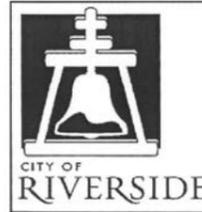


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SHEET 107	- PS-19 PUMP STATION INSTRUMENTATION DETAILS I
SHEET 108	- PS-20 PUMP STATION INSTRUMENTATION DETAILS II

RIVERSIDE



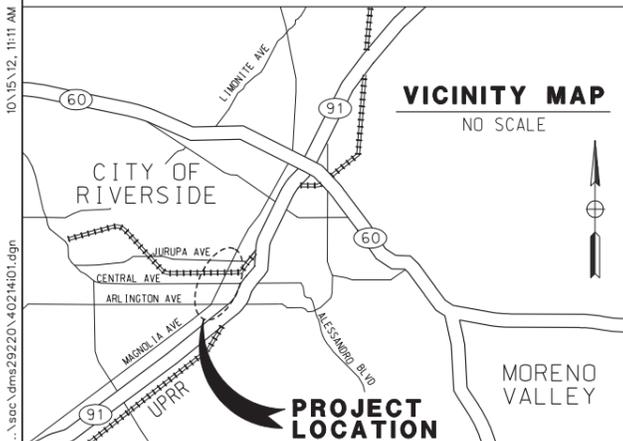
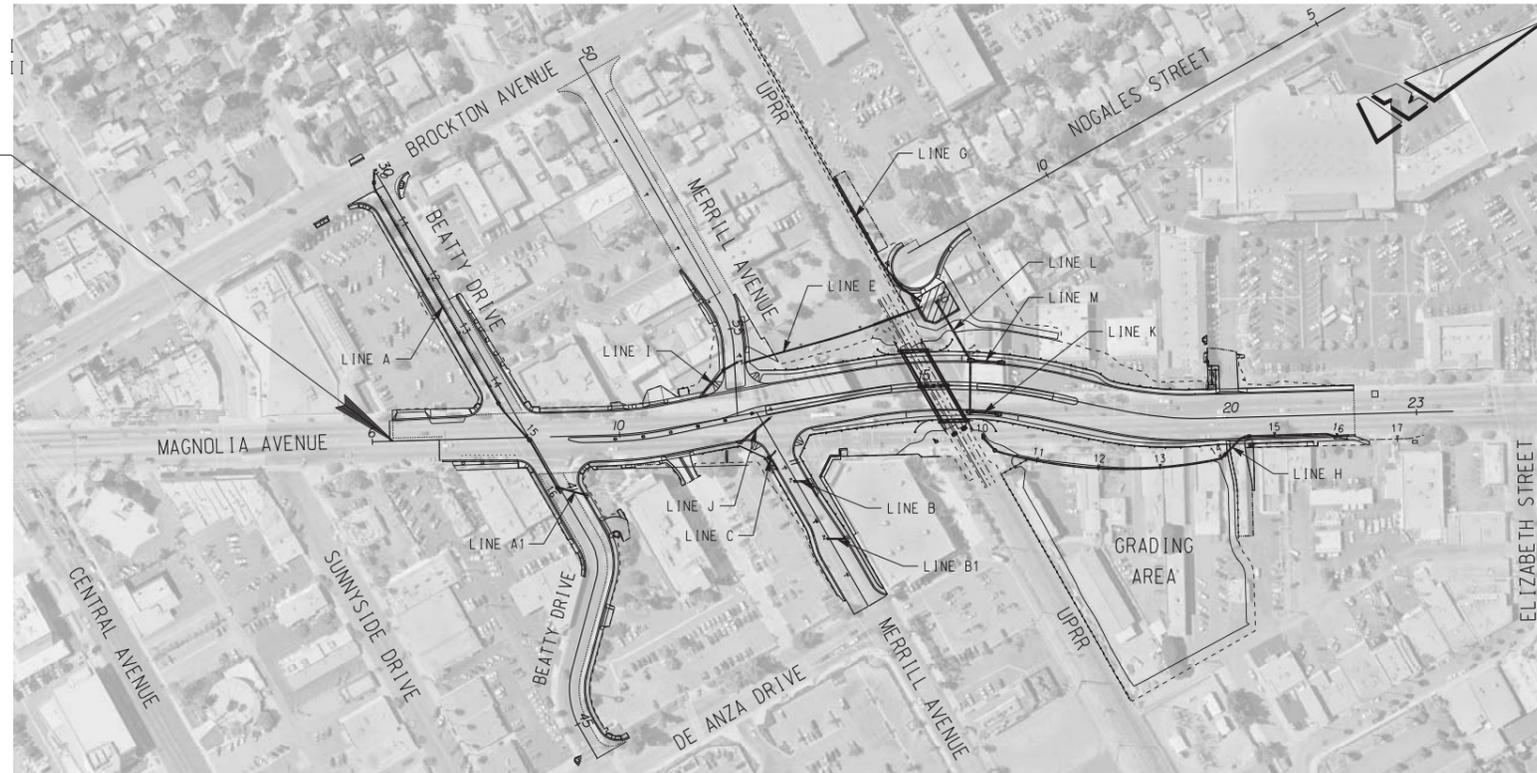
CALIFORNIA

PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

UNION PACIFIC RAILROAD LOS ANGELES SUBDIVISION - MP 53.1 & MP 53.3
DRAINAGE AND PUMP STATION PLANS

**BEGIN CONSTRUCTION
STA 6+33**



PROJECT LOCATION PLAN
NOT TO SCALE

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. *[Number]*
DATE *November 16, 2012*

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

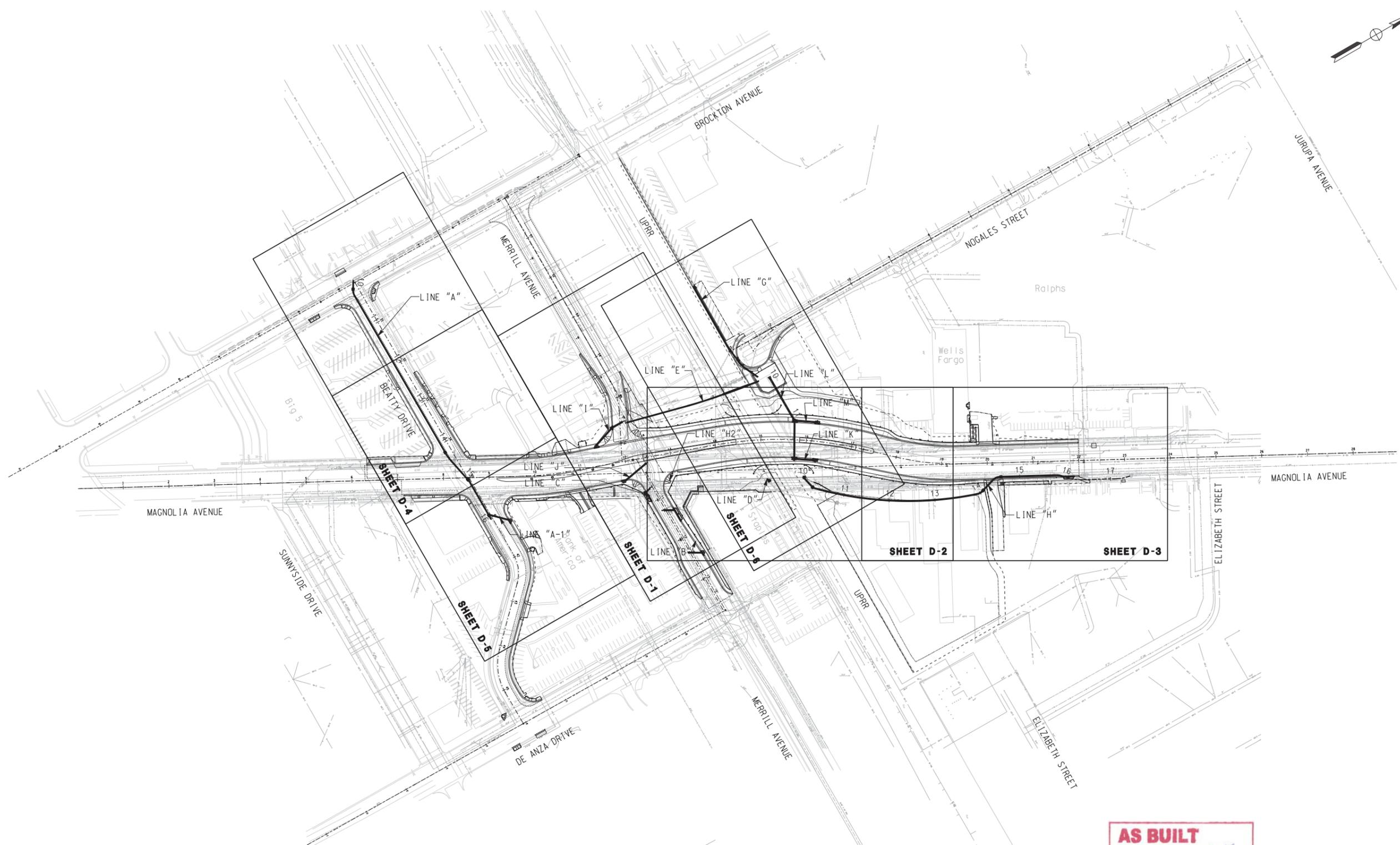
REGISTERED PROFESSIONAL ENGINEER
WILLIAM F. YOUNG
No. C 35715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT	ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS	D-830
TITLE SHEET D-1	SHEET 74 of 189
HORIZ. SCALE: N/A VERT. SCALE: N/A	FILE NO.

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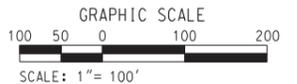


AS BUILT

CORRECTIONS BY *W.F. Young*

CONTRACT NO. _____

DATE *November 16, 2012*



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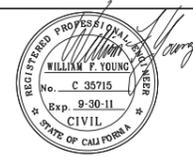
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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE 9/14/09



MARK	REVISIONS	APPR.	DATE

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE KEY SHEET D-2

HORIZ. SCALE: 1" = 100' VERT. SCALE: NONE

ACCT. NO. _____
W.O. NO. _____

D-830

SHEET 75 OF 189

FILE NO. _____

GENERAL NOTES

1. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL. ANY 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 AVAILABLE 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. WHEN A PORTION OF THE WORK IS TO BE DONE BY THE CITY, THE CONTRACTOR SHALL GIVE THE CITY 60-DAYS NOTICE SO THAT THE CONTRACTOR'S WORK AND THE CITY'S WORK CAN BE PROPERLY COORDINATED. THE CONTRACTOR SHALL PREPARE AND COMPACT THE SUBGRADE TO ELEVATIONS WITHIN +/- .1' OF THE DESIGN ELEVATIONS AND SHALL BE RESPONSIBLE FOR THE CONDITION OF THE SUBGRADE UNTIL ACCEPTED BY THE CITY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY BARRICADING DURING THIS TIME.
7. THE CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DEPARTMENT 30 DAYS PRIOR TO BEGINNING CONSTRUCTION TO NEGOTIATE THE COST OF THE CITY'S PORTION OF THE WORK.
8. 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.
9. WHERE NEW PAVEMENT IS TO JOIN THE EXISTING PAVEMENT, THE EDGE OF THE EXISTING PAVEMENT SHALL BE TRIMMED IN A SMOOTH AND STRAIGHT LINE. CONSTRUCT MATCH-UP PAVING AS SHOWN ON THE PLANS AND OVERLAY PAVING AS DIRECTED IN THE FIELD TO PRODUCE A SMOOTH SECTION.
10. CONSTRUCT DRIVEWAY APPROACHES PER STANDARD DRAWING 302. EXACT SIZE AND LOCATION TO BE STAKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OF THE CURB AND GUTTER.
11. STREET OPENING PERMIT FOR CONSTRUCTION AND/OR MODIFICATION OF TRAFFIC SIGNAL FACILITIES IS REQUIRED.
12. ALL TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO OPENING THE STREETS TO TRAFFIC.
13. 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.
14. STREET IMPROVEMENT WORK THAT WILL CAUSE DAMAGE TO THE DETECTOR LOOP(S) SHALL NOT BE PERFORMED UNTIL TRAFFIC SIGNAL MAINTENANCE PERSONNEL HAVE BEEN NOTIFIED AND THE NECESSARY TIMING ADJUSTMENTS ARE MADE TO MAINTAIN SIGNAL OPERATION.
15. FINAL STRIPING FOR TRAFFIC CONTROL AND/OR PAVEMENT MARKING TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE # 1-800-227-2600 OR 1-800-422-4133, TWO WORKING DAYS BEFORE DIGGING. SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES.
17. CONTRACTOR IS TO VERIFY EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION.
18. LOCATION OF LATERALS TO BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER. AVOID CONFLICT WITH PROPOSED AND/OR EXISTING FACILITIES.
19. A PLUG SHALL BE INSTALLED AND WILL REMAIN IN PLACE WHERE THE NEW SEWER CONNECTS WITH THE EXISTING SEWER UNTIL THE NEW SEWER IS ACCEPTED BY THE CITY.
20. THE CONTRACTOR SHALL ADJUST MANHOLES TO FINAL GRADE AFTER PAVING IS COMPLETED.
21. 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.-----
22. IN PAVEMENT OVERLAY AREAS, ANY DISTRESSED EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE INSPECTOR PRIOR TO OVERLAYING WITH A.C. PAVING.
23. ALL ELEVATIONS AND OFFSETS SHOWN ON THE PLANS SHALL BE STAKED IN THE FIELD AND VERIFIED PRIOR TO CONSTRUCTION. ALL ELEVATIONS, OFFSETS, AND DIMENSIONS SHOWN FOR RETAINING WALLS AND DRIVEWAYS ON OR ADJACENT TO PRIVATE PROPERTY SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
24. PRIME CONTRACTORS BIDDING THIS WORK SHALL HAVE A CLASS "A" CONTRACTORS LICENSE.
25. PRIOR TO ISSUANCE OF GRADE SHEETS FOR ANY PROPOSED SEWER AND STORM DRAIN FACILITIES CONTRACTOR SHALL EXPOSE ALL UTILITIES WHICH CROSS OR MAY BE IN CONFLICT WITH THE PROPOSED SEWER AND STORM DRAIN FACILITIES AND COORDINATE WITH THE INSPECTOR TO HAVE THE LOCATION AND ELEVATION VERIFIED BY CITY'S/CONTRACTOR'S SURVEYORS.
26. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS AND THE SPECIFICATIONS FOR THIS CONTRACT.

GENERAL NOTES (CONT.)

27. ALL CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED AND COORDINATED THROUGH THE ENGINEER, INCLUDING THE VARIOUS COMPANIES, AGENCIES AND OTHER CONTRACTORS WHO MAY BE AFFECTED BY THIS WORK. ALL REQUIRED PERMITS INCLUDING RAILROAD RIGHT-OF-WAY PERMITS NEEDED FOR THE WORK SHALL BE OBTAINED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL COMPLY WITH ALL RAILROAD OCCUPANCY REQUIREMENTS INCLUDING INSURANCE REQUIREMENTS, REQUIRED SAFETY TRAINING AND USE OF AND PAYMENT FOR RAILROAD FLAGMEN.
28. HORIZONTAL AND VERTICAL CONTROL POINTS FOR THE TRACK LAYOUT ARE IDENTIFIED IN THE CONTRACT DOCUMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THESE CONTROL POINTS TO ASSURE THAT ALL FACILITIES INCLUDED IN THIS PROJECT ARE CONSTRUCTED AT CORRECT VERTICAL AND HORIZONTAL LOCATIONS.
29. SUBGRADE BELOW TRACK (I.E. WITHIN 14' OF THE CENTERLINE OF TRACK), SHALL BE COMPACTED TO 95% OF THE MAXIMUM PROCTOR DENSITY. ALL OTHER SUBGRADE WORK SHALL BE COMPACTED TO A MINIMUM OF 90% OF THE MAXIMUM PROCTOR DENSITY.
30. POSITIVE DRAINAGE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION TO PREVENT PONDING OF WATER.
31. THE CONTRACTOR SHALL COMPLY WITH THE STATE OF CALIFORNIA NPDES PERMIT REGARDING THE TREATMENT OF WATER BEFORE DISCHARGING OFF THE UPRR R/W.
32. THE CONTRACTOR SHALL PROTECT ALL UPRR SIGNAL FACILITIES IN PLACE. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR CONFLICTS WITH EXISTING UTILITIES, SIGNAL CABLES/EQUIPMENT AND/OR OTHER ITEMS THAT MIGHT IMPAIR CONSTRUCTION ACTIVITIES. INCONSISTENCIES FOUND SHALL BE REPORTED TO THE ENGINEER.
33. REPAIRS TO FACILITIES INTENDED TO REMAIN IN PLACE SHALL BE MADE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS OR BY THE ENGINEER.
34. ALL EXCAVATED WASTE MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE SITE. ON SITE STORAGE OF EXCAVATED WASTE MATERIAL SHALL NOT BE PERMITTED AT ANY TIME. SUITABLE EXCAVATED MATERIAL SHALL BE STOCKPILED PER APPROVAL BY THE ENGINEER.
35. ON-SITE CONSTRUCTION BY OTHERS, INCLUDING ROUTINE MAINTENANCE WORK, (UPRR FORCES, UPRR SIGNAL CONTRACTOR, SCRRRA, UTILITIES, ETC.) MAY OCCUR DURING THE CONSTRUCTION PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES THROUGH THE ENGINEER SO AS TO MINIMIZE INTERFERENCE WITH OTHERS.
36. PRIOR TO COMMENCING WORK, ALL EXISTING SITE CONDITIONS SHALL BE FIELD VERIFIED WITH THE ENGINEER TO ASCERTAIN THE LIMITS OF WORK ACTIVITIES. THE CONTRACTOR SHALL SUBMIT AND RECEIVE THE ENGINEER'S APPROVAL OF THE CONTRACTOR'S PROJECT SCHEDULE AND OPERATIONS PLAN. EACH ITEM OF WORK SHALL BE DESCRIBED AND ACCOUNTED FOR IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR FURTHER INFORMATION REGARDING SUBMITTAL REQUIREMENTS.
37. RAIL TRAFFIC DISRUPTIONS SHALL BE KEPT TO A MINIMUM. DISRUPTIONS IN RAIL TRAFFIC THAT MAY BE REQUIRED SHALL BE COORDINATED WITH THE ENGINEER BEFOREHAND. NO SUCH WORK SHALL BE COMMENCED WITHOUT THE ENGINEER'S APPROVAL WORK AFFECTING SCRRRA COMMUTER TRAIN OPERATIONS AND UPRR FREIGHT TRAFFIC MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
38. THE CONTRACTOR SHALL NOT PLACE MATERIAL AND/OR EQUIPMENT WITHIN 25 FEET OF ANY TRACK AT ANY TIME WITHOUT PRIOR APPROVAL OF THE ENGINEER.
39. EXISTING RAILROAD SIGNAGE (INCLUDING SPEED SIGNS) SHALL BE MAINTAINED DURING THE CONSTRUCTION PERIOD. ALL RAILROAD SIGNAGE SHALL BE FULLY RESTORED UPON COMPLETION OF EACH DAYS WORK IN ACCORDANCE WITH UPRR ENGINEERING STANDARDS. PRIOR TO CONSTRUCTION, NO TRESPASSING SIGNS SHALL BE PLACED IN ACCORDANCE WITH UPRR STD DWG 0538A AND AS SHOWN ON THE DRAWINGS.
40. ALL WORK SHALL BE COORDINATED WITH UPRR'S SIGNAL ENGINEER, SIGNAL FORCES AND SIGNAL CONTRACTOR THRU THE ENGINEER. WORK WILL BE PHASED TO EFFECT THE CONTINUED OPERATION OF EXISTING SIGNAL SYSTEM DURING CONSTRUCTION. IN NO INSTANCE MAY WORK PROCEED IN ANY AREA WITHOUT ADVANCED APPROVAL OF UPRR'S SIGNAL ENGINEER. THE CONTRACTOR SHALL LOCATE ALL SIGNAL AND COMMUNICATION CONDUITS, CABLES, WIRES, OR OTHER TRACK, TRACK BED, AND RIGHT-OF-WAY.
41. WALKWAYS SHALL BE PLACED AS REQUIRED BY CALIFORNIA PUBLIC UTILITIES COMMISSION GENERAL ORDER NO.118 AND 260 FOR ALL NEW CONSTRUCTION, UNLESS NOTED OTHERWISE.
42. DIMENSIONS SHOWN IN PARENTHESES INDICATED APPROXIMATE EXISTING DIMENSIONS. WHERE ELEVATIONS ARE SHOWN IN PARENTHESES AT JOIN LOCATIONS, THE CONTRACTOR SHALL VERIFY THESE ELEVATIONS PRIOR TO CONSTRUCTION AND JOIN FEATURES AT EXISTING ELEVATIONS.

AS BUILT
 CORRECTIONS BY *W. Young*
 CONTRACT NO. _____
 DATE November 16, 2015

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HDR | ONE COMPANY
Many Solutions
 HDR ENGINEERING, INC.
 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2110
 DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER
 WILLIAM F. YOUNG
 No. C 38715
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
GENERAL NOTES D-3
 HORIZ. SCALE: N/A VERT. SCALE: N/A

ACCT. NO. _____
 W.O. NO. _____
D-830
 SHEET 76 OF 189
 FILE NO. _____

LEGEND

	PROPOSED UTILITY
	ELECTRICAL (UNDERGROUND)
	TELEPHONE (UNDERGROUND)
	NATURAL GAS
	OVERHEAD LINE
	WATER
	SANITARY SEWER
	STORM DRAIN
	PCC

ABBREVIATIONS

AC	ASPHALT CONCRETE
ADA	AMERICANS WITH DISABILITIES ACT
ANG	ANGLE
AP; ANG PT	ANGLE POINT
APWA	AMERICAN PUBLIC WORKS ASSOCIATION OR STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
AVE	AVENUE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN HORIZONTAL CURVE
BCR	BEGIN CURVE RETURN
BLVD	BOULEVARD
BW	BACK OF WALK
C&G	CURB AND GUTTER
CB	CATCH BASIN
CF	CURB FACE
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CIDH	CAST-IN-DRILLED-HOLE
CLR	CLEAR
CONST	CONSTRUCT; CONSTRUCTION
DEMO	DEMOLISH; DEMOLITION
DI	DUCTILE IRON
DR	DRIVE
EA	EACH
EC	END HORIZONTAL CURVE
ECR	END CURVE RETURN
EG	EDGE OF GUTTER
ELEC	ELECTRIC LINE
EL; ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ES	EXISTING SURFACE
EXIST	EXISTING
FL	FLOW LINE
FPS	FEET PER SECOND
FS	FINISH SURFACE
GB	GRADE BREAK
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
INT	INTERSECT; INTERSECTION
INV	INVERT
JS	JUNCTION STRUCTURE
L; LC, VC	LENGTH, LENGTH OF CURVE, OR VERTICAL CURVE
LACDPW	LA COUNTY DEPARTMENT OF PUBLIC WORKS
LH	LEFT HAND
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
ML OR MT	MAIN LINE
NB	NORTHBOUND
NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
PCC	PORTLAND CEMENT CONCRETE; POINT OF COMPOUND CURVE

ABBREVIATIONS

PG	PROFILE GRADE
P1	POINT OF INTERSECTION
PO	PUSHON
POB	POINT OF BEGINNING
POE	POINT OF END
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECT
PVT	POINT OF VERTICAL TANGENT
RCB	REINFORCED CONCRETE BOX
RCFC+WCD	RIVERSIDE COUNTY FLOOD CONTROL + WATER CONSERVATION DISTRICT
RT	RIGHT
RPU	RIVERSIDE PUBLIC UTILITIES
RW; ROW; R/W	RIGHT OF WAY
SB	SOUTHBOUND
SDMH	STORM DRAIN MANHOLE
SHLD	SHOULDER
SHT	SHEET
SMH	SEWER MANHOLE
SPPWC	STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION
ST	STREET
STA	STATION
STD	STANDARD
SW	SIDEWALK; SOUNDWALL
SWR	SEWER
TC; T/C	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEMP	TEMPORARY
TF	TRACK FEET
T.I.	TRAFFIC INDEX
T.O.	TURN OUT
TRANS	TRANSITION
TYP	TYPICAL
UG	UNDERGROUND
UPRR	UNION PACIFIC RAILROAD
V/L	AVERAGE CHANGE IN GRADIENT
VAR	VARIABLE; VARIABLE
VERT	VERTICAL
WTR	WATER
+/-	PLUS OR MINUS

CONSTRUCTION NOTES

- 101 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO 405
- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO MH251
- 103 CONSTRUCT JUNCTION STRUCTURE PER CITY OF RIVERSIDE STD DRAWING NO 423
- 104 CONSTRUCT JUNCTION STRUCTURE PER RCFC+WCD STD DRAWING NO JS226
- 105 INSTALL FLAP GATE TO MANHOLE WALL
- 106 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO 405 AND CATCH BASIN SLOPE RETAINING WALLS PER DETAIL ON SHEET D-15
- 107 INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- 108 INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- 109 INSTALL 30" DIA RCP (D-LOAD PER PLAN)
- 110 CONSTRUCT CONCRETE COLLAR PER RCFC+WCD STD DRAWING NO M803
- 111 CONSTRUCT JUNCTION STRUCTURE PER RCFC+WCD STD DRAWING NO JS228
- 112 CONSTRUCT GRATING CATCH BASIN PER SPPWC STD 305-2
- 113 CONSTRUCT JUNCTION STRUCTURE PER CITY OF RIVERSIDE STD DRAWING NO 421
- 117 CONSTRUCT 36" CASING
- 118 INSTALL CONCRETE BACKFILL
- 119 PLUG EXISTING PIPE
- 120 INSTALL ORIFICE PLATE PER DETAIL A, SHEET D-15 PS-4
- 121 INSTALL JUNCTION STRUCTURE IN ORIGINAL JUNCTION STRUCTURE LOCATION
- 122 CONNECT EXISTING STORM DRAIN TO CATCH BASIN
- 130 INSTALL OIL-DEBRIS HOOD AND TRASHSCREEN
- 131 CONSTRUCT PRESSURE MANHOLE SHAFT PER RCFC+WCD STD DRAWING NO MH258

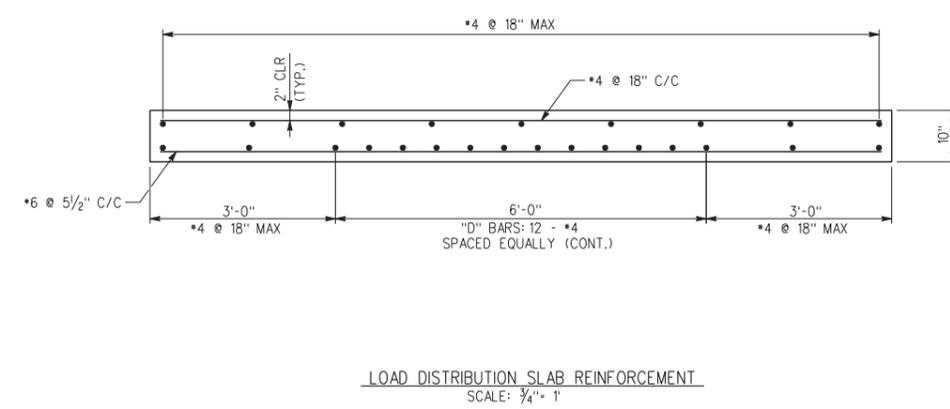
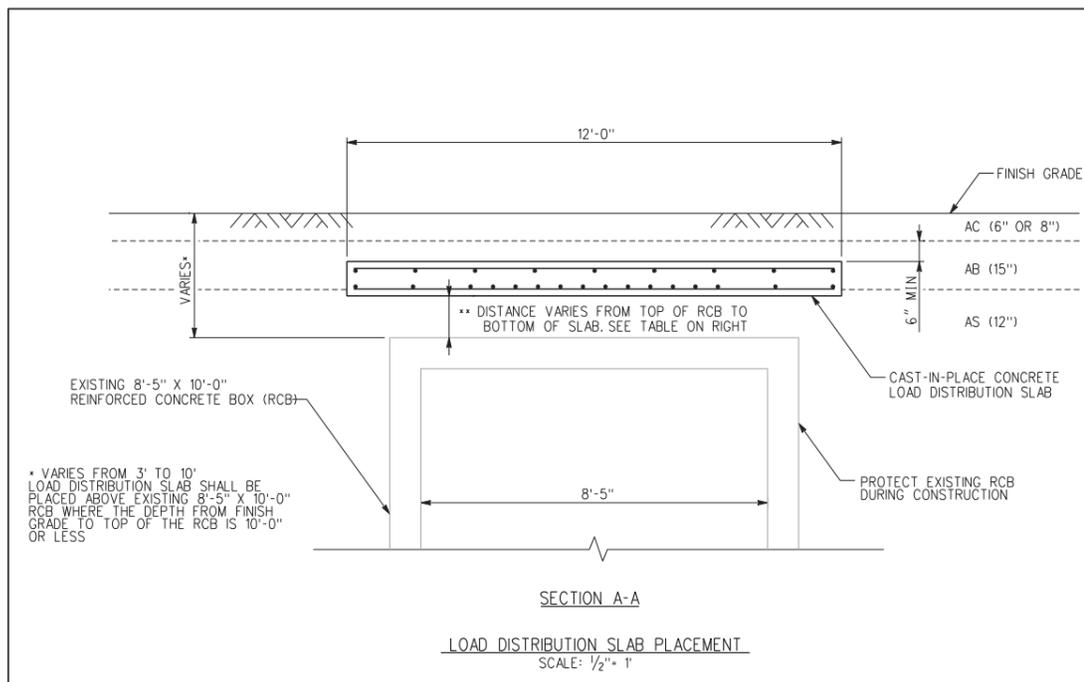
REMOVAL NOTES

- 8 REMOVE TREE
- 12 REMOVE EXISTING PIPE
- 26 REMOVE EXISTING CONCRETE STRUCTURE

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AS BUILT
CORRECTIONS BY *W.F. Young*
CONTRACT NO. _____
DATE *November 16, 2012*

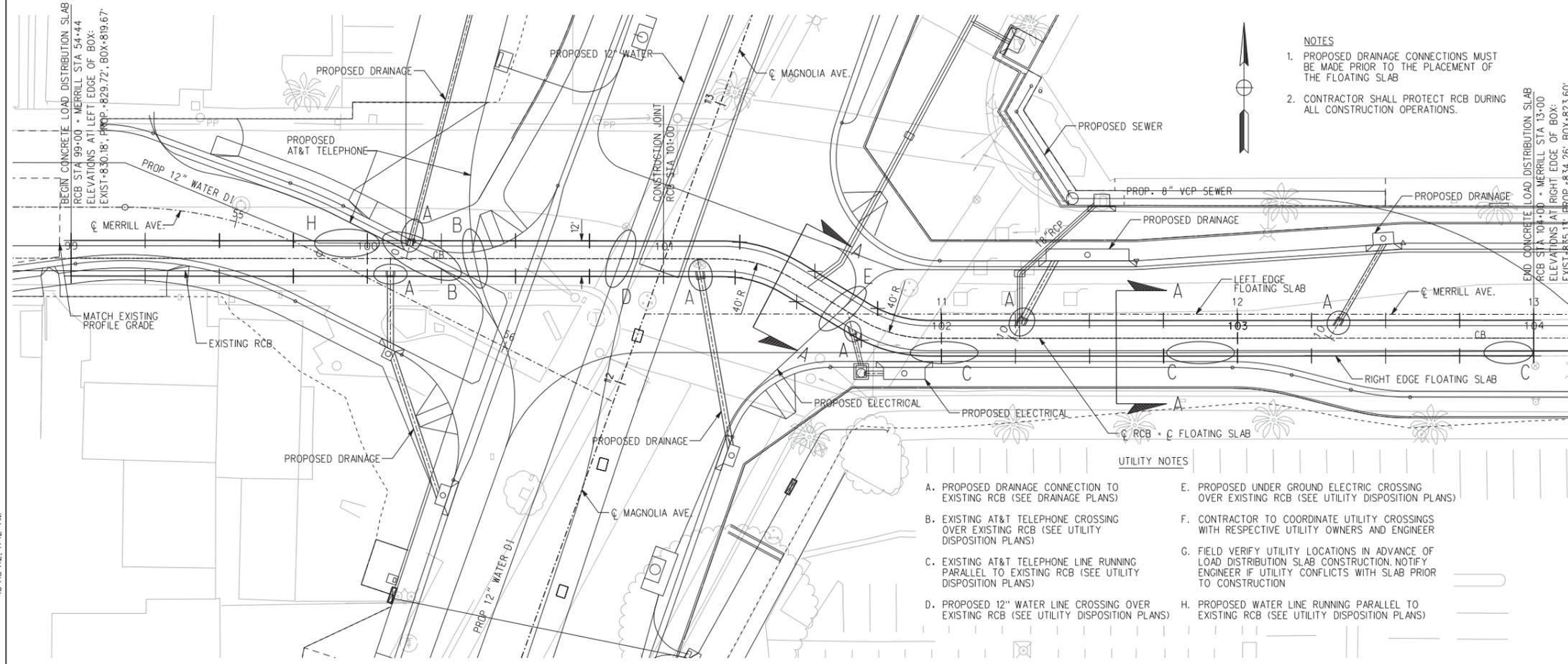
 DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT	 HDR ONE COMPANY <i>Many Solutions</i> HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE <u>9/14/09</u>	 WILLIAM F. YOUNG No. C 38715 Exp. 9-30-11 CIVIL STATE OF CALIFORNIA	REVISION - CONSTRUCTION NOTE SHEET REFERENCE WFY 7/14/11 REVISION - ADD MANHOLE & MODIFY FLAP GATE WFY 2/08/10	ACCT. NO. _____ W.O. NO. _____
			DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____ HORIZ. SCALE: N/A VERT. SCALE: N/A	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS LEGEND, ABBREVIATIONS AND CONST. NOTES D-4	SHEET 77 OF 189 FILE NO. _____



REINFORCING SCHEDULE				
TOTAL	LOCATION	SIZE	LENGTH	SHAPE
9	TOP LONG.	#4	500'-0"	---
334	TOP TRANS.	#4	11'-8"	---
16	BOT LONG.	#4	500'-0"	---
1091	BOT TRANS.	#6	11'-8"	---

MATERIAL SCHEDULE		
TOTAL	UNIT	DESCRIPTION
185.2	CY	4000 PSI CONCRETE

LOAD DISTRIBUTION SLAB PROFILE							
RCB STA	SLAB EDGE	NORTHING	EASTING	MAGNOLIA STA.	MAGNOLIA OFFSET	TOP ELEV.	**DIST. RCB TO SLAB
99+00	LEFT	2293607.12	6214352.85	11+82.54	190.68' LT	828.20'	7.72' **
99+00	RIGHT	2293595.12	6214352.84	11+71.24	186.64' LT	828.20'	7.72' **
99+25	LEFT	2293607.10	6214377.85	11+90.97	167.15' LT	828.17'	7.59' **
99+25	RIGHT	2293595.10	6214377.84	11+79.67	163.10' LT	828.17'	7.59' **
99+50	LEFT	2293607.07	6214402.92	11+99.42	143.55' LT	828.15'	7.48' **
99+50	RIGHT	2293595.07	6214402.84	11+88.10	139.56' LT	828.15'	7.48' **
99+75	LEFT	2293607.05	6214427.85	12+07.83	120.08' LT	827.97'	7.21' **
99+75	RIGHT	2293595.05	6214427.84	11+96.53	116.03' LT	827.97'	7.21' **
100+00	LEFT	2293607.03	6214452.85	12+16.26	96.54' LT	827.20'	6.34' **
100+00	RIGHT	2293595.03	6214452.84	12+04.96	92.49' LT	827.20'	6.34' **
100+25	LEFT	2293607.00	6214477.85	12+24.69	73.00' LT	825.85'	4.90' **
100+25	RIGHT	2293595.00	6214477.84	12+13.39	68.96' LT	825.82'	4.87' **
100+50	LEFT	2293606.98	6214502.85	12+33.12	49.47' LT	824.25'	3.21' **
100+50	RIGHT	2293594.98	6214502.84	12+21.82	45.42' LT	824.25'	3.21' **
100+75	LEFT	2293606.95	6214527.85	12+41.55	25.93' LT	824.05'	2.80' **
100+75	RIGHT	2293594.95	6214527.84	12+30.25	21.88' LT	824.05'	2.80' **
101+00	LEFT	2293606.93	6214552.85	12+49.98	2.40' LT	824.04'	2.46' **
101+00	RIGHT	2293594.93	6214552.84	12+38.68	1.65' RT	824.04'	2.46' **
101+25	LEFT	2293606.55	6214578.62	12+58.33	21.98' RT	823.23'	1.33' **
101+25	RIGHT	2293594.55	6214577.01	12+46.59	24.49' RT	823.23'	1.33' **
101+50	LEFT	2293596.69	6214603.96	12+57.62	49.16' RT	823.11'	0.90' **
101+50	RIGHT	2293586.40	6214597.78	12+45.85	46.82' RT	823.11'	0.90' **
101+75	LEFT	2293584.15	6214625.15	12+52.98	73.35' RT	823.59'	1.07' **
101+75	RIGHT	2293573.50	6214619.62	12+41.09	71.74' RT	823.59'	1.07' **
102+00	LEFT	2293580.07	6214646.61	12+56.41	94.94' RT	824.18'	1.37' **
102+00	RIGHT	2293568.07	6214646.64	12+45.12	99.01' RT	824.18'	1.37' **
102+25	LEFT	2293580.09	6214641.61	12+64.87	118.47' RT	825.26'	2.24' **
102+25	RIGHT	2293568.09	6214671.64	12+53.58	122.53' RT	825.26'	2.24' **
102+50	LEFT	2293580.10	6214696.64	12+73.34	141.99' RT	826.44'	3.22' **
102+50	RIGHT	2293568.10	6214696.64	12+62.04	146.06' RT	826.44'	3.22' **
102+75	LEFT	2293586.11	6214721.64	12+81.80	165.52' RT	827.64'	4.22' **
102+75	RIGHT	2293568.11	6214721.64	12+70.51	169.58' RT	827.64'	4.22' **
103+00	LEFT	2293580.12	6214746.64	12+90.26	189.04' RT	829.08'	5.46' **
103+00	RIGHT	2293568.12	6214746.64	12+78.97	193.10' RT	829.08'	5.46' **
103+25	LEFT	2293580.13	6214771.64	12+98.73	212.56' RT	830.06'	6.23' **
103+25	RIGHT	2293568.13	6214771.64	12+87.44	216.63' RT	830.06'	6.23' **
103+50	LEFT	2293580.15	6214796.64	13+07.19	236.09' RT	831.24'	7.21' **
103+50	RIGHT	2293568.15	6214796.64	12+95.90	240.15' RT	831.24'	7.21' **
103+75	LEFT	2293580.16	6214821.64	13+15.66	259.61' RT	832.27'	8.04' **
103+75	RIGHT	2293568.16	6214821.64	13+04.36	263.67' RT	832.27'	8.04' **
104+00	LEFT	2293580.17	6214846.64	13+24.12	283.14' RT	833.09'	8.66' **
104+00	RIGHT	2293568.17	6214846.64	13+12.83	287.20' RT	833.09'	8.66' **

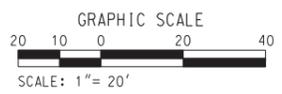


- NOTES
- PROPOSED DRAINAGE CONNECTIONS MUST BE MADE PRIOR TO THE PLACEMENT OF THE FLOATING SLAB
 - CONTRACTOR SHALL PROTECT RCB DURING ALL CONSTRUCTION OPERATIONS.

- UTILITY NOTES
- PROPOSED DRAINAGE CONNECTION TO EXISTING RCB (SEE DRAINAGE PLANS)
 - EXISTING AT&T TELEPHONE CROSSING OVER EXISTING RCB (SEE UTILITY DISPOSITION PLANS)
 - EXISTING AT&T TELEPHONE LINE RUNNING PARALLEL TO EXISTING RCB (SEE UTILITY DISPOSITION PLANS)
 - PROPOSED 12" WATER LINE CROSSING OVER EXISTING RCB (SEE UTILITY DISPOSITION PLANS)
 - PROPOSED UNDER GROUND ELECTRIC CROSSING OVER EXISTING RCB (SEE UTILITY DISPOSITION PLANS)
 - CONTRACTOR TO COORDINATE UTILITY CROSSINGS WITH RESPECTIVE UTILITY OWNERS AND ENGINEER
 - FIELD VERIFY UTILITY LOCATIONS IN ADVANCE OF LOAD DISTRIBUTION SLAB CONSTRUCTION. NOTIFY ENGINEER IF UTILITY CONFLICTS WITH SLAB PRIOR TO CONSTRUCTION
 - PROPOSED WATER LINE RUNNING PARALLEL TO EXISTING RCB (SEE UTILITY DISPOSITION PLANS)

** NOTE: DISTANCE BETWEEN EXISTING TOP OF RCB AND BOTTOM OF NEW CONCRETE SLAB. DISTANCES ARE APPROXIMATE. TOP OF RCB WERE DETERMINED FROM POTHOLE AND AS-BUILT DRAWING INFORMATION. ACTUAL FIELD ELEVATIONS TO BE VERIFIED.

AS BUILT
CORRECTIONS BY [Signature]
CONTRACT NO. [Number]
DATE [Date]



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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

PROFESSIONAL ENGINEER
ERIC A. JOHNSON
No. CS7355
Exp. 12/31/11
CIVIL
STATE OF CALIFORNIA

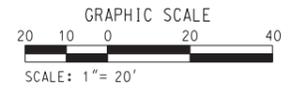
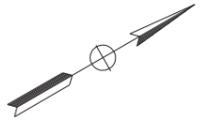
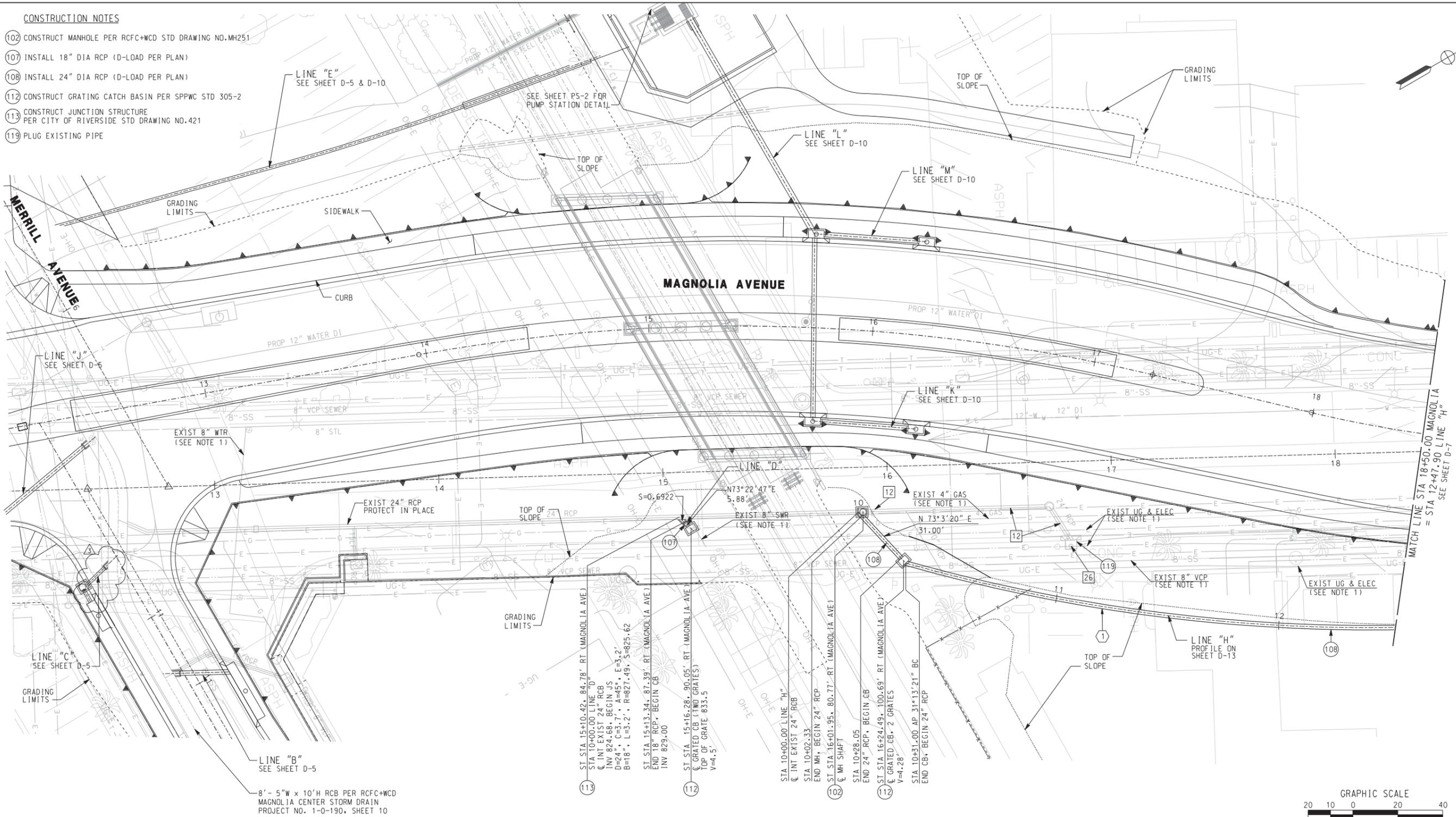
DESIGNED BY	DRAWN BY	CHECKED BY	DATE
			3/22/11

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
EXISTING RCB PROTECTION D-830
SHEET 78a OF 189
ACC'T. NO. W.O. NO.
FILE NO.

10/15/12, 11:12 AM ... \dms29220_4021405a-RE.V5.dgn

CONSTRUCTION NOTES

- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO. MH251
- 107 INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- 108 INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- 112 CONSTRUCT GRATING CATCH BASIN PER SPPWC STD 305-2
- 113 CONSTRUCT JUNCTION STRUCTURE PER CITY OF RIVERSIDE STD DRAWING NO. 421
- 119 PLUG EXISTING PIPE



AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE *November 16, 2012*

CURVE DATA				
No.	Δ	R	L	T
①	27°16'46"	760'	361.85'	184.42'

- REMOVAL NOTES**
- 12 REMOVE EXIST PIPE
 - 26 REMOVE EXISTING CONCRETE STRUCTURE

NOTE:
1. FOR EXISTING UTILITY INFORMATION SEE UTILITY DISPOSITION SHEETS.

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TWO WORKING DAYS BEFORE YOU DIG

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR ONE COMPANY
Many Solutions

HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER

WILLIAM F. YOUNG

No. C 35715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

REVISIONS	DATE
REVISION-ADD MANHOLE & MODIFY FLAP GATE	2/08/10
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	10/21/09

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-6

HORIZ. SCALE: 1"=20' VERT. SCALE: NONE

ACCT. NO. W.O. NO. _____

D-830

SHEET 79 OF 189

FILE NO. _____

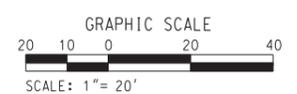
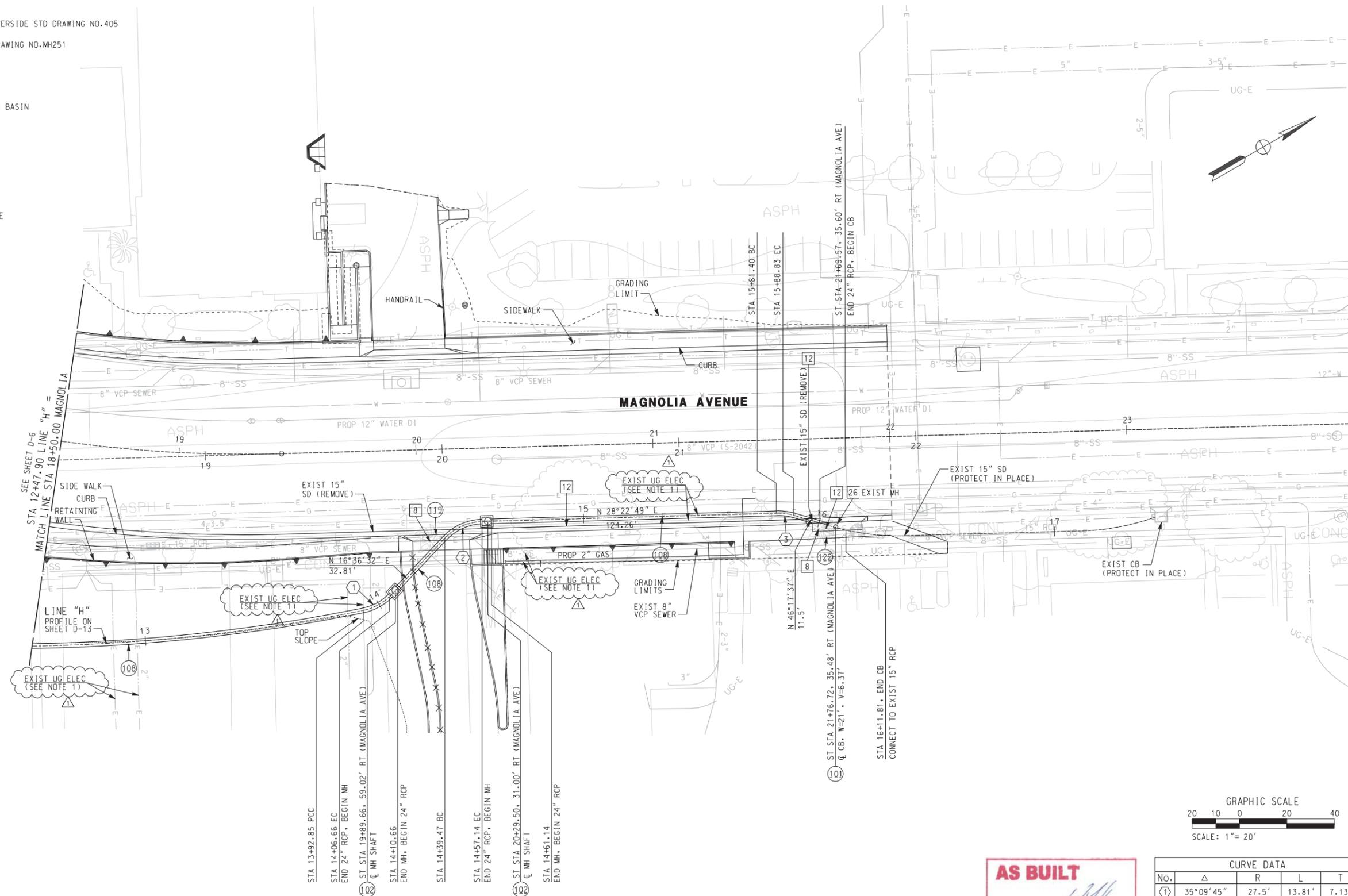
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CONSTRUCTION NOTES

- 101 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO.405
- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO.MH251
- 108 INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- 119 PLUG EXISTING PIPE
- 122 CONNECT EXISTING STORM DRAIN TO CATCH BASIN

REMOVAL NOTES

- 8 REMOVE TREE
- 12 REMOVE EXISTING PIPE
- 26 REMOVE EXISTING CONCRETE STRUCTURE



AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE *November 16, 2012*

CURVE DATA				
No.	Δ	R	L	T
①	35°09'45"	27.5'	13.81'	7.13'
②	45°00'00"	22.5'	17.67'	9.32'
③	18°56'01"	22.5'	7.11'	3.75'

NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

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TWO WORKING DAYS BEFORE YOU DIG

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR ONE COMPANY Many Solutions

HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER

WILLIAM F. YOUNG

No. C 35715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	WFY	DATE
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES			10/2/09

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-7

HORIZ. SCALE: 1"=20' VERT. SCALE: NONE

ACCT. NO. W.O. NO. **D-830**

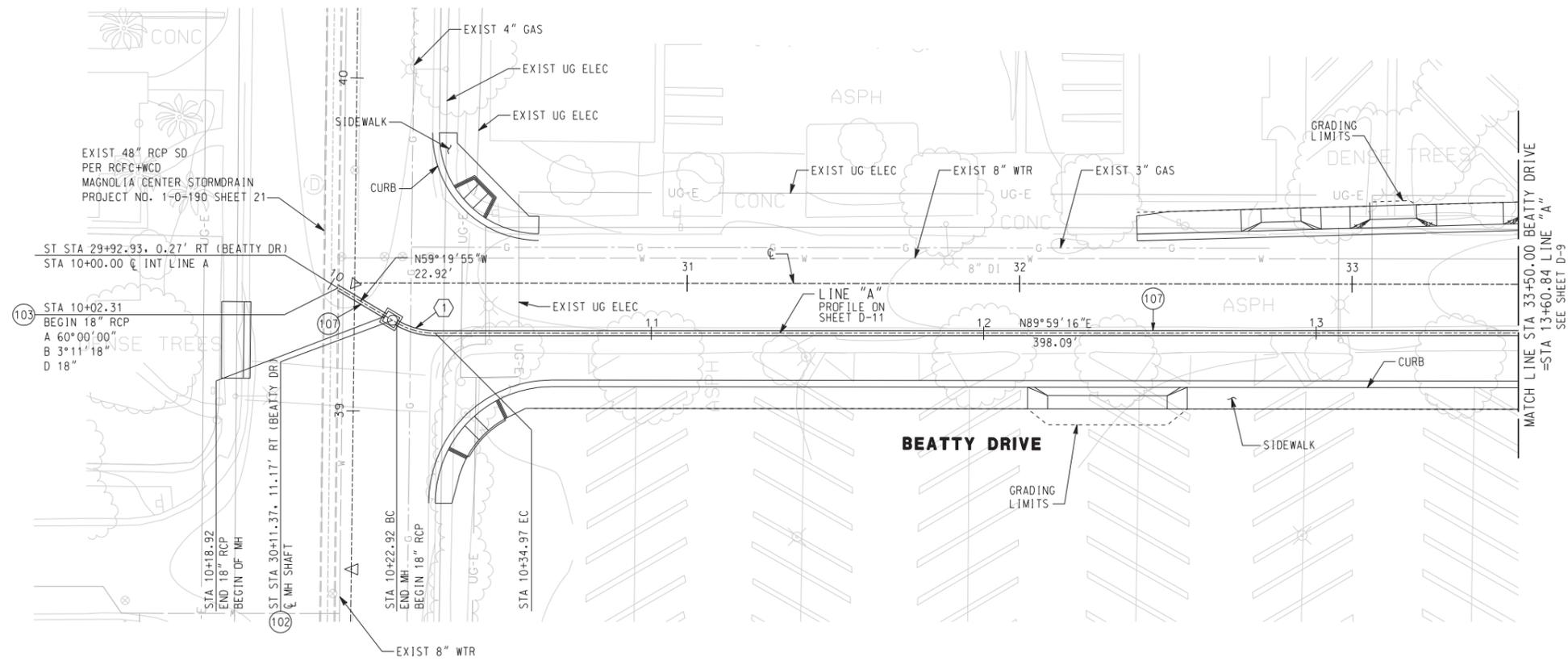
SHEET **80** OF **189**

FILE NO. _____

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CONSTRUCTION NOTES

- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO. MH251
- 103 CONSTRUCT JUNCTION STRUCTURE PER CITY OF RIVERSIDE STD DRAWING NO. 423
- 107 INSTALL 18" DIA RCP (D-LOAD PER PLAN)



AS BUILT

CORRECTIONS BY *W. Young*

CONTRACT NO. _____

DATE *November 16, 2015*

CURVE DATA				
NO.	Δ	R	L	T
1	30°40'51"	22.5'	12.05'	6.17'

NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

DIG ALERT

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY
Many Solutions

HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER

WILLIAM F. YOUNG

No. C 35715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

MARK	ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-8

HORIZ. SCALE: 1"=20' VERT. SCALE: NONE

ACCT. NO. W.O. NO. **D-830**

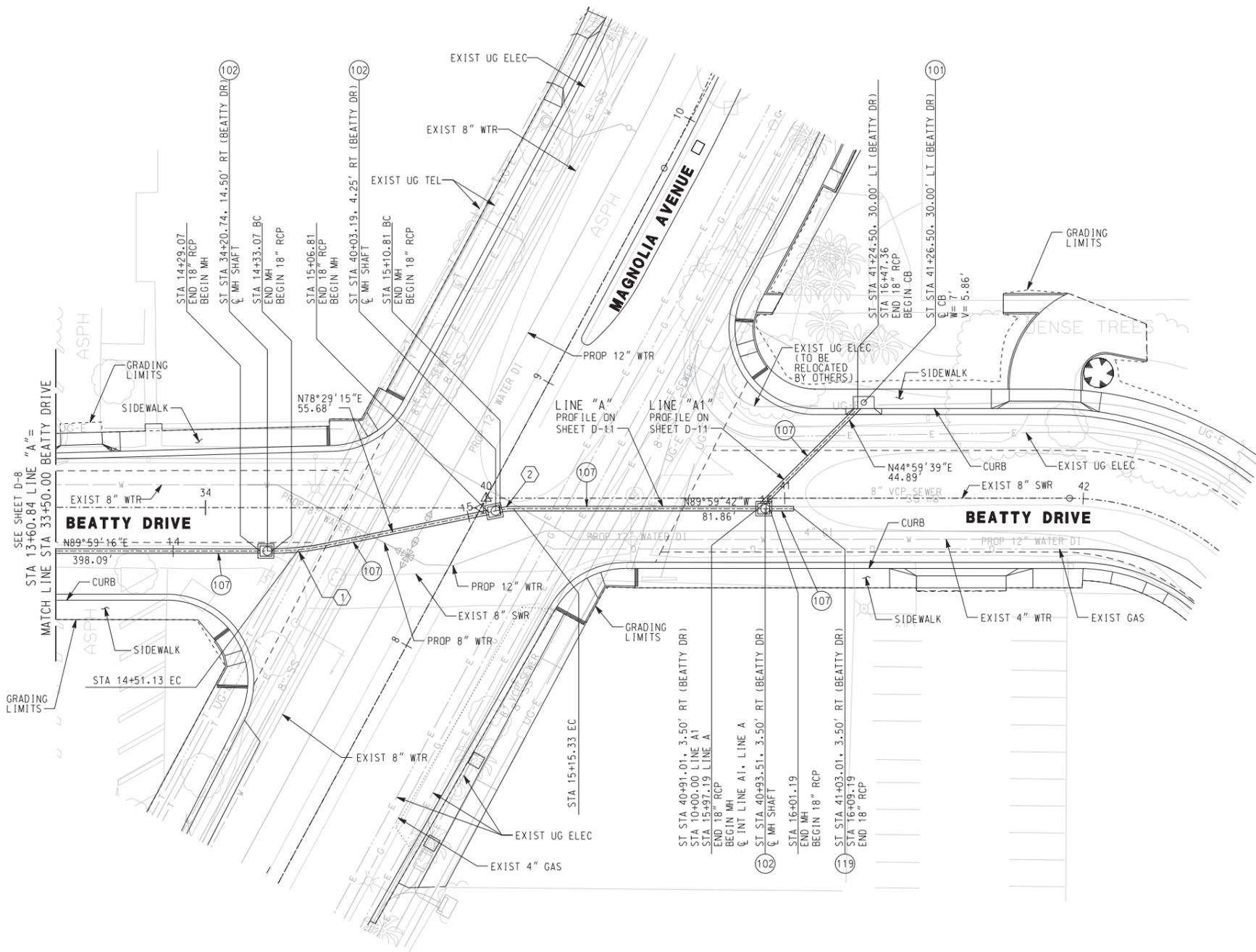
SHEET **61** OF **189**

FILE NO. _____

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CONSTRUCTION NOTES

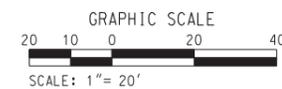
- 101 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO.405
- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO.MH251
- 107 INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- 119 PLUG EXISTING PIPE



CURVE DATA				
No.	Δ	R	L	T
①	11°30'01"	90.00'	18.06'	9.06'
②	11°31'03"	22.5'	4.52'	2.27'

AS BUILT

CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE *November 16, 2012*



NOTE:
 1. FOR EXISTING UTILITY INFORMATION
 SEE UTILITY DISPOSITION SHEETS.

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HDR ENGINEERING, INC.
 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2110
 DATE *XX/XX/09* XXX XX

REGISTERED PROFESSIONAL ENGINEER
WILLIAM F. YOUNG
 No. C 35715
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
REVISIONS	APPR.	DATE
DESIGNED BY _____	DRAWN BY _____	CHECKED BY _____

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-9

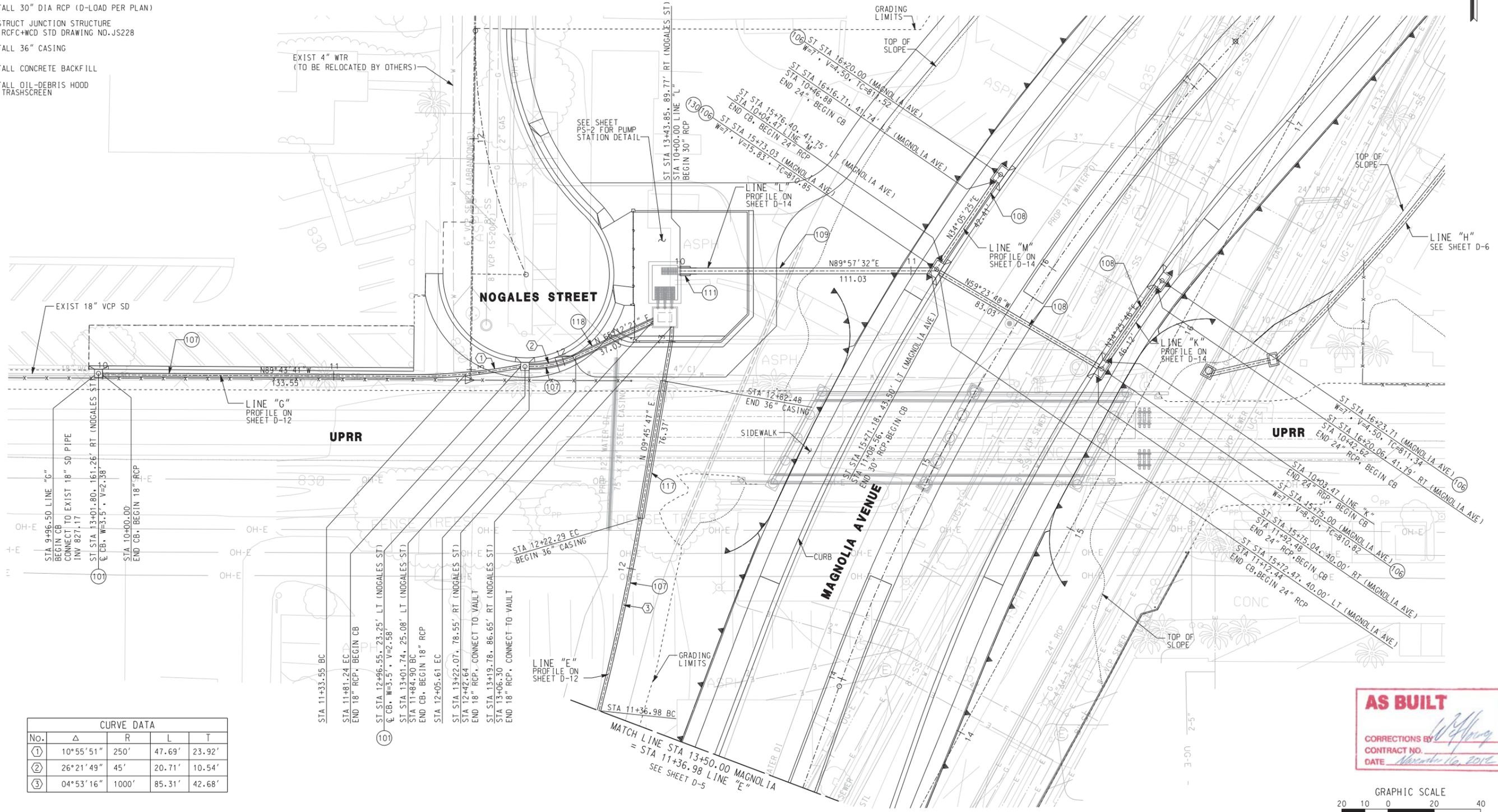
ACCT. NO. W.O. NO. **D-830**
 SHEET **82** OF **189**
 FILE NO. _____

HORIZ. SCALE: 1"=20' VERT. SCALE: NONE

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CONSTRUCTION NOTES

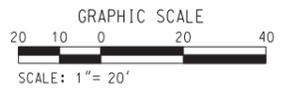
- (101) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO.405
- (106) CONSTRUCT MODIFIED CATCH BASIN PER DETAIL B ON SHEET DD-1
- (107) INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- (108) INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- (109) INSTALL 30" DIA RCP (D-LOAD PER PLAN)
- (111) CONSTRUCT JUNCTION STRUCTURE PER RCF&WCD STD DRAWING NO.JS228
- (117) INSTALL 36" CASING
- (118) INSTALL CONCRETE BACKFILL
- (130) INSTALL OIL-DEBRIS HOOD AND TRASHSCREEN



CURVE DATA				
No.	Δ	R	L	T
①	10°55'51"	250'	47.69'	23.92'
②	26°21'49"	45'	20.71'	10.54'
③	04°53'16"	1000'	85.31'	42.68'

NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

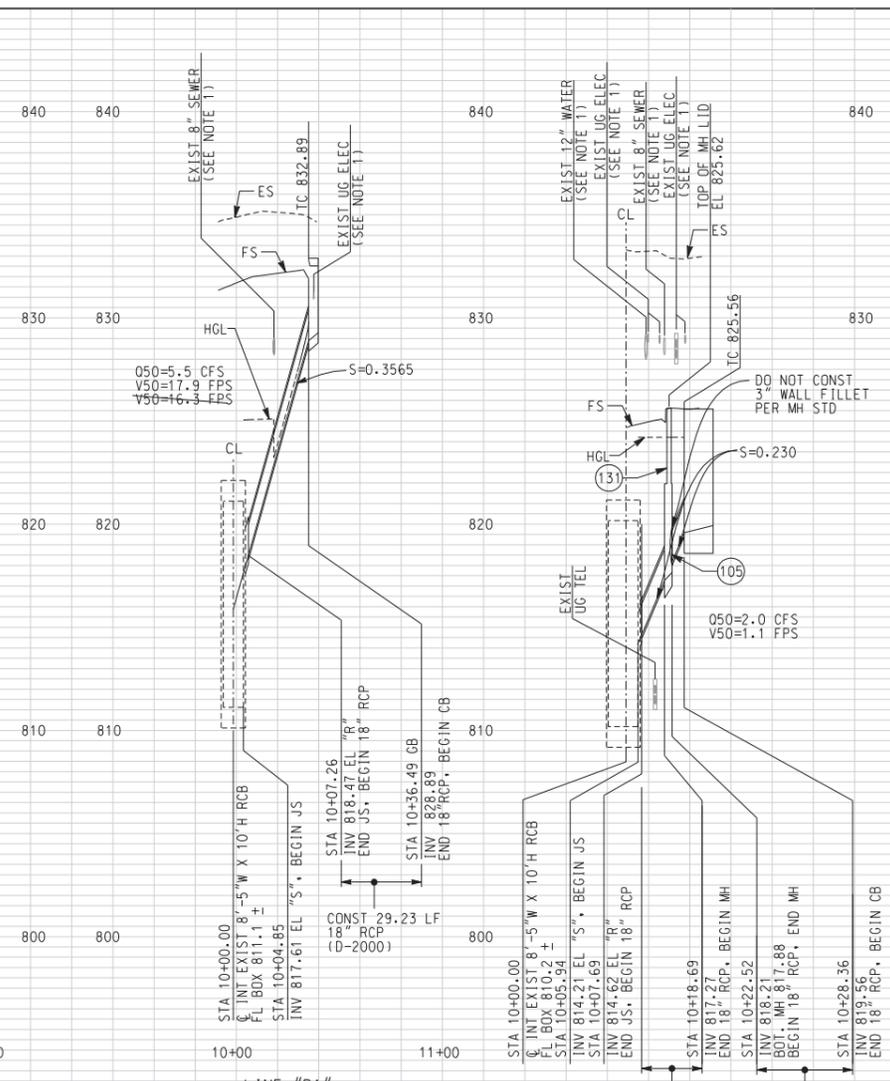
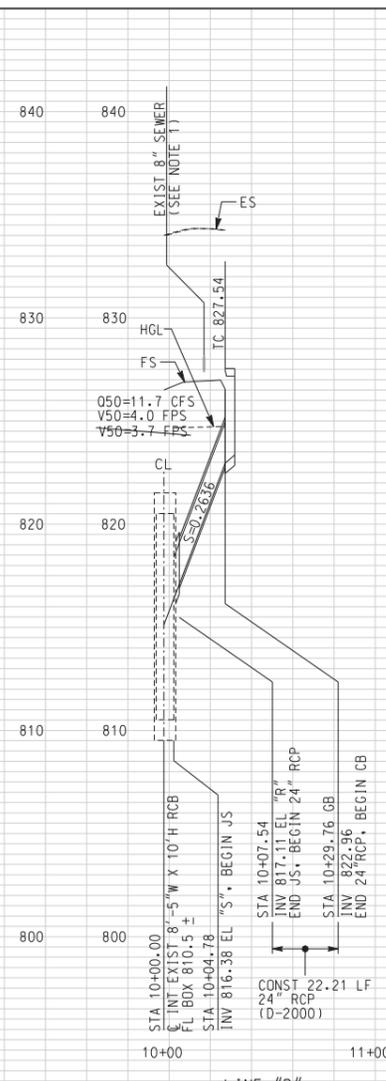
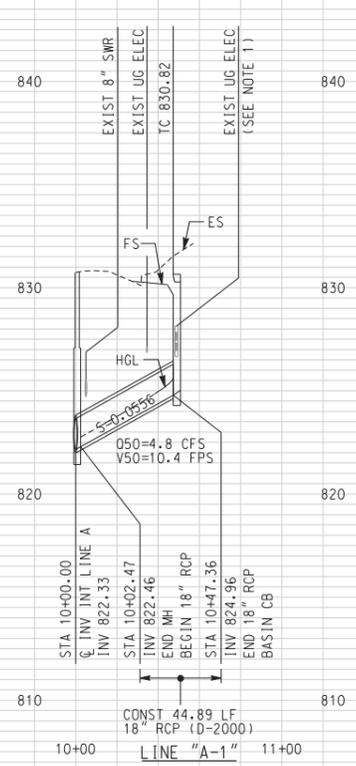
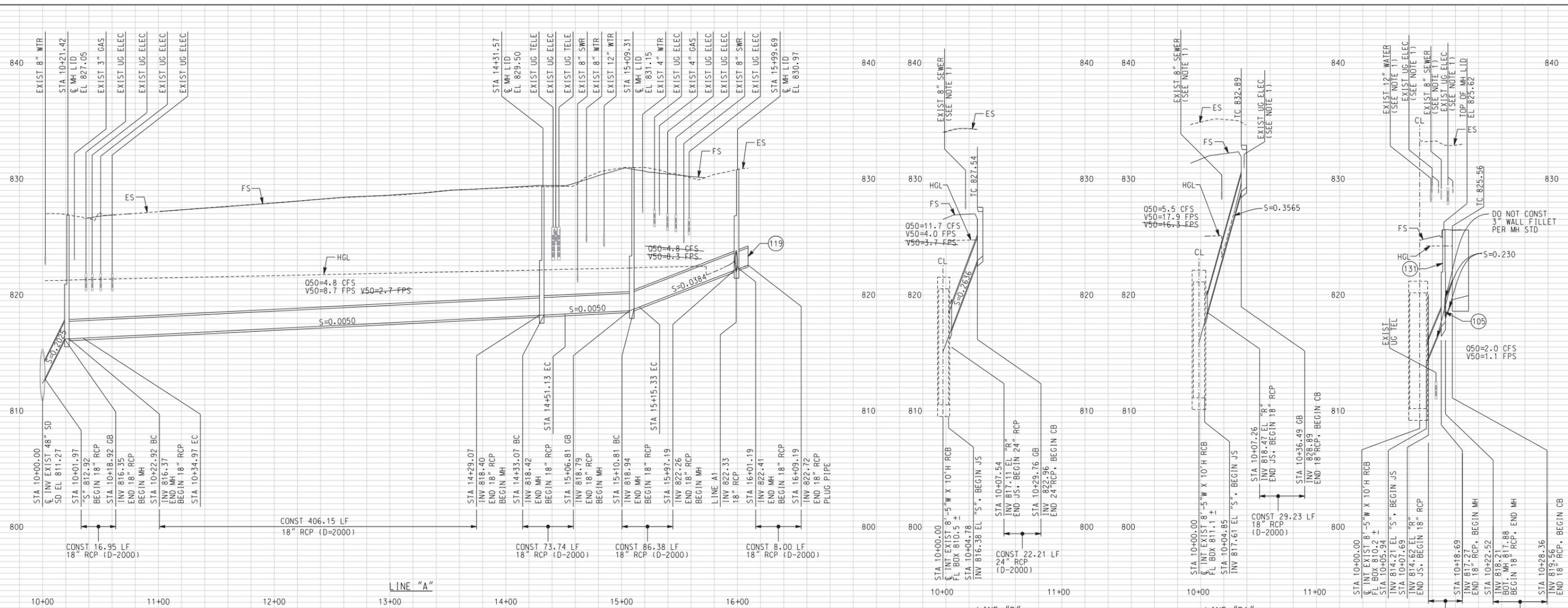
AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: November 16, 2015



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<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE: XX/XX/09 XXX XX</p>		ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES MARK: _____ REVISIONS: _____ APRR. DATE: 10/20/09	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS DRAINAGE PLAN D-10	ACCT. NO. _____ W.O. NO. _____ D-830 SHEET 83 OF 189 FILE NO. _____
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	HORIZ. SCALE: 1"=20' VERT. SCALE: NONE	

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NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

- CONSTRUCTION NOTES**
- (104) CONSTRUCT JUNCTION STRUCTURE PER RCFC+WCD STD DRAWING NO.JS22
 - (105) INSTALL FLAP GATE TO MANHOLE WALL
 - (131) CONSTRUCT PRESSURE MANHOLE SHAFT PER RCFC+WCD STD DRAWING NO.MH258

AS BUILT

CORRECTIONS BY *[Signature]*
 CONTRACT NO. *[Blank]*
 DATE *March 16, 2012*

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

DIG ALERT

DIAL BEFORE YOU DIG
TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY
Many Solutions

HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER
WILLIAM W. YOUNG
No. C 39715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

REVISION - HGL & HYDRAULIC DATA AND ADD MANHOLE & MODIFY FLAP GATE	WFY	2/08/10
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
MARK	REVISIONS	APPR. DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PROFILES D-11

ACCT. NO. W.O. NO.
D-830

SHEET **84** OF **189**

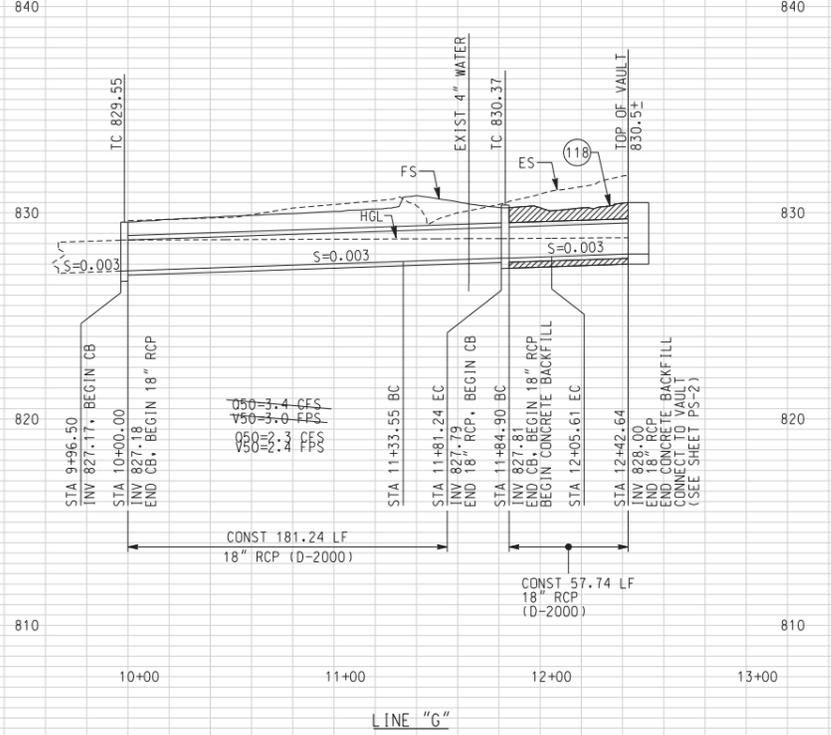
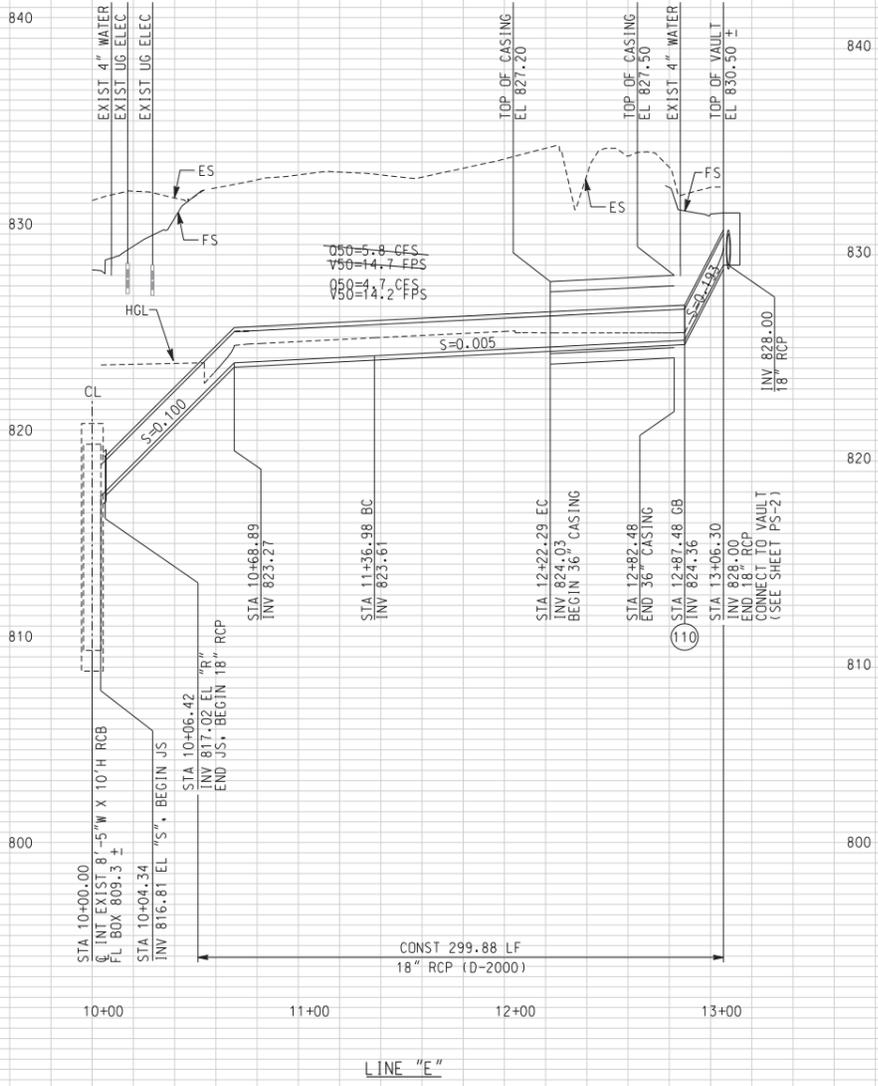
FILE NO.

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

DESIGNED BY: BS DRAWN BY: MM CHECKED BY: SL

CONSTRUCTION NOTES

- 110 CONSTRUCT CONCRETE COLLAR PER RCFC+WCD DRAWING NO M803
- 118 INSTALL CONCRETE BACKFILL



NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE *November 16, 2012*

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

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

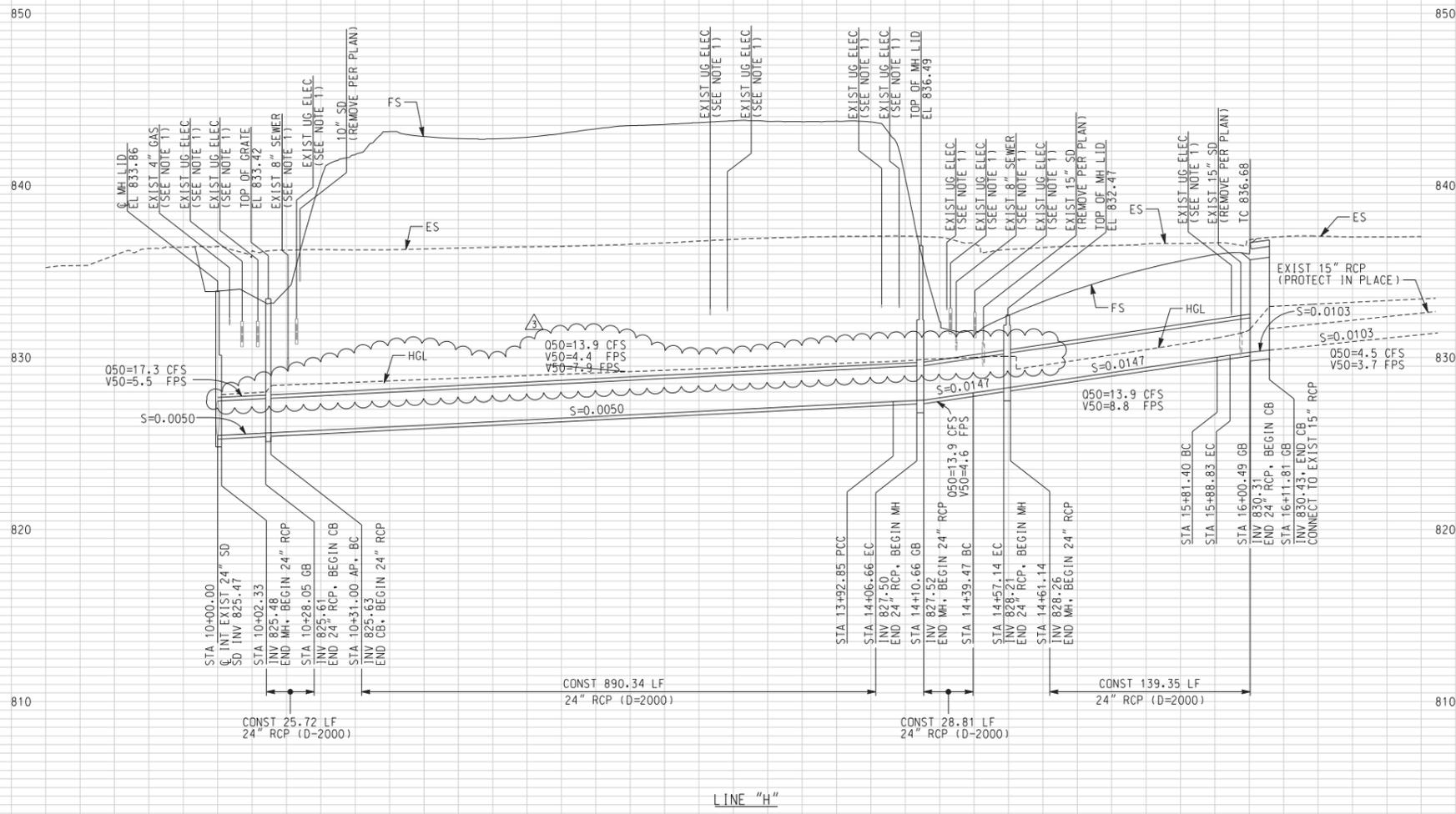
REGISTERED PROFESSIONAL ENGINEER
WILLIAM W. YOUNG
No. C 35715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

REVISION - HGL & HYDRAULIC DATA	WFY	12/08/09
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
REVISIONS	APPR.	DATE
DESIGNED BY: BS	DRAWN BY: MM	CHECKED BY: SL

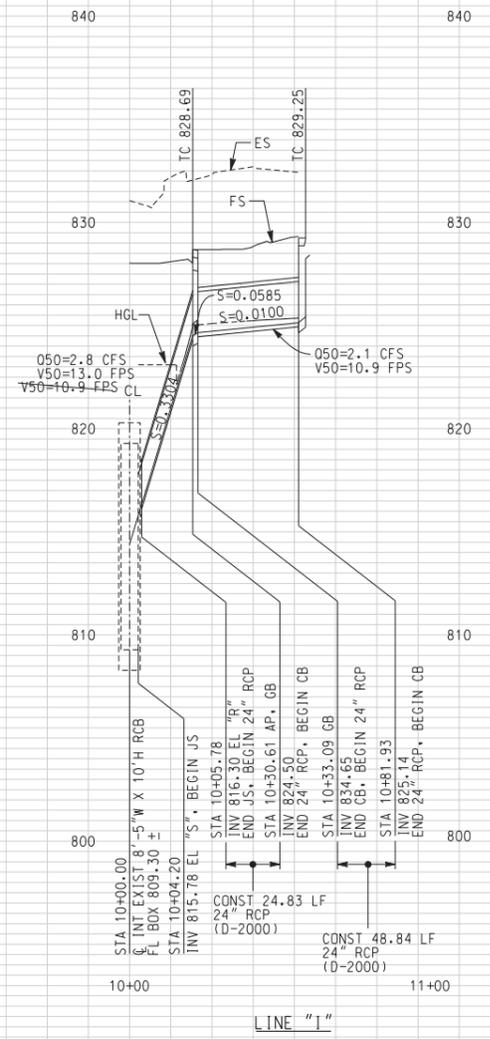
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE PROFILES D-12
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET **85** OF **189**
FILE NO. _____

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LINE "H"



LINE "I"

NOTE:
1. FOR EXISTING UTILITY INFORMATION
SEE UTILITY DISPOSITION SHEETS.

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE *March 16, 2012*

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

DIG ALERT
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TOLL FREE 1-800-227-2686
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

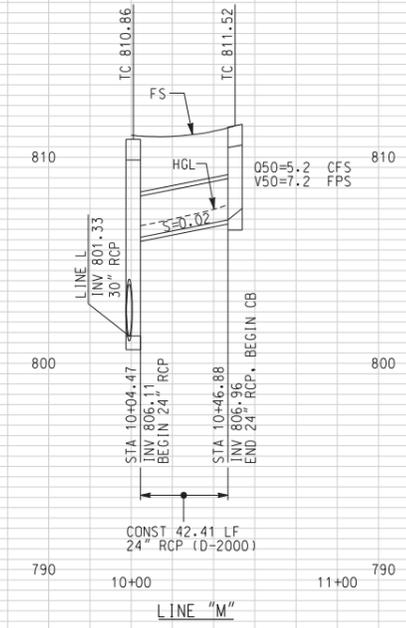
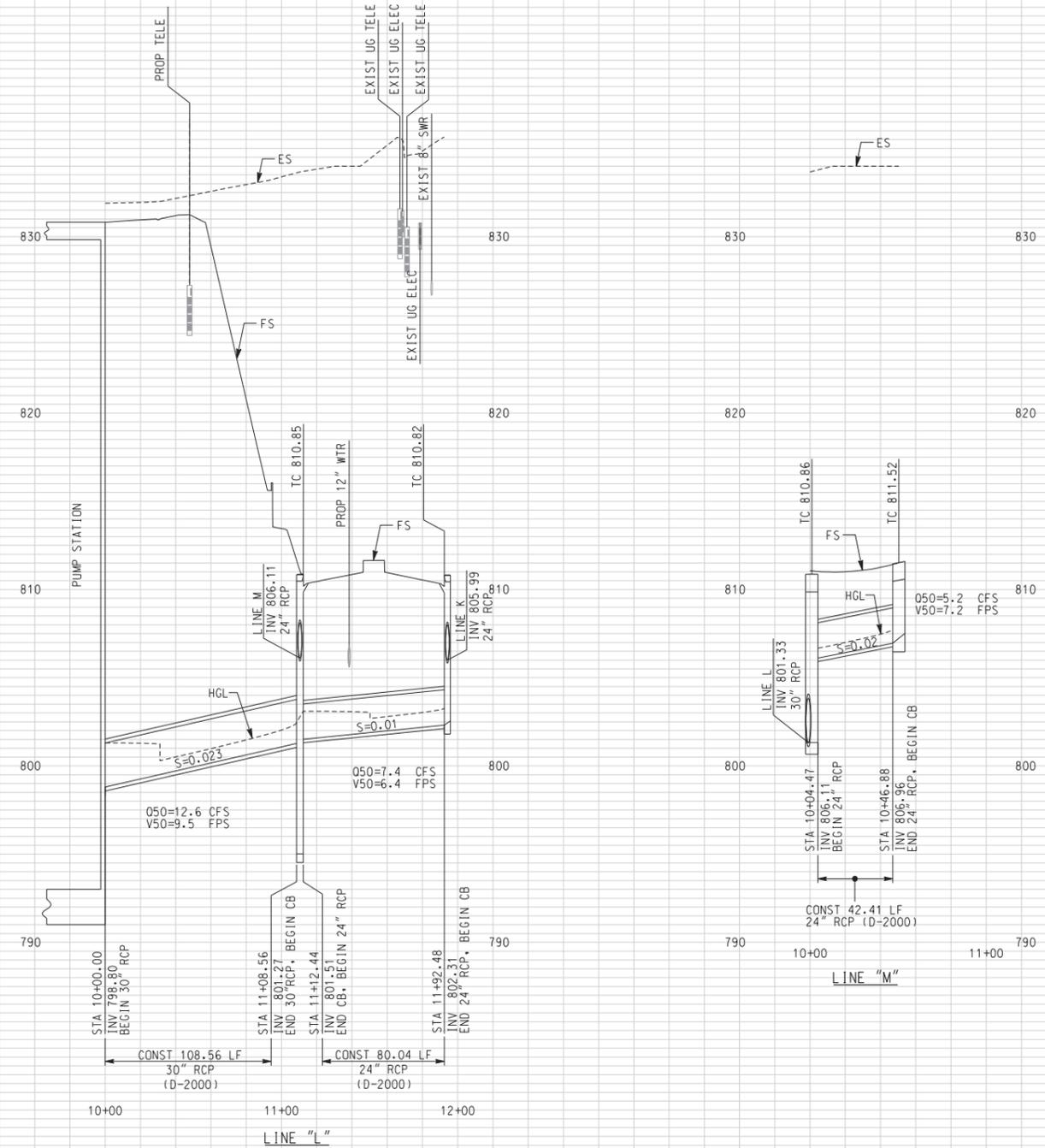
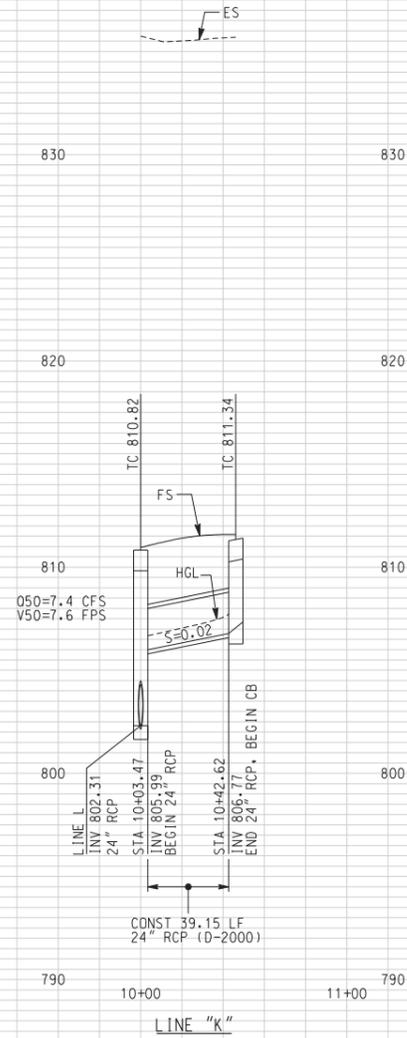
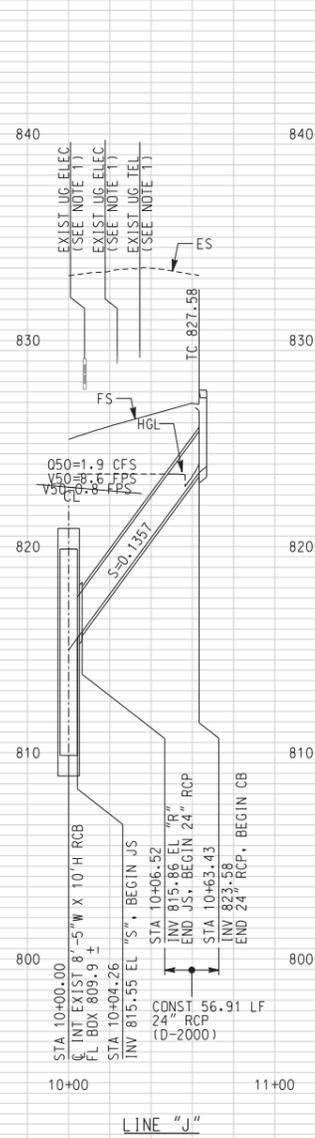
HDR | ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

WILLIAM W. YOUNG
No. C 59715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

REVISION - HGL & HYDRAULIC DATA	WFY	12/08/09
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
REVISIONS	APPR.	DATE
DESIGNED BY: BS	DRAWN BY: MM	CHECKED BY: SL

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE PROFILES D-13
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

ACCT. NO. W.O. NO.
D-830
SHEET **86** OF **189**
FILE NO.



NOTE:
 1. FOR EXISTING UTILITY INFORMATION
 SEE UTILITY DISPOSITION SHEETS.

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE *November 16, 2012*

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

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DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER

WILLIAM W. YOUNG

No. C 59715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

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REVISIONS	APPR.	DATE

DESIGNED BY BS DRAWN BY MM CHECKED BY SL

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 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PROFILES D-14

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

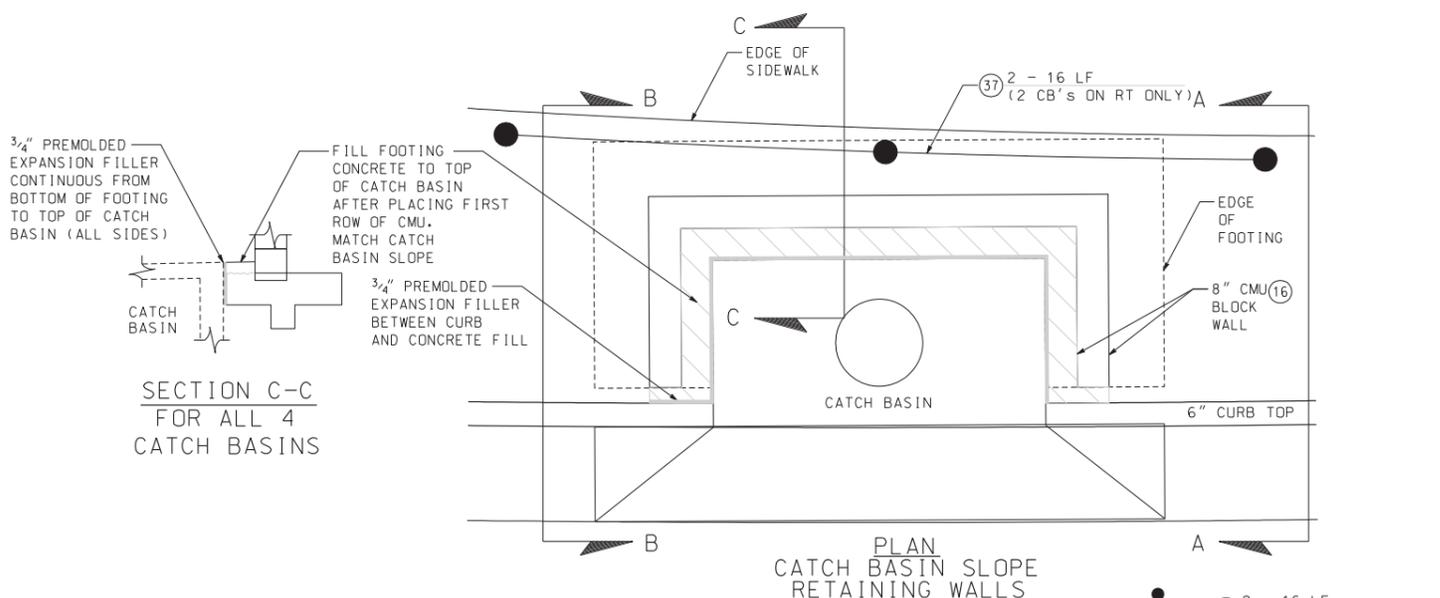
ACCT. NO. _____
 W.O. NO. _____

D-830

SHEET 87 OF 189

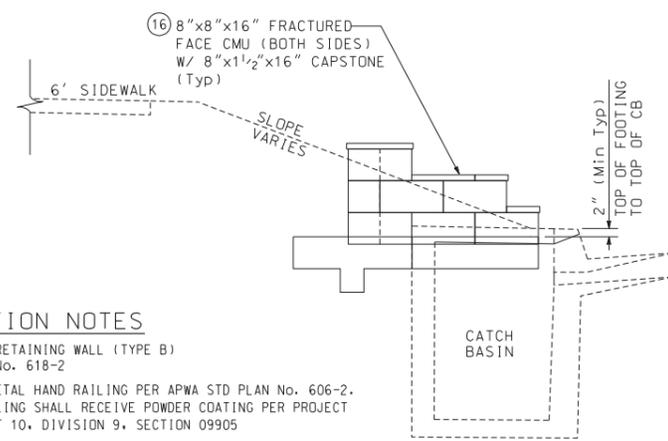
FILE NO. _____

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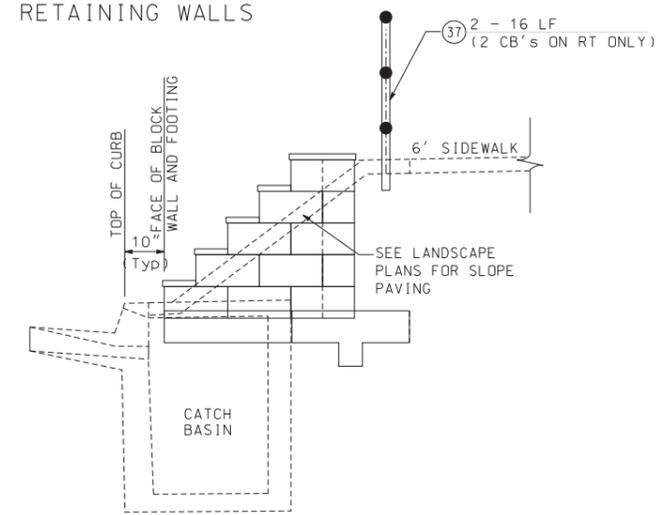


SECTION C-C
 FOR ALL 4
 CATCH BASINS

PLAN
 CATCH BASIN SLOPE
 RETAINING WALLS



SECTION B-B
 FOR CATCH BASINS @
 MAGNOLIA STA 15+73+/- LT
 & STA 16+20+/- LT



SECTION A-A
 FOR CATCH BASINS @
 MAGNOLIA STA 15+75+/- RT
 & STA 16+24+/- RT

CONSTRUCTION NOTES

- (16) CONSTRUCT MASONRY RETAINING WALL (TYPE B) PER APWA STD PLAN No. 618-2
- (37) CONSTRUCT TYPE A METAL HAND RAILING PER APWA STD PLAN No. 606-2. ALL METAL HAND RAILING SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION 09905

CATCH BASIN SLOPE RETAINING WALLS
 NOT TO SCALE

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE *November 16, 2012*

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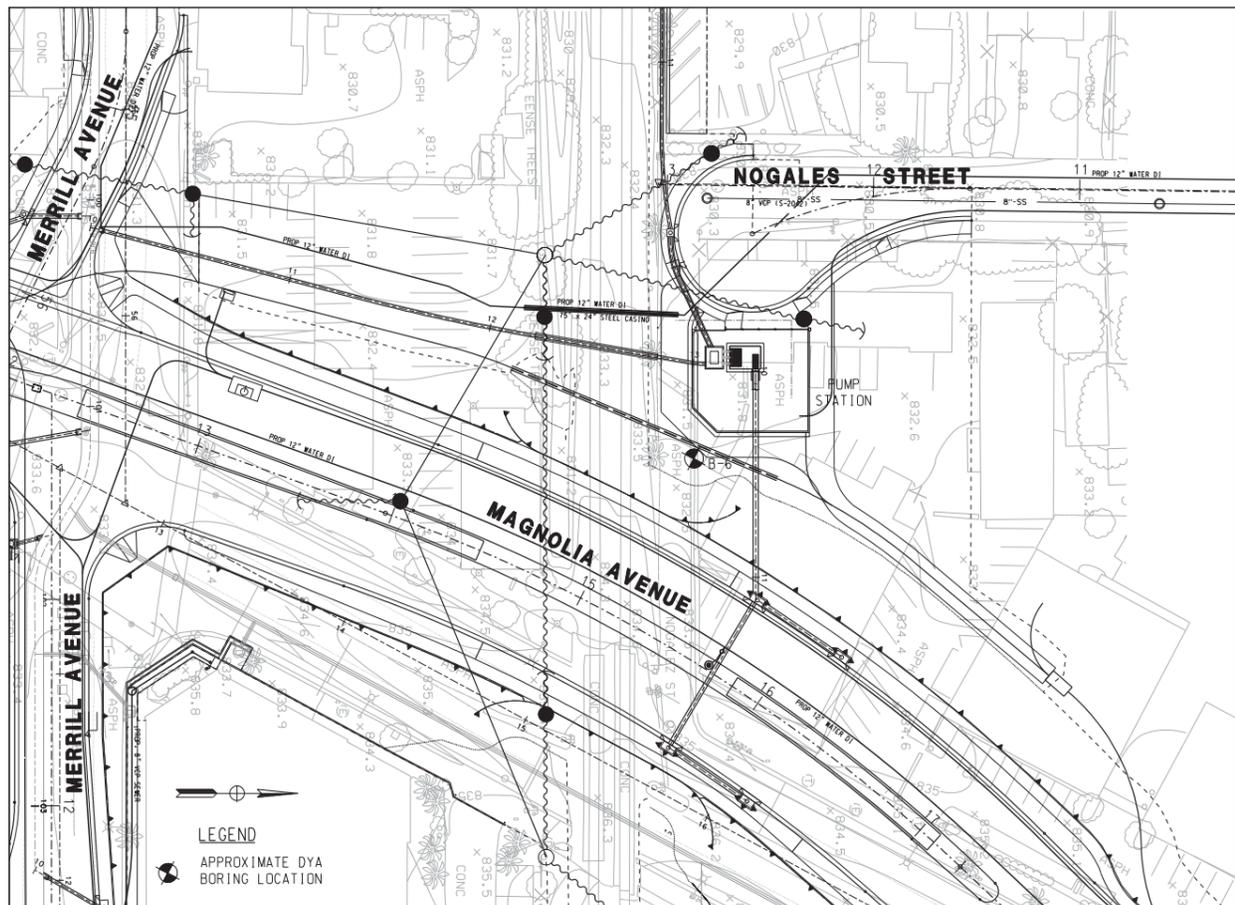
REGISTERED PROFESSIONAL ENGINEER
 WILLIAM F. YOUNG
 No. C 35715
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
DRAINAGE DETAILS D-15

ACCT. NO. _____
 W.O. NO. _____
D-830
 SHEET 88 OF 189
 FILE NO. _____



PUMP STATION LOCATION MAP
SCALE: 1" = 40'

BORING LOCATION: See Figure 2		ELEVATION AND DATUM (FEET): 834 MSL	
LATITUDE: 33° 57' 26.9" N		LONGITUDE: 117° 23' 40.9" W	
DRILLING EQUIPMENT: CME-75		DRILLING METHOD: Hollow Stem Auger	
BORING DIAMETER (inches): 8		BORING DEPTH (feet): 100.9	
DATE STARTED: 10/13/07		DATE COMPLETED: 10/13/07	
SPT HAMMER DROP: 30 inches WT: 140 lbs		DRIVE HAMMER DROP: 30 inches WT: 140 lbs	
LOGGED BY: SN		CHECKED BY: TK	
LOG SHEET NO. 1006-044-001		LOG SHEET NO. 1006-044-002	

Depth (feet)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Unit Weight (pcf)	Plasticity Index (%)	Percent Passing #200 Sieve (%)	Other Tests
4-12	[Symbol]	ASPHALT CONCRETE (AC) 4 inches						
12-13	[Symbol]	SILTY GRAVEL with SAND (GM): gray, moist, medium dense, fine to coarse-grained sand, fine gravel, (BASE - 3 inches SANDY LEAN CLAY (CL) break, moist, firm, medium plasticity, fine-grained sand, trace roots - FILL	114	12	124	16		[U]
13-14	[Symbol]	SANDY SILT (ML): brown, moist, firm, low plasticity, fine-grained sand, trace fine gravel	112	8		61		[U]
14-15	[Symbol]	SILT with SAND (ML): brown, moist, firm, low plasticity, fine-grained sand						[U]
15-16	[Symbol]	SAND	101	1				[U]
16-18	[Symbol]	SILTY SAND (SM): light grayish brown, moist, medium dense, fine to coarse-grained sand						[U]
18-20	[Symbol]	POORLY GRADED SAND with SILT (SP-SM): light grayish brown, moist, medium dense, medium to coarse-grained sand, trace fine gravel						[U]
20-21	[Symbol]	trace silt/silty interbeds						[U]
21-22	[Symbol]	SILT with SAND (ML) dark brown, moist, hard, low plasticity, fine-grained sand, occasional	104	3				[U]

LOG OF BORING B-6
Page 1 of 3
Magnolia Avenue Grade Separation
Project No. 2006-044
PLATE 7

Depth (feet)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Unit Weight (pcf)	Plasticity Index (%)	Percent Passing #200 Sieve (%)	Other Tests
22-23	[Symbol]	SILTY SAND (SM): brown, moist, medium dense, fine to coarse-grained sand						[U]
23-24	[Symbol]	SILT with SAND (ML) dark brown, moist, hard, low plasticity, fine-grained sand	111	16	25	9	66	[U]
24-25	[Symbol]	SANDY LEAN CLAY (CL) olive gray, moist, hard, medium plasticity, fine-grained sand						[U]
25-26	[Symbol]	very hard						[U]
26-27	[Symbol]	LEAN CLAY (CL) dark brown, moist, very hard, medium plasticity, trace fine-grained sand						[U]
27-28	[Symbol]	CLAYEY SAND (SC) brown, moist, very dense, fine to coarse-grained sand, trace fine gravel, trace rock pieces	110	7				[U]
28-29	[Symbol]	POORLY GRADED SAND with SILT (SP-SM) brown, moist, very dense, fine to coarse-grained sand						[U]
29-30	[Symbol]	trace coarse gravel, trace rock pieces						[U]
30-31	[Symbol]	brownish gray						[U]
31-32	[Symbol]	SILTY GRAVEL with SAND (GM) light olive gray, moist, very dense, fine to coarse-grained sand, fine to coarse gravel						[U]

LOG OF BORING B-6
Page 2 of 3
Magnolia Avenue Grade Separation
Project No. 2006-044
PLATE 8

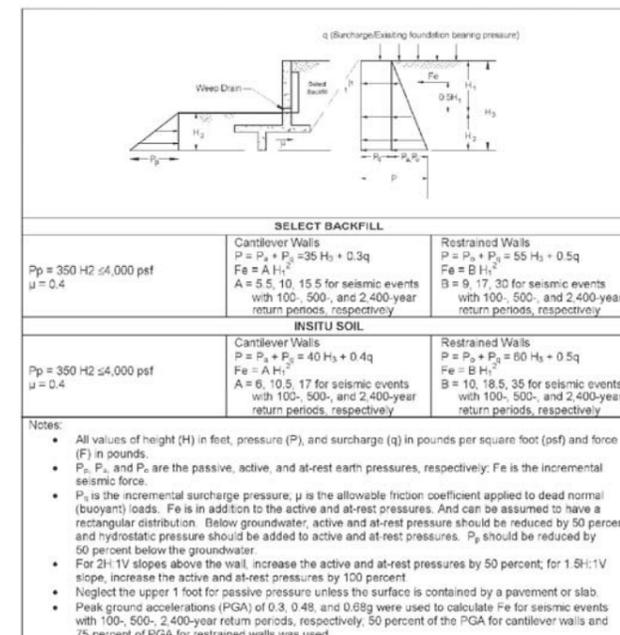


Figure 10 - LATERAL EARTH PRESSURES

AS BUILT
CORRECTIONS BY: [Signature]
CONTRACT NO. [Blank]
DATE: November 16, 2017

Depth (feet)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Unit Weight (pcf)	Plasticity Index (%)	Percent Passing #200 Sieve (%)	Other Tests
32-33	[Symbol]	TRACE ROCK DEBRIS						
33-34	[Symbol]	SILTY SAND with GRAVEL (SM): olive, moist, very dense, fine to coarse-grained sand, fine to coarse gravel						
34-35	[Symbol]	SILT with SAND (ML): olive gray, moist, very hard, low plasticity, fine-grained sand						
35-36	[Symbol]	SILTY SAND with GRAVEL (SM): olive gray, wet, very dense, fine to coarse-grained sand, trace rock pieces	110	18				
36-37	[Symbol]	POORLY GRADED SAND (SP) gray, wet, very dense, fine to coarse-grained sand, trace rock pieces						
37-38	[Symbol]	SILTY SAND (SM) gray, wet, very dense, fine to coarse-grained sand, trace rock pieces						
38-39	[Symbol]	Station of boring at 101 feet. Groundwater encountered between 85 and 89 feet during drilling. Boring backfilled with cementitious grout and cuttings below and above depth of 89 feet, respectively. Surface patched with cast-in-place concrete.						

LOG OF BORING B-6
Page 3 of 3
Magnolia Avenue Grade Separation
Project No. 2006-044
PLATE 9

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WILLIAM F. YOUNG
No. C 35715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

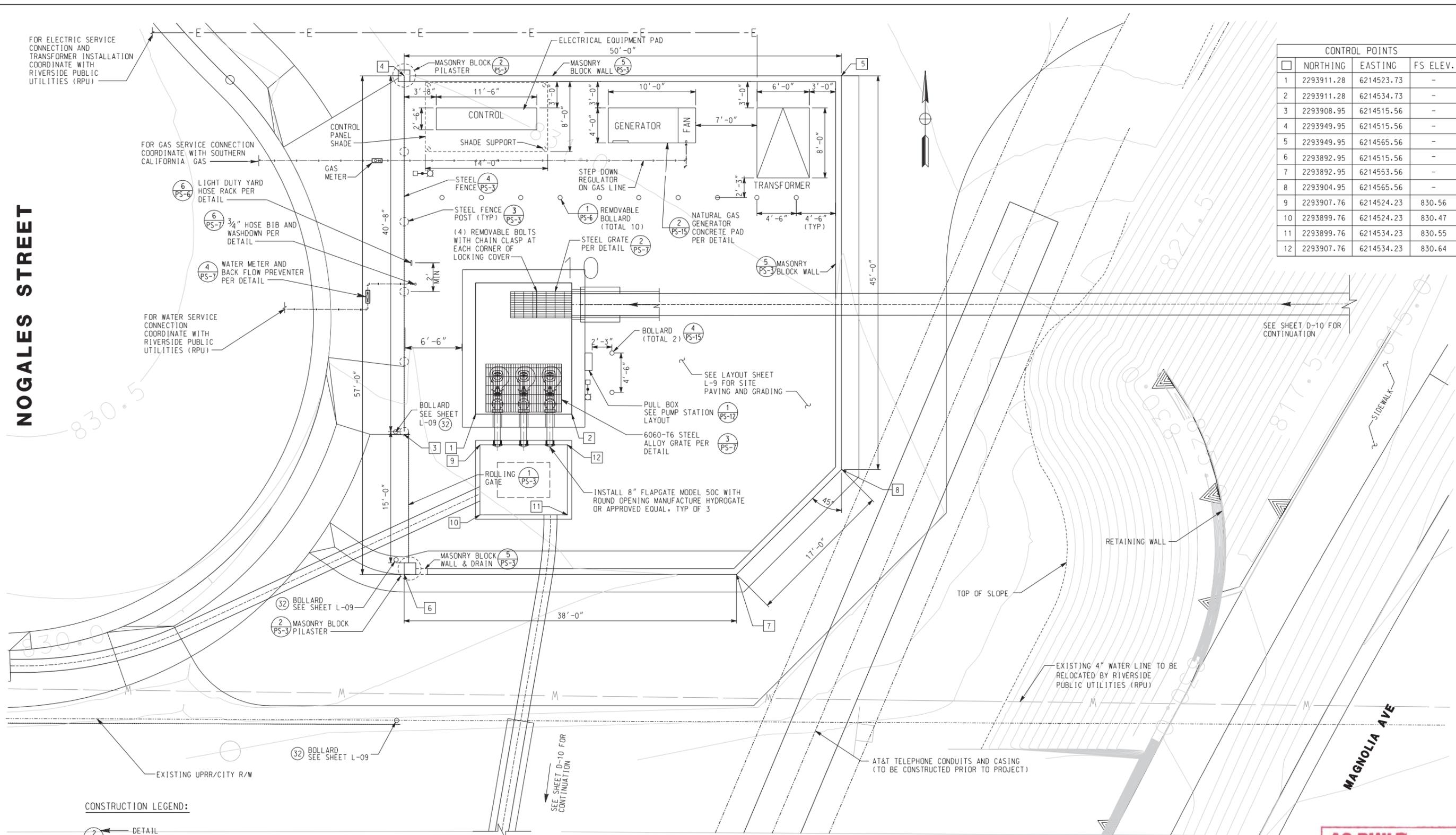
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION GEOTECH PS-1
HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

ACCT. NO. W.O. NO.
D-830
SHEET 89 OF 189
FILE NO.

NOGALES STREET

CONTROL POINTS			
	NORTHING	EASTING	FS ELEV.
1	2293911.28	6214523.73	-
2	2293911.28	6214534.73	-
3	2293908.95	6214515.56	-
4	2293949.95	6214515.56	-
5	2293949.95	6214565.56	-
6	2293892.95	6214515.56	-
7	2293892.95	6214553.56	-
8	2293904.95	6214565.56	-
9	2293907.76	6214524.23	830.56
10	2293899.76	6214524.23	830.47
11	2293899.76	6214534.23	830.55
12	2293907.76	6214534.23	830.64



CONSTRUCTION LEGEND:

2 ← DETAIL

PS-1 ← SHEET IDENTIFICATION NO.

NOTE:
SEE SHEET L-9 FOR GRADING AND DETAILS

PUMP STATION SITE - LAYOUT
SCALE: 1" = 5'

AS BUILT

CORRECTIONS BY: *W. Young*

CONTRACT NO. _____

DATE: *March 16, 2012*

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WILLIAM F. YOUNG

No. C 35715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

PUMP STATION LAYOUT PS-2

HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

ACCT. NO. _____
W.O. NO. _____

D-830

SHEET 90 OF 189

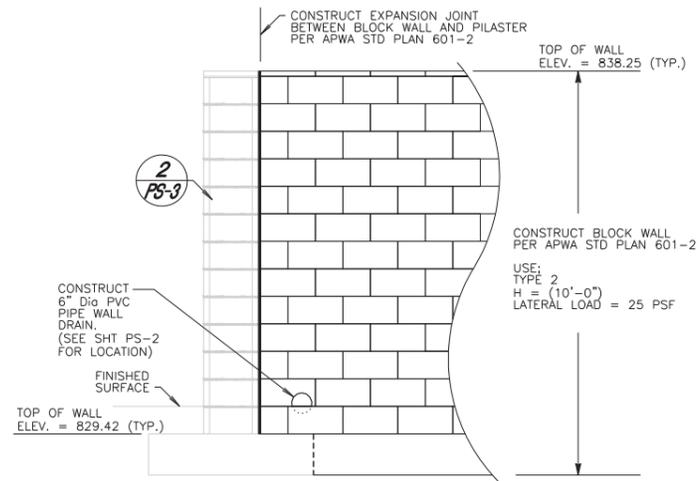
FILE NO. 201546ps02.dgn

CONSTRUCTION NOTES:

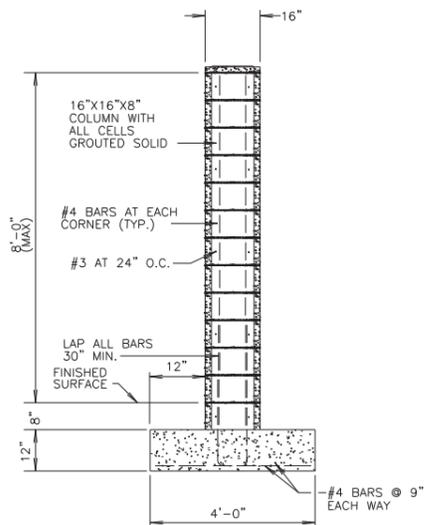
- 11 INSTALL 11 GAGE PERFORATED STEEL PANEL BETWEEN RAIL & PICKET.
- 12 1 3/4" SQUARE STEEL TUBE, 11 GA.

CONSTRUCTION LEGEND:

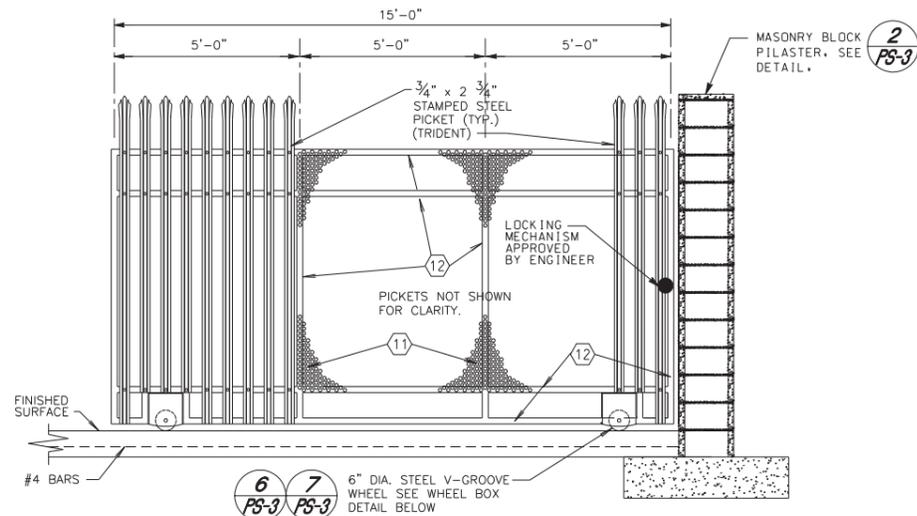
- 2 - DETAIL
- 2 - SHEET IDENTIFICATION NO.



5 MASONRY BLOCK WALL
SCALE: 1/2" = 1'-0"

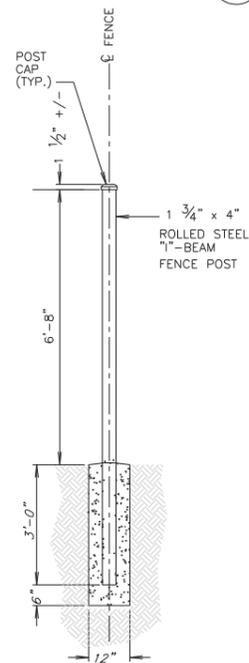


2 MASONRY BLOCK PILASTER
SCALE: 1/2" = 1'-0"

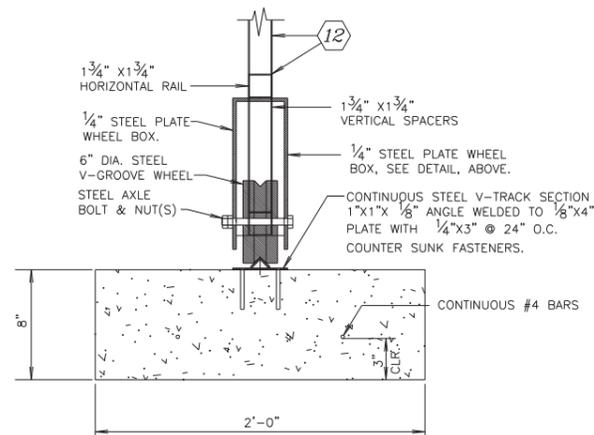


1 ROLLING GATE DETAIL
SCALE: 1/2" = 1'-0"

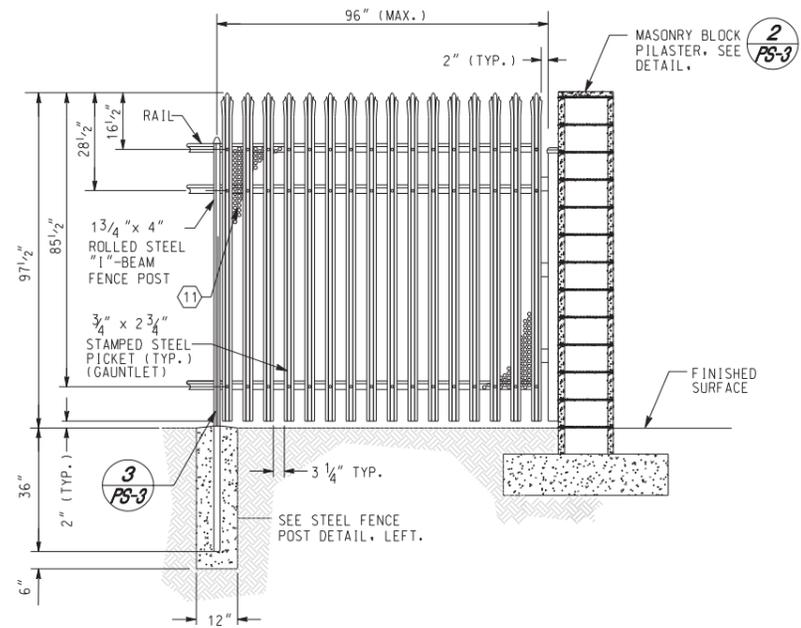
NOTE: ROLLING GATE DETAIL SHOWN IS FOR OVERALL DIMENSIONS AND APPEARANCE. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ALL DIMENSIONS, MATERIALS AND HARDWARE FOR APPROVAL BY THE ENGINEER. ALL METAL FENCING HEREON SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION 09905



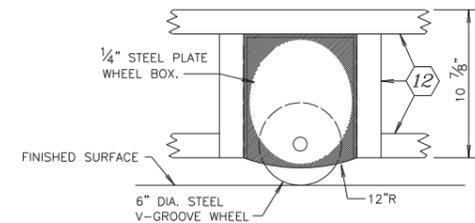
3 TYPICAL STEEL FENCE POST DETAIL
SCALE: 1/2" = 1'-0"



6 V-GROOVE WHEEL DETAIL
SCALE: 2" = 1'-0"



4 STEEL FENCE DETAIL
SCALE: 1/2" = 1'-0"



7 WHEEL BOX DETAIL
SCALE: 2" = 1'-0"

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: *November 16, 2012*

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No. C 35715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

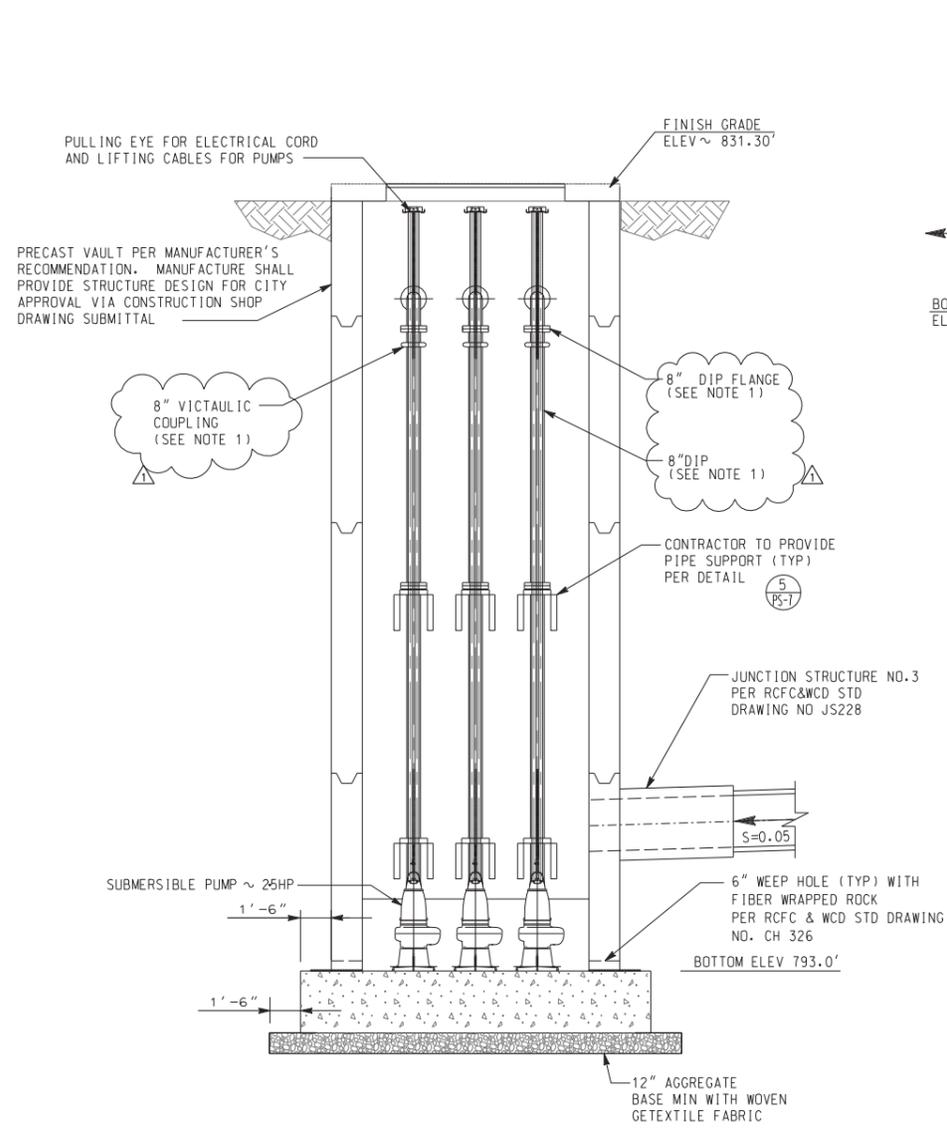
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION FENCE PS-3

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET 91 OF 189
FILE NO. _____

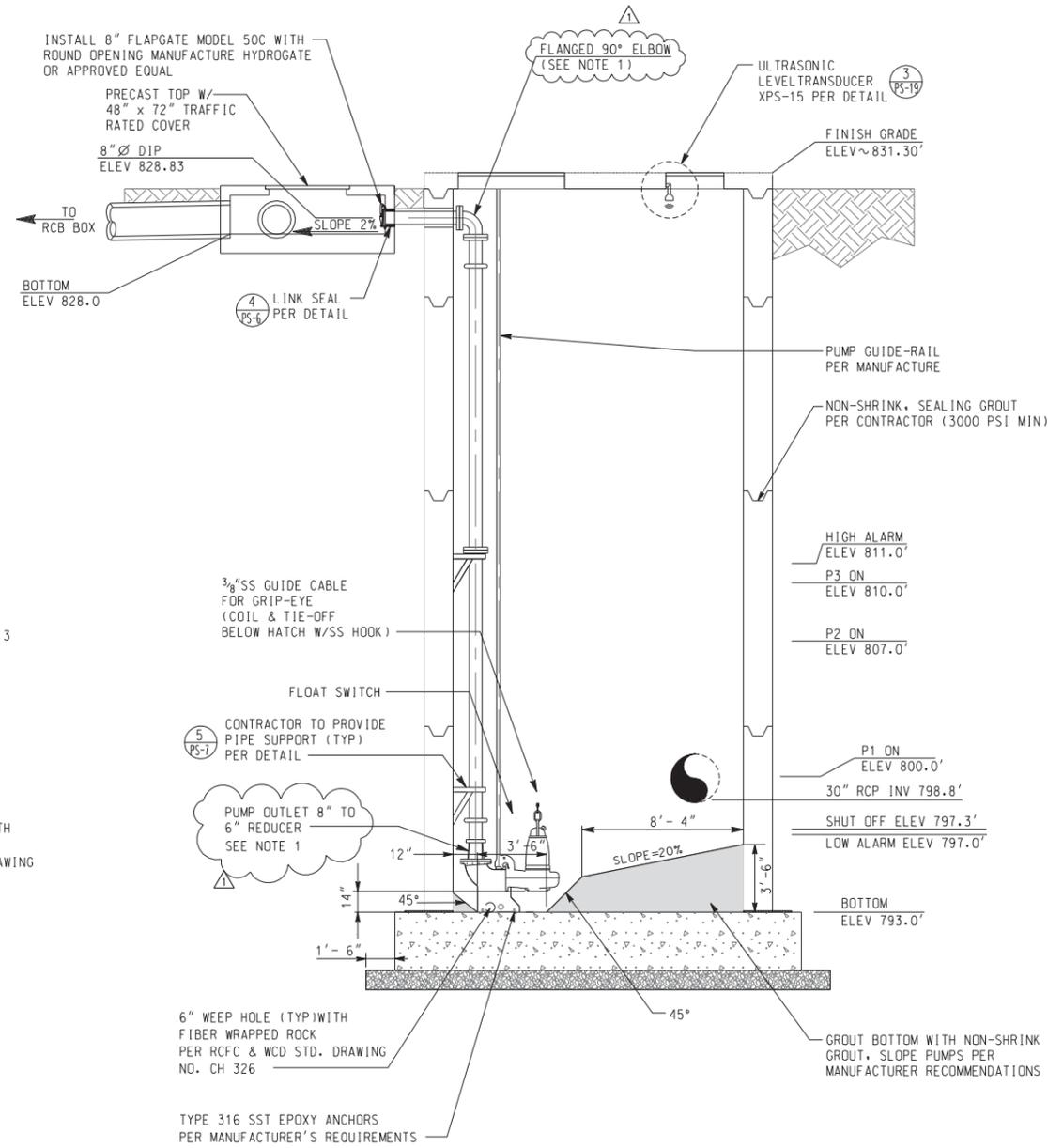
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CONSTRUCTION LEGEND:

2 → DETAIL
 PS-1 → SHEET IDENTIFICATION NO.



SECTION A-A
 SCALE: 1/4" = 1'-0"



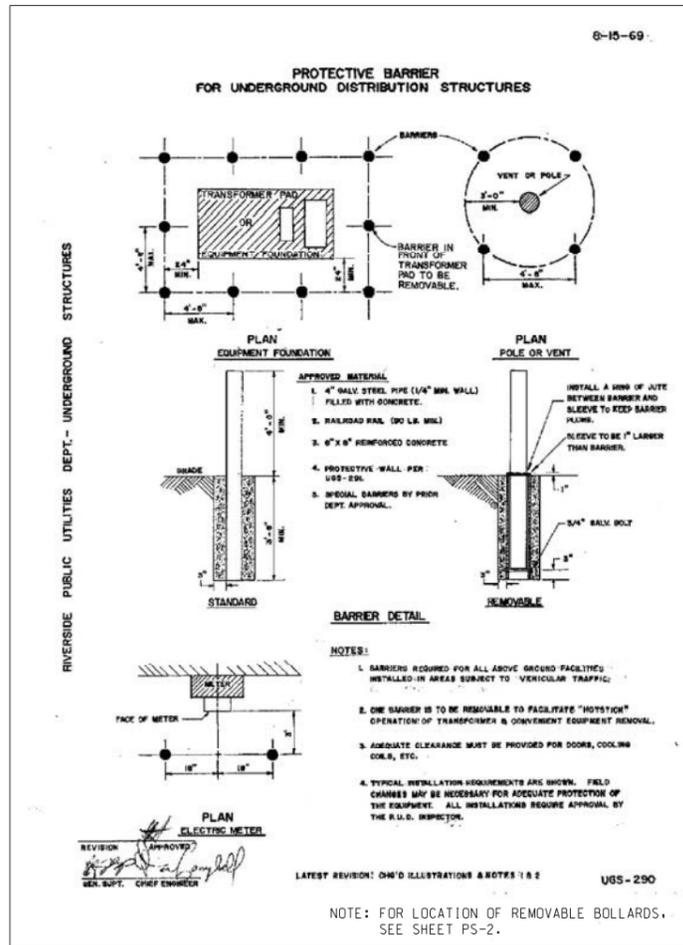
SECTION B-B
 SCALE: 1/4" = 1'-0"

NOTE:
 1. ALL DUCTILE IRON PIPES AND FITTINGS SHALL BE CEMENT LINED PER ANWA (AMERICAN WATER WORKS ASSOCIATION) STANDARD C104

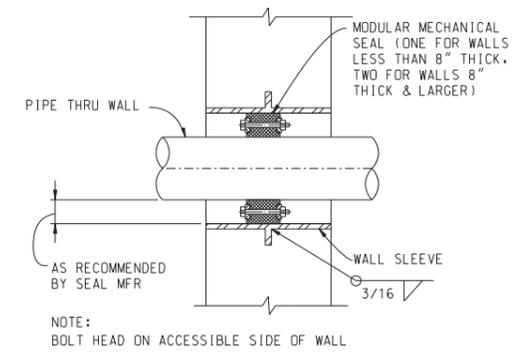
AS BUILT
 CORRECTIONS BY *W. Young*
 CONTRACT NO. _____
 DATE November 16, 2012

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			ADDENDUM-ADD NOTE CEMENT LINING ON DIP REVISIONS _____ WFY 10/2/09 APRR. DATE _____ DESIGNED BY _____ DRAWN BY _____ CHECKED BY <u>AS SHOWN</u>	HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE



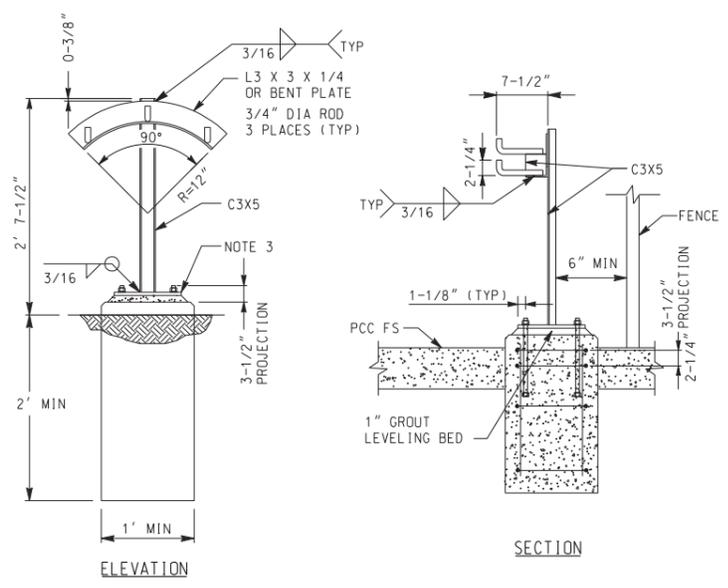
1 REMOVABLE BOLLARD DETAIL
PS-6 NTS



CAST IN PLACE SLEEVED HOLES

PIPE SIZE NOMINAL	ACTUAL O.D.	CENTURY-LINE SLEEVE MODEL	SLEEVE I.D.	LINK-SEAL MODEL	LINKS PER SEAL
8"	8.625	CS - 12	12.250	LS475	12
10"	10.750	CS - 14	14.187	LS400	10
12"	12.750	CS - 16	16.250	LS400	12
14"	14.000	CS - 18	17.500	LS400	13
18"	18.000	CS - 22	20.750	LS425	16
20"	20.000	CS - 24	22.750	LS425	18
24"	25.800	-	29.250	-	24
30"	32.000	-	35.250	-	29

4 LINK SEAL
PS-6 NTS



6 LIGHT DUTY YARD HOSE RACK
PS-6 NTS

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DATE *November 16, 2012*

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Exp. 9-30-11
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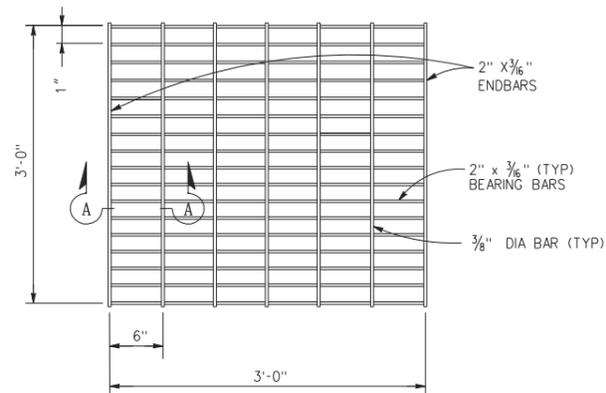
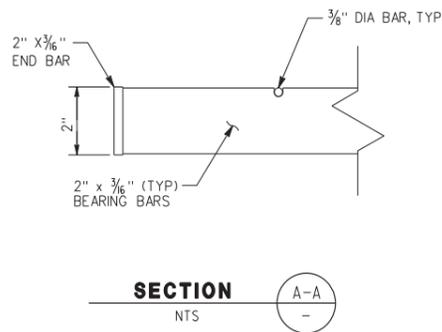
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PUMP STATION DETAILS PS-6

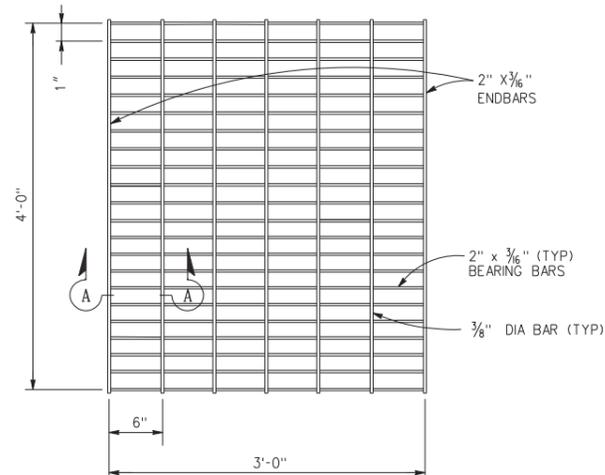
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ACCT. NO. W.O. NO.
D-830

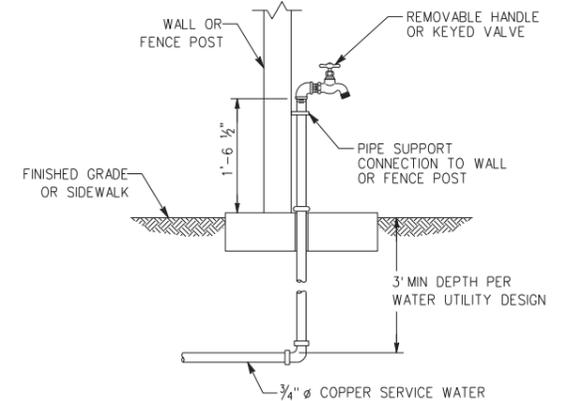
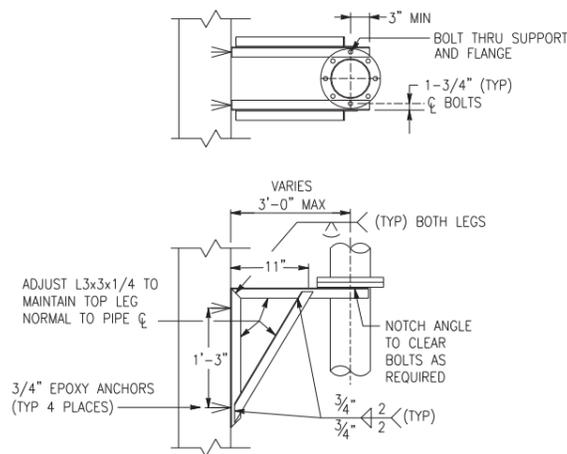
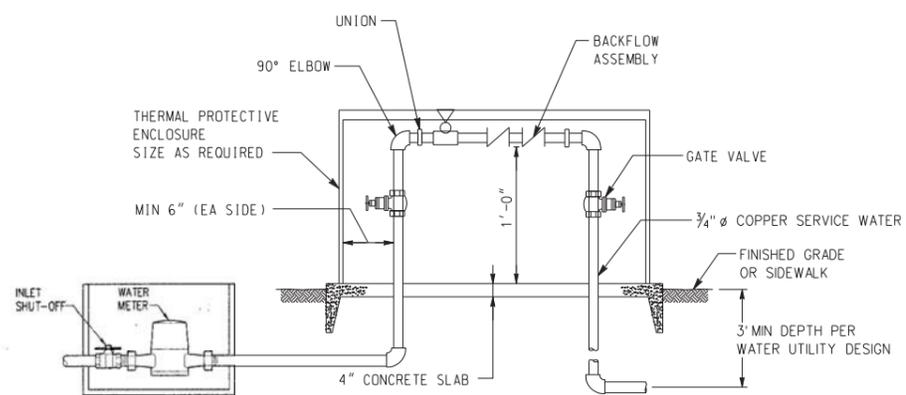
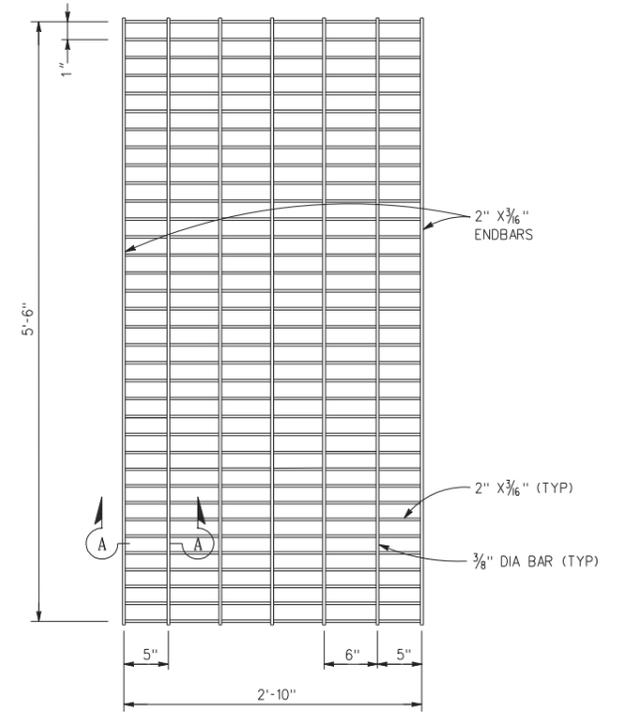
SHEET 94 OF 189
FILE NO.



NOTES:
ALL PARTS HOT-DIPPED GALVANIZED
AFTER FABRICATION & ASTM A-36 STEEL



NOTES:
ALL PARTS HOT-DIPPED GALVANIZED
AFTER FABRICATION & ASTM A-36 STEEL



AS BUILT

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CONTRACT NO. *100101001*
DATE *November 16, 2012*

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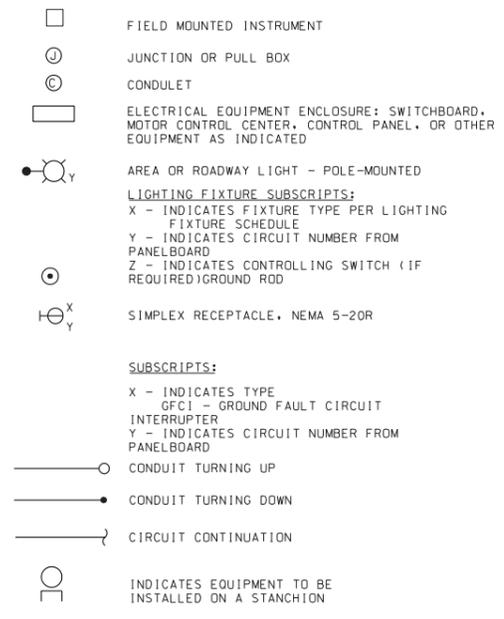
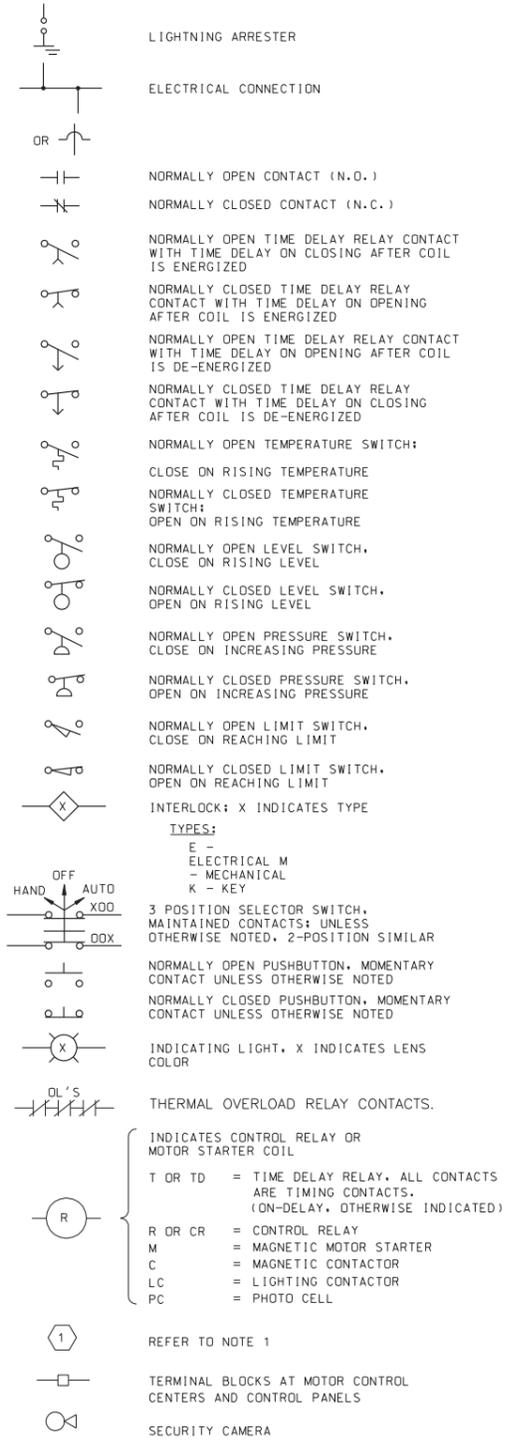
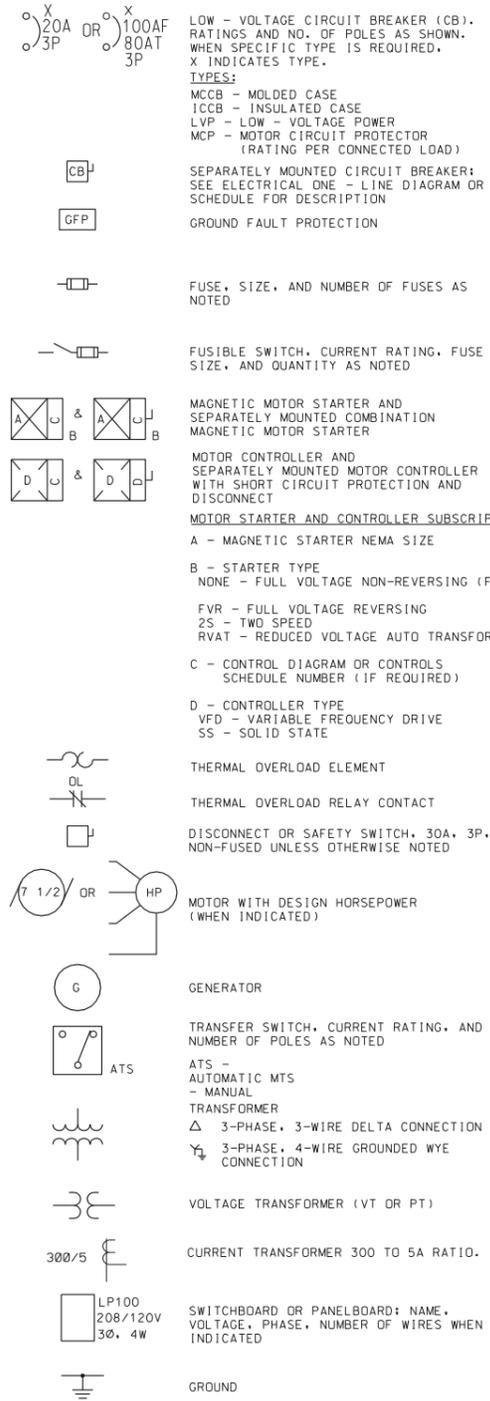
MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION DETAILS PS-7

ACCT. NO. W.O. NO.
D-830
SHEET 95 OF 189
FILE NO. 201546ps07.dgn

ELECTRICAL DIAGRAM LEGEND



GENERAL NOTES:

- THIS IS A STANDARD ELECTRICAL SYMBOLOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.
- SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
- SEE P&ID LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

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 CORRECTIONS BY: [Signature]
 CONTRACT NO. _____
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HDR ONE COMPANY Many Solutions
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 2280 MARKET STREET
 SUITE 100 RIVERSIDE, CA 92501-2110
 DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
 RAYMOND I. GENATO
 No. 17995
 Exp. 12-31-10
 ELECTRICAL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
ELECTRICAL SYMBOLS & LEGEND PS-8
 ACCT. NO. W.O. NO. _____
 D-830
 SHEET 96 of 189
 FILE NO. 201546u01.dgn
 HORIZ. SCALE: NONE VERT. SCALE: NONE

ABBREVIATIONS

A	AMPERE (AMPS)	JB	JUNCTION BOX	SP	SETPOINT / SAMPLE POINT
AC	ALTERNATING CURRENT	KCM	THOUSAND CIRCULAR MILS (OR MCM)	SPD	SPEED
AF	AMPS-FRAME	KV	KILOVOLT	SS	SPREAD SPECTRUM RADIO
AI	ANALOG INPUT	KVA	KILOVOLT AMPERES	SST	STAINLESS STEEL
AIC	AVAILABLE INTERRUPTING CURRENT	KVAR	KILOVOLT AMPERE REACTIVE	STR	START
ALM	ALARM	KW	KILOWATT	STR	STARTER
AO	ANALOG OUTPUT			STRUT	UNISTRUT
AT	AMPS-TRIP	L/R	LOCAL/REMOTE	SUCT	SUCTION
ATS	AUTOMATIC TRANSFER SWITCH	LO	LOW	SWI	SWITCH
AUTO	AUTOMATIC	LOR	LOCAL-OFF-REMOTE SWITCH	SWBD	SWITCHBOARD
ANT	ANTENNA	LOS	LOCK-OUT STOP PUSH BUTTON		
AWG	AMERICAN WIRE GAUGE	LP	LIGHTING PANEL	TB	TERMINAL BLOCK
		LTG	LIGHTING	TDOD	TIME DELAY ON DE-ENERGIZATION
BC	BARE COPPER	LTS	LIGHT SWITCH (PRESSURE SWITCH TYPE) OR LONG TIME TRIP SETTING FEATURE ON CIRCUIT BREAK LEVEL	TDOE	TIME DELAY ON ENERGIZATION
BLDG	BUILDING			TEL	TELEMETRY
BSC	BARE STRANDED COPPER	LVL		TELCO	TELEPHONE UTILITY
BYP	BYPASS			TERM	TERMINAL
		M	MOTOR / MAGMETER	THWN	THERMAL PLASTIC, HEAT RESISTANT, WEATHERPROOF, NYLON COATED
C	CONDUIT	MA	MILLIAMPERE	TK, TNK	TANK
CB	CIRCUIT BREAKER	MAX	MAXIMUM	TMR	TIMER
CKT	CIRCUIT	MBK	MAIN BREAKER	TS	TEMPERATURE SWITCH
CMD	COMMAND	MCC	MOTOR CONTROL CENTER	TSP	TWISTED SHIELDED PAIR
CNTRL	CONTROLLER	MCM	THOUSAND CIRCULAR MILS	TYP	TYPICAL
COM	COMMON	MCP	MAIN CONTROL PANEL		
COMM	COMMUNICATION	MCP	MOTOR CIRCUIT PROTECTION	UG	UNDERGROUND
CP	CONTROL PANEL	MD	MOTION DETECTION	UGS	SCE UNDERGROUND STRUCTURES STANDARD DETAILS
CPT	CONTROL POWER TRANSFORMER	MIN	MINIMUM	UL	UNDERWRITERS LABORATORY
CR	CONTROL RELAY	MS	MAGNETIC STARTER	UPS	UNINTERRUPTIBLE POWER SUPPLY
CT	CURRENT TRANSFORMER	MSH	MOTION, SWITCH, HIGH		
CTRL	CONTROL			V	VOLT
		N	NEUTRAL, NEW	VA	VOLTAMPERES
DI	DISCRETE INPUT	NC	NORMALLY CLOSED	VAC	VOLTS AC
DISC	DISCONNECT	NEC	NATIONAL ELECTRIC CODE	VDC	VOLTS DC
DISCH	DISCHARGE	NO	NORMALLY OPEN	VFD	VARIABLE FREQUENCY DRIVE
DO	DISCRETE OUTPUT	NTS	NOT TO SCALE		
DS	DOOR SWITCH			W	WIRE/WATTS
DWG	DRAWING	OPER	OPERATIONS	WP	WEATHERPROOF
		OUT	OUTPUT	WW	WETWELL
E	EXISTING			XDCR	TRANSDUCER
EGEN	EMERGENCY GENERATOR	P	POLE	XFMR	TRANSFORMER
EL	ELECTRICAL	PB	PUSHBUTTON	XMTR	TRANSMITTER
EP	EXPLOSION PROOF	PB	PULL BOX, PUSH BUTTON		
ESR	SCE ELECTRICAL SERVICE REQUIREMENTS	PF	POWER FACTOR		
ETM	ELAPSED TIMER METER	PFR	POWER FAIL RELAY	2W	TWO WIRE
EXIST	EXISTING	PH, Ø	PHASE	3W	THREE WIRE
		PLC	PROGRAMMABLE LOGIC CONTROLLER	4W	FOUR WIRE
FBK	FEEDER BREAKER	PM	POWER MONITOR		
FLA	FULL LOAD AMPS	PMP	PUMP		
FT	FEET	PNL	PANEL		
FU	FUSE	PNLBD	PANELBOARD		
FUT	FUTURE	POS	POSITION		
FVNR	FULL VOLTAGE NON-REVERSING	PRESS	PRESSURE		
FVR	FULL VOLTAGE REVERSING	PS	POWER SUPPLY		
		PT	POTENTIAL TRANSFORMER		
G	GROUND	PVC	POLYVINYL CHLORIDE (DUCT)		
GF	GROUND FAULT				
GFI	GROUND FAULT INTERRUPTER	R	RELAY		
GFT	GROUND FAULT TRIP	RECEPT	RECEPTACLE		
GIW	GROUND FAULT INTERRUPTER, GROUND	REQ'D	REQUIRED		
GND, GRND	GROUND	RTU	TELEMETRY REMOTE TERMINAL UNITS		
GPM	GALLONS PER MINUTE				
		S	SOLENOID		
HI	HIGH	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION		
HOA	HAND-OFF-AUTOMATIC	SCR	SCREEN		
HP	HORSEPOWER	SD	STORM DRAIN		
HZ	HERTZ	SECT	SECTION		
		SG	SIGNAL GROUND		
I	INSTANTANEOUS	SHLD	SHIELDED		
INST	INSTANTANEOUS (TD CONTACT)	SP	SPARE		
IST	INSTANTANEOUS BREAKER TRIP				

GENERAL NOTES:

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3. SEE P&ID LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

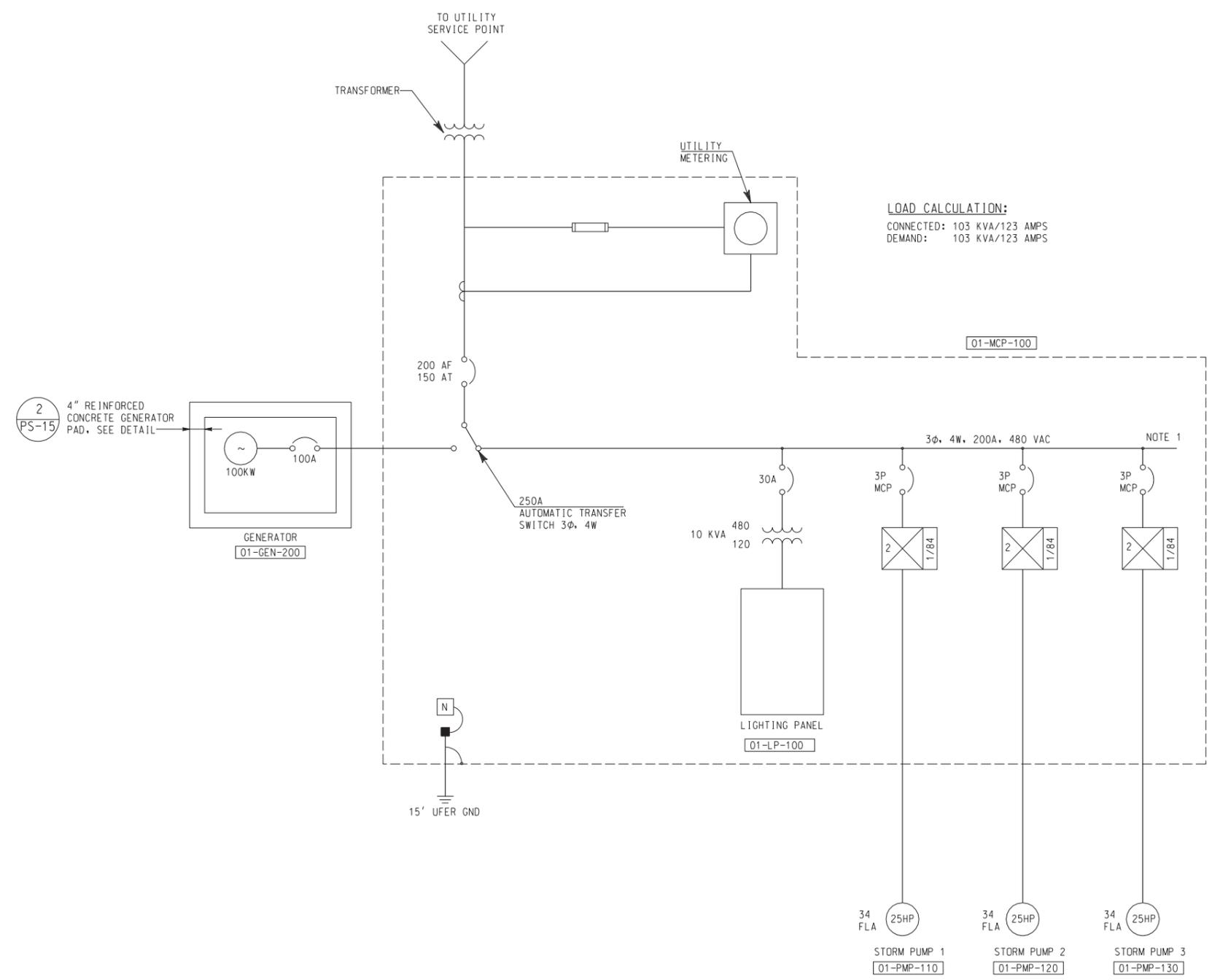
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CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: *November 16, 2012*

			CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
			MAGNOLIA AVENUE UNDERPASS		D-830
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____			SHEET 97 of 189		
DATE: 9/14/09			FILE NO. 201546u02.dgn		

PANEL: 01-LP-100		FEEDER ENTRANCE: TOP		MOUNTING: SURFACE				
SERVICE: 480 : 120/208		3 PHASE 4 WIRE		SERVICE ENTRANCE LABEL: NO				
MAIN DEVICE: NONE								
CKT NO.	CIRCUIT IDENTIFICATION	CB AMPS	VA PER PHASE			CB AMPS	CIRCUIT IDENTIFICATION	CKT NO.
			A	B	C			
1	PLC CABINET	20	742	600		20	GENERATOR	2
3	AREA LIGHTS	20		600		20	SPARE	4
5	RECEPTACLES	20			360	20	SPARE	6
7	.	.	.	.	.	.	.	8
9	.	.	.	.	.	.	.	10
11	.	.	.	.	.	.	.	12
EST TOTAL VA PER PHASE			1342	600	360			
EST TOTAL PANELBOARD VA			2302					

LOAD CALCULATION:
CONNECTED: 103 KVA/123 AMPS
DEMAND: 103 KVA/123 AMPS



AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: *March 11, 2012*

NOTES
1. 200A BUS IS ACTUALLY A 3/0 CABLE. A POWER DISTRIBUTION BLOCK IS REQUIRED TO SPLIT POWER TO EACH BREAKER.

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SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

PROFESSIONAL ENGINEER
RAYMOND L. GENATO
No. 17995
Exp. 12-31-10
ELECTRICAL
STATE OF CALIFORNIA

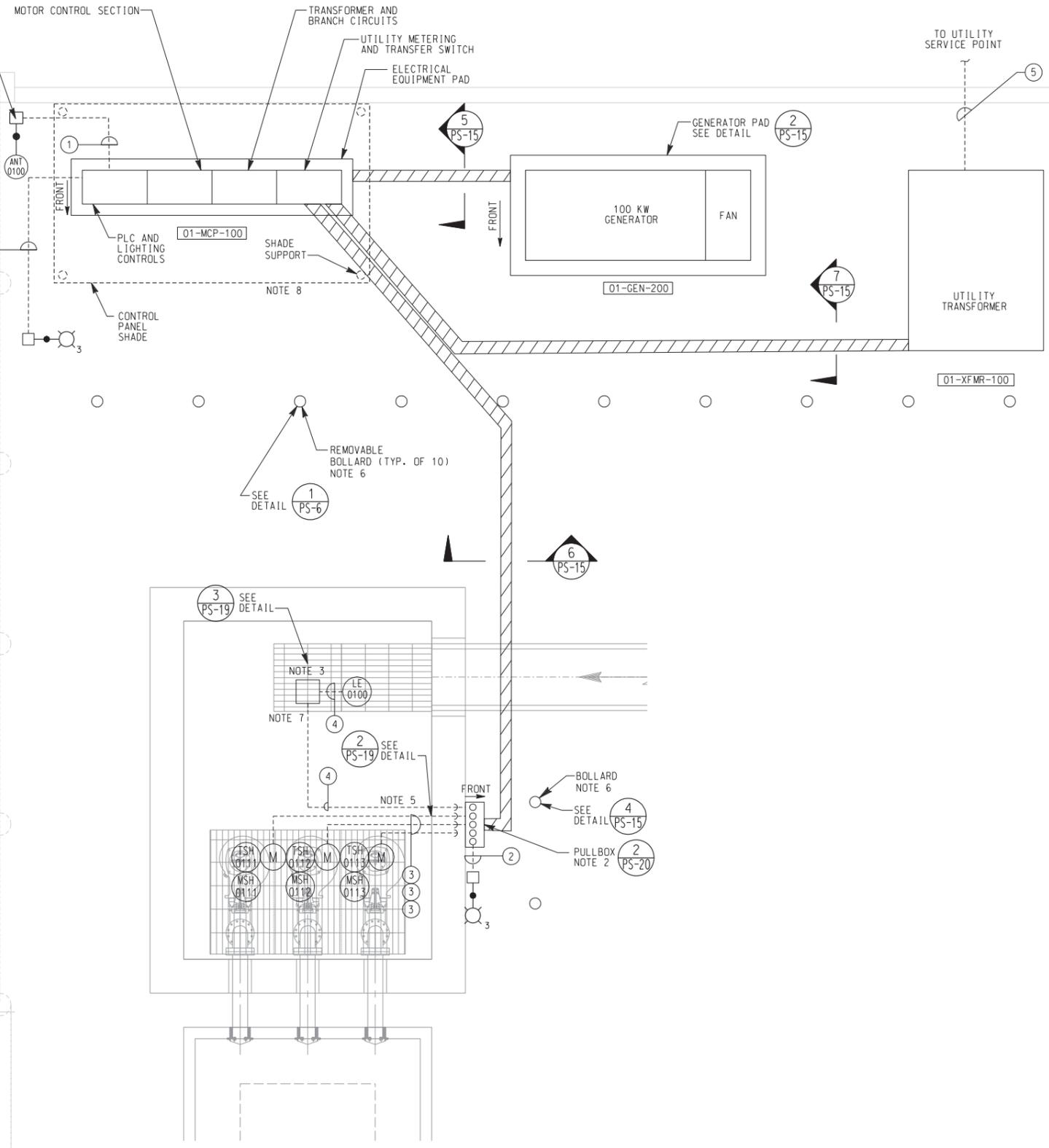
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ELECTRICAL SINGLE LINE PS-10
HORIZ. SCALE: NONE VERT. SCALE: NONE

ACCT. NO. W.O. NO. **D-830**
SHEET **98** OF **189**
FILE NO. _____

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NOGALES STREET



- NOTES:**
1. AREA CLASSIFICATION: WET/OUTDOOR/HAZARDOUS. HIGH TEMPERATURE AND EXPOSED TO ELEMENTS.
 2. PROVIDE NEMA 3R, STAINLESS STEEL, 24"W x 24"L x 10"D PULLBOX, HOFFMAN OR EQUAL. INSTALL PULLBOX INTO MODULAR SUPPORT RACK PER DETAIL 2/PS-20. MOUNT PULLBOX AGAINST FINISHED GRADE OF PUMP STATION.
 3. PROVIDE EXPLOSION PROOF J-BOX.
 4. ALL CONDUITS SHALL BE SCHEDULE 80 PVC.
 5. STUB OUT TO WET WELL PER DETAIL 2/PS-19.
 6. LOCATE BOLLARD TO ALLOW DOORS TO SWING FULLY OPEN.
 7. STUB OUT INTO WETWELL PER DETAIL 4/PS-1.
 8. PROVIDE 14' x 8' CONTROL PANEL SHADE. CONTRACTOR SHALL SUBMIT MATERIAL AND CONNECTION DETAILS TO ENGINEER FOR REVIEW AND APPROVAL.

- CONDUIT/CABLE TAG:**
- 1 2"C - ANTENNA CABLE, 1#12 GND
 - 2 1"C - 2#12, 1#12 GND
 - 3 2"C - PUMP MANUFACTURER'S CABLE
 - 4 1"C - 1 MANUFACTURER'S CABLE
 - 5 4"C - PULL ROPE

PUMP STATION SITE - LAYOUT
NTS

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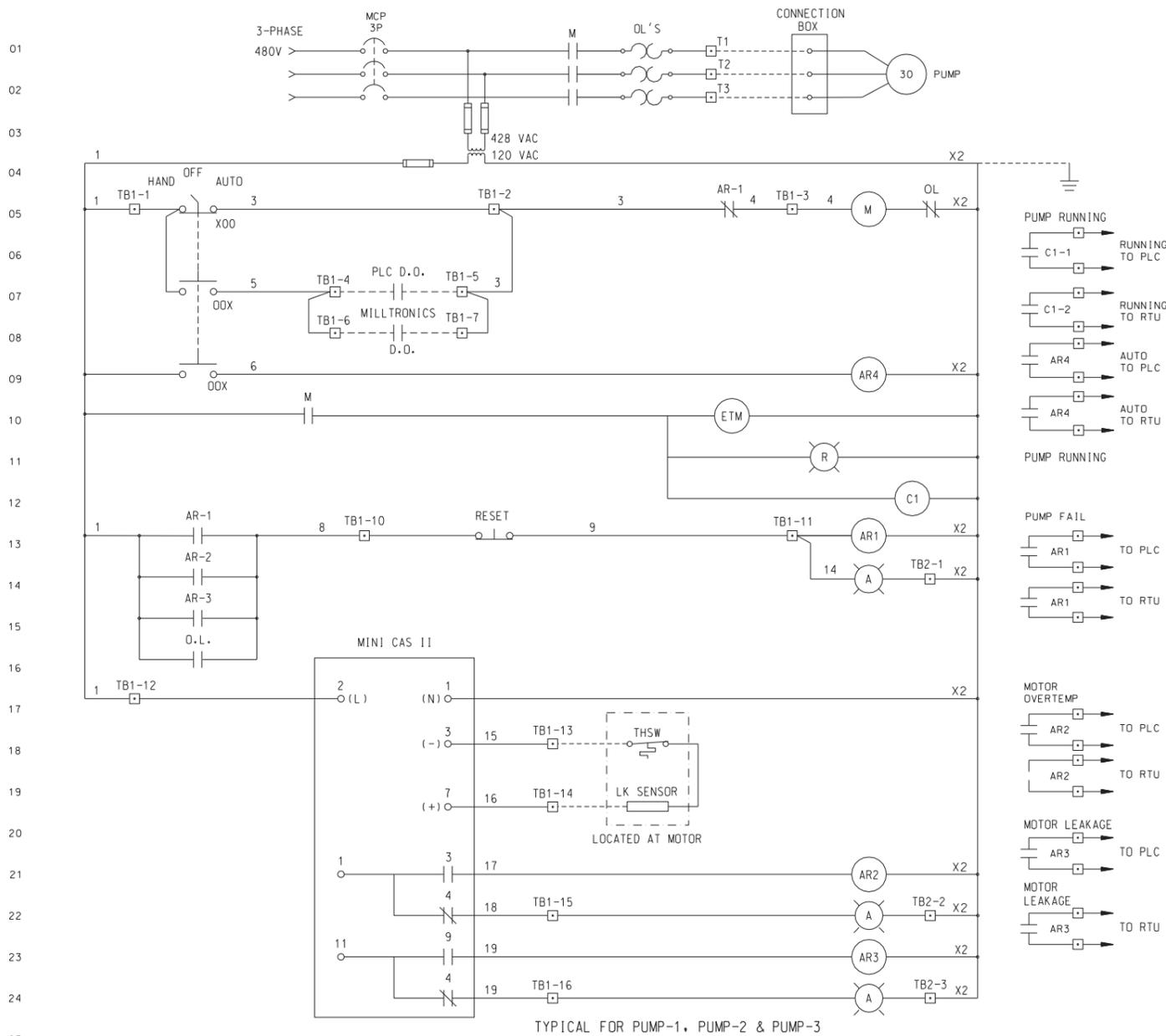
Professional Engineer
RAYMOND I. GENATO
No. 17995
Exp. 12-31-10
ELECTRICAL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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PUMP STATION SITE LAYOUT PS-12
HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

ACCT. NO. W.O. NO. **D-830**
SHEET **100** OF **189**
FILE NO. 201546u05.dgn



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CONTROL ELEMENTARY DIAGRAM
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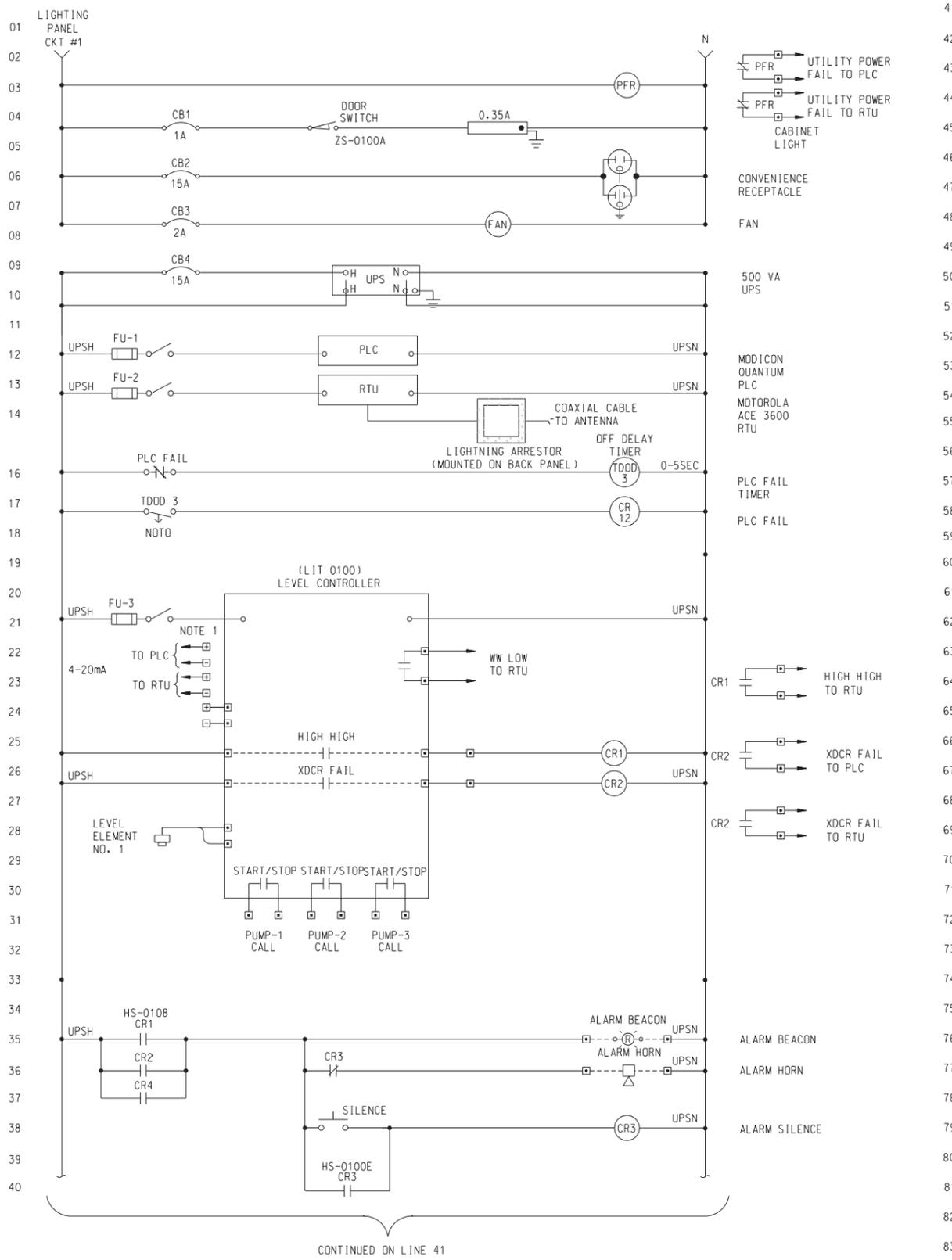
REGISTERED PROFESSIONAL ENGINEER
RAYMOND I. GENATO
No. 17995
Exp. 12-31-10
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STATE OF CALIFORNIA

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CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ELECTRICAL SCHEMATICS I PS-13

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET 101 of 189
FILE NO. 201546uo06.dgn

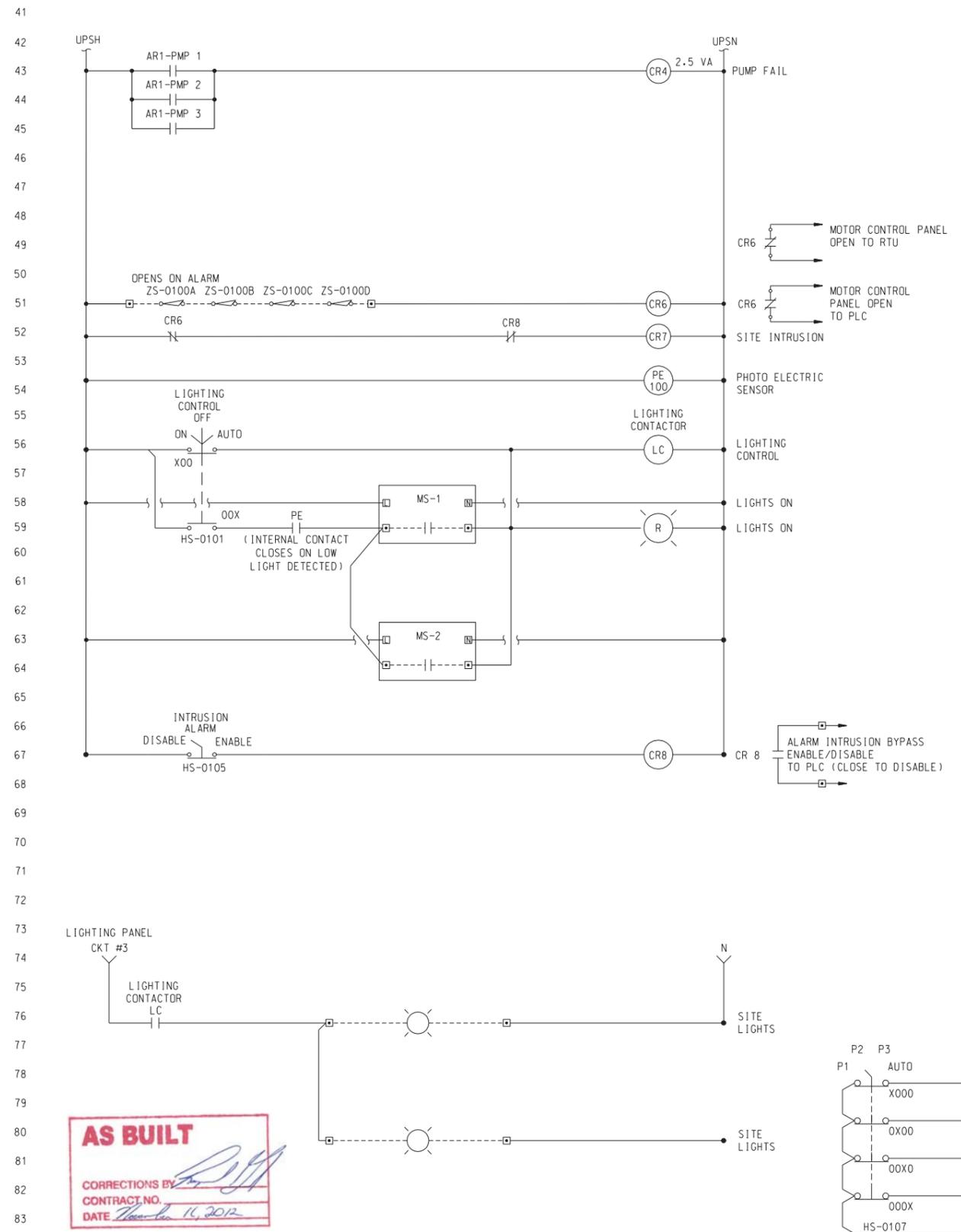
HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE



WETWELL LEVEL AND LIGHTING CONTROL PANEL 1
PS-14

NOTE:
1. PROVIDE 120 VAC EXTERNALLY POWERED LOOP ISOLATORS EACH WITH ONE 4-20 mA INPUTS AND TWO 4-20 mA OUTPUTS.

CONTINUED ON LINE 41



WETWELL LEVEL AND LIGHTING CONTROL PANEL (CONT)

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CONTRACT NO. 17995
DATE: March 14, 2012

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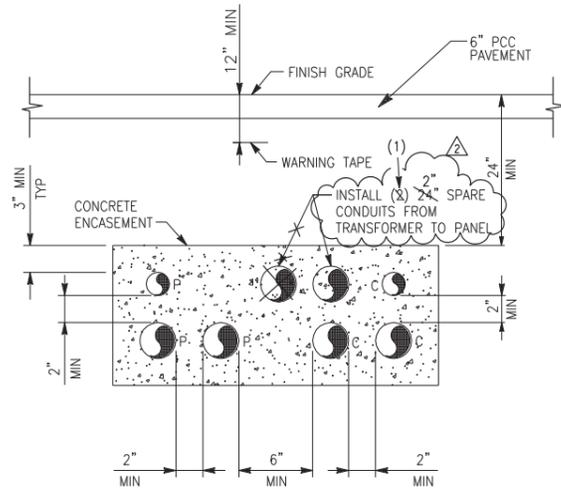
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DATE: 9/14/09

PROFESSIONAL ENGINEER
RAYMOND I. GENATO
No. 17995
Exp. 12-31-10
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REVISION 1 CHANGES PER R1049	10/27/10
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CHECKED BY	

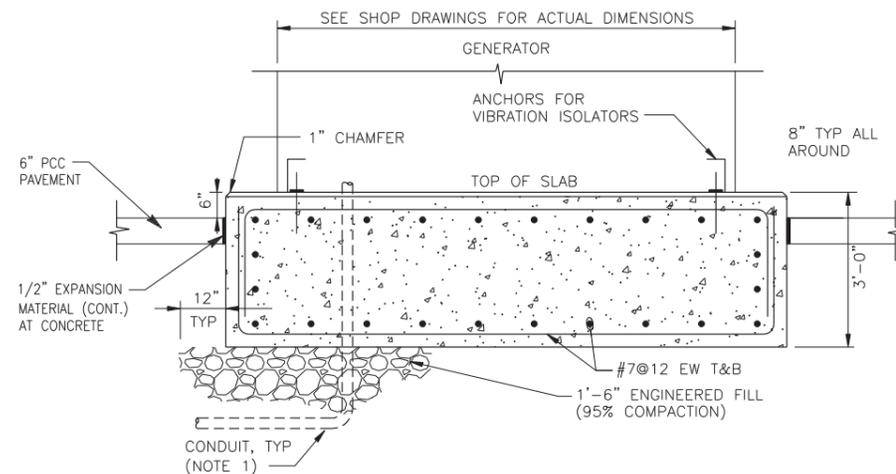
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MAGNOLIA AVENUE UNDERPASS
ELECTRICAL SCHEMATICS II PS-14
ACCT. NO. W.O. NO. D-830
SHEET 102 of 189
FILE NO. 201546uo07.dgn



NOTE:

1. NUMBER OF CONDUITS AS REQUIRED FOR THE APPLICATION.
2. P - SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
3. C - SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
3. ALL BURIED DUCT BANK ENCASEMENT SHALL BE RED CONCRETE.

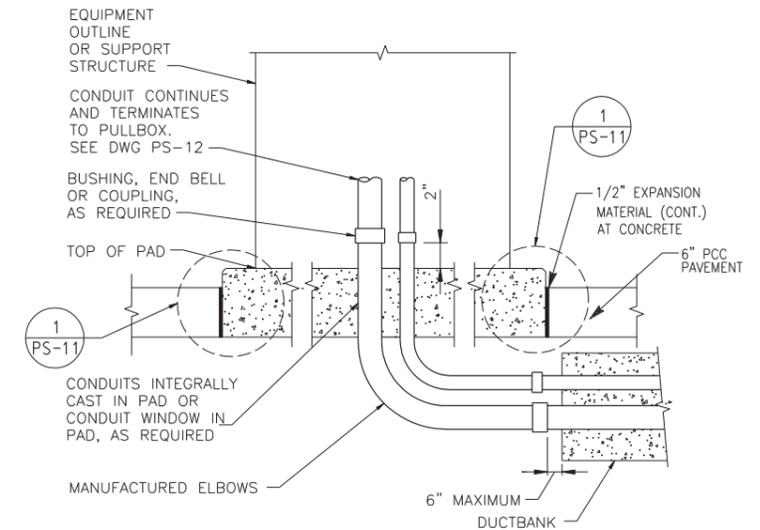
1 CONCRETE ENCASED DUCTBANK SECTION
PS-15 NTS



NOTE:

1. PRIOR TO CONDUIT STUB UPS, REVIEW OF ALL ELECTRICAL CONNECTIONS. GENERATOR SUBMITTAL FOR ACTUAL LOCATIONS

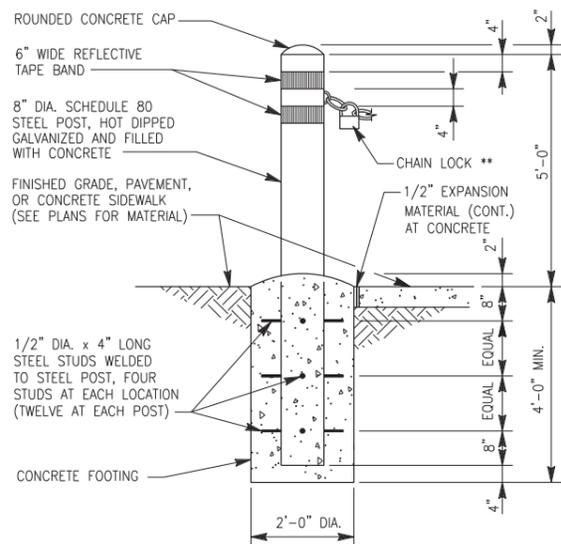
2 GENERATOR PAD
PS-15 NTS



NOTE:

1. SEE DUCTBANK SECTION FOR ADDITIONAL REQUIREMENTS.
2. SEE OTHER CONTRACT DRAWING FOR PAD REQUIREMENTS.

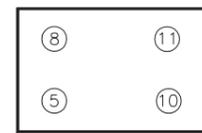
3 CONDUIT TRANSITION TO ABOVE GRADE (EXTERIOR)
PS-15 NTS



4 BOLLARD DETAIL
PS-15 NTS

NOTE:

1. ** INSTALL CHAIN LOCK FROM FRONT CORNER OF PUMP STATION ENCLOSURE NEAR END OF PROPOSED CHAIN LINK FENCE AT UPRR R/W
2. CONSTRUCT REMOVABLE BOLLARD PROTECTIVE BARRIER PER RIVERSIDE PUBLIC UTILITIES DEPT - UNDERGROUND STRUCTURES STD DETAIL UGS-290



5 SECTION
PS-15 NTS

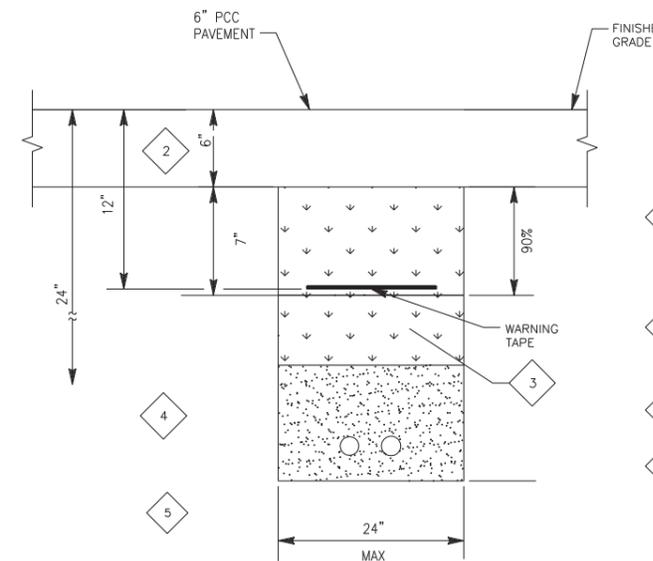


6 SECTION
PS-15 NTS



7 SECTION
PS-15 NTS

DUCTBANK TABLE		
DUCT #	SIZE	WIRE
1	2\"/>	



8 TRENCHING AND BACKFILL DETAIL
PS-15 NTS

BACKFILL GENERAL NOTES:

- 2 PAVED AREAS: ENTIRE PUMP STATION ENCLOSURE TO BE PAVED WITH 6\"/>

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RAYMOND I. GENATO
No. 17995
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ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM-CONDUIT SIZE IS 2\"/>

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PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ELECTRICAL DETAILS 1 PS-15
ACCT. NO. W.O. NO. D-830
SHEET 103 OF 189
FILE NO.

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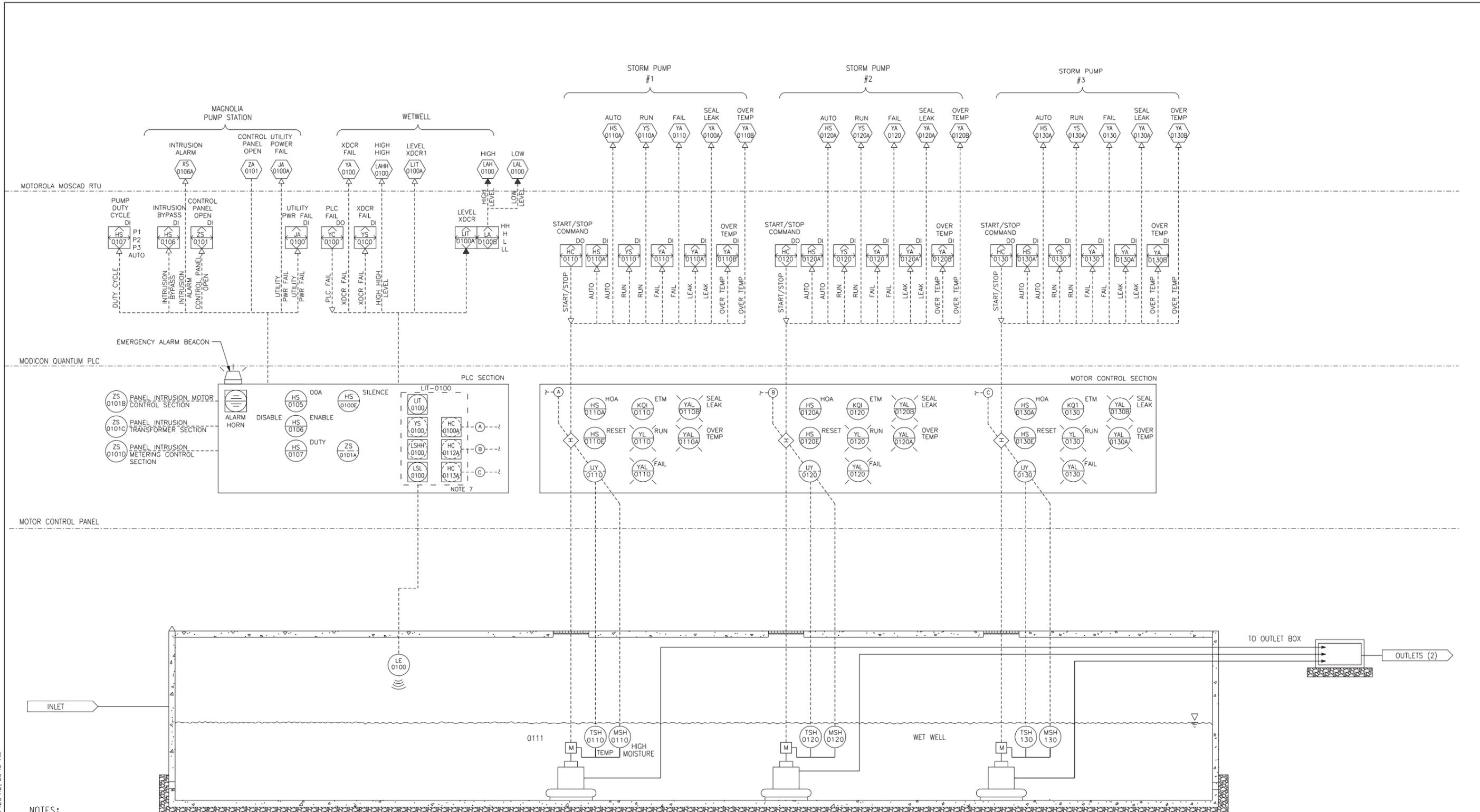
PRIMARY ELEMENT SYMBOLOGY	INSTRUMENT SYMBOLOGY	INSTRUMENT IDENTIFICATION LETTERS	CONTROL SWITCH NOTATION ABBREVIATIONS	GENERAL NOTES:																																																																																																																																																																																											
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THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.</p>
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AS BUILT

CORRECTIONS BY:
CONTRACT NO. _____
DATE: Nov 14, 2012

 <small>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2688 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</small>	 ONE COMPANY <i>Many Solutions</i> <small>HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE: 9/14/09</small>	 <small>RAYMOND I. GENATO No. 17995 Exp. 12-31-10 ELECTRICAL STATE OF CALIFORNIA</small>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; font-size: x-small;">DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____</td> <td style="width: 50%; font-size: x-small;">REVISIONS: _____ APPR. DATE: _____</td> </tr> </table>	DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	REVISIONS: _____ APPR. DATE: _____
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<p style="font-weight: bold;">CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT</p> <p style="font-weight: bold;">MAGNOLIA AVENUE UNDERPASS</p> <p style="font-weight: bold;">INSTRUMENTATION LEGEND P8-16</p>			<p>ACCT. NO. _____ W.O. NO. _____</p> <p style="font-size: large; font-weight: bold;">D-830</p> <p>SHEET 104 of 189</p> <p>FILE NO. 201546u09.dgn</p>		

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- NOTES:**
1. ALL EQUIPMENT TO MEET CITY SPECIFICATIONS.
 2. THE STATION CONTROL SHALL BE 120 VAC.
 3. THE DEVELOPER/CONTRACTOR SHALL COORDINATE AND PAY FOR THE INTERGRATION OF THE RTU INTO THE CITY'S EXISTING SCADA SYSTEM.
 4. CONTRACTOR TO PROVIDE A MINIMUM 2 SPARE DIGITAL I/O AND 2 SPARE ANALOG INPUTS FOR PLC. CONDUIT END SPARES SHALL BE CAPPED AND SEALED FROM GAS.
 5. 2 SPARE CONDUIT SHALL BE PROVIDED BETWEEN THE CONTROL PANEL AND THE WET WELL. THIS CONDUIT SHALL BE THE SAME SIZE OF THE LARGEST CONDUIT NEEDED BETWEEN THE CONTROL PANEL AND WET WELL.
 6. INTRINSICALLY SAFE RELAY.
 7. MILLTRONICS HYDRORANGER MOUNTED ON PANEL DEADFRONT.

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: *December 16, 2012*

DIGALERT

DIAL BEFORE YOU DIG

TWO WORKING DAYS BEFORE YOU DIG

TOLL FREE 1-800-227-2680

A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY
Many Solutions

HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE: 9/14/09

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER

RAYMOND I. GENATO

No. 17995

Exp. 12-31-10

STATE OF CALIFORNIA

REVISION 1 CHANGES PER RFI048	TV/01/10
REVISIONS	APPR. DATE
DESIGNED BY: _____	DRAWN BY: _____
CHECKED BY: _____	

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

PUMP STATION P & ID P8-17

HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

ACCT. NO. _____
W.O. NO. _____

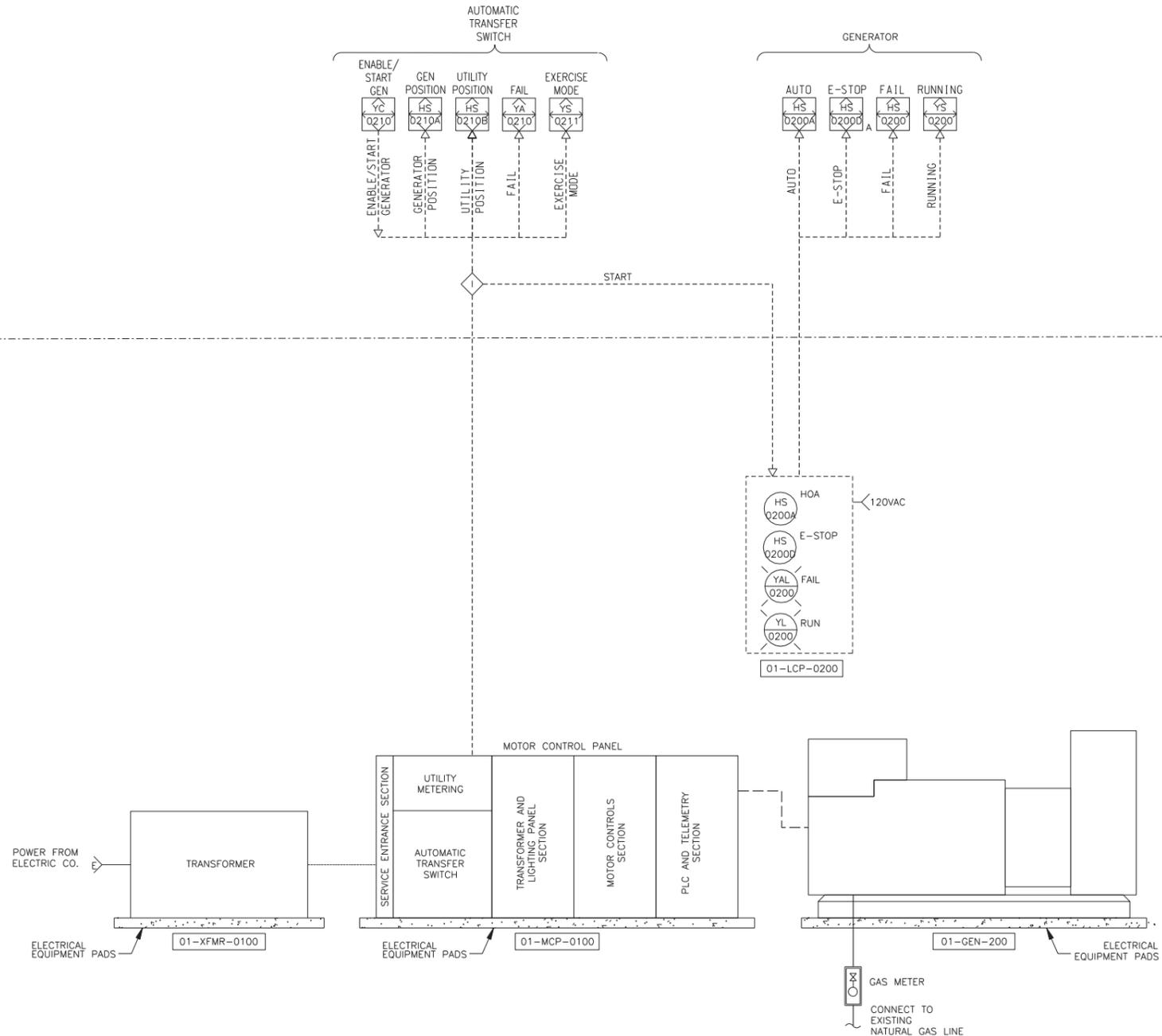
D-830

SHEET 105 of 189

FILE NO. 201546u010.dgn

MOTOROLA MOSCAD RTU

MODICON QUANTUM PLC



PUMP STATION GENERATOR

NTS

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE *November 14, 2012*

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DIGALERT

DIAL BEFORE YOU DIG
TOLL FREE 1-800-227-2680

TWO WORKING DAYS BEFORE YOU DIG

A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR | ONE COMPANY
Many Solutions

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2280 MARKET STREET
SUITE 100
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DATE 9/14/09

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RAYMOND I. GENATO
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Exp. 12-31-10
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STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

PUMP STATION GENERATOR P & ID PS-18

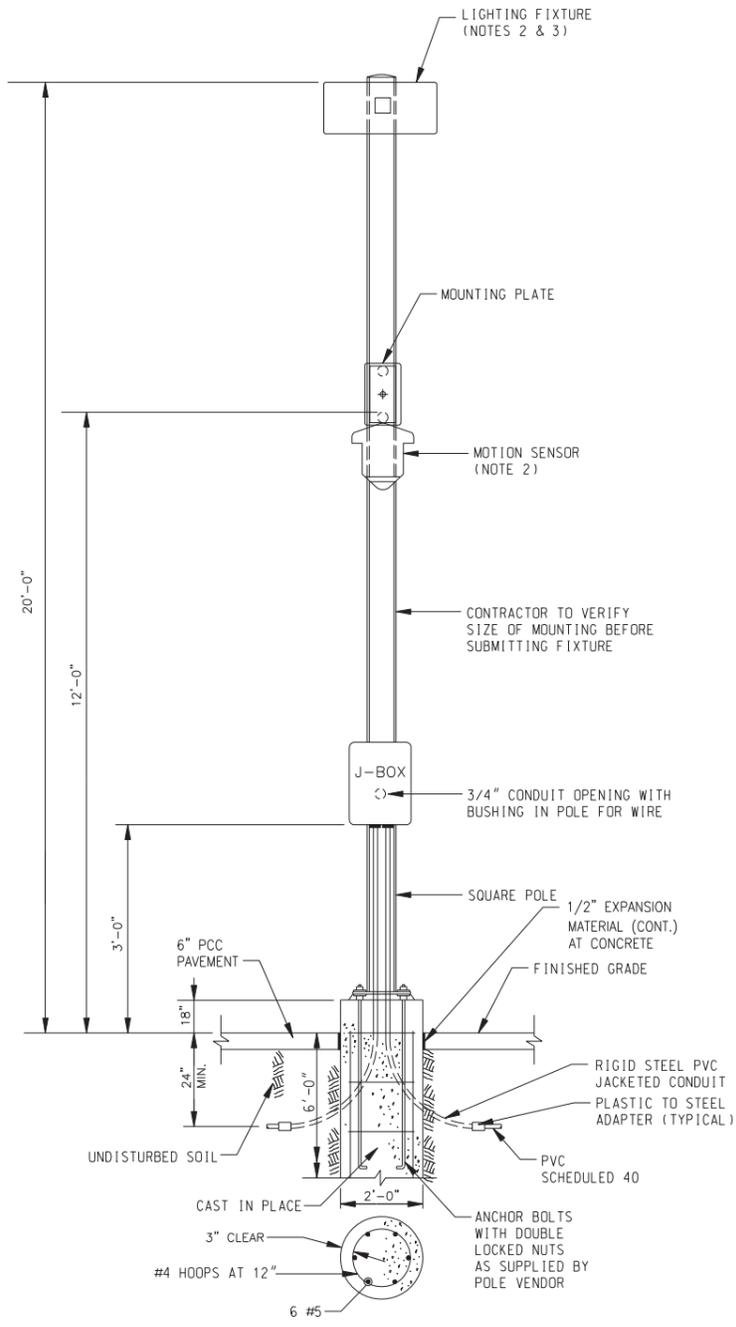
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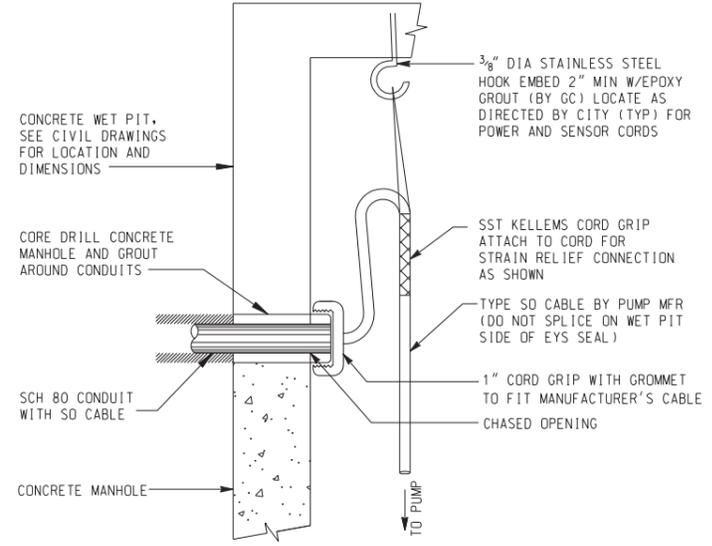
SHEET 106 OF 189

FILE NO. 201546u011.dgn



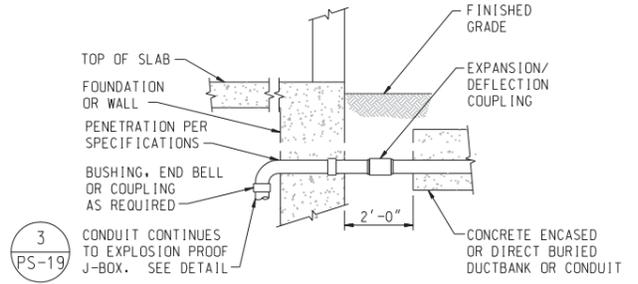
1
PS-19 **DETAIL**
LIGHTING & MOTION DETECTOR
GRADE MOUNTED
NTS

- NOTES:
1. EXPOSED FOUNDATION CAPS SHALL BE FORMED TO MATCH THE OUTLINE OF POLE BASEPLATE.
 2. FOR MOUNTING INSTALLATIONS, SEE EQUIPMENT DATA SHEETS.
 3. PROVIDE SINGLE OR DOUBLE ARM POLE AS SPECIFIED.
 4. SEE SPECIFICATION SECTION 16500 APPENDIX A FOR LUMINAIRE SCHEDULE



2
PS-19 **POWER ENTRANCE AT WET PIT**
NTS

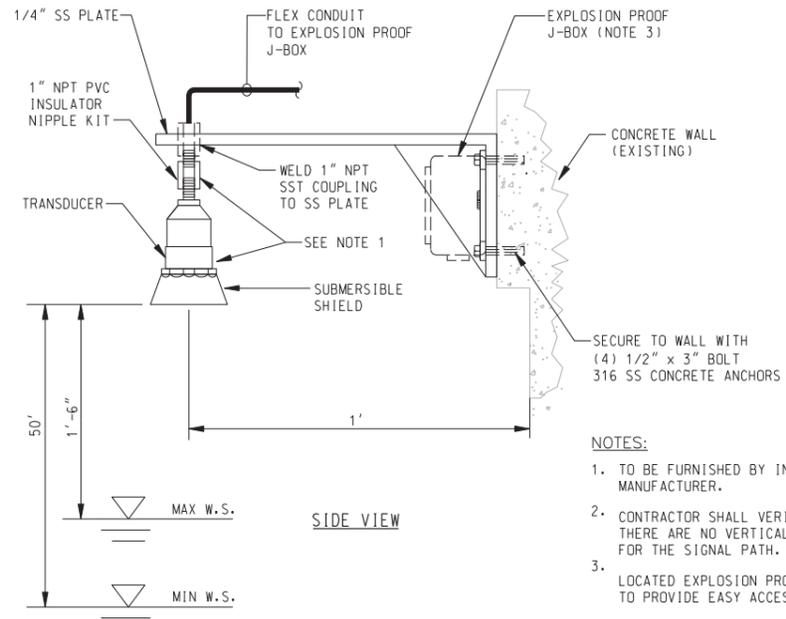
NOTE:
PUMP PIT WALLS AND CONFIGURATION MAY VARY, SEE CIVIL DWGS FOR EXACT CONFIGURATION.



3
PS-19

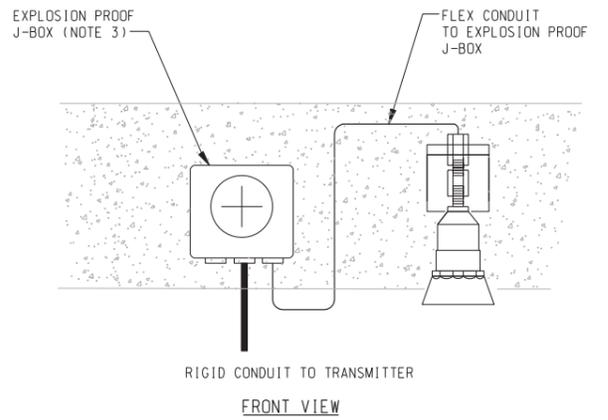
NOTE:
1. SEE DUCTBANK DETAIL FOR ADDITIONAL REQUIREMENTS.

4
PS-19 **CONTROLS CONDUIT TRANSITION TO WETWELL (EXTERIOR TO INTERIOR)**
NTS



3
PS-19 **ULTRASONIC LEVEL SENSOR CONCRETE WALL MOUNTED**
NTS

- NOTES:
1. TO BE FURNISHED BY INSTRUMENT MANUFACTURER.
 2. CONTRACTOR SHALL VERIFY THERE ARE NO VERTICAL OBSTRUCTIONS FOR THE SIGNAL PATH.
 3. LOCATED EXPLOSION PROOF J-BOX TO PROVIDE EASY ACCESS FOR MAINTENANCE.



AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: *November 14, 2012*

DIGALERT
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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
RAYMOND I. GENATO
No. 17995
Exp. 12-31-10
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION INSTRUMENTATION DETAILS | PS-19

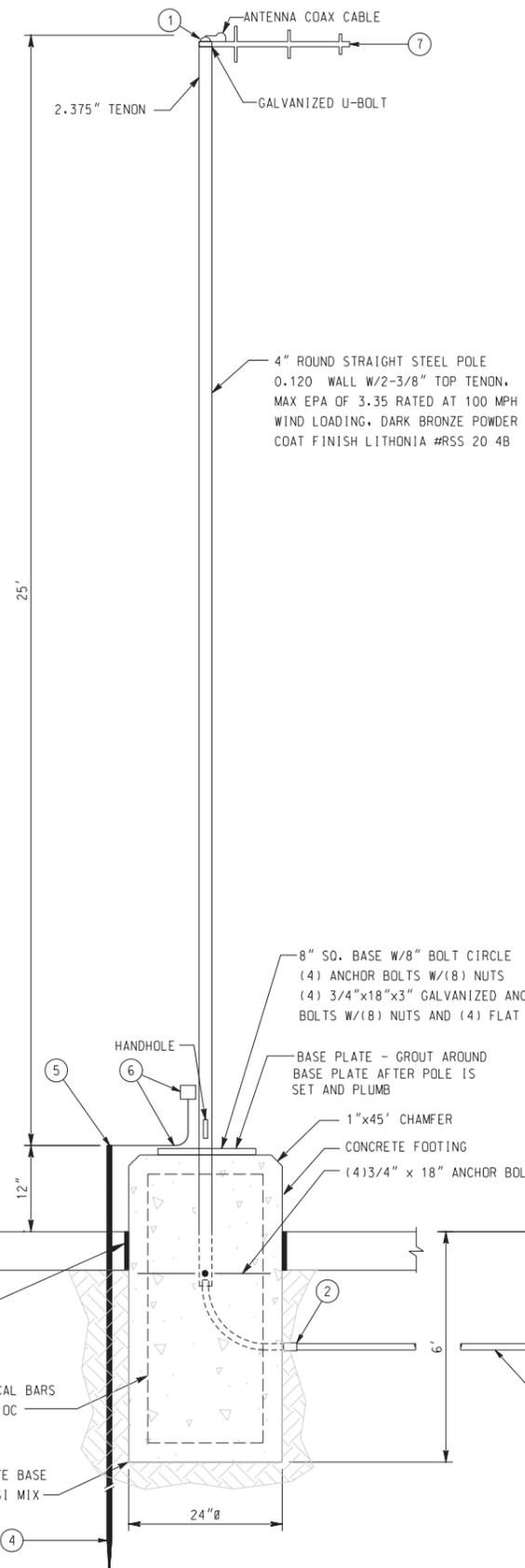
ACCT. NO. W.O. NO.
D-830
SHEET 107 of 189
FILE NO. 201546u012.dgn

HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

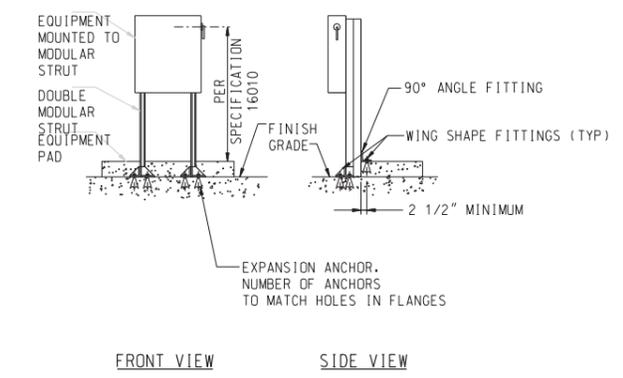
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LIST OF MATERIALS

- ① RAINTIGHT CAP
- ② PVC TO RIGID STEEL CONDUIT FITTING
- ③ 1" PVC CONDUIT TO RADIO TRANSCIVING UNIT
- ④ 5/8" DIAMETER x 8' LONG GROUNDING ROD
- ⑤ ACORN NUT CONNECTION
- ⑥ GROUND ATTACHED TO 4" CONDUIT USING LUG AND SELF TAPPING SCREW
- ⑦ INSTALL YAGI ANTENNA PER CONTRACT DOCUMENTS



① ANTENNA MAST DETAIL
PS-20 NTS



FRONT VIEW SIDE VIEW

NOTES:

- 1. EQUIPMENT LOAD SHALL NOT EXCEED 200 LBS.
- 2. RACK ASSEMBLY MATERIAL: GALVANIZED PER SPECIFICATION 16010.
- 3. MODULAR STRUT WIDTH: 1-5/8 inch.
- 4. ANCHORS: STAINLESS STEEL, 3/8 inch DIAMETER, 3-1/2 inch EMBEDMENT PER SPECIFICATIONS.
- 5. PROTECT SURFACES WITH DISSIMILAR MATERIALS IN ACCORDANCE WITH SPECIFICATIONS.
- 6. REPAIR CUT ENDS AND DAMAGED SURFACES IN ACCORDANCE WITH SPECIFICATIONS.

② MODULAR SUPPORT RACK
PS-20 NTS

AS BUILT
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PUMP STATION INSTRUMENTATION DETAILS II PS-20

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET 108 of 189
FILE NO. 201546u013.dgn

HORIZ. SCALE: NONE VERT. SCALE: NONE