RIVERSIDE CALIFORNIA

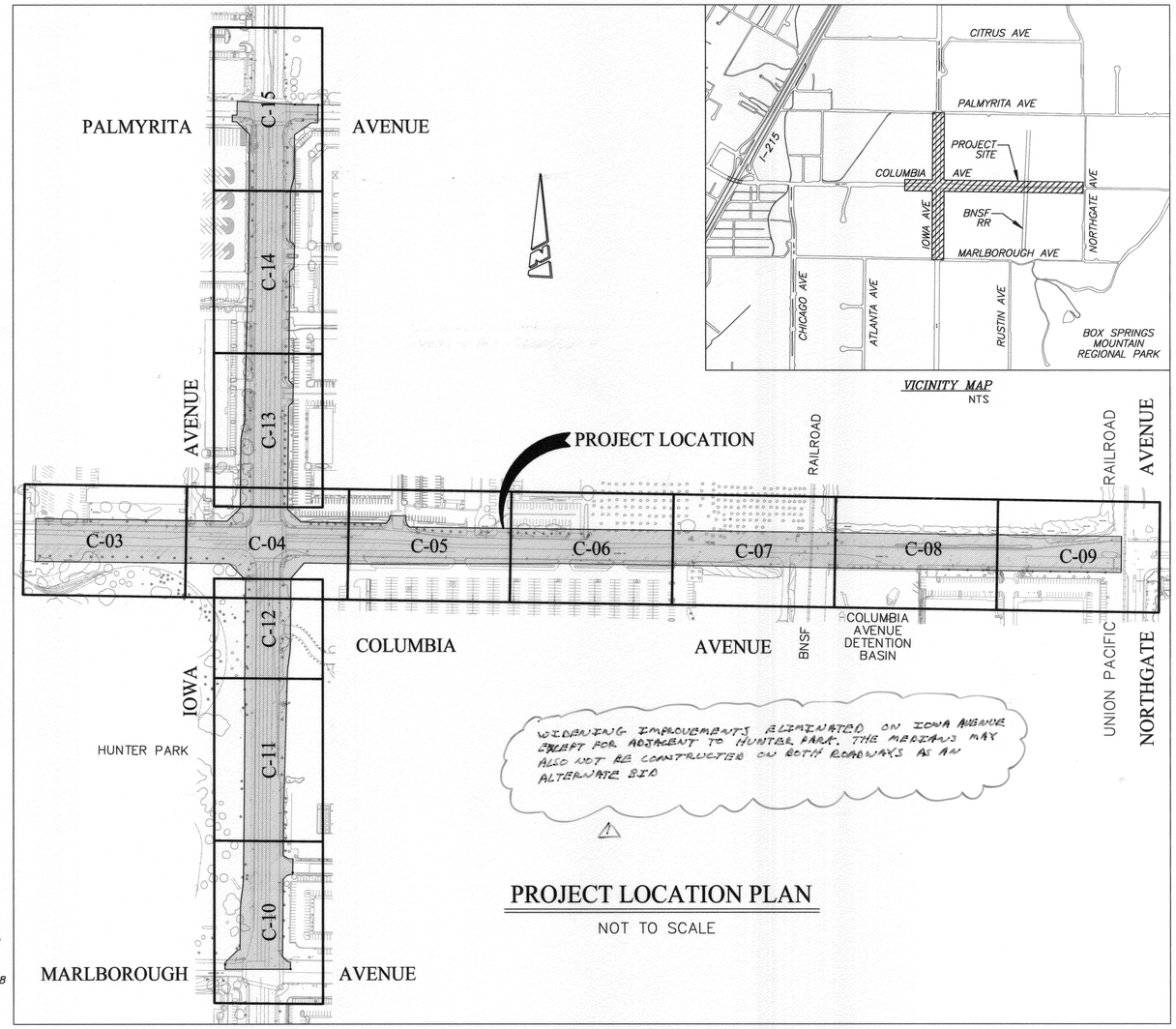
PUBLIC WORKS DEPARTMENT

COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT

CONSTRUCTION NOTES

- NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.
- RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.
- ADJ MH — ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE.
- ADJ GV — ADJUST WATER GATE VALVE AND COVER TO GRADE.
- E1 — PUBLIC UTILITIES DEPARTMENT (PUD), ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- E2 — PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
- E3 — PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- E4 — PUD, ELECTRIC DIV. TO REMOVE POWER POLE OR GUY POLE
- W1 — PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
- REL W2 — RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
- ADJ BO — PUD, WATER DIV. TO ADJUST 10" BLOW OFF MANHOLE COVER AND GATE VALVE TO GRADE
- T1 — ADJUST TELEPHONE MANHOLE TO GRADE (BY TELEPHONE COMPANY)
- T2 — RELOCATE TELEPHONE VAULT/BOX (BY TELEPHONE COMPANY)
- G1 — ADJUST GAS MANHOLE TO GRADE (BY GAS COMPANY)
- G2 — RELOCATE GAS VAULT (BY GAS COMPANY)
- C S1 — CONSTRUCT AC PAVEMENT ~~(0.55' AC OVER 1.35' AB)~~ 0.14'ARHM/0.43 DGAC/1.35 CAB
- C S2 — CONSTRUCT AC PAVEMENT ~~(0.55' AC OVER 0.90' AB)~~ 0.14'ARHM/0.45 DGAC/0.90 CAB
- C S3 — CONSTRUCT AC PAVEMENT ~~(0.70' AC OVER 1.05' AB)~~ 0.14'ARHM/0.60 DGAC/1.05 CAB
- C S4 — CONSTRUCT AC PAVEMENT ~~(0.60' AC OVER 1.45' AB)~~ 0.14'ARHM/0.50 DGAC/1.45 CAB
- C S6 — CONSTRUCT AC PAVEMENT ~~(0.60' AC OVER 0.70' AB)~~ 0.14'ARHM/0.50 DGAC/0.70 CAB
- C S7 — CONSTRUCT AC PAVEMENT ~~(0.80' AC OVER 1.40' AB)~~ 0.14'ARHM/0.70 DGAC/1.40 CAB
- PIP — PROTECT IN PLACE (DESCRIPTION PER PLAN)

1. CONSTRUCT 2" AC OVERLAY
2. CONSTRUCT 1.20' FULL DEPTH AC ON COMPACTED SUBGRADE
3. INSTALL 18" RCP (D-LOAD PER PLAN)
4. INSTALL 24" RCP (D-LOAD PER PLAN)
5. INSTALL 30" RCP (D-LOAD PER PLAN)
6. INSTALL 33" RCP (D-LOAD PER PLAN)
7. INSTALL 36" RCP (D-LOAD PER PLAN)
8. INSTALL 39" RCP (D-LOAD PER PLAN)
9. CONSTRUCT PARKWAY DRAIN PER APWA STANDARD PLAN NO. 151-1
10. CONSTRUCT 1.35' FULL DEPTH AC ON COMPACTED SUBGRADE
11. CONSTRUCT TRANSITION STRUCTURE PER APWA STANDARD PLAN 340-1
12. CONSTRUCT JUNCTION STRUCTURE PER APWA STANDARD PLAN 334-1 CASE 3
13. CONSTRUCT RETAINING WALL PER CITY OF RIVERSIDE STANDARD PLAN NO. 708
14. COLD PLANE 2"
15. MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"
16. CONSTRUCT VARIABLE THICKNESS AC OVERLAY (2" MIN)



PROJECT LOCATION PLAN

NOT TO SCALE

VICINITY MAP
NTS

LEGEND

EXISTING UTILITIES:

- SANITARY SEWER — S —
- WATER LINE — W —
- STORM DRAIN — SD —
- GAS LINE — G —
- OVERHEAD ELECTRIC LINE — OH —
- UNDERGROUND ELECTRIC LINE — UG —

PROPOSED UTILITIES:

- SANITARY SEWER — S —
- WATER LINE — W —
- STORM DRAIN — SD —

GENERAL CONSTRUCTION NOTES

1. UTILITY LINES SHOWN ARE BASED UPON A SEARCH OF AVAILABLE RECORDS. THERE IS NO ASSURANCE THAT THE LOCATION OF SUBSTRUCTURES SHOWN ARE ACCURATE. PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIGALERT) TO MARK THE LOCATION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF FIELD MARKING. THE CONTRACTOR SHALL USE PRECAUTION WHEN EXCAVATING. SUBSTRUCTURES ENCOUNTERED SHALL BE EXPOSED AND THE ENGINEER NOTIFIED OF THEIR EXISTENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT, ON THESE DRAWINGS. THE CONTRACTOR SHALL REPAIR, AT HIS/HER EXPENSE, ANY SUBSTRUCTURES DAMAGE CAUSED BY HIS/HER OPERATIONS.
2. 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.
3. PRIME CONTRACTORS BIDDING THIS WORK SHALL HAVE A CLASS "A" LICENSE.
4. PRIOR TO ISSUANCE OF GRADE SHEETS FOR ANY PROPOSED SEWER OR STORM DRAIN FACILITIES THE 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 THE CONTRACTOR'S SURVEYORS.

REMOVAL NOTES:

1. SAWCUT LINE
2. REMOVE INLET DRAIN
3. REMOVE TREE
4. REMOVE STREET LIGHT
5. RELOCATE TREE
6. REMOVE WOODEN POST
7. REMOVE METAL POST
8. RELOCATE MAILBOX
9. REMOVE SIGN
10. RELOCATE OR RECONSTRUCT SIGN
11. RELOCATE BUS BENCH
12. REMOVE DELINEATOR
13. RELOCATE ANTENNA AND COVER
14. RELOCATE IRRIGATION BOX
15. RELOCATE STREET LIGHT PULL BOX
16. RECONSTRUCT HEADWALL
17. RELOCATE TRAFFIC SIGNAL PULLBOX
18. REMOVE NEWS STAND
19. REMOVE MANHOLE SHAFT

JD
AS-BUILT 6-12-14

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "JB-43" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM

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1131 West Sixth Street, Suite 350
Ontario, CA 91762
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REGISTERED PROFESSIONAL ENGINEER — CHRIS H. BRETHAUER — No. C41824 — Exp. 3-31-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REVISED PAVEMENT SECTION		8/6/10
3	PROJECT SCOPE REVISED		11/4/10

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		5/5/10
PRINCIPAL ENGINEER		5/5/10
STREET SERVICES		
SURVEYOR		5/5/10
TRAFFIC DIVISION		5/5/10
PARKS DEPARTMENT		5/5/10

APPROVED BY _____ CITY ENGINEER
DATE 9/1/10

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
COVER SHEET

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132

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INDEXED 6-12-14 JD

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BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE".

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

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MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

INDEX OF DRAWINGS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
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LEGEND:

- UTILITY/POWER POLE
- (S) SEWER MANHOLE
- (D) STORM DRAIN MANHOLE
- (T) TELEPHONE MANHOLE
- (MH) UNKNOWN MANHOLE
- FIRE HYDRANT
- FLOOD LIGHT
- HOSE BIB
- (C) SEWER CLEANOUT
- WATER VALVE
- GAS VALVE
- WATER METER
- GAS METER
- [W] WATER VAULT
- [G] GAS VAULT
- [T] TELEPHONE VAULT
- [E] ELECTRIC VAULT
- MONITORING WELL
- STREET LIGHT
- TRAFFIC SIGNAL
- GUY WIRE
- (R) RAILROAD SIGNAL
- CAR STOP
- SIGNAL PULLBOX
- CABLE TV PULLBOX
- TELEPHONE PULLBOX
- COMMUNICATIONS PULLBOX
- UNKNOWN PULLBOX
- FIRE DEPT CONNECTION
- CHAIN LINK FENCE
- WROUGHT IRON FENCE
- WOOD FENCE
- BLOCK WALL
- TREE
- PALM
- PINE
- BUSH
- [TR] ELECTRICAL TRANSFORMER
- PHONE BOOTH
- (12.56) EXISTING ELEVATION
- ℄ CENTERLINE
- SLOPE
- LANDSCAPING
- CONCRETE
- (I) IRRIGATION VALVE
- GP GUARD POST
- CENTERLINE
- PROPERTY LINE
- FLOW LINE
- UTILITY MARKER
- GRATE
- HANDICAP
- FLAG POLE
- (F) FIRE SPRINKLER RISER
- SURVEY MONUMENT
- EXISTING SIGN POST
- PROPOSED SIGN
- EXISTING STREET NAME SIGN
- SNS STREET NAME SIGN
- (12') EXISTING WIDTH
- 12' PROPOSED WIDTH

ABBREVIATIONS:

&	AND
△ ∠	ANGLE POINT
@	AT
°	DEGREE(S)
ϕ	DIAMETER
'	FOOT or FEET or MINUTE(S)
"	INCH or INCHES or SECOND(S)
%	PERCENT
#	POUND or NUMBER
AB	AGGREGATE BASE
ABT	ABOUT
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ADD'L	ADDITIONAL
ALT	ALTERNATE
APPROX	APPROXIMATELY
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AS	AGGREGATE SUBBASE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
BC	BEGIN CURVE
BK	BACK
BNSF	BURLINGTON NORTHERN & SANTA FE
BVC	BEGIN VERTICAL CURVE
BW	BACK OF WALK (SIDEWALK)
CAL	CALIFORNIA
CALTRANS	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
CB	CATCH BASIN
C-C	CENTER-TO-CENTER
CF	CURB FACE
CIP	CAST IRON PIPE
CIDH	CAST-IN-DRILLED-HOLE
CIPCP	CAST-IN-PLACE-CONCRETE-PIPE
CL OR ℄	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CORR	CORRUGATED
CONST	CONSTRUCTION
CONST JT	CONSTRUCTION JOINT
CP	CONTROL POINT
CPUC or PUC	CALIFORNIA PUBLIC UTILITIES COMMISSION
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CTR(s)	CENTER(S)
C&G	CURB AND GUTTER
D	DELTA
DESC	DESCRIPTION
DGAC	DENSE GRADE ASPHALT CONCRETE
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DWG	DRAWING
E	EAST or EASTERLY or EASTING
EC	END CURVE
ELEC	ELECTRIC OR ELECTRICAL
EL or ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EPDM	ETHYLENE-PROPYLENE-DIENE-MONOMERS
EQ	EQUAL
EVC	END VERTICAL CURVE
EX or EXIST	EXISTING
FF	FAR FACE
FL	FLOWLINE
FT	FOOT or FEET
FTG	FOOTING
G	GRADE
GC	GRADE CHANGE
GB	GRADE BREAK
ga	GAGE
GALV	GALVANIZED
GV	GAS VALVE
HORIZ, HOR	HORIZONTAL
HMA	HOT-MIX ASPHALT
HT	HEIGHT
ID	INSIDE DIAMETER
IN	INCH or INCHES
INV	INVERT
JS	JUNCTION STRUCTURE
L	LENGTH
LAT	LATERAL
LB	POUND
LF	LINEAR FEET
LH	LEFT HAND
LOL	LAYOUT LINE
LT	LEFT
MAINT	MAINTENANCE
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
M/L	MAINLINE
MPH	MILES PER HOUR
N	NORTH or NORTHERLY or NORTHING
NF	NEAR FACE
NO	NUMBER or NORTHERN
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OG	ORIGINAL GROUND
PB	PULLBOX
PCC	PORTLAND CEMENT CONCRETE
PC	POINT OF CURVATURE
PG	PROFILE GRADE
PL	PLACE
P	PLATE
PL	PROPERTY OF LINE
POB	POINT OF BEGINNING
POC	POINT OF CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
POVC	POINT OF VERTICAL CUVBE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLY VINYL CHLORIDE or POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
RCB OR RC BOX	REINFORCED CONCRETE BOX
R.C.F.C & W.C.D	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCEMENT
RH	RIGHT HAND
RR	RAILROAD
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH or SOUTHERLY
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SHT	SHEET
SO	SOUTHERN
SPPWC	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
SQ	SQUARE
SSMH	SANITARY SEWER MANHOLE
ST	STREET
STA	STATION
STD	STANDARD
STR	STREET
SWK	SIDEWALK
SYMM	SYMMETRICAL
T	TANGENT
TANSAT	TOW-AWAY NO STOPPING ANY TIME
TC	TOP OF CURB
TELE	TELEPHONE
TG	TOP OF GRATE
TW	TOP OF WALL
TS	TRAFFIC SIGNAL
TYP	TYPICAL
UD	UNDERDRAIN
UP	UNDERPASS
VAR	VARIES or VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WEST or WESTERLY
W/	WITH
WM	WATER METER
WV	WATER VALVE
x	BY
XING	CROSSING

PIV POST INDICATOR VALVE
FDC FIRE DEPARTMENT CONNECTION
BFP BACKFLOW PREVENTOR

1

SURVEY CONTROLS:

BASIS OF BEARINGS
NORTH 00°32'47" EAST ALONG THE CENTERLINE OF IOWA AVENUE BETWEEN MARLBOROUGH AVENUE AND COLUMBIA AVENUE AS DERIVED FROM CITY OF RIVERSIDE CONTROL POINTS 109 AND 5178

BENCH MARK		
CITY OF RIVERSIDE BENCH MARK J8-A3 DESCRIBED AS FOLLOWS:		
"BRASS DISK STAMPED "J8-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION		
OF IOWA AVENUE AND MARLBOROUGH AVENUE"		
ELEVATION 929.11	DATUM 1929	ADJUSTMENT YEAR 1971

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Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	ADDED ABBREVIATIONS	CC	12/15/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
LEGEND, ABBREVIATIONS & SURVEY CONTROLS

DESIGN-WO.-NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
K-02

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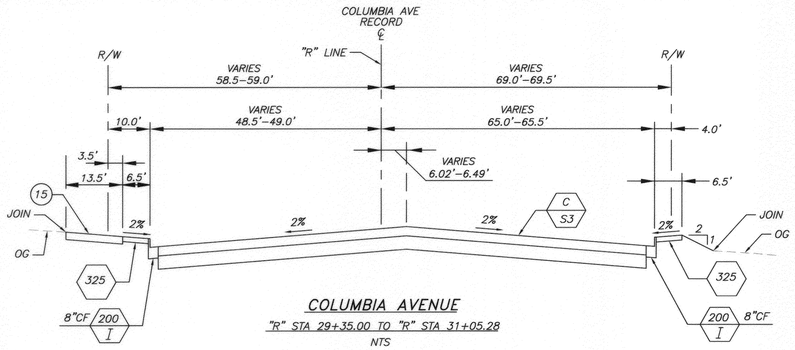
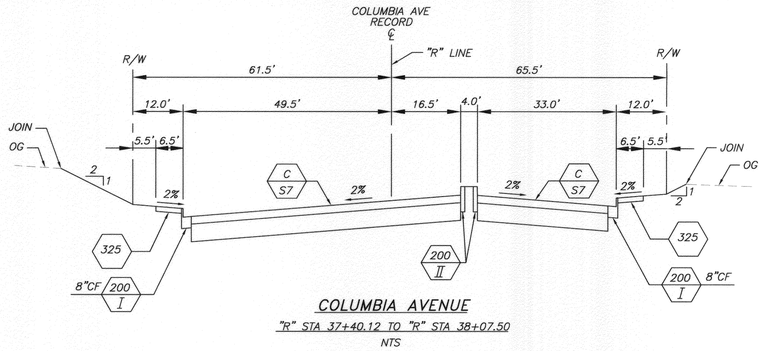


COLUMBIA AVENUE

"R" STA 29+35.00 TO "R" STA 31+05.28

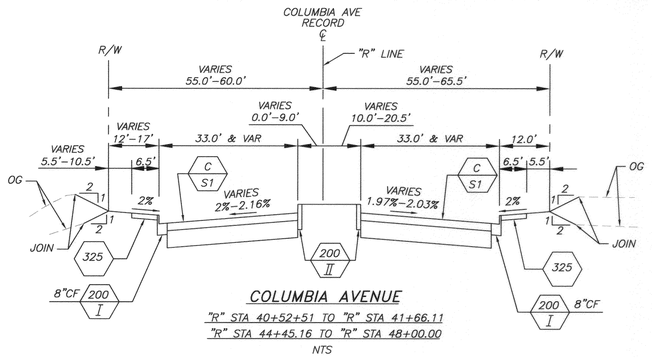
NTS



COLUMBIA AVENUE

"R" STA 37+40.12 TO "R" STA 38+07.50

NTS

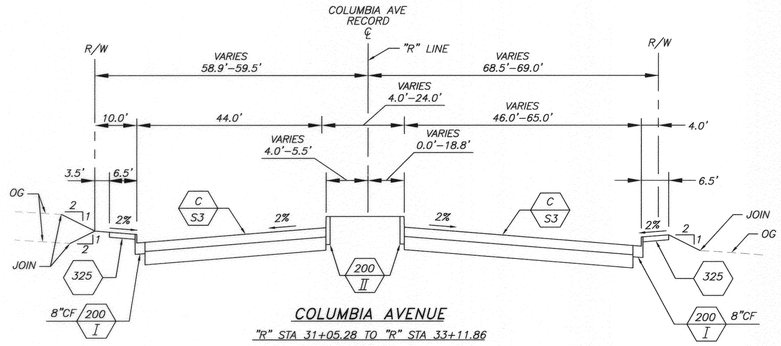


COLUMBIA AVENUE

"R" STA 40+52+51 TO "R" STA 41+66.11

"R" STA 44+45.16 TO "R" STA 48+00.00

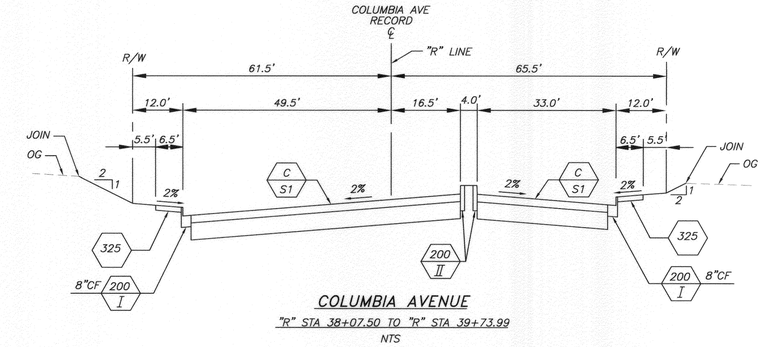
NTS



COLUMBIA AVENUE

"R" STA 31+05.28 TO "R" STA 33+11.86

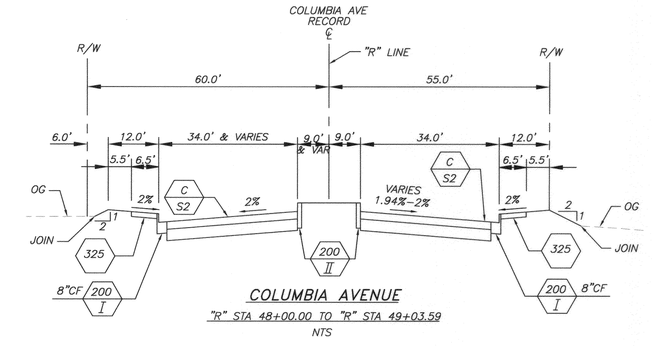
NTS



COLUMBIA AVENUE

"R" STA 38+07.50 TO "R" STA 39+73.99

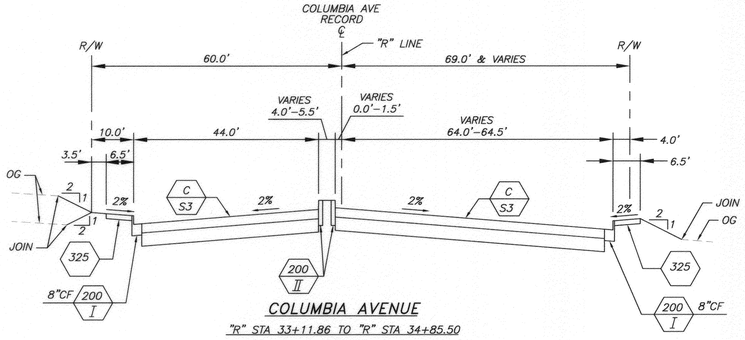
NTS



COLUMBIA AVENUE

"R" STA 48+00.00 TO "R" STA 49+03.59

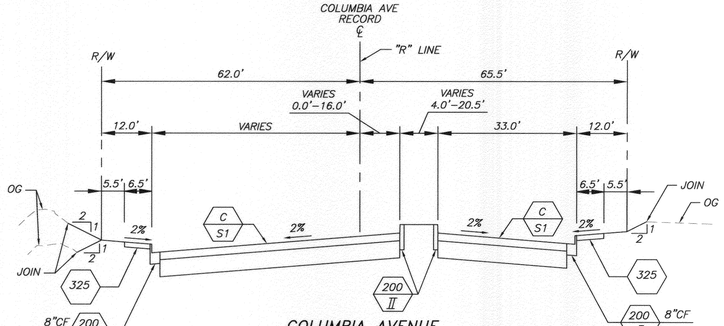
NTS



COLUMBIA AVENUE

"R" STA 33+11.86 TO "R" STA 34+85.50

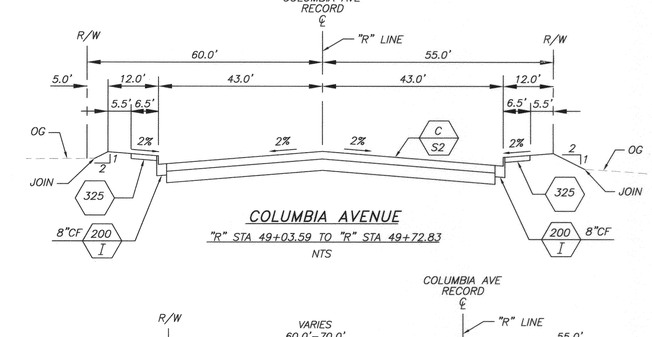
NTS



COLUMBIA AVENUE

"R" STA 39+73.99 TO "R" STA 40+52.51

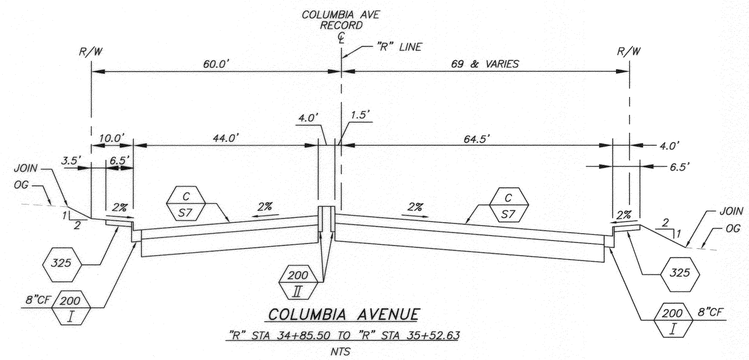
NTS



COLUMBIA AVENUE

"R" STA 49+03.59 TO "R" STA 49+72.83

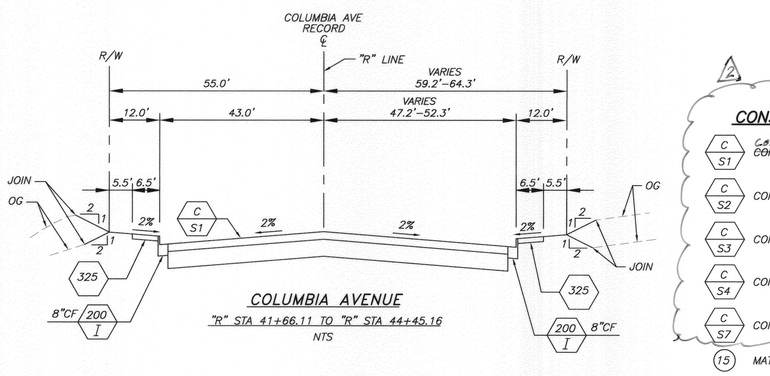
NTS



COLUMBIA AVENUE

"R" STA 34+85.50 TO "R" STA 35+52.63

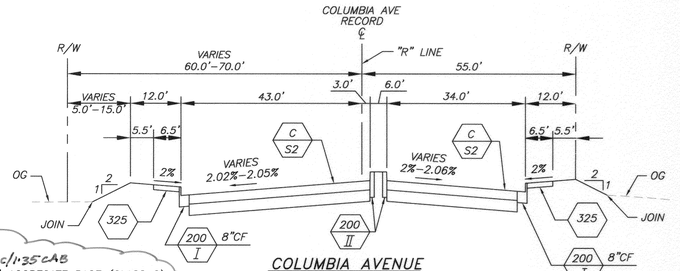
NTS



COLUMBIA AVENUE

"R" STA 41+66.11 TO "R" STA 44+45.16

NTS



COLUMBIA AVENUE

"R" STA 49+72.83 TO "R" STA 50+71.83

NTS

WIDENING IMPROVEMENTS ELIMINATED ON IOWA AVE EXCEPT FOR ABUTMENT TO HUNTER PARK. THE MEDIANS MAY ALSO NOT BE CONSTRUCTED ON BOTH ROADWAYS AS AN ALTERNATE BID. CROSS-SECTIONS TO BE ADJUSTED AS NECESSARY

CONSTRUCTION NOTES:

C S1	~~CONSTRUCT 0.1ARHM/0.45DGAC/1.35CAB~~ CONSTRUCT ~~0.55'~~ AC OVER ~~1.35'~~ AGGREGATE BASE (CLASS 2).
C S2	~~0.1ARHM/0.45DGAC/0.90CAB~~ CONSTRUCT ~~0.55'~~ AC OVER ~~0.90'~~ AGGREGATE BASE (CLASS 2).
C S3	~~0.1ARHM/0.60DGAC/1.05CAB~~ CONSTRUCT ~~0.70'~~ AC OVER ~~1.05'~~ AGGREGATE BASE (CLASS 2).
C S4	~~0.1ARHM/0.50DGAC/1.45CAB~~ CONSTRUCT ~~0.60'~~ AC OVER ~~1.45'~~ AGGREGATE BASE (CLASS 2).
C S7	~~0.1ARHM/0.70DGAC/1.40CAB~~ CONSTRUCT ~~0.80'~~ AC OVER ~~1.40'~~ AGGREGATE BASE (CLASS 2).

(15) MATCH EXISITNG AC PAVEMENT THICKNESS, MINIMUM 4"

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD–01 FOR STORM DRAIN PROFILES AND DETAILS.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM

www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRIEAL No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REVISED PAVEMENT SECTION	C.L	8/24/09
1	PROJECT SCOPE REDUCED	SL	7/1/09

DESIGNED BY S.A. DRAWN BY C.S CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED FOR SIGNATURES ON SHEET 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
TYPICAL SECTIONS

SCALE: NOT TO SCALE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–01

SHEET 4 OF 76

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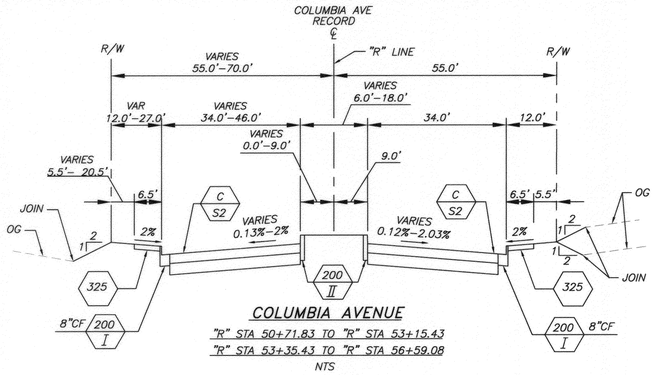
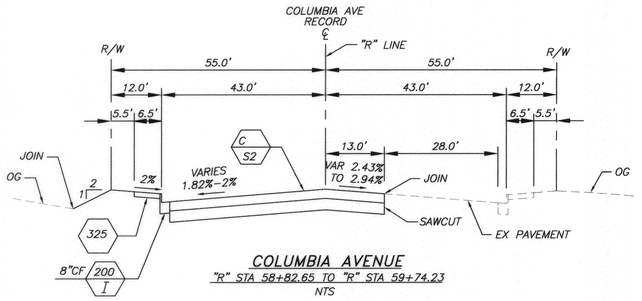


COLUMBIA AVENUE

"R" STA 50+71.83 TO "R" STA 53+15.43
"R" STA 53+35.43 TO "R" STA 56+59.08

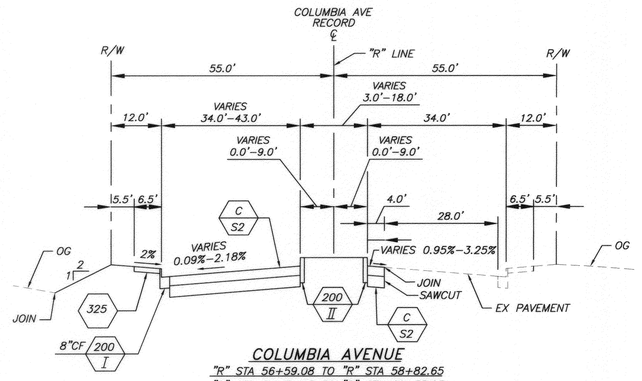
NTS



COLUMBIA AVENUE

"R" STA 58+82.65 TO "R" STA 59+74.23

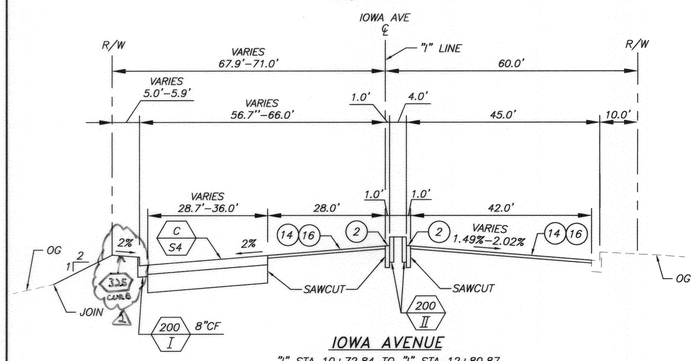
NTS



COLUMBIA AVENUE

"R" STA 56+59.08 TO "R" STA 58+82.65
"R" STA 59+74.23 TO "R" STA 62+53.23

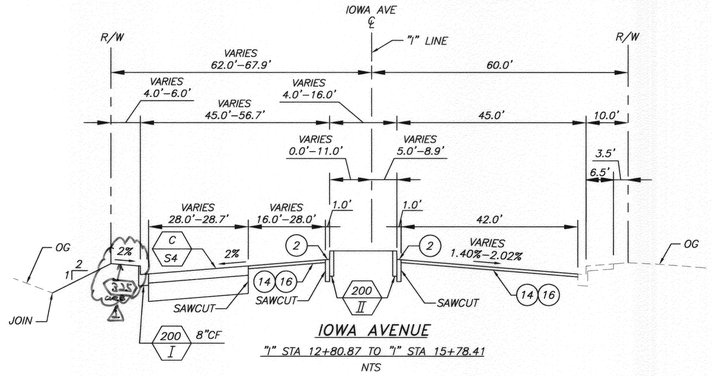
NTS



IOWA AVENUE

"I" STA 10+72.84 TO "I" STA 12+80.87

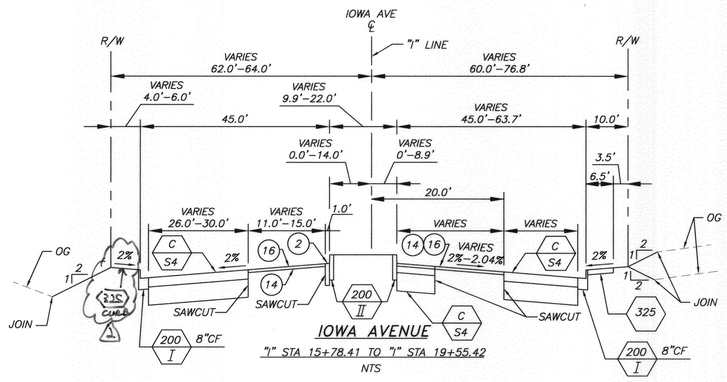
NTS



IOWA AVENUE

"I" STA 12+80.87 TO "I" STA 15+78.41

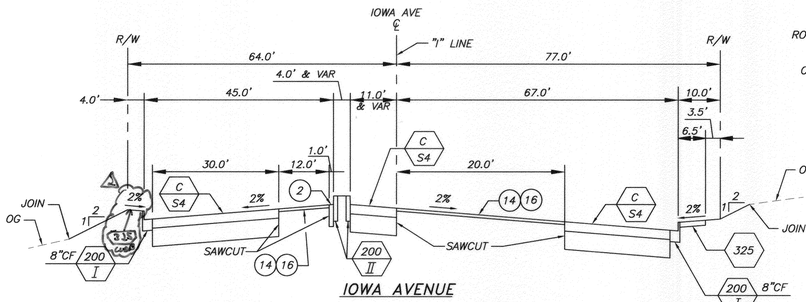
NTS



IOWA AVENUE

"I" STA 15+78.41 TO "I" STA 19+55.42

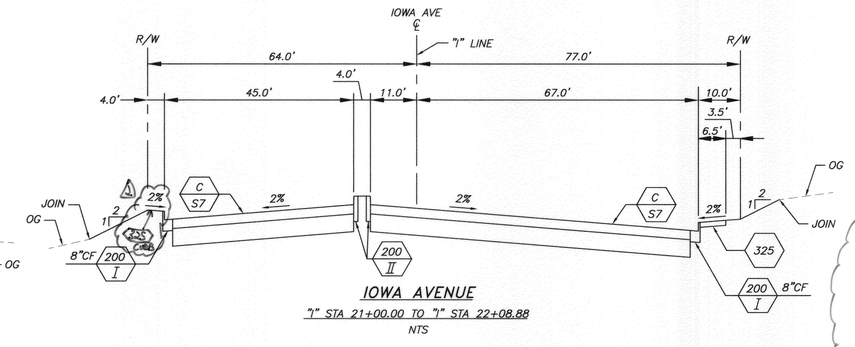
NTS



IOWA AVENUE

"I" STA 19+55.42 TO "I" STA 21+00.00

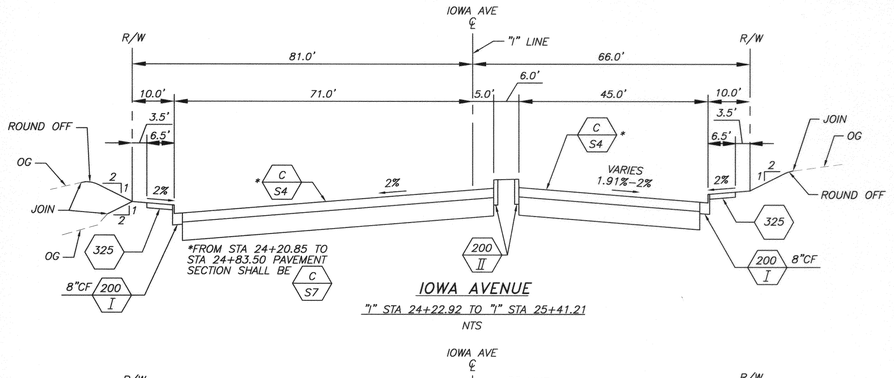
NTS



IOWA AVENUE

"I" STA 21+00.00 TO "I" STA 22+08.88

NTS

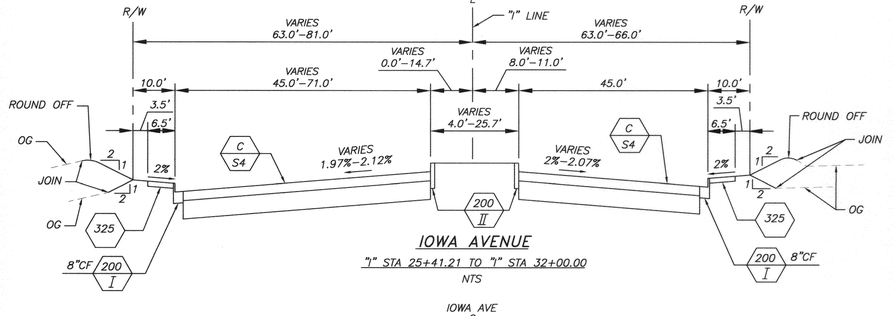


*FROM STA 24+20.85 TO STA 24+83.50 PAVEMENT SECTION SHALL BE C S7

IOWA AVENUE

"I" STA 24+22.92 TO "I" STA 25+41.21

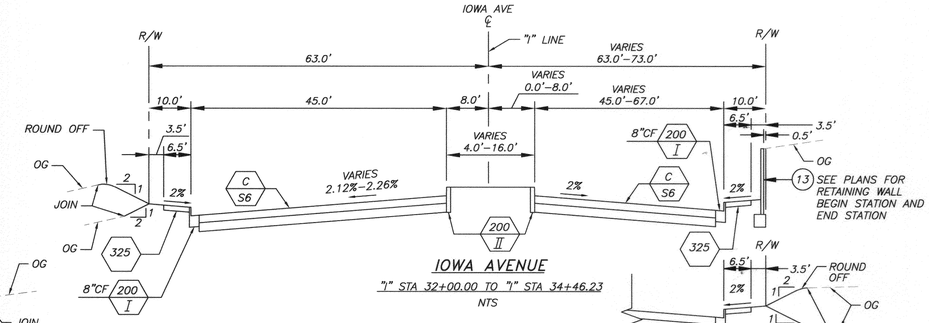
NTS



IOWA AVENUE

"I" STA 25+41.21 TO "I" STA 32+00.00

NTS



IOWA AVENUE

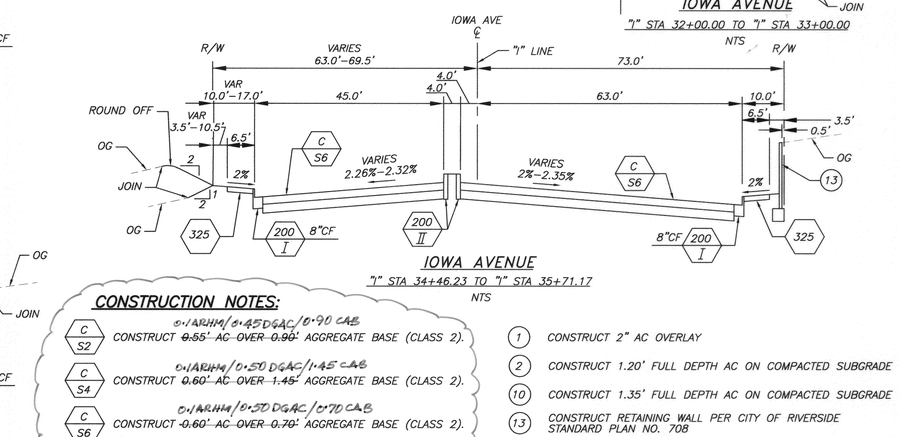
"I" STA 32+00.00 TO "I" STA 34+46.23

NTS

IOWA AVENUE

"I" STA 32+00.00 TO "I" STA 33+00.00

NTS



IOWA AVENUE

"I" STA 34+46.23 TO "I" STA 35+71.17

NTS

CONSTRUCTION NOTES:

- C S2 — 0.1 ARHM / 0.45 DGAC / 0.90 CAB — CONSTRUCT ~~0.55'~~ AC OVER ~~0.90'~~ AGGREGATE BASE (CLASS 2).
- C S4 — 0.1 ARHM / 0.50 DGAC / 1.45 CAB — CONSTRUCT ~~0.60'~~ AC OVER 1.45' AGGREGATE BASE (CLASS 2).
- C S6 — 0.1 ARHM / 0.50 DGAC / 0.70 CAB — CONSTRUCT ~~0.60'~~ AC OVER ~~0.70'~~ AGGREGATE BASE (CLASS 2).
- C S7 — 0.1 ARHM / 0.70 DGAC / 1.40 CAB — CONSTRUCT ~~0.80'~~ AC OVER 1.40' AGGREGATE BASE (CLASS 2).

1. CONSTRUCT 2" AC OVERLAY
2. CONSTRUCT 1.20' FULL DEPTH AC ON COMPACTED SUBGRADE
10. CONSTRUCT 1.35' FULL DEPTH AC ON COMPACTED SUBGRADE
13. CONSTRUCT RETAINING WALL PER CITY OF RIVERSIDE STANDARD PLAN NO. 708
14. COLD PLANE 2"
16. CONSTRUCT VARIABLE THICKNESS AC OVERLAY (2" MIN)

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. FOR MEDIAN OPENINGS AND REVERSE TAPERS DETAILS, SEE CITY OF RIVERSIDE STD PLAN DWG NO. 121 NO. 122 AND NO. 123.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRIEAR No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	ADDED SW ALIGNMENT TO HUNTER PARK	EC	1/7/10
2	REVISED PAVEMENT SECTION	EC	8/4/11

DESIGNED BY S.A. DRAWN BY C.S CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED FOR SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
TYPICAL SECTIONS

SCALE: NOT TO SCALE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–02

SHEET 5 OF 76

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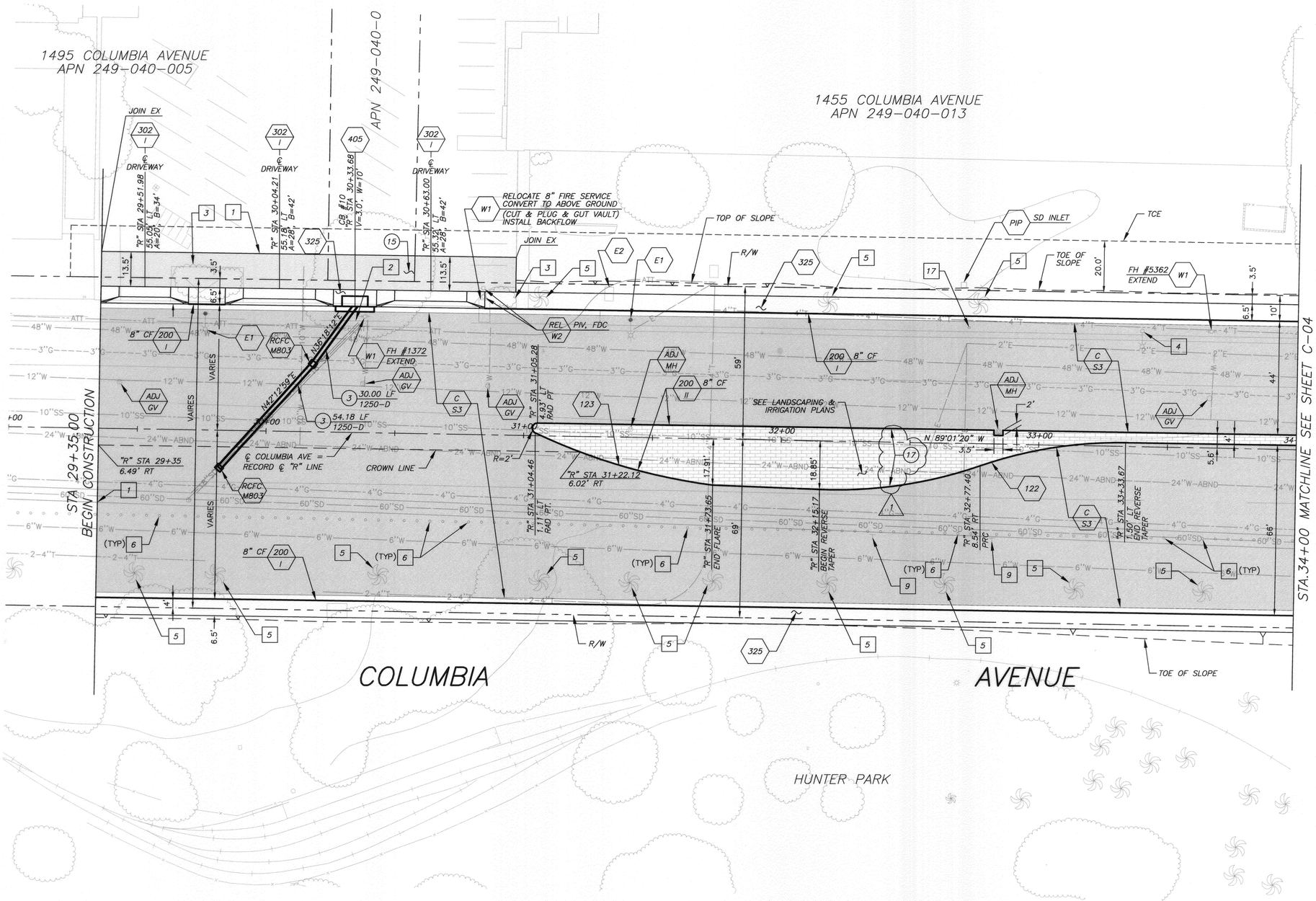

REMOVAL NOTES:

1	SAWCUT LINE
2	REMOVE INLET DRAIN
3	REMOVE TREE
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
6	REMOVE WOODEN POST
9	REMOVE SIGN
17	RELOCATE TRAFFIC SIGNAL PULLBOX

CONSTRUCTION NOTES:

C S3	CONSTRUCT AC PAVEMENT (0.70' AC ON 1.05' AB)
ADJ MH	ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
ADJ GV	ADJUST WATER GATE VALVE AND COVER TO GRADE
E1	PUD, ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
E2	PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
REL W2	RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
PIP	PROTECT IN PLACE (DESCRIPTION PER PLAN)
3	INSTALL 18" RCP (D-LOAD PER PLAN)
15	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

ASPHALT CONCRETE

PROPOSED MEDIAN - FOR LANDSCAPE & IRRIGATION SEE SHEETS 39 THRU 41.

17 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. (1)

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

N

GRAPHIC SCALE: 20' 10' 0 20' 40' — 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-43" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

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T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BREHM No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	G.C.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–COLUMBIA AVENUE "R" 29+35.00 TO "R" 34+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–03
SHEET 6 OF 76

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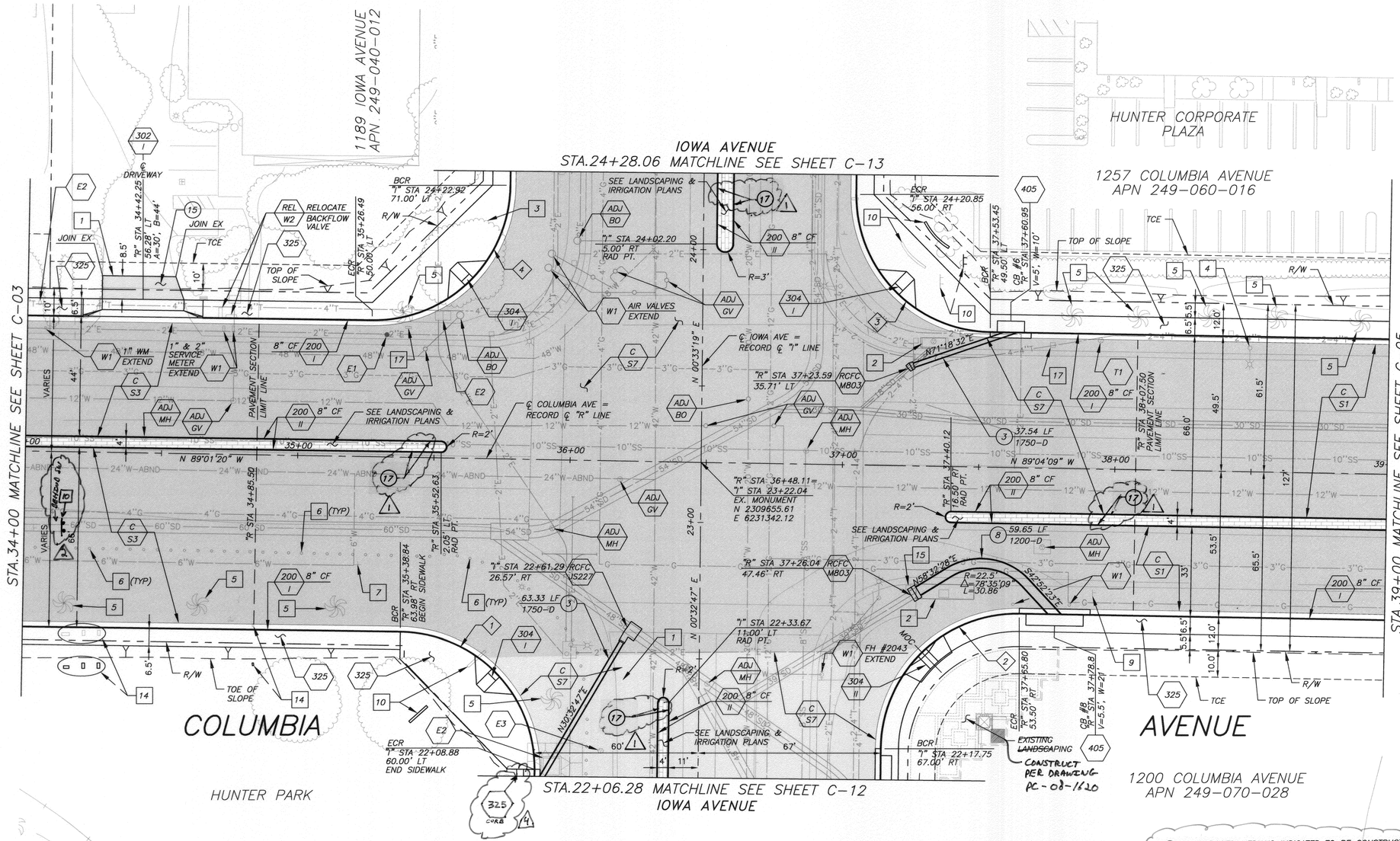

REMOVAL NOTES:

1	SAWCUT LINE	7	REMOVE METAL POST
2	REMOVE INLET DRAIN	9	REMOVE SIGN
3	REMOVE TREE	10	RELOCATE OR RECONSTRUCT SIGN
4	REMOVE STREET LIGHT	14	RELOCATE IRRIGATION BOX
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)	15	RELOCATE STREET LIGHT PULL BOX
6	REMOVE WOODEN POST	17	RELOCATE TRAFFIC SIGNAL PULL BOX

CONSTRUCTION NOTES:

- C S1 — CONSTRUCT AC PAVEMENT (0.55' AC ON 1.35' AB) 0.1ARHM/0.45DGAC/1.35CAB
- C S3 — CONSTRUCT AC PAVEMENT (0.70' AC ON 1.05' AB) 0.1ARHM/0.60DGAC/1.05CAB
- C S7 — CONSTRUCT AC PAVEMENT ~~(0.80' AC ON 1.40' AB)~~ ~~0.1ARHM/0.70DGAC/1.40CAB~~ 2
- ADJ MH — ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV — ADJUST WATER GATE VALVE AND COVER TO GRADE
- E1 — PUD, ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- E2 — PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX OR RELOCATE PRIOR TO CONSTRUCTION
- E3 — PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- T1 — ADJUST TELEPHONE MANHOLE TO GRADE (BY TELEPHONE COMPANY)
- W1 — PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES.
- REL W2 — RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
- ADJ BO — PUD, WATER DIV. TO ADJUST 10" BLOW OFF MANHOLE COVER AND GATE VALVE TO GRADE
- (3) — INSTALL 18" RCP (D-LOAD PER PLAN)
- (8) — INSTALL 39" RCP (D-LOAD PER PLAN)
- (15) — MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN

CURVE DATA

CURVE	R	Δ	L	T
1	50.00'	89°42'45"	78.29'	49.75'
2	50.00'	90°23'04"	78.88'	50.34'
3	50.00'	89°37'27"	78.21'	49.67'
4	50.00'	90°16'44"	78.78'	50.24'

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE X-02 FOR TRAFFIC SIGNAL PLAN.
4. SEE C-01 FOR LIMITS OF PAVEMENT SECTIONS.
5. SEE C-22 FOR INTERSECTION DESIGN.
6. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
7. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

N

20' 10' 0 20' 40'
GRAPHIC SCALE: 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETZ No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	SWK WESTERLY SIDE OF IOWA	E.L.	11/7/10
2	REVISED PAVEMENT SECTION	E.L.	8/24/09
1	INDICATED R4Y SIGN RELOCATION	E.L.	8/11/09
	PROJECT SCOPE REDUCED		

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON SHEET 1
PRINCIPAL ENGINEER			
STREET SERVICES			CITY ENGINEER
SURVEYOR			
TRAFFIC DIVISION			DATE
PARKS DEPARTMENT			

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PLAN–COLUMBIA AVENUE
"R" 34+00 TO "R" 39+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–04
SHEET 7 OF 76

DWG: G:\60202938 Columbia_Iowa\CADD\Civil Sheet\C-04.dwg
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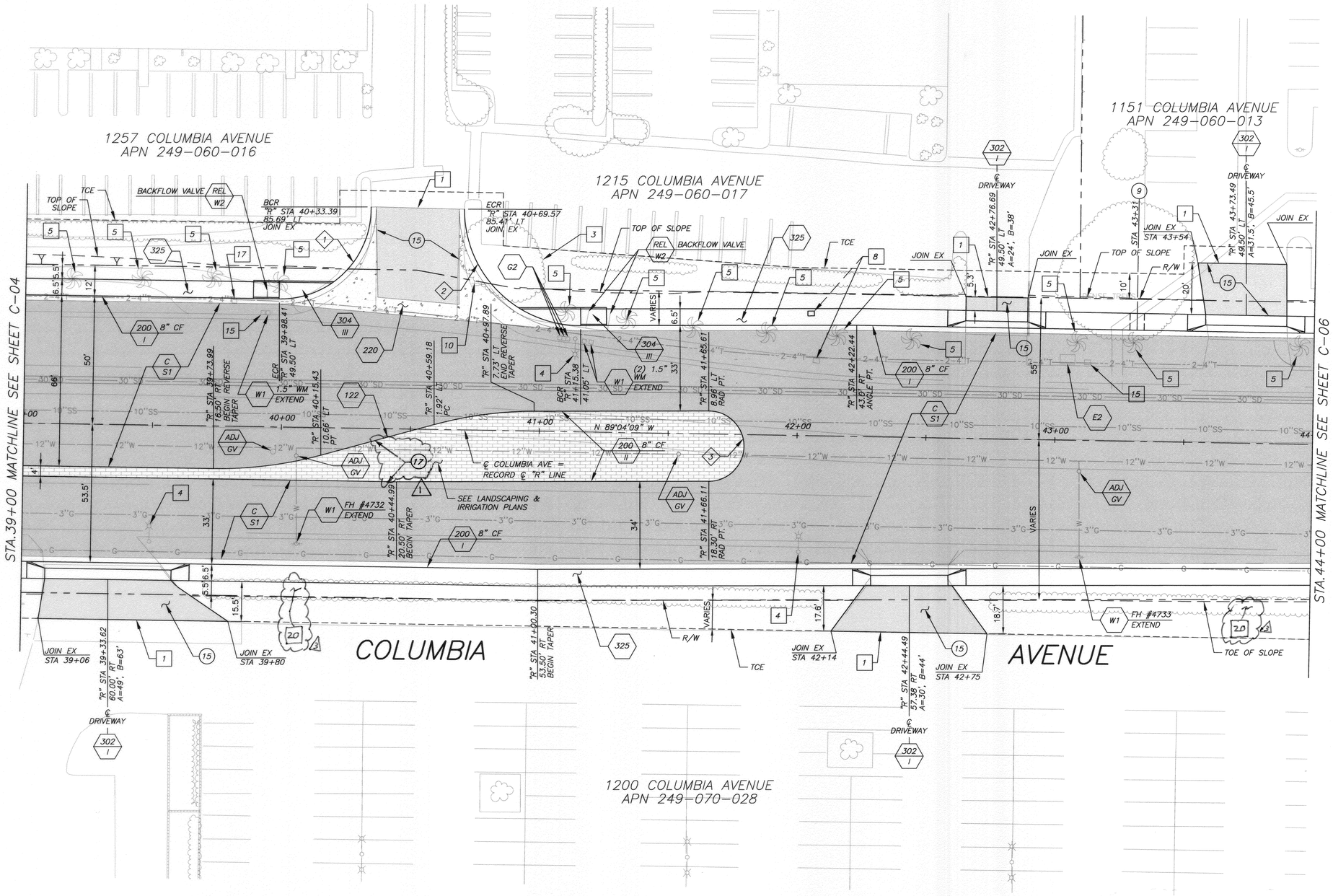

REMOVAL NOTES:

1	SAWCUT LINE
3	REMOVE TREE
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
8	RELOCATE MAILBOX
10	RELOCATE OR RECONSTRUCT SIGN
15	RELOCATE STREET LIGHT PULLBOX
17	RELOCATE TRAFFIC SIGNAL PULLBOX

3 — 20 REMOVE BUSHES

CONSTRUCTION NOTES:

C S1	CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 1.35' AB)~~ 0.18'AR-HMA/0.45'DGAC/1.35 CAB (2)
ADJ GV	ADJUST WATER GATE VALVE AND COVER TO GRADE
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
REL W2	RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
E2	PUD, ELECTRIC DIV. TO ADJUST VAULTS AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
G2	RELOCATE GAS VAULT (BY GAS COMPANY)
9	CONSTRUCT PARKWAY DRAIN PER APWA STANDARD PLAN 151-1
15	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN
- CONCRETE

CURVE DATA				
CURVE	R	△	L	T
1	35.00'	91°56'42"	56.17'	36.21'
2	45.00'	90°14'17"	70.87'	45.19'
3	13.63'	180°00'00"	42.83'	----

17 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. (1)

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

N

GRAPHIC SCALE: 20' 10' 0 20' 40' — 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — CHRIS H. BRETAN — No. C 41824 — Exp. 3-31-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REMOVE BUSHES	C.L.	1/7/10
1	REVISED PAVEMENT SECTION	C.L.	8/4/10
	PROJECT SCOPE REDUCED	C.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–COLUMBIA AVENUE "R" 39+00 TO "R" 44+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–05

SHEET 8 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\C-05.dwg
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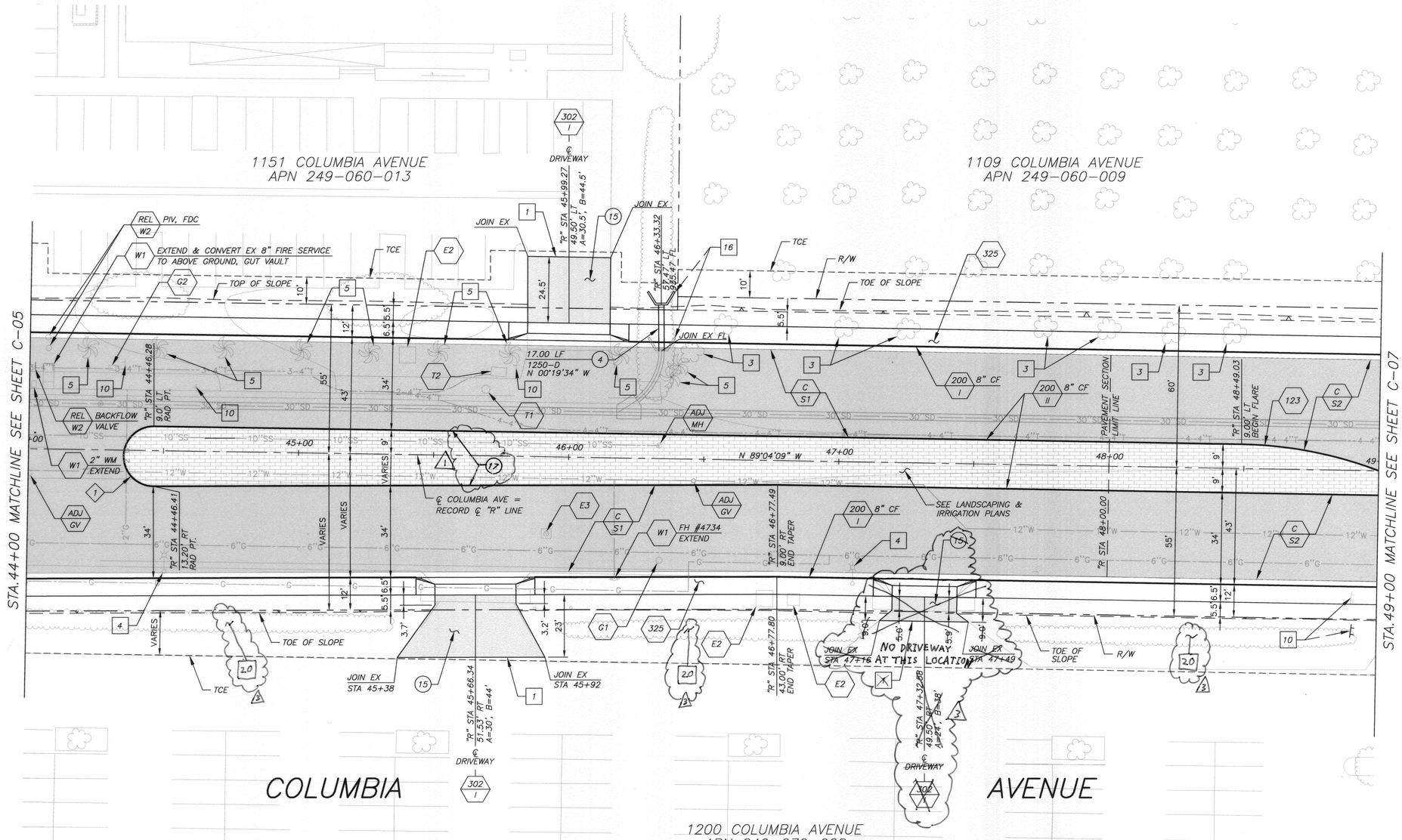

REMOVAL NOTES:

1	SAWCUT LINE
3	REMOVE TREE
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
10	RELOCATE OR RECONSTRUCT SIGN
16	RECONSTRUCT HEADWALL PER CALTRANS STD PLAN D89

CONSTRUCTION NOTES:

C S1	CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 1.35' AB)~~ 0.1'ARHM/0.45'DGAC/1.35'CAB
C S2	CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 0.90' AB)~~ 0.1'ARHM/0.45'DGAC/0.90'CAB 12
ADJ MH	ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
ADJ GV	ADJUST WATER GATE VALVE AND COVER TO GRADE
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
REL W2	RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
E2	PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
E3	PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
T1	ADJUST TELEPHONE MANHOLE TO GRADE (BY TELEPHONE COMPANY)
T2	RELOCATE TELEPHONE VAULT/BOX (BY TELEPHONE COMPANY)
G1	ADJUST GAS MANHOLE TO GRADE (BY GAS COMPANY)
G2	RELOCATE GAS VAULT (BY GAS COMPANY)
(4)	INSTALL 24" RCP (D-LOAD PER PLAN)
(15)	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

ASPHALT CONCRETE

PROPOSED MEDIAN

CURVE DATA				
CURVE	R	△	L	T
1	11.10'	180°00'00"	34.87'	----

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

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N

GRAPHIC SCALE: 20' 10' 0 20' 40' 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.17 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETZ No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	ELIMINATE DRWY-REMOVE BUSHES	E.L.	11/7/10
1	REVISED PAVEMENT SECTION	E.L.	9/14/09
	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN-COLUMBIA AVENUE "R" 44+00 TO "R" 49+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-06
SHEET 9 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\C-06.dwg
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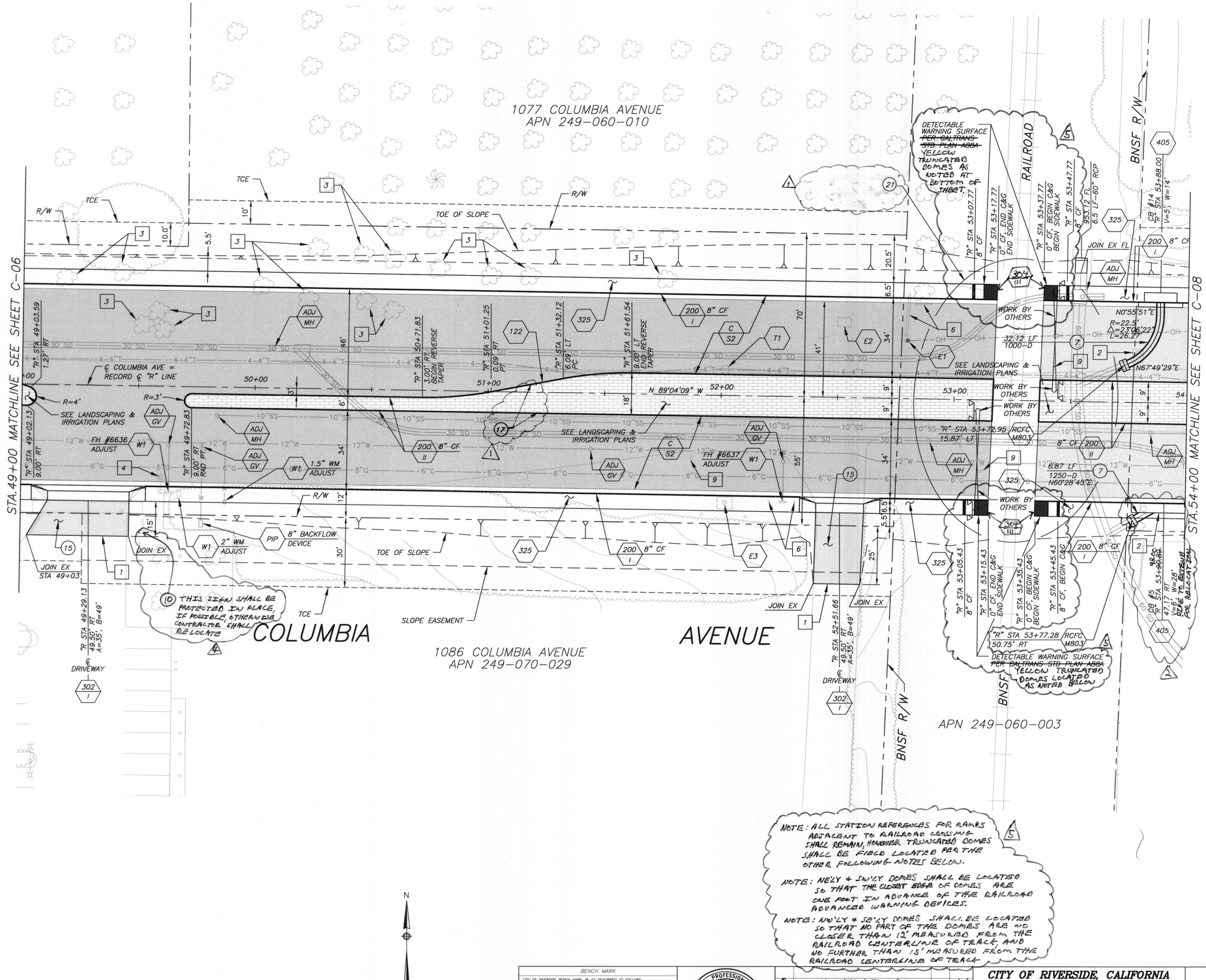

NOTE: ALL STATION REFERENCES FOR RAMPS ADJACENT TO RAILROAD CROSSING SHALL REMAIN, HOWEVER TRUNCATED DOMES SHALL BE FIELD LOCATED PER THE OTHER FOLLOWING NOTES BELOW.

NOTE: NE'LY & SW'LY DOMES SHALL BE LOCATED SO THAT THE CLOSEST EDGE OF DOMES ARE ONE FOOT IN ADVANCE OF THE RAILROAD ADVANCED WARNING DEVICES.

NOTE: NW'LY & SE'LY DOMES SHALL BE LOCATED SO THAT NO PART OF THE DOMES ARE NO CLOSER THAN 12' MEASURED FROM THE RAILROAD CENTERLINE OF TRACK, AND NO FURTHER THAN 15' MEASURED FROM THE RAILROAD CENTERLINE OF TRACK

REMOVAL NOTES:

1. SAWCUT LINE
2. REMOVE INLET DRAIN
3. REMOVE TREE
4. REMOVE STREET LIGHT
6. REMOVE WOODEN POST
9. REMOVE SIGN

CONSTRUCTION NOTES:

- C S2 — CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 0.90' AB)~~ 0.61'ARHM/0.45 DGAC/0.90 CAB
- ADJ MH — ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV — ADJUST WATER GATE VALVE AND COVER TO GRADE
- E1 — PUD, ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- E2 — PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE AND RELOCATE PRIOR TO CONSTRUCTION
- E3 — PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- W1 — PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
- T1 — ADJUST TELEPHONE MANHOLE TO GRADE (BY TELEPHONE COMPANY)
- (7) — INSTALL 36" RCP (D-LOAD PER PLAN)
- (15) — MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

(21) PAVEMENT SHOWN HERE SHALL EXTEND TO 2-FT. ON EITHER SIDE OF RAIL. ALL CURB IMPROVEMENTS SHALL NOT BE EXTENDED AND SHALL BE CONSTRUCTED AS SHOWN. BNSF TO COMPLETE IMPROVEMENTS OUTSIDE CITY PROJECT LIMITS.

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.17 DATUM 1929 ADJUSTMENT YEAR 1971

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REGISTERED PROFESSIONAL ENGINEER — CHRIS H. BRETT — No. C41824 — Exp. 3-31-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
5	REVISED RAMP TYPE & TRUNC. DOME LOC.	C.L.	4/2/09
4	ADDED NOTE FOR SIGN PER MODEL 5	C.L.	4/29/09
3	REVISED PAVEMENT SECTION	C.L.	5/14/09
2	CB TO BE SHIFTED TO STA 53+98	C.L.	6/24/09
1	PROJECT SCOPE REDUCED	C.L.	7/6/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURES ON FILE
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–COLUMBIA AVENUE "R" 49+00 TO "R" 54+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–07
SHEET 10 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\C-07.dwg
TIME: 6-11-09 - 9:20am User: Nguyend XRef Files: xdar xtopo xutl_ex xrd_iowa xrow_FINAL xdaylight xshade xbasin xtce

990 PALMYRITA AVENUE
APN 249-060-031

IMPROVEMENTS TO BE CONSTRUCTED PER HUNTER PARK DISTRIBUTION CENTER PLANS

STA.54+00 MATCHLINE SEE SHEET C-07

STA.59+00 MATCHLINE SEE SHEET C-09

BCR "R" STA 56+72.46 55.00' LT

ECR "R" STA 57+29.70 55.00' LT

TCE

TOE OF SLOPE

20.0'

R/W

SEE LANDSCAPING & IRRIGATION PLANS

BCR "R" STA 56+46.08 43.00' LT

ECR "R" STA 57+56.08 43.00' LT

ECR "R" STA 58+82.15 43.00' LT

"R" STA 55+62.65 3.00' LT END REVERSE TAPER

"R" STA 55+76.65 8.00' RT BEGIN REVERSE TAPER

"R" STA 57+32.65 8.00' RT REVERSE TAPER

"R" STA 57+63.65 3.00' LT BEGIN REVERSE TAPER

"R" STA 57+94.65 3.00' LT END REVERSE TAPER

"R" STA 58+82.65 3.00' LT RAD. PT

"R" STA 56+59.08 43.00' RT JOIN EX

N 89°04'09" W

55+00 56+00 57+00 58+00 59

℄ COLUMBIA AVE = RECORD ℄ "R" LINE

21.5'

R=3'

1030 COLUMBIA AVENUE
APN 249-070-006

COLUMBIA AVENUE

972 COLUMBIA AVENUE
APN 249-070-031

60'50

30'50

72'SD

12"W

10"SS

4-4"T

6"G

WM PIP

SIGN PIP

325

PIP SIGN

TOE OF SLOPE

C&G PIP

PIP ST LIGHT

SIGN PIP

FH #6788 PIP

REMOVAL NOTES:

- 1 SAWCUT LINE
- 3 REMOVE TREE
- 5 RELOCATE TREE (AS DIRECTED BY ENGINEER)
- 10 RELOCATE OR RECONSTRUCT SIGN

CONSTRUCTION NOTES:

- C S2 CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 0.90' AB)~~ 0.10 ARHM/0.45 DGAC/0.90 CAB
- E1 PUD, ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- E3 PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- ADJ MH ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV ADJUST WATER GATE VALVE AND COVER TO GRADE
- PIP PROTECT IN PLACE
- 15 MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

ASPHALT CONCRETE

PROPOSED MEDIAN

- 17 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.
- ~~18~~ ~~CONSTRUCT 0.1 MIN. OVERLAY ON EASTERLY IOWA BETWEEN STA 18+00 TO 20+25, WITH NO GRIND. GRINDING SHALL BE COMPLETED TO 25' EAST OF CENTERLINE WHERE REQUIRED AT ALL LOCATIONS.~~
- 19 COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.
- Ti ADJUST TELEPHONE MANHOLE TO GRADE. (BY TELEPHONE COMPANY)

CURVE DATA				
CURVE	R	△	L	T
1	35.00'	48°55'04"	29.88'	15.92'
2	35.00'	48°55'04"	29.88'	15.92'
3	35.00'	48°55'04"	29.88'	15.92'

18A CONSTRUCT 0.1' ARHM AC OVERLAY

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

N

GRAPHIC SCALE: 20' 10' 0 20' 40' 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 829.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETT No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
	REVISED MEDIAN TURN POCKET	E.L.	11/1/10
2	REVISED PAVEMENT SECTION	E.L.	9/14/09
1	CB TO BE SHIFTED TO STA 57+39.90	E.L.	9/2/09
1	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PLAN-COLUMBIA AVENUE
"R" 54+00 TO "R" 59+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-08

SHEET 11 OF 76

DWG: G:\60202038 Columbia_Iowa\CADD\Civil\Sheet\C-08.dwg
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990 PALMYRITA AVENUE
APN 249-060-031

902 COLUMBIA AVENUE
APN 249-070-032

COLUMBIA AVENUE

RAILROAD

UNION PACIFIC

NORTHGATE AVENUE

STA.59+00 MATCHLINE SEE SHEET C-08

IMPROVEMENTS TO BE CONSTRUCTED PER HUNTER PARK DISTRIBUTION CENTER PLANS

BCR "R" STA 59+08.53 55.00' LT

ECR "R" STA 59+65.77 55.00' LT

TCE

TOE OF SLOPE

R/W

℄ COLUMBIA AVE = RECORD ℄ "R" LINE

60+00

61+00

62+00

63+00

N 89°04'09" W

R=3'

"R" STA 59+74.23 9.00' RT WIDEN RT 55'

"R" STA 59+92.15 43.00' LT

"R" STA 60+71.21 3.00' RT BEGIN REVERSE TAPER

"R" STA 60+95.29 0.71' LT PT

"R" STA 61+09.91 5.32' LT PC

"R" STA 61+31.68 9.0' LT END REVERSE TAPER

"R" STA 62+53.23 43.0' LT JOIN EX. C&G & PAVEMENT

"R" STA 62+53.23 9.00' LT JOIN EX. MEDIAN TC

"R" STA 62+53.23 9.0' RT JOIN EX. MEDIAN & PAVEMENT

SEE LANDSCAPING & IRRIGATION PLANS

FH #6787

RELEASE AIR VALVE

PIP SIGN

PIP RR XING ARM

PIP ST LIGHT

PIP C&G

PIP WM

PIP PP

ADJ MH

ADJ GV

C S2

200 8" CF I

200 8" CF II

304 III

325

220

122

REMOVAL NOTES:

- 1 SAWCUT LINE
- 9 REMOVE SIGN
- 10 RELOCATE OR RECONSTRUCT SIGN
- 12 REMOVE DELINEATOR

CONSTRUCTION NOTES:

- C S2 CONSTRUCT AC PAVEMENT ~~(0.55' AC ON 0.90' AB)~~ 0.10ARHM/0.45DGAC/0.90CAB
- ADJ MH ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV ADJUST WATER GATE VALVE AND COVER TO GRADE
- PIP PROTECT IN PLACE
- (15) MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

ASPHALT CONCRETE

PROPOSED MEDIAN

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

(19A) CONSTRUCT ARHM AC OVERLAY (0.1' min)

(19) COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.

(20) COLDMILL 20' WIDE STRIP ADJACENT TO STREET INTERSECTION WITH 0.1' MINIMUM DEPTH.

CURVE DATA				
CURVE	R	△	L	T
1	35.00'	48°55'04"	29.88'	15.92'

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

N

20' 10' 0 20' 40'
GRAPHIC SCALE: 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-43" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRECKA No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	ELIMINATED GRIND PER ADDENDUM 4	E.L.	9/21/09
2	REVISED PAVEMENT SECTION	E.L.	8/24/09
1	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PLAN-COLUMBIA AVENUE
"R" 59+00 TO NORTHGATE AVE

SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-09

SHEET 12 OF 76

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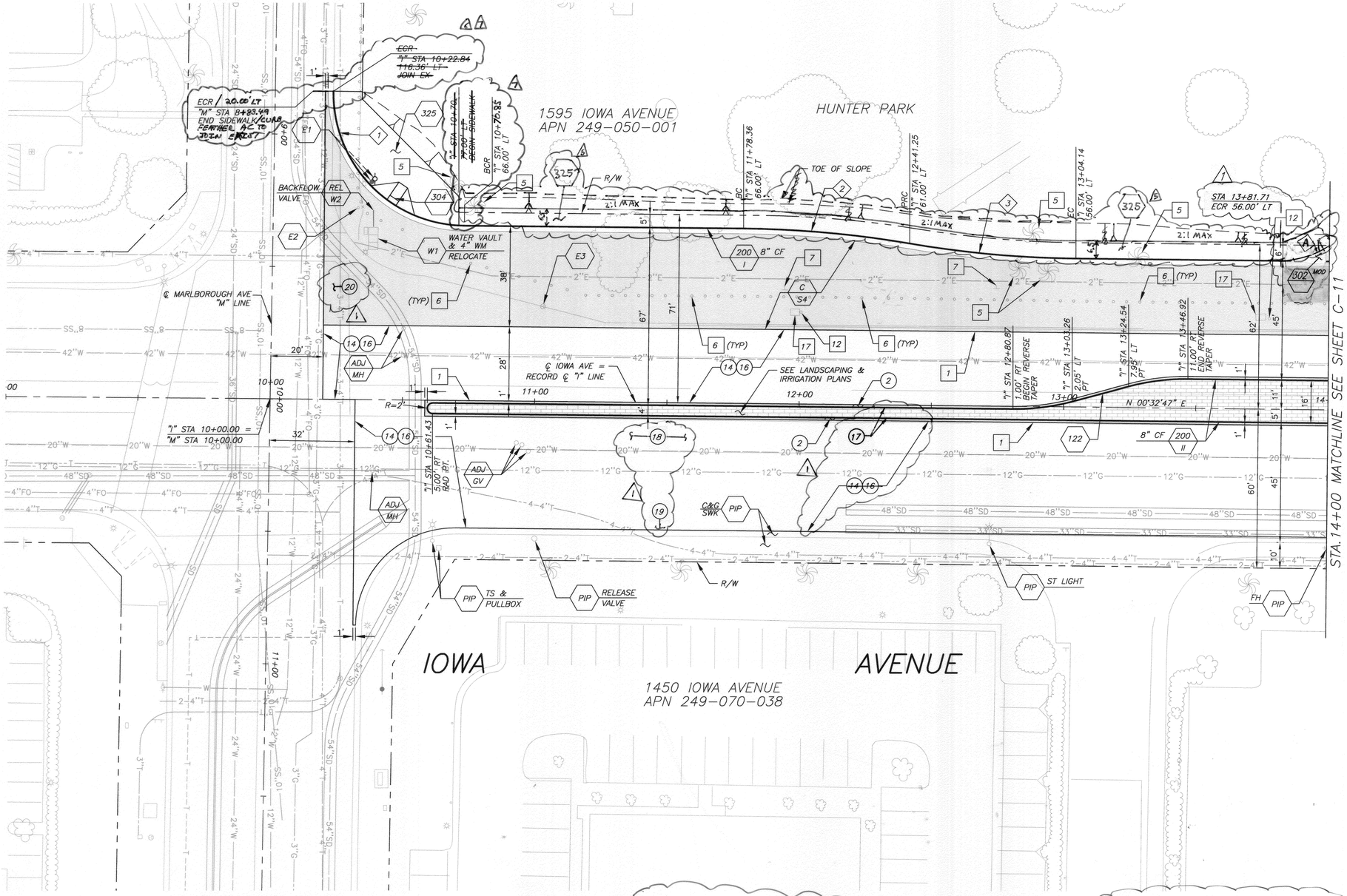

REMOVAL NOTES:

- 1 SAWCUT LINE
- 5 RELOCATE TREE (AS DIRECTED BY ENGINEER)
- 6 REMOVE WOODEN POST
- 7 REMOVE METAL POST
- 12 REMOVE DELINEATOR
- 17 RELOCATE TRAFFIC SIGNAL PULLBOX

CONSTRUCTION NOTES:

- C S4 CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 1.45' AB)~~ 0.10 ARHM / 0.50 DGAC / 1.45 CAB
- E1 PUBLIC UTILITIES DEPARTMENT (PUD), ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- E2 PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
- E3 PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- W1 PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
- REL W2 RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
- ADJ MH ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV ADJUST WATER GATE VALVE AND COVER TO GRADE
- PIP PROTECT IN PLACE
- 2 CONSTRUCT 1.20' FULL DEPTH AC ON COMPACTED SUBGRADE
- 14 COLD PLANE 2"
- 16 ~~CONSTRUCT VARIABLE THICKNESS AC OVERLAY (2" MIN)~~ CONSTRUCT VARIABLE THICKNESS ARHM AC OVERLAY (0.1'MIN TO 0.3'MAX) WITH AC OVERLAY THICKNESS BALANCED 0.1' CONTRACTOR SHALL PROVIDE 0.1' MIN DGAC LEVELING COURSE. 3
- LEGEND: ASPHALT CONCRETE; PROPOSED MEDIAN

CURVE DATA

CURVE	R	Δ	L	T
1	50.00'	~~90°01'04"~~ 90°25'07"	~~78.56'~~ 78.91'	~~50.02'~~ 50.37'
2	398.00'	09°05'29"	63.15'	31.64'
3	398.00'	09°05'29"	63.15'	31.64'

- 17 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE X-01 FOR TRAFFIC SIGNAL PLAN.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

3 302 MOD CONSTRUCT CONCRETE DRIVEWAY PER STANDARD DRAWING NO. 302 WITH THE FOLLOWING MODIFICATIONS: THE PAVEMENT SECTION AND CENTERLINE PROFILE BETWEEN THE CURB RETURNS SHALL BE CONCRETE AND CONSTRUCTED PER STANDARD DETAIL 301; THE CURB RETURNS SHALL BE CONSTRUCTED PER THE CURB DATA SHOWN HEREON; AND THE CURB RETURN PROFILES (ELEVATIONS) WILL BE PROVIDED DURING CONSTRUCTION

3 (18) CONSTRUCT 0.1' MIN/0.3'MAX ARHM AC OVERLAY BETWEEN MARLBOROUGH AVENUE STATION 20+25, MATCHING THE EXISTING PAVEMENT FROM THE EASTERLY MEDIAN CURB TO 25' EASTERLY OF CENTERLINE, EXCEPT BETWEEN STATIONS 18+00 AND 20+25. CONSTRUCT NORTHBOUND PAVEMENT IMPROVEMENTS BETWEEN STATIONS 20+25 TO 21+00 AS INDICATED IN CONSTRUCTION NOTES 14 AND 16.

CONSTRUCTION NOTES:

- ~~18~~ ~~CONSTRUCT 0.1' MIN. OVERLAY ON EASTERLY IOWA BETWEEN STA 18+00 TO 20+25, WITH NO GRIND. GRINDING SHALL BE COMPLETED TO 25' EAST OF CENTERLINE WHERE REQUIRED AT ALL LOCATIONS.~~
- 19 COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.
- 20 COLDMILL 20' WIDE STRIP ADJACENT TO STREET INTERSECTION WITH 0.1' MINIMUM DEPTH. 1

GRAPHIC SCALE: 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETZ No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
7	REVISED NW IOWA RETURN	E.L.	4/6/10
6	REVISED NW IOWA RETURN	E.L.	3/1/10
5	SWK WESTERLY SIDE OF IOWA	E.L.	1/7/10
4	REVISED ARHM MINOR CONT NOTES	E.L.	9/24/09
3	REVISED OVERLAY NOTE REL NO. 4	E.L.	9/24/09
2	REVISED PAVEMENT SECTION	E.L.	8/4/09
1	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY PUC SIGNATURES ON SHEET -1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
PLAN–IOWA AVENUE
MARLBOROUGH AVE TO "I" 14+00
SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–10

SHEET 13 OF 76

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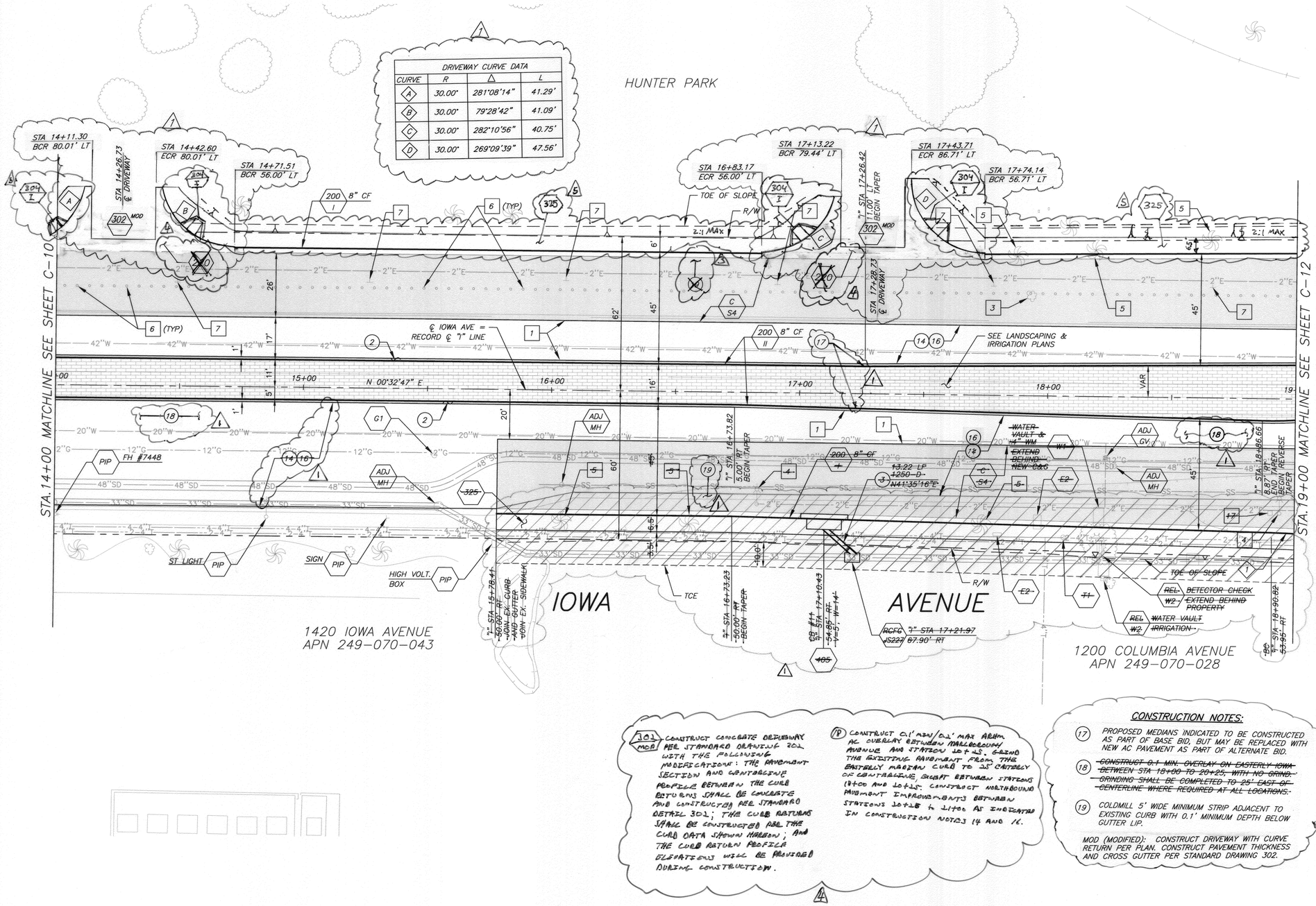

REMOVAL NOTES:

1. SAWCUT LINE
3. REMOVE TREE
4. REMOVE STREET LIGHT
5. RELOCATE TREE (AS DIRECTED BY ENGINEER)
6. REMOVE WOODEN POST
7. REMOVE METAL POST
17. RELOCATE TRAFFIC SIGNAL PULLBOX

CONSTRUCTION NOTES:

- C S4 — CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 1.45' AB)~~ 0.10 ARHM / 0.50 DGAC / 1.45 CAB
- ADJ MH — ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- ADJ GV — ADJUST WATER GATE VALVE COVER TO GRADE
- E2 — PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
- W1 — PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
- REL W2 — RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
- T1 — RELOCATE TELEPHONE MANHOLE TO GRADE (BY TELEPHONE COMPANY)
- G1 — ADJUST GAS MANHOLE TO GRADE (BY GAS COMPANY)
- E2 — PUD, ELECTRIC DIV. TO ADJUST VAULT AND BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
- PIP — PROTECT IN PLACE
- 2 — CONSTRUCT 1.20' FULL DEPTH AC ON COMPACTED SUBGRADE
- 3 — INSTALL 18" RCP (D-LOAD PER PLAN)
- 14 — COLD PLANE 2"
- 16 — ~~CONSTRUCT VARIABLE THICKNESS AC OVERLAY (2" MIN) CONSTRUCT VARIABLE THICKNESS AC OVERLAY~~ (0.1' MIN TO 0.2' MAX), WHERE AC OVERLAY THICKNESS EXCEEDS 0.2', CONTRACTOR SHALL PROVIDE 0.1' MIN. ONE LIFT LONGITUDINAL CONFIGURATION.

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN
- OMITTED FROM PROJECT. ALL EXISTING ITEMS TO BE PROTECTED IN PLACE WHERE PROPOSED IMPROVEMENT LINED OUT.

CURVE DATA				
CURVE	R	Δ	L	T
1	327.00'	11°03'53"	63.15'	31.67'

(301 MOD) CONSTRUCT CONCRETE DRIVEWAY PER STANDARD DRAWING 302 WITH THE FOLLOWING MODIFICATIONS: THE PAVEMENT SECTION AND CENTERLINE PROFILE BETWEEN THE CURB RETURNS SHALL BE CONCRETE AND CONSTRUCTED PER STANDARD DETAIL 302; THE CURB RETURNS SHALL BE CONSTRUCTED PER THE CURB DATA SHOWN HEREON; AND THE CURB RETURN PROFILE ELEVATIONS WILL BE PROVIDED DURING CONSTRUCTION.

(1) CONSTRUCT 0.1' MIN/0.2' MAX ARHM AC OVERLAY BETWEEN MALLORQUIN AVENUE AND STATION 20+45. GRIND THE EXISTING PAVEMENT FROM THE EASTERLY MEDIAN CURB TO 25' EASTERLY OF CENTERLINE EXCEPT BETWEEN STATIONS 18+00 AND 20+45. CONSTRUCT NORTHBOUND PAVEMENT IMPROVEMENTS BETWEEN STATIONS 20+18 & 21+00 AS INDICATED IN CONSTRUCTION NOTES 14 AND 16.

CONSTRUCTION NOTES:

17. PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.
18. ~~CONSTRUCT 0.1 MIN. OVERLAY ON EASTERLY IOWA BETWEEN STA 18+00 TO 20+25, WITH NO GRIND. GRINDING SHALL BE COMPLETED TO 25' EAST OF CENTERLINE WHERE REQUIRED AT ALL LOCATIONS.~~
19. COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.

MOD (MODIFIED): CONSTRUCT DRIVEWAY WITH CURVE RETURN PER PLAN. CONSTRUCT PAVEMENT THICKNESS AND CROSS GUTTER PER STANDARD DRAWING 302.

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

GRAPHIC SCALE: 20' 10' 0 20' 40' — 1" = 20' HORIZ

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JR-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

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REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETA No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
5	SWK WESTERLY SIDE OF IOWA	EC.	1/7/10
4	REMOVE NOTES AND REWORD CURB GUTTER	EC	9/10/09
3	REVISED OVERLAY NOTE PER ADDEN 4	EC	9/2/09
2	REVISED PAVEMENT SECTION	EC	8/19/09
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
PLAN–IOWA AVENUE
"I" 14+00 TO "I" 19+00
SCALE: 1" = 20'

DESIGN W.O. NO. 0702069
CONSTRUCTION W.O. NO. 0915428
R–4132
C–11
SHEET 14 OF 76

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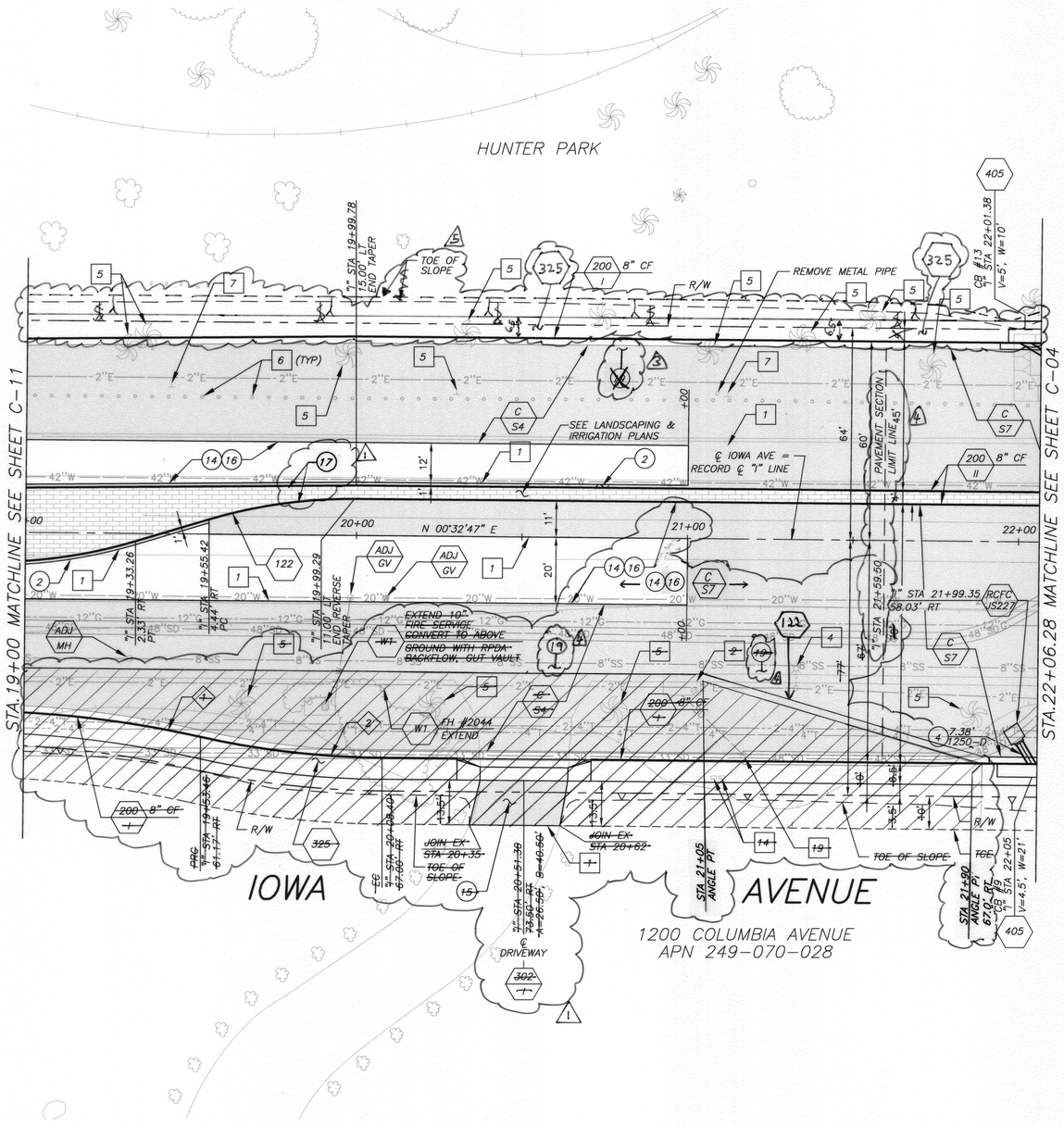

REMOVAL NOTES:

1	SAWCUT LINE
2	REMOVE INLET DRAIN
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
6	REMOVE WOODEN POST
7	REMOVE METAL POST
14	RELOCATE IRRIGATION BOX
19	REMOVE MANHOLE SHAFT

CONSTRUCTION NOTES:

C S4	CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 1.45' AB)~~ 0.10'ARHM/0.50'DGAC/1.45'CAB
C S7	CONSTRUCT AC PAVEMENT ~~(0.80' AC ON 1.40' AB)~~ 0.10'ARHM/0.70'DGAC/1.40'CAB 2
ADJ MH	ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
ADJ GV	ADJUST WATER GATE VALVE AND COVER TO GRADE
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
2	CONSTRUCT 1.20' FULL DEPTH AC ON COMPACTED SUBGRADE
4	INSTALL 24" RCP (D-LOAD PER PLAN)
10	CONSTRUCT 1.35' FULL DEPTH AC ON COMPACTED SUBGRADE
14	COLD PLANE 2"
15	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4" 2
16	~~CONSTRUCT VARIABLE THICKNESS AREA AC OVERLAY (0.1'MIN TO 0.2' MAX) WHEN AC OVERLAY REQUIRED~~ 0.2', COMPACTOR SHALL PROVIDE 0.1' MIN DEAD LOADING TO ENSURE
17	PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH: NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

LEGEND:

ASPHALT CONCRETE

PROPOSED MEDIAN

OMITTED FROM PROJECT. ALL EXISTING ITEMS TO BE PROTECTED IN PLACE WHERE PROPOSED IMPROVEMENT LINED OUT.

CURVE DATA

CURVE	R	Δ	L	T
1	327.00'	11°03'53"	63.15'	31.67'
2	262.00'	12°06'19"	55.35'	27.78'

CONSTRUCTION NOTES:

19 COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.

1

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE C-02 FOR LIMITS OF PAVEMENT SECTIONS.
4. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
5. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

N

20' 10' 0 20' 40'

GRAPHIC SCALE: 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE".

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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T 909.933.5225 F 909.933.5228

AECOM

www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETA No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
5	SWK WESTERLY SIDE OF IOWA	EL	11/2/10
4	REVISED AMENDMENT LENGTH & CALCULATIONS	EL	9/20/09
3	REVISED OVERLAY & ELIMINATED MEDIAN	EL	9/9/09
2	REVISED PAVEMENT SECTION	EL	8/4/09
1	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
PLAN-IOWA AVENUE
"I" 19+00 TO "I" 22+08.88

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-12

SHEET 15 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\C-12.dwg
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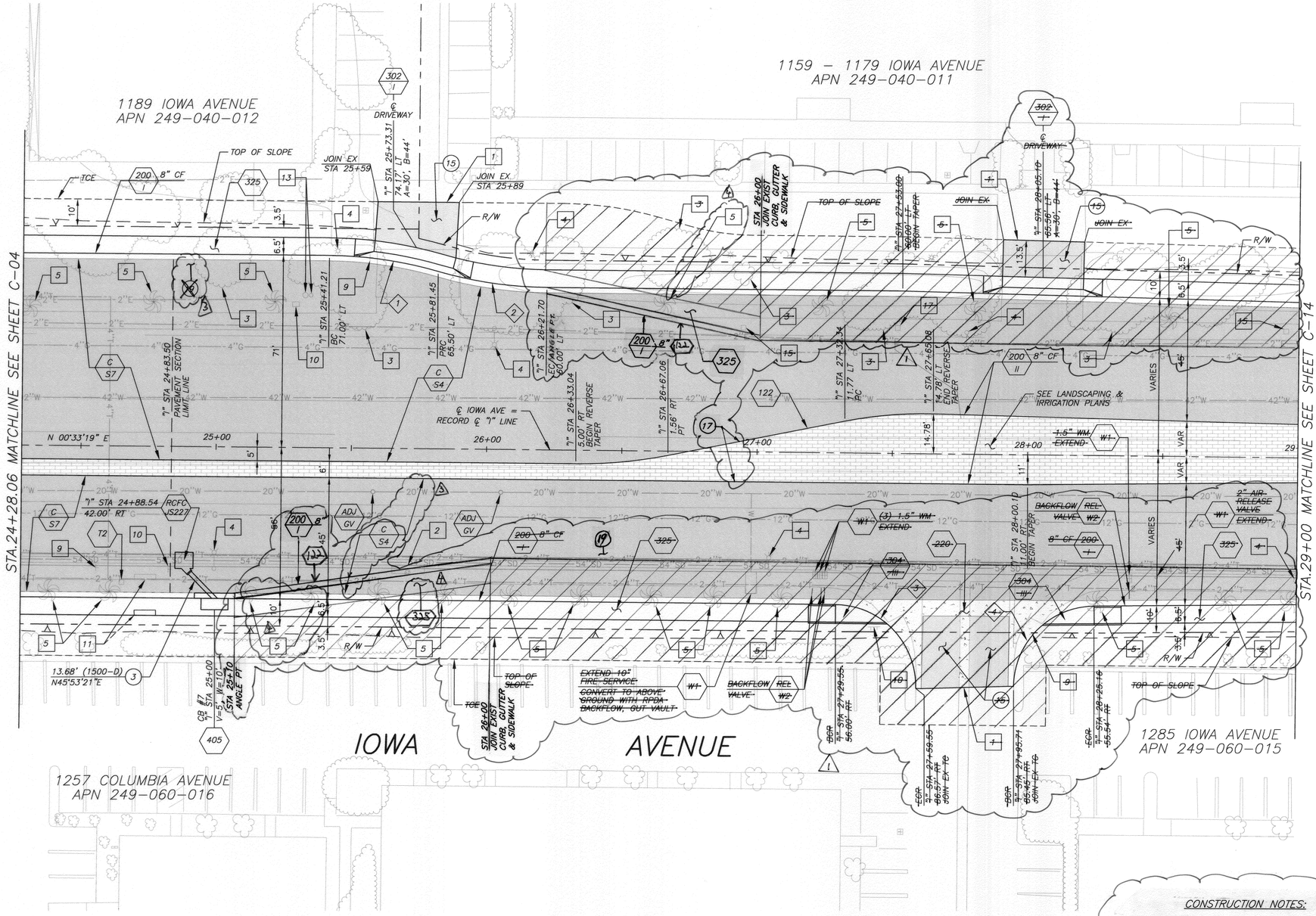

REMOVAL NOTES:

1	SAWCUT LINE
2	REMOVE INLET DRAIN
3	REMOVE TREE
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
9	REMOVE SIGN
10	RELOCATE OR RECONSTRUCT SIGN
11	RELOCATE BUS BENCH
13	RELOCATE ANTENNA AND COVER
15	RELOCATE STREET LIGHT PULLBOX
17	RELOCATE TRAFFIC SIGNAL PULLBOX

CONSTRUCTION NOTES:

C S4	CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 1.45' AB)~~ 0.10 ARHM / 0.50 DGAC / 1.45 CAB
ADJ GV	ADJUST WATER GATE VALVE AND COVER TO GRADE
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
REL W2	RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
T2	RELOCATE TELEPHONE VAULT/BOX (BY TELEPHONE COMPANY)
(3)	INSTALL 18" RCP (D-LOAD PER PLAN)
(15)	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

ASPHALT CONCRETE
PROPOSED MEDIAN
CONCRETE (MATCH EXISTING)
OMITTED FROM PROJECT. ALL EXISTING ITEMS TO BE PROTECTED IN PLACE WHERE PROPOSED IMPROVEMENT LINED OUT. 1

CURVE DATA

CURVE	R	Δ	L	T
1	150.00'	74°26'11"	40.75'	20.50'
2	150.00'	74°26'11"	40.75'	20.50'
~~3~~	~~30.00'~~	~~91°06'55"~~	~~47.71'~~	~~30.59'~~
~~4~~	~~30.00'~~	~~88°48'09"~~	~~46.50'~~	~~29.38'~~

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

CONSTRUCTION NOTES:

(19) COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP. 1

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "1" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
4. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE CITY OF RIVERSIDE STANDARD DRAWINGS AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

N

20' 10' 0 20' 40'
GRAPHIC SCALE: 1" = 20' HORIZ

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION: 929.11 DATUM: 1929 ADJUSTMENT YEAR: 1971

TRANSPORTATION

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www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETT No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
4	JURISDICTIONAL REMOVAL OF TREE/CONST. SW	E.L.	9/30/09
3	REMOVED EXISTING NOTE 4 ADDED 15 NOTE (ADD)	E.L.	9/30/09
2	REVISED PAVEMENT SECTION	E.L.	8/4/09
1	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–IOWA AVENUE
"1" 24+28.06 TO "1" 29+00

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–13
SHEET 16 OF 76

DWG: G:\60202238 Columbia_Iowa\CADD\Civil\Sheet\C-13.dwg
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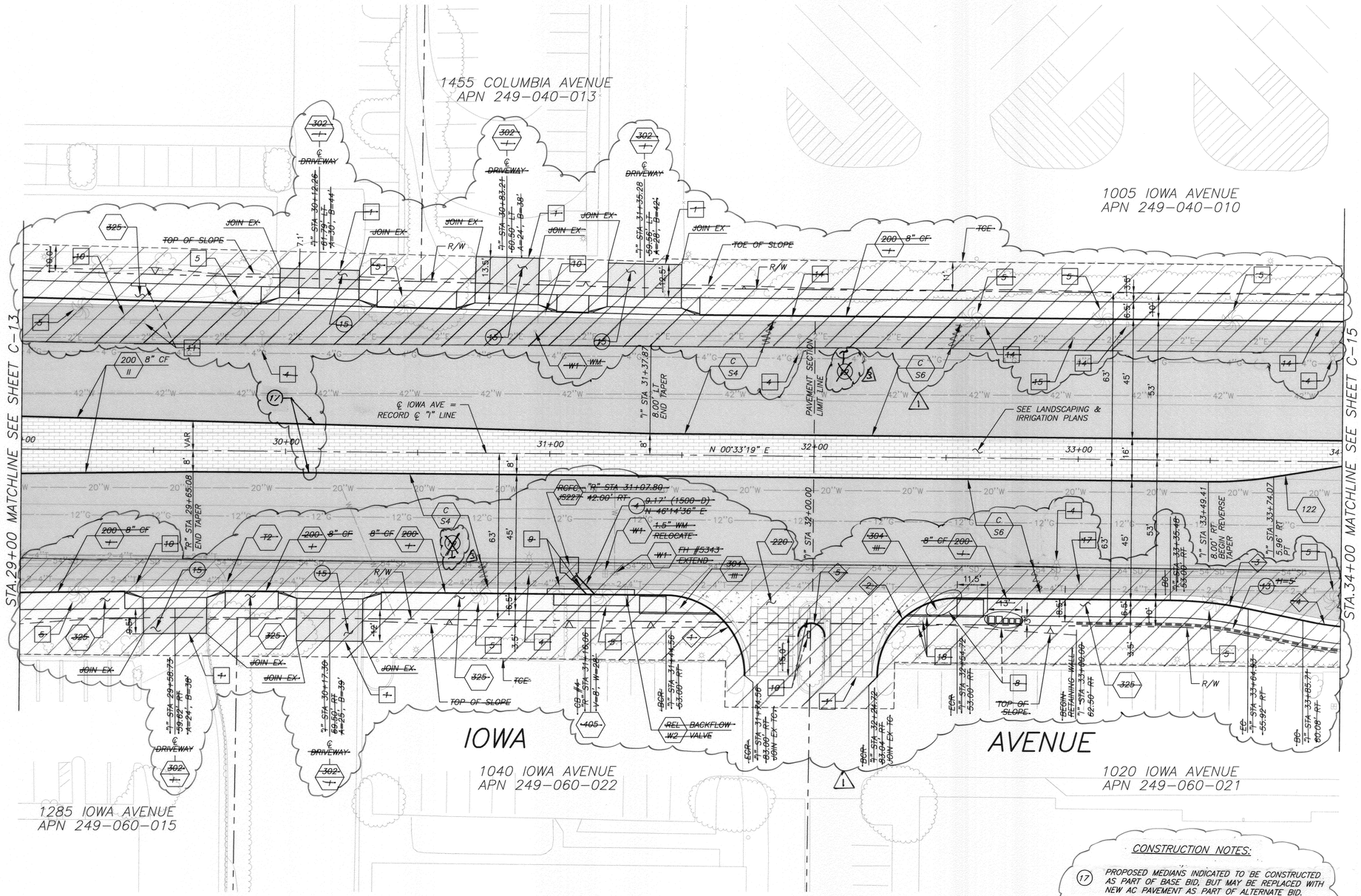

REMOVAL NOTES:

1	SAWCUT LINE
4	REMOVE STREET LIGHT
5	RELOCATE TREE (AS DIRECTED BY ENGINEER)
8	RELOCATE MAILBOX
9	REMOVE SIGN
10	RELOCATE OR RECONSTRUCT SIGN
11	RELOCATE BUS BENCH
14	RELOCATE IRRIGATION BOX
15	RELOCATE STREET LIGHT PULLBOX
17	RELOCATE TRAFFIC SIGNAL PULLBOX
18	REMOVE NEWS STAND

CONSTRUCTION NOTES:

C S4	CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 1.45' AB)~~ 0.10 ARHM/0.50 DGAC/1.45 CAB
C S6	CONSTRUCT AC PAVEMENT ~~(0.60' AC ON 0.70' AB)~~ 0.10 ARHM/0.50 DGAC/0.70 CAB
W1	PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
REL W2	RELOCATE WATER FACILITY BY PRIVATE CONTRACTOR, ITEM AS INDICATED
T2	RELOCATE TELEPHONE VAULT/BOX (BY TELEPHONE COMPANY)
(4)	INSTALL 24" RCP (D-LOAD PER PLAN)
(13)	CONSTRUCT RETAINING WALL PER CITY OF RIVERSIDE STANDARD PLAN NO. 708
(15)	MATCH EXISTING AC PAVEMENT THICKNESS, MINIMUM 4"

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN
- CONCRETE
- STAMPED CONCRETE (MATCH EXISTING)
- RETAINING WALL
- OMITTED FROM PROJECT. ALL EXISTING ITEMS TO BE PROTECTED IN PLACE WHERE PROPOSED IMPROVEMENT LINED OUT.

CURVE DATA

CURVE	R	Δ	L	T
1	~~30.00'~~	~~89°59'53"~~	~~47.12'~~	~~30.00'~~
2	~~30.00'~~	~~90°05'06"~~	~~47.17'~~	~~30.04'~~
3	~~150.00'~~	~~11°19'22"~~	~~29.64'~~	~~14.87'~~
4	~~150.00'~~	~~11°19'22"~~	~~29.64'~~	~~14.87'~~
5	~~5.00'~~	~~180°00'00"~~	~~15.71'~~	----

CONSTRUCTION NOTES:

(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

(19) COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE C-02 FOR LIMITS OF PAVEMENT SECTIONS.
4. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
5. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

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RCFC RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

N

20' 10' 0 20' 40'
GRAPHIC SCALE: 1" = 20'
HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	ELIMINATED HIPAA PER ADDENDUM 4	LL	7/24/09
1	REVISED PAVEMENT SECTION	LL	7/14/09
	PROJECT SCOPE REDUCED	SL	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PUB. IMPROVEMENTS ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN-IOWA AVENUE "I" 29+00 TO "I" 34+00

SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-14
SHEET 17 OF 76

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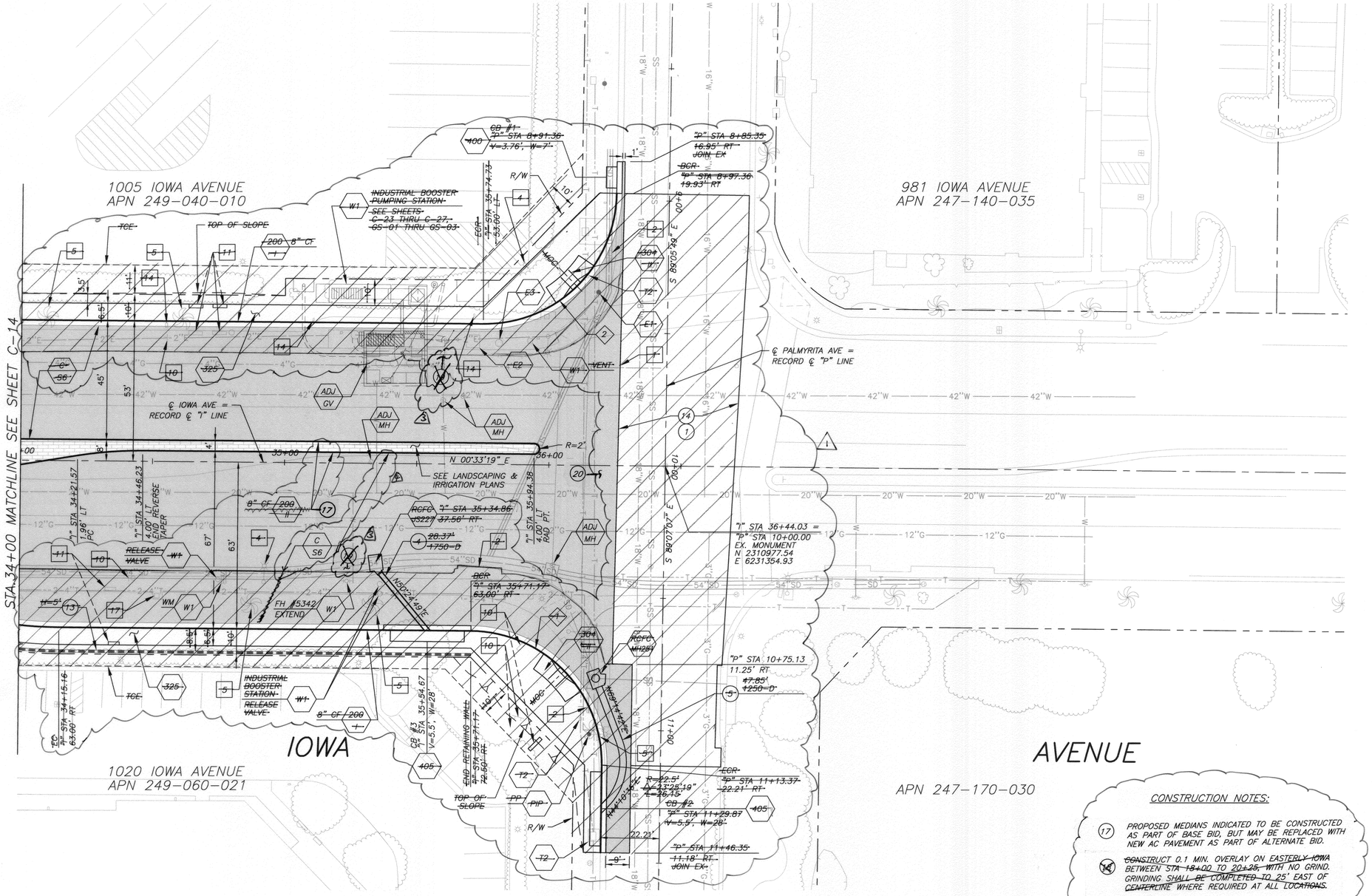

REMOVAL NOTES:

- [1] SAWCUT LINE
- [2] REMOVE INLET DRAIN
- [4] REMOVE STREET LIGHT
- [5] RELOCATE TREE (AS DIRECTED BY ENGINEER)
- [10] RELOCATE OR RECONSTRUCT SIGN
- [11] RELOCATE BUS BENCH
- [14] RELOCATE IRRIGATION BOX
- [17] RELOCATE TRAFFIC SIGNAL PULLBOX

CONSTRUCTION NOTES:

- (C / S6) CONSTRUCT AC PAVEMENT (0.60' AC ON 0.70' AB) 0.10 ARHM/0.50 DGAC/0.70 CAB
- (E1) PUD, ELECTRIC DIV. TO RELOCATE POWER POLE PRIOR TO CONSTRUCTION
- (E2) PUD, ELECTRIC DIV. TO ADJUST VAULT OR BOX TO GRADE OR RELOCATE PRIOR TO CONSTRUCTION
- (E3) PUD, ELECTRIC DIV. TO ADJUST MANHOLE TO GRADE
- (W1) PUD, WATER DIV. TO EXTEND LATERAL AND RELOCATE FIRE HYDRANTS, AIR RELEASE VALVES, WATER METERS, BACKFLOW VALVES, WATER VAULTS AND VENT PIPES
- (T2) RELOCATE TELEPHONE VAULT/BOX (BY TELEPHONE COMPANY)
- (ADJ MH) ADJUST STORM DRAIN, SEWER OR WATER MANHOLE TO GRADE
- (ADJ GV) ADJUST WATER GATE VALVE AND COVER TO GRADE
- (PIP) PROTECT IN PLACE
- (1) CONSTRUCT 2" AC OVERLAY
- (4) INSTALL 24" RCP (D-LOAD PER PLAN)
- (5) INSTALL 30" RCP (D-LOAD PER PLAN)
- (13) CONSTRUCT RETAINING WALL PER CITY OF RIVERSIDE STANDARD PLAN NO. 708
- (14) COLD PLANE 2"

LEGEND:

- ASPHALT CONCRETE
- PROPOSED MEDIAN
- RETAINING WALL
- OMITTED FROM PROJECT. ALL EXISTING ITEMS TO BE PROTECTED IN PLACE WHERE PROPOSED IMPROVEMENT LINED OUT.

CURVE DATA

CURVE	R	Δ	L	T
1	50.00'	90°16'06"	78.77'	50.23'
2	50.00'	89°43'55"	78.31'	49.77

CONSTRUCTION NOTES:

- (17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.
- (X) CONSTRUCT 0.1 MIN. OVERLAY ON EASTERLY IOWA BETWEEN STA 18+00 TO 20+25, WITH NO GRIND. GRINDING SHALL BE COMPLETED TO 25' EAST OF CENTERLINE WHERE REQUIRED AT ALL LOCATIONS.
- (19) COLDMILL 5' WIDE MINIMUM STRIP ADJACENT TO EXISTING CURB WITH 0.1' MINIMUM DEPTH BELOW GUTTER LIP.
- (20) COLDMILL 20' WIDE STRIP ADJACENT TO STREET INTERSECTION WITH 0.1' MINIMUM DEPTH.

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. SIDEWALK SHALL BE 6.50', UNLESS OTHERWISE NOTED ON THE PLANS.
3. SEE X-03 FOR TRAFFIC SIGNAL PLAN.
4. SEE SD-01 FOR STORM DRAIN PROFILES AND DETAILS.
5. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

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RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

GRAPHIC SCALE: 20' 10' 0 20' 40' — 1" = 20' HORIZ

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
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www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRUNE No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
4	ADDED CONST NOTE FOR PAVEMENT	E.L.	9/25/09
3	ELIMINATED GRIND PER ADDEN. #2	E.L.	9/23/09
2	REVISED PAVEMENT SECTION	E.L.	8/24/09
1	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY S.A. DRAWN BY S.A. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–IOWA AVENUE
"I" 34+00 TO PALMYRITA AVE

SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–15

SHEET 18 OF 76

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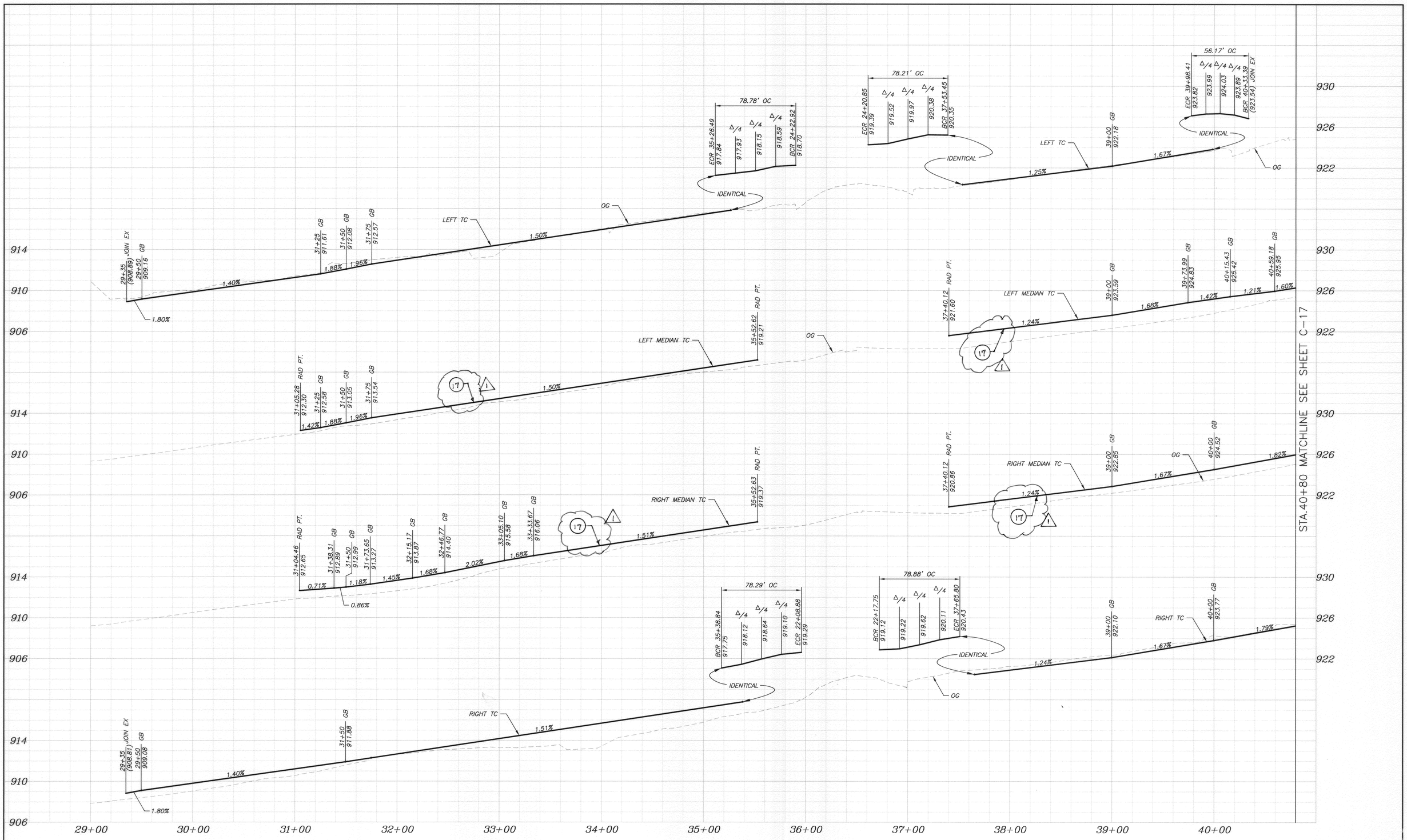

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM

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REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRECHA
No. C 41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PROFILE – COLUMBIA AVENUE "R" 29+35 TO "R" 40+80

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-16

SHEET 19 OF 76

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TIME: 6-08-09 - 4:48pm User: Nguyend XRef Files: xbdr xpro_cdu

STA.40+80 MATCHLINE SEE SHEET C-16

STA.53+00 MATCHLINE SEE SHEET C-18

70.87' OC

ECR 40+69.57 (924.10) JOIN EX

Δ/4 925.08

Δ/4 925.80

Δ/4 926.18

BCR 41+15.38 926.09

IDENTICAL

1.77%

42+26.44 GB 927.98

1.79%

43+00 GB 929.37

1.97%

OG

LEFT TC

46+00 GB 935.28

2.08%

IDENTICAL

49+00 GB 941.53

2.44%

49+25 GB 942.14

2.96%

49+50 GB 942.88

3.44%

49+75 GB 943.74

3.95%

LEFT TC

51+15 GB 949.27

4.34%

51+83 BVC 952.22

100.00' VC
PVI STA = 52+33
PVI ELEV = 954.39
G1=4.34% G2=1.26%

52+83 EVC 955.03

1.26%

40+97.89 GB 926.57

1.60%

17

1

1.79%

41+65.61 RAD PT. 927.78

LEFT MEDIAN TC

44+46.28 RAD PT. 933.08

1.93%

LEFT MEDIAN TC

46+00 GB 936.05

17

1

2.08%

IDENTICAL

48+49.03 GB 941.24

2.27%

48+76.79 GB 941.87

2.72%

49+03.59 RAD PT. 942.60

2.08%

49+72.83 RAD PT. 944.68

3.94%

LEFT MEDIAN TC

50+71.83 GB 948.58

3.74%

51+01.25 GB 949.68

3.60%

51+32.12 GB 950.79

3.84%

51+61.54 GB 951.92

3.97%

51+83 BVC 952.77

100.00' VC
PVI STA = 52+33
PVI ELEV = 954.76
G1=3.97% G2=0.97%

52+83 EVC 955.24

0.97%

17

1

OG

44+46.41 RAD PT. 932.94

2.12%

RIGHT MEDIAN TC

46+00 GB 936.02

2.01%

46+77.49 937.66

2.07%

17

1

IDENTICAL

49+02.13 RAD PT. 942.32

2.07%

49+72.83 RAD PT. 944.44

3.94%

RIGHT MEDIAN TC

51+15 GB 950.04

4.03%

51+83 BVC 952.78

100.00' VC
PVI STA = 52+33
PVI ELEV = 954.80
G1=4.03% G2=0.91%

52+83 EVC 955.26

0.91%

17

1

OG

41+66.11 RAD PT. 927.54

1.82%

RIGHT MEDIAN TC

41+00.30 GB 925.57

1.79%

OG

1.83%

43+00 GB 929.23

RIGHT TC

2.01%

46+00 GB 935.25

2.09%

IDENTICAL

49+00 GB 941.53

2.44%

49+25 GB 942.14

2.96%

49+50 GB 942.88

3.44%

49+75 GB 943.74

3.95%

OG

RIGHT TC

51+15 GB 949.27

4.35%

51+83 BVC 952.23

100.00' VC
PVI STA = 52+33
PVI ELEV = 954.40
G1=4.35% G2=1.25%

52+83 EVC 955.03

1.25%

930 926 922

41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00

958 954 950

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BREA No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

PROJECT SCOPE REDUCED 7/1/09

MARK REVISIONS APPR. DATE

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PROFILE – COLUMBIA AVENUE
"R" 40+80 TO "R" 53+00

SCALE: HOR 1" = 40'; VER 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-17

SHEET 20 OF 76

DWG: G:\60202038 Columbia_Iowa\CADD\Civil\Sheet\C-17.dwg
TIME: 6-07-09 - 2:50pm User: Nguyend XRef Files: xbar xpro_colu

STA.53+00 MATCHLINE SEE SHEET C-17

CONSTRUCTION NOTES:

(21) PAVEMENT ~~SHOWN HERE~~ SHALL EXTEND TO 2-FT. ON EITHER SIDE OF RAIL. ALL CURB IMPROVEMENTS SHALL NOT BE EXTENDED BUT SHALL BE CONSTRUCTED AS SHOWN. BNSF TO COMPLETE IMPROVEMENTS OUTSIDE CITY PROJECT LIMITS.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

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T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETZ No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
B	MEDIAN CURB ELEVATION 56+00 TO 57+00	E.L.	1/11/10
A	PROJECT SCOPE REDUCED	E.L.	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

	APPROVED BY	BY	DATE
	CONST. CONTRACT ADMIN.		
	PRINCIPAL ENGINEER		
	STREET SERVICES		
	SURVEYOR		
	TRAFFIC DIVISION		
	PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PROFILE – COLUMBIA AVENUE
"R" 53+00 TO "R" 62+53.23

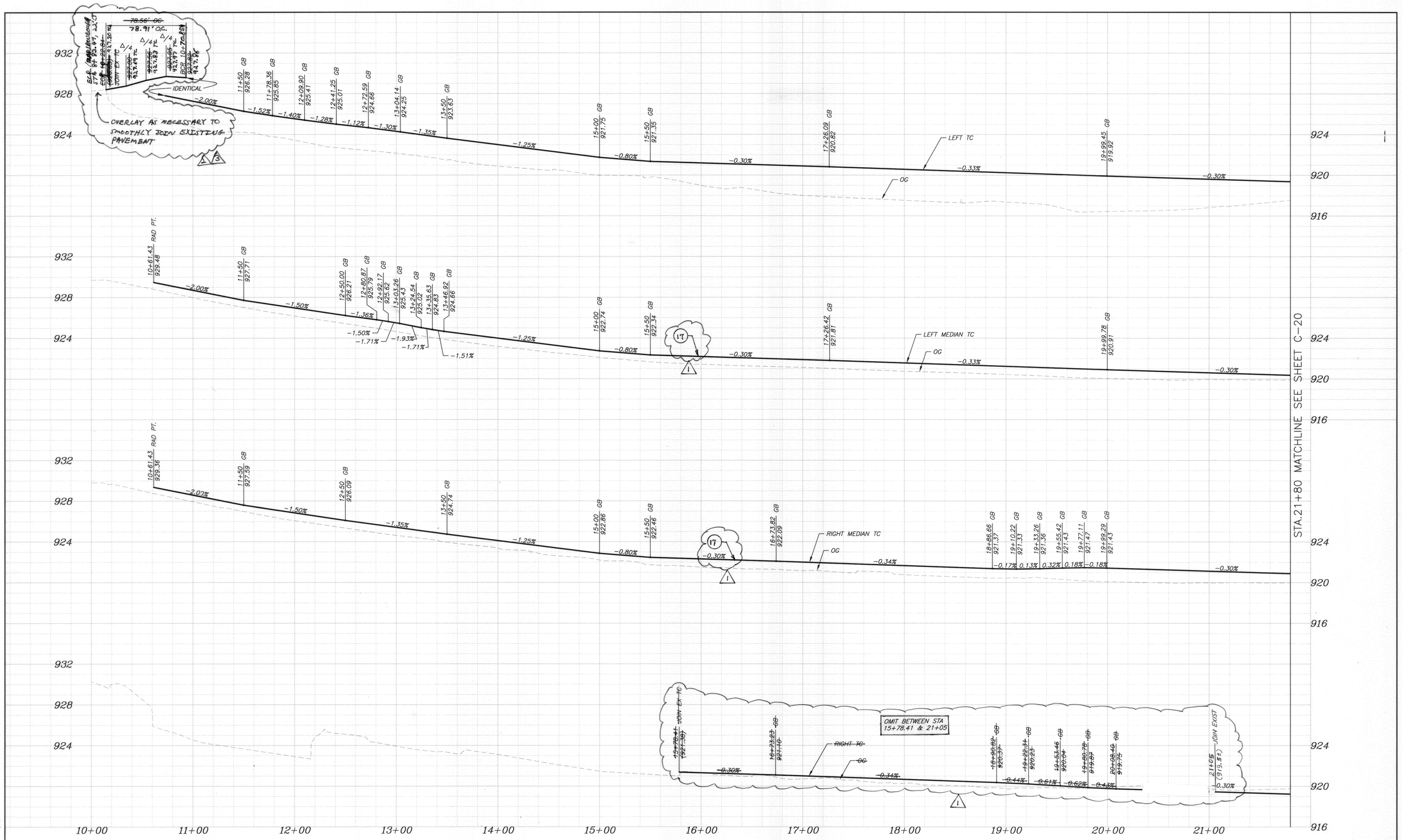
SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702089
CONSTRUCTION W.O. NO. 0915428

R-4132
C-18

SHEET 21 OF 76

DWG: G:\60202038 Columbia_Iowa\CADD\Civil\Street\C-18.dwg
TIME: 6-07-09 - 2:51pm User: tguyend Xref Files: xbar xpro_colu



BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.17 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRITTAIN No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	REVISED NW IOWA RETURN	CL	4/1/10
2	REVISED NW IOWA RETURN	CL	3/1/10
1	PROJECT SCOPE REDUCED	CL	7/1/09

DESIGNED BY D.N. DRAWN BY A.B. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT

PROFILE – IOWA AVE "I" 10+00 TO "I" 21+80

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-19

SHEET 22 OF 76

DWG: G:\60202038 Columbia_Iowa\CADD\Civil Sheet\C-19.dwg
TIME: 6-09-09 - 2:18pm User: Nguyend XRef Files: xbdr xpro_iowa

STA.21+80 MATCHLINE SEE SHEET C-19

STA.33+80 MATCHLINE SEE SHEET C-21

924
920
916

ECR 22+08.88
919.29
−0.30%
LEFT TC

BCR 24+22.92
918.70
0.30%
LEFT TC

25+41.21 GB
919.05
25+61.52 GB
919.14
0.44%
0.70%

26+01.39 GB
919.42
26+21.70 GB
919.50
0.38%
0.51%

27+00
919.90±
JOIN EXIST
0.38%

165.00' VC
PVI STA = 29+00
PVI ELEV = 920.55
G1=0.38%, G2=−0.32%

28+17.50 BVC
920.24

29+82.50 EVC
920.29

OMIT BETWEEN STA
27+00 & 33+80

OG

LEFT TC

−0.32%

22+33.67 RAD PT.
920.21
−0.30%
LEFT MEDIAN TC

OG

24+02.20 RAD PT.
920.24
0.30%

26+00 GB
920.84
26+33.04 GB
920.95
26+50.13 GB
920.99
26+67.06 GB
921.00
0.33%
0.23%
0.06%

−0.06%

27+32.34 GB
920.96
27+48.62 GB
920.98
27+65.08 GB
921.02
0.12%
0.24%

165.00' VC
PVI STA = 29+00
PVI ELEV = 921.54
G1=0.39%, G2=−0.30%

28+17.50 BVC
921.22

0.39%

29+82.50 EVC
921.29

LEFT MEDIAN TC

−0.30%

OG

22+33.67 RAD PT.
920.73
−0.30%
RIGHT MEDIAN TC

OG

24+02.20 RAD PT.
920.37
−0.15%

25+00 GB
920.22
0.30%

26+00 GB
920.52
0.36%

RIGHT MEDIAN TC

OG

165.00' VC
PVI STA = 29+00
PVI ELEV = 921.61
G1=0.36%, G2=−0.33%

28+17.50 BVC
921.31

29+82.50 EVC
921.34

−0.33%

33+49.41 GB
920.17
33+61.78 GB
920.09
33+74.07 GB
920.08
−0.24%
−0.08%
0.00%

21+90
919.20
−0.30%
RIGHT TC

OG

BCR 22+17.75
919.12

ECR 24+20.85
919.39
−0.20%

25+00 GB
919.23
25+10 GB
919.26
0.30%

RIGHT TC

−0.30%
0.40%

26+00 GB
919.53
(919.6±)

47.71' OG
BCR 27+09.55
919.37
27+20.37
920.23
27+30.93
920.93
27+41.66
921.66
ECR 27+49.55
(922.00) JOIN EX

IDENTICAL

−0.34%

46.50' OG
BCR 27+95.71
(926.00) JOIN EX
27+96.43
921.66
28+07.07
921.07
28+17.93
920.43
28+28.79
920.33
28+39.16
920.35
28+40 BVC
920.35

IDENTICAL

0.36%

140.00' VC
PVI STA = 29+00
PVI ELEV = 920.60
G1=0.36% G2=−0.32%

OMIT BETWEEN STA
26+00 & 33+80

29+70 EVC
920.36

RIGHT TC

−0.32%

47.12' OG
BCR 31+44.56
919.82
31+55.32
919.82
31+66.07
919.83
31+76.82
919.90
ECR 31+87.56
(920.00) JOIN EX

IDENTICAL

47.17' OG
BCR 32+24.72
(926.00) JOIN EX
32+35.48
919.86
32+46.23
919.65
32+56.98
919.53
32+67.73
919.45
ECR 32+78.48
919.45

IDENTICAL

−0.33%

33+35.48 GB
919.10
33+50.27 GB
919.12
33+64.93 GB
919.02
−0.41%
−0.68%
−0.72%

OG

RIGHT TC

22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRENKLE
No. C 41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	CL	7/1/09

DESIGNED BY D.N. DRAWN BY A.B. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

PROFILE – IOWA AVE
"I" 21+80 TO "I" 33+80

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-20

SHEET 23 OF 76

DWG: G:\60202238 Columbia_Iowa\CADD\Civil\Sheet\C-20.dwg
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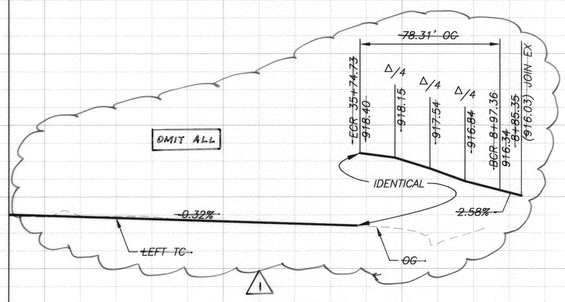

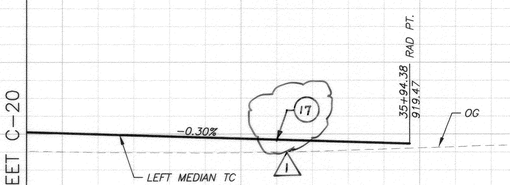

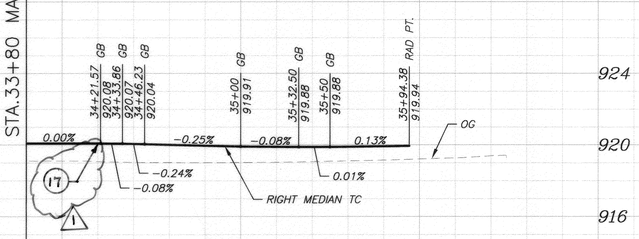

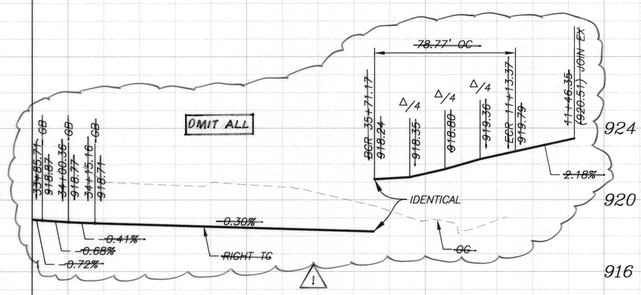

924 920 916

STA.33+80 MATCHLINE SEE SHEET C-20

34+00 35+00 36+00

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\C-21.dwg
TIME: 6-08-09 - 4:56pm User: Nguyenb Xref Files: xbar xpro_iowa

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971.

TRANSPORTATION

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Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EC	7/16/09

DESIGNED BY D.N. DRAWN BY A.B. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATUR ON SHEET-1
CITY ENGINEER
DATE

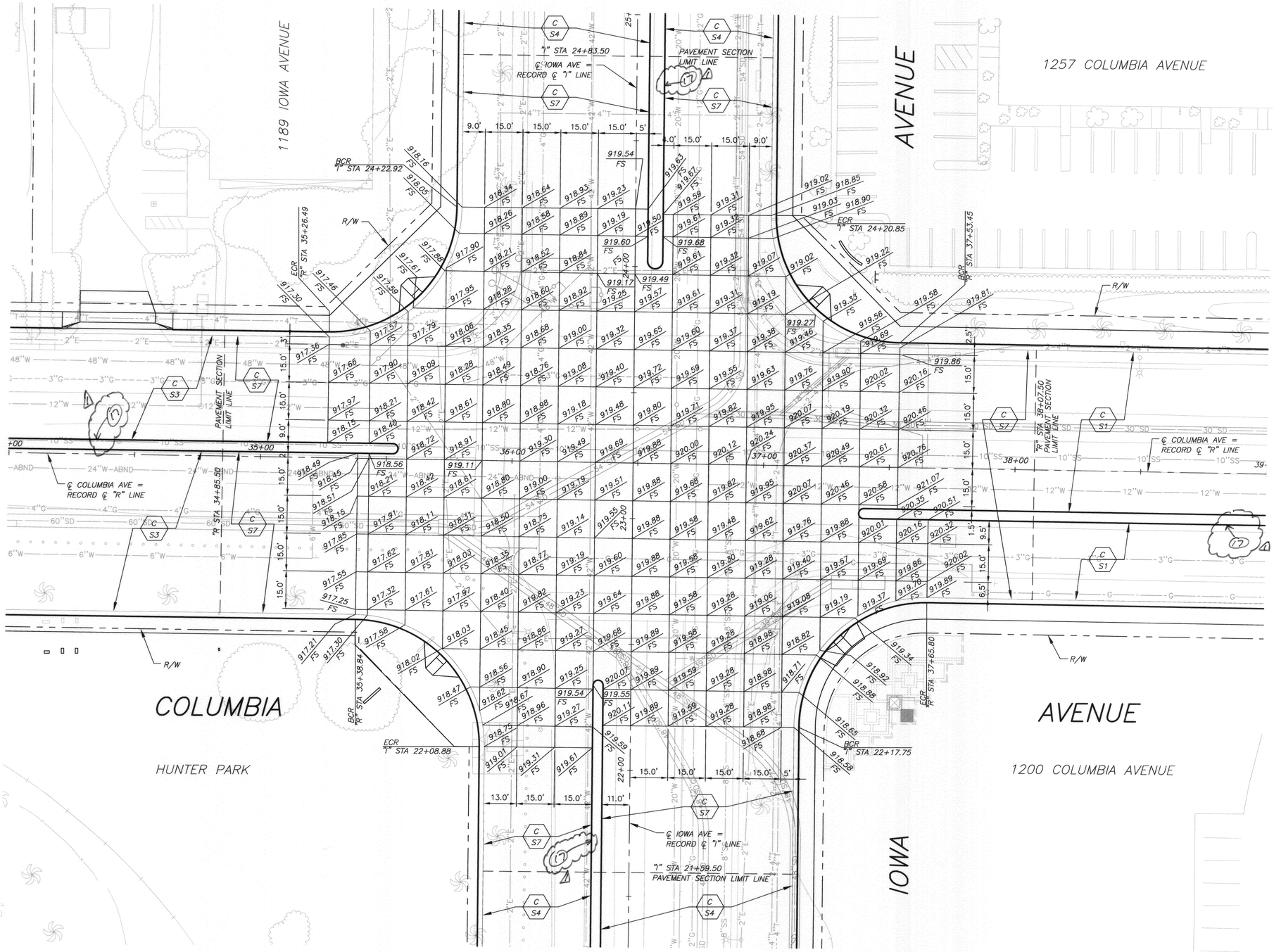
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PROFILE – IOWA AVE "I" 33+80 TO "I" 35+94.41

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-21

SHEET 24 OF 76



(17) PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID ~~(BID)~~ BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID

NOTES:

1. STATIONING IS BASED ON COLUMBIA AVENUE RECORD CENTERLINE – "R" LINE, AND IOWA RECORD CENTERLINE – "I" LINE.
2. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

N

20' 10' 0 20' 40'
GRAPHIC SCALE: 1" = 20'
HORIZ

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

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REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	ADJACENT SLOPE REDUCED	EL.	7/16

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY:	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
PLAN–COLUMBIA AVENUE/IOWA AVENUE INTERSECTION

SCALE 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–22

SHEET 25 OF 76

DWG: C:\160020238 Columbia_Iowa\CADD\Civil\Sheet\C-22.dwg
DATE: 6-08-09 4:52pm User: tguyard Xref Files: xbar xrd_lows xtopo xutil_ex xrow_FINAL xmonument_base xintersection

NEW VENTILATION CONNECT TO TUNNEL WALL. USE SAME SIZE & TYPE OF MATERIAL AS EXIST. MIN 4' COVER INSTALL TO BE WATER TIGHT. SEE SHEET GS-3 DETAIL S-601

RELOCATED EXISTING RADIO ANTENNA UPGRADE CONDUIT & WIRE BY 2 SIZES FROM EXISTING. USE SAME TYPE OF CONDUIT AS EXISTING. RE- CONNECT TO EXISTING. SEE SHEET GS-3 DETAIL S-602

NEW VENTILATION SYSTEM SEE SHEET GS-3 DETAIL S-601

REMOVE VEGETATION IN CONSTRUCTION AREA

TCE

EXIST BLDG

10'

PROPOSED CONCRETE SIDEWALK

RAMP

CONCRETE PAD S-190

TOP OF VAULT EL 919.50±

6' 5'

PROPOSED R/W LINE

2' 5' 12.42' 10.83' 6.75' 7'

6.5'

EXIST R/W LINE

LANDING

DOWN

TOP OF VAULT EL. 919.50±

3.5'

UPGRADED TRANSFORMER BY RIVERSIDE REDEVELOPMENT AGENCY

38'

S-190

TOP OF NEW TUNNEL EL. 912.36

8' 1'

PROPOSED CONCRETE SIDEWALK

6.5'

EL OF EXIST CONNECTION IS 5.5'± ABOVE FF

E C-25 | 1 C-26 | D C-26 | C C-26

PROPOSED CURB & GUTTER

EL OF EXIST CONNECTION IS 5.5'± ABOVE FF

EXIST CONCRETE SIDEWALK

G C-25

VENT

STEPS

DOWN

EXIST CONCRETE PAD

VENT

NEW UNDERGROUND HIGH VOLTAGE POWER FEED. CONTRACTOR TO DEMO & REPLACE POWER FEED 4-5"ø PVC SCH 80 CONDUITS. PULL SAME SIZE WIRE AS EXISTING & TERMINATE SAME EXISTING. PLACE OVER THE TOP OF NEW TUNNEL.

NEW VENTILATION CONNECT TO EXISTING WALL USE SAME SIZE & TYPE OF MATERIAL AS EXISTING & INSTALL TO BE WATER TIGHT MIN 4' COVER

OMITTED

F C-25

2 C-26

MH MH MH

CORE NEW HOLE INTO EXIST WALL AS REQUIRED OR USE EXIST 24" PENETRATION. OPENING IN WALLS EXPOSED SHALL BE SEALED WITH CONCRETE GROUT

EXISTING SUMP, SLOPE TO DRAIN FLOOR SLAB TO EXISTING SUMP. REPLUMB EXISTING SUMP TO ACCOMODATE MODIFICATIONS & DISCHARGE TO THE PROPOSED CURB & GUTTER LOCATION

RELOCATE EXISTING DRAIN LINE & RECONNECT INSIDE EXIST PS & RE-PLUMB TO SIDE OF NEW CURB. USE SAME SIZE & TYPE OF MATERIAL AS EXISTING SEE DETAIL S-601 SHEET GS-3

EXISTING DRAIN LINE REMOVE ON TOP & PARTIALLY INSIDE

NEW CONC COLUMN PER C-25

NEW CONC BEAM PER SHEET C-25

REWORK TOP OF MANHOLE TO NEW FINISH GRADE. DROP TOP OF PRECAST MH RING. TYP OF 3

EXISTING RADIO TELEMETRY PANEL RELOCATED BY CITY. PROVIDE POWER FROM EXIST CIRCUIT BREAKER PANEL TO RELOCATED RADIO TELEMETRY PANEL

HOMERUN TO EXIST TELEMETRY

IOWA AVENUE

DIGALERT

DIAL TOLL FREE 1-800-227-2600

AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DWG: Y:\M&E\Iowa Booster Station\Pionset\C-23.dwg
TIME: 6-08-09 - 11:36am User: siocoa XRef Files: xtopo xutil_ex xrd_iowa xrow_FINAL Base Wrong stamp xbdr

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM

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REGISTERED PROFESSIONAL ENGINEER LAINE E. FAIRBANKS No. 50129 Exp. 6-30-09 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	LC	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET-1
CITY ENGINEER

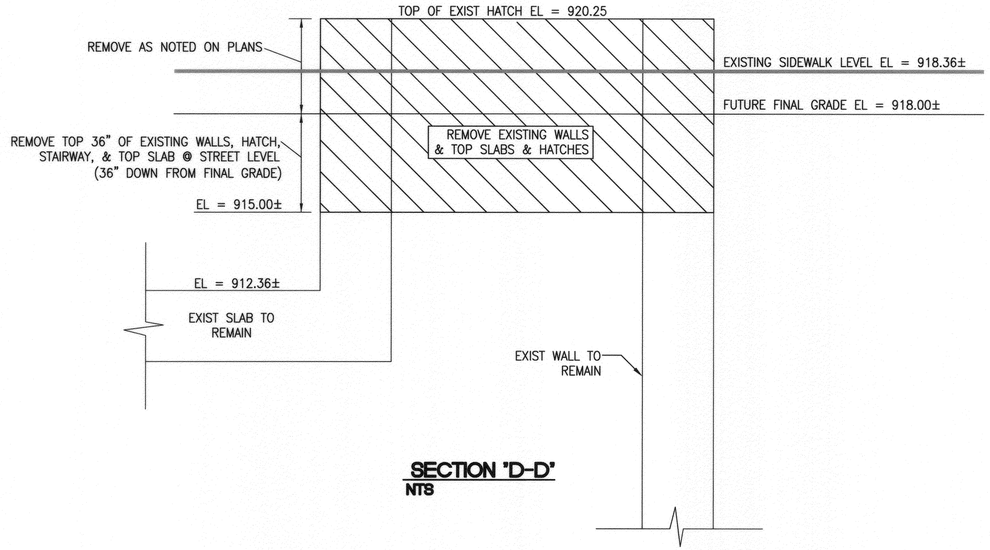
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS-PUMP VAULT SITE PLAN

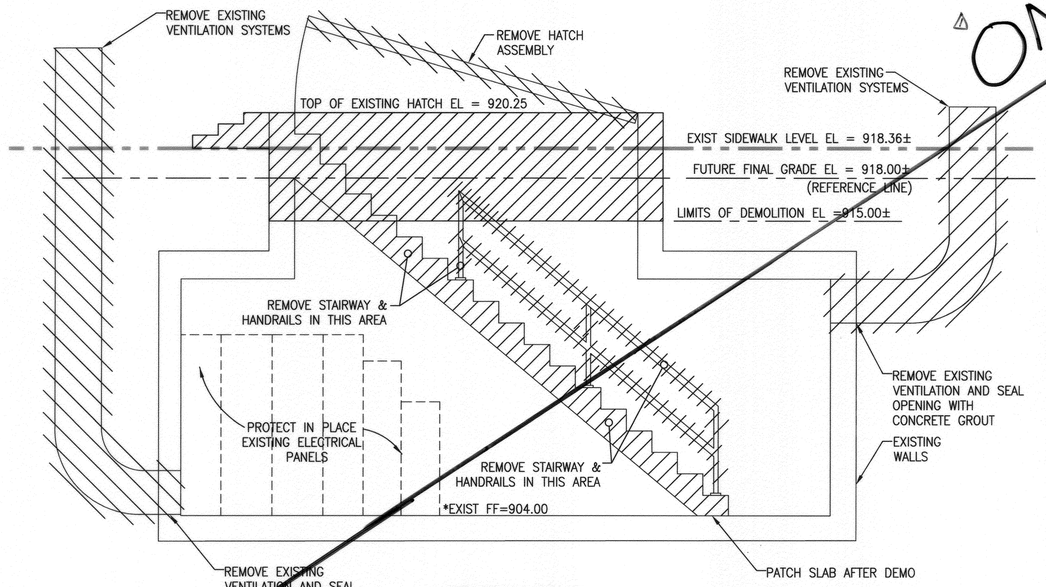
SCALE: 1" = 5'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-23
SHEET 26 OF 76

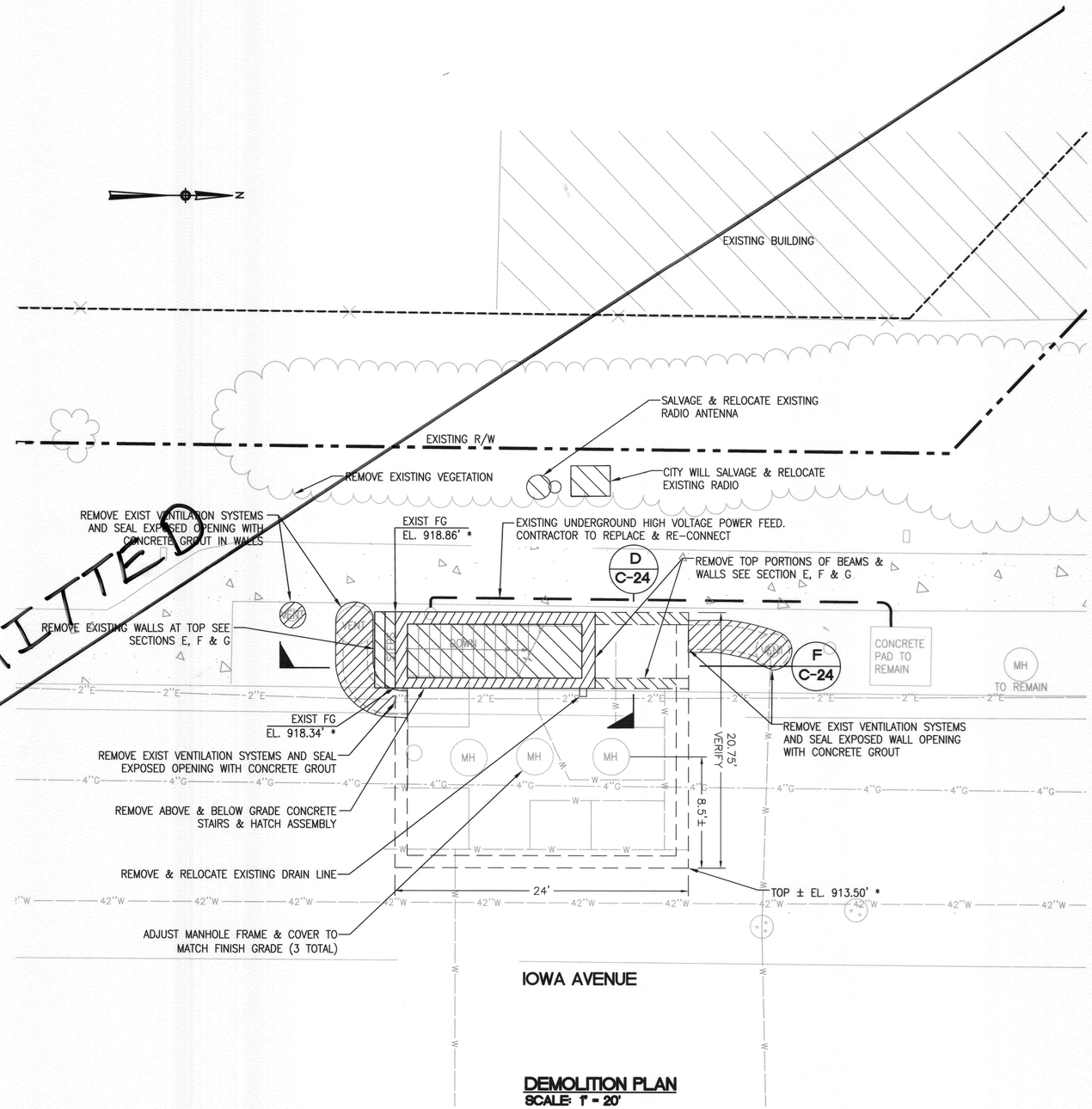


SECTION 'D-D'
NTS



SECTION 'F-F'
NTS

OMITTED



DEMOLITION PLAN
SCALE: 1" = 20'

* CONTRACTOR TO VERIFY EXISTING ELEVATIONS. DATUM FROM RECORD DRAWINGS AND SURVEY MAY BE DIFFERENT. ADJUST AS NECESSARY.

DIGALERT
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AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCH MARK
CITY OF RIVERSIDE BENCH MARK 18-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "18-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
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REGISTERED PROFESSIONAL ENGINEER — LAWRENCE E. FAIRBANKS — No. 50129 — Exp. 6-30-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REVISED	EC	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

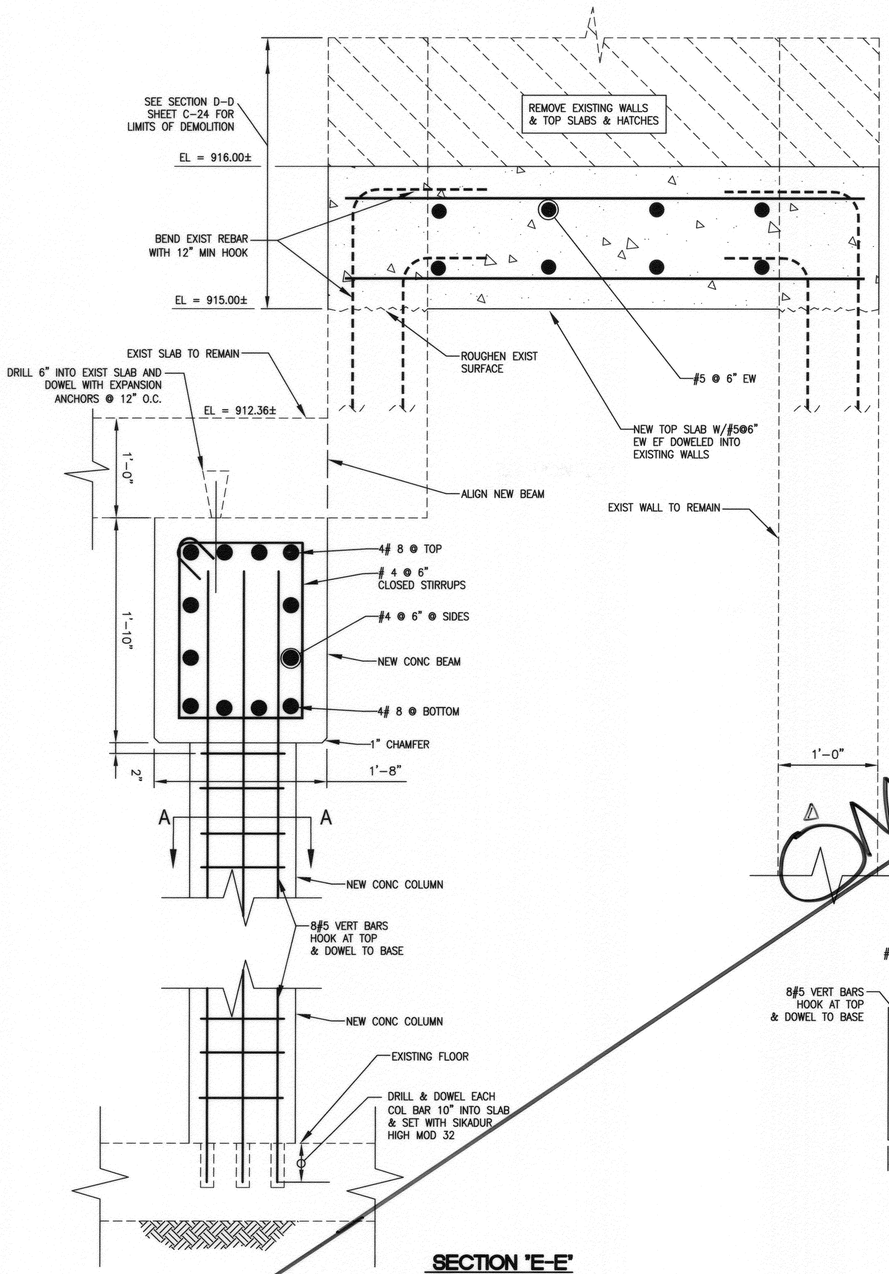
APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS-DEMOLITION PLAN
SCALE: AS SHOWN

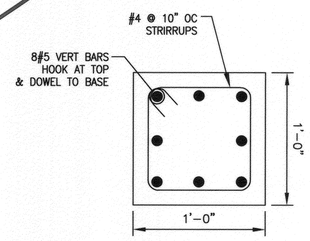
DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428
R-4132
C-24
SHEET 27 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\C-24.dwg
TIME: 6-08-09 - 10:50am User: slocoa XRef Files: xtopo xutil_ex xrd_iowa xrow_FINAL xdaylight xbasin xtce xbdr

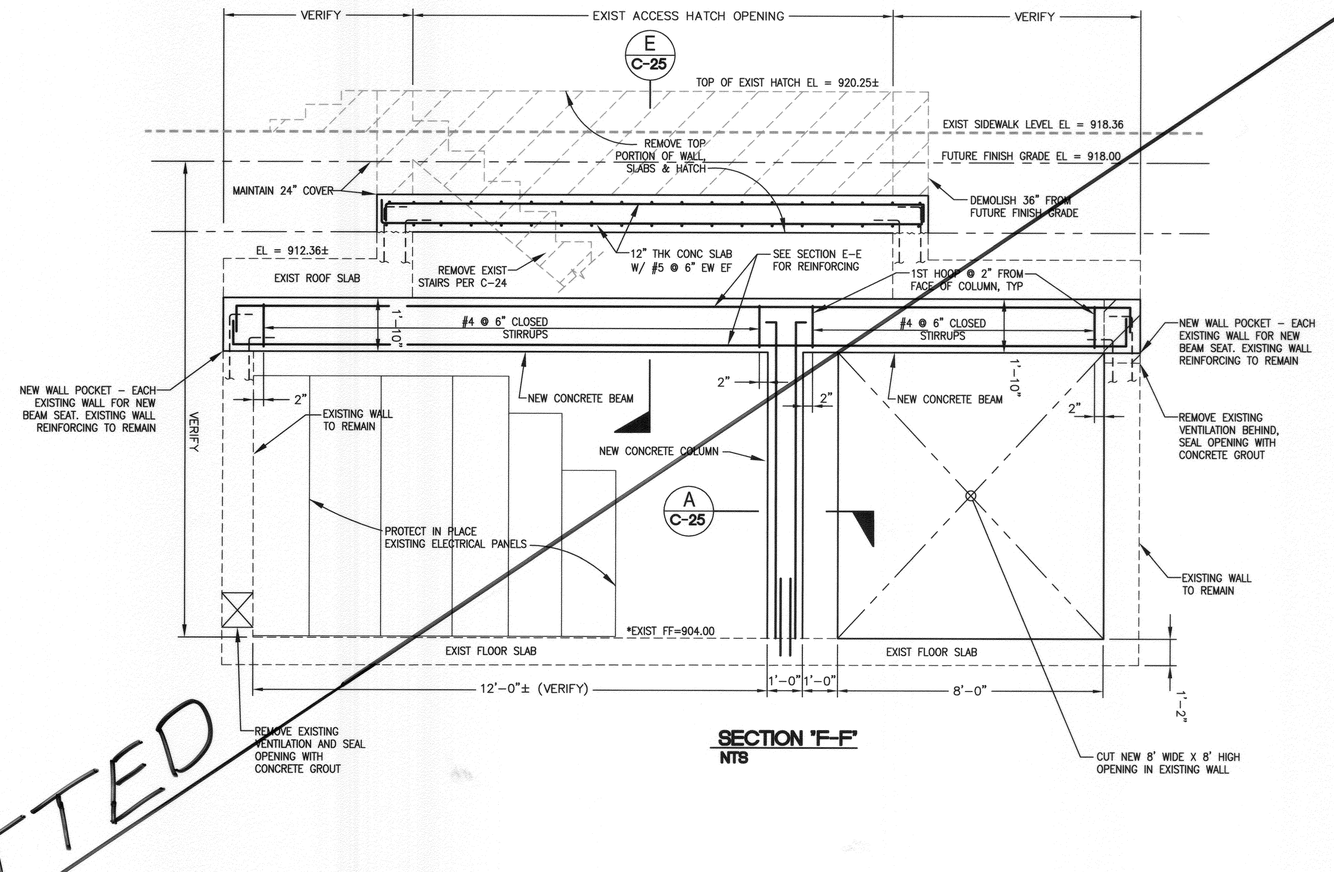
NOTE:
* CONTRACTOR TO VERIFY EXISTING ELEVATIONS. DATUM FROM RECORD DRAWINGS AND SURVEY MAY BE DIFFERENT. ADJUST AS NECESSARY



SECTION 'E–E'
NTS

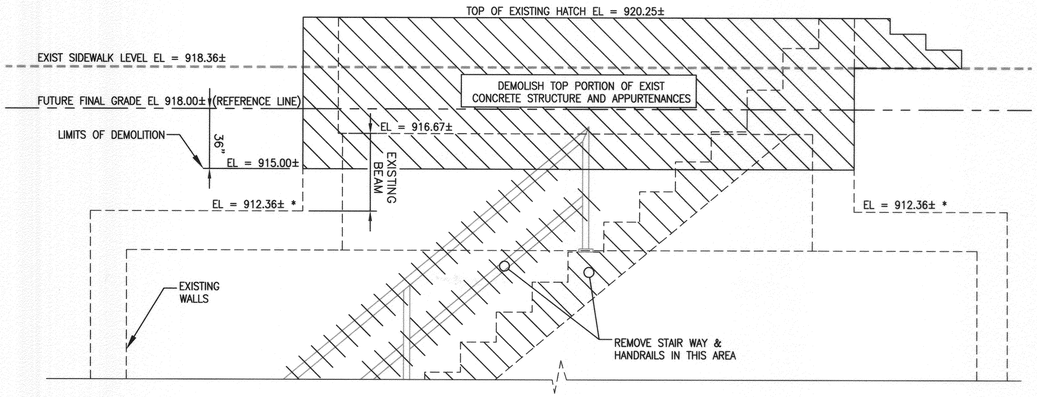


SECTION 'A–A'
NTS



SECTION "F–F"
NTS

OMITTED



SECTION 'G–G'
NTS

BENCH MARK
CITY OF RIVERSIDE BENCH MARK #8–A3 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "#8–A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 928.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER LANNIE E. FAIRBANKS No. 50129 6-30-09 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
Δ	PROJECT SCOPE REDUCED	LL	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

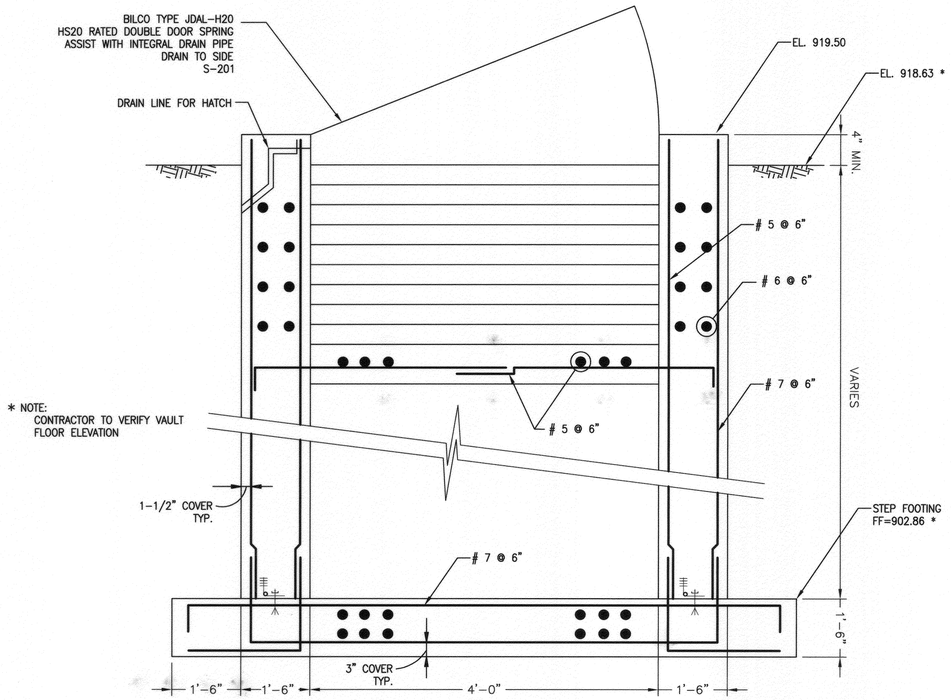
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS–SECTION DETAILS

SCALE: AS SHOWN

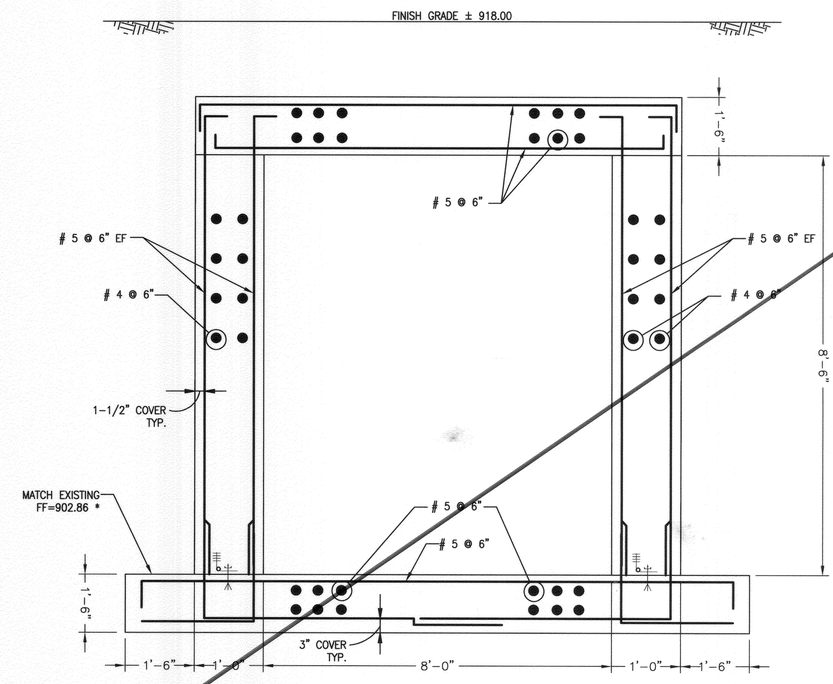
DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
C–25
SHEET 28 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\C–25.dwg
TIME: 6–08–09 – 10:51am User: siocoa XRef Files: xbdr

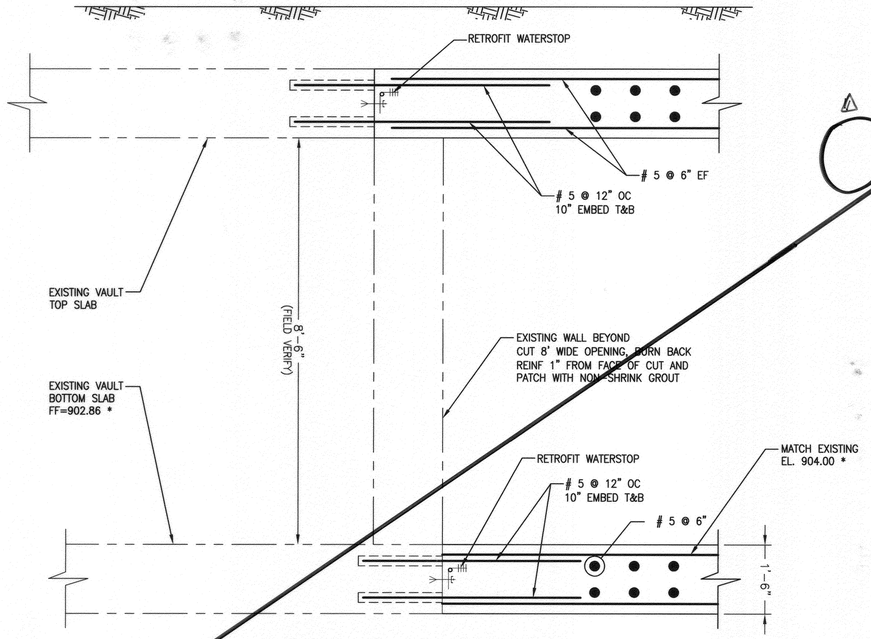


STAIRCASE SECTION "B-B"
NTS

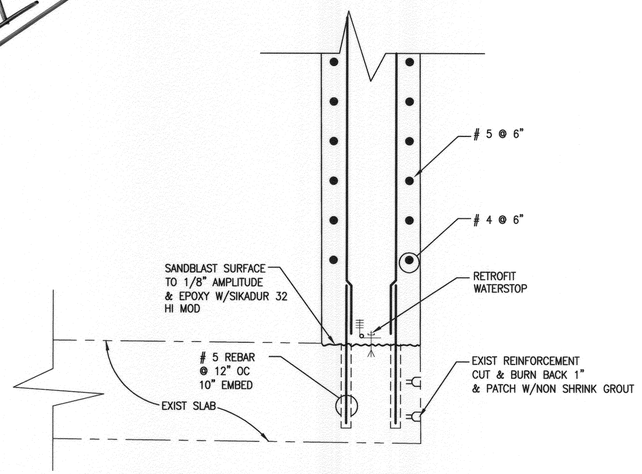


TUNNEL DETAIL SECTION "C-C"
NTS

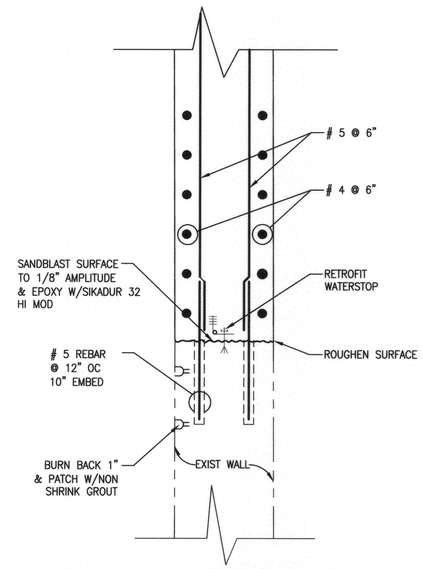
OMITTED



TUNNEL DETAIL SECTION "D-D"
NTS



EXISTING SLAB AND TUNNEL DETAIL 1
NTS



EXISTING WALL AND TUNNEL DETAIL 2
NTS

* CONTRACTOR TO VERIFY EXISTING ELEVATIONS & DATUM FROM RECORD DRAWING AND SURVEY MAY BE DIFFERENT, ADJUST AS NECCESSARY.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK #3-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "3B-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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AECOM
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REGISTERED PROFESSIONAL ENGINEER — LAINNE E. FAIRBANKS — No. 60129 — Exp. 6-30-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EL.	7/16/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS—SECTION DETAILS

SCALE: AS SHOWN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
C-26
SHEET 29 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\C-26.dwg
TIME: 6-08-09 - 10:51am User: siocoa XRef Files: xbdr

SLAB-ON-GRADE PER DETAIL S-190 SHEET GS-2

B / C-26

C / C-27

SLOPE @ 2%

SLAB-ON-GRADE PER DETAIL S-190 SHEET GS-2

HATCH

DOWN

SLOPE ROOF AWAY

1'-0"

1'-6"

4'-0"

1'-6"

1'-0"

1'-0"

1'-0"

5'-0"

HATCH

1'-0"

8'-0"

STAIRCASE PLAN VIEW
SCALE: 1" = 20'

BILCO TYPE JAL-H20 SINGLE DOOR SPRING ASSIST WITH INTEGRAL DRAIN S-201

5'

37'-0"

FG. 919.00 ± *

4" MIN.

2.0%

11'-5"

1'-10"

SLOPE ROOF

1'-0"

B / C-26

#5 @ 6"

4 - #5 TOP & BOLT

#5 @ 6" ON SIDES

BILCO TYPE JDAL-H20 HS20 RATED DOUBLE DOOR SPRING ASSIST WITH INTEGRAL DRAIN PIPE DRAIN TO SIDE S-201

4" MIN.

OMITTED

6'-9"

NATIVE BACKFILL

DRAIN LINE FOR HATCH S-201

5'-0"

8'-2"±

1'-0"

1'-0"

LADDER S-201 COORDINATE POSITION OF LADDER AGAINST HATCH OPENING

SLOPE TO SIDES

1'-0"

7'-9" (MINIMUM)

S-510 EACH SIDE

8" MIN.

3'-0"

#5 NOSE BAR

#4 @ 12"

#5 @ 12" EACH WAY

S-153 TYP

#5 @ 6" EW HOOK TO SIDES

1" CHAMFER, TYP

#5 @ 6" EACH FACE & EACH WAY

7'-9" (MINIMUM)

8'-6"

8' X 8' TUNNEL BEHIND

36"

19'-0"±

#7 @ 6"

SLOPE 1.0% TO SUMP IN TUNNEL

1'-0"

1"

11"

1" RADIUS

7.68"±

STAIRS:
26 EQUAL RISERS @ 7.68"
26 EQUAL TREADS @ 11"

#7 @ 6"

8'-6"

8'-0"

17'-6"

STAIRCASE SECTION C-C
SCALE: 1" = 20'

* NOTE:

CONTRACTOR TO VERIFY VAULT FLOOR ELEVATION & MATCH

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

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AECOM
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REGISTERED PROFESSIONAL ENGINEER — JAMES E. FATROPOULOS — No. 58129 — Exp. 6-30-09 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	CC	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER

DATE

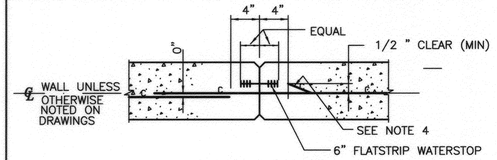
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT STAIRCASE DETAILS

SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

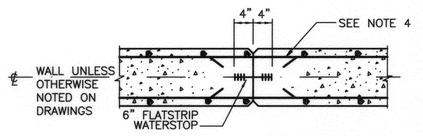
R-4132
C-27
SHEET 30 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\C-27.dwg
TIME: 6-08-09 - 10:52am User: slocoa XRef Files: Base xbdr



SINGLE CURTAIN REINF

WITH WATERSTOP S-121 NO WATERSTOP S-122



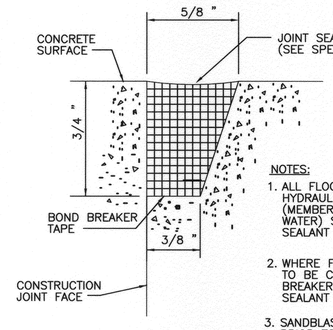
DOUBLE CURTAIN REINF

WITH WATERSTOP S-123 NO WATERSTOP S-124

NOTES:

1. WHERE WATERSTOP IS REQUIRED IN SINGLE CURTAIN WALL REINFORCEMENT PLACE WATERSTOP ON WATER SIDE OF WALL
2. UNLESS OTHERWISE NOTED 3/4 " CHAMFERS SHALL BE OMITTED IN SURFACES TO RECEIVE ARCHITECTURAL TREATMENT
3. UNLESS SPECIFICALLY NOTED OTHERWISE #5 AND LARGER BARS SHALL BE CONTINUOUS THRU JOINT. #4 & SMALLER SHALL STOP ALTERNATE AT JOINT
4. STAGGER SPLICES UNLESS NOTED OTHERWISE

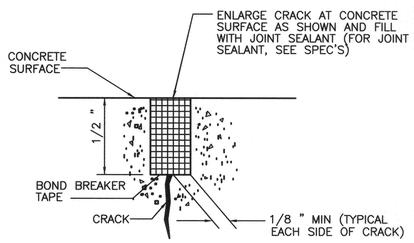
VERTICAL WALL CONSTRUCTION JOINT DETAILS
NTS



NOTES:

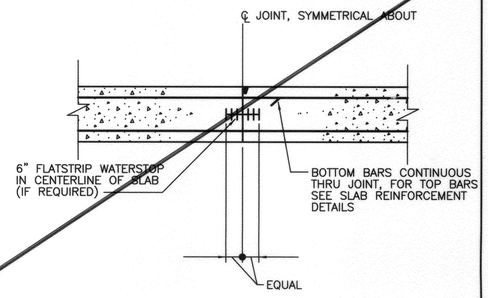
1. ALL FLOOR JOINTS OF HYDRAULIC STRUCTURES (MEMBERS COVERED WITH WATER) SHALL HAVE A SEALANT GROOVE
2. WHERE FACE OF JOINT IS TO BE COATED WITH BOND BREAKER AVOID COATING SEALANT GROOVE
3. SANDBLASTING REQUIRED PRIOR TO APPLICATION OF PRIMER
4. USE BONDBREAKER TAPE ONLY ON SLIP DOWEL JOINTS

SEALANT GROOVE
NTS S-131

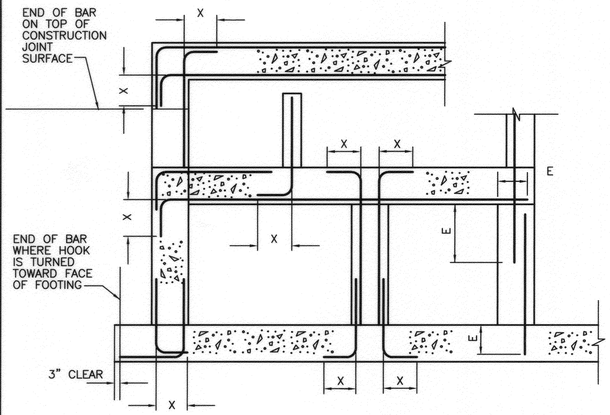


NOTES:
PRIOR TO FILLING, STRUCTURES TO CONTAIN WATER SHALL HAVE ALL CRACKS REPAIRED AS SHOWN IN THIS DETAIL

CONCRETE CRACK REPAIR
NTS S-132



SUSPENDED SLAB CONSTRUCTION JOINT DETAIL
NTS S-137



SECTION

LENGTH (INCHES)				
BAR SIZE	HOOK X	LAP	EMBEDMENT E	
#3	6"	18"	12"	
#4	8"	18"	14"	
#5	10"	23"	18"	
#6	12"	28"	22"	
#7	14"	33"	25"	
#8	16"	SEE TABLE BELOW	SEE TABLE BELOW	
#9	19"			
#10	22"			
#11	24"			

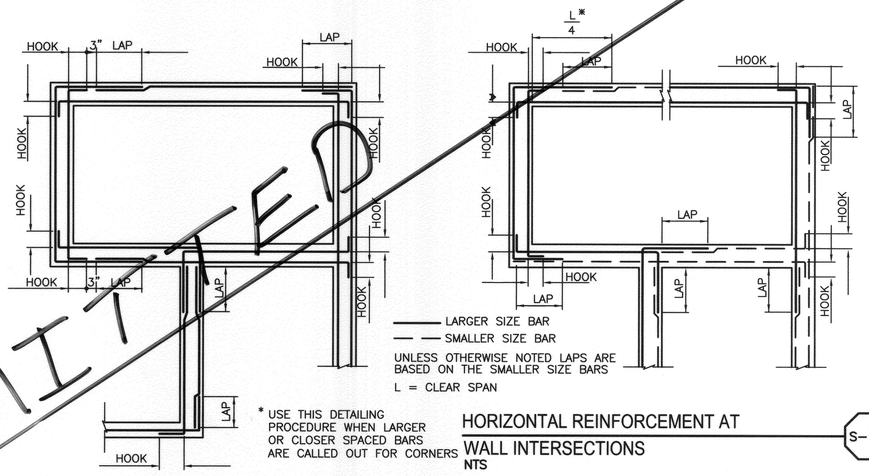
NOTES:

1. USE LAP LENGTHS AS DETERMINED FROM THESE TABLES UNLESS SHOWN OTHERWISE
2. THE TABLES SHOWN ARE FOR f'C=4000 PSI AND fy=60,000 PSI
3. MULTIPLY THE LAP & E SHOWN IN THESE TABLES BY 1.3 FOR WALL HORIZONTAL REBARS AND SLAB BARS WITH 12" OR MORE FRESH CONCRETE UNDERNEATH
4. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, LAP LENGTH SHALL BE THE LARGER OF:
   EMBEDMENT LENGTH OF LARGER BAR
   LAP LENGTH OF SMALLER BAR
5. UNLESS NOTED OTHERWISE USE REBAR COUPLERS FOR SPLICES OF #11 AND LARGER BARS
6. ALL DOWEL BARS SHALL EXTEND AN EMBEDMENT LENGTH E INTO ANOTHER MEMBER OR ACROSS A CONSTRUCTION JOINT UNLESS SHOWN TO SPLICE WITH OTHER BARS OR TO EXTEND TO THE FAR FACE OF THE MEMBER AND END WITH A STANDARD HOOK

LENGTH (INCHES)						
REBAR SIZE	FOR 1" TO < 2" CONCRETE COVER		FOR 2" TO < 3" CONCRETE COVER		FOR 3" AND LARGER CONCRETE COVER	
	REBAR SPACING (CENTER TO CENTER)		REBAR SPACING (CENTER TO CENTER)		REBAR SPACING (CENTER TO CENTER)	
	< 8"	≥ 8"	< 8"	≥ 8"	< 8"	≥ 8"
LAP						
#8	62"	62"	37"	37"	37"	37"
#9	99"	79"	69"	55"	49"	42"
#10	125"	100"	88"	70"	63"	50"
#11	154"	123"	108"	86"	77"	62"
EMBEDMENT E						
#8	48"	48"	29"	29"	29"	29"
#9	77"	61"	54"	43"	38"	33"
#10	97"	77"	68"	54"	49"	39"
#11	119"	95"	84"	67"	60"	48"

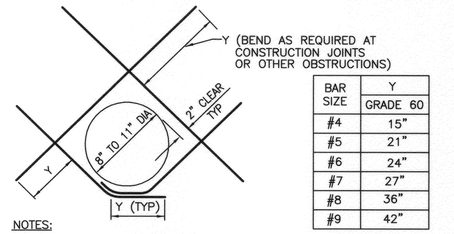
UNLESS OTHERWISE NOTED ON DRAWINGS

STANDARD 90 BAR HOOKS, EMBEDMENT LENGTHS AND LAP LENGTHS
NTS S-143



* USE THIS DETAILING PROCEDURE WHEN LARGER OR CLOSER SPACED BARS ARE CALLED OUT FOR CORNERS

HORIZONTAL REINFORCEMENT AT WALL INTERSECTIONS
NTS S-141

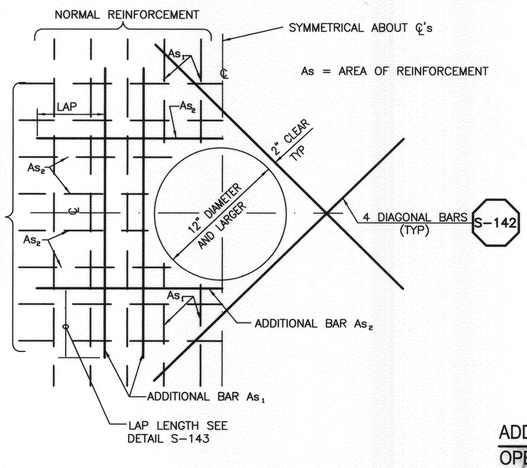


BAR SIZE	Y GRADE 60
#4	15"
#5	21"
#6	24"
#7	27"
#8	36"
#9	42"

NOTES:

1. CUT NORMAL REINFORCEMENT 2" CLEAR OF OPENING
2. DIAGONAL BARS TO BE PLACED;
   A) AT CENTERLINE OF WALL OR SLAB WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED
   B) AT EACH FACE OF WALL OR SLAB WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED
3. UNLESS OTHERWISE NOTED, SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINFORCING BAR CUT
4. THIS DETAIL TO BE USED ONLY WHEN CALLED FOR ON THE DRAWINGS OR WHEN NO OTHER DETAIL IS SPECIFIED

DIAGONAL REINFORCEMENT AT CIRCULAR OPENINGS (8" - 11" DIA)
NTS S-142



NOTES:

1. CUT NORMAL REINFORCEMENT AT OPENINGS:
   As1 AND As2 = 1/2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING
2. ADDITIONAL BARS As1 AND As2 TO BE PLACED:
   A) AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED
   B) AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED
3. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2 X WALL/SLAB THICKNESS FROM OPENING, PROVIDE 2" MIN CLEAR BETWEEN BARS
4. THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS
5. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENING, ADDITIONAL BARS ON THAT SIDE MAY BE OMITTED

ADDITIONAL REINFORCEMENT AT CIRCULAR OPENINGS (12" DIA OR LARGER)
NTS S-144

OMITTED

BENCH MARK
CITY OF RIVERSIDE BENCH MARK 49-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "49-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER LORAINE E. FAIRBANKS No. 50129 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCALE REDUCED	CL.	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

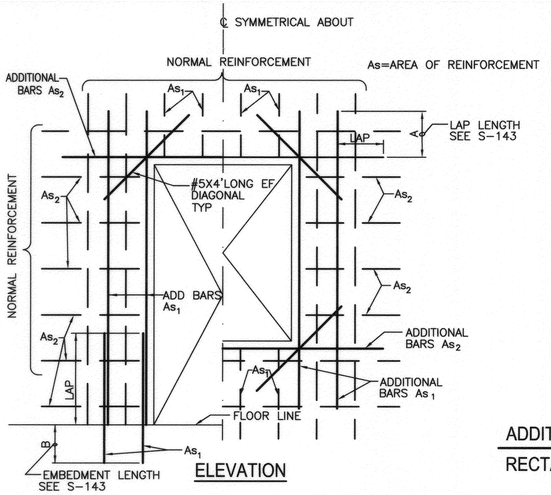
APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS—SECTION DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428
R-4132
GS-1
SHEET 31 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\GS-1.dwg
TIME: 6-08-09 - 10:52am User: slocoa XRef Files: xbdr



NOTES:

1. CUT NORMAL REINFORCEMENT AT OPENING:

   As_1 AND As_2 = 1/2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING

2. ADDITIONAL BARS As_1 AND As_2 TO BE PLACED:

   A) AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED

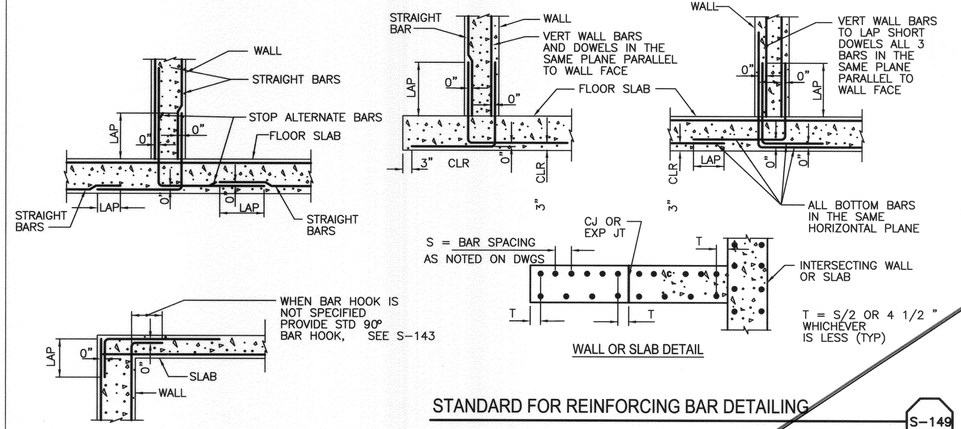
   B) AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED

3. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2 X WALL/SLAB THICKNESS FROM OPENING. PROVIDE 2" MIN CLEAR BETWEEN BARS

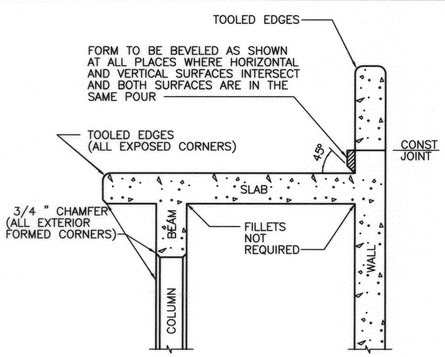
4. THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS

5. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENINGS, ADDITIONAL BARS ON THAT SIDE MAY BE OMITTED

ADDITIONAL REINFORCEMENT AROUND RECTANGULAR OPENINGS — S-148

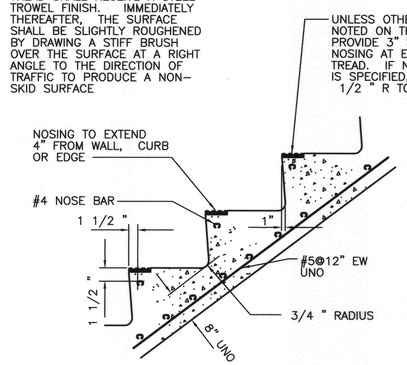


STANDARD FOR REINFORCING BAR DETAILING — S-149

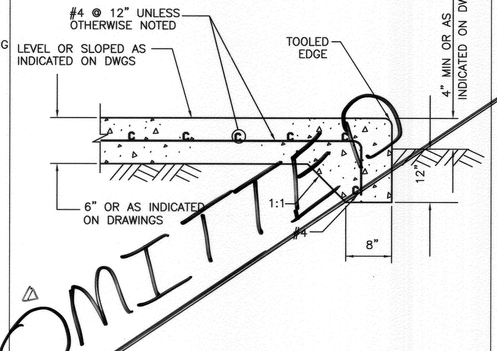


FORMING DETAILS — S-152

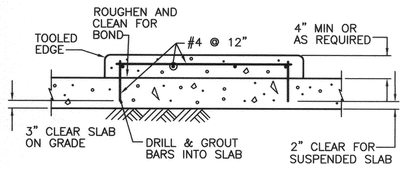
NOTE:
TREAD SHALL RECEIVE A STEEL TROWEL FINISH. IMMEDIATELY THEREAFTER, THE SURFACE SHALL BE SLIGHTLY ROUGHENED BY DRAWING A STIFF BRUSH OVER THE SURFACE AT A RIGHT ANGLE TO THE DIRECTION OF TRAFFIC TO PRODUCE A NON-SKID SURFACE



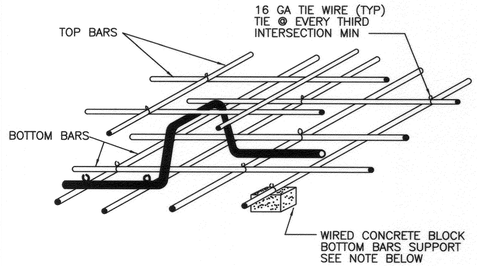
CONCRETE STAIR DETAIL — S-153



SLAB ON GRADE — S-190



HOUSEKEEPING PAD — S-191



NOTE:
METAL BAR SUPPORTS, IF USED IN SLABS NOT ON GROUND, SHALL NOT MAKE CONTACT WITH FORMS

REINFORCEMENT SUPPORT — S-204

OMITTED

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER LONNIE E. FAIRCHILD No. 50129 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	CL	7/1/09

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

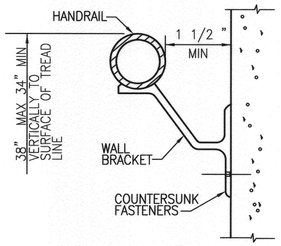
APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS—SECTION DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428
R-4132
GS-2
SHEET 32 OF 76

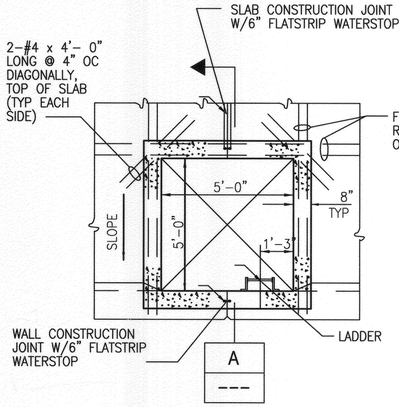
DWG: Y:\M&E\Iowa Booster Station\Planset\GS-2.dwg
TIME: 6-08-09 - 10:52am User: siocco XRef Files: xbdr



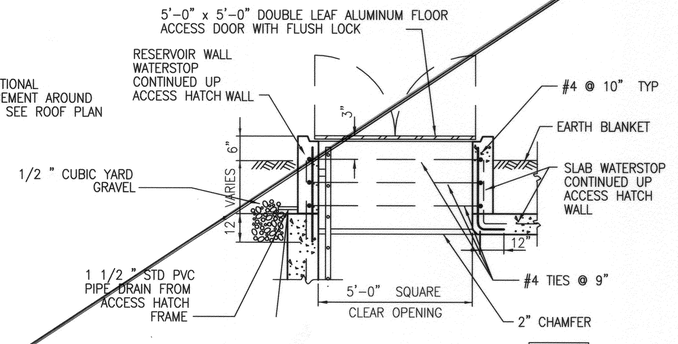
HANDRAIL WALL BRACKET SUPPORT DETAILS

S-512

NTS



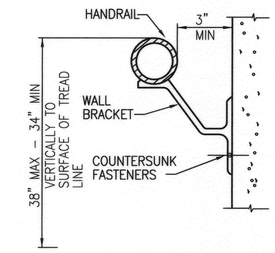
PLAN

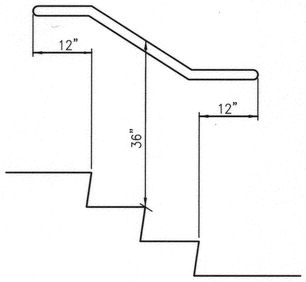


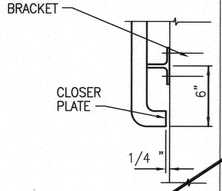
ACCESS HATCH

S-201

NTS



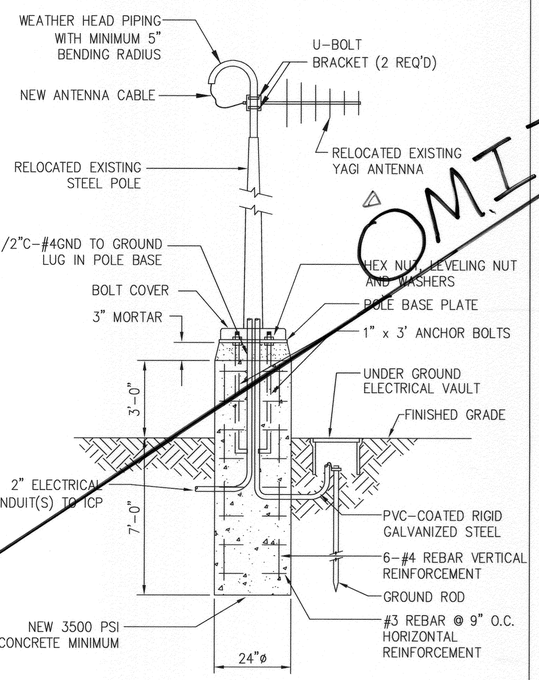




STAIR HANDRAIL

S-510

NTS



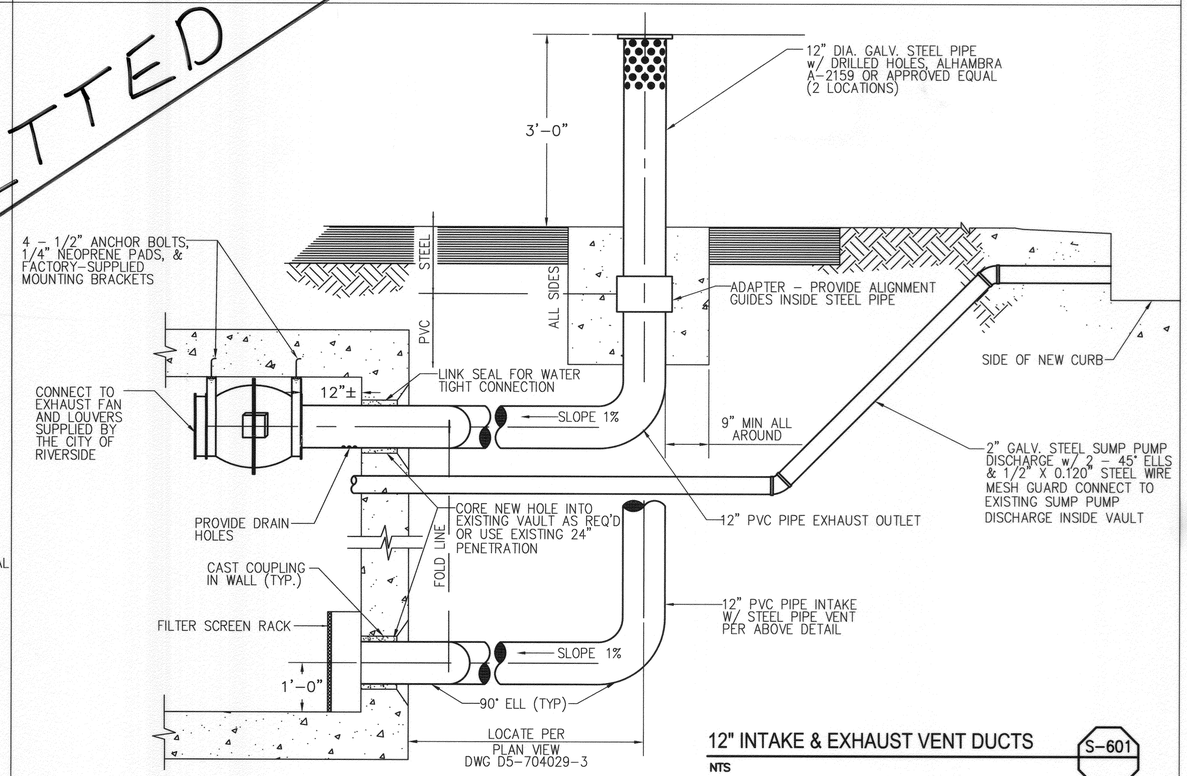
NOTE:
RELOCATE EXISTING ANTENNA POLE. PLACE NEW ELECTRICAL CONDUITS, PULL NEW WIRE, & TERMINATE ENDS.

MONOPOLE ANTENNA MAST

S-602

NTS

OMITTED



12" INTAKE & EXHAUST VENT DUCTS

S-601

NTS

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — No. 50129 — Exp. 6-30-09 — LAWRENCE E. FAIRBANKS — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	LL	7/1/07

DESIGNED BY L.F. DRAWN BY G.G. CHECKED BY L.F.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

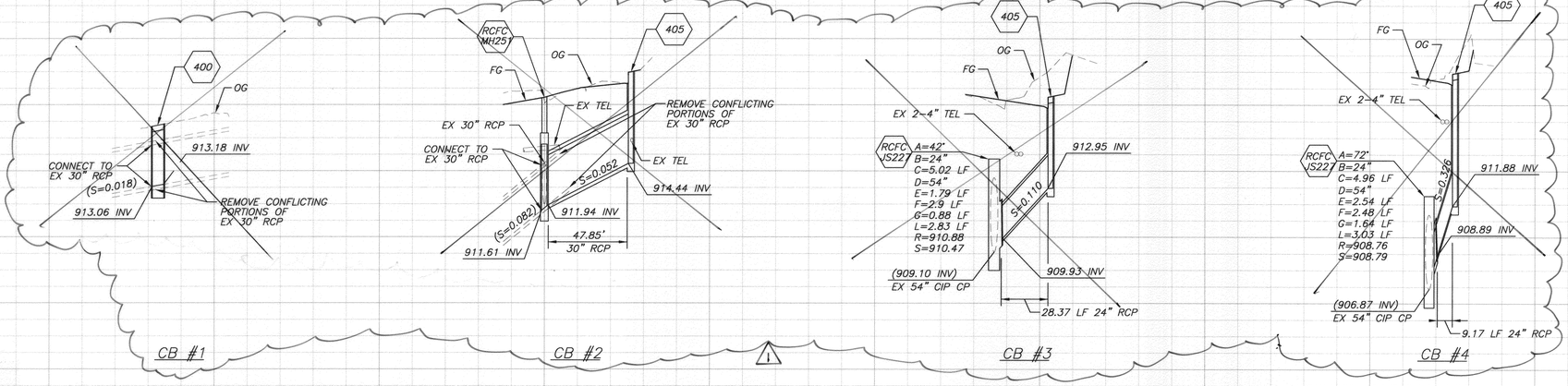
APPROVED BY APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
INDUSTRIAL BOOSTER PUMPING STATION
PUMP VAULT DETAILS-SECTION DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
GS-3
SHEET 33 OF 76

DWG: Y:\M&E\Iowa Booster Station\Planset\GS-3.dwg
TIME: 6-08-08 - 10:53am User: slocoa XRef Files: xbdr



CONSTRUCTION NOTES:

(4) INSTALL 24" RCP (D-LOAD PER PLAN)

RCFC — RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWING SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN. NUMBER SHOWN BELOW INDICATE THE STANDARD DRAWING NUMBER.

NOTE:

1. 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 THESE PLANS. FOR ALL SUCH UTILITIES, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF THE UTILITY PRIOR TO TRENCHING.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK #B-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "28-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — BRIAN M. SMITH — No. C70690 — Exp. 6-30-11 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	CB TO BE SHIFTED TO STA 5+94.11	CL	8/26/09
1	PROJECT SCOPE REDUCED	CL	7/1/09

DESIGNED BY C.G. DRAWN BY C.G. CHECKED BY B.S.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET -1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE STREET IMPROVEMENT PROJECT
STORM DRAIN PROFILES

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
SD-01

SHEET 34 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\SD-01.dwg
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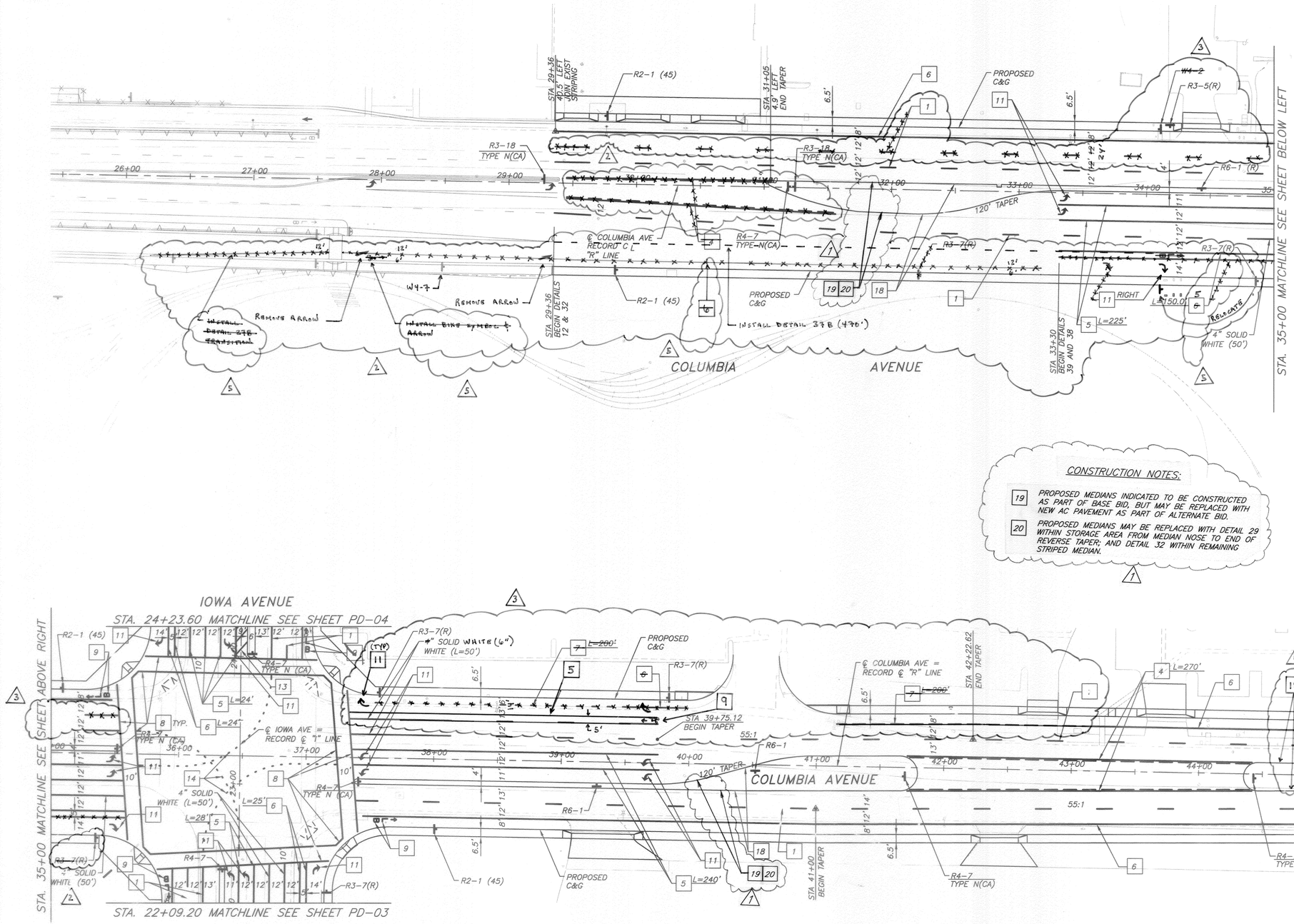


CONSTRUCTION NOTES:

19 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

20 PROPOSED MEDIANS MAY BE REPLACED WITH DETAIL 29 WITHIN STORAGE AREA FROM MEDIAN NOSE TO END OF REVERSE TAPER; AND DETAIL 32 WITHIN REMAINING STRIPED MEDIAN.

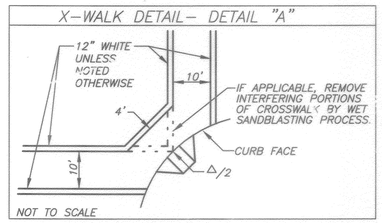
GENERAL NOTES

1. 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.
2. FOR ADDITIONAL SIGNING SEE TRAFFIC SIGNAL PLANS X-297C, X382B AND X415B.
3. ALL STRIPING, MARKING, 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.
4. 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.
5. THE CONTRACTOR SHALL RE-STRIPE EXISTING STRIPING AND CURB MARKINGS OBLITERATED BY NEW CONSTRUCTION, WHETHER OR NOT SHOWN ON THE PLANS FOR REPLACEMENT, AT NO COST TO THE CITY.
6. 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.
7. 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 LEAST 3 WORKING DAYS BEFORE COMMENCING INSTALLATION OF STRIPING, MARKINGS AND MARKERS.
8. TRAFFIC SIGN FACE REFLECTIVE SHEETING SHALL BE 3M "ASTM TYPE 11" 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.
9. 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.
10. SALVAGED SIGNS AND SIGN POST SHALL BE DELIVERED TO THE CITY OF RIVERSIDE SIGN DEPARTMENT.
11. 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 A HOLIDAY.
12. CONTRACTOR SHALL INSTALL NEW SIGN(S) AND/OR POST(S) PER CITY OF RIVERSIDE STANDARD DRAWING No. 666.
13. ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, LEGENDS, AND RAISED PAVEMENT MARKERS SHALL BE REMOVED EVEN IF NOT SHOWN ON PLANS. REMOVALS OF STRIPING, PAVEMENT MARKINGS AND LEGENDS SHALL BE DONE BY WET SAND BLASTING AND/OR GRINDING. BLACK OUT 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.

CONSTRUCTION NOTES

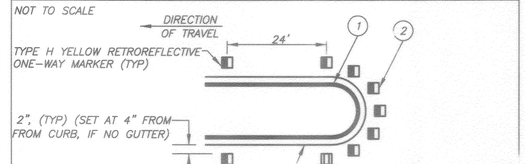
1	INSTALL DETAIL 12	8	INSTALL 12" WHITE LINE
3	INSTALL DETAIL 27B	9	INSTALL "BIKE LANE" & TYPE I ARROW SYMBOL
4	INSTALL DETAIL 32	11	INSTALL TYPE IV ARROW (DIRECTION AS INDICATED)
5	INSTALL DETAIL 38	14	INSTALL DETAIL 40
6	INSTALL DETAIL 39	18	INSTALL DETAIL ~~26~~ 25A
7	INSTALL DETAIL 39A		

X-WALK DETAIL - DETAIL "A"



MEDIAN NOSE DETAIL - DETAIL "B"

NOT TO SCALE



1. PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE REMIXED TRAFFIC YELLOW PAINT WITH GLASS BEADS
2. INSTALL TYPE H RETROREFLECTIVE PAVEMENT MARKERS ON PAVEMENT SURFACE OF MEDIAN CURB NOSE AT 2' CENTER TO CENTER SPACING (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PARALLEL TO CENTERLINE OF ROADWAY

TOP OF RAISED CURB

GRAPHIC SCALE: 40' 20' 0 40' 80' — 1" = 40' HORIZ

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — CARMEN F. BRUNO — No. C 54957 — Exp. 6-30-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	REMOVE BIKE LANE & BIKE LANE SYMBOL	AK	4-29-10
2	DETAIL 26 TO DETAIL 25A, DETAIL "2" CHANGE	AK	4-29-10
3	SIGNING & STRIPING CHANGES	AK	11-5-10
4	SIGNING & STRIPING CHANGES	AK	12-17-09
5	PROJECT SCOPE REDUCED	CA	2/1/10

DESIGNED BY S.A. DRAWN BY C.S. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

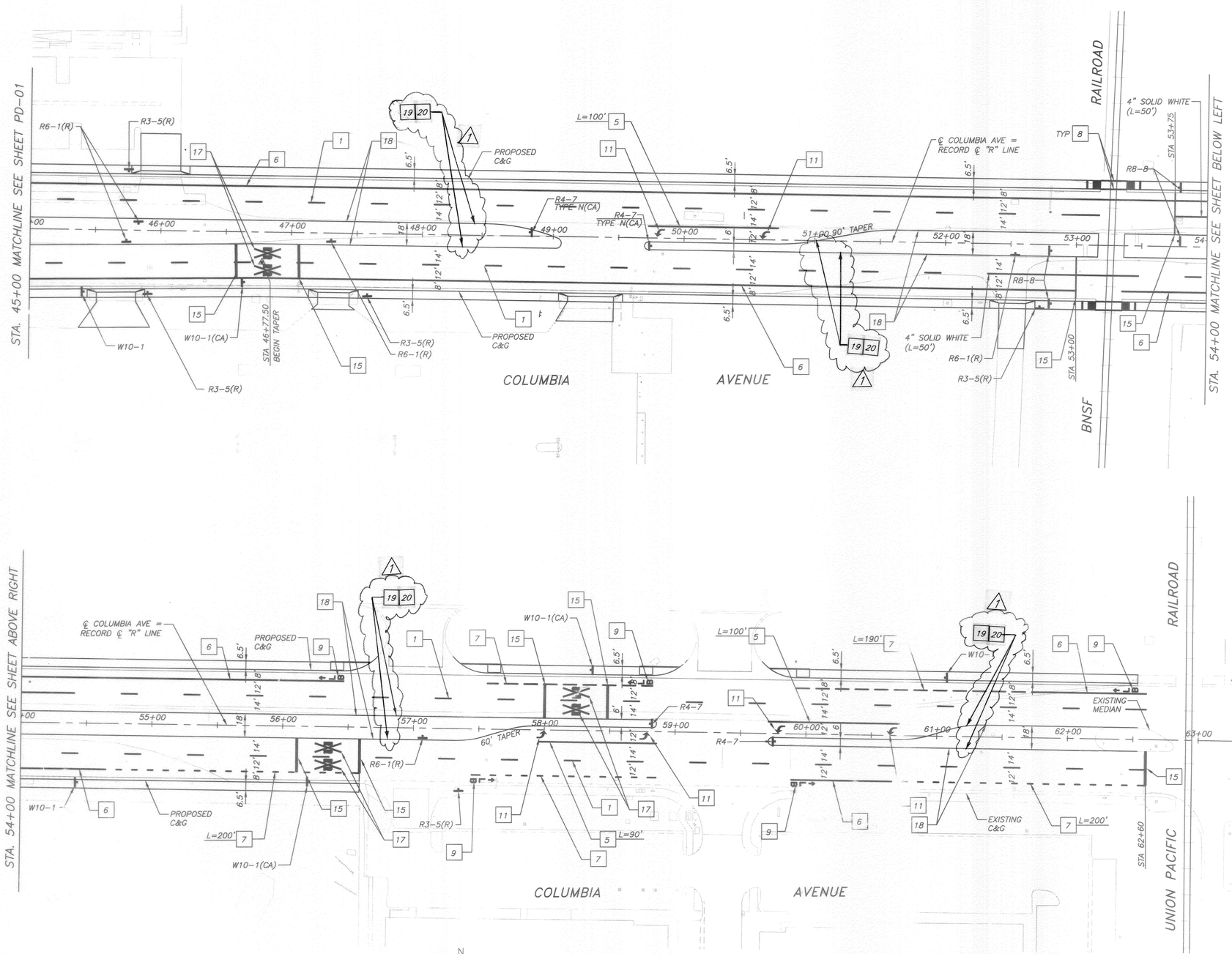
APPROVED PER SIGNATURES ON SHEET -1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
SIGNING AND STRIPING
COLUMBIA AVENUE

SCALE: 1" = 40'

ESCON W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

ML-573
-01



CONSTRUCTION NOTES:

19 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

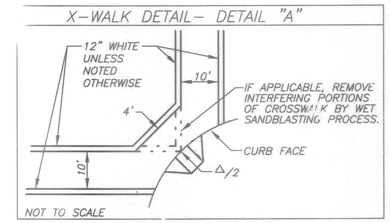
20 PROPOSED MEDIANS MAY BE REPLACED WITH DETAIL 29 WITHIN STORAGE AREA FROM MEDIAN NOSE TO END OF REVERSE TAPER; AND DETAIL 32 WITHIN REMAINING STRIPED MEDIAN.

1

CONSTRUCTION NOTES

1	INSTALL DETAIL 12	11	INSTALL TYPE IV ARROW (DIRECTION AS INDICATED)
5	INSTALL DETAIL 38	15	INSTALL 24" SOLID WHITE
6	INSTALL DETAIL 39	17	INSTALL "RXR"
8	INSTALL 12" WHITE LINE	18	INSTALL DETAIL ~~26~~ 25A 2
9	INSTALL "BIKE LANE" & TYPE I ARROW		

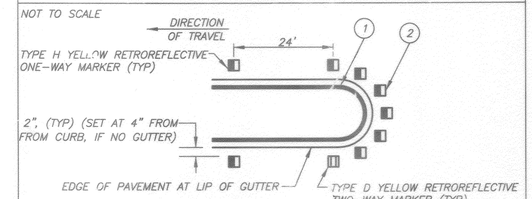
X-WALK DETAIL- DETAIL "A"



NOT TO SCALE

MEDIAN NOSE DETAIL - DETAIL "B"

NOT TO SCALE



1 PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE REMIXED TRAFFIC YELLOW PAINT WITH GLASS BEADS

2 INSTALL TYPE H RETROREFLECTIVE PAVEMENT MARKERS ON ~~PAVEMENT SURFACE~~ TOP OF RAISED CURB OF MEDIAN CURB NOSE AT 2' CENTER TO CENTER SPACING (MINIMUM 5 MARKERS). FACE REFLECTIVE SURFACE OF MARKERS PARALLEL TO CENTERLINE OF ROADWAY.

2

N

GRAPHIC SCALE: 40' 20' 0 40' 80' 1" = 40' HORIZ

TRANSPORTATION
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T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CARMEN F. GEORGE No. C 54957 EXP. 6-30-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	DETAIL 26 TO DETAIL 25A, DETAIL 38" CHANGES	CH	4-22-10
1	PROJECT SCOPE REDUCED	CC	7/1/09

DESIGNED BY S.A. DRAWN BY C.S. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

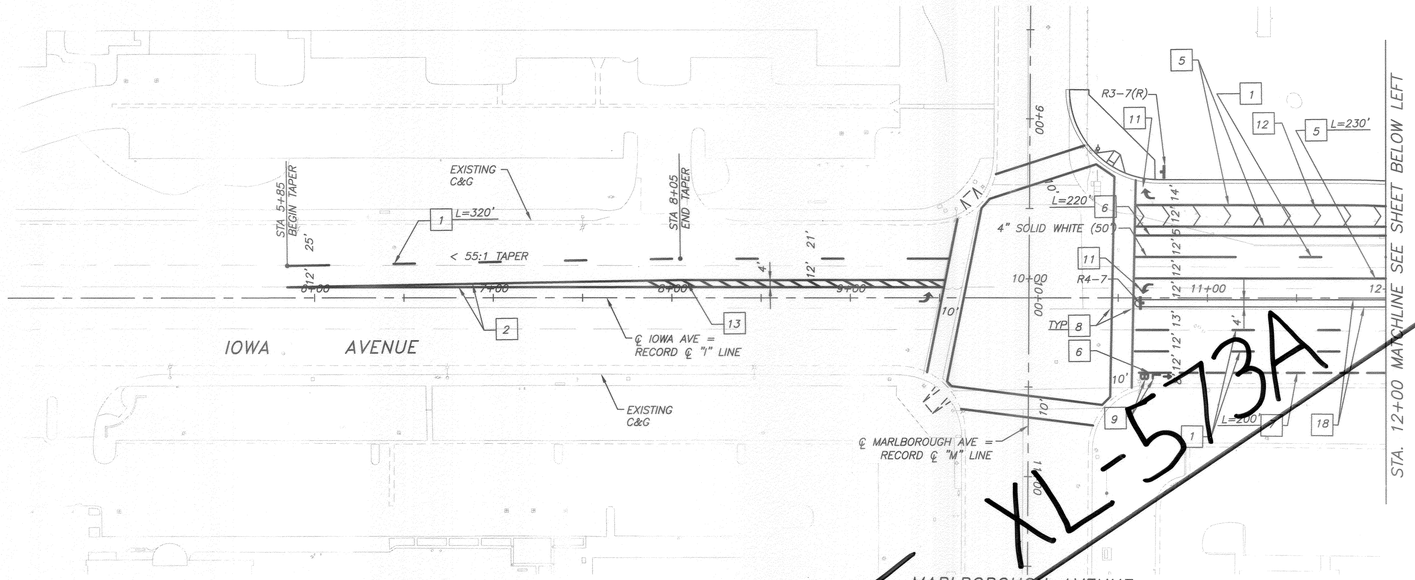
APPROVED BY	BY	DATE	APPROVED
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON SHEET - 1
PRINCIPAL ENGINEER			
STREET SERVICES			CITY ENGR.
SURVEYOR			
TRAFFIC DIVISION			DATE
PARKS DEPARTMENT			

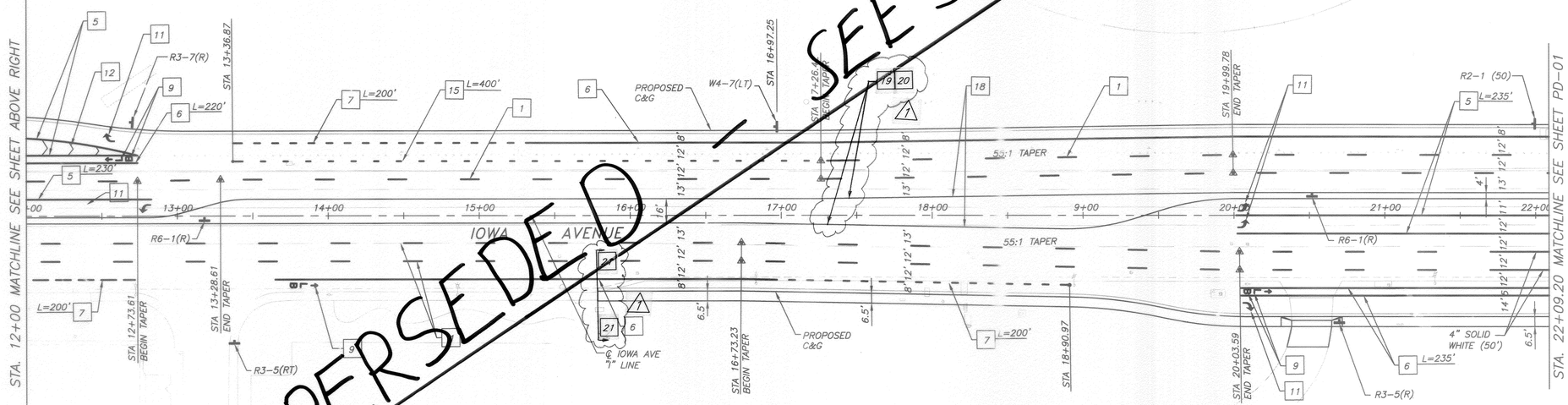
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
SIGNING AND STRIPING
COLUMBIA AVENUE

SCALE: 1" = 40'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

XL-573
PD-02





SUPERSEDED - SEE SHEET XL-573A

CONSTRUCTION NOTES:

19 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

20 PROPOSED MEDIANS MAY BE REPLACED WITH DETAIL 29 WITHIN STORAGE AREA FROM MEDIAN NOSE TO END OF REVERSE TAPER; AND DETAIL 32 WITHIN REMAINING STRIPED MEDIAN.

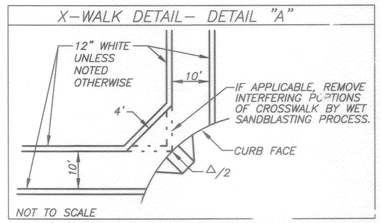
21 THE WIDENING IMPROVEMENTS ALONG THE E'LY SIDE OF IOWA AVE BETWEEN STA 15+78.41 AND 36+26.00 AS WELL AS ON THE W'LY SIDE OF IOWA AVE BETWEEN STA 26+21.70 AND 36+26.00 WILL NOT BE COMPLETED, STRIPING SHALL BE PLACED TO PROVIDE TWO THROUGH LANES AND A BIKE LANE.

1

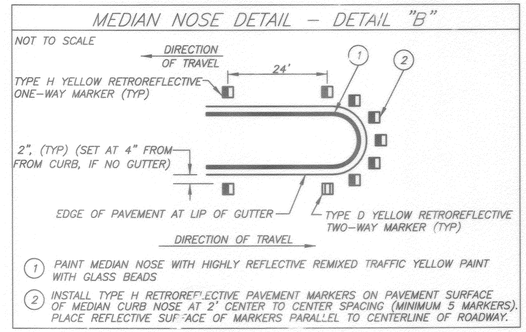
CONSTRUCTION NOTES

1	INSTALL DETAIL 12	11	INSTALL TYPE IV ARROW (DIRECTION AS INDICATED)
2	INSTALL DETAIL 29	12	INSTALL (8" WHITE) CHEVRON STRIPING
5	INSTALL DETAIL 38	13	INSTALL (8" YELLOW) DIAGONAL STRIPING @ 10' C-C
6	INSTALL DETAIL 39	15	INSTALL DETAIL 37B
7	INSTALL DETAIL 39A	18	INSTALL DETAIL 26
8	INSTALL 12" WHITE LINE		
9	INSTALL "BIKE LANE" & TYPE I ARROW		

X-WALK DETAIL- DETAIL "A"



MEDIAN NOSE DETAIL - DETAIL "B"



(1) PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE REMIXED TRAFFIC YELLOW PAINT WITH GLASS BEADS

(2) INSTALL TYPE H RETROREFLECTIVE PAVEMENT MARKERS ON PAVEMENT SURFACE OF MEDIAN CURB NOSE AT 2' CENTER TO CENTER SPACING (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PARALLEL TO CENTERLINE OF ROADWAY.

N

40' 20' 0 40' 80'
GRAPHIC SCALE: 1" = 40'
HORIZ

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AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — No. C 84951 — REN. 6-30-10 — CIVIL — STATE OF CALIFORNIA

⚠ PROJECT SCOPE REDUCED — 7/1/09

MARK	REVISIONS	APPR.	DATE

DESIGNED BY S.A. DRAWN BY C.S. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON SHEET -1
PRINCIPAL ENGINEER			
STREET SERVICES			CITY ENGINEER
SURVEYOR			
TRAFFIC DIVISION			DATE
PARKS DEPARTMENT			

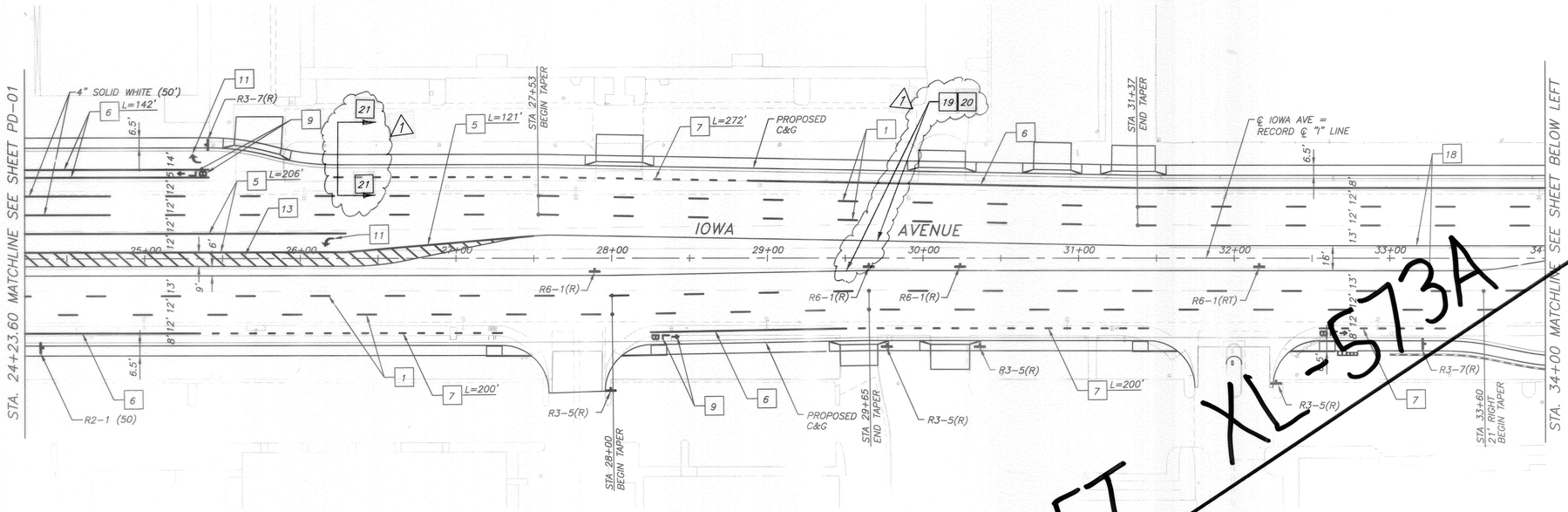
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
SIGNING AND STRIPING
IOWA AVENUE

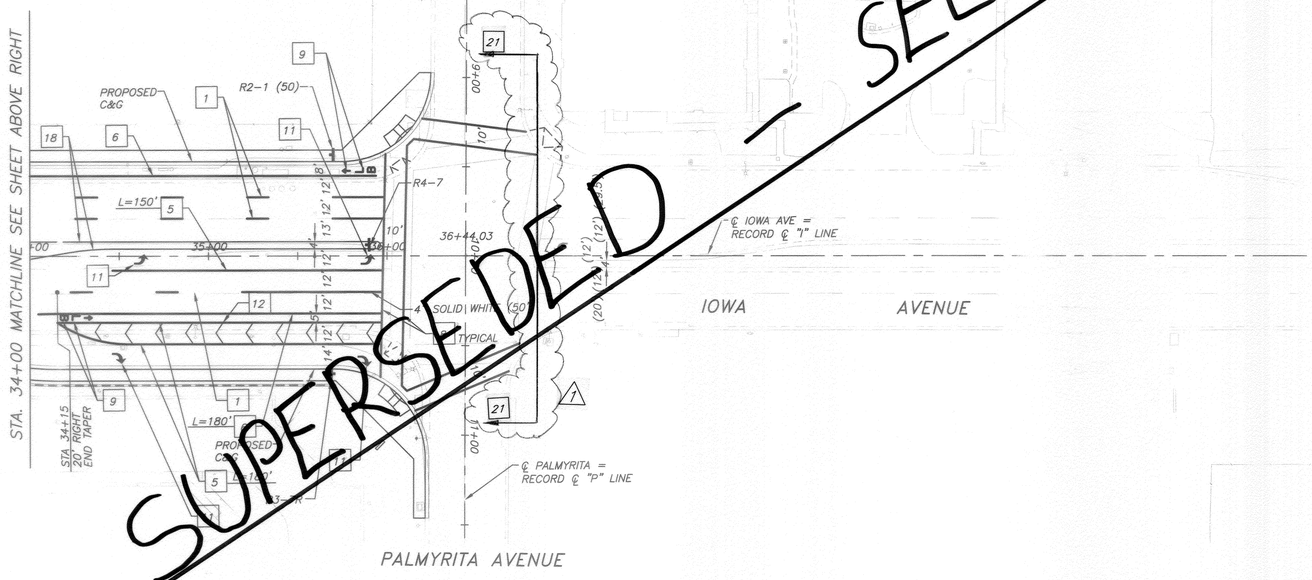
SCALE: 1" = 40'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

XL-573
PD-03

SHEET 37 OF 76





SUPERSEDED – SEE SHEET XL-573A

CONSTRUCTION NOTES:

19 PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

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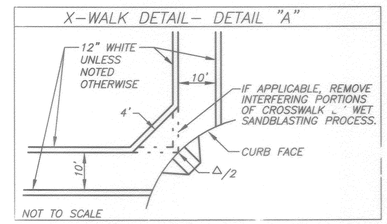
1

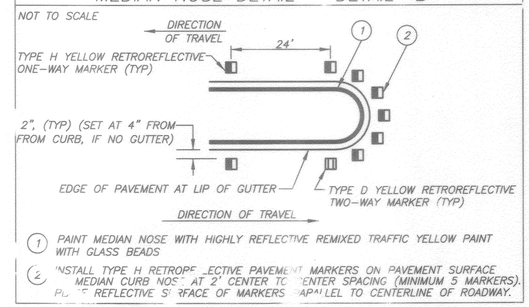
CONSTRUCTION NOTES

1	INSTALL DETAIL 12
5	INSTALL DETAIL 38
6	INSTALL DETAIL 39
7	INSTALL DETAIL 39A
8	INSTALL 12" WHITE LINE
9	INSTALL "BIKE LANE" & TYPE I ARROW
11	INSTALL TYPE IV ARROW (DIRECTION AS INDICATED)
12	INSTALL (8" WHITE) CHEVRON STRIPING @ 10' C-C
13	INSTALL (8" WHITE) DIAGONAL STRIPING @ 10' C-C
18	INSTALL DETAIL 26

X-WALK DETAIL - DETAIL "A"



MEDIAN NOSE DETAIL - DETAIL "B"



(1) PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE REMIXED TRAFFIC YELLOW PAINT WITH GLASS BEADS

(2) INSTALL TYPE H RETROREFLECTIVE PAVEMENT MARKERS ON PAVEMENT SURFACE AT MEDIAN CURB NOSE AT 2' CENTER TO CENTER SPACING (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PARALLEL TO CENTERLINE OF ROADWAY.

N

40' 20' 0 40' 80'
GRAPHIC SCALE: 1" = 40' HORIZ

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www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CARMEN F. GENOVESE No. C 54857 Exp. 8-30-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY S.A. DRAWN BY C.S. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER	APPROVED PER SIGNATURES ON SHEET 1	
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
SIGNING AND STRIPING
IOWA AVENUE

SCALE: 1" = 40'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

XL-573
PD-04

SHEET 38 OF 76

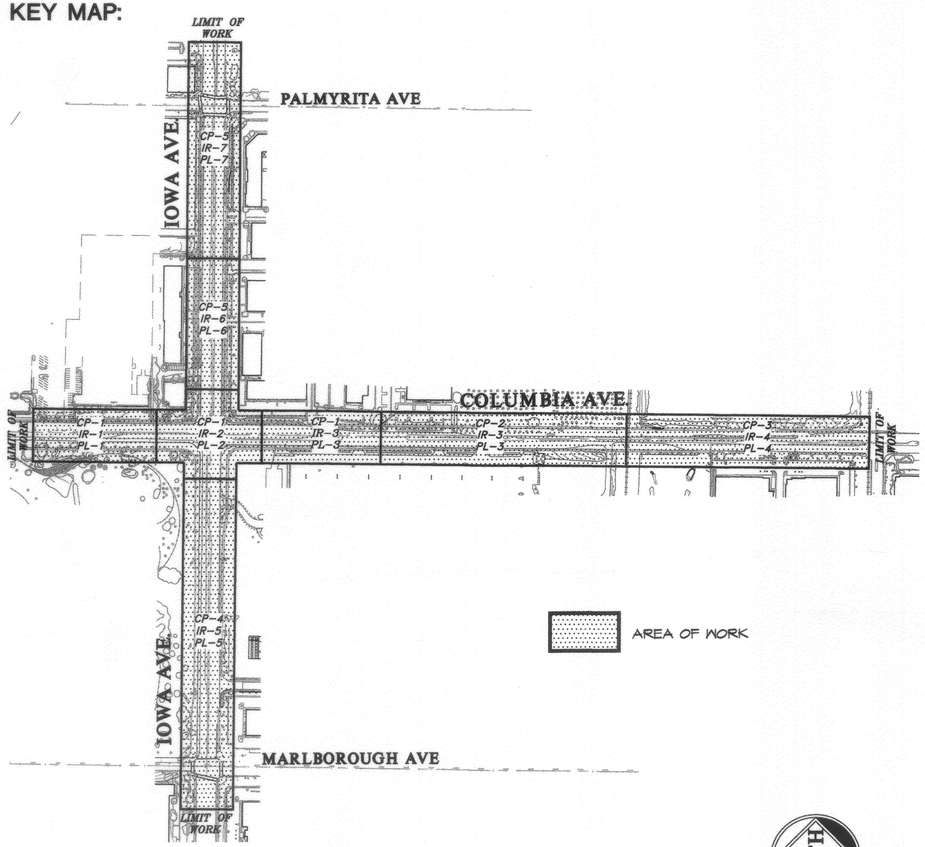
RIVERSIDE CALIFORNIA

CITY OF RIVERSIDE — INCORPORATED 1883

PUBLIC WORKS DEPARTMENT

IOWA AVENUE AND COLUMBIA AVENUE STREET IMPROVEMENT

KEY MAP:



(NOT TO SCALE)

GENERAL NOTES FOR PUBLIC LANDSCAPES:

1. ALL RELATED WORK SHALL CONFORM TO THE CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT STANDARDS AND SPECIFICATIONS FOR PLANTING AND IRRIGATION WORK. (SECTIONS 02441 AND 02480).
2. A "PUBLIC LANDSCAPE" PERMIT, AS ISSUED BY THE PUBLIC WORKS DEPARTMENT IS REQUIRED. CONTACT THE PUBLIC WORKS LANDSCAPE INSPECTOR AT 951-351-6103 TO SCHEDULE A PRE-CONSTRUCTION MEETING AND TO OBTAIN THE PERMIT.
3. WHEN CALLING FOR INSPECTIONS CONTACT THE PUBLIC WORKS LANDSCAPE INSPECTOR A MINIMUM OF 48 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION. A WRITTEN APPROVAL WILL BE PROVIDED ON THE PUBLIC LANDSCAPE PERMIT CARD FOR EACH STAGE OF INSPECTION. A VERBAL APPROVAL WILL NOT BE ACCEPTABLE. INSPECTIONS ARE REQUIRED PER THE STANDARD SPECIFICATIONS, AND INCLUDE BUT ARE NOT NECESSARILY LIMITED TO THE FOLLOWING:
   a. AFTER COMPLETION OF FINAL GRADING AND WHEN ALL UTILITY SERVICES HAVE BEEN MARKED, BUT PRIOR TO INITIATING ANY LANDSCAPE WORK WITHIN IN THE PUBLIC RIGHT OF WAY;
   b. AT TIME OF INSTALLATION OF IRRIGATION SLEEVES AND CONSTANT PRESSURE MAINLINES, BUT PRIOR TO BACKFILL OF TRENCHES FOR SAME (NOTE: MAINLINES MUST BE PRESSURE TESTED IN THE PRESENCE OF THE PUBLIC WORKS LANDSCAPE INSPECTOR);
   c. AT TIME OF INSTALLATION OF IRRIGATION VALVES, LATERALS AND HEADS;
   d. FOR SPOTTING ALL TREES PRIOR TO DIGGING PLANTING PITS;
   e. WHILE DIGGING PLANT PITS AND PLANTING/RELOCATING TREES;
   f. AFTER PLANTING AND ALL OTHER INDICATED OR SPECIFIED WORK HAS BEEN COMPLETED, FOR START OF MAINTENANCE;
   g. AT SUBSTANTIAL COMPLETION OF THE PROJECT FOR CITY'S ACCEPTANCE TO START THE REQUIRED MAINTENANCE PERIOD;
   h. AT THE END OF THE MAINTENANCE PERIOD, THE CONTRACTOR/DEVELOPER SHALL CALL THE PUBLIC WORKS LANDSCAPE INSPECTOR AT THE NUMBER LISTED ABOVE FOR A FINAL ACCEPTANCE INSPECTION IN ORDER TO BE RELEASED FROM MAINTENANCE. CONTRACTOR'S BOND WILL NOT BE RELEASED UNTIL AFTER CITY'S ISSUANCE OF WRITTEN NOTIFICATION THAT THE PROJECT HAS PASSED FINAL INSPECTION AND THE PUBLIC WORKS DEPARTMENT IS ASSUMING MAINTENANCE RESPONSIBILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO ACCEPTABLY MAINTAIN ALL PLANTINGS FOR A MINIMUM PERIOD AS SPECIFIED IN THE BID DOCUMENTS.

(LS R) EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA. 2

WIDENING IMPROVEMENTS ELIMINATED ON IOWA AVENUE EXCEPT FOR ADJACENT TO HUNTER PARK. THE MEDIANS MAY ALSO NOT BE CONSTRUCTED ON BOTH ROADWAYS AS AN ALTERNATE AID 3

SHEET INDEX:

CV-1 COVER SHEET
CP-1 CONSTRUCTION PLAN
CP-2 CONSTRUCTION PLAN
CP-3 CONSTRUCTION PLAN
CP-4 CONSTRUCTION PLAN
CP-5 CONSTRUCTION PLAN
IR-1 IRRIGATION PLAN
IR-2 IRRIGATION PLAN
IR-3 IRRIGATION PLAN
IR-4 IRRIGATION PLAN
IR-5 IRRIGATION PLAN
IR-6 IRRIGATION PLAN
IR-7 IRRIGATION PLAN
IR-8 IRRIGATION DETAILS
IR-9 IRRIGATION DETAILS
PL-1 PLANTING PLAN
PL-2 PLANTING PLAN
PL-3 PLANTING PLAN
PL-4 PLANTING PLAN
PL-5 PLANTING PLAN
PL-6 PLANTING PLAN
PL-7 PLANTING PLAN
PL-8 PLANTING DETAILS

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — Signature — 6/30/09 Exp. 08/09 — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	REDUCED MEDIAN LANDSCAPE AREA	EL	2/6/09
2	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY WD DRAWN BY SS CHECKED BY WD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
COLUMBIA AVE: FROM STA. 29+00 TO STA. 64+00
IOWA AVE: FROM MALBOROUGH AVE. TO PALMYRITA AVE.
COVER SHEET

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L

CV-1

SHEET 39 OF 76

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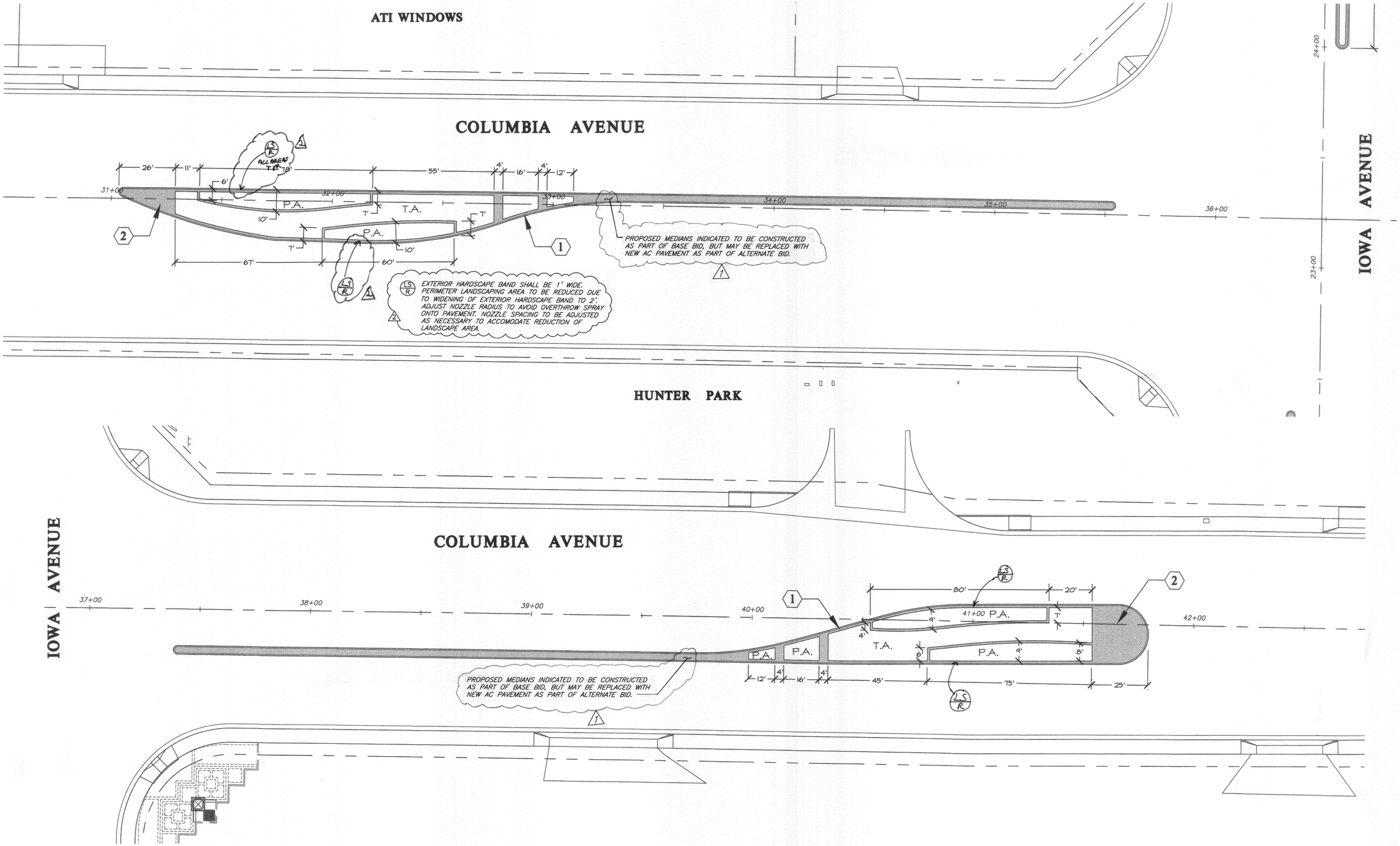

CONSTRUCTION NOTES

1. CONSTRUCT 1' WIDE STAMPED CONCRETE WALK. PER DETAIL A / SHT. CP-3
2. STAMPED CONCRETE PAVING PER DETAIL B / SHT. CP-3

ABBREVIATIONS

P.A. - PLANTED AREA
T.A. - TURF AREA

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 – 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN J. DAVIDSON No. 3781 Signature 6/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	CL	8/24/09
1	PROJECT SCOPE REDUCED	SS	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET – 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
CONSTRUCTION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L

CP-1

SHEET 40 OF 76

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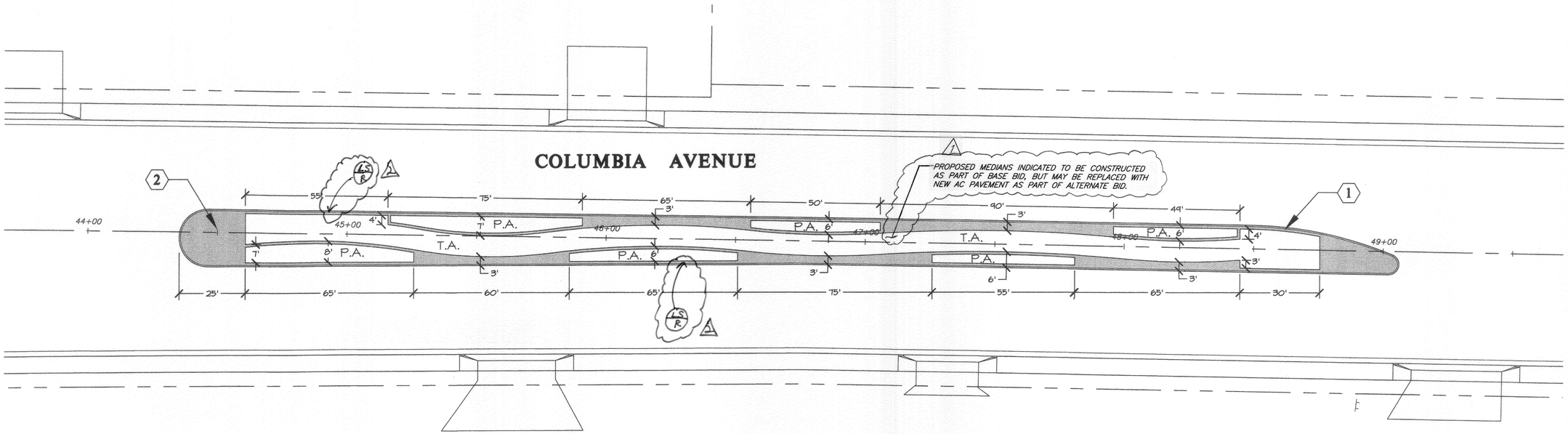

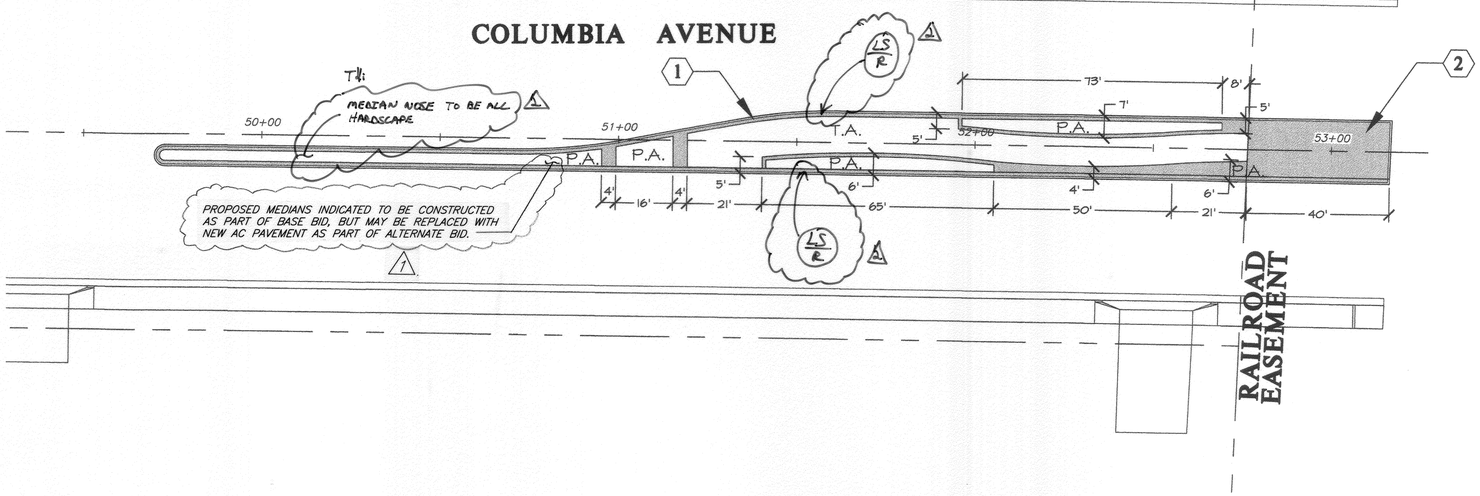

LS R 2 EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

CONSTRUCTION NOTES

1. CONSTRUCT 1' WIDE STAMPED CONCRETE WALK. PER DETAIL A / SHT. CP-3
2. STAMPED CONCRETE PAVING PER DETAIL B / SHT. CP-3

ABBREVIATIONS

P.A. - PLANTED AREA
T.A. - TURF AREA

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN DAVIDSON 2828 6/30/09 EXP. 2009 STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	C.C.	9/21/09
1	PROJECT SCOPE REDUCED	SC	7/11/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

	APPROVED BY	BY	DATE
	CONST. CONTRACT ADMIN.		
	PRINCIPAL ENGINEER		
	STREET SERVICES		
	SURVEYOR		
	TRAFFIC DIVISION		
	PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
CONSTRUCTION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
CP-2
SHEET 41 OF 76

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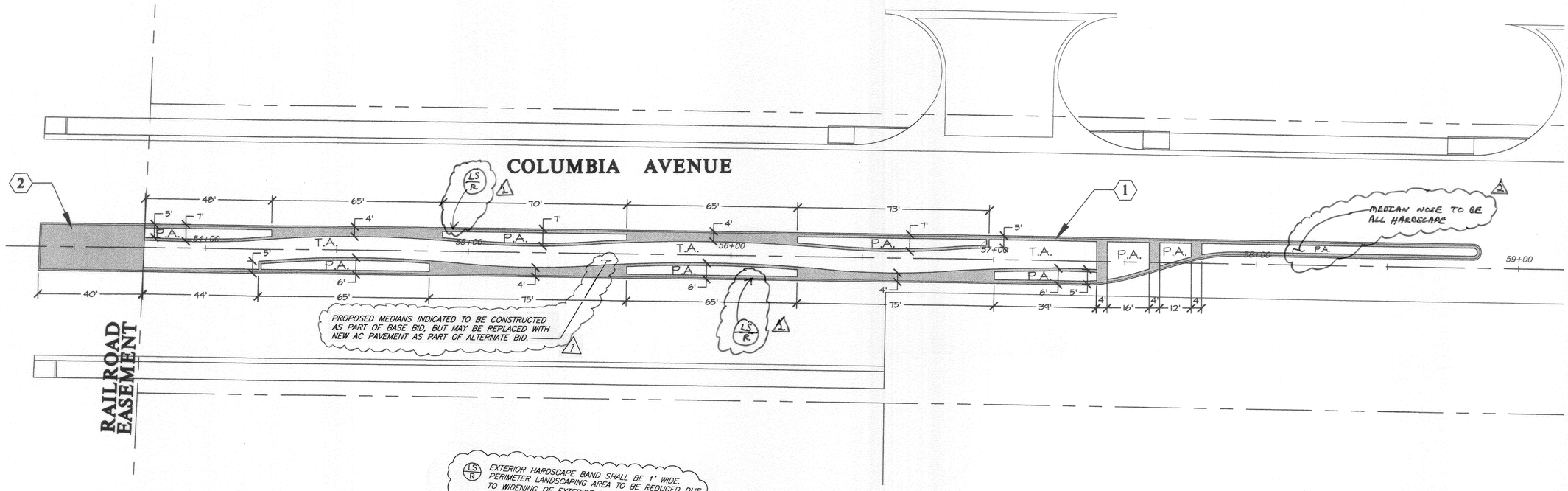
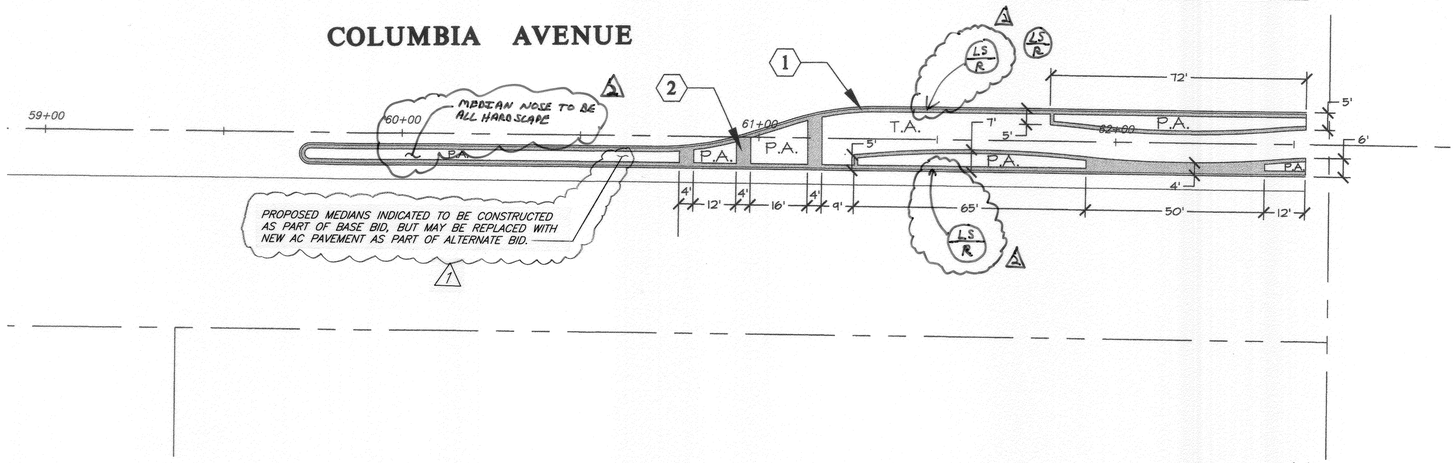
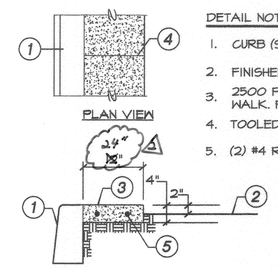






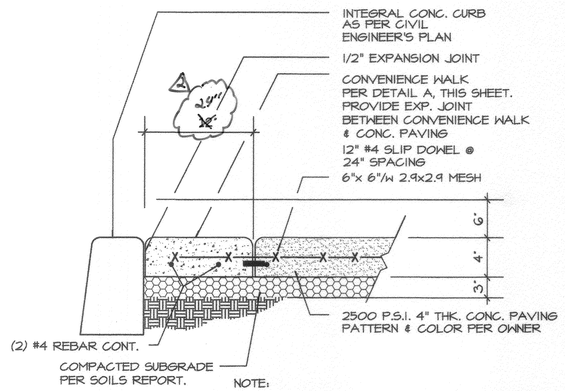
DETAIL NOTES:

1. CURB (SEE CIVIL ENGINEER'S PLAN)
2. FINISHED GRADE
3. 2500 P.S.I. 4" THK. PCC STAMPED CONVENIENCE WALK. PATTERN AND COLOR PER OWNER
4. TOOLED CONTROL JOINT @ 5' O.C.
5. (2) #4 REBAR CONT.

SECTION

A CONCRETE WALK

NOT TO SCALE



NOTE:
STAMPED CONCRETE PATTERN TO BE PARALLEL TO BANDING

B STAMPED CONCRETE PAVING

NOT TO SCALE

CONSTRUCTION NOTES

1. CONSTRUCT 1' WIDE STAMPED CONCRETE WALK. PER DETAIL A / SHT. CP-3
2. STAMPED CONCRETE PAVING PER DETAIL B / SHT. CP-3

ABBREVIATIONS

P.A. - PLANTED AREA
T.A. - TURF AREA

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
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E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN M. DAVIDSON No. 4760 Signature 6/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN/LANDSCAPE AREA	CC	9/9/09
1	PROJECT SCOPE REDUCED	CC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
CONSTRUCTION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
CP-3
SHEET 42 OF 76

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HUNTER PARK

MARLBOROUGH AVE

MATCHLINE - SEE BELOW

IOWA AVENUE

11+00 12+00 13+00 14+00 15+00 16+00

P.A. P.A. P.A. T.A. P.A. P.A. T.A. P.A.

56' 80' 60' 90' 55'

6' 5' 3' 6' 3' 5'

251' 12' 4' 16' 4' 65' 61' 80' 75' 60'

1 2

LS/P 2

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

LS/P 2

THE GROVE

THE GROVE

HUNTER PARK

MATCHLINE - SEE ABOVE

IOWA AVENUE

80' 85' 70' 19' 4' 16' 4' 12'

3' 4'

17+00 18+00 19+00 20+00 21+00 22+00

T.A. P.A. 8' T.A. P.A. 11' P.A. P.A.

6' 3' 5' 5'

70' 85' 60'

LS/P 2

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

2 1

LS/P 2 EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

COLUMBIA AVENUE

BOURNS

CONSTRUCTION NOTES

1. CONSTRUCT 1' WIDE STAMPED CONCRETE WALK. PER DETAIL A / SHT. CP-3
2. STAMPED CONCRETE PAVING PER DETAIL B / SHT. CP-3

ABBREVIATIONS

P.A. - PLANTED AREA
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NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN F. DAVIDSON No. 3878 Signature 6/24/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	C.L.	2/2/10
1	PROJECT SCOPE REDUCED	C.L.	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
CONSTRUCTION PLAN

DESIGN W.O. NO. 070289
CONSTRUCTION W.O. NO. 0915428

R-4132L
CP-4
SHEET 43 OF 76

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HUNTER CORP PLAZA

COLUMBIA AVE

IOWA AVENUE

MATCHLINE - SEE BELOW

MEDIAN NOSE TO BE ALL HARDSCAPE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

HUNTER CORP PLAZA

FATA HUNTER

ATI WINDOWS

FREIGHT YARD

EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

MATCHLINE - SEE ABOVE

IOWA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

PALMYRITA AVE

IOWA CORP CENTER

CONSTRUCTION NOTES

1. CONSTRUCT 1' WIDE STAMPED CONCRETE WALK. PER DETAIL A / SHT. CP-3
2. STAMPED CONCRETE PAVING PER DETAIL B / SHT. CP-3

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40' 30' 20' 10' 0 20' 40'

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E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN J. DAVIDSON 2539 Signature 6/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	S.L.	2/5/10
1	PROJECT SCOPE REDUCED	S.L.	7/11/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

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CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
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PARKS DEPARTMENT		

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CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
CONSTRUCTION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
CP-5
SHEET 44 OF 76

DWG: J:\2007\11007 - Iowa- Columbia Steet Improv\Drawings\Landscape\11007CP.dwg
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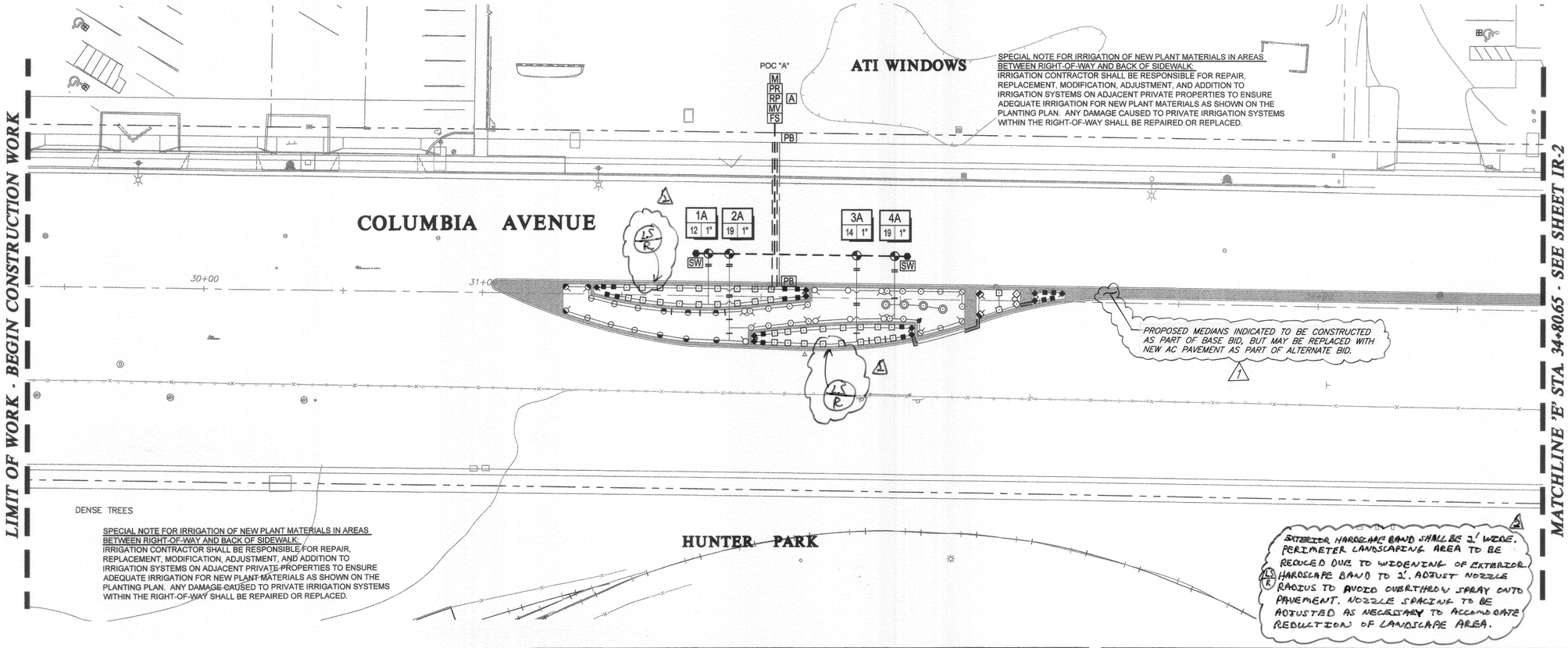
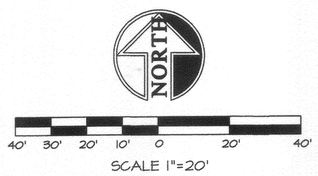


'A' PRESSURE LOSS CALCULATIONS (HIGHEST FLOW - 19 GPM FARTHEST FROM POC)		
EQUIPMENT	SIZE	LOSS
SERVICE LINE - 50' @ 19 GPM	1 1/4"	2.2
WATER METER - 19 GPM	1"	2.0
BACKFLOW PREVENTER - 19 GPM	1"	13.0
MASTER VALVE - 19 GPM	1"	2.6
FLOW SENSOR - 19 GPM	1"	1.0
MAINLINE - 150' SCH 40 PVC - 19 GPM	1 1/2"	1.6
CONTROL VALVE - 19 GPM	1"	2.6
LATERAL LINES - SCH 40 PVC	VAR.	3.0
SUBTOTAL PRESSURE LOSSES		28.0
MISC. LOSSES THRU SYSTEM (10%)		2.8
ELEVATION GAIN (FT)	0	0.0
TOTAL PRESSURE LOSSES		30.8
PRESSURE REQUIRED AT HEAD		30.0
TOTAL PRESSURE REQUIRED		60.8
REGULATED PRESSURE AT POC		70.0
RESIDUAL PRESSURE		9.2

POINT OF CONNECTION 'A'
MAKE IRRIGATION POINT OF CONNECTION INTO NEW 1" WATER METER WITH 1 1/4" SERVICE LINE. VERIFY EXACT LOCATION IN THE FIELD AND ADJUST AS NECESSARY. IRRIGATION CONTRACTOR SHALL COORDINATE NEW METER AND SERVICE WITH THE CITY OF RIVERSIDE WATER DEPARTMENT AND PAY ALL ASSOCIATED FEES. COORDINATE WORK WITH GENERAL CONTRACTOR AND CITY INSPECTOR AS NECESSARY. INSTALL BACKFLOW PREVENTER IMMEDIATELY DOWNSTREAM OF METER PER ALL LOCAL CODES. INSTALL IN STRONG BOX SB-30SS STAINLESS STEEL LOCKING ENCLOSURE. FINAL BACKFLOW PREVENTER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. INSTALL PRESSURE REGULATOR WITH BACKFLOW ASSEMBLY AND SET TO 75 PSI. INSTALL MASTER VALVE DOWNSTREAM OF BACKFLOW ASSEMBLY AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE ONE DEDICATED, COLOR-CODED 14 GA UF WIRE FROM MASTER VALVE TO CONTROLLER AND A CONNECTION TO THE COMMON WIRE. INSTALL FLOW SENSOR DOWNSTREAM OF MASTER VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE TWO DEDICATED, COLOR-CODED 14 GA UF WIRES FROM FLOW SENSOR TO CONTROLLER. MAXIMUM DEMAND IS 19 GPM. STATIC PRESSURE AT METER RANGES FROM 108 TO 121 PSI (INFORMATION FROM STELLA GARCIA AT THE CITY OF RIVERSIDE WATER DEPARTMENT ON 9/18/08 AT 951-826-5285). CONTRACTOR SHALL VERIFY STATIC PRESSURE AT POC PRIOR TO START OF WORK AND NOTIFY THE LANDSCAPE ARCHITECT IF A DISCREPANCY IS FOUND. DO NOT PROCEED WITH ANY IRRIGATION WORK UNTIL ANY PRESSURE RELATED ISSUES HAVE BEEN RESOLVED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND THE CITY.

CONTROLLER 'A'
INSTALL IRRIGATION CONTROLLER ASSEMBLY ADJACENT TO POINT OF CONNECTION AS SHOWN. ASSEMBLY WILL COME FROM CALSENSE PRE ASSEMBLED IN STAINLESS STEEL ENCLOSURE. MOUNT ENCLOSURE PER MANUFACTURER'S DIRECTIONS AND CITY STANDARDS. FINAL CONTROLLER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. THE CITY IS TO PROVIDE 120V AC POWER TO THE FINAL CONTROLLER LOCATION, THE IRRIGATION CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY AND / OR GENERAL CONTRACTOR AS NECESSARY. THE IRRIGATION CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS PER LOCAL CODES. MOUNT, GROUND, AND WIRE ALL THE CONTROL EQUIPMENT PER THE MANUFACTURER'S DIRECTIONS, THESE PLANS, AND PER ALL LOCAL CODES.

'A' POINT OF CONNECTION INFORMATION
WATER TYPE - POTABLE
METER SIZE - 1"
BACKFLOW PREVENTER SIZE - 1"
PRESSURE REGULATOR - 1" (75 PSI)
FLOW SENSOR - 1"
MASTER VALVE - 1"
MAXIMUM DEMAND - 19 GPM
NUMBER OF VALVES - 4
CONTROLLER SIZE - 8 STATION
STATIC PRESSURE AT METER - 108 PSI MIN.



EQUIPMENT LEGEND

SYMBOL	MANUFACTURER / MODEL NUMBER	SIZE	DETAIL
M	WATER METER - SEE POINT OF CONNECTION NOTE ON PLANS	1"	PER CITY STD. DETAILS
A	CALSENSE ET 2000e-8-LR-RRE-SSER CONTROLLER ASSEMBLY	8 STATION	
B C E	CALSENSE ET 2000e-24-LR-RRE-SSER CONTROLLER ASSEMBLY	24 STATION	
D	CALSENSE ET 2000e-16-LR-RRE-SSER CONTROLLER ASSEMBLY	16 STATION	
RP	FEBCO 825YA SERIES REDUCED PRESSURE BACKFLOW PREVENTER - IN LOCKING ENCLOSURE	1"	
PR	WILKINS 500 SERIES PRESSURE REGULATING VALVE - INSTALL WITH BACKFLOW DEVICE	1"	
MV	SUPERIOR 950 SERIES NORMALLY CLOSED BRASS MASTER CONTROL VALVE	1"	
FS	CALSENSE FM-1B FLOW SENSOR	1"	
SW	SPARE WIRES - INSTALL TWO TO EACH END OF EACH MAINLINE	12 GA	
PB	CONTROL WIRE PULL BOX	N/A	
	NIBCO T-580-70 BRONZE BALL VALVE - 3" AND SMALLER	LINE SIZE	
	TORO 100-SLVLC QUICK COUPLING VALVE WITH LOCKING VINYL COVER	1"	
	SUPERIOR 950 SERIES BRASS ELECTRIC CONTROL VALVE	1"	
— — —	SCH 40 PVC IRRIGATION PRESSURE MAINLINE - 18" MINIMUM COVER	1 1/2"	
———	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MINIMUM COVER	PLAN SIZE	
=======	SCH 40 PVC PIPE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
—— - ——	SCH 40 PVC WIRE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
NOT SHOWN	UF DIRECT BURIAL CONTROL WIRE WITH WATERPROOF CONNECTIONS	12 GA	

CONTROLLER SPECIFICATIONS SUBJECT TO CHANGE PENDING RADIO RECEPTION TESTING BY CALSENSE. CONTACT BOB MOXLEY AT CALSENSE FOR INFORMATION AND ORDERING CONTROLLERS (760-580-9428)

HEAD ADJUSTMENTS
IRRIGATION CONTRACTOR SHALL FINE TUNE AND ADJUST ALL IRRIGATION SYSTEM TO PROVIDE MAXIMUM HEAD-TO-HEAD COVERAGE WITH LITTLE OR NO OVERSPRAY OUTSIDE THE PLANTED AREAS. NO OVERSPRAY WILL BE ALLOWED IN THE ROADWAYS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO ADJUSTING THE PRESSURE REGULATOR AT THE POC AS NECESSARY, ADJUSTING THE FLOW CONTROL OF EACH AND EVERY CONTROL VALVE AS NECESSARY, ADJUSTING THE RADIUS OF EACH AND EVERY SPRAY HEAD AS NECESSARY, USING THE BEST NOZZLE AS DETERMINED NECESSARY (ARC AND RADIUS), AND USING AN ADJUSTABLE NOZZLE IF NECESSARY, ETC.

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.

WIRING
EACH SYSTEM (POC) WILL REQUIRE A COMMON WIRE (WHITE), CONTROL WIRES FOR EACH VALVE (UNIQUE COLOR), A CONTROL WIRE FOR THE MASTER VALVE (UNIQUE COLOR), TWO WIRES FOR THE FLOW SENSOR (EACH UNIQUELY COLORED), AND TWO SPARE WIRES TO THE END OF EACH MAINLINE RUN (UNIQUE COLOR).

SPRINKLER LEGEND

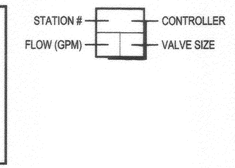
SYMBOL	MANUFACTURER / MODEL NUMBER	NOZZLE	RAD	PSI	FLOW - GPM Q	T	H	TT	TQ	F	DETAIL
TURF POP-UP SPRAY HEADS											
	RAIN BIRD 1806-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1806	6-VAN	6'	30	0.37	0.40	0.60	0.80	1.10		
	RAIN BIRD 1806-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1806	8-VAN	8'	30	0.72	0.79	1.19	1.59	1.55		
	RAIN BIRD 1806-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1806-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1806-15' SERIES	Q/T/H/TT/TQ/F	15'	30	0.92	1.23	1.85	2.48	2.78	3.70	
SHRUB HI-POP SPRAY HEADS											
	RAIN BIRD 1812-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1812-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1812-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1812-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1812-5-B SERIES	Q/H/F/CST	5'	30	0.50/1.00/1.50/0.50						
VINE BUBBLERS											
	RAIN BIRD 1401 SERIES	N/A	N/A	30	0.25						CITY STD.

PIPE SIZING

	3/4" 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	1/2" PIPE
1 1/2" SLEEVE	9-16 WIRES	3/4" PIPE
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



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E-MAIL IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN K. DAVIDSON, RLA 2498 — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	E.C.	9/11/09
1	PROJECT SCOPE REDUCED	EC	7/11/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
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TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY — APPROVED PER SIGNATURE ON SHEET - 1 — CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428
R-4132L
IR-1
SHEET 45 OF 76

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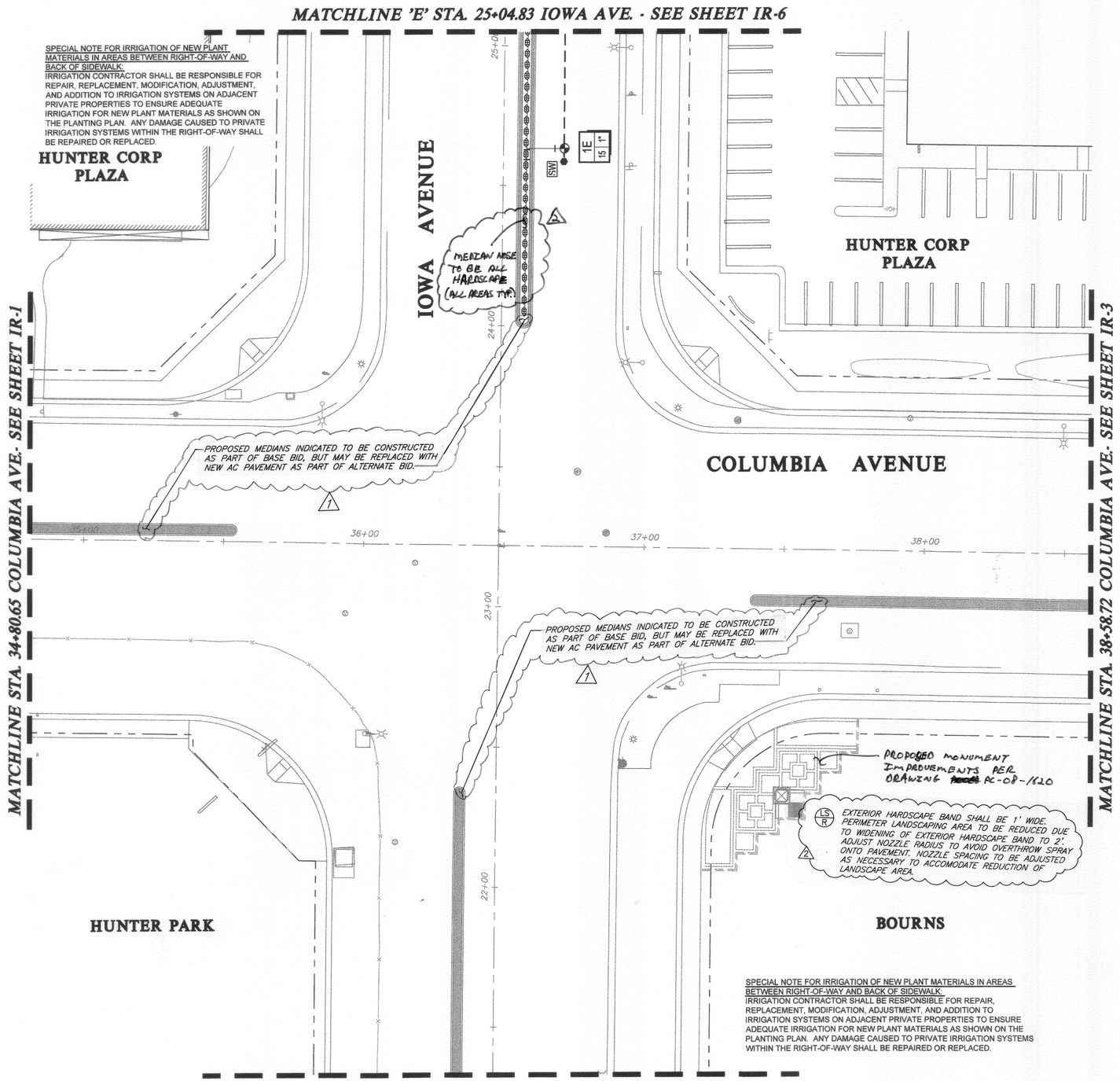

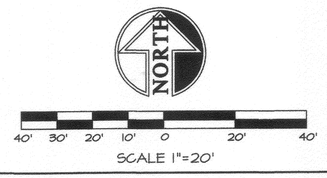

EQUIPMENT LEGEND			
SYMBOL	MANUFACTURER / MODEL NUMBER	SIZE	DETAIL
M	WATER METER - SEE POINT OF CONNECTION NOTE ON PLANS	1"	PER CITY STD. DETAILS
A	CALSENSE ET 2000e-8-LR-RRE-SSER CONTROLLER ASSEMBLY	8 STATION	
B C E	CALSENSE ET 2000e-24-LR-RRE-SSER CONTROLLER ASSEMBLY	24 STATION	
D	CALSENSE ET 2000e-16-LR-RRE-SSER CONTROLLER ASSEMBLY	16 STATION	
RP	FEBCO 825YA SERIES REDUCED PRESSURE BACKFLOW PREVENTER - IN LOCKING ENCLOSURE	1"	
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NOT SHOWN	UF DIRECT BURIAL CONTROL WIRE WITH WATERPROOF CONNECTIONS	12 GA	

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IRRIGATION CONTRACTOR SHALL FINE TUNE AND ADJUST ALL IRRIGATION SYSTEM TO PROVIDE MAXIMUM HEAD-TO-HEAD COVERAGE WITH LITTLE OR NO OVERSPRAY OUTSIDE THE PLANTED AREAS. NO OVERSPRAY WILL BE ALLOWED IN THE ROADWAYS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO ADJUSTING THE PRESSURE REGULATOR AT THE POC AS NECESSARY, ADJUSTING THE FLOW CONTROL OF EACH AND EVERY CONTROL VALVE AS NECESSARY, ADJUSTING THE RADIUS OF EACH AND EVERY SPRAY HEAD AS NECESSARY, USING THE BEST NOZZLE AS DETERMINED NECESSARY (ARC AND RADIUS), AND USING AN ADJUSTABLE NOZZLE IF NECESSARY, ETC.

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.

WIRING
EACH SYSTEM (POC) WILL REQUIRE A COMMON WIRE (WHITE), CONTROL WIRES FOR EACH VALVE (UNIQUE COLOR), A CONTROL WIRE FOR THE MASTER VALVE (UNIQUE COLOR), TWO WIRES FOR THE FLOW SENSOR (EACH UNIQUELY COLORED), AND TWO SPARE WIRES TO THE END OF EACH MAINLINE RUN (UNIQUE COLOR).

SPRINKLER LEGEND												
SYMBOL	MANUFACTURER / MODEL NUMBER	NOZZLE	RAD	PSI	FLOW - GPM Q	T	H	TT	TQ	F	DETAIL
TURF POP-UP SPRAY HEADS												
	RAIN BIRD 1806-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1806	6-VAN	6'	30	0.37	0.40	0.60	0.80	1.10		
	RAIN BIRD 1808-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1806	8-VAN	8'	30	0.72	0.79	1.19	1.59	1.55		
	RAIN BIRD 1806-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1806-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1806-15' SERIES	Q/T/H/TT/TQ/F	15'	30	0.92	1.23	1.85	2.48	2.78	3.70	
SHRUB HI-POP SPRAY HEADS												
	RAIN BIRD 1812-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1812-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1812-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1812-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1812-5-B SERIES	Q/H/F/CST	5'	30	0.50/1.00/1.50/0.50						
VINE BUBBLERS												
	RAIN BIRD 1401 SERIES	N/A	N/A	30	0.25						CITY STD.

PIPE SIZING	
	3/4" 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	1/2" PIPE
1 1/2" SLEEVE	9-16 WIRES	3/4" PIPE
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

STATION # — CONTROLLER
FLOW (GPM) — VALVE SIZE

IAN DAVIDSON,
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3547 MARKET STREET
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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN F. DAVIDSON — 4028 — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	G.C.	12/4/09
1	PROJECT SCOPE REDUCED	SC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428
R-4132L
IR-2
SHEET 46 OF 76

DWG: J:\2007\11007 - Iowa- Columbia Steet Impro\Drawings\Landscape\11007IR.dwg
TIME: 6-10-09 - 10:09am User: Ryan Dierking XRef Files: x11007cd x11007util_ex x11007ir x11007ip

HUNTER CORP PLAZA

GRAINGER

COLUMBIA AVENUE

MATCHLINE STA. 38+58.72 - SEE SHEET IR-2

MATCHLINE STA. 45+09.50 - SEE BELOW

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

1B 15 1" | 2B 15 1" | 3B 15 1" | 4B 14 1" | 5B 18 1" | 6B 10 1"

SW | PB

39+00 | 40+00 | 41+00 | 42+00 | 43+00 | 44+00 | 45+00

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

BOURNS

BOURNS

EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA. 2

SEE SHEET IR-1 & IR-2 FOR IRRIGATION LEGEND

GRAINGER

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

7B 12 1" | 8B 18 1" | 9B 7 1" | 10B 18 1" | 11B 13 1" | 12B 13 1" | 13B 18 1" | 14B 18 1" | 15B 4 1"

COLUMBIA AVENUE

PB

49+00 | 50+00 | 51+00

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

MEDIAN NOSE TO BE ALL HARDSCAPE 3

BOURNS

MATCHLINE STA. 45+09.50 - SEE ABOVE

MATCHLINE STA. 51+60.21 - SEE SHEET IR-4

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	EL	1/21/10
1	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY WD DRAWN BY SS CHECKED BY WD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-3
SHEET 47 OF 76

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MATCHLINE STA. 51+60.21 - SEE SHEET IR-3

POC "B"
M
PR
RP
MV
FS
B
PB

16B 17 | 1"
17B 11 | 1"
18B 13 | 1"
19B 11 | 1"

RAILROAD EASEMENT

53+00

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

BOURNS

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

RAILROAD EASEMENT

1C 11 | 1"
2C 14 | 1"
3C 13 | 1"
4C 16 | 1"
5C 13 | 1"
6C 13 | 1"
7C 16 | 1"
8C 18 | 1"
9C 16 | 1"
10C 7 | 1"

POC "C"
M
PR
RP
MV
FS
C
PB

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

COLUMBIA AVENUE

RETENTION BASIN

PLASCOR

MATCHLINE STA. 58+10.57 - SEE BELOW

EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

SEE SHEET IR-2 FOR IRRIGATION LEGEND

MATCHLINE STA. 58+10.57 - SEE ABOVE

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

11C 13 | 1"

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

PB

59+00

MEDIAN NOSE TO BE ALL HARDSCAPE

12C 13 | 1"

PB

60+00

13C 6 | 1"

61+00

14C 15 | 1"

15C 13 | 1"

16C 11 | 1"

17C 14 | 1"

SW

MEDIAN NOSE TO BE ALL HARDSCAPE

COLUMBIA AVENUE

PLASCOR

HTG ENGINEERING

END WORK - STA. 62+53.23

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

'B' PRESSURE LOSS CALCULATIONS
(HIGHEST FLOW - 18 GPM FARTHEST FROM POC)

EQUIPMENT	SIZE	LOSS
SERVICE LINE - 50' @ 18 GPM	1 1/4"	1.8
WATER METER - 18 GPM	1"	1.8
BACKFLOW PREVENTER - 18 GPM	1"	13.0
MASTER VALVE - 18 GPM	1"	2.6
FLOW SENSOR - 18 GPM	1"	1.0
MAINLINE - 1200' SCH 40 PVC	1 1/2"	10.7
CONTROL VALVE - 18 GPM	1"	2.6
LATERAL LINES - SCH 40 PVC	VAR.	3.0
SUBTOTAL PRESSURE LOSSES		36.5
MISC. LOSSES THRU SYSTEM (10%)		3.7
ELEVATION GAIN (FT)	0	0.0
TOTAL PRESSURE LOSSES		40.2
PRESSURE REQUIRED AT HEAD		30.0
TOTAL PRESSURE REQUIRED		70.2
REGULATED PRESSURE AT POC		80.0
RESIDUAL PRESSURE		9.9

'C' PRESSURE LOSS CALCULATIONS
(HIGHEST FLOW - 18 GPM)

EQUIPMENT	SIZE	LOSS
SERVICE LINE - 50' @ 18 GPM	1 1/4"	1.8
WATER METER - 18 GPM	1"	1.8
BACKFLOW PREVENTER - 18 GPM	1"	13.0
MASTER VALVE - 18 GPM	1"	2.6
FLOW SENSOR - 18 GPM	1"	1.0
MAINLINE - 120' SCH 40 PVC	1 1/2"	1.1
CONTROL VALVE - 18 GPM	1"	2.6
LATERAL LINES - SCH 40 PVC	VAR.	3.0
SUBTOTAL PRESSURE LOSSES		26.9
MISC. LOSSES THRU SYSTEM (10%)		2.7
ELEVATION GAIN (FT)	0	0.0
TOTAL PRESSURE LOSSES		29.6
PRESSURE REQUIRED AT HEAD		30.0
TOTAL PRESSURE REQUIRED		59.6
REGULATED PRESSURE AT POC		70.0
RESIDUAL PRESSURE		10.4

POINT OF CONNECTIONS 'B' & 'C'
MAKE IRRIGATION POINT OF CONNECTION INTO NEW 1" WATER METER WITH 1 1/4" SERVICE LINE. VERIFY EXACT LOCATION IN THE FIELD AND ADJUST AS NECESSARY. IRRIGATION CONTRACTOR SHALL COORDINATE NEW METER AND SERVICE WITH THE CITY OF RIVERSIDE WATER DEPARTMENT AND PAY ALL ASSOCIATED FEES. COORDINATE WORK WITH GENERAL CONTRACTOR AND CITY INSPECTOR AS NECESSARY. INSTALL BACKFLOW PREVENTER IMMEDIATELY DOWNSTREAM OF METER PER ALL LOCAL CODES. INSTALL IN STRONG BOX SB-30SS STAINLESS STEEL LOCKING ENCLOSURE. FINAL BACKFLOW PREVENTER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. INSTALL PRESSURE REGULATOR WITH BACKFLOW ASSEMBLY AND SET TO 80 PSI. INSTALL MASTER VALVE DOWNSTREAM OF BACKFLOW ASSEMBLY AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE ONE DEDICATED, COLOR-CODED 14 GA UF WIRE FROM MASTER VALVE TO CONTROLLER AND A CONNECTION TO THE COMMON WIRE. INSTALL FLOW SENSOR DOWNSTREAM OF MASTER VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE TWO DEDICATED, COLOR-CODED 14 GA UF WIRES FROM FLOW SENSOR TO CONTROLLER. MAXIMUM DEMAND IS 18 GPM. STATIC PRESSURE AT METER RANGES FROM 108 TO 121 PSI (INFORMATION FROM STELLA GARCIA AT THE CITY OF RIVERSIDE WATER DEPARTMENT ON 9/18/08 AT 951-826-5285). CONTRACTOR SHALL VERIFY STATIC PRESSURE AT POC PRIOR TO START OF WORK AND NOTIFY THE LANDSCAPE ARCHITECT IF A DISCREPANCY IS FOUND. DO NOT PROCEED WITH ANY IRRIGATION WORK UNTIL ANY PRESSURE RELATED ISSUES HAVE BEEN RESOLVED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND THE CITY.

CONTROLLERS 'B' & 'C'
INSTALL IRRIGATION CONTROLLER ASSEMBLY ADJACENT TO POINT OF CONNECTION AS SHOWN. ASSEMBLY WILL COME FROM CALSENSE PRE ASSEMBLED IN STAINLESS STEEL ENCLOSURE. MOUNT ENCLOSURE PER MANUFACTURER'S DIRECTIONS AND CITY STANDARDS. FINAL CONTROLLER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. THE CITY IS TO PROVIDE 120V AC POWER TO THE FINAL CONTROLLER LOCATION, THE IRRIGATION CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY AND / OR GENERAL CONTRACTOR AS NECESSARY. THE IRRIGATION CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS PER LOCAL CODES. MOUNT, GROUND, AND WIRE ALL THE CONTROL EQUIPMENT PER THE MANUFACTURER'S DIRECTIONS, THESE PLANS, AND PER ALL LOCAL CODES.

'B' POINT OF CONNECTION INFORMATION
WATER TYPE - POTABLE
METER SIZE - 1"
BACKFLOW PREVENTER SIZE - 1"
PRESSURE REGULATOR - 1" (80 PSI)
FLOW SENSOR - 1"
MASTER VALVE - 1"
MAXIMUM DEMAND - 18 GPM
NUMBER OF VALVES - 19
CONTROLLER SIZE - 24 STATION
STATIC PRESSURE AT METER - 108 PSI MIN.

'C' POINT OF CONNECTION INFORMATION
WATER TYPE - POTABLE
METER SIZE - 1"
BACKFLOW PREVENTER SIZE - 1"
PRESSURE REGULATOR - 1" (70 PSI)
FLOW SENSOR - 1"
MASTER VALVE - 1"
MAXIMUM DEMAND - 18 GPM
NUMBER OF VALVES - 17
CONTROLLER SIZE - 24 STATION
STATIC PRESSURE AT METER - 108 PSI MIN.

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — No. 4813 — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	REDUCED MEDIAN LANDSCAPE AREA	C.L.	9/26/07
2	PROJECT SCOPE REDUCED	C.L.	1/21/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-4
SHEET 48 OF 76

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LIMIT OF WORK - BEGIN CONSTRUCTION WORK

MARLBOROUGH AVE

HUNTER PARK

IOWA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. (1)

10+00 11+00 12+00 13+00 14+00 15+00

SW

1D 12 1" | 2D 13 1" | 3D 13 1" | 4D 14 1"

MATCHLINE STA. 15+47.15 - SEE BELOW

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

THE GROVE

THE GROVE

(LS/R) EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA. (2)

SEE SHEET IR-6 FOR IRRIGATION LEGEND

HUNTER PARK

MATCHLINE STA. 15+47.15 - SEE ABOVE

IOWA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. (1)

16+00 17+00 18+00 20+00 21+00

PB

5D 15 1" | 6D 15 1" | 7D 15 1" | 8D 14 1" | 9D 15 1" | 10D 8 1" | 11D 15 1" | 12D 12 1"

SW

POC "D"

M PR RP MV FS

D

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

BOURNS

SEE SHEET IR-6 FOR POC 'D' CALCS

MATCHLINE 'C' STA. 21+33.17 - SEE SHEET IR-2

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

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IDLA# 11007 – 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN T. DAVIDSON No. 3981 Signature 6/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA C.L.		2/24/10
1	PROJECT SCOPE REDUCED	EC.	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET – 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-5
SHEET 49 OF 76

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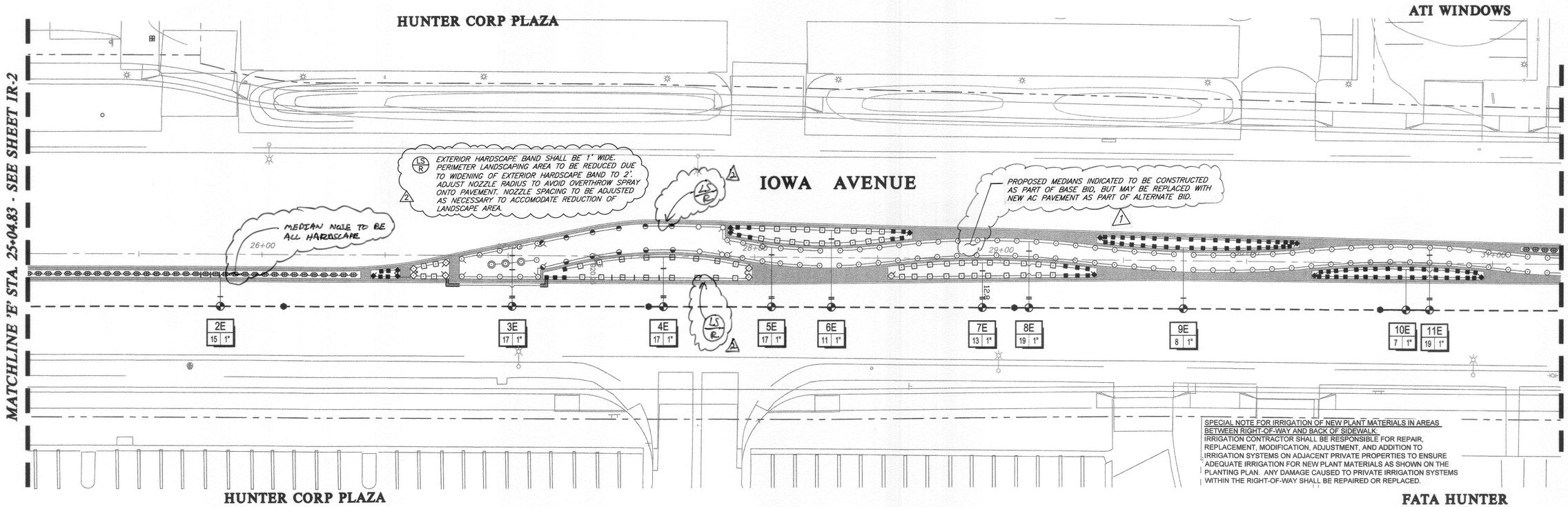

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

'D' PRESSURE LOSS CALCULATIONS (HIGHEST FLOW - 16 GPM FARTHEST FROM POC)		
EQUIPMENT	SIZE	LOSS
SERVICE LINE - 50' @ 16 GPM	1 1/4"	1.5
WATER METER - 16 GPM	1"	1.4
BACKFLOW PREVENTER - 16 GPM	1"	13.0
MASTER VALVE - 16 GPM	1"	2.6
FLOW SENSOR - 16 GPM	1"	1.0
MAINLINE - 500' SCH 40 PVC	1 1/2"	3.6
CONTROL VALVE - 16 GPM	1"	2.6
LATERAL LINES - SCH 40 PVC	VAR.	3.0
SUBTOTAL PRESSURE LOSSES		28.7
MISC. LOSSES THRU SYSTEM (10%)		2.9
ELEVATION GAIN (FT)	0	0.0
TOTAL PRESSURE LOSSES		31.6
PRESSURE REQUIRED AT HEAD		30.0
TOTAL PRESSURE REQUIRED		61.6
REGULATED PRESSURE AT POC		75.0
RESIDUAL PRESSURE		13.4

POINT OF CONNECTION 'D'
MAKE IRRIGATION POINT OF CONNECTION INTO NEW 1" WATER METER WITH 1 1/4" SERVICE LINE. VERIFY EXACT LOCATION IN THE FIELD AND ADJUST AS NECESSARY. IRRIGATION CONTRACTOR SHALL COORDINATE NEW METER AND SERVICE WITH THE CITY OF RIVERSIDE WATER DEPARTMENT AND PAY ALL ASSOCIATED FEES. COORDINATE WORK WITH GENERAL CONTRACTOR AND CITY INSPECTOR AS NECESSARY. INSTALL BACKFLOW PREVENTER IMMEDIATELY DOWNSTREAM OF METER PER ALL LOCAL CODES. INSTALL IN STRONG BOX SB-30SS STAINLESS STEEL LOCKING ENCLOSURE. FINAL BACKFLOW PREVENTER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. INSTALL PRESSURE REGULATOR WITH BACKFLOW ASSEMBLY AND SET TO 75 PSI. INSTALL MASTER VALVE DOWNSTREAM OF BACKFLOW ASSEMBLY AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE ONE DEDICATED, COLOR-CODED 14 GA UF WIRE FROM MASTER VALVE TO CONTROLLER AND A CONNECTION TO THE COMMON WIRE. INSTALL FLOW SENSOR DOWNSTREAM OF MASTER VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE TWO DEDICATED, COLOR-CODED 14 GA UF WIRES FROM FLOW SENSOR TO CONTROLLER. MAXIMUM DEMAND IS 16 GPM. STATIC PRESSURE AT METER RANGES FROM 108 TO 121 PSI (INFORMATION FROM STELLA GARCIA AT THE CITY OF RIVERSIDE WATER DEPARTMENT ON 9/18/08 AT 951-826-5285). CONTRACTOR SHALL VERIFY STATIC PRESSURE AT POC PRIOR TO START OF WORK AND NOTIFY THE LANDSCAPE ARCHITECT IF A DISCREPANCY IS FOUND. DO NOT PROCEED WITH ANY IRRIGATION WORK UNTIL ANY PRESSURE RELATED ISSUES HAVE BEEN RESOLVED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND THE CITY.

CONTROLLER 'D'
INSTALL IRRIGATION CONTROLLER ASSEMBLY ADJACENT TO POINT OF CONNECTION AS SHOWN. ASSEMBLY WILL COME FROM CALSENSE PRE ASSEMBLED IN STAINLESS STEEL ENCLOSURE. MOUNT ENCLOSURE PER MANUFACTURER'S DIRECTIONS AND CITY STANDARDS. FINAL CONTROLLER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. THE CITY IS TO PROVIDE 120V AC POWER TO THE FINAL CONTROLLER LOCATION, THE IRRIGATION CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY AND / OR GENERAL CONTRACTOR AS NECESSARY. THE IRRIGATION CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS PER LOCAL CODES. MOUNT, GROUND, AND WIRE ALL THE CONTROL EQUIPMENT PER THE MANUFACTURER'S DIRECTIONS, THESE PLANS, AND PER ALL LOCAL CODES.

'D' POINT OF CONNECTION INFORMATION
WATER TYPE - POTABLE
METER SIZE - 1"
BACKFLOW PREVENTER SIZE - 1"
PRESSURE REGULATOR - 1" (75 PSI)
FLOW SENSOR - 1"
MASTER VALVE - 1"
MAXIMUM DEMAND - 19 GPM
NUMBER OF VALVES - 12
CONTROLLER SIZE - 16 STATION
STATIC PRESSURE AT METER - 108 PSI MIN.

EQUIPMENT LEGEND			
SYMBOL	MANUFACTURER / MODEL NUMBER	SIZE	DETAIL
M	WATER METER - SEE POINT OF CONNECTION NOTE ON PLANS	1"	PER CITY STD. DETAILS
A	CALSENSE ET 2000e-8-LR-RRE-SSER CONTROLLER ASSEMBLY	8 STATION	
B C E	CALSENSE ET 2000e-24-LR-RRE-SSER CONTROLLER ASSEMBLY	24 STATION	
D	CALSENSE ET 2000e-16-LR-RRE-SSER CONTROLLER ASSEMBLY	16 STATION	
RP	FEBCO 825YA SERIES REDUCED PRESSURE BACKFLOW PREVENTER - IN LOCKING ENCLOSURE	1"	
PR	WILKINS 500 SERIES PRESSURE REGULATING VALVE - INSTALL WITH BACKFLOW DEVICE	1"	
MV	SUPERIOR 950 SERIES NORMALLY CLOSED BRASS MASTER CONTROL VALVE	1"	
FS	CALSENSE FM-1B FLOW SENSOR	1"	
SW	SPARE WIRES - INSTALL TWO TO EACH END OF EACH MAINLINE	12 GA	
PB	CONTROL WIRE PULL BOX	N/A	
	NIBCO T-580-70 BRONZE BALL VALVE - 3" AND SMALLER	LINE SIZE	
	TORO 100-SLVLC QUICK COUPLING VALVE WITH LOCKING VINYL COVER	1"	
	SUPERIOR 950 SERIES BRASS ELECTRIC CONTROL VALVE	1"	
	SCH 40 PVC IRRIGATION PRESSURE MAINLINE - 18" MINIMUM COVER	1 1/2"	
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MINIMUM COVER	PLAN SIZE	
	SCH 40 PVC PIPE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
	SCH 40 PVC WIRE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
NOT SHOWN	UF DIRECT BURIAL CONTROL WIRE WITH WATERPROOF CONNECTIONS	12 GA	

CONTROLLER SPECIFICATIONS SUBJECT TO CHANGE PENDING RADIO RECEPTION TESTING BY CALSENSE. CONTACT BOB MOXLEY AT CALSENSE FOR INFORMATION AND ORDERING CONTROLLERS (760-580-9428)

HEAD ADJUSTMENTS
IRRIGATION CONTRACTOR SHALL FINE TUNE AND ADJUST ALL IRRIGATION SYSTEM TO PROVIDE MAXIMUM HEAD-TO-HEAD COVERAGE WITH LITTLE OR NO OVERSPRAY OUTSIDE THE PLANTED AREAS. NO OVERSPRAY WILL BE ALLOWED IN THE ROADWAYS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO ADJUSTING THE PRESSURE REGULATOR AT THE POC AS NECESSARY, ADJUSTING THE FLOW CONTROL OF EACH AND EVERY CONTROL VALVE AS NECESSARY, ADJUSTING THE RADIUS OF EACH AND EVERY SPRAY HEAD AS NECESSARY, USING THE BEST NOZZLE AS DETERMINED NECESSARY (ARC AND RADIUS), AND USING AN ADJUSTABLE NOZZLE IF NECESSARY, ETC.

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.

WIRING
EACH SYSTEM (POC) WILL REQUIRE A COMMON WIRE (WHITE), CONTROL WIRES FOR EACH VALVE (UNIQUE COLOR), A CONTROL WIRE FOR THE MASTER VALVE (UNIQUE COLOR), TWO WIRES FOR THE FLOW SENSOR (EACH UNIQUELY COLORED), AND TWO SPARE WIRES TO THE END OF EACH MAINLINE RUN (UNIQUE COLOR).

SPRINKLER LEGEND												
SYMBOL	MANUFACTURER / MODEL NUMBER	NOZZLE	RAD	PSI	FLOW - GPM Q	T	H	TT	TQ	F	DETAIL
TURF POP-UP SPRAY HEADS											
	RAIN BIRD 1806-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1806	6-VAN	6'	30	0.37	0.40	0.60	0.80	1.10		
	RAIN BIRD 1806-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1806	8-VAN	8'	30	0.72	0.79	1.19	1.59	1.55		
	RAIN BIRD 1806-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1806-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1806-15' SERIES	Q/T/H/TT/TQ/F	15'	30	0.92	1.23	1.85	2.48	2.78	3.70	
SHRUB HI-POP SPRAY HEADS											
	RAIN BIRD 1812-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1812-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1812-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1812-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1812-5-B SERIES	Q/H/F/CST	5'	30	0.50/1.00/1.50/0.50						
VINE BUBBLERS											
	RAIN BIRD 1401 SERIES	N/A	N/A	30	0.25						CITY STD.

PIPE SIZING	
	3/4" 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	1/2" PIPE
1 1/2" SLEEVE	9-16 WIRES	3/4" PIPE
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

STATION # — CONTROLLER
FLOW (GPM) — VALVE SIZE

NORTH
40' 30' 20' 10' 0 20' 40'
SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951.683.1283 . FAX 951.683.4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON — Signature — 6/30/09 — Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	REDUCED MEDIAN LANDSCAPE AREA	CC	8/24/09
2	PROJECT SCOPE REDUCED	CC	9/11/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-6
SHEET 50 OF 76

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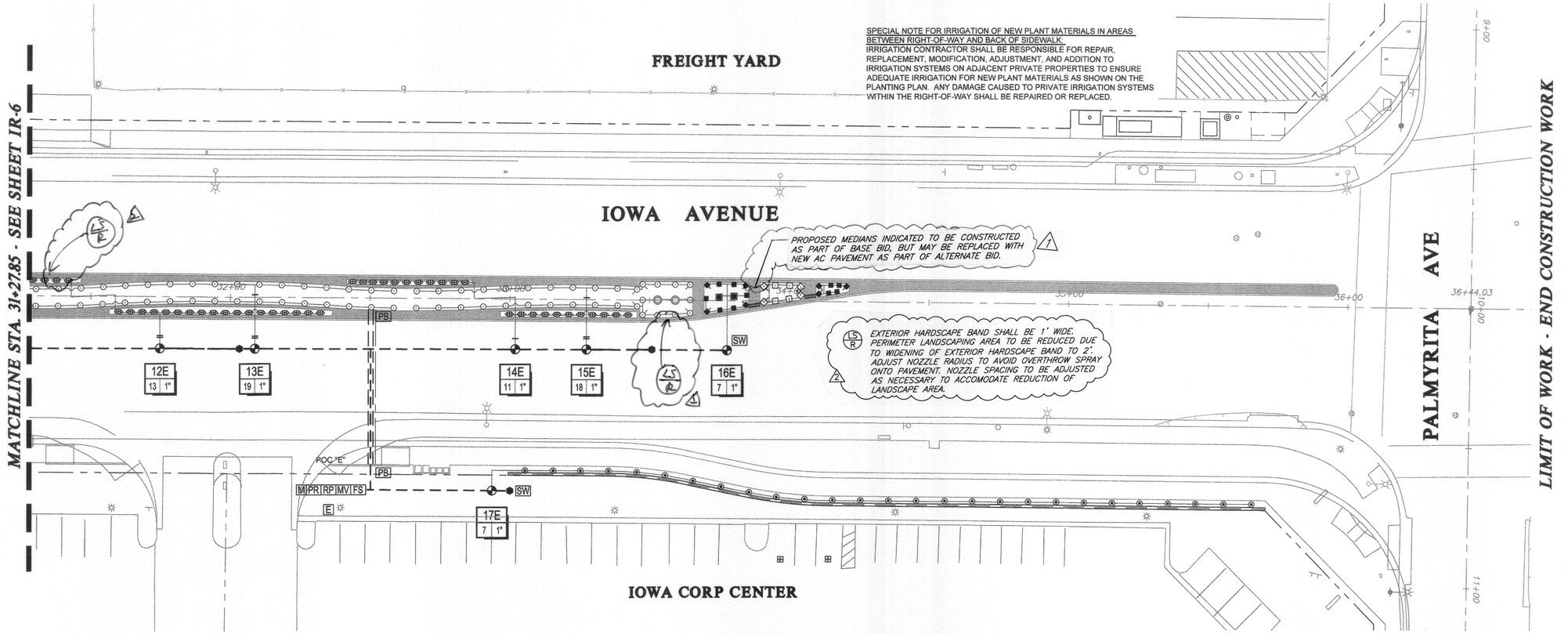

SPECIAL NOTE FOR IRRIGATION OF NEW PLANT MATERIALS IN AREAS BETWEEN RIGHT-OF-WAY AND BACK OF SIDEWALK:
IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR, REPLACEMENT, MODIFICATION, ADJUSTMENT, AND ADDITION TO IRRIGATION SYSTEMS ON ADJACENT PRIVATE PROPERTIES TO ENSURE ADEQUATE IRRIGATION FOR NEW PLANT MATERIALS AS SHOWN ON THE PLANTING PLAN. ANY DAMAGE CAUSED TO PRIVATE IRRIGATION SYSTEMS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED.

'E' PRESSURE LOSS CALCULATIONS
(HIGHEST FLOW - 19 GPM FARTHEST FROM POC)

EQUIPMENT	SIZE	LOSS
SERVICE LINE - 50' @ 19 GPM	1 1/4"	2.2
WATER METER - 19 GPM	1"	2.0
BACKFLOW PREVENTER - 19 GPM	1"	13.0
MASTER VALVE - 19 GPM	1"	2.6
FLOW SENSOR - 19 GPM	1"	1.0
MAINLINE - 500' SCH 40 PVC - 19 GPM	1 1/2"	9.7
CONTROL VALVE - 19 GPM	1"	2.6
LATERAL LINES - SCH 40 PVC	VAR.	3.0
SUBTOTAL PRESSURE LOSSES		36.1
MISC. LOSSES THRU SYSTEM (10%)		3.6
ELEVATION GAIN (FT)	0	0.0
TOTAL PRESSURE LOSSES		39.7
PRESSURE REQUIRED AT HEAD		30.0
TOTAL PRESSURE REQUIRED		69.7
REGULATED PRESSURE AT POC		80.0
RESIDUAL PRESSURE		10.3

POINT OF CONNECTION 'E'
MAKE IRRIGATION POINT OF CONNECTION INTO NEW 1" WATER METER WITH 1 1/4" SERVICE LINE. VERIFY EXACT LOCATION IN THE FIELD AND ADJUST AS NECESSARY. IRRIGATION CONTRACTOR SHALL COORDINATE NEW METER AND SERVICE WITH THE CITY OF RIVERSIDE WATER DEPARTMENT AND PAY ALL ASSOCIATED FEES. COORDINATE WORK WITH GENERAL CONTRACTOR AND CITY INSPECTOR AS NECESSARY. INSTALL BACKFLOW PREVENTER IMMEDIATELY DOWNSTREAM OF METER PER ALL LOCAL CODES. INSTALL IN STRONG BOX SB-30SS STAINLESS STEEL LOCKING ENCLOSURE. FINAL BACKFLOW PREVENTER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. INSTALL PRESSURE REGULATOR WITH BACKFLOW ASSEMBLY AND SET TO 80 PSI. INSTALL MASTER VALVE DOWNSTREAM OF BACKFLOW ASSEMBLY AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE ONE DEDICATED, COLOR-CODED 14 GA UF WIRE FROM MASTER VALVE TO CONTROLLER AND A CONNECTION TO THE COMMON WIRE. INSTALL FLOW SENSOR DOWNSTREAM OF MASTER VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S DIRECTIONS. THIS WILL REQUIRE TWO DEDICATED, COLOR-CODED 14 GA UF WIRES FROM FLOW SENSOR TO CONTROLLER. MAXIMUM DEMAND IS 19 GPM. STATIC PRESSURE AT METER RANGES FROM 108 TO 121 PSI (INFORMATION FROM STELLA GARCIA AT THE CITY OF RIVERSIDE WATER DEPARTMENT ON 9/18/08 AT 951-826-5285). CONTRACTOR SHALL VERIFY STATIC PRESSURE AT POC PRIOR TO START OF WORK AND NOTIFY THE LANDSCAPE ARCHITECT IF A DISCREPANCY IS FOUND. DO NOT PROCEED WITH ANY IRRIGATION WORK UNTIL ANY PRESSURE RELATED ISSUES HAVE BEEN RESOLVED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND THE CITY.

CONTROLLER 'E'
INSTALL IRRIGATION CONTROLLER ASSEMBLY ADJACENT TO POINT OF CONNECTION AS SHOWN. ASSEMBLY WILL COME FROM CALSENSE PRE ASSEMBLED IN STAINLESS STEEL ENCLOSURE. MOUNT ENCLOSURE PER MANUFACTURER'S DIRECTIONS AND CITY STANDARDS. FINAL CONTROLLER LOCATION TO BE APPROVED IN THE FIELD BY THE CITY OR AUTHORIZED REPRESENTATIVE. THE CITY IS TO PROVIDE 120V AC POWER TO THE FINAL CONTROLLER LOCATION. THE IRRIGATION CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY AND / OR GENERAL CONTRACTOR AS NECESSARY. THE IRRIGATION CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS PER LOCAL CODES. MOUNT, GROUND, AND WIRE ALL THE CONTROL EQUIPMENT PER THE MANUFACTURER'S DIRECTIONS, THESE PLANS, AND PER ALL LOCAL CODES.

'E' POINT OF CONNECTION INFORMATION
WATER TYPE - POTABLE
METER SIZE - 1"
BACKFLOW PREVENTER SIZE - 1"
PRESSURE REGULATOR - 1" (75 PSI)
FLOW SENSOR - 1"
MASTER VALVE - 1"
MAXIMUM DEMAND - 19 GPM
NUMBER OF VALVES - 17
CONTROLLER SIZE - 24 STATION
STATIC PRESSURE AT METER - 108 PSI MIN.

NORTH
40' 30' 20' 10' 0 20' 40'
SCALE 1"=20'

EQUIPMENT LEGEND

SYMBOL	MANUFACTURER / MODEL NUMBER	SIZE	DETAIL
M	WATER METER - SEE POINT OF CONNECTION NOTE ON PLANS	1"	PER CITY STD. DETAILS
A	CALSENSE ET 2000e-8-LR-RRE-SSER CONTROLLER ASSEMBLY	8 STATION	
B C E	CALSENSE ET 2000e-24-LR-RRE-SSER CONTROLLER ASSEMBLY	24 STATION	
D	CALSENSE ET 2000e-16-LR-RRE-SSER CONTROLLER ASSEMBLY	16 STATION	
RP	FEBCO 825YA SERIES REDUCED PRESSURE BACKFLOW PREVENTER - IN LOCKING ENCLOSURE	1"	
PR	WILKINS 500 SERIES PRESSURE REGULATING VALVE - INSTALL WITH BACKFLOW DEVICE	1"	
MV	SUPERIOR 950 SERIES NORMALLY CLOSED BRASS MASTER CONTROL VALVE	1"	
FS	CALSENSE FM-1B FLOW SENSOR	1"	
SW	SPARE WIRES - INSTALL TWO TO EACH END OF EACH MAINLINE	12 GA	
PB	CONTROL WIRE PULL BOX	N/A	
	NIBCO T-580-70 BRONZE BALL VALVE - 3" AND SMALLER	LINE SIZE	
	TORO 100-SLVLC QUICK COUPLING VALVE WITH LOCKING VINYL COVER	1"	
	SUPERIOR 950 SERIES BRASS ELECTRIC CONTROL VALVE	1"	
	SCH 40 PVC IRRIGATION PRESSURE MAINLINE - 18" MINIMUM COVER	1 1/2"	
	SCH 40 PVC NON-PRESSURE LATERAL LINE - 12" MINIMUM COVER	PLAN SIZE	
	SCH 40 PVC PIPE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
	SCH 40 PVC WIRE SLEEVING - 18" MIN. COVER - EXTEND 12" BEYOND EDGE OF HARDSCAPE	PLAN SIZE	
NOT SHOWN	UF DIRECT BURIAL CONTROL WIRE WITH WATERPROOF CONNECTIONS	12 GA	

CONTROLLER SPECIFICATIONS SUBJECT TO CHANGE PENDING RADIO RECEPTION TESTING BY CALSENSE. CONTACT BOB MOXLEY AT CALSENSE FOR INFORMATION AND ORDERING CONTROLLERS (760-580-9428)

HEAD ADJUSTMENTS
IRRIGATION CONTRACTOR SHALL FINE TUNE AND ADJUST ALL IRRIGATION SYSTEM TO PROVIDE MAXIMUM HEAD-TO-HEAD COVERAGE WITH LITTLE OR NO OVERSPRAY OUTSIDE THE PLANTED AREAS. NO OVERSPRAY WILL BE ALLOWED IN THE ROADWAYS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO ADJUSTING THE PRESSURE REGULATOR AT THE POC AS NECESSARY, ADJUSTING THE FLOW CONTROL OF EACH AND EVERY CONTROL VALVE AS NECESSARY, ADJUSTING THE RADIUS OF EACH AND EVERY SPRAY HEAD AS NECESSARY, USING THE BEST NOZZLE AS DETERMINED NECESSARY (ARC AND RADIUS), AND USING AN ADJUSTABLE NOZZLE IF NECESSARY, ETC.

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.

WIRING
EACH SYSTEM (POC) WILL REQUIRE A COMMON WIRE (WHITE), CONTROL WIRES FOR EACH VALVE (UNIQUE COLOR), A CONTROL WIRE FOR THE MASTER VALVE (UNIQUE COLOR), TWO WIRES FOR THE FLOW SENSOR (EACH UNIQUELY COLORED), AND TWO SPARE WIRES TO THE END OF EACH MAINLINE RUN (UNIQUE COLOR).

SPRINKLER LEGEND

SYMBOL	MANUFACTURER / MODEL NUMBER	NOZZLE	RAD	PSI	FLOW - GPM Q	T	H	TT	TQ	F	DETAIL
TURF POP-UP SPRAY HEADS											
	RAIN BIRD 1806-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1806	6-VAN	6'	30	0.37	0.40	0.60	0.80	1.10		
	RAIN BIRD 1806-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1806	8-VAN	8'	30	0.72	0.79	1.19	1.59	1.55		
	RAIN BIRD 1806-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1806-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1806-15' SERIES	Q/T/H/TT/TQ/F	15'	30	0.92	1.23	1.85	2.48	2.78	3.70	
SHRUB HI-POP SPRAY HEADS											
	RAIN BIRD 1812-5' SERIES	Q/T/H/F	5'	30	0.10	0.13	0.20			1.41	PER CITY STD. DETAILS
	RAIN BIRD 1812-8' SERIES	Q/T/H/F	8'	30	0.26	0.35	0.52			1.05	
	RAIN BIRD 1812-10' SERIES	Q/T/H/F	10'	30	0.39	0.53	0.79			1.58	
	RAIN BIRD 1812-12' SERIES	Q/T/H/TT/TQ/F	12'	30	0.65	0.87	1.30	1.74	1.95	2.60	
	RAIN BIRD 1812-5-B SERIES	Q/H/F/CST	5'	30	0.50/1.00/1.50/0.50						
VINE BUBBLERS											
	RAIN BIRD 1401 SERIES	N/A	N/A	30	0.25						CITY STD.

PIPE SIZING

	3/4" 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	1/2" PIPE
1 1/2" SLEEVE	9-16 WIRES	3/4" PIPE
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

STATION # — CONTROLLER
FLOW (GPM) — VALVE SIZE

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — Signature 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	EC	9/1/09
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

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SHEET 51 OF 76

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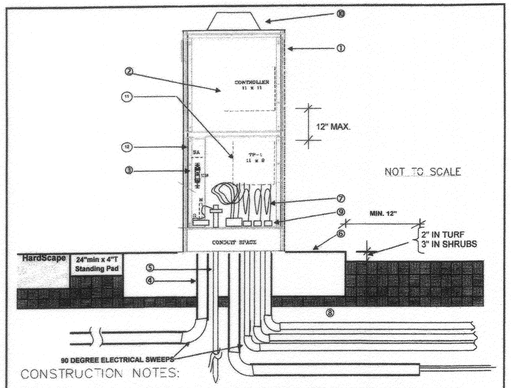


CONSTRUCTION NOTES:

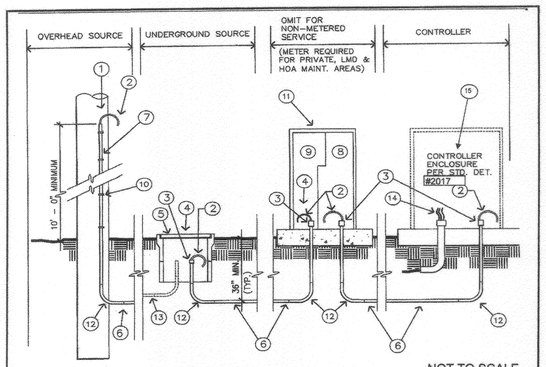
1. MYERS POWER PRODUCTS CAT. No. MEUG22X-ENC-RIV S.S. ENCLOSURE TO SUPPORT ALL MATERIALS REQUIRED BY ALL CITY AGENCIES OR EQUAL. ENCLOSURE SHALL BE MOUNTED ON A MYERS PADMOUNT BASE (PART NUMBER 519100) ENCASED CONCRETE.
2. CALSENSE CONTROLLER AS SPECIFIED ON THE LEGEND AND OR SPECIFICATIONS. WEATHER 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-#8 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. 6" THICK. NO PLANTING WITHIN 12" 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, RAIN 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	Date
P.V.	5/27/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
IRRIGATION CONTROLLER (NON-METERED) DETAIL (CS)

Detail No. **2018**



NOT TO SCALE

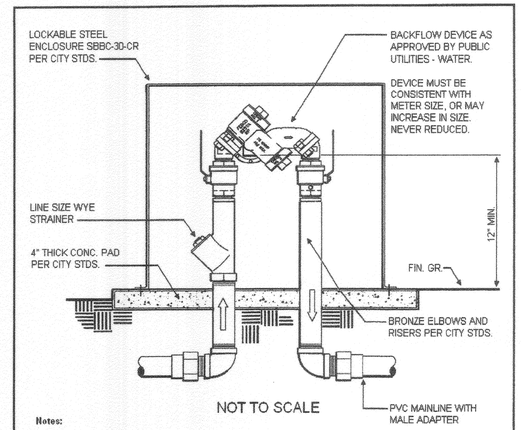
CONSTRUCTION NOTES:

1) COORDINATE W/UTILITIES-ELECTRIC (951) 826-5393 FOR RISER LOCATION ON POLE.
2) 3-#8 CU THW WIRES. CONTRACTOR TO PROVIDE SUFFICIENT WIRE LENGTH BEYOND END OF CONDUIT TO REACH OVERHEAD SECONDARY LINES FOR OVERHEAD SERVICE AND TO PROVIDE 2 FEET OF WIRE BEYOND CONDUIT END AT UGS BOX & 4 FEET OF WIRE AT METER AND CONTROLLER. IDENTIFY NEUTRAL.
3) PROVIDE INSULATING BUSHING, TERMINATE CONDUIT PER UTILITIES SPEC. UGS-311.
4) P.U. ELECTRIC WILL MAKE SERVICE CONNECTIONS IN UGS BOX FOR NON-METERED SERVICE, AND WILL MAKE CONNECTIONS AT UGS BOX
5) ELECTRIC SERVICE BOX, SIZE PER PUBLIC UTILITIES STANDARDS.
6) MIN. 2" SERVICE CONDUIT PER CITY STDS.; DB BELOW GRADE, HDG ABOVE GRADE, HDG WRAPPED SWEEPS.
7) LINE SIZE HDG CONDUIT WITH 3-#8 CU THW WIRES, PER UTILITIES STANDARDS. ID NEUTRAL.
8) LOAD SECTION.
9) SERVICE SECTION.
10) MINIMUM 3 PIPE STRAPS
11) METER PEDESTAL PER E.U.S.E.R.C. DRAWING #308. SUBMIT CATALOG CUTS TO P.U.-UTILITIES FOR APPROVAL PRIOR TO INSTALLATION.
12) LINE SIZE WRAPPED HDG SWEEP ELL, MIN. 9" RAD. (TYP.)
13) EXISTING SERVICE CONDUIT.
14) LOW VOLTAGE IRRIGATION CONTROL WIRE & CONDUIT PER PUBLIC WORKS STD. SPECS.
15) USE CONTROLLER ENCLOSURE DETAILS #2017OR #2018 AS REQUIRED PER PROJECT.

Approved	Date
P.V.	5/27/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
NON-METERED / METERED ELECTRIC SERVICE

Detail No. **2016**



Notes:

Construction Notes

1) Install backflow device square with hardscape elements as approved by the Public Works Inspector in the field.

2) Coordinate with Public Utilities-Water for location of backflow and water meter. Wherever possible, locate service and backflow in the parkway at mid-block a minimum of 150' from the Back of Curb Return at the nearest intersection per City standards.

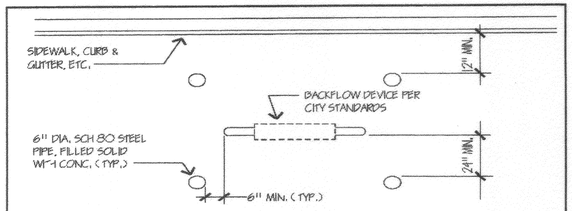
3) The backflow enclosure must be locking Stainless Steel powder coated green per City specifications. SBBC-30-CR or Applicable size.

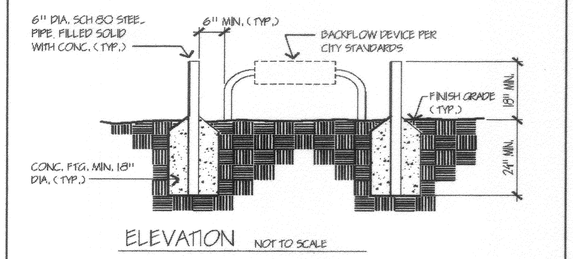
4) Backflow device shall be a Febco 825 YA installed using 250 psi rated brass/bronze pipe and fittings, between P.O.C. and device including the ninety degree elbows at the point of connection to the mainline. Contact Public Utilities-Water Backflow Program Staff (951) 351-6320 or (951) 351-6282 for inspection before back filling.

Approved	Date
P.V.	4/23/08
Revised	Date
P.V.	7/9/08

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
REDUCED PRESSURE BACKFLOW W/ENCLOSURE

Detail No. **2002**



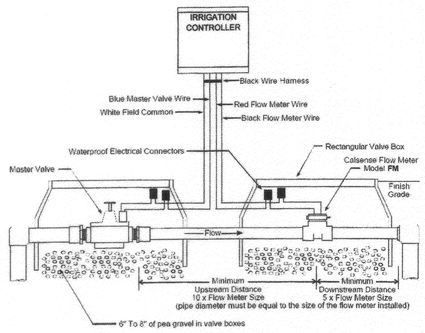


Approved	Date
P.V.	5/8/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
BACKFLOW PREVENTER WITH POSTS

Detail No. **2004**

Flow Meter Installation



Minimum Upstream and Downstream Distance for Various Flow Meter Sizes

Flow Meter Size	Minimum Upstream Pipe Length	Minimum Downstream Pipe Length	Pipe Diameter
1"	10"	5"	1"
1.25"	12-1/2"	6-1/4"	1-1/4"
1.5"	15"	7-1/2"	1-1/2"
2"	20"	10"	2"
3"	30"	15"	3"

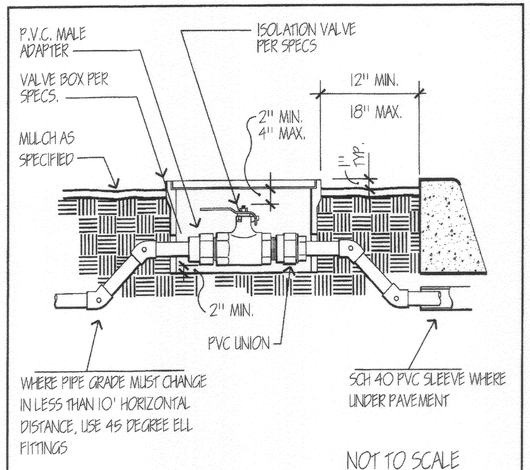
NOT TO SCALE

Note:
1) Installation of the Master Valve and Flow Meter shall be certified by Manufacturer.
2) The proposed location shall be spotted by the Contractor, with the final location Approved by the Landscape Maintenance Inspector
3) Valve boxes shall be Concrete, with Locking cast iron hinged lids.
4) A 3" Min. Clearance between the valve / flow meter and the inside of the valve box is required.

Approved	Date
P.V.	5/5/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
CALSENSE TYPICAL FLOW METER & MASTER VALVE

Detail No. **2007**



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.

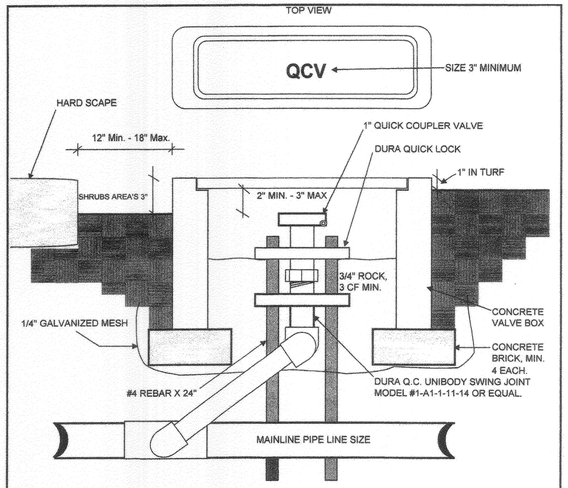
4) Install valve box so that the box does not rest on any lateral or main lines.

5) Provide minimum 3' clear distance between valve and wire boxes.

Approved	Date
P.V.	5/27/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
ISOLATION VALVE IN BOX

Detail No. **2015**



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	Date
P.V.	5/27/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
QUICK COUPLER IN VALVE BOX

Detail No. **2014**

NOTE:
CONTRACTOR IS RESPONSIBLE FOR ALL INFORMATION ON THESE DETAILS. IF UNABLE TO READ THESE DETAILS, OBTAIN LEGIBLE ORIGINAL DETAILS FROM THE CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT, FORESTRY AND LANDSCAPE DIVISION.

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
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951 683 1283 . FAX 951 683 4352
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IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY *APPROVED PER SIGNATURE ON SHEET - 1*
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-8
SHEET 52 OF 76

DWG: J:\2007\11007 - Iowa- Columbia Street improv\Drawings\Landscape\11007IR.dwg
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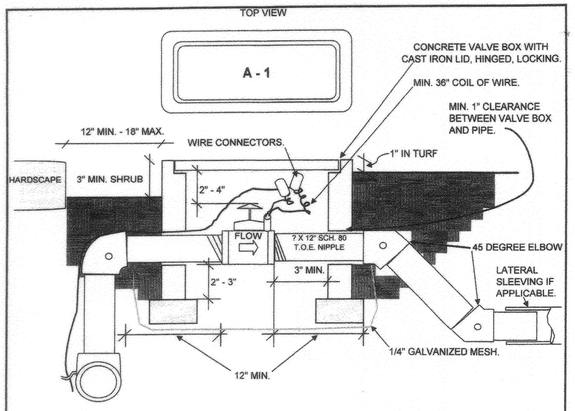


Construction Notes

1) EACH VALVE SHALL HAVE ITS OWN TEE OR ELL CONNECTION TO THE MAINLINE. NO MANIFOLD CONNECTIONS.

2) PROVIDE MINIMUM 3' CLEAR DISTANCE BETWEEN VALVES AND WIRE BOXES.

3) INSTALL VALVE BOX SO THAT THE BOX DOES NOT REST ON ANY IRRIGATION LINES.

4) WHERE PIPE DEPTH MUST CHANGE IN LESS THAN 10' HORIZONTAL DISTANCE, USE 45 DEGREE ELBOWS.

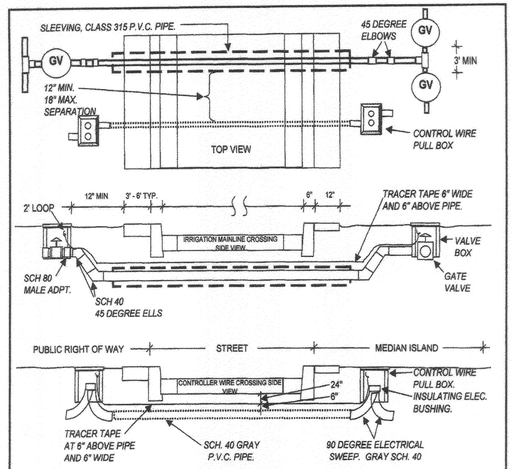
5) 3/4" GRAVEL ROCK SHALL BE PLACED IN EACH BOX. MINIMUM 2 CF.

NOT TO SCALE

Approved	Date
P.V.	5/7/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
REMOTE CONTROL VALVE "IN-LINE"

Detail No. **2010**



Construction Notes

1) The Contractor shall mark the proposed crossing with blue paint, and receive written approval from the inspector prior to trenching and or boring. They shall also have Dig Alert markings prior to inspection.

2) The irrigation tracer tape shall be 6" wide, Blue in color, and read "CAUTION Irrigation Line Buried Below".

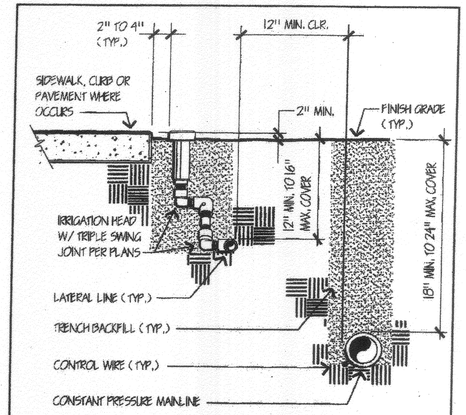
3) The irrigation wire tracer tape shall be 6" wide, Red in color, and read "CAUTION Electrical Line Buried Below".

Not to Scale

Approved	Date
P.V.	5/13/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
TYPICAL STREET CROSSING

Detail No. **2003**



Construction Notes

1) Controller wire shall be taped every 100'.

2) Main Line pipe and Lateral Line pipe shall not be placed within the same trench.

3) Rotor type sprinklers shall have a minimum 4" clearance between the hardscape and edge of rotor.

Not to Scale

Approved	Date
P.V.	5/13/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
TRENCH AND LINE PLACEMENT

Detail No. **2001**

GENERAL IRRIGATION NOTES:

1. GENERAL - ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND THESE PLANS. THE CONTRACTOR SHALL APPLY FOR ALL PERMITS AND PAY SAME.
   1.A. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON THE PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK UNDER THIS CONTRACT.
   1.B. THE CONTRACTOR SHALL CARRY ALL WORKERS COMPENSATION, PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE, AS REQUIRED BY THE CITY AND/OR OWNER.

2. SCOPE OF WORK - UNLESS OTHERWISE SPECIFIED, THE CONSTRUCTION OF IRRIGATION SYSTEMS SHALL INCLUDE THE FURNISHING, INSTALLING AND TESTING OF ALL MAINLINE, POINT OF CONNECTION, LATERAL LINES, RISERS AND FITTINGS; AND THE FURNISHING AND INSTALLING OF SPRINKLER HEADS, CONTROLLERS, ELECTRIC CONTROL VALVES, EXCAVATION AND BACKFILL AND ALL OTHER WORK IN ACCORDANCE WITH THESE PLANS, DETAILS, AND NOTES. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT PROPERTY, TRANSPORTATION, AND PERFORM ALL OPERATIONS REQUIRED FOR A COMPLETE AND OPERABLE IRRIGATION SYSTEM AS INDICATED ON, OR REASONABLY IMPLIED BY THE DRAWINGS, DETAILS, AND NOTES. INCLUDED AS A PART OF THE IRRIGATION WORK, BUT NOT LIMITED BY IT, ARE THE FOLLOWING:
   2.A. INSTALL COMPLETE OPERABLE INDEPENDENT IRRIGATION SYSTEMS PER THE PLANS, DETAILS, LEGENDS, AND NOTES.
   2.B. ALL IRRIGATION WORK SHALL BE GUARANTEED BY THE CONTRACTOR AS TO MATERIAL AND WORKMANSHIP, INCLUDING SETTLING OF BACKFILLED TRENCHES BELOW GRADE FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE OF THE WORK.

3. THE LANDSCAPE ARCHITECT SHALL DECIDE ALL QUESTIONS RELATING TO THE INTERPRETATION OF THE DRAWINGS AND THE ACCEPTABLE FULFILLMENT OF THE CONTRACT.

4. PIPING SHOWN ON THE PLANS IS ESSENTIALLY DIAGRAMMATIC. CONTRACTOR SHALL ROUTE PIPING TO AVOID CONFLICT WITH STATIONARY ELEMENTS AND IN SUCH A MANNER AS TO CONFORM WITH THE VARIOUS DETAILS AND DESIGN INTENT OF THESE PLANS.

5. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE OWNER/CITY.

6. EXTREME CARE SHALL BE EXERCISED IN EXCAVATING AND WORKING NEAR EXISTING UTILITIES. CONTRACTOR SHALL VERIFY THE LOCATION AND CONDITION OF ALL UTILITIES AND BE RESPONSIBLE FOR ANY DAMAGE. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT A MINIMUM OF TWO WORKING DAYS PRIOR TO DIGGING.

7. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND FREE OF EXCESS EQUIPMENT, MATERIALS, AND RUBBISH INCIDENTAL TO HIS WORK.

8. THE IRRIGATION DESIGN IS BASED ON THE METER SIZE AND WATER PRESSURE INDICATED ON THE WATER SOURCE / POINT OF CONNECTION NOTE ON THE PLANS. CONTRACTOR SHALL VERIFY THE PRESSURE PRIOR TO CONSTRUCTION. SHOULD A DISCREPANCY EXIST, NOTIFY THE CITY OF RIVERSIDE PRIOR TO BEGINNING CONSTRUCTION.

9. CONTRACTOR SHALL MAKE POINT(S) OF CONNECTION (POC) AS NOTED ON THE PLANS. ALL FEES AND LOCAL REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

10. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING 120 VOLT SERVICE TO THE CONTROLLER. ELECTRICAL POWER WILL BE PROVIDED BY THE CITY AND/OR OWNER AT THE CONTROLLER LOCATION SHOWN ON THE PLAN.

11. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT REQUIRED TO PERFORM A MAINLINE PRESSURE TEST. THE HYDROSTATIC TEST SHALL HOLD A MINIMUM OF 150 PSI FOR 3 HOURS OR MORE. CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE OF THE TEST FOR CERTIFICATION.

12. ALL WIRES SHALL BE SOLID COPPER, PLASTIC INSULATED, U.F. DIRECT BURIAL WIRE. ALL COMMON WIRE SHALL BE AWG #12 WHITE; ALL CONTROL WIRES SHALL BE AWG #14 RED OR BLACK. CONTROLLERS SHALL HAVE SEPARATE COLOR CODED COMMON WIRES AND CONTROL WIRES WHEN TWO OR MORE CONTROLLERS ARE ON THE PROJECT.

13. ALL CONTROL WIRES AND IRRIGATION PIPING THAT RUNS UNDER HARDSCAPE / PAVING SHALL BE ENCASED IN SCH 40 PVC SLEEVES. SLEEVES SHALL BE SIZED ACCORDING TO THE SLEEVING CHART ON THE PLANS.

14. THE FINAL LOCATION FOR CONTROL VALVES SHALL BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT OR THE OWNER'S AUTHORIZED REPRESENTATIVE. ALL VALVES SHALL BE LOCATED IN SHRUB AREAS WHEREVER POSSIBLE.

15. THE CONTRACTOR SHALL HEAT BRAND VALVE NUMBERS ON INSIDE AND OUTSIDE OF ALL VALVE BOX LIDS.

16. ALL BRASS OR GALVANIZED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE OR APPROPRIATE PIPE JOINT COMPOUND. ALL PVC TO PVC THREADED CONNECTIONS SHALL BE COATED WITH TEFLON TAPE. NO PIPE DOPE IS ALLOWED AT VALVE OR SPRINKLER HEAD CONNECTIONS.

17. ALL PVC SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH SOLVENT-WELD MATERIALS AS RECOMMENDED BY THE PIPE MANUFACTURER. SOLVENT-WELD PRIMER SHALL BE APPLIED AT ALL CONNECTIONS.

18. LOW HEAD DRAINAGE WILL NOT BE ALLOWED. CONTRACTOR TO DETERMINE IN THE FIELD WHICH HEADS DRAIN AFTER THE VALVE IS SHUT OFF. CONTRACTOR SHALL PROVIDE AND INSTALL ADDITIONAL IN-LINE CHECK VALVES AS NEEDED AT NO ADDITIONAL COST TO THE OWNER.

19. ALL PRESSURE SUPPLY LINES AND CONTROL WIRES TO HAVE 18"-24" MINIMUM COVER PER THE DETAIL. LATERAL LINES TO HAVE 12" MIN. COVER. SLEEVING IS TO HAVE 24" MIN. COVER.

20. THE RADIUS OF EACH HEAD IS TO BE ADJUSTED SO THAT HEAD-TO-HEAD COVERAGE IS MAINTAINED, BUT OVERSPRAY ON BUILDINGS, WALKS, WALLS, AND OTHER HARD SURFACES IS MINIMIZED.

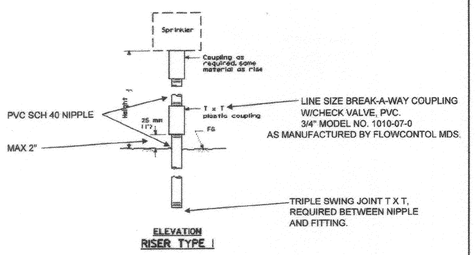
21. CONTRACTOR SHALL INSTALL 2 EXTRA WIRES FROM CONTROLLER(S) TO EACH END OF THE MAINLINE. WIRES SHALL COME UP INTO ALL VALVE BOXES ALONG THE MAINLINE PATH WITH 36" EXPANSION COILS IN EACH BOX. SPARE WIRES SHALL BE COLOR-CODED DIFFERENTLY THAN OTHER CONTROL WIRES FOR EACH CONTROLLER.

22. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR IS TO TURN OVER TO THE OWNER THE FOLLOWING:
   22.a. A REPRODUCIBLE SET OF "AS-BUILT" DRAWINGS AND CONTROLLER CHART.
   22.b. 2 KEYS FOR EACH CONTROLLER / CONTROLLER ENCLOSURE (AS APPLICABLE).
   22.c. 2 QUICK COUPLER KEYS AND MATCHING HOSE SWIVELS.
   22.d. 4 OF EACH SPRINKLER HEAD SPECIFIED.

23. RECORD DRAWINGS - THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE A COMPLETE RECORD SET OF PRINTS WHICH SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL TRANSCRIBE ALL INFORMATION FROM THE RECORD SET TO A BLACK-LINE PRINT PROCURED FROM THE OWNER. ALL WORK SHALL BE NEAT AND LEGIBLE, LOCATING THE FOLLOWING ITEMS FROM PERMANENT POINTS OF REFERENCE: SHUT-OFF VALVES, MAINLINE AND CONTROL WIRE ROUTING, POC, BACKFLOW DEVICE, CONTROL VALVES, CONTROLLER, QUICK COUPLING VALVES, AND OTHER PERTINENT UNDERGROUND ITEMS.

24. "CONTROLLER CHART" - UPON APPROVAL OF THE FINAL RECORD DRAWINGS, PROVIDE ONE CHART FOR EACH CONTROLLER INSTALLED.
   24.A. A. THE CHART IS TO BE A REDUCED COPY OF THE APPROVED RECORD DRAWING (A BLACK-LINE PRINT REDUCED TO THE MAXIMUM SIZE THE CONTROLLER DOOR WILL ALLOW, COLORED WITH A DIFFERENT COLOR FOR EACH VALVE STATION'S AREA OF COVERAGE).
   24.B. WHEN COMPLETED AND APPROVED, THE CHART SHALL BE LAMINATED BETWEEN TWO (2) PIECES OF 20 MIL. CLEAR PLASTIC AND MOUNTED ON THE INSIDE OF THE CONTROLLER DOOR USING VELCRO TAPE OR EQUAL.

NOTE:
CONTRACTOR IS RESPONSIBLE FOR ALL INFORMATION ON THESE DETAILS. IF UNABLE TO READ THESE DETAILS, OBTAIN LEGIBLE ORIGINAL DETAILS FROM THE CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT, FORESTRY AND LANDSCAPE DIVISION.



Construction Notes

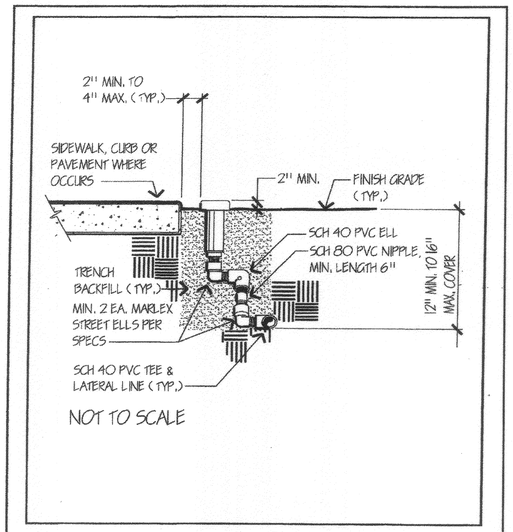
1) The risers shall be Sch. 40 PVC threaded at both ends.

NOT TO SCALE

Approved	Date
P.V.	5/9/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
SHRUB RISER EXTENSION (TYPE 1)

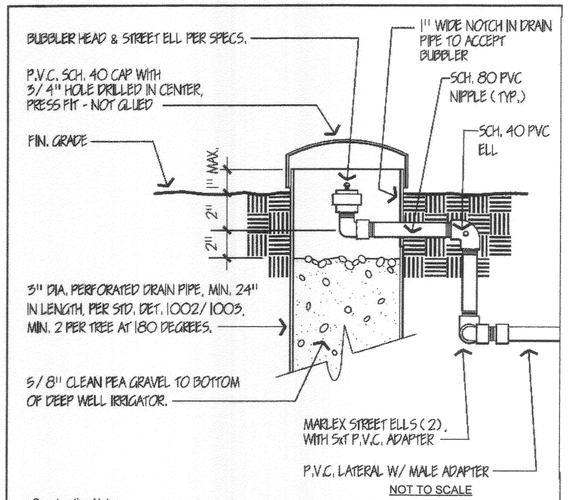
Detail No. **2012**



Approved	Date
P.V.	5/23/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
TYPICAL IRRIGATION SPRAY HEAD DETAIL

Detail No. **2013**



Construction Notes

1) Each tree shall have a minimum of two deep well irrigators.

2) The deep well irrigators shall be irrigated separately from shrub and turf area's.

3) Use pre-set bubblers only, adjustable flood bubblers will not be accepted.

4) The use of Rainbird RWS-BCG02 Root Watering System in place of drain pipe and rock is acceptable.

Approved	Date
P.V.	5/8/08
Revised	Date

Public Works Department, Forestry and Landscape Division
CITY OF RIVERSIDE
DEEP WELL IRRIGATOR

Detail No. **2011**

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RIVERSIDE, CA 92501
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E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — No. 3412 — 5/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
IRRIGATION DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
IR-9
SHEET 53 OF 76

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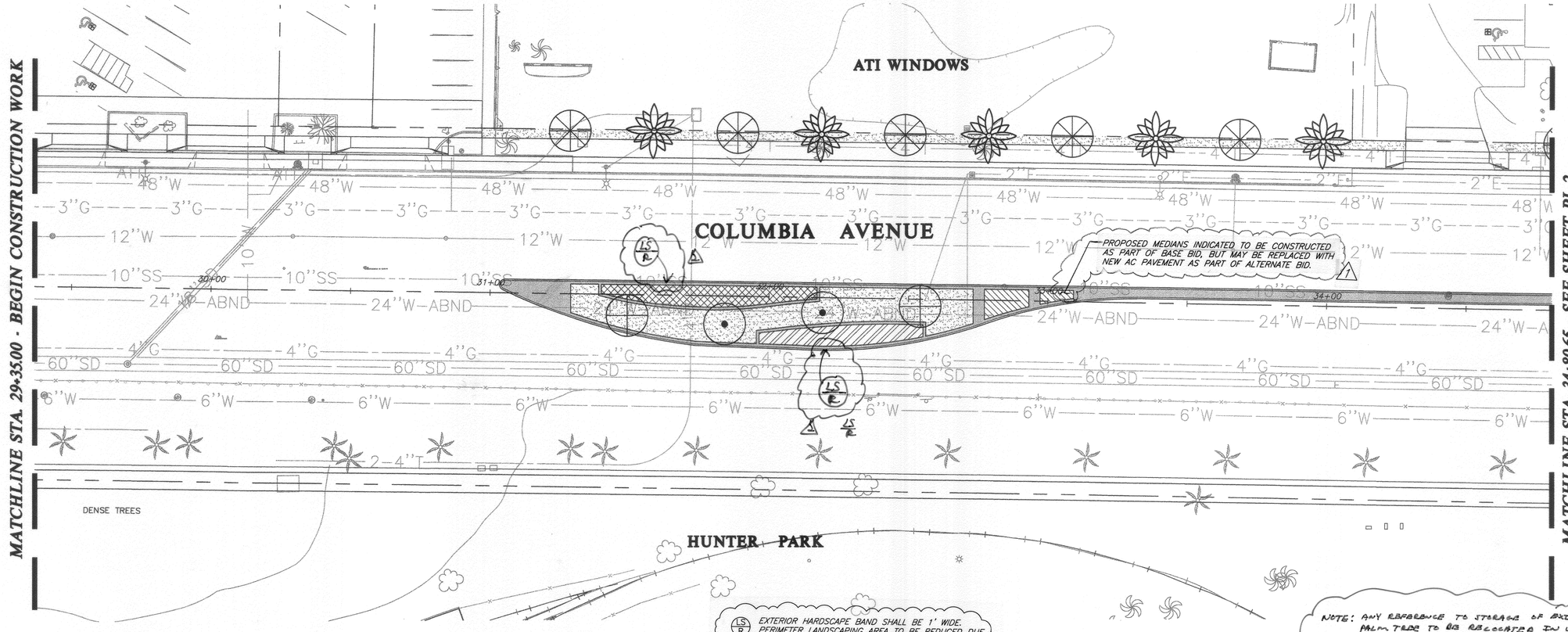

PLANTING LEGEND

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
■	MAGNOLIA GRANDIFLORA/ MAGNOLIA 'MAJESTIC BEAUTY'	24" BOX	STANDARD	33 EA
▲	TABEBUIA IMPETIGINOSA/ PINK TRUMPET TREE	24" BOX	STANDARD	25 EA
✳	PINUS ELDARICA/ AFGHAN PINE	24" BOX	STANDARD	62 EA
●	LAGERSTROEMIA INDICA 'NACHEZ'/ WHITE CRAPE MYRTLE	24" BOX	STANDARD	20 EA
⊕	LIGUSTRUM LUCIDUM/ GLOSSY PRIVET	24" BOX	STANDARD	31 EA
✳	RELOCATED WASHINGTONIA/ CALIFORNIA FAN PALM ON SITE FROM THE EXISTING LOCATION	N/A		89 EA
✳	EXISTING PALM TREE TO REMAIN. PROTECT IN PLACE.	N/A		
✳	PALM TREE TO BE RELOCATED. COORDINATE W/ THE CITY OF RIVERSIDE	N/A		

LS R — EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA. 2

NOTE: ANY REFERENCE TO STORAGE OF EXISTING PALM TREE TO BE RELOCATED IN WHICH THE LOCATION SHALL BE PROVIDED BY THE CITY, SHALL BE ELIMINATED FROM THE PLANS. ANY STORAGE LOCATION REQUIRED FOR THE CONTRACTOR TO COMPLETE THE WORK SHALL BE PROVIDED BY THE CONTRACTOR, INCLUDING THE REQUIRED TRANSPORTATION, SHALL BE PROVIDED BY THE CONTRACTOR, AND NO ADDITIONAL COMPENSATION SHALL BE PROVIDED. THIS APPLIES TO ALL LANDSCAPE SHEETS. 5

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
SHRUB/ GROUNDCOVER LIST				
▨	LANTANA MONTEVIDENSIS/ PURPLE LANTANA	FLATS @ 8" O.C.		2,848 SF
▨	ROSEMARINUS O. PROSTRATUS/ ROSEMARY	FLATS 6" O.C.		2,000 SF
▨	MUHLENBERGIA CAPILLARIS/ PINK MUHLY	1 GAL @ 30" O.C.		2,965 SF
▨	MYOPORUM PARVIFOLIUM 'PUTAH CREEK'/ MYOPORUM	1 GAL @ 42" O.C.		1,781 SF
▨	HEMEROCALLIS HYBRID/ DAYLILY - YELLOW	1 GAL. @ 18" O.C.		1,650 SF
▨	RAPHIOLEPIS INDICA 'CLARA'/ WHITE FLOWERING HAWTHORN	5 GAL @ 36" O.C.		3,133 SF
▨	ROSA 'ICEBERG ROSE'/ WHITE GROUNDCOVER ROSE	5 GAL @ 36" O.C.		1,816 SF
VINES				
▲	FICUS REPENS/ CREEPING FIG	5 GAL @ 10' O.C.		27 EA

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
TURF LIST				
▨	SOD			50,184 SF

NOTES:
1. ADD 3" DEEP LAYER OF BARK MULCH TO ALL PLANTER AREAS
2. ALL RELOCATED PALM TREES SHALL BE STORED OFF-SITE IN AN AREA DESIGNATED BY THE CITY. CONTRACTOR TO COORDINATE WITH CITY PRIOR TO RELOCATION.

HARDSCAPE LEGEND:

▨ STAMPED CONCRETE PAVING AT MEDIAN SEE CONSTRUCTION PLAN

⁘ NO LANDSCAPE

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	ADDED NOTE FOR TREE RELOCATION	CL	8/2/10
2	REVISED MEDIAN LANDSCAPE AREA	CL	8/2/10
1	PROJECT SCOPE REDUCED	EE	7/1/10

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-1
SHEET 54 OF 76

DWG: J:\2007\1007 - Iowa- Columbia Steet Improv\Drawings\Landscape\11007PL.dwg
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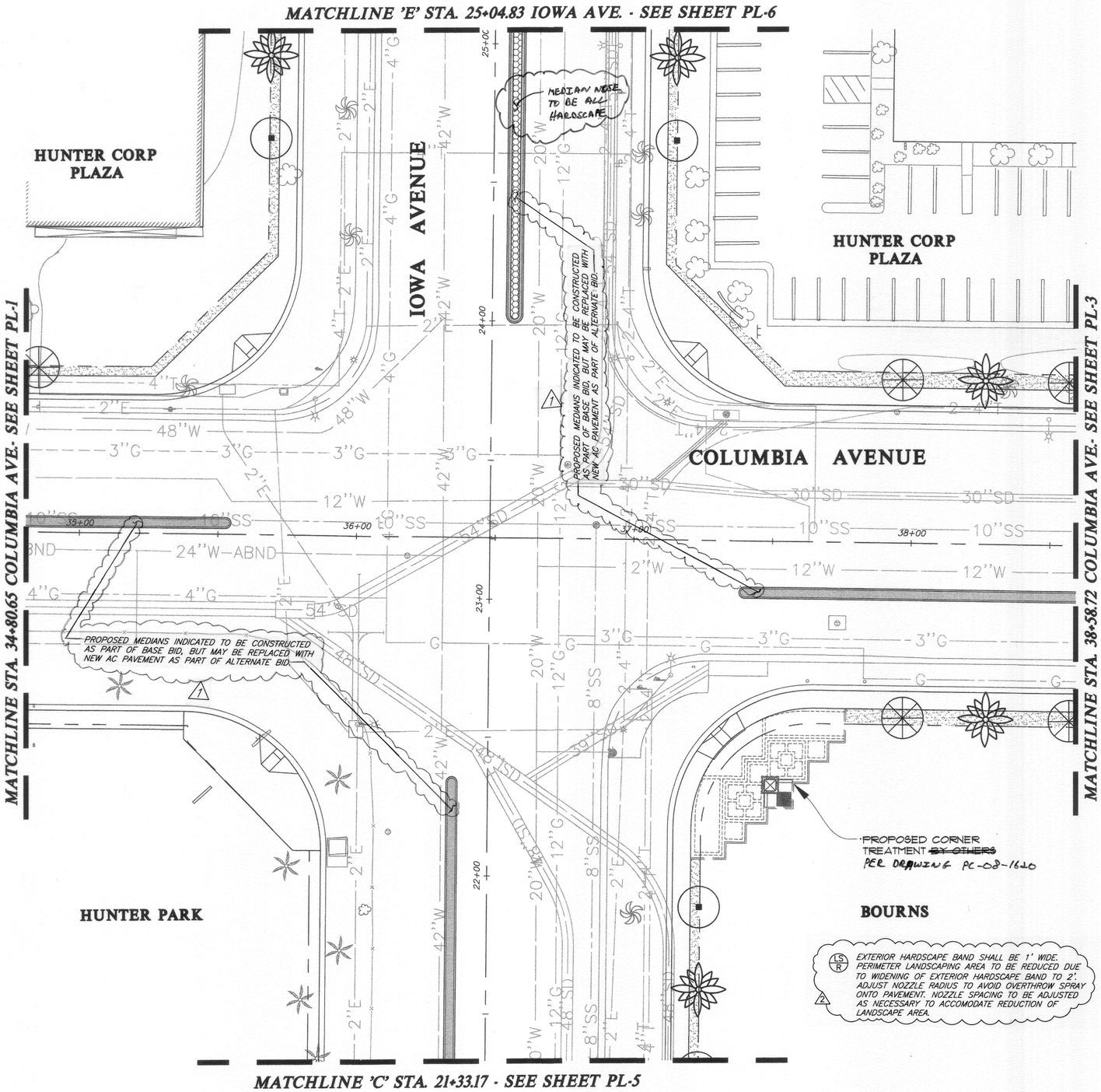

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

PLANTING LEGEND

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
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	RELOCATED WASHINGTONIA/ CALIFORNIA FAN PALM ON SITE FROM THE EXISTING LOCATION	N/A		89 EA
	EXISTING PALM TREE TO REMAIN. PROTECT IN PLACE.	N/A		
	PALM TREE TO BE RELOCATED. COORDINATE W/ THE CITY OF RIVERSIDE	N/A		

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	HEMEROCALLIS HYBRID/ DAYLILY - YELLOW	1 GAL. @ 18" O.C.		1,650 SF
	RAPHIOLEPIS INDICA 'CLARA'/ WHITE FLOWERING HAWTHORN	5 GAL @ 36" O.C.		3,133 SF
	ROSA 'ICEBERG ROSE'/ WHITE GROUNDCOVER ROSE	5 GAL @ 36" O.C.		1,816 SF
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SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
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	SOD			50,184 SF

NOTES:

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2. ALL RELOCATED PALM TREES SHALL BE STORED OFF-SITE IN AN AREA DESIGNATED BY THE CITY. CONTRACTOR TO COORDINATE WITH CITY PRIOR TO RELOCATION.

HARDSCAPE LEGEND:

STAMPED CONCRETE PAVING AT MEDIAN SEE CONSTRUCTION PLAN

NO LANDSCAPE

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 · FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN DAVIDSON No. 4368 Signature 5/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	CC	12/2/09
1	PROJECT SCOPE REDUCED	CC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-2
SHEET 55 OF 76

DWG: J:\2007\11007 - Iowa- Columbia Steet Impro\Drawings\Landscape\11007PL.dwg
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HUNTER CORP PLAZA

GRAINGER

COLUMBIA AVENUE

MATCHLINE STA. 38+58.72 - SEE SHEET PL-2

MATCHLINE STA. 45+09.50 - SEE 'A' BELOW

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

BOURNS

BOURNS

SEE SHEET PL-2 FOR PLANTING LEGEND

(LS/R) EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

GRAINGER

MATCHLINE STA. 45+09.50 - SEE 'A' ABOVE

MATCHLINE STA. 51+60.21 - SEE SHEET PL-4

COLUMBIA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

MEDIAN NOSE TO BE ALL HARDSCAPE

BOURNS

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951.683.1283 . FAX 951.683.4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	EC	2/2/09
1	PROJECT SCOPE REDUCED	EC	2/26/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS

PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L

PL-3

SHEET 56 OF 76

DWG: J:\2007\11007 - Iowa - Columbia Steet Improv\Drawings\Landscape\11007PL.dwg
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MATCHLINE STA. 51+60.21 - SEE SHEET PL-3

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

BOURNS

RAILROAD EASEMENT

RAILROAD EASEMENT

COLUMBIA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

MEDIAN NOSE TO BE ALL HARDSCAPE

RETENTION BASIN

PLASCOR

MATCHLINE STA. 58+10.57 - SEE BELOW

MATCHLINE STA. 58+10.57 - SEE ABOVE

MEDIAN NOSE TO BE ALL HARDSCAPE

COLUMBIA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

MEDIAN NOSE TO BE ALL HARD SCAPE

PLASCOR

HTG ENGINEERING

END CONSTRUCTION WORK - STA. 62+53.23

SEE SHEET PL-2 FOR PLANTING LEGEND

(LS/R) EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON — Signature — 6/30/09 — Exp. 08/09 — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	GL	9/21/09
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-4
SHEET 57 OF 76

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LIMIT OF WORK - BEGIN CONSTRUCTION WORK

MARLBOROUGH AVE

HUNTER PARK

IOWA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

10+00 11+00 12+00 13+00 14+00 15+00

THE GROVE

THE GROVE

MATCHLINE 'D' STA. 15+47.15 - SEE BELOW

SEE SHEET PL-2 FOR PLANTING LEGEND

LS R 2 EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

HUNTER PARK

MATCHLINE 'D' STA. 15+47.15 - SEE ABOVE

IOWA AVENUE

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

16+00 17+00 18+00 19+00 20+00 21+00

BOURNS

MATCHLINE 'C' STA. 21+33.17 - SEE SHEET PL-2

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON — No. 5066 — Signature — 6/30/09 — Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REVISED MEDIAN LANDSCAPE AREA	LC	8/31/09
1	PROJECT SCOPE REDUCED	LC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1 -
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-5
SHEET 58 OF 76

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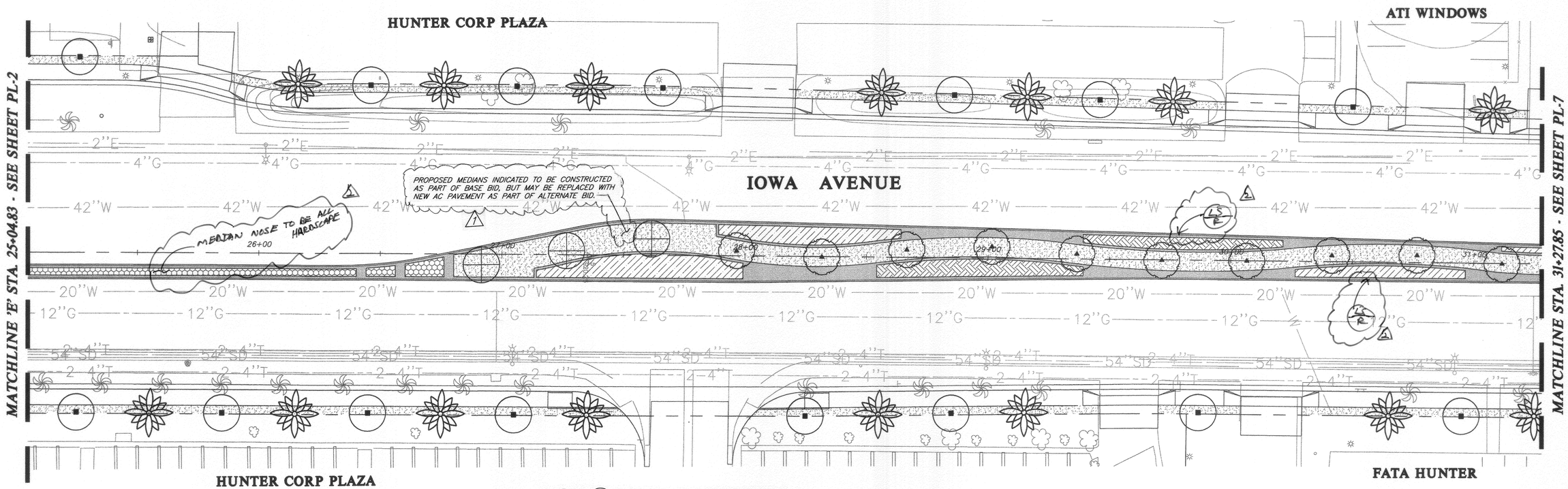

EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

PLANTING LEGEND

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
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HARDSCAPE LEGEND:

- STAMPED CONCRETE PAVING AT MEDIAN SEE CONSTRUCTION PLAN
- NO LANDSCAPE

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT IAN DAVIDSON No.2539 Signature 6/30/09 Exp. Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE AREA	C.L.	7/16/09
1	PROJECT SCOPE REDUCED	CL	7/16/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURE ON SHEET - 1 -
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-6
SHEET 59 OF 76

DWG: J:\2007\11007 - Iowa- Columbia Steet Improv\Drawings\Landscape\11007PL.dwg
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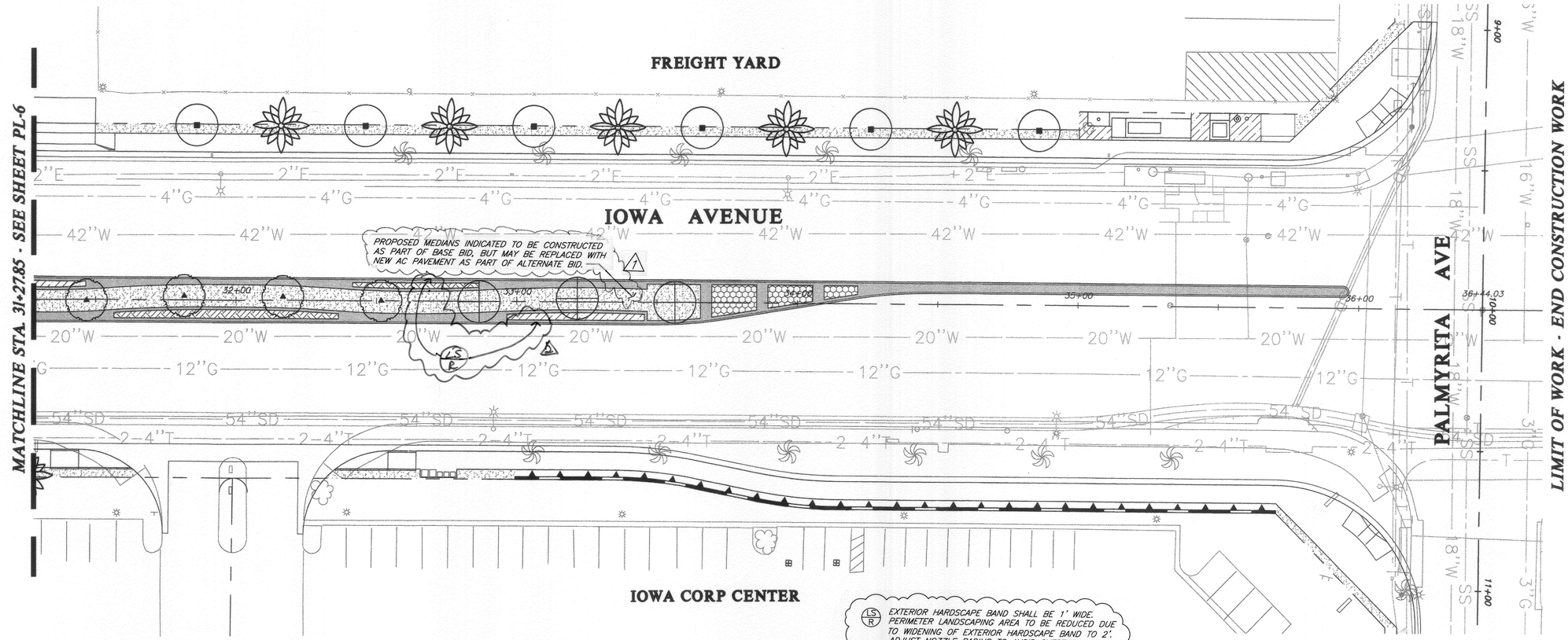

LS R 2 EXTERIOR HARDSCAPE BAND SHALL BE 1' WIDE. PERIMETER LANDSCAPING AREA TO BE REDUCED DUE TO WIDENING OF EXTERIOR HARDSCAPE BAND TO 2'. ADJUST NOZZLE RADIUS TO AVOID OVERTHROW SPRAY ONTO PAVEMENT. NOZZLE SPACING TO BE ADJUSTED AS NECESSARY TO ACCOMODATE REDUCTION OF LANDSCAPE AREA.

PLANTING LEGEND

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✳	EXISTING PALM TREE TO REMAIN. PROTECT IN PLACE.	N/A		
✳	PALM TREE TO BE RELOCATED. COORDINATE W/ THE CITY OF RIVERSIDE	N/A		

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
SHRUB/ GROUNDCOVER LIST				
▨	LANTANA MONTEVIDENSIS/ PURPLE LANTANA	FLATS @ 8" O.C.		2,848 SF
▨	ROSEMARINUS O. PROSTRATUS/ ROSEMARY	FLATS 6" O.C.		2,000 SF
▨	MUHLENBERGIA CAPILLARIS/ PINK MUHLY	1 GAL @ 30" O.C.		2,965 SF
▨	MYOPORUM PARVIFOLIUM 'PUTAH CREEK'/ MYOPORUM	1 GAL @ 42" O.C.		1,781 SF
▨	HEMEROCALLIS HYBRID/ DAYLILY - YELLOW	1 GAL. @ 18" O.C.		1,650 SF
▨	RAPHIOLEPIS INDICA 'CLARA'/ WHITE FLOWERING HAWTHORN	5 GAL @ 36" O.C.		3,133 SF
▨	ROSA 'ICEBERG ROSE'/ WHITE GROUNDCOVER ROSE	5 GAL @ 36" O.C.		1,816 SF
VINES				
▲	FICUS REPENS/ CREEPING FIG	5 GAL @ 10' O.C.		27 EA

SYM.	BOTANICAL NAME/ COMMON NAME	SIZE/SPACING	COMMENTS	QUANTITIES
TURF LIST				
▨	SOD			50,184 SF

NOTES:
1. ADD 3" DEEP LAYER OF BARK MULCH TO ALL PLANTER AREAS
2. ALL RELOCATED PALM TREES SHALL BE STORED OFF-SITE IN AN AREA DESIGNATED BY THE CITY. CONTRACTOR TO COORDINATE WITH CITY PRIOR TO RELOCATION.

HARDSCAPE LEGEND:

▨ STAMPED CONCRETE PAVING AT MEDIAN SEE CONSTRUCTION PLAN

▨ NO LANDSCAPE

NORTH

40' 30' 20' 10' 0 20' 40'

SCALE 1"=20'

IAN DAVIDSON, LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM
IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN DAVIDSON No. 3930 — Signature 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	REDUCED MEDIAN LANDSCAPE WIDTH	EC	9/4/09
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING PLAN

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-7
SHEET 60 OF 76

DWG: J:\2007\1007 - Iowa- Columbia Steet Improv\Drawings\Landscape\1007PL.dwg
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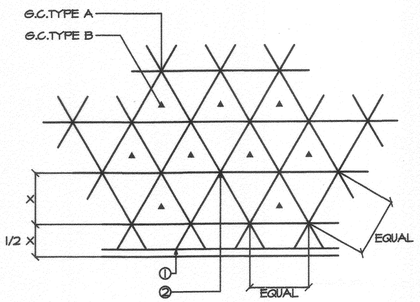
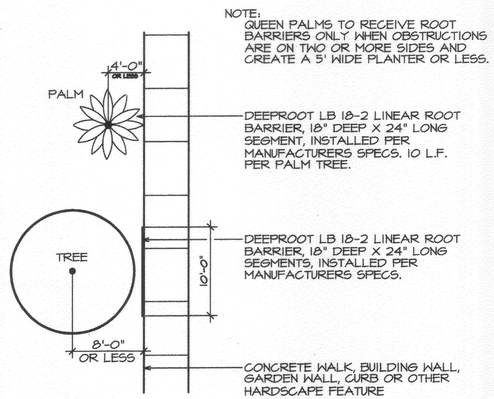


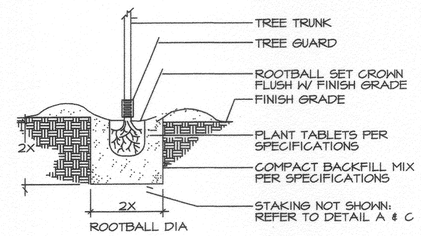
LEGEND
1. BACK OF CURB OR EDGE OF PAVING
2. PLANT LOCATION

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.

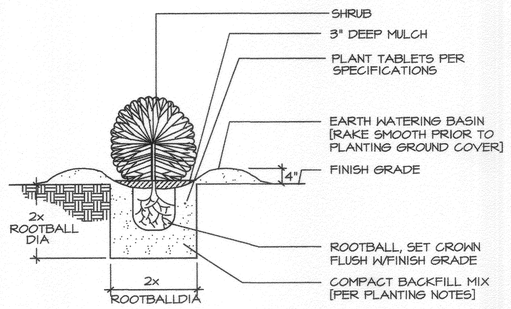


E ROOT BARRIER NTS.

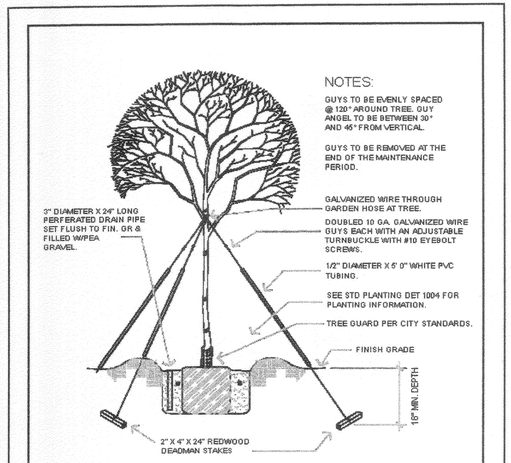


TREE GUARD TO BE INSTALLED FOR ALL TREES LOCATED IN TURF AREAS.

F TREE GUARD NTS.



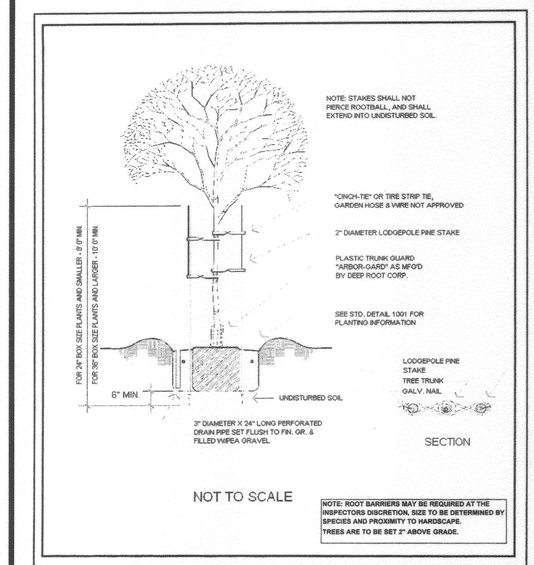
G SHRUB PLANTING NTS.



NOT TO SCALE

Approved	Date	Public Works Department, Forestry and Landscape Division	Detail No.
P.V.	5/12/08	CITY OF RIVERSIDE	1003
Revised	Date	TREE GUYING DETAIL	

C TREE GUYING NTS.



NOT TO SCALE

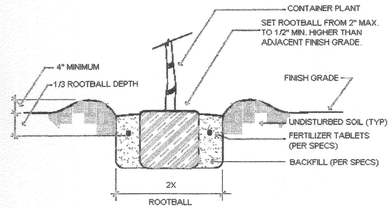
NOTE: ROOT BARRIERS MAY BE REQUIRED AT THE INSPECTORS DISCRETION, SIZE TO BE DETERMINED BY SPECIES AND PROXIMITY TO HARDSCAPE. TREES ARE TO BE SET 2" ABOVE GRADE.

Approved	Date	Public Works Department, Forestry and Landscape Division	Detail No.
P.V.	5/8/08	CITY OF RIVERSIDE	1001
Revised	Date	TREE PLANTING DETAIL	

A DOUBLE STAKE NTS.

GENERAL PLANTING NOTES

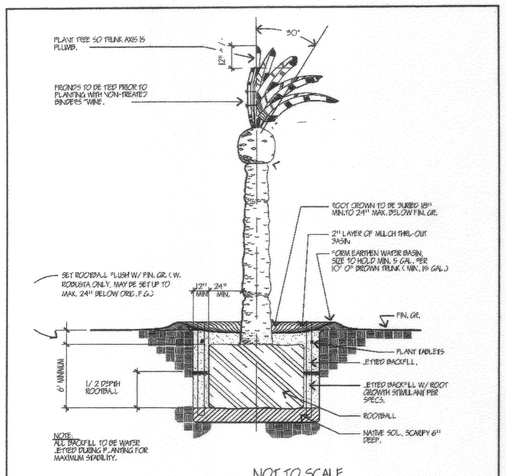
1. CONTACT THE LANDSCAPE MAINTENANCE INSPECTOR AT (951) 351-6313 TWO DAYS (48 HOURS) PRIOR TO INSTALLATION.
2. FOR SPECIFICATION INFORMATION REFER TO CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS, SECTION 02483 PLANTING.
3. PROVIDE FERTILIZER TABLETS.



NOT TO SCALE

Approved	Date	Public Works Department, Forestry and Landscape Division	Detail No.
P.V.	5/12/08	CITY OF RIVERSIDE	1004
Revised	Date	PLANTING DETAIL	

D PLANTING DETAIL NTS.



NOT TO SCALE

Construction Notes
1) Provide minimum two deep water wells 4" x Min. 36" perforated PVC Pipe, filled with 3/4" crushed rock, wrapped with soil cloth.
2) Sand backfill may be required depending on species and location.

Approved	Date	Public Works Department Forestry and Landscape Division	Detail No.
P.V.	5/8/08	CITY OF RIVERSIDE	1002
Revised	Date	PALM TREE PLANTING	

B PALM TREE PLANTING NTS.

I

J

IAN DAVIDSON,
LANDSCAPE ARCHITECTURE
3547 MARKET STREET
RIVERSIDE, CA 92501
951 683 1283 . FAX 951 683 4352
E-MAIL: IDAVIDSON@IDLAINC.COM

IDLA# 11007 - 6/8/2009

REGISTERED LANDSCAPE ARCHITECT — IAN J. DAVIDSON — No. 4812 — Signature — 6/30/09 Exp. Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY IJD DRAWN BY SS CHECKED BY IJD

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
LANDSCAPE PLANS
PLANTING DETAILS

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132L
PL-8
SHEET 61 OF 76

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TIME: 6-10-09 - 10:28am Users: Ryan Uecking XRef Files: x11007bd x11007lp x11007ull_ex x11007pl x11007bs

EQUIPMENT SCHEDULE

	POLE No.	POLE TYPE	SIGNAL MA.	LUMINAIRE MA.	LUMINAIRE HPS	VEH SIG MTG MA.	VEH SIG MTG POLE	PED SIG MTG PHASE	**PED PUSH BUTTON POLE QUAD	AUDIBLE	*POLE LOCATION A	*POLE LOCATION B	***I.I.S.N.S.	REMARKS
	(A)	26-4-80(E)	45'(E)	12'(E)	250W(E)	MAS(2)(E)	SV-1-T(E)	SP-1-T(E)	4(N)	N	((P))(E)	EXISTING	Marlborough 4/C (E)	
	(B)	1-A(E)	–	–	–	–	TV-1-T(E)	SP-1-T(E)	6(N)	E	((C))(E)	EXISTING	–	
2	(C)	~~17~~ 19 2-100(N)	25'(N)	12'(N)	250W(N)	MAS(N)	SV-1-T(N)	SP-1-T(N)	6(N)	E	((C))(N)	3'	21'	Iowa 4/C (R)	RS POLE ; RL EQUIPMENT TO LOC C
	(D)	15 TS	–	–	250W(N)	–	SV-2-T(N)	SP-1-T(N)	8(N)	S	((P))(N)	3'	19'	–	RL TYPE 1A AND INSTALL NEW PED. HEAD TO LOC D
	(E)	26-4-80(E)	45'(E)	12'(E)	250W(E)	MAS(2)(E)	SV-1-T(E)	SP-1-T(E)	8(N)	S	((P))(E)	EXISTING		Marlborough 4/C (E)	
	(F)	1-A(E)	–	–	–	–	TV-2-T(E)	SP-1-T(N)	2(N)	W	((C))(N)	EXISTING		–	
	(G)	19-2-80(E)	30'(E)	12'(E)	250W(E)	MAS(E)	SV-1-T(E)	SP-1-T(E)	2(N)	W	((C))(E)	EXISTING		Iowa 4/C (E)	
	(H)	1-A(E)	–	–	–	–	TV-1-T(E)	SP-1-T(E)	4(N)	N	((P))(E)	EXISTING		–	

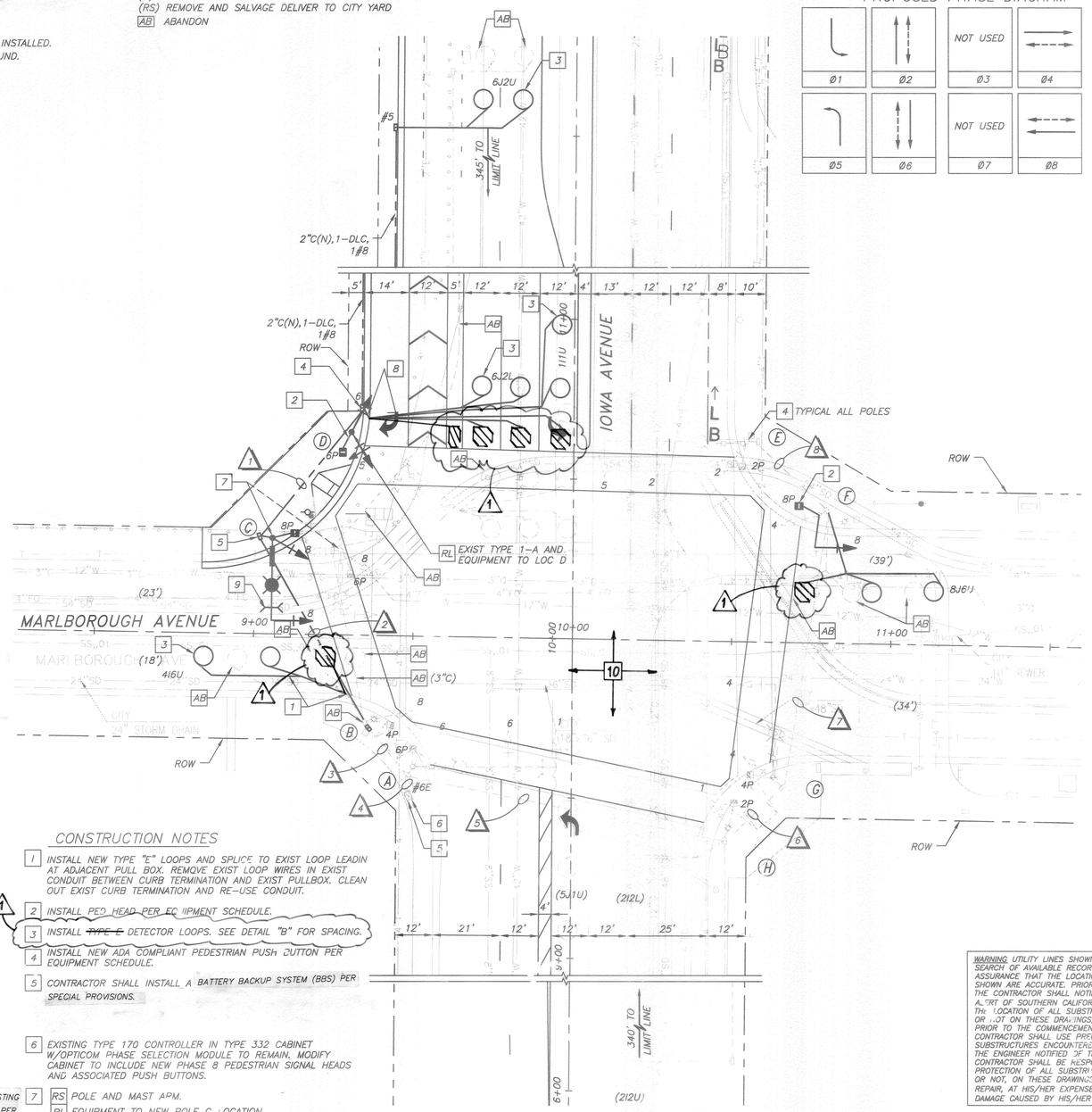
* SEE DETAIL "C"
** PEDESTRIAN PUSH BUTTONS SHALL BE ADA COMPLIANT AND ~~SHALL BE~~ PER SPECIAL PROVISIONS.
*** PER CITY OF RIVERSIDE STD. DWG. No. ~~663~~

(E) EXISTING EQUIPMENT
(RL) RELOCATE POLE AND EQUIPMENT TO NEW LOCATION
(N) NEW EQUIPMENT OR POLE
(RS) REMOVE AND SALVAGE DELIVER TO CITY YARD
AB ABANDON

NOTES: 1. ((C)) or ((P)) – INDICATES AUDITORY PEDESTRIAN SIGNAL TO BE INSTALLED. ((C)) INDICATES CUCKOO SOUND; ((P)) INDICATES PEEP-PEEP SOUND.
2. SIGNAL POLES, MAST ARMS AND EQUIPMENT SHALL BE NEW.

GENERAL NOTES

1. FOR PAVEMENT STRIPING AND MARKINGS, SEE PD SHEETS.
2. ALL TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO OPENING THE STREETS TO TRAFFIC.
3. ALL DETECTOR LOOPS SHALL BE INSTALLED IN THE PRESENCE OF THE TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
4. ALL PAVEMENT DELINEATION REQUIREMENTS SHALL BE COMPLETED AT LEAST ONE DAY PRIOIR TO TURN ON.
5. INSTALL 120V ILLUMINATED STREET NAME SIGN. 120V SIGNAL AND 240V ST. LT. SERVICE PER CITY OF RIVERSIDE STD. DWG. NO. 667.
6. ALL ITEMS FURNISHED AND ALL WORK TO BE DONE SHALL CONFORM TO THE REQUIREMENTS OF: THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS, DATED MAY 2006; THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ADOPTED SEPTEMBER 2006; AND THE SPECIAL PROVISIONS.
7. UTILITIES SHOWN ON THE PLAN ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL KNOWN SUBSTRUCTURES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH SUCH FACILITIES ("UNDERGROUND SERVICE ALERT" (800) 227-2600)
8. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO NOTIFY ALL AFFECTED AGENCIES AND THE RIVERSIDE UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
9. UNLESS SHOWN OTHERWISE, INDUCTIVE LOOPS SHALL BE 6' DIAMETER WITH 10', 15' AND 30' SPACING IN THE DIRECTION OF TRAVEL. NECESSARY STRIPING SHALL BE LOCATED PRIOR TO POSITIONING LOOPS. LOOPS SHALL BE SEALED WITH HOT MELT SEALANT.
10. CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDELINE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION.
11. CONDUIT BETWEEN ADJOINING PULL BOXES SHALL BE 2.5" UNLESS SHOWN OTHERWISE. ALL CONDUIT AND FITTINGS SHALL BE RIGID METAL, UNLESS SHOWN OTHERWISE (BURIED IN A MINIMUM OF 30" OF COVER IN THE STREET AND PARKWAY).
12. UNDERGROUND SIGNAL CONDUCTORS SHALL NOT BE SPLICED.
13. PULL BOXES SHALL BE NO. 6, UNLESS OTHERWISE NOTED ON THE PLAN.
14. PULL BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP OR DRIVEWAY.
15. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE PRECISE FIELD LOCATIONS OF ALL TRAFFIC SIGNAL EQUIPMENT PRIOR TO THE INSTALLATION.
16. ALL LANDSCAPING WHICH IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CITY AND THE PROPERTY OWNER.
17. NEW MAST ARM MOUNTED SIGNS SHALL BE FABRICATED WITH 3M "ASTM TYPE 11" REFLECTIVE SHEETING OR APPROVED EQUAL.
18. VEHICLE HEADS SHALL BE 12" LED TYPE. THE HOUSING, BACKPLATES AND VISORS SHALL BE METAL.
19. INTERNALLY ILLUMINATED STREET NAME SIGNS (IISNS) SHALL BE TYPE A. STREET NAME LEGENDS SHALL BE UPPER/LOWER CASE AND SHALL INCLUDE STREET ADDRESSES AND ROAD NAME SUFFIXES.
20. UNUSED SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE CITY OF RIVERSIDE TRAFFIC SIGNAL MAINTENANCE YARD.
21. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE SALVAGED TO THE CITY YARD.
22. DAMAGED SIDEWALK CONCRETE SHALL BE REPLACED PER CITY OF RIVERSIDE STANDARD.
23. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED PULL BOXES, CONDUITS AND CONDUCTORS AND REPAVE SURROUNDING AREA TO MATCH EXISTING OR PROPOSED GRADE.
24. CONTRACTOR SHALL COORDINATE WITH THE CITY OF RIVERSIDE TRAFFIC CONTROL AND SIGNAL SECTION (619)533-3023 A MINIMUM OF OF FIVE (5) WORKING DAYS PRIOR TO WORK AND AFFECTING A TRAFFIC SIGNAL.
25. REMOVE POLE FOUNDATION FOR ALL POLES THAT ARE TO BE REMOVED OR RELOCATED
26. CONTRACTOR SHALL FURNISH AND INSTALL 170E ETHERNET COMMUNICATIONS MODULES, MCCAIN 400 MODEM FOOTPRINT, WITH DIRECTORY ADDRESSING AUTOSENSING 10 BASE-T OR 100 BASE-T, INTO THE EXISTING 170E CONTROLLERS IN EXISTING CABINETS AT IOWA/MARLBOROUGH. THE EXISTING 170E MODEM CARDS SHALL BE DELIVERED TO THE CITY TRAFFIC ENGINEER.



CONSTRUCTION NOTES

1. INSTALL NEW TYPE "E" LOOPS AND SPLICE TO EXIST LOOP LEADIN AT ADJACENT PULL BOX. REMOVE EXIST LOOP WIRES IN EXIST CONDUIT BETWEEN CURB TERMINATION AND EXIST PULLBOX. CLEAN OUT EXIST CURB TERMINATION AND RE-USE CONDUIT.
2. INSTALL PED HEAD PER EQUIPMENT SCHEDULE.
3. INSTALL ~~TYPE E~~ DETECTOR LOOPS. SEE DETAIL "B" FOR SPACING.
4. INSTALL NEW ADA COMPLIANT PEDESTRIAN PUSH BUTTON PER EQUIPMENT SCHEDULE.
5. CONTRACTOR SHALL INSTALL A BATTERY BACKUP SYSTEM (BBS) PER SPECIAL PROVISIONS.
6. EXISTING TYPE 170 CONTROLLER IN TYPE 332 CABINET W/OPTICOM PHASE SELECTION MODULE TO REMAIN. MODIFY CABINET TO INCLUDE NEW PHASE 8 PEDESTRIAN SIGNAL HEADS AND ASSOCIATED PUSH BUTTONS.
7. RS POLE AND MAST ARM.
   RL EQUIPMENT TO NEW POLE C LOCATION. REMOVE FOUNDATION COMPLETELY AND BACKFILL WITH AGGREGATE BASE.
8. CONTRACTOR SHALL INSTALL CURB TERMINATION DETAIL TYPE A PER CALTRANS STD PLAN ES-5D
9. INSTALL OPTICOM MODEL NO. 722 EVP DETECTOR ASSEMBLY (INCLUDING HARDWARE AND CABLE. EVPE SHALL BE MOUNTED ON THE MAST ARM PER DETAIL A. INSTALL BBS.
10. CONTRACTOR SHALL PAINT EXISTING SIGNAL EQUIPMENT TO REMAIN PER SPECIAL PROVISIONS.

48 HOURS BEFORE YOU DIG
ALL
UNDERGROUND SERVICE ALERT
1-800-227-2600

EXISTING PHASE DIAGRAM

Ø1	Ø2	NOT USED Ø3	Ø4
Ø5	Ø6	NOT USED Ø7	Ø8

PROPOSED PHASE DIAGRAM

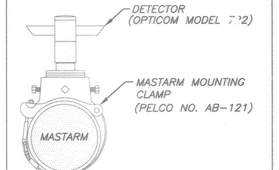
Ø1	Ø2	NOT USED Ø3	Ø4
Ø5	Ø6	NOT USED Ø7	Ø8

CONDUCTOR TABLE

CONTROL FUNCTION	CONDUCTORS	CONDUCTOR RUNS 1	2	3	4	5	6	7	8
VEHICLE & PEDESTRIAN HEADS, PEDESTRIAN PUSH BUTTONS, SPARES & COMMONS	12 WIRE IMSA	1	2	3	8	4	3	2	1
	9 WIRE IMSA	–	–	–	–	–	–	–	–
	5 WIRE IMSA	–	–	–	–	–	–	–	–
	3 WIRE IMSA	1	2	3	8	4	3	2	1
DETECTOR CABLE	#16/2	–	–	–	–	–	–	–	–
PHASE 1		1	1	1	1	–	–	–	–
PHASE 2		–	–	–	2	2	–	–	–
PHASE 3		–	–	–	–	–	–	–	–
PHASE 4		–	–	1	–	–	–	–	–
PHASE 5		1	1	1	1	1	–	–	–
PHASE 6		2	2	2	2	–	–	–	–
PHASE 7		–	–	–	–	–	–	–	–
PHASE 8		–	1	1	1	1	1	1	1
TOTALS		4	5	6	7	4	1	1	1
EVPE CABLE	#20/4	–	2(N)	2(N)	4(N)	–	–	–	–
I.I.S.N.S.	#12	–	2	2	–	2	2	2	2
LUMINAIRES	#8	–	2	2	–	2	2	2	2
SIGNAL SERVICE	#6	–	–	–	–	–	–	–	–
INTERCONNECT	–	–	–	–	–	–	–	–	–
CONDUIT SIZE		2"(N)	3"(N)	3"	2-3.5"	3.5"	3"	3"	2"

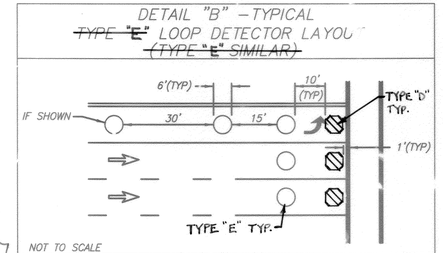
NOTES: (N) = NEW
ALL CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED

DETAIL "A"



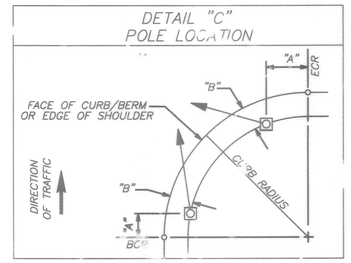
EMERGENCY VEHICLE PRE-EMPTION DETECTOR MASTARM MOUNTING DETAIL

DETAIL "B" – TYPICAL
~~TYPE "E"~~ LOOP DETECTOR LAYOUT
~~(TYPE "E" SIMILAR)~~



NOT TO SCALE

DETAIL "C"
POLE LOCATION



WARNING UTILITY LINES SHOWN ARE BASED UPON A SEARCH OF AVAILABLE RECORDS. THERE IS NO ASSURANCE THAT THE LOCATION OF SUBSTRUCTURES SHOWN ARE ACCURATE. PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIGALERT) TO MARK THE LOCATION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF FIELD MARKING. THE CONTRACTOR SHALL USE PRECAUTION WHEN EXCAVATING. SUBSTRUCTURES ENCOUNTERED SHALL BE EXPOSED AND THE ENGINEER NOTIFIED OF THEIR EXISTENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT, ON THESE DRAWINGS. THE CONTRACTOR SHALL REPAIR, AT HIS/HER EXPENSE, ANY SUBSTRUCTURES DAMAGE CAUSED BY HIS/HER OPERATIONS.

N

GRAPHIC SCALE: 20' 10' 0 20' 40' — 1" = 20'

BENCH MARK
CITY OF RIVERSIDE BENCH MARK 38-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "38-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CARMEN F. CORSINA No. C 34997 Exp. 6-30-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	UPDATE POLE TYPE TO ACCEPT 25' ARM		3-15-10
1	UPDATE LOOPS TO NEW STANDARD		6-11-09

DESIGNED BY C.G. DRAWN BY C.S. CHECKED BY T.P.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL MODIFICATION
IOWA AVENUE AT MARLBOROUGH AVENUE
SCALE 1" = 20'

DESIGN W.O. NO. J702989
CONSTRUCTION W.O. NO. 0915428

X-297A
X-01

SHEET 62 OF 76

EQUIPMENT SCHEDULE

	POLE	SIGNAL	LUMINAIRE		VEH SIG MTG	PED SIG MTG	**PED PUSH BUTTON		AUDIBLE	*POLE LOCATION		***I.I.S.N.S.
No.	TYPE	MA.	MA.	HPS	MA.	POLE	PHASE	POLE QUAD		A	B	
(A)	15 TS	–	12'	250 W	–	SV–2–T	SP–1–T	6(N)	E	((IP))	17.5'	4'	–
(B)	61A–5–100	65'	12'	250 W	MAS (3)	SP–1–T	SP–1–T	4(N)	N	((IC))	19.0'	4'	NB & SB FACE = Columbia 1200
(C)	15 TS	–	12'	250 W	–	SV–2–T	SP–1–T	4(N)	N	((IC))	19.0'	4'	–
(D)	29A–5–100	55'	12'	250 W	MAS (2)	SV–1–T	SP–1–T	2(N)	W	((IP))	19.0'	4'	EB & WB FACE = IOWA 1200
(E)	15 TS	–	12'	250 W	–	SV–2–T	SP–1–T	2(N)	W	((IP))	17.0'	4'	–
(F)	61A–5–100	65'	12'	250 W	MAS (3)	SV–1–T	SP–1–T	8(N)	S	((IC))	17.0'	4'	NB & SB FACE = Columbia 1200
(G)	15 TS	–	12'	250 W	–	SV–2–T	SP–1–T	8(N)	S	((IC))	24.0'	4'	–
(H)	61A–5–100	65'	12'	250 W	MAS (2)	SV–1–T	SP–1–T	6(N)	E	((IP))	19.0'	4'	EB & WB FACE = IOWA 1200

NOTES: 1. ((IC)) or ((IP)) – INDICATES AUDITORY PEDESTRIAN SIGNAL TO BE INSTALLED. ((IC)) INDICATES CUCKOO SOUND; ((IP)) INDICATES PEEP–PEEP SOUND.

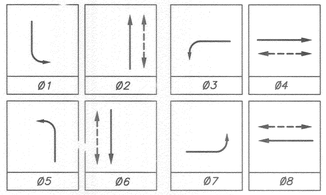
2. SIGNAL POLES, MAST ARMS AND EQUIPMENT SHALL BE NEW.

* SEE DETAIL "C"

** PEDESTRIAN PUSH BUTTONS SHALL BE ADA COMPLIANT AND SHALL BE PER SPECIAL PROVISIONS.

*** PER CITY OF RIVERSIDE STD. DWG. No. 663

PHASE DIAGRAM



FLASHING OPERATION SHALL BE ALL RED.

CONDUCTOR TABLE

CONTROL FUNCTION	CONDUCTORS	CONDUCTOR RUNS 1	2	3	4	5	6	7	8	9
VEHICLE & PEDESTRIAN HEADS, PEDESTRIAN PUSH BUTTONS, SPARES & COMMONS	12 WIRE IMSA	1	2	3	4	1	2	3	–	8
	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–
	3 WIRE IMSA	1	2	3	4	1	2	3	–	8
DETECTOR CABLE	#16/2	–	–	–	–	–	–	–	–	–
PHASE 1		–	–	–	–	–	–	–	X3	X3
PHASE 2		3	3	–	3	–	–	–	–	3
PHASE 3		–	–	2	2	–	–	–	–	2
PHASE 4		–	–	–	–	–	2	2	–	2
PHASE 5		2	2	–	2	–	–	–	–	2
PHASE 6		–	–	–	–	–	–	–	2	2
PHASE 7		–	–	–	–	–	2	2	–	2
PHASE 8		–	–	2	2	–	–	–	–	2
TOTALS		5	5	4	9	0	4	4	4	17
EVPE CABLE	#20/3	–	2	2	4	–	–	–	–	–
I.I.S.N.S.	#12	–	2	2	2	2	2	2	–	–
LUMINAIRES	#8	–	2	2	2	2	2	2	–	–
SIGNAL SERVICE	#6	–	–	–	–	–	–	–	–	2
INTERCONNECT	6PR. #19	–	–	–	–	–	X1	X1	–	X1
CONDUIT SIZE		3–5"	3–5"	3"	2–3.5"	2"	3"	3"	3"	2–4"

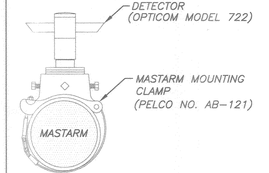
NOTES: (N) = NEW

ALL CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED

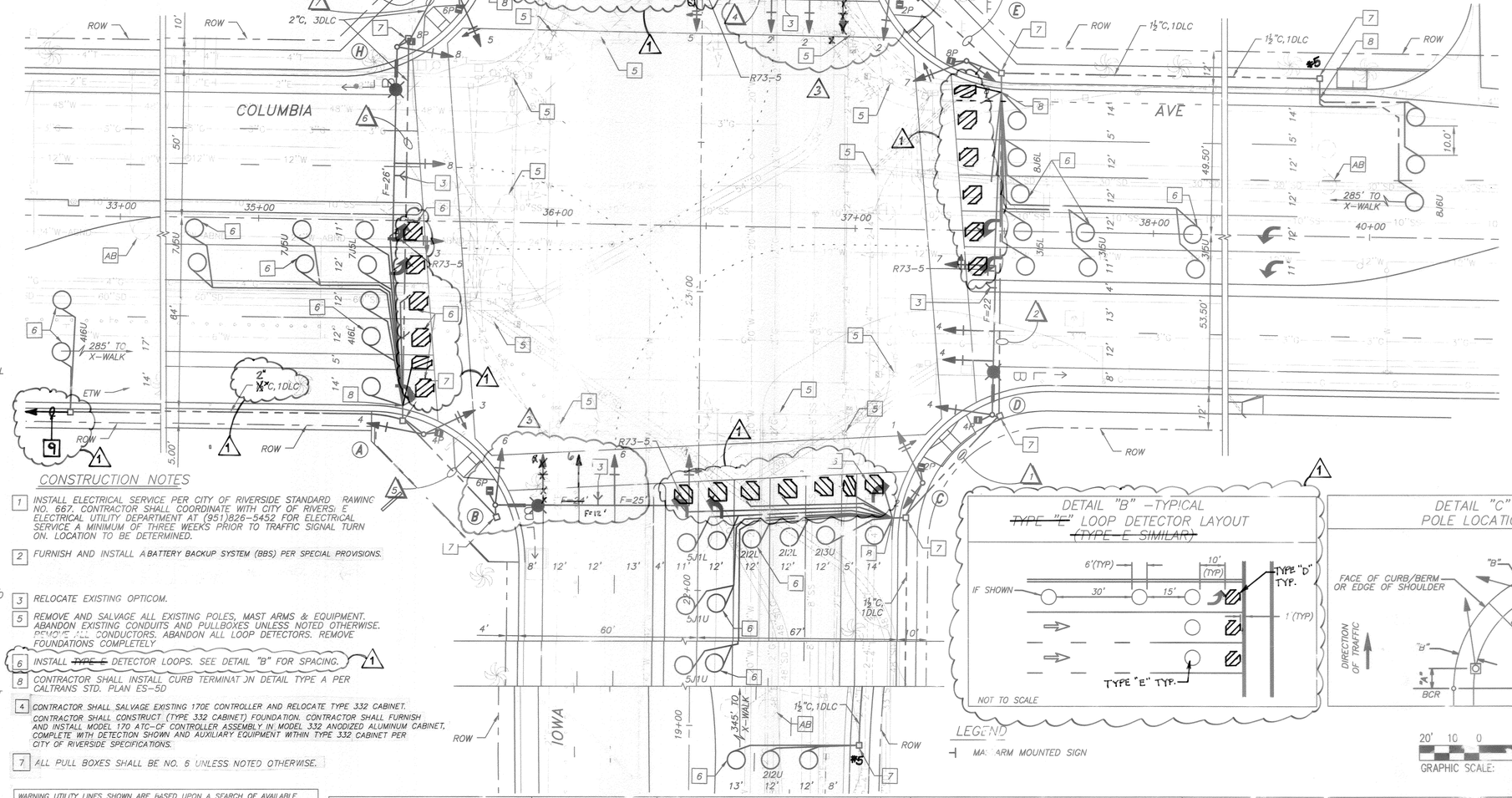
GENERAL NOTES

1. FOR PAVEMENT STRIPING AND MARKINGS, SEE PD SHEETS.
2. ALL TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO OPENING THE STREETS TO TRAFFIC.
3. ALL DETECTOR LOOPS SHALL BE INSTALLED IN THE PRESENCE OF THE TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
4. ALL PAVEMENT DELINEATION REQUIREMENTS SHALL BE COMPLETED AT LEAST ONE DAY PRIOIR TO TURN ON.
5. TYPICAL DETECTOR LOOP SPACING: 10' AND 15' (WHERE APPLICABLE).
6. INSTALL 120V ILLUMINATED STREET NAME SIGN. 120V SIGNAL AND 240V ST. LT. SERVICE PER CITY OF RIVERSIDE STD. DWG. NO. 667. SERVICE POINT TO BE DETERMINED.
7. ALL ITEMS FURNISHED AND ALL WORK TO BE DONE SHALL CONFORM TO THE REQUIREMENTS OF: THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS, DATED MAY 2006; THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ADOPTED SEPTEMBER 2006; AND THE SPECIAL PROVISIONS.
8. UTILITIES SHOWN ON THE PLAN ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL KNOWN SUBSTRUCTURES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH SUCH FACILITIES ("UNDERGROUND SERVICE ALERT" (800) 227-2600)
9. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO NOTIFY ALL AFFECTED AGENCIES AND THE RIVERSIDE UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
10. UNLESS SHOWN OTHERWISE, INDUCTIVE LOOPS SHALL BE 6' DIAMETER WITH 10', 15' AND 30' SPACING IN THE DIRECTION OF TRAVEL. NECESSARY STRIPING SHALL BE LOCATED PRIOR TO POSITIONING LOOPS. LOOPS SHALL BE SEALED WITH HOT MELT SEALANT.
11. CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDELINE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILTY TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION.
12. CONDUIT BETWEEN ADJOINING PULL BOXES SHALL BE 2.5" UNLESS SHOWN OTHERWISE. ALL CONDUIT AND FITTINGS SHALL BE RIGID METAL, UNLESS SHOWN OTHERWISE (BURIED IN A MINIMUM OF 30" OF COVER IN THE STREET AND PARKWAY).
13. UNDERGROUND SIGNAL CONDUCTORS SHALL NOT BE SPLICED.
14. PULL BOXES SHALL BE NO. 6, UNLESS OTHERWISE NOTED ON THE PLAN.
15. PULL BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP OR DRIVEWAY.
16. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE PRECISE FIELD LOCATIONS OF ALL TRAFFIC SIGNAL EQUIPMENT PRIOR TO THE INSTALLATION.
17. ALL LANDSCAPING WHICH IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CITY AND THE PROPERTY OWNER.
18. NEW MAST ARM MOUNTED SIGNS SHALL BE FABRICATED WITH 3M "ASTM TYPE 11" REFLECTIVE SHEETING OR APPROVED EQUAL.
19. VEHICLE HEADS SHALL BE 12" LED TYPE. THE HOUSING, BACKPLATES AND VISORS SHALL BE METAL.
20. INTERNALLY ILLUMINATED STREET NAME SIGNS (IISNS) SHALL BE TYPE A. STREET NAME LEGENDS SHALL BE UPPER/LOWER CASE AND SHALL INCLUDE STREET ADDRESSES AND ROAD NAME SUFFIXES.
21. UNUSED SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE CITY OF RIVERSIDE TRAFFIC SIGNAL MAINTENANCE YARD.
22. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE SALVAGED AND REUSED UNLESS NOTED OTHERWISE.
23. DAMAGED SIDEWALK CONCRETE SHALL BE REPLACED PER CITY OF RIVERSIDE STANDARD.
24. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED PULL BOXES, CONDUITS AND CONDUCTORS AND REPAVE SURROUNDING AREA TO MATCH EXISTING OR PROPOSED GRADE.
25. CONTRACTOR SHALL COORDINATE WITH THE CITY OF RIVERSIDE TRAFFIC CONTROL AND SIGNAL SECTION (619)533–3023 A MINIMUM OF OF FIVE (5) WORKING DAYS PRIOR TO WORK AND AFFECTING A TRAFFIC SIGNAL.
26. REMOVE POLE FOUNDATION FOR ALL POLES THAT ARE TO BE REMOVED OR RELOCATED
27. CONTRACTOR SHALL FURNISH AND INSTALL 170E ETHERNET COMMUNICATIONS MODULES, MCCAIN 400 MODEM FOOTPRINT, WITH DIRECT IP ADDRESSING AUTOSENSING 10 BASE–T OR 100 BASE–T, INTO THE EXISTING 170E CONTROLLERS IN EXISTING CABINETS AT COLUMBIA/IOWA. THE EXISTING 170E MODEM CARDS SHALL BE DELIVERED TO THE CITY TRAFFIC ENGINEER.

DETAIL "A"



EMERGENCY VEHICLE PRE–EMPTION DETECTOR MASTARM MOUNTING DETAIL

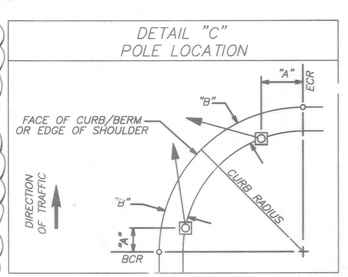


CONSTRUCTION NOTES

1. INSTALL ELECTRICAL SERVICE PER CITY OF RIVERSIDE STANDARD DRAWING NO. 667. CONTRACTOR SHALL COORDINATE WITH CITY OF RIVERS. E ELECTRICAL UTILITY DEPARTMENT AT (951)826–5452 FOR ELECTRICAL SERVICE A MINIMUM OF THREE WEEKS PRIOR TO TRAFFIC SIGNAL TURN ON. LOCATION TO BE DETERMINED.
2. FURNISH AND INSTALL A BATTERY BACKUP SYSTEM (BBS) PER SPECIAL PROVISIONS.
3. RELOCATE EXISTING OPTICOM.
5. REMOVE AND SALVAGE ALL EXISTING POLES, MAST ARMS & EQUIPMENT. ABANDON EXISTING CONDUITS AND PULLBOXES UNLESS NOTED OTHERWISE. REMOVE ALL CONDUCTORS. ABANDON ALL LOOP DETECTORS. REMOVE FOUNDATIONS COMPLETELY
6. INSTALL ~~TYPE E~~ DETECTOR LOOPS. SEE DETAIL "B" FOR SPACING.
8. CONTRACTOR SHALL INSTALL CURB TERMINATION DETAIL TYPE A PER CALTRANS STD. PLAN ES–5D
4. CONTRACTOR SHALL SALVAGE EXISTING 170E CONTROLLER AND RELOCATE TYPE 332 CABINET. CONTRACTOR SHALL CONSTRUCT (TYPE 332 CABINET) FOUNDATION. CONTRACTOR SHALL FURNISH AND INSTALL MODEL 170 ATC–CF CONTROLLER ASSEMBLY IN MODEL 332 ANODIZED ALUMINUM CABINET, COMPLETE WITH DETECTION SHOWN AND AUXILIARY EQUIPMENT WITHIN TYPE 332 CABINET PER CITY OF RIVERSIDE SPECIFICATIONS.
7. ALL PULL BOXES SHALL BE NO. 6 UNLESS NOTED OTHERWISE.

DETAIL "B" –TYPICAL ~~TYPE "E"~~ LOOP DETECTOR LAYOUT ~~(TYPE–E SIMILAR)~~

DETAIL "C" POLE LOCATION



LEGEND

MA MAST ARM MOUNTED SIGN

GRAPHIC SCALE: 20' 10 0 20' 40' 1" = 20' HORIZ

N

48 HOURS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT

1–800–227–2600

9 CONTRACTOR SHALL INSTALL 850' OF 2" CONDUIT TO EXISTING SIC PULL BOX. CONTRACTOR SHALL INSTALL 6 PAIR #19 SIC FROM IOWA AVENUE CONTROLLER CABINET TO CONTROLLER CABINETS AT CHICAGO AVENUE AND EAST LA CADENA DRIVE APPROXIMATELY 3400'. CONTRACTOR SHALL LAND SIC CABLES AT EACH TRAFFIC SIGNAL LOCATION. INSTALL(1) #6 PULL BOX @ 425' W/ 45° SWEEPS.

WARNING UTILITY LINES SHOWN ARE BASED UPON A SEARCH OF AVAILABLE RECORDS. THERE IS NO ASSURANCE THAT THE LOCATION OF SUBSTRUCTURES SHOWN ARE ACCURATE. PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA ("DIGALERT) TO MARK THE LOCATION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF FIELD MARKING. THE CONTRACTOR SHALL USE PRECAUTION WHEN EXCAVATING. SUBSTRUCTURES ENCOUNTERED SHALL BE EXPOSED AND THE ENGINEER NOTIFIED OF THEIR EXISTENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT, ON THESE DRAWINGS. THE CONTRACTOR SHALL REPAIR, AT HIS/HER EXPENSE, ANY SUBSTRUCTURES DAMAGE CAUSED BY HIS/HER OPERATIONS.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK 38–A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "38–A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM

www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CARMEN F. SPADAFORA No. C 34957 Exp. 6–30–10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
3	REMOVE TRAFFIC INDICATION; ADJUST F DIST. 3–15–10		
2	ADD LOOPS & DLC SB LT. 12–23–09		
1	UPDATE LOOPS & INSTALL SIC. 7/31/09		

DESIGNED BY C.G. DRAWN BY C.S. CHECKED BY T.P.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE	APPROVED BY
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON SHEET – 1
PRINCIPAL ENGINEER			
STREET SERVICES			CITY ENGINEER
SURVEYOR			
TRAFFIC DIVISION			DATE
PARKS DEPARTMENT			

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL MODIFICATION
IOWA AVENUE AT COLUMBIA AVENUE

SCALE: 1" = 20'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0815429

X–415B

SHEET 63 OF 76

EQUIPMENT SCHEDULE

	POLE	SIGNAL	LUMINAIRE		VEH SIG MTG		PED SIG MTG	**PED PUSH BUTTON		AUDIBLE	*POLE LOCATION		***I.I.S.N.S.	REMARKS
No.	TYPE	MA.	MA.	HPS	MA.	POLE		PHASE	POLE QUAD		A	B		
(A)	1–A(R)	–	–	–	–	TV–2–T(RL)	SP–1–T(RL)	6(N)	E	–	17.0'	4.0'	–	–
(B)	24–4–80(E)	35'(E)	12'(E)	250W(E)	MAS(E)	SV–1–T(E)	SP–1–T(E)	6(N)	E	–	EXISTING		Existing Iowa	–
(C)	1–A(E)	–	–	–	–	TV–1–T(E)	SP–1–T(E)	8(N)	S	–	EXISTING		–	–
(D)	26–4–80(E)	45'(E)	12'(E)	250W(E)	MAS(E)	SV–1–T(E)	SP–1–T(E)	8(N)	S	–	EXISTING		–	–
(E)	1–A(E)	–	–	–	–	TV–2–T(E)	SP–1–T(E)	2(N)	W	–	EXISTING		–	–
(F)	24–1–100(N)	25'(N)	12'(RL)	250W(RL)	MAS(N)	SV–1–T(RL)	SP–1–T(RL)	2(N)	W	–	23.5'	6.5'	Iowa	(RL) EXISTING I.I.S.N.S.
(G)	1575(N)	–	12'(N)	250W(N)	–	TV–1–T(RL)	SP–1–T(RL)	4(N)	N	–	23.0'	4.0'	–	–
(H)	29–5–100(N)	55'(N)	12'(RL)	250W(RL)	MAS(2)	SV–1–T(RL)	SP–1–T(RL)	4(N)	N	–	20.0'	4.0'	Palmyrita	(RL) OPTICOM E.V.P.E DETECTOP TO NEW MAST ARM (RL) EXISTING I.I.S.N.S.

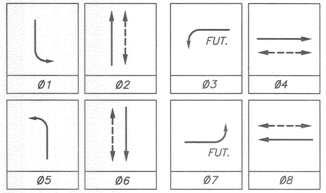
* SEE DETAIL "C"
** PEDESTRIAN PUSH BUTTONS SHALL BE ADA COMPLIANT AND SHALL BE PER SPECIAL PROVISIONS.

*** PER CITY OF RIVERSIDE STD. DWG. No. 663

NOTES: 1. ((C)) or ((P)) – INDICATES AUDITORY PEDESTRIAN SIGNAL TO BE INSTALLED.
((C)) INDICATES CUCKOO SOUND; ((P)) INDICATES PEEP–PEEP SOUND.
2. SIGNAL POLES, MAST ARMS AND EQUIPMENT SHALL BE NEW.

(E) EXISTING EQUIPMENT
(RL) RELOCATE POLE AND EQUIPMENT TO NEW LOCATION
(N) NEW EQUIPMENT OR POLE
(RS) REMOVE AND SALVAGE DELIVER TO CITY YARD
(AB) ABANDON IN PLACE

PHASE DIAGRAM



CONDUCTOR TABLE

CONTROL FUNCTION	CONDUCTORS	CONDUCTOR RUNS 1	2	3	4	5	6	7	8	9	10
VEHICLE & PEDESTRIAN HEADS, PEDESTRIAN PUSH BUTTONS, SPARES & COMMONS	12 WIRE IMSA	1	2	3	4	5	8	3	2	1	–
	9 WIRE IMSA	–	–	–	–	–	–	–	–	–	–
	5 WIRE IMSA	–	–	–	–	–	–	–	–	–	–
	3 WIRE IMSA	1	2	3	4	5	8	3	2	1	–
DETECTOR CABLE	#16/2	–	–	–	–	–	–	–	–	–	–
PHASE 1		–	–	–	–	–	1	1	1	1	–
PHASE 2		–	–	–	2	2	2	–	–	–	–
PHASE 3		–	–	–	–	–	–	–	–	–	–
PHASE 4		–	–	–	–	–	2	2	–	–	–
PHASE 5		–	–	–	1	1	–	–	–	–	–
PHASE 6		–	–	–	–	–	2	2	2	2	–
PHASE 7		–	–	–	–	–	–	–	–	–	–
PHASE 8		–	1	1	1	1	–	–	–	–	–
TOTALS		–	1	1	4	4	8	5	3	3	–
E.V.P.E		–	2	2	4	–	–	–	–	–	–
I.I.S.N.S.	#12	–	–	2	2	2	2	–		–	–
LUMINAIRES	#8	2	2	2	2	2	2	–	2	–	–
SIGNAL SERVICE	#6	–	–	–	–	–	–	–	–	–	2
INTERCONNECT		–	–	–	–	–	–	–	–	–	–
CONDUIT SIZE		–	2"	2"	3"	3"	2–4"	3.5"	3"	3"	2"

NOTES: (N) = NEW
ALL CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED

GENERAL NOTES

1. FOR PAVEMENT STRIPING AND MARKINGS, SEE PD SHEETS.
2. ALL TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO OPENING THE STREETS TO TRAFFIC.
3. ALL DETECTOR LOOPS SHALL BE INSTALLED IN THE PRESENCE OF THE TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
4. ALL PAVEMENT DELINEATION REQUIREMENTS SHALL BE COMPLETED AT LEAST ONE DAY PRIOIR TO TURN ON.
5. TYPICAL DETECTOR LOOP SPACING: 10' AND 15' (WHERE APPLICABLE).
6. INSTALL 120V ILLUMINATED STREET NAME SIGN. 120V SIGNAL AND 240V ST. LT. SERVICE PER CITY OF RIVERSIDE STD. DWG. NO. 667. SERVICE POINT TO BE DETERMINED.
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15. PULL BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP OR DRIVEWAY.
16. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE PRECISE FIELD LOCATIONS OF ALL TRAFFIC SIGNAL EQUIPMENT PRIOR TO THE INSTALLATION.
17. ALL LANDSCAPING WHICH IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CITY AND THE PROPERTY OWNER.
18. NEW MAST ARM MOUNTED SIGNS SHALL BE FABRICATED WITH 3M "ASTM TYPE 11" REFLECTIVE SHEETING OR APPROVED EQUAL.
19. VEHICLE HEADS SHALL BE 12" LED TYPE. THE HOUSING, BACKPLATES AND VISORS SHALL BE METAL.
20. INTERNALLY ILLUMINATED STREET NAME SIGNS (IISNS) SHALL BE TYPE A. STREET NAME LEGENDS SHALL BE UPPER/LOWER CASE AND SHALL INCLUDE STREET ADDRESSES AND ROAD NAME SUFFIXES.
21. UNUSED SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE CITY OF RIVERSIDE TRAFFIC SIGNAL MAINTENANCE YARD.
22. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE SALVAGED AND REUSED UNLESS NOTED OTHERWISE.
23. DAMAGED SIDEWALK CONCRETE SHALL BE REPLACED PER CITY OF RIVERSIDE STANDARD.
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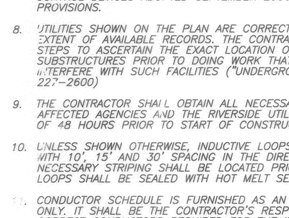
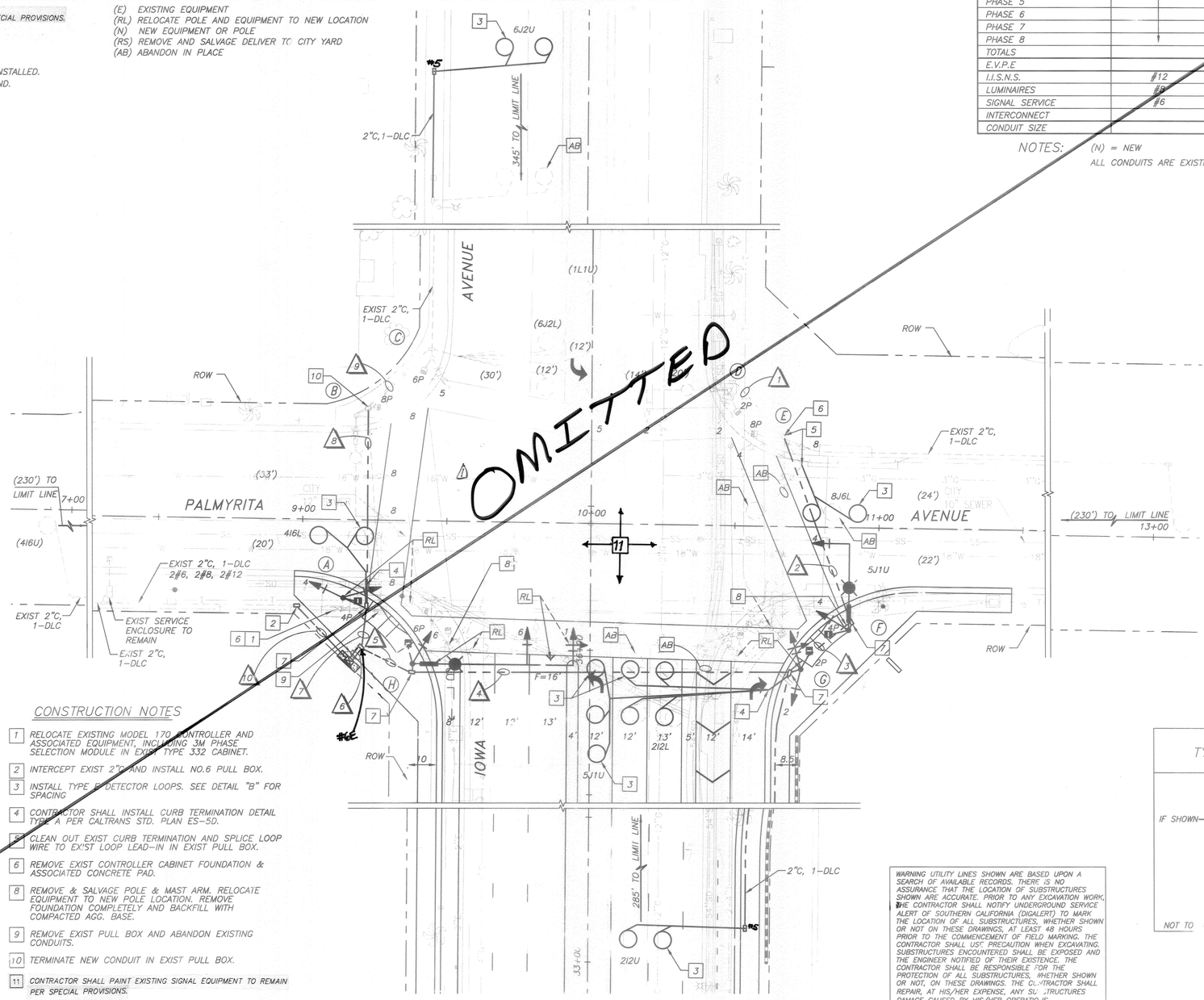
26. REMOVE POLE FOUNDATION FOR ALL POLES THAT ARE TO BE REMOVED OR RELOCATED
27. CONTRACTOR SHALL FURNISH AND INSTALL 170E ETHERNET COMMUNICATIONS MODULES, MCCAIN 4500 MODEM FOOTPRINT, WITH DIRECT IP ADDRESSING AUTOSENSING 10 BASE–T OR 100 BASE–T, INTO THE EXISTING 170E CONTROLLERS IN EXISTING CABINETS AT IOWA/PALMYRITA. THE EXISTING 170E MODEM CARDS SHALL BE DELIVERED TO THE CITY TRAFFIC ENGINEER.

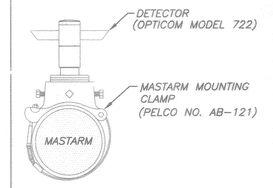


CONSTRUCTION NOTES

1. RELOCATE EXISTING MODEL 170 CONTROLLER AND ASSOCIATED EQUIPMENT, INCLUDING 3M PHASE SELECTION MODULE IN EXIST TYPE 332 CABINET.
2. INTERCEPT EXIST 2"C AND INSTALL NO.6 PULL BOX.
3. INSTALL TYPE E DETECTOR LOOPS. SEE DETAIL "B" FOR SPACING
4. CONTRACTOR SHALL INSTALL CURB TERMINATION DETAIL TYPE A PER CALTRANS STD. PLAN ES–5D.
5. CLEAN OUT EXIST CURB TERMINATION AND SPLICE LOOP WIRE TO EXIST LOOP LEAD–IN IN EXIST PULL BOX.
6. REMOVE EXIST CONTROLLER CABINET FOUNDATION & ASSOCIATED CONCRETE PAD.
8. REMOVE & SALVAGE POLE & MAST ARM. RELOCATE EQUIPMENT TO NEW POLE LOCATION. REMOVE FOUNDATION COMPLETELY AND BACKFILL WITH COMPACTED AGG. BASE.
9. REMOVE EXIST PULL BOX AND ABANDON EXISTING CONDUITS.
10. TERMINATE NEW CONDUIT IN EXIST PULL BOX.
11. CONTRACTOR SHALL PAINT EXISTING SIGNAL EQUIPMENT TO REMAIN PER SPECIAL PROVISIONS.
7. ALL PULLBOXES SHALL BE NO. 6 UNLESS NOTED OTHERWISE.

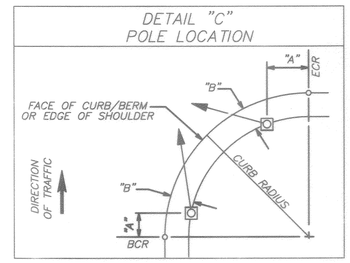


DETAIL "A"

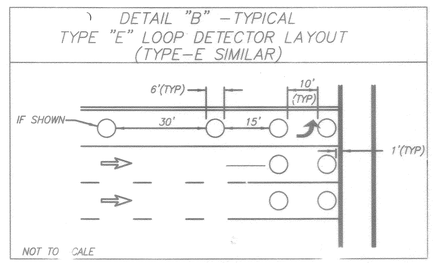


EMERGENCY VEHICLE PRE–EMPTION DETECTOR MASTARM MOUNTING DETAIL

DETAIL "C" POLE LOCATION



DETAIL "B" – TYPICAL TYPE "E" LOOP DETECTOR LAYOUT (TYPE–E SIMILAR)



NOT TO SCALE

WARNING UTILITY LINES SHOWN ARE BASED UPON A SEARCH OF AVAILABLE RECORDS. THERE IS NO ASSURANCE THAT THE LOCATION OF SUBSTRUCTURES SHOWN ARE ACCURATE. PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA (DIGALERT) TO MARK THE LOCATION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF FIELD MARKING. THE CONTRACTOR SHALL USE PRECAUTION WHEN EXCAVATING. SUBSTRUCTURES ENCOUNTERED SHALL BE EXPOSED AND THE ENGINEER NOTIFIED OF THEIR EXISTENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SUBSTRUCTURES, WHETHER SHOWN OR NOT, ON THESE DRAWINGS. THE CONTRACTOR SHALL REPAIR, AT HIS/HER EXPENSE, ANY SUBSTRUCTURES DAMAGE CAUSED BY HIS/HER OPERATIONS.

N

20' 10' 0 20' 40'
GRAPHIC SCALE 1" = 20' HORIZ

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER KAMEN F. QUINTNER No. C 54... EXP. 6-30 STATE OF CALIFORNIA CIVIL

NO.	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EL	7/16/09

DESIGNED BY C.G. DRAWN BY C.S. CHECKED BY T.P.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVE
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON BINDER - 1
PRINCIPAL ENGINEER			
STREET SERVICES			
SURVEYOR			
TRAFFIC DIVISION			CITY EN...
PARKS DEPARTMENT			DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL MODIFICATION
IOWA AVENUE AT PALMYRITA AVENUE
SCALE: 1" = 20'

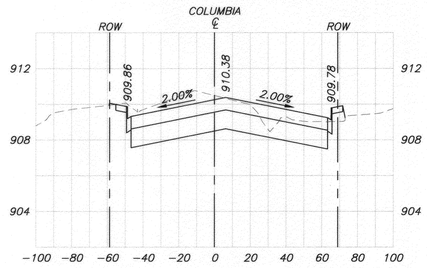
DESIGN W.O. NO. 802989
CONSTRUCTION W.O. NO. 0915428

X–382B

64 OF 76

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

1



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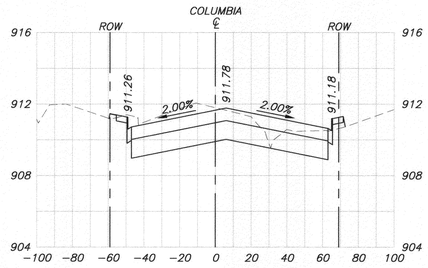

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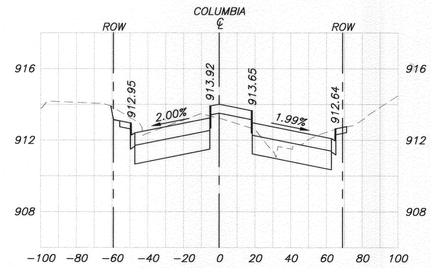

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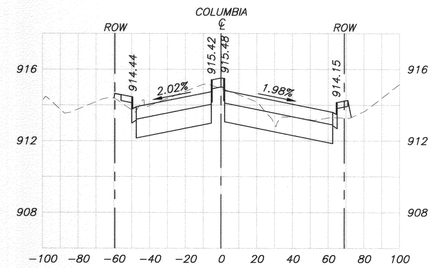

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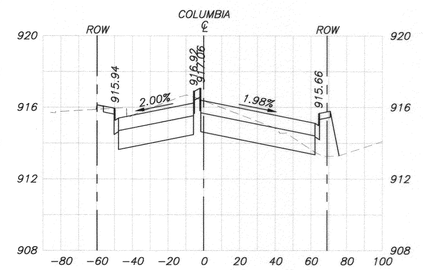

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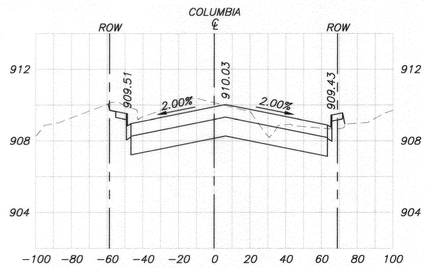

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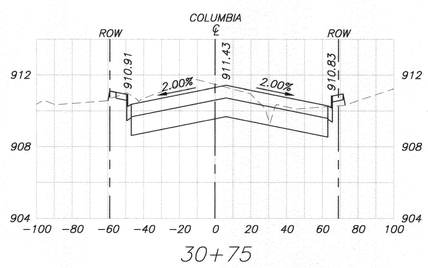

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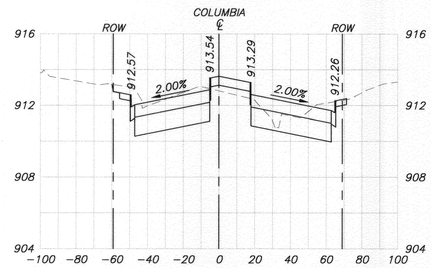

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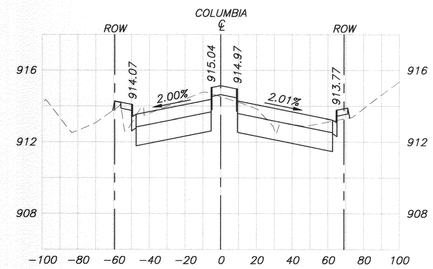

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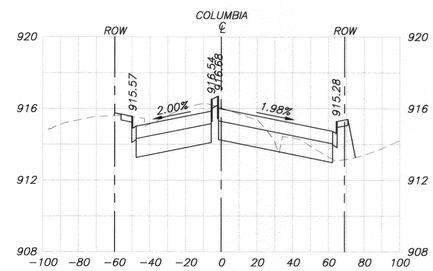

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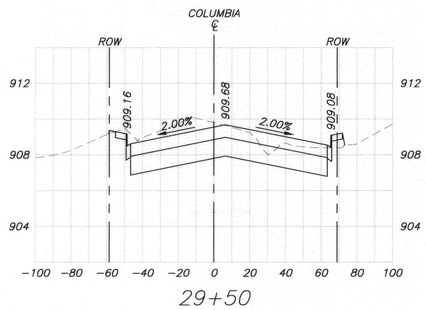

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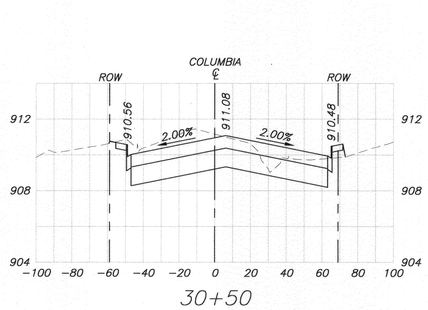

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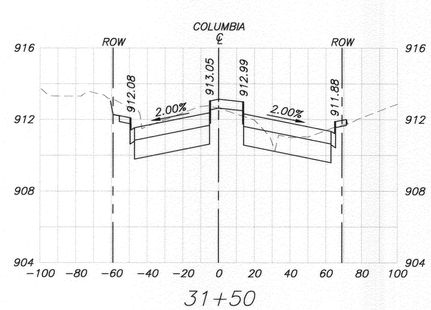

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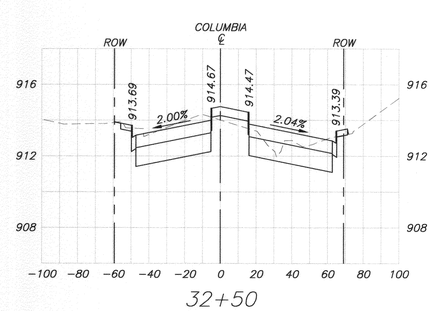

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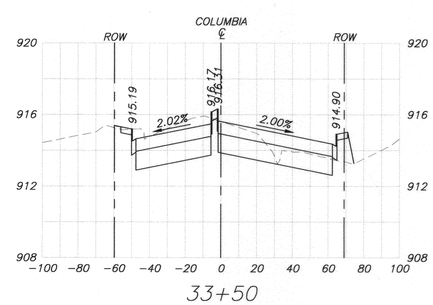

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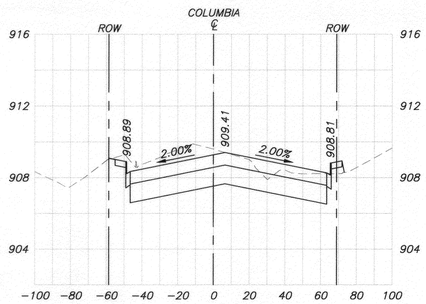

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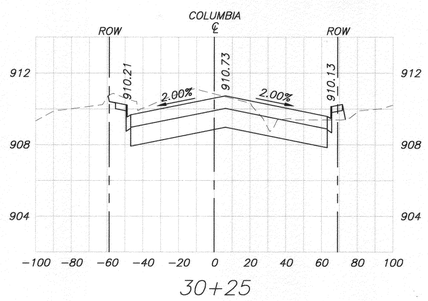

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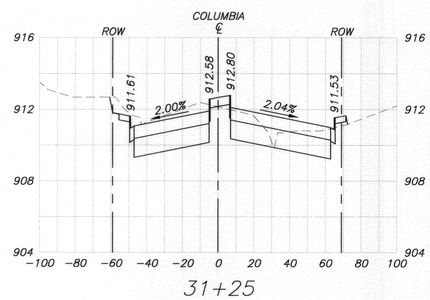

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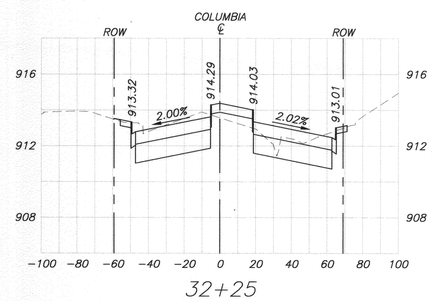

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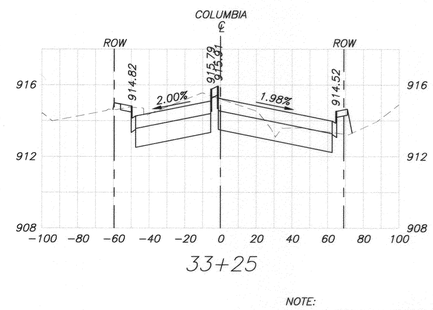

33+25

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRETAN
No. C41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	S.C.	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED FOR SIGNATURE ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-01

SHEET 65 OF 76

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PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

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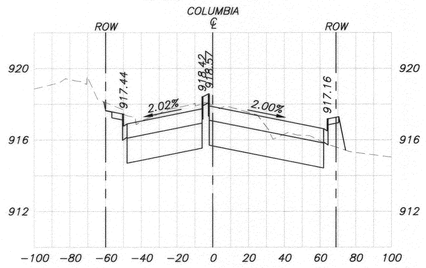

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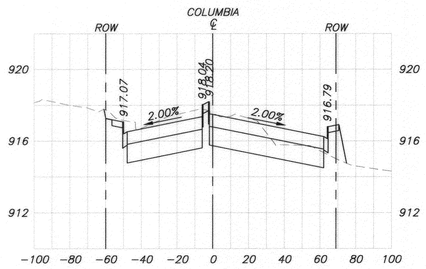

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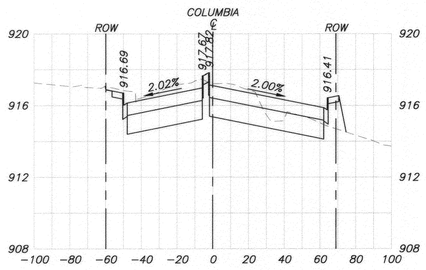

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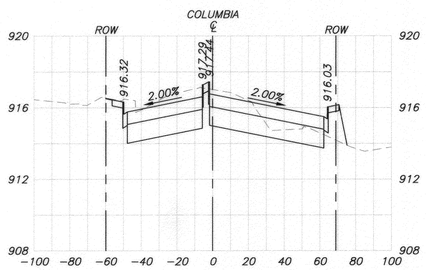

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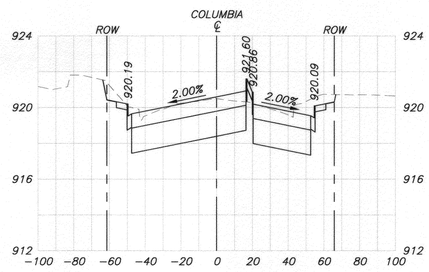

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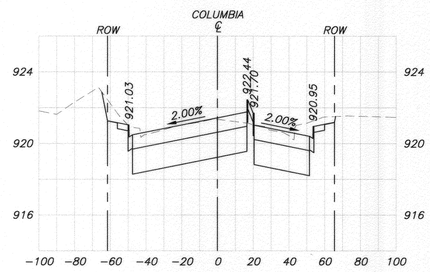

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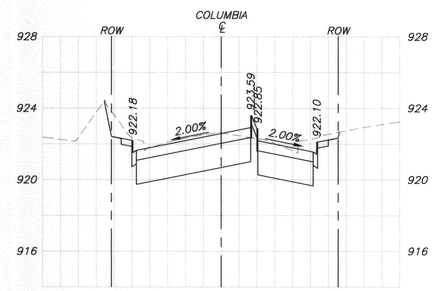

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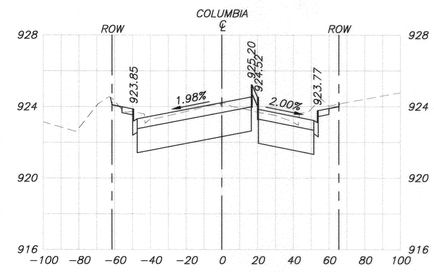

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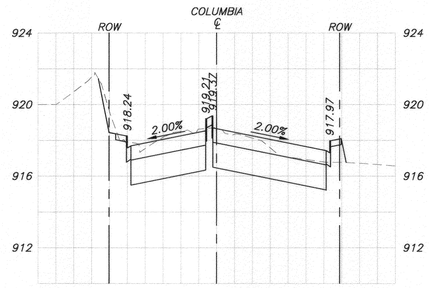

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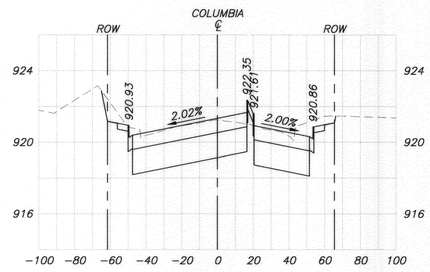

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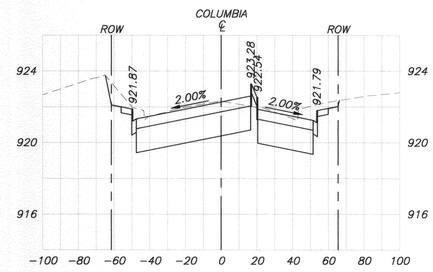

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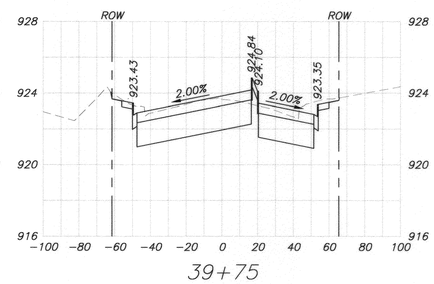

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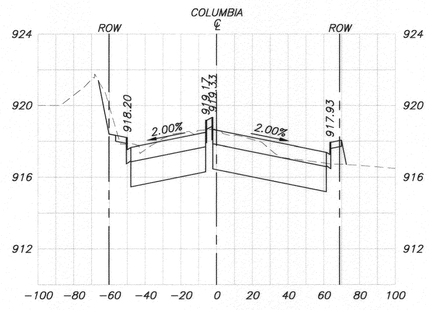

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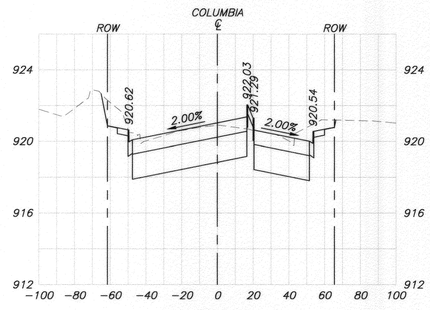

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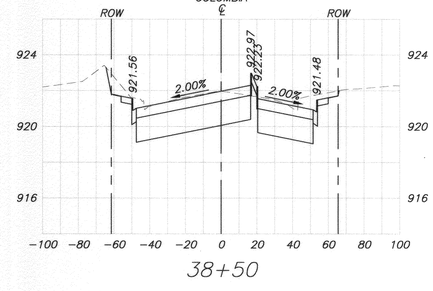

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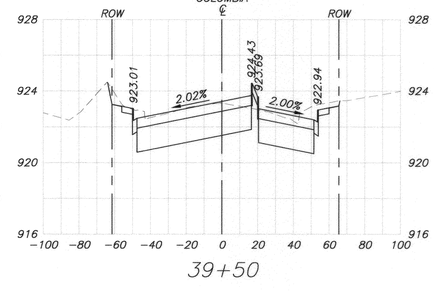

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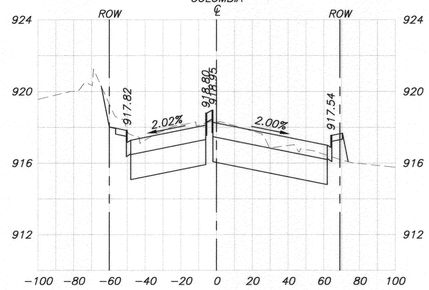

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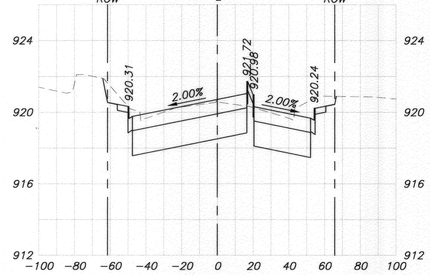

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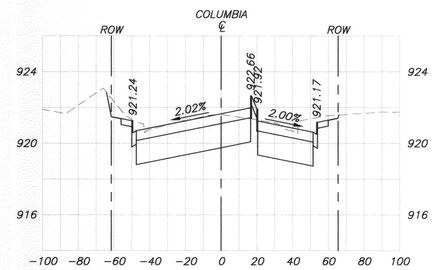

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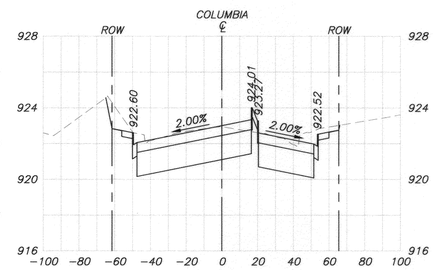

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NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

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BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "JR-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

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Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRETAN
No. C41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EC	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT

CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-02

SHEET 66 OF 76

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

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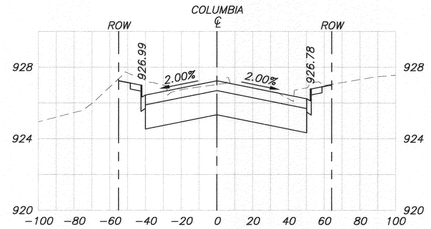

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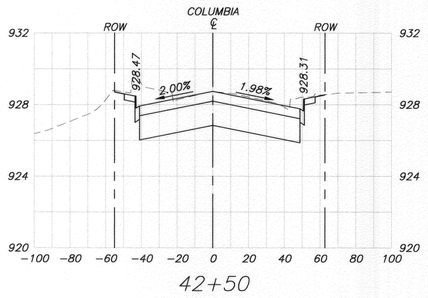

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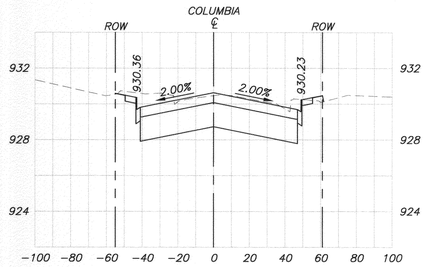

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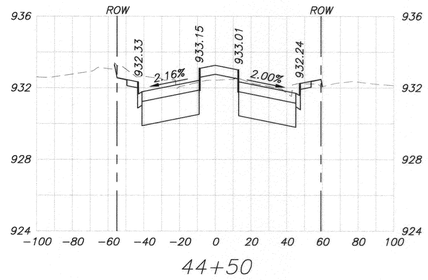

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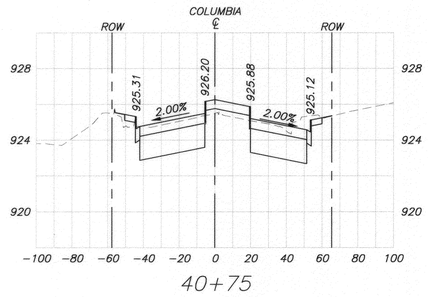

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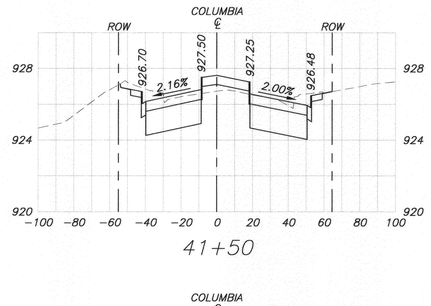

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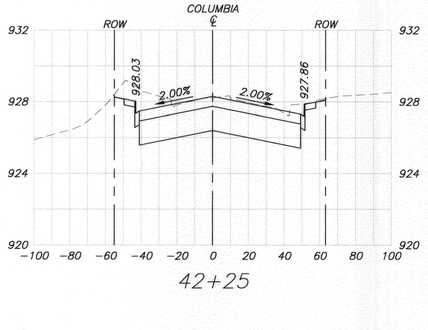

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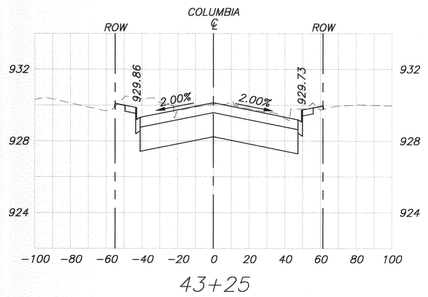

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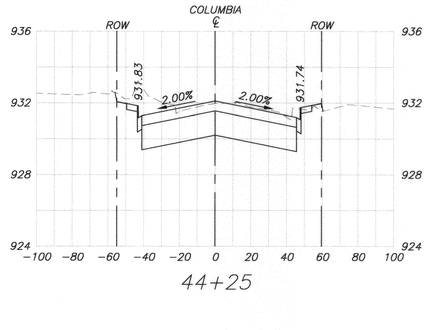

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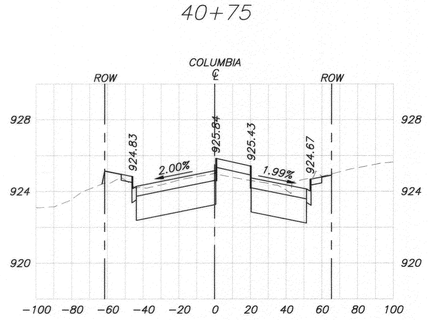

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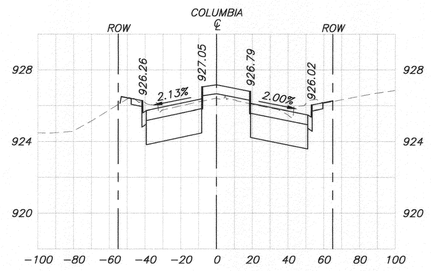

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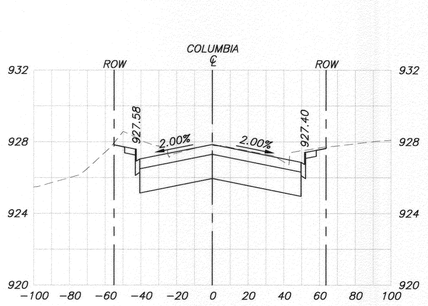

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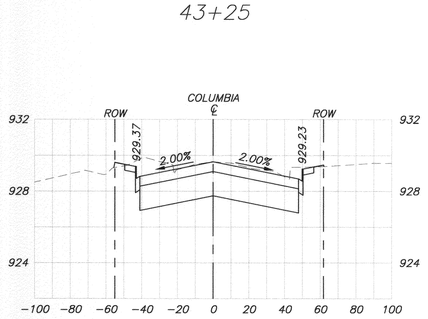

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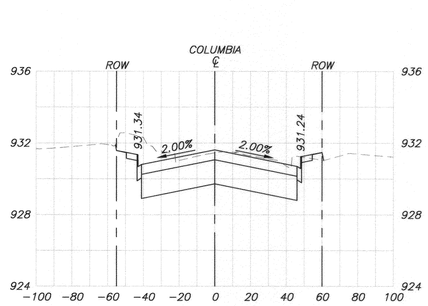

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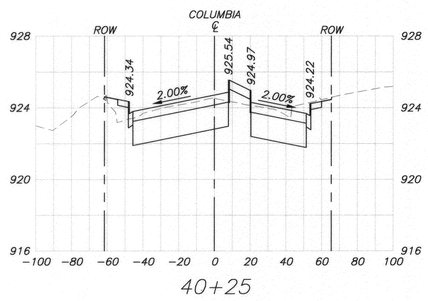

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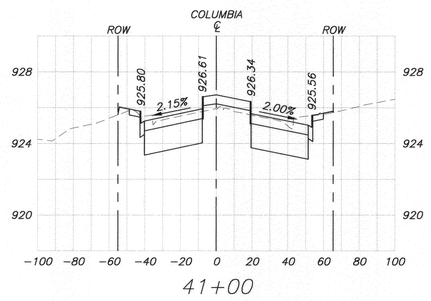

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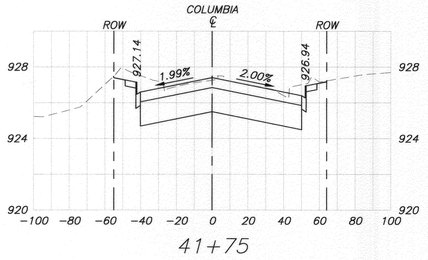

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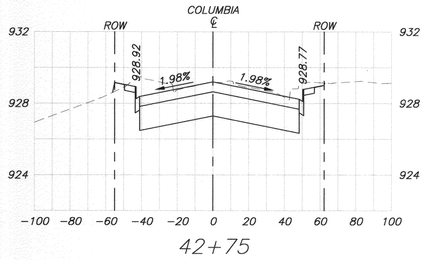

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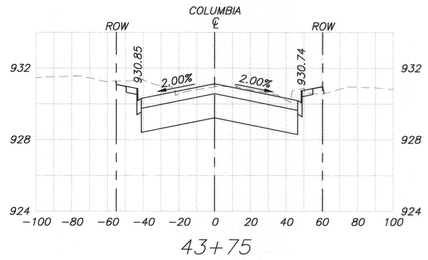

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NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

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BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C41624 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	CL	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET - 1
CITY ENGINEER

DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

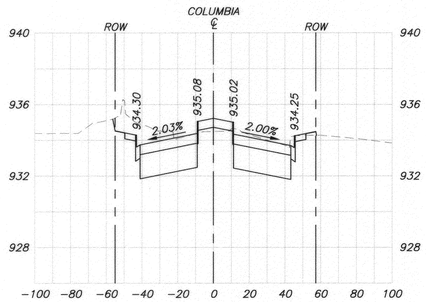
DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-03

SHEET 67 OF 76

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

1



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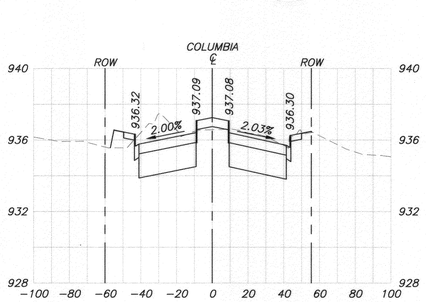

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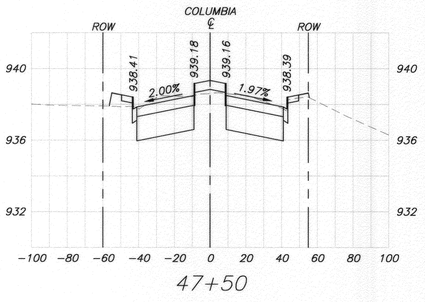

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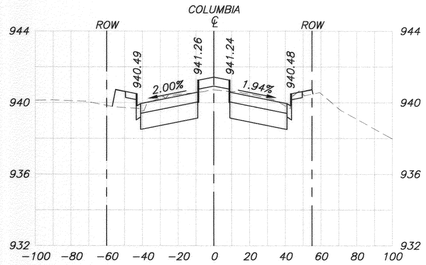

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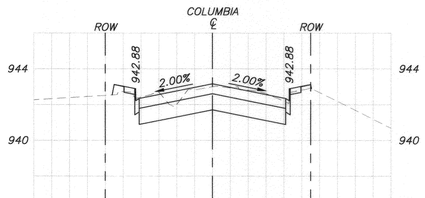

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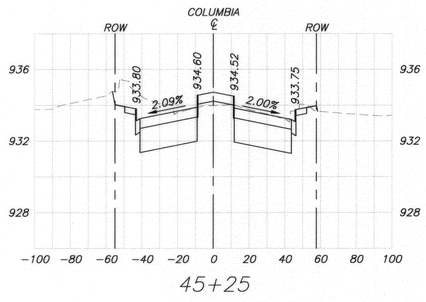

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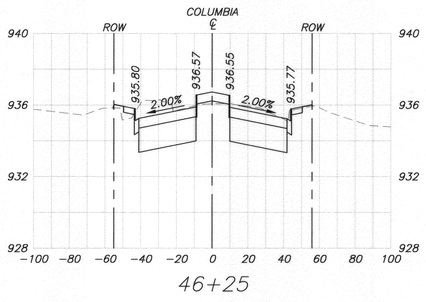

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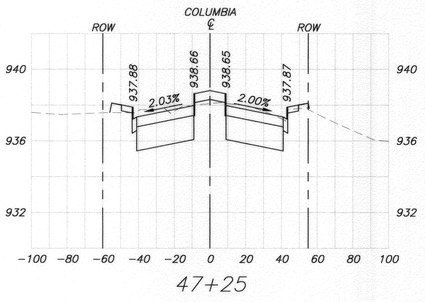

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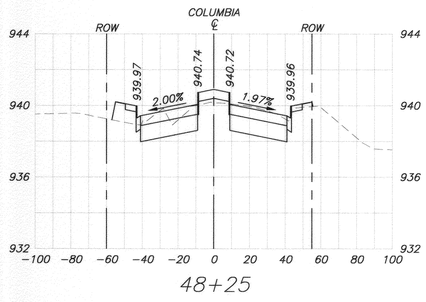

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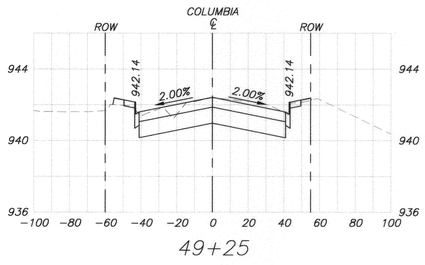

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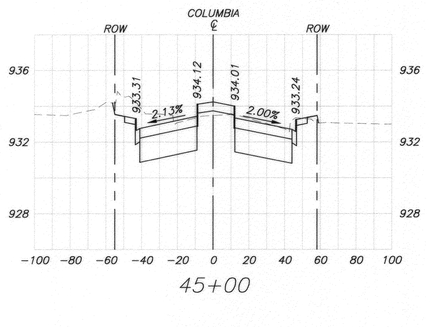

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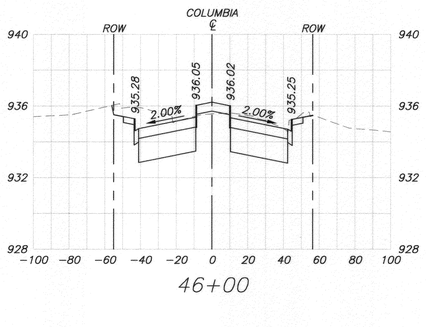

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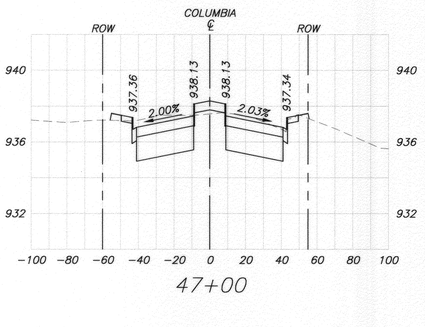

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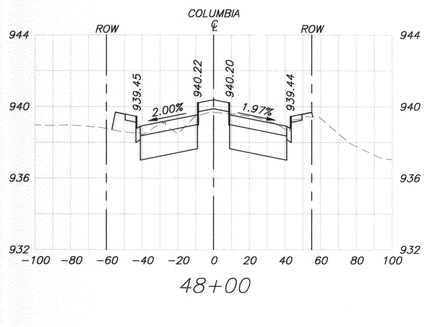

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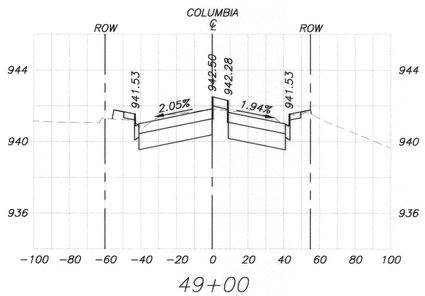

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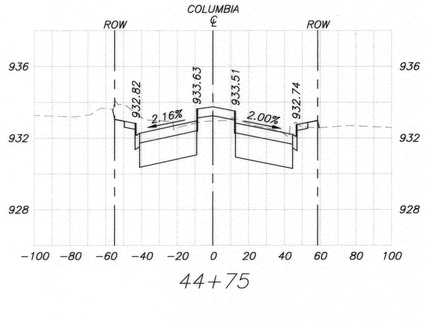

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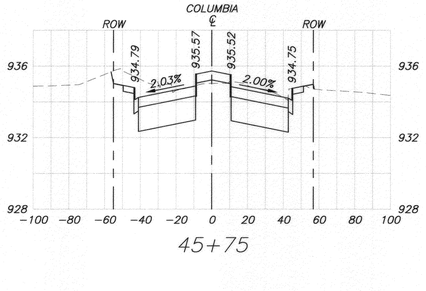

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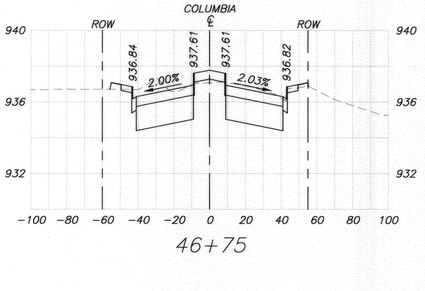

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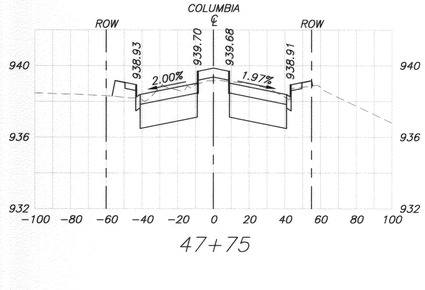

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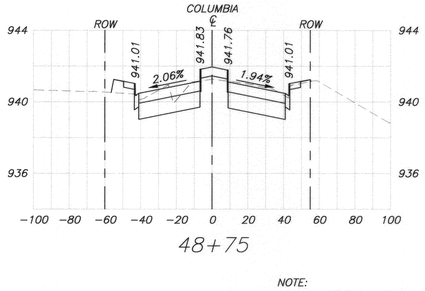

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NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

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BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRETAN
No. C41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EG	7/6/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED FOR SIGNATURE CO #REPORT -1
CITY ENGINEER
DATE

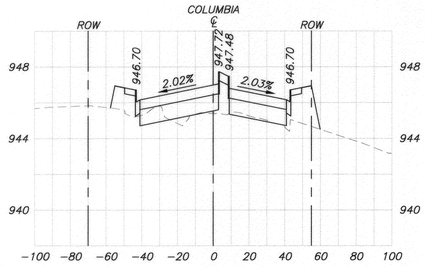
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-04

SHEET 68 OF 76



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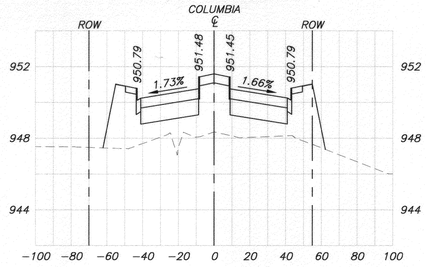

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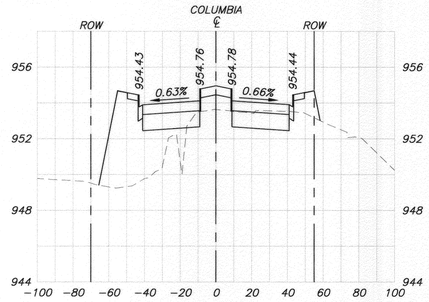

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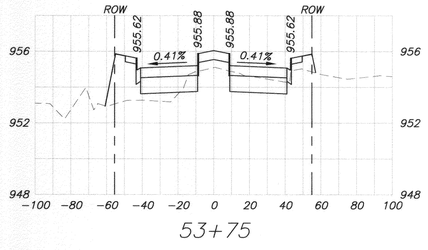

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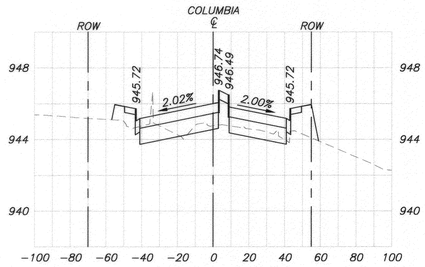
PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

△7



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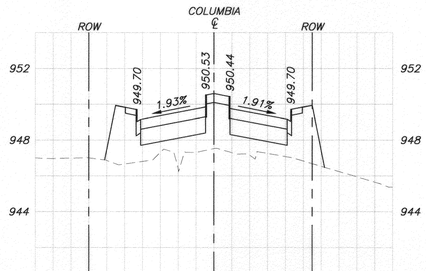

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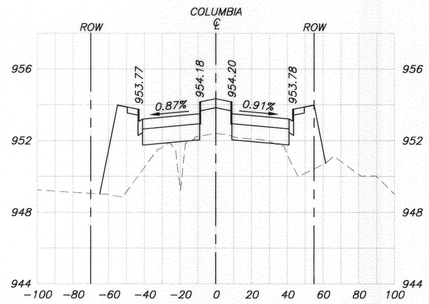

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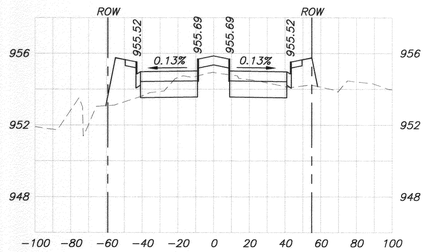

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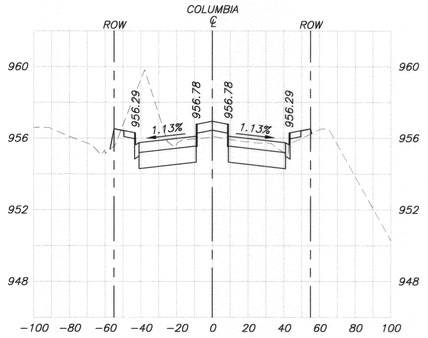

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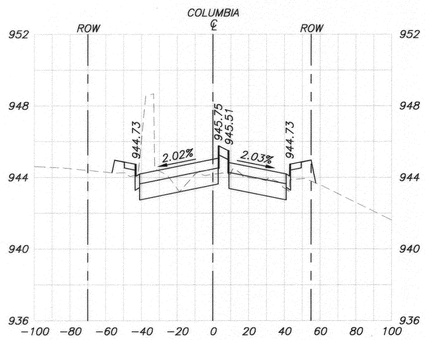

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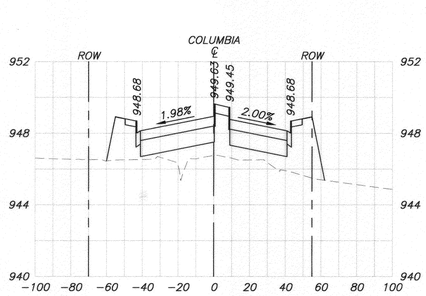

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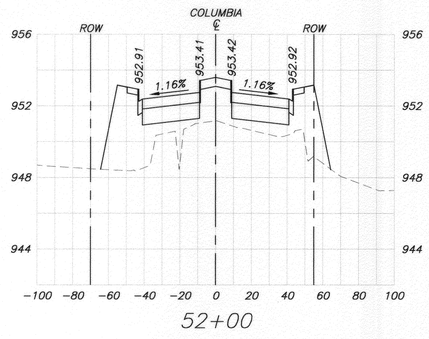

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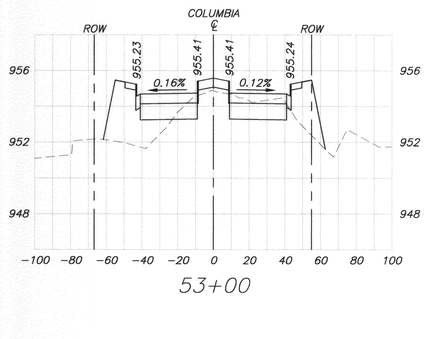

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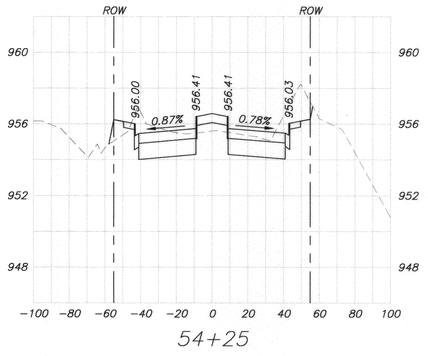

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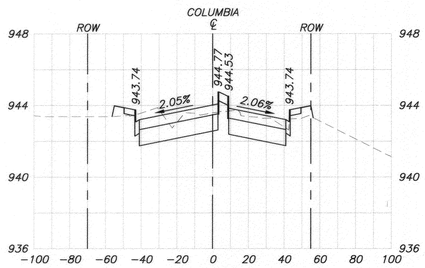

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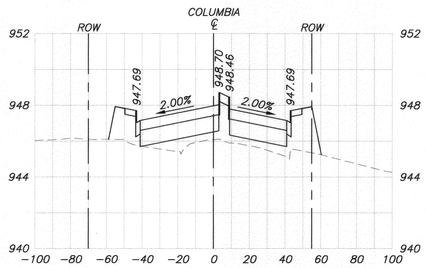

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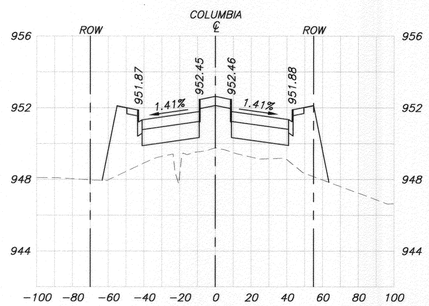

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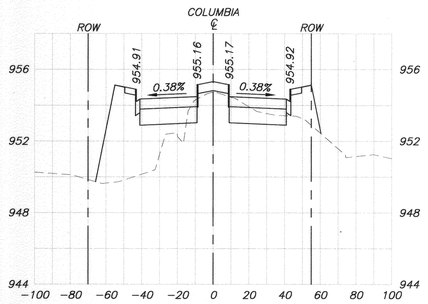

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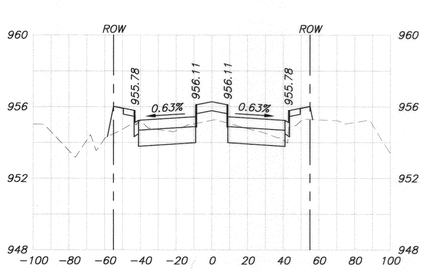


54+00

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-A3 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "JR-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRETAN
No. C41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
△	PROJECT SCOPE REDUCED	SZ	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED PER SIGNATURES ON SHEET 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

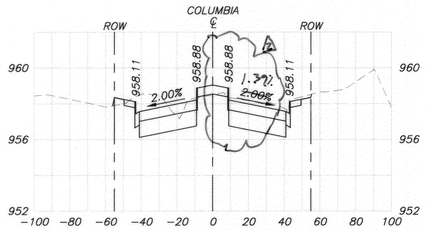
R–4132
CX–05

SHEET 69 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\CX-05.dwg
TIME: 6-07-09 - 1:38pm User: Nguyend XRef Files: xbdr

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1

FOR CURB LOCATION REFER TO C-08 (Sheet 11 of 76)
CURB ELEVATIONS PER THIS SHEET AS SHOWN. FOR STATIONS 54+75 to STATION 57+75. 2



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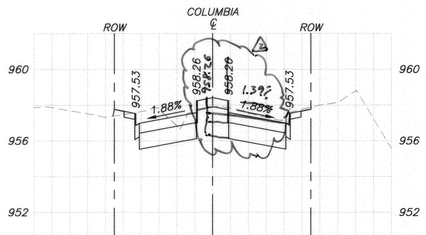

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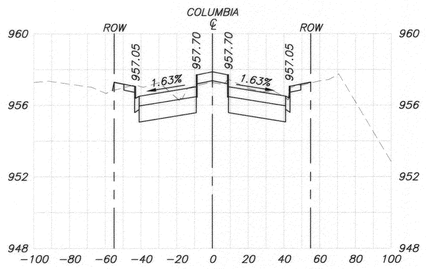

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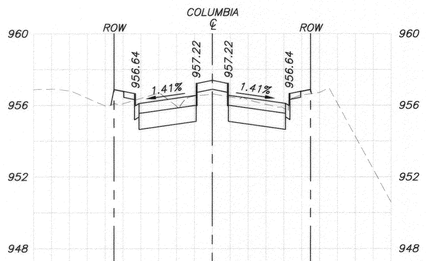
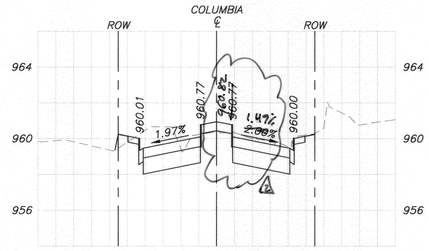


54+75 2



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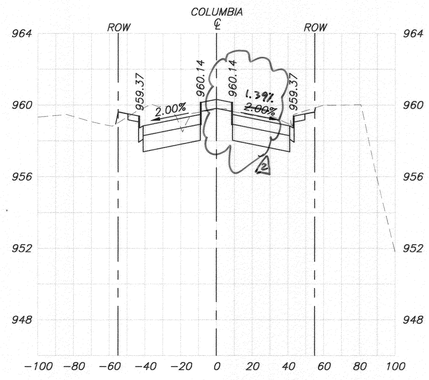

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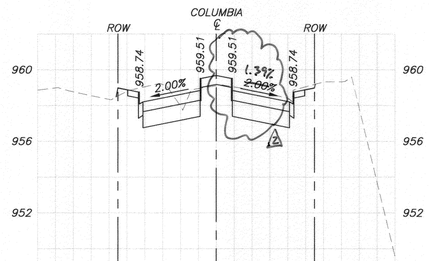

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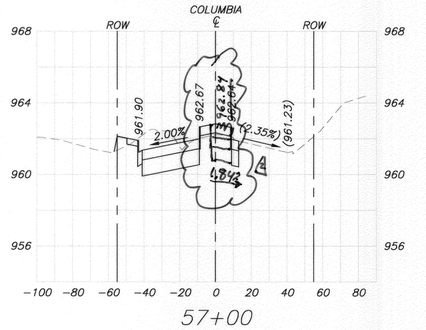

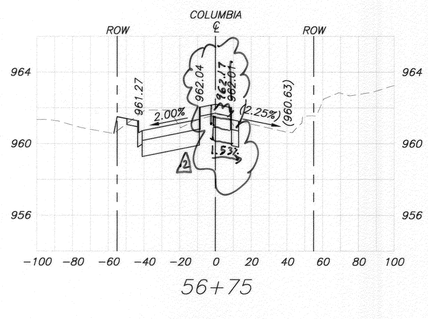

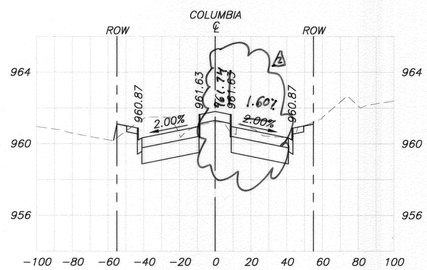

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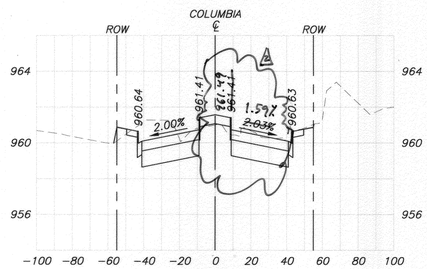

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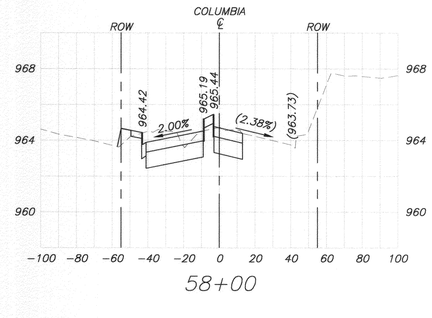

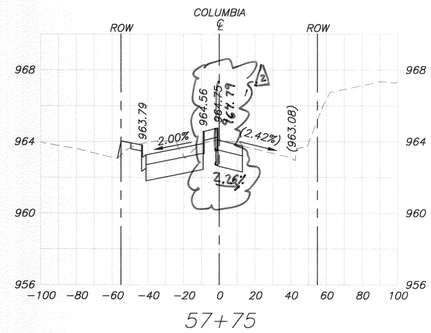

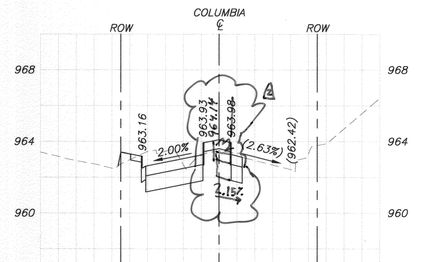

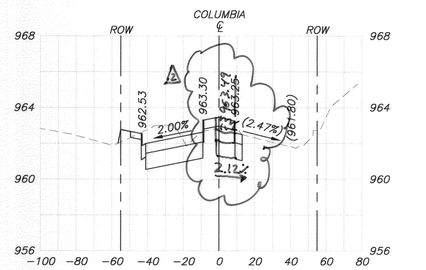

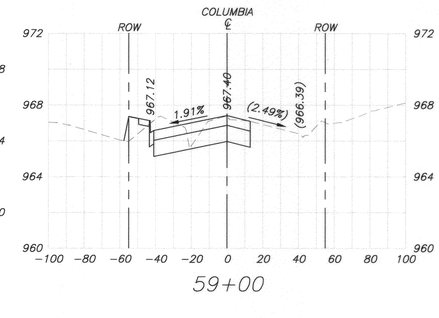

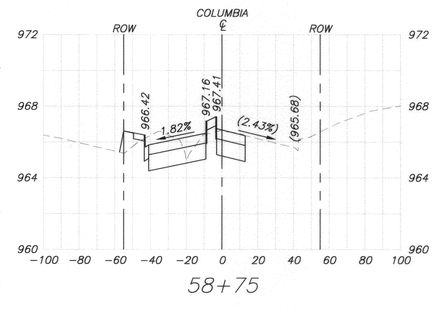

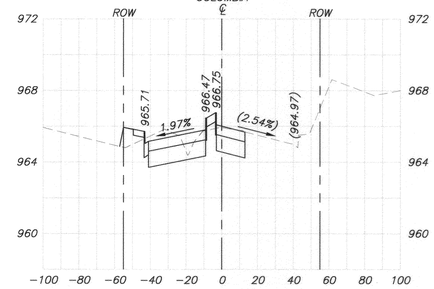

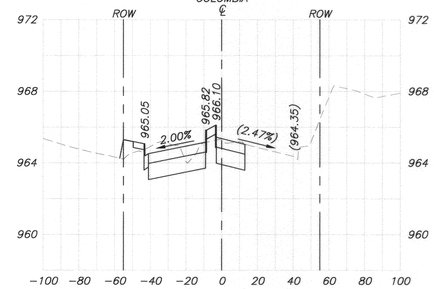

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

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BENCH MARK
CITY OF RIVERSIDE BENCH MARK JB-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-43" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	MEDIAN CURB LOCATION CHANGE	E.L.	11/10
2	PROJECT SCOPE REDUCED	E.L.	2/10

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

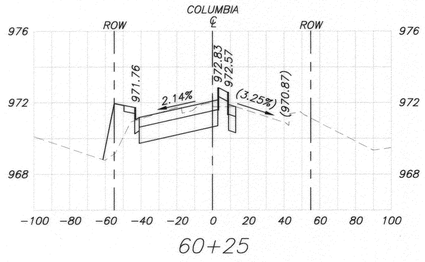
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – COLUMBIA AVENUE

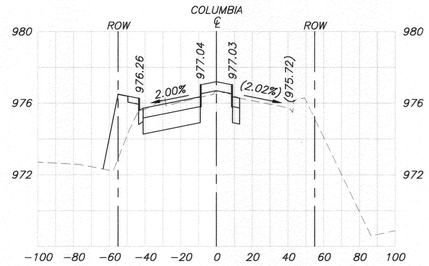
SCALE: HOR. 1" = 40'; VER. 1" = 4'

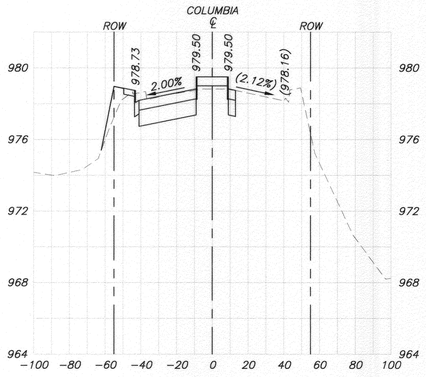
DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

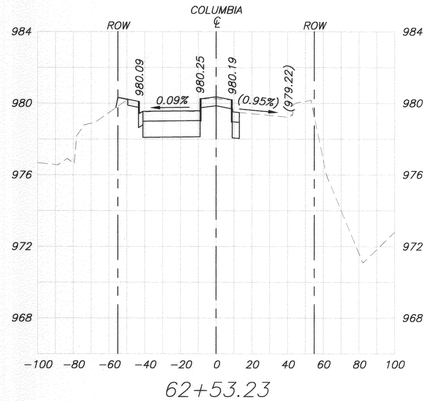
R-4132
CX-06

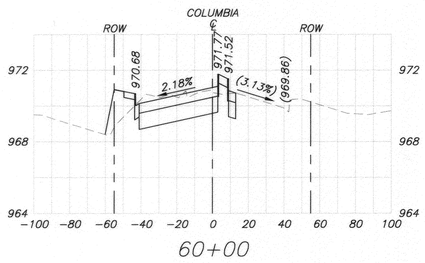
SHEET 70 OF 76

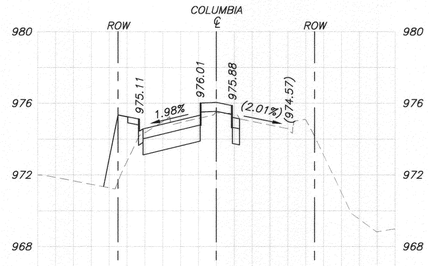


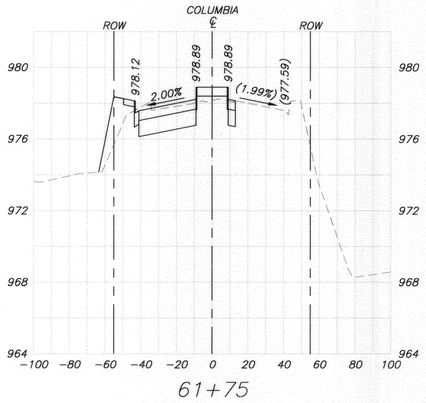


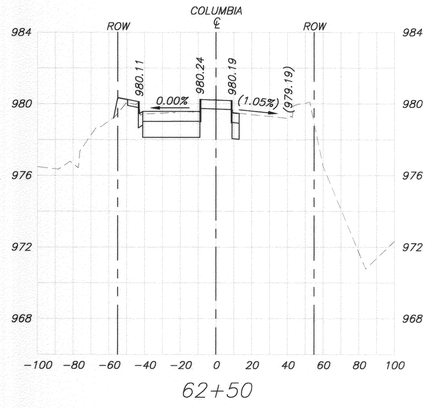


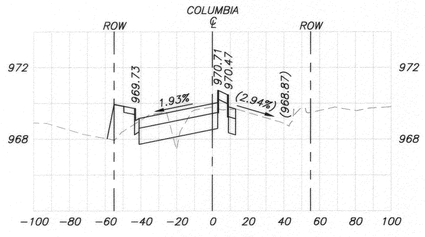


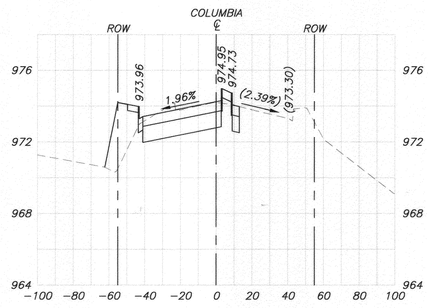


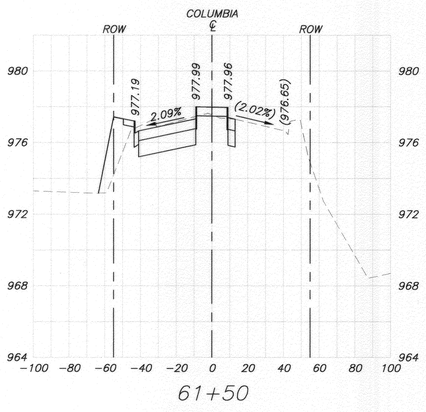


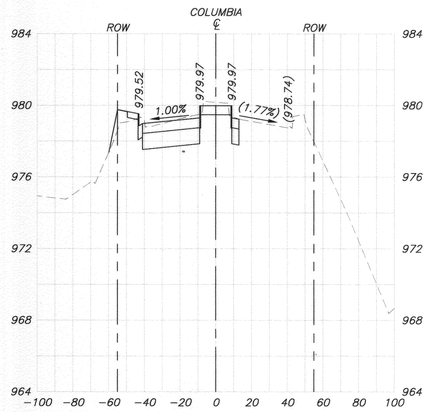


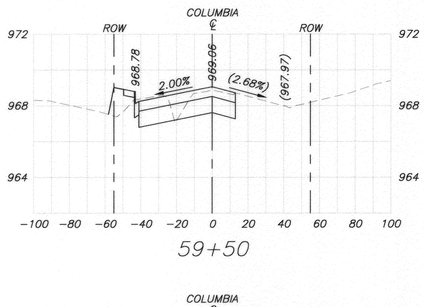


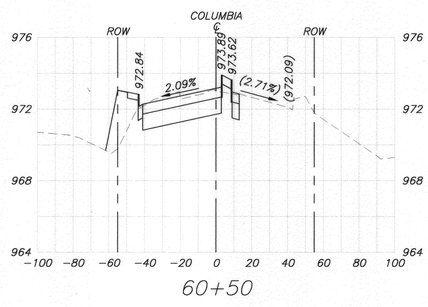


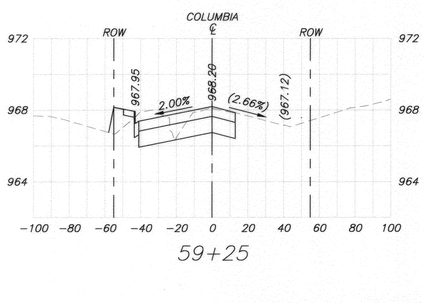












PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

1

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

DWG: G:\600202368 Columbia_Iowa\CADD\Civil\Sheet\CX-07.dwg
TIME: 6-09-09 - 5:47pm User: Nguyenld Xref Files: xbar

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE".

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BRECHTEL
No. C 41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EL	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

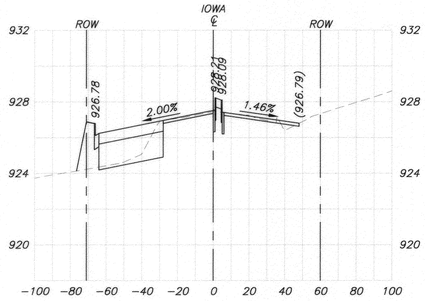
CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – COLUMBIA AVENUE

SCALE: HOR. 1" = 40'; VER. 1" = 4'

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-07
SHEET 71 OF 76

Note: Curb Sidewalk added to W'ly Parkway between Marlborough Ave & Columbia Ave. Tie-Slope to be adjusted accordingly.



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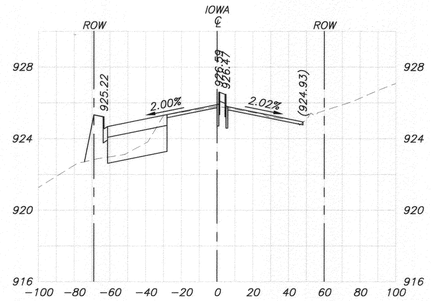

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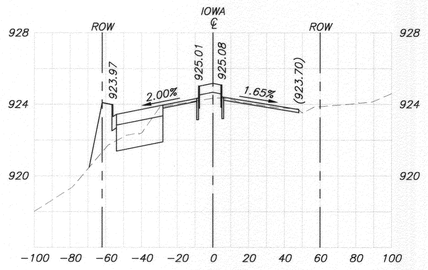

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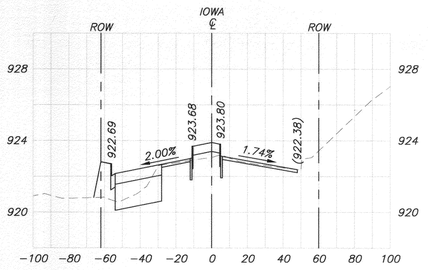

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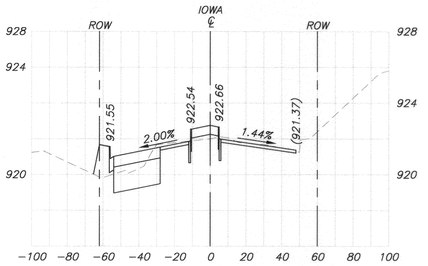

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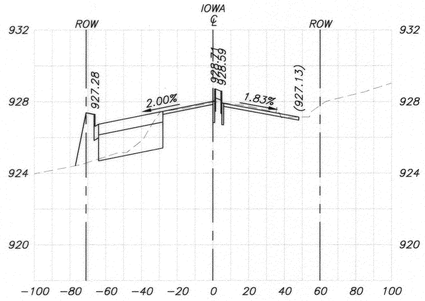

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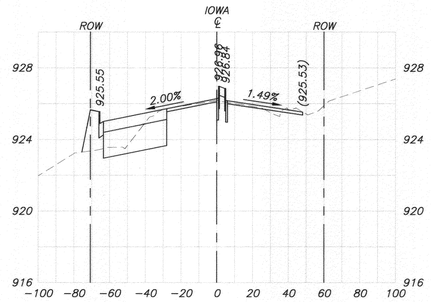

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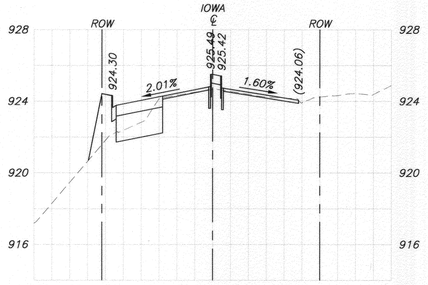

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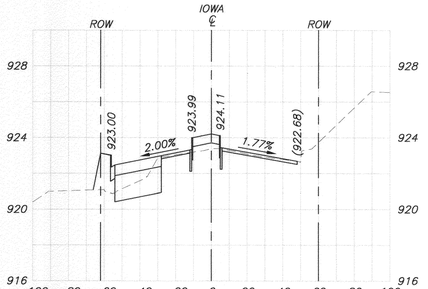

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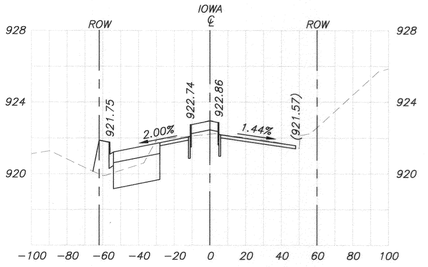

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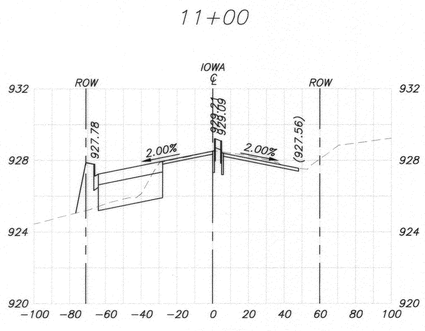

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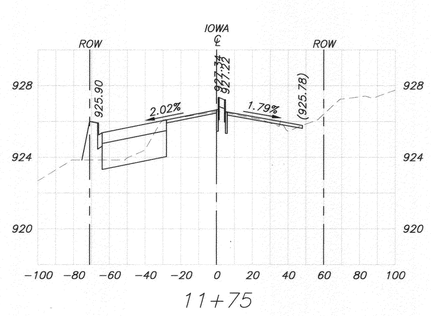

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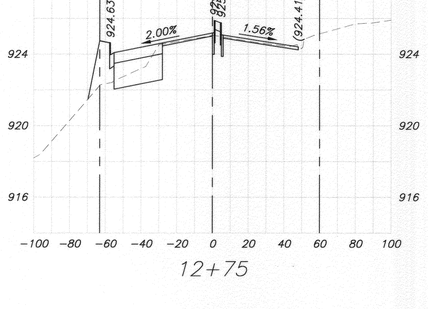

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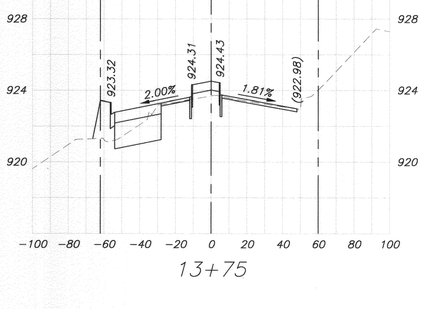

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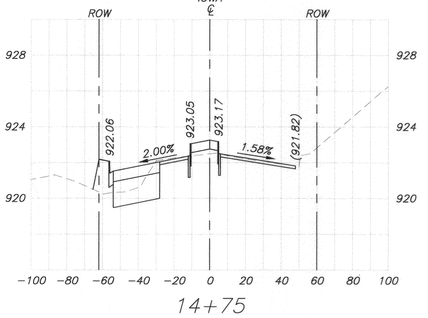

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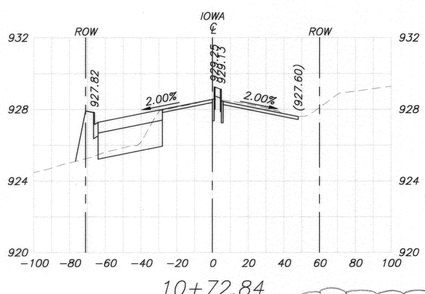

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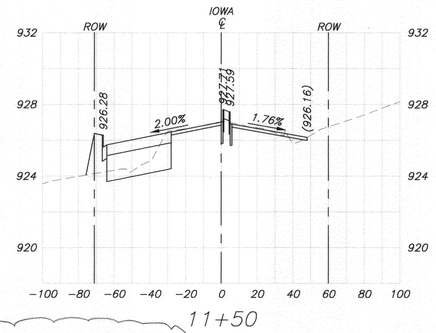

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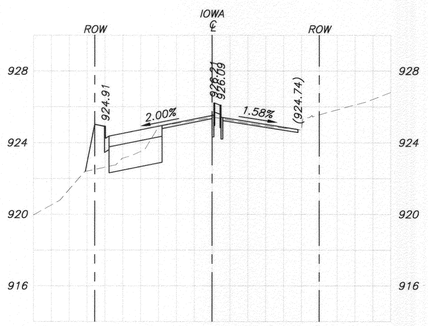

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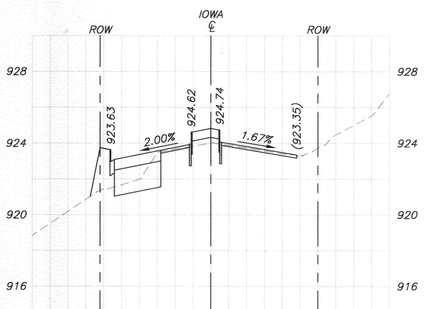

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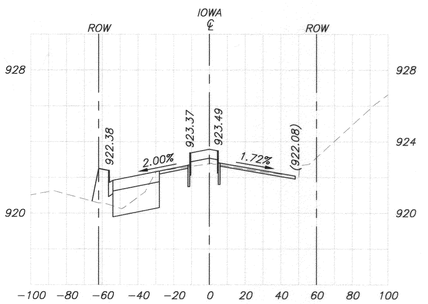


14+50

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

PROPOSED WIDENING ON EASTERLY SIDE OF IOWA AVE. BETWEEN STA 15+78.41 AND STA 36+26.00 AS WELL AS ON WESTERLY SIDE OF IOWA BETWEEN STA 26+21.70 AND STA 36+26.00 HAS BEEN ELIMINATED FROM THE SCOPE OF THE PROJECT. CROSS SECTIONS SHOWN BETWEEN THE ABOVE MENTIONED STATIONS SHALL BE CONSIDERED REVISED TO STRAIGHT GRADE BETWEEN THE EXISTING EDGE OF PAVEMENT AND EITHER THE BOTTOM OF PROPOSED MEDIAN CURB OR PROPOSED PAVEMENT CROWN.

1

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK #8-43 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "08-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BREHER
No. C 41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	Added SW adjacent to Hunter Park E. L. PROJECT SCOPE REDUCED		1/7/10 7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – IOWA AVENUE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-08

SHEET 72 OF 76

DWG: G:\600\202\38 Columbia_Iowa\CADD\Civil\Sheet\CX-08.dwg
TIME: 6-09-09 - 2:22pm User: tguyenda Xref Files: xbar

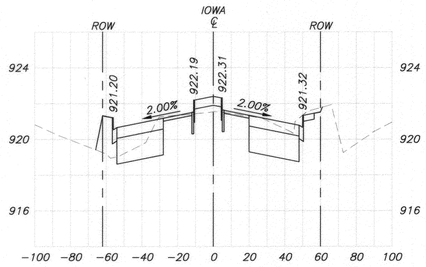
PROPOSED WIDENING ON EASTERLY SIDE OF IOWA AVE. BETWEEN STA 15+78.41 AND STA 36+26.00 AS WELL AS ON WESTERLY SIDE OF IOWA BETWEEN STA 26+21.70 AND STA 36+26.00 HAS BEEN ELIMINATED FROM THE SCOPE OF THE PROJECT. CROSS SECTIONS SHOWN BETWEEN THE ABOVE MENTIONED STATIONS SHALL BE CONSIDERED REVISED TO STRAIGHT GRADE BETWEEN THE EXISTING EDGE OF PAVEMENT AND EITHER THE BOTTOM OF PROPOSED MEDIAN CURB OR PROPOSED PAVEMENT CROWN.

1

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

CURB SIDEWALK ADDED TO WLY PARKWAY BETWEEN MARLBOROUGH AVE & COLUMBIA AVE. TIE-SLOPE TO BE ADJUSTED ACCORDINGLY

2



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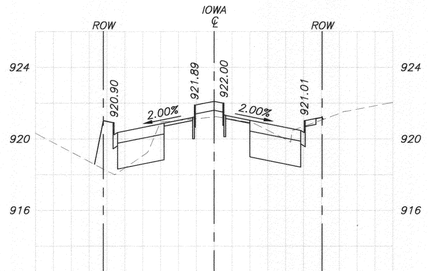

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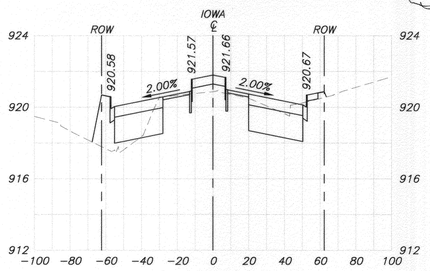

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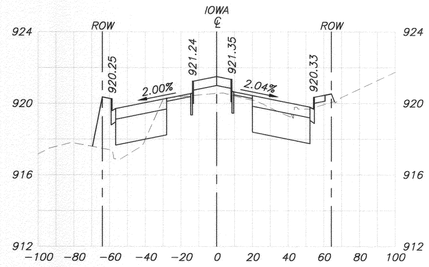

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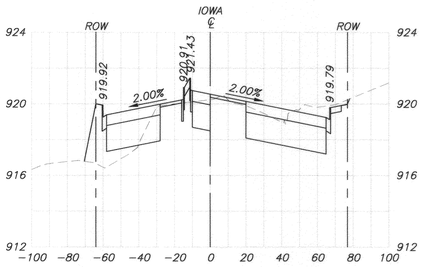
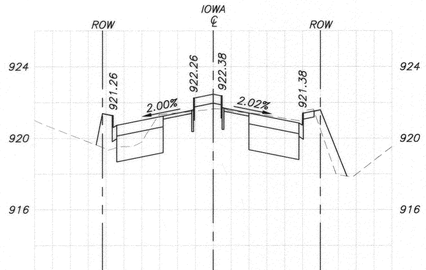
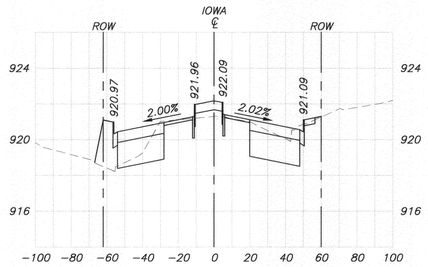


20+00



15+78.41



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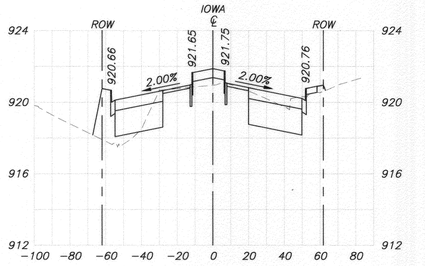

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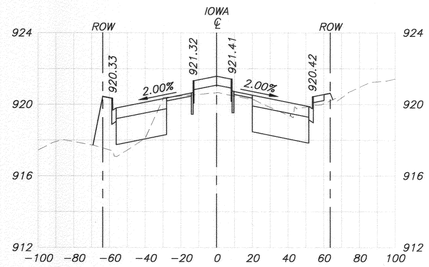

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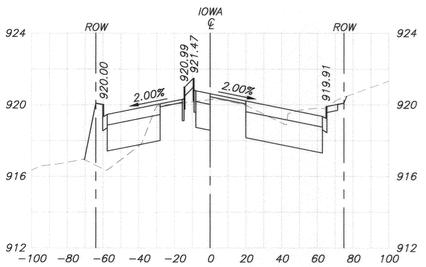

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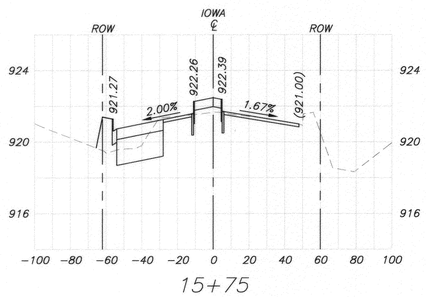

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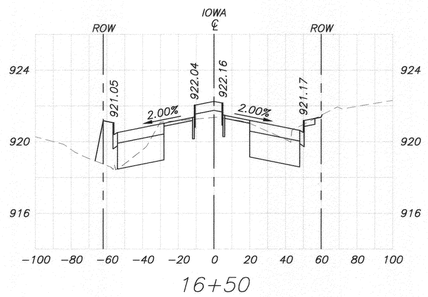

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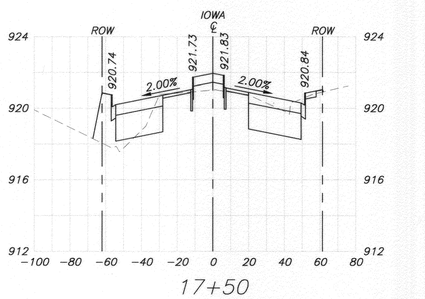

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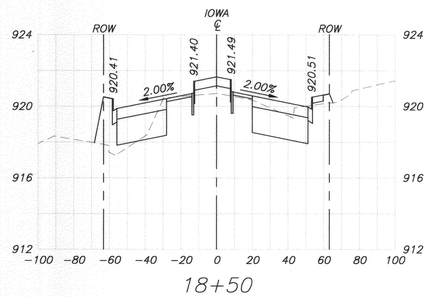

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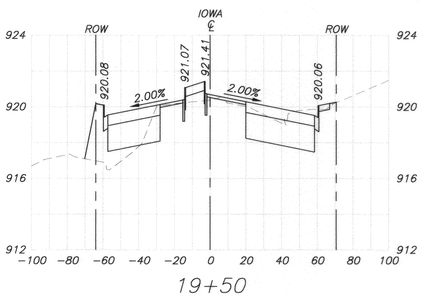

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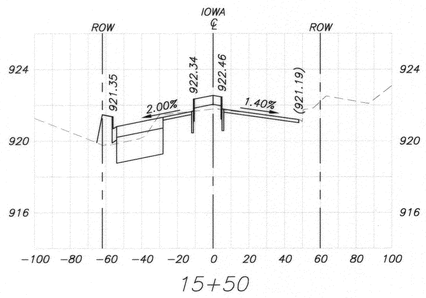

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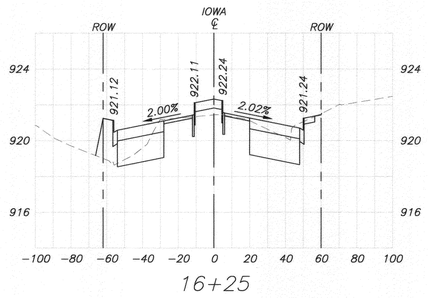

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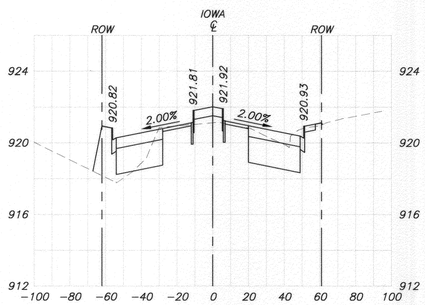

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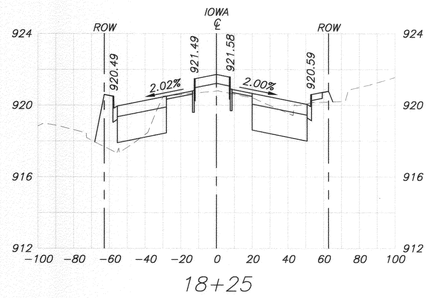

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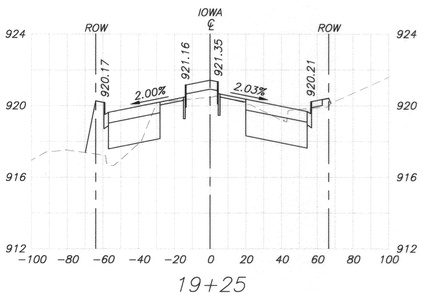


19+25

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JR-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JR-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRETAN No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
2	CURB SW ADDED ADJACENT TO MARL	EC.	1/7/10
1	PROJECT SCOPE REDUCED	EC.	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY
APPROVED FOR SIGNATURES SEE SHEET -1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – IOWA AVENUE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-09

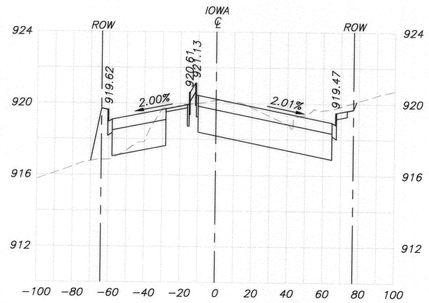
SHEET 73 OF 76

DWG: G:\60020238 Columbia_Iowa\CADD\Civil\Sheet\CX-09.dwg
TIME: 6-09-09 - 5:51pm User: Nguyend XRef Files: xbdr

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

1 PROPOSED WIDENING ON EASTERLY SIDE OF IOWA AVE. BETWEEN STA 15+78.41 AND STA 36+26.00 AS WELL AS ON WESTERLY SIDE OF IOWA BETWEEN STA 26+21.70 AND STA 36+26.00 HAS BEEN ELIMINATED FROM THE SCOPE OF THE PROJECT. CROSS SECTIONS SHOWN BETWEEN THE ABOVE MENTIONED STATIONS SHALL BE CONSIDERED REVISED TO STRAIGHT GRADE BETWEEN THE EXISTING EDGE OF PAVEMENT AND EITHER THE BOTTOM OF PROPOSED MEDIAN CURB OR PROPOSED PAVEMENT CROWN.

ADDED CURB SIDEWALK TO 3% PARKWAY BETWEEN MARLBOROUGH AVE. AND COLUMBIA AVE. TIE-SLOPE TO BE ADJUSTED AS NECESSARY. 1



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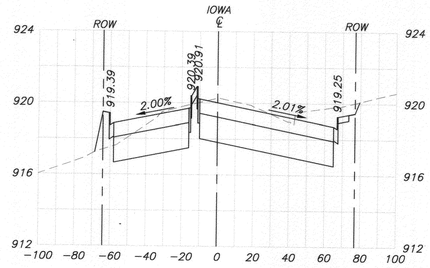

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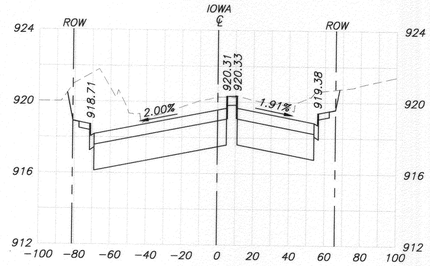
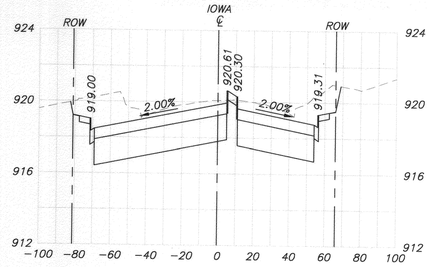


24+25



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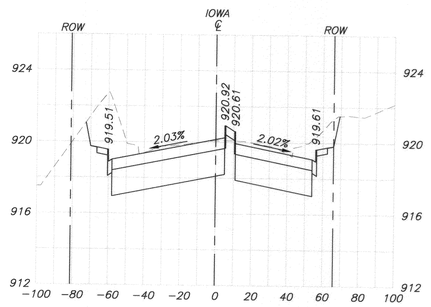
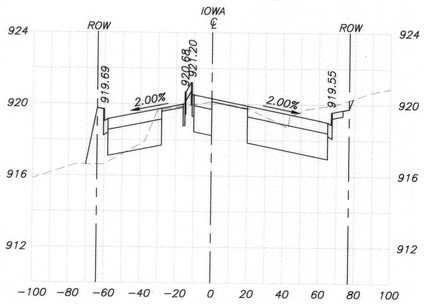


26+25



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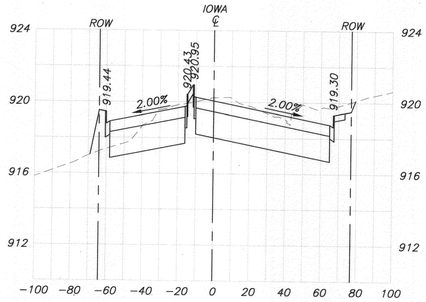

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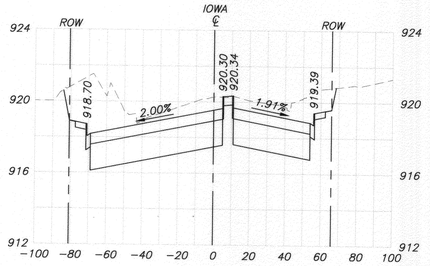

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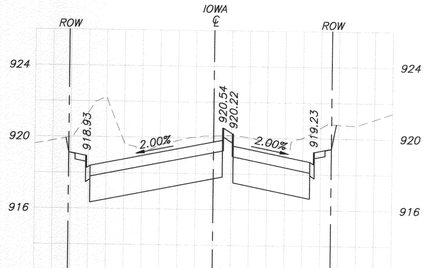

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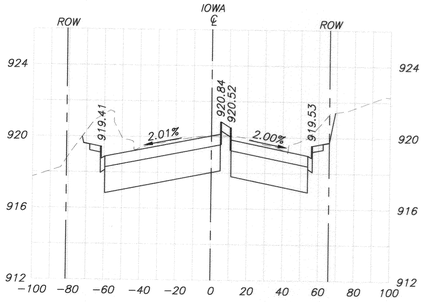

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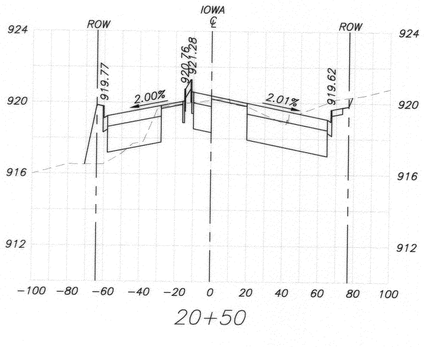

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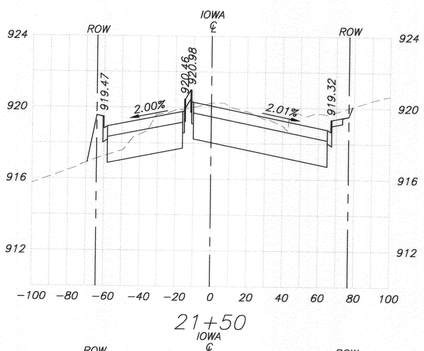

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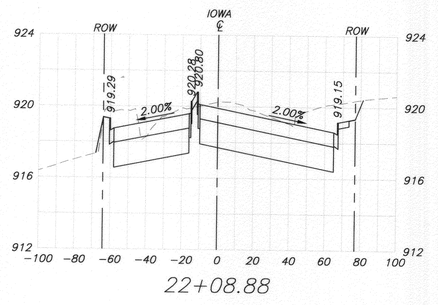

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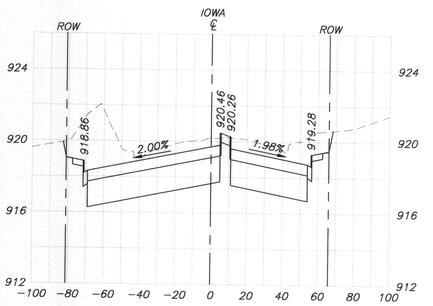

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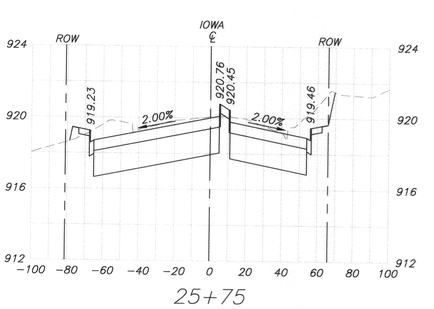

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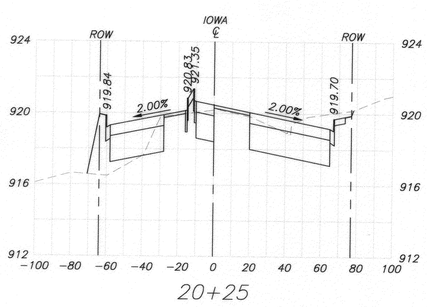

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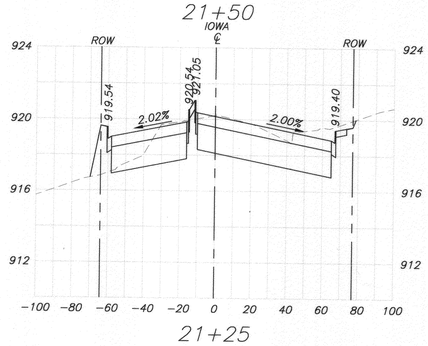

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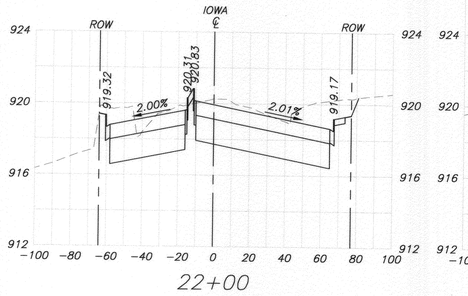

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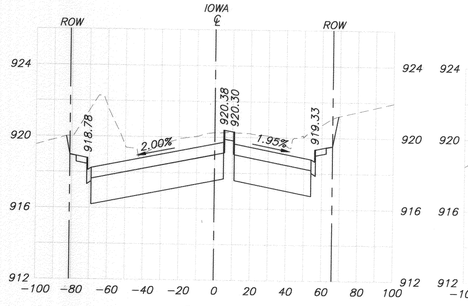

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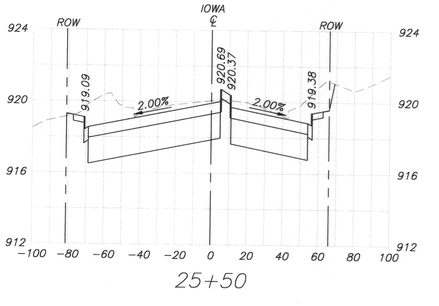

25+50

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-A3 DESCRIBED AS FOLLOWS: "BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."

ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER — CHRIS H. BROWN — No. V C41824 — Exp. 3-31-10 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	ADDED SW ADJACENT TO MARLBOROUGH	LL	11/3/10
1	PROJECT SCOPE REDUCED	LL	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY:	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY: APPROVED PER SIGNATURES ON SHEET - 1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – IOWA AVENUE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R–4132
CX–10

SHEET 74 OF 76

DWG: C:\60020238 Columbia_Iowa\CADD\Civil Sheet\CX-10.dwg
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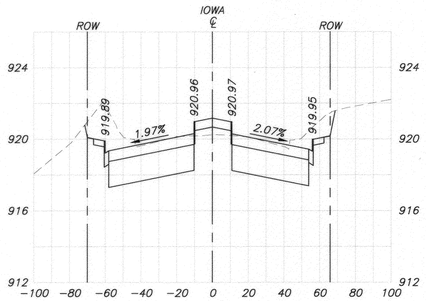
PROPOSED WIDENING ON EASTERLY SIDE OF IOWA AVE. BETWEEN STA 15+78.41 AND STA 36+26.00 AS WELL AS ON WESTERLY SIDE OF IOWA BETWEEN STA 26+21.70 AND STA 36+26.00 HAS BEEN ELIMINATED FROM THE SCOPE OF THE PROJECT. CROSS SECTIONS SHOWN BETWEEN THE ABOVE MENTIONED STATIONS SHALL BE CONSIDERED REVISED TO STRAIGHT GRADE BETWEEN THE EXISTING EDGE OF PAVEMENT AND EITHER THE BOTTOM OF PROPOSED MEDIAN CURB OR PROPOSED PAVEMENT CROWN.

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID. 1



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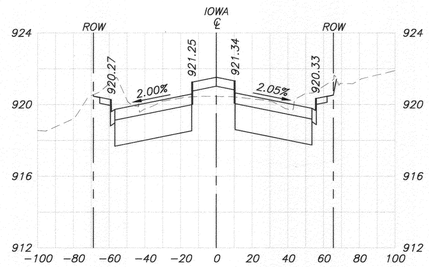

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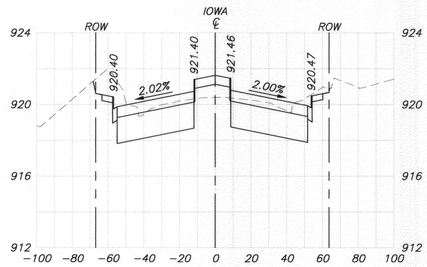

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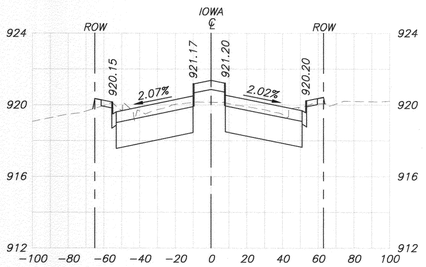

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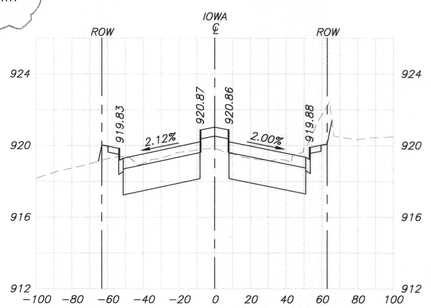

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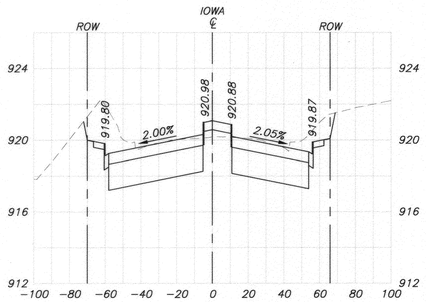

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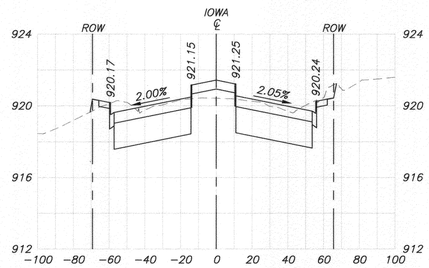

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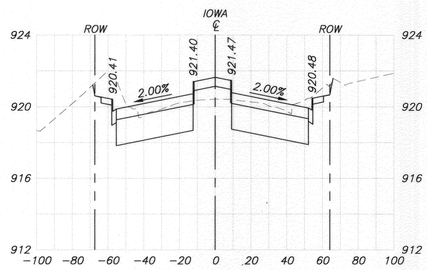

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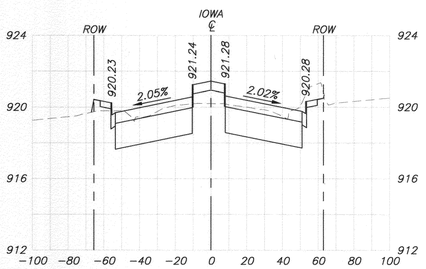

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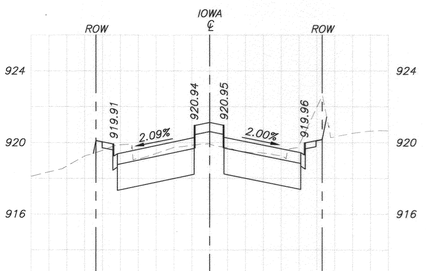

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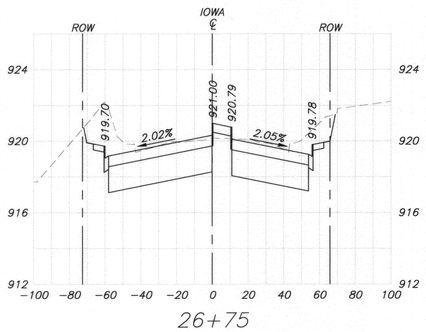

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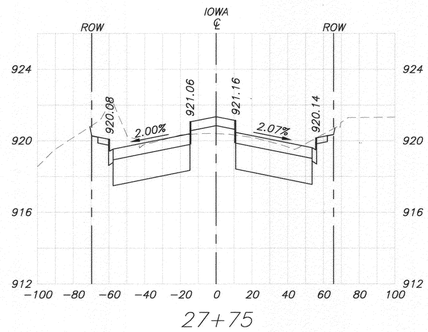

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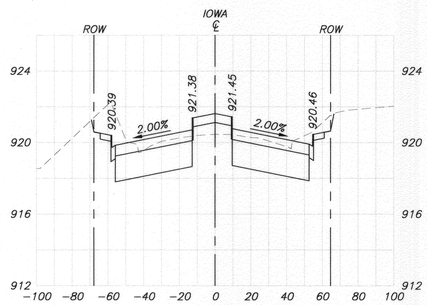

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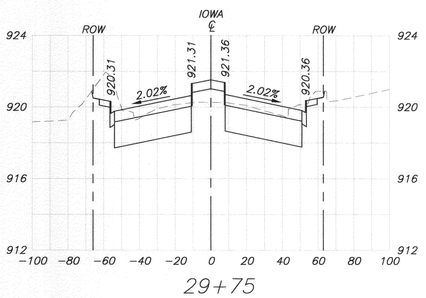

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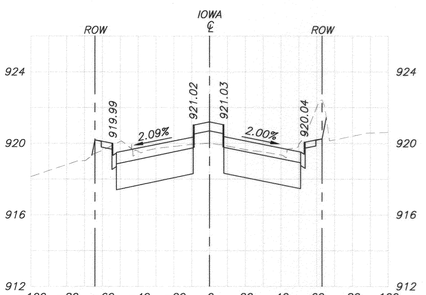

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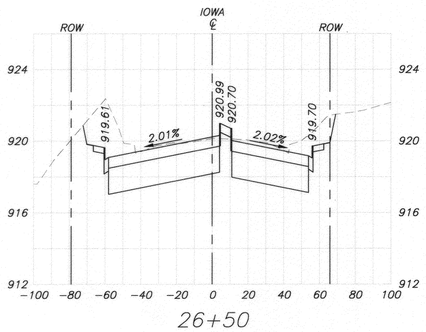

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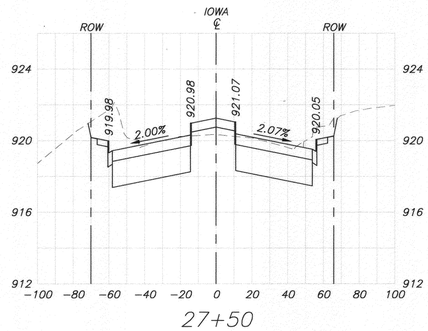

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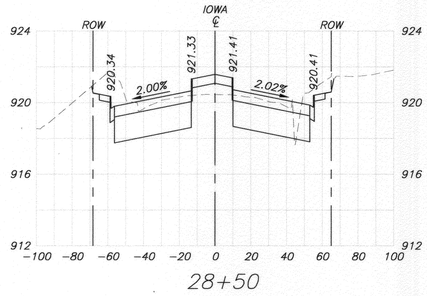

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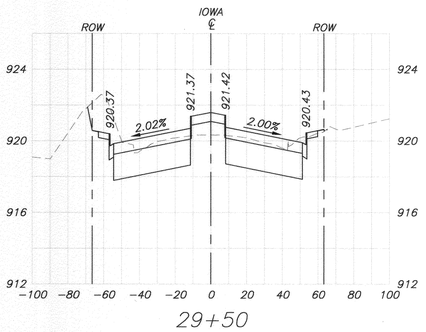

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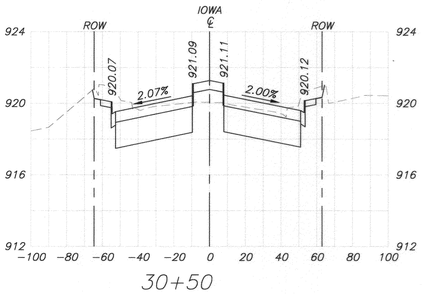

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NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK
CITY OF RIVERSIDE BENCH MARK JR-43 DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "SB-4" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE"
ELEVATION 929.11 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228
AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER CHRIS H. BRENKLE No. C 41824 Exp. 3-31-10 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR	DATE
1	PROJECT SCOPE REDUCED	LL	7/14/10

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
CONST. CONTRACT ADMIN.			APPROVED PER SIGNATURES ON SHEET 1
PRINCIPAL ENGINEER			
STREET SERVICES			CITY ENGINEER
SURVEYOR			
TRAFFIC DIVISION			DATE
PARKS DEPARTMENT			

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – IOWA AVENUE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-11

SHEET 75 OF 76

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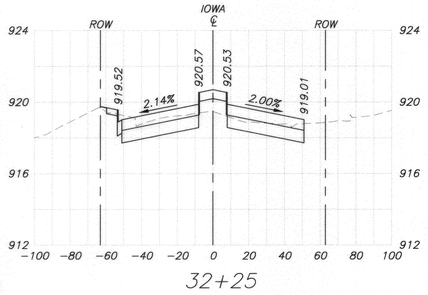

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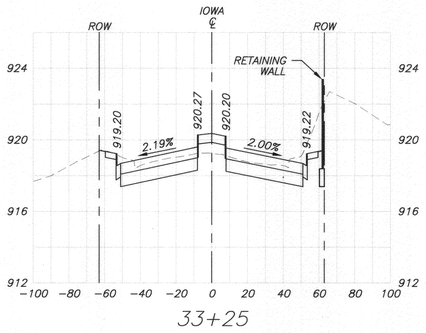

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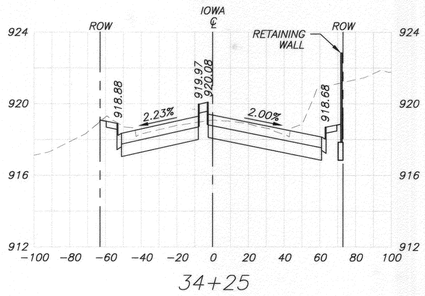

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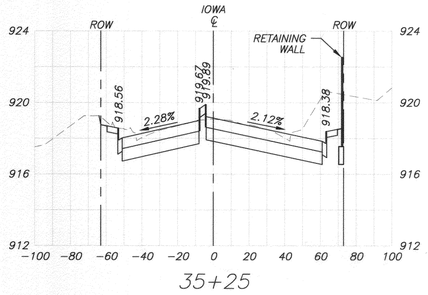

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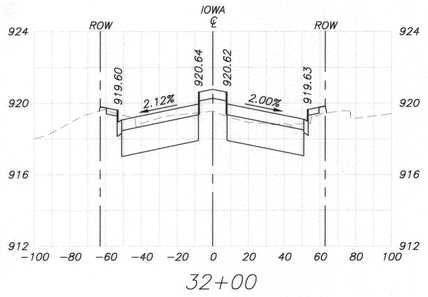

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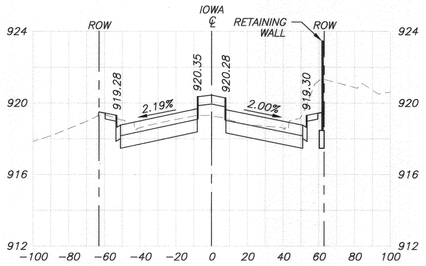

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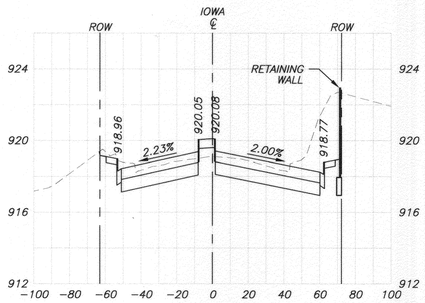

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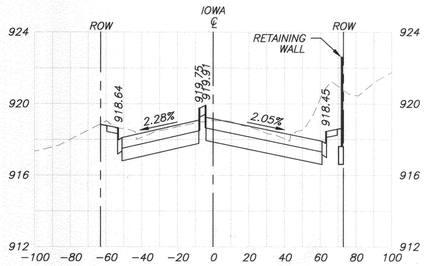

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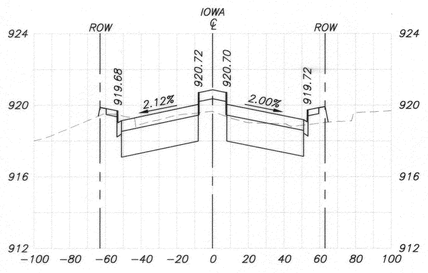

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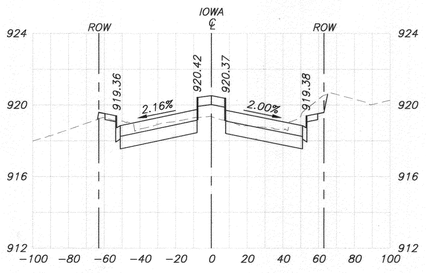

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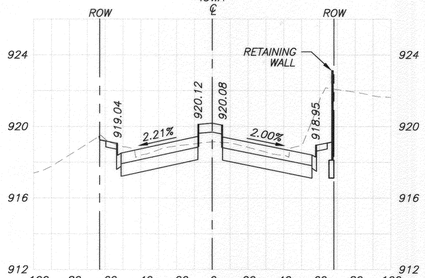

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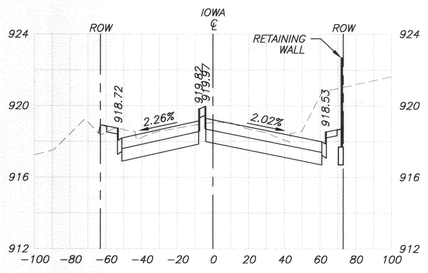

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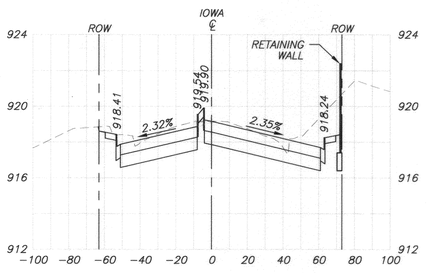

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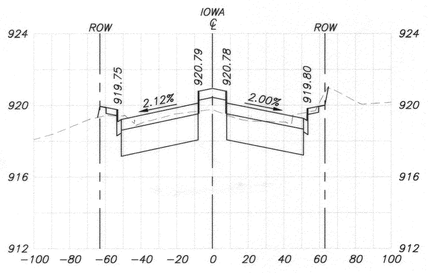

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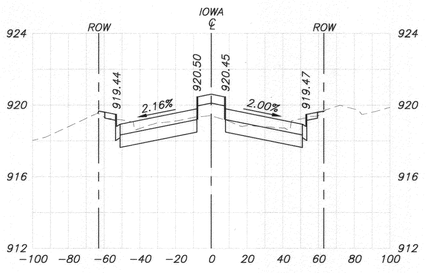

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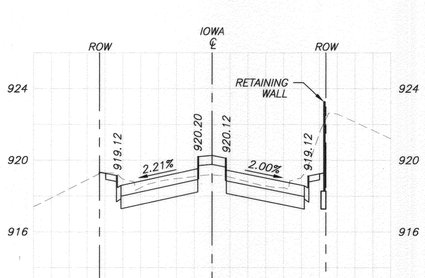

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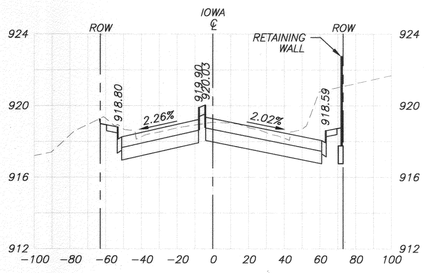
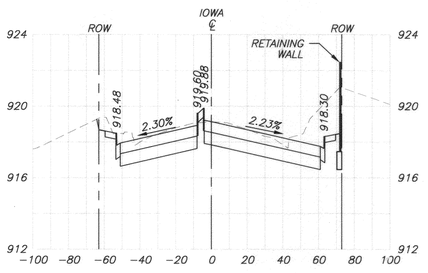


34+50



35+50

PROPOSED MEDIANS INDICATED TO BE CONSTRUCTED AS PART OF BASE BID, BUT MAY BE REPLACED WITH NEW AC PAVEMENT AS PART OF ALTERNATE BID.

PROPOSED WIDENING ON EASTERLY SIDE OF IOWA AVE. BETWEEN STA 15+78.41 AND STA 36+26.00 AS WELL AS ON WESTERLY SIDE OF IOWA BETWEEN STA 26+21.70 AND STA 36+26.00 HAS BEEN ELIMINATED FROM THE SCOPE OF THE PROJECT. CROSS SECTIONS SHOWN BETWEEN THE ABOVE MENTIONED STATIONS SHALL BE CONSIDERED REVISED TO STRAIGHT GRADE BETWEEN THE EXISTING EDGE OF PAVEMENT AND EITHER THE BOTTOM OF PROPOSED MEDIAN CURB OR PROPOSED PAVEMENT CROWN.

1

NOTE:
1. ALL SIDEWALK SHALL HAVE 2% CROSS SLOPE.

BENCH MARK

CITY OF RIVERSIDE BENCH MARK JB-AS DESCRIBED AS FOLLOWS:
"BRASS DISK STAMPED "JB-A" IN A MONUMENT WELL AT THE CENTERLINE INTERSECTION OF IOWA AVENUE AND MARLBOROUGH AVENUE."
ELEVATION 929.17 DATUM 1929 ADJUSTMENT YEAR 1971

TRANSPORTATION

AECOM TECHNICAL SERVICES, Inc.
1131 West Sixth Street, Suite 350
Ontario, CA 91762
T 909.933.5225 F 909.933.5228

AECOM
www.aecom.com

REGISTERED PROFESSIONAL ENGINEER
CHRIS H. BROWN
No. C 41824
Exp. 3-31-10
CIVIL
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	PROJECT SCOPE REDUCED	EL.	7/1/09

DESIGNED BY D.N. DRAWN BY D.N. CHECKED BY C.B.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
CONST. CONTRACT ADMIN.		
PRINCIPAL ENGINEER		
STREET SERVICES		
SURVEYOR		
TRAFFIC DIVISION		
PARKS DEPARTMENT		

APPROVED BY APPROVED PER SIGNATURE ON SHEET-1
CITY ENGINEER
DATE

CITY OF RIVERSIDE
COLUMBIA AVENUE AND IOWA AVENUE
STREET IMPROVEMENT PROJECT
CROSS SECTIONS – IOWA AVENUE

DESIGN W.O. NO. 0702989
CONSTRUCTION W.O. NO. 0915428

R-4132
CX-12

SHEET 76 OF 76

DWG: G:\600202\38 Columbia_Iowa\CADD\Civil\Sheet\CX-12.dwg
TIME: 6-09-09 – 3:47pm User: tguyend XRef Files: xbar