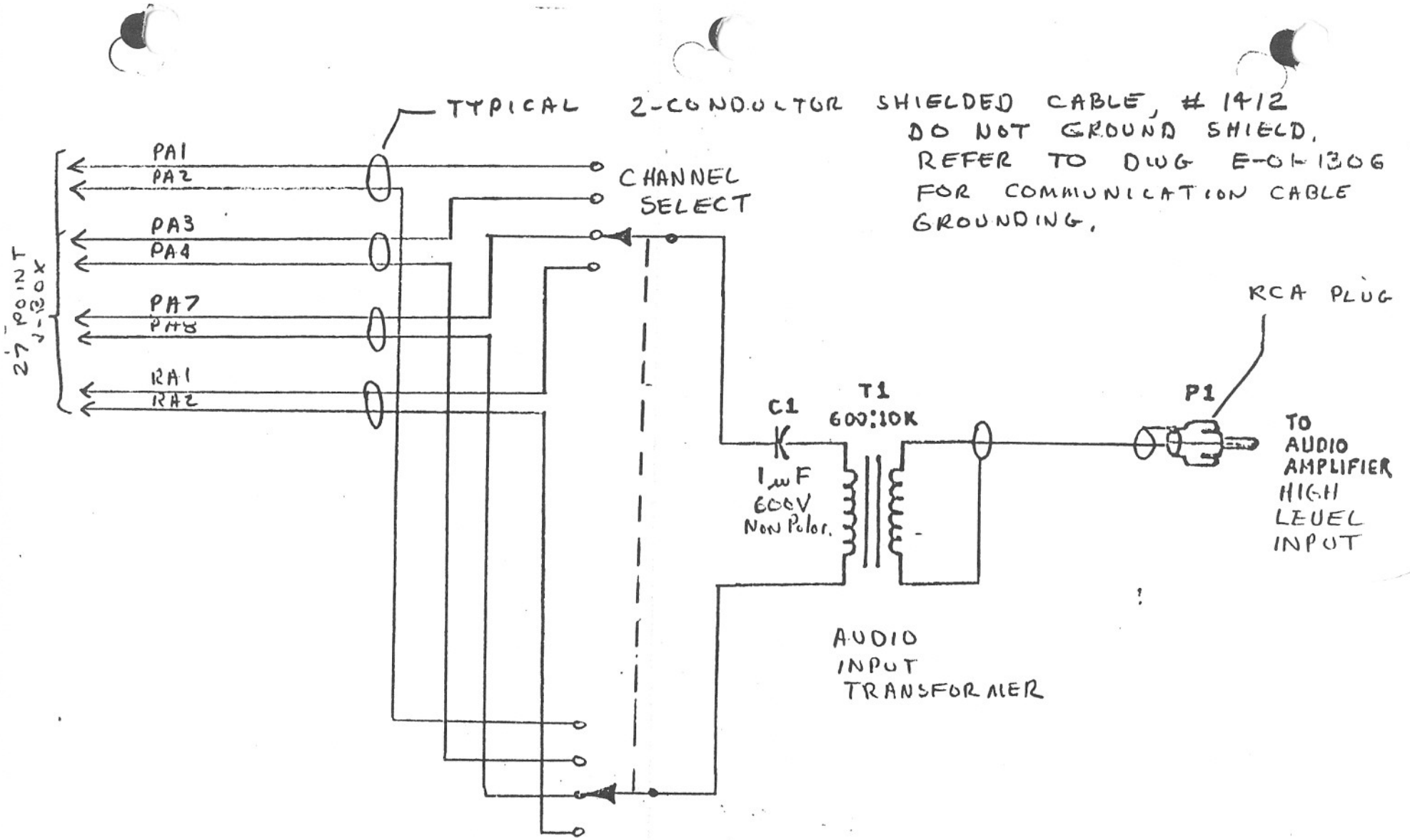
XII Drawings

RFB 102986	"LISTENING IN"
FIG 3	HEP TRAINLINE CONNECTOR LOCATIONS
C-05-7171	END OF CAR TRAINLINE CONNECTOR LOCATIONS
E-00-1909.	FIXED 480V JUMPER CABLE MODIFICATION
E-01-1306	480V & 27 POINT COMMUNICATION TRAINLINE SCHEMATIC
C-01-7169	MU TRAINLINE SCHEMATIC
C-01-1498	27 POINT COMMUNICATION JUMPER CABLE ASSEMBLY
E-00-556	TL COMMUNICATION JUNCTION BOX ASSY & INSTALLATION
B-00-1017	BUS BAR — 480V JUNCTION BOX
E-00-1018	480V JUNCTION BOX ASSEMBLY
E-00-1019	480V JUNCTION BOX ARRANGEMENT
D-279	PULL BOX
D-05-1355	CLEARANCE DIAGRAM

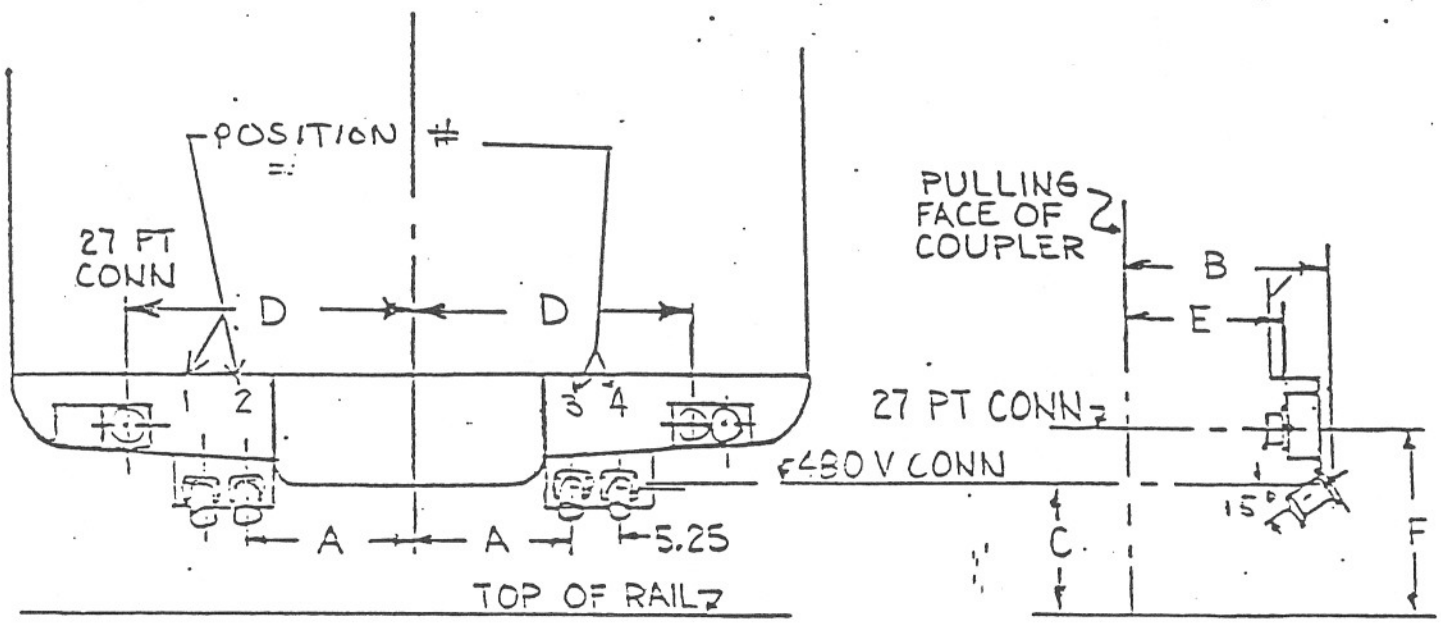
SECTION XII

DRAWINGS

1. R.F.B. 10/29/86 LISTENING IN SCHEME
2. FIXED 480V JUMPER CABLE
3. END OF CAR TRAINLINE CONNECTOR LOCATIONS PRIVATE CAR
4. ELECTRICAL SCHEMATIC M/U TRAINLINE
5. PULL BOX
6. TRAINLINE J. BOX ASSEMBLY
7. BUSS BAR 480V JUNCTION BOX
8. 480V J. BOX ASSEMBLY
9. 480V JUNCTION BOX ARRANGEMENT
10. 480V 27 POINT COMMUNICATION TRAINLINE SCHEMATIC
11. CLEARANCE DIAGRAM
12. 27 POINT COMM. JUMPER CABLE ASSEMBLY CAR-CAR
13. 480V 27 POINT COMM. CAR-CAR SCHEMATIC
14. FIXED 480V JUMPER CABLE MOD.
15. ELECTRICAL SCHEMATIC M/U TRAINLINE
16. END OF CAR TRAINLINE CONNECTOR LOCATIONS
17. END OF CAR TRAINLINE CONNECTOR LOCATIONS PRIVATE CAR



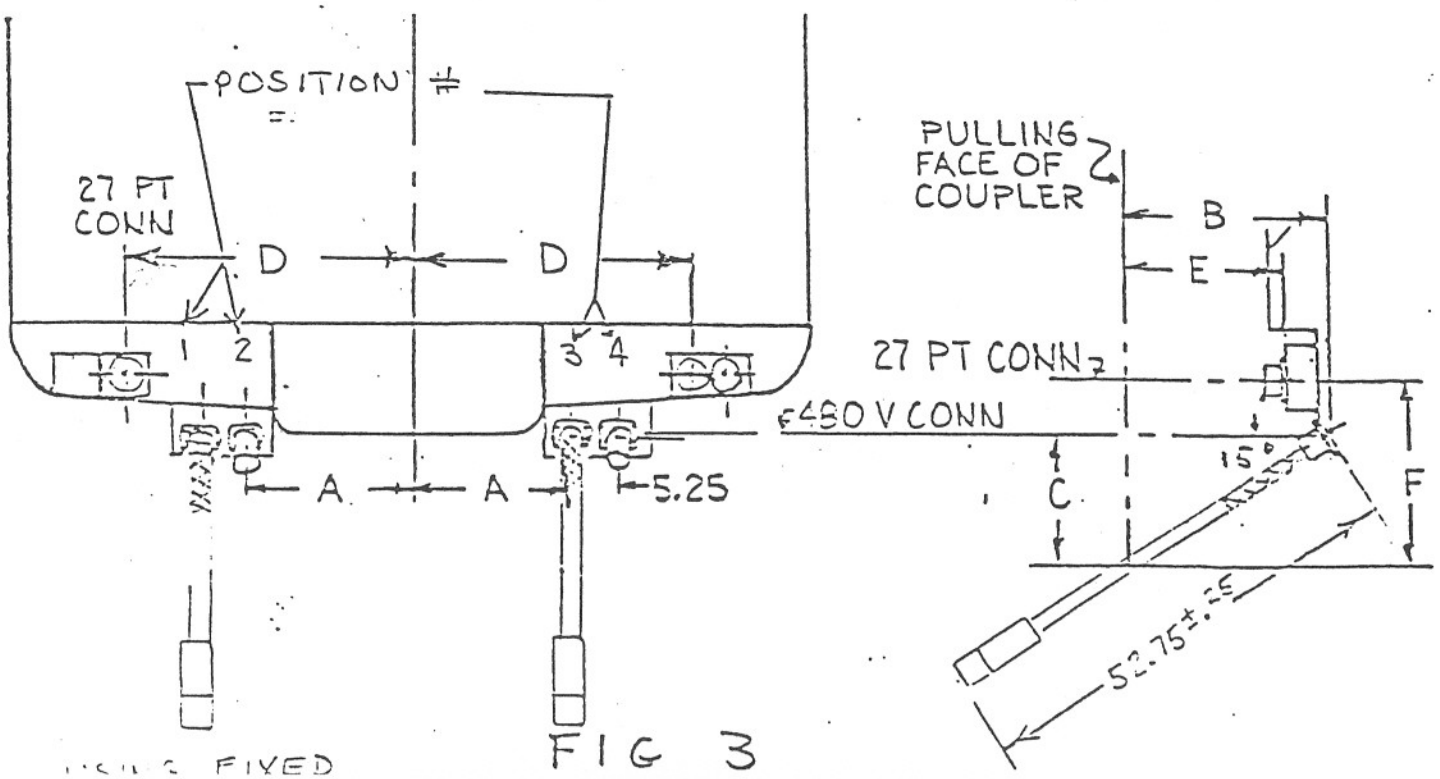
"LISTENING IN" SCHEME
AMTRAK 27 PT
COMMUNICATION
TRAINLINE SYSTEM
REB 10-29-



USING PORTABLE JUMPERS

51" 480V JUMPER CABLES 60" 27 PT COMMUN. JUMPER CABLE

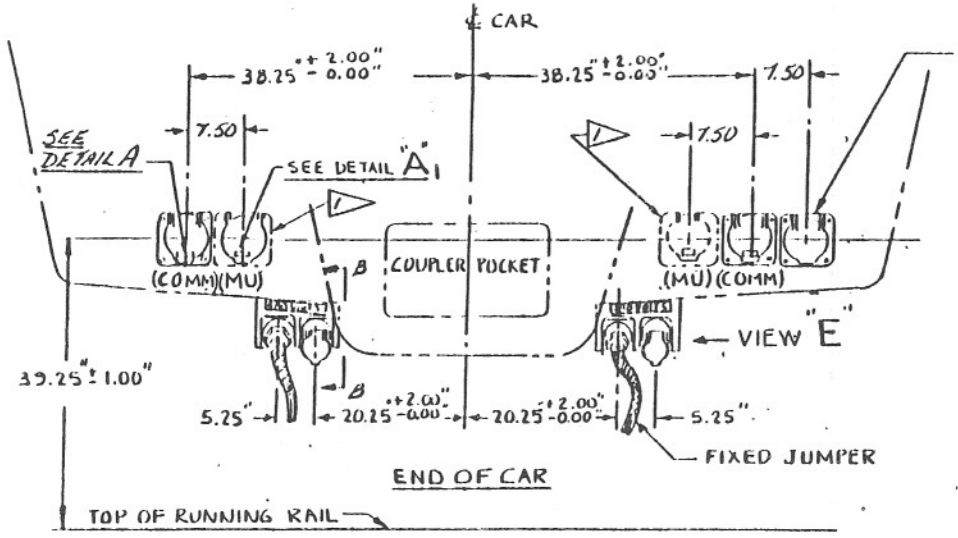
A	B	C	D	E	F
20.25 $^{+2}_{0}$	20.50 ± 2	27.00 $^{+3}_{0}$	38.25 $^{+2}_{0}$	18.75 ± 1	39.25 ± 1

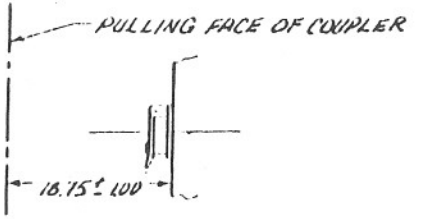


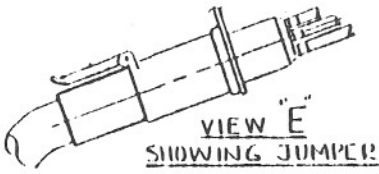
USING FIXED

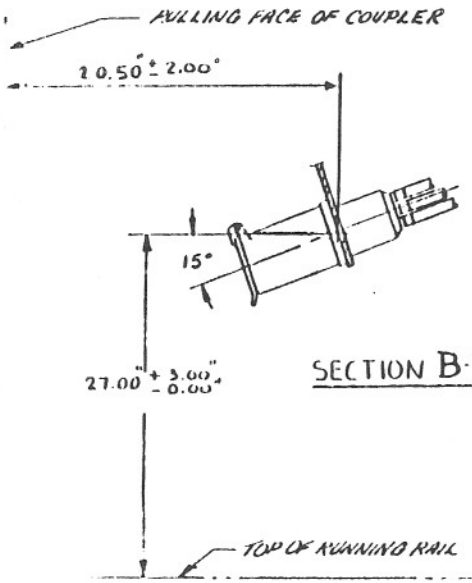
FIG 3

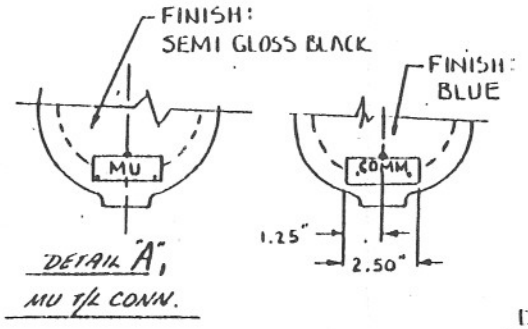
REVISIONS				
LTR	ZONE	DESCRIPTION	DATE	APP'D
A		ADDED MU T/L LOCATIONS & VIEW FIXED JUMPERS	4-10-95	[illegible]











DETAIL "A"
27 PT. COMMUN. CONN.

NOTE:
1. IF OPTIONAL MU TRAINLINES ARE INSTALLED FOR PUSH-PULL OPERATION, USE LOCATION SHOWN IN DOTTED LINES SEE DWG. C-01-7169, "ELECTRICAL SCHEMATIC, M U TRAINLINE"

THIS DRAWING SUPERSEDES
SK-D-112779 (W/O CHANGE)

QTY	PART NUMBER	DESCRIPTION	MATERIAL	MFG/SPEC	P/L ITEM NO	ITEM

LIST OF MATERIAL

QTY/CAR	USED ON

REFERENCE DRAWINGS
E-01-1306 (480V COMMUN. T/L SCHEMATIC)

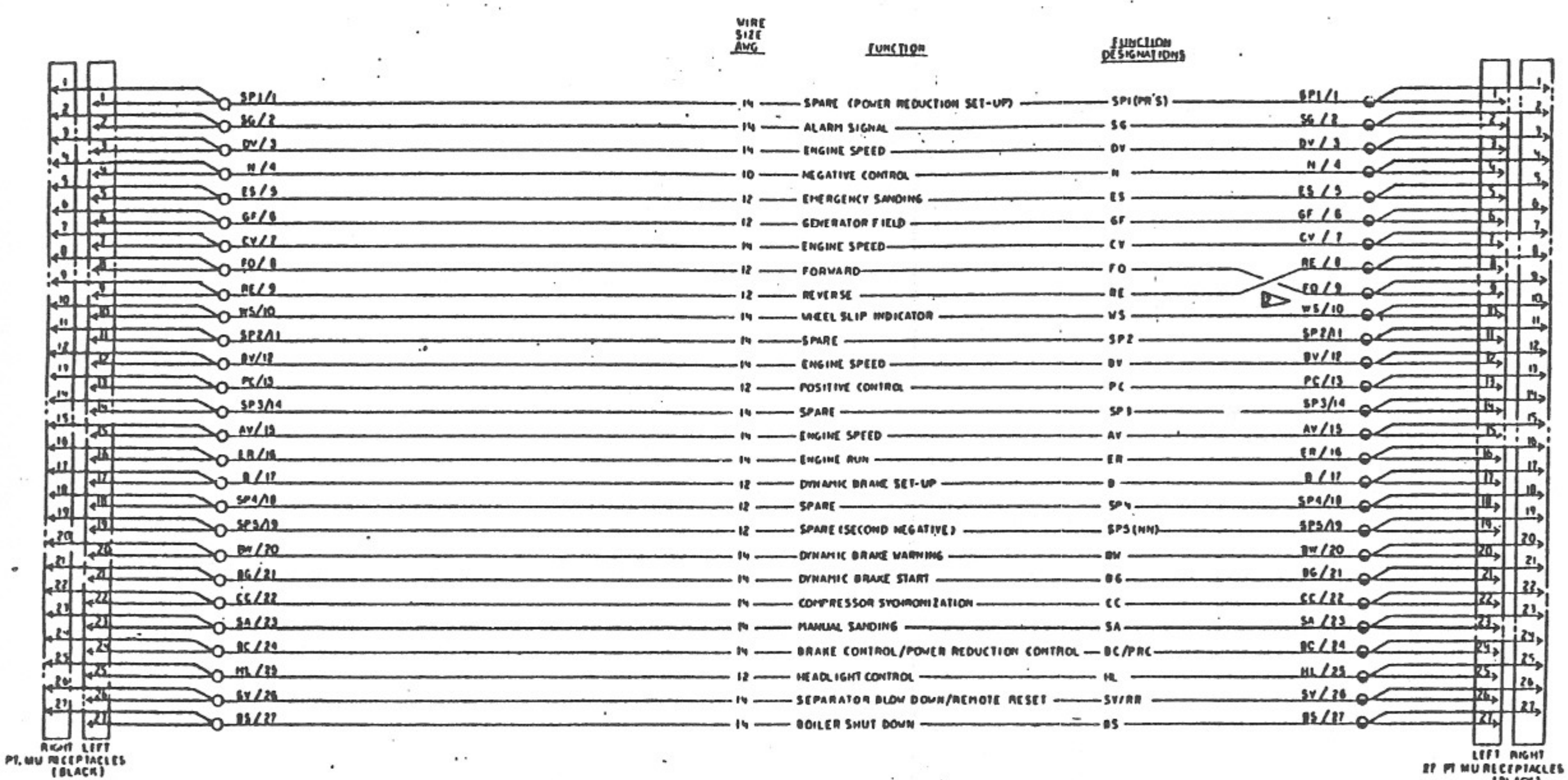
DO NOT SCALE DRAWING

EQUIPMENT ENGINEERING
Amtrak
National Railroad Passenger Corporation
60 North Capitol Street, N.E. Washington, D.C. 20002

TOLERANCES
Dimensions are in inches unless otherwise specified
Decimals
Angles ± 1°
Remove all burrs & break sharp edges

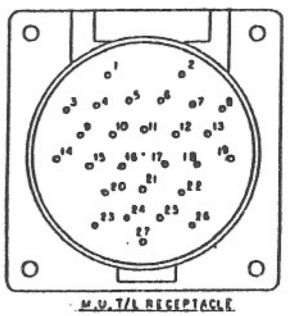
TITLE
END OF CAR TRAINLINE CONNECTOR LOCATIONS
(PRIVATE CARS)

Drawn BCH | Approved | Approved
Checked | Approved | Approved
Scale NONE | DRAWING NUMBER C-05-7173 | REV A
Sheet 1 of 1

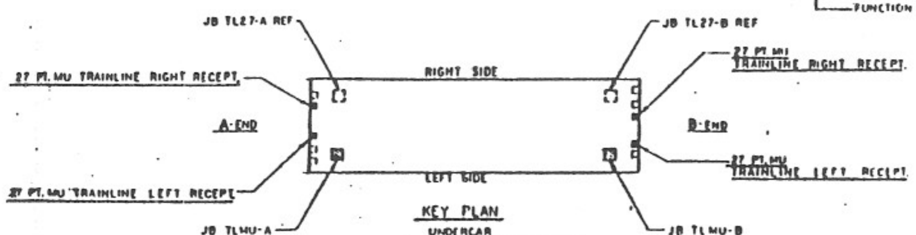

WIRE SIZE AWG
FUNCTION
FUNCTION DESIGNATIONS
SP1/1 — 14 — SPARE (POWER REDUCTION SET-UP) — SP1(PR'S) — SP1/1
SG/2 — 14 — ALARM SIGNAL — SG — SG/2
DV/3 — 14 — ENGINE SPEED — DV — DV/3
N/4 — 10 — NEGATIVE CONTROL — N — N/4
ES/5 — 12 — EMERGENCY SANDING — ES — ES/5
GF/6 — 12 — GENERATOR FIELD — GF — GF/6
CV/7 — 14 — ENGINE SPEED — CV — CV/7
FO/8 — 12 — FORWARD — FO — RE/8
RE/9 — 12 — REVERSE — RE — FO/9
WS/10 — 14 — WHEEL SLIP INDICATOR — WS — WS/10
SP2/11 — 14 — SPARE — SP2 — SP2/11
BV/12 — 14 — ENGINE SPEED — BV — BV/12
PC/13 — 12 — POSITIVE CONTROL — PC — PC/13
SP3/14 — 14 — SPARE — SP3 — SP3/14
AV/15 — 14 — ENGINE SPEED — AV — AV/15
ER/16 — 14 — ENGINE RUN — ER — ER/16
B/17 — 12 — DYNAMIC BRAKE SET-UP — B — B/17
SP4/18 — 12 — SPARE — SP4 — SP4/18
SP5/19 — 12 — SPARE (SECOND NEGATIVE) — SP5(NN) — SP5/19
BW/20 — 14 — DYNAMIC BRAKE WARNING — BW — BW/20
BG/21 — 14 — DYNAMIC BRAKE START — BG — BG/21
CC/22 — 14 — COMPRESSOR SYNCHRONIZATION — CC — CC/22
SA/23 — 14 — MANUAL SANDING — SA — SA/23
BC/24 — 14 — BRAKE CONTROL/POWER REDUCTION CONTROL — BC/PRC — BC/24
HL/25 — 12 — HEADLIGHT CONTROL — HL — HL/25
SV/26 — 14 — SEPARATOR BLOW DOWN/REMOTE RESET — SV/RR — SV/26
BS/27 — 14 — BOILER SHUT DOWN — BS — BS/27
RIGHT LEFT
PT. MU RECEPTACLES (BLACK)
LEFT RIGHT
27 PT MU RECEPTACLES (BLACK)

LEGEND:
- ○ TERMINAL IN JB TLMU-A
- ● TERMINAL IN JB TLMU-B
- XX/XX TERMINAL — CONN. PIN NO. — FUNCTION DESIG.

NOTES
1.
2. CROSSED IN JB TLMU-B



M.U. T/L RECEPTACLE
PIN ARRANGEMENT
(FACING RECEPT)

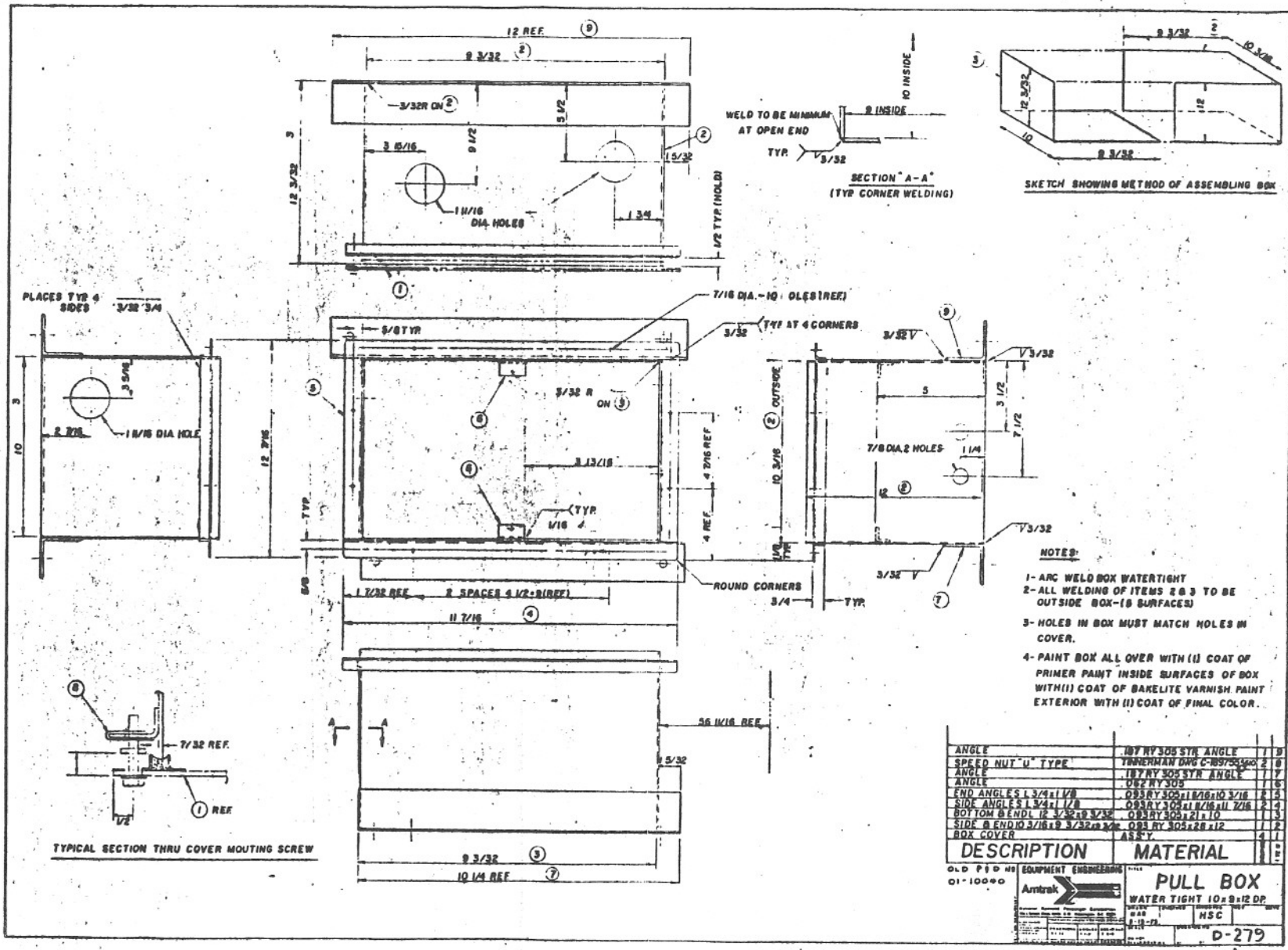


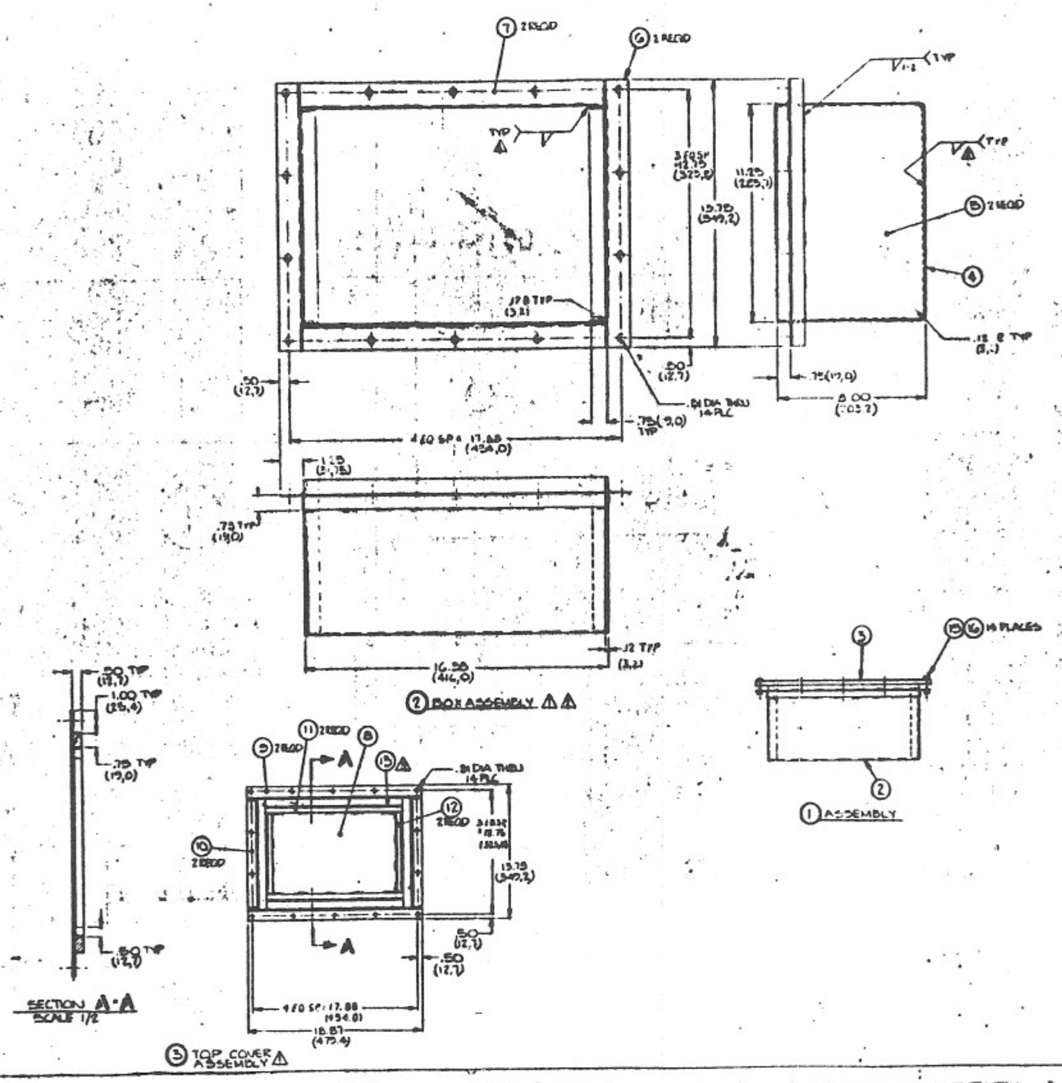
KEY PLAN
UNDERCAR
▢ = COMM. T/L RECEPT

REFERENCE DRAWINGS	EQUIPMENT ENGINEERING	ELECTRICAL SCHEMATIC M/U TRAINLINE
C-05-7171	Amtrak	PUSH-PULL FOR PRIVATE CARS
PUSH PULL FOR PRIVATE CARS	National Railroad Passenger Corporation	
USED ON	DO NOT SCALE DRAWING	C-01-7169

#4

IZ-10-2


12 REF.
9 3/32
3/32R ON (2)
5 1/2
9 1/2
3 15/16
15/32
1 11/16 DIA HOLES
1 3/4
12 3/32
3
1/2 TYP (HOLD)
WELD TO BE MINIMUM AT OPEN END
TYP.
3/32
10 INSIDE
9 INSIDE
1
SECTION "A-A" (TYP CORNER WELDING)
9 3/32
2
10 3/16
12 3/32
1/2
10
9 3/32
SKETCH SHOWING METHOD OF ASSEMBLING BOX
PLACES TYP 4 SIDES
3/32 3/4
3 5/16
1 11/16 DIA HOLE
2 7/16
3
10
12 7/16
7/16 DIA.-10 HOLES (REF.)
5/8 TYP
3/32 TYP AT 4 CORNERS
3/32 R ON (5)
3 13/16
4 7/16 REF
4 REF.
TYP.
1/16
5/8
1 7/32 REF.
2 SPACES 4 1/2=9 (REF.)
11 7/16
ROUND CORNERS
3/4 TYP.
3/32 V
OUTSIDE
10 3/16
5
3 1/2
7 1/2
7/8 DIA. 2 HOLES
1 1/4
12
1/2 TYP.
3/32 V
3/32 V
3/32 V
NOTES:
1- ARC WELD BOX WATERTIGHT
2- ALL WELDING OF ITEMS 2 & 3 TO BE OUTSIDE BOX-(8 SURFACES)
3- HOLES IN BOX MUST MATCH HOLES IN COVER.
4- PAINT BOX ALL OVER WITH (1) COAT OF PRIMER PAINT INSIDE SURFACES OF BOX WITH (1) COAT OF BAKELITE VARNISH. PAINT EXTERIOR WITH (1) COAT OF FINAL COLOR.
7/32 REF.
1 REF.
1/2
TYPICAL SECTION THRU COVER MOUTING SCREW
56 11/16 REF.
5/32
9 3/32
10 1/4 REF
ANGLE .187 RY 305 STR ANGLE 1 9
SPEED NUT "U" TYPE TINNERMAN DWG C-18975 2 8
ANGLE .187 RY 305 STR ANGLE 1 7
ANGLE .062 RY 305 1 6
END ANGLES L 3/4 x L 1/8 .093 RY 305 x 1 5/16 x 10 3/16 2 5
SIDE ANGLES L 3/4 x L 1/8 .093 RY 305 x 1 5/16 x L 7/16 2 4
BOTTOM & END L IR 3/32 x 9 3/32 .093 RY 305 x 2 x 10 1 3
SIDE & END 10 3/16 x 9 3/32 x 3/16 .093 RY 305 x 28 x 12 1 2
BOX COVER ASS'Y. 1 1
DESCRIPTION MATERIAL
OLD P&D NO 01-10000
EQUIPMENT ENGINEERING
Amtrak
PULL BOX
WATER TIGHT 10 x 9 x 12 DP.
HSC
D-279
#5



NOTES
1) DIMENSIONS SHOWN IN PARENTHESIS ARE IN MILLIMETERS
△ BOX MUST BE WATER TIGHT
△ BOND ITEMS 3 TO ITEM 13
△ CLOSED CELL SPONGE RUBBER

-3	-2	-1	DWG/PART NO	DESCRIPTION	MATERIAL	MFG/SPEC	ITEM
							17
		14		NUT, LOCK HEX HD [illegible]	STEEL	GRADE 5	16
		14		BOLT HEX HD [illegible]	STL	GRADE 5	15
							14
			-13	GASKET, .50 x [illegible]	△		13
2			-12	ANGLE, .064 1.00 x 11.25	ST STL	304	12
2			-11	ANGLE, .064 1.00 x 15.38			11
2			-10	ANGLE, .064 1.50 x 11.75			10
2			-9	ANGLE, .064 1.50 x 18.88			9
1			-8	PLATE, .063 13.75 x 18.88			8
	2		-7	ANGLE, .064 2.00 x 16.38			7
	2		-6	ANGLE, .064 2.00 x 13.75			6
	2		-5	SIDE, .06 x 7.25 x 12.75			5
	1		4	BOX, .06 x 6 x 12 x 27.25	ST STL	304	4
X		1	-3	TOP COVER ASSY			3
	X	1	-2	BOX ASSEMBLY			2
		X	-1	JUNCTION BOX ASSY			1

LIST OF MATERIAL

REFERENCE DRAWINGS

EQUIPMENT ENGINEERING

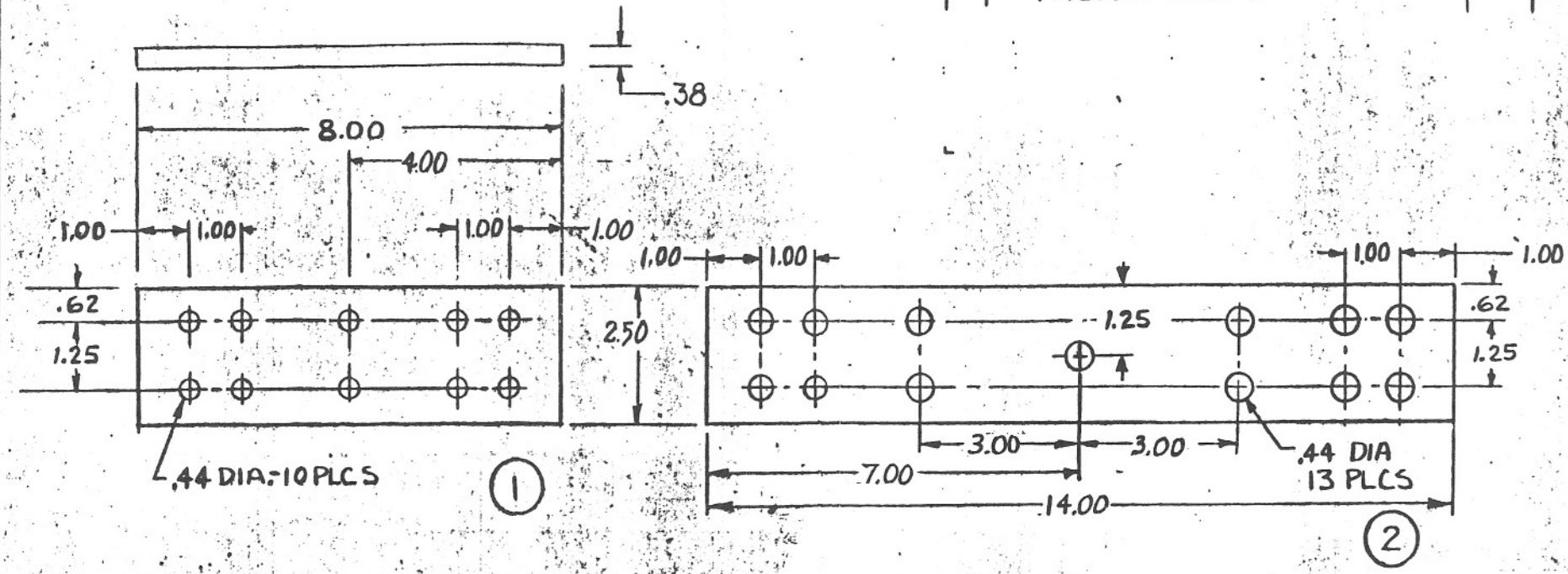
Amtrak

COMMUNICATION JUNCTION BOX ASSY, ST STL, "A" END

E 00-556

6

REVISIONS				
LTR	ZONE	DESCRIPTION	DATE	APP'D
A		DELETED METRIC DIMS ON ITEM 1 ADDED ITEM 2	4-30-84 bcw	RFB 5-14-84



X	-2	BAR .38 X 2.50 X 14.00	COPPER, ½ HARD		2
X	-1	BAR .38 X 2.50 X 8.00	COPPER ½ HARD		1
	PART No	DESCRIPTION	MATERIAL	SPEC/MFG	

LIST OF MATERIAL

3	E-00-519
3	E-00-1019
QTY/CAR	USED ON

REFERENCE DRAWINGS:

EQUIPMENT ENGINEERING

Amtrak

National Railroad Passenger Corporation
955 L'Enfant Plaza North, S.W., Washington, D.C. 20024

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS ± 1/32, ANGLES ± 1/2°, DECIMALS ± .030

REMOVE ALL BURRS-BREAK SHARP CORNERS

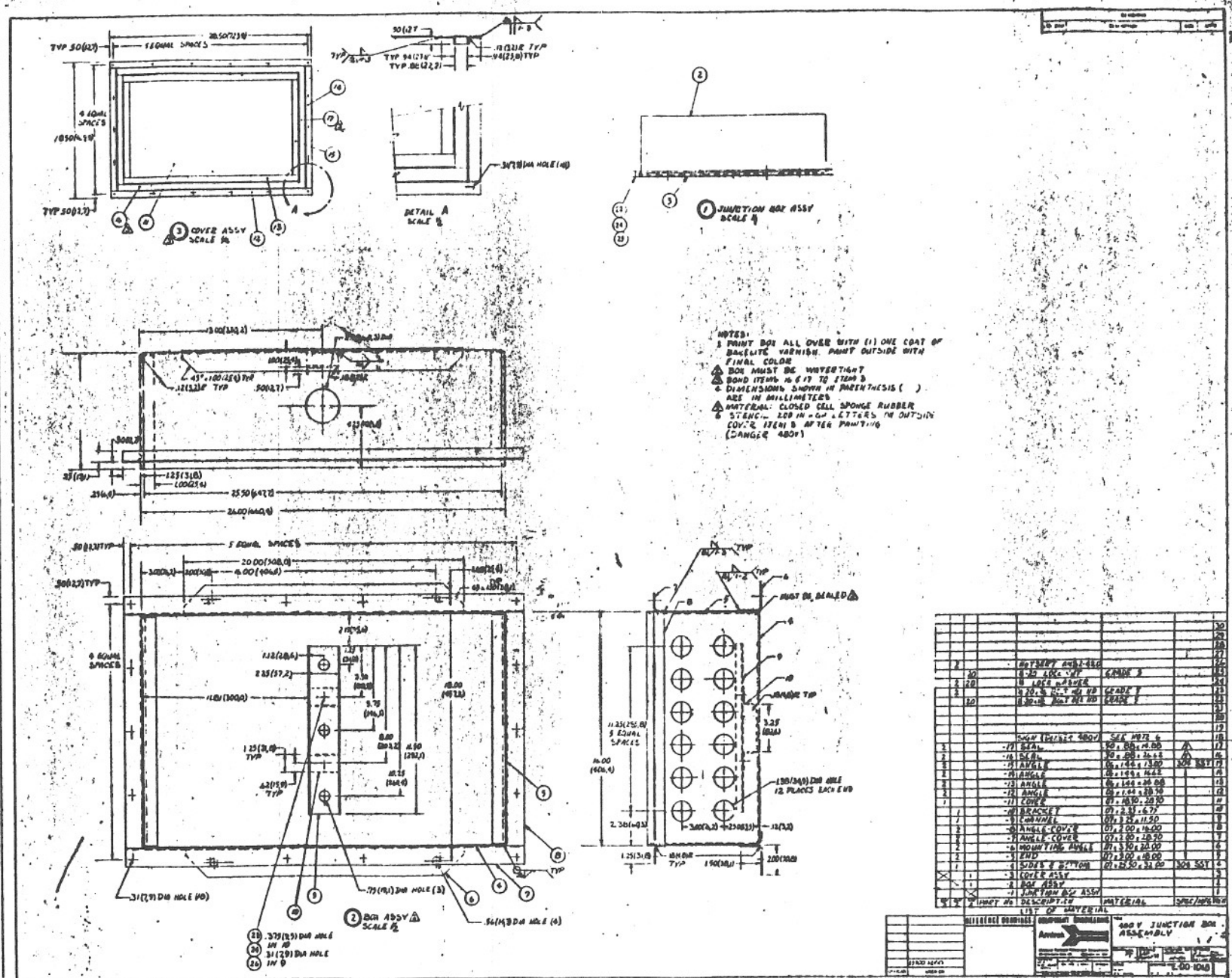
TITLE
BUSS BAR
480V - JUNCTION BOX

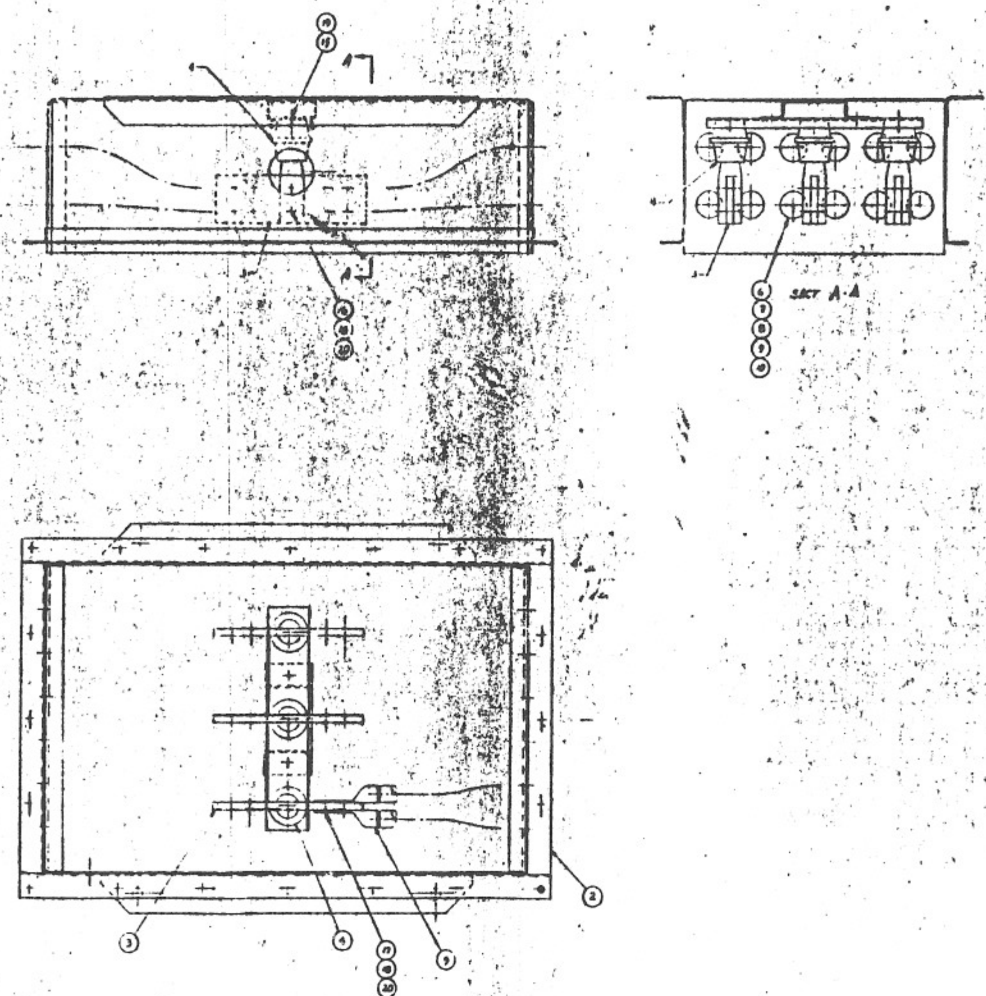
DRAWN	CHECKED	APPROVED	APPROVED
	10-11-79	11/15/79	11/13/79

SCALE 1/2 DO NOT SCALE DRAWING

DRAWING NO. B-00-1017 A

SH. 1 OF 1


3 COVER ASSY
SCALE
DETAIL A
SCALE
1 JUNCTION BOX ASSY
SCALE
NOTES:
1 PAINT BOX ALL OVER WITH (1) ONE COAT OF BAKELITE VARNISH. PAINT OUTSIDE WITH FINAL COLOR
2 BOX MUST BE WATERTIGHT
3 BOND ITEMS 16 & 17 TO ITEM 3
4 DIMENSIONS SHOWN IN PARENTHESIS ( ) ARE IN MILLIMETERS
5 MATERIAL: CLOSED CELL SPONGE RUBBER
6 STENCIL 2.00 IN HIGH LETTERS ON OUTSIDE COVER ITEM 3 AFTER PAINTING (DANGER 480V)
2 BOX ASSY
SCALE
LIST OF MATERIAL
480 V JUNCTION BOX ASSEMBLY



QTY	PART No	DESCRIPTION	MATERIAL	SPEC/[illegible]	ITEM
19		[illegible] LOCK WASHER			20
3		[illegible] LOCK WASHER			19
18		[illegible] LOCK NUT	GRADE 5 STL CAD PL		18
12		[illegible] BOLT HEX HD	GRADE 5 STL CAD PL		17
6		[illegible] BOLT HEX HD	GRADE 5 STL CAD PL		16
3		[illegible] BOLT HEX HD	GRADE 5 STL CAD PL		15
					14
					13
					12
					11
AR		WEATHERBAN	#[illegible]		10
24		1 in WASHER	[illegible]		9
24		1 in END BUSHING [illegible]	[illegible] T & B [illegible]		8
24		1 in LOCK NUT	APPLETON [illegible]		7
24		STRAIN RELIEF BUSHING [illegible]	[illegible]	[illegible]	6
24		TERMINAL LUG [illegible]	AMP #326803		5
3		[illegible] BAR INSULATOR	[illegible] ELECT Co		4
3	E-00-1017-1	BUSS BAR			3
1	E-00-1018-1	JUNCTION BOX ASSY			2
[illegible]		JUNCTION BOX ARRGT	480V		1
-1					

LIST OF MATERIAL

REFERENCE DRAWINGS

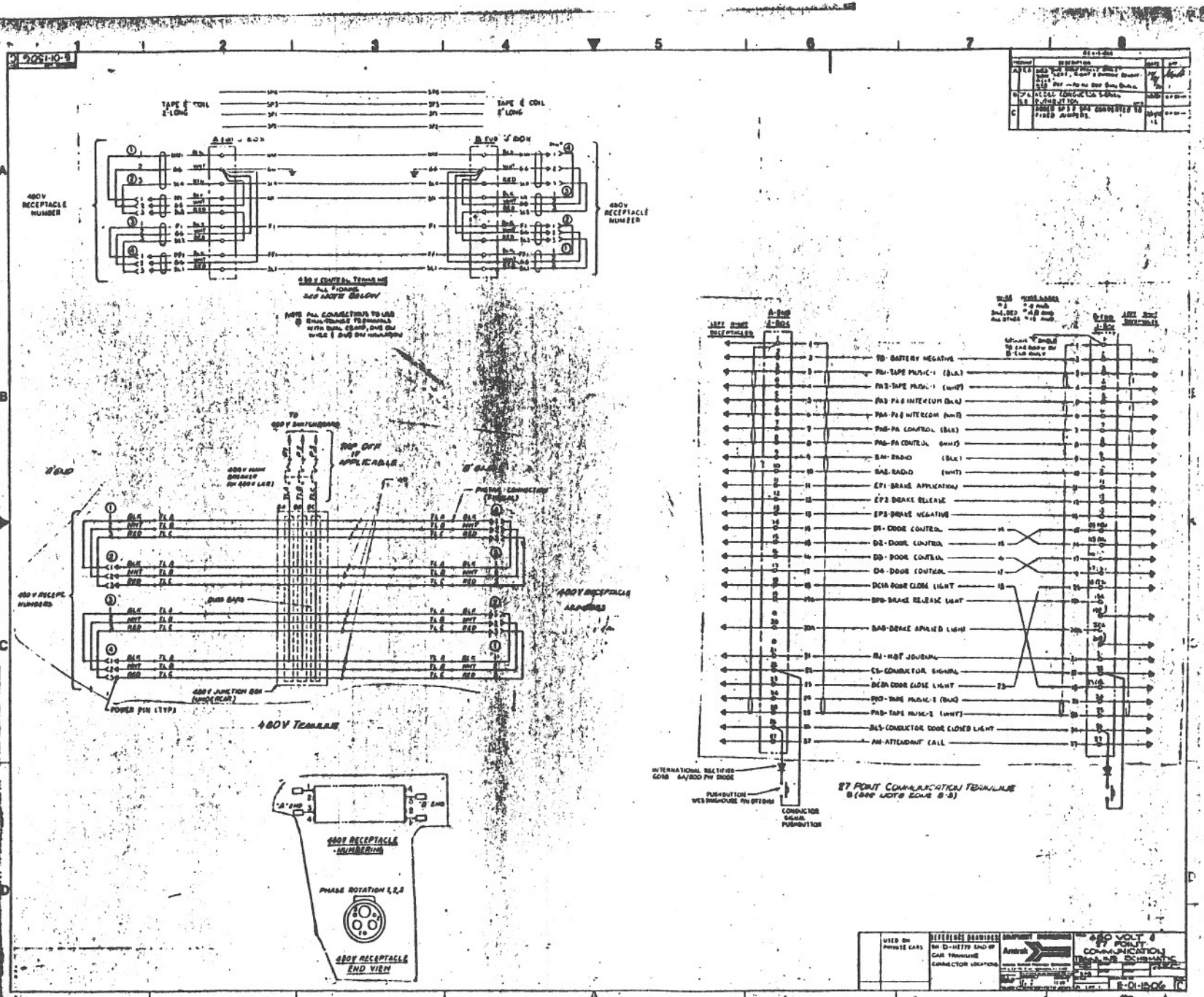
COMPONENT ENGINEERING

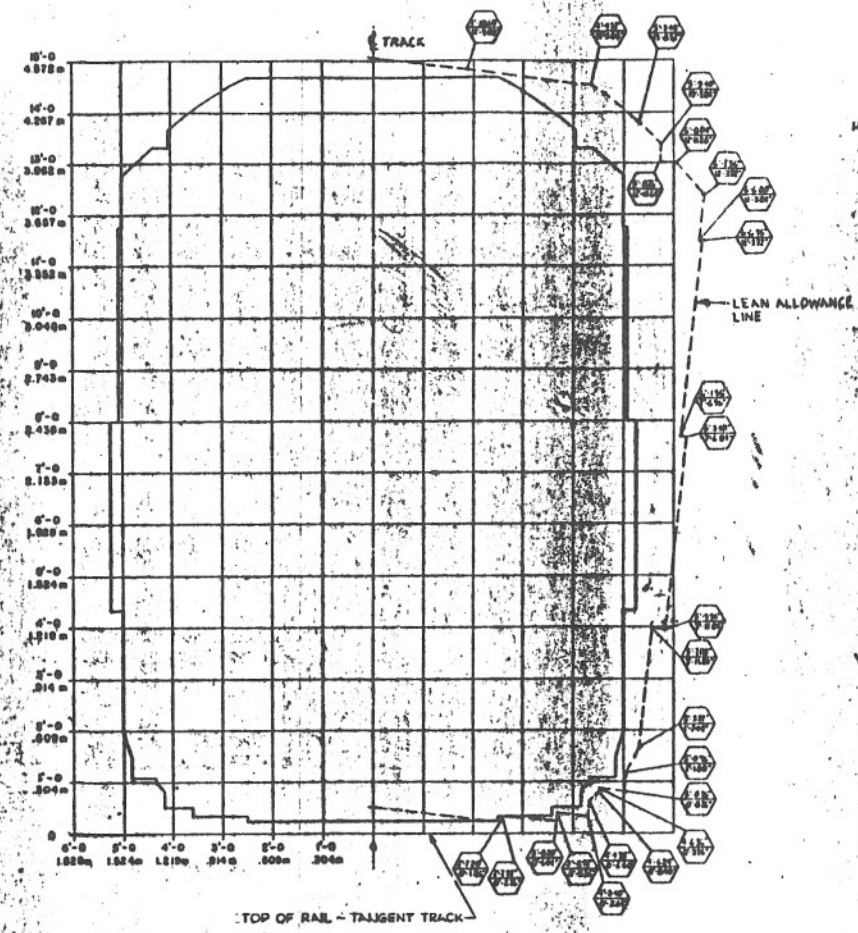
Amtrak

480V-JUNCTION BOX ARRANGEMENT

E-00-1019 A

#9


480V RECEPTACLE NUMBER
480V CONTROL TERMINAL
480V TERMINAL
480V RECEPTACLE NUMBERING
PHASE ROTATION 1,2,3
480V RECEPTACLE END VIEW
87 POINT COMMUNICATION TERMINAL
480 VOLT 87 POINT COMMUNICATION TRAIN LINE SCHEMATIC
B-01-1506



STATIC DIMENSIONS
SOLID LINE

HEIGHT ABOVE RAIL	WIDTH
14'-6	8'-0
14'-4	8'-0
14'-0	7'-0
13'-8	6'-0
13'-3.75	5'-1
12'-3.75	5'-1
12'-3.75	5'-9
11'-9	10'-0
11'-9	10'-0
11'-3	10'-2
8'-6	10'-2
8'-0	10'-6
4'-4	10'-6
4'-4	10'-0
3'-0	10'-0
3'-0	9'-8
1'-6	9'-8
1'-1	8'-0
1'-1	8'-0
1'-0	8'-8
0'-10	8'-4
0'-6	8'-4
0'-6	7'-2
0'-4	7'-2
0'-4	5'-0
0'-2.75	5'-0

NOTES:

NOTES:
1. THIS DIAGRAM IS NOT TO BE USED AS A CAR CONSTRUCTION OR BUILDERS OUTLINE. RATHER THE PURPOSE OF THIS DIAGRAM IS TO PROVIDE THE PARAMETERS WHICH ALL EQUIPMENT MUST MEET FOR UNRESTRICTED OPERATION OVER ALL AMTRAK ROUTES.
2. ALL VERTICAL DIMENSIONS REPRESENT THE MAXIMUM EXCURSION OF THE EQUIPMENT. THEREFORE, THE CAR CONSTRUCTION OUTLINE MUST BE REDUCED TO ALLOW FOR WORN WHEELS. FULL VERTICAL TRAVEL OF THE SUSPENSION SYSTEM (INCLUDING FAILED CONDITION) AND FULL PASSENGER LOADING.
3. WHEN MEASURED ON LEVEL TANGENT TRACK THE HORIZONTAL DIMENSIONS SHOWN REPRESENT THE MAXIMUM STATIC CONDITIONS OF THE EQUIPMENT SUBJECT TO THE FOLLOWING REQUIREMENTS.
   a) HORIZONTAL DIMENSIONS ARE BASED ON AN OVERALL CAR LENGTH OF 86'-0 OVER BUFFERS AND TRUCK CENTER DISTANCE OF 64'-0". EQUIPMENT EXCEEDING THESE REQUIREMENTS MUST HAVE HORIZONTAL DIMENSIONS REDUCED ACCORDINGLY.
   b) A MAXIMUM OF 1.50 LATERAL PLAY (JOURNAL, WHEEL TO RAIL, BOLSTER, ETC.) IS ALLOWED.
   c) THE EQUIPMENT MUST NOT EXCEED THE LEAN ALLOWANCE LINE WHEN SUBJECT TO THE FOLLOWING: FULL BOLSTER LATERAL; MAXIMUM EXCURSION OF THE SUSPENSION SYSTEM FOR A FULLY LOADED CAR; AND INDUCED CARBODY TILTING AS MEASURED WITH THE EQUIPMENT IN STANDING POSITION ON TANGENT TRACK HAVING 0"-6 SUPERELEVATION.
   d) THE HORIZONTAL DIMENSIONS BETWEEN THE HEIGHTS OF 0'-2.75 AND 1'-10.0 ABOVE TOP OF RAIL REPRESENT THE MAXIMUM STATIC CONDITIONS OF TRUCK PARTS OR CARBODY PARTS LOCATED DIRECTLY OVER THE TRUCKS. ALL OTHER EQUIPMENT PROJECTIONS BETWEEN THESE HEIGHTS MUST BE CONSTRUCTED SO THAT THEY DO NOT SWING BEYOND THE STATICALLY PRESCRIBED LIMITS WHILE NEGOTIATING A 12°-30' CURVE.

HORIZONTAL DISTANCE FROM ℄ OF TRACK WITH 0" CROSS LEVEL.

VERTICAL DISTANCE ABOVE TOP OF RAIL WITH 0" CROSS LEVEL.

REFERENCE DRAWINGS:
34146 C NYNHRR
D-323 C AMTRAK

REVISIONS

ZONE	DESCRIPTION	DATE	APP'D

SYSTEM STANDARD

Amtrak

TITLE: CLEARANCE DIAGRAM

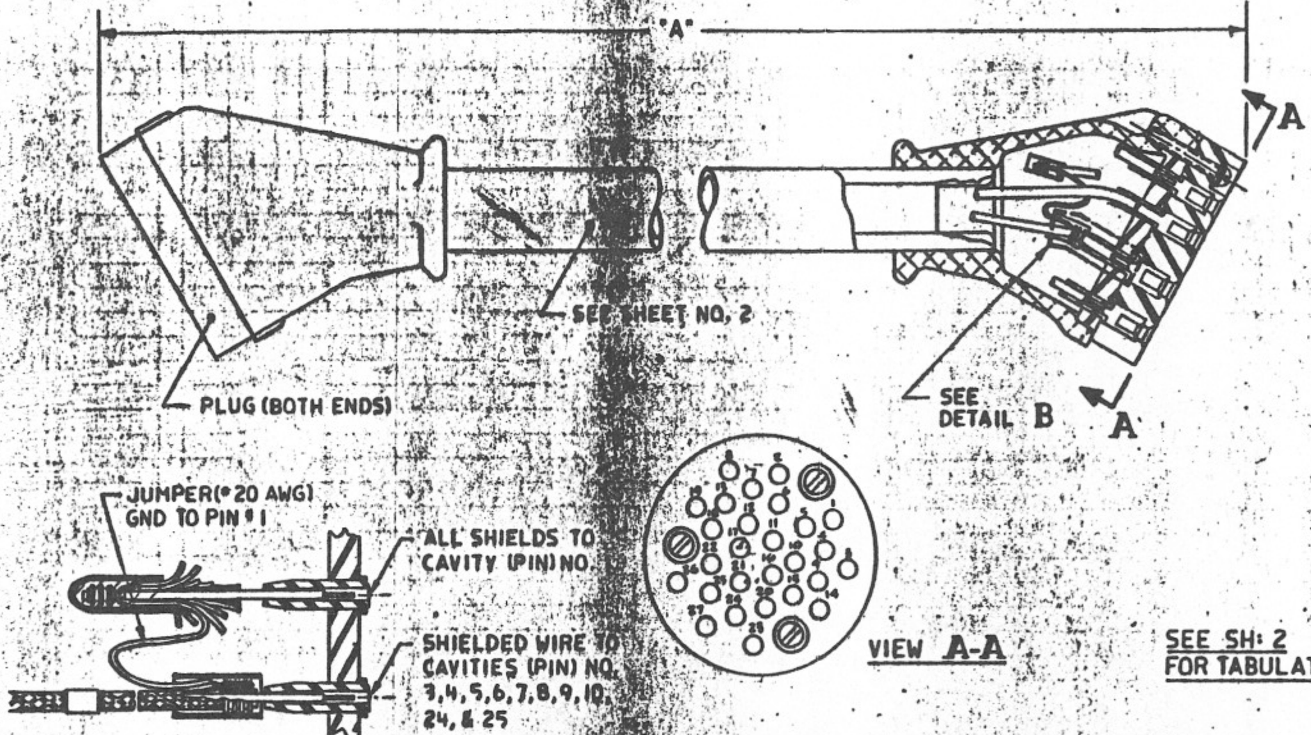
10-05-1355

11

REV	DRAWING NUMBER
B	C-01-1498

REVISIONS

LTR	ZONE	DESCRIPTION	DATE	APPR'D
B		SH: 2 WAS SH: 1 ADDED SH: 1 & RENUMBERED SH: 2		



DETAIL B

SEE SH: 2
FOR TABULATION TABLE & NOTES

QTY	PART NUMBER	DESCRIPTION	MATERIAL	MFG/SPEC	PA. ITEM NO	ITEM
X	-1	27 PT COMM JUMP. CABLE ASSY			X	1

LIST OF MATERIAL

QTY/CAR	USED ON
-1	39900 85
	1100 9624
	SUPERLINER
	AMFLEET

REFERENCE DRAWINGS

EQUIPMENT ENGINEERING

Amtrak

National Railroad Passenger Corporation

TITLE 27 POINT COMM. JUMPER CABLE ASSEMBLY CAR-CAR

SCALE NONE

SH. 1 OF 2

DRAWING NUMBER C-01-1498 REV B

DO NOT SCALE DRAWING

#12

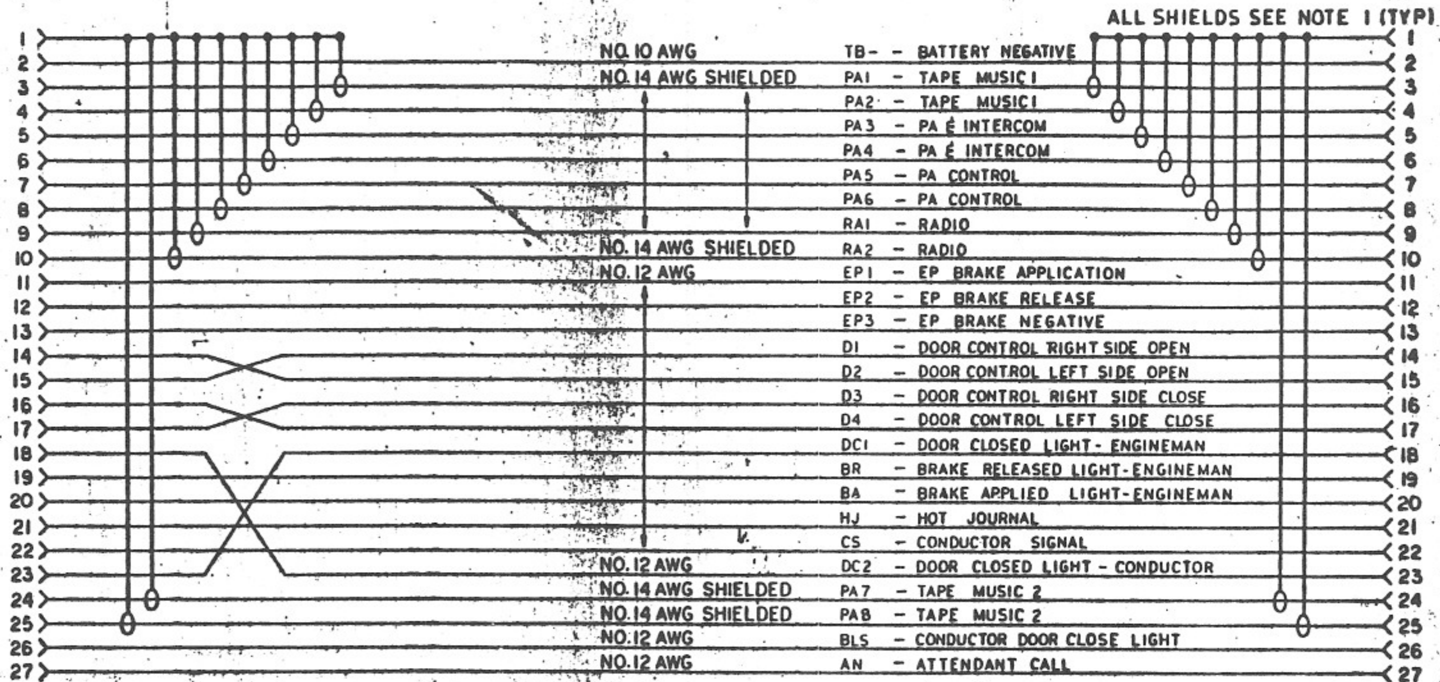
B | C-01-1498 (upside-down stamp)

REVISIONS

LTR	ZONE	DESCRIPTION	DATE	APP'D
A		ADDED WIRE NAMES	2.26.88	R.F. BALIS 3-1-88
B		SEE SH: 1	4/22/00	

TABULATION TABLE

ITEM NO.	DIM 'A' (LENGTH)	AMTRAK PART NO.	WEIGHT (LBS)	VENDOR(S) & PART NO.		
				PYLE NATIONAL		
1	60±1"	C-01-1498-1		WWPCJ-2747-AMTR		



ALL SHIELDS SEE NOTE 1 (TYP)
1 NO. 10 AWG TB- – BATTERY NEGATIVE 1
2 NO. 14 AWG SHIELDED PA1 – TAPE MUSIC 1 2
3 PA2 – TAPE MUSIC 1 3
4 PA3 – PA & INTERCOM 4
5 PA4 – PA & INTERCOM 5
6 PA5 – PA CONTROL 6
7 PA6 – PA CONTROL 7
8 RA1 – RADIO 8
9 NO. 14 AWG SHIELDED RA2 – RADIO 9
10 NO. 12 AWG EP1 – EP BRAKE APPLICATION 10
11 EP2 – EP BRAKE RELEASE 11
12 EP3 – EP BRAKE NEGATIVE 12
13 D1 – DOOR CONTROL RIGHT SIDE OPEN 13
14 D2 – DOOR CONTROL LEFT SIDE OPEN 14
15 D3 – DOOR CONTROL RIGHT SIDE CLOSE 15
16 D4 – DOOR CONTROL LEFT SIDE CLOSE 16
17 DC1 – DOOR CLOSED LIGHT - ENGINEMAN 17
18 BR – BRAKE RELEASED LIGHT-ENGINEMAN 18
19 BA – BRAKE APPLIED LIGHT-ENGINEMAN 19
20 HJ – HOT JOURNAL 20
21 CS – CONDUCTOR SIGNAL 21
22 NO. 12 AWG DC2 – DOOR CLOSED LIGHT - CONDUCTOR 22
23 NO. 14 AWG SHIELDED PA7 – TAPE MUSIC 2 23
24 NO. 14 AWG SHIELDED PA8 – TAPE MUSIC 2 24
25 NO. 12 AWG BLS – CONDUCTOR DOOR CLOSE LIGHT 25
26 NO. 12 AWG AN – ATTENDANT CALL 26
27 27

NOTES:

1. ALL SHIELDS SHALL BE CONNECTED TO NO. 1 CONTACT.
2. CROSS OVER: #14-15; #16-17; #18-23, REMAINING WIRES TERMINATE #2 TO #2; #3 TO #3, ETC
3. PROTECT BOTH ENDS OF SHIELDS WITH HEAT SHRINKABLE TUBING AS SHOWN ON DET. 'B' SH: 1

	39900-85
	1100-9624
	SUPERLINER
	AMFLEET
QTY/CAR	USED ON

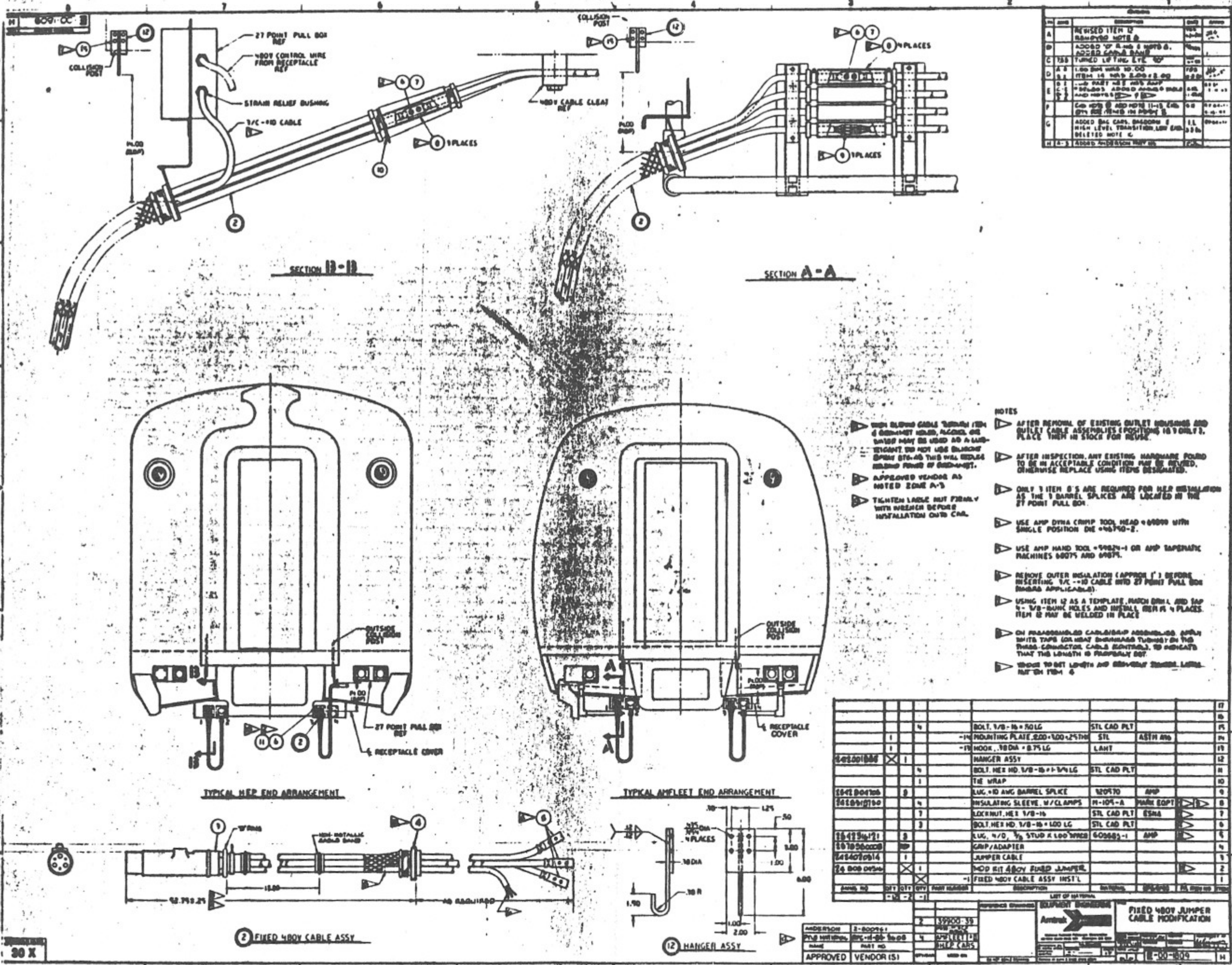
REFERENCE DRAWINGS:

EQUIPMENT ENGINEERING
Amtrak
National Railroad Passenger Corporation
400 N Capitol St., Washington, D.C. 20001

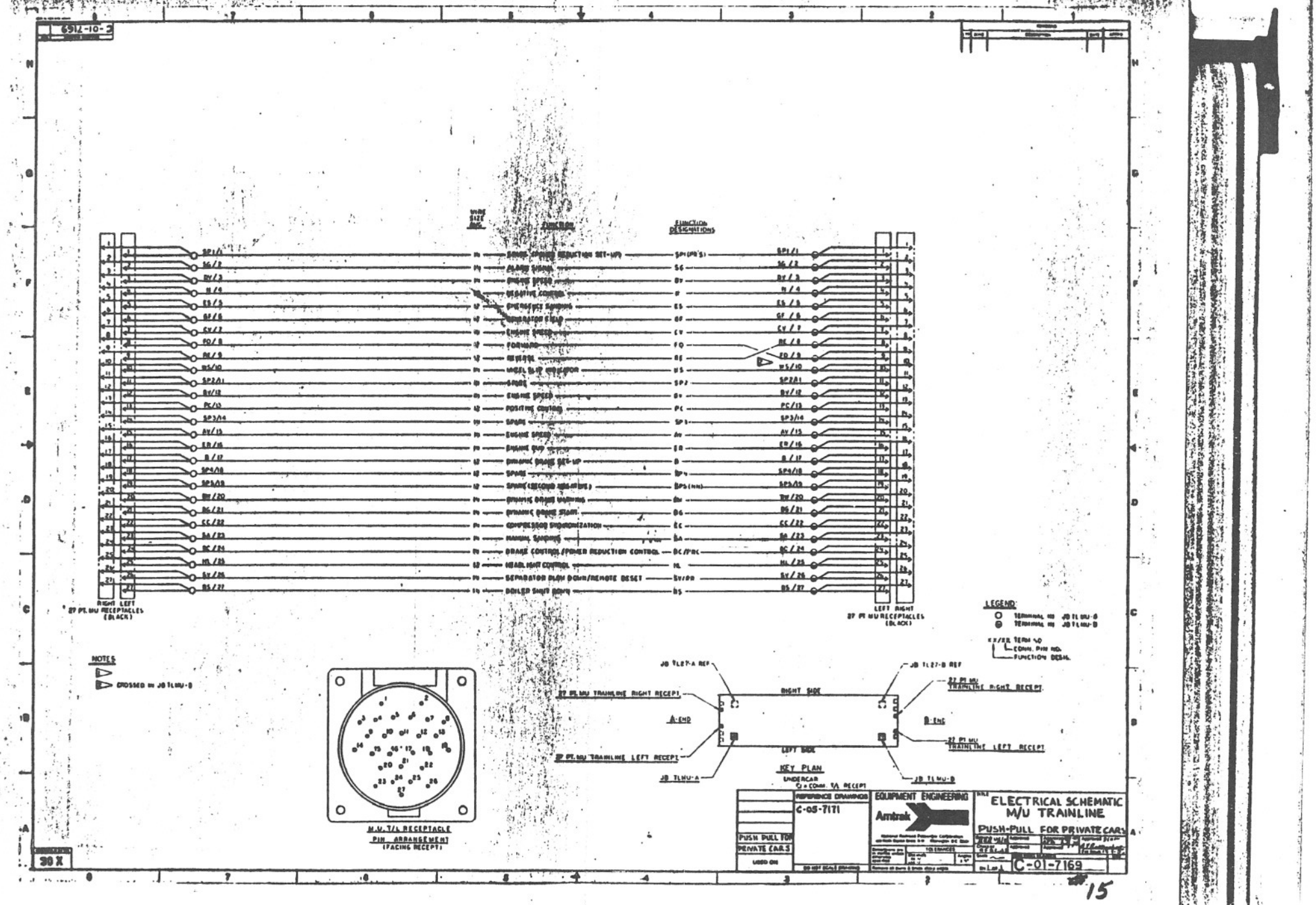
TITLE: 27 POINT COMM. JUMPER CABLE ASSEMBLY CAR - CAR

SCALE: NONE | DRAWING NO. C-01-1498 | REV B | SH 2 OF 2

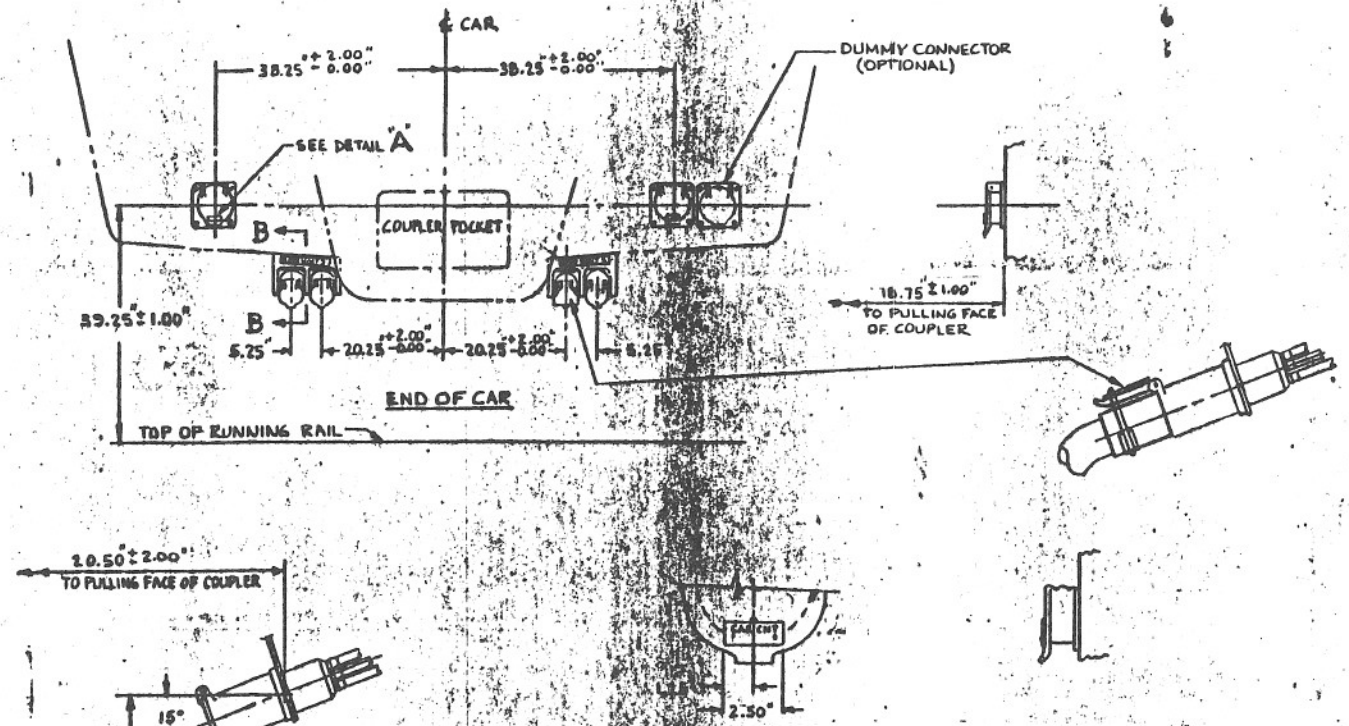
#13



27 POINT PULL BOX REF
480V CONTROL WIRE FROM RECEPTACLE REF
STRAIN RELIEF BUSHING
7/C-#10 CABLE
COLLISION POST
480V CABLE CLEAT REF
9 PLACES
SECTION B-B
SECTION A-A
OUTSIDE COLLISION POST
RECEPTACLE COVER
27 POINT PULL BOX REF
TYPICAL HEP END ARRANGEMENT
TYPICAL AMFLEET END ARRANGEMENT
FIXED 480V CABLE ASSY
HANGER ASSY
NOTES
AFTER REMOVAL OF EXISTING OUTLET HOUSINGS AND OUTLET CABLE ASSEMBLIES (POSITIONS 1 & 7 ONLY?), PLACE THEM IN STOCK FOR REUSE.
AFTER INSPECTION, ANY EXISTING HARDWARE FOUND TO BE IN ACCEPTABLE CONDITION MAY BE REUSED. OTHERWISE REPLACE USING ITEMS DESIGNATED.
ONLY 3 ITEM 8'S ARE REQUIRED FOR HEP INSTALLATION AS THE 3 BARREL SPLICES ARE LOCATED IN THE 27 POINT PULL BOX.
USE AMP DYNA CRIMP TOOL HEAD #69099? WITH SINGLE POSITION DIE #46750-2.
USE AMP HAND TOOL #59824-1 OR AMP TAPEMATIC MACHINES 68075 AND 69875?.
REMOVE OUTER INSULATION (APPROX 1") BEFORE INSERTING 7/C-#10 CABLE INTO 27 POINT PULL BOX (WHERE APPLICABLE).
USING ITEM 12 AS A TEMPLATE, MATCH DRILL AND TAP 4-3/8-16UNC HOLES AND INSTALL ITEM 15 4 PLACES. ITEM 12 MAY BE WELDED IN PLACE
ON [illegible] CABLE/GRIP ASSEMBLIES, APPLY WHITE TAPE (OR HEAT SHRINKABLE TUBING) ON THE THREE-CONDUCTOR CABLE (CONTROL), TO INDICATE THAT THE LENGTH IS PROPERLY SET.
[illegible] TO SET LENGTH AND [illegible] LOCK NUT ON ITEM 4
APPROVED VENDOR AS NOTED ZONE A-3
TIGHTEN CABLE NUT FIRMLY WITH WRENCH BEFORE INSTALLATION ONTO CAR.
BOLT, 3/8-16 x 5.0 LG — STL CAD PLT — 15
MOUNTING PLATE, 2.00 x 3.00 x .25 THK — STL — ASTM A36 — 14
HOOK, .38 DIA x 8.75 LG — 13
HANGER ASSY — 12
BOLT, HEX HD, 3/8-16 x 1-3/4 LG — STL CAD PLT — 11
TIE WRAP — 10
LUG, #10 AWG BARREL SPLICE — 320570 — AMP — 9
INSULATING SLEEVE, W/CLAMPS — M-105-A — 8
LOCKNUT, HEX 3/8-16 — STL CAD PLT — ESNA — 7
BOLT, HEX HD, 3/8-16 x 1.00 LG — STL CAD PLT — 6
LUG, 4/0, 3/8 STUD x 1.00 SPACE — 603685-1 — AMP — 5
GRIP/ADAPTER — 4
JUMPER CABLE — 3
MOD KIT 480V FIXED JUMPER — 2
FIXED 480V CABLE ASSY INST'L — 1
LIST OF MATERIAL
FIXED 480V JUMPER CABLE MODIFICATION
Amtrak
EQUIPMENT ENGINEERING
39900-39
AMFLEET II
HEP CARS
E-00-1809
APPROVED VENDOR (S)
ANDERSON 2-800961
30 X
#14


6912-10-3
WIRE LIST NO.
FUNCTION
FUNCTION DESIGNATIONS
SP1/1
SG/2
BV/3
N/4
ES/5
SF/6
CV/7
FO/8
RE/9
WS/10
SP2/11
BY/12
PC/13
SP3/14
AV/15
EB/16
B/17
SP4/18
SP5/19
BW/20
BG/21
CC/22
SA/23
BC/24
NL/25
SY/26
BS/27
RIGHT LEFT
27 PT. M/U RECEPTACLES (BLACK)
LEFT RIGHT
27 PT M/U RECEPTACLES (BLACK)
NOTES
CROSSED IN JB TL MU-B
M.U. T/L RECEPTACLE
PIN ARRANGEMENT
(FACING RECEPT)
JB TL27-A REF
JB TL27-B REF
27 PT. M/U TRAINLINE RIGHT RECEPT.
A-END
B-END
27 PT. M/U TRAINLINE LEFT RECEPT.
JB TLMU-A
JB TL MU-B
RIGHT SIDE
LEFT SIDE
KEY PLAN
UNDERCAR
C = COMM. T/A RECEPT
LEGEND
TERMINAL NO. JB TL MU-B
TERMINAL NO. JB TL MU-B
XX/XX TERM NO
CONN. PIN NO.
FUNCTION DESIG.
PUSH PULL FOR PRIVATE CARS
USED ON
REFERENCE DRAWINGS
C-05-7171
EQUIPMENT ENGINEERING
Amtrak
ELECTRICAL SCHEMATIC
M/U TRAINLINE
PUSH-PULL FOR PRIVATE CARS
C-01-7169
30 X

15



SECTION B-B

DETAIL "A"
27 PT. COMMUN. CONN.

THIS DRAWING SUPERSEDES
SK-D-112779 (W/O CHANGE)

QTY	PART NUMBER	DESCRIPTION	MATERIAL	MFG/SPEC	P/L ITEM NO	ITEM

LIST OF MATERIAL

REFERENCE DRAWINGS

QTY/CAR | USED ON

DO NOT SCALE DRAWING

EQUIPMENT ENGINEERING
Amtrak
National Railroad Passenger Corporation

TOLERANCES

Remove all burrs & break sharp edges

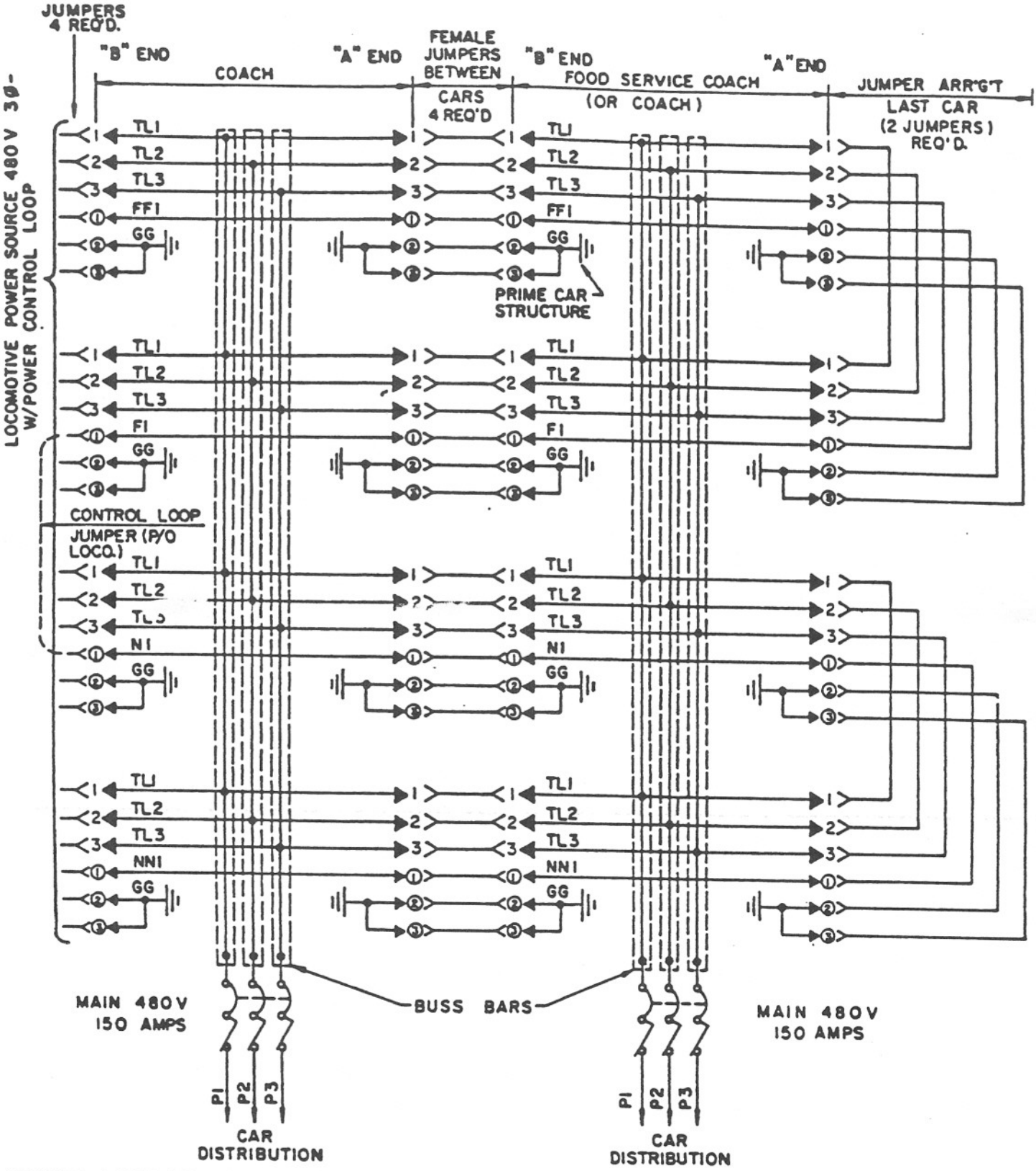
TITLE
END OF CAR TRAINLINE CONNECTOR LOCATIONS

Drawn GEH	Approved	Approved	Approved
Checked	Approved	Approved	Approved

Scale NONE | DRAWING NUMBER C-05-7171 | REV

SH 1 OF 1

16

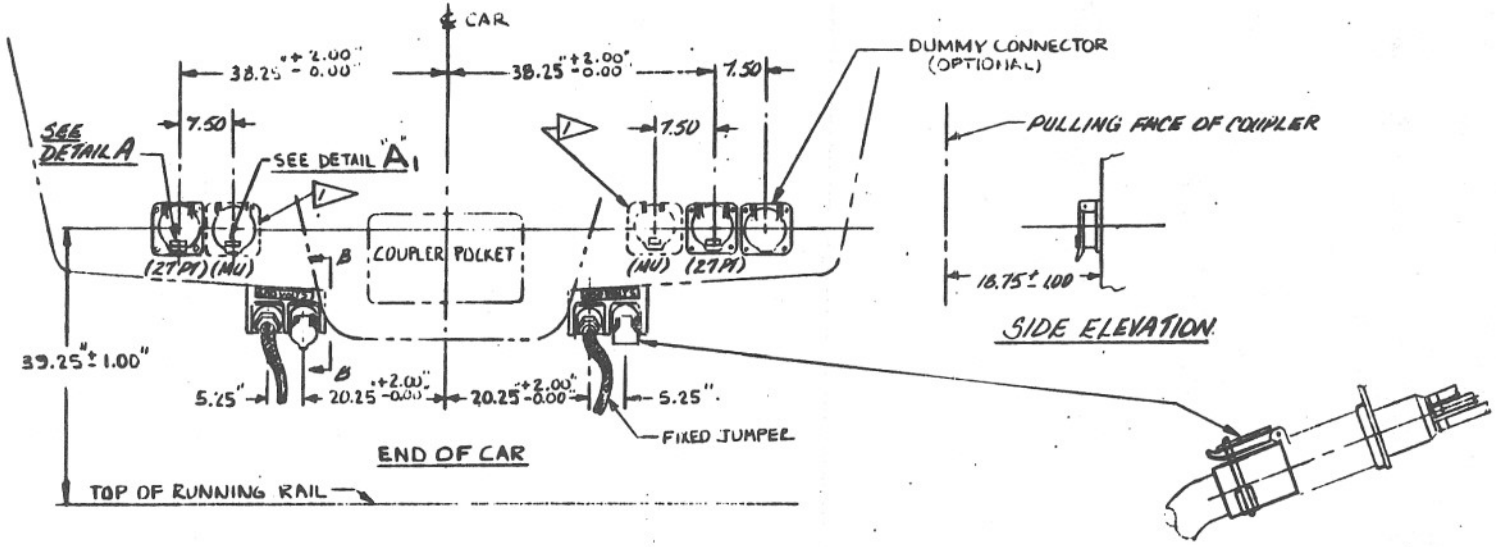


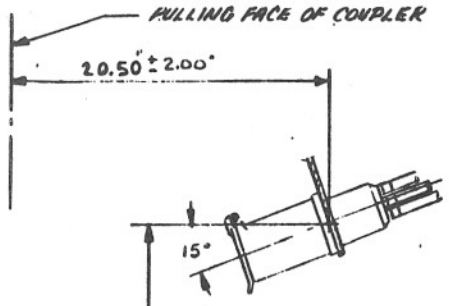
NOTES: 1. PIN NO. 1, 2 & 3 LARGE PINS USED FOR 480 VOLT POWER.
2. PIN NO. ①, ② & ③ SMALL PINS USED FOR CONTROL LOOP CIRCUIT AND GROUNDING.
3. CARS ARE REVERSIBLE BUT CONTROL LOOP IS CONTINUOUS.

FIGURE 3
CAR WIRING - REFERENCE

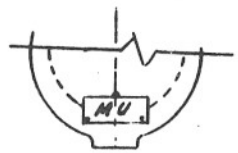
DRAWING NUMBER	
NEXT	A
	7171

REVISIONS			
LTR	ZONE	DESCRIPTION	DTD
A		ADDED MU T/R LOCATIONS & NBOV FIXED JUMPERS	4-24-02

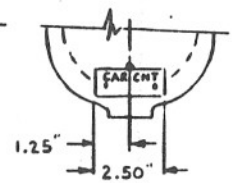




SECTION B-B



DETAIL "A1"
MU T/L CONN.



DETAIL "A"
27 PT. COMMUN. CONN.

NOTE:
IF OPTIONAL MU TRAINLINES ARE INSTALLED FOR PUSH-PULL OPERATION, USE LOCATION SHOWN IN DOTTED LINES. SEE DWG.

THIS DRAWING SUPERSEDES
SK-D-112779 (W/O CHANGE)

QTY	PART NUMBER	DESCRIPTION	MATERIAL	MFG/SPEC	P/L ITEM NO	ITEM

LIST OF MATERIAL

QTY/CAR	USED ON

REFERENCE DRAWINGS

DO NOT SCALE DRAWING

EQUIPMENT ENGINEERING

Amtrak

National Railroad Passenger Corporation
400 North Capitol Street, N.W. Washington, D.C. 20001

TOLERANCES
Dimensions are in inches unless otherwise specified
Decimals .XX +/- .01 .XXX +/- .005
Angles ± ½°
Remove all burns & break sharp edges

TITLE
END OF CAR TRAINLINE CONNECTOR LOCATIONS
(PRIVATE CARS)

Drawn GEN	Approved	Approved	Approved
Checked	Approved	Approved	For Issue

Scale NONE
SHEET 1 OF 1
C-05-7171
REV A

4 3 2 1