

SH. NO.	CONTENTS	REVISION NO.						
		1	2	3	4	5	6	7
1	TITLE, NOTES, INDEX AND REVISIONS	✓	✓	✓				
2	LOCATION PLAN	✓	✓					
3	TRACK AND CONDUIT LAYOUT - DOUBLE TRACK	✓						
4	POWER DISTRIBUTION, DED AND SOTC - HBD START RELAY	✓						
5	COMMUNICATION TERMINAL BOARD, RADIO, TAPE RECORDER AND MODEM CIRCUITS	✓						
6	HBD HOUSE AND COMMERCIAL POWER LAYOUT	✓						
7	HBD EQUIPMENT RACK	✓						
8	LEFT AND RIGHT WALL SHELVES AND COMMUNICATIONS TERMINAL BOARD	✓						
9	TERMINAL BOARD LAYOUT	✓	✓	✓				
10	GROUND APPLICATION FOR HBD HOUSE	✓						
11	HBD PROTECTIVE RAMP (METAL)	✓						

NOTES

- = FOR MATERIAL REFERENCE SEE PLAN S-1002
- ⊗ = DENOTES TWISTED PAIR
- GROUND IN ACCORDANCE WITH CS-9001-A

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C&S CAD

CHANGES TO SHEETS  
1 AND 9  
R-3468  
RR/XRL  
10-08-13  
GREEN = IN  
ORANGE = OUT  
CHECKED BY RWM  
10-15-13

CHANGES TO SHEETS  
1, 2 AND 9  
R-3468  
WJK/XRL  
01-11-13  
RED = IN  
YELLOW = OUT  
CHECKED BY RWM  
03-06-13

IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
 S&E ENGINEERING COPY  
 CONSTRUCTION OFFICE COPY  
 RETURN TO S&E ENG. AFTER COMPLETION  
 FIELD COPY  
 RETURN TO CASE AFTER COMPLETION  
 PROJECT ENGINEER COPY

REVISIONS

1	2-18-91			
PLAN DRAWN ACCOUNT OF NEW INSTALLATIONS OF SERVO HBD 9000 SYSTEMS.				
SYSTEM FILE NO: WO/AFE NO: PFC NO. IN SERVICE: 2-18-91 PER: AJB				
2	1-11-13	WJK	XRL	RWM
REVISED ACCOUNT OF WAYSIDE SIGNAL CHANGES				
R-3468 WO/AFE NO: IN SERVICE: PER:				
3	10-08-13	RR	XRL	RWM
REVISED ACCOUNT OF REMOVE DAX CABLE				
R-3468 WO/AFE NO: IN SERVICE: PER:				



DEARBORN DIVISION

CHICAGO LINE

BURDICK, IN  
HBD MP 476.9

TITLE, NOTES, INDEX AND REVISIONS

PHILADELPHIA, PA.

APPROVED: *[Signature]*, PE CAD  
CHIEF ENGINEER - C&S

ISSUE DATE: FEBRUARY 18, 1991

3200-4769

REV. 3 2 1 10-08-13 01-11-13 SHEET 1

HBD902TA.TYP

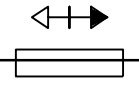
6  
SEE PLAN 3200-4777

WEST  
TO GARY  
M.P. ASCENDING

EAST  
TO ELKHART  
M.P. DECENDING

100'

HOT BOX  
DETECTOR

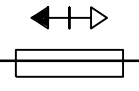


10TN

10TB

20TN

20TB



SEE PLAN 3200-4768

R-3468  
WJK/XRL  
01-11-13  
RED= IN  
YELLOW= OUT  
CHECKED BY RWM  
03-06-13

REV	DATE	CKD BY

C&S CAD

**CONRAIL**

HBD MP 476.9 BURDICK, IN

LOCATION PLAN

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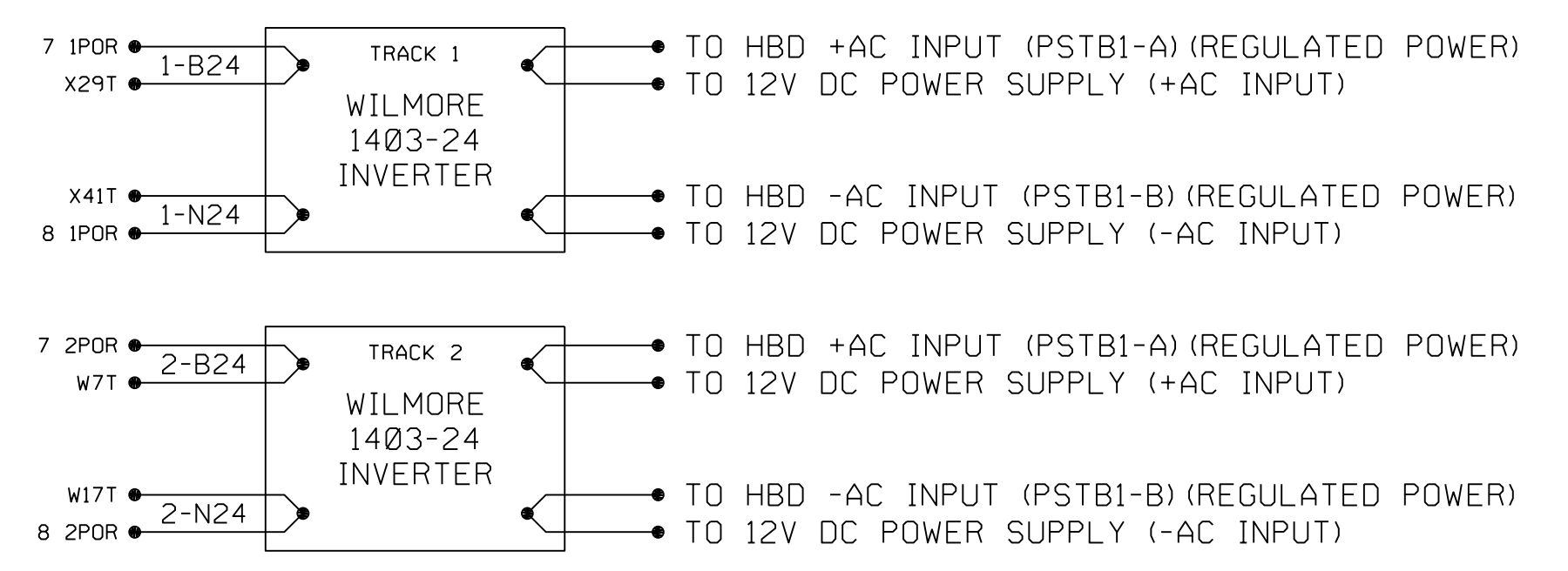
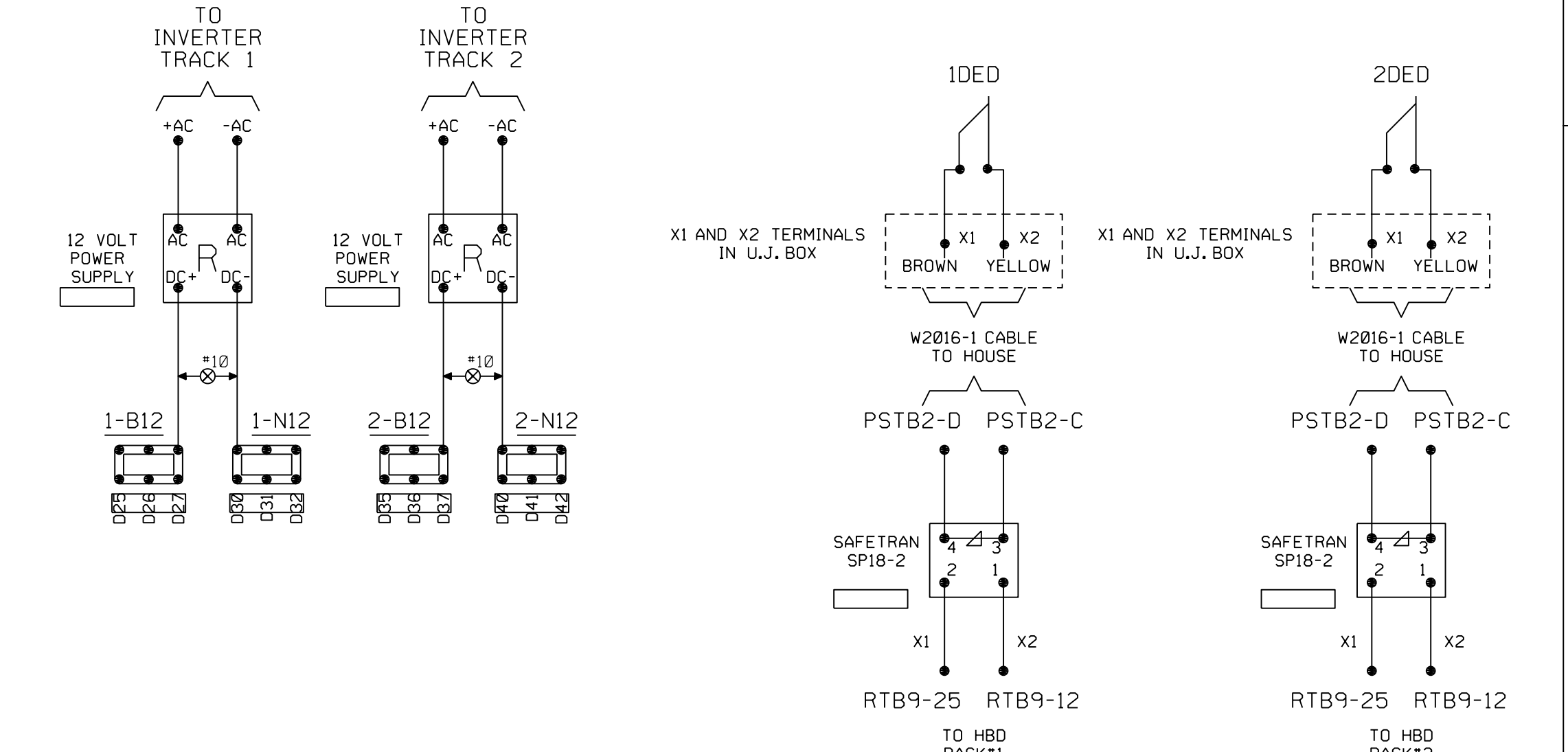
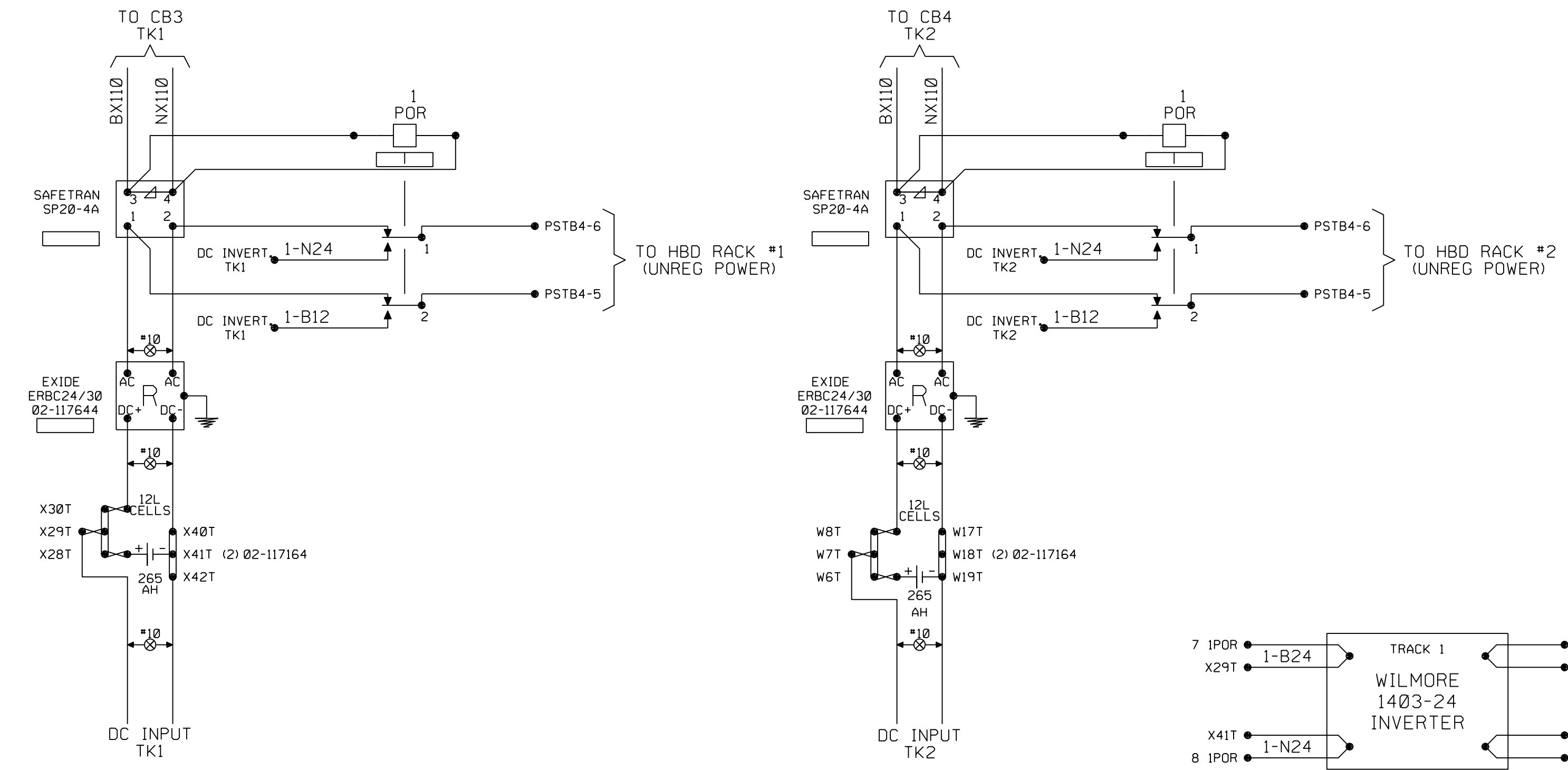
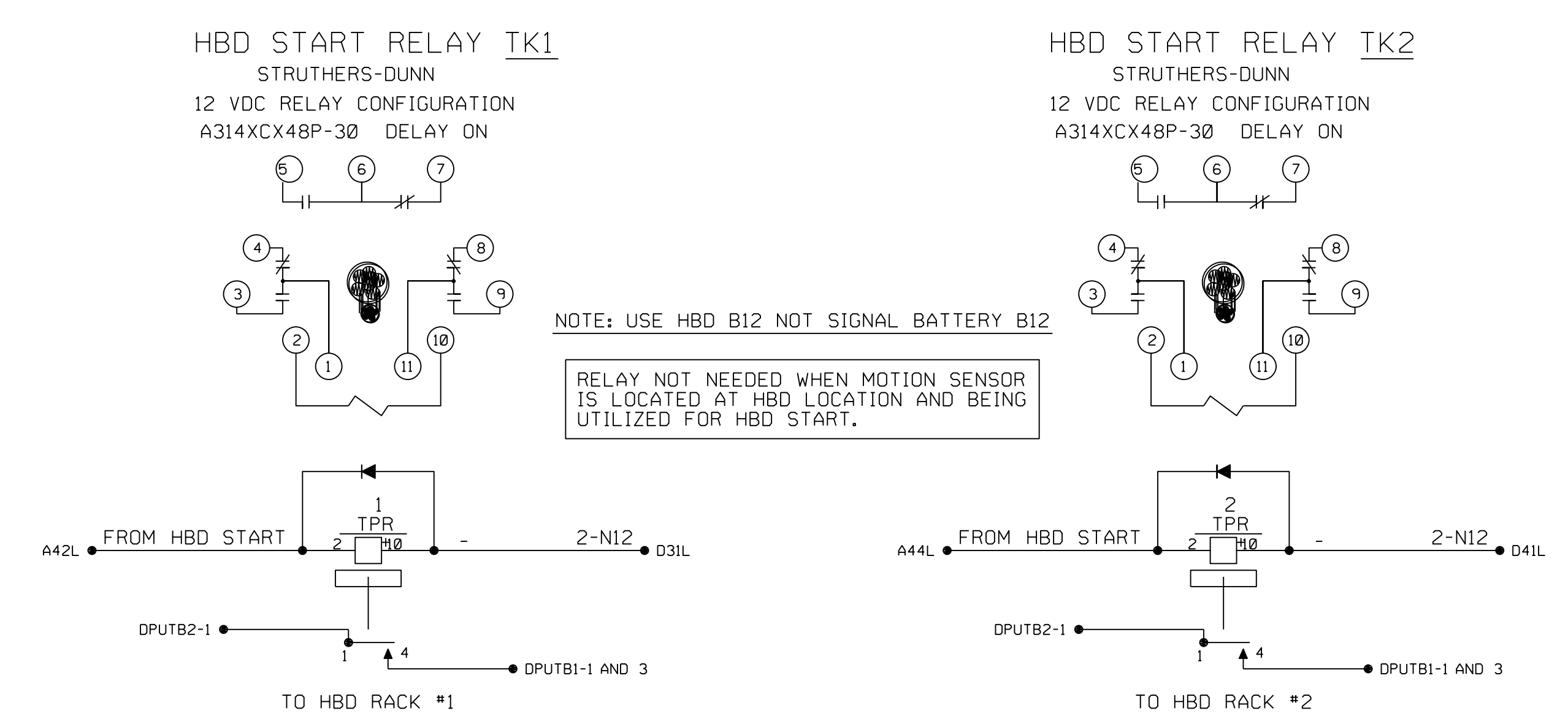
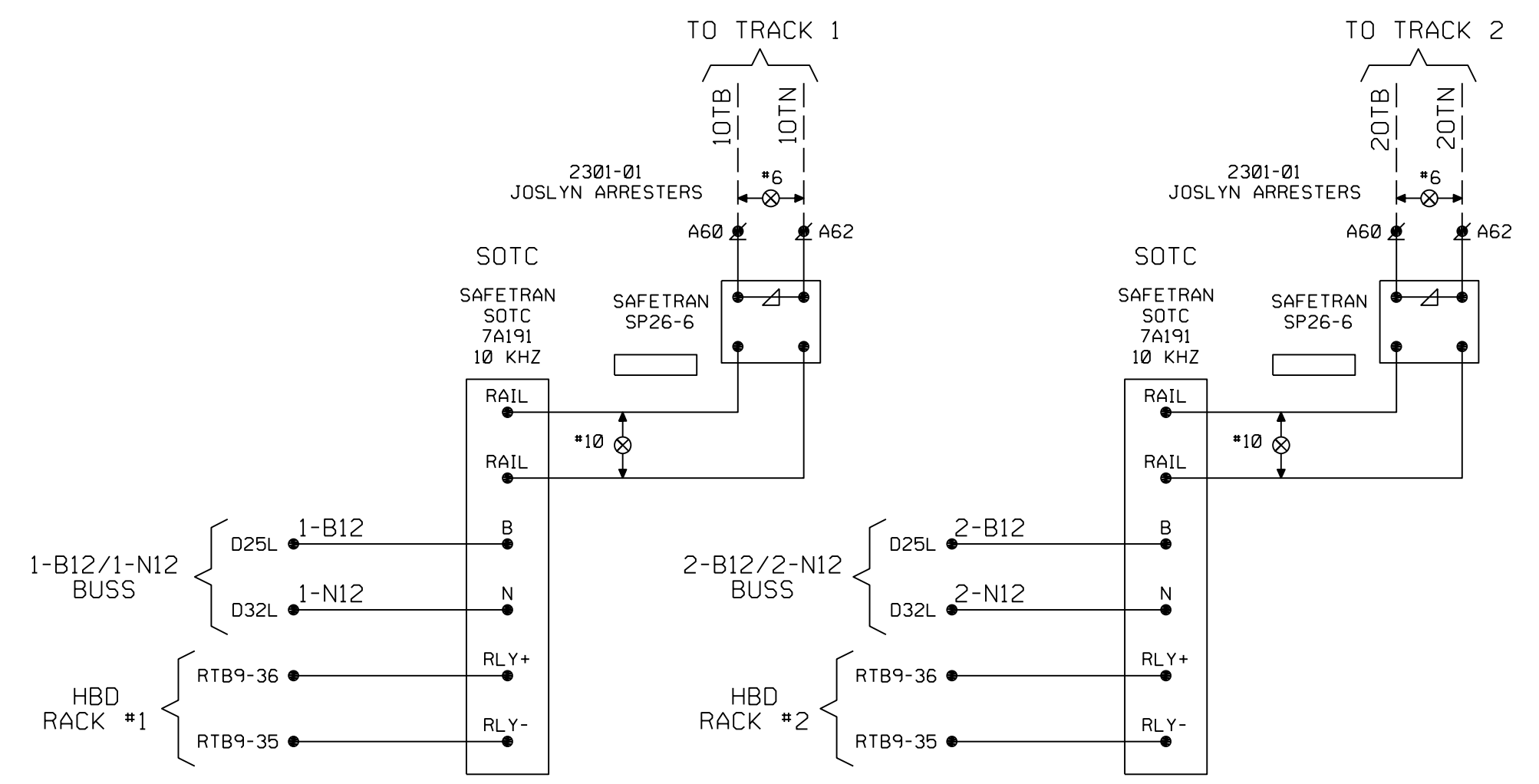
ISSUE DATE: FEBRUARY 18, 1991 3200-4769

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REV. 2 1 01-11-13 2-18-91 SHEET 2


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NOTE: THE JUMPERS MUST BE REMOVED BETWEEN (PSTB4-6 AND PSTB1-B) AND (PSTB4-5 AND PSTB1-A) BEFORE POWER IS APPLIED TO HBD RACKS.

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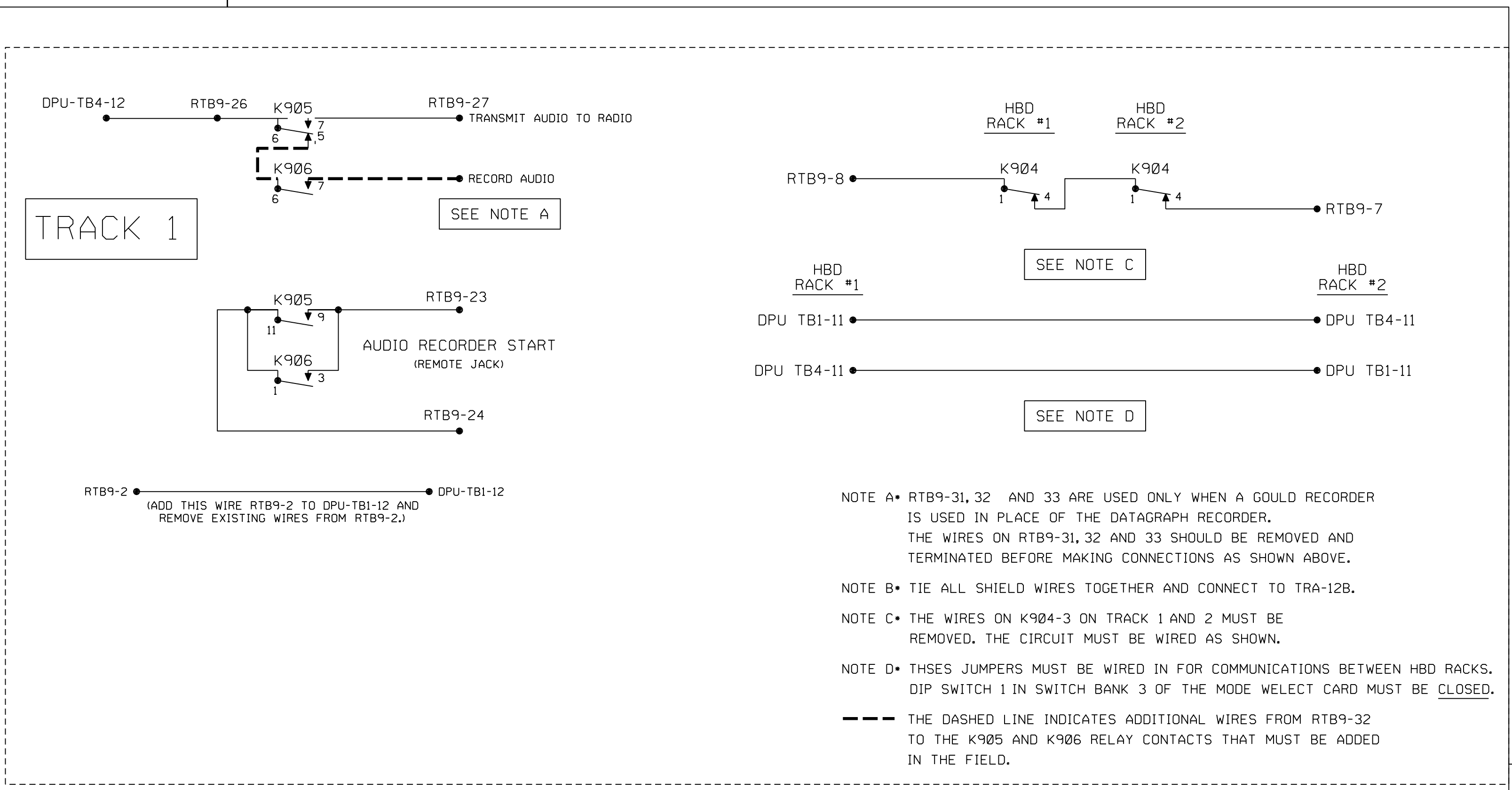
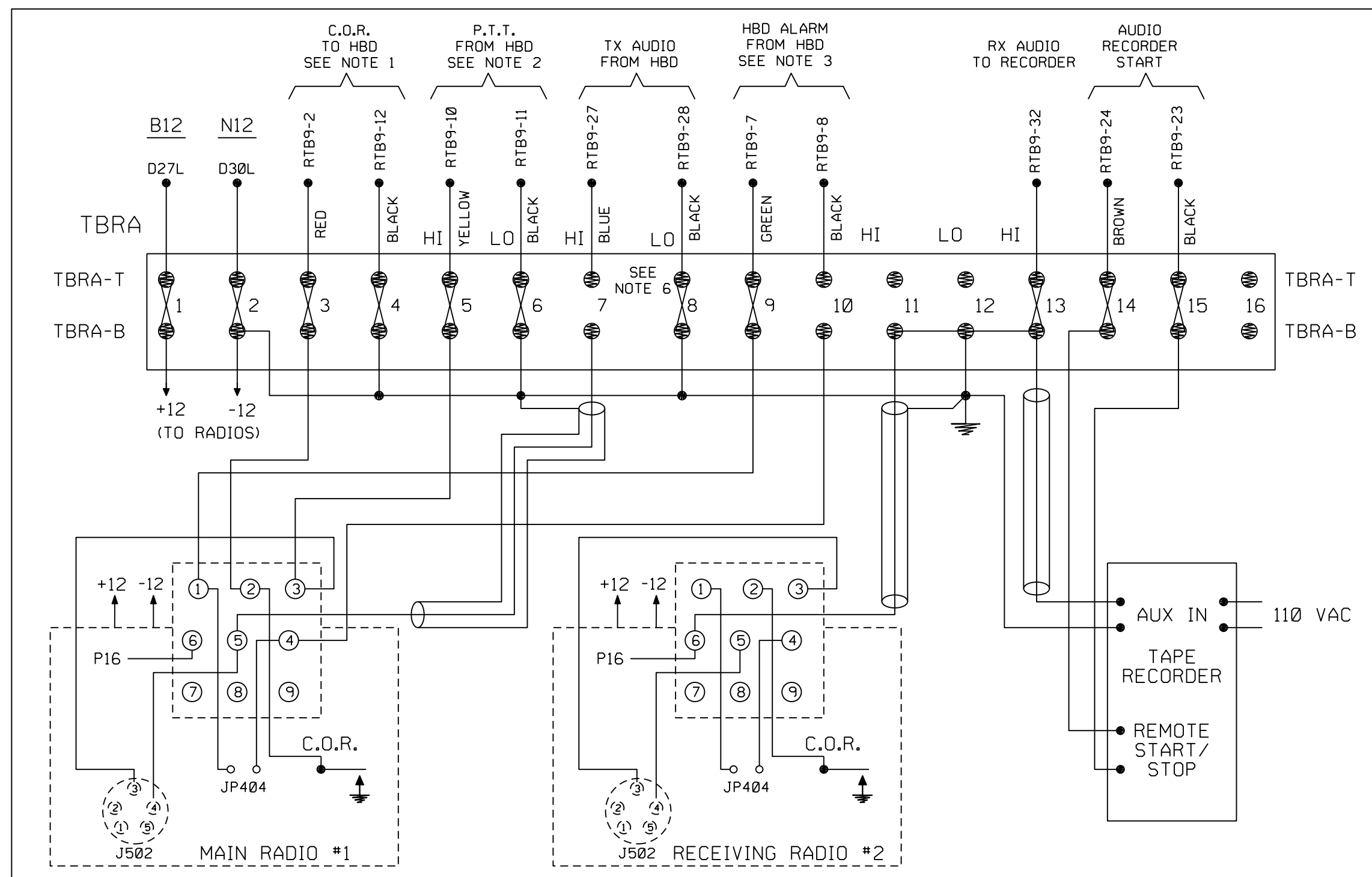


HBD MP 476.9 BURDICK, IN

POWER DISTRIBUTION  
DED AND SOTC  
HBD START RELAY

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REV. 1 2-18-91 SHEET 4



**NOTES**

- C.O.R. IS A CLOSURE FROM RADIO  
-OPEN WHEN NO RADIO TRAFFIC  
-CLOSED WHEN RADIO BUSY
- P.T.T. IS A CLOSURE FROM HBD  
-CLOSED WHEN TRANSMITTING
- ALARM IS A CLOSURE FROM HBD  
-OPEN WHEN NO ALARM  
THIS OPEN WILL ALLOW A P.L. TONE OF 100Hz TO BE TRANSMITTED WITH VOICE MESSAGE  
-CLOSED WHEN ALARMED BY HBD  
THIS CLOSURE SHIFTS THE 100 Hz TONE TO A 150 Hz P.L. TONE.
- CONNECT MAIN RADIO TO OUTSIDE ANTENNA
- USE PORTABLE WHIP ANTENNA ON RECEIVING RADIO
- INSTALL RESISTOR PAD ON TBR TERMINAL AS SHOWN:  
ALL RESISTORS 1/4 WATT

- TBR IS A.A.R. STANDARD TERMINAL STRIP OR EQUIVALENT
- A MICROPHONE WILL BE ON RADIO #1

**RADIO MODIFICATIONS**  
SEE COMMUNICATIONS SERVICE BULLETIN  
"PROCEDURE FOR WIRING HBD RADIOS"  
ISSUED DECEMBER 14, 1988

**BLACK BOX COS-4P**

MODE SWITCH

- TEXT MODE

SWITCH SETTING:

- SWITCH 1A • 5 & 8 CLOSED: ALL OTHERS OPEN
- SWITCH 1B • ALL CLOSED
- SWITCH 2, 3, 4 & 5 (A) • 5 & 8 CLOSED: ALL OTHERS OPEN
- SWITCH 2, 3, 4 & 5 (B) • ALL CLOSED
- SWITCH 6 • 2, 3 & 5 CLOSED: ALL OTHERS OPEN
- SWITCH 7 • 4, 7 & 8 CLOSED: ALL OTHERS OPEN
- SWITCH 8 • 3 & 5 OPEN: ALL OTHERS CLOSED
- SWITCH 9 • 1 CLOSED: ALL OTHERS OPEN
- SWITCH 10 • 2 CLOSED: ALL OTHERS OPEN

STRAP POSITIONS:  
STRAP W1 (OUT)

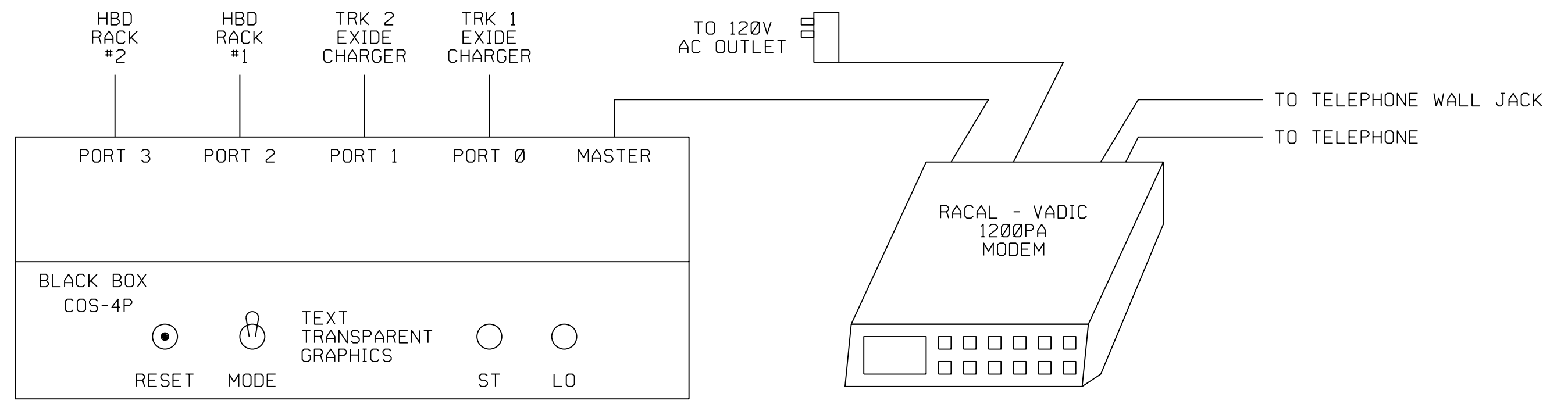
STRAP W4

- STRAP A (IN)
- STRAP B (IN)
- STRAP C (OUT)

**RACAL-VADIC 1200PA MODEM**

- OPTION 1 • 2
- OPTION 2 • 2
- OPTION 3 • 2
- OPTION 4 • 3
- OPTION 5 - 16 • 1
- OPTION 17 • 2
- OPTION 18 - 21 • 1
- OPTION 22 • 2

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**CONRAIL**

HBD MP 476.9

BURDICK, IN

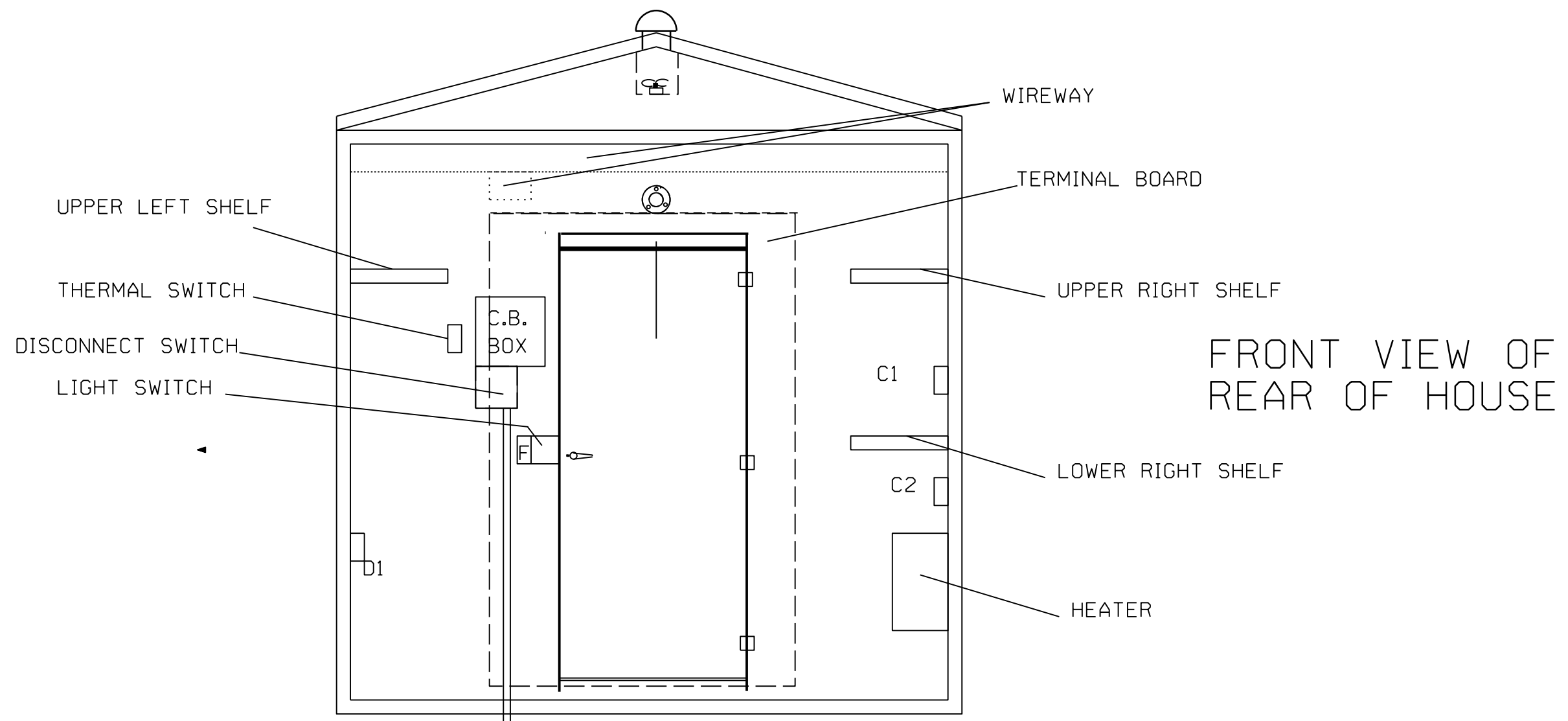
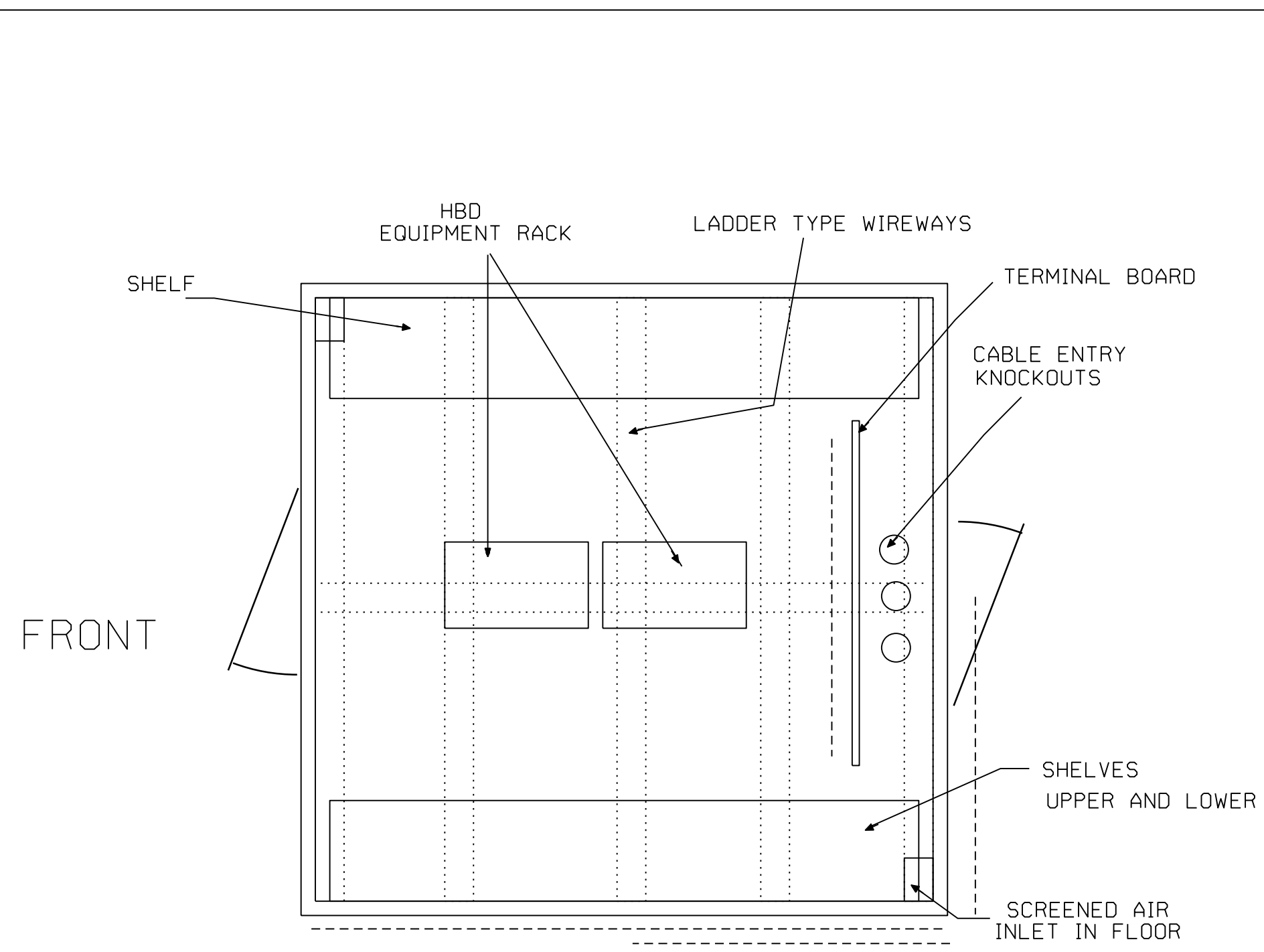
COMMUNICATION TERMINAL BOARD  
RADIO, TAPE RECORDER  
AND MODEM CIRCUITS

ISSUE DATE: FEBRUARY 18, 1991

REV. 1    2-18-91    SHEET 5

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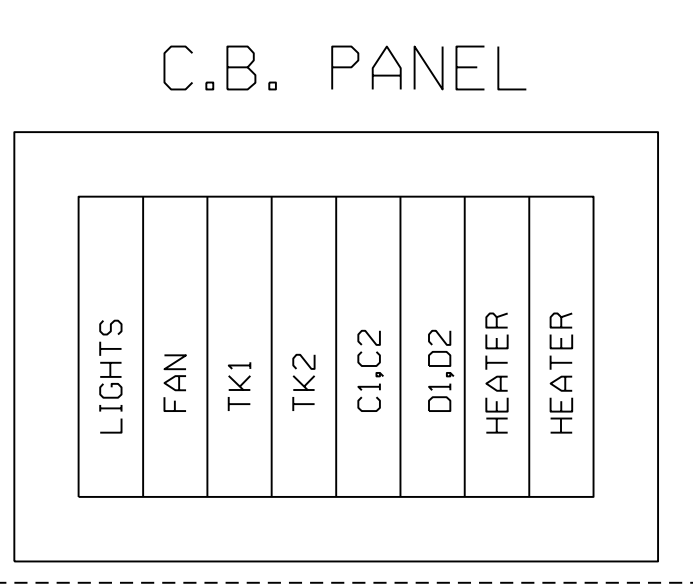
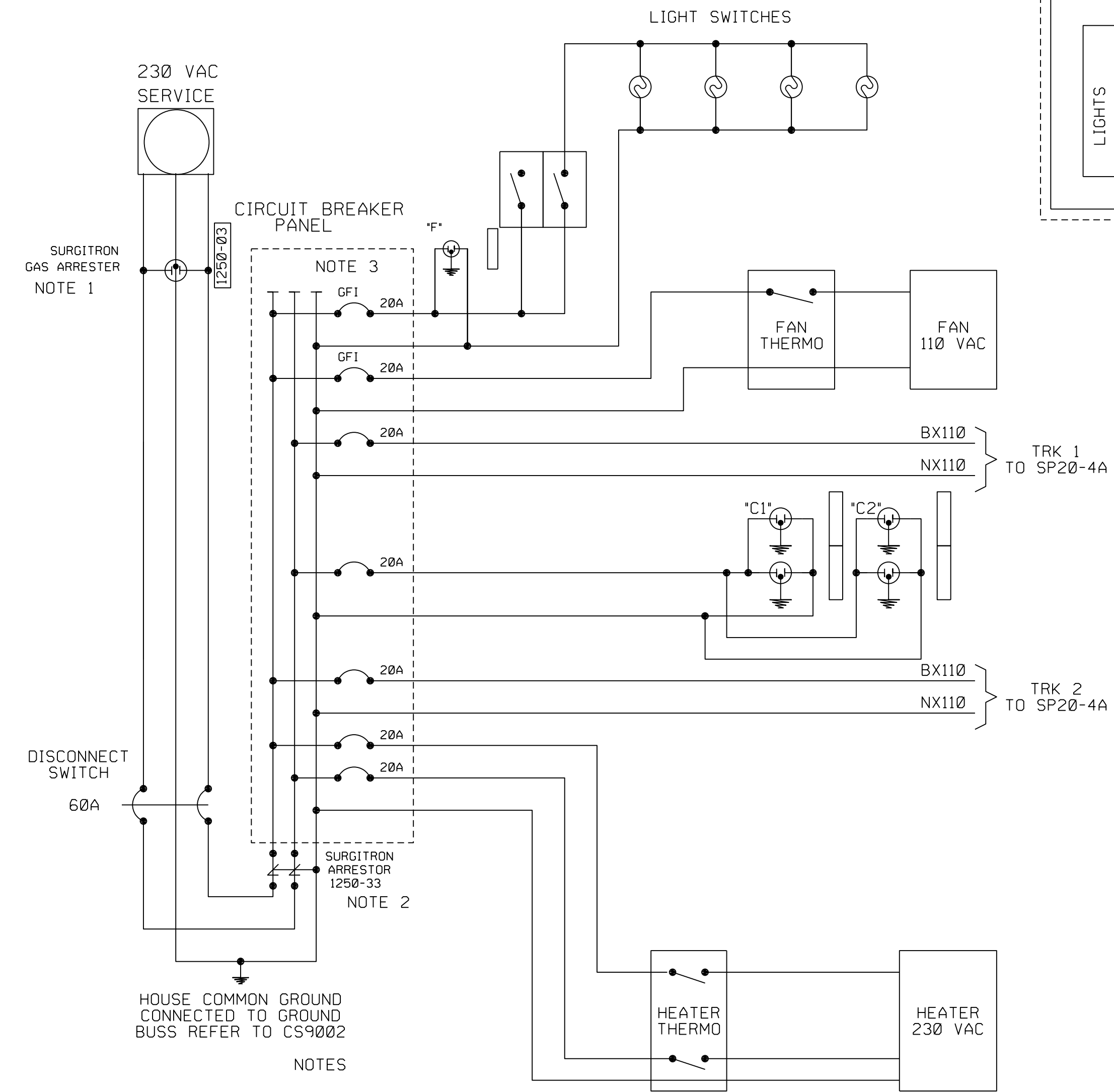


NOTE: D2 MOUNTED ON BACK WALL  
NOT ON TERMINAL BOARD


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### HOUSE WIRING



- NOTES
- ORDERING REFERENCE FOR:  
 SURGITRON ARRESTER 1250-02 IS 02-675005 FOR 120V A.C.  
 SURGITRON ARRESTER 1250-03 IS 02-675021 FOR 240V A.C.  
 SURGITRON ARRESTER 1250-05 IS 02-675047 FOR 440V A.C.  
 FIELD TO USE ONE OF THE ABOVE GAS ARRESTERS  
 AT CONRAIL'S TAP FROM UTILITY SERVICE
  - ORDERING REFERENCE FOR:  
 JOSLYN ARRESTER 1250-32 IS 02-675062  
 SURGITRON ARRESTER 1250-33 IS 02-675104  
 FIELD TO USE ONE OF THE ABOVE ARRESTERS  
 ON THE 110 /220 VAC POWER SUPPLY INTO  
 THE HBD INSTRUMENT HOUSE
  - ONLY BREAKER 1 SHALL BE A GROUND FAULT  
 INTERRUPT TYPE



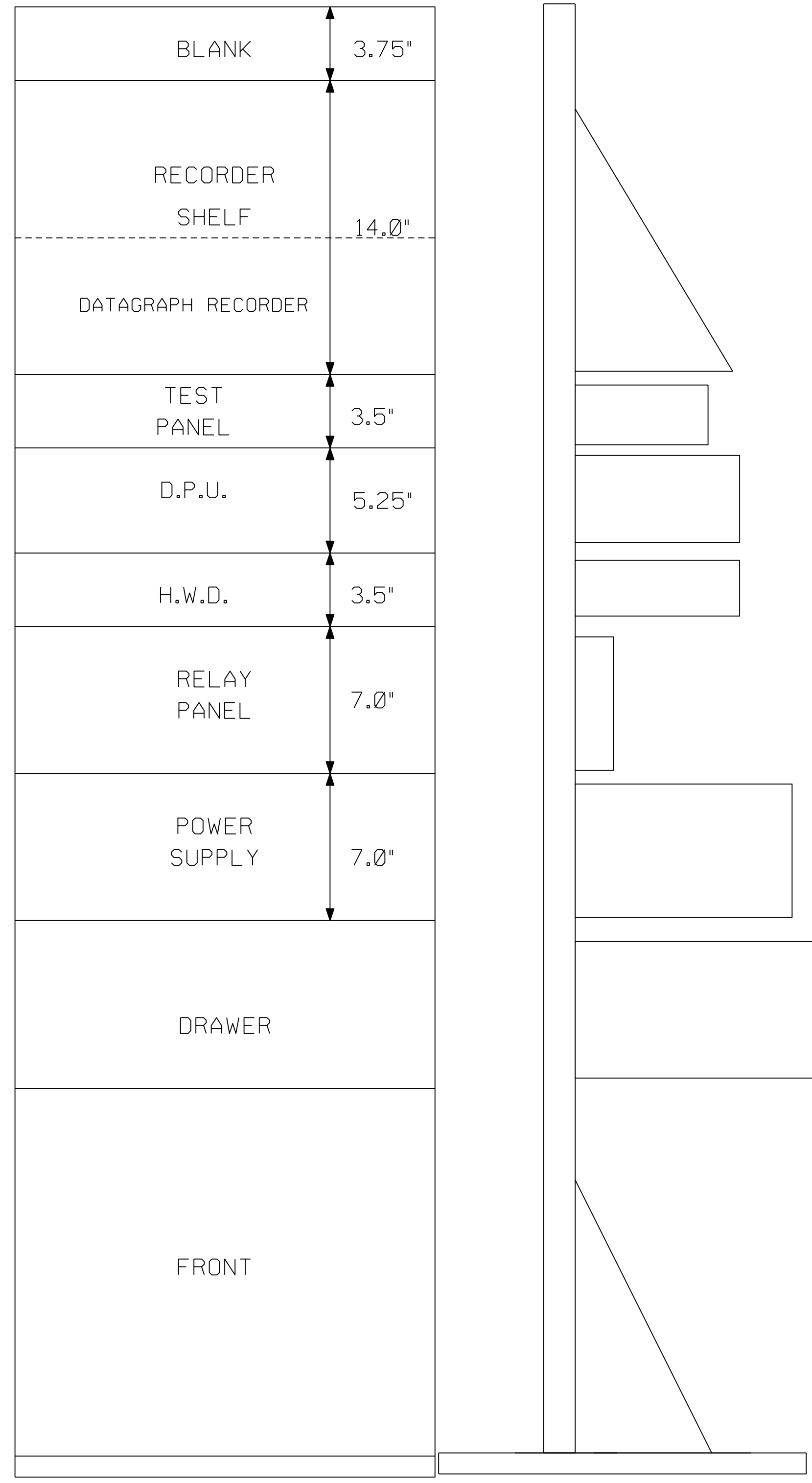
**CONRAIL**

HBD MP 476.9 BURDICK, IN

HBD HOUSE AND COMMERCIAL  
POWER LAYOUT

ISSUE DATE: FEBRUARY 18, 1991	3200-4769
REV. 1	SHEET 6
2-18-91	

HBD902TA.TYP



NOTES

1. WHEN USING DATAGRAPH IN PLACE OF BRUSH 220 RECORDER, DISREGARD NOTES 2, 3, AND 4.
2. INSTALL CHASSIS SOCKET FOR RECORDER PLUG IN BACK CORNER OF RECORDER SHELF.
3. IF TEST PANEL IS NOT INSTALLED IN THIS RACK, LEAVE 3.5" OPENING.
4. BRUSH 220 RECORDER CONNECTIONS:  
 TB302  
 2. CH.1 (RAIL 1)  
 3. JUMPER TO 6  
 5. CH.2 (RAIL 2)  
 6. JUMPER TO 7  
 7. GND  
 8. BEARING I.D. (LEFT EVENT)  
 9. EVENT PEN COMMON  
 10. ALARM (RIGHT EVENT)  
 11. RECORDER START  
 12. RECORDER START

ANALOG SIGNAL CONDITIONING CARD OUTPUT IS 100mv/mm WHEN R79 AND R104 ARE 15K (1%) OR 400mv/mm WHEN R79 AND R104 ARE JUMPERED OUT

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**CONRAIL**

HBD MP 476.9 BURDICK, IN

HBD EQUIPMENT RACK

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ISSUE DATE: FEBRUARY 18, 1991 3200-4769

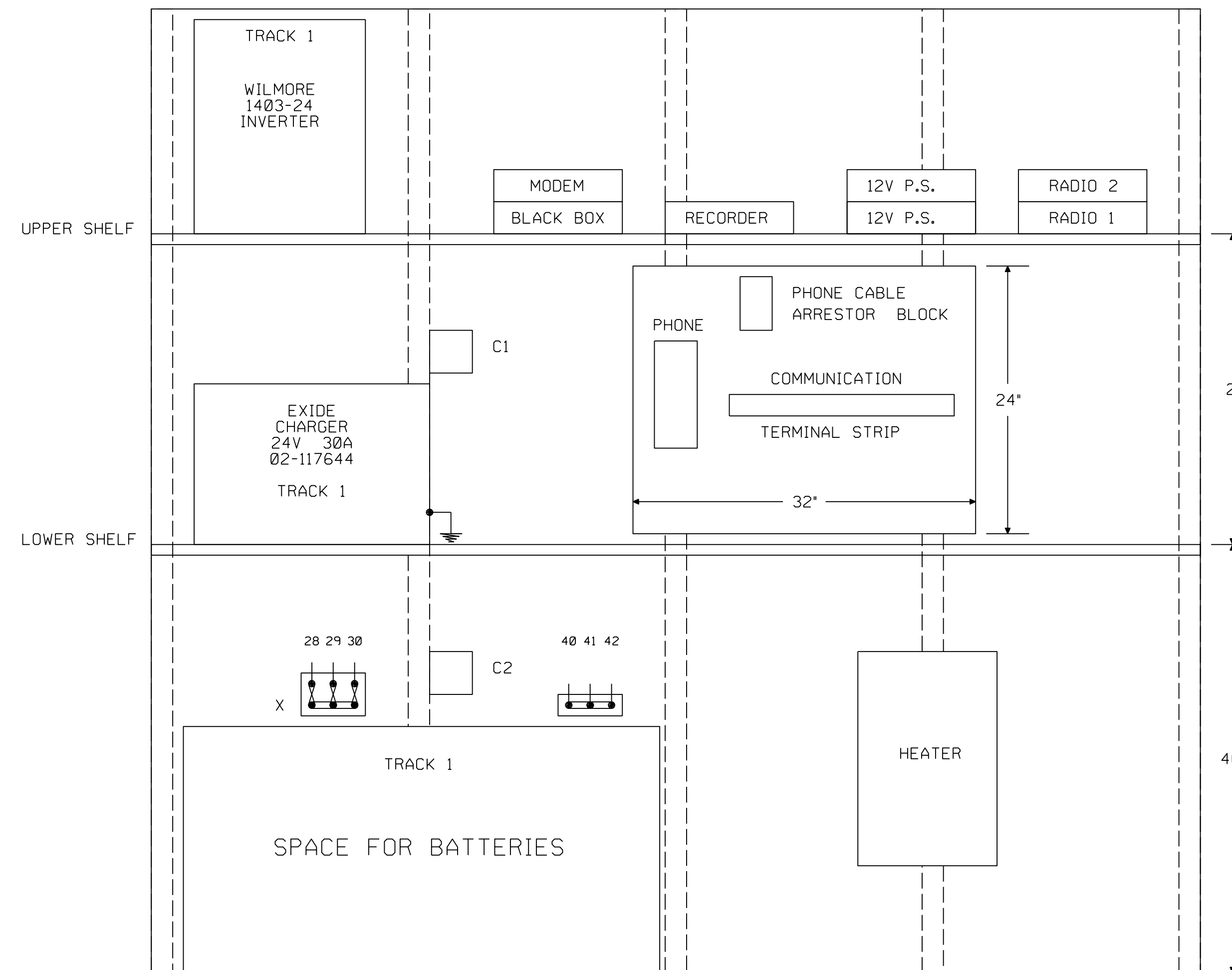
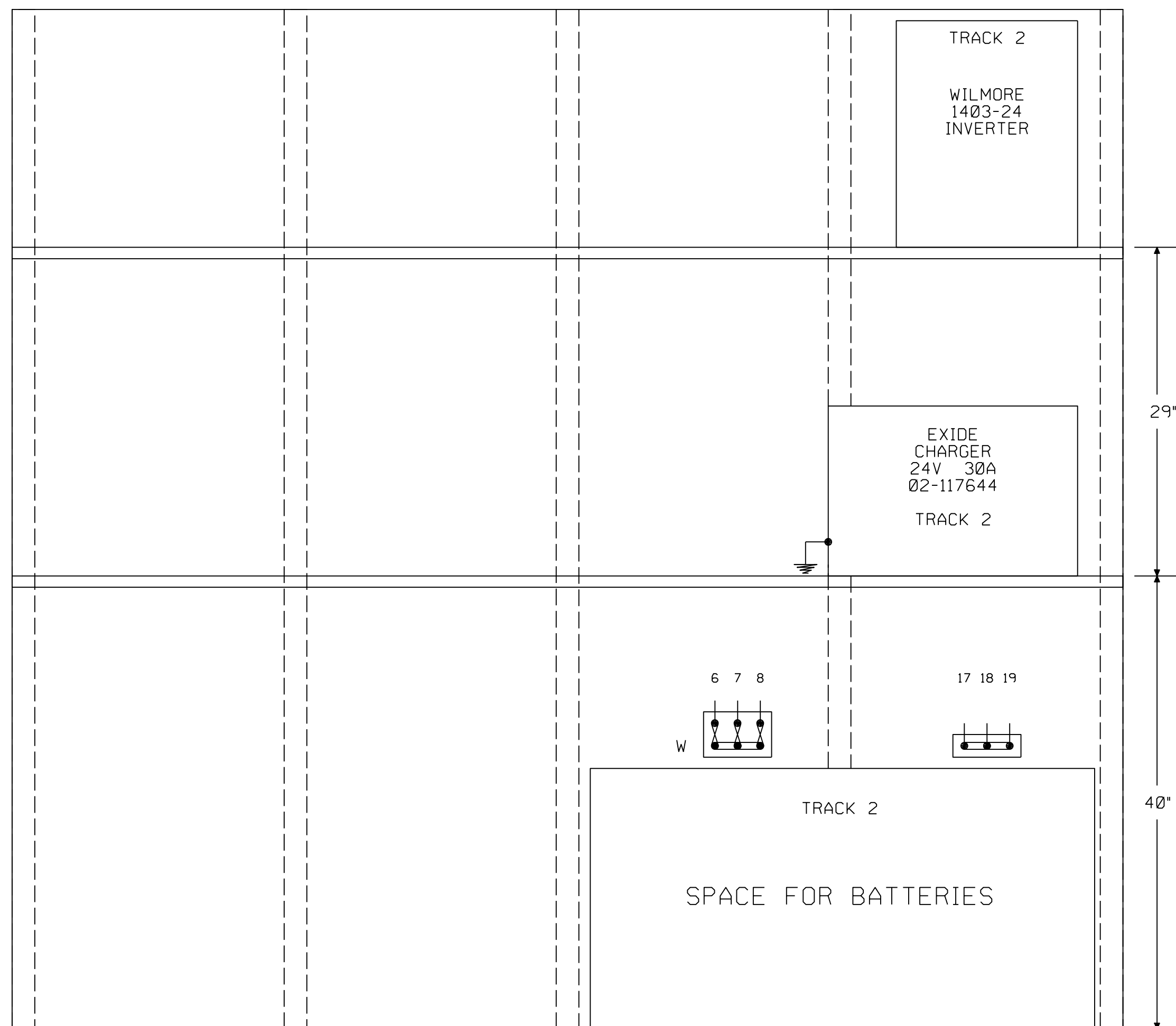
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REV. 1 2-18-91 SHEET 7

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LEFT WALL

RIGHT WALL



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HBD MP 476.9

BURDICK, IN

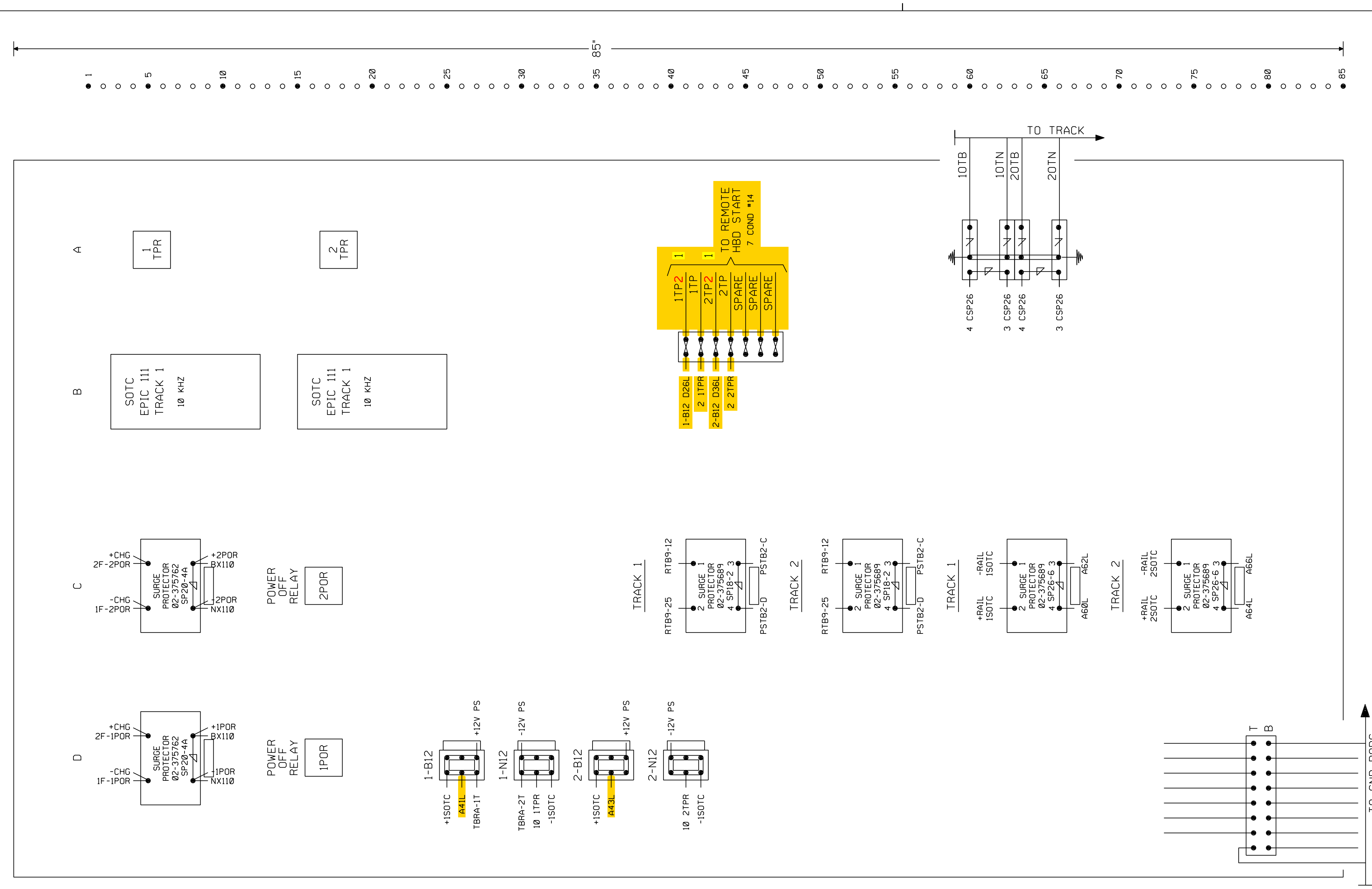
LEFT AND RIGHT WALL SHELVES  
AND COMMUNICATIONS TERMINAL BOARD

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1	2-18-91 SHEET 8

HBD902TA.TYP

REV	DATE	CKD BY
1		RDW

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R-3468 RR/XRL 10-08-13  
 GREEN = IN  
 ORANGE = OUT  
 CHECKED BY RWM 10-15-13

R-3468 WJK/XRL 01-11-13  
 RED = IN  
 YELLOW = OUT  
 CHECKED BY RWM 03-06-13

- NOTES:
- 02-037057 - 3 POST PORCELAIN BASE
  - 02-050753 - TERMINAL BLOCK FOR EQUALIZER
  - 02-048757 - TERMINAL STRIP
  - 02-150009 - BUSS LINK
  - 02-286662 - TEST LINK ASSEMBLY
  - 02-025920 - ARRESTOR, HEAVY DUTY
  - 02-025565 - ARRESTOR
  - 02-197950 - EQUALIZER
- GROUND CONNECTION TO BE IN ACCORDANCE WITH STANDARD PLAN CS-9001-A

**CONRAIL**

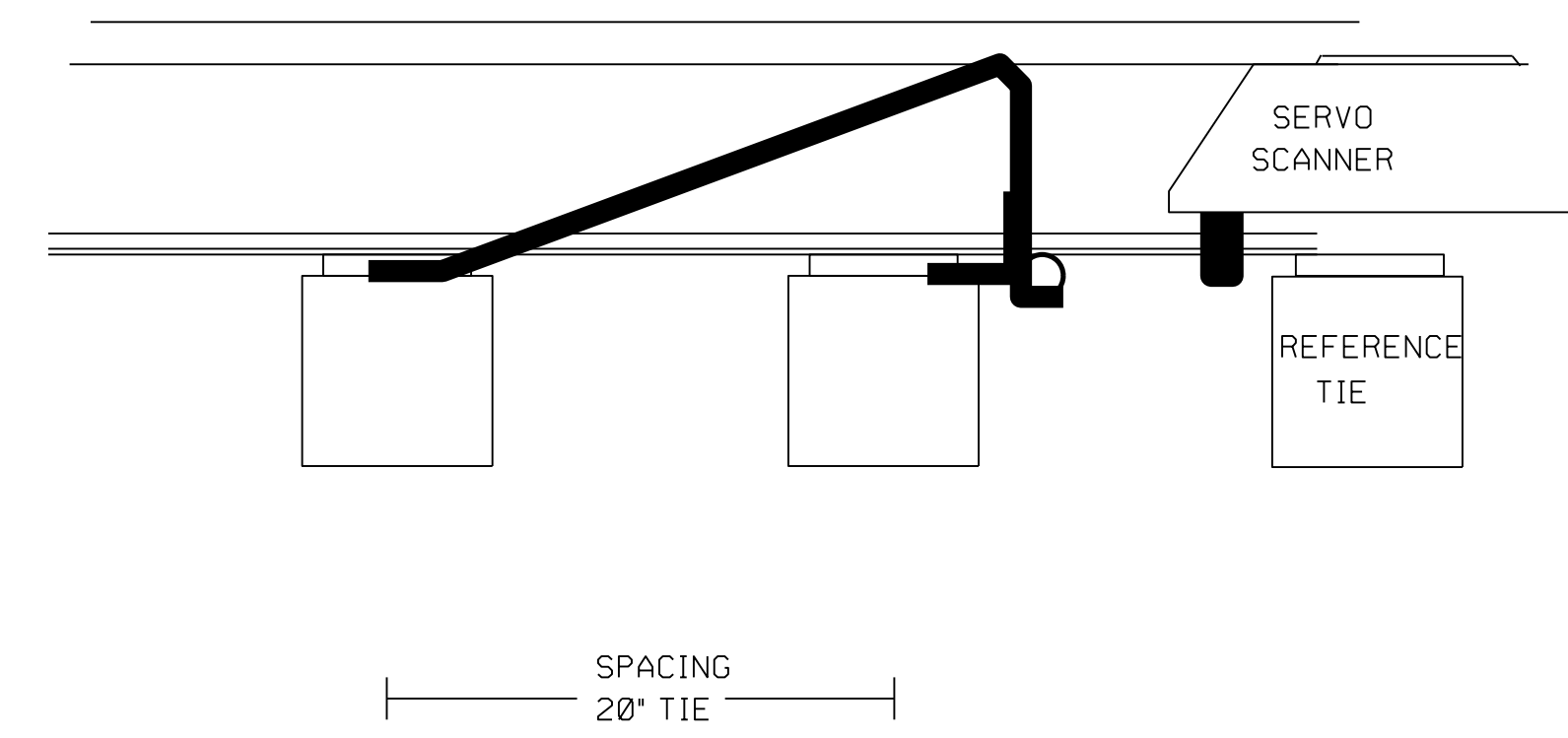
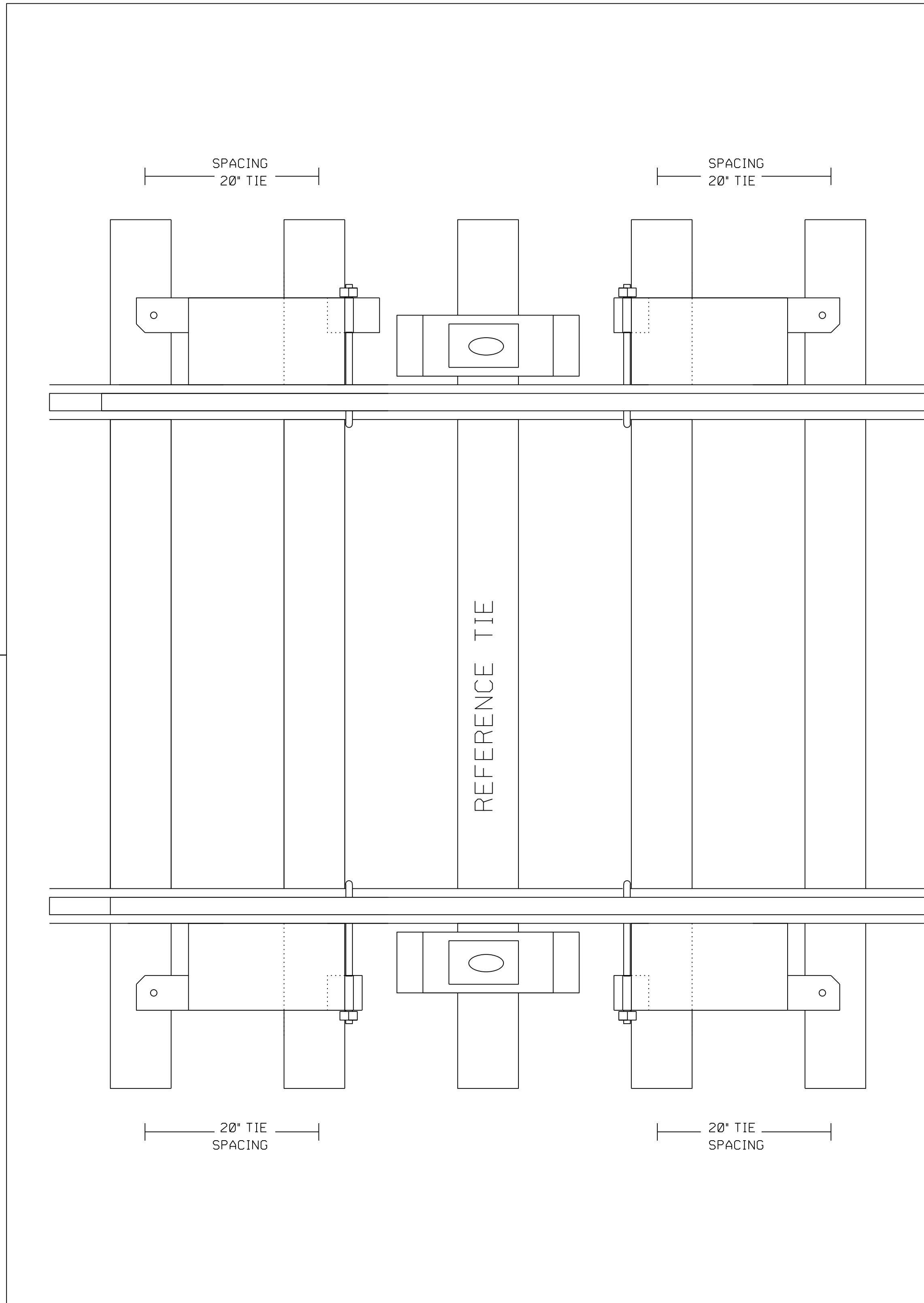
HBD MP 476.9 BURDICK, IN

TERMINAL BOARD LAYOUT

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REV. 3 2 1	10-08-13 01-11-13 SHEET 9

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**CONRAIL**

HBD MP 476.9 BURDICK, IN

HBD PROTECTION RAMP  
METAL

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