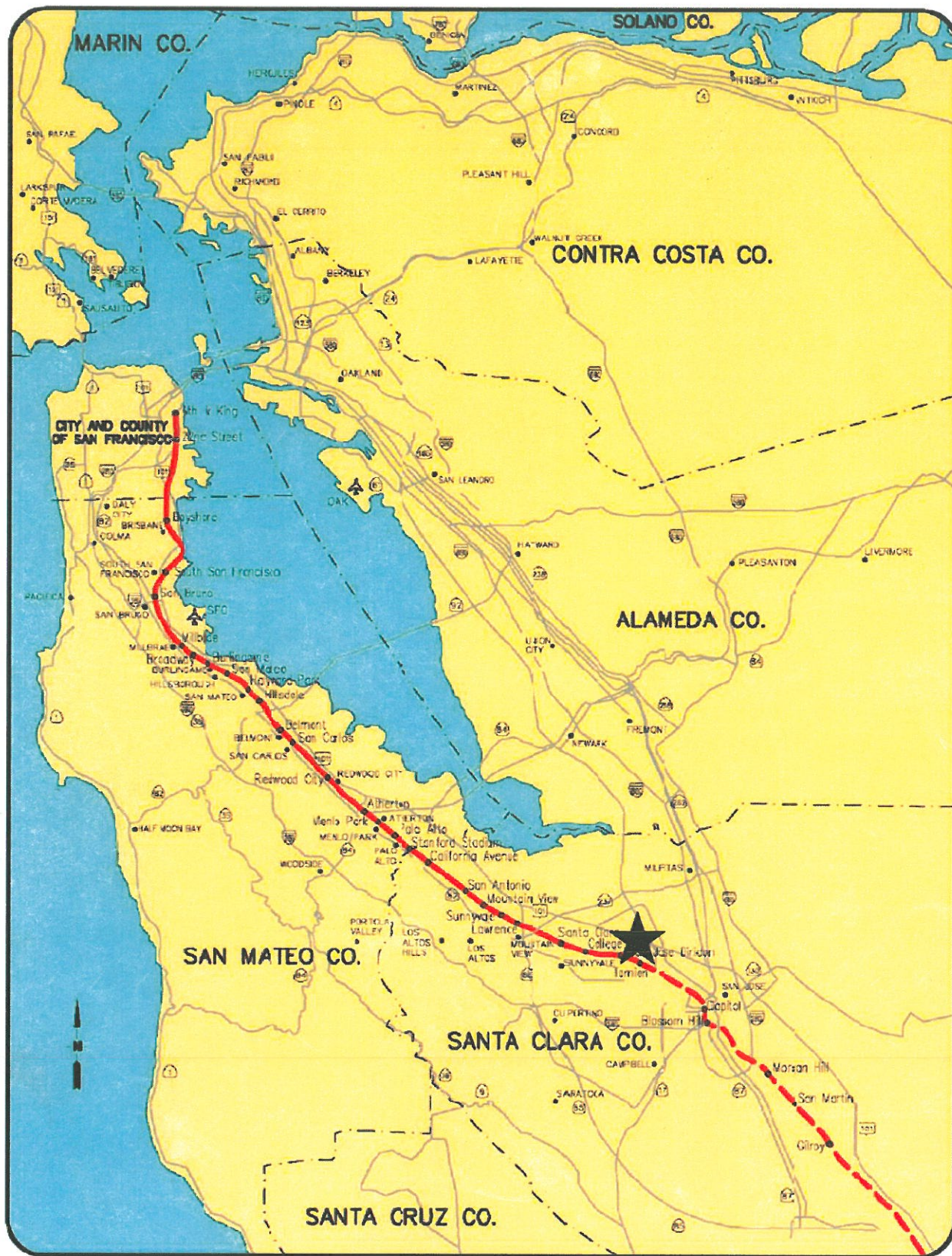


SAN FRANCISCO BAY AREA



SIGNAL ASPECT CHART JPB SIGNAL DRAWINGS

PENINSULA CORRIDOR JOINT POWERS BOARD

Record Drawings
April 1, 2011



Bay Area Office
2890 N. Main Street, Suite 306
Walnut Creek, Ca 94597
(925) 906-0867 Main
(925) 906-9843 Fax
www.xorail.com

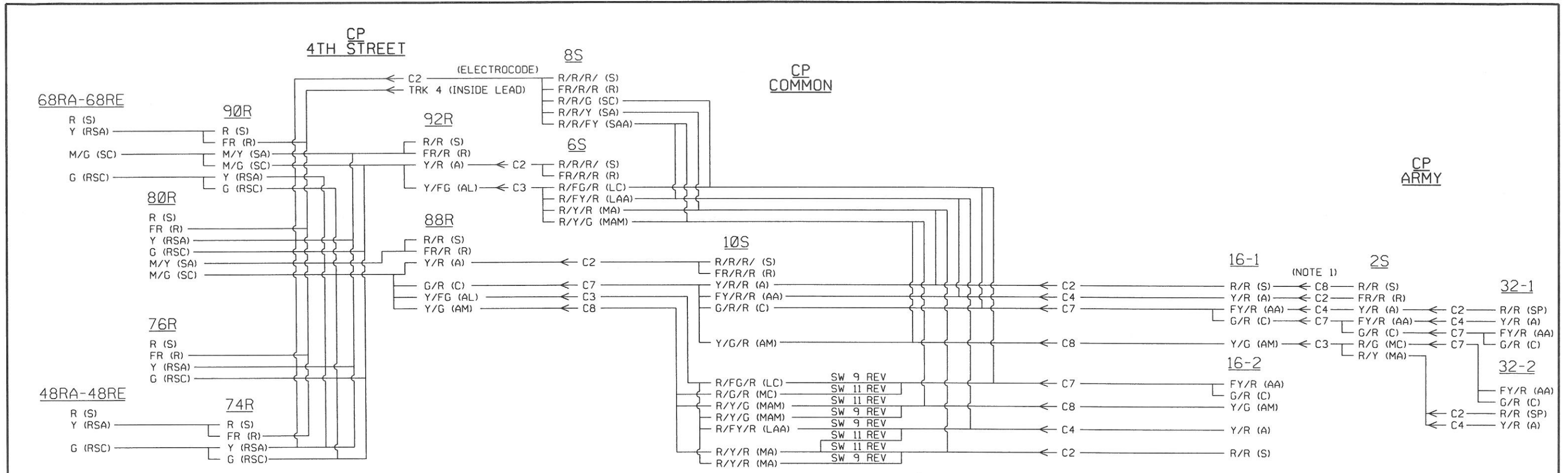


PENINSULA CORRIDOR JOINT POWERS BOARD

ASPECT CHART

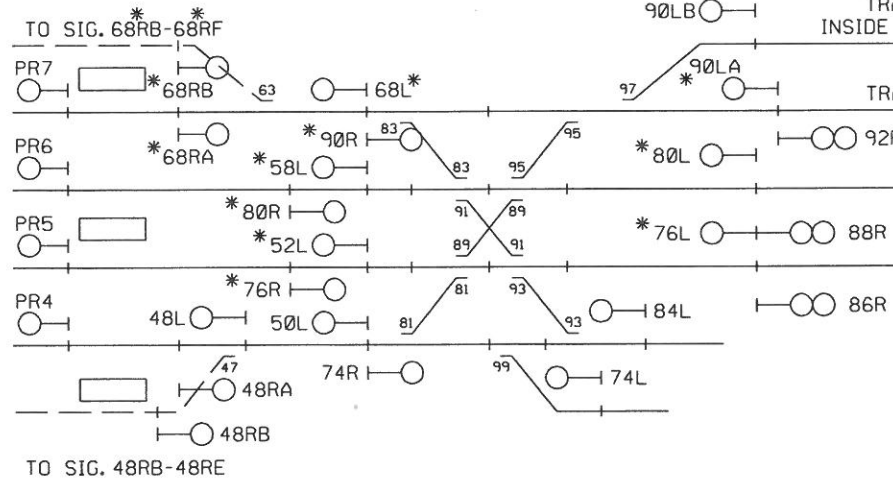
PN 0-52

SH. 1-62

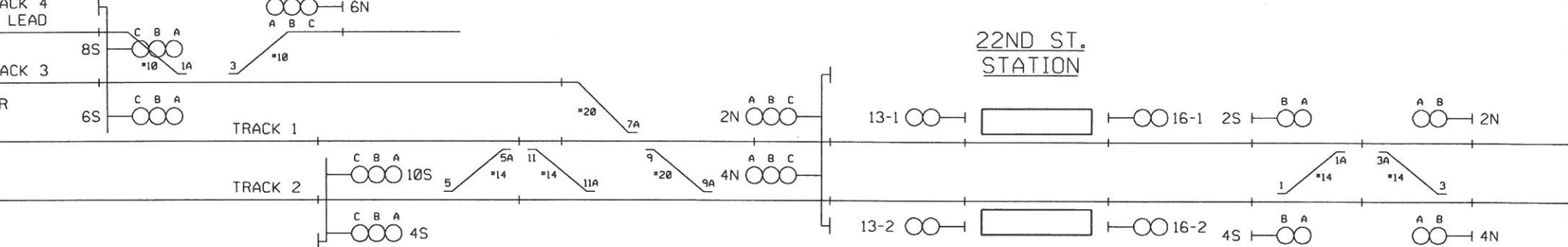


20/5 MPH				MP 0.6				25/10 MPH				MP 0.7				TRACK 3 35/10 MPH				40/10 MPH				MP 1.3				79/40 MPH							
90R	AG	AGF	E	88R	AG	AGF	E	92R	AG	AGF	E	6S	AG	AGF	E	10S	AG	AGF	E	16-1	AG	AGF	E	2S	AG	AGF	E	32-1	AG	AGF	E	32-2	AG	AGF	E
1ST		1.02	805	1ST		1.05	1333	1ST		1.07	802	1ST		1.05	6421	1ST		1.05	6034																
2ND		1.02	1550	2ND		1.05	7401	2ND		1.05	7248	2ND		1.05	7866	2ND		1.05	7479																

SAN FRANCISCO STATION



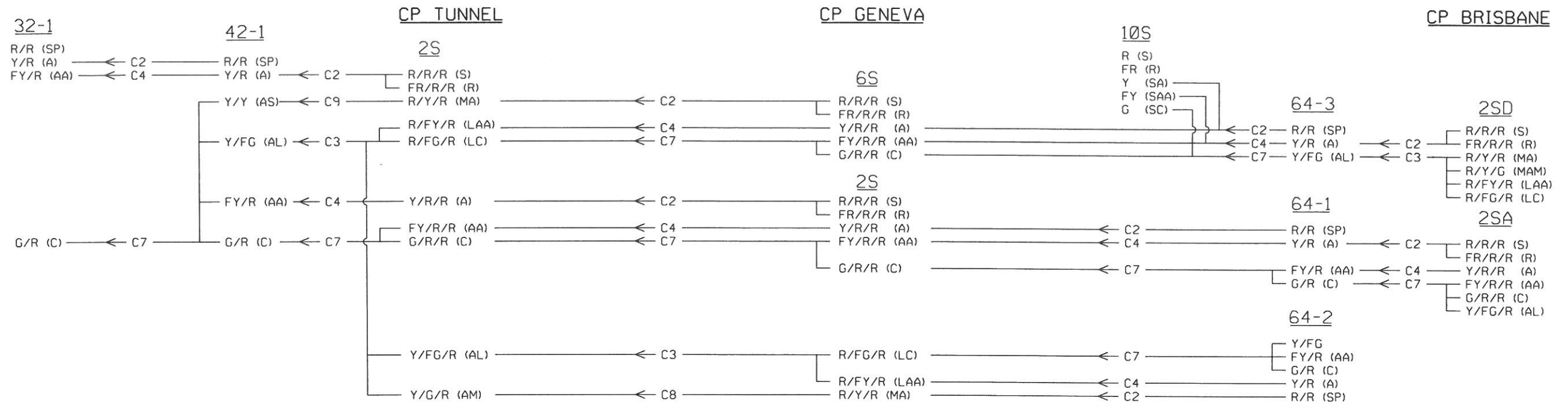
22ND ST. STATION



- LEGEND**
- (SP) = STOP AND PROCEED
 - (S) = STOP
 - (R) = RESTRICTING
 - (A) = APPROACH
 - (AA) = ADVANCE APPROACH
 - (AS) = APPROACH SLOW
 - (AM) = APPROACH MEDIUM
 - (AL) = APPROACH LIMITED
 - (C) = CLEAR
 - (LC) = LIMITED CLEAR
 - (LAA) = LIMITED ADVANCE APPROACH
 - (MC) = MEDIUM CLEAR
 - (MAM) = MEDIUM APPROACH MEDIUM
 - (MA) = MEDIUM APPROACH
 - (MAS) = MEDIUM APPROACH SLOW
 - (SC) = SLOW CLEAR
 - (SAA) = SLOW ADVANCE APPROACH
 - (SA) = SLOW APPROACH
 - (RSA) = REDUCED SLOW APPROACH
 - (RSC) = REDUCED SLOW CLEAR
 - * = SIGNAL W/ MARKER LIGHT "M" (LUNAR) INSTALLED.

- NOTES:**
- SIGNAL 16-1 (NO NUMBER PLATE) PROGRAMMED WITH NO FOLLOWING STICK AND CODE 8 FOR TRACK AND BLOCK INTEGRITY.
 - A = ACTUAL TRACK DISTANCE
 - AG = AVERAGE GRADE (FREIGHT TRAIN)
 - AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 - E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 - 1ST = FIRST APPROACH
 - 2ND = SECOND APPROACH
 - PR4-PR7 = ABSOLUTE RED SIGNALS AT THE END OF TRACK.

DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT, STAGE C2 IN SVC. DATE 09-23-07 CORRECTED: 09-10-08 BY: SWE/ZAE	DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 01-27-07 CORRECTED: 06-27-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB05-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY A. B. POSADAS CHECKED BY R. A. STEVENS APPROVED BY C. J. ZERZAN	<p>2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM</p>	<p>1250 San Carlos Avenue San Carlos, CA 94070</p>	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 1 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 09-10-08 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M01 PAGE NO:
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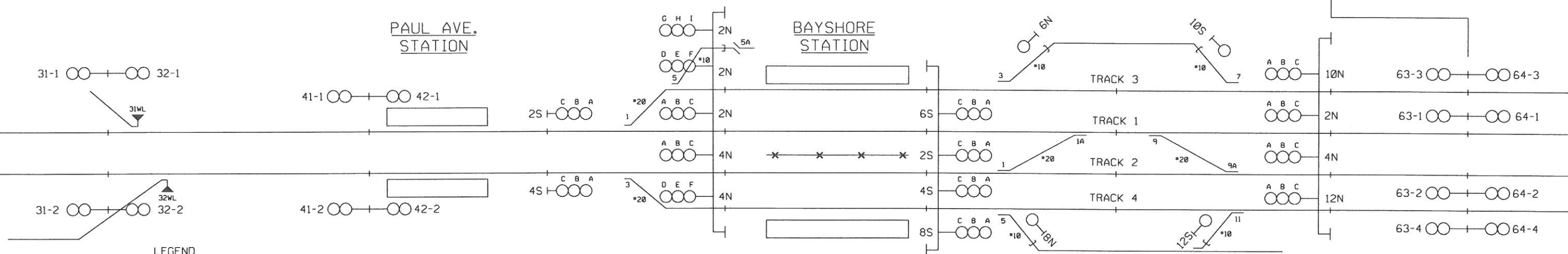
32-1	AG	AGF	E
1ST	0.03	0.98	4973
2ND	-0.01	0.98	9688

42-1	AG	AGF	E
1ST	-0.09	0.97	4699
2ND	-0.12	0.96	7399

2S	AG	AGF	E
1ST	-0.16	0.95	2716
2ND	-0.10	0.98	6973



2S	AG	AGF	E
1ST	-0.08	0.99	4218
2ND	-0.07	0.99	7650

64-1	AG	AGF	E
1ST	-0.07	1.00	3478
2ND	-0.05	1.00	9426



LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

NOTES:
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 2 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M02 PAGE NO:
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CP BRISBANE

2SD

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)
R/FG/R (LC)
R/Y/G (MAM)

2SA

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

Y/FG/R (AL)

CP SIERRA

2S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)

92-1

R (SP)
Y (A)
FY (AA)
G (C)

92-2

FY (AA)
G (C)
Y (A)
R (SP)

102-1

R (SP)
Y (A)
FY (AA)
G (C)

110-1

R/R (SP)
Y/R (A)
FY/R (AA)

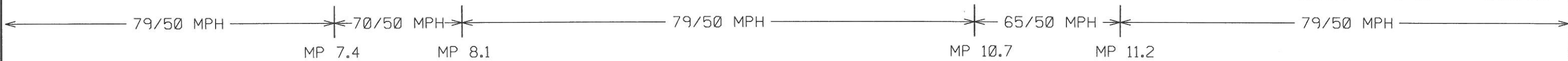
122-1

R/R (SP)
Y/R (A)
FY/R (AA)

CP CENTER

2S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
Y/Y/R (AS)
FY/R/R (AA)
Y/FG/R (AL)
G/R/R (C)
R/FG/R (LC)
R/Y/G (MAM)
R/Y/Y (MAS)
R/Y/R (MA)



2S	AG	AGF	E
1ST	0.02	1.00	5971
2ND	0.03	1.00	11569

A=5970'

2S	AG	AGF	E
1ST	0.01	1.01	5603
2ND	0.00	1.00	11643

A=5550'

92-1	AG	AGF	E
1ST	0.00	0.99	6044
2ND	0.05	1.01	10620

A=6080'

102-1	AG	AGF	E
1ST	0.06	1.05	4615
2ND	-0.02	1.00	10707

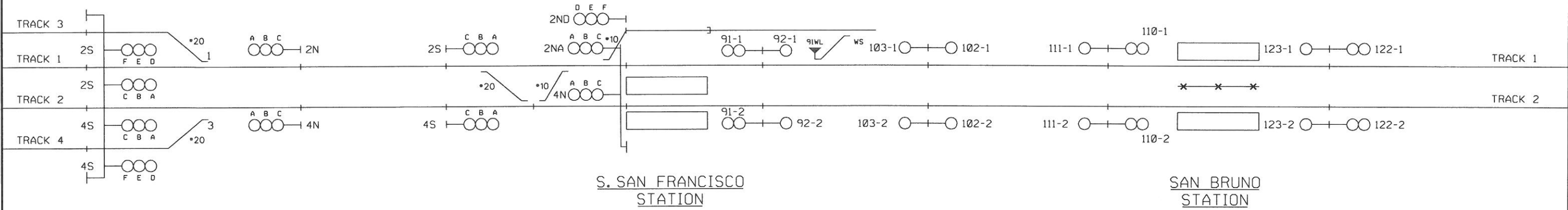
A=4400'

110-1	AG	AGF	E
1ST	0.02	0.95	5953
2ND	0.03	0.97	8748

A=6280'

122-1	AG	AGF	E
1ST	-0.05	1.02	2794
2ND	-0.05	1.00	7250

A=2740'





LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
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- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 3 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-01-07 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M03 PAGE NO:
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CP CENTER

2S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
Y/Y/R (AS)

CP BART

2S

R/R/R (S)
FR/R/R (R)
R/R/Y (SA)
R/R/G (SC)

CP TROUSDALE

6S

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)
R/FG/R (LC)

2S

R/R/R (S)
FR/R/R (R)

FY/R/R (AA)

G/R/R (C)

Y/FG/R (AL)

R/Y/R (MA)
R/Y/Y (MAS)
R/Y/G (MAM)
R/FG/R (LC)

Y/R/R (A)

FY/R/R (AA)
G/R/R (C)

Y/FG/R (AL)

R/R (SP)
Y/R (A)
Y/FG (AL)
FY/R (AA)
G/R (C)

Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)

152-1

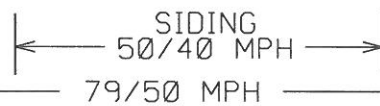
R (SP)
Y (A)
FY (AA)
G (C)

152-2

FY (AA)
G (C)
Y (A)
R (SP)

160-1

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/FG (AL)



2S	AG	AGF	E
1ST	-0.02	1.00	4523
2ND	-0.02	1.00	7094

A=4510'

2S	AG	AGF	E
1ST	0.00	0.99	2546
2ND	0.02	1.00	7912

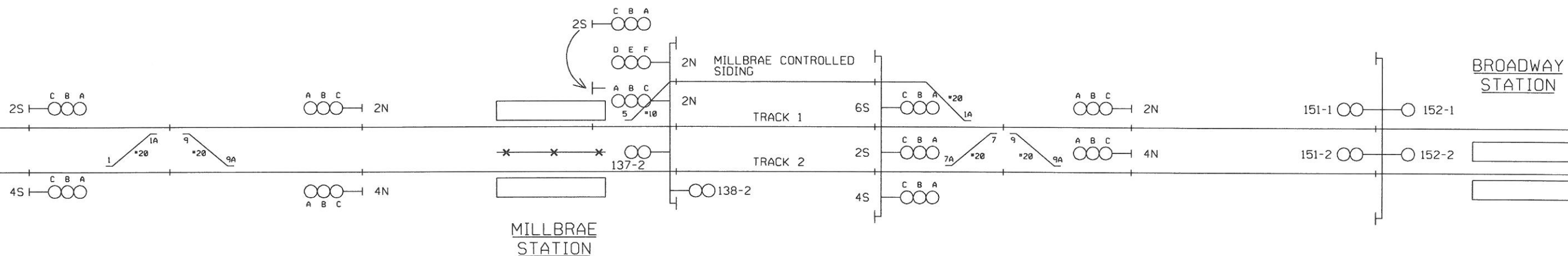
A=2570'

2S	AG	AGF	E
1ST	-0.06	1.00	5327
2ND	0.02	1.03	9814

A=5310'

152-1	AG	AGF	E
1ST	0.11	1.05	4474
2ND	0.11	1.04	9767

A=4260'



LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
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- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE
FILE: JP805-15617
WD NO.: 2505
NORTH TERMINAL OPERATIONS
IMPROVEMENT PROJECT

IN SVC. DATE: 10-06-06
CORRECTED: 06-01-07 BY: SWE/ZAE

DESIGNED: 12-11-02 BY: SWE/
FILE: JP800-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SVC. DATE: 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY:
Z. A. ETKIN
DRAWN BY:
T. G. PEREZ
CHECKED BY:
C. J. ZERZAN
APPROVED BY:
C. J. ZERZAN

xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 986-0867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM

Caltrain
1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR:
S. CHAO
MANAGER OF CAS:
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

**CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1**

PN 0-52 SH 4 OF 62

DESIGN DATE: 12-11-02
REVISION DATE: 06-01-07
MAINTENANCE DRAWING
ADOPTED DATE: SCALE: NONE
DRAWING NO: PN 0-52.M04
PAGE NO:

CP
PALM

160-1

170-1

176-1

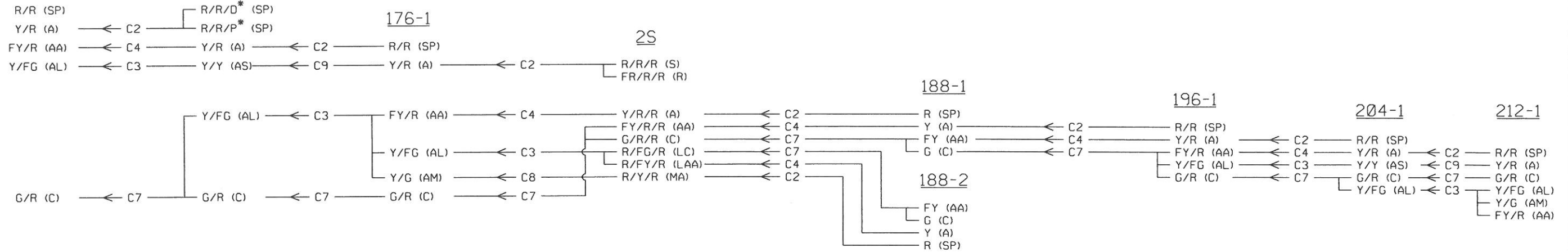
2S

188-1

196-1

204-1

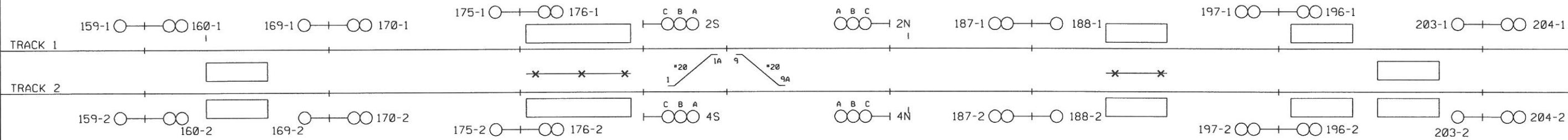
212-1



DESIGN SPEED 79/50 MPH

Segment	AG	AGF	E	Segment	AG	AGF	E	Segment	AG	AGF	E	Segment	AG	AGF	E	Segment	AG	AGF	E	Segment	AG	AGF	E																
160-1	0.13	1.04	5328	170-1	0.08	0.98	3574	176-1	-0.05	0.99	2186	2S	-0.16	0.93	3600	188-1	-0.13	0.99	4569	196-1	0.10	1.08	4841	204-1	0.16	0.97	3456												
1ST				2ND				1ST				2ND				1ST				2ND				1ST				2ND				1ST				2ND			

A=5098' 1036+47 A=3629' 1087+45 A=2205' 1123+74 1145+79 A=3859' 1184+38 A=4623' 1230+61 A=4479' 1275+40 A=3563'



BURLINGAME STATION

SAN MATEDO STATION

HAYWARD PARK STATION

HILLSDALE STATION

BAY MEADOWS STATION

LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

* R/R/P = BRIDGES ARE NORMAL
R/R/D = BRIDGES HAVE TO BE INSPECTED

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
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- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/
FILE: JPB00-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SYNC DATE: 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN



2890 NORTH MAIN STREET, SUITE 306
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1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

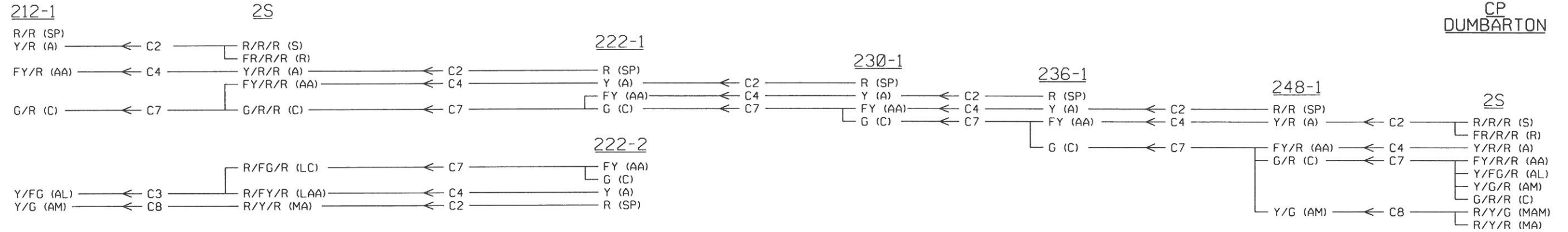
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1

PN 0-52 SH 5 OF 62

DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M05	PAGE NO:

CP
RALSTON

CP
DUMBARTON



212-1	AG	AGF	E
1ST	0.24	1.13	2250
2ND	0.21	1.08	6436

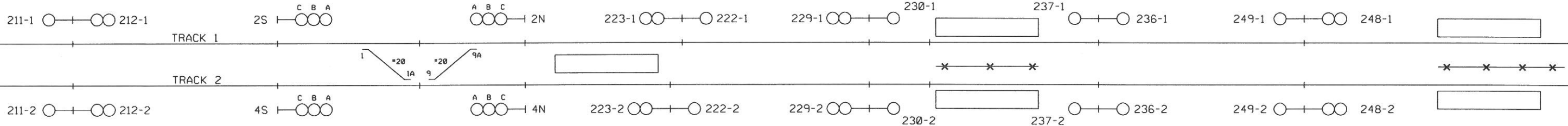
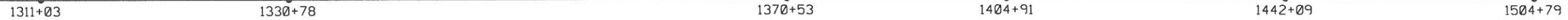
2S	AG	AGF	E
1ST	0.14	1.07	4273
2ND	0.01	1.00	7454

222-1	AG	AGF	E
1ST	0.07	0.92	3184
2ND	0.07	0.96	6912

230-1	AG	AGF	E
1ST	-0.11	1.00	3742
2ND	-0.16	0.96	9673

236-1	AG	AGF	E
1ST	-0.17	0.94	5940
2ND	-0.14	0.96	12123

248-1	AG	AGF	E
1ST	-0.16	0.97	6157
2ND	0.00	1.02	12365



BELMONT
STATION

SAN CARLOS
STATION

REDWOOD CITY
STATION

LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
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- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

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- 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZAE
FILE: JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT

DESIGNED: 12-11-02 BY: SWE/
FILE: JPB08-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SVC. DATE 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

IN SVC. DATE 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
R. A. STEVENS

APPROVED BY
R. A. STEVENS

2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-8867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM

1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1

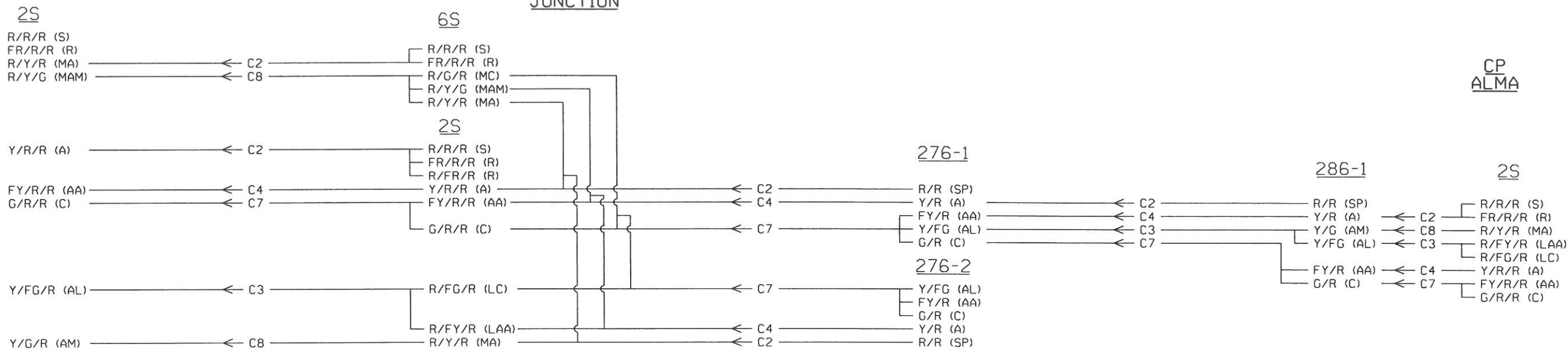
PN 0-52 SH 6 OF 62

DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M06	PAGE NO:

CP
DUMBARTON

CP
JUNCTION

CP
ALMA



DESIGN SPEED
EAST SIDING
30/25 MPH

79/50 MPH DESIGN SPEED

2S	AG	AGF	E
1ST	0.15	1.08	6199
2ND	0.21	1.09	9807

2S	AG	AGF	E
1ST	0.38	1.10	3615
2ND	0.35	1.09	8525

276-1	AG	AGF	E
1ST	0.36	1.08	4927
2ND	0.29	1.05	7684

286-1	AG	AGF	E
1ST	0.24	1.02	2774
2ND	0.19	1.02	6996

A=5734'

A=3260'

A=4550'

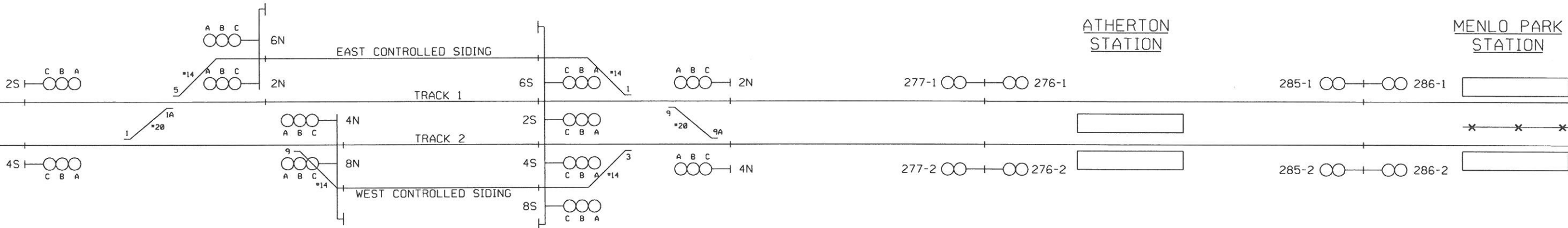
A=2705'

1567+84

1625+18

1657+78

1703+28





LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY: Z. A. ETKIN DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR: S. CHAO MANAGER OF CAS: D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 7 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M07 PAGE NO:
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CP
ALMA

2S

R/R/R (S)
FR/R/R (R)

Y/R/R (A) ← C2
FY/R/R (AA) ← C4
G/R/R (C) ← C7
R/FG/R (LC) ← C7
R/FY/R (LAA) ← C4
R/Y/R (MA) ← C2

300-1

R (SP)
Y (A) ← C2
FY (AA) ← C4
G (C) ← C7

300-2

FY (AA)
G (C)
Y (A)
R (SP)

306-1

R (SP)
Y (A) ← C2
FY (AA) ← C4
G (C) ← C7

316-1

R (SP)
Y (A) ← C2
FY (AA) ← C4
G (C) ← C7

326-1

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/FG (AL)

DESIGN SPEED 79/50 MPH

2S	AG	AGF	E
1ST	0.13	1.01	4199
2ND	-0.04	0.95	7412

300-1	AG	AGF	E
1ST	-0.16	0.88	3184
2ND	-0.23	0.89	8281

306-1	AG	AGF	E
1ST	-0.31	0.89	5020
2ND	-0.21	0.94	9987

316-1	AG	AGF	E
1ST	-0.21	0.98	4927
2ND	-0.09	1.01	10645

A=4129'

A=3613'

A=5610'

A=5000'

1730+33

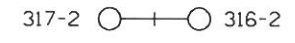
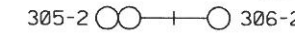
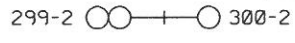
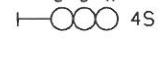
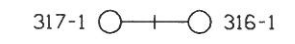
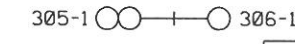
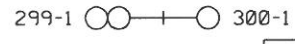
1771+62

1807+75

1863+85

TRACK 1

TRACK 2



PALO ALTO STATION

STANFORD STATION

CALIFORNIA AVE. STATION

LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

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1ST = FIRST APPROACH
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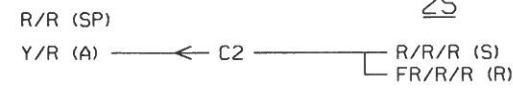
DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 8 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ			MANAGER OF C&S D. OBEDOZA		MAINTENANCE DRAWING	
	CHECKED BY C. J. ZERZAN			DESIGNED BY: XORAIL		ADOPTED DATE: NONE	SCALE: NONE
	APPROVED BY C. J. ZERZAN			CHECKED BY:		DRAWING NO: PN 0-52.M08	PAGE NO:

CP
MAYFIELD

CP
MARY

326-1

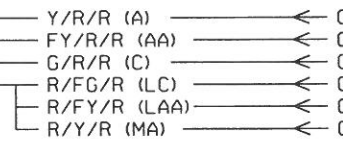
2S



FY/R (AA) ← C4

Y/FG (AL) ← C3

G/R (C) ← C7



348-1

358-1

366-1

376-1

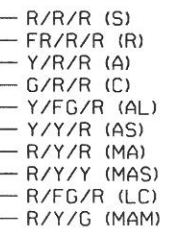
2S

348-2

FY (AA)
G (C)
Y (A)
R (SP)

R/R (SP)
Y/R (A)
FY/R (AA)

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)



79/50 MPH DESIGN SPEED

326-1	AG	AGF	E
1ST	0.04	1.03	5724
2ND	0.09	1.04	12009

2S	AG	AGF	E
1ST	0.17	1.04	6285
2ND	0.20	1.05	12836

348-1	AG	AGF	E
1ST	0.23	1.07	6585
2ND	0.31	1.09	10704

358-1	AG	AGF	E
1ST	0.37	1.12	4079
2ND	0.28	1.07	8858

366-1	AG	AGF	E
1ST	0.28	1.04	4834
2ND	0.21	1.02	8132

376-1	AG	AGF	E
1ST	0.12	0.99	3285
2ND	0.05	0.98	7398

A=5523'

A=5990'

A=6140'

A=3632'

A=4632'

A=3292'

1913+85

1969+08

2028+98

2090+38

2126+70

2173+02

325-1 ○ — ○ — ○ 326-1

○ — ○ — ○ 2S

2N ○ — ○ — ○

347-1 ○ — ○ — ○ 348-1

359-1 ○ — ○ — ○ 358-1

367-1 ○ — ○ — ○ 366-1

375-1 ○ — ○ — ○ 376-1

TRACK 1

325-2 ○ — ○ — ○ 326-2

○ — ○ — ○ 4S

4N ○ — ○ — ○

347-2 ○ — ○ — ○ 348-2

359-2 ○ — ○ — ○ 358-2

367-2 ○ — ○ — ○ 366-2

375-2 ○ — ○ — ○ 376-2

TRACK 2

SAN ANTONIO
STATION

MOUNTAIN VIEW
STATION

LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

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DESIGNED: 04-08-08 BY: XORAIL/ZAE
FILE JPB00-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT

DESIGNED: 12-11-02 BY: SWE/
FILE JPB00-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SVC. DATE 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

IN SVC. DATE 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN

2890 NORTH MAIN STREET, SUITE 306
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1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1

PN 0-52 SH 9 OF 62

DESIGN DATE: 04-08-08
REVISION DATE: 03-30-11

MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M09
PAGE NO:

CP
MARY
2S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
Y/Y/R (AS)
Y/FG/R (AL)

G/R/R (C)

R/Y/R (MA)
R/Y/Y (MAS)
R/Y/G (MAM)
R/FG/R (LC)

CP
HENDY
2S

390-1

R/R (SP)
Y/R (A)
Y/G (AM)
Y/FG (AL)

FY/R (AA)
G/R (C)

390-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/FG (AL)
Y/G (AM)

2S

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)

R/FG/R (LC)
Y/R/R (A)
FY/R/R (AA)

G/R/R (C)

402-3

R/R (SP)
Y/R (A)
FY/R (AA)
Y/FG (AL)

402-1

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)

410-3

R/R (SP)
Y/R (A)
Y/G (AM)
Y/FG (AL)

410-1

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)

MP 38.1

MP 38.3

79/45 MPH

79/50 MPH

TRACK 1, TRACK 3 DESIGN SPEED

TRACK 3 70/40 MPH

TIME TABLE SPEED

2S	AG	AGF	E
1ST	-0.05	0.97	4110
2ND	-0.10	0.95	6284

390-1	AG	AGF	E
1ST	-0.17	0.92	2197
2ND	-0.21	0.92	6001

2S	AG	AGF	E
1ST	-0.25	0.91	3772
2ND	-0.25	0.92	7511

402-1	AG	AGF	E
1ST	-0.31	0.93	3741
2ND	-0.27	0.94	6816

A=4216'

A=2369'

A=4104'

A=4009'

2205+94

2248+10

2271+79

2312+83

C B A 2S

2N A B C

389-1

390-1

2S C B A

D E F 2N
A B C 2N

TRACK 3

401-3

TRACK 1

401-1

402-3

*20 1A 9

*20 9A

X X X

A B C 4N

TRACK 2

401-2

402-1

C B A 4S

4N A B C

389-2

390-2

4S C B A

D E F 4N

TRACK 4

401-4

402-2

402-4

SUNNYVALE
STATION

LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(DA) = DIVERGING APPROACH
(DC) = DIVERGING CLEAR

NOTES:

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FILE JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBULT

DESIGNED: 12-11-02 BY: SWE/
FILE JPB08-8730
WD NO.: 625
CTC PROJECT
ASBULT

IN SVC. DATE 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

IN SVC. DATE 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN

xorail

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D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1

PN 0-52 SH 10 OF 62

DESIGN DATE: 04-08-08
REVISION DATE: 03-30-11

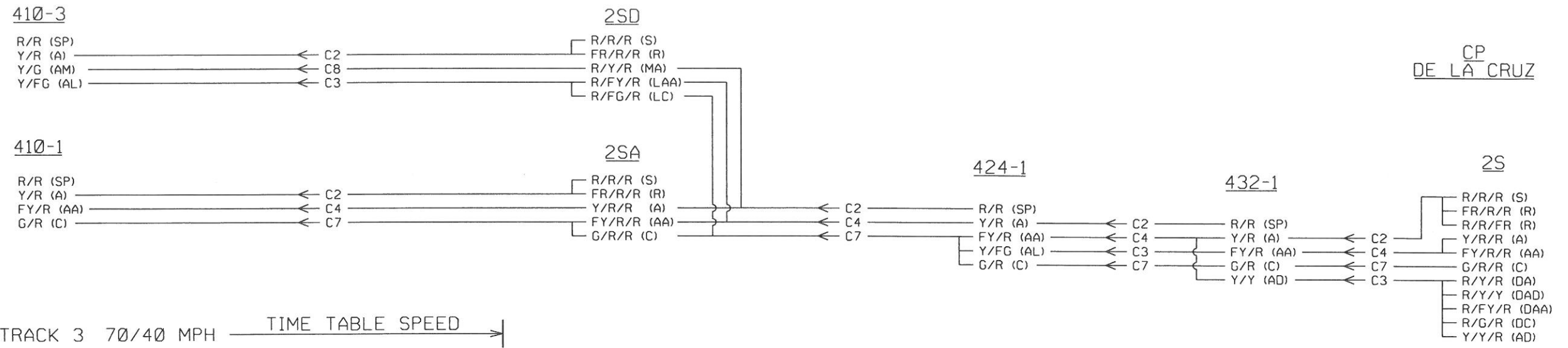
MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M10
PAGE NO:

CP
BOWERS

CP
DE LA CRUZ



← TRACK 3 70/40 MPH TIME TABLE SPEED →

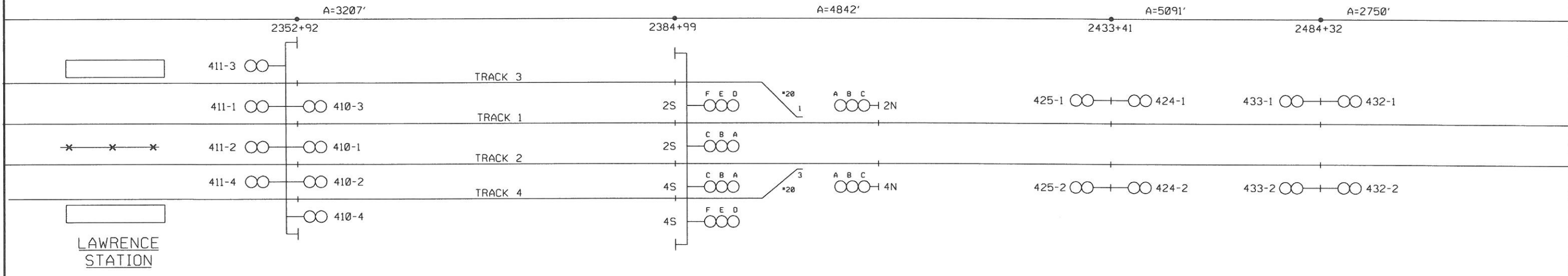
← 79/50 MPH TRACK 1, TRACK 3 DESIGN SPEED →

410-1	AG	AGF	E
1ST	-0.23	0.95	3050
2ND	-0.16	0.97	7861

2S	AG	AGF	E
1ST	-0.14	0.99	4824
2ND	-0.07	1.00	9996

424-1	AG	AGF	E
1ST	0.02	1.01	5173
2ND	0.05	1.02	8024

432-1	AG	AGF	E
1ST	0.09	1.03	2844
2ND	0.10	1.03	3653



LAWRENCE
STATION

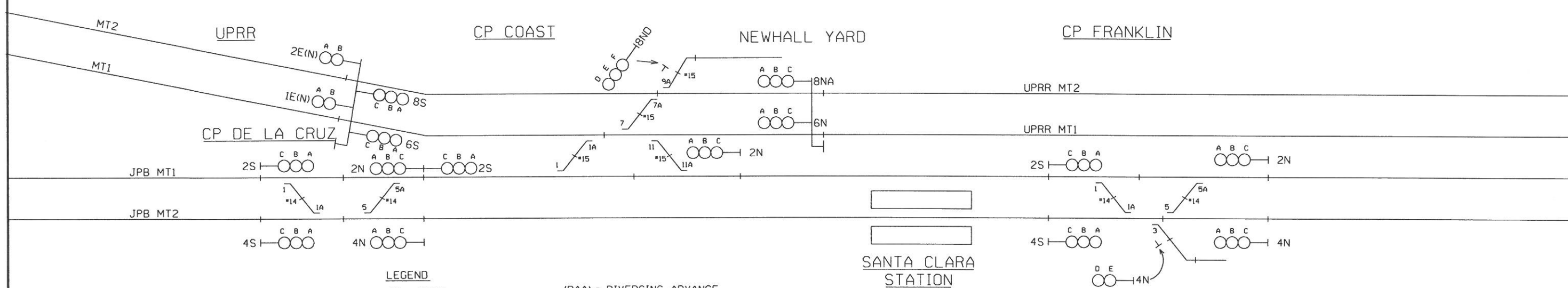
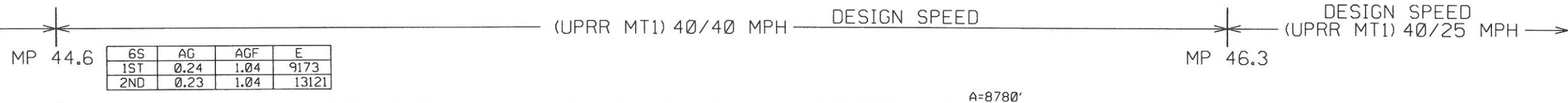
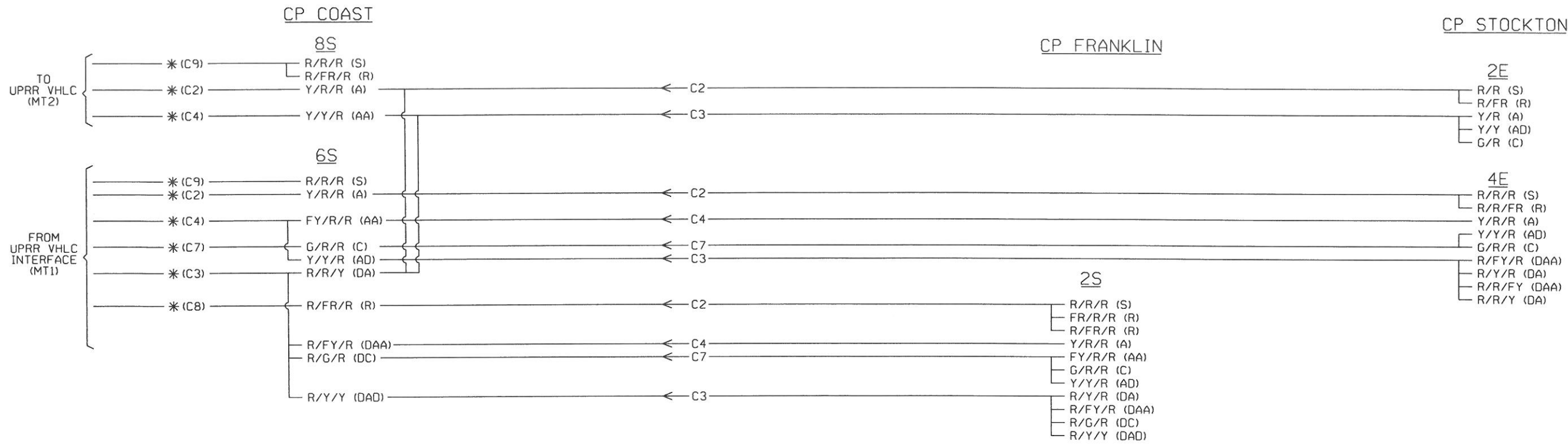
LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
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- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH
- (AD) = APPROACH DIVERGING
- (DA) = DIVERGING APPROACH
- (DC) = DIVERGING CLEAR

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- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1 PN 0-52 SH 11 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M11 PAGE NO:
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LEGEND

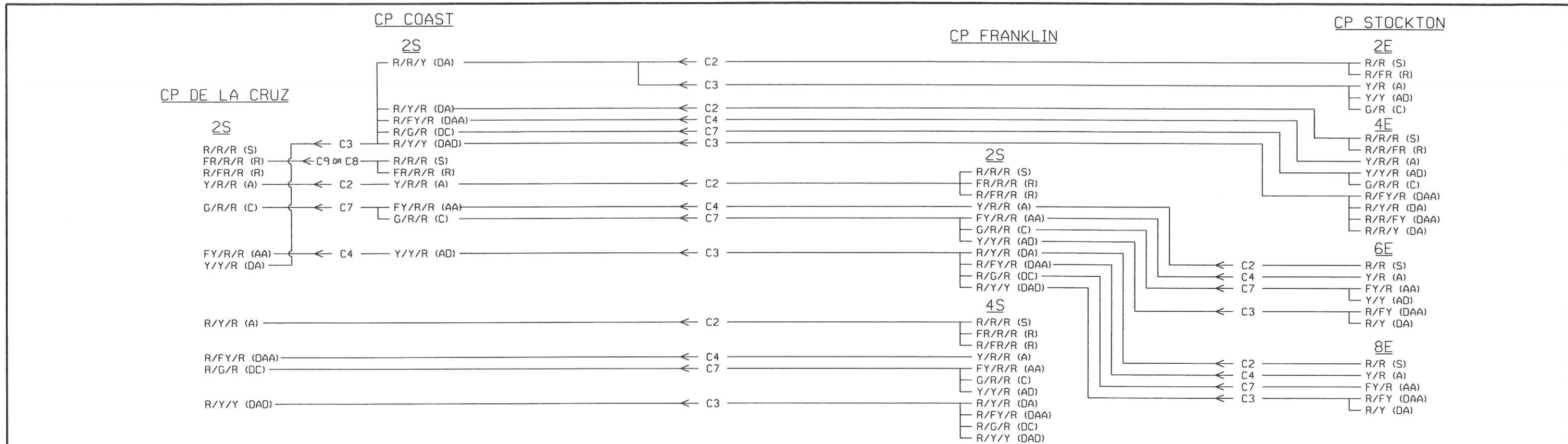
- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AR) = APPROACH RESTRICTING
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- ☆(DAD) = DIVERGING APPROACH DIVERGING
- (DAA) = DIVERGING ADVANCE APPROACH
- (DA) = DIVERGING APPROACH
- * = TRANSMITTED VIA VITAL SERIAL LINK
- ☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGN NOTES:
 SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2 NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2. JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1 & MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO., (925) 906-0867 FAX NO., (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACKS UPRR MT1 & MT2 PN 0-52 SH 12 OF 62	DESIGN DATE: REVISION DATE: MAINTENANCE DRAWING ADOPTED DATE: SCALE: DRAWING NO: PAGE NO:	08-30-06 NONE PN 0-52.M12 NONE
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DESIGN SPEED

JPB MT1 79/50 MPH

DESIGN SPEED 79/40 MPH

DESIGN SPEED 40/25 MPH

2S	AG	AGF	E
1ST	0.12	1.03	809
2ND	0.11	1.02	3182

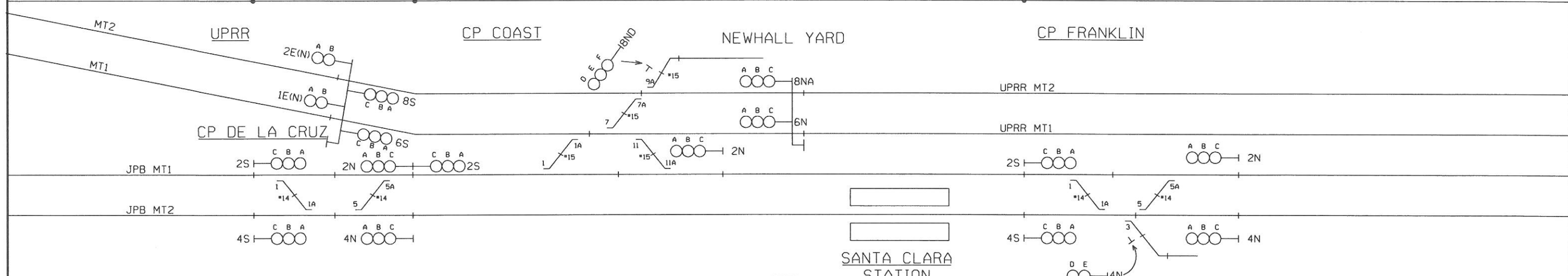
MP 44.6

2S	AG	AGF	E
1ST	0.12	1.02	2374
2ND	0.14	1.03	9070

A=2750' A=780' A=2320' A=6420'

2S	AG	AGF	E
1ST	0.15	1.04	6682
2ND	0.15	1.04	10629

MP 46.3



DESIGN NOTES:
 SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2 NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2. JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1 & MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

LEGEND

(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR

(DC) = DIVERGING CLEAR
 ☆(DAD) = DIVERGING APPROACH DIVERGING
 (DAA) = DIVERGING ADVANCE APPROACH
 (DA) = DIVERGING APPROACH
 ☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

NOTES:

A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK JPB MT1 PN 0-52 SH 13 OF 62	DESIGN DATE:	REVISION DATE: 08-30-06
DRAWN BY T. G. PEREZ		MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	
CHECKED BY C. J. ZERZAN		DESIGNED BY: XORAIL		ADOPTED DATE:	SCALE: NONE
APPROVED BY C. J. ZERZAN		CHECKED BY:		DRAWING NO: PN 0-52.M13	PAGE NO:

CP STOCKTON

2E

R/R (S)
R/FR (R)
Y/R (A)
Y/Y (AD)
G/R (C)

4E

R/R/R (S)
R/R/FR (R)
Y/R/R (A)

G/R/R (C)

Y/Y/R (AD)

R/Y/R (DA)

R/FY/R (DAA)

R/R/FY (DAA)

R/R/Y (DA)

6E

R/R (S)

Y/R (A)

FY/R (AA)

Y/Y (AD)

R/Y (DA)

R/FY (DAA)

CP SHARK

2EA

R/R/R (S)

FR/R/R (R)

FY/R/R (AA)

G/R/R (C)

R/Y/R (DA)

R/FR/R (R)

R/R/Y (DA)

R/R/FR (R)

4E

R/R (S)

FR/R (R)

Y/R (A)

R/FR (R)

R/Y (DA)

6EA

R (S)

FR (R)

Y (A)

CP ALAMEDA

8E

R/R (S)

Y/R (A)

FY/R (AA)

G/R (C)

Y/Y (AD)

10E

R (S)

FR (R)

14E

R (S)

FR (R)

CP BIRD

18E

R/R (S)

Y/R (A)

FY/R (AA)

G/R (C)

R/Y (DA)

R/G (DC)

22EA

R/R (S)

R/Y (DA)

R/G (DC)

Y/R (A)

FY/R (AA)

G/R (C)

Y/Y (AD)

CP DELMAS

2E

R/R (S)

Y/R (A)

FY/R (AA)

G/R (C)

4E

R/R (S)

Y/R (A)

FY/R (AA)

Y/Y (AD)

G/R (C)

R/Y (DA)

R/FY (DAA)

R/G (DC)

(MT1) 40/25 MPH DESIGN SPEED
(MT2) 40/25 MPH DESIGN SPEED

DESIGN SPEED
DESIGN SPEED

MP 47.1

MP 47.2

(MT1) 15/15 MPH DESIGN SPEED
(MT2) 20/15 MPH DESIGN SPEED

DESIGN SPEED
DESIGN SPEED

MP 47.8

DESIGN SPEED
DESIGN SPEED
35/35 MPH
35/35 MPH
DESIGN SPEED

6E	AG	AGF	E
1ST	0.18	1.04	3959
2ND	0.23	1.06	5416

4E	AG	AGF	E
1ST	0.27	1.16	1455
2ND	0.27	1.10	3754

10E	AG	AGF	E
1ST	0.27	1.09	2332
2ND	0.30	1.09	7229

22E	AG	AGF	E
1ST	0.33	1.08	4868
2ND	0.30	1.07	7186

A=3785'

A=1280'

A=2122'

A=4491'

2608+57

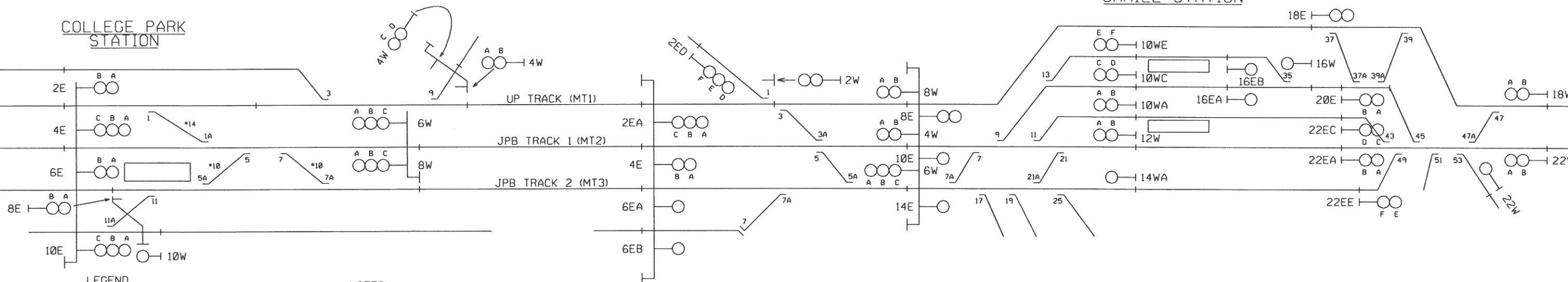
2646+42

2659+22

2680+44

COLLEGE PARK STATION

CAHILL STATION



LEGEND

- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- (DAA) = DIVERGING ADVANCE APPROACH
- (DA) = DIVERGING APPROACH

NOTES:

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- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZA
FILE: JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT
IN SVC. DATE 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN



2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
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FAX NO.: (925) 986-9843
WWW.XORAIL.COM



1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
SOUTHBOUND ASPECTS TRKS MT1 & MT2

PN 0-52 SH 14 OF 62

DESIGN DATE: 04-08-08
REVISION DATE: 03-30-11

MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M14
PAGE NO:

CP
DELMAS

CP
MACK

CP
MICHAEL

2E

R/R (S)
Y/R (A)
FY/R (AA)

G/R (C)
Y/Y (AD)

6E

R/R (S)
R/FR (R)
Y/R (A)

FY/R (AA)
G/R (C)
R/Y (DA)

R/FY (DAA)
R/G (DC)

2S

R/R (S)
FR/R (R)
Y/R (A)
FY/R (AA)
G/R (C)

4S

R/R (S)
FR/R (R)
R/FR (R)
Y/R (A)
FY/R (AA)
G/R (C)
R/Y (DA)
R/FY (DAA)
R/G (DC)

6S

R/R (S)
FR/R (R)
R/FR (R)
R/Y (DA)
R/FY (DAA)
R/G (DC)

504-1

R/R (SP)
Y/R (A)
Y/Y (AD)
FY/R (AA)
G/R (C)

DESIGN SPEED
35/35 MPH

MP 48.6

DESIGN SPEED
35/35 MPH

TIME TABLE SPEED
79/60 MPH
DESIGN SPEED
79/40 MPH
MP 49.7

2E	AG	AGF	E
1ST	0.28	1.02	2272
2ND	0.23	1.02	4606

6E	AG	AGF	E
1ST	0.25	1.00	2300
2ND	0.25	1.04	8811

2S	AG	AGF	E
1ST	0.21	1.05	6513
2ND	0.25	1.06	12600

A=2221'

A=2280'

A=6163'

2725+35

2747+56

2770+36

18W

2E

2W

6E

6W

TRACK 1

2S

A B C
2N

1A *14

3 *14 3A

5 *10

8WAC

TRACK 2

4S

1A *10

3 *14 3A

5 *10 5A

A B C
4NA

22WAB

4E

4W

8E

8WBD

6S

6N

4ND

LEGEND

(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR
 (DC) = DIVERGING CLEAR
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 (DAA) = DIVERGING ADVANCE APPROACH

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 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN

xorail

2890 NORTH MAIN STREET, SUITE 306
 WALNUT CREEK, CA 94597
 PH. NO.: (925) 906-0867
 FAX NO.: (925) 906-9843
 WWW.XORAIL.COM



1250 San Carlos Avenue
 San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
 SOUTHBOUND ASPECTS TRACK 1

PN 0-52 SH 15 OF 62

DESIGN DATE:
12-14-04

REVISION DATE:
08-30-06

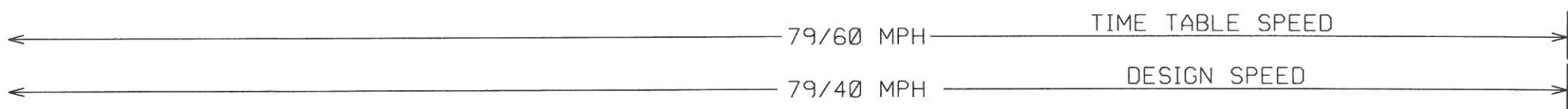
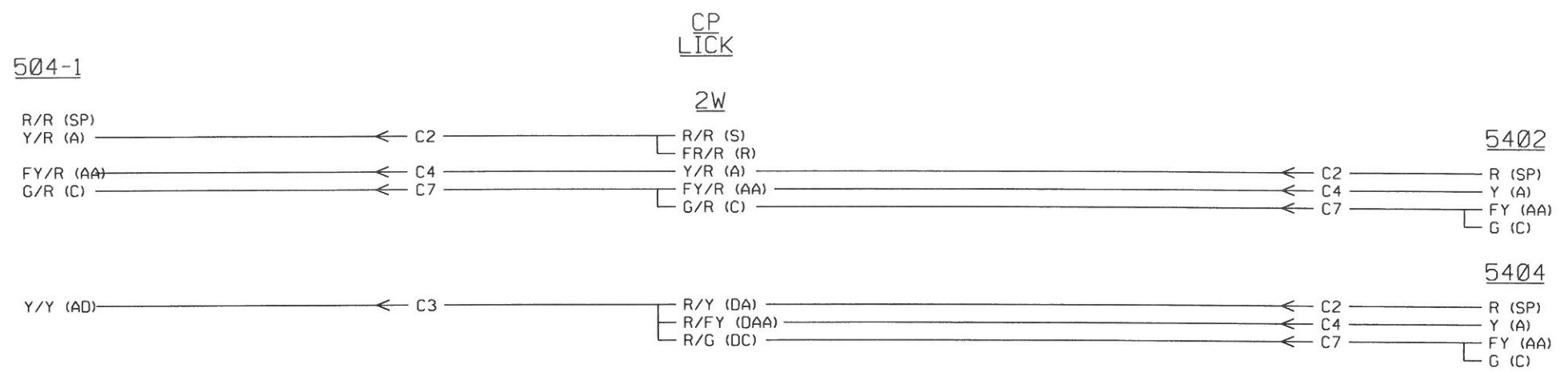
MAINTENANCE DRAWING

ADOPTED DATE:

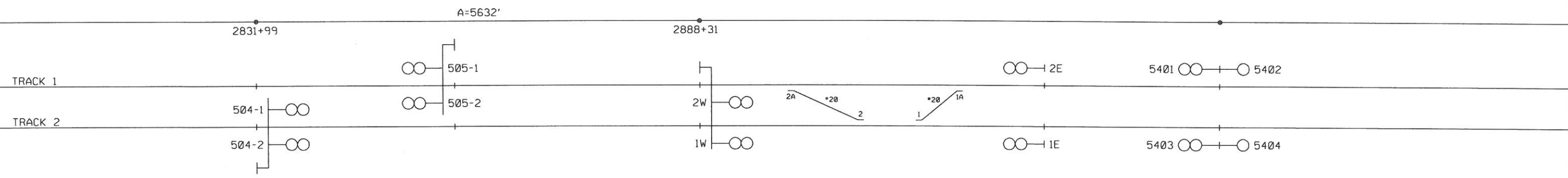
SCALE:
NONE

DRAWING NO:
PN 0-52.M15

PAGE NO:



504-1	AG	AGF	E
1ST	0.28	1.09	6177
2ND			



LEGEND

(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR
 (DC) = DIVERGING CLEAR
 (DA) = DIVERGING APPROACH
 (DAA) = DIVERGING ADVANCE APPROACH

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 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN

xorail

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1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY:
XORAIL

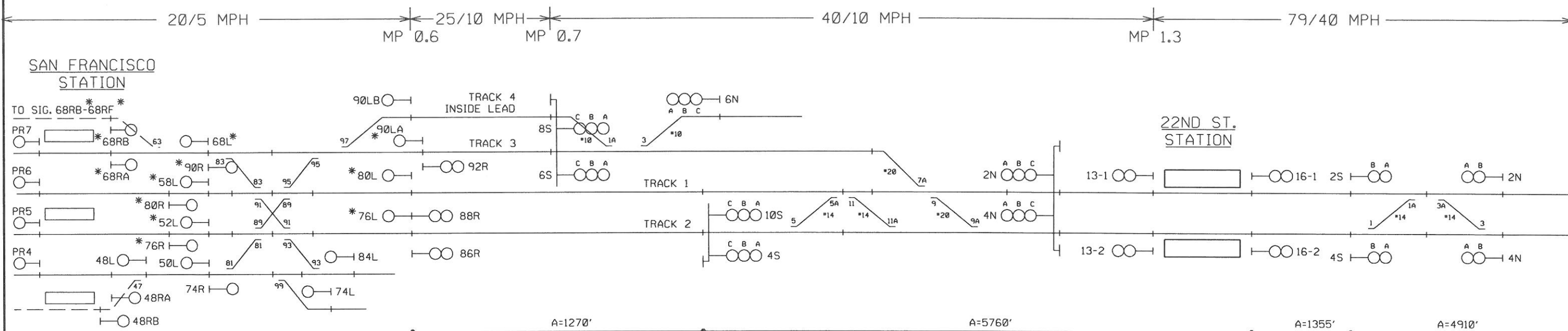
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1

PN 0-52 SH 16 OF 62

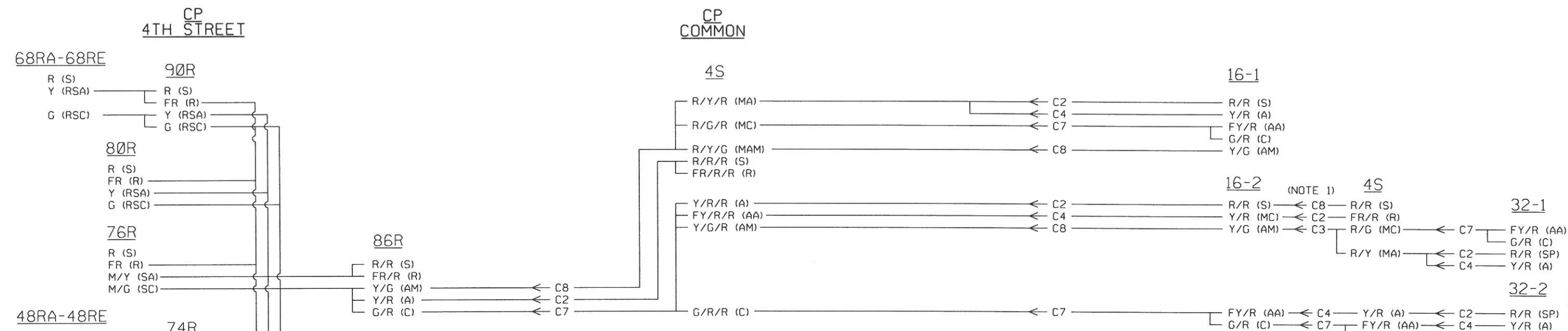
DESIGN DATE: 12-14-04	REVISION DATE: 08-30-06
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M16	PAGE NO:



86R	AG	AGF	E
1ST		1.05	1333
2ND		1.05	7401

4S	AG	AGF	E
1ST		1.05	6034
2ND		1.05	7479

16-2	AG	AGF	E	4S	AG	AGF	E
1ST	0.22	1.07	1453	1ST	0.16	1.03	5056
2ND	0.17	1.04	6495	2ND	0.08	1.01	10204



LEGEND

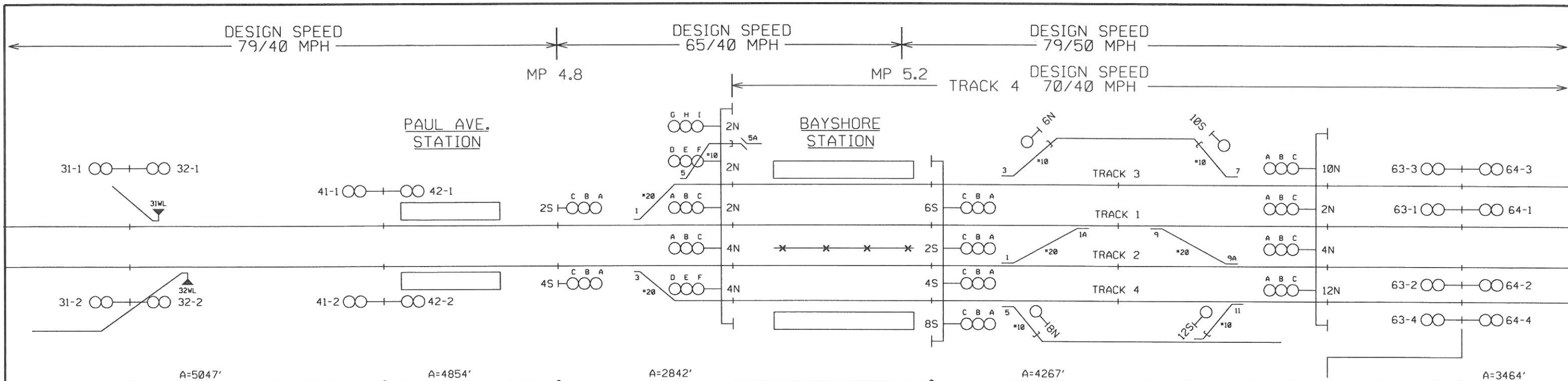
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR

(LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH
 (RSA) = REDUCED SLOW APPROACH
 (RSC) = REDUCED SLOW CLEAR
 (*) = SIGNAL W/ MARKER LIGHT *M* (LUNAR) INSTALLED.

NOTES:

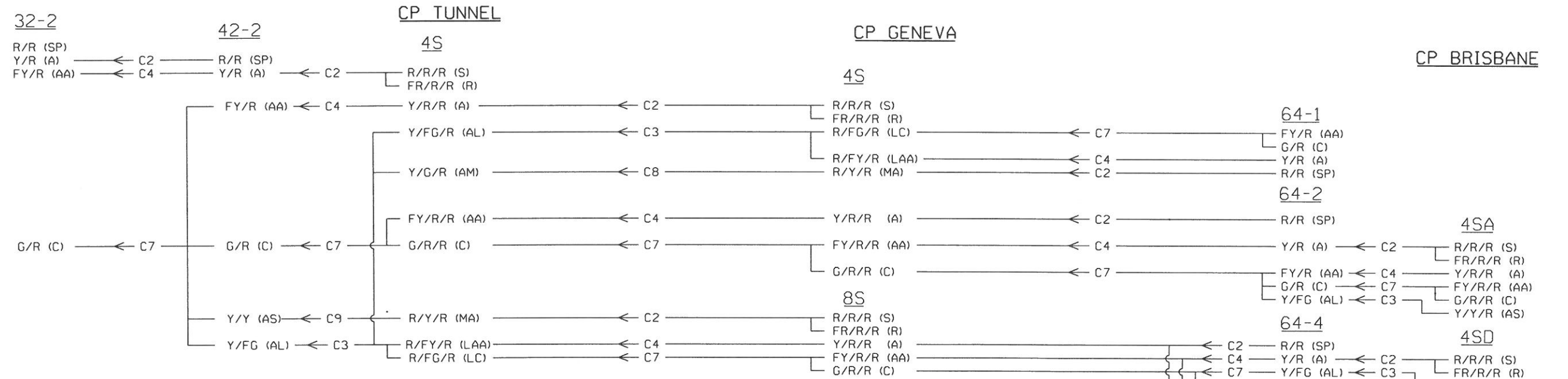
1. SIGNAL 16-1 (NO NUMBER PLATE) PROGRAMMED WITH NO FOLLOWING STICK AND CODE 8 FOR TRACK AND BLOCK INTEGRITY.
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE
 (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH
 PR4-PR7 = ABSOLUTE RED SIGNALS AT THE END OF TRACK.

DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT, STAGE C2	DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT	DESIGNED BY Z. A. ETKIN DRAWN BY A. B. POSADAS CHECKED BY R. A. STEVENS APPROVED BY C. J. ZERZAN	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	Caltrain 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF C&S D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 17 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 09-10-08	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M17 PAGE NO:
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353+12	A=5047'	403+59	A=4854'	452+13	A=2842'	480+55	A=4267'	523+22	A=3464'
--------	---------	--------	---------	--------	---------	--------	---------	--------	---------

32-2	AG	AGF	E	42-2	AG	AGF	E	4S	AG	AGF	E	4S	AG	AGF	E	64-2	AG	AGF	E
1ST	0.03	0.98	4973	1ST	-0.09	0.97	4699	1ST	-0.16	0.95	2716	1ST	-0.08	0.99	4218	1ST	-0.07	1.00	3478
2ND	-0.01	0.98	9688	2ND	-0.12	0.96	7399	2ND	-0.10	0.98	6973	2ND	-0.07	0.99	7650	2ND	-0.05	1.00	9426



LEGEND

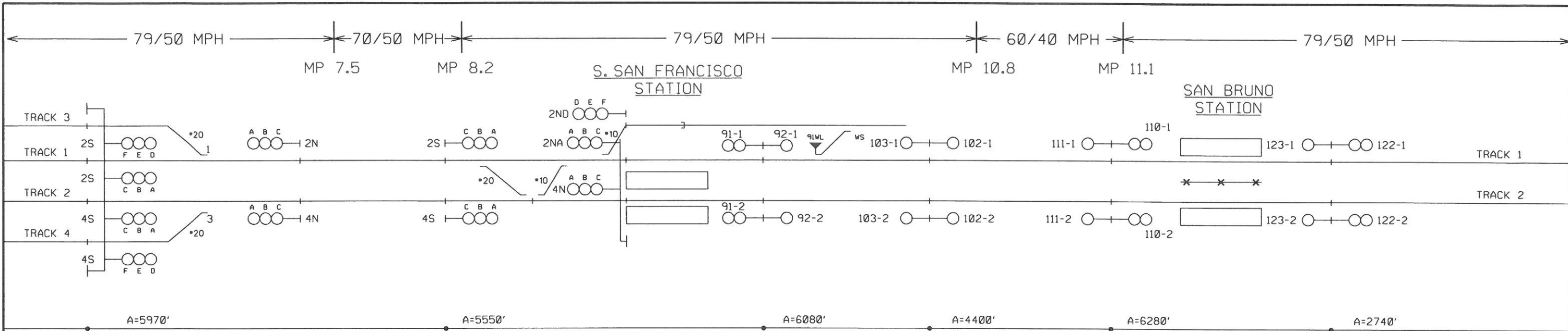
(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

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DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 18 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	
	CHECKED BY C. J. ZERZAN			DESIGNED BY XORAIL		ADOPTED DATE: SCALE: NONE	
	APPROVED BY C. J. ZERZAN			CHECKED BY: DRAWING NO.: PN 0-52.M18		PAGE NO.:	



4S	AG	AGF	E
1ST	0.02	1.00	5971
2ND	0.03	1.00	11569

4S	AG	AGF	E
1ST	0.01	1.01	5603
2ND	0.00	1.00	11643

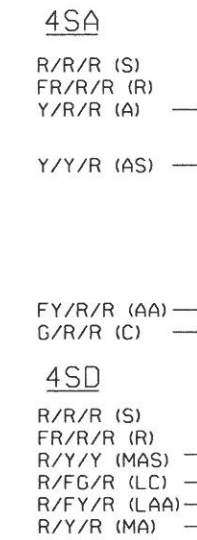
92-2	AG	AGF	E
1ST	0.00	0.99	6044
2ND	0.05	1.01	10620

102-2	AG	AGF	E
1ST	0.06	1.05	4615
2ND	-0.02	1.00	10707

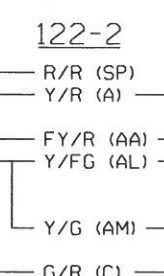
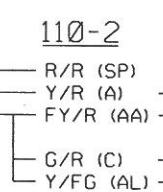
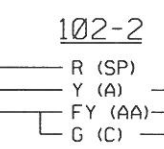
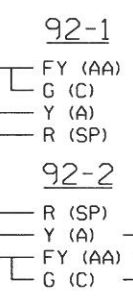
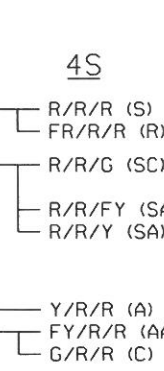
110-2	AG	AGF	E
1ST	0.02	0.95	5953
2ND	0.03	0.97	8748

122-2	AG	AGF	E
1ST	-0.05	1.02	2794
2ND	-0.05	1.00	7250

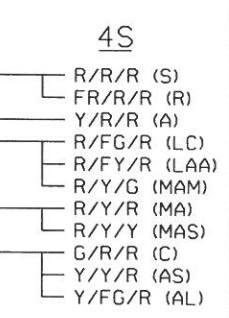
CP BRISBANE



CP SIERRA



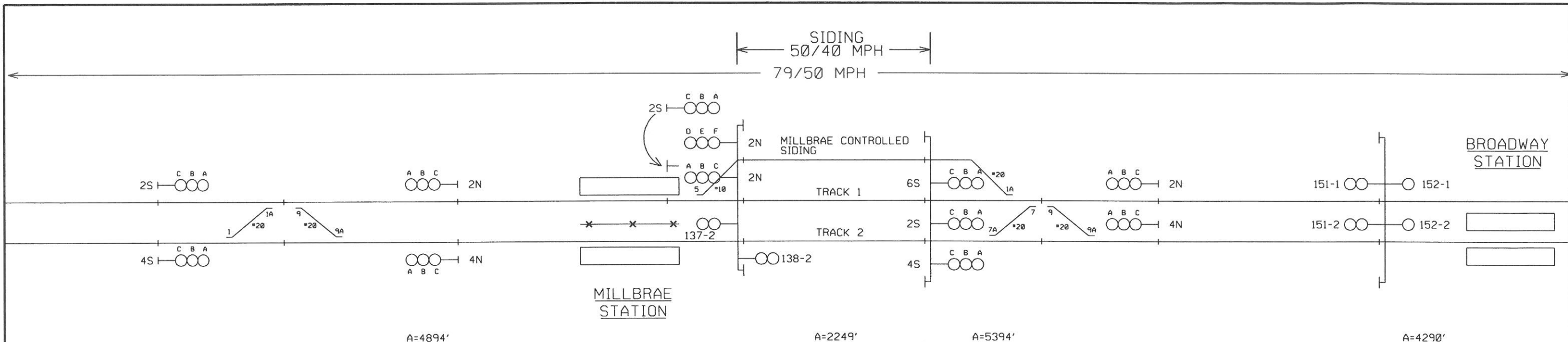
CP CENTER



- LEGEND**
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

- NOTES:**
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 19 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-01-07 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M19 PAGE NO:
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4S	AG	AGF	E
1ST	-0.02	1.00	4894
2ND	-0.02	1.00	7142

138-2	AG	AGF	E
1ST	0.00	0.99	2231
2ND	0.02	1.00	7643

4S	AG	AGF	E
1ST	-0.06	1.00	5327
2ND	0.02	1.03	9814

152-2	AG	AGF	E
1ST	0.11	1.05	4474
2ND	0.11	1.04	9767

CP CENTER
4S

- R/R/R (S)
- FR/R/R (R)
- R/FG/R (LC)
- R/Y/G (MAM)
- R/FY/R (LAA)
- R/Y/R (MA)
- R/Y/Y (MAS)

- Y/FG/R (AL)
- Y/R/R (A)
- Y/Y/R (AS)

- G/R/R (C)

CP BART
2S

- FY/R/R (AA)
- G/R/R (C)
- Y/FG/R (AL)
- Y/R/R (A)
- R/R/R (S)
- FR/R/R (R)
- R/R/Y (SA)
- R/R/G (SC)

138-2

- Y/FG (AL)
- R/R (SP)
- Y/R (A)

- FY/R (AA)
- G/R (C)

CP TROUSDALE
4S

- R/Y/R (MA)
- R/FY/R (LAA)
- R/FG/R (LC)
- R/R/R (S)
- FR/R/R (R)
- Y/R/R (A)
- FY/R/R (AA)
- G/R/R (C)

152-1

- R (SP)
- Y (A)
- FY (AA)
- G (C)

152-2

- R (SP)
- Y (A)
- FY (AA)
- G (C)

160-2



- R/R (SP)
- Y/R (A)
- FY/R (AA)
- Y/FG (AL)
- G/R (C)

LEGEND

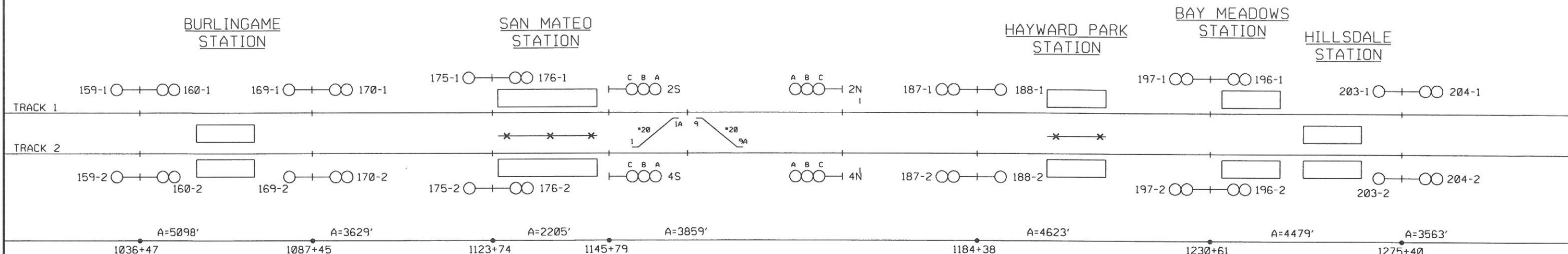
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

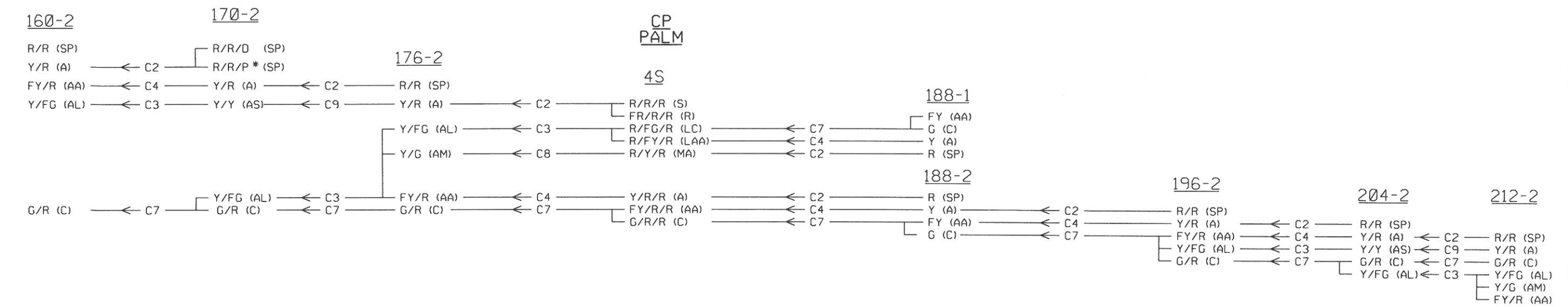
- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 20 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-01-07	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M20 PAGE NO:
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DESIGN SPEED 79/50 MPH



Track	Segment	AG	AGF	E
160-2	1ST	0.13	1.04	5328
	2ND	0.08	1.02	8923
170-2	1ST	0.08	0.98	3574
	2ND	0.06	0.98	5764
176-2	1ST	-0.05	0.99	2186
	2ND	-0.15	0.95	5767
4S	1ST	-0.16	0.93	3600
	2ND	-0.11	0.96	8196
188-2	1ST	-0.13	0.99	4569
	2ND	0.01	1.03	9398
196-2	1ST	0.10	1.08	4841
	2ND	0.06	1.04	8393
204-2	1ST	0.16	0.97	3456
	2ND	0.25	1.03	5725

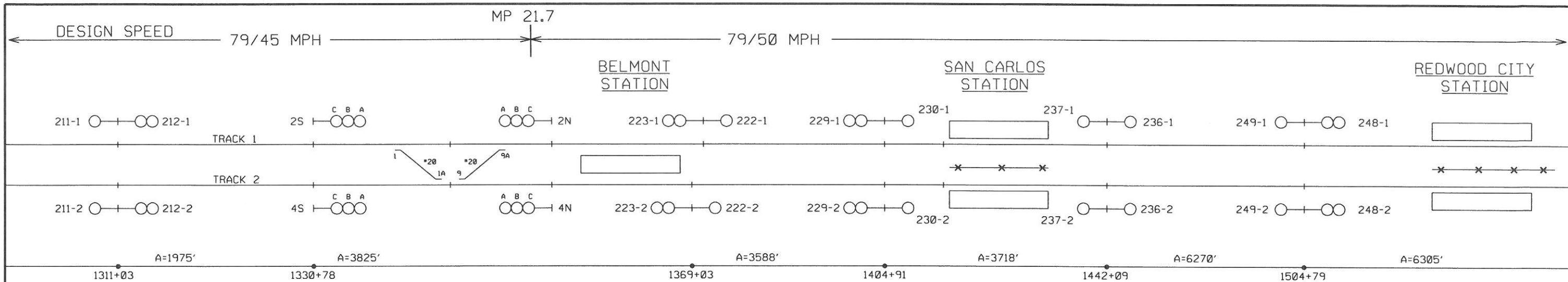


* R/R/P = BRIDGES ARE NORMAL
R/R/D = BRIDGES HAVE TO BE INSPECTED

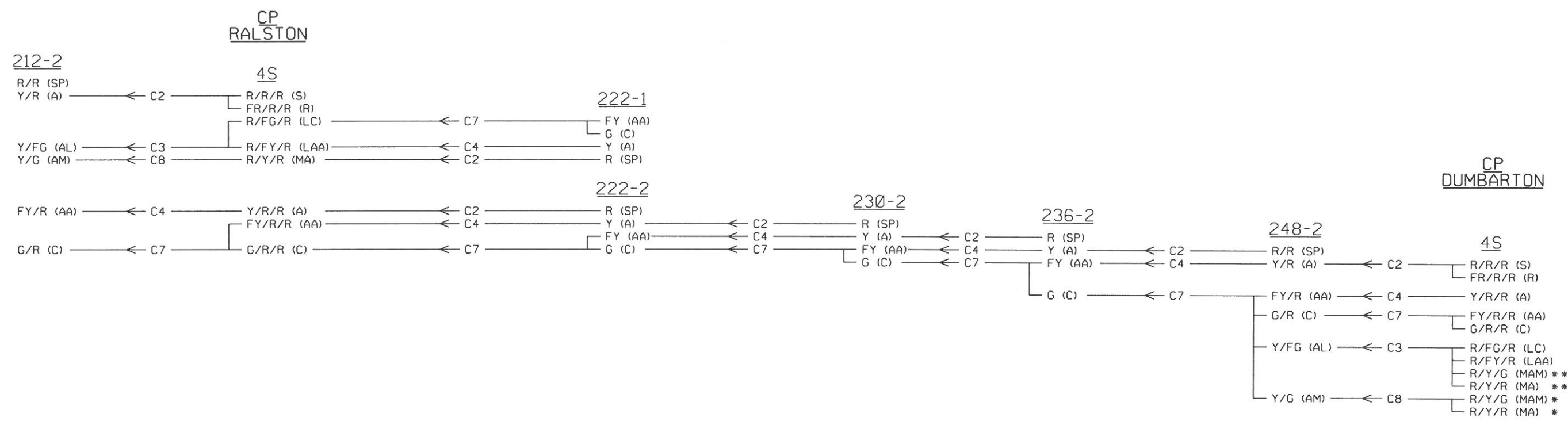
LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

NOTES:
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE JP800-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 21 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M21 PAGE NO:
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212-2	AG	AGF	E	4S	AG	AGF	E	222-2	AG	AGF	E	230-2	AG	AGF	E	236-2	AG	AGF	E	248-2	AG	AGF	E
1ST	0.24	1.13	2250	1ST	0.14	1.07	4111	1ST	0.07	0.92	3322	1ST	-0.11	1.00	3742	1ST	-0.17	0.94	5940	1ST	-0.16	0.97	6157
2ND	0.21	1.08	6275	2ND	0.01	1.00	7454	2ND	0.07	0.96	7057	2ND	-0.16	0.96	9673	2ND	-0.14	0.96	12123	2ND	0.00	1.02	12365



LEGEND

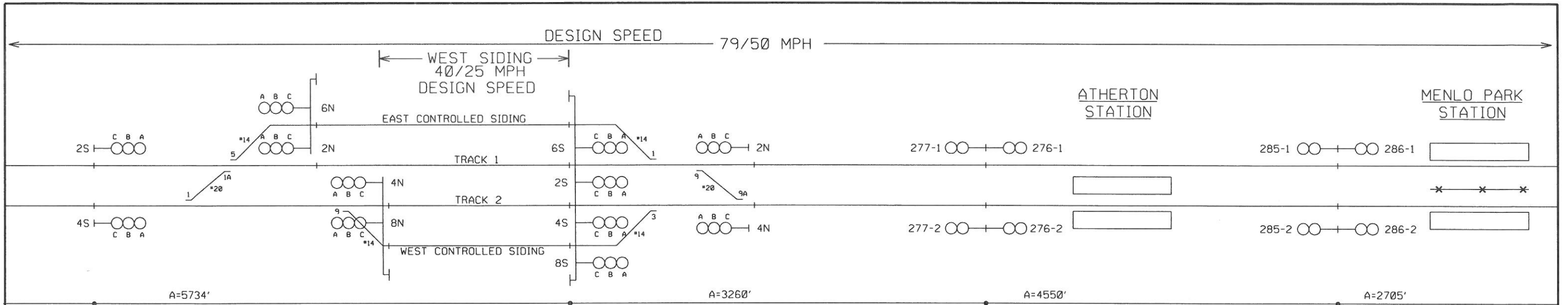
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

NOTES:

A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH
 * = SWITCH 9 REV. OR SWITCH 5 REV.
 ** = SWITCH 5 NOR.

DESIGNED: 04-08-08 BY: XORAIL/ZA FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	<p>2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM</p>	<p>1250 San Carlos Avenue San Carlos, CA 94070</p>	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 22 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M22 PAGE NO:
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	4S	AG	AGF	E
1ST	0.15	1.08	6199	
2ND	0.21	1.09	9807	

	4S	AG	AGF	E
1ST	0.38	1.10	3615	
2ND	0.35	1.09	8525	

	276-2	AG	AGF	E
1ST	0.36	1.08	4927	
2ND	0.29	1.05	7684	

	286-2	AG	AGF	E
1ST	0.24	1.02	2774	
2ND	0.19	1.02	6996	

CP DUMBARTON

CP JUNCTION

CP ALMA

4S

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/Y/G (MAM)

6S

R/R/R (S)
FR/R/R (R)
R/G/R (MC)
R/Y/G (MAM)
R/Y/R (MA)

2S

R/R/R (S)
FR/R/R (R)
R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

4S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)

R/FY/R (LAA)
R/FG/R (LC)

Y/R/R (A)

FY/R/R (AA)

G/R/R (C)

G/R/R (C)
8S
R/R/R (S)
FR/R/R (R)

R/Y/R (MA)
R/Y/G (MAM)
R/G/R (MC)

276-2

R/R (SP)

Y/R (A)

FY/R (AA)

Y/FG (AL)

G/R (C)

286-2

R (SP)

Y/R (A)

Y/G (AM)

Y/FG (AL)

FY/R (AA)

G/R (C)

4S

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)
R/FG/R (LC)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

LEGEND

(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

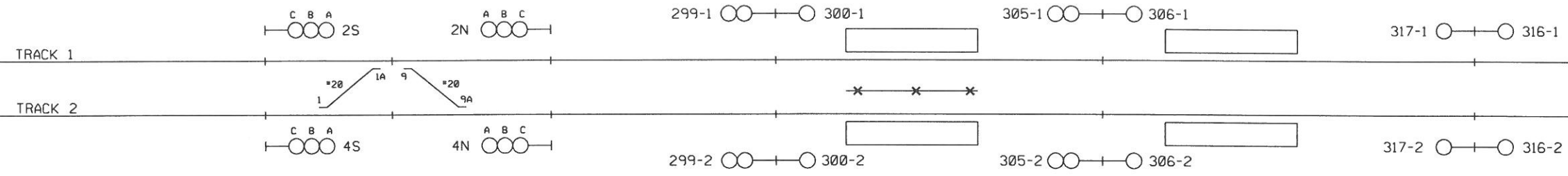
A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 23 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	
	CHECKED BY C. J. ZERZAN			DESIGNED BY: XORAIL		ADOPTED DATE: NONE	SCALE: NONE
	APPROVED BY C. J. ZERZAN			CHECKED BY: (blank)		DRAWING NO: PN 0-52.M23	PAGE NO: (blank)

PALO ALTO STATION

STANFORD STATION

CALIFORNIA AVE. STATION



4S	AG	AGF	E
1ST	0.13	1.01	4199
2ND	-0.04	0.95	7412

300-2	AG	AGF	E
1ST	-0.16	0.88	3184
2ND	-0.23	0.89	8281

306-2	AG	AGF	E
1ST	-0.31	0.89	5020
2ND	-0.21	0.94	9987

316-2	AG	AGF	E
1ST	-0.21	0.98	4907
2ND	-0.09	1.01	10645

← DESIGN SPEED 79/50 MPH →

A=4129' A=3613' A=5610' A=5000'

1730+33 1771+62 1807+75 1863+85

CP
ALMA

4S

R/R/R (S)
FR/R/R (R)
R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)

300-1

FY (AA)
G (C)
Y (A)
R (SP)

300-2

Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

R (SP)
Y (A)
FY (AA)
G (C)

306-2

R (SP)
Y (A)
FY (AA)
G (C)

316-2

R (SP)
Y (A)
FY (AA)
G (C)

326-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/FG (AL)

LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

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- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
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DESIGNED: 12-11-02 BY: SWE/
FILE: JPB00-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SVC. DATE 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN

2898 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 986-8867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM

1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

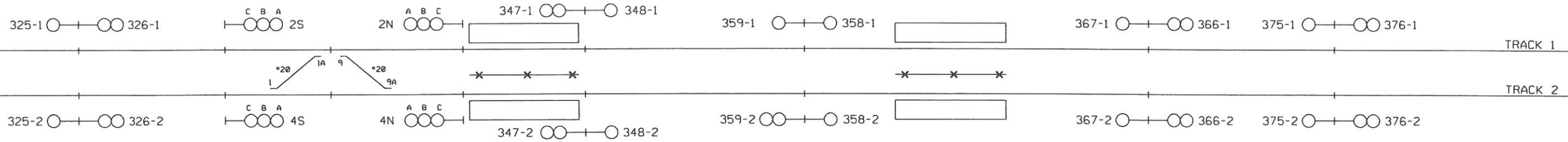
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 2

PN 0-52 SH 24 OF 62

DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M24	PAGE NO:

SAN ANTONIO STATION

MOUNTAIN VIEW STATION



326-2	AG	AGF	E
1ST	0.04	1.03	5724
2ND	0.09	1.04	12009

4S	AG	AGF	E
1ST	0.17	1.04	6285
2ND	0.20	1.05	12836

348-2	AG	AGF	E
1ST	0.23	1.07	6585
2ND	0.31	1.09	10704

358-2	AG	AGF	E
1ST	0.37	1.12	4079
2ND	0.28	1.04	8858

366-2	AG	AGF	E
1ST	0.28	1.04	4834
2ND	0.21	1.02	8132

376-2	AG	AGF	E
1ST	0.12	0.99	3285
2ND	0.05	0.98	7398

A=5523' A=5990' A=6140' A=3632' A=4632' A=3292'

1913+85 1969+08 2028+98 2090+38 2126+70 2173+02

CP MAYFIELD

326-2

R/R (SP)

Y/R (A) ← C2

Y/FG (AL) ← C3

4S

R/R/R (S)

FR/R/R (R)

R/FG/R (LC) ← C7

R/FY/R (LAA) ← C4

R/Y/R (MA) ← C2

348-1

G (C)

FY (AA)

Y (A)

R (SP)

348-2

R (SP)

Y (A)

FY (AA) ← C4

G (C) ← C7

358-2

R (SP)

Y (A)

FY (AA) ← C4

G (C) ← C7

366-2

R/R (SP)

Y/R (A) ← C2

FY/R (AA) ← C4

G/R (C) ← C7

Y/FG (AL) ← C3

376-2

R/R (SP)

Y/R (A) ← C2

FY/R (AA) ← C4

G/R (C) ← C7

Y/G (AM) ← C8

Y/FG (AL) ← C3

CP MARY

4S

R/R/R (S)

FR/R/R (R)

Y/R/R (A)

G/R/R (C)

Y/FG/R (AL)

Y/Y/R (AS)

R/Y/R (MA)

R/Y/Y (MAS)

R/FG/R (LC)



R/Y/G (MAM)

LEGEND

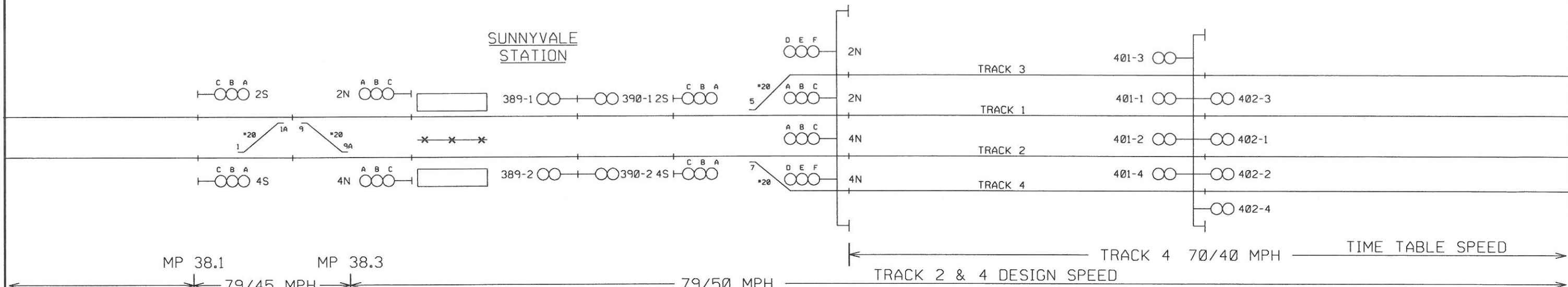
- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

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- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZA FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 25 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M25 PAGE NO:
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SUNNYVALE STATION



4S	AG	AGF	E
1ST	-0.05	0.97	4110
2ND	-0.10	0.95	6284

390-2	AG	AGF	E
1ST	-0.17	0.92	2197
2ND	-0.21	0.92	6001

4S	AG	AGF	E
1ST	-0.25	0.91	3772
2ND	-0.25	0.92	7511

402-1	AG	AGF	E
1ST	-0.31	0.93	3741
2ND	-0.27	0.94	6816

A=4216' A=2369' A=4104' A=4009'

2205+94 2248+10 2271+79 2312+83

CP MARY

4S

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/Y/Y (MAS)
R/Y/G (MAM)
R/FG/R (LC)

390-1

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/FG (AL)
Y/G (AM)

390-2

Y/R/R (A)
Y/Y/R (AS)

G/R/R (C)

Y/FG/R (AL)

CP HENDY

4S

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

R/Y/R (MA)
R/FY/R (LAA)

R/FG/R (LC)

402-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)

402-4

R/R (SP)
Y/R (A)
FY/R (AA)
Y/FG (AL)

410-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)

410-4



R/R (SP)
Y/R (A)
Y/G (AM)
Y/FG (AL)

LEGEND

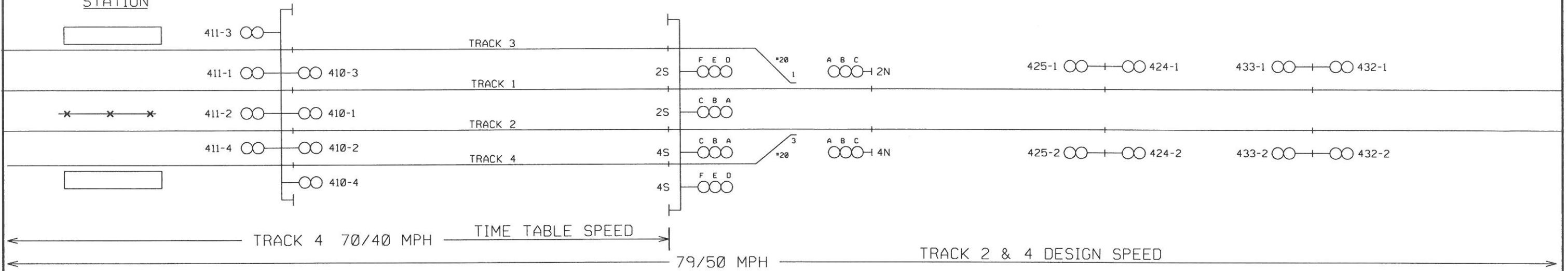
- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

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- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 26 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M26 PAGE NO:
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LAWRENCE STATION



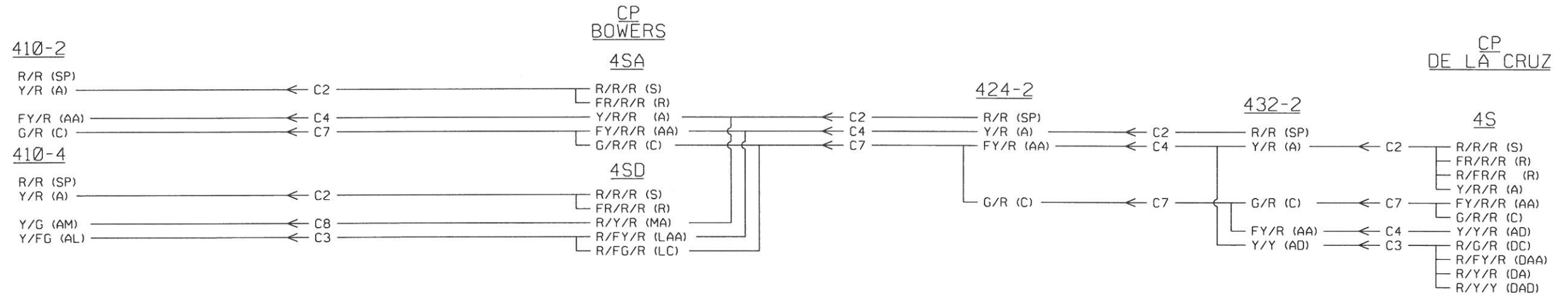
410-2	AG	AGF	E
1ST	-0.23	0.95	3050
2ND	-0.16	0.97	7861

4S	AG	AGF	E
1ST	-0.14	0.99	4824
2ND	-0.07	1.00	9996

424-2	AG	AGF	E
1ST	0.02	1.01	5173
2ND	0.05	1.02	8024

432-2	AG	AGF	E
1ST	0.09	1.03	2844
2ND	0.09	1.02	6020

A=3207' 2352+92 A=4842' 2384+99 A=5091' 2433+41 A=2750' 2484+32



LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH
- (DA) = DIVERGING APPROACH
- (DC) = DIVERGING CLEAR

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/
 FILE JPB00-8730
 WD NO.: 625
 CTC PROJECT
 ASBUILT
 IN SVC. DATE 05-09-04
 CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN
 DRAWN BY
T. G. PEREZ
 CHECKED BY
C. J. ZERZAN
 APPROVED BY
C. J. ZERZAN

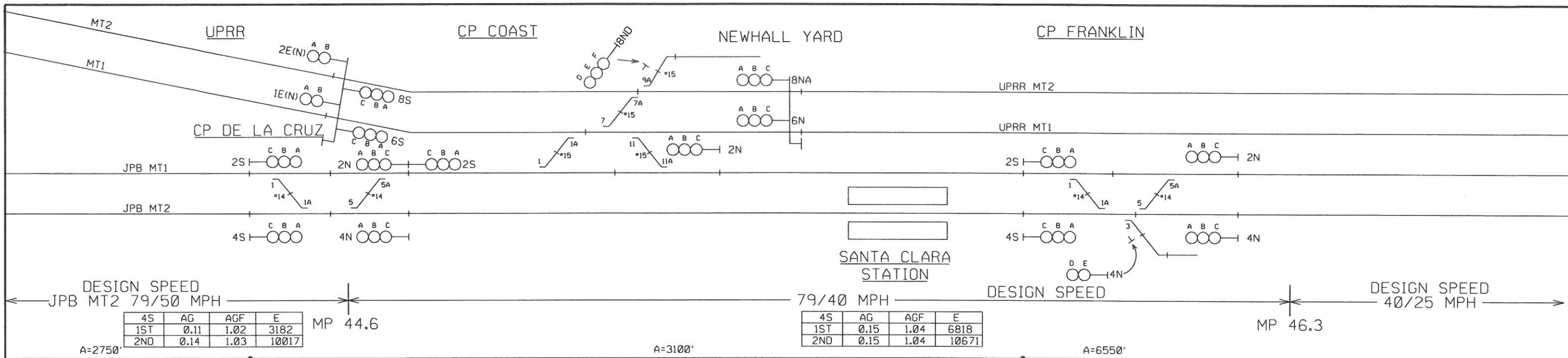
2890 NORTH MAIN STREET, SUITE 306
 WALNUT CREEK, CA 94597
 PH. NO.: (925) 906-0867
 FAX NO.: (925) 906-9843
 WWW.XORAIL.COM

1250 San Carlos Avenue
 San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO
 MANAGER OF CAS
D. OBEDOZA
 DESIGNED BY
XORAIL
 CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD
 CTC ASPECT CHART
 SOUTHBOUND ASPECTS TRACK 2
 PN 0-52 SH 27 OF 62

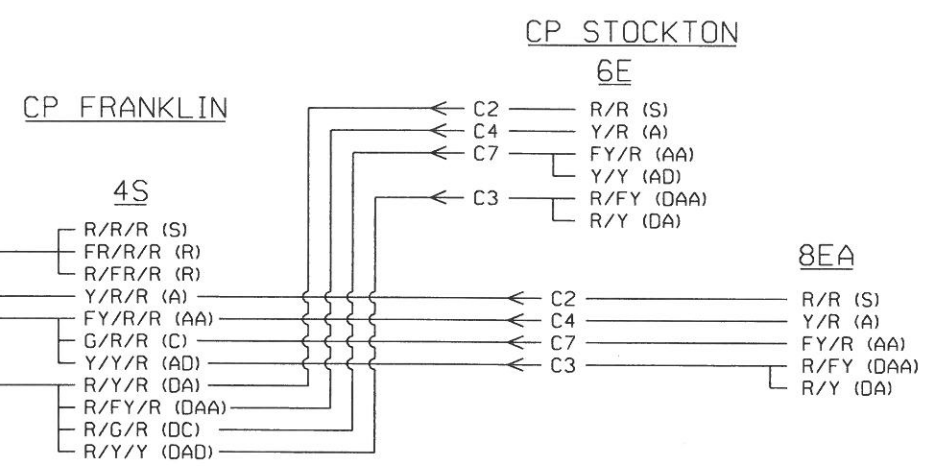
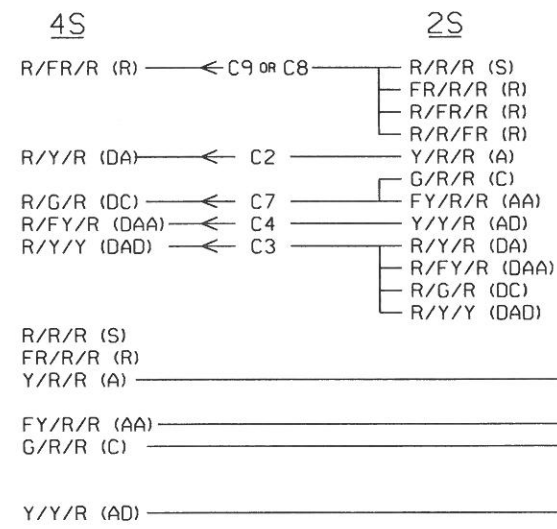
DESIGN DATE:	12-11-02	REVISION DATE:	08-30-06
MAINTENANCE DRAWING			
ADOPTED DATE:		SCALE:	NONE
DRAWING NO:	PN 0-52.M27	PAGE NO:	



4S	AG	AGF	E
1ST	0.11	1.02	3182
2ND	0.14	1.03	10017

4S	AG	AGF	E
1ST	0.15	1.04	6818
2ND	0.15	1.04	10671

CP DE LA CRUZ CP COAST



LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AR) = APPROACH RESTRICTING
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- ☆(DAD) = DIVERGING APPROACH DIVERGING
- (DAA) = DIVERGING ADVANCE APPROACH
- (DA) = DIVERGING APPROACH
- ☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

NOTES:

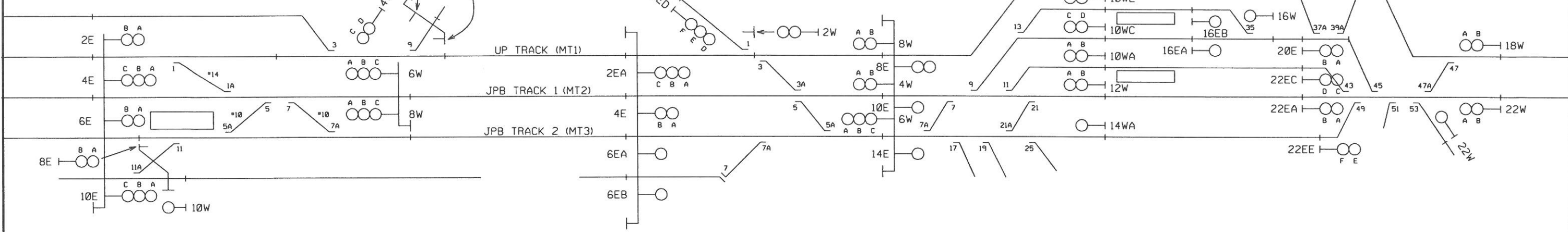
- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGN NOTES:
SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2 NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2. JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1 & MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK JPB MT2 PN 0-52 SH 28 OF 62	DESIGN DATE:	REVISION DATE: 08-30-06
DRAWN BY T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	
CHECKED BY C. J. ZERZAN			DESIGNED BY XORAIL		ADOPTED DATE:	SCALE: NONE
APPROVED BY C. J. ZERZAN			CHECKED BY:		DRAWING NO: PN 0-52.M28	PAGE NO:

COLLEGE PARK STATION

CAHILL STATION



DESIGN SPEED
40/25 MPH

DESIGN SPEED
20/15 MPH

DESIGN SPEED
20/10 MPH

DESIGN SPEED
35/35 MPH

MP 47.1

MP 47.2

MP 47.8

8EA	AG	AGF	E
1ST	0.18	1.04	3864
2ND	0.23	1.06	5318

A=3695'

6EA	AG	AGF	E
1ST	0.27	1.13	1455
2ND	0.27	1.10	3754

A=1280'

14E	AG	AGF	E
1ST	0.27	1.09	2332
2ND	0.30	1.09	7229

A=2122'

22E	AG	AGF	E
1ST	0.33	1.08	4868
2ND	0.30	1.07	7186

A=4491'

2609+47

2646+42

2659+22

2680+44

CP STOCKTON

CP SHARK

CP ALAMEDA

CP BIRD

CP DELMAS

8EA

R/R (S)
R/Y (DA)

R/FY (DAA)

Y/R (A)

FY/R (AA)

10E

R/R/R (S)

R/R/Y (DA)

R/R/FY (DAA)

R/Y/R (A)

R/FY/R (AA)

4E

R/R (S)

FR/R (R)

R/FR (R)

Y/R (A)

R/Y (DA)

6EA

R (S)

FR (R)

Y (A)

14E

R (S)

FR (R)

22EE

R/R (S)

R/Y (DA)

R/G (DC)

Y/R (A)

FY/R (AA)

G/R (C)

Y/Y (AD)

2E

R/R (S)

Y/R (A)

FY/R (AA)

Y/Y (AD)

G/R (C)

4E

R/R (S)

Y/R (A)

FY/R (AA)

Y/Y (AD)

G/R (C)

R/Y (DA)

R/FY (DAA)

R/G (DC)

LEGEND

- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- (DAA) = DIVERGING ADVANCE APPROACH
- (DA) = DIVERGING APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZAE
FILE JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT
IN SVC. DATE 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN

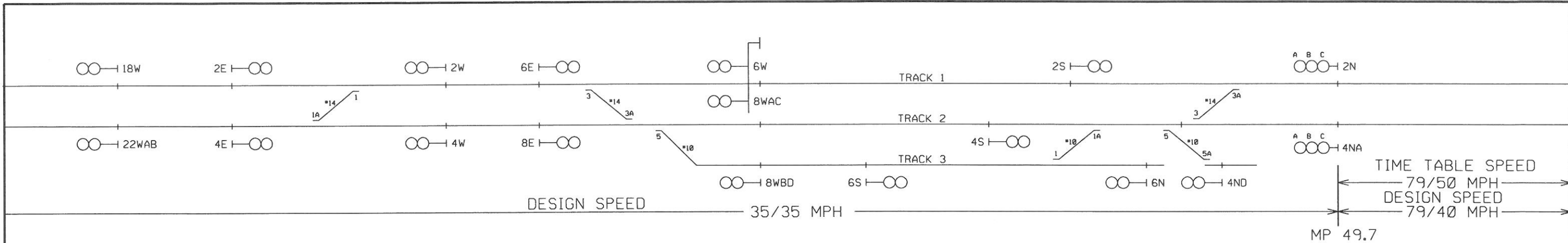
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM

1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK MT3
PN 0-52 SH 29 OF 62

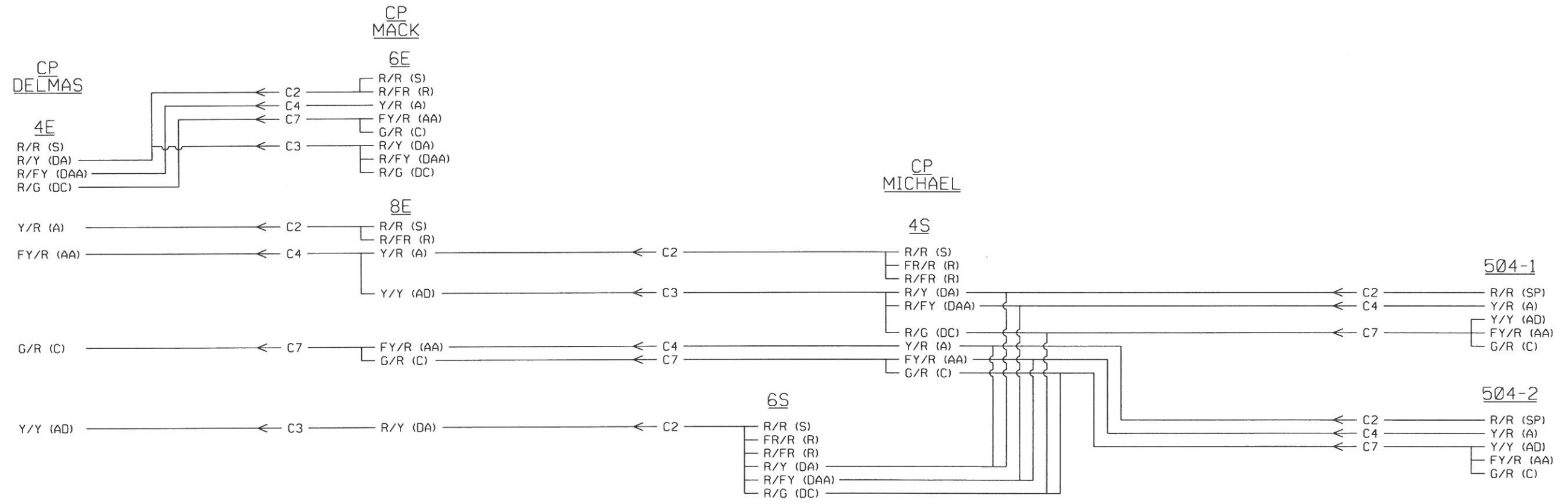
DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M29	PAGE NO:



4E	AG	AGF	E
1ST	0.28	1.02	2272
2ND	0.23	1.02	4420

8E	AG	AGF	E
1ST	0.25	1.00	2118
2ND	0.25	1.04	8811

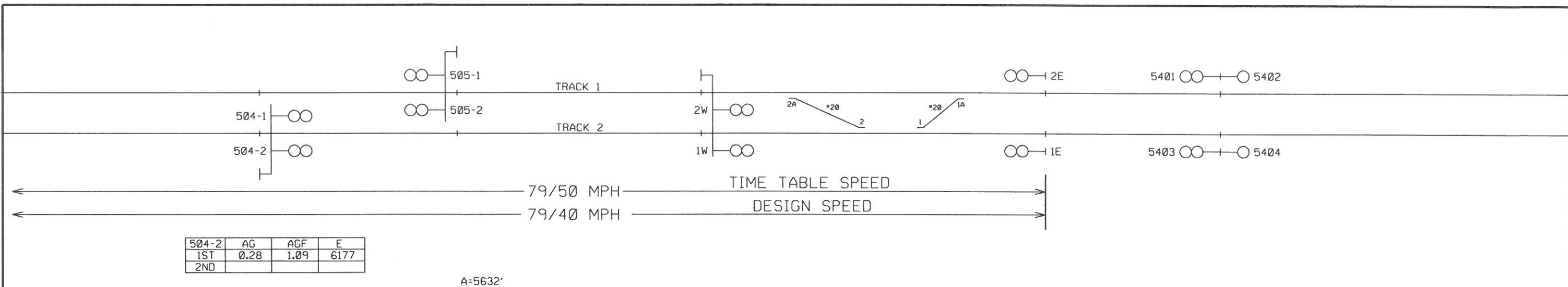
4S	AG	AGF	E
1ST	0.21	1.05	6698
2ND	0.25	1.06	12789



LEGEND
(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AR) = APPROACH RESTRICTING
(AA) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR
(DA) = DIVERGING APPROACH
(DAA) = DIVERGING ADVANCE APPROACH

NOTES:
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AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
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DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 30 OF 62	DESIGN DATE: 12-14-04 REVISION DATE: 08-30-06
MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M30 PAGE NO:					



504-2	AG	AGF	E
1ST	0.28	1.09	6177
2ND			

2831+99

A=5632'

2888+31

504-2

R/R (SP)
Y/R (A)

Y/Y (AD)

FY/R (AA)
G/R (C)

CP
LICK

1W

R/R (S)
R/Y (DA)
R/FY (DAA)
R/G (DC)

Y/R (A)
FY/R (AA)
G/R (C)

5402

R (SP)
Y (A)
FY (AA)
G (C)

5404



R (SP)
Y (A)
FY (AA)
G (C)

LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AR) = APPROACH RESTRICTING
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- (DA) = DIVERGING APPROACH
- (DAA) = DIVERGING ADVANCE APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
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- 1ST = FIRST APPROACH
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DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 31 OF 62	DESIGN DATE: 12-14-04 REVISION DATE: 08-30-06	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M31 PAGE NO:
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CP
4TH STREET

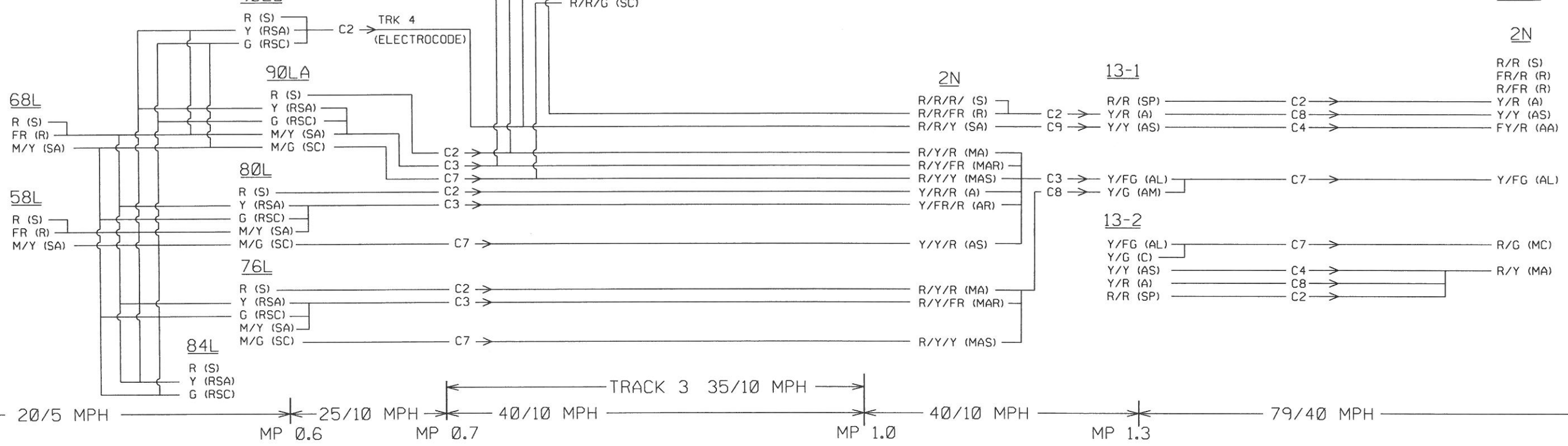
6N
CP
COMMON

CP
ARMY

2N

13-1

13-2



Signal	AG	AGF	E
90LA			
1ST		0.95	749
2ND		0.99	2067
80L			
1ST		0.94	594
2ND		0.98	1907

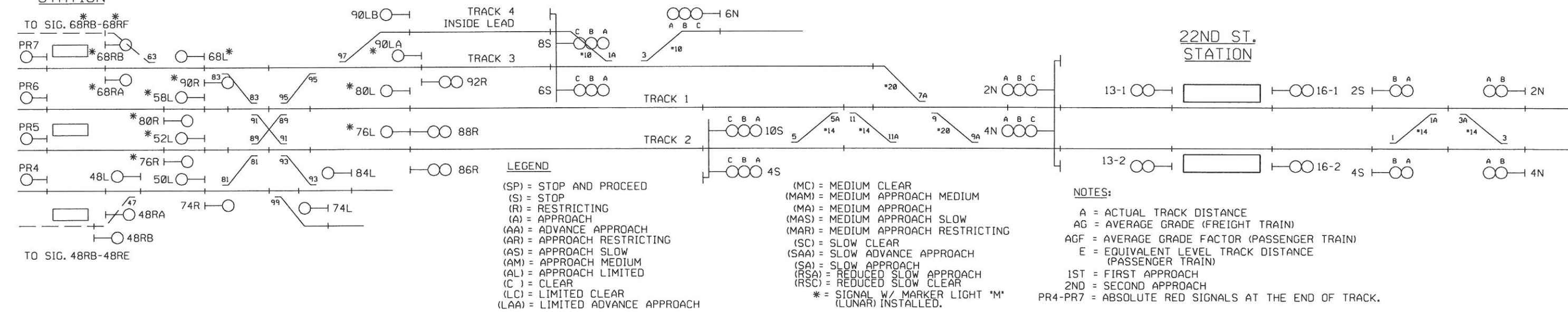
Signal	AG	AGF	E
2N			
1ST	-0.21	0.97	2845
2ND	-0.23	0.95	3474

Signal	AG	AGF	E
13-1			
1ST	-0.24	0.95	1182
2ND	-0.21	0.96	4018

Signal	AG	AGF	E
2N			
1ST	-0.15	0.93	4541
2ND	-0.15	0.94	5740

SAN FRANCISCO
STATION

22ND ST.
STATION



LEGEND

(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AR) = APPROACH RESTRICTING
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (MAR) = MEDIUM APPROACH RESTRICTING
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH
 (RSA) = REDUCED SLOW APPROACH
 (RSC) = REDUCED SLOW CLEAR
 * = SIGNAL W/ MARKER LIGHT *M* (LUNAR) INSTALLED.

NOTES:

A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH
 PR4-PR7 = ABSOLUTE RED SIGNALS AT THE END OF TRACK.

DESIGNED: 04-18-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT, STAGE C2 IN SVC. DATE 09-23-07 CORRECTED: 09-10-08 BY: SWE/ZAE	DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 01-27-07 CORRECTED: 06-27-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE
--	--	---

DESIGNED BY
Z. A. ETKIN

DRAWN BY
A. B. POSADAS

CHECKED BY
R. A. STEVENS

APPROVED BY
C. J. ZERZAN

xorail

2890 NORTH MAIN STREET, SUITE 306
 WALNUT CREEK, CA 94597
 PH. NO.: (925) 906-8867
 FAX NO.: (925) 906-9843
 WWW.XORAIL.COM

Caltrain

1250 San Carlos Avenue
 San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY:
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
 NORTHBOUND ASPECTS TRACK 1

PN 0-52 SH 32 OF 62

DESIGN DATE: 12-11-02	REVISION DATE: 09-10-08
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M32	PAGE NO:

CP TUNNEL

2NG

R/R/R (S)
FR/R/R (R)
R/R/Y (SA)
R/R/FY (SAA)
R/R/G (SC)

2ND

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)
R/FG/R (LC)

6N

R (S)
FR (R)
Y (SA)

CP GENEVA

10N

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
Y/FG/R (AL)

63-3

R/R (SP)
Y/R (A)

2N

R/R/R (S)
FR/R/R (R)
Y/R/R (A)

63-1

R/R (SP)
Y/R (A)

2NA

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)

4NA

FY/R/R (AA)
G/R/R (C)
Y/R/R (A)
R/R/R (S)
FR/R/R (R)

R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)

Y/FG (AL)
Y/G (AM)

CP ARMY

2N

R/R (S)
FR/R (R)
R/FR (R)
Y/R (A)
Y/Y (AS)
FY/R (AA)
G/R (C)
R/G (MC)
R/Y (MA)

31-1

R/R (S)
Y/R (A)

41-1

R/R (S)
Y/R (A)
FY/R (AA)

79/40 MPH DESIGN SPEED

DESIGN SPEED

70/40 MPH DESIGN SPEED

DESIGN SPEED

TRACK 3 75/40 MPH DESIGN SPEED

DESIGN SPEED

79/50 MPH DESIGN SPEED

DESIGN SPEED

31-1	AG	AGF	E
1ST	0.04	0.99	4270
2ND	-0.07	0.96	8816

41-1	AG	AGF	E
1ST	0.09	1.02	5167
2ND	0.05	1.01	9449

2N	AG	AGF	E
1ST	0.09	1.03	5908
2ND	0.08	1.02	11053

2N	AG	AGF	E
1ST	0.06	1.04	3999
2ND	0.07	1.03	9871

63-1	AG	AGF	E
1ST	-0.02	0.97	2358
2ND	0.06	1.02	6386

A=4304'

A=5047'

A=5722'

A=3833'

A=2408'

353+12

403+59

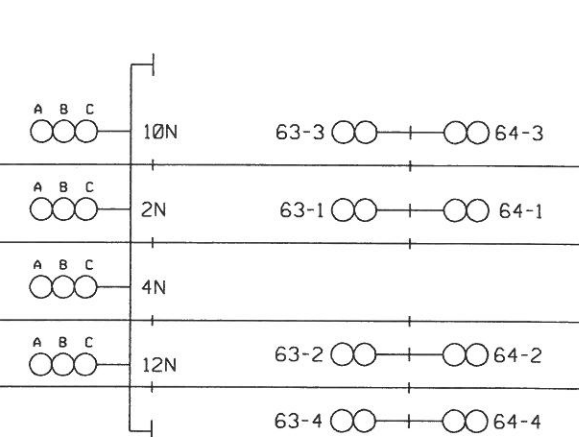
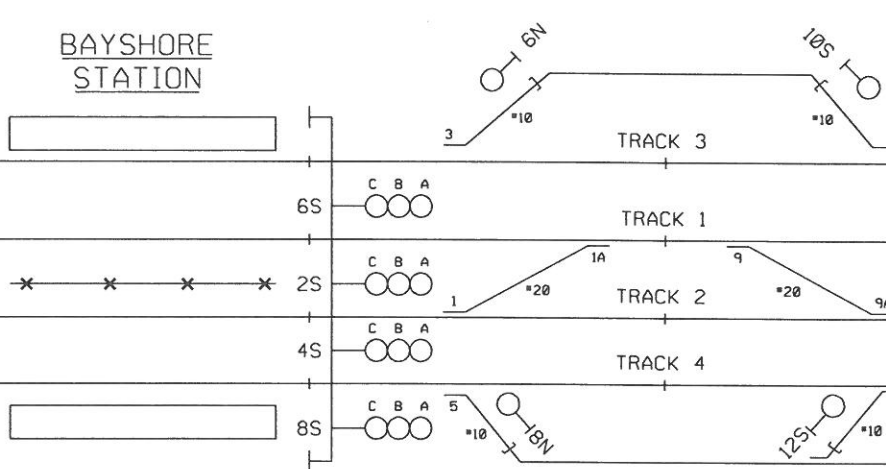
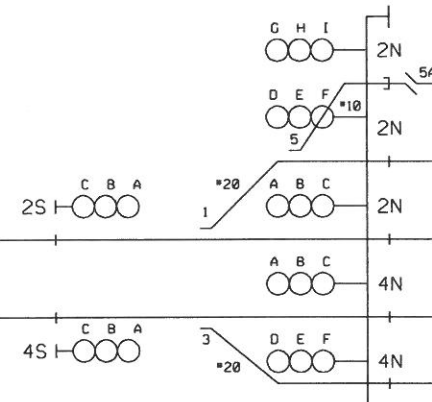
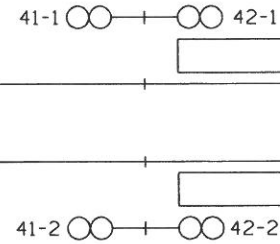
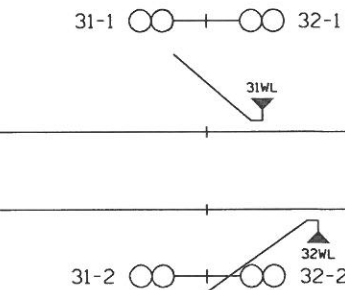
460+81

499+14

523+22

PAUL AVE. STATION

BAYSHORE STATION



LEGEND

(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/
FILE JP800-8730
WD NO.: 625
CTC PROJECT
ASBUILT

IN SVC. DATE 05-09-04
CORRECTED: 06-04-04 BY: SWE/ZAE

DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN



2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
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FAX NO.: (925) 906-9843
WWW.XORAIL.COM



1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 1

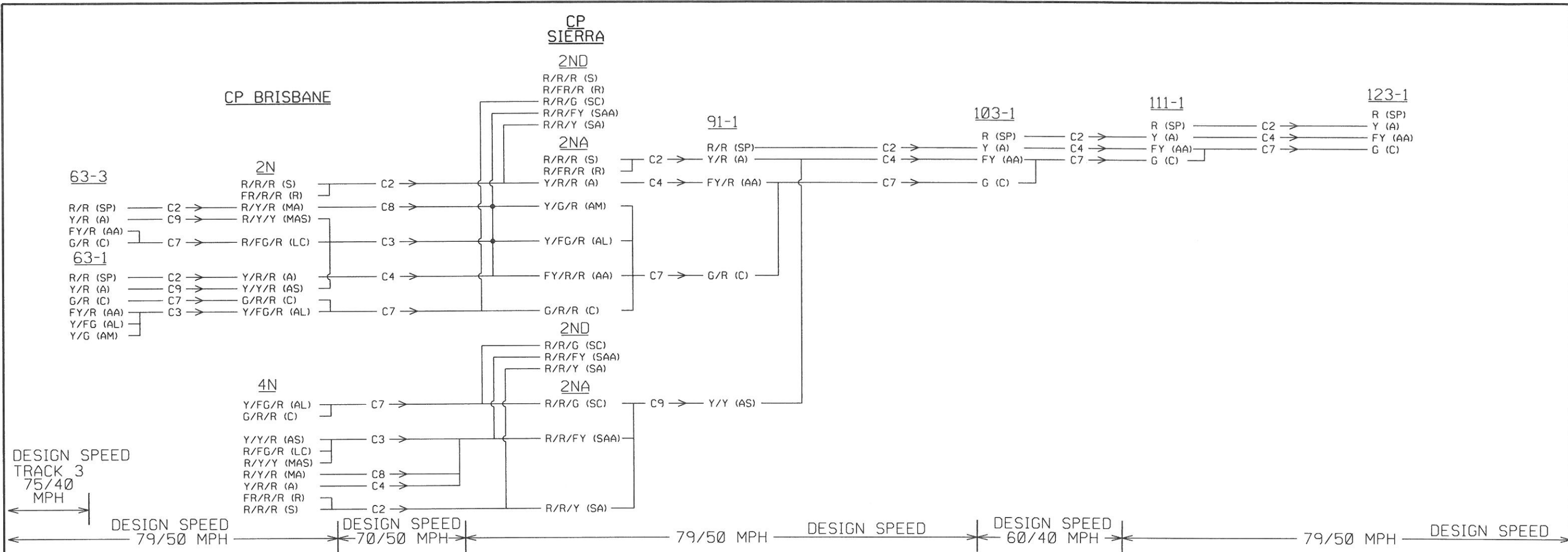
PN 0-52 SH 33 OF 62

DESIGN DATE: 12-11-02
REVISION DATE: 08-30-06

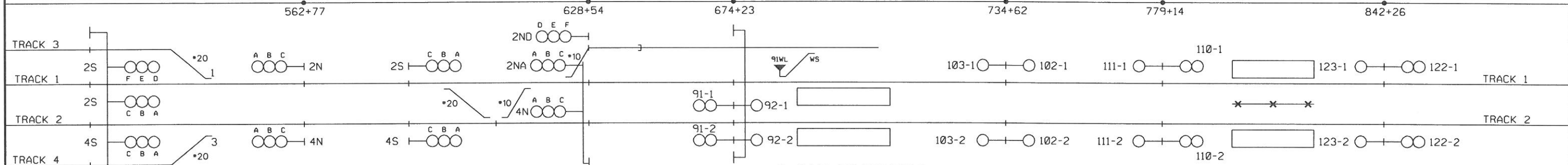
MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M33
PAGE NO:



MP 7.5				MP 8.2				MP 10.8				MP 11.1				123-1							
2N	AG	AGF	E	2N	AG	AGF	E	91-1	AG	AGF	E	103-1	AG	AGF	E	111-1	AG	AGF	E	123-1	AG	AGF	E
1ST	0.02	1.01	3996	1ST	-0.03	1.00	6590	1ST	-0.01	0.98	4518	1ST	-0.02	0.98	5945	1ST	0.01	0.98	4381	1ST	0.06	1.03	6506
2ND	-0.02	0.99	6321	2ND	-0.02	1.00	10567	2ND	0.01	0.99	11113	2ND	-0.03	0.98	10469	2ND	0.01	0.99	10422	2ND	0.00	1.00	10804
A=3955'				A=6577'				A=4569'				A=6039'				A=4452'				A=6312'			



LEGEND

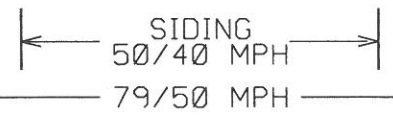
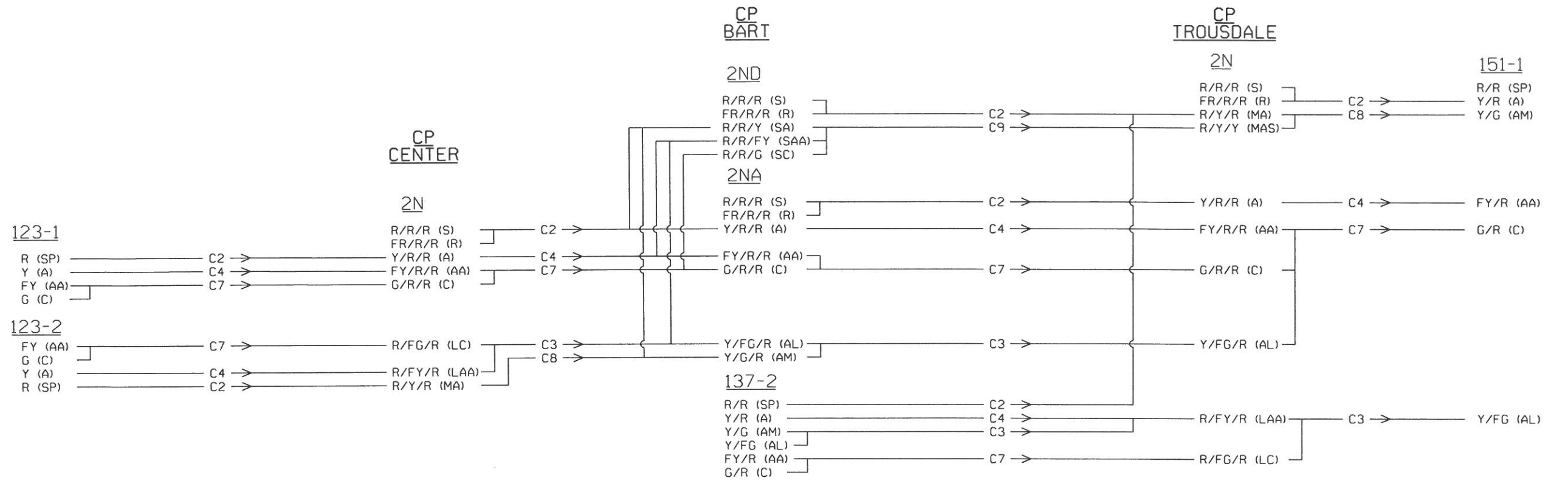
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

NOTES:

A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JP800-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 SPEED SIGNAL ASPECTS PN 0-52 SH 34 OF 62	
	CHECKED BY C. J. ZERZAN			DESIGNED BY XORAIL		ADOPTED DATE: NONE	SCALE: NONE
	APPROVED BY C. J. ZERZAN			CHECKED BY:		DRAWING NO: PN 0-52.M34	PAGE NO:



2N	AG	AGF	E
1ST	-0.05	0.96	4336
2ND	0.02	1.00	11110

2NA	AG	AGF	E
1ST	0.10	1.06	2864
2ND	-0.05	0.98	7373

2N	AG	AGF	E
1ST	-0.04	0.99	3973
2ND	0.06	1.03	6899

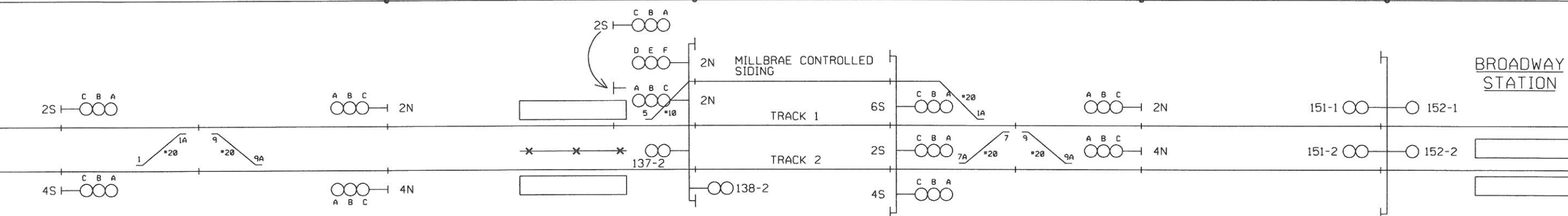
151-1	AG	AGF	E
1ST	-0.20	0.98	3530
2ND	-0.14	0.99	7515

A=4830'

A=2690'

A=4000'

A=3600'

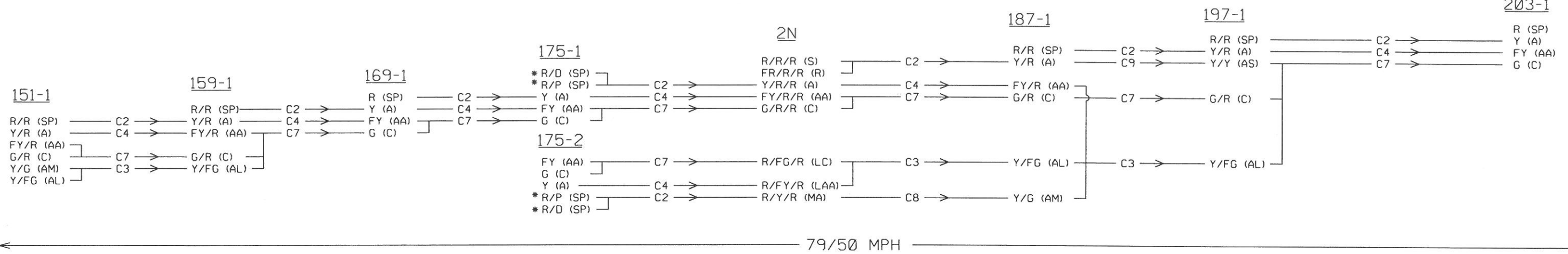


LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

NOTES:
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 SPEED SIGNAL ASPECTS PN 0-52 SH 35 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-01-07	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M35 PAGE NO:
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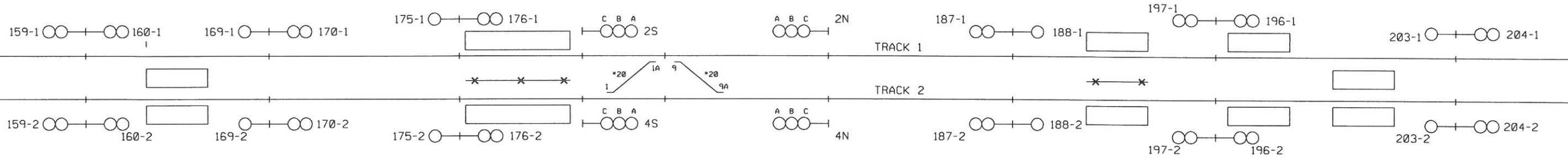
CP
PALM



79/50 MPH

159-1	AG	AGF	E	169-1	AG	AGF	E	175-1	AG	AGF	E	2N	AG	AGF	E	187-1	AG	AGF	E	197-1	AG	AGF	E	203-1	AG	AGF	E
1ST	-0.15	0.93	3947	1ST	-0.02	0.98	5034	1ST	0.17	1.02	3583	1ST	0.16	1.05	3940	1ST	0.03	1.07	2551	1ST	-0.07	0.98	4528	1ST	-0.28	0.96	4108
2ND	-0.13	0.95	7462	2ND	-0.08	0.96	9060	2ND	0.07	0.99	8604	2ND	0.13	1.03	7538	2ND	0.06	1.05	6454	2ND	0.01	1.01	7101	2ND	-0.20	0.98	8694

A=4260' A=5140' A=3530' A=3646' A=2390' A=4610' A=4300'



BURLINGAME
STATION

SAN MATEO
STATION

HAYWARD PARK
STATION

BAY MEADOWS
STATION

HILLSDALE
STATION



LEGEND

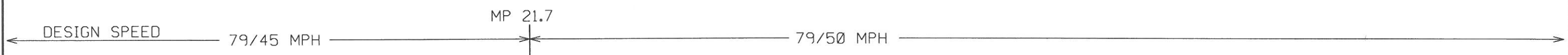
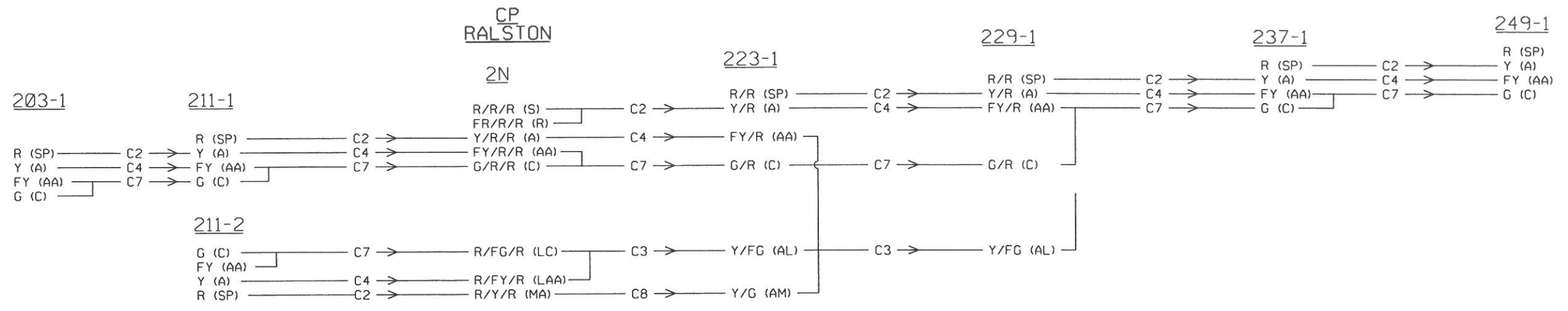
- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

* R/P = BRIDGES ARE NORMAL
R/D = BRIDGES HAVE TO BE INSPECTED

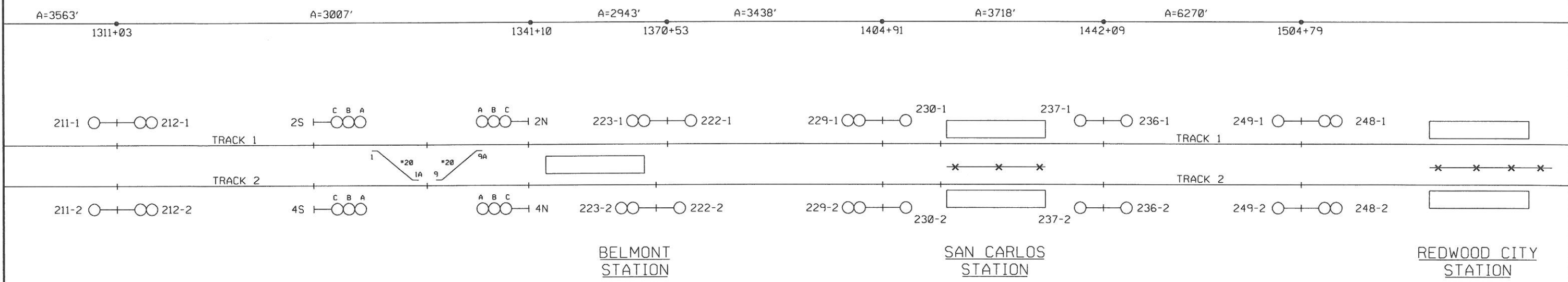
NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 01-27-07 CORRECTED: 06-27-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 36 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-27-07 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M36 PAGE NO:
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211-1				2N				223-1				229-1				237-1				249-1			
1ST	AG	AGF	E	1ST	AG	AGF	E	1ST	AG	AGF	E	1ST	AG	AGF	E	1ST	AG	AGF	E	1ST	AG	AGF	E
-0.20	0.98	3499		-0.08	0.87	2623		0.11	1.01	2993		0.11	1.05	3641		0.12	0.99	3683		0.16	1.06	6657	
-0.23	0.95	6493		-0.04	0.93	6169		-0.08	0.94	5595		0.07	1.03	6585		0.15	1.02	10332		0.11	1.03	10351	



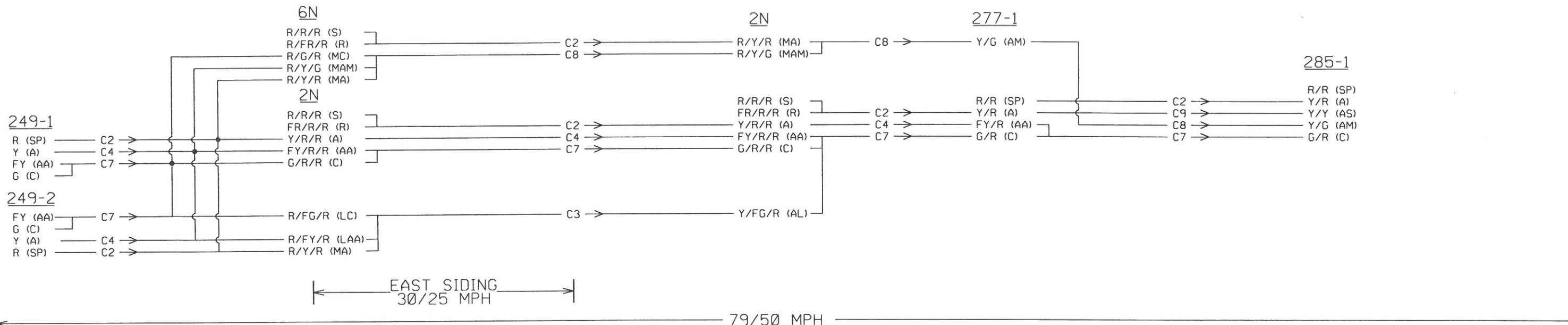
- LEGEND**
- (SP) = STOP AND PROCEED
 - (S) = STOP
 - (R) = RESTRICTING
 - (A) = APPROACH
 - (AA) = ADVANCE APPROACH
 - (AS) = APPROACH SLOW
 - (AM) = APPROACH MEDIUM
 - (AL) = APPROACH LIMITED
 - (C) = CLEAR
 - (LC) = LIMITED CLEAR
 - (LAA) = LIMITED ADVANCE APPROACH
 - (MC) = MEDIUM CLEAR
 - (MAM) = MEDIUM APPROACH MEDIUM
 - (MA) = MEDIUM APPROACH
 - (MAS) = MEDIUM APPROACH SLOW
 - (SC) = SLOW CLEAR
 - (SAA) = SLOW ADVANCE APPROACH
 - (SA) = SLOW APPROACH

- NOTES:**
- A = ACTUAL TRACK DISTANCE
 - AG = AVERAGE GRADE (FREIGHT TRAIN)
 - AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 - E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 - 1ST = FIRST APPROACH
 - 2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 37 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M37 PAGE NO:
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CP
DUMBARTON

CP
JUNCTION



EAST SIDING
30/25 MPH

79/50 MPH

2N	AG	AGF	E
1ST	-0.17	0.99	7172
2ND	-0.04	1.02	13790

2N	AG	AGF	E
1ST	-0.37	0.90	5331
2ND	-0.23	0.95	12534

277-1	AG	AGF	E
1ST	-0.31	0.88	1925
2ND	-0.34	0.90	7264

285-1	AG	AGF	E
1ST	-0.21	0.93	4239
2ND	-0.26	0.91	6170

A=7235'

A=5894'

A=2170'

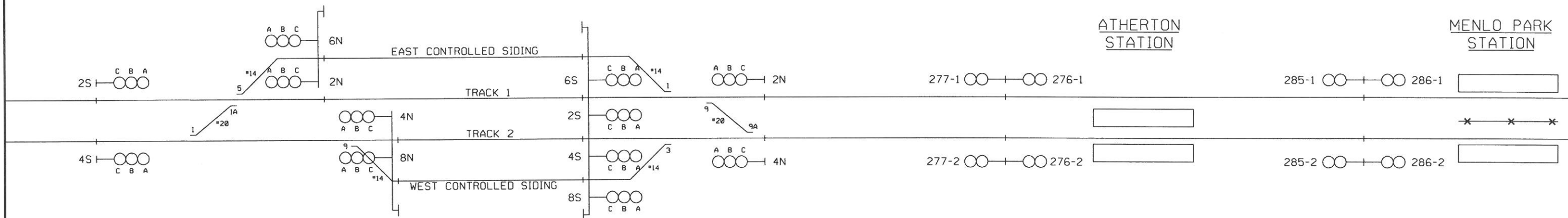
A=4550'

1577+14

1636+08

1657+78

1703+28





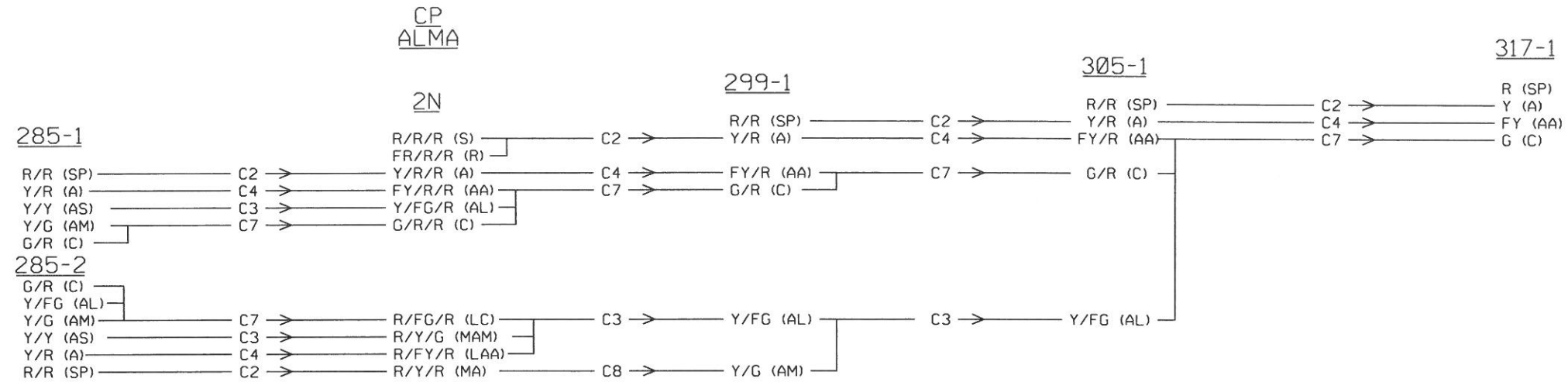
LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

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- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
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- 1ST = FIRST APPROACH
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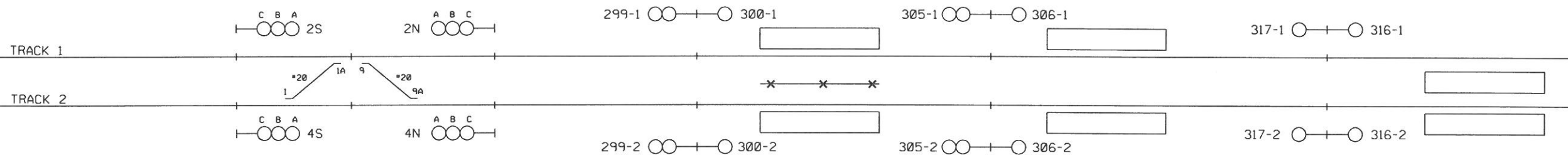
DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/SAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 38 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M38 PAGE NO:
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79/50 MPH DESIGN SPEED

2N	AG	AGF	E	299-1	AG	AGF	E	305-1	AG	AGF	E	317-1	AG	AGF	E
1ST	0.09	0.97	3814	1ST	0.25	1.00	2926	1ST	0.40	1.11	4046	1ST	0.16	1.08	6079
2ND	-0.03	0.95	8046	2ND	0.16	0.99	6796	2ND	0.28	1.06	6952	2ND	0.24	1.10	10137

A=3905' 1742+33 A=2929' 1771+62 A=3613' 1807+75 A=5610' 1863+85

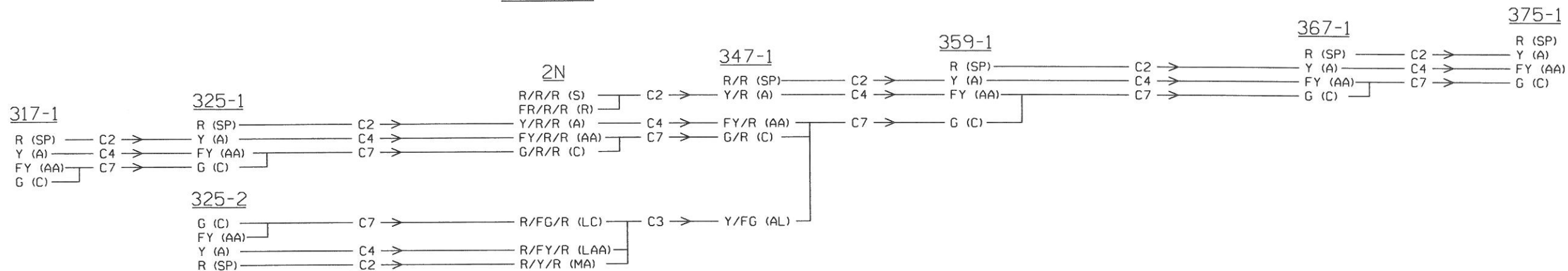


LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
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 (AL) = APPROACH LIMITED
 (C) = CLEAR
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 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
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 (SC) = SLOW CLEAR
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DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 39 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	ADOPTED DATE: NONE
	CHECKED BY C. J. ZERZAN			DESIGNED BY XORAIL		DRAWING NO: PN 0-52.M39	PAGE NO:
	APPROVED BY C. J. ZERZAN			CHECKED BY:			

CP
MAYFIELD



79/50 MPH DESIGN SPEED

325-1	AG	AGF	E
1ST	-0.09	0.99	4974
2ND	0.06	1.04	11036

2N	AG	AGF	E
1ST	-0.20	0.97	6578
2ND	-0.15	0.98	11556

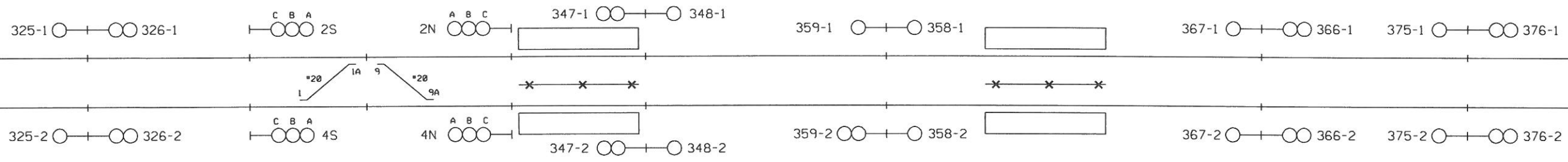
347-1	AG	AGF	E
1ST	-0.27	0.92	4408
2ND	-0.22	0.95	10942

359-1	AG	AGF	E
1ST	-0.34	0.92	5689
2ND	-0.32	0.92	10122

367-1	AG	AGF	E
1ST	-0.26	0.87	3168
2ND	-0.26	0.90	8854

375-1	AG	AGF	E
1ST	0.01	0.98	4552
2ND	-0.15	0.93	7723

A=5000' 1913+85 A=6763' 1981+48 A=4750' 2028+98 A=6140' 2090+38 A=3632' 2126+70 A=4632' 2173+02



SAN ANTONIO
STATION

MOUNTAIN VIEW
STATION

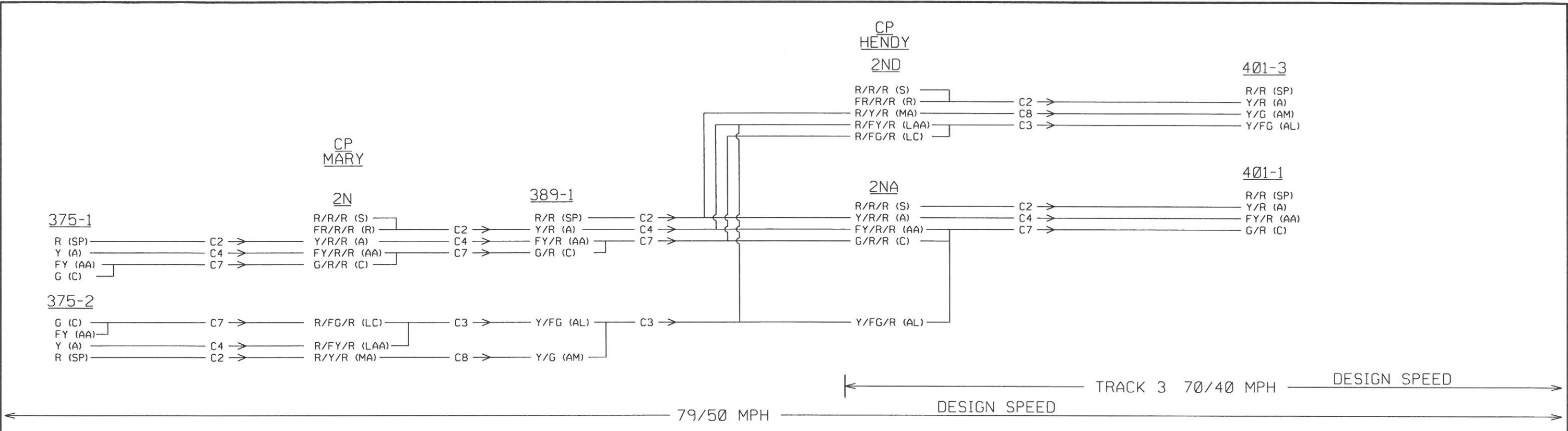
LEGEND

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DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 40 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M40 PAGE NO:
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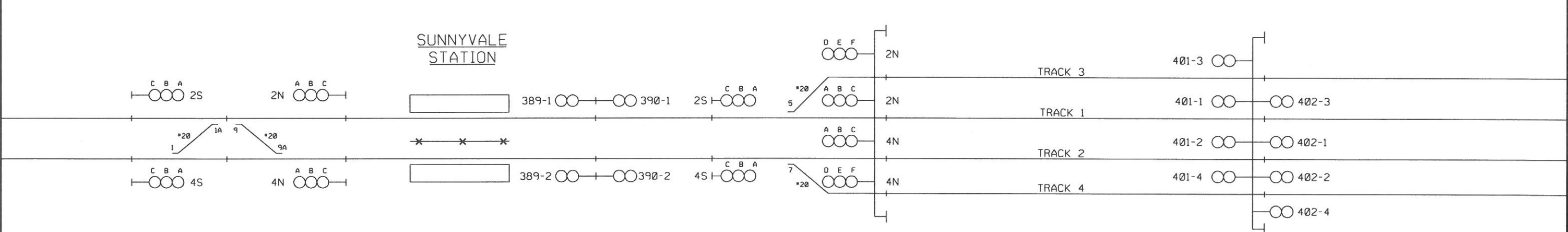


2N	AG	AGF	E
1ST	0.15	1.01	4498
2ND	0.08	0.99	9052

389-1	AG	AGF	E
1ST	0.25	1.03	3170
2ND	0.18	1.02	7666

2N	AG	AGF	E
1ST	0.27	1.08	3127
2ND	0.23	1.06	6304

401-1	AG	AGF	E
1ST	0.25	1.05	3807
2ND	0.28	1.07	6941



LEGEND

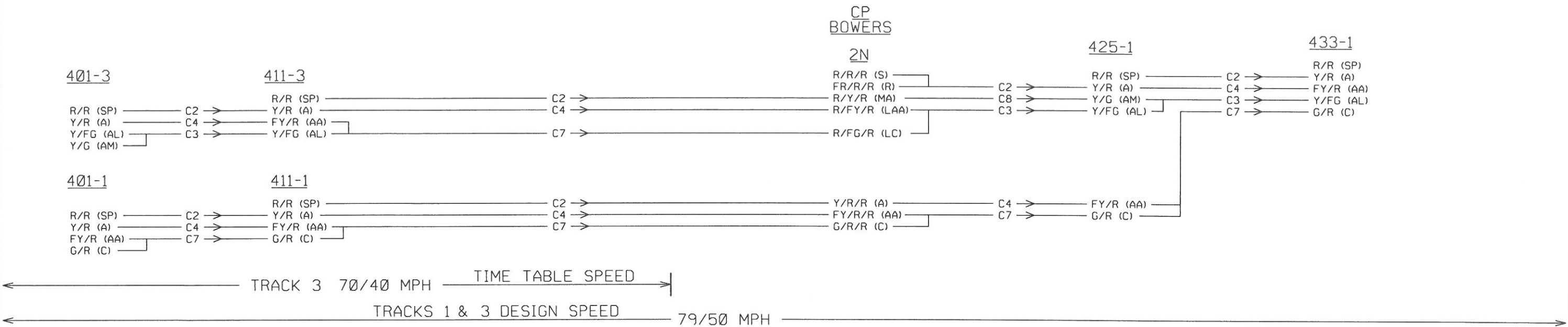
(S) = STOP
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 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH

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 (MAM) = MEDIUM APPROACH MEDIUM
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DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-0730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY: Z. A. ETKIN DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 41 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M41 PAGE NO:
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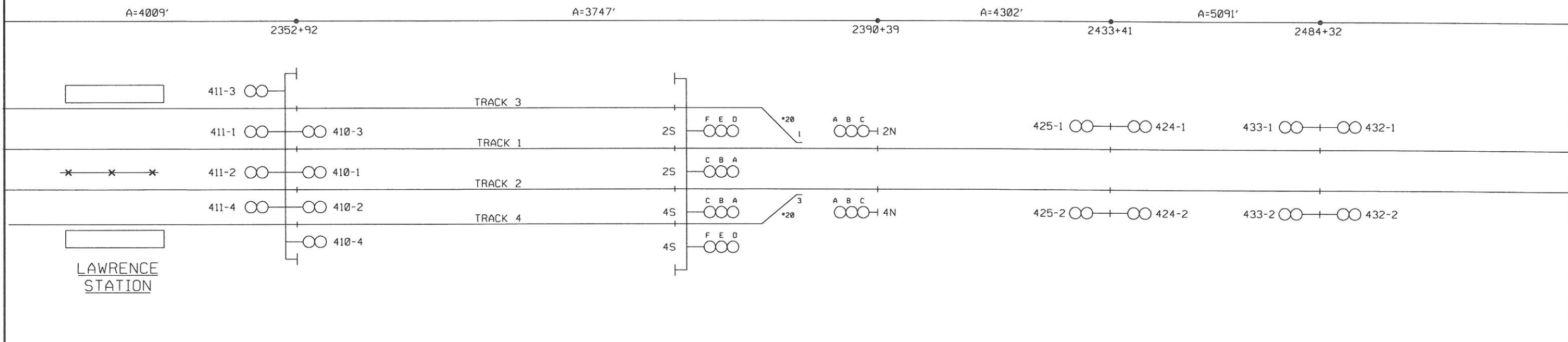


411-1	AG	AGF	E
1ST	0.15	1.07	4295
2ND	0.18	1.07	8138

2N	AG	AGF	E
1ST	0.04	1.02	3854
2ND	0.10	1.04	8109

425-1	AG	AGF	E
1ST	-0.06	0.99	4292
2ND	0.00	1.01	8154

433-1	AG	AGF	E
1ST	-0.10	0.97	4981
2ND	-0.08	0.98	9272



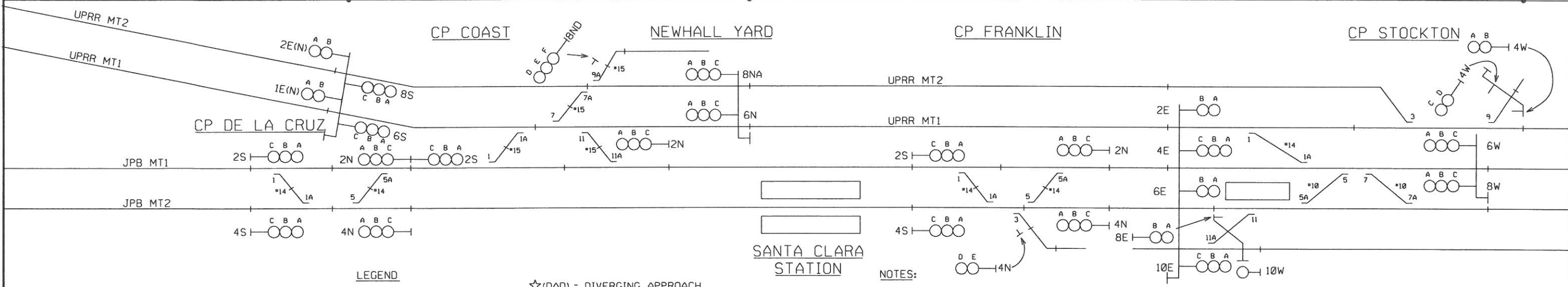
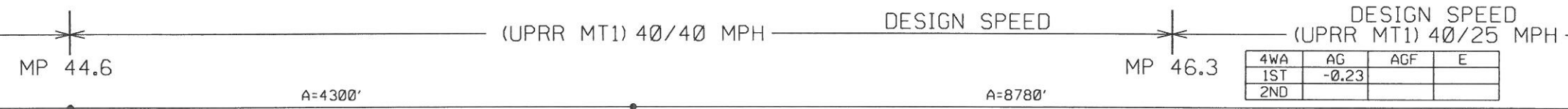
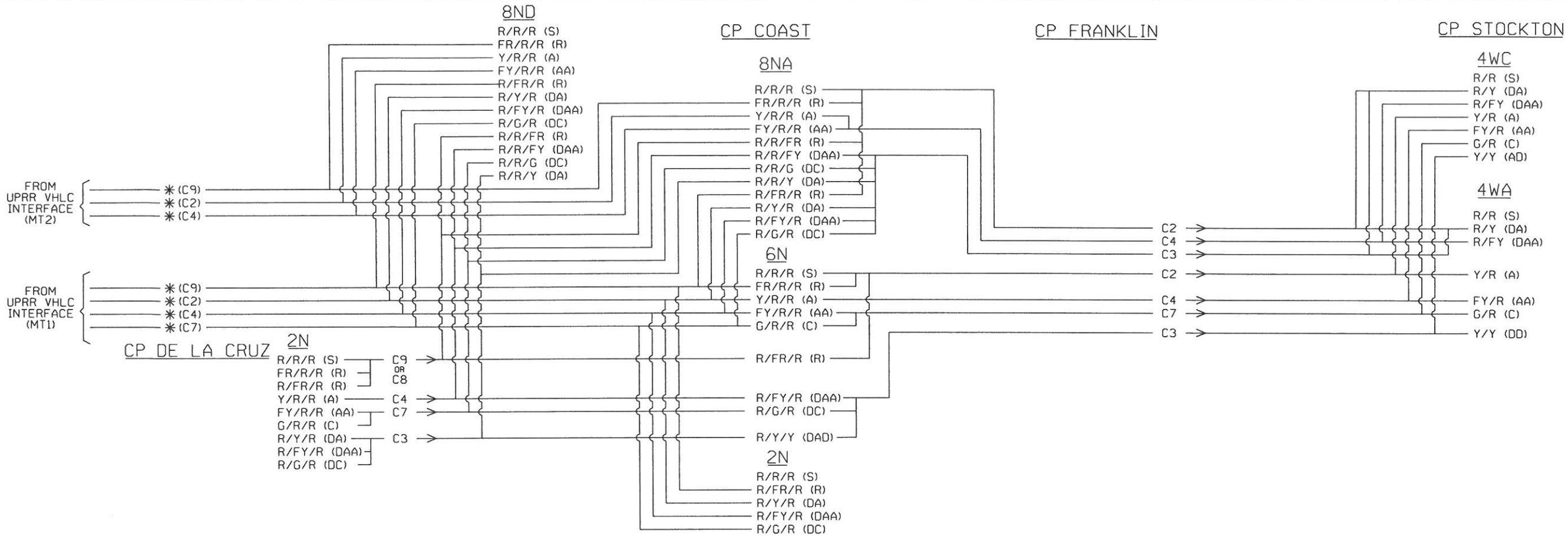
LEGEND

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- (R) = RESTRICTING
- (A) = APPROACH
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DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22205 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 1 PN 0-52 SH 42 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M42 PAGE NO:
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LEGEND



(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR
 (DC) = DIVERGING CLEAR

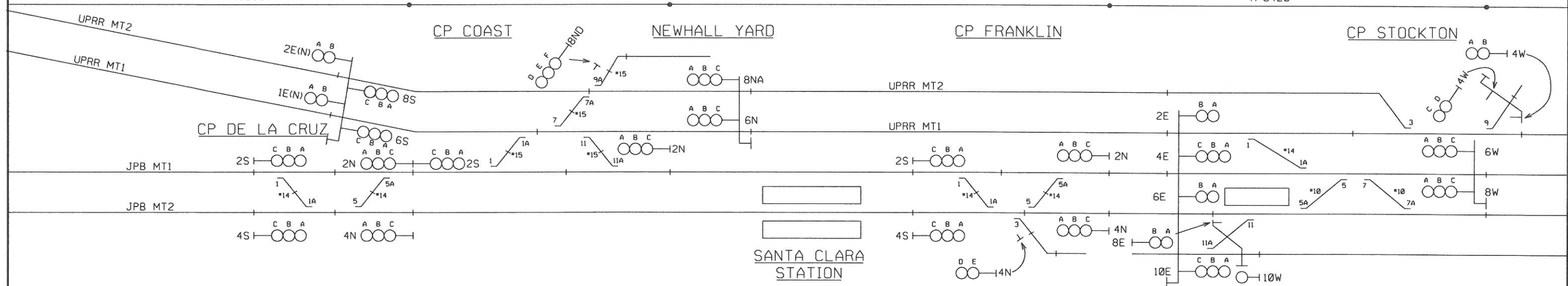
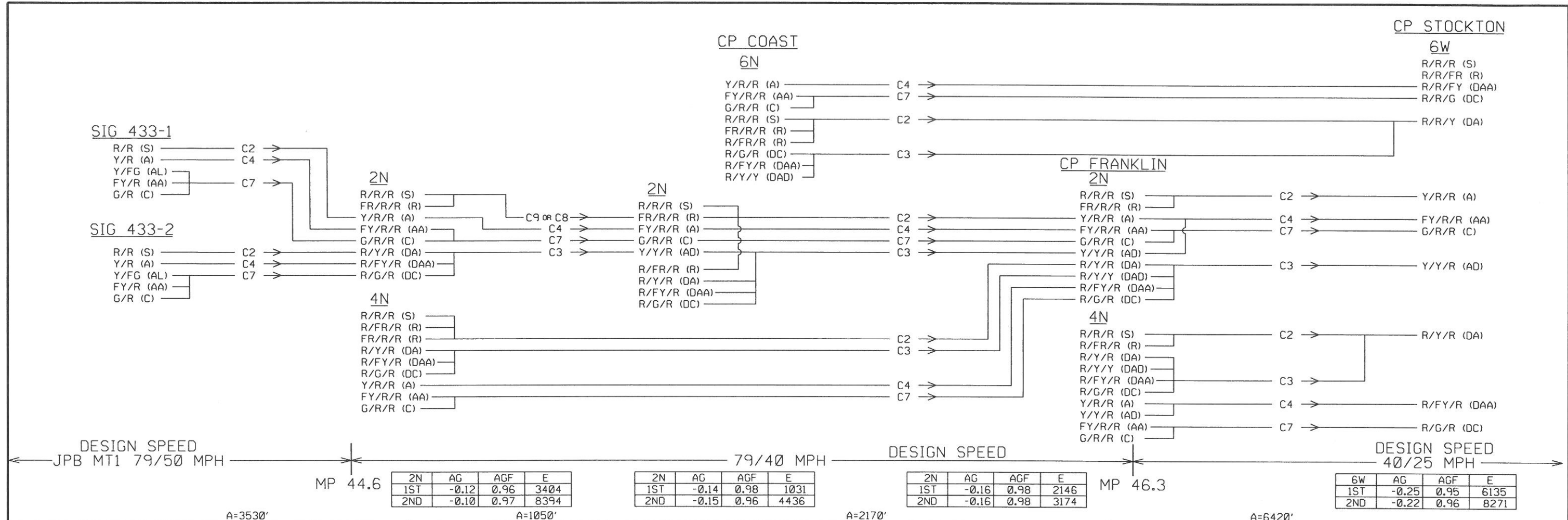
☆(DAD) = DIVERGING APPROACH DIVERGING
 (DAA) = DIVERGING ADVANCE APPROACH
 (DA) = DIVERGING APPROACH
 * = TRANSMITTED VIA VITAL SERIAL LINK
 ☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

NOTES:

A = ACTUAL TRACK DISTANCE
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DESIGN NOTES:
 SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2 NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2. JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1 & MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACKS UPRR MT1 & MT2 PN 0-52 SH 43 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M43 PAGE NO:
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LEGEND

(S) = STOP
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(R) = RESTRICTING
(A) = APPROACH
(AR) = APPROACH RESTRICTING
(AA) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR

☆(DAD) = DIVERGING APPROACH
(DAA) = DIVERGING ADVANCE APPROACH
(DA) = DIVERGING APPROACH
* = TRANSMITTED VIA VITAL SERIAL LINK
☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

NOTES:

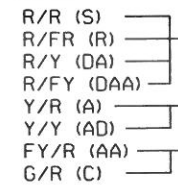
A = ACTUAL TRACK DISTANCE
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DESIGN NOTES:
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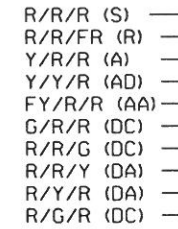
DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED BY: Z. A. ETKIN DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	<p>2898 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM</p>	<p>1250 San Carlos Avenue San Carlos, CA 94070</p>	DEPUTY DIRECTOR: S. CHAO MANAGER OF CAS: D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK JPB MT1 PN 0-52 SH 44 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M44 PAGE NO:
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CP STOCKTON

4WA

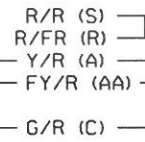


6W

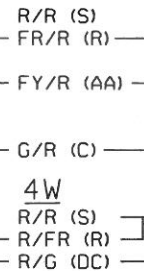


CP SHARK

2W

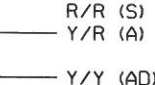


8W



CP ALAMEDA

10W-12W

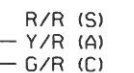


6W

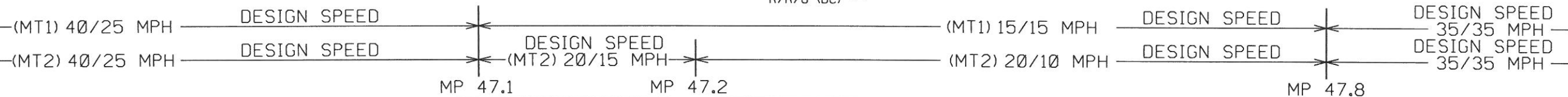


CP BIRD

18W



16W



2W	AG	AGF	E
1ST	-0.36	0.90	2787
2ND	-0.26	0.94	11184

8W	AG	AGF	E
1ST	-0.39	0.88	602
2ND	-0.36	0.91	3422

18W	AG	AGF	E
1ST	-0.28	0.93	3012
2ND	-0.30	0.92	3594

A=3065'
A=4195'

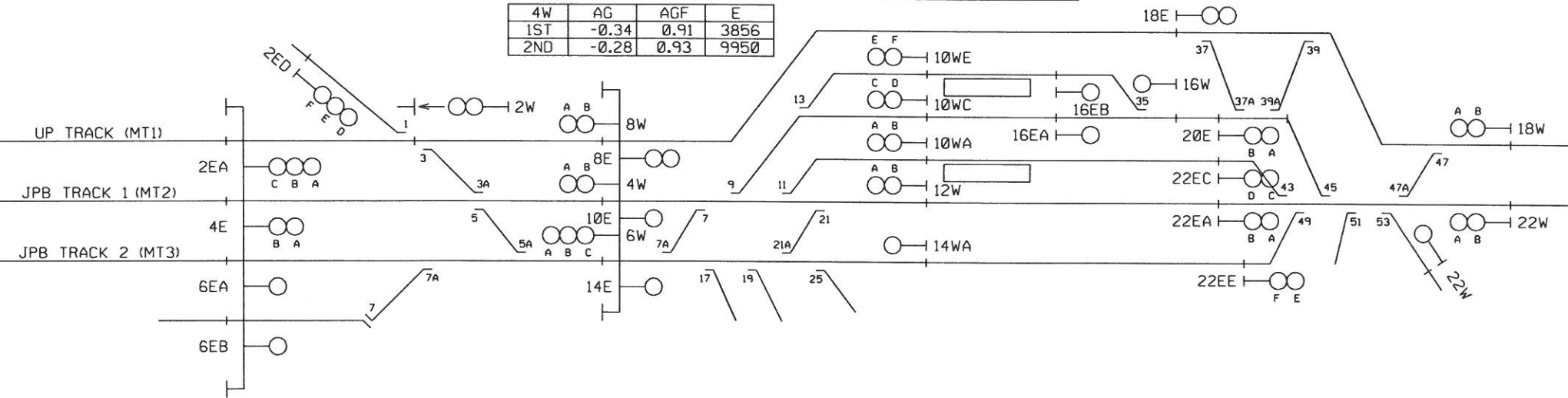
2652+42
2659+22

A=3212'

2691+34

CAHILL STATION

4W	AG	AGF	E
1ST	-0.34	0.91	3856
2ND	-0.28	0.93	9950





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- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 05-05-11 BY: XORAIL/ZAE FILE UWD11-28149A WD NO.: 89197 REMOVAL OF OLD CP ARENA ASBULT IN SVC. DATE 08-06-11 CORRECTED: 09-23-11 BY: XORAIL/ABP	DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBULT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY R. A. STEVENS APPROVED BY R. A. STEVENS	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS M. JOHNSON DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRKS MT1 & MT2 PN 0-52 SH 45 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 09-23-11	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M45 PAGE NO:
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CP BIRD

CP DELMAS

CP MACK

2N

18W

R/R (S)
R/FR (R)
Y/R (A)
FY/R (AA)
G/R (C)
R/Y (DA)

2W

R/R (S)
Y/R (A)
FY/R (AA)
G/R (C)
Y/Y (AD)

6W

R/R (S)
Y/R (A)
FY/R (AA)
G/R (C)
Y/Y (AD)

8WAC

R/R (S)
Y/R (A)
FY/R (AA)
R/Y (DA)
R/G (DC)

8WBD

R/R (S)
Y/R (A)
FY/R (AA)
R/Y (DA)
R/G (DC)

R/R/R (S)
FR/R/R (R)
R/FR/R (R)
R/R/FR (R)
Y/R/R (A)
FY/R/R (AA)

G/R/R (C)

R/Y/R (DA)
R/FY/R (DAA)
R/G/R (DC)

R/R/Y (DA)
R/R/G (DC)

TIME TABLE SPEED
79/60 MPH

DESIGN SPEED
79/40 MPH

MP 49.7

2W	AG	AGF	E
1ST	-0.29	0.90	3487
2ND	-0.28	0.92	6515

6W	AG	AGF	E
1ST	-0.22	0.97	2497
2ND	-0.28	0.93	6018

2N	AG	AGF	E
1ST	-0.26	0.91	2513
2ND	-0.22	0.96	5110

A=3861'

A=2571'

A=2740'

A=5173'

2729+95

2755+66

2783+06

2E

2W

6E

6W

2S

2N

4E

4W

8E

8WBD

6S

4S

6N

4ND

4NA

LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AR) = APPROACH RESTRICTING
(AA) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR
(DA) = DIVERGING APPROACH
(DAA) = DIVERGING ADVANCE APPROACH

NOTES:

A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED BY: Z. A. ETKIN
DRAWN BY: T. G. PEREZ
CHECKED BY: C. J. ZERZAN
APPROVED BY: C. J. ZERZAN

DESIGNED: 04-08-08 BY: XORAIL/ZAE
FILE: JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT

IN SVC. DATE: 05-20-10
CORRECTED: 03-30-11 BY: XORAIL/ABP

DESIGNED BY: Z. A. ETKIN
DRAWN BY: T. G. PEREZ
CHECKED BY: C. J. ZERZAN
APPROVED BY: C. J. ZERZAN

xorail

2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM

Caltrain

1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR: S. CHAO
MANAGER OF CAS: D. OBEDOZA
DESIGNED BY: XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 1

PN 0-52 SH 46 OF 62

DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
MAINTENANCE DRAWING	
ADOPTED DATE:	SCALE: NONE
DRAWING NO: PN 0-52.M46	PAGE NO:

CP
MICHAEL

2N

R/R/R (S)
FR/R/R (R)
R/FR/R (R)
R/R/FR (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)
R/Y/R (DA)
R/FY/R (DAA)
R/G/R (DC)
R/R/Y (DA)
R/R/G (DC)

C2
C4
C7
C8
C3

505-1

R/R (SP)
Y/R (A)

FY/R (AA)

G/R (C)

Y/L (AR)

Y/Y (AD)

505-2

R/R (SP)

Y/R (A)

Y/L (AR)

FY/R (AA)

G/R (C)

C2
C4

C7

C2

C4

C7

CP
LICK

2E

R/R (S)
Y/R (A)
FY/R (AA)

G/R (C)

R/Y (DA)

R/FY (DAA)

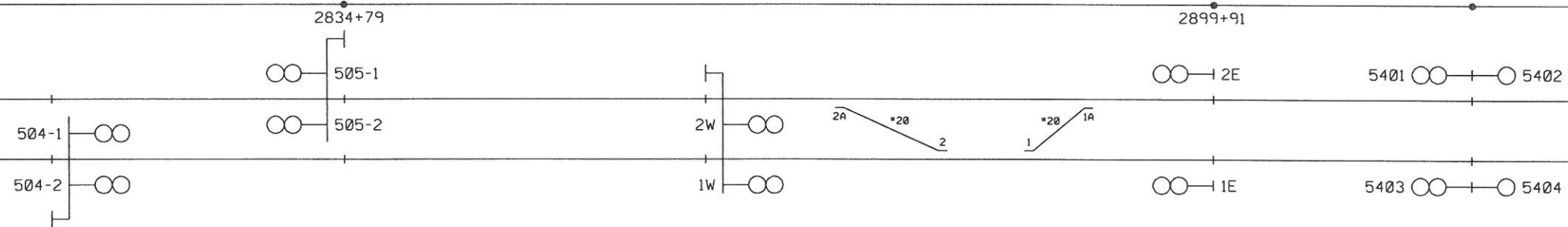
R/G (DC)

TIME TABLE SPEED 79/60 MPH

DESIGN SPEED 79/40 MPH

505-1	AG	AGF	E
1ST	-0.27	0.93	4858
2ND	-0.28	0.93	7409

A=6512'



LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AR) = APPROACH RESTRICTING
(AA) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR
(DA) = DIVERGING APPROACH
(DAA) = DIVERGING ADVANCE APPROACH

NOTES:

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AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN



2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM



1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 1

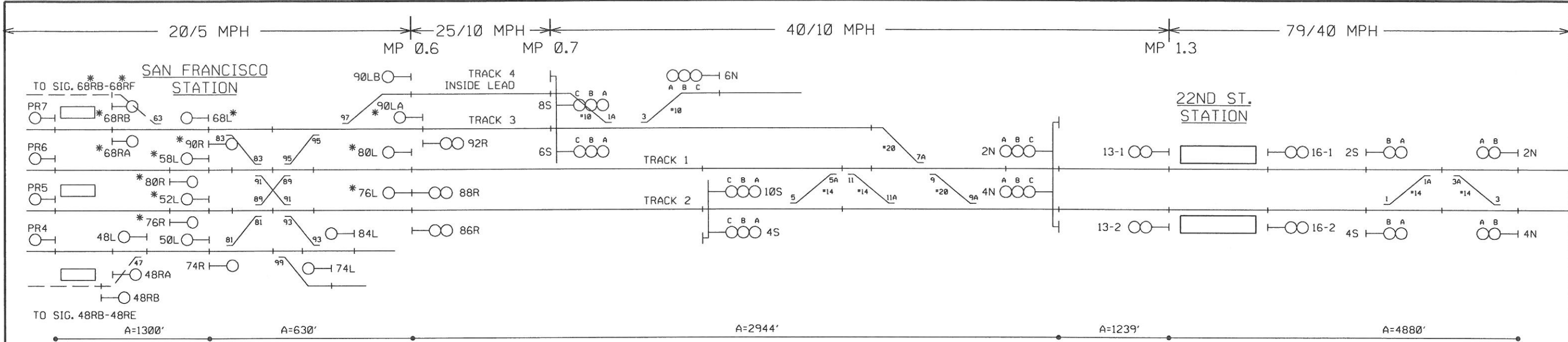
PN 0-52 SH 47 OF 62

DESIGN DATE: 12-14-04 REVISION DATE: 08-30-06

MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M47 PAGE NO:

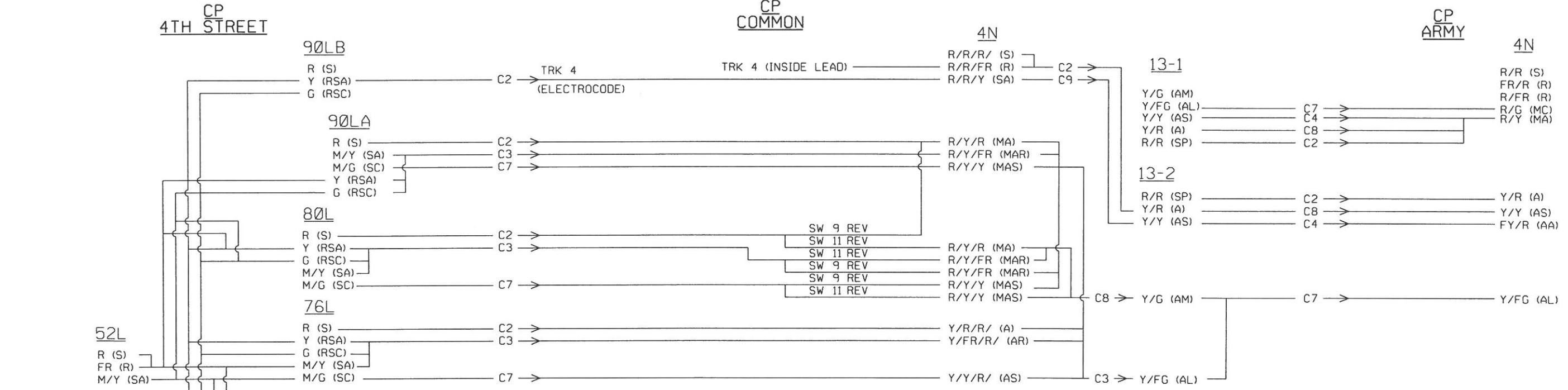


76L	AG	AGF	E
1ST		0.94	594
2ND		0.98	1907

4N	AG	AGF	E
1ST	-0.21	0.97	2845
2ND	-0.23	0.95	3474

13-2	AG	AGF	E
1ST	-0.24	0.95	1182
2ND	-0.21	0.96	4018

4N	AG	AGF	E
1ST	-0.15	0.93	4541
2ND	-0.15	0.94	5740



LEGEND

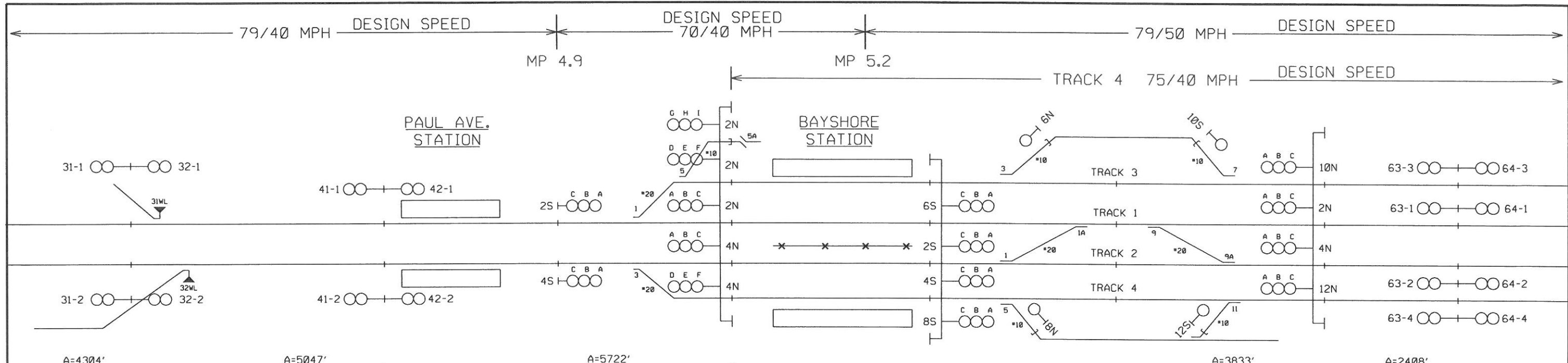
(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AR) = APPROACH RESTRICTING
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(MAR) = MEDIUM APPROACH RESTRICTING
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(RSA) = REDUCED SLOW APPROACH
(RSC) = REDUCED SLOW CLEAR
* = SIGNAL W/ MARKER LIGHT "M" (LUNAR) INSTALLED.

NOTES:

A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH
PR4-PR7 = ABSOLUTE RED SIGNALS AT THE END OF TRACK.

DESIGNED: 04-18-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT, STAGE C2	DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-0730 WD NO.: 625 CTC PROJECT ASBUILT	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	Caltrain 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF C&S D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 48 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 09-10-08	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M48 PAGE NO:
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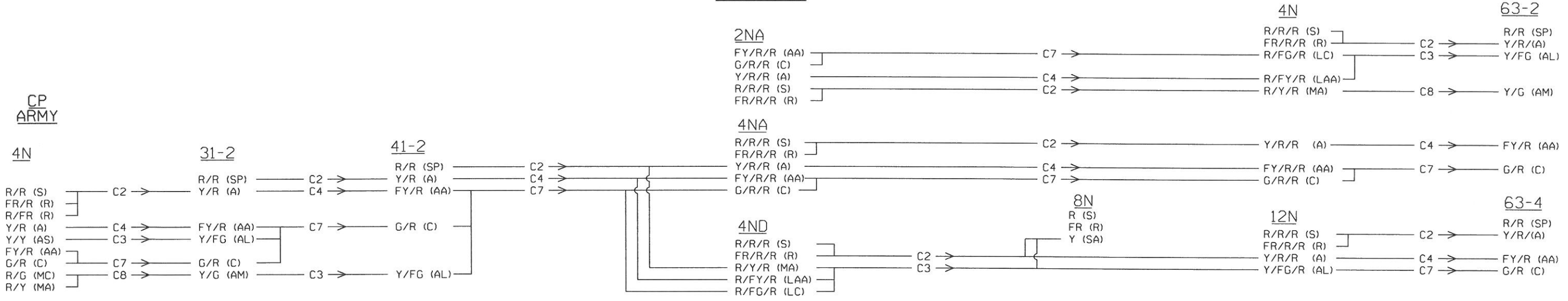


A=4304'				A=5047'				A=5722'				A=3833'				A=2408'			
353+12				403+59				460+81				499+14				523+22			
31-2	AG	AGF	E	41-2	AG	AGF	E	4N	AG	AGF	E	4N	AG	AGF	E	63-2	AG	AGF	E
1ST	0.04	0.99	4270	1ST	0.09	1.02	5167	1ST	0.09	1.03	5908	1ST	0.06	1.04	3999	1ST	-0.02	0.97	2358
2ND	-0.07	0.96	8816	2ND	0.05	1.01	9449	2ND	0.08	1.02	11053	2ND	0.07	1.03	9871	2ND	0.06	1.02	6386

CP TUNNEL

CP GENEVA

CP ARMY



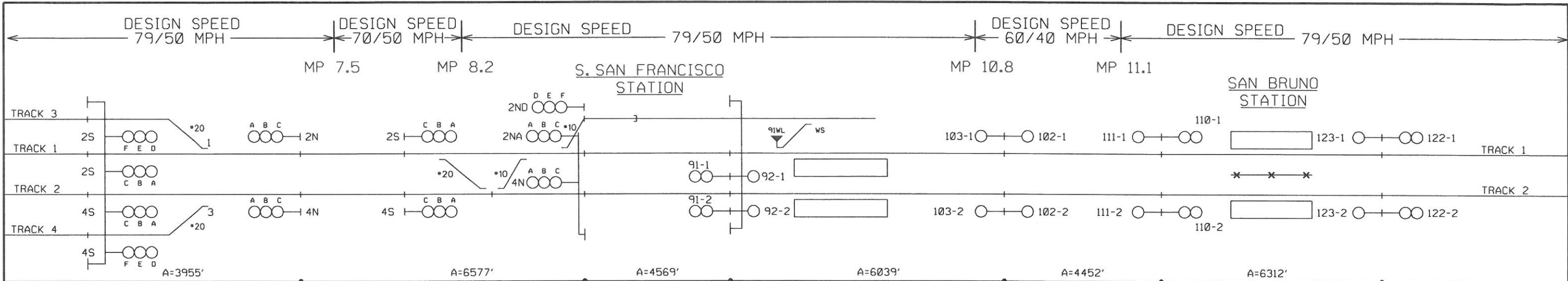
LEGEND

- (SP) = STOP AND APPROACH
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

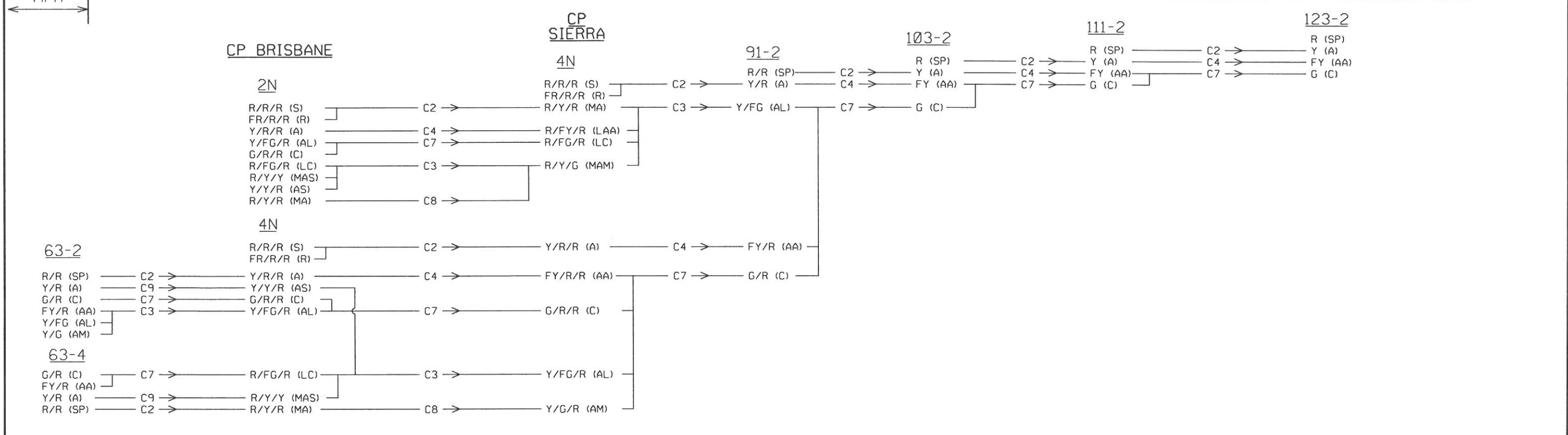
NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 49 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M49 PAGE NO:
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Station	Track	1ST	AG	AGF	E
562+77	4N	0.02	1.01	3996	
	E	-0.02	0.99	6321	
628+54	4N	-0.03	1.00	6590	
	E	-0.02	1.00	10567	
674+23	91-2	-0.01	0.98	4518	
	E	0.00	0.99	11113	
734+62	103-2	-0.02	0.98	5945	
	E	-0.03	0.98	10469	
779+14	111-2	0.01	0.98	4381	
	E	0.01	0.99	10422	
842+26	123-2	0.06	1.03	6506	
	E	0.00	1.00	10804	



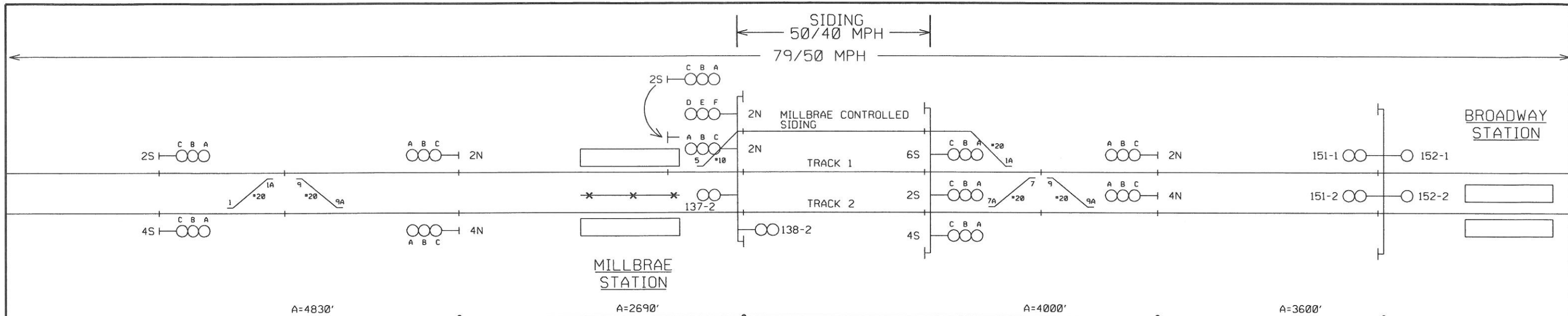
LEGEND

- (SP) = STOP AND APPROACH
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
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DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 SPEED SIGNAL ASPECTS PN 0-52 SH 50 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06
MAINTENANCE DRAWING						
ADOPTED DATE: SCALE: NONE						
DRAWING NO: PN 0-52.M50 PAGE NO:						

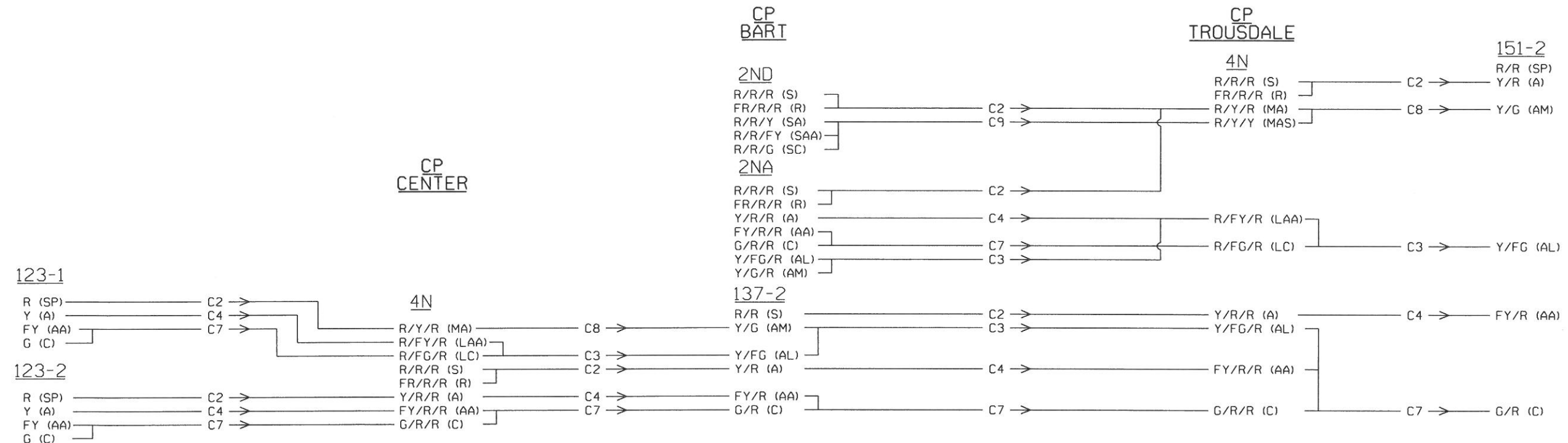


4N	AG	AGF	E
1ST	-0.05	0.96	4636
2ND	0.02	1.00	11110

137-2	AG	AGF	E
1ST	0.10	1.06	2864
2ND	-0.05	0.98	7373

4N	AG	AGF	E
1ST	-0.04	0.99	3973
2ND	0.06	1.03	6899

151-2	AG	AGF	E
1ST	-0.20	0.98	3530
2ND	-0.14	0.99	7515

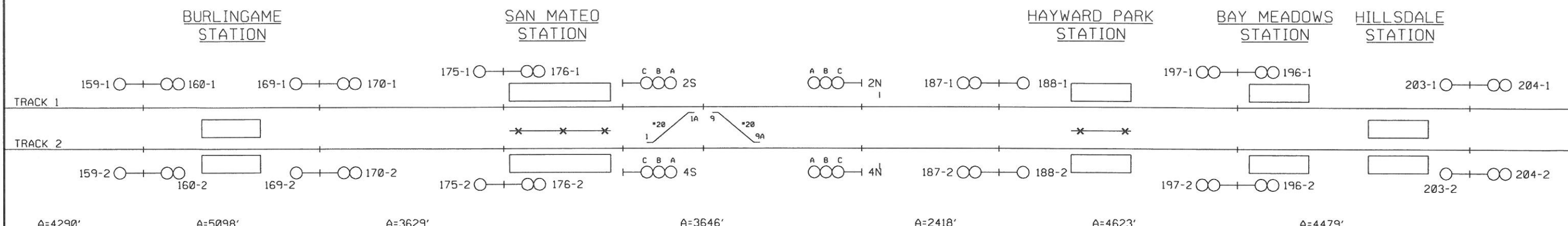


LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH
 (MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

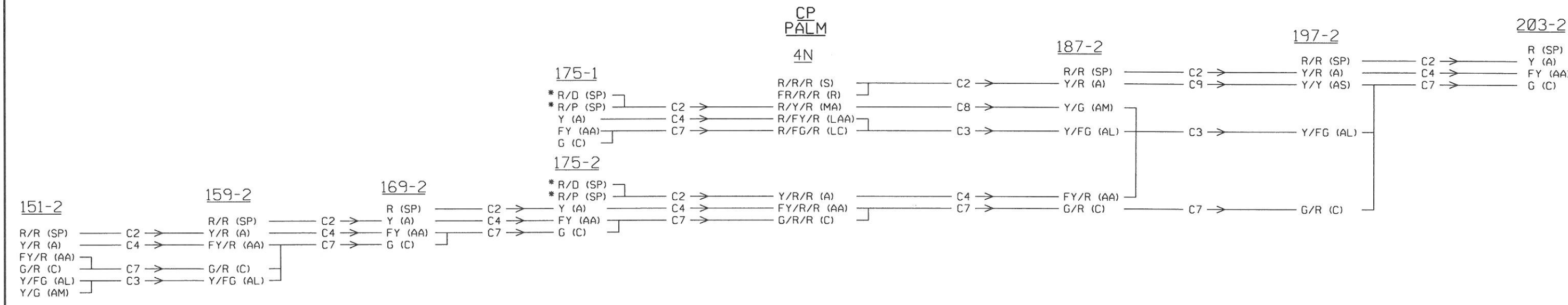
NOTES:
 A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 1ST = FIRST APPROACH
 2ND = SECOND APPROACH

DESIGNED: 06-30-06 BY: SWE/ZAE FILE JPB05-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF C&S D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 SPEED SIGNAL ASPECTS PN 0-52 SH 51 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 06-01-07 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M51 PAGE NO:
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DESIGN SPEED 79/50 MPH



1036+47				1087+45				1123+74				1160+20				1184+38				1230+61				1275+40			
159-2	AG	AGF	E	169-2	AG	AGF	E	175-2	AG	AGF	E	4N	AG	AGF	E	187-2	AG	AGF	E	197-2	AG	AGF	E	203-2	AG	AGF	E
1ST	-0.14	0.93	3989	1ST	-0.02	0.98	5001	1ST	0.16	1.01	3683	1ST	0.15	1.04	3824	1ST	0.03	1.06	2580	1ST	-0.08	0.98	4539	1ST	-0.29	0.96	4304
2ND	-0.11	0.95	7627	2ND	-0.08	0.96	9064	2ND	0.07	0.99	8672	2ND	0.13	1.03	7522	2ND	0.06	1.04	6385	2ND	0.00	1.01	7140	2ND	-0.21	0.97	8904





LEGEND

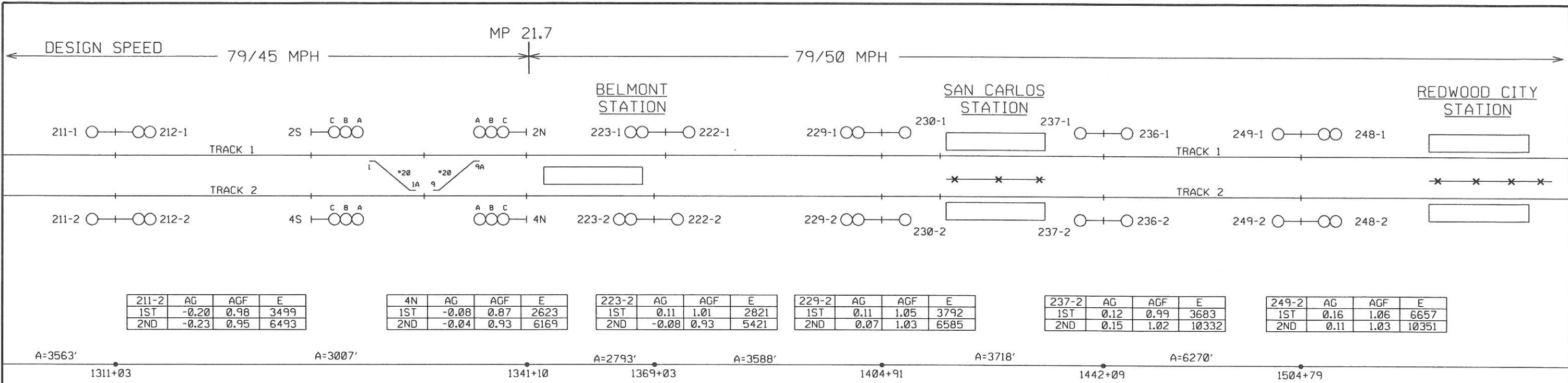
- (SP) = STOP AND PROCEED
- (S) = STOP
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- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
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- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

* R/P = BRIDGES ARE NORMAL
R/D = BRIDGES HAVE TO BE INSPECTED

NOTES:

- A = ACTUAL TRACK DISTANCE
- AG = AVERAGE GRADE (FREIGHT TRAIN)
- AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
- 1ST = FIRST APPROACH
- 2ND = SECOND APPROACH

DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE: 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-8867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 52 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M52 PAGE NO:
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211-2	AG	AGF	E
1ST	-0.20	0.98	3499
2ND	-0.23	0.95	6493

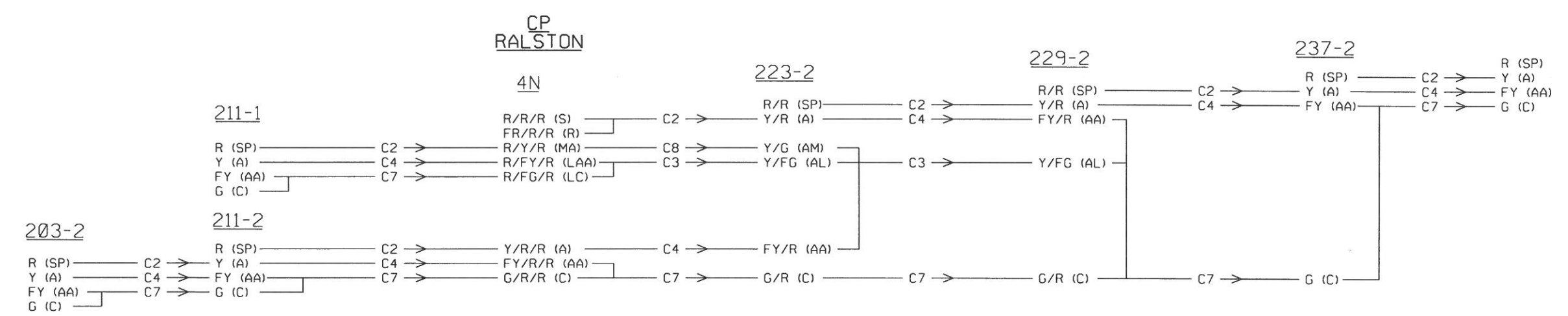
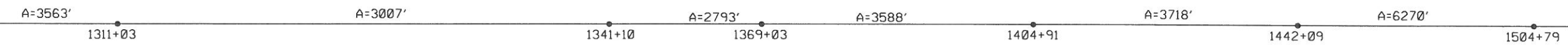
4N	AG	AGF	E
1ST	-0.08	0.87	2623
2ND	-0.04	0.93	6169

223-2	AG	AGF	E
1ST	0.11	1.01	2821
2ND	-0.08	0.93	5421

229-2	AG	AGF	E
1ST	0.11	1.05	3792
2ND	0.07	1.03	6585

237-2	AG	AGF	E
1ST	0.12	0.99	3683
2ND	0.15	1.02	10332

249-2	AG	AGF	E
1ST	0.16	1.06	6657
2ND	0.11	1.03	10351



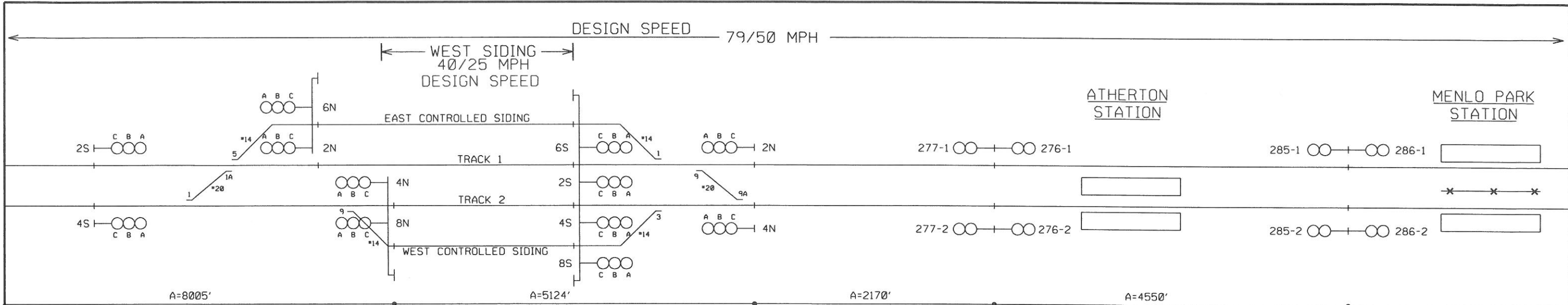
LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

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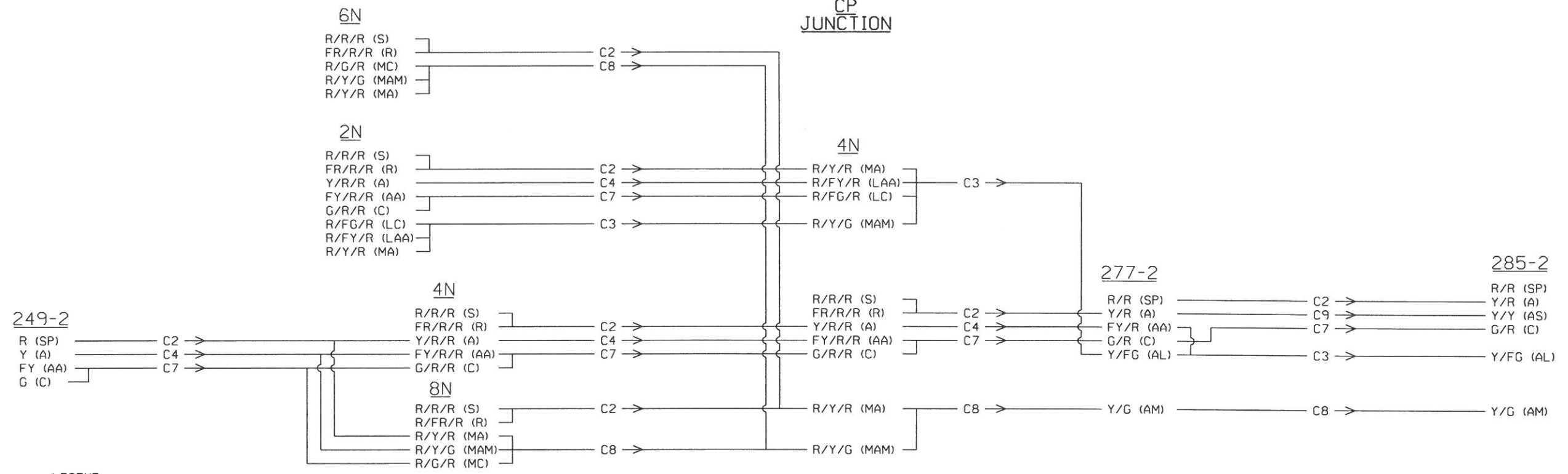
DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 53 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M53 PAGE NO:
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1584+84				1636+08				1657+78				1703+28			
4N	AG	AGF	E	4N	AG	AGF	E	277-2	AG	AGF	E	285-2	AG	AGF	E
1ST	-0.18	0.98	7884	1ST	-0.37	0.90	4631	1ST	-0.31	0.88	1925	1ST	-0.21	0.93	4239
2ND	-0.05	1.01	14500	2ND	-0.23	0.95	12534	2ND	-0.33	0.90	6564	2ND	-0.26	0.91	6170

CP DUMBARTON

CP JUNCTION



LEGEND

- (SP) = STOP AND PROCEED
- (S) = STOP
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

NOTES:

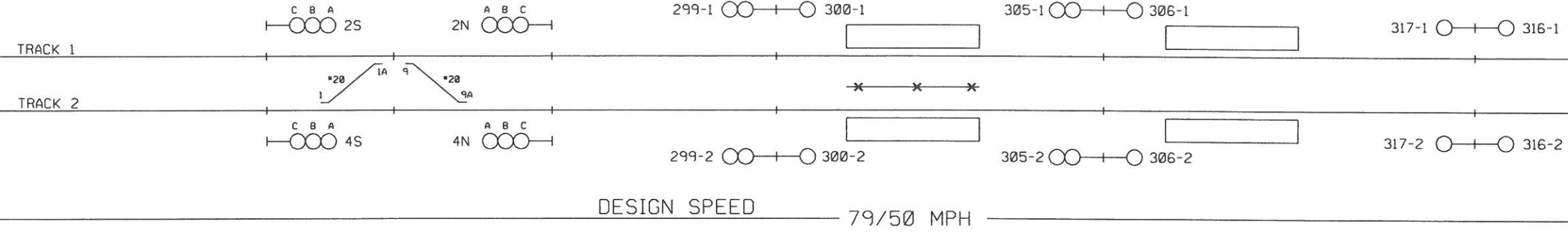
- A = ACTUAL TRACK DISTANCE
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- E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
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DESIGNED: 12-11-02 BY: SWE/ FILE JP800-8730 WD NO.: 625 CTC PROJECT ASBULT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZA	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 54 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M54 PAGE NO:
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PALO ALTO STATION

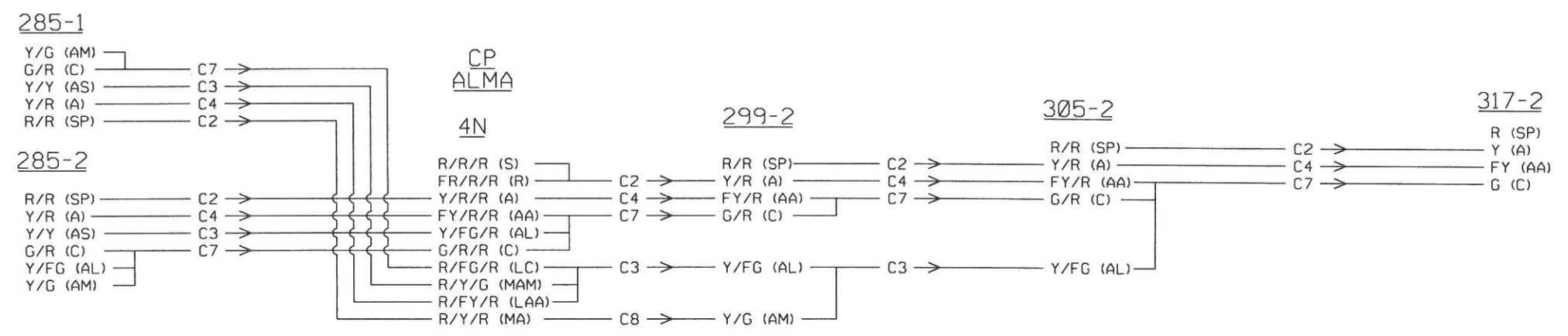
STANFORD STATION

CALIFORNIA AVE. STATION



4N	AG	AGF	E	299-2	AG	AGF	E	305-2	AG	AGF	E	317-2	AG	AGF	E
1ST	0.09	0.97	3814	1ST	0.25	1.00	2926	1ST	0.40	1.11	4046	1ST	0.16	1.08	6079
2ND	-0.03	0.95	8046	2ND	0.16	0.99	6796	2ND	0.28	1.06	6952	2ND	0.24	1.10	10137

A=3905' 1742+33 A=2929' 1771+62 A=3613' 1807+75 A=5610' 1863+85





LEGEND

- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AA) = ADVANCE APPROACH
- (AS) = APPROACH SLOW
- (AM) = APPROACH MEDIUM
- (AL) = APPROACH LIMITED
- (C) = CLEAR
- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
- (SAA) = SLOW ADVANCE APPROACH
- (SA) = SLOW APPROACH

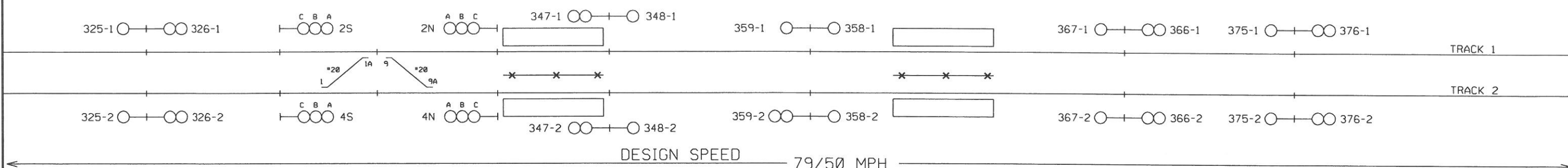
NOTES:

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DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 55 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M55 PAGE NO:
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SAN ANTONIO STATION

MOUNTAIN VIEW STATION



325-2	AG	AGF	E
1ST	-0.09	0.99	4974
2ND	0.06	1.04	11036

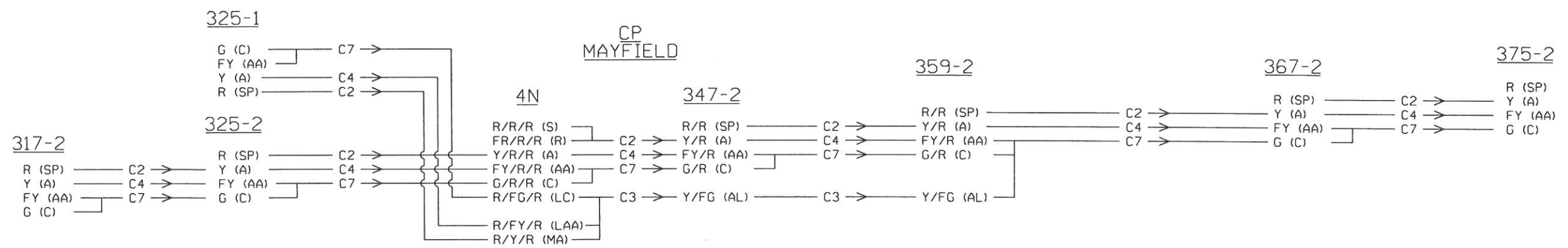
4N	AG	AGF	E
1ST	-0.20	0.97	6578
2ND	-0.15	0.98	11556

347-2	AG	AGF	E
1ST	-0.27	0.92	4408
2ND	-0.22	0.95	10942

359-2	AG	AGF	E
1ST	-0.34	0.92	5689
2ND	-0.32	0.92	10122

367-2	AG	AGF	E
1ST	-0.26	0.87	3168
2ND	-0.26	0.90	8854

375-2	AG	AGF	E
1ST	0.01	0.98	4552
2ND	-0.15	0.93	7723



LEGEND

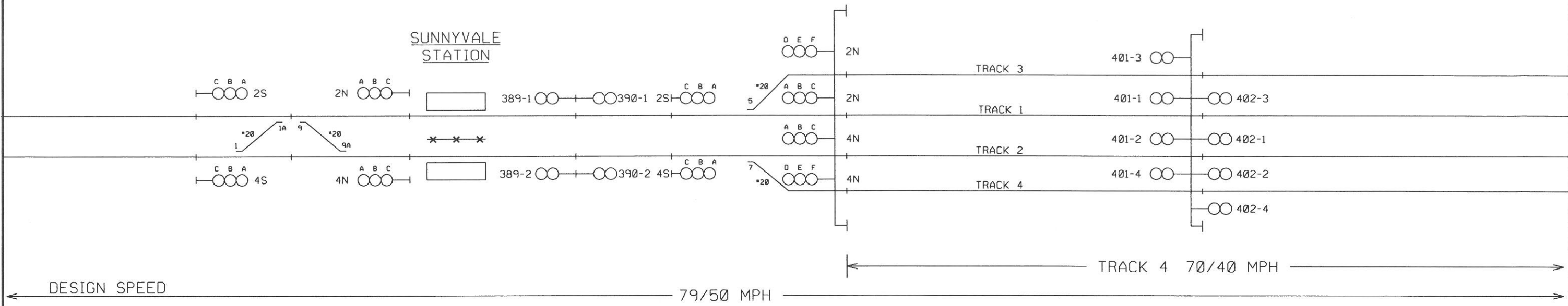
- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
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- (LC) = LIMITED CLEAR
- (LAA) = LIMITED ADVANCE APPROACH
- (MC) = MEDIUM CLEAR
- (MAM) = MEDIUM APPROACH MEDIUM
- (MA) = MEDIUM APPROACH
- (MAS) = MEDIUM APPROACH SLOW
- (SC) = SLOW CLEAR
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- (SA) = SLOW APPROACH

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DESIGNED: 12-11-02 BY: SWE/ FILE JP800-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 56 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M56 PAGE NO:
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SUNNYVALE STATION



4N	AG	AGF	E
1ST	0.15	1.01	4498
2ND	0.08	0.99	9052

389-2	AG	AGF	E
1ST	0.25	1.03	3170
2ND	0.18	1.02	7666

4N	AG	AGF	E
1ST	0.27	1.08	3127
2ND	0.23	1.06	6304

401-2	AG	AGF	E
1ST	0.25	1.05	3807
2ND	0.28	1.07	6941

A=4442'

A=3066'

A=2879'

A=3594'

CP MARY

CP HENDY

375-1

G (C)
FY (AA)
Y (A)
R (SP)

375-2

R (SP)
Y (A)
FY (AA)
G (C)

4N

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)
R/FG/R (LC)
R/FY/R (LAA)
R/Y/R (MA)

389-2

R/R/R (SP)
Y/R (A)
FY/R (AA)
G/R/ (C)
Y/FG/R (AL)
Y/G (AM)

4NA

R/R/R (S)
FR/R/R (R)
Y/R/R (A)
FY/R/R (AA)
G/R/R (C)
Y/FG/R (AL)

4ND

R/R/R (S)
FR/R/R (R)
R/Y/R (MA)
R/FY/R (LAA)
R/FG/R (LC)

401-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)

401-4

R/R (SP)
Y/R (A)
Y/G (AM)
Y/FG (AL)

LEGEND

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DESIGNED: 04-08-08 BY: XORAIL/ZAE
FILE JPB08-22285
WD NO.: 4732
SIGNAL OPTIMIZATION PROJECT
ASBUILT

DESIGNED: 12-11-02 BY: SWE/
FILE JPB00-8730
WD NO.: 625
CTC PROJECT
ASBUILT

DESIGNED BY
Z. A. ETKIN

DRAWN BY
T. G. PEREZ

CHECKED BY
C. J. ZERZAN

APPROVED BY
C. J. ZERZAN



2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM



1250 San Carlos Avenue
San Carlos, CA 94070

DEPUTY DIRECTOR
S. CHAO

MANAGER OF CAS
D. OBEDOZA

DESIGNED BY
XORAIL

CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD

CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 2

PN 0-52 SH 57 OF 62

DESIGN DATE:
04-08-08

REVISION DATE:
03-30-11

MAINTENANCE DRAWING

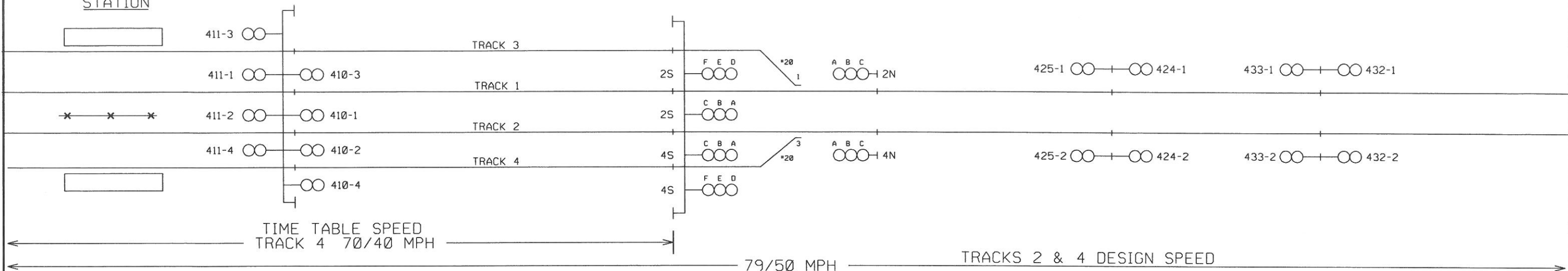
ADOPTED DATE:

SCALE:
NONE

DRAWING NO:
PN 0-52.M57

PAGE NO:

LAWRENCE STATION



411-2	AG	AGF	E
1ST	0.15	1.07	4295
2ND	0.18	1.07	8138

4N	AG	AGF	E
1ST	0.04	1.02	3854
2ND	0.10	1.04	8109

425-2	AG	AGF	E
1ST	-0.06	0.99	4292
2ND	0.00	1.01	8154

433-2	AG	AGF	E
1ST	-0.10	0.97	4981
2ND	-0.08	0.98	9272

A=4009'

A=3747'

A=4302'

A=5091'

2352+92

2390+39

2433+41

2484+32

CP BOWERS

401-2

R/R (SP) C2
Y/R (A) C4
FY/R (AA) C7
G/R (C)

411-2

R/R (SP) C2
Y/R (A) C4
FY/R (AA) C7
G/R (C)

401-4

R/R (SP) C2
Y/R (A) C4
Y/FG (AL) C3
Y/G (AM)

411-4

R/R (SP) C2
Y/R (A) C4
FY/R (AA) C7
Y/FG (AL) C3

4N

R/R/R (S) C2
FR/R/R (R) C4
Y/R/R (A) C7
FY/R/R (AA) C3
G/R/R (C)

425-2

R/R (S) C2
Y/R (A) C4
FY/R (AA) C7
G/R (C)

433-2

R/R (S) C2
Y/R (A) C4
FY/R (AA) C7
G/R (C)

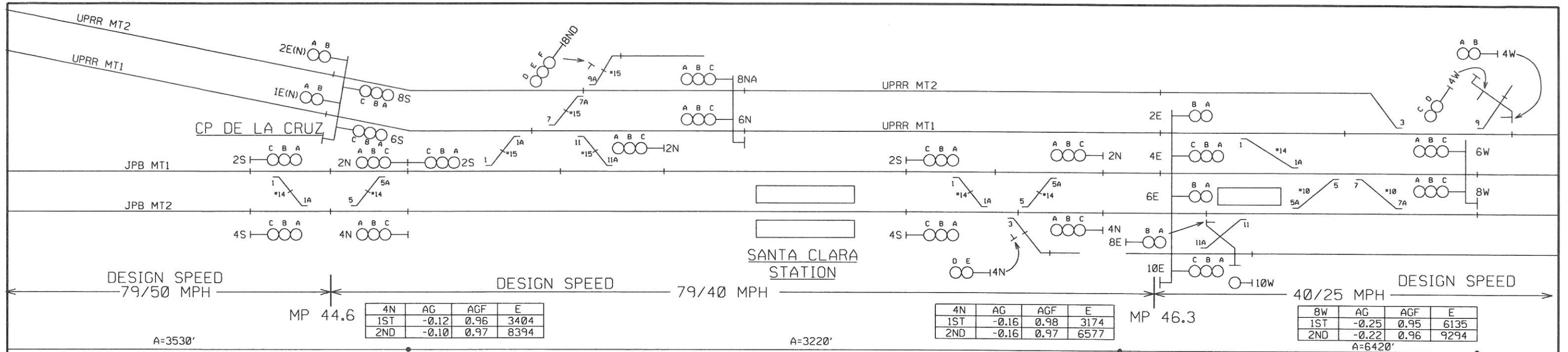
LEGEND

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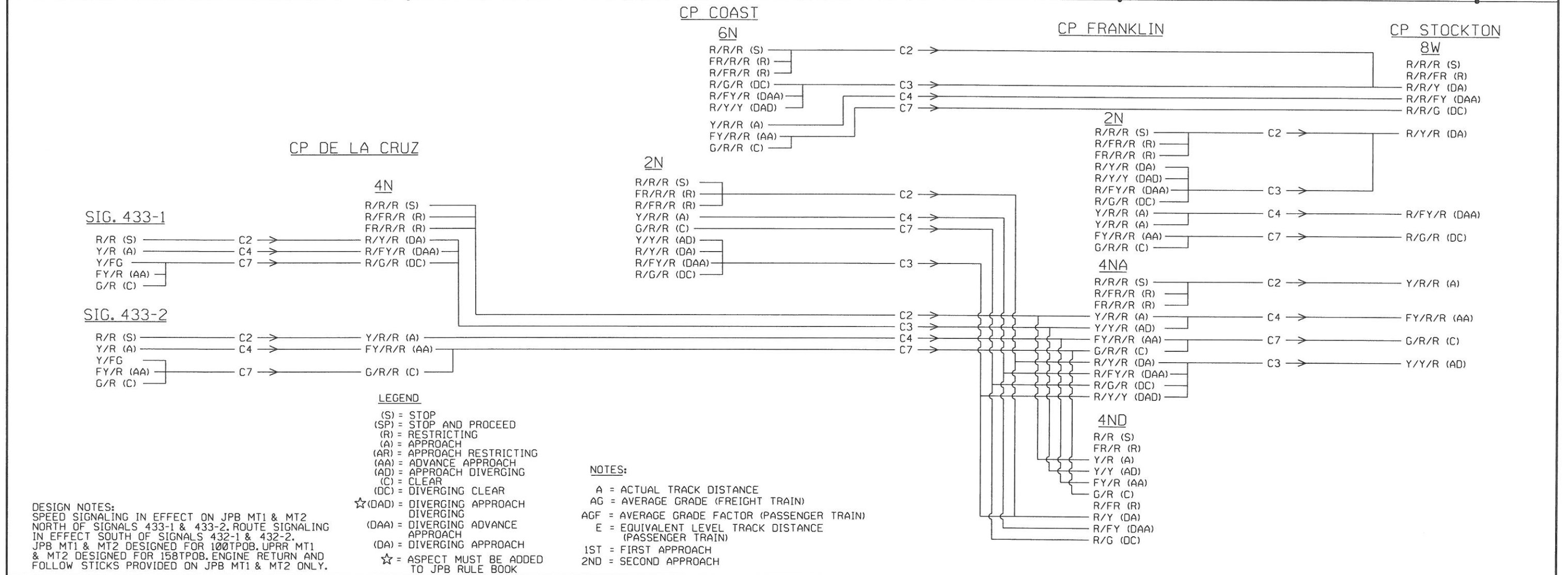
DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 58 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M58 PAGE NO:
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	4N	AG	AGF	E
1ST	-0.12	0.96	3404	
2ND	-0.10	0.97	8394	

	4N	AG	AGF	E
1ST	-0.16	0.98	3174	
2ND	-0.16	0.97	6577	

	8W	AG	AGF	E
1ST	-0.25	0.95	6135	
2ND	-0.22	0.96	9294	



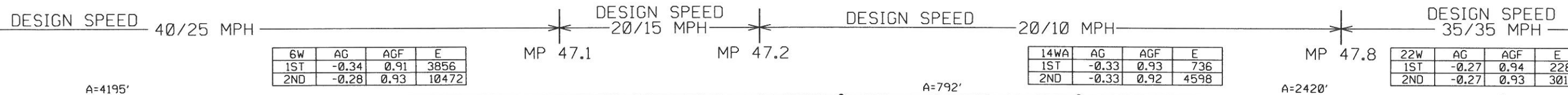
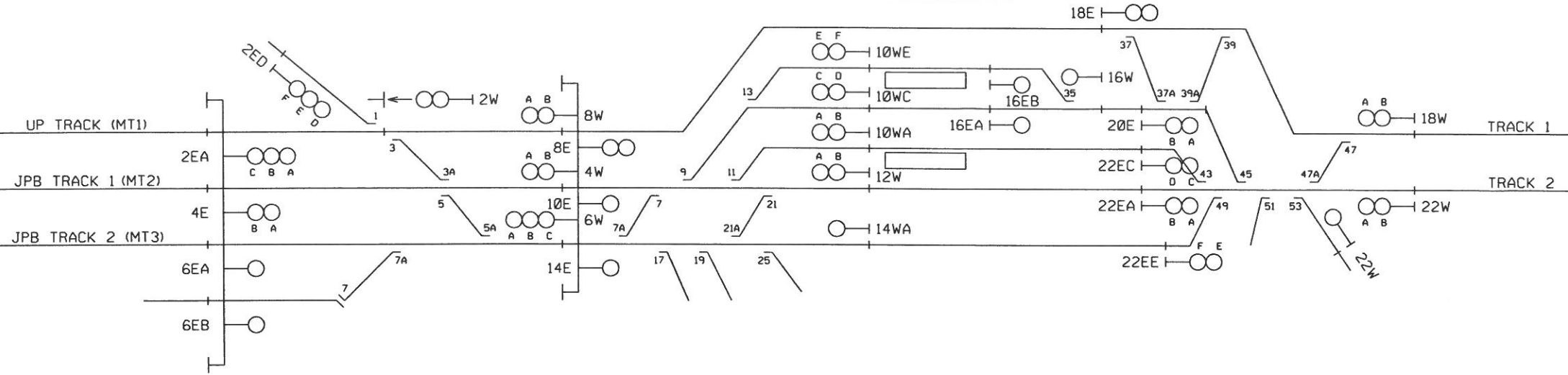
- LEGEND**
- (S) = STOP
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 - (R) = RESTRICTING
 - (A) = APPROACH
 - (AR) = APPROACH RESTRICTING
 - (AA) = ADVANCE APPROACH
 - (AD) = APPROACH DIVERGING
 - (C) = CLEAR
 - (DC) = DIVERGING CLEAR
 - ☆(DAD) = DIVERGING APPROACH DIVERGING
 - (DAA) = DIVERGING ADVANCE APPROACH
 - (DA) = DIVERGING APPROACH
 - ☆ = ASPECT MUST BE ADDED TO JPB RULE BOOK

- NOTES:**
- A = ACTUAL TRACK DISTANCE
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 - 2ND = SECOND APPROACH

DESIGN NOTES:
 SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2 NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2. JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1 & MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF C&S D. OBEDOZA DESIGNED BY XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK JPB MT2 PN 0-52 SH 59 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M59 PAGE NO:
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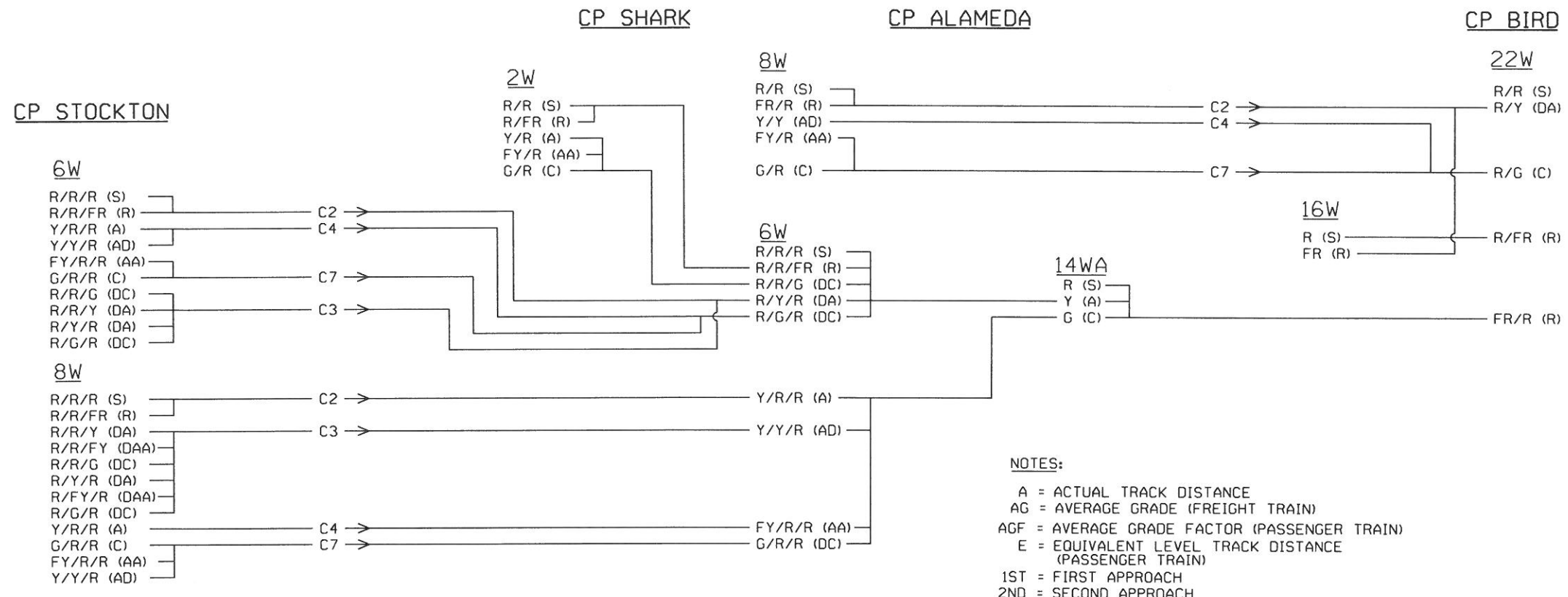
CAHILL STATION



6W	AG	AGF	E
1ST	-0.34	0.91	3856
2ND	-0.28	0.93	10472



14WA	AG	AGF	E
1ST	-0.33	0.93	736
2ND	-0.33	0.92	4598

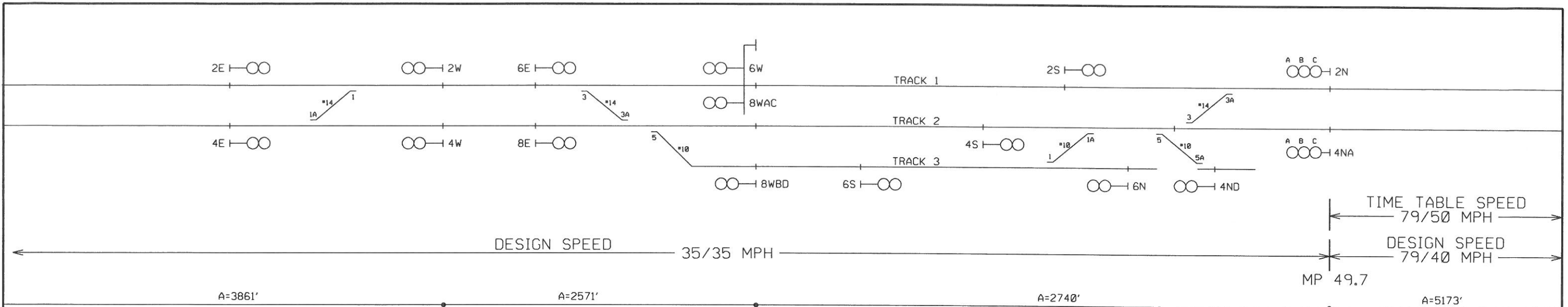
22W	AG	AGF	E
1ST	-0.27	0.94	2281
2ND	-0.27	0.93	3013



- LEGEND**
- (S) = STOP
 - (SP) = STOP AND PROCEED
 - (R) = RESTRICTING
 - (A) = APPROACH
 - (AA) = ADVANCE APPROACH
 - (AD) = APPROACH DIVERGING
 - (C) = CLEAR
 - (DC) = DIVERGING CLEAR
 - (DAA) = DIVERGING ADVANCE APPROACH
 - (DA) = DIVERGING APPROACH

- NOTES:**
- A = ACTUAL TRACK DISTANCE
 - AG = AVERAGE GRADE (FREIGHT TRAIN)
 - AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 - E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
 - 1ST = FIRST APPROACH
 - 2ND = SECOND APPROACH

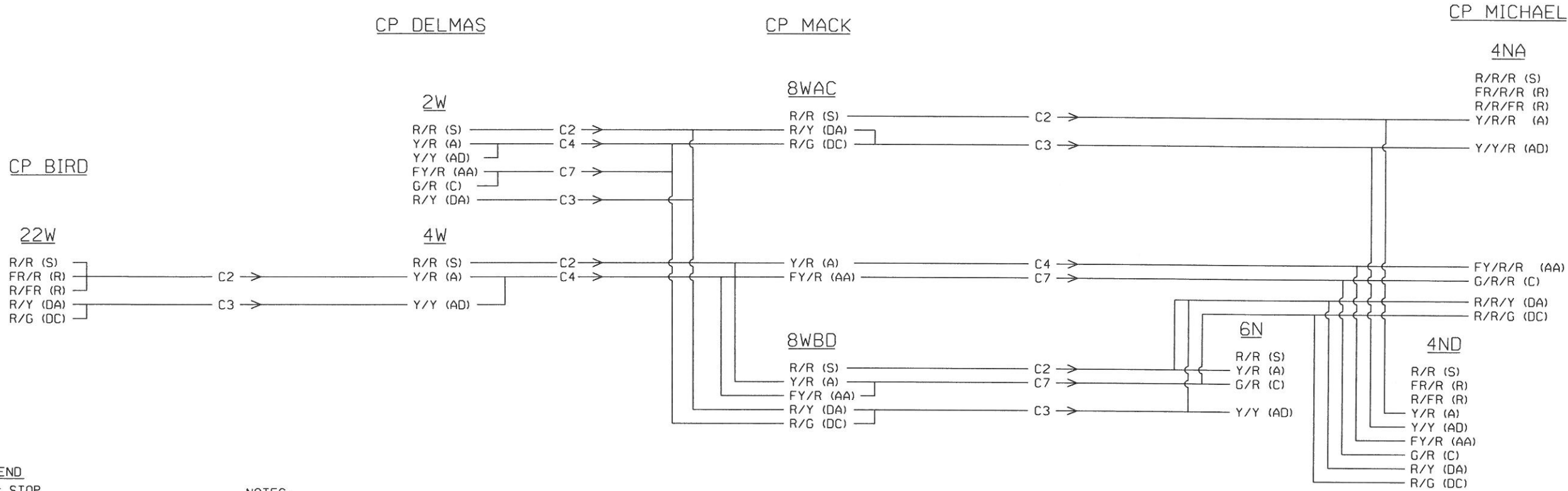
DESIGNED: 05-05-11 BY: XORAIL/ZAE FILE UWD11-28149A WD NO.: 89197 REMOVAL OF OLD CP ARENA ASBUILT	DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT	DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY R. A. STEVENS APPROVED BY R. A. STEVENS	 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	 1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS M. JOHNSON DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK MT3 PN 0-52 SH 60 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 09-23-11
MAINTENANCE DRAWING						ADOPTED DATE: SCALE: NONE	DRAWING NO: PAGE NO: PN 0-52.M60



4W	AG	AGF	E
1ST	-0.29	0.90	3487
2ND	-0.27	0.92	5789

8WAC	AG	AGF	E
1ST	-0.22	0.97	2497
2ND	-0.28	0.93	6018

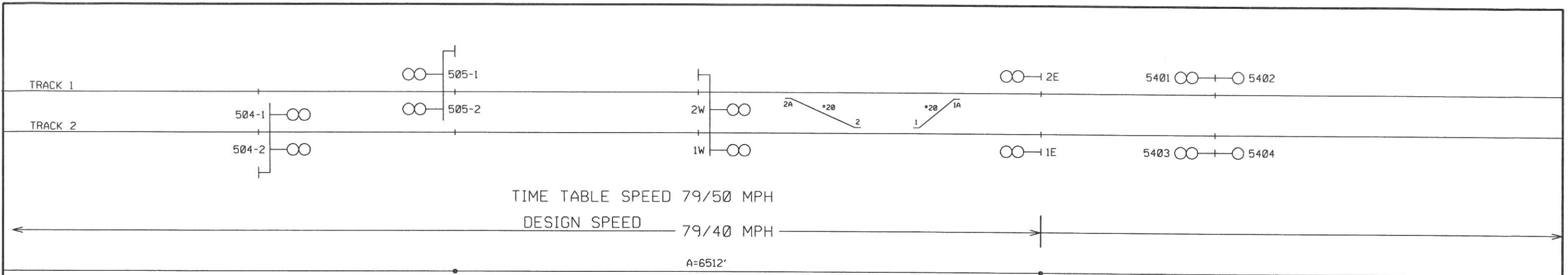
4W	AG	AGF	E
1ST	-0.26	0.91	2513
2ND	-0.22	0.96	5110



LEGEND
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 (R) = RESTRICTING
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 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR
 (DC) = DIVERGING CLEAR
 (DA) = DIVERGING APPROACH
 (DAA) = DIVERGING ADVANCE APPROACH

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 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
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DESIGNED BY: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	DESIGNED BY: Z. A. ETKIN	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	1250 San Carlos Avenue San Carlos, CA 94070	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 61 OF 62	DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
	DRAWN BY: T. G. PEREZ			MANAGER OF CAS D. OBEDOZA		MAINTENANCE DRAWING	
	CHECKED BY: C. J. ZERZAN			DESIGNED BY: XORAIL		ADOPTED DATE: NONE	SCALE: NONE
	APPROVED BY: C. J. ZERZAN			CHECKED BY:		DRAWING NO: PN 0-52.M61	PAGE NO:



505-2	AG	AGF	E
1ST	-0.27	0.93	4858
2ND	-0.28	0.93	7409

CP
MICHAEL

CP
LICK

1E

R/R (S)
R/Y (DA)
R/FY (DAA)

505-1

R/R (SP)
Y/R (A)
Y/L (AR)
Y/Y (AD)
FY/R (AA)
G/R (C)

C2 →
C4 →

R/G (DC)

505-2

R/R (SP)
Y/R (A)
FY/R (AA)
G/R (C)
Y/L (AR)

C2 →
C4 →
C7 →

Y/R (A)
FY/R (AA)

G/R (C)

4N

R/R/R (S)
FR/R/R (R)
R/R/FR (R)
Y/R/R (A)
Y/Y/R (AD)
FY/R/R (AA)
G/R/R (C)
R/R/Y (DA)
R/R/G (DC)

C2 →
C4 →
C7 →
C8 →

LEGEND

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- (R) = RESTRICTING
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- 1ST = FIRST APPROACH
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DESIGNED BY Z. A. ETKIN DRAWN BY T. G. PEREZ CHECKED BY C. J. ZERZAN APPROVED BY C. J. ZERZAN	xorail <small>2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM</small>	<small>1250 San Carlos Avenue San Carlos, CA 94070</small>	DEPUTY DIRECTOR S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 62 OF 62	DESIGN DATE: 12-14-04 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PN 0-52.M62 PAGE NO:
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