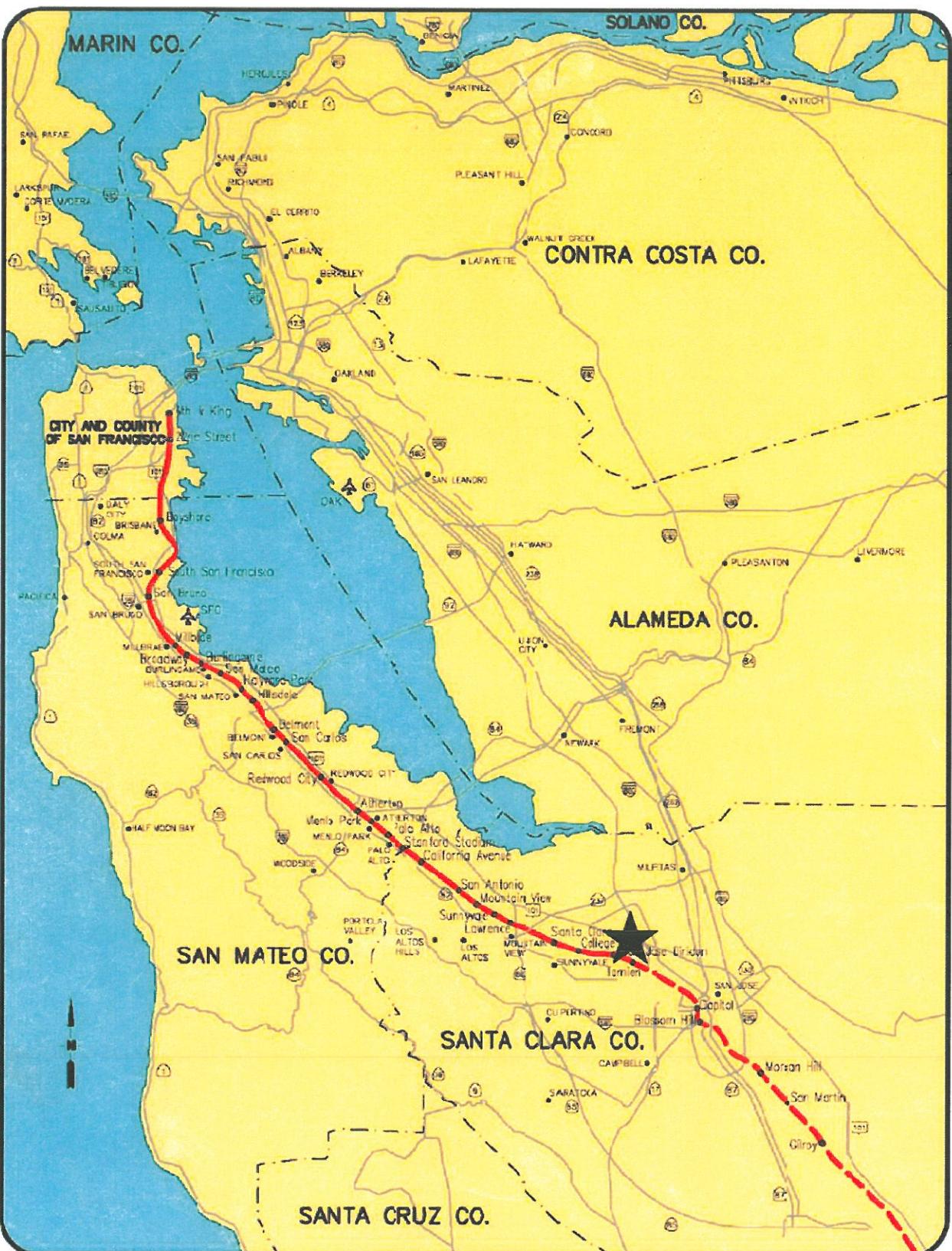


SAN FRANCISCO BAY AREA



SIGNAL ASPECT CHART JPB SIGNAL DRAWINGS

PENINSULA CORRIDOR JOINT POWERS BOARD

Record Drawings
April 1, 2011

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

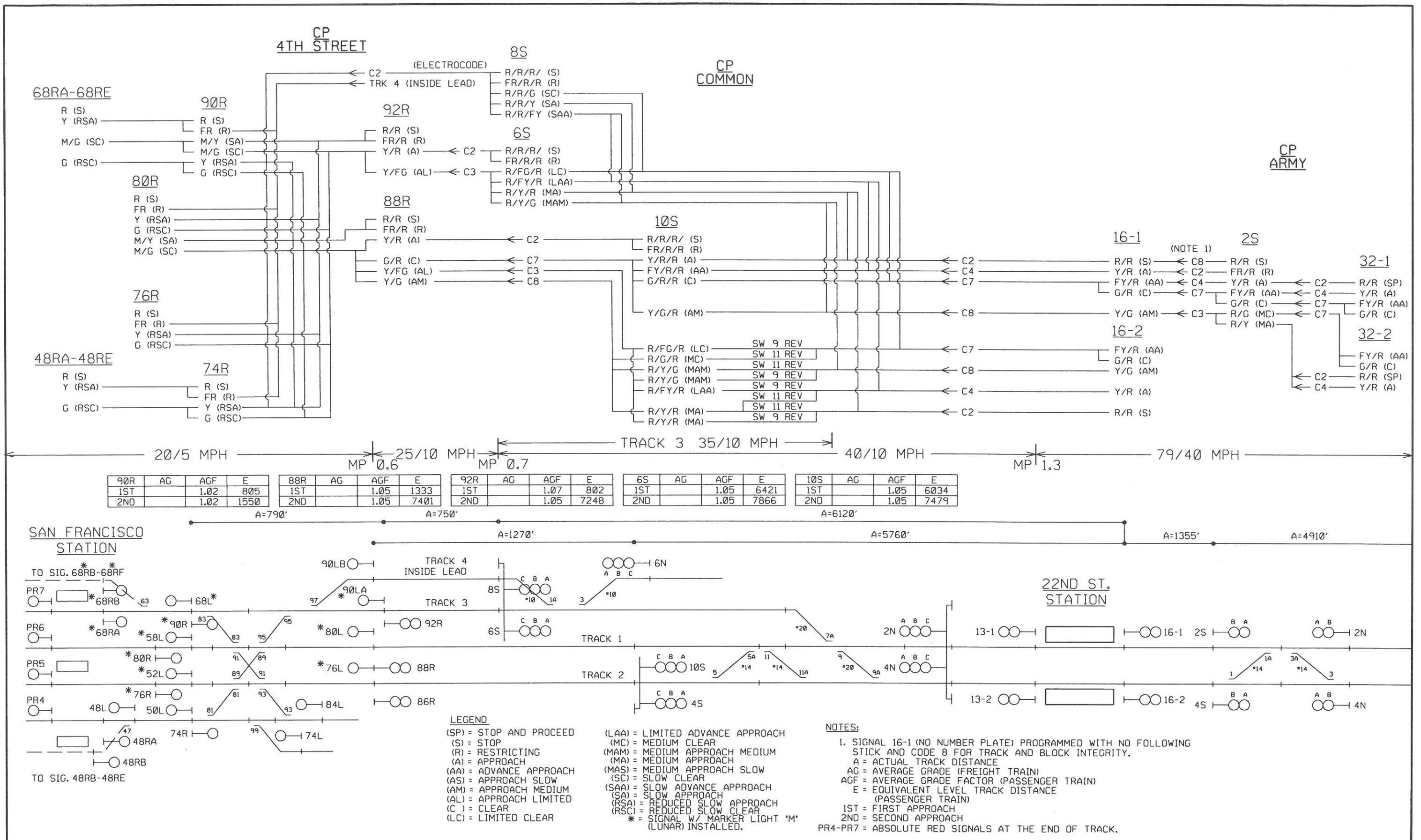


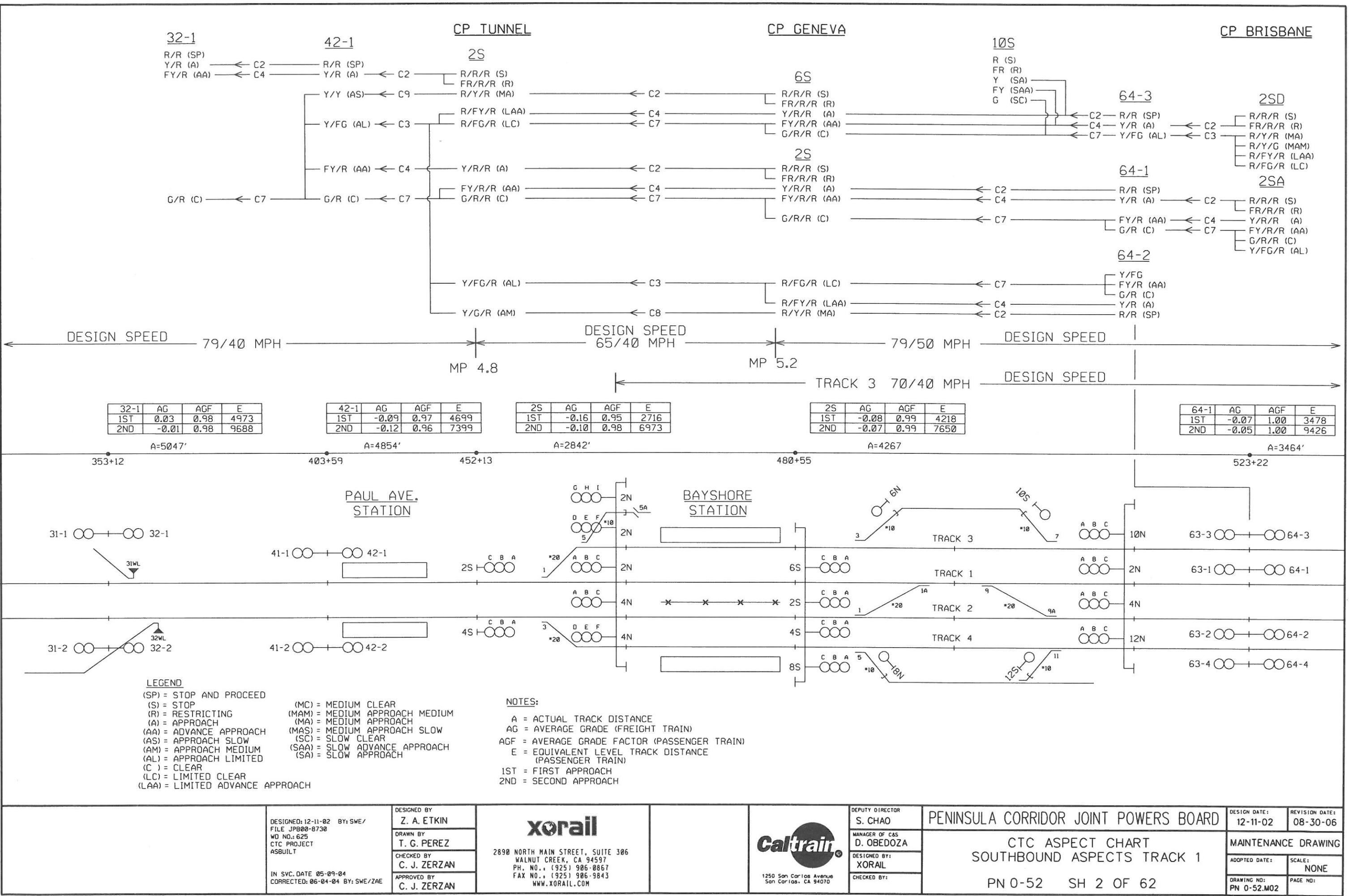
PENINSULA CORRIDOR JOINT POWERS BOARD

A S P E C T C H A R T

PN 0-52

SH. 1-62





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)

C2

C4

C7

C3

C7

C4

C2

92-1

R (SP)
Y (A)
FY (AA)
G (C)
92-2

C2

C4

C7

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

102-1

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

C2

C4

C7

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

110-1

G/R (C)
Y/FG (AL)

C2

C4

C7

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

122-1

Y/Y/R (AS)
Y/FG/R (AL)
G/R/R (C)
Y/FG (AL)

C2

C4

C7

Y/Y/R (AS)
Y/FG/R (AL)
G/R/R (C)
Y/FG (AL)

CP
CENTER

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

79/50 MPH 70/50 MPH 79/50 MPH 65/50 MPH 79/50 MPH

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

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

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

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

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

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

A=5970'

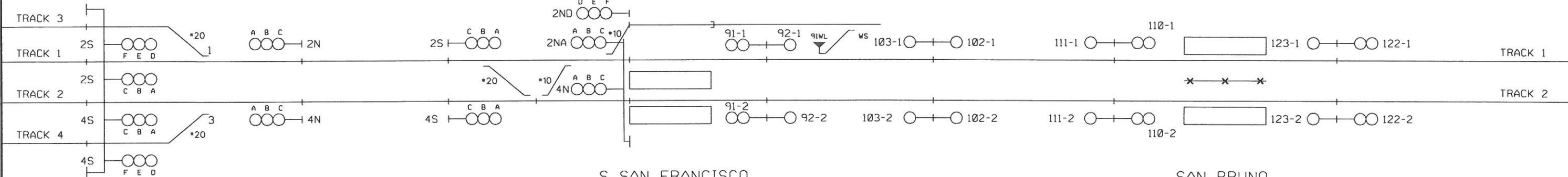
A=5550'

A=6080'

A=4400'

A=6280'

A=2740'



S. SAN FRANCISCO
STATION

SAN BRUNO
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: 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. C. 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) 906-8867 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: XORAIL	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

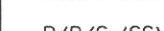
R/R/R (S)
FR/R/R (R)
Y/R/R (A)
Y/Y/R (AS)



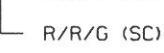
CP
BART

2S

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



R/R/G (SC)



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



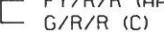
FY/R/R (AA)



Y/R/R (A)



G/R/R (C)



FY/R/R (AA)



G/R/R (C)



Y/FG/R (AL)



Y/FG/R (AL)



R/FG/R (LC)



R/Y/R (MA)



R/Y/Y (MAS)



R/Y/G (MAM)



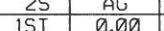
R/FG/R (LC)



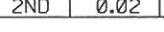
FY/R (AA)



G/R (C)



SIDING



50/40 MPH



79/50 MPH

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)



Y/R/R (A)



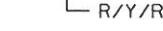
FY/R/R (AA)



G/R/R (C)



R/FG/R (LC)



FY (AA)



G (C)



Y (A)

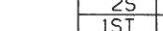


R (SP)



152-1

R (SP)



Y (A)



160-1

R/R (SP)



Y/R (A)



FY/R (AA)



G (C)



Y (A)



R (SP)

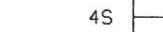


152-2

R (SP)



Y (A)



R (SP)



152-1

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

xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
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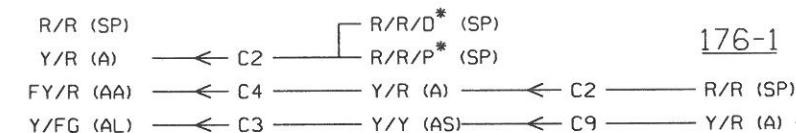
caltrain®
1250 San Carlos Avenue
San Carlos, CA 94070
DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1
PN 0-52 SH 4 OF 62

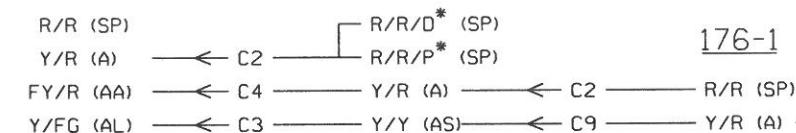
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MAINTENANCE DRAWING
ADOPTED DATE: SCALE: NONE
DRAWING NO: PAGE NO:
PN 0-52.M04 PN 0-52.M04

CP
PALM

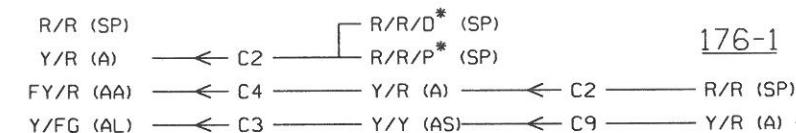
160-1



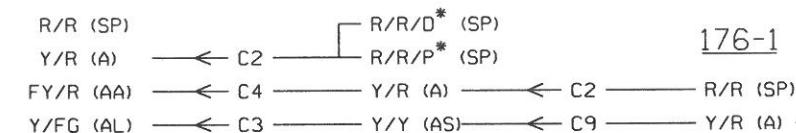
170-1



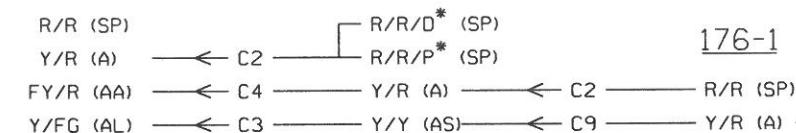
176-1



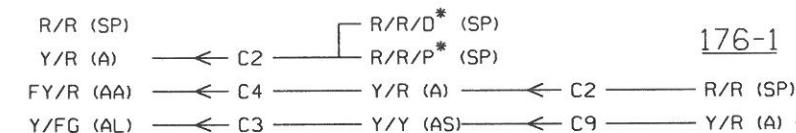
2S



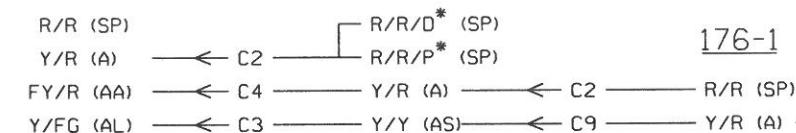
188-1



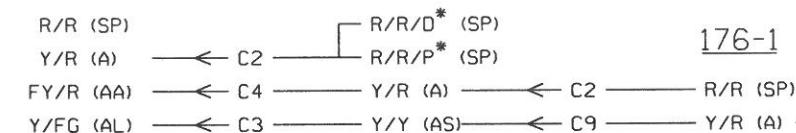
196-1



204-1



212-1



DESIGN SPEED

79/50 MPH

160-1	AG	AGF	E
1ST	0.13	1.04	5328
2ND	0.08	1.02	8925

170-1	AG	AGF	E
1ST	0.08	0.98	3574
2ND	0.06	0.98	5764

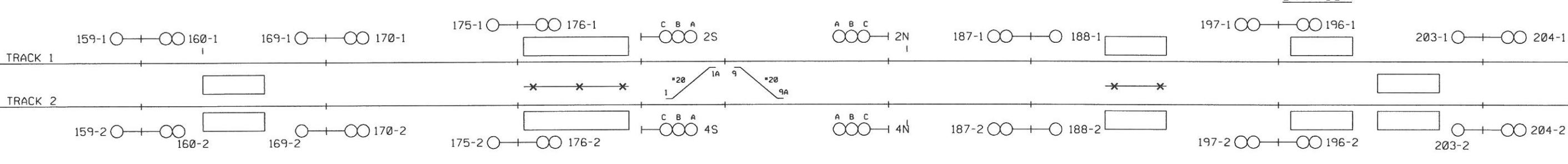
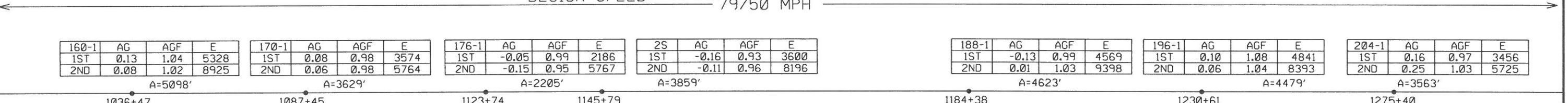
176-1	AG	AGF	E
1ST	-0.05	0.99	2186
2ND	-0.15	0.95	5767

2S	AG	AGF	E
1ST	-0.16	0.93	3600
2ND	-0.11	0.96	8196

188-1	AG	AGF	E
1ST	-0.13	0.99	4569
2ND	0.01	1.03	9398

196-1	AG	AGF	E
1ST	0.10	1.08	4841
2ND	0.06	1.04	8393

204-1	AG	AGF	E
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

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

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

(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

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) 986-8867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM

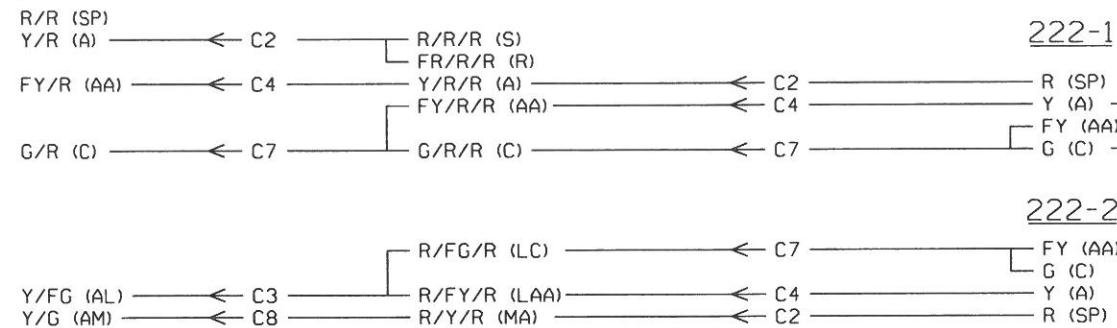


PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 1
PN 0-52 SH 5 OF 62

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

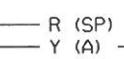
CP
RALSTON

212-1

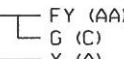


2S

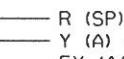
222-1



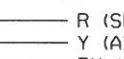
222-2



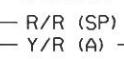
230-1



236-1



248-1



CP
DUMBARTON

2S

DESIGN SPEED 79/45 MPH MP 21.7 79/50 MPH

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

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

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

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

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

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

A=1975'

A=3975'

A=3438'

A=3718'

A=6270'

A=6305'

1311+03

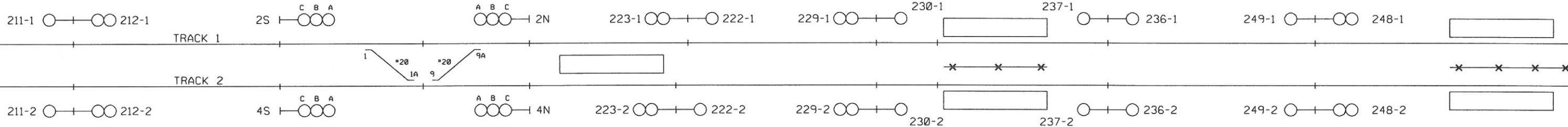
1330+78

1370+53

1404+91

1442+09

1504+79



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

(LC) = LIMITED CLEAR

(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR

(MAS) = MEDIUM APPROACH MEDIUM

(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 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 R. A. STEVENS APPROVED BY R. A. STEVENS	Caltrain® 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 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 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:
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CP
DUMBARTON

2S

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

CP
JUNCTION

6S

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

2S

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

276-1

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

276-2

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

286-1

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

CP
ALMA

2S

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

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'

1567+84

1625+18

A=3260'

A=4550'

A=2705'

1703+28

1657+78

A=5

CP
ALMA

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)

300-1

300-2

306-1

316-1

326-1

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

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

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

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

DESIGN SPEED 79/50 MPH

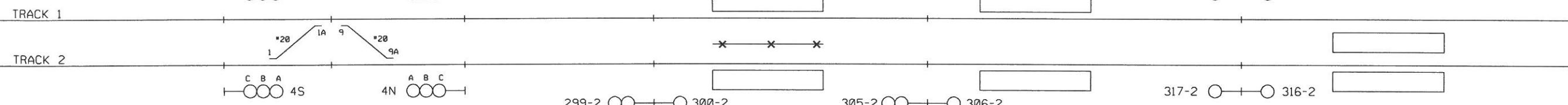
2S	AG	AGF	E
1ST	0.13	1.01	4199
2ND	-0.04	0.95	7412

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' 1730+33 A=3613' 1771+62 A=5610' 1807+75 A=5000' 1863+85



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
(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 JPB00-0730 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
--	--

xorail

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

PENINSULA CORRIDOR JOINT POWERS BOARD		DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1		Maintenance Drawing	
PN 0-52 SH 8 OF 62		ADOPTED DATE: None	SCALE: None
DRAWING NO: PN 0-52.M08		DRAWING NO: PN 0-52.M08	PAGE NO:

CP
MAYFIELD

326-1

2S

R/R (SP)
Y/R (A) ← C2 → R/R/R (S)
FR/R/R (R)

FY/R (AA) ← C4 → Y/R/R (A) ← C2 → R (SP)
Y/FG (AL) ← C3 → G/R/R (C) ← C7 → Y (A) ← C2 → R (SP)
R/FG/R (LC) ← C7 → R/FY/R (LAA) ← C4 → G (C) ← C7 → FY (AA) ← C4 → Y (A) ← C2 → R (SP)
R/Y/R (MA) ← C2 → G/R (C) ← C7 → FY (AA) ← C4 → Y (A) ← C2 → R (SP)

348-1

348-2

358-1

G (C)

366-1

R/R (SP)
Y/R (A) ← C2 → R/R (SP)
FY/R (AA) ← C4 → Y/R (A) ← C2 → R/R (S)
G/R (C) ← C7 → FY/R (AA) ← C4 → Y/R (A) ← C2 → R/R (S)
Y/FG (AL) ← C3 → Y/G (AM) ← C8 → R/Y/R (MA)
Y/FG (AL) ← C3 → Y/G (AM) ← C8 → R/Y/R (MA)
Y/FG (AL) ← C3 → R/Y/Y (MAS)
Y/FG (AL) ← C3 → R/Y/Y (MAS)
Y/FG (AL) ← C3 → R/Y/G (MAM)
Y/FG (AL) ← C3 → R/Y/G (MAM)

376-1

CP
MARY

2S

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'

1913+85 1969+08

A=5990'

2028+98

A=6140'

2090+38

A=3632'

2126+70 A=4632'

2173+02 A=3292'

325-1 ○ —○○ 326-1

C B A
H ○○○ 2S

2N A B C ○○○ 348-1

359-1 ○ —○○ 358-1

367-1 ○ —○○ 366-1

375-1 ○ —○○ 376-1

TRACK 1

*20 1A 9
I ——————
*20 9A

—————
* * * *

325-2 ○ —○○ 326-2

C B A
H ○○○ 4S

4N A B C ○○○ 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

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	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
DRAWN BY T. G. PEREZ	CHECKED BY C. J. ZERZAN
CHECKED BY C. J. ZERZAN	APPROVED BY C. J. ZERZAN
APPROVED BY C. J. ZERZAN	

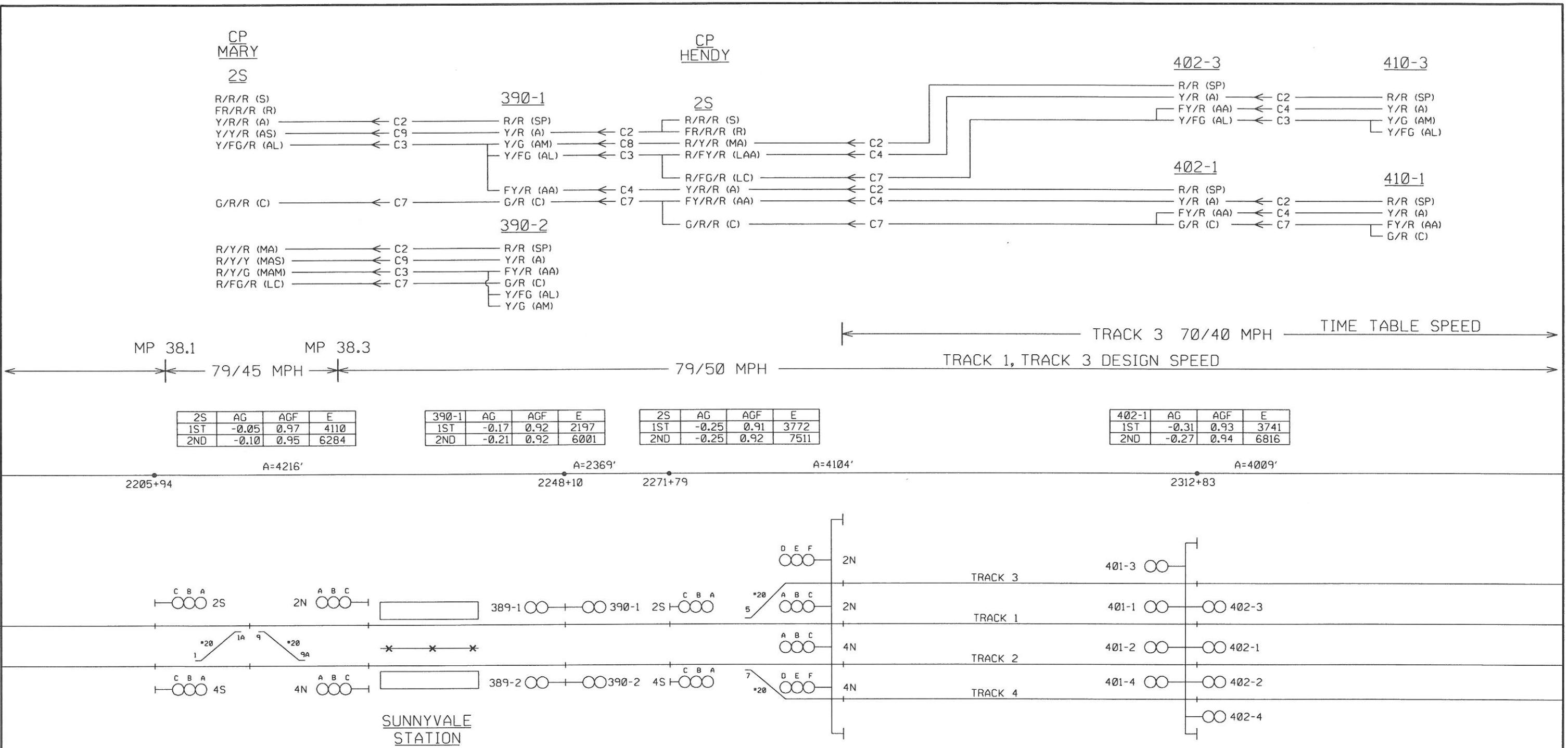
xorail
2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597
PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843
WWW.XORAIL.COM



1250 San Carlos Avenue San Carlos, CA 94070

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:



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:

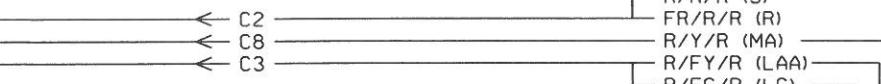
A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE
(PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED: 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	xorail	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-8867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	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 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:
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						

CP
BOWERS

410-3

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



CP
DE LA CRUZ

2SD

2SA

410-1

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



424-1

R/R (SP)

Y/R (A)

FY/R (AA)

Y/FG (AL)

G/R (C)

C7

432-1

R/R (SP)

Y/R (A)

FY/R (AA)

Y/FG (AL)

G/R (C)

C7

2S

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

← TRACK 3 70/40 MPH → TIME TABLE SPEED

79/50 MPH

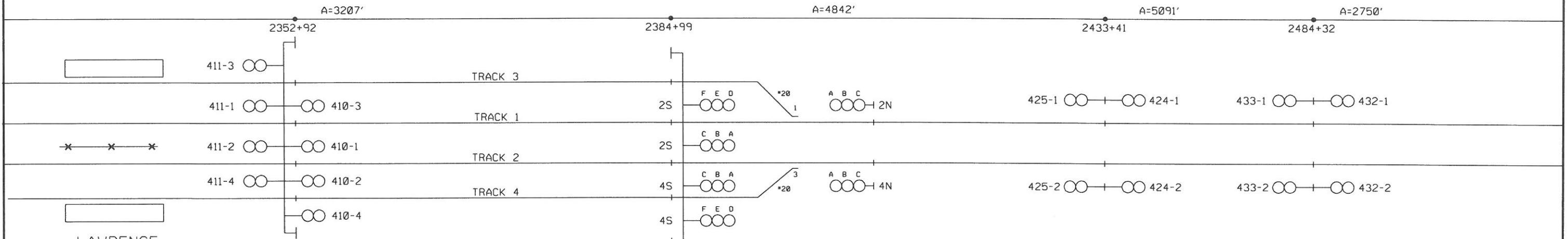
TRACK 1, TRACK 3 DESIGN SPEED

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

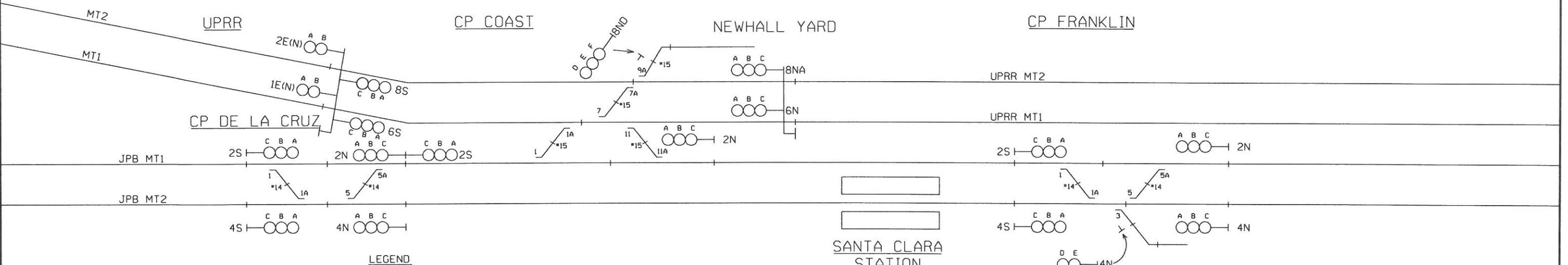
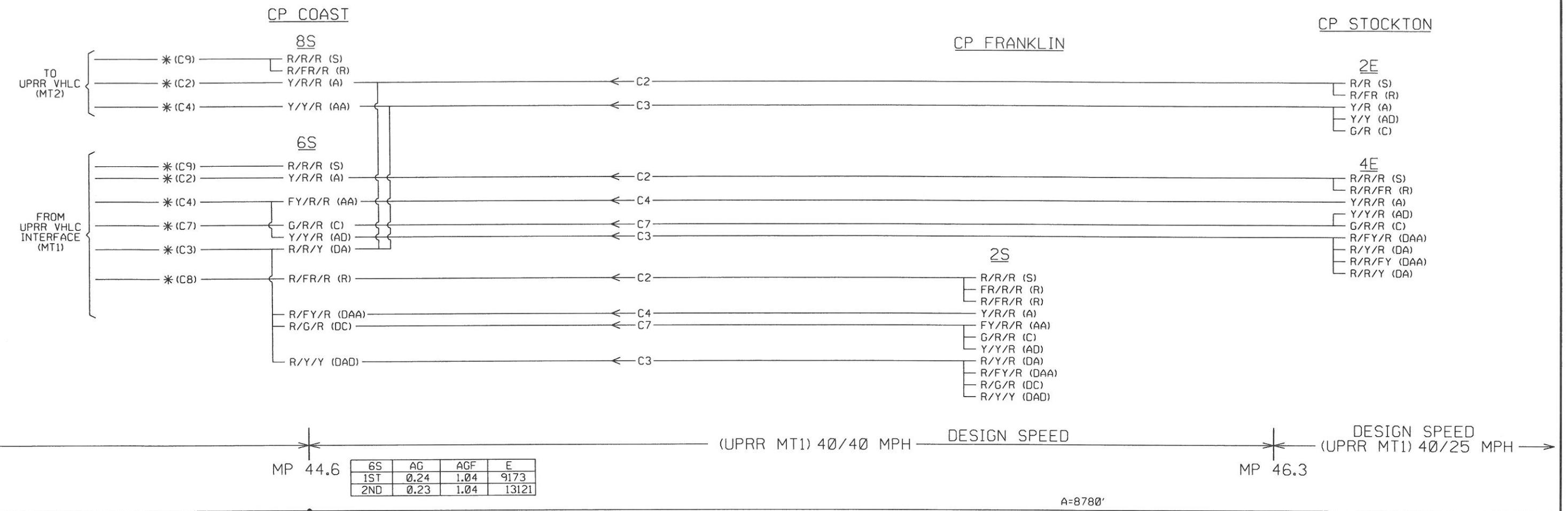
(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(AD) = APPROACH DIVERGING
(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 BY: Z. A. ETKIN	DRAWN BY: T. G. PEREZ	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	DEPUTY DIRECTOR: S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
FILE JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE APPROVED BY: C. J. ZERZAN	CHECKED BY: C. J. ZERZAN	Caltrain® 1250 San Carlos Avenue San Carlos, CA 94070	MANAGER OF C&S D. OBEDOZA	CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1	MAINTENANCE DRAWING	

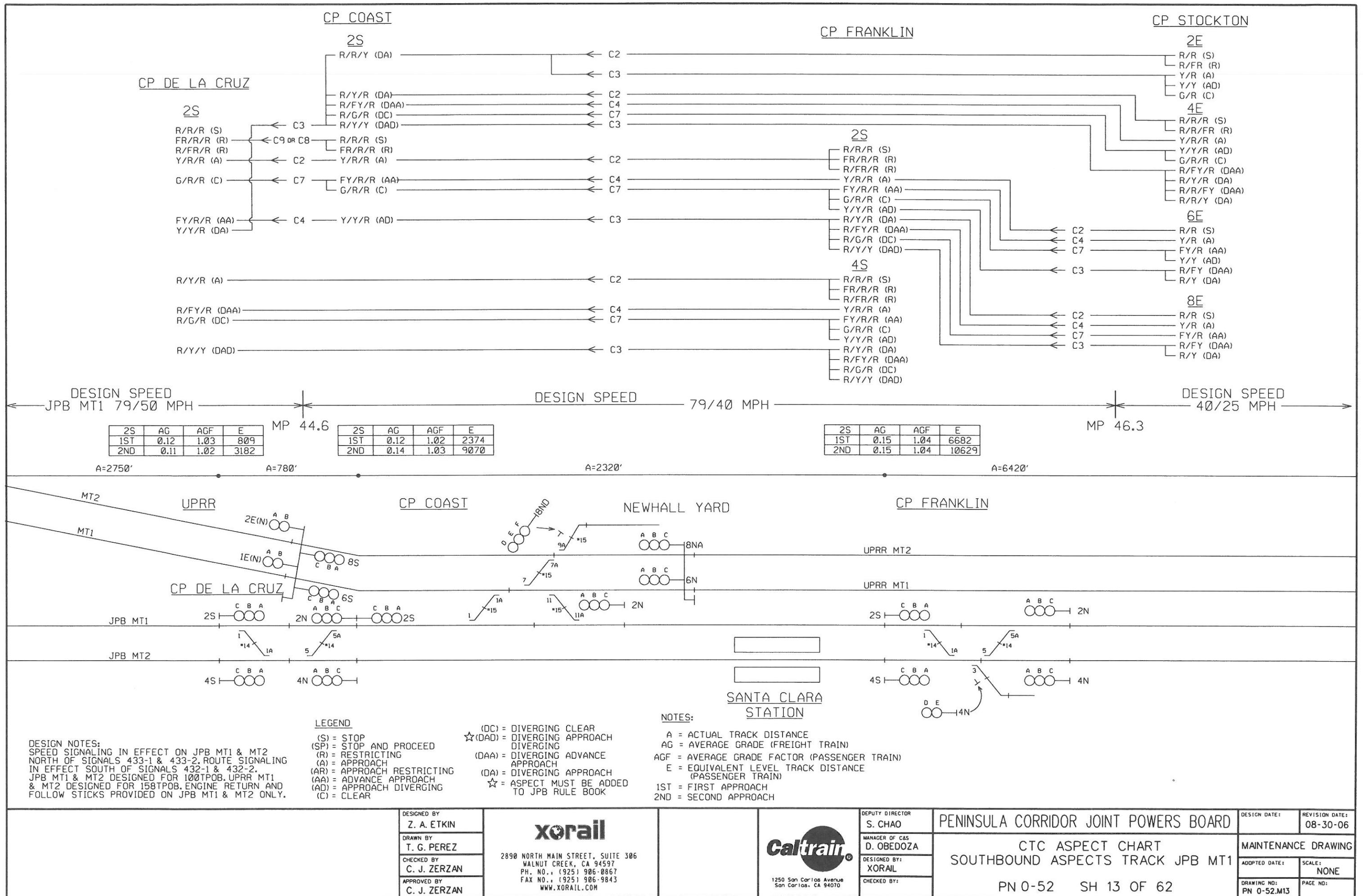


DESIGN NOTES:
SPEED SIGNALING IN EFFECT ON JPB MT1 & MT2
NORTH OF SIGNALS 433-1 & 433-2. ROUTE SIGNALING
IN EFFECT SOUTH OF SIGNALS 432-1 & 432-2.
JPB MT1 & MT2 DESIGNED FOR 100TPOB. UPRR MT1
& MT2 DESIGNED FOR 158TPOB. ENGINE RETURN AND
FOLLOW STICKS PROVIDED ON JPB MT1 & MT2 ONLY.

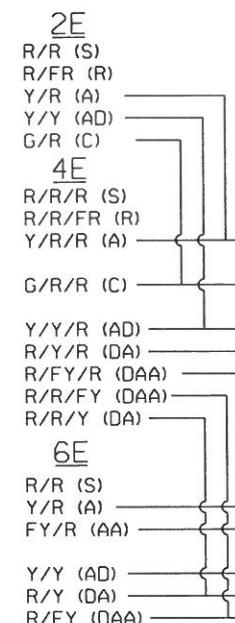
NOTES:

- 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	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD	DESIGN DATE: 08-30-06
				MANAGER OF CAS D. OBEDOZA	CTC ASPECT CHART SOUTHBOUND ASPECTS TRACKS UPRR MT1 & MT2 PN 0-52 SH 12 OF 62	MAINTENANCE DRAWING
				DESIGNED BY: XORAIL		ADOPTED DATE: SCALE: NONE
				CHECKED BY:		DRAWING NO: PAGE NO: PN 0-52.M12

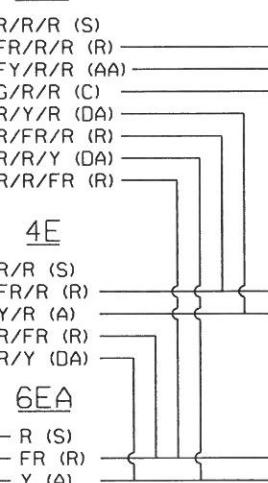


CP STOCKTON



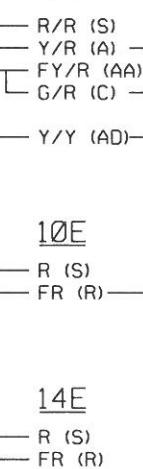
CP SHARK

2EA



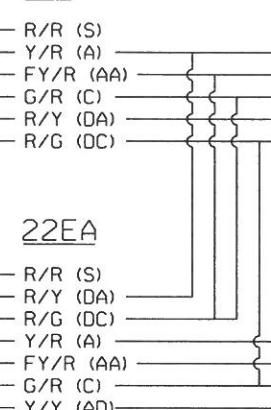
CP ALAMEDA

8E



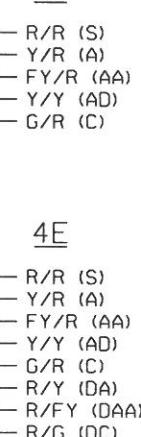
CP BIRD

18E



CP DELMAS

2E



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

DESIGN SPEED
(MT2) 20/15 MPH

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

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

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'

2608+57

A=1280'

2646+42

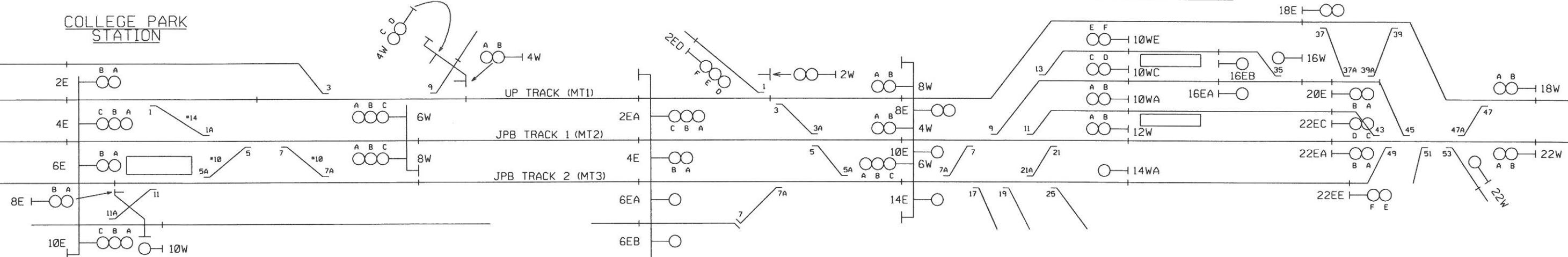
A=2122'

2659+22

A=4491'

2680+44

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:

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

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

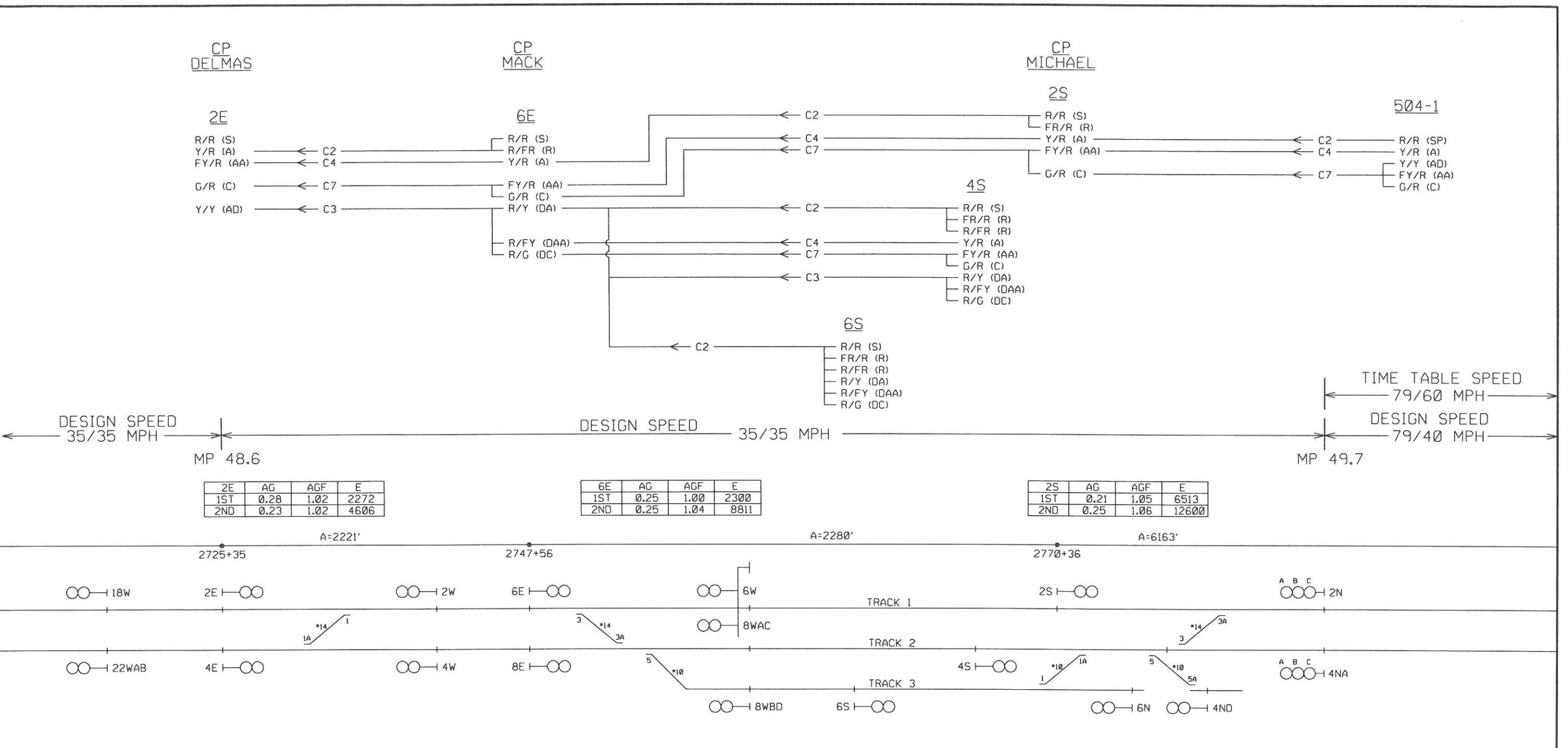
xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 986-0867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM

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 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:



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

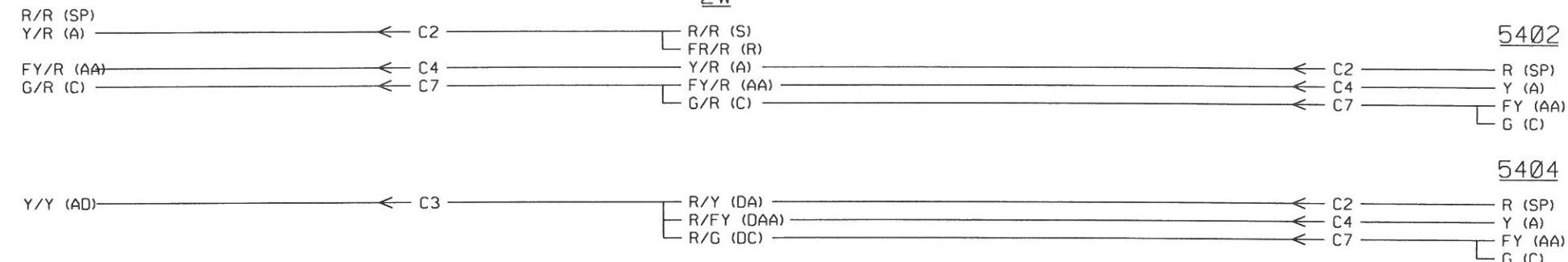
NOTES:

A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
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

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®	DEPUTY DIRECTOR: S. CHAO	MANAGER OF CAS: D. OBEDOZA	DESIGNED BY: XORAIL	CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD	DESIGN DATE: 12-14-04	REVISION DATE: 08-30-06
												CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 1	MAINTENANCE DRAWING
												PN 0-52 SH 15 OF 62	ADOPTED DATE: SCALE: NONE
													DRAWING NO: PN 0-52.M15
													PAGE NO: 1

CP
LICK

504-1



TIME TABLE SPEED

DESIGN SPEED

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

A=5632'

2831+99

504-1

504-2

505-1

505-2

2888+31

2W

1W

2A

1A

2B

1E

2E

5401

5402

5403

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

D:\CADDD\JEB_ETC Maintenance Master\Aspect Chart\Cadd Files

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



2890 NORTH MAIN STREET, SUITE 30
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORBAI.COM



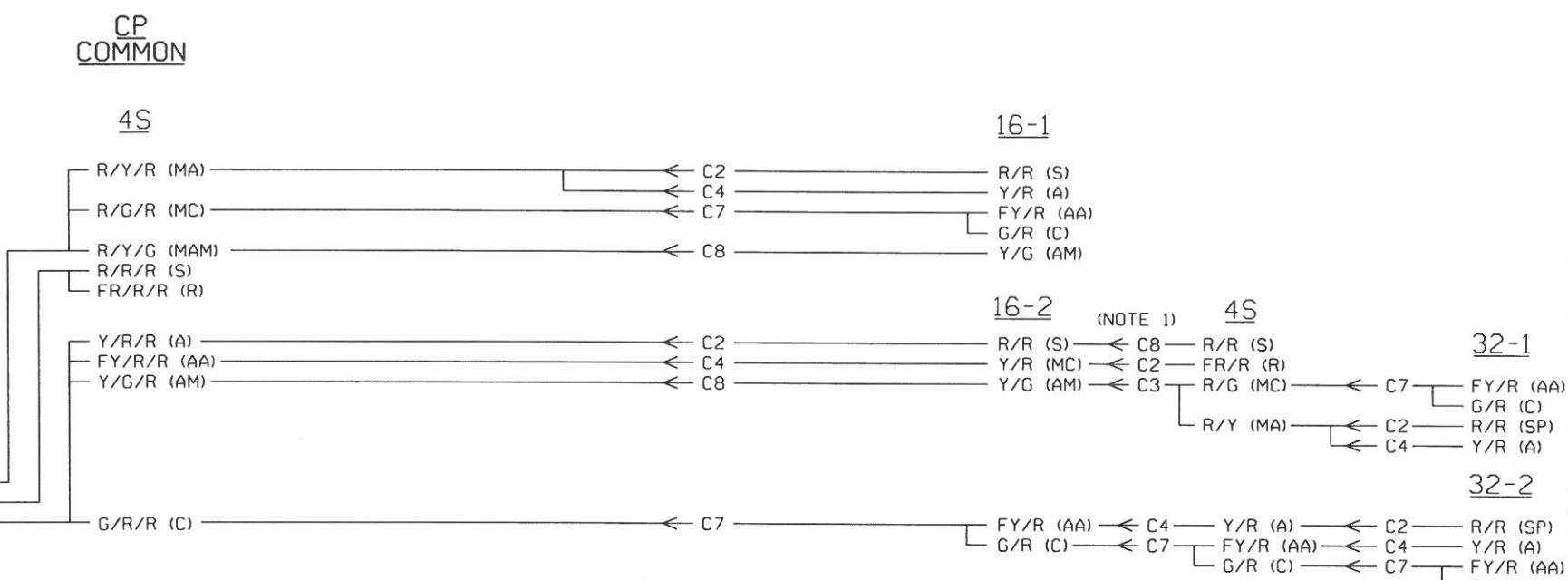
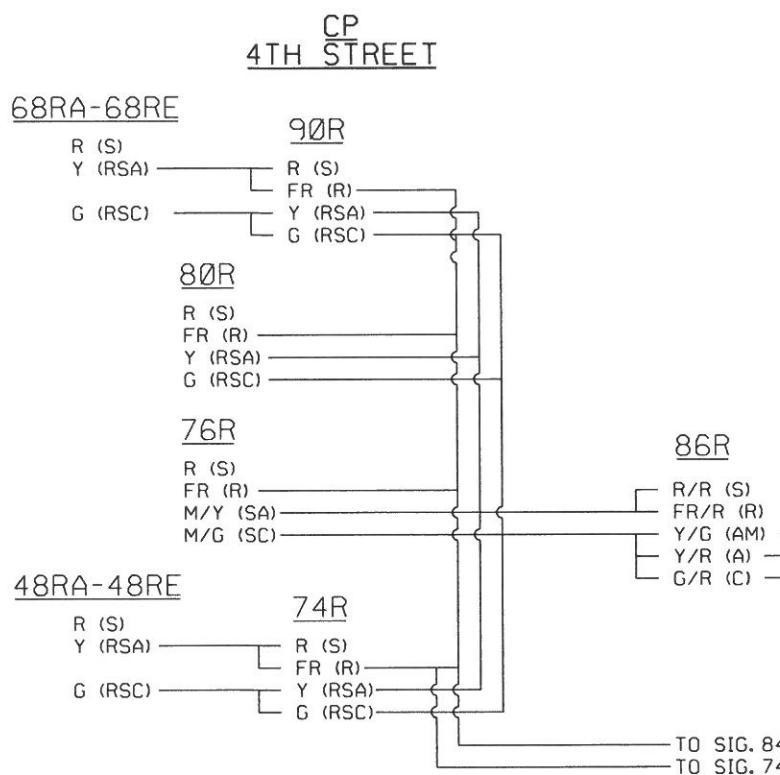
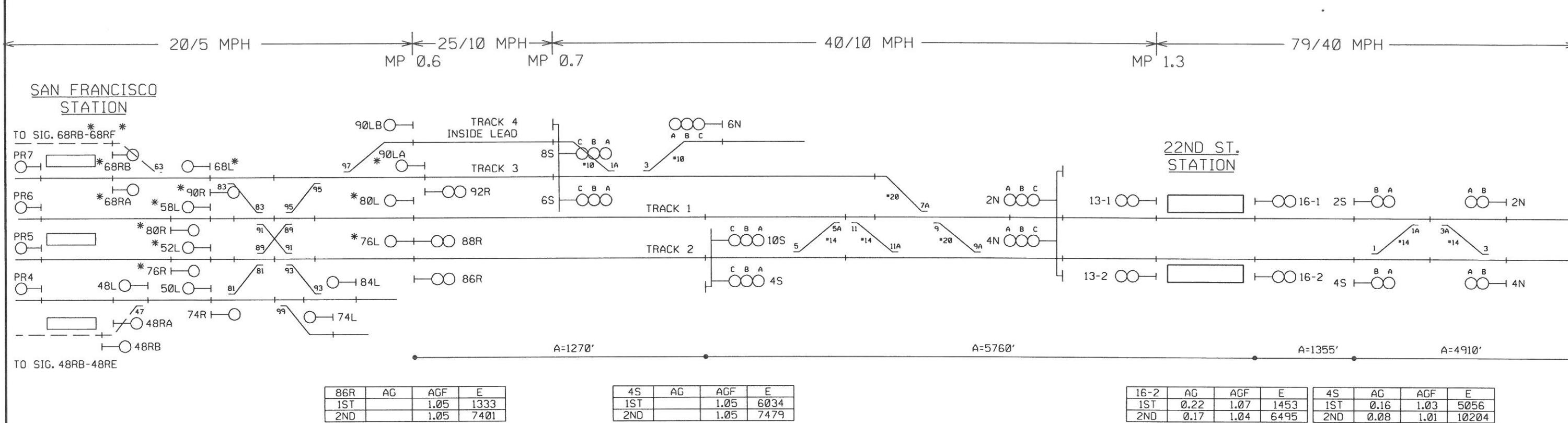
1250 San Carlos Avenue
San Carlos, CA 94070

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:



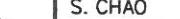
LEGEND

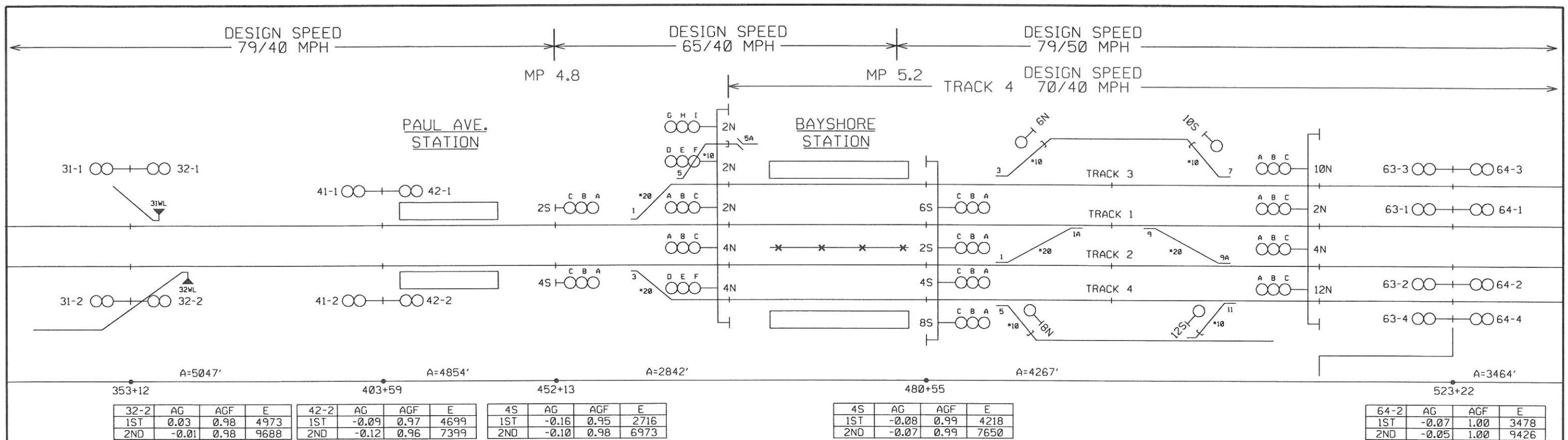
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR

(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.

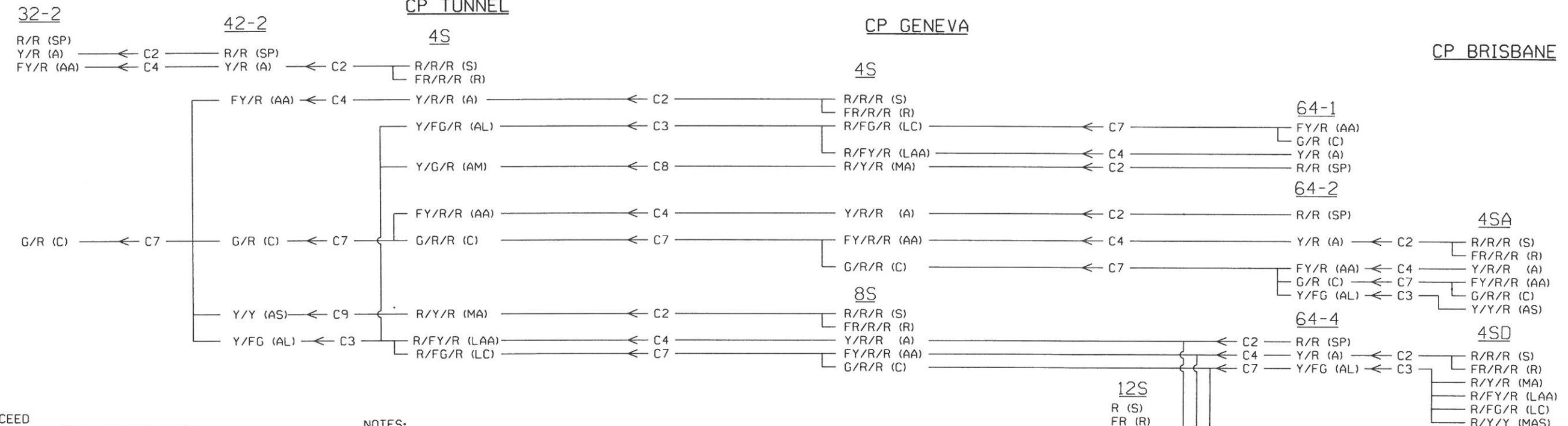
NOTE

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) 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 17 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 09-10-08 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PAGE NO: PN 0-52.M17
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STATION	APPROACH	GRADE	EQUIVALENT LEVEL DISTANCE
32-2	AG	AGF	E
1ST	0.03	0.98	4973
2ND	-0.01	0.98	9688
42-2	AG	AGF	E
1ST	-0.09	0.97	4699
2ND	-0.12	0.96	7399
4S	AG	AGF	E
1ST	-0.16	0.95	2716
2ND	-0.10	0.98	6973
4S	AG	AGF	E
1ST	-0.08	0.99	4218
2ND	-0.07	0.99	7650
64-2	AG	AGF	E
1ST	-0.07	1.00	3478
2ND	-0.05	1.00	9426



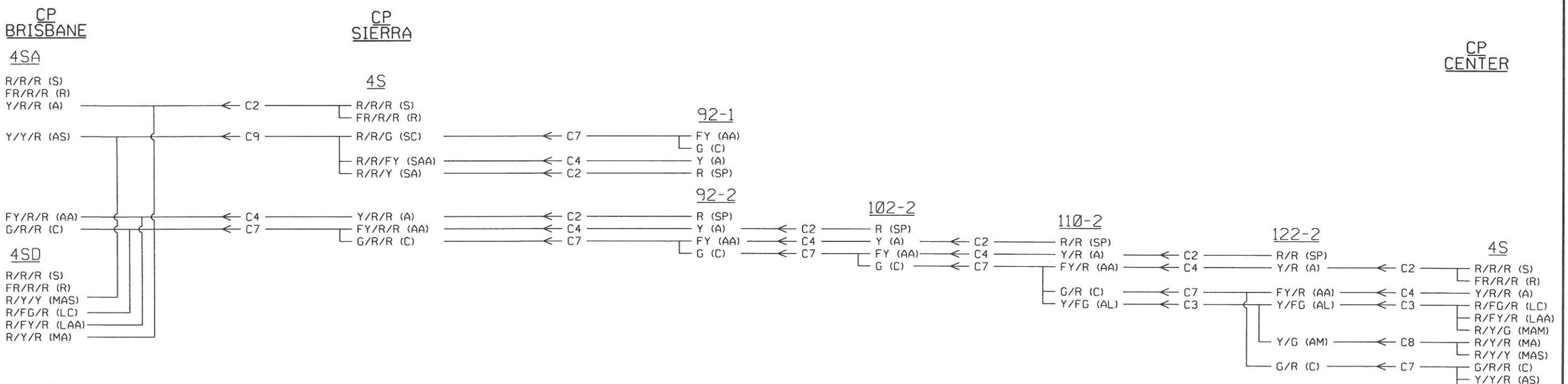
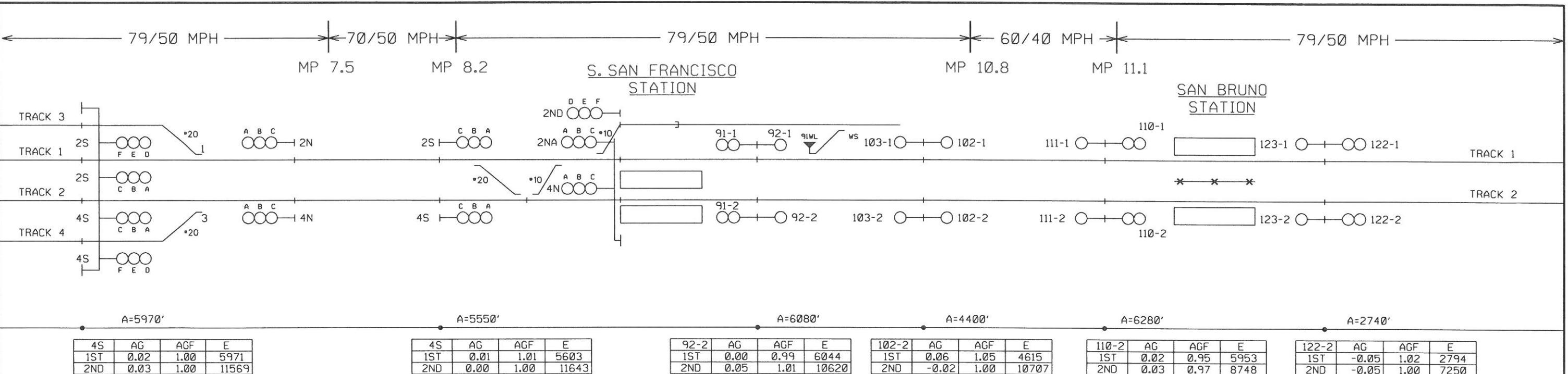
LEGEND
 (SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE APPROACH

(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

12S
 R (S)
 FR (R)
 Y (SA)
 FY (SAA)
 G (SC)

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) 986-0867 FAX NO.: (925) 986-9843 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 SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 18 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06 MAINTENANCE DRAWING ADOPTED DATE: NONE SCALE: NONE DRAWING NO: PN 0-52.M18 PAGE NO:
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LEGEND

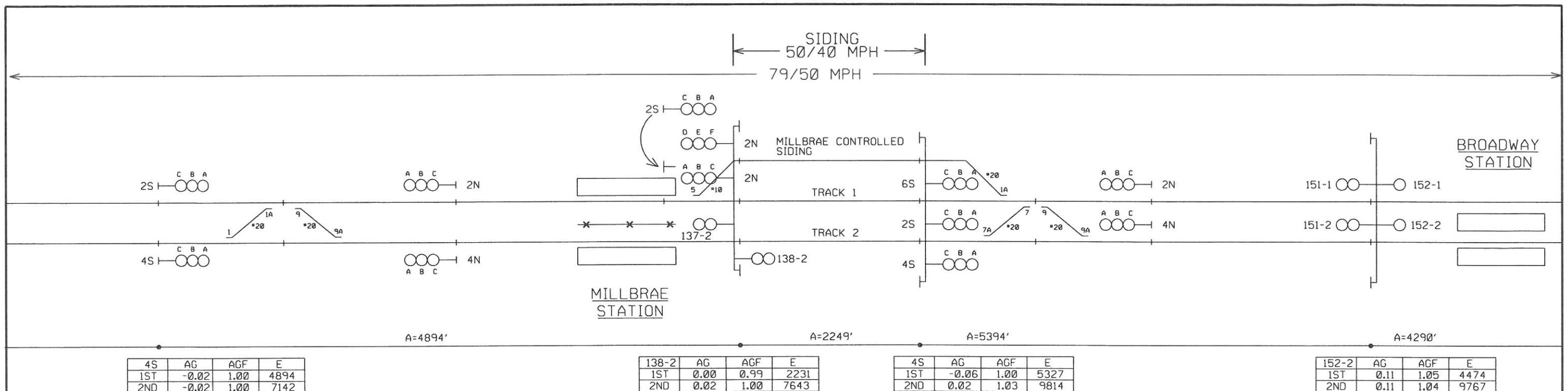
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LA) = LIMITED ADVANCE A

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

	DESIGNED: 06-30-06 BY: SWE/ZAE FILE JP805-15617 WD NO. 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT	DESIGNED: 12-11-02 BY: SWE/ FILE JP800-8730 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	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 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 19 OF 62	DESIGN DATE: 12-11-02 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE
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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)

← C7

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)

← C3

← C4

← C2

← C9

← C7

← C9

← C7

← C7

← C7

← C7

← C7

← C7

CP
TROUSDALE

4S

152-1

152-2

160-2

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

← C2

← C4

← C7

← G (C)

R/FG/R (LC)

← C2

← C4

← C7

← R (SP)

Y (A)

FY (AA)

← G (C)

R/R (SP)

Y/R (A)

FY (AA)

← G (C)

Y/FG (AL)

← G (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 JP805-15617 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 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 C&S D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY: XORAIL	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

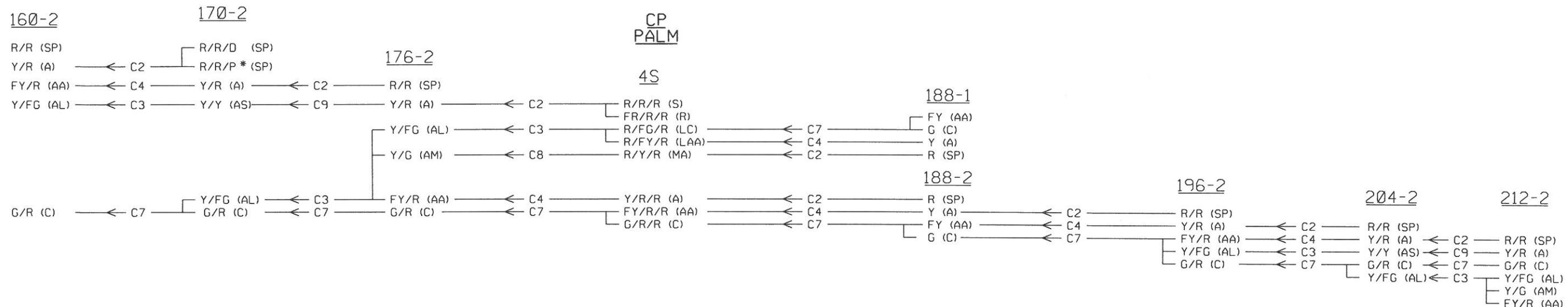
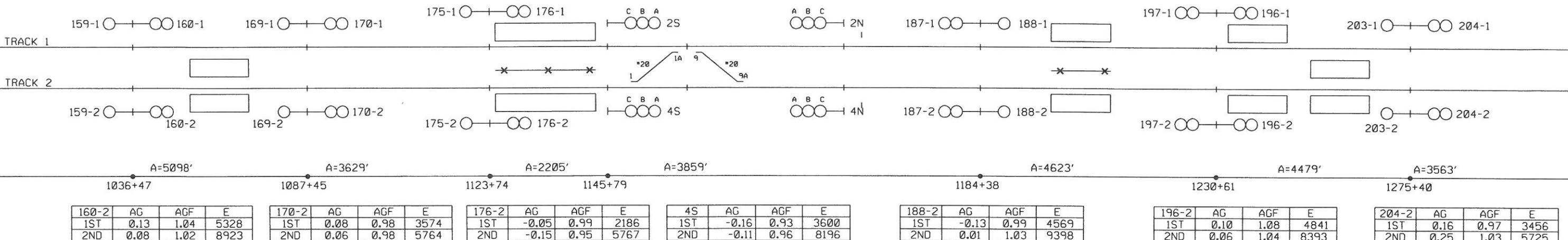
BURLINGAME
STATION

SAN MATEO
STATION

HAYWARD PARK
STATION

BAY MEADOWS
STATION

HILLSDALE
STATION



LEGEND

(S) = 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
 (I AA) = LIMITED ADVANCE A

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

10. The following table summarizes the results of the study.

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/Z

DESIGNED BY
Z. A. ET
DRAWN BY
T. G. PE
CHECKED BY
C. J. ZE
APPROVED BY
C. J. ZE



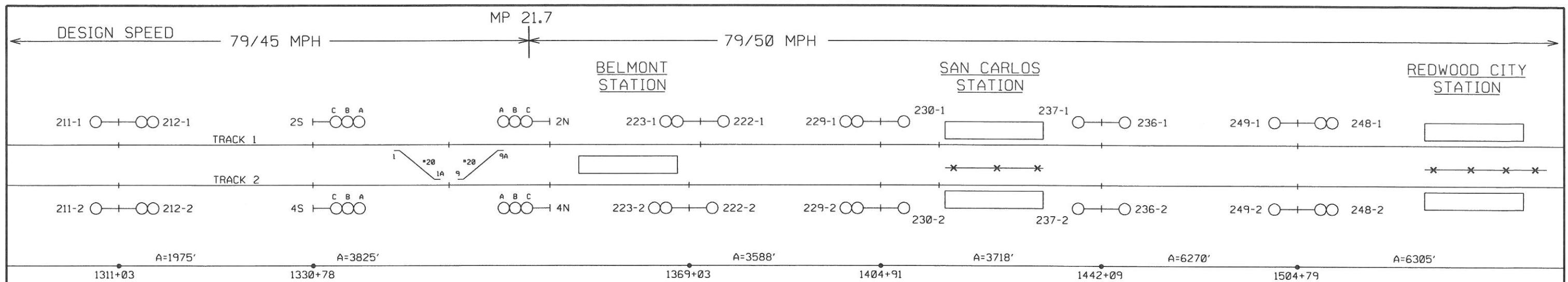
2890 NORTH MAIN STREET, SUITE 300
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
4444 XOBAL.COM



DEPUTY DIRECTOR
S. CHAO
MANAGER OF C&I
D. OBEDO
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: DM-2-52-M01	PAGE NO:



212-2	AG	AGF	E
1ST	0.24	1.13	2250
2ND	0.21	1.08	6275

4S	AG	AGF	E
1ST	0.14	1.07	4111
2ND	0.01	1.00	7454

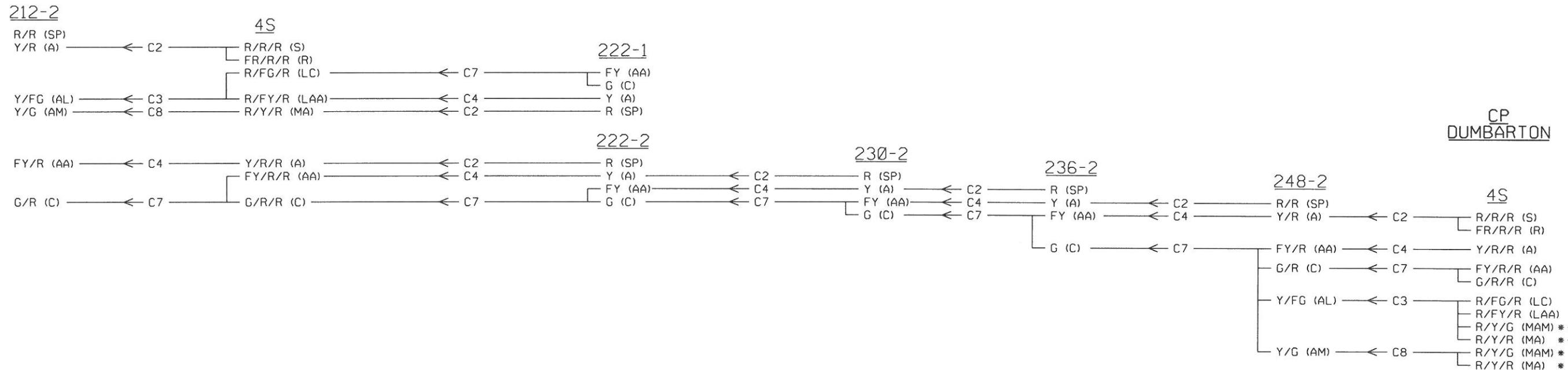
222-2	AG	AGF	E
1ST	0.07	0.92	3322
2ND	0.07	0.96	7057

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

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

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

CP
RALSTON



LEGEND

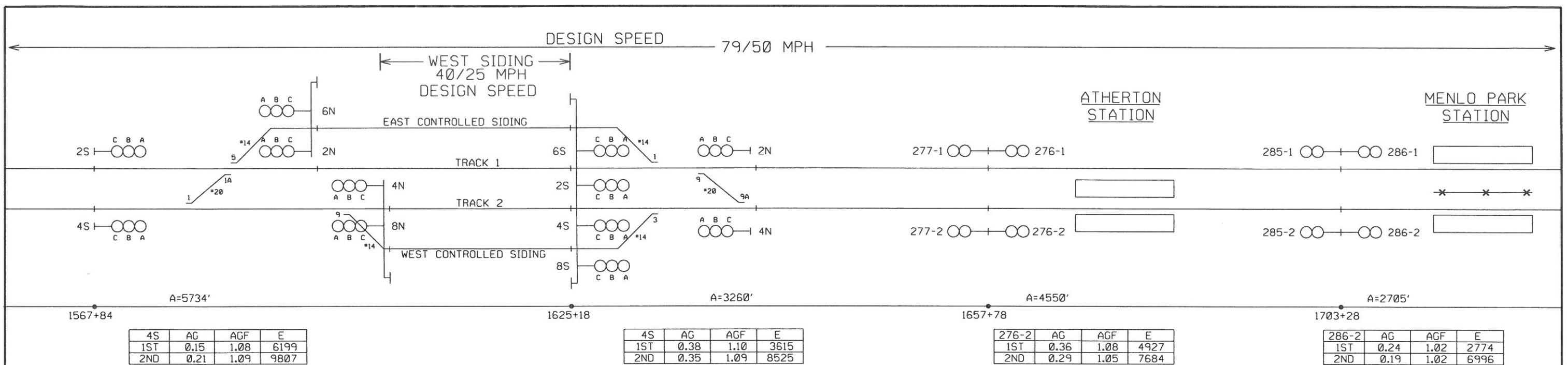
(SP) = STOP AND PROCEED
 (S) = STOP
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE A

(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/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	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 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 22 OF 62	DESIGN DATE: 04-08-08 MAINTENANCE DRAWING ADOPTED DATE: 30-30-11 DRAWING NO: PN 0-52.M22	REVISION DATE: 03-30-11 SCALE: NONE PAGE NO: 1
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CP
DUMBARTON

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)

C2

R/FY/R (LAA)

R/FG/R (LC)

C3

R/FG/R (LC)

R/FY/R (LAA)

R/Y/R (MA)

R/Y/R (MA)

Y/R/R (A)

Y/R/R (A)

FY/R/R (AA)

G/R/R (C)

4S

R/R/R (S)

FR/R/R (R)

C2

R/Y/R (MA)

R/Y/G (MAM)

R/G/R (MC)

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

CP
JUNCTION

4S

Y/R/R (A)

FY/R/R (AA)

G/R/R (C)

8S

R/R/R (S)

FR/R/R (R)

C2

R/Y/R (MA)

R/Y/G (MAM)

R/G/R (MC)

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

276-2

R/R (SP)

C2

Y/R (A)

FY/R (AA)

Y/FG (AL)

G/R (C)

286-2

4S

R (SP)

C2

R/R/R (S)

FR/R/R (R)

R/Y/R (MA)

R/Y/G (AM)

Y/FG (AL)

R/FY/R (LAA)

R/FG/R (LC)

FY/R (AA)

Y/R (A)

G/R (C)

FY/R/R (AA)

G/R/R (C)

PENINSULA CORRIDOR JOINT POWERS BOARD

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

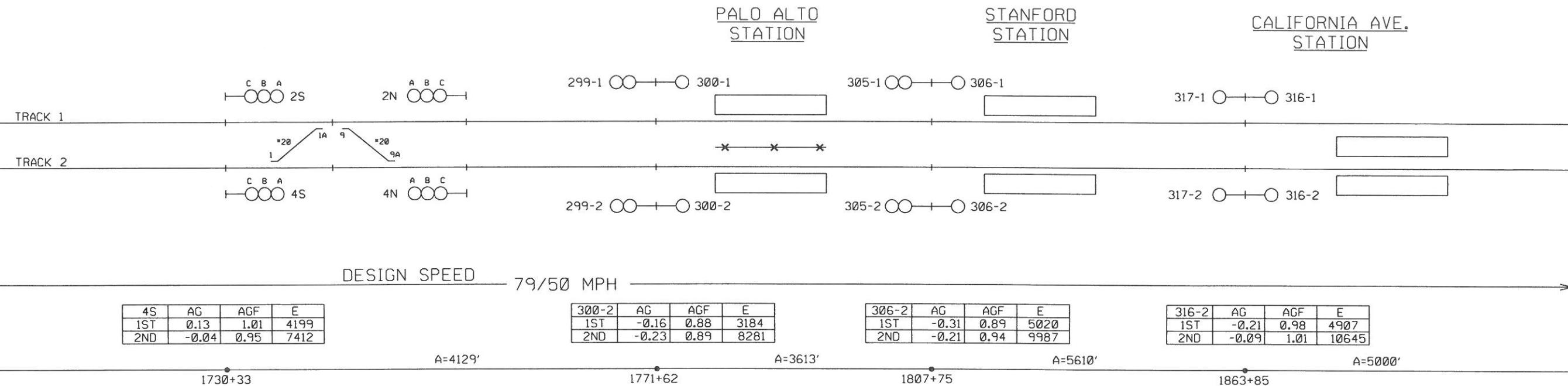
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 2

MAINTENANCE DRAWING

ADOPTED DATE: SCALE: NONE

DRAWING NO: PN 0-52.M23 PAGE NO:

PN 0-52 SH 23 OF 62



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)

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

300-2

C2
R (SP)
Y (A)
C2
FY (AA)
G (C)

306-2

C2
R (SP)
Y (A)
C2
FY (AA)
G (C)

316-2

C2
R (SP)
Y (A)
C2
FY (AA)
G (C)

326-2

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

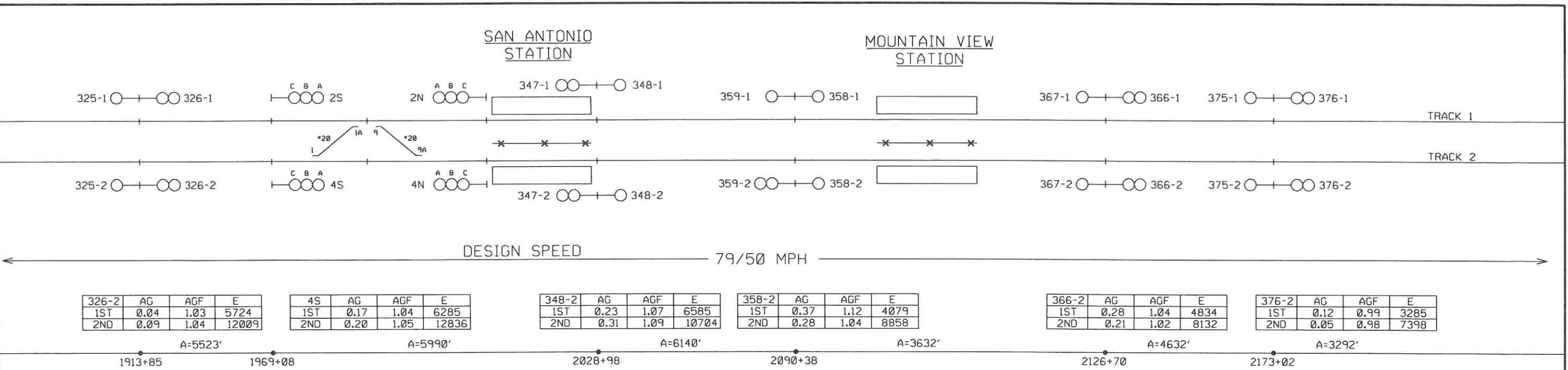
LEGEND

(S) = STOP	(MC) = MEDIUM CLEAR
(SP) = STOP AND PROCEED	(MAM) = MEDIUM APPROACH MEDIUM
(R) = RESTRICTING	(MA) = MEDIUM APPROACH
(A) = APPROACH	(MAS) = MEDIUM APPROACH SLOW
(AA) = ADVANCE APPROACH	(SC) = SLOW CLEAR
(AS) = APPROACH SLOW	(SAA) = SLOW ADVANCE APPROACH
(AM) = APPROACH MEDIUM	(SA) = SLOW APPROACH
(AL) = APPROACH LIMITED	
(C) = CLEAR	
(LC) = LIMITED CLEAR	
(LAA) = LIMITED 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: 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	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 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 SOUTHBOUND ASPECTS TRACK 2 PN 0-52 SH 24 OF 62	DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06
IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE				MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE	DRAWING NO: PN 0-52.M24 PAGE NO: 1



CP
MAYFIELD

326-2

49

R/R (SP)

348-

CP
MARY

FY/R (6)

G/R (C)

348-

358-

366-

376-2

4S

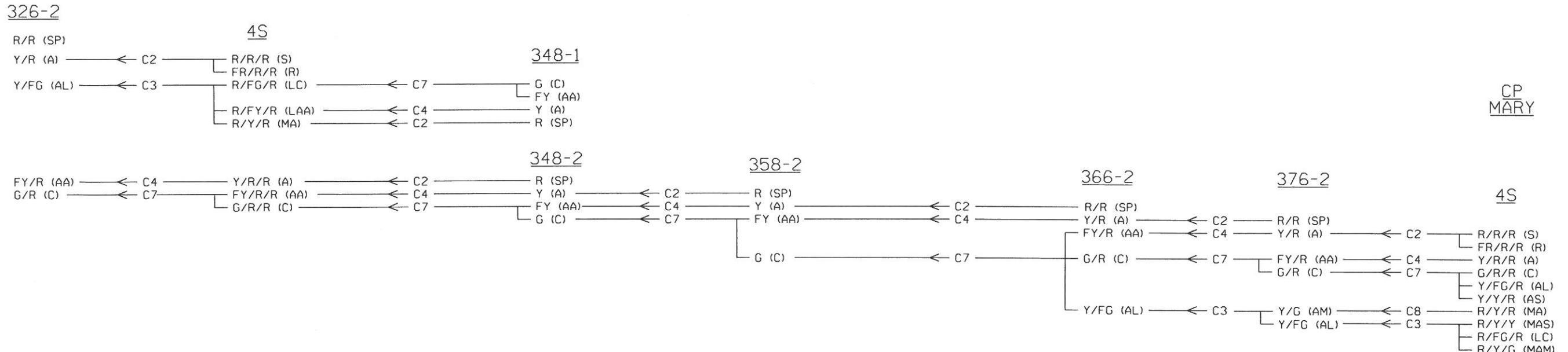
LEGEND

(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
 (LA) = LIMITED ADVANCE A

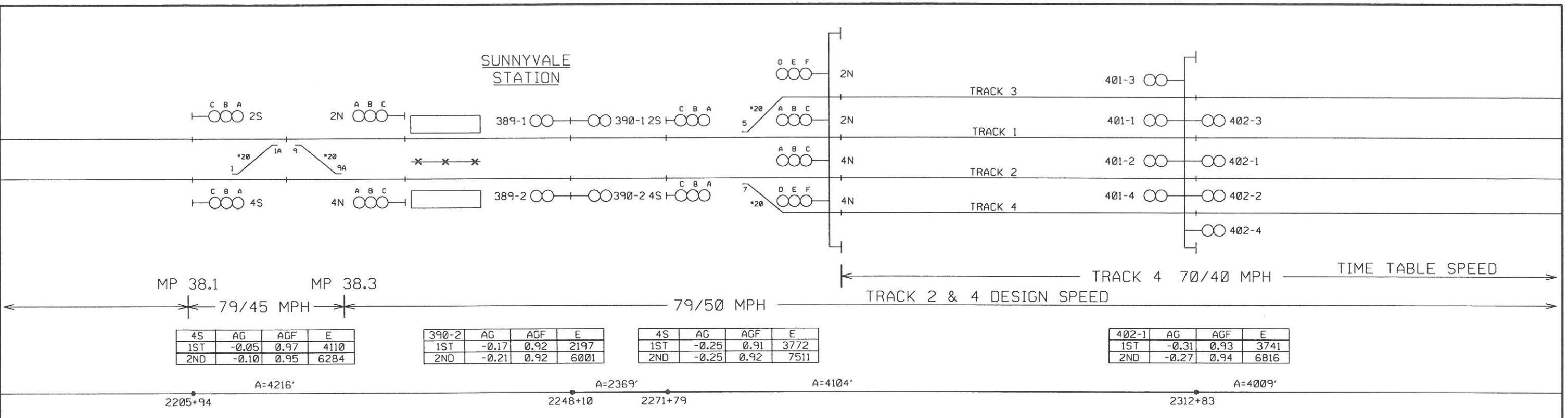
(MC) = MEDIUM CLEAR
 (MAM) = MEDIUM APPROACH MEDIUM
 (MA) = MEDIUM APPROACH
 (MAS) = MEDIUM APPROACH SLOW
 (SC) = SLOW CLEAR
 (SAA) = SLOW ADVANCE APPROACH
 (SA) = SLOW APPROACH

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	DESIGNED: 12-11-02 BY: SWE/ FILE JPB08-8730 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	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 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 25 OF 62	DESIGN DATE: 04-08-08 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PAGE NO: PN 0-52.M25
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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)

C2 R/R (SP)
C9 Y/R (A)
C3 FY/R (AA)
C7 G/R (C)
Y/FG (AL)
Y/G (AM)

390-1

CP
HENDY

4S

Y/R/R (A)
Y/Y/R (AS)
G/R/R (C)
Y/FG/R (AL)

C2 R/R (SP)
C9 Y/R (A)
C7 C2
C7 FY/R (AA)
C3 C8
Y/G (AM)
Y/FG (AL)

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

390-2

4S

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

C2 R/R (SP)
C4 Y/R (A)
C4 FY/R (AA)
C7 C2
C7 G/R/R (C)
C3 C8
Y/G (AM)
Y/FG (AL)

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

C2 R/R (SP)
C4 Y/R (A)
C7 C2
C7 R/FY/R (LAA)

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

402-2 410-2

402-4 410-4

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

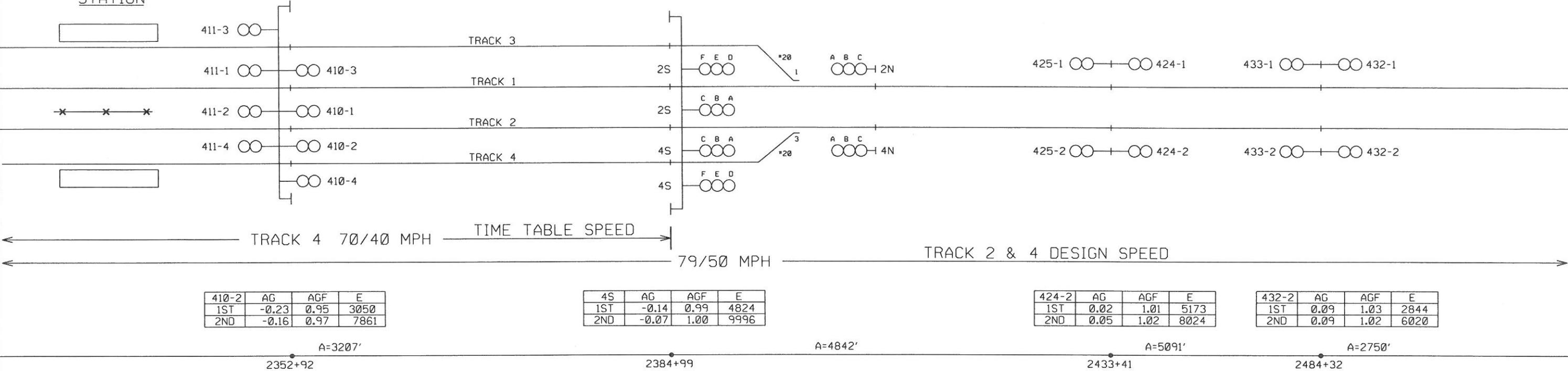
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

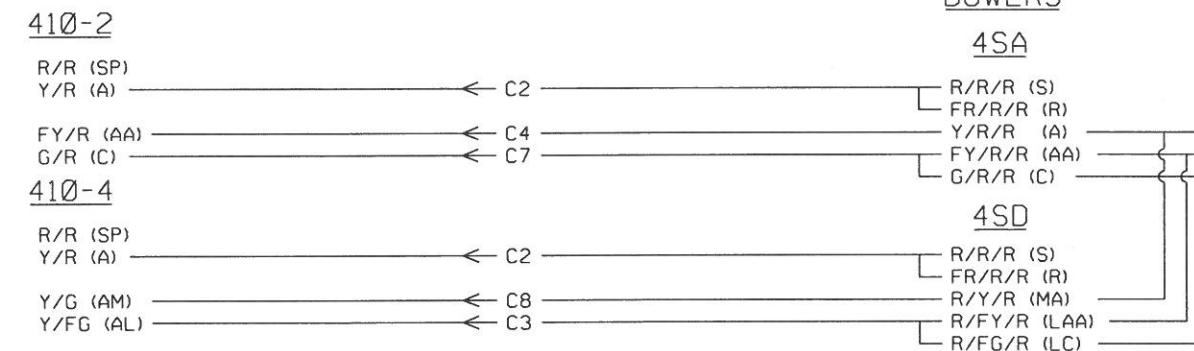
A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JPB08-22285 WD NO: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT	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	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	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 26 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: NONE DRAWING NO: PN 0-52.M26 PAGE NO:
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					

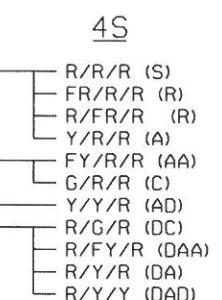
LAWRENCE
STATION



CP
BOWERS



CP
DE LA CRUZ



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

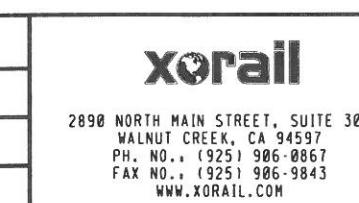
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(DA) = DIVERGING APPROACH
(DC) = DIVERGING CLEAR

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

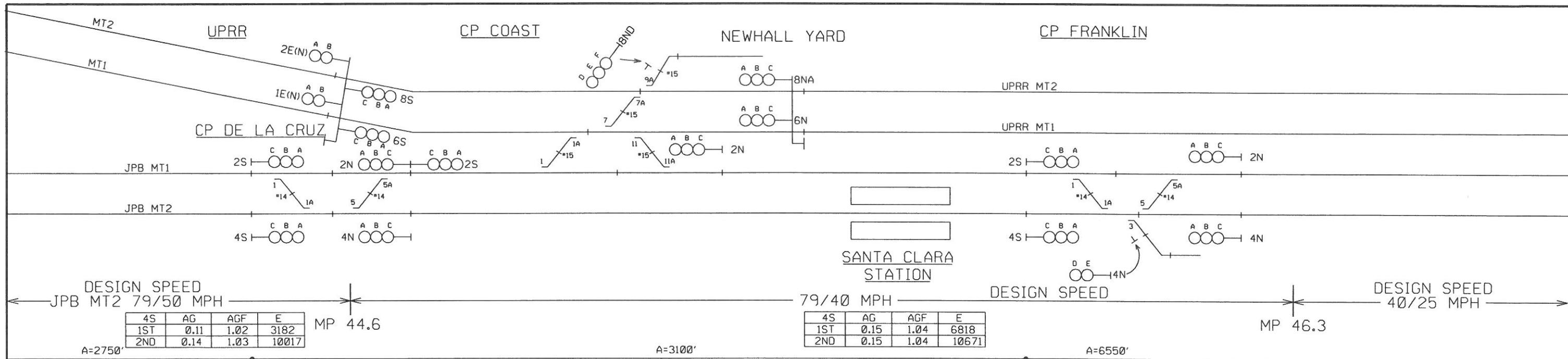
DESIGNED BY
Z. A. ETKIN
DRAWN BY
T. G. PEREZ
CHECKED BY
C. J. ZERZAN
APPROVED BY
C. J. ZERZAN



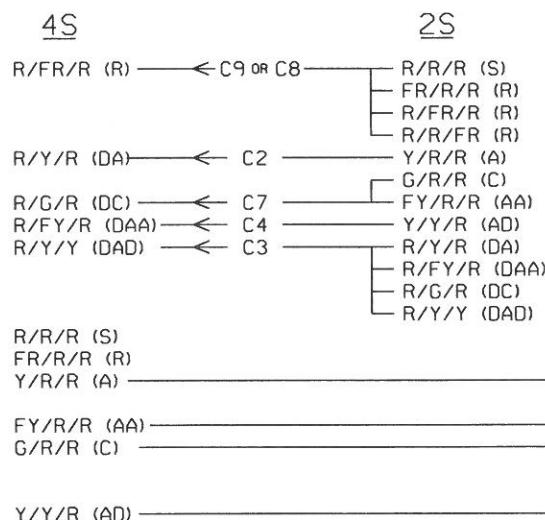
DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

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

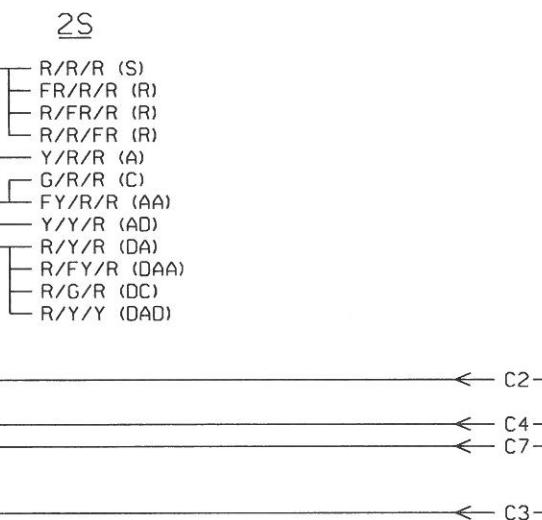
DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06
MAINTENANCE DRAWING
ADOPTED DATE: SCALE: NONE
DRAWING NO: PN 0-52.M27 PAGE NO:



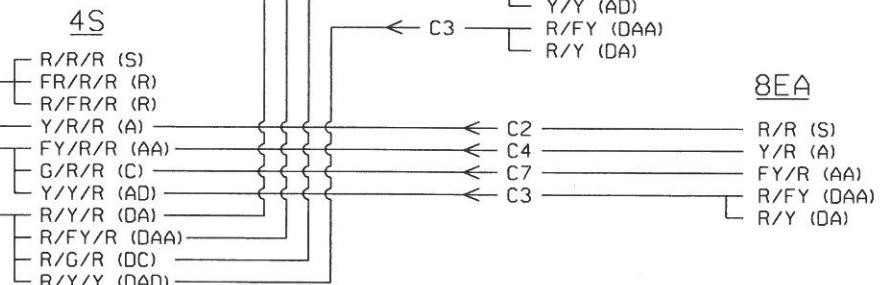
CP DE LA CRUZ



CP COAST



CP FRANKLIN



CP STOCKTON



LEGEND

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

NOTES:

A = ACTUAL TRACK DISTANCE
 AG = AVERAGE GRADE (FREIGHT TRAIN)
 AF = 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

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

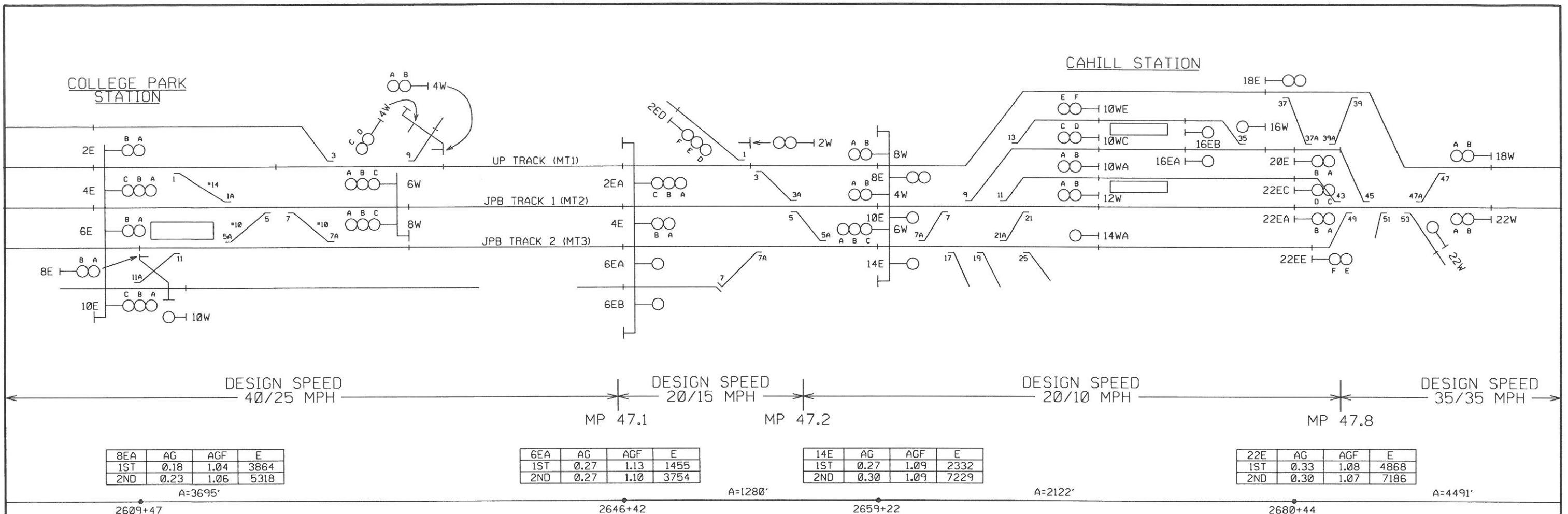
caltrain
 1250 San Carlos Avenue
 San Carlos, CA 94070

PENINSULA CORRIDOR JOINT POWERS BOARD

DESIGN DATE: 08-30-06
 REVISION DATE:

CTC ASPECT CHART
 SOUTHBOUND ASPECTS TRACK JPB MT2
 PN 0-52 SH 28 OF 62

MAINTENANCE DRAWING
 ADOPTED DATE: SCALE: NONE
 DRAWING NO: PAGE NO:
 PN 0-52.M28



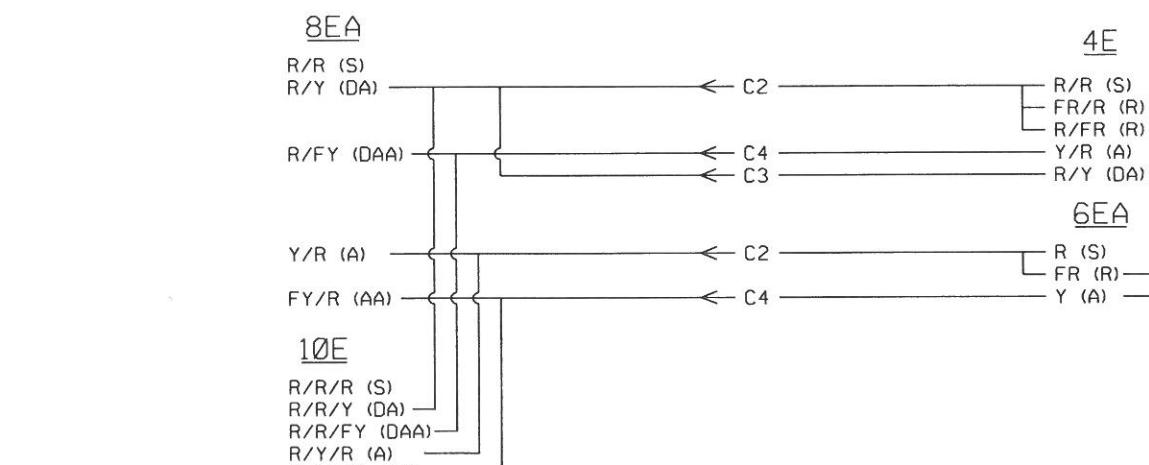
CP STOCKTON

CP SHARK

CP ALAMEDA

CP BIRD

CP DELMAS



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

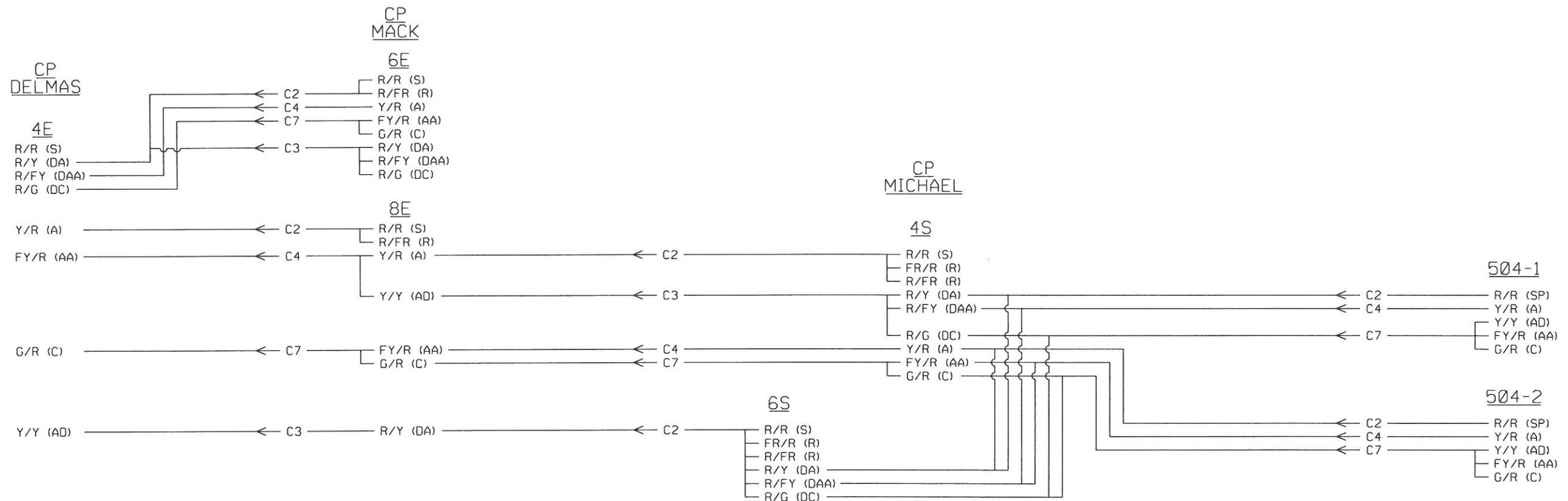
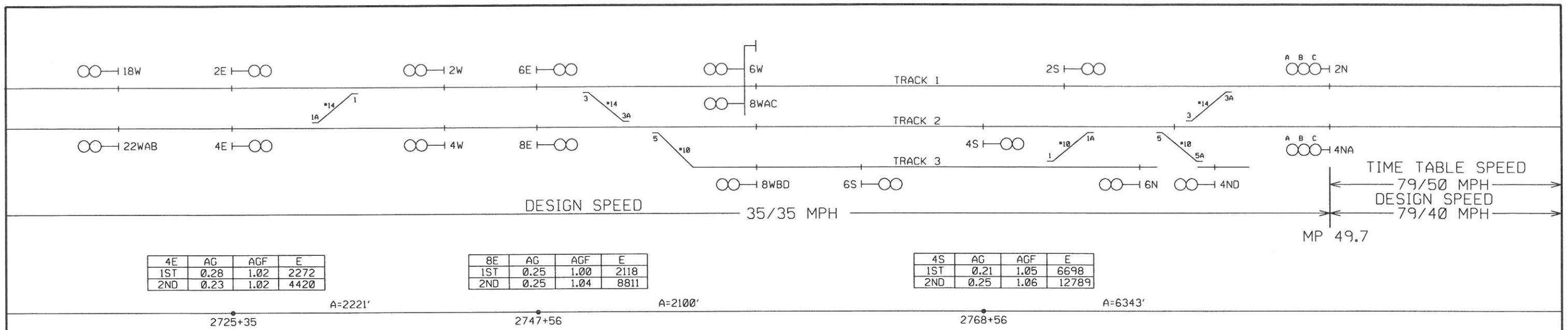
xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 986-0867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM



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

PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
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: PAGE NO:
PN 0-52.M29



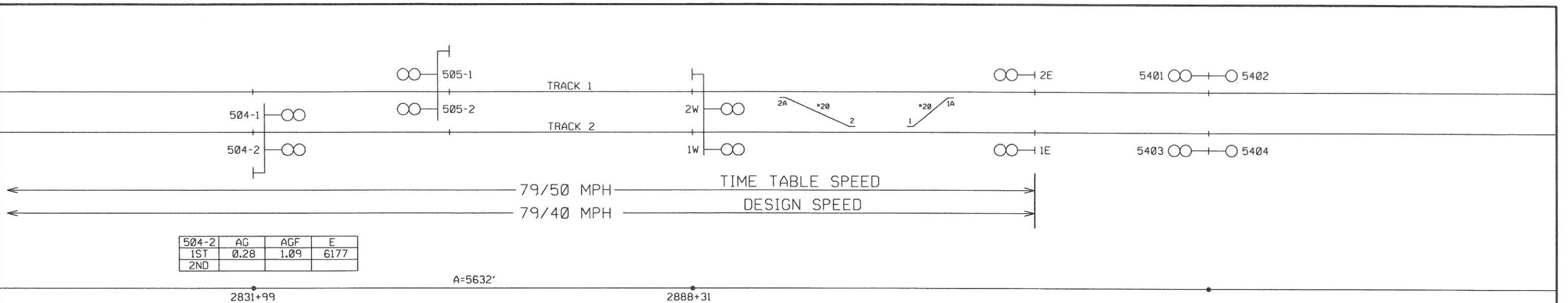
LEGEND

(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)
 (PASSENGER 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	xorail	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	DEPUTY DIRECTOR S. CHAO	PENINSULA CORRIDOR JOINT POWERS BOARD	DESIGN DATE: 12-14-04	REVISION DATE: 08-30-06
	DRAWN BY T. G. PEREZ				CTC ASPECT CHART SOUTHBOUND ASPECTS TRACK 2	MAINTENANCE DRAWING	
	CHECKED BY C. J. ZERZAN	Caltrain®	1250 San Carlos Avenue San Carlos, CA 94070	MANAGER OF C&S D. OBEDOZA	DESIGNED BY: XORAIL	PN 0-52 SH 30 OF 62	ADOPTED DATE: SCALE: NONE
	APPROVED BY C. J. ZERZAN				CHECKED BY:		DRAWING NO.: PAGE NO.: PN 0-52.M30



CP
LICK

504-2

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

← C2

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

5402

R (SP)

Y (A)

FY (AA)

G (C)

Y/Y (AD)

← C3

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

5404

FY (AA)

G (C)

FY/R (AA)

← C4

Y/R (A)

R (SP)

Y (A)

FY (AA)

G (C)

G/R (C)

← C7

FY/R (AA)

C2

C4

C7

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)
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

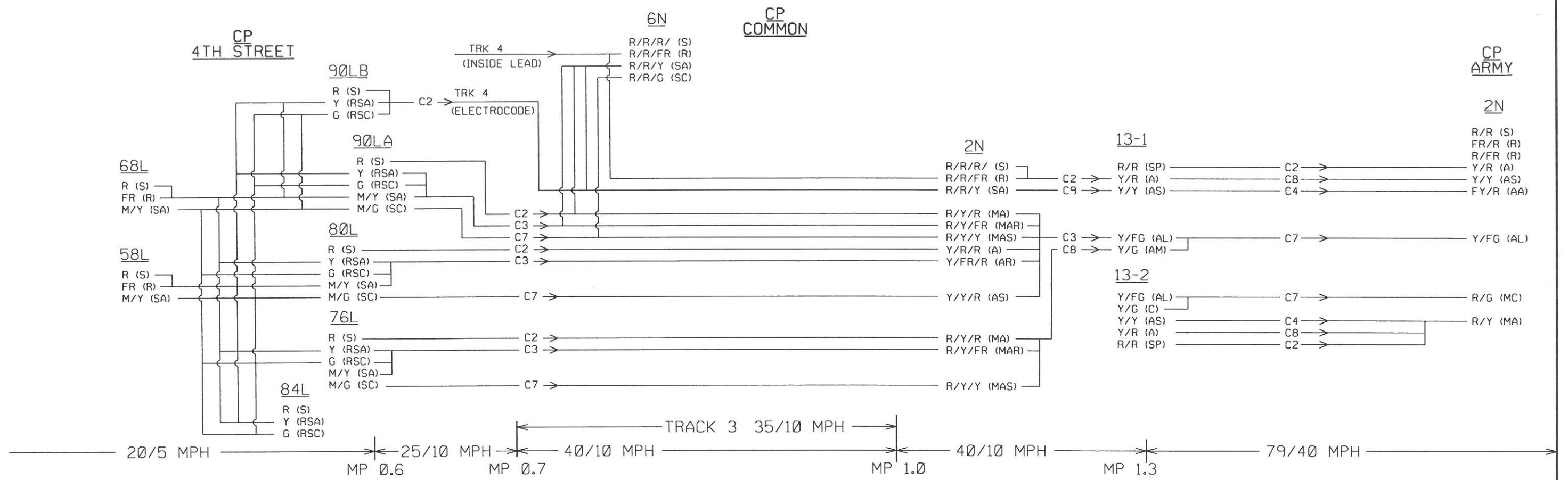
caltrain

1250 San Carlos Avenue
San Carlos, CA 94070

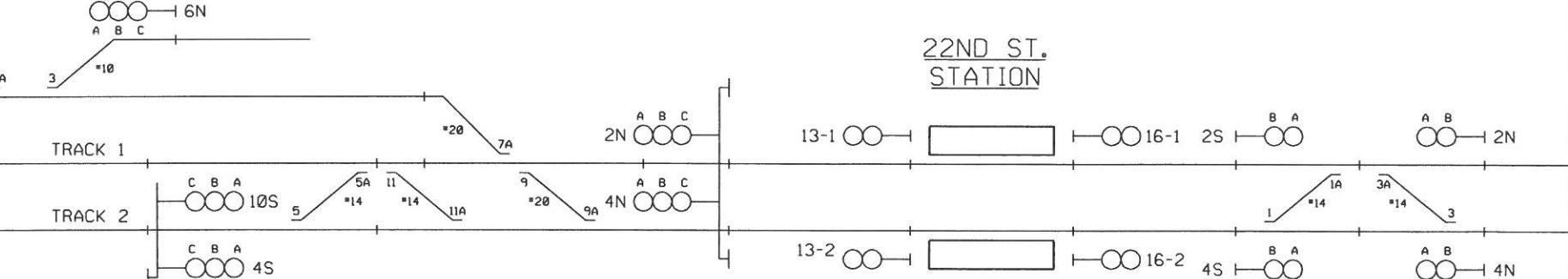
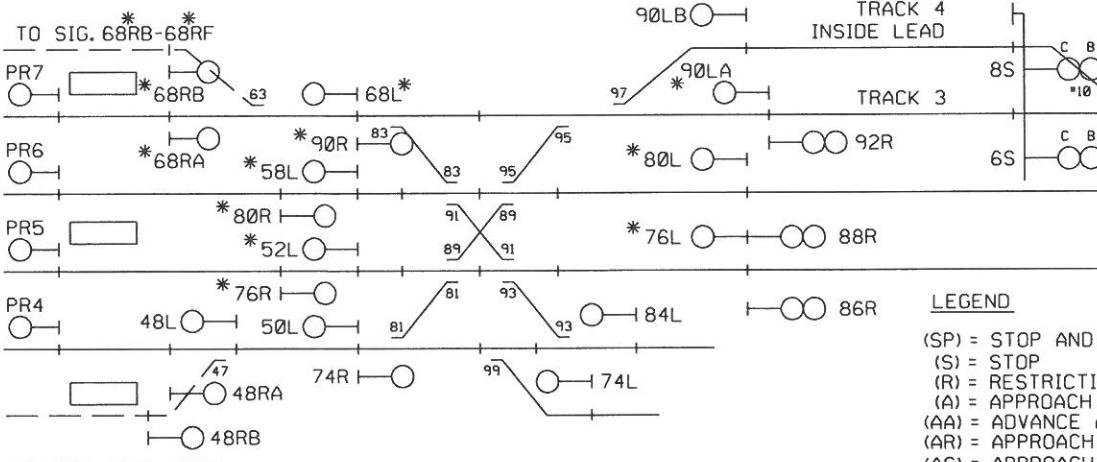
DEPUTY DIRECTOR:
S. CHAO
MANAGER OF CAS:
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
SOUTHBOUND ASPECTS TRACK 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:



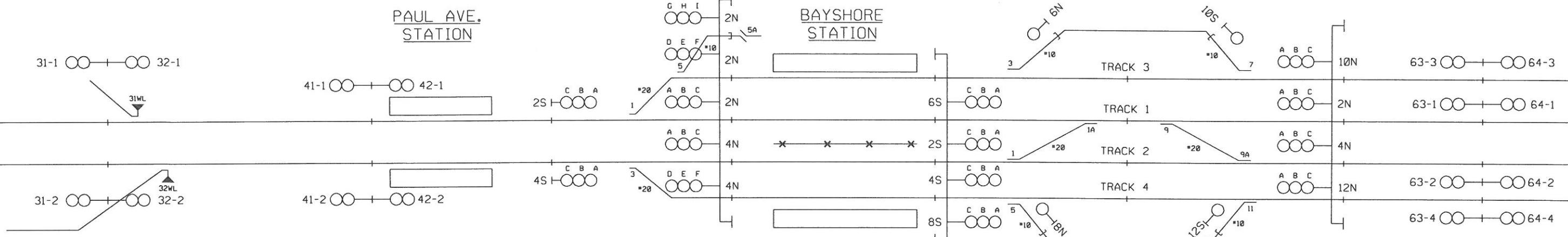
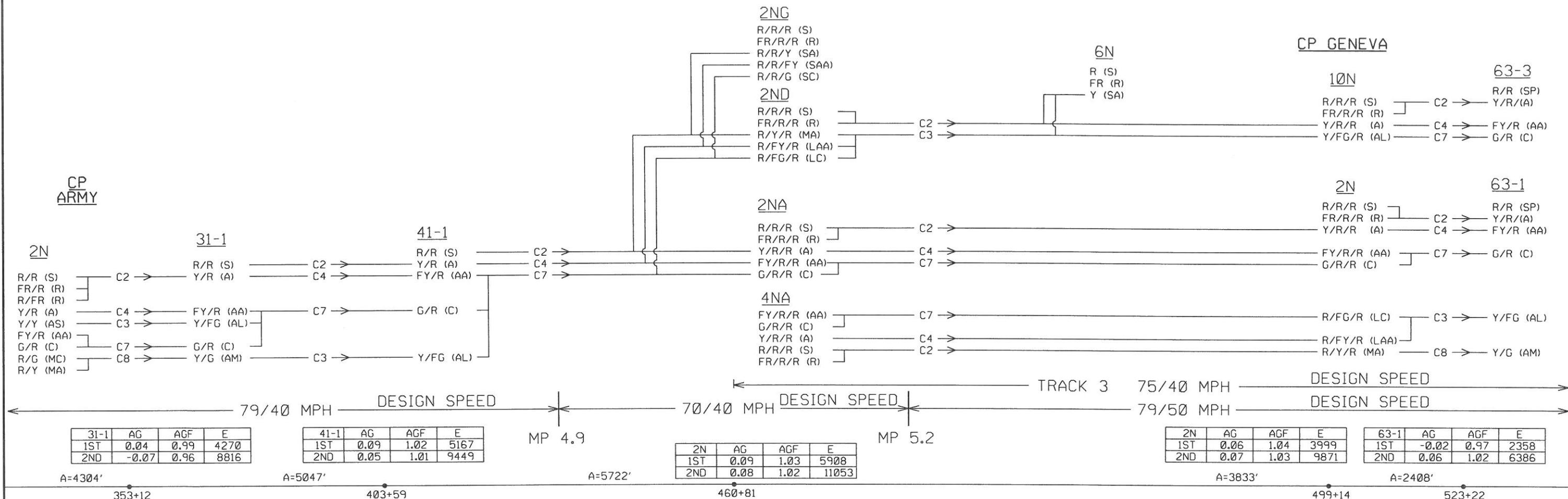
SAN FRANCISCO STATION



(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.

DESIGNED: 04-18-06 BY: SWE/ZAE FILE JP805-15617 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 JP805-15617 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 JP800-8730 WD NO.: 625 CTC PROJECT ASBUILT IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE APPROVED BY C. J. ZERZAN	DRAWN 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) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	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 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:
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CP TUNNEL



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
DRAWN BY: T. G. PEREZ
CHECKED BY: C. J. ZERZAN
APPROVED BY: C. J. ZERZAN

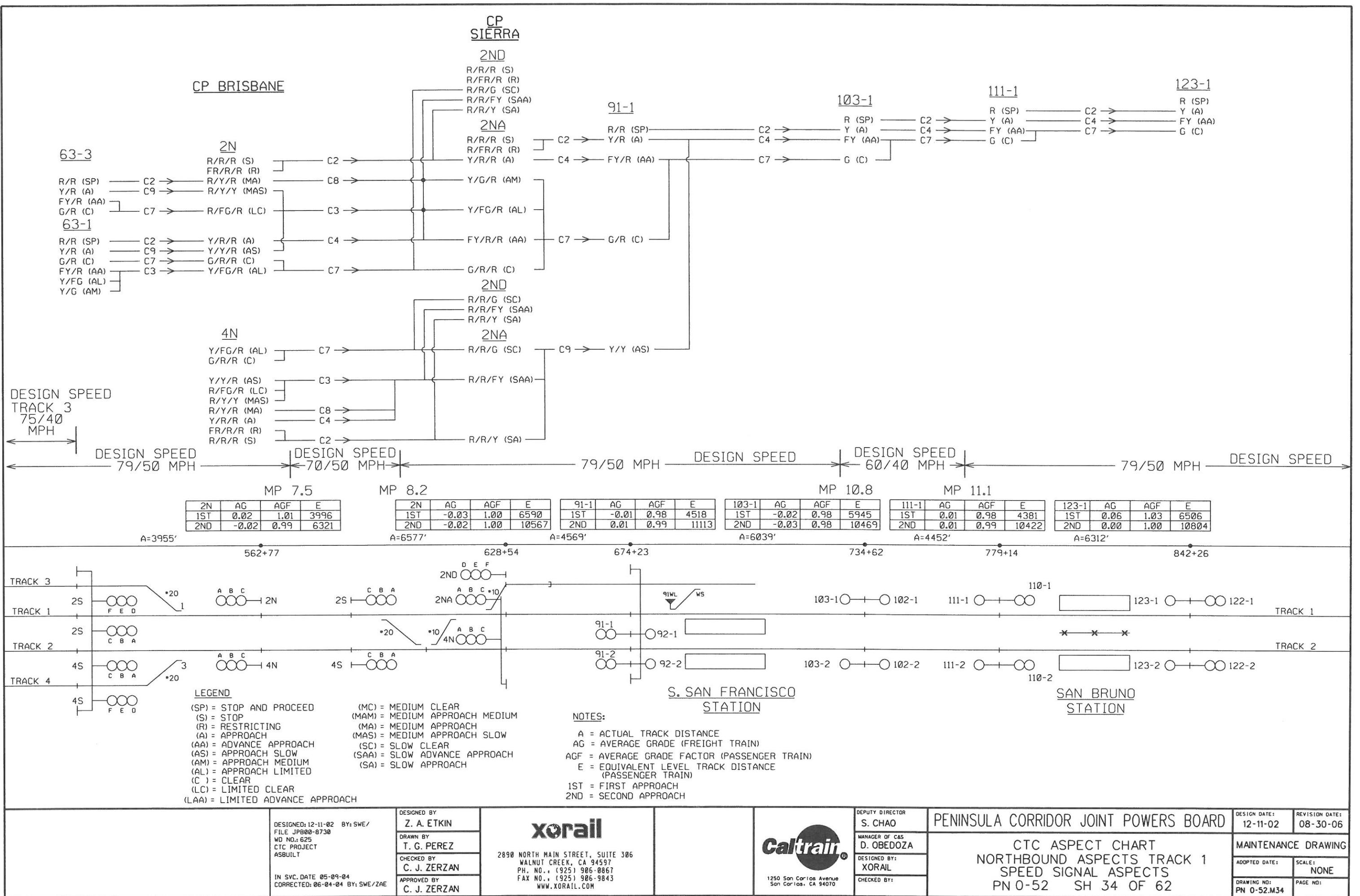
xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO. (925) 906-0867
FAX NO. (925) 906-9843
WWW.XORAIL.COM

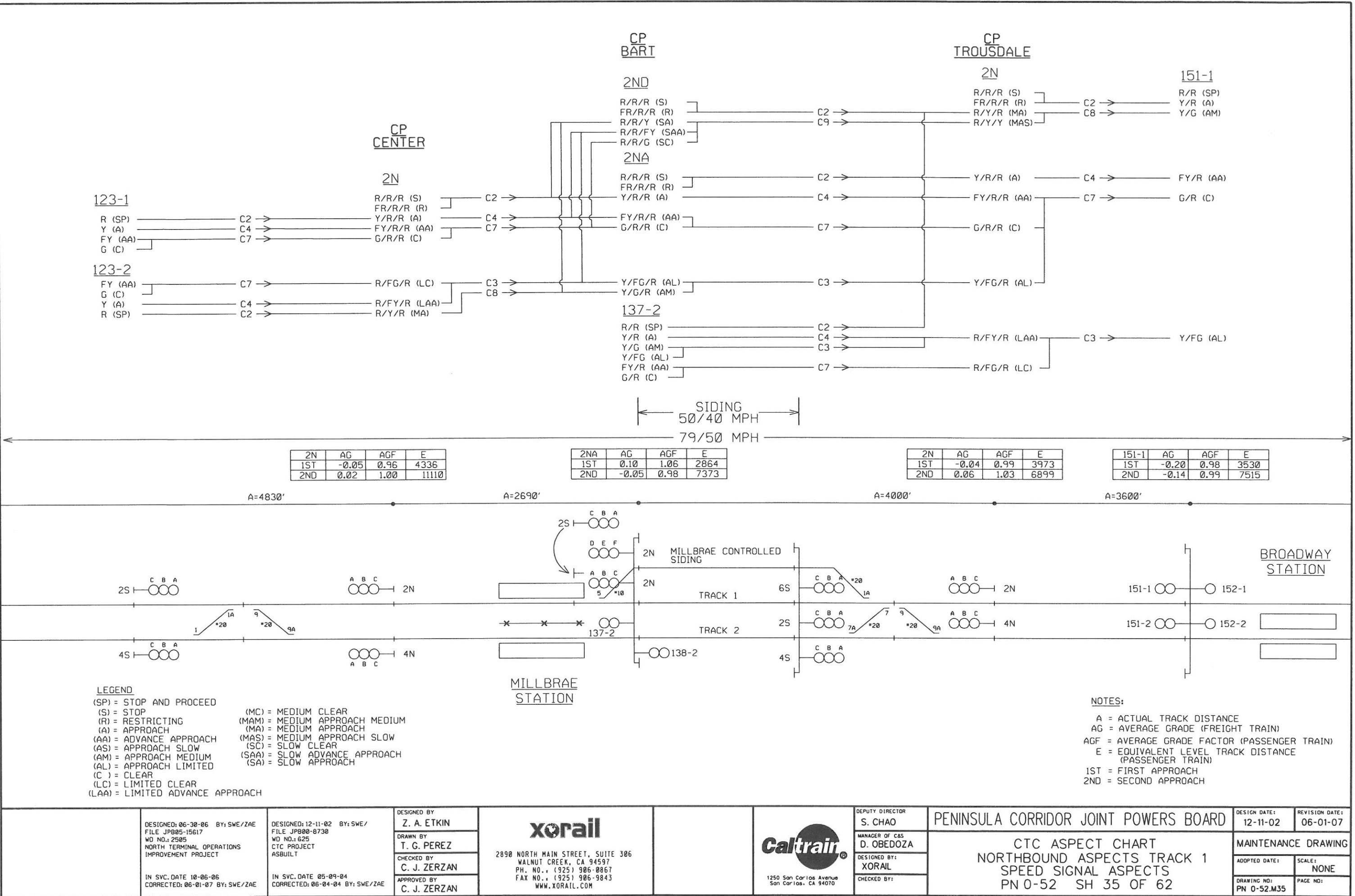


DEPUTY DIRECTOR
S. CHAO
MANAGER OF C&S
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 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:





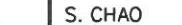
<u>LEGEND</u>	
(SP) = STOP AND PROCEED	
(S) = STOP	(MC)
(R) = RESTRICTING	(MAM)
(A) = APPROACH	(MA)
(AA) = ADVANCE APPROACH	(MAS)
(AS) = APPROACH SLOW	(SC)
(AM) = APPROACH MEDIUM	(SAA)
(AL) = APPROACH LIMITED	(SA)
(C) = CLEAR	
(LC) = LIMITED CLEAR	
(LAA) = LIMITED ADVANCE APPROACH	

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

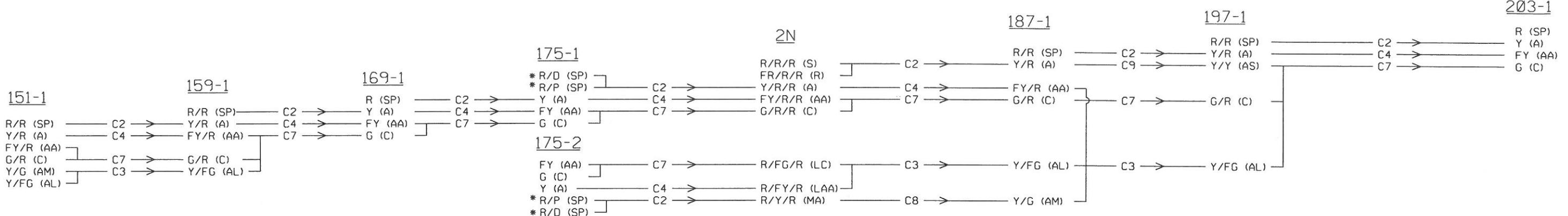
MILLBRAE
STATION

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	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	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 SPEED SIGNAL ASPECTS PN 0-52 SH 35 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 06-01-07
	IN SVC. DATE 10-06-06 CORRECTED: 06-01-07 BY: SWE/ZAE	IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE							MAINTENANCE DRAWING	
									ADOPTED DATE: NONE	SCALE: NONE
									DRAWING NO: PN 0-52.M35	PAGE NO: 62

CP
PALM



	AG	AGF	E
1ST	-0.15	0.93	3947
2ND	-0.13	0.95	7462

	AG	AGF	E
1ST	-0.02	0.98	5034
2ND	-0.08	0.96	9060

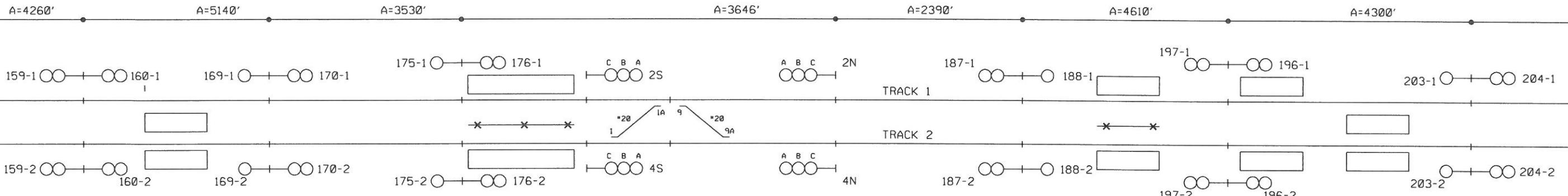
	AG	AGF	E
1ST	0.17	1.02	3583
2ND	0.07	0.99	8604

	AG	AGF	E
1ST	0.16	1.05	3940
2ND	0.13	1.03	7538

	AG	AGF	E
1ST	0.03	1.07	2551
2ND	0.06	1.05	6454

	AG	AGF	E
1ST	-0.07	0.98	4528
2ND	0.01	1.01	7101

	AG	AGF	E
1ST	-0.28	0.96	4108
2ND	-0.20	0.98	8694



BURLINGAME
STATION

SAN MATEO
STATION

HAYWARD PARK BAY MEADOWS HILLSDALE
STATION STATION 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

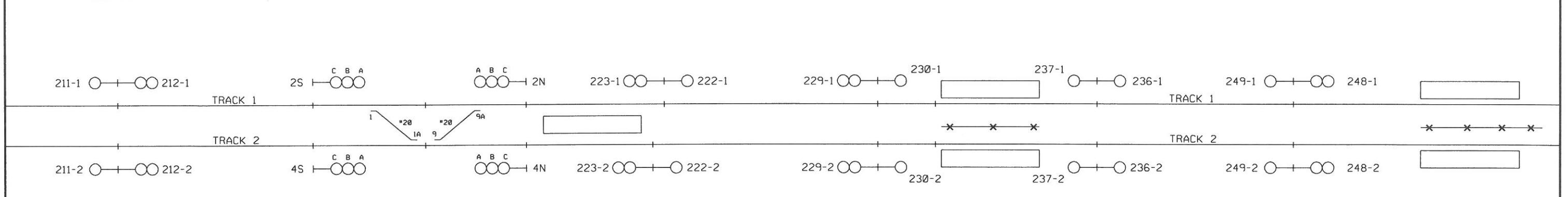
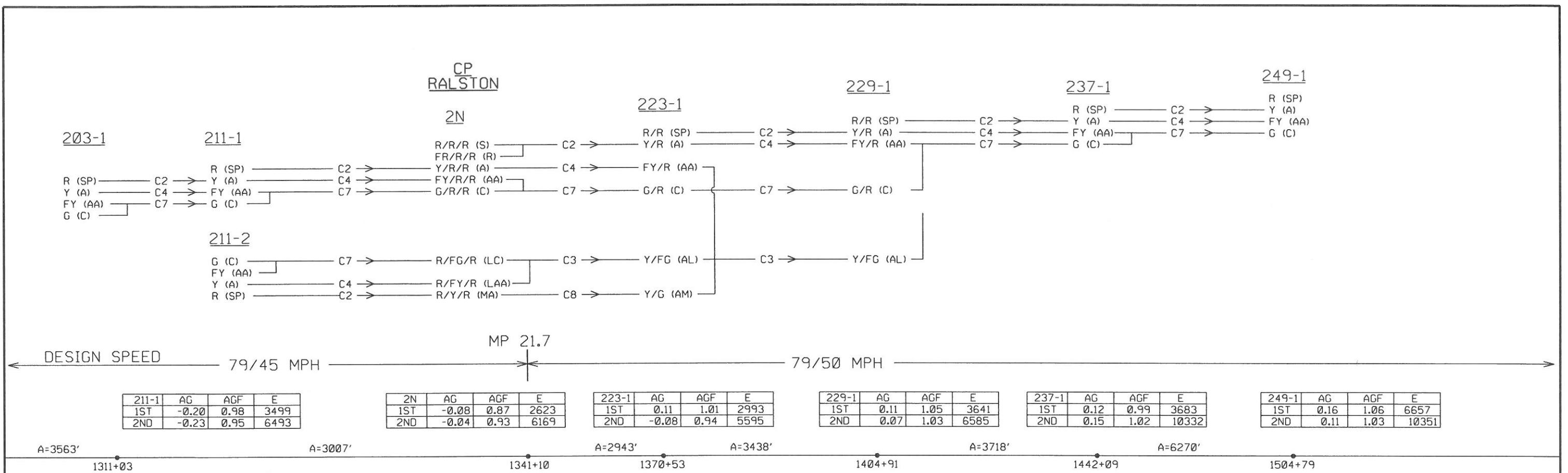
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

* 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	DESIGNED: 12-11-02 BY: SWE/ FILE JPB00-8730 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT	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	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
IN SVC. DATE 01-27-07 CORRECTED: 06-27-07 BY: SWE/ZAE	IN SVC. DATE 05-09-04 CORRECTED: 06-04-04 BY: SWE/ZAE				MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PAGE NO: PN 0-52.M36	



LEGEND

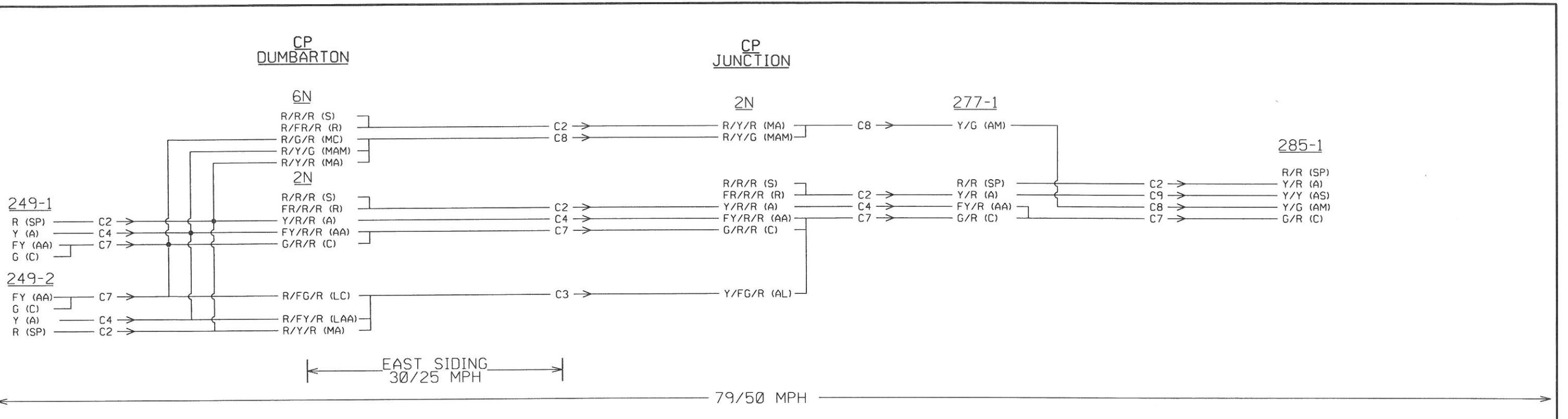
(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AS) = APPROACH SLOW
(MAM) = MEDIUM APPROACH MEDIUM
(MAM) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

(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	DESIGNED: 12-11-02 BY: SWE/FILE JPB08-0730 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	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 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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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'

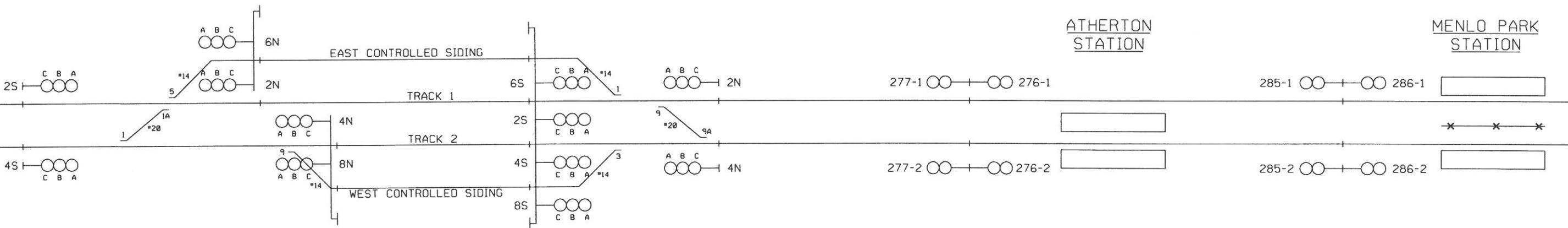
A=4550'

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:

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

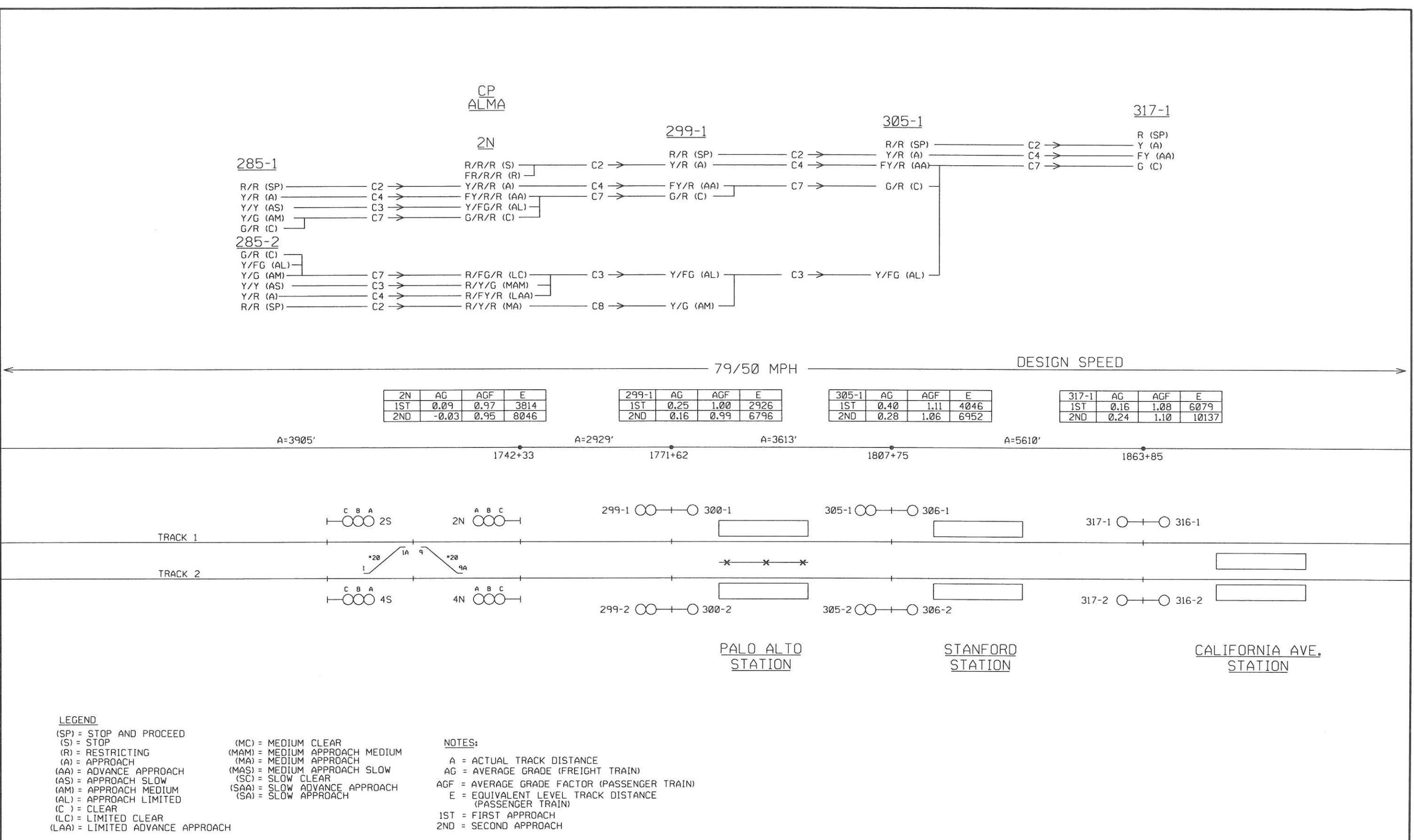
xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 986-0867
FAX NO.: (925) 986-9843
WWW.XORAIL.COM



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

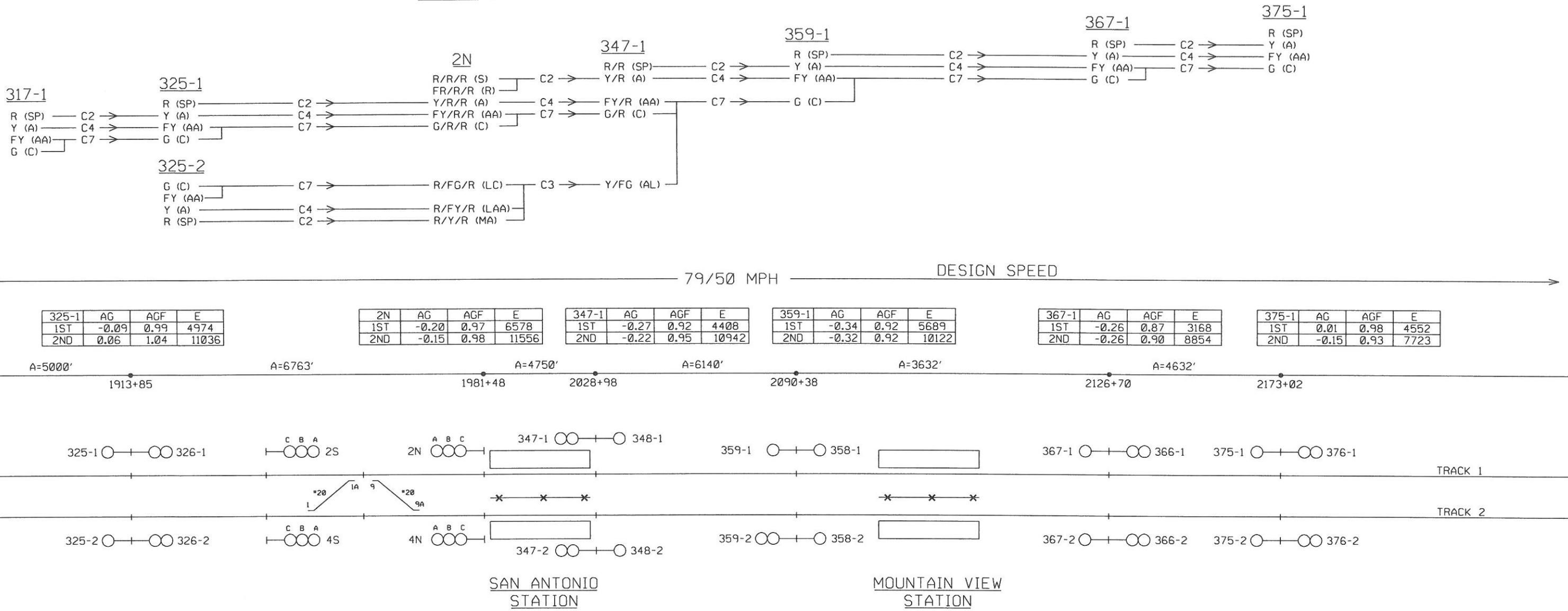
PENINSULA CORRIDOR JOINT POWERS BOARD
CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 1
PN 0-52 SH 38 OF 62

DESIGN DATE: 12-11-02 REVISION DATE: 08-30-06
MAINTENANCE DRAWING
ADOPTED DATE: SCALE: NONE
DRAWING NO: PN 0-52.M38 PAGE NO:



		DESIGNED BY Z. A. ETKIN	xorail 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 39 OF 62	DESIGN DATE: 12-11-02	REVISION DATE: 08-30-06
		DESIGNED: 12-11-02 BY: SWE/ FILE JP800-8730 WD NO. 625 CTC PROJECT ASBUILT					MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE	DRAWING NO: PN 0-52.M39 PAGE NO:

CP
MAYFIELD



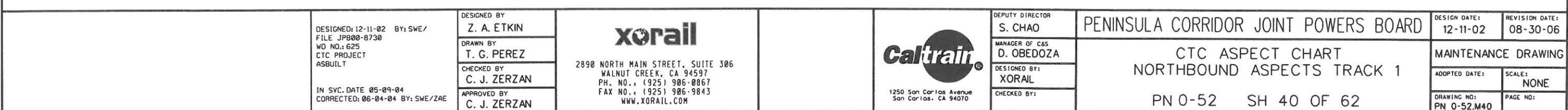
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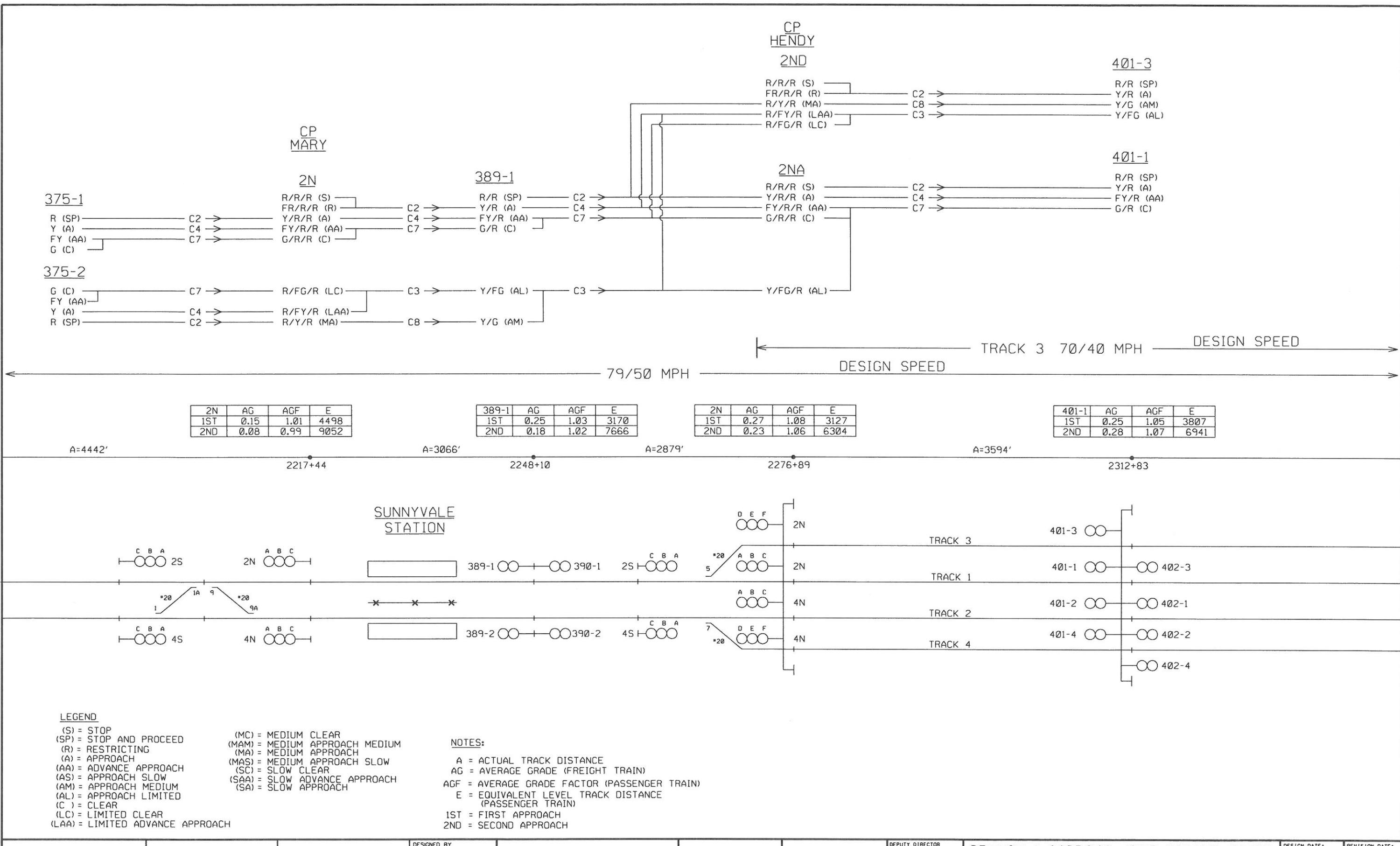
(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AA) = ADVANCE APPROACH
 (AS) = APPROACH SLOW
 (AM) = APPROACH MEDIUM
 (AL) = APPROACH LIMITED
 (C) = CLEAR
 (LC) = LIMITED CLEAR
 (LAA) = LIMITED ADVANCE A

(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

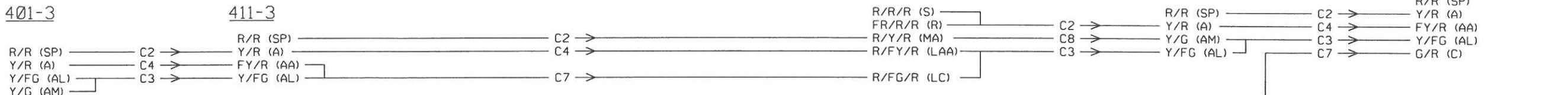




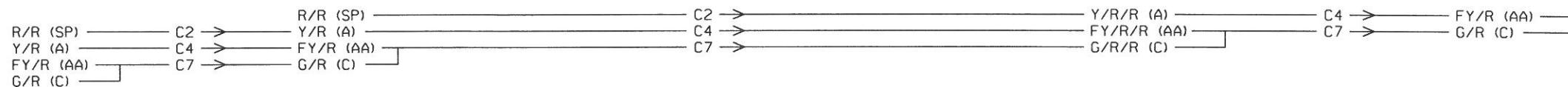
DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE: JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT	DESIGNED: 12-11-02 BY: SWE/FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT	DESIGNED BY: Z. A. ETKIN DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	XORAIL 2890 NORTH MAIN STREET, 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 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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CP
BOWERS

2N



401-1 411-1



← TRACK 3 70/40 MPH → TIME TABLE SPEED

← TRACKS 1 & 3 DESIGN SPEED 79/50 MPH →

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

A=4009'

2352+92

A=3747'

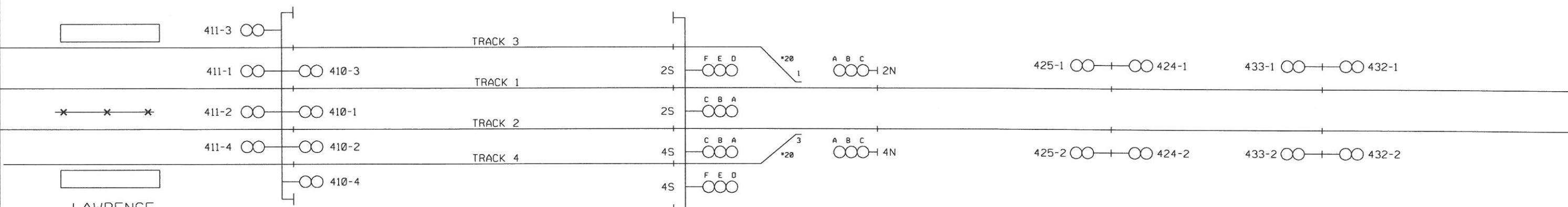
2390+39

A=4302'

2433+41

A=5091'

2484+32



LAWRENCE
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

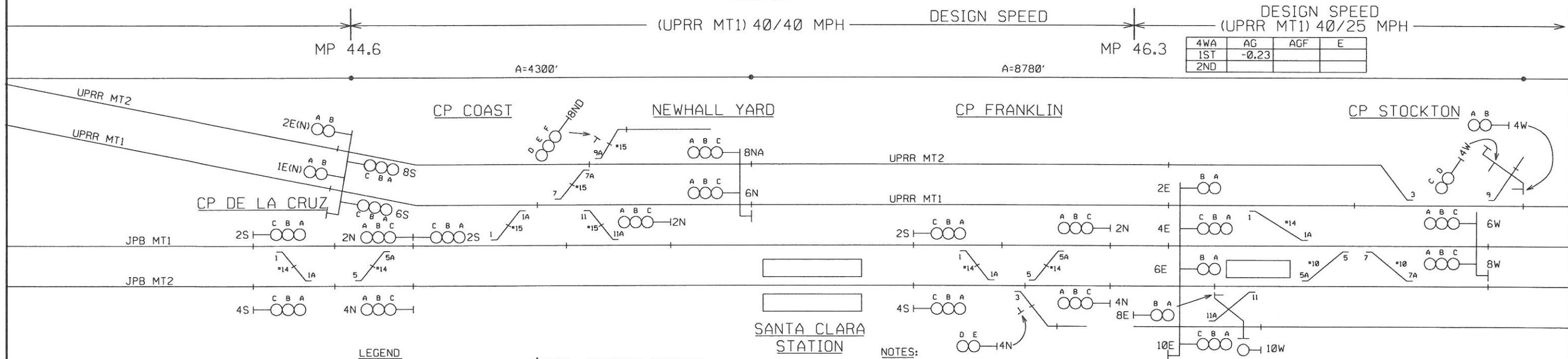
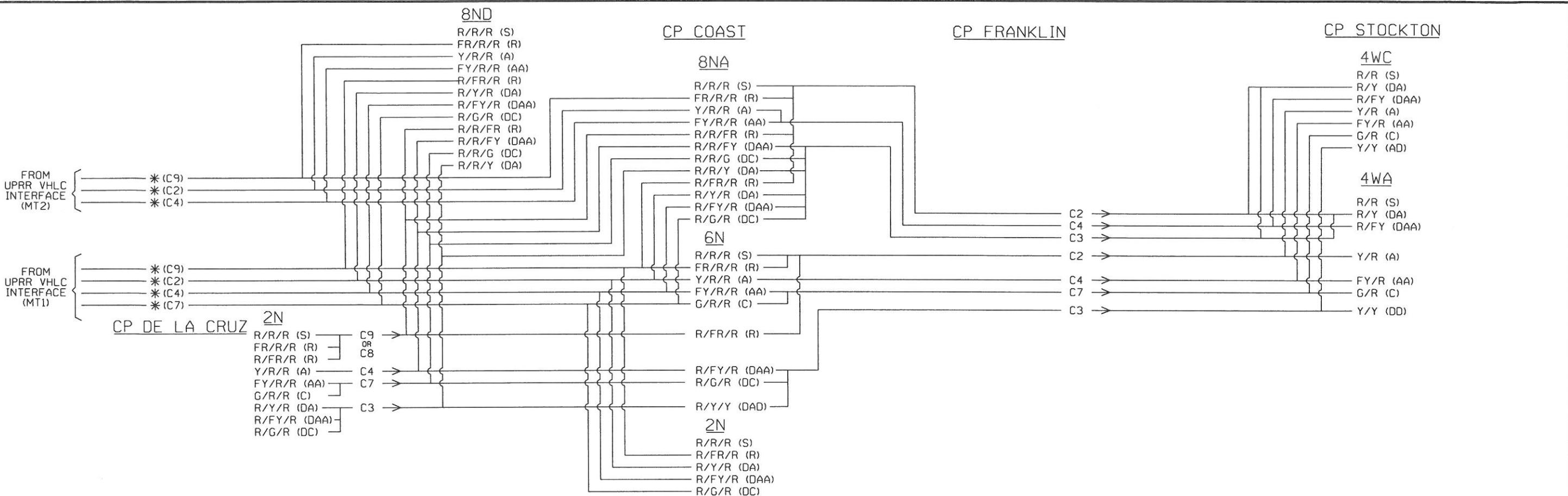
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH

NOTES:

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: XORAIL/ZAE FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT	DESIGNED BY: SWE/FILE JPB08-8730 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	xorail 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 C&S: 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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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.

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

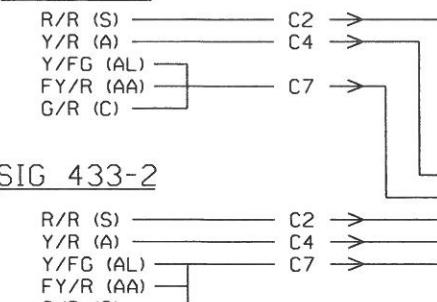
DESIGNED BY: Z. A. ETKIN	DRAWN BY: T. G. PEREZ	CHECKED BY: C. J. ZERZAN	APPROVED BY: C. J. ZERZAN	DEPUTY DIRECTOR: S. CHAO	MANAGER OF CAS: D. OBEDOZA	DESIGNED BY: XORAIL	CHECKED BY:	DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
FILE JPB08-22285 WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT IN SVC. DATE 05-20-10 CORRECTED: 03-30-11 BY: XORAIL/ABP	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM							PENINSULA CORRIDOR JOINT POWERS BOARD	CTC ASPECT CHART NORTHBOUND ASPECTS TRACKS UPRR MT1 & MT2 PN 0-52 SH 43 OF 62

CP STOCKTON

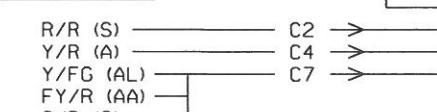
6W

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

SIG 433-1

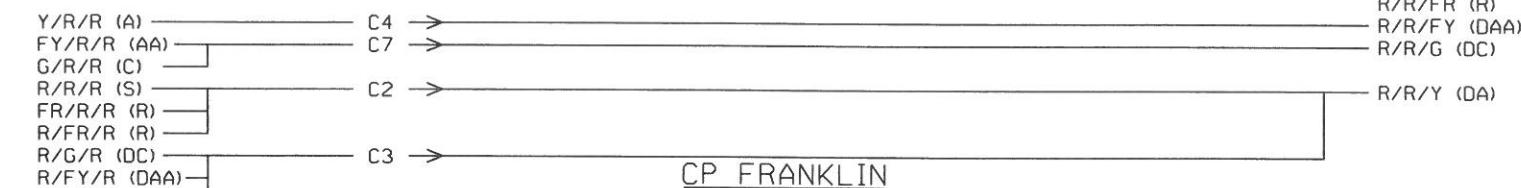


SIG 433-2



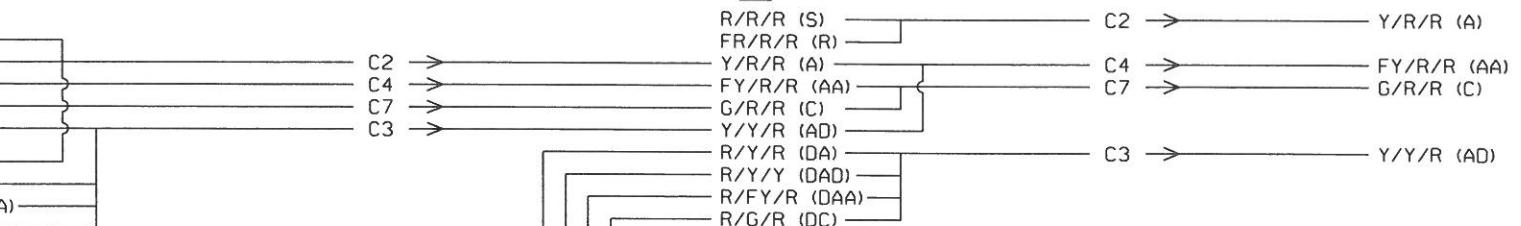
CP COAST

6N

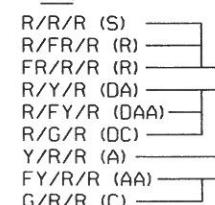


CP FRANKLIN

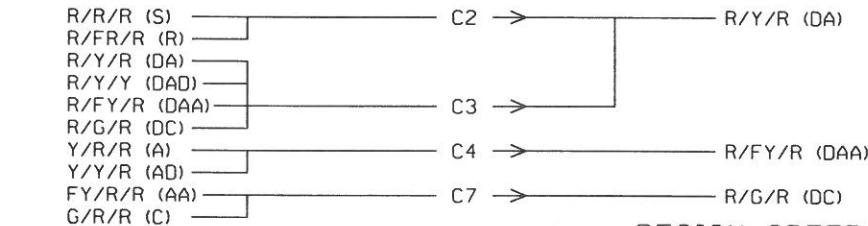
2N



4N



4N



DESIGN SPEED

JPB MT1 79/50 MPH

MP 44.6

	2N	AG	AGF	E
1ST	-0.12	0.96	3404	
2ND	-0.10	0.97	8394	

A=3530'

79/40 MPH

	2N	AG	AGF	E
1ST	-0.14	0.98	1031	
2ND	-0.15	0.96	4436	

A=1050'

DESIGN SPEED

MP 46.3

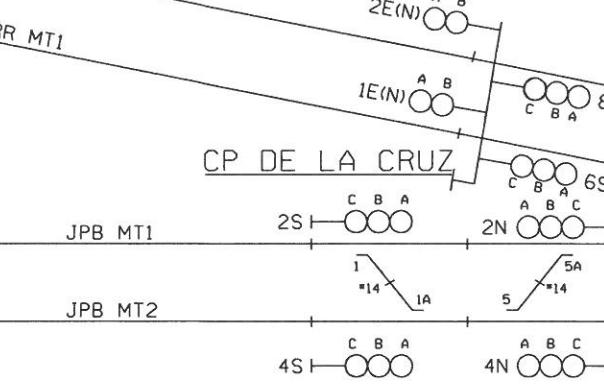
	2N	AG	AGF	E
1ST	-0.16	0.98	2146	
2ND	-0.16	0.98	3174	

A=6420'

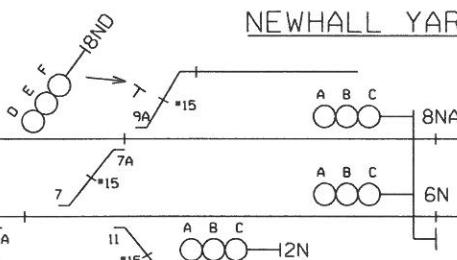
DESIGN SPEED

	6W	AG	AGF	E
1ST	-0.25	0.95	6135	
2ND	-0.22	0.96	8271	

UPRR MT2



CP COAST



CP FRANKLIN

UPRR MT2

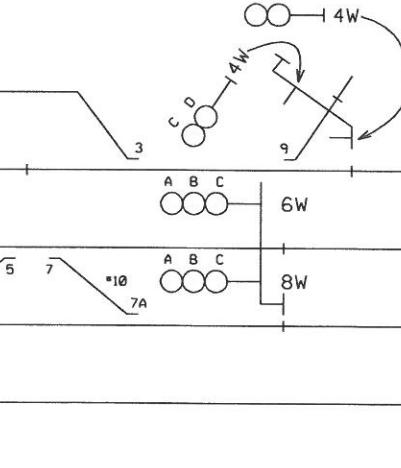
UPRR MT1

2S

1A

11A

CP STOCKTON



SANTA CLARA STATION

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

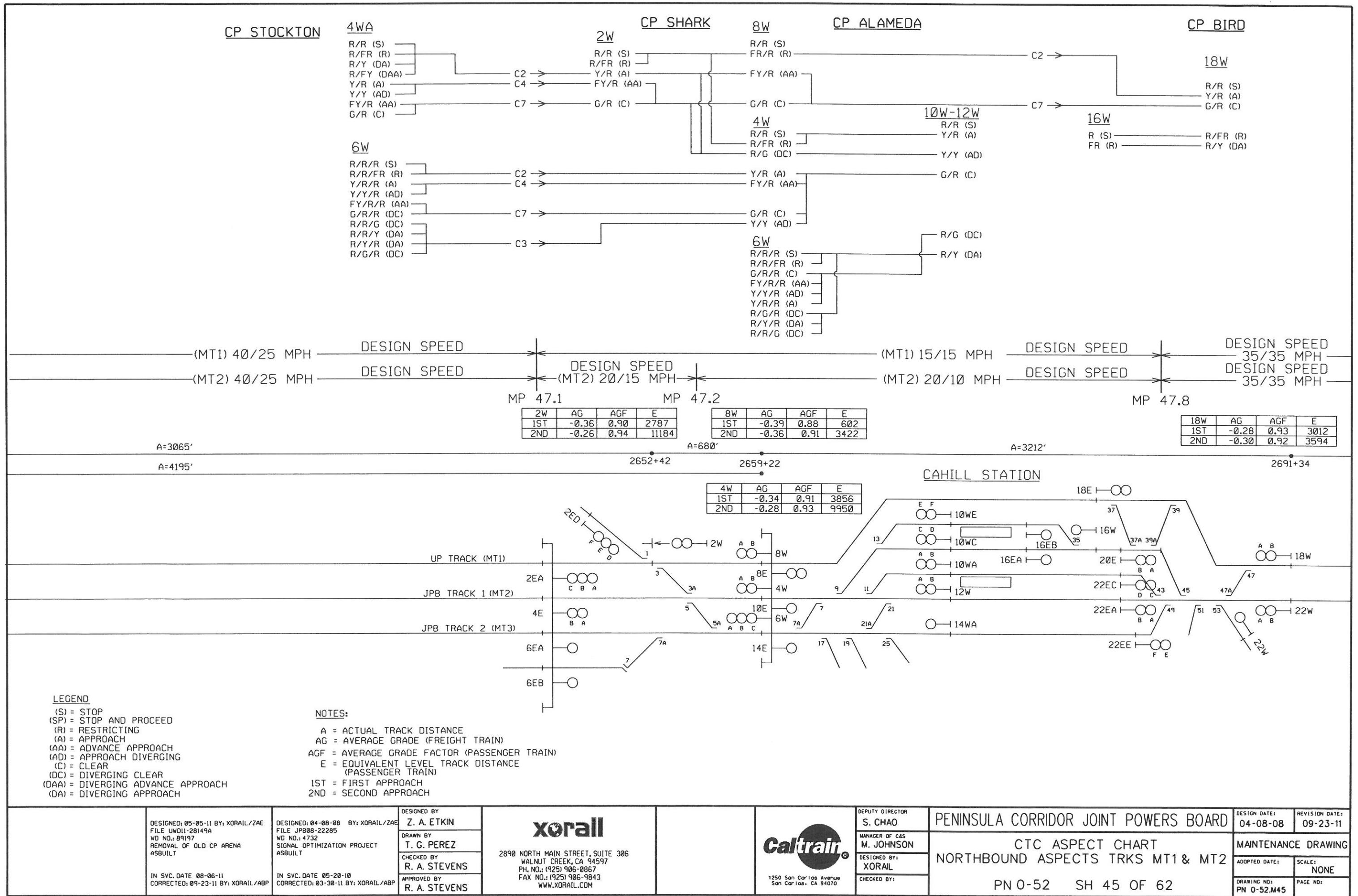
(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AA) = APPROACH RESTRICTING
(AD) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR

★(DAD) = DIVERGING APPROACH
DIVERTING
(DAA) = DIVERGING ADVANCE
APPROACH
(DA) = DIVERTING APPROACH
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

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 APPROVED BY: C. J. ZERZAN	DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	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	S. CHAO MANAGER OF CAS D. OBEDOZA DESIGNED BY: XORAIL CHECKED BY:	PENINSULA CORRIDOR JOINT POWERS BOARD		DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
				CTC ASPECT CHART		MAINTENANCE DRAWING	
				NORTHBOUND ASPECTS TRACK JPB MT1		ADOPTED DATE: SCALE: NONE	
				PN 0-52 SH 44 OF 62		DRAWING NO: PAGE NO: PN 0-52.M44	



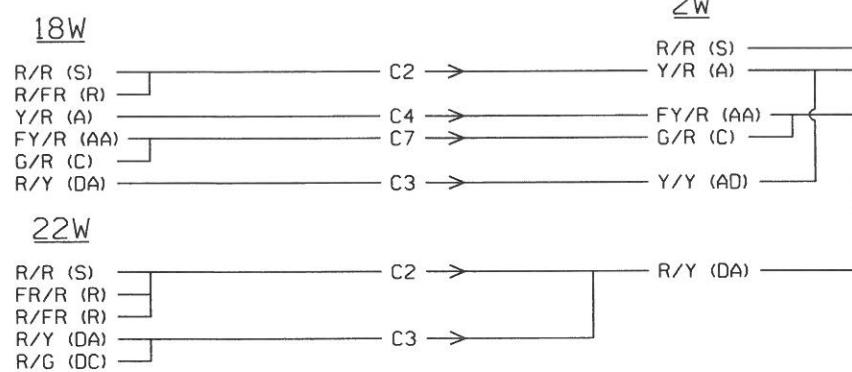
CP MICHAEL

CP BIRD

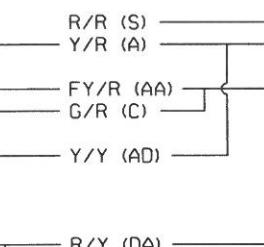
CP DELMAS

CP MACK

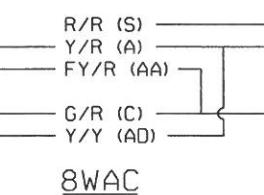
2N



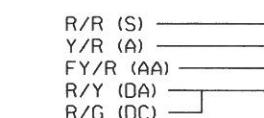
2W



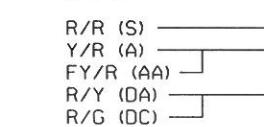
6W



8WAC



8WBD



DESIGN SPEED

35/35 MPH

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'

2729+95

A=2571'

2755+66

A=2740'

2783+06

A=5173'

2E —○○

○○— 2W

6E —○○

○○— 6W

2S —○○

○○— 2N

4E —○○

○○— 4W

8E —○○

○○— 8WAC

4S —○○

○○— 4NA

5 —○○

5 —○○

6S —○○

1 —○○

1 —○○

5 —○○

5 —○○

5 —○○

6N —○○

6N —○○

4ND —○○

4ND —○○

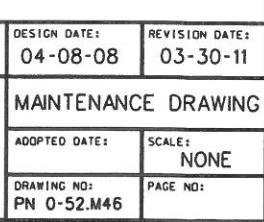
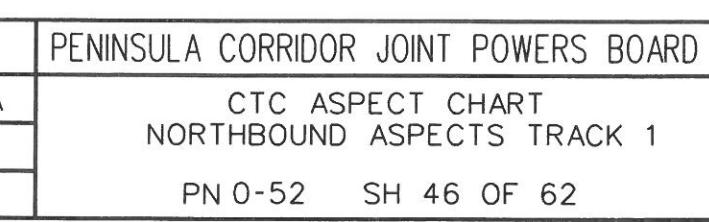
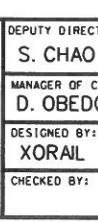
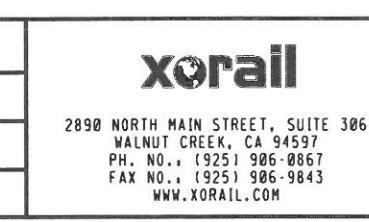
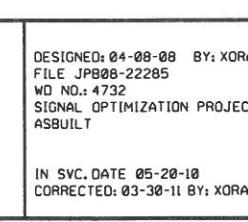
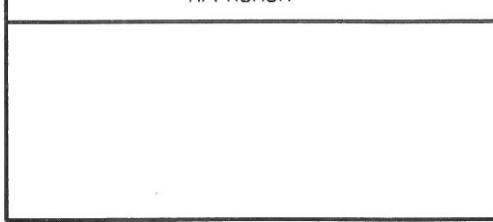
LEGEND

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

NOTES:

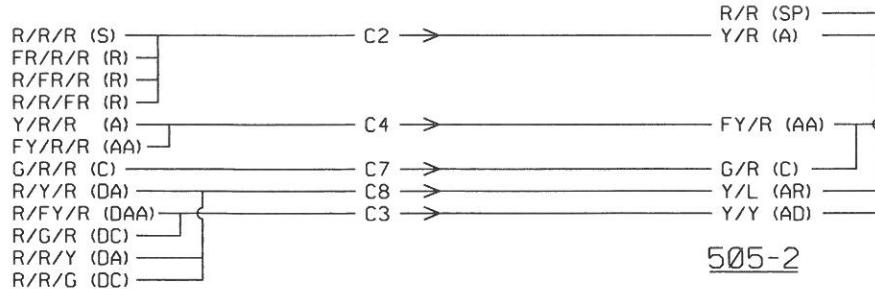
A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
(R) = RESTRICTING
(A) = APPROACH
(AR) = APPROACH RESTRICTING
(AA) = ADVANCE APPROACH
(AD) = APPROACH DIVERGING
(C) = CLEAR
(DC) = DIVERGING CLEAR
(DA) = DIVERGING APPROACH
(DAA) = DIVERGING ADVANCE APPROACH

1ST = FIRST APPROACH
2ND = SECOND APPROACH



CP
MICHAEL

2N



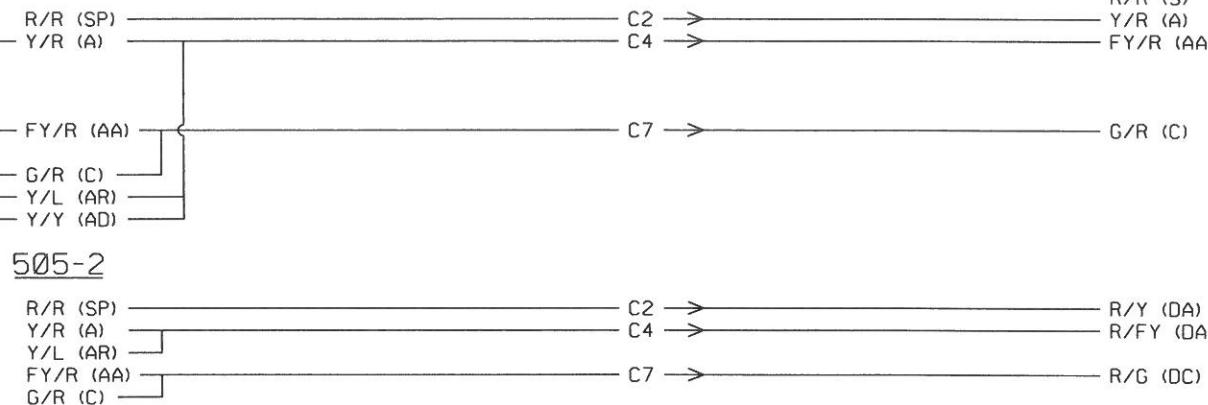
505-1

505-2

CP
LICK

2E

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

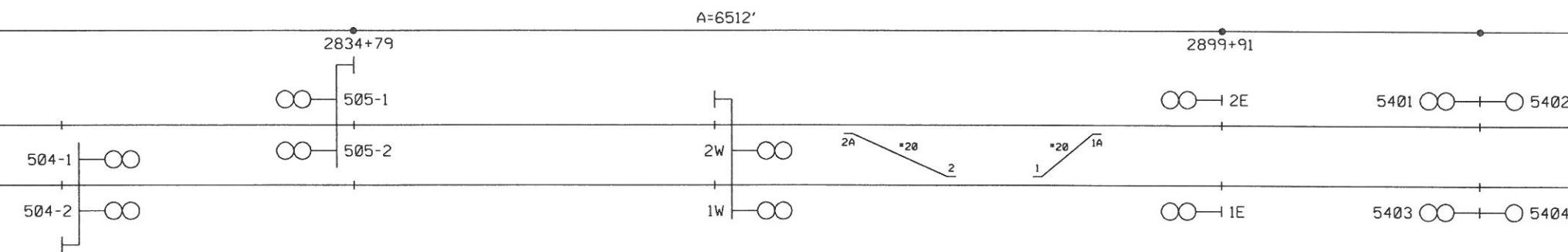


TIME TABLE SPEED 79/60 MPH

DESIGN SPEED

79/40 MPH

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



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
----------------------------	-------------------------	----------------------------	-----------------------------

xorail
2890 NORTH MAIN STREET, SUITE 306
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PH. NO., (925) 906-0867
FAX NO., (925) 906-9843
WWW.XORAIL.COM



PENINSULA CORRIDOR JOINT POWERS BOARD

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

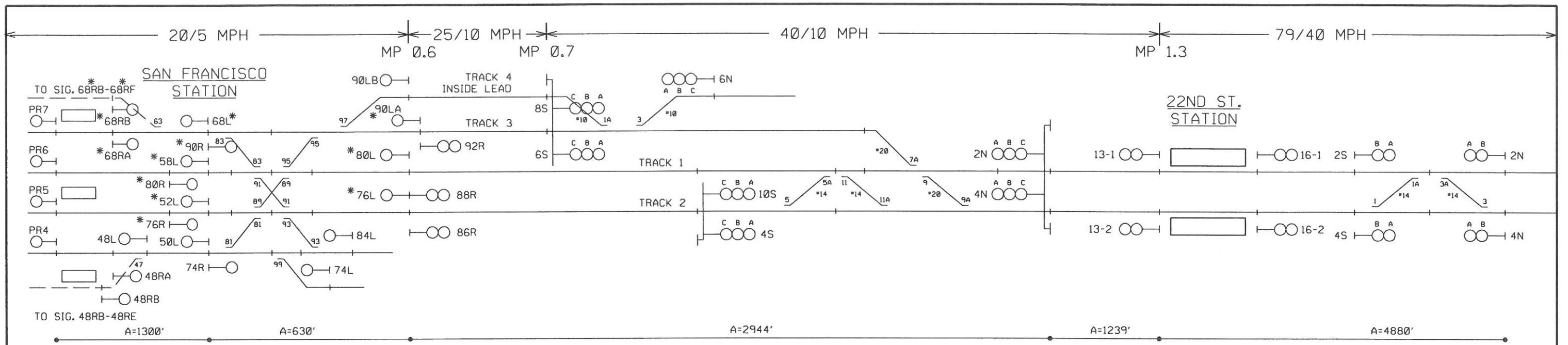
CTC ASPECT CHART
NORTHBOUND ASPECTS TRACK 1

MAINTENANCE DRAWING

PN 0-52 SH 47 OF 62

ADOPTED DATE: SCALE: NONE

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



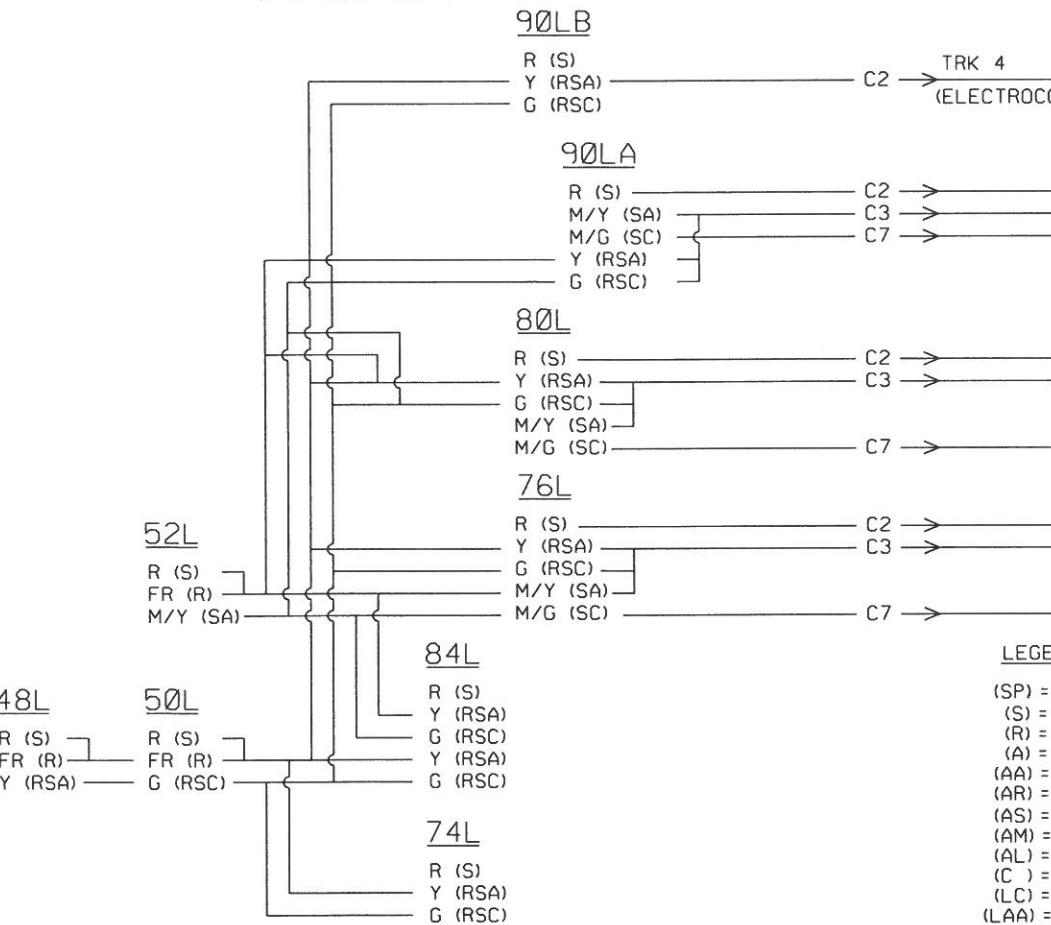
76L	AG	AGF	E
1ST	0.94	594	
2ND	0.98	1907	

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

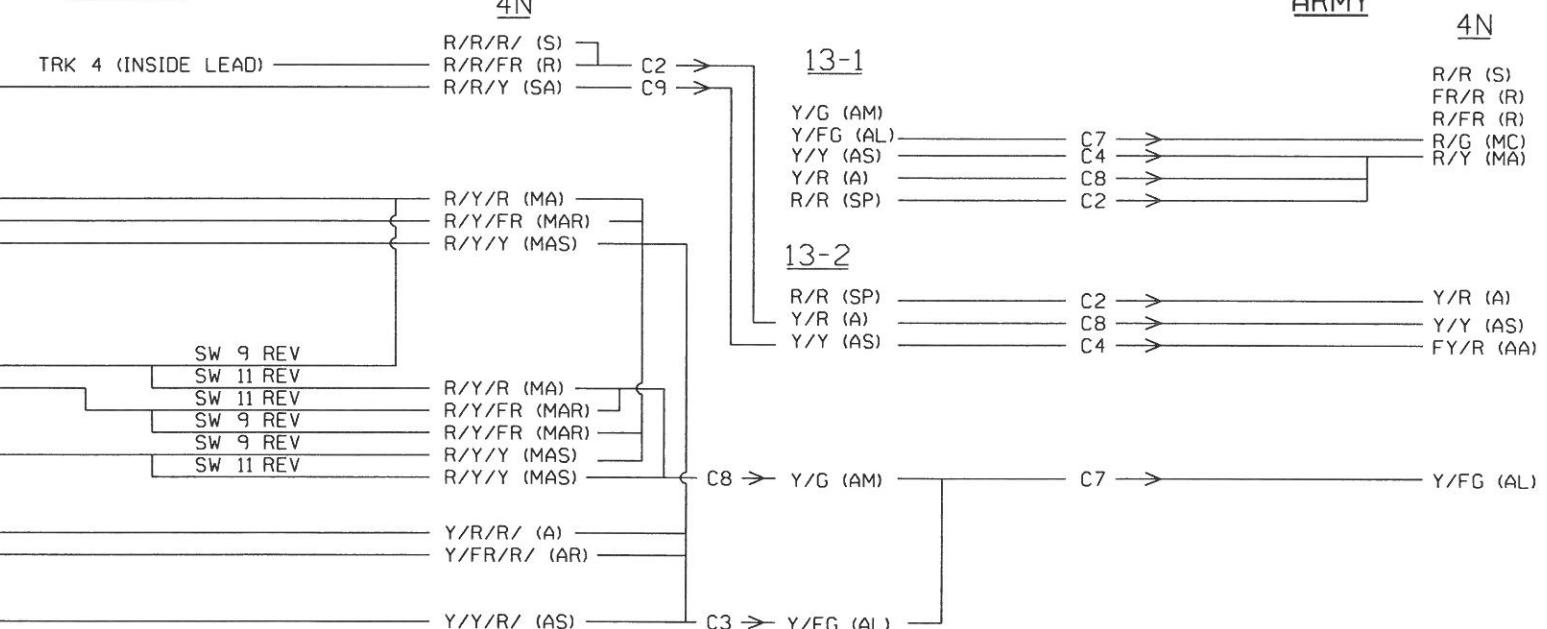
13-2	AG	AGF	E
1ST	-0.24	0.95	1182
2ND	-0.21	0.96	4018

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

CP 4TH STREET



CP COMMON



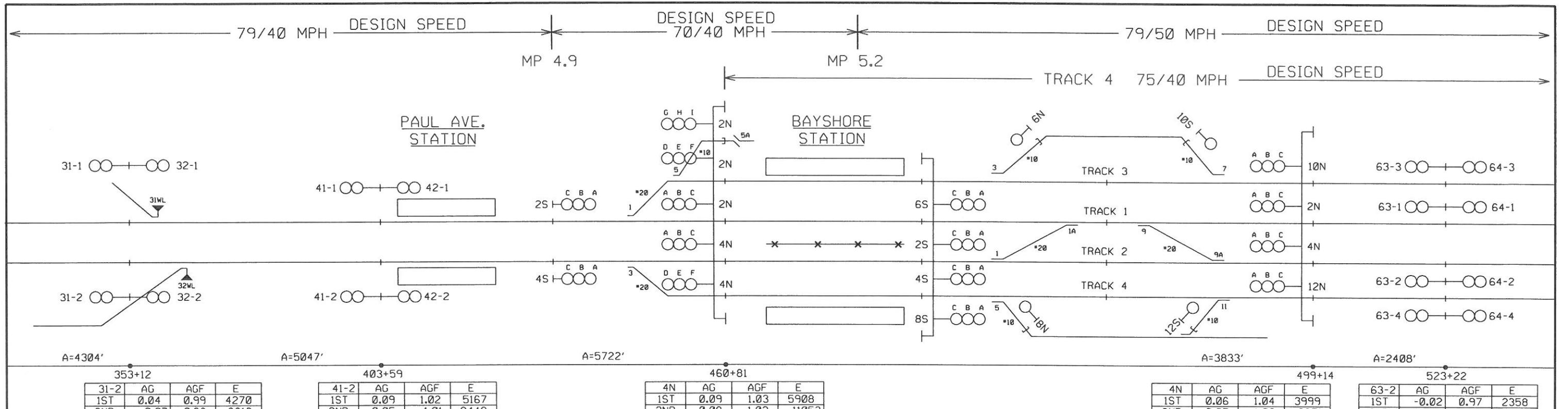
LEGEND

(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

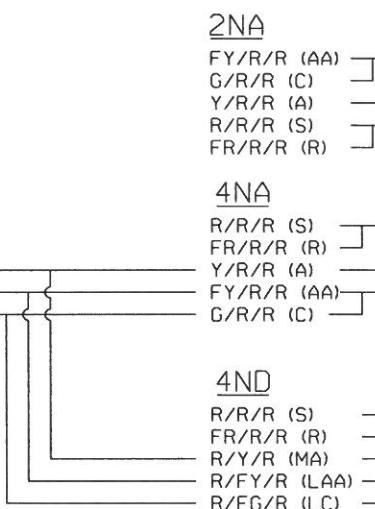
(MC) = MEDIUM CLEAR
(MAM) = MEDIUM APPROACH MEDIUM
(MA) = MEDIUM APPROACH
(MAS) = MEDIUM APPROACH SLOW
(MAR) = MEDIUM APPROACH RESTRICTING
(SC) = SLOW CLEAR
(SAA) = SLOW ADVANCE APPROACH
(SA) = SLOW APPROACH
(RSA) = REDUCED SLOW APPROACH
(RSC) = REDUCED SLOW CLEAR
* = SIGNAL W/ MARKER LIGHT "M"
(LUNAR)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

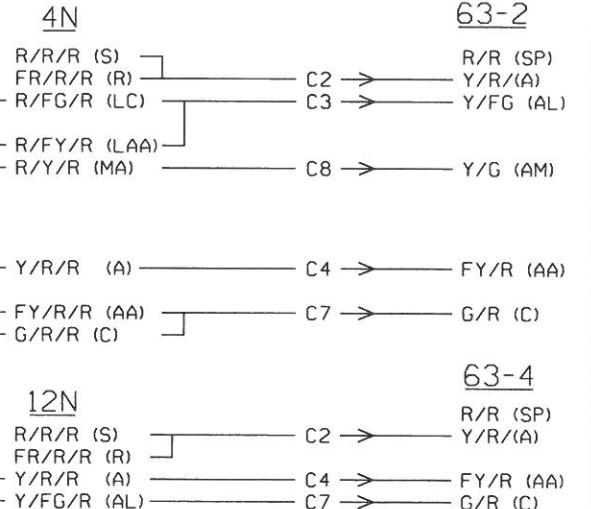
DESIGNED: 04-18-06 BY: SWE/ZAE FILE JPB805-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT, STAGE C2 IN SVC. DATE 09-23-07 CORRECTED: 09-10-08 BY: SWE/ZAE	DESIGNED: 01-19-05 BY: SWE/ZAE FILE JPB805-15617 WD NO.: 2505 NORTH TERMINAL OPERATIONS IMPROVEMENT PROJECT IN SVC. DATE 01-27-07 CORRECTED: 06-27-07 BY: SWE/ZAE	DESIGNED: 12-11-02 BY: SWE/ FILE JPB800-8730 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	DEPUTY DIRECTOR S. CHAO MANAGER OF C&S D. OBOEDAZA 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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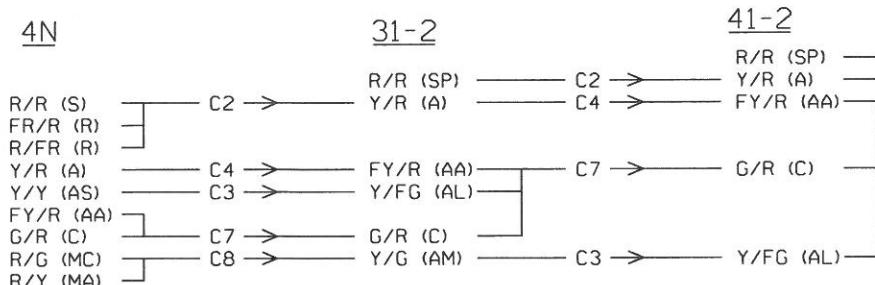
CP TUNNEL



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

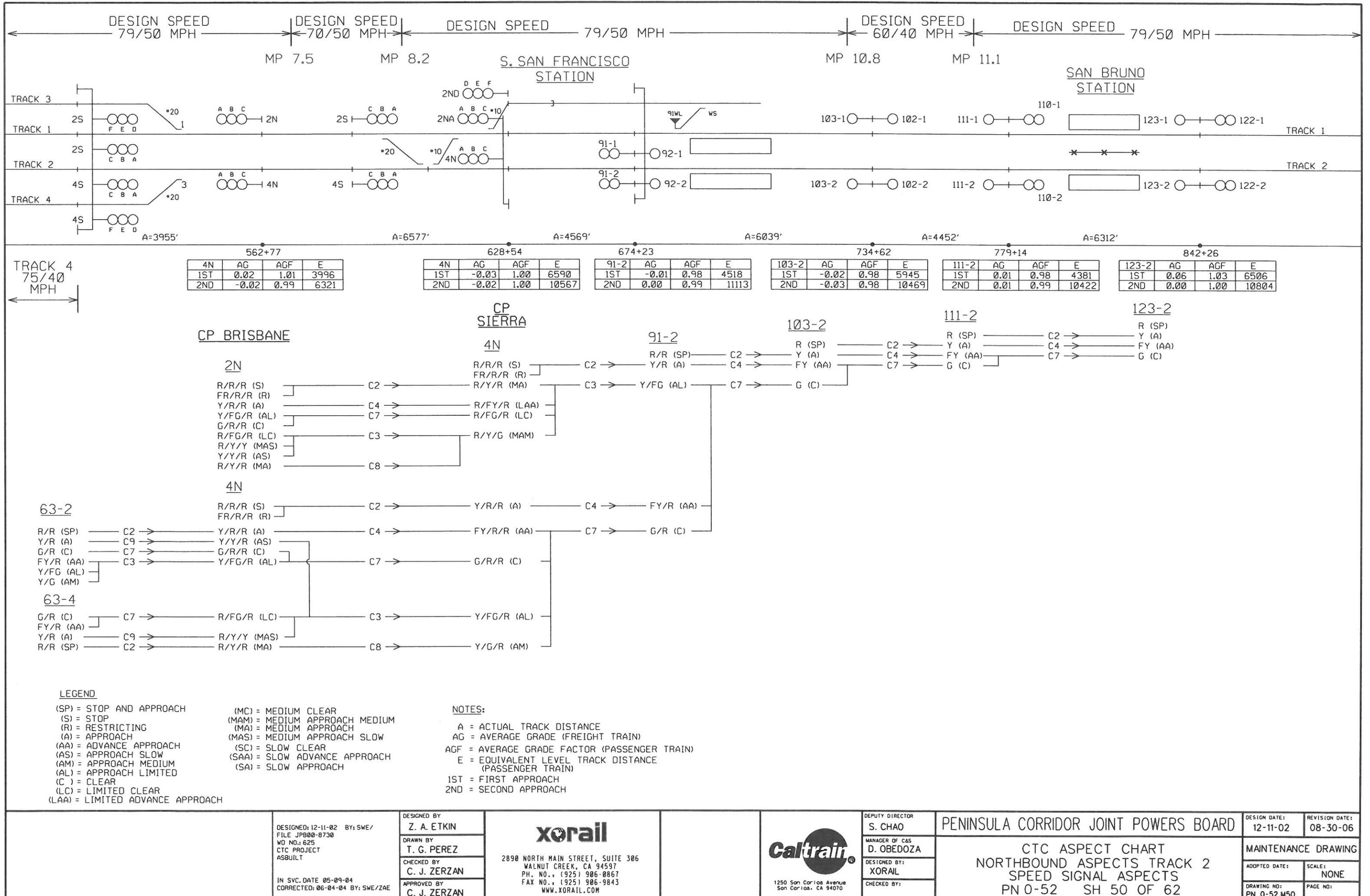
xorail
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
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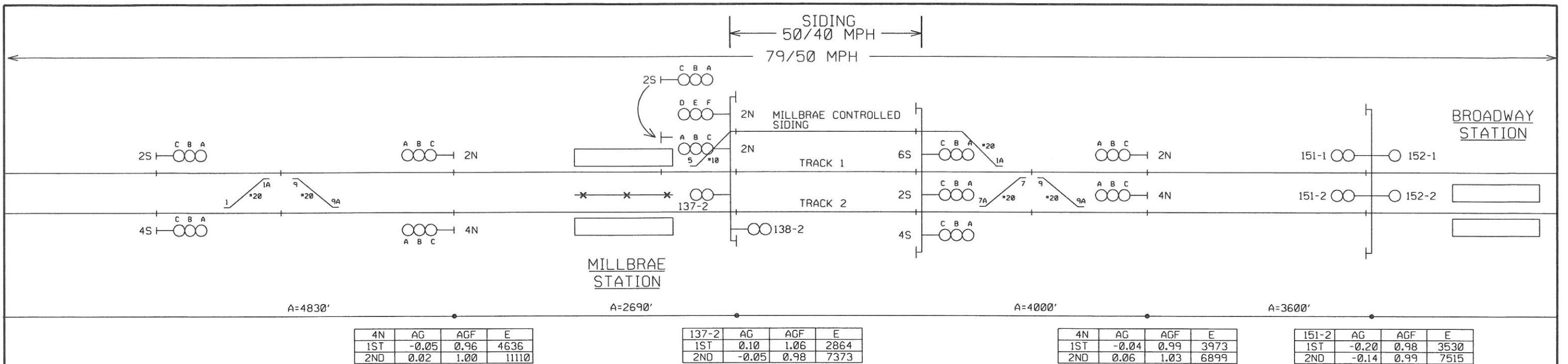


DEPUTY DIRECTOR
S. CHAO
MANAGER OF CAS
D. OBEDOZA
DESIGNED BY:
XORAIL
CHECKED BY:

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: PAGE NO:
PN 0-52.M49



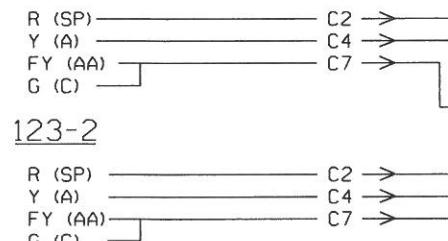


CP
BART

CP
TROUSDALE

CP
CENTER

123-1



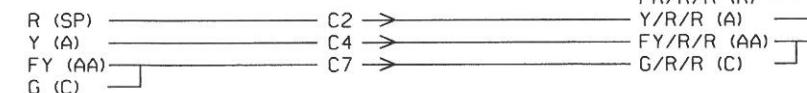
4N

137-2

2NA

4N

123-2



R/R (S)

Y/G (AM)

C3

Y/FG (AL)

C2

Y/R (A)

C4

FY/R/R (AA)

C3

Y/FG/R (AL)

C2

Y/R/R (A)

C3

Y/FG/R (AL)

C4

FY/R (AA)

C3

Y/R (A)

C4

FY/R/R (AA)

C3

Y/FG/R (AL)

C2

Y/R/R (A)

C3

DESIGN SPEED

79/50 MPH

BURLINGAME STATION

159-1 ○ — ○ 160-1 169-1 ○ — ○ 170-1

TRACK 1

TRACK 2

159-2 ○ — ○ 160-2

169-2 ○ — ○ 170-2

A=4290' A=5098' A=3629'

1036+47

1087+45

1123+74

159-2	AG	AGF	E
1ST	-0.14	0.93	3989
2ND	-0.11	0.95	7627

169-2	AG	AGF	E
1ST	-0.02	0.98	5001
2ND	-0.08	0.96	9064

175-2	AG	AGF	E
1ST	0.16	1.01	3683
2ND	0.07	0.99	8672

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

1036+47

1087+45

1123+74

1160+20

1184+38

1230+61

1275+40

1160+20

1184+38

1230+61

1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

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A=2418'

A=4623'

A=4479'

A=1184+38

A=1230+61

A=1160+20

A=1275+40

A=1230+61

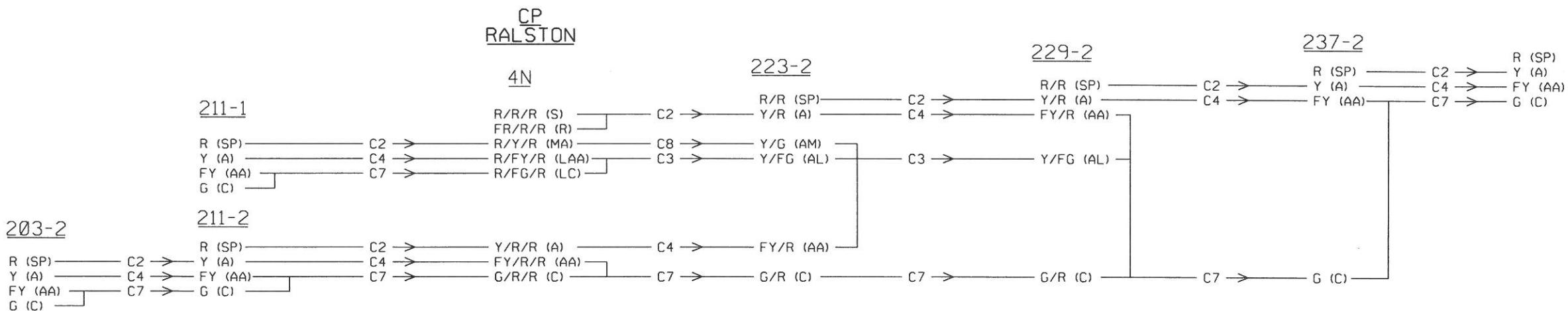
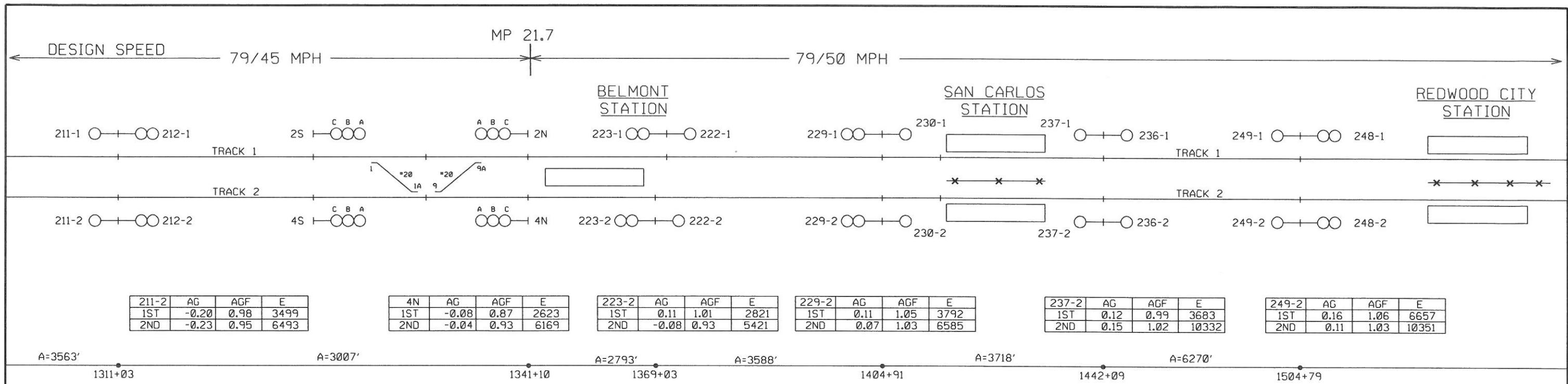
A=1275+40

A=3646'

A=2418'

A=4623'

A=4479'



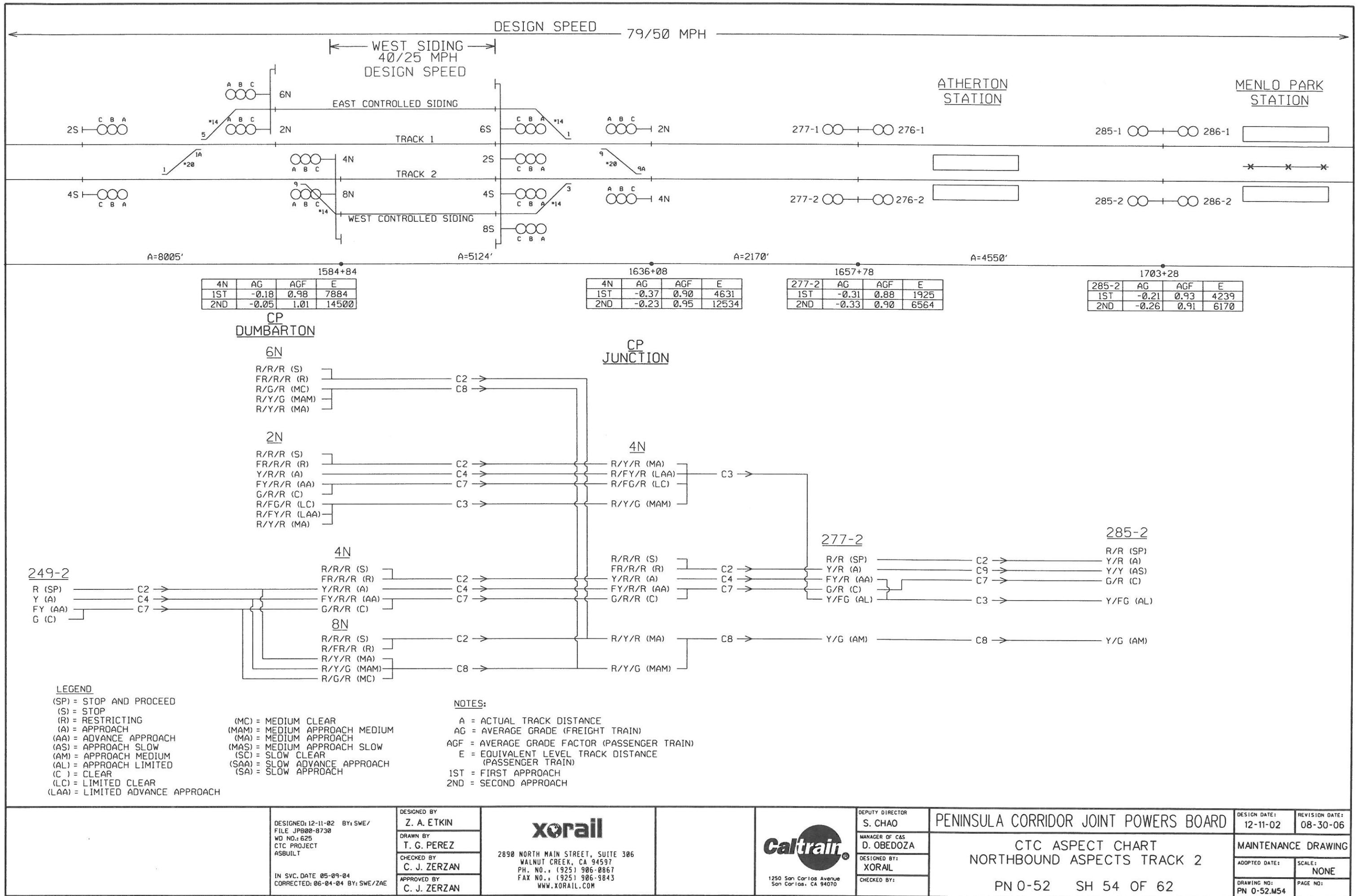
LEGEND

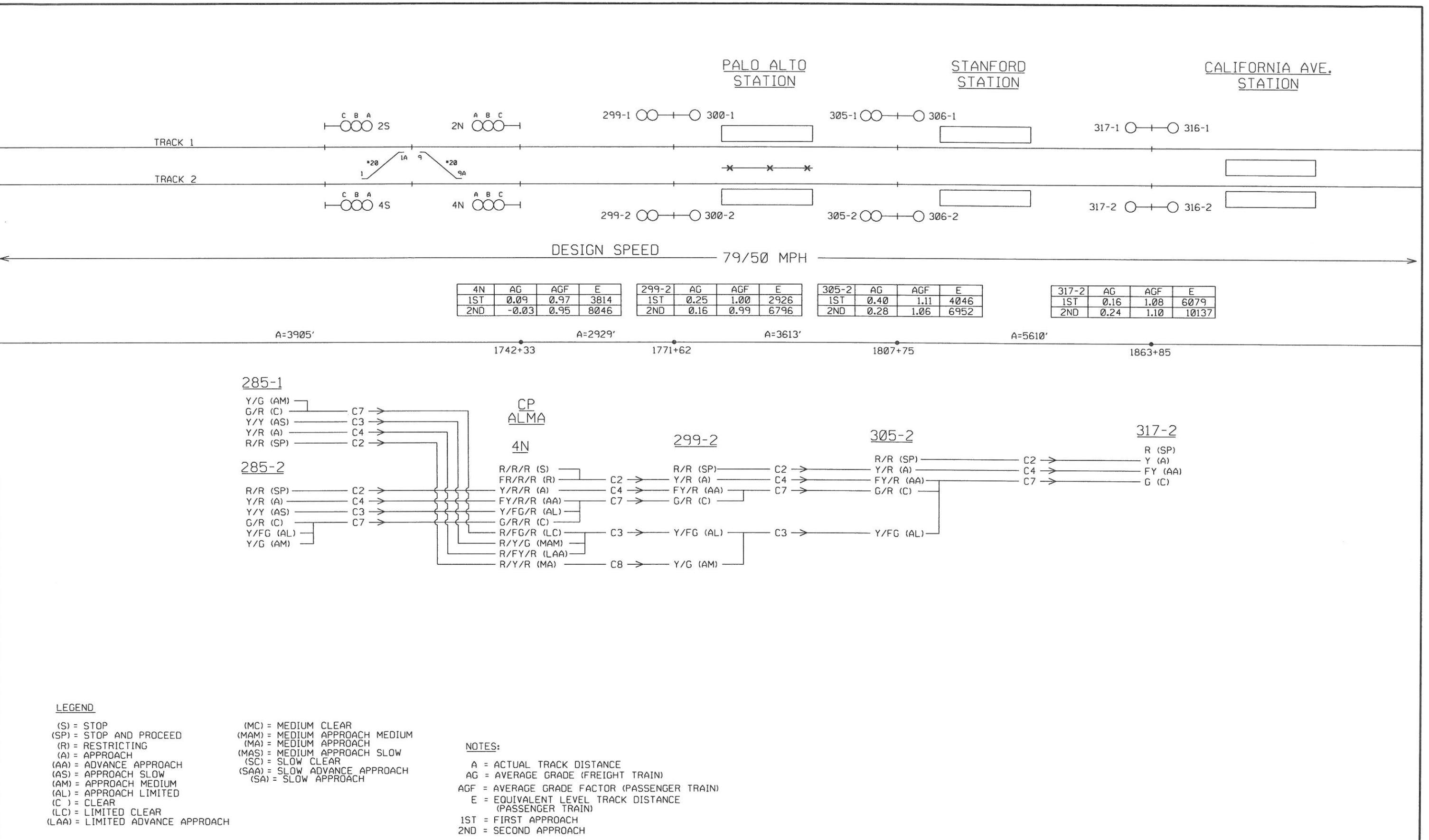
(SP) = STOP AND PROCEED
(S) = STOP
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
(AM) = APPROACH MEDIUM
(AL) = APPROACH LIMITED
(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

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

DESIGNED: 04-08-08 BY: XORAIL/ZAE	DESIGNED: 12-11-02 BY: SWE/FILE JPB08-2285	DESIGNED BY: Z. A. ETKIN	DRAWN BY: T. G. PEREZ	CHECKED BY: C. J. ZERZAN	APPROVED BY: C. J. ZERZAN	DEPUTY DIRECTOR: S. CHAO	MANAGER OF C&S: D. OBEDOZA	DESIGNED BY: XORAIL	CHECKED BY:	DESIGN DATE: 04-08-08	REVISION DATE: 03-30-11
WD NO.: 4732 SIGNAL OPTIMIZATION PROJECT ASBUILT	WD NO.: 625 CTC PROJECT ASBUILT									MAINTENANCE DRAWING	
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	2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 906-0867 FAX NO.: (925) 906-9843 WWW.XORAIL.COM	xorail	Caltrain®	1250 San Carlos Avenue San Carlos, CA 94070	PENINSULA CORRIDOR JOINT POWERS BOARD CTC ASPECT CHART NORTHBOUND ASPECTS TRACK 2 PN 0-52 SH 53 OF 62	DRAWING NO: PN 0-52.M53	PAGE NO: 0-52.M53	MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PAGE NO:		

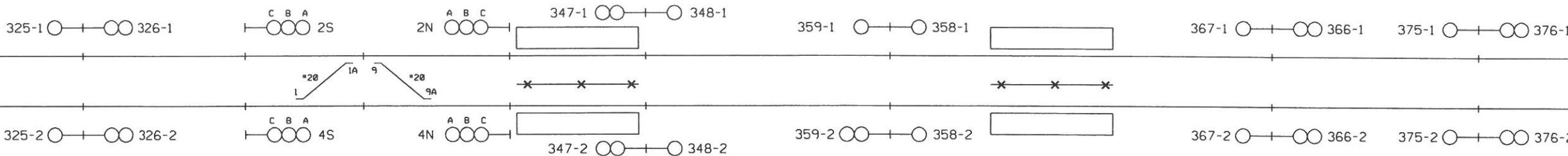




DESIGNED: 12-11-02 BY: SWE/ FILE: JPB00-8730 WD NO.: 625 CTC PROJECT ASBUILT	DESIGNED BY: Z. A. ETKIN DRAWN BY: T. G. PEREZ CHECKED BY: C. J. ZERZAN APPROVED BY: C. J. ZERZAN	xorail 2890 NORTH MAIN STREET, SUITE 306 WALNUT CREEK, CA 94597 PH. NO.: (925) 986-0867 FAX NO.: (925) 986-9843 WWW.XORAIL.COM	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 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:	

SAN ANTONIO
STATION

MOUNTAIN VIEW
STATION



DESIGN SPEED

79/50 MPH

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

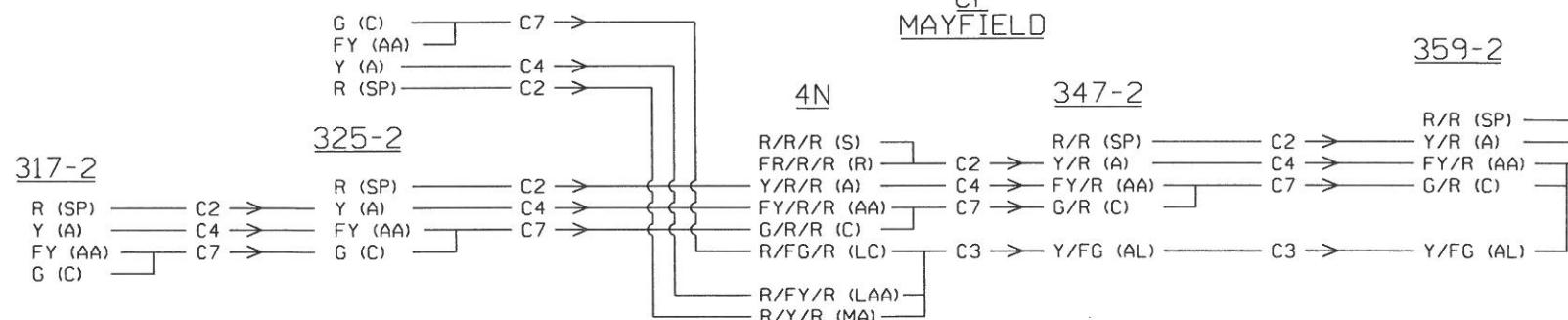
359-2	AG	AGF	E
1ST	-0.34	0.92	5689
2ND	-0.32	0.92	10122

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

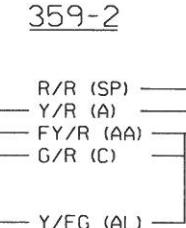
375-2	AG	AGF	E
1ST	0.01	0.98	4552
2ND	-0.15	0.93	7723

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

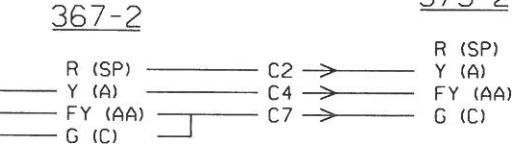
325-1



359-2



367-2



375-2



LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
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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

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AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
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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

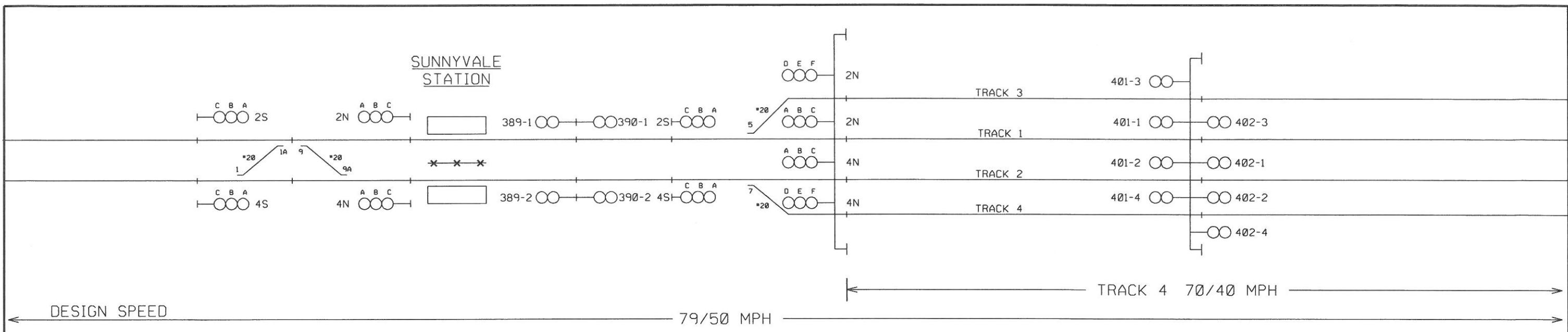
2890 NORTH MAIN STREET, SUITE 306
WALNUT CREEK, CA 94597
PH. NO.: (925) 906-0867
FAX NO.: (925) 906-9843
WWW.XORAIL.COM

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 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:



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'

2217+44

A=3066'

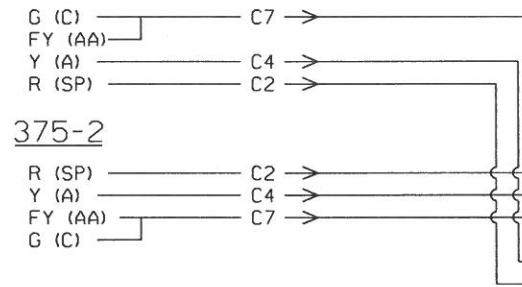
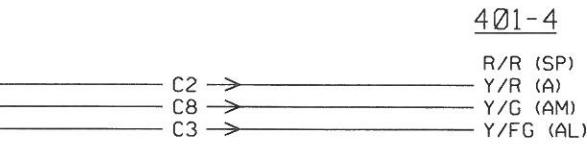
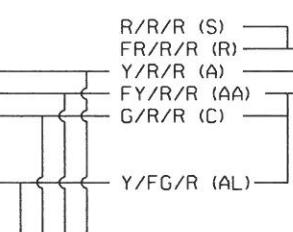
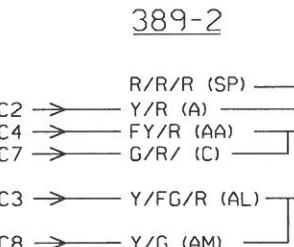
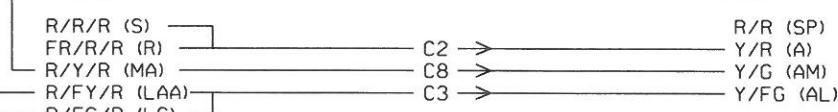
2248+10

A=2879'

2276+89

A=3594'

2312+83

375-1CP MARY4N389-2CP HENDY4NA401-2401-4401-4LEGEND

(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
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(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

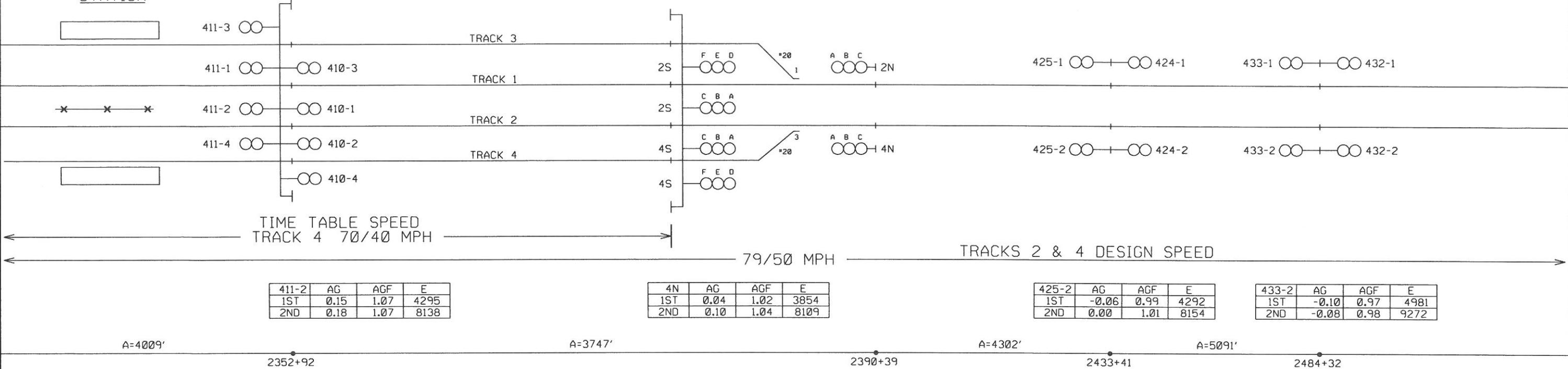
NOTES:

A = ACTUAL TRACK DISTANCE
AG = AVERAGE GRADE (FREIGHT TRAIN)
AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)

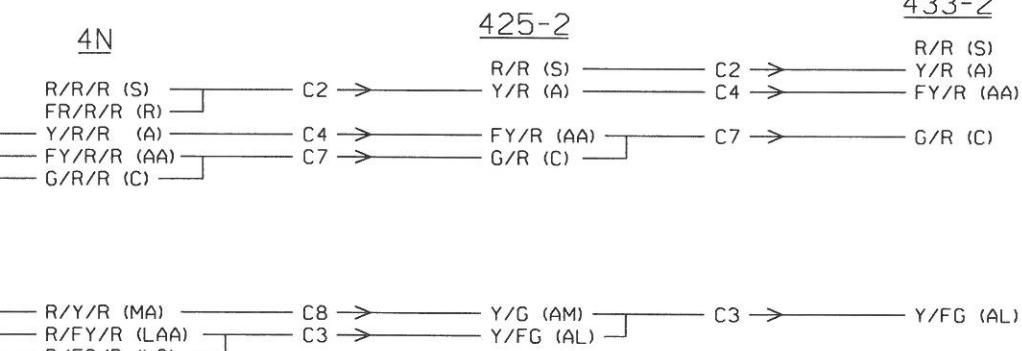
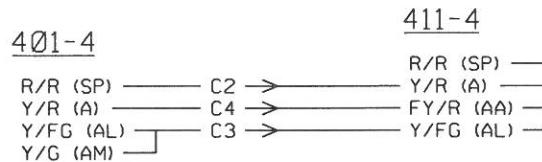
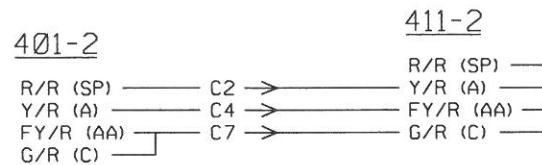
E = EQUIVALENT LEVEL TRACK DISTANCE
(PASSENGER TRAIN)
1ST = FIRST APPROACH
2ND = SECOND APPROACH

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



CP
BOWERS



LEGEND

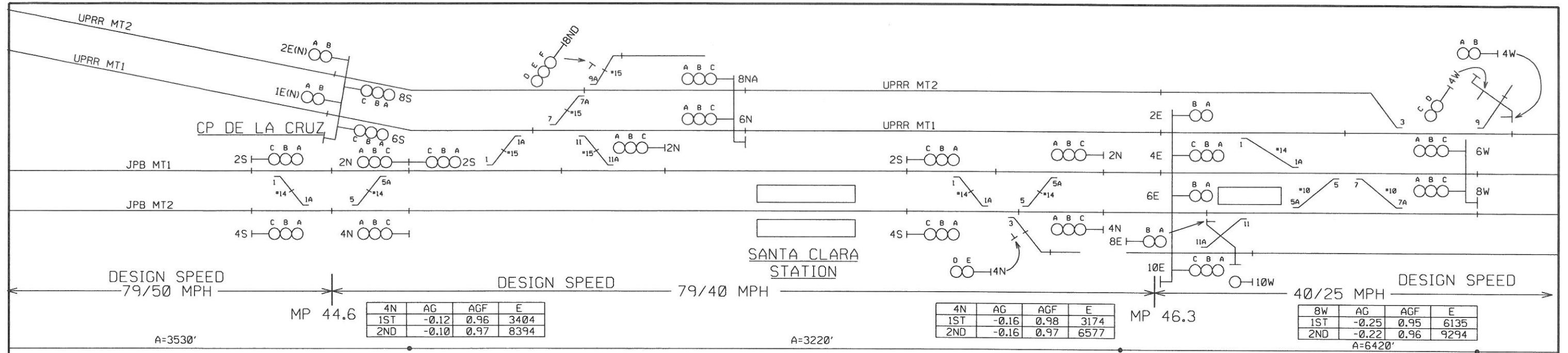
(S) = STOP
(SP) = STOP AND PROCEED
(R) = RESTRICTING
(A) = APPROACH
(AA) = ADVANCE APPROACH
(AS) = APPROACH SLOW
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(C) = CLEAR
(LC) = LIMITED CLEAR
(LAA) = LIMITED ADVANCE APPROACH

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

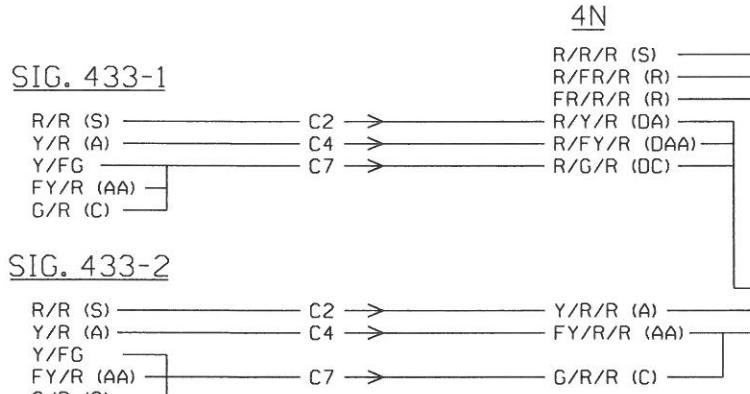
NOTES:

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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: JPB08-8730 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	xorail 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 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 58 OF 62	DESIGN DATE: 04-08-08 REVISION DATE: 03-30-11 MAINTENANCE DRAWING ADOPTED DATE: SCALE: NONE DRAWING NO: PAGE NO: PN 0-52.M58
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CP DE LA CRUZ



LEGEND

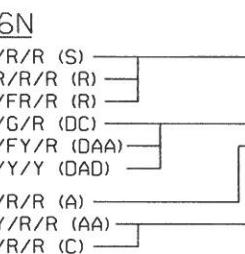
(S) = STOP
 (SP) = STOP AND PROCEED
 (R) = RESTRICTING
 (A) = APPROACH
 (AR) = APPROACH RESTRICTING
 (AA) = ADVANCE APPROACH
 (AD) = APPROACH DIVERGING
 (C) = CLEAR
 (DC) = DIVERGING CLEAR
 ☆(DAD) = DIVERGING APPROACH
 (DIV) = DIVERGING
 (DAA) = DIVERTING ADVANCE
 (DA) = DIVERTING APPROACH
 ☆ = ASPECT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

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.

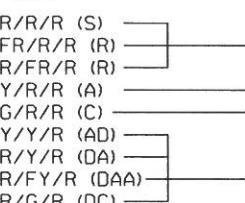
NOTES:

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 AGF = AVERAGE GRADE FACTOR (PASSENGER TRAIN)
 E = EQUIVALENT LEVEL TRACK DISTANCE (PASSENGER TRAIN)
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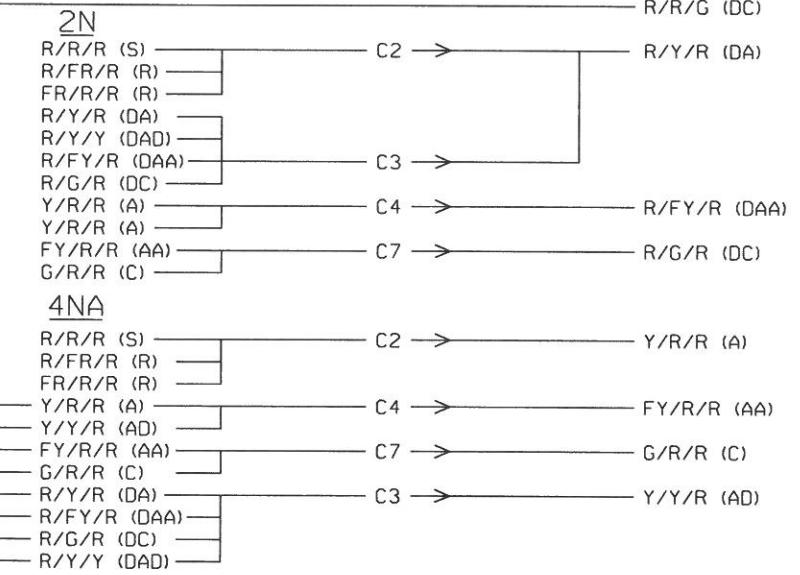
CP COAST



2N



CP FRANKLIN



CP STOCKTON

8W

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

2N

R/R/R (S) — C2 →
 R/F/R/R (R) —
 FR/R/R (R) —
 R/Y/Y (DA) — C3 →
 R/FY/R (DAA) — C4 →
 R/G/R (DC) —
 Y/R/R (A) — C4 →
 Y/Y/R (AD) — C7 →
 R/FY/R (AA) — C7 →
 G/R/R (C) —

4NA

R/R/R (S) — C2 →
 R/F/R/R (R) —
 FR/R/R (R) —
 Y/R/R (A) — C4 →
 Y/Y/R (AD) — C7 →
 R/FY/R (AA) — C7 →
 G/R/R (C) — C3 →
 R/Y/R (DA) — C3 →
 R/FY/R (DAA) — C3 →
 R/G/R (DC) —
 R/Y/Y (DAD) —

4ND

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

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

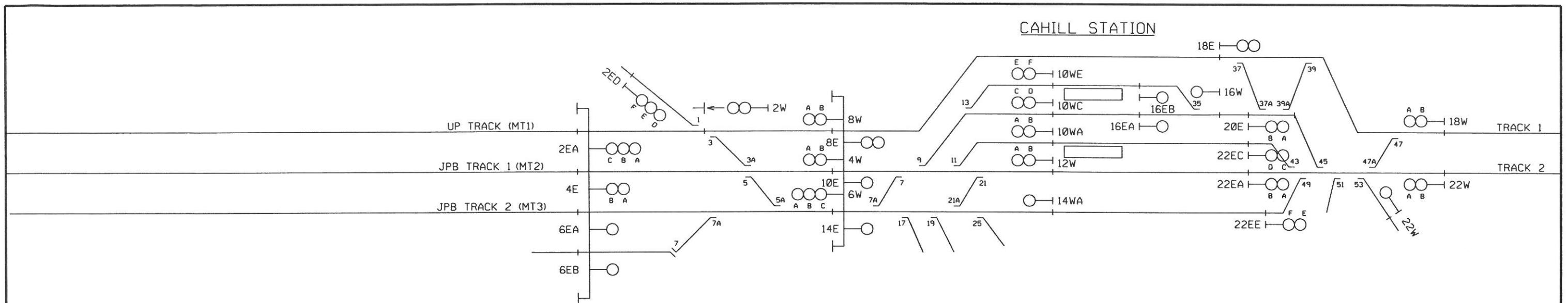
xorail
 2890 NORTH MAIN STREET, SUITE 306
 WALNUT CREEK, CA 94597
 PH. NO.: (925) 906-0867
 FAX NO.: (925) 906-9843
 WWW.XORAIL.COM

caltrain
 1250 San Carlos Avenue
 San Carlos, CA 94070

DEPUTY DIRECTOR
 S. CHAO
 MANAGER OF 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:



DESIGN SPEED

— 40/25 MP

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

A=419

DESIGN SPEED

MP 47.2

DESIGN SPEED

—20/10 MP

DESIGN SPEED

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

MP 47.8

2691 + 34

CP SHARK

CP ALAMEDA

CP BIRD

CP STOCKTON

6w

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

8W

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

A timing diagram showing five pulse edges labeled from top to bottom: R/R (S), R/FR (R), Y/R (A), FY/R (AA), and G/R (C). The edges are represented by vertical lines with horizontal segments indicating their duration.

14WA
R (S) -
Y (A) -
G (C) -

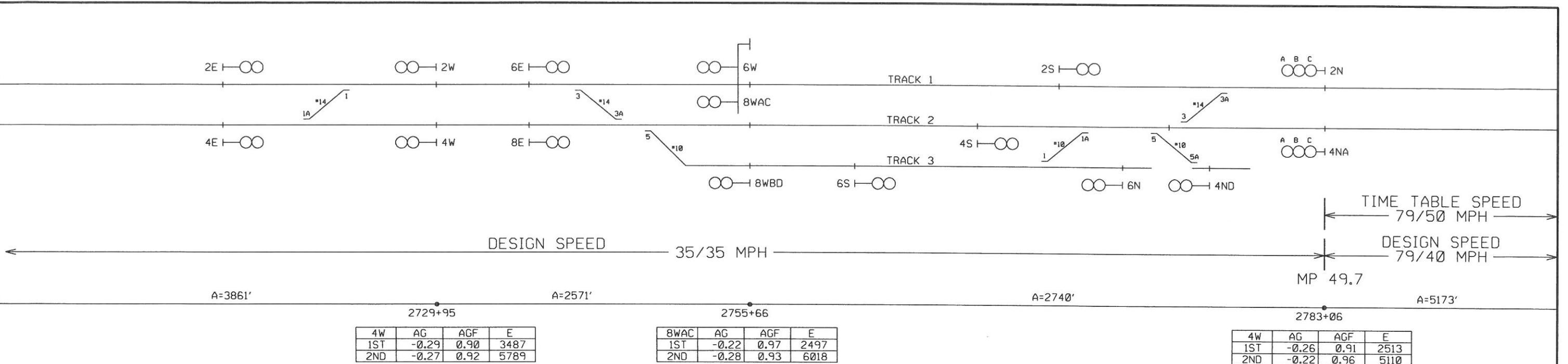
LEGEND

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 (R) = RESTRICTING
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 (AD) = APPROACH DIVERGING
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 (DC) = DIVERGING CLEAR
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1ST = FIRST APPROACH
2ND = SECOND APPROACH

	DESIGNED: 05-05-11 BY: XORAIL/ZAE FILE UW011-28149A WD NO.: 89197 REMOVAL OF OLD CP ARENA ASBUILT	DESIGNED: 04-08-08 BY: XORAIL/ZAE FILE JP008-22285 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	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 C&S 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 MAINTENANCE DRAWING ADOPTED DATE: CORRECTED: 09-23-11 BY: XORAIL/ABP	REVISION DATE: 09-23-11 SCALE: NONE DRAWING NO: PN 0-52.M60 PAGE NO:
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CP DELMAS

CP BIRD

22W

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

2W

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

4W

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

CP MACK

8WAC

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

8WBD

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

6N

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

4ND

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

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

CP MICHAEL

4NA

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)

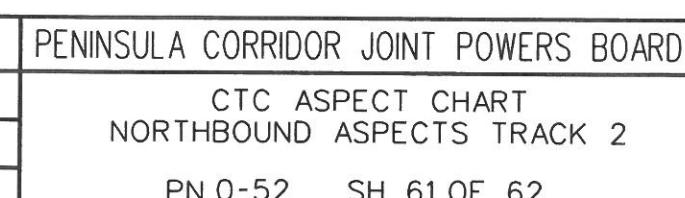
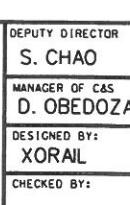
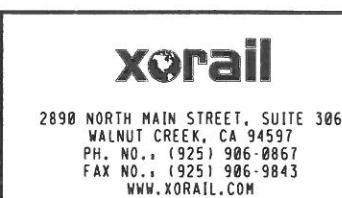
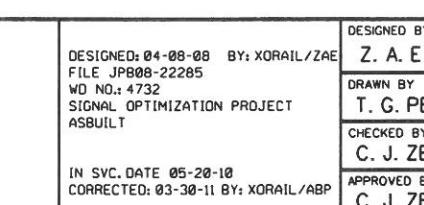
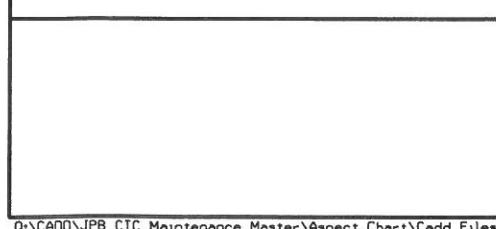
R/R (S)
FR/R (R)
R/FR (R)
Y/R (A)
Y/Y (AD)
FY/R (AA)
G/R (C)
R/Y (DA)
R/G (DC)

LEGEND

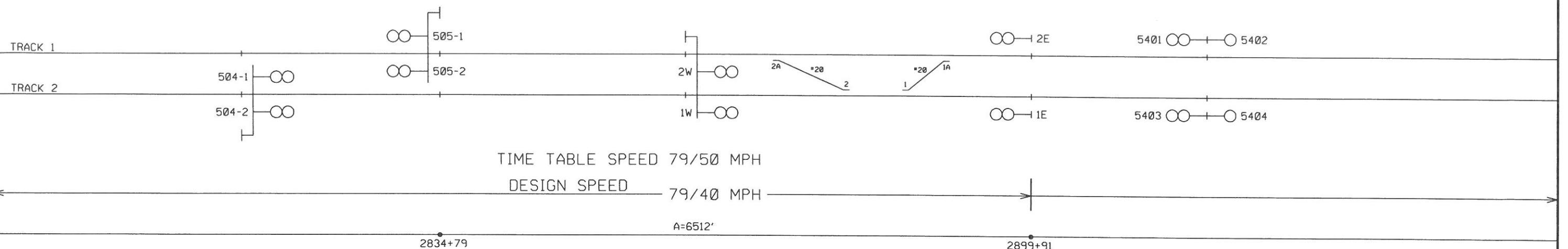
- (S) = STOP
- (SP) = STOP AND PROCEED
- (R) = RESTRICTING
- (A) = APPROACH
- (AR) = APPROACH RESTRICTING
- (AA) = ADVANCE APPROACH
- (AD) = APPROACH DIVERGING
- (C) = CLEAR
- (DC) = DIVERGING CLEAR
- (DA) = DIVERGING APPROACH
- (DAA) = DIVERGING ADVANCE APPROACH

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



DESIGN DATE:	04-08-08	REVISION DATE:	03-30-11
MAINTENANCE DRAWING			
ADOPTED DATE:		SCALE:	NONE
DRAWING NO:	PN 0-52.M61	PAGE NO:	



CP
MICHAEL

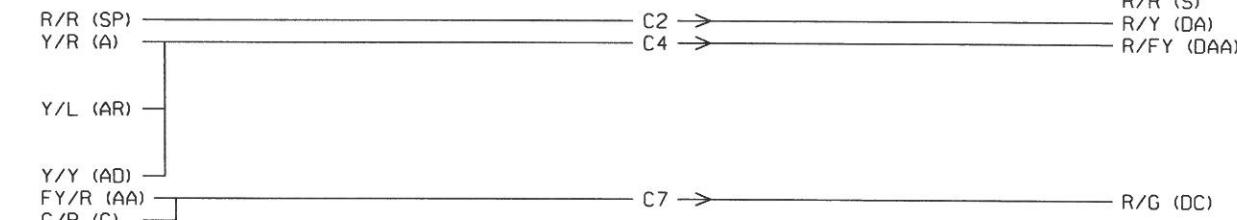
505-2	AG	AGF	E
1ST	-0.27	0.93	4858
2ND	-0.28	0.93	7409

CP
LICK

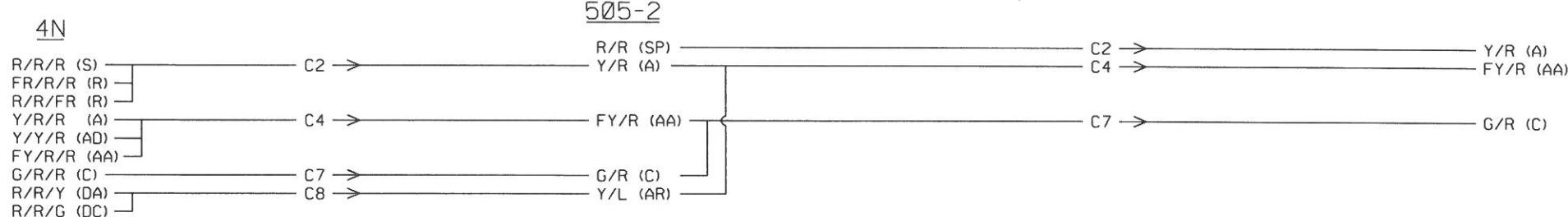
1E

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

505-1



505-2



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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1ST = FIRST APPROACH
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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:	PAGE NO:	PN 0-52.M62	

