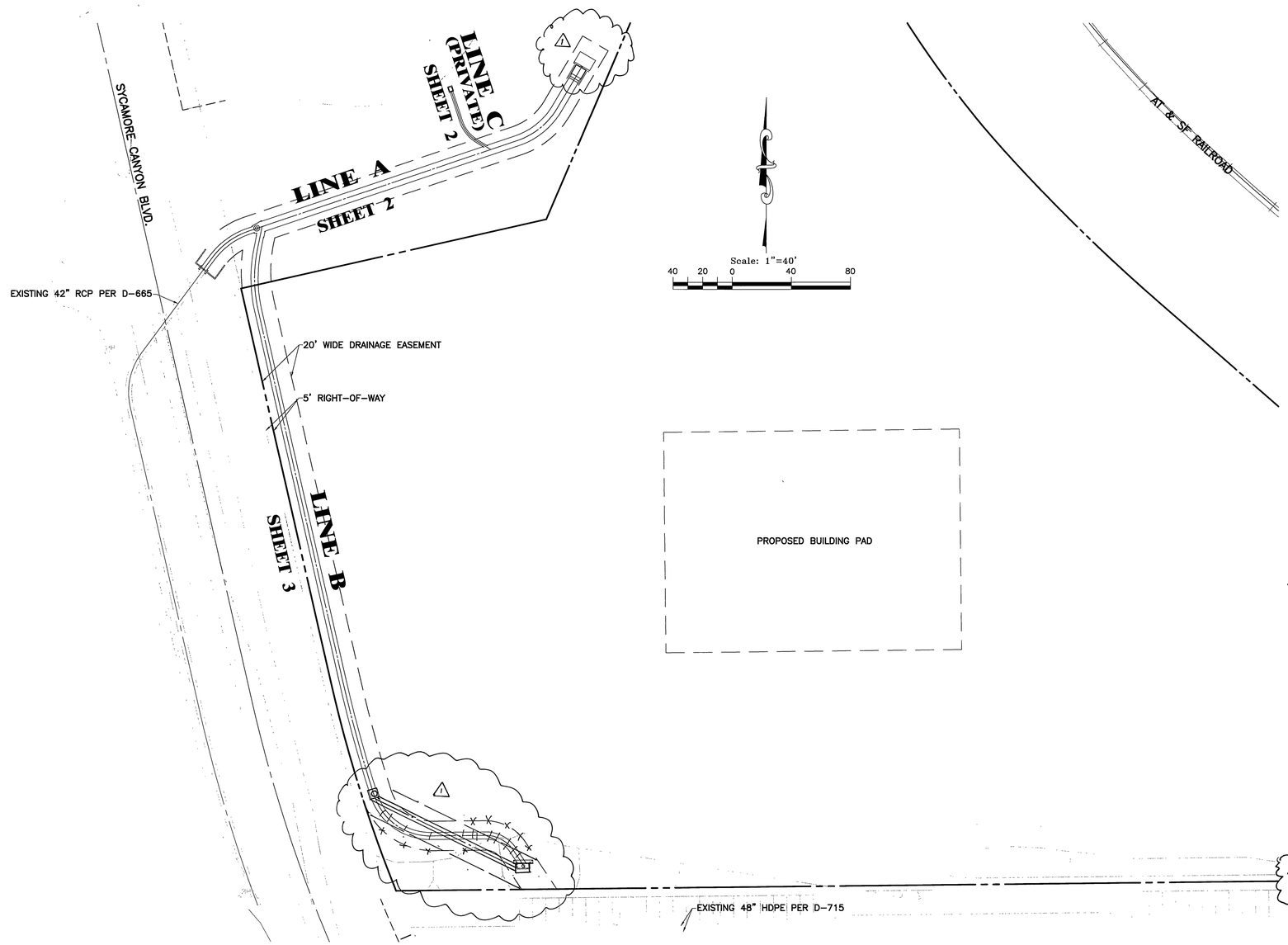
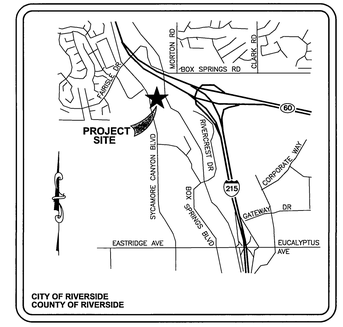
# CITY OF RIVERSIDE
## STORM DRAIN IMPROVEMENT PLAN




VICINITY MAP
N.T.S.

**LEGEND:**

| | |
|---|---|
| FL | INDICATES FLOW LINE |
| FG | INDICATES FINISH GROUND |
| FS | INDICATES FINISH SURFACE |
| NG | INDICATES NATURAL GROUND |
| TG | INDICATES TOP OF GRATE |
| MH | INDICATES MANHOLE |
| C.B. | INDICATES CATCH BASIN |

## GENERAL NOTES

1. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL OBJECTS WITHIN THE PUBLIC RIGHT-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. THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR RE-ESTABLING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HEREON.
7. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
8. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA) PHONE NO. 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.
9. BEFORE THE RIP-RAP AT THE OUTLET OF ANY DRAINAGE STRUCTURE IS ACCEPTED BY THE CITY, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.

## CONSTRUCTION NOTES:

| | | QUANTITIES | |
|---|---|---|---|
| △1 | CONSTRUCT ENERGY DISSIPATOR-IMPACT BASIN PER A.P.W.A. STD. PLAN 384-~~1~~2. (W=8' L=~~10~~11' H=8') | 1 | EA. |
| 2 | INSTALL 42" RCP 1500D WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN. | 47 | LF |
| 3 | INSTALL 72" RCP 1500D WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN. | 239 | LF |
| 4 | CONSTRUCT JUNCTION STRUCTURE NO. 4 (CASE 1) PER CITY OF RIVERSIDE STD. DWG. NO. 423. A=50'00'00" D=18" | 1 | EA. |
| 5 | CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO. 432. A=60'00'00" B=48" D1=42" D2=72" C'=7' E'=6.4' L'=7.4' | 1 | EA. |
| 6 | INSTALL 18" CLASS IV RCP WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN. | 47 | LF |
| 7 | REMOVE EXISTING DISSIPATER. | 1 | EA. |
| 8 | CONNECT 42" RCP TO EXISTING 42" RCP WITH CONCRETE COLLAR PER CITY OF RIVERSIDE STD. DWG. NO. 424. | 1 | EA. |
| 9 | PROVIDE 6' DEEP 1/4 TON GROUTED RIPRAP. | 576 | CF |
| 10 | CONSTRUCT GRATING CATCH BASIN-ALLEY PER A.P.W.A. STD. PLAN 304-2. (SINGLE GRATE LONGITUDIAL) | 1 | EA. |
| 11 | REMOVE EXISTING RIPRAP. | 600 | CF |
| 12 | SAWCUT AND REMOVE 25 LF PORTION OF EXISTING 48" HDPE | 25 | LF |
| 13 | INSTALL 48" RCP 1500D (ALTERNATE 48" HDPE PIPE WITH PIPE BEDDING CASE 2) WITH PIPE BEDDING CASE 1 PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN. | 512 | LF |
| △14 | CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG. NO. 405. W=~~8'~~ 7.5' V=11.57' D=~~3'~~ 1' | 1 | EA. |
| 15 | ~~CONSTRUCT SLOPE PROTECTION BARRIER PER A.P.W.A. STD. PLAN 360-0.~~ CONSTRUCT MH AX PER CITY OF RIVERSIDE STD. DWG. NO. 430 | 1 | EA. |
| 16 | CONSTRUCT 6' HIGH CHAIN LINK FENCE PER CITY OF RIVERSIDE STD. DWG. NO. 380. | 41 | LF |

BENCH MARK:

CITY OF RIVERSIDE L1-C3 PK NAIL AND CITY ENGINEER TAG IN THE NORTHERLY CORNER OF A CATCH BASIN IN THE MEDIAN CURB OF SYCAMORE CANYON BLVD, 95' SOUTHEASTERLY OF FAIR ISLE DR.

ELEVATION = 1510.379

PUBLIC UTILITIES DEPARTMENT
WATER DIVISION

APPROVED BY: 3/2/07 DATE

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a Permit to Excavate is to be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
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UNDERGROUND SERVICE ALERT
1-800-227-2600

W.J. McKEEVER, INC.
CIVIL ENGINEERING
647 NORTH MAIN STREET, SUITE 2A
RIVERSIDE, CALIFORNIA 92501
PH.: (951) 341-2700
FAX: (951) 341-2740
3/1/07 DATE WILLIAM J. McKEEVER, RCE 22502

REGISTERED PROFESSIONAL ENGINEER WILLIAM J. McKEEVER No. 22502 Exp. 12-31-07 CIVIL STATE OF CALIFORNIA

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| △1 | REVISE DRAINAGE ESMT | RR | 7/3/07 |
| | REVISE CONST. NOTE 1, 14 & 15 | | |
| | REVISE PIPE ALIGN. ADD S.D. | | |
| | M.H. REMOVE PROTECT BARRIER | | |

DESIGNED BY ____ DRAWN BY ____ CHECKED BY ____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

| APPROVED BY | BY | DATE |
|---|---|---|
| PRINCIPAL ENGINEER | RR | 3/1/07 |

APPROVED BY
CITY ENGINEER
DATE 3/8/07

RR

STORM DRAIN PLAN

PARCEL NO. 20166, PMB 131/11-12

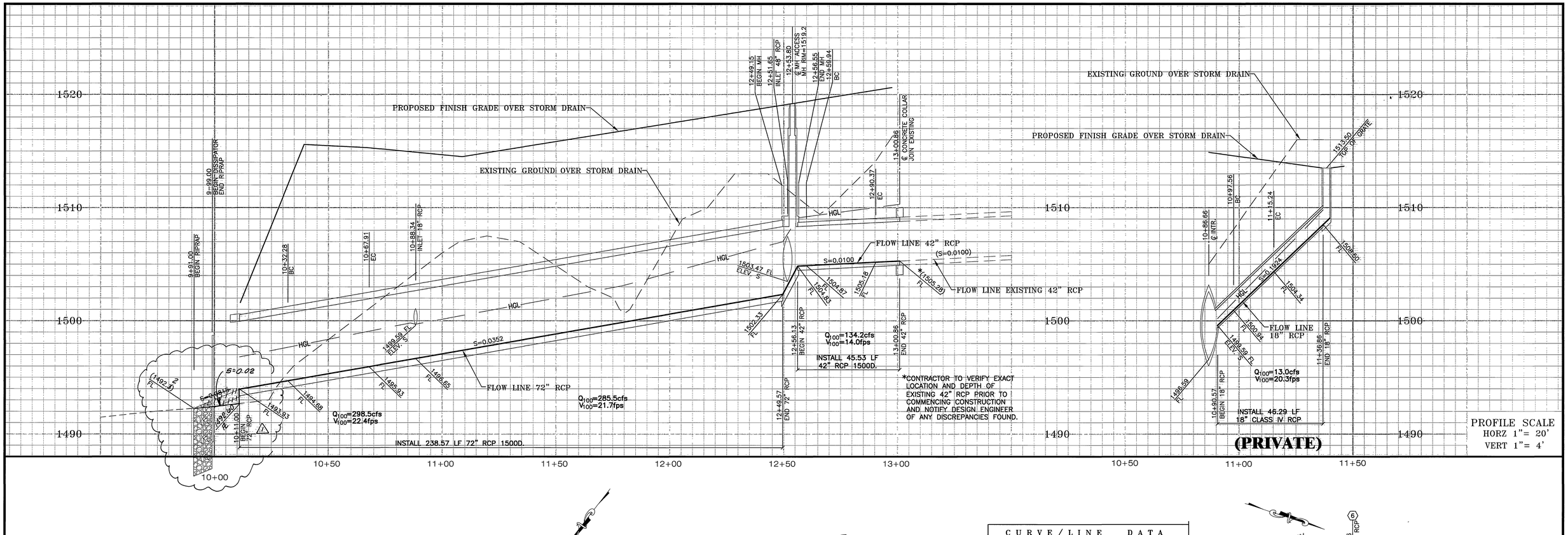
HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE:

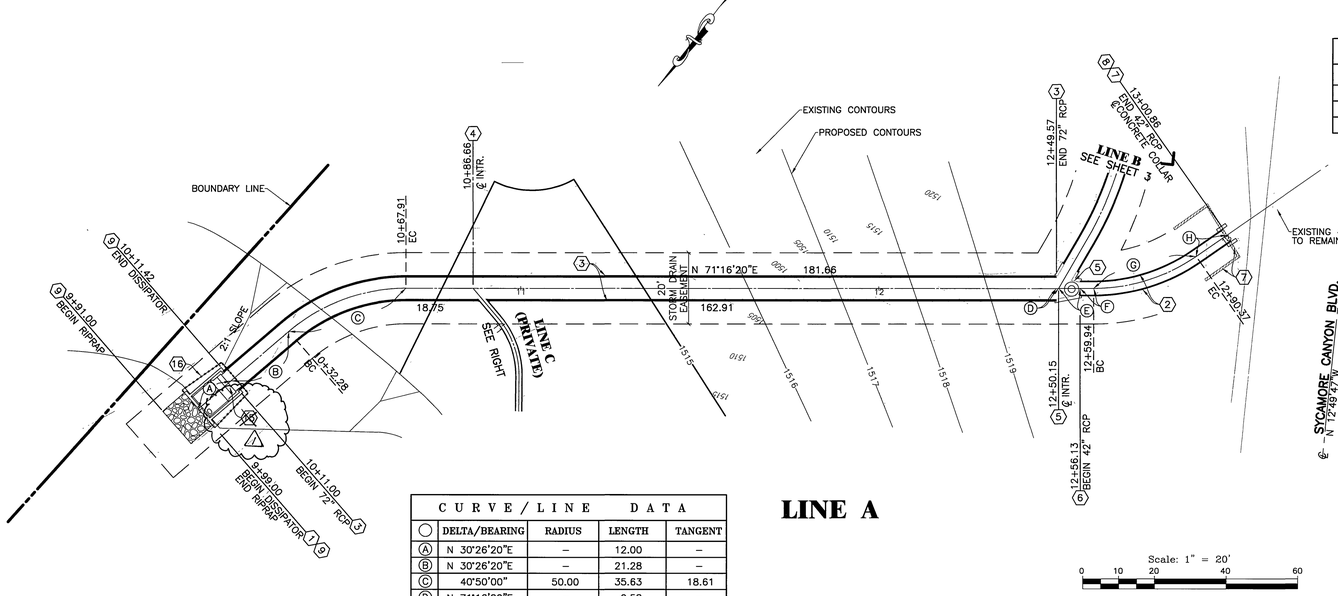
ACCT. NO. PW 06-0776

D 811

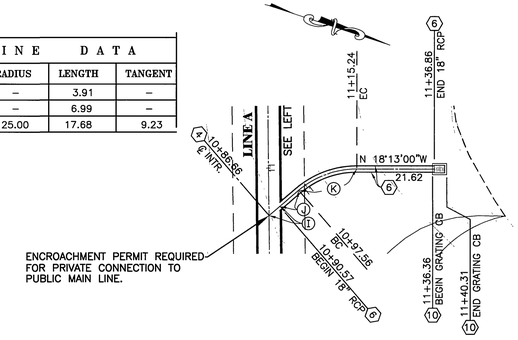
SHEET 1 OF 3

INDEXED 3-12-07 LH




| CURVE / LINE DATA | | | | |
|---|---|---|---|---|
| | DELTA/BEARING | RADIUS | LENGTH | TANGENT |
| (I) | N 58°43'40"W | – | 3.91 | – |
| (J) | N 58°43'40"W | – | 6.99 | – |
| (K) | 40°30'40" | 25.00 | 17.68 | 9.23 |




## LINE C (PRIVATE)

| CURVE / LINE DATA | | | | |
|---|---|---|---|---|
| | DELTA/BEARING | RADIUS | LENGTH | TANGENT |
| (A) | N 30°26'20"E | – | 12.00 | – |
| (B) | N 30°26'20"E | – | 21.28 | – |
| (C) | 40°50'00" | 50.00 | 35.63 | 18.61 |
| (D) | N 71°16'20"E | – | 0.58 | – |
| (E) | N 71°16'20"E | – | 5.98 | – |
| (F) | N 71°16'20"E | – | 3.81 | – |
| (G) | 34°51'56" | 50.00 | 30.43 | 15.70 |
| (H) | N 36°57'41"E | – | 10.49 | – |

## LINE A

Scale: 1" = 20'
0 10 20 40 60

CONSTRUCTION NOTES:

1. CONSTRUCT ENERGY DISSIPATOR–IMPACT BASIN PER A.P.W.A. STD. PLAN 384–~~X~~ 3 (W=8' L=11' H=~~X'~~ 8') △
2. INSTALL 42" RCP 1500D WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN.
3. INSTALL 72" RCP 1500D WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN.
4. CONSTRUCT JUNCTION STRUCTURE NO. 4 (CASE 1) PER CITY OF RIVERSIDE STD. DWG. NO. 423. A=50°00'00" D=18"
5. CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO. 432. A=60°00'00" B=48" D1=42" D2=72" C'=7' E'=6.4' L'=7.4'
6. INSTALL 18" CLASS IV RCP WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN.
7. REMOVE EXISTING DISSIPATER.
8. CONNECT 42" RCP TO EXISTING 42" RCP WITH CONCRETE COLLAR PER CITY OF RIVERSIDE STD. DWG. NO. 424.
9. PROVIDE 6' DEEP 1/4 TON GROUTED RIPRAP PER A.P.W.A. STD. PLAN 384–1, SECTION C–C.
10. CONSTRUCT GRATING CATCH BASIN–ALLEY PER A.P.W.A. STD. PLAN 304–2. (SINGLE GRATE LONGITUDIAL)

△ 15. ~~CONSTRUCT SLOPE PROTECTION BARRIER PER A.P.W.A. STD. PLAN 360–8.~~ CONSTRUCT MH AX PER CITY OF RIVERSIDE STD DWG. NO. 430

16. CONSTRUCT 6' HIGH CHAIN LINK FENCE PER CITY OF RIVERSIDE STD. DWG. NO. 380.

BENCH MARK:

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PUBLIC UTILITIES DEPARTMENT
WATER DIVISION

APPROVED BY: 3/2/07 DATE

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647 NORTH MAIN STREET, SUITE 2A
RIVERSIDE, CALIFORNIA 92501
PH.: (951) 341-3700
FAX: (951) 341-3740
3/1/07 DATE
WILLIAM J. McKEEVER, RCE 22502

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J McKEEVER
No. 22502
Exp. 12-31-07
CIVIL
STATE OF CALIFORNIA

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| △ | REVISE CONST. NOTE 1,15 | RR | 7-3-07 |
| | REVISE PIPE ALIGN ADD S.D. MH | | |
| | REMOVE PROTECT BARRIER | | |

DESIGNED BY ____ DRAWN BY ____ CHECKED BY ____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

| APPROVED BY | BY | DATE |
|---|---|---|
| PRINCIPAL ENGINEER | PH | 3/1/07 |

APPROVED BY
CITY ENGINEER
DATE 3/8/07

# STORM DRAIN PLAN
# LINES A AND C

PARCEL NO. 20166, PMB 131/11-12

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1"=4'

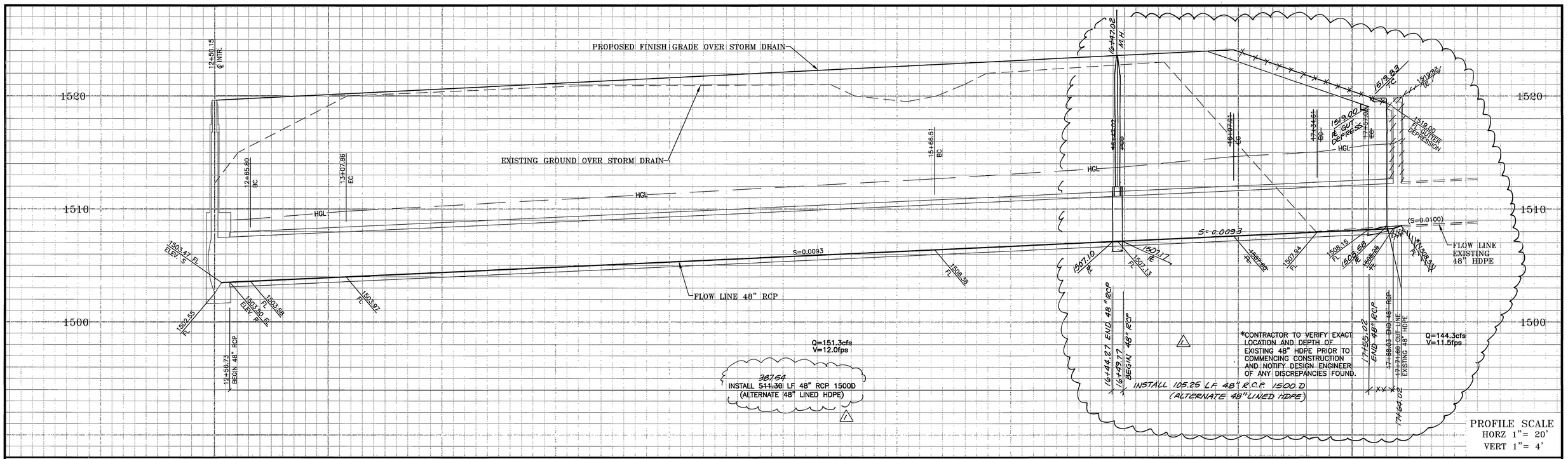
ACCT. NO. PW 06-0776

D 811

SHEET 2 OF 3

RR

INDEXED 3-12-07 GH




| CURVE / LINE DATA | | | | |
|---|---|---|---|---|
| | DELTA/BEARING | RADIUS | LENGTH | TANGENT |
| A | N 11°16'20"E | – | 6.58 | – |
| B | N 11°16'20"E | – | 9.07 | – |
| C | 24°06'07" | 100.00 | 42.06 | 21.35 |
| D | 04°55'23" | 937.00 | 80.51 | 40.28 |
| ~~E~~ | ~~72°53'33"~~ | ~~40.00~~ | ~~50.89~~ | ~~29.54~~ |
| F | 57°05'02" | 22.50 | 22.42 | 12.24 |
| G | N 33°33'41"W | – | 11.00 | – |
| E | S 62°33'13"E | | 108.00 | |

## CONSTRUCTION NOTES:

(5) CONSTRUCT MANHOLE JM PER CITY OF RIVERSIDE STD. DWG. NO. 432. A=60'00'00" B=48" D1=42" D2=72" C'=7' E'=6.4" L'=7.4'

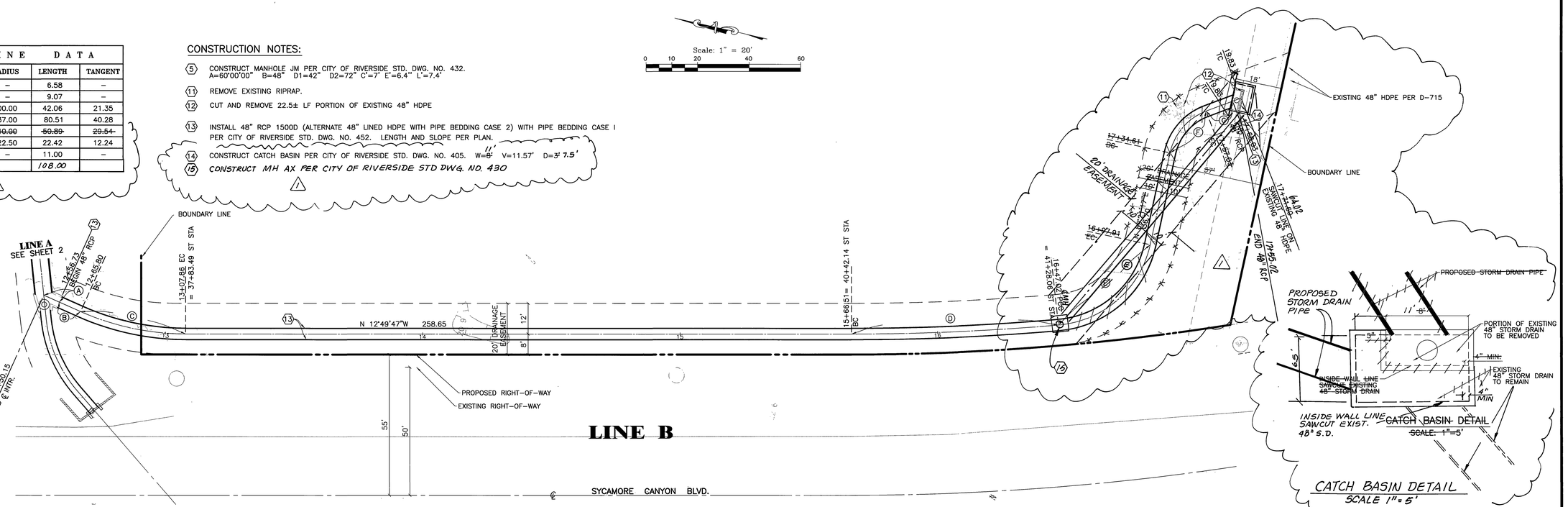
(11) REMOVE EXISTING RIPRAP.

(12) CUT AND REMOVE 22.5± LF PORTION OF EXISTING 48" HDPE

(13) INSTALL 48" RCP 1500D (ALTERNATE 48" LINED HDPE WITH PIPE BEDDING CASE 2) WITH PIPE BEDDING CASE I PER CITY OF RIVERSIDE STD. DWG. NO. 452. LENGTH AND SLOPE PER PLAN.

(14) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD. DWG. NO. 405. W=~~8'~~ 11' V=11.57' D=~~3'~~ 7.5'

(15) CONSTRUCT MH AX PER CITY OF RIVERSIDE STD DWG. NO. 430

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WILLIAM J. McKEEVER, RCE 22502

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J. McKEEVER
No. 22502
Exp. 12-31-07
CIVIL
STATE OF CALIFORNIA

| MARK | REVISIONS | APPR. | DATE |
|---|---|---|---|
| 1 | REVISE CONST. NOTE 14, ADD 15 | RR | 7-20-07 |
| | REV. PIPE ALIGN ADD S.D. M.H. | | |
| | REVISE DRAINAGE ESMT. | | |

DESIGNED BY ____ DRAWN BY ____ CHECKED BY ____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

| APPROVED BY | BY | DATE |
|---|---|---|
| PRINCIPAL ENGINEER | | 3/7/07 |

APPROVED BY
CITY ENGINEER
DATE 3/8/07

# STORM DRAIN PLAN
# LINE B

PARCEL NO. 20166, PMB 131/11-12

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1"=4'

ACCT. NO. PW 06-0776

D 811

SHEET 3 OF 3

RR

INDEXED 3-12-07