RIVERSIDE CALIFORNIA

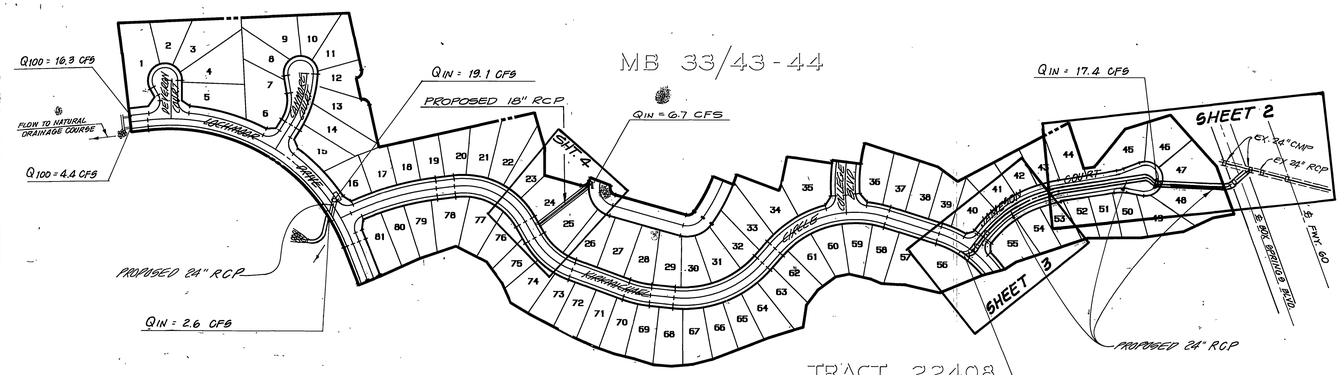
SYCAMORE HIGHLANDS

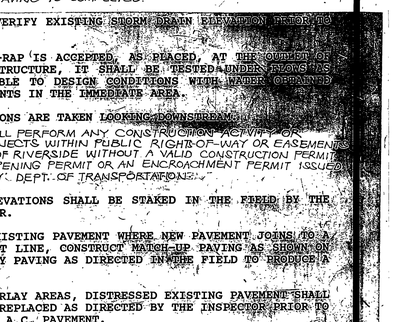
STORM DRAIN IMPROVEMENT PLANS

TRACT 21167

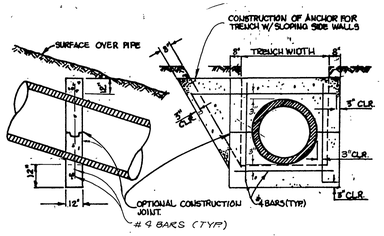
CONSTRUCTION NOTES AND ESTIMATED QUANTITIES

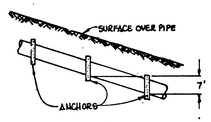
	ITEM	QTY	UNIT
(1)	CONSTRUCT 24" R.C.P., D-LOAD AS NOTED	719	LF
(2)	CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG. NO. 405 N & V AS NOTED ON PLANS	3	EA
(3)	CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER DETAIL ON SHEET 3	1	EA.
(4)	CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. DWG. NO. 424.	1	EA
(5)	CONSTRUCT M.H. EZ PER CITY OF RIV. STD. DWG. NO. 431 & DETAIL SHOWN ON SHEET 2	1	EA
(6)	CONSTRUCT M.H. EZ PER CITY OF RIVERSIDE STD. DWG. NO. 431.	3	EA
(7)	CONSTRUCT 18" RCP (2000-D)	184	LF
(8)	CONSTRUCT CURB OUTLET PER CITY OF RIV. STD. DWG. NO. 410.	1	EA.
(9)	CONSTRUCT PIPE SLOPE ANCHOR PER DETAIL THIS SHEET	3	EA
(10)	CONST. 30" RCP (1400-D)	12	LF
(11)	MODIFY EXIST. GRATE INLET CATCH BASIN CONNECT NEW 30" RCP IN PLACE OF EXIST. 24" CMP		
(12)	CONSTRUCT CLEAN OUT BOX PER CITY OF RIVERSIDE STD. DWG. NO. 425	1	EA
(13)	CONSTRUCT 6" CONCRETE ENCASEMENT PER CITY OF RIVERSIDE STD. DWG. NO. 452 CASE IV.	1	EA
(14)	CUT AND REMOVE PORTION OF EXIST. 24" CMP	20	LF





INDEX MAP





NOTES:

1. PIPE ANCHORS SHALL BE CONSTRUCTED AT 7' VERTICAL INTERVAL ON ALL SLOPES OF 5:1 OR STEEPER.
2. ALL REINFORCING STEEL SHALL BE #4 BARS
3. CONCRETE SHALL BE CLASS 500-C-2500 CONCRETE.

CONCRETE PIPE SLOPE ANCHOR
NOT TO SCALE (O.C.E.M.A. STD. PLAN 1333 - MODIFIED)

SCALE: 1" = 200'

SCALE: 1"= 200 FEET
0 100 200 400 600 800

REGISTERED PROFESSIONAL ENGINEER
RICHARD N. YALE
NO. #040023
Exp. 12/31/01
CIVIL
STATE OF CALIFORNIA

NOTICE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURE SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

GENERAL NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS 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 FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION AND CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED JULY, 1992
3. THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.
4. QUANTITIES SHOWN ARE FOR INFORMATION ONLY. WELLS FARGO AND/OR CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING OR RE-ESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HEREON.
6. ON ALL AREAS WITHIN PUBLIC RIGHT-OF-WAY, WHERE THE FILL IS ONE (1) FOOT OR GREATER, A LETTER WILL BE REQUIRED FROM THE SOILS ENGINEER, CERTIFYING THE COMPACTION OF THE RIGHT-OF-WAY SUBGRADE, PRIOR TO ISSUANCE OF THE CONSTRUCTION PERMIT/CUT SHEETS.
7. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE: 1-800-227-2600, 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 USA.
8. THE STORM DRAIN CONTRACTOR SHALL ADJUST MANHOLES TO FINAL GRADE AFTER PAVING IS COMPLETED.
9. CONTRACTOR TO VERIFY EXISTING STORM DRAIN ELEVATION PRIOR TO CONSTRUCTION.
10. BEFORE THE RIP-RAP IS ACCEPTED, AS PLACED, AT THE OUTLET OF ANY DRAINAGE STRUCTURE, IT SHALL BE TESTED UNDER FLOWING AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.
11. ALL CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
12. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL ANY OBJECTS WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS OF THE COUNTY OF RIVERSIDE WITHOUT A VALID CONSTRUCTION PERMIT OR, A STREET OPENING PERMIT OR AN ENCROACHMENT PERMIT ISSUED BY THE COUNTY DEPT. OF TRANSPORTATION.
13. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
14. TRIM EDGE OF EXISTING PAVEMENT WHERE NEW PAVEMENT JOINS TO A SMOOTH, STRAIGHT LINE, CONSTRUCT MATCH-UP PAVING AS SHOWN ON PLAN AND OVERLAY PAVING AS DIRECTED IN THE FIELD TO PRODUCE A SMOOTH SECTION.
15. IN PAVEMENT OVERLAY AREAS, DISTRESSED EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE INSPECTOR PRIOR TO OVERLAYING WITH A.C. PAVEMENT.
16. ANY TRAFFIC CONTROL STRIPING OBLITERATED AND/OR BADLY WORN DURING CONSTRUCTION, SHALL BE RESTORED BY THE CONTRACTOR WITHIN FIVE DAYS AFTER NOTIFICATION FROM THE CITY INSPECTORS.

PRIVATE ENGINEERING NOTE
(NOT REQUIRED BY GOVERNING AGENCY)

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

17. PIPE BEDDING SHALL BE PER CITY OF RIVERSIDE STD. DWG. NO. 452, CASE I, UNLESS OTHERWISE SPECIFIED.
18. No person shall perform any construction activity or install any objects within the public rights-of-way or easements of the City of Riverside without a valid Construction Permit or, a Street Opening Permit or an Encroachment Permit issued by the City's Public Works Department.

RIVERSIDE COUNTY TRANSPORTATION DEPT.
APPROVED BY — DATE 1/27/98

BENCHMARK:

CITY OF RIVERSIDE BENCHMARK H8-F.
P.K. NAIL AND CITY ENGINEER TAG IN THE EASTERLY CORNER OF CATCHBASIN AT THE SOUTHEAST CORNER OF CENTRAL AVENUE AT BOX SPRINGS BOULEVARD.

ELEVATION - 1360.91

SOUTHERN CALIFORNIA GAS CO.	CITY OF RIVERSIDE WATER SYSTEM	PACIFIC BELL TELEPHONE
APPROVED BY — DATE 9-19-91	APPROVED BY — DATE 6-18-91	APPROVED BY — DATE 4-17-91

KEITH INTERNATIONAL, INC.
•Planning • Civil Engineering • Environmental Services• •Land Surveying • Public Works • Water Resources•
Inland Empire Division
22690 Cactus Ave., Ste. 300, Moreno Valley, CA 92553 (909) 653-0234
RICHARD N. YALE REG. CIVIL ENGINEER NO. 40023 — DATE 4/25/97

MARK	REVISIONS	APPR.	DATE

DESIGNED BY ABB DRAWN BY MT CHECKED BY DNL

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

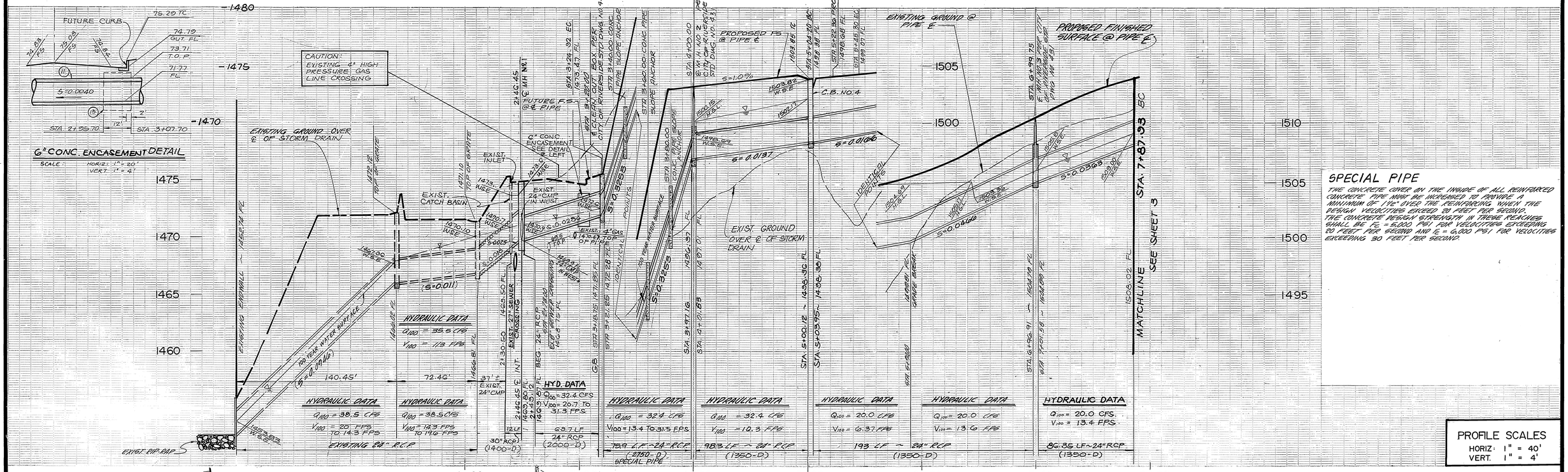
APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	1/30/98	RC
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P.W. ENGINEER	—	—

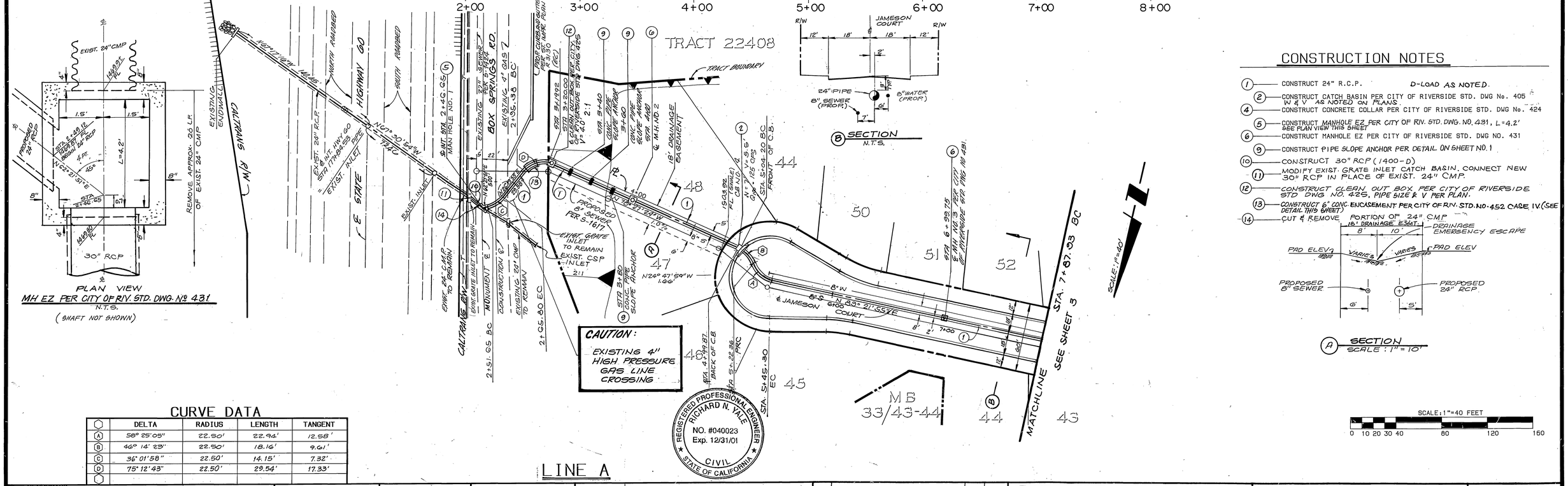
APPROVED BY — PUBLIC WORKS DIRECTOR
DATE 2-5-98

STORM DRAIN IMPROV. PLANS
TRACT 21167
LINE A/LINE C
TITLE SHEET

ACCOUNT NO. D-600
SHEET 1 OF 4
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

INDEXED 3-24-98 GH





CONSTRUCTION NOTES

1. CONSTRUCT 24" R.C.P. D-LOAD AS NOTED.
2. CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG No. 405 W & V AS NOTED ON PLANS
4. CONSTRUCT CONCRETE COLLAR PER CITY OF RIVERSIDE STD. DWG No. 424
5. CONSTRUCT MANHOLE EZ PER CITY OF RIV. STD. DWG. NO. 431, L=4.2' SEE PLAN VIEW THIS SHEET
6. CONSTRUCT MANHOLE EZ PER CITY OF RIVERSIDE STD. DWG NO. 431
9. CONSTRUCT PIPE SLOPE ANCHOR PER DETAIL ON SHEET NO. 1
10. CONSTRUCT 30" RCP (1400-D)
11. MODIFY EXIST. GRATE INLET CATCH BASIN, CONNECT NEW 30" RCP IN PLACE OF EXIST. 24" CMP.
12. CONSTRUCT CLEAN OUT BOX PER CITY OF RIVERSIDE STD DWG NO. 425, PIPE SIZE & V PER PLAN.
13. CONSTRUCT 6" CONC. ENCASEMENT PER CITY OF RIV. STD. NO. 452 CASE IV. (SEE DETAIL THIS SHEET)
14. CUT & REMOVE

CURVE DATA

	DELTA	RADIUS	LENGTH	TANGENT
A	58° 25' 05"	22.50'	22.94'	12.58'
B	46° 14' 23"	22.50'	18.16'	9.61'
C	36° 01' 58"	22.50'	14.15'	7.32'
D	75° 12' 43"	22.50'	29.54'	17.33'

LINE A

REGISTERED PROFESSIONAL ENGINEER RICHARD N. YALE NO. #040023 Exp. 12/31/01 CIVIL STATE OF CALIFORNIA

BENCHMARK:
CITY OF RIVERSIDE BENCHMARK H8-F.
P.K. NAIL AND CITY ENGINEER TAG IN THE EASTERLY CORNER OF CATCHBASIN AT THE SOUTHEAST CORNER OF CENTRAL AVENUE AT BOX SPRINGS BOULEVARD.
ELEVATION - 1360.91

SOUTHERN CALIFORNIA GAS COMPANY — APPROVED 9-19-91 DATE

CITY OF RIVERSIDE WATER SYSTEM — APPROVED 6-18-91 DATE

PACIFIC BELL TELEPHONE — APPROVED 8/29/91 DATE

KEITH INTERNATIONAL, INC.
• Planning • Civil Engineering • Environmental Services • • Land Surveying • Public Works • Water Resources •
Inland Empire Division
23692 Castus Ave., Ste. 200, Moreno Valley, CA 92553 (909) 653-0234
RICHARD N. YALE REG. CIVIL ENGINEER NO. 40023 — 4/25/97 DATE

MARK	REVISIONS	APPR.	DATE

DESIGNED BY MT DRAWN BY MP CHECKED BY DAL

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	11/30/98	
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P.W. ENGINEER		

APPROVED BY Richard McDaniel PUBLIC WORKS DIRECTOR
DATE 2-5-98

STORM DRAIN PLANS
TRACT 21167
LINE A

HORIZ. SCALE: 1"= 40' VERT. SCALE: 1"= 4'

ACCOUNT NO. D-600
SHEET 2 OF 4

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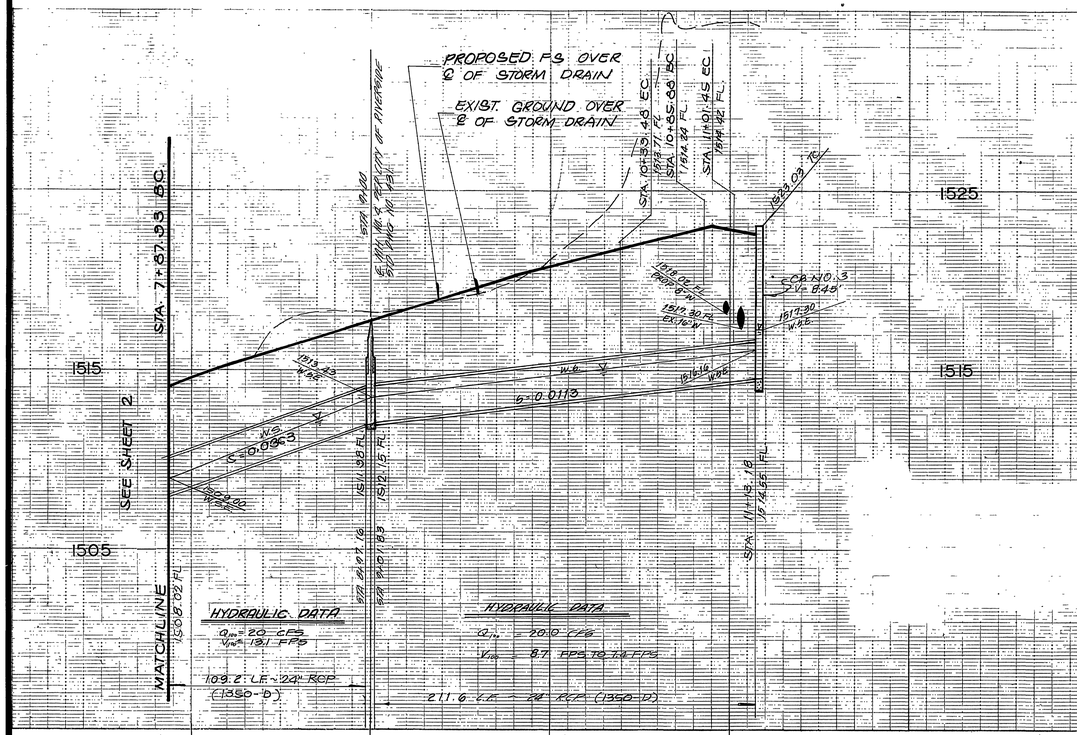
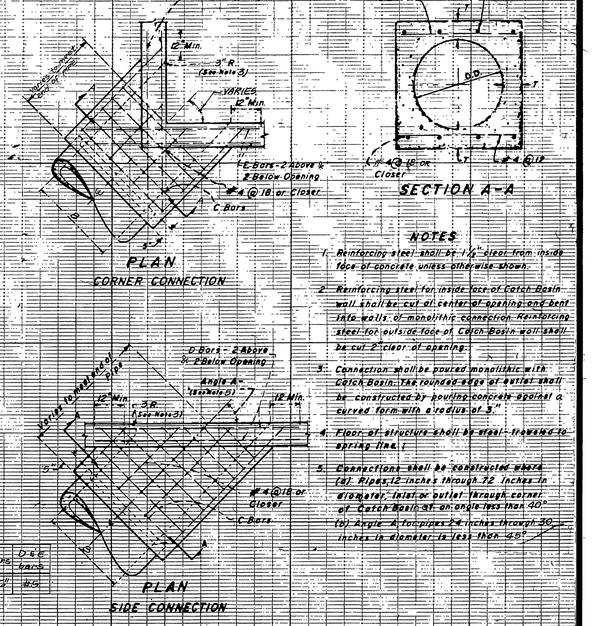




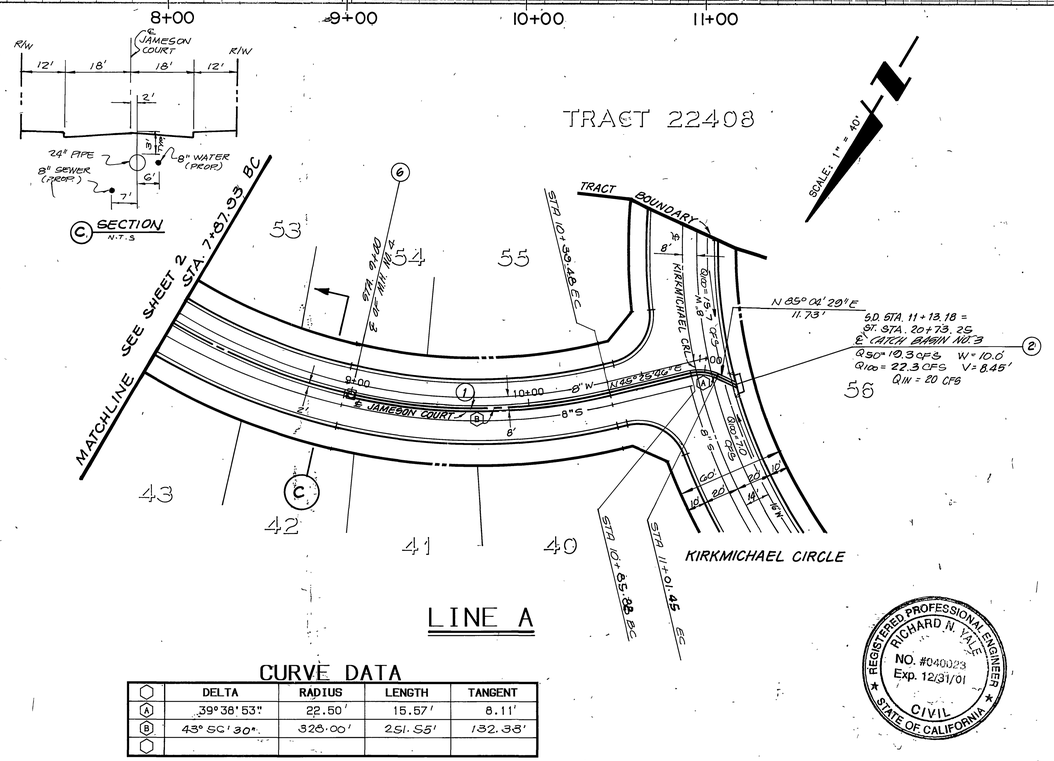
NOTES

1. Reinforcing steel shall be 1½" clear from inside face of concrete unless otherwise shown.
2. Reinforcing steel for inside face of Catch Basin wall shall be cut at center of opening and bent into walls of monolithic connection. Reinforcing steel for outside face of Catch Basin wall shall be cut 2" clear of opening.
3. Connection shall be poured monolithic with Catch Basin. The top and bottom edge of curves shall be constructed by pouring concrete against a curved form with a radius of 3".
4. Floor of structure shall be steel troweled to spring line.
5. Connections shall be constructed where (a) Pipes 12 inches through 72 inches in diameter, laid or butted through corner of Catch Basin at an angle less than 90°. (b) Angle A for pipes 24 inches through 30 inches in diameter is less than 45°.

SPECIAL CONNECTIONS TO CATCH BASIN No. 3

NOT TO SCALE

PROFILE SCALES
HORIZ: 1" = 40'
VERT: 1" = 4'



CURVE DATA

	DELTA	RADIUS	LENGTH	TANGENT
A	39°38'53"	22.50'	15.57'	8.11'
B	45°50'30"	326.00'	251.55'	132.38'

CONSTRUCTION NOTES

1. CONSTRUCT 24" R.C.P., D-LOAD AS NOTED
2. CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG No. 405
6. CONSTRUCT MANHOLE EZ PER CITY OF RIVERSIDE STD. DWG NO. 431

SCALE: 1"=40 FEET
0 10 20 30 40 80 120 160

REGISTERED PROFESSIONAL ENGINEER
RICHARD N. YALE
NO. #040023
Exp. 12/31/01
CIVIL
STATE OF CALIFORNIA

BENCHMARK:

CITY OF RIVERSIDE BENCHMARK H8-F.
P.K. NAIL AND CITY ENGINEER TAG IN THE EASTERLY CORNER OF CATCHBASIN AT THE SOUTHEAST CORNER OF CENTRAL AVENUE AT BOX SPRINGS BOULEVARD.

ELEVATION - 1360.91

SOUTHERN CALIFORNIA GAS COMPANY
APPROVED 9-19-91 DATE

CITY OF RIVERSIDE WATER SYSTEM
APPROVED 1/21/98 DATE
APPROVED 6-18-91 DATE

PACIFIC BELL TELEPHONE
APPROVED 7-22-91 DATE

KEITH INTERNATIONAL, INC.
• Planning • Civil Engineering • Environmental Services •
• Land Surveying • Public Works • Water Resources •
Inland Empire Division
22690 Cactus Ave., Ste. 300, Moreno Valley, CA 92553 (909) 653-0234
RICHARD N. YALE REG. CIVIL ENGINEER NO. 40023 4/25/97 DATE

MARK	REVISIONS	APPR.	DATE

DESIGNED BY MT DRAWN BY MP CHECKED BY ADB

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	1/20/98	RC
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P.W. ENGINEER	—	—

APPROVED BY Richard M. Brady
PUBLIC WORKS DIRECTOR
DATE 2-5-98

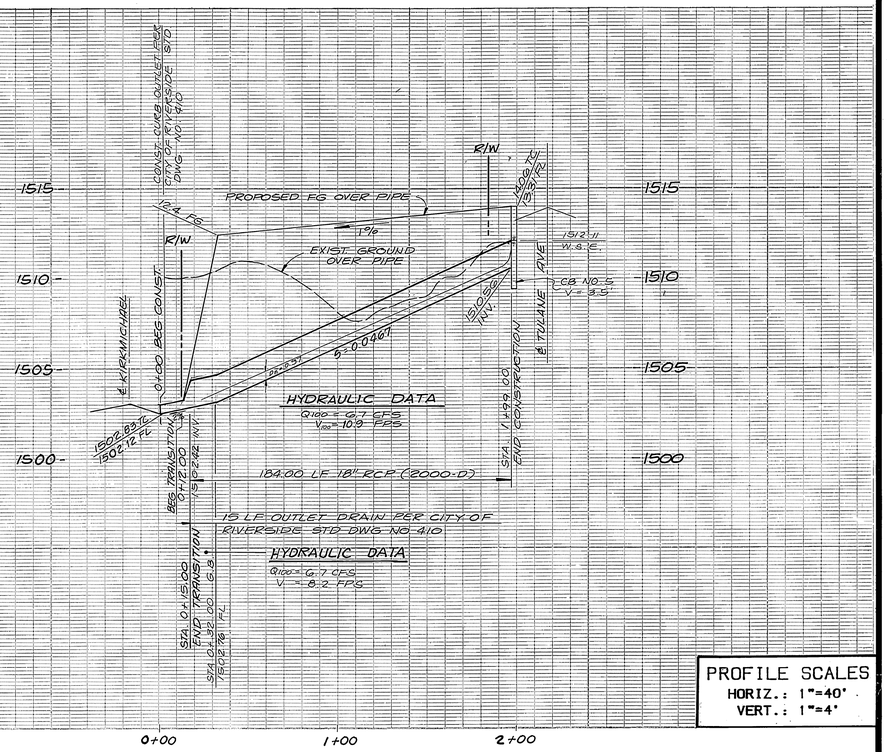
STORM DRAIN PLANS
TRACT 21167
LINE A

HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 4'

ACCOUNT NO. D-600

SHEET 3 OF 4

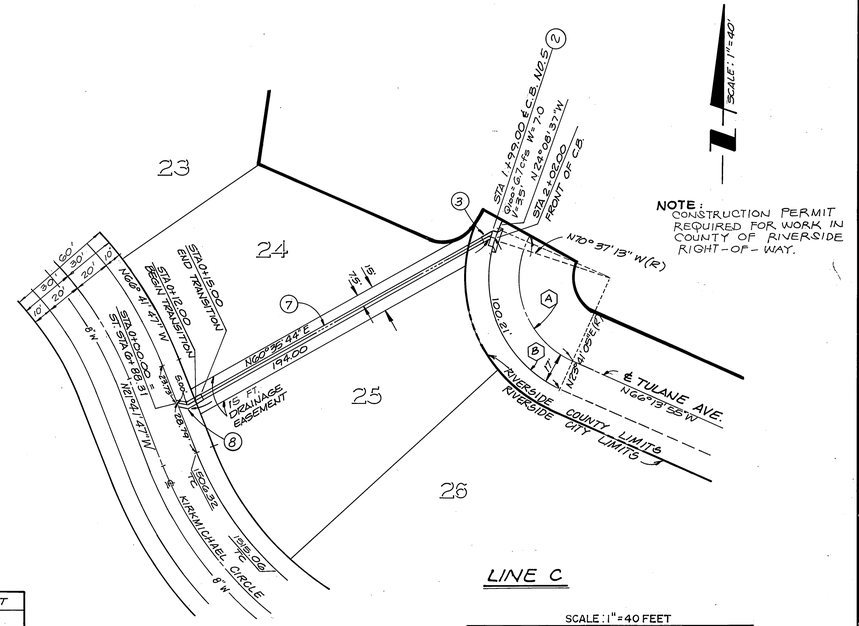
4P: STORM DRAIN LINE B 3/3 - 48(0.32)PF: 726006 123 19-Dec-89 11:39 AM / 726006-5214
INDEXED 3-24-98 GH



PROFILE SCALES
HORIZ.: 1"=40'
VERT.: 1"=4'

CONSTRUCTION NOTES

(2) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DWG NO. 405 W & V AS NOTED ON PLANS.
(3) CONSTRUCT SPECIAL CONNECTIONS TO CATCH BASIN PER DETAIL ON SHEET 3. USE SIDE CONNECTION DETAIL.
(7) CONSTRUCT 18" RCP (2000-D)
(8) CONSTRUCT CURB OUTLET PER CITY OF RIVERSIDE STD DWG NO. 410 CURB TRANSITION LENGTH = 10'



NOTE: CONSTRUCTION PERMIT REQUIRED FOR WORK IN COUNTY OF RIVERSIDE RIGHT-OF-WAY.

LINE C

SCALE: 1"=40 FEET
0 10 20 30 40 80 120 160

CURVE DATA

	DELTA	RADIUS	LENGTH	TANGENT
A	95° 19' 45"	50.00	83.19	54.88
B	90° 27' 32"	67.00	105.78	67.54

REGISTERED PROFESSIONAL ENGINEER
RICHARD N. YALE
NO. #040023
Exp. 12/31/01
CIVIL
STATE OF CALIFORNIA

RIVERSIDE COUNTY TRANSPORTATION DEPT.
APPROVED BY 11/24/98 DATE

BENCHMARK:
CITY OF RIVERSIDE BENCHMARK H8-F.
P.K. NAIL AND CITY ENGINEER TAG IN THE EASTERLY CORNER OF CATCHBASIN AT THE SOUTHEAST CORNER OF CENTRAL AVENUE AT BOX SPRINGS BOULEVARD.
ELEVATION - 1360.91

SOUTHERN CALIFORNIA GAS CO	CITY OF RIVERSIDE WATER SYSTEM	PACIFIC BELL TELEPHONE
APPROVED BY 9-19-97 DATE	APPROVED BY 6-16-97 DATE	APPROVED BY 4/1/97 DATE

KEITH INTERNATIONAL, INC.
•Planning • Civil Engineering • Environmental Services•
•Land Surveying • Public Works • Water Resources•
Inland Empire Division
22690 Cactus Ave., Ste. 300, Moreno Valley, CA 92553 (909) 653-0234
RICHARD N. YALE REG. CIVIL ENGINEER NO. 40023 4/25/97 DATE

MARK	REVISIONS	APPR.	DATE

DESIGNED BY CJ DRAWN BY LB CHECKED BY CJ

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	1/30/98	RC
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
CHIEF P. W. ENGINEER		

APPROVED BY Richard McGrath
PUBLIC WORKS DIRECTOR
DATE 2-5-98

STORM DRAIN IMPROV. PLANS.
TRACT 21167
LINE C

ACCOUNT NO. D - 600
SHEET 4 OF 4

HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 4'

INDEXED 3-24-98 GH