CITY OF RIVERSIDE
STORM DRAIN IMPROVEMENT PLANS
FOR
TRACT NO. 31147

STORM DRAIN GENERAL NOTES

1. 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.

2. 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.

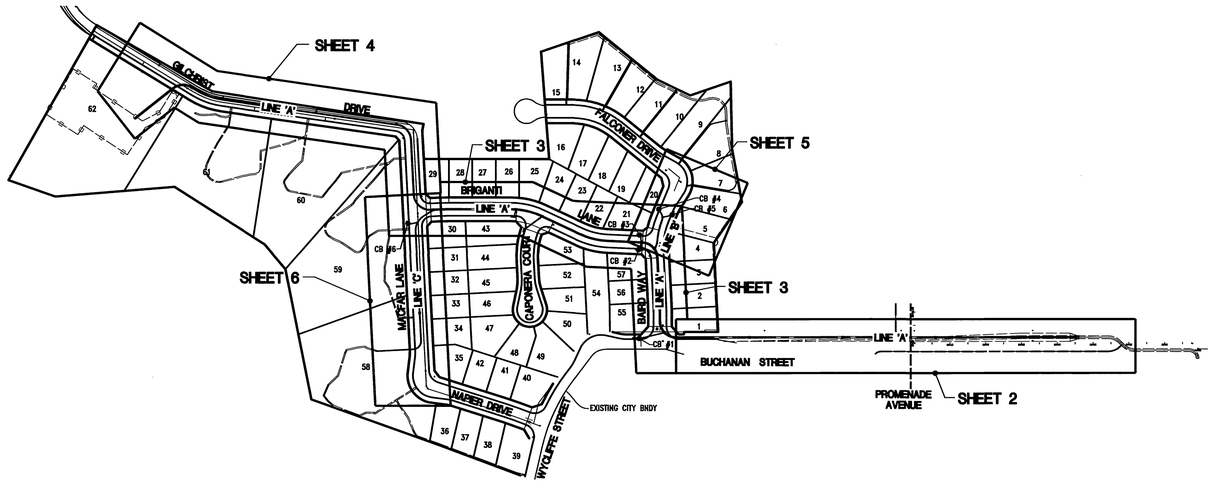
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPARTMENT OF PUBLIC WORKS, STANDARD DRAWINGS, ITS SUPPLEMENTAL NOTES AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.

4. 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.

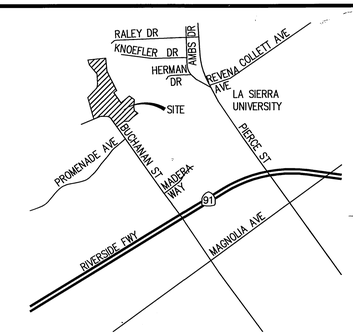
5. QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY

6. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.

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 U.S.A.



INDEX MAP
SCALE: 1"=200'



VICINITY MAP
NTS

N

SHEET INDEX

SHEET NO.	DESCRIPTION
1 of 7	TITLE SHEET
2 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LINE 'A'
3 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LINE 'A'
4 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LINE 'A'
5 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LINE 'B' & LATERAL 'B1'
6 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LINE 'C' & LATERAL 'C1'
7 of 7	STORM DRAIN IMPROVEMENT PLAN AND PROFILE – LATERAL 'A1', 'A2', 'A3', 'A8' & 'A9'

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	*QUANTITY	UNIT
1	INSTALL 18" RCP STORM DRAIN – D-LOAD PER PLAN	240	LF
2	INSTALL 24" RCP STORM DRAIN – D-LOAD PER PLAN	195	LF
3	INSTALL 36" RCP STORM DRAIN – D-LOAD PER PLAN	425	LF
4	INSTALL 42" RCP STORM DRAIN – D-LOAD PER PLAN	435	LF
5	INSTALL 48" RCP STORM DRAIN – D-LOAD PER PLAN	1570	LF
6	CONSTRUCT JUNCTION STRUCTURE B PER CITY STD DWG NO. 421	4	EA
7	NOT USED	–	–
8	REMOVE EXISTING CHANNEL	7,300	SF
9	NOT USED	–	–
10	CONSTRUCT MANHOLE AX PER CITY STD DWG NO. 430	8	EA
11	CONSTRUCT MANHOLE EZ PER CITY STD DWG NO. 431	2	EA
12	CONSTRUCT MANHOLE JM PER CITY STD DWG NO. 432	2	EA
13	CONSTRUCT CATCH BASIN AND LOCAL DEPRESSION PER CITY STD NO. 405	8	EA
14	TRENCH BACKFILL PER CITY STD DWG NO. 453	4,200	SF
15	CONSTRUCT PIPE SINGLE HEADWALL PER CALTRANS STD D89. (D, H, L PER PLAN) PER DETAIL ON SHEET 7	1	EA
16	INSTALL 54" RCP STORM DRAIN – D-LOAD PER PLAN	465	LF
17	INSTALL 30" RCP STORM DRAIN – D-LOAD PER PLAN	90	LF
18	CONSTRUCT CHANNEL END / HEADWALL PER CALTRANS STD D89 AND JOIN PROPOSED STORM DRAIN TO EXISTING CHANNEL PER DETAIL ON SHT 2 AND 7	1	EA
19	PIPE BEDDING PER CITY STD DWG 452, CASE 2.	4,600	LF
20	CONSTRUCT BOX CULVERT WINGWALLS PER CALTRANS STD D90. (H, L, ELEVATION a AND ANGLE OF FLARE PER PLAN) PER DETAIL ON SHEET 7	2	EA
21	CONSTRUCT 6'X6' SLOPED PROTECTION BARRIER PER APWA STD PLAN 360.	1	EA

* QUANTITIES SHOWN ON THESE PLANS ARE FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHOULD RUN THEIR OWN QUANTITIES AND BID A COMPLETE JOB.

BENCH MARK DATA
BRASS DISK STAMPED E1-A IN CONCRETE ON TOP OF A LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.
ELEVATION= 857.147

LEGAL DESCRIPTION OF PROJECT SITE
IN THE CITY OF RIVERSIDE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA. BEING A SUBDIVISION OF A PORTION OF RANCHO LA SIERRA AND RANCHO EL SOBRANTE DE SAN JACINTO IN SECTIONS 16 & 21, T3S, R6W, SBBM, AS SHOWN BY UNITED STATES GOV. SURVEY

BASIS OF BEARINGS
BASIS OF BEARINGS PER THE CENTERLINE OF BUCHANAN STREET BEING N33°37'36"W, PER RS 72/1-15, REC. 10/18/1984.

LEGEND

BC	BEGIN CURVE
CL	CENTERLINE
CB	CATCH BASIN
EC	END CURVE
EX	EXISTING
INT	INTERSECTION
INV	INVERT
MH	MANHOLE
PRC	POINT OF REVERSE CURVE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
W	WIDTH
V	VERTICAL DEPTH
E	ELECTRICAL
G	GAS
SD	STORM DRAIN
SW	SANITARY SEWER
T	TELEPHONE
WA	WATER

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 DATE 10/10/05

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	PH	10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES	JEF	10/26/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

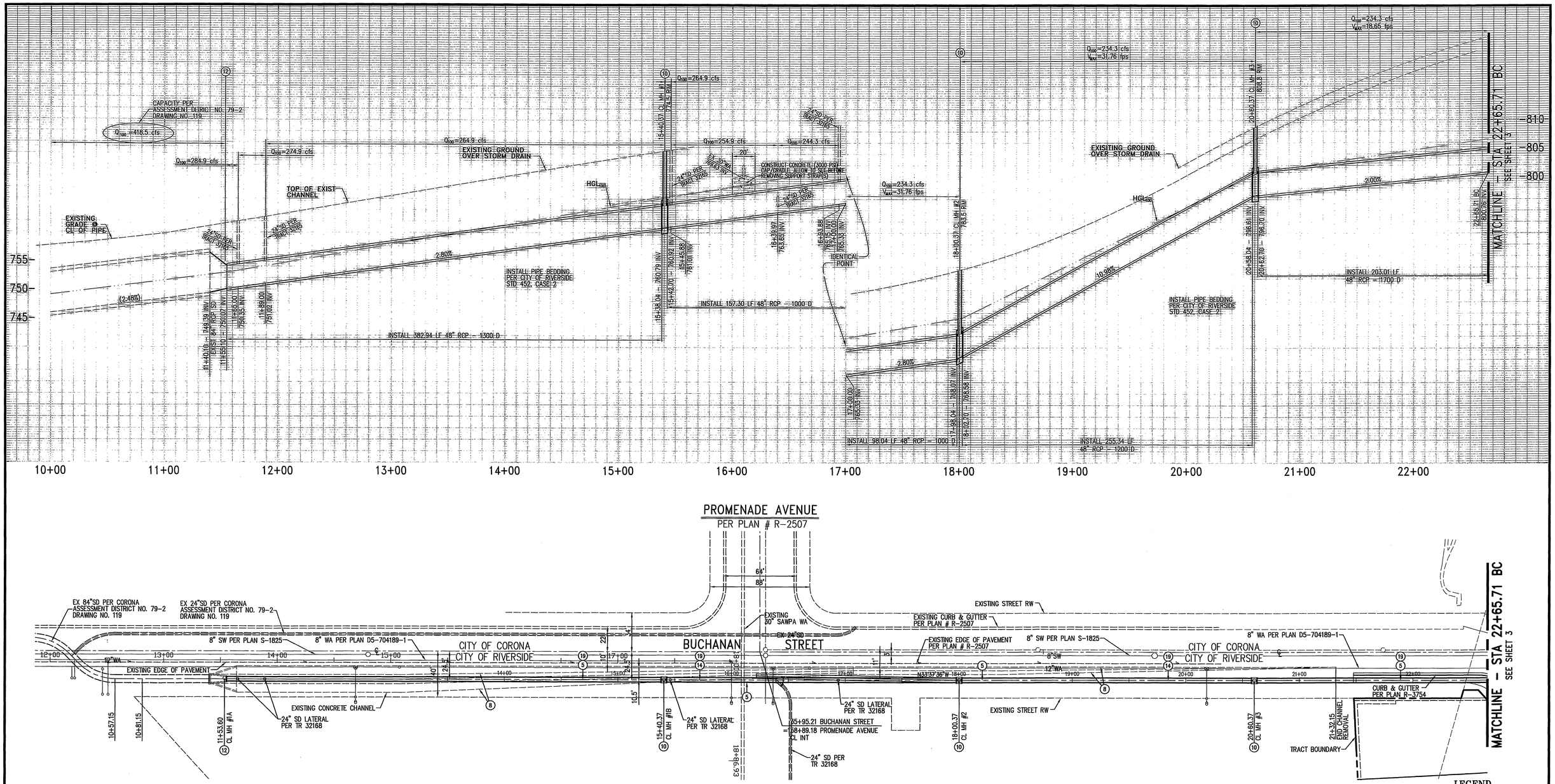
STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
TITLE SHEET

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 1 OF 7
FILE NO.:

Drawing Name: U:\02377\Grp1\02377-002\Final Plots\Storm Drain\01_02377d1.dwg
Last Plotted: Oct 10, 2005 - 9:17am by Michelle

BZ

INDEXED 11-07-05 HH



LINE "A"

LEGEND

BC	BEGIN CURVE
CL	CENTERLINE
CB	CATCH BASIN
EC	END CURVE
EX	EXISTING
INT	INTERSECTION
INV	INVERT
MH	MANHOLE
PRC	POINT OF REVERSE CURVE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
W	WIDTH
V	VERTICAL DEPTH
E	ELECTRICAL
G	GAS
SD	STORM DRAIN
SW	SANITARY SEWER
T	TELEPHONE
WA	WATER

CONSTRUCTION NOTES

(5) INSTALL 48" RCP STORM DRAIN - D-LOAD PER PLAN
(8) REMOVE EXISTING CHANNEL
(10) CONSTRUCT MANHOLE AX PER CITY STD DWG NO. 430
(12) CONSTRUCT MANHOLE JM PER CITY STD DWG NO. 432
(14) TRENCH BACKFILL PER CITY STD DWG NO. 453
(18) CONSTRUCT CHANNEL END / HEADWALL PER CALTRANS STD DB9 AND JOIN PROPOSED STORM DRAIN TO EXISTING CHANNEL PER DETAIL HEREON AND ON SHT 7
(19) PIPE BEDDING PER CITY STD DWG 452, CASE 2

scale 1"= 40' (40 0 40 80 feet)

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 DATE 10/10/05

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES		10/13/05

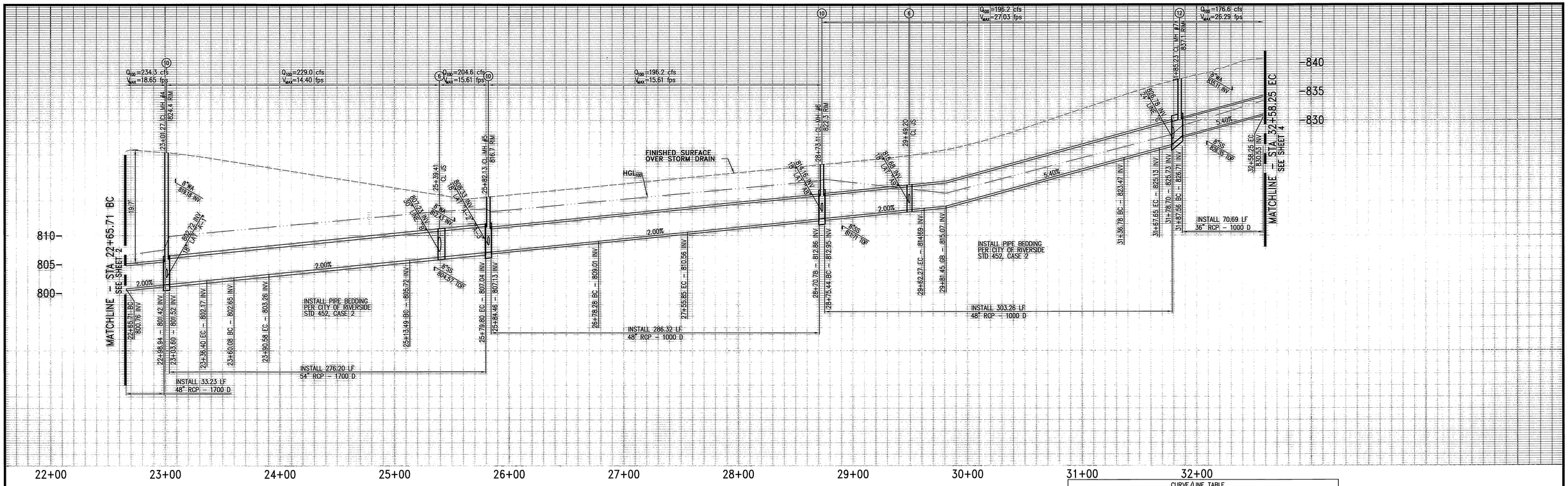
APPROVED BY: CITY ENGINEER
DATE: 11/1/05

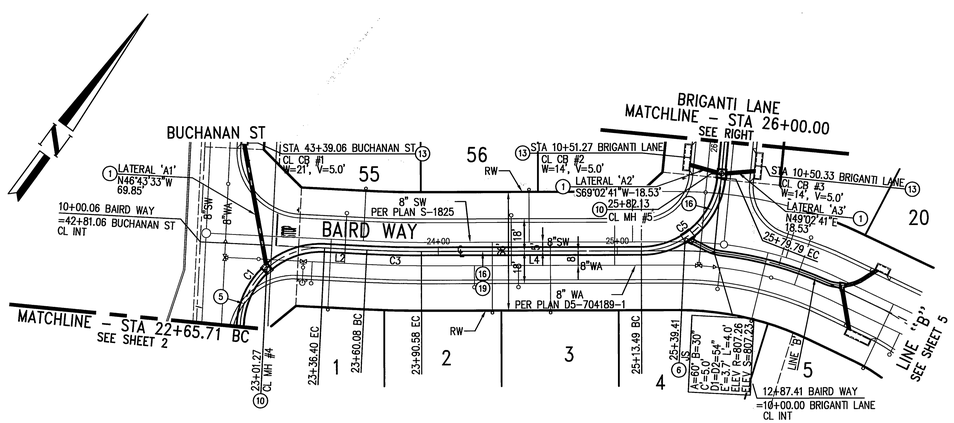
STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
LINE "A"
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

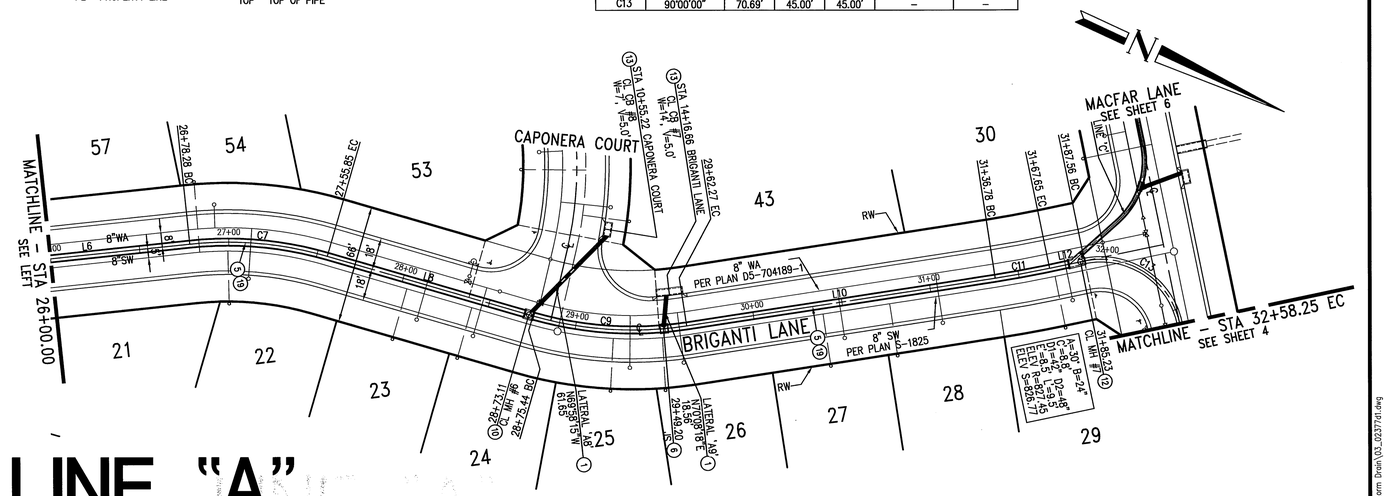
PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 2 OF 7
FILE NO.:

Drawing Name: U:\02377\Eng\02377-002\Final Plots\Storm Drain\02_02377d1.dwg
Last Changed: Oct 18, 2005 - 9:46am by Mercado

INDEXED 11-07-05 HH







LEGEND

BC	BEGIN CURVE	R/W	RIGHT OF WAY
CL	CENTERLINE	W	WIDTH
CB	CATCH BASIN	V	VERTICAL DEPTH
EC	END CURVE	E	ELECTRICAL
EX	EXISTING	G	GAS
INT	INTERSECTION	SD	STORM DRAIN
INV	INVERT	SW	SANITARY SEWER
MH	MANHOLE	T	TELEPHONE
PRC	POINT OF REVERSE CURVE	WA	WATER
PL	PROPERTY LINE	TOP	TOP OF PIPE

CURVE/LINE TABLE

CURVE	ANGLE	LENGTH	RADIUS	TANGENT	BEARING	DISTANCE
C1	90°00'00"	70.69'	45.00'	45.00'	–	–
L2	–	–	–	–	S56°22'24"W	23.68'
C3	2°54'45"	30.50'	600.00'	15.25'	–	–
L4	–	–	–	–	S53°27'39"W	122.91'
C5	84°24'58"	66.30'	45.00'	40.81'	–	–
L6	–	–	–	–	N30°57'19"W	98.48'
C7	22°13'22"	77.57'	200.00'	39.28'	–	–
L8	–	–	–	–	S08°43'57"E	119.60'
C9	24°52'25"	86.83'	200.00'	44.11'	–	–
L10	–	–	–	–	S33°36'22"E	174.51'
C11	2°56'51"	30.87'	600.00'	15.44'	–	–
L12	–	–	–	–	S36°33'13"E	19.91'
C13	90°00'00"	70.69'	45.00'	45.00'	–	–

CONSTRUCTION NOTES

1. INSTALL 18" RCP STORM DRAIN – D-LOAD PER PLAN
4. INSTALL 42" RCP STORM DRAIN – D-LOAD PER PLAN
5. INSTALL 48" RCP STORM DRAIN – D-LOAD PER PLAN
6. CONSTRUCT JUNCTION STRUCTURE B PER CITY STD DWG NO. 421
10. CONSTRUCT MANHOLE AX PER CITY STD DWG NO. 430
12. CONSTRUCT MANHOLE JM PER CITY STD DWG NO. 432
13. CONSTRUCT CATCH BASIN AND LOCAL DEPRESSION PER CITY STD DWG NO 405 SEE STREET IMPROVEMENT PLAN
16. INSTALL 54" RCP STORM DRAIN – D-LOAD PER PLAN
19. PIPE BEDDING PER CITY STD DWG 452, CASE 2

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

SEE SHT 7 FOR LATERAL PROFILES

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
Harold Garcelon 10/10/05
HAROLD GARCELON, P.E. R.C.E. 31681 DATE

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	PA	10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES	RCB	10/13/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
LINE "A"

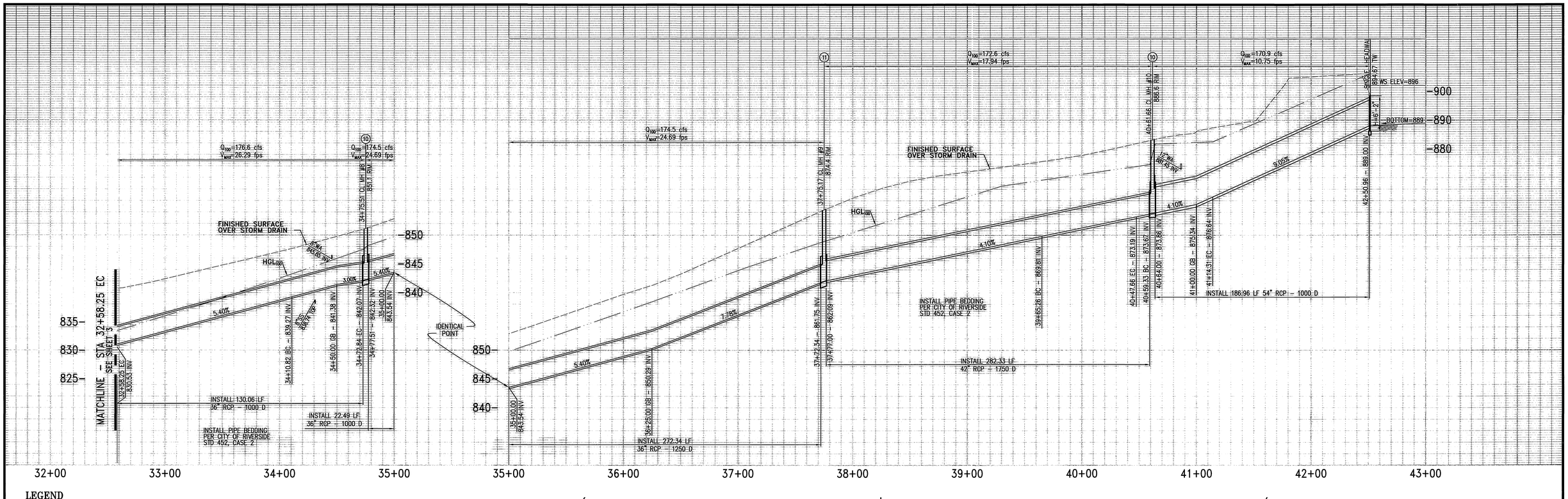
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 3 OF 7
FILE NO.:

RYZ

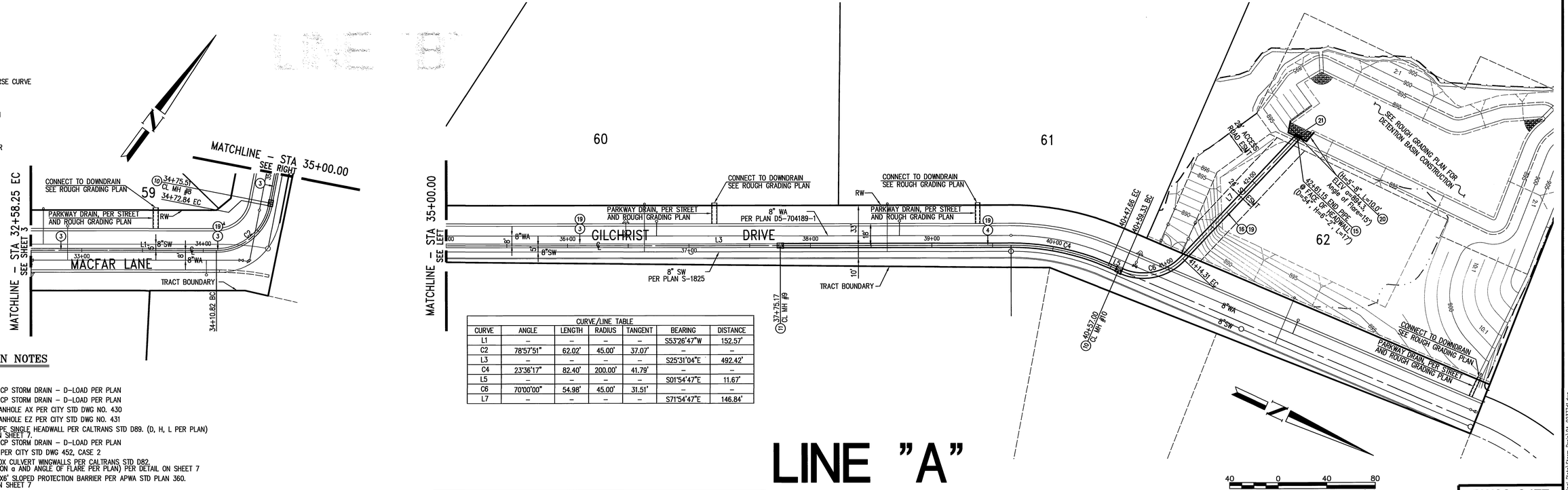
INDEXED 11-07-05 GH

Drawing Name: U:\02377\Eng\02377-002\Final Plots\Storm Drain\03_02377d1.dwg
Last Revised: Oct 11, 2005 – 6:26pm by: MGrubb



LEGEND

BC	BEGIN CURVE
CL	CENTERLINE
CB	CATCH BASIN
EC	END CURVE
EX	EXISTING
INT	INTERSECTION
INV	INVERT
MH	MANHOLE
PRC	POINT OF REVERSE CURVE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
W	WIDTH
V	VERTICAL DEPTH
E	ELECTRICAL
G	GAS
SD	STORM DRAIN
SW	SANITARY SEWER
T	TELEPHONE
WA	WATER



CONSTRUCTION NOTES

(3) INSTALL 36" RCP STORM DRAIN – D-LOAD PER PLAN
(4) INSTALL 42" RCP STORM DRAIN – D-LOAD PER PLAN
(10) CONSTRUCT MANHOLE AX PER CITY STD DWG NO. 430
(11) CONSTRUCT MANHOLE EZ PER CITY STD DWG NO. 431
(15) CONSTRUCT PIPE SINGLE HEADWALL PER CALTRANS STD D89. (D, H, L PER PLAN) SEE DETAIL ON SHEET 7.
(16) INSTALL 54" RCP STORM DRAIN – D-LOAD PER PLAN
(19) PIPE BEDDING PER CITY STD DWG 452, CASE 2
(20) CONSTRUCT BOX CULVERT WINGWALLS PER CALTRANS STD D82. (H, L, ELEVATION α AND ANGLE OF FLARE PER PLAN) PER DETAIL ON SHEET 7
(21) CONSTRUCT 6'X6' SLOPED PROTECTION BARRIER PER APWA STD PLAN 360. PER DETAIL ON SHEET 7

CURVE/LINE TABLE

CURVE	ANGLE	LENGTH	RADIUS	TANGENT	BEARING	DISTANCE
L1	–	–	–	–	S53°26'47"W	152.57'
C2	78°57'51"	62.02'	45.00'	37.07'	–	–
L3	–	–	–	–	S25°31'04"E	492.42'
C4	23°36'17"	82.40'	200.00'	41.79'	–	–
L5	–	–	–	–	S01°54'47"E	11.67'
C6	70°00'00"	54.98'	45.00'	31.51'	–	–
L7	–	–	–	–	S71°54'47"E	146.84'

LINE "A"

40 0 40 80
scale 1"= 40' feet

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 DATE 10/10/05

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES		10/19/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

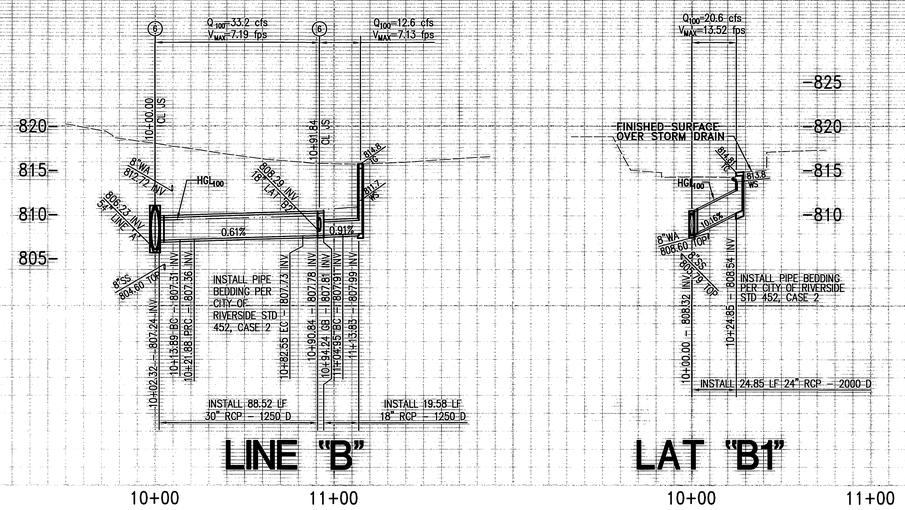
STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
LINE "A"
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 4 OF 7
FILE NO.:

Drawing Name: U:\02377\Eng\02377-002\Final Plots\Storm Drain\V4_02377d1.dwg
Last Changed: Oct 19, 2005 – 8:37am by: MPK

RTZ

INDEXED 11-07-05 LH

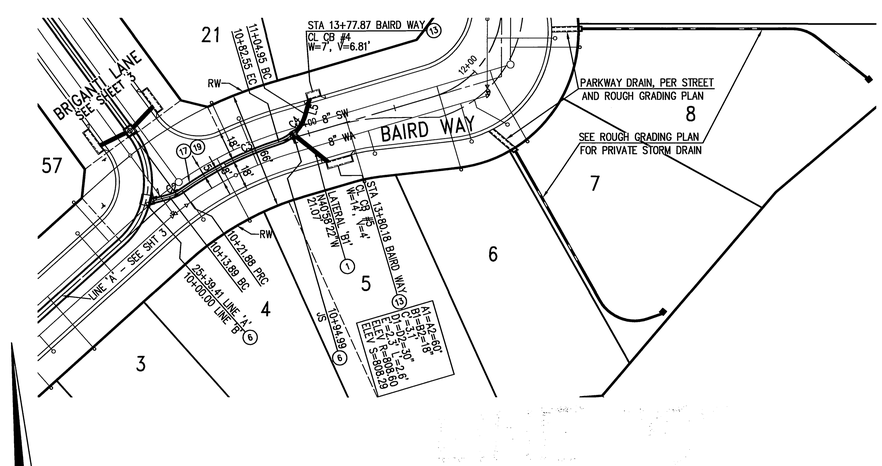


LINE "B"

CURVE/LINE TABLE						
CURVE	ANGLE	LENGTH	RADIUS	TANGENT	BEARING	DISTANCE
L1	–	–	–	–	S80°28'03"W	13.89'
C2	20°20'16"	7.99'	22.50'	4.04'	–	–
C3	57°2'31"	22.40'	22.5'	12.23'	–	–
C4	17°22'51"	60.67'	200.00'	30.57'	–	–
L5	–	–	–	–	N20°28'07"E	8.87'

LEGEND

BC	BEGIN CURVE
CL	CENTERLINE
CB	CATCH BASIN
EC	END CURVE
EX	EXISTING
INT	INTERSECTION
INV	INVERT
MH	MANHOLE
PRC	POINT OF REVERSE CURVE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
W	WIDTH
V	VERTICAL DEPTH
E	ELECTRICAL
G	GAS
SD	STORM DRAIN
SW	SANITARY SEWER
T	TELEPHONE
WA	WATER



CONSTRUCTION NOTES

1. INSTALL 18" RCP STORM DRAIN – D-LOAD PER PLAN
6. CONSTRUCT JUNCTION STRUCTURE B PER CITY STD DWG NO. 421
13. CONSTRUCT CATCH BASIN AND LOCAL DEPRESSION PER CITY STD DWG NO 405 SEE STREET IMPROVEMENT PLAN
17. INSTALL 30" RCP STORM DRAIN – D-LOAD PER PLAN
19. PIPE BEDDING PER CITY STD DWG 452, CASE 2.

scale 1"= 40' feet (40 0 40 80)

Underground Service Alert
CALL BEFORE YOU DIG
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 Rancho Cucamonga, CA 91730 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 DATE 10/10/05

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES		10/13/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

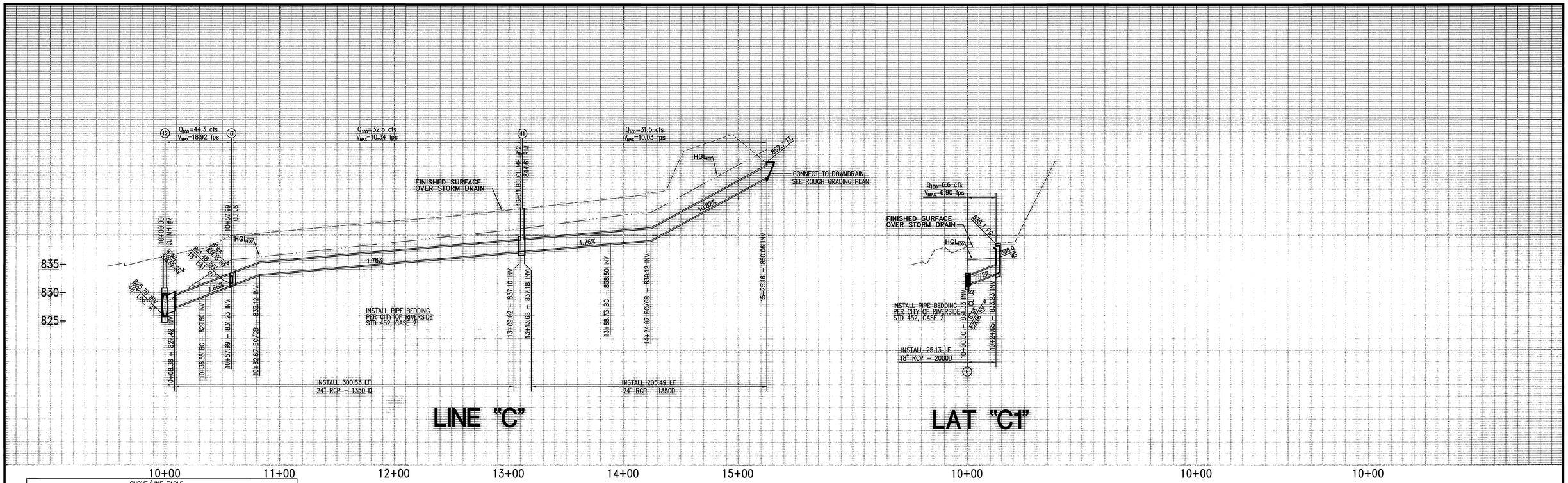
RVZ

STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
LINE 'B' & LAT 'B1'
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 5 OF 7
FILE NO.:

INDEXED 11-07-05 [illegible]

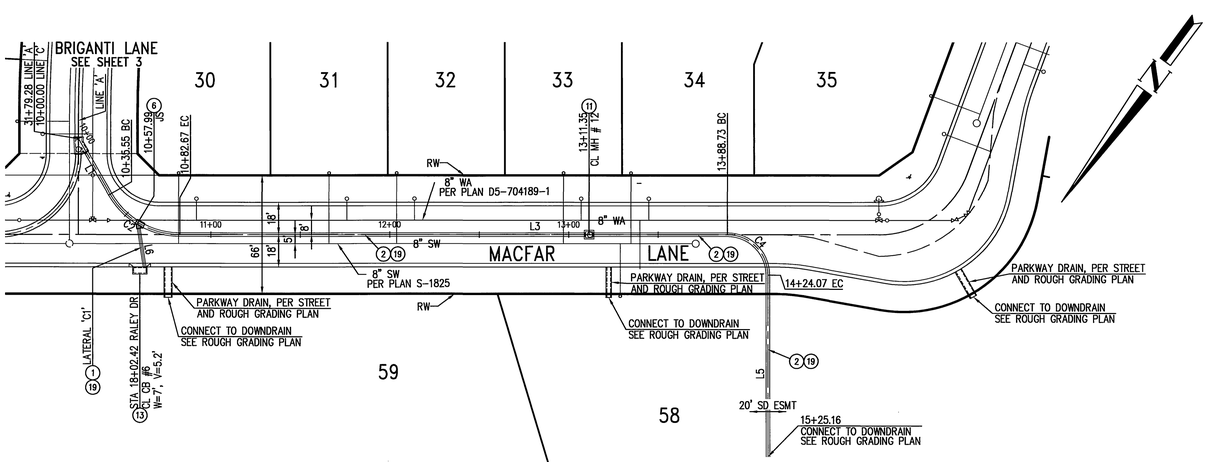
Drawing Name: U:\02377\Eng\02377-002\Final Plots\Storm Drain\05_02377d1.dwg
Last Revised: Oct 11, 2005 – 9:27am by [illegible]



CURVE/LINE TABLE						
CURVE	ANGLE	LENGTH	RADIUS	TANGENT	BEARING	DISTANCE
L1	–	–	–	–	S66°33'13"E	35.55'
C2	60°00'00"	47.12'	45.00'	25.98'	–	–
L3	–	–	–	–	S53°26'47"W	397.83'
C4	90°00'00"	35.34'	22.50'	22.50'	–	–
L5	–	–	–	–	S36°33'13"E	92.43'
L6	–	–	–	–	S45°07'34"E	25.13'

CONSTRUCTION NOTES

1. INSTALL 18" RCP STORM DRAIN – D-LOAD PER PLAN
2. INSTALL 24" RCP STORM DRAIN – D-LOAD PER PLAN
6. CONSTRUCT JUNCTION STRUCTURE B PER CITY STD DWG NO. 421
11. CONSTRUCT MANHOLE EZ PER CITY STD DWG NO. 431
13. CONSTRUCT CATCH BASIN AND LOCAL DEPRESSON PER CITY STD DWG NO 405 SEE STREET IMPROVEMENT PLAN
19. PIPE BEDDING PER CITY STD DWG 452, CASE 2



LEGEND

BC	BEGIN CURVE
CL	CENTERLINE
CB	CATCH BASIN
EC	END CURVE
EX	EXISTING
INT	INTERSECTION
INV	INVERT
MH	MANHOLE
PRC	POINT OF REVERSE CURVE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
W	WIDTH
V	VERTICAL DEPTH
E	ELECTRICAL
G	GAS
SD	STORM DRAIN
SW	SANITARY SEWER
T	TELEPHONE
WA	WATER
TOP	TOP OF PIPE

scale 1"= 40' (40 0 40 80 feet)

Underground Service Alert
DIG ALERT BEFORE YOU DIG
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 DATE 10/10/05

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES		10/15/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

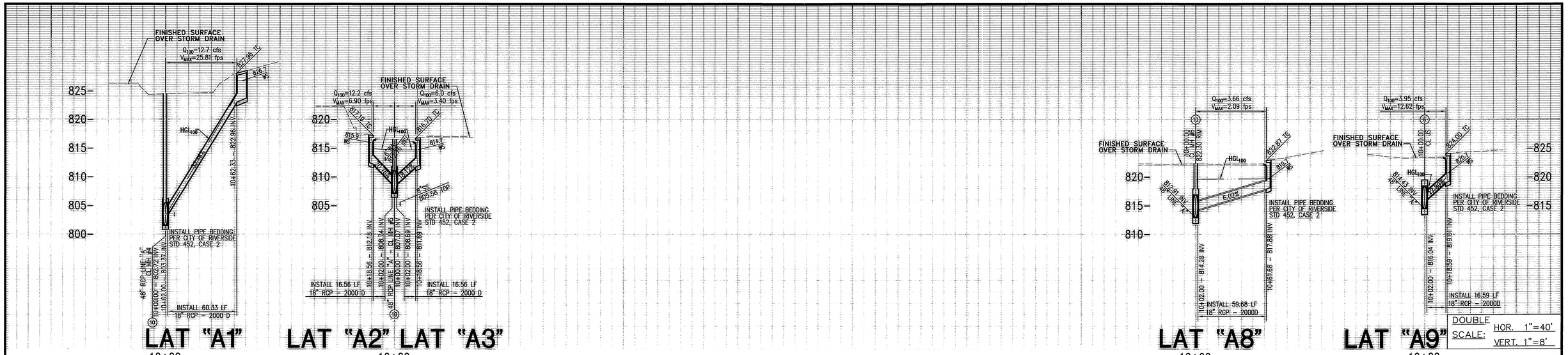
BRZ

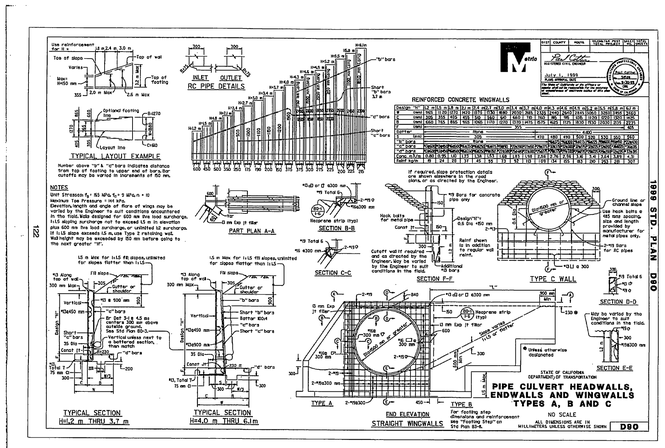
INDEXED 11-07-05

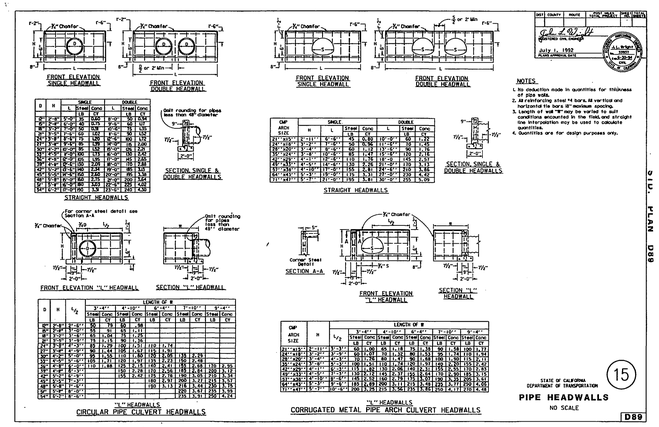
STORM DRAIN IMPROVEMENT PLAN & PROFILE
TRACT NO. 31147
LINE 'C' & LAT 'C1'
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 6 OF 7
FILE NO.:

Drawing Name: U:\02377\Ed\02377_0001\Final Plans\Storm Drain\06_02377d1.dwg
Last Plotted: Oct 10, 2005 - 9:29am by: MKenda







Underground Service Alert
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK E1-A2:

BRASS DISK STAMPED E1-A IN CONCRETE IN TOP OF LARGE ROCK AT THE NORTHWESTERLY END OF BUCHANAN STREET, 100 FEET WSESTERLY AND 40 SOUTHERLY OF A HOUSE AT 4613 BUCHANAN ST.

ELEVATION= 857.147 (FEET)

CITY OF RIVERSIDE BUSINESS TAX CERTIFICATE NO. 105767 EXP. 11/8/05

Hall & Foreman, Inc.
Engineering • Surveying • Planning • Landscape Architecture
9130 Anaheim Pl., Ste. 120 • Rancho Cucamonga, CA 91730 • 909-484-9090
PREPARED UNDER THE SUPERVISION OF:
HAROLD GARCELON, P.E. R.C.E. 31681 — 10/10/05 DATE

REGISTERED PROFESSIONAL ENGINEER HAROLD ARTHUR GARCELON No. 31681 Exp. 12/31/06 CIVIL STATE OF CALIFORNIA

NO.	DESCRIPTION	APPR.	DATE

DESIGNED BY: MPK DRAWN BY: MPK CHECKED BY: HAG

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		10/31/05
PARK DEPARTMENT	—	—
TRAFFIC DIVISION	—	—
STREET SERVICES		10/13/05

APPROVED BY
CITY ENGINEER
DATE: 11/1/05

RVR

STORM DRAIN IMPROVEMENT PLAN & PROFILE

TRACT NO. 31147
LATERALS & DETAILS

HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=8'

PW03-0477
PROJECT NO.: 02377-002
D-741
SHEET 7 OF 7
FILE NO.:

INDEXED 11-07-05 LH

Drawing Name: U:\02377\Eng\02377-002\Final Plots\Storm Drain\07_02377d1.dwg
Last Plotted: Oct 31 2005 - 9:29am by MAlvarado