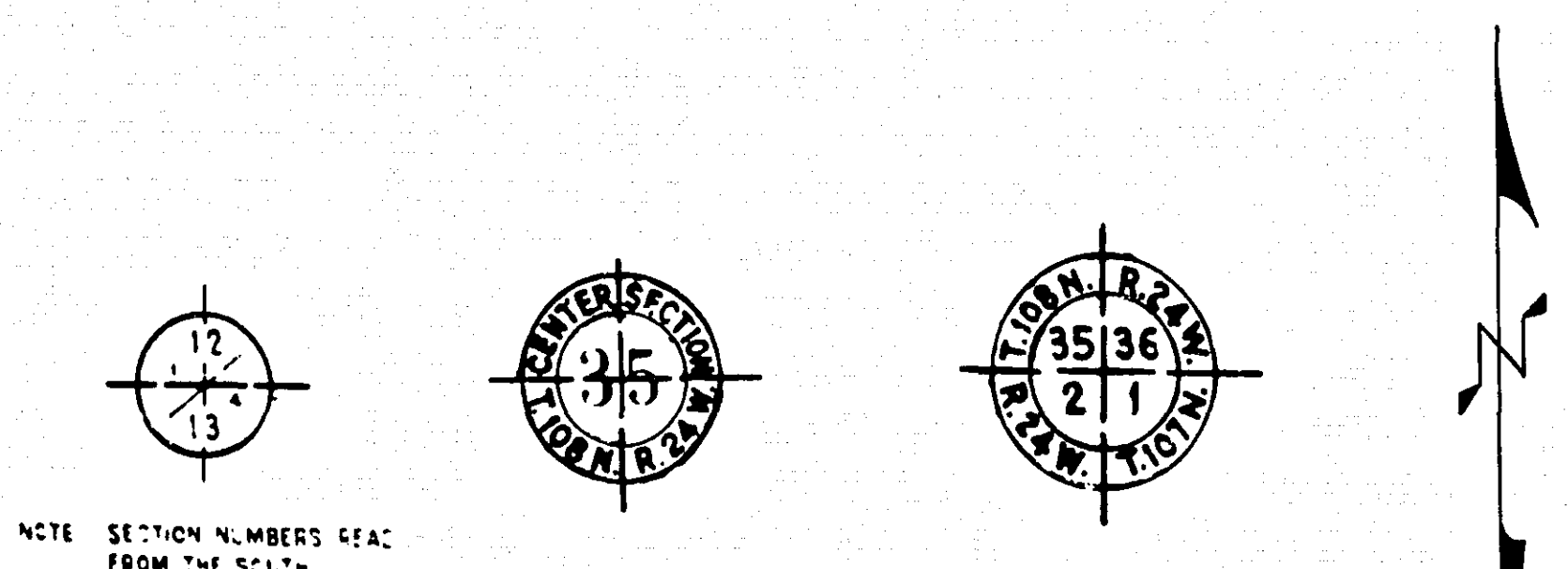


PLANS SYMBOLS

STATE LINE	-----	SPRINGS	-----
COUNTY LINE	-----	MARSH	-----
TOWNSHIP OR RANGE LINE	-----	TIMBER	-----
SECTION LINE	-----	ORCHARD	-----
QUARTER LINE	-----	BRUSH	-----
SIXTEENTH LINE	-----	NURSERY	-----
RIGHT OF WAY LINE	-----	CATCH BASIN	-----
PRESENT RIGHT OF WAY LINE	-----	FIRE HYDRANT	-----
CONTROL OF ACCESS LINE	-----	CATTLE GUARD	-----
PROPERTY LINE (Except Land Lines)	-----	OVERPASS (Highway Over)	-----
VACATED PLATTED PROPERTY	-----	UNDERPASS (Highway Under)	-----
CORPORATE OR CITY LIMITS	-----	BRIDGE	-----
TRUNK HIGHWAY CENTER LINE	-----	BUILDING (One Story Frame)	-----
RETAINING WALL	-----	F-FRAME C-CONCRETE	-----
RAILROAD	-----	S-STONE T-TILE	-----
RAILROAD RIGHT OF WAY LINE	-----	B-BRICK ST-STUCCO	-----
RIVER OR CREEK	-----	IRON PIPE OR ROD	-----
DRY RUN	-----	MONUMENT (STONE, CONCRETE, OR METAL)	-----
DRAINAGE DITCH	-----	WOODEN HUB	-----
DRAIN TILE	-----	GRAVEL PIT	-----
CULVERT	-----	SAND PIT	-----
DROP INLET	-----	BORROW PIT	-----
GUARD RAIL	-----	ROCK QUARRY	-----
BARBED WIRE FENCE	-----		
WOVEN WIRE FENCE	-----		
CHAIN LINK FENCE	-----		
RAILROAD SHOW FENCE	-----		
STONE WALL OR FENCE	-----		
HEDGE	-----		
RAILROAD CROSSING SIGN	-----		
RAILROAD CROSSING BELL	-----		
ELECTRIC WARNING SIGN	-----		
CROSSING GATE	-----		
MEANDER CORNER	-----		

UTILITIES SYMBOLS

POWER POLE LINE	-----	CONDUIT	-----
TELEPHONE OR TELEGRAPH POLE LINE	-----	TELEPHONE CABLE IN CONDUIT	-----
JOINT TELEPHONE AND POWER ON POWER POLES	-----	ELECTRIC CABLE IN CONDUIT	-----
ON TELEPHONE POLES	-----	TELEPHONE MANHOLE	-----
ANCHOR	-----	ELECTRIC MANHOLE	-----
STEEL TOWER	-----	BURIED TELEPHONE CABLE	-----
STREET LIGHT	-----	BURIED ELECTRIC CABLE	-----
PEDESTAL TELEPHONE CABLE TERMINAL	-----	AERIAL TELEPHONE CABLE	-----
GAS MAIN	-----	SEWER, (SANITARY OR STORM)	-----
WATER MAIN	-----	SEWER MANHOLE	-----



PIT DATA

PIT NO. _____	Located in _____
PIT NO. _____	Located in _____

THE "MINNESOTA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JANUARY 1, 1972 AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED JANUARY 1, 1974 SHALL GOVERN.

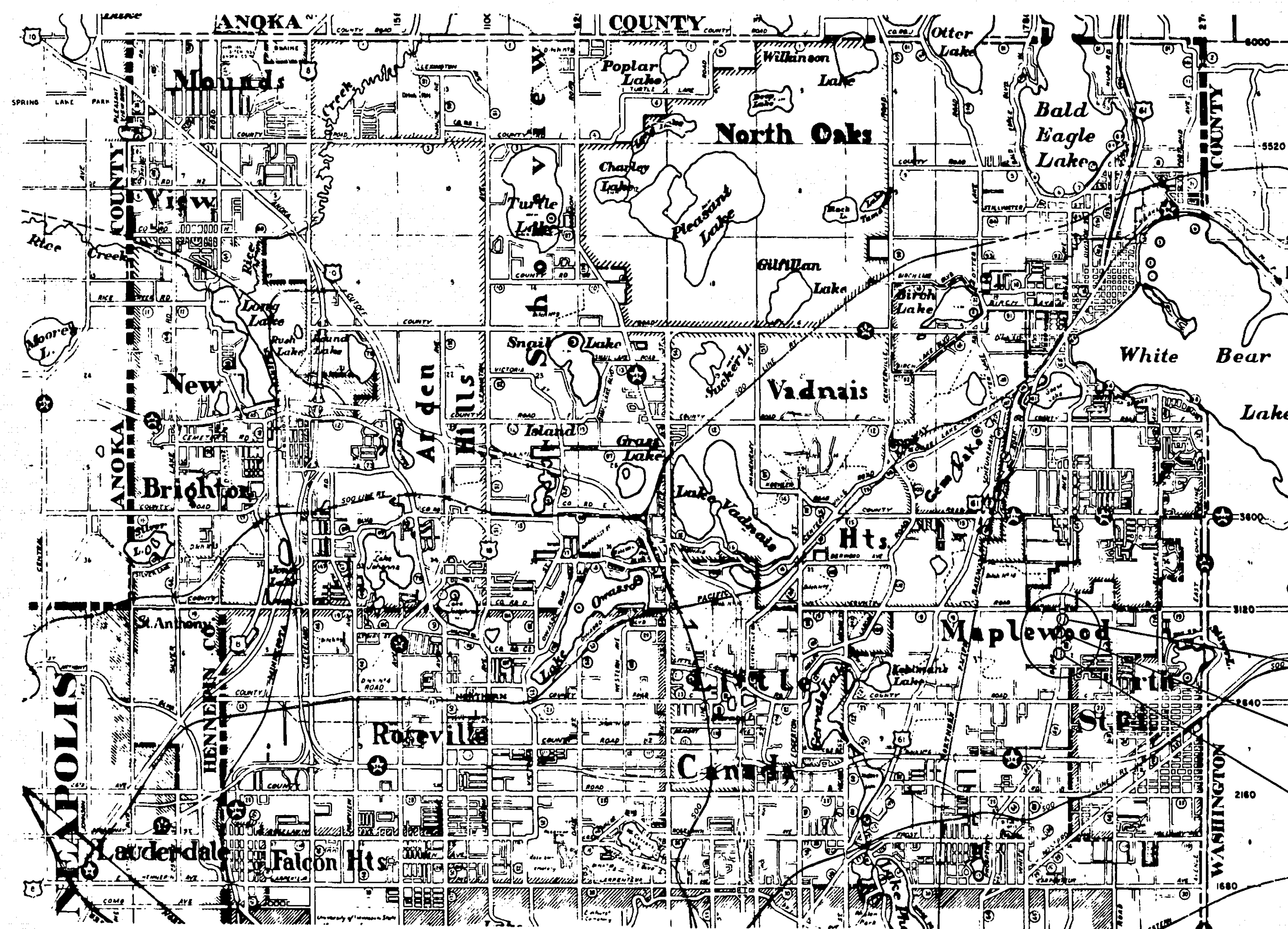
OFFICE OF COUNTY ENGINEER RAMSEY COUNTY

PLAN OF TRAFFIC CONTROL SYSTEM FOR THE INTERSECTIONS OF

WHITE BEAR AVE. & BEAM AVE. - SYSTEM A
WHITE BEAR AVE. & LYDIA AVE. - SYSTEM B
WHITE BEAR AVE. & TOWER AVE. - SYSTEM C

CO. PROJ. NO. 1974-65-S2

PHASE 2



CITY OF ST. PAUL

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DETAILS
3	INTERSECTION LAYOUT - SYSTEM A
4	FIELD WIRING DIAGRAM - SYSTEM A
5	INTERSECTION LAYOUT - SYSTEM B
6	FIELD WIRING DIAGRAM - SYSTEM B
7	INTERSECTION LAYOUT - SYSTEM C
8	FIELD WIRING DIAGRAM - SYSTEM C
9	INTERSECTION LAYOUT - SYSTEM A & B
10	FIELD WIRING DIAGRAM - SYSTEM A & B

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date _____ Reg. No. _____

DESIGNED _____ DIRECTOR OF SAFETY _____ DATE _____

RECOMMENDED FOR APPROVAL _____ COUNTY ENGINEER _____ DATE _____

APPROVED _____ CHAIRMAN OF THE RAMSEY COUNTY BOARD _____ DATE _____

APPROVED _____ DATE _____

APPROVED _____ DATE _____

MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DISTRICT STATE AID ENGINEER _____ DATE _____

APPROVAL _____ STATE AID ENGINEER _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DATE _____

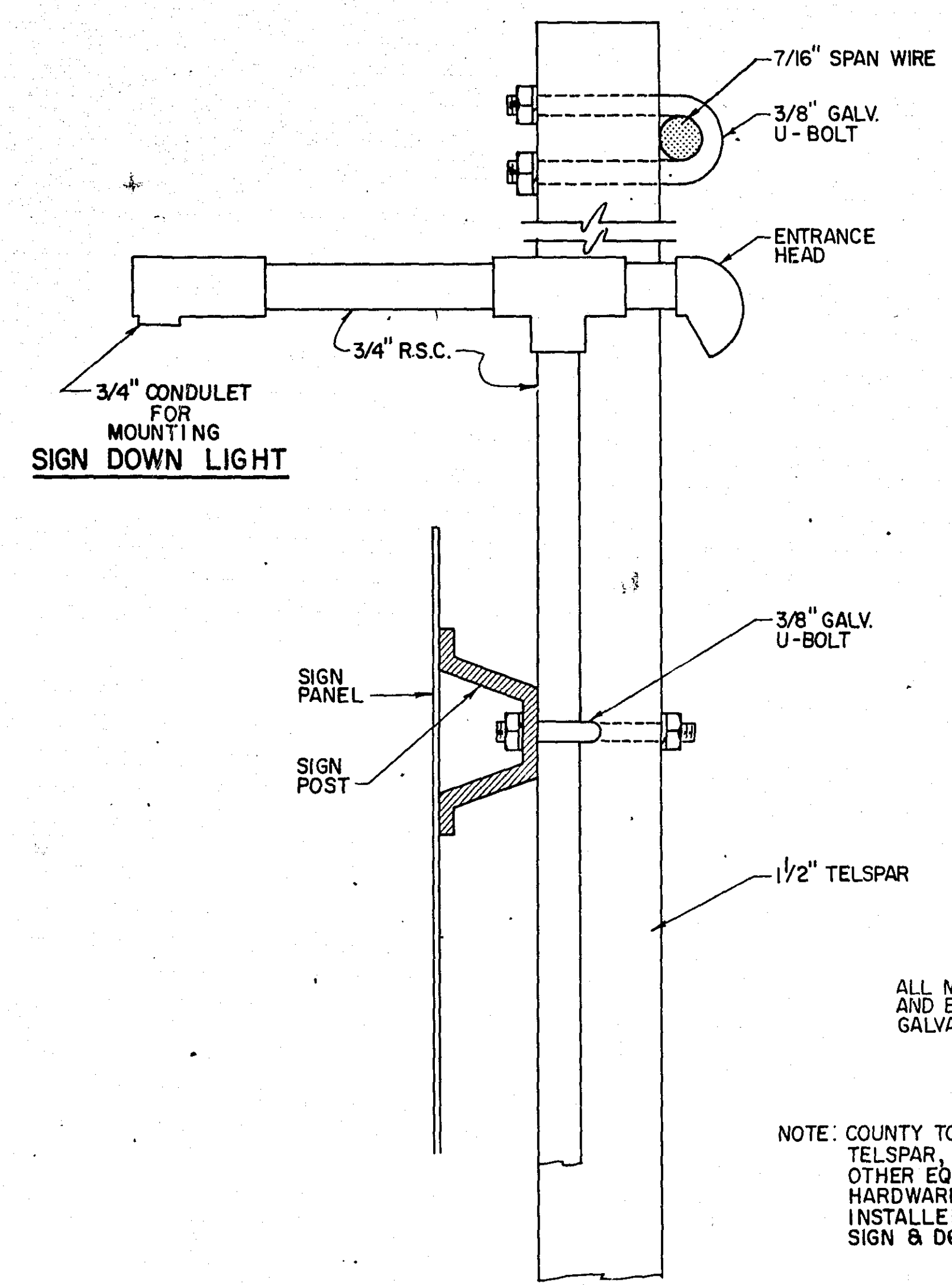
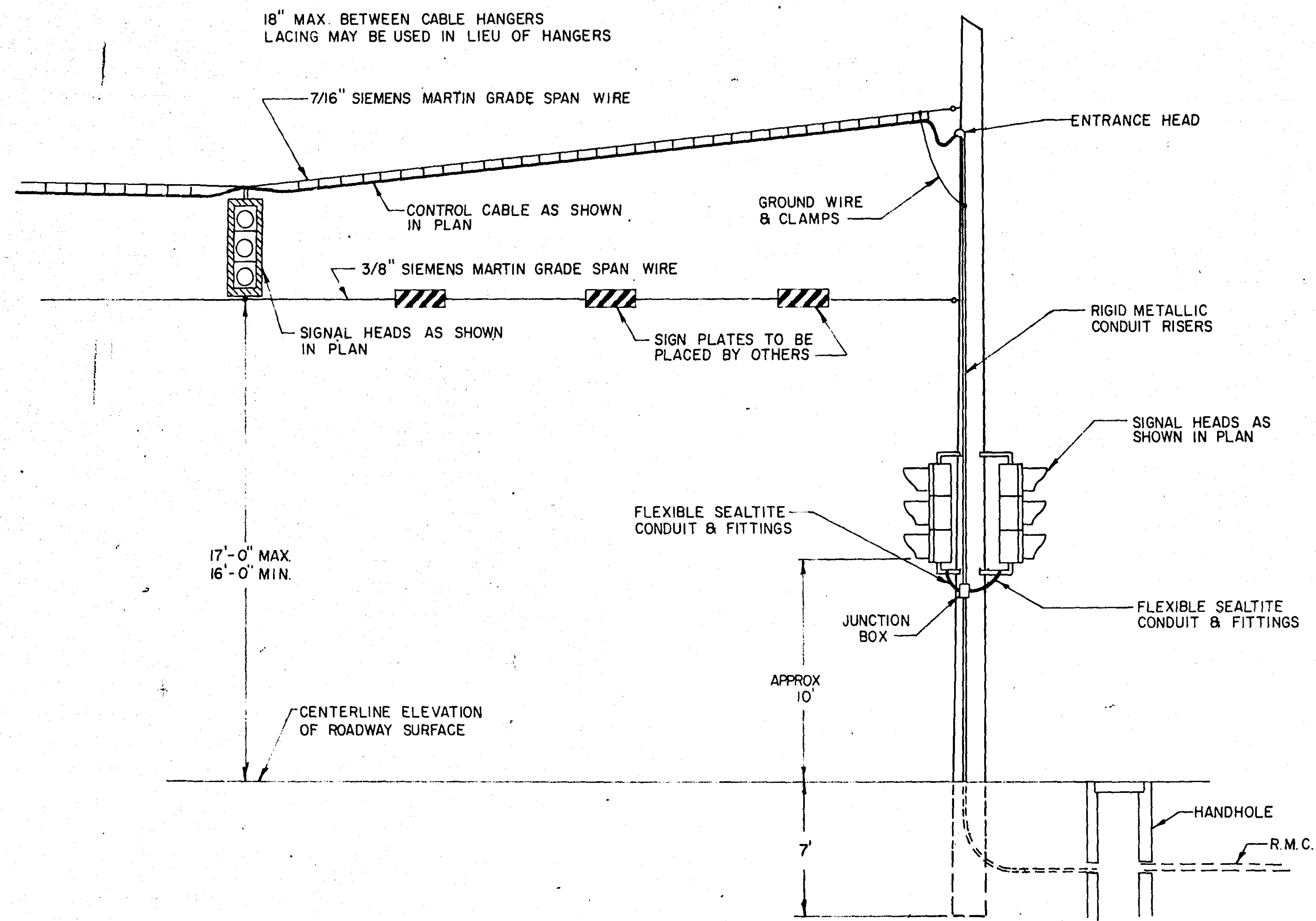
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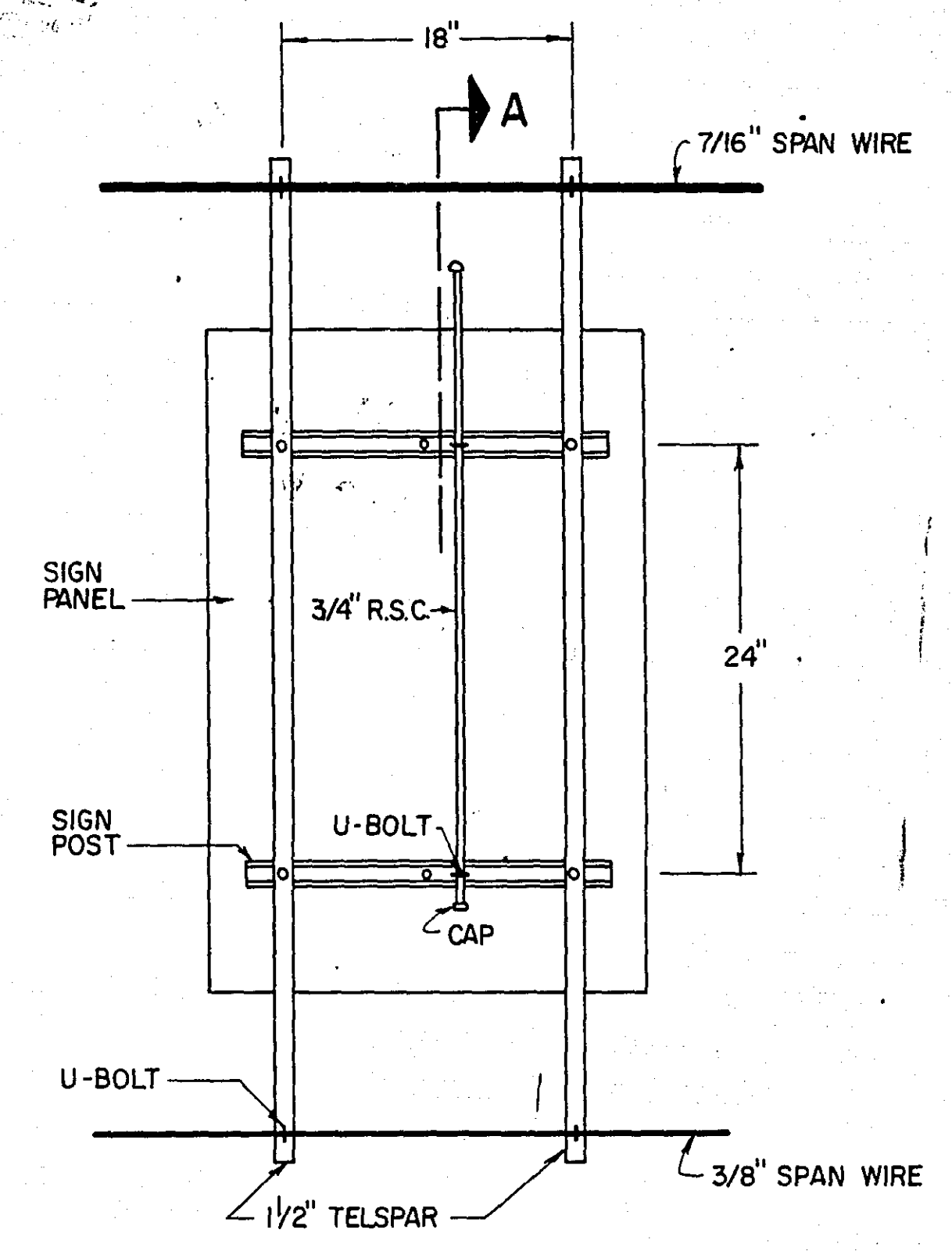
RECOMMENDED FOR APPROVAL _____ DATE _____

APPROVED _____ COUNTY ENGINEER _____ DATE _____

TEMPORARY WOOD POLE TRAFFIC SIGNAL



SECTION - A



TYPICAL MOUNTING FOR SIGN & DOWN LIGHT ON SPAN WIRE

ABBREVIATIONS

EQUIPMENT & INDICATIONS

- RED - RED
- YEL - YELLOW
- GRN - GREEN
- LTA - LEFT TURN ARROW
- THA - THRU ARROW
- RTA - RIGHT TURN ARROW
- TRA - THRU AND RIGHT ARROW
- WLK - WALK
- NEU - NEUTRAL
- DWK - DON'T WALK
- SW - SWITCH
- SWD - SWITCHED
- LUM - LUMINAIRE
- PA1(eg) - PEDESTRIAN INDICATION - "A" PHASE
- PBB2(eg) - PUSH BUTTON - "B" PHASE
- C3(eg) - SIGNAL HEAD - "C" PHASE
- DA4(eg) - DETECTOR - "A" PHASE
- H.H. - HANDHOLE
- GR R - GROUND ROD
- SERV - SERVICE

- DNL - DOWNLIGHT
- P.E.C. - PHOTOELECTRIC CELL
- ST. LHT - STREET LIGHT
- CH. - CHECK
- S.O.P. - SOURCE OF POWER
- E.Q.G. - EQUIPMENT GROUND
- SPR - SPARE CONDUCTOR

COLOR CODING OF CONDUCTORS

- R - RED
- O - ORANGE
- BL - BLUE
- WH - WHITE
- R/BLK - RED WITH BLACK TRACER
- O/BLK - ORANGE WITH BLACK TRACER
- BL/BLK - BLUE WITH BLACK TRACER
- WH/BLK - WHITE WITH BLACK TRACER
- BLK - BLACK
- BLK/WH - BLACK WITH WHITE TRACER
- G/BLK - GREEN WITH BLACK TRACER
- G - GREEN

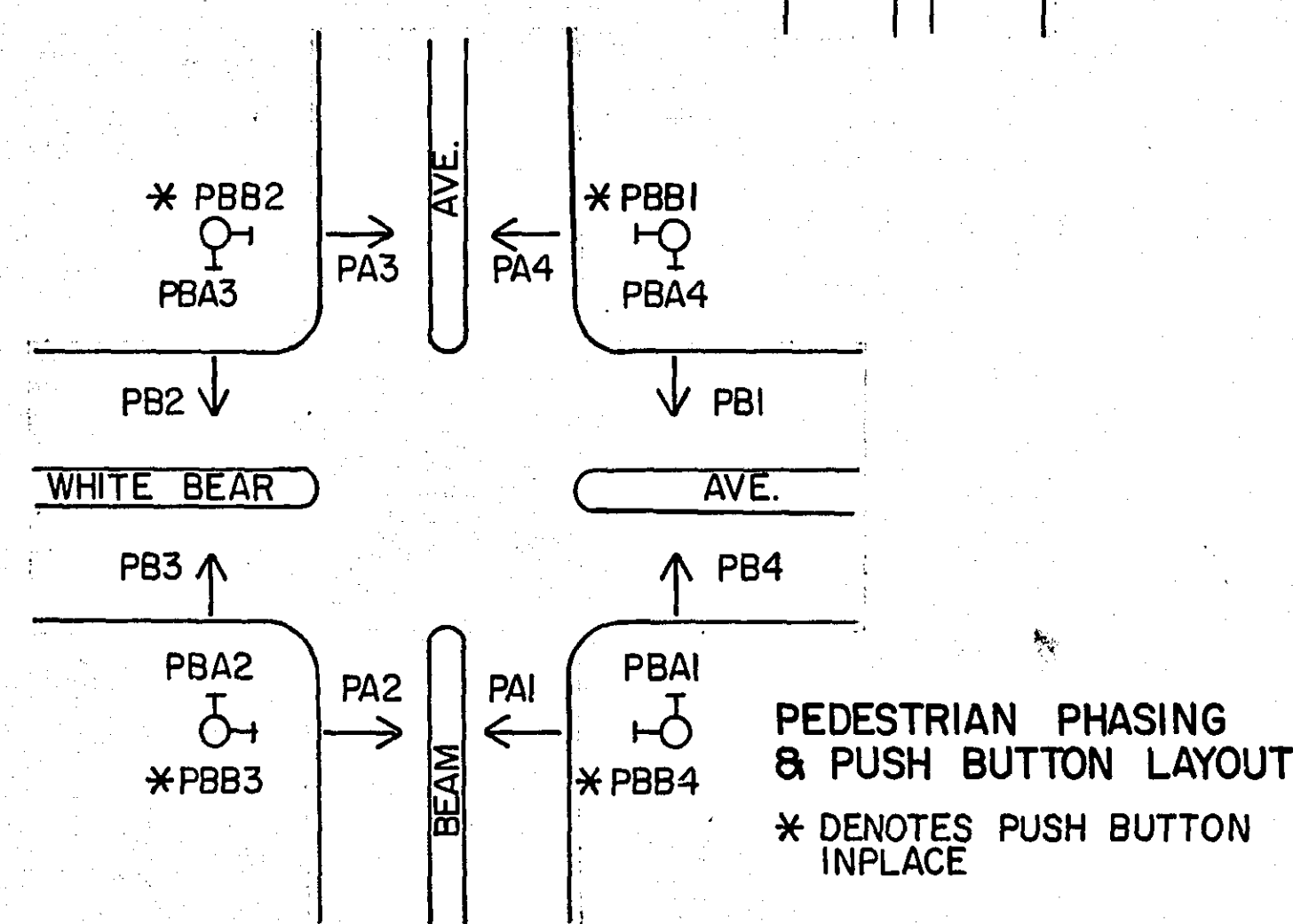
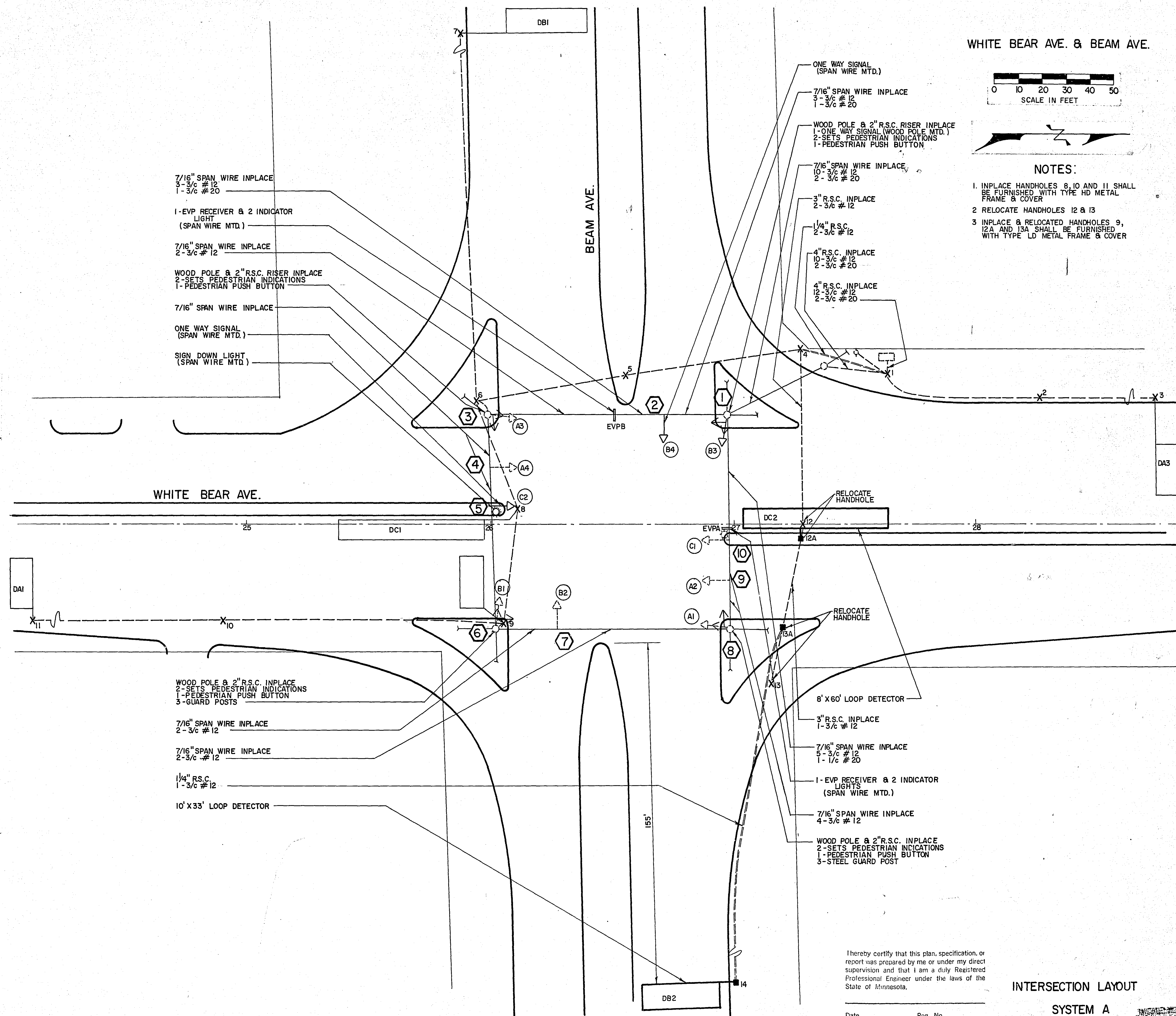
- EVP - EMERGENCY VEHICLE PRE-EMPTION
- EVPA - EMERGENCY VEHICLE PRE-EMPTION, PHASE A
- EVPR-A - EMERGENCY VEHICLE PRE-EMPTION RECEIVER, PHASE A
- EVPR-B - EMERGENCY VEHICLE PRE-EMPTION INDICATOR LIGHT, PHASE B

STANDARD PLATES *	
PLATE NO.	DESCRIPTION
8115B	PEDESTRIAN PUSH BUTTON INSTALLATION
8116C	STEEL GUARD POSTS
8117E	PRECAST CONCRETE HANDHOLE (OR PULLBOX)
8130B	SAW CUT LOOP DETECTORS

* STATE OF MINNESOTA, DEPT. OF HIGHWAYS, STANDARD PLATES MANUAL 5-296.

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PHASE 2

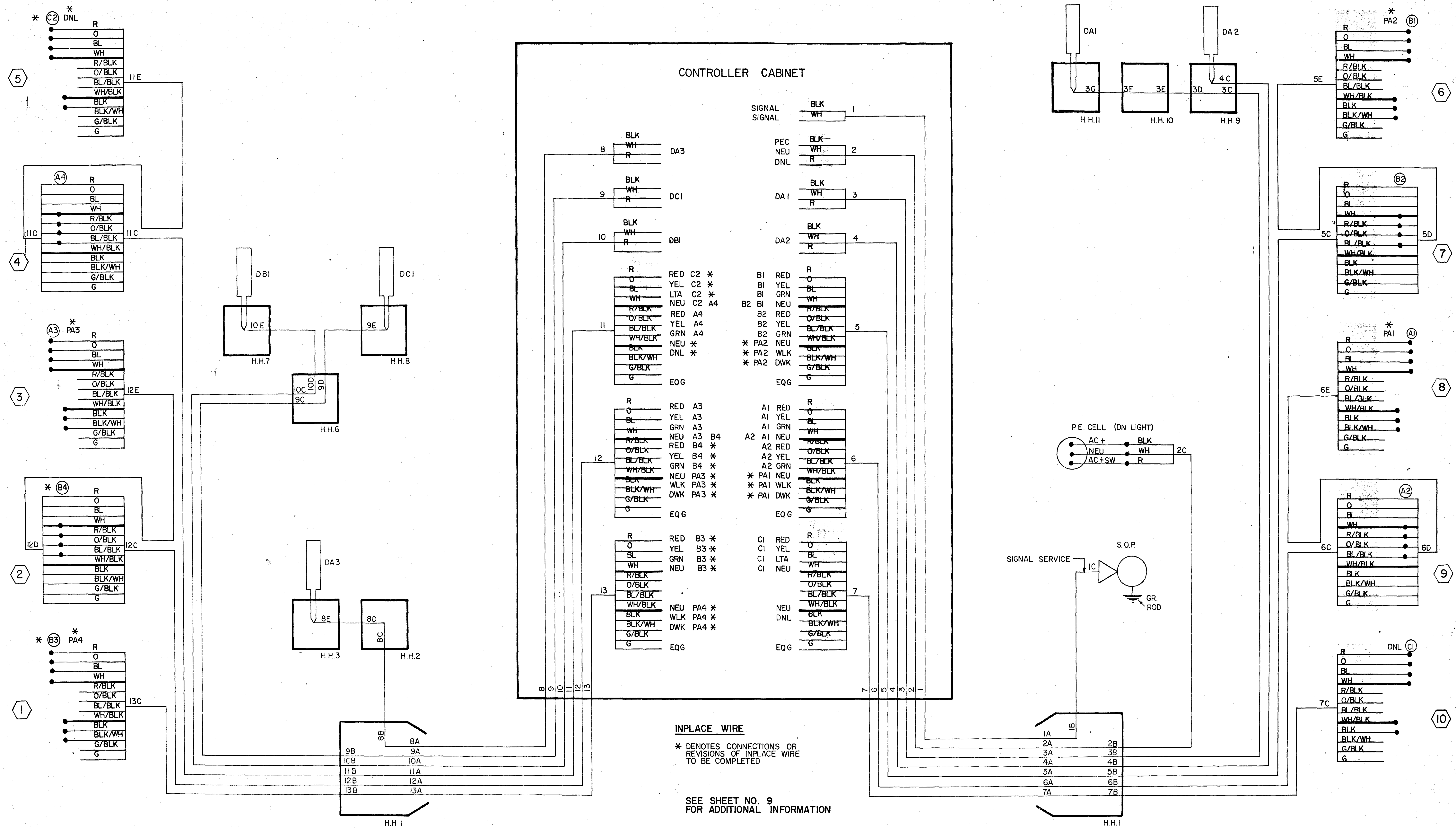
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Date _____ Reg. No. _____

INTERSECTION LAYOUT

SYSTEM A
PHASE 2



INPLACE
FIELD WIRING DIAGRAM
WHITE BEAR AVE & BEAM AVE
SYSTEM A
PHASE 2

Thereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date _____ Reg. No. _____

PHASING DIAGRAM



WHITE BEAR AVE.

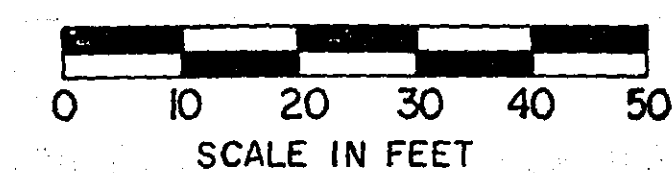
ONE WAY SIGNAL
(SPAN WIRE MTD.)

SIGN DOWN LIGHT
(SPAN WIRE MTD.)

7/16" SPAN WIRE INPLACE
2 - 3/c # 12

WOOD POLE & 2" R.S.C. RISER INPLACE
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON
3-STEEL GUARD POSTS _____

WHITE BEAR AVE. & LYDIA AVE.



NOTES:

- 1 INPLACE HANDHOLES 4, 6 & 7 SHALL BE
FURNISHED WITH TYPE HD METAL FRAME
& COVERS
- 2 INPLACE HANDHOLE 5 SHALL BE FURNISHED
WITH TYPE LD METAL FRAME & COVER

7/16" SPAN WIRE INPLACE
6-3/c #12
1-3/c #20

1-EVP RECEIVER & 2 INDICATOR
LIGHTS
(SPAN WIRE MTD.)

— 7/16" SPAN WIRE INPLACE
5-3/c #12

ONE WAY SIGNAL
(SPAN WIRE MTD.)

— 7/16" SPAN WIRE INPLACE
5 - 3/c #12

WOOD POLE & 2" R.S.C. RISER IN PLACE
ONE WAY SIGNAL (SPAN WIRE MTD.)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON

— 7/16" SPAN WIRE INPLACE
3-3/c #12

4" R.S.C. IN PLACE
11 - 3/c # 12
2 - 3/c # 20

4" R.S.C. INPLACE
11-3/c #12
2-3/c #20

WOOD POLE & 4" R.S.C. RISER IN PLACE
2-SETS PEDESTRIAN INDICATIONS
1 PEDESTRIAN PUSH BUTTON _____

7/16" SPAN WIRE INPLACE
3- 3/c # 12
1- 3/c # 20

7/16" SPAN WIRE INPLACE
3-3/c # 12
1-3/c ~~# 20~~ _____

1- EVP RECEIVER & 2 INDICATOR
LIGHTS
(SPAN WIRE MTD.)_____

7/16" SPAN WIRE INPLACE
2-3/c #12

LYDIA AVE.

7/16" SPAN WIRE INPLACE
3-3/c #12

—WOOD POLE & 2"R.S.C. RISER INPLACE
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON

—1 1/4" R.S.C. RISER BELOW JCT BOX
1-3/c #12

— 1 1/4" R.S.C.
1-3/c # 12

10' X 20' LOOP DETECTOR

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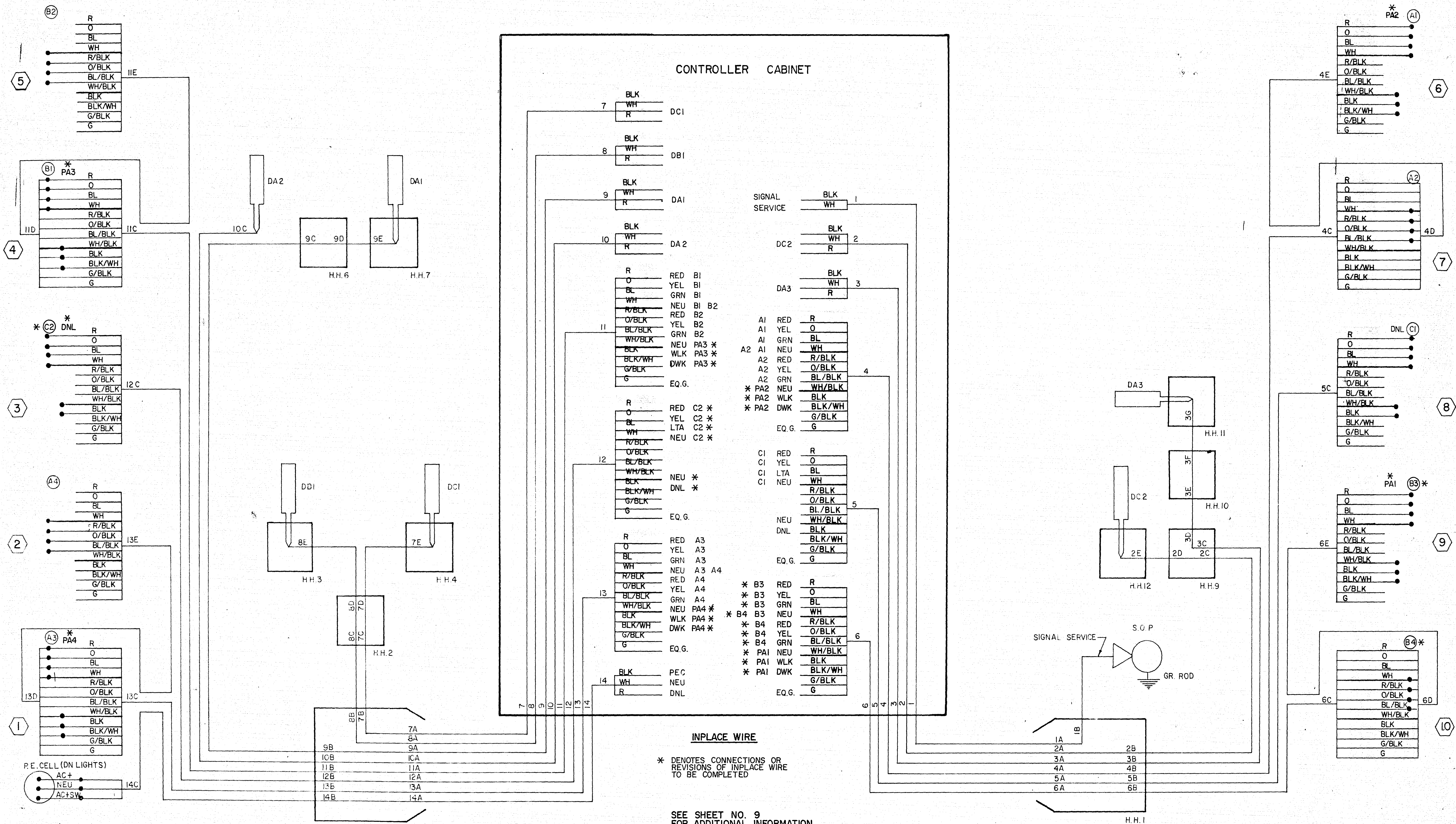
INTERSECTION LAYOUT

SYSTEM B
PHASE 2

CO. PROJ. NO. 1974-65-S2

SHEET NO. 5 OF 10 SHEETS

17-134

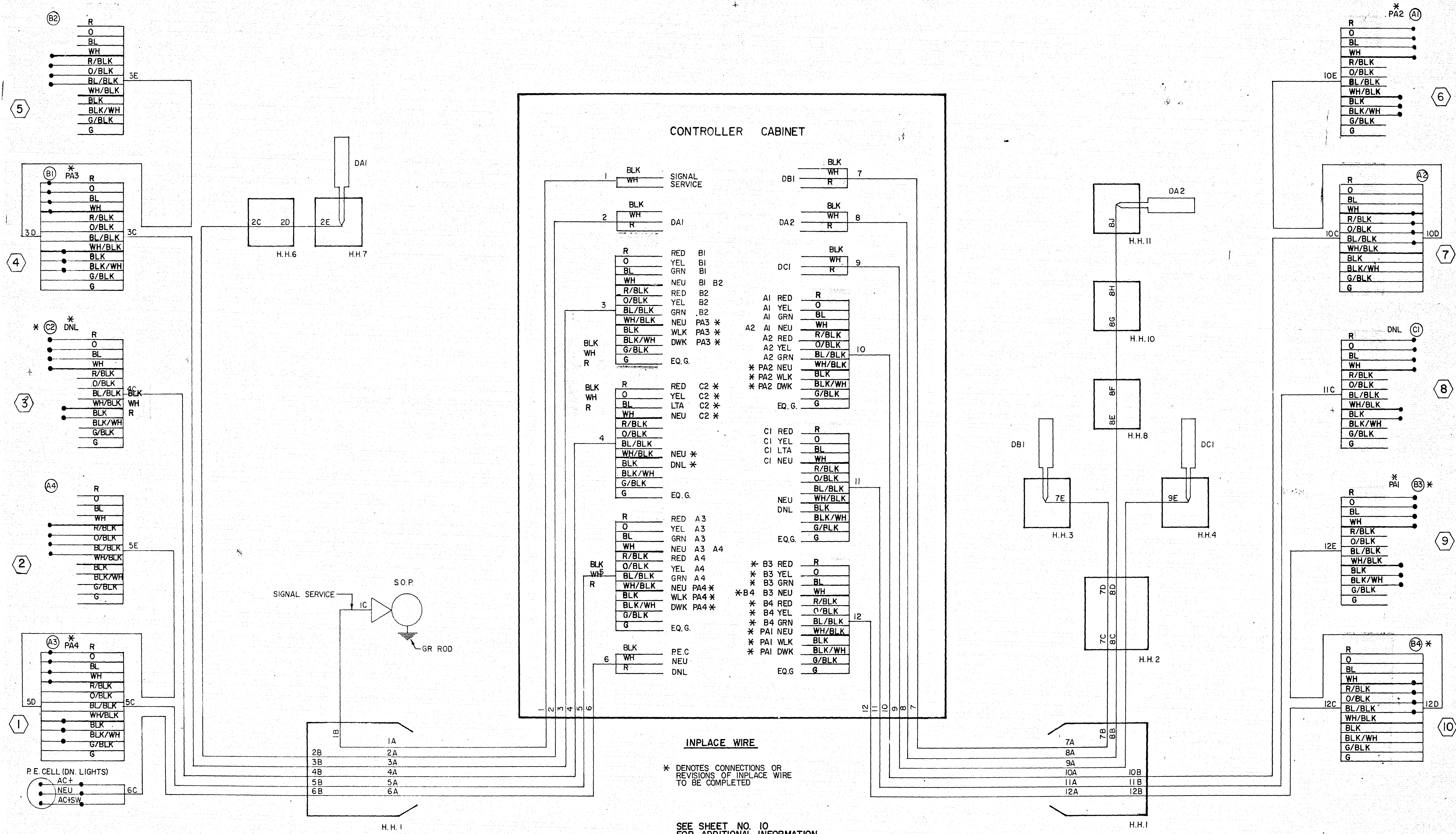


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Date _____ Reg. No. _____

**INPLACE
FIELD WIRING DIAGRAM
WHITE BEAR AVE & LYDIA AVE.
SYSTEM B**

PHASE 2

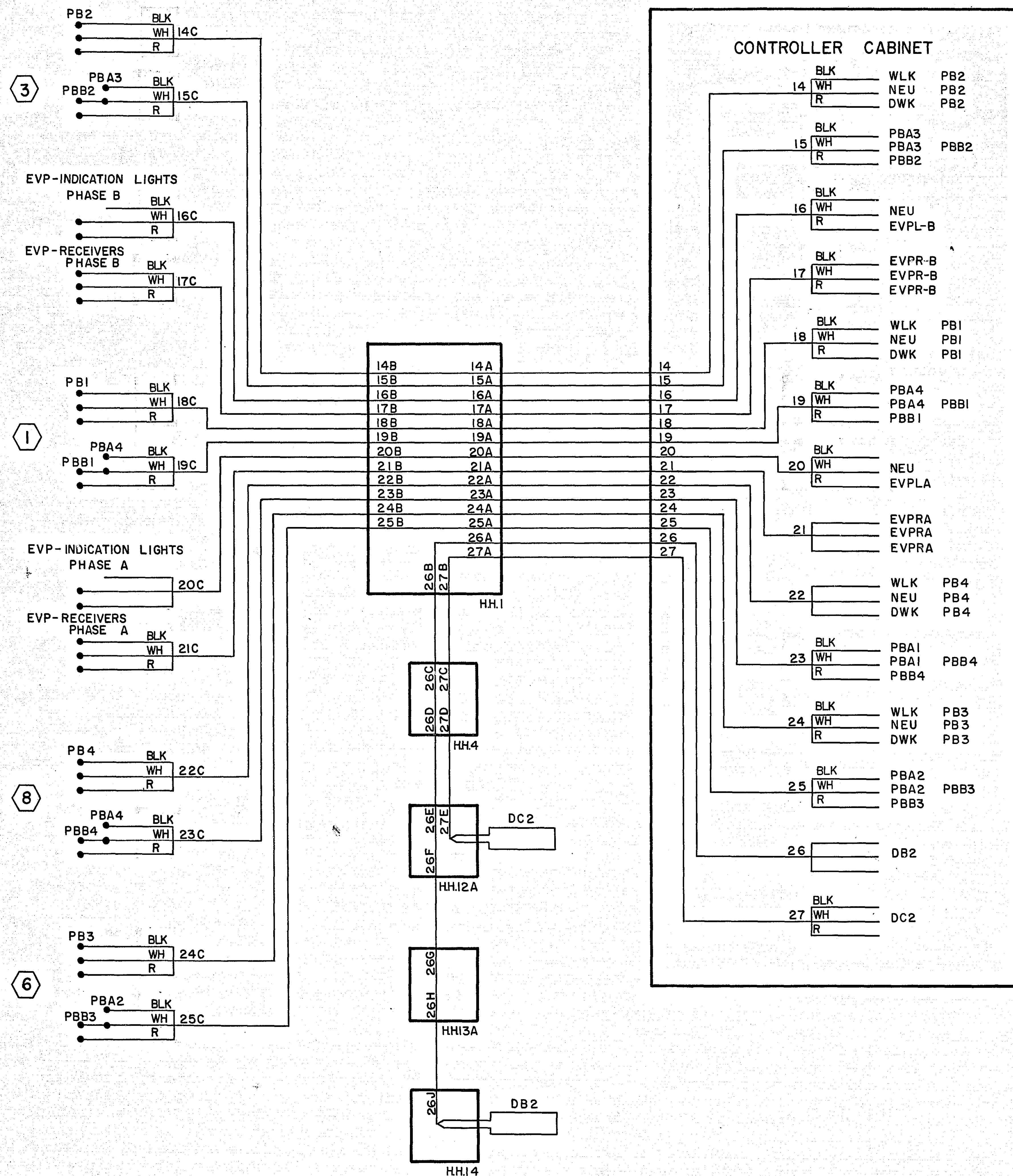


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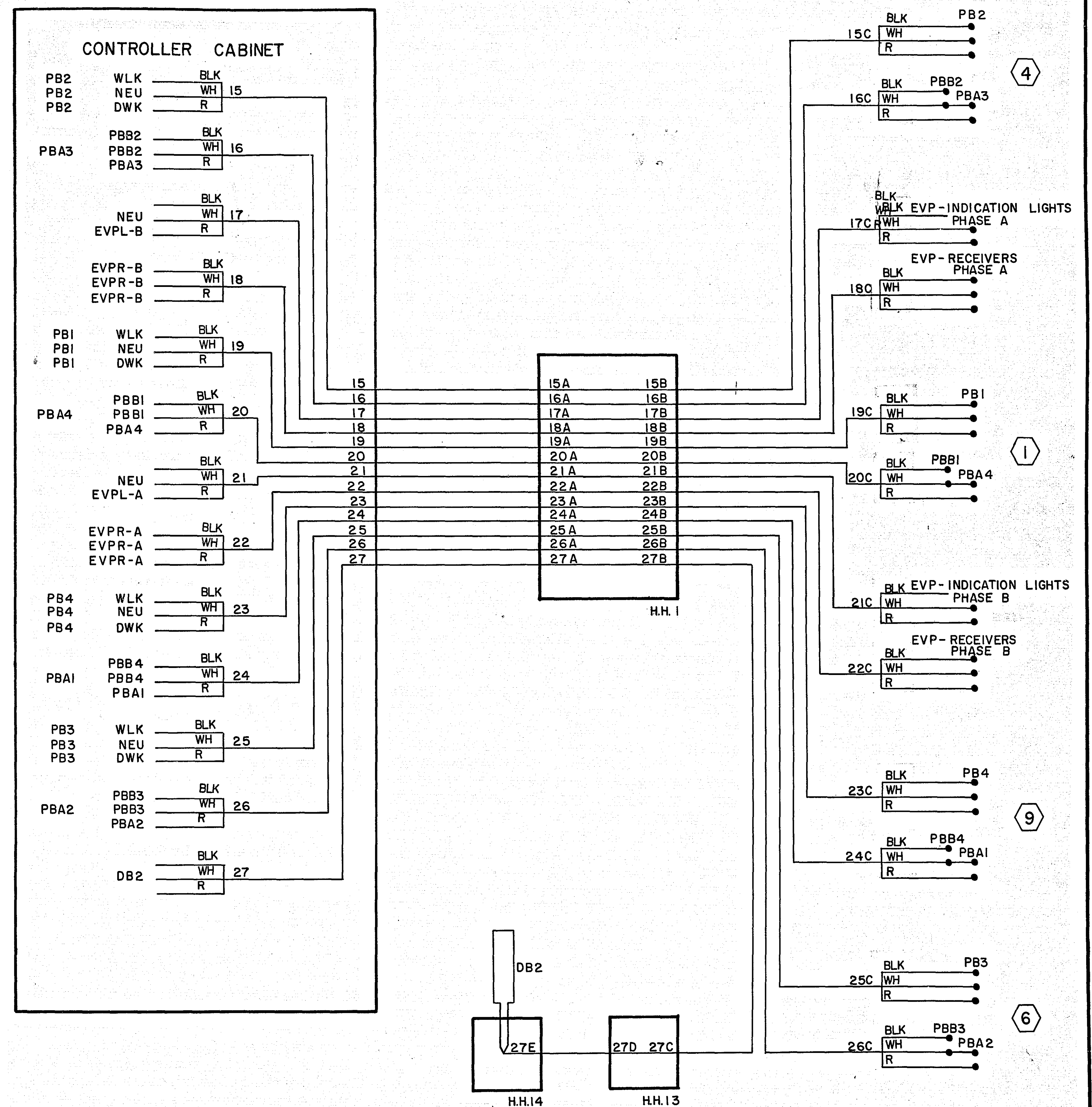
Date _____ Reg. No. _____

**INPLACE
FIELD WIRING DIAGRAM
WHITE BEAR AVE & TOWER AVE
SYSTEM C**

PHASE 2



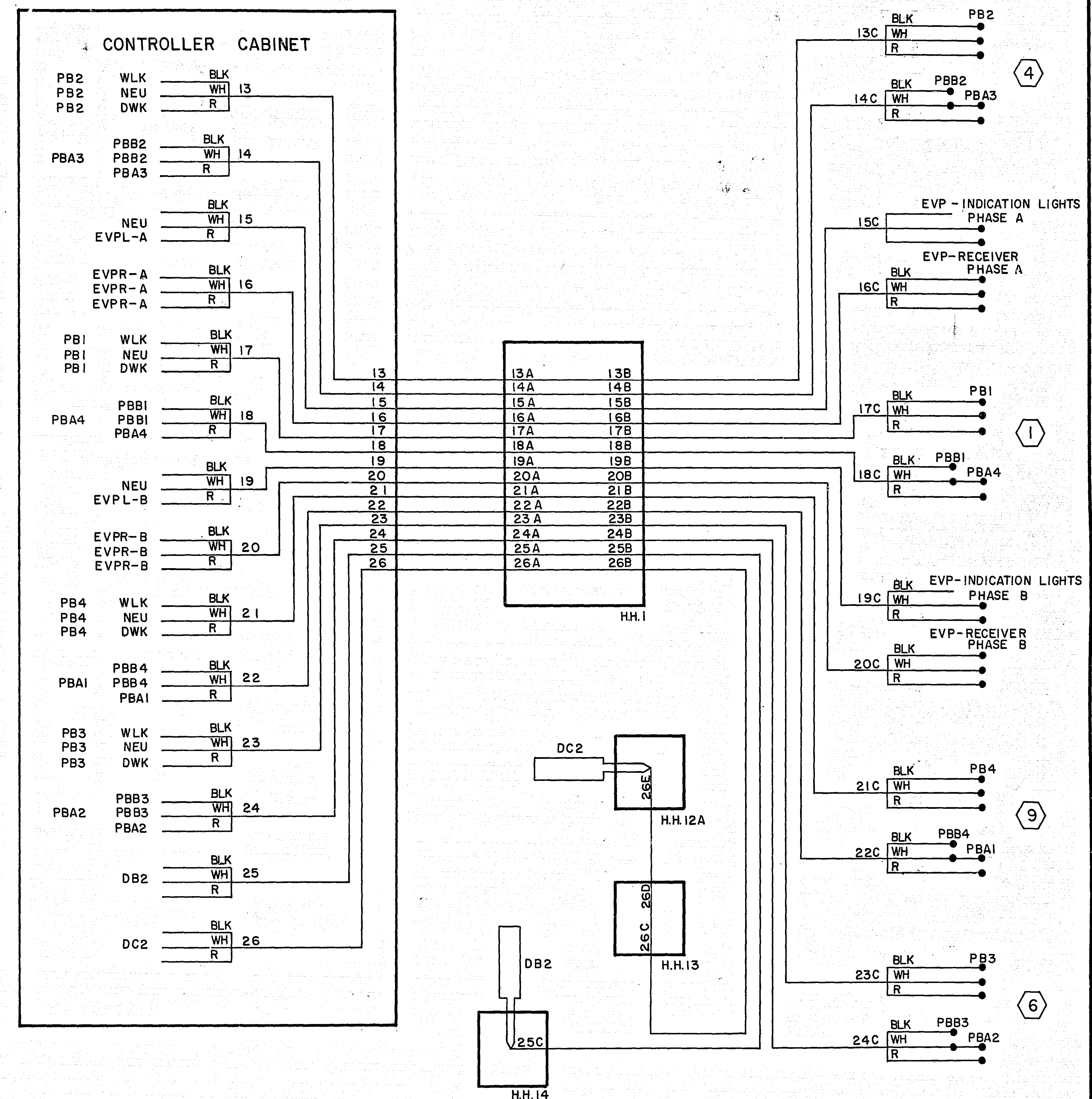
FIELD WIRING DIAGRAM
WHITE BEAR AVE. & BEAM AVE.
SYSTEM "A"
PHASE 2



FIELD WIRING DIAGRAM
WHITE BEAR AVE. & LYDIA AVE.
SYSTEM "B"
PHASE 2

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Date _____ Reg. No. _____



FIELD WIRING DIAGRAM
WHITE BEAR AVE. & TOWER AVE.
SYSTEM "C"
PHASE 2

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Date _____ Reg. No. _____

CO. PROJ. NO. 1974-65-S2

SHEET NO. 10 OF 10 SHEETS

17-134

RAMSEY CO. ENG'G