

PLOTTED/REVISED: 13-APR-2020

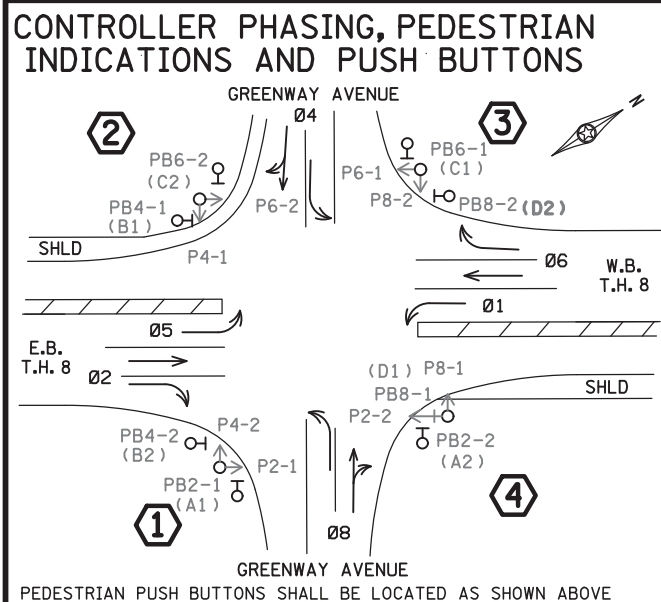
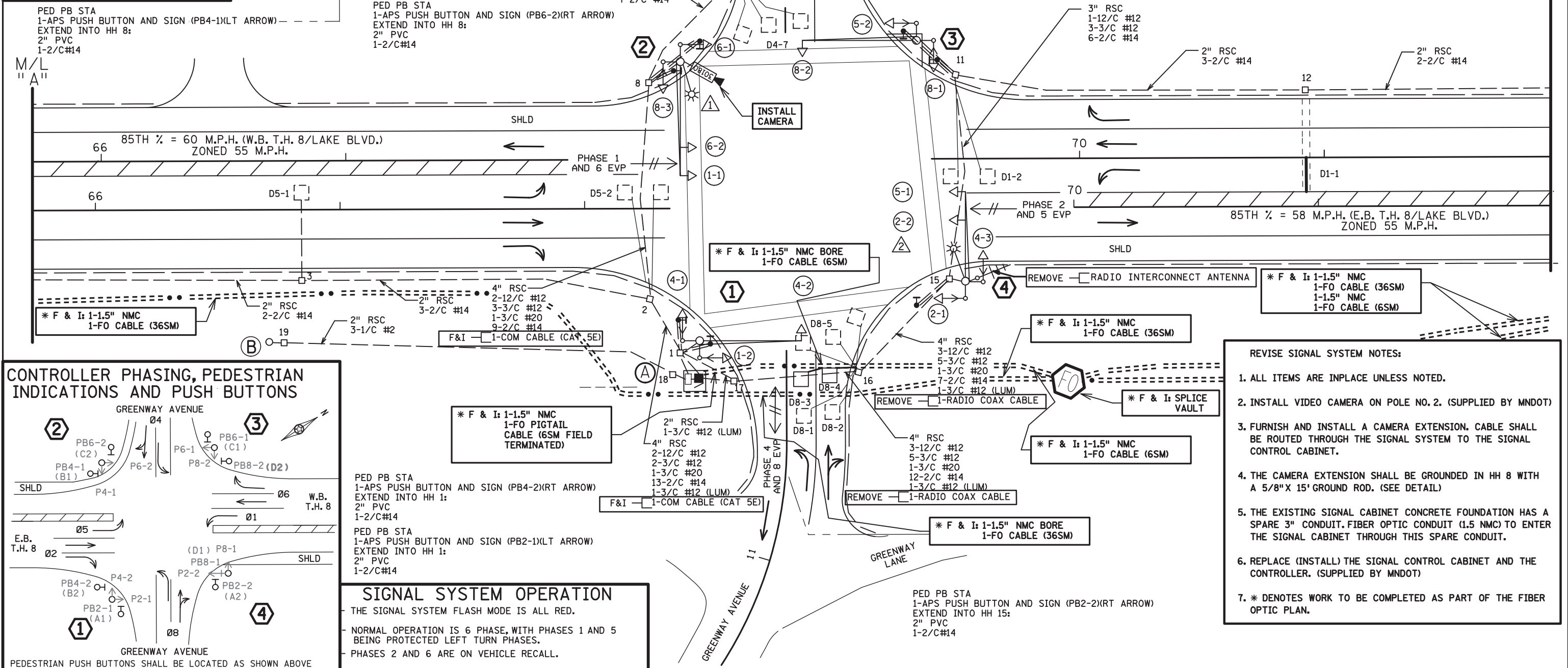
DISTRICT #: Metro  
IPLOT NAME: LAYOUT 21906  
PATH & FILENAME: Projects\DM\_R05\008\00007\Traffic\Signal\21906\T21906\_sgl.dgn

LOOP DETECTOR CHART			
NUMBER	SIZE (FT)	LOCATION	TYPE
D1-1	MAGNETIC	165	MAG
D1-2	2-6x6	10 & 40	PVC
D2-1	MAGNETIC	475	MAG
D2-2	MAGNETIC	320	MAG
D4-1, D4-2	6x6	120	PVC
D4-3, D4-4	6x6	40	PVC
D4-7	3-6x6	10, 10, 5	PVC
D5-1	6x6	165	PVC
D5-2	2-6x6	10 & 40	PVC
D6-1	MAGNETIC	475	MAG
D6-2	MAGNETIC	320	MAG
D8-1, 8-2	6x6	40	PVC
D8-3, 8-4	6x6	25	PVC
D8-5	3-6x6	10, 10, 5	PVC

-LOCATION: DISTANCE FROM CROSSWALK /STOP BAR IN FEET

SIGNAL HEAD CHART			
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12"  
-ALL RED SIGNAL INDICATIONS ARE LED  
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS



### SIGNAL SYSTEM OPERATION

THE SIGNAL SYSTEM FLASH MODE IS ALL RED.

NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.

- ### REVISE SIGNAL SYSTEM NOTES:
- ALL ITEMS ARE INPLACE UNLESS NOTED.
  - INSTALL VIDEO CAMERA ON POLE NO. 2. (SUPPLIED BY MNDOT)
  - FURNISH AND INSTALL A CAMERA EXTENSION. CABLE SHALL BE ROUTED THROUGH THE SIGNAL SYSTEM TO THE SIGNAL CONTROL CABINET.
  - THE CAMERA EXTENSION SHALL BE GROUNDED IN HH 8 WITH A 5/8" X 15' GROUND ROD. (SEE DETAIL)
  - THE EXISTING SIGNAL CABINET CONCRETE FOUNDATION HAS A SPARE 3" CONDUIT. FIBER OPTIC CONDUIT (1.5 NMC) TO ENTER THE SIGNAL CABINET THROUGH THIS SPARE CONDUIT.
  - REPLACE (INSTALL) THE SIGNAL CONTROL CABINET AND THE CONTROLLER. (SUPPLIED BY MNDOT)
  - \* DENOTES WORK TO BE COMPLETED AS PART OF THE FIBER OPTIC PLAN.

BY	DATE	REVISIONS	SYSTEM ID: 1735955	T.E. 22528	S.A.P. NO.	DRAWN BY: BAM	CKD BY: GAK	DATE: 4-9-20
			METER ADDRESS:		CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829	DATE: 4/9/20	
			OLD SYSTEM ID: 21906		STATE PROJ. NO. 1301-126 (T.H.8)		SHEET NO. SS8 OF SS42 SHEETS	

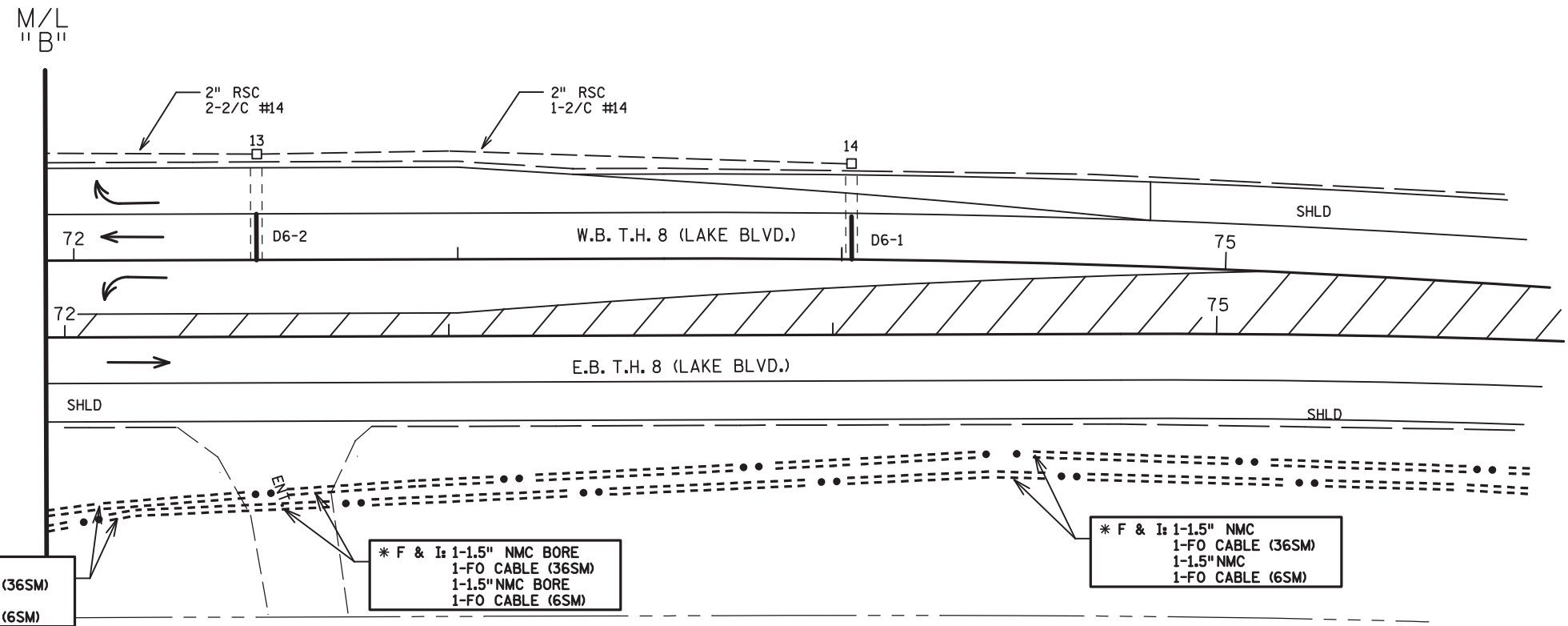
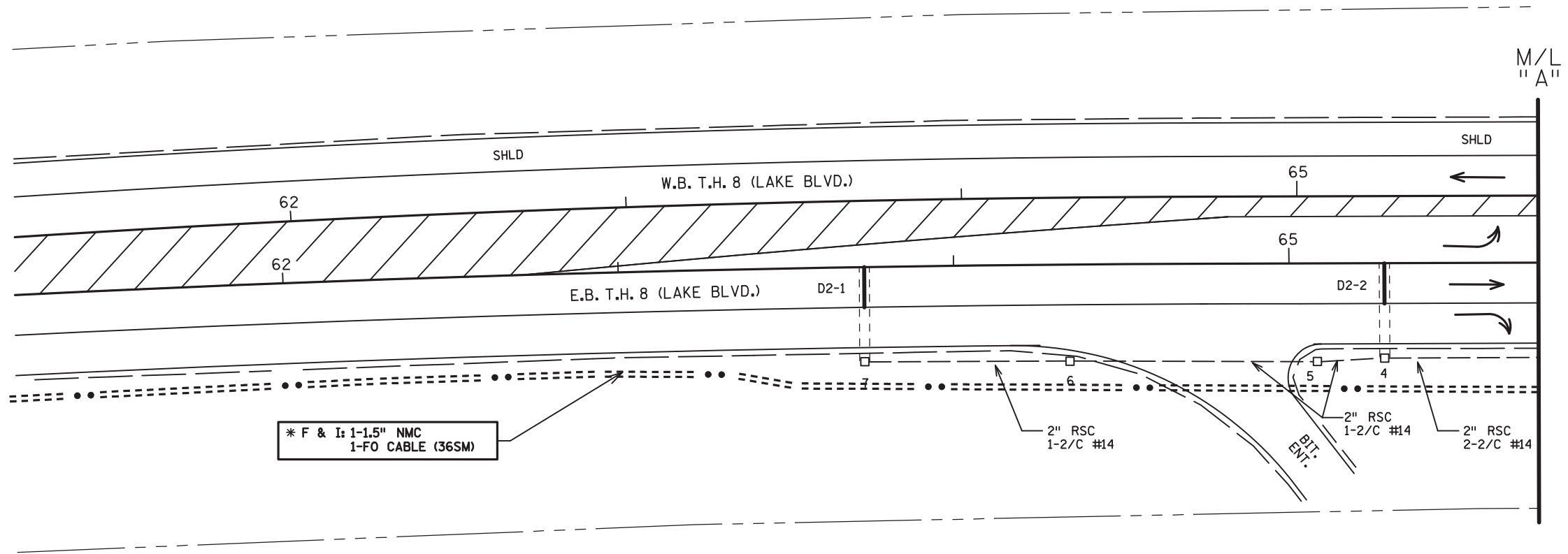
**INTERSECTION LAYOUT**  
**REVISE SIGNAL SYSTEM B**  
**T.H. 8 AT GREENWAY AVE.**  
**WYOMING TOWNSHIP, CHISAGO COUNTY**

PLOTTED/REVISED: 23-APR-2020

DISTRICT #: Metro  
 PLOT NAME: SS9\_MATCHLINE 21906  
 PATH & FILENAME: Projects\DM\_R0S\008\0000\Traffic\Signal\21906\T21906\_sgl.dgn



40  
 SCALE IN FEET



- REVISE SIGNAL SYSTEM NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
  2. INSTALL VIDEO CAMERA ON POLE NO. 2. (SUPPLIED BY MNDOT)
  3. FURNISH AND INSTALL A CAMERA EXTENSION. CABLE SHALL BE ROUTED THROUGH THE SIGNAL SYSTEM TO THE SIGNAL CONTROL CABINET.
  4. THE CAMERA EXTENSION SHALL BE GROUNDED IN HH 8 WITH A 5/8" X 15' GROUND ROD. (SEE DETAIL)
  5. THE EXISTING SIGNAL CABINET CONCRETE FOUNDATION HAS A SPARE 3" CONDUIT. FIBER OPTIC CONDUIT (1.5 NMC) TO ENTER THE SIGNAL CABINET THROUGH THIS SPARE CONDUIT.
  6. REPLACE (INSTALL) THE SIGNAL CONTROL CABINET AND THE CONTROLLER. (SUPPLIED BY MNDOT)
  7. \* DENOTES WORK TO BE COMPLETED AS PART OF THE FIBER OPTIC PLAN.

\* F & I: 1-1.5" NMC  
 1-FO CABLE (36SM)  
 1-1.5" NMC  
 1-FO CABLE (6SM)

\* F & I: 1-1.5" NMC BORE  
 1-FO CABLE (36SM)  
 1-1.5" NMC BORE  
 1-FO CABLE (6SM)

\* F & I: 1-1.5" NMC  
 1-FO CABLE (36SM)  
 1-1.5" NMC  
 1-FO CABLE (6SM)

BY	DATE	REVISIONS

SYSTEM ID: 1735955 T.E. 22528  
 METER ADDRESS:  
 OLD SYSTEM ID: 21906

**MATCHLINES**  
**REVISE SIGNAL SYSTEM B**  
**T.H. 8 AT GREENWAY AVE.**  
**WYOMING TOWNSHIP, CHISAGO COUNTY**

S.A.P. NO. \_\_\_\_\_ DRAWN BY: BAM CKD BY: GAK DATE: 4-9-20  
 CERTIFIED BY: *Gregory Ken* LIC. NO. 26829 DATE: 4/9/20  
 STATE PROJ. NO. 1301-126 (T.H.8) SHEET NO. SS9 OF SS42 SHEETS

PLOTTED/REVISED: 13-APR-2020

DISTRICT \*: Metro  
I/PLOT NAME: NOTES 21906  
PATH & FILENAME: Projects\DM\_R0S\008\0000\Traffic\Signal\21906\T21906\_sgl.dgn

**(A)** EQUIPMENT PAD  
SIGNAL SERVICE EQUIPMENT (120/240 VOLT)  
(SIGNAL SERVICE CABINET)  
METER TO HH 18:  
2" RSC  
3-1/C #2  
BETWEEN METER AND LOAD CENTER  
3-1/C #2  
BETWEEN LOAD CENTER AND HH 1:  
2" RSC  
2-3/C #12 (LUM)

REPLACE (INSTALL)  CONTROLLER AND CABINET

BETWEEN LOAD CENTER AND SIGNAL CABINET  
2" RSC  
2-1/C #6  
1-1/C #6 BR. GR.  
3" RSC STUBOUT  
THREAD AND CAP BOTH ENDS  
2" RSC STUBOUT FOR PHONE LINE  
THREAD AND CAP BOTH ENDS  
BETWEEN CABINET AND HH 1:  
4" RSC  
3-12/C #12  
6-3/C #12  
2-3/C #20  
15-2/C #14

F&I  1-COM CABLE (CAT 5E)

BETWEEN CABINET AND HH 17:  
4" RSC  
3-12/C #12  
5-3/C #12  
1-3/C #20  
12-2/C #14

REMOVE  1-RADIO COAX CABLE  
CONTROLLER CABINET TO PULL VAULT  
\* F&I  1-1.5" NMC  
 1-FO PIGTAIL (6SM FIELD TERMINATED)

**(B)** WOOD POLE INPLACE-INPLACE  
120/240 VOLT DISCONNECT  
ABOVE DISCONNECT  
2" RSC RISER AND WEATHERHEAD  
WITH 3-1/C #2  
BELOW DISCONNECT INTO HH 19:  
2" RSC  
3-1/C #2

**(2)** PA100 POLE FOUNDATION  
TYPE PA100-A-45-D40-9 (DAVIT AT 350 )

REMOVE  D40-9 (DAVIT AT 350 DEG)  
F&I  1-X6-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG)  
(INCLUDING LIGHTNING ROD)  
7/16 GROUND BRAID  
INSTALL  1-VIDEO CAMERA WITH MOUNT (30180)

2 - ONE WAY SIGNALS OVERHEAD  
(0' AND 11' FROM END OF MAST ARM)  
2-TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS

S&I  LUMINAIRE - 200 WATT HPS

ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT  
(INSTALLED 2' FROM END OF MAST ARM)  
EXTEND INTO HH 8:  
3" RSC  
2-12/C #12  
2-3/C #12  
1-3/C #20  
1-3/C #12 (LUM)

F&I  1-7/16" GROUND BRAID TO GROUND ROD  
 1-COM CABLE (CAT 5E)

**(1)** PA90 POLE FOUNDATION  
TYPE PA90-A-40  
ONE WAY SIGNAL OVERHEAD  
(0' FROM END OF MAST ARM)  
TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS  
TWO WAY EVP DETECTOR &  
CONFIRMATORY LIGHTS  
(2' FROM END OF MAST ARM)  
EXTEND INTO HH 1:  
3" RSC  
1-12/C #12  
4-3/C #12  
1-3/C #20

**(3)** PA100 POLE FOUNDATION  
TYPE PA100-A-45  
ONE WAY SIGNAL OVERHEAD  
(0' FROM END OF MAST ARM)  
2-TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS  
EXTEND INTO HH 11:  
3" RSC  
1-12/C #12  
3-3/C #12

**(4)** PA90 POLE FOUNDATION  
TYPE PA90-A-35-D40-9 (DAVIT AT 350 )  
2 - ONE WAY SIGNALS OVERHEAD  
(0' AND 11' FROM END OF MAST ARM)  
TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS  
1-APS PUH BUTTON AND SIGN (PB8-1)(LT ARROW)  
LUMINAIRE - 200 WATT HPS  
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT  
(INSTALLED 2' FROM END OF MAST ARM)

REMOVE  RADIO INTERCONNECT ANTENNA

EXTEND INTO HH 15:  
3" RSC  
2-12/C #12  
2-3/C #12  
1-3/C #20  
1-3/C #12 (LUM)

REMOVE  1-RADIO COAX CABLE

REVISE SIGNAL SYSTEM NOTES:

1. ALL ITEMS ARE INPLACE UNLESS NOTED.
2. INSTALL VIDEO CAMERA ON POLE NO. 2. (SUPPLIED BY MNDOT)
3. FURNISH AND INSTALL A CAMERA EXTENSION. CABLE SHALL BE ROUTED THROUGH THE SIGNAL SYSTEM TO THE SIGNAL CONTROL CABINET.
4. THE CAMERA EXTENSION SHALL BE GROUNDED IN HH 8 WITH A 5/8" X 15' GROUND ROD. (SEE DETAIL)
5. THE EXISTING SIGNAL CABINET CONCRETE FOUNDATION HAS A SPARE 3" CONDUIT. FIBER OPTIC CONDUIT (1.5 NMC) TO ENTER THE SIGNAL CABINET THROUGH THIS SPARE CONDUIT.
6. REPLACE (INSTALL) THE SIGNAL CONTROL CABINET AND THE CONTROLLER. (SUPPLIED BY MNDOT)
7. \* DENOTES WORK TO BE COMPLETED AS PART OF THE FIBER OPTIC PLAN.

BY	DATE	REVISIONS

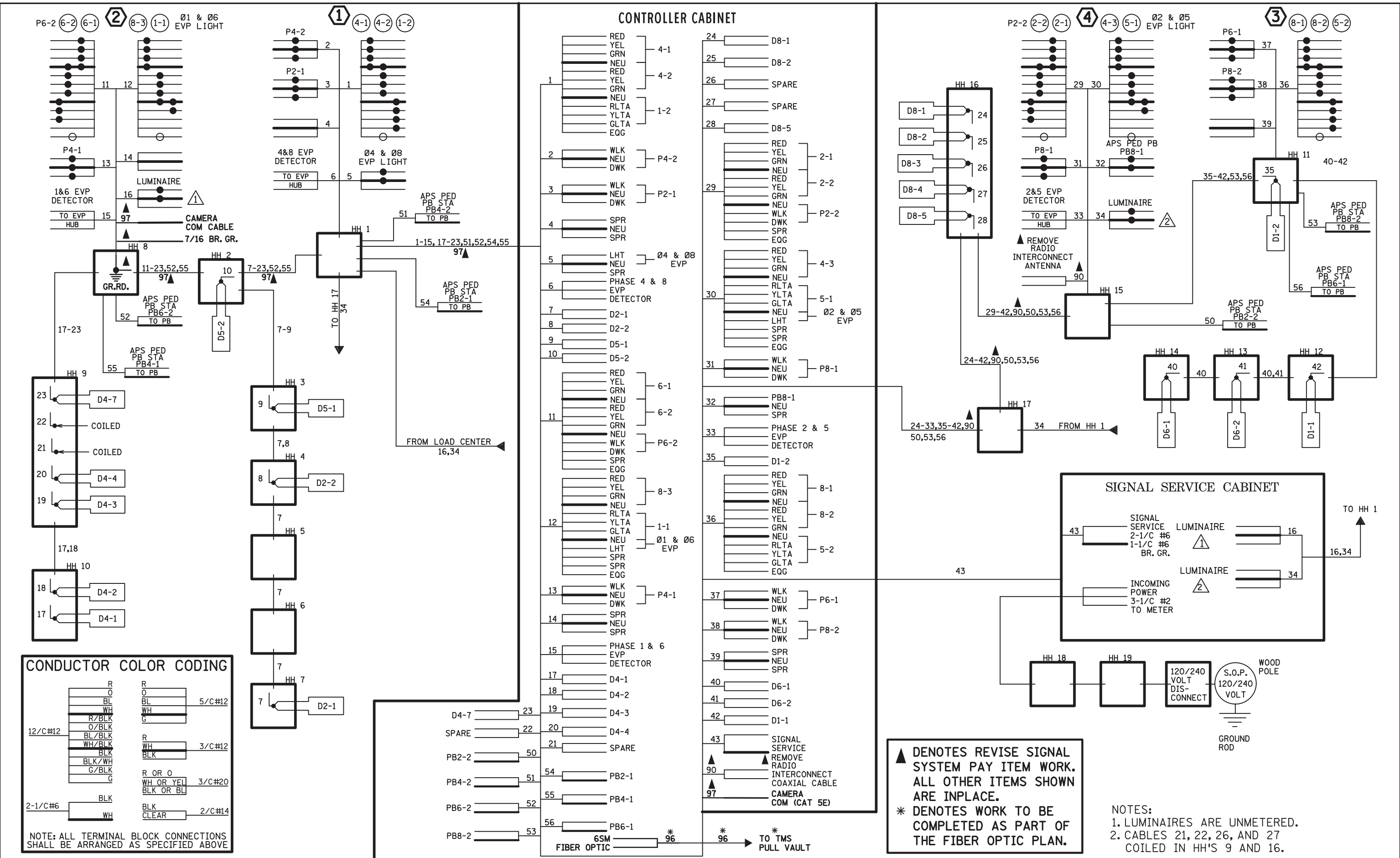
SYSTEM ID: 1735955 T.E. 22528  
METER ADDRESS:  
OLD SYSTEM ID: 21906

INTERSECTION NOTES  
REVISE SIGNAL SYSTEM B  
T.H. 8 AT GREENWAY AVE.  
WYOMING TOWNSHIP, CHISAGO COUNTY

S.A.P. NO.	DRAWN BY: BAM	CKD BY: GAK	DATE: 4-9-20
CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829	DATE: 4/9/20	
STATE PROJ. NO. 1301-126 (T.H.8)		SHEET NO. SS10 OF SS42 SHEETS	

PLOTTED/REVISED: 13-APR-2020

DISTRICT #: Metro  
 IPLOT NAME: WIRE 21906  
 PATH & FILENAME: Projects\DM\_Ros\008\0000\Traffic\Signal\21906\21906.sgl.dgn



BY	DATE	REVISIONS

SYSTEM ID: 1735955 T.E. 22528  
 METER ADDRESS:  
 OLD SYSTEM ID: 21906

**FIELD WIRING DIAGRAM**  
 REVISE SIGNAL SYSTEM B  
 T.H. 8 AT GREENWAY AVE.  
 WYOMING TOWNSHIP, CHISAGO COUNTY

S.A.P. NO. \_\_\_\_\_  
 CERTIFIED BY *Gregory Ken* LIC. NO. 26829 DATE: 4/9/20  
 STATE PROJ. NO. 1301-126 (T.H.8) SHEET NO. SS11 OF SS42 SHEETS

PLOTTED/REVISED: 10-SEP-2019

I PLOT NAME: Layout  
PATH & FILENAME: Projects\DM\_R05\008\0000\Traffic\Signal\21906A2\21906A2\_sgl.dgn

LOOP DETECTOR CHART			
NUMBER	SIZE (FT)	LOCATION	TYPE
D1-1	MAGNETIC	165	MAG
D1-2	2-6x6	10 & 40	PVC
D2-1	MAGNETIC	475	MAG
D2-2	MAGNETIC	320	MAG
D4-1, D4-2	6x6	120	PVC
D4-3, D4-4	6x6	40	PVC
D4-7	3-6x6	10, 10, 5	PVC
D5-1	6x6	165	PVC
D5-2	2-6x6	10 & 40	PVC
D6-1	MAGNETIC	475	MAG
D6-2	MAGNETIC	320	MAG
D8-1, 8-2	6x6	40	PVC
<b>D8-3, 8-4</b>	<b>6x6</b>	<b>25</b>	<b>PVC</b>
D8-5	3-6x6	10, 10, 5	PVC

-LOCATION: DISTANCE FROM CROSSWALK /STOP BAR IN FEET

**(A)** EQUIPMENT PAD - SEE DETAIL  
SIGNAL SERVICE EQUIPMENT (120/240 VOLT)  
(SIGNAL SERVICE CABINET - SEE DETAIL)  
METER TO HH 18:  
2" RSC  
3-1/C #2  
BETWEEN METER AND LOAD CENTER  
3-1/C #2  
BETWEEN LOAD CENTER AND HH 1:  
2" RSC  
2-3/C #12 (LUM)  
INSTALL CONTROLLER AND CABINET  
BETWEEN LOAD CENTER AND SIGNAL CABINET  
2" RSC  
2-1/C #6  
1-1/C #6 BR. GR.  
BETWEEN CABINET AND HH 1:  
4" RSC  
3-12/C #12  
1-3/C #20  
15-2/C #14

SCALE IN FEET  
40  
2" RSC  
2-2/C #14  
3" RSC STUBOUT (FUTURE USE)  
THREAD AND CAP BOTH ENDS  
2" RSC STUBOUT FOR PHONE LINE  
THREAD AND CAP BOTH ENDS  
2" RSC  
7-2/C #14  
4" RSC  
3-12/C #12  
5-3/C #12  
1-3/C #20  
12-2/C #14  
1-RADIO COAX CABLE

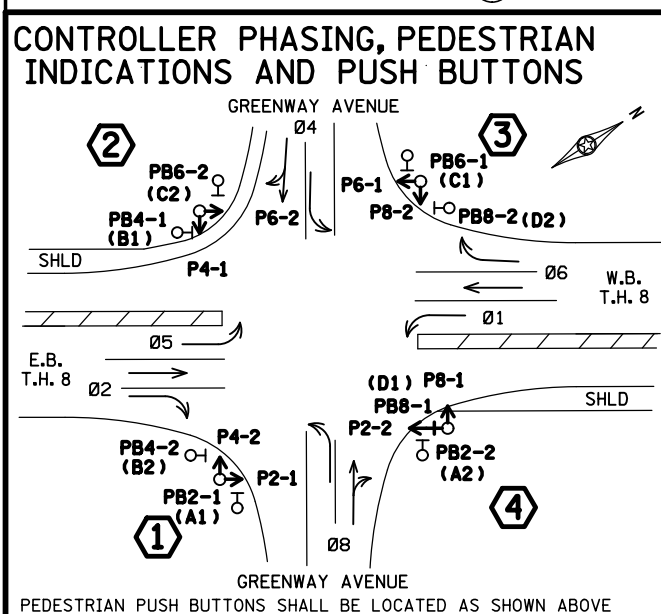
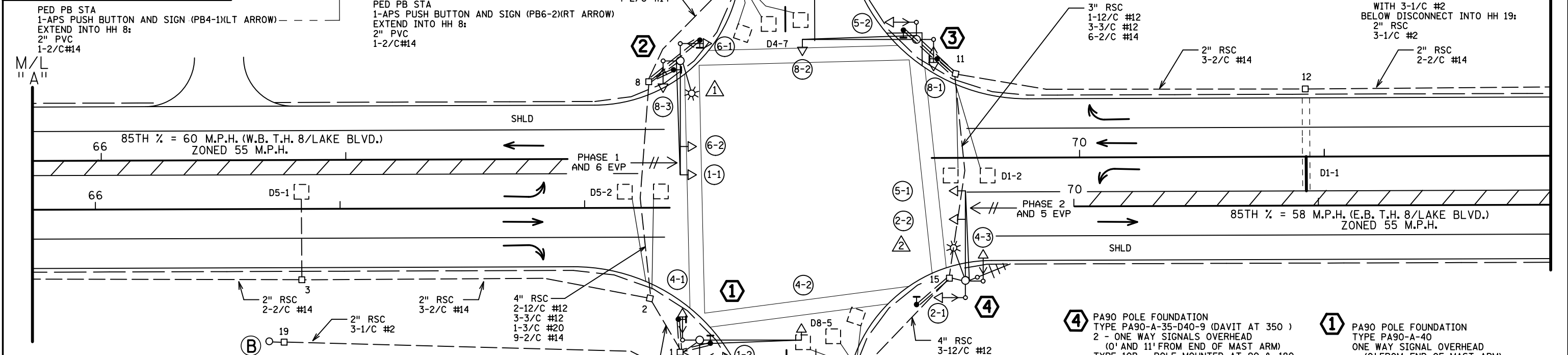
**(3)** PA100 POLE FOUNDATION  
TYPE PA100-A-45  
ONE WAY SIGNAL OVERHEAD  
(0' FROM END OF MAST ARM)  
2-TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS  
EXTEND INTO HH 11:  
3" RSC  
1-12/C #12  
3-3/C #12  
PED PB STA  
1-APS PUSH BUTTON AND SIGN (PB6-1)(LT ARROW)  
EXTEND INTO HH 11:  
2" PVC  
1-2/C#14  
PED PB STA  
1-APS PUSH BUTTON AND SIGN (PB8-2)(RT ARROW)  
EXTEND INTO HH 11:  
2" PVC  
1-2/C#14

**(2)** PA100 POLE FOUNDATION  
TYPE PA100-A-45-D40-9 (DAVIT AT 350 )  
2 - ONE WAY SIGNALS OVERHEAD  
(0' AND 11' FROM END OF MAST ARM)  
2-TYPE 10B - POLE MOUNTED AT 90 & 180  
2-CD PED HEADS  
LUMINAIRE - 200 WATT HPS  
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT  
(INSTALLED 2' FROM END OF MAST ARM)  
EXTEND INTO HH 8:  
3" RSC  
2-12/C #12  
2-3/C #12  
1-3/C #20  
1-3/C #12 (LUM)

SIGNAL HEAD CHART				
FACE	R	Y	G	
1-1, 1-2	←	←	←	
2-1, 2-2, 2-3	○	○	○	
4-1, 4-2, 4-3	○	○	○	
5-1, 5-2	←	←	←	
6-1, 6-2, 6-3	○	○	○	
8-1, 8-2, 8-3	○	○	○	

-ALL SIGNAL INDICATIONS ARE 12"  
-ALL RED SIGNAL INDICATIONS ARE  
LED  
-ALL SIGNAL HEADS HAVE  
BACKGROUND SHIELDS

**(B)** WOOD POLE INPLACE-INPLACE  
120/240 VOLT DISCONNECT  
ABOVE DISCONNECT  
2" RSC RISER AND WEATHERHEAD  
WITH 3-1/C #2  
BELOW DISCONNECT INTO HH 19:  
2" RSC  
3-1/C #2



### SIGNAL SYSTEM OPERATION

THE SIGNAL SYSTEM FLASH MODE IS ALL RED.  
NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.  
PHASES 2 AND 6 ARE ON VEHICLE RECALL.

PED PB STA  
1-APS PUSH BUTTON AND SIGN (PB4-2)(RT ARROW)  
EXTEND INTO HH 1:  
2" PVC  
1-2/C#14

PED PB STA  
1-APS PUSH BUTTON AND SIGN (PB2-1)(LT ARROW)  
EXTEND INTO HH 1:  
2" PVC  
1-2/C#14

PED PB STA  
1-APS PUSH BUTTON AND SIGN (PB2-2)(RT ARROW)  
EXTEND INTO HH 15:  
2" PVC  
1-2/C#14

BY	DATE	REVISIONS
J3T	SPT 10 19	SHOWS MISSING LOOP DETECTORS (D8-3, D8-4)

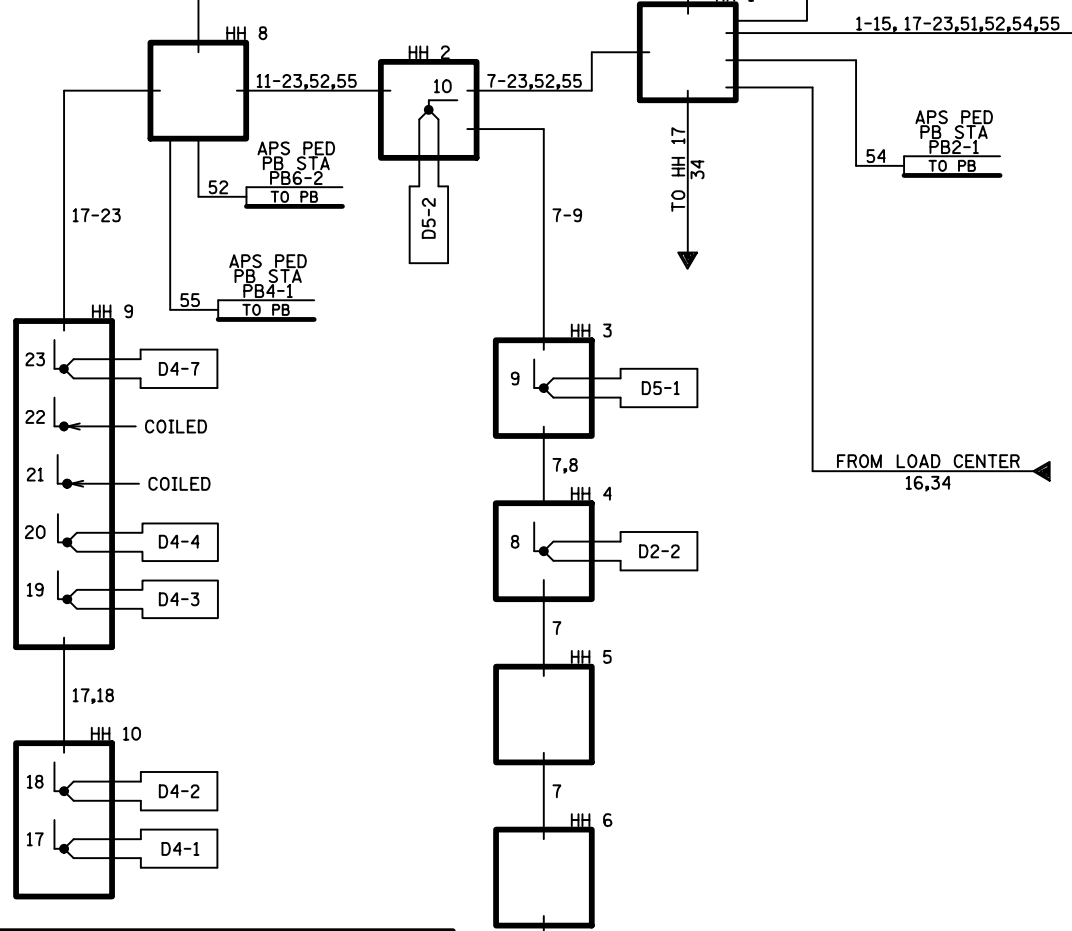
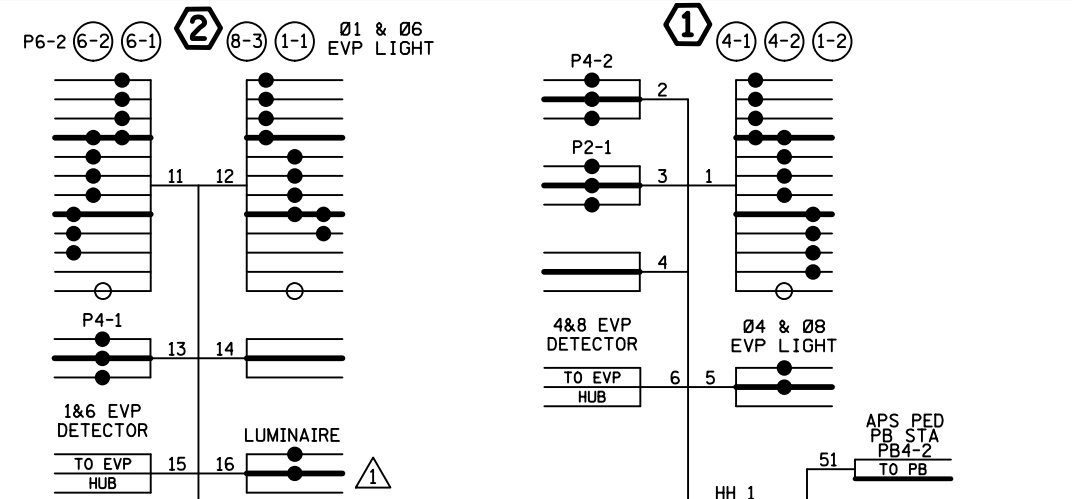
SYSTEM ID: 21906 T.E.  
METER ADDRESS: ID 1735955  
OLD SYSTEM ID:

INTERSECTION LAYOUT  
T.H. 8 AT GREENWAY AVE.  
WYOMING TOWNSHIP, CHISAGO COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____ <small>LICENSED PROFESSIONAL ENGINEER</small>	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.)	SHEET NO. 1 OF 2 SHEETS	

PLOTTED/REVISED: 10-SEP-2019

I/PLOT NAME: Wiring PATH & FILENAME: Projects\DM\_R0S\008\0000\Traffic\Signal\21906A2\21906A2\_sgl.dgn

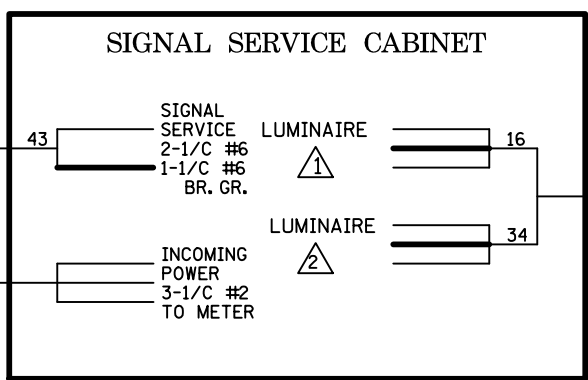
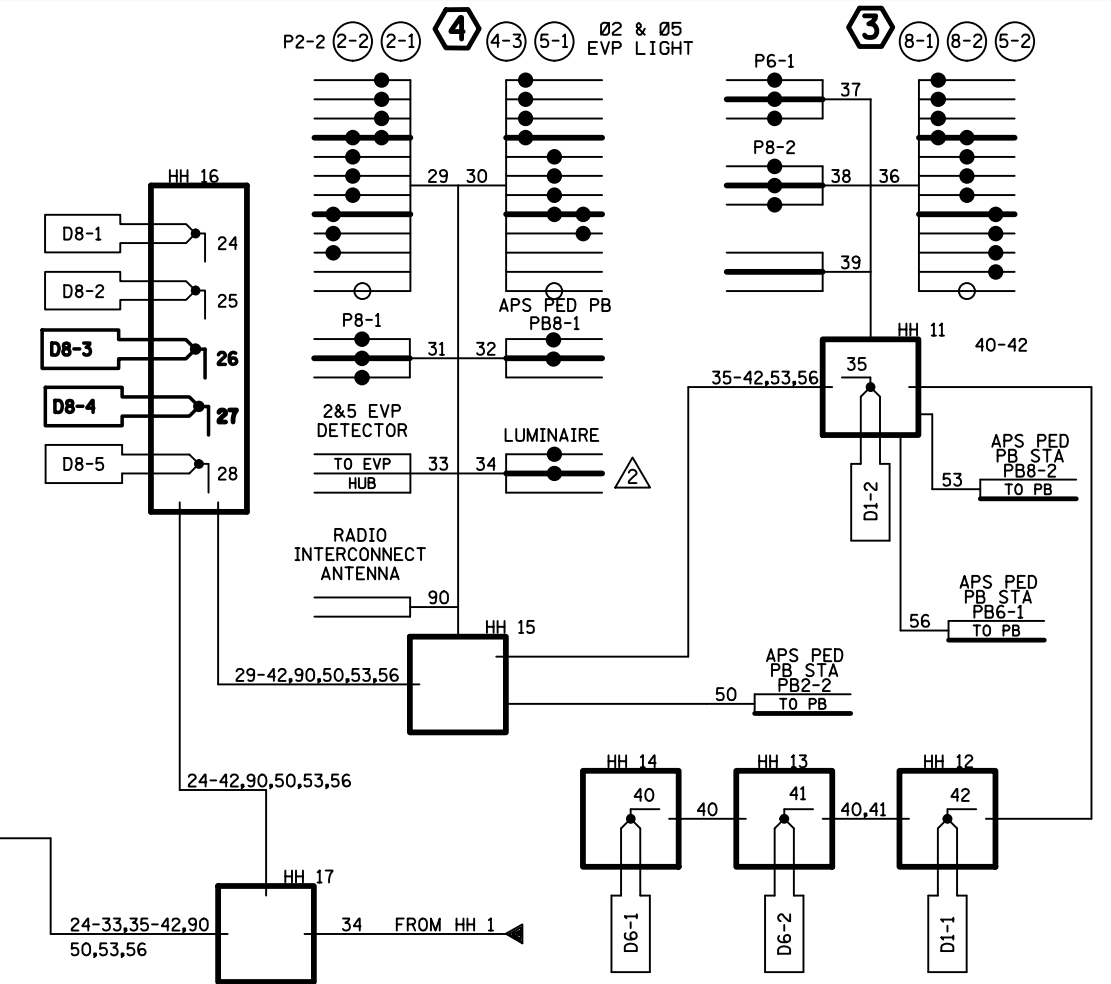
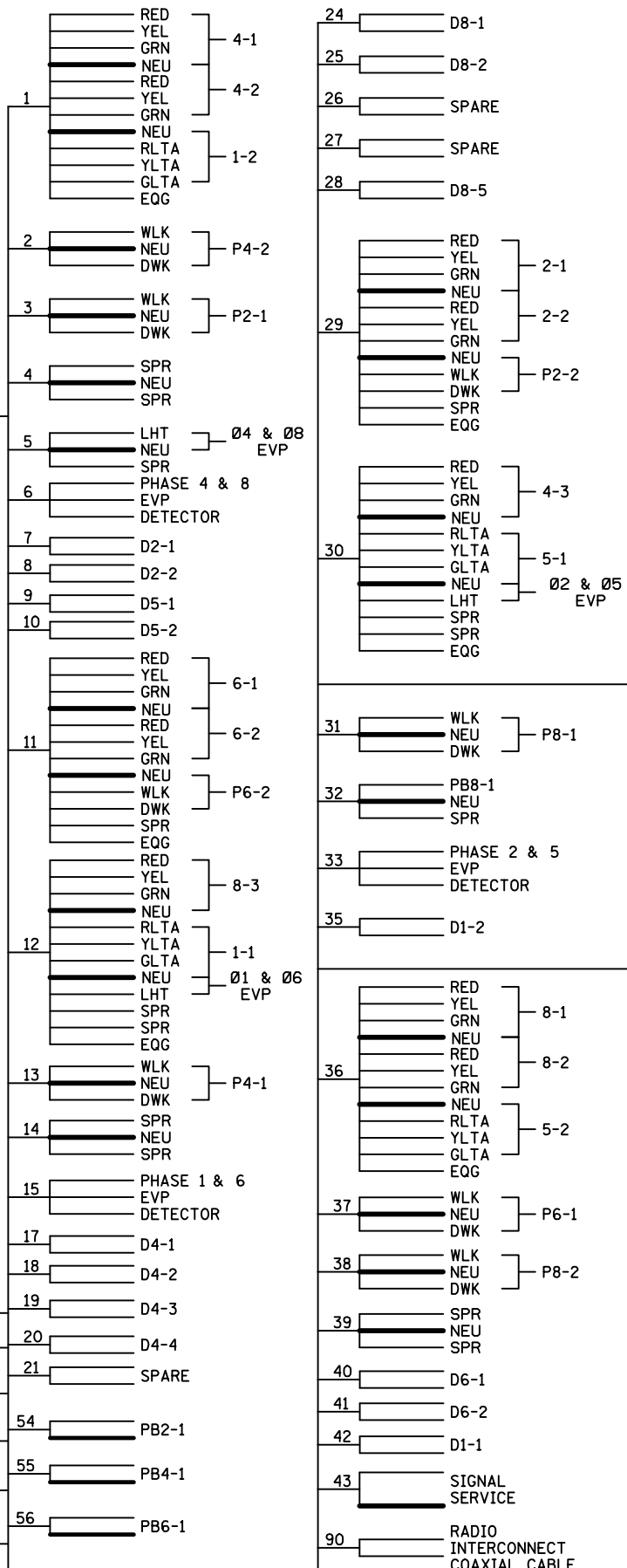


**CONDUCTOR COLOR CODING**

R	R	
O	O	
BL	BL	5/C#12
WH	WH	
R/BLK	R	
O/BLK	WH	3/C#12
BL/BLK	BLK	
WH/BLK	BLK	
BLK	R OR O	3/C#20
BLK/WH	WH OR YEL	
G/BLK	BLK OR BL	
G		
BLK	BLK	2/C#14
WH	CLEAR	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

**CONTROLLER CABINET**



NOTES:  
 1. LUMINAIRES ARE UNMETERED.  
 2. CABLES 21, 22, 26, AND 27 COILED IN HH'S 9 AND 16.

BY	DATE	REVISIONS
J3T	SPT 10 19	SHOWS MISSING LOOP DETECTORS (D8-3, D8-4)

SYSTEM ID: 21906 T.E.  
 METER ADDRESS: ID 1735955  
 OLD SYSTEM ID:

**FIELD WIRING DIAGRAM**  
**T.H. 8 AT GREENWAY AVE.**  
**WYOMING TOWNSHIP, CHISAGO COUNTY**

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.)	SHEET NO. 2	OF 2 SHEETS

