

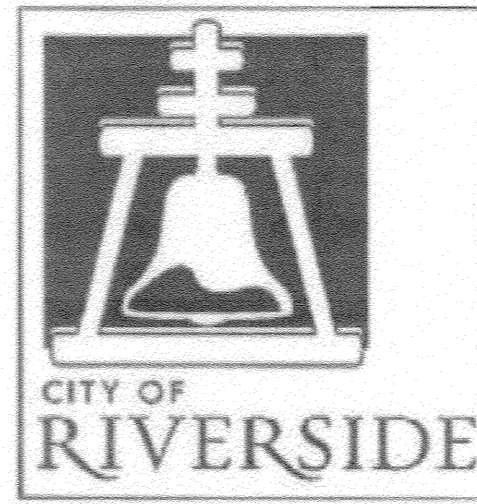
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- * STREET LIGHTING PLANS

* NOTATES PLANS BY OTHERS

RIVERSIDE



CALIFORNIA

PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

UNION PACIFIC RAILROAD LOS ANGELES SUBDIVISION - MP 55.2

**BEGIN CONSTRUCTION
STA 6+33**

**Limit of Work
(Beatty Drive)
Sta 30+22**

**Limit of Work
(Merrill Avenue)
Sta 50+25**

**Additional Work Area
(Nogales Street Cul-De-Sac)**

**END CONSTRUCTION
STA 22+00**

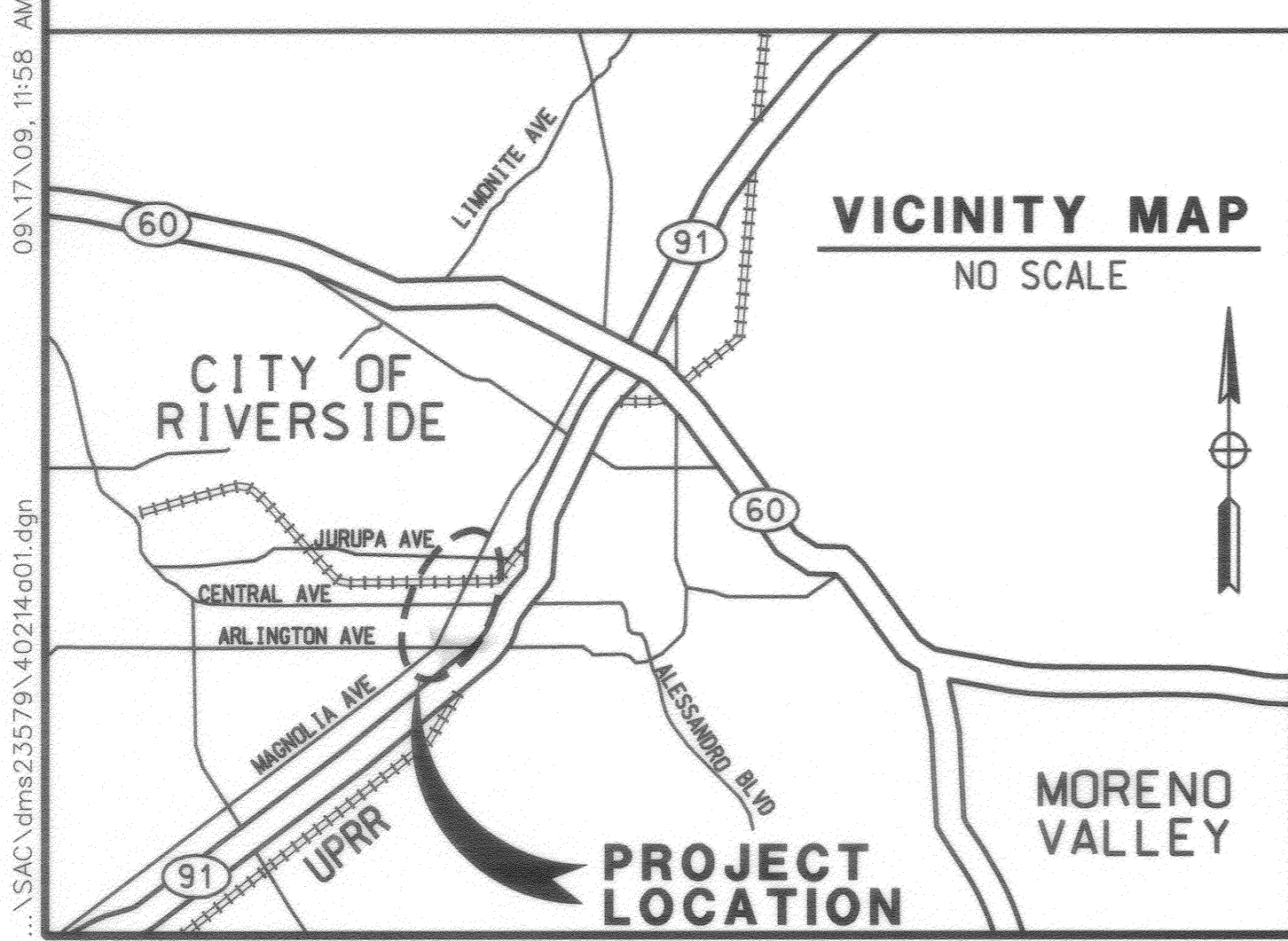


**Limit of Work
(Beatty Drive)
Sta 45+70**

**Limit of Work
(Merrill Avenue)
Sta 13+62**

PROJECT LOCATION PLAN
NOT TO SCALE

AS BUILT
CORRECTIONS BY _____
CONTRACT NO. _____
DATE 11/16/2012



<p>DIAL BEFORE YOU DIG</p> <p>TWO WORKING DAYS BEFORE YOU DIG</p> <p>TOLL FREE 1-800-227-2600</p> <p>A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>ONE COMPANY Many Solutions</p> <p>HDR ENGINEERING, INC.</p> <p>2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110</p> <p>DATE 9/14/09</p>		APPROVED BY _____ BY _____ DATE _____ PRINCIPAL ENGINEER <i>F.M. 9/17/09</i> CONSTRUCTION ADMIN. <i>R.S. 9/17/09</i> SURVEYOR <i>M.A.S. 9/17/09</i> STREET SERVICES _____ TRAFFIC ENGINEER <i>S.H. 9/17/09</i> PARK & REC. DEP. _____	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT APPROVED BY _____ CITY ENGINEER <i>[Signature]</i> DATE 9/17/09	MAGNOLIA AVENUE UNDERPASS TITLE SHEET HORIZ. SCALE: N/A VERT. SCALE: N/A	ACCT. NO. _____ W.O. NO. _____ R-4081 SHEET 1 OF 189 FILE NO. _____
			DESIGNED BY KW DRAWN BY MM CHECKED BY SL	MARK _____ REVISIONS _____ APPR. DATE _____	DATE 9/17/09	DATE 9/17/09

INDEXED 12-17-12

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.

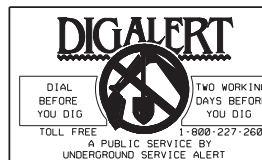
GENERAL NOTES (CONT.)

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.

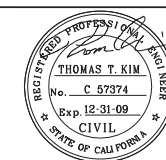
AS BUILT

CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012

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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



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		R-4081
GENERAL NOTES GN-1		SHEET <u>2</u> OF <u>189</u>
HORIZ. SCALE: N/A	VERT. SCALE: N/A	FILE NO.

CONSTRUCTION NOTES

- 1 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 2 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 3 CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
- 4 COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 6 CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- 7 CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- 8 CONSTRUCT TYPE 1 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- 9 CONSTRUCT TYPE 2 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304 AND DETAIL ON CONSTRUCTION DETAIL SHEET
- 10 CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- 11 CONSTRUCT TYPE C1 MOUNTABLE CURB PER CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 12 CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 13 CONSTRUCT CURB TRANSITION FROM 4" CF TO 6" CF PER CITY OF RIVERSIDE STD PLAN No. 210
- 14 CONSTRUCT NEW CHAIN LINK FENCE PER CITY OF RIVERSIDE STD PLAN No. 380
- 15 RELOCATE COMMERCIAL SIGN TO NEW LOCATION AS APPROVED BY ENGINEER
- 16 CONSTRUCT MASONRY RETAINING WALL (TYPE B) PER APWA STD PLAN No. 618-2
- 17 CONSTRUCT PARKWAY DRAIN PER APWA STD PLAN No. 151-1
- 18 ADJUST/MODIFY WATER VALVE COVER TO GRADE
- 19 ADJUST/MODIFY WATER METER BOX TO GRADE
- 20 ADJUST/MODIFY ELECTRICAL VAULT (BY OTHERS)
- 21 ADJUST/MODIFY GAS VAULT (BY OTHERS)
- 22 ADJUST/MODIFY SEWER MANHOLE TO GRADE
- 23 ADJUST/MODIFY ELECTRICAL MANHOLE TO GRADE (BY OTHERS)
- 24 ADJUST/MODIFY WATER VAULT TO GRADE (BY OTHERS)
- 25 CONSTRUCT SEWER MANHOLE PER CITY OF RIVERSIDE STD PLAN No. 500. JOIN EXISTING SEWER PER DETAIL ON UT-2
- 26 RELOCATE WATER METER (BY OTHERS)
- 27 CONSTRUCT SEWER LATERAL PER PLAN
- 28 MODIFY SEWER MANHOLE PER DETAIL ON UT-2
- 29 RELOCATE EXISTING LIGHT POLE (SEE STREET LIGHTING PLANS)
- 30 CONSTRUCT WATERLINE PER PLAN
- 31 RELOCATE EXISTING PARKING LIGHT FIXTURE PER DETAIL ON CONSTRUCTION DETAIL SHEET CD-4
- 32 CONSTRUCT BOLLARD PER DETAIL 4 ON PUMP STATION ELECTRICAL PLAN PS-15
- 33 ADJUST/MODIFY OR RELOCATE EXISTING TELEPHONE VAULT OR MANHOLE (BY OTHERS)
- 34 CONSTRUCT 6" CURBED SWALE GUTTER PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 35 CONSTRUCT CONCRETE BUS BAY PER APWA STD PLAN No. 131-1. (ON 15" AB)
- 36 CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- 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
- 38 CONSTRUCT REINFORCED CONCRETE RETAINING WALL (TYPE 7) PER APWA STD PLAN No. 616-2
- 39 CONSTRUCT TYPE A1-6 (6") PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- 40 PROTECT IN PLACE
- 41 CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL
- 42 CONSTRUCT REVERSE TAPER PER CITY OF RIVERSIDE STD PLAN No. 122
- 43 CONSTRUCT 6" PCC PAVEMENT

CONSTRUCTION NOTES (CONT.)

- 44 CONSTRUCT PCC STAIR PER APWA STD PLAN 640-1
- 45 CONSTRUCT TREE WELL AND COVER PER CITY OF RIVERSIDE STD PLAN No. 326. MODIFY DIMENSIONS WHERE NECESSARY TO CENTER TREE.
- 46 CONSTRUCT PCC GUTTER FOR ALLEY SECTIONS PER CITY OF RIVERSIDE STD PLAN No. 110.
- 47 CONSTRUCT PCC CROSS GUTTER PER APWA STD PLAN 122-1
- 48 RESTORE OVERHEAD POWERLINES TO ORIGINAL ALIGNMENT COORDINATE WITH THE CITY OF RIVERSIDE PUBLIC UTILITIES.
- 49 MODIFY SEWER MANHOLE TO MATCH PROPOSED GRADE AND ADJUST MANHOLE RIM AND COVER TO FINISHED SURFACE.
- 50 INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)
- 51 RELOCATE FIRE CONTROL DEVICE
- 52 ADJUST/MODIFY ELECTRIC PULLBOX TO GRADE
- 53 CONSTRUCT PATTERNED STAMPED CONCRETE

CONSTRUCTION NOTES - STORM DRAIN

- 101 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO 405
- 102 CONSTRUCT MANHOLE 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 DRIFICE PLATE PER DETAIL A, SHEET DD-1 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

SIGNING AND STRIPING NOTES:

- 70 APPLY 4-INCH SOLID DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20A, DETAIL 22
- 71 APPLY 4-INCH SOLID DOUBLE YELLOW MEDIAN STRIPE PER CALTRANS STD PLAN A20B, DETAIL 29
- 72 APPLY 8-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 38
- 73 APPLY 4-INCH DASHED WHITE STRIPE PER CALTRANS STD PLAN A20A, DETAIL 9
- 74 APPLY 12-INCH SOLID WHITE CROSSWALK MARKINGS/LIMITS
- 75 APPLY 50', 4" SOLID WHITE STRIPE
- 76 APPLY 6-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39
- 77 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A24A
- 78 APPLY 4-INCH SOLID/DASHED DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20B, DETAIL 32
- 79 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20B, DETAIL 26
- 80 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLANS
- 81 APPLY 6" DASHED WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39A
- 82 REMOVE/SANDBLAST EXISTING MARKINGS
- 83 RELOCATE
- 84 REMOVE
- 85 INSTALL SIGN & POST AS SHOWN
- 86 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20D DETAIL 40
- 87 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20C DETAIL 37B
- 88 INSTALL RED CURB
- 89 APPLY 8" YELLOW STRIPE

REMOVAL NOTES

- 1 SAWCUT EXISTING PAVEMENT
- 2 REMOVE EXISTING AC PAVEMENT
- 3 REMOVE EXISTING CONCRETE
- 4 REMOVE CHAIN LINK FENCE
- 5 REMOVE EXISTING BLOCK WALL
- 6 REMOVE FIRE HYDRANT AND VALVE (BY OTHERS)
- 7 REMOVE EXISTING GUARD POST
- 8 REMOVE TREE
- 9 REMOVE ELECTRICAL PULL BOX
- 10 REMOVE EXISTING ELECTRICAL METER PEDESTAL
- 11 REMOVE CURB & GUTTER
- 12 REMOVE EXISTING PIPE
- 13 REMOVE EXISTING CONCRETE SIDEWALK
- 14 REMOVE EXISTING CROSS GUTTER
- 15 REMOVE & SALVAGE EXIST TRAFFIC SIGNAL EQUIPMENT (DELIVER TO CITY YARD AT 8095 LINCOLN AVE., RIVERSIDE)
- 16 REMOVE & SALVAGE SIGN
- 17 REMOVE & SALVAGE EXISTING STREET LIGHT
- 18 RELOCATE POWER POLE (BY OTHERS)
- 19 NOT USED
- 20 NOT USED
- 21 NOT USED
- 22 ABANDON PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 23 REMOVE EXISTING UTILITY MANHOLE
- 24 REMOVE AND SAVAGE EXISTING BUS STOP EQUIPMENT (DELIVER TO CITY YARD)
- 25 ABANDON SEWER AND MANHOLE
- 26 REMOVE EXISTING CONCRETE STRUCTURE

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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

PROFESSIONAL ENGINEER
 THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
△	REVISION - CONSTRUCTION NOTE SHEET REFERENCE	WYF	7/14/11
△	MODIFY MEDIAN, SIGNS & STRIPING	TTK	06/02/11
△	REVISION - ADD MANHOLE & MODIFY FLAP GATE	WYF	2/08/10

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
GENERAL NOTES GN-2		SHEET <u>3</u> OF <u>189</u>
HORIZ. SCALE: N/A	VERT. SCALE: N/A	FILE NO.

LEGEND

-----	PROPOSED UTILITY
-----e-----e-----	ELECTRICAL (UNDERGROUND)
-----T-----T-----	TELEPHONE (UNDERGROUND)
-----g-----	NATURAL GAS
-----OH-E-----	OVERHEAD LINE
-----v-----	WATER
-----s-----	SANITARY SEWER
-----18"-SD-----	STORM DRAIN
	CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
	COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
	CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL

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
Q:CL	CENTERLINE
CIDH	CAST-IN-DRILLED-HOLE
CLR	CLEAR
CONST	CONSTRUCT; CONSTRUCTION
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY (BUILDING FIRE CONTROL DEVICE)
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
LACDDPW	LA COUNTY DEPARTMENT OF PUBLIC WORKS
LH	LEFT HAND
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
ML OR MT	MAIN LINE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NB	NORTHBOUND
NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
PCC	PORTLAND CEMENT CONCRETE; POINT OF COMPOUND CURVE

ABBREVIATIONS (CONT.)

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PO	PUSHON
POB	POINT OF BEGINNING
PDE	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
ROW; R/W	RIGHT OF WAY
RW	RETAINING WALL
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	VARIES; VARIABLE
VERT	VERTICAL
WTR	WATER
+/-	PLUS OR MINUS

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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

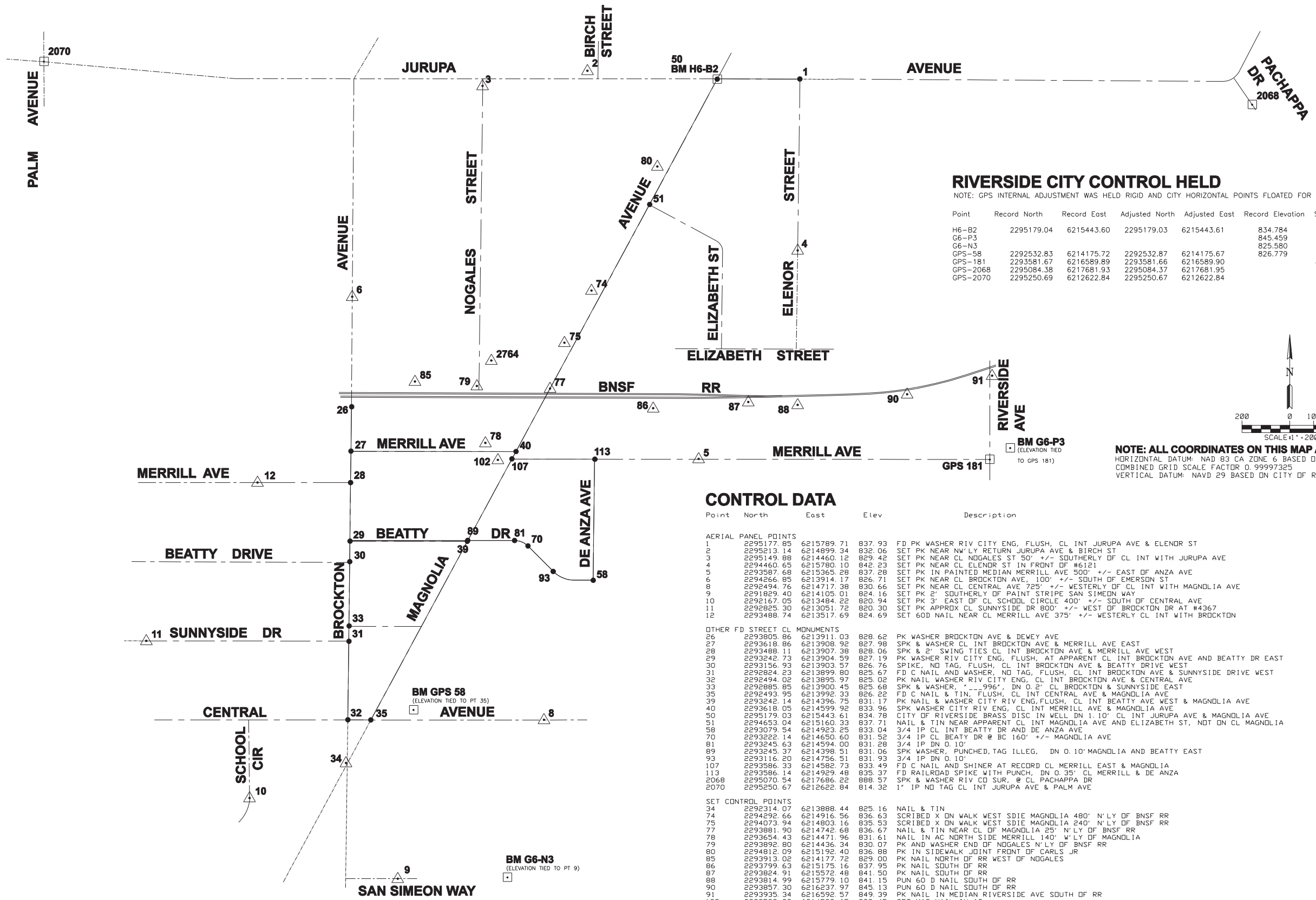
REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LEGEND & ABBREVIATIONS GN-3

ACCT. NO. W.O. NO.
R-4081
SHEET 4 OF 189
FILE NO.

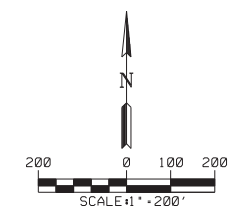
HORIZ. SCALE: N/A VERT. SCALE: N/A



RIVERSIDE CITY CONTROL HELD

NOTE: GPS INTERNAL ADJUSTMENT WAS HELD RIGID AND CITY HORIZONTAL POINTS FLOATED FOR BEST FIT)

Point	Record North	Record East	Adjusted North	Adjusted East	Record Elevation	Surveyed Elev
H6-B2	2295179.04	6215443.60	2295179.03	6215443.61	834.784	ALSO GPS-2069
G6-P3					845.459	
G6-N3					825.580	
GPS-58	2292532.83	6214175.72	2292532.87	6214175.67	826.779	
GPS-181	2293581.67	6216589.89	2293581.66	6216589.90		843.513
GPS-2068	2295084.38	6217681.93	2295084.37	6217681.95		
GPS-2070	2295250.69	6212622.84	2295250.67	6212622.84		



NOTE: ALL COORDINATES ON THIS MAP ARE GRID SCALE COORDINATES
 HORIZONTAL DATUM: NAD 83 CA ZONE 6 BASED ON CITY OF RIVERSIDE COORDINATE DATUM
 COMBINED GRID SCALE FACTOR 0.99997325
 VERTICAL DATUM: NAVD 29 BASED ON CITY OF RIVERSIDE BM'S

CONTROL DATA

Point	North	East	Elev	Description
AERIAL PANEL POINTS				
1	2295177.85	6215789.71	837.93	FD PK WASHER RIV CITY ENG, FLUSH, CL INT JURUPA AVE & ELENOR ST
2	2295213.14	6214899.34	832.06	SET PK NEAR NW'LY RETURN JURUPA AVE & BIRCH ST
3	2295149.88	6214460.12	829.42	SET PK NEAR CL NOGALES ST 50' +/- SOUTHERLY OF CL INT WITH JURUPA AVE
4	2294462.65	6215780.10	842.23	SET PK NEAR CL ELENOR ST IN FRONT OF #6121
5	2293587.68	6215365.28	837.28	SET PK IN PAINTED MEDIAN MERRILL AVE 500' +/- EAST OF ANZA AVE
6	2294266.85	6213914.17	826.71	SET PK NEAR CL BROCKTON AVE, 100' +/- SOUTH OF EMERSON ST
8	2292494.76	6214717.38	830.66	SET PK NEAR CL CENTRAL AVE 725' +/- WESTERLY OF CL INT WITH MAGNOLIA AVE
9	2291829.40	6214105.01	824.16	SET PK 2' SOUTHERLY OF PAINT STRIPE SAN SIMEON WAY
10	2292167.05	6213484.22	820.94	SET PK 3' EAST OF CL SCHOOL CIRCLE 400' +/- SOUTH OF CENTRAL AVE
11	2292825.30	6213051.72	820.30	SET PK APPROX CL SUNNYSIDE DR 800' +/- WEST OF BROCKTON DR AT #4367
12	2293488.74	6213517.69	824.69	SET 60D NAIL NEAR CL MERRILL AVE 375' +/- WESTERLY CL INT WITH BROCKTON
OTHER FD STREET CL MONUMENTS				
26	2293805.86	6213911.03	828.62	PK WASHER BROCKTON AVE & DEWEY AVE
27	2293618.86	6213908.92	827.98	SPK & WASHER CL INT BROCKTON AVE & MERRILL AVE EAST
28	2293488.11	6213907.38	828.06	SPK & 2" SWING TIES CL INT BROCKTON AVE & MERRILL AVE WEST
29	2293242.73	6213904.59	827.19	PK WASHER RIV CITY ENG, FLUSH, AT APPARENT CL INT BROCKTON AVE AND BEATTY DR EAST
30	2293156.93	6213903.57	826.76	SPIKE, NO TAG, FLUSH, CL INT BROCKTON AVE & BEATTY DRIVE WEST
31	2292824.23	6213899.80	825.67	FD C NAIL AND WASHER, NO TAG, FLUSH, CL INT BROCKTON AVE & SUNNYSIDE DRIVE WEST
32	2292494.02	6213895.97	825.02	PK NAIL WASHER RIV CITY ENG, CL INT BROCKTON AVE & CENTRAL AVE
33	2292885.85	6213900.45	825.68	SPK & WASHER, "996", DN 0.2" CL BROCKTON & SUNNYSIDE EAST
34	2292493.95	6213992.33	826.22	FD C NAIL & TIN, FLUSH, CL INT CENTRAL AVE & MAGNOLIA AVE
39	2293242.14	6214396.75	831.17	PK NAIL & WASHER CITY RIV ENG, FLUSH, CL INT BEATTY AVE WEST & MAGNOLIA AVE
40	2293618.05	6214599.92	833.96	SPK WASHER CITY RIV ENG, CL INT MERRILL AVE & MAGNOLIA AVE
50	2295179.03	6215443.61	834.78	CITY OF RIVERSIDE BRASS DISC IN WELL DN 1.10' CL INT JURUPA AVE & MAGNOLIA AVE
51	2294653.04	6215160.33	837.71	NAIL & TIN NEAR APPARENT CL INT MAGNOLIA AVE AND ELIZABETH ST, NOT DN CL MAGNOLIA
58	2293079.54	6214923.25	833.04	3/4 IP CL INT BEATTY DR AND DE ANZA AVE
70	2293222.14	6214650.60	831.52	3/4 IP CL BEATTY DR @ BC 160' +/- MAGNOLIA AVE
81	2293245.63	6214594.00	831.28	3/4 IP DN 0.10'
89	2293245.37	6214398.51	831.06	SPK WASHER, PUNCHED, TAG ILLEG, DN 0.10' MAGNOLIA AND BEATTY EAST
93	2293116.20	6214756.31	831.93	3/4 IP DN 0.10'
107	2293586.33	6214582.73	833.49	FD C NAIL AND SHINER AT RECORD CL MERRILL EAST & MAGNOLIA
113	2293586.14	6214929.48	835.37	FD RAILROAD SPIKE WITH PUNCH, DN 0.35' CL MERRILL & DE ANZA
2068	2295070.54	6217686.22	888.57	SPK & WASHER RIV CO SUR, @ CL PACHAPPA DR
2070	2295250.67	6212622.84	814.32	1" IP NO TAG CL INT JURUPA AVE & PALM AVE
SET CONTROL POINTS				
34	2292314.07	6213888.44	825.16	NAIL & TIN
74	2294292.66	6214916.56	836.63	SCRIBED X DN WALK WEST SDIE MAGNOLIA 480' N'LY OF BNSF RR
75	2294073.94	6214803.16	835.53	SCRIBED X DN WALK WEST SDIE MAGNOLIA 240' N'LY OF BNSF RR
77	2293881.90	6214742.68	836.67	NAIL & TIN NEAR CL OF MAGNOLIA 25' N'LY OF BNSF RR
78	2293654.43	6214471.96	831.61	NAIL IN AC NORTH SIDE MERRILL 140' W'LY OF MAGNOLIA
79	2293892.80	6214436.34	830.07	PK AND WASHER END OF NOGALES N'LY OF BNSF RR
80	2294812.09	6215192.40	836.88	PK IN SIDEWALK JOINT FRONT OF CARLS JR
85	2293913.02	6214177.72	829.00	PK NAIL NORTH OF RR WEST OF NOGALES
86	2293799.63	6215175.16	837.95	PK NAIL SOUTH OF RR
87	2293824.91	6215572.48	841.50	PK NAIL SOUTH OF RR
88	2293814.99	6215779.10	841.15	PUN 60 D NAIL SOUTH OF RR
90	2293857.30	6216237.97	845.13	PUN 60 D NAIL SOUTH OF RR
91	2293935.34	6216592.57	849.39	PK NAIL IN MEDIAN RIVERSIDE AVE SOUTH OF RR
102	2293583.93	6214523.65	832.45	SET MAG NAIL IN AC
2764	2293999.51	6214496.96	832.20	MAG NAIL EAST SIDE NOGALES ST 140' +/- N'LY BNSF RR

BM G6-N3
(ELEVATION TIED TO PT 9)

BM GPS 58
(ELEVATION TIED TO PT 35)

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 CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012

Surveying by:
TOWILL Surveying, Mapping and GIS Services
 2091 Business Center Drive, Suite 150
 Irvine, CA 92612-1130
 L.S. 6179
 KNISS A. LARSON PLS 6179

PROFESSIONAL LAND SURVEYOR
 STATE OF CALIFORNIA
 THOMAS T. KIM
 No. C 57374
 Exp. 3/31/10
 Rsp. 12-31-09
 CIVIL

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SURVEY CONTROL PLAN HC-1		SHEET 5 of 189
DESIGNED BY: _____		FILE NO.
REVISIONS	APPR. DATE	
HORIZ. SCALE: 1"=200'		VERT. SCALE: NA

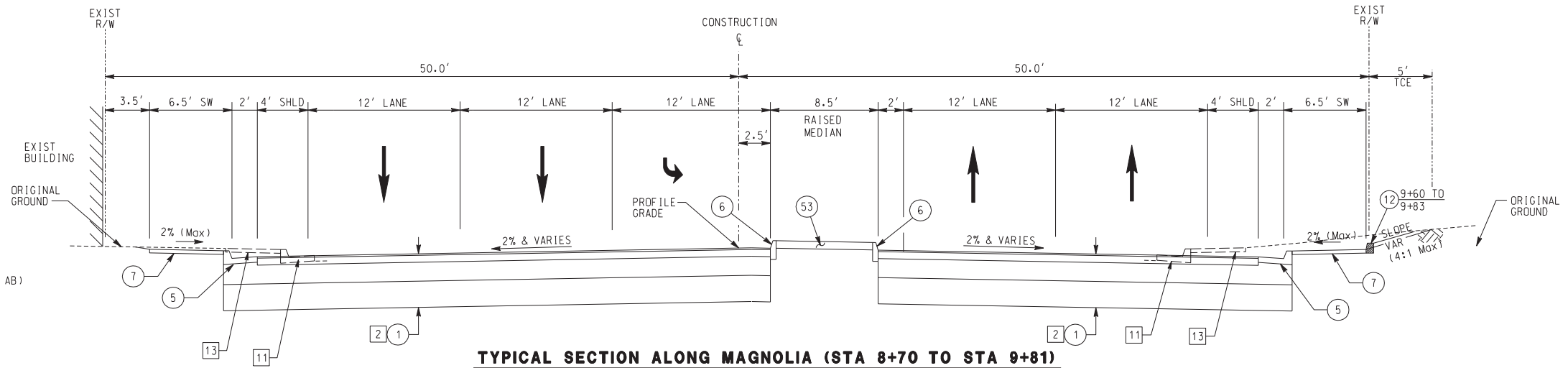
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CONSTRUCTION NOTES:

- ① CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN NO. 20
- ⑥ CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN NO. 200
- ⑦ CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN NO. 325
- ⑫ CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ⑮ CONSTRUCT CONCRETE BUS BAY PER APWA STD PLAN NO. 131-1. (ON 15" AB)
- ⑮ CONSTRUCT PATTERNED STAMPED CONCRETE

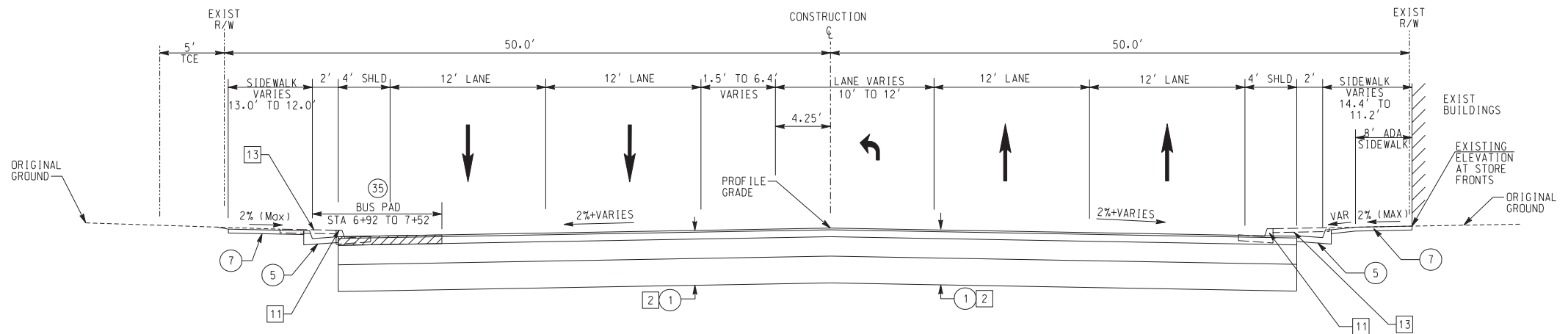
REMOVAL NOTES

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK



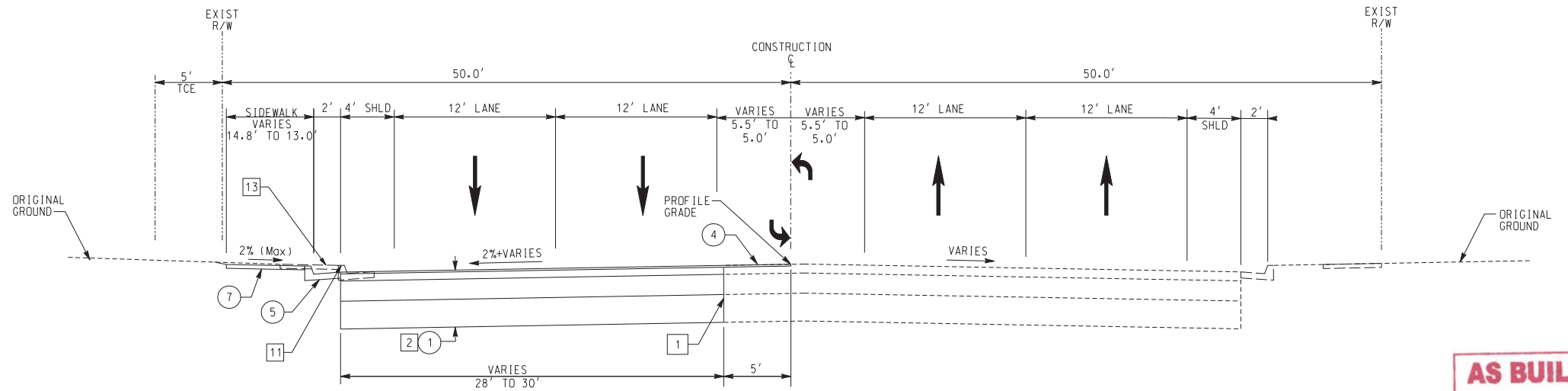
TYPICAL SECTION ALONG MAGNOLIA (STA 8+70 TO STA 9+81)

NO SCALE
T. I. = 10.5



**TYPICAL SECTION ALONG MAGNOLIA
STA 7+13 LT TO STA 8+35**

NO SCALE
T. I. = 10.5



**TYPICAL SECTION ALONG MAGNOLIA
STA 6+33 LT TO STA 7+13**

NO SCALE
T. I. = 10.5

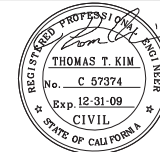
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2280 MARKET STREET
SUITE 100 RIVERSIDE, CA 92501-2110
DATE: 9/14/09



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△	MODIFY MEDIAN, SIGNS & STRIPING	TTK 06/02/11

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS

ACCT. NO.
W.O. NO.

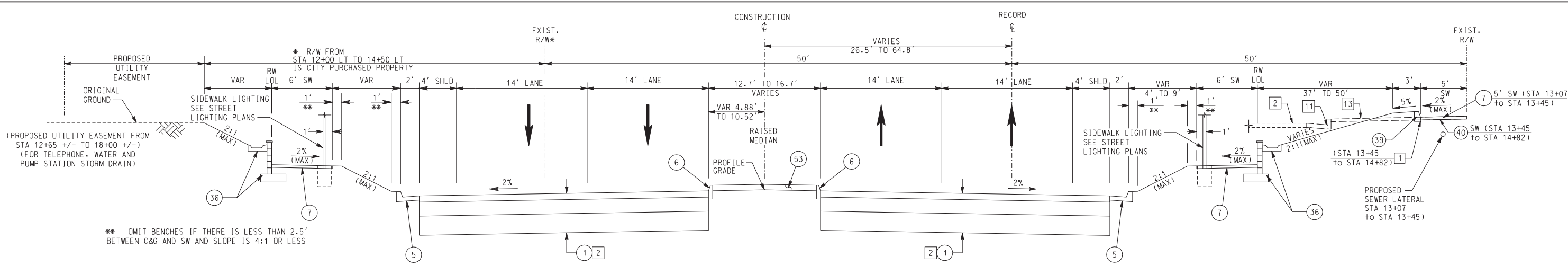
R-4081

TYPICAL SECTIONS TS-1

SHEET 6 OF 189

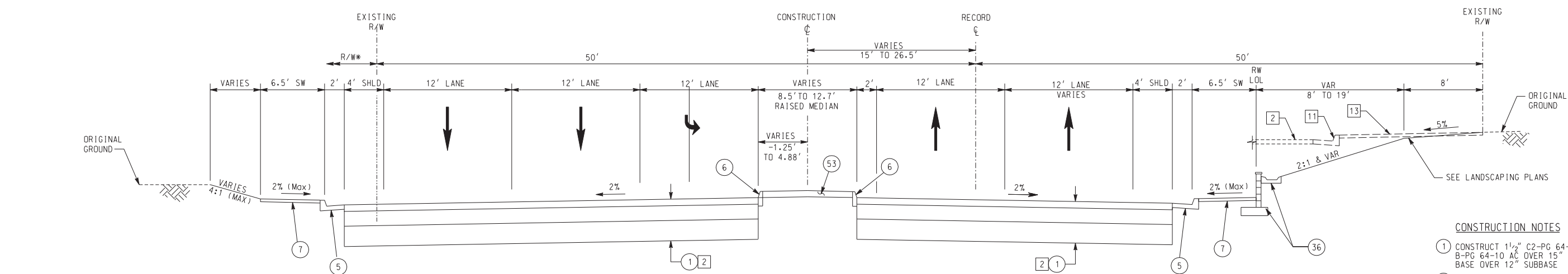
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FILE NO.



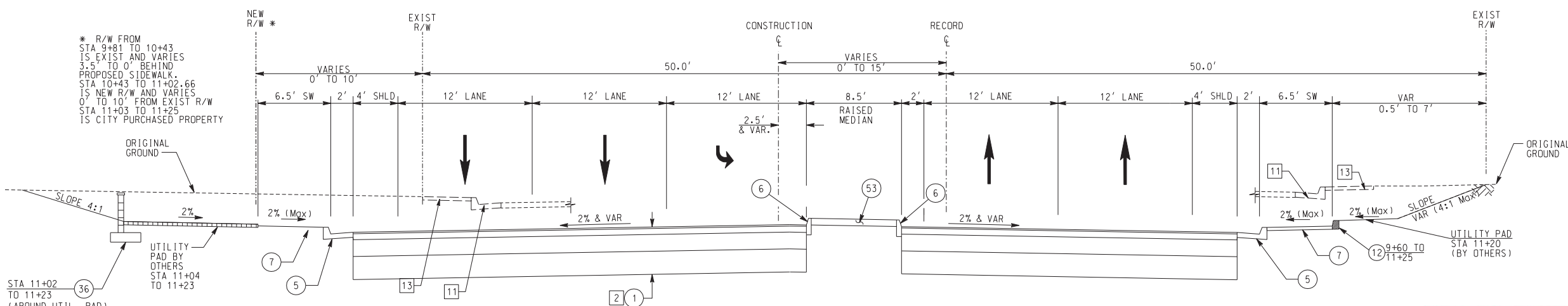
TYPICAL SECTION ALONG MAGNOLIA (STA 12+00 TO STA 14+65)

NO SCALE T.I.=10.5



TYPICAL SECTION ALONG MAGNOLIA (STA 11+25 TO STA 12+00)

NO SCALE T.I.=10.5



TYPICAL SECTION ALONG MAGNOLIA (STA 9+81 TO STA 11+25)

NO SCALE T.I.=10.5

CONSTRUCTION NOTES

- 1 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 6 CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- 7 CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- 12 CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 36 CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- 39 CONSTRUCT TYPE A1-150(6) 6" PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- 40 PROTECT IN PLACE
- 53 CONSTRUCT PATTERNED STAMPED CONCRETE

REMOVAL NOTES

- 1 SAWCUT EXISTING PAVEMENT
- 2 REMOVE EXISTING AC PAVEMENT
- 11 REMOVE CURB & GUTTER
- 13 REMOVE EXISTING CONCRETE SIDEWALK

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 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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

REGISTERED PROFESSIONAL ENGINEER
 THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
MARK	REVISIONS	APPR. DATE
MODIFY MEDIAN, SIGNS & STRIPING		TTK 06/02/11

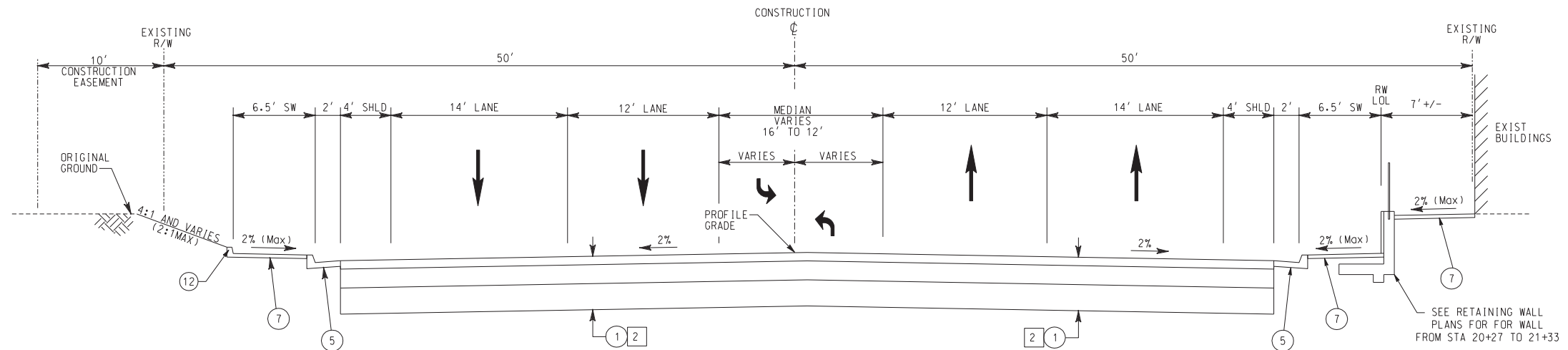
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
TYPICAL SECTIONS TS-2
 HORIZ. SCALE: _____ VERT. SCALE: _____
 ACCT. NO. W.O. NO. R-4081
 SHEET 7 OF 189
 FILE NO. _____

CONSTRUCTION NOTES

- ① CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑥ CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑫ CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ③⑥ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- ③⑦ CONSTRUCT TYPE A METAL HAND RAILING PER APWA STD PLAN No. 606-2
- ⑤③ CONSTRUCT PATTERNED STAMPED CONCRETE

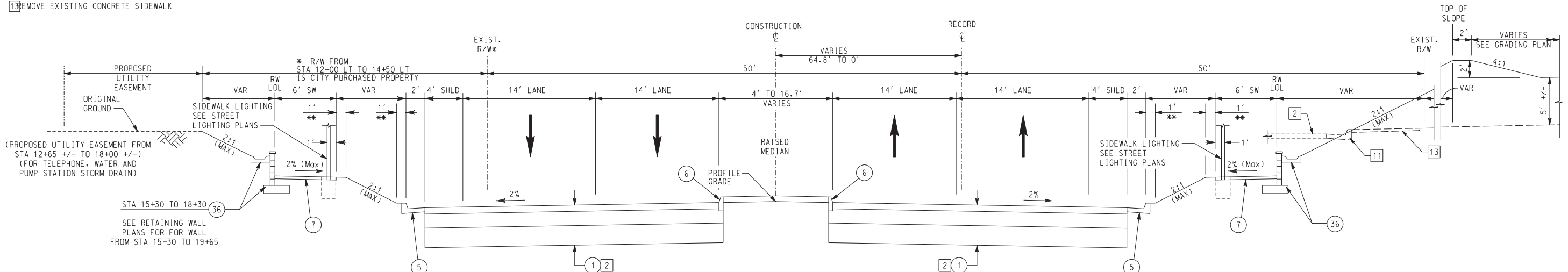
REMOVAL NOTES

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK



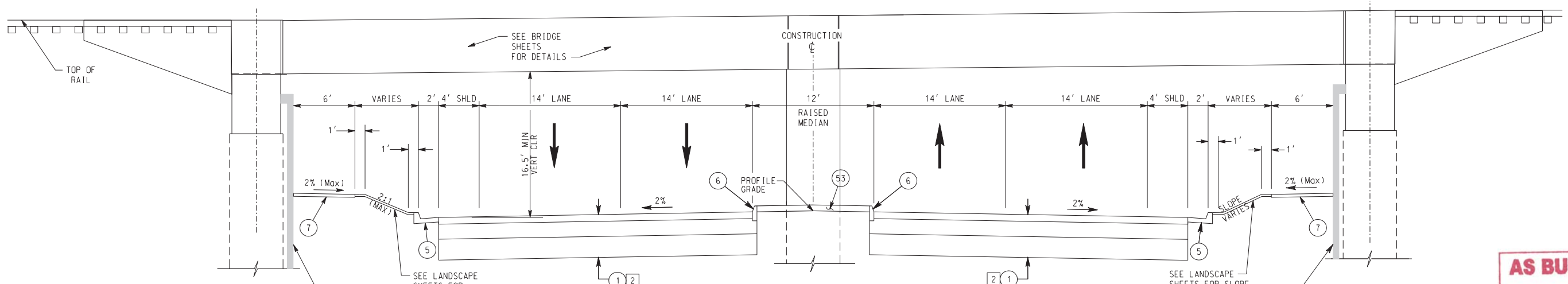
TYPICAL SECTION ALONG MAGNOLIA (STA 19+50 TO STA 22+00)

NO SCALE T.I.=10.5



TYPICAL SECTION ALONG MAGNOLIA (STA 15+75 TO STA 19+50)

NO SCALE T.I.=10.5



TYPICAL SECTION ALONG MAGNOLIA AT RAIL BRIDGE (STA 14+65 TO 15+75)

NO SCALE T.I.=10.5

AS BUILT
 CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012

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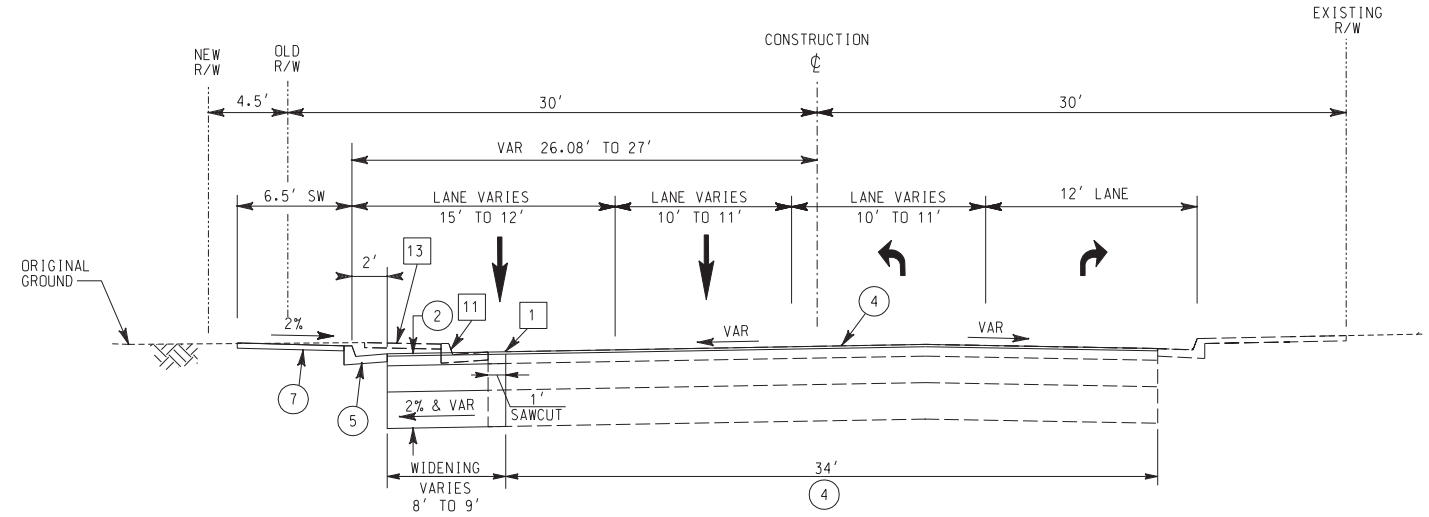
<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>HDR ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE: 9/14/09</p>		MODIFY MEDIAN, SIGNS & STRIPING REVISIONS: _____ TTK 06/02/11 APRR. DATE: _____	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS TYPICAL SECTIONS TS-3	ACCT. NO. _____ W.O. NO. _____ R-4081 SHEET 8 of 189
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	HORIZ. SCALE: _____ VERT. SCALE: _____	FILE NO. _____

CONSTRUCTION NOTES

- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ③⑥ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- ④① CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL

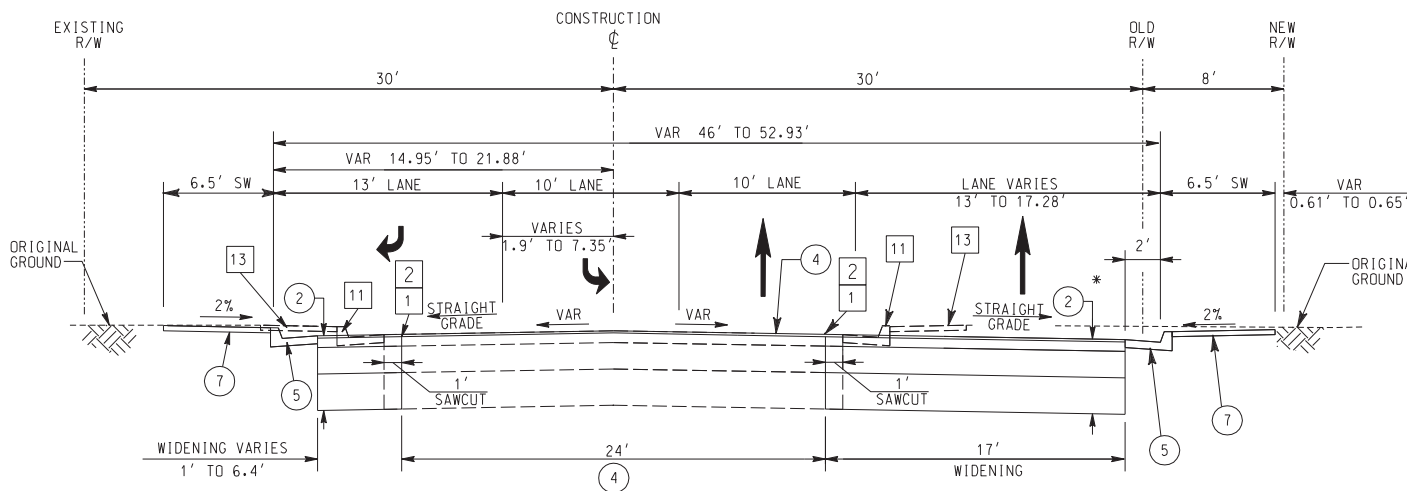
REMOVAL NOTES

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ①① REMOVE CURB & GUTTER
- ①③ REMOVE EXISTING CONCRETE SIDEWALK



TYPICAL SECTION BEATTY DRIVE (STA 42+58 TO STA 45+40 EAST OF MAGNOLIA)

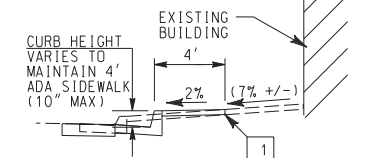
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TYPICAL SECTION BEATTY DRIVE (STA 32+35 TO STA 34+40 WEST OF MAGNOLIA)

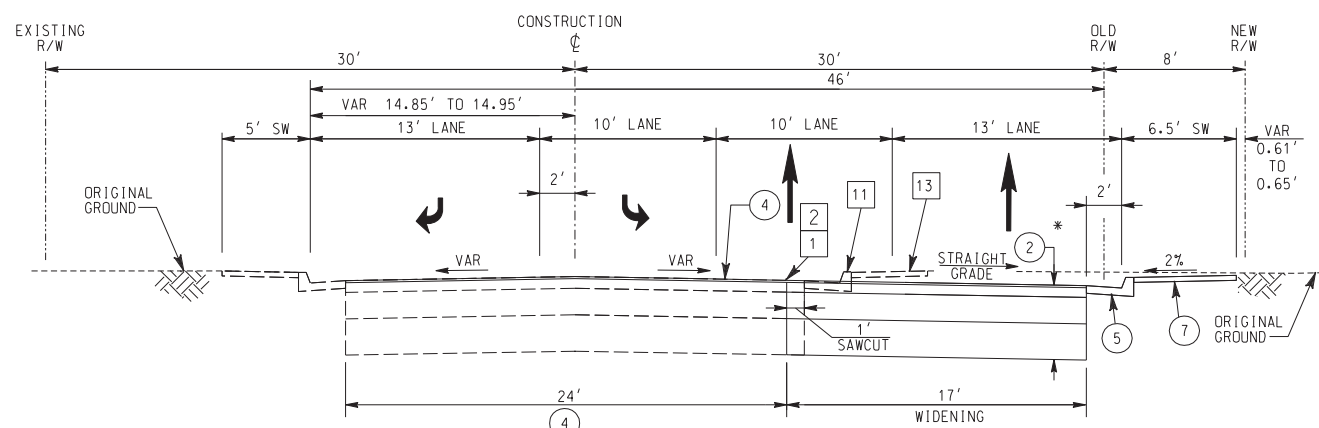
NO SCALE T.I.=8.5

* REMOVE ALL TREES, CURB AND DECORATIVE BLOCK WALL BEHIND EXISTING SIDE WALK



****ADA SIDEWALK DETAIL (STA 42+00 TO 42+58)**

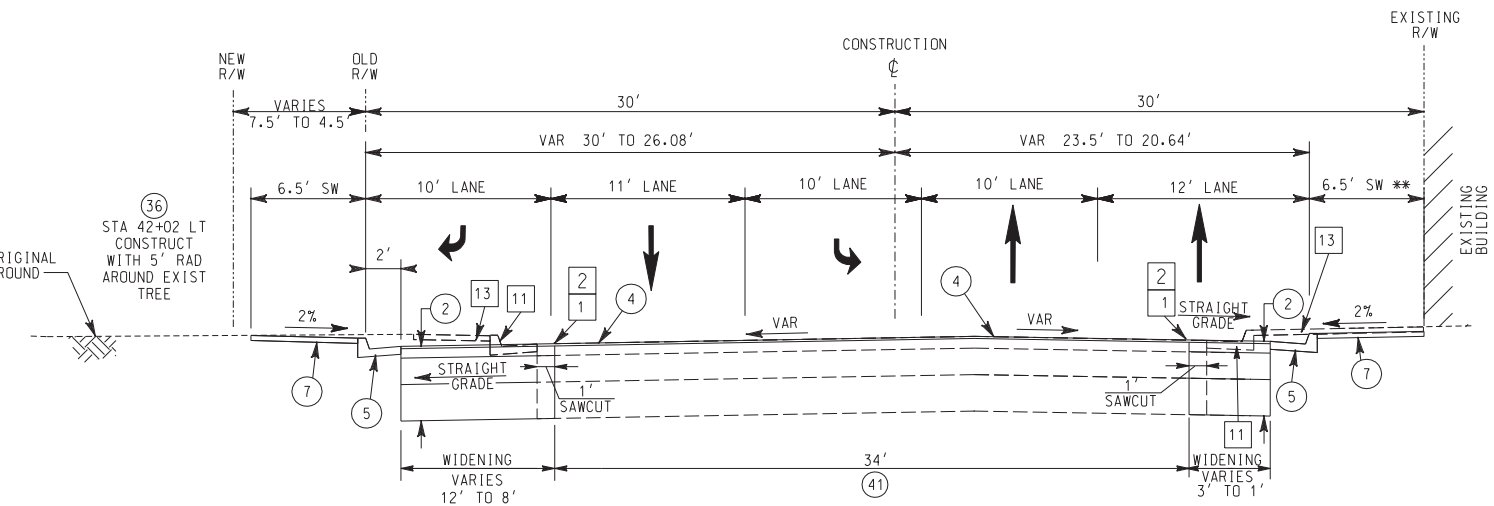
NO SCALE



TYPICAL SECTION BEATTY DRIVE (STA 30+25 TO STA 32+35 WEST OF MAGNOLIA)

NO SCALE T.I.=8.5

* REMOVE ALL TREES, CURB AND DECORATIVE BLOCK WALL BEHIND EXISTING SIDE WALK WITHIN CONSTRUCTION LIMITS.



TYPICAL SECTION BEATTY DRIVE (STA 40+50 TO STA 42+58 EAST OF MAGNOLIA)

NO SCALE T.I.=8.5

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THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
TYPICAL SECTIONS TS-4

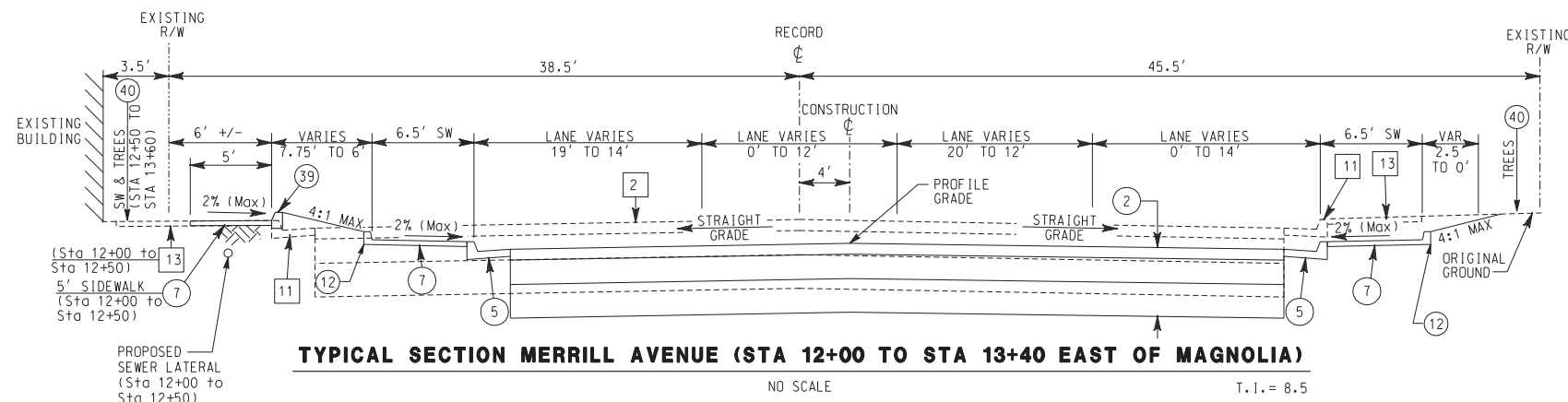
ACCT. NO. W.O. NO.
R-4081
SHEET 9 OF 189
FILE NO.

CONSTRUCTION NOTES

- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑫ CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ⑯ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- ⑳ CONSTRUCT TYPE A1-150(6) 6" PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- ④⑩ PROTECT IN PLACE

REMOVAL NOTES

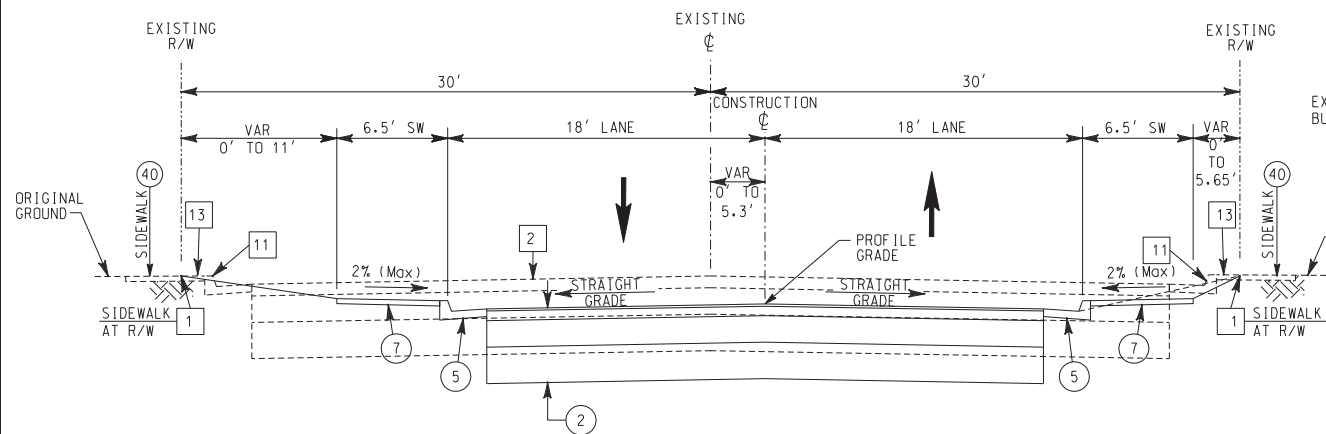
- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK



TYPICAL SECTION MERRILL AVENUE (STA 12+00 TO STA 13+40 EAST OF MAGNOLIA)

NO SCALE

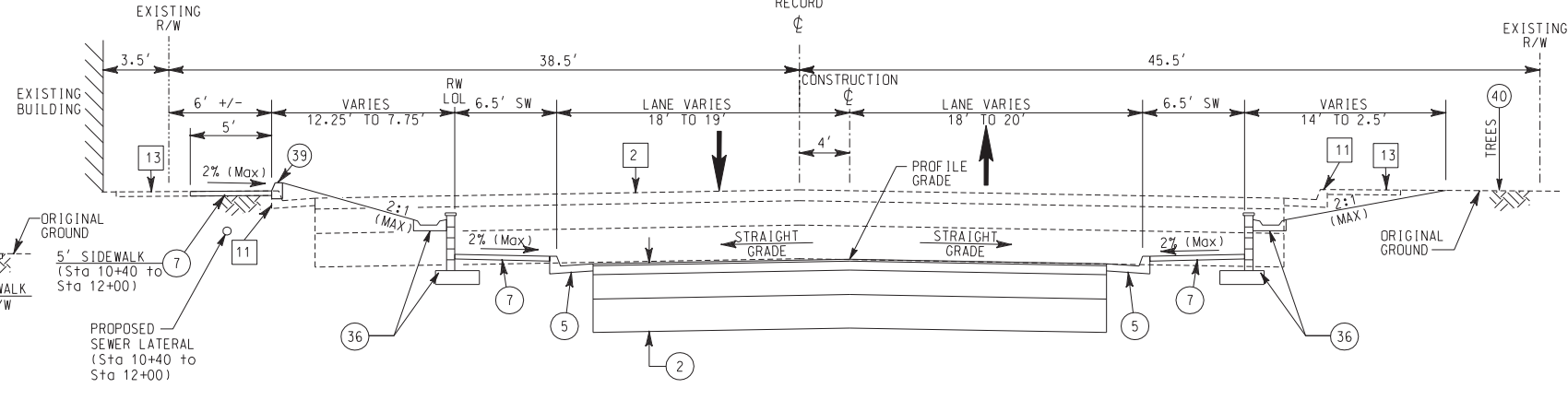
T.I. = 8.5



TYPICAL SECTION MERRILL AVENUE (STA 53+77 TO STA 55+00 WEST OF MAGNOLIA)

NO SCALE

T.I. = 8.5

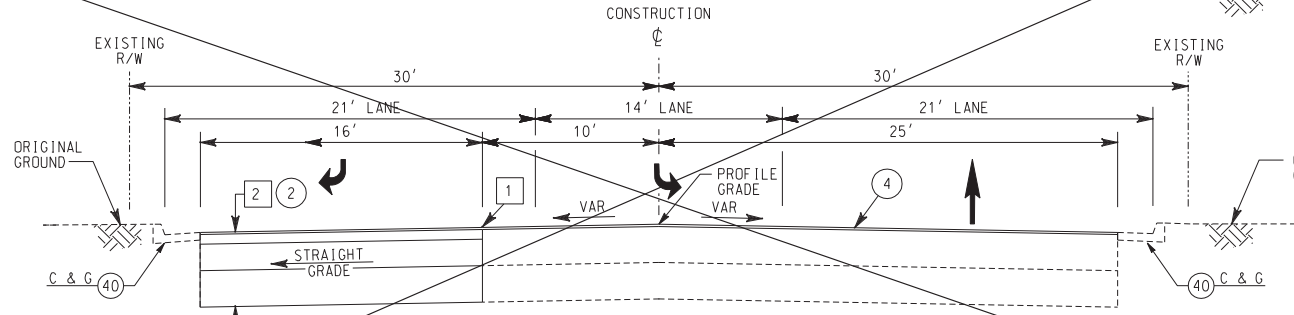


TYPICAL SECTION MERRILL AVENUE (STA 10+63 TO STA 12+00 EAST OF MAGNOLIA)

NO SCALE

T.I. = 8.5

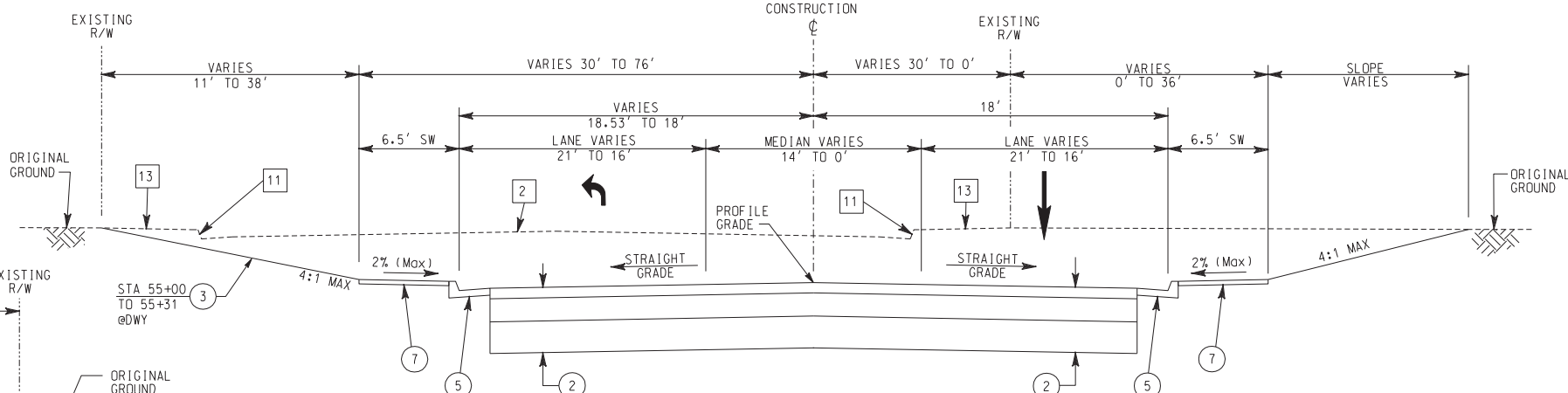
STRUCTURAL SECTION DELETED



TYPICAL SECTION MERRILL AVENUE (STA 50+69 TO STA 53+77 WEST OF MAGNOLIA)

NO SCALE

T.I. = 8.5



TYPICAL SECTION MERRILL AVENUE (STA 55+00 TO STA 55+70 WEST OF MAGNOLIA)

NO SCALE

T.I. = 8.5

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 CONTRACT NO. _____
 DATE: 11/16/2012

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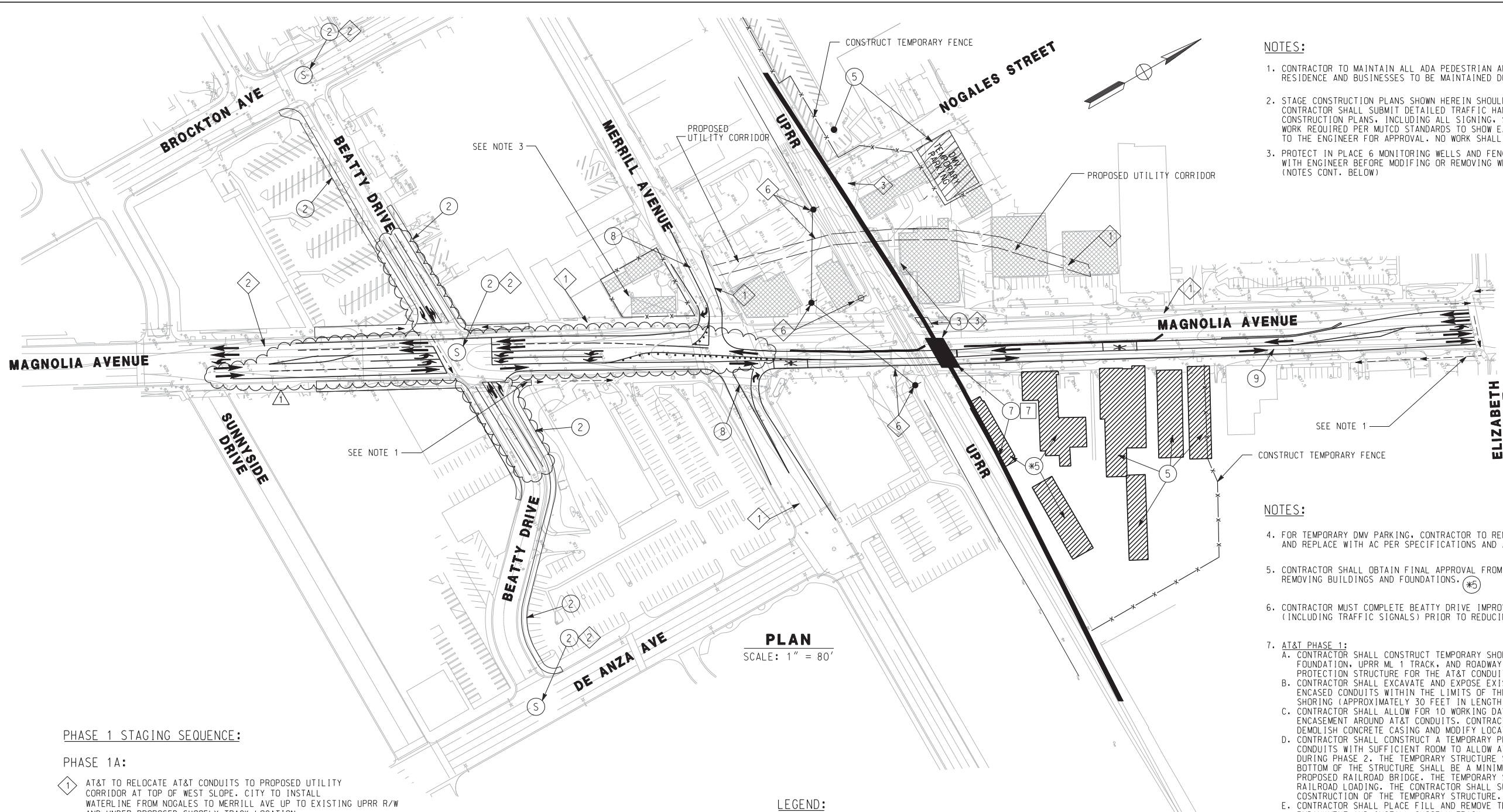
REGISTERED PROFESSIONAL ENGINEER
 THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
TYPICAL SECTIONS TS-5
 HORIZ. SCALE: _____ VERT. SCALE: _____

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 10 of 189
 FILE NO. _____



NOTES:

1. CONTRACTOR TO MAINTAIN ALL ADA PEDESTRIAN AND VEHICULAR ACCESS TO LOCAL RESIDENCE AND BUSINESSES TO BE MAINTAINED DURING ALL STAGES.
2. STAGE CONSTRUCTION PLANS SHOWN HEREIN SHOULD BE USED AS A GUIDE ONLY. CONTRACTOR SHALL SUBMIT DETAILED TRAFFIC HANDLING PLANS AND STAGE CONSTRUCTION PLANS, INCLUDING ALL SIGNING, STRIPING AND TRAFFIC SIGNAL WORK REQUIRED PER MUTCD STANDARDS TO SHOW EACH STAGE OF CONSTRUCTION TO THE ENGINEER FOR APPROVAL. NO WORK SHALL COMMENCE PRIOR TO SUCH APPROVAL.
3. PROTECT IN PLACE 6 MONITORING WELLS AND FENCE DURING PHASE 1 & 2. COORDINATE WITH ENGINEER BEFORE MODIFYING OR REMOVING WELLS OR FENCE. SEE SPECIFICATIONS. (NOTES CONT. BELOW)

NOTES:

4. FOR TEMPORARY DMV PARKING, CONTRACTOR TO REMOVE ALL INTERFERING BUILDING FOUNDATIONS AND REPLACE WITH AC PER SPECIFICATIONS AND APPROVAL FROM ENGINEER.
5. CONTRACTOR SHALL OBTAIN FINAL APPROVAL FROM ENGINEER BEFORE REMOVING BUILDINGS AND FOUNDATIONS. (*5)
6. CONTRACTOR MUST COMPLETE BEATTY DRIVE IMPROVEMENTS (INCLUDING TRAFFIC SIGNALS) PRIOR TO REDUCING MAGNOLIA TO 2 LANES.

AT&T PHASE 1:

- A. CONTRACTOR SHALL CONSTRUCT TEMPORARY SHORING TO PROTECT THE EXISTING SIGNAL GATE FOUNDATION, UPRR ML 1 TRACK, AND ROADWAY FOR THE CONSTRUCTION OF THE TEMPORARY PROTECTION STRUCTURE FOR THE AT&T CONDUITS.
- B. CONTRACTOR SHALL EXCAVATE AND EXPOSE EXISTING CONCRETE ENCASUREMENT AROUND AT&T ENCASED CONDUITS WITHIN THE LIMITS OF THE SHOOFLY TRACK EMBANKMENT NORTH OF BRIDGE SHORING (APPROXIMATELY 30 FEET IN LENGTH).
- C. CONTRACTOR SHALL ALLOW FOR 10 WORKING DAYS FOR AT&T TO DEMOLISH EXISTING CONCRETE ENCASUREMENT AROUND AT&T CONDUITS. CONTRACTOR SHALL PROVIDE AT&T WITH ACCESS TO DEMOLISH CONCRETE CASING AND MODIFY LOCATION OF CONDUITS.
- D. CONTRACTOR SHALL CONSTRUCT A TEMPORARY PROTECTION STRUCTURE AROUND THE EXISTING AT&T CONDUITS WITH SUFFICIENT ROOM TO ALLOW AT&T TO LOWER AND SPREAD OUT THE CONDUITS DURING PHASE 2. THE TEMPORARY STRUCTURE SHALL BE A MINIMUM OF 8'-6" IN WIDTH AND THE BOTTOM OF THE STRUCTURE SHALL BE A MINIMUM OF 3 FEET BELOW THE SOFFIT OF THE PROPOSED RAILROAD BRIDGE. THE TEMPORARY STRUCTURE SHALL BE DESIGNED TO WITHSTAND RAILROAD LOADING. THE CONTRACTOR SHALL SUPPORT AND PROTECT AT&T CONDUITS DURING THE CONSTRUCTION OF THE TEMPORARY STRUCTURE.
- E. CONTRACTOR SHALL PLACE FILL AND REMOVE TEMPORARY SHORING AS REQUIRED AND CONSTRUCT EMBANKMENT AND INSTALL SHOOFLY TRACK.

AT&T PHASE 2:

- A. CONTRACTOR SHALL EXCAVATE AND EXPOSE THE CONDUITS 150 FEET ON EACH SIDE OF THE PROPOSED RAILROAD BRIDGE FOR A BOTTOM TRENCH WIDTH OF 12'-6" IN WIDTH. THE CONTRACTOR SHALL EXCAVATE AS REQUIRED TO FACILITATE AT&T TO LOWER THE CONDUITS TO A MINIMUM OF 3 FEET BELOW PROPOSED BRIDGE SOFFIT. CONTRACTOR SHALL CONSTRUCT TEMPORARY SHORING AS REQUIRED TO SUPPORT THIS TASK.
- B. CONTRACTOR SHALL ALLOW AT&T 40 WORKING DAYS TO DEMOLISH ENCASUREMENT AROUND CONDUITS AND LAY CABLES FLAT AND INSTALL 2 EMERGENCY BACKUP SERVICE CONDUITS.

AT&T PHASE 3:

- A. UPON AT&T AND THE ENGINEER'S APPROVAL, THE CONTRACTOR SHALL PROPERLY AND LEGALLY REMOVE AND DISPOSE OF ANY INTERFERING PORTIONS OF CABLE DUCTS, CONDUITS, VAULTS, MANHOLES AND CABLES. THE EXISTING CONDUITS ARE TRANSITE, WHICH CONTAINS ASBESTOS.

NOTE: CONTRACTOR SHALL SUBMIT DESIGN PLANS AND CALCULATIONS SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF CALIFORNIA FOR ALL TEMPORARY STRUCTURES INCLUDING SHORING AND AT&T PROTECTION STRUCTURE FOR REVIEW AND APPROVAL BY THE ENGINEER AND UPRR. CONTRACTOR SHALL COORDINATE ALL SHORING CONSTRUCTION IN THE VICINITY OF UPRR SIGNALS WITH THE ENGINEER AND UPRR.

PLAN
SCALE: 1" = 80'

LEGEND:

- ◇ BY CITY OR BY OTHERS
- BY CONTRACTOR
- BY UPRR
- POWER LINE
- ➔ DIRECTION OF TRAFFIC (DETOUR)
- ▨ BUILDINGS TO BE DEMOLISHED BY OTHERS PRIOR TO CONSTRUCTION. ANY REMAINING FOUNDATIONS TO BE REMOVED BY CONTRACTOR.
- ▩ BUILDINGS AND FOUNDATIONS TO BE DEMOLISHED BY THE CONTRACTOR. (SEE NOTE 5)
- ➔ DIRECTION OF PEDESTRIAN (DETOUR)
- Ⓢ NEW TRAFFIC SIGNAL

PHASE 1 STAGING SEQUENCE:

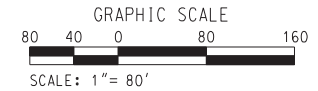
PHASE 1A:

- 1 AT&T TO RELOCATE AT&T CONDUITS TO PROPOSED UTILITY CORRIDOR AT TOP OF WEST SLOPE. CITY TO INSTALL WATERLINE FROM NOGALES TO MERRILL AVE UP TO EXISTING UPRR R/W AND UNDER PROPOSED SHOOFLY TRACK LOCATION.
- 2 RELOCATE ALL UTILITIES FROM THE SOUTH END OF PROJECT TO NORTH OF BEATTY AVE. CONSTRUCT ROADWAY WIDENING IMPROVEMENTS ALONG BEATTY DRIVE AND INTERSECTIONS AT BROCKTON, MAGNOLIA AND DE ANZA. INSTALL TRAFFIC SIGNALS AT ALL 3 INTERSECTIONS. REMOVE SIGNAL AT INTERSECTION OF MAGNOLIA AND MERRILL AVE. (SEE NOTE 6)
- 3 CONSTRUCT SHORING, STORM DRAINS AND UTILITY CROSSINGS NEEDED BEFORE SHOOFLY TRACK IS IN OPERATION. CONTRACTOR SHALL CONSTRUCT TEMPORARY STRUCTURE AROUND EXISTING AT&T CONDUITS (APPROX. 24-4" DIA CONDUITS) TO SUPPORT SHOOFLY TRACK TO ALLOW FOR DEPRESSING AND SPREADING OF CONDUITS. THIS WILL ENABLING BRIDGE CONSTRUCTION AFTER SHOOFLY TRACK IS IN SERVICE. EXISTING AT&T CONDUIT MUST BE PROTECTED UNTIL RELOCATED AT&T LINE IS IN OPERATION. (SEE NOTE 7)
- 4 DRY UTILITY COMPANIES TO INSTALL TEMPORARY SERVICES TO EXISTING PROPERTIES TO MAINTAIN SERVICE.
- 5 REMODEL DMV PARKING LOT TO CLEAR RAILROAD SHOOFLY. ADD TEMPORARY PARKING AREA FOR DMV(SEE NOTE 4). DEMOLISH REMAINING BUILDINGS(SEE NOTE 5)
- 6 RELOCATE POWER AERIAL LINES AND COMMUNICATION LINES RUNNING ALONG SOUTHERLY RAILROAD RIGHT OF WAY. WORK TO BE PERFORMED BY RIVERSIDE PUBLIC UTILITIES.

PHASE 1B:

- 7 CONSTRUCT TEMPORARY RAILROAD SHOOFLY, GRADE CROSSING AND SIGNALS.
- 8 RESTRICT MERRILL AVE TRAFFIC TO RIGHT TURNS ONLY
- 9 DETOUR TRAFFIC TO ONE LANE IN EACH DIRECTION ON EXISTING MAGNOLIA NORTHBOUND LANES

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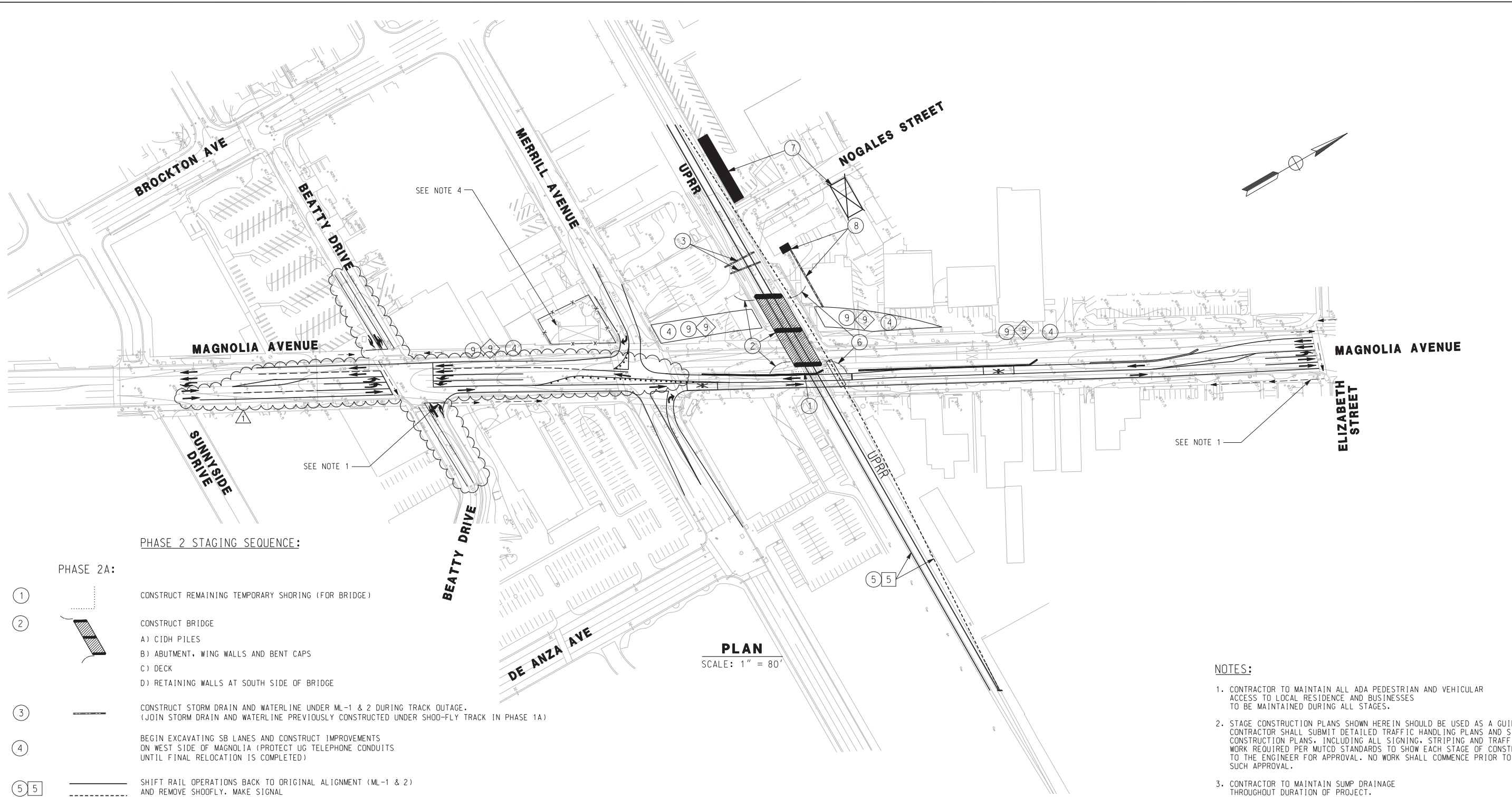
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REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	ADDENDUM-REVISED BEATTY/MAG. TRAF. LANES	TTK	10/2/09
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		CHECKED BY	

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
PHASE I STAGING SEQUENCE C8-1		SHEET 11 OF 189
HORIZ. SCALE: 1" = 80'		VERT. SCALE: N/A
FILE NO.		



PHASE 2 STAGING SEQUENCE:

PHASE 2A:

- ① CONSTRUCT REMAINING TEMPORARY SHORING (FOR BRIDGE)
- ② CONSTRUCT BRIDGE
A) CIDH PILES
B) ABUTMENT, WING WALLS AND BENT CAPS
C) DECK
D) RETAINING WALLS AT SOUTH SIDE OF BRIDGE
- ③ CONSTRUCT STORM DRAIN AND WATERLINE UNDER ML-1 & 2 DURING TRACK OUTAGE.
(JOIN STORM DRAIN AND WATERLINE PREVIOUSLY CONSTRUCTED UNDER SHOOF-FLY TRACK IN PHASE 1A)
- ④ BEGIN EXCAVATING SB LANES AND CONSTRUCT IMPROVEMENTS ON WEST SIDE OF MAGNOLIA (PROTECT UG TELEPHONE CONDUITS UNTIL FINAL RELOCATION IS COMPLETED)
- ⑤ ⑤ SHIFT RAIL OPERATIONS BACK TO ORIGINAL ALIGNMENT (ML-1 & 2) AND REMOVE SHOOF-FLY. MAKE SIGNAL MODIFICATIONS FOR ML-1 & 2 THROUGH DETOUR

PHASE 2B:

- ⑥ CONSTRUCT RETAINING WALLS AT NORTH SIDE OF BRIDGE
- ⑦ RECONSTRUCT DMV PARKING AND CLOSE TEMPORARY PARKING LOT
- ⑧ BEGIN CONSTRUCTION OF PUMP STATION
- ⑨ ⑨ COMPLETE EXCAVATING SB LANES AND INSTALL UTILITIES IN SB LANES.

PLAN
SCALE: 1" = 80'

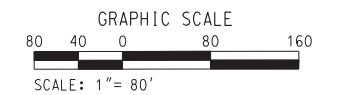
LEGEND:

- ◇ BY CITY OR BY OTHERS
- BY CONTRACTOR
- BY UPRR
- > DIRECTION OF PEDESTRIAN (DETOUR)

NOTES:

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3. CONTRACTOR TO MAINTAIN SUMP DRAINAGE THROUGHOUT DURATION OF PROJECT.
4. PROTECT IN PLACE 6 MONITORING WELLS AND FENCE DURING PHASE 1 & 2. COORDINATE WITH ENGINEER BEFORE MODIFYING OR REMOVING WELLS OR FENCE. SEE SPECIFICATIONS.

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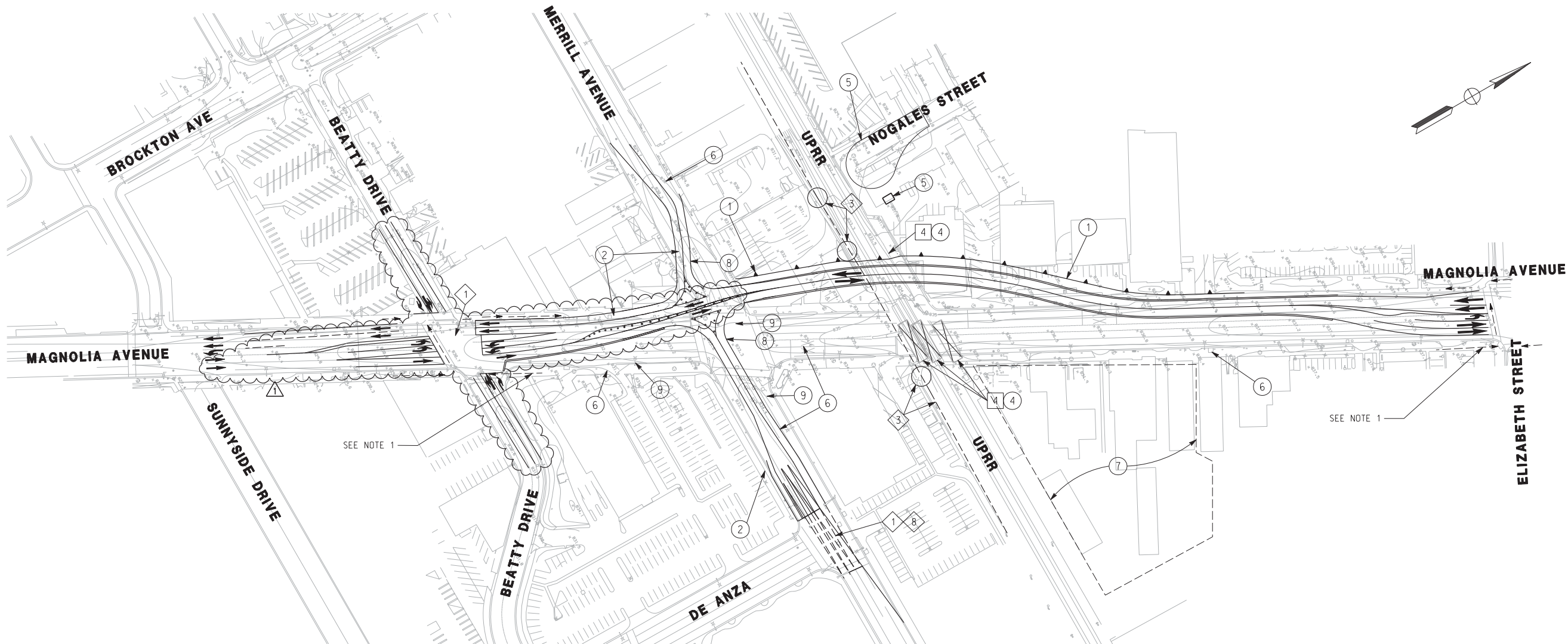
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PHASE 2 STAGING SEQUENCE CS-2		SHEET <u>12</u> OF <u>189</u>
HORIZ. SCALE: 1" = 80' VERT. SCALE: N/A		FILE NO.



PLAN
SCALE: 1" = 80'

PHASE 3 STAGING SEQUENCE:

PHASE 3A:

- ① ① CONSTRUCT REMAINDER OF IMPROVEMENTS ON WEST SIDE OF MAGNOLIA TO FACILITATE OPENING PHASE 3 DETOUR AND MAINTAIN ADA PEDESTRIAN ACCESS. MODIFY SIGNAL AT BEATTY/MAGNOLIA AND DE ANZA/MERRILL TO ACCOMMODATE DETOUR.
- ② SHIFT DETOUR TO ONE LANE IN EACH DIRECTION IN SB LANES OF MAGNOLIA. MOVE MERRILL TRAFFIC TO THE SOUTH TO CONSTRUCT NORTH SIDE IMPROVEMENTS AND MAINTAIN RIGHT TURNS ONLY CONNECTIONS TO MAGNOLIA. USE MINIMAL CLOSURES TO MERRILL TO CONSTRUCT TO FINAL MAGNOLIA GRADE.
- ③ RELOCATE 69KV POWER POLES TO FINAL LOCATION.
- ④ ④ REMOVE ALL RAIL CROSSING PANELS. MODIFY RAIL SIGNALS FOR FINAL CONDITION. CONSTRUCT FINAL GRADING AT BRIDGE APPROACHES.
- ⑤ CONSTRUCT NOGALES CUL-DE-SAC AND FINALIZE PUMP STATION OPERATIONS FOR SB LANES.
- ⑥ EXCAVATE EAST SIDE OF MAGNOLIA FOR NB LANES AND THE NORTH SIDE OF MERRILL. CONSTRUCT IMPROVEMENTS ON THESE SIDES.

PHASE 3B:

- ⑦ CLEAR AND GRADE SITE TO 5'+ HIGHER.
- ⑧ ⑧ MOVE DETOUR ON MERRILL AVE TO NORTH SIDE IMPROVEMENTS. MODIFY SIGNAL AT DE ANZA/MERRILL. USE MINIMAL CLOSURES TO MERRILL TO CONSTRUCT TO FINAL MAGNOLIA GRADE.
- ⑨ FINALIZE UTILITY RELOCATIONS AND SERVICE CONNECTIONS.
- ⑩ CONSTRUCT SOUTH SIDE IMPROVEMENTS ON MERRILL AVE AND MAINTAIN RIGHT TURNS ONLY CONNECTIONS TO MAGNOLIA. USE MINIMAL CLOSURES TO MERRILL TO CONSTRUCT TO FINAL MAGNOLIA GRADE.

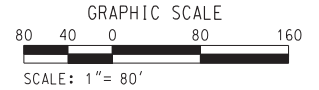
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3. CONTRACTOR TO MAINTAIN SUMP DRAINAGE THROUGHOUT DURATION OF PROJECT.

LEGEND:

- ◇ BY CITY OR BY OTHERS
- BY CONTRACTOR
- BY UPRR
- DIRECTION OF TRAFFIC (DETOUR)
- - - DIRECTION OF PEDESTRIAN (DETOUR)

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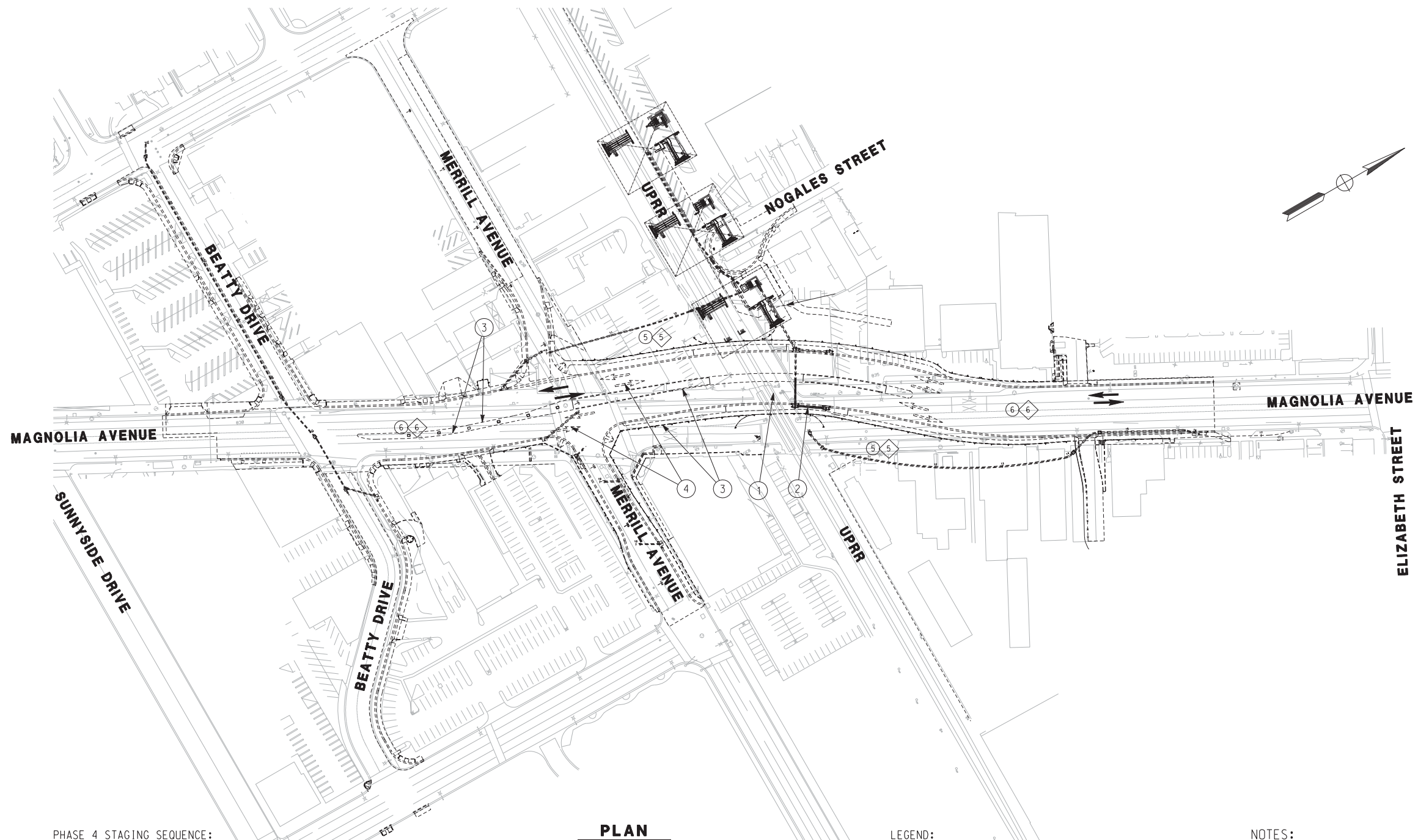
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PHASE 3 STAGING SEQUENCE CS-3		SHEET 13 OF 189
HORIZ. SCALE: 1" = 80' VERT. SCALE: N/A		FILE NO.



PHASE 4 STAGING SEQUENCE:

PLAN
SCALE: 1" = 80'

LEGEND:

NOTES:

PHASE 4A:

- ① COMPLETE EXCAVATING NORTHBOUND LANES.
- ② CONSTRUCT NORTHBOUND LANE STORM DRAIN TO CONNECT TO PUMP STATION
- ③ CONSTRUCT REMAINDER OF IMPROVEMENTS ON EAST SIDE OF MAGNOLIA TO FACILITATE OPENING TRAFFIC ON NORTHBOUND LANES.

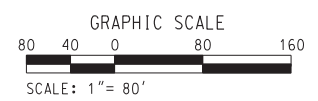
- ◇ BY CITY OR BY OTHERS
- BY CONTRACTOR
- BY UPRR
- ➔ DIRECTION OF TRAFFIC (DETOUR FOR PHASE 4A)
- ⇄ DIRECTION OF TRAFFIC (DETOUR FOR PHASE 4B)

- 1. CONTRACTOR TO MAINTAIN ALL ADA PEDESTRIAN AND VEHICULAR ACCESS TO LOCAL RESIDENCE AND BUSINESSES TO BE MAINTAINED DURING ALL STAGES.
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- 3. CONTRACTOR TO MAINTAIN SUMP DRAINAGE THROUGHOUT DURATION OF PROJECT.

PHASE 4B:

- ④ OPEN BOTH NORTHBOUND AND SOUTHBOUND LANES FOR TEMPORARY DETOURS TO FACILITATE CONSTRUCTION OF FINAL IMPROVEMENTS.
- ⑤ COMPLETE RETAINING WALLS, SIDEWALKS, LANDSCAPING, IRRIGATION, STREET LIGHTS, ANY FINAL OFFSITE IMPROVEMENTS AND FINAL PAVING
- ⑥ COMPLETE FINAL SIGNING, STRIPING AND SIGNAL MODIFICATIONS TO OPEN FINAL CONDITIONS

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012



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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
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	MODIFY MEDIAN, SIGNS & STRIPING	TTK	06/02/11
	REVISIONS	APPR.	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PHASE 4 STAGING SEQUENCE C8-4
HORIZ. SCALE: 1" = 80' VERT. SCALE: N/A

ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 14 OF 189
FILE NO. _____

GENERAL

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES AND PROTECT IN PLACE WHETHER SHOWN ON THE PLAN OR NOT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR WHEN IN THE VICINITY OF ANY UTILITY LINES TO NOTIFY ALL UTILITIES WHEN CONSTRUCTION WORK BEGINS AND TO ARRANGE FOR A REPRESENTATIVE OF THE UTILITY TO BE PRESENT IF THE CONTRACTOR'S OPERATIONS ARE IN CLOSE PROXIMITY TO ANY LINES. IN THEIR EXISTING OR RELOCATED POSITION WHICH COULD CREATE A HAZARDOUS CONDITION. CONTRACTOR SHALL COORDINATE ITS ACTIVITIES WITH UTILITY COMPANIES.
- NO FIELD CHANGES WILL BE PERMITTED WITHOUT DIRECT WRITTEN AUTHORIZATION FROM THE ENGINEER.
- CONTRACTOR SHALL COORDINATE WORK WHICH AFFECTS ADJACENT PROPERTY OWNERS. ANY QUESTIONS OR AGREEMENTS BETWEEN ADJACENT PROPERTY OWNERS AND CONTRACTOR SHALL BE MADE IN WRITING. A COPY OF SUCH AGREEMENT SHALL BE PROVIDED TO THE ENGINEER.
- SUBGRADE PROFILE ELEVATION IS 3.00' BELOW TOP OF RAIL ON PROPOSED TRACKS.
- CONTRACTOR TO REFER TO THE PROJECT FOR TECHNICAL SPECIFICATIONS FOR STORM WATER POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROLS.

SURVEY AND STATIONING

- RAILROAD STATIONING FOR THIS PROJECT FOR PROFILES AND ALIGNMENTS IS BASED ON STATIONS ESTABLISHED FOR THE CENTERLINE OF THE EXISTING UPRR RAILWAY MAINLINE ON TANGENT AND SPIRALED CURVES UNLESS OTHERWISE NOTED.
- CROSS SECTION ELEVATION ON EXISTING CENTERLINES ARE AT THE TOP OF SUBGRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL SURVEY CONTROL MONUMENTS. IN THE EVENT MONUMENTS ARE DAMAGED OR DESTROYED BY THE CONTRACTOR, THE ENGINEER WILL REPLACE THE MONUMENT AT THE CONTRACTOR'S SOLE EXPENSE.
- GRADING IS BASED ON THE EXISTING TRACK CENTERLINE AS SHOWN ON PLANS AND NOTES SUPPLIED.

DESIGN CRITERIA

- DISTANCE FROM TOP OF RAIL ELEVATION TO TOP OF SUBGRADE AT C OF TRACK
- REFER TO SHOOFLY CROSS SECTIONS, SHTS T-8 TO T-11 FOR ACTUAL SECTIONS TO BE CONSTRUCTED.
- MAINLINE SHOOFLY DESIGN SPEEDS ARE 55 MPH PASSENGER AND 40 FREIGHT.
- VERTICAL PROFILE OF RECONSTRUCTED TRACKS MT1 AND MT2 SHALL MATCH EXISTING CONDITIONS.

SCALES:

SHOOFLY PLANS & PROFILES
 FULL SIZE: HORIZONTAL 1" = 40'
 VERTICAL 1" = 8'
 HALF SIZE: HORIZONTAL 1" = 80'
 VERTICAL 1" = 16'

SHOOFLY CROSS-SECTION
 FULL SIZE: HORIZONTAL 1" = 10'
 VERTICAL 1" = 10'
 HALF SIZE: HORIZONTAL 1" = 20'
 VERTICAL 1" = 20'

RAILROAD BRIDGE DESIGNATION

- UPRR - BR 55.20
 LOS ANGELES DIVISION
 LOS ANGELES SUBDIVISION

LEGEND

- EXISTING TRACK
- EXISTING ROW
- PROPOSED TRACK
- ▲▲▲ REMOVE AND RECONSTRUCT TRACK
- SHIFTED TRACK
- TRACK TO BE SHIFTED

ABBREVIATIONS

- APPROX APPROXIMATELY
- CONC CONCRETE
- CONSTR CONSTRUCTION
- CP CONTROL POINT
- DBL DOUBLE
- EA SUPERELEVATION (ACTUAL)
- ELEC. ELECTRICAL
- ELEV ELEVATION
- EO EQUATION
- EXIST EXISTING
- FO FIBER OPTIC CABLE
- GND GROUND
- HOEL HAND OPERATED ELECTRIC LOCK
- LH LEFT HAND
- LT LEFT
- ML/MT MAIN LINE/ MAIN TRACK
- MP MILE POST
- N.T.S./NS NOT TO SCALE / NO SCALE
- OG ORIGINAL GROUND
- OPP OPPOSITE
- PCS POINT OF CURVE TO SPIRAL
- P.S. POINT OF SWITCH
- PP POWER POLE (UTILITY POLE)
- PS TANGENT TO SPIRAL
- PSC POINT OF SPIRAL TO CURVE
- PT SPIRAL TO TANGENT
- PVC POINT OF VERTICAL CURVE
- PVI POINT OF VERTICAL INTERSECTION
- PVT POINT OF VERTICAL TANGENCY
- PI POINT OF HORIZONTAL INTERSECTION
- ROW, R/W UPRR RIGHT OF WAY
- RH RIGHT HAND
- RT RIGHT
- S/G SUBGRADE
- SD STORM DRAIN
- SHLD SHOULDER
- TF TRACK FOOT
- TO TURNOUT
- T/R TOP OF RAIL
- TRK TRACK
- TYP TYPICAL
- XING GRADE CROSSING

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE 11/16/2012

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 RIVERSIDE, CA 92501-2110

DATE _____

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

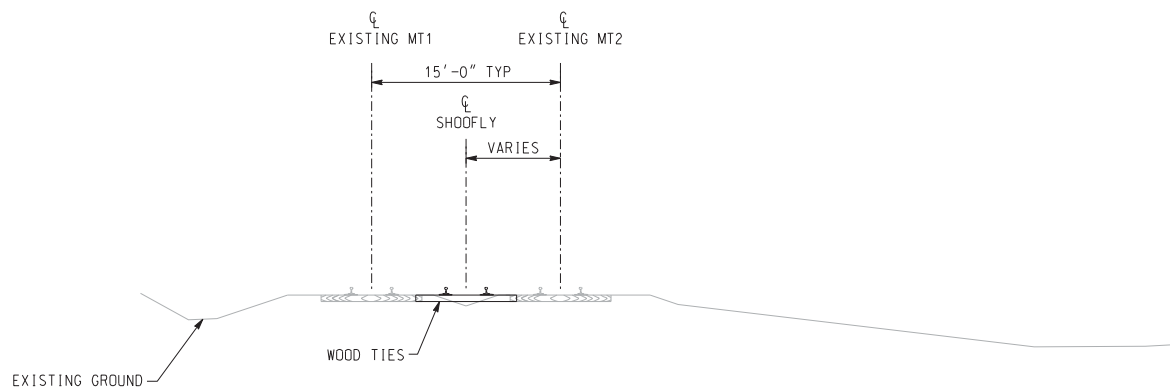
SHOOFLY GENERAL NOTES T-1

HORIZ. SCALE: N/A VERT. SCALE: N/A

ACCT. NO. W.O. NO. **R-4081**

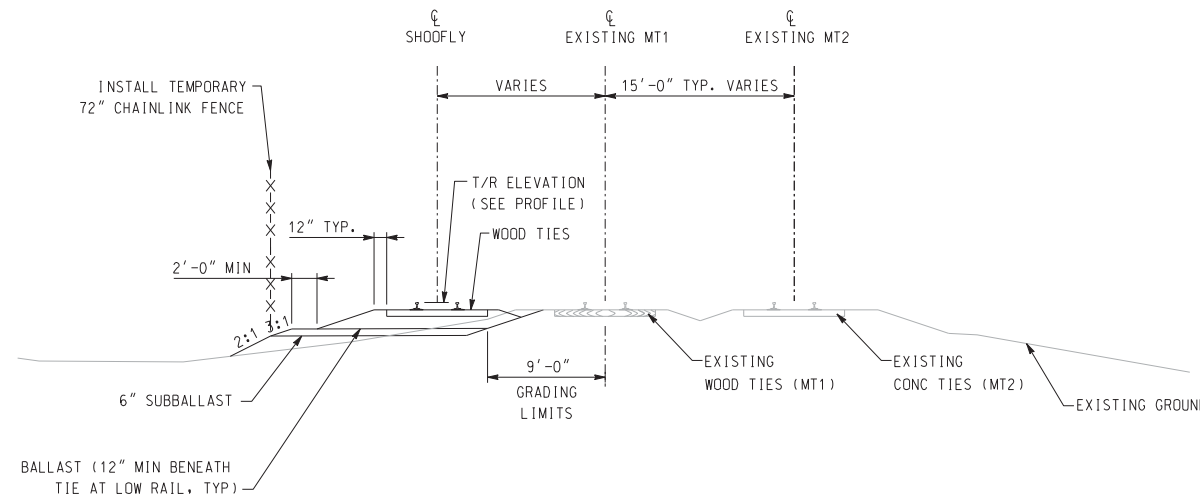
SHEET 15 OF 189

FILE NO. _____



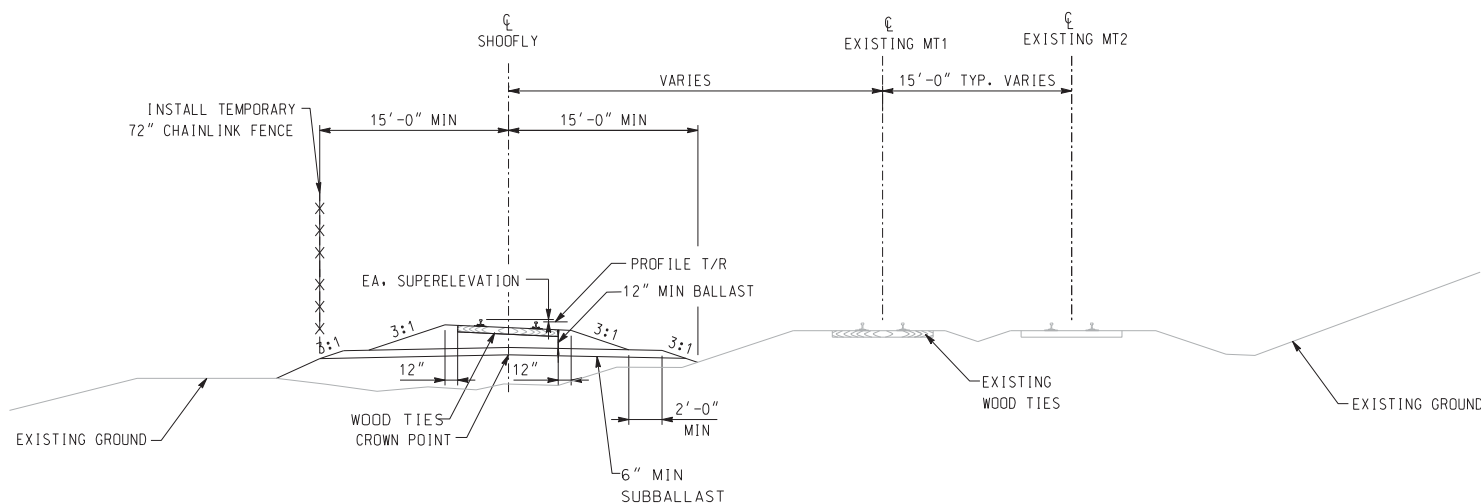
TYPICAL SECTION SHOOFLY

UPRR CONTROLLED SECTION
 EXACT STATIONS DETERMINED BY UPRR
 APPROX MT1 STA 2893+53.87 TO
 APPROX MT11 STA 2905+21.79 (WORK BY UPRR FORCES)
 NOT TO SCALE



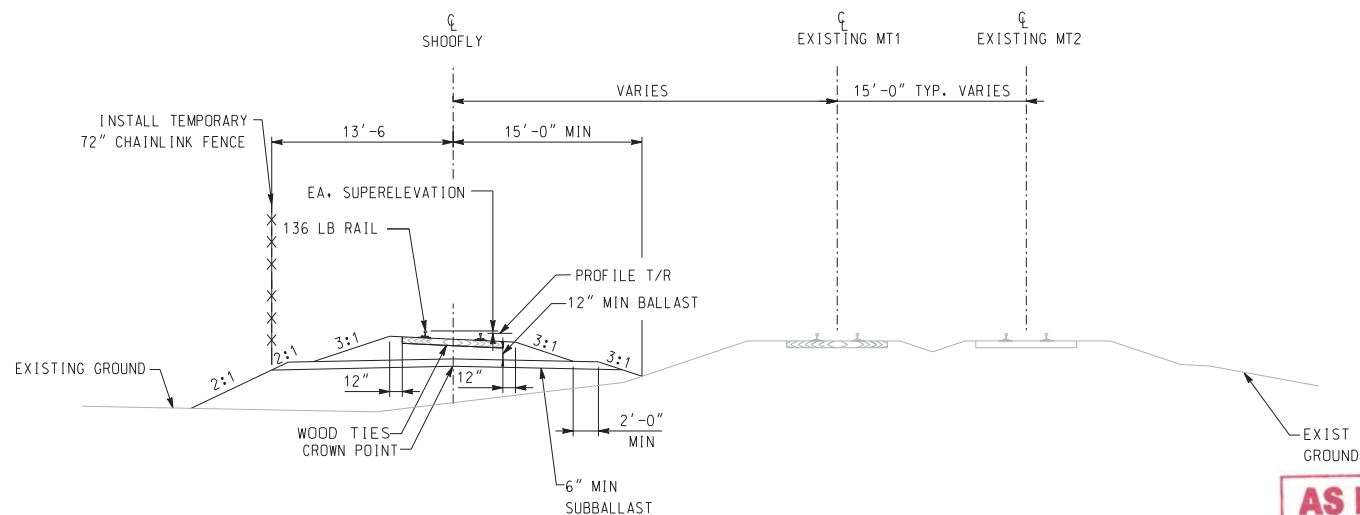
TYPICAL SECTION SHOOFLY

STA 13+56.59 TO STA 16+96.54
 STA 24+50.00 TO STA 25+15.95
 STA 25+15.95 TO STA 31+39.60 (WORK BY UPRR FORCES)
 NOT TO SCALE



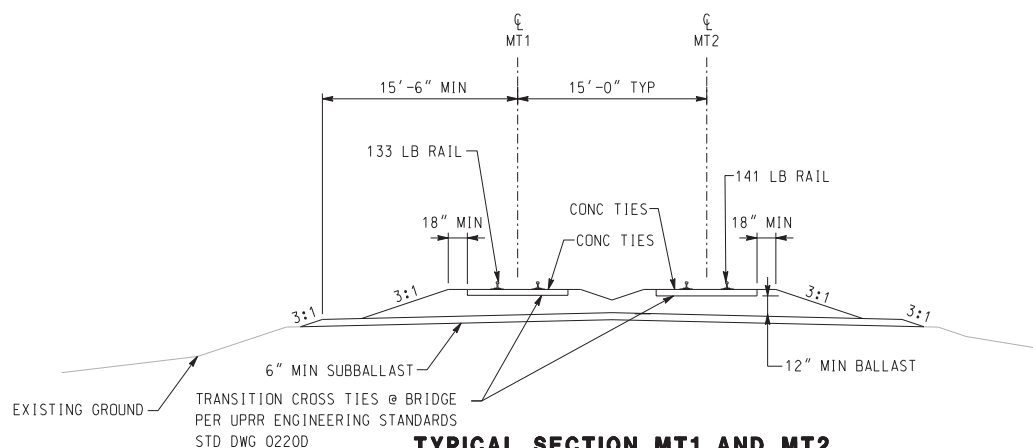
TYPICAL SECTION SHOOFLY

STA 13+56.59 TO STA 16+96.54 (WORK BY UPRR FORCES)
 STA 16+96.54 TO STA 23+50.00
 NOT TO SCALE



TYPICAL SECTION SHOOFLY

STA 23+50.00 TO STA 24+50.00
 NOT TO SCALE



TYPICAL SECTION MT1 AND MT2

STA 2912+00.00 TO WEST END OF BRIDGE AND
 EAST END OF BRIDGE TO STA 2915+00.00 (WORK BY UPRR FORCES)
 NOT TO SCALE

TRANSITION CROSS TIES @ BRIDGE
 PER UPRR ENGINEERING STANDARDS
 STD DWG 0220D

NOTES:

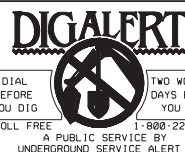
1. DISTANCE FROM TOP OF RAIL ELEVATION TO TOP OF SUBGRADE AT ϕ OF UPRR TRACK IS 3.00' ON TANGENT TRACK.
2. REFER TO CROSS SECTIONS, SHTS T-8 TO T-11 FOR ACTUAL SECTIONS TO BE CONSTRUCTED.
3. A TEMPORARY DITCH WILL ONLY BE CONSTRUCTED WHERE NECESSARY TO GRADE TO DRAIN.
4. CONTRACTOR SHALL PLACE ALL SUB-GRADE AND SUB-BALLAST MATERIAL.

AS BUILT

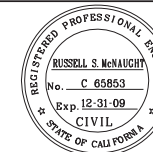
CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
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MARK	REVISIONS	APPR.	DATE

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

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 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
TYPICAL SECTIONS AND DETAILS T-2
 HORIZ. SCALE: _____ VERT. SCALE: _____

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 16 of 189
 FILE NO. _____

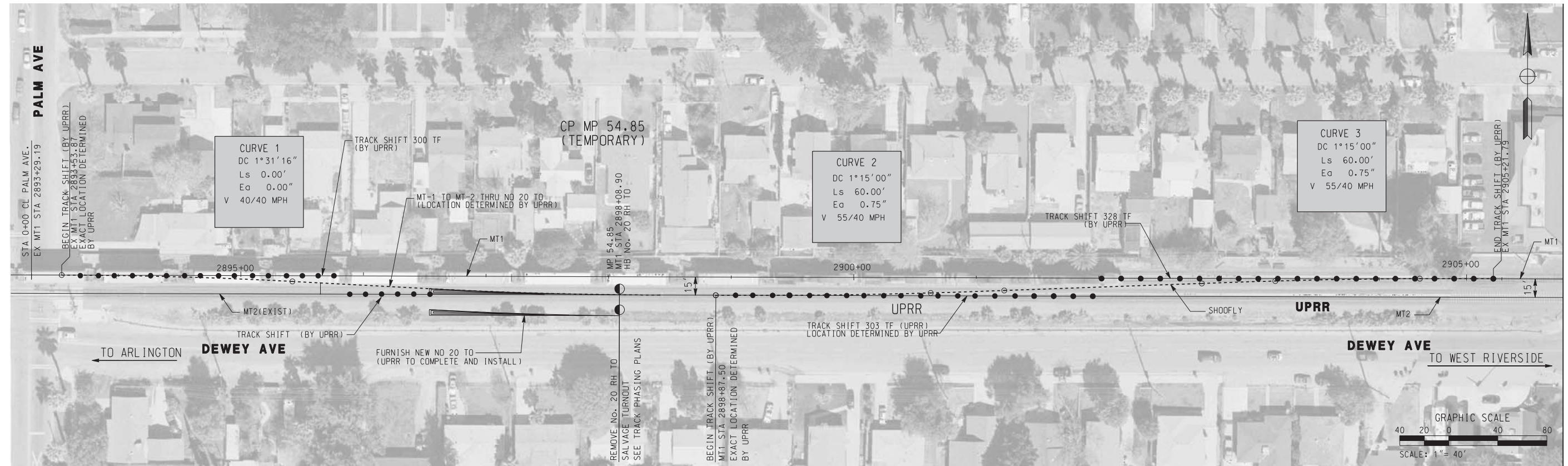
MAGNOLIA SHOOFLY GEOMETRY DATA							CURVE DATA						SPIRAL DATA						
CURVE No.	PT. DESC.	DISTANCE (feet)	BEARING	STATION	NORTHING	EASTING	RADIUS (feet)	DEGREE OF CURVE	DELTA	LENGTH (feet)	EA (in)	V* (mph)	Ls (feet)	THETA	Lt (feet)	St (feet)	X (feet)	Y (feet)	
CURVE-4	PS		S 89°48'48" E	13+56.59	2293862.6210	6213966.4584													
	PSC			14+16.59	2293862.5564	6214026.4582							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PI				2293862.8780	6244124.3143	4583.66	1°15'00"	2°26'46"	195.68	0.75	40/55							
	PCS			16+12.27	2293867.3756	6214222.0675							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PT	160.72	N 86°59'26" E	16+72.27	2293870.3948	6214281.9914													
CURVE-5	PS			18+32.99	2293878.8319	6214442.4823													
	PSC			18+92.99	2293881.8511	6214502.4062							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PI				2293893.4241	6214753.9395	4583.66	1°15'00"	6°17'19"	503.09	0.75	40/55							
	PCS			23+96.08	2293877.3752	6215005.2269							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PT	168.86	S 85°58'14" E	24+56.08	2293873.2897	6215065.0875													
CURVE-6	PS			26+24.94	2293861.4240	6215233.5356													
	PSC			26+84.94	2293857.3385	6215293.3962							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PI				2293845.9693	6215471.4111	4583.66	1°15'00"	4°27'26"	356.58	0.75	40/55							
	PCS			30+41.52	2293848.4687	6215649.7711							60.00	0°22'30"	40.00	20.00	60.00	0.13	
	PT		N 88°49'20" E	31+01.52	2293849.5711	6215709.7609													

NOTE:

1. CURVE NUMBERS 1, 2 AND 3 ARE ON PLAN VIEW BELOW.
THE LOCATION OF THESE CURVES WILL BE DETERMINED BY UPRR BASED ON FIELD CONDITIONS.

* Vfreight/Vpassenger

GEOMETRY TABLE



LEGEND:

	NEW TRACK
	REMOVE TRACK
	SHIFTED TRACK
	TRACK TO BE SHIFTED

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. *[Number]*
DATE: *11/16/2012*

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DATE: _____

RUSSELL S. McNAUGHT
No. C 65853
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

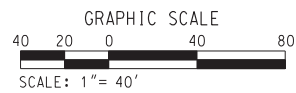
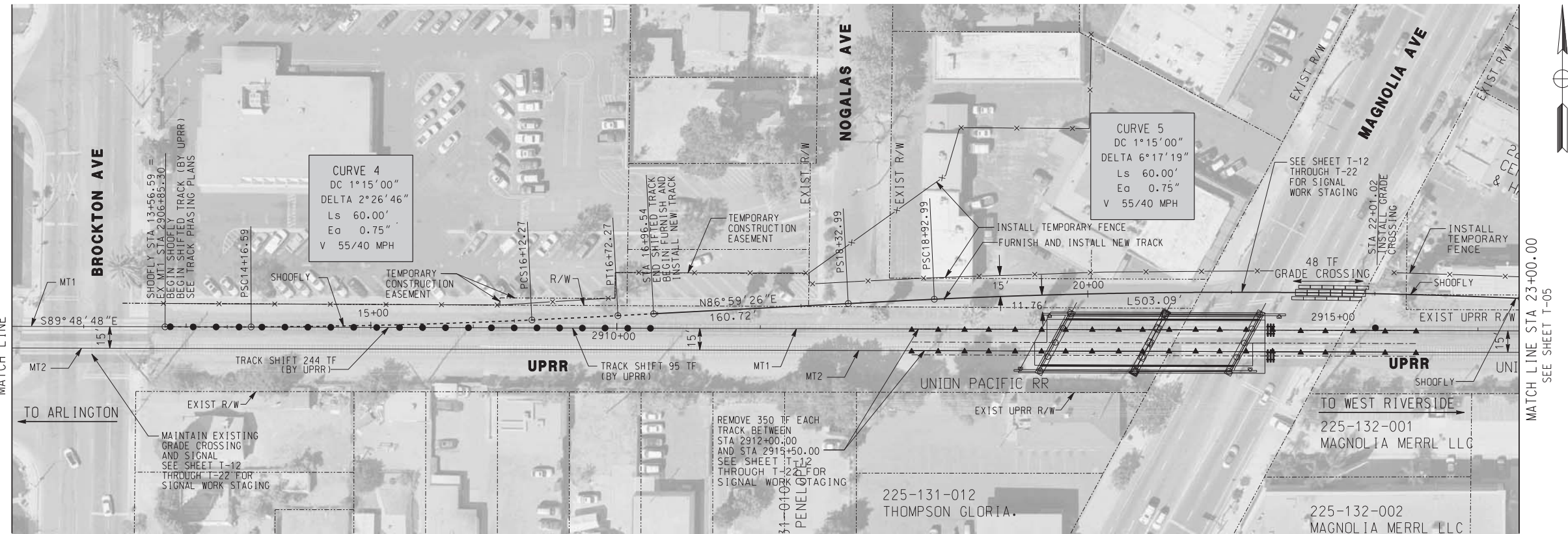
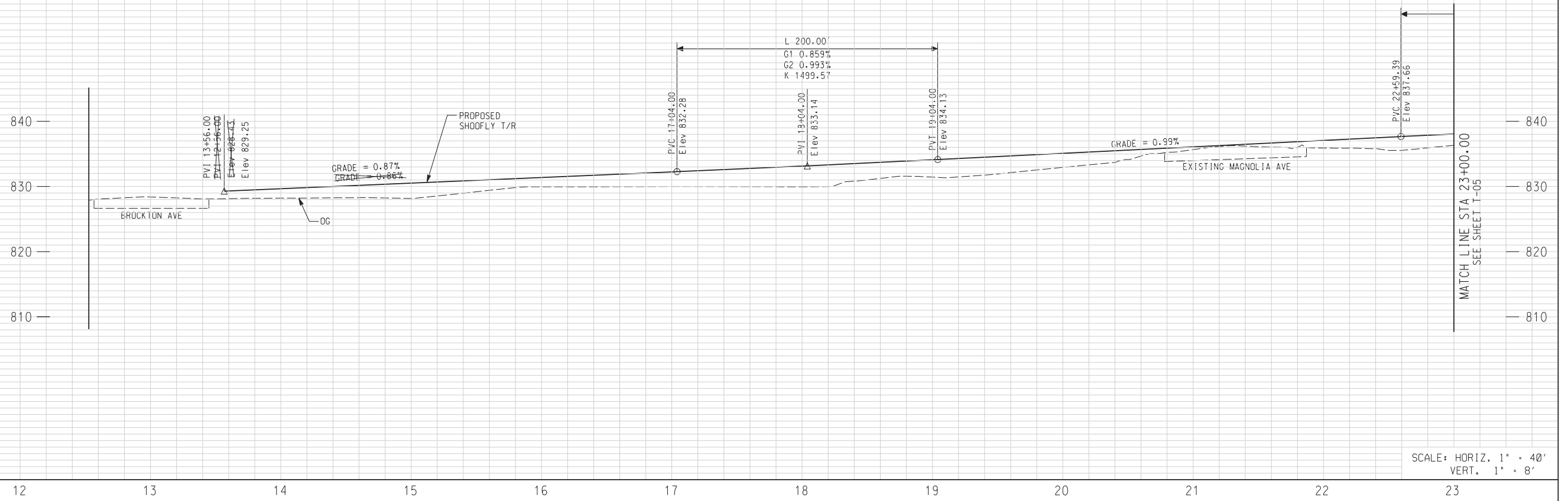
MARK	REVISIONS	APPR.	DATE

DESIGNED BY: *[Signature]* DRAWN BY: *[Signature]* CHECKED BY: *[Signature]*

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SHOOFLY PLAN AND GEOMETRY TABLE T-3
HORIZ. SCALE: 1" = 40' VERT. SCALE: N/A

ACCT. NO. *[Number]*
W.O. NO. *[Number]*
R-4081
SHEET 17 OF 189
FILE NO. _____

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LEGEND:

	NEW TRACK
	REMOVE TRACK
	SHIFTED TRACK (BY UPRR)
	SHIFT TRACK (BY UPRR)
	DRAINAGE FLOWLINE

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

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SUITE 100
RIVERSIDE, CA 92501-2110

DATE: _____

REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65863

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

REVISION-SHOOFLY STA, GRADE & ELEV. CHANGE	RSM	2/5/10
REVISIONS	APPR.	DATE
DESIGNED BY: _____	RSM	DRAWN BY: _____
CHECKED BY: _____	RSM	DATE: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

SHOOFLY PLAN AND PROFILE T-4

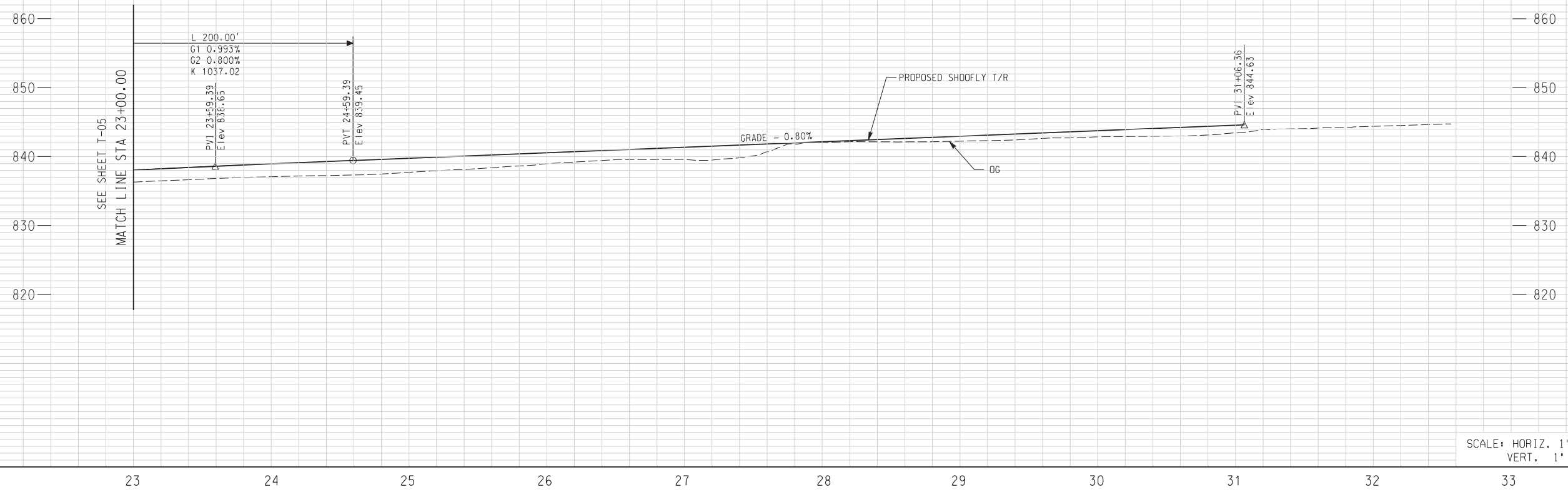
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 8'

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

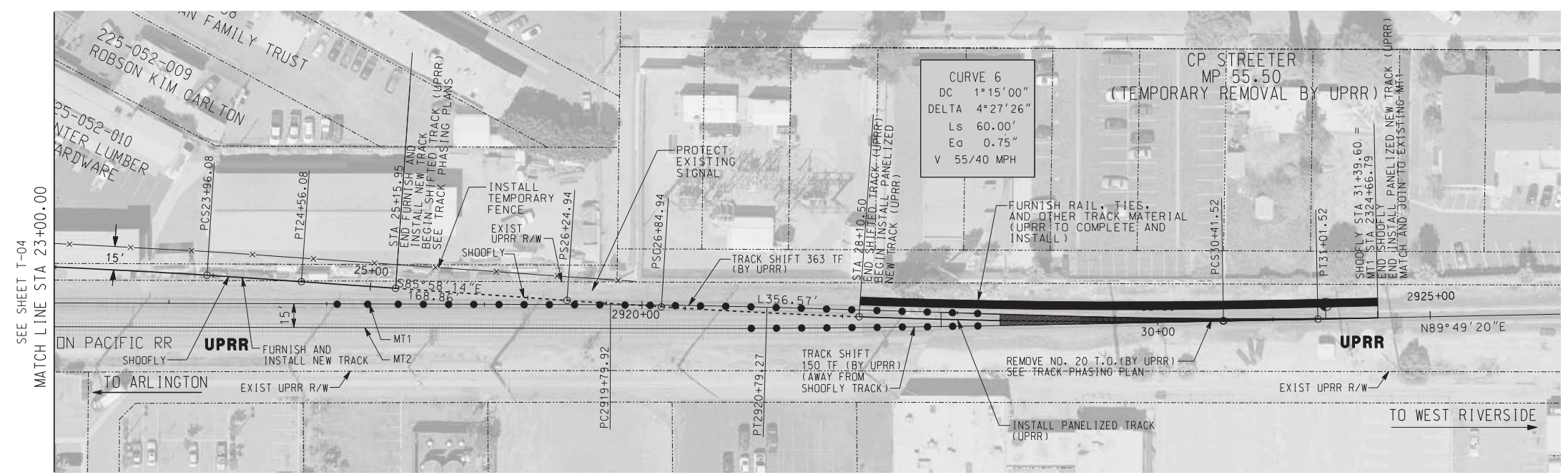
R-4081

SHEET 18 OF 189

FILE NO. _____



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



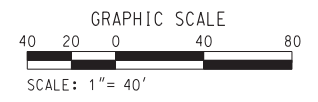
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LEGEND:

	NEW TRACK
	REMOVE TRACK
	SHIFT TRACK (UPRR)
	TRACK TO BE SHIFTED (UPRR)

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012

NOTE:
330TF OF RAIL, TIES, AND OTHER TRACK MATERIAL SHALL BE FURNISHED IN LOOSE AND NOT IN PANEL FORM FOR UPRR FORCES TO INSTALL BETWEEN STA. 28+10.00 AND STA. 31+40.00 SEE TRACK PHASING PLANS



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SUITE 100
RIVERSIDE, CA 92501-2110
DATE _____

RUSSELL S. McNAUGHT
No. C 65853
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

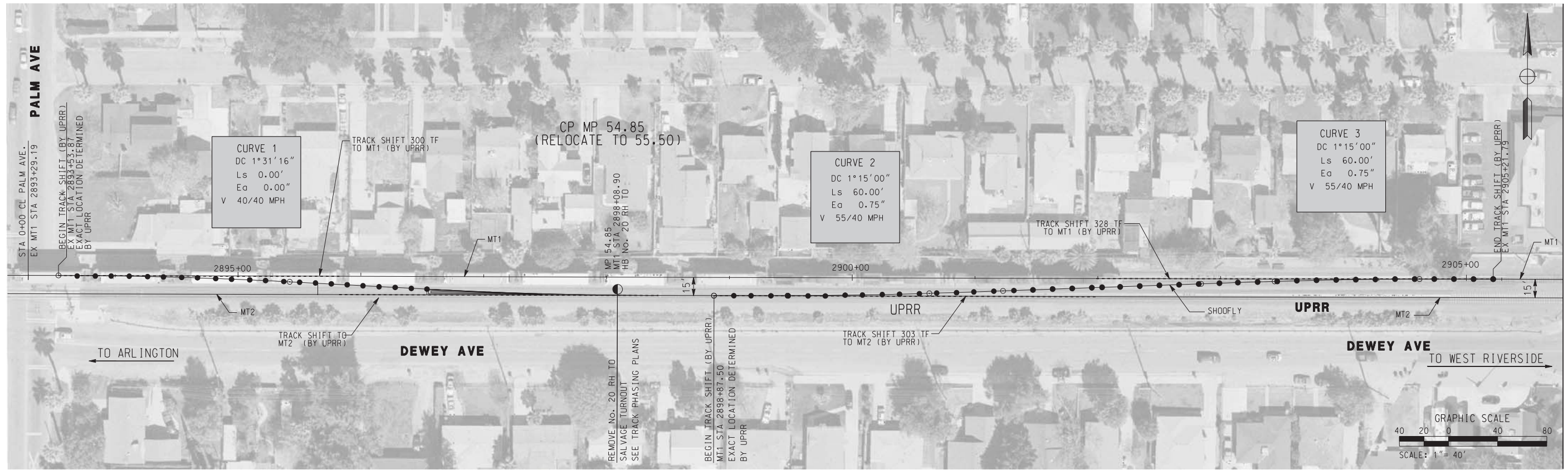
MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SHOOFLY PLAN & PROFILE T-5
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 8'

ACCT. NO. W.O. NO.
R-4081
SHEET 19 OF 189
FILE NO.

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LEGEND:

	NEW TRACK
	REMOVE TRACK
	SHIFT TRACK (UPRR)
	TRACK TO BE SHIFTED (UPRR)

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REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

SHOOFLY REMOVAL PLAN T-6

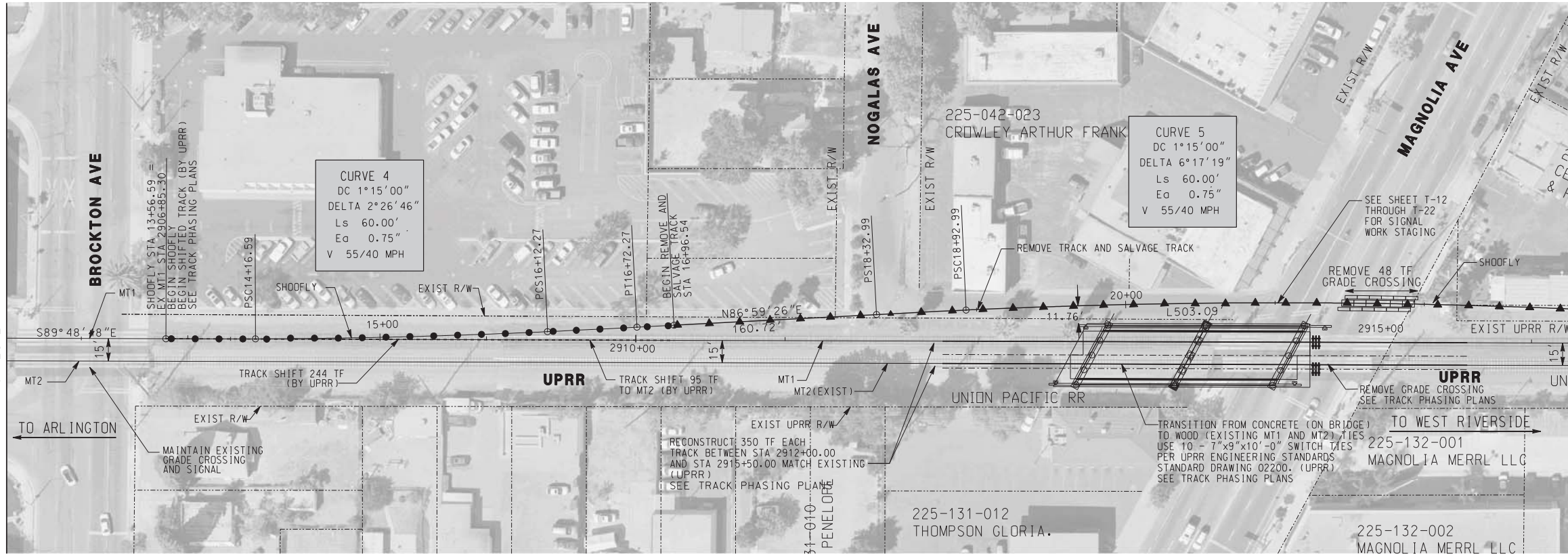
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 8'

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

R-4081

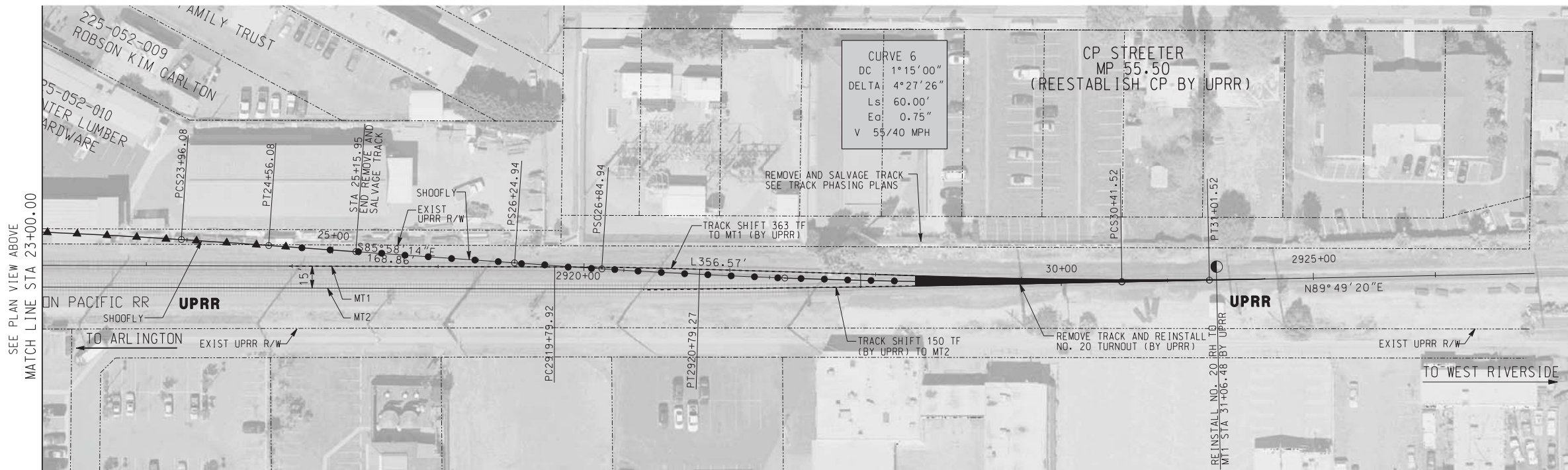
SHEET 20 OF 189

FILE NO. _____

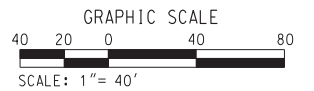


SEE SHEET T-06
MATCH LINE

MATCH LINE STA 23+00.00
SEE PLAN BELOW



SEE PLAN VIEW ABOVE
MATCH LINE STA 23+00.00



LEGEND:

	NEW TRACK
	REMOVE TRACK
	SHIFT TRACK (UPRR)
	TRACK TO BE SHIFTED (UPRR)

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DATE _____

REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

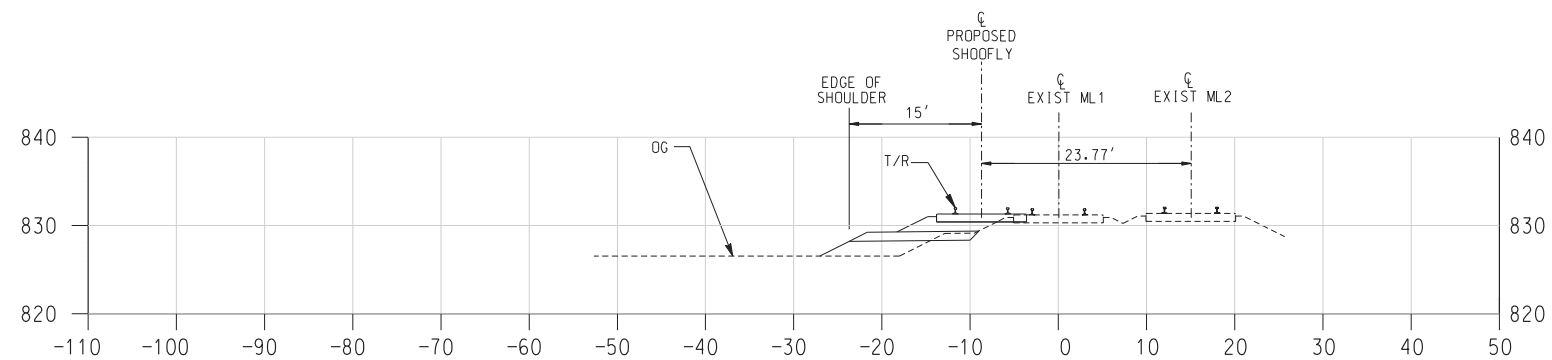
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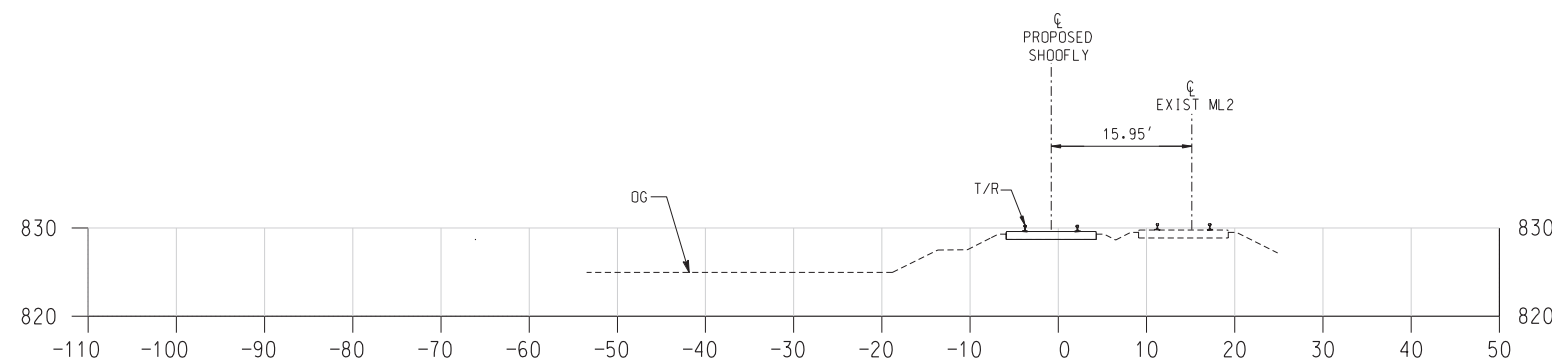
MARK	REVISIONS	APPR.	DATE

DESIGNED BY: RSM DRAWN BY: RSM CHECKED BY: RSM

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SHOOFLY REMOVAL PLAN T-7		SHEET 21 OF 189
HORIZ. SCALE: N/A VERT. SCALE: N/A		FILE NO.



**2910+00
(MT-1 STA)**

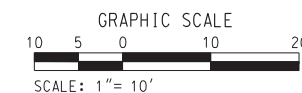


**2908+00
(MT-1 STA)**

LEGEND

----- ORIGINAL GROUND

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CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
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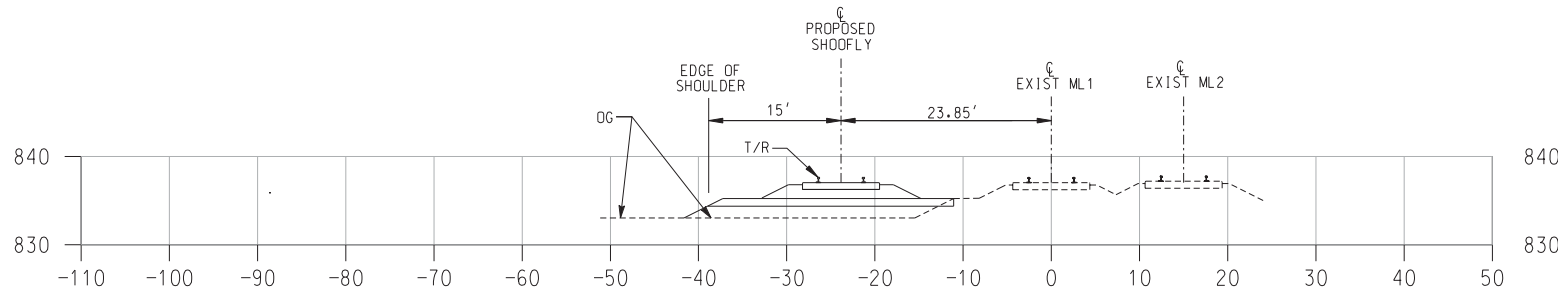
MARK	REVISIONS	APPR.	DATE

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

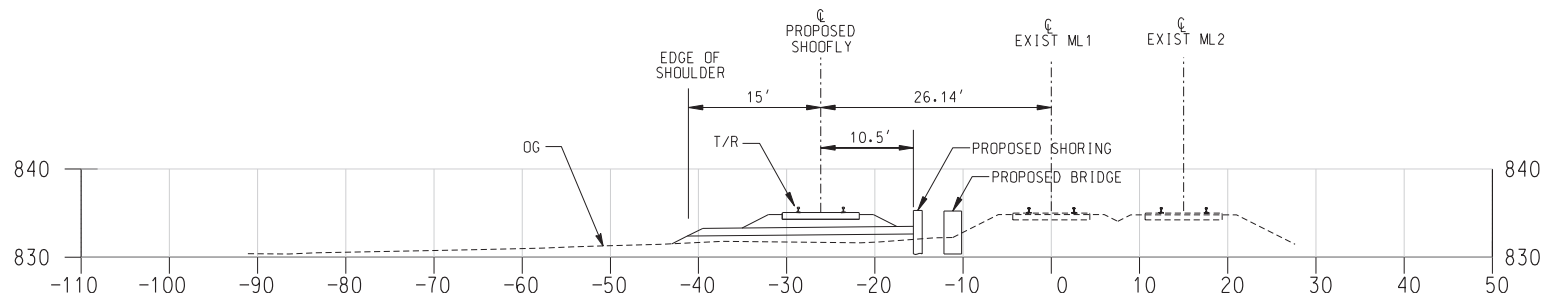
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SHOOFLY CROSS-SECTIONS T-8
HORIZ. SCALE: 1"=10' VERT. SCALE: 1"=10'

ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 22 OF 189
FILE NO. _____

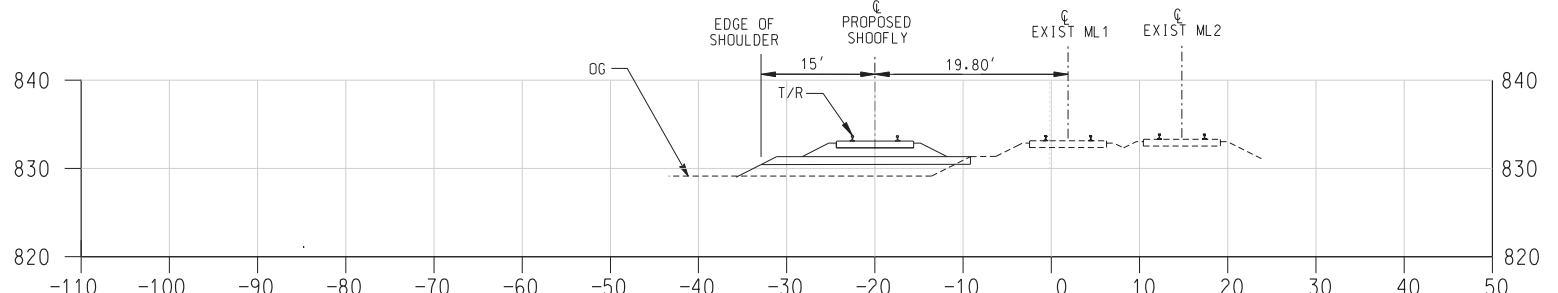
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**2916+00
(MT-1 STA)**



**2914+00
(MT-1 STA)**



**2912+00
(MT-1 STA)**

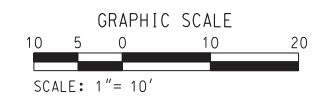
LEGEND
----- ORIGINAL GROUND

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE 11/16/2012



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DATE _____

REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

SHOOFLY CROSS-SECTIONS T-9

HORIZ. SCALE: 1"=10' VERT. SCALE: 1"=10'

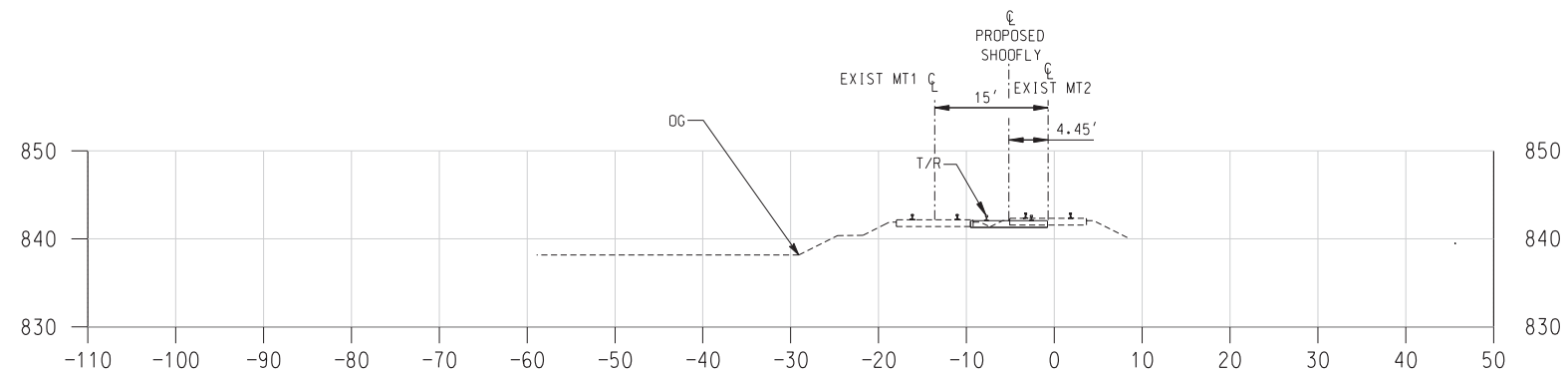
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W.O. NO. _____

R-4081

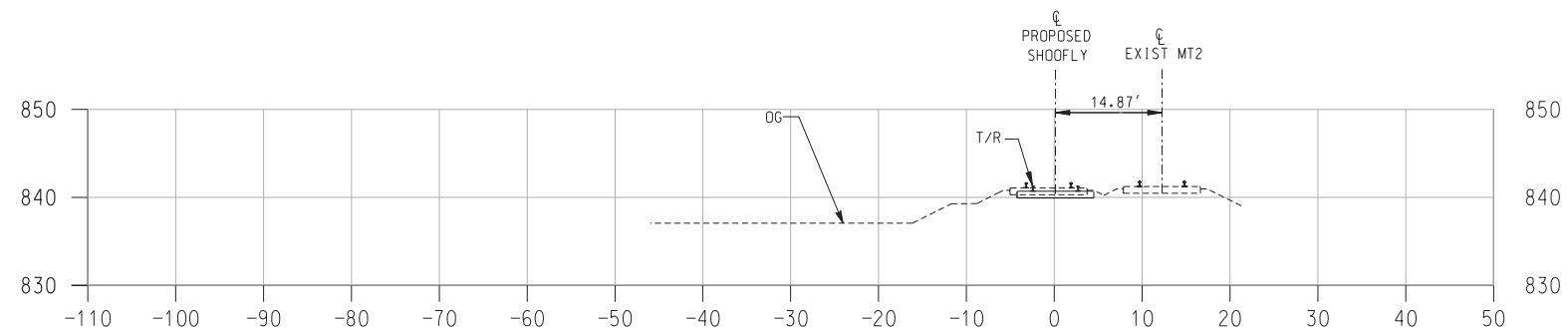
SHEET 23 OF 189

FILE NO. _____

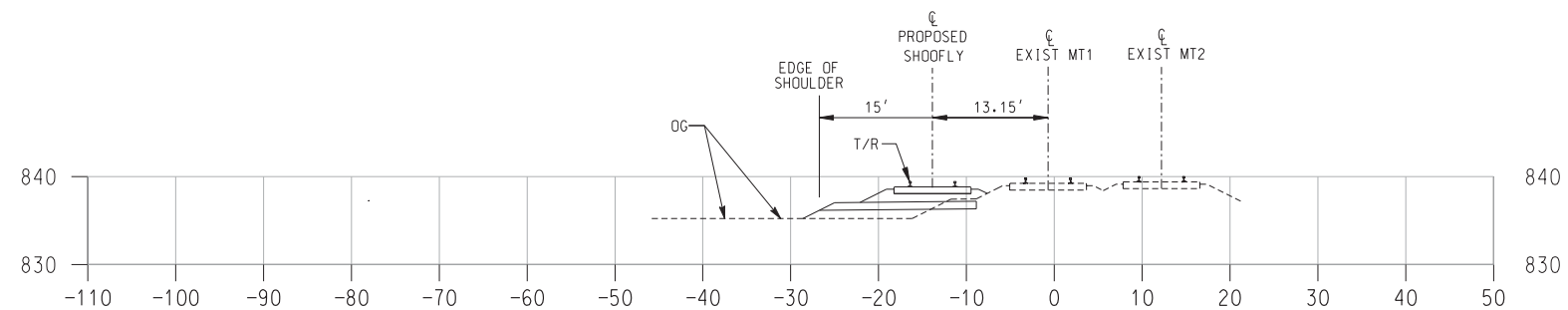
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(MT-1 STA)**



**2920+00
(MT-1 STA)**



**2918+00
(MT-1 STA)**

LEGEND

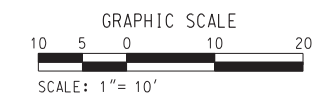
----- ORIGINAL GROUND

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RIVERSIDE, CA 92501-2110

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REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

CIVIL

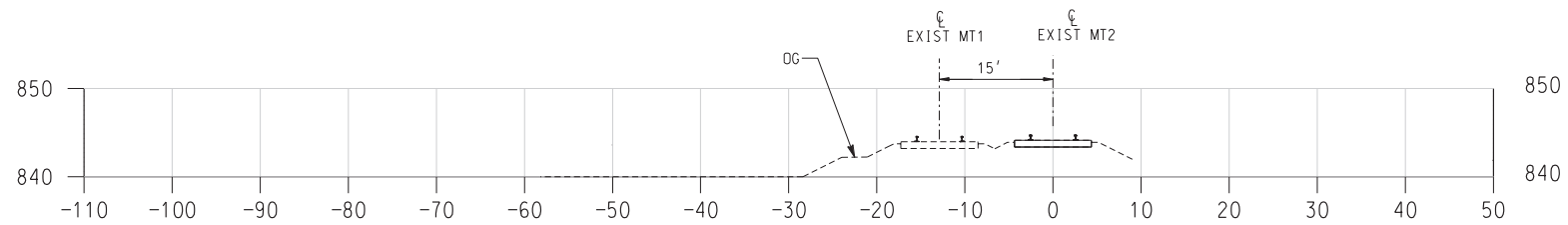
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

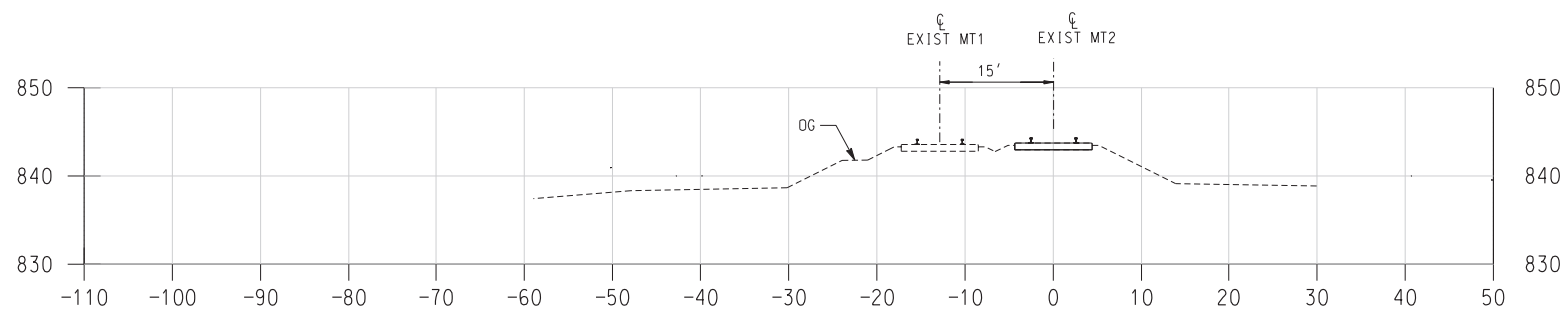
DESIGNED BY: RSM DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SHOOFLY CROSS-SECTIONS T-10		SHEET <u>24</u> OF <u>189</u>
HORIZ. SCALE: 1"=10' VERT. SCALE: 1"=10'		FILE NO.

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(MT-1 STA)**



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(MT-1 STA)**

LEGEND

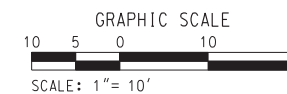
----- ORIGINAL GROUND

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CONTRACT NO. _____

DATE: 11/16/2012



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RIVERSIDE, CA 92501-2110

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REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

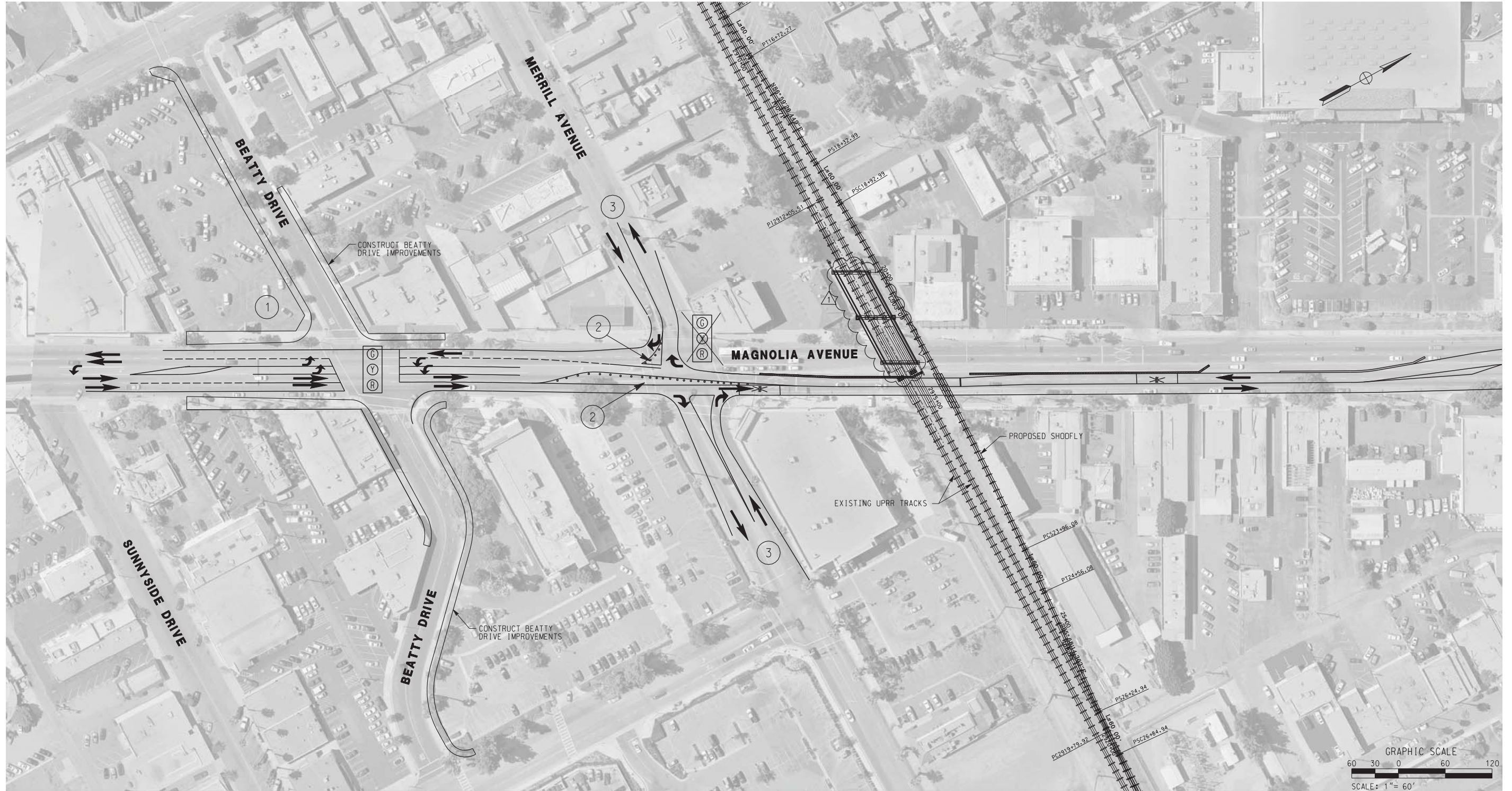
CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SHOOFLY CROSS-SECTIONS T-11		SHEET <u>25</u> OF <u>189</u>
HORIZ. SCALE: 1"=10' VERT. SCALE: 1"=10'		FILE NO.



PHASE 1

- ① COMPLETE BEATTY DRIVE IMPROVEMENTS
- ② INSTALL CHANNELIZERS FOR RIGHT-IN AND RIGHT-OUT ACCESS TO MERRILL AVE
- ③ REMOVE EXISTING SIGNAL. MERRILL AVE TO BE OPEN TO RIGHT-IN AND RIGHT-OUT DURING CONSTRUCTION ONLY

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 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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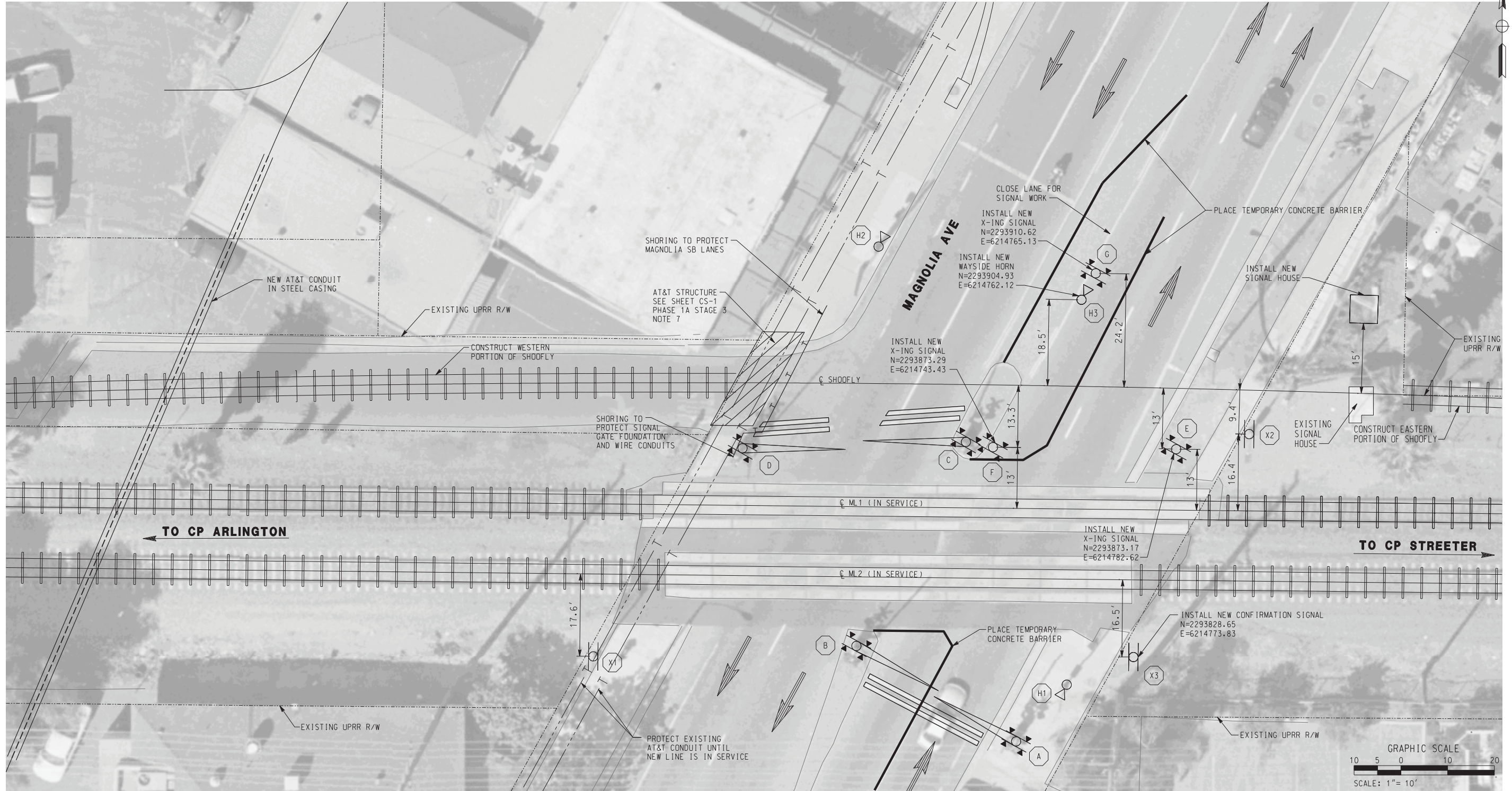
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 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2110
 DATE _____

REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

DESIGNED BY _____	RSM	DRAWN BY _____	RSM	CHECKED BY _____	RSM
REVISIONS		APPROVALS		DATE	
ADDENDUM-MATCH BRIDGE LAYOUT TO STRUCT.DWGS.		RSM		10/21/09	

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
RAILROAD PHASING T-12
 HORIZ. SCALE: 1"=60' VERT. SCALE: N/A

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 26 OF 189
 FILE NO. _____



LEGEND

- CROSSING SIGNAL LETTER n
- WAYSIDE HORN NUMBER n
- CONFIRMATION SIGNAL NUMBER n
- CROSSING SIGNAL (IN SERVICE)
- CROSSING SIGNAL (OUT OF SERVICE)
- WAYSIDE HORN
- CONFIRMATION SIGNAL

NOTE

1. COORDINATES ARE TO CENTER OF POLE

AS BUILT

CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

PHASE 2

- ① CONSTRUCT EASTERN AND WESTERN PORTION OF SHOOFLY.
- ② CLOSE NORTHBOUND No. 1 LANE.
- ③ INSTALL NEW SIGNAL HOUSE. (UPRR)
- ④ INSTALL NEW CROSSING SIGNALS AT E, F, AND G. (UPRR)
- ⑤ INSTALL NEW WAYSIDE HORN H3 AND CONFIRMATION SIGNAL X3.
- ⑥ CROSSING SIGNALS A, E, F, G SHOULD BE TESTED AND READY TO ACTIVATE FROM NEW SIGNAL HOUSE IN FOLLOWING PHASES. (UPRR)
- ⑦ WAYSIDE HORN H3 AND CONFIRMATION SIGNAL X3 SHOULD BE TESTED AND READY TO ACTIVATE IN FOLLOWING PHASES.

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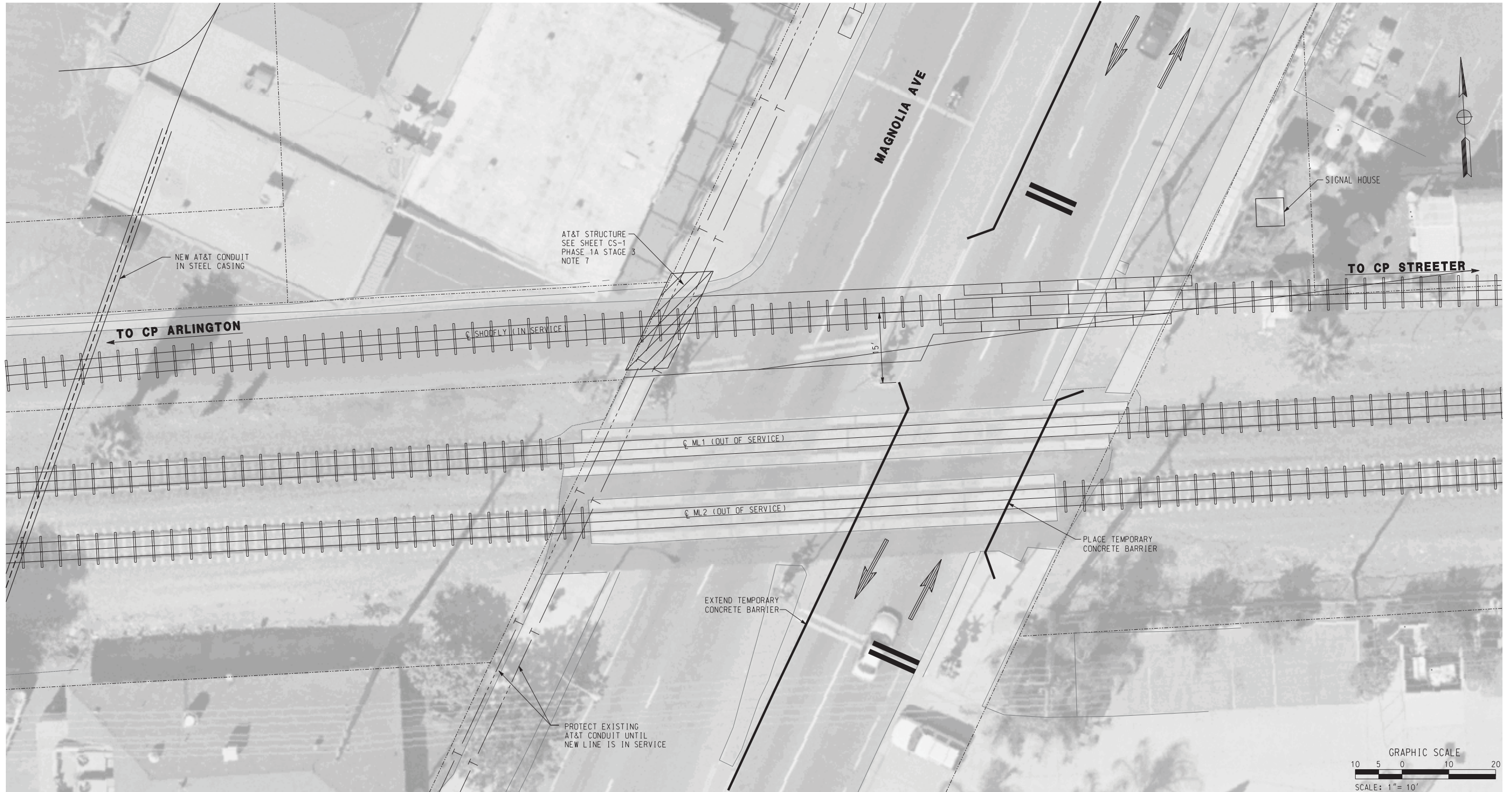
REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65863
 Exp. 12-31-09
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 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE








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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SIGNAL INSTALLATION T-13
 HORIZ. SCALE: 1"=10' VERT. SCALE: N/A

ACCT. NO. W.O. NO.
R-4081
 SHEET 27 OF 189
 FILE NO.



LEGEND

-  CROSSING SIGNAL LETTER n
-  WAYSIDE HORN NUMBER n
-  CONFIRMATION SIGNAL NUMBER n
-  CROSSING SIGNAL (IN SERVICE)
-  CROSSING SIGNAL (OUT OF SERVICE)
-  WAYSIDE HORN
-  CONFIRMATION SIGNAL

AS BUILT

CORRECTIONS BY 

CONTRACT NO. _____

DATE 11/16/2012

- PHASE 3A**
- ① CONNECT BOTH SIDES OF SHOOFLY TO MAINLINE TRACKS AND TRANSFER RAIL TRAFFIC TO SHOOFLY. (UPRR)
 - ② EXTEND AND ADD TEMPORARY CONCRETE BARRIER AS NEEDED.

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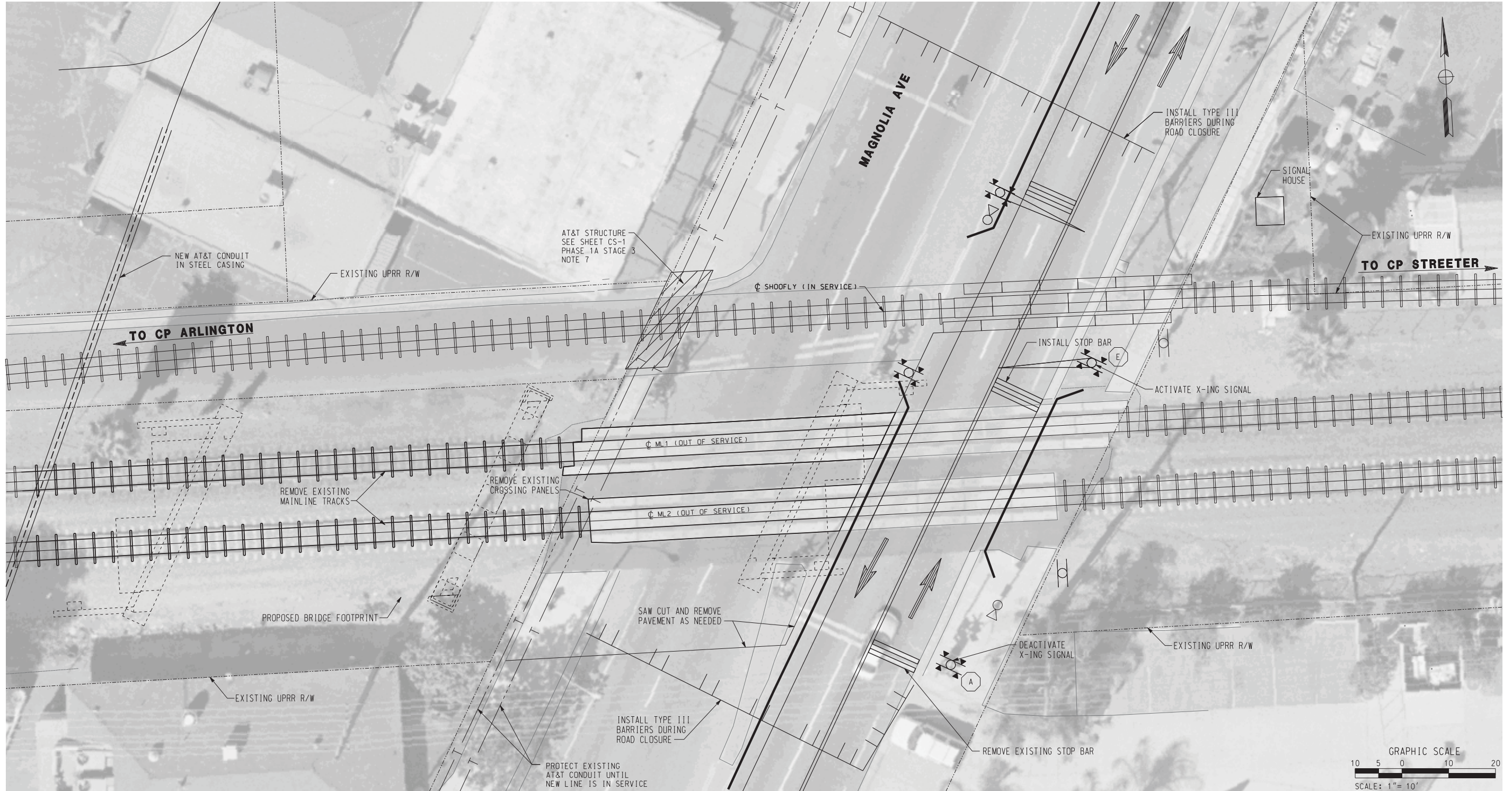
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RIVERSIDE, CA 92501-2110
DATE _____








REGISTERED PROFESSIONAL ENGINEER
RUSSELL S. McNAUGHT
No. C 65863
Exp. 12-31-09
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STATE OF CALIFORNIA

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DESIGNED BY	RSM	DRAWN BY	RSM
CHECKED BY			

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SIGNAL INSTALLATION T-15		SHEET 29 OF 189
HORIZ. SCALE: 1"=10'	VERT. SCALE: N/A	FILE NO.



LEGEND

-  CROSSING SIGNAL LETTER n
-  WAYSIDE HORN NUMBER n
-  CONFIRMATION SIGNAL NUMBER n
-  CROSSING SIGNAL (IN SERVICE)
-  CROSSING SIGNAL (OUT OF SERVICE)
-  WAYSIDE HORN
-  CONFIRMATION SIGNAL

PHASE 4 (SHORT TERM CLOSURE)

AS BUILT

CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

- ① CLOSE MAGNOLIA AVE TO THROUGH TRAFFIC.
- ② REMOVE EXISTING MAINLINE TRACKS, CROSSING PANELS AND PAVEMENT AS NEEDED, CONSTRUCT PROPOSED BRIDGE.
- ③ ACTIVATE CROSSING SIGNAL E. (UPRR)
- ④ DEACTIVATE CROSSING SIGNAL A. (UPRR)
- ⑤ INSTALL OR REPAIR PAVEMENT STRIPING AS NEEDED AND OPEN MAGNOLIA AVE TO THROUGH TRAFFIC.

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 RIVERSIDE, CA 92501-2110
 DATE _____

REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

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

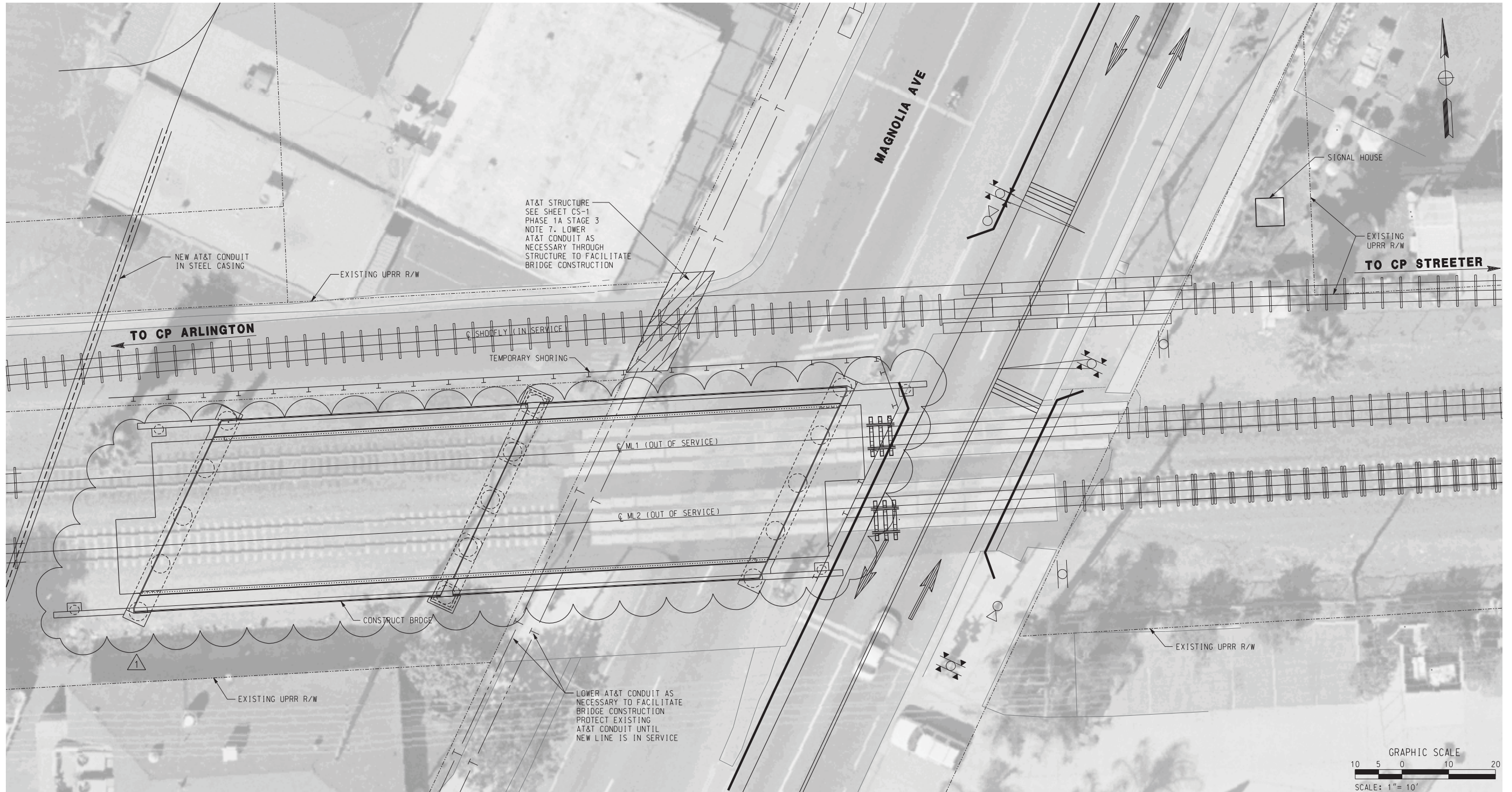
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS








SIGNAL INSTALLATION T-16

HORIZ. SCALE: 1"=10' VERT. SCALE: N/A

ACCT. NO. W.O. NO.	R-4081
SHEET 30 OF 189	FILE NO.



LEGEND

-  CROSSING SIGNAL LETTER n
-  WAYSIDE HORN NUMBER n
-  CONFIRMATION SIGNAL NUMBER n
-  CROSSING SIGNAL (IN SERVICE)
-  CROSSING SIGNAL (OUT OF SERVICE)
-  WAYSIDE HORN
-  CONFIRMATION SIGNAL

PHASE 5
 ① CONSTRUCT BRIDGE

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 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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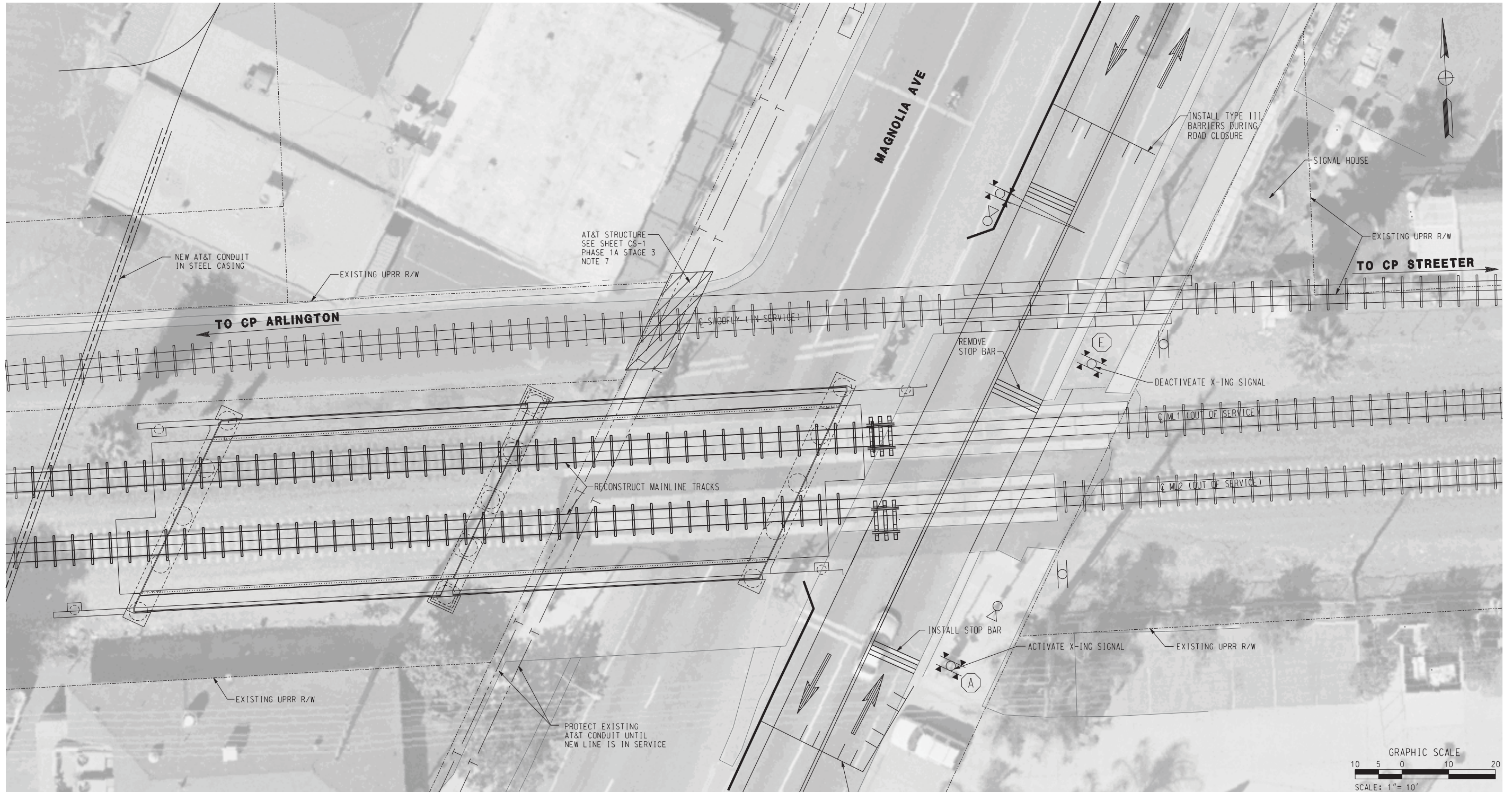
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






REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
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ADDENDUM-MATCH BRIDGE LAYOUT TO STRUCT.DWGS. AND REMOVED NOTE 2	RSM	10/21/09
MARK	REVISIONS	APPR. DATE
DESIGNED BY _____	RSM	DRAWN BY _____
_____	RSM	CHECKED BY _____

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SIGNAL INSTALLATION T-17		SHEET 31 OF 189
HORIZ. SCALE: 1"=10' VERT. SCALE: N/A		FILE NO.



LEGEND

-  CROSSING SIGNAL LETTER n
-  WAYSIDE HORN NUMBER n
-  CONFIRMATION SIGNAL NUMBER n
-  CROSSING SIGNAL (IN SERVICE)
-  CROSSING SIGNAL (OUT OF SERVICE)
-  WAYSIDE HORN
-  CONFIRMATION SIGNAL

AS BUILT

CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012

PHASE 6 (WEEKEND CLOSURE)

- ① CLOSE MAGNOLIA AVE TO THROUGH TRAFFIC.
- ② ACTIVATE CROSSING SIGNAL A AND DEACTIVATE E. (UPRR)
- ③ RE-CONSTRUCT MAINLINE TRACKS.
- ④ MODIFY TEMPORARY BARRIER AS NEEDED.
- ⑤ OPEN MAGNOLIA AVE TO THROUGH TRAFFIC.

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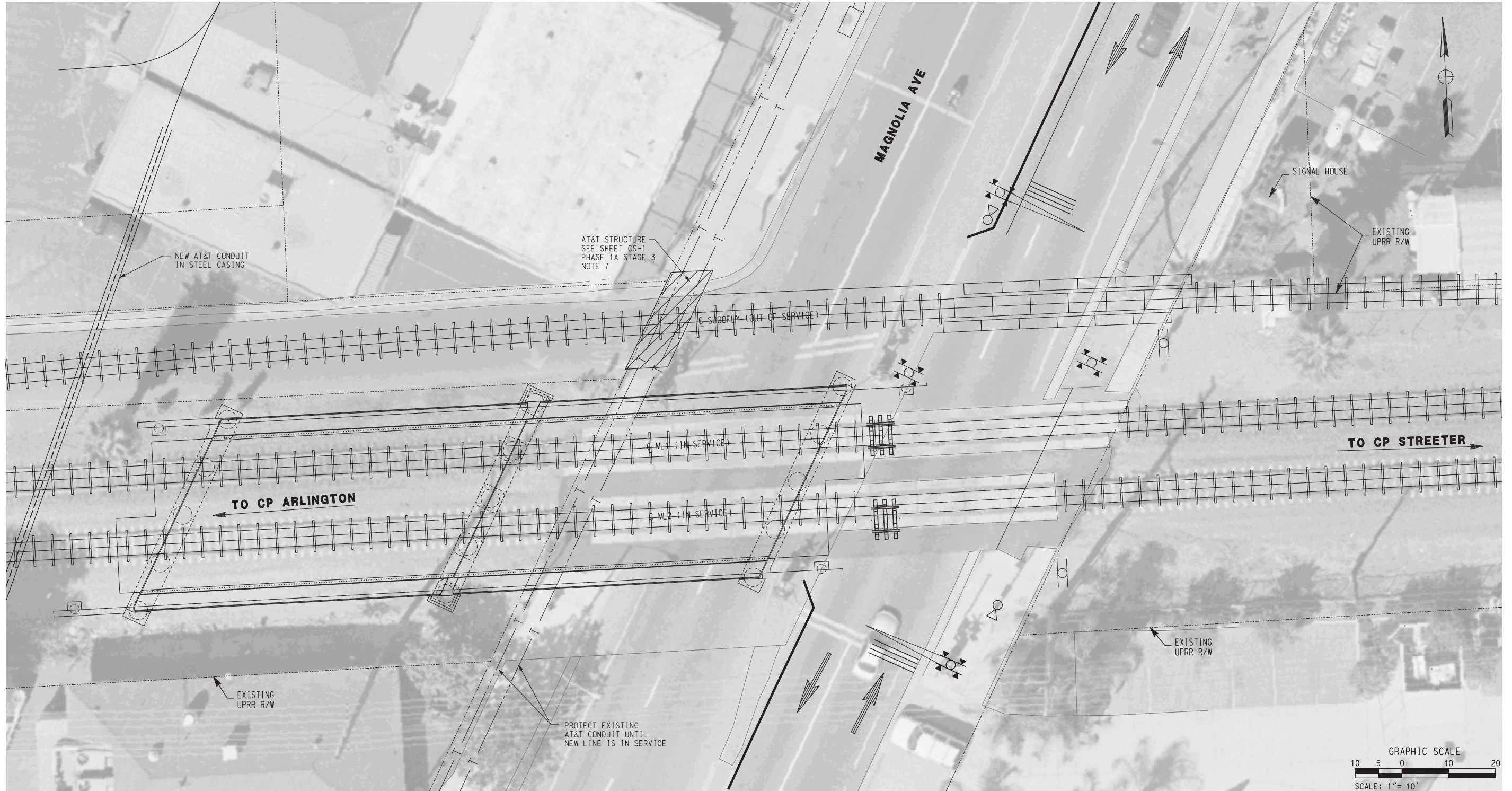
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 2280 MARKET STREET
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 RIVERSIDE, CA 92501-2110
 DATE: MGM








REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McLAUGHLIN
 No. C 65853
 Exp. 12-31-09
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 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY: RSM	DRAWN BY: RSM	CHECKED BY: RSM	

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SIGNAL INSTALLATION T-18		SHEET 32 OF 189
HORIZ. SCALE: 1"=10' VERT. SCALE: N/A		FILE NO.



LEGEND

-  CROSSING SIGNAL LETTER n
-  WAYSIDE HORN NUMBER n
-  CONFIRMATION SIGNAL NUMBER n
-  CROSSING SIGNAL (IN SERVICE)
-  CROSSING SIGNAL (OUT OF SERVICE)
-  WAYSIDE HORN
-  CONFIRMATION SIGNAL

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

PHASE 6A
 ① DISCONNECT SHOOFLY FROM MAINLINE TRACKS AT BOTH ENDS AND RE-CONNECT MAINLINE TRACKS TO THEIR ORIGINAL CONFIGURATION. (UPRR)

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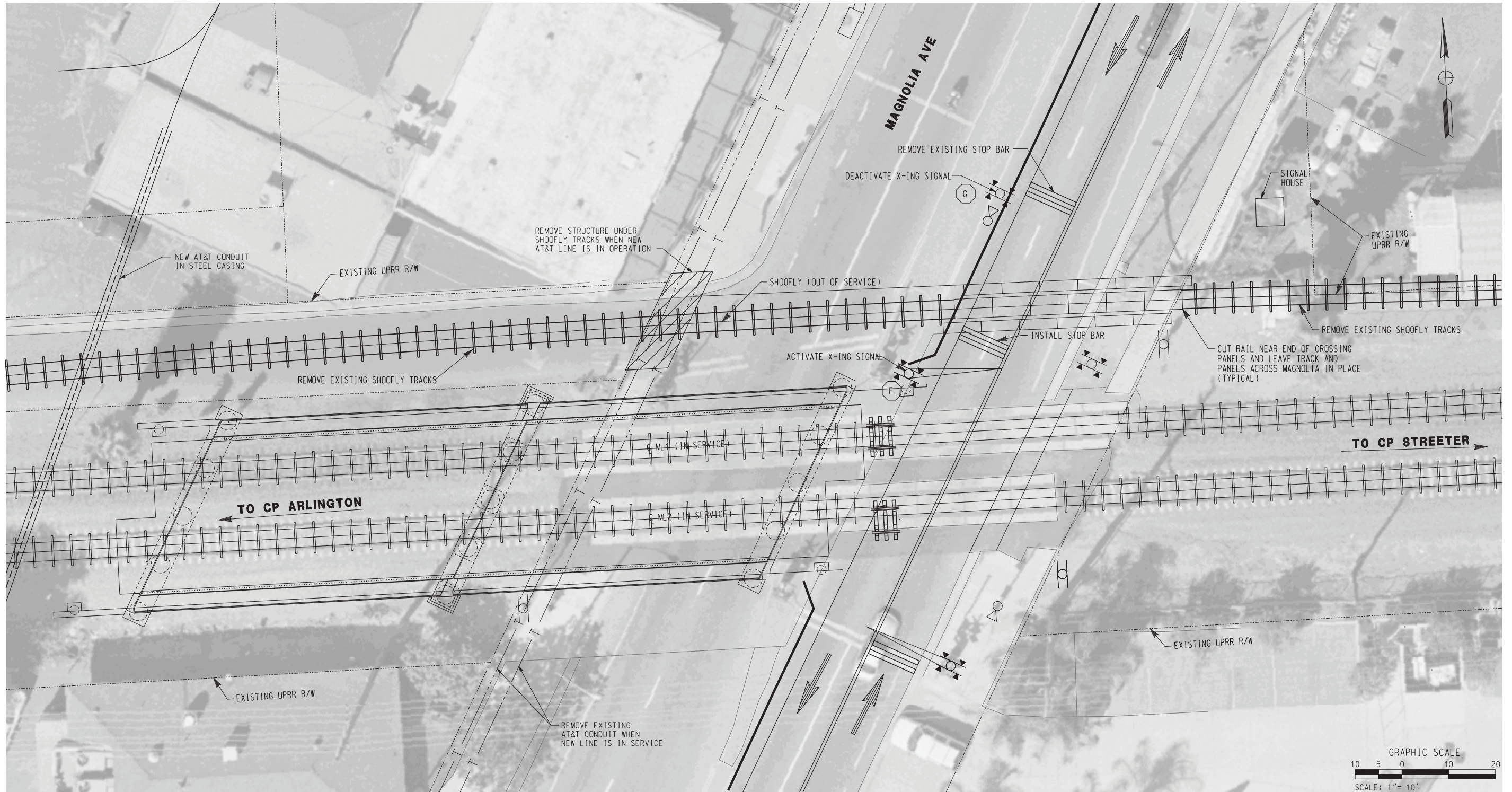
HDR | ONE COMPANY
 Many Solutions
 HDR ENGINEERING, INC.
 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2110
 DATE _____

REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
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 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
SIGNAL INSTALLATION T-19		SHEET <u>33</u> OF <u>189</u>
HORIZ. SCALE: 1"=10' VERT. SCALE: N/A		FILE NO.



LEGEND

- CROSSING SIGNAL LETTER n
- WAYSIDE HORN NUMBER n
- CONFIRMATION SIGNAL NUMBER n
- CROSSING SIGNAL (IN SERVICE)
- CROSSING SIGNAL (OUT OF SERVICE)
- WAYSIDE HORN
- CONFIRMATION SIGNAL

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CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

- PHASE 7**
- ① ACTIVATE CROSSING SIGNAL F AND DEACTIVATE G. (UPRR)
 - ② MODIFY TEMPORARY BARRIER AS NEEDED.
 - ③ REMOVE EXISTING SHOOFLY TRACKS.

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 RIVERSIDE, CA 92501-2110
 DATE _____

REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY: <u>RSM</u>	DRAWN BY: <u>RSM</u>	CHECKED BY: <u>RSM</u>	

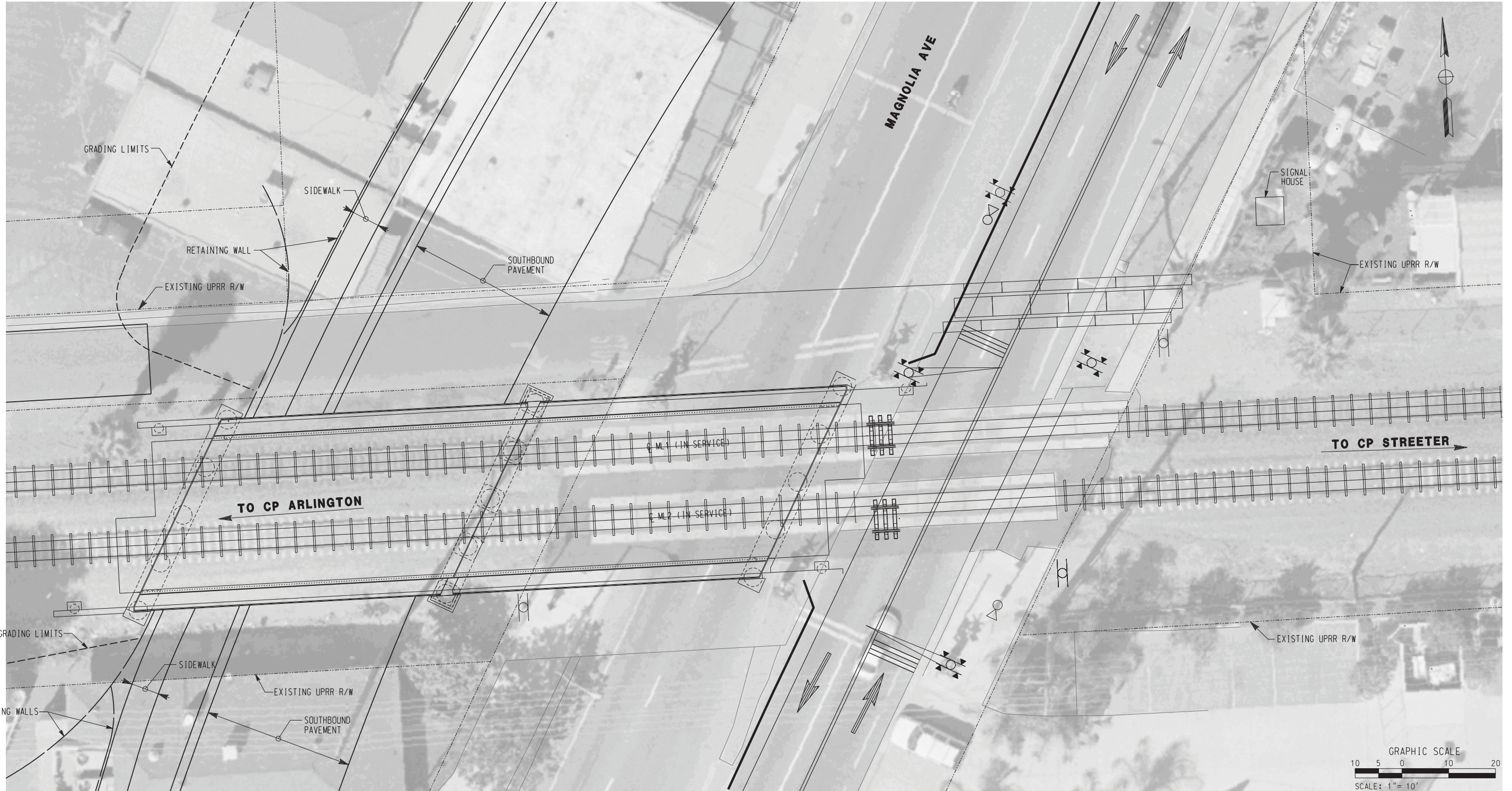
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

SIGNAL INSTALLATION T-20

HORIZ. SCALE: 1"=10' VERT. SCALE: N/A

ACCT. NO. W.O. NO.	R-4081
SHEET 34 OF 189	FILE NO.



LEGEND

- CROSSING SIGNAL LETTER n
- WAYSIDE HORN NUMBER n
- CONFIRMATION SIGNAL NUMBER n
- CROSSING SIGNAL (IN SERVICE)
- CROSSING SIGNAL (OUT OF SERVICE)
- WAYSIDE HORN
- CONFIRMATION SIGNAL

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

PHASE 7A

① EXCAVATE AND PAVE SOUTHBOUND SIDE OF RE-ALIGNED MAGNOLIA AVE.

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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 _____

REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

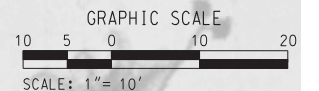
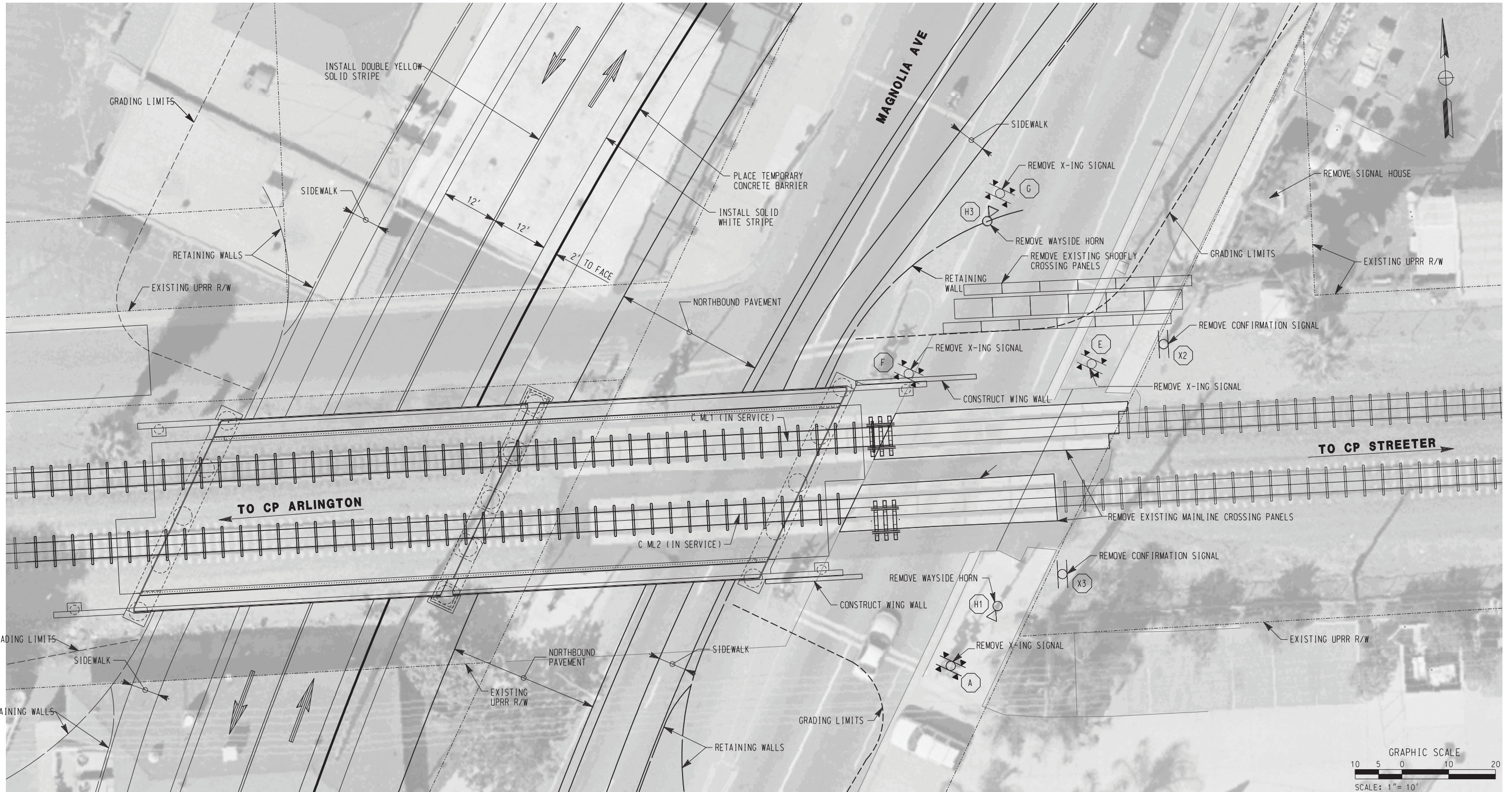
SIGNAL INSTALLATION T-21

HORIZ. SCALE: 1"=10' VERT. SCALE: N/A

ACCT. NO. W.O. NO. **R-4081**

SHEET 35 OF 189

FILE NO. _____



LEGEND

- CROSSING SIGNAL LETTER n
- WAYSIDE HORN NUMBER n
- CONFIRMATION SIGNAL NUMBER n
- CROSSING SIGNAL (IN SERVICE)
- CROSSING SIGNAL (OUT OF SERVICE)
- WAYSIDE HORN
- CONFIRMATION SIGNAL

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

PHASE 8

- ① OPEN SOUTHBOUND SIDE OF NEW MAGNOLIA ALIGNMENT TO TWO WAY TRAFFIC AND CLOSE EXISTING DETOUR.
- ② REMOVE ALL EXISTING CROSSING SIGNALS AND SIGNAL HOUSE. (UPRR)
- ③ REMOVE ALL EXISTING CONFIRMATION SIGNALS AND WAYSIDE HORNS
- ④ COMMENCE DEMOLITION OF EXISTING ROADWAY.
- ⑤ CONSTRUCT EAST WING WALLS
- ⑥ COMMENCE CONSTRUCTION OF NORTHBOUND SIDE OF NEW MAGNOLIA ALIGNMENT.

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Many Solutions

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

DATE: _____

REGISTERED PROFESSIONAL ENGINEER

RUSSELL S. McNAUGHT

No. C 65853

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

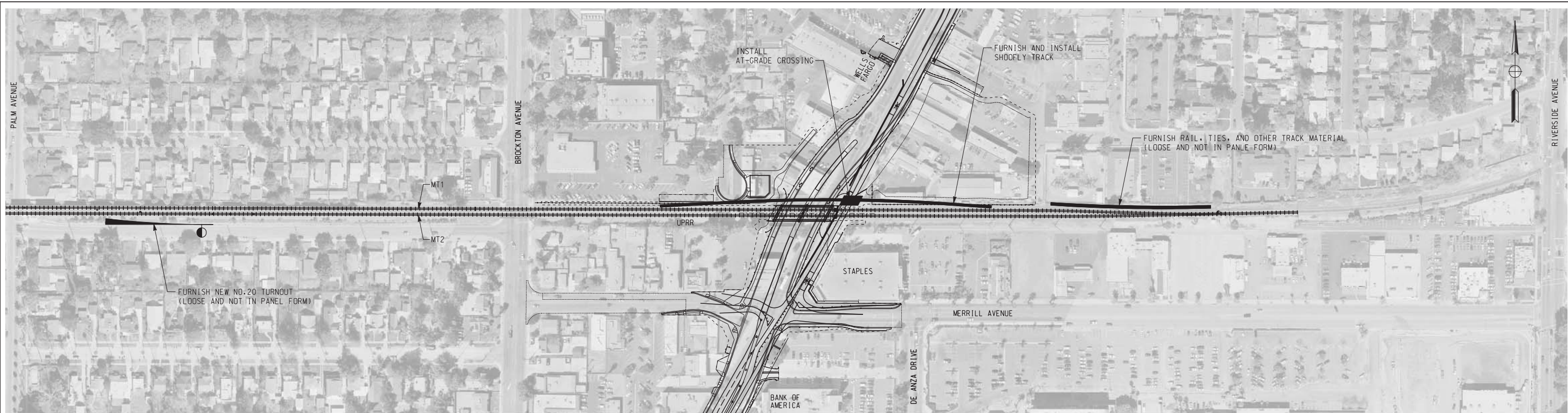
SIGNAL INSTALLATION T-22

HORIZ. SCALE: 1"=10' VERT. SCALE: N/A

ACCT. NO. W.O. NO. R-4081

SHEET 36 OF 189

FILE NO. _____



PHASE 1
NOT TO SCALE



PHASE 2A
NOT TO SCALE

NOTES:

1. THE WORK INCLUDED ON THESE PHASING PLANS APPLY TO TRACK ONLY.
2. THE CITY'S CONTRACTOR SHALL PERFORM ALL GRADING ACTIVITIES.
3. UPRR SHALL PERFORM ALL WORK AS INDICATED ON THESE PHASING PLANS. UPRR MAY ADJUST PHASES.
4. FOR EXACT LOCATIONS, SEE TRACK PLANS.
5. UPRR SIGNAL WILL FURNISH AND INSTALL ALL RAILWAY SIGNAL EQUIPMENT. THE CITY'S CONTRACTOR WILL FURNISH AND INSTALL ALL WAYSIDE HORNS. SEE SIGNAL PHASING PLANS.
6. CITY'S CONTRACTOR SHALL PROVIDE A BILL OF MATERIALS FOR UPRR APPROVAL PRIOR TO PROCUREMENT AND DELIVERY OF MATERIALS.

LEGEND:

- WORK PERFORMED BY CITY OF RIVERSIDE CONTRACTOR
- WORK PERFORMED BY UNION PACIFIC RAILROAD FORCES

AS BUILT

CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012

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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 _____

REGISTERED PROFESSIONAL ENGINEER

 RUSSELL S. McLAUGHLIN
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

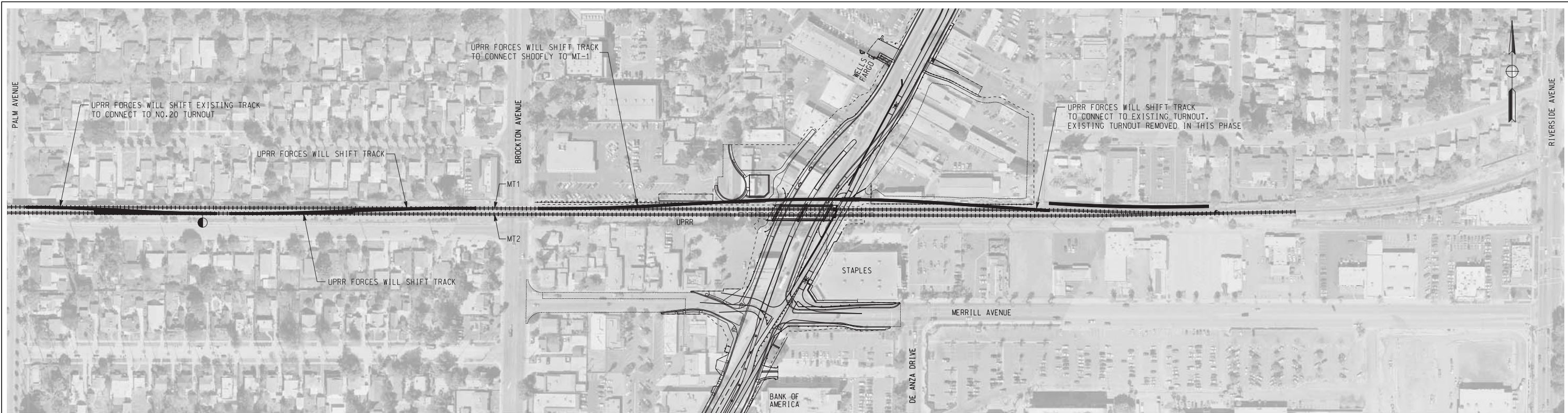
MARK	REVISIONS	APPR.	DATE

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

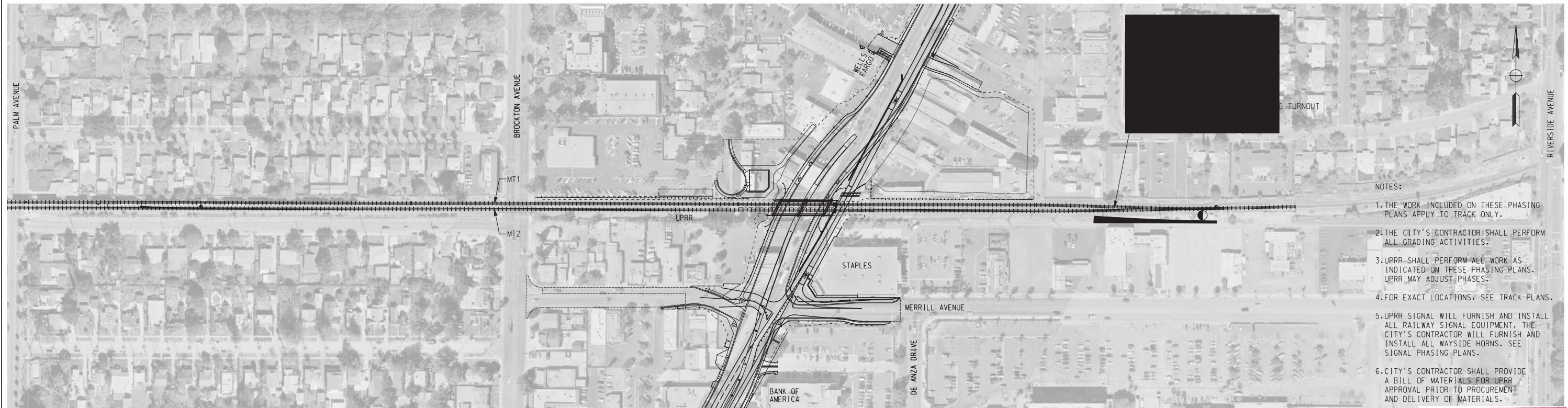
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
TRACK CONSTRUCTION PHASING T-23

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 37 OF 189
 FILE NO. _____

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PHASE 2B
NOT TO SCALE



- NOTES:
1. THE WORK INCLUDED ON THESE PHASING PLANS APPLY TO TRACK ONLY.
 2. THE CITY'S CONTRACTOR SHALL PERFORM ALL GRADING ACTIVITIES.
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 4. FOR EXACT LOCATIONS, SEE TRACK PLANS.
 5. UPRR SIGNAL WILL FURNISH AND INSTALL ALL RAILWAY SIGNAL EQUIPMENT. THE CITY'S CONTRACTOR WILL FURNISH AND INSTALL ALL WAYSIDE HORNS. SEE SIGNAL PHASING PLANS.
 6. CITY'S CONTRACTOR SHALL PROVIDE A BILL OF MATERIALS FOR UPRR APPROVAL PRIOR TO PROCUREMENT AND DELIVERY OF MATERIALS.

PHASE 2C
NOT TO SCALE

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE *11/16/2012*

LEGEND:
WORK PERFORMED BY UNION PACIFIC RAILROAD FORCES

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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 _____



MARK	REVISIONS	APPR.	DATE

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

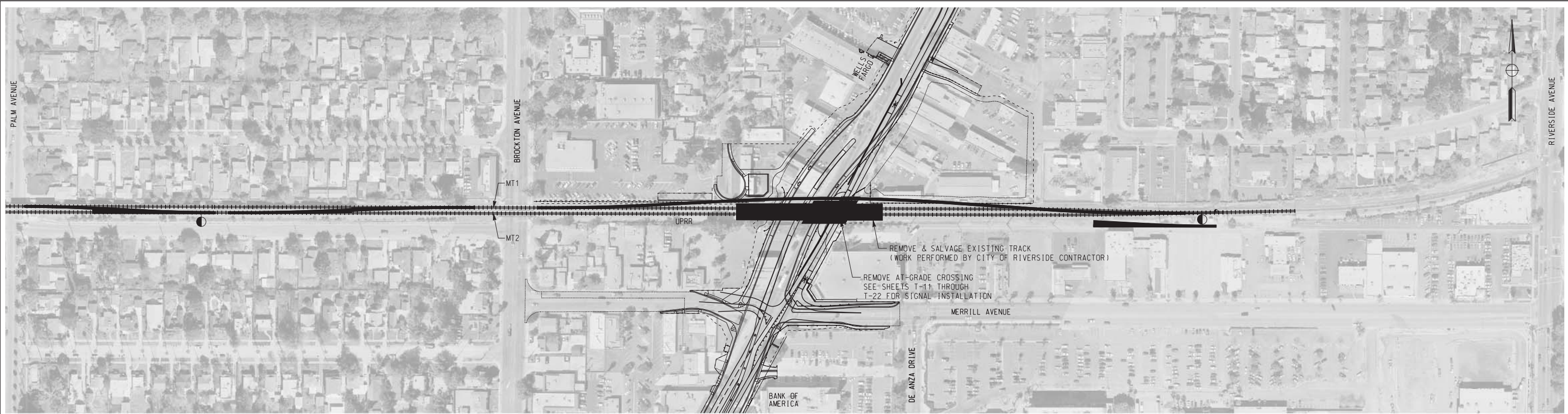
APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
CONSTRUCTION ADMIN.		
SURVEYOR		
STREET SERVICES		
TRAFFIC ENGINEER		
PAK & REC. DEP.		

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
APPROVED BY _____
CITY ENGINEER _____
DATE _____

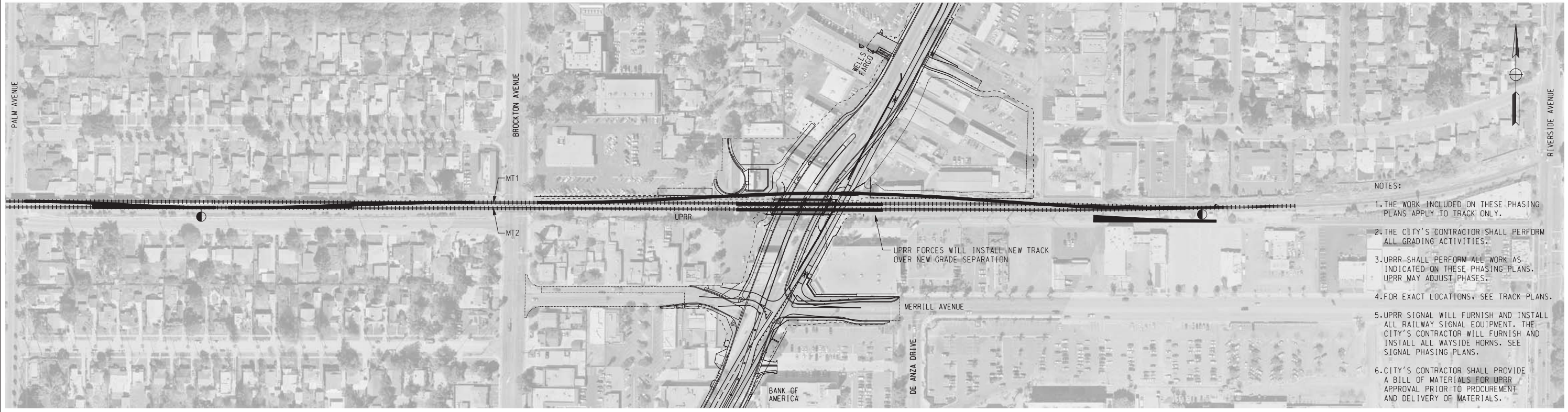
MAGNOLIA AVENUE UNDERPASS
TRACK CONSTRUCTION PHASING T-24
HORIZ. SCALE: NONE VERT. SCALE: N/A

ACCT. NO. XXXXXXXXXXXXXXXX
W.O. NO. XXXXXXXX
R-4081
SHEET 38 OF 189
FILE NO. _____

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PHASE 3A
NOT TO SCALE



PHASE 3B
NOT TO SCALE

- NOTES:
1. THE WORK INCLUDED ON THESE PHASING PLANS APPLY TO TRACK ONLY.
 2. THE CITY'S CONTRACTOR SHALL PERFORM ALL GRADING ACTIVITIES.
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LEGEND:
 WORK PERFORMED BY CITY OF RIVERSIDE CONTRACTOR
 WORK PERFORMED BY UNION PACIFIC RAILROAD FORCES

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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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 _____

REGISTERED PROFESSIONAL ENGINEER

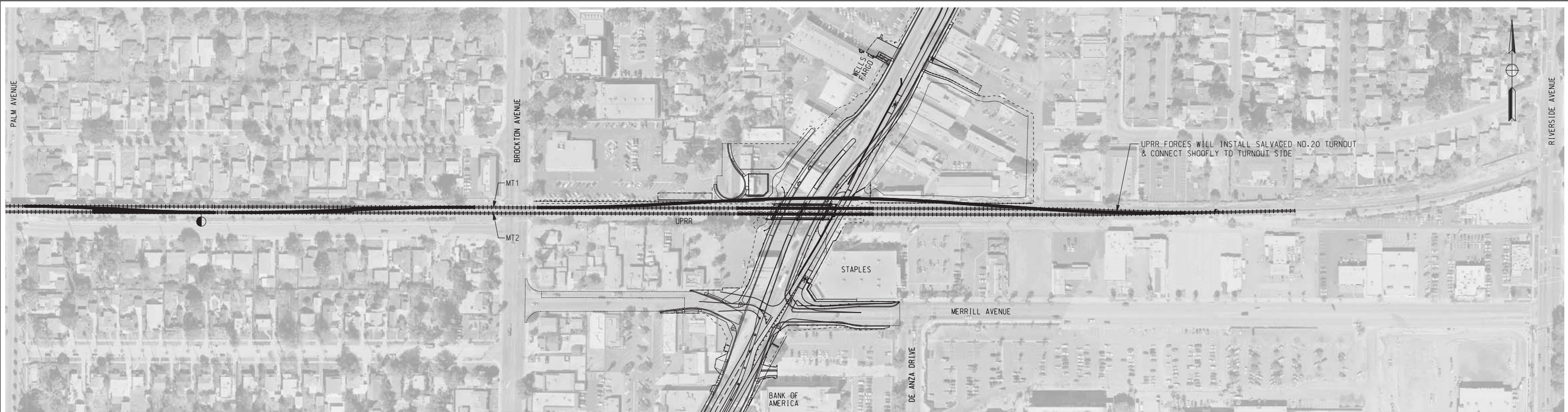
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

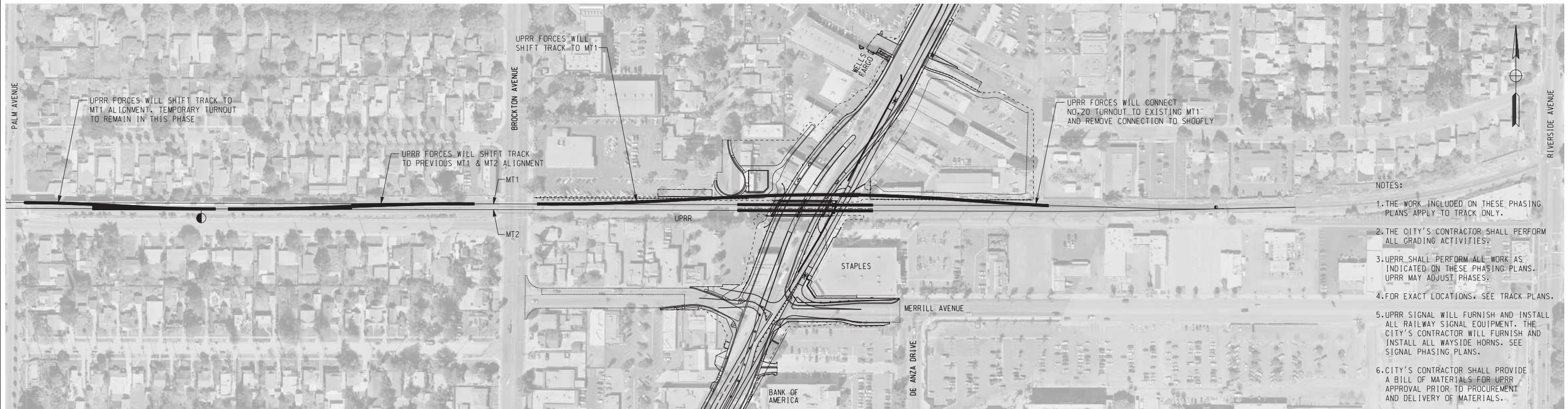
DESIGNED BY: RSM DRAWN BY: _____ RSM CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
TRACK CONSTRUCTION PHASING T-25		SHEET 39 of 189
HORIZ. SCALE: NONE VERT. SCALE: N/A		FILE NO.

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PHASE 4A
NOT TO SCALE



PHASE 4B
NOT TO SCALE

- NOTES:
1. THE WORK INCLUDED ON THESE PHASING PLANS APPLY TO TRACK ONLY.
 2. THE CITY'S CONTRACTOR SHALL PERFORM ALL GRADING ACTIVITIES.
 3. UPRR SHALL PERFORM ALL WORK AS INDICATED ON THESE PHASING PLANS. UPRR MAY ADJUST PHASES.
 4. FOR EXACT LOCATIONS, SEE TRACK PLANS.
 5. UPRR SIGNAL WILL FURNISH AND INSTALL ALL RAILWAY SIGNAL EQUIPMENT. THE CITY'S CONTRACTOR WILL FURNISH AND INSTALL ALL WAYSIDE HORNS. SEE SIGNAL PHASING PLANS.
 6. CITY'S CONTRACTOR SHALL PROVIDE A BILL OF MATERIALS FOR UPRR APPROVAL PRIOR TO PROCUREMENT AND DELIVERY OF MATERIALS.

LEGEND:
 WORK PERFORMED BY UNION PACIFIC RAILROAD FORCES

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE *11/16/2012*

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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 _____

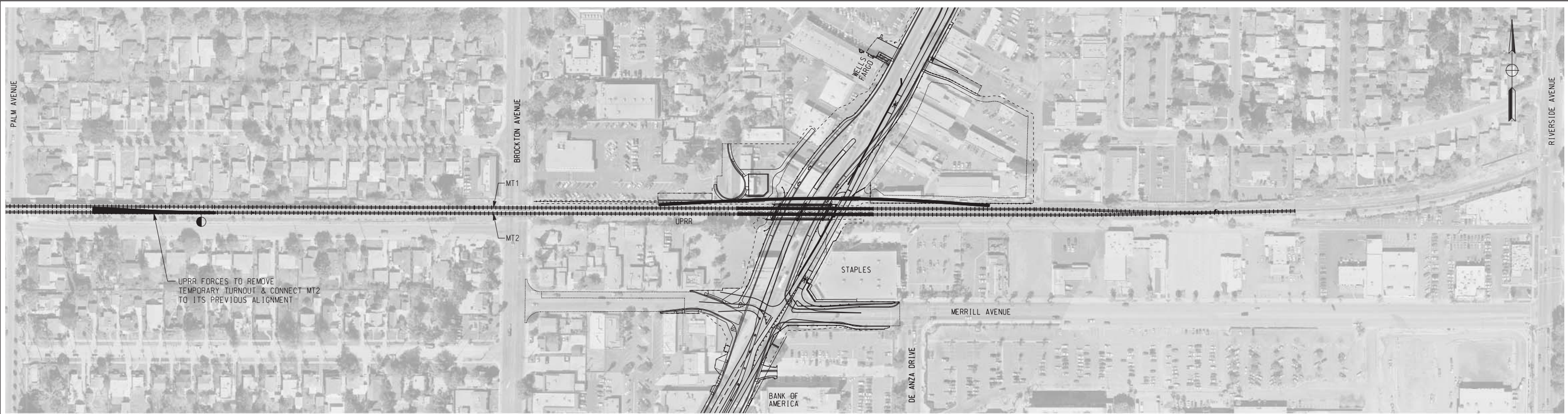
REGISTERED PROFESSIONAL ENGINEER

 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

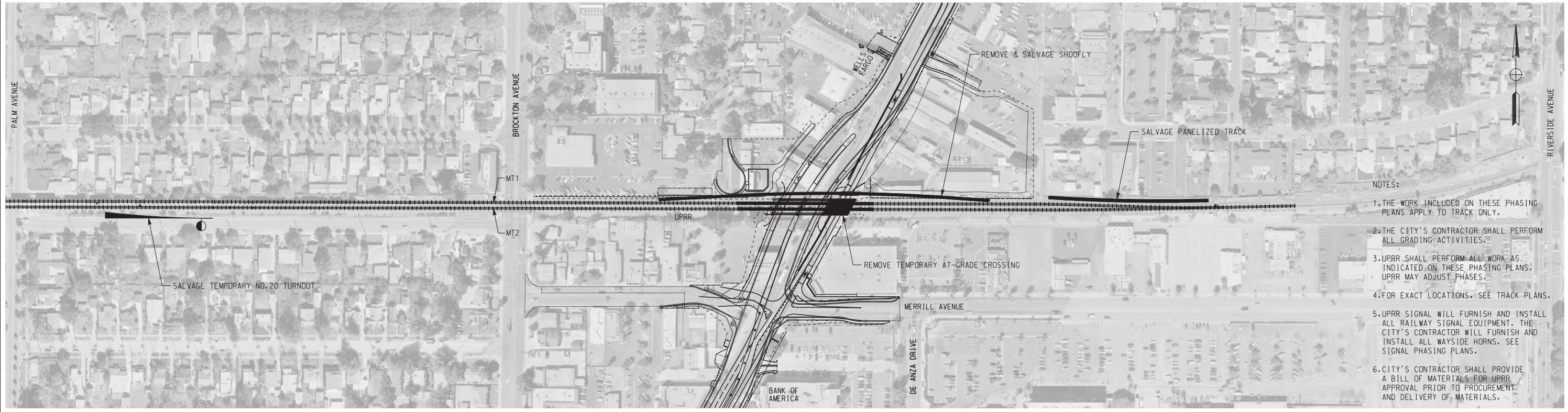
MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		R-4081
TRACK CONSTRUCTION PHASING T-26		SHEET 40 of 189
HORIZ. SCALE: NONE VERT. SCALE: N/A		FILE NO.



PHASE 4C
NOT TO SCALE



PHASE 5
NOT TO SCALE

- NOTES:
1. THE WORK INCLUDED ON THESE PHASING PLANS APPLY TO TRACK ONLY.
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LEGEND:
 WORK PERFORMED BY CITY OF RIVERSIDE CONTRACTOR
 WORK PERFORMED BY UNION PACIFIC RAILROAD FORCES

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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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 _____

REGISTERED PROFESSIONAL ENGINEER
 RUSSELL S. McNAUGHT
 No. C 65853
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

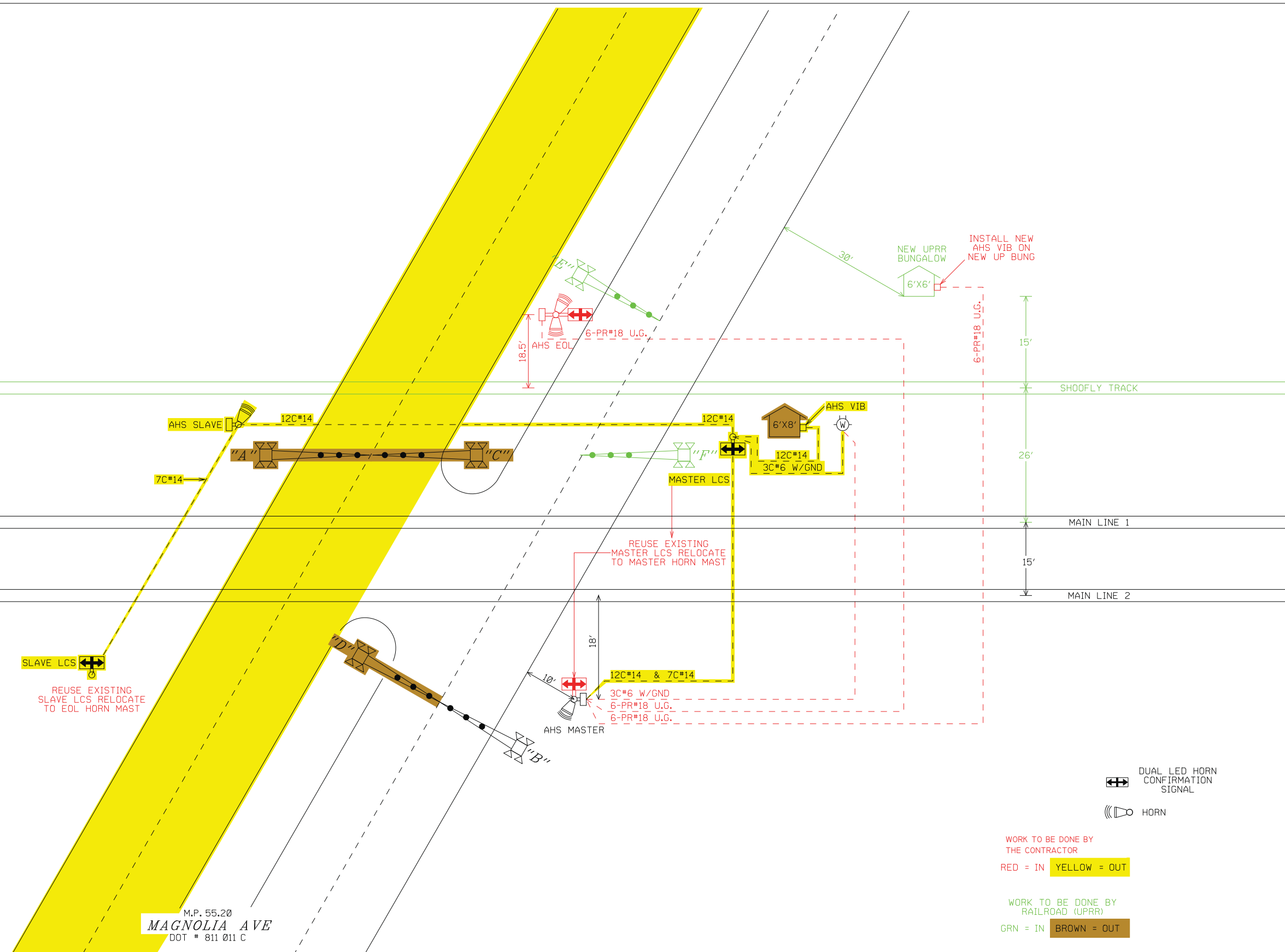
DESIGNED BY: RSM DRAWN BY: _____ RSM CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
TRACK CONSTRUCTION PHASING T-27

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET **41** OF **189**
 FILE NO. _____

HORIZ. SCALE: NONE VERT. SCALE: N/A

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

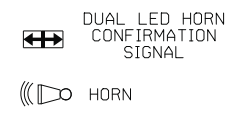
TCS
 RAILROAD SIGNAL DESIGN
 TWIN CITY SIGNAL
 A PROGRESS RAIL SERVICES COMPANY
 1515 LIVINGSTON ROAD
 HUDSON, WI 54016
 DATE: 04-13-09

MARK	REVISIONS	APPR.	DATE
DESIGNED BY: MAR	DRAWN BY: MAR	CHECKED BY:	

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER		
CONSTRUCTION ADMIN.		
SURVEYOR		
STREET SERVICES		
TRAFFIC ENGINEER		
PARK & REC. DEP.		

MAGNOLIA AVENUE UNDERPASS
WAYSIDE HORNS T-28
 HORIZ. SCALE N/A VERT. SCALE N/A

ACCT. NO. W.O. NO.
R-4081
 SHEET 42 OF 189
 FILE NO.



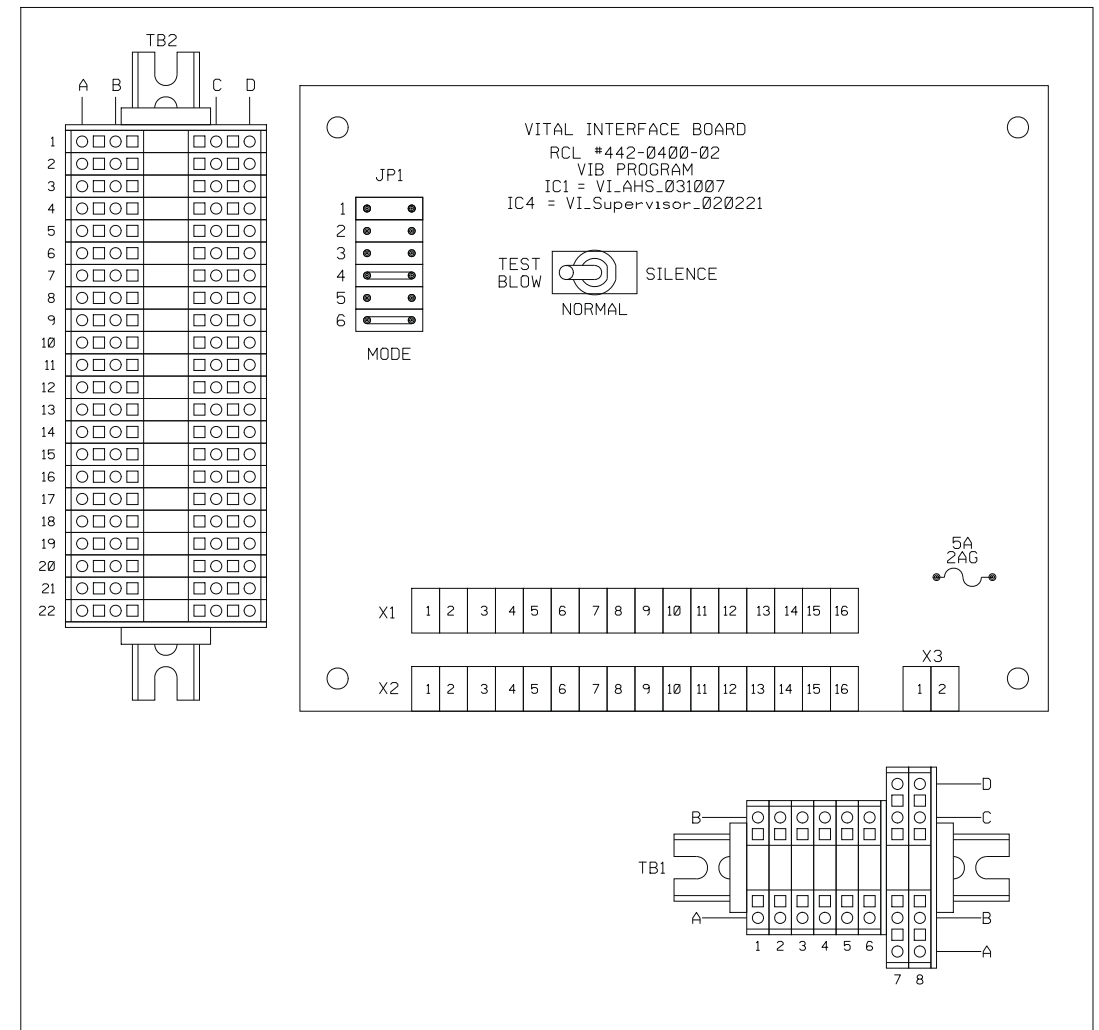
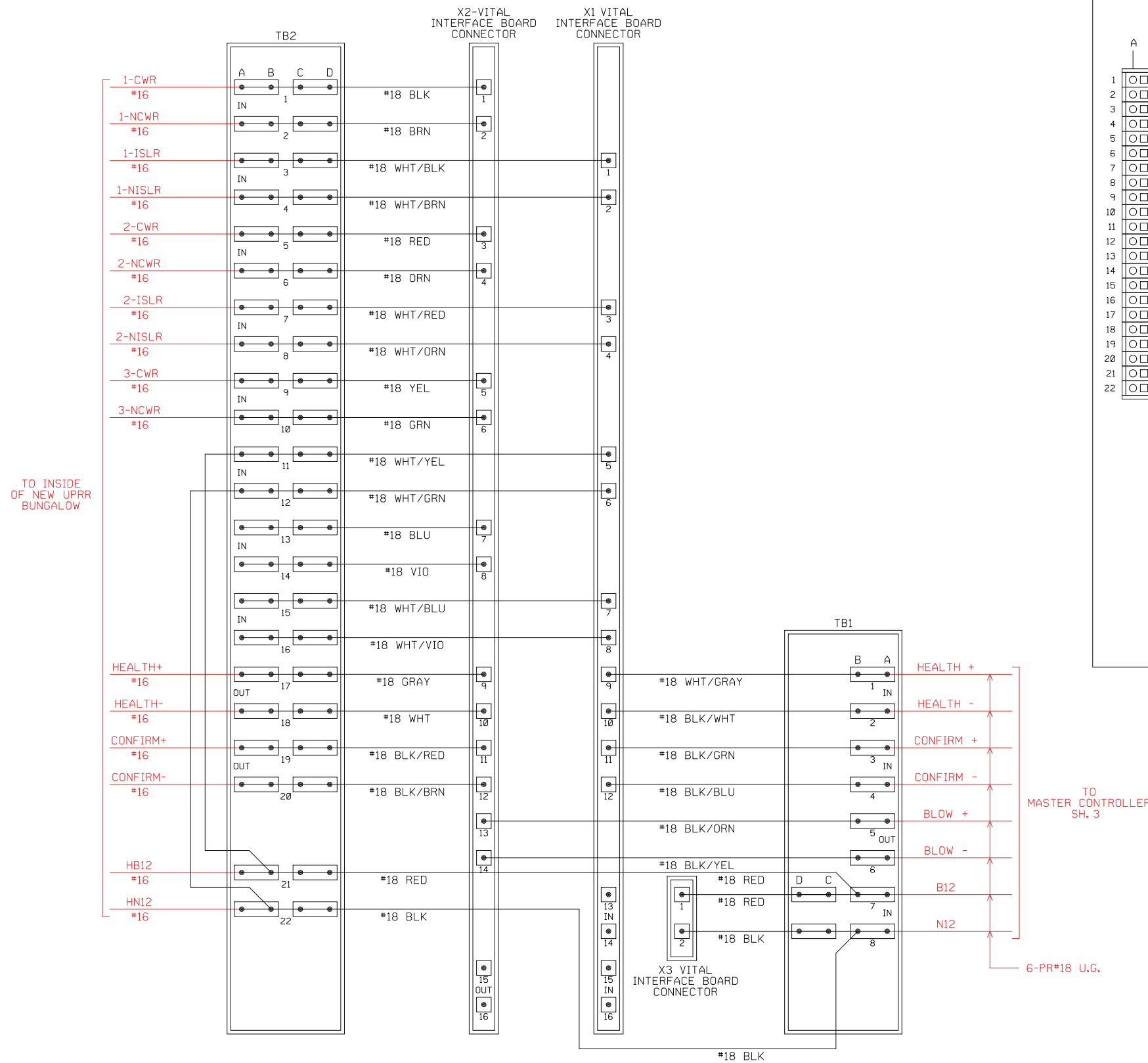
WORK TO BE DONE BY THE CONTRACTOR
 RED = IN YELLOW = OUT

WORK TO BE DONE BY RAILROAD (UPRR)
 GRN = IN BROWN = OUT

M.P. 55.20
MAGNOLIA AVE
 DOT # 811 011 C

VITAL INTERFACE

VITAL INTERFACE BOARD



INSTALL ON TEMPORARY UPRR BUNGALOW OUTSIDE

JP1 NOTES:

- = JUMPER ON
- = JUMPER OFF

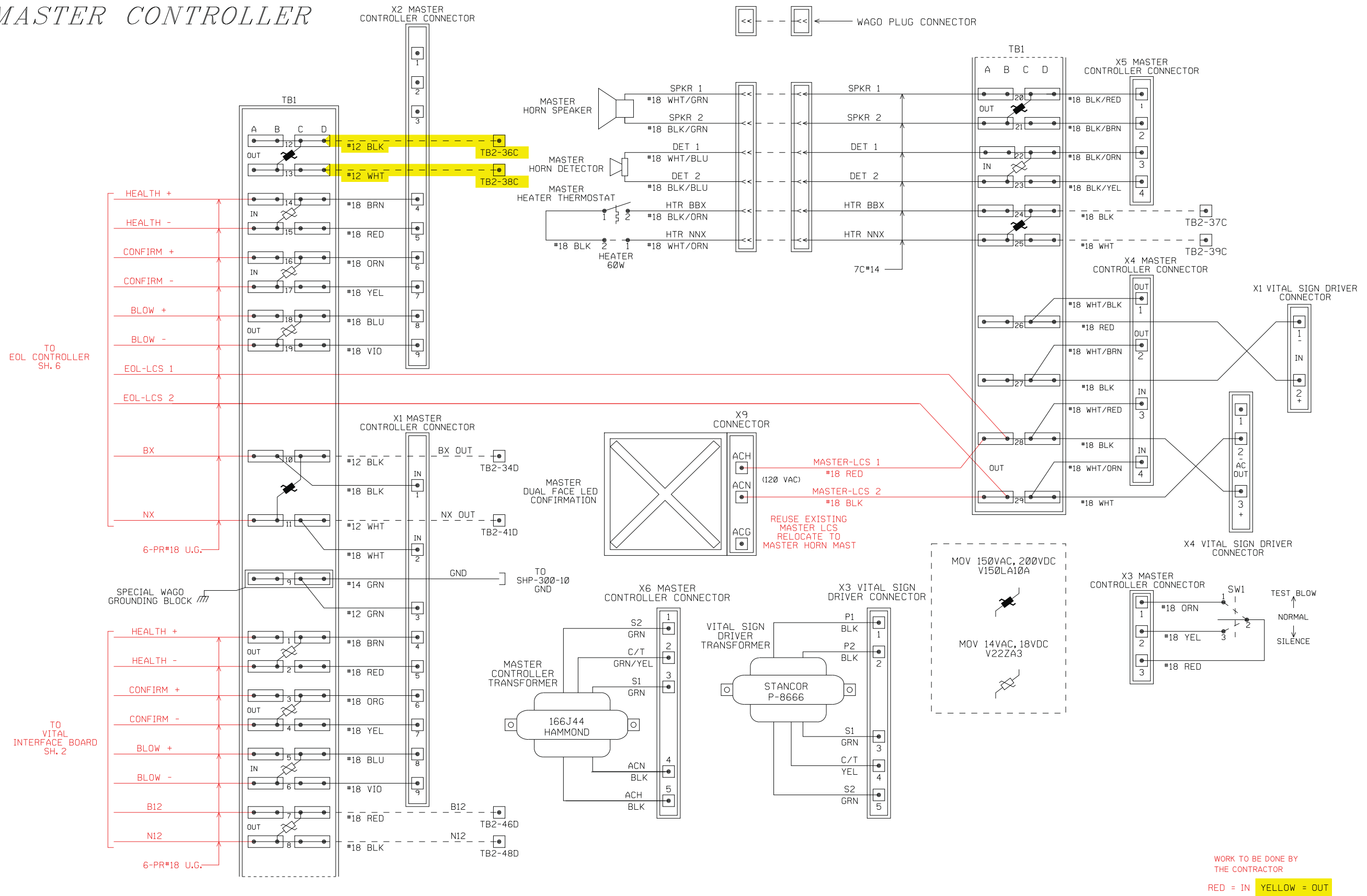
MODE JUMPERS 1-4 ON = DISABLE TRACKS 1-4: CWT 1-4 AND ISLAND 1-4 INPUTS IGNORED.
 MODE JUMPERS 1-4 OFF = ENABLE TRACKS 1-4: CWT 1-4 AND ISLAND 1-4 INPUTS MONITORED.
 MODE JUMPER 5 ON & 6 OFF = FOUR CWT INPUTS WITH FOUR CORRESPONDING ISL INPUTS.
 MODE JUMPER 5 ON & 6 ON = WITH STANDARD FIRMWARE ACTS SAME AS 5 ON & 6 OFF.
 MODE JUMPER 5 OFF & 6 ON = TRACK 4 REMAPPED TO ONE CWT-ONLY INPUT AND ONE ISL-ONLY INPUT.
 MODE JUMPER 5 OFF & 6 OFF = TRACK 4 REMAPPED TO DUAL CWT-ONLY INPUTS.

**ALL NEW AHS VIB CASE
PRE-ASSEMBLED BY RCL**

WORK TO BE DONE BY
THE CONTRACTOR
RED = IN YELLOW = OUT

<p>DIAL BEFORE YOU DIG TWO WORKING DAYS BEFORE YOU DIG TOLL FREE 1-800-227-2600 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>TWIN CITY SIGNAL A PROGRESS RAIL SERVICES COMPANY 1515 LIVINGSTON ROAD HUDSON, WI 54016 DATE: 04-13-09</p>	APPROVED BY	BY	DATE	MAGNOLIA AVENUE UNDERPASS WAYSIDE HORNS T-29 HORIZ. SCALE N/A VERT. SCALE N/A	ACCT. NO. W.O. NO.
		MARK	REVISIONS	APPR.		DATE	R-4081 SHEET 43 OF 189
DESIGNED BY: MAR		DRAWN BY: MAR		CHECKED BY:	FILE NO.	

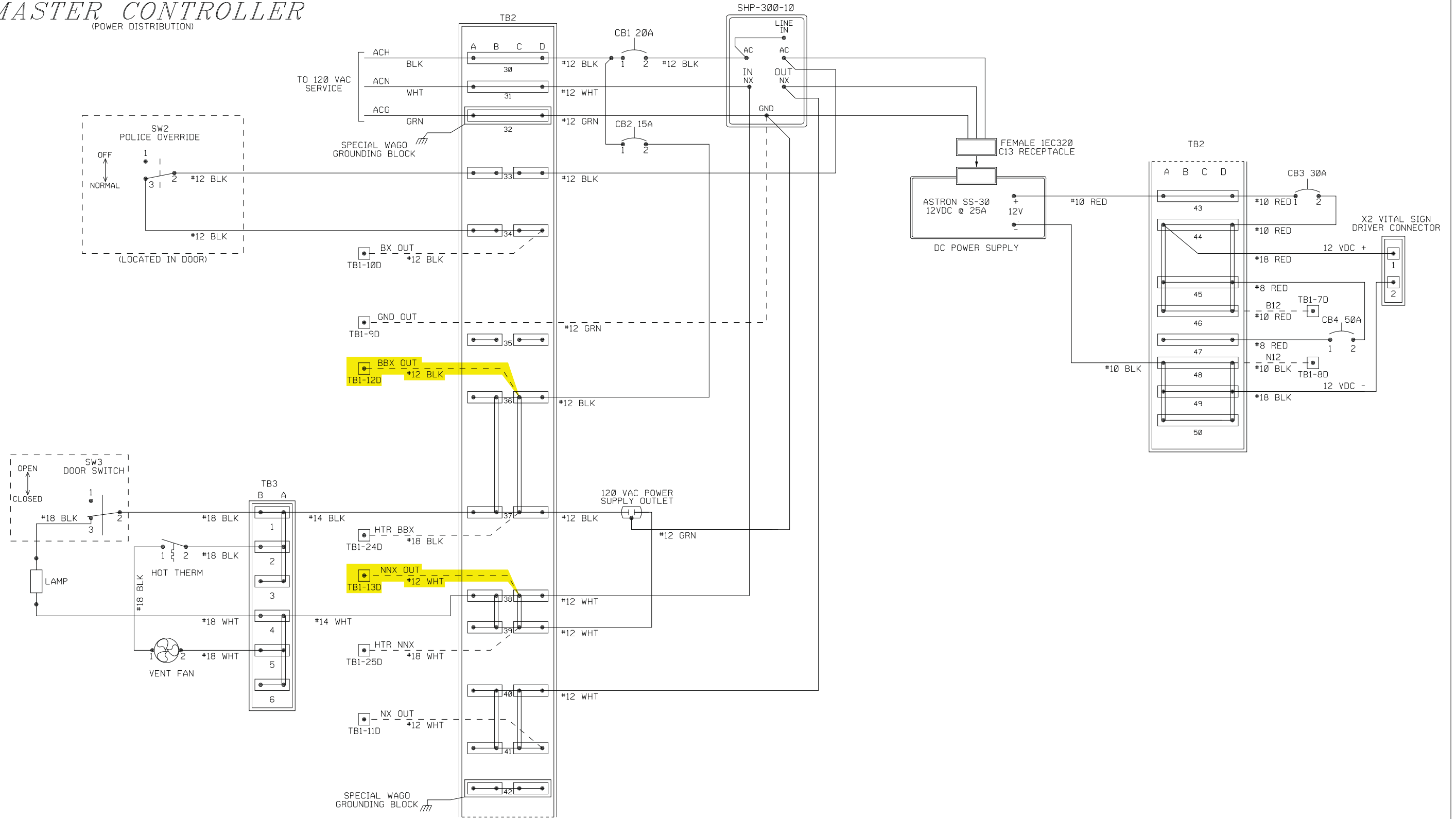
MASTER CONTROLLER



<p>DIAL BEFORE YOU DIG</p> <p>TWO WORKING DAYS BEFORE YOU DIG</p> <p>TOLL FREE 1-800-227-2600</p> <p>A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>TWIN CITY SIGNAL DESIGN</p> <p>A PROGRESS RAIL SERVICES COMPANY</p> <p>1515 LIVINGSTON ROAD HUDSON, WI 54016</p> <p>DATE: 04-13-09</p>	APPROVED BY PRINCIPAL ENGINEER CONSTRUCTION ADMIN. SURVEYOR STREET SERVICES TRAFFIC ENGINEER PARK & REC. DEP.	BY DATE	MAGNOLIA AVENUE UNDERPASS WAYSIDE HORNS T-30	ACCT. NO. W.O. NO. R-4081
		DESIGNED BY: MAR DRAWN BY: MAR CHECKED BY:	MARK REVISIONS APPR. DATE	HORIZ. SCALE N/A VERT. SCALE N/A	SHEET 44 OF 189 FILE NO.

MASTER CONTROLLER

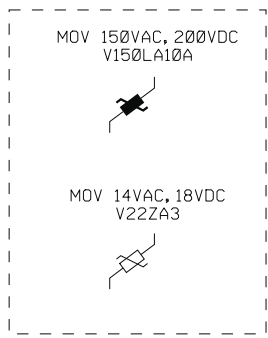
(POWER DISTRIBUTION)



WORK TO BE DONE BY THE CONTRACTOR
 RED = IN YELLOW = OUT

<p>DIAL BEFORE YOU DIG TWO WORKING DAYS BEFORE YOU DIG TOLL FREE 1-800-227-2600 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>TWIN CITY SIGNAL A PROGRESS RAIL SERVICES COMPANY 1515 LIVINGSTON ROAD HUDSON, WI 54016 DATE: 04-13-09</p>	APPROVED BY PRINCIPAL ENGINEER CONSTRUCTION ADMIN. SURVEYOR STREET SERVICES TRAFFIC ENGINEER PARK & REC. DEP.	BY DATE	MAGNOLIA AVENUE UNDERPASS WAYSIDE HORNS T-31	ACCT. NO. W.O. NO. R-4081 SHEET 45 OF 189 FILE NO.
		MARK DESIGNED BY: MAR REVISIONS DRAWN BY: MAR APPR. CHECKED BY:	DATE	HORIZ. SCALE N/A VERT. SCALE N/A	

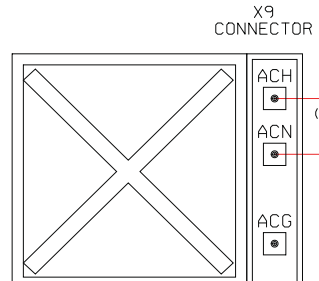
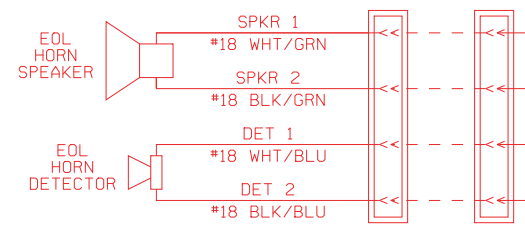
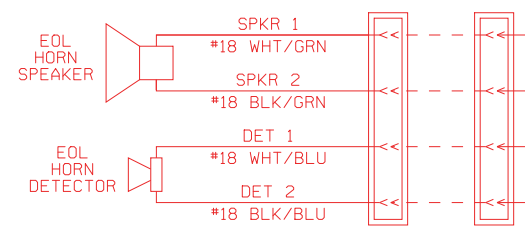
END OF LINE (EOL) CONTROLLER



SPECIAL WAGO GROUNDING BLOCK

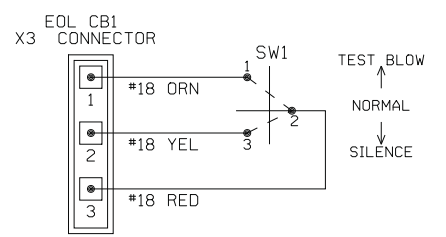
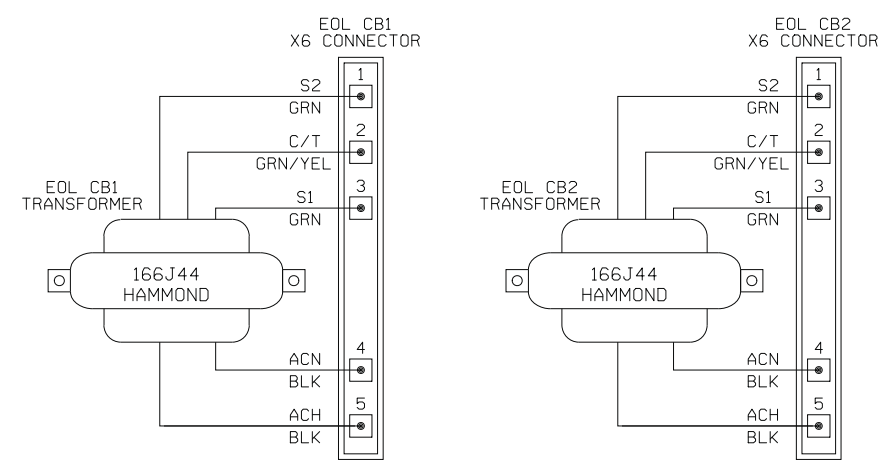
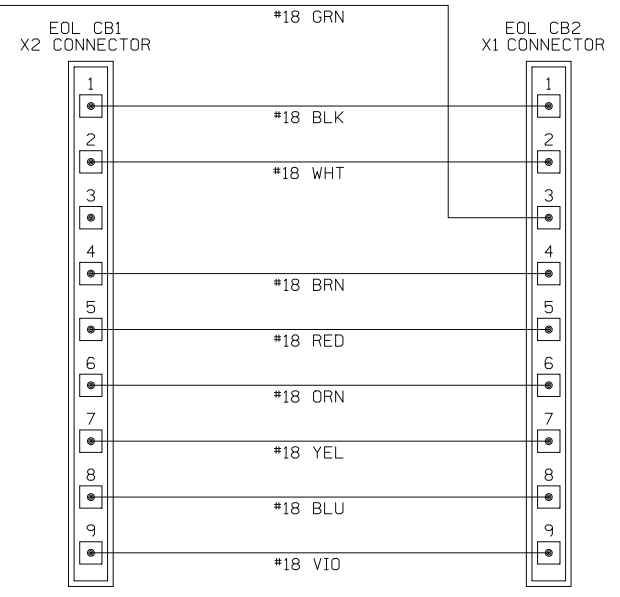
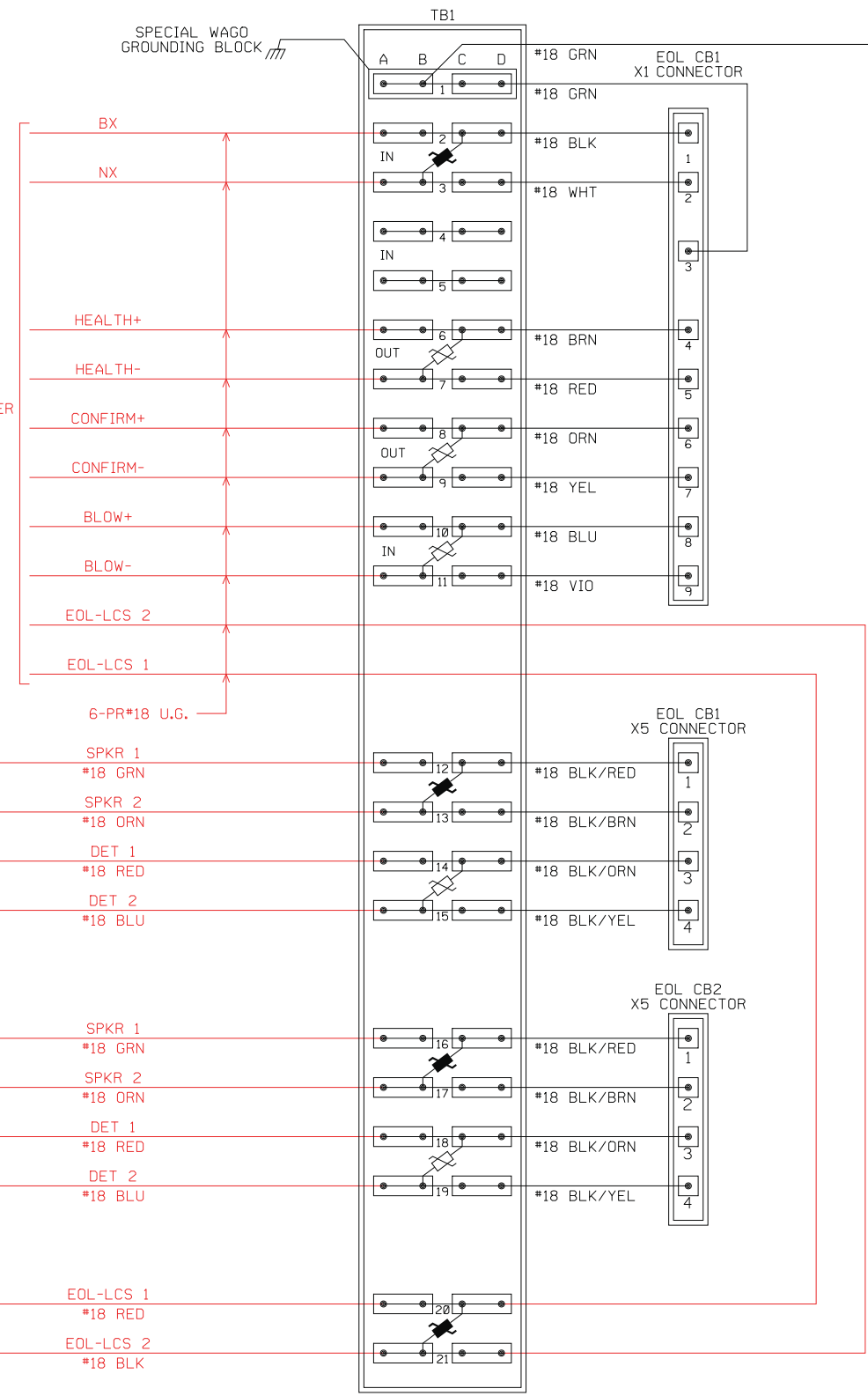
TO MASTER CONTROLLER SH. 3

WAGO PLUG CONNECTOR



EOL-LCS DUAL FACE LED CONFIRMATION

REUSE EXISTING SLAVE LCS RELOCATE TO EOL HORN MAST



ALL NEW AHS EOL CASE PRE-ASSEMBLED BY RCL

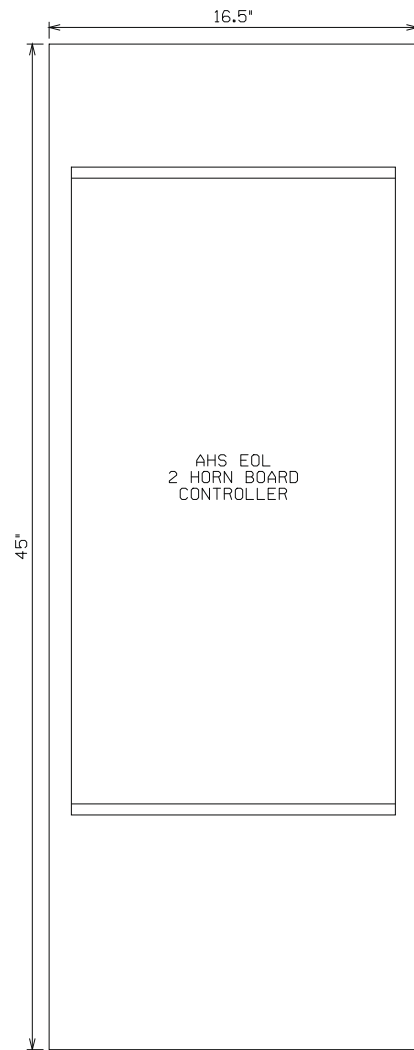
WORK TO BE DONE BY THE CONTRACTOR
RED = IN YELLOW = OUT

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TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

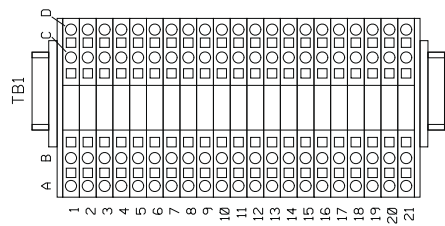
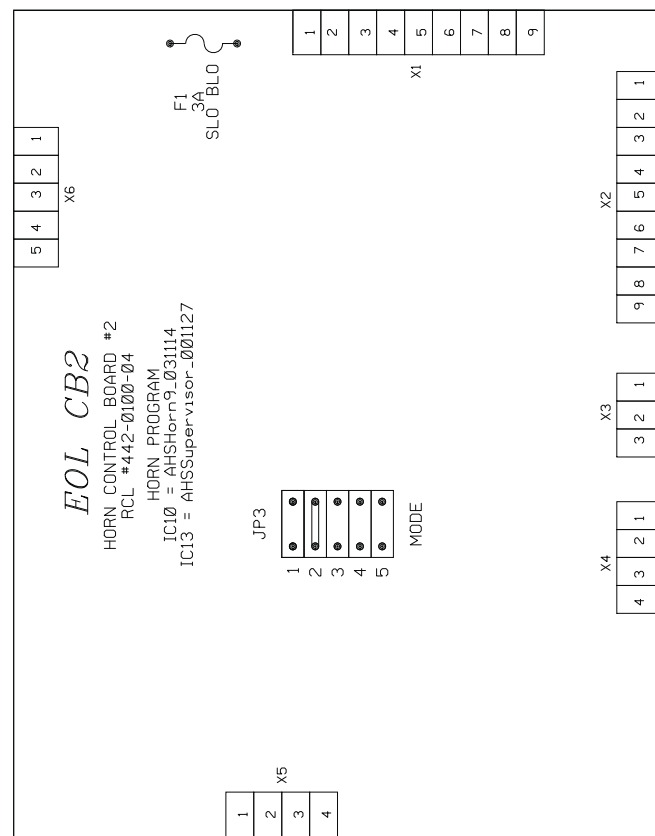
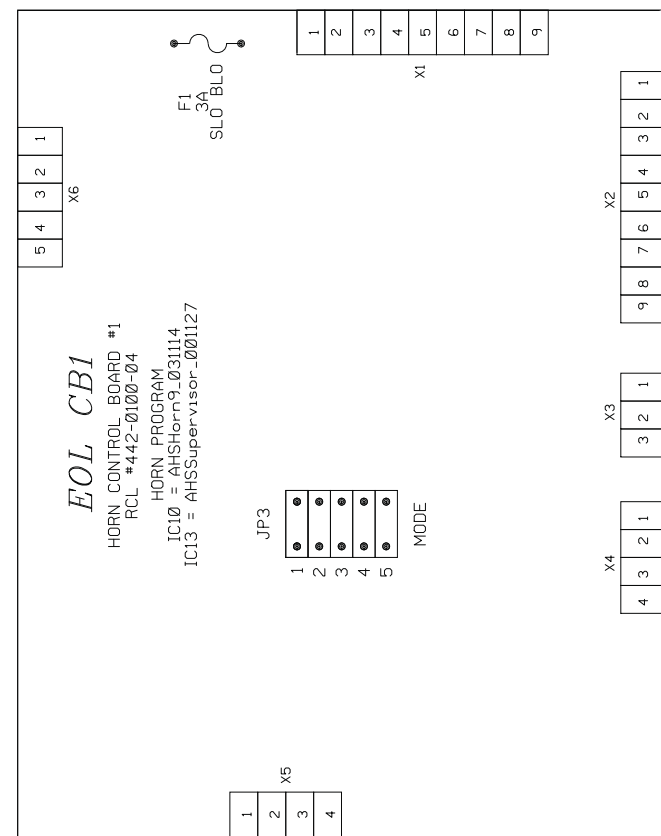
TCS
RAILROAD SIGNAL DESIGN
TWIN CITY SIGNAL
A PROGRESS RAIL SERVICES COMPANY
1515 LIVINGSTON ROAD
HUDSON, WI 54016
DATE: 04-13-09

APPROVED BY	BY	DATE	MAGNOLIA AVENUE UNDERPASS	ACCT. NO.
PRINCIPAL ENGINEER				R-4081
CONSTRUCTION ADMIN. SURVEYOR				SHEET 47 OF 189
STREET SERVICES TRAFFIC ENGINEER				FILE NO.
MARK	REVISIONS	APPR.	DATE	DESIGNED BY: MAR
				DRAWN BY: MAR
				CHECKED BY:
HORIZ. SCALE N/A			VERT. SCALE N/A	

EOL CASE LAYOUT

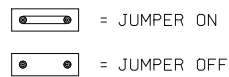


EOL 2 HORN BOARD CONTROLLER



GROUNDED WAGO BLOCK

JP3 NOTES:



- MODE JUMPER 1 ON = MASTER, OFF = SLAVE.
- MODE JUMPER 2 ON = LAST BOARD TERMINATION IN DAISY CHAIN, OFF = PASS THROUGH.
- MODE JUMPER 3 ON = 90 SECONDS BLOW LIMIT, OFF = NO BLOW LIMIT.
- MODE JUMPER 4 ON = SIGN FLASHES WHEN HEALTH IS GOOD, OFF = SIGN FLASHES WHEN BLOWING.
- MODE JUMPER 5 ON = TEST BLOW EVERY 4 HOURS, OFF = NO TEST BLOW.

ALL NEW AHS EOL CASE PRE-ASSEMBLED BY RCL

WORK TO BE DONE BY THE CONTRACTOR

RED = IN YELLOW = OUT

APPROVED BY	BY	DATE	MAGNOLIA AVENUE UNDERPASS	ACCT. NO.
PRINCIPAL ENGINEER				R-4081
CONSTRUCTION ADMIN.				SHEET 48 OF 189
SURVEYOR				FILE NO.
STREET SERVICES			WAYSIDE HORNS T-34	
TRAFFIC ENGINEER				HORIZ. SCALE N/A	VERT. SCALE N/A
PARK & REC. DEP.				
DESIGNED BY: MAR	DRAWN BY: MAR	CHECKED BY:		

CONSTRUCTION NOTES

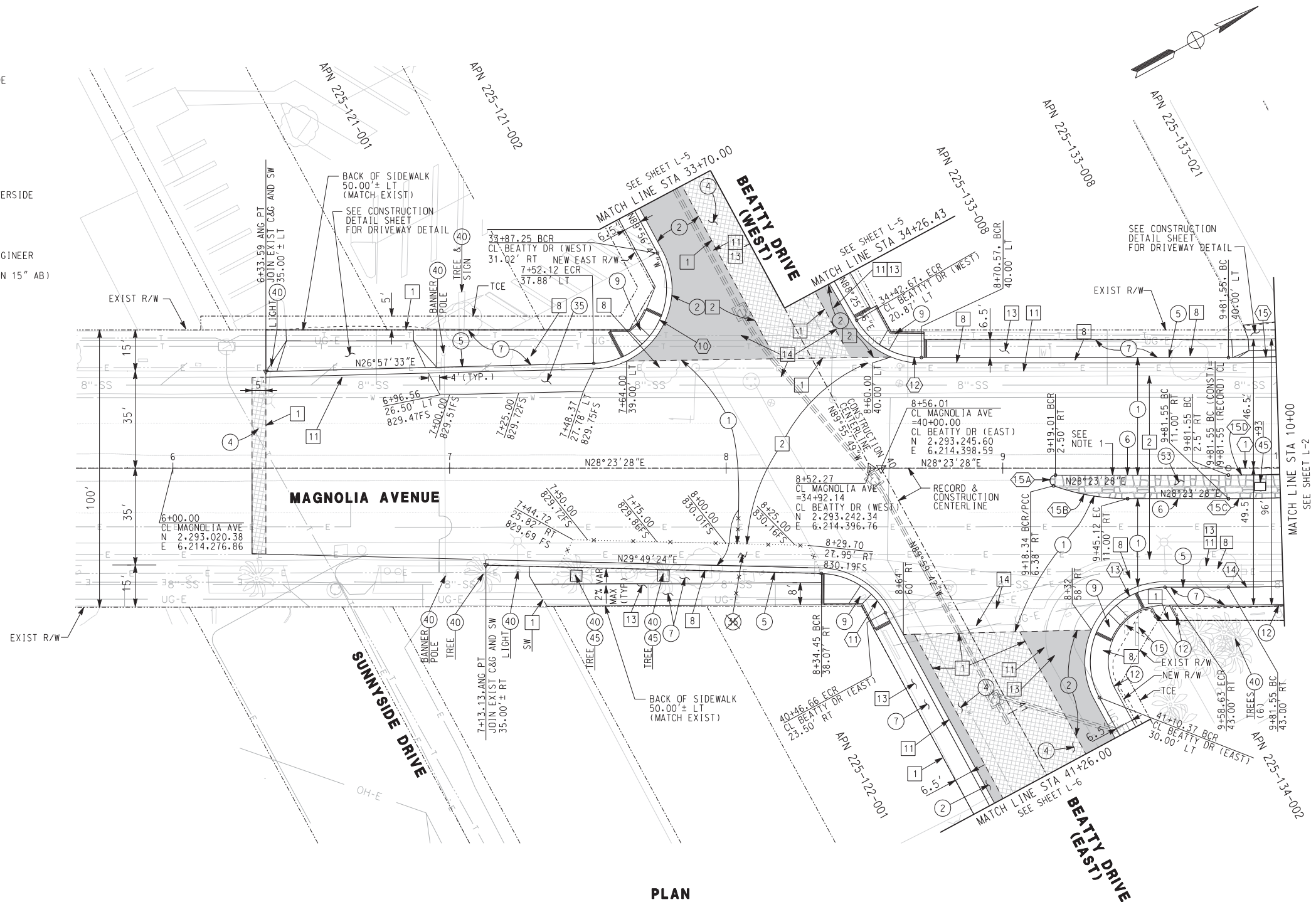
- 1 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 2 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 3 CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
- 4 COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 6 CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- 7 CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- 9 CONSTRUCT TYPE 2 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- 10 CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- 12 CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 15 RELOCATE COMMERCIAL SIGN TO NEW LOCATION AS APPROVED BY ENGINEER
- 35 CONSTRUCT CONCRETE BUS BAY PER APWA STD PLAN No. 131-1. (ON 15" AB)
- 40 PROTECT IN PLACE.
- 45 CONSTRUCT TREE WELL AND COVER PER CITY OF RIVERSIDE STD PLAN No. 326. MODIFY DIMENSIONS WHERE NECESSARY TO CENTER TREE.

REMOVAL NOTES

- 1 SAWCUT EXISTING PAVEMENT
- 2 REMOVE EXISTING AC PAVEMENT
- 3 REMOVE EXISTING CONCRETE
- 4 REMOVE CHAIN LINK FENCE
- 5 REMOVE EXISTING BLOCK WALL
- 8 REMOVE TREE
- 11 REMOVE CURB & GUTTER
- 12 REMOVE PIPE
- 13 REMOVE EXISTING CONCRETE SIDEWALK
- 14 REMOVE EXIST CROSS GUTTER

NOTE:

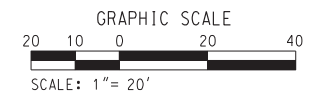
1. PATTERNED STAMPED CONCRETE 1' + 6" CURB FACE.



PLAN
SCALE: 1" = 20'

CURVE DATA				
No.	Δ	R	L	T
1	8° 37' 48"	580.00'	87.36'	43.76'
10	118° 31' 37"	27.00'	55.09'	45.41'
11	60° 10' 54"	27.00'	28.36'	15.65'
12	60° 02' 28"	27.00'	28.29'	15.60'
13	118° 23' 10"	27.00'	55.79'	45.28'
14	9° 09' 54"	623.00'	99.66'	49.93'
15	10° 05' 42"	540.00'	95.14'	47.69'
15A	160° 26' 34"	2.00'	5.60'	11.60'
15B	19° 33' 26"	80.00'	27.31'	13.79'
15C	10° 12' 43"	584.19'	104.12'	52.20'
15D	10° 03' 44"	580.00'	101.86'	51.06'

AS BUILT
CORRECTIONS BY: [Signature]
CONTRACT NO. [Blank]
DATE: 11/16/2012



11/13/12, 09:19 AM
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DIGALERT
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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 ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____
MARK	MODIFY MEDIAN, SIGNS & STRIPING	TTK 06/02/11
REVISIONS	APPR. DATE	

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT - MAGNOLIA AVE L-1
HORIZ. SCALE: 1"=20' VERT. SCALE: _____
ACCT. NO. W.O. NO.
R-4081
SHEET 51 of 189
FILE NO.

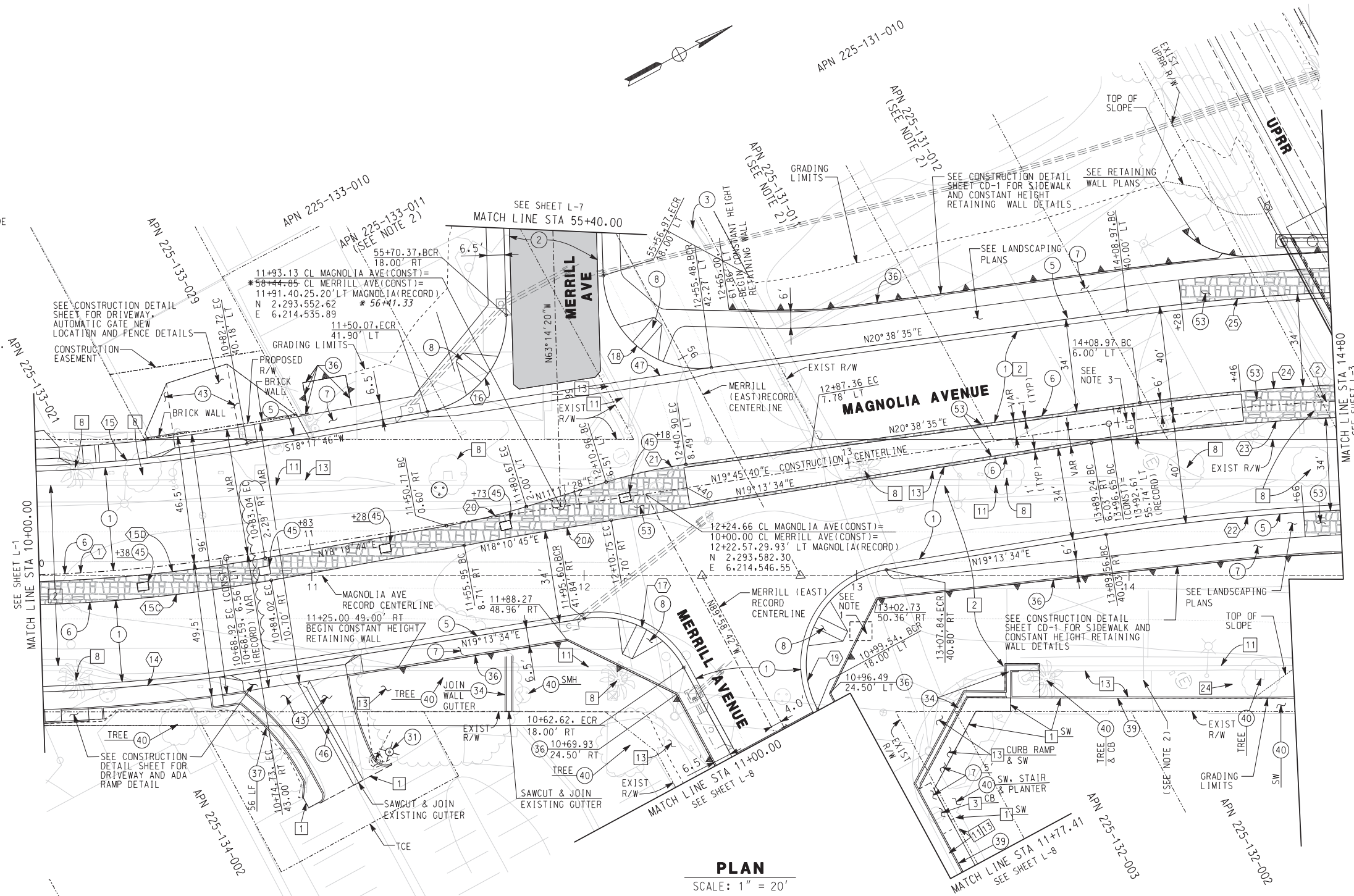
CONSTRUCTION NOTES:

- ① CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ③ CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑥ CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑧ CONSTRUCT TYPE 1 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- ⑩ CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- ③① RELOCATE EXISTING PARKING LIGHT FIXTURE PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ③④ CONSTRUCT 6" CURBED SWALE GUTTER PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ③⑥ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- 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
- ③⑨ CONSTRUCT TYPE A1-6 (6") PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- ④① PROTECT IN PLACE
- ④③ CONSTRUCT 6" PCC PAVEMENT
- ④⑥ CONSTRUCT PCC GUTTER FOR ALLEY SECTIONS PER CITY OF RIVERSIDE STD PLAN No. 110.
- ④⑦ CONSTRUCT PCC CROSS GUTTER PER APWA STD PLAN 122-1
- ④⑤ CONSTRUCT TREE WELL AND COVER PER CITY OF RIVERSIDE STD PLAN No. 326. MODIFY DIMENSIONS WHERE NECESSARY TO CENTER TREE.

- ⑤③ CONSTRUCT PATTERNED STAMPED CONCRETE

REMOVAL NOTES

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ③ REMOVE EXISTING CONCRETE
- ⑧ REMOVE TREE
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK
- ⑲ REMOVE AND SAVAGE EXISTING BUS STOP EQUIPMENT



PLAN
SCALE: 1" = 20'

CURVE DATA				
No.	Δ	R	L	T
①	8°37'48"	580.00'	87.36'	43.76'
②	23°37'21"	800.00'	329.83'	167.29'
④	9°09'54"	623.00'	99.66'	49.93'
⑤	10°05'42"	540.00'	95.14'	47.69'
⑤①	10°12'43"	584.19'	104.12'	52.20'
⑤②	10°03'44"	580.00'	101.86'	51.06'
⑥	81°32'07"	35.00'	49.81'	30.18"
⑦	70°47'44"	35.00'	43.25'	24.87'
⑧	96°07'05"	35.00'	58.72'	38.95'
⑨	109°12'16"	35.00'	66.71'	49.25'
⑩	07°02'16"	245.00'	30.09'	15.07'
⑪	09°21'07"	184.00'	30.03'	15.05'
⑫	22°15'08"	760.00'	295.16'	149.47'
⑬	22°15'08"	794.00'	308.37'	156.15'
⑭	24°00'19"	806.00'	337.69'	171.36'
⑮	24°00'19"	840.00'	351.94'	178.59'
⑯	01°02'48"	3000.00'	54.81'	27.40'

NOTES:

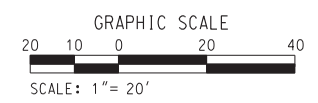
- 1. CONSTRUCT CONSTANT HEIGHT RETAINING WALL FOUNDATION TO STEP ABOVE THE EXISTING PIPE.
- 2. CONTRACTOR SHALL SALVAGE OLD RAILROAD SIGNS AND MOUNTING BRACKETS LOCATED AT MAGNOLIA STA 14+00 RT +/- AND 17+00 LT +/- (TOTAL 2). CONTRACTOR SHALL ASSURE EXISTING CONDITION OF SIGNS ARE MAINTAINED. COORDINATE WITH ENGINEER TO DELIVER SIGNS TO CITY YARD.
- 3. PATTERNED STAMPED CONCRETE 1' + 6" CURB.

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012



10/15/12, 11:15 AM

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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

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MODIFY MEDIAN, SIGNS & STRIPING	TTK	06/02/11
ADDENDUM-REVISE MERRILL/MAGNOLIA STA. EOA.	TTK	10/27/09
REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

LAYOUT - MAGNOLIA AVE L-2

HORIZ. SCALE: 1" = 20' VERT. SCALE: _____

ACCT. NO. W.O. NO. R-4081

SHEET 52 of 189

FILE NO. _____

CONSTRUCTION NOTES:

- 1 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 6 CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- 7 CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- 11 CONSTRUCT TYPE C1 MOUNTABLE CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 14 CONSTRUCT NEW CHAIN LINK FENCE PER CITY OF RIVERSIDE STD PLAN No. 380
- 16 CONSTRUCT MASONRY RETAINING WALL (TYPE B) PER APWA STD PLAN No. 618-2 (SEE DRAINAGE DETAIL SHEET)
- 32 CONSTRUCT BOLLARD PER DETAIL 4 ON PUMP STATION ELECTRICAL PLAN PS-15
- 36 CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- 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
- 39 CONSTRUCT TYPE A1-6 (6") PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- 40 PROTECT IN PLACE.
- 53 CONSTRUCT PATTERNED STAMPED CONCRETE

REMOVAL NOTES

- 1 SAWCUT EXISTING PAVEMENT
- 2 REMOVE EXISTING AC PAVEMENT
- 3 REMOVE EXISTING CONCRETE
- 8 REMOVE TREE
- 11 REMOVE CURB & GUTTER
- 13 REMOVE EXISTING CONCRETE SIDEWALK
- 14 REMOVE EXIST CROSS GUTTER
- 17 REMOVE & SALVAGE EXISTING STREET LIGHT

NOTES:

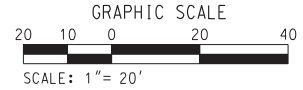
- 1. COORDINATE WITH RESIDENT ENGINEER AND UTILITY OWNERS FOR REMOVAL OF ABANDONED UTILITY FACILITIES THROUGH EXCAVATED AREA.
- 2. COORDINATE WITH RESIDENT ENGINEER AND UTILITY OWNER TO PROTECT IN PLACE UNDERGROUND TELEPHONE CONDUIT DURING BUT NOT LIMITED TO RAIL SHOOFLY AND BRIDGE CONSTRUCTION
- 3. ALL BUILDINGS, UTILITIES AND EQUIPMENT ASSOCIATED WITH PROPERTY TO BE REMOVED BY OTHERS
- 4. ALL BUILDINGS, AND EQUIPMENT ASSOCIATED WITH PROPERTY TO BE REMOVED BY OTHERS. PAVEMENT, FOUNDATIONS AND UNDERGROUND SERVICE UTILITIES TO BE REMOVED BY CONTRACTOR
- 5. ALL RAIL SIGNAL AND TRACK EQUIPMENT IS TO BE REMOVED OR MODIFIED BY UNION PACIFIC RAILROAD.
- 6. CONTRACTOR SHALL SALVAGE OLD RAILROAD SIGNS AND MOUNTING BRACKETS LOCATED AT MAGNOLIA STA 14+00 RT +/- AND 17+00 LT +/- (TOTAL 2). CONTRACTOR SHALL ASSURE EXISTING CONDITION OF SIGNS ARE MAINTAINED. COORDINATE WITH ENGINEER TO DELIVER SIGNS TO CITY YARD.
- 7. PATTERNED STAMPED CONCRETE 1' + 6" CURB.



PLAN
SCALE: 1" = 20'

CURVE DATA				
No.	Δ	R	L	T
2	23°37'21"	800.00'	329.83'	167.29'
3	14°59'35"	550.00'	143.92'	72.37'
25	22°15'08"	760.00'	295.16'	149.47'
26	24°00'19"	840.00'	351.94'	178.59'
27	22°15'08"	794.00'	308.37'	156.15'
28	24°00'19"	806.00'	337.69'	171.36'
29	176°49'48"	5.39'	16.63'	194.70'
30	13°05'13"	618.00'	141.16'	70.89'
31	16°15'26"	542.00'	153.79'	77.41'

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



10/15/12, 11:16 AM
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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

THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____
MODIFY MEDIAN, SIGNS & STRIPING	TIK	06/02/11
REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT - MAGNOLIA AVE L-3
HORIZ. SCALE: 1"=20' VERT. SCALE: _____

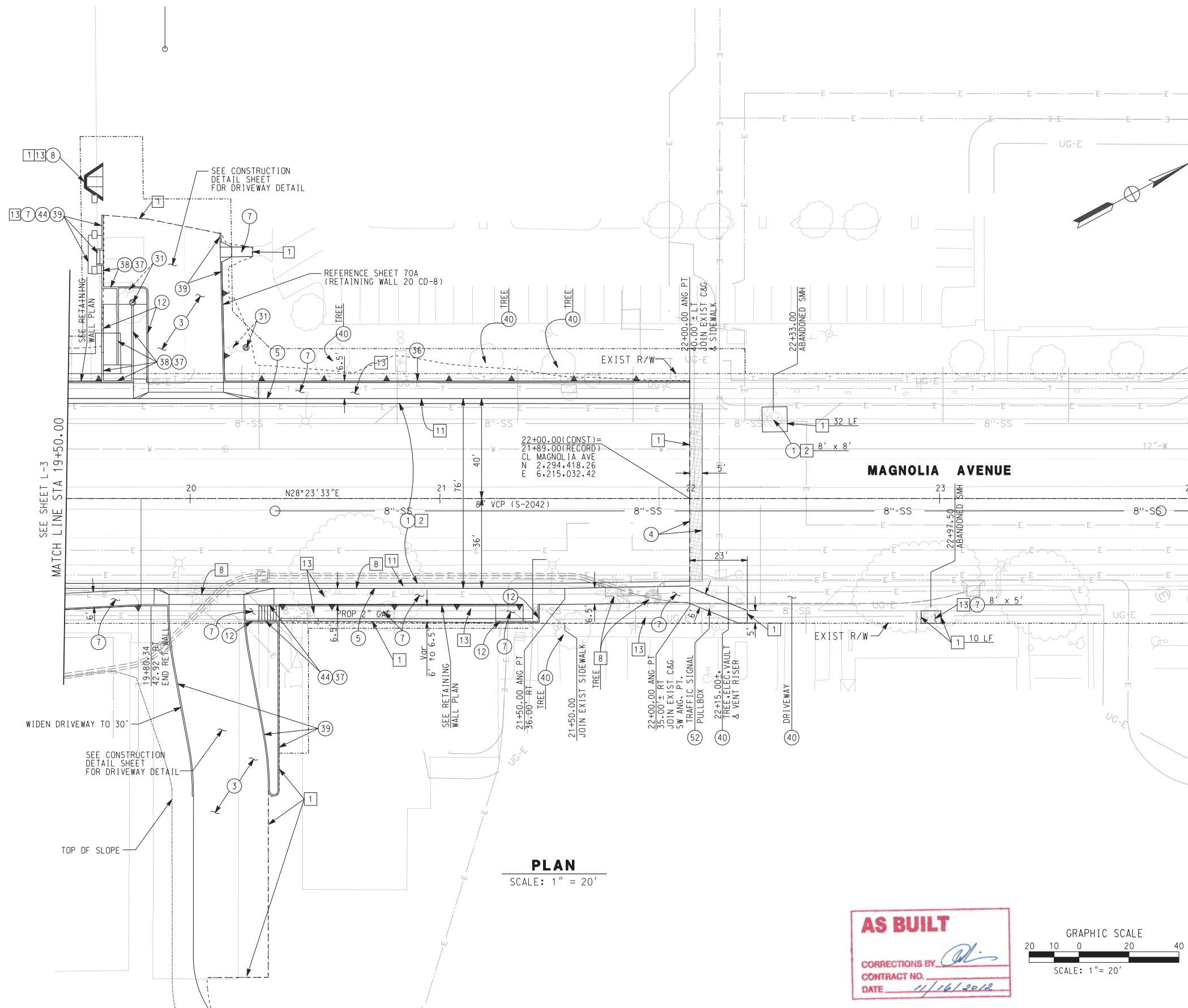
ACCT. NO. W.O. NO.
R-4081
SHEET 53 of 189
FILE NO. _____

CONSTRUCTION NOTES

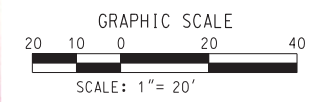
- 1 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- 3 CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
- 4 COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- 7 CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- 8 CONSTRUCT TYPE 1 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- 10 CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- 12 CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 31 RELOCATE EXISTING PARKING LIGHT FIXTURE PER DETAIL ON CONSTRUCTION DETAIL SHEET
- 36 CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- 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
- 38 CONSTRUCT REINFORCED CONCRETE RETAINING WALL (TYPE 7) PER APWA STD PLAN No. 616-1
- 39 CONSTRUCT 6" PCC CURB TO MATCH EXISTING COMMERCIAL CURB.
- 40 PROTECT IN PLACE.
- 44 CONSTRUCT PCC STAIR PER APWA STD PLAN 640-1
- 52 ADJUST/MODIFY ELECTRIC PULLBOX TO GRADE

REMOVAL NOTES

- 1 SAWCUT EXISTING PAVEMENT
- 2 REMOVE EXISTING AC PAVEMENT
- 3 REMOVE EXISTING CONCRETE
- 8 REMOVE TREE
- 11 REMOVE CURB & GUTTER
- 13 REMOVE EXISTING CONCRETE SIDEWALK

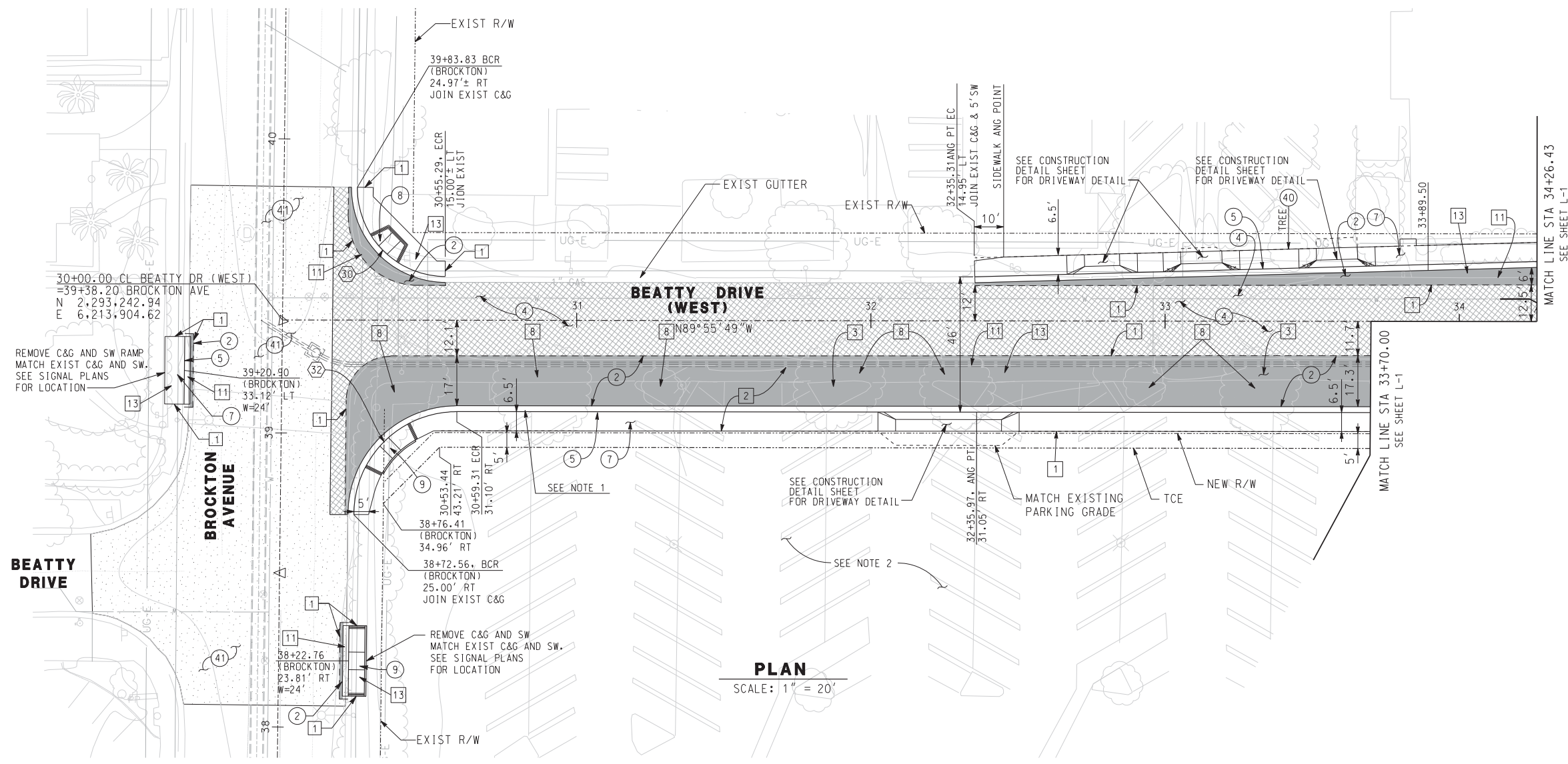


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 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012



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 DIAL 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 <u>9/14/09</u>		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS LAYOUT - MAGNOLIA AVE L-4 HORIZ. SCALE: 1"=20' VERT. SCALE:	ACCT. NO. _____ W.O. NO. _____ R-4081 SHEET <u>54</u> OF <u>189</u> FILE NO. _____
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____			REVISIONS: _____ APRR. DATE: _____	



PLAN
SCALE: 1" = 20'

CONSTRUCTION NOTES

- ① CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 6 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ③ CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑧ CONSTRUCT TYPE 1 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- ⑨ CONSTRUCT TYPE 2 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- ⑩ CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- ③⑨ CONSTRUCT 6" PCC CURB TO MATCH EXISTING COMMERCIAL CURB.
- ④⑩ PROTECT IN PLACE.
- ④① CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL

REMOVAL NOTES

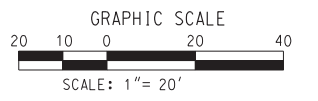
- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ③ REMOVE EXISTING CONCRETE
- ⑧ REMOVE TREE
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK

NOTES:

- 1. REMOVE BLOCK WALLS & CONCRETE CURB BETWEEN EXISTING SIDEWALK AND PROPOSED BACK OF SIDEWALK (STA 30+20 RT TO 36+20 RT)
- 2. PARKING LOT IMPROVEMENTS AND STRIPING TO BE CONSTRUCTED BY OTHERS

CURVE DATA				
No.	Δ	R	L	T
③⑩	90° 23' 16"	30.00'	47.33'	30.20'
③②	90° 00' 09"	35.00'	54.98'	35.00'

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE *11/16/2012*



10/15/12, 11:16 AM
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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
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT - BEATTY DR WEST L-5
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

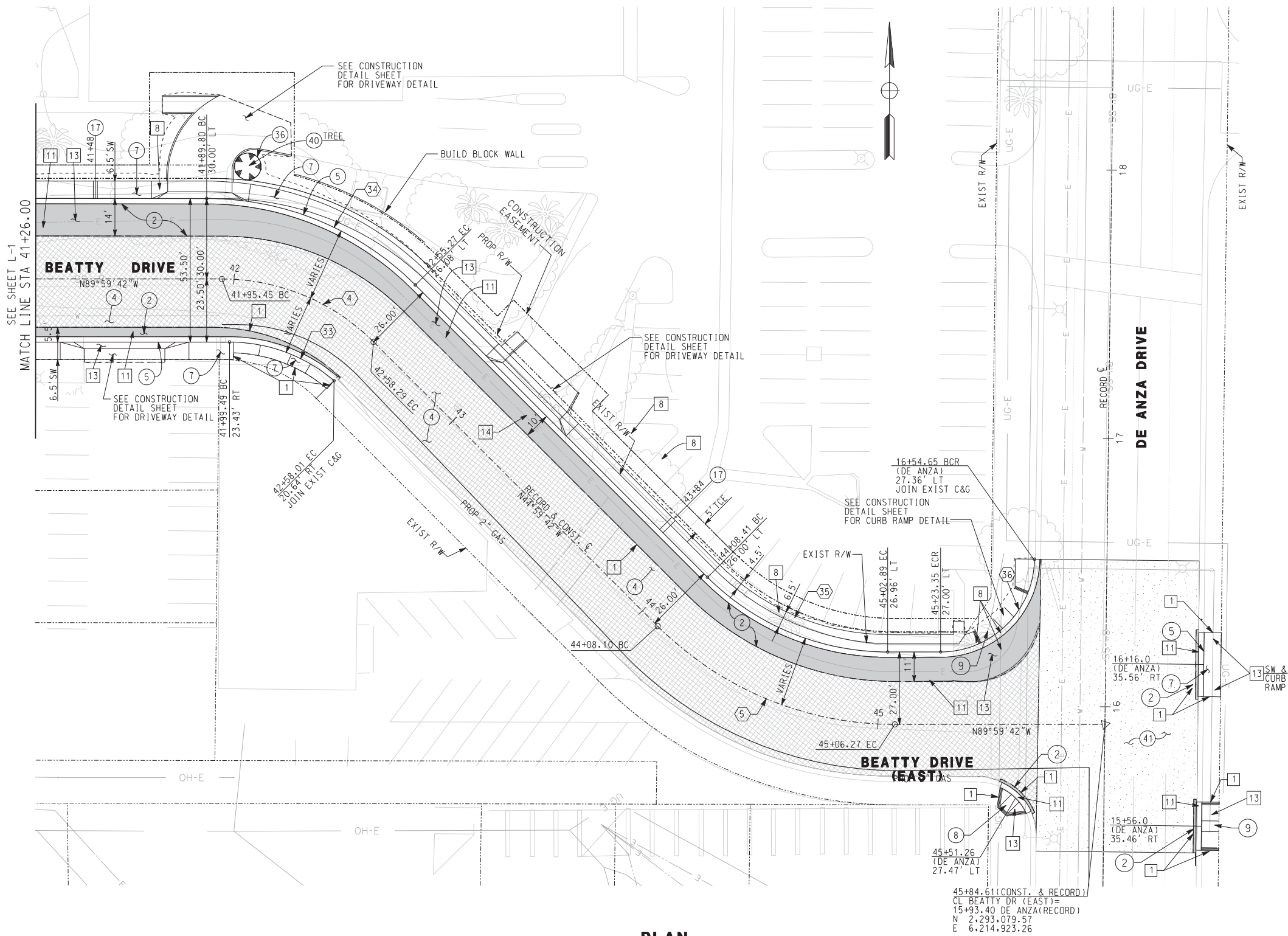
ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 55 of 189
FILE NO. _____

CONSTRUCTION NOTES:

- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑧ CONSTRUCT TYPE 1 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- ⑨ CONSTRUCT TYPE 2 PCC WHEELCHAIR RAMP PER CITY OF RIVERSIDE STD PLAN No. 304
- ⑩ CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- ⑰ CONSTRUCT UNDER SIDEWALK DRAIN PER CITY OF RIVERSIDE STD PLAN No. 411
- ⑳ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- ㉑ PROTECT IN PLACE
- ㉒ CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL

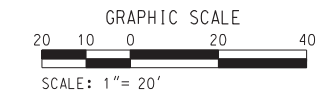
REMOVAL NOTES

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ③ REMOVE EXISTING CONCRETE
- ④ REMOVE CHAIN LINK FENCE
- ⑤ REMOVE EXISTING BLOCK WALL
- ⑦ REMOVE EXISTING GUARD POST
- ⑧ REMOVE TREE
- ⑩ REMOVE EXISTING ELECTRICAL METER PEDESTAL
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK
- ⑭ REMOVE EXIST CROSS GUTTER



PLAN
SCALE: 1" = 20'

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012



CURVE DATA				
No.	Δ	R	L	T
④	45° 00' 00"	80.00'	62.83'	33.14'
⑤	45° 00' 00"	125.00'	98.17'	51.78'
③	40° 30' 49"	60.00'	42.43'	22.14'
④	45° 00' 00"	110.00'	86.39'	45.56'
⑤	45° 00' 00"	95.00'	74.61'	39.35'
⑥	89° 18' 10"	35.00'	54.55'	34.58'

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

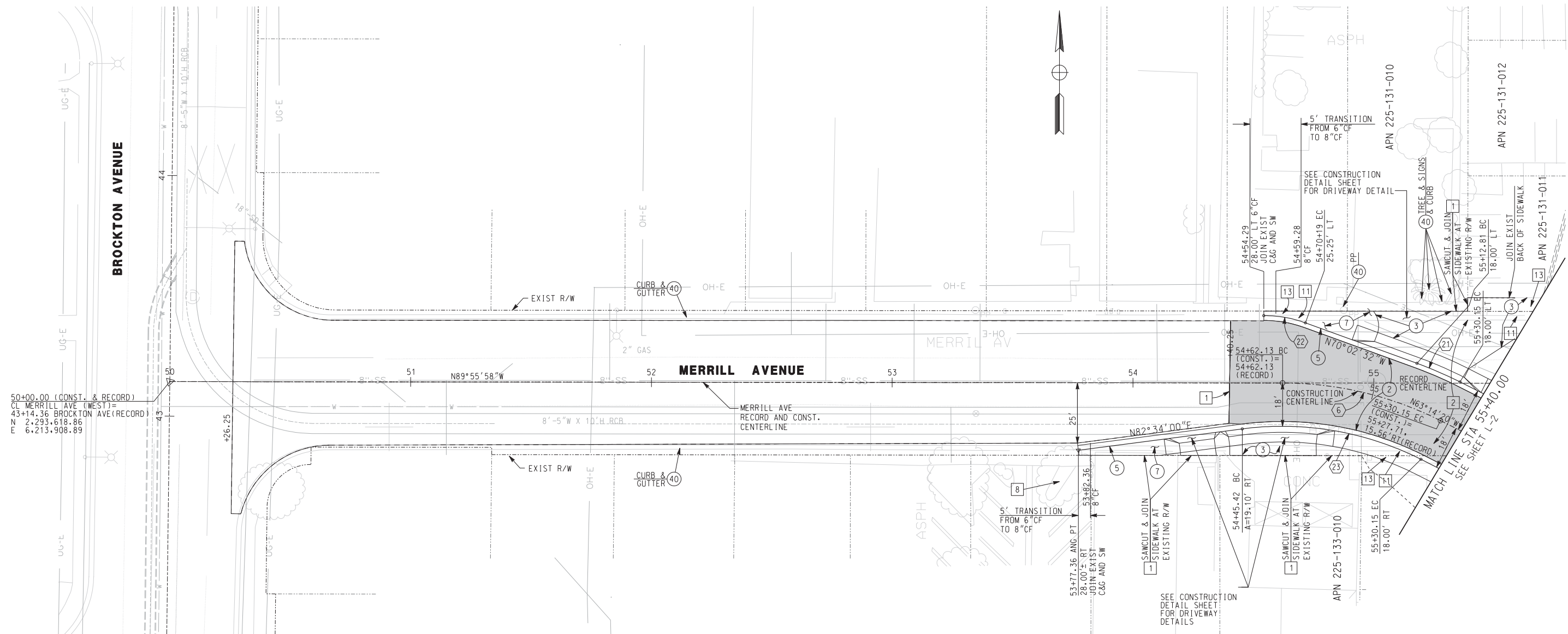
REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT - BETTY DR EAST L-6
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 56 OF 189
FILE NO. _____

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PLAN
SCALE: 1" = 20'

CONSTRUCTION NOTES:

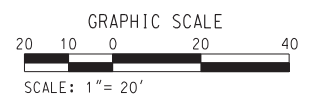
- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ③ CONSTRUCT 4" C2-PG 64-10 AC COMPACTED NATIVE SOIL
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑩ CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
- ④0 PROTECT IN PLACE

REMOVAL NOTES:

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ⑧ REMOVE TREE
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK

CURVE DATA				
NO.	Δ	R	L	T
⑥	26° 41' 38"	146.00'	68.02'	34.64'
⑪	6° 48' 12"	164.00'	19.47'	9.75'
⑫	20° 12' 51"	50.00'	17.64'	8.91'
⑬	34° 11' 40"	128.00'	76.39'	39.37'

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



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

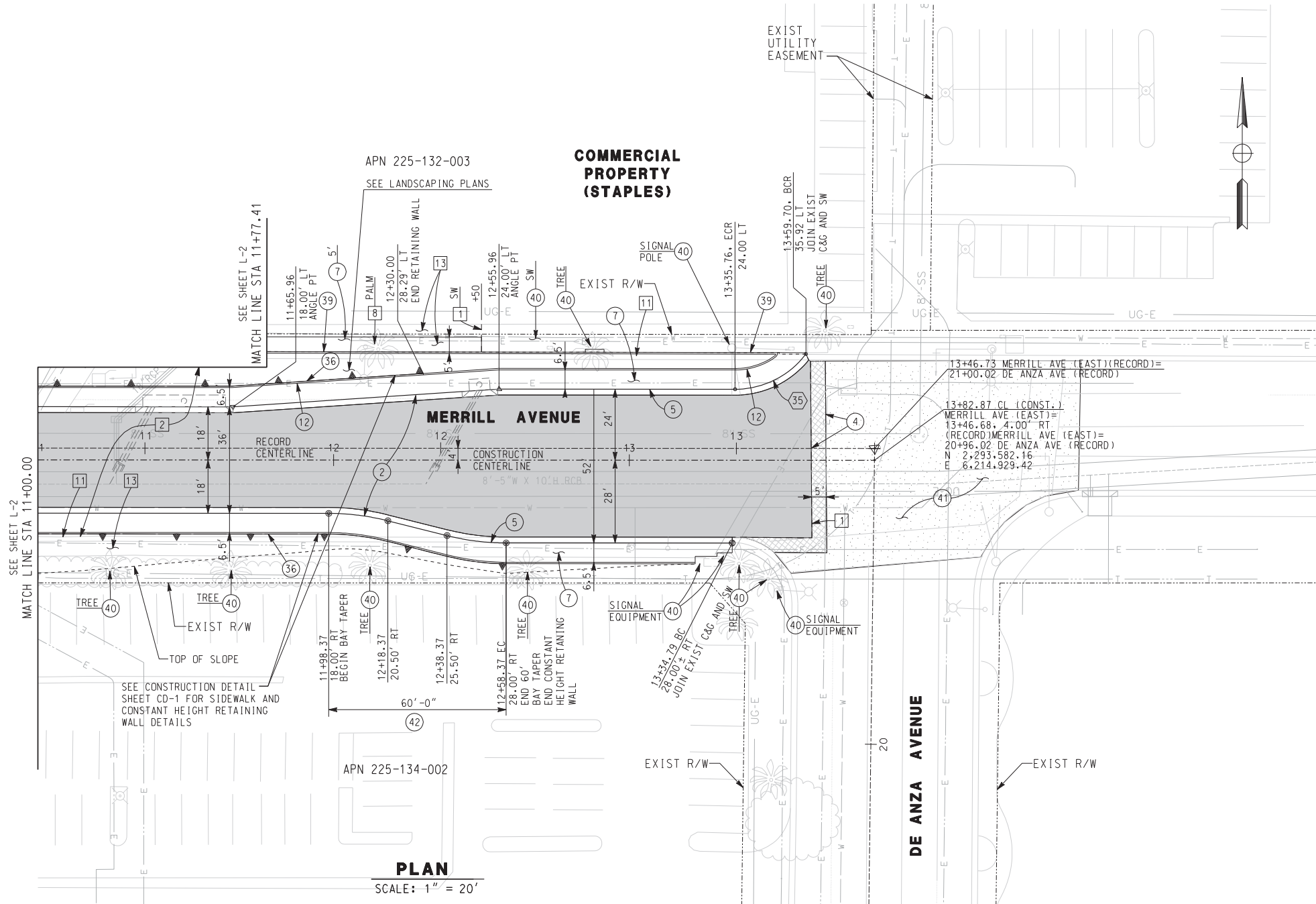
REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT-MERRILL AVE WEST L-7
HORIZ. SCALE: 1"=20' VERT. SCALE: _____

ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 57 OF 189
FILE NO. _____



PLAN

SCALE: 1" = 20'

CONSTRUCTION NOTES:

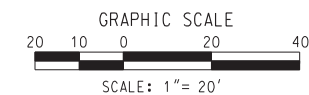
- ② CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
- ④ COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
- ⑤ CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑥ CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
- ⑦ CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
- ⑫ CONSTRUCT 6" CURB AT BACK OF SIDEWALK OR PAVEMENT PER DETAIL ON CONSTRUCTION DETAIL SHEET
- ⑩ CONSTRUCT CONSTANT HEIGHT RETAINING WALL PER APWA STD PLAN No. 622-2 AND CONSTRUCTION DETAIL SHEET CD-1
- ⑨ CONSTRUCT TYPE A1-6 (6") PCC CURB PER APWA STD PLAN No. 120-1. TRANSITION TO MATCH EXISTING COMMERCIAL CURB.
- ④ PROTECT IN PLACE
- ① CRACK-FILL EXISTING PAVEMENT AND APPLY EMULSION-AGGREGATE SLURRY SEAL
- ② CONSTRUCT REVERSE TAPER PER CITY OF RIVERSIDE STD PLAN No. 122

REMOVAL NOTES:

- ① SAWCUT EXISTING PAVEMENT
- ② REMOVE EXISTING AC PAVEMENT
- ⑧ REMOVE TREE
- ⑪ REMOVE CURB & GUTTER
- ⑬ REMOVE EXISTING CONCRETE SIDEWALK

CURVE DATA				
NO.	Δ	R	L	T
⑩	52° 56' 12"	30.00'	27.72'	14.94'

AS BUILT
 CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: 11/16/2012



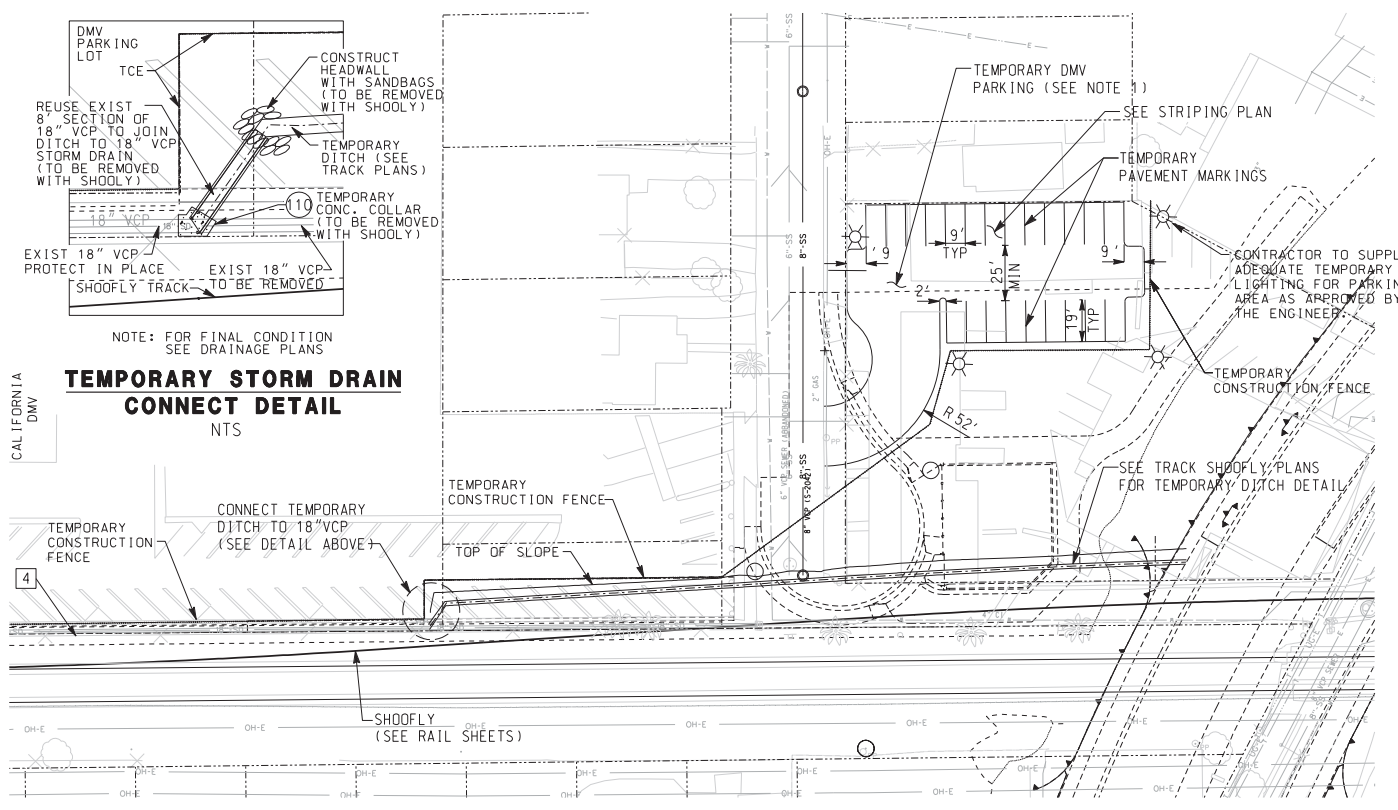
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 SUITE 100
 RIVERSIDE, CA 92501-2110
 DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
 THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT	ACCT. NO. W.O. NO.
				MAGNOLIA AVENUE UNDERPASS	R-4081
				LAYOUT-MERRILL AVE EAST L-8	SHEET 58 OF 189
DESIGNED BY	DRAWN BY	CHECKED BY		HORIZ. SCALE: 1"=20'	VERT. SCALE:
					FILE NO.



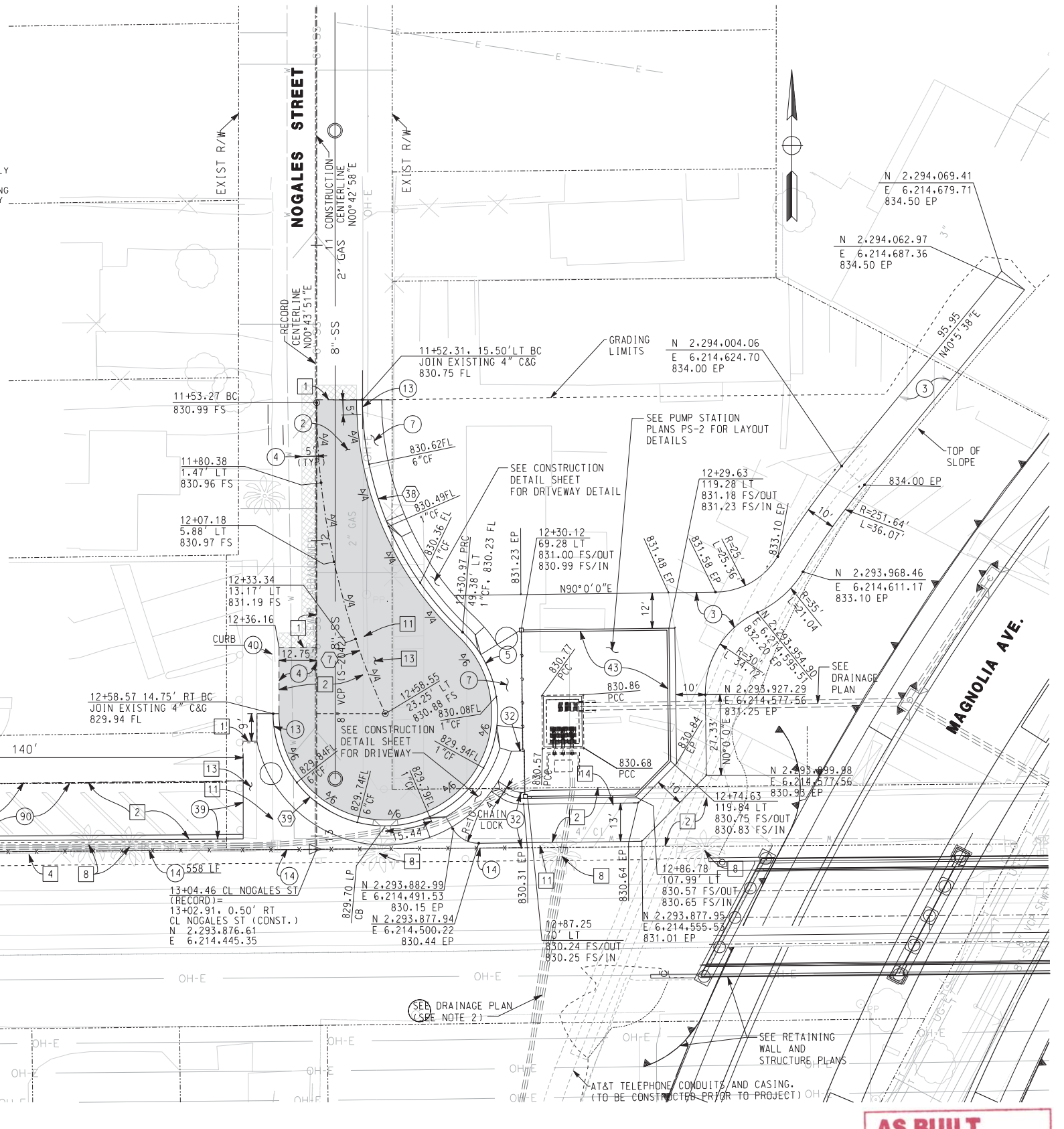
TEMPORARY STORM DRAIN CONNECT DETAIL
NTS

SHOO-FLY CONDITION PLAN
SCALE: 1" = 40'

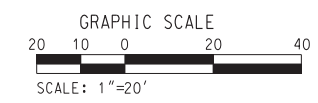
- CONSTRUCTION NOTES**
- 2 CONSTRUCT 1 1/2" C2-PG 64-10 AC OVER 4 1/2" B-PG 64-10 AC OVER 15" CRUSHED AGGREGATE BASE OVER 12" SUBBASE
 - 3 CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
 - 4 COLD MILL EXISTING 1 1/2" AC PAVEMENT AND PLACE 1 1/2" OVERLAY
 - 5 CONSTRUCT TYPE 1 - 8" CURB AND GUTTER PER CITY OF RIVERSIDE STD PLAN No. 200
 - 7 CONSTRUCT 3 1/2" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325
 - 10 CONSTRUCT PCC COMMERCIAL DRIVEWAY APPROACH PER CITY OF RIVERSIDE STD PLAN No. 302
 - 13 CONSTRUCT CURB TRANSITION FROM 4" CF TO 6" CF PER DETAIL.
 - 14 CONSTRUCT NEW CHAIN LINK FENCE PER CITY OF RIVERSIDE STD PLAN No. 380 OR REPLACE EXISTING IN KIND
 - 32 CONSTRUCT BOLLARD PER DETAIL 4 ON PUMP STATION ELECTRICAL PLAN PS-15
 - 39 CONSTRUCT 6" PCC CURB TO MATCH EXISTING COMMERCIAL CURB.
 - 40 PROTECT IN PLACE
 - 43 CONSTRUCT 6" PCC PAVEMENT
 - 90 RE-ESTABLISH PAVEMENT MARKINGS PER EXISTING LOCATION. SEE SIGNING AND STRIPING PLANS.
 - 110 CONSTRUCT CONCRETE COLLAR PER RCFC+WCD STD DRAWING NO M803
- REMOVAL NOTES**
- 1 SAWCUT EXISTING PAVEMENT
 - 2 REMOVE EXISTING AC PAVEMENT
 - 3 REMOVE EXISTING CONCRETE
 - 4 REMOVE CHAIN LINK FENCE
 - 8 REMOVE TREE
 - 11 REMOVE CURB & GUTTER
 - 13 REMOVE EXISTING CONCRETE SIDEWALK
 - 14 REMOVE EXIST CROSS GUTTER

- CONSTRUCTION NOTES**
1. PROTECT EXISTING PAVEMENT AND BUILDING CONCRETE SLAB FOR TEMPORARY PARKING TO BE REMOVED AFTER DMV CONDITIONS ARE RESTORED.
 2. CONSTRUCT SECTION OF PIPE UNDER SHOOFLY PRIOR TO CONSTRUCTION OF SHOOFLY. PIPE SHALL HAVE 3/16" STEEL CASTING ON UPRR RIGHT-OF-WAY.

CURVE DATA				
No.	Δ	R	L	T
(7)	24°54'22"	250.00'	108.67'	55.21'
(8)	46°29'29"	108.50'	88.04'	46.61'
(9)	226°32'02"	38.00'	150.24'	-



END PLAN
SCALE: 1" = 20'



AS BUILT
CORRECTIONS BY: [Signature]
CONTRACT NO. [Blank]
DATE: 11/16/2012

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

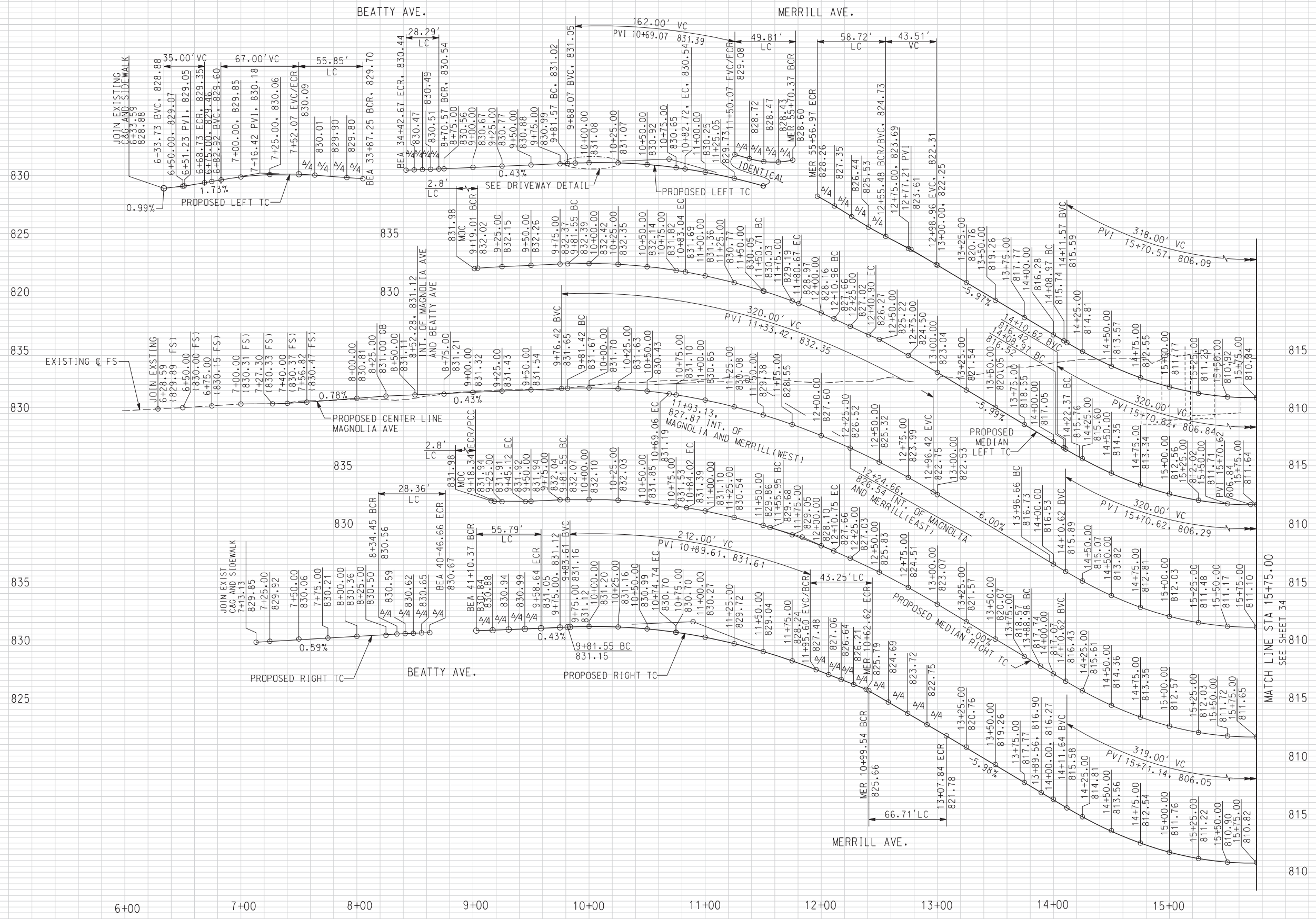
THOMAS T. KIM
REGISTERED PROFESSIONAL ENGINEER
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
LAYOUT - NOGALES ST L-9
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. W.O. NO.
R-4081
SHEET 59 OF 189
FILE NO.



AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE 11/16/2012

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

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2280 MARKET STREET

SUITE 100

RIVERSIDE, CA 92501-2110

DATE 9/14/09

Professional Engineer

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

DESIGNED BY: KW	DRAWN BY: MM	CHECKED BY: SL	DATE: 6/20/11
MODIFY MEDIAN, SIGNS & STRIPING		DATE: 6/20/11	DATE: 6/20/11

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

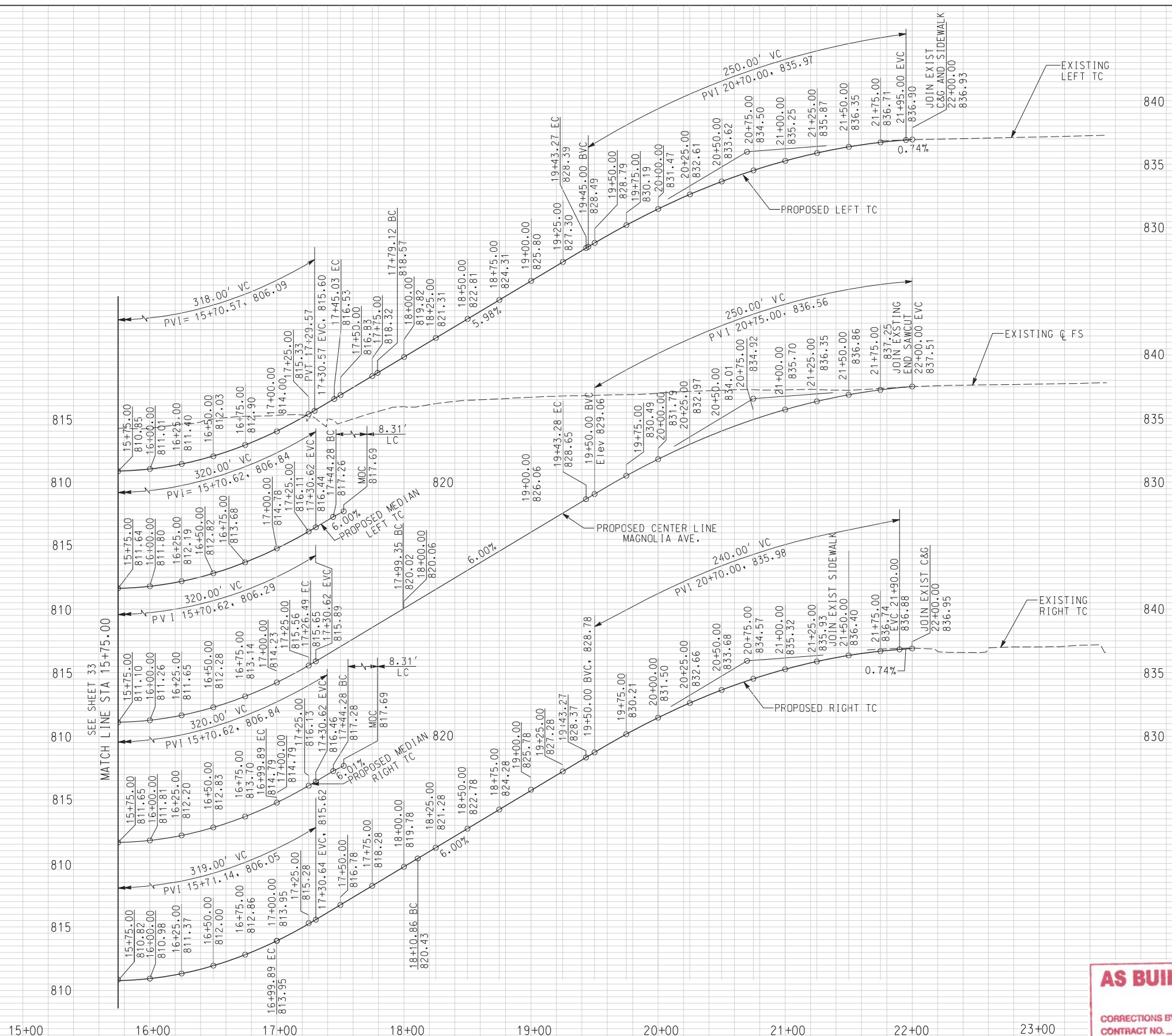
PROFILES - MAGNOLIA AVE P-1

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

ACCT. NO. W.O. NO. R-4081

SHEET 60 OF 189

FILE NO.



AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE 11/16/2012

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

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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE 9/14/09

PROFESSIONAL ENGINEERING

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: KW DRAWN BY: MM CHECKED BY: SL

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

PROFILES - MAGNOLIA AVE P-2

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

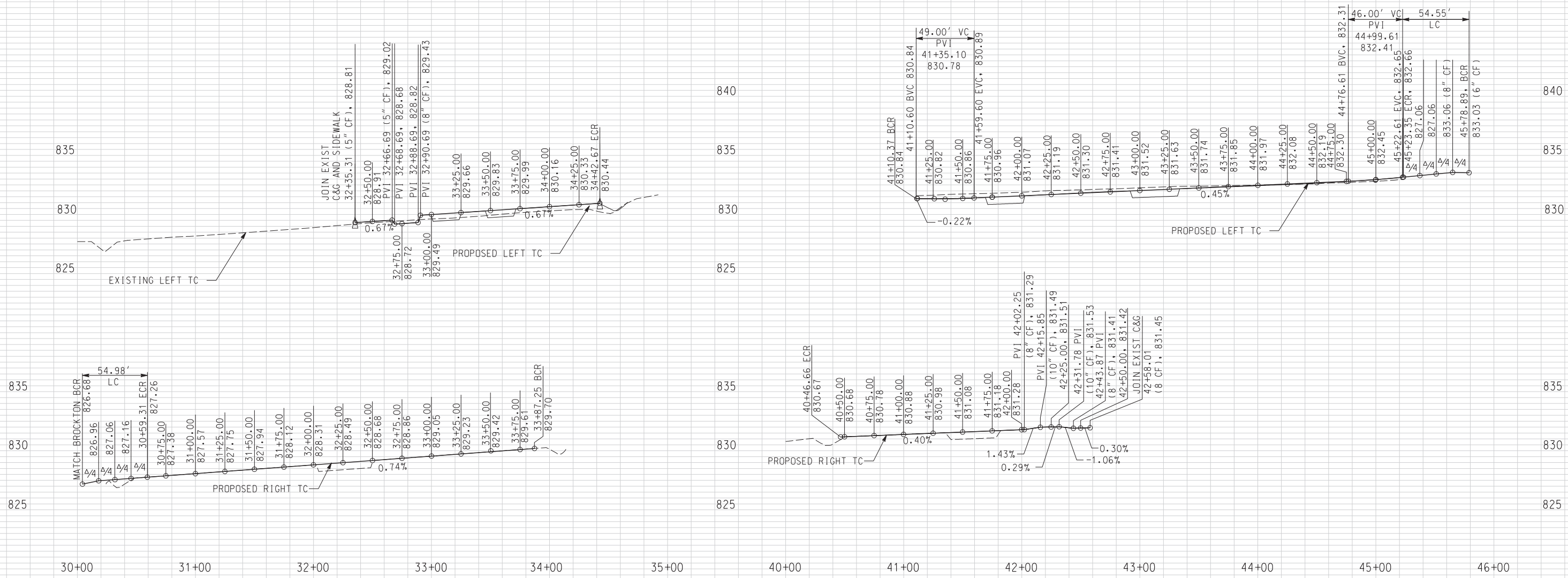
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W.O. NO. _____

R-4081

SHEET 61 OF 189

FILE NO. _____

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BEATTY AVENUE
 SIDEWALKS

AS BUILT
 CORRECTIONS BY *[Signature]*
 CONTRACT NO. _____
 DATE 11/16/2012

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

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THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

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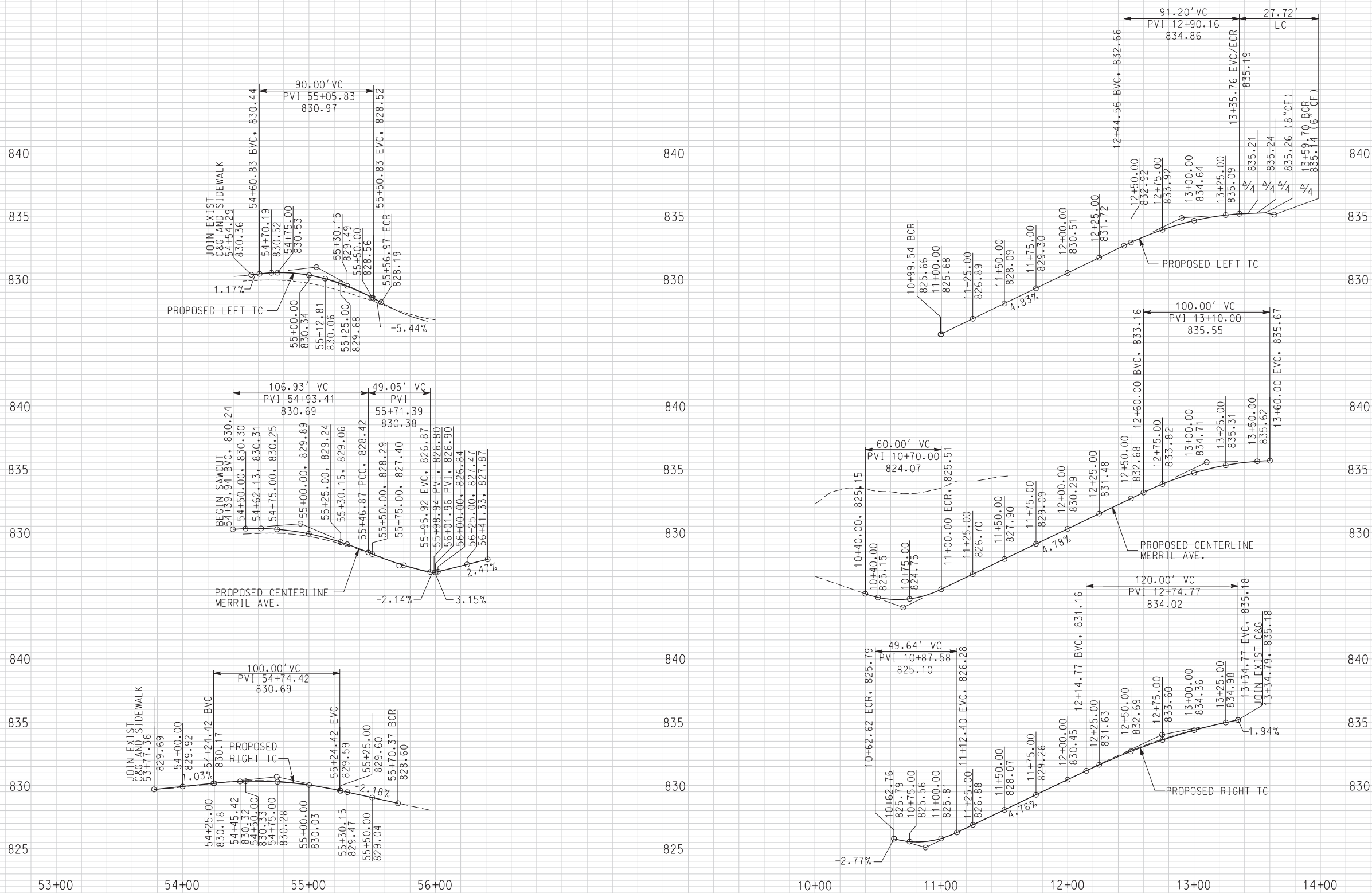
DESIGNED BY: KW DRAWN BY: MM CHECKED BY: SL

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PROFILES - BEATTY AVE P-3
 HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 62 OF 189
 FILE NO. _____

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MERRILL AVENUE

AS BUILT

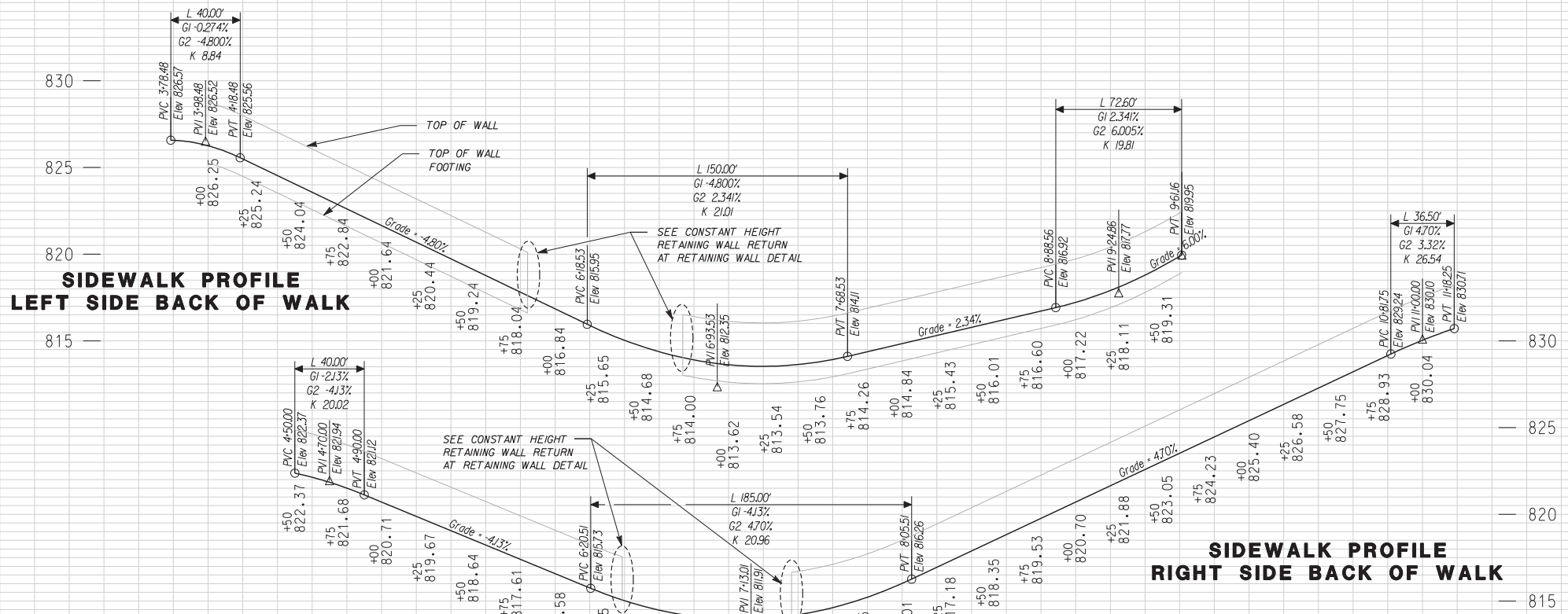
CORRECTIONS BY *[Signature]*

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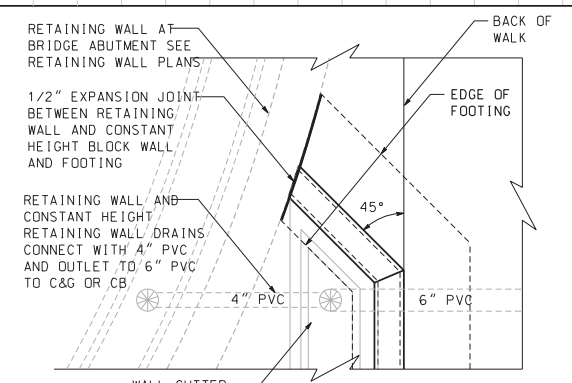
DATE 11/16/2012

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

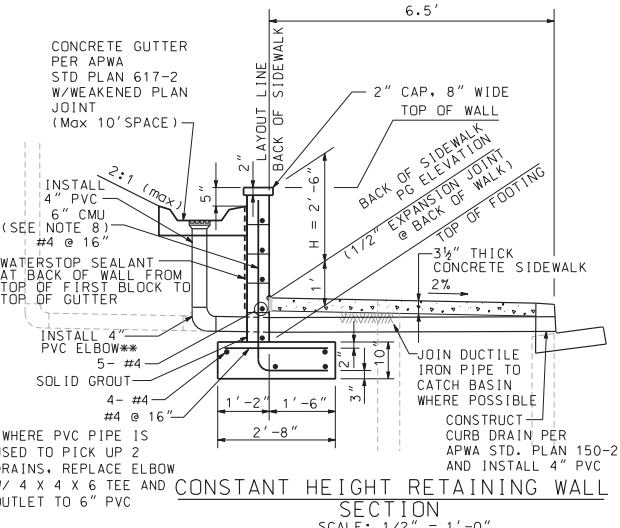
<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2600 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE 9/14/09</p>		REVISIONS DESIGNED BY: KW DRAWN BY: MM CHECKED BY: SL	APRR. DATE _____	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS PROFILES - MERRILL AVE P-4 HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'	ACCT. NO. W.O. NO. R-4081 SHEET 63 OF 189 FILE NO.
			MARK: _____		SHEET 63 OF 189	



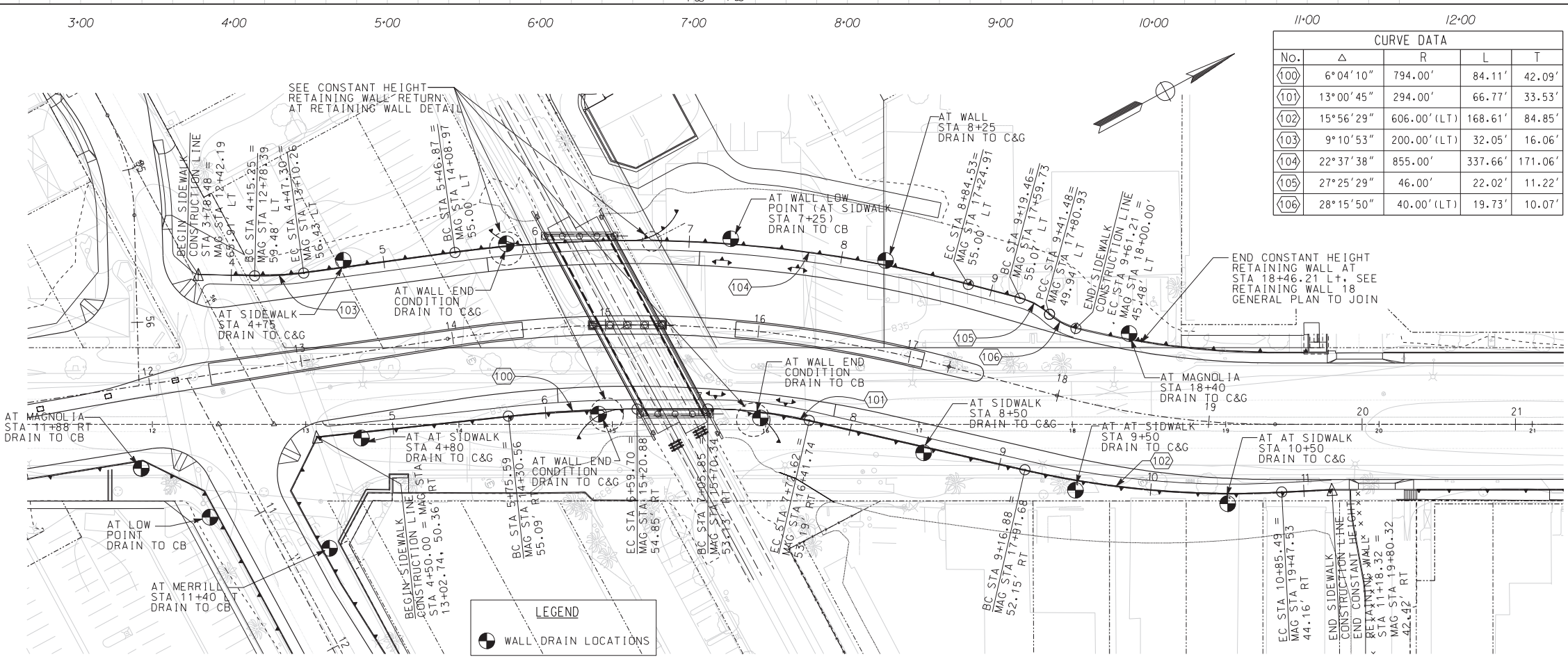
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'



CONSTANT HEIGHT RETAINING WALL RETURN AT RETAINING WALL DETAIL
SCALE: 1/2" = 1'-0"



CONSTANT HEIGHT RETAINING WALL SECTION
SCALE: 1/2" = 1'-0"



CURVE DATA				
No.	Δ	R	L	T
100	6°04'10"	794.00'	84.11'	42.09'
101	13°00'45"	294.00'	66.77'	33.53'
102	15°56'29"	606.00' (LT)	168.61'	84.85'
103	9°10'53"	200.00' (LT)	32.05'	16.06'
104	22°37'38"	855.00'	337.66'	171.06'
105	27°25'29"	46.00'	22.02'	11.22'
106	28°15'50"	40.00' (LT)	19.73'	10.07'

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CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012

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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
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

ADDENDUM-ADDED EXPANSION JOINT/WALL/WALK	TTK	10/20/09
REVISIONS	APPR.	DATE
DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
CONSTRUCTION DETAIL CD-1
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 4'
ACCT. NO. W.O. NO. R-4081
SHEET 64 OF 189
FILE NO. _____



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CONSTRUCTION NOTES
SEE GENERAL NOTE SHEET FOR CONSTRUCTION AND REMOVAL NOTES
NOTE: ALL DRIVEWAYS TO MAINTAIN ACCESS DURING CONSTRUCTION UNLESS OTHERWISE DIRECTED BY ENGINEER

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012

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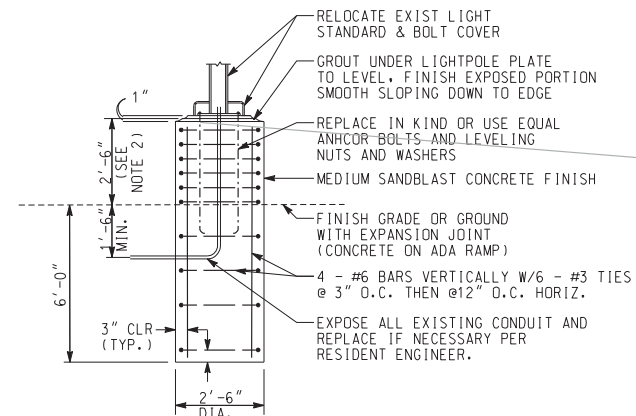
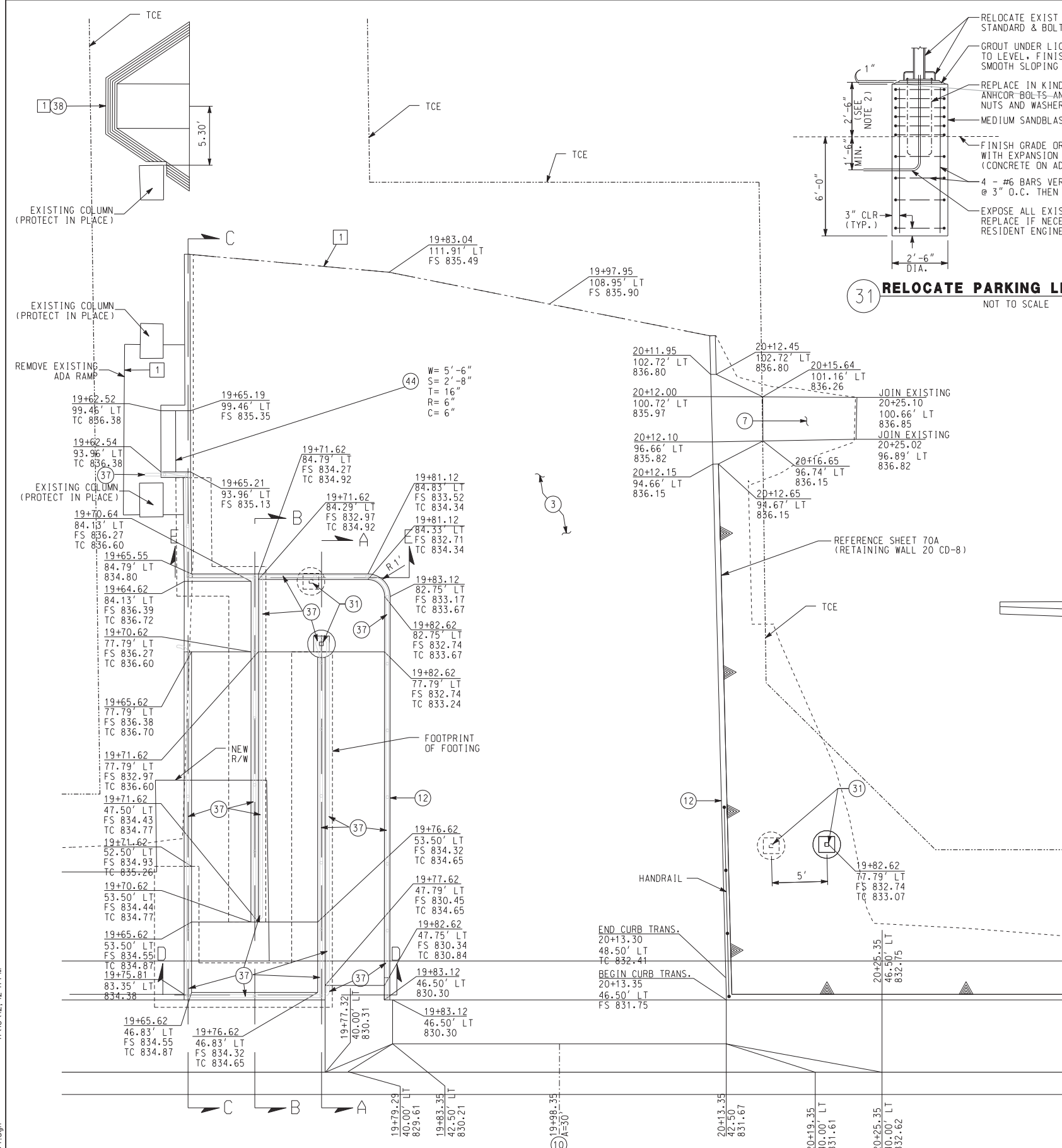
HDR ONE COMPANY
Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

PROFESSIONAL SEAL
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

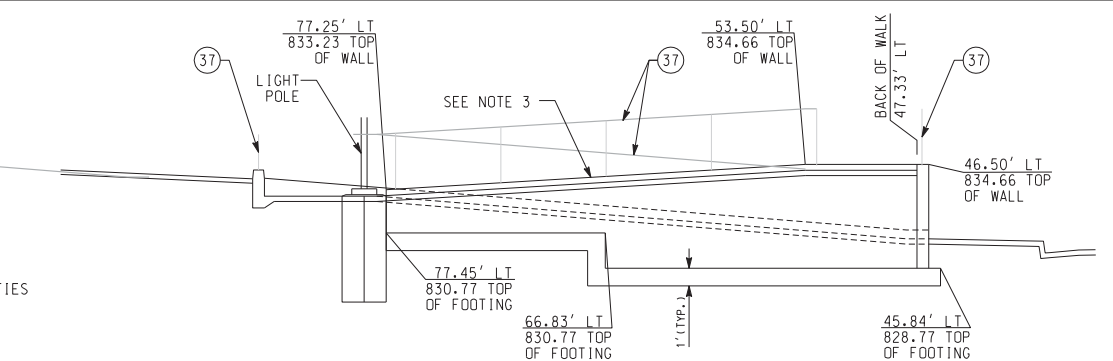
MARK	REVISIONS	APPR.	DATE

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

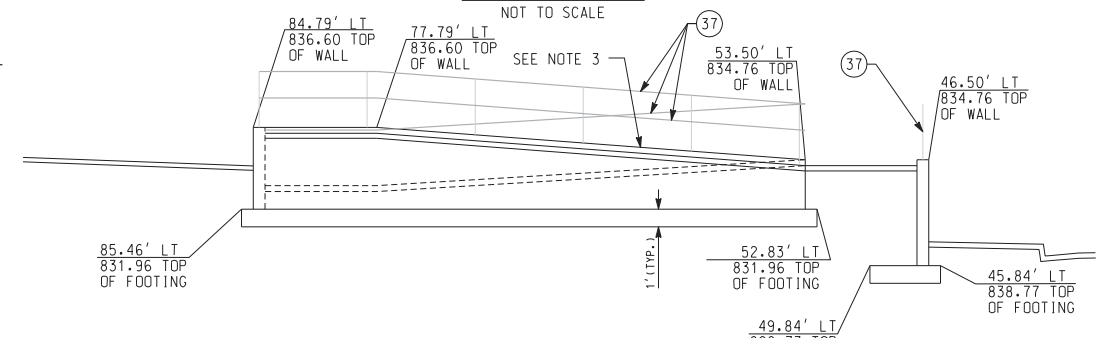
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRIVEWAY DETAILS CD-3
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=2'
ACCT. NO. W.O. NO. _____
R-4081
SHEET 66 OF 189
FILE NO. _____



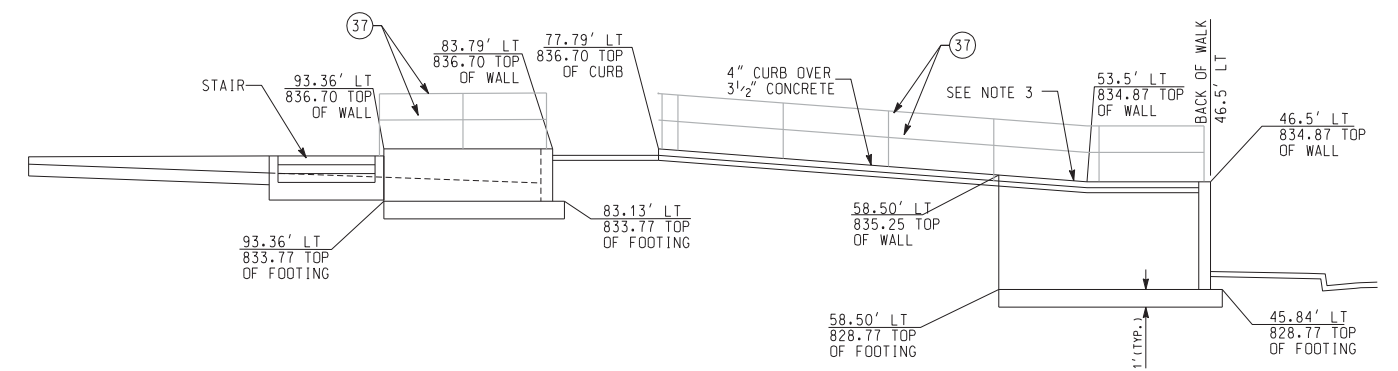
31 RELOCATE PARKING LIGHT DETAIL
NOT TO SCALE



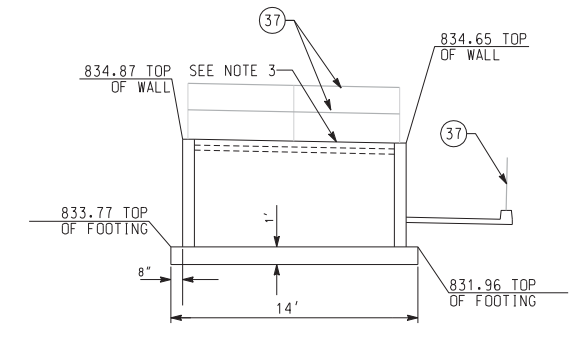
SECTION A-A
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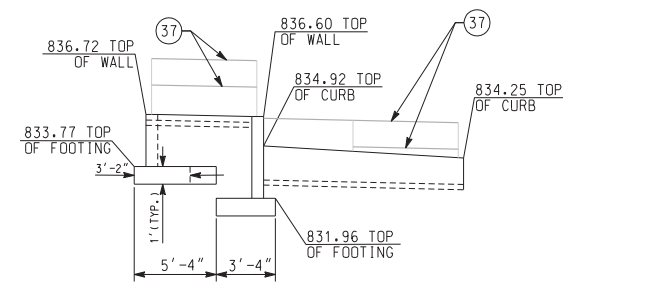
SECTION B-B
NOT TO SCALE



SECTION C-C
NOT TO SCALE



SECTION D-D
NOT TO SCALE



SECTION E-E
NOT TO SCALE

- NOTES:
1. CONSTRUCT CONCRETE FOOTING W/ DRILLED HOLE IN UNDISTURBED SOIL OR COMPACTED FILL APPROVED BY THE CITY ENGINEER.
 2. WHERE CONSTRUCTED ON ADA RAMP, TOP OF BASE TO BE FLUSH WITH SURFACE. CONSTRUCT EXPANSION JOINT W/WATERPROOFING COMPOUND BETWEEN BASE AND CONCRETE WALKWAY.
 3. CONSTRUCT RETAINING WALL 4" ABOVE TOP OF WALKWAY. WALKWAY WILL CONSIST OF 3 1/2" PCC CONCRETE.
 4. CONSTRUCT REINFORCED CONCRETE RETAINING WALL TYPE 7 PER APWA STD PLAN 616-2.

DRIVEWAY DETAIL

MAGNOLIA AVENUE
19+98.35' LT
SCALE: 1" = 1'

CONSTRUCTION NOTES
SEE GENERAL NOTE SHEET FOR CONSTRUCTION AND REMOVAL NOTES

NOTE: ALL DRIVEWAYS TO MAINTAIN ACCESS DURING CONSTRUCTION UNLESS OTHERWISE DIRECTED BY ENGINEER

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

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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 ENGINEER

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRIVEWAY DETAILS CD-4

HORIZ. SCALE: 1"=20' VERT. SCALE: _____

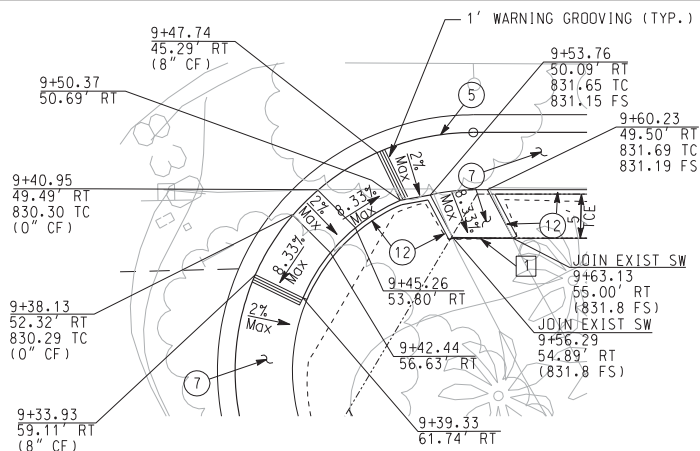
ACCT. NO. W.O. NO. _____

R-4081

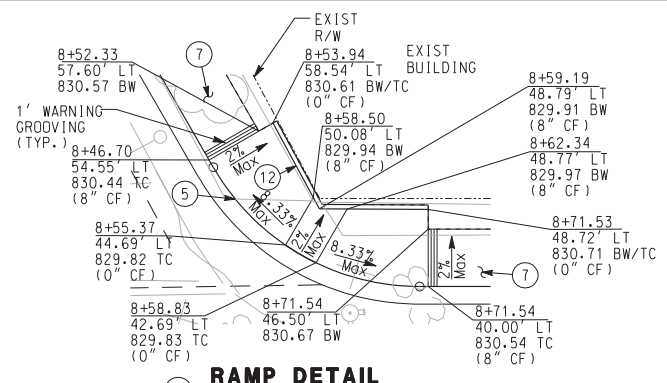
SHEET 67 OF 189

FILE NO. _____

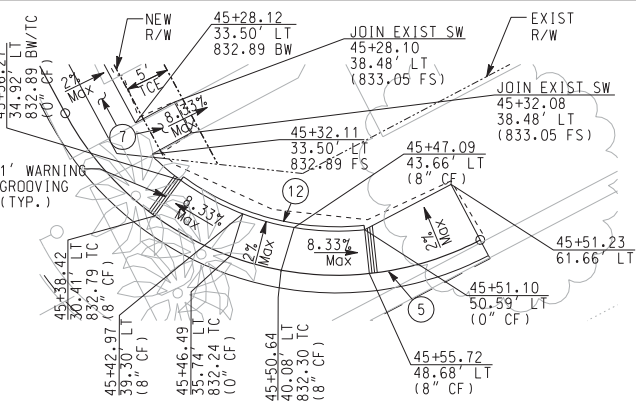
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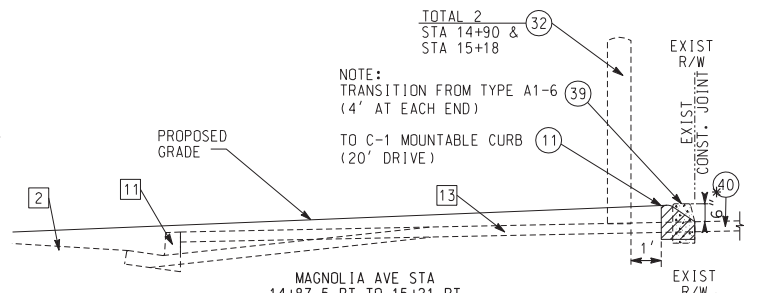
RAMP DETAIL
MAGNOLIA AVENUE
9+39.47, 50.84' RT
SCALE: 1" = 2'



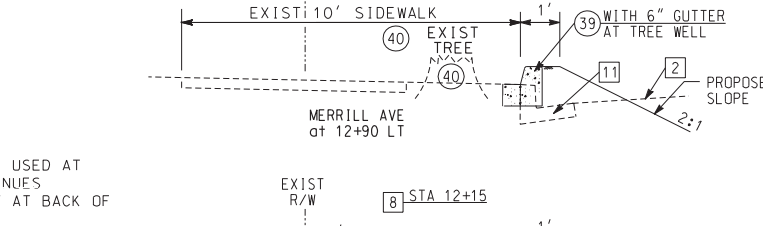
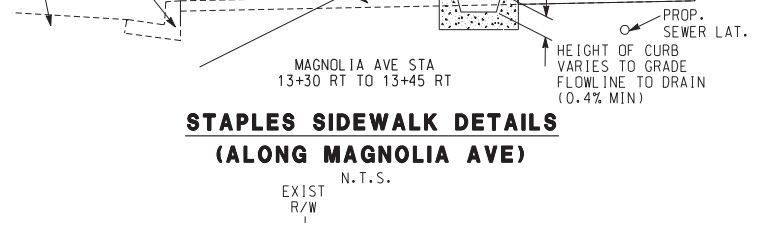
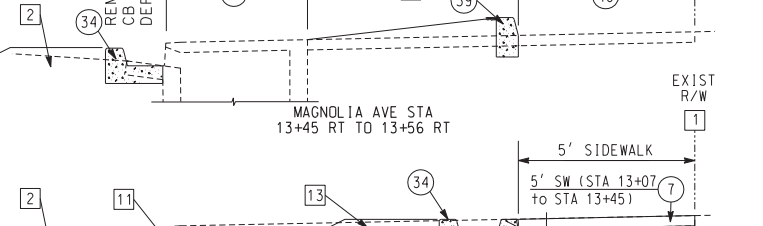
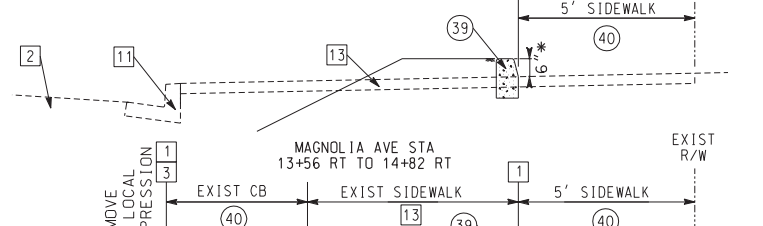
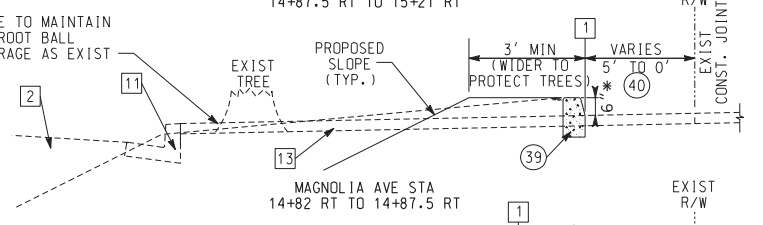
RAMP DETAIL
MAGNOLIA AVENUE
8+57.06, 43.62' LT
SCALE: 1" = 2'



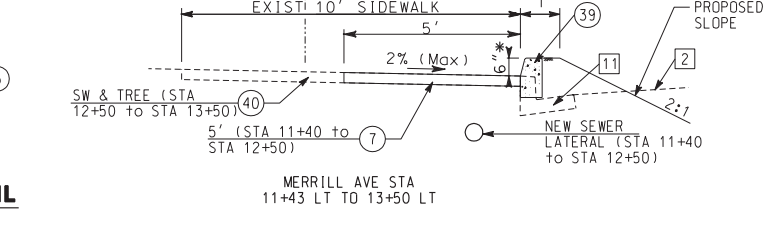
RAMP DETAIL
BEATTY DRIVE
45+47.95, 37.10' LT
SCALE: 1" = 2'



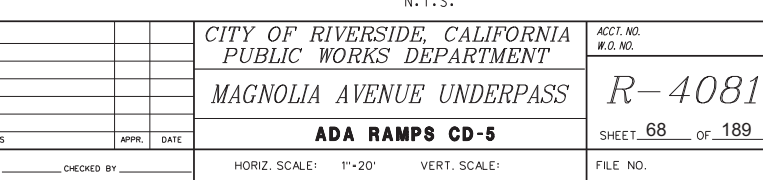
NOTE:
TRANSITION FROM TYPE A1-6
(4' AT EACH END)
TO C-1 MOUNTABLE CURB
(20' DRIVE)



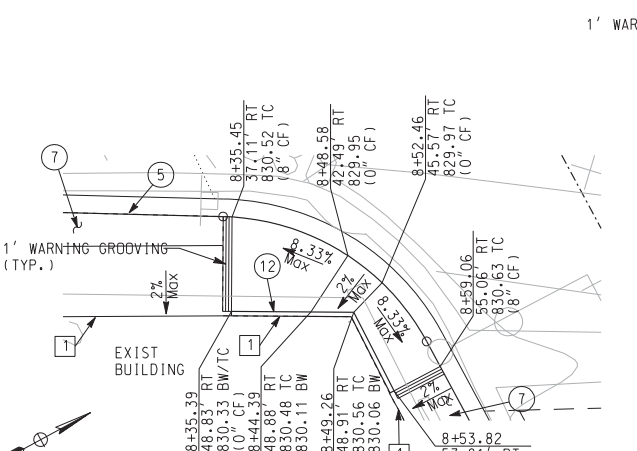
**STAPLES SIDEWALK DETAILS
(ALONG MAGNOLIA AVE)**



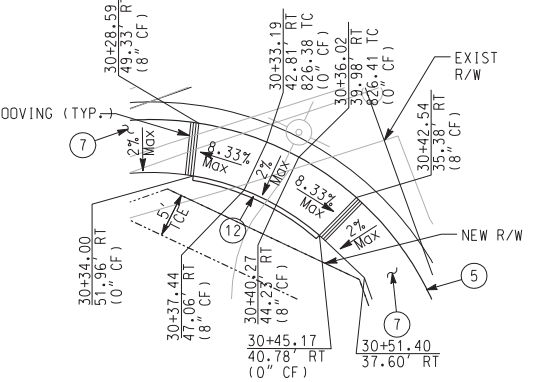
**STAPLES SIDEWALK DETAILS
(ALONG MAGNOLIA AVE)**



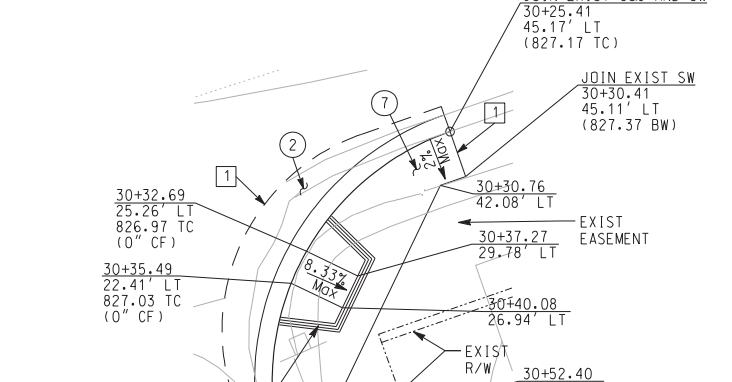
**STAPLES SIDEWALK DETAILS
(ALONG MERRILL AVE)**



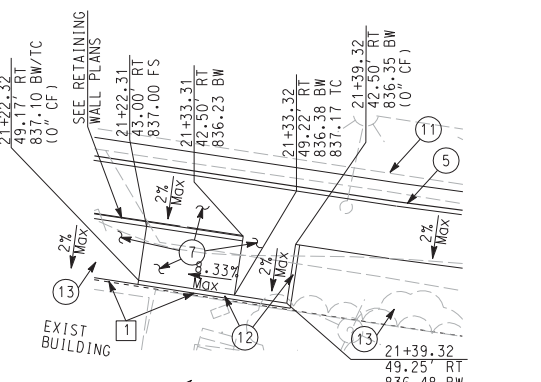
RAMP DETAIL
MAGNOLIA AVENUE
8+50.78, 43.96' RT
SCALE: 1" = 2'



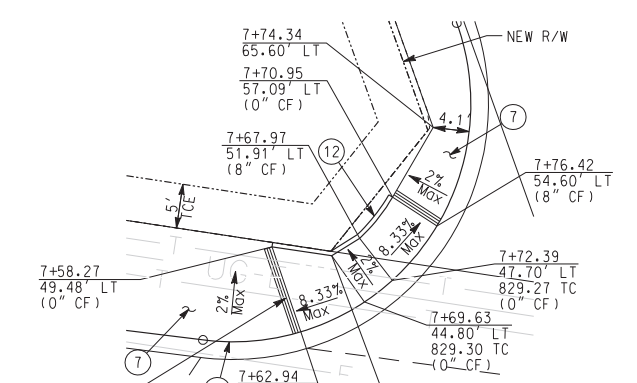
RAMP DETAIL
BEATTY DRIVE
30+34.56, 41.36' RT
SCALE: 1" = 2'



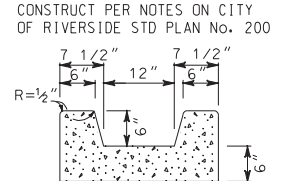
RAMP DETAIL
BEATTY DRIVE
30+34.04, 23.79' LT
SCALE: 1" = 2'



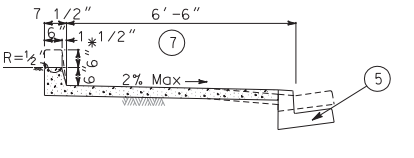
RAMP DETAIL
MAGNOLIA AVENUE
20+09.57, 38.50' RT
SCALE: 1" = 2'



RAMP DETAIL
MAGNOLIA AVENUE
7+74.80, 51.32' LT
SCALE: 1" = 2'



PCC CURBED SWALE DETAIL
N.T.S.



SIDEWALK BACK-CURB DETAIL
N.T.S.

* HEIGHT OF CURB VARIES FROM 0" TO 6" WHERE USED AT BACK OF CURB RAMP. WHERE BACK CURB CONTINUES BEYOND THE LIMITS OF CURB, THE CURB HEIGHT AT BACK OF RAMP WILL BE 12".

AS BUILT
CORRECTIONS BY: [Signature]
CONTRACT NO. [Number]
DATE: 11/16/2012

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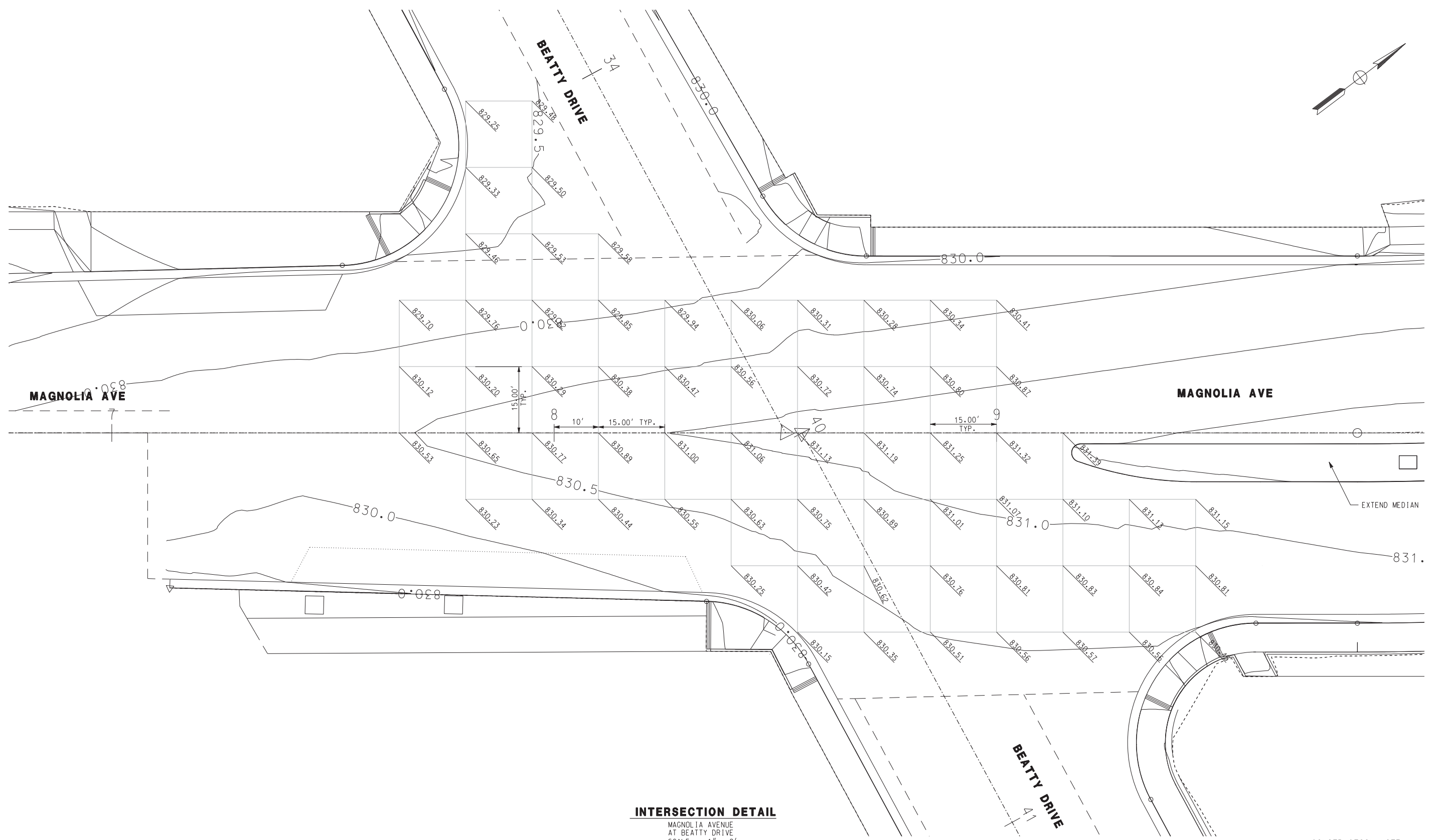
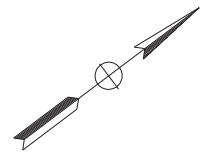
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ADA RAMPS CD-5
HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 2'

ACCT. NO. W.O. NO.
R-4081
SHEET 68 OF 189
FILE NO.



INTERSECTION DETAIL

MAGNOLIA AVENUE
AT BEATTY DRIVE
SCALE: 1" = 2'

CONSTRUCTION NOTE
⑩ CONSTRUCT PCC COMMERCIAL DRIVEWAY
APPROACH PER CITY OF RIVERSIDE
STD PLAN No. 302

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012

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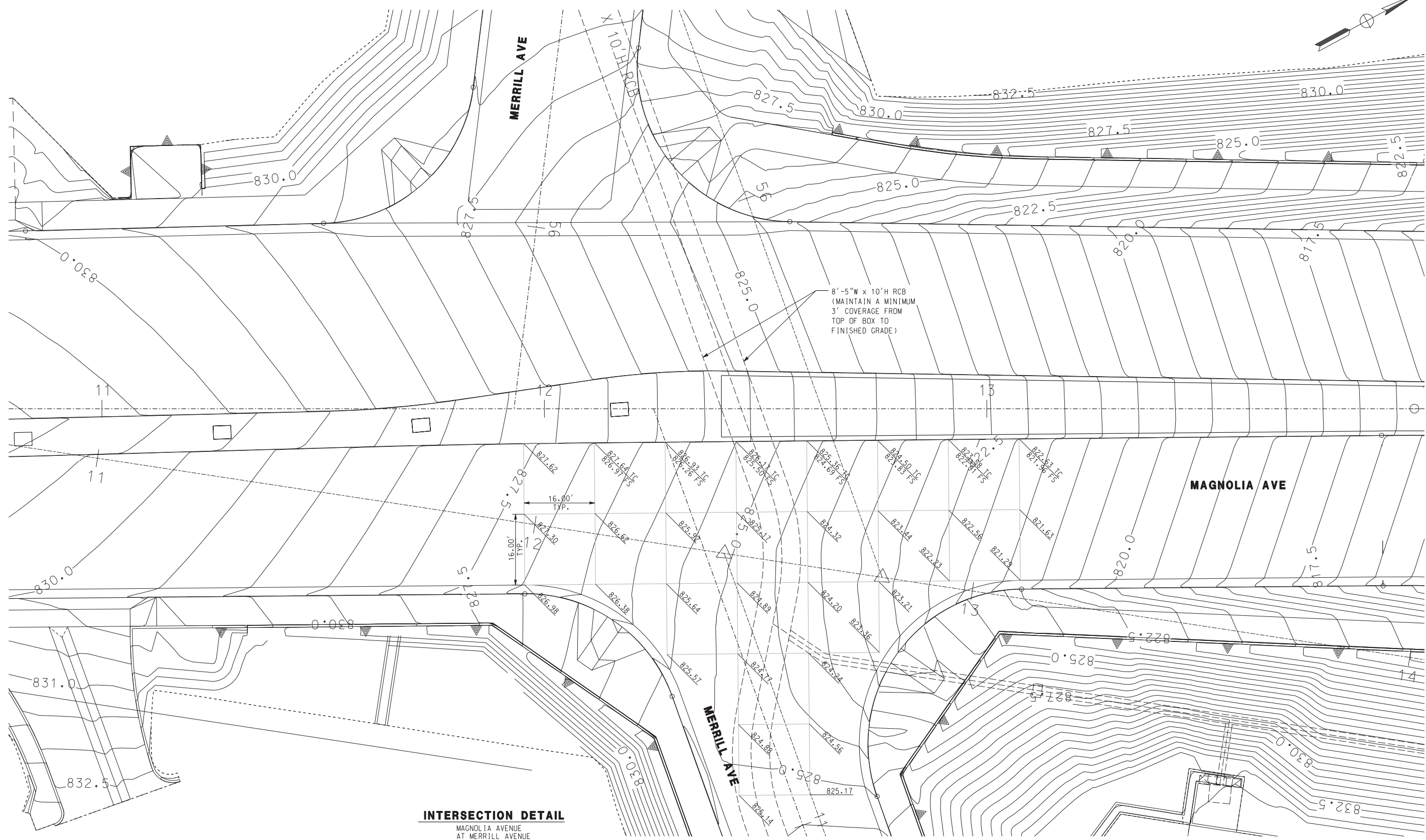
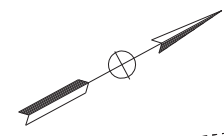
HDR | ONE COMPANY
Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
△	MODIFY MEDIAN, SIGNS & STRIPING	TKK	06/02/11

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
INTERSECTION DETAIL CD-6
HORIZ. SCALE: 1"=20' VERT. SCALE: _____
ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 69 OF 189
FILE NO. _____

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INTERSECTION DETAIL
MAGNOLIA AVENUE
AT MERRILL AVENUE
SCALE: 1" = 2'

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012

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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

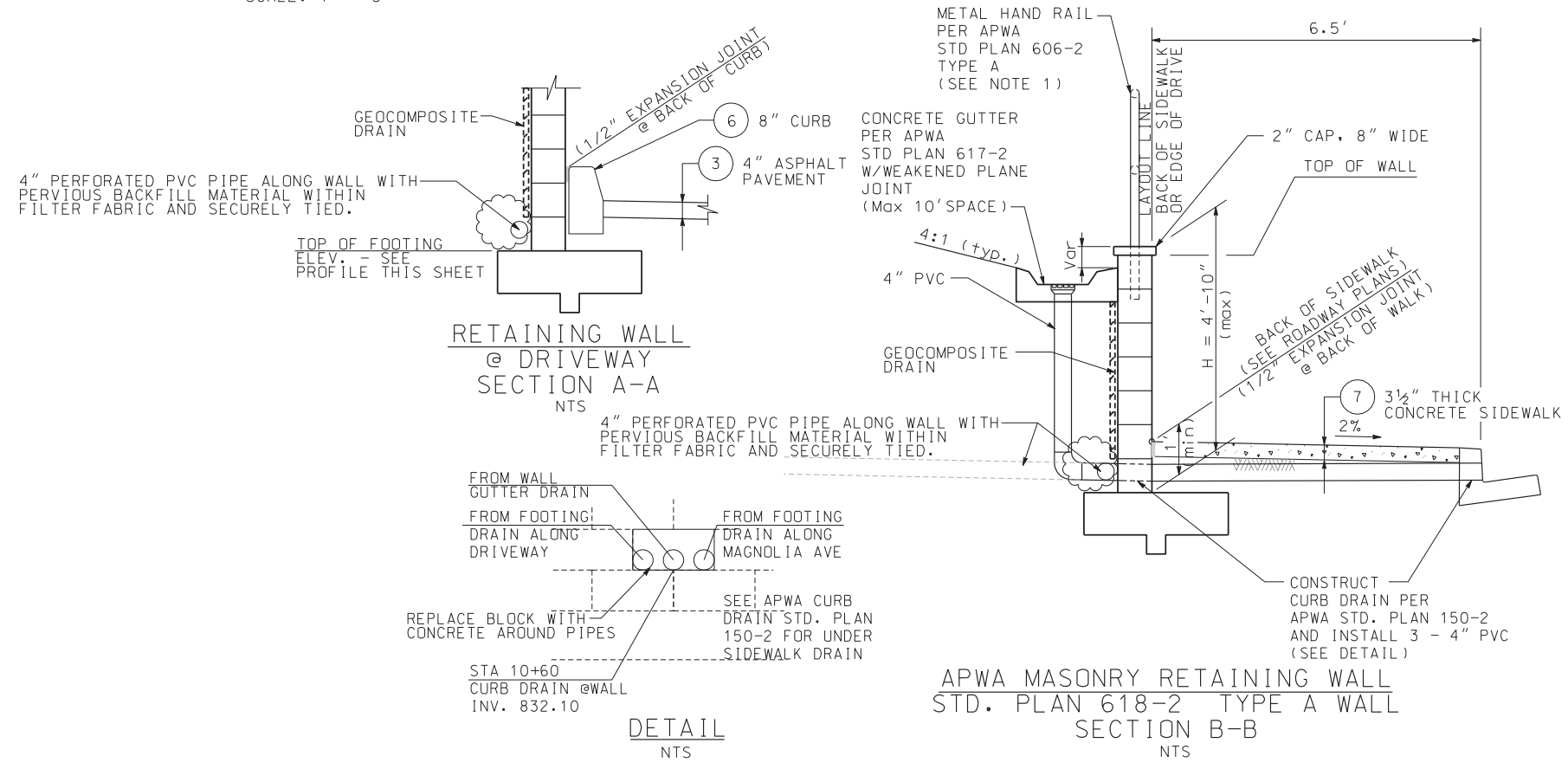
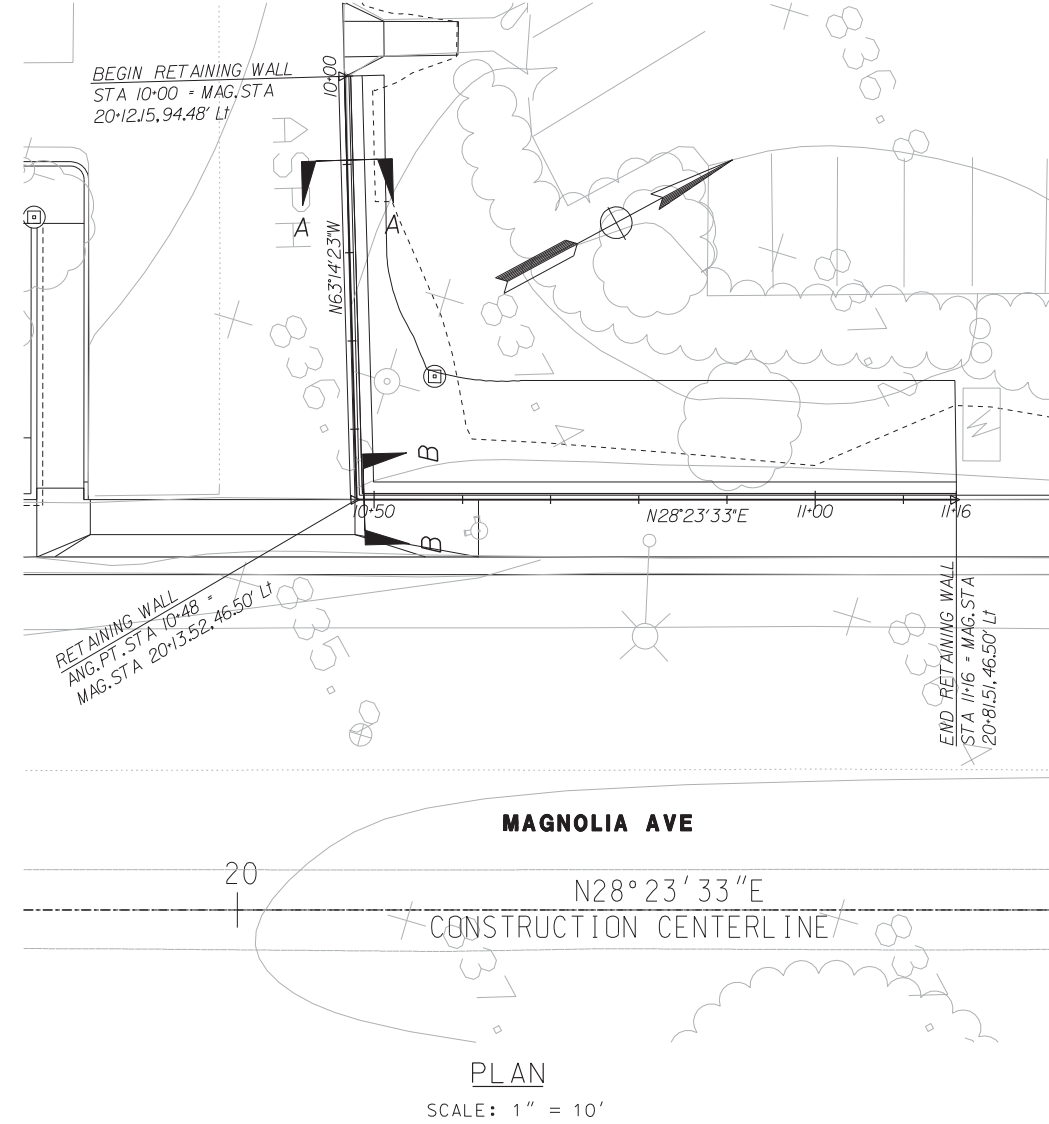
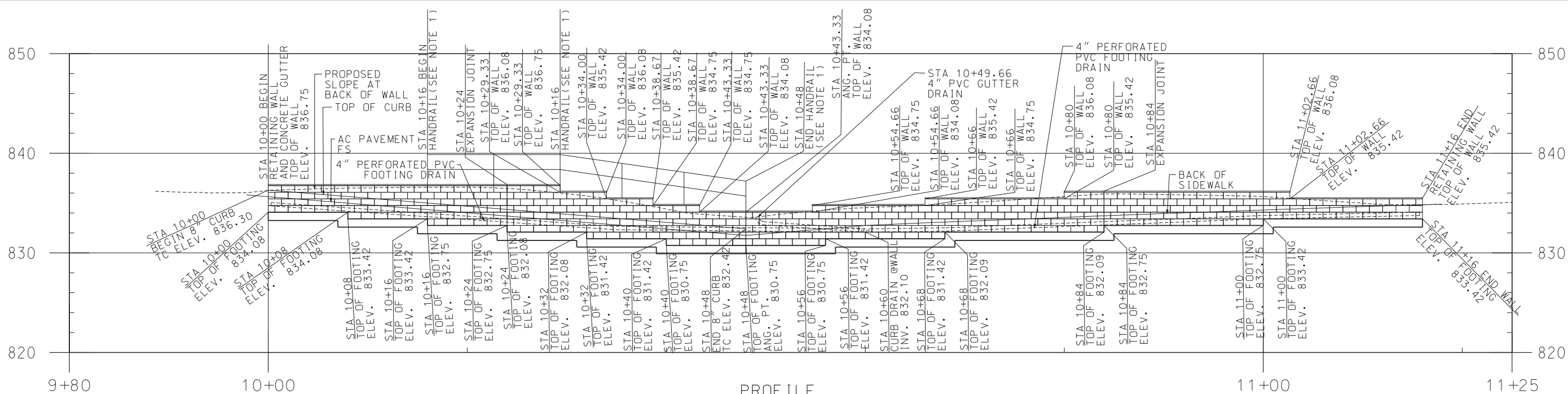
REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY	TTK	06/02/11
MODIFY MEDIAN, SIGNS & STRIPING			APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
INTERSECTION DETAIL CD-7
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. W.O. NO.
R-4081
SHEET 70 OF 189
FILE NO.

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AS BUILT
 Eric Johnson
 CORRECTIONS BY:
 CONTRACT NO. _____
 DATE Nov 16, 2012

- NOTES**
1. WALL HEIGHT TO BE REDUCED LESS THAN 2'-6" WHERE POSSIBLE TO REDUCE THE NEED FOR HANDRAIL AT THE TOP OF THE WALL AND MAINTAIN SLOPE AND LANDSCAPE REQUIREMENTS PER THE ENGINEER.
 2. SEE LAYOUT SHEET L-4 AND PROFILE SHEET P-2 FOR ADDITIONAL INFORMATION.

- CONSTRUCTION NOTES**
3. CONSTRUCT 4" C2-PG 64-10 AC OVER COMPACTED NATIVE SOIL
 6. CONSTRUCT TYPE 2 - 8" MEDIAN CURB PER CITY OF RIVERSIDE STD PLAN No. 200
 7. CONSTRUCT 3.5" PCC SIDEWALK PER CITY OF RIVERSIDE STD PLAN No. 325

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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 7/20/11

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

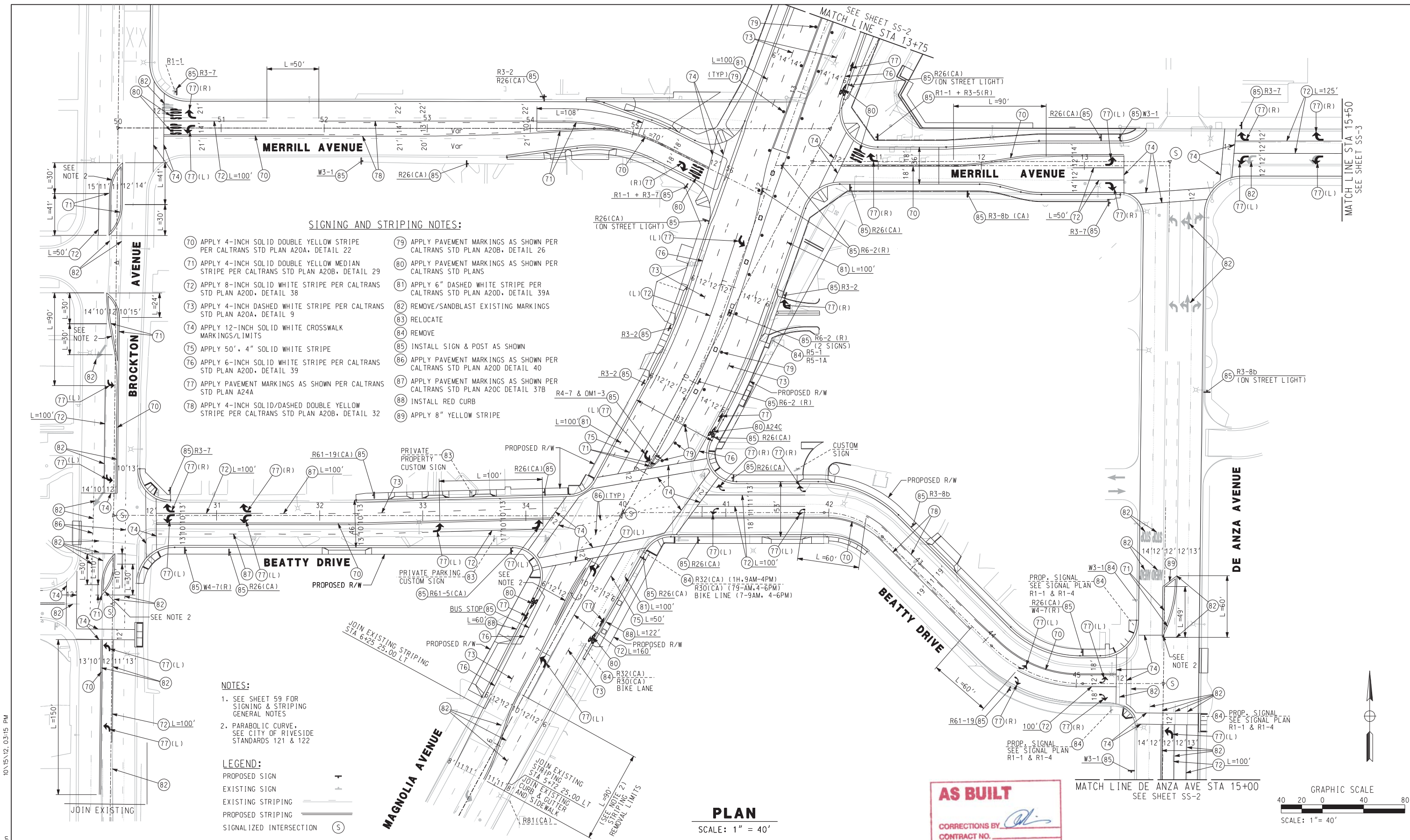
MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
RETAINING WALL 20 CD-8
 HORIZ. SCALE: 1"=10' VERT. SCALE: 1"=5'

ACCT. NO. W.O. NO. R-4081
 SHEET 70a of 189
 FILE NO.

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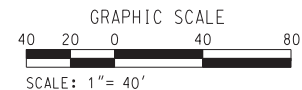
- SIGNING AND STRIPING NOTES:**
- 70 APPLY 4-INCH SOLID DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20A, DETAIL 22
 - 71 APPLY 4-INCH SOLID DOUBLE YELLOW MEDIAN STRIPE PER CALTRANS STD PLAN A20B, DETAIL 29
 - 72 APPLY 8-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 38
 - 73 APPLY 4-INCH DASHED WHITE STRIPE PER CALTRANS STD PLAN A20A, DETAIL 9
 - 74 APPLY 12-INCH SOLID WHITE CROSSWALK MARKINGS/LIMITS
 - 75 APPLY 50', 4" SOLID WHITE STRIPE
 - 76 APPLY 6-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39
 - 77 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A24A
 - 78 APPLY 4-INCH SOLID/DASHED DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20B, DETAIL 32
 - 79 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20B, DETAIL 26
 - 80 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLANS
 - 81 APPLY 6" DASHED WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39A
 - 82 REMOVE/SANDBLAST EXISTING MARKINGS
 - 83 RELOCATE
 - 84 REMOVE
 - 85 INSTALL SIGN & POST AS SHOWN
 - 86 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20D DETAIL 40
 - 87 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20C DETAIL 37B
 - 88 INSTALL RED CURB
 - 89 APPLY 8" YELLOW STRIPE

- NOTES:**
- SEE SHEET 59 FOR SIGNING & STRIPING GENERAL NOTES
 - PARABOLIC CURVE, SEE CITY OF RIVERSIDE STANDARDS 121 & 122

- LEGEND:**
- PROPOSED SIGN
 - EXISTING SIGN
 - EXISTING STRIPING
 - PROPOSED STRIPING
 - SIGNALIZED INTERSECTION

PLAN
SCALE: 1" = 40'

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



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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
R. SCOTT BACHKIN
No. C 48774
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: AG	DRAWN BY: MM	CHECKED BY: SL
MODIFY MEDIAN, SIGNS & STRIPING	TTK 06/02/11	APPR. DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SIGNING & STRIPING PLAN SS-1
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 40'

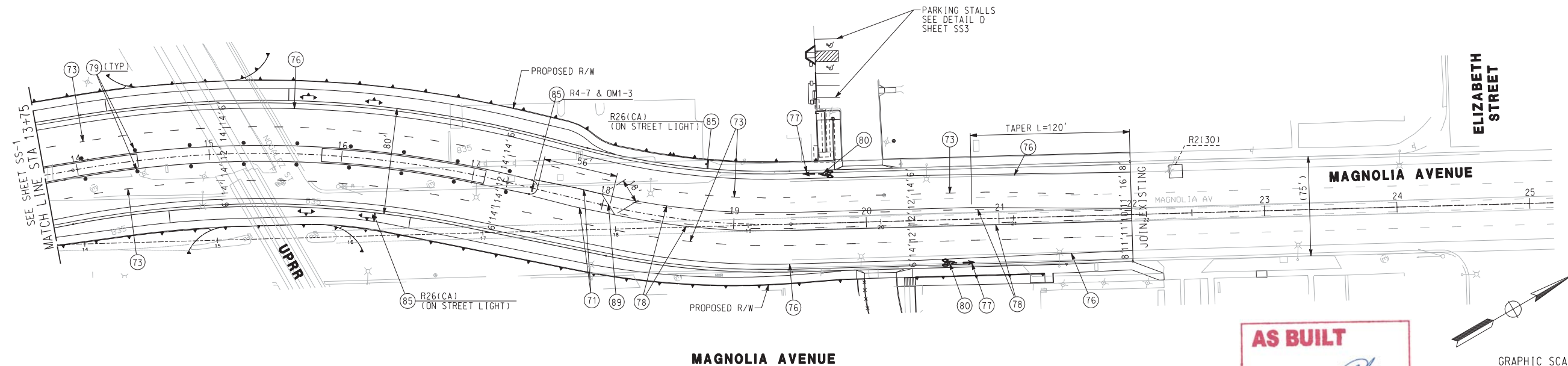
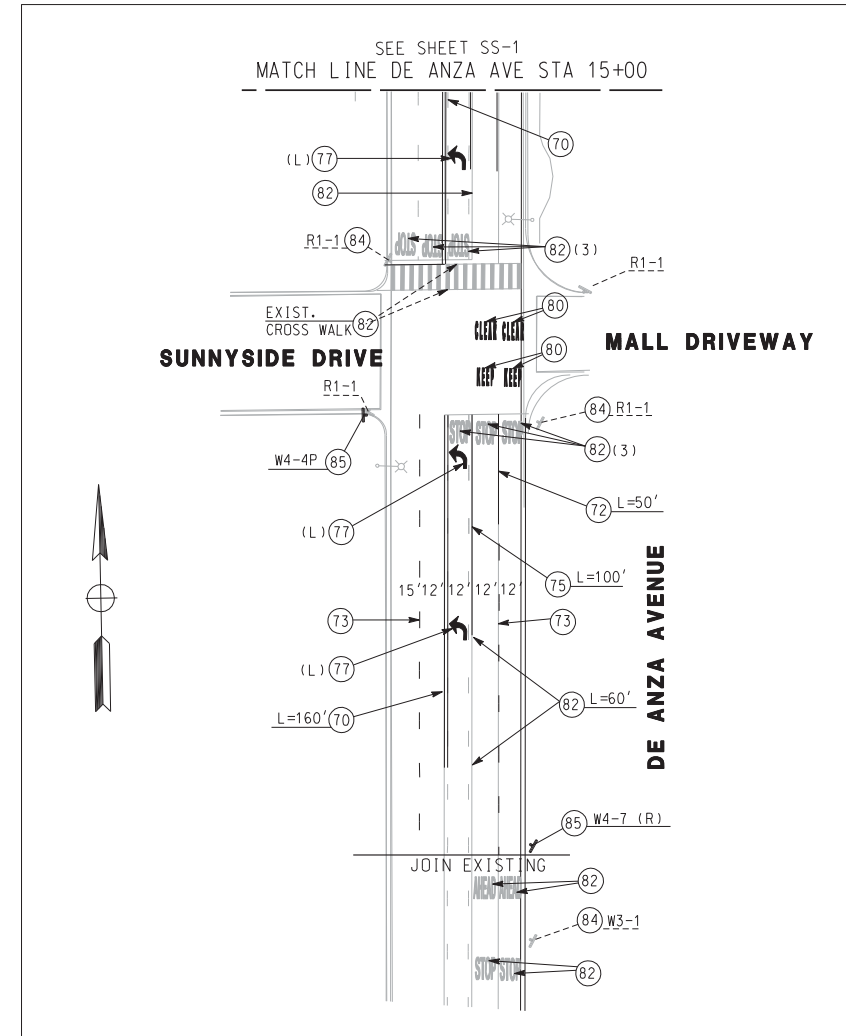
ACCT. NO. W.O. NO. XL-603
SHEET 71 OF 189
FILE NO.

SIGNING AND STRIPING NOTES:

- (70) APPLY 4-INCH SOLID DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20A, DETAIL 22
- (71) APPLY 4-INCH SOLID DOUBLE YELLOW MEDIAN STRIPE PER CALTRANS STD PLAN A20B, DETAIL 29
- (72) APPLY 8-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 38
- (73) APPLY 4-INCH DASHED WHITE STRIPE PER CALTRANS STD PLAN A20A, DETAIL 9
- (74) APPLY 12-INCH SOLID WHITE CROSSWALK MARKINGS/LIMITS
- (75) APPLY 50', 4" SOLID WHITE STRIPE
- (76) APPLY 6-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39
- (77) APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A24A
- (78) APPLY 4-INCH SOLID/DASHED DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20B, DETAIL 32
- (79) APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20B, DETAIL 26
- (80) APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLANS
- (81) APPLY 6" DASHED WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39A
- (82) REMOVE/SANDBLAST EXISTING MARKINGS
- (83) RELOCATE
- (84) REMOVE
- (85) INSTALL SIGN & POST AS SHOWN
- (86) APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20D DETAIL 40
- (87) APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20C DETAIL 37B
- (88) INSTALL RED CURB
- (89) APPLY 8" YELLOW STRIPE

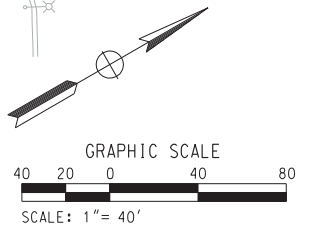
LEGEND:

- PROPOSED SIGN
- EXISTING SIGN
- EXISTING STRIPING
- PROPOSED STRIPING



NOTE:
SEE SHEET 59 FOR SIGNING &
STRIPING GENERAL NOTES

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012



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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
R. SCOTT BACHIN
No. C 48774
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

MARK	MODIFY MEDIAN, SIGNS & STRIPING	TKT	06/02/11
REVISIONS		APPR.	DATE
DESIGNED BY	AG	DRAWN BY	MM
CHECKED BY	SL		

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS		XL-603
SIGNING & STRIPING PLAN SS-2		SHEET <u>72</u> OF <u>189</u>
HORIZ. SCALE:	VERT. SCALE:	FILE NO.

GENERAL NOTES

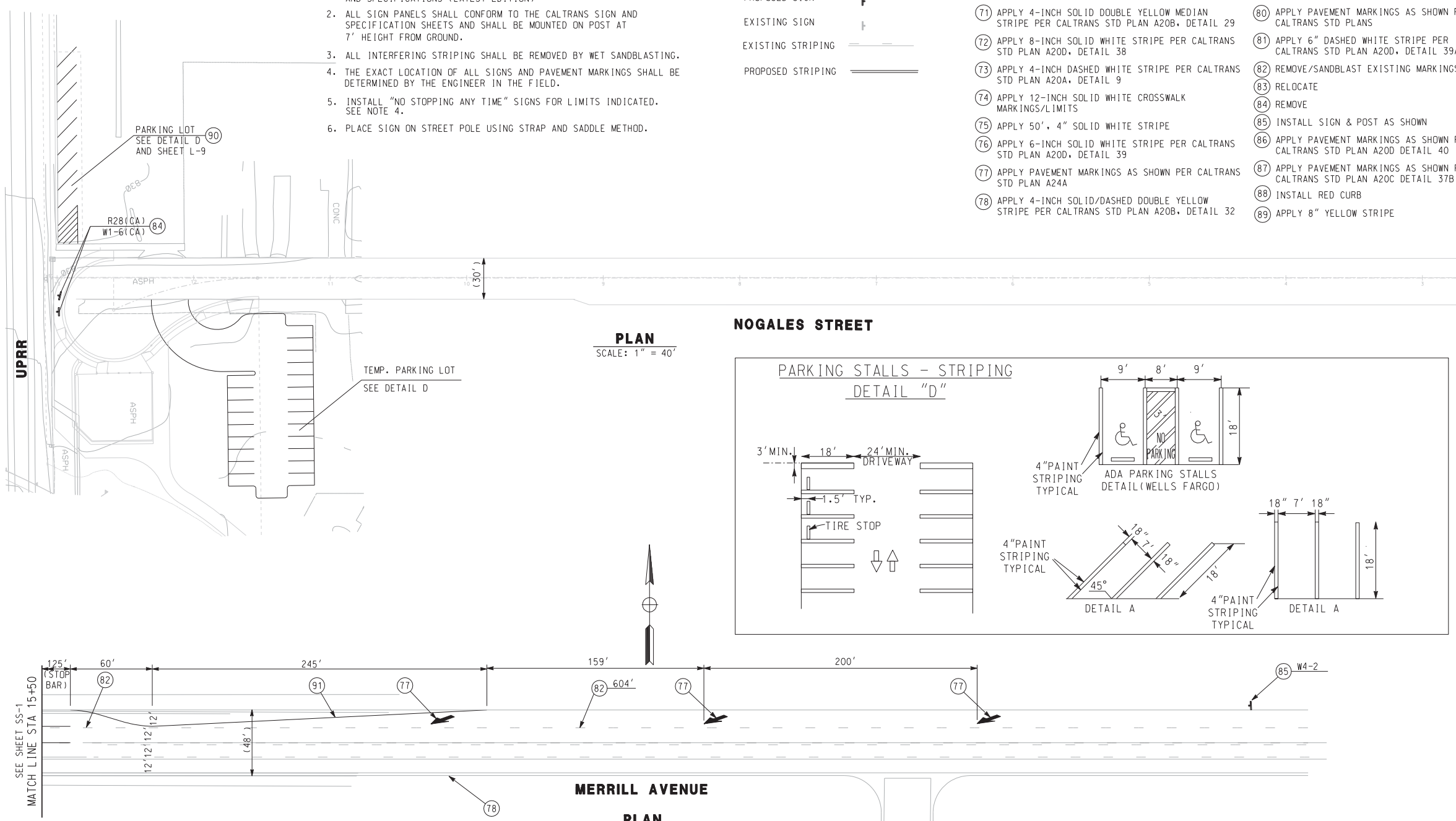
- ALL PAVEMENT AND MARKINGS SHALL BE THERMOPLASTIC AND INSTALLED IN CONFORMANCE WITH THE CALTRANS STANDARD PLAN AND SPECIFICATIONS (LATEST EDITION)
- ALL SIGN PANELS SHALL CONFORM TO THE CALTRANS SIGN AND SPECIFICATION SHEETS AND SHALL BE MOUNTED ON POST AT 7' HEIGHT FROM GROUND.
- ALL INTERFERING STRIPING SHALL BE REMOVED BY WET SANDBLASTING.
- THE EXACT LOCATION OF ALL SIGNS AND PAVEMENT MARKINGS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- INSTALL "NO STOPPING ANY TIME" SIGNS FOR LIMITS INDICATED. SEE NOTE 4.
- PLACE SIGN ON STREET POLE USING STRAP AND SADDLE METHOD.

LEGEND:

- PROPOSED SIGN
- EXISTING SIGN
- EXISTING STRIPING
- PROPOSED STRIPING

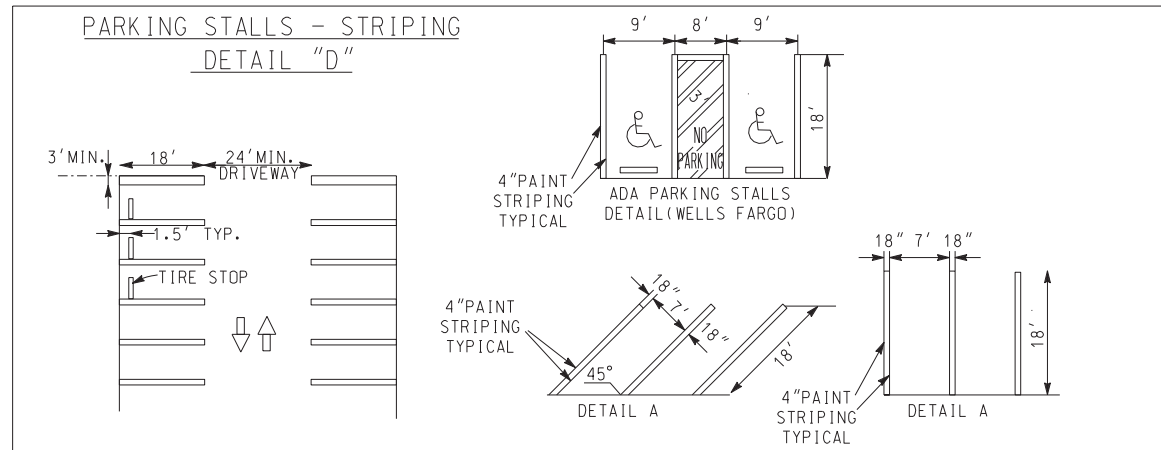
SIGNING AND STRIPING NOTES:

- 70 APPLY 4-INCH SOLID DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20A, DETAIL 22
- 71 APPLY 4-INCH SOLID DOUBLE YELLOW MEDIAN STRIPE PER CALTRANS STD PLAN A20B, DETAIL 29
- 72 APPLY 8-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 38
- 73 APPLY 4-INCH DASHED WHITE STRIPE PER CALTRANS STD PLAN A20A, DETAIL 9
- 74 APPLY 12-INCH SOLID WHITE CROSSWALK MARKINGS/LIMITS
- 75 APPLY 50', 4" SOLID WHITE STRIPE
- 76 APPLY 6-INCH SOLID WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39
- 77 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A24A
- 78 APPLY 4-INCH SOLID/DASHED DOUBLE YELLOW STRIPE PER CALTRANS STD PLAN A20B, DETAIL 32
- 79 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20B, DETAIL 26
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- 81 APPLY 6" DASHED WHITE STRIPE PER CALTRANS STD PLAN A20D, DETAIL 39A
- 82 REMOVE/SANDBLAST EXISTING MARKINGS
- 83 RELOCATE
- 84 REMOVE
- 85 INSTALL SIGN & POST AS SHOWN
- 86 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20D DETAIL 40
- 87 APPLY PAVEMENT MARKINGS AS SHOWN PER CALTRANS STD PLAN A20C DETAIL 37B
- 88 INSTALL RED CURB
- 89 APPLY 8" YELLOW STRIPE



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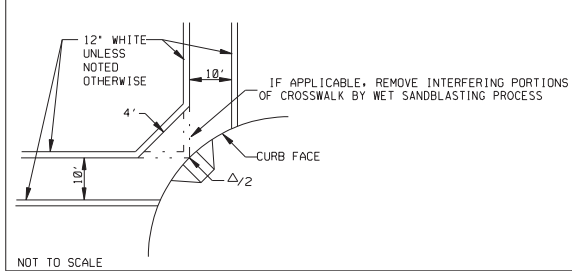
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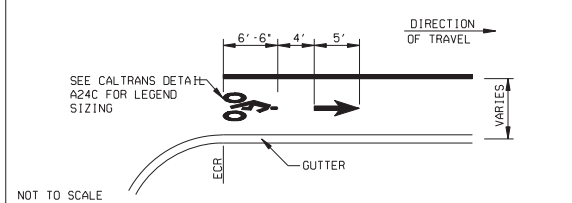
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PLAN
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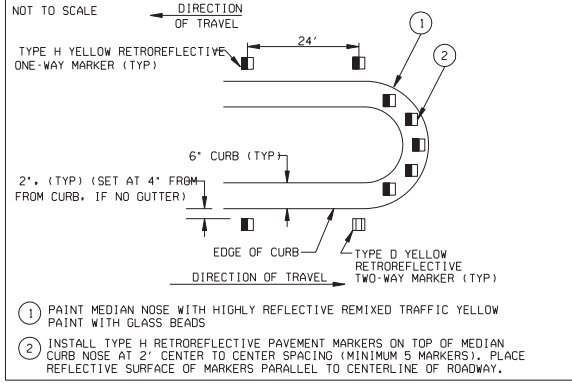
X-WALK DETAIL - DETAIL "A"



BIKE LANE LEGEND DETAIL - DETAIL "B"



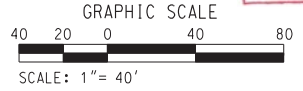
MEDIAN NOSE DETAIL - DETAIL "C"



SIGNING AND STRIPING GENERAL NOTES:

- SIGNING AND STRIPING INSTALLATIONS SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS DATED MAY 2006, AND ALL ADDENDUMS THERETO, AND THE CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT STANDARD DRAWINGS, CURRENT EDITION.
- ALL STRIPING, MARKINGS, AND LEGENDS SHALL BE REFLECTORIZED THERMOPLASTIC UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE AND INSTALL RAISED PAVEMENT MARKERS FOR ALL STRIPING, STRIPING, MARKINGS AND LEGENDS SHALL CONFORM TO THE LATEST CALTRANS STANDARD PLANS A20A THRU A20D AND A24A THRU A24E.
- PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL PAVEMENT STRIPING AND STENCILING WITHIN THE PERIMETER OF THE CONSTRUCTION AREA SHALL BE RESTORED TO LIKE NEW CONDITION, IN A MANNER MEETING THE APPROVAL OF THE CITY OF RIVERSIDE.
- THE CONTRACTOR SHALL RE-STRIP EXISTING STRIPING AND CURB MARKINGS OBLITERATED BY NEW CONSTRUCTION, WHETHER OR NOT SHOWN ON THE PLANS FOR REPLACEMENT, AT NO COST TO THE CITY.
- AT LOCATIONS WHERE EXISTING PAINTED CURB IS TO BE RECONSTRUCTED, THE CONTRACTOR SHALL PAINT THE NEW CURB AS SHOWN ON THE PLANS WITHIN 10 WORKING DAYS OF CURB CONSTRUCTION OR AS DIRECTED BY ENGINEER. THE PAINT SHALL BE WATER-BASED WITH 2-YEAR GUARANTEE AGAINST COLOR FADING. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CITY WRITTEN PROOF OF THE MANUFACTURER'S 2-YEAR GUARANTEE.
- ALL NEW STRIPING SHALL BE "CAT TRACKED" AND APPROVED BY THE ENGINEER PRIOR TO FINAL INSTALLATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AFTER COMPLETING LAYOUT AND AT LEAST 3 WORKING DAYS BEFORE COMMENCING INSTALLATION OF STRIPING, MARKINGS AND MARKERS.
- TRAFFIC SIGN FACE REFLECTIVE SHEETING SHALL BE 3M DG3 (ASTM XI) OR APPROVED EQUAL WITH PROTECTIVE GRAFFITI OVERLAY FILM OR AS OTHERWISE NOTED. ALL WARNING SIGNS SHALL HAVE A FLUORESCENT YELLOW BACKGROUND AND SCHOOL SIGNS NOTED SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND.
- SIGNS SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE. PRIOR TO INSTALLATION, NEW SIGNS SHALL BE APPROVED BY THE CITY OF RIVERSIDE. EXACT LOCATIONS OF SIGNS SHALL BE DETERMINED BY THE CITY ENGINEER.
- SALVAGED SIGNS AND SIGN POSTS SHALL BE DELIVERED TO THE CITY OF RIVERSIDE SIGN DEPARTMENT.
- WHEN PAINT IS SPECIFIED, TRAFFIC STRIPES AND MARKINGS SHALL BE APPLIED IN TWO COATS. A MINIMUM OF SEVEN DAYS SHALL BE PROVIDED BETWEEN FIRST AND SECOND COATS.
- STRIPING SHALL BE APPLIED WITHIN 48 HOURS OF SURFACE COURSE REPLACEMENT ON STREETS OPEN TO THE PUBLIC. IN NO CASE SHALL A NEWLY PAVED STREET OPEN TO THE PUBLIC BE LEFT UNSTRIPED OVER A WEEKEND OR HOLIDAY.
- ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, LEGENDS, AND RAISED PAVEMENT MARKERS SHALL BE REMOVED EVEN IF NOT SHOWN ON PLANS. REMOVALS OF PAINTED STRIPING, PAVEMENT MARKINGS AND LEGENDS SHALL BE DONE BY WET SANDBLASTING. REMOVALS OF THERMOPLASTIC STRIPING, PAVEMENT MARKINGS AND LEGENDS SHALL BE REMOVED BY WET SANDBLASTING, GRINDING OR OTHER APPROVED METHOD AND SHALL NOT DAMAGE THE PAVEMENT. "BLACK OUT" OF EXISTING DELINEATION IS NOT PERMITTED. ALL DAMAGED PAVEMENT DUE TO REMOVALS SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A SMOOTH AND UNIFORM SURFACE OR AS DIRECTED BY THE ENGINEER. ALL STRIPING REMOVALS AND LEGENDS SHALL BE "FOG SEALED".
- CONTRACTOR SHALL INSTALL NEW SIGN(S) AND/OR POST(S) PER CITY OF RIVERSIDE STANDARD DRAWING No. 666.

AS BUILT
CORRECTIONS BY *[Signature]*
CONTRACT NO. _____
DATE 11/16/2012



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Many Solutions
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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER
R. SCOTT BACHKIN
No. C 48774
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: AG	DRAWN BY: MM	CHECKED BY: SL
MARK:	MODIFY MEDIAN, SIGNS & STRIPING	REVISIONS
DATE: 06/02/11	DATE: 06/02/11	DATE: 06/02/11

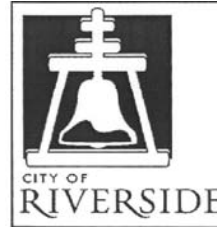
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
SIGNING & STRIPING PLAN SS-3
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 40'
ACCT. NO. W.O. NO. _____
XL-603
SHEET 73 OF 189
FILE NO. _____

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RIVERSIDE



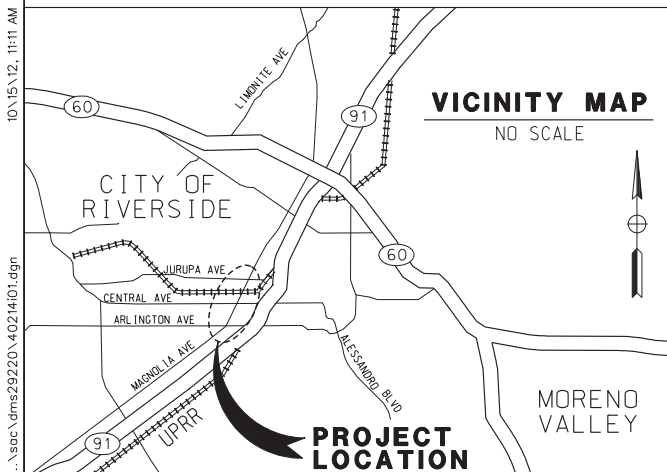
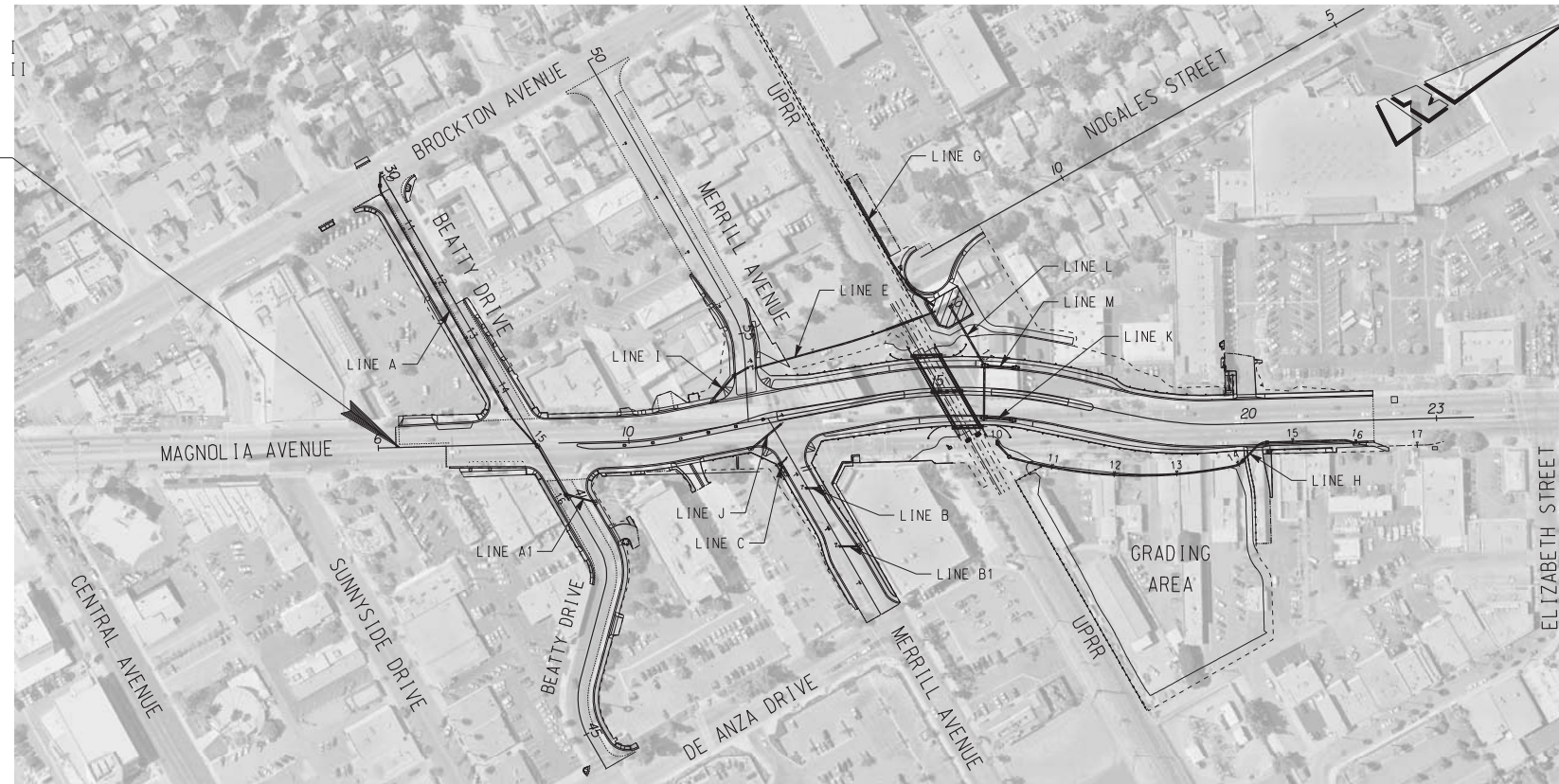
CALIFORNIA

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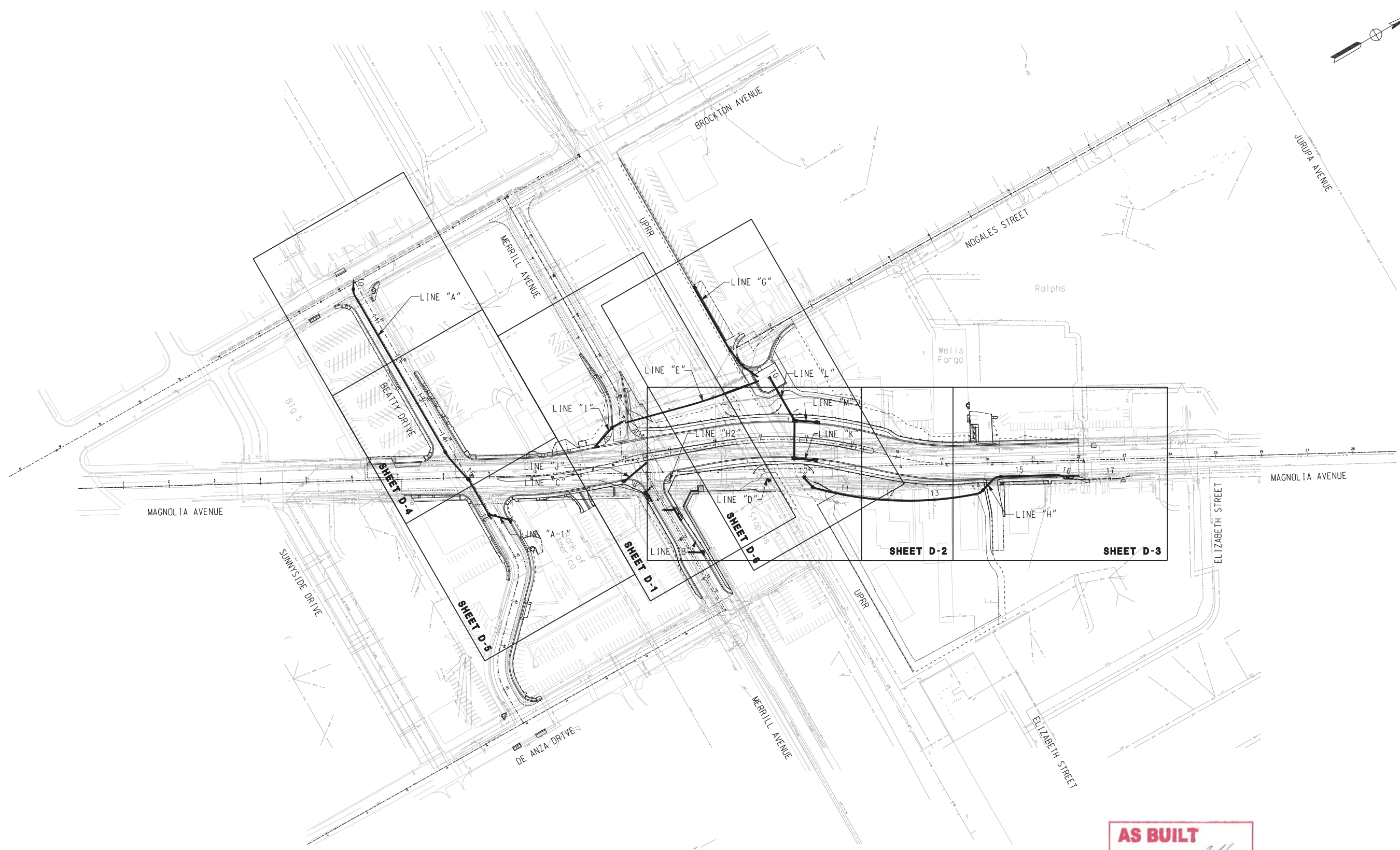
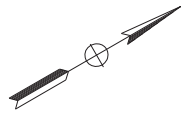
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

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.

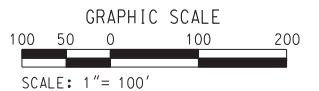


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CORRECTIONS BY *W.F. Young*

CONTRACT NO. _____

DATE *November 16, 2012*



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2280 MARKET STREET
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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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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
PI	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
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*

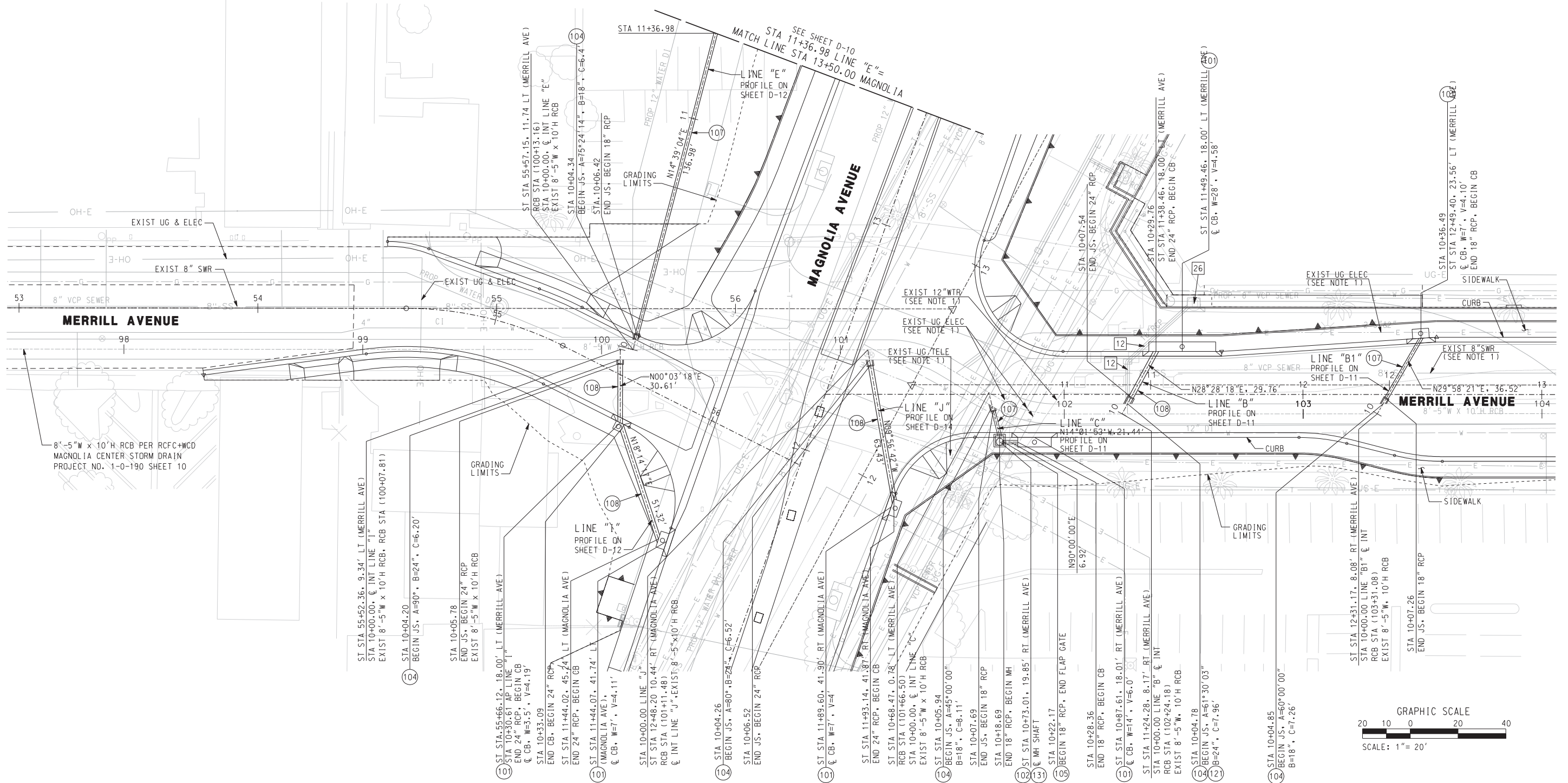
 DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT	 HDR ONE COMPANY <i>Many Solutions</i> HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE <u>9/14/09</u>	 WILLIAM F. YOUNG No. C 38715 Exp. 9-30-11 CIVIL STATE OF CALIFORNIA	REVISION - CONSTRUCTION NOTE SHEET REFERENCE WFY 7/14/11 REVISION - ADD MANHOLE & MODIFY FLAP GATE WFY 2/08/10 MARK REVISIONS APPR. DATE	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS LEGEND, ABBREVIATIONS AND CONST. NOTES D-4	ACCT. NO. _____ W.O. NO. _____ D-830 SHEET <u>77</u> OF <u>189</u> FILE NO. _____
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____				HORIZ. SCALE: N/A VERT. SCALE: N/A	

CONSTRUCTION NOTES

- 101 CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO.405
- 102 CONSTRUCT MANHOLE PER RCFC+WCD STD DRAWING NO.MH251
- 104 CONSTRUCT JUNCTION STRUCTURE PER RCFC+WCD STD DRAWING NO.JS226
- 105 INSTALL FLAP GATE TO MANHOLE WALL
- 107 INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- 108 INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- 121 INSTALL JUNCTION STRUCTURE IN ORIGINAL JUNCTION STRUCTURE LOCATION
- 131 CONSTRUCT PRESSURE MANHOLE SHAFT PER RCFC+WCD STD DRAWING NO MH258

REMOVAL NOTES

- 12 REMOVE EXISTING PIPE
- 26 REMOVE EXISTING CONCRETE STRUCTURE



8'-5" W x 10' H RCB PER RCFC+WCD
MAGNOLIA CENTER STORM DRAIN
PROJECT NO. 1-0-190 SHEET 10

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

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

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

REVISIONS	DATE
REVISION-ADD MANHOLE & MODIFY FLAP GATE	2/8/10
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	10/2/09

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-5

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

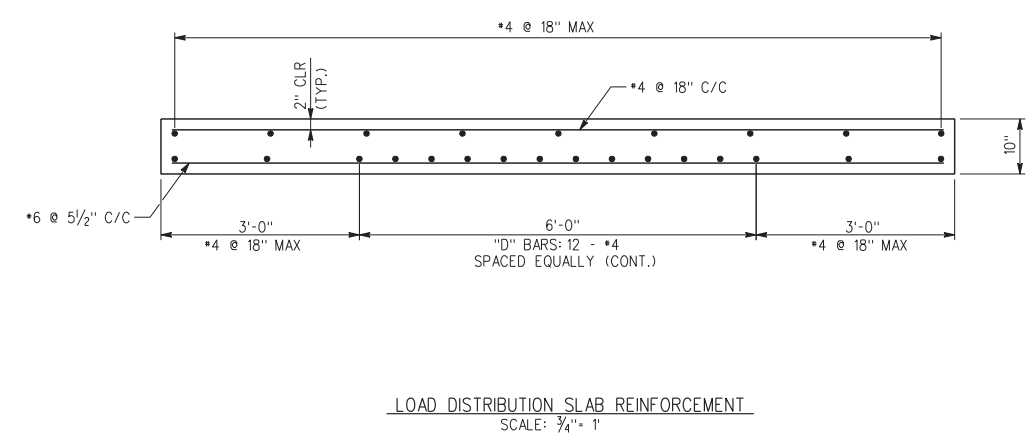
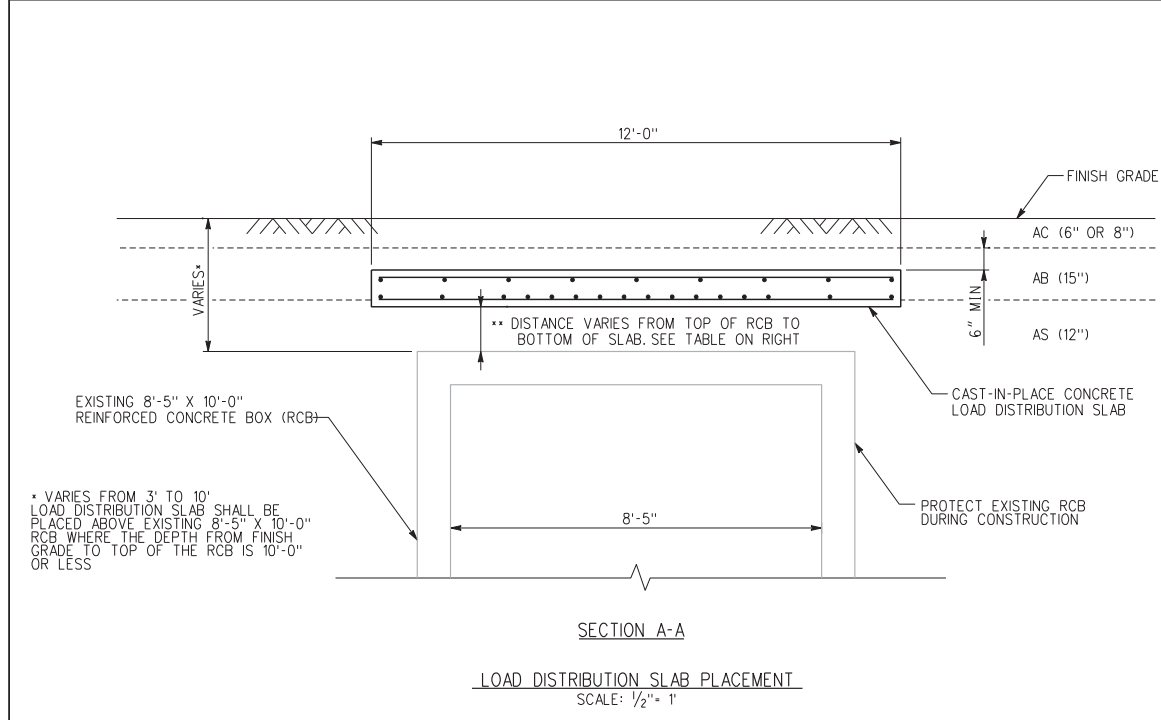
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D-830

SHEET **78** OF **189**

FILE NO. _____

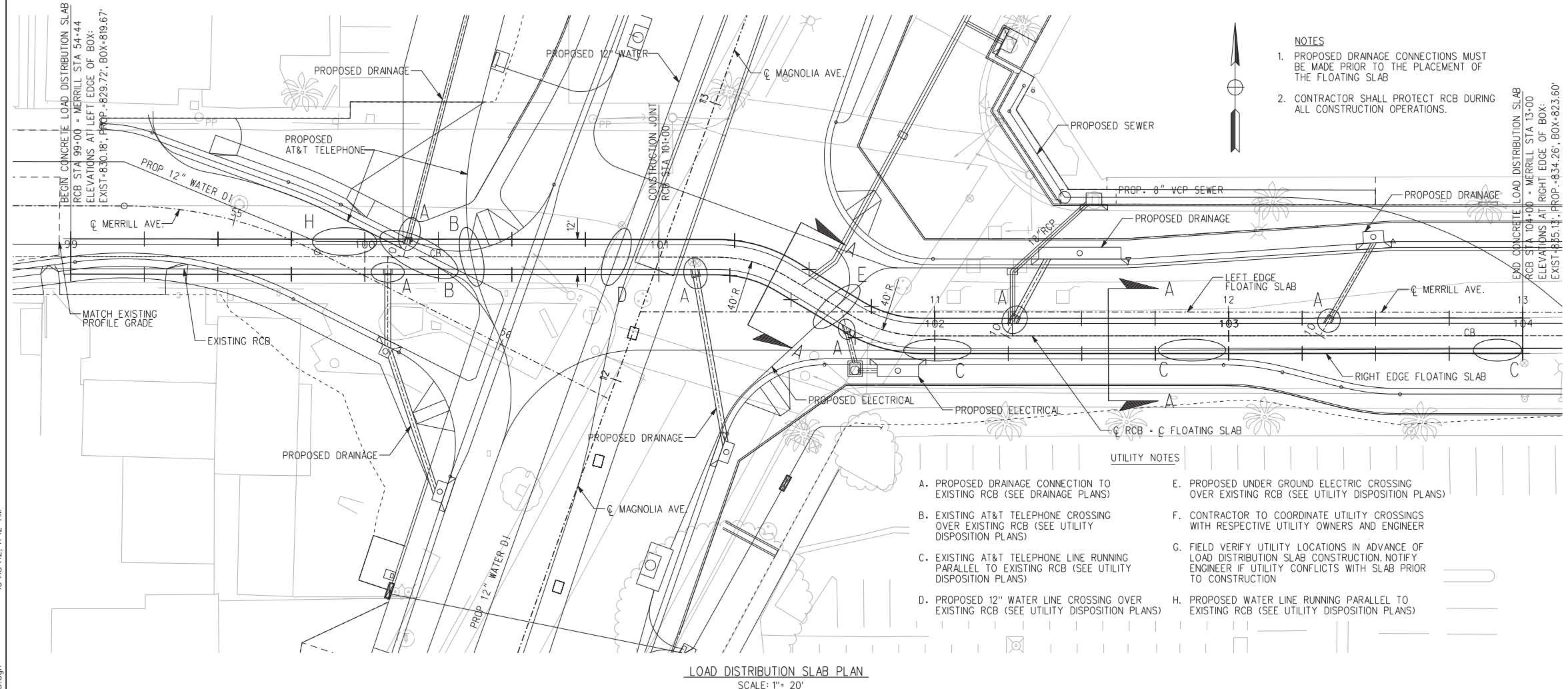
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REINFORCING SCHEDULE				
TOTAL	LOCATION	SIZE	LENGTH	SHAPE
9	TOP LONG.	#4	500'-0"	—
334	TOP TRANS.	#4	11'-8"	—
16	BOT LONG.	#4	500'-0"	—
1091	BOT TRANS.	#6	11'-8"	—

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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	RIGHT	2293594.66	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	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' **
	RIGHT	2293568.17	6214846.64	13+12.83	287.20' RT	833.09'	8.66' **

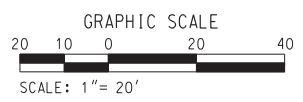


- NOTES
- PROPOSED DRAINAGE CONNECTIONS MUST BE MADE PRIOR TO THE PLACEMENT OF THE FLOATING SLAB
 - CONTRACTOR SHALL PROTECT RCB DURING ALL CONSTRUCTION OPERATIONS.

- 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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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. C57355
Exp. 12/31/11
CIVIL
STATE OF CALIFORNIA

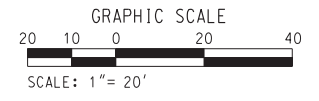
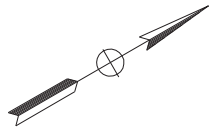
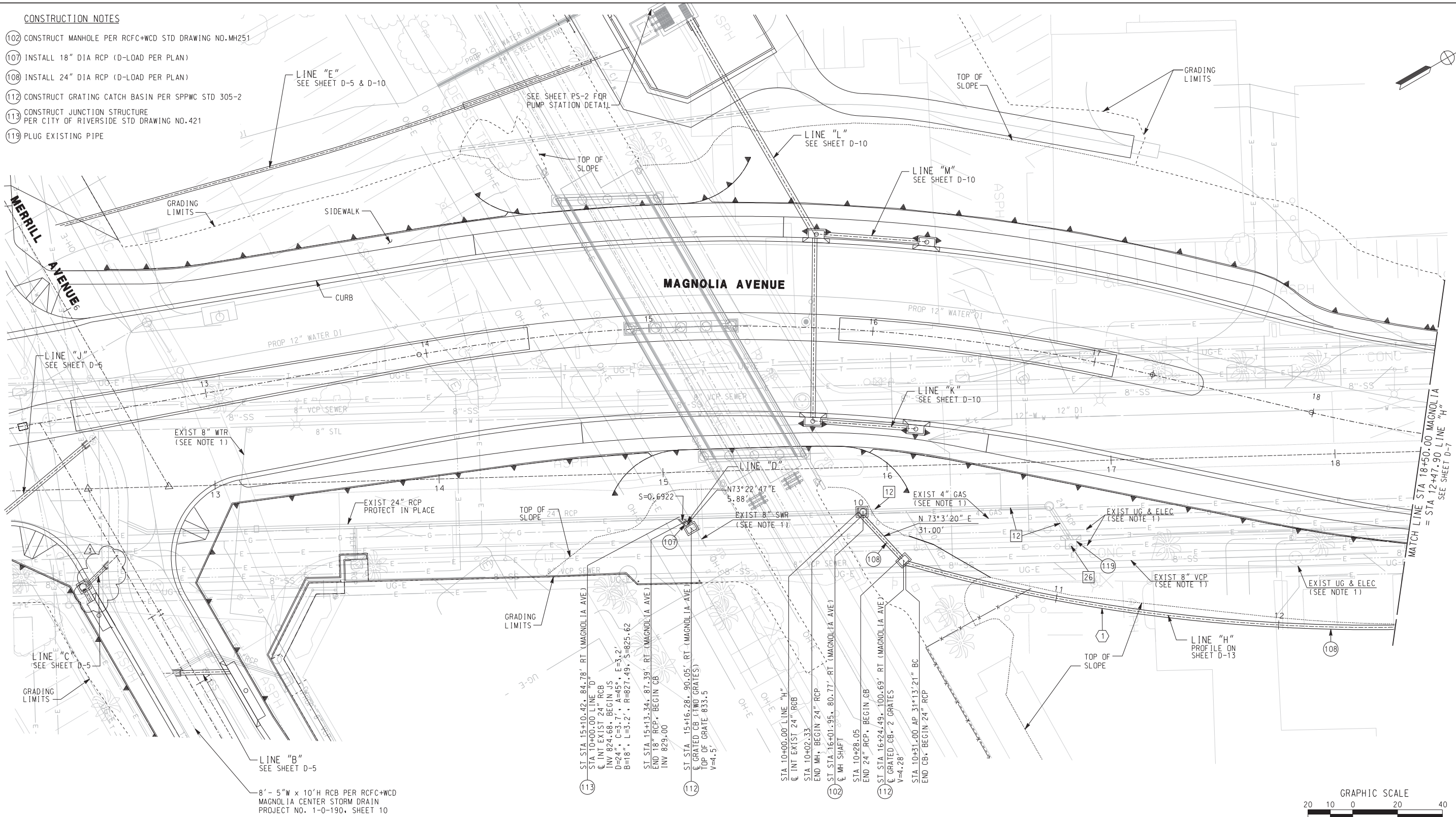
NO.	REVISIONS	DATE
1	MODIFIED TABLE TO INCLUDE DISTANCE FROM RCB TO SLAB	3/22/11
2	NEW SLAB TO PROTECT EXISTING 8'-5" X 10' RCB	8/13/10

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.
D-830
FILE NO.

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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]*

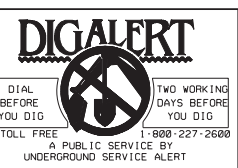
CONTRACT NO. _____

DATE *November 16, 2012*

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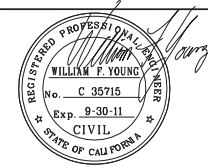
- REMOVAL NOTES**
- 12 REMOVE EXIST PIPE
 - 26 REMOVE EXISTING CONCRETE STRUCTURE

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



HDR | ONE COMPANY
Many Solutions

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



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.

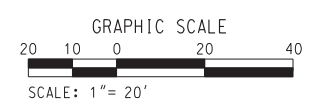
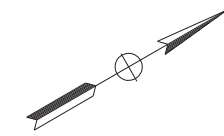
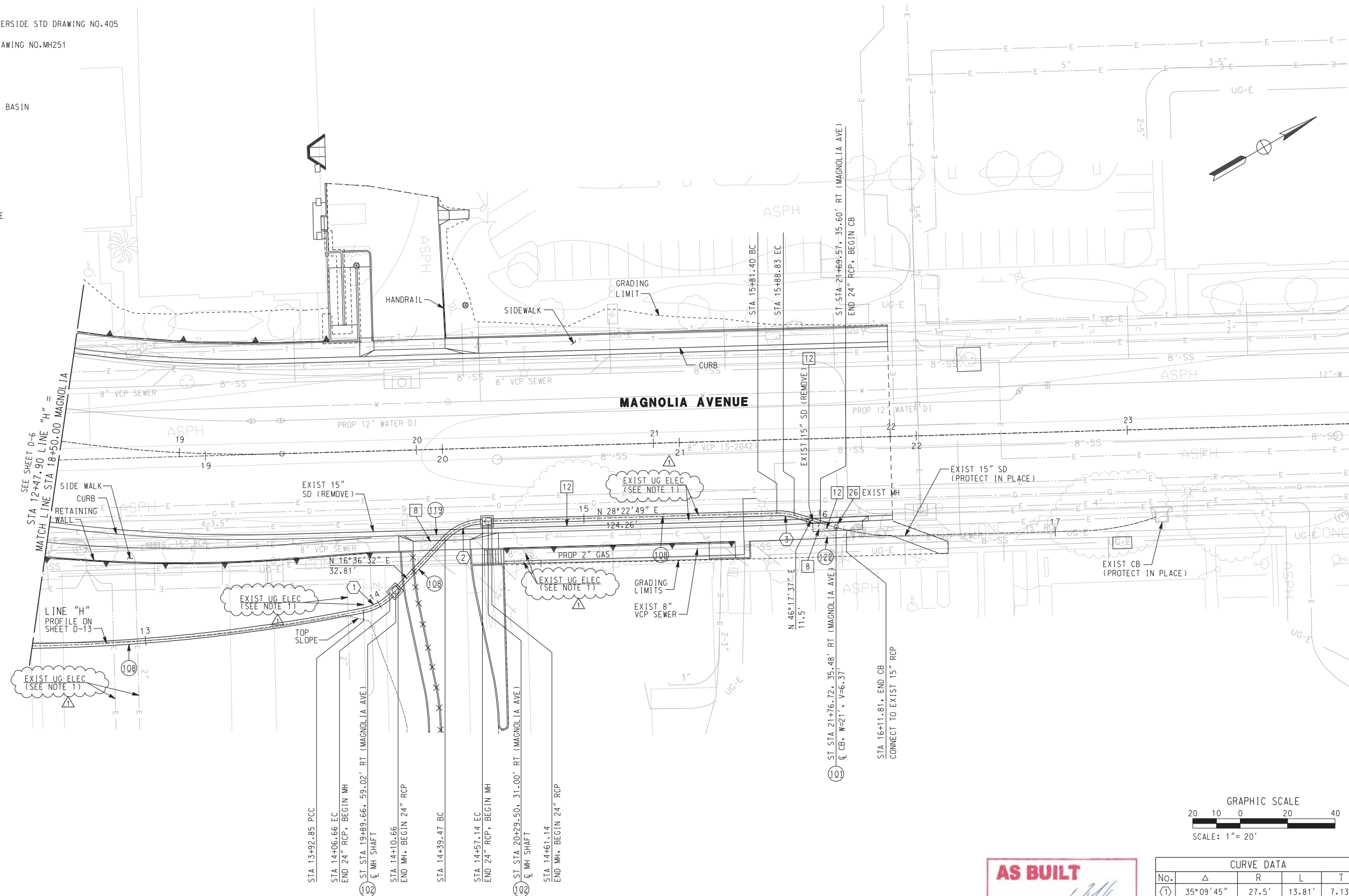
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CONSTRUCTION NOTES

- 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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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**

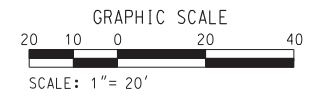
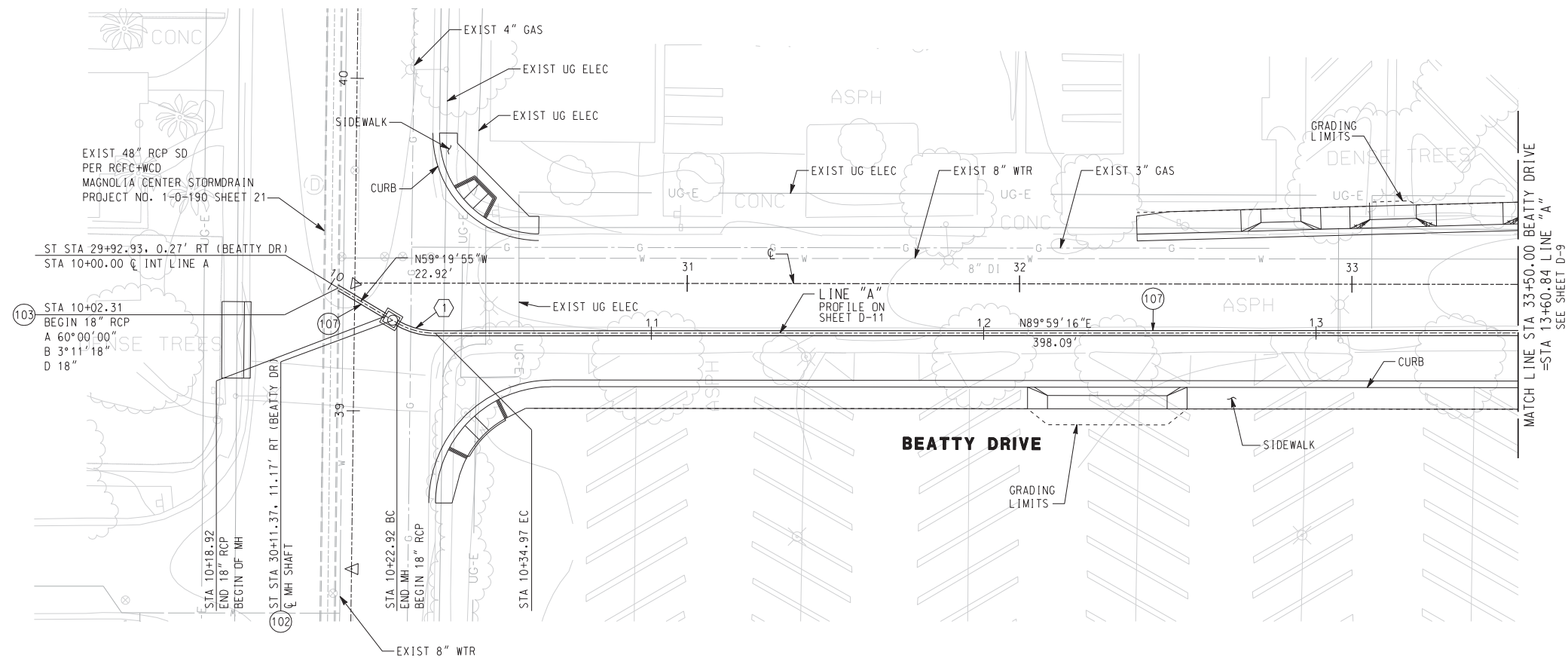
SHEET **80** OF **189**

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.

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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 35715

Exp. 9-30-11

CIVIL

STATE OF CALIFORNIA

MARK	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-8

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

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

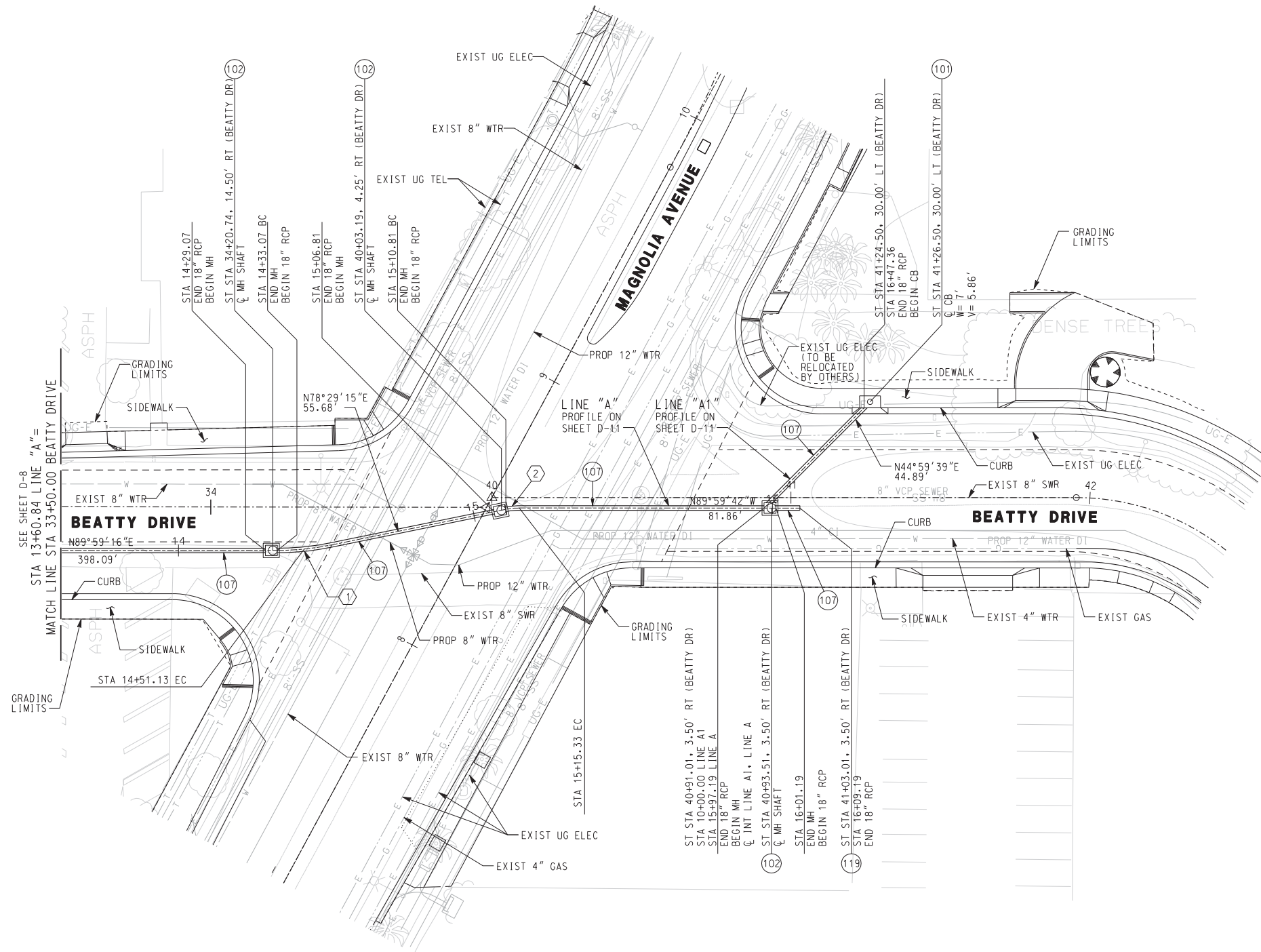
SHEET **61** OF **189**

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



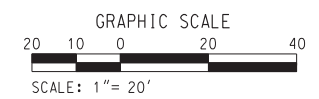
CURVE DATA				
No.	Δ	R	L	T
①	11°30'01"	90.00'	18.06'	9.06'
②	11°31'03"	22.5'	4.52'	2.27'

AS BUILT

CORRECTIONS BY *W.F. Young*

CONTRACT NO. _____

DATE *November 16, 2012*



NOTE:
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W.F. Young

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

ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
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PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PLAN D-9

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

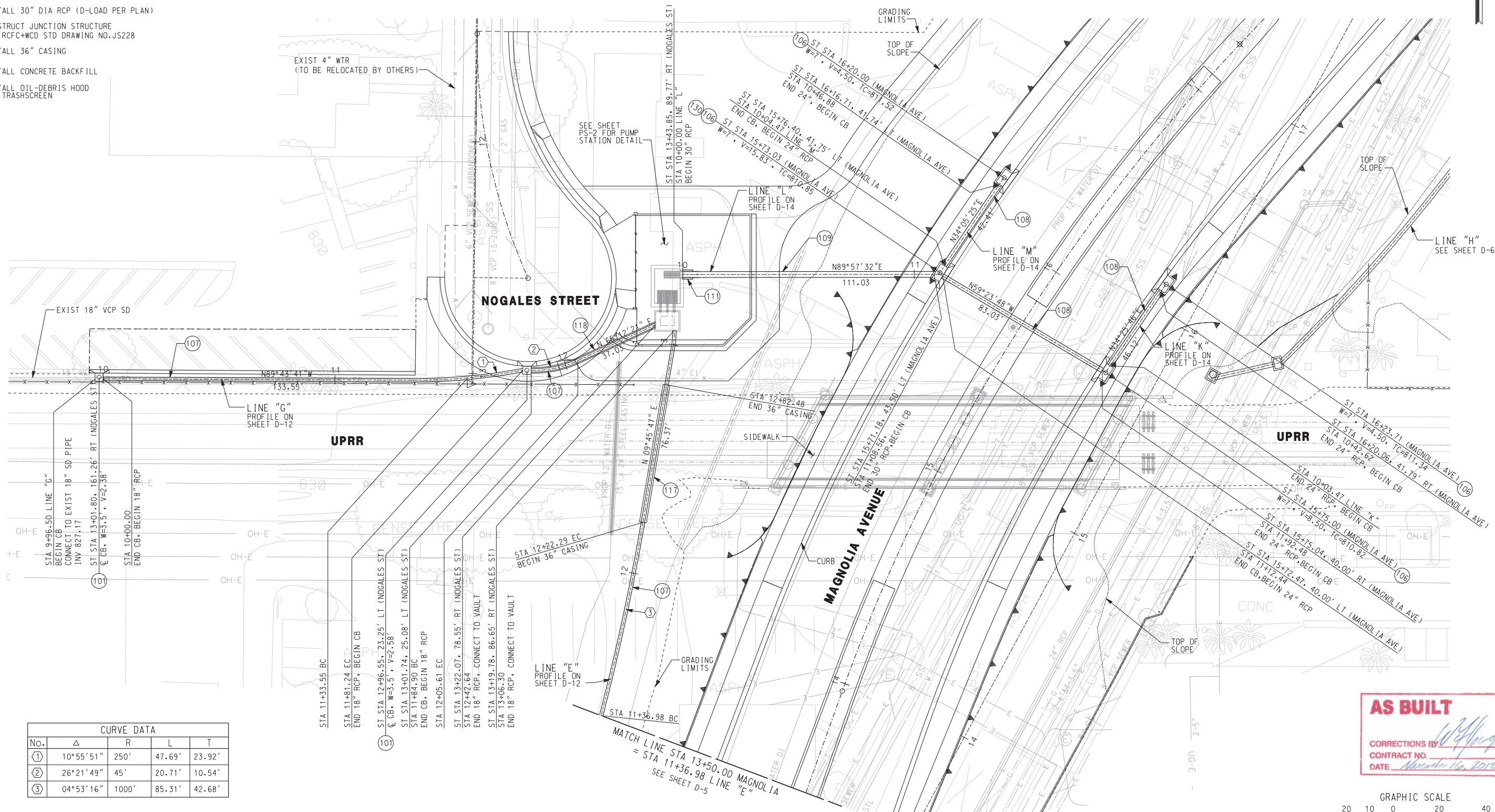
ACCT. NO. W.O. NO. *D-830*

SHEET *82* OF *189*

FILE NO. _____

CONSTRUCTION NOTES

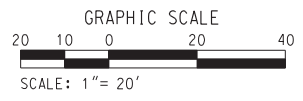
- (101) CONSTRUCT CATCH BASIN PER CITY OF RIVERSIDE STD DRAWING NO.405
- (106) CONSTRUCT MODIFIED CATCH BASIN PER DETAIL B ON SHEET DD-1
- (107) INSTALL 18" DIA RCP (D-LOAD PER PLAN)
- (108) INSTALL 24" DIA RCP (D-LOAD PER PLAN)
- (109) INSTALL 30" DIA RCP (D-LOAD PER PLAN)
- (111) CONSTRUCT JUNCTION 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
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AS BUILT
CORRECTIONS BY: *W. Young*
CONTRACT NO. _____
DATE: *November 16, 2015*



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

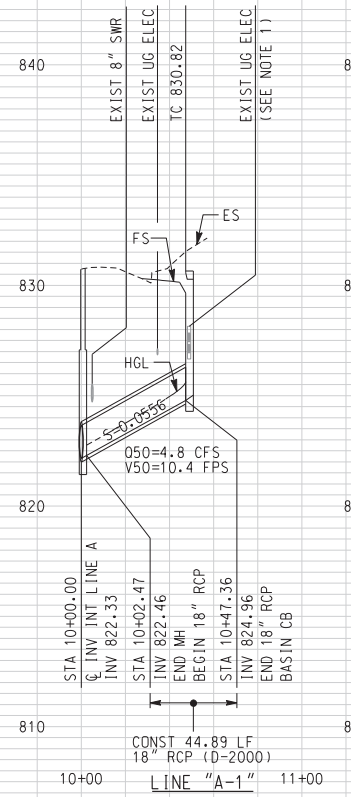
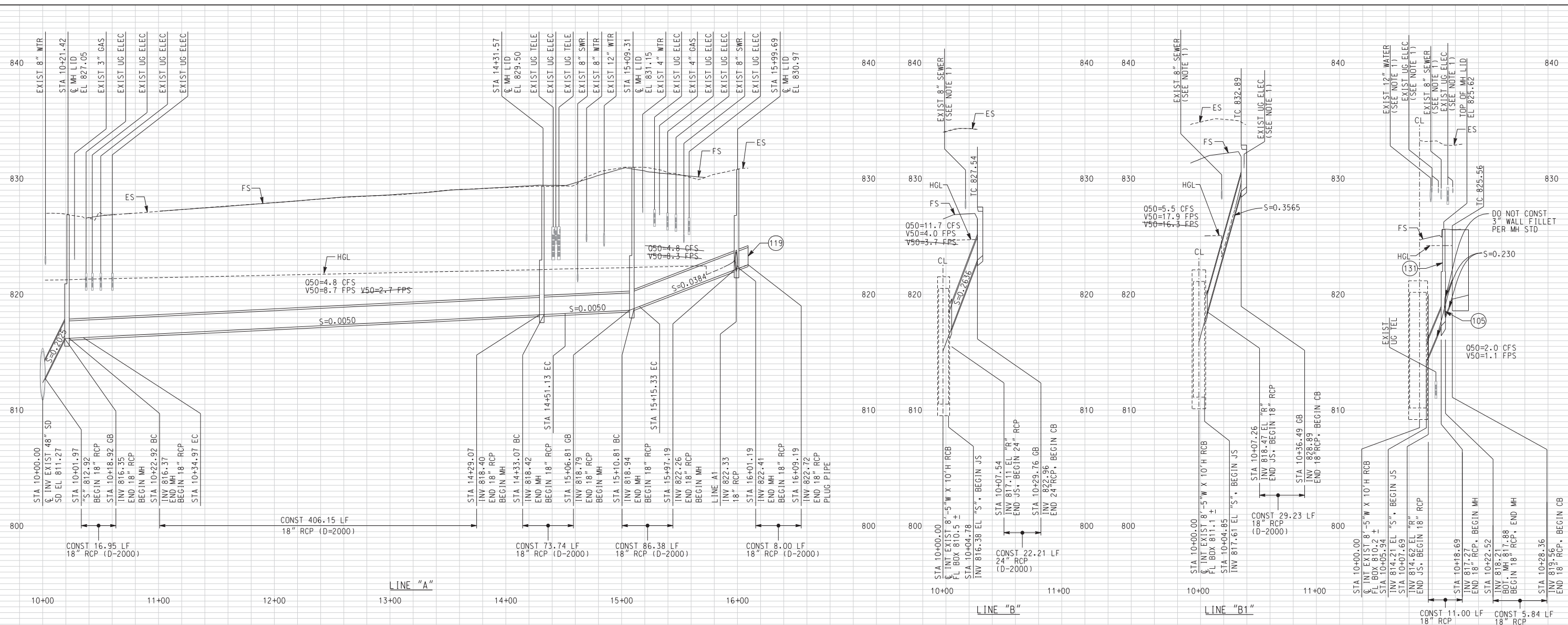
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	WFY	10/21/09
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DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____

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PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE PLAN D-10

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET **83** OF **189**
FILE NO. _____

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 *W. Young*
 CONTRACT NO. _____
 DATE *March 16, 2012*

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

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REGISTERED PROFESSIONAL ENGINEER
 WILLIAM W. YOUNG
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 Exp. 9-30-11
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 STATE OF CALIFORNIA

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

DRAINAGE PROFILES D-11

DESIGNED BY BS DRAWN BY MM CHECKED BY SL

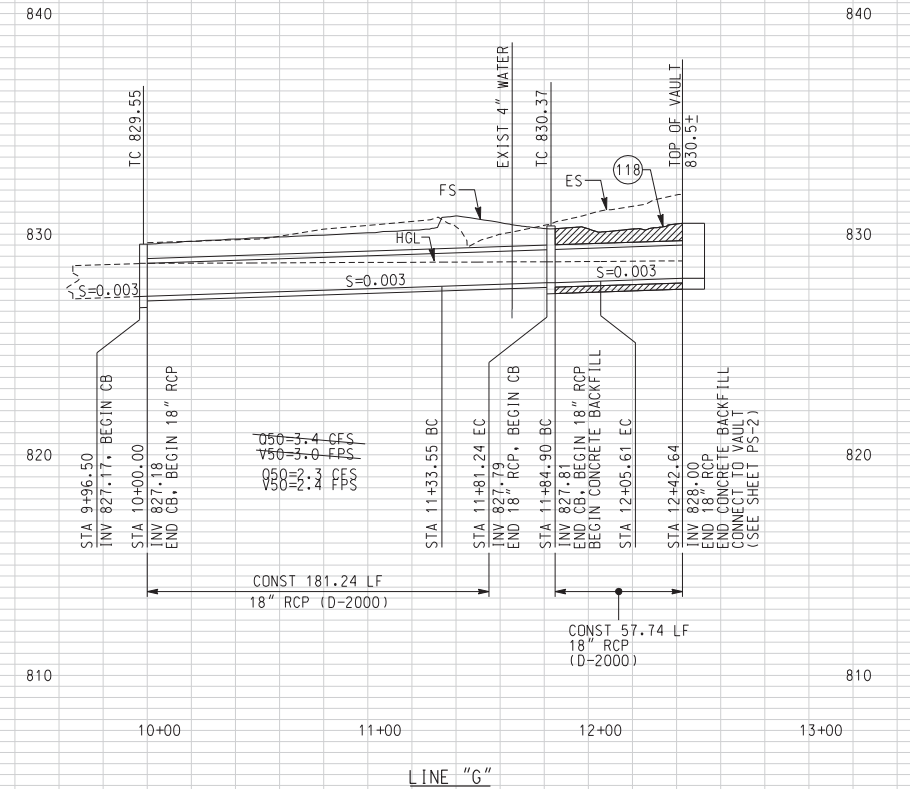
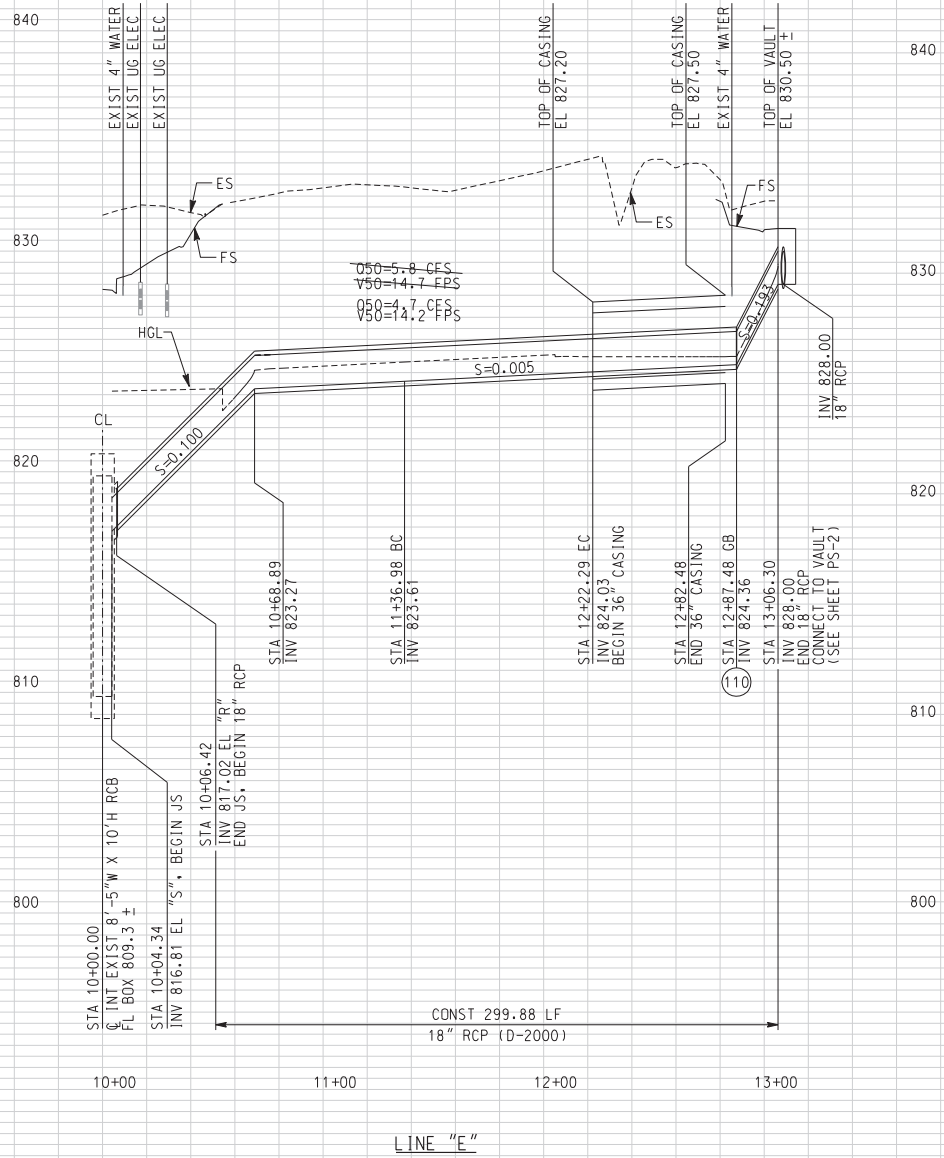
ACCT. NO. W.O. NO.
D-830

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

FILE NO. _____

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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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

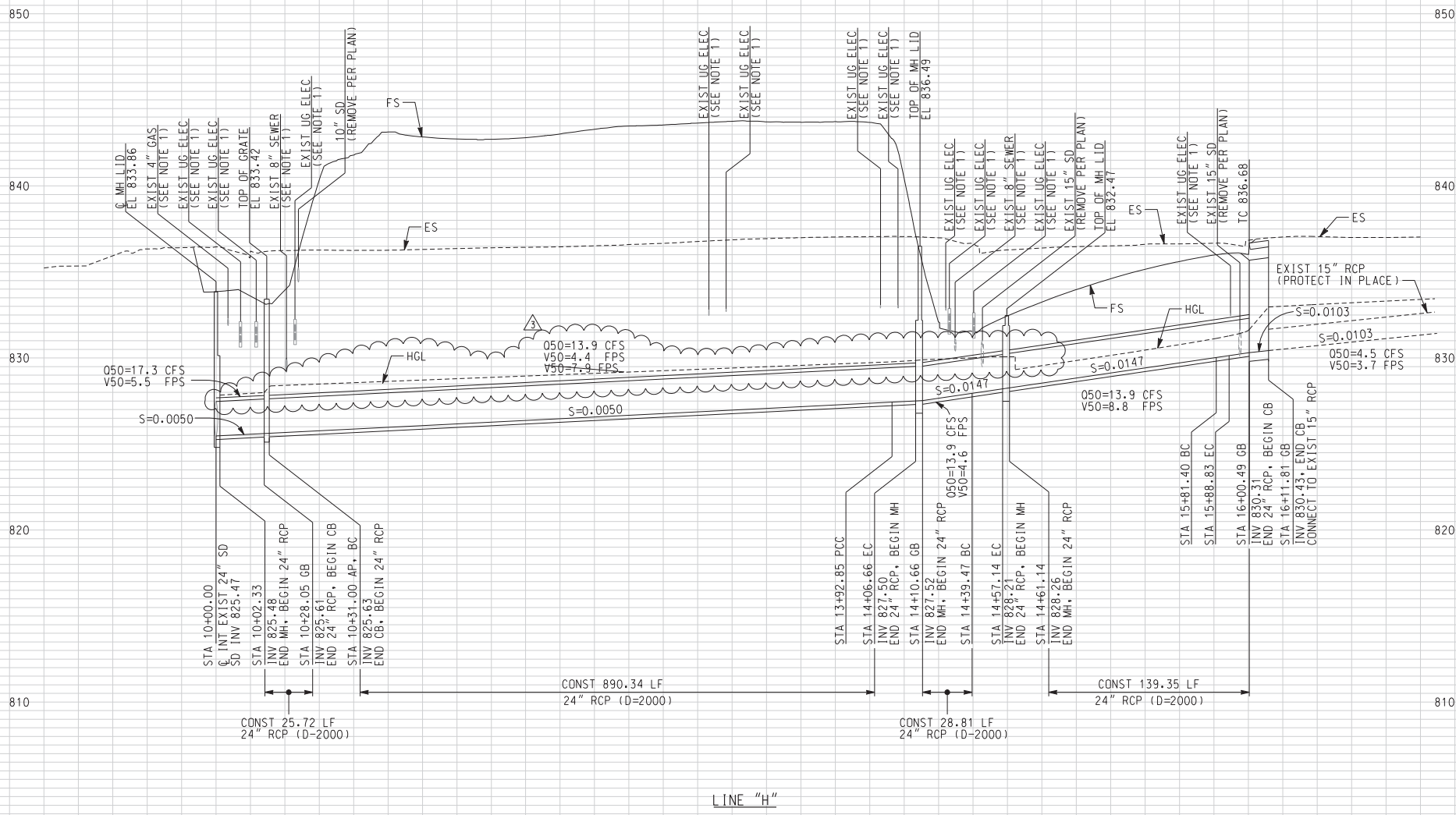
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE PROFILES D-12

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

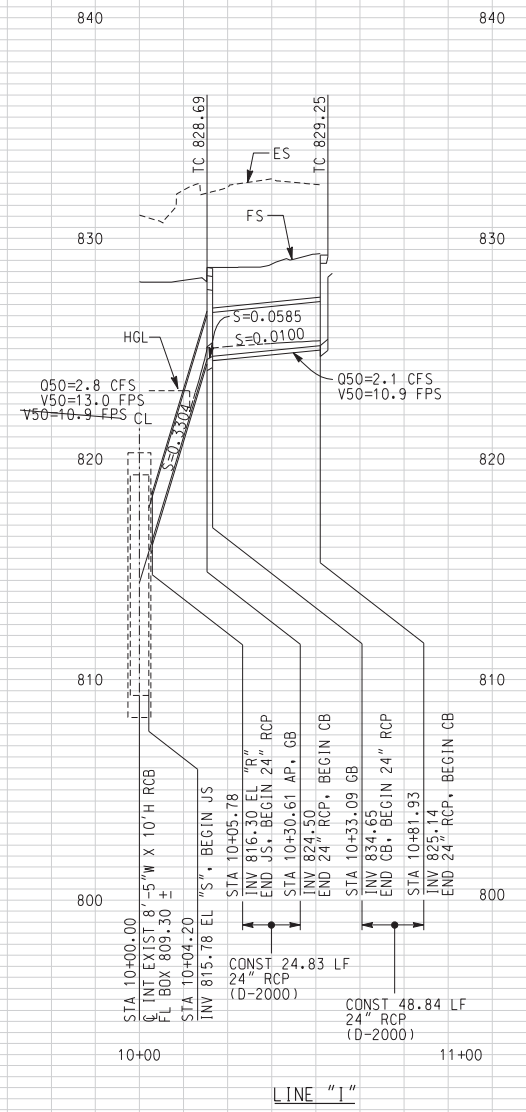
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HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

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LINE "H"



LINE "I"

NOTE:
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AS BUILT
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 CONTRACT NO. _____
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SCALE: HORIZ. 1"=40'
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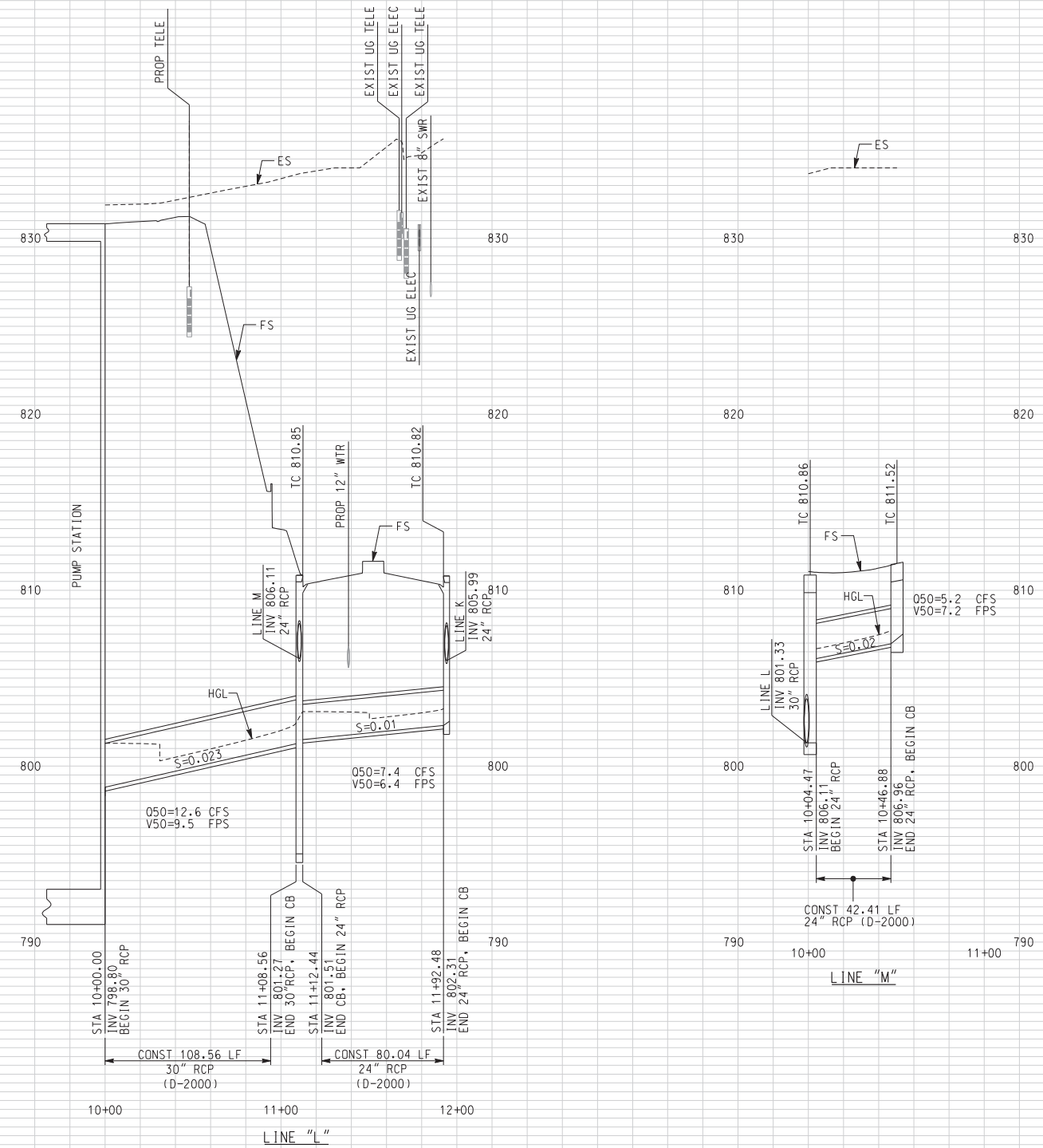
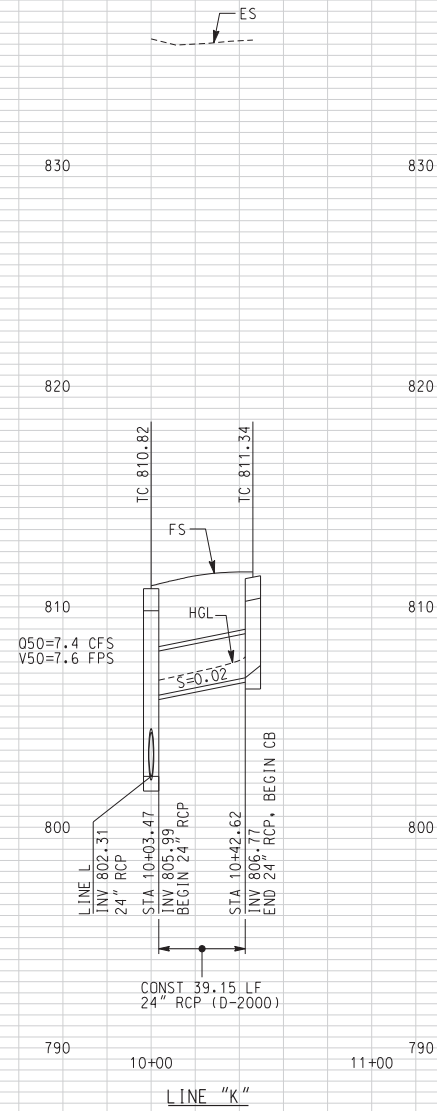
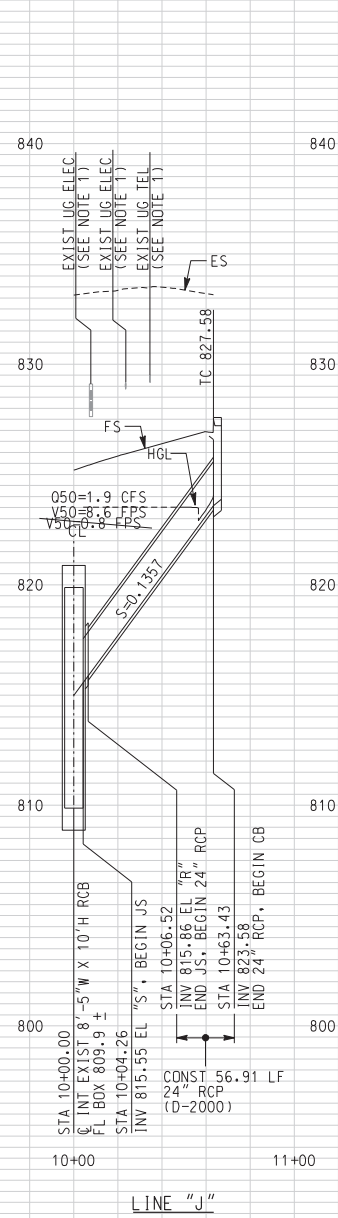
REVISION	DATE
REVISION - HGL & HYDRAULIC DATA	12/08/09
ADDENDUM-ADD & REVISE EXIST. UTIL. NOTES	10/21/09

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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. _____

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NOTE:
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SCALE: HORIZ. 1"=40'
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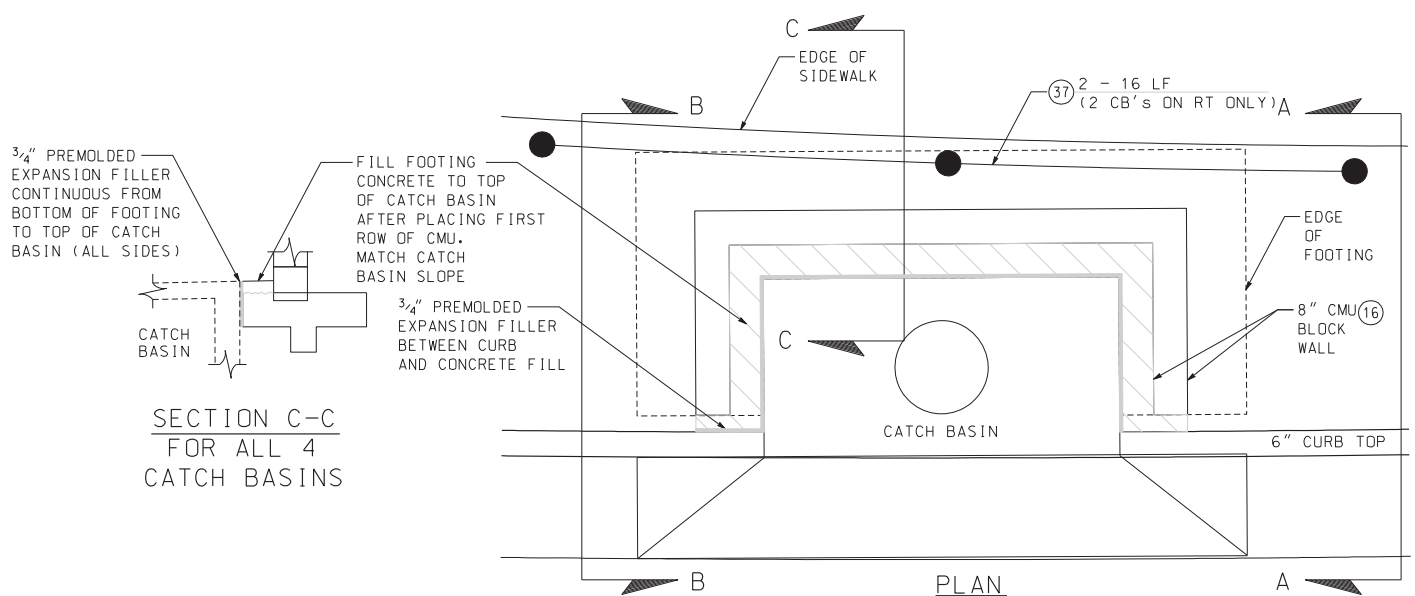
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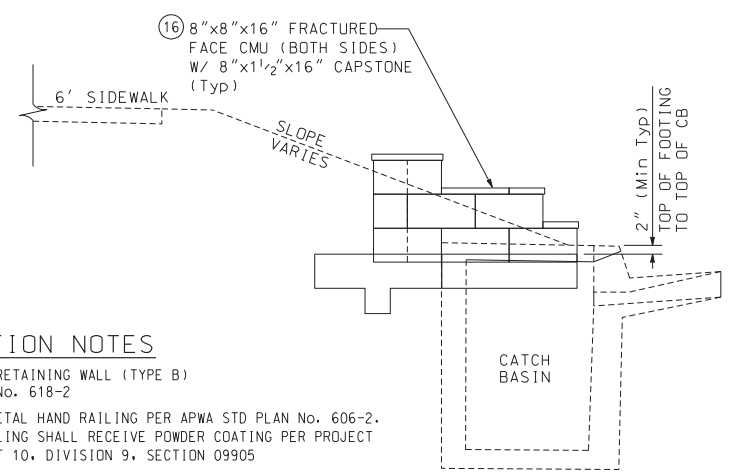
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DRAINAGE PROFILES D-14
HORIZ. SCALE: 1"=40' VERT. SCALE: 1"=4'

ACCT. NO. _____
W.O. NO. _____
D-830
SHEET 87 OF 189
FILE NO. _____

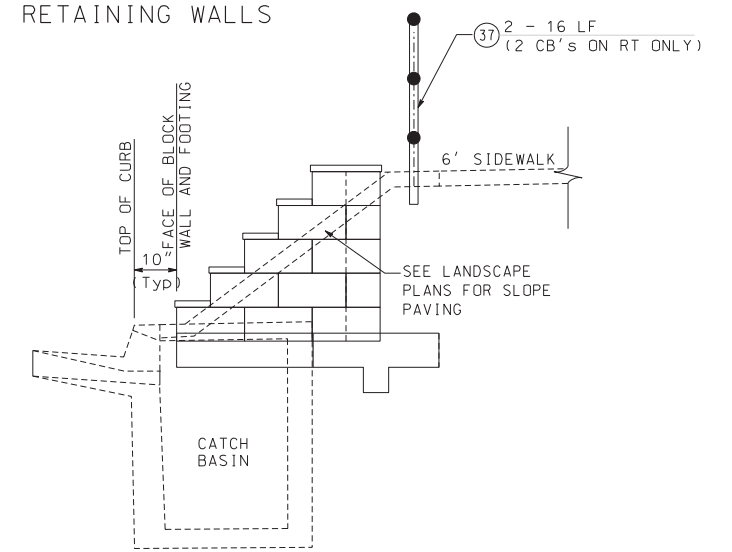


SECTION C-C
FOR ALL 4
CATCH BASINS

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

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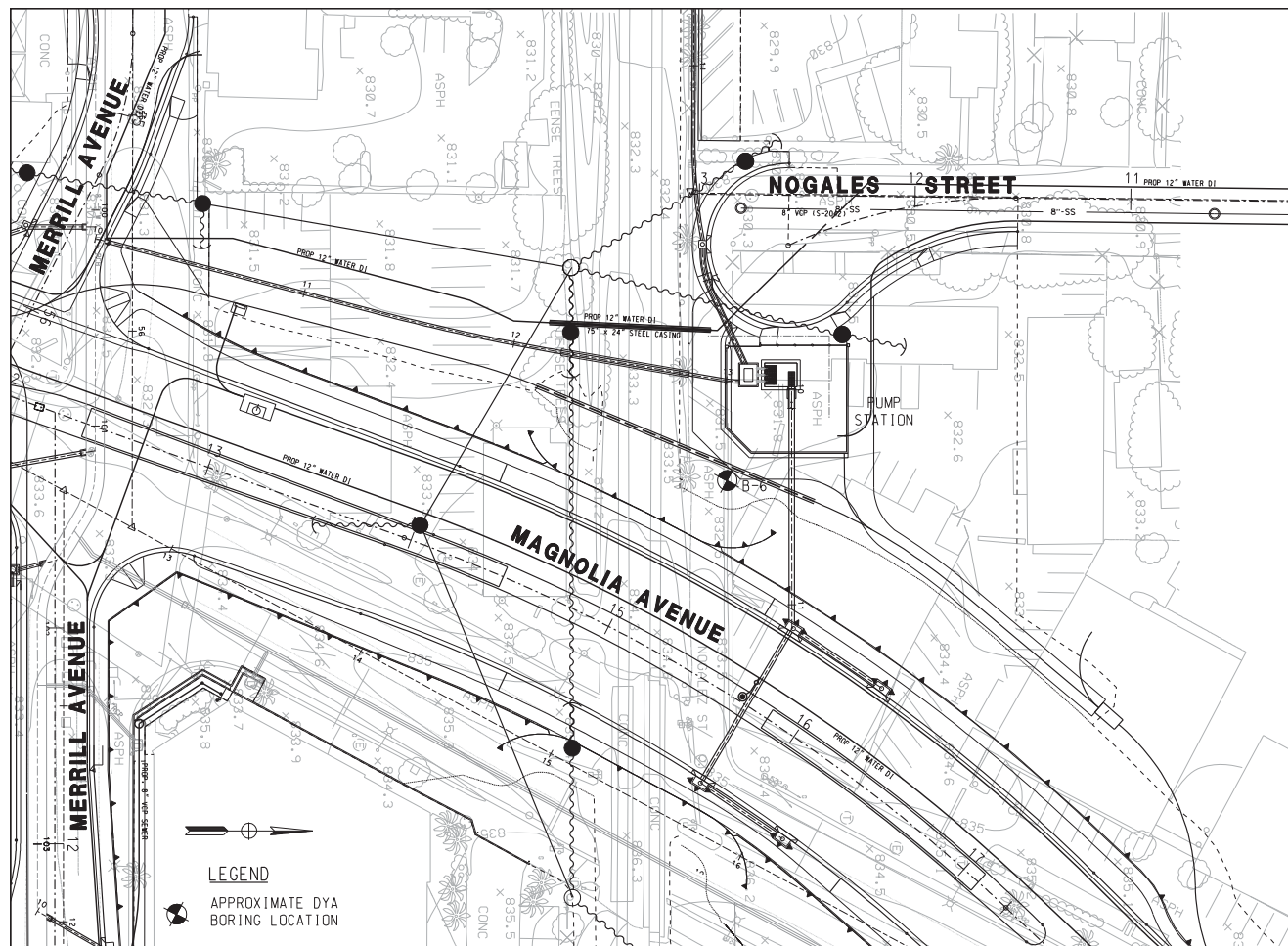
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DRAINAGE DETAILS D-15

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



PUMP STATION LOCATION MAP
SCALE: 1" = 40'

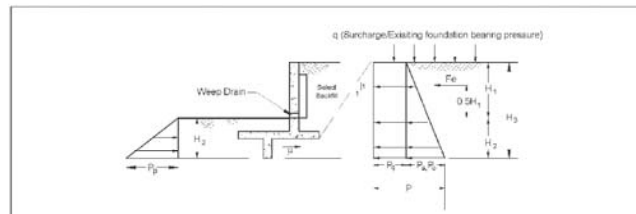
BORING LOCATION: See Figure 2	ELEVATION AND DATUM (WEG): 834 MSL
LATITUDE: 33° 57' 26.9" N	LONGITUDE: 117° 23' 40.9" W
DRILLING EQUIPMENT: CME-75	DRILLING METHOD: Hollow Stem Auger
BORING DIAMETER (inches): 8	BORING DEPTH (feet): 100.9
DATE STARTED: 10/13/07	DATE COMPLETED: 10/13/07
SPT HAMMER DROP: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

Depth (feet)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Plasticity Index (%)	Penetration (mm)	Flow Value (mm)	Other Tests
4-12		ASPHALT CONCRETE (AC) 4 inches						
12-13		SILTY GRAVEL with SAND (SM): gray, moist, medium dense, fine to coarse-grained sand, fine gravel, (BASE - 3 inches SANDY LEAN CLAY (CL) break, root, firm, medium plasticity, fine-grained sand, trace roots - FILL)	114	12	24	16		(3)
13-15		SANDY SILT (ML): brown, moist, firm, low plasticity, fine-grained sand, trace fine gravel	112	8		61		(3)(5)
15-18		SILT with SAND (ML): brown, moist, firm, low plasticity, fine-grained sand						(14)
18-20		SAND						(3)(3)
20-25		SILTY SAND (SM): light grayish brown, moist, medium dense, fine to coarse-grained sand	101	1				(3)(3) CA
25-30		POORLY GRADED SAND with SILT (SP-SM): light grayish brown, moist, medium dense, medium to coarse-grained sand, trace fine gravel						(3)(3) CA
30-35		trace silt/silt interbeds						(1)(3)
35-40		SILT with SAND (ML): dark brown, moist, hard, low plasticity, fine-grained sand, occasional	104	3				(2)(3)

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 (%)	Plasticity Index (%)	Penetration (mm)	Flow Value (mm)	Other Tests
111-116		SILTY SAND (SM): brown, moist, medium dense, fine to coarse-grained sand	111	16	25	9	66	(3)(5)
116-122		SILT with SAND (ML): dark brown, moist, hard, low plasticity, fine-grained sand						(1)(3)
122-131		very hard						(1)(3)
131-160		LEAN CLAY (CL): dark brown, moist, very hard, medium plasticity, trace fine-grained sand	118	7				(3)(3)
160-177		CLAYEY SAND (SC): brown, moist, very dense, fine to coarse-grained sand, trace fine gravel, trace rock pieces						(3)
177-180		POORLY GRADED SAND with SILT (SP-SM): brown, moist, very dense, fine to coarse-grained sand						(3)
180-197		trace coarse gravel, trace rock pieces						7 (3) CA
197-207		brownish gray						CA
207-250		SILTY GRAVEL with SAND (SM): light clay gray, moist, very dense, fine to coarse-grained sand, fine to coarse gravel						

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



	Cantilever Walls	Restrained Walls
SELECT BACKFILL	$P = P_a + P_p = 35 H_3 + 0.3q$	$P = P_a + P_p = 55 H_3 + 0.5q$
$P_p = 350 H_2 \leq 4,000$ psf $\mu = 0.4$	$F_e = A H_1^2$ $A = 5.5, 10, 15.5$ for seismic events with 100-, 500-, and 2,400-year return periods, respectively	$F_e = B H_1^2$ $B = 9, 17, 30$ for seismic events with 100-, 500-, and 2,400-year return periods, respectively
INSITU SOIL	$P = P_a + P_p = 40 H_3 + 0.4q$	$P = P_a + P_p = 60 H_3 + 0.5q$
$P_p = 350 H_2 \leq 4,000$ psf $\mu = 0.4$	$F_e = A H_1^2$ $A = 6, 10.5, 17$ for seismic events with 100-, 500-, and 2,400-year return periods, respectively	$F_e = B H_1^2$ $B = 10, 18.5, 35$ for seismic events with 100-, 500-, and 2,400-year return periods, respectively

- Notes:**
- All values of height (H) in feet, pressure (P), and surcharge (q) in pounds per square foot (psf) and force (F) in pounds.
 - P_a , P_p , and P_0 are the passive, active, and at-rest earth pressures, respectively; F_e is the incremental seismic force.
 - P_0 is the incremental surcharge pressure; μ is the allowable friction coefficient applied to dead normal (buoyant) loads. F_e is in addition to the active and at-rest pressures. And can be assumed to have a rectangular distribution. Below groundwater, active and at-rest pressure should be reduced by 50 percent and hydrostatic pressure should be added to active and at-rest pressures. P_p should be reduced by 50 percent below the groundwater.
 - For 2H:1V slopes above the wall, increase the active and at-rest pressures by 50 percent; for 1.5H:1V slope, increase the active and at-rest pressures by 100 percent.
 - Neglect the upper 1 foot for passive pressure unless the surface is contained by a pavement or slab.
 - Peak ground accelerations (PGA) of 0.3, 0.48, and 0.8g were used to calculate F_e for seismic events with 100-, 500-, 2,400-year return periods, respectively, 50 percent of the PGA for cantilever walls and 75 percent of PGA for restrained walls was used.

Figure 10 - LATERAL EARTH PRESSURES

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CORRECTIONS BY: *[Signature]*
CONTRACT NO.:
DATE: November 16, 2017

Depth (feet)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Plasticity Index (%)	Penetration (mm)	Flow Value (mm)	Other Tests
100-105		TRACE ROCK DEBRIS						
105-110		SILTY SAND with GRAVEL (SM): olive, moist, very dense, fine to coarse-grained sand, fine to coarse gravel						
110-116		SILT with SAND (ML): olive gray, moist, very hard, low plasticity, fine-grained sand						
116-125		SILTY SAND with GRAVEL (SM): olive gray, wet, very dense, fine to coarse-grained sand, trace rock pieces	110	18				
125-130		POORLY GRADED SAND (SP): gray, wet, very dense, fine to coarse-grained sand, trace rock pieces						
130-140		SILTY SAND (SM): gray, wet, very dense, fine to coarse-grained sand, trace rock pieces						
140-160		Station of boring at 101 feet. Groundwater encountered between 85 and 88 feet during drilling. Boring backfilled with cementitious grout and cuttings below and above depth of 80 feet, respectively. Surface patched with cast patch repair.						

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

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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

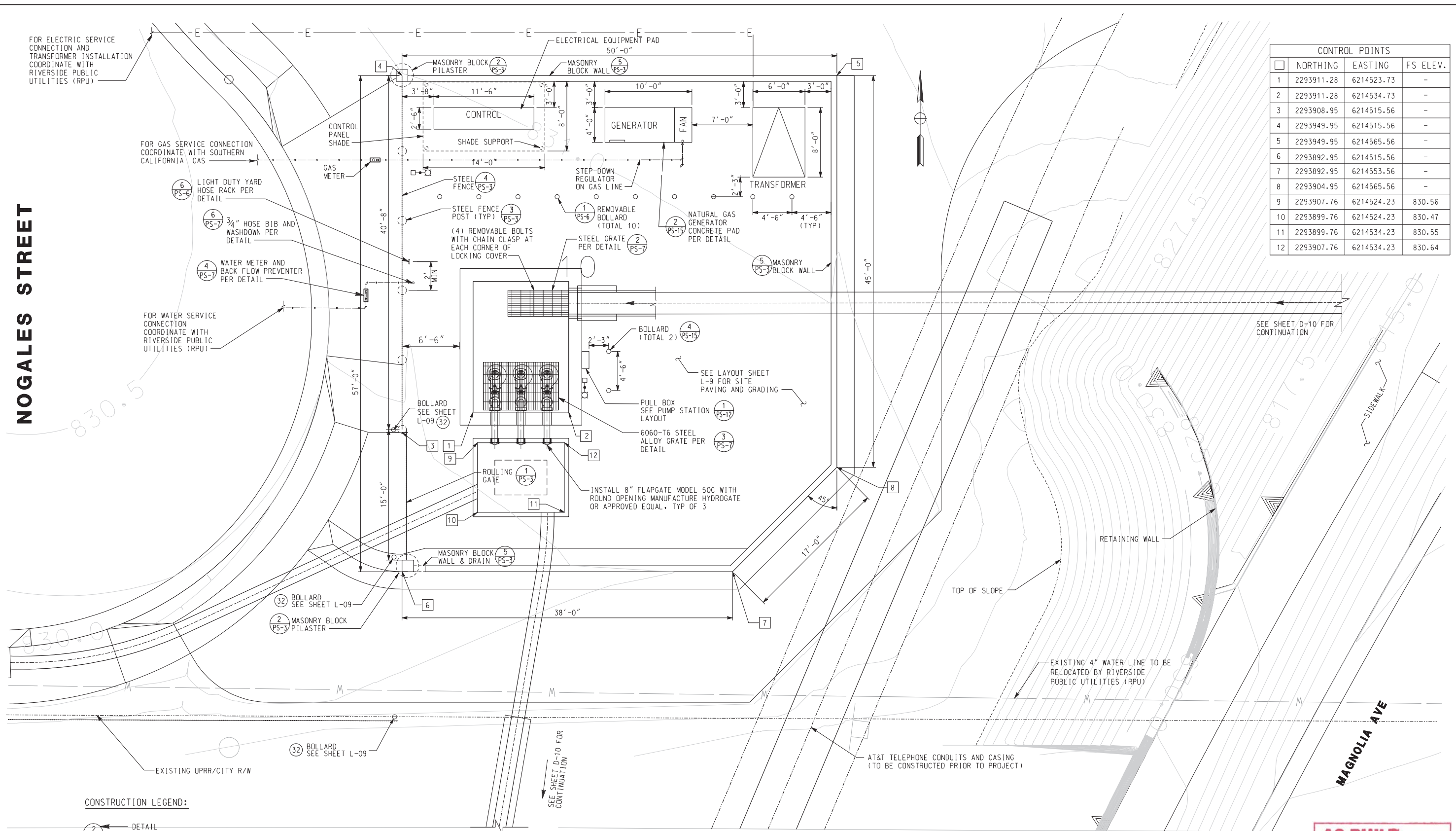
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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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.
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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*

10/15/12, 01:32 PM
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 DATE: 9/14/09

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 WILLIAM F. YOUNG
 No. C 35715
 Exp. 9-30-11
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CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION LAYOUT PS-2
 HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

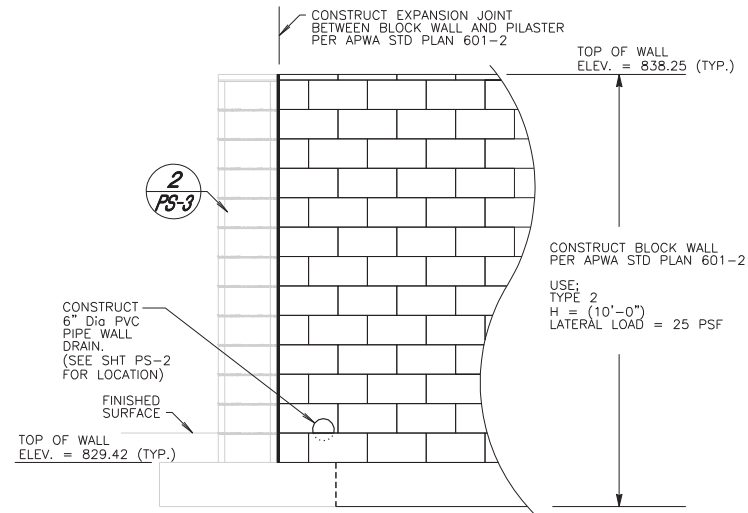
ACCT. NO. W.O. NO.
D-830
 SHEET 90 OF 189
 FILE NO. 201546ps02.dgn

CONSTRUCTION NOTES:

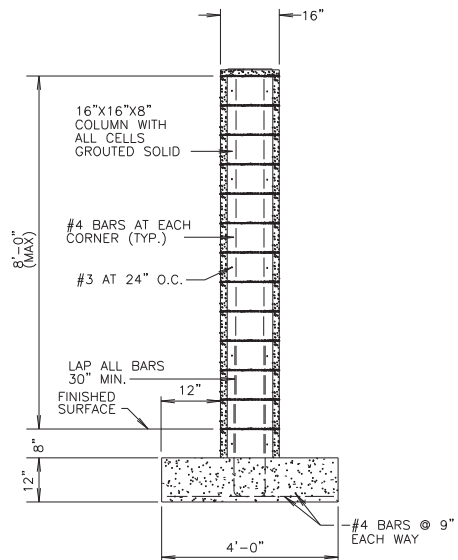
- 11 INSTALL 11 GAGE PERFORATED STEEL PANEL BETWEEN RAIL & PICKET.
- 12 1 3/4" SQUARE STEEL TUBE, 11 GA.

CONSTRUCTION LEGEND:

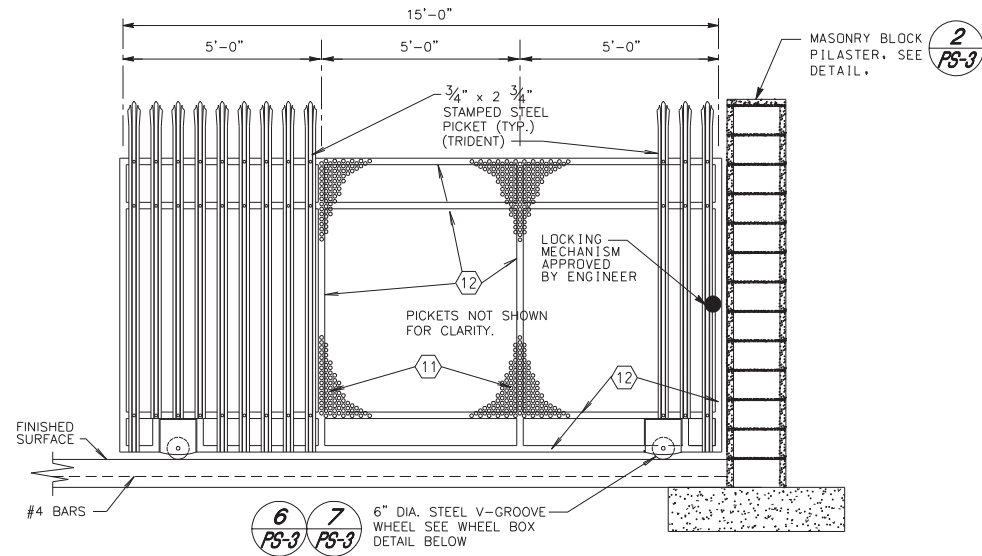
- 2 - DETAIL
- 2 - SHEET IDENTIFICATION NO.



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

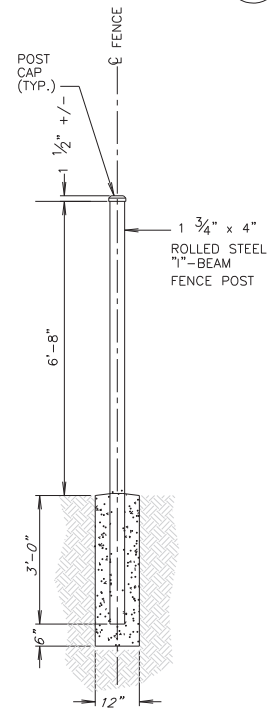


2 MASONRY BLOCK PILASTER
SCALE: 1/2" = 1'-0"

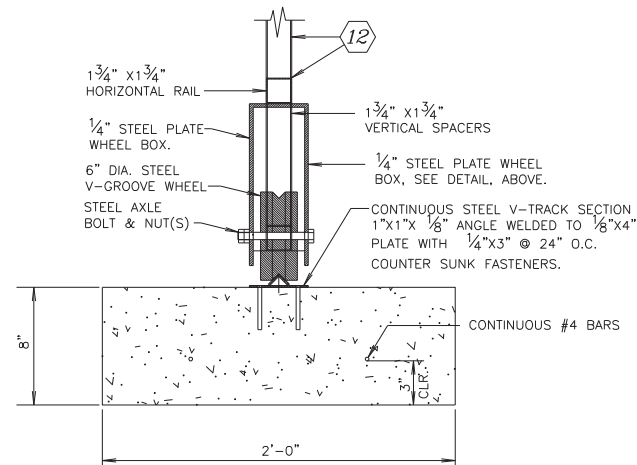


1 ROLLING GATE DETAIL
SCALE: 1/2" = 1'-0"

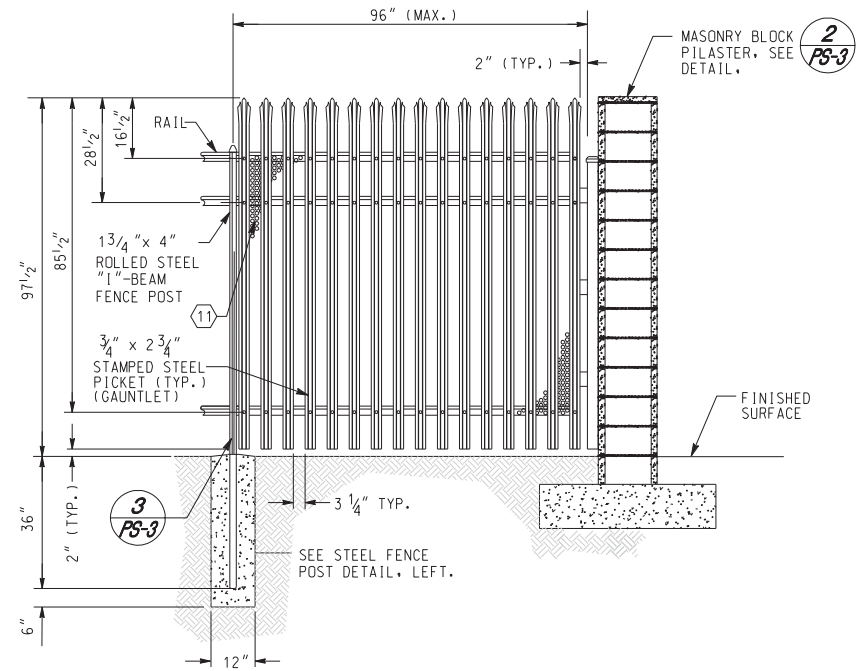
NOTE: ROLLING GATE DETAIL SHOWN IS FOR OVERALL DIMENSIONS AND APPEARANCE. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ALL DIMENSIONS, MATERIALS AND HARDWARE FOR APPROVAL BY THE ENGINEER. ALL METAL FENCING HEREON SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION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



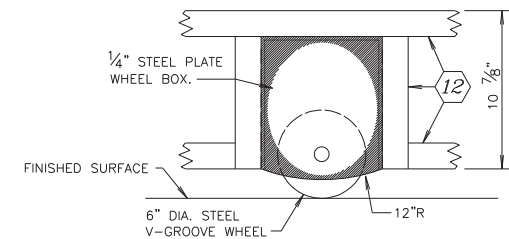
3 TYPICAL STEEL FENCE POST DETAIL
SCALE: 1/2" = 1'-0"



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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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

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. _____

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

HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE

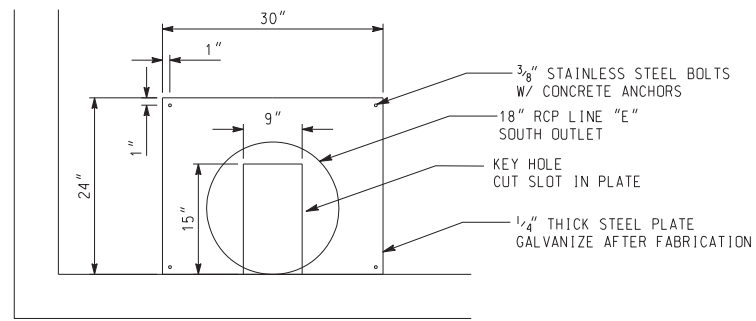
NOTE:

CONTRACTOR TO VERIFY THE LOCATION, RELOCATION, ABANDONMENT, AND/OR TEMPORARY SUPPORT OF ALL UTILITIES AFFECTED BY THE CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE UTILITY COMPANIES,

AGENCIES, AND/OR AUTHORITIES OF ALL PLANNED WORK IN THE AREA CONTAINING UTILITIES. THE CONTRACTOR SHALL NOTIFY ONE-CALL LOCATORS 48 HOURS PRIOR TO PLANNED WORK (1-800-424-5555). CONTRACTOR IS PLACED ON NOTICE THAT FIBER OPTIC, COMMUNICATIONS, CONTROL SYSTEMS AND OTHER TYPES OF CABLES MAY BE BURIED ON RAILROAD PROPERTY. BEFORE BEGINNING WORK, CONTRACTOR SHALL CONTACT RAILROAD'S COMMUNICATION NETWORK CONTROL CENTER AT 1-800-533-2691.

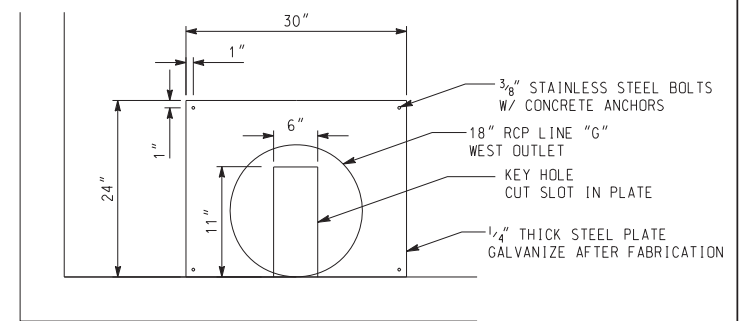
SEE DRAWING SHEET UT-9 FOR EXISTING UTILITY PLAN.

NO FIELD CHANGES WILL BE PERMITTED WITHOUT DIRECT AUTHORIZATION FROM UPRR ENGINEERING DEPARTMENT AND THE CITY ENGINEER.



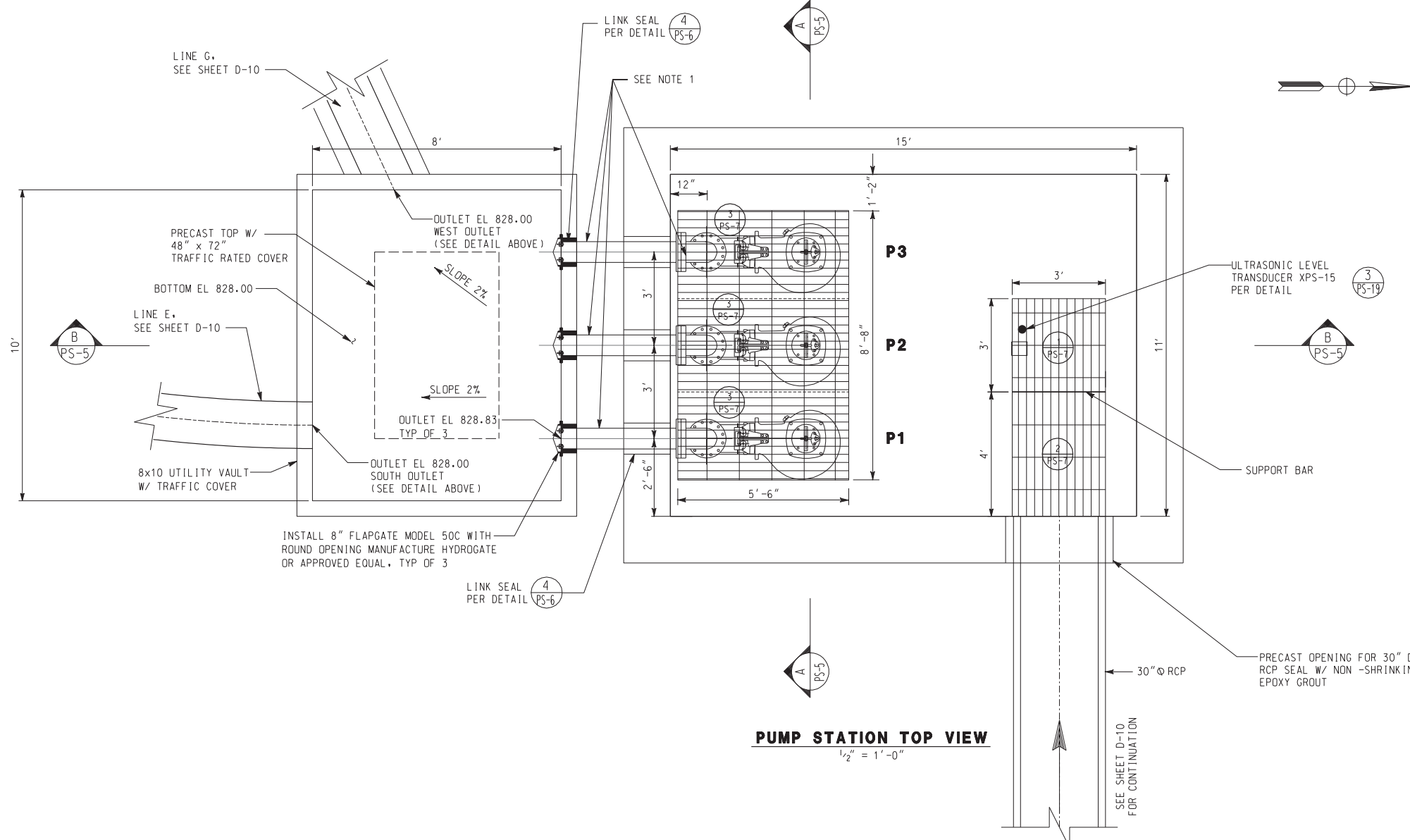
SOUTH OUTLET

NTS



WEST OUTLET

NTS



PUMP STATION TOP VIEW

1/2" = 1'-0"

PUMP SCHEDULE					
NAME	SYMBOL	GPM	TDH	MOTOR	
				HP	RPM
P1	01-PMP-110	1200	27	25	1150
P2	01-PMP-120	1200	27	25	1150
P3	01-PMP-130	1200	27	25	1150

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

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

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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 35715
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

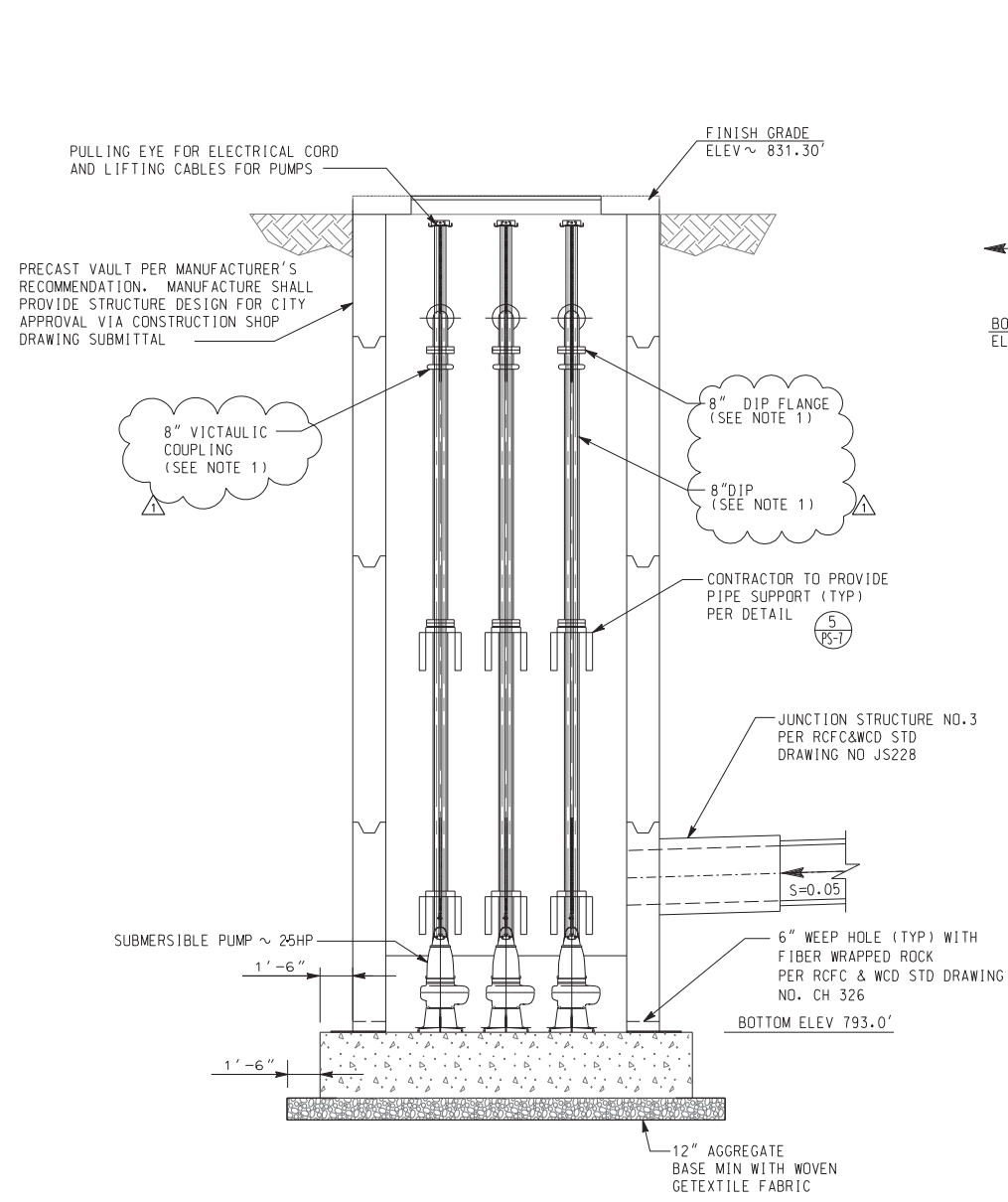
REVISIONS	DATE
REVISION-MODIFY OPENING SIZE TO OUTLET PLATE	12/08/09
ADDENDUM-ADD NOTE FOR CEMENT LINING ON DIP	10/21/09

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION LAYOUT PS-4
ACCT. NO. _____
W.O. NO. _____
D-830
SHEET 92 OF 189
FILE NO. _____

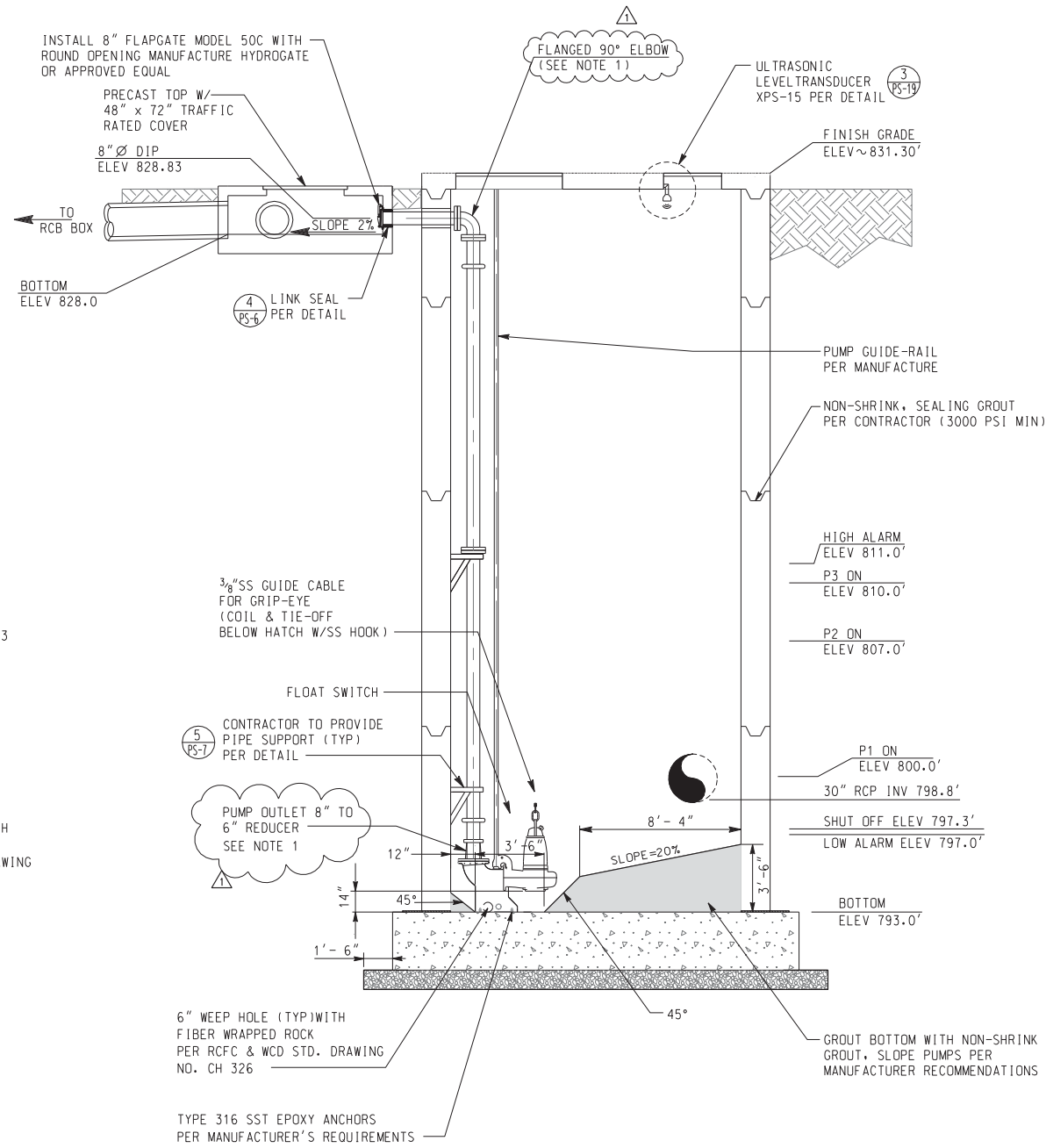
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CONSTRUCTION LEGEND:

- 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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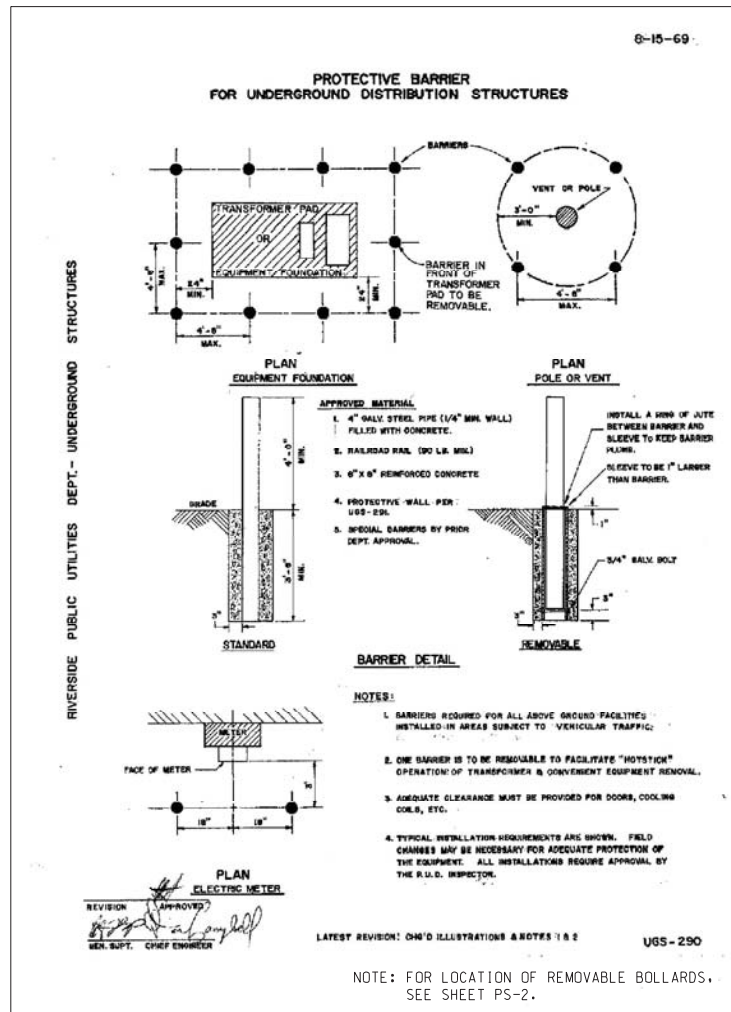
HDR | ONE COMPANY Many Solutions
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SUITE 100
RIVERSIDE, CA 92501-2110
DATE 9/14/09

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

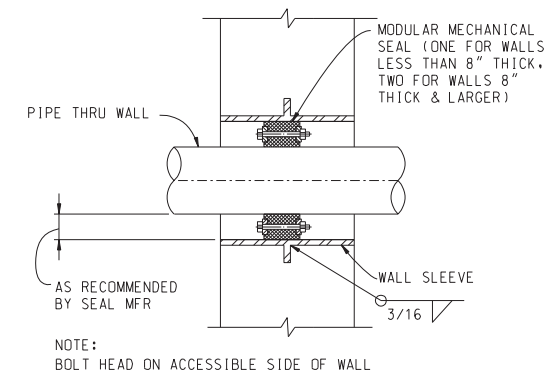
ADDENDUM-ADD NOTE CEMENT LINING ON DIP	WFY	10/2/09
REVISIONS	APPR.	DATE
DESIGNED BY _____	DRAWN BY _____	CHECKED BY <u>AS SHOWN</u>

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION SECTIONS PS-5
ACCT. NO. W.O. NO. **D-830**
SHEET **93** OF **189**
FILE NO. 201546ps05.dgn

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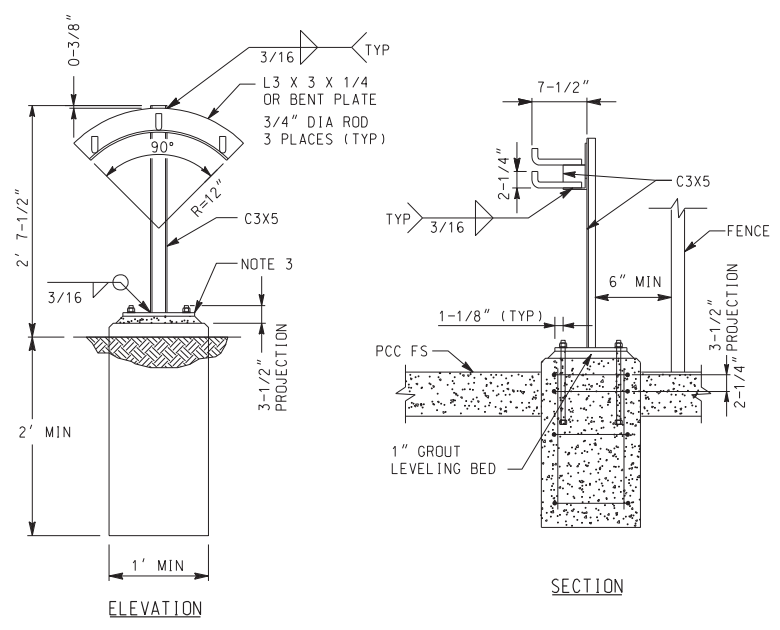
1 REMOVABLE BOLLARD DETAIL
PS-6 NTS



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



- NOTES:**
- HOT DIP GALVANIZE AFTER FABRICATION.
 - 1/2" X 8" X 8" STEEL PLATE W/HOLES FOR 3/4" DIA ANCHOR RODS.
 - PROVIDE (4) 3/4" DIA X 1'-2" SST 316 HEADED ANCHOR RODS.

6 LIGHT DUTY YARD HOSE RACK
PS-6 NTS

AS BUILT

CORRECTIONS BY [Signature]

CONTRACT NO. [Blank]

DATE November 16, 2012

10/15/12, 01:32 PM

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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

MAGNOLIA AVENUE UNDERPASS

PUMP STATION DETAILS PS-6

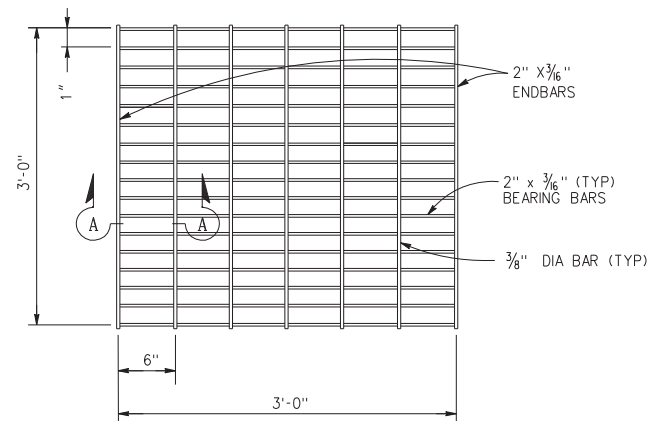
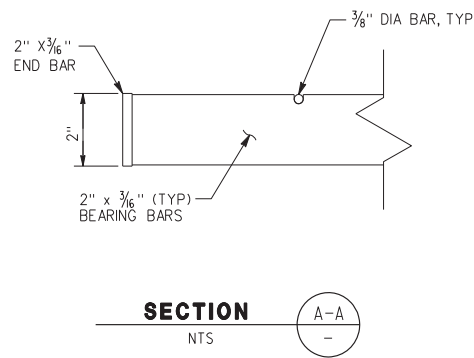
HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

ACCT. NO. W.O. NO.

D-830

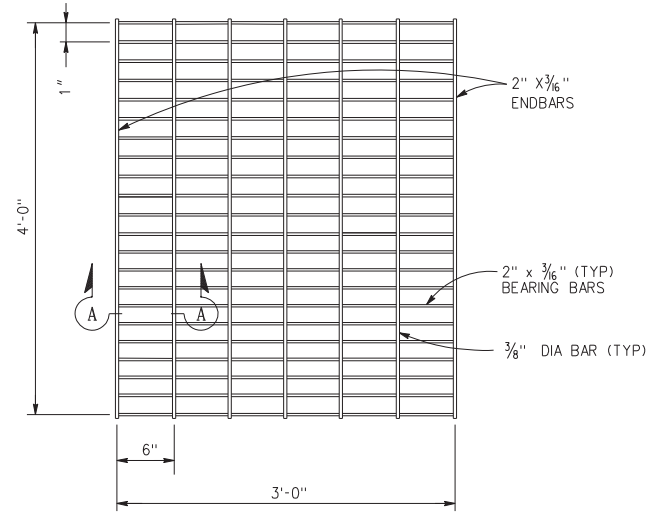
SHEET 94 of 189

FILE NO.



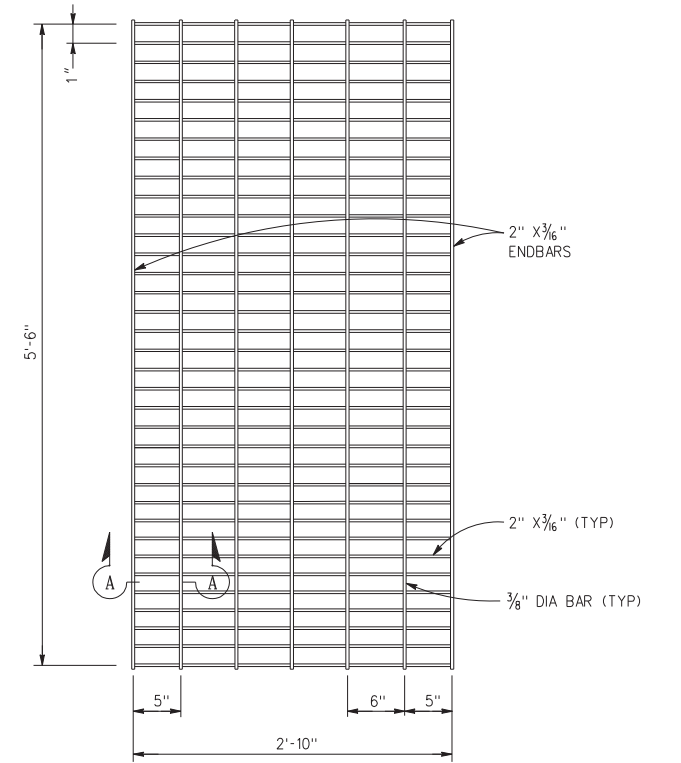
NOTES:
ALL PARTS HOT-DIPPED GALVANIZED
AFTER FABRICATION & ASTM A-36 STEEL

STEEL GRATE 1
NTS

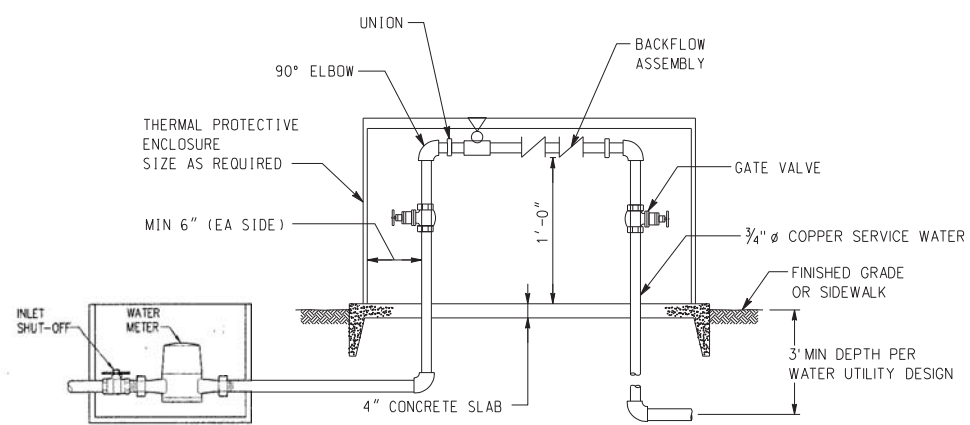


NOTES:
ALL PARTS HOT-DIPPED GALVANIZED
AFTER FABRICATION & ASTM A-36 STEEL

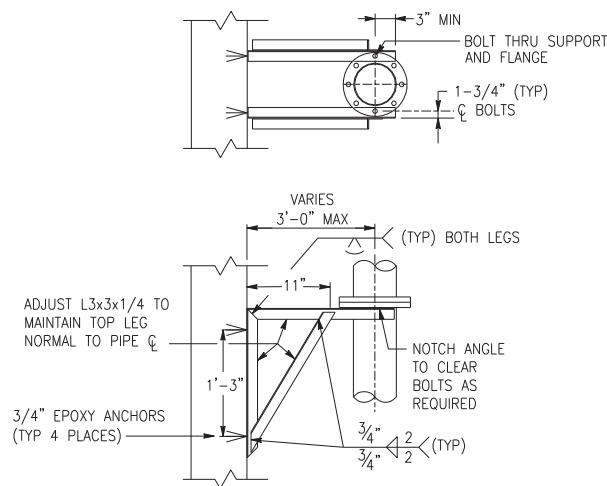
STEEL GRATE 2
NTS



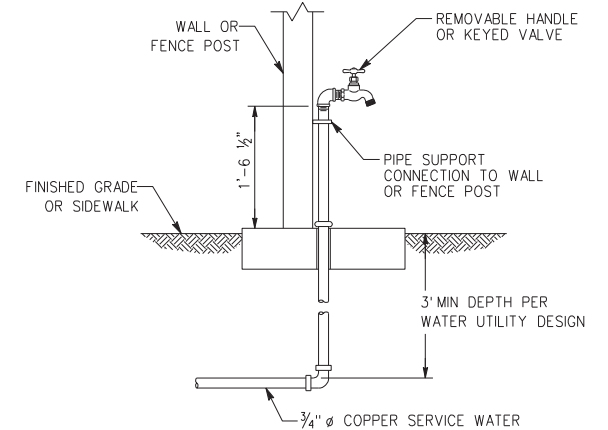
STEEL GRATE 3
NTS



**WATER METER AND
BACKFLOW PREVENTER 4**
NTS



PIPE SUPPORT 5
NTS



HOSE BIB & WASHDOWN 6
NTS

AS BUILT

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

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

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

MARK	REVISIONS	APPR.	DATE

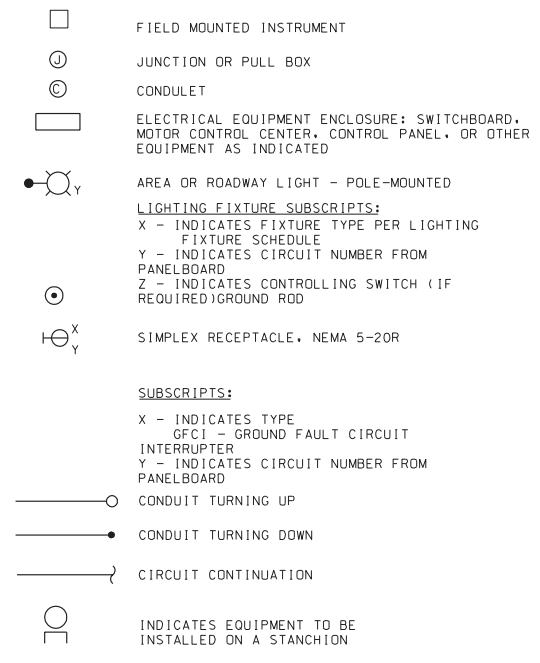
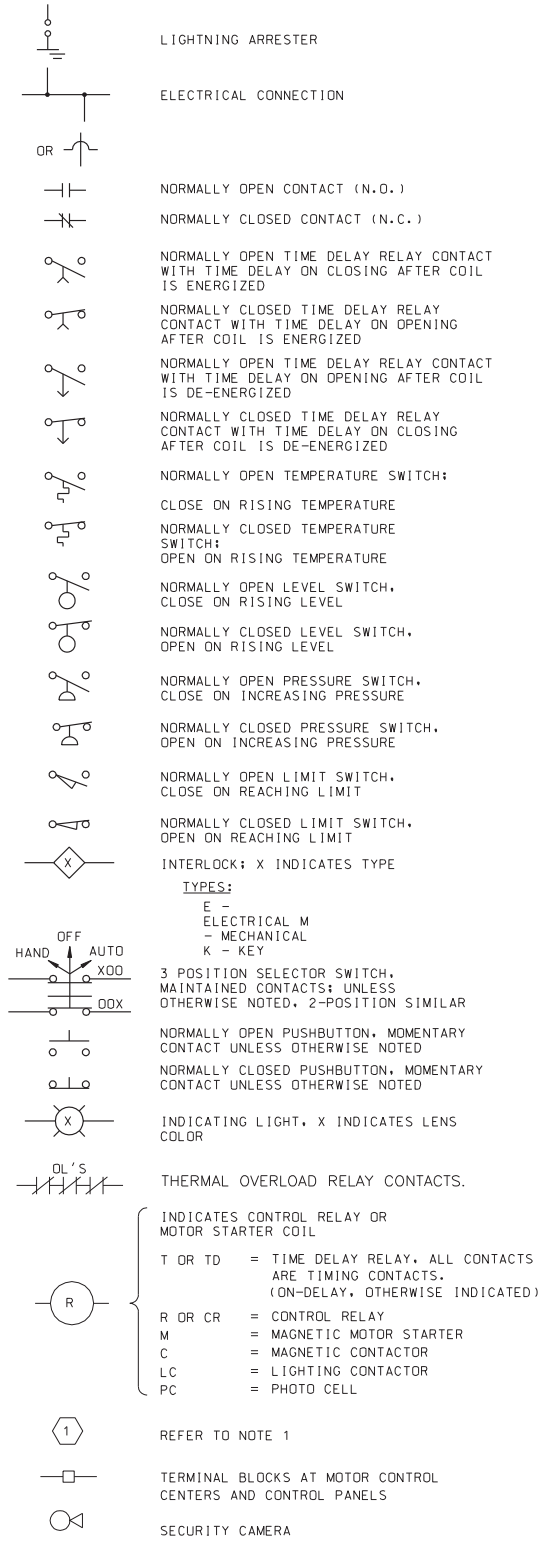
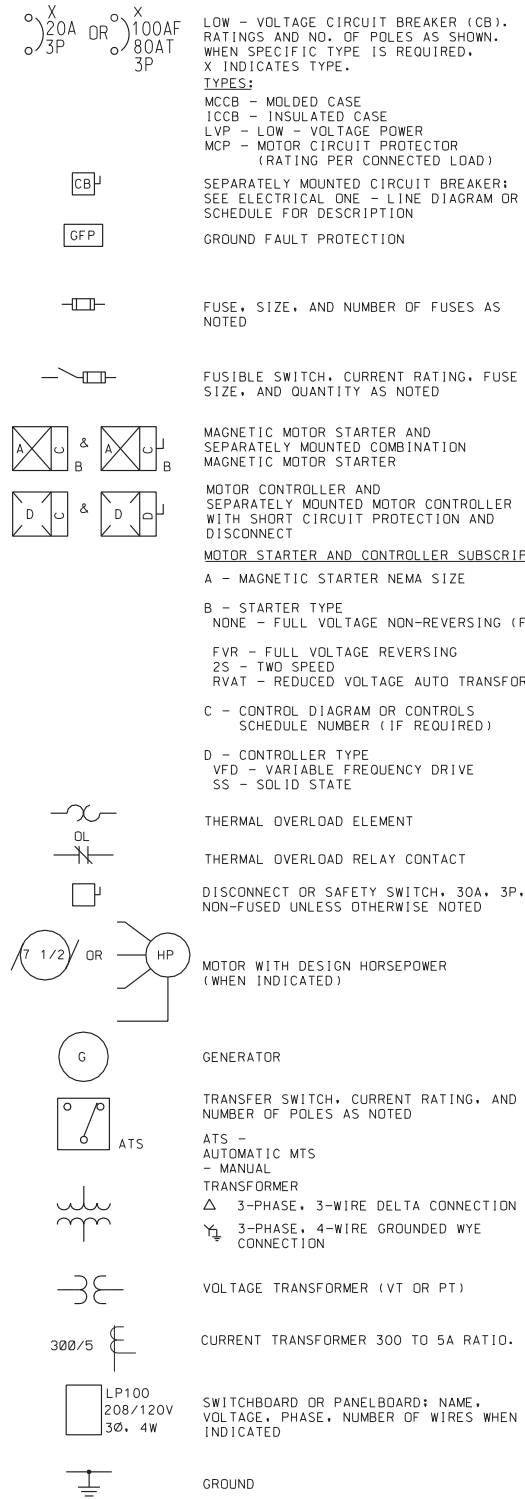
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION DETAILS PS-7

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

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

HORIZ. SCALE: AS SHOWN VERT. SCALE: AS SHOWN

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.

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

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 Many Solutions
 HDR ENGINEERING, INC.
 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: _____

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
ELECTRICAL SYMBOLS & LEGEND PS-8
 ACCT. NO. W.O. NO.
 D-830
 SHEET 96 OF 189
 FILE NO. 201546uo01.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	L/R	LOCAL/REMOTE	STRUT	UNISTRUT
AT	AMPS-TRIP	LO	LOW	SUCT	SUCTION
ATS	AUTOMATIC TRANSFER SWITCH	LOR	LOCAL-OFF-REMOTE SWITCH	SWI	SWITCH
AUTO	AUTOMATIC	LOS	LOCK-OUT STOP PUSH BUTTON	SWBD	SWITCHBOARD
ANT	ANTENNA	LP	LIGHTING PANEL	TB	TERMINAL BLOCK
AWG	AMERICAN WIRE GAUGE	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	LVL	LEVEL	TEL	TELEMETRY
BSC	BARE STRANDED COPPER	M	MOTOR / MAGMETER	TELCO	TELEPHONE UTILITY
BYP	BYPASS	MA	MILLIAMPERE	TERM	TERMINAL
C	CONDUIT	MAX	MAXIMUM	THWN	THERMAL PLASTIC, HEAT RESISTANT, WEATHERPROOF, NYLON COATED
CB	CIRCUIT BREAKER	MBK	MAIN BREAKER	TK, TNK	TANK
CKT	CIRCUIT	MCC	MOTOR CONTROL CENTER	TMR	TIMER
CMD	COMMAND	MCM	THOUSAND CIRCULAR MILS	TS	TEMPERATURE SWITCH
CNTRL	CONTROLLER	MCP	MAIN CONTROL PANEL	TSP	TWISTED SHIELDED PAIR
COM	COMMON	MCP	MOTOR CIRCUIT PROTECTION	TYP	TYPICAL
COMM	COMMUNICATION	MD	MOTION DETECTION	UG	UNDERGROUND
CP	CONTROL PANEL	MIN	MINIMUM	UGS	SCE UNDERGROUND STRUCTURES STANDARD DETAILS
CPT	CONTROL POWER TRANSFORMER	MS	MAGNETIC STARTER	UL	UNDERWRITERS LABORATORY
CR	CONTROL RELAY	MSH	MOTION, SWITCH, HIGH	UPS	UNINTERRUPTIBLE POWER SUPPLY
CT	CURRENT TRANSFORMER	N	NEUTRAL, NEW	V	VOLT
CTRL	CONTROL	NC	NORMALLY CLOSED	VA	VOLTAMPERES
DI	DISCRETE INPUT	NEC	NATIONAL ELECTRIC CODE	VAC	VOLTS AC
DISC	DISCONNECT	NO	NORMALLY OPEN	VDC	VOLTS DC
DISCH	DISCHARGE	NTS	NOT TO SCALE	VFD	VARIABLE FREQUENCY DRIVE
DO	DISCRETE OUTPUT	OPER	OPERATIONS	W	WIRE/WATTS
DS	DOOR SWITCH	OUT	OUTPUT	WP	WEATHERPROOF
DWG	DRAWING	P	POLE	WW	WETWELL
E	EXISTING	PB	PUSHBUTTON	XDCR	TRANSDUCER
EGEN	EMERGENCY GENERATOR	PB	PULL BOX, PUSH BUTTON	XFMR	TRANSFORMER
EL	ELECTRICAL	PF	POWER FACTOR	XMTR	TRANSMITTER
EP	EXPLOSION PROOF	PFR	POWER FAIL RELAY	2W	TWO WIRE
ESR	SCE ELECTRICAL SERVICE REQUIREMENTS	PH, Ø	PHASE	3W	THREE WIRE
ETM	ELAPSED TIMER METER	PLC	PROGRAMMABLE LOGIC CONTROLLER	4W	FOUR WIRE
EXIST	EXISTING	PM	POWER MONITOR		
FBK	FEEDER BREAKER	PMP	PUMP		
FLA	FULL LOAD AMPS	PNL	PANEL		
FT	FEET	PNLBD	PANELBOARD		
FU	FUSE	POS	POSITION		
FUT	FUTURE	PRESS	PRESSURE		
FVNR	FULL VOLTAGE NON-REVERSING	PS	POWER SUPPLY		
FVR	FULL VOLTAGE REVERSING	PT	POTENTIAL TRANSFORMER		
G	GROUND	PVC	POLYVINYL CHLORIDE (DUCT)		
GF	GROUND FAULT	R	RELAY		
GFI	GROUND FAULT INTERRUPTER	RECEPT	RECEPTACLE		
GFT	GROUND FAULT TRIP	REQ'D	REQUIRED		
GIW	GROUND FAULT INTERRUPTER, GROUND	RTU	TELEMETRY REMOTE TERMINAL UNITS		
GND, GRND	GROUND	S	SOLENOID		
GPM	GALLONS PER MINUTE	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION		
HI	HIGH	SCR	SCREEN		
HOA	HAND-OFF-AUTOMATIC	SD	STORM DRAIN		
HP	HORSEPOWER	SECT	SECTION		
HZ	HERTZ	SG	SIGNAL GROUND		
I	INSTANTANEOUS	SHLD	SHIELDED		
INST	INSTANTANEOUS (TD CONTACT)	SP	SPARE		
IST	INSTANTANEOUS BREAKER TRIP				

GENERAL NOTES:

1. THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.
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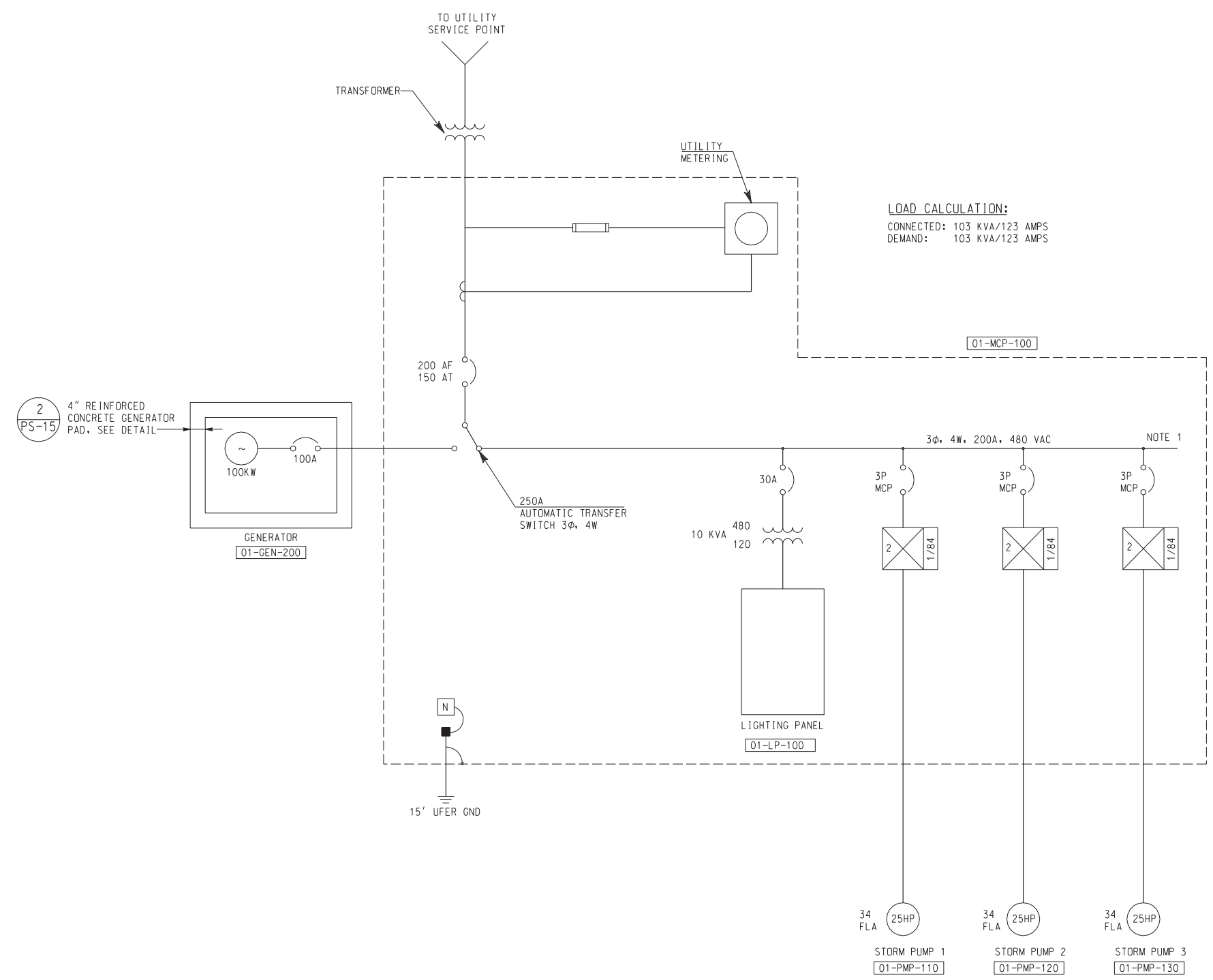
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CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: *November 16, 2012*

			CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS		ACCT. NO. _____ W.O. NO. _____
			ABBREVIATIONS PS-9		SHEET 97 of 189
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____			HORIZ. SCALE: NONE VERT. SCALE: NONE		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



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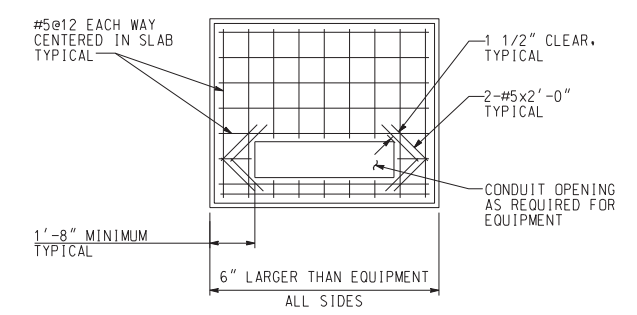
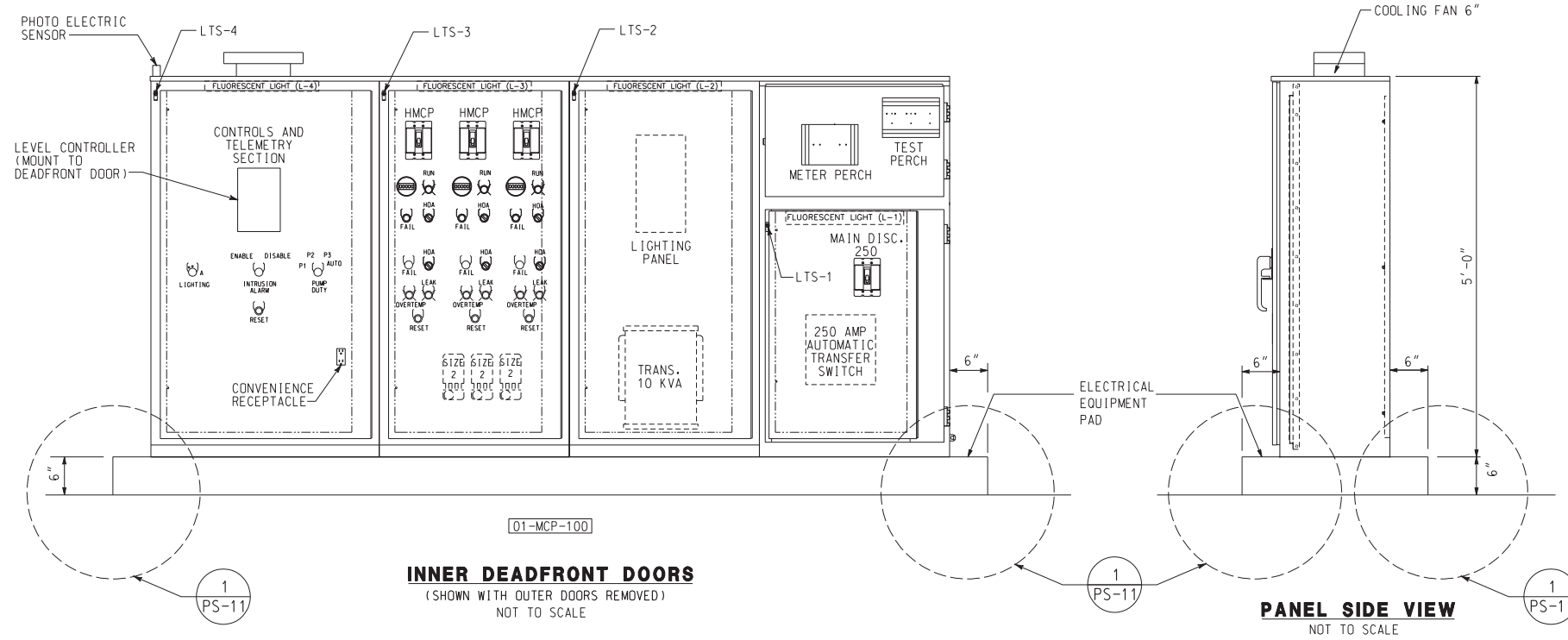
HDR | ONE COMPANY
Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

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

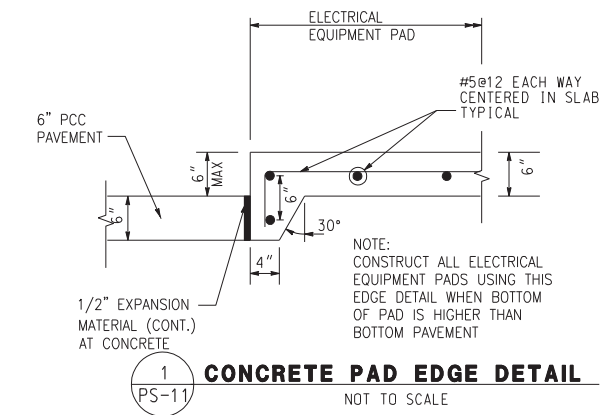
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DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____	

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ELECTRICAL SINGLE LINE PS-10
HORIZ. SCALE: NONE VERT. SCALE: NONE

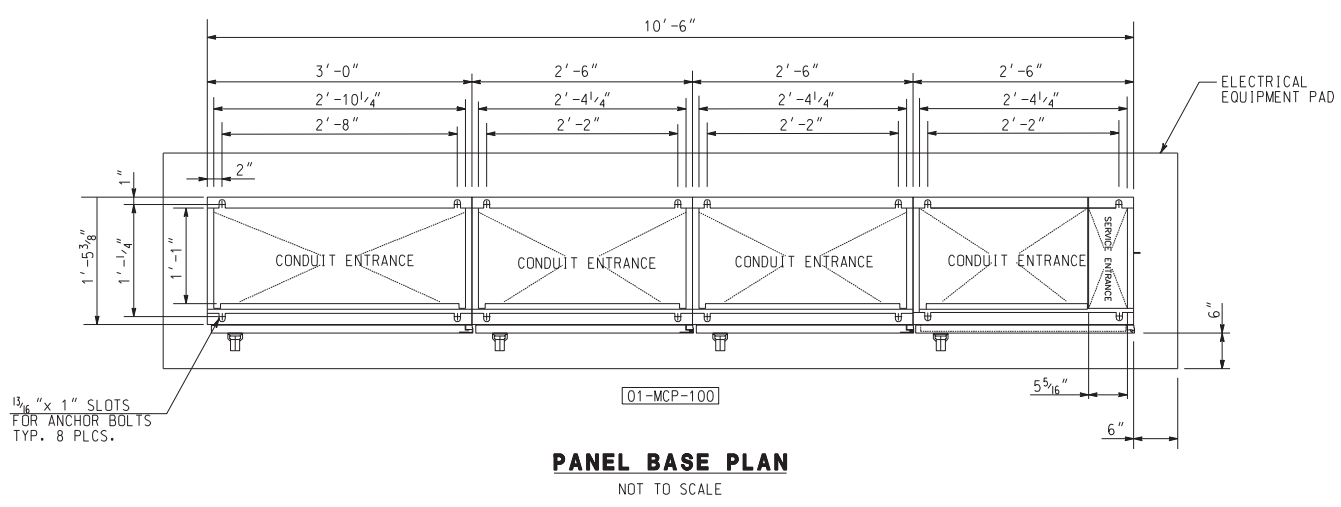
ACCT. NO. W.O. NO. **D-830**
SHEET **98** OF **189**
FILE NO. _____



ELECTRICAL EQUIPMENT PAD
NOT TO SCALE



CONCRETE PAD EDGE DETAIL
NOT TO SCALE



PANEL BASE PLAN
NOT TO SCALE

ENCLOSURE CONSTRUCTION NOTES

1. EXTERIOR 12 GA. H.D. STAINLESS STEEL AND INTERIOR 14 GA. COLD ROLLED STEEL ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED. CONSTRUCTION SHALL BE NEMA 3R, RAIN TIGHT AND DUST TIGHT.
2. ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
3. NUTS, BOLTS & SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE, CAST IN FOOTING.
4. PLASTIC NAMEPLATES SHALL BE PROVIDED FOR ALL COMPONENTS.
5. CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
6. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
7. ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
8. COLOR TO BE: SEE SPECIFICATIONS.

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

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RIVERSIDE, CA 92501-2110
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REGISTERED PROFESSIONAL ENGINEER
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No. 17995
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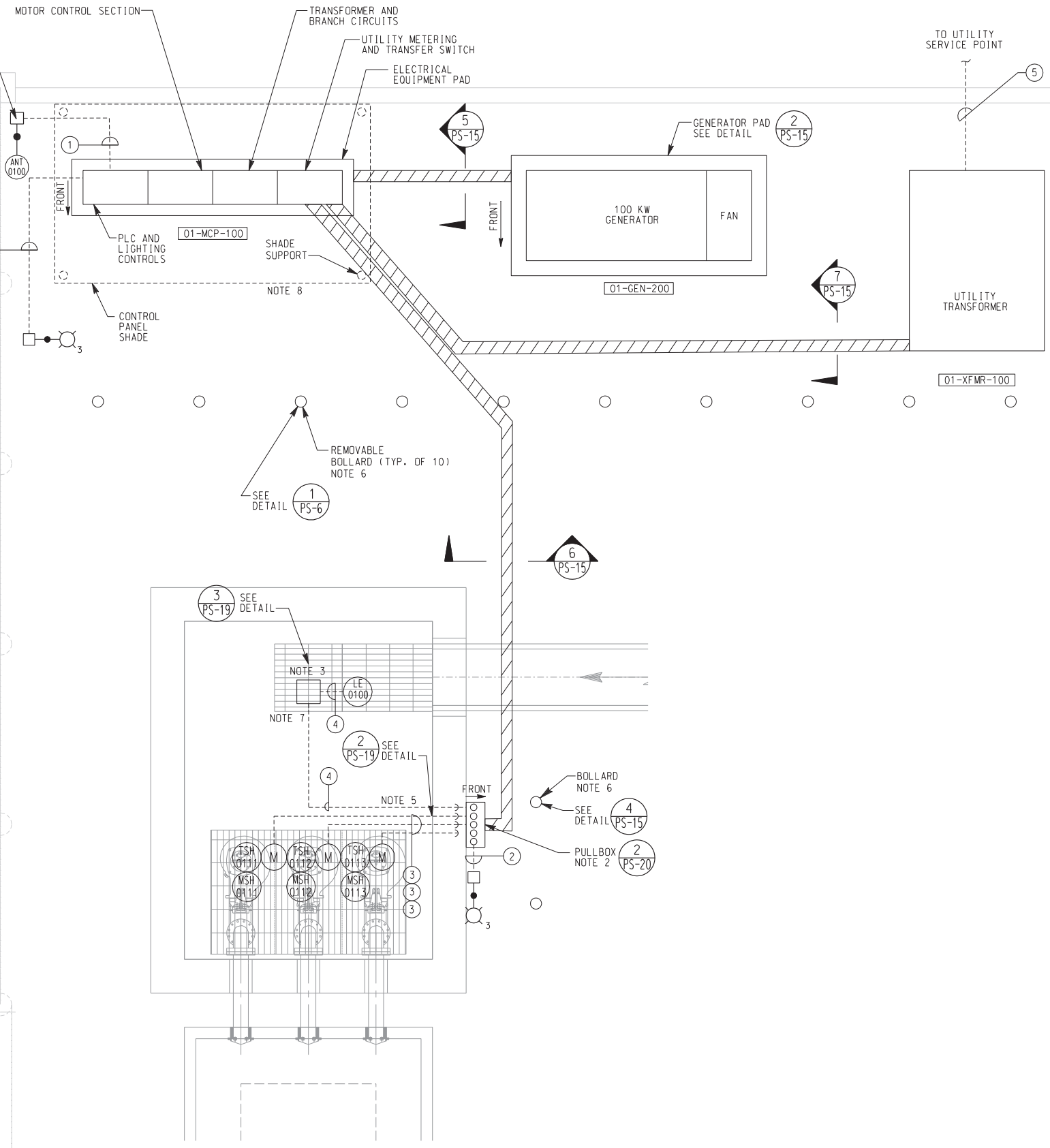
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
CONTROL PANEL ELEVATION PS-11

ACCT. NO. W.O. NO.
D-830
SHEET 99 OF 189
FILE NO. 201546ua04.dgn

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NOGALES STREET



PUMP STATION SITE - LAYOUT
NTS

- 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

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DATE 9/14/09

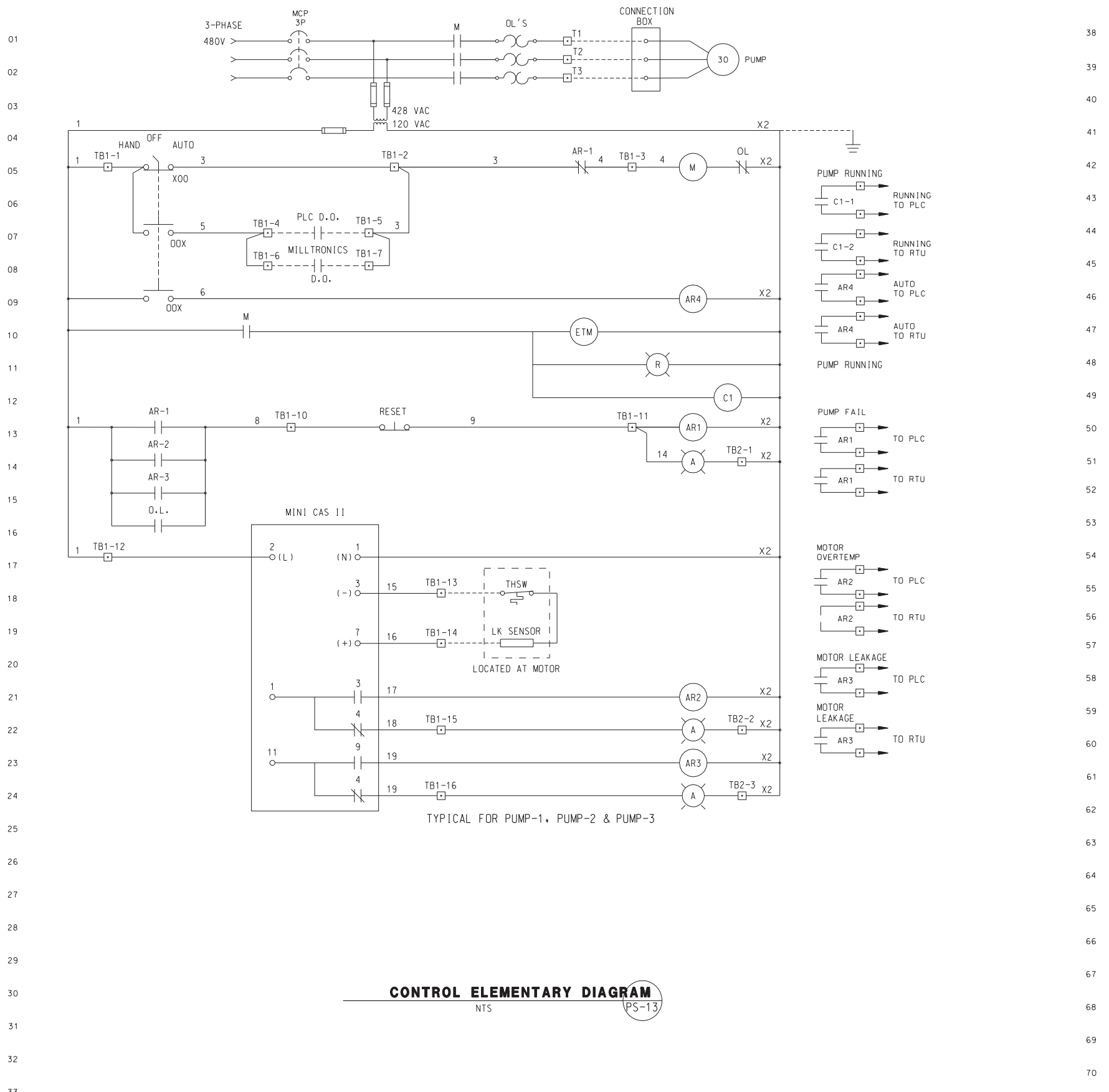
REGISTERED PROFESSIONAL ENGINEER
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No. 17995
Exp. 12-31-10
ELECTRICAL
STATE OF CALIFORNIA

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CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
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



CONTROL ELEMENTARY DIAGRAM
NTS PS-13

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CONTRACT NO. _____
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DATE: 9/14/09

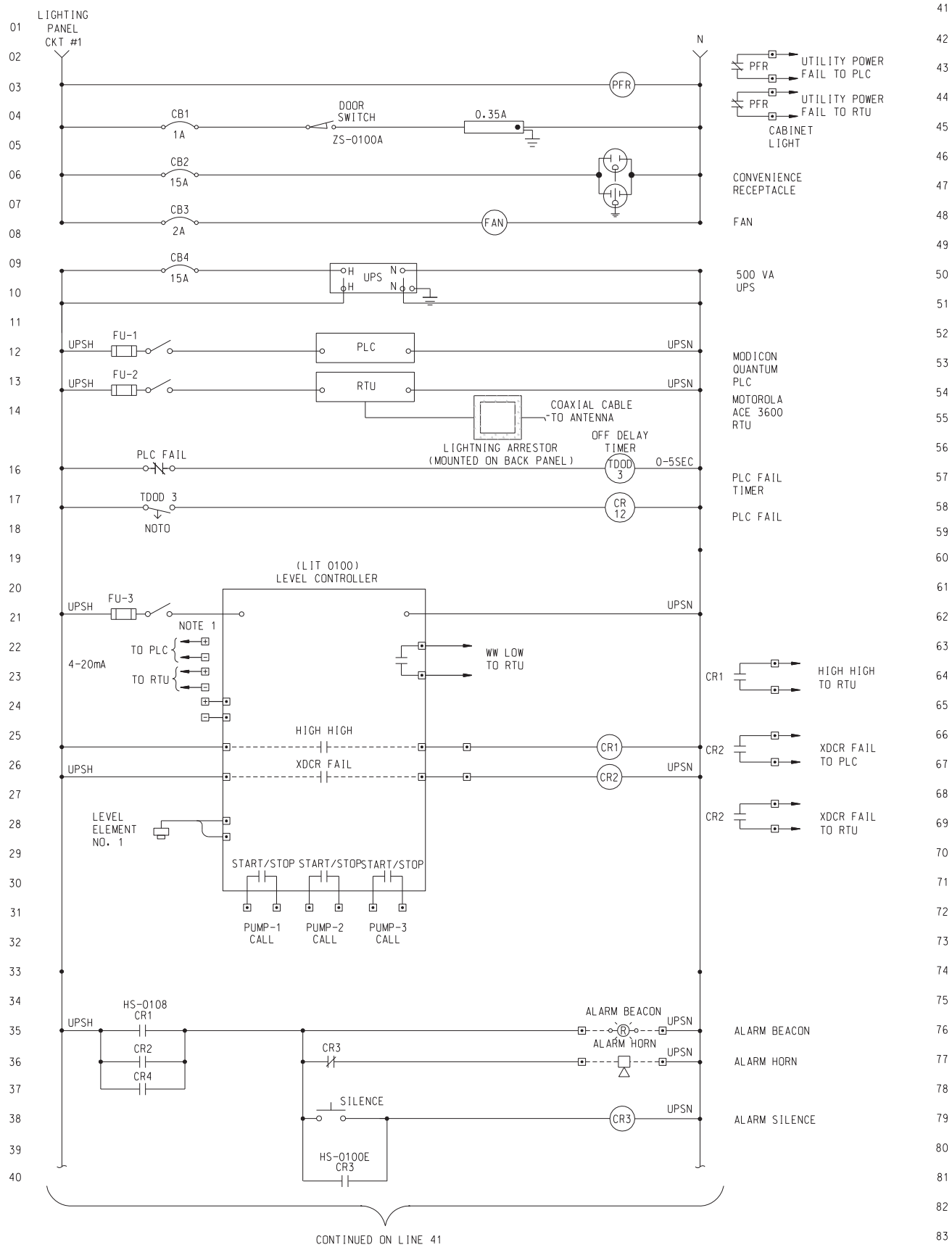
REGISTERED PROFESSIONAL ENGINEER
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Exp. 12-31-10
ELECTRICAL
STATE OF CALIFORNIA

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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

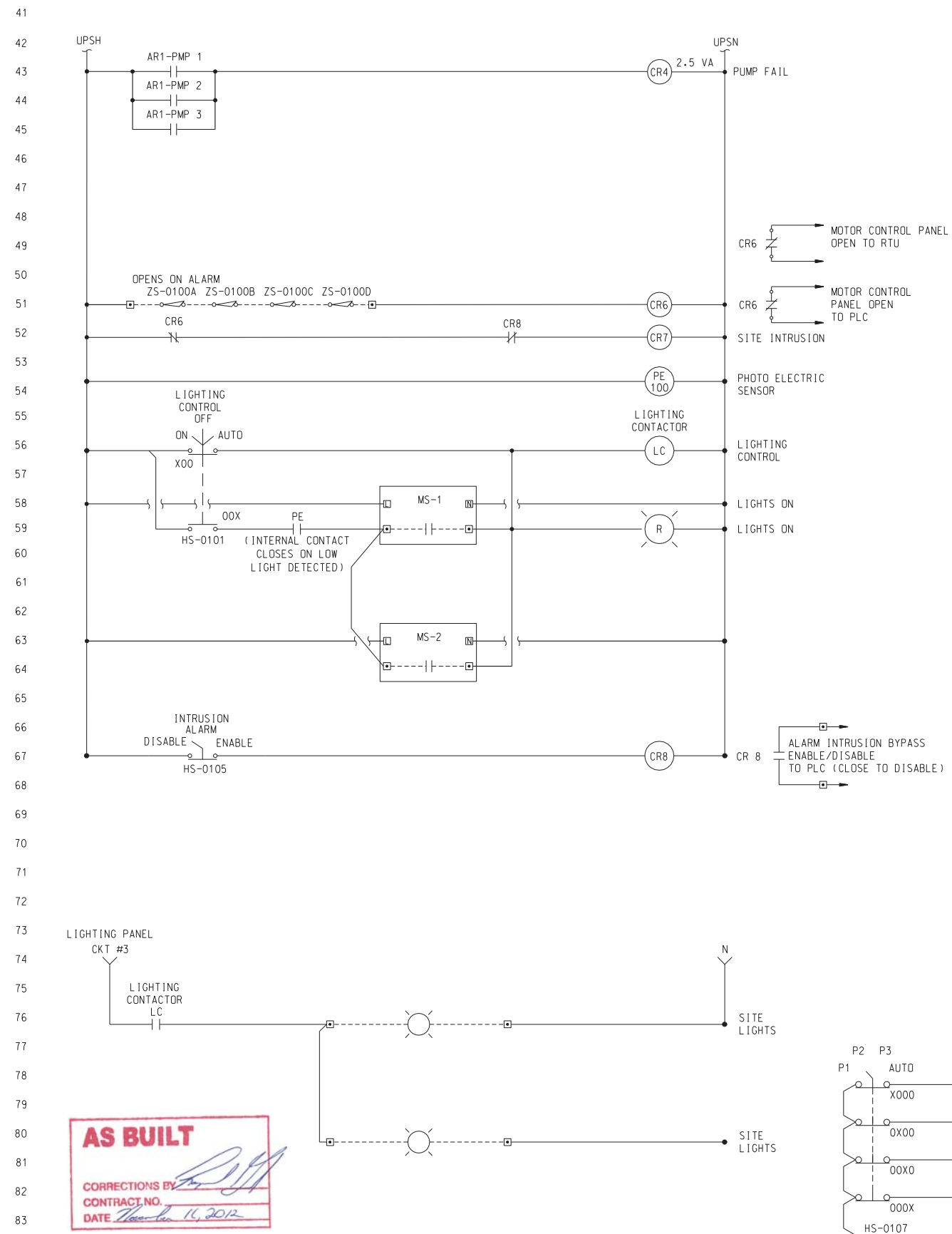
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WETWELL LEVEL AND LIGHTING CONTROL PANEL 1
PS-14

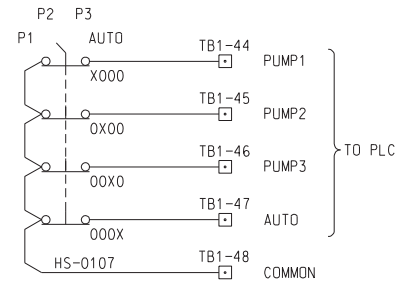
NOTE:
1. PROVIDE 120 VAC EXTERNALLY POWERED LOOP ISOLATORS EACH WITH ONE 4-20 mA INPUTS AND TWO 4-20 mA OUTPUTS.

CONTINUED ON LINE 41



WETWELL LEVEL AND LIGHTING CONTROL PANEL (CONT)

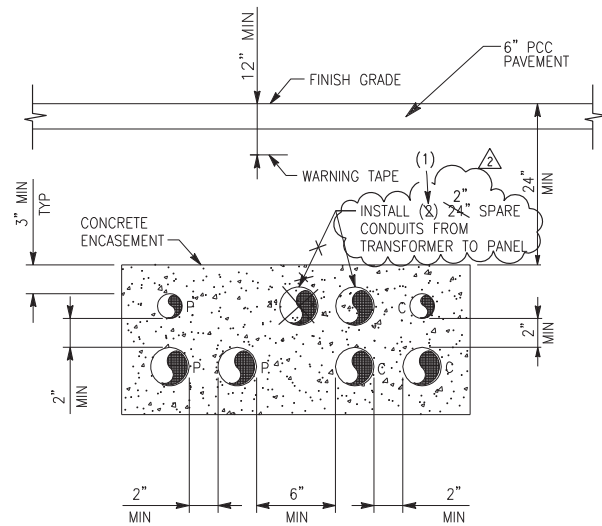
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CORRECTIONS BY: [Signature]
CONTRACT NO. 17995
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<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE 9/14/09</p>		REVISION 2 CHANGES PER R1048 REVISION 1 CHANGES PER R1049	10/01/10 10/27/10	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS	ACCT. NO. W.O. NO. D-830
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____		ELECTRICAL SCHEMATICS II PS-14	SHEET 102 of 189

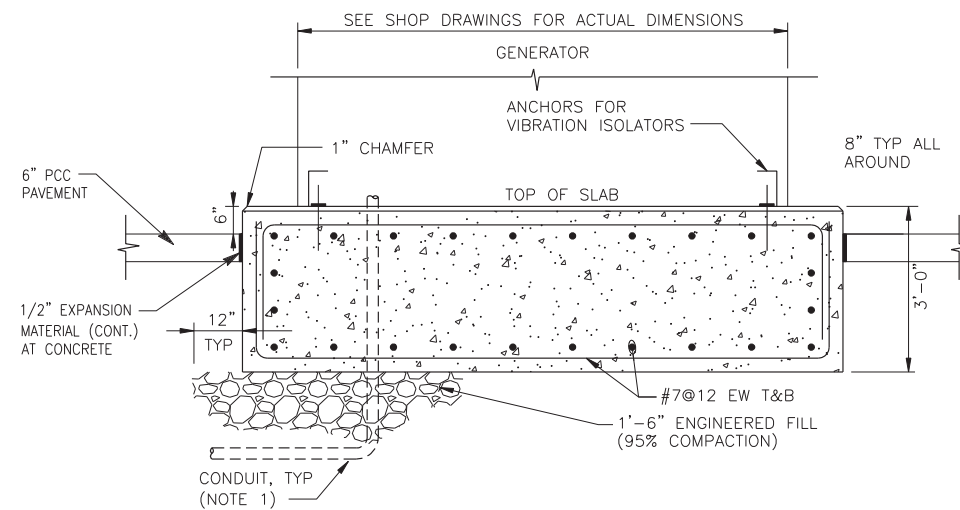
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NOTE:

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.

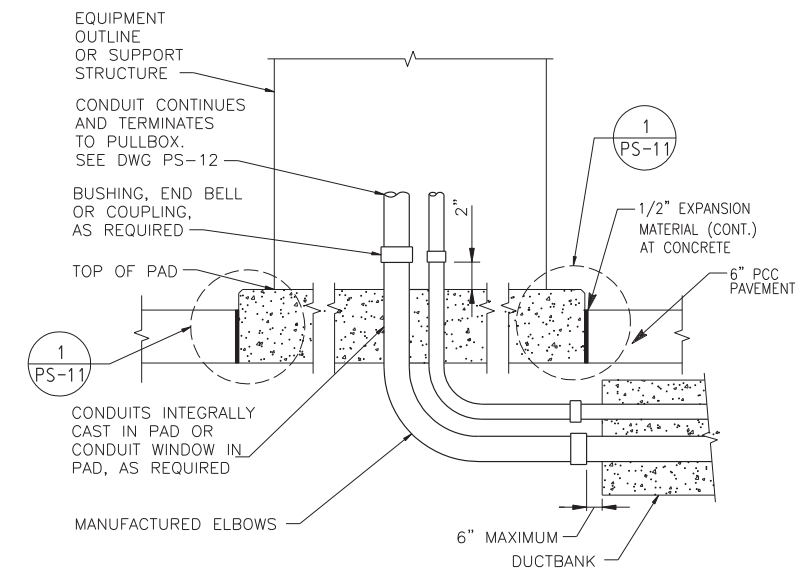
1 CONCRETE ENCASED DUCTBANK SECTION
PS-15 NTS



NOTE:

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

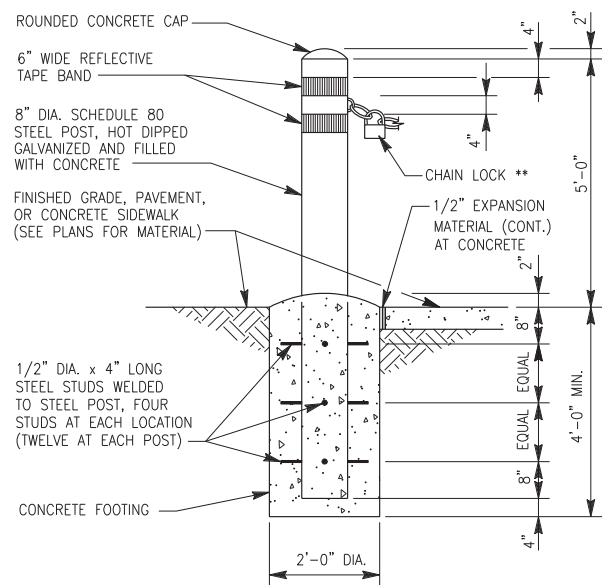
2 GENERATOR PAD
PS-15 NTS



NOTE:

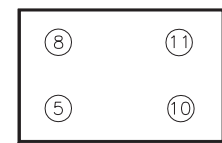
1. SEE DUCTBANK SECTION FOR ADDITIONAL REQUIREMENTS.
2. SEE OTHER CONTRACT DRAWING FOR PAD REQUIREMENTS.

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

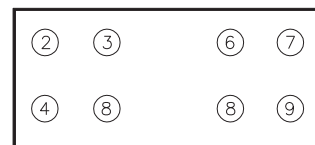


4 BOLLARD DETAIL
PS-15 NTS

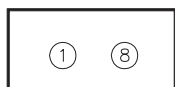
- NOTE:**
1. ** INSTALL CHAIN LOCK FROM FRONT CORNER OF PUMP STATION ENCLOSURE NEAR END OF PROPOSED CHAIN LINK FENCE AT UPRR R/W
 2. CONSTRUCT REMOVABLE BOLLARD PROTECTIVE BARRIER PER RIVERSIDE PUBLIC UTILITIES DEPT - UNDERGROUND STRUCTURES STD DETAIL UGS-290



5 SECTION
PS-15 NTS

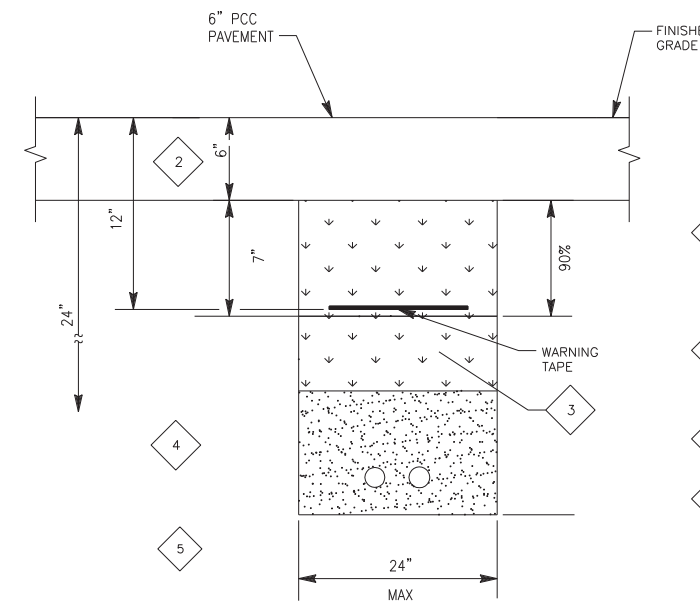


6 SECTION
PS-15 NTS



7 SECTION
PS-15 NTS

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



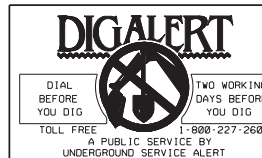
8 TRENCHING AND BACKFILL DETAIL
PS-15 NTS

BACKFILL GENERAL NOTES:

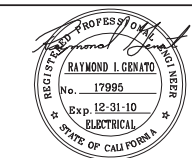
- 2 PAVED AREAS: ENTIRE PUMP STATION ENCLOSURE TO BE PAVED WITH 6\"/>

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ADDENDUM-CONDUIT SIZE IS 2\"/>

CITY OF RIVERSIDE, CALIFORNIA
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 SYMBOLOLOGY	
	ORIFICE PLATE
	PITOT TUBE OR ANNUBAR
	ROTOMETER
	SONIC OR ULTRASONIC FLOWMETER
	MAGNETIC FLOWMETER
	MASS DISPERSION FLOWMETER
	FLUME
	WEIR
	PROPELLER OR TURBINE METER
	VENTURI TUBE
	FLOAT SWITCH
	TEMPERATURE ELEMENT WITH THERMOWELL
	SIGHT FLOW GLASS
	ULTRASONIC LEVEL ELEMENT

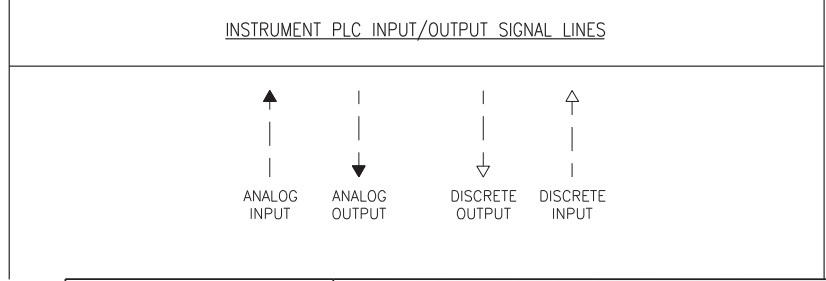
LINE TYPES	
	MAIN PROCESS LINE
	SECONDARY PROCESS LINE
	AUXILIARY PROCESS LINE
	DIRECTION OF FLOW
	PNEUMATIC SIGNAL
	ELECTRICAL SIGNAL
	HYDRAULIC SIGNAL
	SOFTWARE OR DATA LINK
	SIGNAL CONNECTION
	CROSSOVER - NO CONNECTION
	CAPILLARY
	MECHANICAL LINK
	ETHERNET I/O DATA LINK
	DEVICENET DATA LINK
	SERIAL RS232 LINK
	FIBER OPTIC

CROSS REFERENCE SYMBOLOLOGY	
	SEQUENCE NUMBER CONTINUATION ON SHEET ____
	SEQUENCE NUMBER CONTINUATION ON SHEET ____

INSTRUMENT SYMBOLOLOGY	
	LOCALLY MOUNTED FIELD INSTRUMENTATION
	MOUNTED ON PANEL FRONT
	MOUNTED INSIDE PANEL
	FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL)
	MOUNTED INSIDE AUXILIARY PANEL
	PILOT LIGHT
	INSTRUMENT FUNCTIONS SHARING COMMON HOUSING
	COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS
	SHARED DISPLAY, SHARED CONTROL, MOUNTED INSIDE PANEL
	SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED
	SHARED DISPLAY, SHARED CONTROL, PRIMARY LOCATION (NORMALLY ACCESSIBLE TO OPERATOR)
	PROGRAMMABLE LOGIC CONTROL, PRIMARY LOCATION (NORMALLY ACCESSIBLE TO OPERATOR)
	SHARED DISPLAY, SHARED CONTROL LOCATED AT SCADA

INSTRUMENT IDENTIFICATION LETTERS				
	FIRST LETTER		SUCCEEDING LETTERS	
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE
C	USERS CHOICE			CLOSED
D	USERS CHOICE	DIFFERENTIAL		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	
F	FLOW RATE	RATIO (FRACTION)		
G	USER'S CHOICE		GLASS, VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT (ELECTRICAL)		INDICATE	
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME; RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT	LOW
M	USER'S CHOICE	MOMENTARY		MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION	
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION	
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD	
S	SPEED, FREQUENCY	SAFETY		SWITCH
T	TEMPERATURE			TRANSMIT
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER, LOUVER
W	WEIGHT, FORCE		WELL	
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT

MISCELLANEOUS INSTRUMENTATION ABBREVIATIONS	
AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
OI	OPERATOR INTERFACE
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
HH	HIGH, HIGH
H	HIGH
L	LOW
LL	LOW, LOW
XDCR	TRANSDUCER
PLC	PROGRAMMABLE LOGIC CONTROLLER
P1	PUMP 1
P2	PUMP 2
P3	PUMP 3



CONTROL SWITCH NOTATION ABBREVIATIONS	
	XXX
ACK	ACKNOWLEDGE
ESTOP	EMERGENCY STOP
ETM	ELAPSED TIME METER
FAIL	FAILURE
FOR	FORWARD-OFF-REVERSE
FR	FORWARD-REVERSE
FS	FAST-SLOW
HA	HAND-AUTO
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
LL	LEAD-LAG
LLS	LEAD-LAG-STANDBY
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
LS	LEAD-STANDBY
MA	MANUAL-AUTO
OAC	OPEN-AUTO-CLOSE
OC	OPEN-CLOSE
OO	ON-OFF
OSC	OPEN-STOP-CLOSE
RJ	RUN-JOG
RJR	RUN-JOG-REVERSE
SIL	SILENCE
SS	START-STOP
OOA	ON-OFF AUTO

1. THIS IS A STANDARD INSTRUMENTATION SYMBOLOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.

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CONTRACT NO. _____

DATE: Nov 14, 2012

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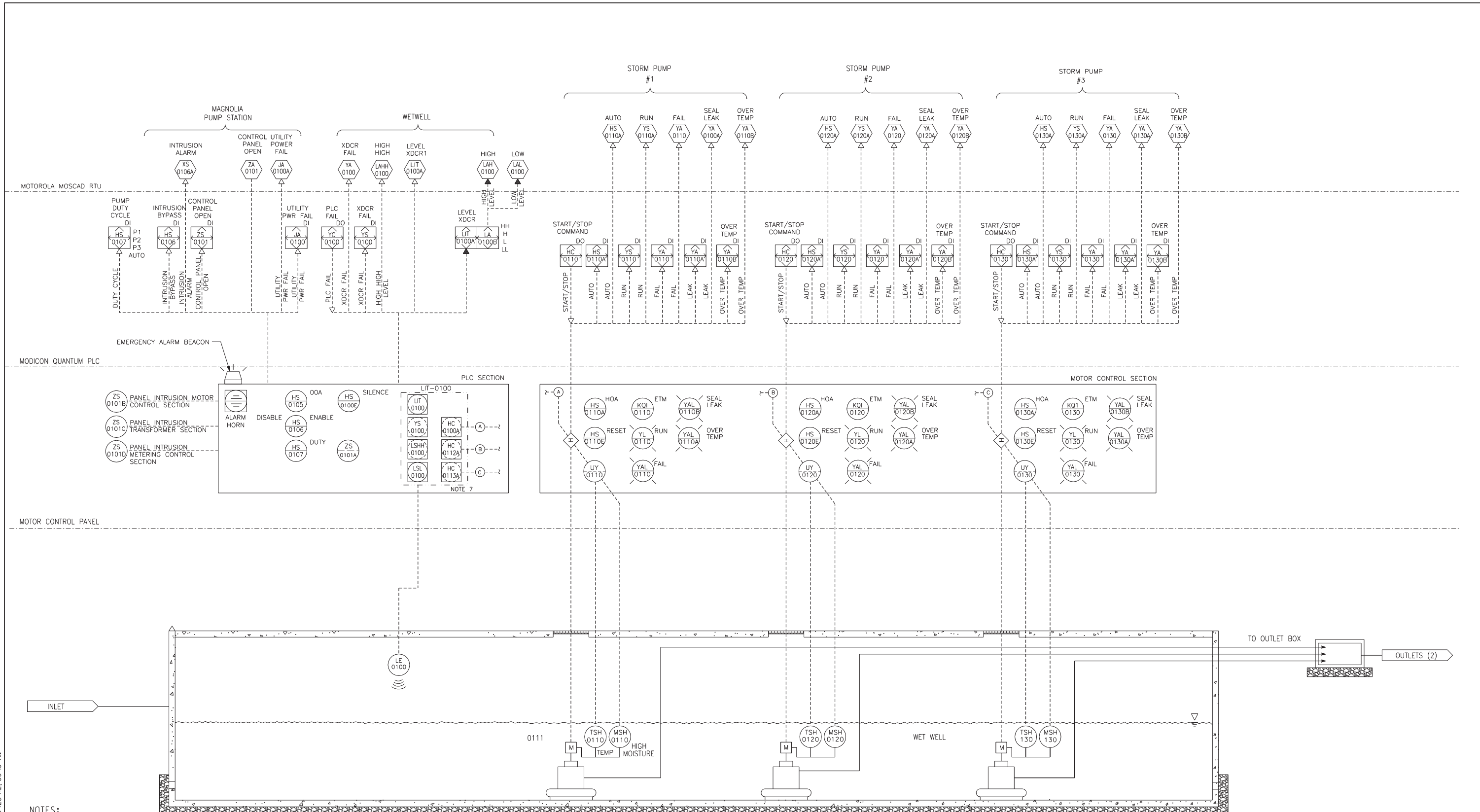
HDR ENGINEERING, INC.
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SUITE 100 RIVERSIDE, CA 92501-2110
DATE: 9/14/09

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

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

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MAGNOLIA AVENUE UNDERPASS	D-830
INSTRUMENTATION LEGEND PS-16	SHEET <u>104</u> of <u>189</u>
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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.

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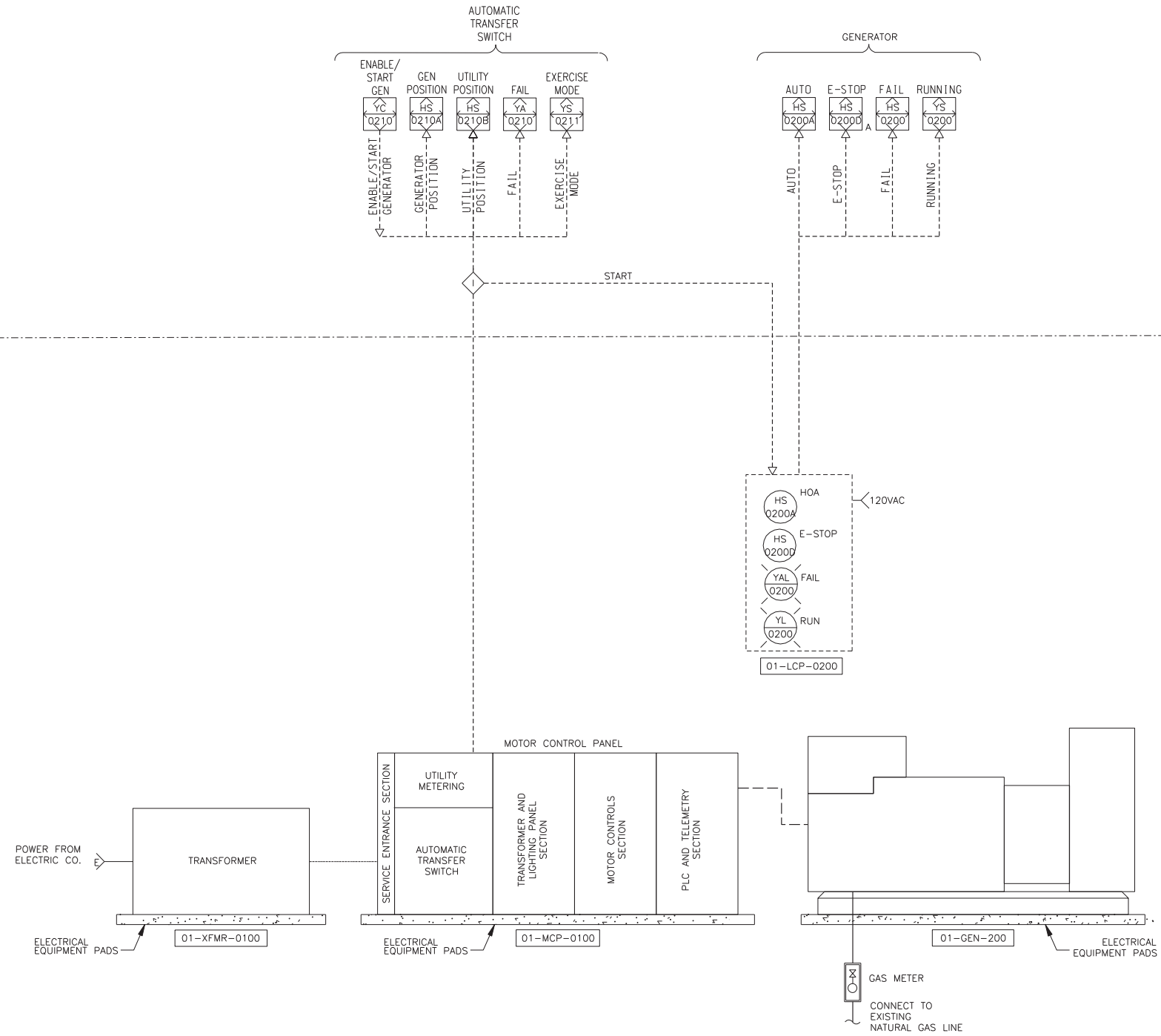
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			REVISIONS: _____ REVISIONS: _____ REVISIONS: _____ REVISIONS: _____ REVISIONS: _____	DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

MOTOROLA MOSCAD RTU

MODICON QUANTUM PLC



PUMP STATION GENERATOR

NTS

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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

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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 GENERATOR P & ID PS-18

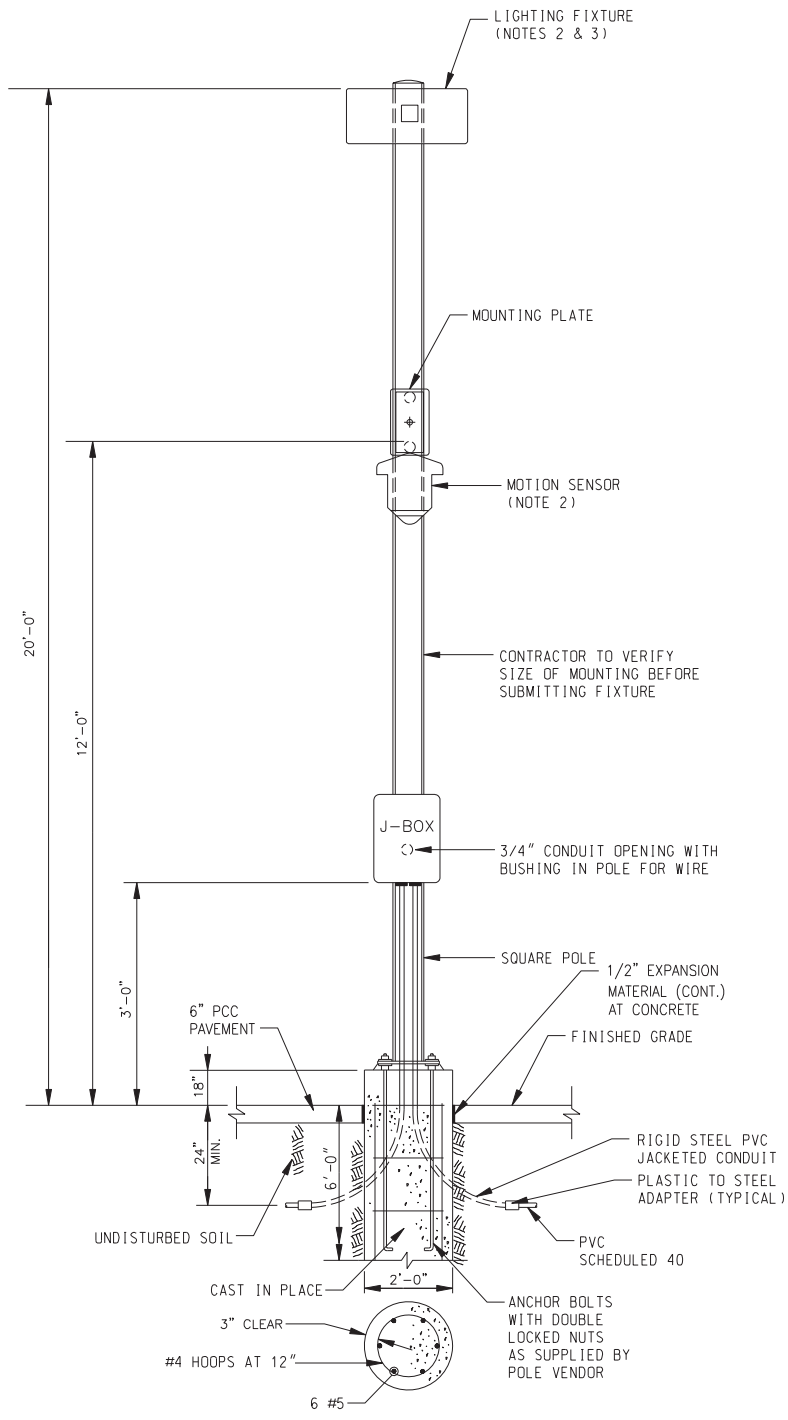
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ACCT. NO. _____ W.O. NO. _____

D-830

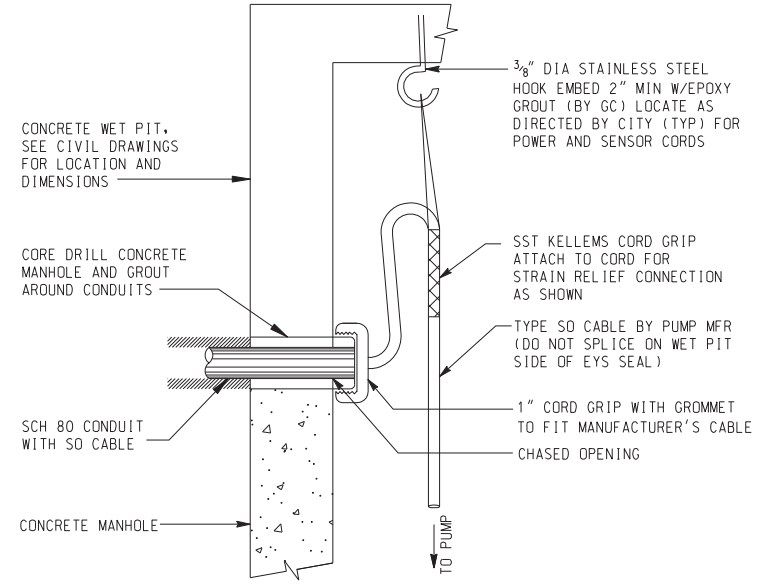
SHEET 106 OF 189

FILE NO. 201546u011.dgn



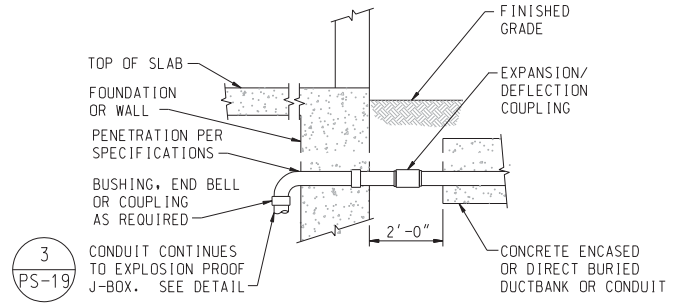
1
PS-19 **DETAIL**
LIGHTING & MOTION DETECTOR
GRADE MOUNTED
NTS

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



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

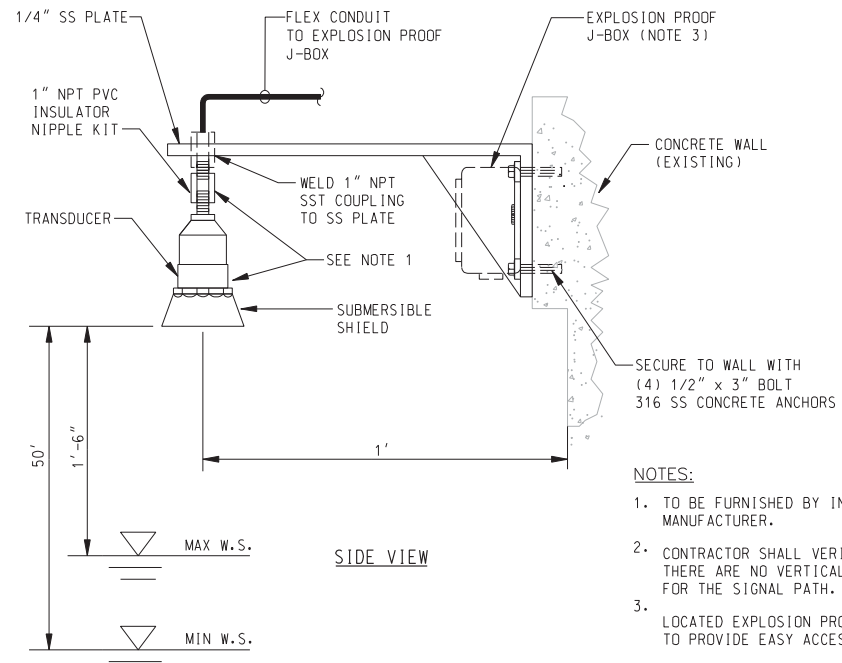
NOTE:
PUMP PIT WALLS AND CONFIGURATION MAY VARY. SEE CIVIL DWGS FOR EXACT CONFIGURATION.



3
PS-19

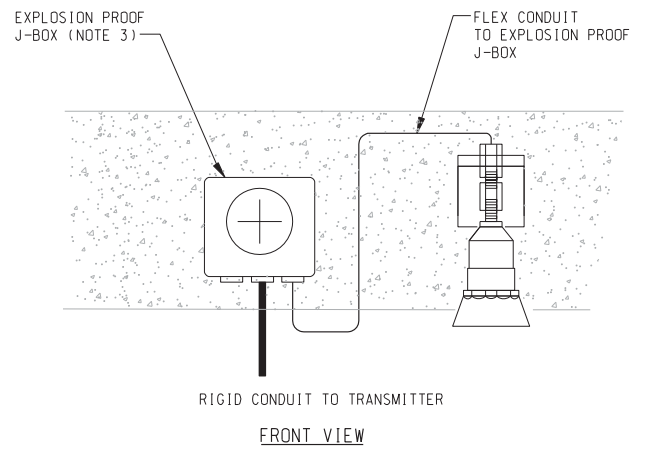
NOTE:
1. SEE DUCTBANK DETAIL FOR ADDITIONAL REQUIREMENTS.

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



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

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



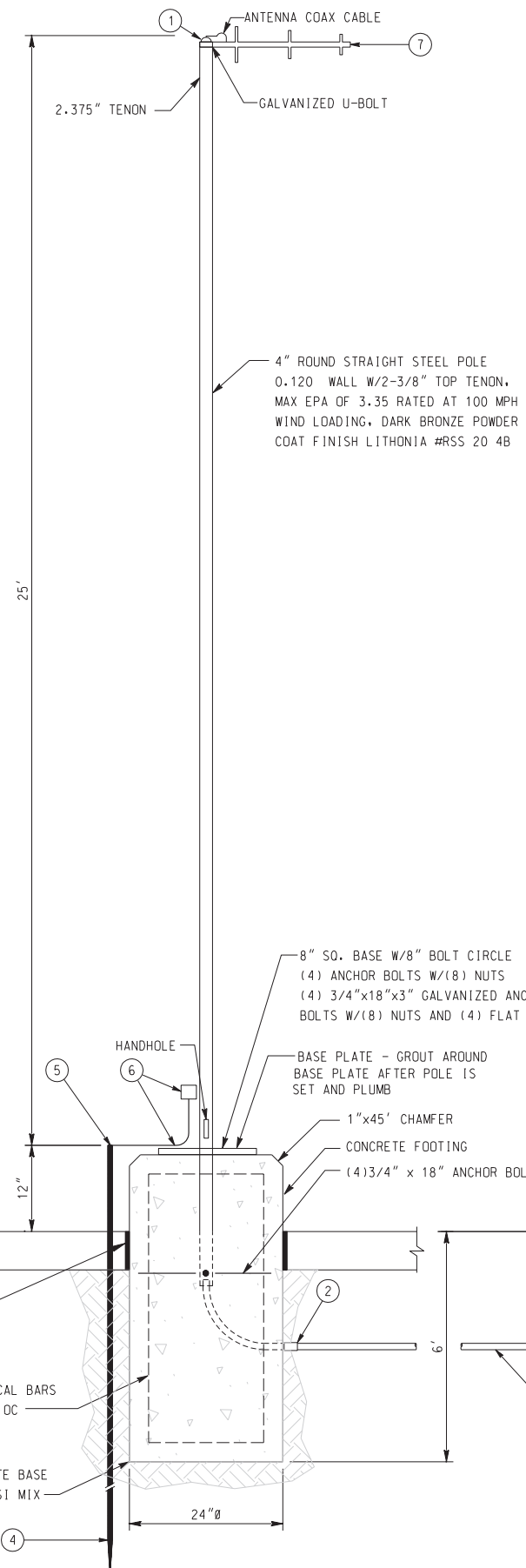
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CONTRACT NO. [Blank]
DATE: November 14, 2012

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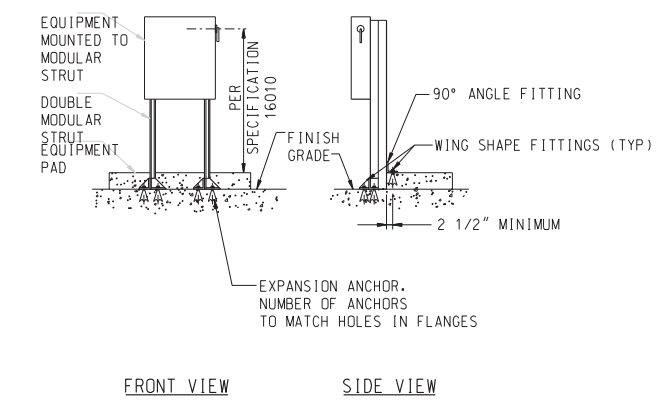
<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE: 9/14/09</p>		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS PUMP STATION INSTRUMENTATION DETAILS PS-19		ACCT. NO. W.O. NO. D-830 SHEET 107 of 189
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	REVISIONS: _____ APRR. DATE: _____	HORIZ. SCALE: AS SHOWN VERT. SCALE: NONE	FILE NO. 201546ua12.dgn

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".
- 4. ANCHORS: STAINLESS STEEL, 3/8" DIAMETER, 3-1/2" 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

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CONTRACT NO. _____
DATE: *November 14, 2012*

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

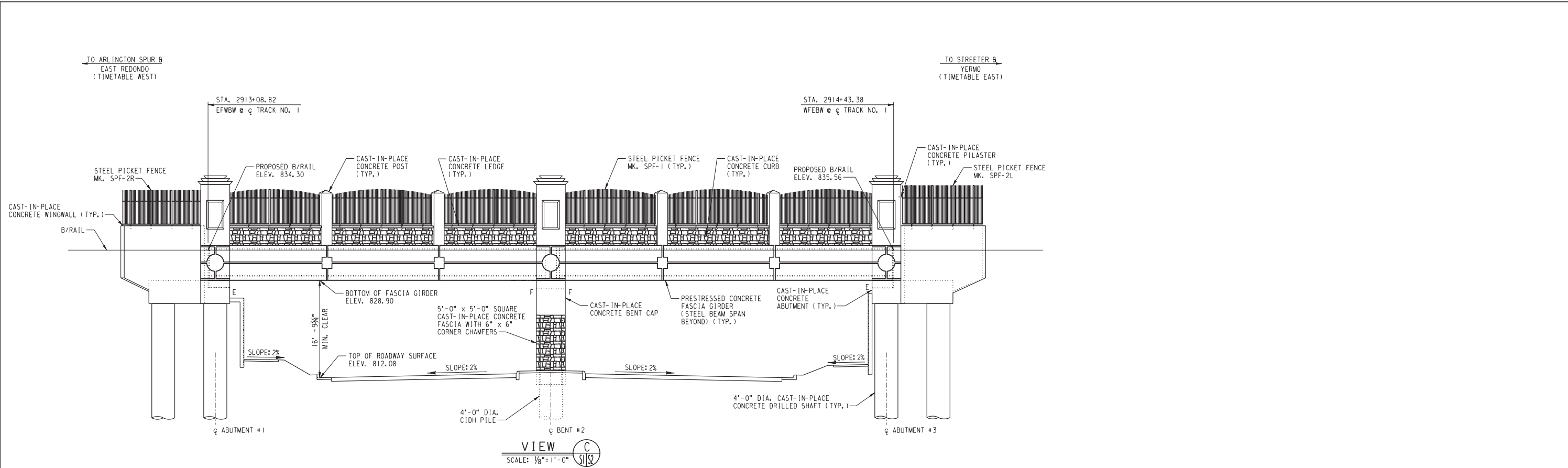
REGISTERED PROFESSIONAL ENGINEER
RAYMOND I. GENATO
No. 17995
Exp. 12-31-10
ELECTRICAL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

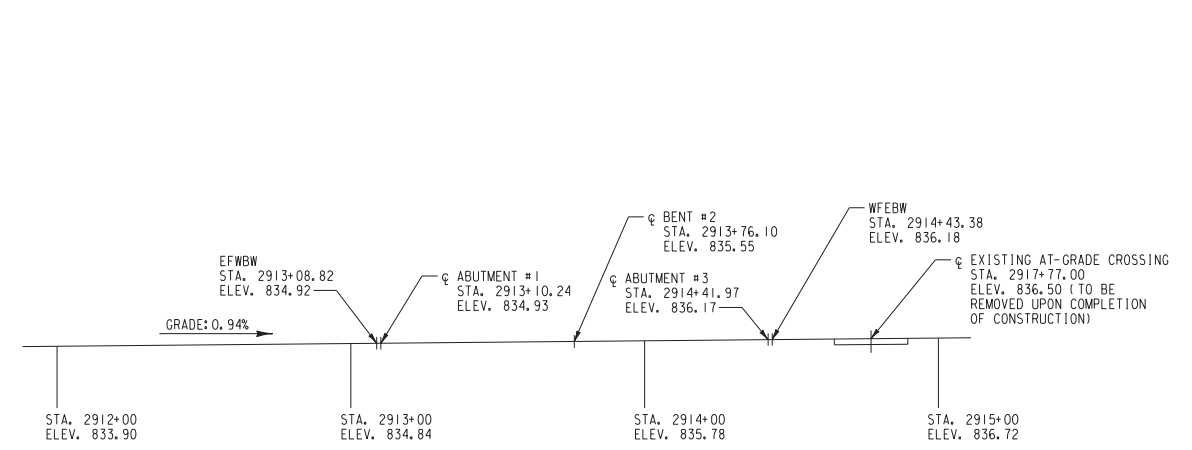
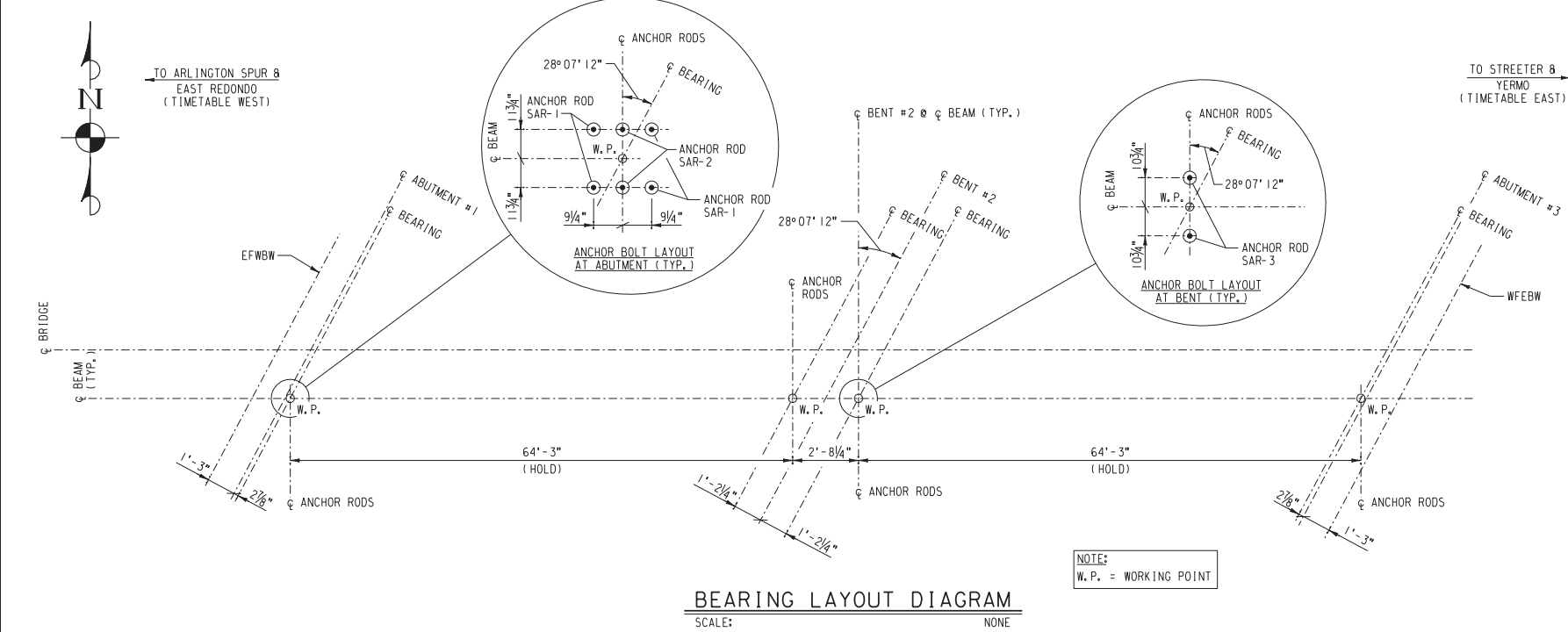
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PUMP STATION INSTRUMENTATION DETAILS II PS-20

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

HORIZ. SCALE: NONE VERT. SCALE: NONE



NOTES:
1. FOR ROADWAY PROFILE, SEE SHEETS P-1 THRU P-2.
2. FOR SIDEWALK PROFILE, SEE SHEET CD-1.



NOTE:
STATIONING SHOWN AT TRACK NO. 1. PROPOSED TOP OF RAIL PROFILE TO MATCH EXISTING TRACK NO. 2 PROFILE.

AS BUILT
Erie A. Russo
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012

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

REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
GENERAL ARRANGEMENT (2 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S2
R-4081
SHEET 110 OF 189
FILE NO.

GENERAL NOTES:

1. All work requirements shown on the drawings and not otherwise detailed shall be accomplished as specified in Union Pacific Railroad Specifications and the most current edition of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering. In the event of conflicts between specifications, the more restrictive shall apply.

DESIGN DATA

- The proposed substructures have been designed in accordance with 2008 AREMA Manual for Railway Engineering Chapter 8 - Concrete Structures and Foundations.
- The proposed superstructure has been designed in accordance with 2008 AREMA Manual for Railway Engineering Chapter 15 - Steel Structures and Chapter 29 - Waterproofing.
- The proposed substructure and superstructure have been designed for Cooper E80 live load or alternate live load where applicable, plus impact, and 30" total depth of ballast.
- Subsurface exploration was performed by Diaz Yaurman & Associates. A copy of the geotechnical investigation, dated December 24, 2007 (Revised March 27, 2009), is available from the Irvine office of HDR, Inc., 3230 El Camino Real, Suite 200, Phone 714-730-2300. Contact Rob Kivovsky.
- Seismic design performed in accordance with 2008 AREMA Manual for Railway Engineering Chapter 9 - Seismic Design for Railway Structures and using Caltrans SDC 1.4 (2006).

SEISMIC DESIGN LOADING

Three level ground motion and performance criteria:

- Serviceability Limit State
- Ultimate Limit State
- Survivability Limit State

PERIOD (SECONDS)	HORIZONTAL SPECTRAL RESPONSE (G)		
	SERVICEABILITY	ULTIMATE	SURVIVABILITY
0.01	0.750	1.200	1.700
0.05	0.750	1.200	1.700
0.10	0.750	1.200	1.700
0.20	0.750	1.200	1.700
0.30	0.750	1.200	1.700
0.40	0.750	1.200	1.700
0.50	0.687	1.100	1.558
0.60	0.608	0.973	1.379
0.70	0.549	0.878	1.244
0.80	0.502	0.803	1.137
0.90	0.464	0.742	1.051
1.00	0.432	0.691	0.979
1.10	0.405	0.648	0.919
1.20	0.382	0.612	0.867
1.30	0.362	0.580	0.821
1.40	0.345	0.552	0.782
1.50	0.329	0.527	0.746
2.00	0.272	0.434	0.615
2.50	0.234	0.374	0.530
3.00	0.207	0.331	0.469
3.50	0.187	0.299	0.423
4.00	0.171	0.273	0.387

DIVISION OF RESPONSIBILITY:

A. RAILROAD

- Provide and install new ballast, ties, rail and other track material. Provide 6" nominal of new ballast for the Contractor to place on the bridge (See Note B.6 below).
- Provide and install bridge marker signs at each end of bridge.

B. CONTRACTOR

- Coordinate all construction activities with the City of Riverside and the Railroad.
- Provide the City and the Railroad with a detailed construction plan defining the activity, schedule, and procedure for each aspect of the work. Construction shall not begin until the construction plan has been approved by the City and the Railroad.
- Verify the location, relocation, abandonment, and/or temporary support of all utilities affected by the construction of the structure and embankment and coordinate these activities with the appropriate utility companies, agencies and/or authorities. For information on, and relocation of, fiber optic cable, call 1-800-336-9193.
- Apply for and obtain all construction permits necessary to perform the work.
- Supply all material and perform all work not supplied or performed by the Railroad, including incidental material not shown in the Bill of Material.
- Install initial 6" layer of ballast on the bridge.
- Construction submittals to be designed per UPRR and AREMA requirements and reviewed and approved by the City and UPRR.

CAST-IN-PLACE AND PRECAST CONCRETE NOTES:

CONCRETE

- All concrete materials, placement and workmanship shall be in accordance with the current edition of the AREMA Manual for Railway Engineering, Chapter 8.
- All concrete shall have a compressive strength of 4000 lb. per square inch at 28 days, unless noted otherwise.
- Exposed surfaces shall be formed in a manner which will produce a smooth and uniform appearance without rubbing or plastering. Exposed edges of 90 degrees or less are to be chamfered 3/4" x 3/4". Top surface to have a smooth finish, free of all float or trowel marks.
- Concrete shall be proportioned such that the water-cement ratio (by weight) does not exceed 0.45. Concrete must contain a minimum of six and one half (6 1/2) sacks of cement per cubic yard of concrete.
- Cement shall be Type I, II or III Portland Cement as specified in the current edition of ASTM C150.
- Coarse aggregate shall be graded in accordance with ASTM C33, size no. 67.
- Fine aggregate shall be graded in accordance with ASTM C33, natural sand.
- Total entrained air content shall be between 5% and 7% (by volume).
- Admixtures shall not be used without approval by the Engineer.
- Curing shall be accomplished by wet curing or membrane curing compound. Membrane curing compound shall conform to ASTM C309 Type 2.

REINFORCING STEEL

- Reinforcing steel shall be deformed, new billet bars per current ASTM A706 Specifications and meet Grade 60 requirements, except as otherwise noted. Reinforcing steel to be welded shall meet the requirements of ASTM A706.
- Fabrication of reinforcing steel shall be per Chapter 7 of the CRSI Manual of standard practice. Dimensions of bending details are out to out of bar.
- Reinforcing steel is to be blocked to proper location and securely wired against displacement. Tack welding of reinforcing is prohibited. Minimum concrete cover on reinforcement shall meet current AREMA requirements.

STRUCTURAL STEEL NOTES:

DESIGN STRESSES

Design stresses for the following materials are in accordance with the American Railway Engineering and Maintenance-of-Way Association (AREMA).
 Structural Steel: ASTM A709, Grade 50W Fy = 50,000 psi
 Structural Steel: ASTM A709, Grade 36 Fy = 36,000 psi
 Structural Steel: ASTM A588 Fy = 50,000 psi

DESIGN LOADING

Maximum offset of ϕ Track to the ϕ of one beam is 6".
 Live Load, Deck Plate = Alternate Live Load Chapter 15
 Live Load, Longitudinal Beams = Cooper E80 Chapter 15
 Impact = 2008 AREMA Chapter 15
 Other Loads = 2008 AREMA Chapter 15
 Ballast = 30" Deep Nominal (Accounts for future raises)

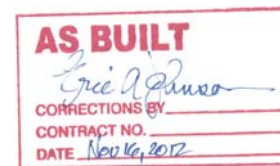
STRUCTURAL STEEL

- Fabrication and shop assembly shall comply with AREMA Chapter 15, Part 3: "Fabrication".
- Fabrication of structural steel shall be performed by a fabricator certified under AISC Quality Certification Program for Major Steel Bridges (CBR).
- Structural steel shall conform to the following requirements:
 Longitudinal Beams ASTM A709, Grade 50W2
 Deck plate ASTM A709, Grade 36T2
 All other structural steel ASTM A588, except as noted
 Anchor rods ASTM F1554, Grade 36
- Structural steel shall be of the type and quality as designated on the plans. Material supplied shall meet the longitudinal Charpy V-notch requirements for Zone I as specified in the AREMA provisions.
- All shop and field bolted connections shall use high strength bolts (including nuts and washers) conforming to ASTM A325, Type 3, except as otherwise noted. Nuts shall be per ASTM A563, Specification. All bolts shall be 1/2" diameter unless otherwise noted. Holes for bolts shall be 1/16" diameter larger than nominal diameter unless otherwise noted. All high strength steel bolts shall have one hardened steel washer (per ASTM F436) per bolt under the element to be turned and shall be installed using the "Turn of the Nut Method". Alternative bolt fastening methods are subject to approval of the Engineer.
- Bolts shall be placed so that the bolt heads are on the outside (exposed) surface of the member wherever possible unless shown otherwise on the plans. Threads shall be excluded from the shear plane in all connections.
- Center to center dimensions shall be as noted.
- All machine bolts required shall be ASTM A307.
- Welding: All welding shall be in accordance with the current edition of the Bridge Welding Code, AWS D1.5. Welding to be allowed only as shown on design drawings and approved shop drawings.

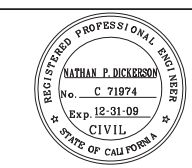
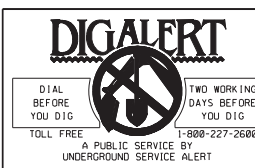
- Welded joints shall conform to the prequalified details of AWS D1.5, Figure 2.4. Alternate joint details may be submitted for approval. All welding shall be done to minimize distortion. The welding sequence and procedures to be used shall be submitted to the Engineer for approval.
- Fully automatic submerged arc welding shall be required for this project. Manual shielded arc welding or semi-automatic submerged arc welding will be allowed only if fully automatic submerged arc welding is not practical. Alternate welding methods are subject to the Engineer's approval.
- When welding A709, Grade 50W, or A588 steel, weld metal must be compatible with A709, Grade 50W, or A588 steel in strength, corrosion resistance and weathered appearance.
- The fabricator shall submit copies of welders' certificates for all welding processes.
- The fabricator shall submit three (3) copies of detailed shop drawings prior to beginning fabrication. Fabrication shall not begin until shop drawings are approved.
- The fabricator shall shop assemble the spans prior to shipping. During assembly and reaming all bolts shall be placed in holes as work progresses to assure proper fit.
- Shop assembled spans shall be inspected by the Engineer or his/her representative before the steel is disassembled and/or shipped to the erection site. Pieces shall be match-marked as required.
- Reaming of holes during field erection is not allowed, unless approved in writing by the Engineer.
- All structural steel shall be blast cleaned prior to shipment as follows, except as noted otherwise. All ASTM A709 steel, other surfaces visible from sides and all facing surfaces regardless of location: Minimum SSPC-SP6, Commercial Blast Cleaning. All remaining steel surfaces: SSPC-SP1, Solvent Cleaning. All steel members shall be clearly marked after blast cleaning has been completed.

BILL OF MATERIAL

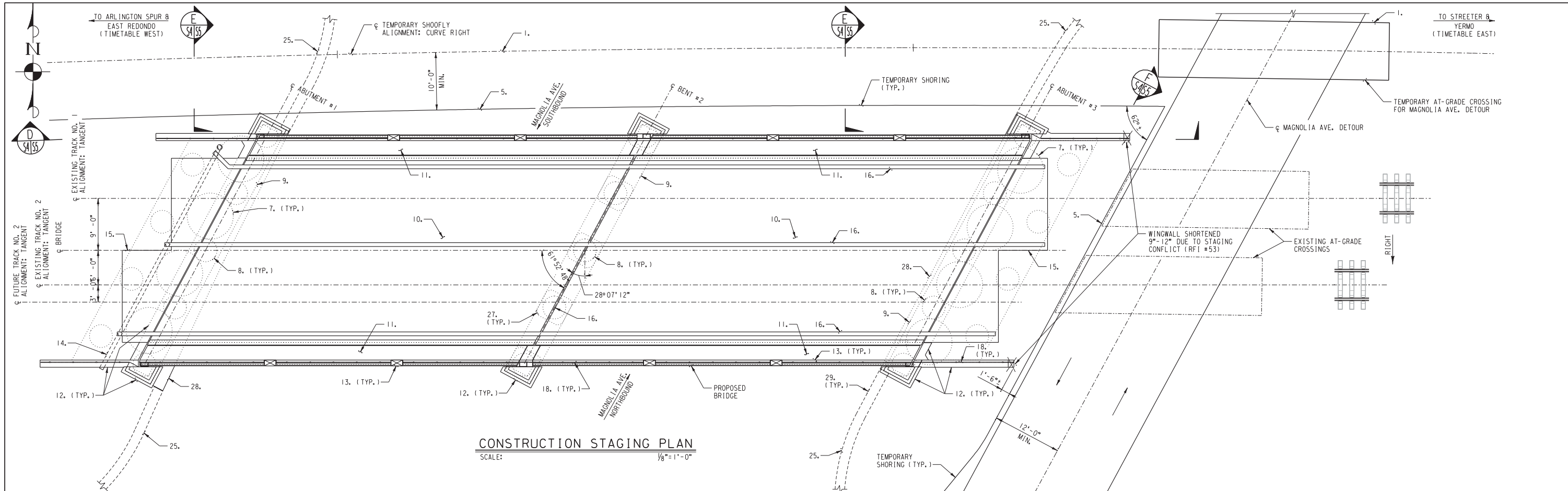
REQ'D	UNIT	DESCRIPTION	ORDERED BY
1	L0T	STRUCTURAL STEEL, FASTENERS, WATERPROOFING, ANCHOR RODS, BEARING PLATES AND BEARING PADS FOR 2 BEAM SPANS TOTALING 134'-2 1/4" O. TO O. AT ϕ BRIDGE (PER SPECIFICATIONS, DETAILS AND NOTES, SHEET S3 AND SHEETS S32 THRU S42 AND S51) (TOTAL EST. STEEL WT. = 893,825 LB.)	CONTRACTOR
927	CU.-YD.	4000 PSI CONCRETE FOR C1DH PILES (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS, SHEETS S9 AND S10)	
1	L0T	REINFORCING STEEL FOR C1DH PILES (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS AND SCHEDULE, SHEET S10)	
391	CU.-YD.	4000 PSI CONCRETE FOR ABUTMENTS AND BENT, PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS, SHEETS S11 THRU S15, S17 AND S21 AND S24 THRU S27) 159 CU.YD. FOR EACH ABUTMENT AND 73.2 CU.YD. FOR BENT	
27	CU.-YD.	INTEGRAL COLORED CONCRETE FOR BENT COLUMN FASCIA (PER SPECIFICATIONS AND DETAILS, SHEETS S24 THRU S27) 6.3 CU.YD. PER COLUMN FASCIA	
1	L0T	REINFORCING STEEL FOR ABUTMENTS AND BENT (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS AND SCHEDULES, SHEETS S11 THRU S15, S17 THRU S21, S24 THRU S27 AND S30 THRU S31)	
31	CU.-YD.	4000 PSI CONCRETE FOR APPROACH SLABS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS, SHEET S23) 7.7 CU.YD. PER APPROACH SLAB	
1	L0T	REINFORCING STEEL FOR APPROACH SLABS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS AND SCHEDULES, SHEETS S23 AND S30)	
3	CU.-YD.	4000 PSI CONCRETE FOR ABUTMENT FASCIA WALLS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS, SHEETS S16 AND S22) 1.7 CU.YD. FOR ABUTMENT #1 AND 0.8 CU.YD. FOR ABUTMENT #3	
36	CU.-YD.	INTEGRAL COLORED CONCRETE FOR ABUTMENT FASCIA WALLS (PER SPECIFICATIONS AND DETAILS, SHEETS S16 AND S22) 18.6 CU.YD. FOR ABUTMENT #1 FASCIA WALL AND 17.6 CU.YD. FOR ABUTMENT #3 FASCIA WALL	
1	L0T	REINFORCING STEEL FOR ABUTMENT FASCIA WALLS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS AND SCHEDULES, SHEETS S16, S22 AND S30)	
9	CU.-YD.	4000 PSI CONCRETE FOR LEDGES AND POSTS ON FASCIA GIRDERS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS, SHEETS S28 AND S29)	
21	CU.-YD.	INTEGRAL COLORED CONCRETE FOR CURB WALLS ON FASCIA GIRDERS (PER SPECIFICATIONS AND DETAILS, SHEETS S28 AND S29)	
1	L0T	REINFORCING STEEL FOR CURBS AND POSTS ON FASCIA GIRDERS (PER SPECIFICATIONS, NOTES, SHEET S3, AND DETAILS AND SCHEDULES, SHEETS S28, S29 AND S31)	
1	L0T	PRESTRESSED CONCRETE FASCIA GIRDERS, BEARING PADS, THREADED RODS AND ASSOCIATED HARDWARE, (PER SPECIFICATIONS, DETAILS AND SCHEDULES, SHEETS S43 THRU S48)	
1	L0T	STEEL PICKET FENCE (PER SPECIFICATIONS AND DETAILS, SHEETS S49 AND S50)	
8	EA.	8"-0" DIA. SOILCRETE OR JET GROUTED SOIL COLUMNS (PER SPECIFICATIONS AND DETAILS, SHEET S9)	
1	L0T	TEMPORARY SHORING AS REQUIRED (PER NOTES AND DETAILS, SHEETS S4 AND S5)	
1	L0T	FOUNDATION DRAIN SYSTEM (PER SPECIFICATIONS, NOTES AND DETAILS, SHEETS S16 AND S22)	
1	L0T	DRAINAGE SYSTEM (PER SPECIFICATIONS, NOTES AND DETAILS, SHEETS S41 AND S42)	
1	L0T	MISCELLANEOUS STEEL (PER SPECIFICATIONS, NOTES AND DETAILS, SHEET S51)	
1	L0T	ANTI-GRAFFITI COATING (PER SPECIFICATIONS, NOTES AND DETAILS, SHEETS S11, S16, S17, S22 AND S24)	
2	EA.	BRIDGE MARKER SIGN PER ENGINEERING STANDARDS DRAWING NO. 0507	UPRR MGR. BRIDGE MAINTENANCE



STRUCTURE SHEET NO. S3
 UPRR BRIDGE 55.16 LOS ANGELES SUB.
 CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
 R-4081
 SHEET 111 OF 189
 FILE NO.



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DESIGNED BY	DRAWN BY	CHECKED BY	
HORIZ. SCALE: NONE		VERT. SCALE: NONE	



CONSTRUCTION STAGING PLAN
SCALE: 1/8" = 1'-0"

PROPOSED CONSTRUCTION SEQUENCE:

Some of the following tasks may be accomplished concurrently as determined by the Contractor. All work to be coordinated with the City of Riverside and Union Pacific Railroad.

Phase 1:

1. Construct shoofly and temporary at-grade crossing.
2. Prepare Magnolia Avenue detour.
3. Close Magnolia Avenue at site of proposed bridge. Route traffic to detour. Route all rail traffic to shoofly.
4. Remove rail, ties, and other track material from site of proposed bridge.
5. Install temporary shoring.
6. Excavate to bottom of abutment and bent caps. Between caps excavate to 8'-0" maximum below shoofly base of rail. Slope of excavation line between caps and 8'-0" excavation is based on 1.5 horizontal to 1 vertical perpendicular to caps.
7. Construct 8'-0" dia. soilcrete or jet grouted soil columns.
8. Construct 4'-0" dia. CIDH piles at abutments and bents.
9. Form and construct abutments and bent caps.
10. Install bearings and erect steel beam spans.
11. Install prestressed concrete fascia girders.
12. Form and construct wingwalls and pilasters at abutments and bent.
13. Form and construct curbs and posts on fascia girders.
14. Install drain pipes and backfill behind abutments.
15. Construct approach slabs.
16. Install cover plates, waterproofing and half-round perforated drains.
17. Immediately following approval of waterproofing, place ballast to a minimum depth of 6".
18. Install steel picket fence.
19. Remove temporary shoring along detour through Track Nos. 1 and 2.
20. UPRR forces to place remainder of ballast and install track for Track Nos. 1 and 2.
21. Prepare at-grade crossings for detour at Track Nos. 1 and 2.

Phase 2:

22. Route all rail traffic to Track Nos. 1 and 2.
23. Remove shoofly west of temporary at-grade crossing.
24. Remove remainder of temporary shoring along shoofly.
25. Construct as much of retaining walls on either side of abutments as possible.
26. Excavate under bridge.
27. Construct column fascia at bent.
28. Construct fascia walls at abutments.
29. Complete construction of retaining walls either side of abutments.
30. Remove remainder of temporary shoring.
31. Grade and construct roadway, median and sidewalks.
32. Route traffic under new bridge and close detour.
33. Remove remainder of shoofly and temporary at-grade crossing.
34. Remove existing at-grade crossings on mainline tracks.

NOTES:
1. FOR SHOOFLY ALIGNMENT AND PROFILE, SEE SHEETS T-3 THRU T-5.
2. FOR MAGNOLIA AVE. DETOUR PLAN, SEE SHEET CS-1.

AS BUILT
Eric Johnson
CORRECTIONS BY _____
CONTRACT NO. _____
DATE Nov 16, 2012

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

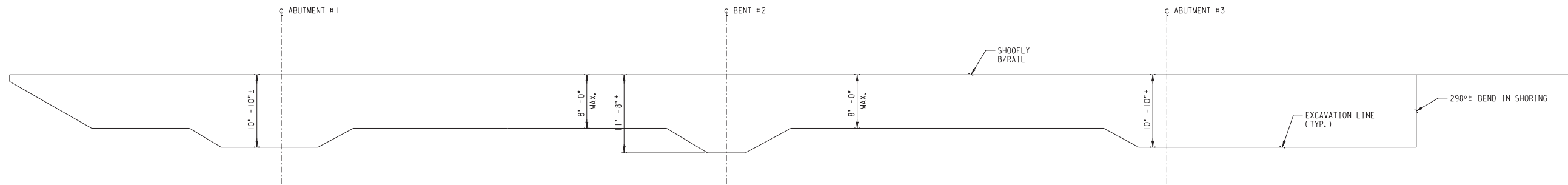
REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

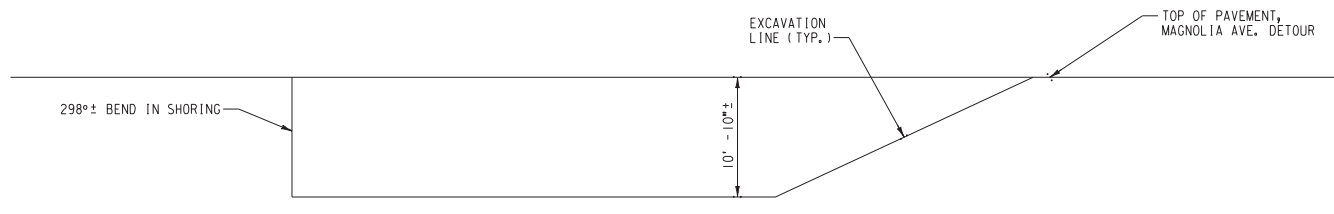
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PROPOSED CONSTRUCTION STAGING
HORIZ. SCALE: 1/8" = 1'-0" VERT. SCALE: 1/8" = 1'-0"

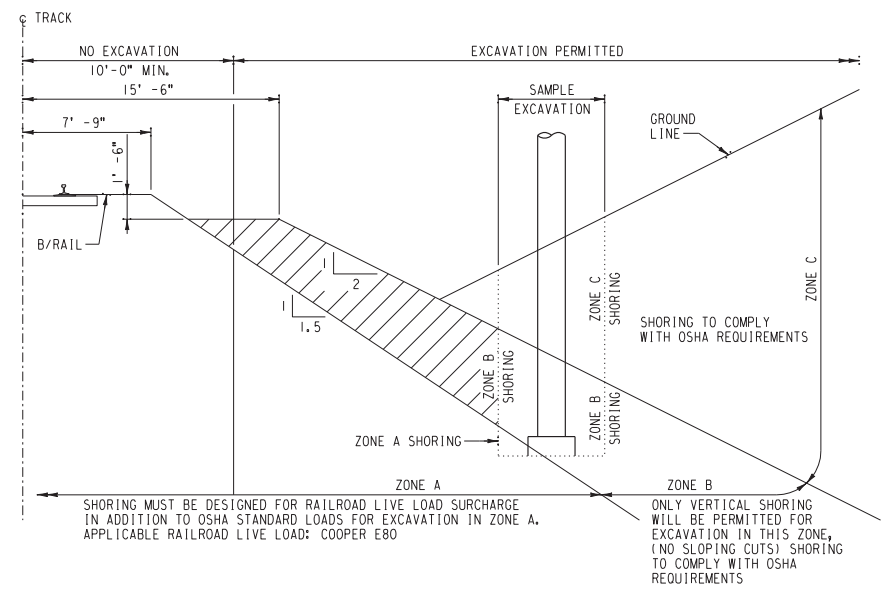
STRUCTURE SHEET NO. **S4**
R-4081
SHEET **112** OF **189**
FILE NO.



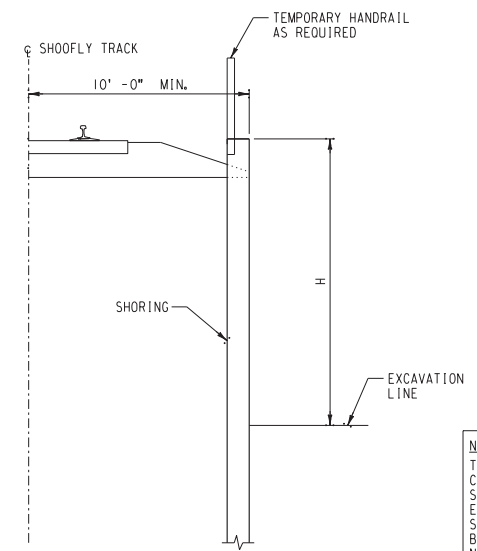
SECTION D
SCALE: 1/8"=1'-0" S455



SECTION F
SCALE: 1/8"=1'-0" S455



GENERAL EXCAVATION ZONES
SCALE: NONE



SECTION E
SCALE: 1/4"=1'-0" (TYPICAL H=12'-0") S455

NOTE:
TEMPORARY SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR. SYSTEM SHOWN IS ILLUSTRATIVE ONLY. SHORING IS TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA. SHORING DESIGN IS SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF RIVERSIDE AND UPRR. SHORING SHALL NOT BE INSTALLED UNTIL APPROVAL IS GIVEN. SHORING SHALL INCLUDE FOOTWALK AND HANDRAIL PER FRA REQUIREMENTS. TEMPORARY SHORING SHALL MEET THE REQUIREMENTS OF UNION PACIFIC RAILROAD "GUIDELINES FOR TEMPORARY SHORING". ANY SYSTEM OF SHORING PROPOSED WITH TIE-BACKS OR DEADMAN ANCHORAGE SYSTEMS SHALL BE COMPLETELY REMOVABLE UPON COMPLETION OF CONSTRUCTION.

NOTE:
ANY SHORING EXTENDING INTO ZONE A SHALL BE DESIGNED FOR APPLICABLE RAILROAD E80 LIVE LOAD SURCHARGE OVER ENTIRE HEIGHT.

AS BUILT
Eric J. Johnson
CORRECTIONS BY _____
CONTRACT NO. _____
DATE Nov 16, 2012

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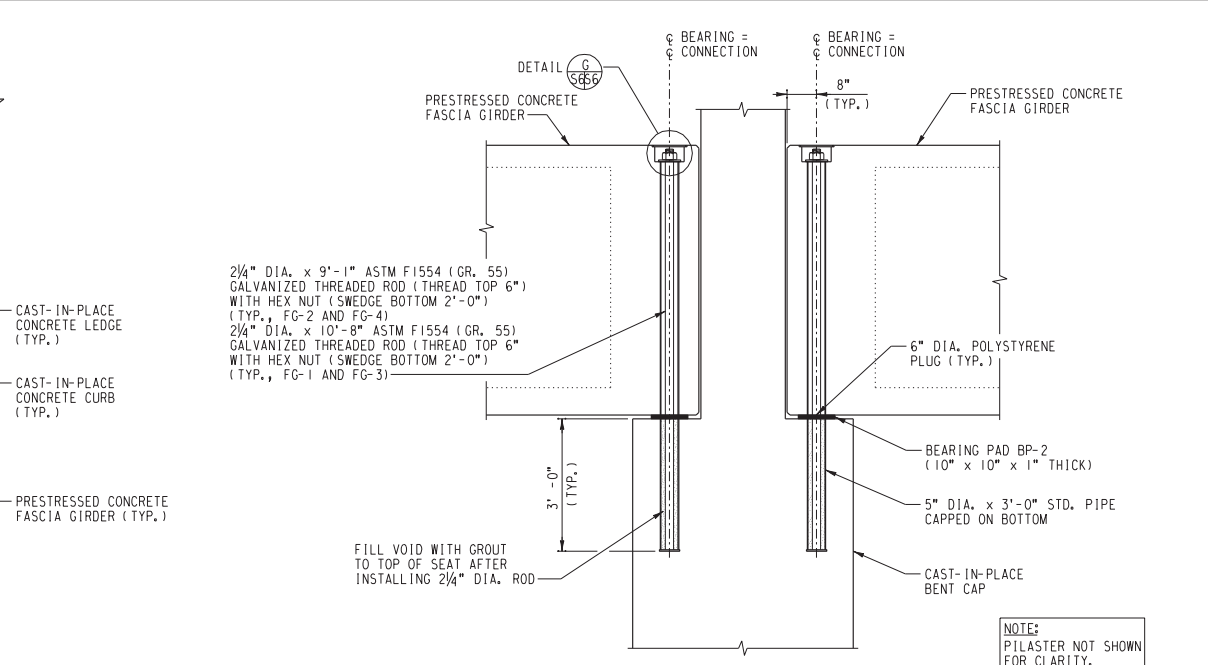
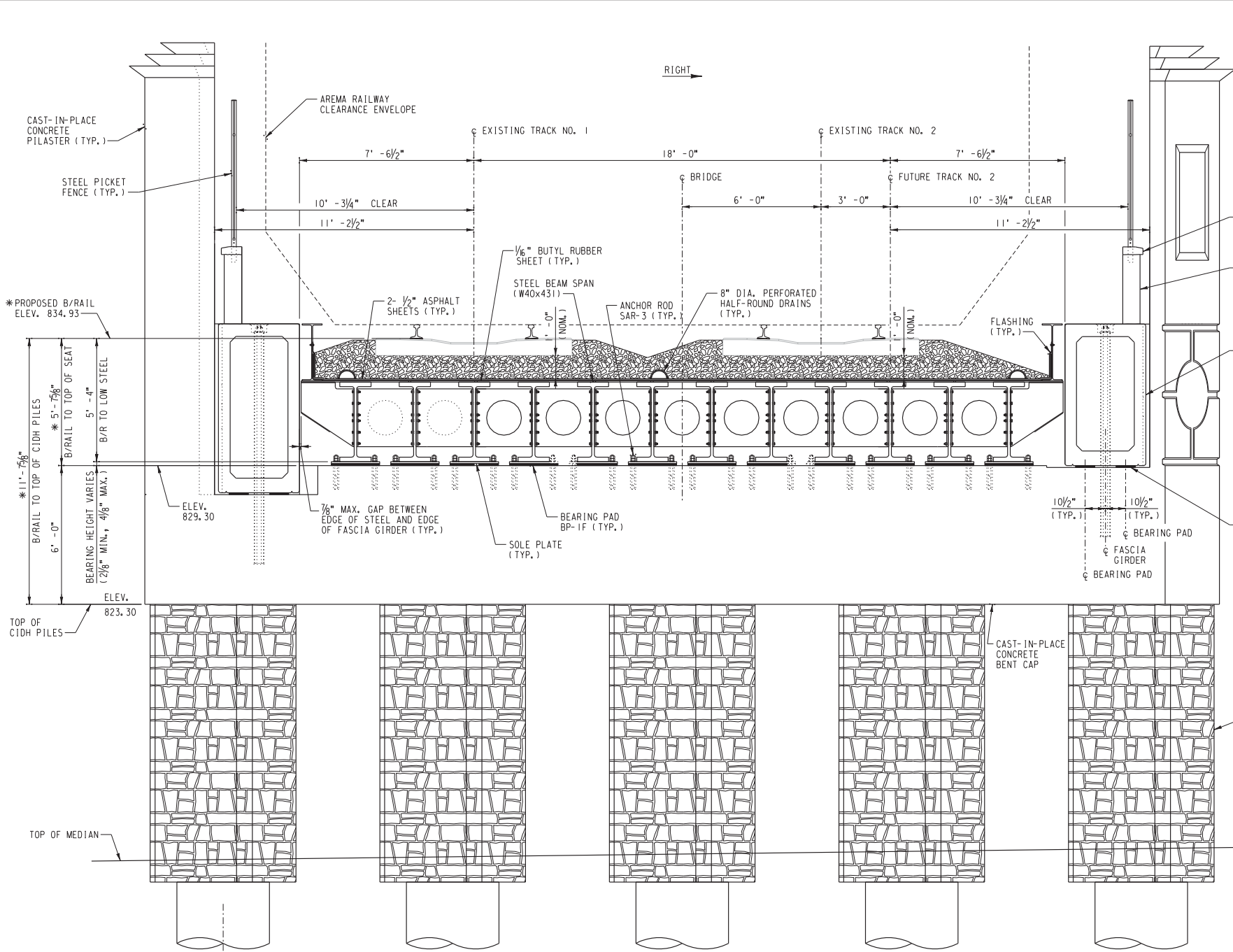
REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

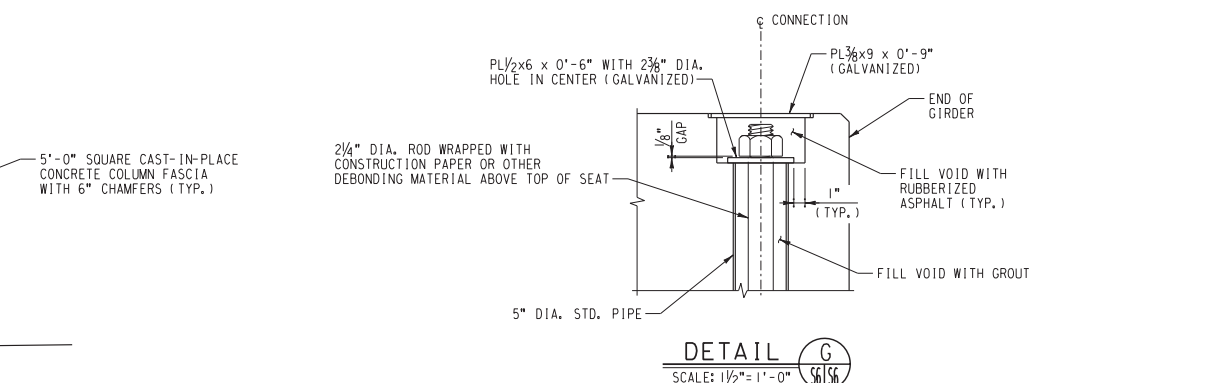
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
TEMPORARY SHORING DETAILS
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

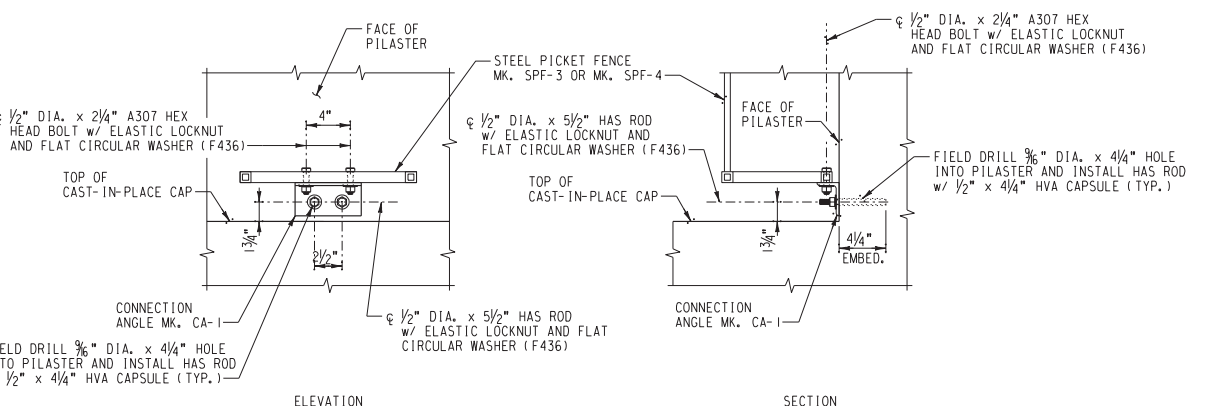
STRUCTURE SHEET NO. **S5**
R-4081
SHEET 113 OF 189
FILE NO.



FASCIA GIRDER CONNECTION DETAIL
SCALE: (AT BENT #2) 1/2"=1'-0"



DETAIL G
SCALE: 1/2"=1'-0"



STEEL PICKET FENCE MK. SPF-3 AND MK. SPF-4 CONNECTION DETAIL
SCALE: 1/2"=1'-0"

* NOTE:
AT INTERSECTION OF
TRACK NO. 1 AND
BENT #2.

SECTION A
SCALE: 3/8"=1'-0"

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No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

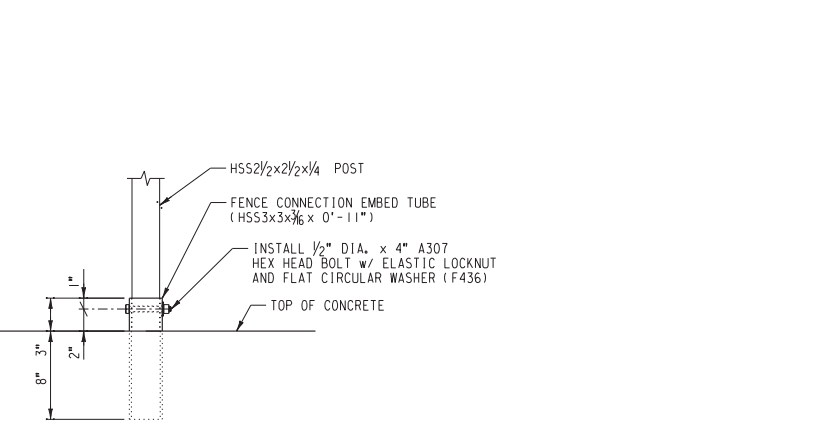
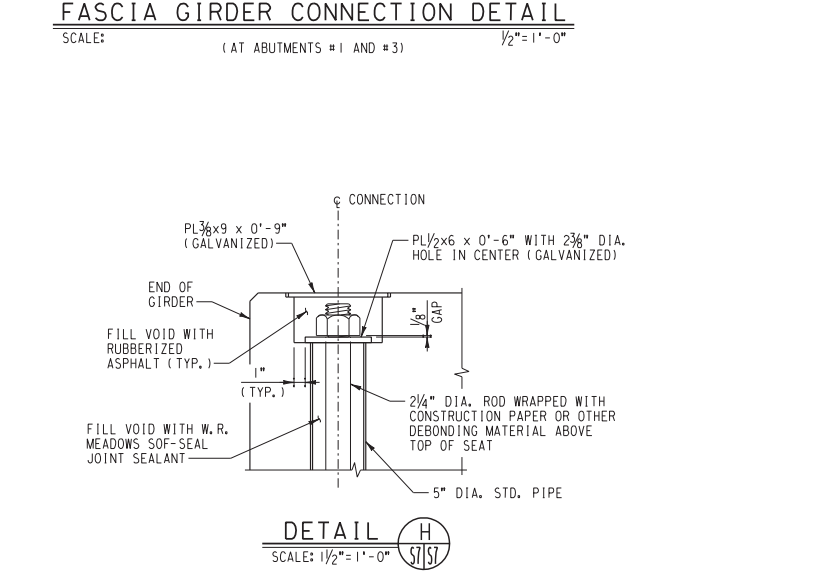
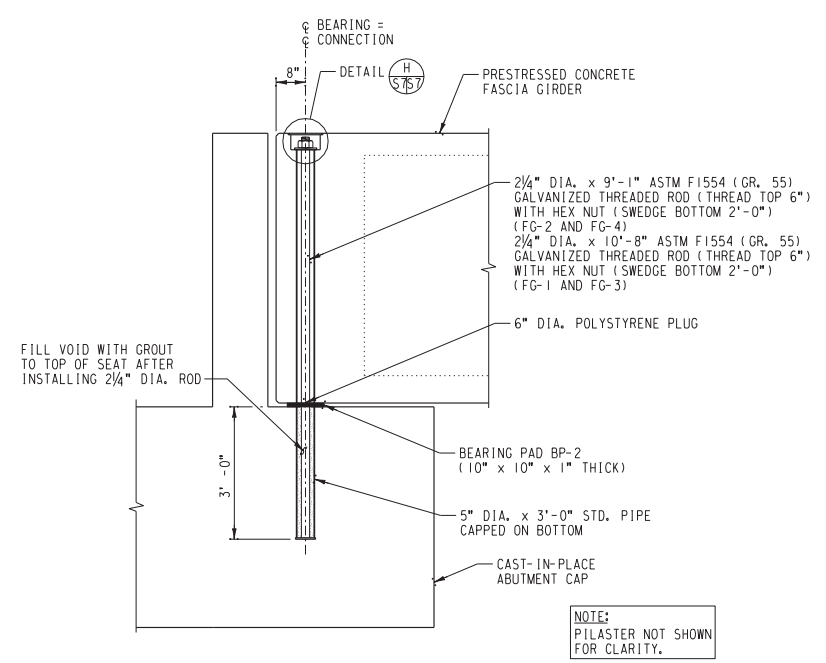
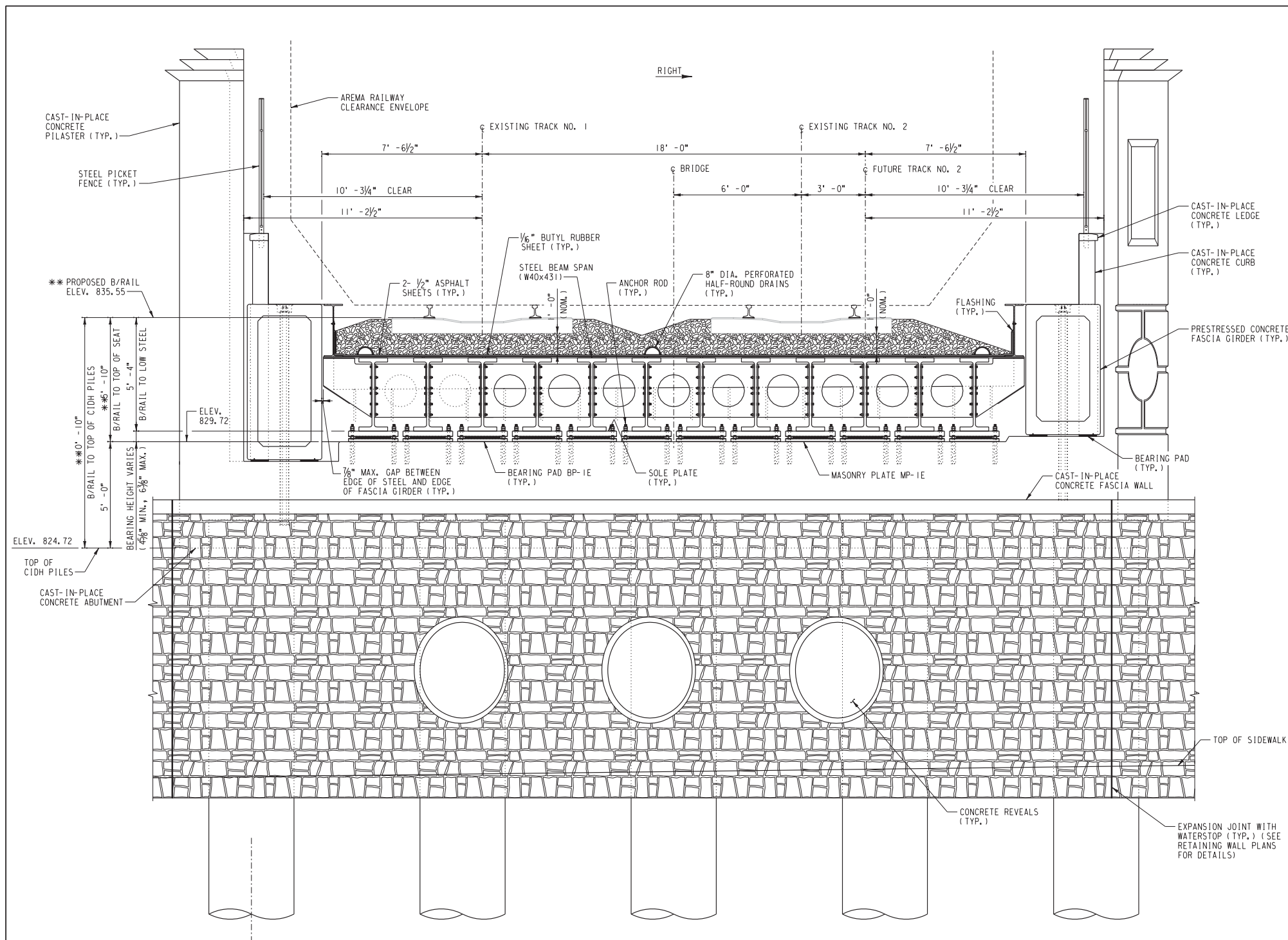
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
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PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
TYPICAL SECTIONS AND DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. **S6**
R-4081
SHEET **114** OF **189**
FILE NO.

\\S06...TypicalSectionsandDetails.dgn

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 ... \S07 - Typical Sections and Details.dgn



*** NOTE: AT INTERSECTION OF TRACK NO. 1 AND ABUTMENT #3.

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Eric J. Russo
 CORRECTIONS BY
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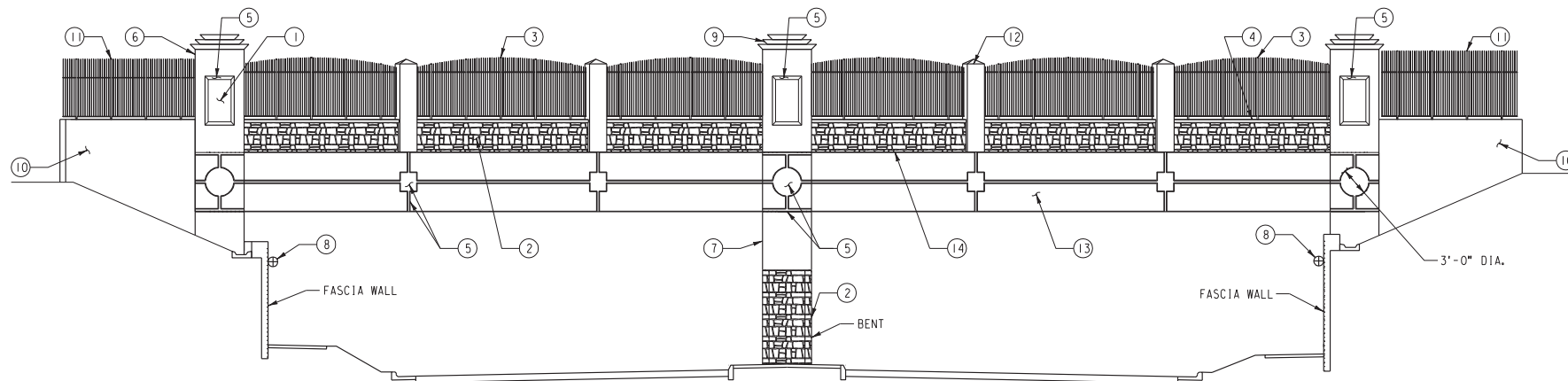
REGISTERED PROFESSIONAL ENGINEER
 NATHAN P. DICKERSON
 No. C 71974
 Exp. 12-31-09
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 STATE OF CALIFORNIA

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

UPRR BRIDGE 55.16 LOS ANGELES SUB.
 CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
 TYPICAL SECTIONS AND DETAILS (2 OF 2)
 HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

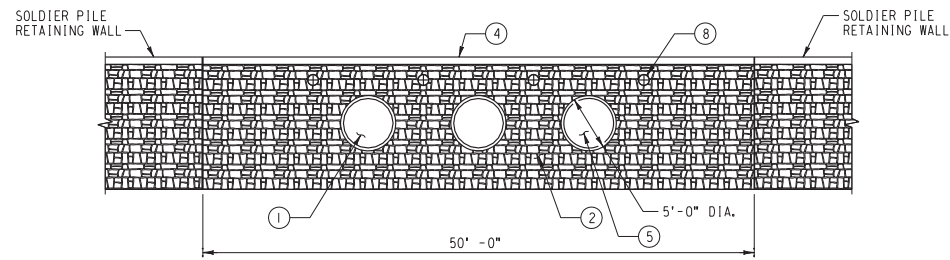
STRUCTURE SHEET NO. S7
 R-4081
 SHEET 115 OF 189
 FILE NO.



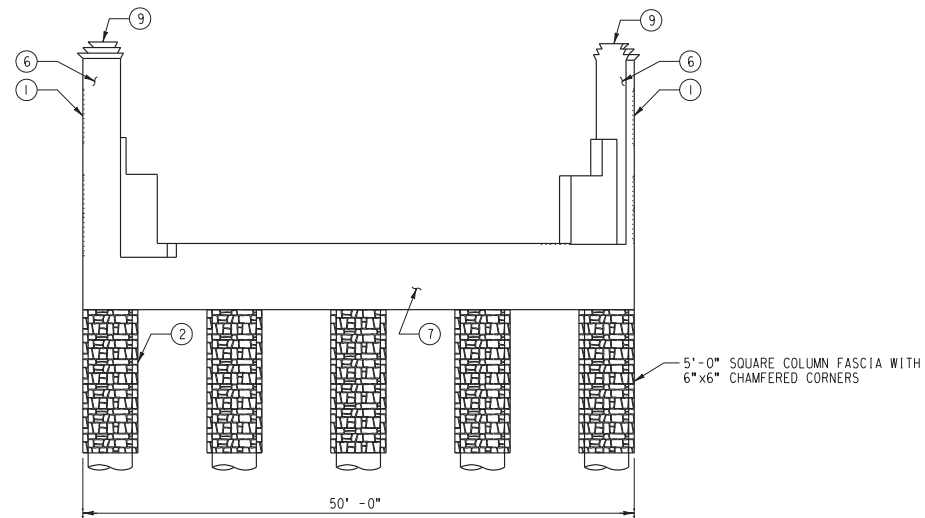
BRIDGE ELEVATION
SCALE: 1/8" = 1'-0"

FEATURE LEGEND

- ① CONCRETE REVEALS FOR ART
- ② CONCRETE STONE FORM LINER WITH INTEGRAL COLORED CONCRETE
- ③ BLACK CURVED STEEL PICKET FENCE
- ④ CONCRETE LEDGE
- ⑤ 1 1/2" DEEP CONCRETE FORMED REVEAL
- ⑥ CONCRETE PILASTER
- ⑦ BENT CAP
- ⑧ SCONCE LIGHTING
- ⑨ CONCRETE PILASTER CAP
- ⑩ WINGWALL
- ⑪ BLACK STEEL PICKET FENCE
- ⑫ CONCRETE POST
- ⑬ PRESTRESSED CONCRETE FASCIA GIRDER
- ⑭ CURB WALL



FASCIA WALL ELEVATION
SCALE: 1/8" = 1'-0"



BENT ELEVATION
SCALE: 1/8" = 1'-0"

- NOTES:**
- CONCRETE STONE FORM LINER SHALL BE PATTERN 16999 "GEORGIA ASHLAR" BY FITZGERALD FORMLINERS OR APPROVED EQUAL.
 - BRIDGE COMPONENTS RECEIVING CONCRETE STONE FORM LINER FINISH, INCLUDING ABUTMENT FASCIA WALLS, BENT COLUMN FASCIA AND CURB WALLS, SHALL BE CONSTRUCTED WITH INTEGRAL COLORED CONCRETE PER SPECIFICATIONS. FINAL COLOR CHOICE TO BE DETERMINED BY THE CITY OF RIVERSIDE AFTER EXAMINATION OF TEST PANELS. ALL OTHER BRIDGE COMPONENTS SHALL BE STANDARD PORTLAND CEMENT CONCRETE GREY WITH UNIFORM APPEARANCE.
 - SCONCE LIGHTING FIXTURE SHALL BE PACE URBANICA MODEL #UAW51 - SCONCE OR APPROVED EQUAL.

AS BUILT
Eric J. Russo
CORRECTIONS BY
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DATE *Nov 16, 2012*

...:\S08_ArchitecturalTreatments.dgn 10/16/12, 09:51 AM

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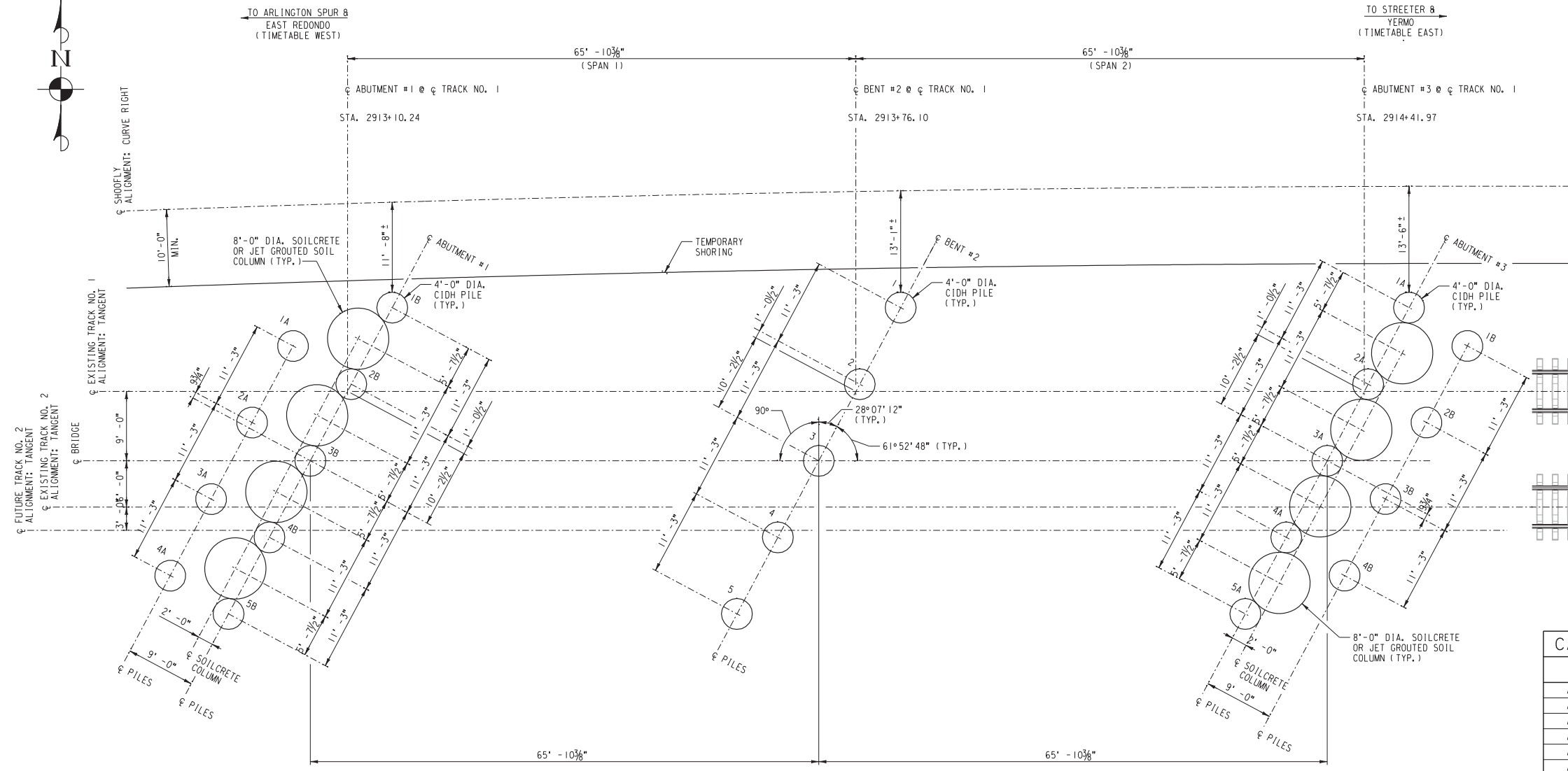
REGISTERED PROFESSIONAL ENGINEER
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No. C 71974
Exp. 12-31-09
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STATE OF CALIFORNIA

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MAGNOLIA AVENUE UNDERPASS
ARCHITECTURAL TREATMENTS
HORIZ. SCALE: 1/8" = 1'-0" VERT. SCALE: 1/8" = 1'-0"

STRUCTURE SHEET NO. **S8**
R-4081
SHEET **116** OF **189**
FILE NO.



FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

CAST IN DRILLED HOLE (CIDH) PILE FOUNDATIONS

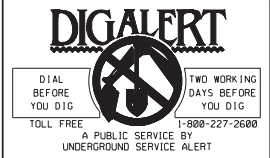
LOCATION	PILE NO.	DIAMETER	TOP ELEVATION	ESTIMATED TIP ELEVATION	ESTIMATED LENGTH	DESIGN LOAD (TONS)
ABUTMENT #1	1A	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	2A	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	3A	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	4A	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	1B	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	2B	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	3B	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	4B	4'-0"	823.48	736.48	87'-0"	335
ABUTMENT #1	5B	4'-0"	823.48	736.48	87'-0"	335
BENT #2	1	4'-0"	823.30	740.30	83'-0"	450
BENT #2	2	4'-0"	823.30	740.30	83'-0"	450
BENT #2	3	4'-0"	823.30	740.30	83'-0"	450
BENT #2	4	4'-0"	823.30	740.30	83'-0"	450
BENT #2	5	4'-0"	823.30	740.30	83'-0"	450
ABUTMENT #3	1A	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	2A	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	3A	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	4A	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	5A	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	1B	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	2B	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	3B	4'-0"	824.72	736.72	88'-0"	335
ABUTMENT #3	4B	4'-0"	824.72	736.72	88'-0"	335

SOILCRETE OR JET GROUTED SOIL COLUMNS

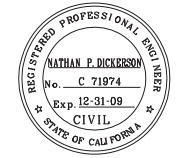
LOCATION	PILE NO.	MINIMUM DIAMETER	TOP ELEVATION	ESTIMATED TIP ELEVATION	ESTIMATED LENGTH	DESIGN LOAD (TONS)
ABUTMENT #1	N/A	8'-0"	823.48	810.48	13'-0"	N/A
ABUTMENT #3	N/A	8'-0"	824.72	809.72	15'-0"	N/A

NOTES:
1. FOR SHOOFLY ALIGNMENT AND PROFILE, SEE SHEETS T-3 THRU T-5.
2. FOR TEMPORARY SHORING, SEE SHEETS S4 AND S5.

AS BUILT
Eric Johnson
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012



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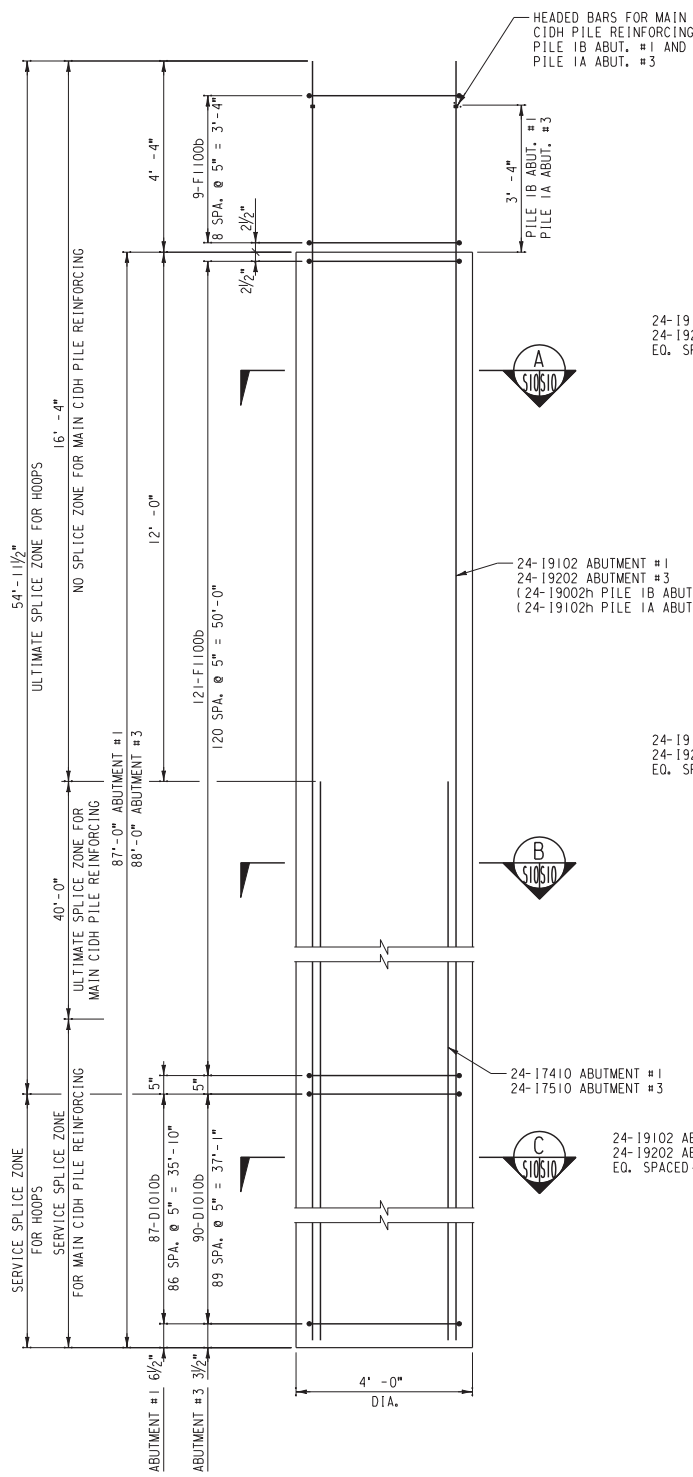
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UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
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MAGNOLIA AVENUE UNDERPASS
FOUNDATION PLAN
HORIZ. SCALE: 1/8" = 1'-0" VERT. SCALE: 1/8" = 1'-0"

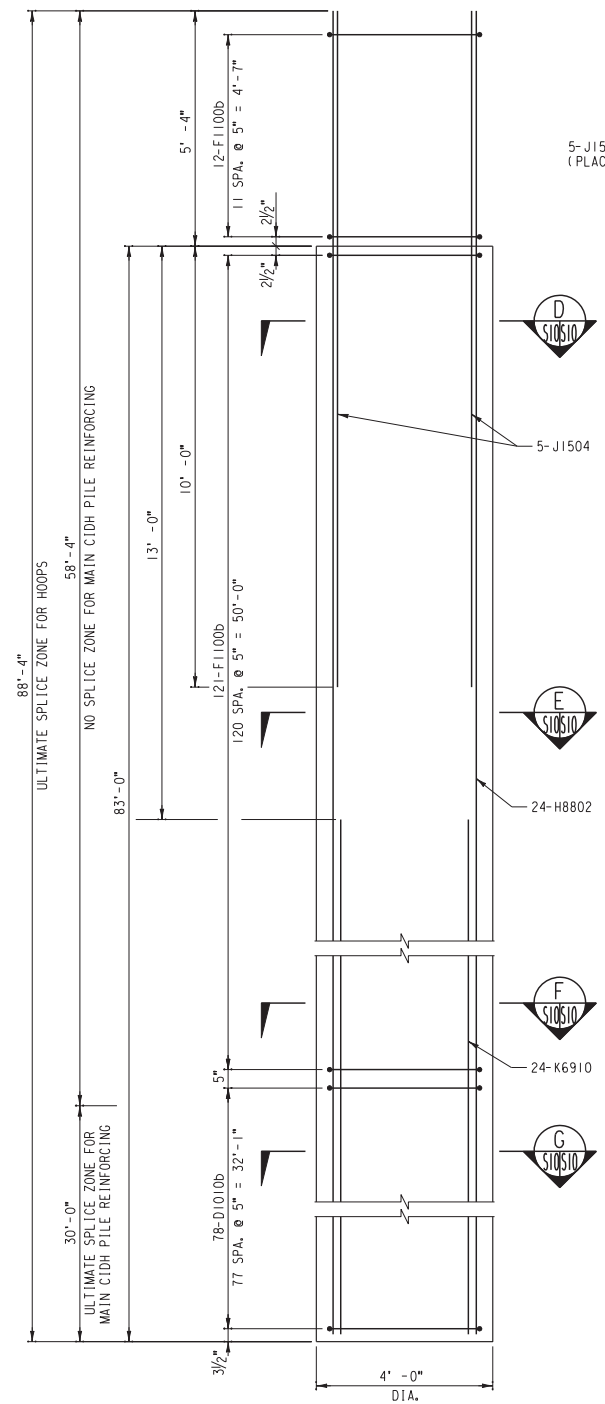
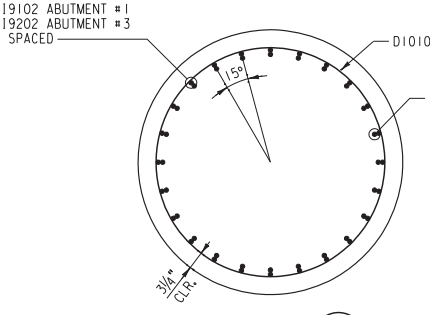
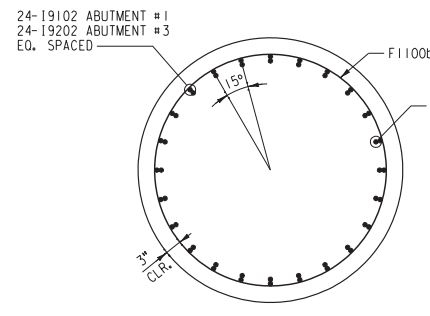
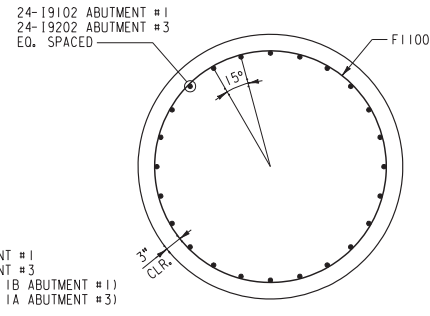
STRUCTURE SHEET NO. **S9**
R-4081
SHEET **117** OF **189**
FILE NO.

... \S09_FoundationPlan.dgn 10/16/12, 09:51 AM

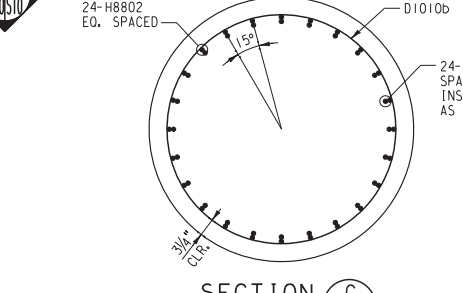
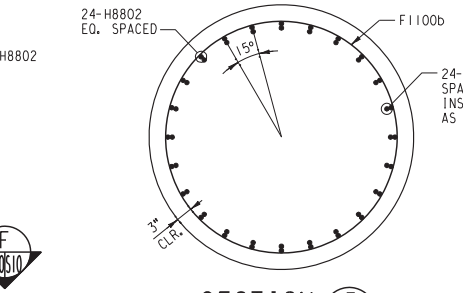
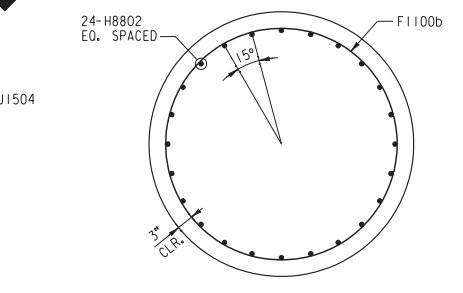
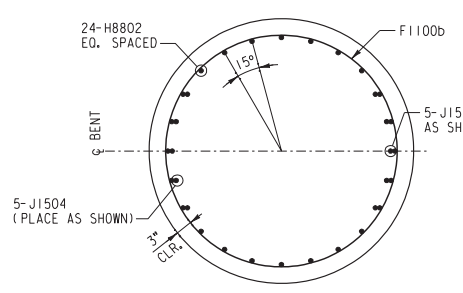
...S10_CIDHPIleDetailsReinforcingSchedules.dgn 10/16/12, 09:51 AM



ABUTMENT CIDH PILE DETAILS
SCALE: 1/2"=1'-0"



BENT CIDH PILE DETAILS
SCALE: 1/2"=1'-0"



REINFORCING SCHEDULE						
ABUTMENT #1	TOTAL	PER PILE	MARK	SIZE	LENGTH	SHAPE
	783	87	D1010b	#5	10'-10"	○
	1170	130	F1100b	#7	11'-0"	○
	216	24	17410	#10	74'-10"	—
	24	24	19002h	#10	90'-2"	—
	192	24	19102	#10	91'-2"	—

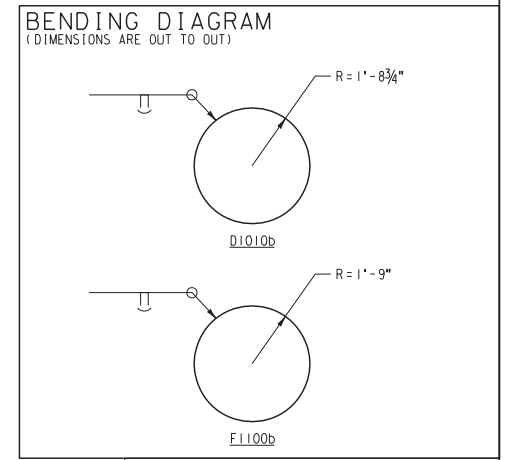
EST. WT. OF REINFORCING STEEL PER PILE ABUTMENT #1 (EXCLUDING PILE 1B) = 21,050 LB.
EST. WT. OF REINFORCING STEEL FOR PILE 1B ABUTMENT #1 = 20,950 LB.
TOTAL EST. WT. OF REINFORCING STEEL ABUTMENT #1 = 189,350 LB.

REINFORCING SCHEDULE						
BENT #2	TOTAL	PER PILE	MARK	SIZE	LENGTH	SHAPE
	390	78	D1010b	#5	10'-10"	○
	665	133	F1100b	#7	11'-0"	○
	120	24	H8802	#9	88'-2"	—
	50	10	J1504	#11	15'-4"	—
	120	24	K6910	#14	69'-10"	—

EST. WT. OF REINFORCING STEEL PER PILE BENT #2 = 24,705 LB.
TOTAL EST. WT. OF REINFORCING STEEL BENT #2 = 123,525 LB.

REINFORCING SCHEDULE						
ABUTMENT #3	TOTAL	PER PILE	MARK	SIZE	LENGTH	SHAPE
	810	90	D1010b	#5	10'-10"	○
	1170	130	F1100b	#7	11'-0"	○
	216	24	17510	#10	75'-10"	—
	24	24	19102h	#10	91'-2"	—
	192	24	19202	#10	92'-2"	—

EST. WT. OF REINFORCING STEEL PER PILE ABUTMENT #3 (EXCLUDING PILE 1A) = 21,290 LB.
EST. WT. OF REINFORCING STEEL FOR PILE 1A ABUTMENT #3 = 21,190 LB.
TOTAL EST. WT. OF REINFORCING STEEL ABUTMENT #3 = 191,510 LB.



NOTE:
BAR DESIGNATIONS CONSIST OF BAR SIZE & LENGTH FOLLOWED BY THE LETTER "b" IF BENT, BAR SIZES ARE REPRESENTED BY THE LETTERS A THROUGH L CORRESPONDING TO BAR SIZE #2 THROUGH #18. BAR LENGTHS ARE GIVEN IN FEET AND INCHES; THE LAST TWO DIGITS ARE INCHES. FOR BAR DESIGNATIONS FOLLOWED BY THE LETTER "b", BARS SHALL BE HEADED

EST. CONCRETE QUANTITIES					
ABUTMENT #1		BENT #2		ABUTMENT #3	
TOTAL	PER PILE	TOTAL	PER PILE	TOTAL	PER PILE
(CU. YD.)	(CU. YD.)	(CU. YD.)	(CU. YD.)	(CU. YD.)	(CU. YD.)
365	40.5	193	38.6	369	41.0

- NOTES:**
- FOR CONCRETE NOTES, SEE SHEET S3.
 - VERTICAL REINFORCING IN PILES MUST BE ORIENTED AS SHOWN IN SECTIONS. THIS SHEET, PRECISE PLACEMENT IS ESSENTIAL TO FACILITATE PLACEMENT OF REINFORCING STEEL IN CAPS.
 - IN THE ULTIMATE SPLICE ZONE, SPLICES OF MAIN CIDH PILE VERTICAL REINFORCING SHALL BE STAGGERED ULTIMATE BUTT-WELDED SPLICES THAT PROVIDE MIN. 100% ULTIMATE CAPACITY OF UNWELDED BAR.
 - FOR PILE NUMBERING, SEE SHEET S9.

AS BUILT
Eric A. Russo
CORRECTIONS BY
CONTRACT NO.
DATE *Nov 16, 2012*

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REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
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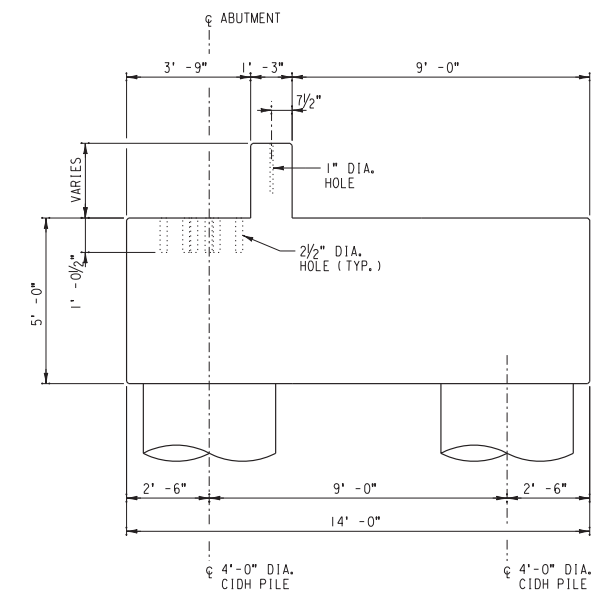
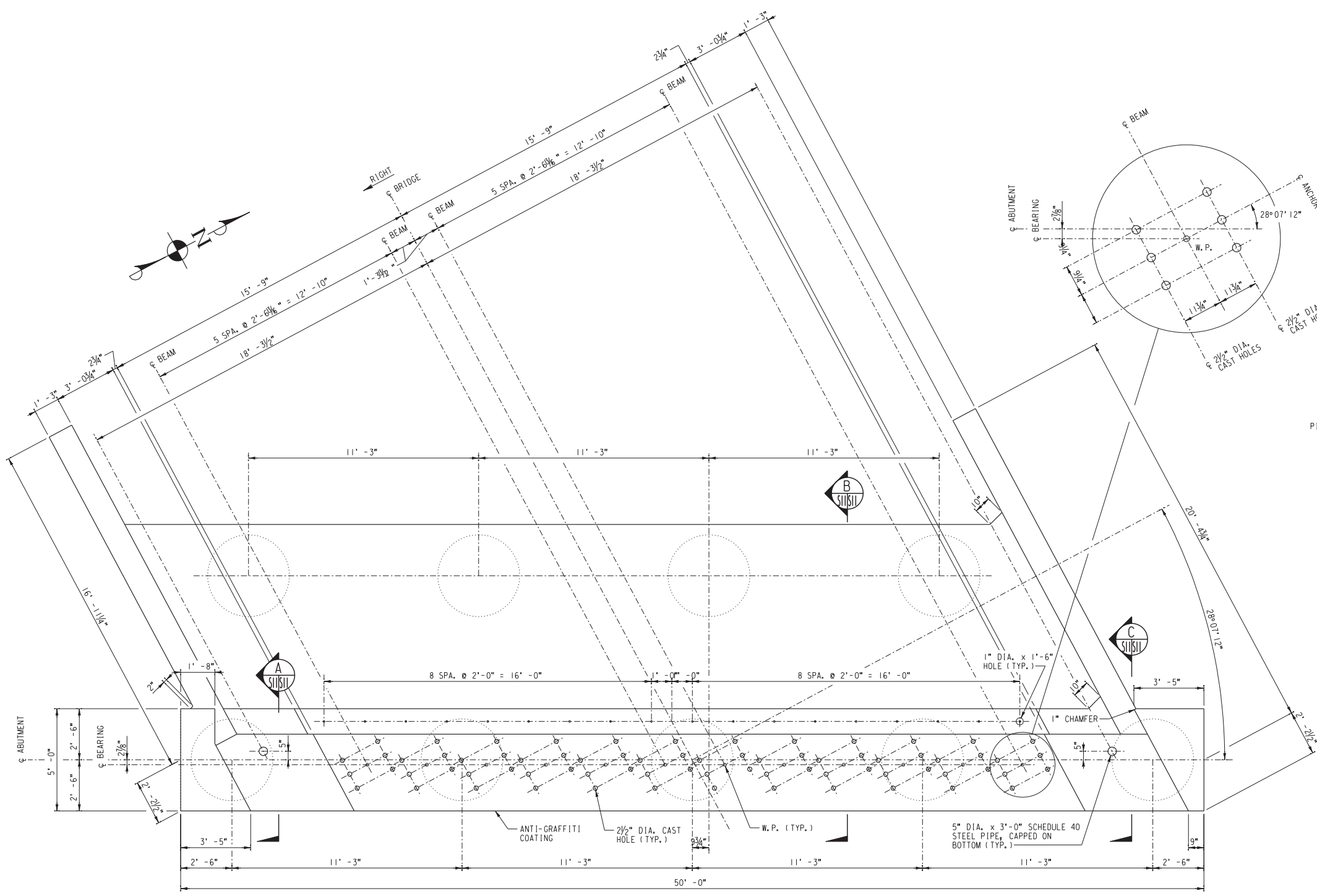
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CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
CIDH PILE DETAILS AND REINFORCING SCHEDULES
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S10
R-4081
SHEET 118 OF 189
FILE NO.

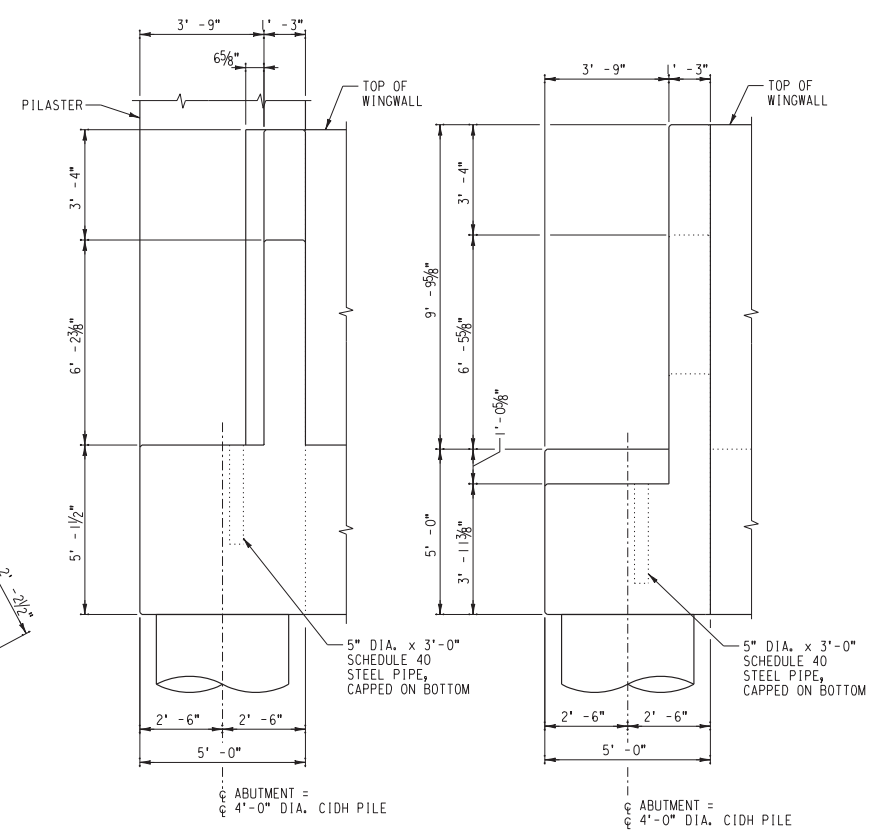
- NOTES:**
- FOR REINFORCING DETAILS, SEE SHEET S13-S15.
 - FOR APPROACH SLAB DETAILS, SEE SHEET S23.
 - APPLY ANTI-GRAFFITI COATING TO FACE OF ABUTMENT ABOVE TOP OF FASCIA WALL.
 - APPROXIMATE AREA OF SURFACE TO BE COVERED = 135 SQ. FT.

MATERIAL SCHEDULE
(ABUTMENT #1)

TOTAL	UNIT	DESCRIPTION
159	CUL.YD.	4000 PSI CONCRETE (PER NOTES, SHEET S3)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S30-S31)
2	EA.	5" DIA. x 3'-0" SCHEDULE 40 STEEL PIPE, CAPPED ON BOTTOM



SECTION B
SCALE: 3/8" = 1'-0"



SECTION A
SCALE: 3/8" = 1'-0"

SECTION C
SCALE: 3/8" = 1'-0"

ABUTMENT #1 FRAMING PLAN
SCALE: 3/8" = 1'-0"

AS BUILT
Gric A. Johnson
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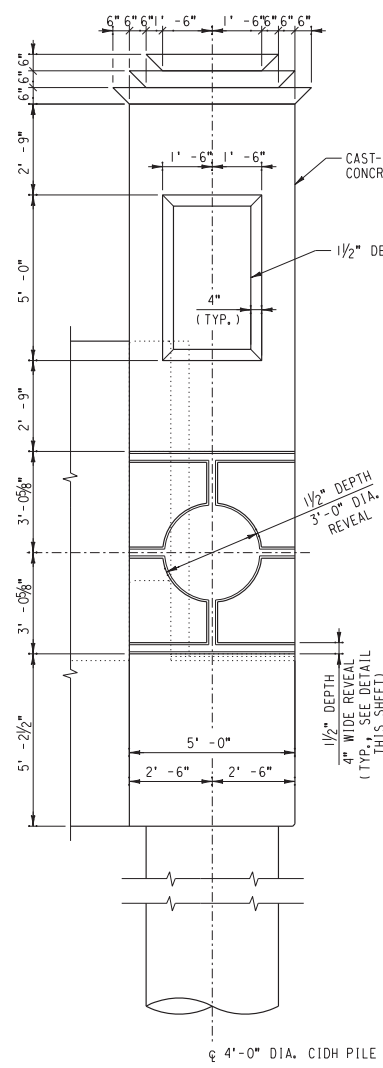
REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

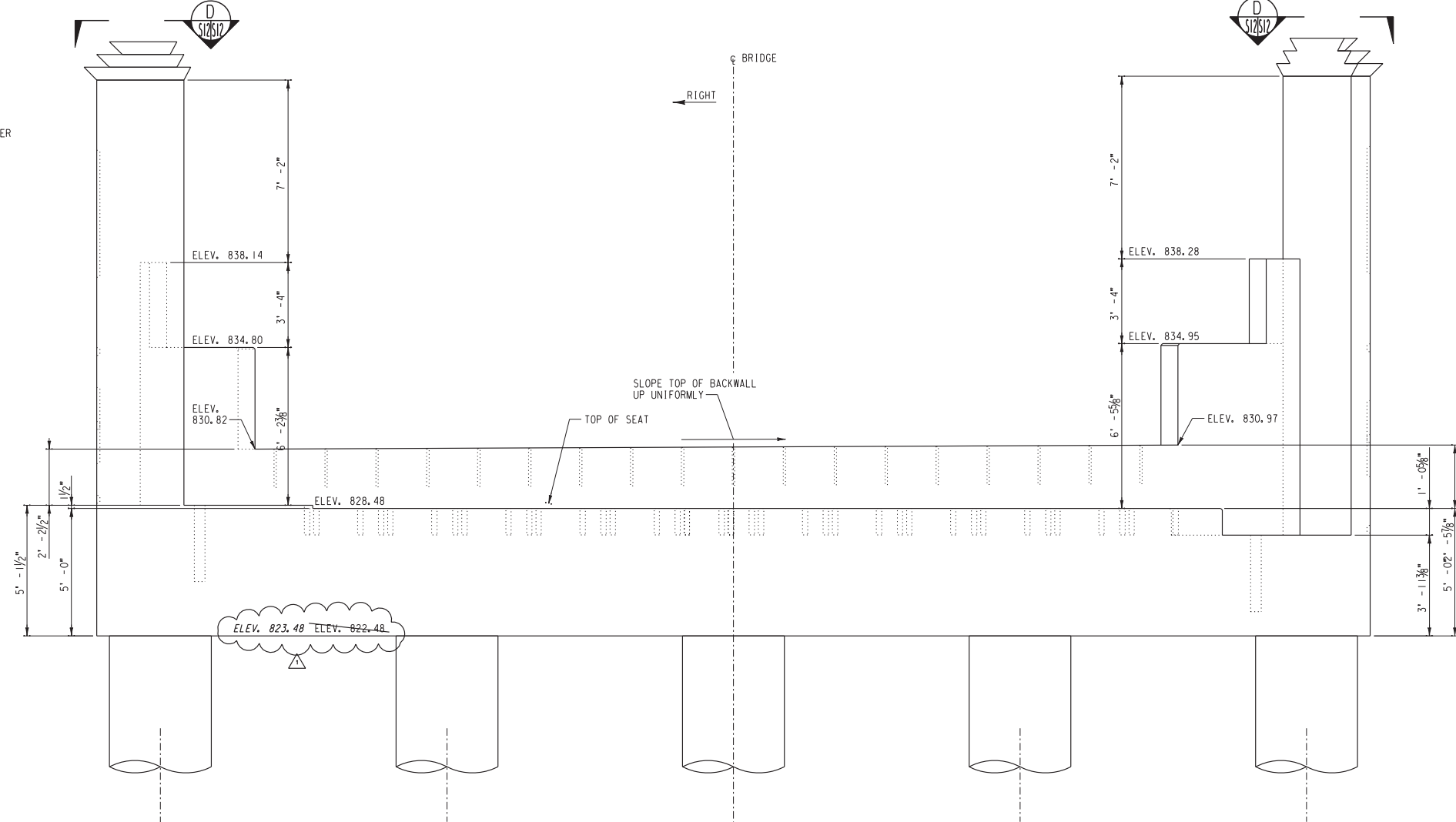
UPRR BRIDGE 55, 16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ABUTMENT #1 FRAMING DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED
VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S11
R-4081
SHEET 119 OF 189
FILE NO.

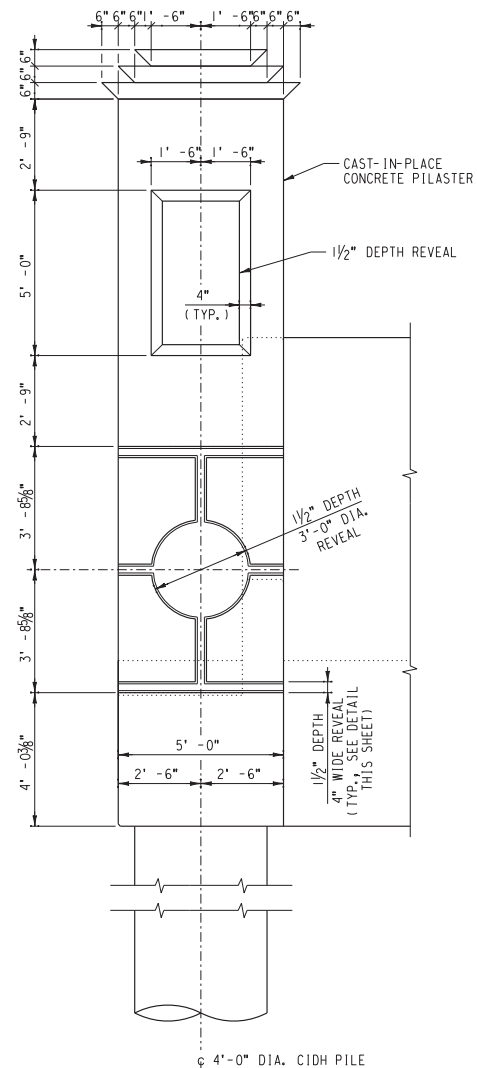
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...S11...Abutment FRamingDetails (1 of 2).dgn



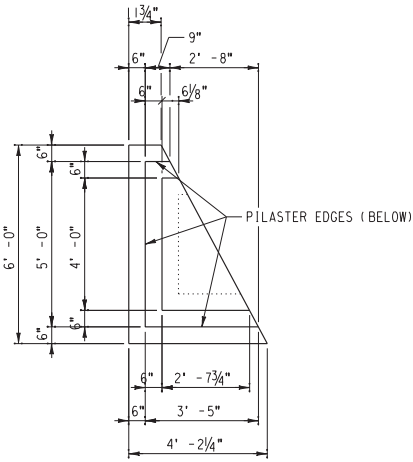
RIGHT END VIEW



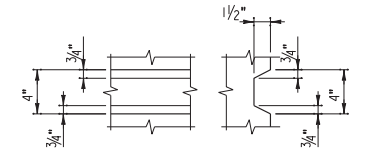
ABUTMENT #1 FRAMING ELEVATION
SCALE: 3/8"=1'-0"
(ONLY FRONT ROW OF CIDH PILES SHOWN)



LEFT END VIEW



VIEW
SCALE: 3/8"=1'-0"
D 512512

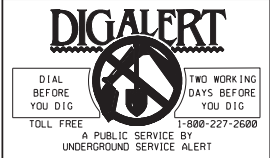


4" WIDE REVEAL DETAIL
SCALE: 1/2"=1'-0"

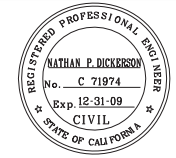
AS BUILT
Corrections by: *Eric A. Russo*
CONTRACT NO. _____
DATE: Nov 16, 2012

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STRUCTURE SHEET NO. S12
R-4081
SHEET 120 OF 189
FILE NO.



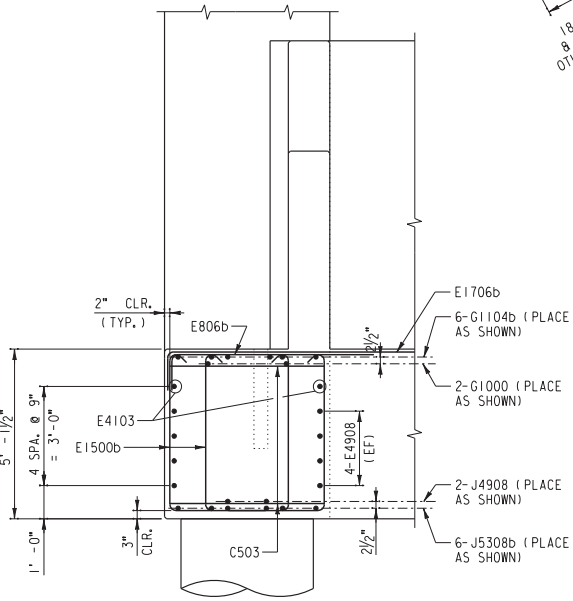
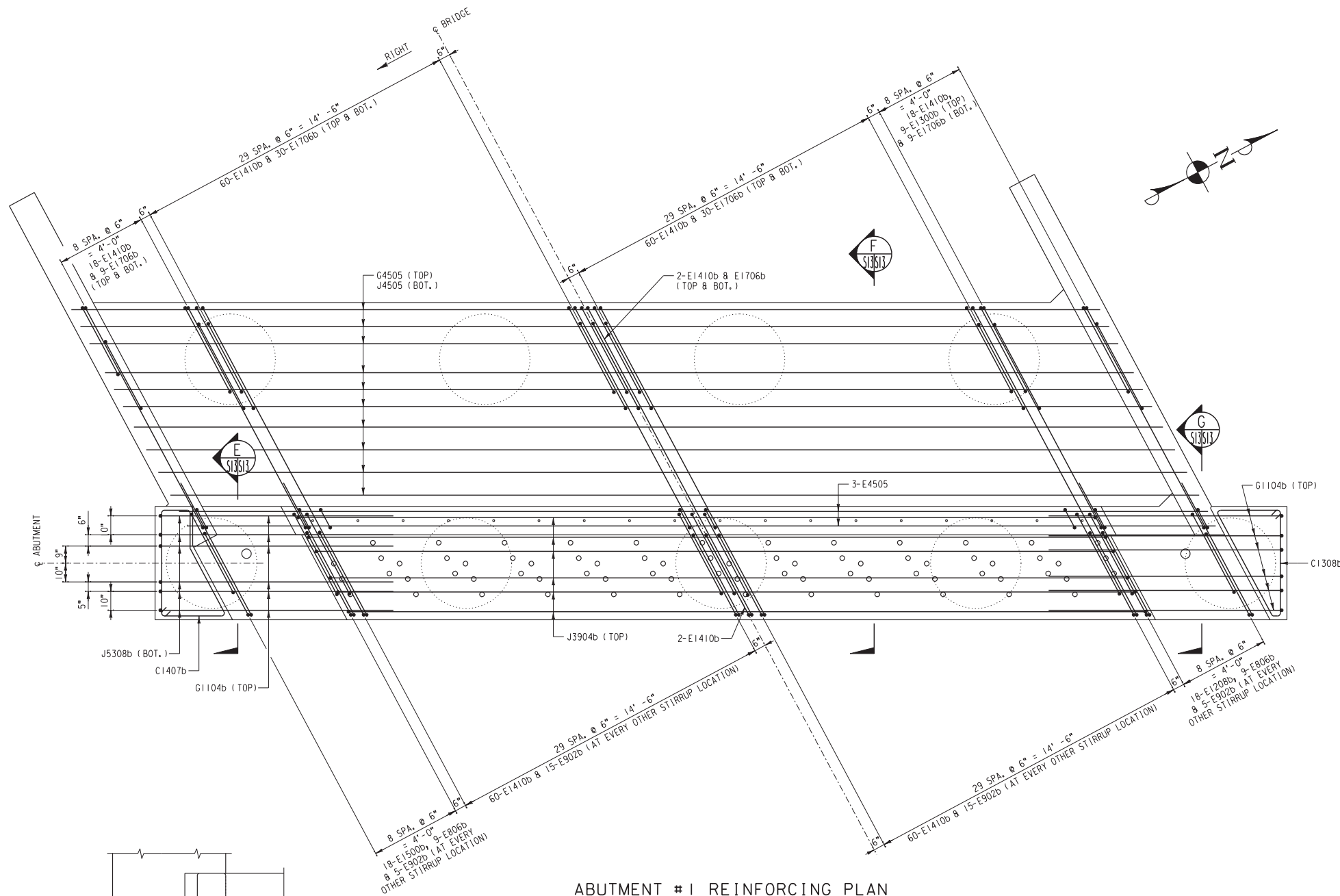
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DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____
ADDENDUM-REVISE BENT CAP BOTTOM ELEV.	10/21/09	
MARK REVISIONS	APPR. DATE	

ABUTMENT #1 FRAMING DETAILS (2 OF 2)
HORIZ. SCALE: AS NOTED
VERT. SCALE: AS NOTED

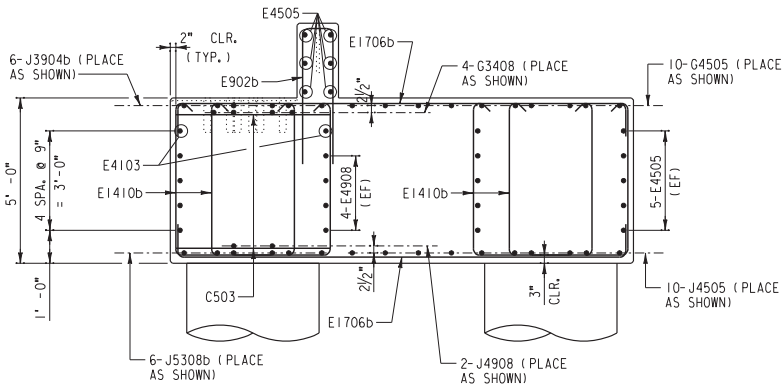
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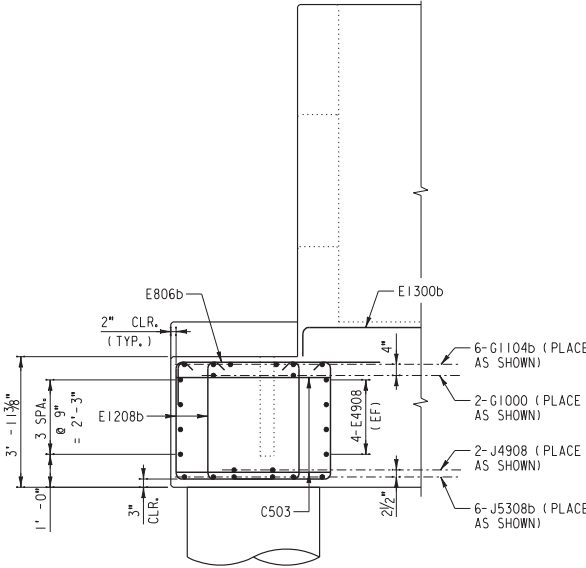
SECTION E
SCALE: 3/8" = 1'-0"

ABUTMENT #1 REINFORCING PLAN

SCALE: 3/8" = 1'-0"



SECTION F
SCALE: 3/8" = 1'-0"



SECTION G
SCALE: 3/8" = 1'-0"

- NOTES:
1. FOR CONCRETE NOTES, SEE SHEET S3.
 2. FOR REINFORCING SCHEDULE, SEE SHEET S30-S31.
 3. ADJUST STIRRUP LOCATIONS AS MINIMALLY AS POSSIBLE TO CLEAR ANCHOR ROD HOLES AS REQUIRED.

...S13 - Abutment1ReinforcingDetail(1 of 2).dgn 10/16/12, 09:52 AM

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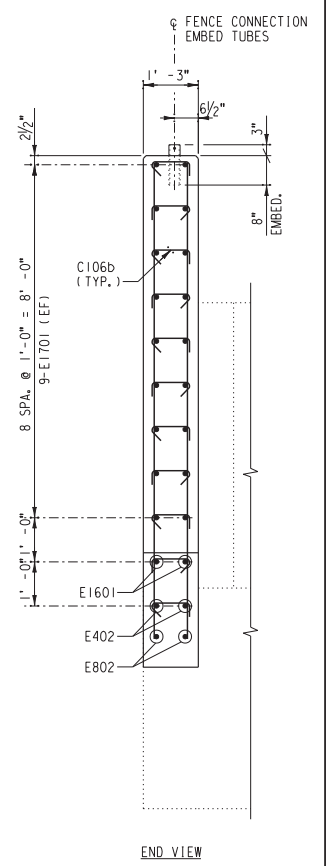
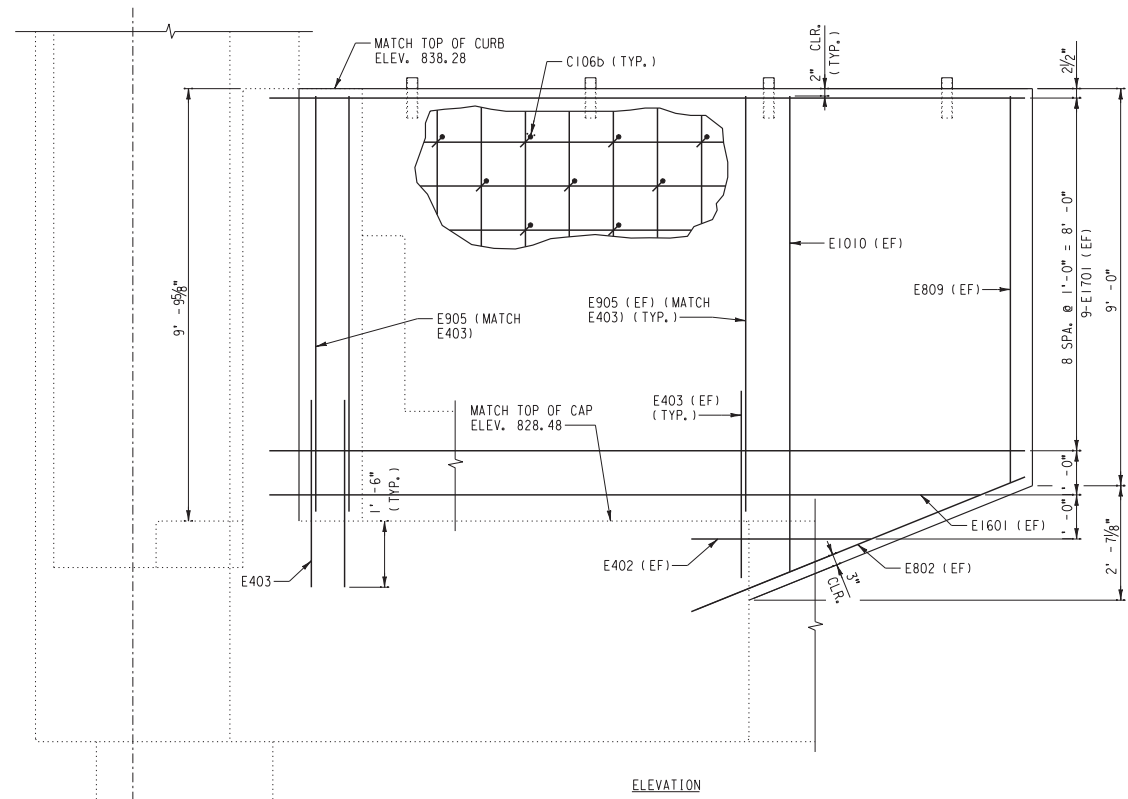
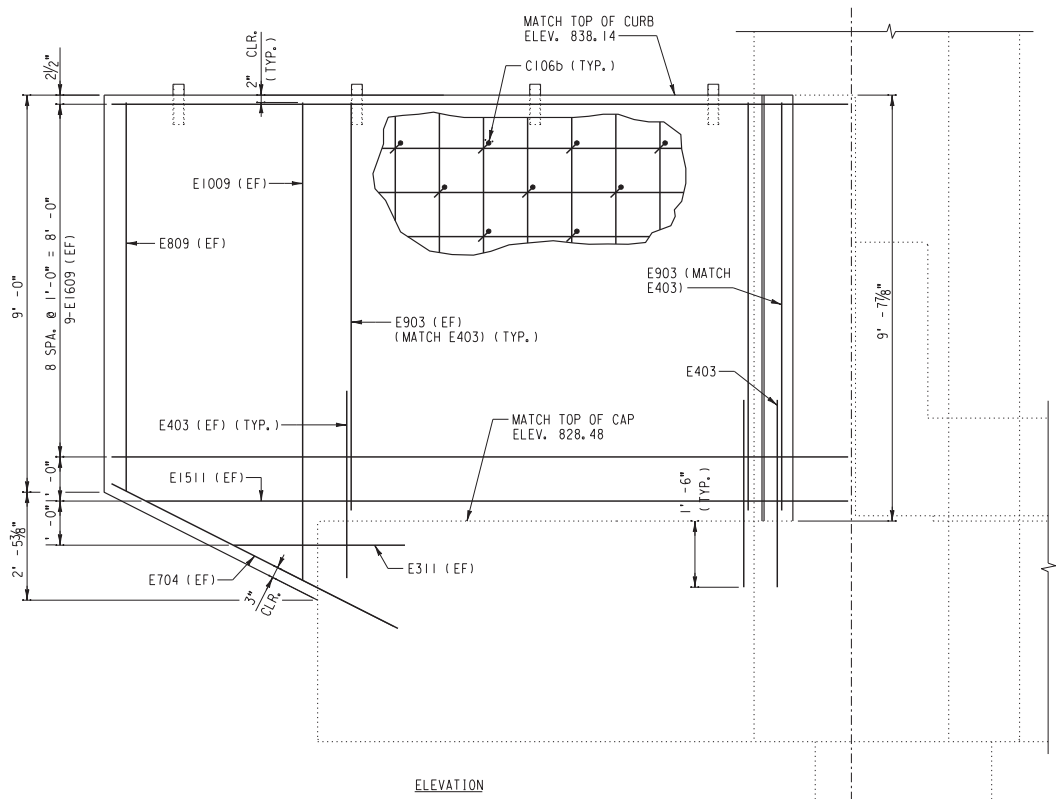
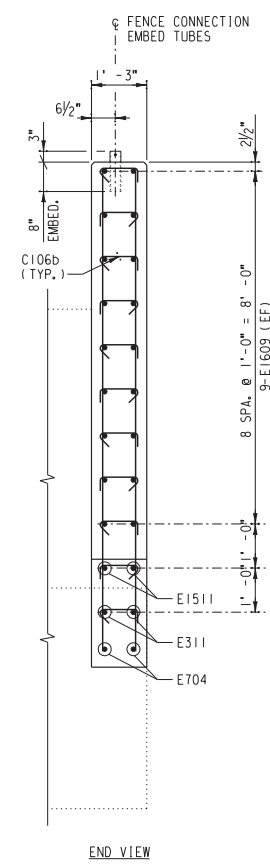
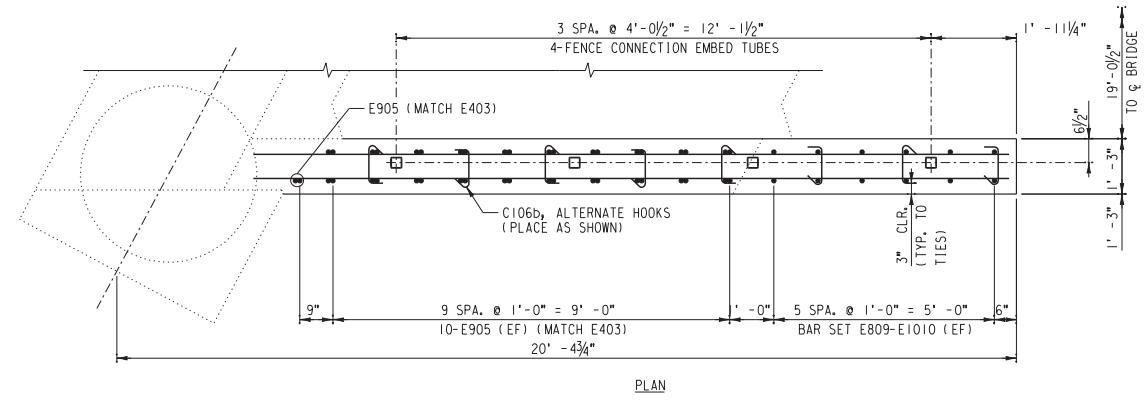
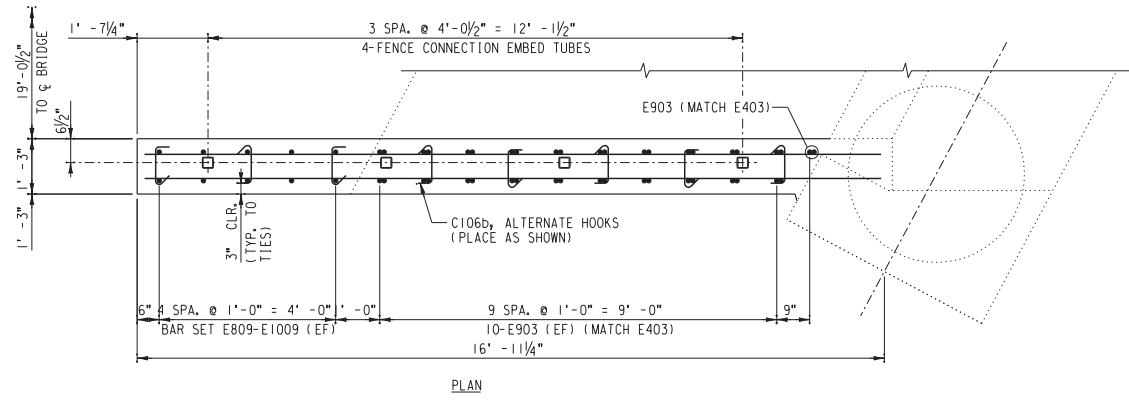
REGISTERED PROFESSIONAL ENGINEER
 NATHAN P. DICKERSON
 No. C 71974
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

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 MAGNOLIA AVENUE UNDERPASS
 ABUTMENT #1 REINFORCING DETAILS (1 OF 2)
 HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S13
 R-4081
 SHEET 121 OF 189
 FILE NO.



SOUTHWEST WINGWALL - ABUTMENT #1
 SCALE: 1/2" = 1'-0" (LOOKING NORTH)

NORTHWEST WINGWALL - ABUTMENT #1
 SCALE: 1/2" = 1'-0" (LOOKING SOUTH)

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Eric J. Russo
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 CONTRACT NO.
 DATE Nov 16, 2012

10/16/12, 09:52 AM ...\\S15_Abument1\WingwallDetails.dgn

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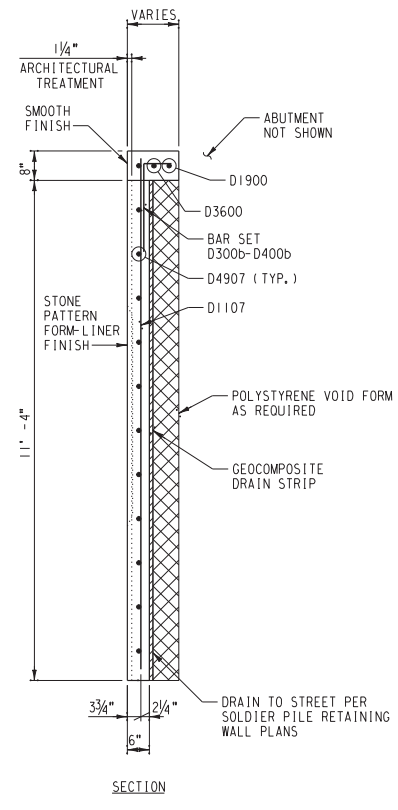
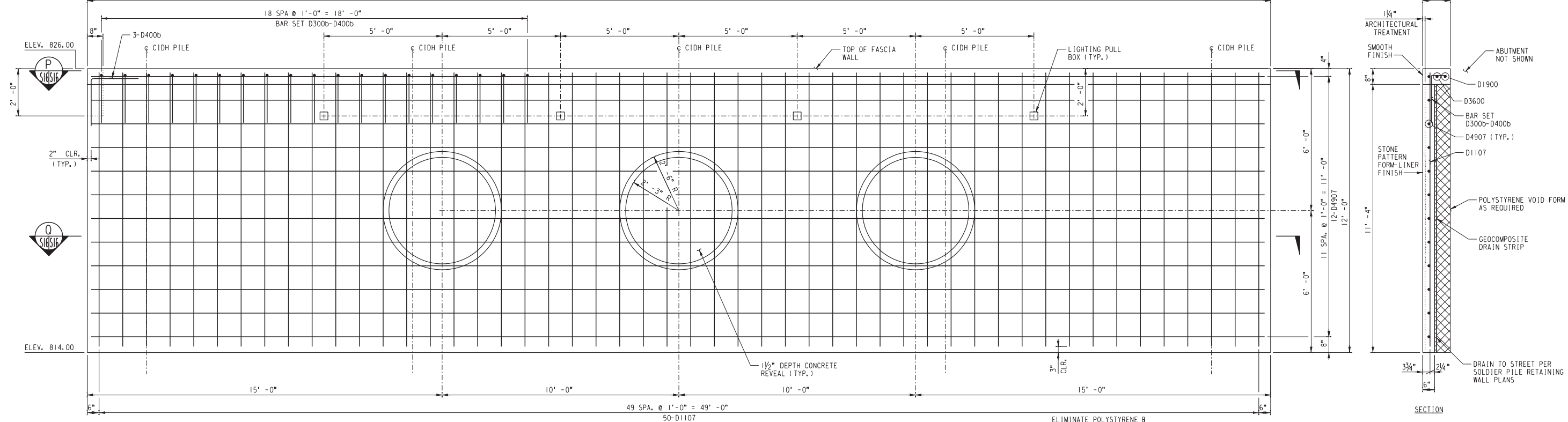
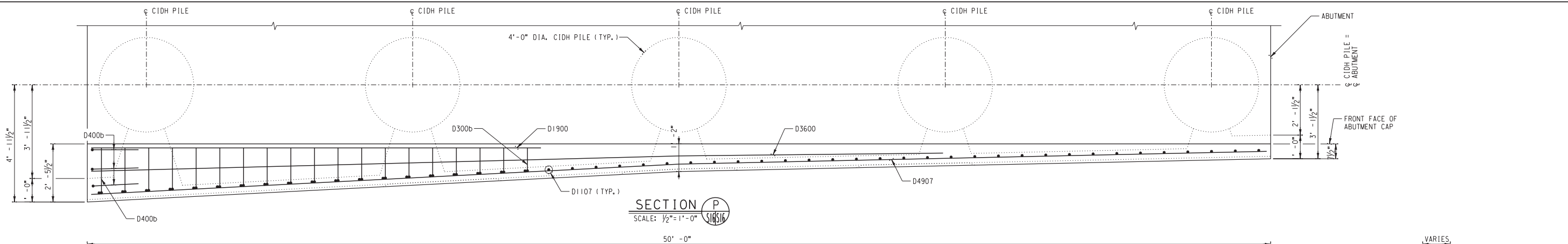
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MARK	REVISIONS	APPR.	DATE

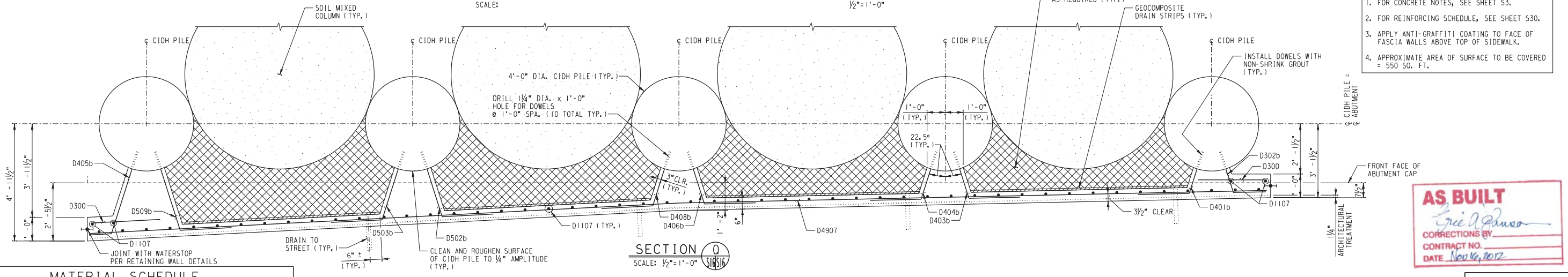
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 CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
 ABUTMENT #1 WINGWALL FRAMING AND REINFORCING DETAILS
 HORIZ. SCALE: 1/2" = 1'-0" VERT. SCALE: 1/2" = 1'-0"

STRUCTURE SHEET NO. S15
R-4081
SHEET 123 OF 189
FILE NO.



FASCIA WALL REINFORCING ELEVATION - ABUTMENT #1
SCALE: 1/2" = 1'-0"



- NOTES:**
1. FOR CONCRETE NOTES, SEE SHEET S3.
 2. FOR REINFORCING SCHEDULE, SEE SHEET S30.
 3. APPLY ANTI-GRAFFITI COATING TO FACE OF FASCIA WALLS ABOVE TOP OF SIDEWALK.
 4. APPROXIMATE AREA OF SURFACE TO BE COVERED = 550 SQ. FT.

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CONTRACT NO.
DATE Nov 16, 2012

MATERIAL SCHEDULE
(ABUTMENT #1 FASCIA WALL)

TOTAL	UNIT	DESCRIPTION
20.3	CU. YD.	4000 PSI CONCRETE (1.7 CU. YD. PLAIN AND 18.6 CU. YD. INTEGRAL COLORED)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S30)
J	LOT	VOID FORM
J	LOT	GEOCOMPOSITE DRAIN STRIPS
J	LOT	DRAINAGE MATERIALS
J	LOT	NON-SHRINK GROUT

SECTION Q
SCALE: 1/2" = 1'-0"

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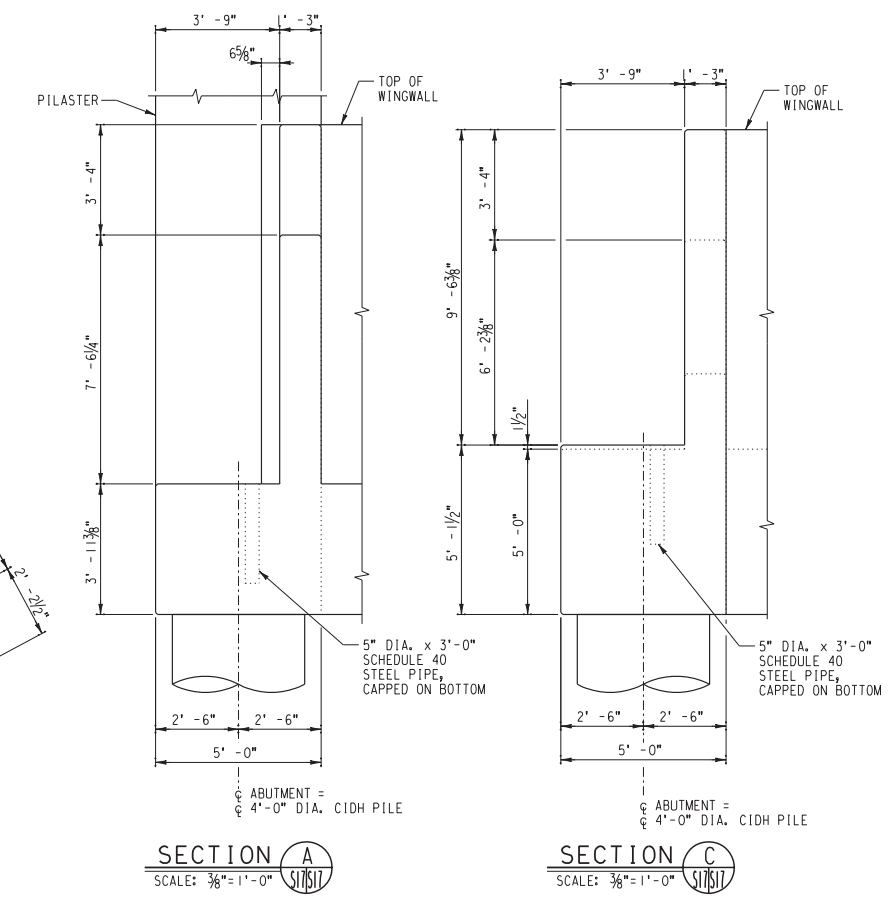
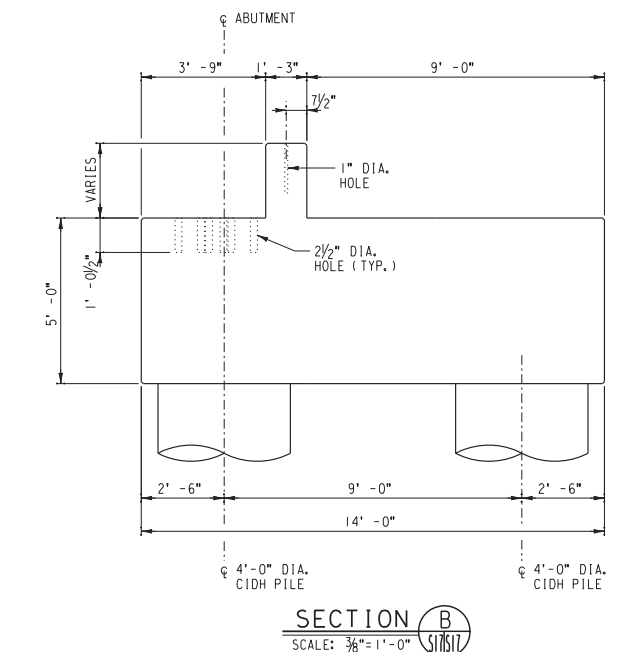
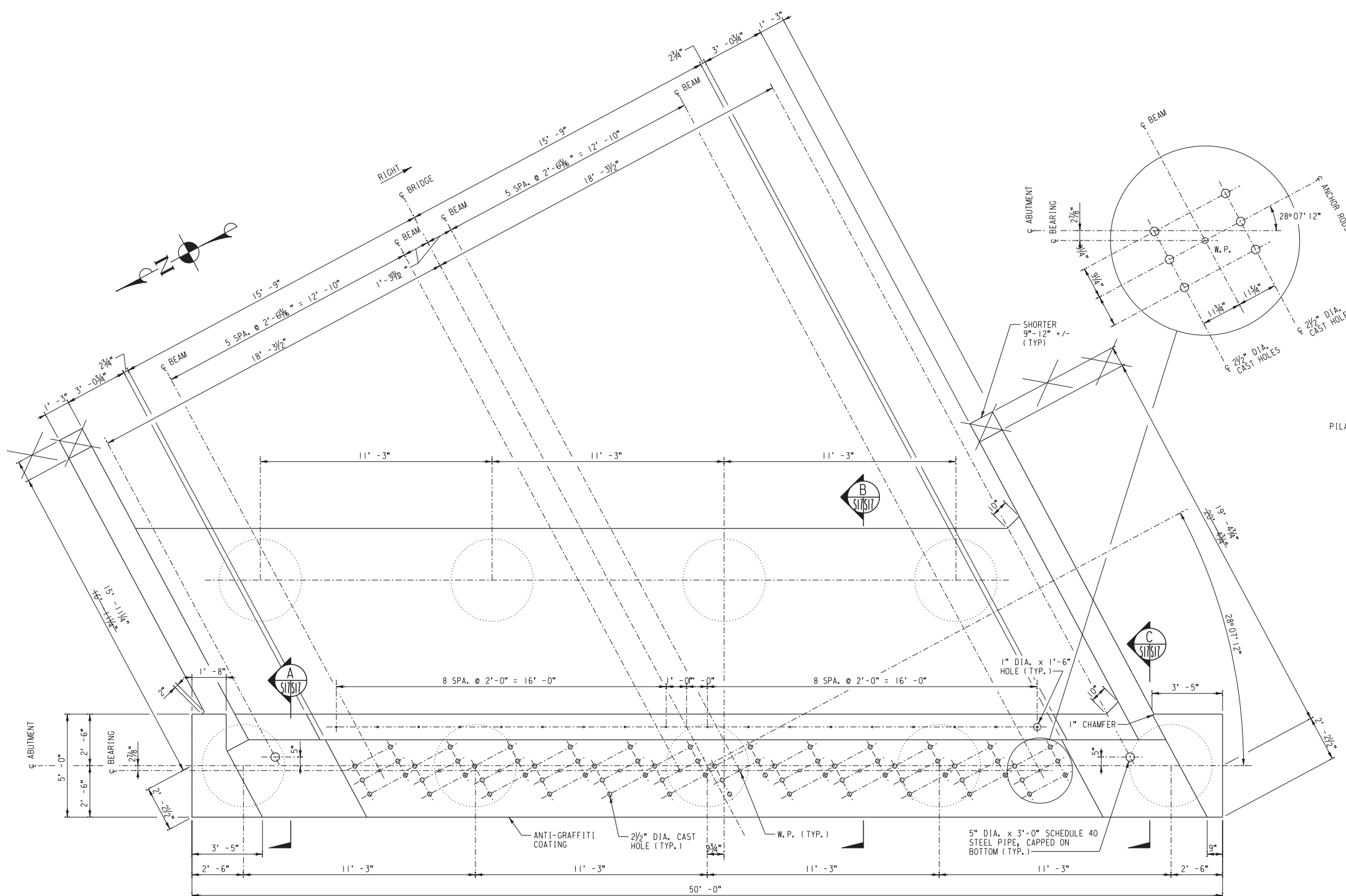
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MAGNOLIA AVENUE UNDERPASS
ABUTMENT #1 FASCIA WALL FRAMING AND REINFORCING DETAILS
HORIZ. SCALE: 1/2" = 1'-0" VERT. SCALE: 1/2" = 1'-0"

STRUCTURE SHEET NO. S16
R-4081
SHEET 124 OF 189
FILE NO.

...\\S16_Abutment1\FasciaWallRein\Drawings\Drawings.dgn 10/16/12, 09:52 AM

- NOTES:**
- FOR REINFORCING DETAILS, SEE SHEET S19-S21.
 - FOR APPROACH SLAB DETAILS, SEE SHEET S23.
 - APPLY ANTI-GRAFFITI COATING TO FACE OF ABUTMENT ABOVE TOP OF FASCIA WALL.
 - APPROXIMATE AREA OF SURFACE TO BE COVERED = 147 SQ. FT.

MATERIAL SCHEDULE (ABUTMENT #3)		
TOTAL	UNIT	DESCRIPTION
159	CUL.YD.	4000 PSI CONCRETE (PER NOTES, SHEET S3)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S30-S31)
2	EA.	5" DIA. x 3'-0" SCHEDULE 40 STEEL PIPE, CAPPED ON BOTTOM



ABUTMENT #3 FRAMING PLAN
SCALE: 3/8" = 1'-0"

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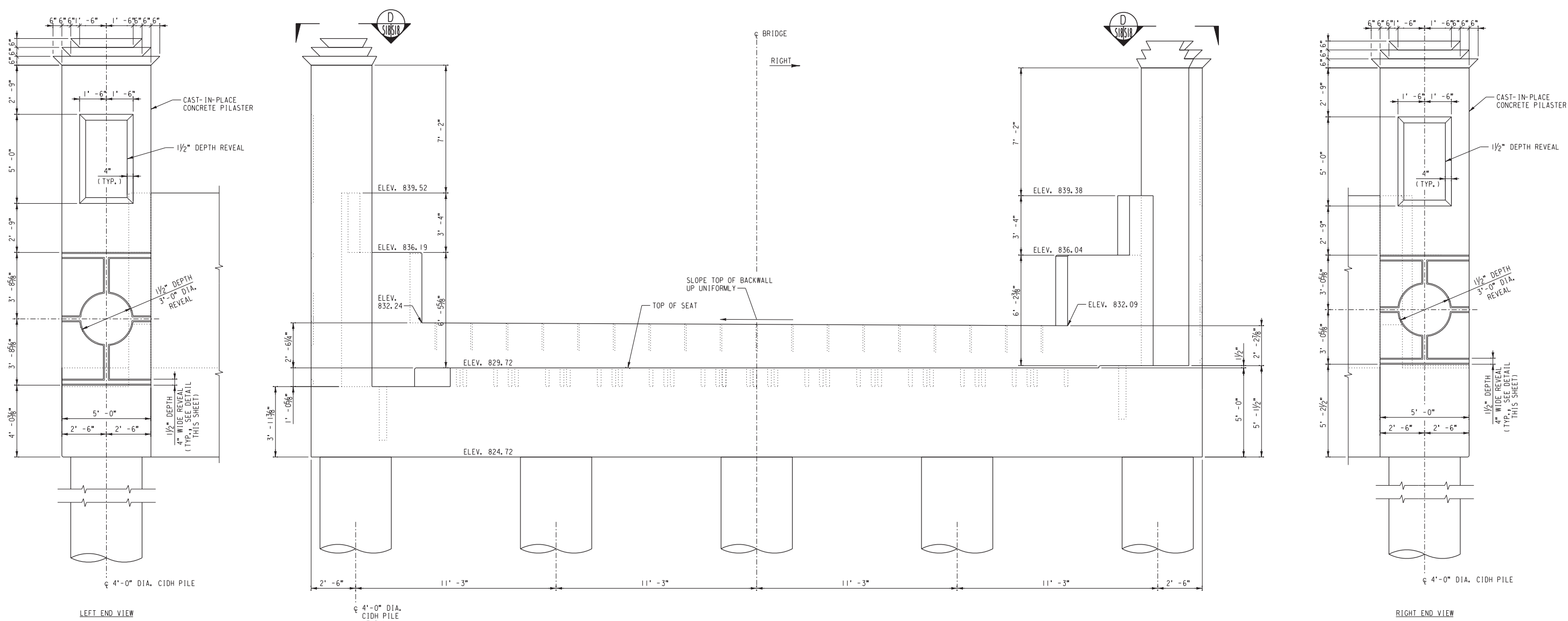
MARK	REVISIONS	APPR.	DATE

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ABUTMENT #3 FRAMING DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED
VERT. SCALE: AS NOTED

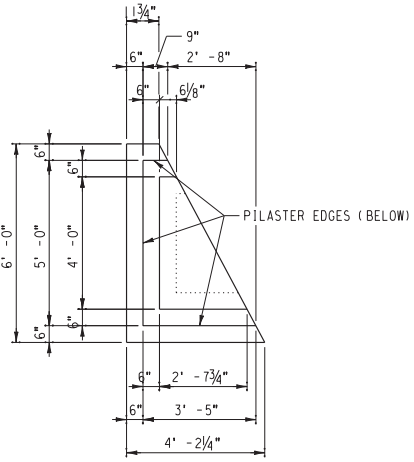
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R-4081
SHEET 125 OF 189
FILE NO.

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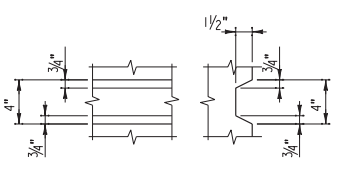
... \S18 - Abutment3 FramingDetail(2 of 2).DGN 10/16/12, 09:52 AM



ABUTMENT #3 FRAMING ELEVATION
 SCALE: 3/8"=1'-0"
 (ONLY FRONT ROW OF CIDH PILES SHOWN)



VIEW D
 SCALE: 3/8"=1'-0"
 S1812



4" WIDE REVEAL DETAIL
 SCALE: 1/2"=1'-0"

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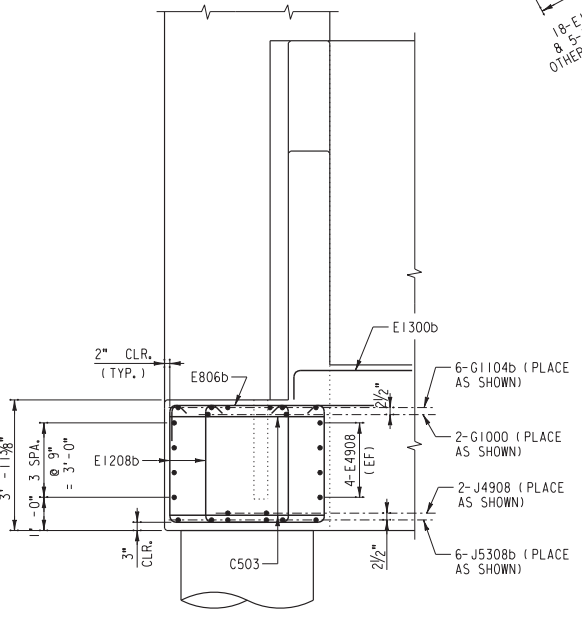
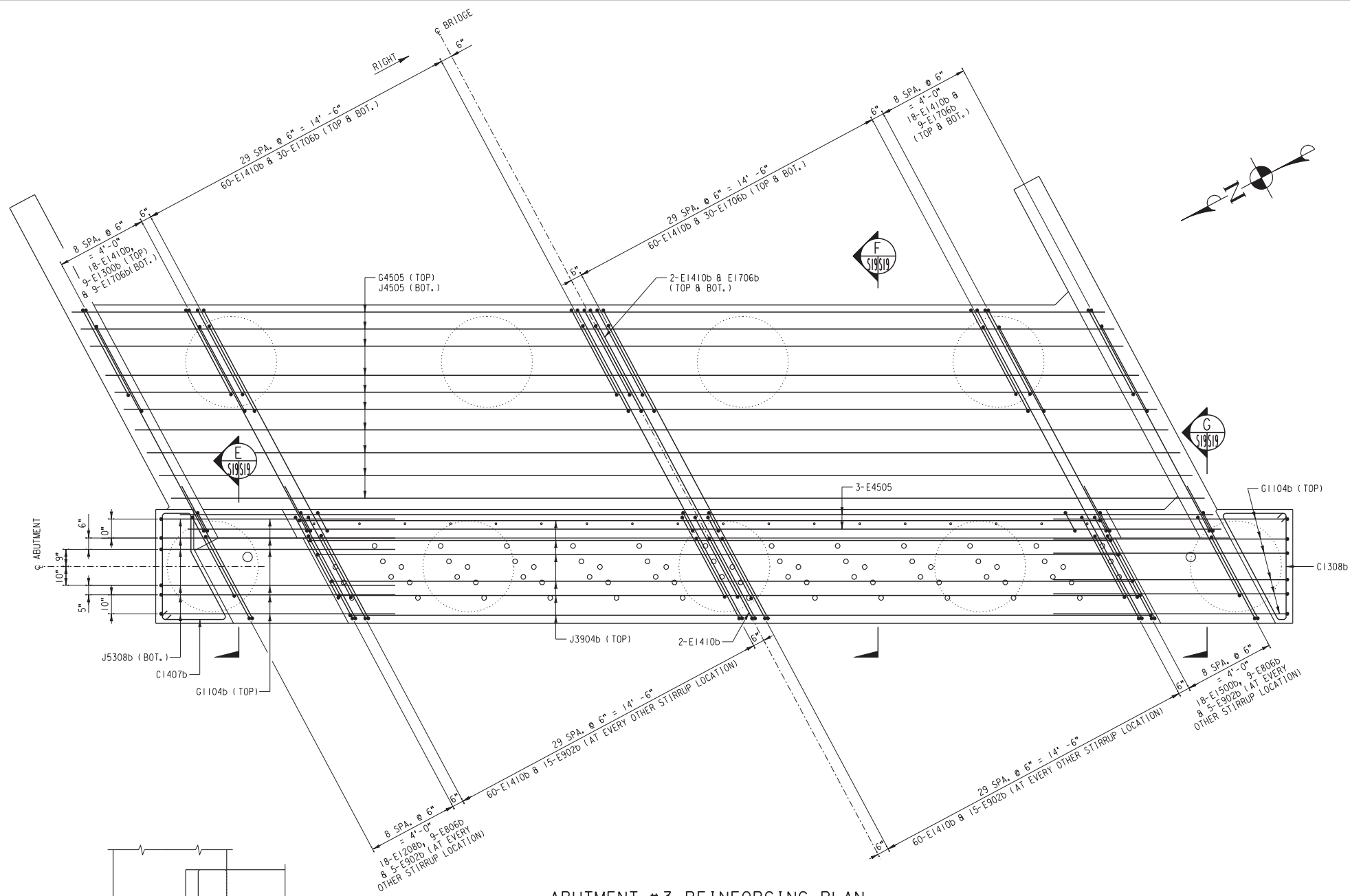
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 ABUTMENT #3 FRAMING DETAILS (2 OF 2)
 HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

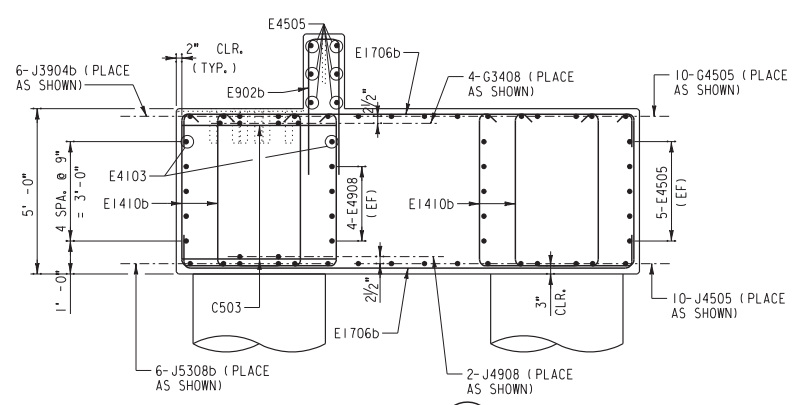
STRUCTURE SHEET NO. S18
 R-4081
 SHEET 126 OF 189
 FILE NO.

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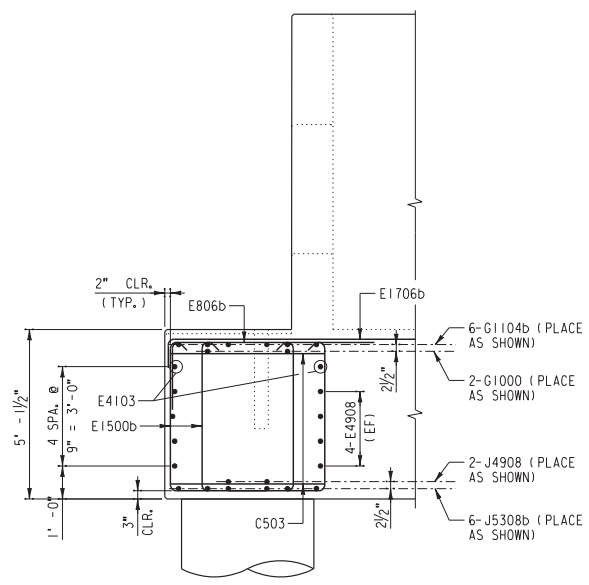


SECTION E
SCALE: 3/8"=1'-0"

ABUTMENT #3 REINFORCING PLAN
SCALE: 3/8"=1'-0"



SECTION F
SCALE: 3/8"=1'-0"



SECTION G
SCALE: 3/8"=1'-0"

- NOTES:
1. FOR CONCRETE NOTES, SEE SHEET S3.
 2. FOR REINFORCING SCHEDULE, SEE SHEET S30-S31.
 3. ADJUST STIRRUP LOCATIONS AS MINIMALLY AS POSSIBLE TO CLEAR ANCHOR ROD HOLES AS REQUIRED.

AS BUILT
Eric Johnson
CORRECTIONS BY
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DATE *Nov 6, 2012*

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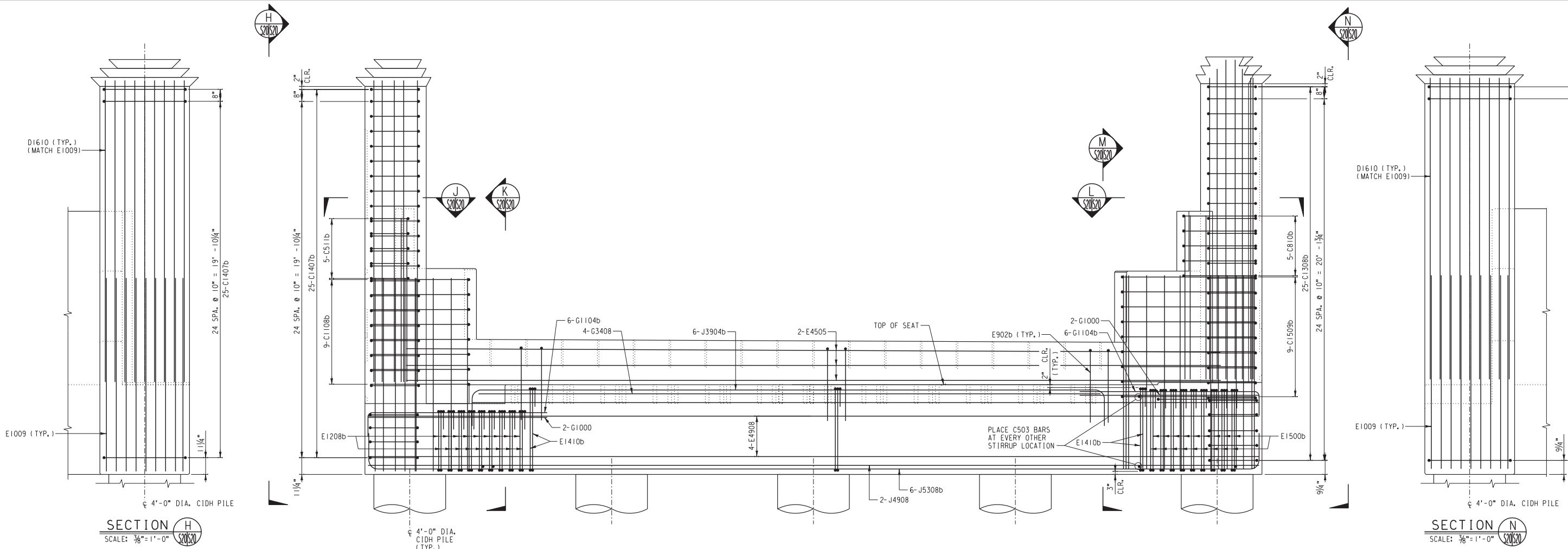
REGISTERED PROFESSIONAL ENGINEER
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Exp. 12-31-09
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STATE OF CALIFORNIA

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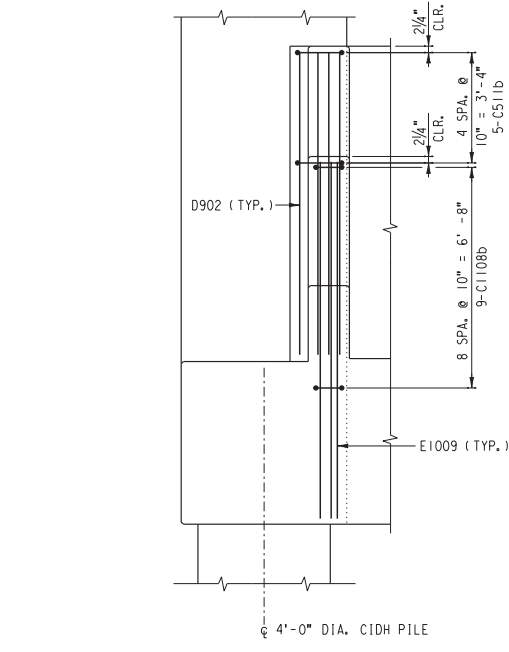
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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ABUTMENT #3 REINFORCING DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

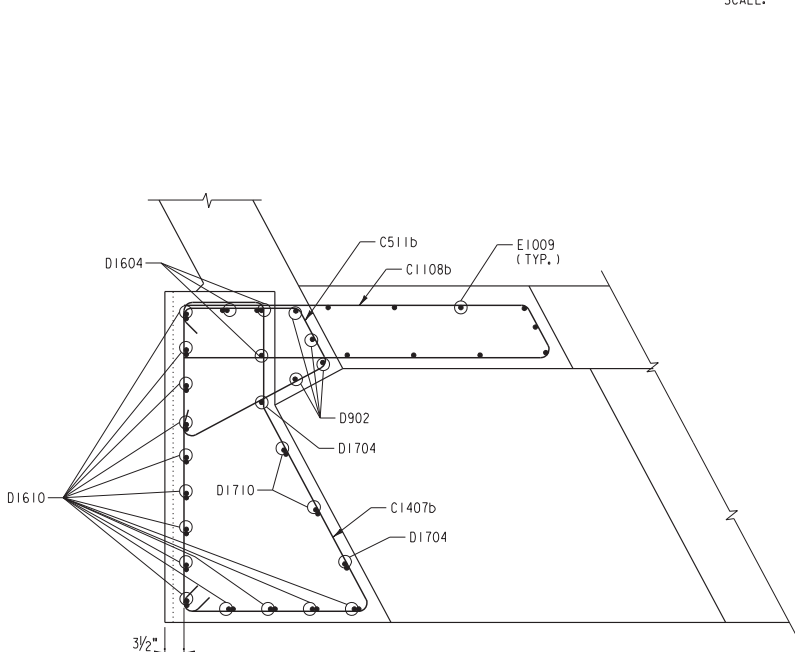
STRUCTURE SHEET NO. S19
R-4081
SHEET 127 OF 189
FILE NO.



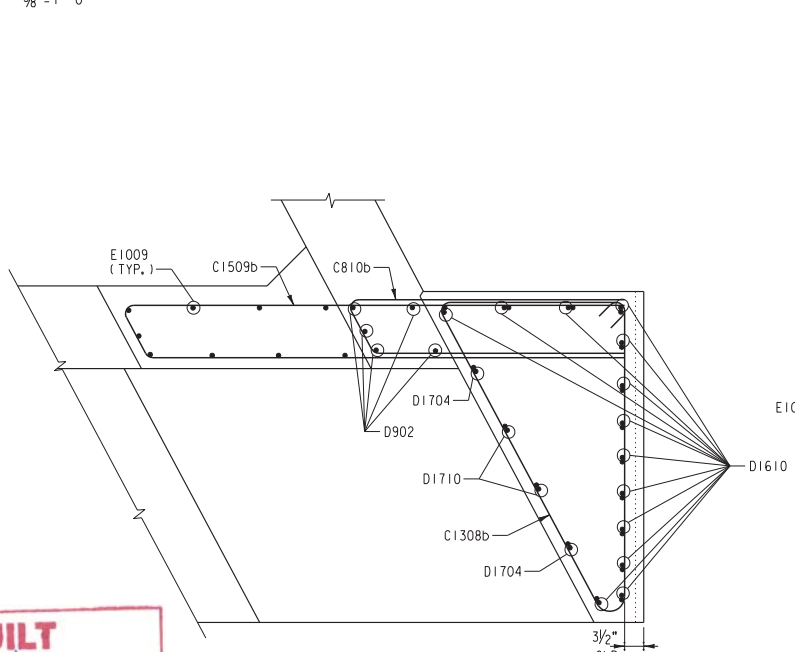
ABUTMENT #3 REINFORCING ELEVATION
SCALE: (ONLY FRONT REINFORCING SHOWN) 3/8"=1'-0"



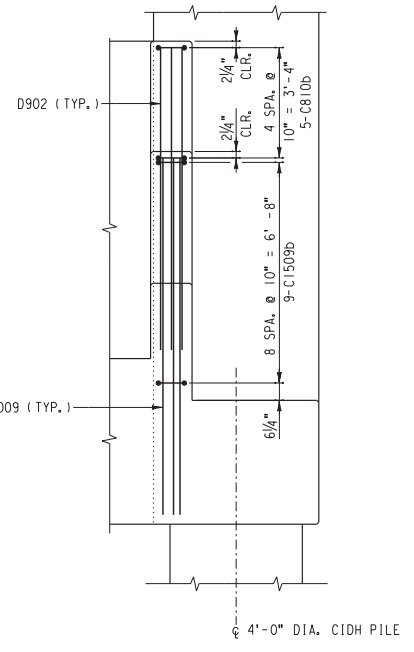
SECTION H
SCALE: 3/8"=1'-0"



SECTION J
SCALE: 3/4"=1'-0"



SECTION L
SCALE: 3/4"=1'-0"



SECTION M
SCALE: 3/8"=1'-0"

AS BUILT
Eric Johnson
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DATE *Nov 12, 2012*

... \S20_Abutment3ReinforcingDetails(2of2).dgn 10/16/12, 09:52 AM

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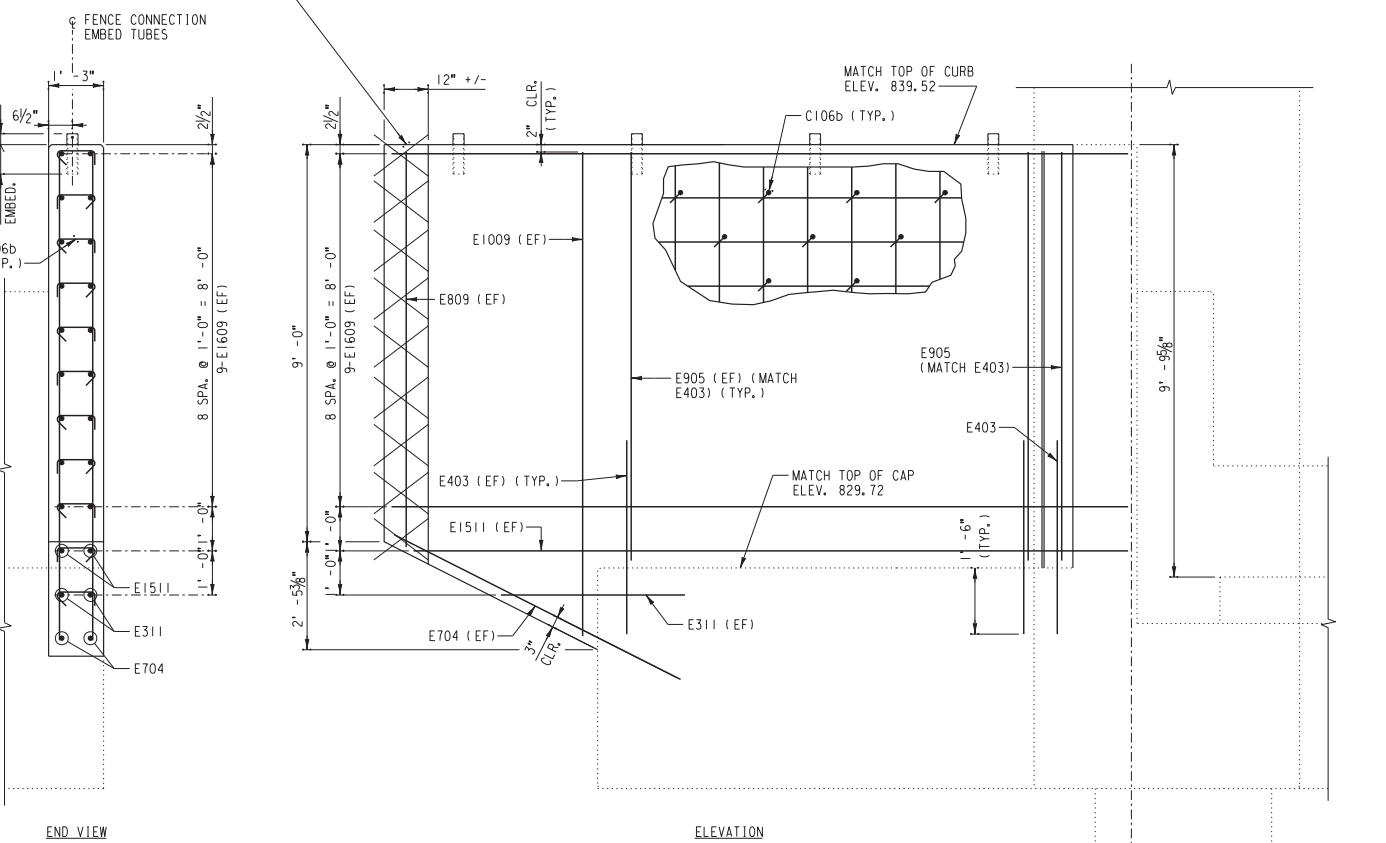
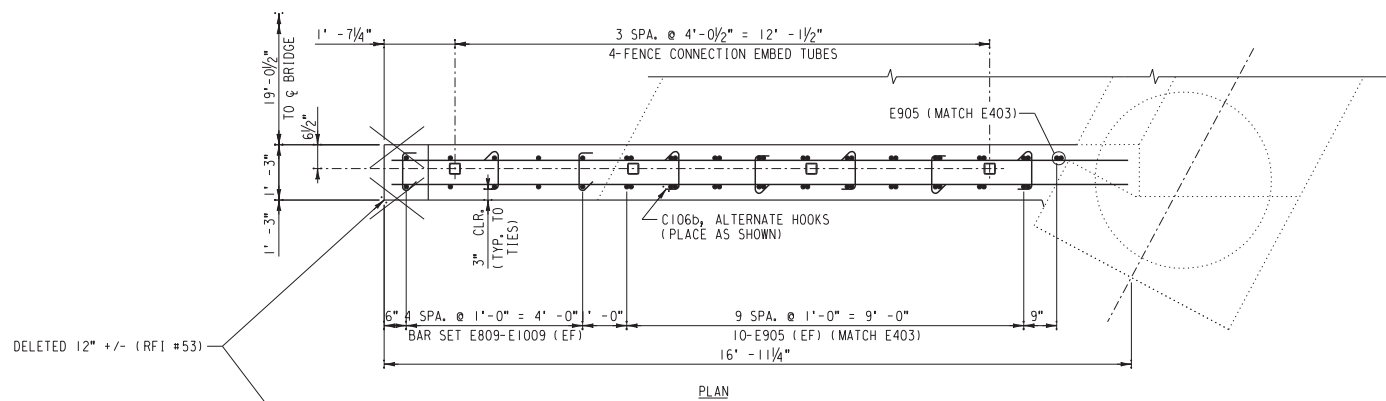
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NATHAN P. DICKERSON
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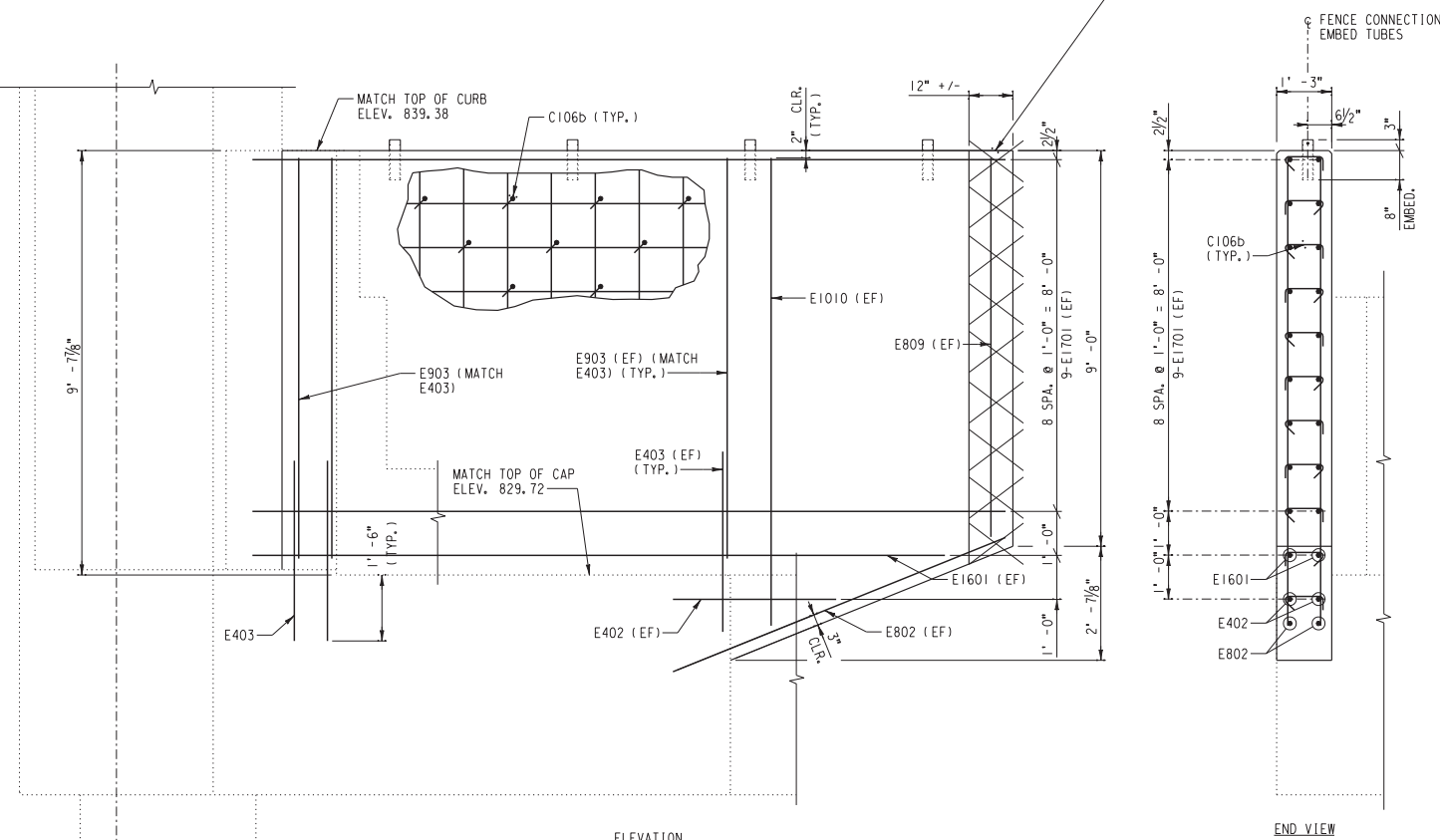
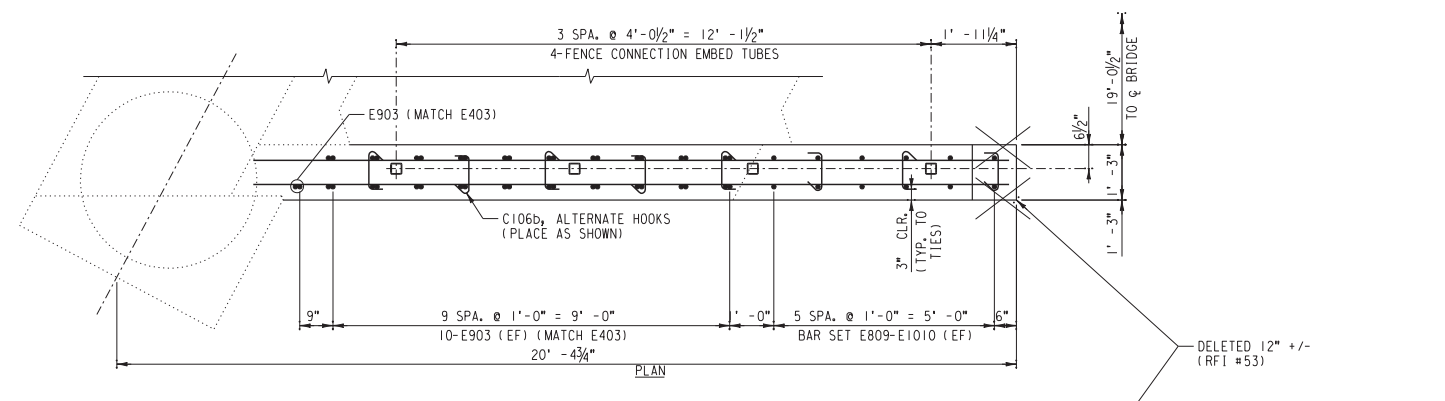
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ABUTMENT #3 REINFORCING DETAILS (2 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S20
R-4081
SHEET 128 OF 189
FILE NO.



NORTHEAST WINGWALL - ABUTMENT #3
 SCALE: 1/2" = 1'-0"
 (LOOKING SOUTH)



SOUTHEAST WINGWALL - ABUTMENT #3
 SCALE: 1/2" = 1'-0"
 (LOOKING NORTH)

AS BUILT
Eric J. Russo
 CORRECTIONS BY
 CONTRACT NO.
 DATE Nov 16, 2012

...S21...Abutment3WingwallFramingandReinforcingDetails18x24_09:53 AM

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 DATE _____

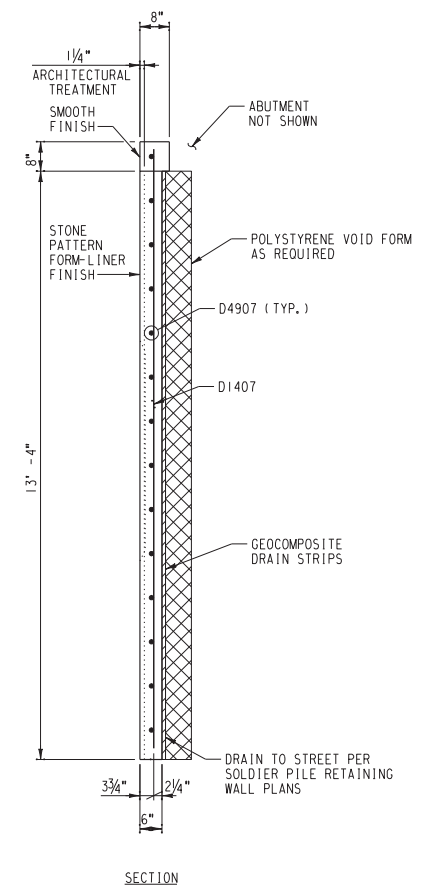
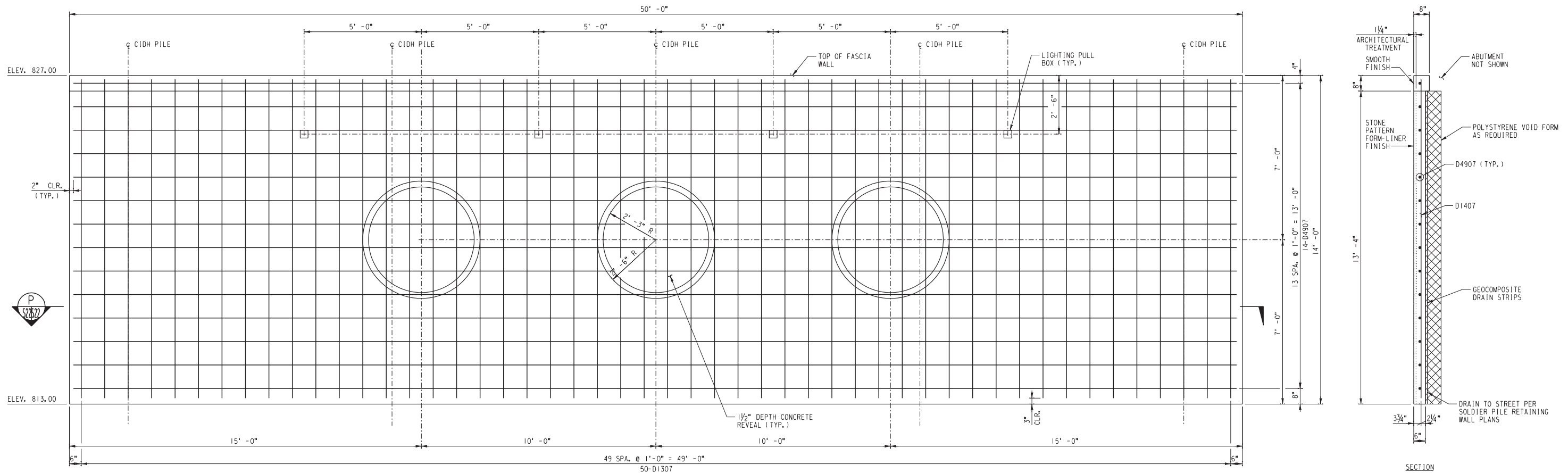
REGISTERED PROFESSIONAL ENGINEER
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 No. C 71974
 Exp. 12-31-09
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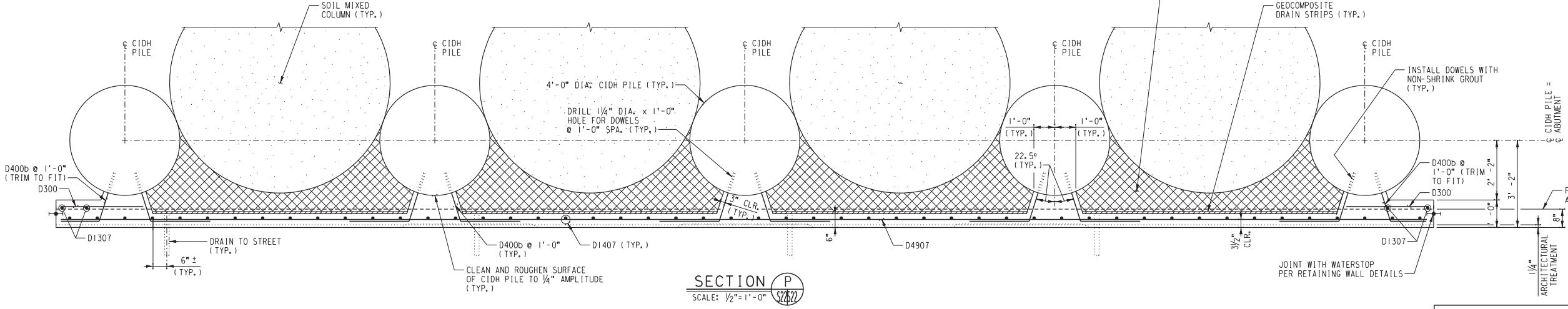
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

UPRR BRIDGE 55.16 LOS ANGELES SUB.
 CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
 ABUTMENT #3 WINGWALL FRAMING AND REINFORCING DETAILS
 HORIZ. SCALE: 1/2" = 1'-0" VERT. SCALE: 1/2" = 1'-0"

STRUCTURE SHEET NO. S21
R-4081
 SHEET 129 of 189
 FILE NO.



FASCIA WALL REINFORCING ELEVATION - ABUTMENT #3
SCALE: 1/2" = 1'-0"



SECTION P
SCALE: 1/2" = 1'-0"

MATERIAL SCHEDULE (ABUTMENT #3 FASCIA WALL)		
TOTAL	UNIT	DESCRIPTION
18.4	CU. YD.	4000 PSI CONCRETE (0.8 CU. YD. PLAIN AND 17.6 CU. YD. INTEGRAL COLORED)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S30)
J	LOT	VOID FORM
J	LOT	GEOCOMPOSITE DRAIN STRIPS
J	LOT	DRAINAGE MATERIALS
J	LOT	NON-SHRINK GROUT

- NOTES:**
- FOR CONCRETE NOTES, SEE SHEET S3.
 - FOR REINFORCING SCHEDULE, SEE SHEET S30.
 - APPLY ANTI-GRAFFITI COATING TO FACE OF FASCIA WALLS ABOVE TOP OF SIDEWALK.
 - APPROXIMATE AREA OF SURFACE TO BE COVERED = 650 SQ. FT.

AS BUILT
Eric J. Russo
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012

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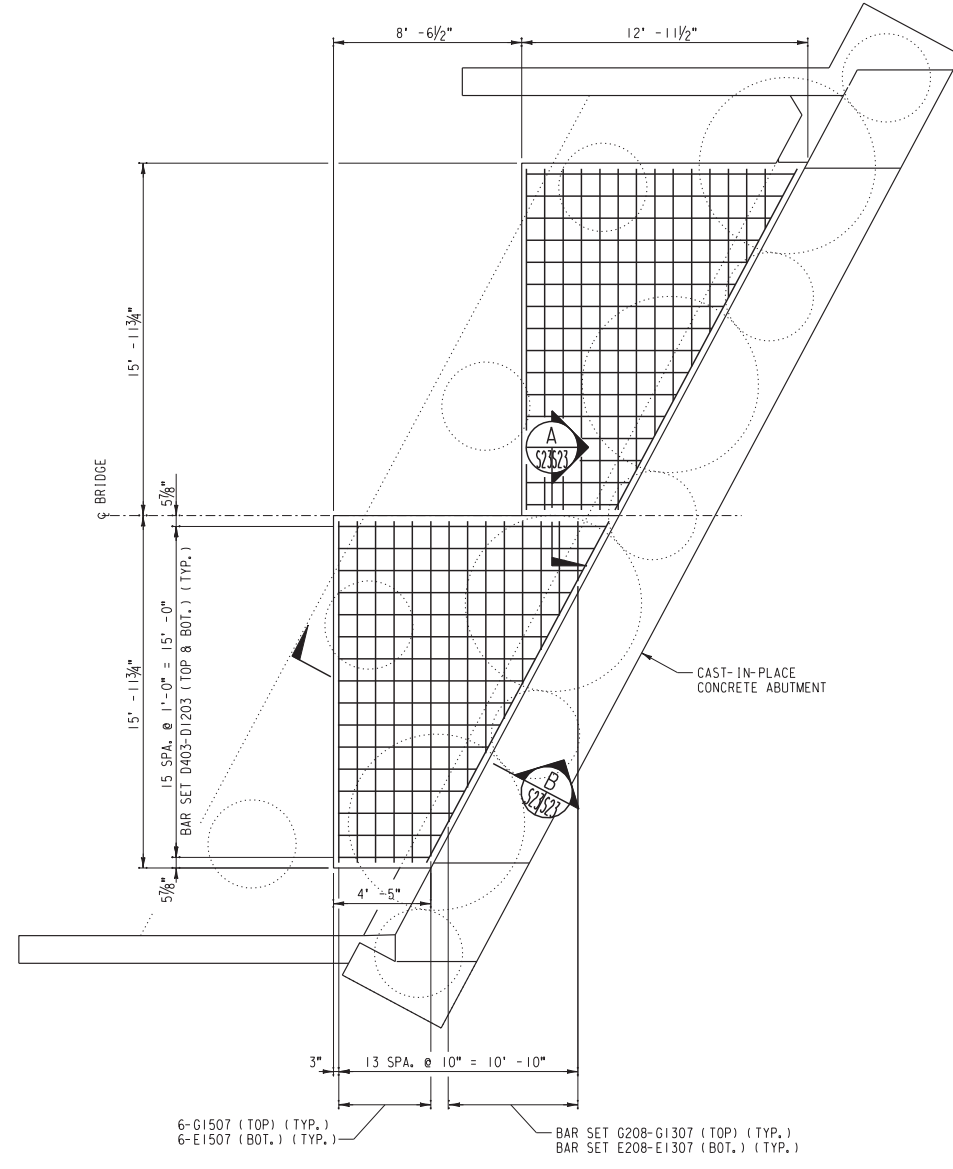
UPRR BRIDGE 55.16 LOS ANGELES SUB.
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PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
ABUTMENT #3 FASCIA WALL FRAMING AND REINFORCING DETAILS
HORIZ. SCALE: 1/2" = 1'-0" VERT. SCALE: 1/2" = 1'-0"

STRUCTURE SHEET NO. S22
R-4081
SHEET 130 OF 189
FILE NO.

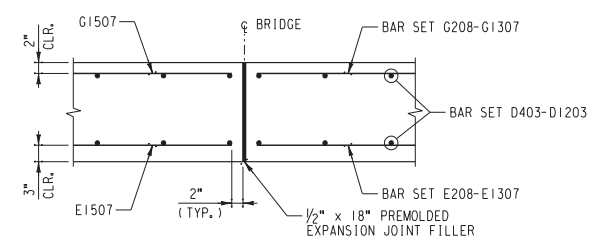
...S22-Abutment3FasciaWallReinFramingReinDIts.dgn 10/16/12, 09:53 AM

MATERIAL SCHEDULE
(APPROACH SLABS)

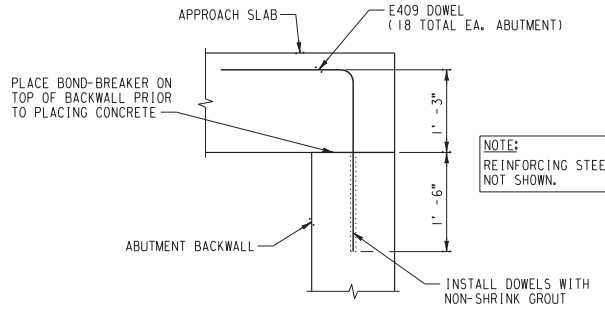
TOTAL	UNIT	DESCRIPTION
3Q. 8	CU. YD.	4000 PSI CONCRETE (7.7 CU. YD. EACH)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S30)
J	LOT	PREMOLDED EXPANSION JOINT FILLER
J	LOT	GRANULAR FILL



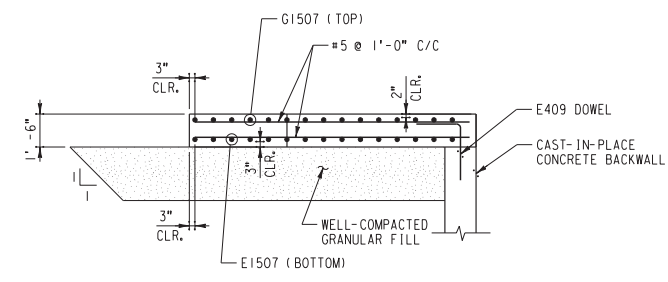
PLAN - APPROACH SLAB
SCALE: 1/4" = 1'-0"



SECTION A
SCALE: 3/4" = 1'-0"



SECTION B
SCALE: 3/4" = 1'-0"



SECTION AT TRACK - APPROACH SLAB
SCALE: 1/4" = 1'-0"

- NOTES:
- FOR CONCRETE NOTES, SEE SHEET S3.
 - FOR REINFORCING SCHEDULE, SEE SHEET S30.
 - REINFORCING STEEL IN ABUTMENT NOT SHOWN.
 - PROVIDE WELL-COMPACTED GRANULAR FILL UNDER APPROACH SLAB.
 - MATCH TOP OF APPROACH SLAB TO TOP OF STEEL DECK. SLOPE TOP OF SLAB UNIFORMLY ALONG TRACK TO 0.94%.

AS BUILT
Eric A. Russo
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... \S23 - Approach Slab Framing and Reinforcing Details.dwg, 16/12/09 09:53 AM

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STATE OF CALIFORNIA

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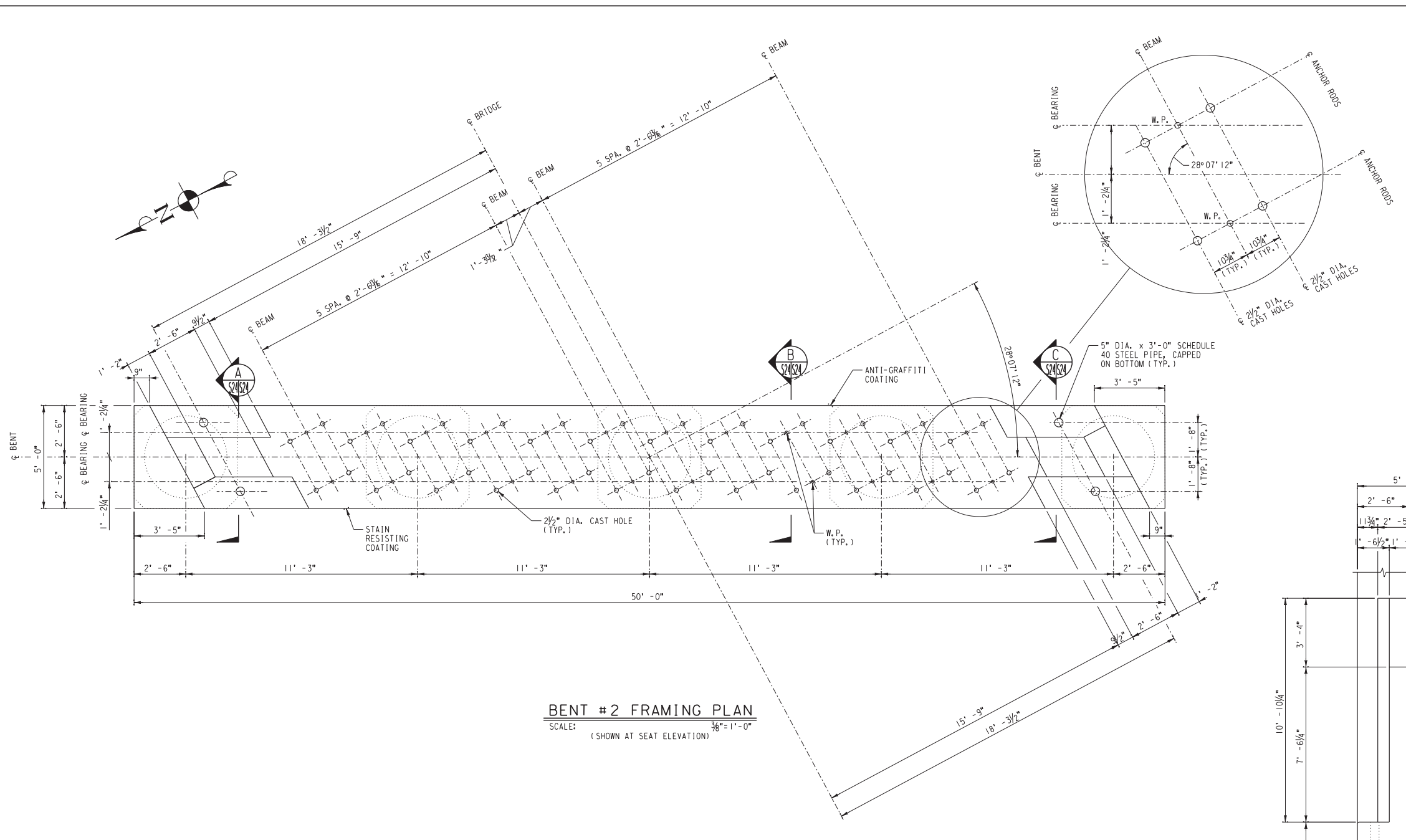
DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
APPROACH SLAB FRAMING AND REINFORCING DETAILS
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S23
R-4081
SHEET 131 OF 189
FILE NO.

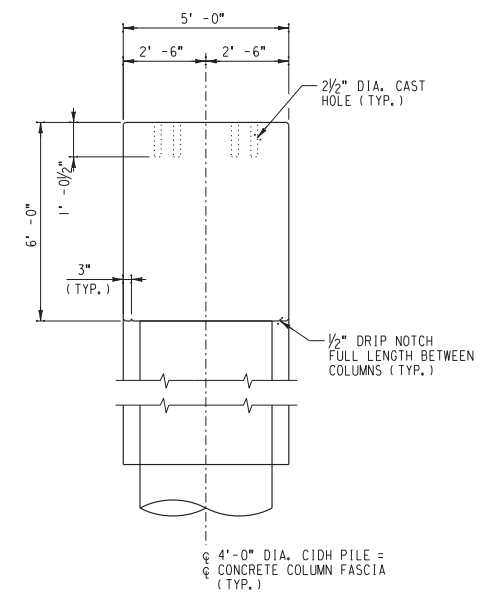
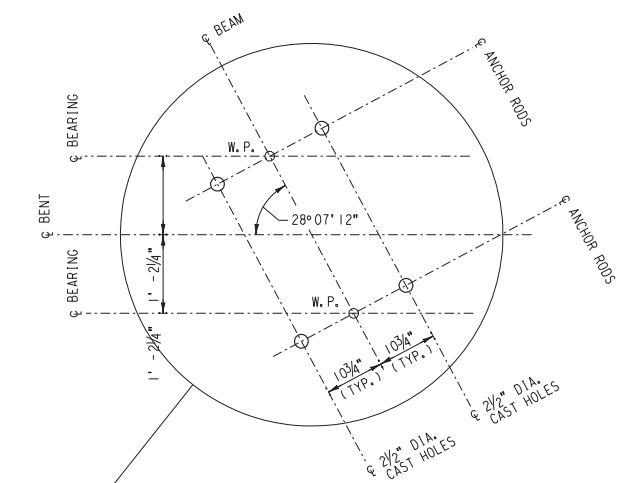
MATERIAL SCHEDULE
(BENT #2)

TOTAL	UNIT	DESCRIPTION
99.7	CU. YD.	4000 PSI CONCRETE (PER NOTES, SHEET S3) (73.2 CU. YD. PLAIN AND 26.5 CU. YD. INTEGRAL COLORED)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S31)
4	EA.	5" DIA. x 3'-0" SCHEDULE 40 STEEL PIPE, CAPPED ON BOTTOM

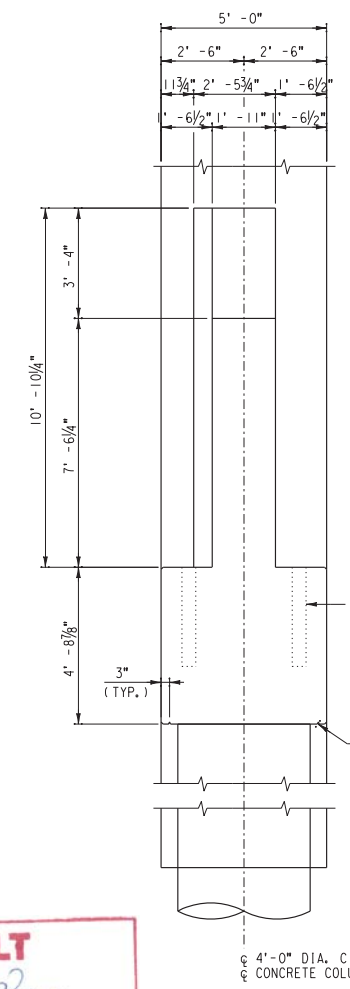


BENT #2 FRAMING PLAN
SCALE: $\frac{3}{8}'' = 1'-0''$
(SHOWN AT SEAT ELEVATION)

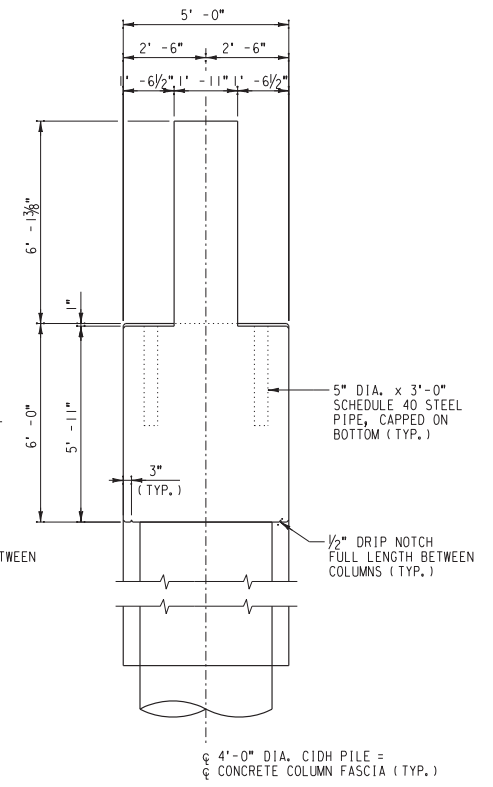
- NOTES:**
- FOR REINFORCING DETAILS, SEE SHEET S26-S27.
 - FOR REINFORCING SCHEDULE AND BAR BENDING DIAGRAMS, SEE SHEET S31.
 - APPLY ANTI-GRAFFITI COATING TO BOTH SIDES OF BENT CAP AND SURFACE OF COLUMN FASCIA.
 - APPROXIMATE AREA OF SURFACE TO BE COVERED = 1600 SQ. FT.



SECTION B
SCALE: $\frac{3}{8}'' = 1'-0''$



SECTION A
SCALE: $\frac{3}{8}'' = 1'-0''$



SECTION C
SCALE: $\frac{3}{8}'' = 1'-0''$

AS BUILT
Eric Johnson
CORRECTIONS BY _____
CONTRACT NO. _____
DATE Nov 16, 2012

10/16/12, 09:53 AM
... \S24_Bent2FramingDetails (r12).dgn

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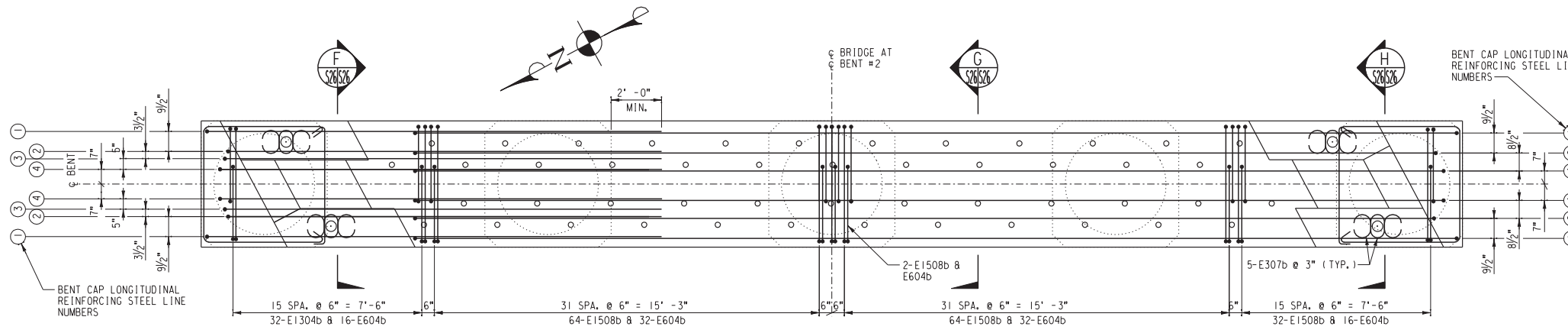
REGISTERED PROFESSIONAL ENGINEER
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No. C 71974
Exp. 12-31-09
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STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

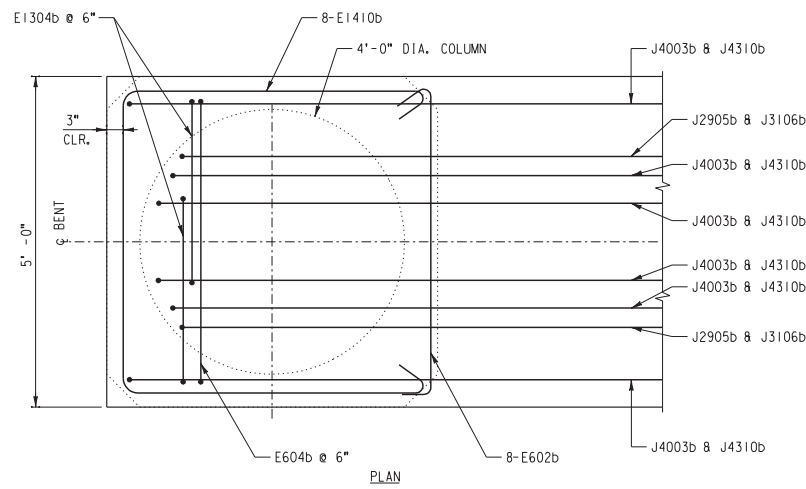
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
BENT #2 FRAMING DETAILS (1 OF 2)
HORIZ. SCALE: $\frac{3}{8}'' = 1'-0''$ VERT. SCALE: $\frac{3}{8}'' = 1'-0''$

STRUCTURE SHEET NO. S24
R-4081
SHEET 132 OF 189
FILE NO. _____

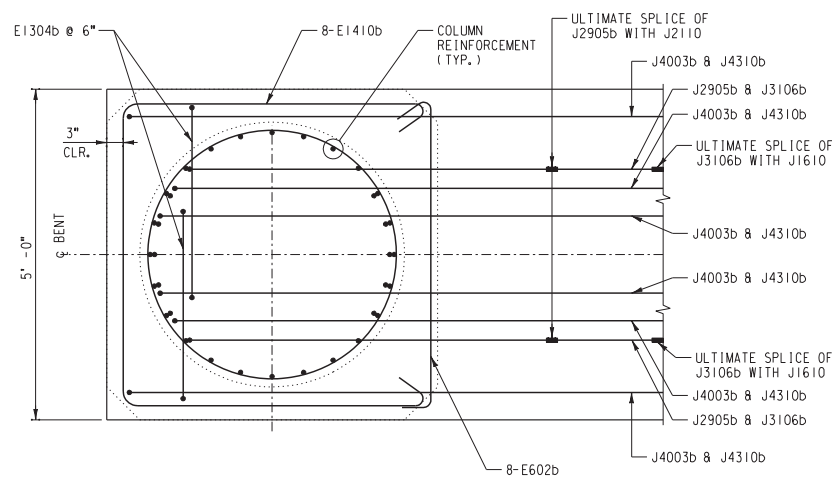


BENT #2 REINFORCING PLAN
SCALE: 3/8"=1'-0"

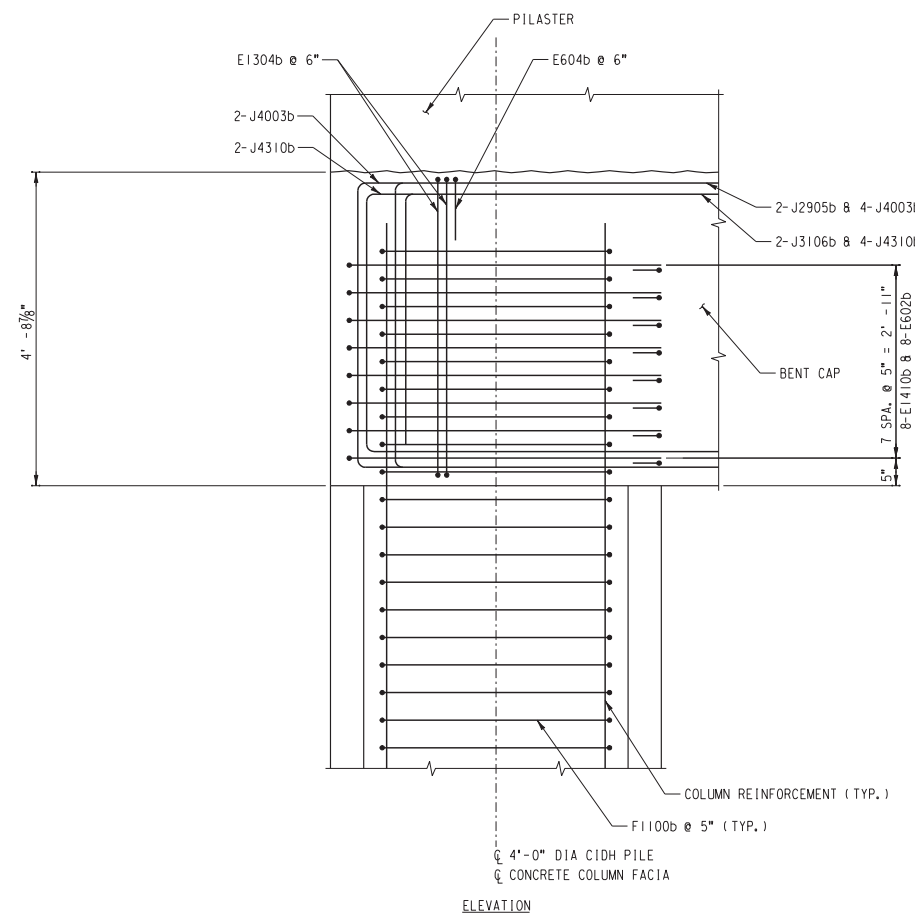
NOTE:
FOR BENT CAP LONGITUDINAL REINFORCING STEEL PLACEMENT DIAGRAMS, SEE SHEET S27. ULTIMATE SPLICES OF ADJACENT BARS SHALL BE STAGGERED 2'-0" MIN.



BENT CAP TOP DETAIL
SCALE: 3/8"=1'-0"
(NORTH END SHOWN, SOUTH END SIMILAR)



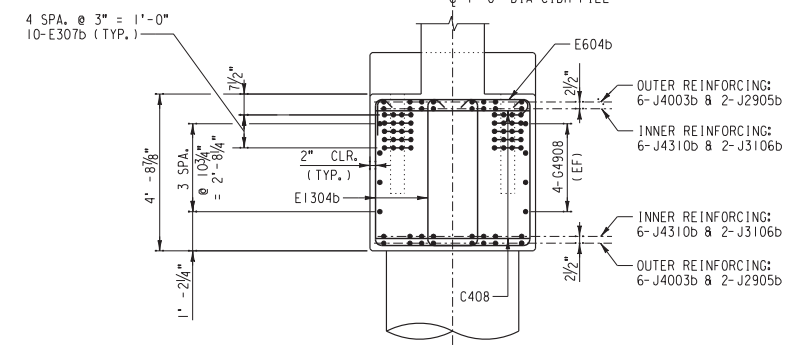
BENT CAP BOTTOM DETAIL
SCALE: 3/8"=1'-0"
(NORTH END SHOWN, SOUTH END SIMILAR)



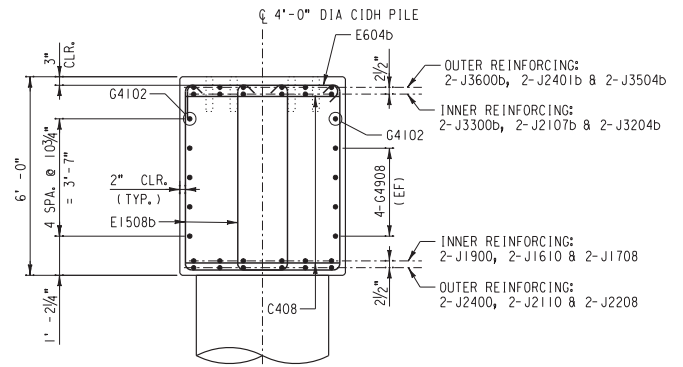
EXTERIOR COLUMN TO CAP CONNECTION DETAIL
SCALE: 3/8"=1'-0"
(NORTH END SHOWN, SOUTH END SIMILAR)

AS BUILT
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CORRECTIONS BY
CONTRACT NO.
DATE: Nov 16, 2012

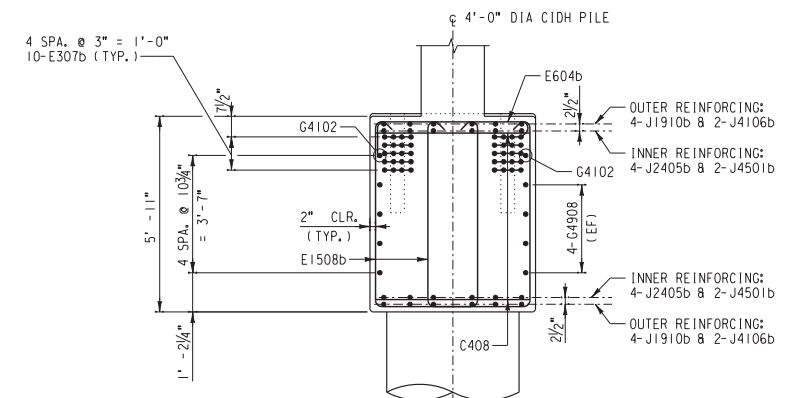
- NOTES:
- FOR CONCRETE NOTES, SEE SHEET S3.
 - FOR REINFORCING SCHEDULE, SEE SHEET S31.
 - ADJUST STIRRUP LOCATIONS AS MINIMALLY AS POSSIBLE TO CLEAR ANCHOR ROD HOLES AS REQUIRED.



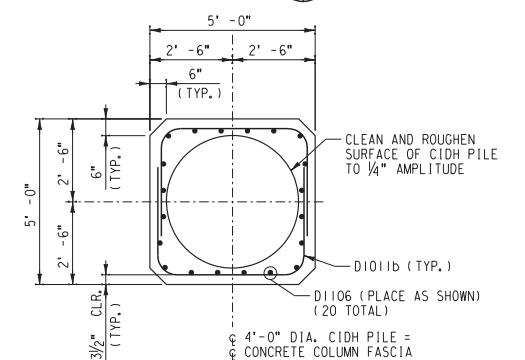
SECTION F
SCALE: 3/8"=1'-0"



SECTION G
SCALE: 3/8"=1'-0"



SECTION H
SCALE: 3/8"=1'-0"



SECTION M
SCALE: 3/8"=1'-0"

10:16:12, 09:53 AM
...S26-Bent2ReinforingDetails(1 of 2).dgn

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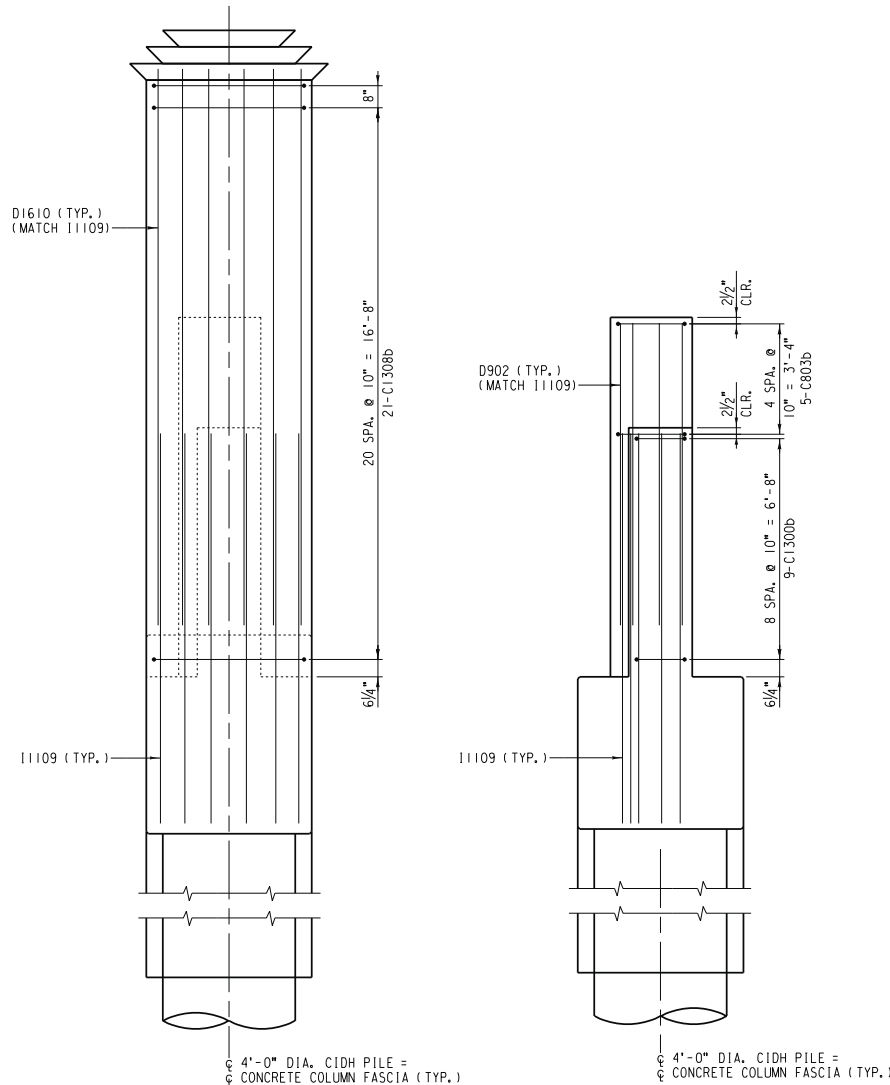
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STRUCTURE SHEET NO. S26
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
BENT #2 REINFORCING DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED
R-4081
SHEET 134 OF 189
FILE NO.

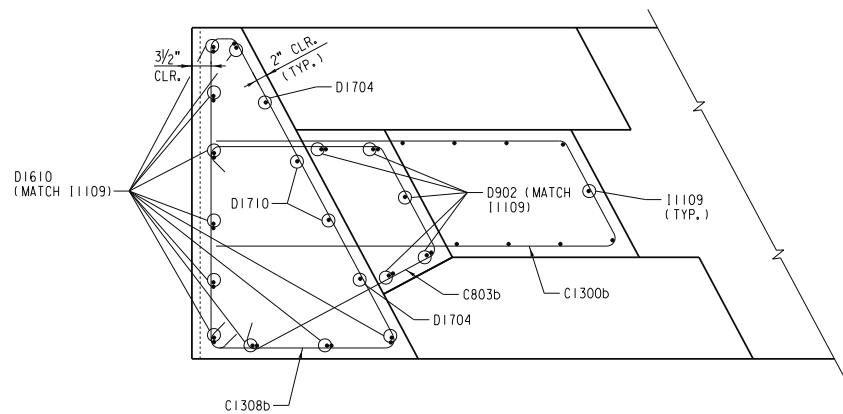


SECTION J
SCALE: 3/8"=1'-0"

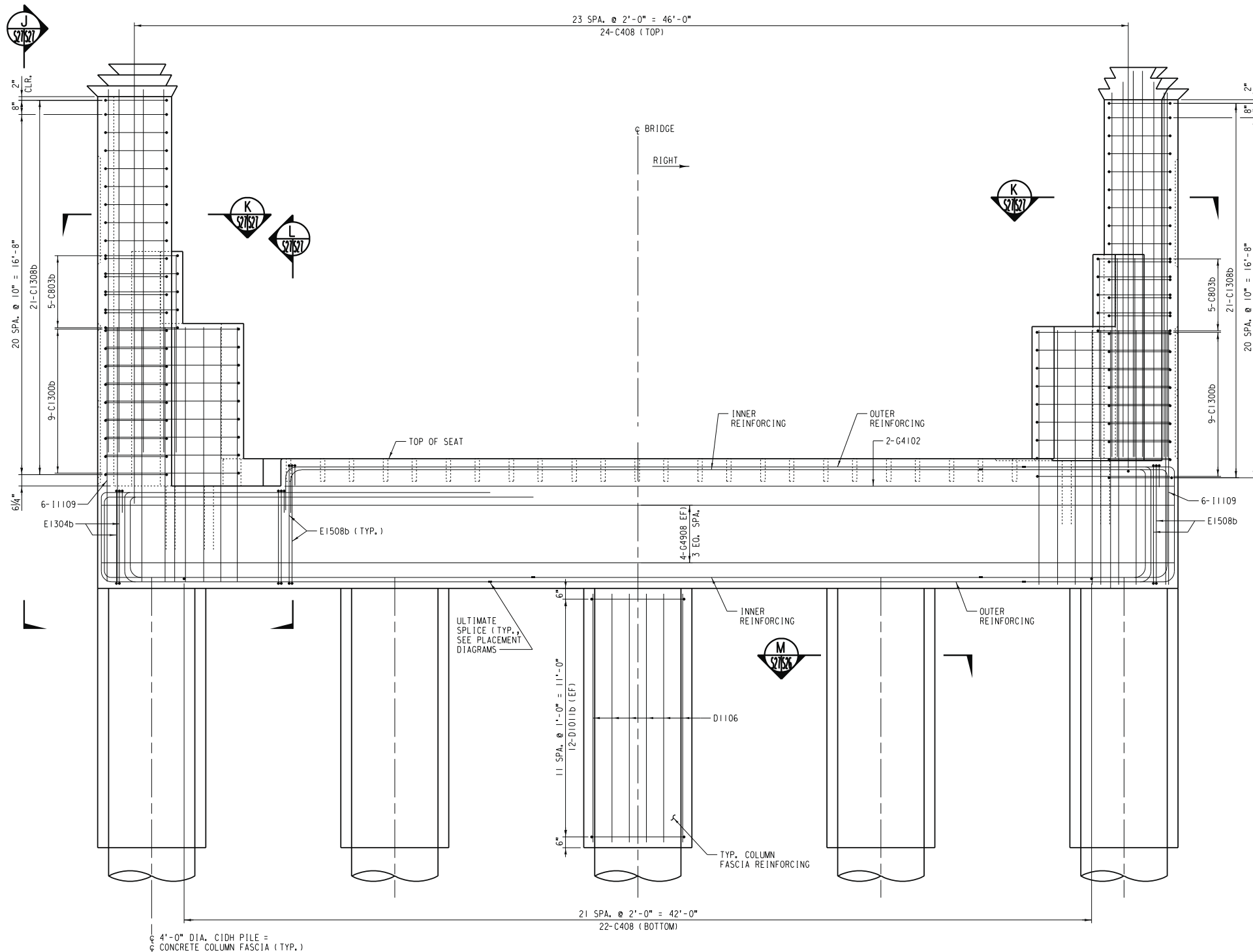
(BENT PILASTER ON RIGHT SIDE SIMILAR)

SECTION L
SCALE: 3/8"=1'-0"

(BENT PILASTER ON RIGHT SIDE SIMILAR)

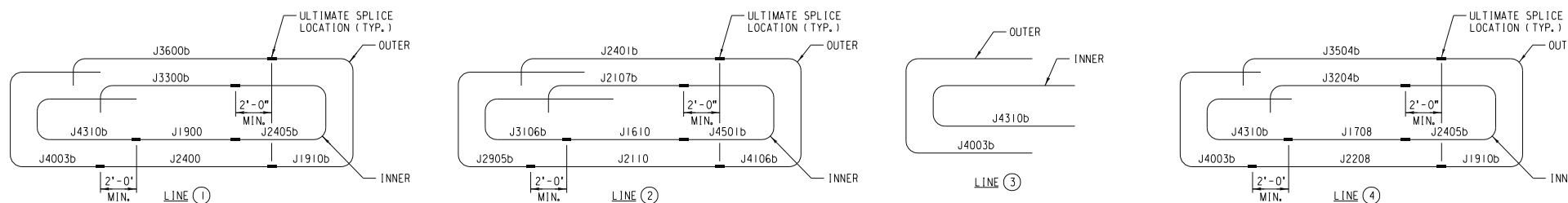


SECTION K
SCALE: 3/4"=1'-0"



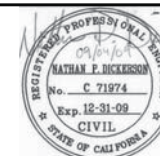
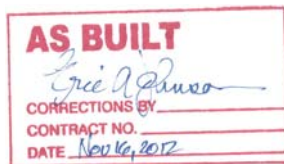
BENT #2 REINFORCING ELEVATION

SCALE: 3/8"=1'-0"



BENT CAP LONGITUDINAL REINFORCING STEEL PLACEMENT DIAGRAMS

SCALE: NONE



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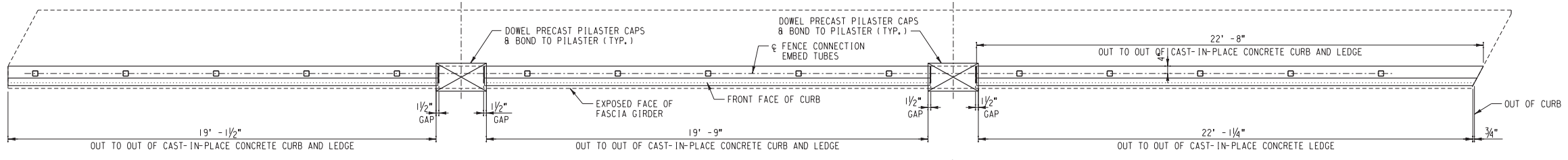
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
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MAGNOLIA AVENUE UNDERPASS
BENT #2 REINFORCING DETAILS (2 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S27

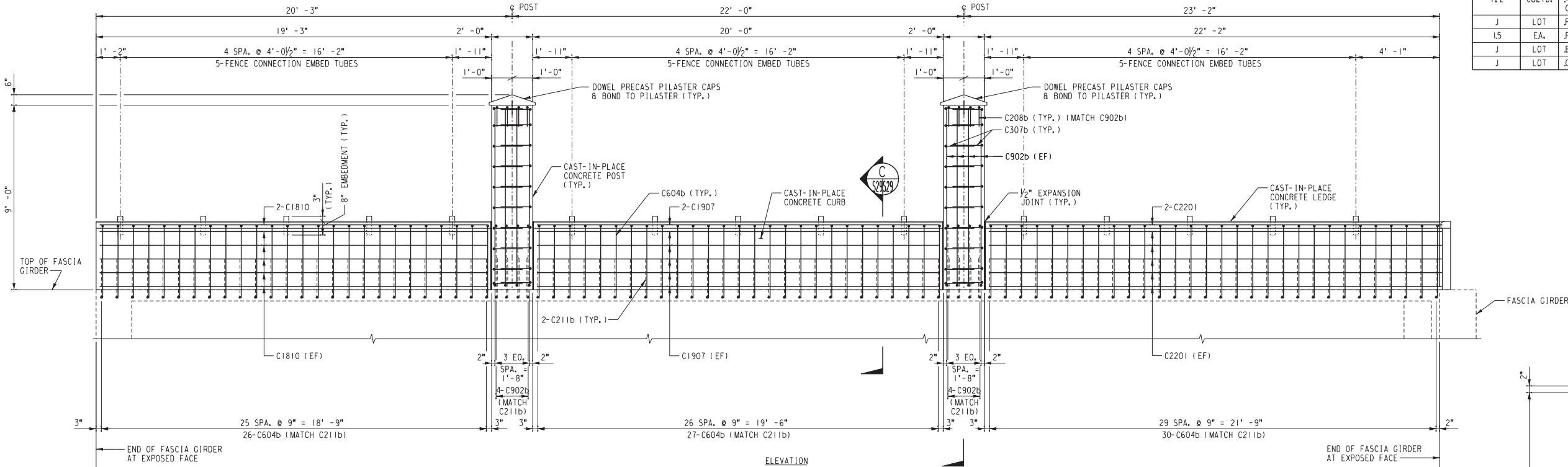
R-4081

SHEET 135 OF 189

FILE NO.



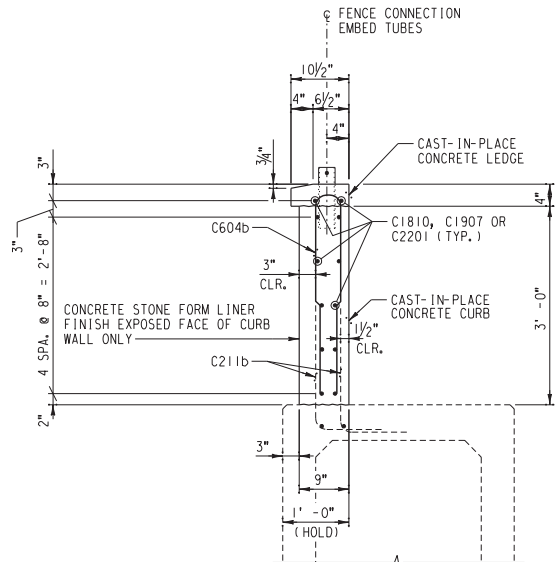
MATERIAL SCHEDULE		
(CURB & POSTS ON FG-1 AND FG-4)		
TOTAL	UNIT	DESCRIPTION
7.2	CU. YD.	4000 PSI CONCRETE (2.1 CU. YD. PLAIN AND 5.1 CU. YD. INTEGRAL COLORED)
J	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S31)
1.5	EA.	FENCE CONNECTION EMBED TUBE (PER DETAIL, SHEET S51)
J	LOT	EXPANSION JOINT MATERIAL
J	LOT	GRAY CAULK (HILTI CS-2130 OR APPROVED EQUAL)



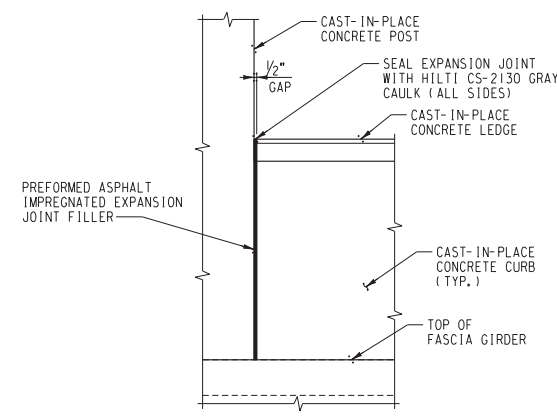
**CAST-IN-PLACE CONCRETE CURB AND POST REINFORCING DETAILS
FOR FASCIA GIRDERS FG-1 AND FG-4**

SCALE: (LOOKING AT EXPOSED FACE OF FASCIA GIRDER) 3/8" = 1'-0"

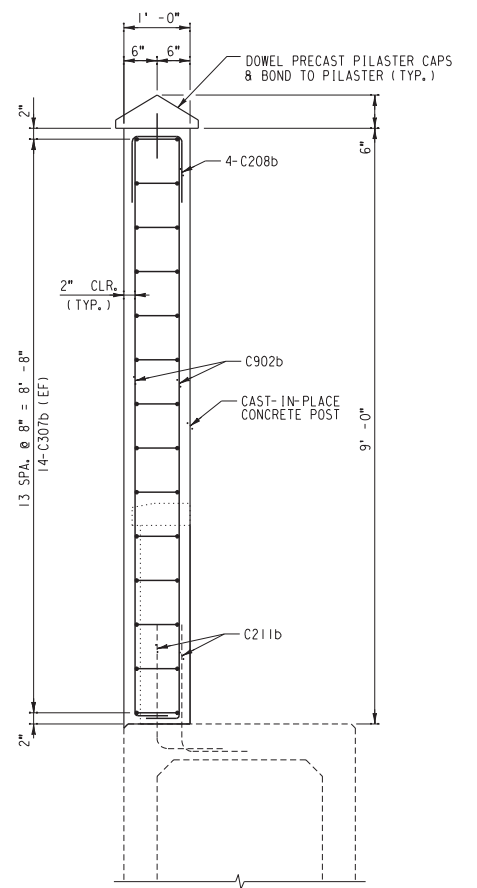
NOTE:
ADJUST REINFORCING STEEL AS REQUIRED
FOR PLACEMENT OF FENCE CONNECTION
EMBED TUBE.



SECTION C
SCALE: 3/4" = 1'-0"



EXPANSION JOINT DETAIL
SCALE: 3/4" = 1'-0"



SECTION D
SCALE: 3/4" = 1'-0"

AS BUILT
Eric J. Danuso
CORRECTIONS BY
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DATE Nov 16, 2012

...S29-Curb and Post Framing and Reinforcing Details (2 of 2) 09:54 AM

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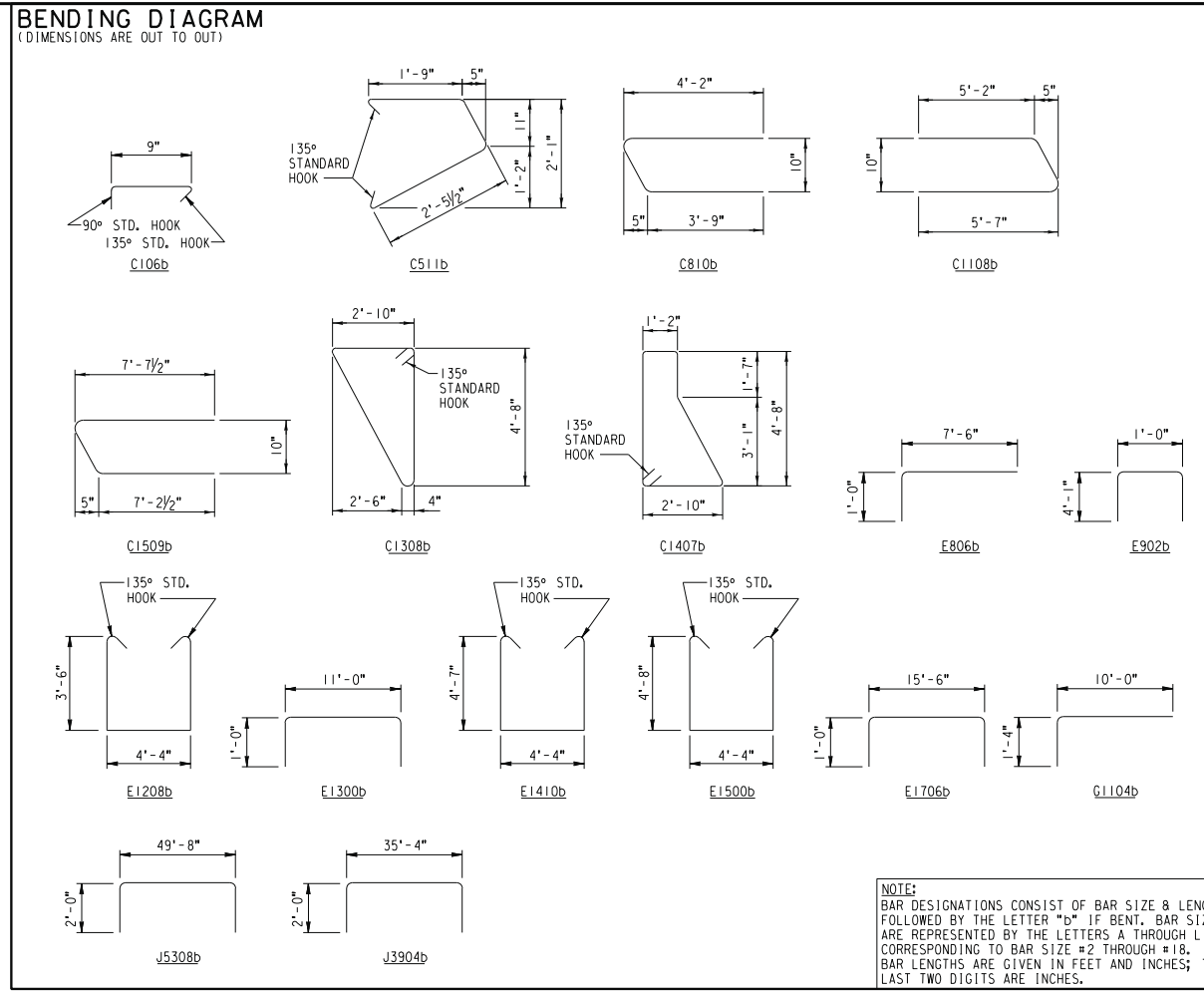
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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MAGNOLIA AVENUE UNDERPASS
CURB AND POST FRAMING AND
REINFORCING DETAILS (2 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S29
R-4081
SHEET 137 OF 189
FILE NO.

REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
155	C106b	#4	1'-6"		
80	C503	#4	5'-3"		
5	C511b	#4	5'-11"		
5	C810b	#4	8'-10"		
9	C1108b	#4	11'-8"		
25	C1308b	#4	13'-8"		
25	C1407b	#4	14'-7"		
9	C1509b	#4	15'-9"		
9	D902	#5	9'-2"		
3	D1604	#5	16'-4"		
26	D1610	#5	16'-10"		
4	D1704	#5	17'-4"		
4	D1710	#5	17'-10"		
2	E311	#6	3'-11"		
2	E402	#6	4'-2"		
42	E403	#6	4'-3"		
2	E704	#6	7'-4"		
2	E802	#6	8'-2"		
18	E806b	#6	8'-6"		
40	E902b	#6	9'-2"		
21	E903	#6	9'-3"		
21	E905	#6	9'-5"		
53	E1009	#6	10'-9"		
18	E1208b	#6	12'-8"		
9	E1300b	#6	13'-0"		
280	E1410b	#6	14'-10"		
18	E1500b	#6	15'-0"		
2	E1511	#6	15'-11"		
2	E1601	#6	16'-1"		
18	E1609	#6	16'-9"		
18	E1701	#6	17'-1"		
149	E1706b	#6	17'-6"		
2	E4103	#6	41'-3"		
16	E4505	#6	45'-5"		
8	E4908	#6	49'-8"		
4	G1000	#8	10'-0"		
12	G1104b	#8	11'-4"		
4	G3408	#8	34'-8"		
10	G4505	#8	45'-5"		
6	J3904b	#11	39'-4"		
10	J4505	#11	45'-5"		
2	J4908	#11	49'-8"		
6	J5308b	#11	53'-8"		

REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
155	C106b	#4	1'-6"		
80	C503	#4	5'-3"		
5	C511b	#4	5'-11"		
5	C810b	#4	8'-10"		
9	C1108b	#4	11'-8"		
25	C1308b	#4	13'-8"		
25	C1407b	#4	14'-7"		
9	C1509b	#4	15'-9"		
9	D902	#5	9'-2"		
3	D1604	#5	16'-4"		
26	D1610	#5	16'-10"		
4	D1704	#5	17'-4"		
4	D1710	#5	17'-10"		
2	E311	#6	3'-11"		
2	E402	#6	4'-2"		
42	E403	#6	4'-3"		
2	E704	#6	7'-4"		
2	E802	#6	8'-2"		
18	E806b	#6	8'-6"		
40	E902b	#6	9'-2"		
21	E903	#6	9'-3"		
21	E905	#6	9'-5"		
53	E1009	#6	10'-9"		
18	E1208b	#6	12'-8"		
9	E1300b	#6	13'-0"		
280	E1410b	#6	14'-10"		
18	E1500b	#6	15'-0"		
2	E1511	#6	15'-11"		
2	E1601	#6	16'-1"		
18	E1609	#6	16'-9"		
18	E1701	#6	17'-1"		
149	E1706b	#6	17'-6"		
2	E4103	#6	41'-3"		
16	E4505	#6	45'-5"		
8	E4908	#6	49'-8"		
4	G1000	#8	10'-0"		
12	G1104b	#8	11'-4"		
4	G3408	#8	34'-8"		
10	G4505	#8	45'-5"		
6	J3904b	#11	39'-4"		
10	J4505	#11	45'-5"		
2	J4908	#11	49'-8"		
6	J5308b	#11	53'-8"		



REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
36	E409b	#6	4'-9"		
24	E1507	#6	15'-7"		
24	G1507	#8	15'-7"		

SET LIST							
MARK	SIZE	MIN. LENGTH	MAX. LENGTH	INCREMENT	NO. OF BARS/SET	NO. OF SETS	SHAPE
D403-D1203	#5	4'-3"	12'-3"	6 ^{3/8"} (+)	16	8	
E208-E1307	#6	2'-8"	13'-7"	1'-0 ^{1/8"} (+)	8	4	
G208-G1307	#8	2'-8"	13'-7"	1'-0 ^{1/8"} (+)	8	4	

BENDING DIAGRAM
(DIMENSIONS ARE OUT TO OUT)

EST. WT. OF REINFORCING STEEL FOR APPROACH SLABS = 4,005 LB.

SET LIST							
MARK	SIZE	MIN. LENGTH	MAX. LENGTH	INCREMENT	NO. OF BARS/SET	NO. OF SETS	SHAPE
E809-E1009	#6	8'-9"	10'-9"	6"	5	2	
E809-E1010	#6	8'-9"	10'-10"	5"	6	2	

EST. WT. OF REINFORCING STEEL FOR ABUTMENT #1 = 26,610 LB.

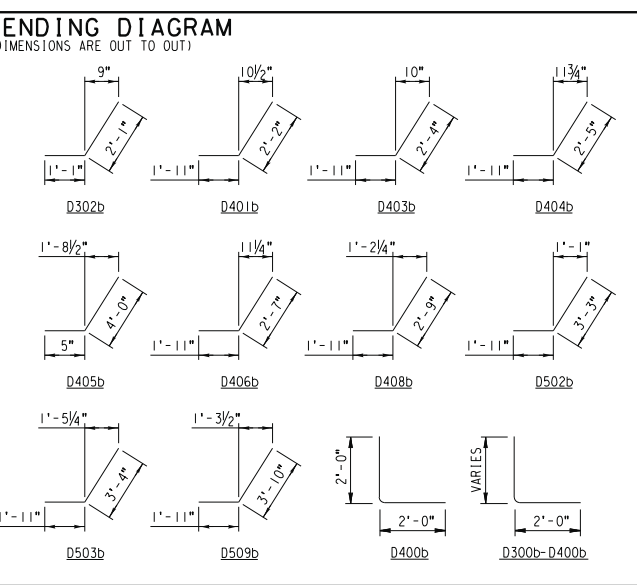
SET LIST							
MARK	SIZE	MIN. LENGTH	MAX. LENGTH	INCREMENT	NO. OF BARS/SET	NO. OF SETS	SHAPE
E809-E1009	#6	8'-9"	10'-9"	6"	5	2	
E809-E1010	#6	8'-9"	10'-10"	5"	6	2	

EST. WT. OF REINFORCING STEEL FOR ABUTMENT #3 = 26,610 LB.

REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
22	D300	#5	3'-0"		
10	D302b	#5	3'-2"		
3	D400b	#5	4'-0"		
10	D401b	#5	4'-1"		
10	D403b	#5	4'-3"		
10	D404b	#5	4'-4"		
10	D405b	#5	4'-5"		
10	D406b	#5	4'-6"		
10	D408b	#5	4'-8"		
10	D502b	#5	5'-2"		
10	D503b	#5	5'-3"		
10	D509b	#5	5'-9"		
54	D1107	#5	11'-7"		
1	D1900	#5	19'-0"		
1	D3600	#5	36'-0"		
12	D4907	#5	49'-7"		

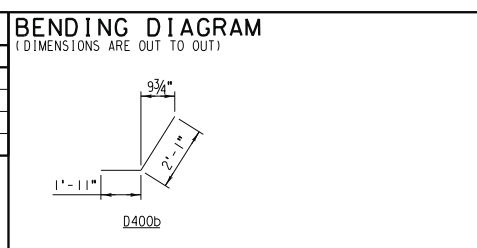
SET LIST							
MARK	SIZE	MIN. LENGTH	MAX. LENGTH	INCREMENT	NO. OF BARS/SET	NO. OF SETS	SHAPE
D300b-D400b	#5	3'-0"	4'-0"	5 ^{1/8"} (+)	19	1	

EST. WT. OF REINFORCING STEEL FOR ABUTMENT #1 FASCIA WALL = 1,960 LB.



REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
24	D300	#5	3'-0"		
120	D400b	#5	4'-0"		
54	D1307	#5	13'-7"		
14	D4907	#5	49'-7"		

EST. WT. OF REINFORCING STEEL FOR ABUTMENT #3 FASCIA WALL = 2,065 LB.



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DATE Nov 16, 2012

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S30-ReinforcingSchedules.dgn

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REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
REINFORCING SCHEDULES (1 OF 2)
HORIZ. SCALE: NONE VERT. SCALE: NONE

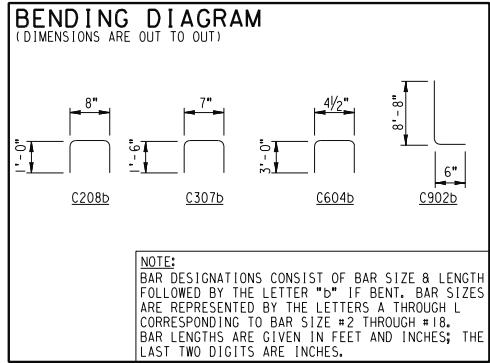
STRUCTURE SHEET NO. S30
R-4081
SHEET 138 of 189
FILE NO.

REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
46	C40B	#4	4'-8"		
10	C803b	#4	8'-3"		
18	C1300b	#4	13'-0"		
42	C1308b	#4	13'-8"		
10	D902	#5	9'-2"		
120	D1011b	#5	10'-11"		
100	D1106	#5	11'-6"		
20	D1610	#5	16'-10"		
4	D1704	#5	17'-4"		
4	D1710	#5	17'-10"		
40	E307b	#6	3'-7"		
16	E602b	#6	6'-2"		
97	E604b	#6	6'-4"		
32	E1304b	#6	13'-4"		
16	E1410b	#6	14'-10"		
162	E1508b	#6	15'-8"		
2	G4102	#8	41'-2"		
8	G4908	#8	49'-8"		
46	I1109	#10	11'-9"		
2	J1610	#11	16'-10"		
2	J1708	#11	17'-8"		
2	J1900	#11	19'-0"		
4	J1910b	#11	19'-10"		
2	J2107b	#11	21'-7"		
2	J2110	#11	21'-10"		
2	J2208	#11	22'-8"		
2	J2400	#11	24'-0"		
2	J2401b	#11	24'-1"		
4	J2405b	#11	24'-5"		
2	J2905b	#11	29'-5"		
2	J3106b	#11	31'-6"		
2	J3204b	#11	32'-4"		
2	J3300b	#11	33'-0"		
2	J3504b	#11	35'-4"		
2	J3600b	#11	36'-0"		
6	J4003b	#11	40'-3"		
2	J4106b	#11	41'-6"		
6	J4310b	#11	43'-10"		
2	J4501b	#11	45'-1"		

EST. WT. OF REINFORCING STEEL FOR BENT #2 = 22,025 LB.

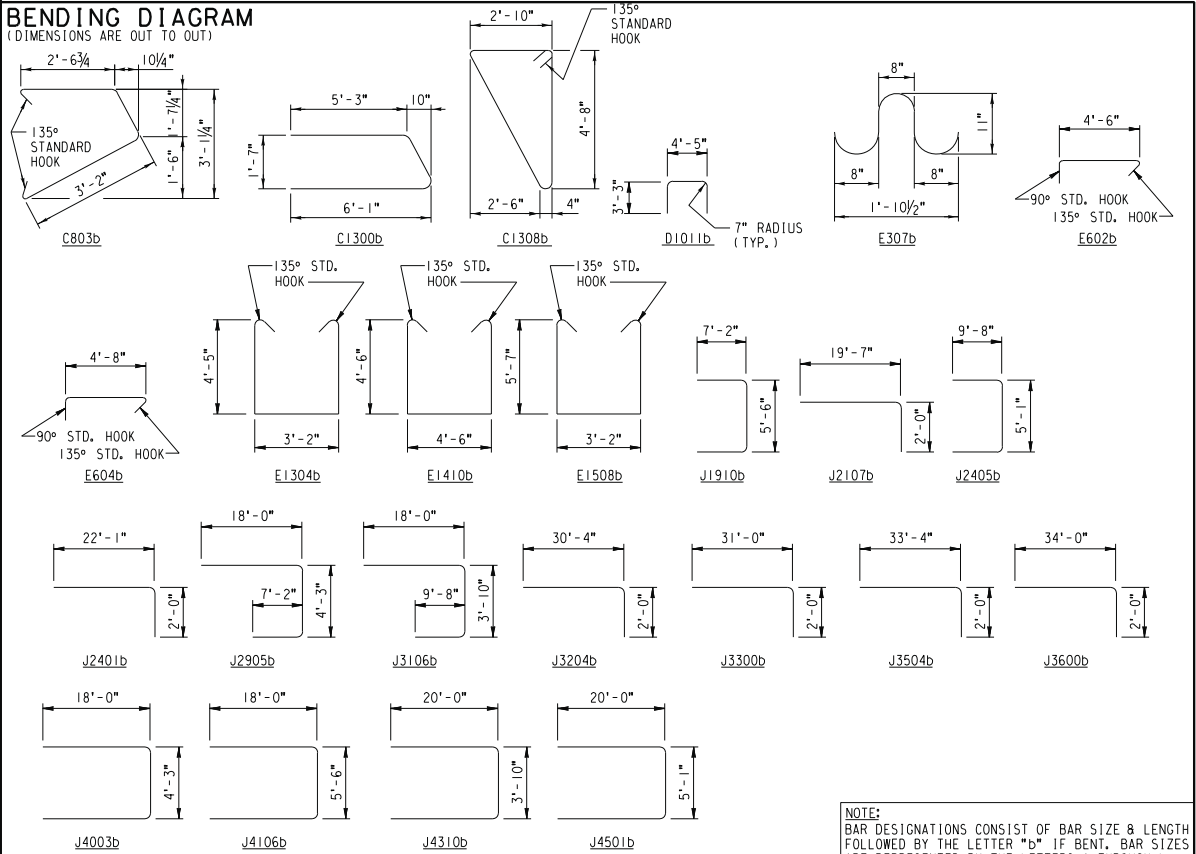
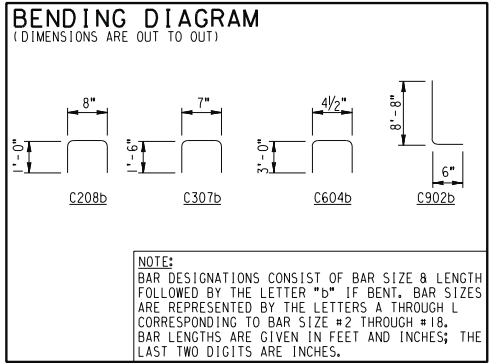
REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
8	C208b	#4	2'-8"		
56	C307b	#4	3'-7"		
83	C604b	#4	6'-4"		
16	C902b	#4	9'-2"		
12	C1810	#4	18'-10"		
12	C1907	#4	19'-7"		
12	C2201	#4	22'-1"		

EST. WT. OF REINFORCING STEEL FOR CURB & POSTS ON FG-1 AND FG-4 = 1,085 LB.



REINFORCING SCHEDULE					
TOTAL	MARK	SIZE	LENGTH	SHAPE	
8	C208b	#4	2'-8"		
56	C307b	#4	3'-7"		
83	C604b	#4	6'-4"		
16	C902b	#4	9'-2"		
12	C1810	#4	18'-10"		
12	C1908	#4	19'-8"		
12	C2103	#4	21'-3"		

EST. WT. OF REINFORCING STEEL FOR CURB & POSTS ON FG-2 AND FG-3 = 1,085 LB.



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UPRR BRIDGE 55.16 LOS ANGELES SUB.

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MAGNOLIA AVENUE UNDERPASS

STRUCTURE SHEET NO. S31

R-4081

SHEET 139 of 189

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REGISTERED PROFESSIONAL ENGINEER
NATHAN F. DICKSON
No. C 71974
Exp. 12-31-09
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STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

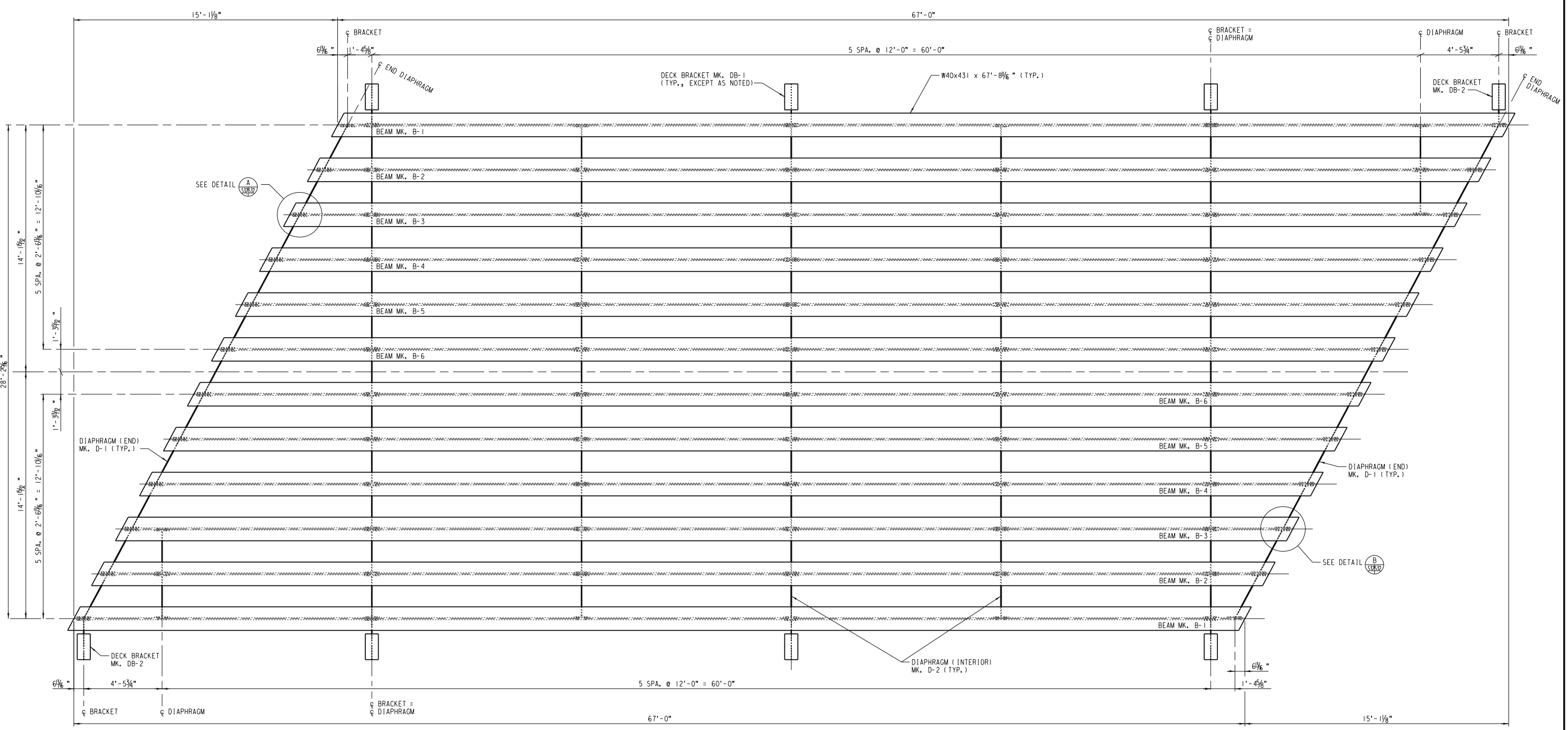
REINFORCING SCHEDULES (2 OF 2)
HORIZ. SCALE: NONE VERT. SCALE: NONE

FILE NO.

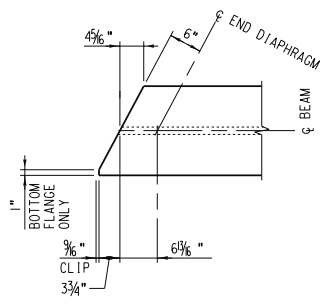
9/2/2009
S31_Bent 2_Reinf_Schedules.dgn

9/2/2009

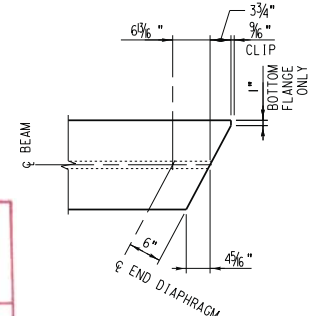
PROPOSED BRIDGE



FRAMING PLAN
SCALE: 3/8" = 1'-0"



DETAIL A
SCALE: 3/8" = 1'-0"



DETAIL B
SCALE: 3/8" = 1'-0"

- NOTES:
1. FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.
 2. FOR BEAM DETAILS, SEE SHEETS S33 AND S34.
 3. FOR DIAPHRAGM, BRACKET, AND SOLE PLATE DETAILS, SEE SHEET S38.

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 CORRECTIONS BY
 CONTRACT NO.
 DATE: Nov 16, 2012

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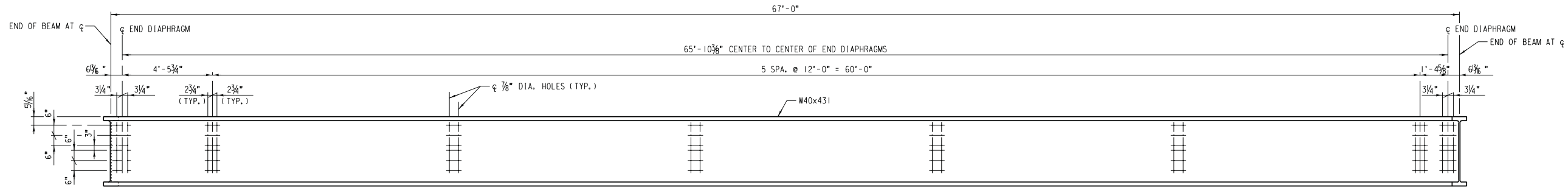
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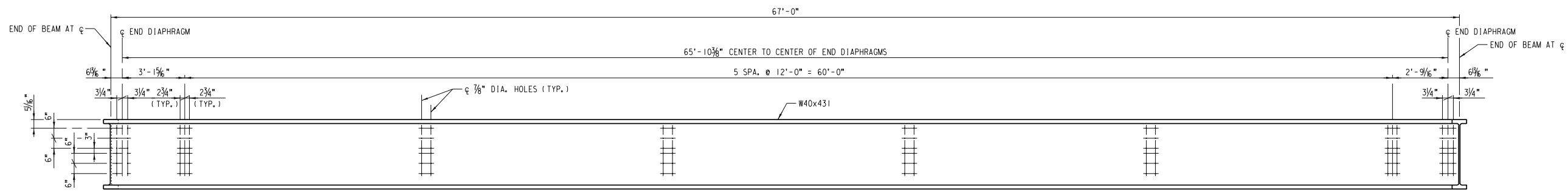
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
 BEAM SPAN FRAMING PLAN
 HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S32
R-4081
 SHEET 140 OF 189
 FILE NO.



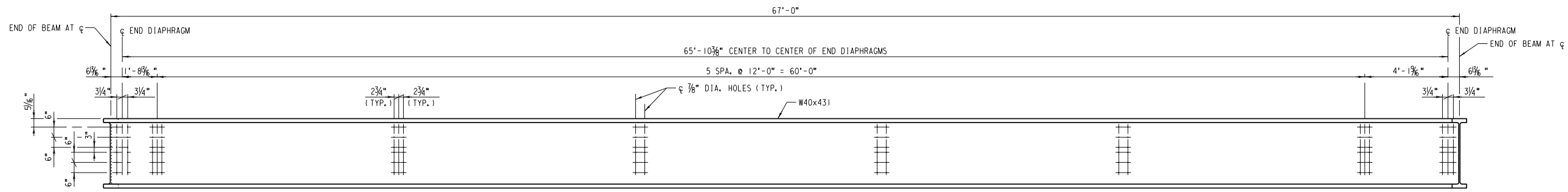
BEAM MK. B-1
SCALE: 3/8" = 1'-0"

SECTION



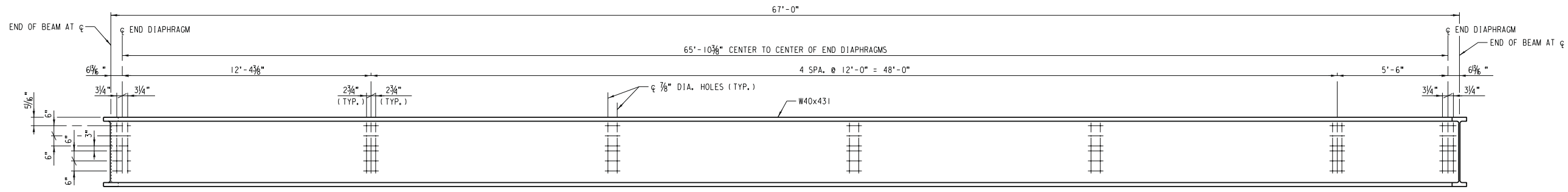
BEAM MK. B-2
SCALE: 3/8" = 1'-0"

SECTION



BEAM MK. B-3
SCALE: 3/8" = 1'-0"

SECTION



BEAM MK. B-4
SCALE: 3/8" = 1'-0"

SECTION

AS BUILT
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CONTRACT NO. _____
DATE Nov 16, 2012

NOTES:
1. FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.
2. ALL BEAM ELEVATIONS LOOKING FROM OUTSIDE OF SPAN.

9/2/2009
...S33-BeamDetail1(f2).dgn

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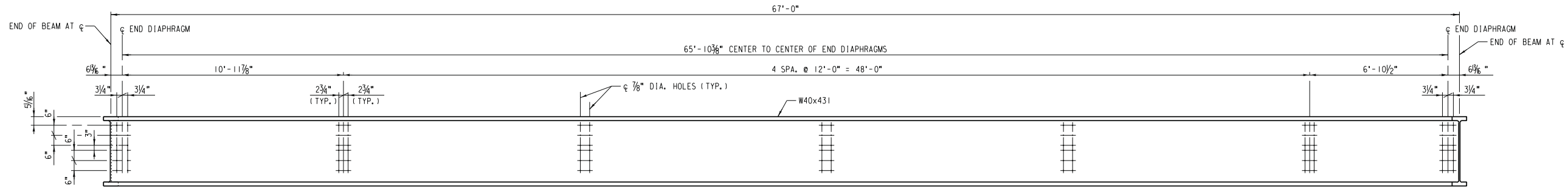
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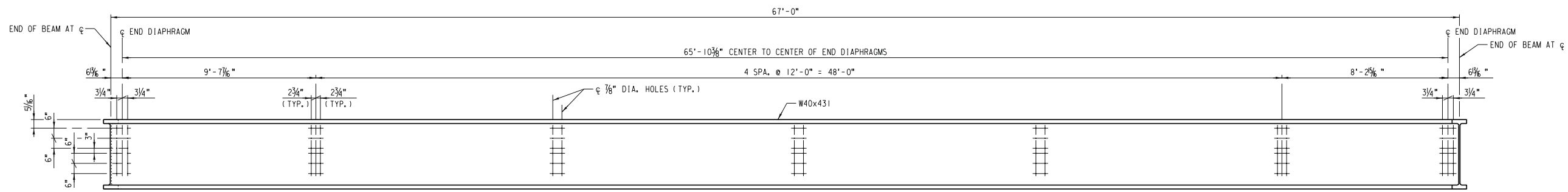
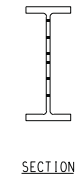
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
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MAGNOLIA AVENUE UNDERPASS
BEAM DETAILS (1 OF 2)
HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

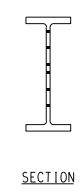
STRUCTURE SHEET NO. S33
R-4081
SHEET 141 OF 189
FILE NO.



BEAM MK. B-5
SCALE: 3/8" = 1'-0"



BEAM MK. B-6
SCALE: 3/8" = 1'-0"



9/2/2009
\\S34_BeamDetail12012.dgn

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CORRECTIONS BY
CONTRACT NO. _____
DATE Nov 16, 2012

- NOTES:
1. FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.
2. ALL BEAM ELEVATIONS LOOKING FROM OUTSIDE OF SPAN.

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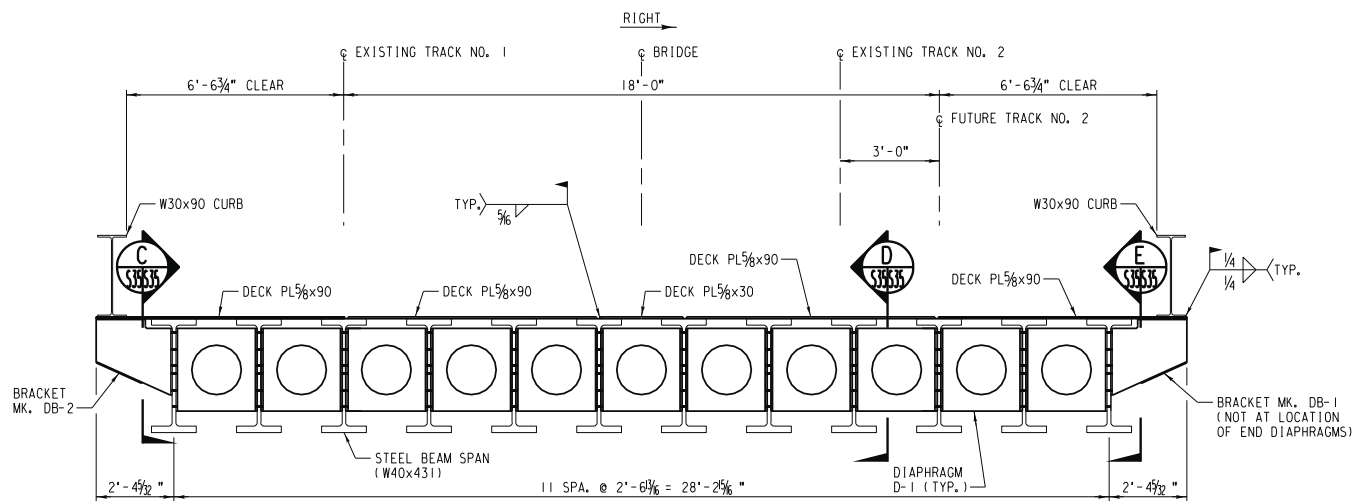
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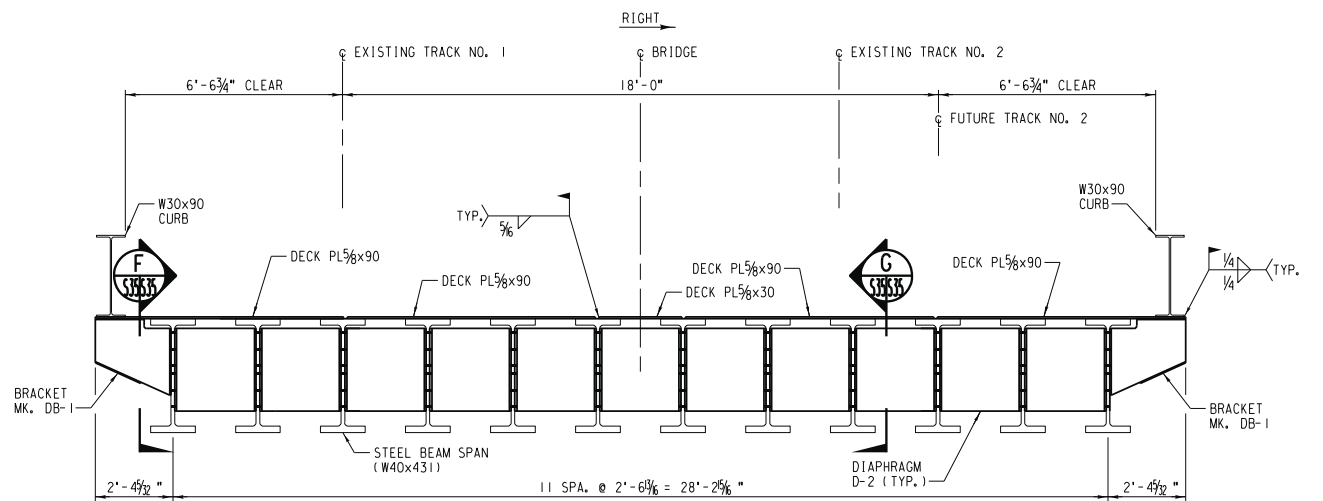
DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

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CITY OF RIVERSIDE, CALIFORNIA
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BEAM DETAILS (2 OF 2)
HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

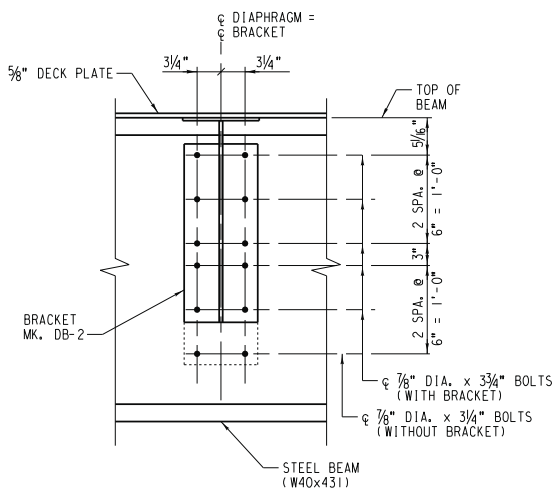
STRUCTURE SHEET NO. S34
R-4081
SHEET 142 OF 189
FILE NO.



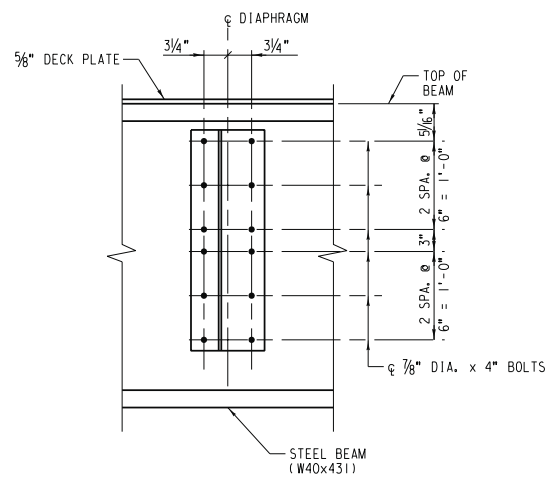
SECTION - SPAN AT END DIAPHRAGM
SCALE: 3/8"=1'-0"



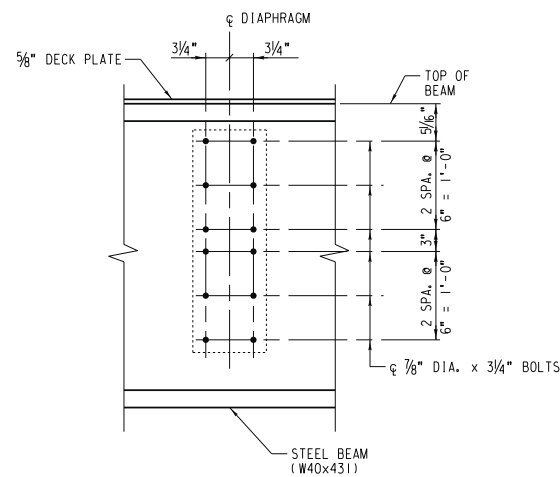
SECTION - SPAN AT INTERIOR DIAPHRAGM
SCALE: 3/8"=1'-0"



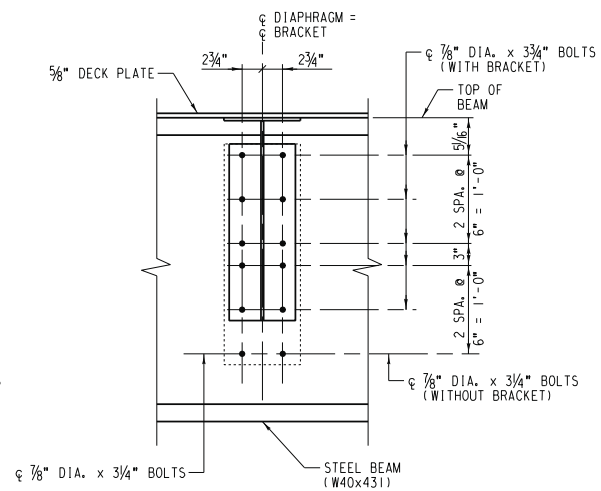
SECTION C
SCALE: 1"=1'-0"



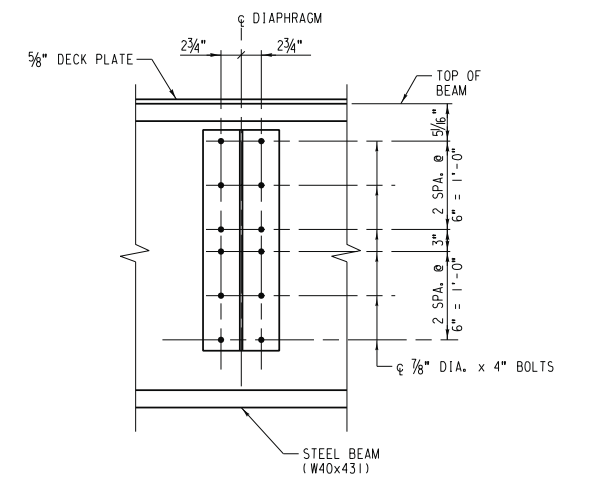
SECTION D
SCALE: 1"=1'-0"



SECTION E
SCALE: 1"=1'-0"



SECTION F
SCALE: 1"=1'-0"



SECTION G
SCALE: 1"=1'-0"

NOTE:
FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.

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9/2/2009 \\S35-BeamSpanAssemblyDetails.dgn

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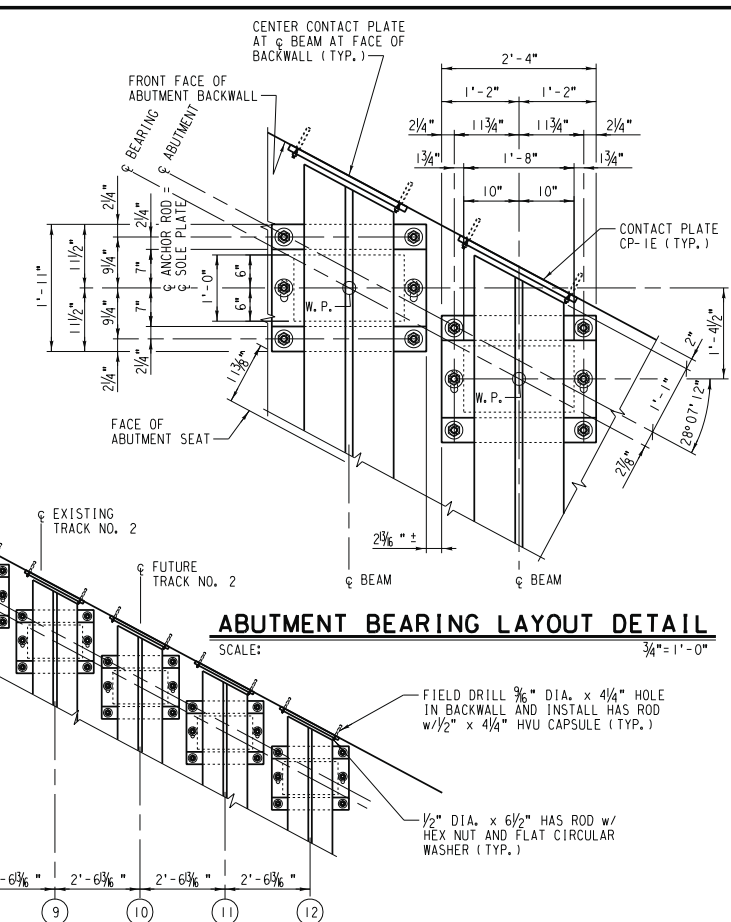
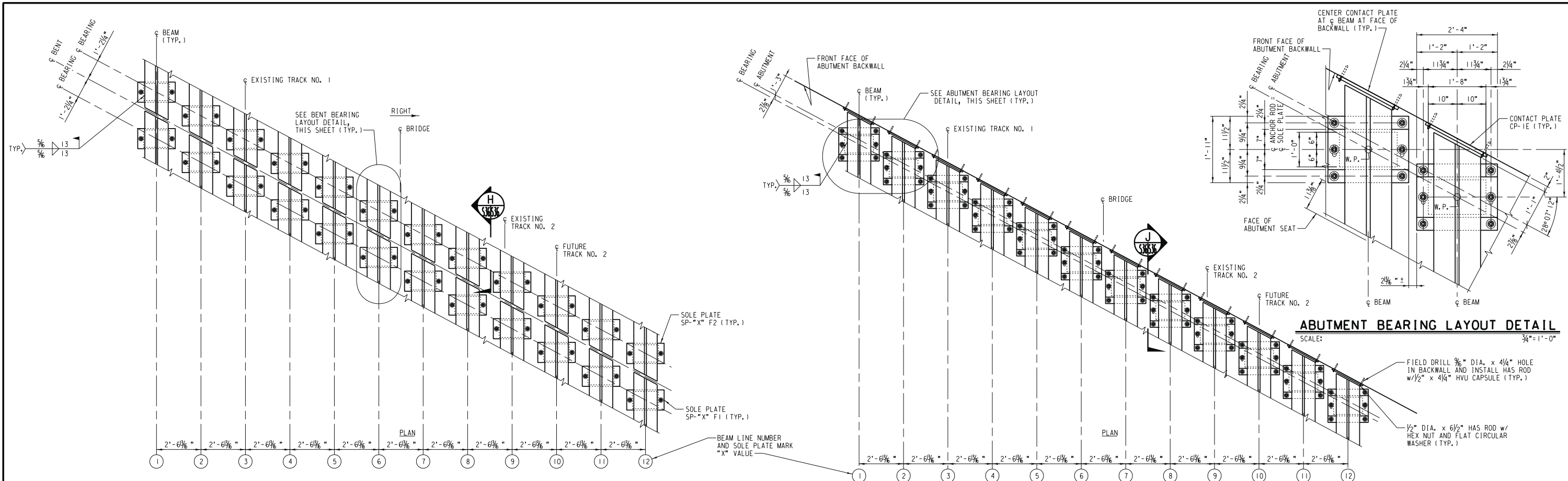
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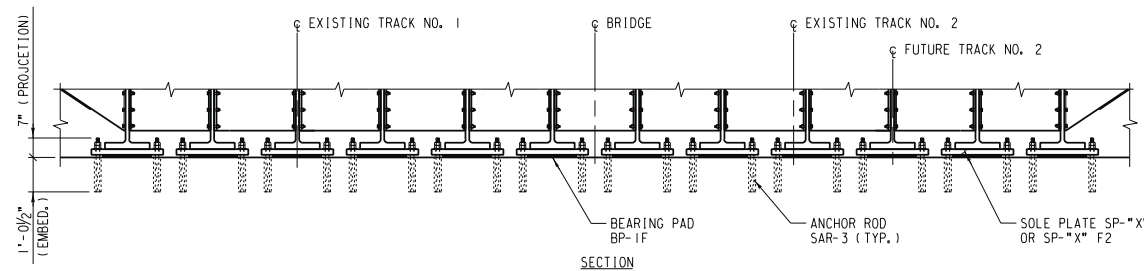
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
BEAM SPAN ASSEMBLY DETAILS
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

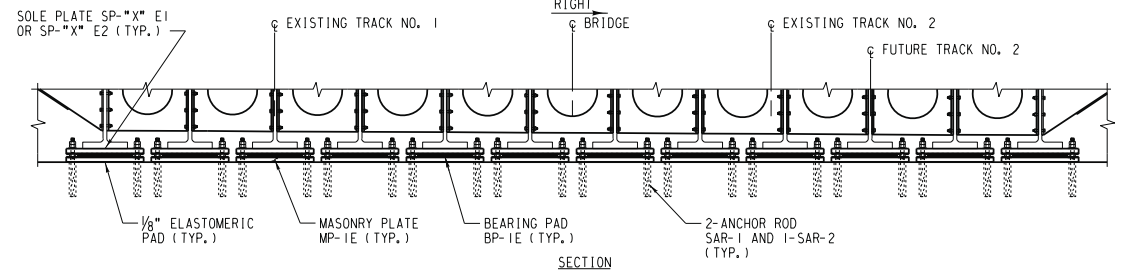
STRUCTURE SHEET NO. S35
R-4081
SHEET 143 OF 189
FILE NO.



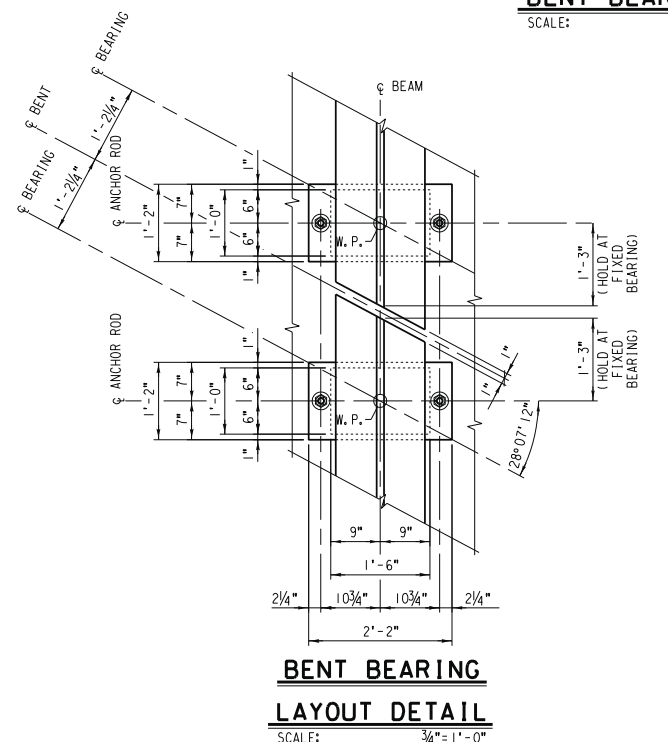
ABUTMENT BEARING LAYOUT DETAIL
SCALE: 3/8" = 1'-0"



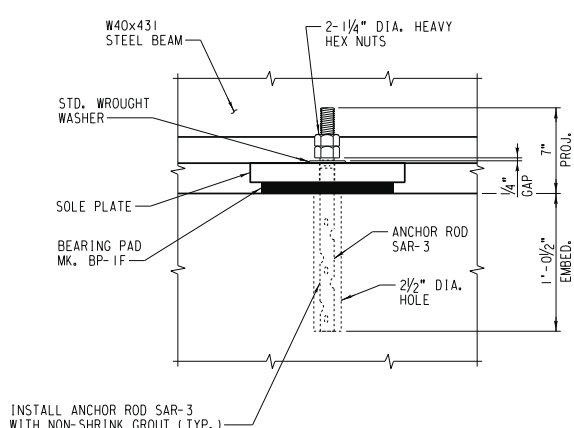
BENT BEARING ASSEMBLY DETAIL
SCALE: 3/8" = 1'-0"



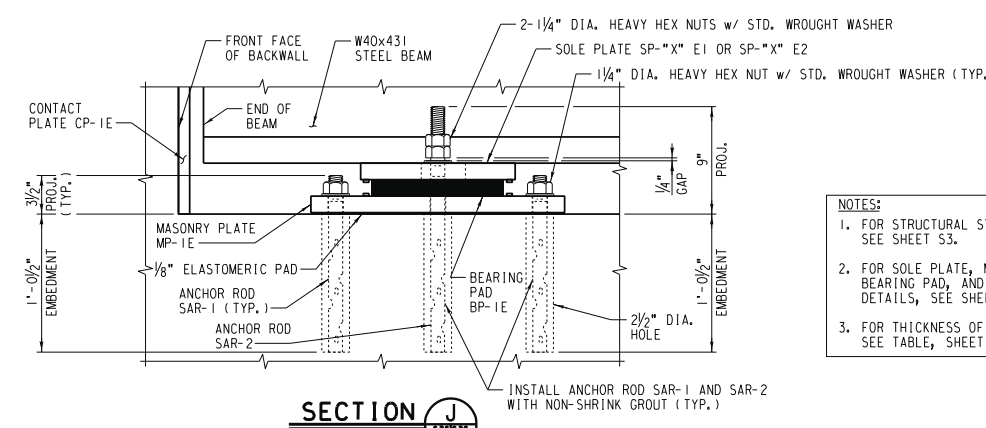
ABUTMENT BEARING ASSEMBLY DETAIL
SCALE: (ABUTMENT #3 SHOWN, ABUTMENT #1 SIMILAR) 3/8" = 1'-0"



BENT BEARING LAYOUT DETAIL
SCALE: 3/4" = 1'-0"



SECTION H
SCALE: 1 1/2" = 1'-0"



SECTION J
SCALE: 1 1/2" = 1'-0"

- NOTES:**
1. FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.
 2. FOR SOLE PLATE, MASONRY PLATE, BEARING PAD, AND ANCHOR ROD DETAILS, SEE SHEET S38.
 3. FOR THICKNESS OF SOLE PLATES, SEE TABLE, SHEET S37.

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Corrections by
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Exp. 12-31-09
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STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

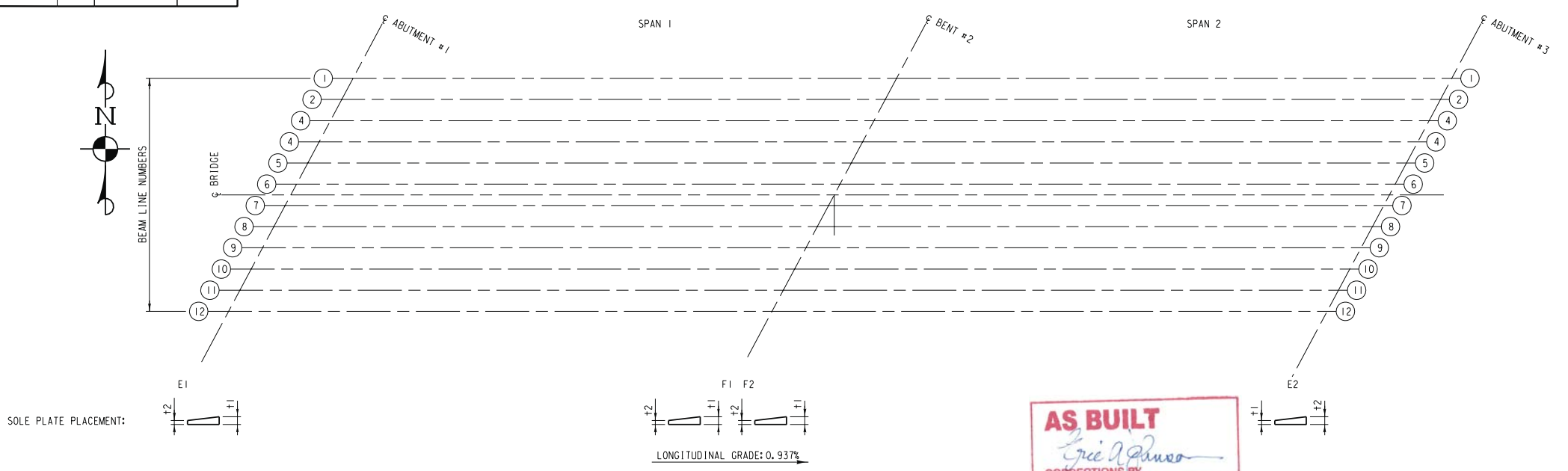
UPRR BRIDGE 55.16 LOS ANGELES SUB.
**CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT**
MAGNOLIA AVENUE UNDERPASS
BEAM SPAN BEARING ASSEMBLY DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S36
R-4081
SHEET 144 OF 189
FILE NO.

S36-BeamSpanBearingAssemblyDetailforF21.dgn 2/2009

BEARING PAD/SOLE PLATE/MASONRY PLATE DATA													
SPAN	ABUTMENT/BENT	BEARING PAD MK.	REQUIRED	SOLE PLATE			EST. WT. EACH (lb)	REQUIRED	MASONRY PLATE			EST. WT. EACH (lb)	REQUIRED
				PLATE MK.	+ (in)	+1 (in)			+2 (in)	PLATE MK.	+ (in)		
1	#1	BP-1E	12	SP-1E1	2 1/2	2 3/8	2 3/8	278	MP-1E & MATCHING 60 DUROMETER ELASTOMERIC PAD	1 1/2	276	12	1
				SP-2E1	2 3/8	2 3/8	2 3/8	264					
				SP-3E1	2 3/8	2 3/8	2 3/8	243					
				SP-4E1	2 3/8	2 3/8	2	229					
				SP-5E1	1 7/8	1 5/8	1 9/8	208					
				SP-6E1	1 3/4	1 9/8	1 1/2	195					
				SP-7E1	1 3/8	1 5/8	1 1/2	174					
				SP-8E1	1 3/8	1 1/2	1 3/8	160					
				SP-9E1	1 1/4	1 1/2	1 3/8	139					
				SP-10E1	1 1/8	1 3/8	1 1/2	125					
				SP-11E1	5/8	1	7/8	104					
				SP-12E1	3/4	7/8	3/4	90.3					
1	#2	BP-1F	12	SP-1F1	2 7/8	2 3/8	2 3/8	297					1
				SP-2F1	2 1/8	2 3/4	2 5/8	277					
				SP-3F1	2 3/8	2 5/8	2 1/2	264					
				SP-4F1	2 3/8	2 3/8	2 3/8	245					
				SP-5F1	2 1/4	2 5/8	2 3/8	232					
				SP-6F1	2 1/8	2 1/8	2	213					
				SP-7F1	1 5/8	2	1 7/8	200					
				SP-8F1	1 3/4	1 9/8	1 1/2	181					
				SP-9F1	1 5/8	1 9/8	1 3/8	168					
				SP-10F1	1 3/8	1 1/2	1 3/8	148					
				SP-11F1	1 5/8	1 3/8	1 1/4	135					
				SP-12F1	1 1/8	1 3/8	1 1/8	116					
2	#2	BP-1F	12	SP-1F2	3 1/8	3 1/8	3	316					1
				SP-2F2	2 5/8	3	2 7/8	303					
				SP-3F2	2 3/4	2 9/8	2 1/2	284					
				SP-4F2	2 5/8	2 1/8	2 3/8	271					
				SP-5F2	2 1/2	2 3/8	2 1/8	258					
				SP-6F2	2 3/8	2 3/8	2 1/4	239					
				SP-7F2	2 3/8	2 1/4	2 1/8	226					
				SP-8F2	2	2 1/8	1 5/8	206					
				SP-9F2	1 7/8	1 9/8	1 9/8	194					
				SP-10F2	1 1/8	1 3/4	1 5/8	174					
				SP-11F2	1 3/8	1 5/8	1 1/2	161					
				SP-12F2	1 3/8	1 1/8	1 5/8	142					
2	#3	BP-1E	12	SP-1E2	2 1/2	2 7/8	2 3/8	278	MP-1E & MATCHING 60 DUROMETER ELASTOMERIC PAD	1 1/2	276	12	1
				SP-2E2	2 5/8	2 1/4	2 3/8	257					
				SP-3E2	2 3/8	2 1/8	2 1/4	243					
				SP-4E2	2	1 5/8	2 1/8	222					
				SP-5E2	1 7/8	1 9/8	1 5/8	208					
				SP-6E2	1 1/8	1 5/8	1 3/4	188					
				SP-7E2	1 3/8	1 1/2	1 5/8	174					
				SP-8E2	1 3/8	1 5/8	1 3/8	153					
				SP-9E2	1 1/4	1 3/8	1 5/8	139					
				SP-10E2	1 1/8	1	1 1/8	118					
				SP-11E2	5/8	7/8	1	104					
				SP-12E2	3/4	3/4	7/8	90.3					

NOTE:
FOR DIMENSIONS OF BEARING PADS,
SOLE PLATES AND MASONRY PLATES,
SEE DETAILS, SHEET S38.



AS BUILT
Eric J. Dawson
 CORRECTIONS BY
 CONTRACT NO.
 DATE Nov 16, 2012

S37 - BeamSpanBearingAssemblyDetails(2 of 2).dwg/2/2009

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

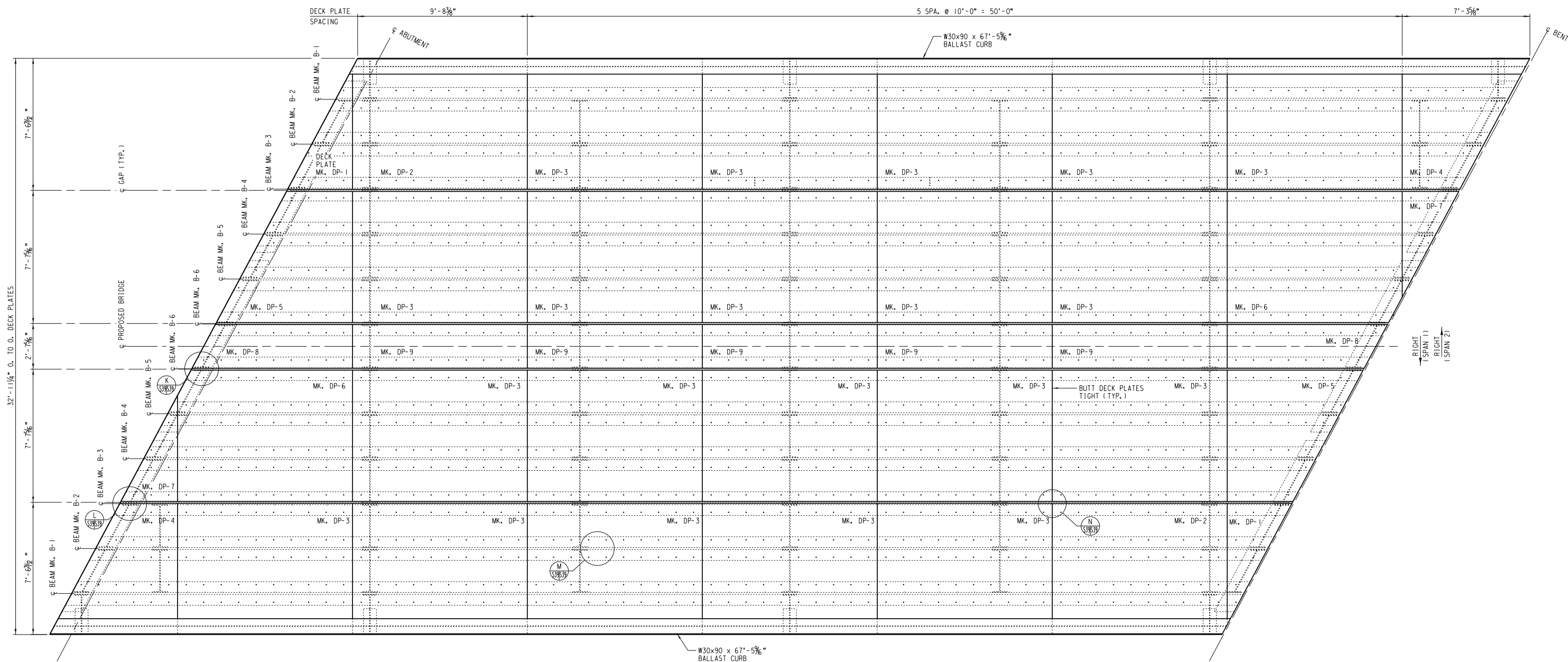
REGISTERED PROFESSIONAL ENGINEER
 NATHAN F. DICKERSON
 No. C 71974
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

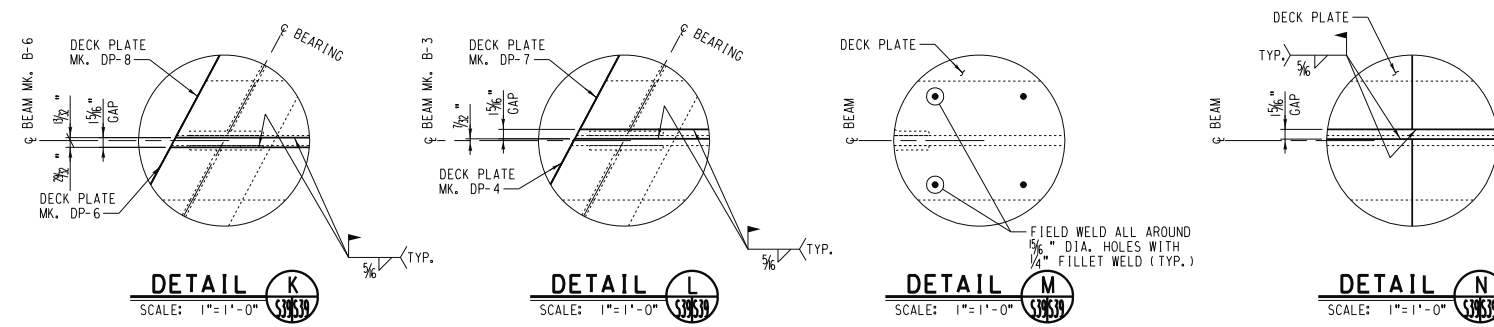
UPRR BRIDGE 55.16 LOS ANGELES SUB.
 CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
 BEAM SPAN BEARING ASSEMBLY DETAILS (2 OF 2)
 HORIZ. SCALE: NONE VERT. SCALE: NONE

STRUCTURE SHEET NO. S37
 R-4081
 SHEET 145 OF 189
 FILE NO.



DECK PLATE LAYOUT
SCALE: 3/8" = 1'-0"

- NOTES:**
1. DRILLED AND TAPPED HOLES FOR 1/2" DIA. GALV. OR ZINC PLATED A307 BOLTS @ 2'-0" MAX. CENTERS REQUIRED IN BALLAST CURBS FOR ATTACHING FLASHING. SEE SECTION AND DETAIL, SHEET S41 AND S42. HOLES MAY BE SHOP OR FIELD DRILLED AT CONTRACTOR'S DISCRETION.
 2. THE CONTRACTOR MAY DIRECT THE FABRICATOR TO ASSEMBLE EACH SPAN IN THE SHOP TO THE MAXIMUM EXTENT POSSIBLE AND SHIP THEM TO THE PROJECT SITE TO BE ERRECTED AS UNITS. THE CONTRACTOR IS ENCOURAGED TO DEVISE WHATEVER COMBINATION OF SHOP AND FIELD ASSEMBLY AND ERECTION REQUIRED TO PRODUCE THE MOST EFFICIENT AND ECONOMICAL SYSTEM OF CONSTRUCTION. DRAWINGS SHOW SPANS TO BE COMPLETELY FIELD ASSEMBLED. ANY OTHER OPTION PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO BEGINNING FABRICATION.



AS BUILT
Eric J. Russo
CORRECTIONS BY
CONTRACT NO.
DATE *Nov 16, 2012*

9/2/2009
S39_DeckPlateLayout.dgn

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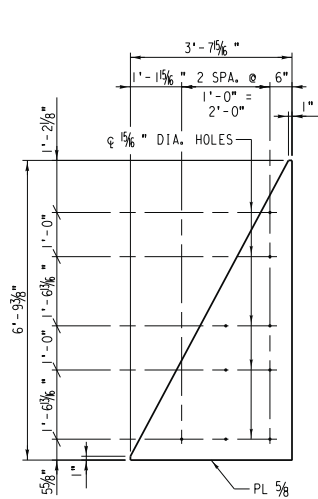
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2100
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
Nathan P. Dickerson
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

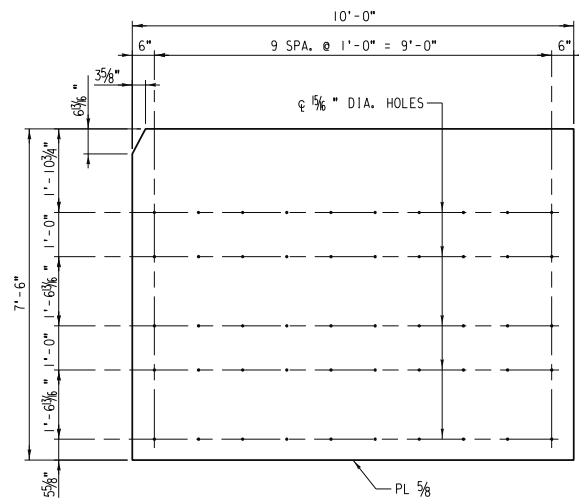
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DECK PLATE LAYOUT
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S39
R-4081
SHEET 147 OF 189
FILE NO.



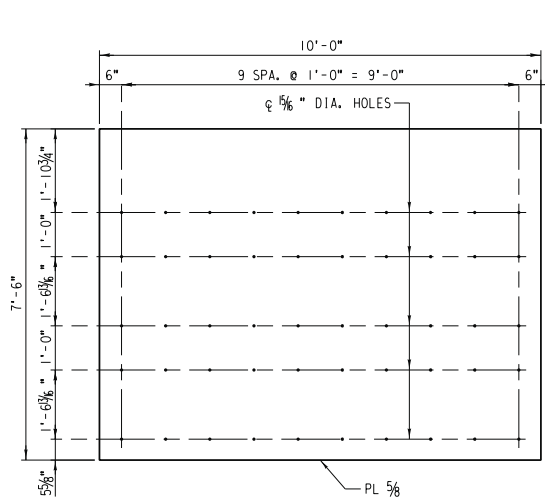
DECK PLATE MK. DP-1

SCALE: 1/2" = 1'-0"
EST. WT. = 320 LB. EA. (4 REQUIRED)



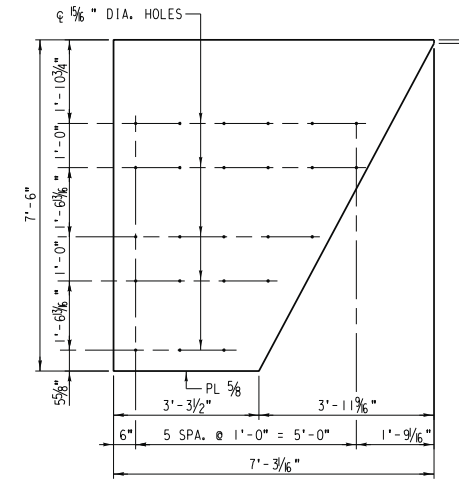
DECK PLATE MK. DP-2

SCALE: 1/2" = 1'-0"
EST. WT. = 1,913 LB. EA. (4 REQUIRED)



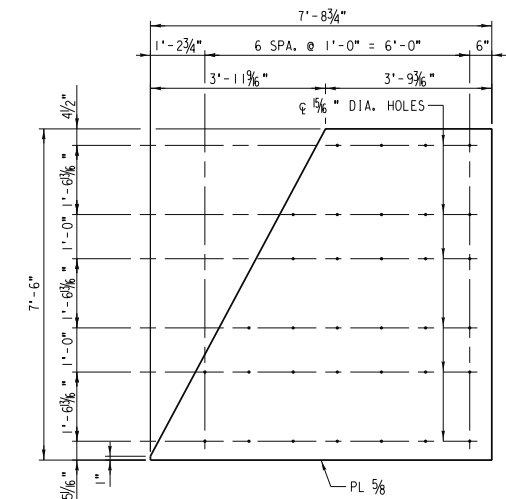
DECK PLATE MK. DP-3

SCALE: 1/2" = 1'-0"
EST. WT. = 1,913 LB. EA. (40 REQUIRED)



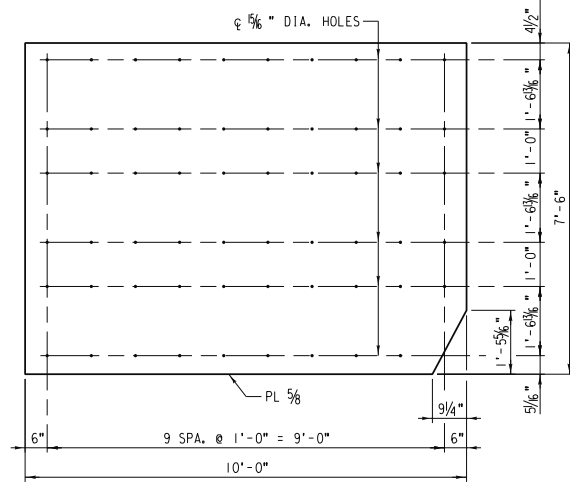
DECK PLATE MK. DP-4

SCALE: 1/2" = 1'-0"
EST. WT. = 1,009 LB. EA. (4 REQUIRED)



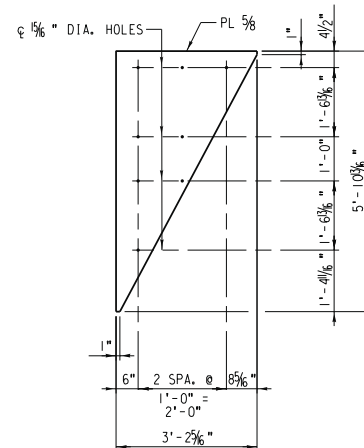
DECK PLATE MK. DP-5

SCALE: 1/2" = 1'-0"
EST. WT. = 1,099 LB. EA. (4 REQUIRED)



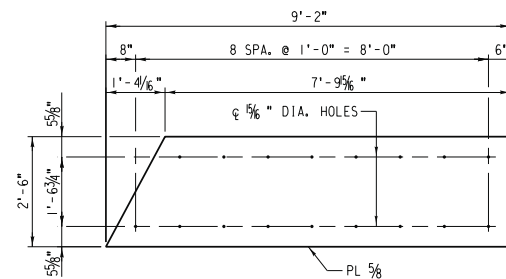
DECK PLATE MK. DP-6

SCALE: 1/2" = 1'-0"
EST. WT. = 1,913 LB. EA. (4 REQUIRED)



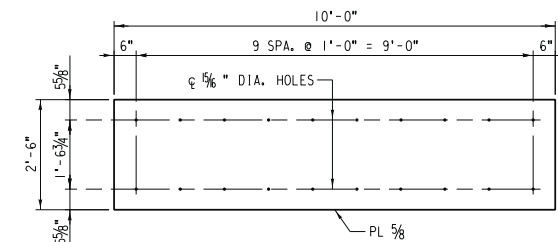
DECK PLATE MK. DP-7

SCALE: 1/2" = 1'-0"
EST. WT. = 241 LB. EA. (4 REQUIRED)



DECK PLATE MK. DP-8

SCALE: 1/2" = 1'-0"
EST. WT. = 542 LB. EA. (4 REQUIRED)



DECK PLATE MK. DP-9

SCALE: 1/2" = 1'-0"
EST. WT. = 638 LB. EA. (10 REQUIRED)

NOTE:
FOR STRUCTURAL STEEL NOTES, SEE SHEET S3.

AS BUILT
Eric Johnson
CORRECTIONS BY
CONTRACT NO.
DATE *Nov 16, 2012*

9/2/2009

\\S40_DeckPlateDetails.dgn

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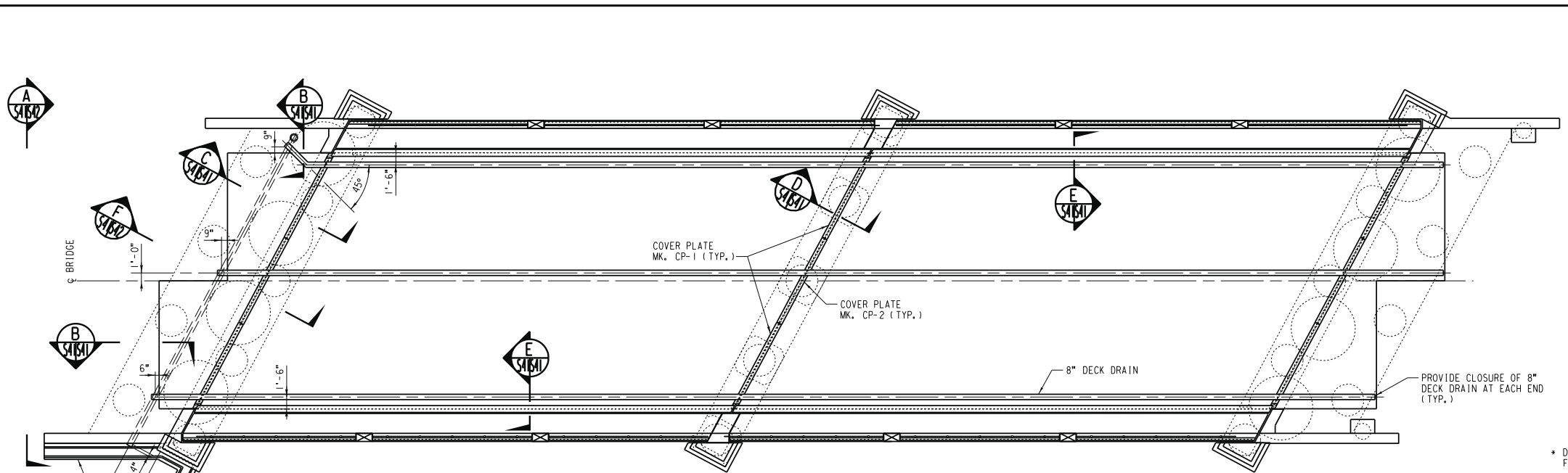
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2100
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

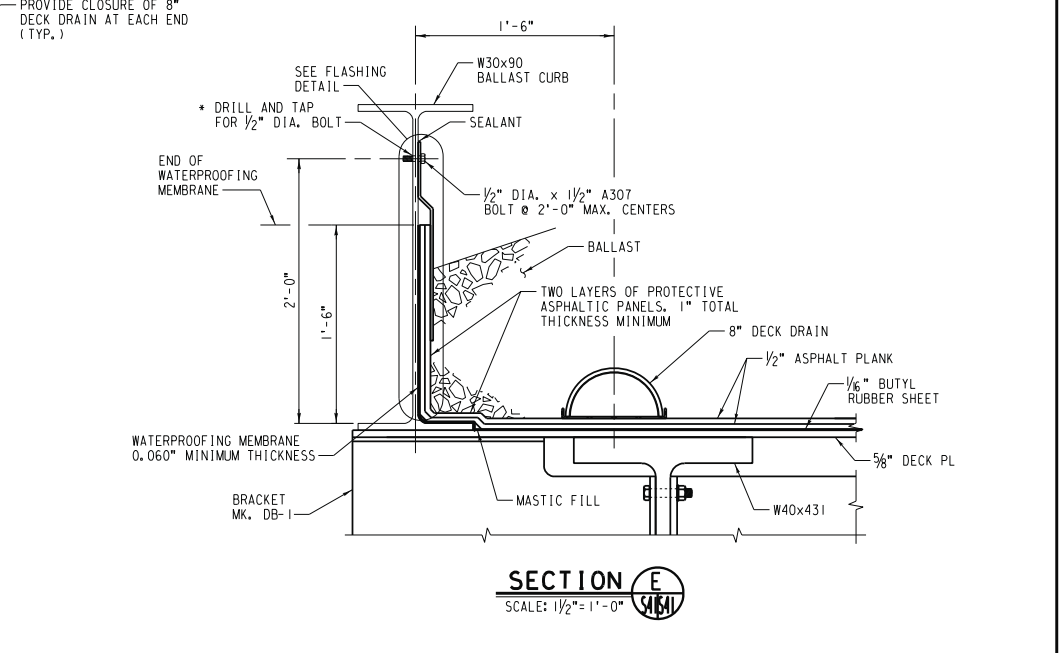
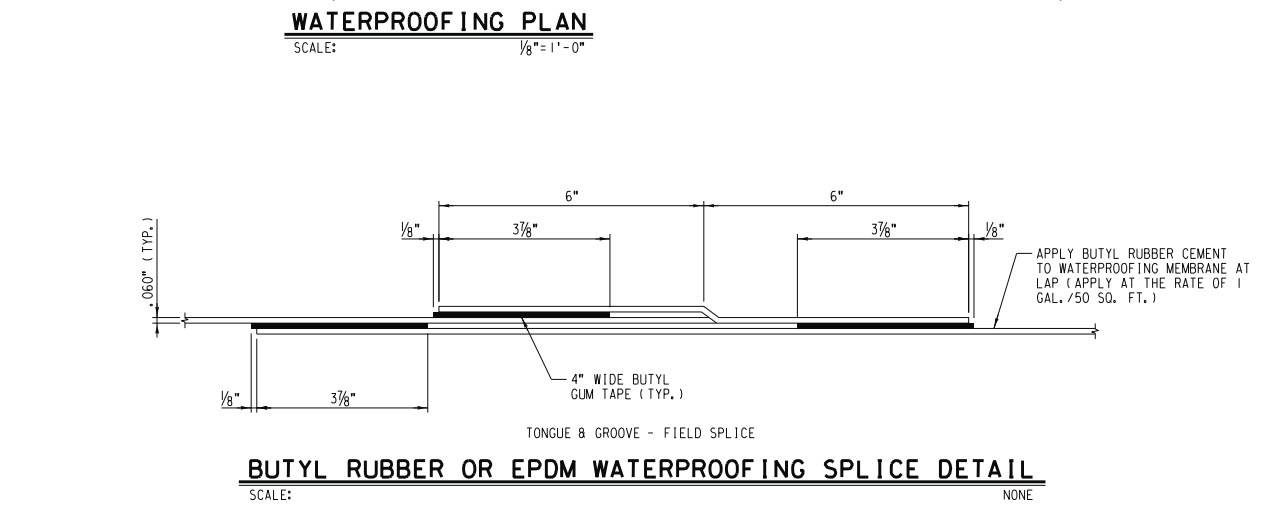
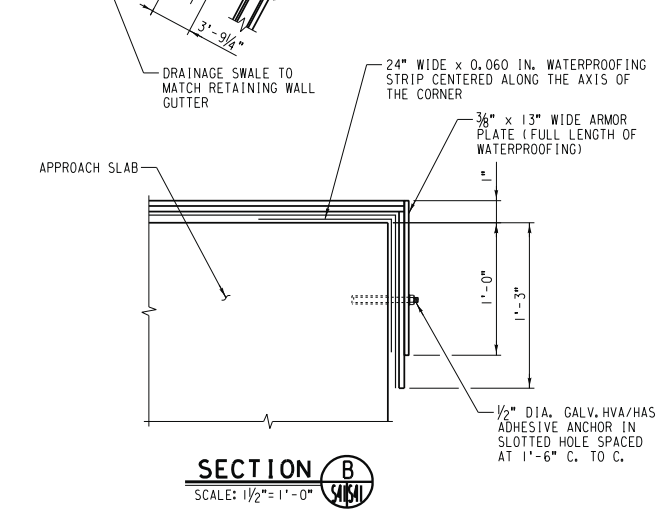
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DECK PLATE DETAILS
HORIZ. SCALE: 1/2" = 1'-0" VERT. SCALE: 1/2" = 1'-0"

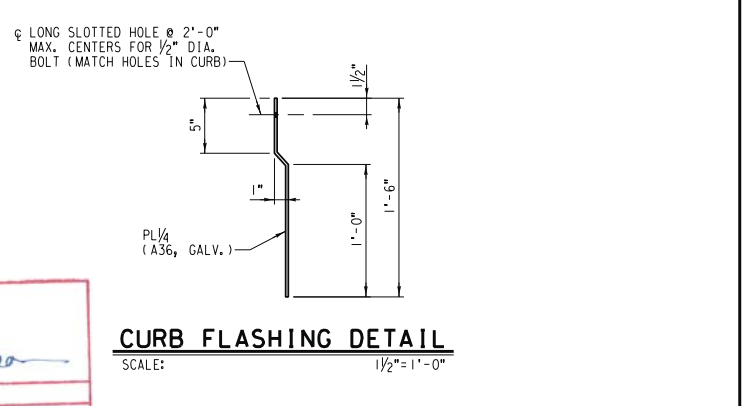
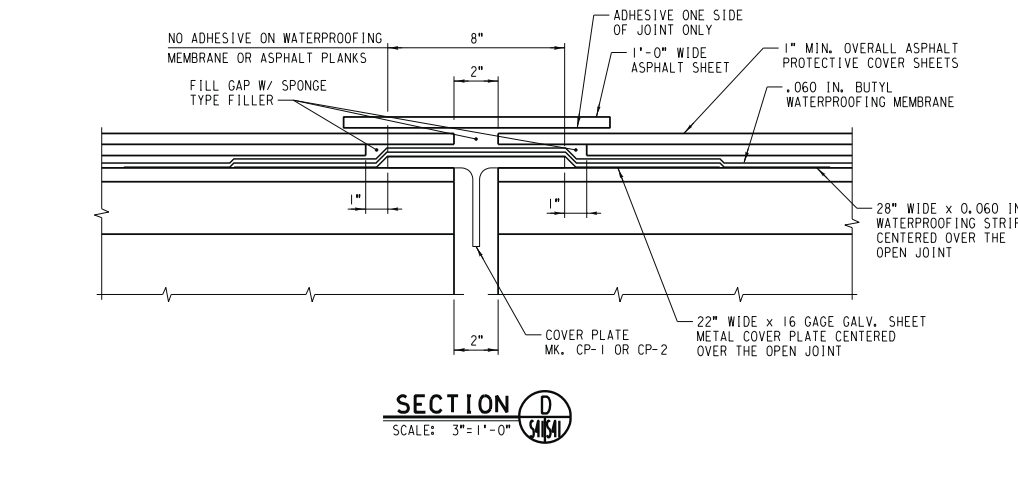
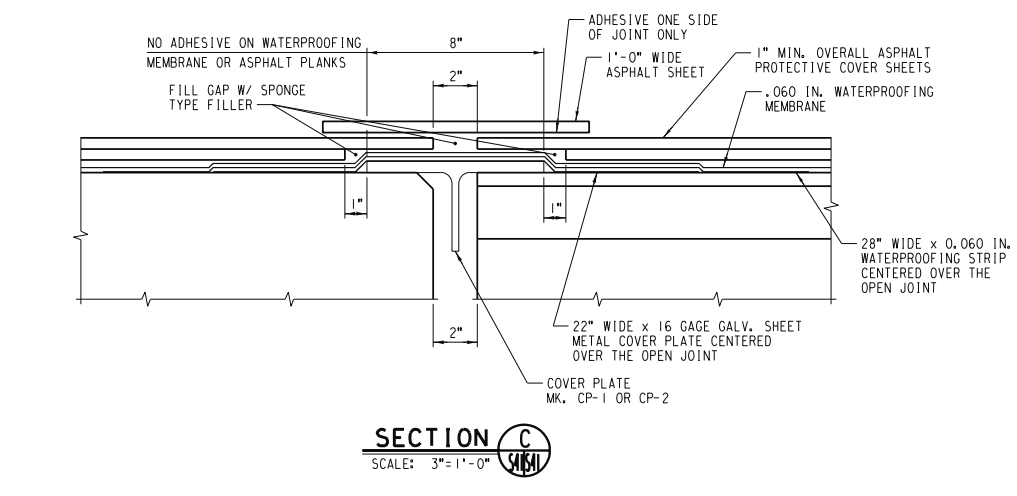
STRUCTURE SHEET NO. S40
R-4081
SHEET 148 OF 189
FILE NO.



- WATERPROOFING NOTES:**
- ENTIRE DECK AND APPROACH SLABS SHALL BE WATERPROOFED PER NOTES AND DETAILS, THIS SHEET.
 - THE CONTRACTOR SHALL SUBMIT A DRAWING TO THE CITY OF RIVERSIDE AND UPRR SHOWING THE LAYOUT OF THE WATERPROOFING MEMBRANE AND EACH LAYER OF THE ASPHALT SHEETS. THE LAYOUTS ARE SUBJECT TO THE APPROVAL OF THE CITY AND UPRR.
 - FILL GAPS BETWEEN DECK PLATES AND HOLES IN DECK PLATES WITH MASTIC PRIOR TO INSTALLING WATERPROOFING MEMBRANE.
 - APPLY ADHESIVE TO THE ENTIRE DECK, APPROACH SLABS, AND APPLICABLE PORTIONS OF CURBS AT THE RATE OF ONE GALLON PER HUNDRED SQ. FT. PRIOR TO INSTALLING THE WATERPROOFING MEMBRANE. DO NOT APPLY ADHESIVE AS DETAILED AT THE JOINTS BETWEEN SPANS AND AT THE ABUTMENT BACKWALL. OVERLAP THE ENDS OF THE WATERPROOFING MEMBRANE AS DETAILED.
 - THE ASPHALT SHEETS ARE TO BE PLACED OVER THE WATERPROOFING MEMBRANE. BOND THE BOTTOM LAYER OF ASPHALT SHEETS TO THE WATERPROOFING MEMBRANE AND THE TOP LAYER OF ASPHALT SHEETS TO THE BOTTOM LAYER WITH ADHESIVE, APPLYING IT AT THE SAME RATE AND MANNER AS INDICATED FOR THE WATERPROOFING. DO NOT APPLY ADHESIVE TO THE ASPHALT SHEETS AS DETAILED AT THE JOINTS BETWEEN SPANS AND AT THE ABUTMENT BACKWALLS. STAGGER JOINTS BETWEEN LAYERS OF ASPHALT SHEETS A MINIMUM OF 6" SO THAT NO JOINT IN THE TOP LAYER COINCIDES WITH A JOINT IN THE BOTTOM LAYER.
 - CAUTION - ADHESIVE IS EXTREMELY FLAMMABLE. DO NOT EXPOSE TO OPEN FLAME OR SPARKS FROM GRINDING OR WELDING.**
 - IMMEDIATELY FOLLOWING ACCEPTANCE OF THE WATERPROOFING, THE CONTRACTOR SHALL PLACE BALLAST TO A MINIMUM DEPTH OF 6". THE BALLAST IS TO BE FURNISHED BY THE RAILROAD. IN PLACING THE BALLAST, MEANS SHALL BE EMPLOYED SO AS TO NOT DAMAGE THE ASPHALT SHEETS OR WATERPROOFING MEMBRANE.



- NOTES:**
- ALL STRUCTURAL STEEL PLATES, BOLTS AND WASHERS SHALL BE GALVANIZED.
 - DISCONTINUE FLASHING AT BENT AND ABUTMENT GAPS IN STEEL BALLAST CURB. LEAVE MIN. 1" GAP BETWEEN ADJACENT PIECES OF FLASHING.
 - AT CONTRACTOR'S OPTION, TAPPED HOLES FOR INSTALLATION OF FLASHING MAY BE FABRICATED IN THE FIELD OR IN THE SHOP.



AS BUILT
Eric J. Russo
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012

S41 - Waterproo ftingandDrainageDetail2.dwg/2/2009

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HDR ONE COMPANY Many Solutions
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RIVERSIDE, CA 92501-2100
DATE: 9/14/09

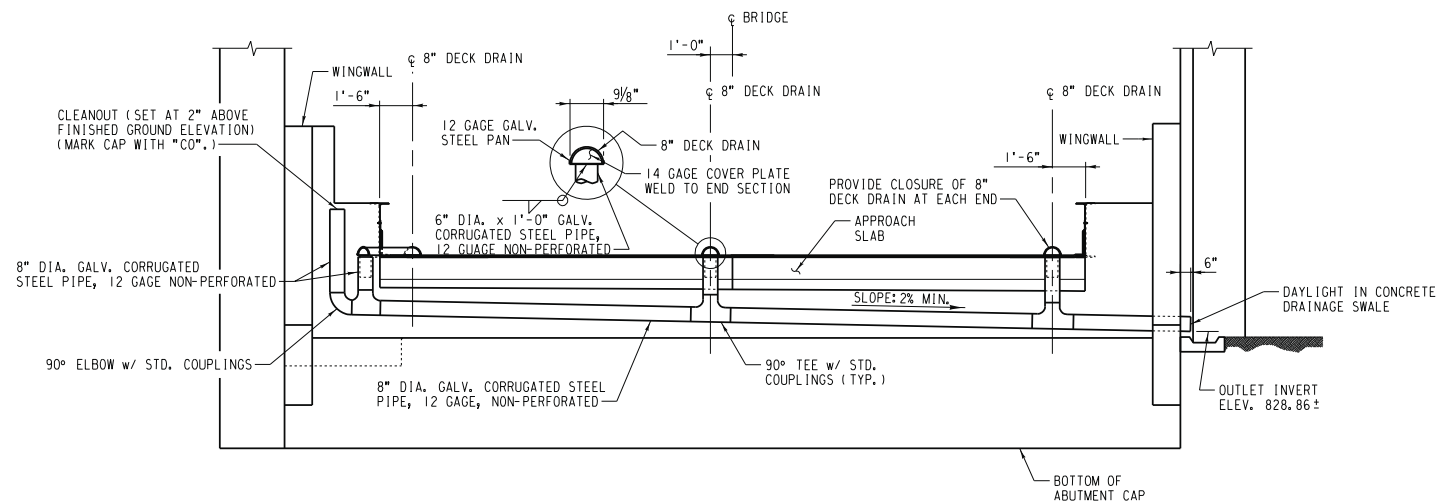
REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

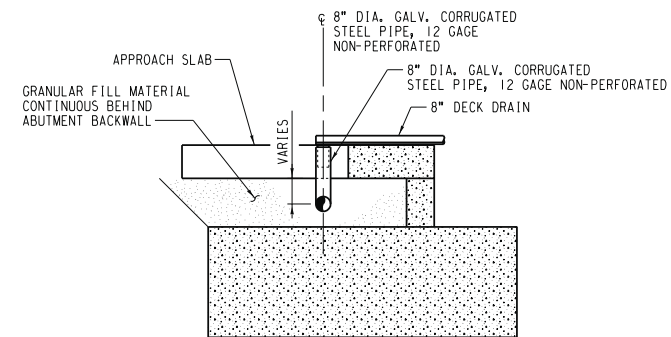
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
WATERPROOFING AND DRAINAGE DETAILS (1 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S41
R-4081
SHEET 149 OF 189
FILE NO.

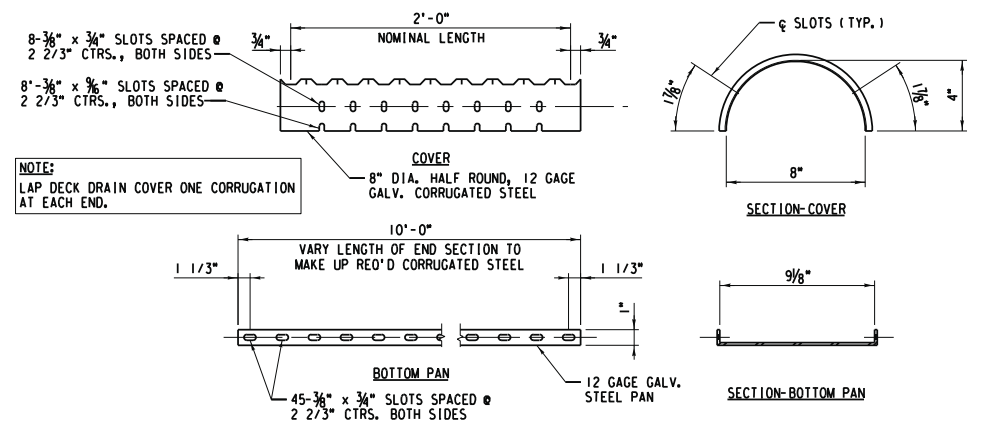


VIEW A
SCALE: 1/4" = 1'-0"

NOTE:
PROVIDE A RODENT SCREEN WHERE
8" DIA. GALV. STEEL PIPE DAYLIGHTS.



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



NOTES:
LAP DECK DRAIN COVER ONE CORRUGATION AT EACH END.

8" DECK DRAIN DETAILS
SCALE: NONE

AS BUILT
Eric J. Johnson
CORRECTIONS BY _____
CONTRACT NO. _____
DATE *Nov 16, 2012*

S:\S42 - Water\p\oo\img\imgDetail\2\F2\189gv/2009

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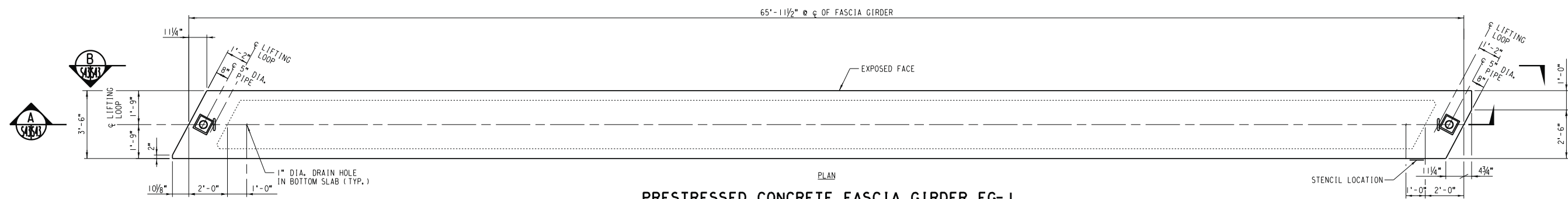
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HDR ENGINEERING, INC.
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SUITE 100 RIVERSIDE, CA 92501-2100
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
NATHAN F. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

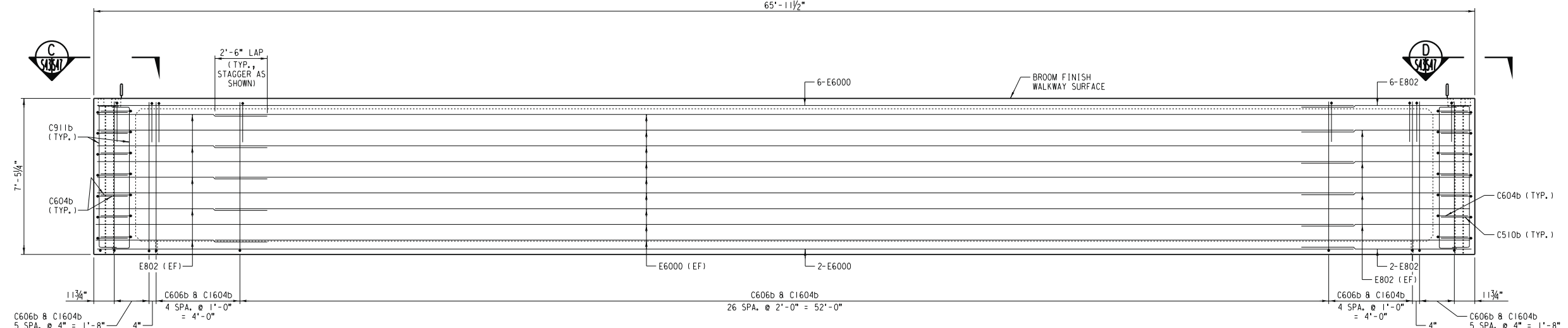
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
WATERPROOFING AND DRAINAGE DETAILS (2 OF 2)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

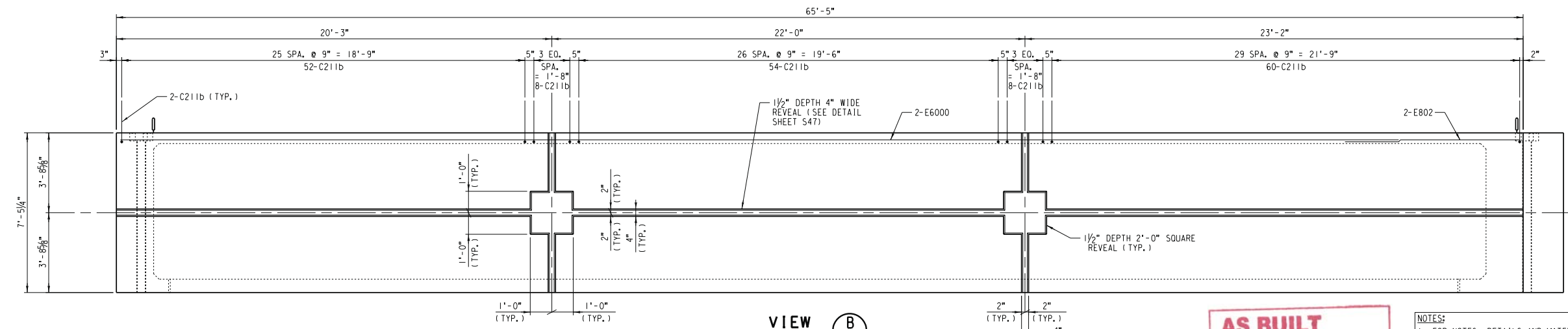
STRUCTURE SHEET NO. S42
R-4081
SHEET 150 OF 189
FILE NO.



PRESTRESSED CONCRETE FASCIA GIRDER FG-1
SCALE: (1 REQUIRED) 3/8" = 1'-0"



SECTION A
SCALE: 3/8" = 1'-0"



VIEW B
SCALE: 3/8" = 1'-0"
(SHOWING EXPOSED FACE)

EST. WT. OF PRESTRESSED CONC. FASCIA GIRDER
MK, FG-1 = 112,800 LB. (56.4 TONS)

AS BUILT
Eric Johnson
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012

- NOTES:**
1. FOR NOTES, DETAILS AND MATERIAL SCHEDULE, SEE SHEET S47.
 2. FOR SECTIONS, SEE SHEET S47.
 3. FOR REINFORCING SCHEDULE, SEE SHEET S48.

STRUCTURE SHEET NO. S43

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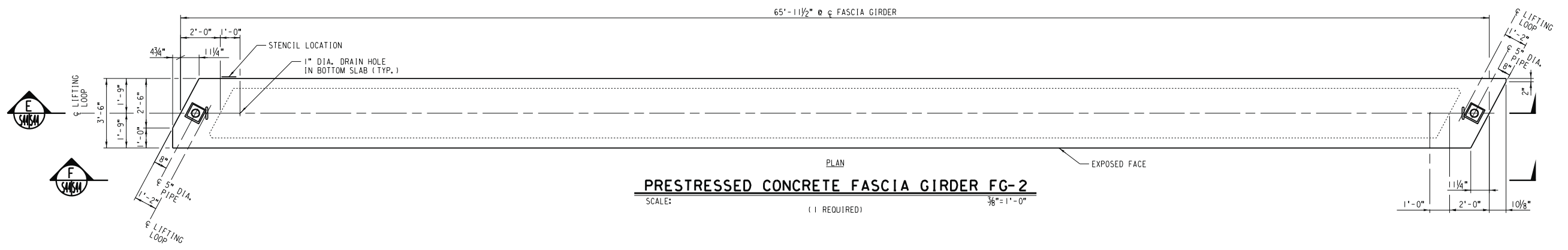
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2100
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
NATHAN F. DICKSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

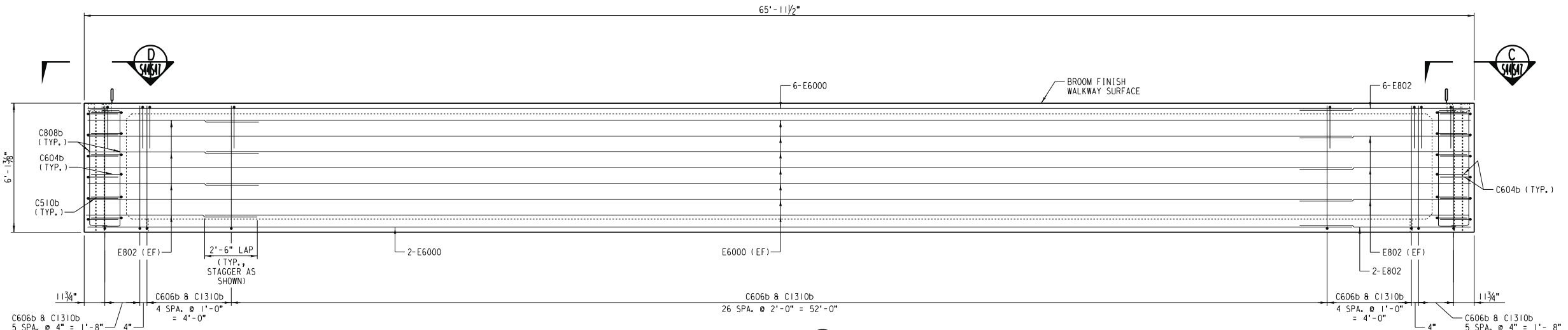
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
(1 OF 6)
HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

R-4081
SHEET 151 OF 189
FILE NO.



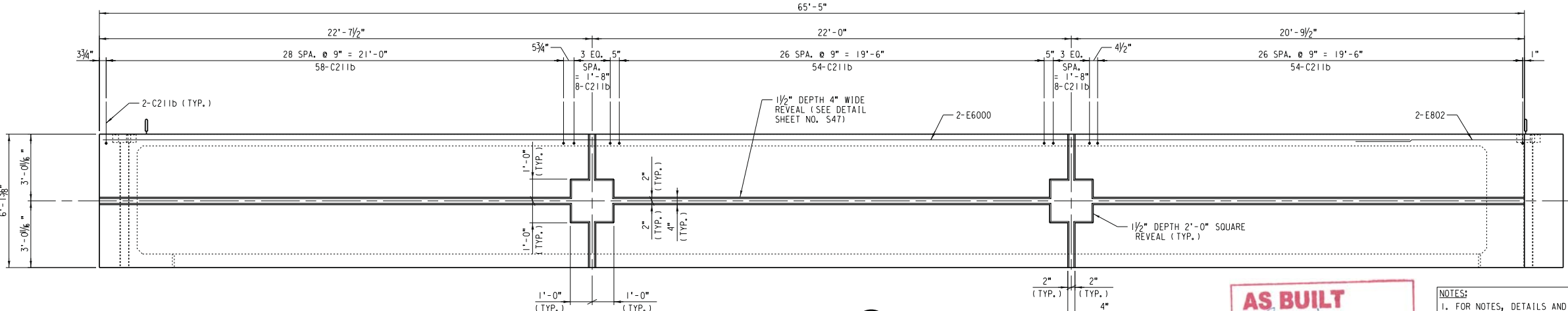
PRESTRESSED CONCRETE FASCIA GIRDER FG-2

SCALE: (1 REQUIRED) 3/8" = 1'-0"



SECTION E

SCALE: 3/8" = 1'-0"



VIEW F

SCALE: 3/8" = 1'-0" (SHOWING EXPOSED FACE)

EST. WT. OF PRESTRESSED CONC. FASCIA GIRDER
 MK, FG-2 = 97,800 LB. (48.9 TONS)

AS BUILT
Eric Johnson
 CORRECTIONS BY
 CONTRACT NO.
 DATE Nov 16, 2012

- NOTES:**
- FOR NOTES, DETAILS AND MATERIAL SCHEDULE, SEE SHEET S47.
 - FOR SECTIONS, SEE SHEET S48.
 - FOR REINFORCING SCHEDULE, SEE SHEET S48.

9/2/2009 \\S44_PrestressedConcreteFascia.dgn

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 HDR ENGINEERING, INC.
 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2100
 DATE: 9/14/09

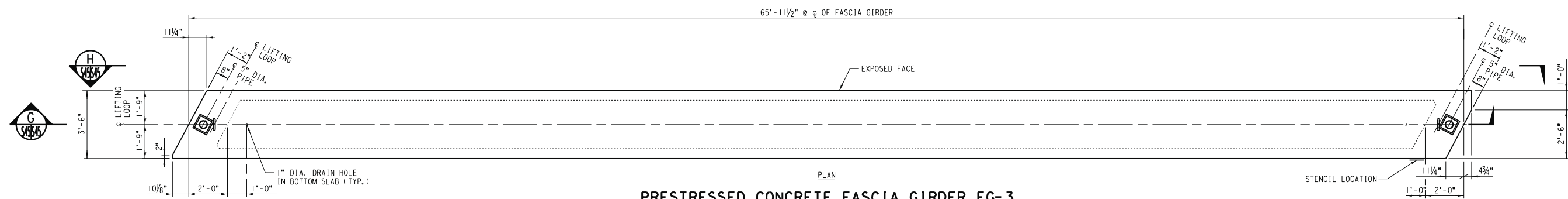
REGISTERED PROFESSIONAL ENGINEER
 NATHAN P. DICKERSON
 No. C 71974
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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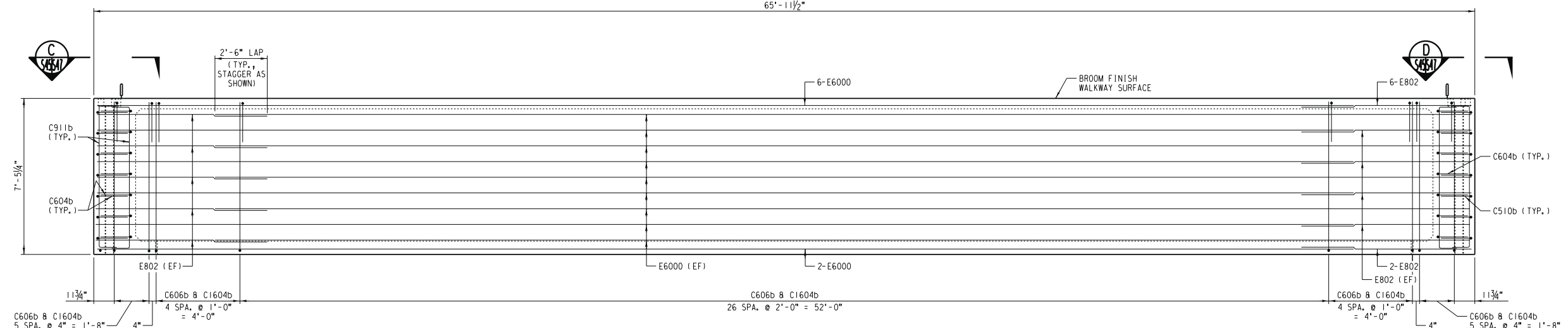
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
 PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
 (2 OF 6)
 HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

STRUCTURE SHEET NO. S44
R-4081
 SHEET 152 OF 189
 FILE NO.



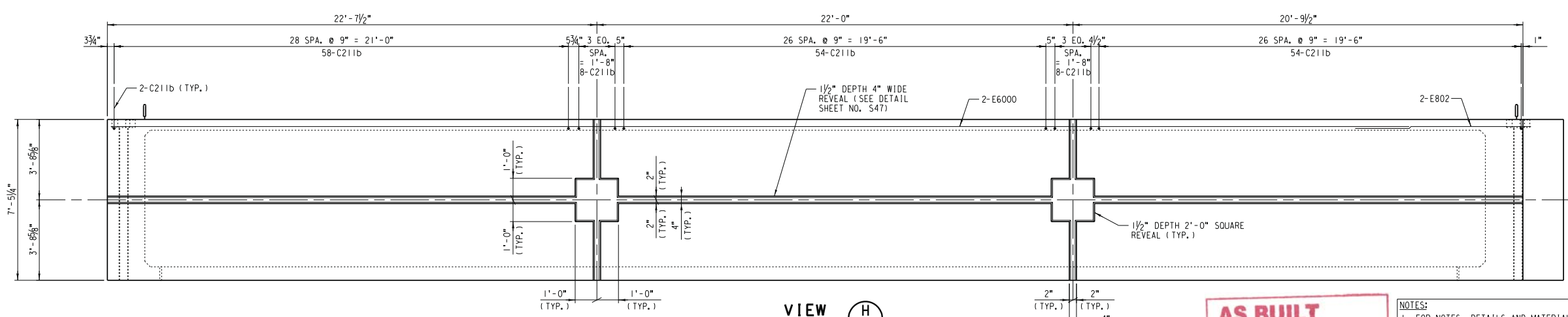
PRESTRESSED CONCRETE FASCIA GIRDER FG-3

SCALE: (1 REQUIRED) 3/8" = 1'-0"



SECTION C

SCALE: 3/8" = 1'-0"



VIEW H

SCALE: 3/8" = 1'-0" (SHOWING EXPOSED FACE)

EST. WT. OF PRESTRESSED CONC. FASCIA GIRDER
 MK. FG-3 = 112,800 LB. (56.4 TONS)

AS BUILT
Eric J. Russo
 CORRECTIONS BY
 CONTRACT NO.
 DATE Nov 16, 2012

- NOTES:**
1. FOR NOTES, DETAILS AND MATERIAL SCHEDULE, SEE SHEET S47.
 2. FOR SECTIONS, SEE SHEET S47.
 3. FOR REINFORCING SCHEDULE, SEE SHEET S48.

...S45_PrestressedConcreteFasciaGirderDetail.dwg

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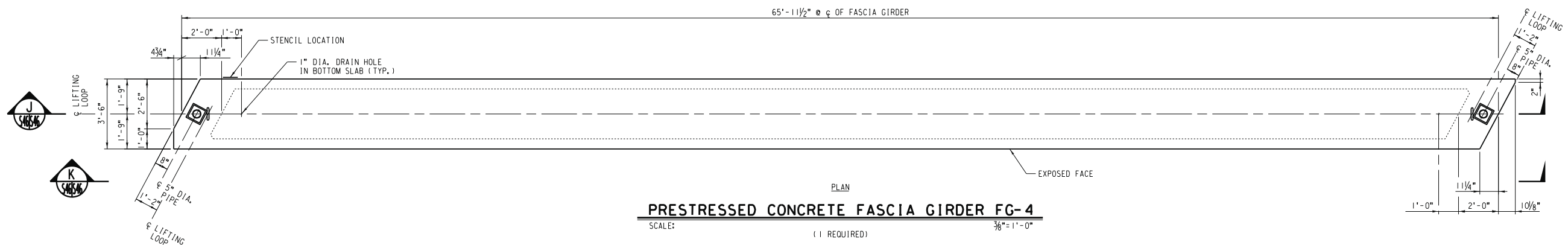
HDR ONE COMPANY Many Solutions
 HDR ENGINEERING, INC.
 2280 MARKET STREET
 SUITE 100
 RIVERSIDE, CA 92501-2100
 DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
 NATHAN F. DICKERSON
 No. C 71974
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

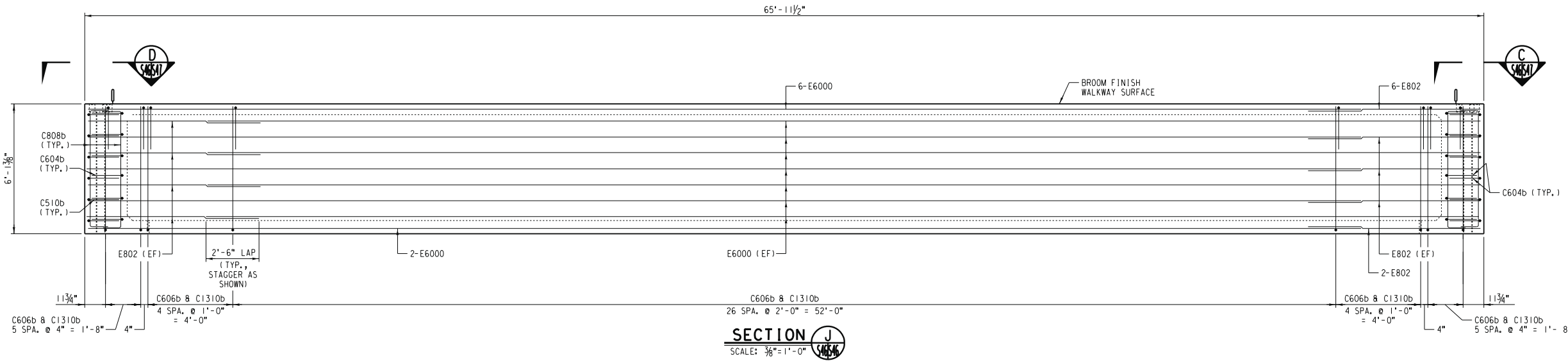
MARK	REVISIONS	APPR.	DATE

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
 PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
 (3 OF 6)
 HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

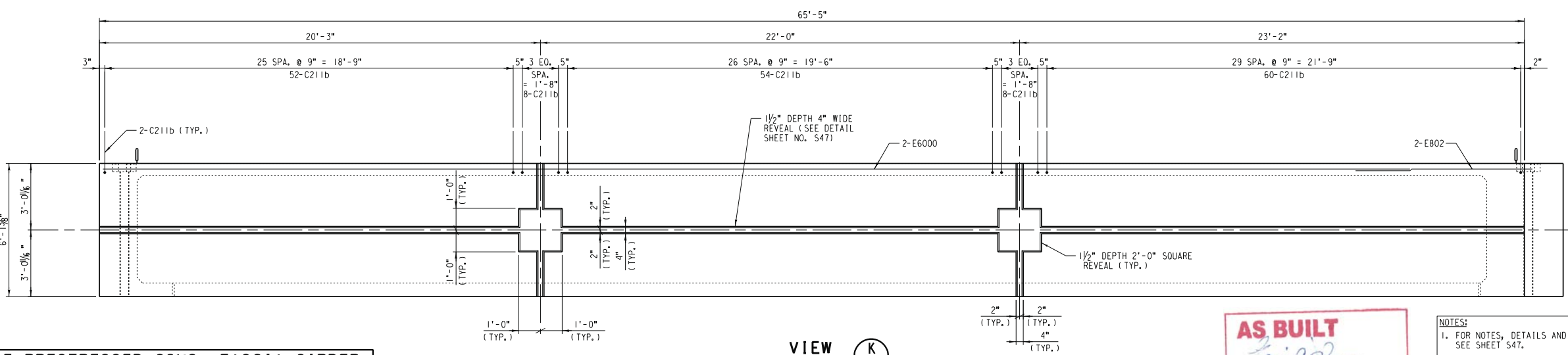
STRUCTURE SHEET NO. S45
R-4081
 SHEET 153 OF 189
 FILE NO.



PRESTRESSED CONCRETE FASCIA GIRDER FG-4
SCALE: (1 REQUIRED) 3/8" = 1'-0"



SECTION J
SCALE: 3/8" = 1'-0"



VIEW K
SCALE: 3/8" = 1'-0"
(SHOWING EXPOSED FACE)

EST. WT. OF PRESTRESSED CONC. FASCIA GIRDER
MK, FG-4 = 97,800 LB. (48.9 TONS)

AS BUILT
Eric J. Johnson
CORRECTIONS BY
CONTRACT NO.
DATE: Nov 16, 2012

- NOTES:**
- FOR NOTES, DETAILS AND MATERIAL SCHEDULE, SEE SHEET S47.
 - FOR SECTIONS, SEE SHEET S48.
 - FOR REINFORCING SCHEDULE, SEE SHEET S48.

STRUCTURE SHEET NO. S46

UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
(4 OF 6)

R-4081
SHEET 154 OF 189
FILE NO.

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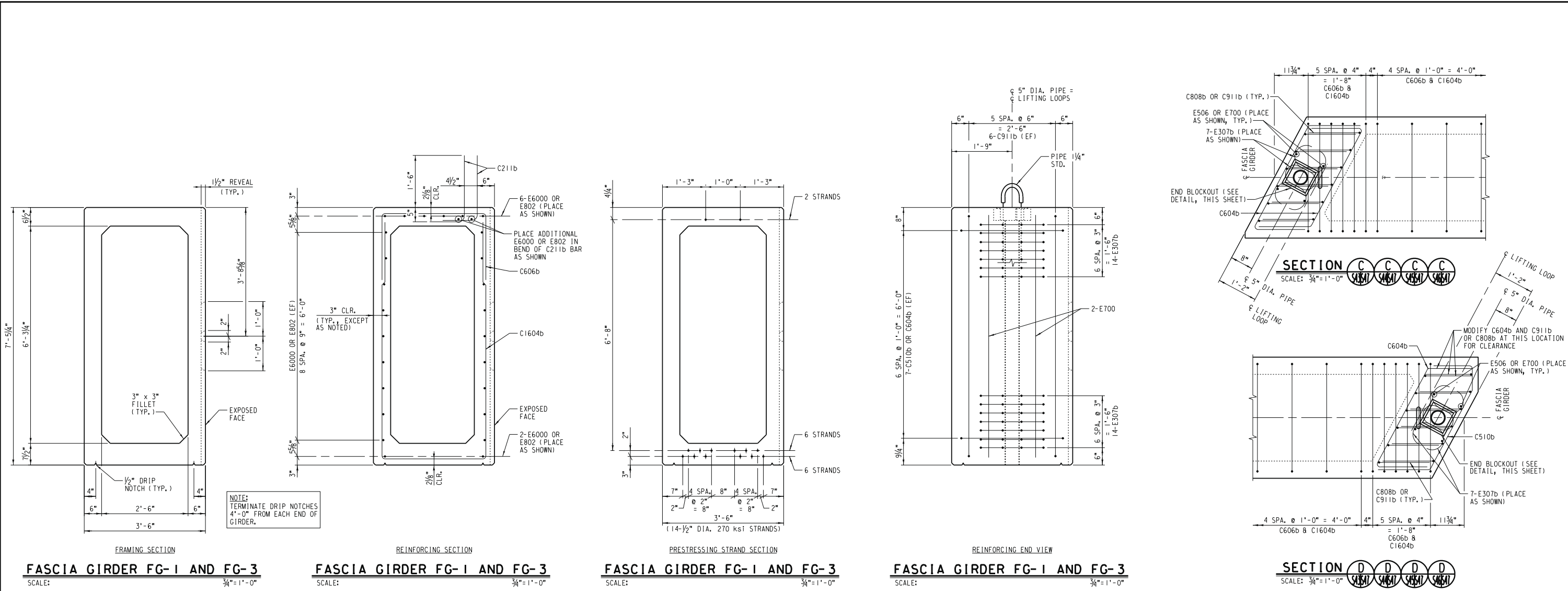
REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
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STATE OF CALIFORNIA

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HORIZ. SCALE: 3/8" = 1'-0" VERT. SCALE: 3/8" = 1'-0"

...S46-PrestressedConcreteFasciaGirderDetails.dwg



GENERAL NOTES - PRESTRESSED CONCRETE FASCIA GIRDERS

CONCRETE:
Concrete material, placing and curing shall be in accordance with the requirements specified in the specifications and the current edition of Chapter 8 of the AREMA Manual for Railway Engineering. The compressive strength of the concrete shall exceed 6000 psi at 28 days and 4000 psi at transfer of prestressing force.

Air entraining agents shall be in accordance with the requirements specified in the current edition of ASTM C260. The total entrained air content shall be 6% ± 1% by volume of the plastic concrete.

Concrete aggregate shall be in accordance with the requirements specified in the current edition of ASTM C33. Coarse aggregate shall be Size No. 67.

PRESTRESSING STRAND:
Prestressing strand shall be 1/2 inch diameter, seven wire, uncoated, low relaxation strand which is in accordance with the requirements specified in ASTM A416. The strand shall have an ultimate tensile strength of 270 ksi. The initial prestress shall be 30,600 lbs. per strand.

Strand shall be tested in accordance with PCI recommendations (Mustafa Method) and certified by the fabricator as having adequate bond characteristics to satisfy the prediction equations for transfer and development length given in the AREMA Manual for Railway Engineering.

An alternate strand pattern which has the same eccentricity as the pattern shown on this plan and is better suited to the manufacturer's facilities will be considered. Manufacturer must submit plans and computations for Railroad approval prior to casting.

REINFORCING STEEL:
Reinforcing steel shall be deformed, per current ASTM A615 Specification and meet grade 60 requirements. Fabrication of reinforcing steel shall be per Chapter 7 of the CRSI Manual of standard practice. Dimensions of bending details are out to out of bar. Reinforcing steel is to be blocked to proper location and securely wired against displacement. Use plastic protected reinforcing supports, meeting CRSI specifications Chapter 3, Class 1. Tack welding of reinforcing is prohibited. Minimum concrete cover on reinforcement shall meet current AREMA requirements.

MANUFACTURE:
Production procedures and dimensional tolerances for the manufacture of precast, prestressed girders shall be in accordance with the AREMA Manual for Railway Engineering and the Prestressed Concrete Institute's current Manual MNL 116 for Quality Control.

Tolerance for location of lifting loops shall be ±1/2".

The ends of the strands shall be burned off and recessed to a depth of 1 inch. Such recesses and minor spalls must be filled and finished to the plan dimensions using an epoxy bonding compound and grout.

Surfaces shall be formed in a manner which will produce a smooth and uniform appearance without rubbing or plastering. Unless otherwise noted, exposed edges of 90-degrees or less are to be chamfered 3/4" x 3/4". Unformed surfaces shall have a smooth finish free of all float and trowel marks.

The fabricator shall stencil the fabricator's name, date of fabrication, piece mark, and lifting weight at location shown.

The area around lifting loops shall not be recessed. Lifting loops to be removed in field flush with concrete surface.

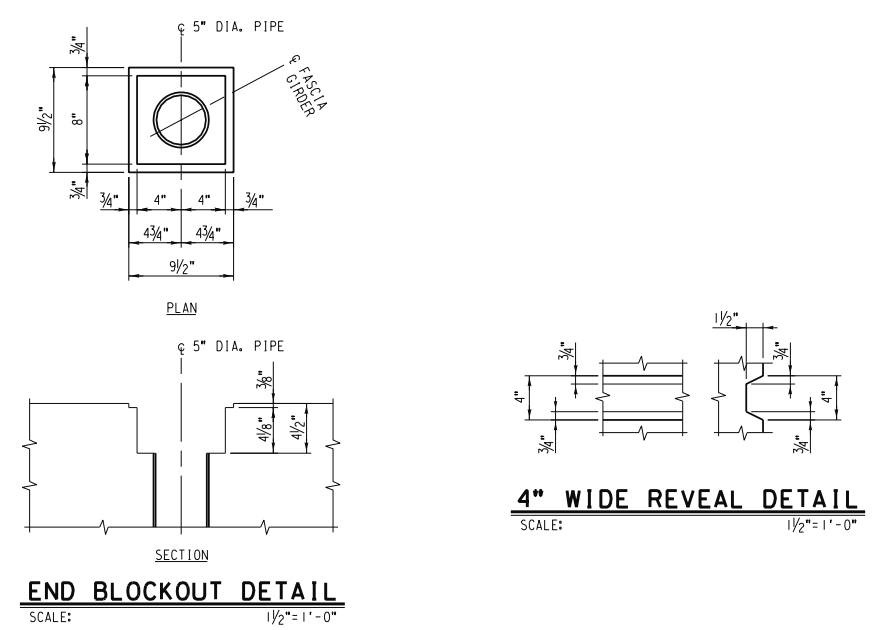
Inspection, loading, and securing for shipment: refer to specifications.

If lifted with slings instead of lifting loops, slings must not be placed more than 3'-0" from ends of beams.

LIFTING LOOPS:
Fabricator is responsible for developing lifting loop anchorage detail to provide safety factor of 4 on working load. Detail shall be proof-tested with test results kept on file by fabricator and available for inspection.

MATERIAL SCHEDULE					
(PRESTRESSED CONCRETE FASCIA GIRDERS)					
REQUIRED				UNIT	DESCRIPTION
FG-1	FG-2	FG-3	FG-4	CU. YD.	6000 PSI CONCRETE
27.9	24.2	27.9	24.2		
1	1	1	1	LOT	REINFORCING STEEL (PER SCHEDULE, SHEET S48)
924	924	924	924	L.F.	1/2" DIA. 270 KSI STRAND
2	2	2	2	EA.	5" DIA. SCHEDULE 40 STEEL PIPE (ASTM A53, GRADE B)
2	2	2	2	EA.	LIFTING LOOP

AS BUILT
Eric J. Russo
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012



...S47_PrestressconcfasciagirderDts15c61.dwg 2/2009

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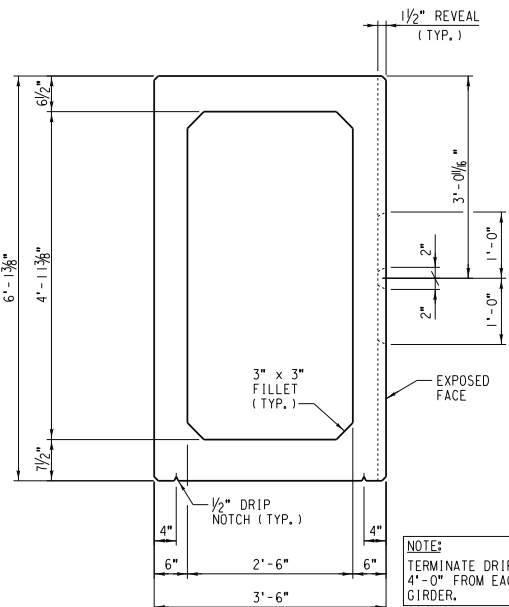
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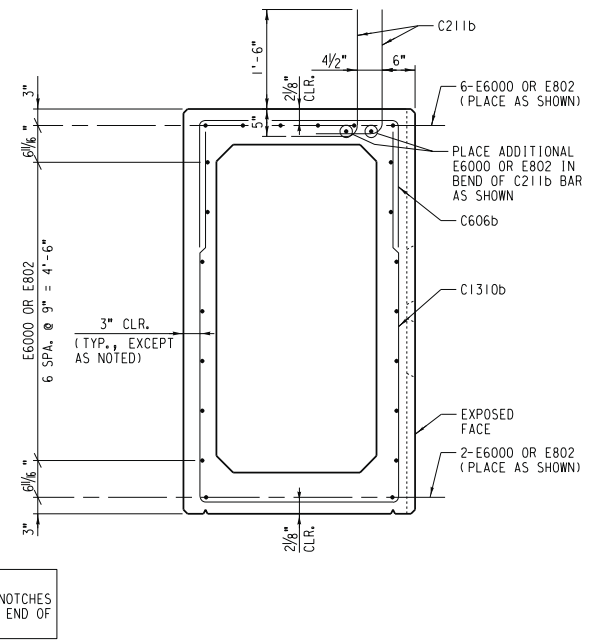
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PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
(5 OF 6)
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. S47
R-4081
SHEET 155 OF 189
FILE NO.



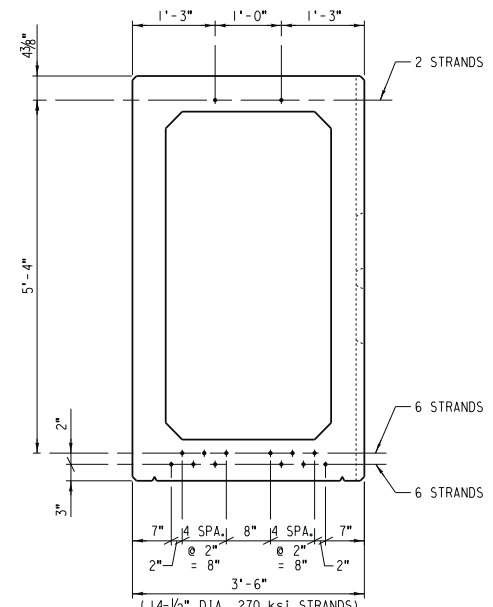
FRAMING SECTION

FASCIA GIRDER FG-2 AND FG-4
SCALE: 3/4" = 1'-0"



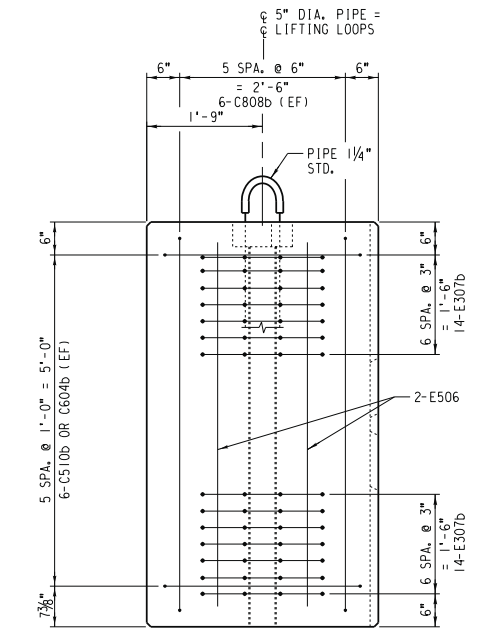
REINFORCING SECTION

FASCIA GIRDER FG-2 AND FG-4
SCALE: 3/4" = 1'-0"



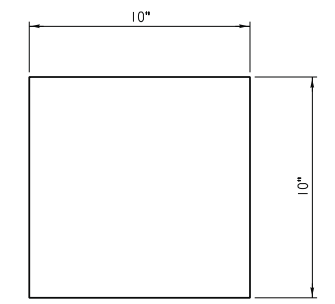
PRESTRESSING STRAND SECTION

FASCIA GIRDER FG-2 AND FG-4
SCALE: 3/4" = 1'-0"

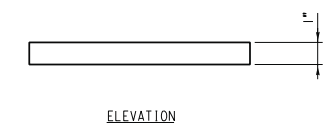


REINFORCING END VIEW

FASCIA GIRDER FG-2 AND FG-4
SCALE: 3/4" = 1'-0"



PLAN



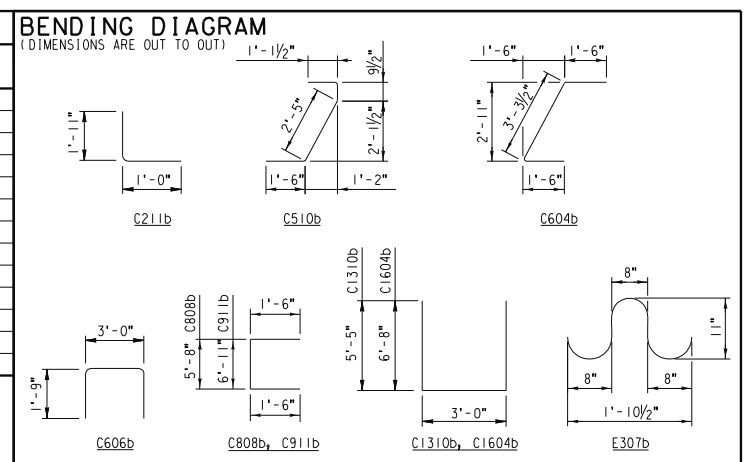
ELEVATION

BEARING PAD MK. BP-2

SCALE: 3\"/>

REINFORCING SCHEDULE							
REQUIRED				MARK	SIZE	LENGTH	SHAPE
FG-1	FG-2	FG-3	FG-4				
182	182	182	182	C211b	#4	2'-11"	L
47	47	47	47	C606b	#4	6'-6"	L
7	6	7	6	C510b	#4	5'-10"	L
21	18	21	18	C604b	#4	6'-4"	L
-	24	-	24	C808b	#4	8'-8"	L
24	-	24	-	C911b	#4	9'-11"	L
-	47	-	47	C1310b	#4	13'-10"	L
47	-	47	-	C1604b	#4	16'-4"	L
56	56	56	56	E307b	#6	3'-7"	S
-	8	-	8	E506	#6	5'-6"	—
8	-	8	-	E700	#6	7'-0"	—
28	24	28	24	E802	#6	8'-2"	—
28	24	28	24	E6000	#6	60'-0"	—

EST. WT. OF REINFORCING STEEL FG-1 = 4,600 LB.
 EST. WT. OF REINFORCING STEEL FG-2 = 4,060 LB.
 EST. WT. OF REINFORCING STEEL FG-3 = 4,600 LB.
 EST. WT. OF REINFORCING STEEL FG-4 = 4,060 LB.



AS BUILT
Eric A. [Signature]
 CORRECTIONS BY
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 DATE: Nov 16, 2012

...S48_PrestressConcFasciaGirderDts16of6.dwg 2/2009

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REGISTERED PROFESSIONAL ENGINEER
 NATHAN P. DICKSON
 No. C 71974
 Exp. 12-31-09
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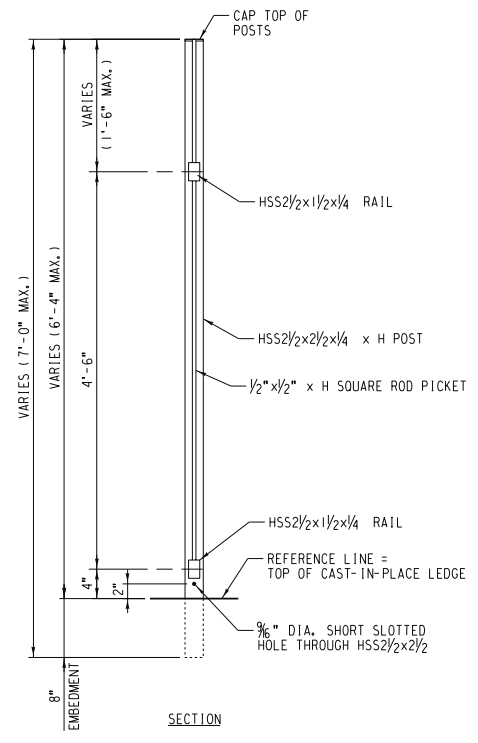
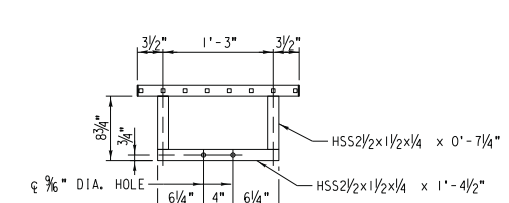
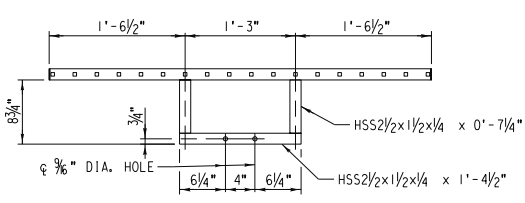
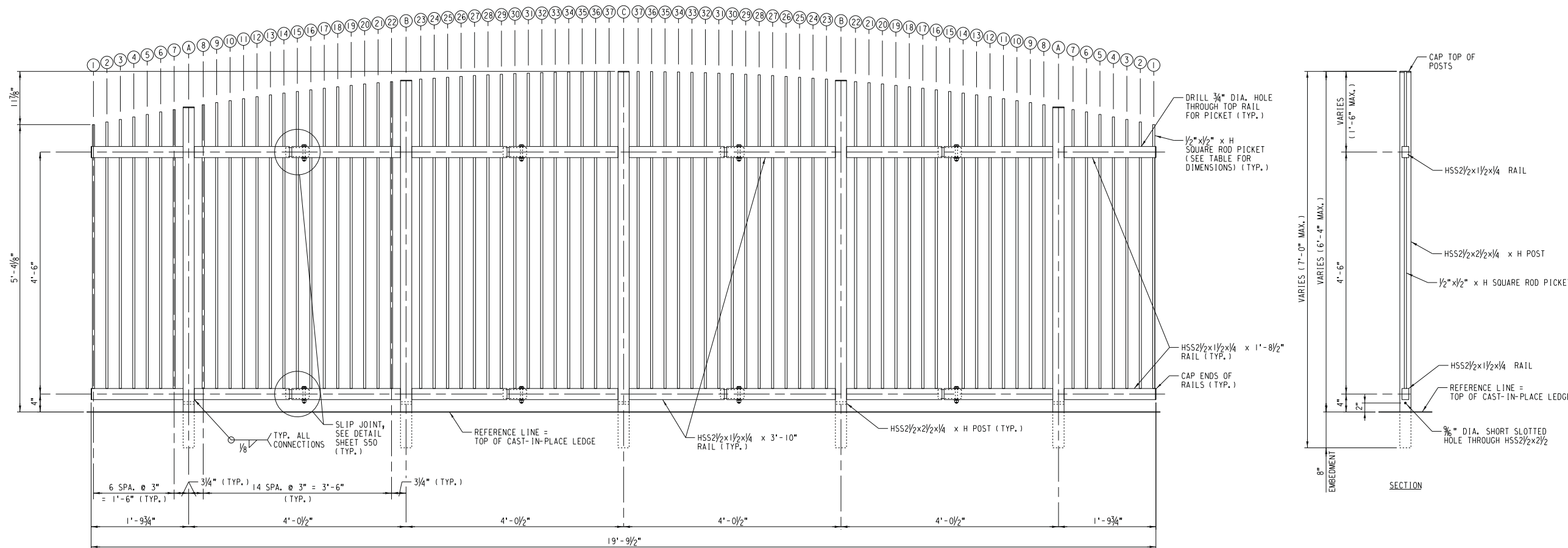
UPRR BRIDGE 55.16 LOS ANGELES SUB.
 CITY OF RIVERSIDE, CALIFORNIA
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 MAGNOLIA AVENUE UNDERPASS
 PRESTRESSED CONCRETE FASCIA GIRDER DETAILS
 (6 OF 6)
 HORIZ. SCALE: 3/4" = 1'-0" VERT. SCALE: 3/4" = 1'-0"

STRUCTURE SHEET NO. S48
 R-4081
 SHEET 156 OF 189
 FILE NO.

FENCE MEMBER DIMENSIONS

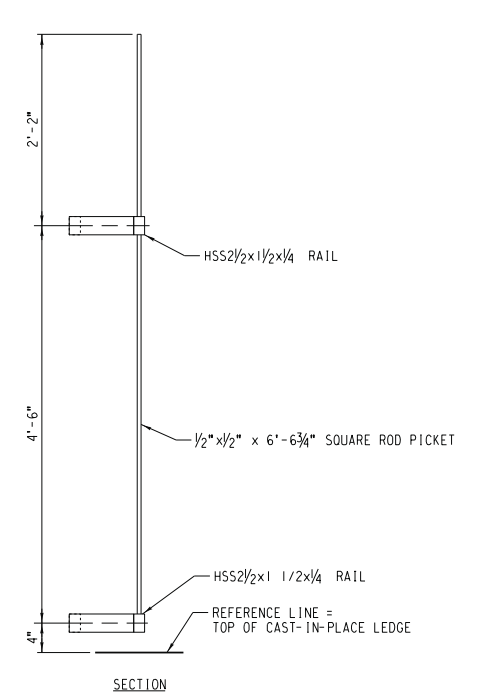
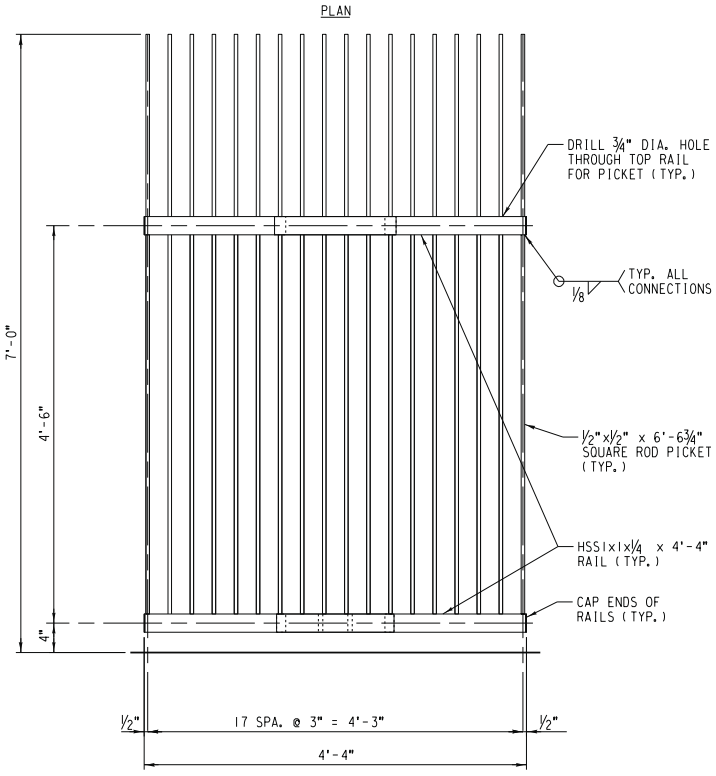
MEMBER	H
1	4'-10 1/8"
2	4'-11 1/2"
3	5'-0"
4	5'-0 5/8"
5	5'-1 1/8"
6	5'-1 3/4"
7	5'-2 1/4"
*A	6'-4"
8	5'-3 1/4"
9	5'-3 3/4"
10	5'-4 1/4"
11	5'-4 5/8"
12	5'-5 1/8"
13	5'-5 1/2"
14	5'-5 5/8"
15	5'-6 1/4"
16	5'-6 5/8"
17	5'-7"
18	5'-7 1/4"
19	5'-7 5/8"
20	5'-7 7/8"
21	5'-8 1/4"
22	5'-8 1/2"
*B	6'-10"
23	5'-9"
24	5'-9 1/4"
25	5'-9 1/2"
26	5'-9 5/8"
27	5'-9 7/8"
28	5'-10"
29	5'-10 1/8"
30	5'-10 1/4"
31	5'-10 3/8"
32	5'-10 1/2"
33	5'-10 5/8"
34	5'-10 7/8"
35	5'-10 5/8"
36	5'-10 3/4"
37	5'-10 3/4"
*C	7'-0"

*LENGTH INCLUDES TOP CAP



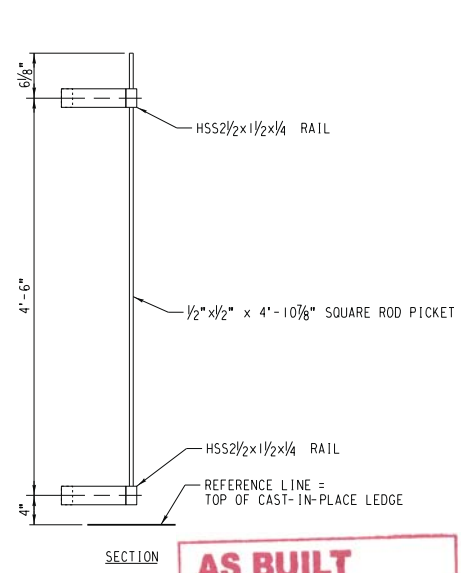
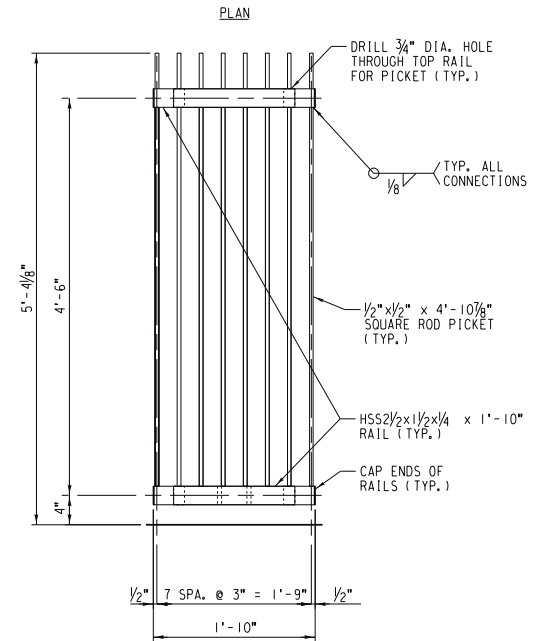
STEEL PICKET FENCE MK. SPF-1 DETAIL

SCALE: 1"=1'-0"



STEEL PICKET FENCE MK. SPF-4 DETAIL

SCALE: 1"=1'-0"



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STEEL PICKET FENCE MK. SPF-3 DETAIL

SCALE: 1"=1'-0"

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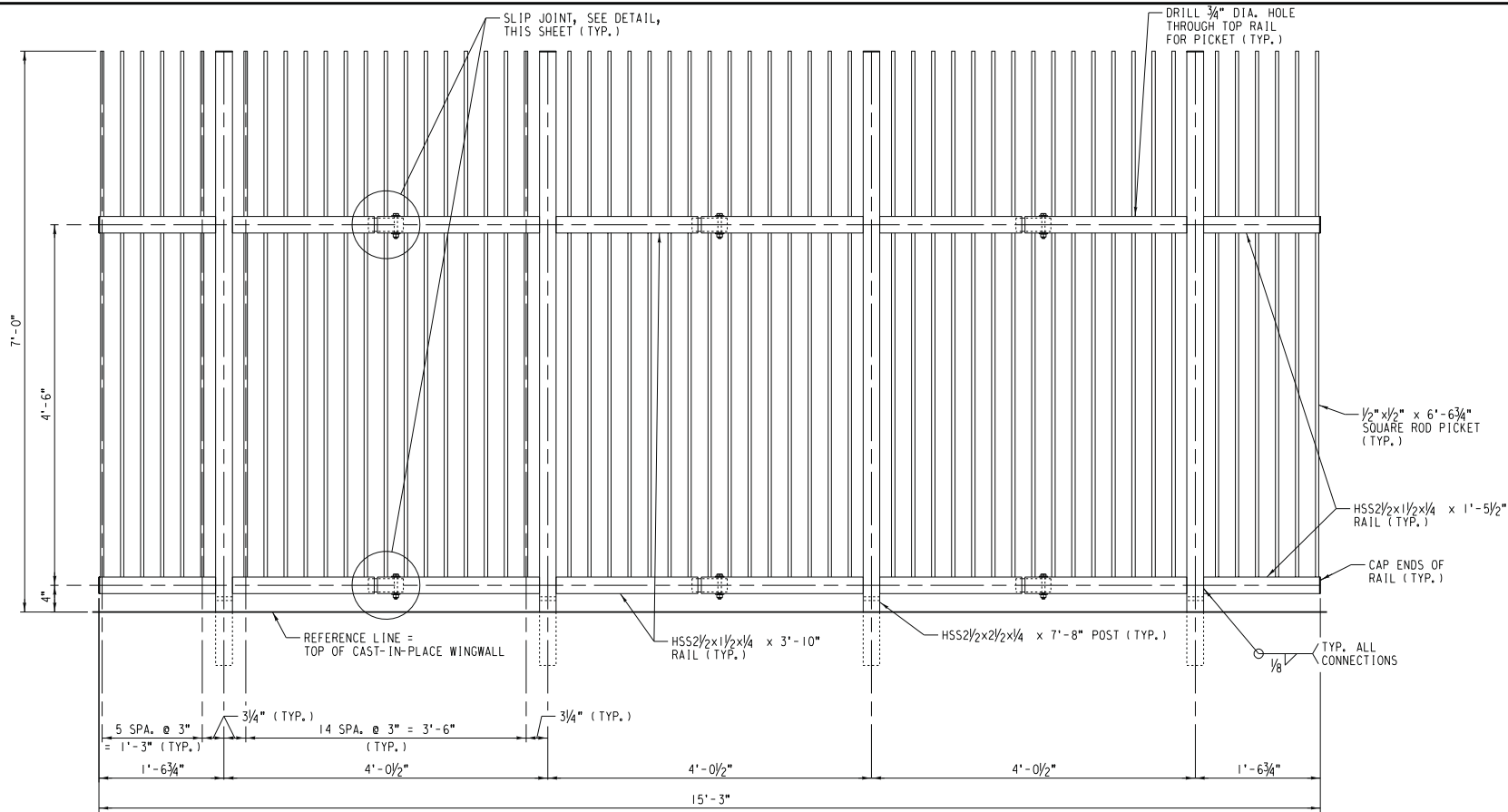
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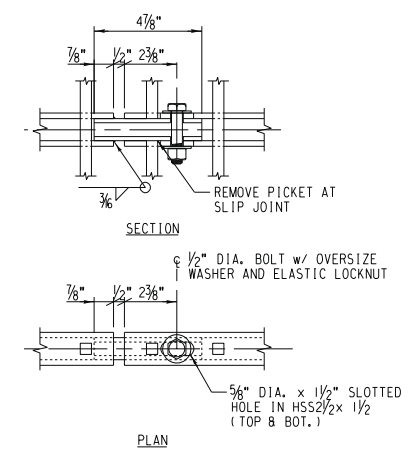
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 STEEL PICKET FENCE DETAILS (1 OF 2)

STRUCTURE SHEET NO. S49
 R-4081
 SHEET 157 OF 189
 FILE NO.

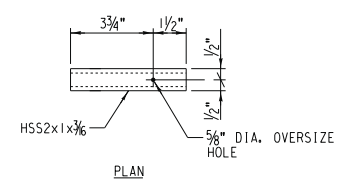
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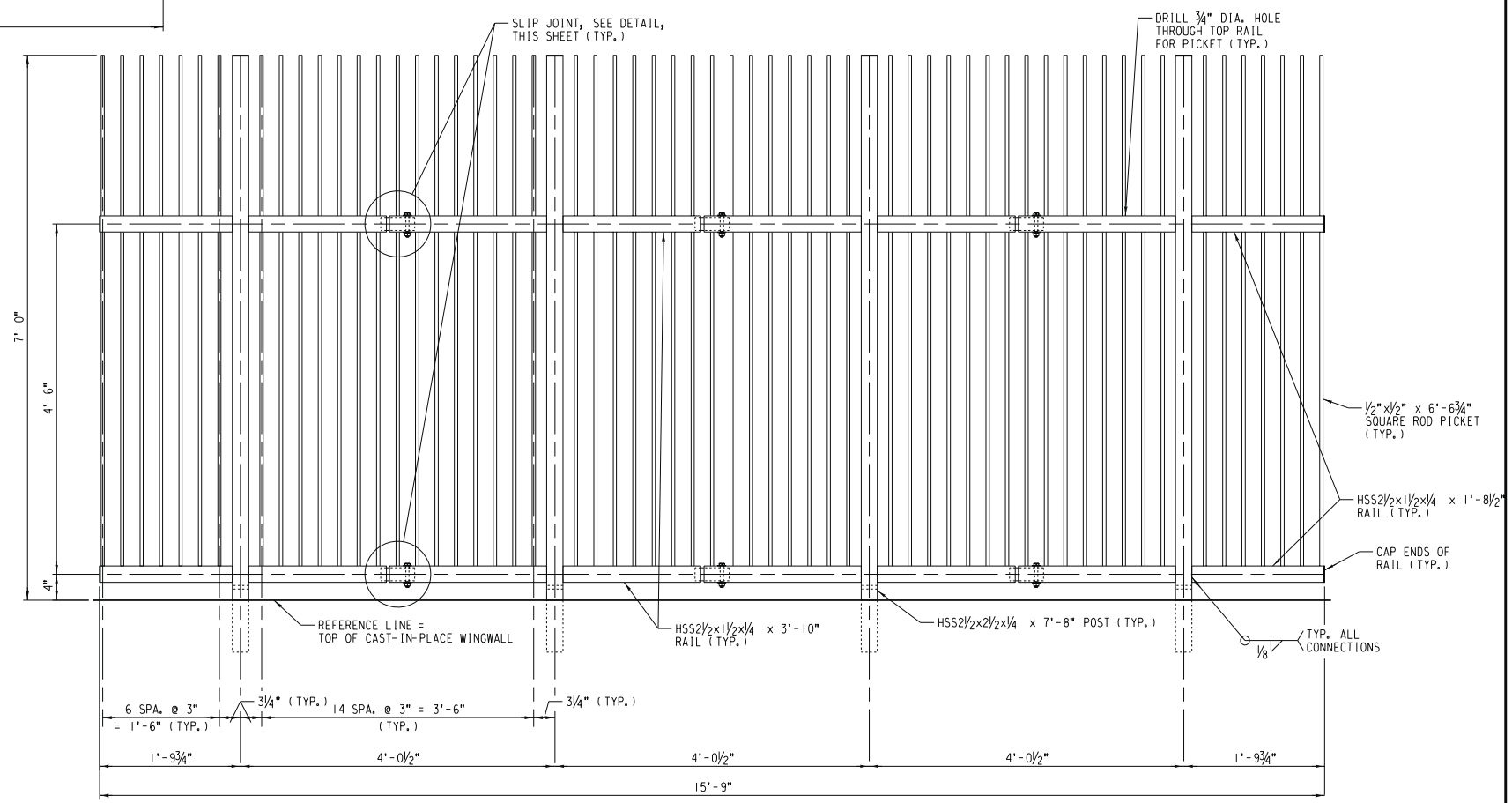
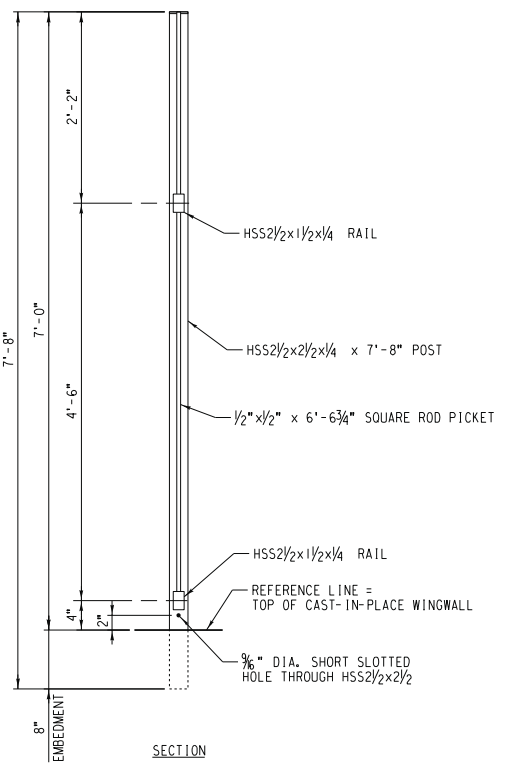
STEEL PICKET FENCE MK. SPF-2R DETAIL
SCALE: 1"=1'-0"



SLIP JOINT DETAIL
SCALE: 3"=1'-0"



SLIP JOINT SLEEVE
SCALE: 3"=1'-0"



STEEL PICKET FENCE MK. SPF-2L DETAIL
SCALE: 1"=1'-0"

\\SSO_SSteelPicket\FenceDetails\2of21.dgn 9/2/2009

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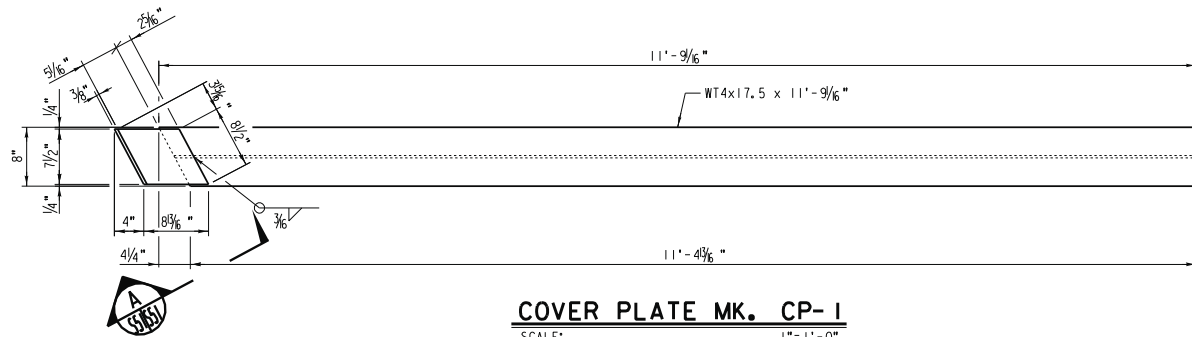
REGISTERED PROFESSIONAL ENGINEER
NATHAN F. HICKSON
No. C 71974
Exp. 12-31-09
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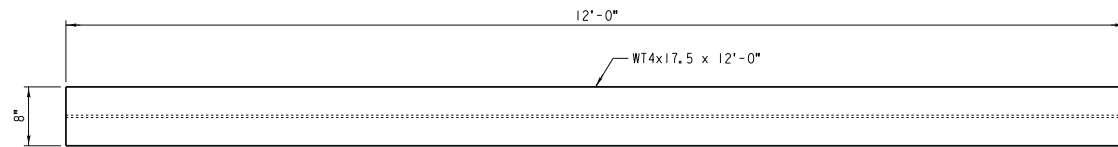
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STEEL PICKET FENCE DETAILS (2 OF 2)
HORIZ. SCALE: 1"=1'-0" VERT. SCALE: 1"=1'-0"

STRUCTURE SHEET NO. S50
R-4081
SHEET 158 OF 189
FILE NO.



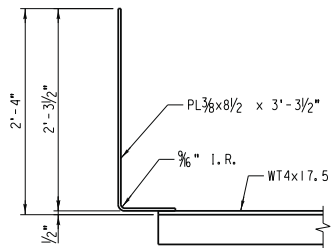
COVER PLATE MK. CP-1

SCALE: 1"=1'-0"
EST. WT. = 233 LB. EA. (6 REQUIRED)



COVER PLATE MK. CP-2

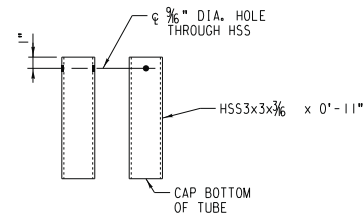
SCALE: 1"=1'-0"
EST. WT. = 210 LB. EA. (3 REQUIRED)



SECTION A

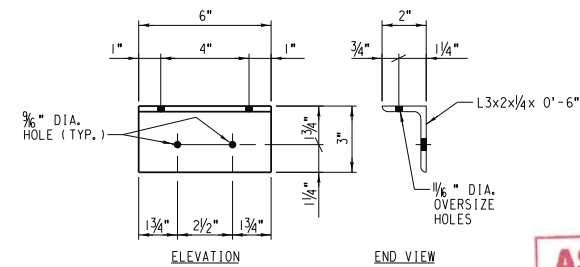
SCALE: 1"=1'-0"

- NOTES:**
1. WT SECTIONS TO BE PER ASTM A992 SPECIFICATION.
 2. PLATE MATERIAL TO BE PER ASTM A36 SPECIFICATION.
 3. COVER PLATES TO BE GALVANIZED PER ASTM A123 SPECIFICATION, THICKNESS GRADE 100.



FENCE CONNECTION EMBED TUBE

SCALE: 1/2"=1'-0"
EST. WT. = 6.3 LB. EA. (76 REQUIRED)



CONNECTION ANGLE MK. CA-1

SCALE: 3"=1'-0"
EST. WT. = 2.1 LB. EA. (8 REQUIRED)

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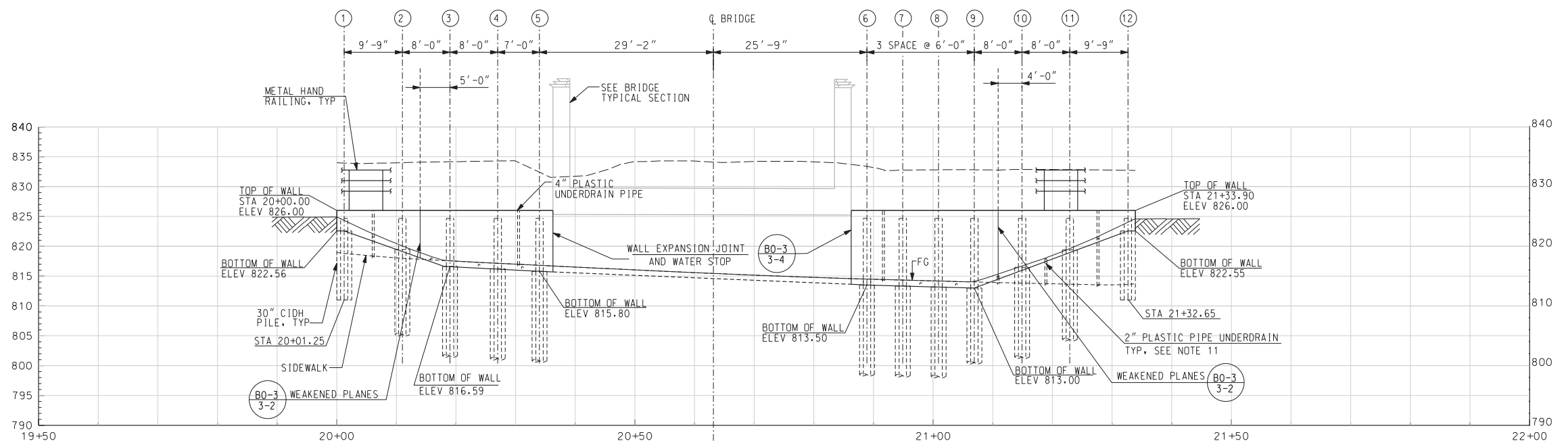
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SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
NATHAN P. DICKERSON
No. C 71974
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

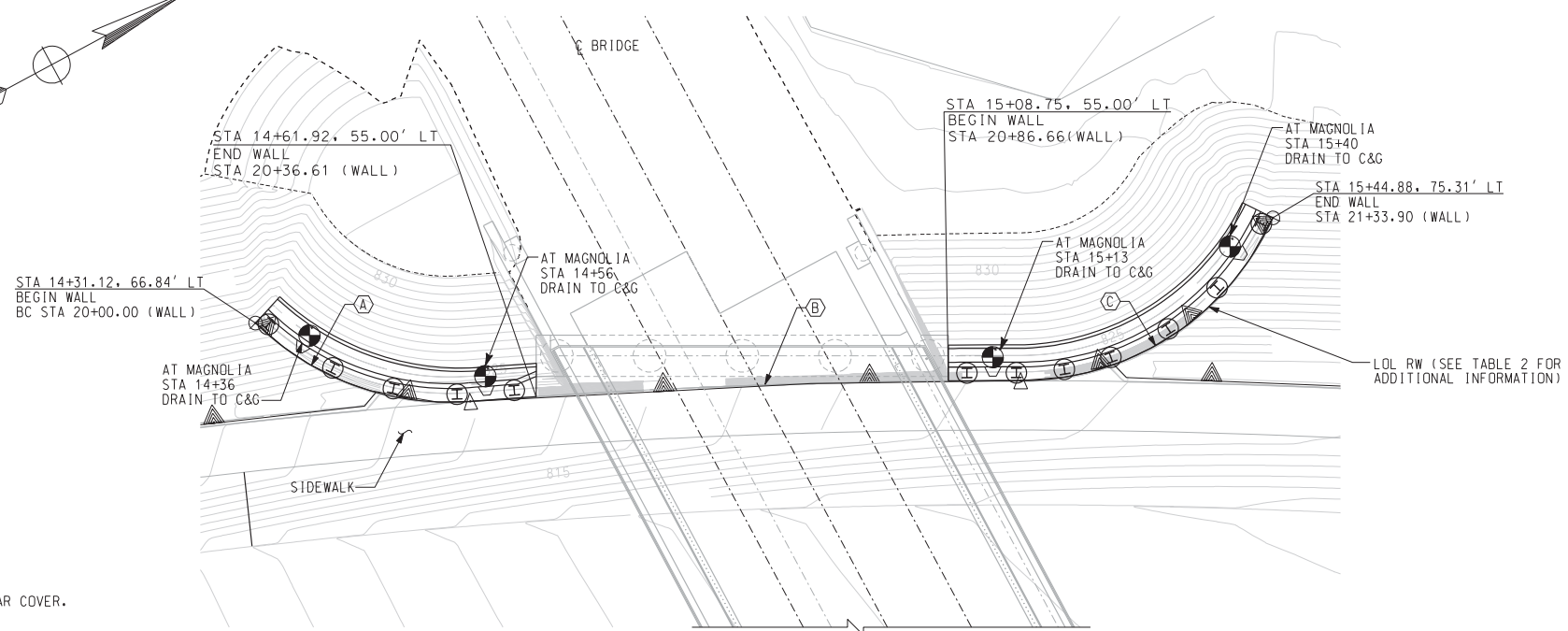
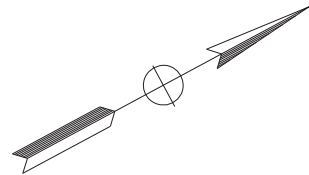
UPRR BRIDGE 55.16 LOS ANGELES SUB.
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
MISCELLANEOUS STEEL DETAILS
HORIZ. SCALE: AS NOTED VERT. SCALE: AS NOTED

STRUCTURE SHEET NO. **S51**
R-4081
SHEET 159 OF 189
FILE NO.



**DEVELOPED ELEVATION
WEST SOLDIER PILE WALL**
SCALE: 1" = 10'

TABLE 2	
ELEMENT: CIRCULAR	
BC = 20+00.00	
PI = 20+15.22	
PCC = 20+28.58	
ELEMENT: CIRCULAR	
PI = 20+62.01	
PRC = 20+95.42	
ELEMENT: CIRCULAR	
PI = 21+17.09	
EC = 21+33.90	



PLAN-WEST SOLDIER PILE WALL
SCALE: 1" = 10'

CURVE DATA				
No.	Δ	R	L	T
(A)	45°52'48"	-33.50'	28.58'	15.22'
(B)	4°28'44"	855.00'	66.84'	33.44'
(C)	65°48'49"	-33.50'	38.48'	21.68'

- LEGEND:**
- △ = INTERSECTION ANGLE
 - R = RADIUS
 - L = LENGTH
 - T = TANGENT
 - C&G = CURB & GUTTER
 - = LOCATION OF WALL DRAIN

- GENERAL NOTES:**
- THE RETAINING WALLS ARE DESIGNED IN ACCORDANCE WITH THE 2008 AREMA MANUAL, CHAPTER 8, CONCRETE STRUCTURES AND FOUNDATIONS AND CHAPTER 15, STEEL STRUCTURES AND CALTRANS BRIDGE DESIGN SPECIFICATIONS (2006).
 - CONTRACTOR SHALL PERFORM EXCAVATION AS REQUIRED FOR CONSTRUCTION AND REPLACE THE AREAS REMOVED AND DISTURBED IN THE COURSE OF CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING.
 - UNLESS NOTED, ALL CONCRETE AND SHOTCRETE SHALL HAVE A COMPRESSION STRENGTH OF 4,000 LBS PER SQUARE INCH AT 28 DAYS (F'c = 4,000 psi)
 - REINFORCING STEEL SHALL BE PER CURRENT ASTM A706 SPECIFICATIONS MEETING GRADE 60 REQUIREMENTS $f_y = 60$ ksi
 - UNLESS NOTED OTHERWISE, ALL REINFORCING STEEL SHALL HAVE 2" MINIMUM CLEAR COVER.
 - STEEL SOLDIER PILING AND STEEL PIPE SHALL CONFORM TO ASTM A572 GRADE 50 REQUIREMENTS.
 - TEMPORARY SHOTCRETE LAGGING SHALL BE DESIGNED IN ACCORDANCE WITH CURRENT AREMA SPECIFICATIONS AND UPRR "GUIDELINES FOR TEMPORARY SHORING" (OCTOBER 25, 2004).
 - IF ANY OF THE UTILITIES INTERFERE WITH THE PROPOSED LOCATION OF THE PILING, CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER AND RESOLVE ANY CONFLICTS WITH THE DESIGN ENGINEER.
 - FOR QUANTITIES, PILE DATA TABLE AND STANDARD PLAN LIST, SEE "INDEX TO PLANS" SHEET.
 - FOR CONSTANT HEIGHT RETAINING WALL SEE "CONSTRUCTION DETAILS CD-1" SHEET.
 - SEE "DRAINAGE DETAILS" SHEETS 1 & 2 FOR WALL DRAINS.

AS BUILT
Eric J. Pano
 CORRECTIONS BY
 CONTRACT NO.
 DATE *Nov 16, 2012*

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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

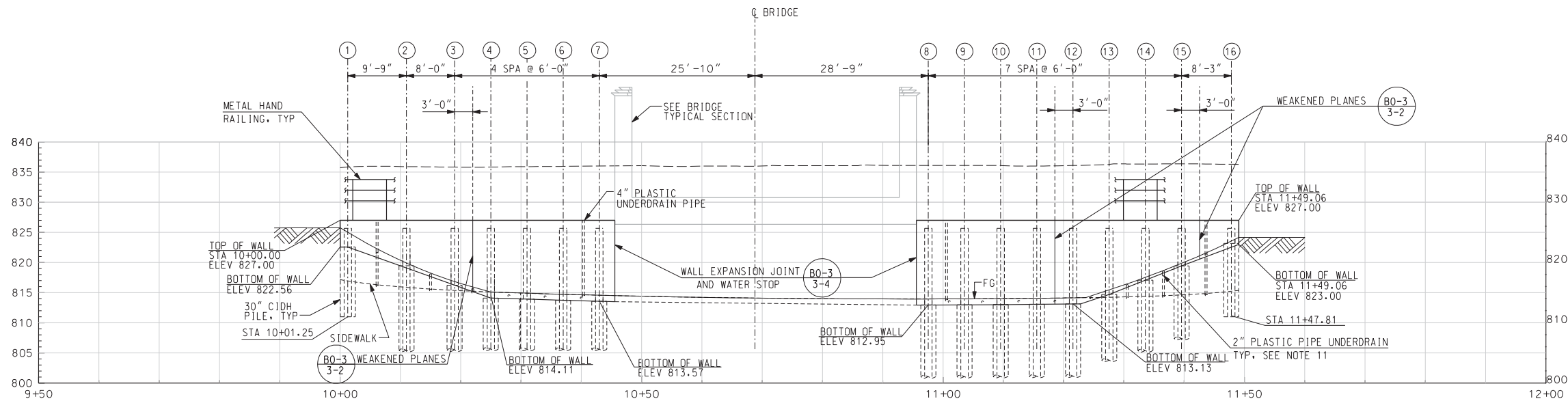
REGISTERED PROFESSIONAL ENGINEER
B. REZNICOV
 No. C 56878
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

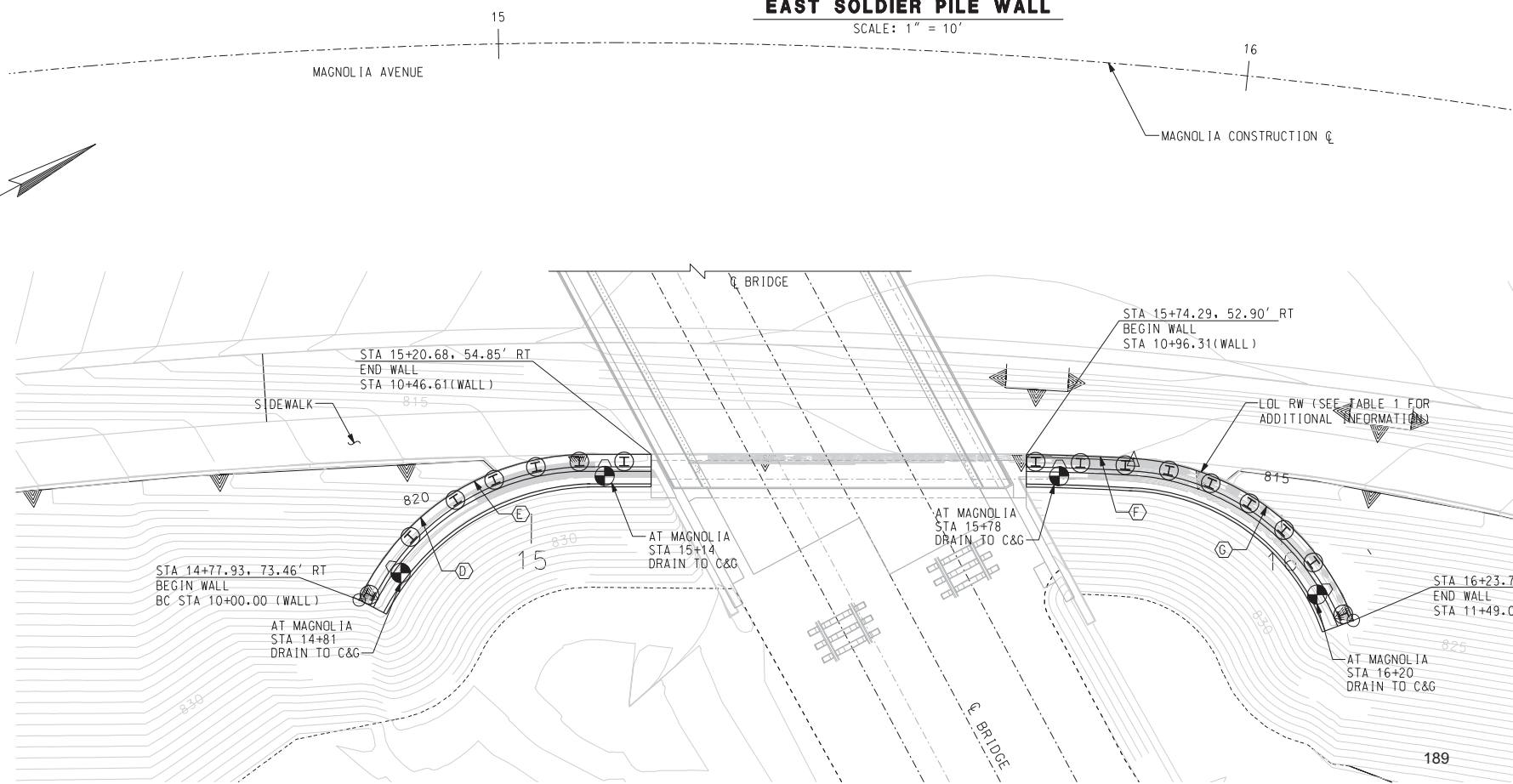
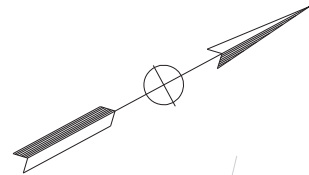
CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		RETAINING WALL SHEET NO. RW1
MAGNOLIA AVENUE UNDERPASS		ACCT. NO. W.O. NO.
WEST RETAINING WALL - GENERAL PLAN		R-4081
HORIZ. SCALE: VERT. SCALE:		SHEET 160 OF 189
		FILE NO.

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**DEVELOPED ELEVATION
EAST SOLDIER PILE WALL**

SCALE: 1" = 10'



PLAN-EAST SOLDIER PILE WALL

SCALE: 1" = 10'

GENERAL NOTES:

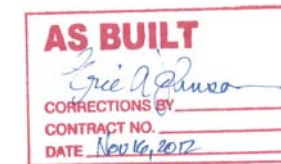
1. THE RETAINING WALLS ARE DESIGNED IN ACCORDANCE WITH THE 2008 AREMA MANUAL, CHAPTER 8, CONCRETE STRUCTURES AND FOUNDATIONS AND CHAPTER 15, STEEL STRUCTURES AND CALTRANS BRIDGE DESIGN SPECIFICATIONS (2006).
2. CONTRACTOR SHALL PERFORM EXCAVATION AS REQUIRED FOR CONSTRUCTION AND REPLACE THE AREAS REMOVED AND DISTURBED IN THE COURSE OF CONSTRUCTION TO CONDITION EQUAL TO OR BETTER THAN EXISTING.
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4. REINFORCING STEEL SHALL BE PER CURRENT ASTM A706 SPECIFICATIONS MEETING GRADE 60 REQUIREMENTS $f_y = 60$ ksi
5. UNLESS NOTED OTHERWISE, ALL REINFORCING STEEL SHALL HAVE 2" MINIMUM CLEAR COVER.
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8. IF ANY OF THE UTILITIES INTERFERE WITH THE PROPOSED LOCATION OF THE PILING, CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER AND RESOLVE ANY CONFLICTS WITH THE DESIGN ENGINEER.
9. FOR QUANTITIES, PILE DATA TABLE AND STANDARD PLAN LIST, SEE "INDEX TO PLANS" SHEET.
10. FOR CONSTANT HEIGHT RETAINING WALL SEE "CONSTRUCTION DETAILS CD-1" SHEET.
11. SEE "DRAINAGE DETAILS" SHEETS 1 & 2 FOR WALL DRAINS.

LEGEND:

- △ = INTERSECTION ANGLE
- R = RADIUS
- L = LENGTH
- T = TANGENT
- C&G = CURB & GUTTER
- = LOCATION OF WALL DRAIN

TABLE 1	
ELEMENT: CIRCULAR	
BC = 10+00.00	
PI = 10+21.08	
PCC = 10+37.63	
ELEMENT: CIRCULAR	
PI = 10+42.19	
EC = 10+46.75	
ELEMENT: LINEAR	
BC = 10+92.90	
ELEMENT: CIRCULAR	
PI = 11+01.91	
PCC = 11+10.91	

CURVE DATA				
No.	Δ	R	L	T
D	64°21'31"	33.50'	37.63'	21.08'
E	0°39'29"	794.00'	9.12'	4.56'
F	3°30'33"	294.00'	18.01'	9.01'
G	65°44'50"	33.50'	38.44'	21.65'



RETAINING WALL SHEET NO. RW2

ACCT. NO. W.O. NO.

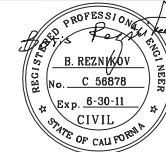
R-4081

SHEET 161 OF 189

FILE NO.



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



MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
 EAST RETAINING WALL - GENERAL PLAN
 DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

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PILE DATA TABLE

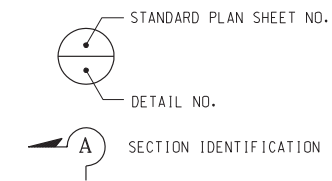
PILE No.1	PILE TYPE	DESIGN LOADING	NOMINAL RESISTANCE		CUT-OFF ELEV (FT)	TOP OF CIP CONC LAGGING WALL ELEV (FT)	BOTTOM OF CIP CONC LAGGING WALL ELEV (FT)	TOP OF HP PILE ELEV (FT)	DESIGN TIP ELEV (FT)	SPECIFIED TIP ELEV (FT)
			COMPRESSION	TENSION						
WEST RETAINING WALL										
1	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	822.56	825.08	811.00(3)	811.00
2	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	819.10	825.08	803.00(3)	802.00
3	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	816.59	825.08	789.00(3)	789.00
4	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	816.17	825.08	789.00(3)	788.00
5	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	815.80	825.08	788.00(3)	788.00
6	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	813.50	825.08	784.00(3)	784.00
7	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	813.33	825.08	784.00(3)	783.00
8	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	813.17	825.08	784.00(3)	783.00
9	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	813.00	825.08	784.00(3)	784.00
10	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	815.97	825.08	792.00(3)	792.00
11	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	818.94	825.08	802.00(3)	802.00
12	HP 14X117 (30"CIDH)	N/A	N/A	N/A	824.33	825.00	822.55	825.08	811.00(3)	811.00
EAST RETAINING WALL										
1	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	822.56	826.08	811.00(3)	811.00
2	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	819.09	826.08	801.00(3)	800.00
3	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	816.24	826.08	789.00(3)	788.00
4	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	814.11	826.08	784.00(3)	783.00
5	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.95	826.08	783.00(3)	783.00
6	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.72	826.08	783.00(3)	783.00
7	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.57	826.08	783.00(3)	783.00
8	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	812.95	826.08	782.00(3)	782.00
9	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	812.97	826.08	782.00(3)	782.00
10	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.00	826.08	782.00(3)	782.00
11	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.06	826.08	783.00(3)	782.00
12	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	813.13	826.08	783.00(3)	782.00
13	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	814.69	826.08	784.00(3)	784.00
14	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	817.06	826.08	789.00(3)	788.00
15	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	819.42	826.08	801.00(3)	800.00
16	HP 14X117 (30"CIDH)	N/A	N/A	N/A	825.33	826.00	822.53	826.08	811.00(3)	811.00

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	REQUIRED
STRUCTURE EXCAVATION (SOLDIER PILE WALL)	CY	85
STRUCTURE BACKFILL (SOLDIER PILE WALL)	CY	53
30" CAST-IN DRILLED HOLE CONCRETE PILING	LF	714
FURNISH STEEL PILING (HP 14 X 117)	LF	980
STRUCTURAL CONCRETE, RETAINING WALL	CY	84
GEOCOMPOSITE DRAIN	SF	1686
METAL HAND RAILING	LF	183
ARCHITECTURAL TREATMENT	SF	1747
BAR REINFORCING STEEL (RETAINING WALL)	LB	14779
4" PLASTIC PIPE UNDERDRAIN	LF	179
2" PLASTIC PIPE UNDERDRAIN	LF	240
FILTER FABRIC	SY	92

INDEX TO PLANS

SHEET No.	TITLE
120	WEST RETAINING WALL - GENERAL PLAN
121	EAST RETAINING WALL - GENERAL PLAN
122	INDEX TO PLANS
123	SOLDIER PILE WALL SECTIONS AND DETAILS
124	DRAINAGE DETAILS (SHEET 1 OF 2)
125	DRAINAGE DETAILS (SHEET 2 OF 2)
126	RETAINING WALL 18 - GENERAL PLAN
127	RETAINING WALL 20 - GENERAL PLAN

PLAN SYMBOLS



CALTRANS STANDARD PLANS DATED MAY 2006

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
B0-3	BRIDGE DETAILS
B3-8	RETAINING WALL DETAILS NO. 1
B3-9	RETAINING WALL DETAILS NO. 2

NOTES:

- FOR LOCATION OF THE PILES, SEE "GENERAL PLAN" SHEET
- DESIGN TIP ELEVATION IS CONTROLLED BY THE FOLLOWING DEMANDS:
(1) COMPRESSION; (2) TENSION; (3) LATERAL LOADS
- SPECIFIED TIP ELEVATION SHALL NOT BE RAISED

DESIGN NOTES:

DESIGN: AMERICAN RAILWAY ENGINEERING MAINTENANCE OF WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING (2005)-CHAPTER 8, CONCRETE STRUCTURE & FOUNDATIONS, CHAPTER 9, SEISMIC DESIGN, CHAPTER 15, STEEL STRUCTURES AND CALTRANS BRIDGE DESIGN SPECIFICATIONS (2004).

CONCRETE: CAST-IN-PLACE REINFORCED CONCRETE
SHOTCRETE

$f'c = 4$ ksi
 $f_y = 60$ ksi
 $\eta = 8$
 $f'c = 4$ ksi

STEEL: ASTM A572 GRADE 50 $F_y = 50$ ksi, $F_u = 65$ ksi

SEISMIC LOAD: INCREMENTAL SEISMIC LOAD (SEE DESIGN FORCE DIAGRAM)

LATERAL EARTH PRESSURE:

- STATIC EARTH PRESSURE (SEE DESIGN FORCE DIAGRAM)
- PASSIVE EARTH PRESSURE (SEE DESIGN FORCE DIAGRAM)
- SURCHARGE PRESSURE (SEE DESIGN FORCE DIAGRAM)

LOAD COMBINATIONS:

- EXTERNAL STABILITY (FOR OVERTURNING)**
- GROUP 1 : D + E (FS ≥ 1.5)
 - GROUP 2 : D + E + EO (FS ≥ 1.0)

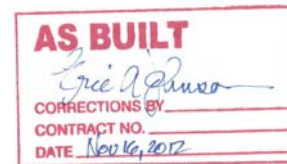
INTERNAL STABILITY (FOR MEMBER DESIGN)

- SERVICE LOAD DESIGN:**
- GROUP I : D + L + E
 - GROUP EO : D + E + EO

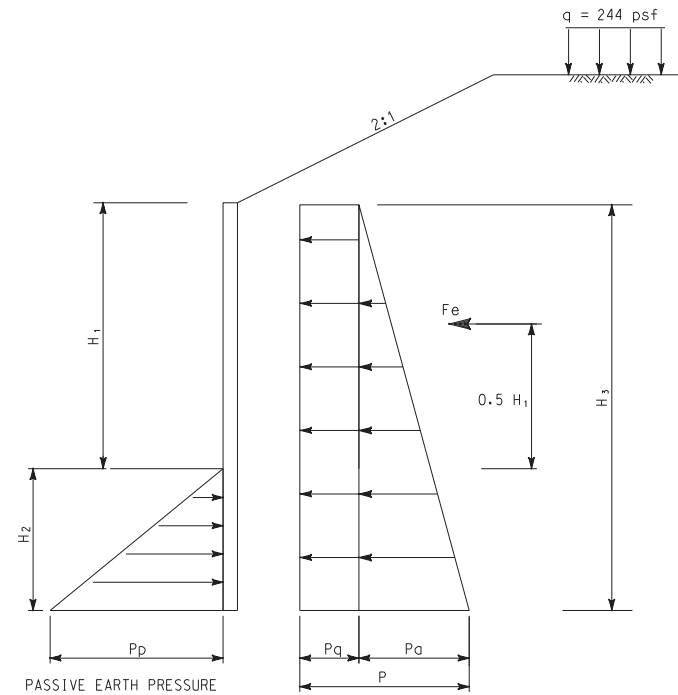
- LOAD FACTOR DESIGN**
- GROUP 1: 1.4 (D + 5/3 * L + E)
 - GROUP 1A: 1.8 (D + L + E)
 - GROUP II: 1.0(D + E + EO)

WHERE:

- D = DEAD LOAD
- E = LATERAL EARTH PRESSURE
- EO = SEISMIC LOAD
- L = LIVE LOAD



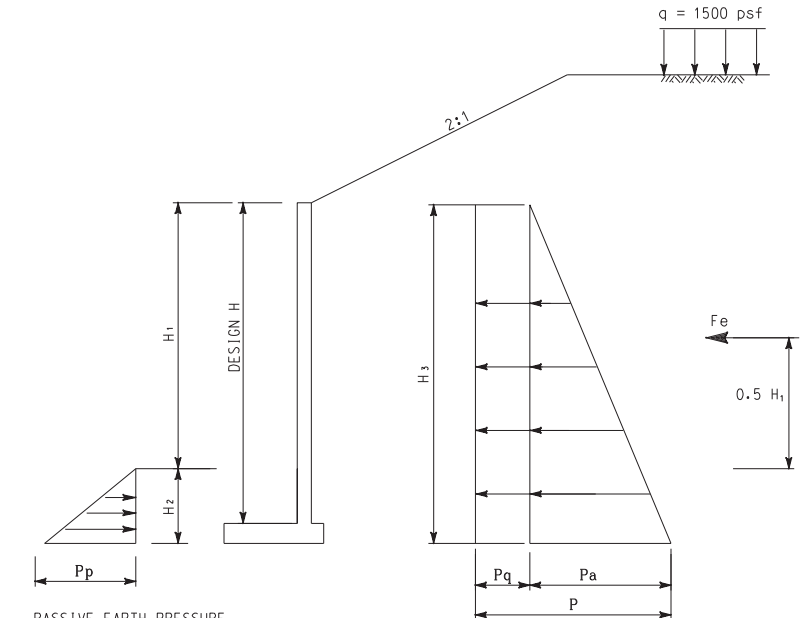
(SURCHARGE/ EXISTING FOUNDATION BEARING PRESSURE)



* FROM GEOTECHNICAL REPORT

SOLDIER PILE WALL

(SURCHARGE/ EXISTING FOUNDATION BEARING PRESSURE)



* FROM GEOTECHNICAL REPORT

CANTILEVER WALL ++ - RETAINING WALL 18

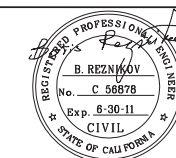
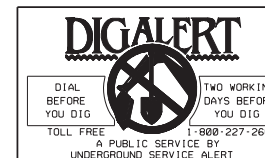
++ NOTE FOR CANTILEVER WALL

DESIGN H IS CALCULATED FROM THE TOP OF THE GUTTER TO THE BOTTOM OF WALL. BOTTOM OF THE WALL IS AT LEAST 2 FT BELOW FINISHED GRADE AT EXTERIOR FACE OF THE WALL.

DESIGN FORCE DIAGRAM

NTS

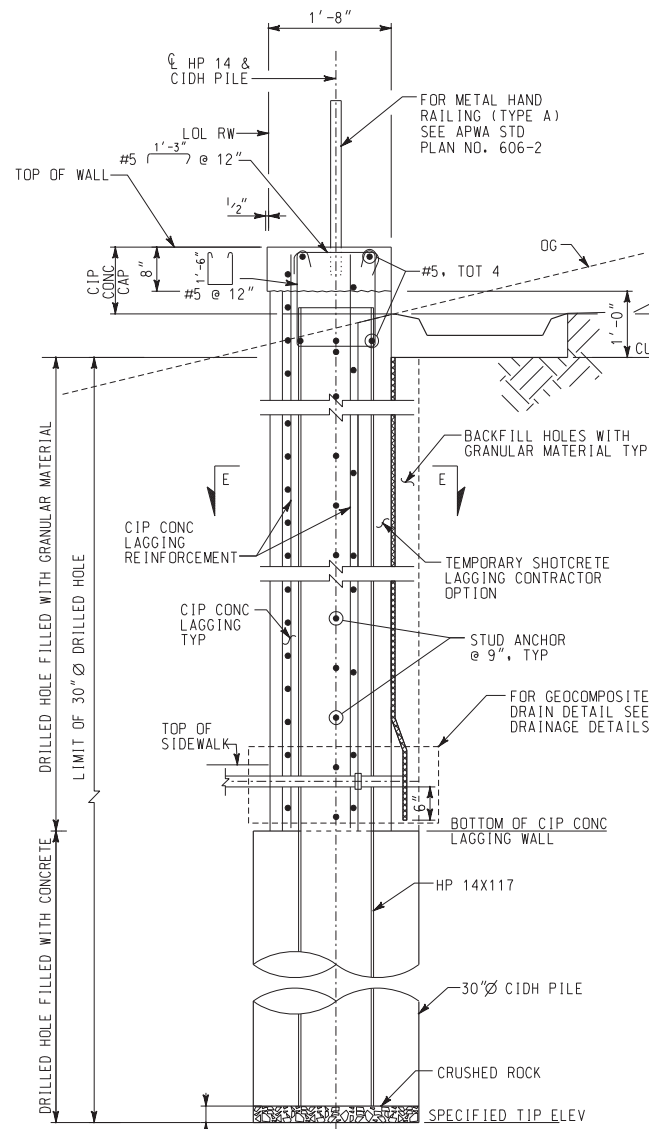
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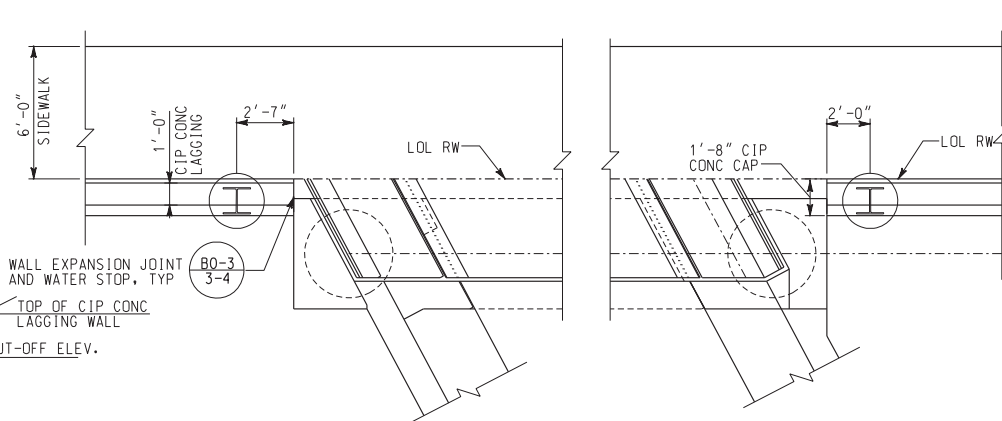
MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT	
MAGNOLIA AVENUE UNDERPASS	
INDEX TO PLANS	
HORIZ. SCALE: NO SCALE VERT. SCALE:	

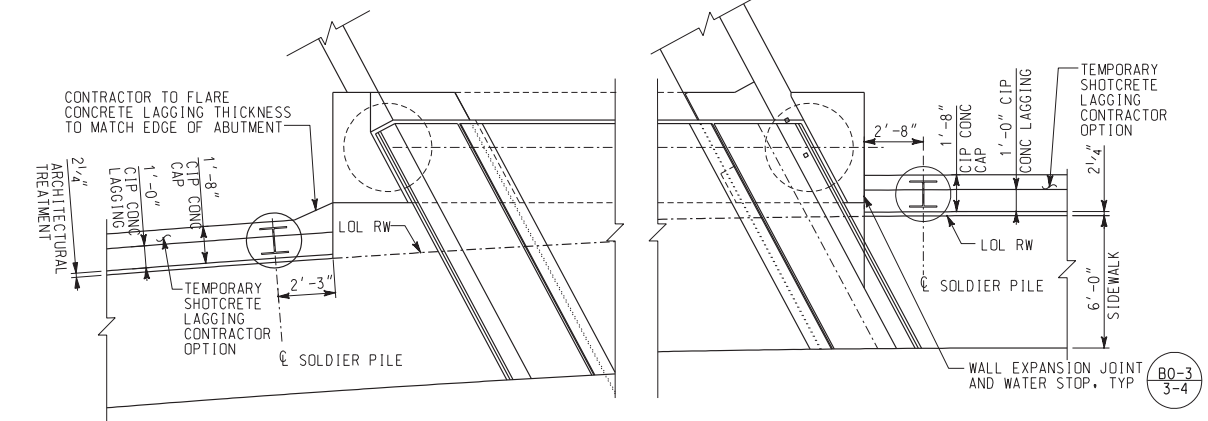
ACCT. NO. W.O. NO.	R-4081
SHEET	162 of 189
FILE NO.	



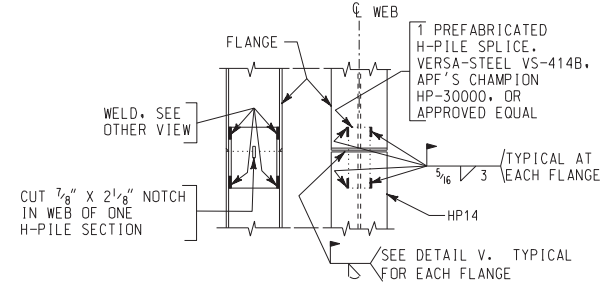
SOLDIER PILE WALL SECTION
SCALE: 1/4" = 1'-0"



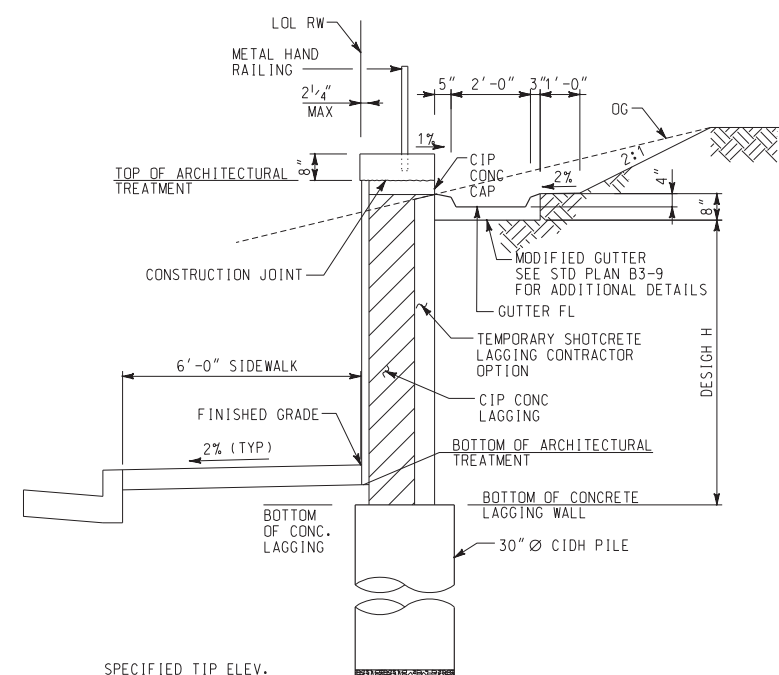
EAST ABUTMENT - RETAINING WALL CONNECTION
SCALE: 1/4" = 1'-0"



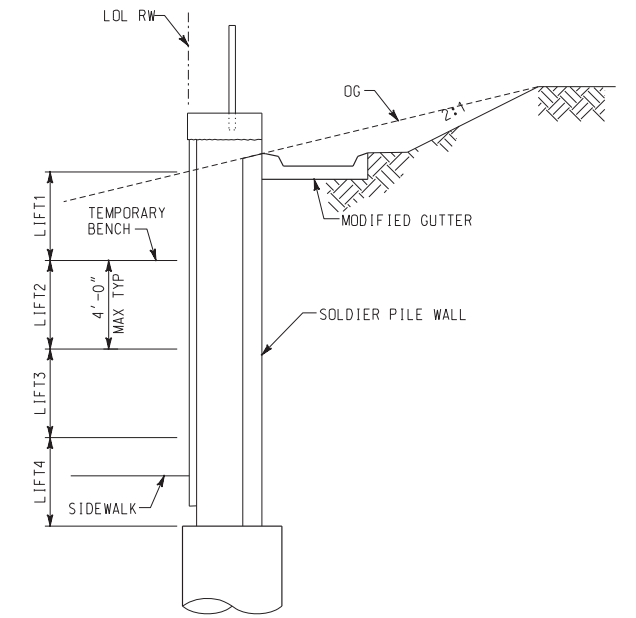
WEST ABUTMENT - RETAINING WALL CONNECTION
SCALE: 1/4" = 1'-0"



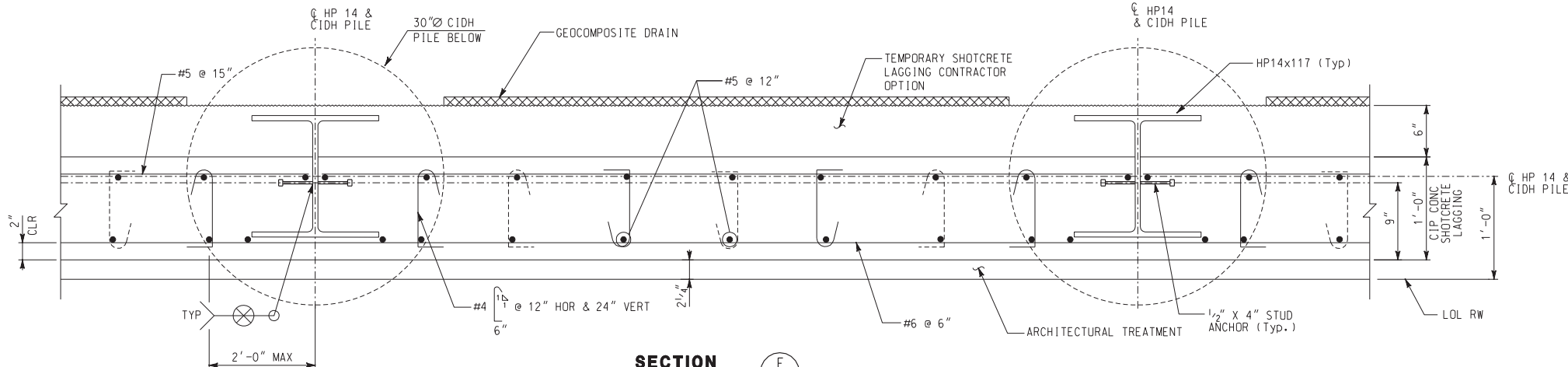
PILE SPlice DETAIL
H-PILE SPlice DETAILS



TYPICAL SECTION
NO SCALE



DETAIL 2
NO SCALE



SECTION
SCALE: 1/2" = 1'-0"

PROPOSED CONSTRUCTION SEQUENCE FOR SOLDIER PILE WALL

1. BENCH AND LAY BACK SLOPE AS SHOWN IN DETAIL 2.
2. DRILL HOLES FOR SOLDIER PILES TO THE SPECIFIED TIP ELEVATIONS.
3. INSTALL STEEL PILING AND BRACE THEM IN THEIR FINAL POSITIONS.
4. PLACE CONCRETE IN THE DRILLED HOLES TO THE CONCRETE CUT-OFF ELEVATION AND ALLOW CONCRETE TO REACH A MINIMUM COMPRESSION STRENGTH OF 3000 PSI.
5. BACKFILL REST OF HOLES WITH GRANULAR MATERIAL.
6. FORM PORTION OF WALL EXPOSED ABOVE TEMPORARY BENCH AND CONSTRUCT SHOTCRETE LAGGING FOR LIFT 1 AS SHOWN IN THE PLANS. ALLOW SHOTCRETE TO REACH A MINIMUM COMPRESSION STRENGTH OF 3000 PSI.
7. EXCAVATE FOR LIFT 2 AND PLACE TEMPORARY SHOTCRETE LAGGING.
8. EXCAVATE FOR LIFT 3 AND PLACE TEMPORARY SHOTCRETE LAGGING.
9. EXCAVATE FOR LIFT 4 AND FINISH PLACEMENT OF TEMPORARY SHOTCRETE LAGGING.
10. CONSTRUCT CONCRETE GUTTER AND CABLE RAILING AS SHOWN IN PLANS.
11. AFTER TEMPORARY SHOTCRETE LAGGING IS COMPLETE, FORM AND POUR CIP CONG LAGGING TO TOP OF CIP CONG LAGGING WALL ELEVATION SHOWN ON PILE DATA TABLE.
12. POUR CIP CONCRETE CAP.

- NOTES:**
1. WALL COMPONENTS RECEIVING CONCRETE STONE FORM LINER FINISH SHALL BE CONSTRUCTED WITH INTEGRAL COLORED CONCRETE PER PROJECT SPECIFICATIONS PART 10, DIVISION 3, SECTION 03002
 2. ALL METAL HAND RAILING SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION 09905

AS BUILT
Eric A. Johnson
CORRECTIONS BY
CONTRACT NO.
DATE: Nov 16, 2012

DIGALERT
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A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

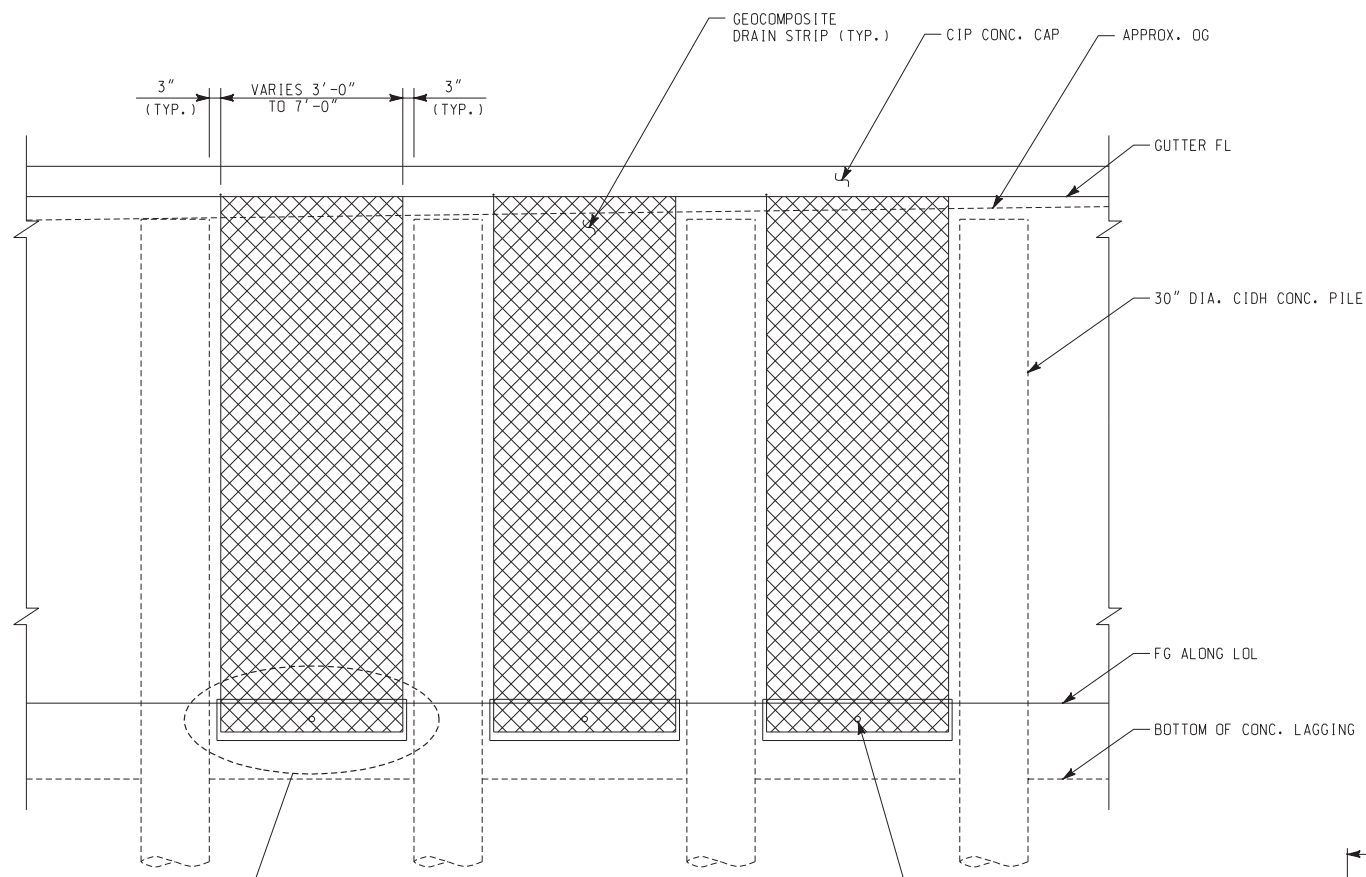
HDR ONE COMPANY Many Solutions
HDR ENGINEERING, INC.
2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER
B. REZNIKOV
No. C 56878
Exp. 8-30-11
CIVIL
STATE OF CALIFORNIA

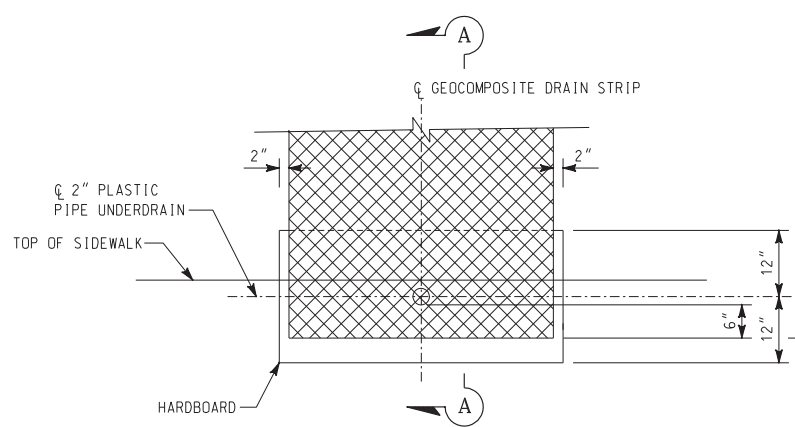
MARK	REVISIONS	APPR.	DATE

RETAINING WALL SHEET NO. RW4	
CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT	ACCT. NO. W.O. NO.
MAGNOLIA AVENUE UNDERPASS	R-4081
SOLDIER PILE WALL SECTIONS AND DETAILS	SHEET 163 OF 189
HORIZ. SCALE: AS NOTED VERT. SCALE:	FILE NO.

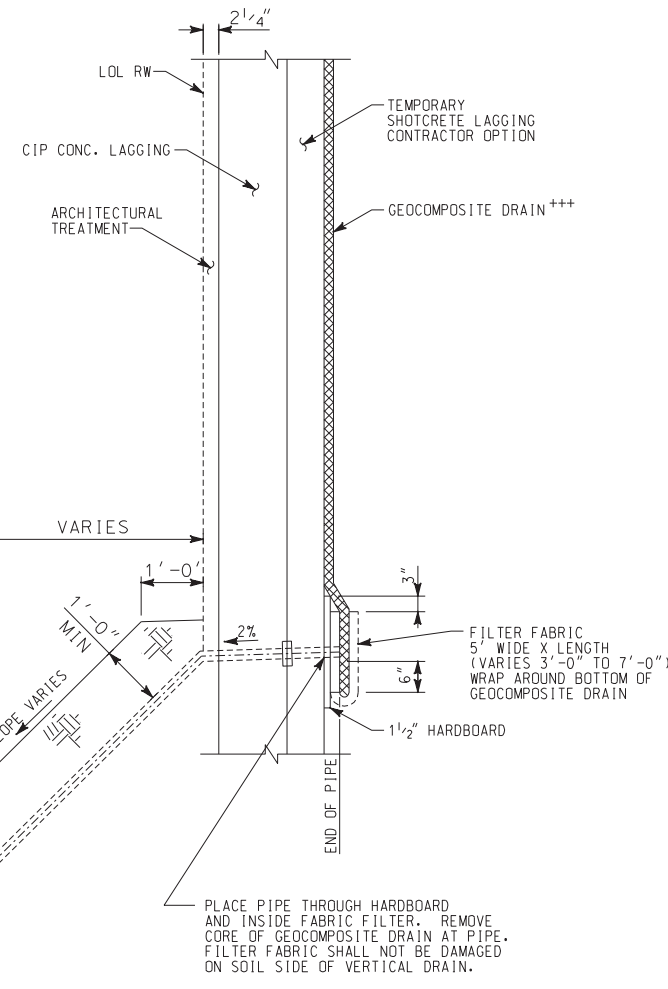
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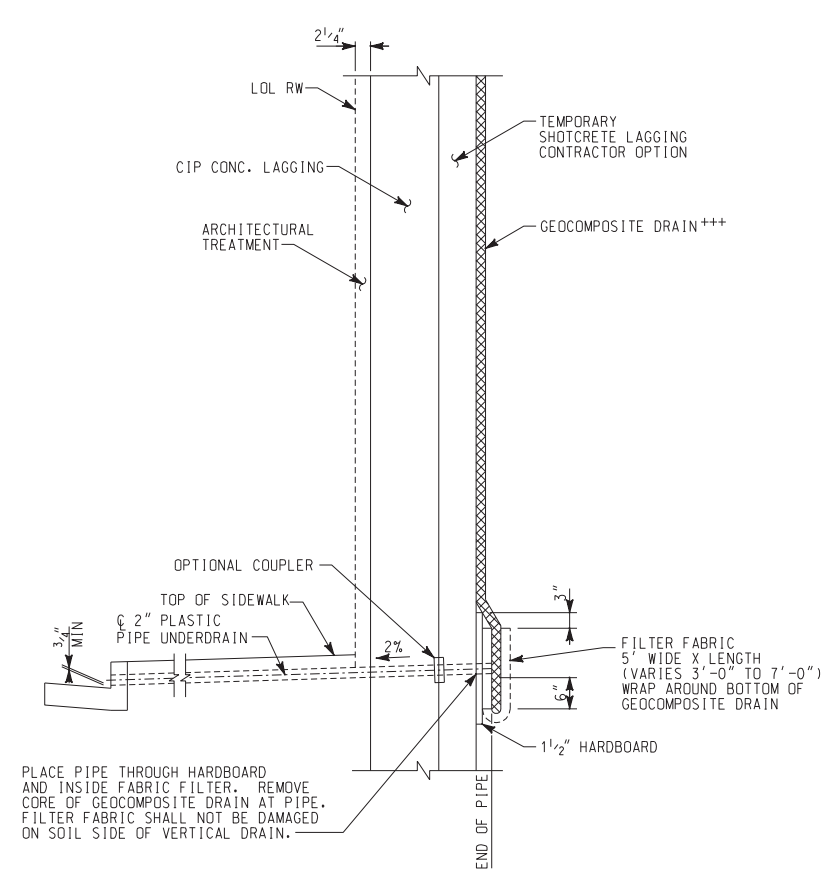
PARTIAL ELEVATION
NO SCALE



DETAIL A
NO SCALE



SECTION A-A AT WEEPHOLES LOCATED NEAR SLOPING GROUND
NO SCALE



SECTION A-A AT TYPICAL WEEPHOLE
NO SCALE

+++ NOTE FOR GEOCOMPOSITE DRAIN
IF LIFT IS FLASHED WITH THIN LAYER OF SHOTCRETE TO PREVENT SLOUGHING, DRILL 1/4\"/>

AS BUILT
Eric A. Russo
CORRECTIONS BY
CONTRACT NO.
DATE *Nov 16, 2012*

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN

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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

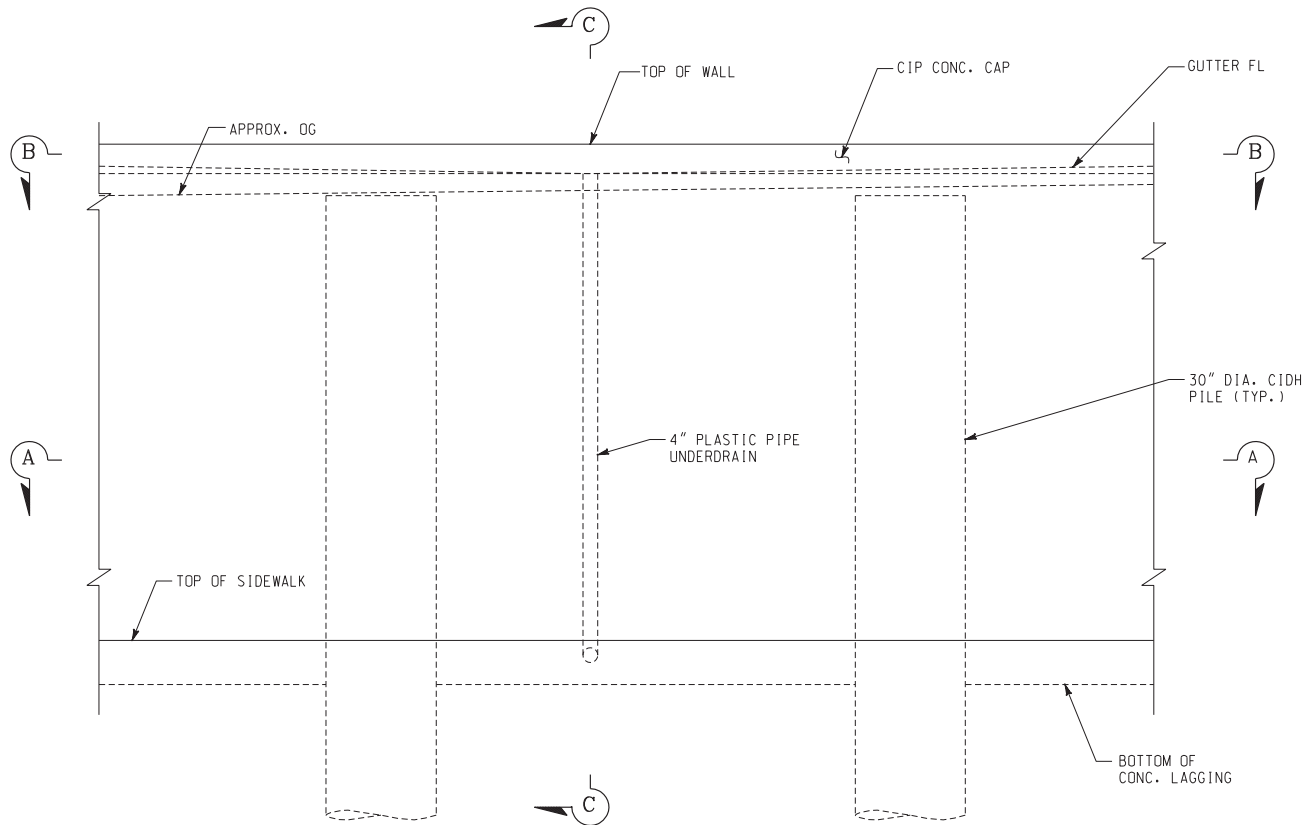
REGISTERED PROFESSIONAL ENGINEER
B. REZNICOV
No. C 56878
Exp. 8-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

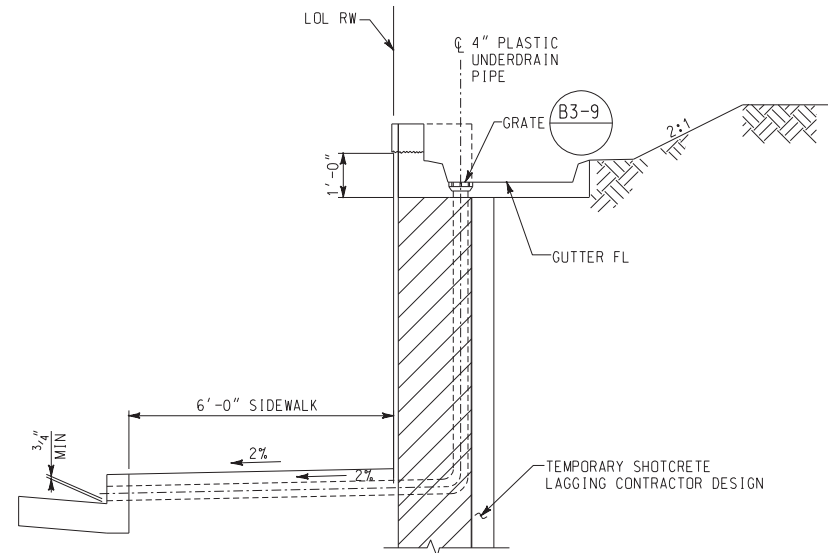
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE DETAILS (SHEET 1 OF 2)

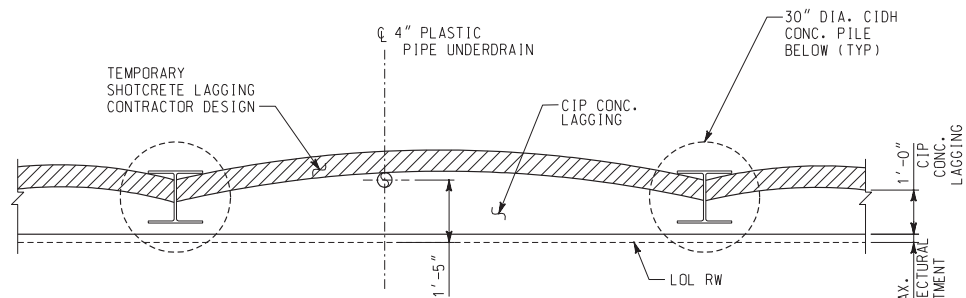
RETAINING WALL SHEET NO. RW5
ACCT. NO. W.O. NO.
R-4081
SHEET 164 of 189
FILE NO.



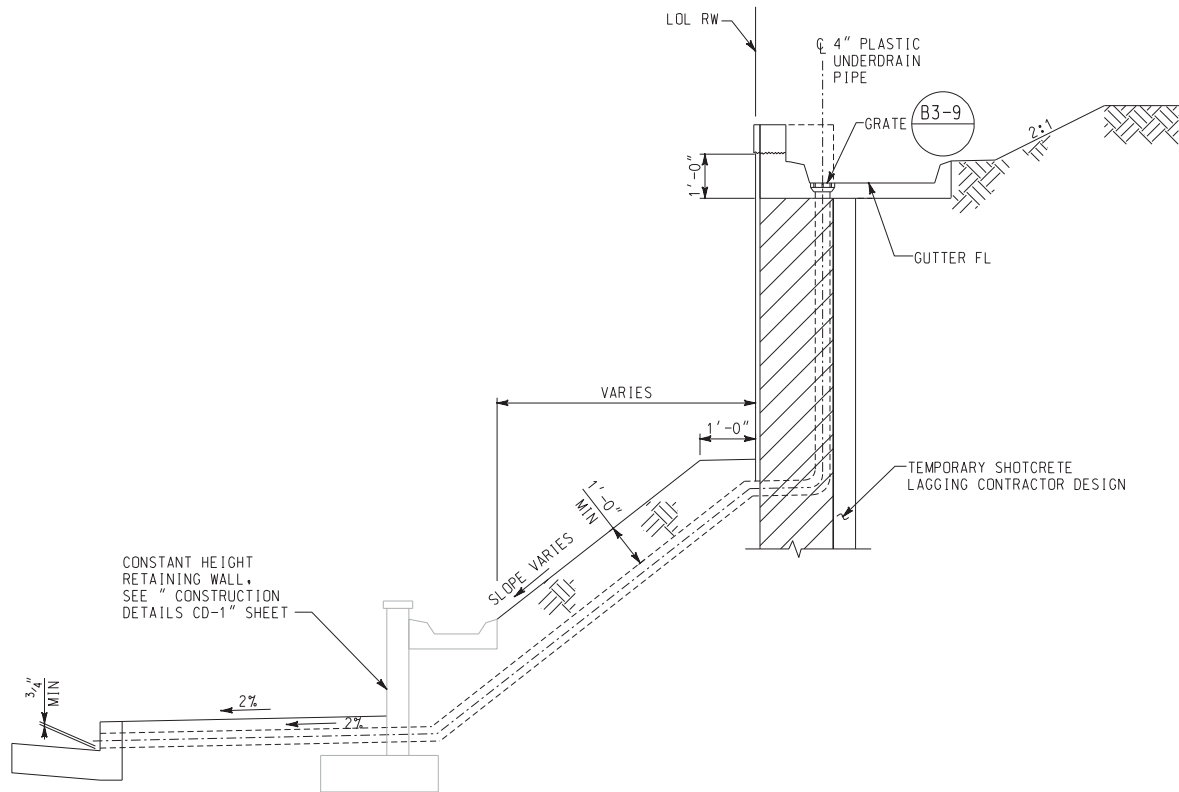
PARTIAL ELEVATION
NO SCALE



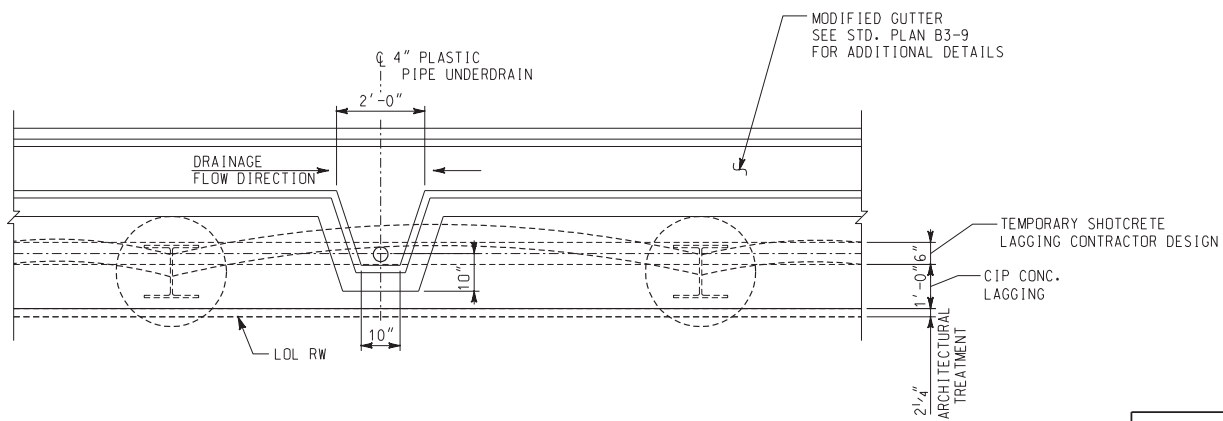
SECTION C-C
(AT TYPICAL WALL DRAIN)
NO SCALE



SECTION A-A
NO SCALE



SECTION C-C
(AT WALL DRAINS LOCATED NEAR SLOPING GROUND)
NO SCALE



SECTION B-B
NO SCALE

AS BUILT
Eric A. Pardo
CORRECTIONS BY
CONTRACT NO. _____
DATE Nov 16, 2012

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

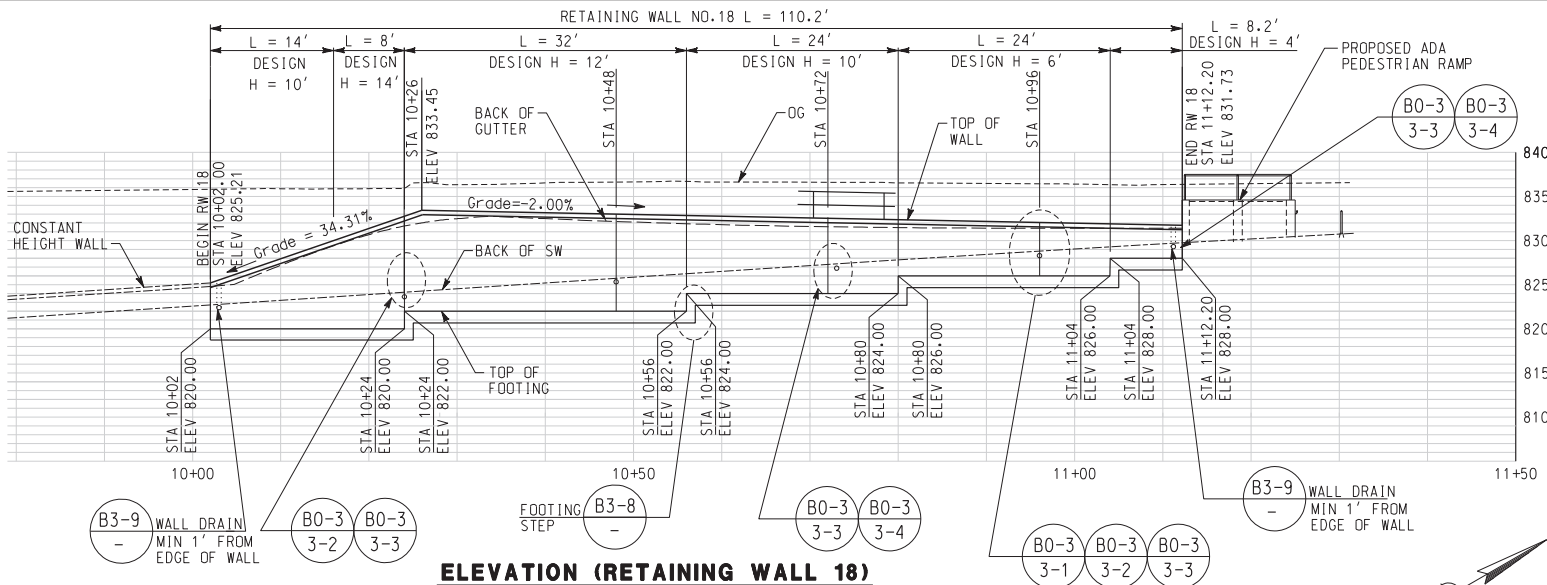
REGISTERED PROFESSIONAL ENGINEER
Eric A. Pardo
No. C 56878
Exp. 8-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
DRAINAGE DETAILS (SHEET 2 OF 2)
HORIZ. SCALE: NO SCALE VERT. SCALE: _____

RETAINING WALL SHEET NO. **RW6**
ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 165 OF 189
FILE NO. _____



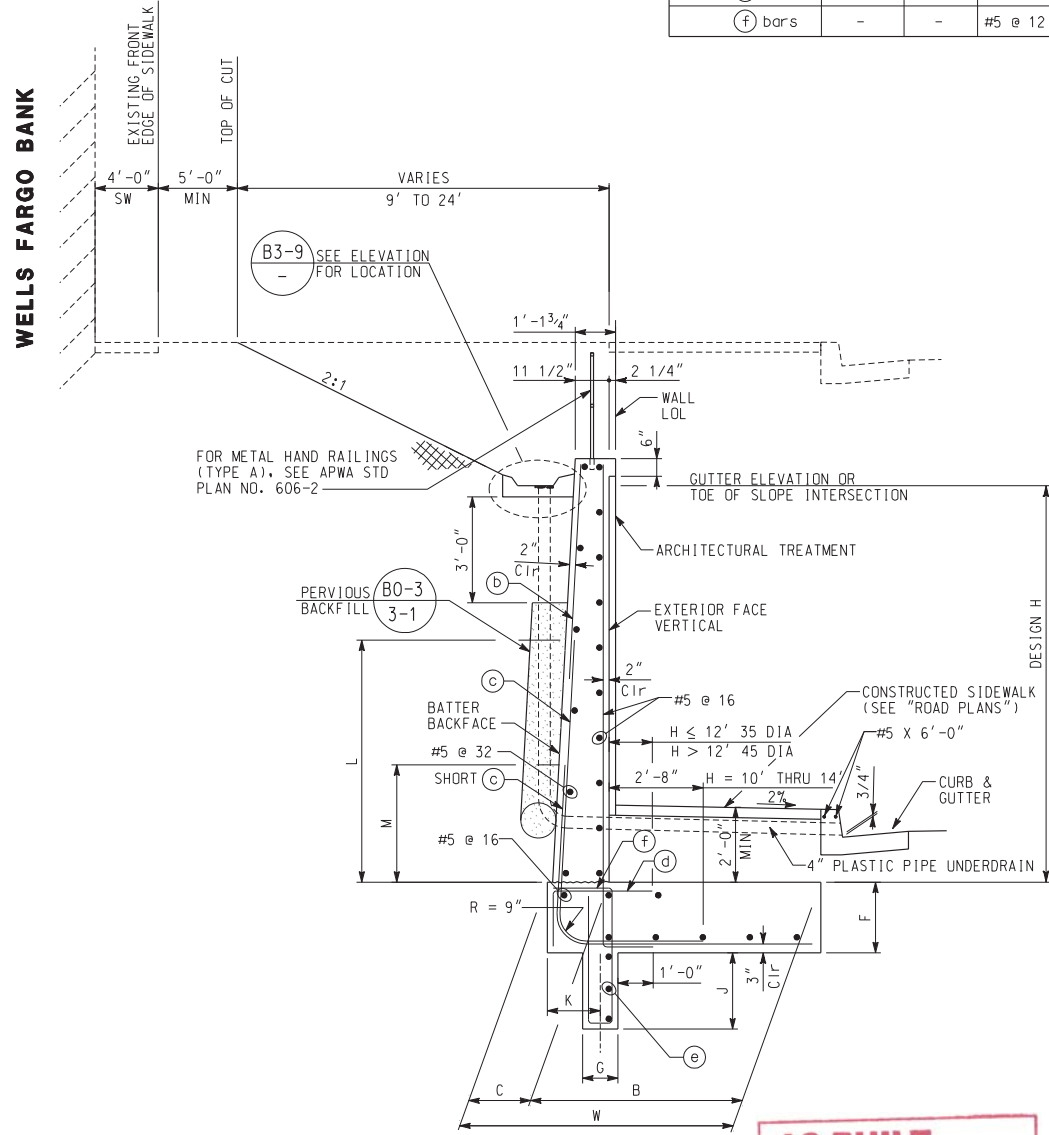
ELEVATION (RETAINING WALL 18)

SCALE: 1" = 10'

QUANTITIES	
CONTRACT ITEMS	QUANTITY
STRUCTURE EXCAVATION (RETAINING WALL)	253 CY
STRUCTURE BACKFILL (RETAINING WALL)	166 CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	21 CY
STRUCTURAL CONCRETE, RETAINING WALL	92 CY
BAR REINFORCING STEEL (RETAINING WALL)	9245 LB
METAL HAND RAILING	111 LF
4" PLASTIC PIPE UNDERDRAIN	61 LF
ARCHITECTURAL TREATMENT	566 SF

CURVE DATA				
No.	Δ	R	L	T
(180)	9°30'36"	-535.50'	88.88'	45.54'

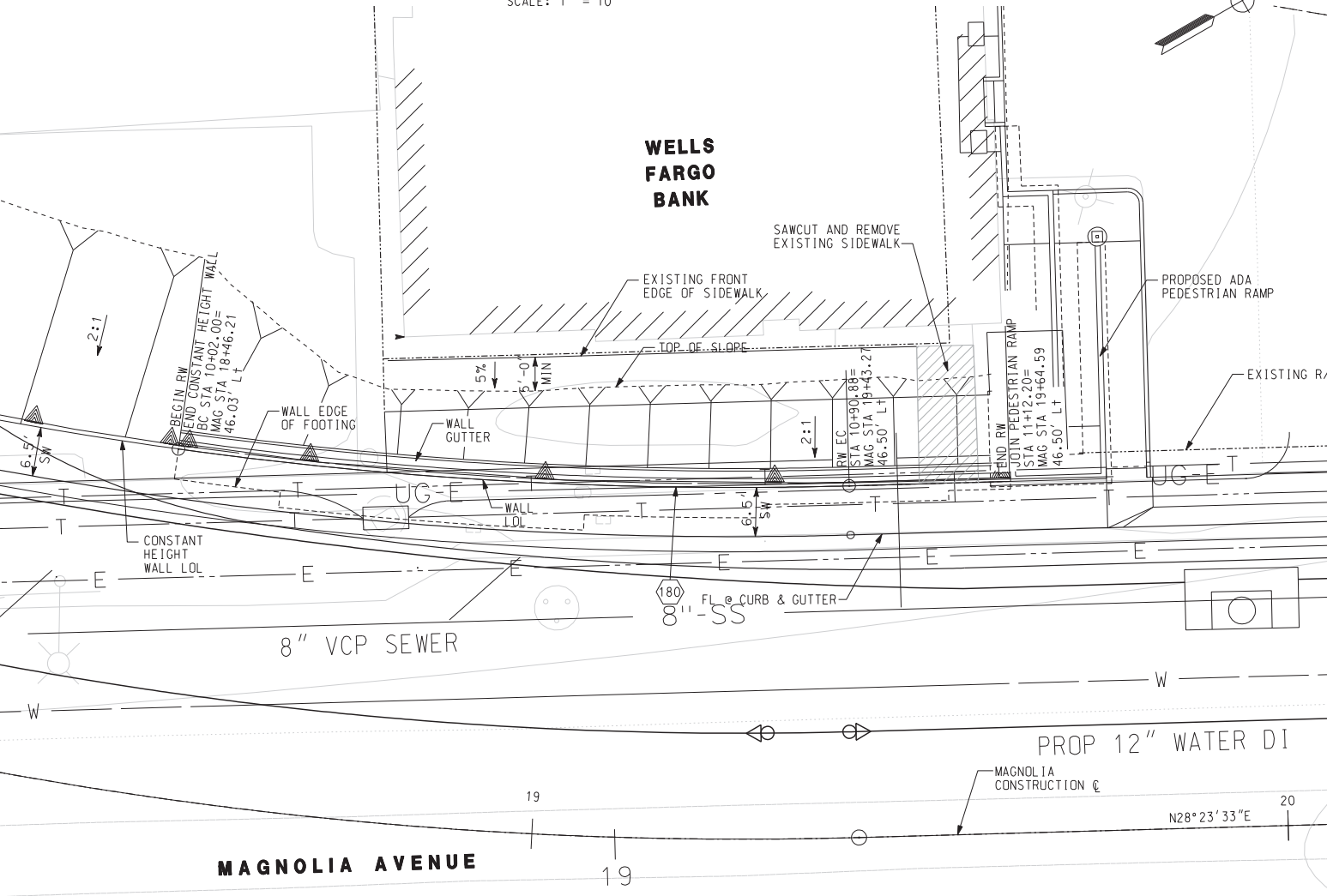
RETAINING WALL TABLE					
DESIGN H	4'	6'	10'	12'	14'
W	3'-3"	4'-0"	5'-9"	7'-9"	7'-9"
C	2'-3"	1'-9"	1'-9"	1'-9"	1'-9"
B	1'-0"	2'-3"	4'-0"	6'-0"	6'-0"
F	1'-4"	1'-4"	1'-6"	2'-0"	2'-0"
G	-	1'-0"	1'-0"	1'-0"	1'-0"
J	-	8"	2'-0"	2'-2"	2'-6"
K	-	1'-6"	1'-6"	1'-6"	1'-6"
L	-	-	7'-0"	8'-0"	9'-6"
M	-	-	5'-0"	5'-6"	6'-0"
Batter	1/2 : 12	1/2 : 12	1/2 : 12	1/2 : 12	1/2 : 12
(b) bars	-	-	#5 @ 16	#5 @ 12	#5 @ 12
(c) bars	#5 @ 16	#5 @ 16	#6 @ 8	#8 @ 12	#9 @ 12
(d) bars	#5 @ 16	#5 @ 16	#5 @ 8	#8 @ 12	#9 @ 12
(e) bars	-	-	#4 @ 7	#4 @ 7	#4 @ 7
(f) bars	-	-	#5 @ 12	#5 @ 12	#5 @ 12



SECTION

NTS

AS BUILT
Eric J. Adams
 CORRECTIONS BY
 CONTRACT NO.
 DATE: Nov 6, 2012



PLAN

SCALE: 1" = 10'

APWA STANDARD PLANS 2006 EDITION

606-2 METAL HAND RAILINGS

NOTES:

- FOR LAYOUT INFORMATION, SEE "ROAD PLANS" SHEET
- FOR CALTRANS STANDARD PLANS DATED MAY 2006, SEE "INDEX TO PLANS" SHEET
- FOR DESIGN INFORMATION, MATERIAL PROPERTIES, DESIGN FORCE DIAGRAM, SEE "INDEX TO PLANS" SHEET
- STRUCTURAL SURVEY OF ADJACENT BUILDING SHALL BE COMPLETED PRIOR TO RETAINING WALL 18 CONSTRUCTION TO MONITOR FOR POSSIBLE DAMAGES
- WALL COMPONENTS RECEIVING CONCRETE STONE FORM LINER FINISH SHALL BE CONSTRUCTED WITH INTEGRAL COLORED CONCRETE PER PROJECT SPECIFICATIONS PART 10, DIVISION 3, SECTION 03002
- ALL METAL HAND RAILING SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION 0905
- 4" PLASTIC PIPE UNDER DRAIN SHALL BE USED FOR WEEP HOLE TRANSITION TO CURB, WALL DRAIN AND GUTTER OUTLET.
- FOR CONSTANT HEIGHT RETAINING WALL, SEE "CONSTRUCTION DETAILS CD-1" SHEET.

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

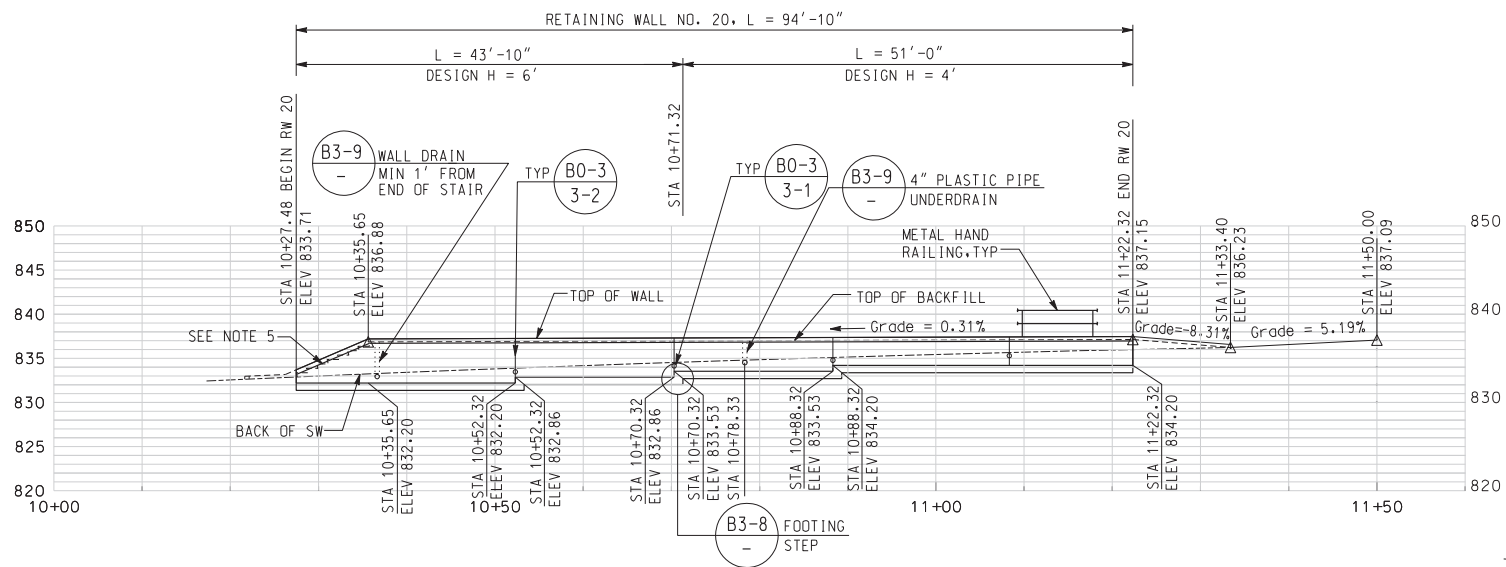
REGISTERED PROFESSIONAL ENGINEER
 B. REZNICOV
 No. C 56878
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

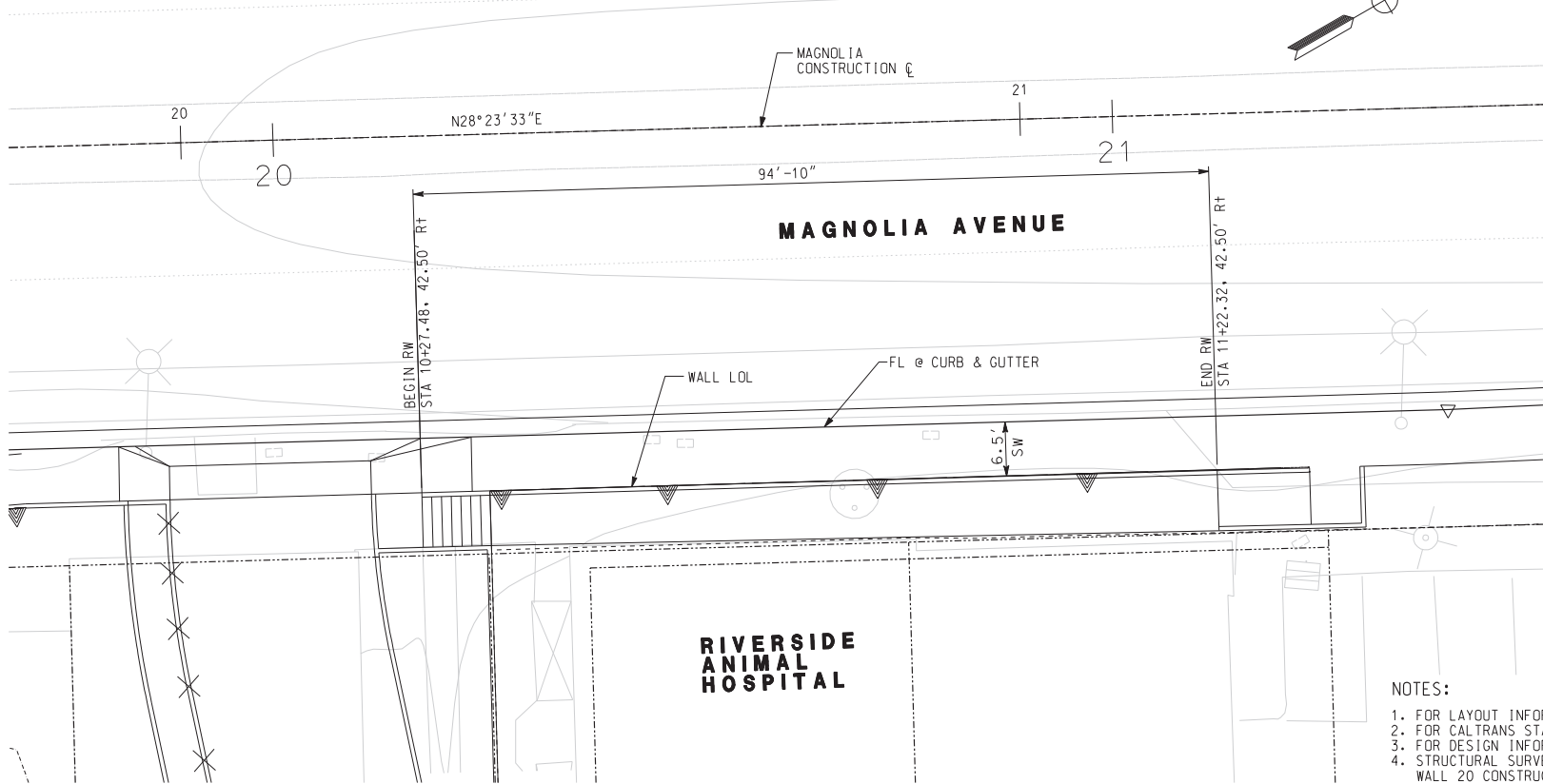
CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 MAGNOLIA AVENUE UNDERPASS
RETAINING WALL 18 - GENERAL PLAN
 HORIZ. SCALE: AS NOTED VERT. SCALE:

RETAINING WALL SHEET NO. RW7
 ACCT. NO. W.O. NO.
R-4081
 SHEET 166 of 189
 FILE NO.

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ELEVATION (RETAINING WALL 20)
SCALE: 1" = 10'



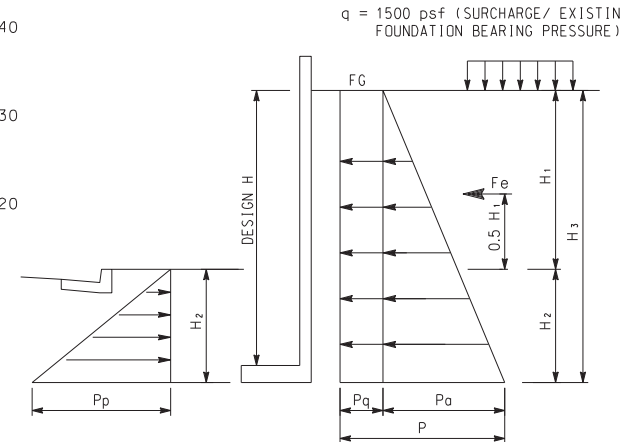
PLAN
SCALE: 1" = 10'

RETAINING WALL TABLE		
DESIGN H	4'	6'
W	4'	5'-3"
⊙ Bars	#5 @ 18	#5 @ 12

QUANTITIES	
CONTRACT ITEMS	QUANTITY
STRUCTURE EXCAVATION (RETAINING WALL)	87 CY
STRUCTURE BACKFILL (RETAINING WALL)	59 CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	11 CY
STRUCTURAL CONCRETE, RETAINING WALL	33 CY
BAR REINFORCING STEEL (RETAINING WALL)	2860 LB
METAL HAND RAILING	95 LF
4" PLASTIC PIPE UNDERDRAIN	71 LF
ARCHITECTURAL TREATMENT	212 SF

APWA STANDARD PLANS 2006 EDITION

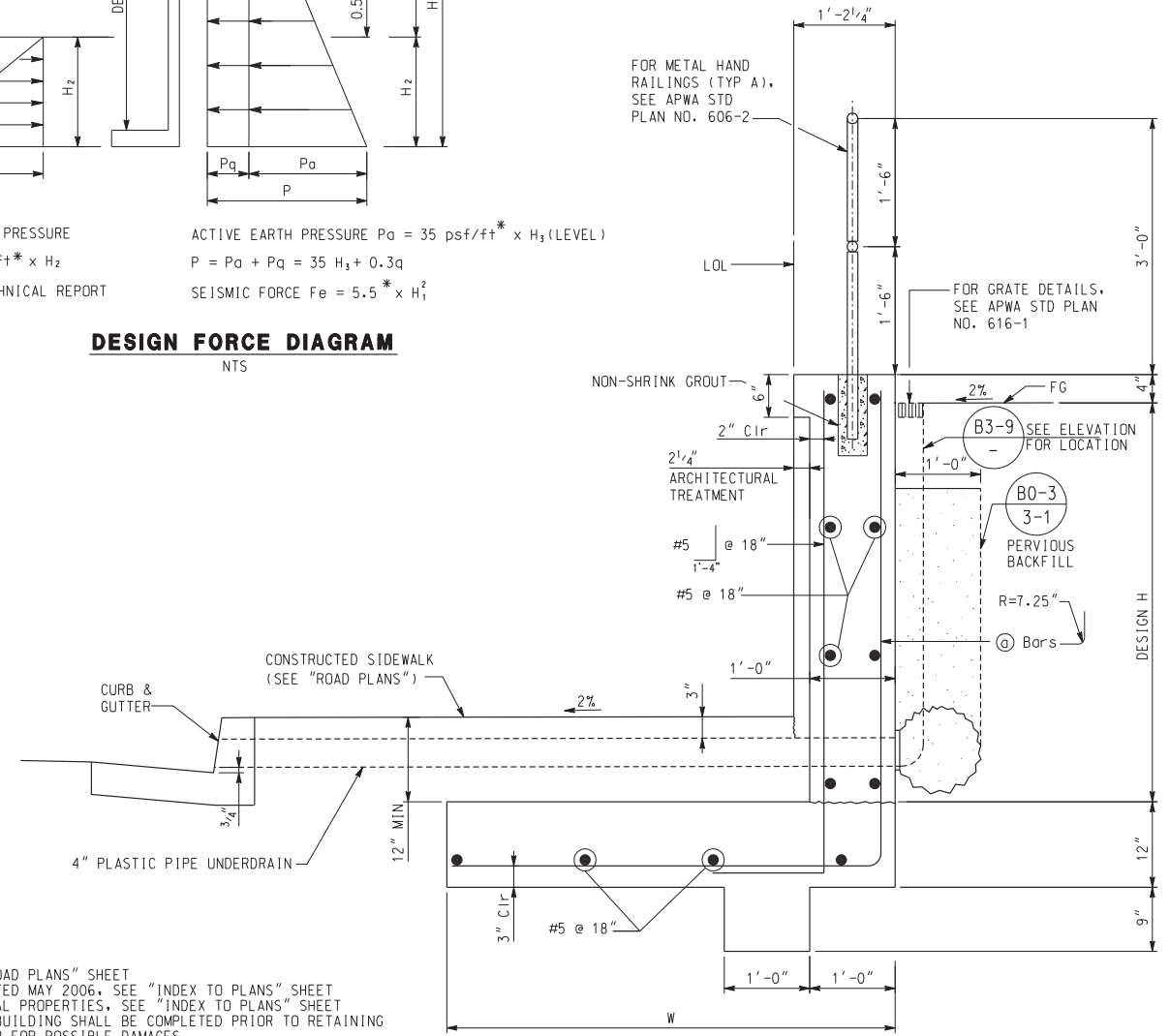
606-2 METAL HAND RAILINGS
616-1 GRATE DETAILS



PASSIVE EARTH PRESSURE
 $P_p = 350 \text{ psf/ft} \times H^2$
* FROM GEOTECHNICAL REPORT

ACTIVE EARTH PRESSURE $P_a = 35 \text{ psf/ft} \times H_3 \text{ (LEVEL)}$
 $P = P_a + P_q = 35 H_3 + 0.3q$
SEISMIC FORCE $F_e = 5.5 \times H^2$

DESIGN FORCE DIAGRAM
NTS



SECTION
SCALE: 1" = 1'-0"

NOTES:

- FOR LAYOUT INFORMATION, SEE "ROAD PLANS" SHEET
- FOR CALTRANS STANDARD PLANS DATED MAY 2006, SEE "INDEX TO PLANS" SHEET
- FOR DESIGN INFORMATION, MATERIAL PROPERTIES, SEE "INDEX TO PLANS" SHEET
- STRUCTURAL SURVEY OF ADJACENT BUILDING SHALL BE COMPLETED PRIOR TO RETAINING WALL 20 CONSTRUCTION TO MONITOR FOR POSSIBLE DAMAGES
- FOR STAIR WALL DETAILS, SEE "DRIVEWAY DETAILS CD-2" PLAN
- WALL COMPONENTS RECEIVING CONCRETE STONE FORM LINER FINISH SHALL BE CONSTRUCTED WITH INTEGRAL COLORED CONCRETE PER PROJECT SPECIFICATIONS PART 10, DIVISION 3, SECTION 03002
- ALL METAL HAND RAILING SHALL RECEIVE POWDER COATING PER PROJECT SPECIFICATIONS PART 10, DIVISION 9, SECTION 09905
- 4" PLASTIC PIPE UNDER DRAIN SHALL BE USED FOR WEEP HOLE TRANSITION TO CURB, WALL DRAIN AND GUTTER OUTLET.
- FOR CONSTANT HEIGHT RETAINING WALL, SEE "CONSTRUCTION DETAILS CD-1" SHEET.

AS BUILT
CORRECTIONS BY
CONTRACT NO.
DATE Nov 16, 2012

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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
B. REZNICOV
No. C 56878
Exp. 8-30-11
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
RETAINING WALL 20 - GENERAL PLAN
HORIZ. SCALE: AS NOTED VERT. SCALE: 1" = 1'-0"

RETAINING WALL SHEET NO. RW8
ACCT. NO. W.O. NO.
R-4081
SHEET 167 OF 189
FILE NO.

CONSTRUCTION NOTES

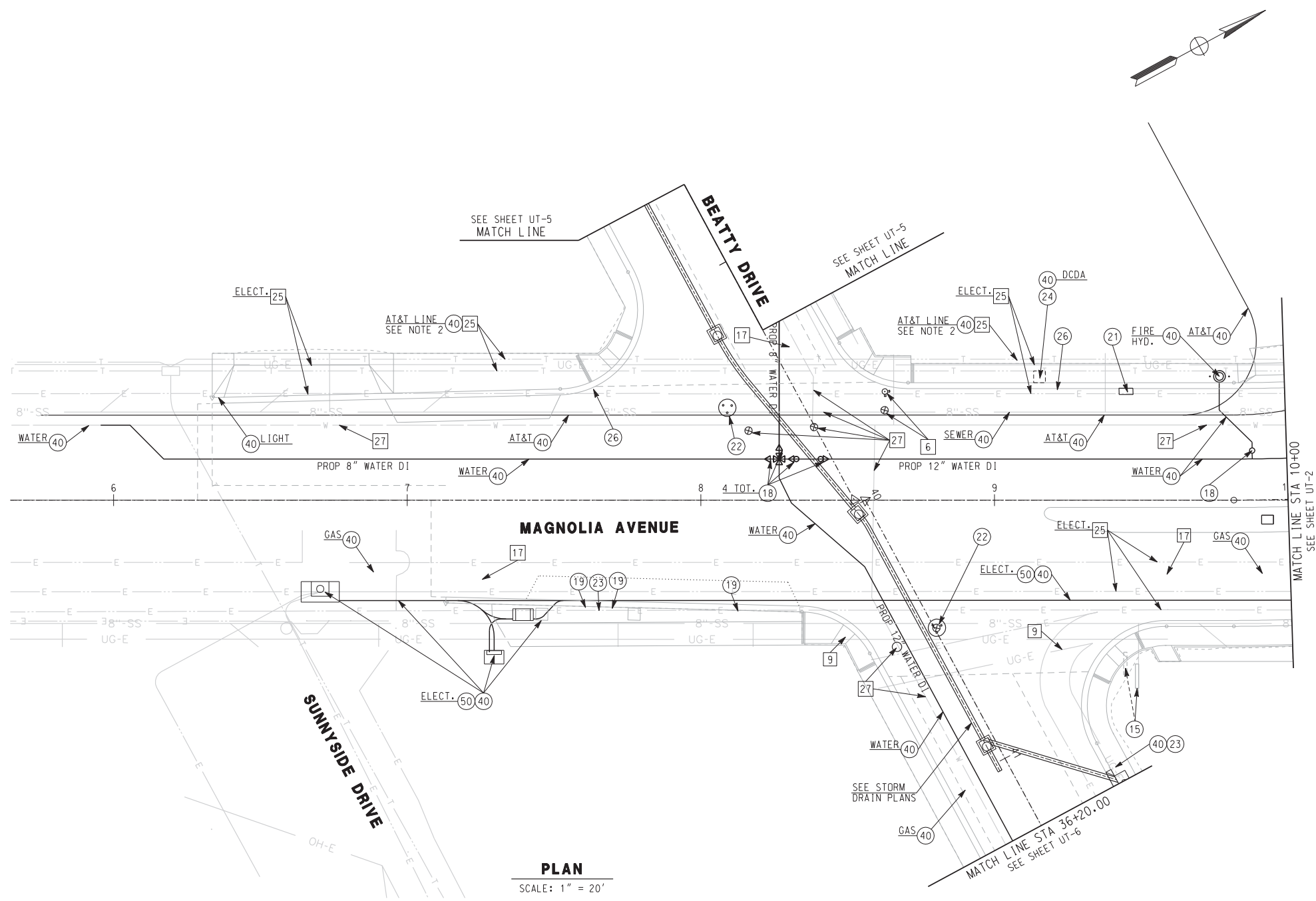
- 15) RELOCATE COMMERCIAL SIGN TO NEW LOCATION AS APPROVED BY ENGINEER
- 18) ADJUST WATER VALVE COVER TO GRADE
- 19) ADJUST/MODIFY WATER METER BOX TO GRADE
- 21) ADJUST/MODIFY GAS VAULT (BY OTHERS)
- 22) ADJUST SEWER MANHOLE TO GRADE
- 23) ADJUST/MODIFY ELECTRICAL MANHOLE TO GRADE (BY OTHERS)
- 24) ADJUST/MODIFY WATER VAULT TO GRADE (BY OTHERS)
- 26) RELOCATE/MODIFY WATER METER (BY OTHERS)
- 29) RELOCATE EXISTING LIGHT POLE (SEE STREET LIGHTING PLANS)
- 40) PROTECT IN PLACE
- 50) INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)

REMOVAL NOTES

- 6) REMOVE FIRE HYDRANT AND VALVE (BY OTHERS)
- 9) REMOVE ELECTRICAL PULL BOX
- 17) REMOVE & SALVAGE EXISTING STREET LIGHT
- 25) ABANDON UTILITY CONDUIT AND STRUCTURE (BY OTHERS)
- 27) ABANDON WATERLINE AND VALVES (BY OTHERS)

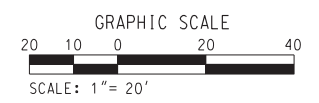
NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL, RELOCATION OR ABANDONING OF ANY UTILITY FACILITIES.
2. EXISTING AT&T CONDUIT MUST BE PROTECTED UNTIL RELOCATED AT&T LINE IS IN OPERATION. CONTRACTOR TO COORDINATE WITH ENGINEER AND UTILITY OWNER TO MODIFY OR REMOVE ANY PORTION OF THIS LINE.



PLAN
SCALE: 1" = 20'

AS BUILT
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CONTRACT NO. _____
DATE: 11/16/2012



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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
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
UTILITY DISPOSITION UT-1
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. W.O. NO. R-4081
SHEET 168 OF 189
FILE NO.

CONSTRUCTION NOTES

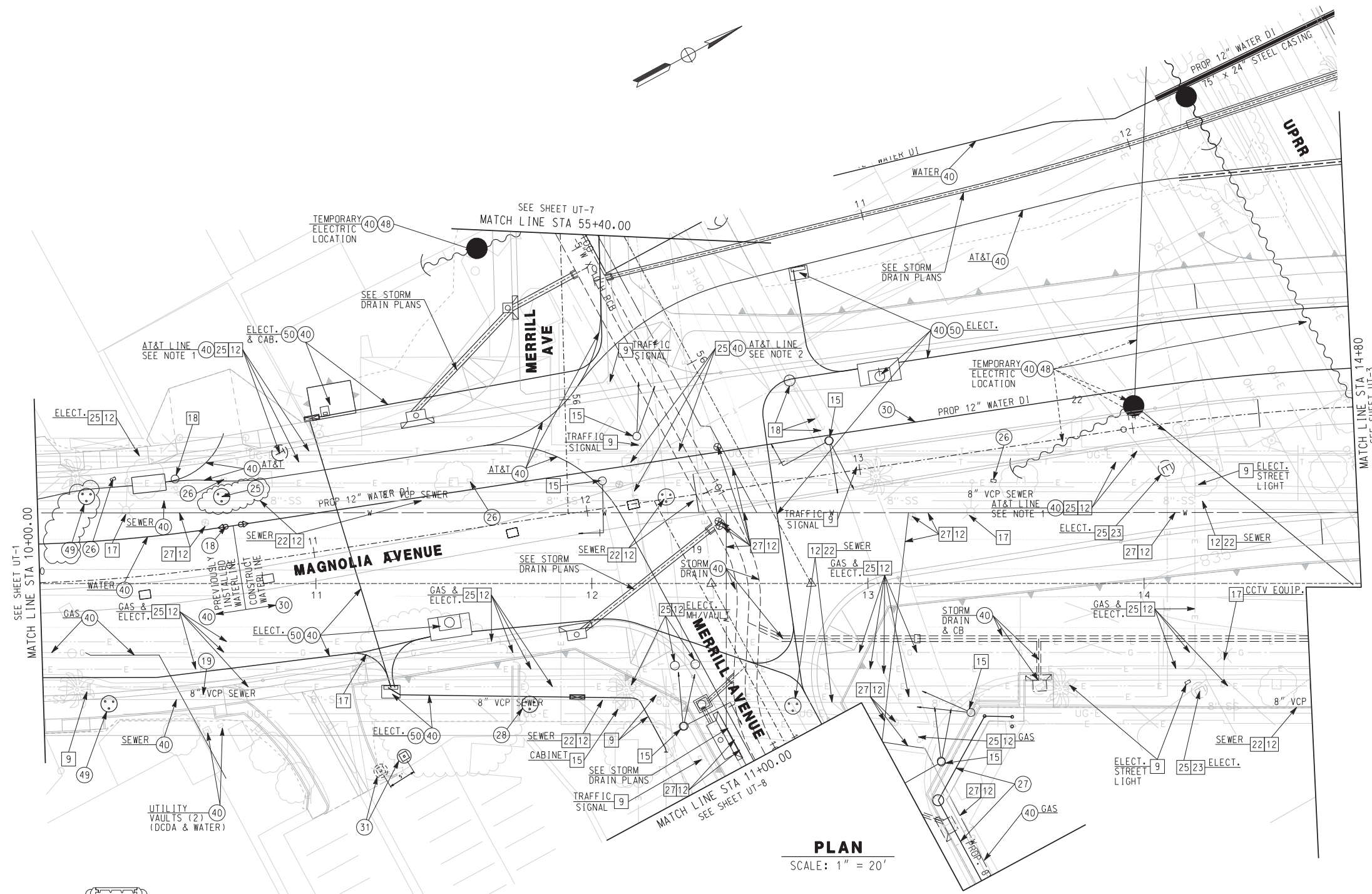
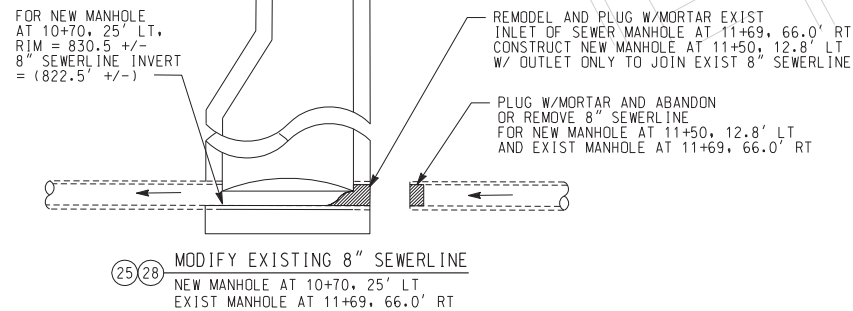
- (18) ADJUST WATER VALVE COVER TO GRADE
- (19) ADJUST/MODIFY WATER METER BOX TO GRADE
- (25) CONSTRUCT SEWER MANHOLE PER CITY OF RIVERSIDE STD PLAN No. 500. JOIN EXISTING SEWER PER DETAIL ON UT-2
- (26) RELOCATE/MODIFY WATER METER (BY OTHERS)
- (27) CONSTRUCT SEWER LATERAL PER PLAN
- (28) MODIFY SEWER MANHOLE PER DETAIL ON UT-2
- (30) CONSTRUCT WATERLINE PER PLAN
- (31) RELOCATE EXISTING PARKING LIGHT FIXTURE PER DETAIL ON CONSTRUCTION DETAIL SHEET CD-4
- (40) PROTECT IN PLACE
- (48) RESTORE OVERHEAD POWERLINES TO ORIGINAL ALIGNMENT COORDINATE WITH THE CITY OF RIVERSIDE PUBLIC UTILITIES.
- (49) MODIFY SEWER MANHOLE TO MATCH PROPOSED GRADE AND ADJUST MANHOLE RIM AND COVER TO FINISHED SURFACE.
- (50) INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)

REMOVAL NOTES

- (9) REMOVE ELECTRICAL PULL BOX
- (12) REMOVE INTERFERING PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- (15) REMOVE & SALVAGE EXIST TRAFFIC SIGNAL EQUIPMENT (DELIVER TO CITY YARD AT 8095 LINCOLN AVE., RIVERSIDE)
- (17) REMOVE & SALVAGE EXISTING STREET LIGHT
- (18) RELOCATE POWER POLE (BY OTHERS)
- (22) ABANDON PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- (23) REMOVE EXISTING UTILITY MANHOLE
- (25) ABANDON UTILITY CONDUIT AND STRUCTURE (BY OTHERS)
- (27) ABANDON WATERLINE AND VALVES (BY OTHERS)

NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES. AT&T CONDUITS WILL BE EXPOSED FOR BRIDGE CONSTRUCTION. CONTRACTOR SHALL TRENCH AROUND EXISTING AT&T DUCT BANK AND PROTECT WITH STEEL SHORING AND STEEL SHIELD.

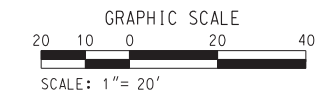


AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012



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<p>DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2680 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT</p>	<p>HDR ONE COMPANY Many Solutions HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501-2110 DATE: 9/14/09</p>		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS UTILITY DISPOSITION UT-2		ACCT. NO. W.O. NO. R-4081
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	REVISIONS: _____ APPR. DATE: _____	SHEET 169 of 189	FILE NO. _____

CONSTRUCTION NOTES

- 18 ADJUST WATER VALVE COVER TO GRADE
- 26 RELOCATE/MODIFY WATER METER (BY OTHERS)
- 30 CONSTRUCT WATERLINE PER PLAN
- 40 PROTECT IN PLACE
- 48 RESTORE OVERHEAD POWERLINES TO ORIGINAL ALIGNMENT
COORDINATE WITH THE CITY OF RIVERSIDE PUBLIC UTILITIES.
- 50 INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)
- 51 RELOCATE FIRE CONTROL DEVICE

REMOVAL NOTES

- 6 REMOVE FIRE HYDRANT AND VALVE (BY OTHERS)
- 9 REMOVE ELECTRICAL PULL BOX
- 12 REMOVE INTERFERING PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 17 REMOVE & SALVAGE EXISTING STREET LIGHT
- 22 ABANDON PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 23 REMOVE EXISTING UTILITY MANHOLE
- 25 ABANDON UTILITY CONDUIT AND STRUCTURE (BY OTHERS)
- 27 ABANDON WATERLINE AND VALVES (BY OTHERS)

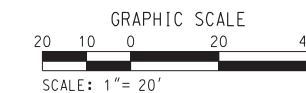
NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES. AT&T CONDUITS WILL BE EXPOSED FOR BRIDGE CONSTRUCTION. CONTRACTOR SHALL TRENCH AROUND EXISTING AT&T DUCT BANK AND PROTECT WITH STEEL SHORING AND STEEL SHIELD.
2. ALL RAILROAD SIGNAL EQUIPMENT TO BE MODIFIED, RELOCATED OR REMOVED BY UPRR FORCES.
3. APPROXIMATE LOCATION OF EXISTING DCDA AND WATER SUPPLY (WELLS FARGO). CONTRACTOR SHALL REPLUMB DOMESTIC AND FIRE SUPPLIES TO NEW CITY INSTALLED WATER METER. CONTRACTOR SHALL OBTAIN PERMITS AND CALCULATIONS FOR DEMANDS AND ASSURE THAT DESIGN MEETS CITY AND NATIONAL PLUMBING CODE.



PLAN
SCALE: 1" = 20'

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CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



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

REGISTERED PROFESSIONAL ENGINEER
THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
UTILITY DISPOSITION UT-3

ACCT. NO. _____
W.O. NO. _____
R-4081
SHEET 170 OF 189
FILE NO. _____

CONSTRUCTION NOTES

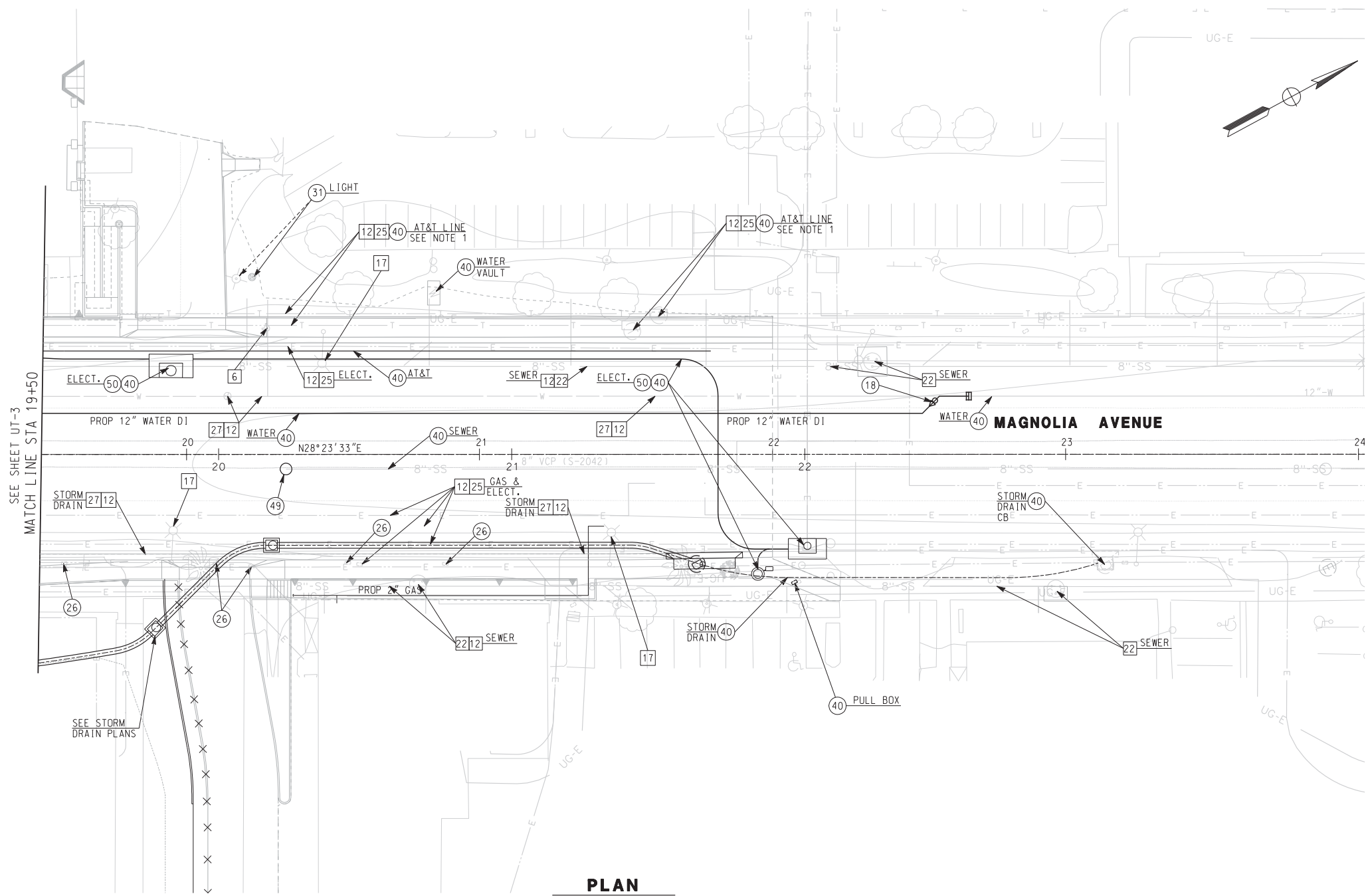
- 18 ADJUST WATER VALVE COVER TO GRADE
- 26 RELOCATE/MODIFY WATER METER (BY OTHERS)
- 31 RELOCATE EXISTING PARKING LIGHT FIXTURE PER DETAIL ON CONSTRUCTION DETAIL SHEET CD-4
- 40 PROTECT IN PLACE
- 48 RESTORE OVERHEAD POWERLINES TO ORIGINAL ALIGNMENT COORDINATE WITH THE CITY OF RIVERSIDE PUBLIC UTILITIES.
- 49 MODIFY SEWER MANHOLE TO MATCH PROPOSED GRADE AND ADJUST MANHOLE RIM AND COVER TO FINISHED SURFACE.
- 50 INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)

REMOVAL NOTES

- 6 REMOVE FIRE HYDRANT AND VALVE (BY OTHERS)
- 12 REMOVE INTERFERING PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 17 REMOVE & SALVAGE EXISTING STREET LIGHT
- 22 ABANDON PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 25 ABANDON UTILITY CONDUIT AND STRUCTURE (BY OTHERS)
- 27 ABANDON WATERLINE AND VALVES (BY OTHERS)

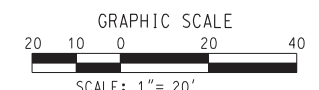
NOTES

- 1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.



PLAN
SCALE: 1" = 20'

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



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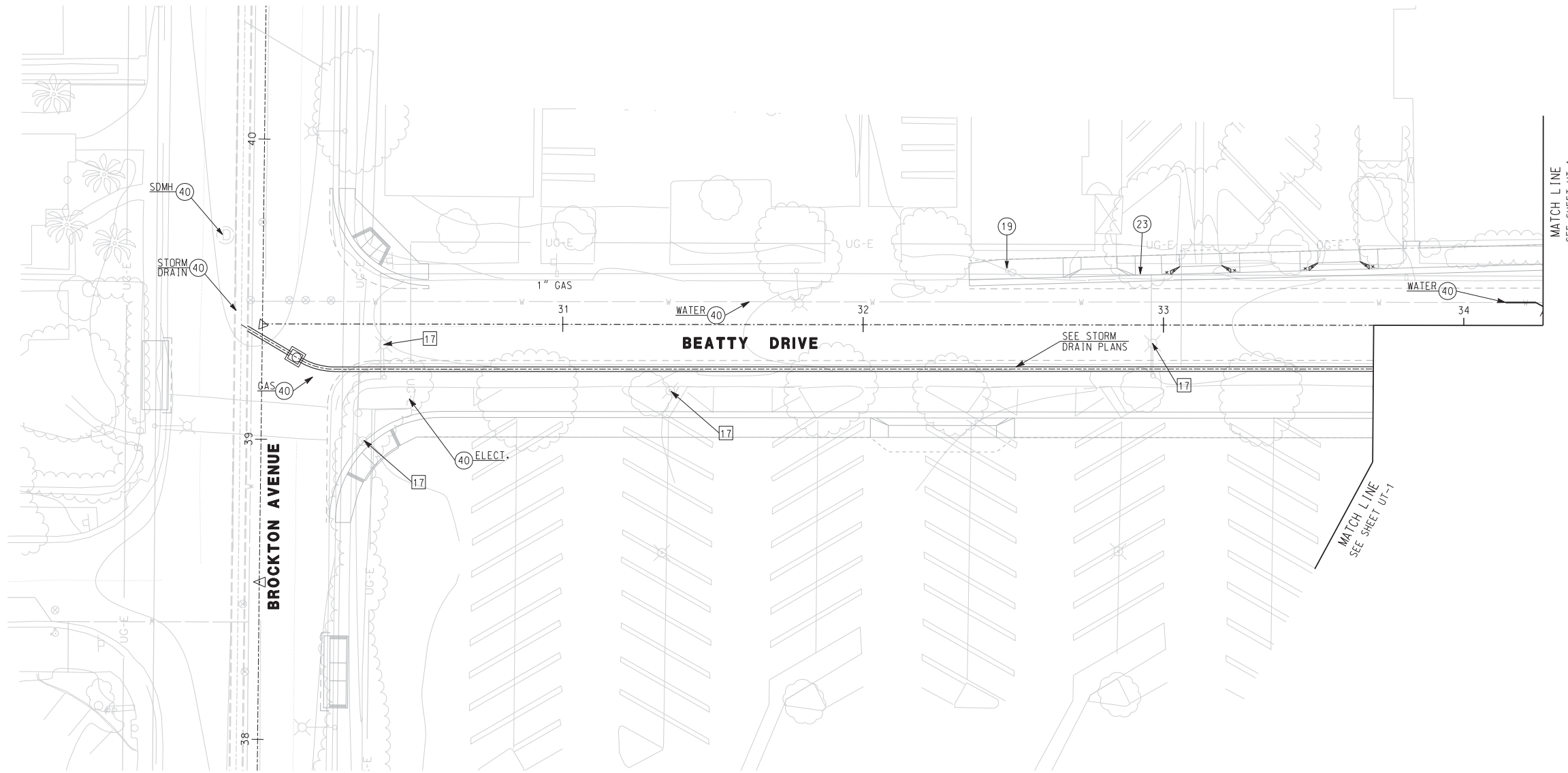
			CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS UTILITY DISPOSITION UT-4		ACCT. NO. W.O. NO. R-4081
			DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____	REVISIONS: _____ APRR. DATE: _____	SHEET 171 OF 189	FILE NO.

CONSTRUCTION NOTES

- 19 ADJUST/MODIFY WATER METER BOX TO GRADE
- 23 ADJUST/MODIFY ELECTRICAL MANHOLE TO GRADE (BY OTHERS)
- 40 PROTECT IN PLACE

REMOVAL NOTES

- 17 REMOVE & SALVAGE EXISTING STREET LIGHT



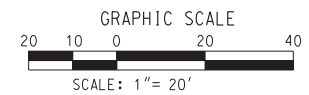
PLAN

SCALE: 1" = 20'

NOTES

- 1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.

AS BUILT
 CORRECTIONS BY: *[Signature]*
 CONTRACT NO. _____
 DATE: *11/16/2012*

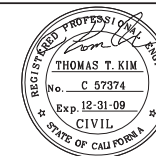


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 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

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



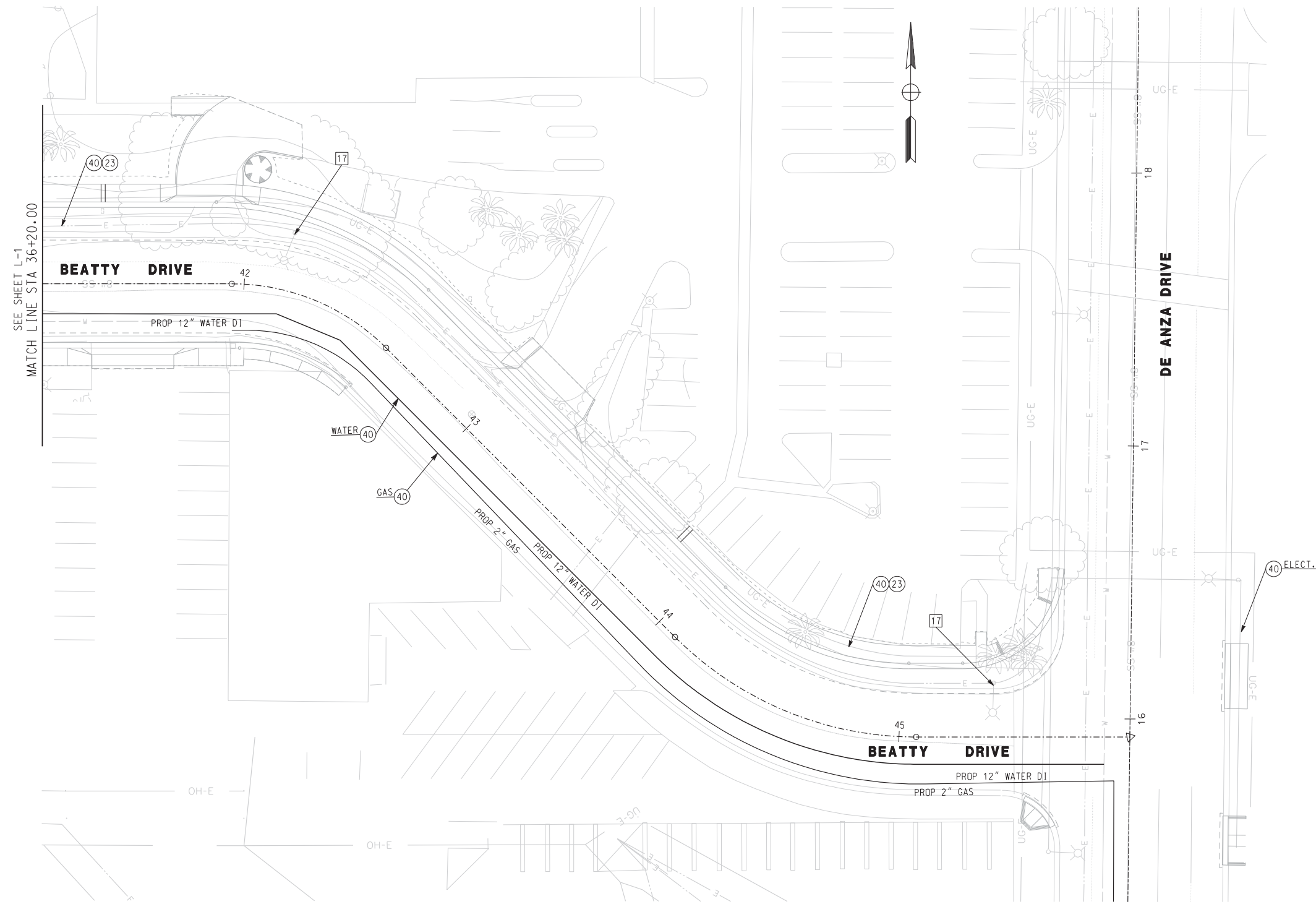
MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
UTILITY DISPOSITION UT-5

ACCT. NO. _____
 W.O. NO. _____
R-4081
 SHEET 172 OF 189
 FILE NO. _____ 1"=20'

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CONSTRUCTION NOTES

- 19 ADJUST/MODIFY WATER METER BOX TO GRADE
- 23 ADJUST/MODIFY ELECTRICAL MANHOLE TO GRADE (BY OTHERS)
- 40 PROTECT IN PLACE

REMOVAL NOTES

- 17 REMOVE & SALVAGE EXISTING STREET LIGHT

NOTES

- 1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.

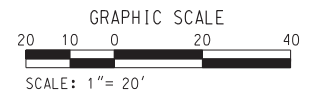
PLAN
SCALE: 1" = 20'

AS BUILT

CORRECTIONS BY *[Signature]*

CONTRACT NO. _____

DATE 11/16/2012



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Many Solutions

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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE 9/14/09

REGISTERED PROFESSIONAL ENGINEER

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

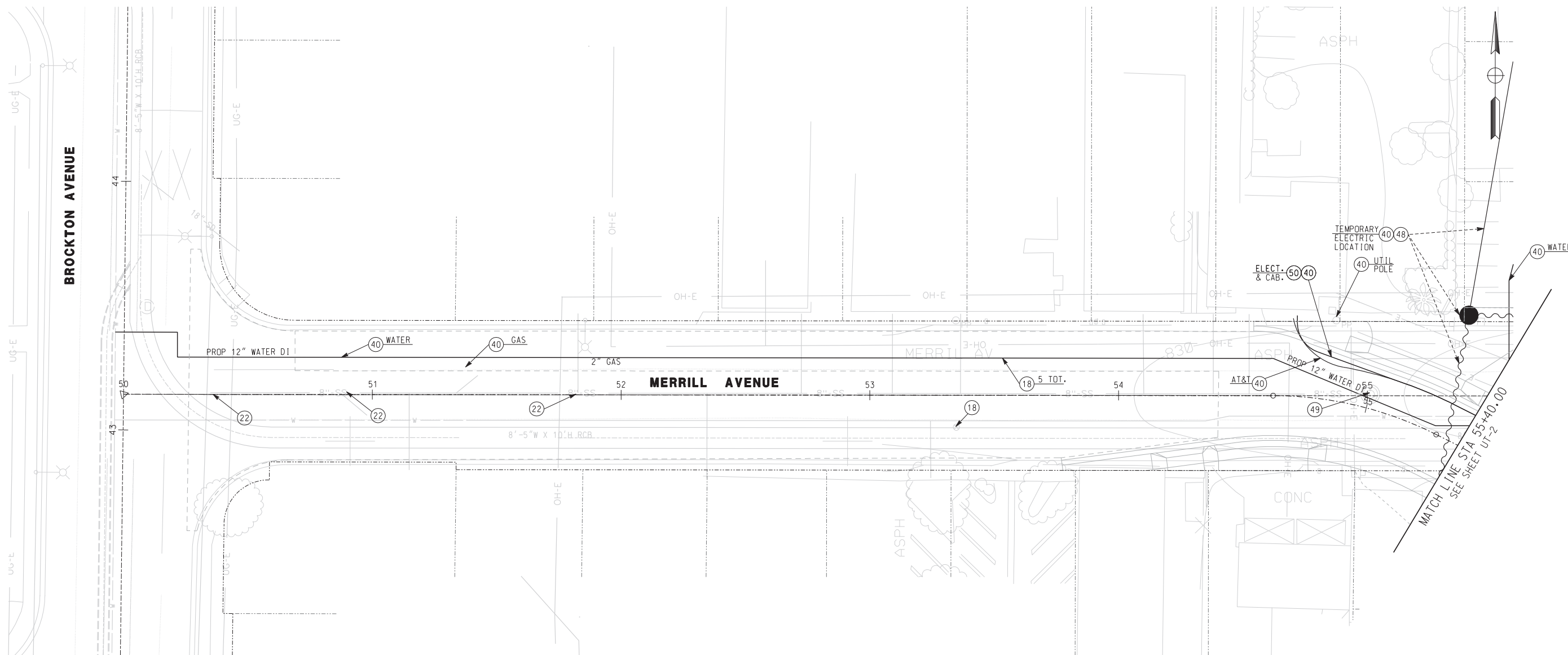
UTILITY DISPOSITION UT-6

HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. W.O. NO. **R-4081**

SHEET 173 OF 189

FILE NO. _____



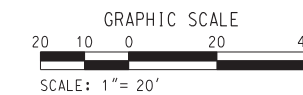
PLAN
SCALE: 1" = 20'

CONSTRUCTION NOTES

- (18) ADJUST/MODIFY WATER VALVE COVER TO GRADE
- (22) ADJUST SEWER MANHOLE TO GRADE
- (40) PROTECT IN PLACE
- (48) RESTORE OVERHEAD POWERLINES TO ORIGINAL ALIGNMENT
COORDINATE WITH THE CITY OF RIVERSIDE PUBLIC UTILITIES.
- (49) MODIFY SEWER MANHOLE TO MATCH PROPOSED GRADE AND ADJUST
MANHOLE RIM AND COVER TO FINISHED SURFACE.

NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS
FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.



AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

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Many Solutions

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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110

DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER

THOMAS T. KIM

No. C 57374

Exp. 12-31-09

CIVIL

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

UTILITY DISPOSITION UT-7

HORIZ. SCALE: 1"=20' VERT. SCALE: _____

ACCT. NO. W.O. NO. **R-4081**

SHEET 174 of 189

FILE NO. _____

CONSTRUCTION NOTES

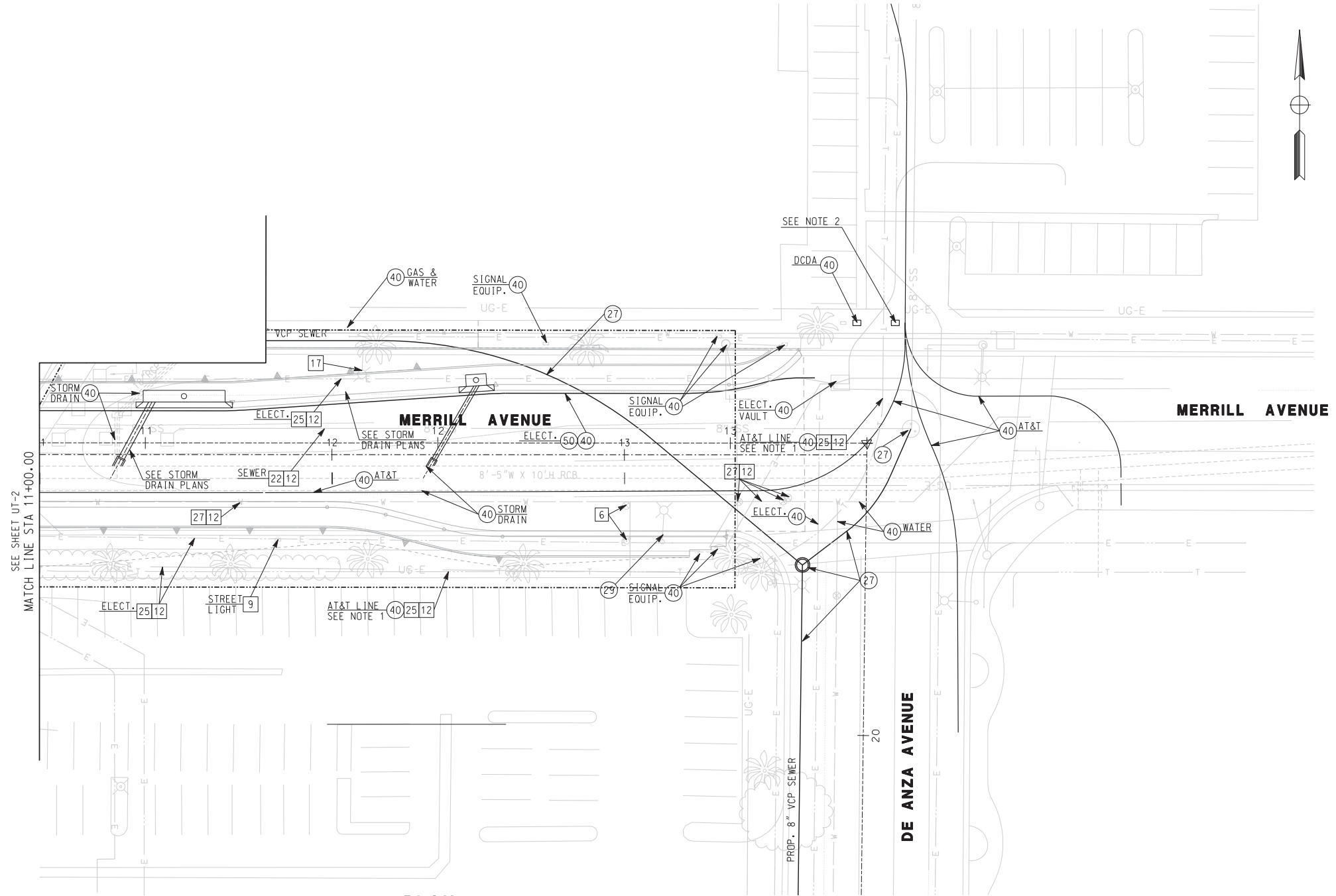
- 26 RELOCATE/MODIFY WATER METER (BY OTHERS)
- 27 CONSTRUCT SEWER LATERAL PER PLAN
- 29 RELOCATE EXISTING LIGHT POLE (SEE STREET LIGHTING PLANS)
- 40 PROTECT IN PLACE
- 50 INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)

REMOVAL NOTES

- 6 REMOVE FIRE HYDRANT AND VALVE (BY OTHERS)
- 9 REMOVE ELECTRICAL PULL BOX
- 12 REMOVE INTERFERING PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 17 REMOVE & SALVAGE EXISTING STREET LIGHT
- 22 ABANDON PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- 25 ABANDON UTILITY CONDUIT AND STRUCTURE (BY OTHERS)
- 27 ABANDON WATERLINE AND VALVES (BY OTHERS)

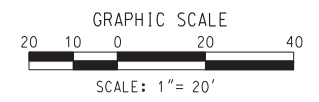
NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.
2. CITY SHALL INSTALL NEW WATER SERVICE AND METER IN THE APPROXIMATE LOCATION SHOWN. CONTRACTOR SHALL REPLUMB DOMESTIC SUPPLY TO NEW CITY INSTALLED WATER METER. CONTRACTOR SHALL OBTAIN PERMITS AND CALCULATIONS FOR DEMANDS AND ASSURE THAT DESIGN MEETS CITY AND NATIONAL PLUMBING CODE.



PLAN
SCALE: 1" = 20'

AS BUILT
CORRECTIONS BY: *[Signature]*
CONTRACT NO. _____
DATE: 11/16/2012



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 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: 9/14/09		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
			MAGNOLIA AVENUE UNDERPASS UTILITY DISPOSITION UT-8		R-4081 SHEET 175 OF 189
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____			HORIZ. SCALE: 1"=20' VERT. SCALE: _____		FILE NO. _____

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CONSTRUCTION NOTES

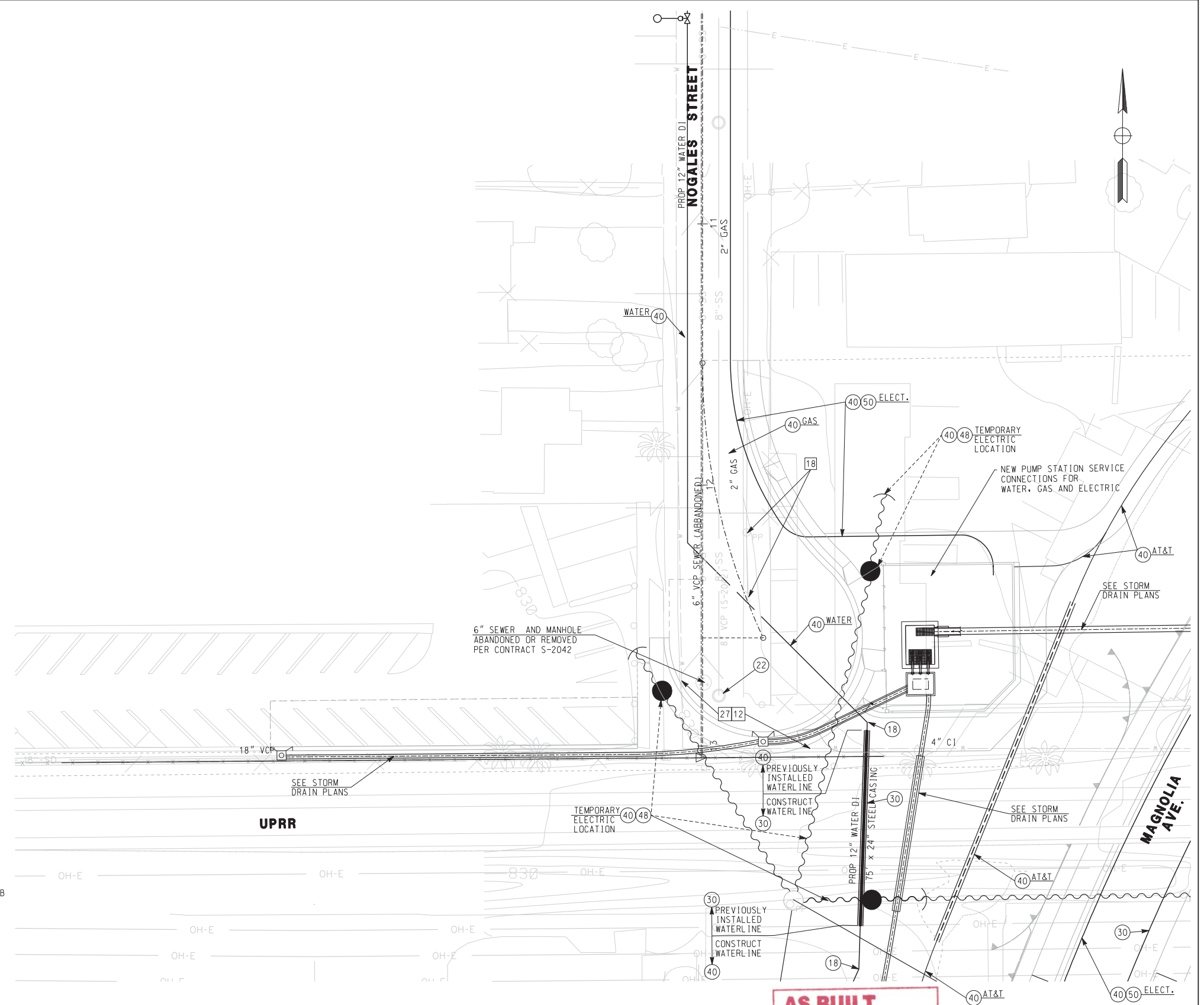
- (18) ADJUST WATER VALVE COVER TO GRADE
- (22) ADJUST SEWER MANHOLE TO GRADE
- (30) CONSTRUCT WATERLINE PER PLAN
- (40) PROTECT IN PLACE
- (50) INSTALL UNDERGROUND ELECTRIC CONDUIT AND SERVICE (BY OTHERS)

REMOVAL NOTES

- (12) REMOVE INTERFERING PORTIONS OF UTILITY CONDUITS AND STRUCTURES.
- (18) RELOCATE POWER POLE (BY OTHERS)
- (27) ABANDON WATERLINE AND VALVES (BY OTHERS)

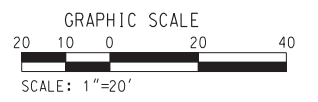
NOTES

1. COORDINATE WITH CITY ENGINEER AND UTILITY OWNERS FOR REMOVAL AND RELOCATION OF UTILITY FACILITIES.
3. PROTECT EXISTING PAVEMENT AND BUILDING CONCRETE SLAB FOR TEMPORARY PARKING TO BE REMOVED AFTER DMV CONDITIONS ARE RESTORED.
4. CONSTRUCT SECTION OF PIPE UNDER SHOOFLY PRIOR TO CONSTRUCTION OF SHOOFLY. PIPE SHALL HAVE 3/16" STEEL CASTING ON UPRR RIGHT-OF-WAY.



END PLAN
 SCALE: 1" = 20'

AS BUILT
 CORRECTIONS BY: [Signature]
 CONTRACT NO. [Blank]
 DATE: 11/16/2012



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

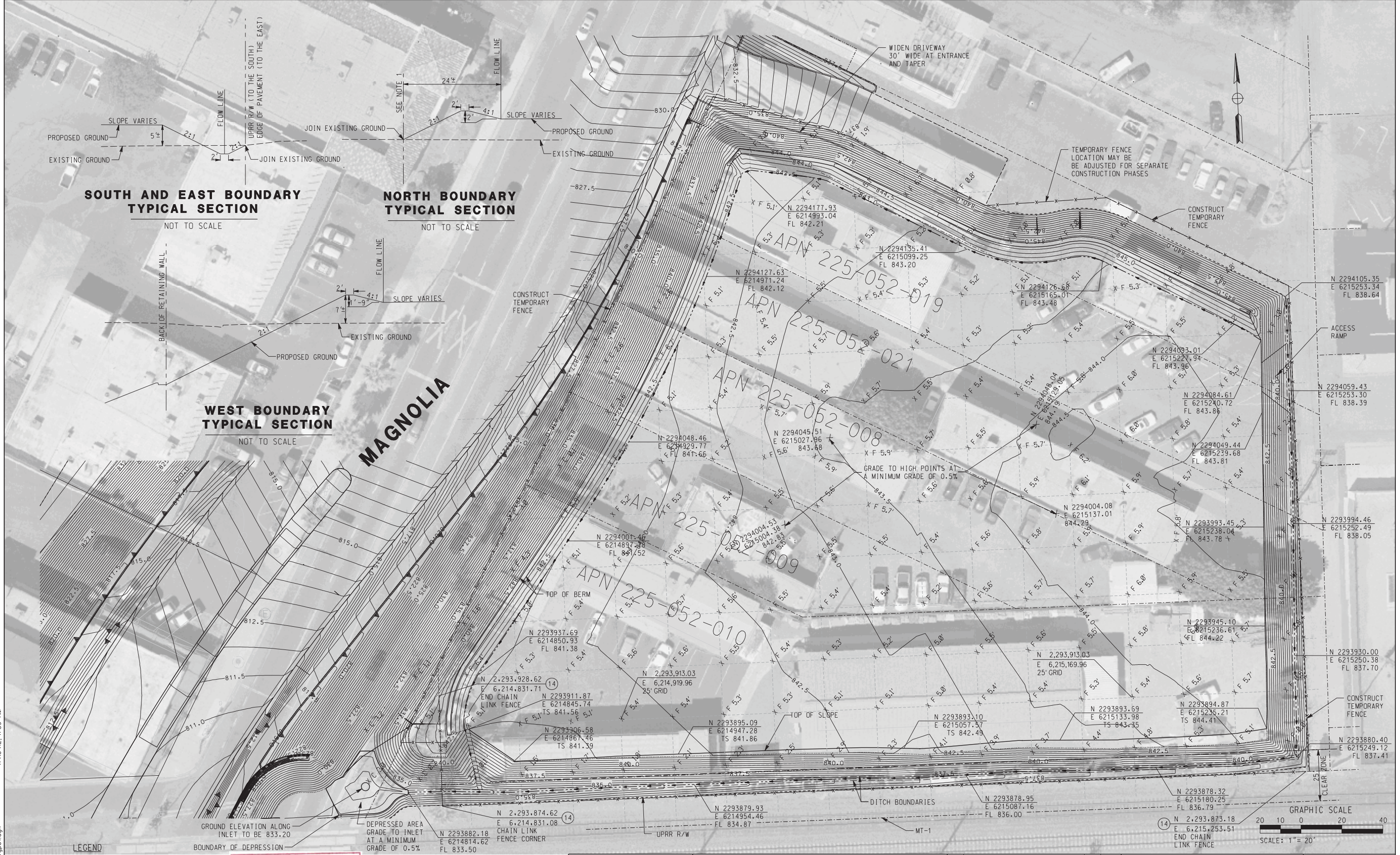
REGISTERED PROFESSIONAL ENGINEER
 THOMAS T. KIM
 No. C 57374
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
UTILITY DISPOSITION UT-9
 HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

ACCT. NO. W.O. NO.
R-4081
 SHEET 176 OF 189
 FILE NO.



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LEGEND

- X F 1.0 1' FILL FROM EG TO FG
- X C 1.0 1' CUT FROM EG TO FG

AS BUILT

CORRECTIONS BY: *[Signature]*

CONTRACT NO. _____

DATE: 11/16/2012

NOTE: DEMOLISH ALL BUILDINGS, FOUNDATIONS AND UNDERGROUND OBSTRUCTIONS PER ENGINEER. CLEARLY DEFINE WORK LIMITS BEFORE ANY ANY WORK BEGINS.

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2280 MARKET STREET
SUITE 100
RIVERSIDE, CA 92501-2110
DATE: 9/14/09

REGISTERED PROFESSIONAL ENGINEER

THOMAS T. KIM
No. C 57374
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

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

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

MAGNOLIA AVENUE UNDERPASS

GRADING PLAN G-1

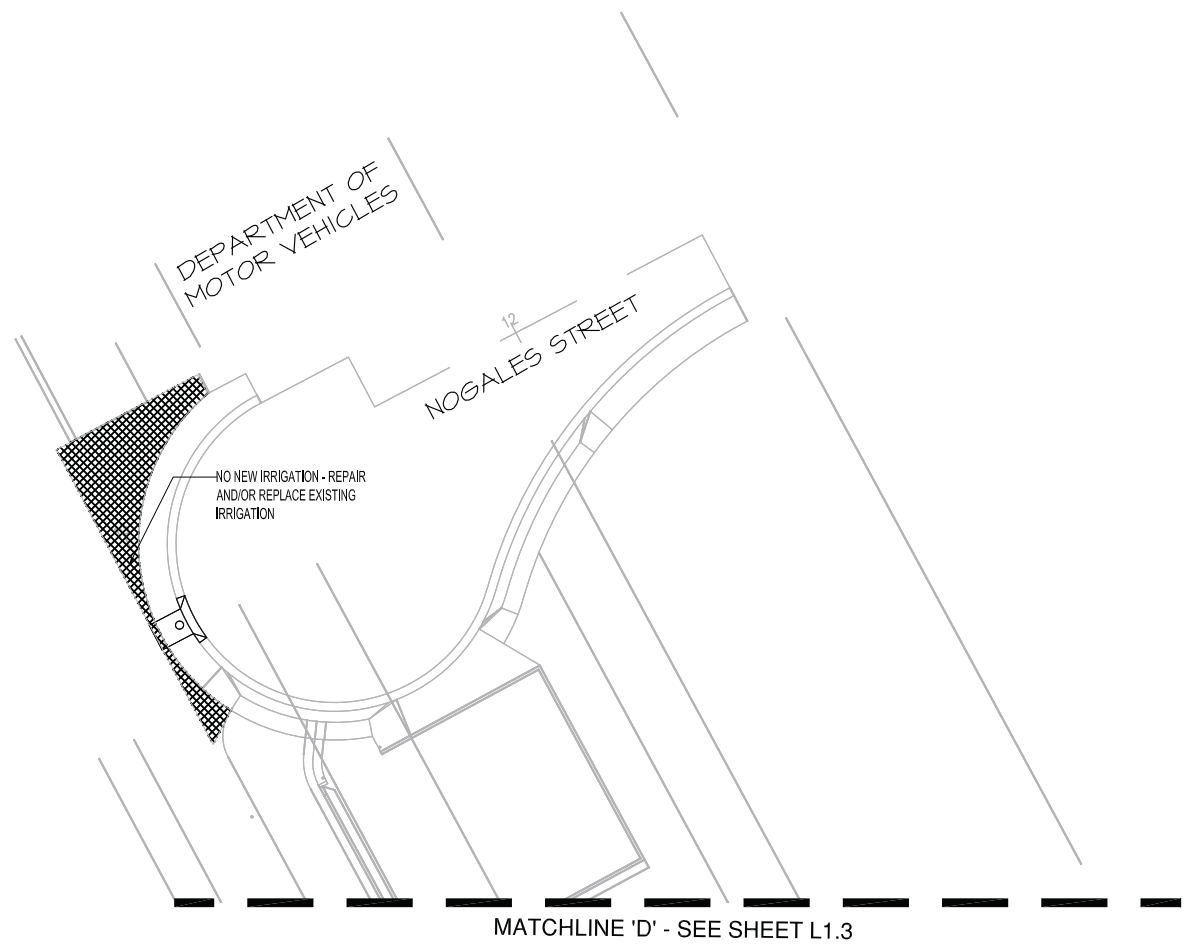
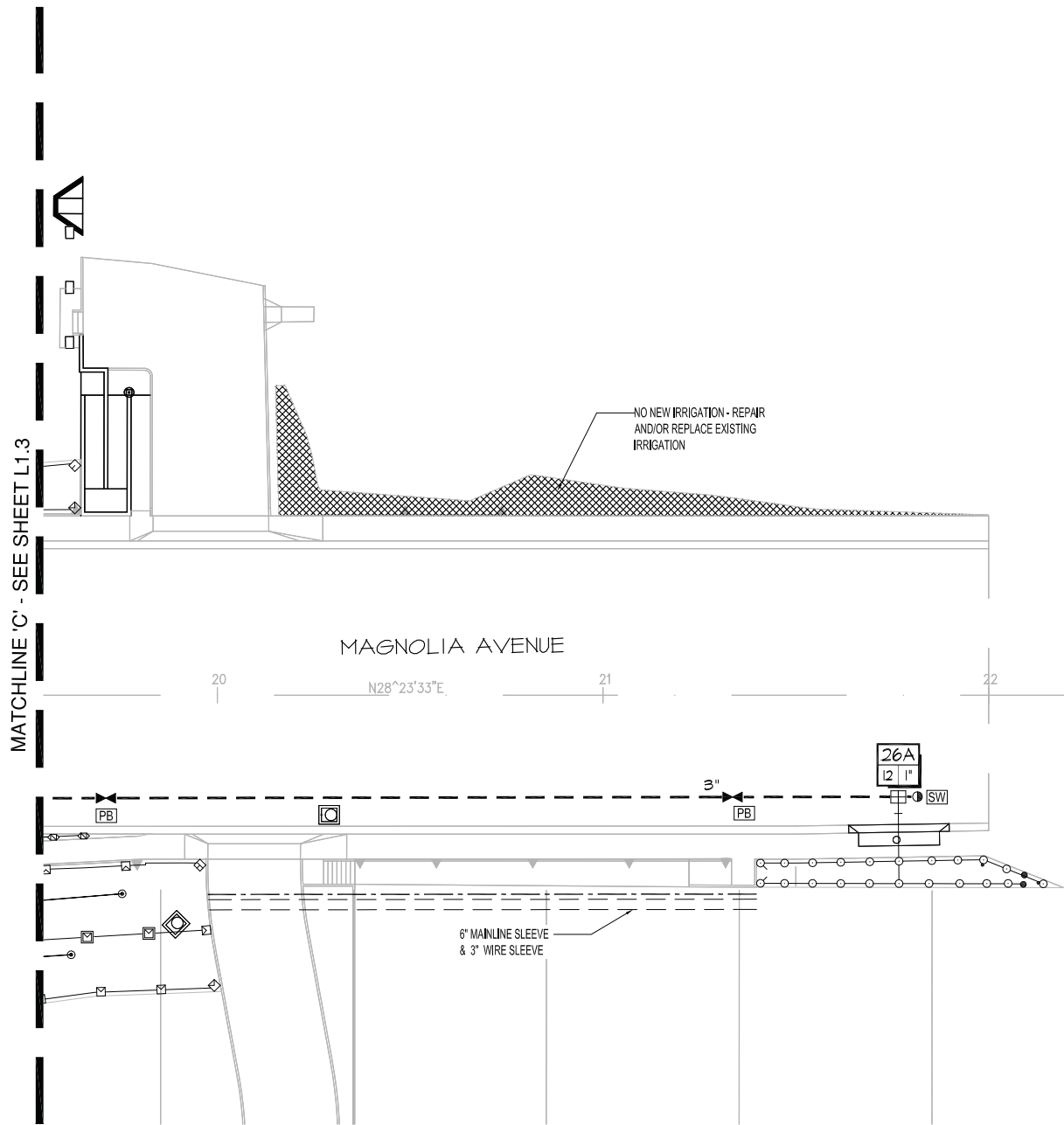
HORIZ. SCALE: 1"=20' VERT. SCALE: 1"=20'

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

R-4081

SHEET 177 of 189

FILE NO. _____

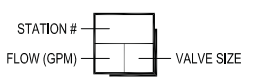


PIPE SIZING	
—	1" PIPE
—	1" PIPE
—	1 1/4" PIPE
—	1 1/2" PIPE
—	2" PIPE
—	2 1/2" PIPE
—	3" PIPE
—	4" PIPE
—	6" PIPE
—	8" PIPE

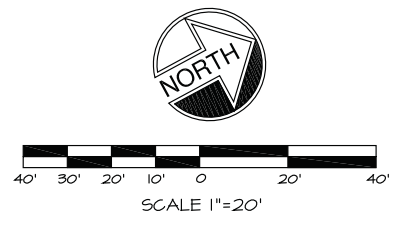
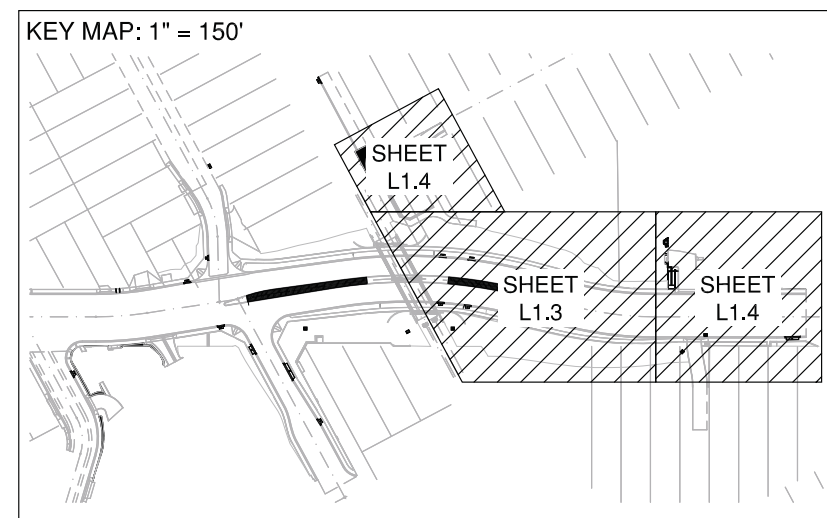
SCH 40 PVC SLEEVING CHART		
1 1/4" SLEEVE	1-8 WIRES	N/A
1 1/2" SLEEVE	9-16 WIRES	N/A
2" SLEEVE	17-26 WIRES	1" PIPE
2 1/2" SLEEVE	27-38 WIRES	1 1/4" PIPE
3" SLEEVE	39-54 WIRES	1 1/2" PIPE
4" SLEEVE	55-100 WIRES	2" PIPE
6" SLEEVE	100+ WIRES	3" PIPE
8" SLEEVE	N/A	4" PIPE
12" SLEEVE	N/A	6" PIPE

SLEEVING
 MAINLINE AND VALVES SHOWN OUTSIDE OF PLANTED AREAS FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN ADJACENT PLANTED AREAS EXCEPT WHERE SLEEVING IS SHOWN ON THE PLANS. ALL PIPES AND WIRES THAT MUST RUN UNDER HARDSCAPE TO BE SLEEVED IN SCH 40 PVC SLEEVES ACCORDING TO THE SLEEVING CHART.

RECLAIMED WATER DESIGN
 THE IRRIGATION SYSTEM IS DESIGNED FOR RECLAIMED WATER. CONTRACTOR SHALL INSTALL SYSTEM IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS AND PER WATER PURVEYOR STANDARDS.

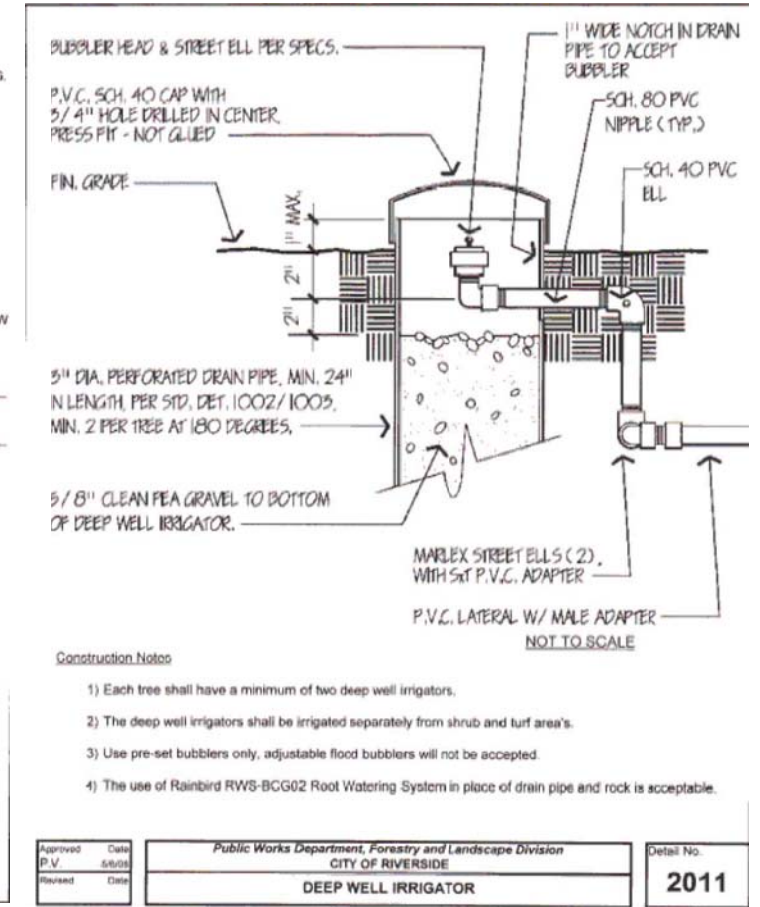
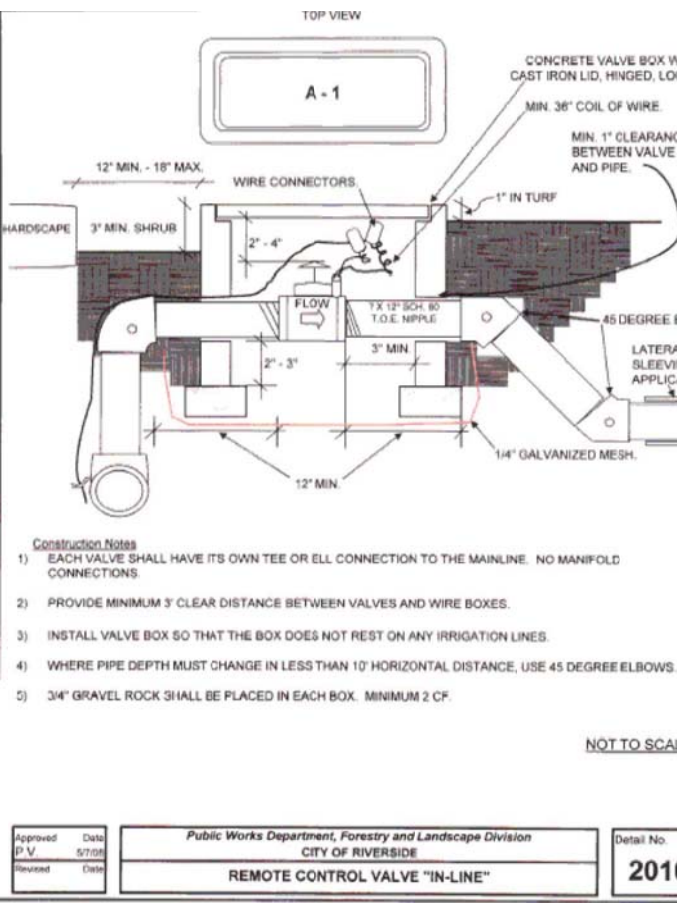
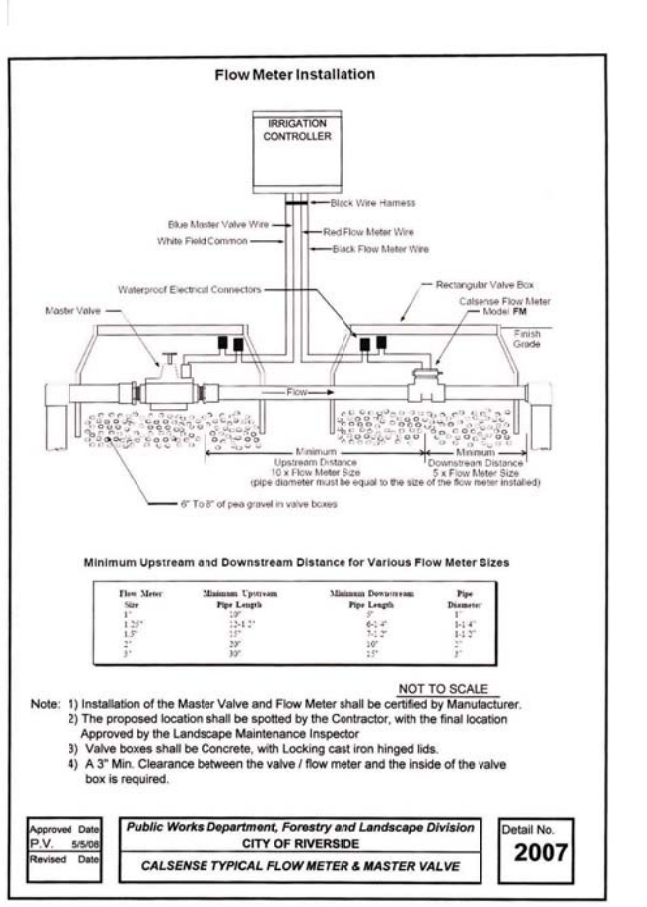
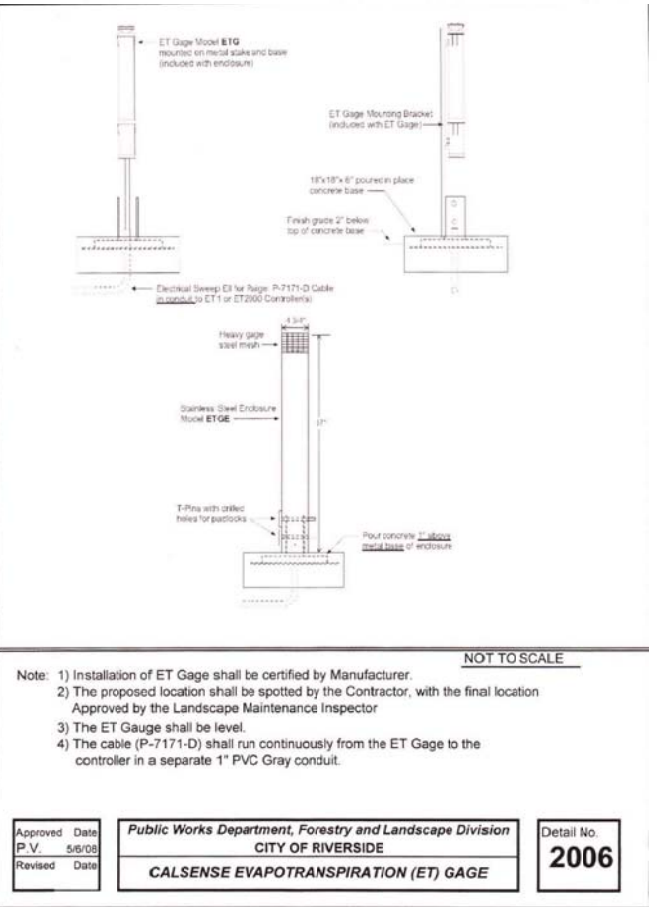
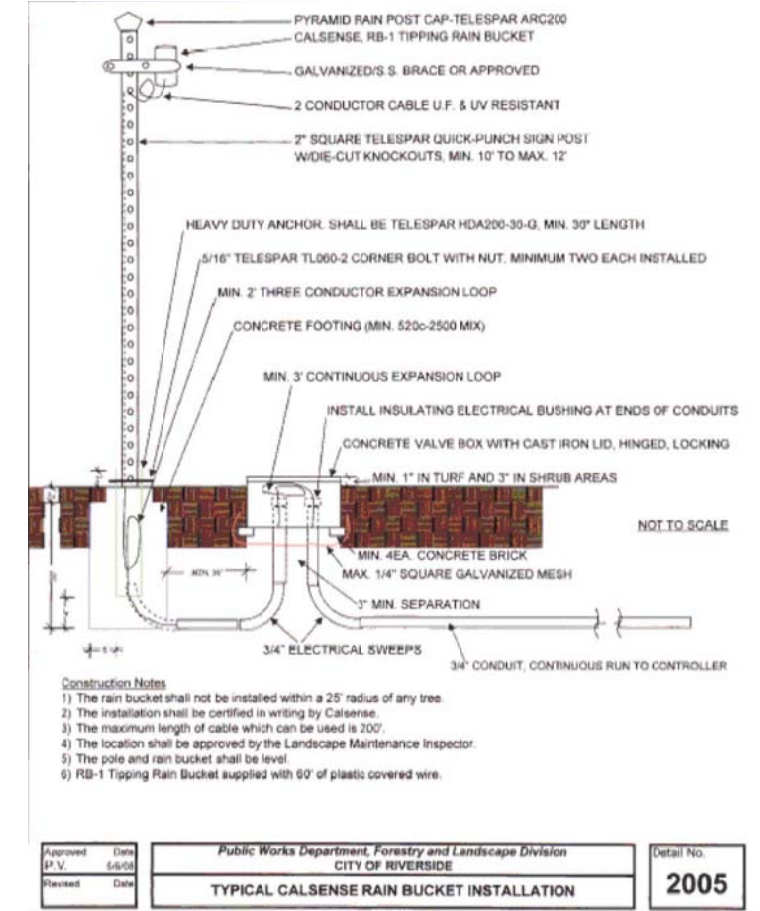
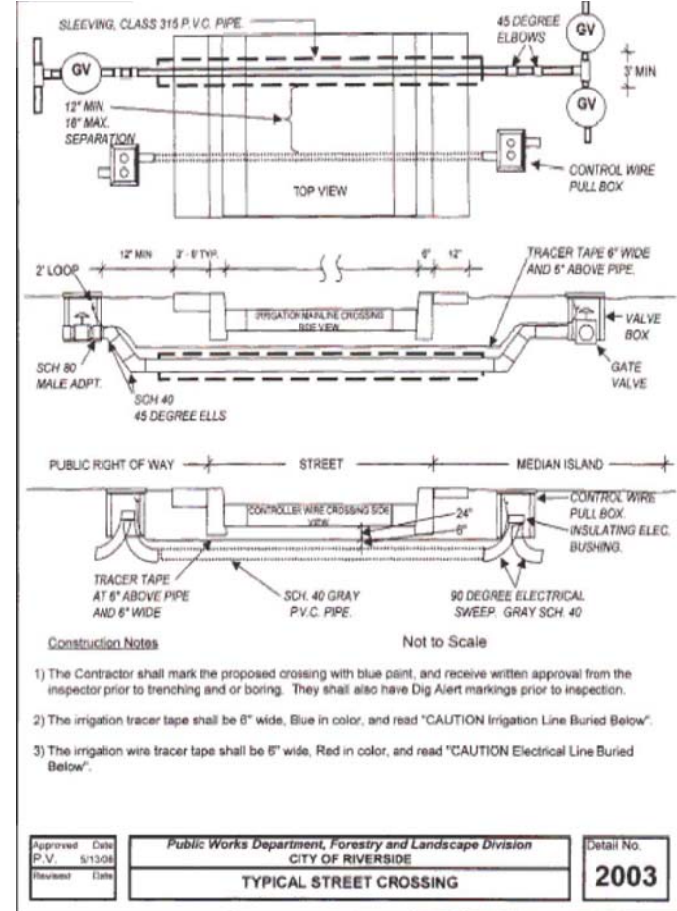
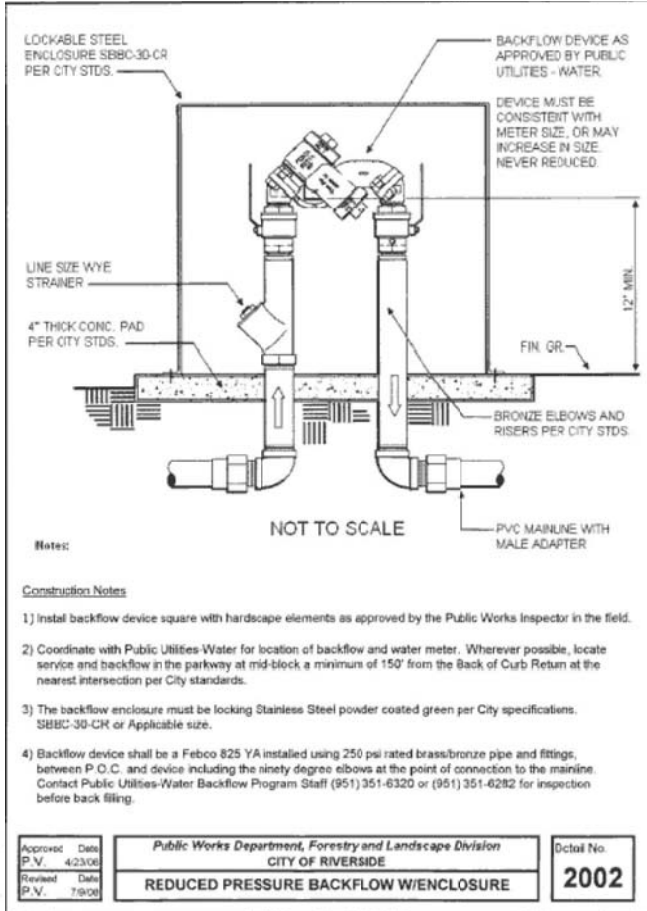
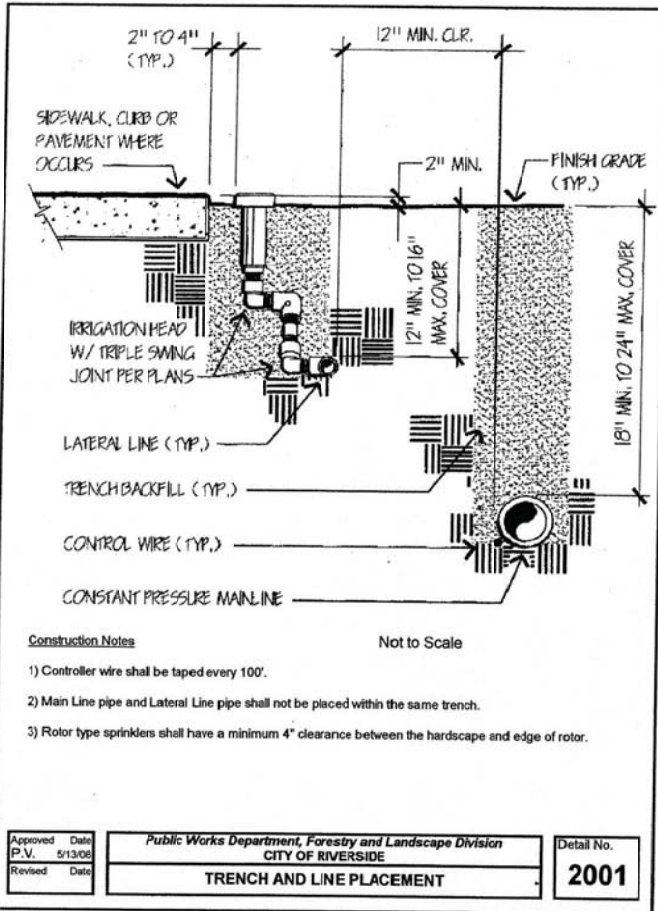


SEE SHEET L1.3 FOR IRRIGATION SPRINKLER LEGEND
 SEE SHEETS L1.5 THROUGH L1.75 FOR IRRIGATION DETAILS
 SEE SHEET L1.7 FOR IRRIGATION NOTES
 REFER TO ALL CITY OF RIVERSIDE DETAILS INCLUDED IN THESE DOCUMENTS BY THIS REFERENCE
 REFER TO SPECIFICATIONS SECTION 02441 - IRRIGATION



		IAN DAVIDSON, LANDSCAPE ARCHITECTURE 3547 MARKET STREET RIVERSIDE, CA 92501 951.683.1283 . FAX 951.683.4352 E-MAIL: IDAVIDSON@IDLAINC.COM REGISTRATION NO. 2651		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. W.O. NO.
				MAGNOLIA AVENUE UNDERPASS		R-4081L L1.4
IRRIGATION PLAN				SHEET 181 of 189		FILE NO.
DESIGNED BY IJD DRAWN BY JIM CHECKED BY IJD		DATE 9/14/09		SCALE: AS SHOWN		

DWG: J:\2008\10808 - Magnolia Underpass\Drawings\Landscape\10808IR.dwg
 TIME: 9-15-09 - 3:25pm User: Jason McHugh XRef Files: x10808bnd x10808r x10808bpt x10808bss - SLOPE_PAVE_xplanting



REFER TO ALL CITY OF RIVERSIDE DETAILS INCLUDED IN THESE DOCUMENTS BY THIS REFERENCE. REFER TO SPECIFICATIONS SECTION 02441 - IRRIGATION

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IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951.683.1283 . FAX 951.683.4352
E-MAIL: IDAVIDSON@IDLAINC.COM
REGISTRATION NO. 2651

REGISTERED LANDSCAPE ARCHITECT
IAN DAVIDSON
STATE OF CALIFORNIA

DATE 9/14/09

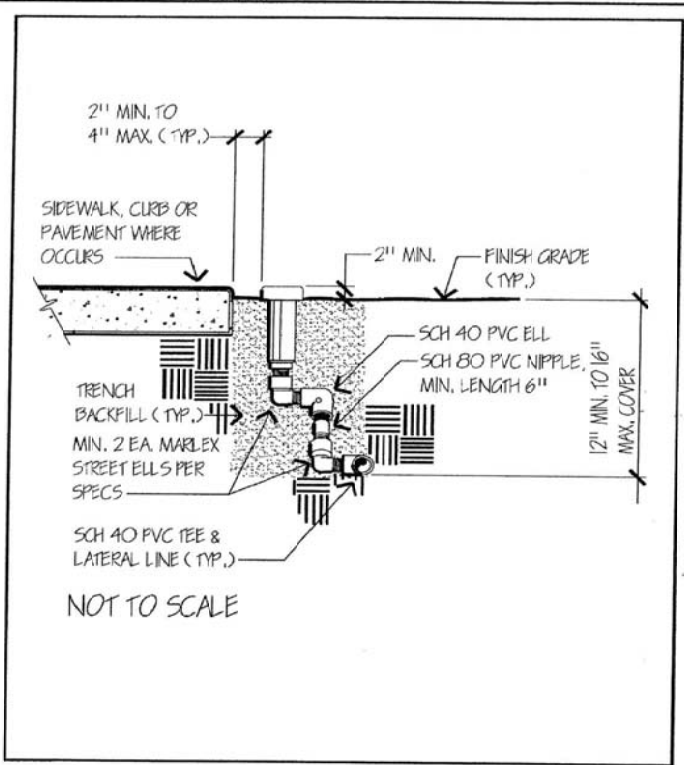
DESIGNED BY IJD DRAWN BY JIM CHECKED BY IJD

MARK REVISIONS APPR. DATE

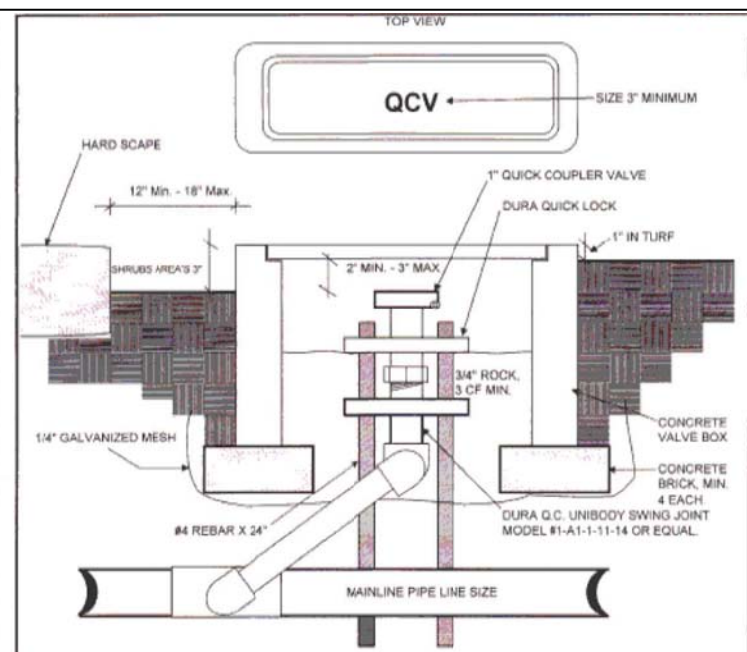
CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
IRRIGATION DETAILS
SCALE: AS SHOWN

ACCT. NO. R-4081L
SHEET 182 of 189
FILE NO.

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Approved P.V. 5/23/08	Date 5/23/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2013
Revised	Date	TYPICAL IRRIGATION SPRAY HEAD DETAIL	

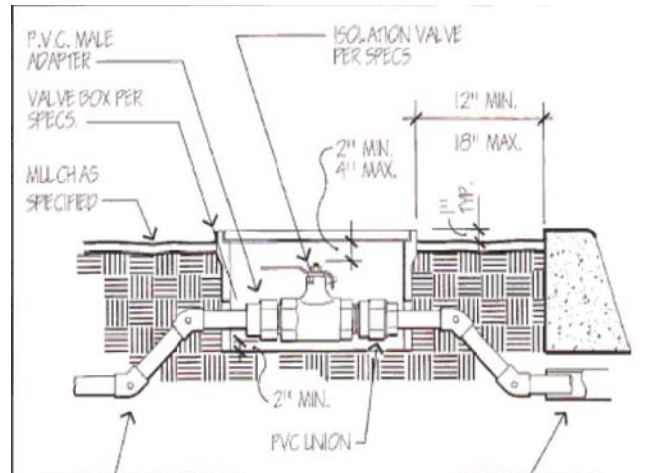


Construction Notes

- 1) The contractor shall ensure that the hexagons between the quick lock and the swing joint are aligned.
- 2) All boxes shall have a minimum 3' foot space between each other.

NOT TO SCALE

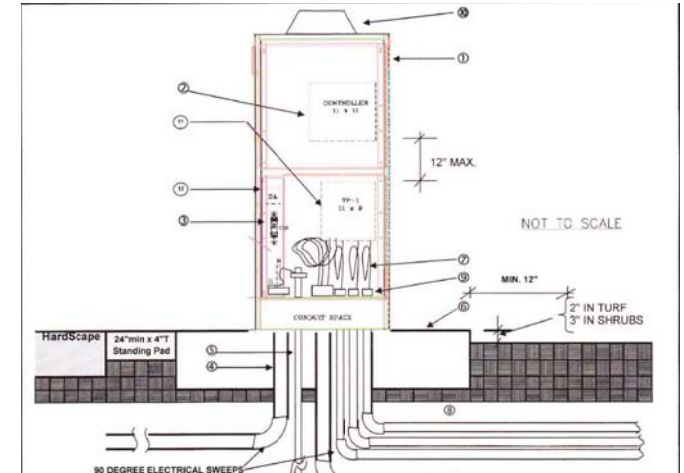
Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2014
Revised	Date	QUICK COUPLER IN VALVE BOX	



Construction Notes

- 1) Isolation valve must be Nibco T-113-K Gate Valve.
- 2) Where pipe depth must change, use 45 degree elbows.
- 3) A minimum of 2 CF. of 3/4" gravel rock shall be placed under valve in box.
- 4) Install valve box so that the box does not rest on any lateral or main lines.
- 5) Provide minimum 3' clear distance between valve and wire boxes.

Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2015
Revised	Date	ISOLATION VALVE IN BOX	

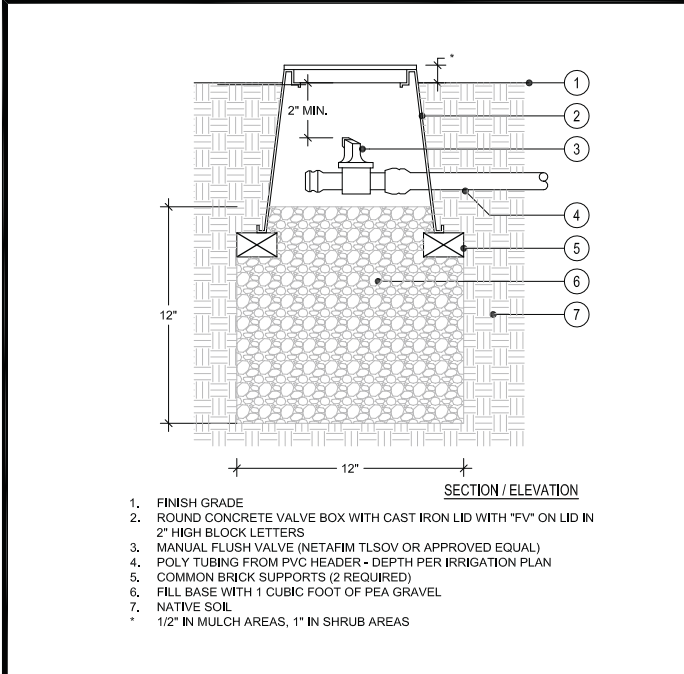


CONSTRUCTION NOTES:

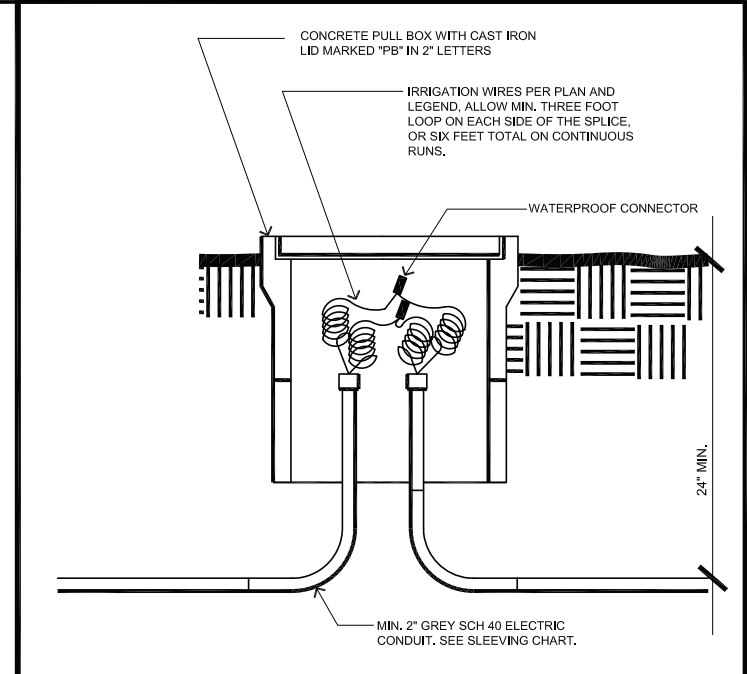
- 1) MYERS POWER PRODUCTS CAT. NO. MEU224-ENC-RIF 5.5 ENCLOSURE TO SUPPORT ALL MATERIALS REQUIRED BY ALL CITY AGENCIES OR EQUAL. ENCLOSURE SHALL BE MOUNTED ON A MYERS PADMOUNT BASE (PART NUMBER 519105) ENCASED CONCRETE.
- 2) CALIBRE CONTROLLER AS SPECIFIED ON THE LEGEND AND/OR SPECIFICATIONS. WEATHER PROOF AUTOMATIC CONTROLLER, WALL MOUNT TYPE, SECURELY MOUNTED TO THE ENCLOSURE.
- 3) SQUARE-D 15 AMP SINGLE BREAKER BOX WITH DUPLEX OUTLET. MAKE 120V. POWER AND GROUND CONNECTION AT BREAKER BOX THEN TO TP-110 SURGE PROTECTION DEVICE.
- 4) 3-#6 CU THW WIRES IN MIN. 2" SCH 40 PVC CONDUIT FROM CONTROLLER TO POWER SOURCE. BOND SERVICE TO BREAKER BOX.
- 5) #8 CU COPPER GROUND WIRE AND MIN. (1) 5/8" BY 8' LONG DRIVEN COPPER GROUNDING ROD WITHIN ENCLOSURE. DRIVE ROD PRIOR TO INSTALLATION OF ENCLOSURE.
- 6) CONCRETE PAD. EXTEND EDGE MIN. 8" FROM ENCLOSURE TO ALLOW UNOBSTRUCTED AREA FOR DOOR TO SWING FREE. MIN. 8" THICK. NO PLANTING WITHIN 15" FROM THE FOOTING ON ALL SIDES.
- 7) LOW VOLTAGE ELECTRICAL SWEEP TO EXTEND MIN. 12" FROM EDGE OF FOOTING. THREE FOOT EXPANSION LOOP ON ALL CONTROLLER WIRES. MAIN BUCKETS, ET-GAUGE, AND FLOW-SENSORS NEATLY LACED WITH ZIP-LOCKS. MAKE CONNECTION TO TP-1 BOARD.
- 8) THE ET-GAUGE, RAIN BUCKET, AND FLOW SENSOR CONTROL WIRES SHALL BE INSTALLED IN SCH 40 GRAY PVC CONDUIT, AS A CONTINUOUS RUN.
- 9) PROVIDE INSULATING ELECTRICAL BUSHINGS AT CONTROLLER END OF CONDUITS.
- 10) LR-DOME RR ANTENNA
- 11) TP-1 BOARD. THE DISTANCE BETWEEN THE CONTROLLER AND THE TP-1 BOARD SHALL NOT EXCEED 12".
- 12) TP-110 LINE SURGE PROTECTOR

(INSTALLATION SHALL BE CERTIFIED BY THE CONTROLLER MANUFACTURER IN WRITING)

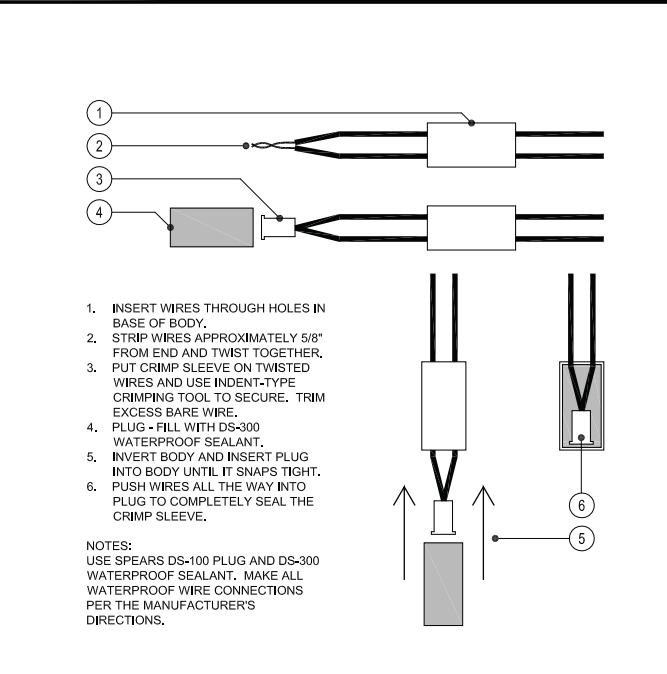
Approved P.V. 5/27/08	Date 5/27/08	Public Works Department, Forestry and Landscape Division CITY OF RIVERSIDE	Detail No. 2018
Revised	Date	IRRIGATION CONTROLLER (NON-METERED) DETAIL (CS)	



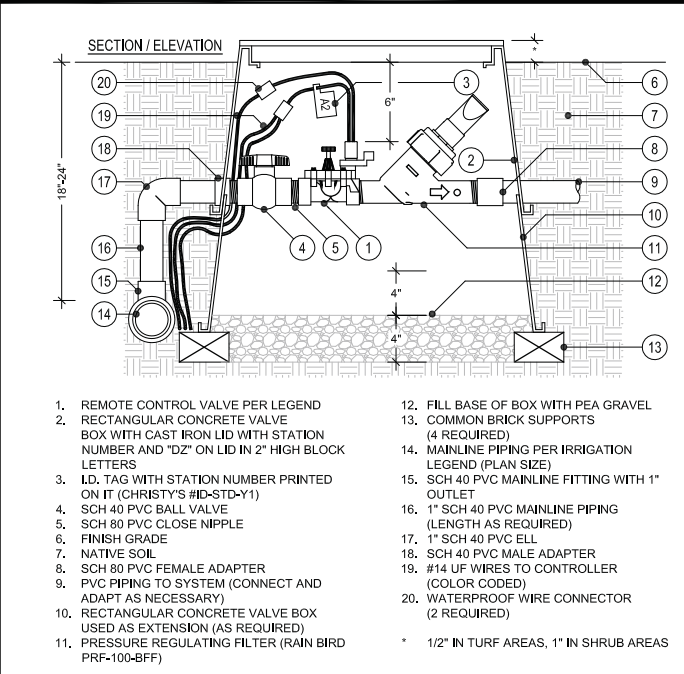
A FLUSH VALVE



B PULL BOX



C WIRE CONNECTOR



D CONTROL VALVE - DRIP ASSEMBLY

REFER TO ALL CITY OF RIVERSIDE DETAILS INCLUDED IN THESE DOCUMENTS BY THIS REFERENCE. REFER TO SPECIFICATIONS SECTION 02441 - IRRIGATION

DIGAURT

DIAL BEFORE YOU DIG

NO WORKING DAYS BEFORE YOU DIG

TOLL FREE 1-800-227-2600

A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

ID LANDSCAPE ARCHITECTURE

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501

951.683.1283 FAX 951.683.4352
E-MAIL: IDAVIDSON@IDLAINC.COM
REGISTRATION NO. 2651

DATE 9/14/09

REGISTERED LANDSCAPE ARCHITECT

IAN DAVIDSON

STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY IJD	DRAWN BY JIM	CHECKED BY IJD	

**CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT**

MAGNOLIA AVENUE UNDERPASS

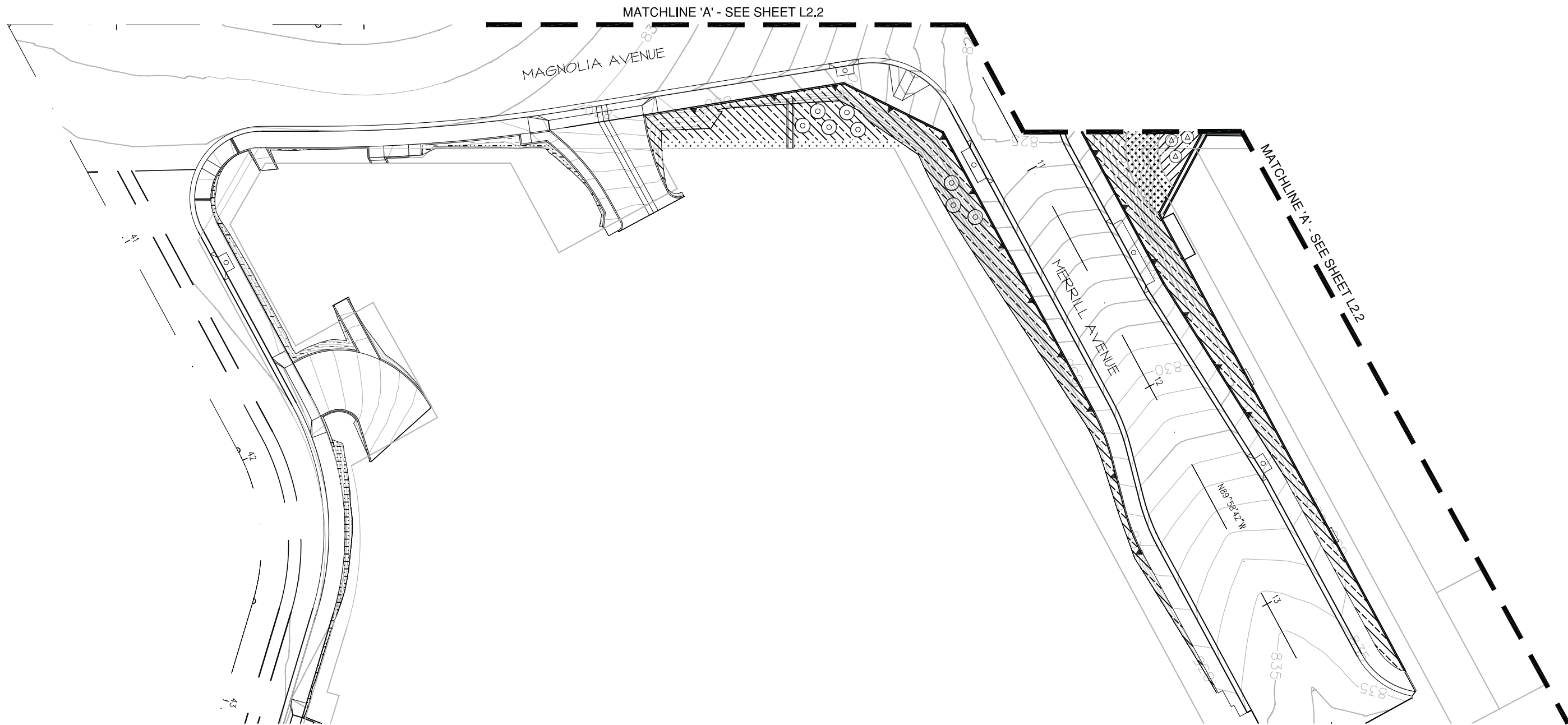
IRRIGATION DETAILS

SCALE: AS SHOWN

ACCT. NO. R-4081L
SHEET 183 of 189
FILE NO.

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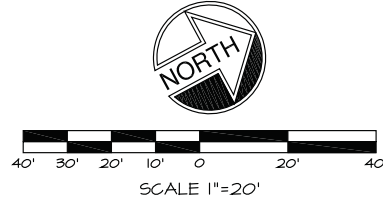
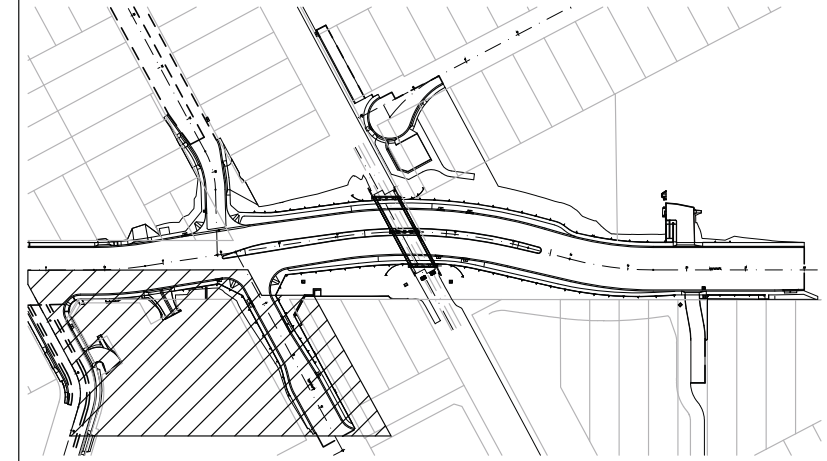


PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	QUANTITIES	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	QUANTITIES
TREES											
	CERCIS CANADENSIS 'FOREST FANSY'	EASTERN REDBUD	24" BOX	STANDARD DOUBLE STAKE	87		COTONEASTER DAMMERI 'LOWFAST'	BEARBERRY COTONEASTER	1 GAL @ 36" O.C.		25,251 SQ. FT.
	MAGNOLIA GRANDIFLORA 'MAJESTIC BEAUTY'	MAGNOLIA	36" BOX	STANDARD GUY	28		LANTANA MONTEVIDENSIS	LANTANA 'SUNSET SURPRISE'	1 GAL @ 24" O.C.		1,582 SQ. FT.
	QUERCUS ENGELMANNII	ENGELMANN OAK	24" BOX	STANDARD	11		ROSEMARINUS OFFICINALIS 'HUNTINGTON CARPET'	HUNTINGTON BLUE	FLATS @ 8" O.C.		26,232 SQ. FT.
	EXISTING TREE	PROTECT IN PLACE					TURF	MARATHON III	SOD		550 SQ. FT.
SHRUBS											
	LASERSTROEMIA INDICA	PETITE PLUM CRAPE MYRTLE	15 GAL		174		REPAIR & REPLACE EXISTING PLANT MATERIAL				2,571 SQ. FT.
	PHORMIUM TENAX 'PURPUREA'	NEW ZEALAND FLAX	5 GAL		84						
	MAHONIA AQUIFOLIUM 'COMPACTA'	OREGON GRAPE	1 GAL @ 24" O.C.		2,287 SQ. FT.						
	XYLOSMA CONGESTUM 'COMPACTA'	XYLOSMA	5 GAL @ 42" O.C.		13,728 SQ. FT.						

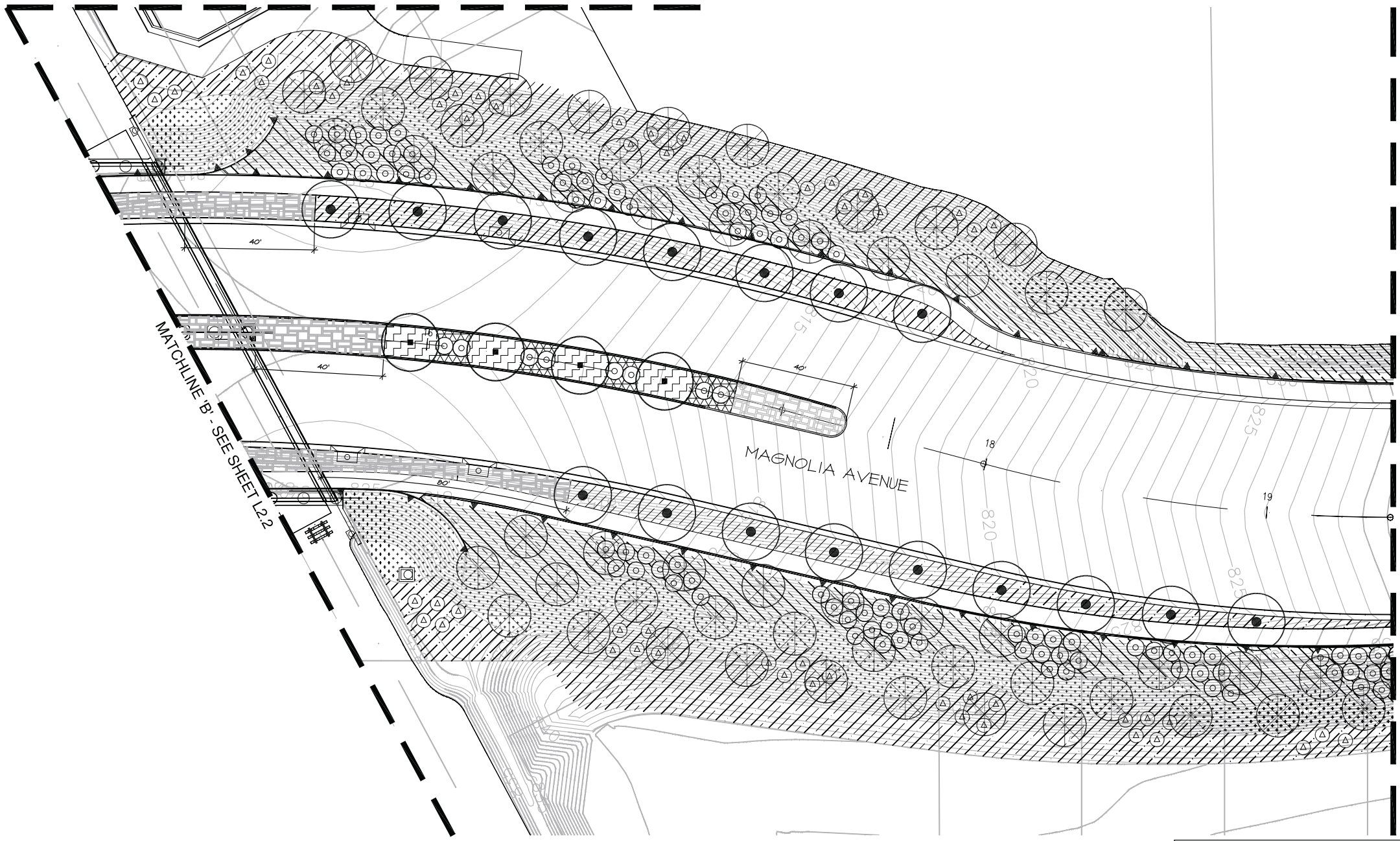
NOTE:
 1. ALL PLANTED AREAS SHALL RECEIVE: 3" THICK BARK MULCH IN SHRUB AREAS
 2" THICK BARK MULCH IN GROUNDCOVER AREAS
 2. ADD ROOT BARRIERS AS OUTLINED IN DETAIL E, SHEET L2.5
 3. REFER TO SPECIFICATIONS SECTION 02483 - PUBLIC LANDSCAPE PLANTING

KEY MAP: 1" = 150'



 DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2600 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT	 IAN DAVIDSON, LANDSCAPE ARCHITECTURE 3547 MARKET STREET RIVERSIDE, CA 92501 951.683.1283 . FAX 951.683.4352 E-MAIL: IDAVIDSON@IDLAINC.COM REGISTRATION NO. 2651		CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT		ACCT. NO. R-4081L
			MAGNOLIA AVENUE UNDERPASS		W.O. NO. L2.1
DESIGNED BY: IJD DRAWN BY: JIM CHECKED BY: IJD DATE: 9/14/09			PLANTING PLAN		SHEET 185 of 189
SCALE: AS SHOWN			FILE NO.		

MATCHLINE 'D' - SEE SHEET L2.4

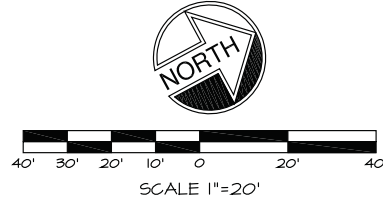
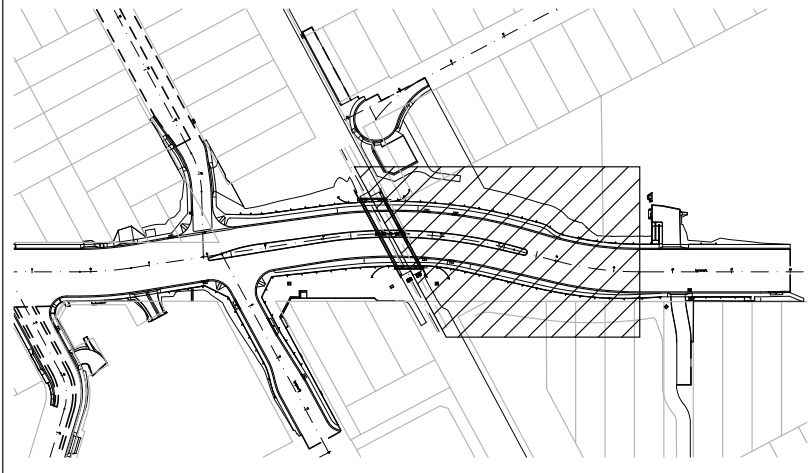


PLANTING LEGEND

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	QUERCUS ENGELMANNII	ENGELMANN OAK	24" BOX	STANDARD	11		EXISTING TREE	PROTECT IN PLACE			
SHRUBS											
	LAGERSTROEMIA INDICA	PETITE PLUM CRAPE MYRTLE	15 GAL		174		PHORMIUM TENAX 'PURPUREA'	NEW ZEALAND FLAX	5 GAL		84
	PHORMIUM TENAX 'PURPUREA'	NEW ZEALAND FLAX	5 GAL		84		MAHONIA AQUIFOLIUM 'COMPACTA'	OREGON GRAPE	1 GAL @ 24" O.C.		2,287 SQ. FT.
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	XYLOSMA CONGESTUM 'COMPACTA'	XYLOSMA	5 GAL @ 42" O.C.		13,128 SQ. FT.	GROUNDCOVERS					
	COTONEASTER DAMMERI 'LOWFAST'	BEARBERRY COTONEASTER	1 GAL @ 36" O.C.		25,251 SQ. FT.		LANTANA MONTEVIDENSIS	LANTANA 'SUNSET SURPRISE'	1 GAL @ 24" O.C.		1,582 SQ. FT.
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	TURF	MARATHON III	SOD		550 SQ. FT.		REPAIR & REPLACE EXISTING PLANT MATERIAL				2,571 SQ. FT.

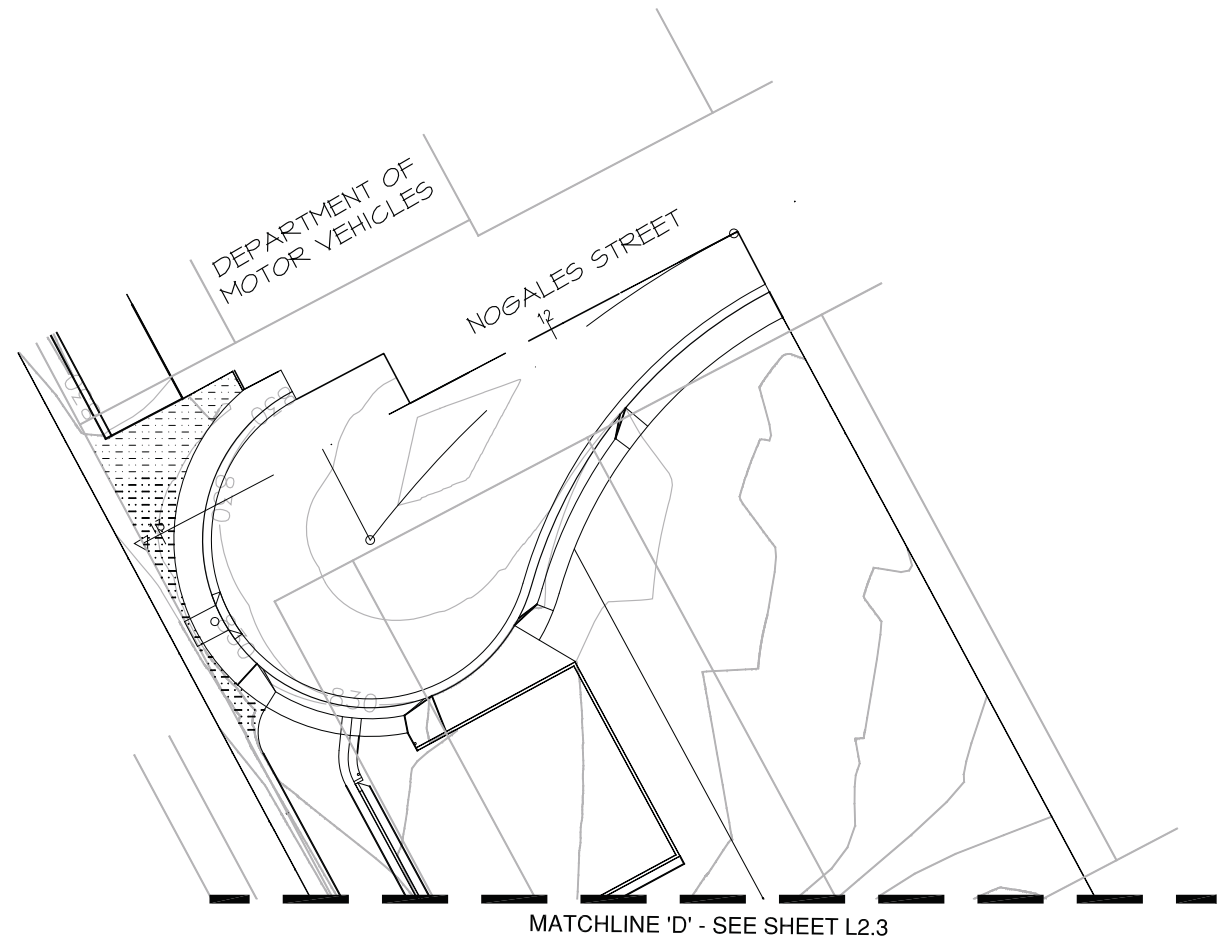
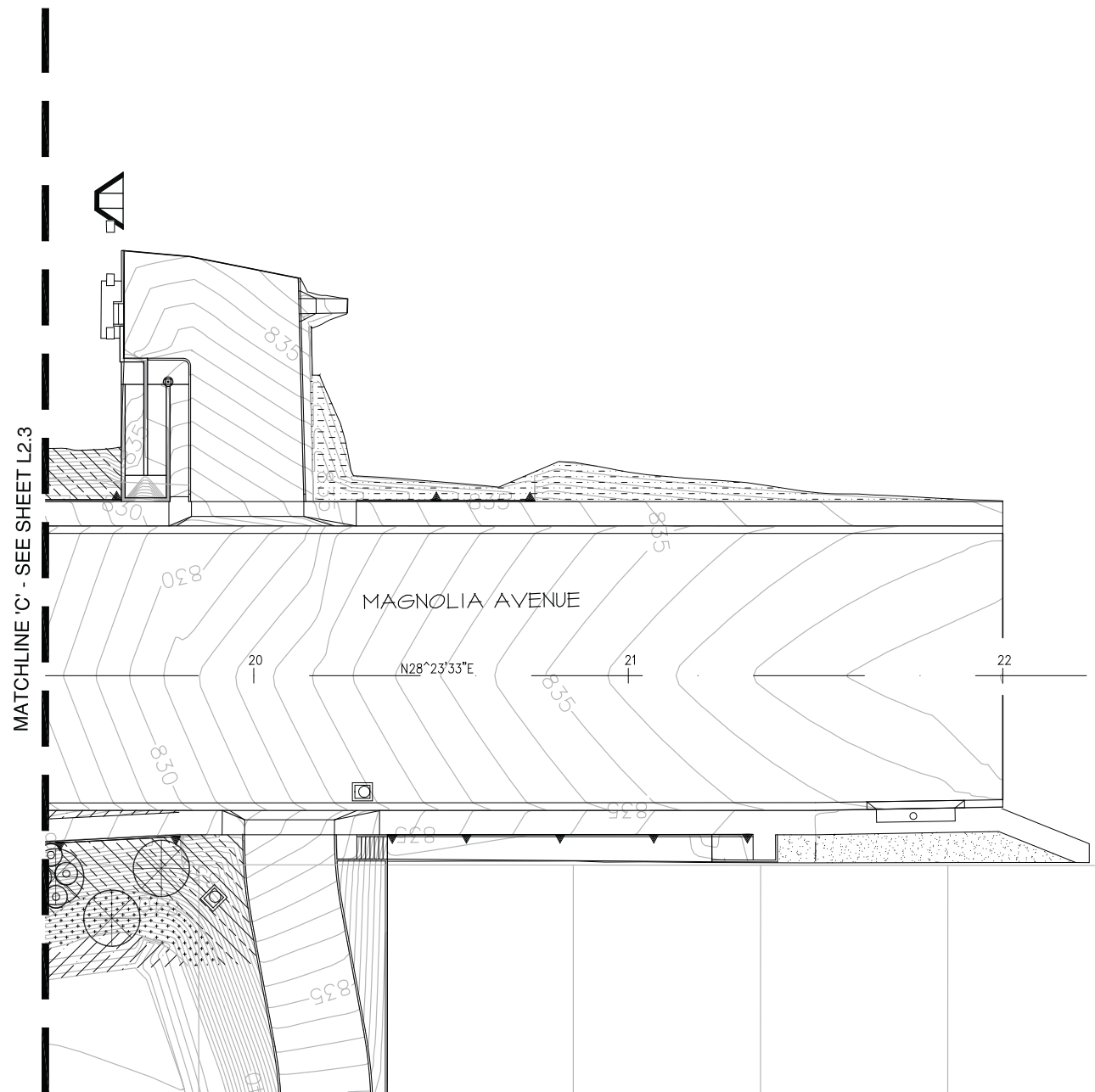
NOTE:
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 2. ADD ROOT BARRIERS AS OUTLINED IN DETAIL E, SHEET L2.5
 3. REFER TO SPECIFICATIONS SECTION 02483 - PUBLIC LANDSCAPE PLANTING

KEY MAP: 1" = 150'



 DIAL BEFORE YOU DIG TOLL FREE 1-800-227-2600 A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT	 IAN DAVIDSON, LANDSCAPE ARCHITECTURE 3547 MARKET STREET RIVERSIDE, CA 92501 951.683.1283 . FAX 951.683.4352 E-MAIL: IDAVIDSON@DLAINC.COM REGISTRATION NO. 2651	 REGISTERED LANDSCAPE ARCHITECT IAN DAVIDSON STATE OF CALIFORNIA	CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT MAGNOLIA AVENUE UNDERPASS PLANTING PLAN	ACCT. NO. R-4081L SHEET 187 of 189
			DESIGNED BY: IJD DRAWN BY: JIM CHECKED BY: IJD	REVISIONS APPR. DATE

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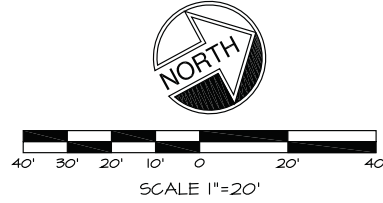
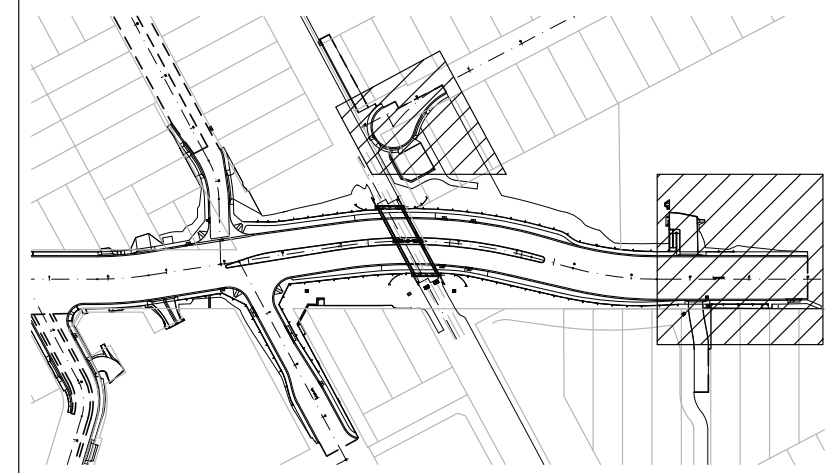


PLANTING LEGEND

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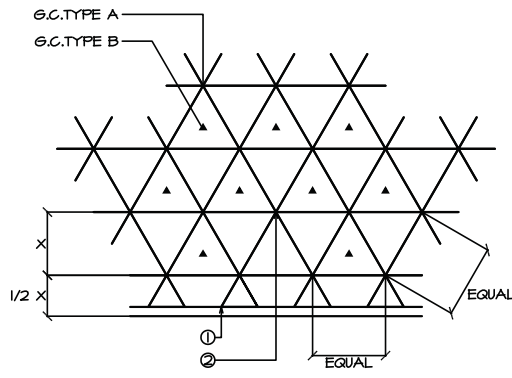
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			DESIGNED BY	IJD	DRAWN BY	JJM		

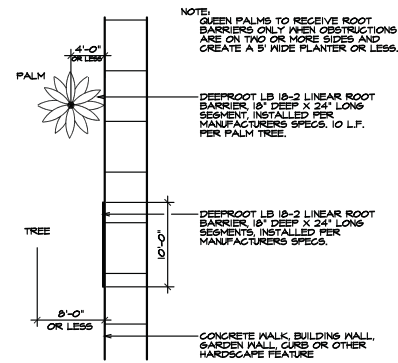
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LEGEND
 1. BACK OF CURB OR EDGE OF PAVING
 2. PLANT LOCATION

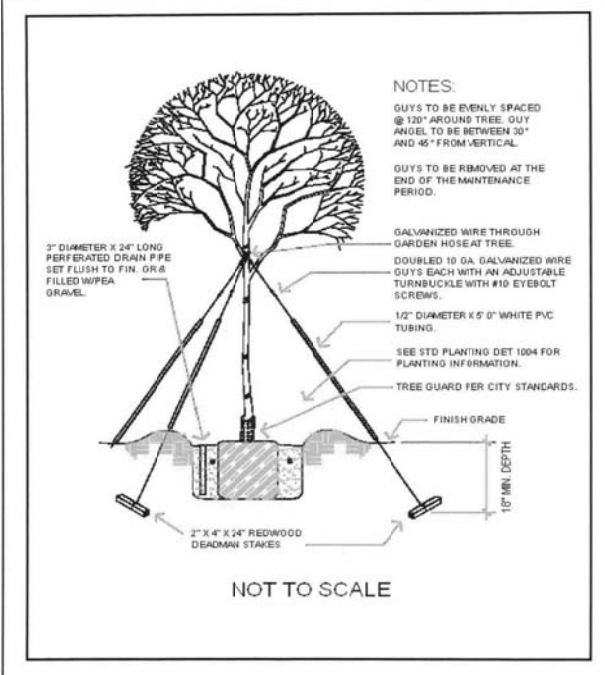
NOTES: ALL SHRUBS/GROUND COVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS. SEE LEGEND FOR SPACING REQUIREMENTS.

H SHRUBS & G.C. SPACING NTS.



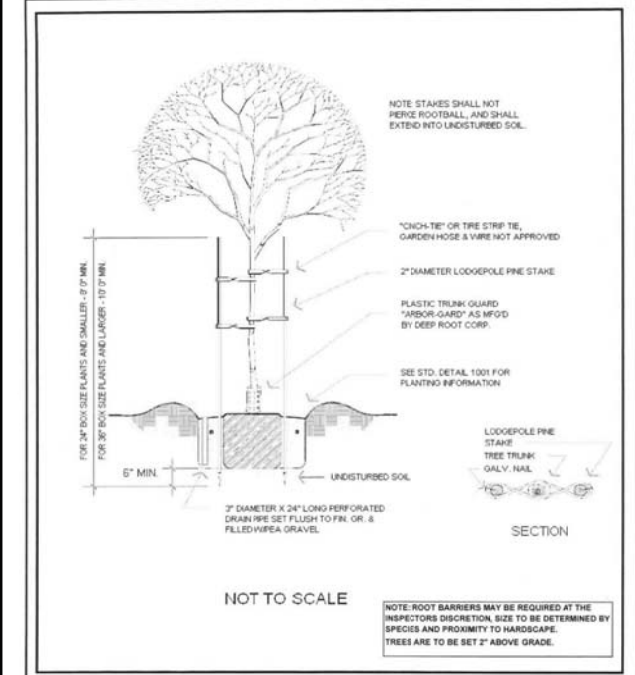
NOTE: QUEEN PALMS TO RECEIVE ROOT BARRIERS ONLY WHEN OBSTRUCTIONS ARE ON TWO OR MORE SIDES AND CREATE A 3' WIDE PLANTER OR LESS.

E ROOT BARRIER NTS.



NOTES:
 GUY'S TO BE EVENLY SPACED @ 120° AROUND TREE. GUY ANGLE TO BE BETWEEN 30° AND 45° FROM VERTICAL.
 GUY'S TO BE REMOVED AT THE END OF THE MAINTENANCE PERIOD.
 GALVANIZED WIRE THROUGH GARDEN HOSE AT TREE.
 DOUBLED 10 GA. GALVANIZED WIRE GUY'S EACH WITH AN ADJUSTABLE TURNBUCKLE WITH #10 EYEBOLT SCREWS.
 1/2" DIAMETER X 5' 0" WHITE PVC TUBING.
 SEE STD. PLANTING DET 1004 FOR PLANTING INFORMATION.
 TREE GUARD PER CITY STANDARDS.

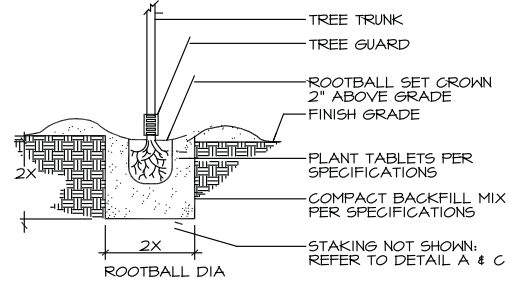
Approved: P.V. 5/12/09
 Revised: Date
 Public Works Department, Forestry and Landscape Division
 CITY OF RIVERSIDE
 TREE GUYING DETAIL
 Detail No. 1003



Approved: P.V. 5/12/09
 Revised: Date
 Public Works Department, Forestry and Landscape Division
 CITY OF RIVERSIDE
 TREE PLANTING DETAIL
 Detail No. 1001

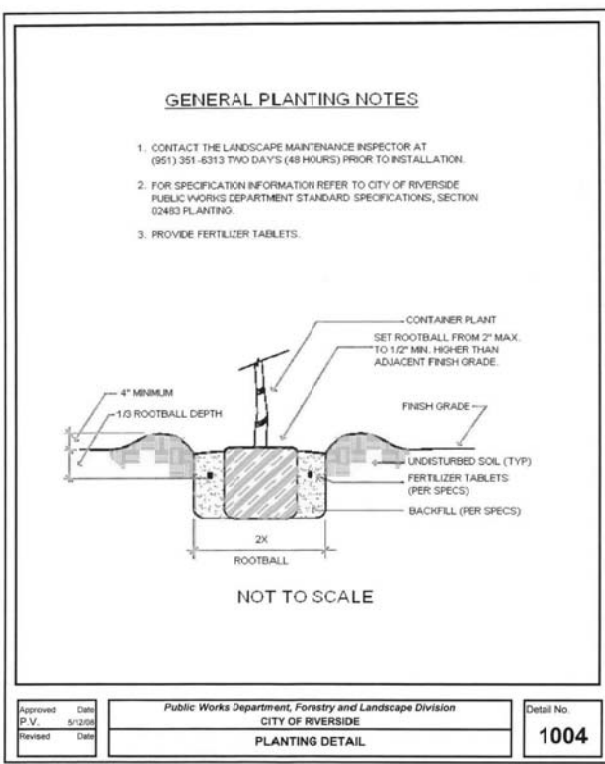
C TREE GUYING NTS.

A DOUBLE STAKE NTS.



TREE GUARD TO BE INSTALLED FOR ALL TREES LOCATED IN TURF AREAS.

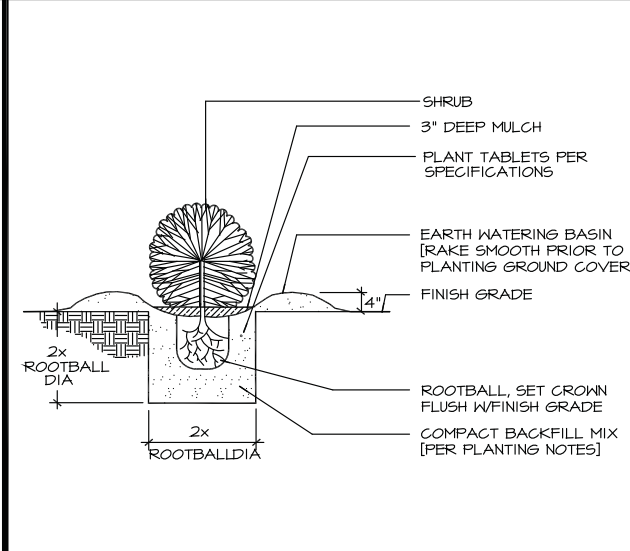
F TREE GUARD NTS.



GENERAL PLANTING NOTES

- CONTACT THE LANDSCAPE MAINTENANCE INSPECTOR AT (951) 351-6313 TWO DAYS (48 HOURS) PRIOR TO INSTALLATION.
- FOR SPECIFICATION INFORMATION REFER TO CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS, SECTION 02483 PLANTING.
- PROVIDE FERTILIZER TABLETS.

Approved: P.V. 5/12/09
 Revised: Date
 Public Works Department, Forestry and Landscape Division
 CITY OF RIVERSIDE
 PLANTING DETAIL
 Detail No. 1004



G SHRUB PLANTING NTS.

D PLANTING DETAIL NTS.

B NOT USED NTS.

REFER TO SPECIFICATIONS SECTION 02483 - PUBLIC LANDSCAPE PLANTING

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 DIAL BEFORE YOU DIG
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 IAN DAVIDSON, LANDSCAPE ARCHITECTURE
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 E-MAIL: IDAVIDSON@DLAINC.COM
 REGISTRATION NO. 2651
 DATE 9/14/09

REGISTERED LANDSCAPE ARCHITECT
 IAN DAVIDSON
 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
DESIGNED BY	IJD	DRAWN BY	JJM
CHECKED BY	IJD	SCALE:	AS SHOWN

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT
MAGNOLIA AVENUE UNDERPASS
PLANTING DETAILS

ACCT. NO. R-4081L
 I2.5
 SHEET 189 of 189