A13/D7A1

0000 0000 0731

A13/D7A1

25×10 32×10

0000 0000 0732

CITY OF
Albuquerque

P.O. Box 1293, Albuquerque, NM 87103

October 8, 1996

Martin J. Chávez, Mayor

Pierce Runnels
Bohannan Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: ENGINEER'S CERTIFICATION FOR SEVEN BAR NORTH - UNIT 5A
RECEIVED SEPTEMBER 16, 1996 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 9/9/96 (A-13/D7A1)

Dear Mr. Runnels:

Based on the information included in the submittal referenced above, City Hydrology accepts the Engineer's Certification for Financial Guaranty Release. In the future, any modification of the approved plan must be indicated on the certified plan instead of in a letter.

Contact Terri Martin to obtain the Financial Guaranty Release for City Project Number 4982.93.

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

Sincerely,

John P. Curtin

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

c: Andrew Garcia
Terri Martin, CPN 4982.93
Tim McNaney, Brown/NZD Dev, P.O. Box 3671, 87190

Good for You, Albuquerque!

25×10 32×10

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: SEVEN BAR NORTH TRACT 5A ZONE ATLAS/DRNG. FILE #: A13/D7A1
DRB #: 94-457 EPC #: _____ WORK ORDER #: 4982.93
LEGAL DESCRIPTION: TRACT B5A SEVEN BAR NORTH SUBDIVISION, CITY OF ALBUQ
CITY ADDRESS: SEVEN BAR LOOP ROAD & LENO RD

ENGINEERING FIRM: BOHANNAN HUSTON, INC. CONTACT: PIERCE RUNNELS
ADDRESS: 7500 JEFFERSON NE, ALB. NM 87109 PHONE: 823-1000
OWNER: BROWN/NZD (DEVELOPMENT) JOINT VENTURE CONTACT: TIM MCNANEY
ADDRESS: 3411 CANDELARIA NE PHONE: 883-1674
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
X ENGINEER'S CERTIFICATION
___ OTHER

PRE-DESIGN MEETING:

___ YES
X 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
X DRAINAGE REQUIREMENTS
X OTHER (RELEASE (GUARANTEE) SPECIFY)

DATE SUBMITTED: 9/11/96
BY: PIERCE RUNNELS

RECEIVED
SEP 16 1996
HYDROLOGY DIVISION

25×10 32×10

0000 0000 0734

BOHANNAN-HUSTON INC.
COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
TEL (505) 823-1000 FAX (505) 821-0892

PRINCIPALS
R. W. HUSTON, C.P. | WILLIAM E. [illegible]KE, P.E.
MICHAEL M. EMERY, P.E. | GORDON A. WALHOOD, JR., P.E.
BRIAN G. BURNETT, P.E. | MARY E. CARTER
KERRY L. DAVIS, P.E. | GEORGE RADNOVICH, R.L.A.
LARRY A. LARRANAGA, P.E. | SILAS V. SUAZO
HOWARD C. STONE, P.E. | JAMES R. TOPMILLER, P.E.

September 9, 1996

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

Re: Engineering Certification
Seven Bar North, Unit 5A
City Project # 4982.93
City Hydrology File A13/D7A
DRB # 94-457

Dear John:

Enclosed for review and approval of release of financial guarantees are copies of the Final Grading and Drainage Plan for Seven Bar North, Tract B5, Unit 5A. This includes the engineer's drainage certification confirming substantial compliance with the approved Grading/Drainage Plan.

At the time of survey, the backyard ponds had been filled with blown sand and were no longer distinct. Visual inspection indicates that the existing grading has adequate area for the ponds, which will be regraded as each lot is developed by the home builder.

The pond on the west side of the project is currently being "relocated" to the north, as indicated in the grading plan for Unit 5B. The as-built survey indicates that the existing pond does not provide the design depth. However, this pond is no longer necessary since it is being replaced with the pond to the north.

If you have any questions or require further information, please contact me.

Sincerely,

Pierce Runnels, E.I.
Community Development
and Planning Group

PR/rac

Enclosures

RECEIVED
SEP 16 1996
HYDROLOGY DIV.

\\MICKEY\SEC_CDP\93217\A2490\ENGRCERT.DOC - 09/09/96

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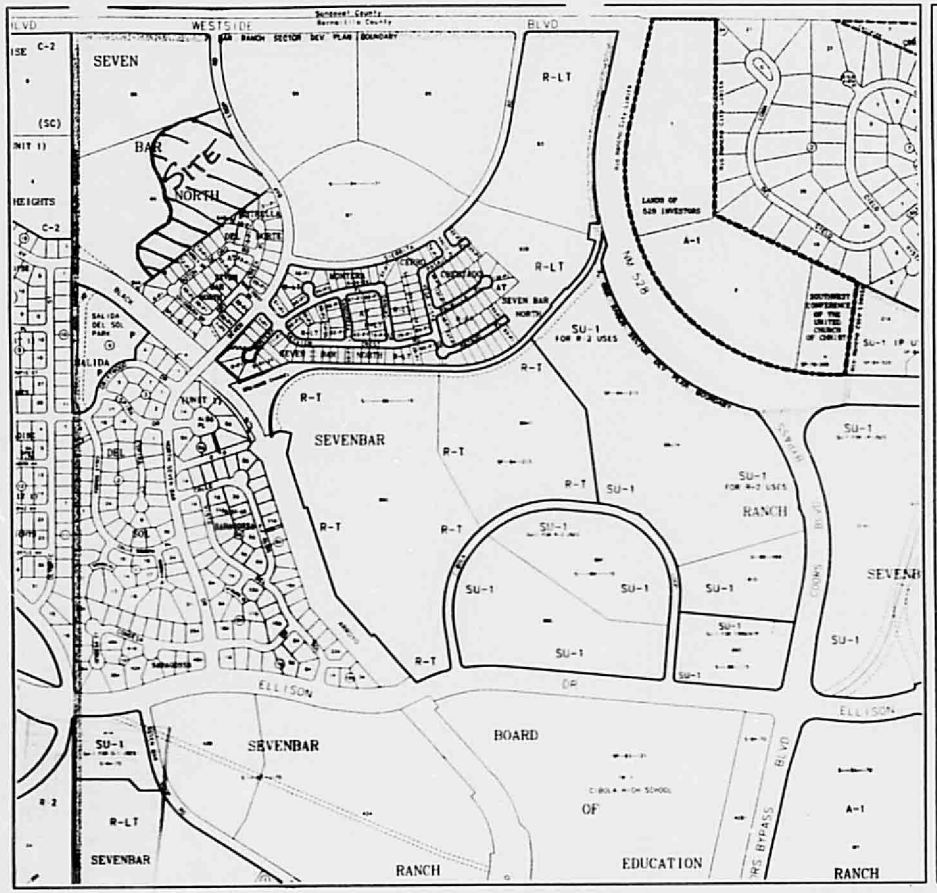


GRAPHIC SCALE IN FEET

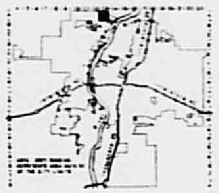
250 0 500 1000

City of Albuquerque

A G I S

© Copyright 1993

Map Amended through September 21, 1993



LEGAL DESCRIPTION

TWN

RGE

SEC 6

UNIFORM PROPERTY CODE

1-013-000

A-13-Z

25×

32×

0000 0000 0736

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 3, 1995

Pierce Runnels
Bohannan Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: GRADING PLAN FOR SEVEN BAR NORTH - UNIT 5A (A-13/D7A1)
RECEIVED OCTOBER 31, 1995 FOR R GRADING, FINAL PLAT & W.O.
ENGINEER'S STAMP DATED 10/31/95

Dear Mr. Runnels:

Based on the information included in the submittal referenced above, City Hydrology accepts the Grading Plan for Final Plat & Work Order and approves a Rough Grading Permit for Seven Bar North - Units 5A & 5B. Submit a copy of the amended Grading Plan to DRB for their approval.

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

Sincerely,

John P. Curtin

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

c: Andrew Garcia
Larry Caudill, Environmental Health
Fred Aguirre, DRB 94-457
Tim McNaney, Brown/NZD Dev, PO Box 3671, 87190

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

25×10 32×10

0000 0000 0737

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SEVEN BAR NORTH-UNIT 5A ZONE ATLAS/DRNG. FILE # A-13/D-7A 1
DRB #: 94-457 EPC #: _____ WORK ORDER #: 4982.93
LEGAL DESCRIPTION: SEVEN BAR NORTH TRACT B-5
CITY ADDRESS: _____

ENGINEERING FIRM: BOHANNAN HUSTON, INC. CONTACT: PIERCE RUNNELS
ADDRESS: 7500 JEFFERSON NE, ALB. NM 87109 PHONE: 823-1000
OWNER: BROWN/NZD DEVELOPMENT JOINT VENTURE CONTACT: TIM McNANEY
ADDRESS: P.O. BOX 3671 PHONE: 883-1674
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

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
X FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
X GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
X OTHER WORK ORDER (SPECIFY)

DATE SUBMITTED: 10/26/95
BY: PIERCE RUNNELS

RECEIVED OCT 31 1995 HYDROLOGY SECTION

25×10 32×10

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SEVEN BAR NORTH

UNIT 5A

CALCULATIONS FOR TEMPORARY SEDIMENT POND AND SWALES

- POND CALCULATIONS SHT 1-7
- LINED SWALES SHT 8-10
- CONNECTOR PIPE SHT 11
- OUTFLOW FROM UNIT 5A SHT 12-13

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET _____ OF _____
PROJECT NO. _____ BY _____ DATE _____
SUBJECT _____ CH'D _____ DATE _____

25×10 32×10

UNIT 5A GRADING:

EXISTING OFFSITE FLOWS:

BASIN	AREA AC	C	I	Q, CFS	E, IN	V, AC-FT
OFF1	50			24.9		5.225
A1	10.565	0.286	4.70	14.2	0.463	0.408
A2	6.770	0.286	4.70	9.1	0.463	0.261
A3	7.320	0.286	4.70	9.8	0.463	0.282
	74.65 = .117 SM			58.0 CFS		6.176 AC FT

NOTE: USED - 90% TYPE A } LAND TREATMENT
10% TYPE B }

$E = .9(.44) + .1(.67) = .463''$ $E_{10} = .9(.08) + .1(.22) = .094$

$C = .9(.27) + .1(.43) = .286$ $C_{10\text{-}YR} = .9(.08) + .1(.24) = .096$

∴ TOTAL FLOW TO POND: Q = 58.0 CFS, PEAK, 100-YR
V = 6.176 AC-FT, " , "

SEDIMENT POND:

ASSUME · DESIGN PARTICLE = VERY FINE SAND (D=0.06 mm)
- 100% REMOVAL OF DESIGN PARTICLE IN 10-YR STORM
- V_s = 0.009 FPS FOR VERY FINE SAND

SURFACE AREA = SA = $(1.2)(Q_{10})/V_s$

$Q_{10} = 21.5 + .096(3.14)(24.66) = 28.9$ CFS

SA = $(1.2)(28.9)/.009 = 3850$ SF

ASSUME L = 3W

3W(W) = 3850 W = 36 L = 108

BOHANNAN-HUSTON INC.

PROJECT NAME SEDIMENTATION POND SHEET 1 OF
PROJECT NO. SEVEN BAR NORTH-UNIT 5A BY PR DATE 3/17/95
SUBJECT CH'D DATE

25×10 32×10

SEDIMENT LOAD:

FROM USLE EQUATION (ATTACHED)
ANNUAL SEDIMENT YIELD = 6895 CF

SURFACE AREA = 3850 SF BOTTOM IS 36' x 108' = 3888 SF
TOP AREA = $(36+6z)(108+6z)$
$= (3888 + 864z + 36z^2)$ FT^2
VOLUME = $3888z + 432z^2 + 18z^3 = \underline{6895}$

z_{SED} = 1.5 FT

∴ USE 1.5' FOR SEDIMENT STORAGE
2' FOR SETTLING DEPTH.

BOHANNAN-HUSTON INC.

PROJECT NAME SEDIMENTATION POND SHEET 2 OF
PROJECT NO. SEVEN BAR NORTH-UNIT 5A BY PR DATE 3/17/95
SUBJECT CH'D DATE

25×10 32×10

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SEVEN BAR RANCH NORTH SEDIMENT YIELD ANALYSIS
UNIVERSAL SOIL LOSS EQUATION

DESCRIPTION	VARIABLE	UNIT			
BASIN					
Drainage Area	DA	Sq. Mi.	0.117		
Slope	S	Ft/Ft	0.050		
Slope Angle	THETA	Radians	0.050		
	L	Feet	700.000		
Rainfall	R		25.000		
Soil Erodability*	K		0.240		
Slope Length Factor	LS		1.128		
Cover*	C		0.170		
Support Practice Factor	P		1.000		
Sediment Yield	A	Tons/Acre	1.151		
		Tons	86.186		
		Cy	63.841		
			Total Annual Sediment Yield	63.841 Cy	
Estimated Soil Unit Weight	100.000	Lbs/Cf	Adjustment Factor	4.000	

			Adjusted Sediment Yield	255.366 Cy	
				6894.870 Cf	

NOTE: The Universal Soil Loss Equation typically underestimates the actual sediment yield by 4 times so a factor of 4 is applied to the total annual sediment yield.

SHT 3

25×10 32×10

ASSUME OUTLET OF 18' CONNECTOR PIPE,
ORIFICE CONTROLLED OUTFLOW $Q = .6(1.767)\sqrt{64.4\,h}$

OUTFLOW CFS	STORAGE AC-FT	ELEV	
0	0	5140	
.1	0.22	5142	TOP OF PIPE
8.5	.368	5143	
12.0	.542	5144	
14.7	0.746	5145	
24.1	2.30	5150	

RAN THRU HYMO - DIDN'T WORK - TRY 36" STANDPIPE

OUT	STO	ELEV	h
		5140	
		5142 TP	
34.0		5143	1
48.1		5144	2
59.0		5145	3
96.3		5150	8

A = 7.07

PEAK DISCHARGE = 45.4 CFS
MAX ELEVATION = 5143.8 S = 0.5%

SUMMARY OF POND REQUIREMENTS:
BOTTOM IS 36' X 108'
TOTAL DEPTH = 1.5 (SEDIMENT STORAGE)
3.8 (VOLUMETRICS)
5.3 USE 5.5' DEEP.

BOHANNAN-HUSTON INC.

PROJECT NAME SEDIMENTATION POND SHEET 4 OF
PROJECT NO. SEVEN PEAK NORTH-UNIT 5A BY PR DATE 3/17
SUBJECT CH'D DATE

25×10 32×10

```
*************************************************************
    *DETERMINATION OF POND AT UNIT 5A:
    *
    *******COMPUTE HYDROGRAPH OFF1
    COMPUTE NM HYD        ID=2  HYD=OFF1  DA=0.078 SQ MI
                          PER A=6.0  PER B=34.0  PER C=34.0  PER D=26.0
                          TP=-0.155       RAIN=-1

 Basin      TP      K     K/TP    N     Unit      B      Area    IA    IF
 Type                                    Peak
            hr      hr                   cfs            sq mi   in    in

mpervious  0.155  0.085  0.547   7.07    68.7   524.73   0.020  0.1   0.04
 Pervious  0.155  0.141  0.912   3.88   129.3   347.29   0.058  0.4   1.09
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD

    *
    PRINT HYD             ID=2     CODE=10
                          HYDROGRAPH NUMBER        OFF1
```

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.	8.500	0.	17.000	0.
0.500	0.	9.000	0.	17.500	0.
1.000	0.	9.500	0.	18.000	0.
1.500	133.	10.000	0.	18.500	0.
2.000	25.	10.500	0.	19.000	0.
2.500	5.	11.000	0.	19.500	0.
3.000	2.	11.500	0.	20.000	0.
3.500	1.	12.000	0.	20.500	0.
4.000	0.	12.500	0.	21.000	0.
4.500	0.	13.000	0.	21.500	0.
5.000	0.	13.500	0.	22.000	0.
5.500	0.	14.000	0.	22.500	0.
6.000	0.	14.500	0.	23.000	0.
6.500	1.	15.000	0.	23.500	0.
7.000	1.	15.500	0.	24.000	0.
7.500	0.	16.000	0.	24.500	0.
8.000	0.	16.500	0.	25.000	0.

```
    RUNOFF VOLUME =        5.269 ACRE-FT
    PEAK DISCHARGE RATE =      133.3 CFS
    PEAK OCCURRED AT  1.55 HRS.

    *
    *******ROUTE OFF1 THROUGH STREET RESERVOIR OFFSITE
    ROUTE RESERVOIR       ID=1 HYD=OFF1.RT INFLOW ID=2 CODE=5
```

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0	0	5223
15	0.01	5225
21	0.7	5226
26	3.2	5227

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

TIME (HRS)	INFLOW DISCHARGE (CFS)	WATER ELEV (FT)	WATER VOLUME (A-F)	TOTAL OUTFLOW (CFS)

SHT 5

25×10 32×10

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```
    0.0          0.0    5223.0        0.0
    0.3          0.0    5223.0        0.0          0.0
    0.5          0.0    5223.0        0.0          0.0
    0.8          0.0    5223.0        0.0          0.0
    1.0          0.0    5223.0        0.0          0.0
    1.3          4.1    5223.5        0.0          3.5
    1.5        132.6    5226.0        0.8         21.2
    1.8         59.6    5226.7        2.4         24.5
    2.0         24.8    5226.8        2.7         25.0
    2.3          9.6    5226.7        2.5         24.7
    2.5          4.8    5226.6        2.2         24.0
    2.8          2.7    5226.4        1.8         23.1
    3.0          1.6    5226.3        1.3         22.3
    3.3          1.0    5226.1        0.9         21.4
    3.5          0.7    5225.7        0.5         19.3
    3.8          0.5    5225.2        0.2         16.2
PEAK DISCHARGE =      25.01 CFS.
MAXIMUM WATER ELEVATION = 5226.8 FT.
MAXIMUM RESERVOIR STORAGE =     2.71 ACRE-FT.
    *
    *******COMPUTE HYDROGRAPHS FOR A1,A2,A3
    COMPUTE NM HYD        ID=8  HYD=5APOND1  DA=0.0385 SQ MI
                          PER A=90.0  PER B=5.0  PER C=0.0  PER D=.0
                          TP=-0.1333   RAIN=-1

 Basin      TP      K     K/TP    N      Unit      B     Area    IA    IF
  Type                                    Peak
            hr      hr                     cfs          sq mi    in    in

 Pervious  0.133  0.162  1.215   2.93    79.7  275.87   0.038  0.6   1.65
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD

    PRINT HYD             ID=8     CODE=0

                           HYDROGRAPH NUMBER    5APOND1


          RUNOFF VOLUME =       0.968 ACRE-FT
          PEAK DISCHARGE RATE =        34.1 CFS
          PEAK OCCURRED AT  1.50 HRS.


    *
    *******ADD TO BASIN OFF1
    *
    ADD HYD               ID=1    HYD=SD1A
                          ID=1    ID=8
    *
    PRINT HYD             ID=1    CODE=10

                           HYDROGRAPH NUMBER       SD1A

          TIME       FLOW            TIME       FLOW            TIME       FLOW
           HRS       CFS              HRS       CFS              HRS       CFS
          0.000        0.            2.000       28.           4.000        0.
          0.500        0.            2.500       25.           4.500        0.
          1.000        0.            3.000       23.           5.000        0.
          1.500       55.            3.500       19.

          RUNOFF VOLUME =       5.642 ACRE-FT
          PEAK DISCHARGE RATE =        55.3 CFS
          PEAK OCCURRED AT  1.50 HRS.


    *
    *******ROUTE BASINS OFF1, 5APOND1 THROUGH RETENTION POND
```

SHT 6

25×10 32×10

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ROUTE RESERVOIR ID=22 HYD=POND5A INFLOW ID=1 CODE=5

OUTFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)	
0	0	5140	34.5 Btm
0.1	0.22	5142	
34.	0.368	5143	
48.1	.542	5144	
59.0	.746	5145	40.5 Top
96.3	2.30	5150	

* *

TIME (HRS)	INFLOW DISCHARGE (CFS)	WATER ELEV (FT)	WATER VOLUME (A-F)	TOTAL OUTFLOW (CFS)
0.0	0.0	5140.0	0.0	
0.3	0.0	5140.0	0.0	0.0
0.5	0.0	5140.0	0.0	0.0
0.8	0.0	5140.0	0.0	0.0
1.0	0.0	5140.0	0.0	0.0
1.3	3.5	5140.1	0.0	0.0
1.5	55.3	5143.1	0.4	35.7
1.8	35.8	5143.6	0.5	42.4
2.0	28.2	5142.9	0.4	30.2
2.3	26.6	5142.8	0.3	26.9
2.5	25.1	5142.7	0.3	25.4
2.8	23.8	5142.7	0.3	24.1
3.0	22.7	5142.7	0.3	22.9
3.3	21.7	5142.6	0.3	21.9
3.5	19.4	5142.6	0.3	20.1
3.8	16.3	5142.5	0.3	16.9
4.0	0.1	5142.0	0.2	1.4

PEAK DISCHARGE = 45.37 CFS.
MAXIMUM WATER ELEVATION = 5143.8 FT. −40 = 3.8
MAXIMUM RESERVOIR STORAGE = 0.51 ACRE-FT.

34.5 + 3.8 = 38.3' = MWSEL

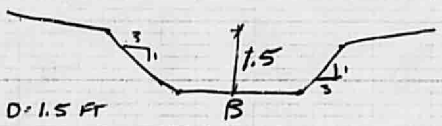
SHT 7

25×10 32×10

SWALES

FROM NORTH BOUNDARY OF 5A TO POND:

Q = 58.0 CFS
n = 0.017
SLOPE = 4%
BASE = 22' TOTAL D = 1.5 FT



ALONG NORTH BOUNDARY:

Q = 39.1 CFS
n = 0.017
SLOPE = 25%
BASE = 8 TOTAL D = 1.5'

X_SECT_1.WPR

KEEP VELOCITY < 8 FPS OR NEED TO REINFORCE LINING.

CONNECTOR PIPE:

36" OUTLET BOTTOM 3' BELOW POND
= 5132.5

INV INTO NYE @ 20+00.48 CARETTA = 5128.35

SLOPE = (32.5 - 28.35)/120.66 = 3.44%

BOHANNAN-HUSTON INC.

PROJECT NAME SEDIMENT POND SHEET 8 OF
PROJECT NO. SEVEN BAR NORTH - UNIT 5A BY PR DATE 3/17/95
SUBJECT CH'D DATE

25×10 32×10

0000 0000 0747

UNIT 5A CHANNEL

MANNING'S N = .0170 SLOPE = .0400

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	3.00	3	31.00	0.00			
2	9.00	0.00	4	40.00	3.00			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.01	0.01	0.0	0.0	0.1	0.5	22.06
0.02	0.02	0.4	0.6	22.1	1.3	22.12
0.03	0.03	0.7	1.1	22.2	1.7	22.18
0.04	0.04	0.9	1.8	22.3	2.0	22.24
0.05	0.05	1.1	2.6	22.3	2.4	22.30
0.06	0.06	1.3	3.5	22.4	2.7	22.36
0.07	0.07	1.6	4.6	22.4	2.9	22.42
0.08	0.08	1.8	5.7	22.5	3.2	22.48
0.09	0.09	2.0	7.0	22.6	3.5	22.54
0.10	0.10	2.2	8.3	22.6	3.7	22.60
0.11	0.11	2.5	9.8	22.7	4.0	22.66
0.12	0.12	2.7	11.3	22.8	4.2	22.72
0.13	0.13	2.9	12.9	22.8	4.4	22.78
0.14	0.14	3.1	14.6	22.9	4.6	22.84
0.15	0.15	3.4	16.4	22.9	4.9	22.90
0.16	0.16	3.6	18.2	23.0	5.1	22.96
0.17	0.17	3.8	20.2	23.1	5.3	23.02
0.18	0.18	4.1	22.2	23.1	5.5	23.08
0.19	0.19	4.3	24.3	23.2	5.7	23.14
0.20	0.20	4.5	26.5	23.3	5.9	23.20
0.21	0.21	4.8	28.8	23.3	6.1	23.26
0.22	0.22	5.0	31.1	23.4	6.2	23.32
0.23	0.23	5.2	33.5	23.5	6.4	23.38
0.24	0.24	5.5	36.0	23.5	6.6	23.44
0.25	0.25	5.7	38.5	23.6	6.8	23.50
0.26	0.26	5.9	41.1	23.6	6.9	23.56
0.27	0.27	6.2	43.8	23.7	7.1	23.62
0.28	0.28	6.4	46.6	23.8	7.3	23.68
0.29	0.29	6.6	49.4	23.8	7.5	23.74
0.30	0.30	6.9	52.3	23.9	7.6	23.80
0.31	0.31	7.1	55.3	24.0	7.8	23.86
0.32	0.32	7.3	58.3	24.0	7.9	23.92
0.33	0.33	7.6	61.4	24.1	8.1	23.98
0.34	0.34	7.8	64.6	24.2	8.2	24.04
0.35	0.35	8.1	67.8	24.2	8.4	24.10
0.36	0.36	8.3	71.1	24.3	8.6	24.16
0.37	0.37	8.6	74.4	24.3	8.7	24.22
0.38	0.38	8.8	77.8	24.4	8.9	24.28
0.39	0.39	9.0	81.3	24.5	9.0	24.34
0.40	0.40	9.3	84.9	24.5	9.1	24.40
0.41	0.41	9.5	88.5	24.6	9.3	24.46
0.42	0.42	9.8	92.1	24.7	9.4	24.52
0.43	0.43	10.0	95.9	24.7	9.6	24.58
0.44	0.44	10.3	99.6	24.8	9.7	24.64
0.45	0.45	10.5	103.5	24.8	9.8	24.70
0.46	0.46	10.8	107.4	24.9	10.0	24.76
0.47	0.47	11.0	111.4	25.0	10.1	24.82
0.48	0.48	11.3	115.4	25.0	10.3	24.88
0.49	0.49	11.5	119.5	25.1	10.4	24.94
0.50	0.50	11.7	123.6	25.2	10.5	25.00
0.51	0.51	12.0	127.8	25.2	10.7	25.06
0.52	0.52	12.3	132.1	25.3	10.8	25.12
0.53	0.53	12.5	136.4	25.4	10.9	25.18
0.54	0.54	12.8	140.8	25.4	11.0	25.24

Q_{100} = 58.0

SHT 9

25×10 32×10

0000 0000 0748

UNIT 5A CHANNEL

MANNING'S N = .0170 SLOPE = .0250

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	3.00	3	17.00	0.00			
2	9.00	0.00	4	26.00	3.00			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.01	0.01	0.0	0.0	0.1	0.4	8.06
0.02	0.02	0.2	0.2	8.1	1.0	8.12
0.03	0.03	0.2	0.3	8.2	1.3	8.18
0.04	0.04	0.3	0.5	8.3	1.6	8.24
0.05	0.05	0.4	0.8	8.3	1.9	8.30
0.06	0.06	0.5	1.0	8.4	2.1	8.36
0.07	0.07	0.6	1.3	8.4	2.3	8.42
0.08	0.08	0.7	1.7	8.5	2.5	8.48
0.09	0.09	0.7	2.0	8.6	2.7	8.54
0.10	0.10	0.8	2.4	8.6	2.9	8.60
0.11	0.11	0.9	2.8	8.7	3.1	8.66
0.12	0.12	1.0	3.3	8.8	3.3	8.72
0.13	0.13	1.1	3.7	8.8	3.4	8.78
0.14	0.14	1.2	4.2	8.9	3.6	8.84
0.15	0.15	1.3	4.8	8.9	3.8	8.90
0.16	0.16	1.4	5.3	9.0	3.9	8.96
0.17	0.17	1.4	5.9	9.1	4.1	9.02
0.18	0.18	1.5	6.5	9.1	4.2	9.08
0.19	0.19	1.6	7.1	9.2	4.4	9.14
0.20	0.20	1.7	7.7	9.3	4.5	9.20
0.21	0.21	1.8	8.4	9.3	4.6	9.26
0.22	0.22	1.9	9.1	9.4	4.8	9.32
0.23	0.23	2.0	9.8	9.5	4.9	9.38
0.24	0.24	2.1	10.5	9.5	5.0	9.44
0.25	0.25	2.2	11.3	9.6	5.2	9.50
0.26	0.26	2.3	12.1	9.6	5.3	9.56
0.27	0.27	2.4	12.9	9.7	5.4	9.62
0.28	0.28	2.5	13.7	9.8	5.5	9.68
0.29	0.29	2.6	14.5	9.8	5.7	9.74
0.30	0.30	2.7	15.4	9.9	5.8	9.80
0.31	0.31	2.8	16.3	10.0	5.9	9.86
0.32	0.32	2.9	17.2	10.0	6.0	9.92
0.33	0.33	3.0	18.1	10.1	6.1	9.98
0.34	0.34	3.1	19.1	10.2	6.2	10.04
0.35	0.35	3.2	20.1	10.2	6.3	10.10
0.36	0.36	3.3	21.1	10.3	6.4	10.16
0.37	0.37	3.4	22.1	10.3	6.5	10.22
0.38	0.38	3.5	23.1	10.4	6.7	10.28
0.39	0.39	3.6	24.2	10.5	6.8	10.34
0.40	0.40	3.7	25.2	10.5	6.9	10.40
0.41	0.41	3.8	26.3	10.6	7.0	10.46
0.42	0.42	3.9	27.5	10.7	7.1	10.52
0.43	0.43	4.0	28.6	10.7	7.2	10.58
0.44	0.44	4.1	29.8	10.8	7.3	10.64
0.45	0.45	4.2	30.9	10.8	7.4	10.70
0.46	0.46	4.3	32.1	10.9	7.4	10.76
0.47	0.47	4.4	33.4	11.0	7.5	10.82
0.48	0.48	4.5	34.6	11.0	7.6	10.88
0.49	0.49	4.6	35.9	11.1	7.7	10.94
0.50	0.50	4.7	37.1	11.2	7.8	11.00
0.51	0.51	4.9	38.4	11.2	7.9	11.06
0.52	0.52	5.0	39.8	11.3	8.0	11.12
0.53	0.53	5.1	41.1	11.4	8.1	11.18
0.54	0.54	5.2	42.5	11.4	8.2	11.24

Q_{100} = 39.1

SHT 10

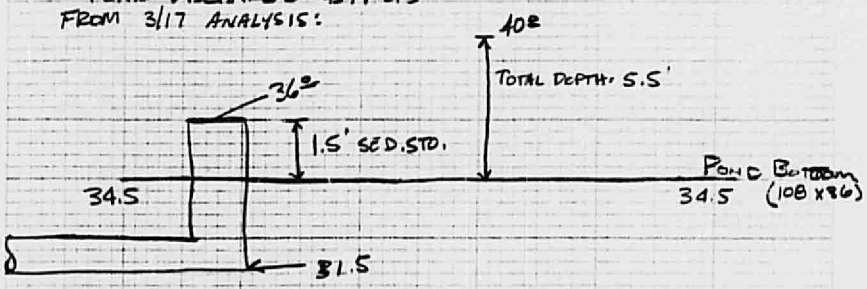
25×10 32×10

0000 0000 0749

UNIT 5A

POND OUTLET:

PEAK DISCHARGE = 45.4 CFS
FROM 3/17 ANALYSIS:



CONNECTOR PIPE TO SD LINE @ ℄ STA 21+23

INV @ TIE = 30.30
LENGTH ≈ 26'

SLOPE 24" CONN. = $\frac{31.5-30.3}{26}$

= 4.6%

24" @ 45.4 CFS, V = 11.6 FPS d = 18.4"

HEAD LOSS = $h_b = K_b \frac{V^2}{2g} = .2\sqrt{\frac{90}{90}}\ \frac{18.5^2}{64.4}$

= ≈ 1'

USE 24" CONNECTOR.

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 11 OF _____
PROJECT NO. _____ BY _____ DATE 4/7/95
SUBJECT _____ CH'D _____ DATE _____

25×10 32×10

0000 0000 0750

HYDROLOGIC ANALYSIS - SEVEN BAR UNIT 5A.

FIND OUTFLOW @ ANALYSIS POINT 3 (OUTFLOW OF UNIT 5A)

FLOW @ ANALYSIS PT. 7A

$Q_p = 7$ CFS: SLOPE = 5% d = 0.27'

CAPACITY OF SINGLE "A" = 3.3 CFS

FLOW REMAINING = 7 - 2(3.3) = 0.4 CFS

FLOW @ ANALYSIS PT 5: 0.4 + (12.1 - 7) + 5.1 + 9.8 = 20 CFS

$Q_p = 20$ CFS SLOPE = 3.82% d = 0.37

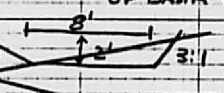
CAPACITY OF SINGLE "A" = 5.8 CFS

FLOW REMAINING = 20 - 2(5.8) = 8.4 CFS

FLOW @ ANALYSIS PT 3 (USE AS OUTFLOW FROM 5A)

= 8.4 CFS + 4.6 = 13 CFS (CONSERVATIVE, AS ONLY A PORTION OF BASIN 6Z IS INCLUDED)

~~DITCH X-SECT~~



~~S = 1.7%~~

~~d = 0.47'~~ ~~1.5' FREEBOARD~~

USE GRADED STREET RIGHT-OF-WAY TO CONVEY TO POND. SEE RATING CURVE NEXT SHEET.

BOHANNAN-HUSTON INC.

PROJECT NAME SEVEN BAR NORTH - UNIT 5A SHEET 12 OF 13

PROJECT NO. 9321744 BY PR DATE 9/27/95

SUBJECT HYDROLOGY - TEMP. FACILITIES CH'D _____ DATE _____

25×10 32×10

0000 0000 0751

, UNIT 5A CHANNEL (FLOW FROM UNIT 5A)

MANNING'S N = .0300 SLOPE = .0050

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	5.00	3	14.00	1.00	5	28.10	5.00
2	0.10	2.00	4	28.00	2.00			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
1.05	0.05	0.0	0.0	1.4	0.3	1.39
1.10	0.10	0.1	0.1	2.8	0.5	2.79
1.15	0.15	0.3	0.2	4.2	0.6	4.19
1.20	0.20	0.6	0.4	5.6	0.8	5.58
1.25	0.25	0.9	0.8	7.0	0.9	6.97
1.30	0.30	1.3	1.2	8.4	1.0	8.37
1.35	0.35	1.7	1.9	9.8	1.1	9.77
1.40	0.40	2.2	2.7	11.2	1.2	11.16
1.45	0.45	2.8	3.7	12.6	1.3	12.56
1.50	0.50	3.5	4.8	14.0	1.4	13.95
1.55	0.55	4.2	6.2	15.4	1.5	15.35
1.60	0.60	5.0	7.9	16.8	1.6	16.74
1.65	0.65	5.9	9.7	18.2	1.7	18.14
1.70	0.70	6.8	11.9	19.6	1.7	19.53
1.75	0.75	7.8	14.3	21.0	1.8	20.93
1.80	0.80	8.9	16.9	22.4	1.9	22.32
1.85	0.85	10.1	19.9	23.8	2.0	23.72
1.90	0.90	11.3	23.2	25.2	2.1	25.11
1.95	0.95	12.6	26.8	26.6	2.1	26.51
2.00	1.00	14.0	30.7	28.0	2.2	27.90
2.05	1.05	15.3	35.9	28.1	2.3	27.90
2.10	1.10	16.7	41.4	28.2	2.5	27.91
2.15	1.15	18.1	47.2	28.3	2.6	27.91
2.20	1.20	19.5	53.3	28.4	2.7	27.91
2.25	1.25	20.9	59.7	28.5	2.9	27.92
2.30	1.30	22.3	66.3	28.6	3.0	27.92
2.35	1.35	23.7	73.2	28.7	3.1	27.92
2.40	1.40	25.1	80.3	28.8	3.2	27.93
2.45	1.45	26.5	87.7	28.9	3.3	27.93
2.50	1.50	27.9	95.3	29.0	3.4	27.93
2.55	1.55	29.3	103.2	29.1	3.5	27.94
2.60	1.60	30.7	111.3	29.2	3.6	27.94
2.65	1.65	32.1	119.6	29.3	3.7	27.94
2.70	1.70	33.5	128.1	29.4	3.8	27.95
2.75	1.75	34.9	136.8	29.5	3.9	27.95
2.80	1.80	36.3	145.7	29.6	4.0	27.95
2.85	1.85	37.7	154.8	29.7	4.1	27.96
2.90	1.90	39.1	164.1	29.8	4.2	27.96
2.95	1.95	40.5	173.7	29.9	4.3	27.96
3.00	2.00	41.9	183.4	30.0	4.4	27.97
3.05	2.05	43.3	193.2	30.1	4.5	27.97
3.10	2.10	44.7	203.3	30.2	4.6	27.97
3.15	2.15	46.1	213.6	30.3	4.6	27.98
3.20	2.20	47.5	224.0	30.4	4.7	27.98
3.25	2.25	48.9	234.6	30.5	4.8	27.98
3.30	2.30	50.3	245.3	30.6	4.9	27.99
3.35	2.35	51.7	256.3	30.7	5.0	27.99
3.40	2.40	53.1	267.4	30.8	5.0	27.99
3.45	2.45	54.5	278.6	30.9	5.1	28.00
3.50	2.50	55.9	290.0	31.0	5.2	28.00
3.55	2.55	57.3	301.6	31.1	5.3	28.00
3.60	2.60	58.7	313.3	31.2	5.3	28.01
3.65	2.65	60.1	325.2	31.3	5.4	28.01
3.70	2.70	61.5	337.2	31.4	5.5	28.01
3.75	2.75	62.9	349.3	31.5	5.6	28.02
3.80	2.80	64.3	361.6	31.6	5.6	28.02
3.85	2.85	65.7	374.1	31.7	5.7	28.02
3.90	2.90	67.1	386.7	31.8	5.8	28.03
3.95	2.95	68.5	399.4	31.9	5.8	28.03
4.00	3.00	69.9	412.2	32.0	5.9	28.03

Q_{100} < 13 CFS

SHT 13

25×10 32×10

0000 0000 0752

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

September 14, 1995

Pierce Runnels
Bohannan Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: GRADING PLAN FOR SEVEN BAR NORTH - UNIT 5A [redacted]
RECEIVED SEPTEMBER 6, 1995 FOR R GRADING, FINAL PLAT & W.O.
ENGINEER'S STAMP DATED 9/5/95

Dear Mr. Runnels:

Based on the information included in the submittal referenced above, City Hydrology accepts the Grading Plan for Rough Grading Permit. The following comments must be addressed before Final Plat & Work Order:

Include a copy of the Final Plat & Infrastructure List in the next submittal. Execute an Agreement & Covenant for the diversion channel & detention-sedimentation pond and submit it to City Hydrology for processing.

Use a manhole instead of a tee where pond outfall connects to storm drain because of maintenance requirements. Indicate drainage easements required for the diversion channel, sedimentation pond and storm drain.

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

Sincerely,

John P. Curtin

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

c: Andrew Garcia
Larry Caudill, Environmental Health

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

25×10 32×10

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: SEVEN BAR NORTH - UNIT 5A ZONE ATLAS/DRNG. FILE # A-13/D741
DRB #: 94-457 EPC #: _____ WORK ORDER #: 498293
LEGAL DESCRIPTION: SEVEN BAR NORTH TRACT B-5
CITY ADDRESS: _____

ENGINEERING FIRM: BOHANNAN HUSTON, INC. CONTACT: PIERCE RUNNELS
ADDRESS: 7500 JEFFERSON NE, ALB. NM 87109 PHONE: 823-1000
OWNER: BROWN/NZD (DEVELOPMENT) JOINT VENTURE CONTACT: TIM MCNANEY
ADDRESS: P.O. BOX 3671 PHONE: 883-1674
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

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
X FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
X GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
X OTHER WORK ORDER (SPECIFY)

SEP - 6 1995

DATE SUBMITTED: 9/6/95
BY: PIERCE RUNNELS

25×10 32×10

0000 0000 0754

FIGURE 6

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

9-8-95 (DATE)

PROJECT NO: 4982.93
ZONE ATLAS: A-13

D-007A1
2/6/95

PROJECT NAME: SOUTH-BAR [illegible] SUBD TR. B-5A
LOCATION: (7-BAR LOOP RD)

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

Contact Person: Royce Runnels Phone: 823-1000
Firm: BOHANNAN-HUSTON

X Scheduled with the D.R.C. on 9-13-95 at 1:30 in Conf. Room 302
___ No DRC Meeting Scheduled. Please return any comments by ___

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

The Project Relates To:
/X/ Water /X/ San. Sewer /X/ 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
/ /	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
/ / Joe Luehring	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

25×10 32×10

0000 0000 0955

BOHANNAN-HUSTON INC.
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS
COURTYARD I, 7500 JEFFERSON NE ALBUQUERQUE, NM 87109 TEL: (505)823-1000 FAX: (505)821-0892

AUG 1 8 1995

CLIENT/COURIER TRANSMITTAL FORM

To: TERRIE MARTIN
MASTER SCHEDULER
PUBLIC WORKS DEPT
CITY OF ALBUQUERQUE

Requested By: PIERCE RUNNELS
Date: 8/17/95
Time Due: ☐ This A.M. ☑ This P.M.
☐ Rush _____ ☐ By Tomorrow
Job No.: 9321744
Job Name: SEVEN BAR 5A

DELIVERY VIA
☐ Courier ☐ Federal Express
☐ Mail ☐ UPS
☐ Other _____

PICK UP
Item: _____

ITEM NO.	QUANTITY	DESCRIPTION
	1	ROLL PLANS Reviewed 8-25-95 JPC

COMMENTS / INSTRUCTIONS

TERRIE- AS WE JUST DISCUSSED ON THE PHONE, I AM SENDING THIS SET OF PLANS FOR SEVEN BAR NORTH-UNIT 5A FOR YOU TO ROUTE TO HYDROLOGY FOR DRC REVIEW. ALSO ATTACHED IS THE DRC SESSION MINUTES, AND THE LETTER OF PREVIOUS TRANSMITTAL.

THANKS FOR YOUR HELP.
PIERCE

Received By: SR Lundell Date: _____ Time: _____

Misc./Courier Rqst Form 10/94

25×10 32×10

0000 0000 0756

ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS

BOHANNAN-HUSTON INC.

COURTYA... JEFFERSON STREET, N.E. ALBUQUERQUE, NM 87109
TEL (505) 823 1000 FAX (505) 821-0892

June 5, 1995

7/11/95

Mr. Fred Aguirre
City Hydrologist
Hydrology Department
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Seven Bar North, Unit 5A

Dear Mr. Aguirre:

Attached is a copy of the Seven Bar North, Tract B-5, construction drawings for review by your division. This project was previously submitted for DRC review, however, our Hydrology Representative was Scott Davis, and with his transfer, etc., we have yet to receive any DRC comments from Hydrology.

Please note that the Final Grading Plan is included in the plan set for your review. I have also attached a copy of the DRC session minutes from April 6, 1995.

If you need any additional information, or have any questions, please call me.

Sincerely,

Pierce Runnels

Pierce Runnels, E.I.
Community Development and Planning Group

PR/sh
Enclosures

cc: James Topmiller, BHI
Tim McNaney, Brown & Associates

F:\CDP\9321744\AGUIRRE.LTR-6/5/95

PRINCIPALS
LARRY W. HUSTON, C.P.
MICHAL M. EMERY, P.E.
BRIAN G. BURNETT, P.E.
JERRY L. DAVIS, P.E.
LARRY A. LARRANAGA, P.E.
HOWARD C. STONE, P.E.
WILLIAM L. ...REEKE, P.E.
... P.E.
MARY E. CARTER
GEORGE RADNOVICH, R.L.A.
SILAS V. SUAZO
JAMES R. TOPMILLER, P.E.

25×10 32×10

0000 0000 0757

DRC SESSION MINUTES

DRC COMMITTEE MEETING April 6 1995 (Date) 1:30 pm (Time)

PROJECT: Salem Bar North Tr R-5 Project No. 498293

CONSULTANT: Estaman-Huston, Inc Previous Doc. NFID

PRESENT:

Billie Godsbu	Chairman		Constr. Management
Richard Dourte	Trans. Development		Parks & General Services
Robert Kane	Utility Development		City Utility Coord.
	Hydrology		
Pierce Runnels	Consultant		
Dave Fredenburg		Tim McNaney, Brown & Rssc.	

COMMENTS:

- Richard Dourte provided verbal discussion of his review. He also provided markups
- Robert Kane said that NW Utilities will need to sign and then he will.
- Hydrology did not have any representation at this session. The Consultant will need to coordinate with that section for comments.
- The Chairman provided markups.

The Consultant will make appropriate corrections to the plans and submit these, all the markups and a final Engineers Estimate (Figure 7) to the Master Schedule to route for signatures.

25× 32×

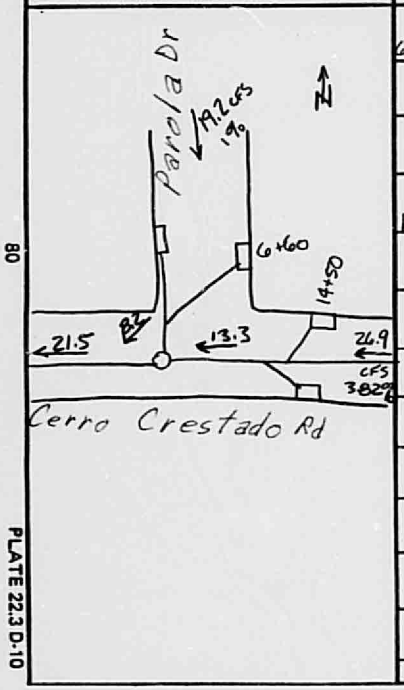
CATCH BASIN CALCULATION SHEET

Sht.___ of___

PROJECT _____ CALCULATED BY _____

DESIGN FREQUENCY _____ DATE _____

FLOW DIAGRAM (Indicate street slopes)



Sym.	Drain. Area	Q Total	Q Inter.	Cap. of ½ Street	Gutter "d"	C.B. No.	C.B. Size	Connector Pipe Head	Connector Pipe L	Connector Pipe Dia.	V Depth
6+60		19.2	5.5 x 2 11		0.44	2	"A"				
		8.2									
14+50		26.9	2x6.8 13.6		0.40						
		13.3									

4+62 80

PLATE 22.3 D-10

22.3

25×10

32×10

STREET CAPACITY ANALYSIS
SUMMARY TABLE
SEVEN BAR NORTH
UNITS 4, 5 AND 6

	ANALYSIS POINT	SLOPE, %	TYPE OF CURB	Q-100YR (CFS)	DEPTH (FT)	V-100YR (FPS)	E-100YR (FT)	E<0.87'? ≤.51 ROLL	NOTES
Unit 4	A	2.50	STD	17.5	0.38	4.0	0.63	YES	USE STD
	B	2.50	ROLL	11.2	0.28	3.4	0.46	YES	USE ROLL
	C	6.21	STD	10.1	0.24	4.8	0.60	YES	USE STD TO CULDESAC
	D	3.00	STD	21.9	0.39	4.5	0.70	YES	USE STD
Unit 5A	2	1.35	STD	32.0	0.50	4.2	0.77	YES	USE STD
	3	1.35	STD	26.1	0.47	3.8	0.69	YES	USE STD
	4	1.00	STD	19.2	0.44	3.1	0.59	YES	USE STD
	5	3.82	STD	26.9	0.40	5.3	0.84	YES	USE STD
	6	1.00	ROLL	9.8	0.31	2.4	0.40	YES	USE ROLL
	7	5.25	STD	7.2	0.26	4.1	0.52	YES	USE STD
	7A	5.25	STD	20.8	0.36	5.4	0.81	YES	USE STD
	8	1.00	ROLL	13.5	0.35 >.33	2.7	0.46	YES	USE ROLL
	9	4.57	ROLL	8.0	0.23	4.0	0.48	YES	USE ROLL
	10	4.57	STD	22.3	0.38	5.4	0.83	YES	USE STD
	11	4.57	STD	12.5	0.32	4.6	0.65	YES	USE STD
	12	3.25	STD	27.9	0.42	5.2	0.84	YES	USE STD
	13	4.00	STD	12.3	0.32	4.3	0.61	YES	USE STD, TRANS 100'
	14	4.00	ROLL	9.7	0.25	4.0	0.50	YES	USE ROLL

SUMMARY:Use roll curb only in Basins A3, B7, B10, B13, B14 and a portion of Basins A4 and B12.

25 X
32 X
0000 0000 0159

0000 0000 0760

CURB TYPE IDENTIFICATION MAP

ROLL CURB

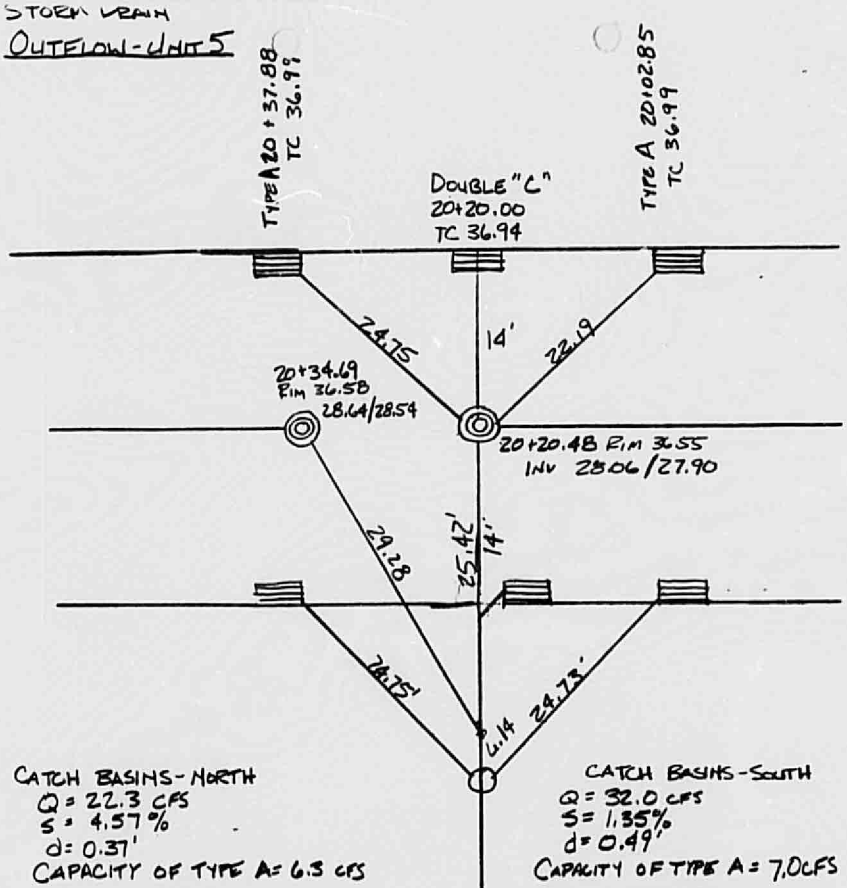
STANDARD CURB

25× 32× 25×

0000 0000 0761

STORM DRAIN

OUTFLOW-UNIT 5



CATCH BASINS-NORTH
Q = 22.3 CFS
S = 4.57%
d = 0.37'
CAPACITY OF TYPE A = 6.3 CFS
FLOW INTERCEPTED = 12.6 CFS
REMAINING FLOW = 9.7 CFS

CATCH BASINS-SOUTH
Q = 32.0 CFS
S = 1.35%
d = 0.49'
CAPACITY OF TYPE A = 7.0 CFS
FLOW INTERCEPTED = 14.0 CFS
REMAINING FLOW = 18.0 CFS

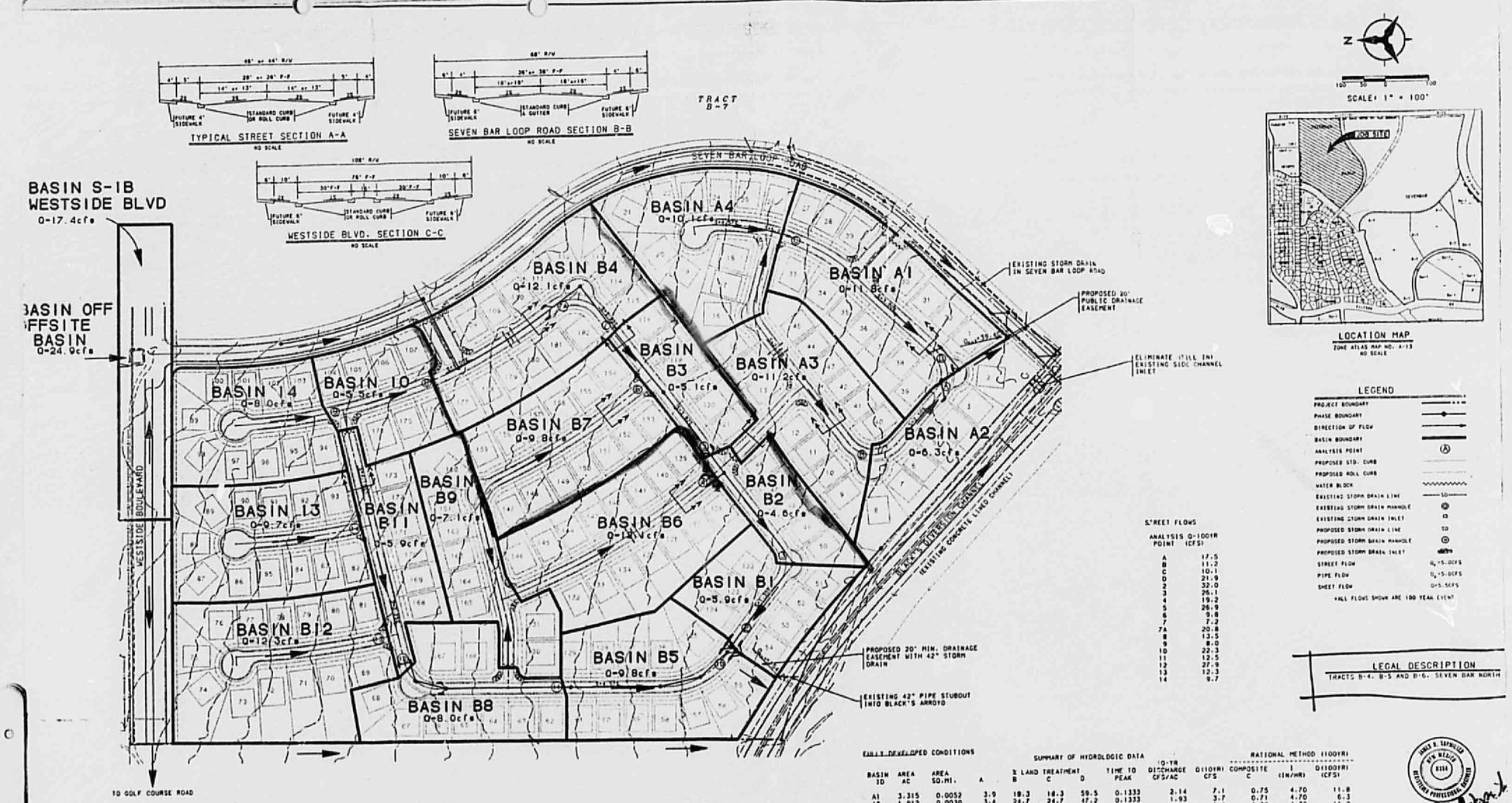
TOTAL REMAINING FLOW = 9.7 + 18.0 = 27.7 CFS

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET _____ OF _____
PROJECT NO _____ BY _____ DATE _____
CHKD _____ DATE _____

25×10 32×10

0000 0000 0162



STREET FLOWS

ANALYSIS POINT	Q-100YR (CFS)
A	17.5
B	11.2
C	10.1
D	21.9
2	32.0
3	26.1
4	19.2
5	26.9
6	9.8
7	7.2
7A	20.8
8	13.5
9	8.0
10	22.3
11	12.5
12	27.9
13	12.3
14	9.7

FULLY DEVELOPED CONDITIONS

SUMMARY OF HYDROLOGIC DATA

BASIN ID	AREA AC	AREA SQ.MI.	% LAND TREATMENT A	B	C	D	TIME TO PEAK	10-YR DISCHARGE CFS/AC	Q(10YR) CFS	RATIONAL METHOD (100YR) COMPOSITE C	I (IN/HR)	Q(100YR) (CFS)
A1	3.315	0.0052	3.9	18.3	18.3	59.5	0.1333	2.14	7.1	0.75	4.70	11.8
A2	1.912	0.0030	3.4	24.7	24.7	47.2	0.1333	1.93	3.7	0.71	4.70	6.3
A3	3.065	0.0048	3.9	15.4	15.4	65.3	0.1333	2.24	6.9	0.78	4.70	11.2
A4	3.015	0.0047	3.4	23.4	23.4	49.8	0.1333	1.97	5.9	0.72	4.70	10.1
B1	1.747	0.0027	3.7	22.5	22.5	51.3	0.1333	2.00	3.5	0.72	4.70	5.9
B2	1.286	0.0020	3.6	18.1	18.1	60.2	0.1333	2.16	2.8	0.76	4.70	4.6
B3	1.401	0.0022	3.9	16.5	16.5	63.0	0.1333	2.20	3.1	0.77	4.70	5.1
B4	3.489	0.0055	3.7	20.6	20.6	55.2	0.1333	2.07	7.2	0.74	4.70	12.1
B5	2.892	0.0045	3.8	22.3	22.3	51.5	0.1333	2.00	5.8	0.72	4.70	9.8
B6	3.549	0.0055	3.9	21.7	21.7	52.8	0.1333	2.02	7.2	0.73	4.70	12.1
B7	2.798	0.0044	4.3	19.4	19.4	56.9	0.1333	2.09	5.9	0.74	4.70	9.8
B8	2.349	0.0037	3.5	21.9	21.9	52.6	0.1333	2.02	4.8	0.73	4.70	8.0
B9	2.038	0.0032	3.6	20.1	20.1	56.2	0.1333	2.06	4.2	0.74	4.70	7.1
B10	1.586	0.0025	4.1	20.1	20.1	55.8	0.1333	2.07	3.3	0.74	4.70	5.5
B11	1.589	0.0025	3.5	14.5	14.5	67.5	0.1333	2.29	3.6	0.79	4.70	5.9
B12	3.786	0.0059	3.2	26.3	26.3	44.2	0.1333	1.88	7.1	0.69	4.70	12.3
B13	2.861	0.0045	3.9	22.0	22.0	52.1	0.1333	2.01	5.7	0.72	4.70	9.7
B14	2.366	0.0037	3.9	22.2	22.2	51.7	0.1333	2.00	4.7	0.72	4.70	8.0

JAMES B. TAPPELLER NEW MEXICO 8181 REGISTERED PROFESSIONAL ENGINEER

10/26/97

DRAINAGE BASIN MAP

TRACTS B-4, B-5 & B-6
SEVEN BAR NORTH
ALBUQUERQUE, NEW MEXICO

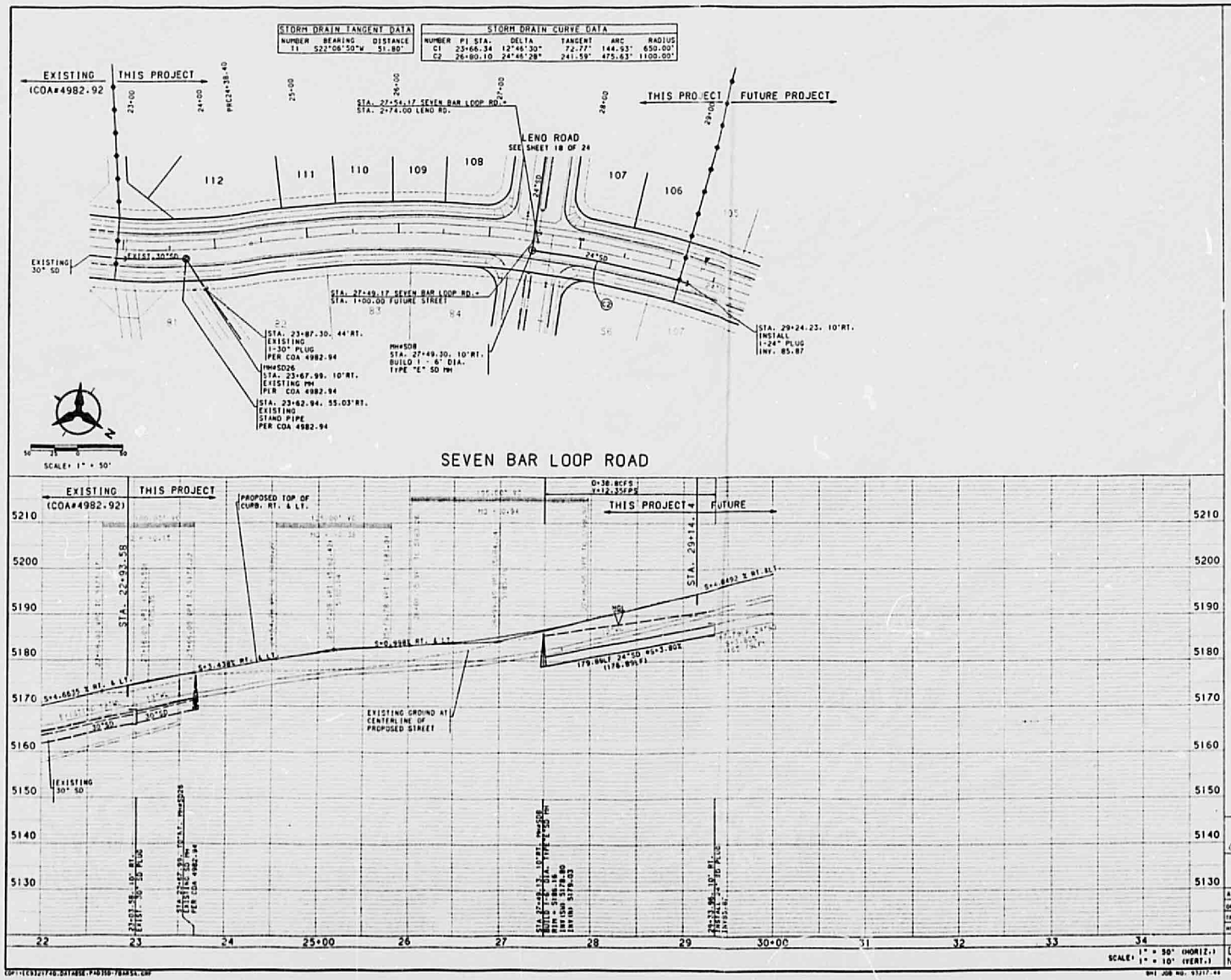
OCTOBER 1994

25×10 32×10 25×10

0000 0000 0163

STORM DRAIN TANGENT DATA		
NUMBER	BEARING	DISTANCE
T1	S22°06'50"W	51.80'

STORM DRAIN CURVE DATA					
NUMBER	PI STA.	DELTA	TANGENT	ARC	RADIUS
C1	23+66.34	12°46'30"	72.77'	144.93'	650.00'
C2	26+80.10	24°46'28"	241.59'	475.63'	1100.00'



NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ALL CURB RETURN RADII SHALL BE 25' TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

4. GRADE ELEVATIONS WHERE NOTED, ARE FOR TOP OF CURB UNLESS OTHERWISE SPECIFIED.

5. CONTRACTOR IS TO INSTALL A 4"x4"x5' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.

6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.

7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.

8. CONTRACTOR SHALL PROVIDE THE INSPECTORS (MMD AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.

9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

10. ANY DAMAGE TO THE EXISTING FACILITIES (CURB AND GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

11. REMOVAL OF THE EXISTING CURB AND GUTTER SHALL BE AS PER COA STD. DWG. 2415 (SAWCUT ONLY).

12. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.

AS-BUILT INFORMATION
CONTRACTOR
STAKED BY
INSPECTED BY
DATE
SUBMITTED BY
DATE
CERTIFICATION BY
DATE
CHECKED BY
DATE
MICRO-FILM INFORMATION
REVIEWED BY
DATE

BENCH MARKS

NO.	DESCRIPTION	DATE
	CHISLED "X" LOCATED APPROXIMATELY 459 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL. ELEV. 5110.55	

SURVEY INFORMATION

NO.	FIELD NOTES BY	DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS
		REVISIONS

DESIGNED BY P.W. DATE 2/95
DRAWN BY TEG DATE 2/95
CHECKED BY DATE 2/95

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
SEVEN BAR LOOP ROAD

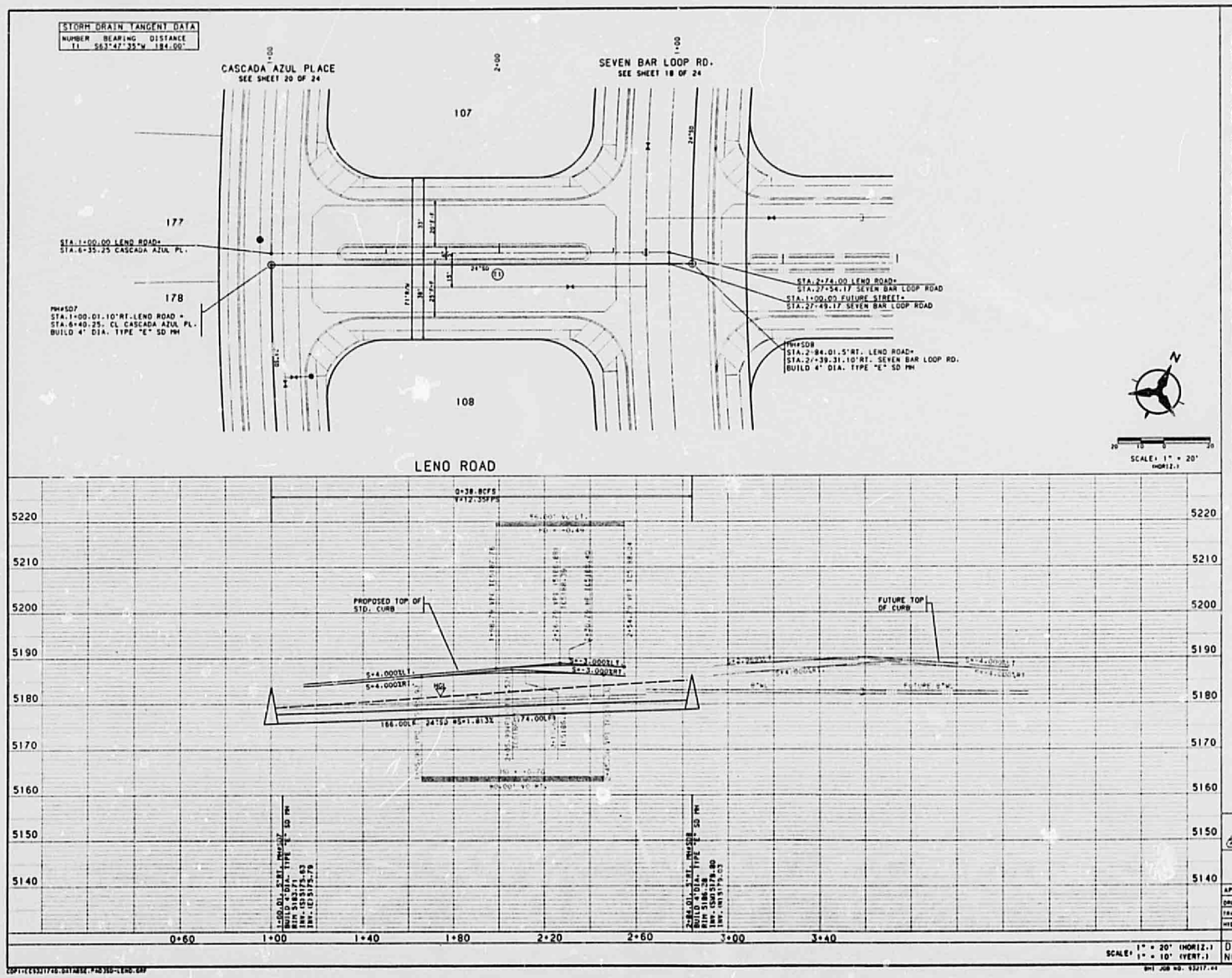
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

DRAWING NO. 4982.93 | MAP NO. A-13 | SHEET 18 OF 24

Copyright Bohannan-Huston, Inc. 1995
DATE: APRIL, 1995

25×10 32×10 25×10

STORM DRAIN TANGENT DATA		
NUMBER	BEARING	DISTANCE
T1	S63°47'35"W	184.00'



NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

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4. GRADE ELEVATIONS, WHERE NOTED, ARE FOR TOP OF CURB UNLESS OTHERWISE SPECIFIED.

5. CONTRACTOR IS TO INSTALL A 4"x4"x5' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.

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7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.

8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (MMU AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.

9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

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12. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.

AS-BUILT INFORMATION

CONTRACTOR
FIELD VERIFIED BY: ... DATE
SUPERINTENDENT: ... DATE
FIELD INSPECTION BY: ... DATE
CHECKED BY: ... DATE
MICRO-FILM INFORMATION
RECORDED BY: ... DATE
NO.

BENCH MARKS

SURVEY INFORMATION		
FIELD NOTES		
NO.	BY	DATE

IBM NO. 205
CHISLED "X" LOCATED APPROXIMATELY 455 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL.
ELEV. 5110.55

ENGINEER'S SEAL

Jack Ford 9/12/95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY PM, JF
DRAWN BY TSG
CHECKED BY JRT
DATE 2/95
DATE 2/95
DATE 2/95

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
LENO ROAD

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		9/13/95	WASTE WATER		
HYDROLOGY		10-2-95			

DRAWING NO. 4892.93 | MAP NO. A-13 | SHEET 19 OF 24

Copyright Bohannan-Huston Inc. 1995
DATE: APRIL 1995

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BHI JOB NO. 53217.04

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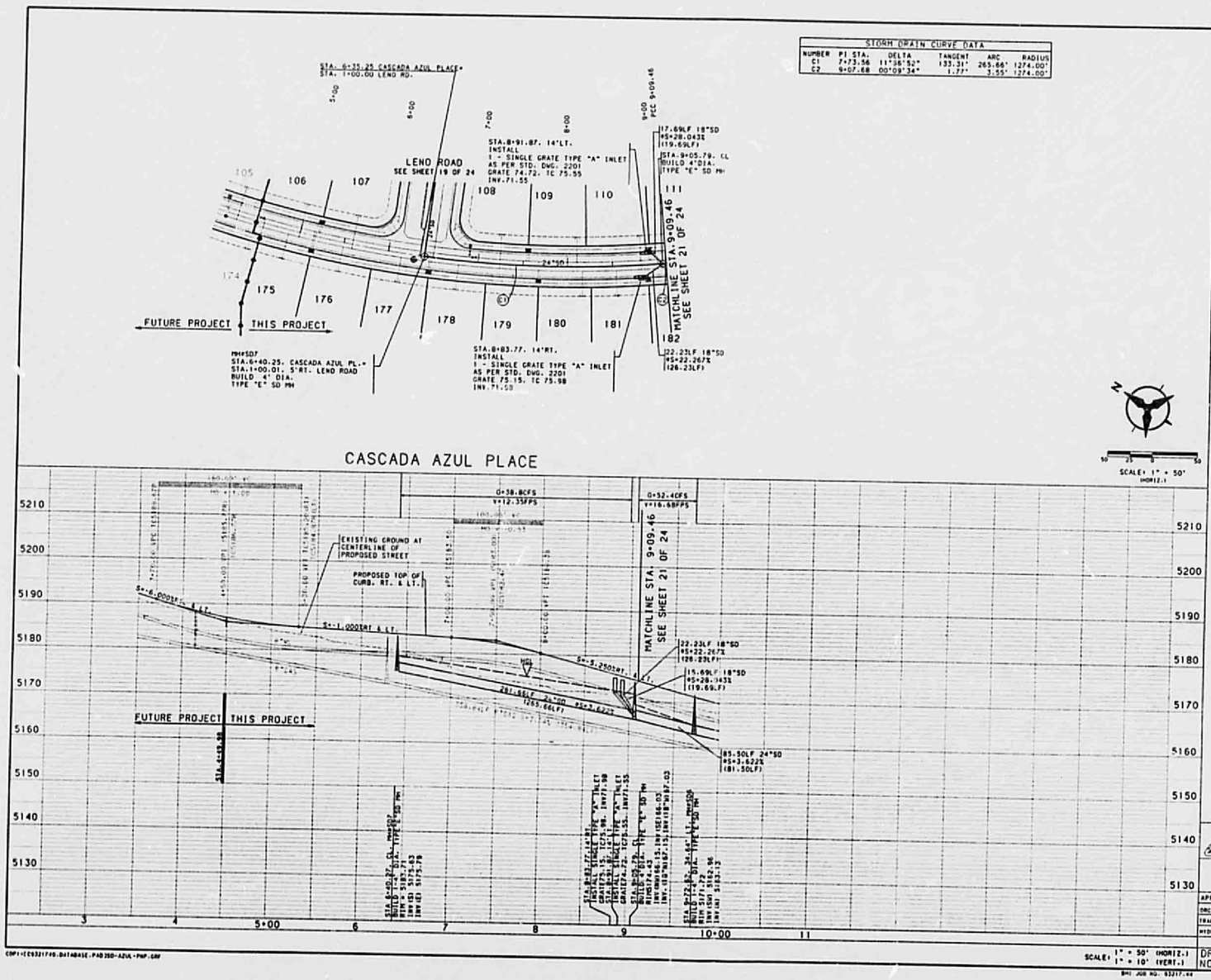

STORM DRAIN CURVE DATA					
NUMBER	PI STA.	DELTA	TANGENT	ARC	RADIUS
C1	7+73.56	11°36'52"	133.31'	265.66'	1274.00'
C2	9+07.68	00°09'34"	1.77'	3.55'	1274.00'

NOTES

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12. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.

AS-BUILT INFORMATION
CONTRACTOR
COMPANY
SUPERINTENDENT
DATE
INSPECTOR
DATE
FIELD ENGINEER
DATE
MODIFICATION INFORMATION
DATE
REVIEWED BY
DATE
NO.

BENCH MARKS
TBM NO.205
CHISELED "X" LOCATED APPROXIMATELY 455 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL.
ELEV. 5110.55

FIELD NOTES
NO. | DATE | BY

ENGINEER'S SEAL
9/10/95

REMARKS
REVISIONS
NO. | DATE | BY
DESIGN
DATE 2-95
DATE 2-95
DATE 2-95

DESIGNED BY PB
DRAWN BY TSG, SV, BS
CHECKED BY JP

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
CASCADA AZUL PLACE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		9-13-95	WASTE WATER		9/10/95
HYDROLOGY		10-31-95			

DRAWING NO. 4982.93 | MAP NO. A-13 | SHEET 20 OF 24

Copyright Bohannan-Huston, Inc. 1995
DATE: APRIL, 1995

COPY:C:\0321740.DATABASE.PAD350-AZUL-PNP.GRF

BHI JOB NO. 93217.04

25×10 32×10

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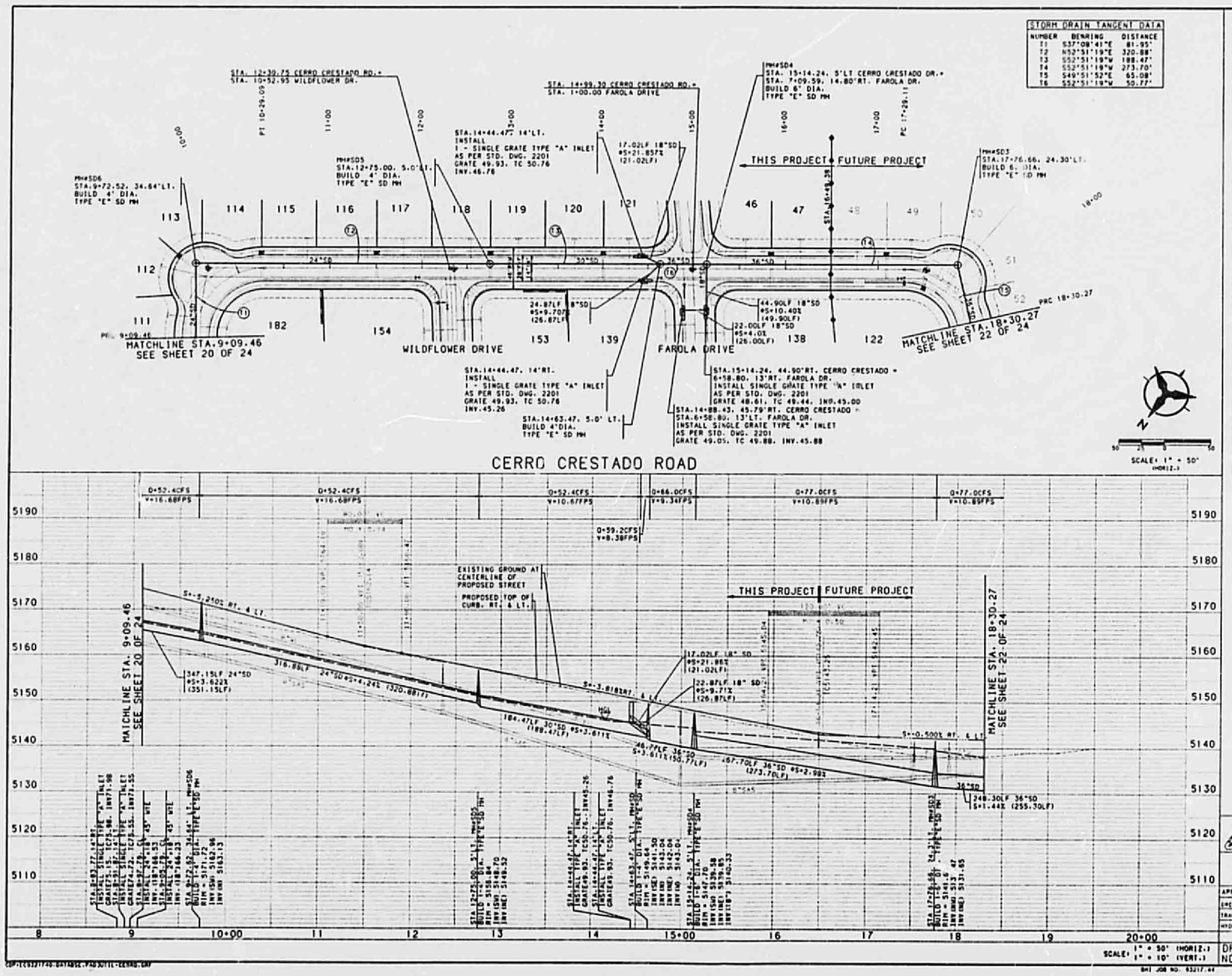

STORM DRAIN TANGENT DATA		
NUMBER	BEARING	DISTANCE
T1	S37°08'41"E	81.95'
T2	N52°51'19"E	320.88'
T3	S52°51'19"W	188.47'
T4	S52°51'19"W	273.70'
T5	S49°51'52"E	65.08'
T6	S52°51'19"W	50.77'

NOTES

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AS-BUILT INFORMATION
CONTRACTOR
COMPANY
SUPERINTENDENT
PHONE
DATE
CHECKED BY
FIELD VERIFICATION
DATE
CHECKED BY
OFFICE FILM INFORMATION
RECORDED BY
DATE
NO.

BENCH MARKS
1BM NO.205
CHISELED "X" LOCATED APPROXIMATELY 459 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL.
ELEV. 5110.55

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
JESUS TURNLER
N.M. REG. 5224
9/21/95

REVISIONS
NO. DATE REMARKS BY

DESIGNED BY PP DATE 2/95
DRAWN BY TSG DATE 2/95
CHECKED BY JRT DATE 2/95

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
CERRO CRESTADO ROAD

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		9/21/95	WASTE WATER		9/18/95
HYDROLOGY		10/3/95			

DRAWING NO. 4982.93 | MAP NO. A-13 | SHEET 21 OF 24

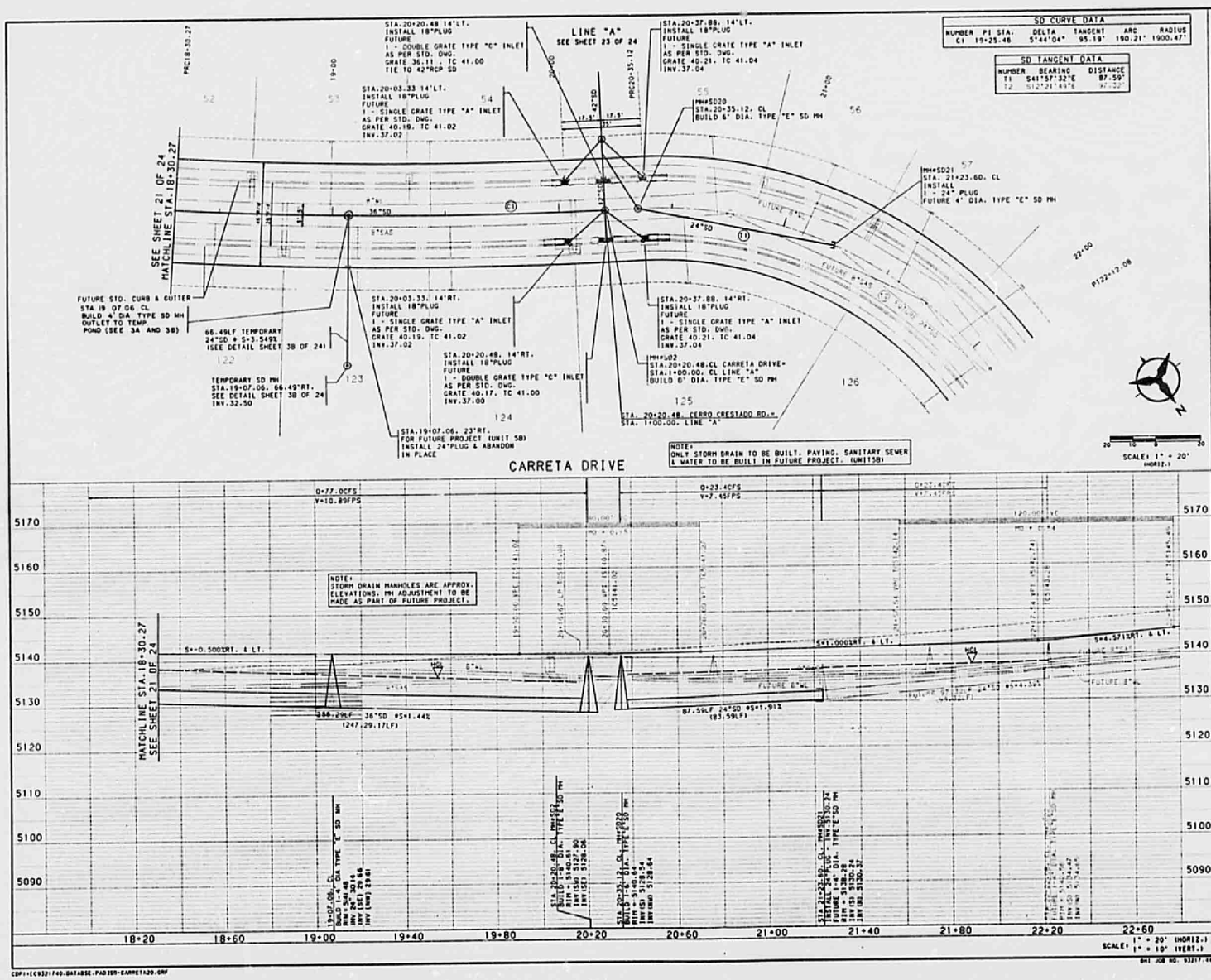
Copyright Bohannan-Huston, Inc. 1995

DATE: APRIL 1995

BHI JOB NO. 93217.44

25×10 32×10 25×10

0000 0000 0767



SD CURVE DATA					
NUMBER	PI STA.	DELTA	TANGENT	ARC	RADIUS
C1	19+25.48	5°44'04"	95.19'	190.21'	1900.47'

SD TANGENT DATA		
NUMBER	BEARING	DISTANCE
T1	S41°57'32"E	87.59'
T2	S12°21'43"E	97.32'

NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ALL CURB RETURN RADII SHALL BE 25' TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

4. GRADE ELEVATIONS, WHERE NOTED, ARE FOR TOP OF CURB UNLESS OTHERWISE SPECIFIED.

5. CONTRACTOR IS TO INSTALL A 4"x4"x5' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.

6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.

7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.

8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (MMU AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.

9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

10. ANY DAMAGE TO THE EXISTING FACILITIES (CURB AND GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

11. REMOVAL OF THE EXISTING CURB AND GUTTER SHALL BE AS PER COA STD. DWG. 2415 (SAWCUT ONLY).

12. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.

AS-BUILT INFORMATION
CONTRACTOR
CHIEF INSPECTOR BY DATE
CHIEF ENGINEER BY DATE
BENCH MARKS
1BM NO.205
CHISELED "X" LOCATED APPROXIMATELY 459 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL.
ELEV. 5110.55
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
UNIT & LAP SURV. NEW MEXICO 8334 PROFESSIONAL ENGINEER
9/12/95

REMARKS
REVISIONS
DESIGN
NO. DATE BY
DESIGNED BY PM DATE 2/95
DRAWN BY TSG, BS DATE 2/95
CHECKED BY JBT DATE 2/95

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
CARRETA DRIVE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		9/13/95	WASTE WATER		9/18/95
HYDROLOGY		11-31-95			

DRAWING NO. 4982.93
MAP NO. A-13
SHEET 22 OF 24

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DATE: APRIL 1995

BHI JOB NO. 93317.00

CDP:\IC93217\40-DATABSE-PAD3B\CARRETA20.DRF

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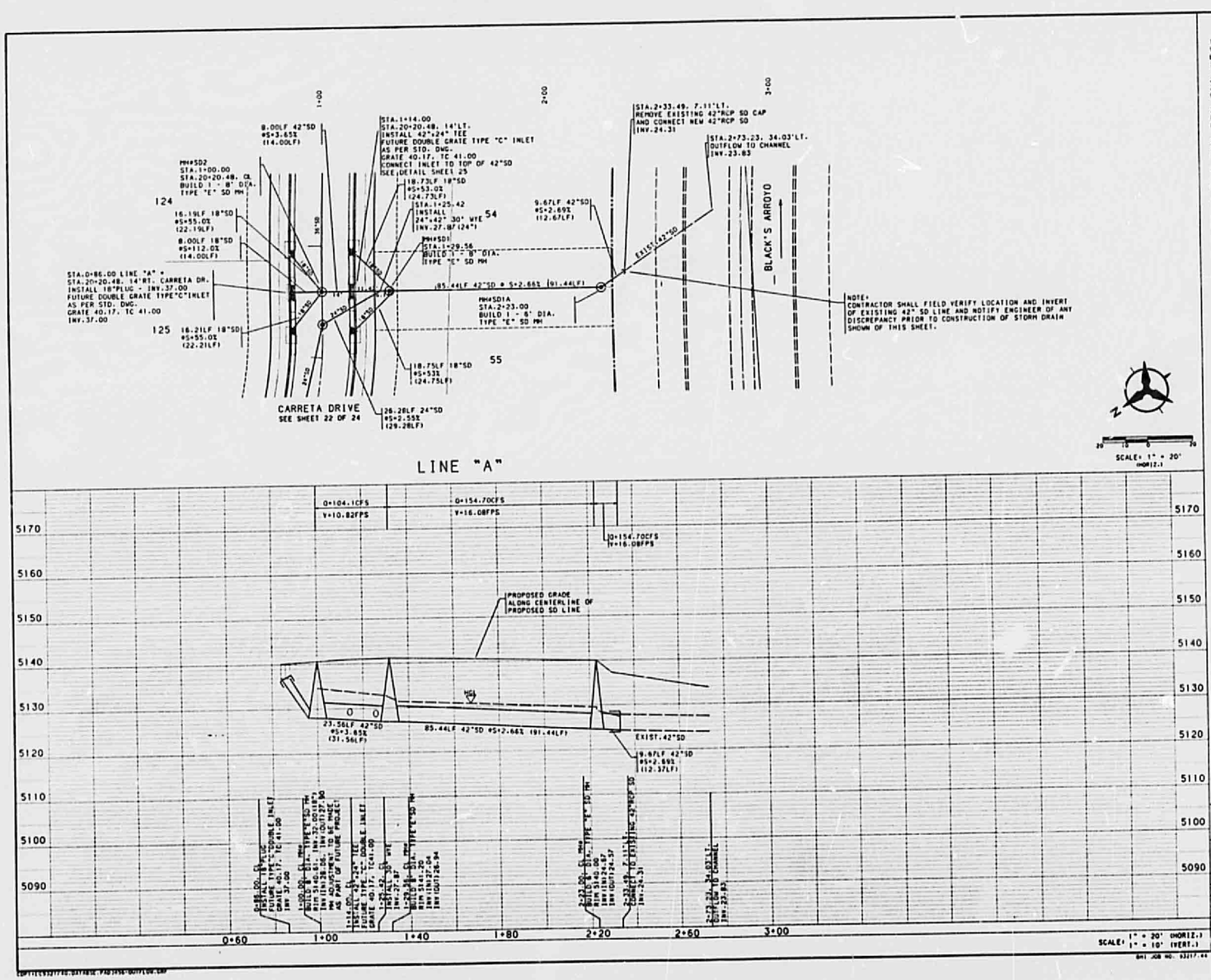

NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ALL CURB RETURN RADII SHALL BE 25' TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.

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12. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.

AS-BUILT INFORMATION
CONTRACTOR
CHIEF INSPECTOR
CHIEF ENGINEER
DATE
DRAWING NO.
SHEET NO.
REVISED BY
DATE
MYLAR FILM INFORMATION
REVISED BY
DATE
SHEET NO.

BENCH MARKS
TBM NO.205
CHISELED "X" LOCATED APPROXIMATELY 450 FEET SOUTH OF THE BLACK'S DIVERSION INLET STRUCTURE ON THE EAST WALL.
ELEV. 5110.55

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
MILES E. HARRISON
NEW MEXICO
No. 5024
9/12/95

NO.	DATE	REMARKS REVISIONS DESIGN	BY

DESIGNED BY PW, CP DATE 10/94
DRAWN BY TSG DATE 10/94
CHECKED BY JAT DATE 10/94

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A
STORM DRAIN PLAN & PROFILE
LINE "A"

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		9.12.95	WASTE WATER		9/12/95
HYDROLOGY		9.12.95			

DRAWING NO. 4982.93 | MAP NO. A-13 | SHEET 23 OF 24

BHI JOB NO. 93217.44

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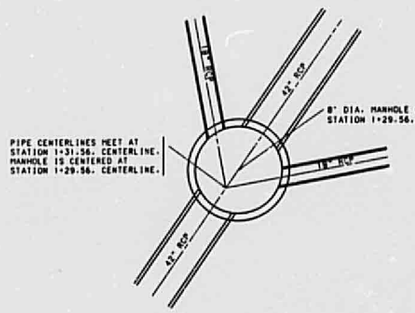
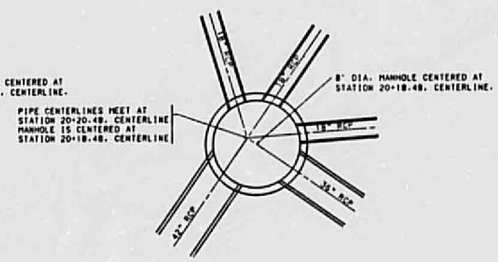
DATE: APRIL, 1995



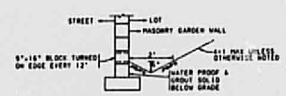
STA 1+29.56.CENTERLINE - "LINE A"

MH #SD1



STA 20+18.48.CENTERLINE - CARRETA DRIVE

MH #SD2



WEEP HOLE DETAIL

NO SCALE

BLOCKS TO BE TURNED ON SIDE (LOT 130 & 146) WITH THE BACK OF THESE LOTS TO BE GRADED TO DRAIN THRU THESE "WEEP HOLES".

SURVEY INFORMATION			
NO.	FIELD NOTES	BY	DATE

AS-BUILT INFORMATION	
CONTRACTOR STAKED BY	
STAKING CHECKED BY	DATE
POST-PAVE BY	
AS-BUILT BY	DATE
CONTRACTOR	
CONFIRMED BY	DATE
MILLING-FILM INFORMATION	
RECORDED BY	DATE
SO	

BENCH MARKS
THE BENCH MARK IS A 2" ALUMINUM CAP STAMPED "LS 6244", LOCATED APPROXIMATELY 5'+ FROM THE S'LY BOUNDARY OF LOT 13 & 14, APPROXIMATELY 3'+ INTERSECTION OF COLA COURSE AND CARRETA DRIVE.
ELEVATION = 5119.22

ENGINEER'S SEAL

JAMES T. TAFOYA NEW MEXICO 5114 REGISTERED PROFESSIONAL ENGINEER

9/29/95

NO.	DATE	BY	REMARKS
			REVISIONS
			DESIGN

DESIGNED BY PM DATE 9/94
DRAWN BY TSJ DATE 9/94
CHECKED BY JP DATE 9/94

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

SEVEN BAR NORTH - UNIT 5A

MISC. DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER	N/A	
TRANSPORTATION	N/A	9/29/95	WASTE WATER	N/A	10/4/95
HYDROLOGY		10-27-95			

DRAWING NO.	MAP NO.	SHEET	OF
4982.93	A-13	24	24

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Dwg No. 93217.44

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25×10 32×10 25×10

A13/D7A1

0000 0000 0770

PLANS/PLATS ON FILE

FILE DESC: A13/D7A2

PLANS/PLATS 2

25×10 32×10

0000 0000 0771