GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT OF WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS EACH UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES AND AT NO COST TO THE CITY.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPARTMENT OF PUBLIC WORKS, STANDARD DRAWINGS, STANDARD DRAWING NO. 10 AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
3. THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSUMING THE ACCURACY AND ACCEPTIBILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPENCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONIBLE FOR DETERMINING AN ACCEPTIBLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.
4. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE # 1-800-422-4133, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
5. BEFORE THE RIP-RAP IS ACCEPTED, AS PLACED, AT THE OUTLET OF ANY DRAINAGE STRUCTURE, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.

GENERAL NOTES (CONTINUED)

6. DEVELOPER AND/OR CONTRACTOR TO GIVE RCFC 5 DAYS WRITTEN NOTICE PRIOR TO STARTING WORK ON STORM DRAIN (OR DOING ANY WORK WITHIN RCFC EASEMENTS)
RCFC ENCROACHMENT PERMIT NO. 1-0-041-1727

SCALE:
1" = 40' HORIZONTAL
1" = 4' VERTICAL

SCALE: 1" = 40'

LINE "A"

LINE "B"

LINE "C"

LINE "D"

PROPOSED SURFACE OVER STORM DRAIN

PROPOSED 8" SEWER

H.G.L

EXIST. GRD.

PROPOSED 18" R.C.P.

PROPOSED 6" GUNITE APRON W/ 4"X4" 10 W.W.M. & CUTOFF WALL.

PROPOSED CURB AND GUTTER

PROPOSED 8" WATERLINE

PROPOSED 8" SEWER

PROP. GUNITE TO BE A MIN. OF 4" THICK.

PROPOSED CONCRETE V-DITCH

IDENTICAL POINT

SEWER MANHOLE

PROP. 8" W.L.

PROP. 8" SEWER

PROP. C. & G.

PROP. 8" WATERLINE

PROP. 8" SEWER

PROPERTY LINE

TRACT BOUNDARY

BRUIN DRIVE

ATHENS STREET

HUMBOLT COURT

TRACT

BDRY.

20' WIDE STORM DRAIN EASEMENT

SEE SHEET 2

SEE DETAIL "B" SHEET 2

SEE DETAIL "A" "X" ABOVE SEE SHEET TWO

MEET EXISTING F.L. & PROVIDE 1' MIN. DEEP CUT-OFF WALL ALONG P.L.

MEET EXIST. AT 1.5:1

MEET EXIST AT 1.5:1

Q_{10} = 8.0 C.F.S.
Q_{100} = 12.7 C.F.S.
V_{10} = 8.0 F.P.S.
V_{100} = 12.7 F.P.S.

Q_{10} = 66.5 C.F.S.
Q_{100} = 105.4 C.F.S.
V_{10} = 25.5 F.P.S.
V_{100} = 28.9 F.P.S.

Q_{10} = 39.9 C.F.S.
Q_{100} = 65.0 C.F.S.
V_{10} = 19.1 F.P.S.
V_{100} = 21.7 F.P.S.

Q_{10} = 39.9 C.F.S.
Q_{100} = 65.0 C.F.S.
V_{10} = 9.7 F.P.S.
V_{100} = 10.7 F.P.S.

Q_{10} = 29.1 C.F.S.
Q_{100} = 47.4 C.F.S.
V_{10} = 21.1 F.P.S. 10.5
V_{100} = 24.1 F.P.S. 10.0

V_{10} = 11.8 F.P.S.
V_{100} = 13.2 F.P.S.

V_{100} = 3.3 F.P.S.

Q = 39.9 C.F.S.
Q100 = 65.0 C.F.S.
V10 = 9.2 F.P.S. Ø.7
V100 = 9.8 F.P.S. 10.7

167.13 L.F. 39"ø R.C.P. D-1500 OR 39" CAST-IN-PLACE PIPE, T= 4"

691.88 L.F. 36"ø R.C.P. - D-1500 OR 36" CAST-IN-PLACE PIPE, T= 3½"

382.03 L.F. 30"ø R.C.P. D-1750 OR 30" CAST-IN-PLACE PIPE, T= 3"

10+00.00 BEGIN 39"ø R.C.P. LINE "A" CONSTRUCT HEADWALL PER CALTRANS STD. D-89 (28.70 F.L.)

11+40.00 B.C. 38.50 F.L. 11+67.13 BEG. MANHOLE JM TRANS. FROM 39"ø R.C.P. TO 36"ø R.C.P.-38.95 F.L.

11+69.23 LINE "A" 10+00.00 LINE "C"

11+74.23 LINE "A" 10+00.00 LINE "B"

11+79.53 END MANHOLE JM - TRANS. FROM 39"ø R.C.P. TO 36"ø R.C.P.-38.95 F.L.

12+05.55 P.R.C. 39.21 F.L.

12+75.00 G.B. 39.90 F.L.

12+82.82 E.C. 40.37 F.L.

11+00.00 G.B. 37.90 F.L.

11+36.00 (R.C.F.C. LEVEE) HGL INUNDATION

15+00.00 MH 53.32 F.L.

15+50.00 G.B. 56.30 F.L.

15+00.00 G.B. 56.30 F.L.

15+10.00 MH 53.32 F.L.

17+13.57 B.C. 57.94 F.L. 60.60 F.L.

17+48.91 E.C. 58.29 F.L. 61.53 F.L.

18+42.91 B.C. 59.55 F.L.

18+45 BEGIN MANHOLE JM TRANS. FROM 36"ø R.C.P. TO 30"ø R.C.P. - 59.55 F.L.

18+70.45 BEG. MANHOLE JM TRANS. FROM 36"ø R.C.P. TO 30"ø R.C.P. - 59.55 F.L.

18+76.05 END MANHOLE JM TRANS. FROM 36"ø R.C.P. TO 30"ø R.C.P. - 60.06 F.L.

18+78.25 E.C. 60.08 F.L. 65.51 F.L.

18+71.45 LINE "A" =10+00.00 LINE "D"

22+43.59 B.C. 82.50 F.L. 85.93

22+58.59 END 30"ø R.C.P. LINE "A" CONSTRUCT "L" HEADWALL PER CALTRANS STD. D-89 (82.80 F.L.) 86.50 F.L.

N 15° 00' 00" E

N 00° 04' 10" E - 430.75'

N 00° 04' 10" E 365.34'

N 89° 55' 50" W - 94.00'

S 3.94%

5.59%

2.0%

2.62%

1.0%

9.2%

CONSTRUCTION NOTES

1. CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG. NO. 405 W=7', V=4.28'
2. CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG. NO. 405 W=4', V=8'
3. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO. 432, MODIFIED PER DETAIL "C".
4. CONSTRUCT HEADWALL PER CALTRANS STD. D-89.
5. CONSTRUCT GUNITE APRON AT S.D. INLET PER DETAIL "A", SHEET 2
6. CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. DWG. NO. 412, V=3.50'
7. CONSTRUCT CONCRETE APRON AT S.D. INLET PER DETAIL "B" AND RET. WALL STRUCTURE T=6" PER DETAIL "B" (SH. 2) AND GRADING PLAN DETAIL "A"
8. CONSTRUCT CONC. DRAINAGE SWALE PER SECT. A-A ON GRADING PLAN. ~~3' WIDE CONCRETE APRON PER GRADING PLAN.~~
9. CONSTRUCT MANHOLE AX PER CITY OF RIVERSIDE STD. DWG. NO. 430.
10. INSTALL LIGHT RIP-RAP PER CALTRANS STD. SPEC. SECTION 72.
11. INSTALL 18" R.C.P. D-LOAD = 2000
12. INSTALL 24" R.C.P. D-LOAD = 1500
13. INSTALL 30" R.C.P. D-LOAD = 1750 OR 30" CAST-IN-PLACE PIPE, T=3"
14. INSTALL 36" R.C.P. D-LOAD = 1500 OR 36" CAST-IN-PLACE PIPE, T=3½"
15. INSTALL 39" R.C.P. D-LOAD = 1500 OR 39" CAST-IN-PLACE PIPE, T= 4"
16. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO 432.
17. PIPE BEDDING PER CITY OF RIVERSIDE STD. DWG. NO. 452, CASE ~~X~~ VARIES *

CURVE DATA CHART

	DELTA	RADIUS	LENGTH	TANGENT
1	83° 27' 23"	45.00'	65.55'	40.13'
2	98° 23' 13"	45.00'	77.27'	52.12'
3	90° 00' 00"	22.50'	35.34'	22.50'
4	~~44° 06' 16"~~ ~~38° 19' 31"~~	22.50'	~~17.32'~~ ~~15.05'~~	9.11' ~~7.82'~~
5	37° 13' 02"	45.00'	29.23'	15.15'
6	06° 21' 58"	45.00'	5.00'	2.50'
7	39° 52' 23"	45.00'	31.32'	16.32'

PIPE OUTLET DETAIL
NO SCALE

SECTION - SINGLE HEADWALL

FRONT ELEV. SINGLE HEADWALL

D = 39", H = 4'-11", L = 12'-6", STEEL 130 LBS., CONCRETE 209 CU. YDS.

(4) SINGLE HEADWALL DETAIL N.T.S.

SECTION A-A

FOR CORNER STEEL DETAIL SEE DETAIL A-A

SECTION "L" HEADWALL

FRONT ELEV. "L" HEADWALL

D = 30", H = 4'-2", L/2 = 5'-0" W = 4'-10", STEEL 110 LBS., CONC. 180 CU. YDS.

(4) "L" HEADWALL DETAIL
NOT TO SCALE

"L" HEADWALL

TOE OF SLOPE AT BACK OF HEADWALL

2:1 SLOPE

d=0.50'

DETAIL "A" STORM DRAIN INLET
NO SCALE

HEADWALL NOTES

1. NO DEDUCTION MADE IN QUANTITIES FOR THICKNESS OF PIPE WALLS.
2. ALL REINFORCING STEEL 4 BARS. ALL VERTICAL AND HORIZONTAL TIE BARS 18" MAXIMUM SPACING.
3. LENGTH OF WALL "W" MAY BE VARIED TO SUIT CONDITIONS ENCOUNTERED IN THE FIELD, AND STRAIGHT LINE INTERPOLATION MAY BE USED TO CALCULATE QUANTITIES.
4. QUANTITIES ARE FOR DESIGN PURPOSES ONLY.

CONSTRUCT "SINGLE HEADWALL" PER STD. D-89 & DETAIL "L" HEADWALL DETAIL" SH. 10 (4)

CITY OF RIVERSIDE
WATER SYSTEM
Richard L. Dubek 4-4-90
APPROVED DATE

JN BEELER and associates
LAND SURVEYING AND MAPPING
6104 RIVERSIDE AVENUE SUITE B
RIVERSIDE, CA. 92506
(714)682-2216

PLANS PREPARED UNDER THE SUPERVISION OF:
DATE 10-2090
R.C.E. 27988 EXP. 3/30/00

REGISTERED CIVIL ENGINEER No. 27988 Exp. 3/30/00 CIVIL

MARK	REVISIONS	APPR.	DATE
1	REVISED LINE "A" LINE "D" DETAIL "A", DETAIL "X" AND DETAIL "B"	JLT	5/14/90
2	REVISE S.D. GRADES, ADD 95 & 21+00 "L" HEADWALL & SINGLE HEADWALL	JLT	6/18/90

DESIGNED BY L.B. DRAWN BY J.A.T. CHECKED BY J.L.T.

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	6/15/90	
PARK DEPARTMENT		
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER	6/18/90	

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY Barry Bed
PUBLIC WORKS DIRECTOR
DATE 6/20/90

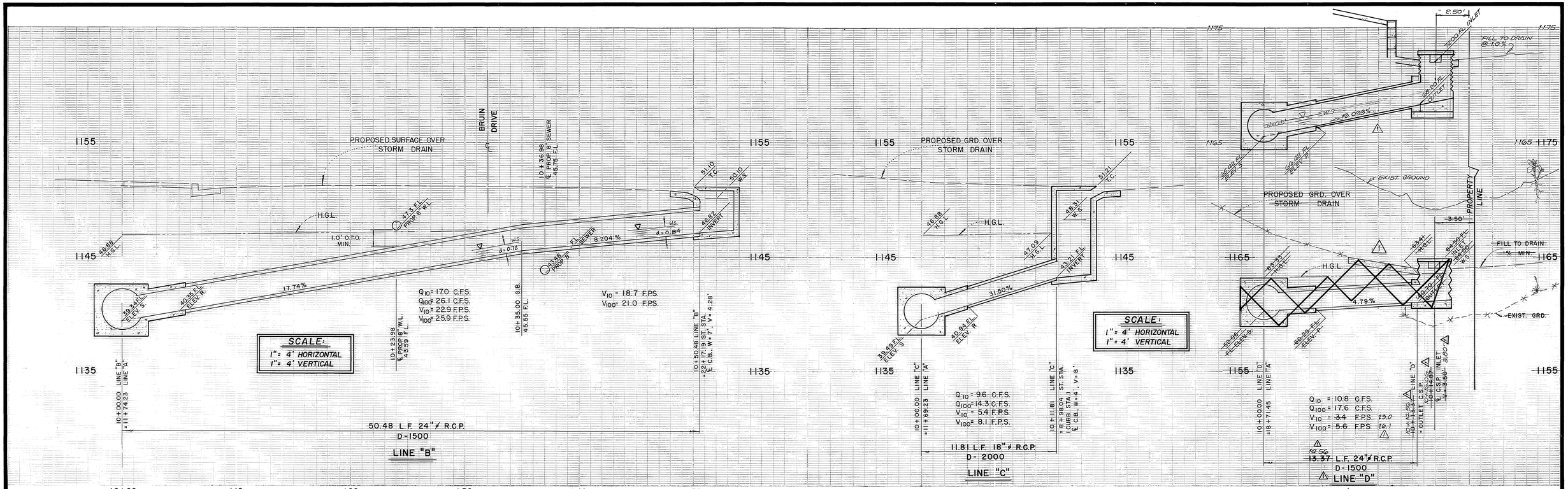
TRACT NO. 24684
STORM DRAIN PLAN

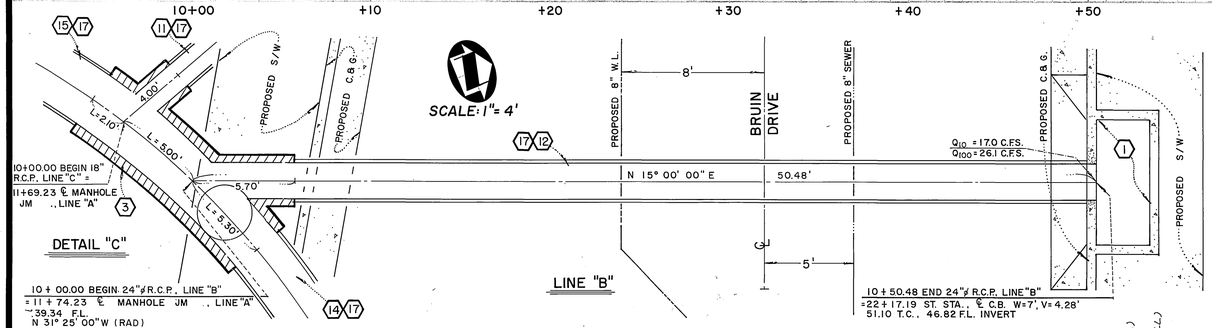
FOR: CONCORDIA DEVELOPMENT CORP.
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 4'

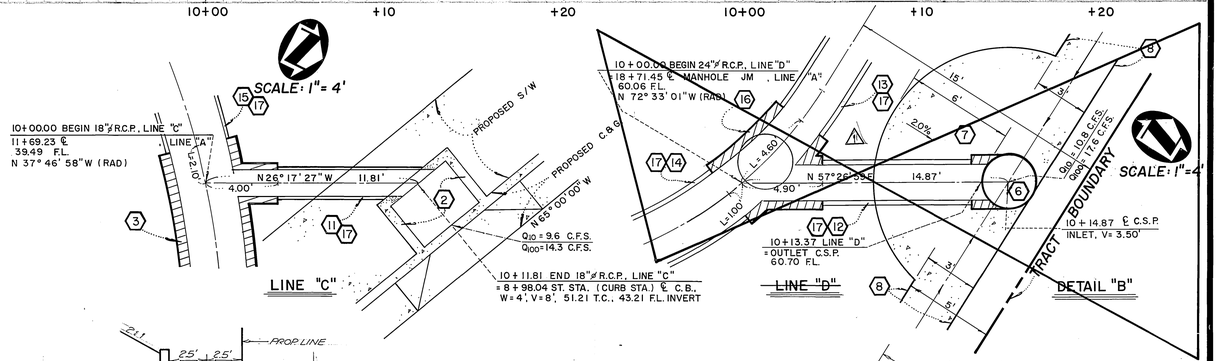
ACCOUNT NO. D-577
SHEET 1 OF 2
W.O. 88-259-03

AS BUILT 3-13-91 BDSM

INDEXED 8-10-90 LH







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5. CONSTRUCT GUNITE APRON AT S.D. INLET PER DETAIL "X", SHEET TWO
6. CONSTRUCT C.S.P. INLET PER CITY OF RIVERSIDE STD. DWG. NO. 412, V=3.50'
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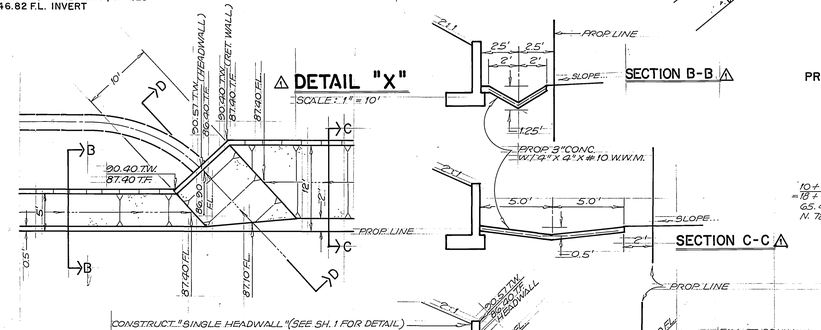
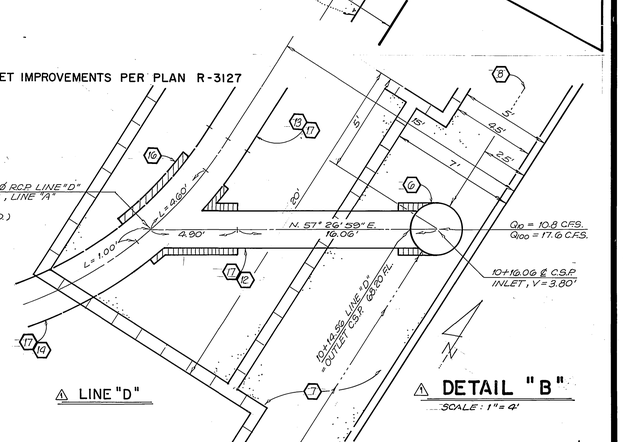
16. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO. 432.
17. PIPE BEDDING PER CITY OF RIVERSIDE STD. DWG. NO. 452, CASE II.

MANHOLE JM DATA

	A	B	C	D_1	D_2	E	F	L	T
LINE "B"	46° 25' 00"	24"	5.7'	36"	39"	5.3'	7"	12.4'	5¼"
LINE "C"	78° 30' 29"	18"	4.0'	36"	39"	10.3'	7"		4½"
LINE "D"	50° 00' 00"	24"	4.9'	30"	36"	4.6'	6½"	5.6'	5¼"





CITY OF RIVERSIDE
WATER SYSTEM
Richard L. Diedrick 4-4-90
APPROVED DATE

REGISTERED PROFESSIONAL ENGINEER RICHARD L. JORDAN No. 27983 3/30/90

JN BEELER and associates LAND SURVEYING AND MAPPING
6104 RIVERSIDE AVENUE SUITE B
RIVERSIDE, CA. 92506
(714)682-2216

PLANS PREPARED UNDER THE SUPERVISION OF:
R.C.E. 27983 EXP. 3/30/90 DATE 10-20-89

MARK	REVISIONS	APPR.	DATE
1	REVISE "LINE "A", LINE "D" DETAIL "A", DETAIL "X" AND DETAIL "B"		
2	REVISE S.D. GRADES 57.50 & 57.00 CHANGE "E" HEADWALL "A" TO "SINGLE" HEADWALL		

DESIGNED BY L.E. DRAWN BY JAT. CHECKED BY L.L.J.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	6/15/90	
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P. W. ENGINEER	6/18/90	

APPROVED BY Barry Bent
PUBLIC WORKS DIRECTOR
DATE 6/20/90

TRACT NO. 24684
STORM DRAIN PLAN

FOR: CONCORDIA DEVELOPMENT CORP.
HORIZ. SCALE: 1"= 4' VERT. SCALE: 1"= 4'

ACCOUNT NO. D-577
SHEET 2 OF 2
W.O. 88-259-03

* Per Bullet 3-13-91 Brian

INDEXED 8-10-90 GH