

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. ROUTE 591 (US 34)
SECTION (15)TS-1

TRAFFIC SIGNAL HEAD REPLACEMENT
DEKALB COUNTY

C-93-089-14

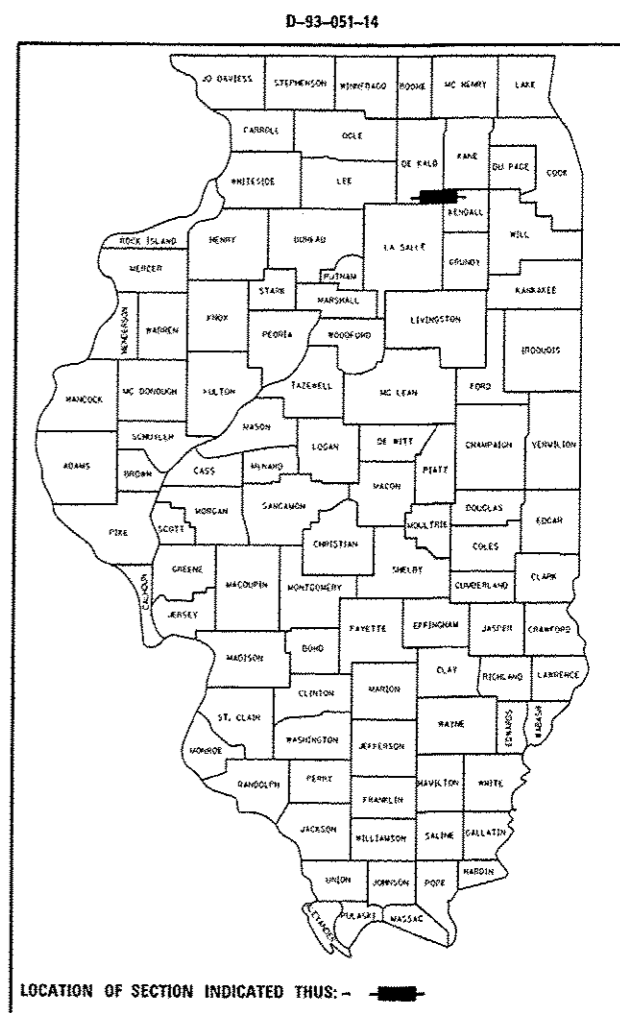
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(15)TS-1	DEKALB	6	1
ILLINOIS		CONTRACT NO. 66067		

INDEX OF SHEETS

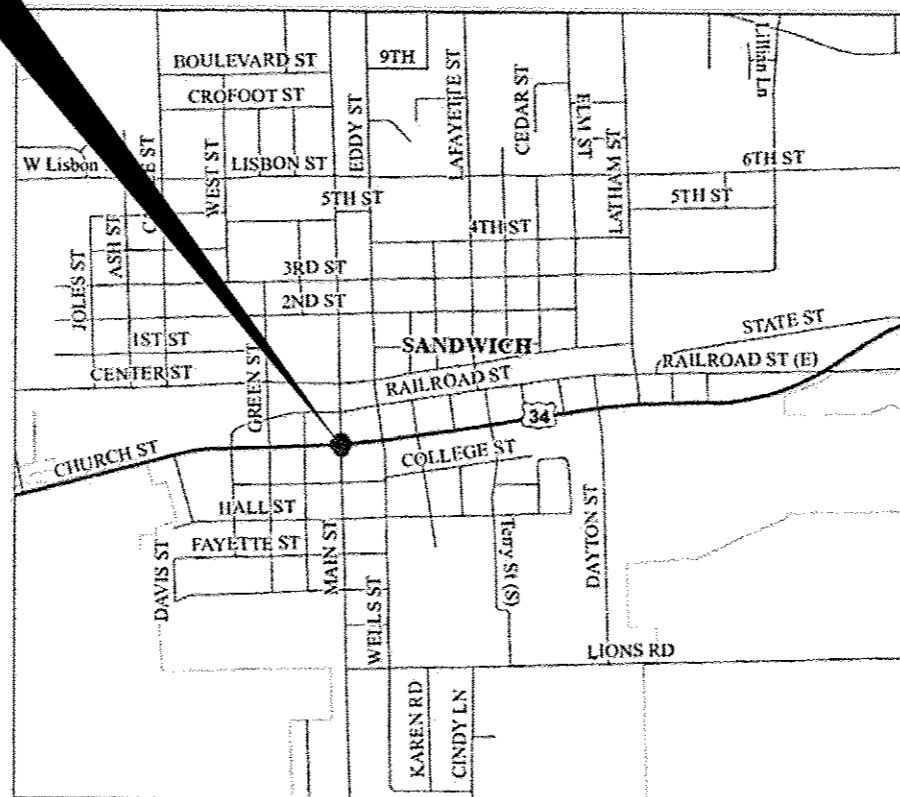
- COVER SHEET
- GENERAL NOTES
- SUMMARY OF QUANTITIES
- OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- PAVEMENT EDGE
- OFF-ROAD OPERATIONS MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE

HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 701001-02 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY FROM PAVEMENT EDGE
- 701006-05 OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701701-09 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701801-05 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-03 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 873001-02 TRAFFIC SIGNAL GROUNDING & BONDING
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS



INTERSECTION OF
US 34 & MAIN STREET



POINT LOCATION

URBAN OTHER ARTERIAL FAP 591 (US 34) 2013		URBAN MINOR ARTERIAL MAIN STREET 2013	
ADT	10700	ADT	4100
P.V.	93.93%	P.V.	96.10%
S.U.	3.50%	S.U.	3.66%
M.U.	2.57%	M.U.	0.24%

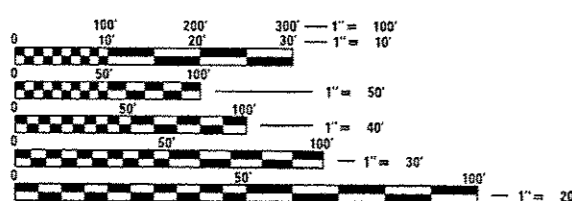
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 15 2014
Paul Loete, P.E.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 27 2014
John D. Baranelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

June 27 2014
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: JOE KANNEL, P.E.
UNIT CHIEF: RON WOODSHANK
TOWNSHIP: SANDWICH
CONTRACT NO. 66D67

GENERAL NOTES

COMMITMENTS:

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL EXCAVATED MATERIAL, WHICH INCLUDES DIGGING OR GRADING OF ANY SOIL OR FILL MATERIAL, WITH THE EXCEPTION OF AGGREGATE FILLS, MUST BE INCORPORATED WITHIN THE IDOT RIGHT OF WAY DUE TO ENVIRONMENTAL DOCUMENTATION REQUIREMENTS.

THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION (JUL.I.E. 800/892-0123). CONTACT IDOT FOR HIGHWAY LIGHTING LOCATE.

THE CONTRACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE

THE CONTRACTOR SHALL CONTACT THE CITY OF SANDWICH (815-789-9321) A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.

THE DEPARTMENT OF TRANSPORTATION (815-434-8505) SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO THE TURNING ON OF THE CONTROLLER UNIT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING THE NEW ELECTRICAL LOADS FOR THE UNMETERED SERVICES ON THIS IMPROVEMENT TO THE UTILITY COMPANY AND AGENCY RESPONSIBLE FOR ENERGY CHARGES; CITY OF SANDWICH, IL.

ALL MAST ARM SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE "RED" INDICATIONS ARE LEVEL WITH EACH OTHER.

THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.

ALL THREADS OF BOLTS USED IN TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.

BACK PLATES SHALL BE POLYCARBONATE WITH A DEEP BACK FLANGE.

THE CONTRACTOR SHALL PROVIDE 3 FEET SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE: MAST ARM, POST, CONTROLLER, THE SLACK, WHICH IS IN ADDITION TO THE VERTICAL LENGTH OF THE CABLE DEFINED IN THE SPECIFICATIONS, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH CABLE.

ALL EXISTING HANDHOLES WHICH ARE TO BE RE-USED SHALL BE THOROUGHLY CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS, OR FOREIGN MATTER OF ANY KIND AND HAVE NEW AGGREGATE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS. EXISTING GROUND RODS SHALL BE RE-SET TO PROJECT ONLY TEN (10) INCHES OF ROD ABOVE HANDHOLE BASE OR PROVIDE IF NOT PRESENT, THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT CONSIDERED INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEM.

THE CONTRACTOR SHALL PROVIDE A SELF ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.

SIGNAL HEADS SHALL HAVE BLACK HOUSING AND BLACK POLYCARBONATE BRACKETS.

TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.

ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM THE CONTROLLER TO SIGNAL. SPLICES IN HANDHOLES WILL NOT BE ALLOWED.

ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED; CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.

DATE: 5-15-14

PREPARED BY: Don Bonvil
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: Halv Arnesen
DISTRICT CONSTRUCTION ENGINEER

Harold Phillips
DISTRICT MATERIALS ENGINEER

Bruce A. Anderson
DISTRICT OPERATIONS ENGINEER

FILE NAME *	USER NAME * ahamedh	DESIGNED - HASAN AHMED	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\p\idot\ahmedh\0300033\0366\27-sh-1-do-tails.dgn	DRAWN - HASAN AHMED	REVISIED -	591			(15)TS-1	DEKALB	6	2	
PLOT SCALE * 100.0000 1" = 10'	CHECKED -	REVISED -	CONTRACT NO. 66D67							
PLOT DATE * 5/5/2014	DATE -	REVISED -	[ILLINOIS] FED. AID PROJECT							
#MODEL NAME *				SCALE:	SHEET 1 OF 1 SHEETS	STA.	TO STA.			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				STATE FUNDS 100% TRAFFIC SIGNALS 0021 URBAN
67100100	MOBILIZATION	L SUM	1	1
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1
* 72000100	SIGN PANEL - TYPE 1	SO FT	10	10
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	340	340
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	400	400
88040150	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2	2
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	4	4
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1

11

FILE NAME *	USER NAME * ahmedh	DESIGNED - HASAN AHMED	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\pwork\ahmedh\030003\0366657-sh-t-details.dgn	DRAWN - HASAN AHMED	RECHECKED -	REVISED -			591	(15)TS-1	DEKALB	6	3
PLOT SCALE * 1/8" = 1' / in.	CHECKED -	RECHECKED -	REVISED -			CONTRACT NO. 66D67				
PLOT DATE * 5/5/2014	DATE -	RECHECKED -	REVISED -			ILLINOIS FED. AID PROJECT				
#MOFLNAME*				SCALE:	SHEET 1 OF 1 SHEETS	STA. TO STA.				

** Specialty Items*

CONSTRUCTION NOTES:

MODIFY EXISTING CONTROLLER AND CABINET.

EXISTING DETECTOR LOOP LEAD-IN CABLE TO REMAIN IN PLACE.

REMOVE EXISTING 3-SECTION LED HEAD ON THE SOUTHEAST MAST ARM AND REPLACE WITH 5-SECTION LED HEAD. RE USE EXISTING WIRING.

REMOVE EXISTING 3-SECTION LED HEAD ON THE NORTHWEST MAST ARM AND REPLACE WITH 5-SECTION LED HEAD. RE USE EXISTING WIRING.

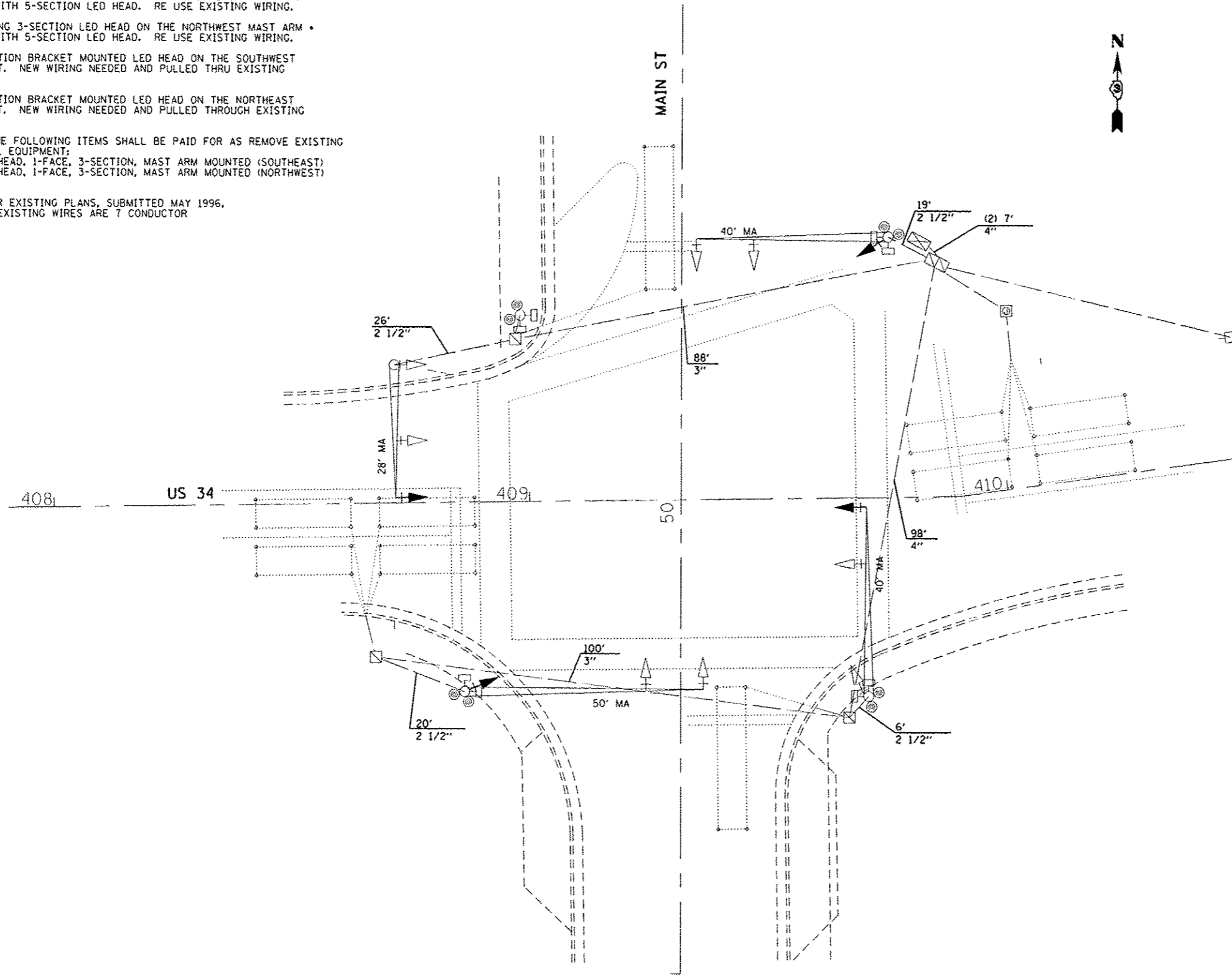
INSTALL 5-SECTION BRACKET MOUNTED LED HEAD ON THE SOUTHWEST MAST ARM POST. NEW WIRING NEEDED AND PULLED THRU EXISTING CONDUIT.

INSTALL 5-SECTION BRACKET MOUNTED LED HEAD ON THE NORTHEAST MAST ARM POST. NEW WIRING NEEDED AND PULLED THROUGH EXISTING CONDUIT.

REMOVAL OF THE FOLLOWING ITEMS SHALL BE PAID FOR AS REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT:

- SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED (SOUTHEAST)
- SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED (NORTHWEST)

• PER EXISTING PLANS, SUBMITTED MAY 1996, THE EXISTING WIRES ARE 7 CONDUCTOR



NOTE: REMOVED TRAFFIC SIGNAL HEADS SHALL BE DELIVERED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, 700 EAST NORRIS DRIVE OTTAWA, IL 61350

TRAFFIC SIGNALS LEGEND

- EXISTING CONTROLLER CABINET
- EXISTING SERVICE INSTALLATION
- EXISTING CONDUIT
- EXISTING SIGNAL HEAD WITH BACKPLATE
- PROPOSED SIGNAL HEAD WITH BACKPLATE
- EXISTING COMBINATION STEEL MAST ARM ASSEMBLY
- EXISTING TRAFFIC SIGNAL POST
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING JUNCTION BOX
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING PEDESTRIAN PUSH BUTTON
- EXISTING DETECTOR LOOP
- EXISTING CONDUIT LENGTH AND SIZE PER EXISTING PLANS

FILE NAME * 036667-SHT-TS-PLAN-US34-MAIN

USER NAME * ARR
 PLOT SCALE * 1" = 20'
 PLOT DATE * 02/14

DESIGNED - JKC
 DRAWN - ARR
 CHECKED - JKC
 DATE - 02/14

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL PLAN
 FAP 591 (US 34) AND MAIN STREET

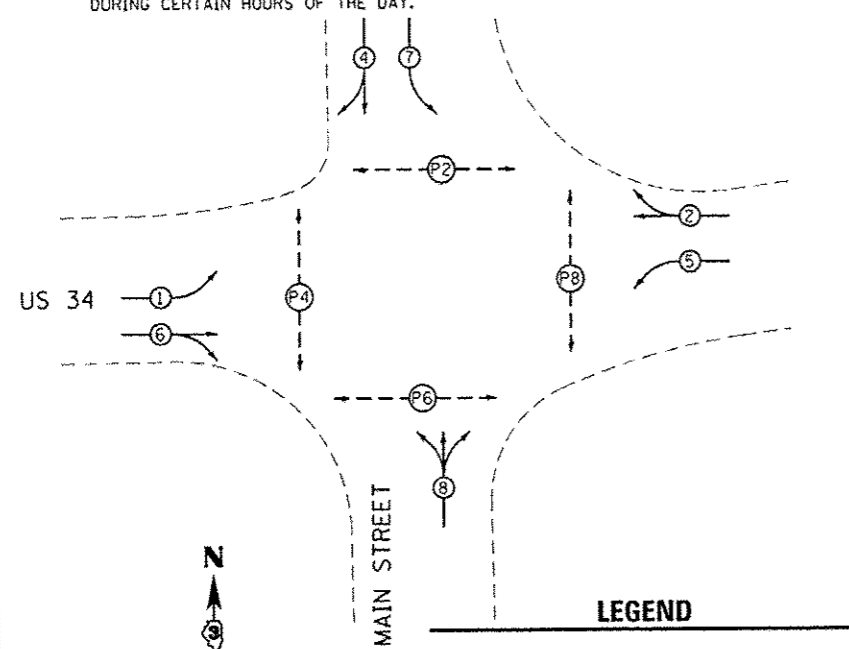
SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	(15)TS-1	DEKALB	6	4
CONTRACT NO. 66D67				
ILLINOIS FED. AID PROJECT				

CONTROLLER SEQUENCE

NAME OF INTERSECTION: US 34 AND MAIN STREET
 CONTROLLER SPECIFIED: FULL-ACTUATED CONTROLLER, STANDARD SEQUENCE II, 8 PHASE, IN TYPE IV CABINET REFERRING TO STANDARD 857001. THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED.

NOTE: THE DETECTOR LOOP ON THE NORTH APPROACH SHALL CALL BOTH PHASES 4 & 7. PHASE 7 WILL BE OMITTED DURING CERTAIN HOURS OF THE DAY.



PROPOSED PLAN
 NOT TO SCALE

LEGEND

- VEHICULAR MOVEMENT
- PEDESTRIAN MOVEMENT
- * NUMBER REFERS TO ASSOCIATED PHASE

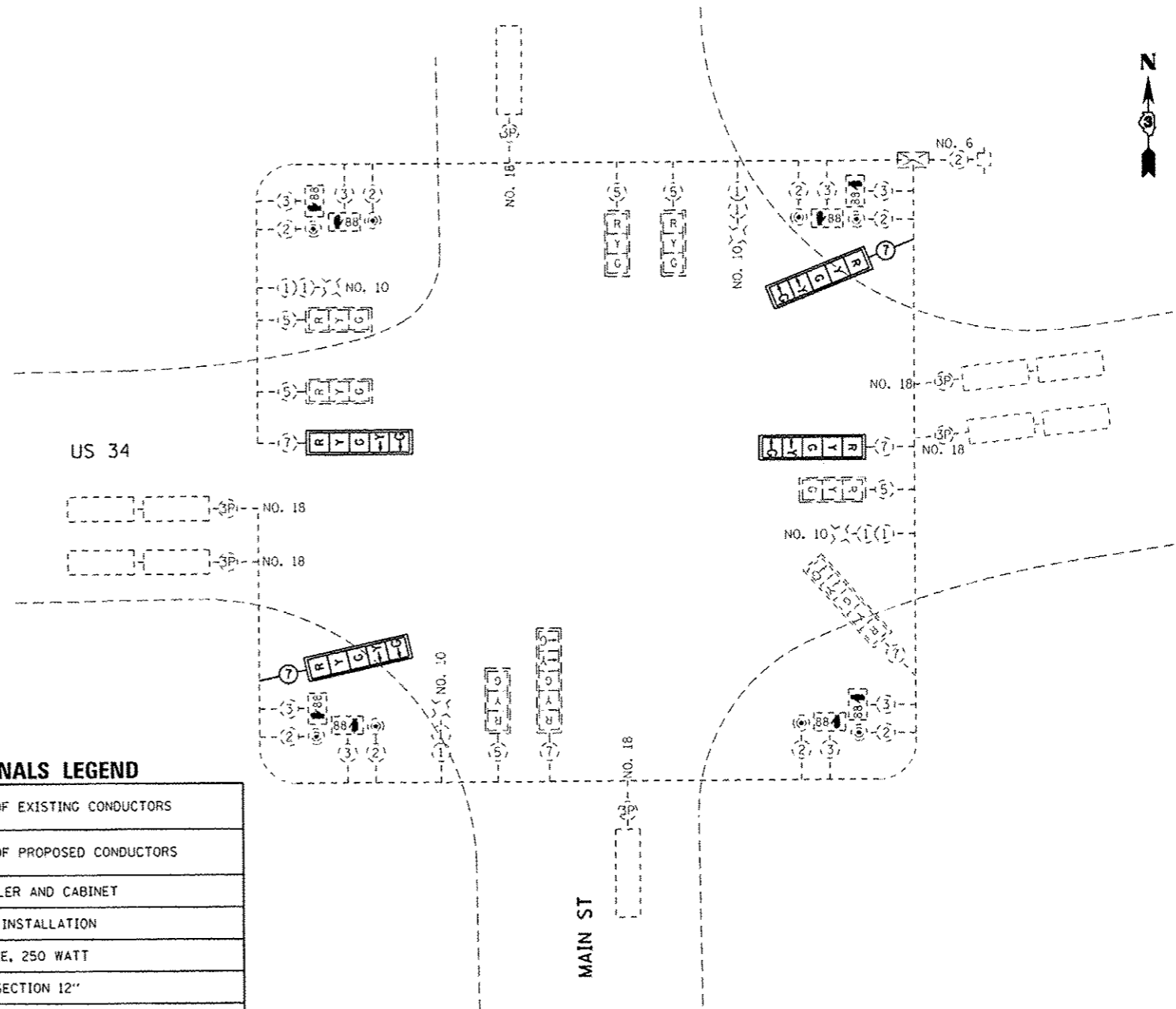
TRAFFIC SIGNALS LEGEND

	DENOTES NUMBER OF EXISTING CONDUCTORS
	DENOTES NUMBER OF PROPOSED CONDUCTORS
	EXISTING CONTROLLER AND CABINET
	EXISTING SERVICE INSTALLATION
	EXISTING LUMINAIRE, 250 WATT
	EXISTING SIGNAL SECTION 12"
	SIGNAL SECTION 12"
	LEFT TURN GREEN
	LEFT TURN YELLOW
	EXISTING PEDESTRIAN PUSH BUTTON
	EXISTING WALK/DON'T WALK WITH COUNT DOWN TIMER
	EXISTING TRAFFIC SIGNAL BACKPLATE
	PROPOSED TRAFFIC SIGNAL BACKPLATE
	EXISTING VEHICLE DETECTOR, INDUCTION LOOP

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROPOSED CABLE PLAN

NOT TO SCALE



FILE NAME *
 D366067-SHT-TS-CABLE-US34-MAIN.DGN

USER NAME * **
 PLOT SCALE * 1" = 20'
 PLOT DATE * 02/14

DESIGNED - JKC
 DRAWN - ARR
 CHECKED - JKC
 DATE - 02/14

REVISED - ---
 REVISED - ---
 REVISED - ---
 REVISED - ---

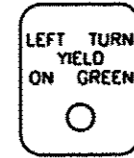
TRAFFIC SIGNAL CABLE PLAN
 FAP 591 (US 34) AND MAIN STREET
 SCALE: 1" = 20' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 591	SECTION (15)TS-1	COUNTY DEKALB	TOTAL SHEETS 6	SHEET NO. 5
CONTRACT NO. 66D67				
ILLINOIS FED. AID PROJECT				

ELECTRICAL LOAD FOR INTERSECTION				
STREET NAME	COMPONENT	NUMBER	WATTAGE EACH	BURNTIME %
US 34	RED	6	11	32
	YELLOW	6	22	4
	GREEN	6	15	63
	YELLOW ARROW LT.	4	10	4
	GREEN ARROW LT.	4	11	11
	☉☉☉☉	4	20	100
MAIN STREET	RED	5	11	84
	YELLOW	5	22	3
	GREEN	5	15	14
	YELLOW ARROW LT.	2	10	4
	GREEN ARROW LT.	2	11	11
	☉☉☉☉	4	20	100
TRAFFIC SIGNAL CABINET	CONTROLLER	1	6	100
	UPS	1	50	100
	VEHICLE DETECTORS	6	4	100
LIGHTING	LUMINAIRE	4	250	100

AGENCY RESPONSIBLE FOR TRAFFIC SIGNAL ENERGY CHARGES:
CITY OF SANDWICH, IL

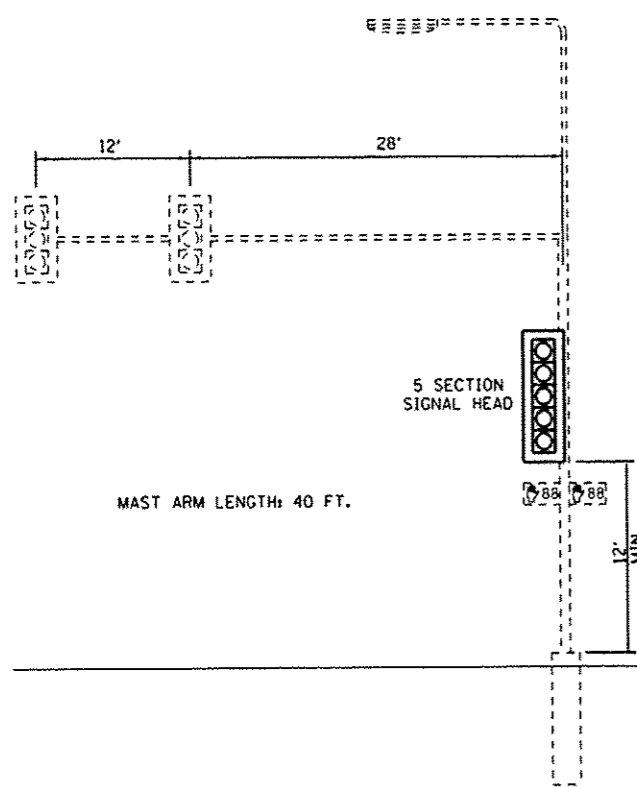
NOTE: ALL SIGNAL HEADS
HAVE BACKPLATES



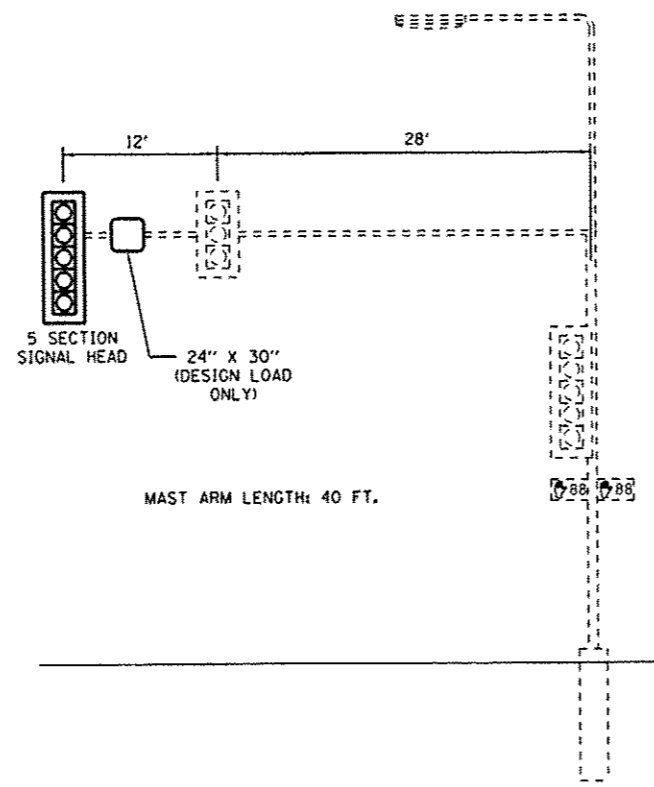
R10 - 12
24" X 30"

TYPE A SHEETING REQUIRED
2 SIGNS REQUIRED = 5 SQ.FT. EACH
= 10 SQ.FT. TOTAL

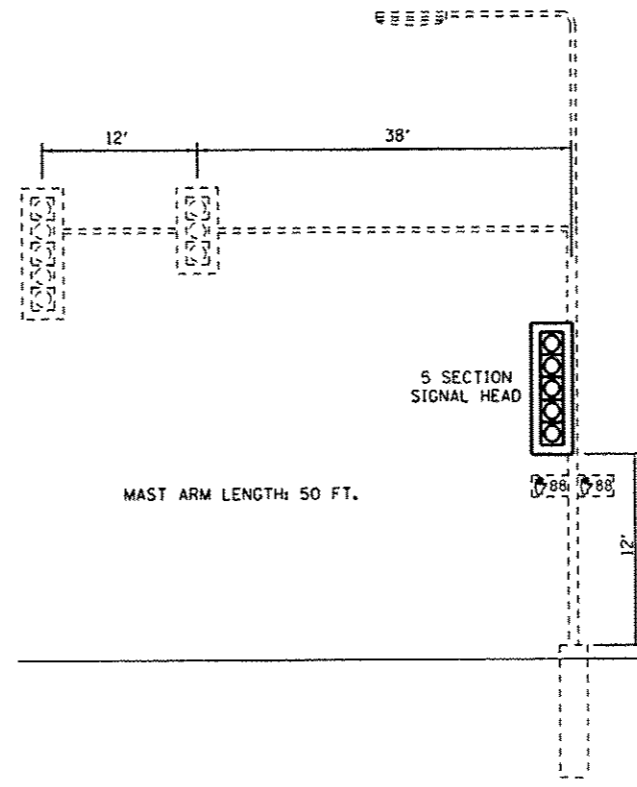
THIS SIGN SHALL BE LOCATED 6 TO 12
INCHES TO THE RIGHT OF EACH 5 SECTION
MAST ARM MOUNTED LEFT TURN SIGNAL



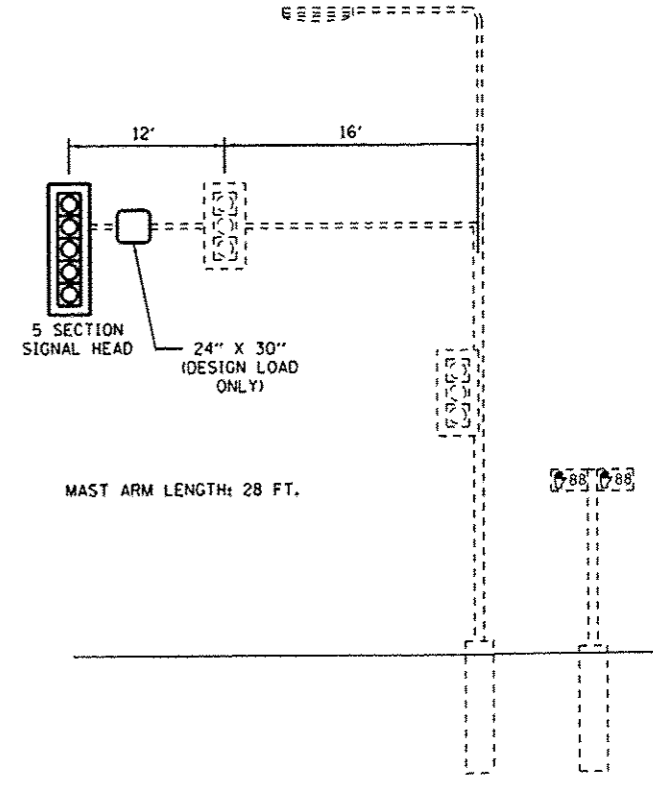
NORTHEAST CORNER
NOT TO SCALE



SOUTHEAST CORNER
NOT TO SCALE



SOUTHWEST CORNER
NOT TO SCALE



NORTHWEST CORNER
NOT TO SCALE

FILE NAME 0366067-SHT-TS-DETAILS-US34-MAIN.DGN	USER NAME ARR	DESIGNED JJK	REVISED -
PLOT SCALE 1" = 20'	CHECKED ARR	DATE 02/14	REVISED -
PLOT DATE 02/14	CHECKED JKC	DATE 02/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL DETAILS		F.A.P. RTE. 591	SECTION (15)TS-1	COUNTY DEKALB	TOTAL SHEETS 6	SHEET NO. 6
SCALE 1" = 20'	SHEET 1	OF 1	SHEETS	STA. TO STA.		

F.A.P. RTE. 591	SECTION (15)TS-1	COUNTY DEKALB	TOTAL SHEETS 6	SHEET NO. 6
CONTRACT NO. 66067				
ILLINOIS FED. AID PROJECT				