PORTION OF TRACT 25 a, M.R.G.C.D. MAP 33, ALBUQUERQUE, NEW MEXICO.

BENCH MARK : CITY ELEV. B.M. 10-G-14 ELEV. 4969.575, AT NW CORNER OF SAN CLEMENTE & 4th STREET.

SURVEYED BY : SOUTHWEST SURVEYING CO., INC.

SOIL TYPE : GILA - LOS GRIEGOS QUAD.

FLOOD HAZARD MAP : 350002 0005 NOT IN HAZARD AREA
ASSUMED TIME OF CONCENTRATION 10 MIN. - SOP FOR SMALL AREAS
NO EXISTING STRUCTURES ON OR WITHIN 15' OF THIS PROPERTY.

NOTE : ALL FILL TO BE PLACED IN 8" MAX. LIFTS WITH OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MODIFIED PROCTOR DENSITY OF 95%

ALL GRADING TO BE STRAIGHT LINE BETWEEN SPOT ELEVATIONS.

LEGEND :

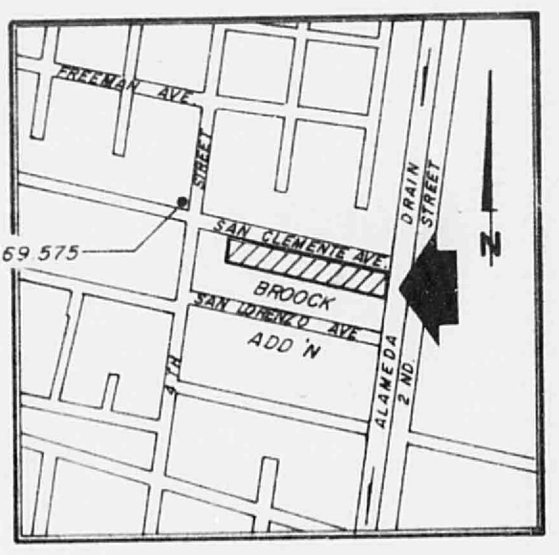
▨	POND
x	EXISTING ELEVATION
●	PROPOSED ELEVATION
▨	LANDSCAPED ~~UNPAVED~~ AREA
⌐	DOWN SPOUT
- - -	EXISTING CONTOUR
——	PROPOSED CONTOUR
- - -	EXISTING
——	PROPOSED

No. 2934
CARROLL A. COONCE

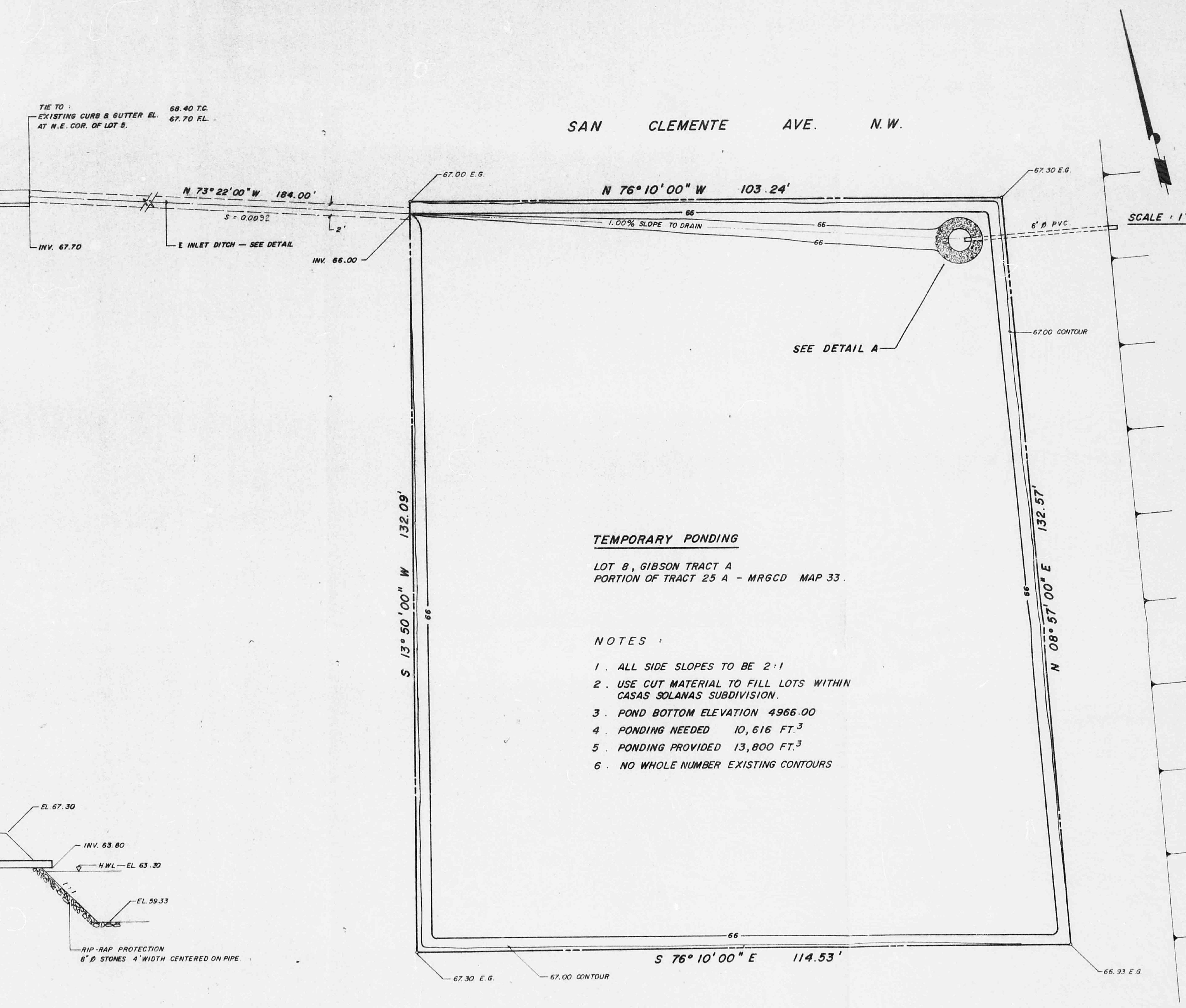
G14/D6

C. A. COONCE & ASSOC.
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

TITLE	DRAINAGE & GRADING PLAN		
PROJECT	CASAS SOLANAS II		
DATE	8-21-81	REVISED	12-14-81
DRAWN	V.M.	11-22-81	
CHECKED	C.A.C.	11-30-81	
SHEET 1 OF			



LOCATION MAP (G-14-Z)

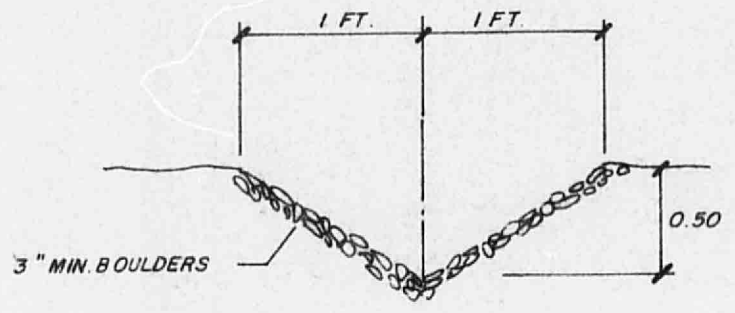


TEMPORARY PONDING

LOT 8, GIBSON TRACT A
PORTION OF TRACT 25 A - MRGCD MAP 33.

NOTES :

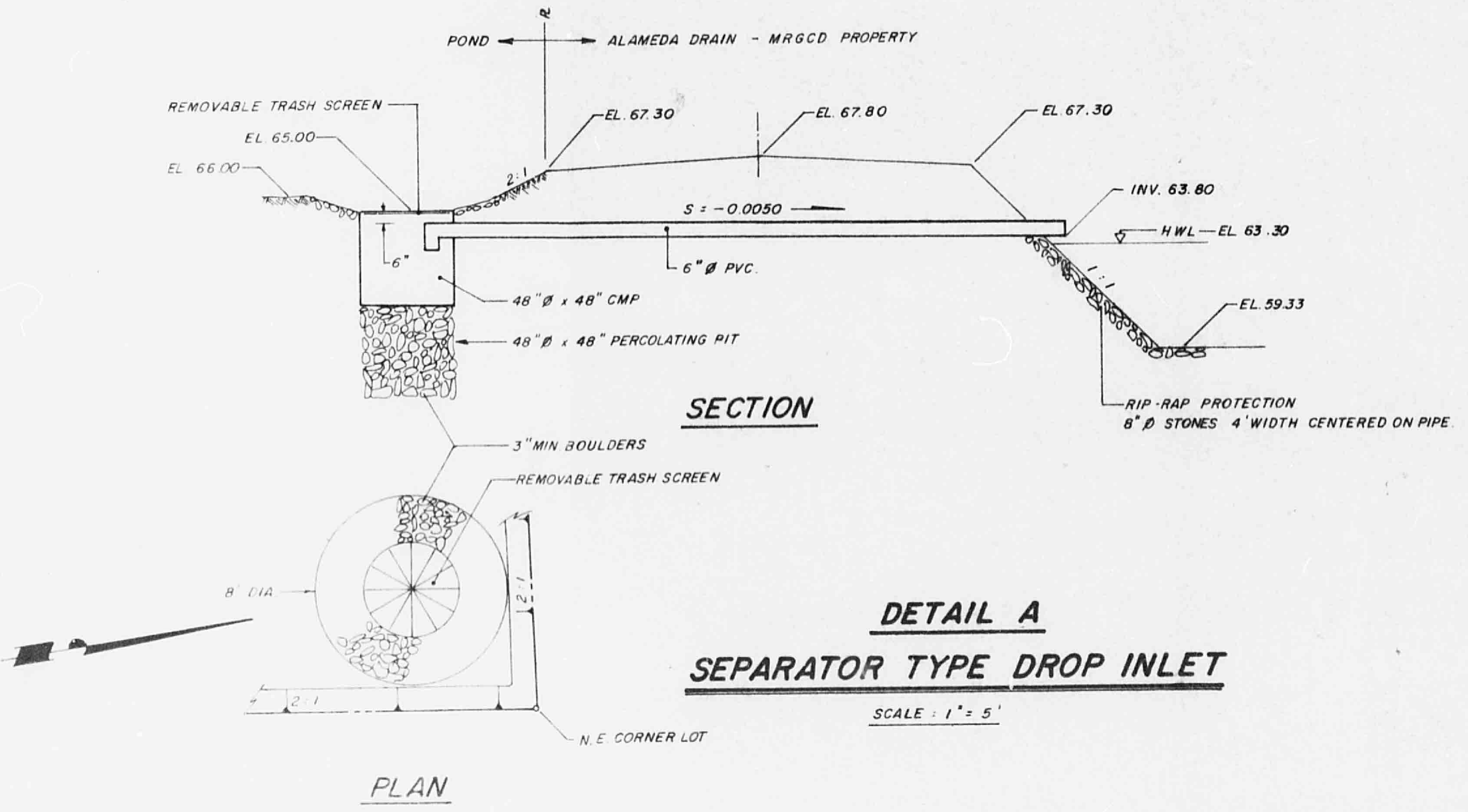
1. ALL SIDE SLOPES TO BE 2:1
2. USE CUT MATERIAL TO FILL LOTS WITHIN CASAS SOLANAS SUBDIVISION.
3. POND BOTTOM ELEVATION 4966.00
4. PONDING NEEDED 10,616 FT.^{3}
5. PONDING PROVIDED 13,800 FT.^{3}
6. NO WHOLE NUMBER EXISTING CONTOURS



INLET DITCH

FROM EXISTING CURB & GUTTER AT EAST ℞.
OF LOT 5 TO WEST ℞. OF LOT 8.

RECEIVED
JAN 13 1983
ENGINEERING



DETAIL A

SEPARATOR TYPE DROP INLET

SCALE : 1" = 5'

G14/D6

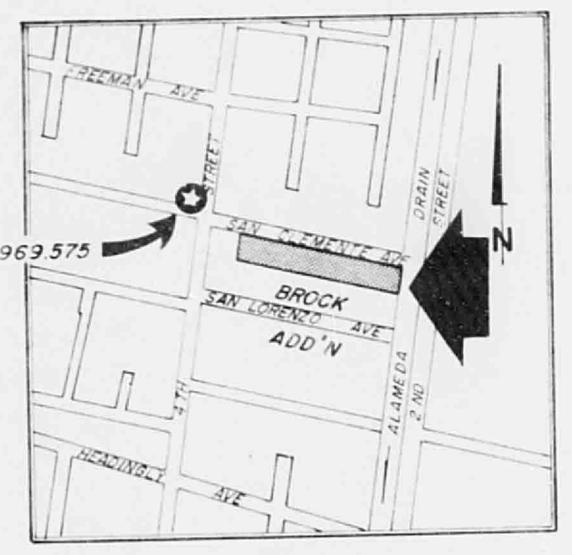
C. A. COONCE & ASSOC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

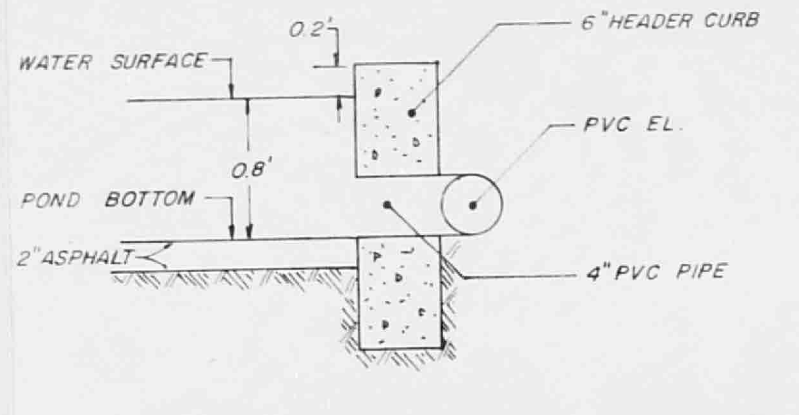
TITLE TEMPORARY PONDING

PROJECT CASAS SOLANAS II.

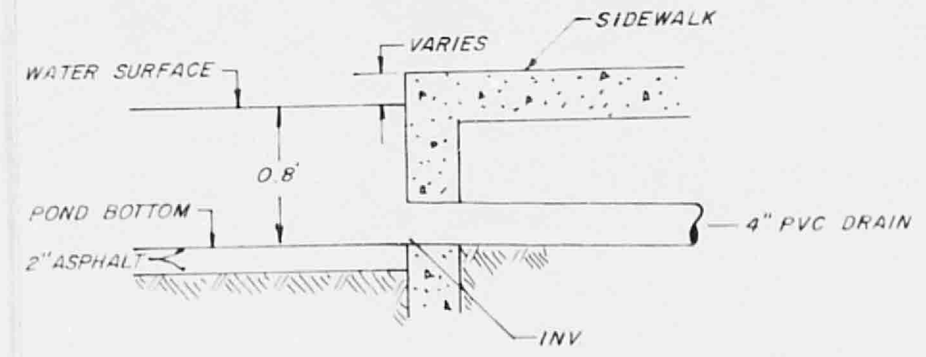
DATE	11-9-82	REVISED	02-12-83		
DRAWN	V. M.				
CHECKED	C.A.C.				SHEET 1 OF 1



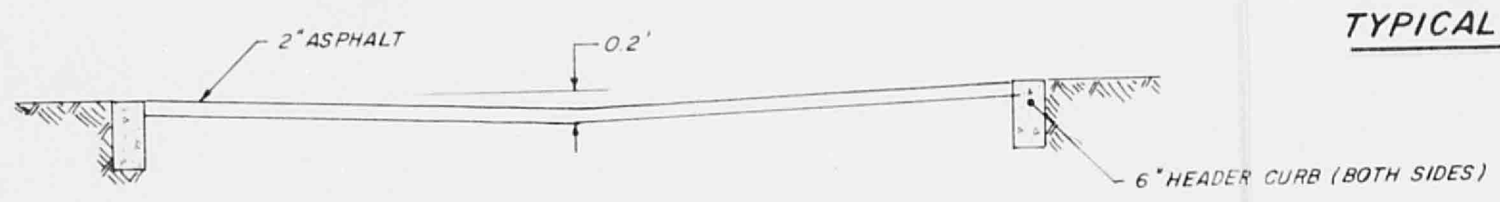
LOCATION MAP (G-14-Z)



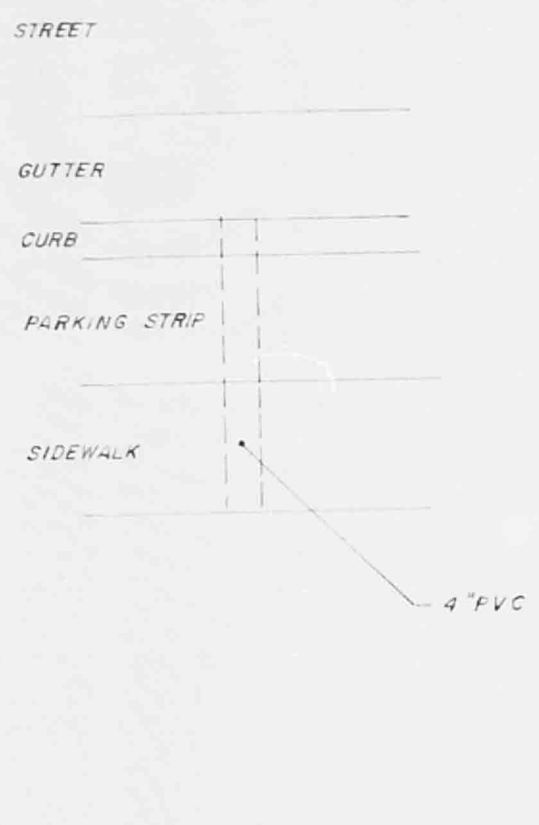
TYPICAL CROSS-SECTION REAR PONDS - NTS



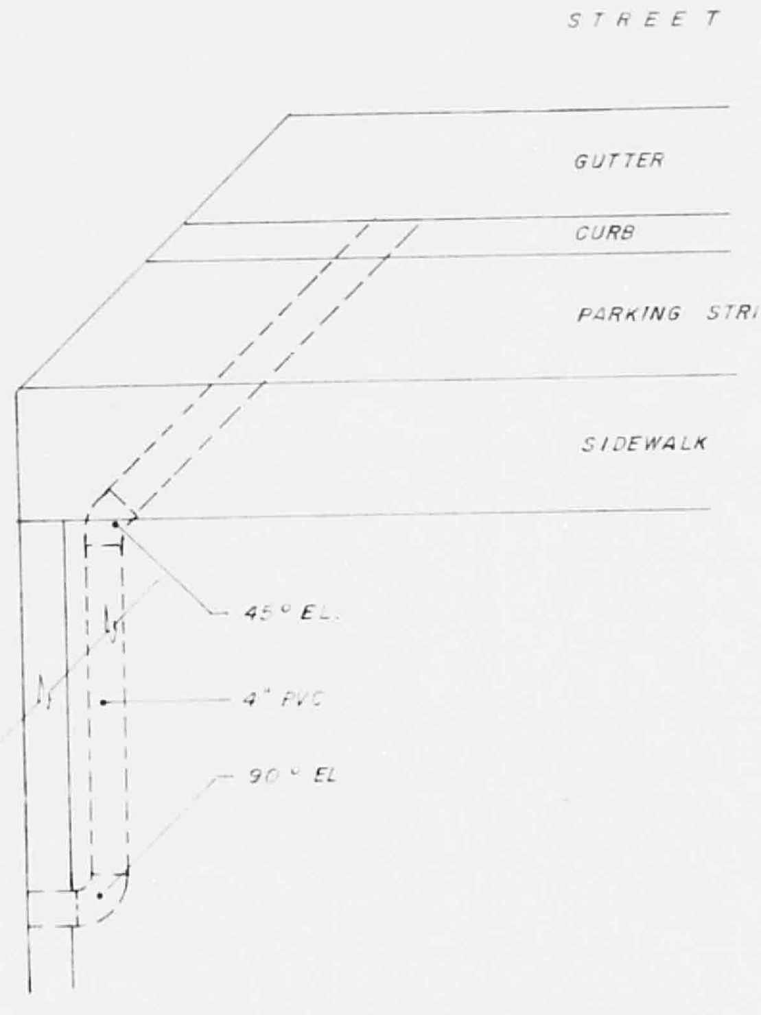
TYPICAL CROSS-SECTION FRONT POND - NTS



TYPICAL REAR POND OVERFLOW - NTS



TYPICAL PLAN FRONT POND DRAIN PIPE



TYPICAL PLAN REAR POND DRAIN PIPE

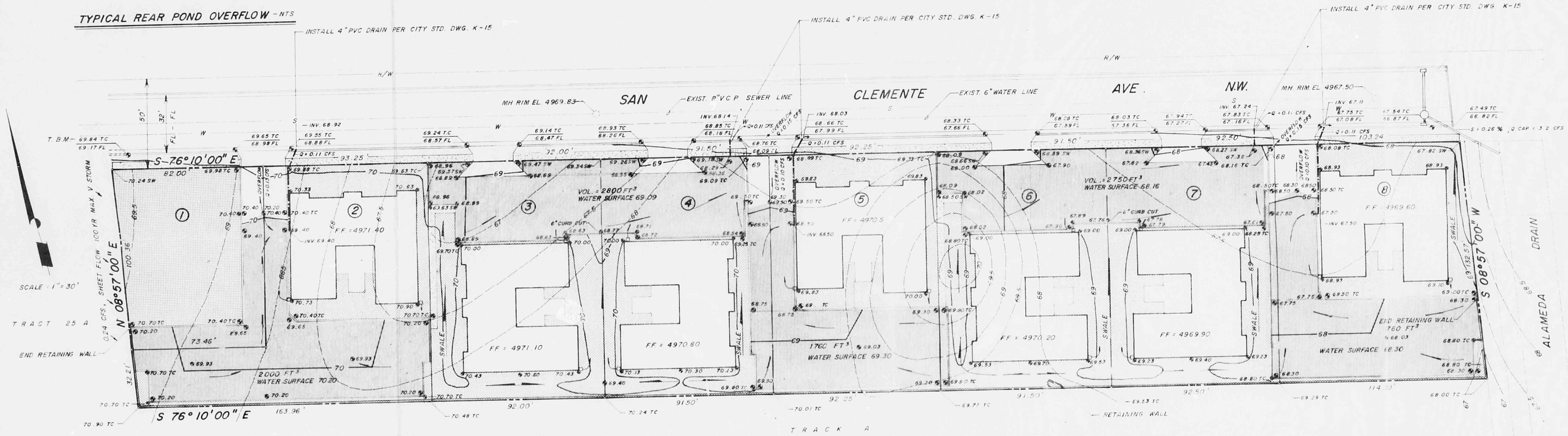
CASAS SOLANAS II DRAINAGE PLAN

Casas Solanas II is in a sensitive drainage area, in the North Valley of Albuquerque, adjacent to the Alameda Drain. The slope varies from about .75 to 2%. The street, curb, gutter and drainage design was done by the Wilson Co. in a paving assessment district. Approval has been obtained by the Wilson Co. from the M R G C D to discharge the flood waters into the Alameda drain. The site plat was approved by the S R B on Sept. 3, 1981 for the 7 each 8 plex apartments. No building is planned for lot 1 at this time.

As a result of the street design, the only flow onto this property is from the west 100 foot boundary. An unpaved, Star Oil Co. gas station, area has an approximate 50' strip which drains in sheet flow across this site. No elevation changes at any of the boundaries, except for the curb side, are proposed by this design.

In order to accommodate this density of development, it is necessary to change the elevation of this property, by engineered fill, to ensure gravity flow into San Clemente Ave. and the Alameda drain. As a consequence, the traditional flow onto the rear yards of homes abutting this property to the south will cease, however, the elevations at the property line remain unchanged.

The proposed drainage plan for this property is to restrict the flow to the 100 year maximum volume flood, i.e. 2.4 inches in 6 hours. Each of the ponding volumes is contained within the paved parking area. Each pond has a defined emergency overflow which will flow onto the driveway and into San Clemente Av. Thus there is no unpaved overflow area. Each pond is positively drained by a 4 inch PVC drain, to be installed in accordance with City Std. Detail K-15. This system of flood protection will provide some minor inconvenience to the building occupants but is believed to be the only feasible approach to achieve this type of building density and still comply with the A M A F C A objectives.



ASSUMED RUNOFF COEFFICIENTS

C UNDEV. = 0.40

C IMPERVIOUS = 0.90 (0.10 DEPRESSION PONDING & INFILTRATION)

C LANDSCAPED = 0.20

$$C\ COMP = \frac{\Sigma_{i=1}^{n} C_i A_i}{\Sigma_i = A_i}$$

TOTAL AREA 2.239 AC

ASSUMED INTENSITIES INCHES / HR.

100 YR MAX. Q; I = 5.4 FOR 10 MIN.
100 YR MAX. V; I = 0.4 FOR 6 HRS.
50 YR MAX. V; I = 0.33 FOR 6 HRS.
1 YR MAX. Q; I = 1.62 FOR 10 MIN.

LOT NO		2	3	4	5	6	7	8
IMPERVIOUS AREA	FT²	11,593	8,288	9,049	9,670	8,301	8,539	10,948
LANDSCAPED AREA	FT²	3,037	3,864	3,037	2,515	3,785	3,679	3,435
TOTAL AREA	FT²	14,630	12,152	12,086	12,185	12,086	12,218	14,383
C UNDEVELOPED		0.40	0.40	0.40	0.40	0.40	0.40	0.40
C DEVELOPED		0.75	0.68	0.72	0.76	0.68	0.69	0.73
ΔC		0.35	0.28	0.32	0.36	0.28	0.29	0.33
POND REQUIRED	FT³	1810	1363	1436	1528	1356	1391	1732
POND PROVIDED	FT³	2000	2800		1760	2750		1760
100 YR UNDEV. Q	CFS	0.72	0.60	0.60	0.60	0.60	0.61	0.71
100 YR DEV. Q	CFS	1.36	1.02	1.08	1.15	1.02	1.05	1.30
100 YR UNDEV. V	FT³	1080	864	864	864	864	864	1080
100 YR DEV. V	FT³	1970	1400	1490	1555	1404	1425	1917
50 YR UNDEV. V	FT³	900	720	720	720	720	720	900
50 YR DEV. V	FT³	1810	1363	1436	1528	1356	1391	1732
1 YR UNDEV. Q	CFS	0.22	0.18	0.18	0.18	0.18	0.18	0.21

$Q_{DIS.} = C_D\ A\ \sqrt{2gh}$
$C_D = 0.5$ (ASSUMED)
$A = 0.09\ FT^2$ (4" DIA)
SHORT PIPE

$Q_{DIS} = 0.35\sqrt{h} = 0.35\sqrt{0.633} = 0.28$ CFS

Q_{DIS} LONG PIPES WITH TWO EL'S ASSUMED
1/2 OF ORIFICE FLOW = 0.14

$h = 0.633$ FT ALL PONDS

OVERFLOW DEPTH
$Q = C_w\ L h^{3/2}$
$C_w = 3.33$ (ASSUMED)
FOR TRI. SECTION AVERAGE h OVER L WAS USED
REAR PONDS @ 20' L AND 0.1' h CAN HANDLE 2.11 CFS; 100 YR Q = 1.36 CFS (POND 2)
FRONT PONDS FOR L = 10'; h = 0.16' TO HANDLE 100 YR. Q.

LEGAL DESCRIPTION : GIBSON TRACT A, PORTION OF TRACT 25 a, M.R.G.C.D. MAP 33
ALBUQUERQUE, NEW MEXICO.

BENCH MARK : CITY ELEV. B.M. 10-G-14 ELEV. 4969.575, AT NW CORNER OF
SAN CLEMENTE & 4th STREET

SURVEYED BY : SOUTHWEST SURVEYING CO., INC.

SOIL TYPE : GILA - LOS GRIEGOS QUAD

FLOOD HAZARD MAP : 350002 0005 NOT IN HAZARD AREA
ASSUMED TIME OF CONCENTRATION 10 MIN. - SOP FOR SMALL AREAS
NO EXISTING STRUCTURES ON OR WITHIN 15' OF THIS PROPERTY

RUNOFF CALCULATIONES

$Q = C I A$
WHERE Q = QUANTITY IN CFS
C = RUNOFF COEFF.
I = RAINFALL INTENSITY IN IN/HR
A = AREA IN ACRES

$V = C \frac{I}{12} t\ A$
WHERE V = VOLUME IN FT³
C = RUNOFF COEFF.
I = RAINFALL INT. IN IN/HR.
t = TIME IN HRS
A = AREA IN FT²

NOTE : ALL FILL TO BE PLACED IN 8" MAX. LIFTS WITH OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MODIFIED PROCTOR DENSITY OF 95%

ALL GRADING TO BE STRAIGHT LINE BETWEEN SPOT ELEVATIONS.

LEGEND :

▨	POND
x	EXISTING ELEVATION
●	PROPOSED ELEVATION
▨	LANDSCAPED ~~UNPAVED~~ AREA
⌐	DOWN SPOUT
- - -	EXISTING CONTOUR
—	PROPOSED CONTOUR
- - -	EXISTING
—	PROPOSED

RECEIVED
DEC 15 1981
ENGINEERING

[illegible] FOR DRAINAGE
Jim Zink
SIGNATURE
12/15/81
DATE
CE/Hyd
TITLE
CONTINGENCIES

G14/D6

CARROLL A. COONCE
NO. 2934

C. A. COONCE & ASSOC.
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

TITLE: DRAINAGE & GRADING PLAN
PROJECT: CASAS SOLANAS II

DATE	8-21-81	REVISED	[illegible]		
DRAWN	V. M.	[illegible]			SHEET 1 OF
CHECKED	C. A. C.	[illegible]			