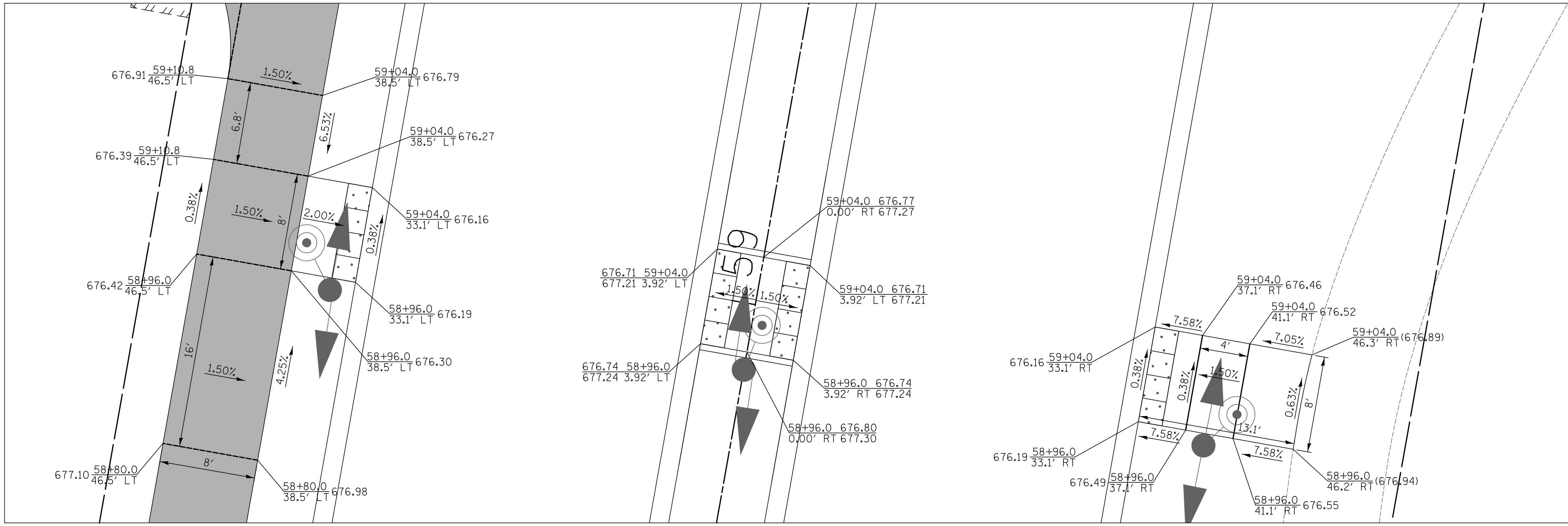
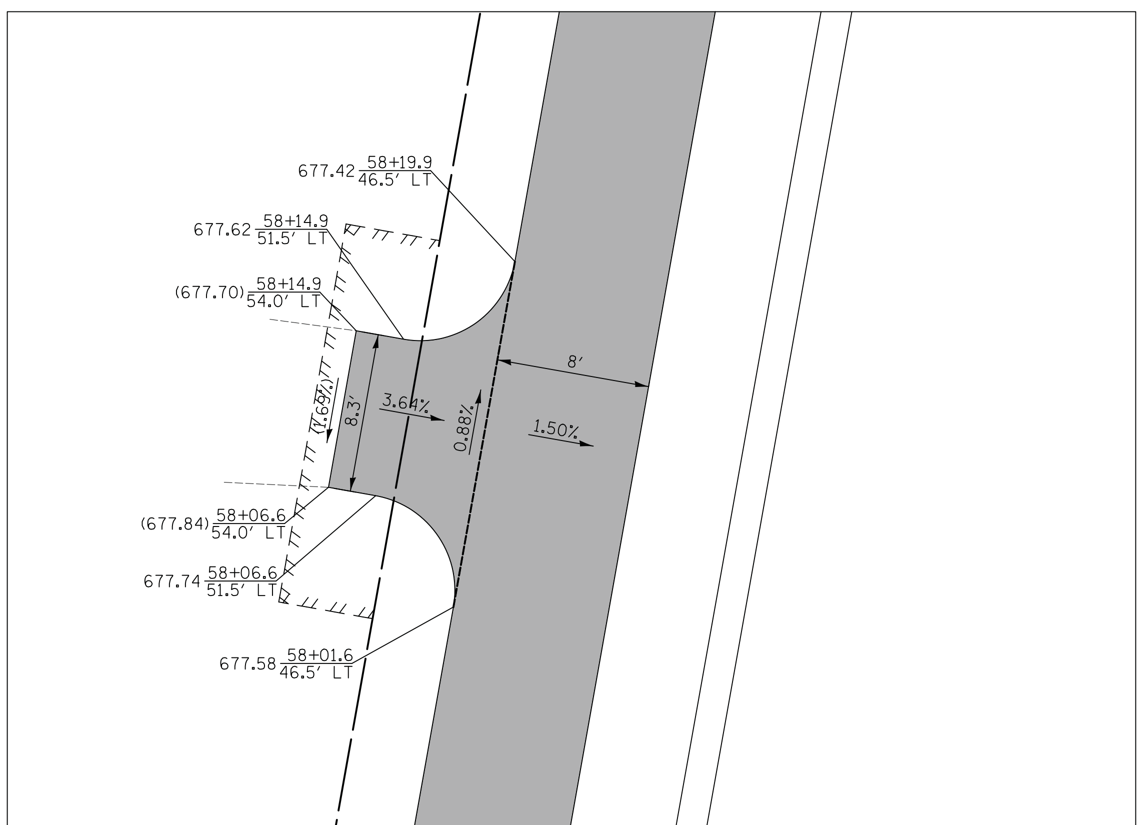
FINAL SURVEY	BY	DATE
NOTE BOOK NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

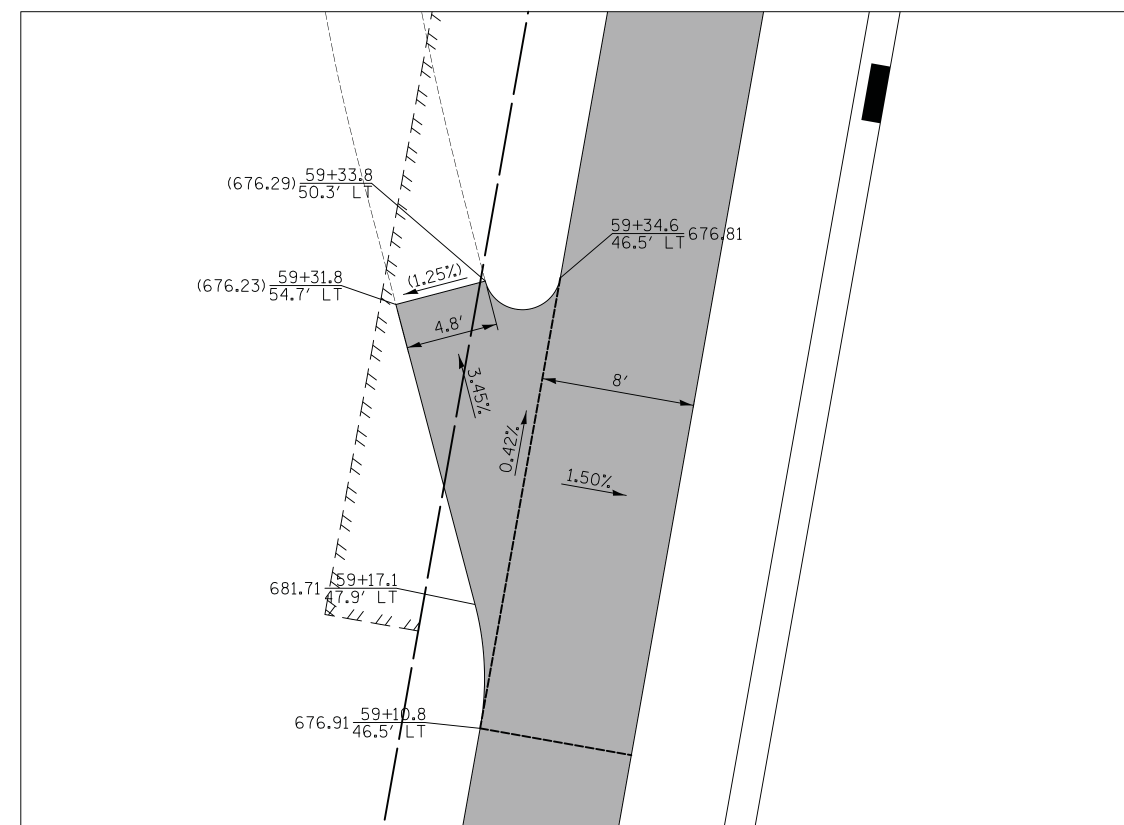
ORIGINAL SURVEY	BY	DATE
NOTE BOOK NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



MID BLOCK CROSSING
STA. 58+96



MATCH EXISTING PATH
AT STA. 58+11



MATCH EXISTING PATH
AT STA. 59+33

N

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CHECKED - JRV	REVISED -
DATE - 10/8/2018	REVISED -

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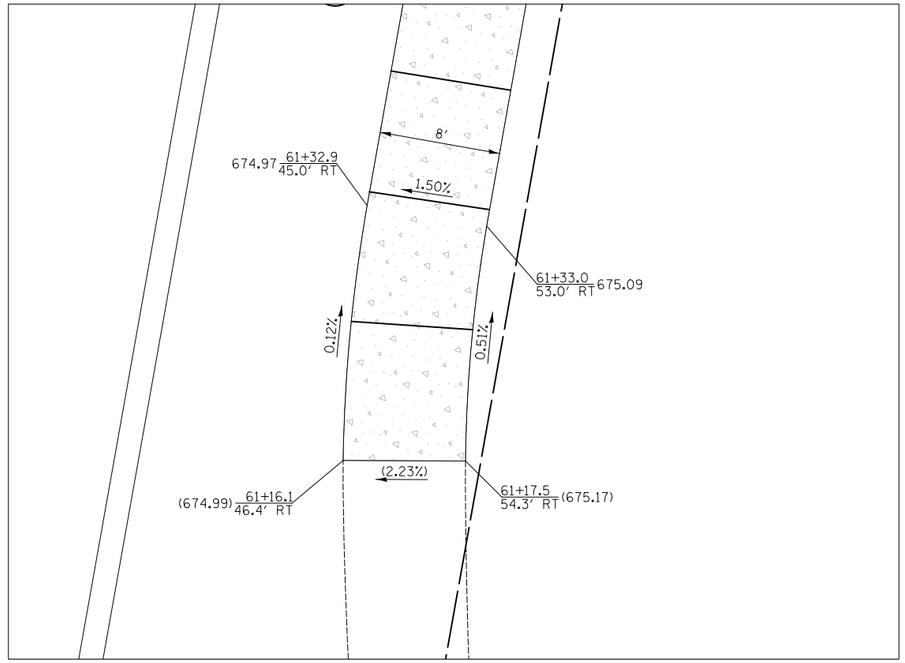
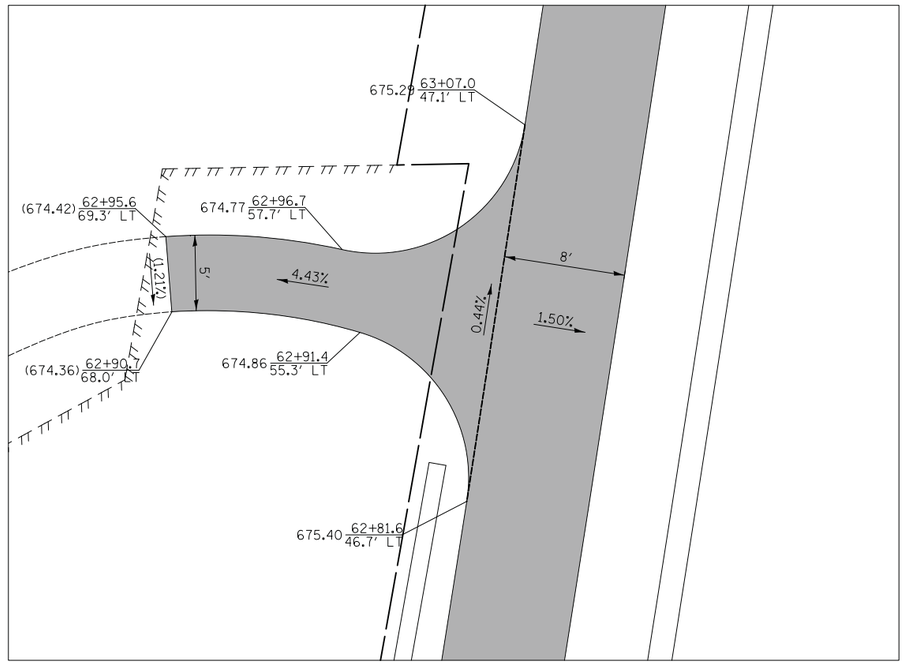
SIDEWALK RAMP DETAILS

SHEET NO. 13 OF 17 SHEETS STA. TO STA.

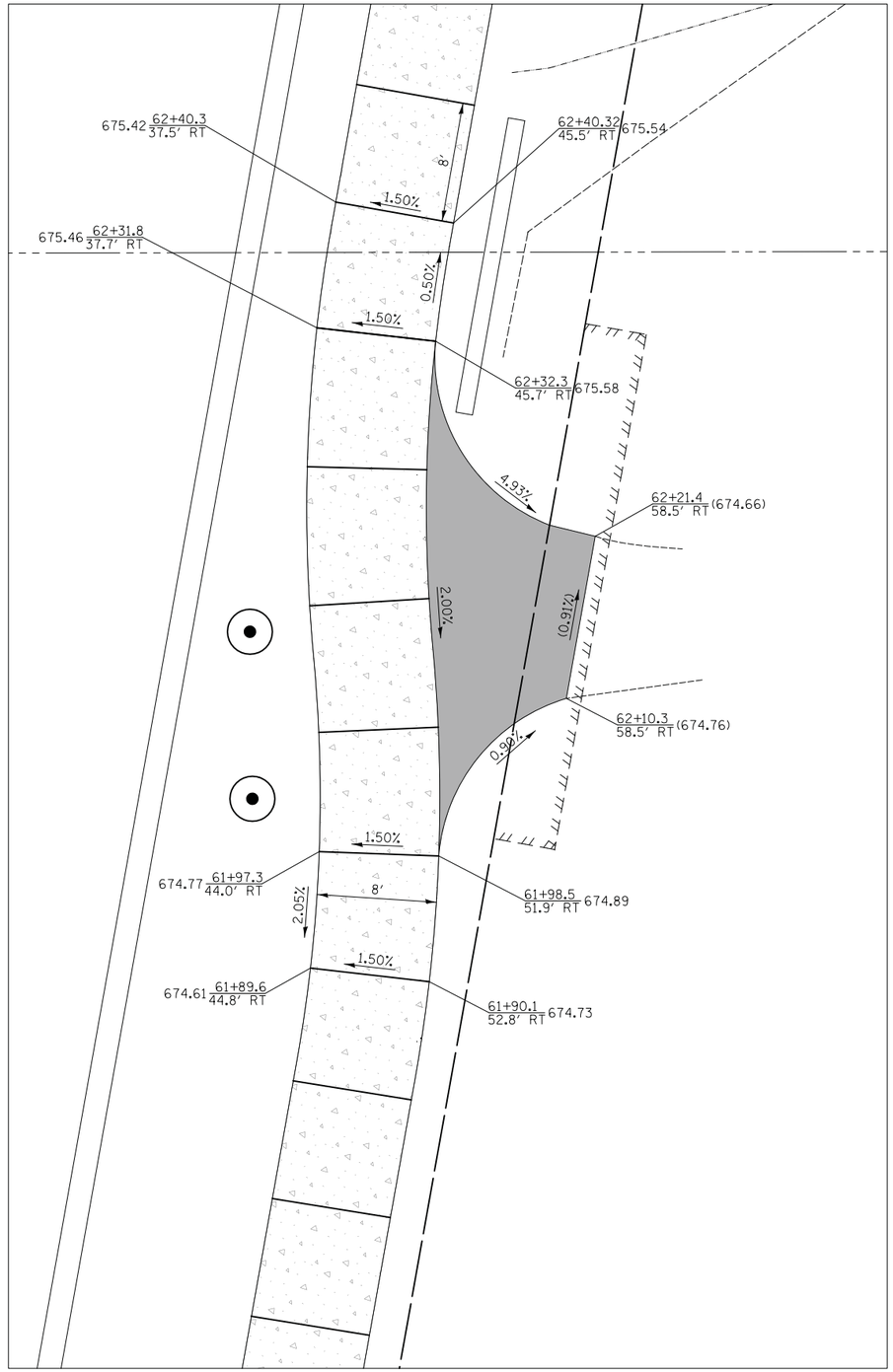
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	201
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MATCH EXISTING PATH
AT STA. 61+17



MATCH EXISTING PATH
AT STA. 62+93



MATCH EXISTING PATH
AT STA. 62+15

FINAL SURVEY

NO.	NOTE BOOK	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY

NO.	NOTE BOOK	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

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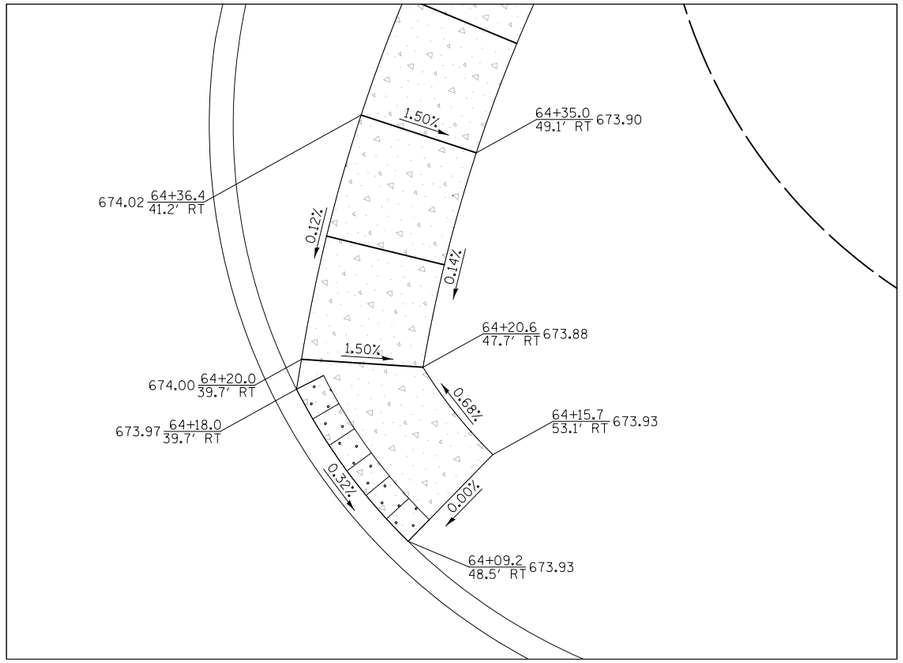
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
0 5 10

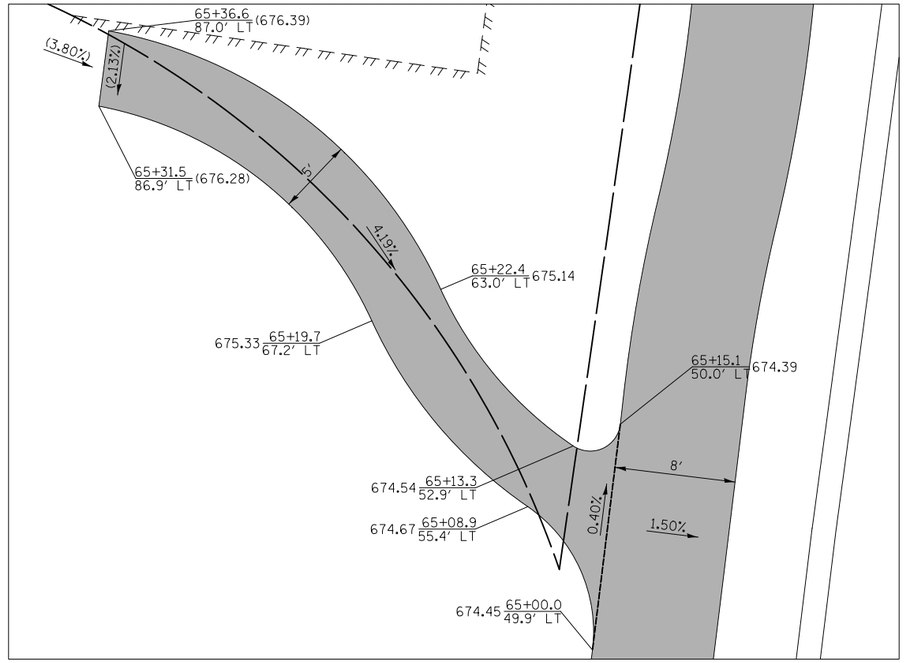
SIDEWALK RAMP DETAILS

SHEET NO. 14 OF 17 SHEETS | STA. | TO STA.

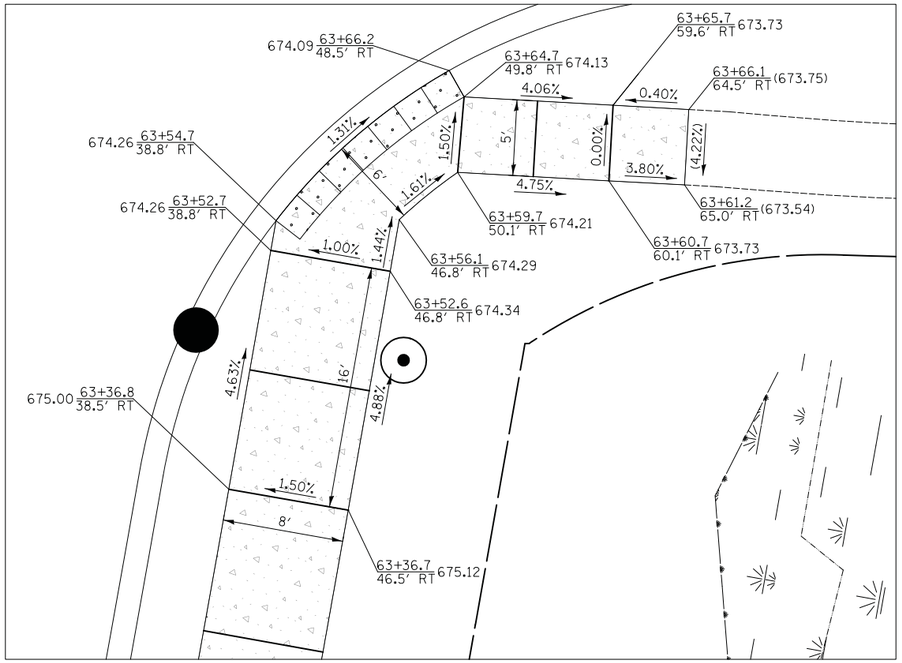
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	202
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



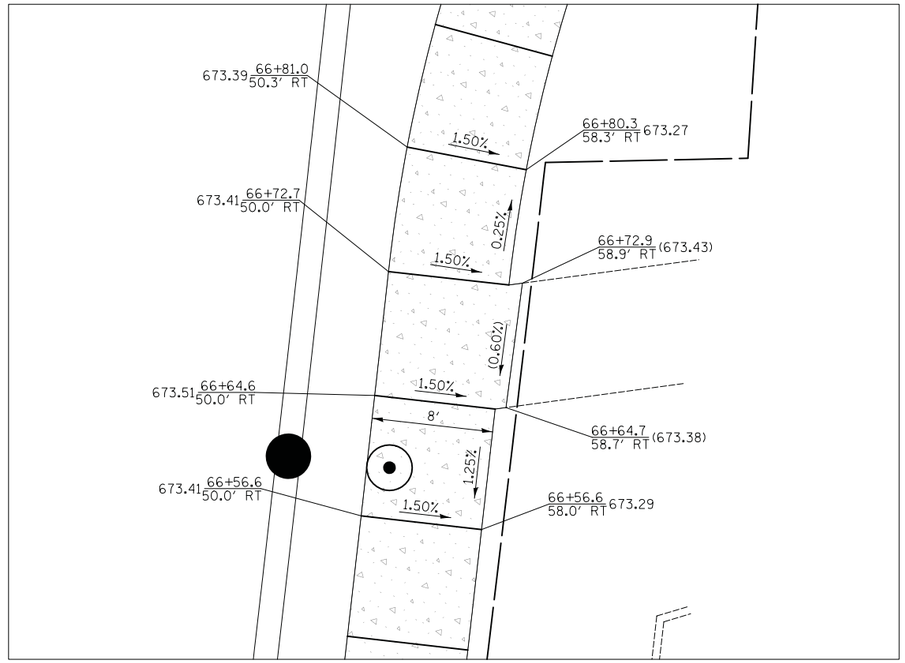
NORTHEAST CORNER CROSSWALK
WEILAND RD. AND MARVINS WAY



MATCH EXISTING PATH
AT STA. 65+34



SOUTHEAST CORNER CROSSWALK
WEILAND RD. AND MARVINS WAY



MATCH EXISTING PATH
AT STA. 66+80

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

DATE	BY

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DRAWN - PK	REVISED -	
CHECKED - JRV	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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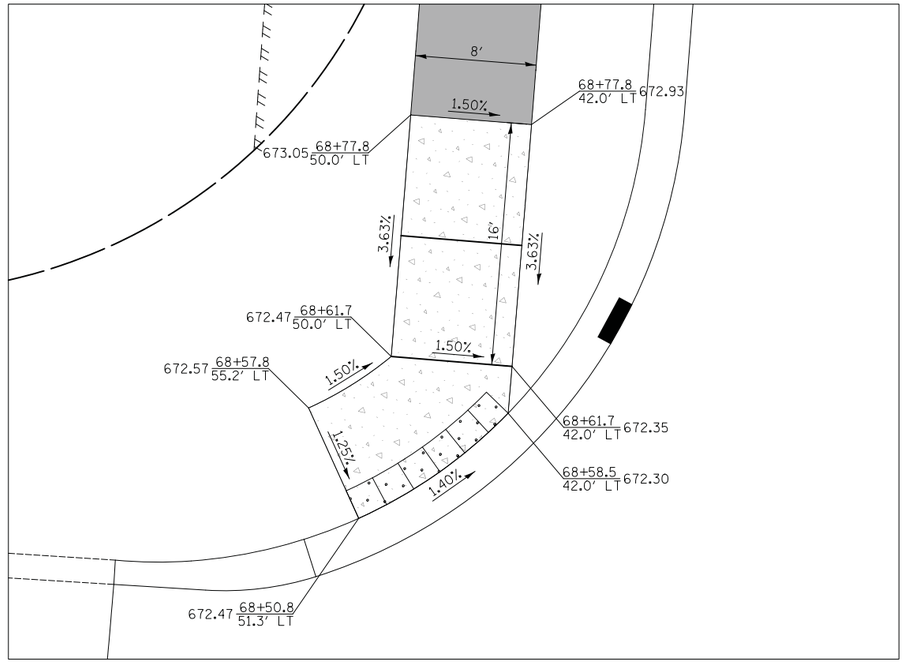
0 5 10

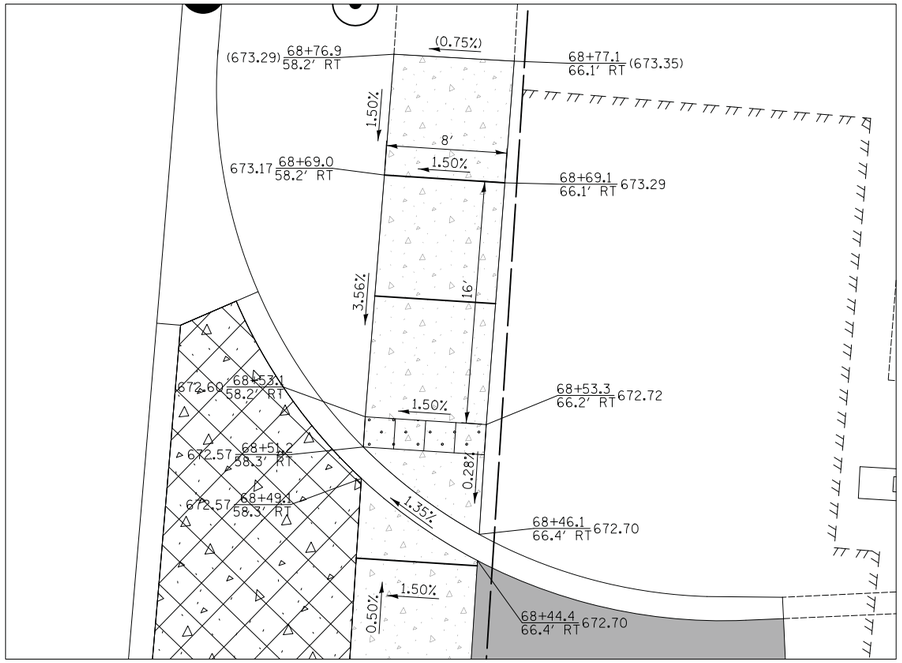
SIDEWALK RAMP DETAILS

SHEET NO. 15 OF 17 SHEETS | STA. | TO STA.

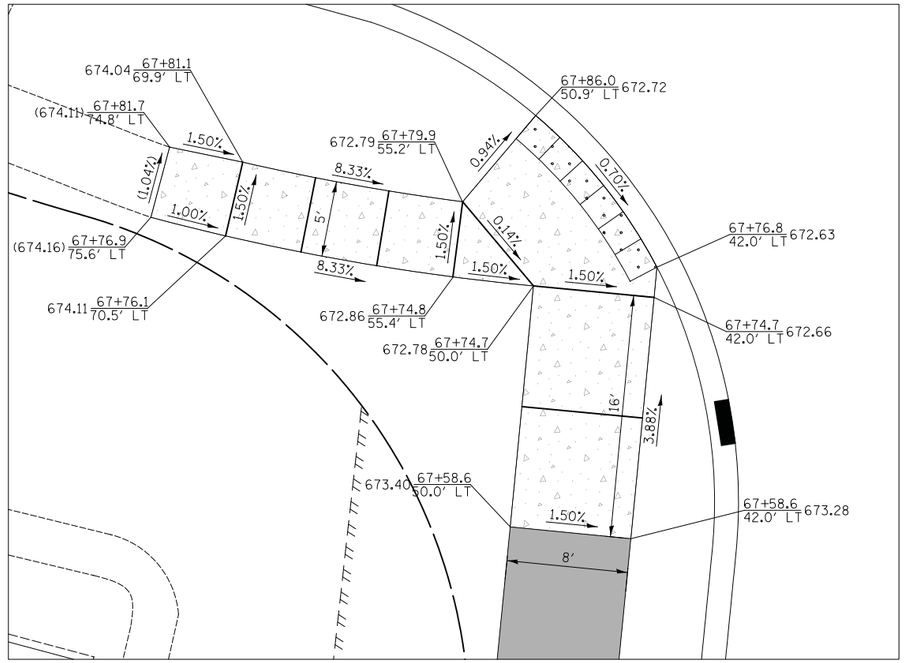
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	203
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NORTHWEST CORNER CROSSWALK
WEILAND RD. AND BENTLEY PL.



NORTH RAMP
DRIVEWAY AT STA. 68+24



SOUTHWEST CORNER CROSSWALK
WEILAND RD. AND BENTLEY PL.

SOUTH RAMP
DRIVEWAY AT STA. 68+24

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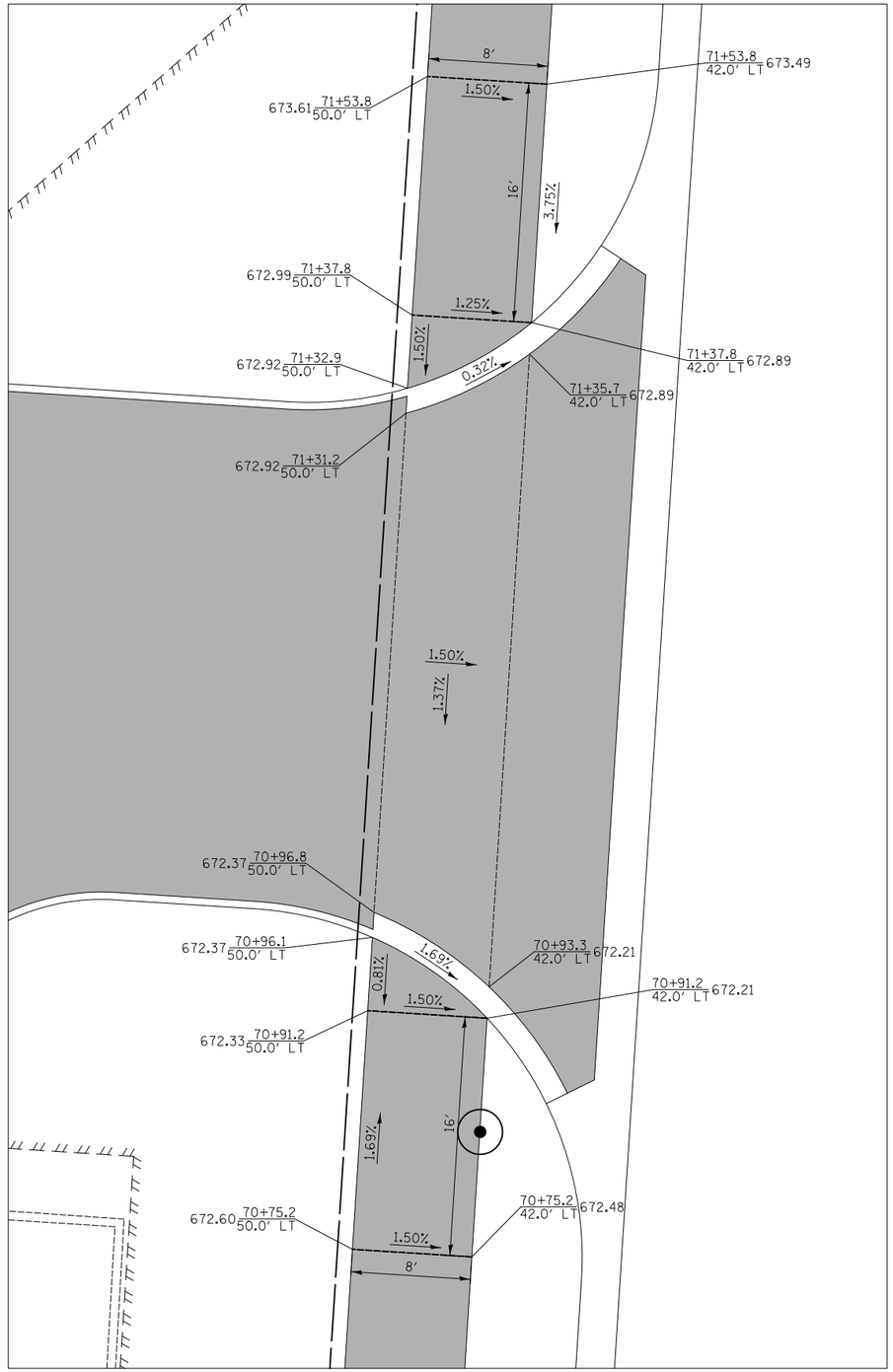
SIDEWALK RAMP DETAILS

SHEET NO. 16 OF 17 SHEETS | STA. | TO STA.

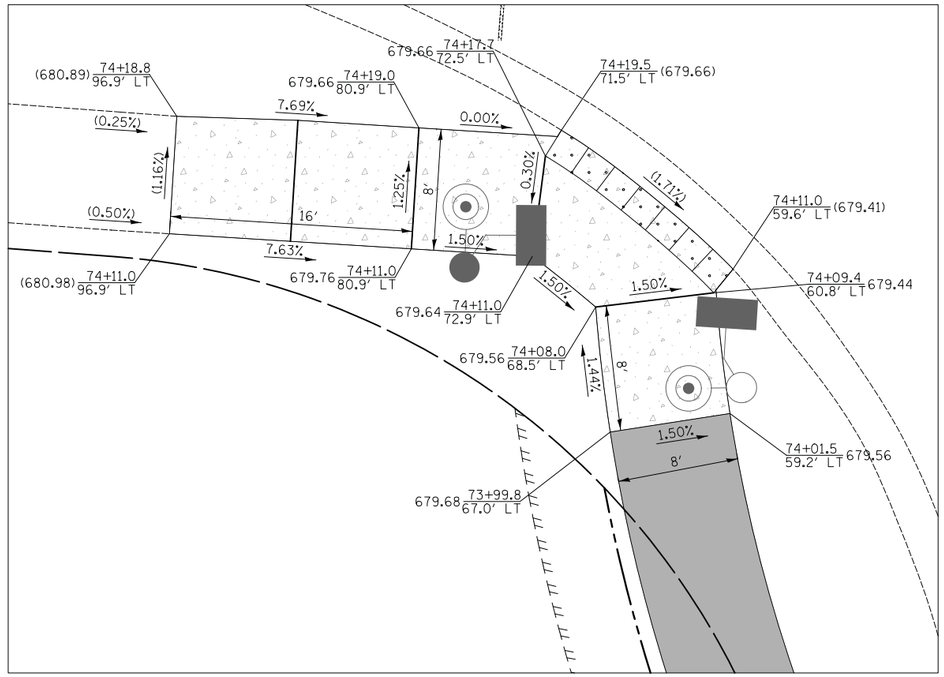
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	204
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE



DRIVEWAY AT STA. 71+14



SOUTHWEST CORNER CROSSWALK
WEILAND RD. AND DEERFIELD PKWY.

N

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
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SURVEYED
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DEPARTMENT OF TRANSPORTATION

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0 5 10

SIDEWALK RAMP DETAILS

SHEET NO. 17 OF 17 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	205
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

BEGIN ROADWAY IMPROVEMENTS STA 18+25.0 (MATCH EXISTING)

DOUBLE YELLOW CENTERLINE 11'' C-C (TYP) THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

WOODSTONE DRIVE

WHITE LETTERS AND SYMBOLS (TYP) THPL PVT MK LTR & SYM GRV RCSD PM LRT & SYM

R3-5R TO BE REMOVED

R2-1 TO BE RELOCATED TO STA 25+30, 50.0' LT

W6-1 TO BE REMOVED

R1-6A (12'' X 36'') STA 29+13, 0.0' RT

R1-6A (12'' X 36'') STA 29+28, 0.0' RT

R1-5B (36'' X 36'') STA 29+75, 35.4' LT

PT PVT MK - RAISED MED (TYP)

MATCH LINE STA 30+00 SEE BELOW

YELLOW MEDIAN DIAGONALS @ 45° THPL PVT MK LINE, 12'' GRV RCSD PVT MRKG 13'' (50' C-C)

WHITE DASHED LANE LINE (TYP) 10' DASH - 30' SKIP THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

RECESSED REFLECTIVE PAVEMENT MARKER WHITE AND RED (TYP)

W4-2 TO BE REMOVED

YELLOW LANE LINE (TYP) THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

YELLOW LANE LINE (TYP) 10' DASH - 30' SKIP THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

R2-1 TO BE RELOCATED TO STA 25+30, 42.8' RT

W11-2 (36'' X 36'') W16-9P (24'' X 12'') STA 26+75, 36.1' RT

WHITE EDGE LINE (TYP) THPL PVT MK LINE, 5'' GRV RCSD PVT MRKG 6''

WHITE STOP LINE (TYP) THPL PVT MK LINE, 24'' GRV RCSD PVT MRKG 25''

R1-5B (36'' X 36'') STA 28+67, 36.1' RT

8' WHITE PED BARS (TYP) 24'' SPACING THPL PVT MK LINE, 12'' GRV RCSD PVT MRKG 13''

NOTE:

1. SEE SIGNAL PLANS FOR ADDITIONAL SIGNING INFORMATION.

WEILAND ROAD

PAULINE AVENUE

SPECIAL TO BE RELOCATED TO STA 34+88, 149.3' LT

SPECIAL TO BE RELOCATED TO STA 34+96, 119.4' LT

W11-2 (36'' X 36'') W16-9P (24'' X 12'') STA 30+60, 50.0' LT

R2-1 TO BE RELOCATED FROM LIGHT POLE AT STA 37+55, 47.8' LT TO STA 33+75, 48.8' LT

MATCH LINE STA 30+00 SEE ABOVE

WHITE EDGE LINE (TYP) THPL PVT MK LINE, 5'' GRV RCSD PVT MRKG 6''

WHITE DASHED LANE LINE (TYP) 2' DASH - 6' SKIP THPL PVT MK LINE, 6'' GRV RCSD PVT MRKG 7''

280' STORAGE

WHITE LANE LINE (TYP) THPL PVT MK LINE, 6'' GRV RCSD PVT MRKG 7''

WHITE DASHED LANE LINE (TYP) 10' DASH - 30' SKIP THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

W3-3, W16-8P TO BE RELOCATED TO STA 30+40, 40.0' RT

8' WHITE PED BARS (TYP) 24'' SPACING THPL PVT MK LINE, 12'' GRV RCSD PVT MRKG 13''

R2-1 TO BE RELOCATED TO STA 37+05, 45.8' RT

RECESSED REFLECTIVE PAVEMENT MARKER WHITE AND RED (TYP) PT PVT MK - RAISED MED (TYP)

185' STORAGE

R4-7 (24'' X 30'') STA 38+98, 1.9' RT

W3-3, W16-8P TO BE RELOCATED FROM LIGHT POLE TO STA 39+81, 49.0' LT

R4-7 (24'' X 30'') STA 41+62, 0.0' LT

YELLOW EDGE LINE (TYP) THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

YELLOW MEDIAN DIAGONALS @ 45° THPL PVT MK LINE, 12'' GRV RCSD PVT MRKG 13'' (15' C-C)

WHITE LETTERS AND SYMBOLS (TYP) THPL PVT MK LTR & SYM GRV RCSD PM LTR & SYM

DOUBLE YELLOW CENTERLINE 11'' C-C (TYP) THPL PVT MK LINE, 4'' GRV RCSD PVT MRKG 5''

6' WHITE PED BARS 24'' SPACING THPL PVT MK LINE, 12'' GRV RCSD PVT MRKG 13''

WHITE STOP LINE (TYP) THPL PVT MK LINE, 24'' GRV RCSD PVT MRKG 25''

R1-1 TO BE RELOCATED TO STA 42+51, 45.0' RT

D3-1, D3-1 TO BE RELOCATED TO STA 42+61, 45.5' RT

MATCH LINE STA 43+00 SEE SHEET NO 207

WEILAND ROAD

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ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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PAVEMENT MARKING AND SIGNING

SHEET NO. 1 OF 3 SHEETS | STA. 17+00.0 | TO STA. 43+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	206
		CONTRACT NO. 61E24		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

MATCH LINE STA 43+00
SEE SHEET NO 206

WHITE LANE LINE (TYP)
THPL PVT MK LINE, 6"
GRV RCSD PVT MRKG 7"

WHITE LETTERS AND SYMBOLS (TYP)
THPL PVT MK LTR & SYM
GRV RCSD PM LTR & SYM

WHITE DASHED LANE LINE (TYP)
2' DASH - 6' SKIP
THPL PVT MK LINE, 6"
GRV RCSD PVT MRKG 7"

185' STORAGE

YELLOW MEDIAN DIAGONALS @ 45°
THPL PVT MK LINE, 12"
GRV RCSD PVT MRKG 13"
(20' C-C)

DOUBLE YELLOW CENTERLINE
11" C-C (TYP)
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

SPEED LIMIT 40
R2-1
TO BE RELOCATED
FROM LIGHT POLE
AT STA 47+08, 34.6' LT
TO STA 50+00, 48.7' LT

STOP
R1-1
TO BE RELOCATED
FROM LIGHT POLE TO
STA 51+46, 57.0' LT

NEWTOWN DR
WEILAND RD
D3-1, D3-1
TO BE REMOVED
FROM LIGHT POLE

Newtown Dr
Weiland Rd
D3-1 (30" X 12")
D3-1 (30" X 12")
STA 51+26, 50.0' LT

NEWTOWN DRIVE

WHITE STOP LINE (TYP)
THPL PVT MK LINE, 24"
GRV RCSD PVT MRKG 25"

8' WHITE PED BARS (TYP)
24" SPACING
THPL PVT MK LINE, 12"
GRV RCSD PVT MRKG 13"

ONLY
R3-5R
TO BE REMOVED

185' STORAGE

200' TAPER

MATCH LINE STA 55+00
SEE BELOW

WHITE EDGE LINE (TYP)
THPL PVT MK LINE, 5"
GRV RCSD PVT MRKG 6"

RECESSED REFLECTIVE PAVEMENT MARKER
WHITE AND RED
(TYP)

WHITE DASHED LANE LINE (TYP)
10' DASH - 30' SKIP
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

185' STORAGE

ONLY
R3-5R
TO BE REMOVED

Newtown Dr
Weiland Rd
D3-1 (30" X 12")
D3-1 (30" X 12")
STA 51+17, 41.8' RT

NEWTOWN DR
WEILAND RD
D3-1, D3-1
TO BE REMOVED
FROM LIGHT POLE

LOCAL TRAFFIC ONLY
SPECIAL
TO BE RELOCATED TO
STA 51+46, 63.9' RT

NEWTOWN DRIVE

STOP
R1-1
TO BE RELOCATED TO
STA 52+03, 59.2' RT

LOCAL TRAFFIC ONLY
SPECIAL
TO BE RELOCATED TO
STA 52+09, 59.2' RT

R8-3
TO BE REMOVED
FROM LIGHT POLE

SPEED LIMIT 40
R2-1
TO BE RELOCATED
FROM LIGHT POLE TO
STA 53+18, 40.9' RT

WEILAND ROAD

R8-3
TO BE REMOVED

WHITE EDGE LINE (TYP)
THPL PVT MK LINE, 5"
GRV RCSD PVT MRKG 6"

DOUBLE YELLOW CENTERLINE
11" C-C (TYP)
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

PT PVT MK - RAISED MED (TYP)

MATCH LINE STA 55+00
SEE ABOVE

R4-7 (24" X 30")
STA 55+53, 1.9' RT

R8-3
TO BE REMOVED FROM LIGHT POLE

AHEAD
W11-2
(36" X 36")
W16-9P
(24" X 12")
STA 56+86, 36.0' RT

YELLOW EDGE LINE (TYP)
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

R8-3
TO BE REMOVED
FROM LIGHT POLE

STATE LAW STOP TO WITHIN CROSSWALK
R1-6A
(12" X 36")
STA 58+93, 0.0' RT

STATE LAW STOP TO WITHIN CROSSWALK
R1-6A
(12" X 36")
STA 59+08, 0.0' RT

STOP HERE FOR
R1-5B (36" X 36")
STA 58+46, 36.0' RT

WHITE DASHED LANE LINE (TYP)
10' DASH - 30' SKIP
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

R8-3
TO BE REMOVED
FROM LIGHT POLE

SPEED LIMIT 40
R2-1
TO BE RELOCATED
FROM LIGHT POLE
AT STA 66+93, 41.0' LT
TO STA 60+75, 51.0' LT

STOP HERE FOR
R1-5B (36" X 36")
STA 59+54, 35.5' LT

R8-3
TO BE REMOVED

SPEED LIMIT 40
R2-1 (30" X 36")
STA 61+37, 36.0' RT

ONLY
R3-5R
TO BE REMOVED

AHEAD
W11-2 (36" X 36")
W16-9P (24" X 12")
STA 61+56, 35.5' LT

YELLOW LANE LINE (TYP)
THPL PVT MK LINE, 4"
GRV RCSD PVT MRKG 5"

MARVINS WAY
WEILAND RD
D3-1, D3-1
TO BE REMOVED
FROM LIGHT POLE

Marvins Way
Weiland Rd
D3-1 (30" X 12")
D3-1 (30" X 12")
STA 63+55, 50.8' RT

MARVINS WAY

R4-7 (24" X 30")
STA 63+37, 0.0' RT

70:1 TAPER

75' STORAGE

1.4'R

WHITE STOP LINE (TYP)
THPL PVT MK LINE, 24"
GRV RCSD PVT MRKG 25"

8' WHITE PED BARS (TYP)
24" SPACING
THPL PVT MK LINE, 12"
GRV RCSD PVT MRKG 13"

STOP
R1-1 (36" X 36")
STA 64+12, 50.9' RT

R8-3
TO BE REMOVED
FROM LIGHT POLE

WHITE LANE LINE (TYP)
THPL PVT MK LINE, 6"
GRV RCSD PVT MRKG 7"

YELLOW MEDIAN DIAGONALS @ 45°
THPL PVT MK LINE, 12"
GRV RCSD PVT MRKG 13"
(20' C-C)

WHITE DASHED LANE LINE (TYP)
2' DASH - 6' SKIP
THPL PVT MK LINE, 6"
GRV RCSD PVT MRKG 7"

175' TAPER

MATCH LINE STA 67+00
SEE SHEET NO 208

WHITE LETTERS AND SYMBOLS (TYP)
THPL PVT MK LTR & SYM
GRV RCSD PM LTR & SYM

RECESSED REFLECTIVE PAVEMENT MARKER
WHITE AND RED
(TYP)

WEILAND ROAD

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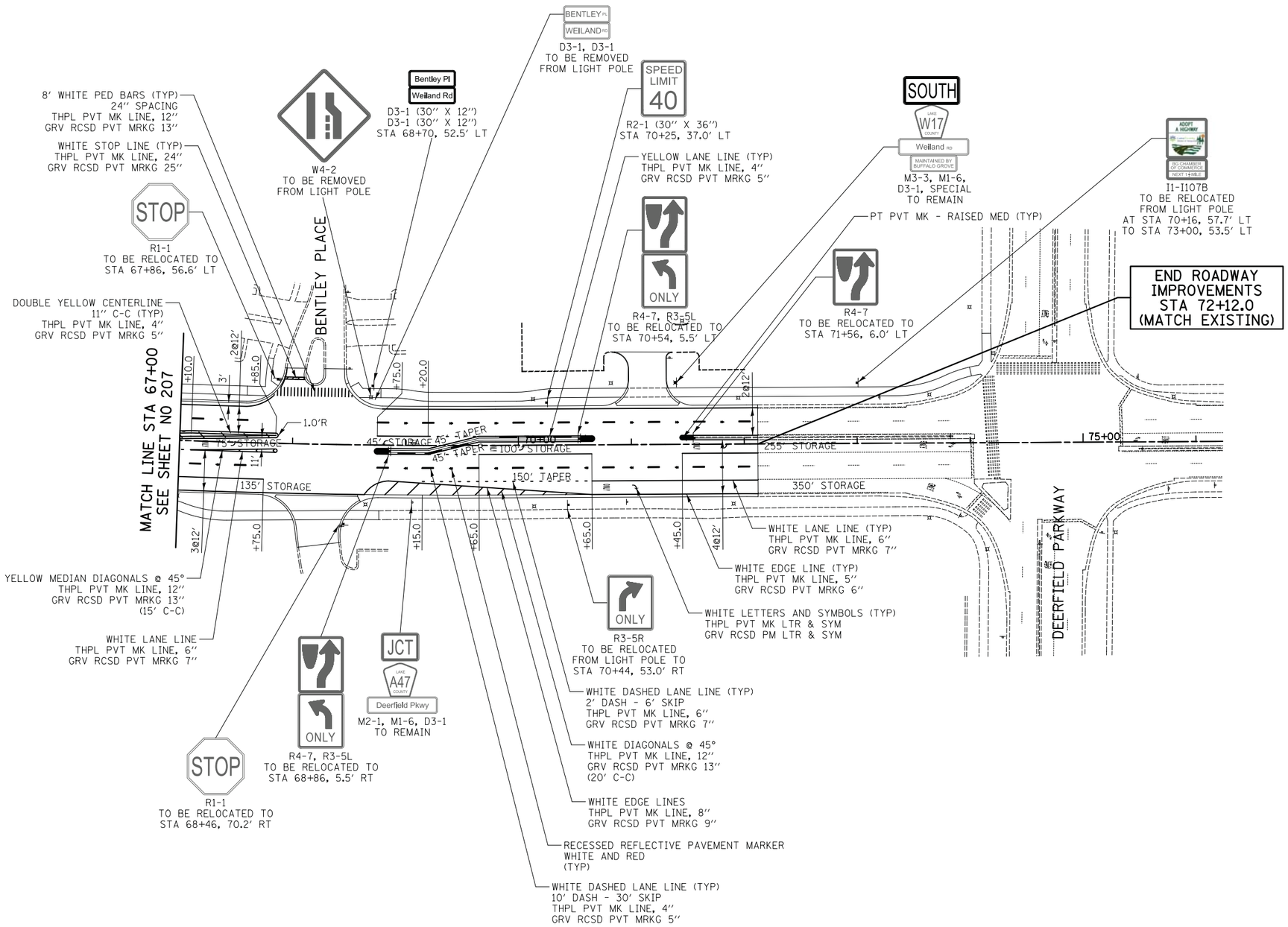
	DRAWN - PK	REVISED -			
	CHECKED - JRV	REVISED -			SHEET NO. 2 OF 3 SHEETS STA. 43+00.0 TO STA. 67+00.0
	DATE - 10/8/2018	REVISED -			

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	207
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY / ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE



WEILAND ROAD

CIVILTECH	Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	
DESIGNED - PK	REVISED -	
DRAWN - PK	REVISED -	
CHECKED - JRV	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
0 50 100

PAVEMENT MARKING AND SIGNING

SHEET NO. 3 OF 3 SHEETS | STA. 67+00.0 TO STA. 72+12.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	208
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	CC	CC
MASTER CONTROLLER	MC	MC
MASTER MASTER CONTROLLER	MMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN. TILT. ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX		
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET		
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P	P
SAMPLING (SYSTEM) DETECTOR	S	S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS	IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS	QS
WIRELESS DETECTOR SENSOR	R	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	P	P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	C D
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

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		DRAWN - IP	REVISED -
Default	PLOT SCALE = 50.0000 ' / in.	CHECKED - LP	REVISED -
	PLOT DATE = 9/29/2016	DATE - 9/29/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	209
	TS-05	CONTRACT NO. 61E24		
	ILLINOIS FED. AID PROJECT			

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

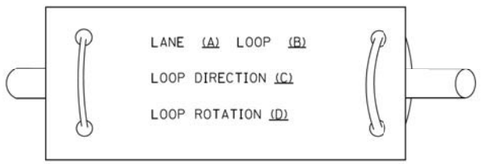
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

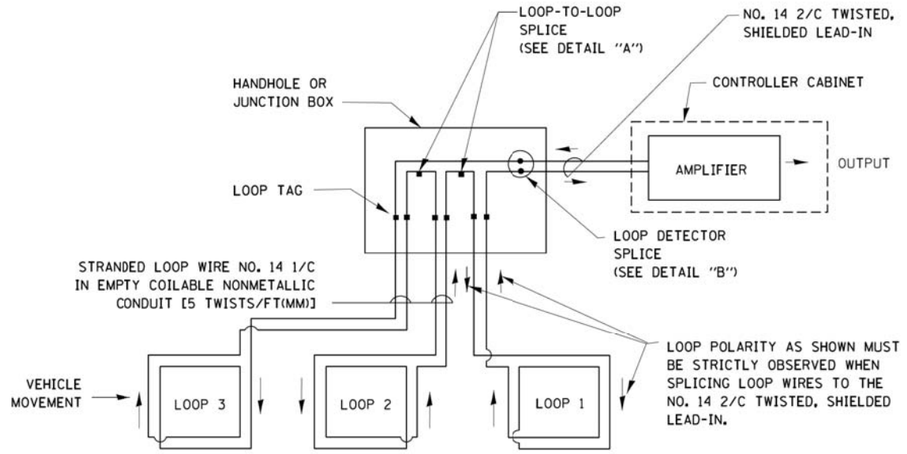


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

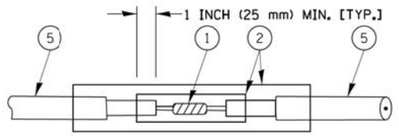
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

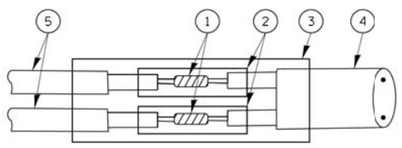


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

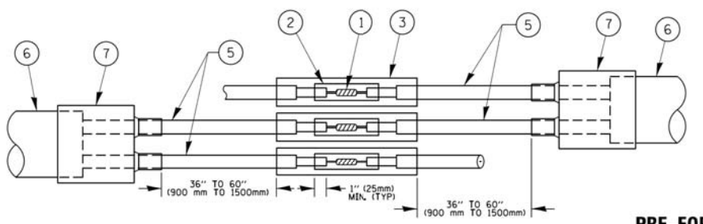


DETAIL "A"
LOOP-TO-LOOP SPLICE



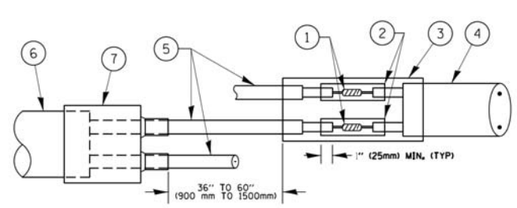
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. ~~TYCO CBR-2 OR APPROVED EQUAL~~

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		DRAWN - BCK	REVISED -
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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	210
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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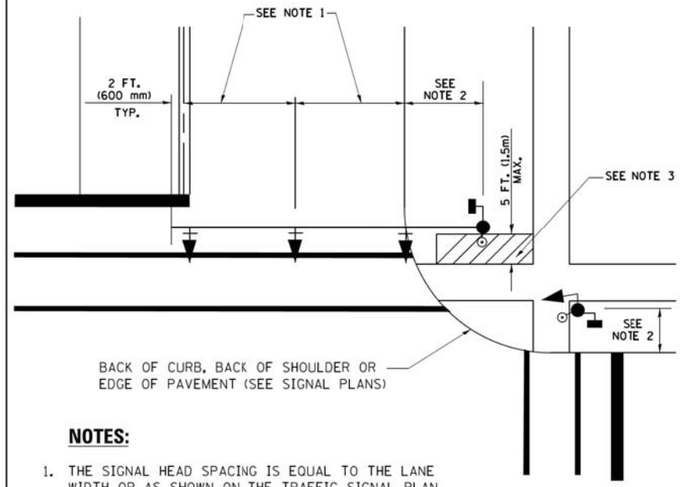
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

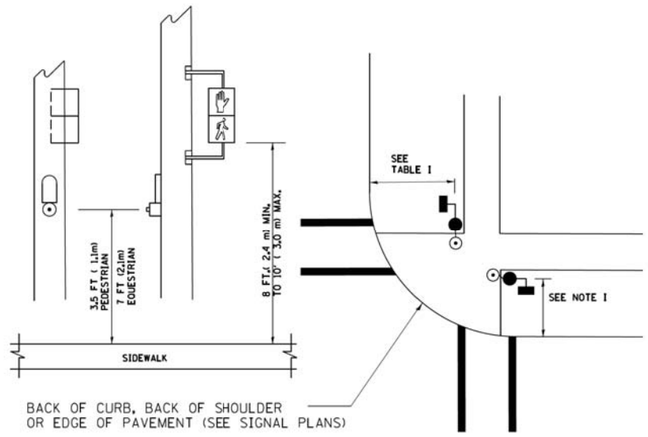
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

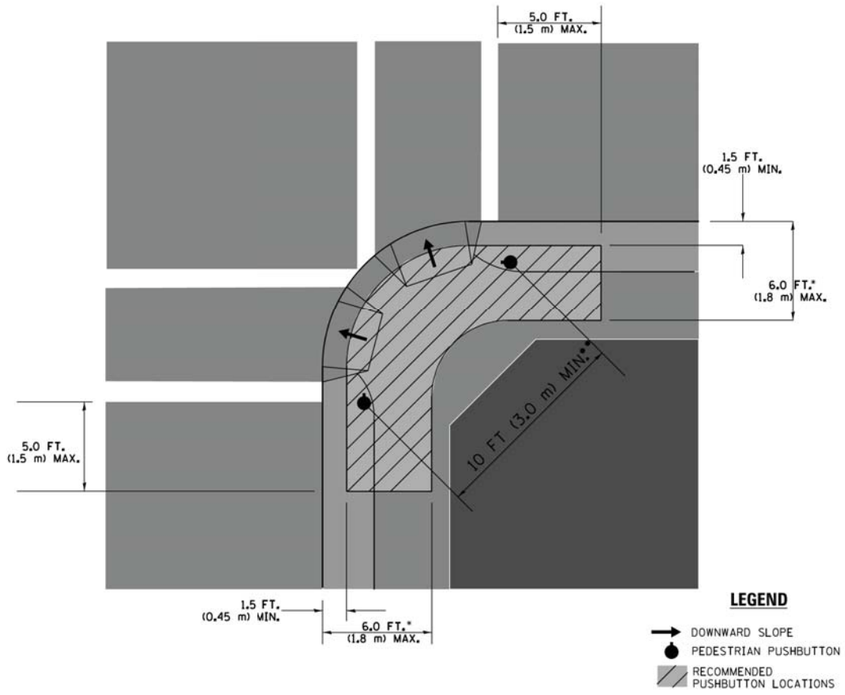
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	211
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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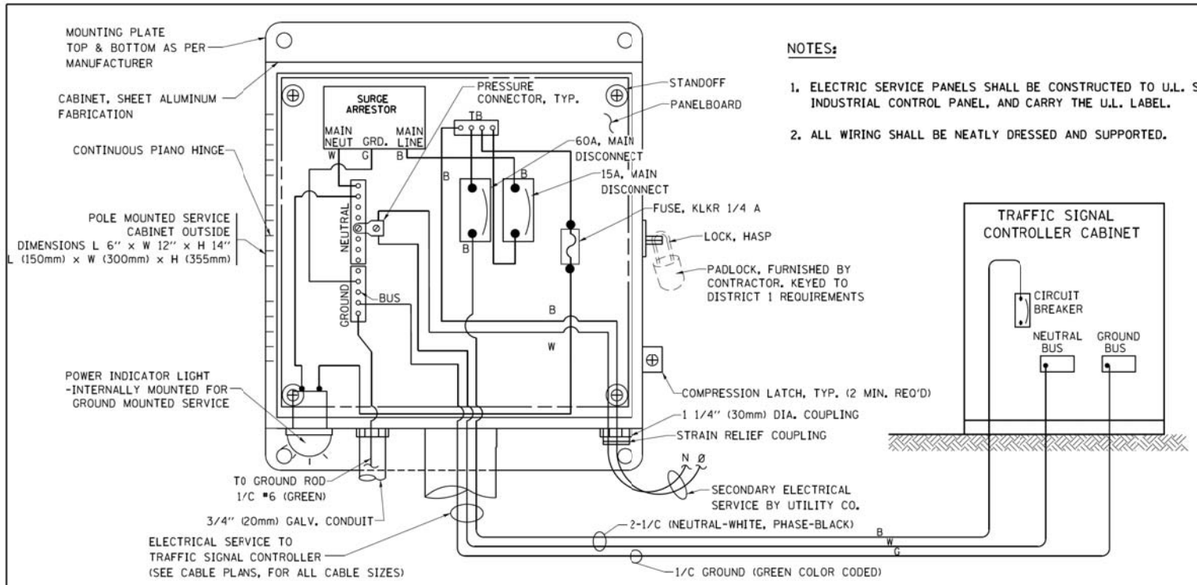


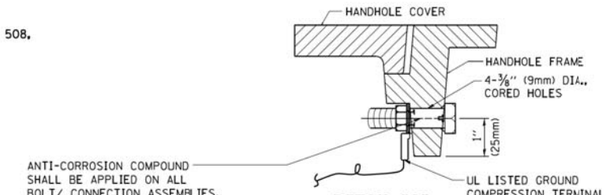
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

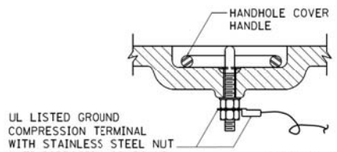
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

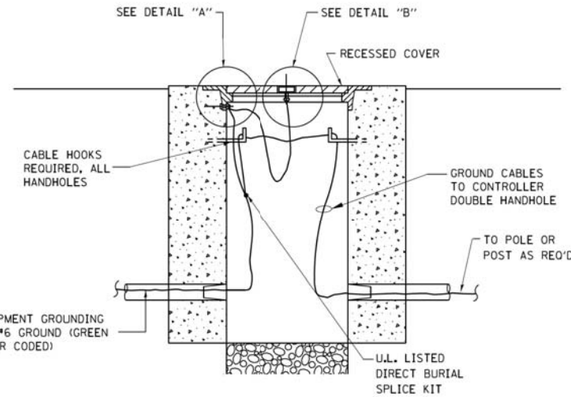


DETAIL "B"

NOTES:

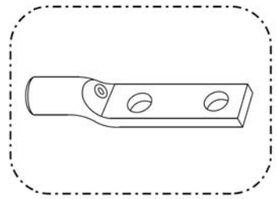
GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

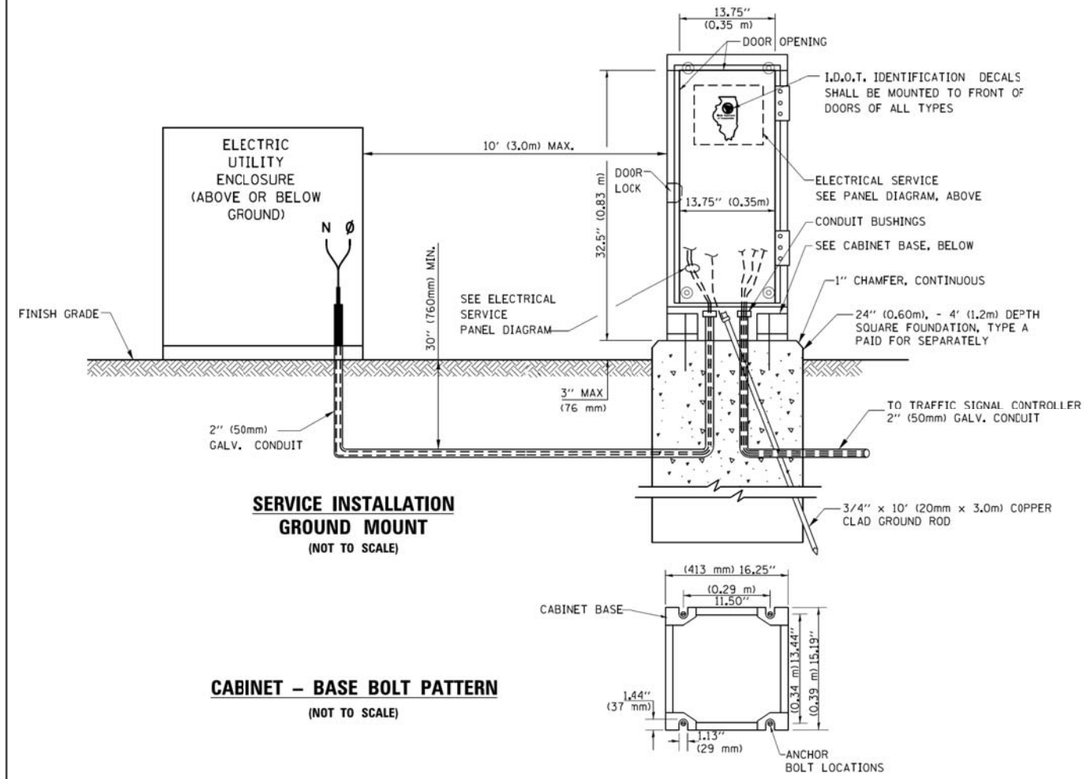


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

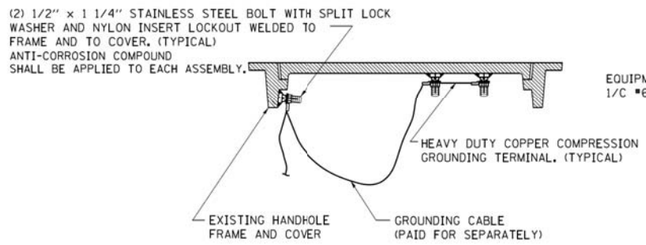


SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

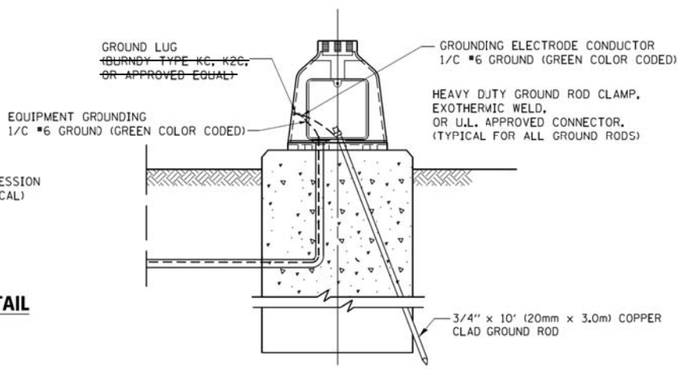
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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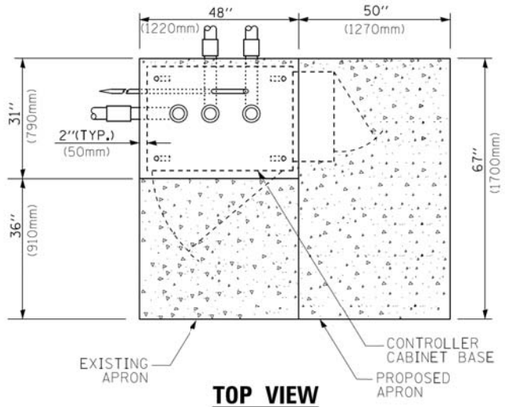
	PLOT SCALE = 50.0000 ' / in.	DRAWN - BCK	REVISED -
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

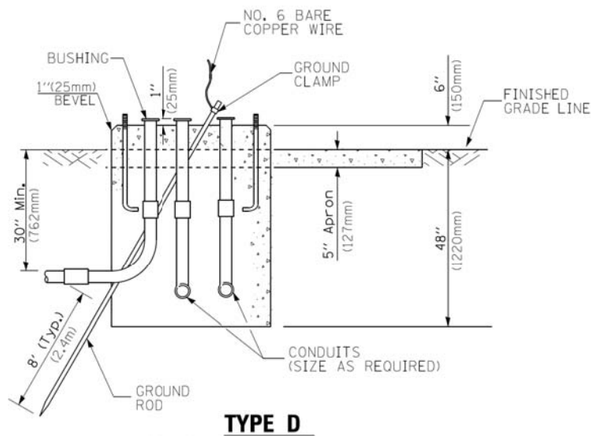
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

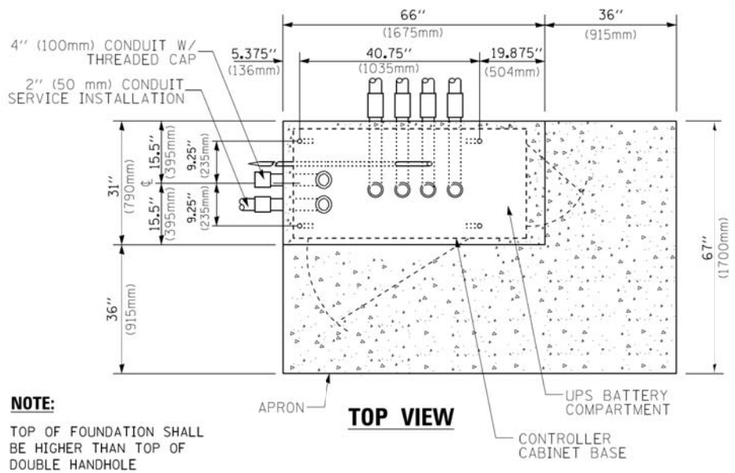
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	212
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TOP VIEW



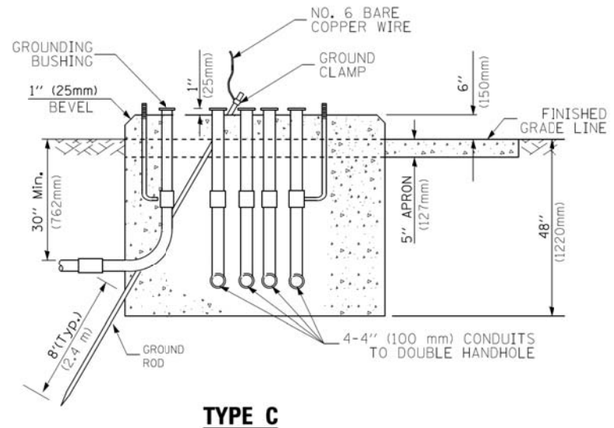
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



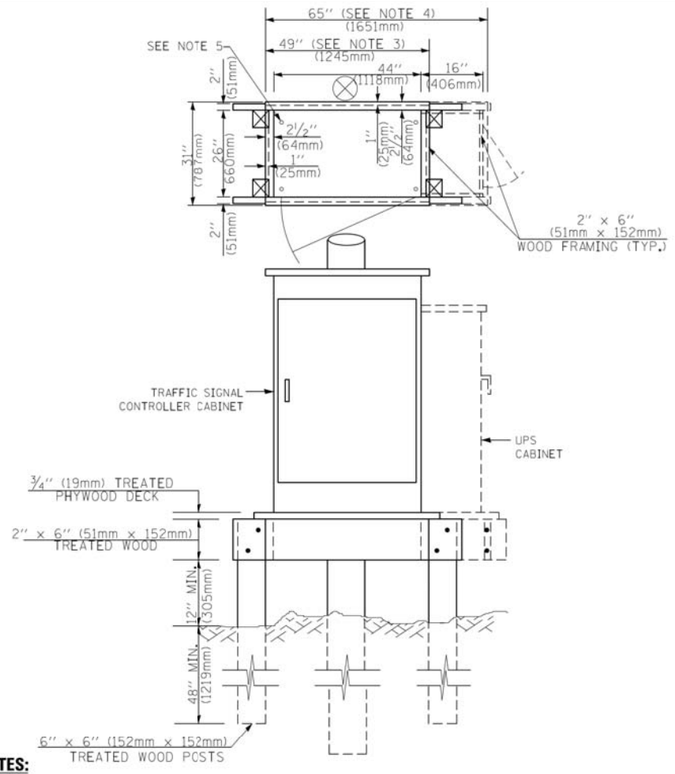
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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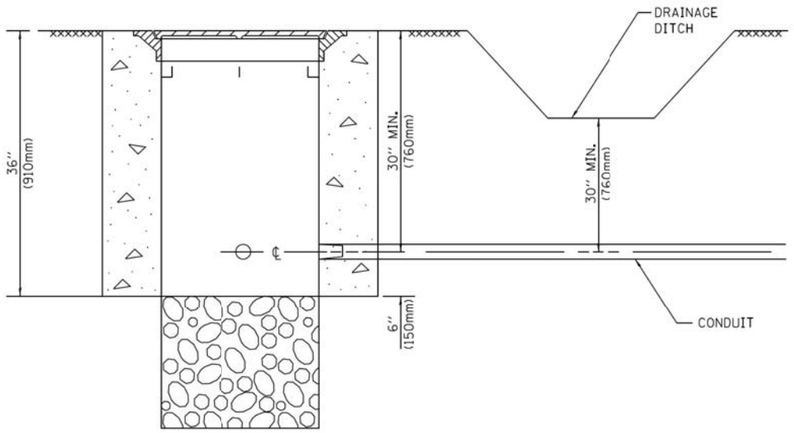
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	213
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

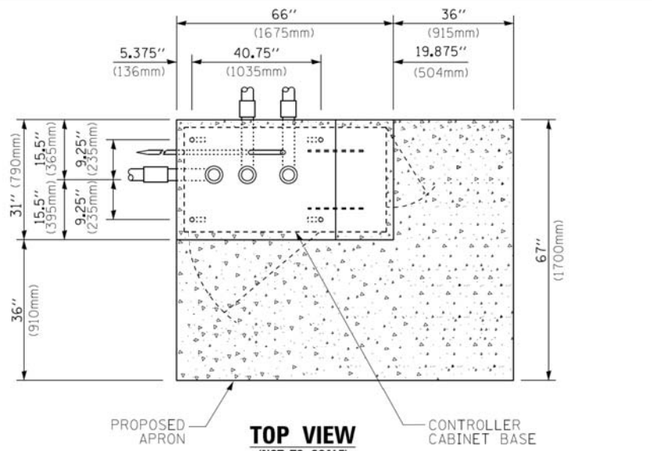


NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

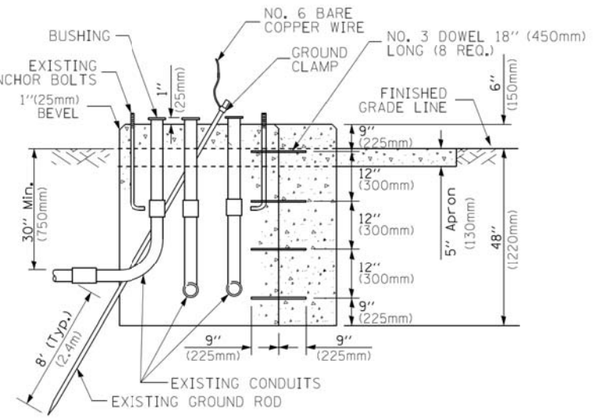
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



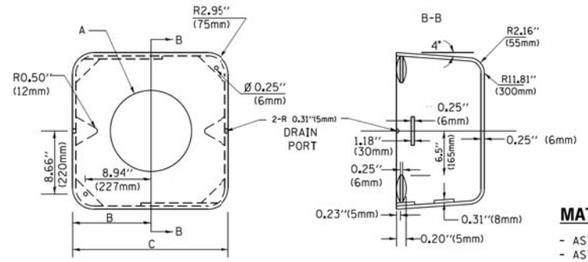
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

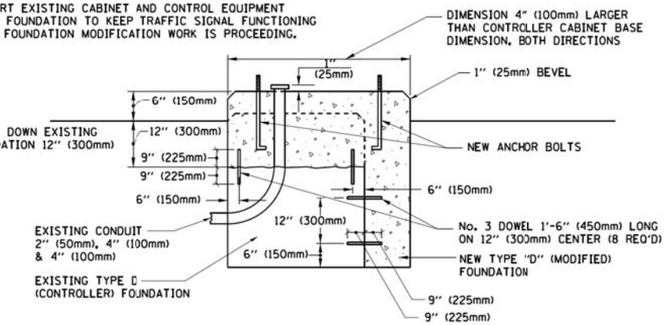
SHROUD

NOTES:

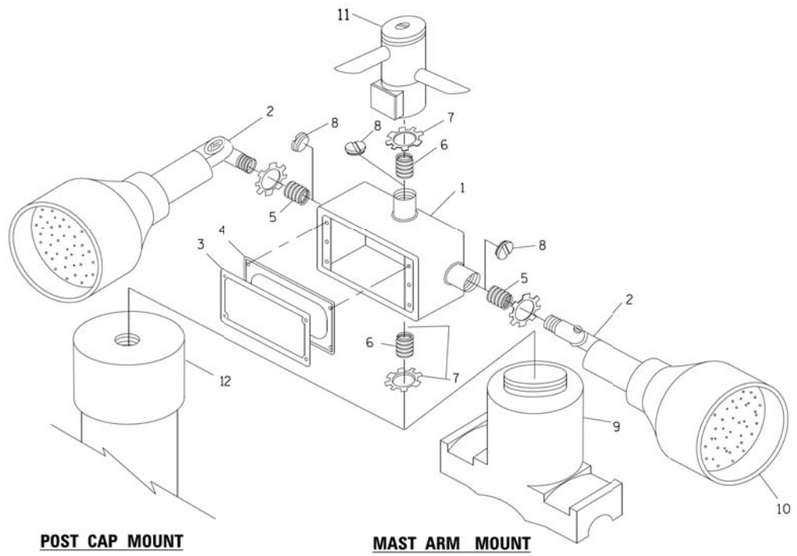
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



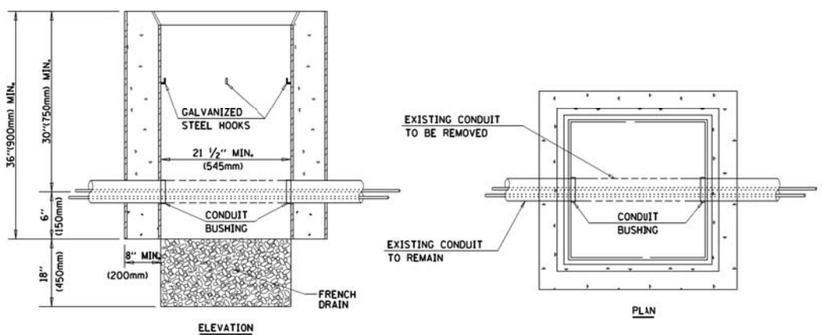
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4"(19 mm) CLOSE NIPPLE
7	3/4"(19 mm) LOCKNUT
8	3/4"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ~~ITEM #1 OZ/GEDNEY FSX 1 50 OR EQUIVALENT~~
   ~~ITEM #2 MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT~~
   ~~ITEM #9 "BAND-IT" SADDLE BRACKET OR EQUIVALENT~~
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	214
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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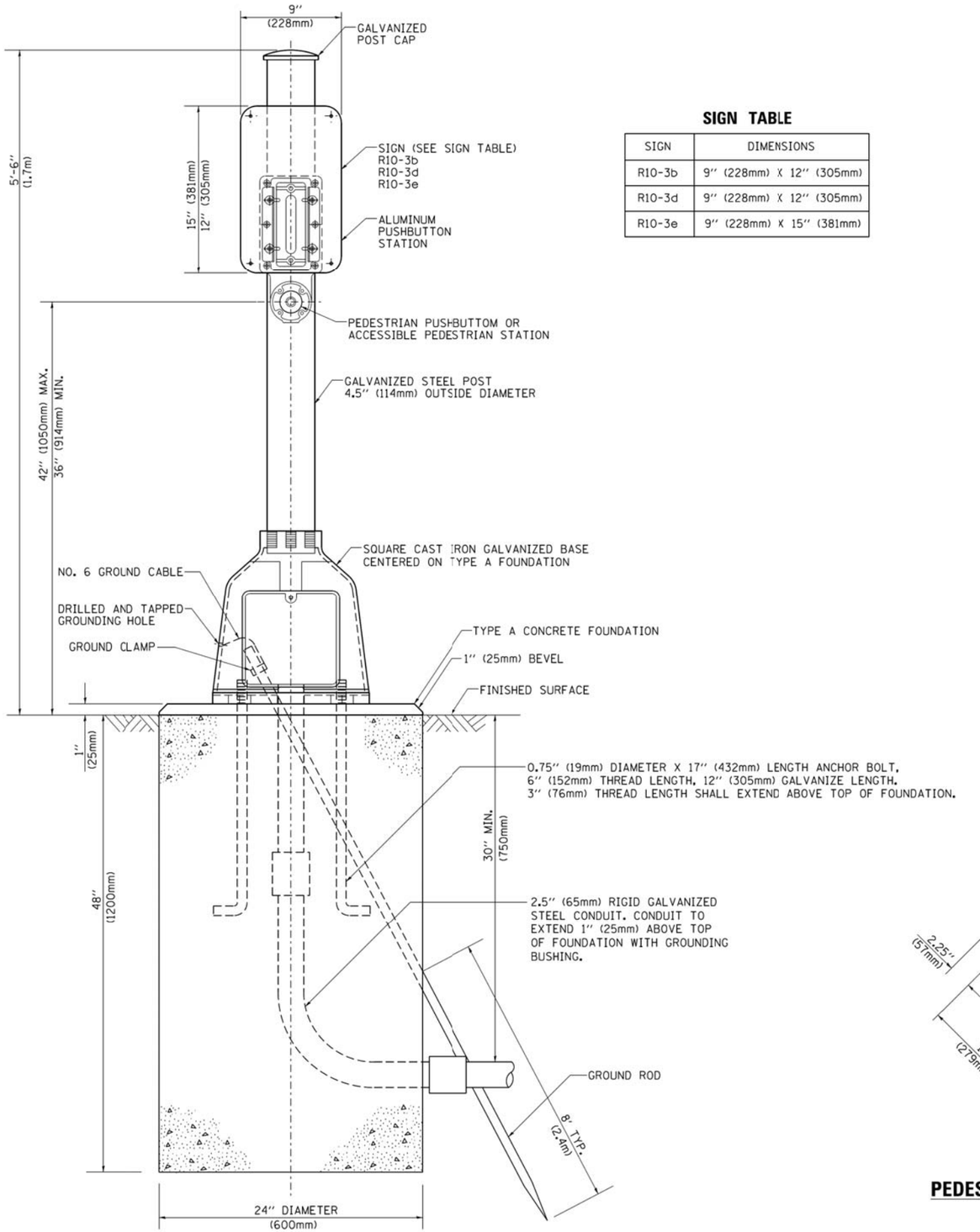
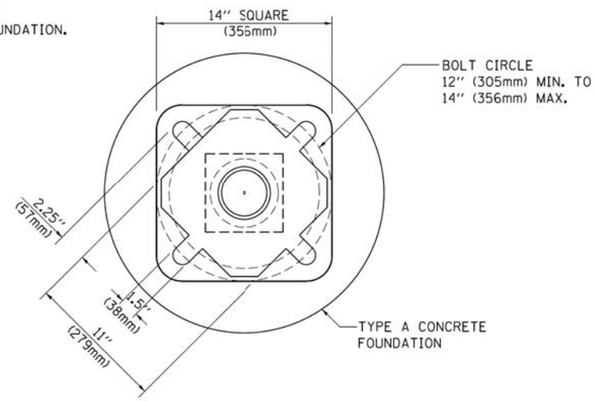


SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9'' (228mm) X 12'' (305mm)
R10-3d	9'' (228mm) X 12'' (305mm)
R10-3e	9'' (228mm) X 15'' (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

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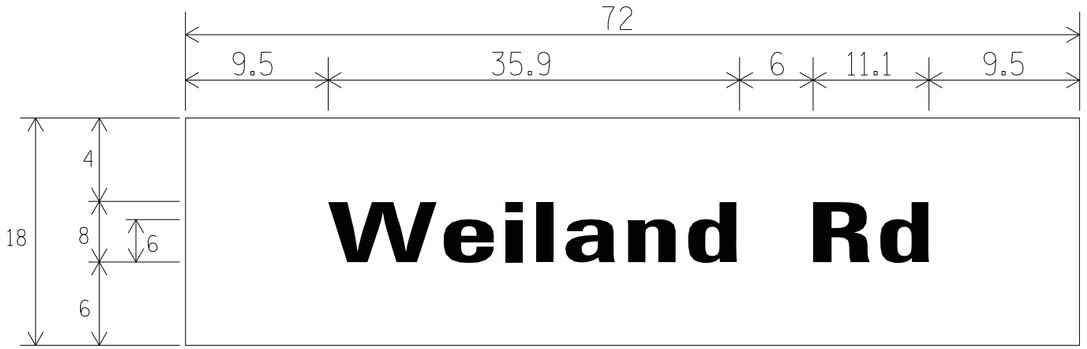
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	215
	TS-05	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



ALL DIMENSIONS SHOWN IN INCHES

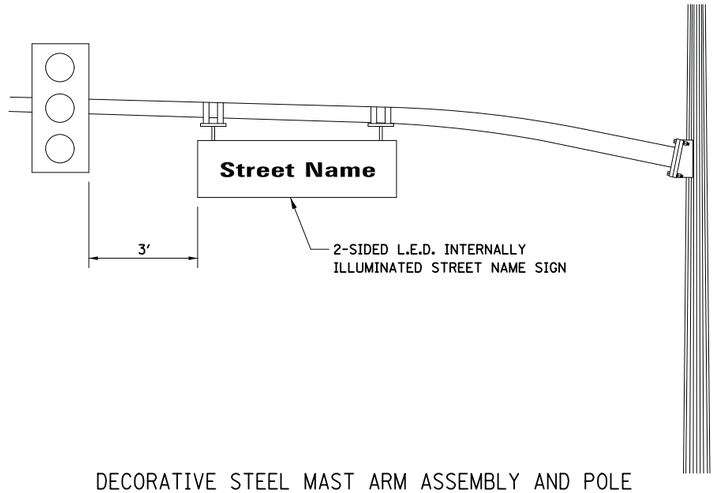
9.0 SQ. FT. EACH

2 REQUIRED

____ SINGLE SIDED REQUIRED

X DOUBLE SIDED REQUIRED

DESIGN SERIES D



DECORATIVE STEEL MAST ARM ASSEMBLY AND POLE

ALL DIMENSIONS SHOWN IN INCHES

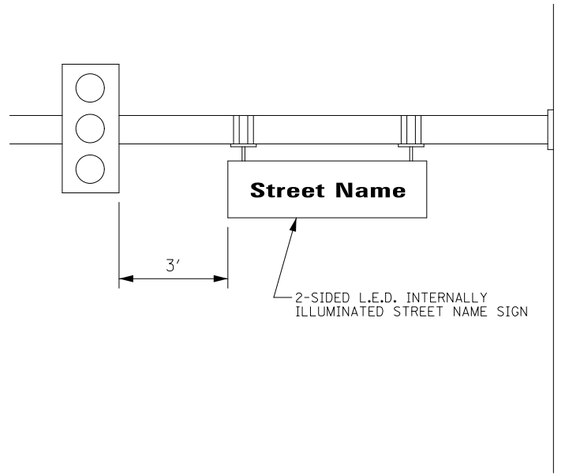
9.0 SQ. FT. EACH

2 REQUIRED

____ SINGLE SIDED REQUIRED

X DOUBLE SIDED REQUIRED

DESIGN SERIES D



REGULAR STEEL MAST ARM ASSEMBLY AND POLE

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS.

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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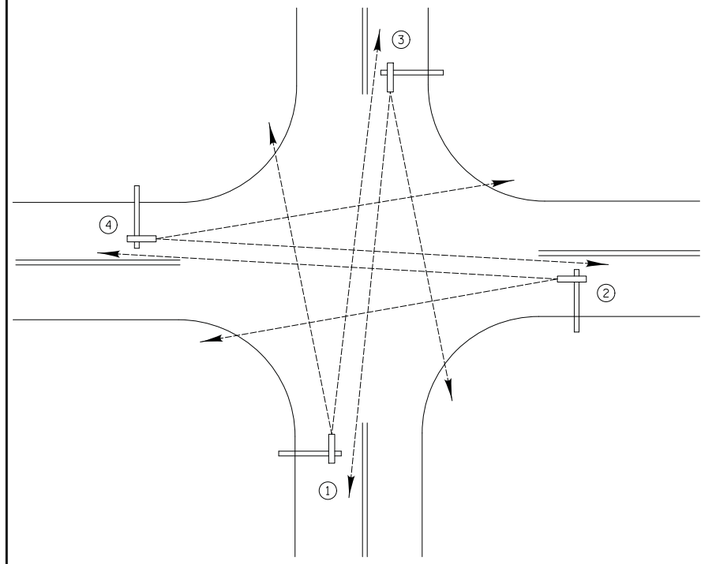
DRAWN - SJC	REVISED -
CHECKED - DNM	REVISED -
DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS
WEILAND ROAD AT PAULINE AVENUE

NOT TO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

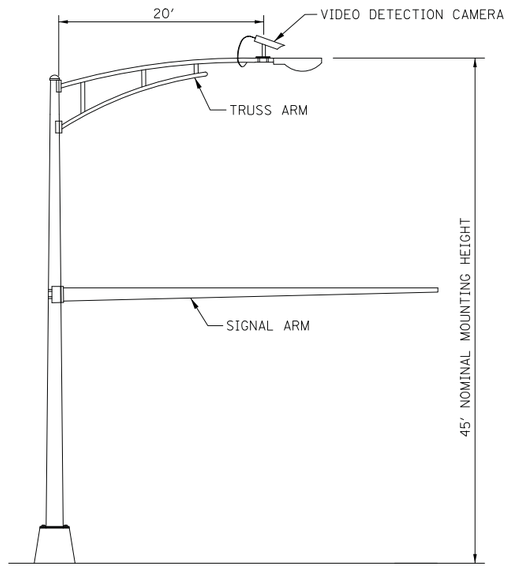
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	216
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL VIDEO VEHICLE DETECTION SYSTEM

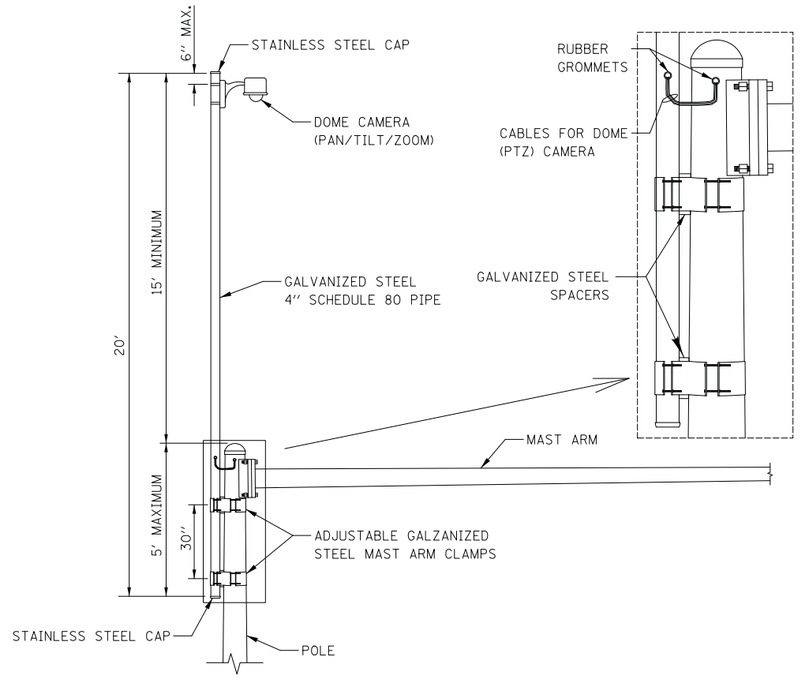
(NOT TO SCALE)

(4) VIDEO DETECTION CAMERA ASSEMBLIES AND BRACKETS ① ② ③ ④



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

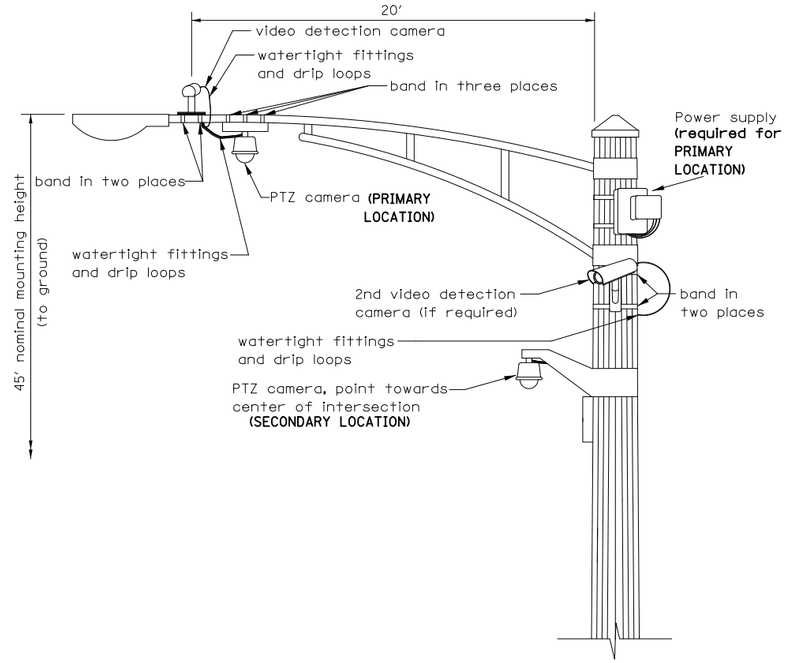
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)

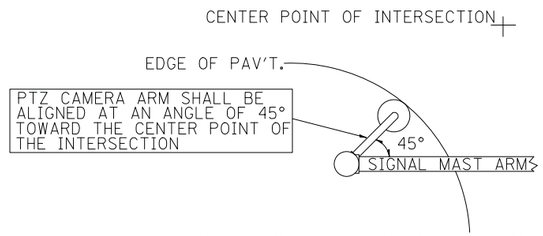
NOTES:
- THE MAST ARM IS TAPERED.
- INSTALL EXTENSION POLE VERTICAL AND PLUMB BY MODIFYING/INSTALLING BRACKETS AS NECESSARY. ADDITIONAL SPACERS REQUIRED ARE INCLUDED IN THE COST OF THE CAMERA MOUNTING ASSEMBLY OF THE TYPE SPECIFIED.
- SPACERS ARE TO BE INTEGRATED OR MANUFACTURED WITH THE MAST ARM BRACKETS



VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE CAMERA MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- MOUNT VIDEO DETECTION CAMERA AIMING DOWN TOWARD THE DIRECTION OF TRAFFIC TO BE DETECTED.



PTZ CAMERA MOUNTING DETAILS (SECONDARY LOCATION)

(NO SCALE)

REVISIONS	DATE
Mounting Details Revised	05/01/08
2nd Camera Locat. added	01/14/09
Mast Arm Taper Detail	06/01/12
Mounting Details Revised	06/13/14

LakeCounty Division of Transportation

APPROVED BY: J. P. NELSON
DATE: JUNE 13, 2014

CAMERA MOUNTING DETAILS

LC8900

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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DRAWN - SBP		REVISED -
CHECKED - DWM		REVISED -
DATE - 10/8/2018		REVISED -

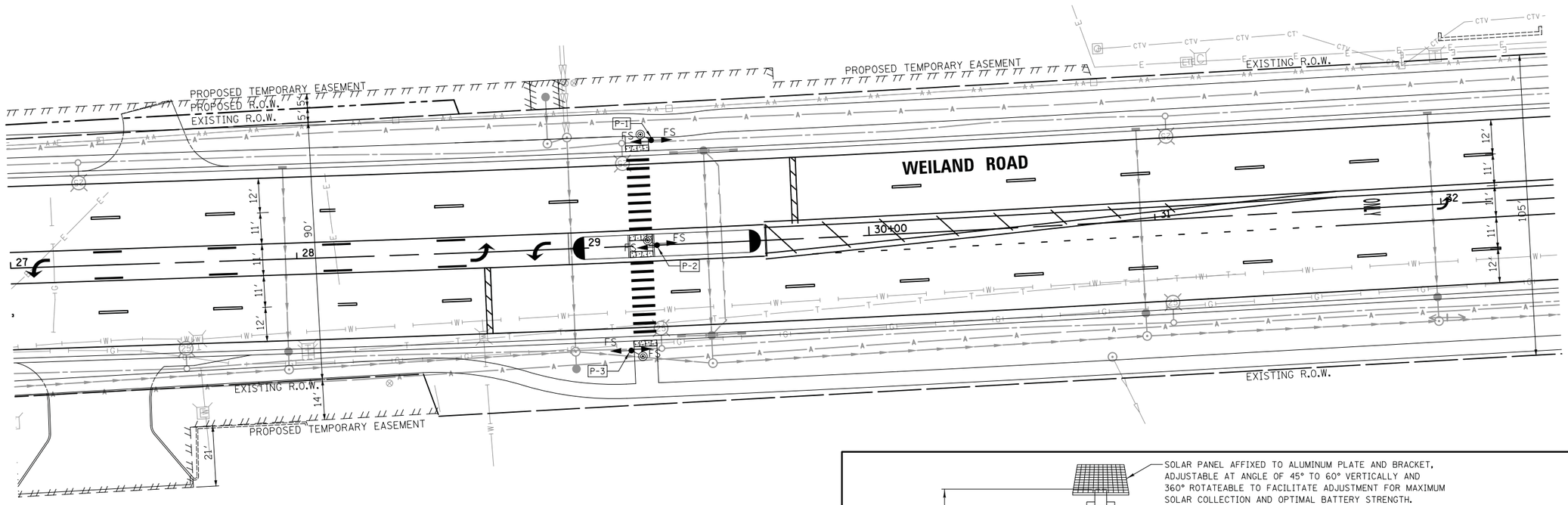
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DIVISION OF TRANSPORTATION
CAMERA MOUNTING DETAILS

SHEET NO. 1 OF 1 SHEETS STA. TO STA.

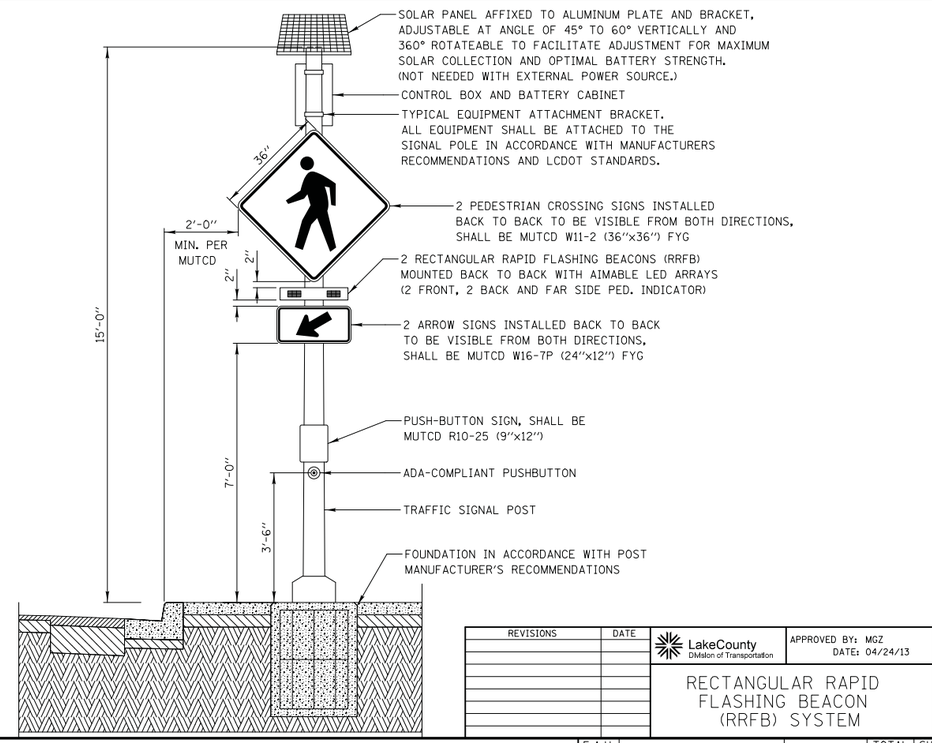
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	217
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
P-1	29+25	37′ LT	NONE	684.80′
P-2	29+26	0′	NONE	685.34′
P-3	29+15	36′ RT	UNDERGROUND GAS, PROPOSED STORM SEWER	684.79′



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
RECTANGULAR RAPID FLASHING BEACON ASSEMBLY (COMPLETE)	EACH	3



REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: MGZ
DATE: 04/24/13

RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM

L0802

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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DRAWN - LEP	REVISED -	
CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

FLASHING BEACON INSTALLATION PLAN
WEILAND ROAD AT STA. 29+20

SCALE: 1′ = 20″ | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	218
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

1. TO ACCOMMODATE TEMPORARY LIGHTING, WOOD POLES AT A HEIGHT OF 50' SHALL BE USED. THE TEMPORARY LUMINAIRES SHALL BE MOUNTED ON 20' LUMINAIRE ARMS. THIS WORK SHALL BE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION."

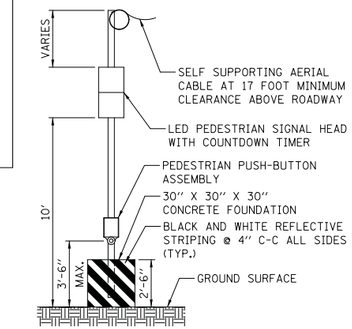
2. THE ARROW INDICATIONS ON THESE SIGNAL HEADS SHALL BE BAGGED AND DISCONNECTED UNTIL THE BEGINNING OF CONSTRUCTION STAGE III.

3. PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND THE PHASES DISCONNECTED WHEN PEDESTRIAN CROSSINGS ARE NOT PERMITTED, OR AS DIRECTED BY THE ENGINEER.

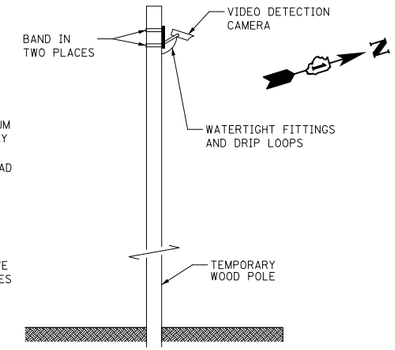
4. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.

STRUCTURE	STATION	OFFSET	HEIGHT	POSSIBLE UTILITY CONFLICTS
WP-1	35+75	52' LT	50'	EXISTING WATER MAIN
WP-2	34+44	60' LT	50'	EXISTING CONDUIT EXISTING OVERHEAD LINE
WP-3	34+70	55' RT	50'	PROPOSED GAS LINE
WP-4	35+79	49' RT	50'	PROPOSED GAS LINE
WP-1 TO WP-2	SPAN WIRE			EXISTING OVERHEAD LINES
WP-2 TO WP-3	SPAN WIRE			EXISTING OVERHEAD LINES
WP-3 TO WP-4	SPAN WIRE			NONE
WP-4 TO WP-1	SPAN WIRE			NONE

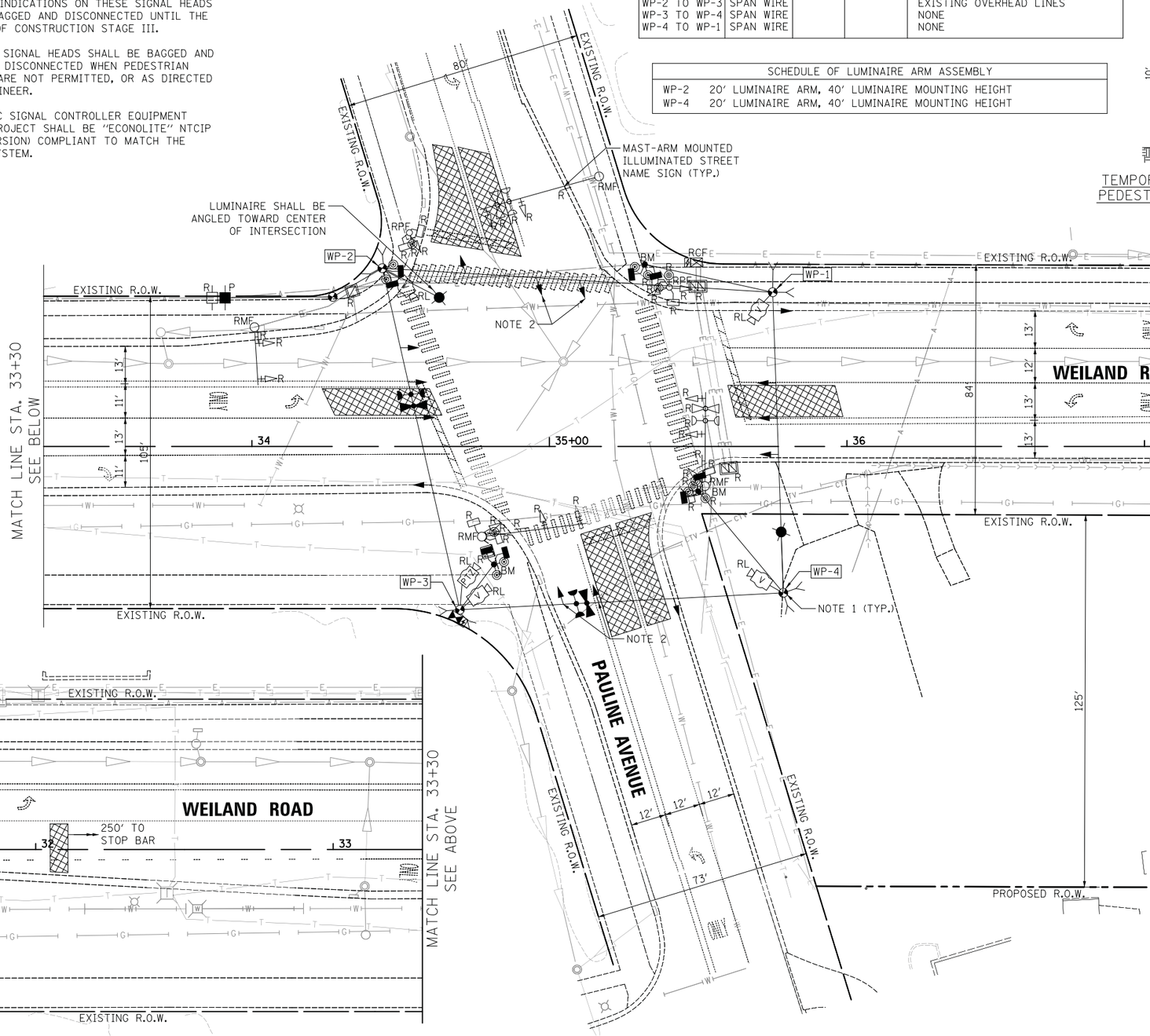
SCHEDULE OF LUMINAIRE ARM ASSEMBLY	
WP-2	20' LUMINAIRE ARM, 40' LUMINAIRE MOUNTING HEIGHT
WP-4	20' LUMINAIRE ARM, 40' LUMINAIRE MOUNTING HEIGHT



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)



REMOVAL NOTES

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
2	EACH	SIGNAL POST
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
9	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
8	EACH	TRAFFIC SIGNAL BACKPLATE
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SERVICE INSTALLATION
1	EACH	CONTROLLER CABINET
2	EACH	LIGHT DETECTOR

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF LAKE COUNTY, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY AS PER THE SPECIAL PROVISIONS.

1	EACH	CONTROLLER
1	EACH	UNINTERRUPTABLE POWER SUPPLY
1	EACH	LIGHT DETECTOR AMPLIFIER
4	EACH	ILLUMINATED STREET NAME SIGN

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, RELOCATED TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AND RESTORED TO OPERATION TO THE SATISFACTION OF THE ENGINEER AND LCDOT. IF ANY EQUIPMENT IS DAMAGED DURING RELOCATION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPLACE THE EQUIPMENT AT NO ADDITIONAL COST TO THE CONTRACT. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL, THIS EQUIPMENT SHALL BE DELIVERED TO THE COUNTY'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE SPECIAL PROVISIONS.

1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
1	EACH	VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)
1	EACH	VIDEO ENCODER
1	EACH	LAYER II SWITCH
1	EACH	CELLULAR MODEM & ANTENNA
1	EACH	TERMINAL SERVER

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — BY — DATE

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CHECKED - JJE		REVISED -
DATE - 10/8/2018		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

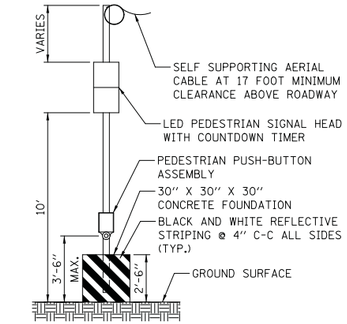
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

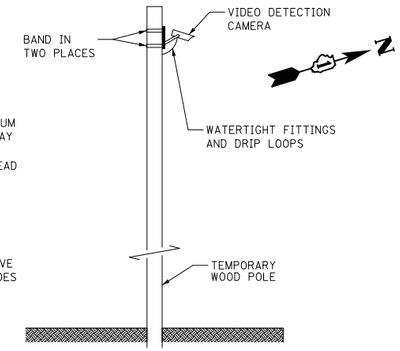
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	219
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

1. TO ACCOMMODATE TEMPORARY LIGHTING, WOOD POLES AT A HEIGHT OF 50' SHALL BE USED. THE TEMPORARY LUMINAIRES SHALL BE MOUNTED ON 20' LUMINAIRE ARMS. THIS WORK SHALL BE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION."
2. THE ARROW INDICATIONS ON THESE SIGNAL HEADS SHALL BE BAGGED AND DISCONNECTED UNTIL THE BEGINNING OF CONSTRUCTION STAGE III.
3. PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND THE PHASES DISCONNECTED WHEN PEDESTRIAN CROSSINGS ARE NOT PERMITTED, OR AS DIRECTED BY THE ENGINEER.
4. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

FINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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DRAWN - LEP	REVISED -	
CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE I
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20' | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	220
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

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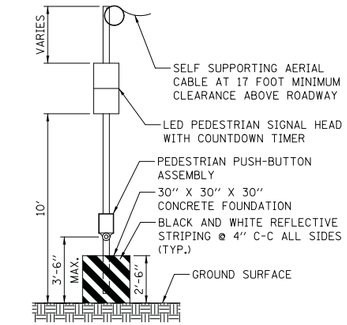
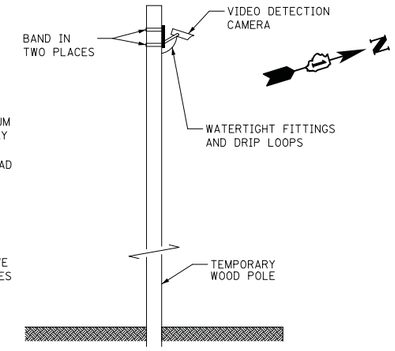


TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

CIVILTECH Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	DESIGNED - LEP	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN - LEP	REVISED -	
	CHECKED - JJE	REVISED -	
	DATE - 10/8/2018	REVISED -	

HORIZ. SCALE 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE IA
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20' | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	221
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

NOTES

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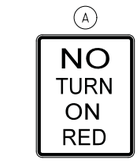
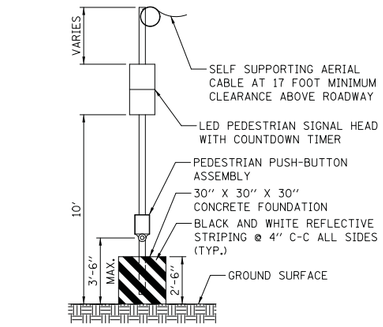
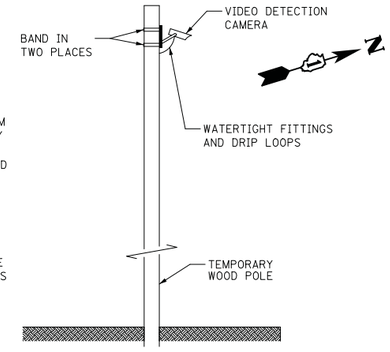


R10-11A
30" x 36"
SIGN PANEL - TYPE 1
2 REQUIRED



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

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	CHECKED - JJE	REVISED -	
	DATE - 10/8/2018	REVISED -	

HORIZ. SCALE 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE IB
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20' | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	222
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

NOTES

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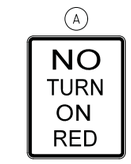
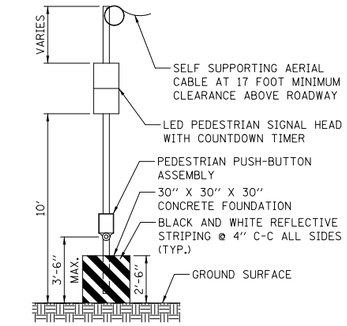
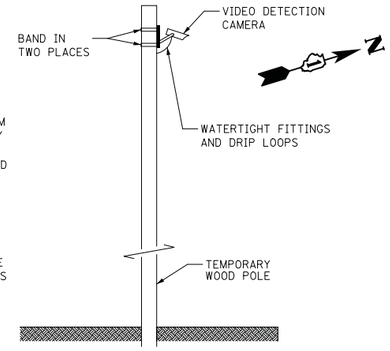


R10-11A
30" x 36"
SIGN PANEL - TYPE 1
4 REQUIRED



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

CIVILTECH Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	DESIGNED - LEP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE HORIZ. 0 20 40	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE II WEILAND ROAD AT PAULINE AVENUE	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - LEP	REVISED -				2665	14-00158-11-WR	LAKE	537	223
	CHECKED - JJE	REVISED -							CONTRACT NO. 61E24	
	DATE - 10/8/2018	REVISED -			SCALE: 1" = 20' SHEET NO. 4 OF 7 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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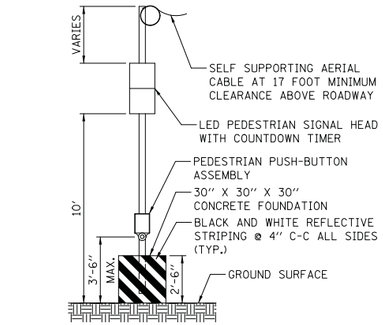
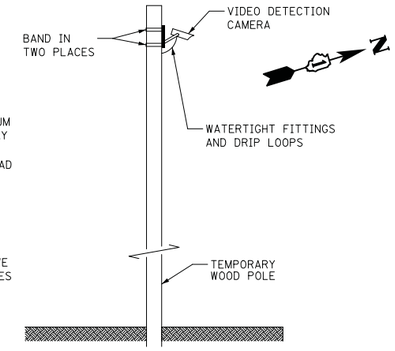
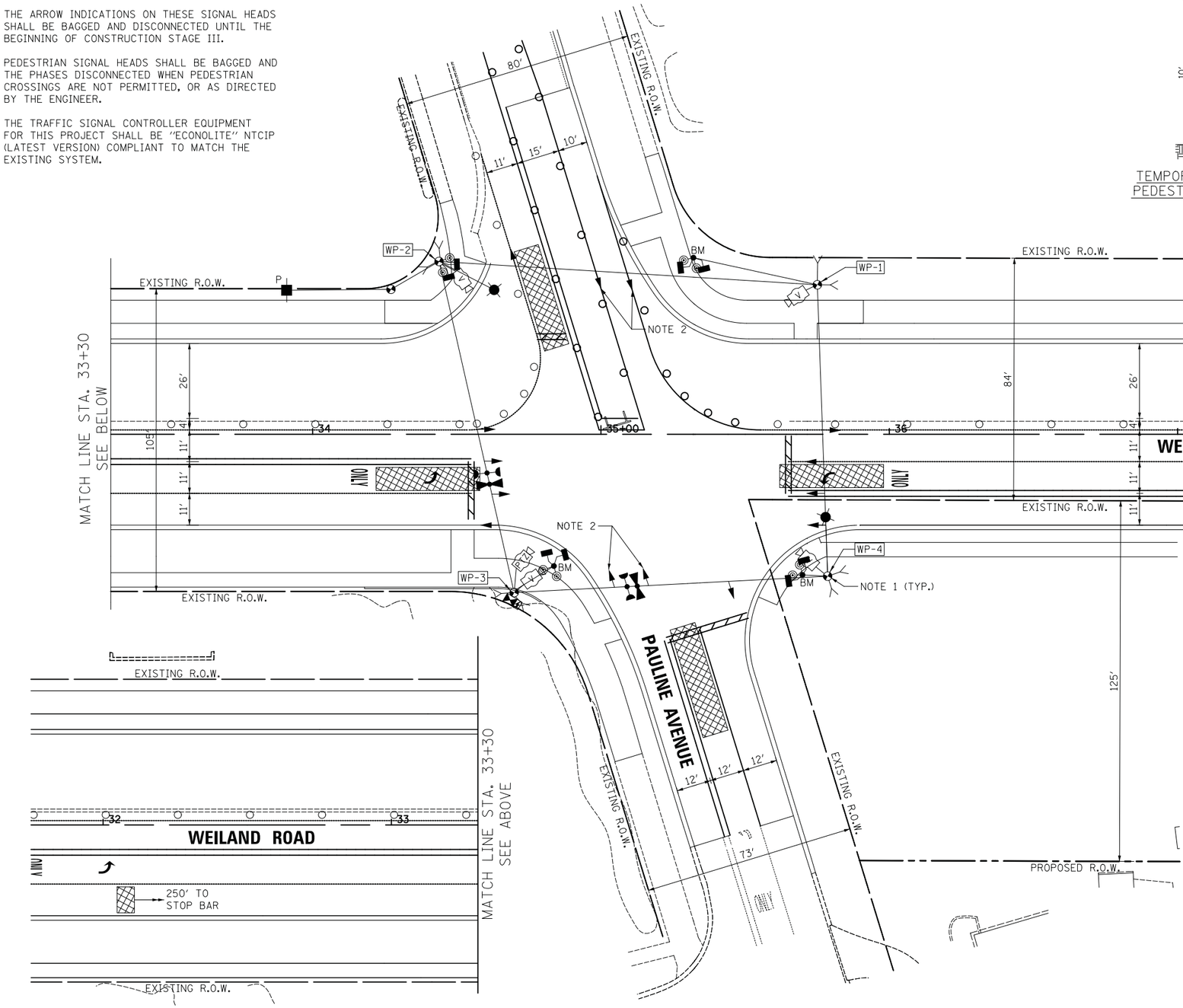


TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)



CIVILTECH Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	DESIGNED - LEP DRAWN - LEP CHECKED - JJE DATE - 10/8/2018	REVISED - REVISED - REVISED - REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE IIA
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20′ | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

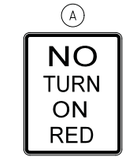
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	224
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

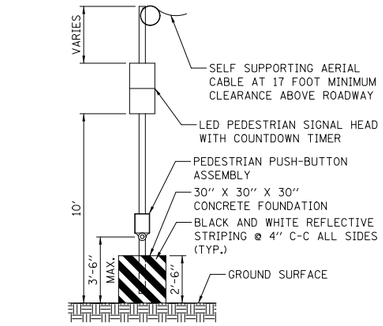
ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

NOTES

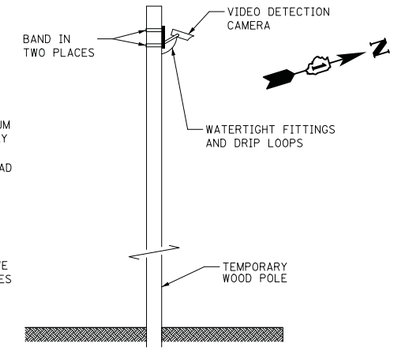
1. TO ACCOMMODATE TEMPORARY LIGHTING, WOOD POLES AT A HEIGHT OF 50' SHALL BE USED. THE TEMPORARY LUMINAIRES SHALL BE MOUNTED ON 20' LUMINAIRE ARMS. THIS WORK SHALL BE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION."
2. THE ARROW INDICATIONS ON THESE SIGNAL HEADS SHALL BE BAGGED AND DISCONNECTED UNTIL THE BEGINNING OF CONSTRUCTION STAGE III.
3. PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND THE PHASES DISCONNECTED WHEN PEDESTRIAN CROSSINGS ARE NOT PERMITTED, OR AS DIRECTED BY THE ENGINEER.
4. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.



R10-11A
30" x 36"
SIGN PANEL - TYPE 1
2 REQUIRED



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE IIB
WEILAND ROAD AT PAULINE AVENUE

SCALE: 1" = 20' | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

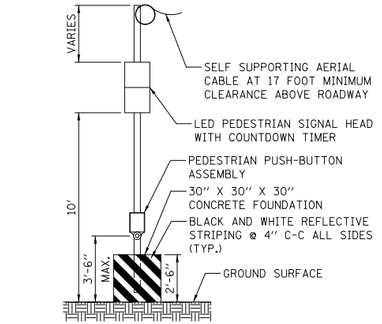
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	225
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

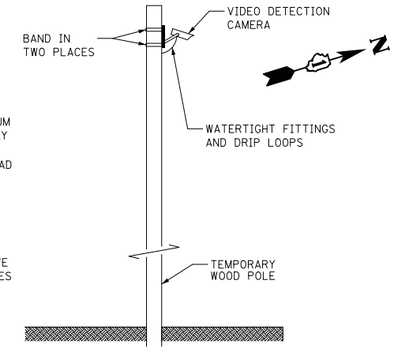
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

NOTES

1. TO ACCOMMODATE TEMPORARY LIGHTING, WOOD POLES AT A HEIGHT OF 50' SHALL BE USED. THE TEMPORARY LUMINAIRES SHALL BE MOUNTED ON 20' LUMINAIRE ARMS. THIS WORK SHALL BE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION."
2. PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND THE PHASES DISCONNECTED WHEN PEDESTRIAN CROSSINGS ARE NOT PERMITTED, OR AS DIRECTED BY THE ENGINEER.
3. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.



TEMPORARY POST-MOUNTED PEDESTRIAN SIGNAL DETAIL
(NOT TO SCALE)



TEMPORARY VIDEO DETECTION DETAIL
(NOT TO SCALE)

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TEMPLATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TEMPLATE
	AREAS
	AREAS CHECKED

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DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

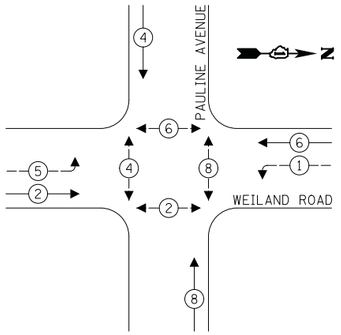
SCALE
HORIZ. 0 20 40

TEMPORARY TRAFFIC SIGNAL PLAN – STAGE III
WEILAND ROAD AT PAULINE AVENUE

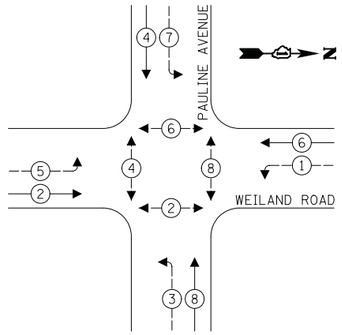
SCALE: 1" = 20' | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	226
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

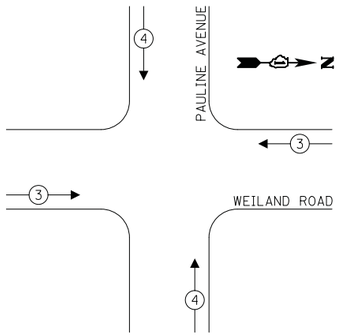
TEMPORARY CONTROLLER SEQUENCE (STAGES I & II)



TEMPORARY CONTROLLER SEQUENCE (STAGES III & FINAL)



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE (ALL STAGES)



LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP

TEMPORARY CABLE PLAN NOTES

1. THE ARROW INDICATIONS OF THESE SIGNAL HEADS SHALL REMAIN BAGGED AND DISCONNECTED UNTIL THE BEGINNING OF CONSTRUCTION STAGE III.
2. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM AND INCLUDE AN ETHERNET PORT.
3. PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND THE PHASES DISCONNECTED WHEN PEDESTRIAN CROSSINGS ARE NOT PERMITTED, OR AS DIRECTED BY THE ENGINEER.

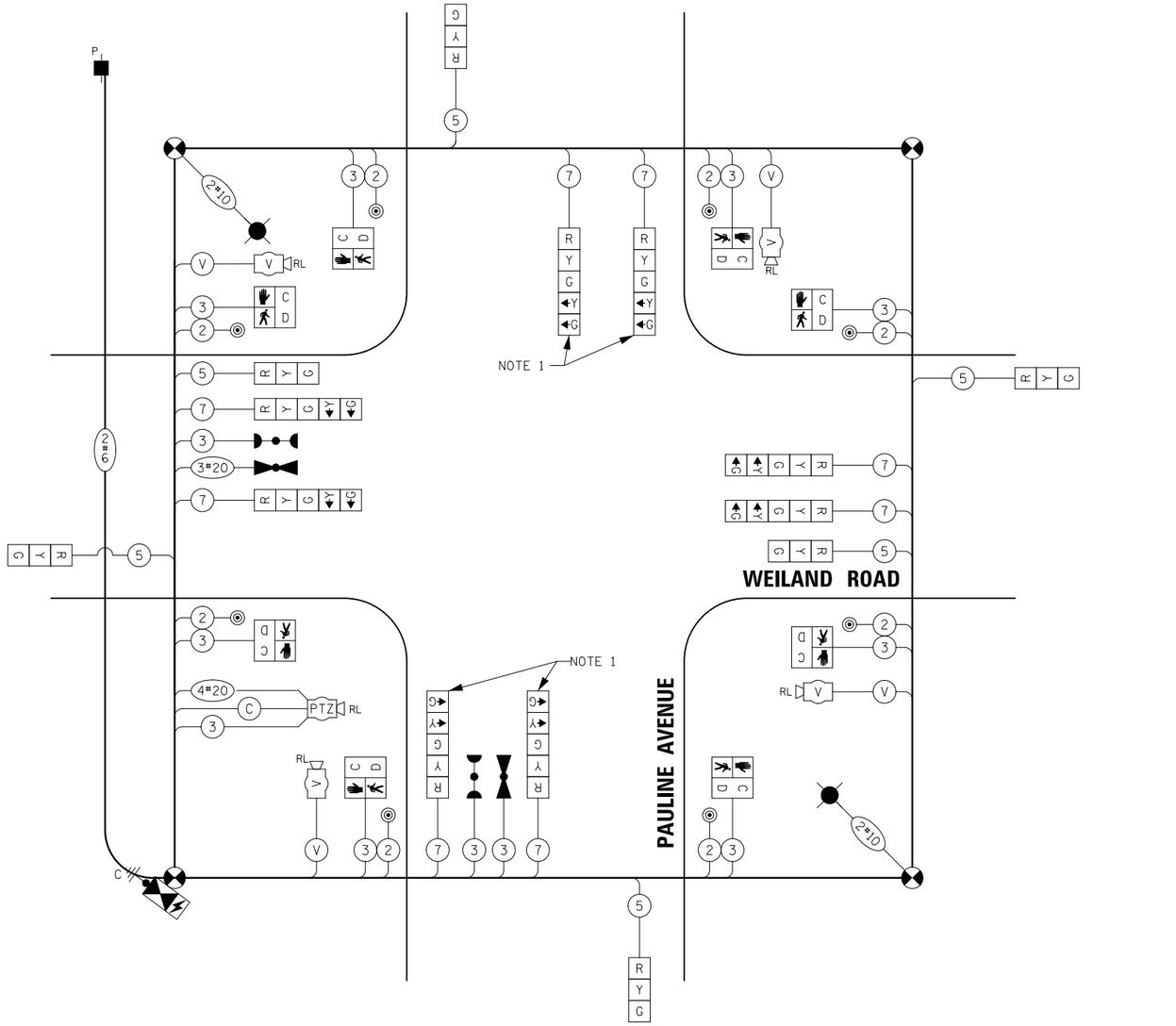
TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
ARROW	16	10	10	16.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	2	250	50	250.0
			TOTAL =	843.8

ENERGY COSTS TO:

VILLAGE OF BUFFALO GROVE
50 RAUPP BOULEVARD
BUFFALO GROVE, IL 60089

ENERGY SUPPLY: CONTACT: ALLYSEN HURST
PHONE: (847) 816-5215
COMPANY: COMED
ACCOUNT NUMBER: 1023097173



TEMPORARY CABLE PLAN

(NOT TO SCALE)

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DATE - 10/8/2018	REVISED -	

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TEMPORARY CABLE PLAN AND SEQUENCES
WEILAND ROAD AT PAULINE AVENUE

SCALE: NO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

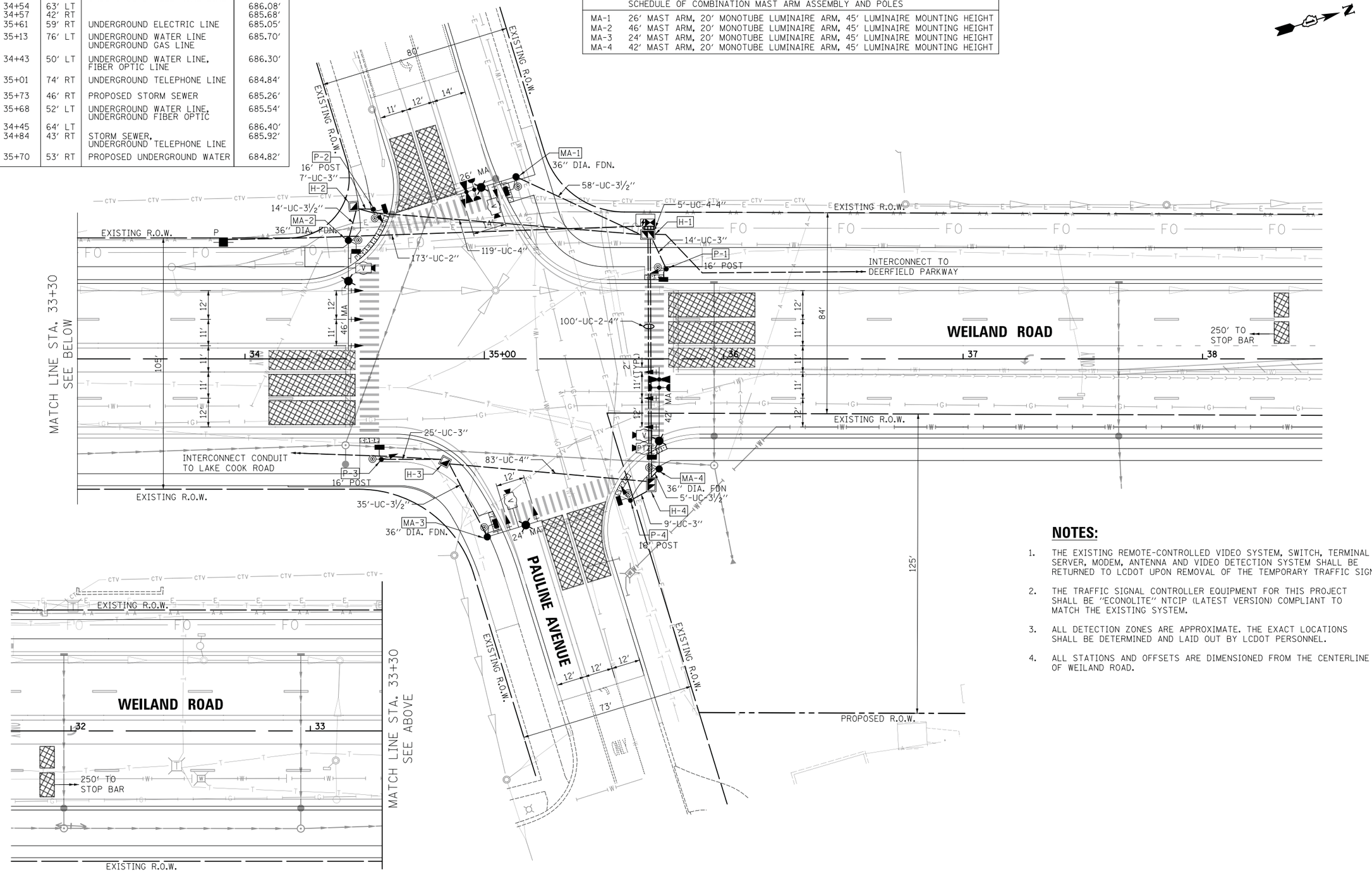
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	227
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
P-1	35+76	37′ LT	UNDERGROUND TELEPHONE LINE	685.22′
P-2	34+54	63′ LT		686.08′
P-3	34+57	42′ RT		685.68′
P-4	35+61	59′ RT	UNDERGROUND ELECTRIC LINE	685.05′
MA-1	35+13	76′ LT	UNDERGROUND WATER LINE UNDERGROUND GAS LINE	685.70′
MA-2	34+43	50′ LT	UNDERGROUND WATER LINE, FIBER OPTIC LINE	686.30′
MA-3	35+01	74′ RT	UNDERGROUND TELEPHONE LINE	684.84′
MA-4	35+73	46′ RT	PROPOSED STORM SEWER	685.26′
H-1	35+68	52′ LT	UNDERGROUND WATER LINE, UNDERGROUND FIBER OPTIC	685.54′
H-2	34+45	64′ LT		686.40′
H-3	34+84	43′ RT	STORM SEWER, UNDERGROUND TELEPHONE LINE	685.92′
H-4	35+70	53′ RT	PROPOSED UNDERGROUND WATER	684.82′

SCHEDULE OF COMBINATION MAST ARM ASSEMBLY AND POLES	
MA-1	26′ MAST ARM, 20′ MONOTUBE LUMINAIRE ARM, 45′ LUMINAIRE MOUNTING HEIGHT
MA-2	46′ MAST ARM, 20′ MONOTUBE LUMINAIRE ARM, 45′ LUMINAIRE MOUNTING HEIGHT
MA-3	24′ MAST ARM, 20′ MONOTUBE LUMINAIRE ARM, 45′ LUMINAIRE MOUNTING HEIGHT
MA-4	42′ MAST ARM, 20′ MONOTUBE LUMINAIRE ARM, 45′ LUMINAIRE MOUNTING HEIGHT



NOTES:

1. THE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM, SWITCH, TERMINAL SERVER, MODEM, ANTENNA AND VIDEO DETECTION SYSTEM SHALL BE RETURNED TO LCDOT UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL.
2. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.
3. ALL DETECTION ZONES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED AND LAID OUT BY LCDOT PERSONNEL.
4. ALL STATIONS AND OFFSETS ARE DIMENSIONED FROM THE CENTERLINE OF WEILAND ROAD.

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

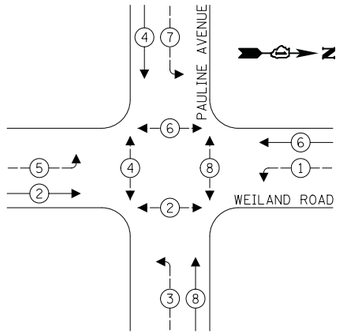
HORIZ. SCALE 0 20 40

TRAFFIC SIGNAL MODERNIZATION PLAN
WEILAND ROAD AT PAULINE AVENUE

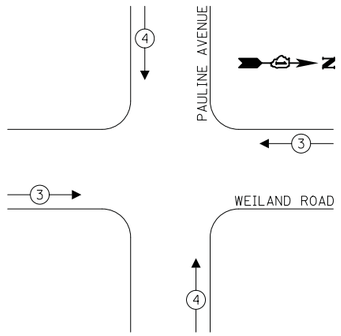
SCALE: 1″ = 20′ | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	228
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PROPOSED CONTROLLER SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

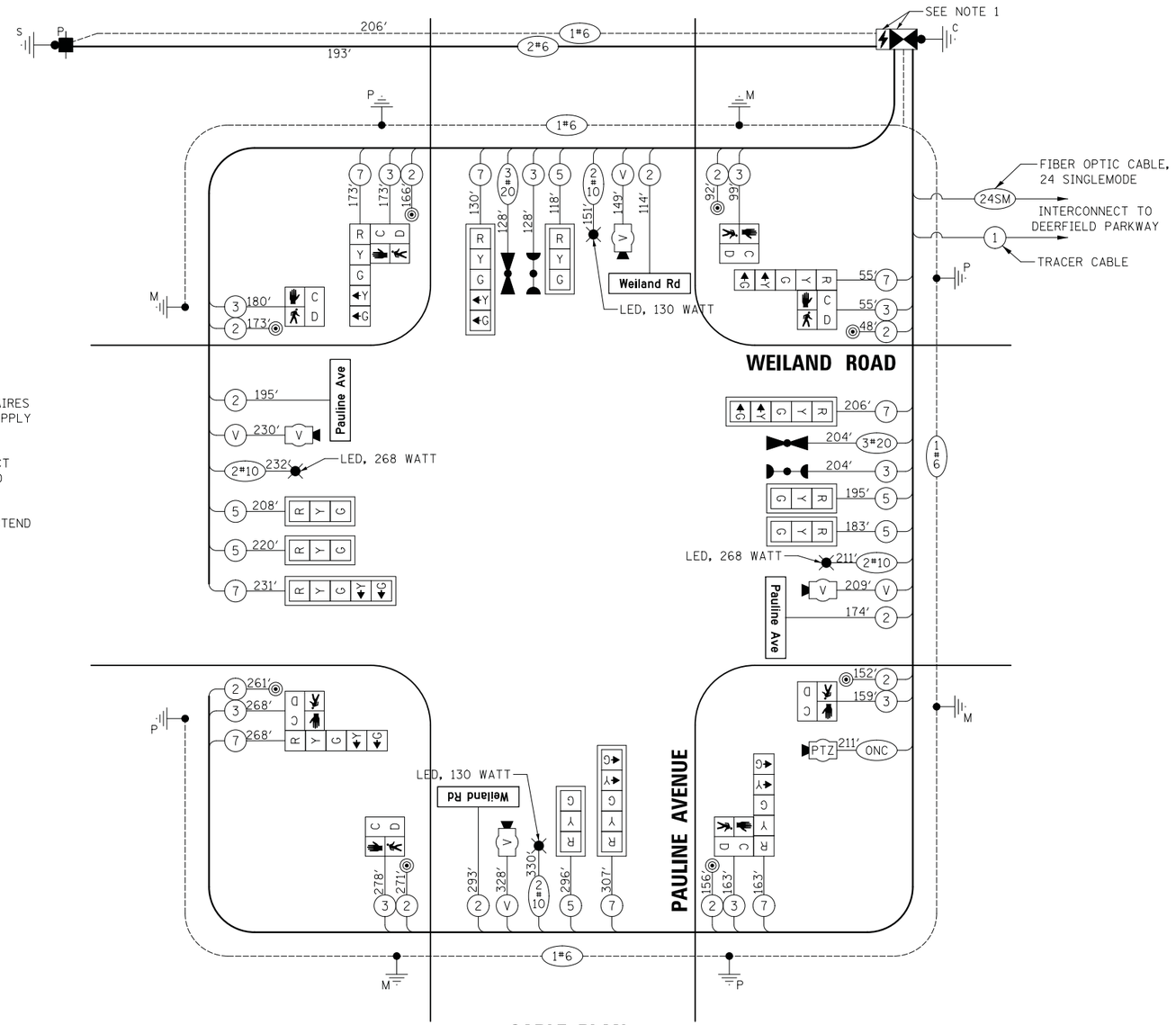


LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP

NOTES:

1. LED INTERNALLY ILLUMINATED STREET NAME SIGNS AND LUMINAIRES SHALL NOT BE CONNECTED TO THE UNINTERRUPTIBLE POWER SUPPLY UNIT.
2. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" NTCIP (LATEST VERSION) COMPLIANT TO MATCH THE EXISTING SYSTEM.
3. THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.



CABLE PLAN
(NOT TO SCALE)

LEGEND:

ONC — OUTDOOR RATED NETWORK CABLE

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	11	50	77.0
(YELLOW)	14	20	5	14.0
(GREEN)	14	12	45	75.6
ARROW	16	10	10	16.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240.0
LUMINAIRE	2	268	50	268.0
LUMINAIRE	2	130	50	130.0
			TOTAL =	1255.6

ENERGY COSTS TO:

VILLAGE OF BUFFALO GROVE
50 RAUPP BOULEVARD
BUFFALO GROVE, IL 60089

ENERGY SUPPLY: CONTACT: ALLYSEN HURST
PHONE: (847) 816-5215
COMPANY: COMED
ACCOUNT NUMBER: 1023097173

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND SEQUENCES
WEILAND ROAD AT PAULINE AVENUE

SCALE: NO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	229
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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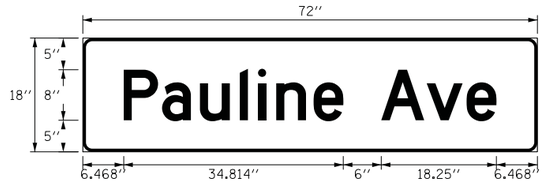
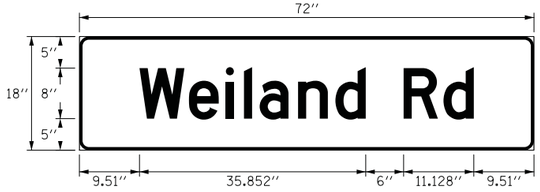


DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.00	LED SNS	N/A	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.00	LED SNS	N/A	2

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2″ DIA.	FOOT	173
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3″ DIA.	FOOT	55
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2″ DIA.	FOOT	112
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4″ DIA.	FOOT	422
HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1846
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2092
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1704
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1218
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1531
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	193
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1115
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	5
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	331
RELOCATE SWITCH	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
OUTDOOR RATED NETWORK CABLE	FOOT	211
UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL	EACH	1
RELOCATE EXISTING ENCODER	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
LAYER II (DATALINK) SWITCH	EACH	1
RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)	EACH	1
LUMINAIRE INSTALLATION, TYPE 1	EACH	2
LUMINAIRE INSTALLATION, TYPE 2	EACH	2
RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

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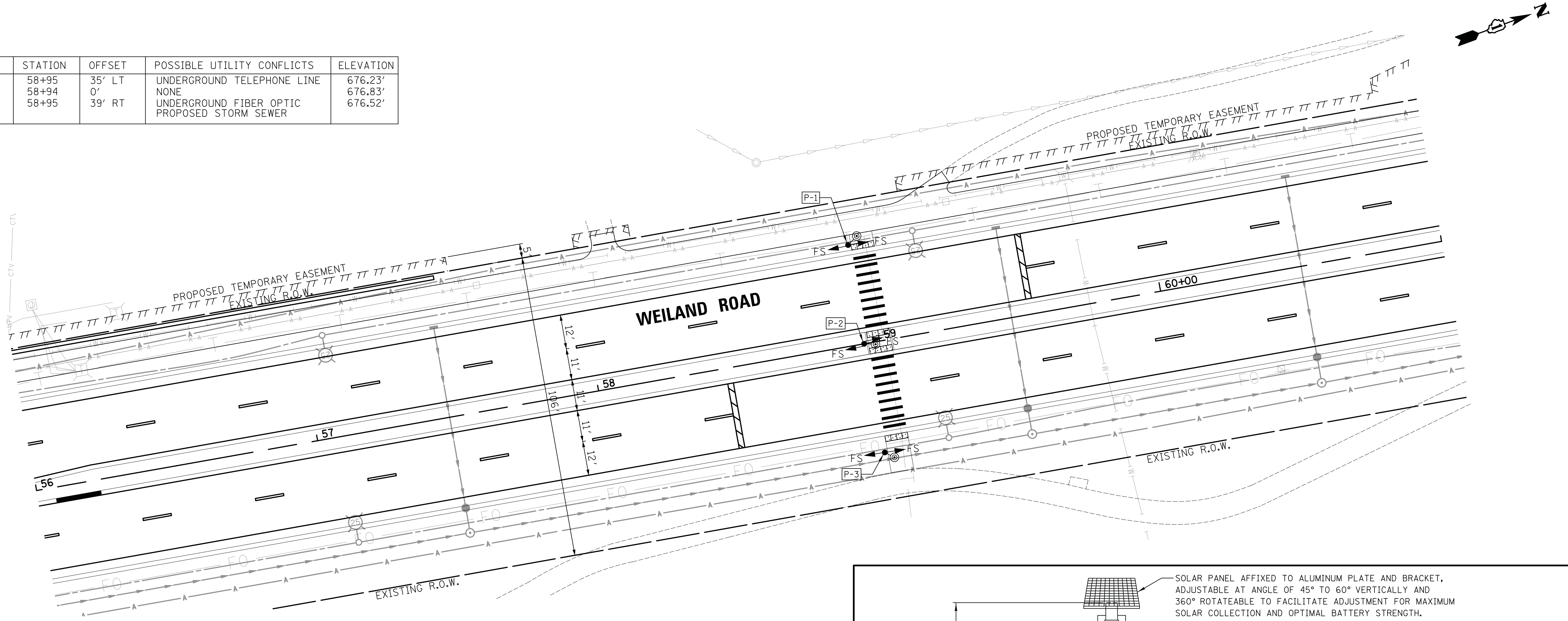
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS
AND SCHEDULE OF QUANTITIES
WEILAND ROAD AT PAULINE AVENUE

SCALE: NO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

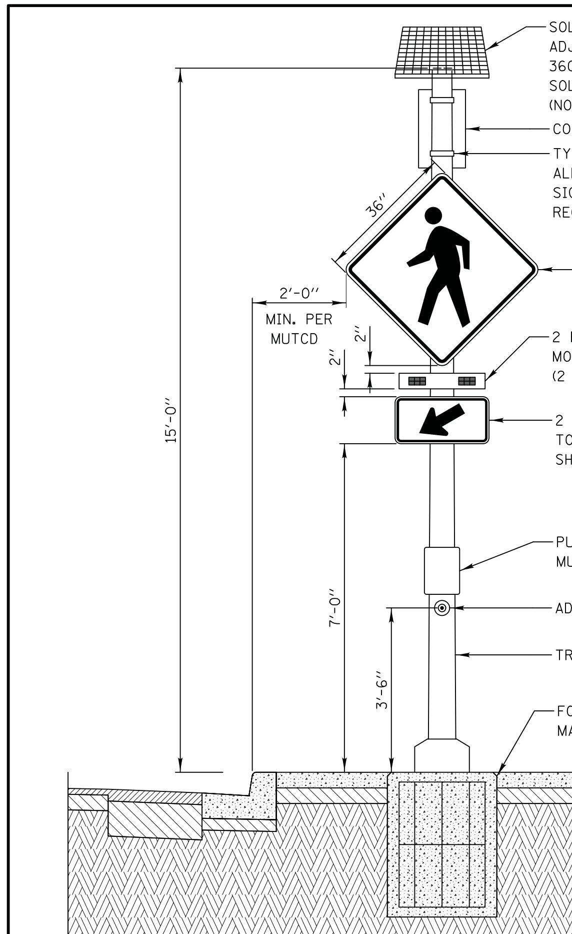
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	230
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
P-1	58+95	35' LT	UNDERGROUND TELEPHONE LINE	676.23'
P-2	58+94	0'	NONE	676.83'
P-3	58+95	39' RT	UNDERGROUND FIBER OPTIC PROPOSED STORM SEWER	676.52'



SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
RECTANGULAR RAPID FLASHING BEACON ASSEMBLY (COMPLETE)	EACH	3



REVISIONS	DATE	LakeCounty Division of Transportation	APPROVED BY: MGZ DATE: 04/24/13
		RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM	LC8502

CIVILTECH Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	DESIGNED - LEP DRAWN - LEP CHECKED - JJE DATE - 10/8/2018	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: HORIZ. 0 20 40

FLASHING BEACON INSTALLATION PLAN
WEILAND ROAD AT STA. 59+00

SCALE: 1' = 20'' | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	231
		CONTRACT NO. 61E24		

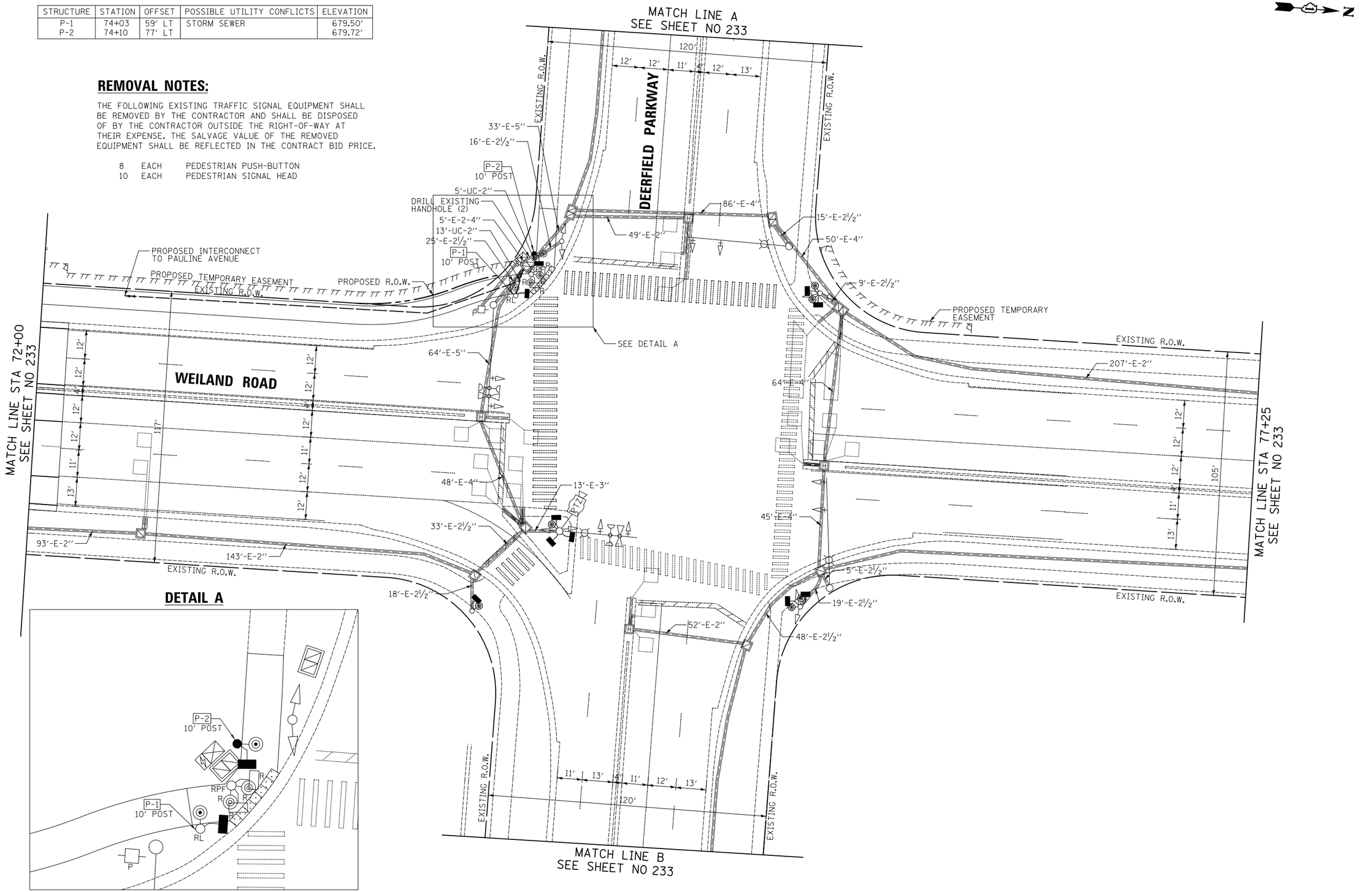
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
P-1	74+03	59' LT	STORM SEWER	679.50'
P-2	74+10	77' LT		679.72'

REMOVAL NOTES:

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

8	EACH	PEDESTRIAN PUSH-BUTTON
10	EACH	PEDESTRIAN SIGNAL HEAD



DETAIL A

FINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.		

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

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CHECKED - JJE		REVISED -
DATE - 10/8/2018		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TRAFFIC SIGNAL MODIFICATION PLAN
WEILAND ROAD AT DEERFIELD PARKWAY

SCALE: 1" = 20' | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	232
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

N

EXISTING INTERCONNECT TO HIGHLAND GROVE DRIVE

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

EXISTING R.O.W.

DEERFIELD PARKWAY

EXISTING R.O.W.

120'

12' 13' 11' 4' 12' 13'

PROPOSED TEMPORARY EASEMENT

77

EXISTING R.O.W.

WEILAND ROAD

71

12'

12'

4'

12'

12'

117'

SAMPLING (SYSTEM) DETECTORS

6'

6'

6'

12'

12'

6'

12'

EXISTING R.O.W.

MATCH LINE STA 72+00
SEE SHEET NO 232

328'-E-2"

MATCH LINE A
SEE SHEET NO 232

MATCH LINE B
SEE SHEET NO 232

330'-E-2"

11' 13' 4' 11' 12' 13'

120'

EXISTING R.O.W.

EXISTING R.O.W.

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

EXISTING INTERCONNECT TO COMMERCE COURT

EXISTING R.O.W.

86'-E-2"

EXISTING SAMPLING (SYSTEM) DETECTORS

12'

12'

78

12'

11'

13'

106'

EXISTING R.O.W.

MATCH LINE STA 77+25
SEE SHEET NO 232

EXISTING INTERCONNECT TO APTAKISIC-TRIPP JUNIOR HIGH SHOOL

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

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DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

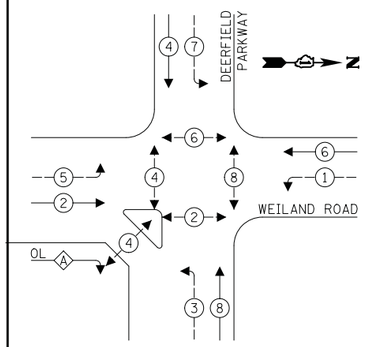
SCALE
HORIZ. 0 20 40

TRAFFIC SIGNAL MODIFICATION PLAN
WEILAND ROAD AT DEERFIELD PARKWAY

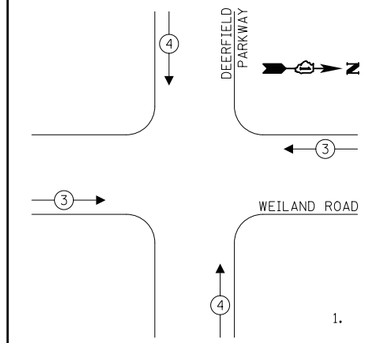
SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	233
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

EXISTING CONTROLLER SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

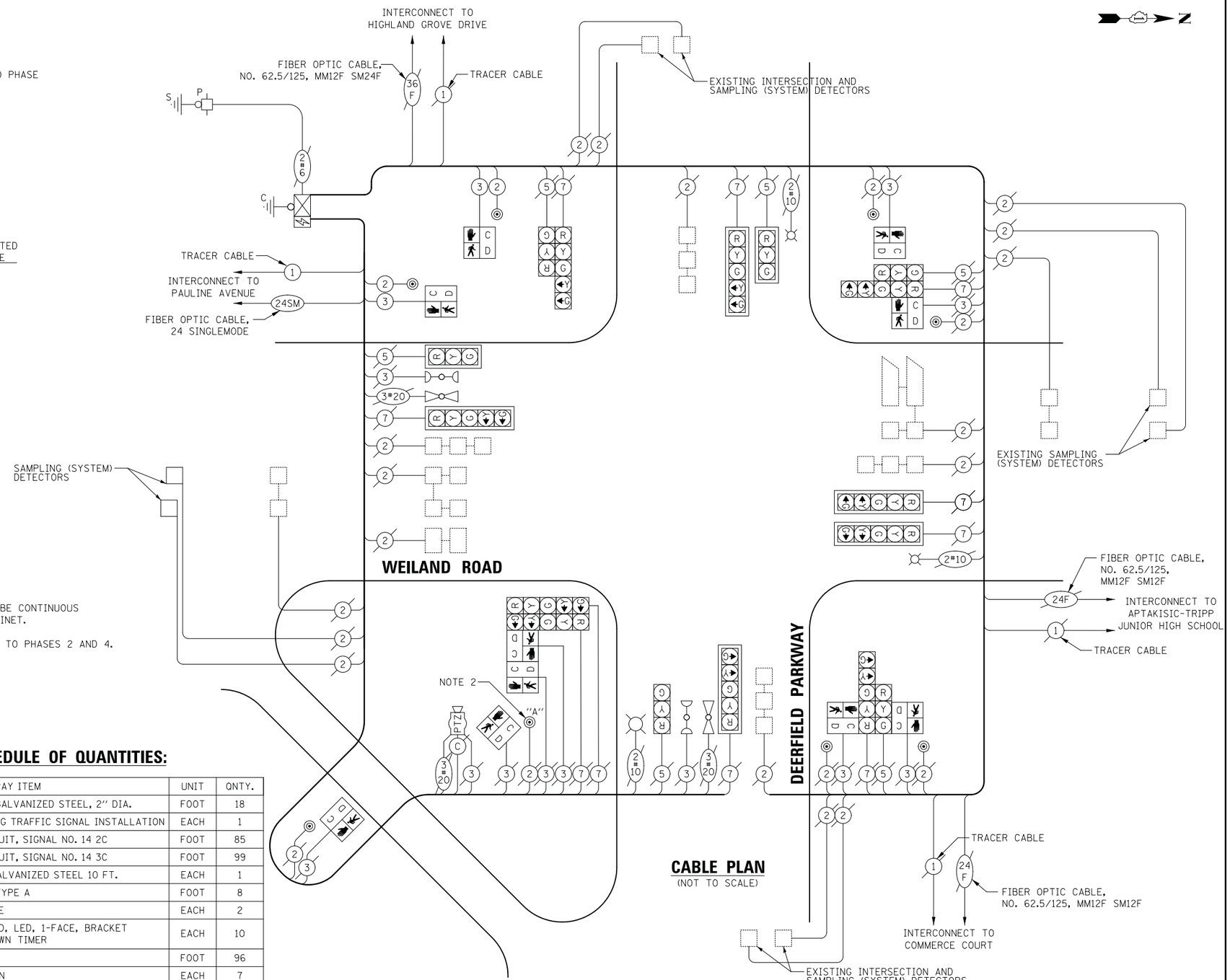
- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL OVERLAP

RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3

CABLE PLAN NOTES:

1. THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.
2. PUSH-BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
ARROW	20	10	10	20.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	3	250	100	750.0
			TOTAL =	1307.4

ENERGY COSTS TO:

VILLAGE OF BUFFALO GROVE
50 RAUPP BOULEVARD
BUFFALO GROVE, IL 60089

ENERGY SUPPLY: CONTACT: ALLYSEN HURST
PHONE: (847) 816-5215
COMPANY: COMED
ACCOUNT NUMBER: 1023097173

SCHEDULE OF QUANTITIES:

PAY ITEM	UNIT	QNTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	18
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	85
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	99
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
DRILL EXISTING HANDHOLE	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	10
DETECTOR LOOP, TYPE I	FOOT	96
PEDESTRIAN PUSH-BUTTON	EACH	7
RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	168
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	1

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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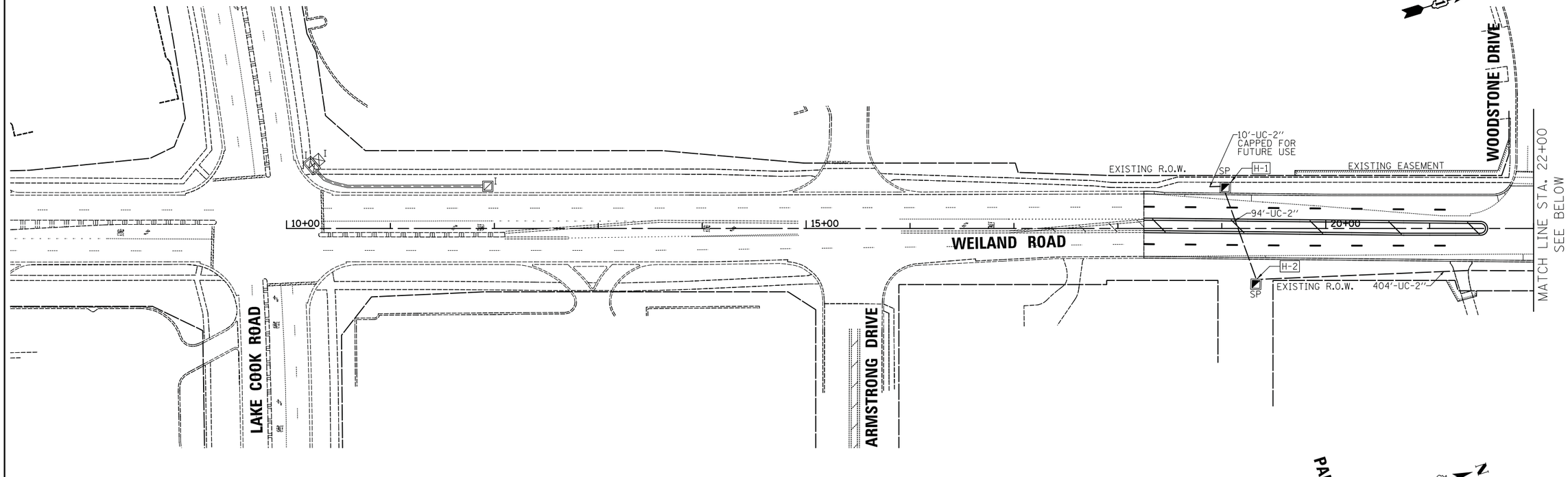
DATE - 10/8/2018	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

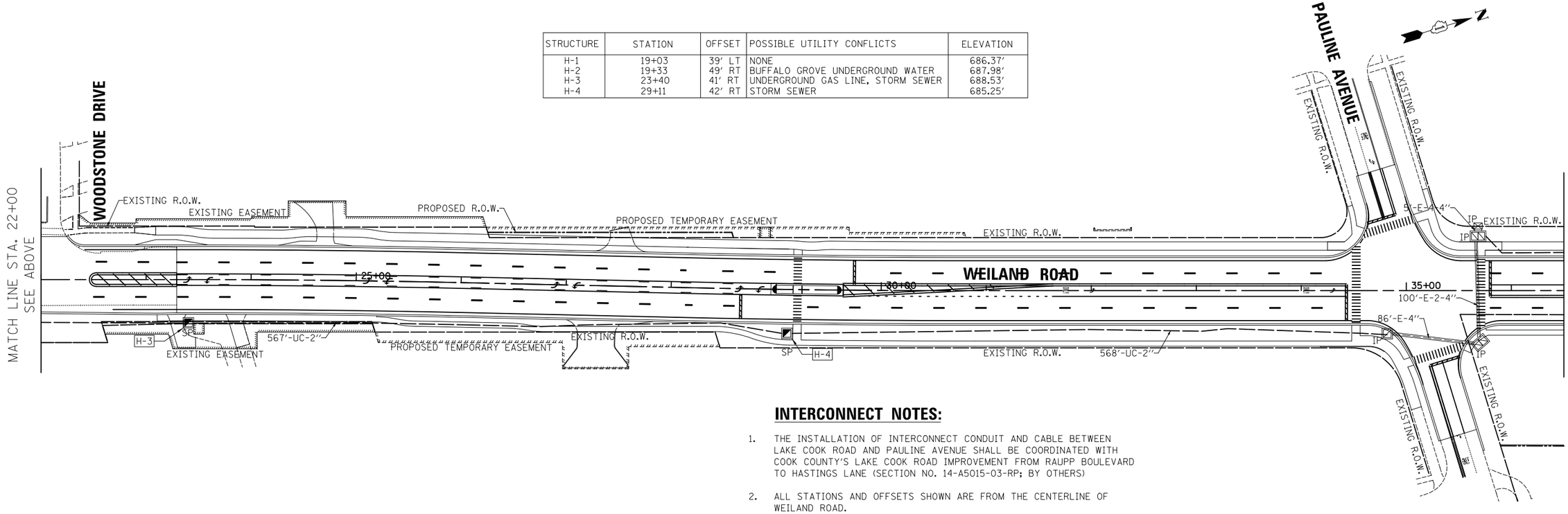
CABLE PLAN, SEQUENCES, AND SCHEDULE OF QUANTITIES
WEILAND ROAD AT DEERFIELD PARKWAY

SCALE: NO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	234
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



STRUCTURE	STATION	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
H-1	19+03	39' LT	NONE	686.37'
H-2	19+33	49' RT	BUFFALO GROVE UNDERGROUND WATER	687.98'
H-3	23+40	41' RT	UNDERGROUND GAS LINE, STORM SEWER	688.53'
H-4	29+11	42' RT	STORM SEWER	685.25'



INTERCONNECT NOTES:

1. THE INSTALLATION OF INTERCONNECT CONDUIT AND CABLE BETWEEN LAKE COOK ROAD AND PAULINE AVENUE SHALL BE COORDINATED WITH COOK COUNTY'S LAKE COOK ROAD IMPROVEMENT FROM RAUPP BOULEVARD TO HASTINGS LANE (SECTION NO. 14-A5015-03-RP; BY OTHERS)

2. ALL STATIONS AND OFFSETS SHOWN ARE FROM THE CENTERLINE OF WEILAND ROAD.

FINAL SURVEY / ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

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CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

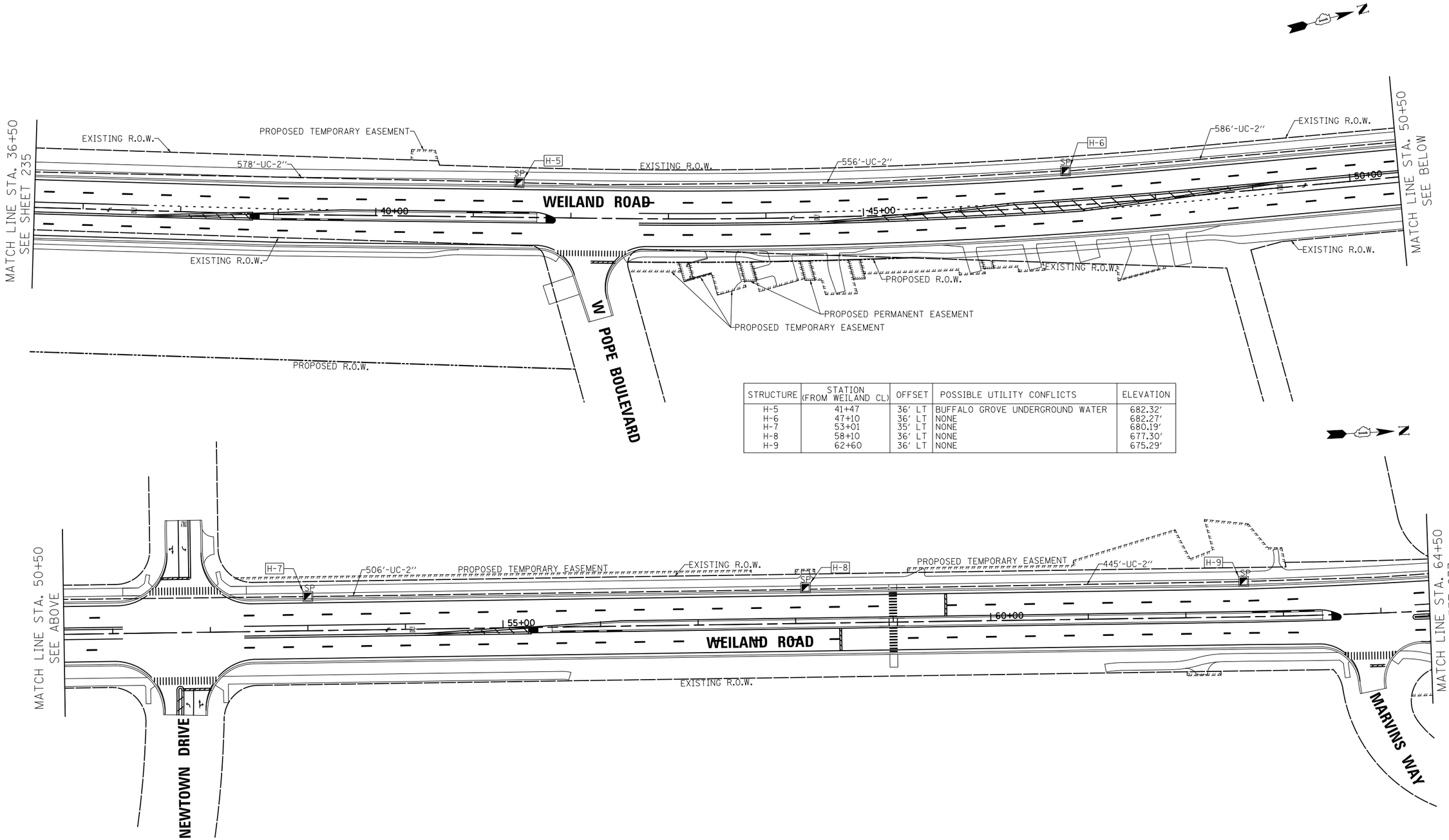
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 50 100

INTERCONNECT PLAN
WEILAND ROAD

SCALE: 1" = 50' | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	235
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



STRUCTURE	STATION (FROM WEILAND CL)	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
H-5	41+47	36' LT	BUFFALO GROVE UNDERGROUND WATER	682.32'
H-6	47+10	36' LT	NONE	682.27'
H-7	53+01	35' LT	NONE	680.19'
H-8	58+10	36' LT	NONE	677.30'
H-9	62+60	36' LT	NONE	675.29'

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 50 100

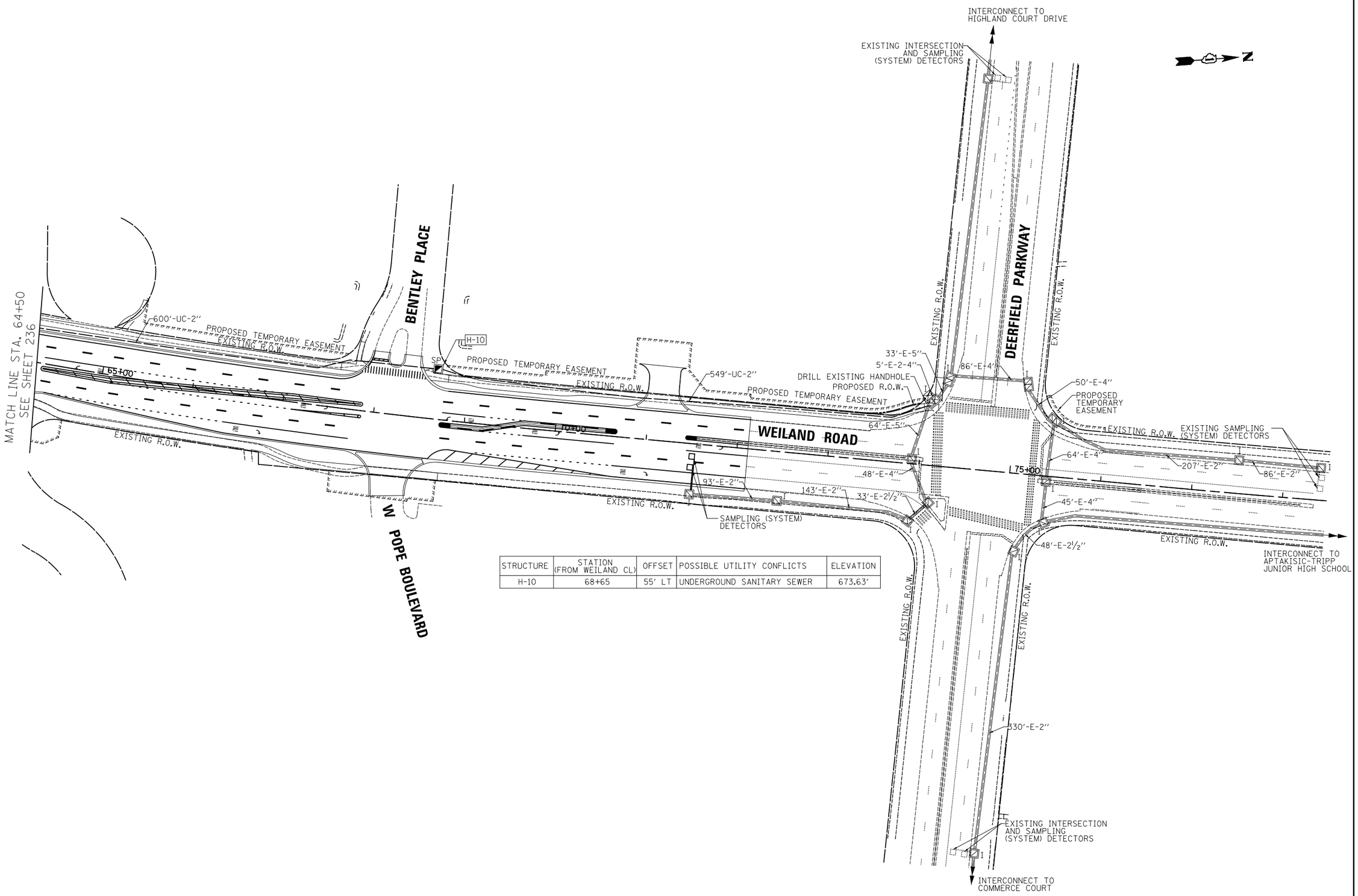
INTERCONNECT PLAN
WEILAND ROAD

SCALE: 1" = 50' | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	236
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



STRUCTURE	STATION (FROM WEILAND CL)	OFFSET	POSSIBLE UTILITY CONFLICTS	ELEVATION
H-10	68+65	55' LT	UNDERGROUND SANITARY SEWER	673.63'

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 50 100

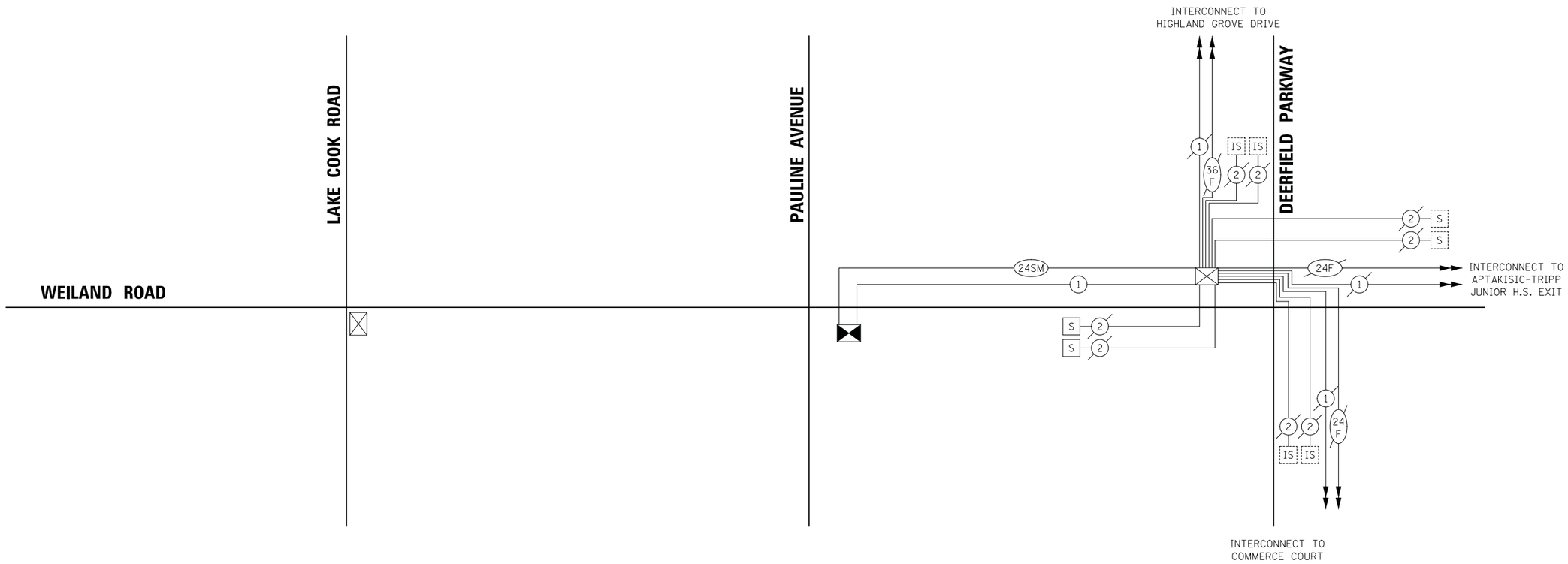
INTERCONNECT PLAN
WEILAND ROAD

SCALE: 1" = 50' | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	237
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

INTERCONNECT NOTES:

1. THE INSTALLATION OF INTERCONNECT CONDUIT AND CABLE BETWEEN LAKE COOK ROAD AND PAULINE AVENUE SHALL BE COORDINATED WITH COOK COUNTY'S LAKE COOK ROAD IMPROVEMENT FROM RAUPP BOULEVARD TO HASTINGS LANE (SECTION NO. 14-A5015-03-RP; BY OTHERS)



INTERCONNECT SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	5463
HANDHOLE	EACH	10
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3904
DRILL EXISTING HANDHOLE	EACH	1
FIBER OPTIC CABLE IN CONDUIT, 24 FIBERS, SINGLE MODE	FOOT	3927
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

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DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC

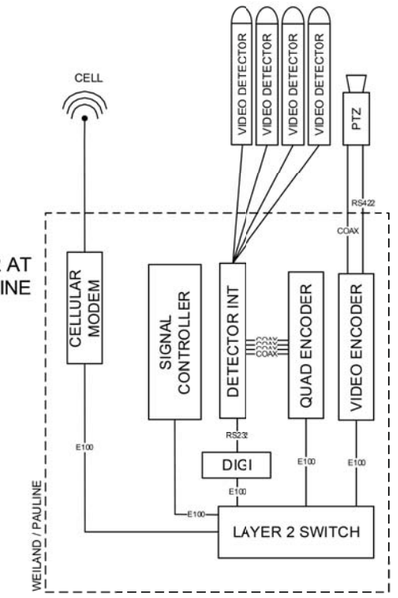
SCALE: NO SCALE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

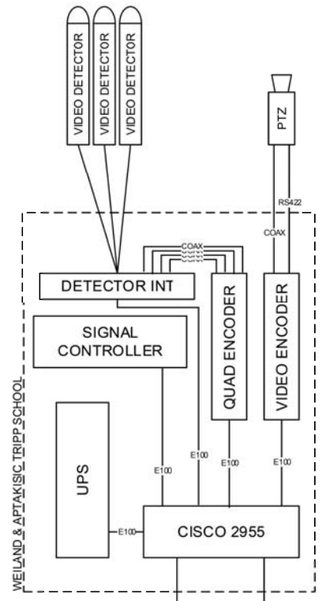
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	238
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PARSONS

- EXISTING MULTIMODE FIBER
- PROPOSED MULTIMODE FIBER
- EXISTING SINGLEMODE FIBER
- PROPOSED SINGLEMODE FIBER
- XYZ — EXISTING EQUIPMENT
- **XYZ** — PROPOSED EQUIPMENT

RELOCATE ALL GEAR AT
WEILAND / PAULINE

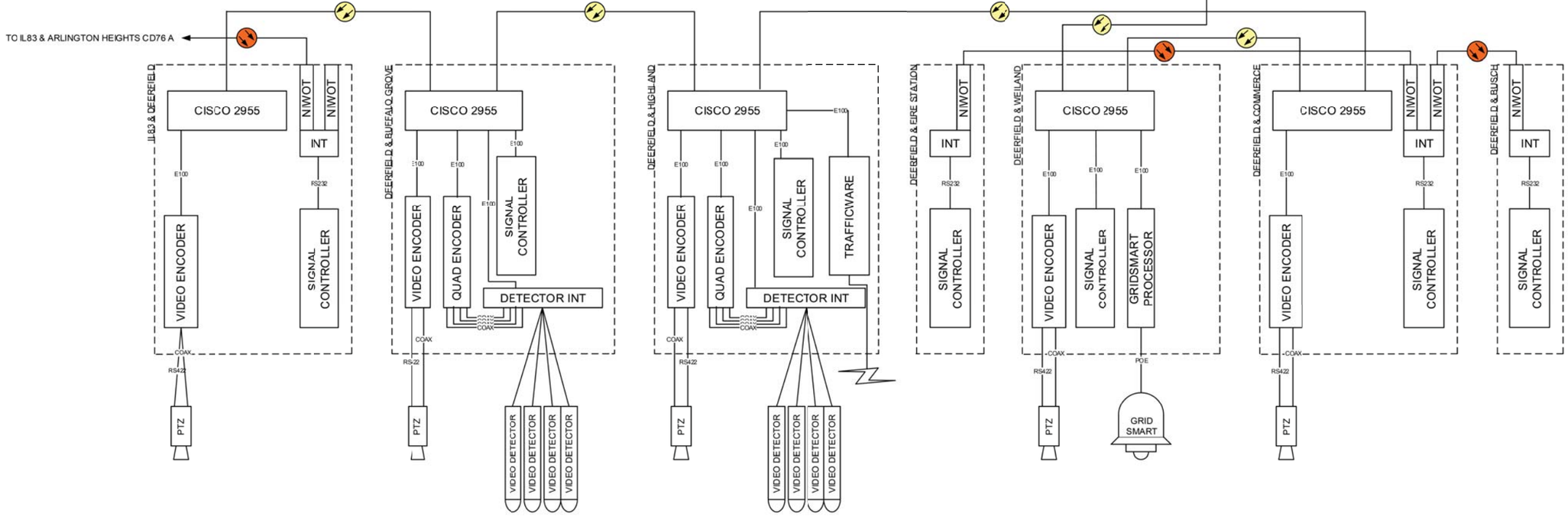




TEMP

TO APTAKISIC / WEILAND COMM CABINET CD16 A

TO IL83 & ARLINGTON HEIGHTS CD76 A



DESIGNED - DG	REVISED 2016.06.22	DR/BUFF, DR/HIGH, DR/WEIL, WEI/TRI	LAKE COUNTY DIVISION OF TRANSPORTATION
DRAWN - DG	REVISED 2017.07.05	DR/WEIL - GRIDSMART	
CHECKED - DG	REVISED –		
DATE 2017/11/16	REVISED –		

16B
APTAKISIC / WEILAND TEMP
SCALE N/A

ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
			16B	

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DEPARTMENT OF TRANSPORTATION

TEMPORARY CABINET DETAIL
WEILAND ROAD
SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	239
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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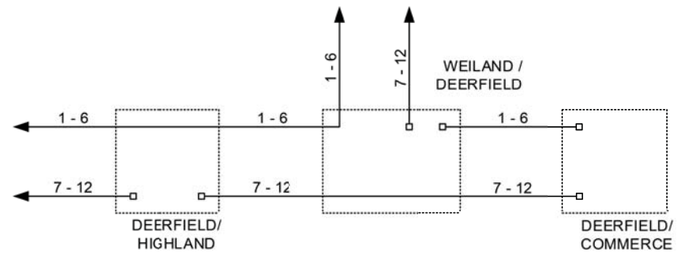
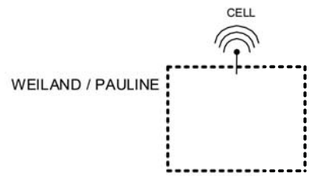
ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

PARSONS

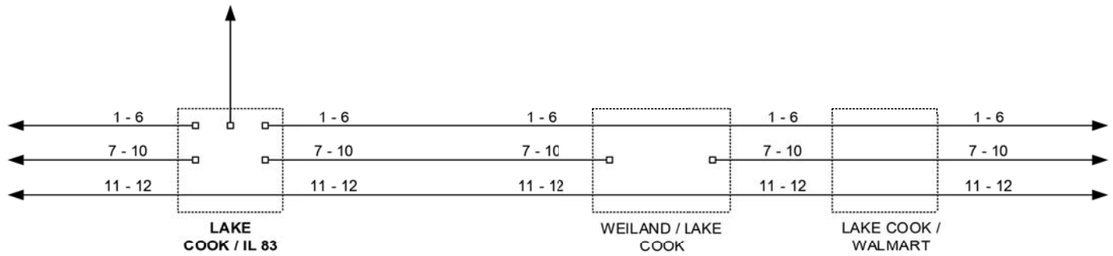
FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	





TEMP



EXISTING CONNECTOR / EXISTING FIBER
NEW CONNECTOR / EXISTING FIBER
EXISTING FUSION SPLICE / EXISTING FIBER
NEW FUSION SPLICE / EXISTING FIBER
NEW CONNECTOR / NEW FIBER
NEW FUSION SPLICE / NEW FIBER

	DESIGNED - DG	REVISED –		LAKE COUNTY DIVISION OF TRANSPORTATION	WEILAND from LAKE COOK to DEERFIELD FIBER SPLICING DIAGRAM - TEMP	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - DG	REVISED –								
	CHECKED - DG	REVISED –								
	DATE 2017/11/16	REVISED –			SCALE N/A					

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DRAWN - LEP	REVISED -	
CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

CABINET DETAIL
WEILAND ROAD
SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	240
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PARSONS

EXISTING MULTIMODE FIBER

PROPOSED MULTIMODE FIBER

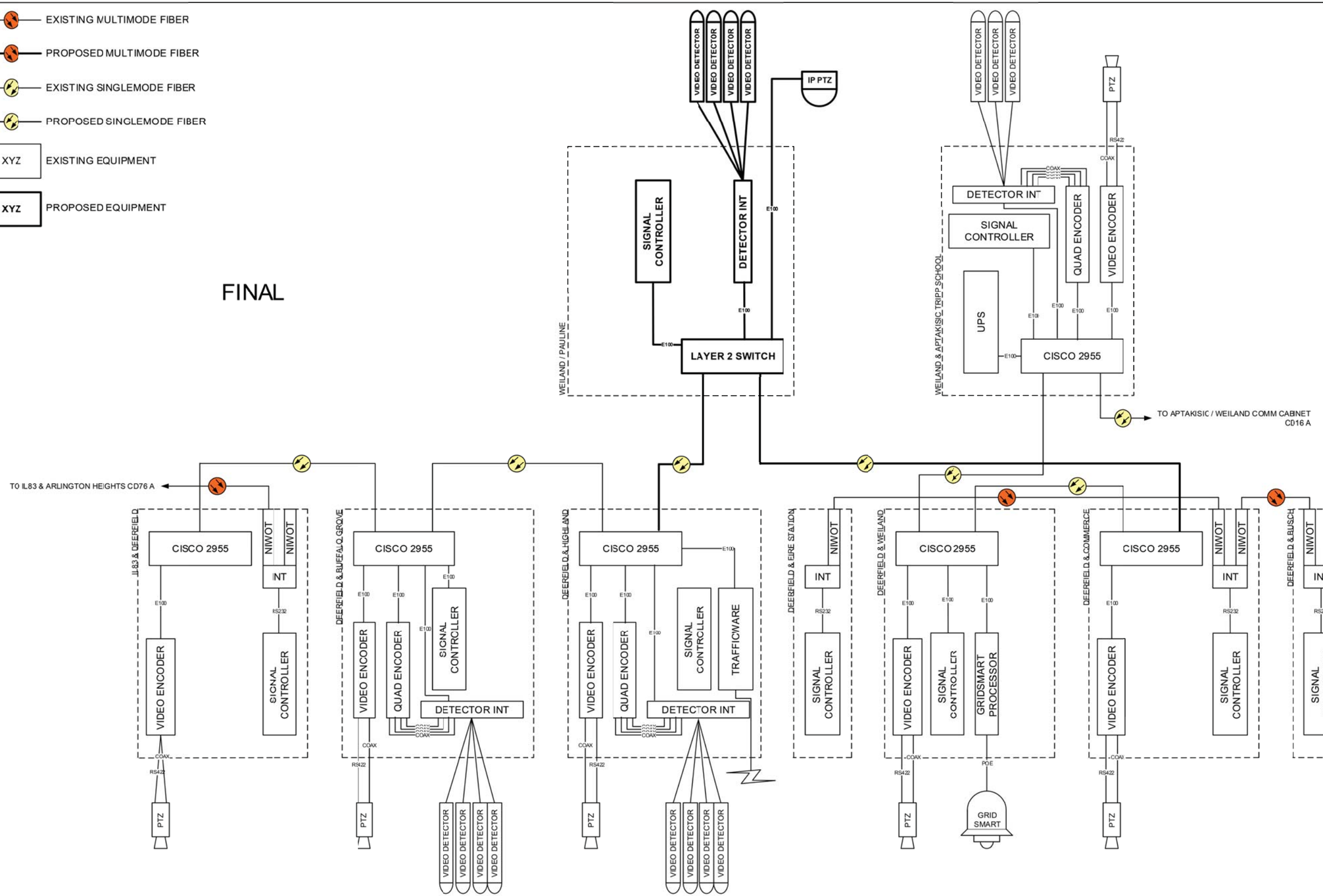
EXISTING SINGLEMODE FIBER

PROPOSED SINGLEMODE FIBER

XYZ EXISTING EQUIPMENT

XYZ PROPOSED EQUIPMENT

FINAL



DESIGNED - DG	REVISED -2016.06.22	DR/BUFF, DR/HIGH, DR/WEIL, WEI/TRI	LAKE COUNTY DIVISION OF TRANSPORTATION
DRAWN - DG	REVISED 2017.07.05	DR/WEIL - GRIDSMART	
CHECKED - DG	REVISED –		
DATE 2017/11/16	REVISED –		

16B
APTAKISIC / WEILAND FINAL

SCALE N/A

ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
			16B	

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
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DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

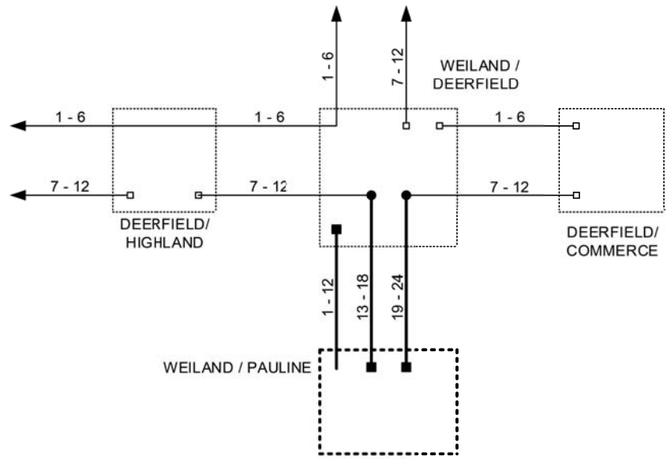
TEMPORARY FIBER SPLICING DIAGRAM
WEILAND ROAD

SHEET NO. OF SHEETS

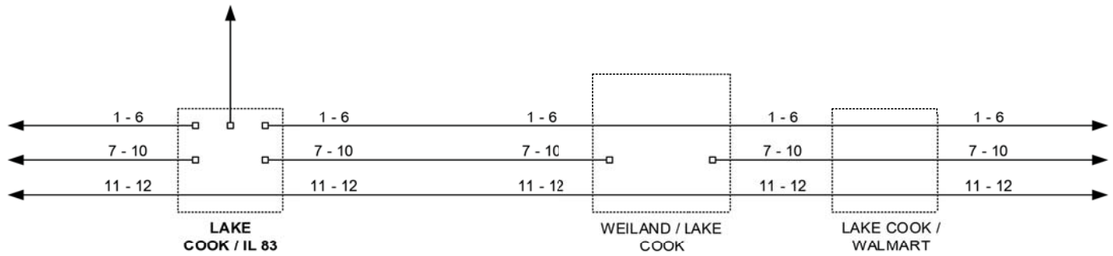
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	241
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PARSONS

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



FINAL



EXISTING CONNECTOR / EXISTING FIBER
NEW CONNECTOR / EXISTING FIBER
EXISTING FUSION SPLICE / EXISTING FIBER
NEW FUSION SPLICE / EXISTING FIBER
NEW CONNECTOR / NEW FIBER
NEW FUSION SPLICE / NEW FIBER

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

	DESIGNED - DG	REVISED –		LAKE COUNTY DIVISION OF TRANSPORTATION	WEILAND from LAKE COOK to DEERFIELD FIBER SPLICING DIAGRAM - TEMP	ROUTE	SECTION / ROUTE SECTION / SHEET / SHEETS
	DRAWN - DG	REVISED –					
	CHECKED - DG	REVISED –					
	DATE 2017/11/16	REVISED –			SCALE N/A		

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CHECKED - JJE	REVISED -	
DATE - 10/8/2018	REVISED -	

FIBER SPLICING DIAGRAM
WEILAND ROAD
SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	242
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

LEGEND

	TEMPORARY LIGHTING UNIT LUMINAIRE, 250 WATT HPS, TYPE III DISTRIBUTION TEMPORARY WOOD POLE, 50 FT. CLASS 4, 15 FT. MAST ARM (40 FT. M.H.)
	TEMPORARY COMBINATION TRAFFIC SIGNAL AND STREET LIGHT LUMINAIRE, 250 WATT HPS, TYPE III DISTRIBUTION 40 FT. M.H., 15 FT. MAST ARM LUMINAIRE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER (SEE TRAFFIC SIGNAL PLANS)
	TEMPORARY COMBINATION TRAFFIC SIGNAL AND STREET LIGHT LUMINAIRE, 250 WATT HPS, TYPE III DISTRIBUTION 40 FT. M.H., 20 FT. MAST ARM LUMINAIRE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER (SEE TRAFFIC SIGNAL PLANS)
	PROPOSED LIGHTING UNIT LUMINAIRE, 130 WATT, LED LIGHT POLE, WEATHERING STEEL, 35 FT. M.H., 6 FT. MAST ARM
	PROPOSED COMBINATION TRAFFIC SIGNAL AND STREET LIGHT LUMINAIRE, 130 WATT, LED 45 FT. M.H., 20 FT. MAST ARM LUMINAIRE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER (SEE TRAFFIC SIGNAL PLANS)
	PROPOSED COMBINATION TRAFFIC SIGNAL AND STREET LIGHT LUMINAIRE, 268 WATT, LED 45 FT. M.H., 20 FT. MAST ARM LUMINAIRE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER (SEE TRAFFIC SIGNAL PLANS)
	EXISTING LIGHTING UNIT LUMINAIRE, 250 OR 100 WATT HPS 35 OR 24.5 FT. M.H., 6 FT. MAST ARM
	RELOCATE EXISTING LIGHTING UNIT
	EXISTING LIGHTING UNIT TO BE REMOVED
	PROPOSED LIGHTING CONTROLLER
	TEMPORARY WOOD POLE, 50 FT., CLASS 4
	PROPOSED UNIT DUCT (SIZE AS SPECIFIED IN PLANS)
	TEMPORARY AERIAL CABLE
	EXISTING CABLES
	REMOVAL OF EXISTING CABLES

LIGHTING GENERAL NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
2. PAY ITEMS IN THE SUMMARY OF QUANTITIES HAVE BEEN ESTIMATED. IF, IN THE ENGINEER'S OPINION, ANY WORK IS NOT REQUIRED, THAT ITEM WILL BE DEDUCTED FROM THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
3. EXISTING LIGHTING WILL REMAIN OPERATIONAL UNTIL TEMPORARY LIGHTING ARE INSTALLED AND OPERATIONAL. TEMPORARY LIGHTING WILL REMAIN OPERATIONAL UNTIL PROPOSED LIGHTING SYSTEMS ARE INSTALLED AND OPERATIONAL.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLES AND LIGHTING CONTROLLERS FOR EXAMINATION AND CONFIRMATION WITH THE RESIDENT ENGINEER AT THE CONSTRUCTION INSPECTION.
5. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO AUGURING FOR LIGHT POLE FOUNDATIONS. THE EXACT LOCATIONS FOR ALL ITEMS SHALL BE CONFIRMED WITH THE RESIDENT ENGINEER PRIOR TO STARTING WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE RESIDENT ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF FOUNDATIONS HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
7. LIGHT POLE FOUNDATION TYPE IS SPECIFIED IN THE PLANS BASE ON UTILITY INFORMATION. IF IT IS DETERMINED THAT THE CONDITIONS IN THE FIELD REQUIRES AN ALTERNATE FOUNDATION TYPE, AN ALTERNATE FOUNDATION TYPE WILL BE USED WITH THE APPROVAL OF THE ENGINEER. THE PAY ITEM LIGHT POLE FOUNDATION, 24" OR 30" DIAMETER WILL BE THE PREFERRED FOUNDATION TO USE ON THE PROJECT. NO COMPENSATION WILL BE GIVEN TO THE CONTRACTOR IF THE PAY ITEM IS NOT USED.
8. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
9. TO MAINTAIN THE STRUCTURAL INTEGRITY OF ALUMINUM POLES WITH MAST ARMS, THEY SHALL NOT BE ERECTED AND LEFT TO STAND WITHOUT LUMINAIRES. NOTE THAT THE CONTRACTOR SHALL NOT BE PAID FOR POLES UNTIL LUMINAIRES ARE INSTALLED.
10. CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS, OTHER UTILITIES AND LANDSCAPING.
11. WHEN SPLICING TO EXISTING POLE, ANY AND ALL WORK REQUIRED TO RUN THE PROPOSED UNIT DUCT INTO EXISTING FOUNDATION SLEEVE AND SPLICING IN EXISTING POLE SHALL BE COVERED AND INCLUDED IN THE PAY ITEM FOR THE UNIT DUCT.
12. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE ANY LIGHT STANDARD IS ERECTED.
13. ANY DAMAGE TO PAVEMENT, SIDEWALK, CURB, OR ANY OTHER PORTION OF THE ROADWAY NOT SPECIFICALLY TO BE REMOVED AND REPLACED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST AND REPLACEMENT SHALL MEET THE APPROVAL OF THE ENGINEER.
14. COORDINATE WITH TRAFFIC SIGNAL PLANS FOR EXACT LOCATIONS OF COMBINATION POLES. COMBINATION POLES, MAST ARM, LUMINAIRE, AND WIRING FOR THE COMBINATION LIGHTING WILL BE PAID FOR UNDER TRAFFIC SIGNAL PAY ITEMS.
15. OFFSET CALL-OFFS FOR TEMPORARY LIGHT POLES ARE FROM THE CENTER OF POLES TO PROPOSED BASELINE/PGL. OFFSETS CALL-OFFS FOR PROPOSED LIGHT POLES ARE FROM THE CENTER OF POLES TO PROPOSED EDGE OF PAVEMENT (E.O.P.).

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

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CHECKED - DNM	REVISED -	
DATE - 10/8/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING LEGEND AND GENERAL NOTES

SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	243
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LIGHTING SCHEDULE OF QUANTITIES

CODED PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	1265
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	75
81603040	UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYEHTYLENE	FOOT	345
81603050	UNIT DUCT, 600V, 3-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	341
81603100	UNIT DUCT, 600V, 4-1C NO.6, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	10247
81702400	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	40
81702450	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	55
81800230	AERIAL CABLE, 2-1/C NO. 6 WITH MESSENGER WIRE	FOOT	830
81800300	AERIAL CABLE, 3-1/C NO. 2 WITH MESSENGER WIRE	FOOT	30
81800415	AERIAL CABLE, 4-1/C NO. 6 WITH MESSENGER WIRE	FOOT	8485
82500350	LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100 AMP	EACH	1
83062370	LIGHT POLE, WEATHERING STEEL, 35 FT. M.H., 6 FT. MAST ARM	EACH	48
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	380
84100110	REMOVAL OF TEMPORARY LIGHTING UNIT	EACH	50
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	23
84200804	REMOVAL OF POLE FOUNDATION	EACH	29
84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	6
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	5
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	14820
X0323003	TEMPORARY ELECTRIC SERVICE INSTALLATION	EACH	1
X0324637	BASE COVER, LIGHT POLE	EACH	48
X0327236	TEMPORARY WOOD POLE, 50 FT., CLASS 4	EACH	2
X0327350	TEMPORARY WOOD POLE, 50 FT., CLASS 4, 15 FT. MAST ARM	EACH	48
X8210005	TEMPORARY LUMINAIRE, HIGH PRESSURE SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	48
X8250060	TEMPORARY LIGHTING CONTROLLER	EACH	1
X8360215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	60
X8360315	LIGHT POLE FOUNDATION, 30" DIAMETER, OFFSET	FOOT	132
X8380084	BREAKAWAY DEVICE, COUPLING	EACH	48
Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	12
XX008068	LUMINAIRE INSTALLATION, TYPE 1	EACH	47
X1400202	LUMINAIRE (SPECIAL)	EACH	1

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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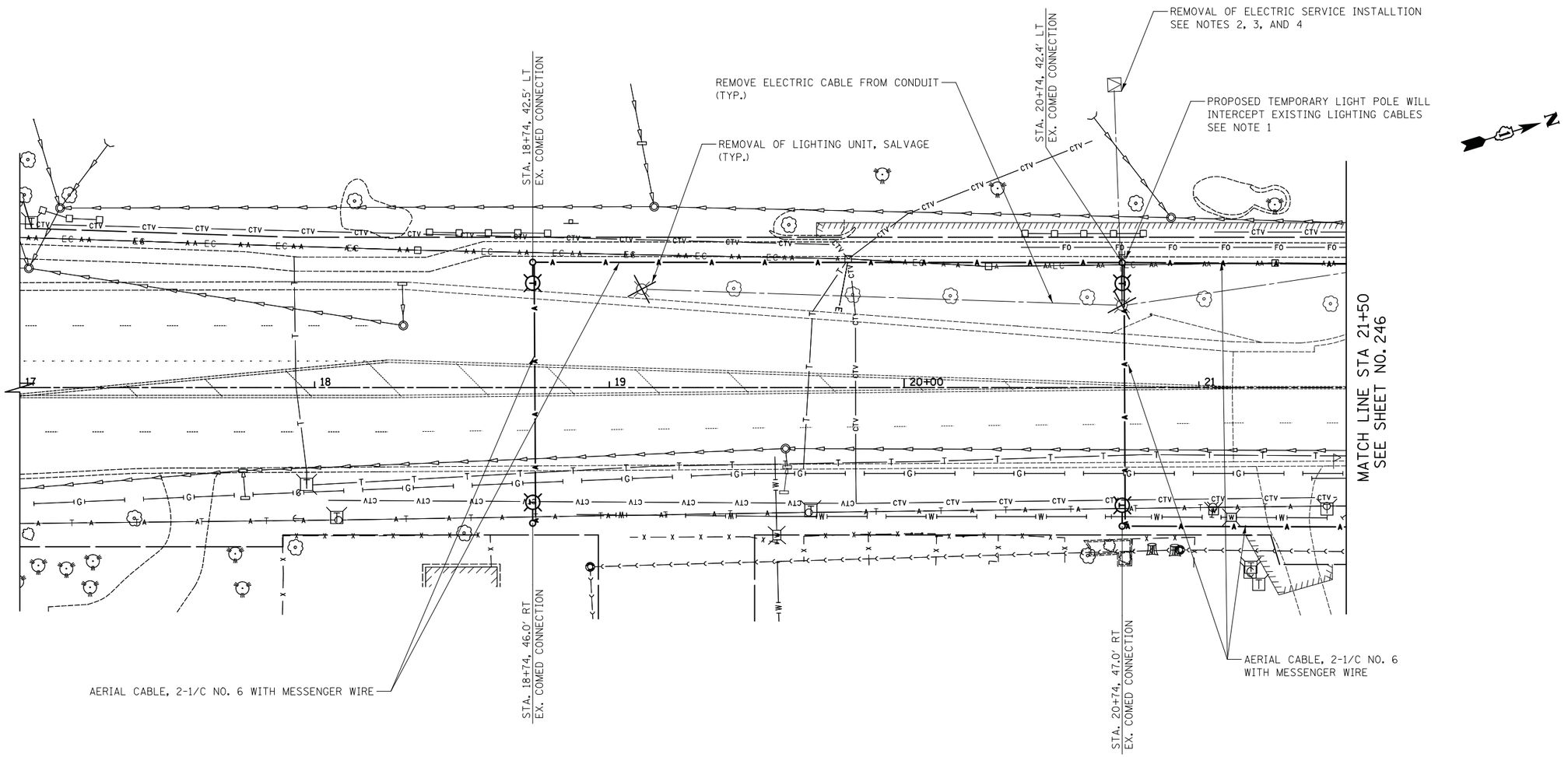
DRAWN - SJC	REVISED -	
CHECKED - DNM	REVISED -	
DATE - 11/26/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING SCHEDULE OF QUANTITIES

SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	244
			CONTRACT NO. 61E24	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. PROPOSED TEMPORARY LIGHT POLE WILL INTERCEPT EXISTING LIGHTING CABLES FROM THE NORTHWEST. RUN EXISTING LIGHTING CABLES UP TEMPORARY POLE AND SPLICE TO LIGHTING CABLE WITH WATERPROOF SPLICES TO POWER TEMPORARY LIGHTING SYSTEM. NO UNDERGROUND SPLICING WILL BE ALLOWED. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN AERIAL CABLE.

2. REMOVAL OF ELECTRIC SERVICE INSTALLATION WILL BE DONE AFTER PROPOSED LIGHTING ARE INSTALLED AND OPERATING. EXISTING ELECTRIC SERVICE INSTALLATION WILL BE REMOVED WHEN REMOVING TEMPORARY LIGHTING SYSTEM.

3. EXISTING CABLES IN CONDUIT OR DUCT SLEEVE SHALL BE REMOVED FROM THE CONDUIT OR DUCT SLEEVE AND WILL BE PAID FOR AS "REMOVE ELECTRIC CABLE FROM CONDUIT". DIRECT BURIED CABLES WITHOUT CONDUIT OR DUCT SLEEVE SHALL BE ABANDONED AND WILL NOT BE PAID FOR ABANDONING IT.

4. CONTRACTOR MUST VERIFY THE ABANDONED DIRECT BURIED CABLES ARE NOT ENERGIZED AFTER REMOVAL OF ELECTRIC SERVICE INSTALLATION.

WEILAND ROAD

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK	AREAS	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
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TEMPLATE		
NOTE BOOK	AREAS	
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CHECKED - DNM	REVISED -	
DATE - 10/8/2018	REVISED -	

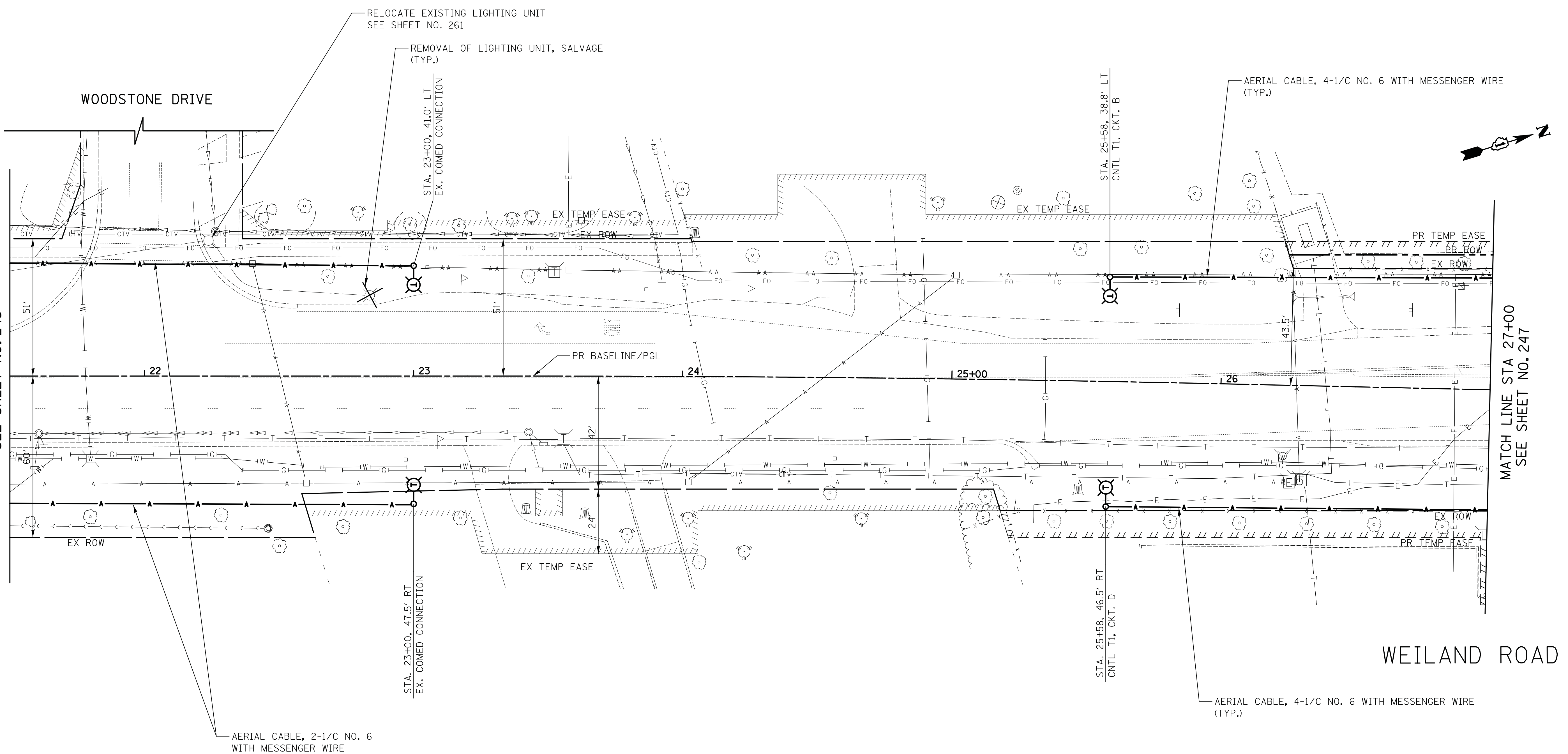
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 1 OF 12 SHEETS | STA. 17+00.0 | TO STA. 21+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	245
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 20 40

TEMPORARY LIGHTING PLAN

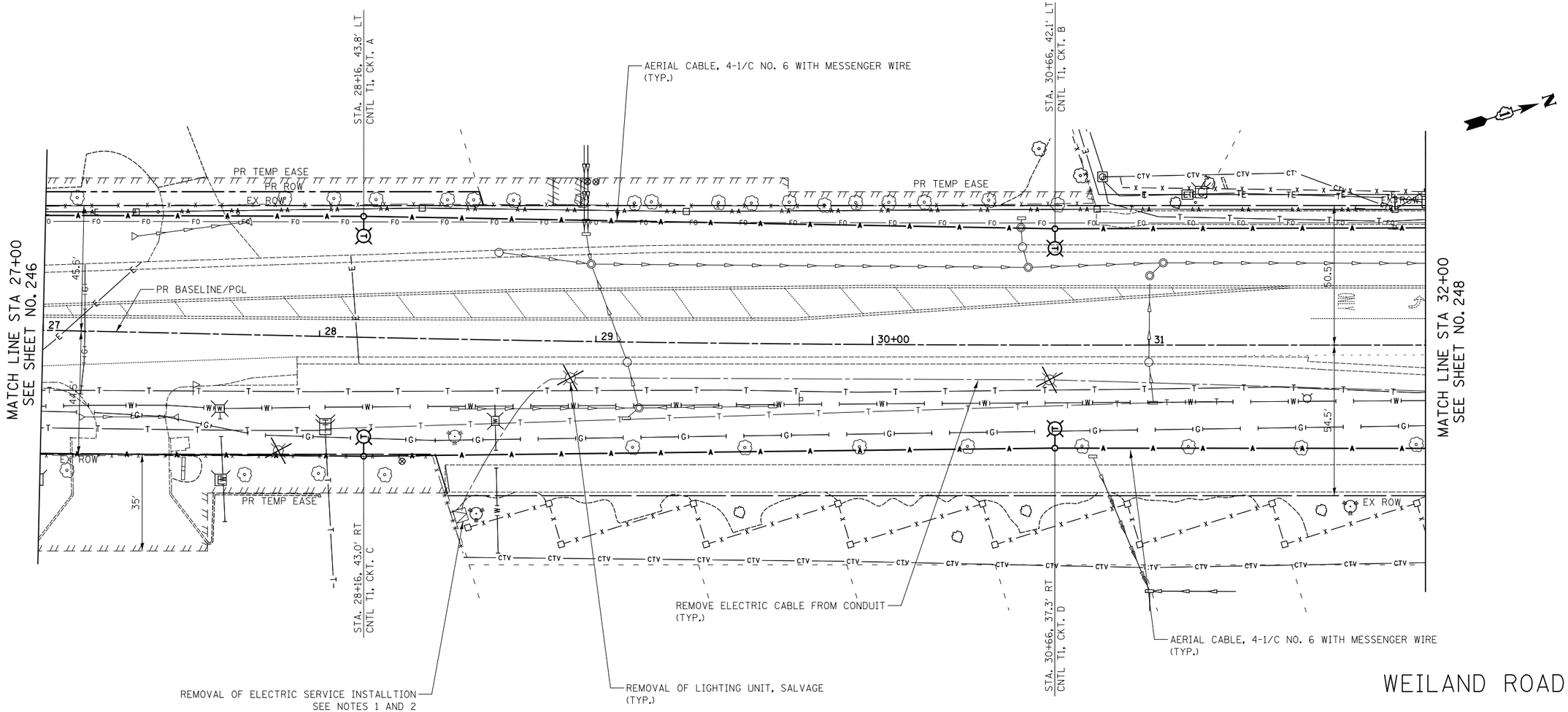
SHEET NO. 2 OF 12 SHEETS STA. 23+29.1 TO STA. 27+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	246
		CONTRACT NO. 61E24		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

ORIGINAL SURVEY	NOTE BOOK NO.	SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED	BY	DATE

FINAL SURVEY	NOTE BOOK NO.	SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED	BY	DATE



NOTES:

1. CABLES IN CONDUIT OR DUCT SLEEVE SHALL BE REMOVED FROM THE CONDUIT OR DUCT SLEEVE AND WILL BE PAID FOR AS "REMOVE ELECTRIC CABLE FROM CONDUIT". DIRECT BURIED CABLES WITHOUT CONDUIT OR DUCT SLEEVE SHALL BE ABANDONED AND WILL NOT BE PAID FOR ABANDONING IT.

2. CONTRACTOR MUST VERIFY THE ABANDONED DIRECT BURIED CABLES ARE NOT ENERGIZED AFTER REMOVAL OF ELECTRIC SERVICE INSTALLATION.

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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DATE - 10/8/2018	REVISED -	

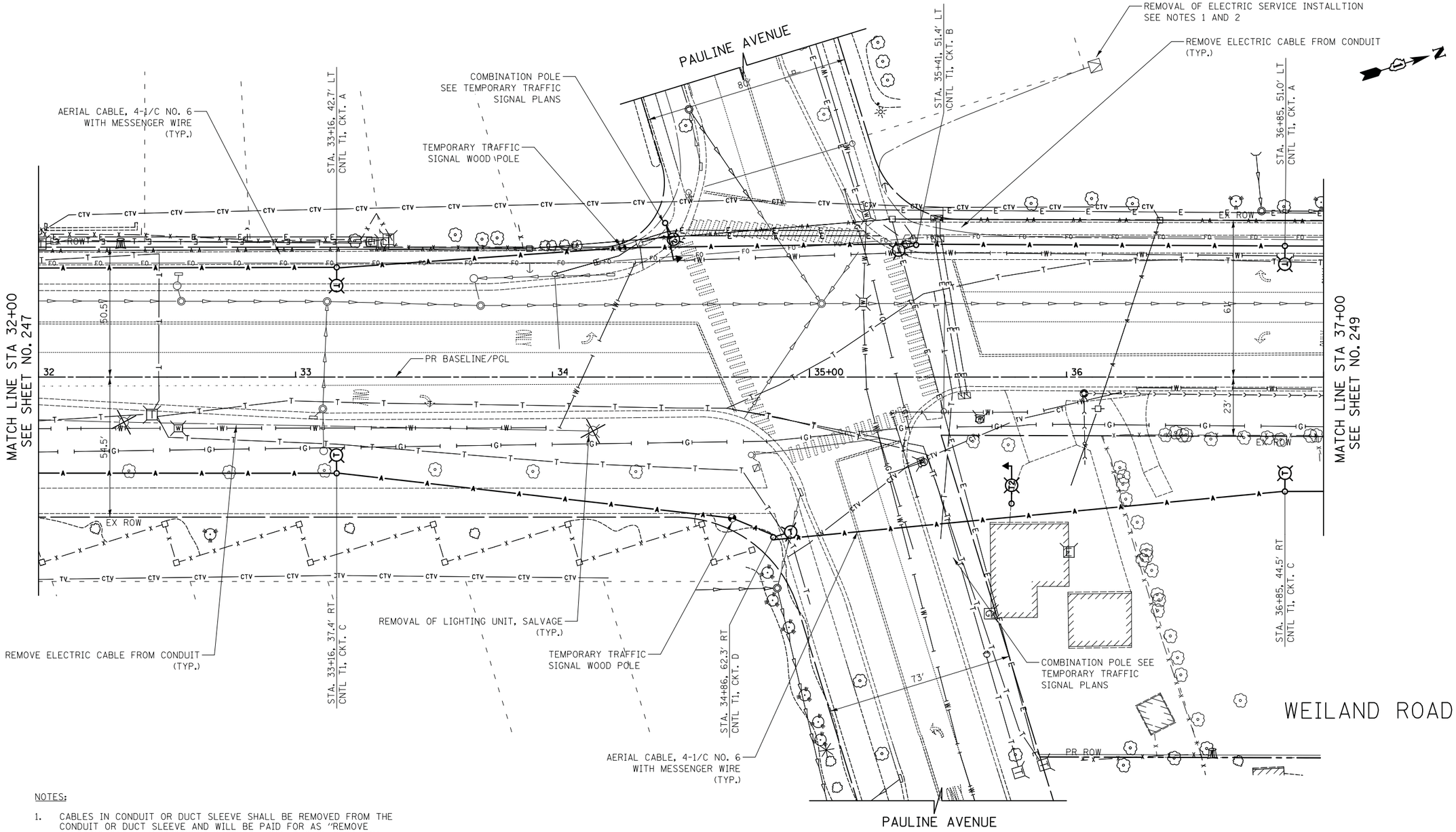
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 3 OF 12 SHEETS | STA. 27+00.0 | TO STA. 32+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	247
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. CABLES IN CONDUIT OR DUCT SLEEVE SHALL BE REMOVED FROM THE CONDUIT OR DUCT SLEEVE AND WILL BE PAID FOR AS "REMOVE ELECTRIC CABLE FROM CONDUIT". DIRECT BURIED CABLES WITHOUT CONDUIT OR DUCT SLEEVE SHALL BE ABANDONED AND WILL NOT BE PAID FOR ABANDONING IT.

2. CONTRACTOR MUST VERIFY THE ABANDONED DIRECT BURIED CABLES ARE NOT ENERGIZED AFTER REMOVAL OF ELECTRIC SERVICE INSTALLATION.

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
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ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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DATE - 10/8/2018	REVISED -	

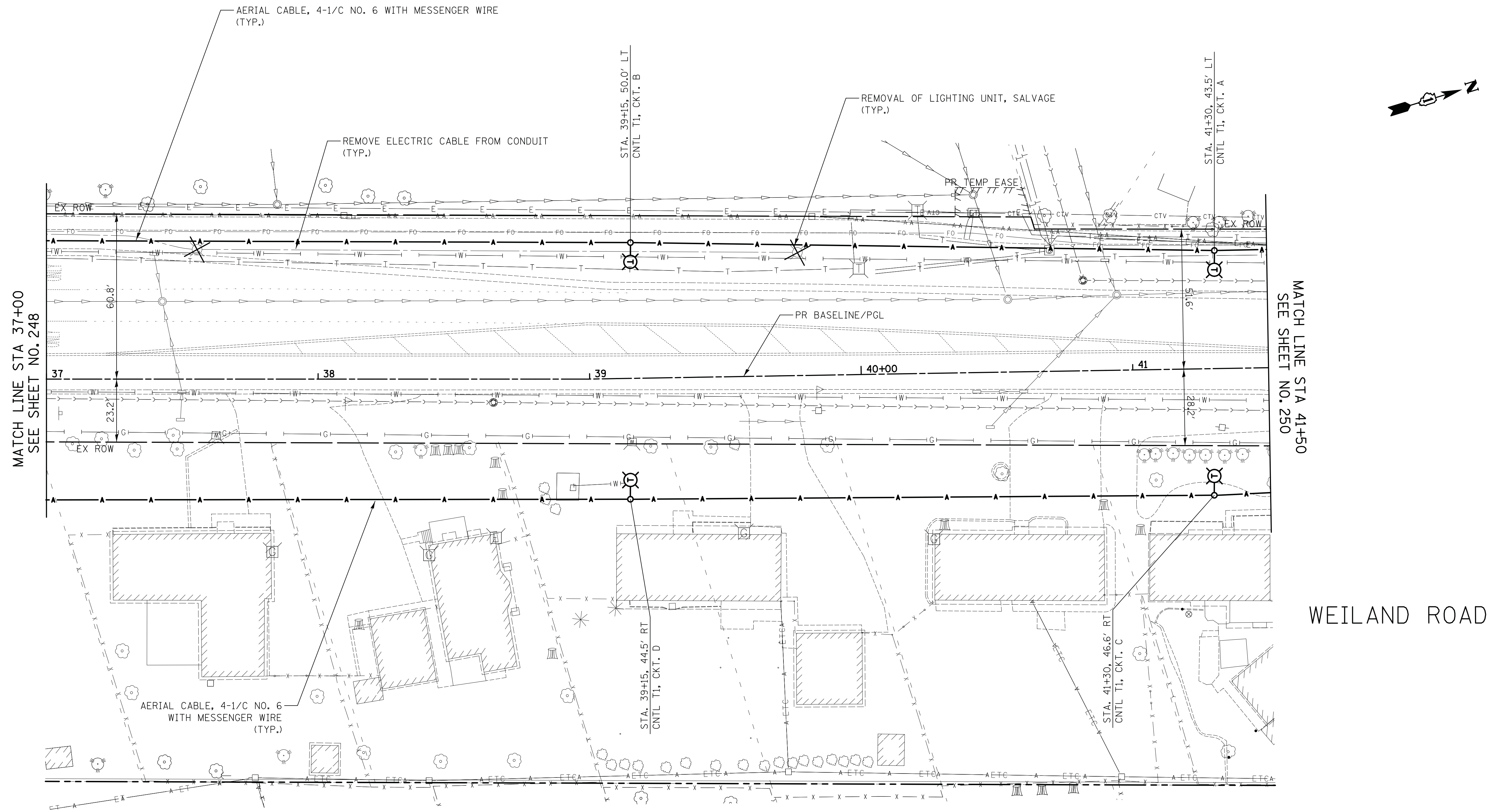
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 4 OF 12 SHEETS | STA. 32+00.0 | TO STA. 37+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	248
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY		BY	DATE
NOTE BOOK NO.	SURVEYED		
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	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 20 40

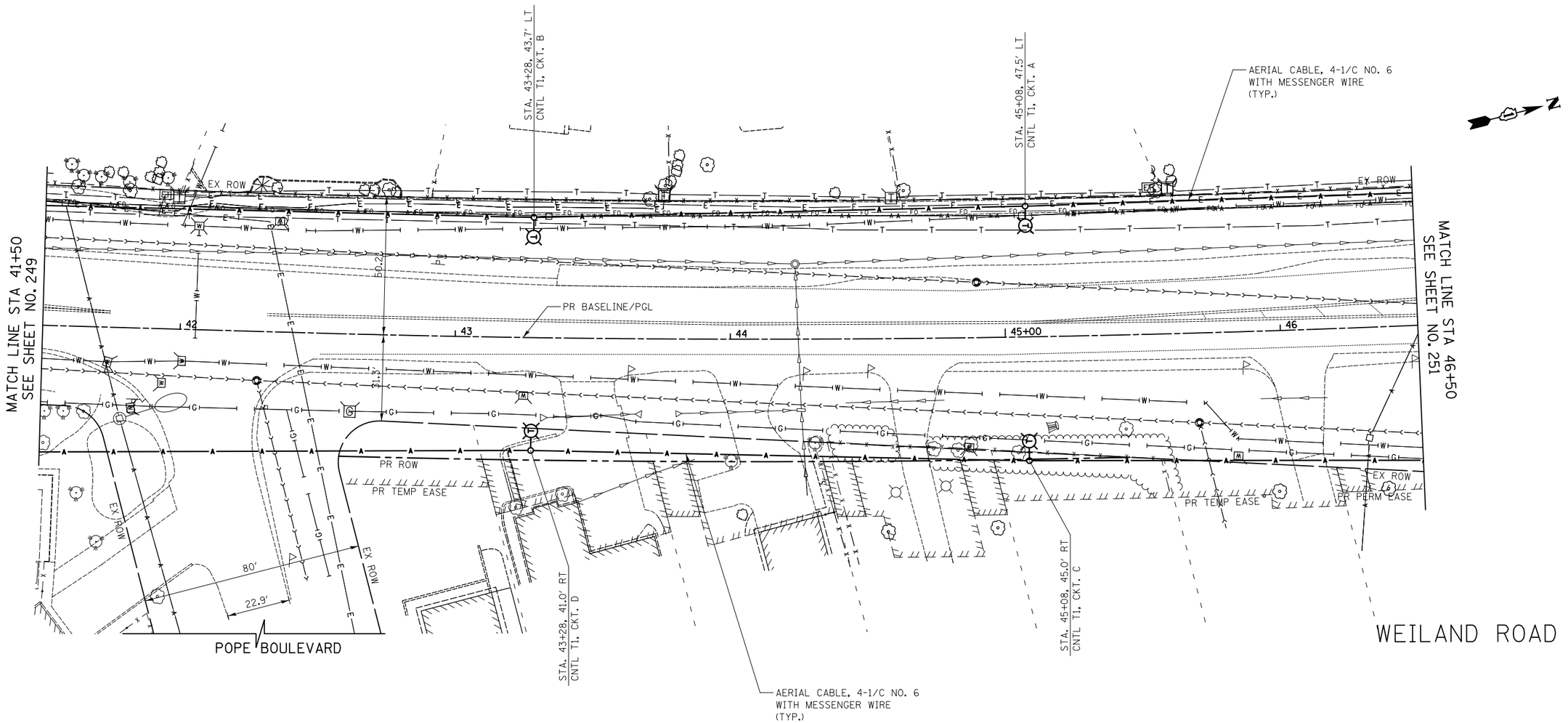
TEMPORARY LIGHTING PLAN

SHEET NO. 5 OF 12 SHEETS | STA. 37+00.0 TO STA. 41+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	249
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
	PLOTTED	
	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	



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STATE OF ILLINOIS
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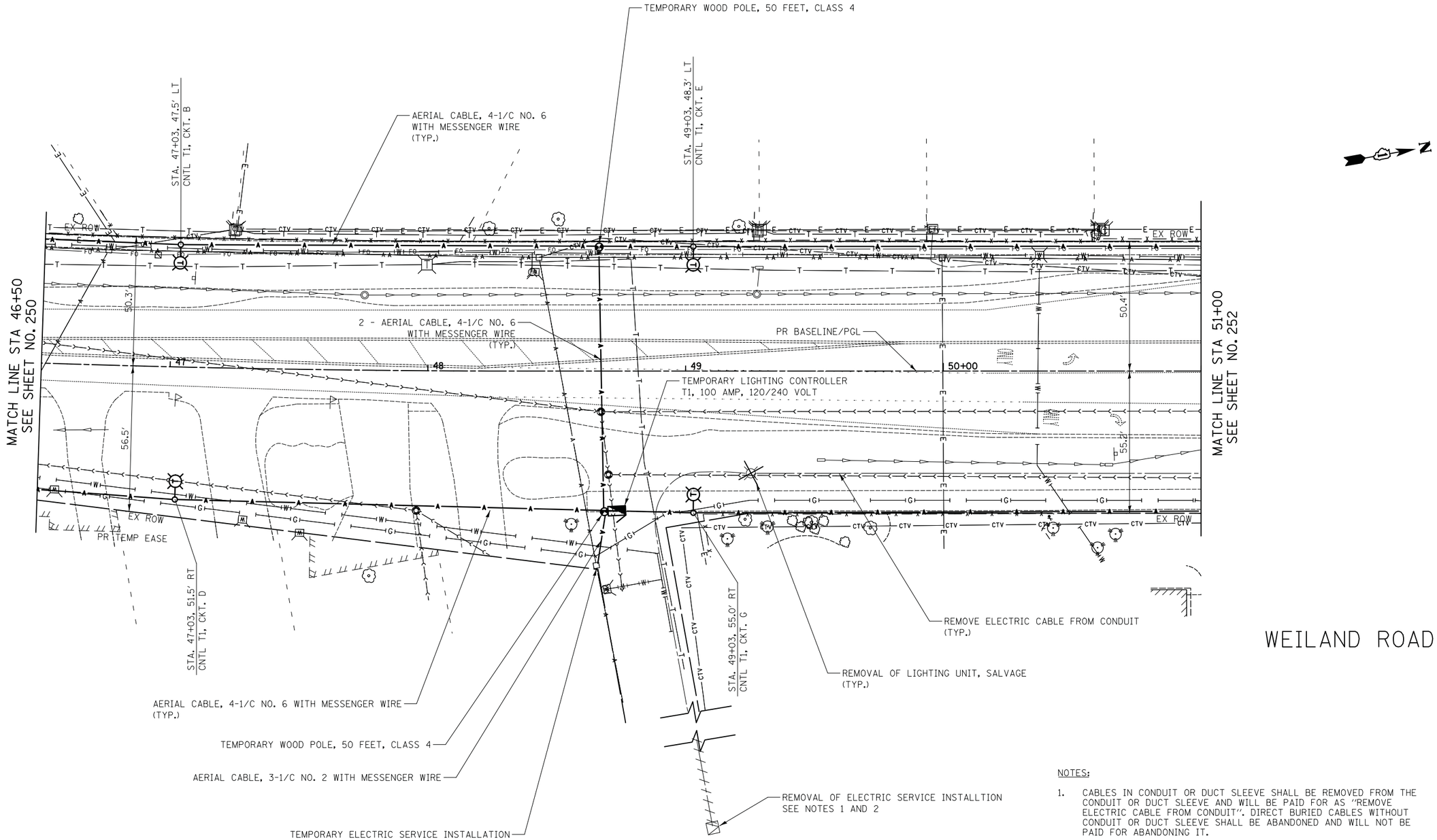
HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 6 OF 12 SHEETS | STA. 41+50.0 | TO STA. 46+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	250
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



WEILAND ROAD

NOTES:

1. CABLES IN CONDUIT OR DUCT SLEEVE SHALL BE REMOVED FROM THE CONDUIT OR DUCT SLEEVE AND WILL BE PAID FOR AS "REMOVE ELECTRIC CABLE FROM CONDUIT". DIRECT BURIED CABLES WITHOUT CONDUIT OR DUCT SLEEVE SHALL BE ABANDONED AND WILL NOT BE PAID FOR ABANDONING IT.
2. CONTRACTOR MUST VERIFY THE ABANDONED DIRECT BURIED CABLES ARE NOT ENERGIZED AFTER REMOVAL OF ELECTRIC SERVICE INSTALLATION.

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

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STATE OF ILLINOIS
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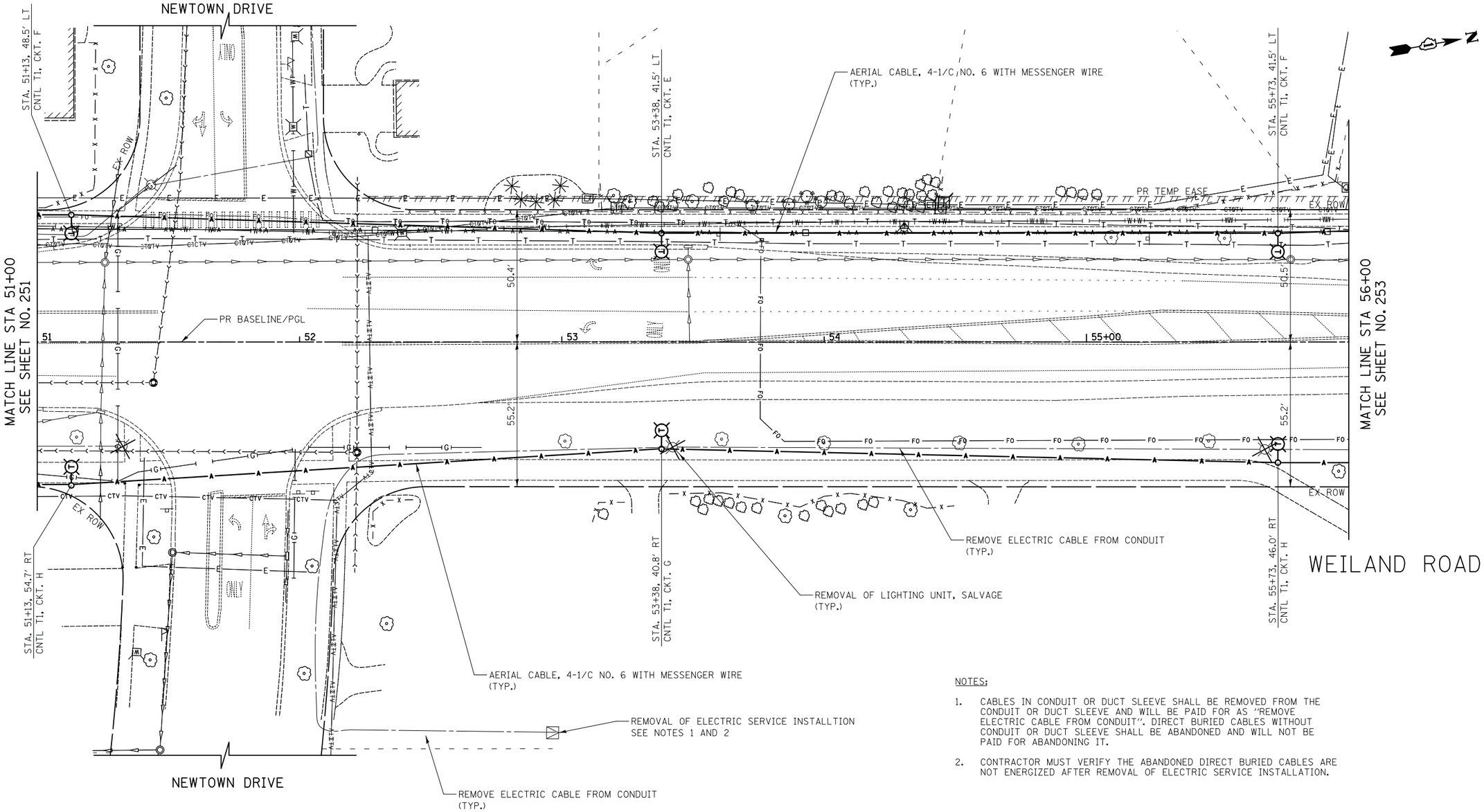
SCALE
HORIZ. 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 7 OF 12 SHEETS | STA. 46+50.0 | TO STA. 51+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	251
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY

NO.	BY	DATE
NOTE BOOK	SURVEYED	
AREAS	PLOTTED	
AREAS	TEMPLATE	
AREAS	AREAS	
AREAS	AREAS CHECKED	

ORIGINAL SURVEY

NO.	BY	DATE
NOTE BOOK	SURVEYED	
AREAS	PLOTTED	
AREAS	TEMPLATE	
AREAS	AREAS	
AREAS	AREAS CHECKED	

NOTES:

1. CABLES IN CONDUIT OR DUCT SLEEVE SHALL BE REMOVED FROM THE CONDUIT OR DUCT SLEEVE AND WILL BE PAID FOR AS "REMOVE ELECTRIC CABLE FROM CONDUIT". DIRECT BURIED CABLES WITHOUT CONDUIT OR DUCT SLEEVE SHALL BE ABANDONED AND WILL NOT BE PAID FOR ABANDONING IT.
2. CONTRACTOR MUST VERIFY THE ABANDONED DIRECT BURIED CABLES ARE NOT ENERGIZED AFTER REMOVAL OF ELECTRIC SERVICE INSTALLATION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

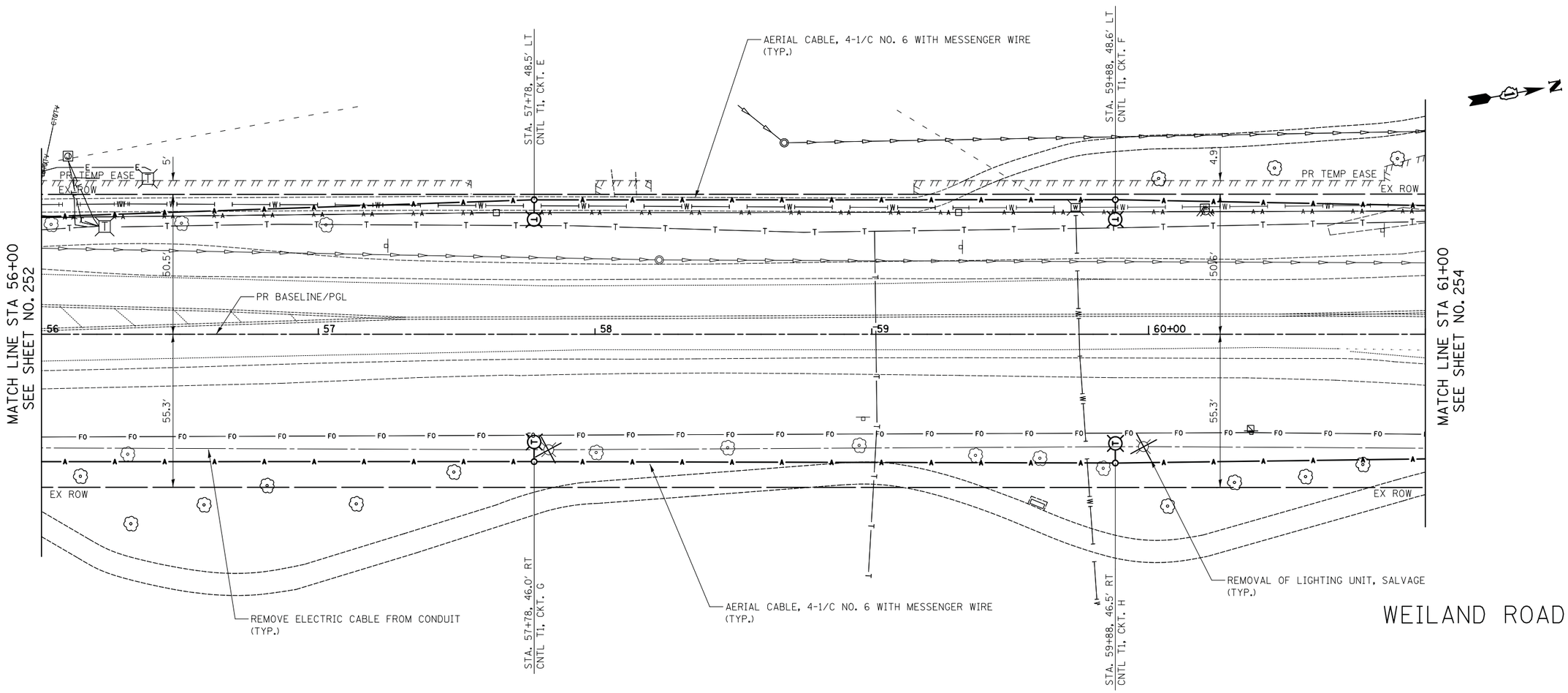
HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 8 OF 12 SHEETS | STA. 51+00.0 | TO STA. 56+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	252
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	



ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

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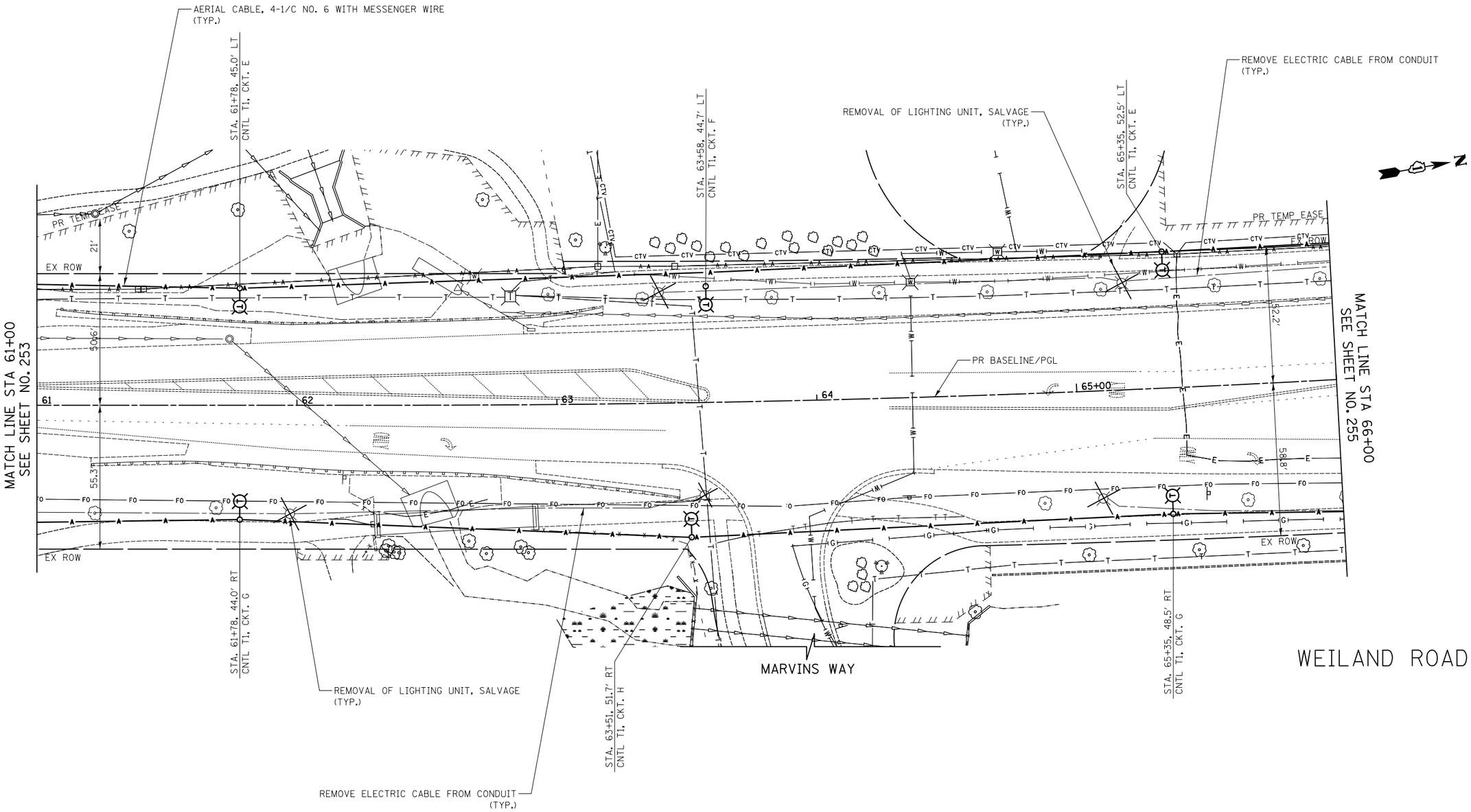
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 9 OF 12 SHEETS | STA. 56+00.0 | TO STA. 61+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	253
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
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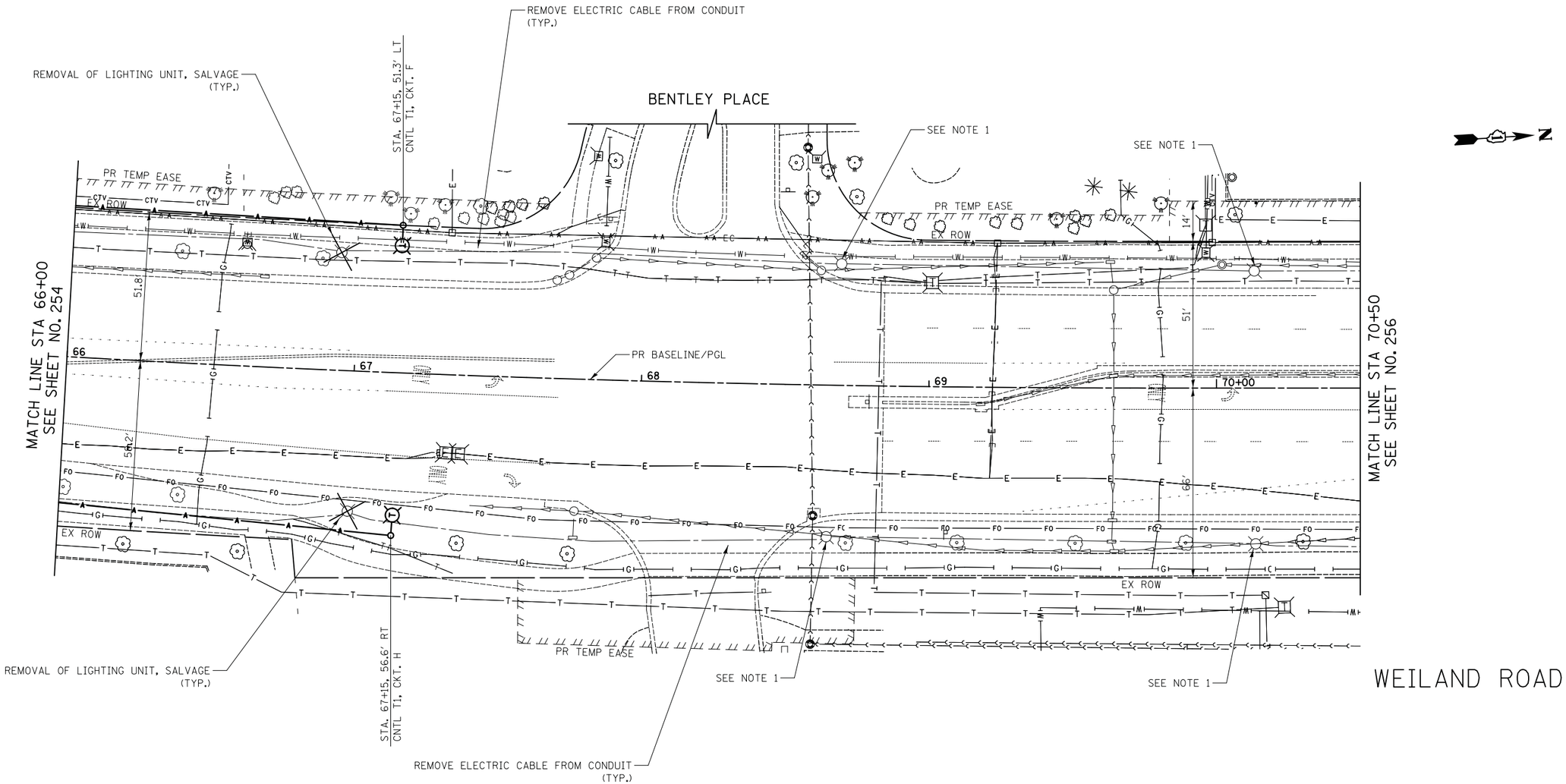
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE
HORIZ. 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 10 OF 12 SHEETS | STA. 61+00.0 | TO STA. 66+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	254
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTE:

1. EXISTING LIGHTING UNIT SHALL REMAIN FOR TEMPORARY LIGHTING.

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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	TEMPLATE	
	AREAS	
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DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

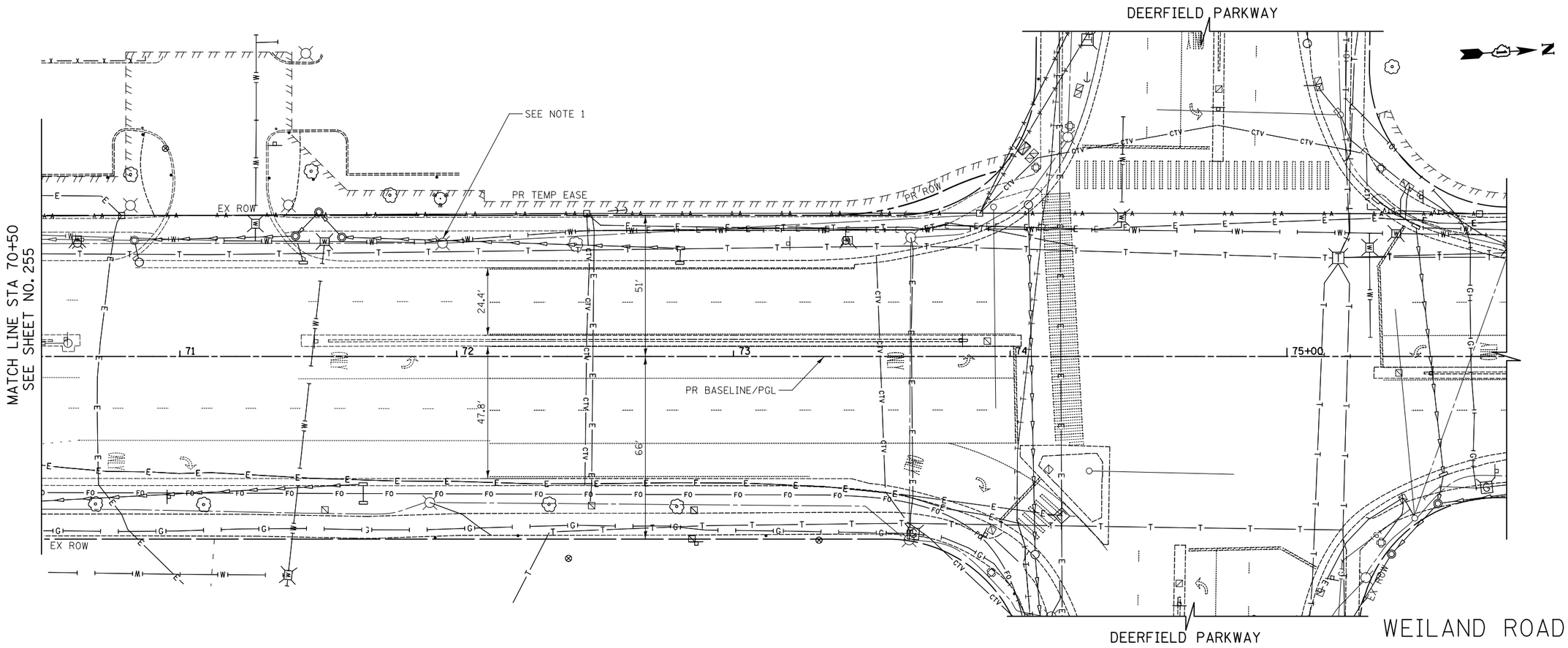
TEMPORARY LIGHTING PLAN

SHEET NO. 11 OF 12 SHEETS | STA. 66+00.0 | TO STA. 70+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	255
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	



NOTE:

1. EXISTING LIGHTING UNIT SHALL REMAIN FOR TEMPORARY LIGHTING.

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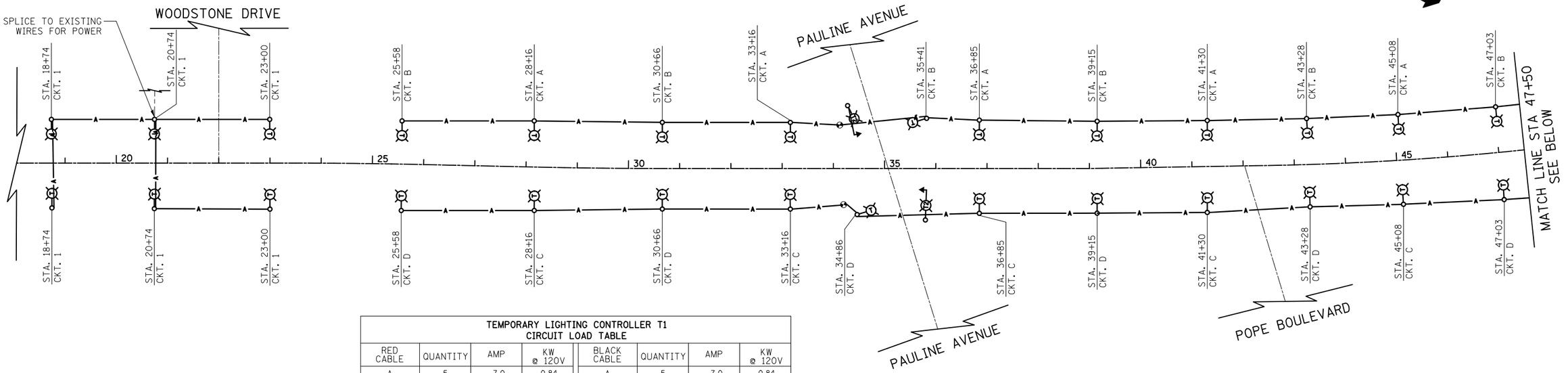
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

TEMPORARY LIGHTING PLAN

SHEET NO. 12 OF 12 SHEETS | STA. 70+50.0 | TO STA. 72+12.0

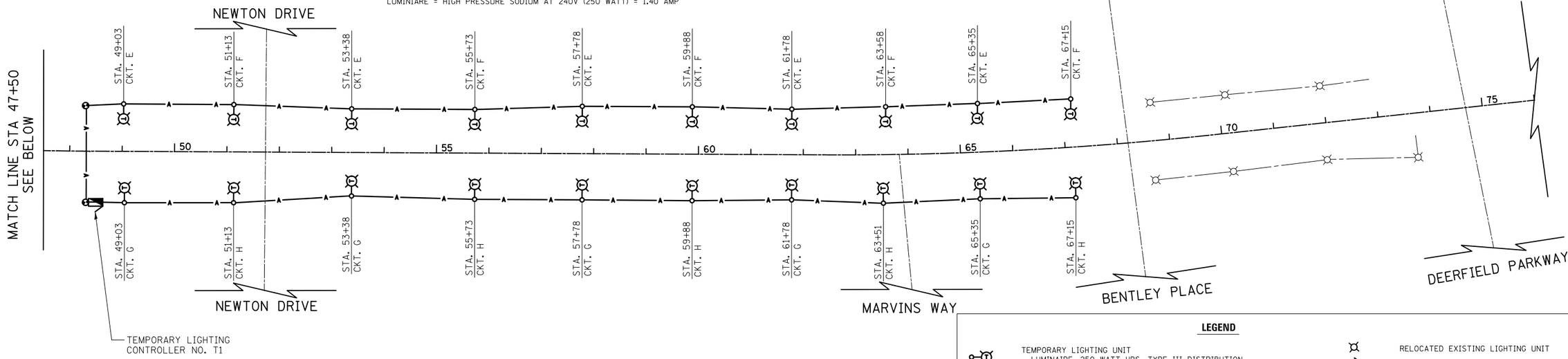
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	256
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TEMPORARY LIGHTING CONTROLLER T1
CIRCUIT LOAD TABLE

RED CABLE	QUANTITY	AMP	KW @ 120V	BLACK CABLE	QUANTITY	AMP	KW @ 120V
A	5	7.0	0.84	A	5	7.0	0.84
B	6	8.4	1.01	B	6	8.4	1.01
C	5	7.0	0.84	C	5	7.0	0.84
D	6	8.4	1.01	D	6	8.4	1.01
E	5	7.0	0.84	E	5	7.0	0.84
F	5	7.0	0.84	F	5	7.0	0.84
G	5	7.0	0.84	G	5	7.0	0.84
H	5	7.0	0.84	H	5	7.0	0.84
	TOTAL:	58.8	7.06		TOTAL:	58.8	7.06

LUMINIARE = HIGH PRESSURE SODIUM AT 240V (250 WATT) = 1.40 AMP



LEGEND

- TEMPORARY LIGHTING UNIT — LUMINAIRE, 250 WATT HPS, TYPE III DISTRIBUTION; TEMPORARY WOOD POLE, 50 FT. CLASS 4, 15 FT. MAST ARM (40 FT. M.H.)
- TEMPORARY COMBINATION TRAFFIC SIGNAL AND STREET LIGHT — LUMINAIRE, 250 WATT HPS, TYPE III DISTRIBUTION; 40 FT. M.H., 20 FT. MAST ARM; LUMINAIRE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER (SEE TRAFFIC SIGNAL PLANS)
- EXISTING LIGHTING UNIT — LUMINAIRE, 250 WATT HPS; 35 FT. M.H., 6 FT. MAST ARM
- RELOCATED EXISTING LIGHTING UNIT
- TEMPORARY LIGHTING CONTROLLER
- AERIAL CABLE (AS SPECIFIED IN THE PLANS)
- TEMPORARY WOOD POLE, 50 FT., CLASS 4
- PROPOSED UNIT DUCT (AS SPECIFIED IN THE PLANS)
- EXISTING UNIT DUCT (AS SPECIFIED IN THE PLANS)

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

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DEPARTMENT OF TRANSPORTATION

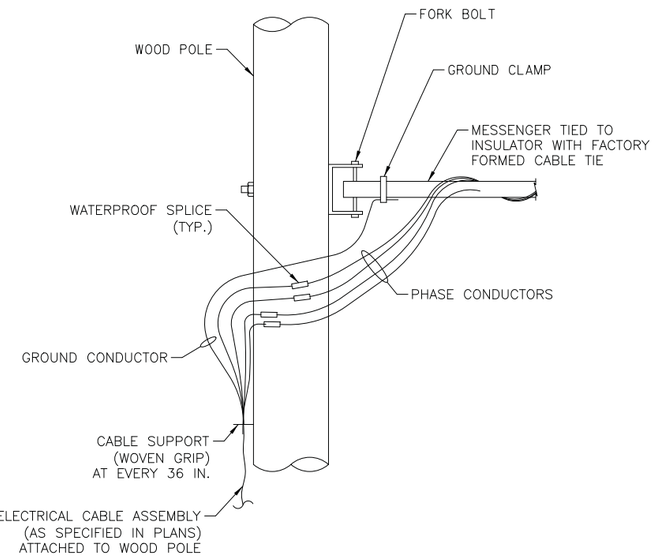
SCALES
0 100 200

TEMPORARY LIGHTING WIRING DIAGRAM

SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	257
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK		
NO.		



AERIAL CABLE CONNECTION DETAIL

N.T.S.

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
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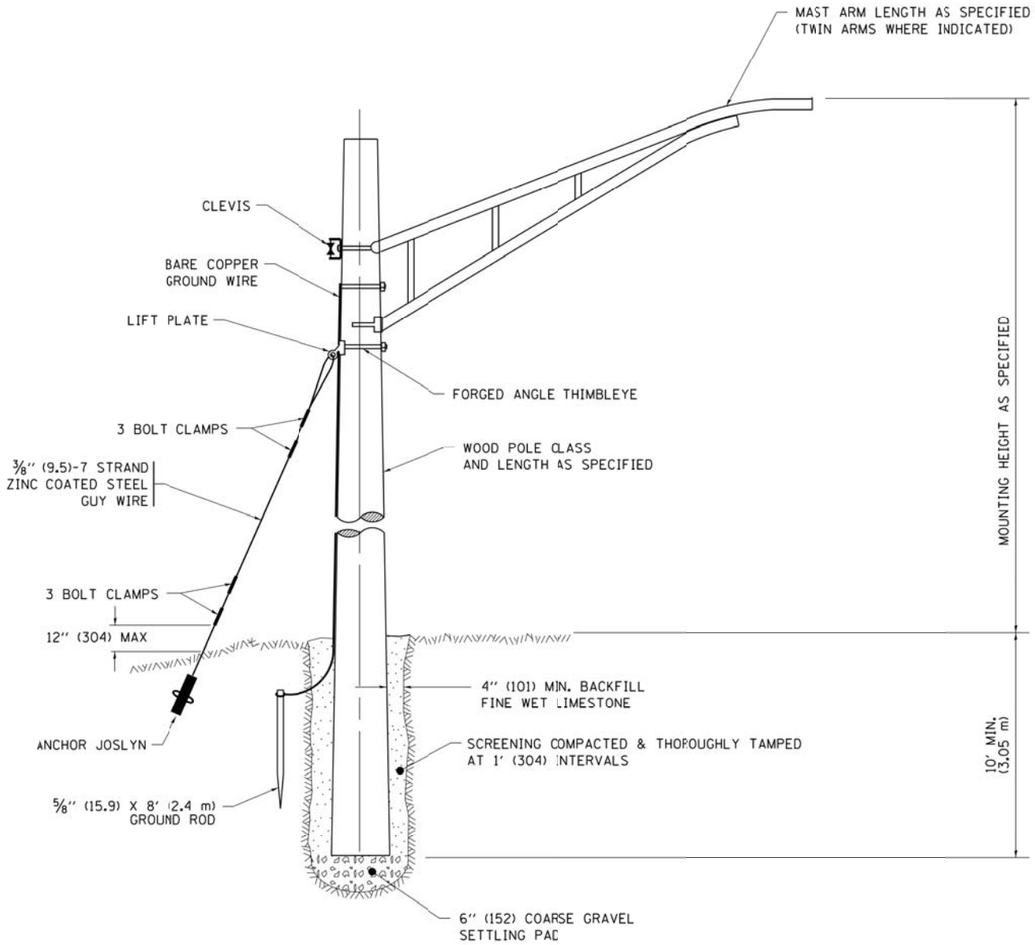
DEPARTMENT OF TRANSPORTATION

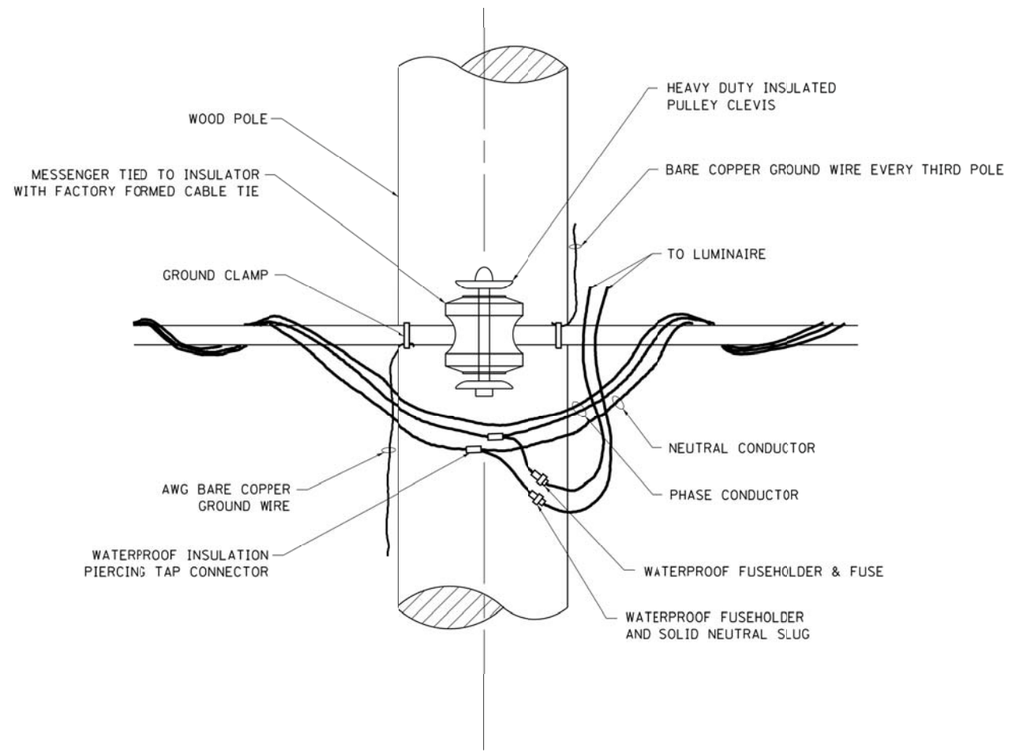
TEMPORARY LIGHTING DETAIL

NOT TO SCALE | SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	258
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TEMPORARY LIGHT POLE DETAIL



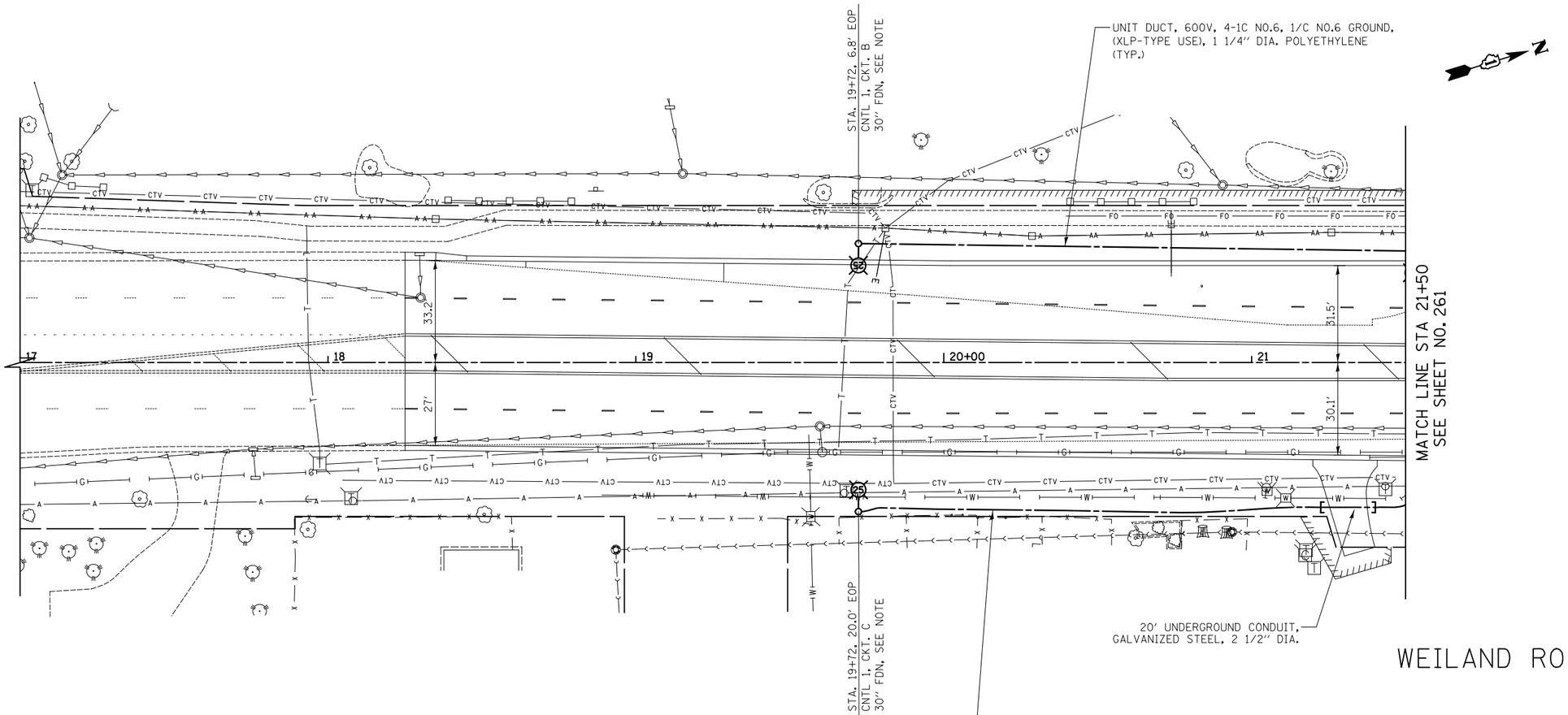
TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTE:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. MAST ARM SHALL BE RATED FOR THE SPECIFIED MOUNTING HEIGHT.

FILE NAME = pw:\\IL084EBIDINTE6.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\CADData\CADsheets\be800.dgn	USER NAME = footemj	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY LIGHT POLE DETAILS
	PLOT SCALE = 50.000 ' / in.	DRAWN	REVISED - R.T. 07-26-16		
Default	PLOT DATE = 9/1/2016	CHECKED -	REVISED -		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.
		DATE -	REVISED -		

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	259
	BE-800	CONTRACT NO. 61E24		
	ILLINOIS FED. AID PROJECT			



WEILAND ROAD

NOTE:

CONTRACTOR SHALL COORDINATE WITH LAKE COOK ROAD PROJECT, STATE JOB NO. C-91-365-14, REGARDING ELEVATION OF LIGHT POLE FOUNDATIONS BEING INSTALLED.

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK	AREAS	
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ORIGINAL SURVEY	BY	DATE
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NOTE BOOK	AREAS	
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PROPOSED LIGHTING PLAN

SHEET NO. 1 OF 12 SHEETS | STA. 17+00.0 | TO STA. 21+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	260
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
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	AREAS CHECKED	

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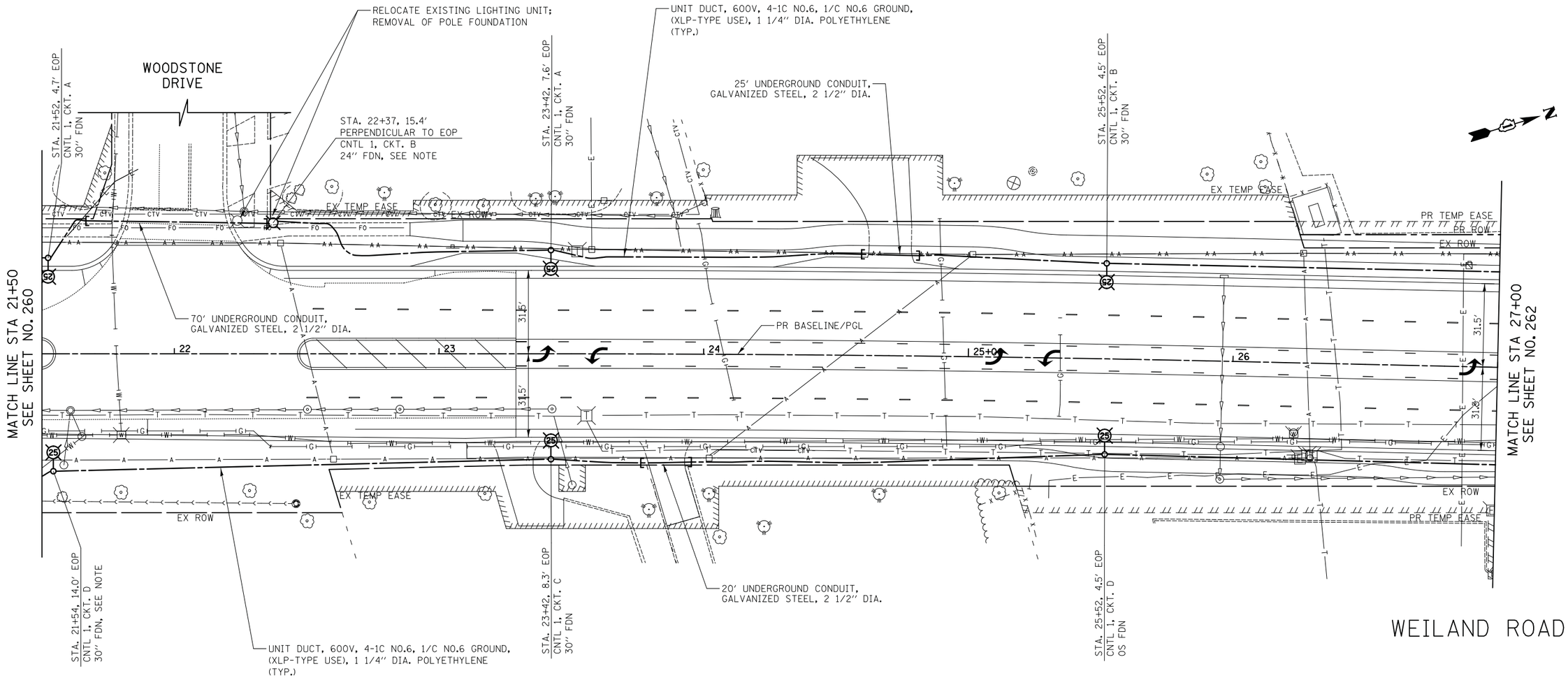

NOTE:

CONTRACTOR SHALL COORDINATE WITH LAKE COOK ROAD PROJECT, STATE JOB NO. C-91-365-14, REGARDING ELEVATION OF LIGHT POLE FOUNDATIONS BEING INSTALLED.

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HORIZ. SCALE 0 20 40

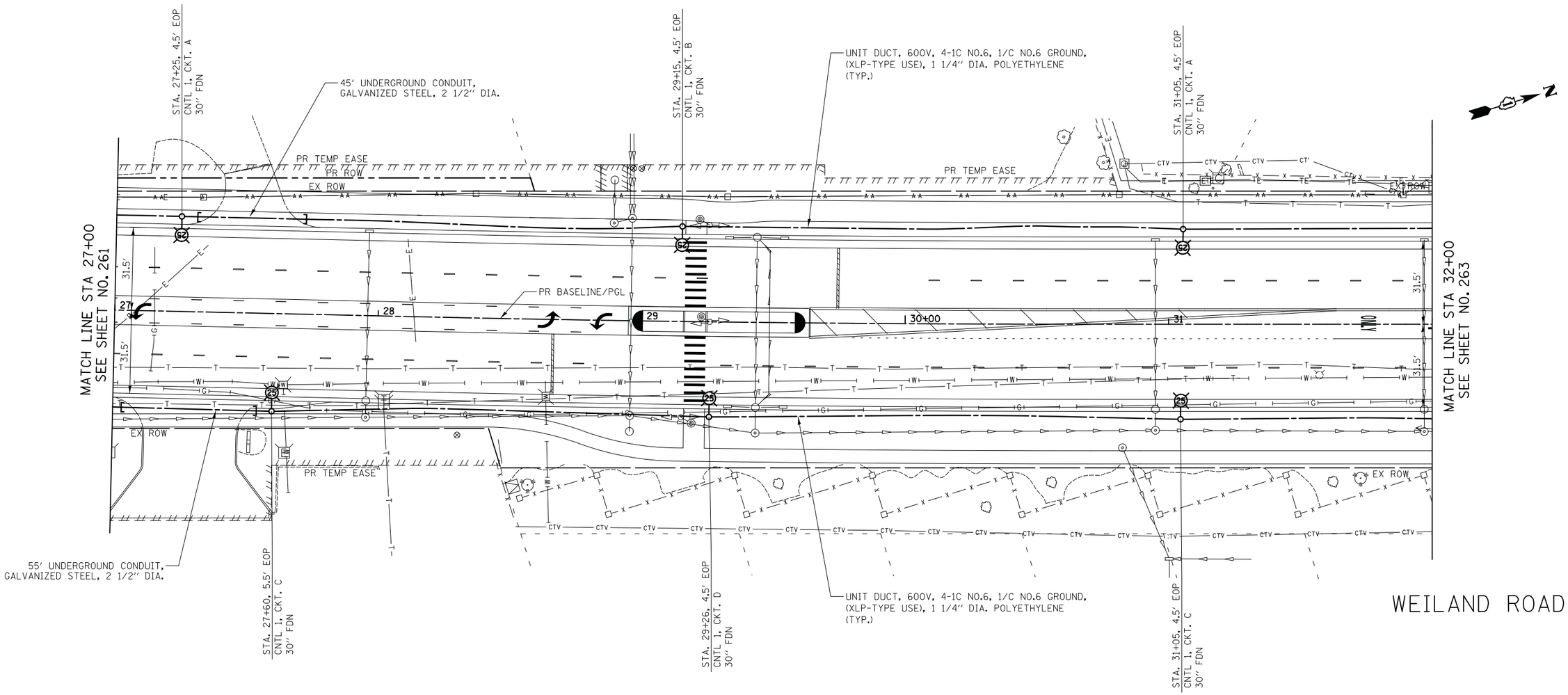
PROPOSED LIGHTING PLAN

SHEET NO. 2 OF 12 SHEETS | STA. 21+50.0 TO STA. 27+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	261
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE
NO.								

ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE
NO.								



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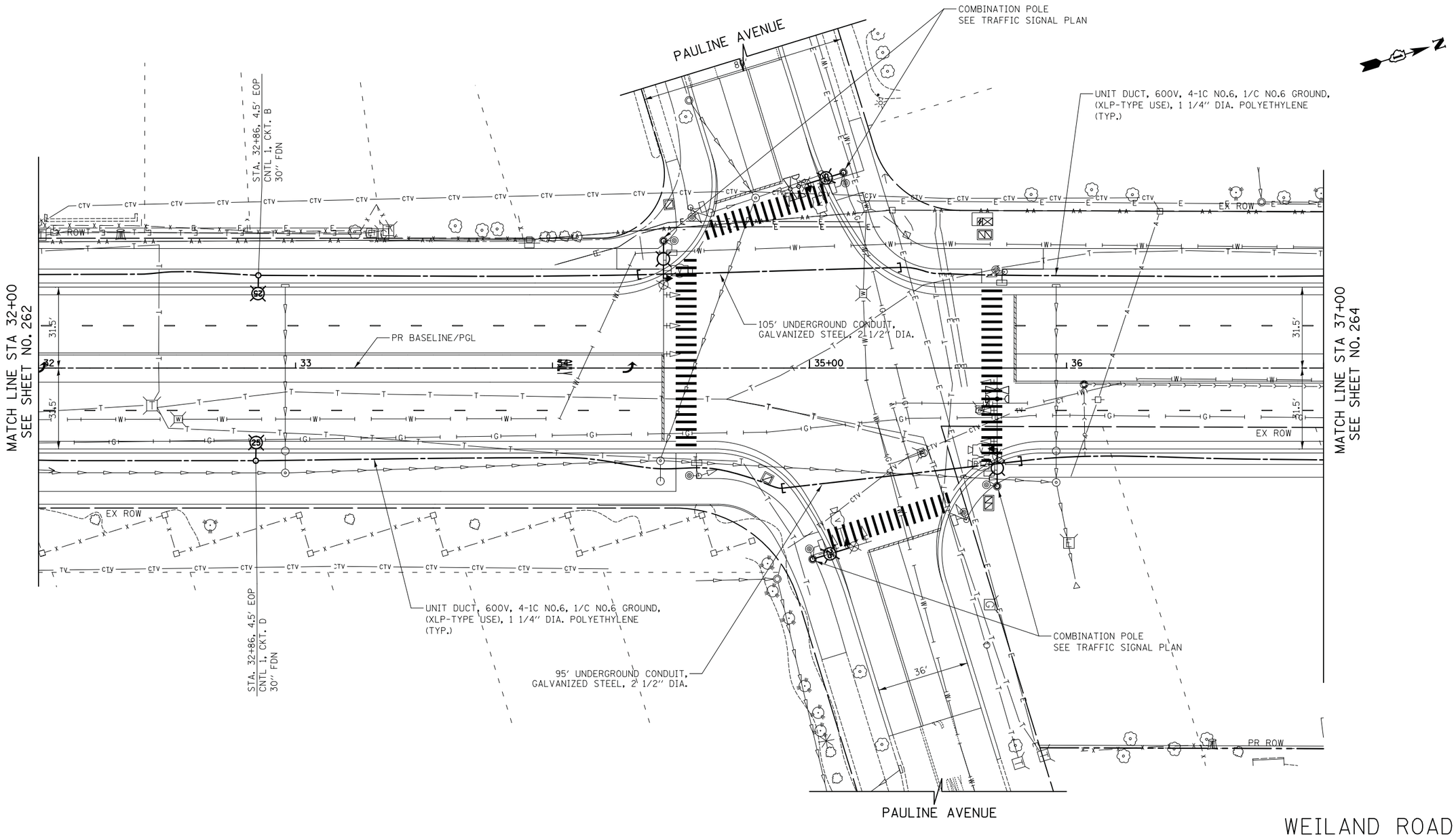
DEPARTMENT OF TRANSPORTATION

HORIZ. SCALE 0 20 40

PROPOSED LIGHTING PLAN

SHEET NO. 3 OF 12 SHEETS | STA. 27+00.0 | TO STA. 32+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	262
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
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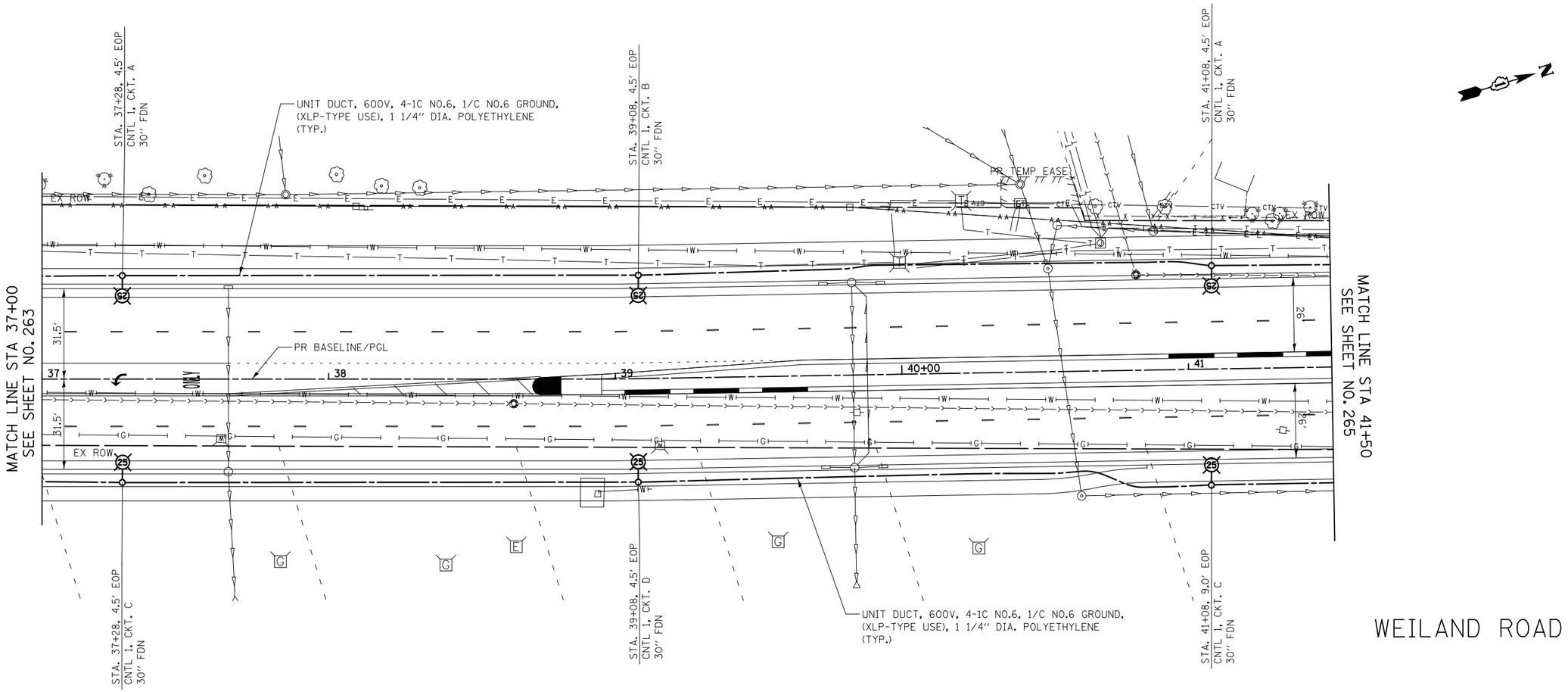
HORIZ. SCALE 0 20 40

PROPOSED LIGHTING PLAN

SHEET NO. 4 OF 12 SHEETS | STA. 32+00.0 TO STA. 37+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	263
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

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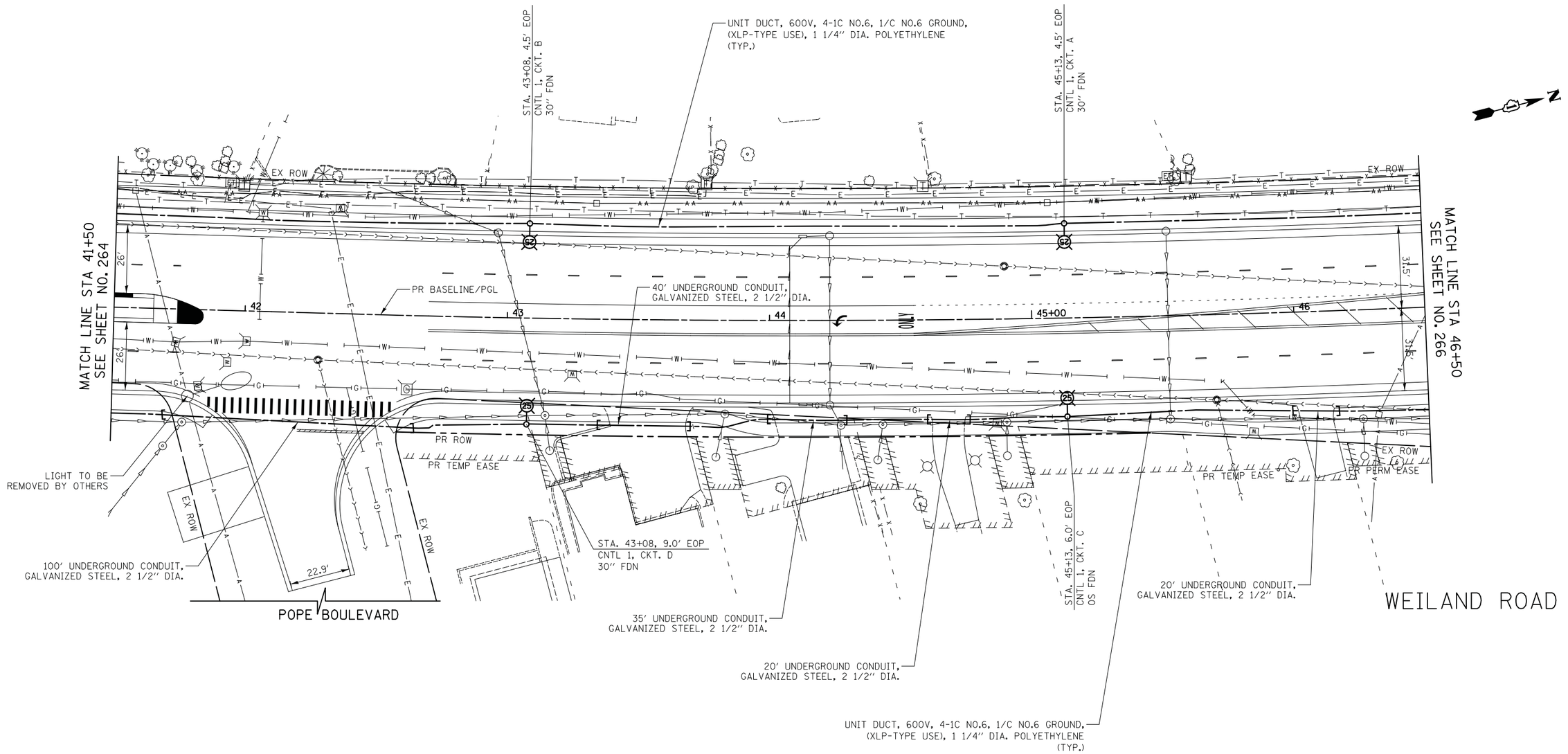
HORIZ. SCALE 0 20 40

PROPOSED LIGHTING PLAN

SHEET NO. 5 OF 12 SHEETS | STA. 37+00.0 | TO STA. 41+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	264
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
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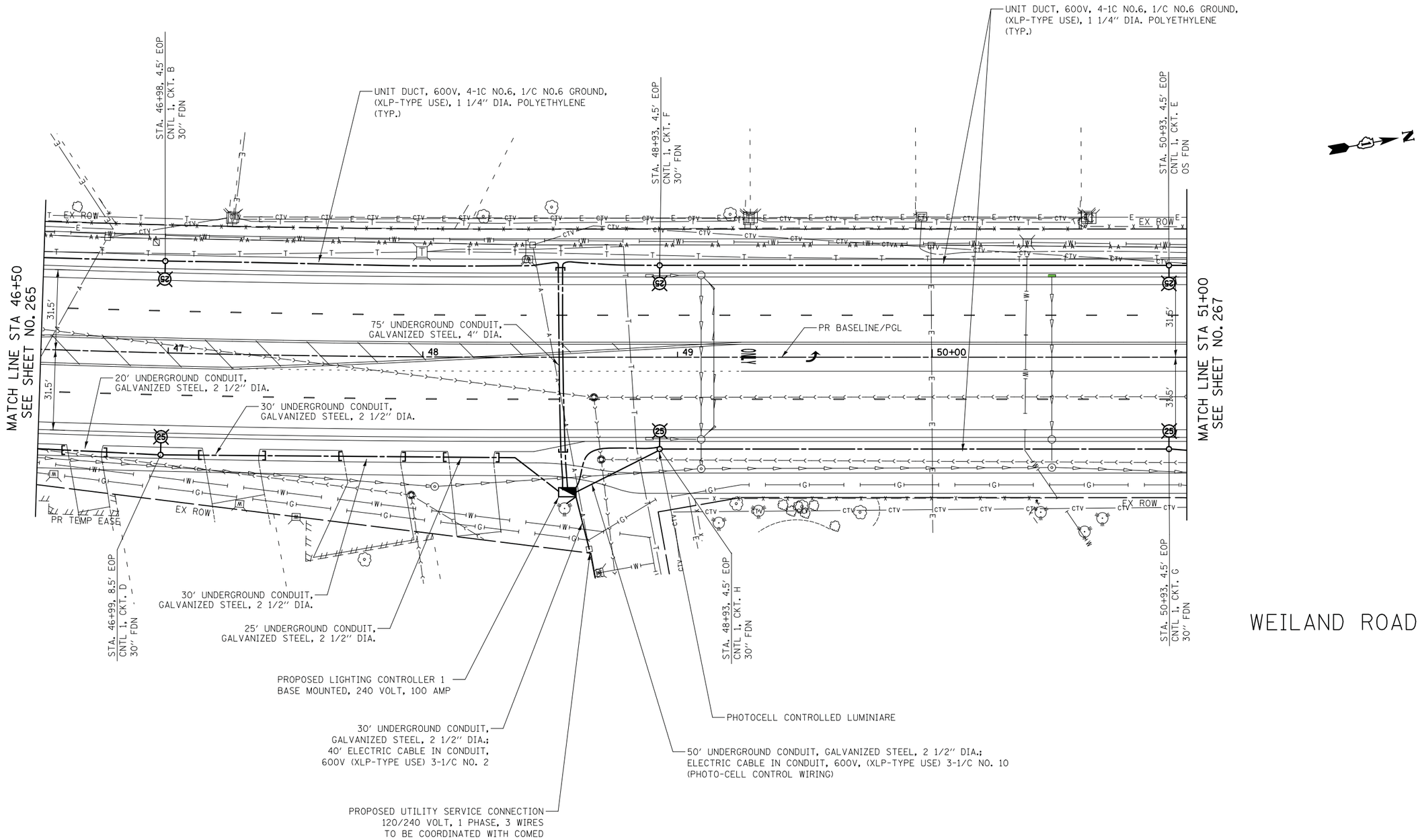
HORIZ. SCALE 0 20 40

PROPOSED LIGHTING PLAN

SHEET NO. 6 OF 12 SHEETS | STA. 41+50.0 | TO STA. 46+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	265
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	BY	DATE
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ORIGINAL SURVEY	BY	DATE
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PROPOSED LIGHTING PLAN

SHEET NO. 7 OF 12 SHEETS | STA. 46+50.0 | TO STA. 51+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	266
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
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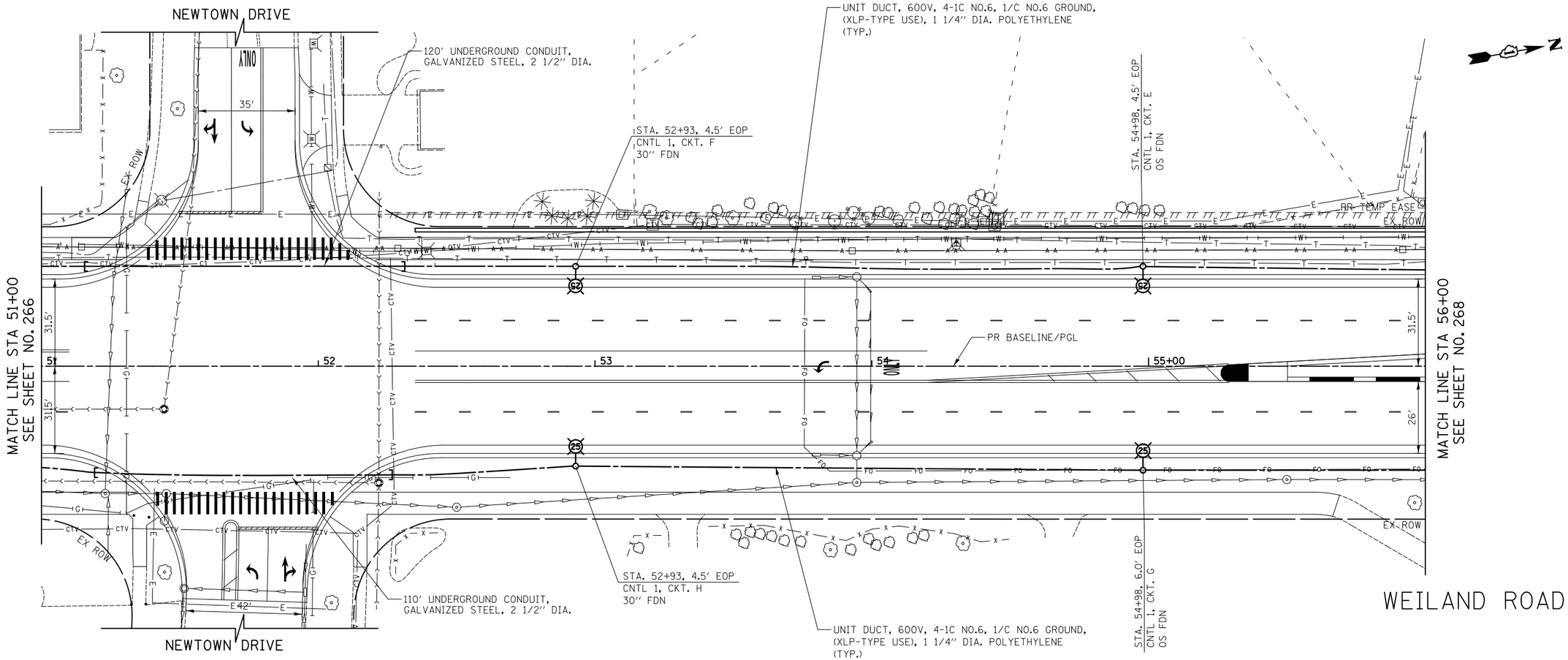

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PROPOSED LIGHTING PLAN

SHEET NO. 8 OF 12 SHEETS | STA. 51+00.0 | TO STA. 56+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	267
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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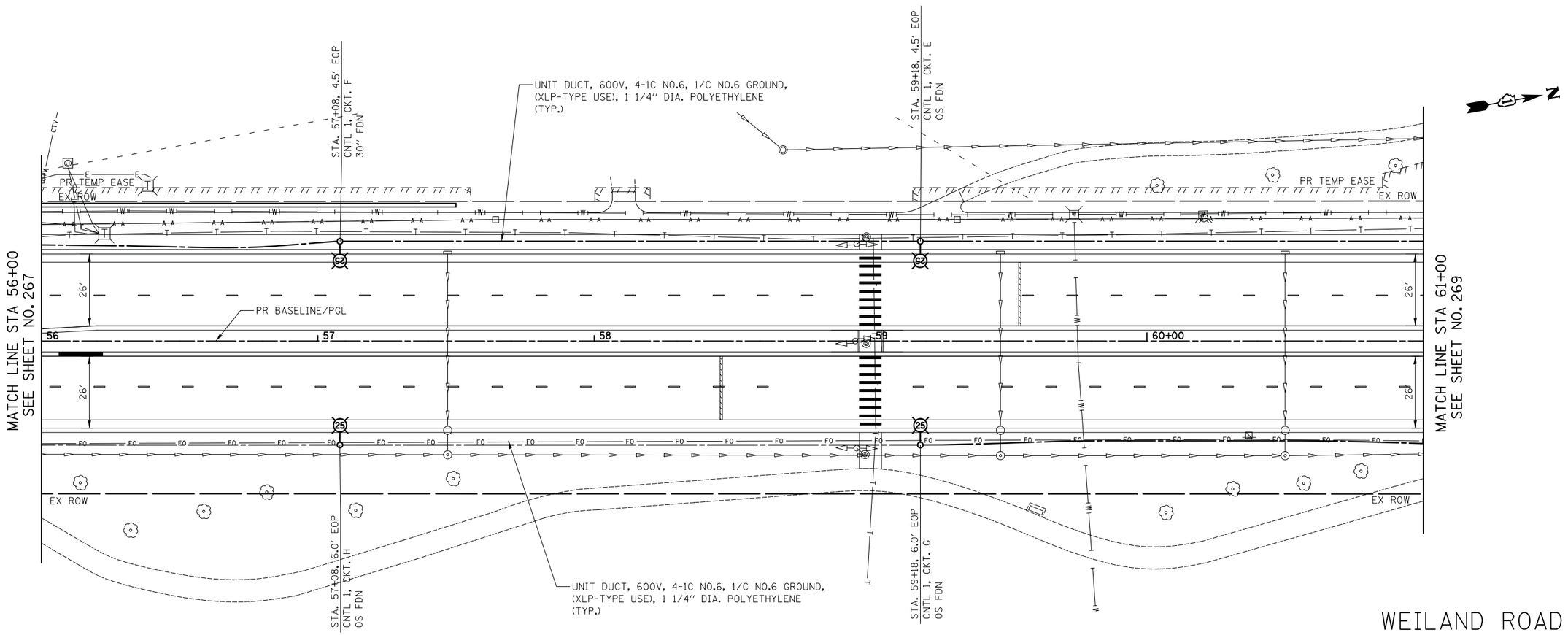

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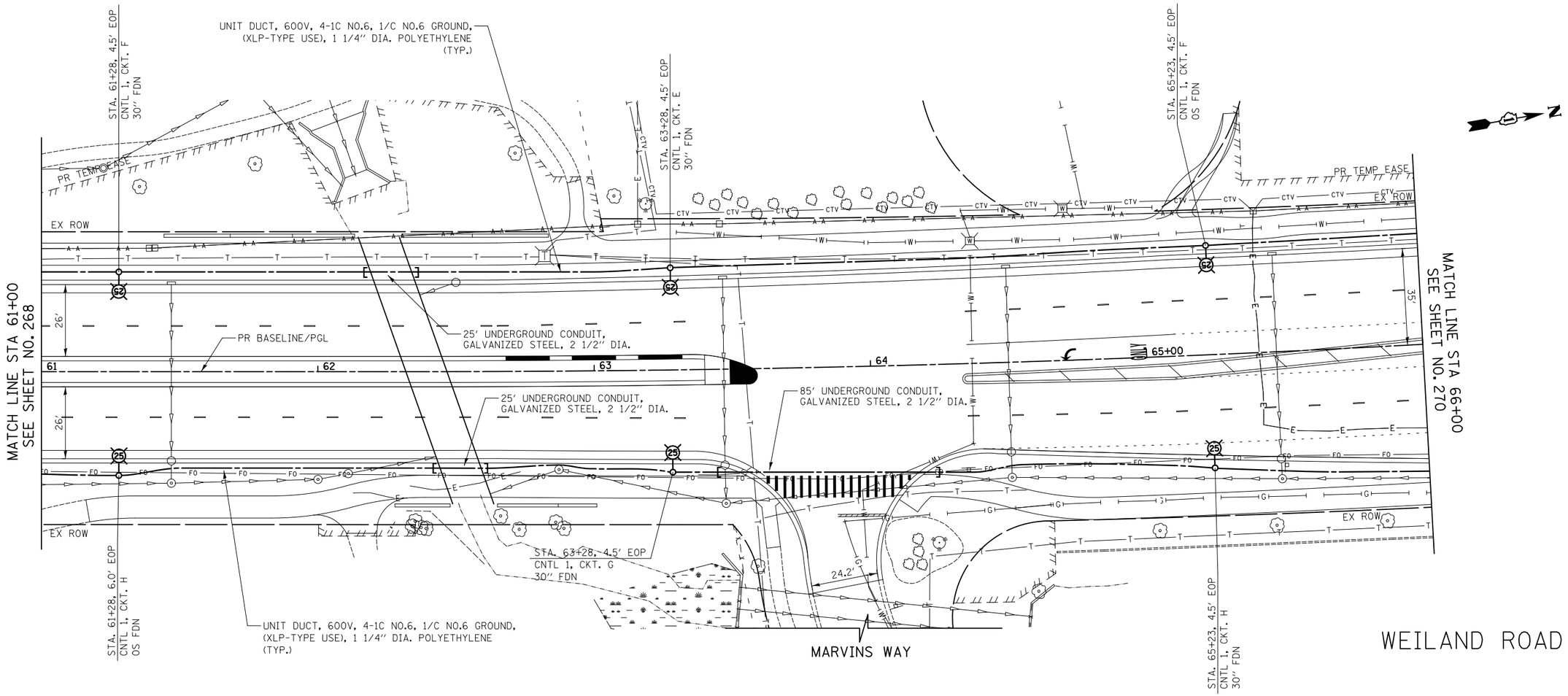
PROPOSED LIGHTING PLAN

SHEET NO. 9 OF 12 SHEETS | STA. 56+00.0 | TO STA. 61+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	268
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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PROPOSED LIGHTING PLAN

SHEET NO. 10 OF 12 SHEETS | STA. 61+00.0 | TO STA. 66+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	269
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
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ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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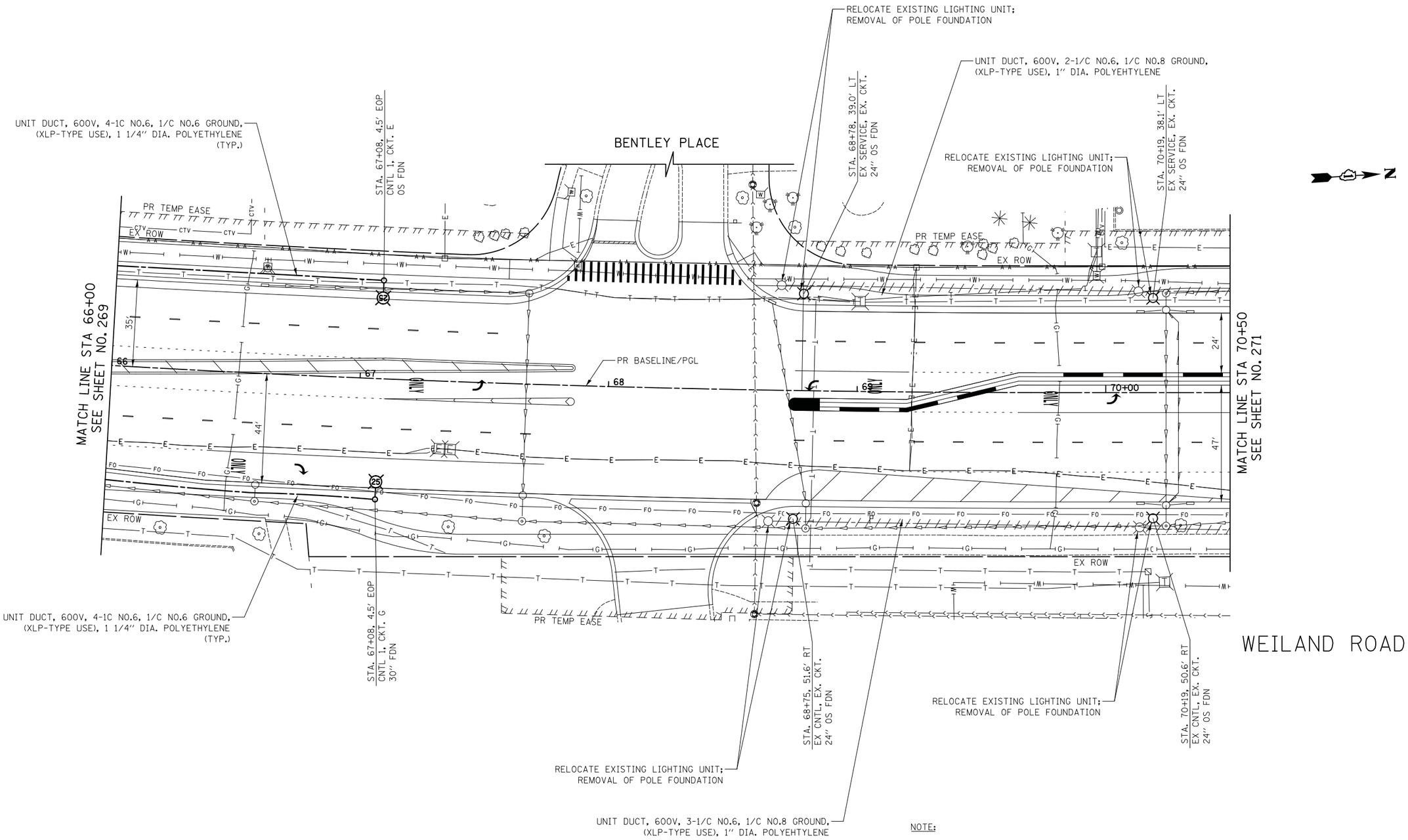

NOTE:

1. EXISTING LIGHTING UNIT TO BE RELOCATED MUST BE RELOCATED PRIOR TO INSTALLATION OF PROPOSED BIKE PATH OR SIDEWALK.

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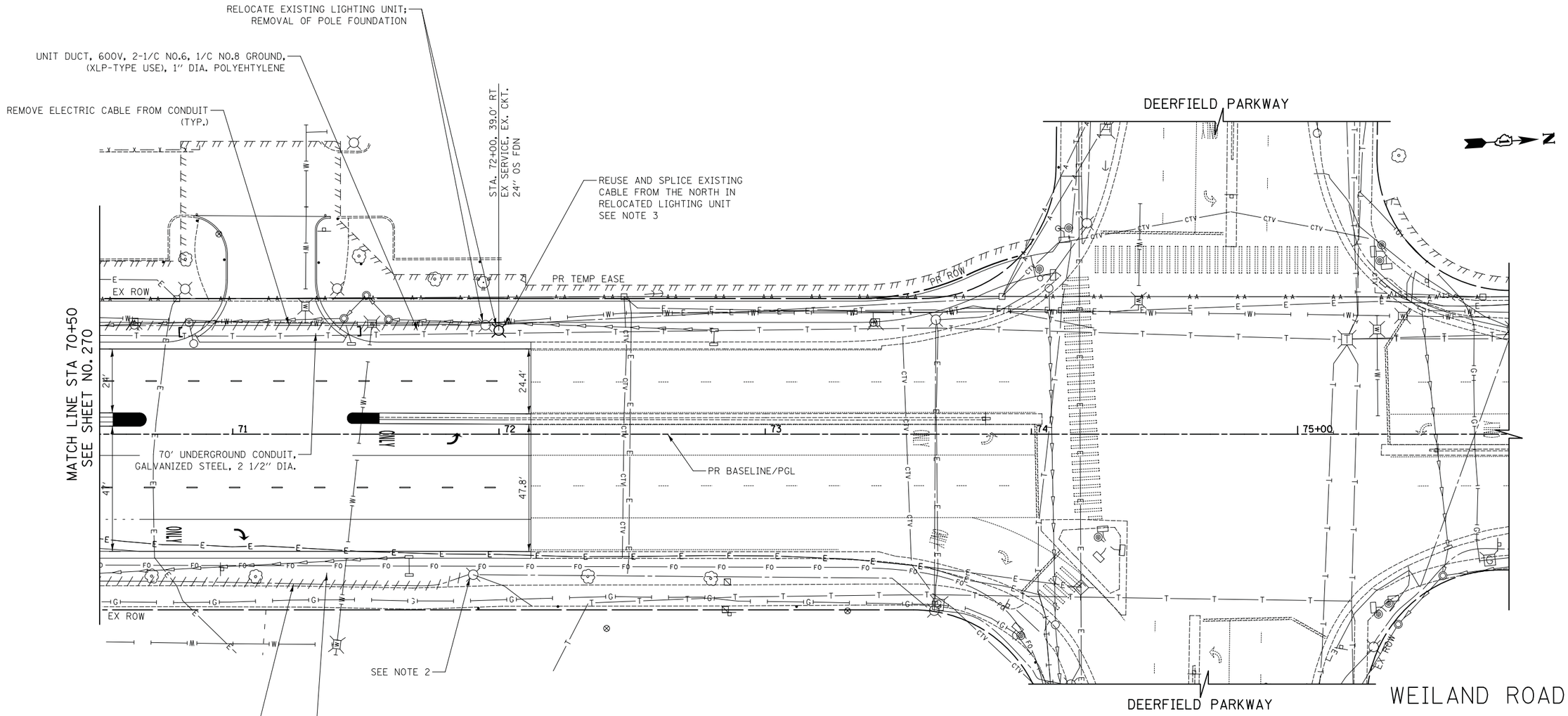
PROPOSED LIGHTING PLAN

SHEET NO. 11 OF 12 SHEETS | STA. 66+00.0 TO STA. 70+50.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	270
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTE:

1. EXISTING LIGHTING UNIT TO BE RELOCATED MUST BE RELOCATED PRIOR TO INSTALLATION OF PROPOSED BIKE PATH OR SIDEWALK.

2. CONTRACTOR SHALL RUN PROPOSED UNIT DUCT INTO EXISTING LIGHT POLE FOUNDATION SLEEVE AND WILL SPLICE PROPOSED CABLE TO EXISITNG CABLES IN LIGHT POLE HANDHOLE WITH NEW WATERPROOF SPLICES. NO UNDERGROUND SPLICING WILL BE ALLOWED. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN UNIT DUCT PAY ITEM.

3. CONTRACTOR SHALL INTERCEPT AND REUSE EXISTING CABLE FROM THE NORTH. SPLICING OF EXISTING AND PROPOSED CABLES AT PROPOSED LOCATION OF EXISTING LIGHT POLE WILL BE IN LIGHT POLE HANDHOLE WITH NEW WATERPROOF SPLICES. NO UNDERGROUND SPLICING WILL BE ALLOWED. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN RELOCATE EXISTING LIGHTING UNIT.

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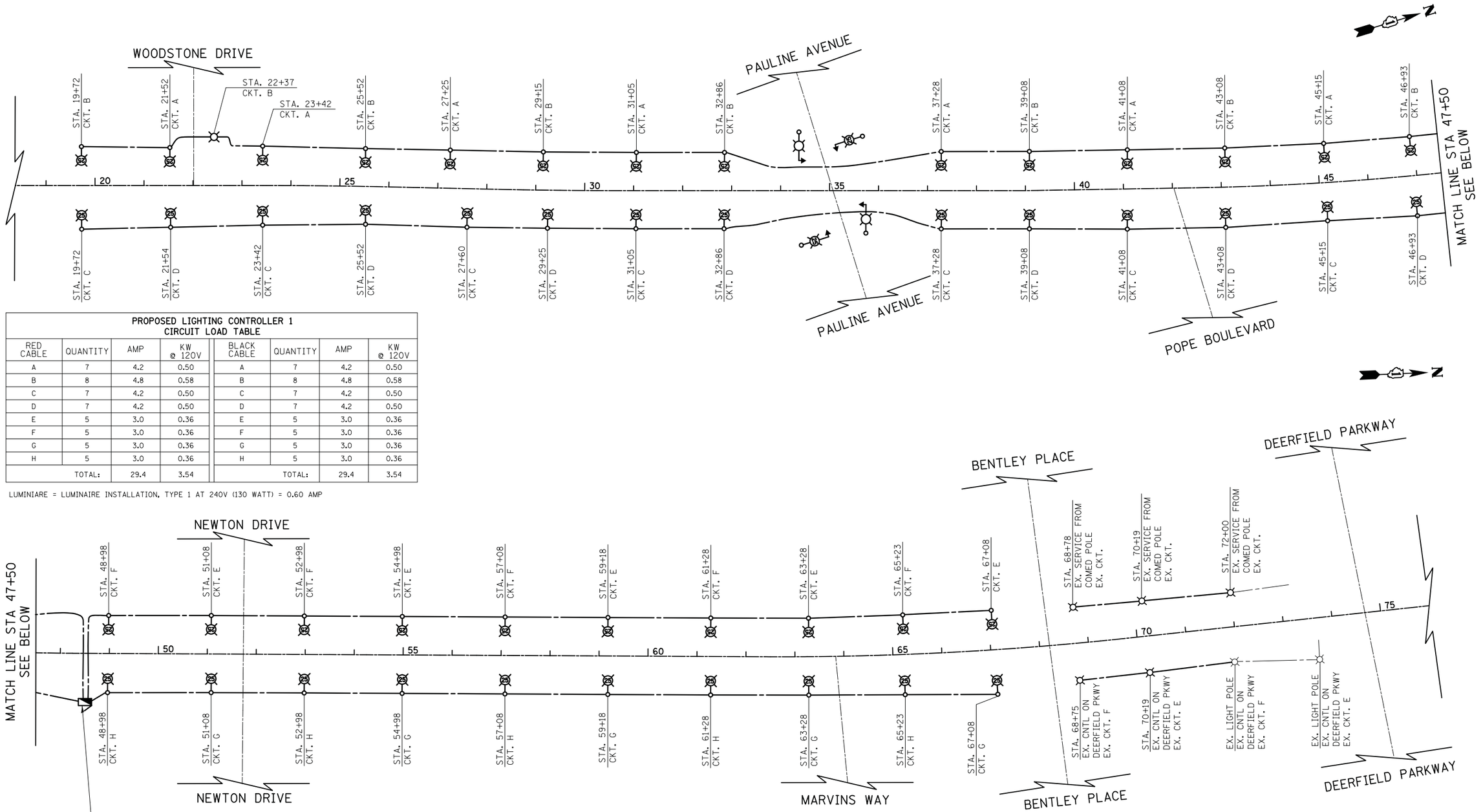
PROPOSED LIGHTING PLAN

SHEET NO. 12 OF 12 SHEETS | STA. 70+50.0 | TO STA. 72+12.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	271
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PROPOSED LIGHTING CONTROLLER 1
CIRCUIT LOAD TABLE

RED CABLE	QUANTITY	AMP	KW @ 120V	BLACK CABLE	QUANTITY	AMP	KW @ 120V
A	7	4.2	0.50	A	7	4.2	0.50
B	8	4.8	0.58	B	8	4.8	0.58
C	7	4.2	0.50	C	7	4.2	0.50
D	7	4.2	0.50	D	7	4.2	0.50
E	5	3.0	0.36	E	5	3.0	0.36
F	5	3.0	0.36	F	5	3.0	0.36
G	5	3.0	0.36	G	5	3.0	0.36
H	5	3.0	0.36	H	5	3.0	0.36
TOTAL:		29.4	3.54	TOTAL:		29.4	3.54

LUMINIARE = LUMINAIRE INSTALLATION, TYPE 1 AT 240V (130 WATT) = 0.60 AMP

PROPOSED LIGHTING CONTROLLER NO. 1
BASE MOUNTED, 240 VOLT, 100 AMP

LEGEND

- PROPOSED LIGHTING UNIT
  LUMINAIRE, 130 WATT, LED
  LIGHT POLE, WEATHERING STEEL, 35 FT. M.H., 6 FT. MAST ARM
- PROPOSED COMBINATION TRAFFIC SIGNAL AND STREET LIGHT
  LUMINAIRE, 130 WATT, LED
  45 FT. M.H., 20 FT. MAST ARM (SEE TRAFFIC SIGNAL PLANS)
  LUMINIARE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER
- PROPOSED COMBINATION TRAFFIC SIGNAL AND STREET LIGHT
  LUMINAIRE, 268 WATT, LED
  45 FT. M.H., 20 FT. MAST ARM (SEE TRAFFIC SIGNAL PLANS)
  LUMINIARE POWERED THROUGH TRAFFIC SIGNAL CONTROLLER
- PROPOSED LIGHTING CONTROLLER
- RELOCATED EXISTING LIGHTING UNIT
- PROPOSED UNIT DUCT (SIZE AS SPECIFIED IN PLANS)
- EXISTING LIGHTING UNIT
  LUMINAIRE, 250 WATT HPS
  35 FT. M.H., 6 FT. MAST ARM
- EXISTING UNIT DUCT (SIZE AS SPECIFIED IN PLANS)

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PROPOSED LIGHTING WIRING DIAGRAM

SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	272
		CONTRACT NO. 61E24		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

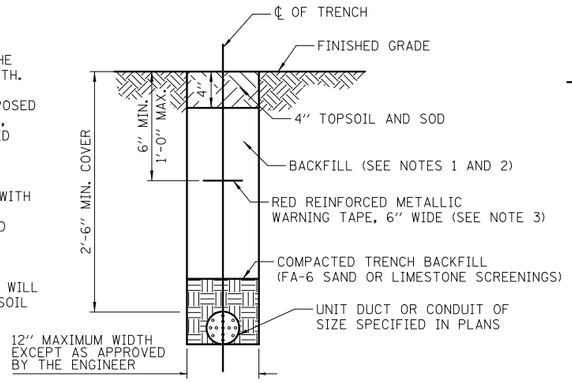
NOTES:

1. IN GRASS COVERED AREAS, THE BACKFILL MAY BE COMPACTED EARTH.

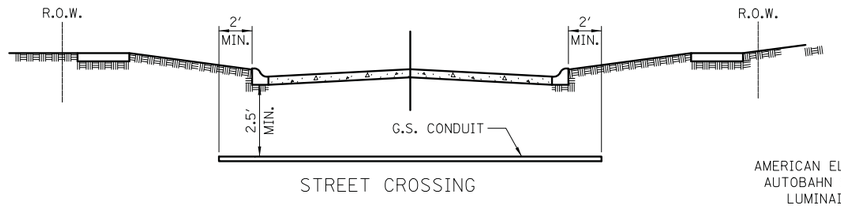
2. TRENCHES WITHIN 2' OF PROPOSED OR EXISTING STREETS, DRIVEWAYS, OR SIDEWALKS WILL BE BACKFILLED WITH COMPACTED FA-6 SAND OR LIMESTONE SCREENINGS.

3. WARNING TAPE WILL BE RED WITH BLACK LETTERING TO READ "CAUTION - ELECTRIC LINE BURIED BELOW".

4. ALL GRASS COVERED AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED WITH 4" OF TOPSOIL AND SOD.



TYPICAL TRENCH CROSS SECTION



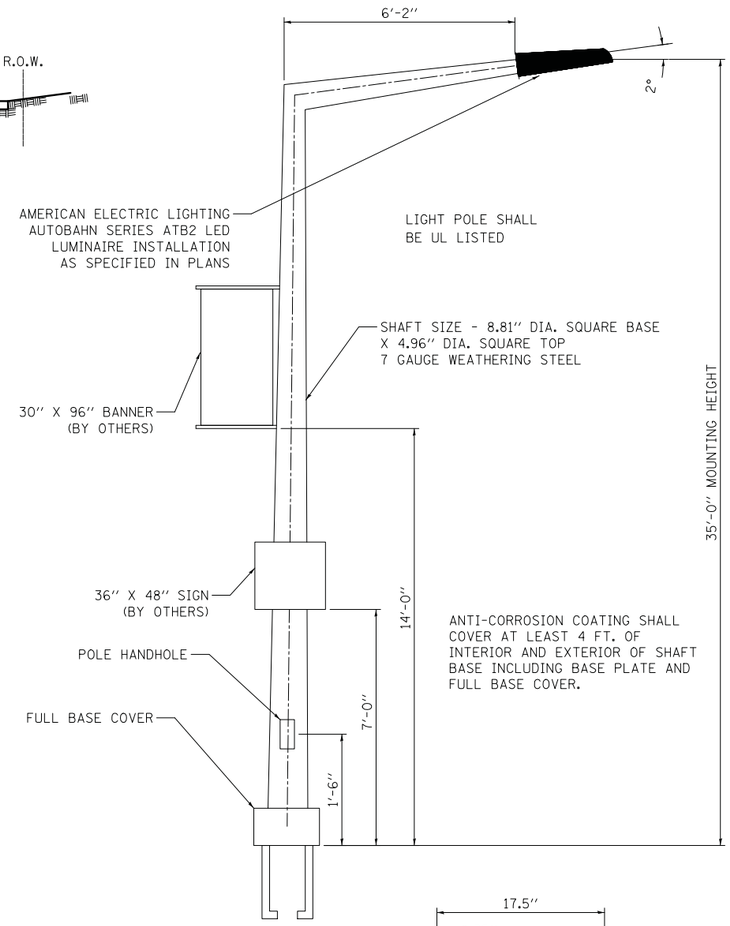
STREET CROSSING

① CONDUIT SHALL BE HEAVY WALL RIGID G.S. CONDUIT.

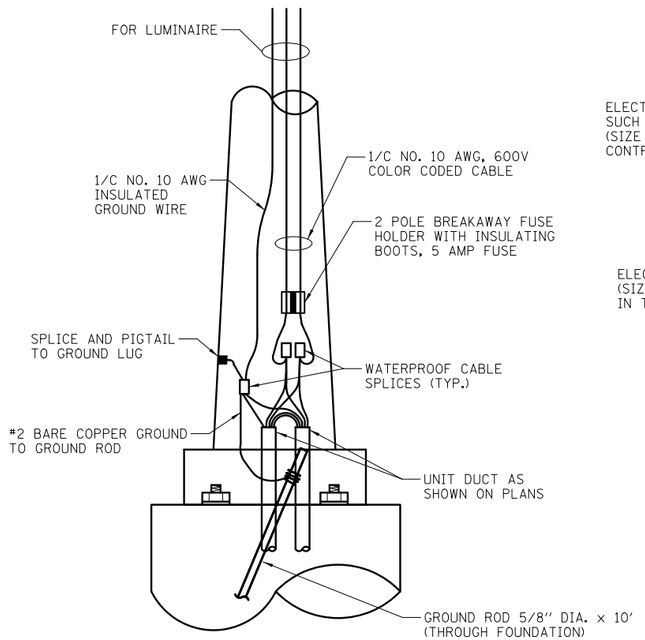
② CONDUIT SHALL EXTEND A MINIMUM OF 2 FT. BEYOND BACK OF CURB.

③ CONDUIT SHALL BE A MINIMUM OF 2.5 FT. BELOW BOTTOM OF CURB.

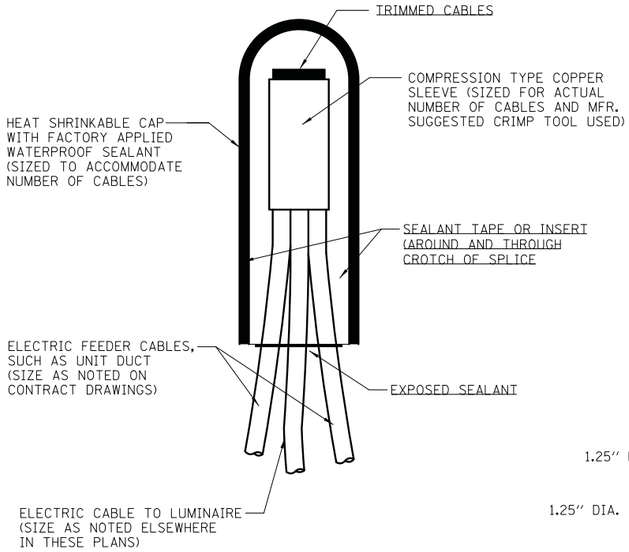
ELECTRICAL CONDUIT UNDER PAVEMENT



ALL CONDUCTORS SHALL BE INDIVIDUALLY COLOR-CODED. THE COLOR-CODED INSULATION FOR EACH WIRE SHALL RUN THE ENTIRE LENGTH OF THE CONDUCTOR FROM THE CIRCUIT BREAKER TO THE LUMINAIRE WITH THE SAME COLOR.

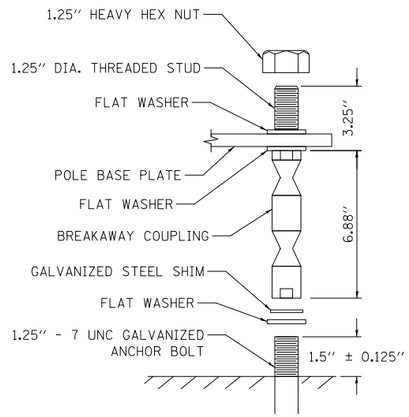


ROADWAY POLE HANDHOLE WIRING DIAGRAM
VILLAGE OF BUFFALO GROVE

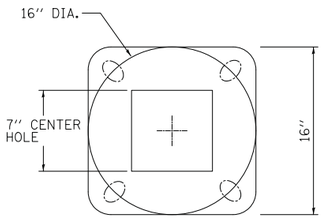


NOTE: NUMBER OF CABLES IN SPLICE MAY VARY

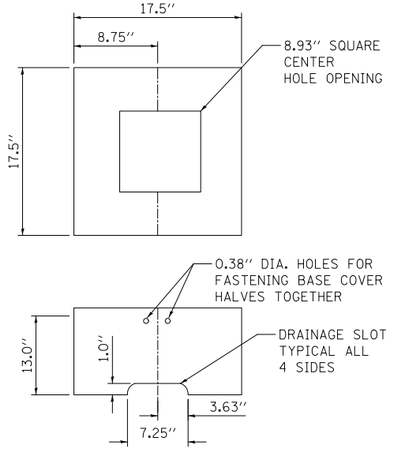
SPLICING ELECTRIC CABLES
BASIC MATERIALS AND METHODS



BREAKAWAY COUPLING



BASE PLATE



FULL BASE COVER

LIGHT POLE, WEATHERING STEEL, 35 FT. M.H., 6 FT. MAST ARM

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LIGHTING DETAILS

NOT TO SCALE | SHEET NO. 1 OF 4 SHEETS

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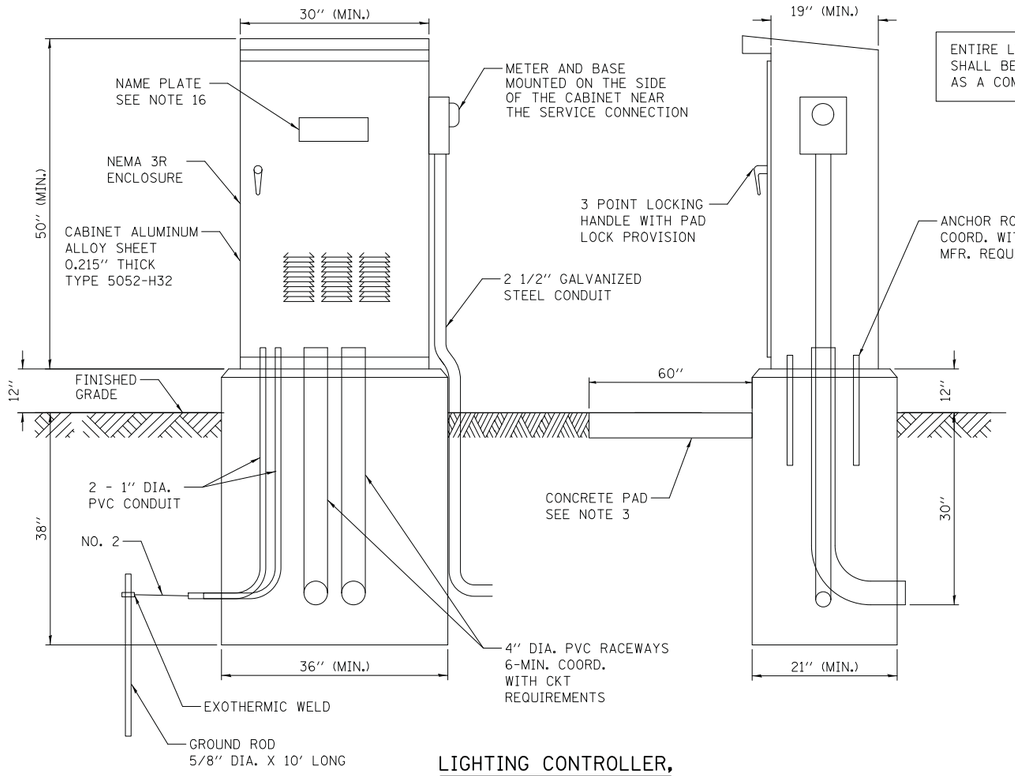
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

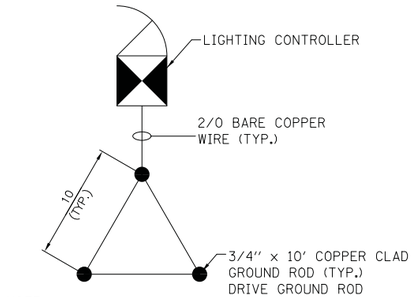


ENTIRE LIGHTING CONTROLLER SHALL BE UL LISTED AND LABELED AS A COMPLETE UNIT.

LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 100 AMP

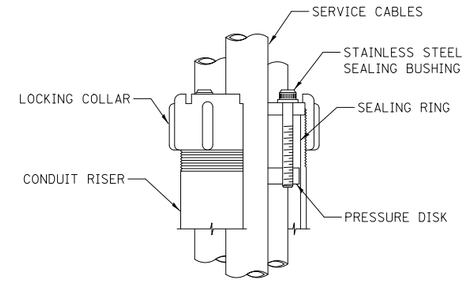
NOTES:

1. THE CABINET SHALL BE FABRICATED FROM 0.125" THICK ALUMINUM ALLOY SHEET AND SHALL BE REINFORCED WITH ALUMINUM ANGLES. THE CABINET DOOR SHALL BE NEMA TYPE 3R CONSTRUCTION WITH NEOPRENE GASKET.
2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
3. IN FRONT OF THE CONTROLLER CABINET DOOR, REMOVE VEGETATION AND 2" TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER. NOT REQUIRED IF ADJACENT TO SIDEWALK
4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" DIA. STAINLESS STEEL HINGE PIN.
7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
8. CONTROL WIRING SHALL BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER. THE ENDS OF ALL CONTROL WIRES HALL BE IDENTIFIED.
9. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
10. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
11. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
    R = RED BL = BLUE W = WHITE
    B = BLACK Y = YELLOW G = GREEN
12. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICE IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
13. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
14. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
15. 6" X 11" STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "VILLAGE OF BUFFALO GROVE LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

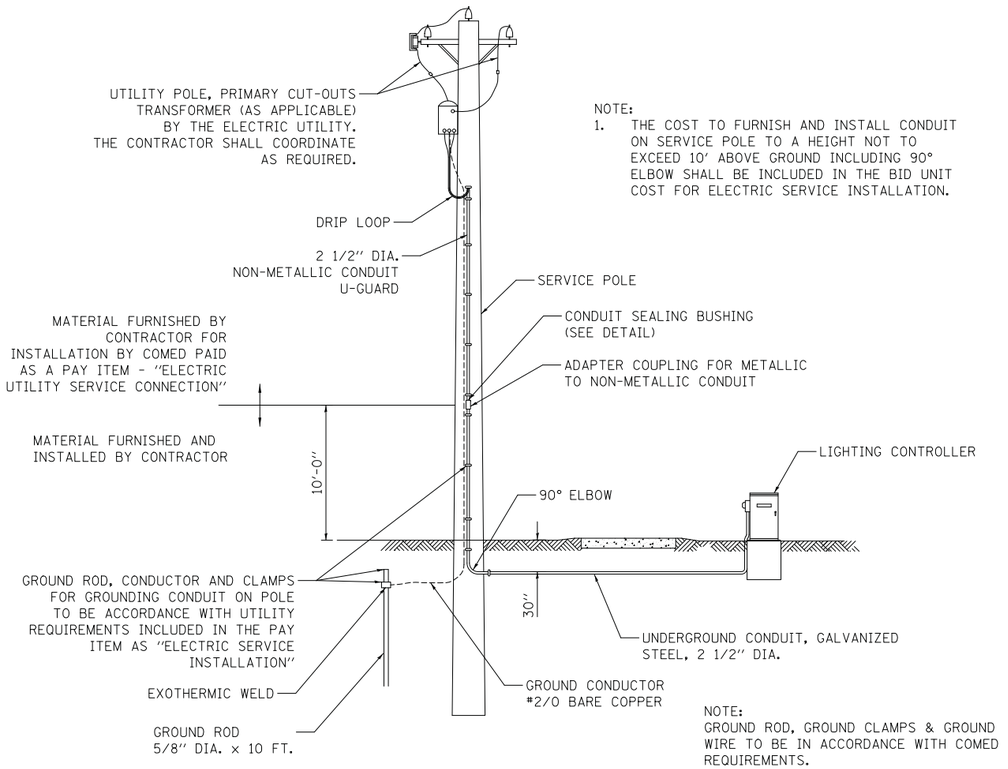


NOTE:
USE EXOTHERMIC WELD FOR ALL GROUND CONNECTIONS

GROUND FIELD DETAIL



SEALING BUSHING DETAIL



NOTE:
1. THE COST TO FURNISH AND INSTALL CONDUIT ON SERVICE POLE TO A HEIGHT NOT TO EXCEED 10' ABOVE GROUND INCLUDING 90° ELBOW SHALL BE INCLUDED IN THE BID UNIT COST FOR ELECTRIC SERVICE INSTALLATION.

NOTE:
GROUND ROD, GROUND CLAMPS & GROUND WIRE TO BE IN ACCORDANCE WITH COMED REQUIREMENTS.

ELECTRIC SERVICE INSTALLATION

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
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DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

NOT TO SCALE | SHEET NO. 2 OF 5 SHEETS

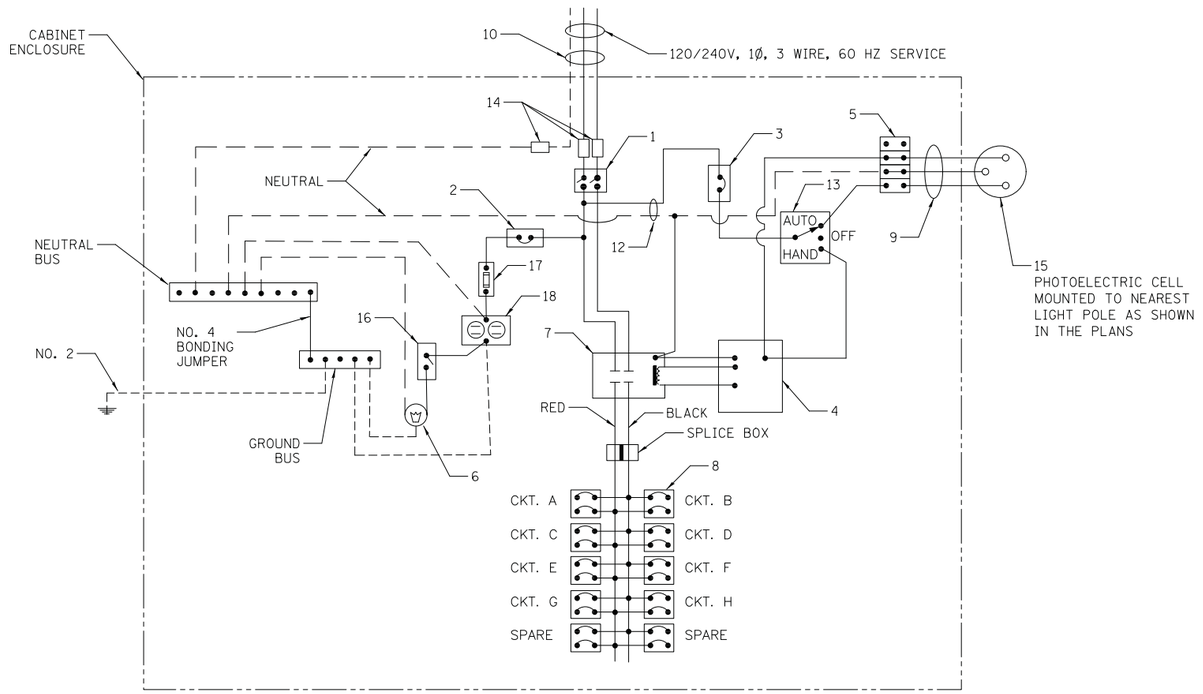
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	274
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

LIGHTING CONTROLLER COMPONENT SCHEDULE

ITEM	SPECIFICATION OR EQUAL
(1) MAIN CIRCUIT BREAKER	100 AMPERE, 2 POLE, 240 VOLT RATING INTERRUPTING CAPACITY NOT LESS THAN 25,000 RMS SYMMETRICAL AMPS AT 600V
(2) OUTLET CIRCUIT BREAKER	20 AMPERE, 1 POLE, 120 VOLT RATING INTERRUPTING CAPACITY NOT LESS THAN 14,000 RMS SYMMETRICAL AMPS AT 277V
(3) PHOTOELECTRIC CELL CONTROL CIRCUIT BREAKER	15 AMPERE, 1 POLE, 120 VOLT RATING INTERRUPTING CAPACITY NOT LESS THAN 14,000 RMS SYMMETRICAL AMPS AT 277V
(4) AUXILIARY RELAY	120 VOLT SPST 60 HZ COIL
(5) FOUR POINT TERMINAL BLOCK	600 VOLT
(6) LAMPHOLDER	120 VOLT SWITCHED LAMPHOLDER
(7) REMOTE CONTROL SWITCH - CONTACTOR	100 AMPERE 2 POLE, 240 VOLT RATING, 120V COIL. ELECTRICALLY OPERATED, MECHANICALLY HELD.
(8) BRANCH LINE CIRCUIT BREAKERS	CKTS. A - H = 30 AMP, 2 POLE, 240 VOLT RATING ALL CIRCUITS SHALL BE INTERRUPTING CAPACITY NOT LESS THAN 10,000 RMS SYMMETRICAL AMPS AT 277V
(9) PHOTOELECTRIC CELLCONTROL WIRE	3-600V XLP NO. 10
(10) SERVICE CABLES	3-600V (XLP-TYPE USE) NO. 2
(11) NOT USED	
(12) CONTROL WIRE	2-600V XLP NO. 10
(13) HAND-AUTO-OFF CONTROL SWITCH	10 AMPERE, 3 POLE, 120 VOLT.
(14) LIGHTING ARRESTOR	BRACKET MOUNTED SURGE ARRESTOR FOR 120/240V 3W SERVICE
(15) PHOTOELECTRIC CELL	120 SECONDS OFF TIME DELAY, 120V
(16) MICRO SWITCH	MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR IS OPEN
(17) FUSE	20 AMP, 120 VOLT
(18) OUTLET	120 VOLT SWITCHED LAMPHOLDER AND 20 AMP GFI DUPLEX RECEPTACLE. WEATHERPROOF SINGLE GANG CAST ALUMINUM BOX AND WEATHERPROOF COVER.



LIGHTING CONTROLLER WIRING DIAGRAM

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

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DEPARTMENT OF TRANSPORTATION

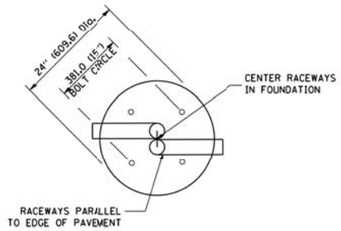
LIGHTING DETAILS

NOT TO SCALE | SHEET NO. 3 OF 5 SHEETS

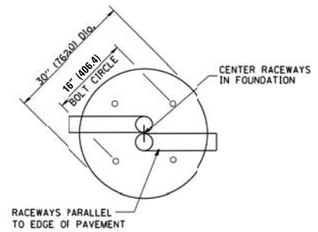
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	275
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LIGHT POLE FOUNDATION DEPTH TABLE

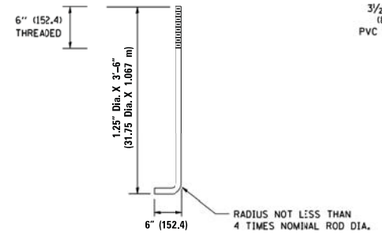
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND Ø = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND Ø = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND Ø = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



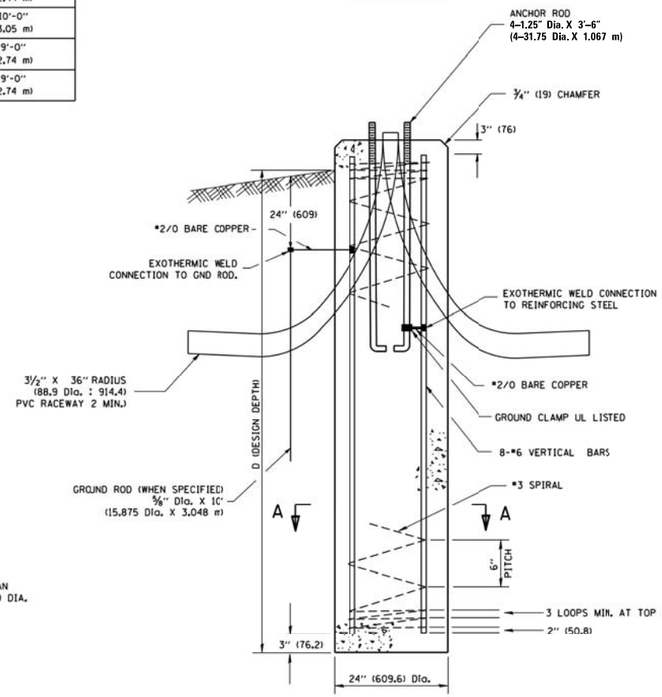
TOP VIEW



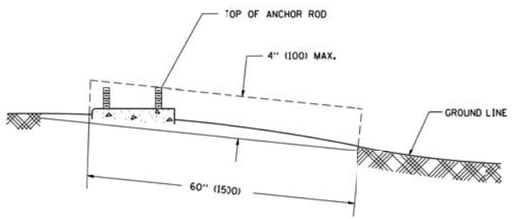
TOP VIEW



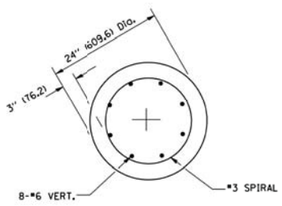
ANCHOR ROD DETAIL



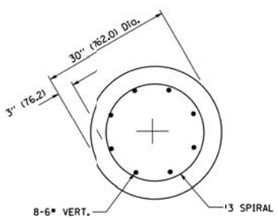
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED ¾-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 125 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUN OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2¾" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

FINAL SURVEY | NOTE BOOK | NO. | BY | DATE | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED

ORIGINAL SURVEY | NOTE BOOK | NO. | BY | DATE | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED

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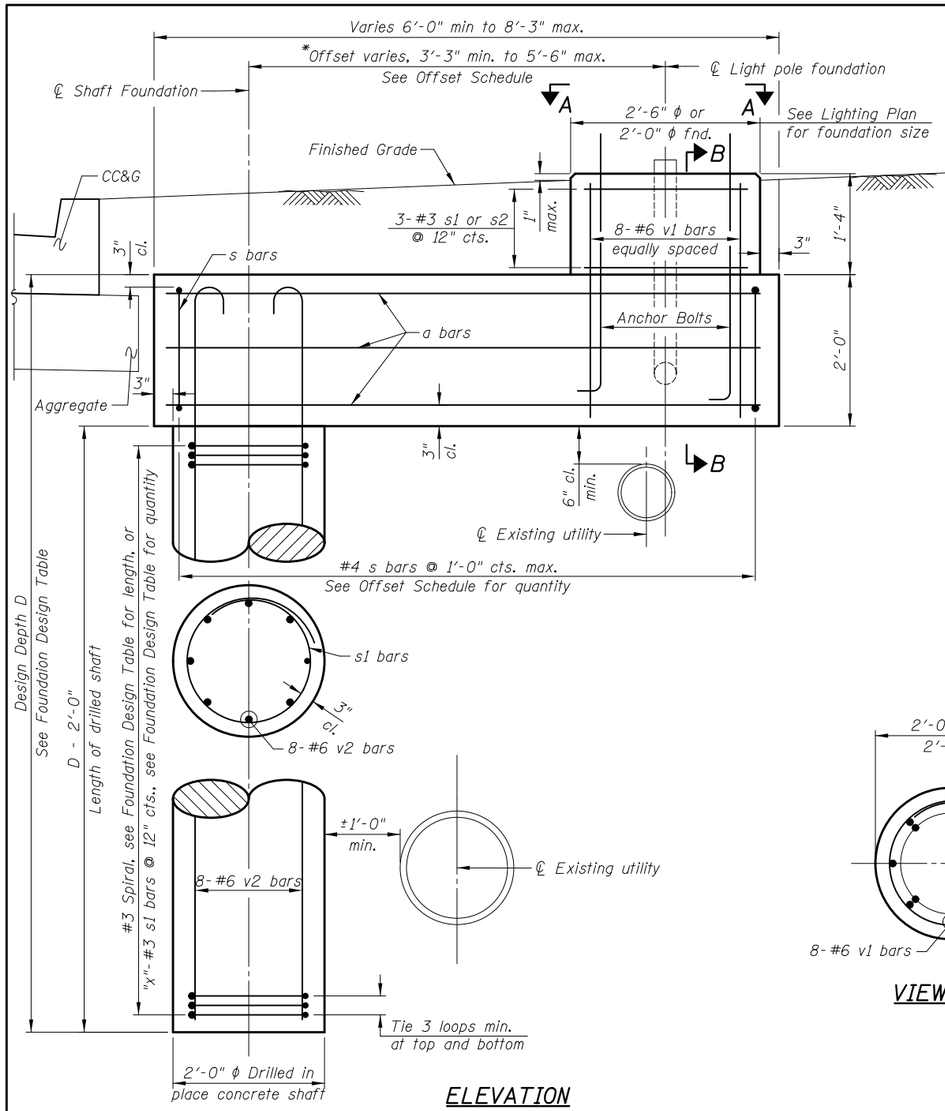
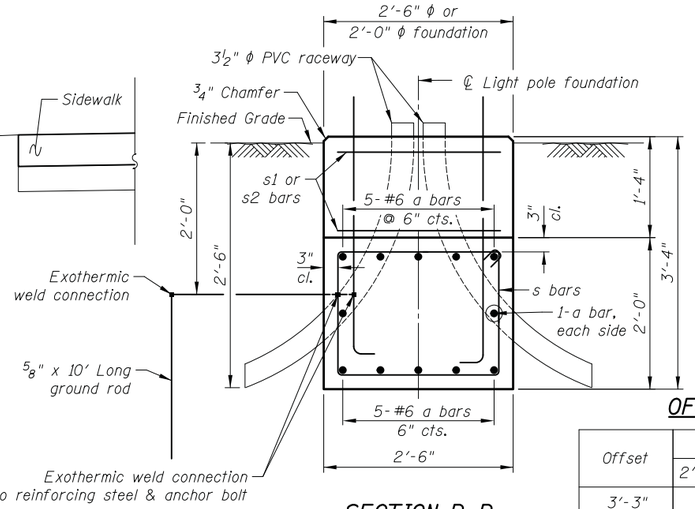
LIGHTING DETAILS

NOT TO SCALE | SHEET NO. 4 OF 5 SHEETS

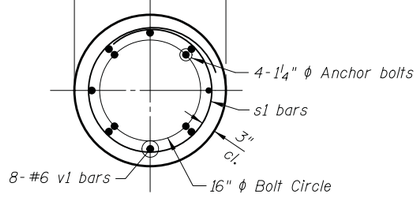
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	276
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



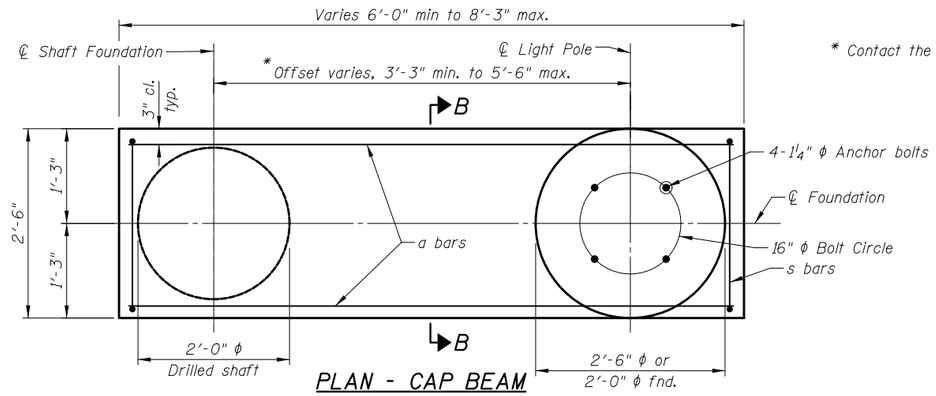
ELEVATION



SECTION B-B



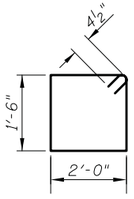
VIEW A-A



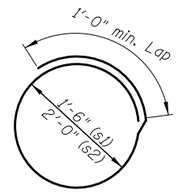
PLAN - CAP BEAM

* Contact the Engineer for offsets greater than 5'-6"

v2 BAR



s BAR



s1 & s2 BARS

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION D	REINFORCEMENT IN SHAFT		
		v2 bars "h"	SPIRAL	"x" s1 bars
Soft Clay Qu < 0.75 TSF	13'-0"	12'-6"	#3x122'	12
Medium Clay 0.75 TSF < Qu < 1.50 TSF	9'-6"	9'-0"	#3x90'	11
Stiff Clay Qu > 1.5 TSF	7'-0"	6'-6"	#3x66'	8
Loose sand ϕ = 34°	9'-0"	8'-6"	#3x85'	10
Medium sand ϕ = 37.5°	8'-3"	8'-0"	#3x78'	9
Dense sand ϕ = 40°	7-9"	7'-6"	#3x73'	9

Contact the Engineer if conditions other than represented in the table above are encountered.

OFFSET SCHEDULE

Offset	Length of bar a		No. of s bars
	2'-0" ϕ Fnd.	2'-6" ϕ Fnd.	
3'-3"	5'-3"	5'-6"	6
3'-9"	5'-9"	6'-0"	6
4'-6"	6'-6"	6'-9"	7
5'-0"	7'-0"	7'-3"	7
5'-6"	7'-6"	7'-9"	8

BILL OF MATERIAL

(For information only)

Mark	No.	Size	Length	Shape
a	12	6	See Offset Schedule	——
s	See Offset Schedule	4	7'-9"	▭
s1	**"x" + 3	3	5'-9"	○
s2	** 3	3	7'-4"	○
v1	8	6	2'-9"	——
v2	8	6	See Design Table	——→

** s2 bars for 2'-6" ϕ foundation only. "x" s1 bars in drilled shaft with 3 additional s1 bars in 2'-0" ϕ foundation.

NOTES:

1. THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE. THE CONTRACTOR SHALL NOT ORDER REINFORCEMENT BARS UNTIL THE OFFSET AND DIMENSION "D" ARE DETERMINED.
2. EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" OR 30" IN DIAMETER.
3. THE CONTRACTOR SHALL USE #3 SPIRAL AT 6" PITCH OR AT HIS OPTION MAY SUBSTITUTE #3 TIES AT 12" CENTER.
4. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
5. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONRETE IS PLACED IN THE FORM.
6. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725. NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
7. CONCRETE SHALL BE CLASS "SI". CONCRETE FOUNDATION MUST BE CURED FOR (10) TEN DAYS BEFORE THE LIGHT STANDARD IS ERECTED.
8. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.
9. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2¾" ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENSION WITH ENGINEER.
10. A MINIMUM OF 3" OF THE THREADING ON THE ANCHOR BOLTS SHALL REMAIN BELOW THE TOP OF THE FOUNDATION.
11. RACEWAYS SHALL PROJECT 1" ABOVE THE TOP OF THE FOUNDATION.
12. FOUNDATION MAY BE OFFSET IN THE DIRECTION OF CURB AS SHOWN IN ELEVATION VIEW PROVIDED THE DRILLED SHAFT DOES NOT UNDERMINE CURB. OTHERWISE, FOUNDATION SHALL BE OFFSET IN DIRECTION AWAY FROM CURB.

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LIGHTING DETAILS

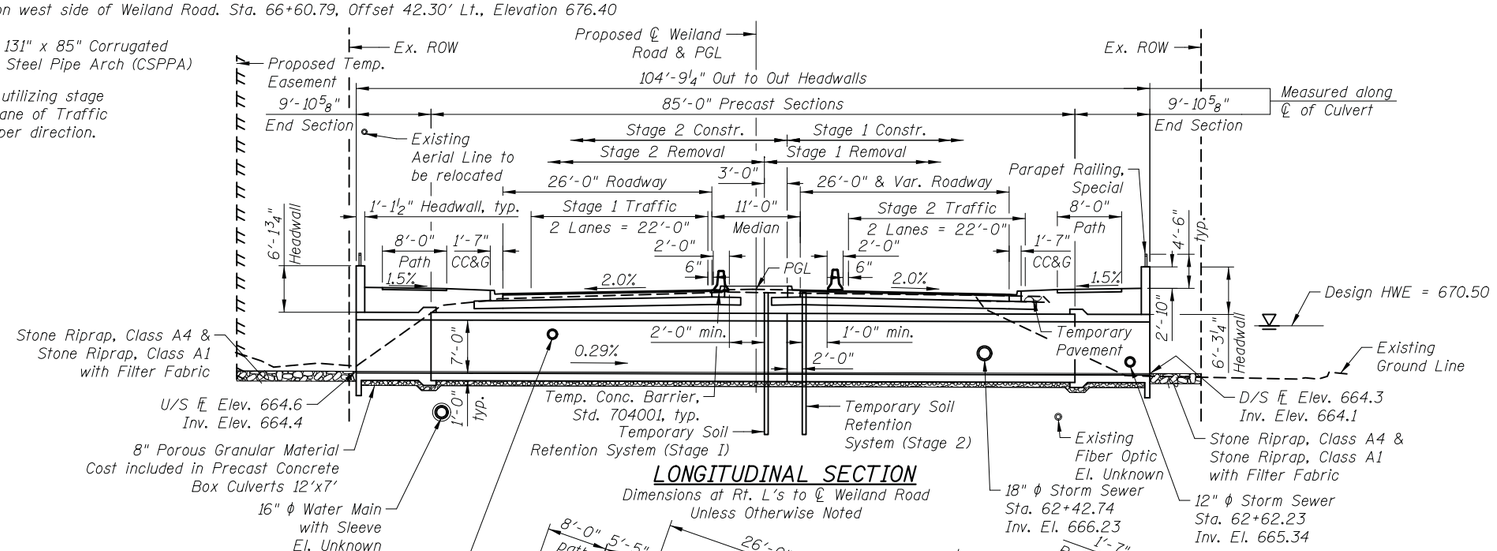
SHEET NO. OF SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	277
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

Benchmark: T.B.M. #8 Cross cut (set) in southwest flange bolt of first fire hydrant south of Bentley Place on west side of Weiland Road. Sta. 66+60.79, Offset 42.30' Lt., Elevation 676.40

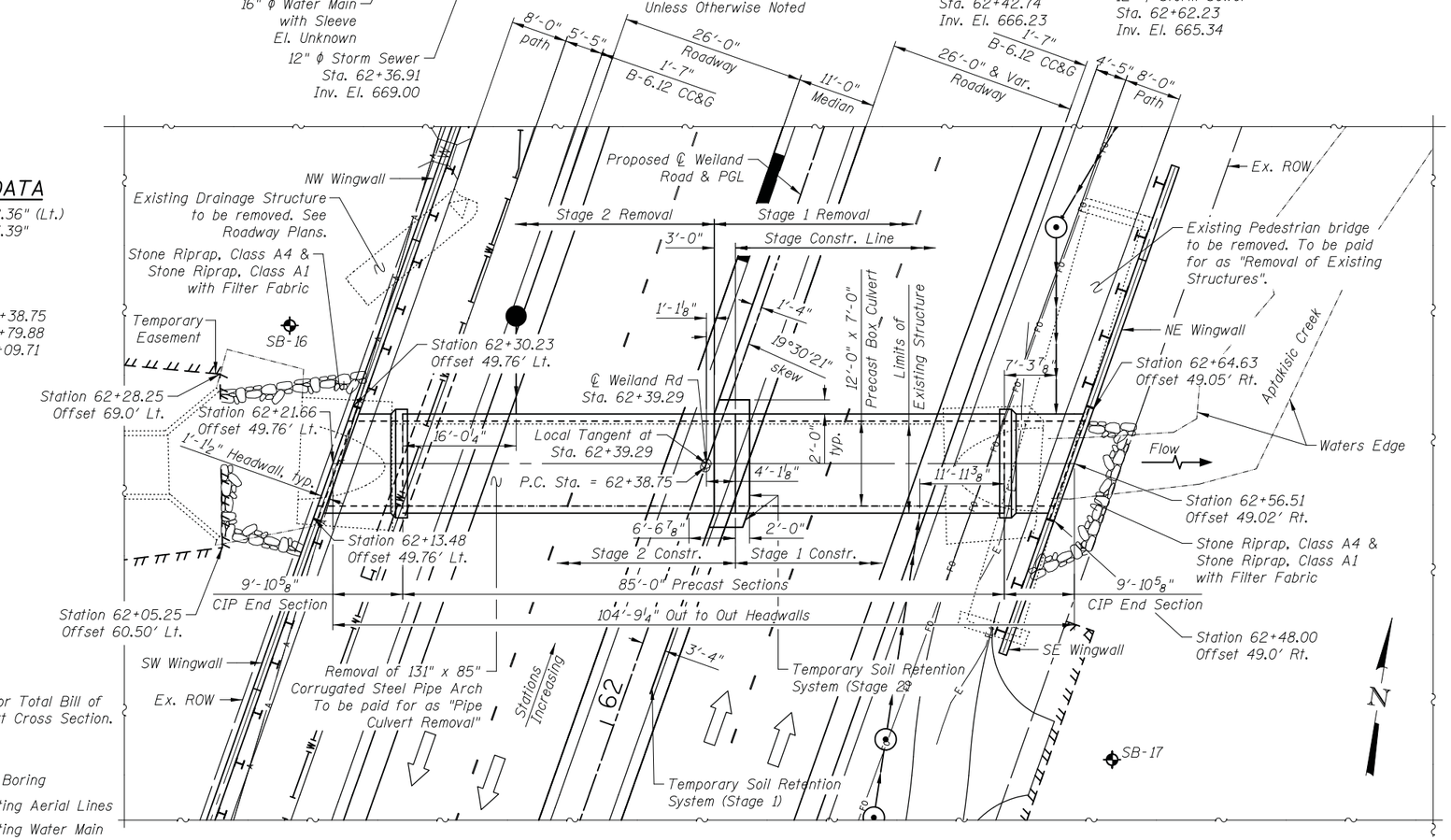
Existing Structure: 131" x 85" Corrugated Steel Pipe Arch (CSPPA)

Culvert to be built utilizing stage construction. One lane of Traffic will be maintained per direction.



LONGITUDINAL SECTION

Dimensions at Rt. L's to ℄ Weiland Road Unless Otherwise Noted



PLAN

CURVE DATA

Δ = 6° 25' 48.36" (Lt.)
D = 0° 52' 03.39"
R = 6,603.88'
T = 370.95'
L = 741.13'
E = 10.41'
P.C. Sta. = 62+38.75
P.T. Sta. = 69+79.88
P.I. Sta. = 66+09.71

Notes:
See Sheet S2 for Total Bill of Material and Culvert Cross Section.

LEGEND

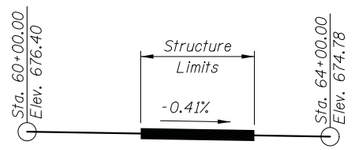
- Soil Boring
- A — Existing Aerial Lines
- W — Existing Water Main
- E — Existing Underground Electric
- Proposed Storm Sewer
- FO — Existing Fiber Optic

WATERWAY INFORMATION

Drainage Area = 2.80 sq. miles — Low Grade Elev. 672.74 @ Sta. 70+24.26

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	2	65	52.1	62.4	669.8	0.0	0.0	669.8	669.8
	10	188	56.4	68.4	670.3	0.0	0.0	670.3	670.3
Design	30	272	58.0	70.8	670.5	0.0	0.0	670.5	670.5
	50	290	58.7	72.0	670.6	0.1	0.0	670.7	670.6
Base	100	395	60.9	75.6	670.9	1.3	0.2	672.2	671.1
Max. Calc.	500	479	62.8	79.2	671.2	2.4	1.0	673.6	672.2

10-Year Velocity through Existing Culvert = 4.1 fps
10-Year Velocity through Proposed Culvert = 3.2 fps



PROFILE GRADE

(along Proposed ℄ Weiland Road)

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 60,000 psi (M270 Grade 50)

PRECAST UNITS

f'c = 5,000 psi
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Fabric)

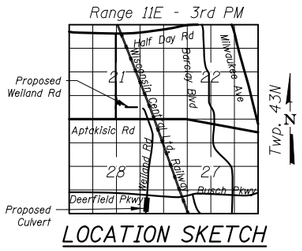
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

INDEX OF SHEETS



LOCATION SKETCH

CIVILTECH ENGINEERING, INC.
GREGORY J. HATLESTAD, S.E.

STATE OF ILLINOIS — GREGORY J. HATLESTAD — 081-005562 — LICENSED STRUCTURAL ENGINEER — CHICAGO, IL

GREGORY J. HATLESTAD, S.E.
081-005562

EXP 11-30-2018

DATE 11-13-2018

I certify that to the best of knowledge, information and belief, this culvert and retaining wall design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current LRFD AASHTO Bridge Design Specifications.

GENERAL PLAN & LONGITUDINAL SECTION
CULVERT
WEILAND ROAD F.A.U. RTE 2665
SECTION 14-00158-11-WR
LAKE COUNTY
STA. 62+39.29

CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

DRAWN	- M. RENDINO	REVISED -
DESIGNED	- M. RENDINO	REVISED -
CHECKED	- G. HATLESTAD	REVISED -
DATE	- 11/13/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND LONGITUDINAL SECTION
CULVERT
WEILAND ROAD; F.A.U. 2665
SHEET NO. S1 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	278
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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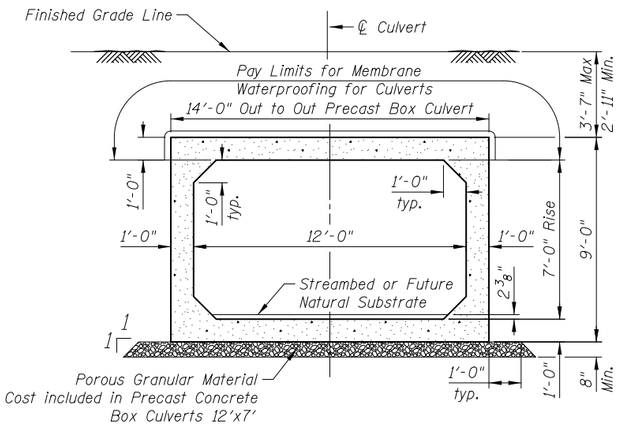
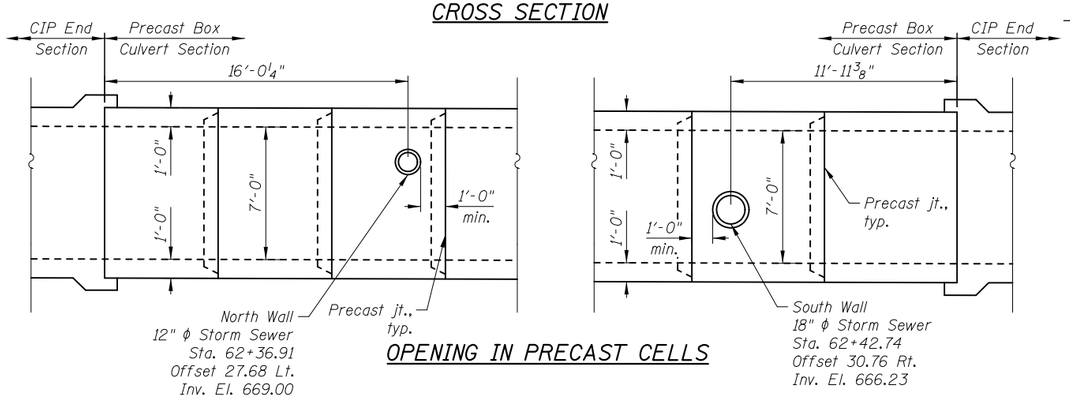
11/13/2018

TOTAL BILL OF MATERIAL

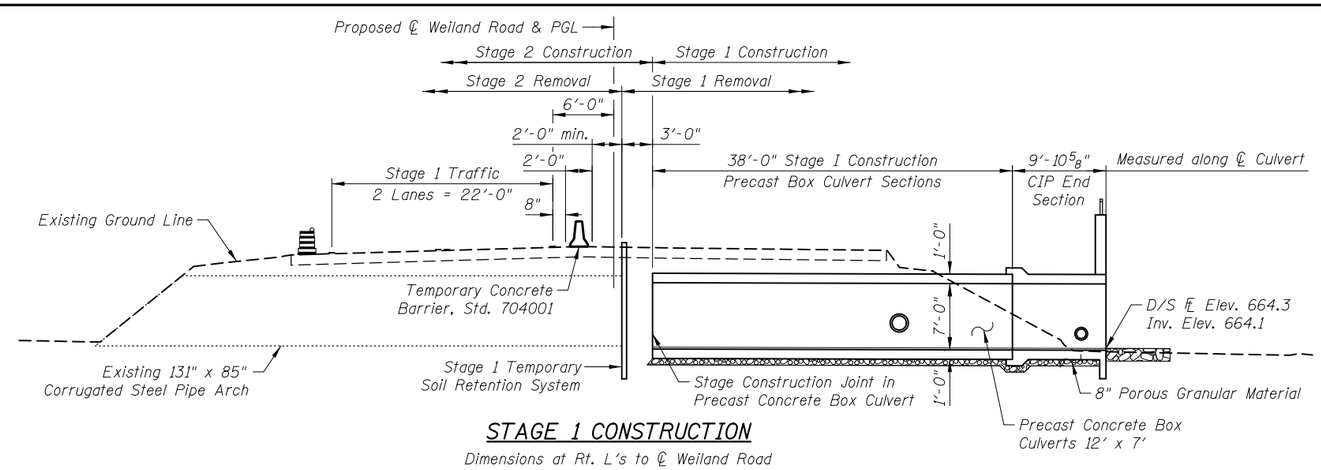
ITEM	UNIT	TOTAL QUANTITY
Removal of Existing Structures	Each	1
Concrete Headwall Removal	Each	2
Pipe Culvert Removal	Foot	82
Structure Excavation	Cu. Yd.	71
Form Liner Textured Surface	Sq. Ft.	2,364
Protective Coat	Sq. Yd.	49
Stud Shear Connectors	Each	209
Reinforcement Bars	Pound	5,370
Reinforcement Bars, Epoxy Coated	Pound	6,810
Temporary Soil Retention System	Sq. Ft.	666
Furnishing Soldier Piles (HP Section)	Foot	675
Driving Soldier Piles	Foot	675
Untreated Timber Lagging	Sq. Ft.	562
Concrete Structures (Retaining Wall)	Cu. Yd.	72
Concrete Box Culverts	Cu. Yd.	49
Geocomposite Wall Drain	Sq. Yd.	450
Anti-graffiti Protection System	Sq. Ft.	2,364
Membrane Waterproofing System for Buried Structures	Sq. Yd.	152
Staining Concrete Structures	Sq. Ft.	2,364
Parapet Railing, Special	Foot	212
Precast Concrete Box Culvert 12' x 7'	Foot	85



CROSS SECTION

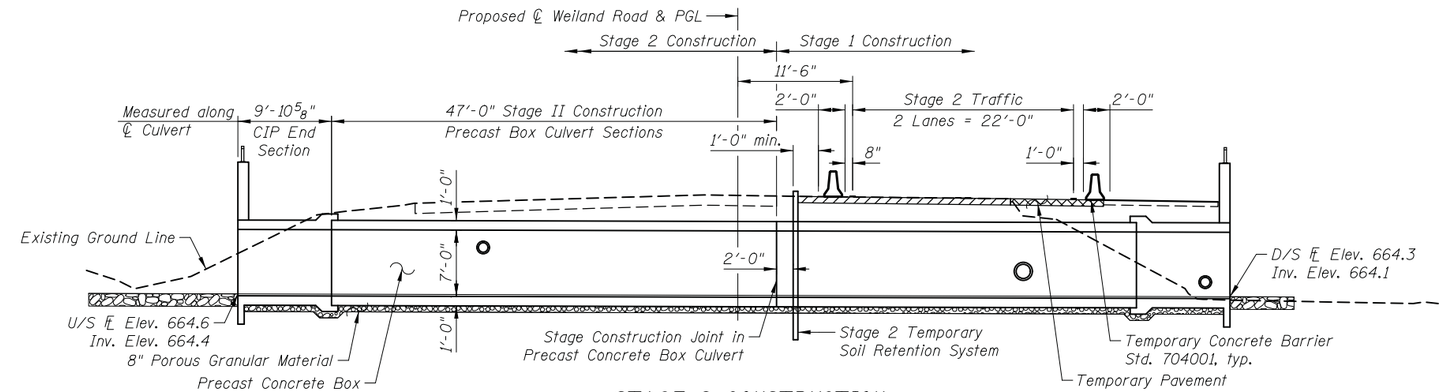


OPENING IN PRECAST CELLS



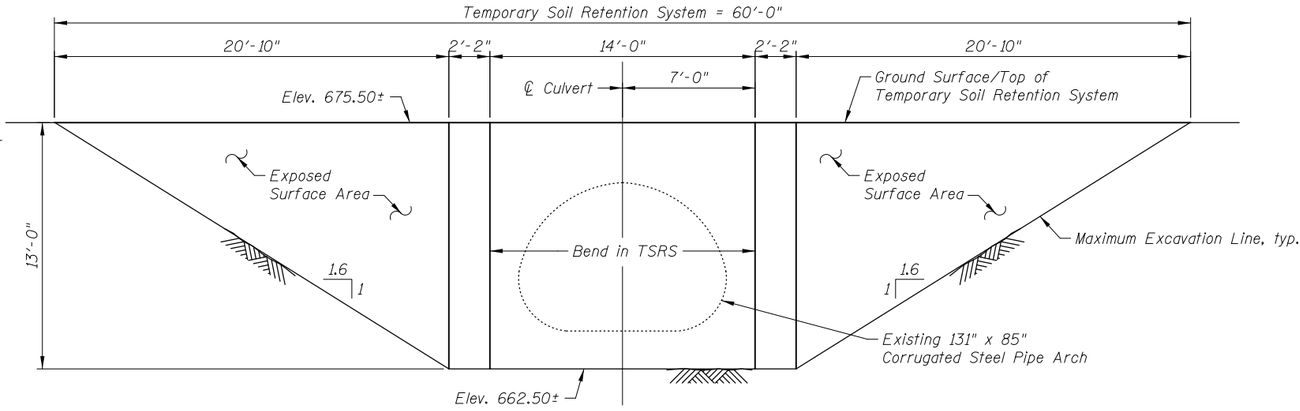
STAGE 1 CONSTRUCTION

Dimensions at Rt. L's to ℄ Weiland Road
Unless Otherwise Noted



STAGE 2 CONSTRUCTION

Dimensions at Rt. L's to ℄ Weiland Road
Unless Otherwise Noted



ELEVATION - TEMPORARY SOIL RETENTION SYSTEM

(Unfolded Elevation)
TSRS = Temporary Soil Retention System

CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

DRAWN - M. RENDINO	REVISED -	
DESIGNED - M. RENDINO	REVISED -	
CHECKED - G. HATLESTAD	REVISED -	
DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

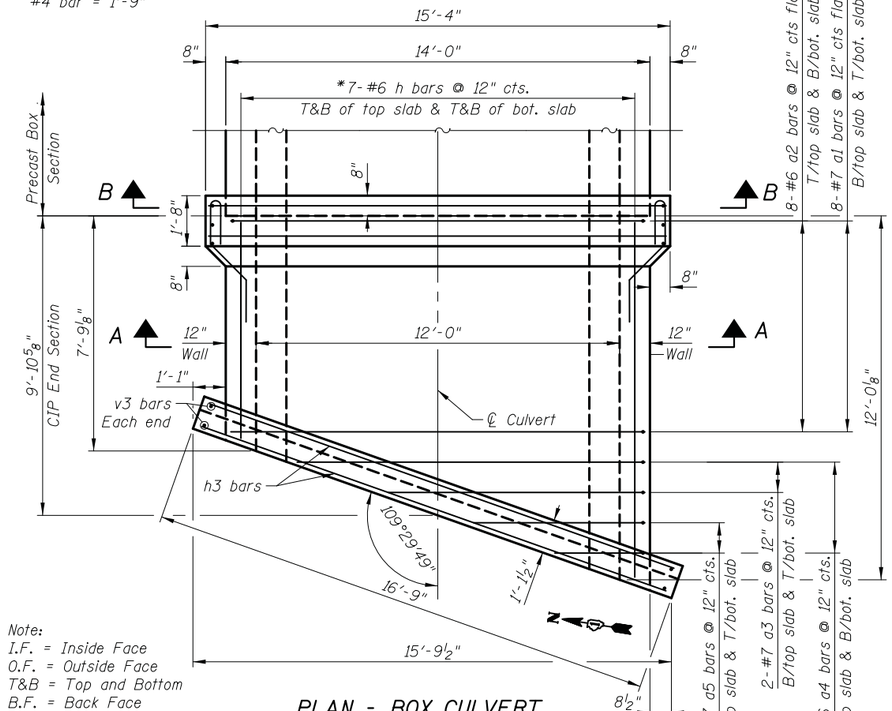
GENERAL DATA & STAGE CONSTRUCTION DETAILS
CULVERT
WEILAND ROAD; F.A.U. 2665
SHEET NO. S2 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	279
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

MPR 11/13/2018 12:10:34 PM JA2819\cad\sheet\Stage2\S5-Structures\Culvert\02_GeneralData.dgn

MINIMUM BAR LAP

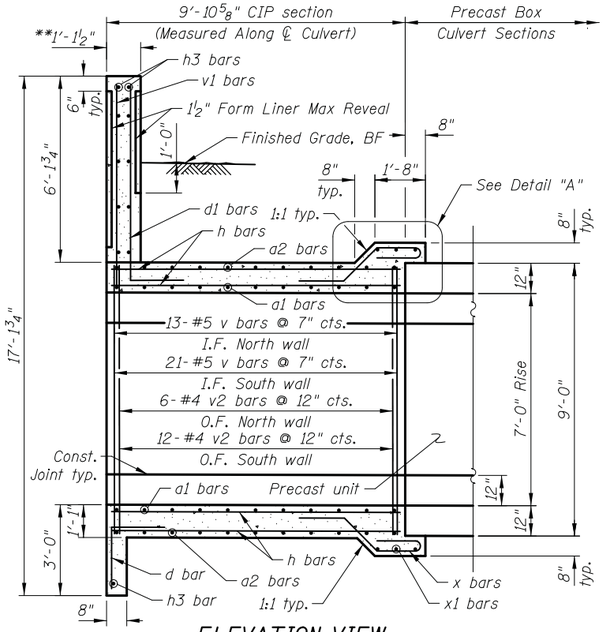
#4 bar = 1'-9"



Note:
I.F. = Inside Face
O.F. = Outside Face
T&B = Top and Bottom
B.F. = Back Face
F.F. = Front Face
Const. = Construction
For culvert headwall railing details, see sheet S-10

PLAN - BOX CULVERT END SECTION (WEST)

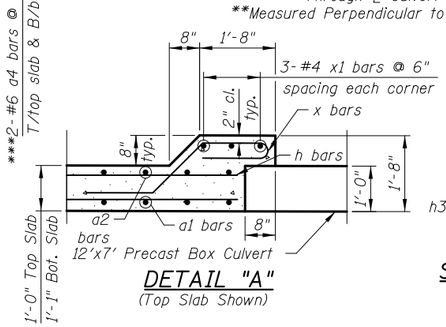
***See Field Cutting Diagram



ELEVATION VIEW

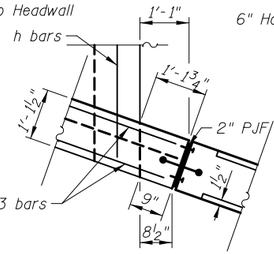
Through ℄ Culvert

**Measured Perpendicular to Headwall



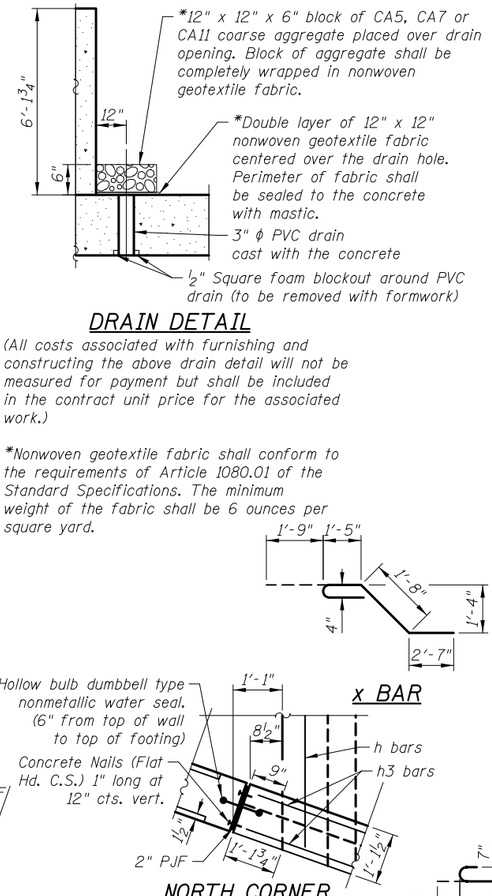
DETAIL "A"

(Top Slab Shown)



SOUTH CORNER DETAIL

See North Corner Detail for Balance of Information



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

x BAR

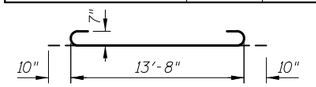
NORTH CORNER DETAIL

Water seal and concrete nails are included in the cost of Concrete Box Culverts.

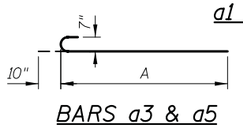
REINFORCEMENT BAR LIST

Bar	No.	Size	Length	Shape
a1	8	#7	15'-4"	
a2	8	#6	13'-8"	
a3	2	#7	12'-2"	
a4	2	#6	14'-2"	
a5	2	#7	6'-6"	
h	28	#6	18'-4"	
h1	16	#4	7'-5"	
h2	16	#4	12'-1"	
h3	11	#4	16'-5"	
d	10	#4	3'-11"	
d1	15	#4	8'-6"	
v	34	#5	8'-9"	
v1	10	#4	6'-9"	
v2	18	#4	8'-9"	
v3	4	#4	17'-10"	
x	54	#4	7'-5"	
x1	12	#4	14'-2"	

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	134
Concrete Box Culverts	Cu. Yd.	24.7
Reinforcement Bars	Pound	2,690



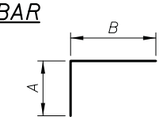
a1 BAR



BARS a3 & a5

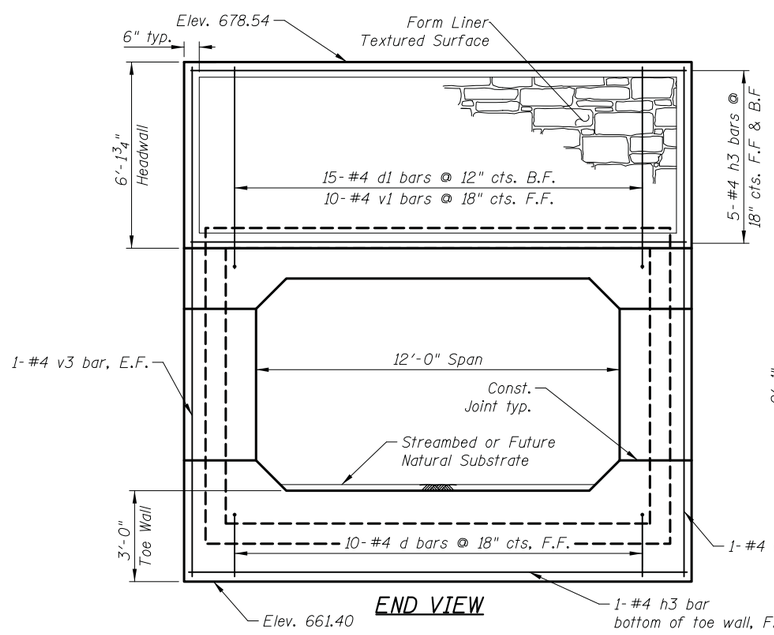
Field cut bars as required

bar	A
a3	11'-4"
a5	5-8"

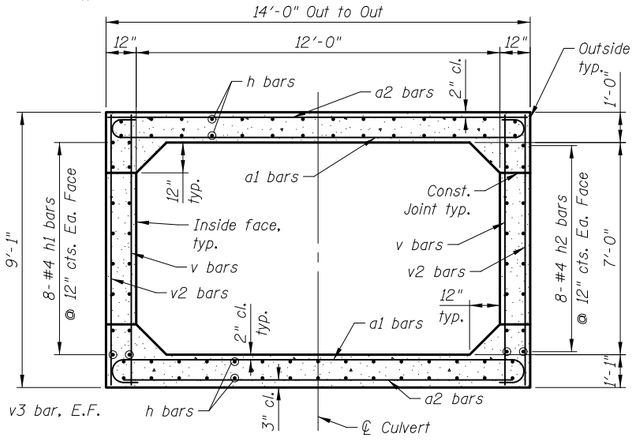


BARS d, d1 & x1

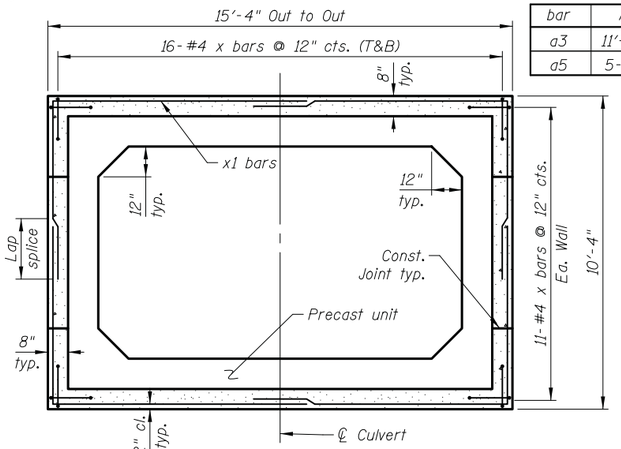
bar	A	B
d	2'-2"	1'-9"
d1	6'-9"	1'-9"
x1	5'-10"	8'-4"



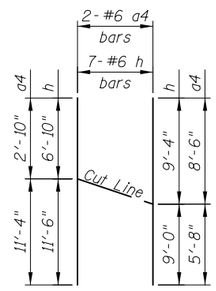
END VIEW



SECTION A-A



SECTION B-B



FIELD CUTTING DIAGRAM

CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.cnc

DRAWN - M. RENDINO	REVISED -	
DESIGNED - M. RENDINO	REVISED -	
CHECKED - G. HATLESTAD	REVISED -	
DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST CULVERT END SECTION
CULVERT
WEILAND ROAD; F.A.U. 2665
SHEET NO. S3 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	280
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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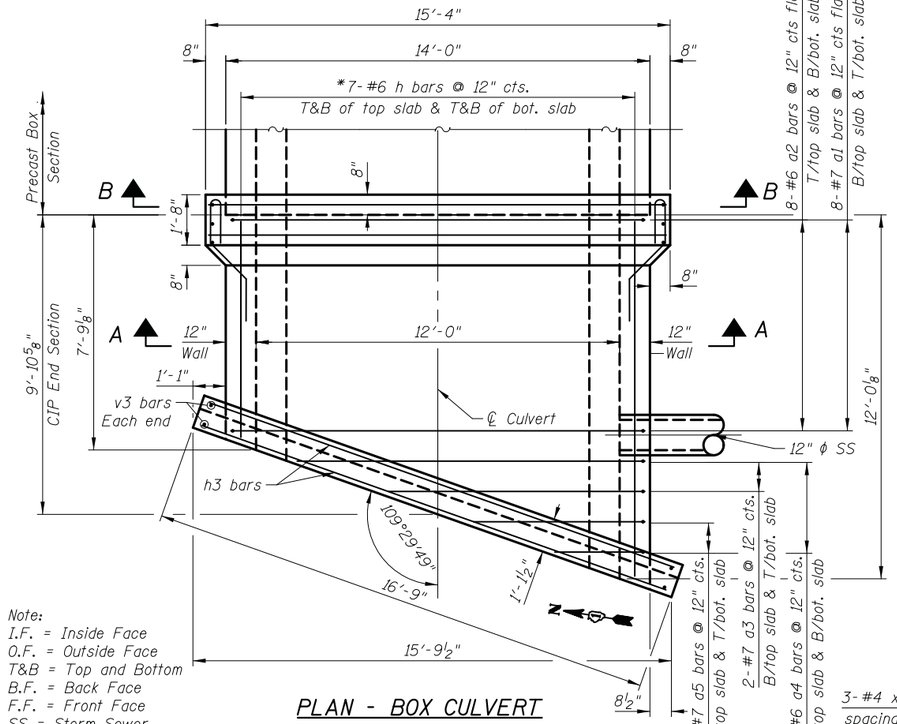
MINIMUM BAR LAP

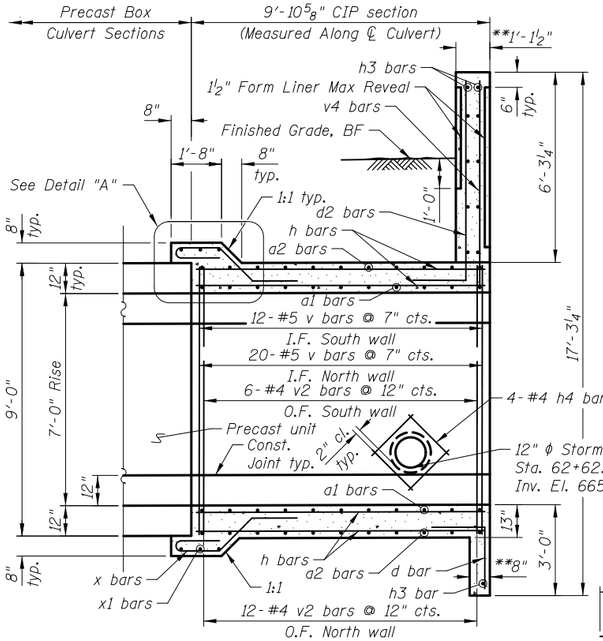
#4 bar = 1'-9"



Note:
I.F. = Inside Face
O.F. = Outside Face
T&B = Top and Bottom
B.F. = Back Face
F.F. = Front Face
SS = Storm Sewer
Const. = Construction
For culvert headwall railing details, see sheet S-10

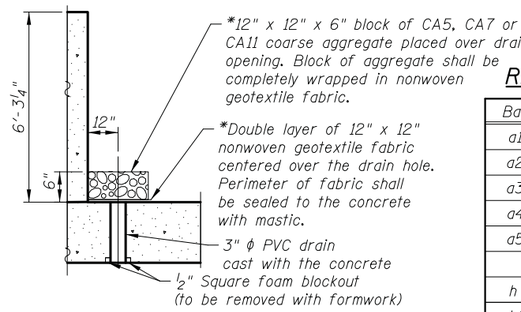
PLAN - BOX CULVERT END SECTION (EAST)

***See Field Cutting Diagram



ELEVATION VIEW

Through ℄ Culvert
**Measured Perpendicular to Headwall



DRAIN DETAIL

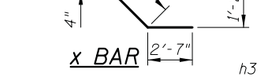
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

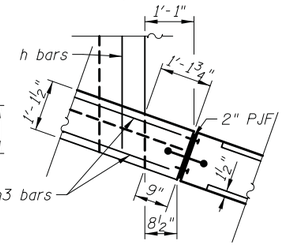
REINFORCEMENT BAR LIST

Bar	No.	Size	Length	Shape
a1	8	#7	15'-4"	
a2	8	#6	13'-8"	
a3	4	#7	12'-2"	
a4	2	#6	14'-2"	
a5	2	#7	6'-6"	
h	28	#6	18'-4"	
h1	16	#4	7'-5"	
h2	16	#4	12'-1"	
h3	11	#4	16'-5"	
h4	4	#4	1'-8"	
d	10	#4	3'-11"	
d2	15	#4	8'-8"	
v	32	#5	8'-9"	
v2	18	#4	8'-9"	
v4	10	#4	6'-11"	
v5	4	#4	17'-11"	
x	54	#4	7'-5"	
x1	12	#4	14'-2"	

Item	Unit	Quantity
Form Liner Textured Surface	Sq. Ft.	136
Concrete Box Culverts	Cu. Yd.	24.7
Reinforcement Bars	Pound	2,680

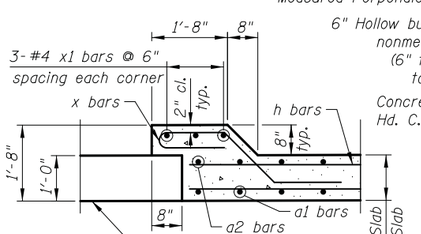


x BAR



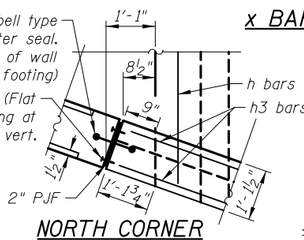
SOUTH CORNER DETAIL

See North Corner Detail for Balance of Information



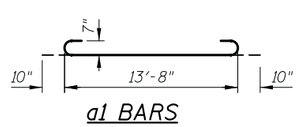
DETAIL "A"

(Top Slab Shown)

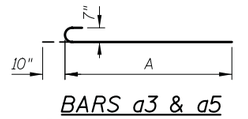


NORTH CORNER DETAIL

Water seal and concrete nails are included in the cost of Concrete Box Culverts.



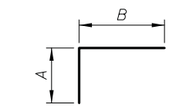
a1 BARS



BARS a3 & a5

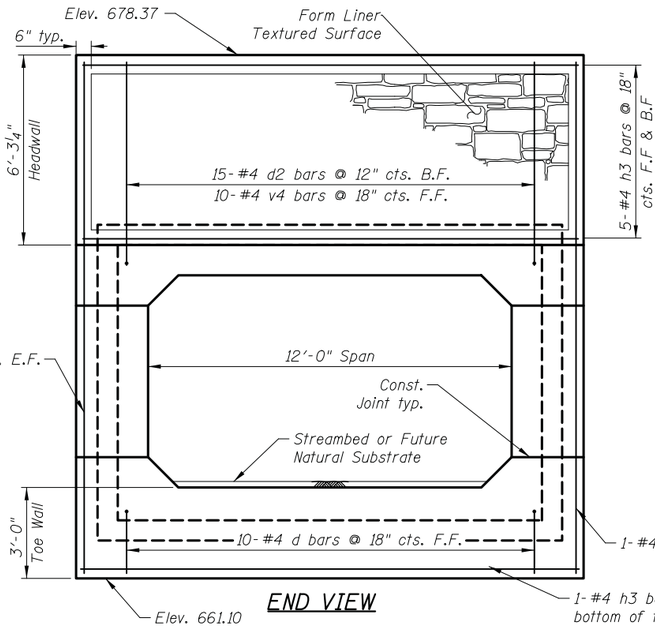
Field cut bars as required

bar	A
a3	11'-4"
a5	5-8"

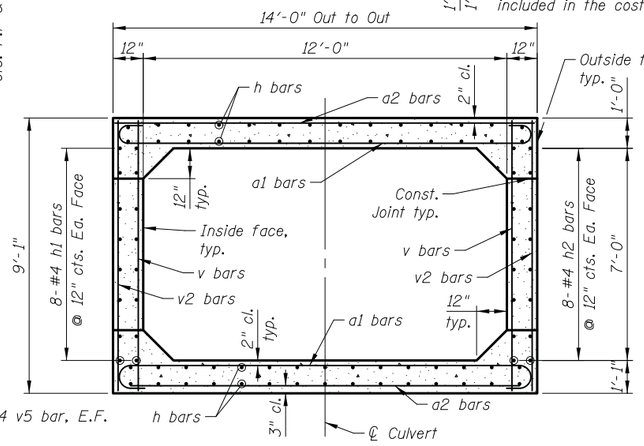


BARS d, d1 & x1

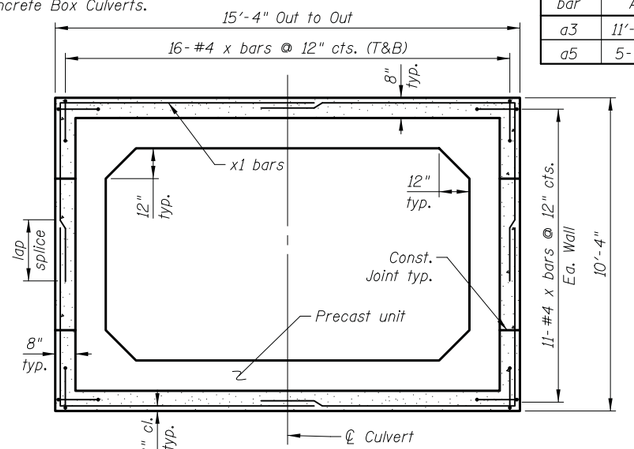
bar	A	B
d	2'-2"	1'-9"
d2	6'-11"	1'-9"
x1	5'-10"	8'-4"



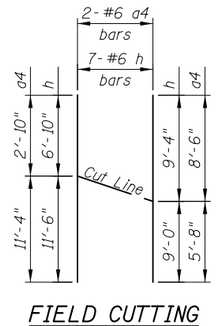
END VIEW



SECTION A-A



SECTION B-B



FIELD CUTTING DIAGRAM

CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

DRAWN - M. RENDINO	REVISED -	
DESIGNED - M. RENDINO	REVISED -	
CHECKED - G. HATLESTAD	REVISED -	
DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST CULVERT END SECTION
CULVERT
WEILAND ROAD; F.A.U. 2665
SHEET NO. S4 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	281
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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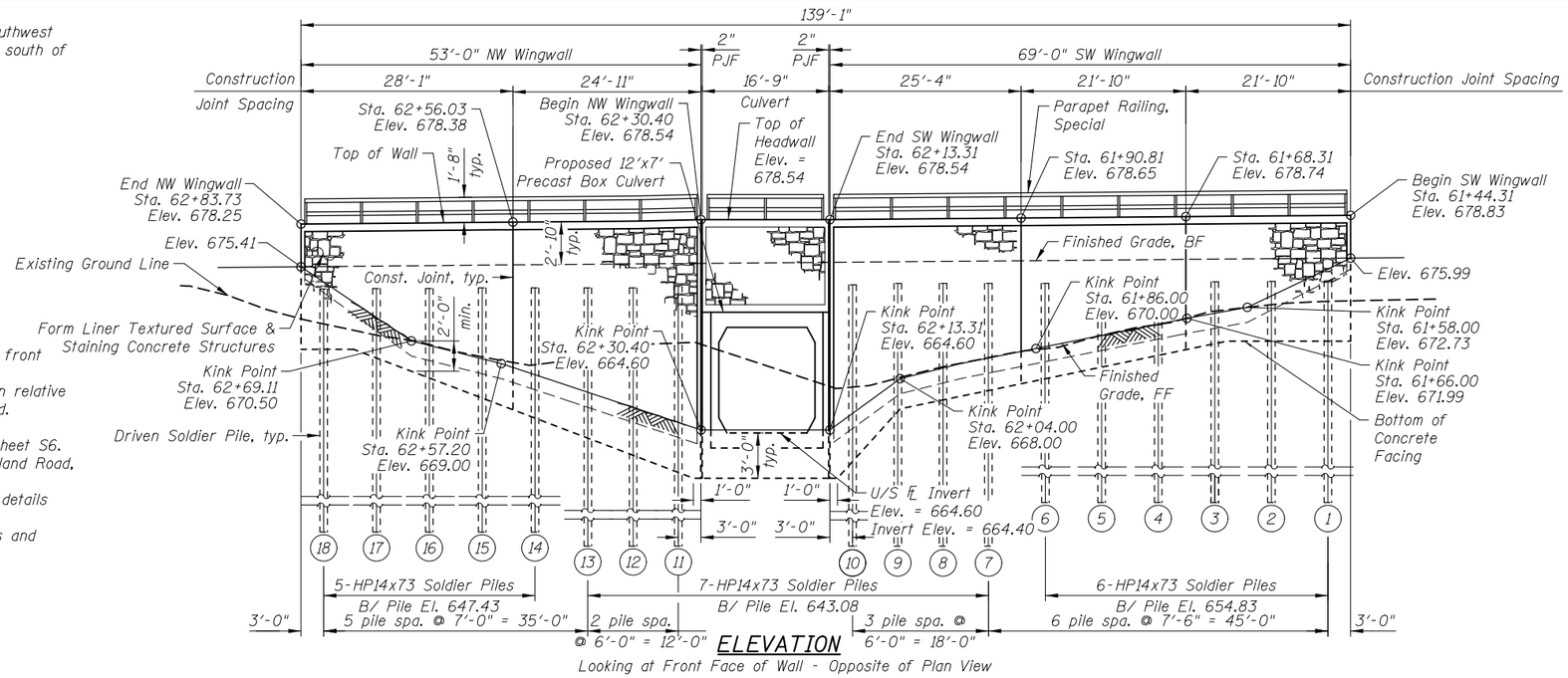
Benchmark:
T.B.M. #8 Cross cut (set) in southwest flange bolt of first fire hydrant south of Bentley. Place on west side of Weiland Road. Sta. 66+60.79, Offset 42.30' Lt., Elevation 676.40

Existing Structure: None.

Notes:

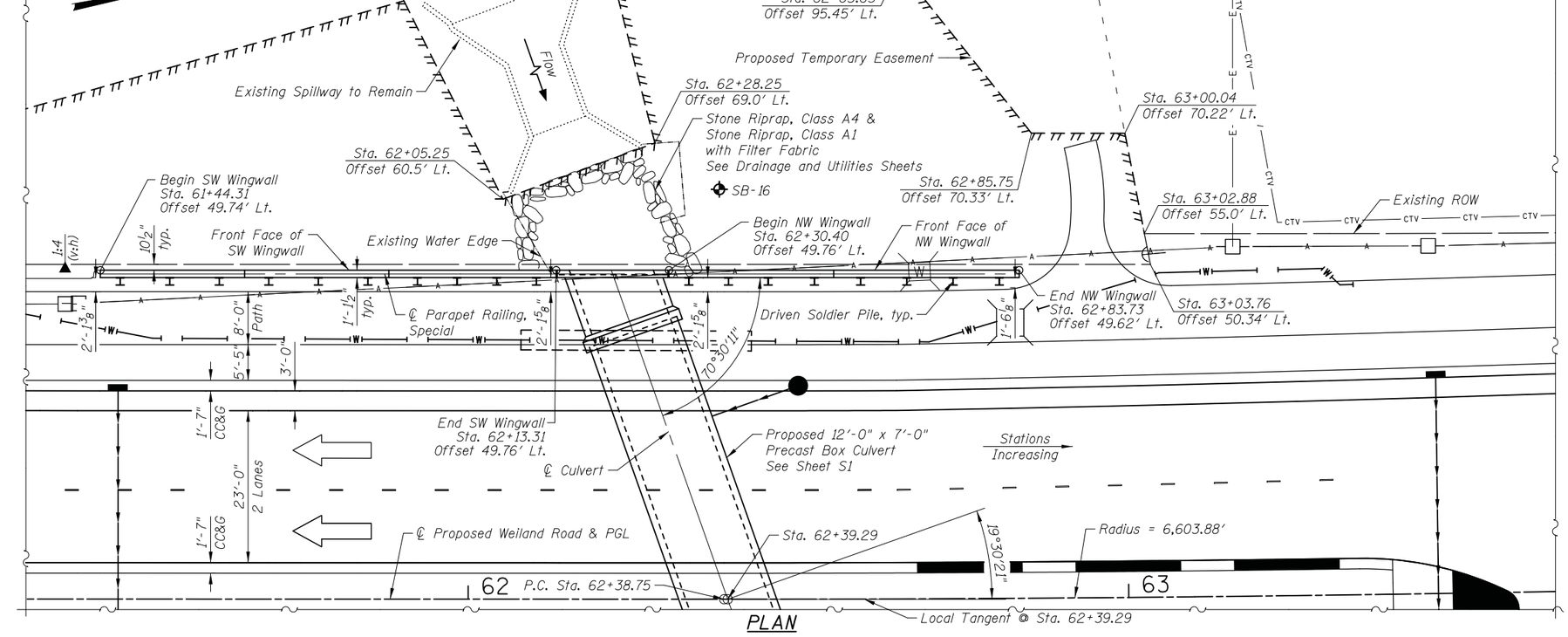
1) Dimensions measured along front face of wall.
2) Stations and offsets shown relative to ℄ Proposed Weiland Road.
3) For SW and NW Wingwalls reinforcement details see Sheet S6.
4) For Typical Section at Weiland Road, Section thru Driven Soldier Pile Wall and retaining wall details see Sheet S9.
5) For Parapet Railing Details and quantity see Sheet S10.

FF = Front Face
BF = Back Face
SW = Southwest
NW = Northwest
Const. = Construction



ELEVATION

Looking at Front Face of Wall - Opposite of Plan View



PLAN

LEGEND

- Soil Boring
- CTV — Existing Comcast
- A — Existing Aerial Lines
- W — Existing Water Main
- E — Existing Underground Electric
- Proposed Storm Sewer

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DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTERN WINGWALLS PLAN AND ELEVATION
WEILAND ROAD; F.A.U. 2665
SHEET NO. S5 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	282
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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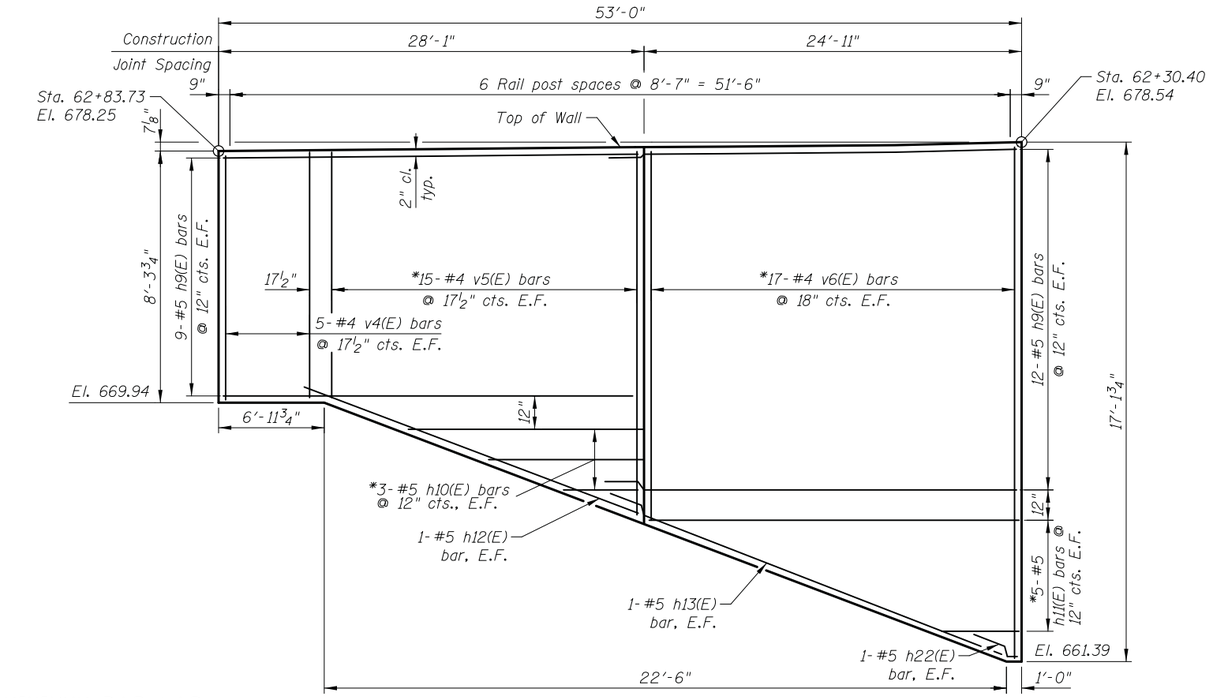
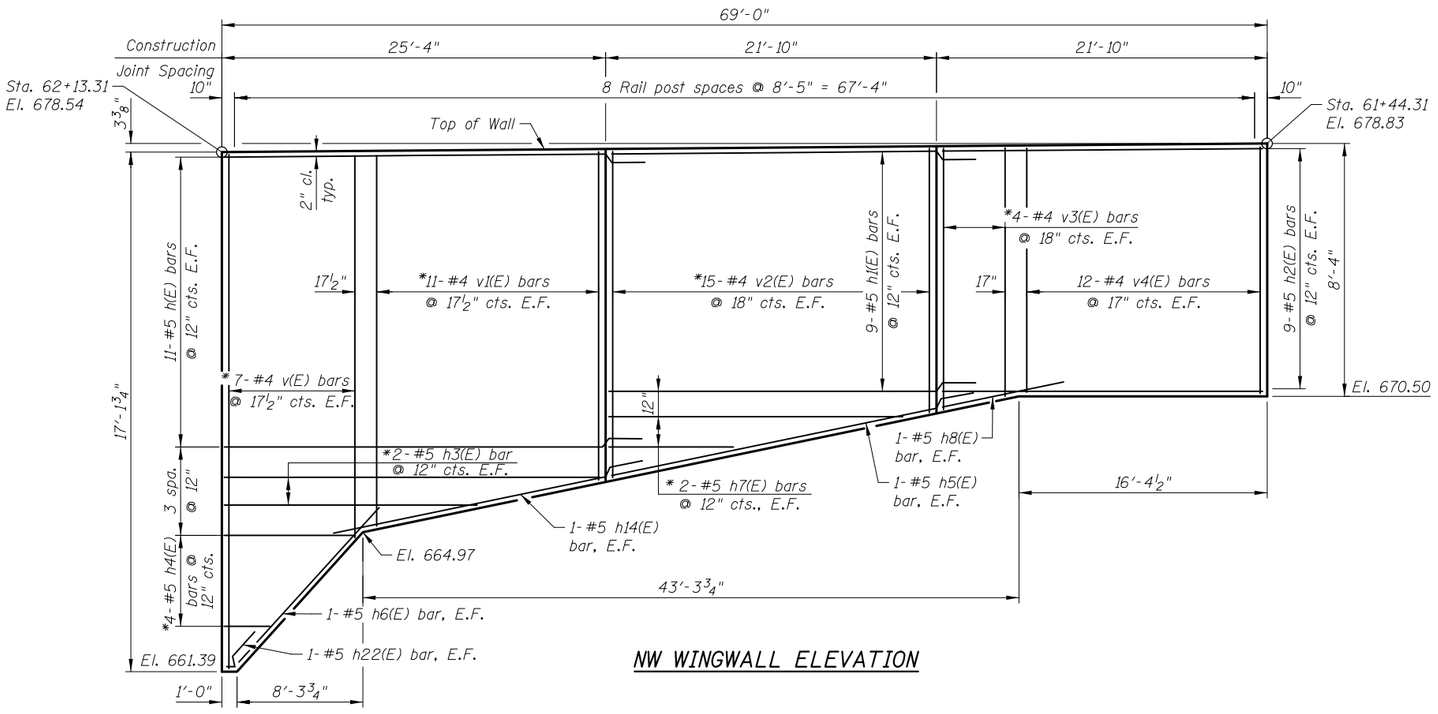


SW WINGWALL ELEVATION

MINIMUM BAR LAP

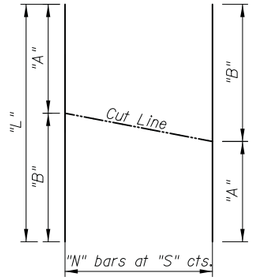
#5 bar = 3'-2"



NW WINGWALL ELEVATION

PILE ELEVATIONS:

Pile No.	Centerline of Pile Station	Centerline of Pile Offset (Lt.)	Top of Pile Elevation	Bottom of CIP Facing	Stud Shear Connectors
P1	61+47.31	48.05	674.48	670.48	5
P2	61+54.81	48.05	674.48	670.48	5
P3	61+62.31	48.05	674.48	670.32	5
P4	61+69.81	48.06	674.48	669.54	6
P5	61+77.31	48.06	674.48	668.76	7
P6	61+84.81	48.06	674.48	667.99	7
P7	61+92.31	48.06	674.48	667.21	8
P8	61+98.31	48.06	674.48	666.59	9
P9	62+04.31	48.06	674.48	665.83	10
P10	62+10.31	48.06	674.48	662.61	13
P11	62+33.40	48.07	674.13	661.82	13
P12	62+39.40	48.07	674.13	662.96	12
P13	62+45.45	48.07	674.13	664.09	11
P14	62+52.50	48.06	674.13	665.41	10
P15	62+59.55	48.04	674.13	666.73	8
P16	62+66.60	48.02	674.13	668.05	7
P17	62+73.65	47.99	674.13	669.37	6
P18	62+80.70	47.95	674.13	669.94	5



FIELD CUTTING DIAGRAM

Bar	"A"	"B"	"L"	"N"	"S"
h3(E)	13'-0"	22'-8"	35'-8"	2	12"
h4(E)	2'-7"	8'-6"	11'-1"	4	12"
h7(E)	7'-11"	19'-2"	27'-1"	2	12"
h10(E)	5'-0"	15'-6"	20'-6"	3	12"
h11(E)	3'-1"	24'-5"	27'-6"	5	12"
v(E)	12'-5"	16'-9"	29'-2"	7	17 1/2"
v1(E)	10'-8"	12'-1"	22'-9"	11	18"
v2(E)	8'-6"	10'-7"	19'-1"	15	18"
v3(E)	8'-5"	8'-0"	16'-5"	4	18"
v5(E)	8'-2"	12'-1"	20'-3"	15	17 1/2"
v6(E)	12'-3"	16'-8"	28'-11"	17	18"

*Order h4(E), h7(E), h10(E), h11(E), v(E), v2(E), v3(E), v5(E), and v6(E) bars full length. See Field Cutting Diagram.

Note:

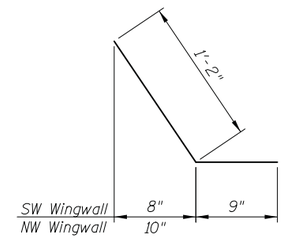
For Construction Joint Detail and Typical Wingwall Section see Sheet S9.

REINFORCEMENT BAR LIST

(SW and NW Wingwalls)

Bar	No.	Size	Length	Shape
h(E)	22	#5	28'-6"	
h1(E)	18	#5	25'-0"	
h2(E)	18	#5	21'-8"	
h3(E)	2	#5	35'-8"	
h4(E)	4	#5	11'-1"	
h5(E)	2	#5	25'-1"	
h6(E)	2	#5	10'-9"	
h7(E)	2	#5	27'-1"	
h8(E)	2	#5	6'-9"	
h9(E)	42	#5	27'-11"	
h10(E)	3	#5	20'-6"	
h11(E)	5	#5	27'-6"	
h12(E)	2	#5	22'-9"	
h13(E)	2	#5	27'-8"	
h14(E)	2	#5	20'-7"	
h22(E)	4	#5	1'-11"	L
v(E)	7	#4	29'-2"	
v1(E)	11	#4	22'-9"	
v2(E)	15	#4	19'-1'	
v3(E)	4	#4	16'-5"	
v4(E)	34	#4	7'-11"	
v5(E)	15	#4	20'-3"	
v6(E)	17	#4	28'-11"	

Item	Unit	Quantity
Structure Excavation	Cu. Yd.	46.1
Form Liner Textured Surface	Sq. Ft.	1,487
Protective Coat	Sq. Yd.	23
Stud Shear Connectors	Each	147
Reinforcement Bars, Epoxy Coated	Pound	4,640
Furnishing Soldier Piles (HP Section)	Foot	471
Driving Soldier Piles	Foot	471
Untreated Timber Lagging	Sq. Yd.	392
Concrete Structures (Retaining Wall)	Cu. Ft. Sq. Ft.	51.7
Geocomposite Wall Drain	Sq. Yd.	31
Anti-graffiti Protection System	Sq. Ft.	1,487
Staining Concrete Structures	Sq. Ft.	1,487



h22(E) BAR

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DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTERN WINGWALL ELEVATIONS
WEILAND ROAD; F.A.U. 2665
SHEET NO. S6 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	283
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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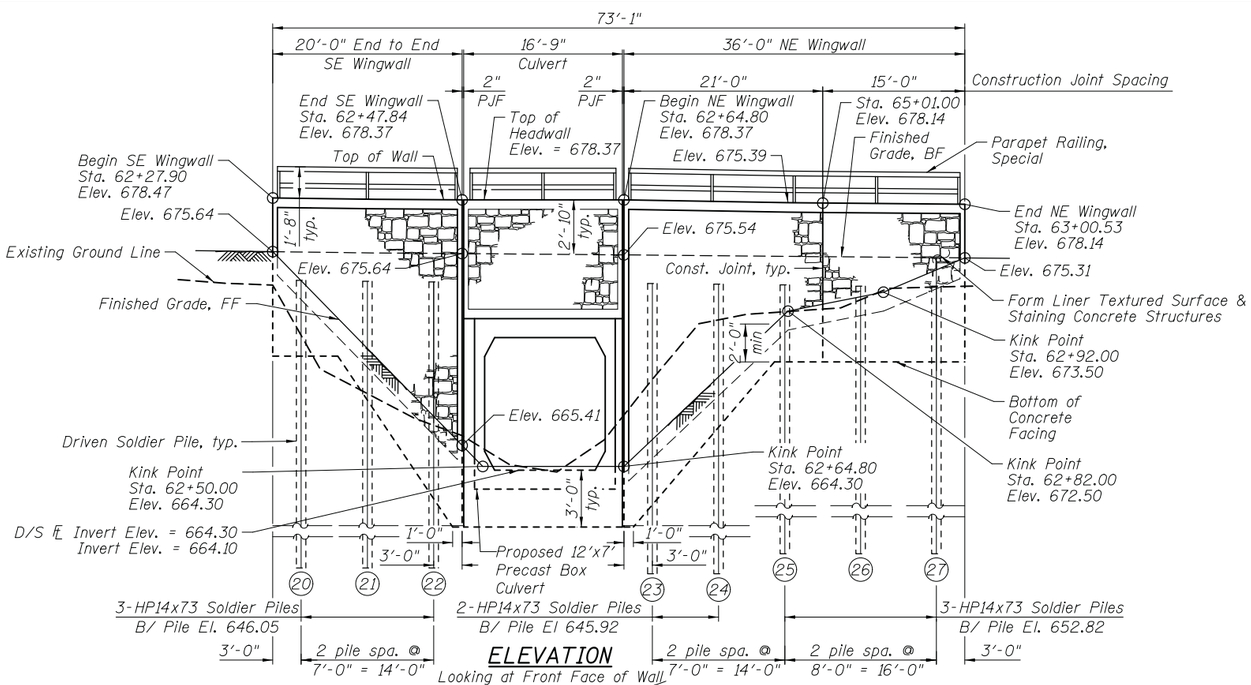
Benchmark: T.B.M. #8 Cross cut (set) in southwest flange bolt of first fire hydrant south of Bentley Place on west side of Weiland Road. Sta. 66+60.79, Offset 42.30' Lt., Elevation 676.40

Existing Structure: None.

Notes:

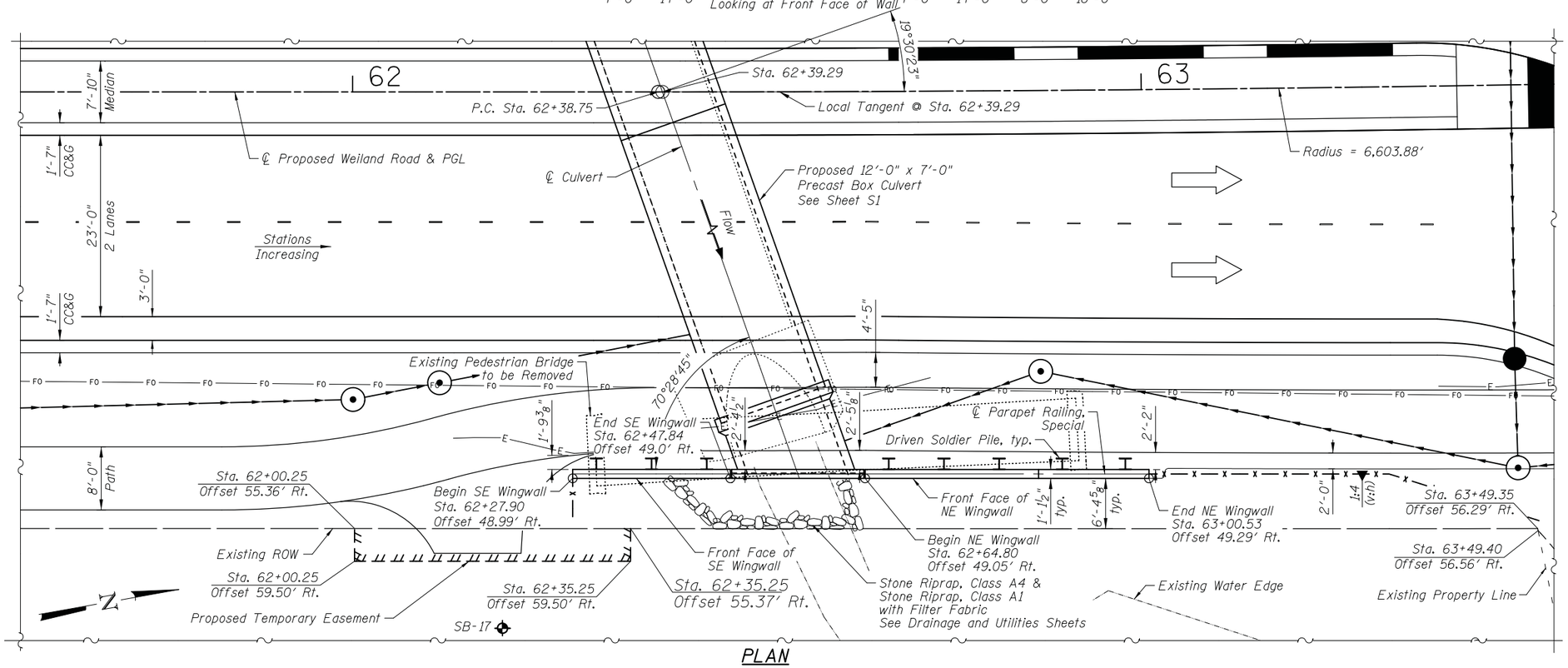
1) Dimensions measured along front face of wall.
2) Stations and offsets shown relative to ℄ Proposed Weiland Road.
3) For SE and NE Wingwalls reinforcement details see Sheet S8.
4) For Typical Section at Weiland Road, Section thru Driven Soldier Pile Wall and retaining wall details see Sheet S9.
5) For Parapet Railing Details and quantity see Sheet S10.

FF = Front Face
BF = Back Face
SW = Southeast
NW = Northeast
Const. = Construction



LEGEND

- Soil Boring
- E — E — Existing Electric
- x — x — x — x Existing Fence
- Proposed Storm Sewer
- x — x — x — x Proposed Fence



PLAN

Offsets are measured from ℄ Weiland Road to front face of retaining wall.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EASTERN WINGWALLS PLAN AND ELEVATION
WEILAND ROAD; F.A.U. 2665
SHEET NO. S7 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	284
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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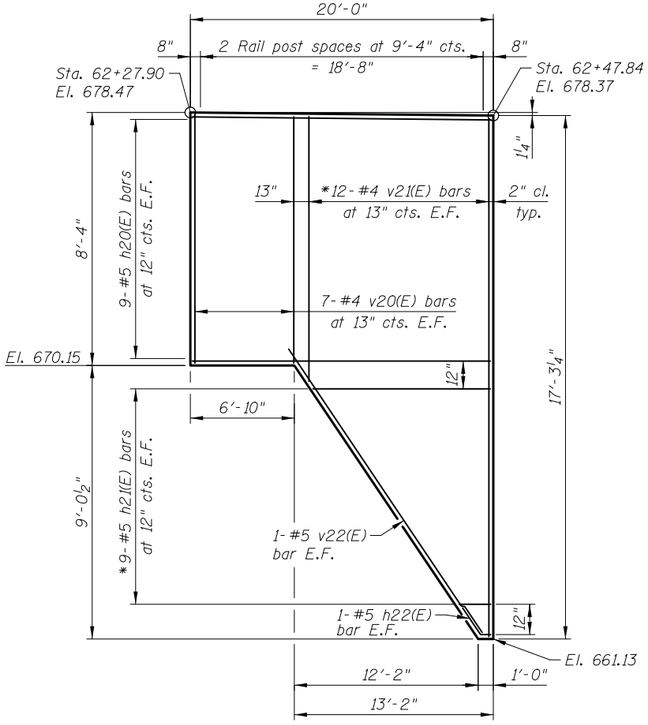
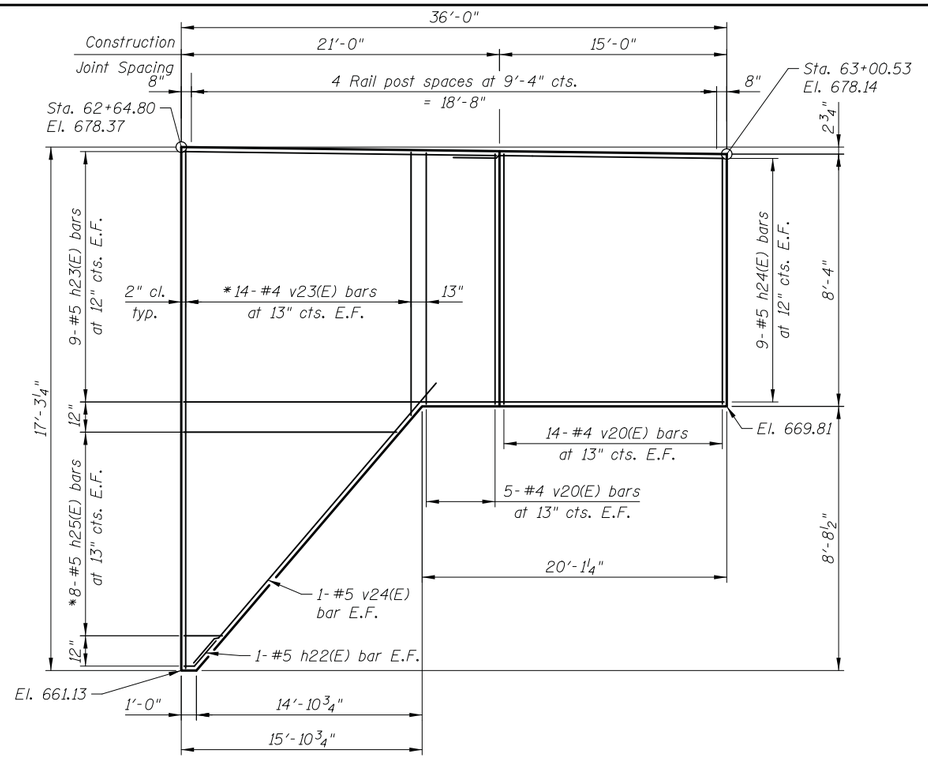


SE WINGWALL ELEVATION



NE WINGWALL ELEVATION

* Order h21(E), h25(E), v21(E) and v23(E) bars full length. Cut to fit and use the remainder of bar at the opposite face. See Field Cutting Diagram.

MINIMUM BAR LAP

#5 bar = 3'-2"

REINFORCEMENT BAR LIST

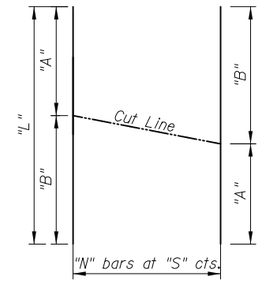
(SE and NE Wingwalls)

Bar	No.	Size	Length	Shape
h20(E)	18	#5	19'-8"	———
h21(E)	9	#5	13'-10"	———
h22(E)	4	#5	1'-11"	⌞
h23(E)	18	#5	20'-10"	———
h24(E)	18	#5	18'-0"	———
h25(E)	8	#5	16'-6"	———
v20(E)	52	#4	8'-0"	———
v21(E)	12	#4	25'-7"	———
v22(E)	2	#5	15'-6"	———
v23(E)	14	#4	25'-5"	———
v24(E)	2	#5	17'-6"	———

Item	Unit	Quantity
Structure Excavation	Cu. Yd.	25.3
Form Liner Textured Surface	Sq. Ft.	607
Protective Coat	Sq. Yd.	11
Stud Shear Connectors	Each	62
Reinforcement Bars, Epoxy Coated	Pound	2,170
Furnishing Soldier Piles (HP Section)	Foot	204
Driving Soldier Piles	Foot	204
Untreated Timber Lagging	Sq. Yd.	170
Concrete Structures (Retaining Wall)	Cu. Ft.	20.2
Geocomposite Wall Drain	Sq. Yd.	14
Anti-graffiti Protection System	Sq. Ft.	607
Staining Concrete Structures	Sq. Ft.	607

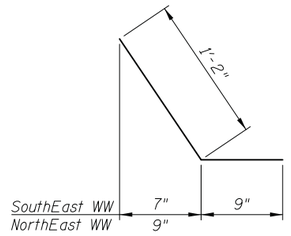
PILE ELEVATIONS:

Pile No.	Centerline of Pile Station	Centerline of Pile Offset (Rt.)	Top of Pile Elevation	Bottom of CIP Facing	Stud Shear Connectors
P20	62+30.90	47.16	674.12	670.13	5
P21	62+37.90	47.16	674.12	667.82	7
P22	62+44.86	47.16	674.12	662.77	12
P23	62+67.78	47.23	673.95	662.42	13
P24	62+74.73	47.26	673.95	665.20	10
P25	62+81.68	47.30	673.95	669.82	5
P26	62+89.63	47.36	673.95	669.82	5
P27	62+97.60	47.43	673.95	669.82	5



Bar	"A"	"B"	"L"	"N"	"S"
h21(E)	1'-5"	12'-5"	13'-10"	9	12"
h25(E)	1'-8"	14'-10"	16'-6"	8	12"
v21(E)	8'-8"	16'-11"	25'-7"	12	13"
v23(E)	8'-6"	16'-11"	25'-5"	14	13"

FIELD CUTTING DIAGRAM



h22(E) BAR

Note:

For Construction Joint Detail and Typical Wingwall Section see Sheet S9.

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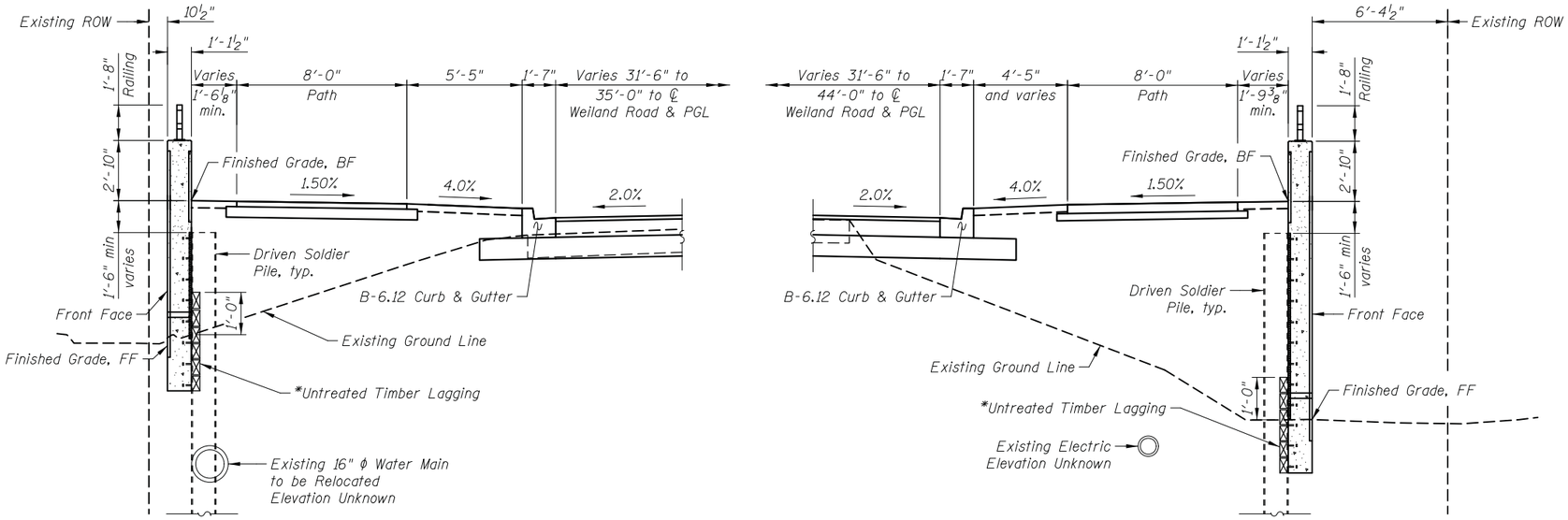
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

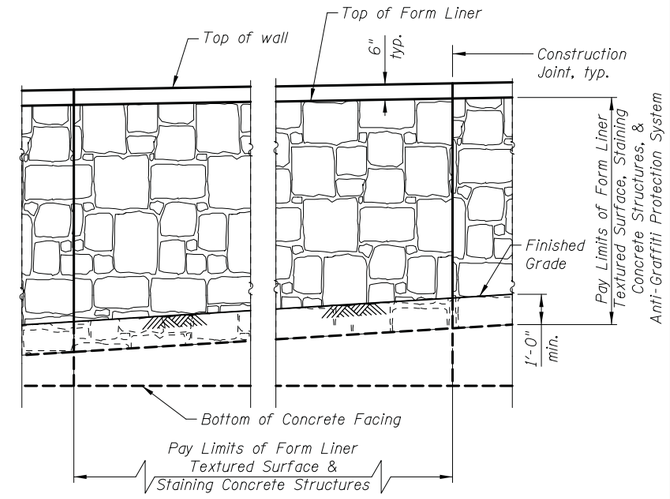
EASTERN WINGWALL ELEVATIONS
WEILAND ROAD; F.A.U. 2665
SHEET NO. S8 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	285
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

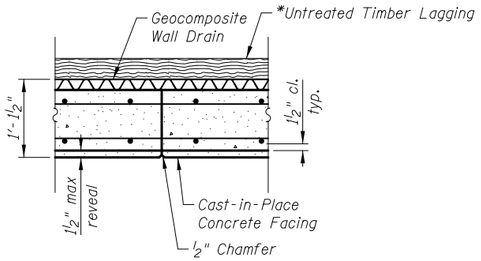


TYPICAL SECTION AT WEILAND ROAD

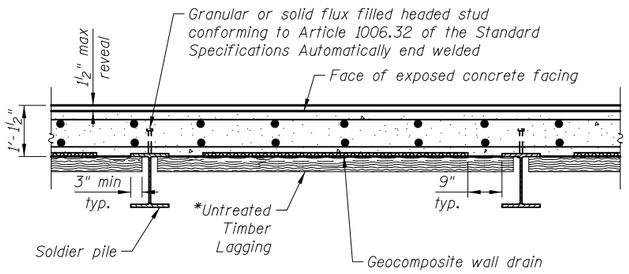
See Typical Wingwall Section for balance of information
Looking North



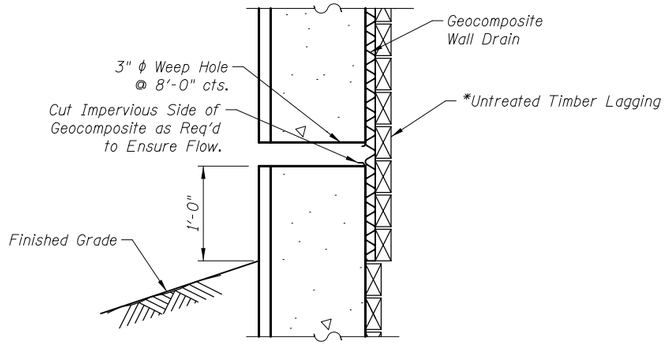
FORM LINER TEXTURED SURFACE DETAIL



CONSTRUCTION JOINT

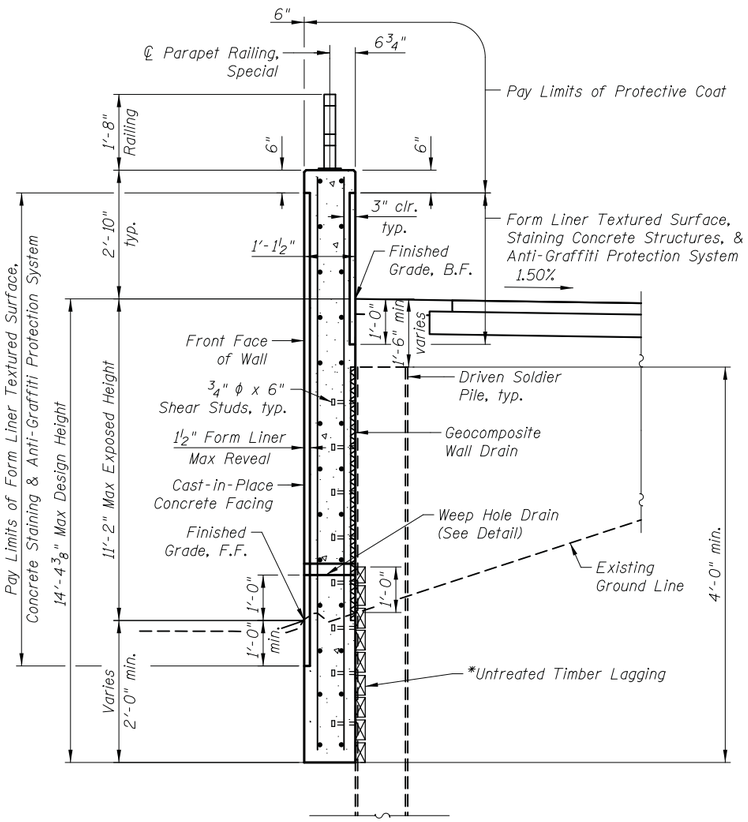


SECTION THRU DRIVEN SOLDIER PILE WALL



WEEP HOLE DRAIN DETAIL

* The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a miniminum allowable bending stress of 1000 psi.



TYPICAL WINGWALL SECTION

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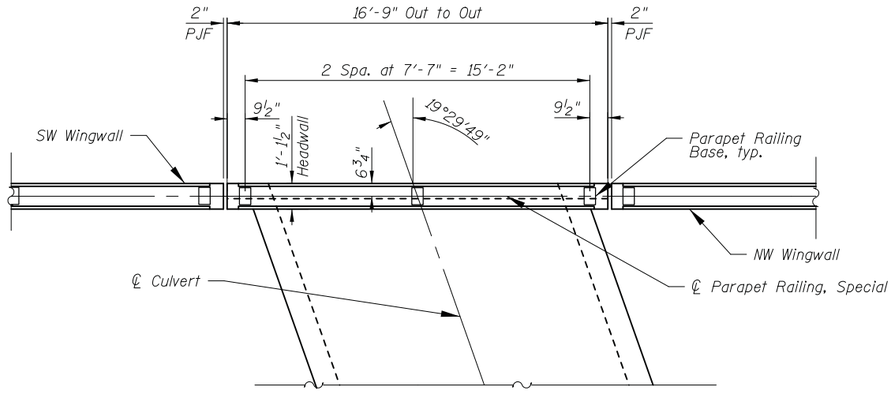
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WINGWALL DETAILS
WEILAND ROAD; F.A.U. 2665
SHEET NO. S9 OF S11 SHEETS

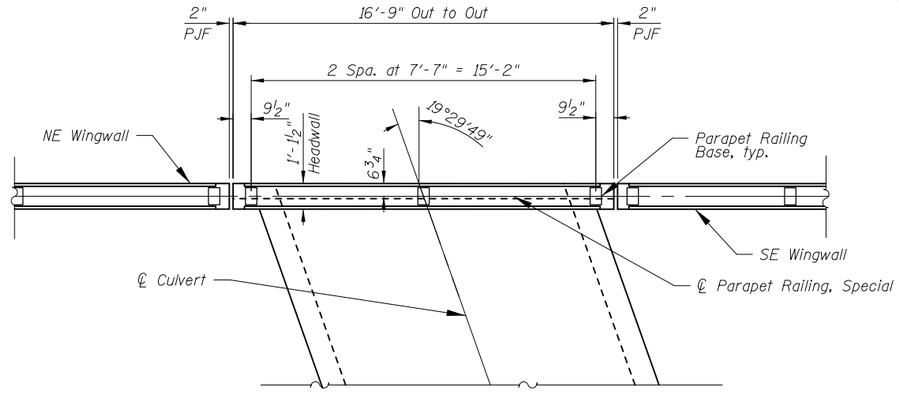
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	286
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

Notes:
All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications.

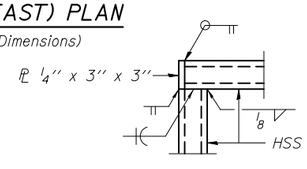
Notes:
A. All posts, anchor devices, plates and structural steel tubing shall be hot-dip galvanized after shop fabrication according to Article 509.05 of the Standard Specifications.
B. All post, railing, splices, anchor devices, and bent plates shall be painted the color black (Munsell No. N1).



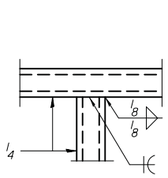
BOX CULVERT END SECTION (WEST) PLAN
(Showing Dimensions)



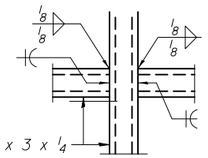
BOX CULVERT END SECTION (EAST) PLAN
(Showing Dimensions)



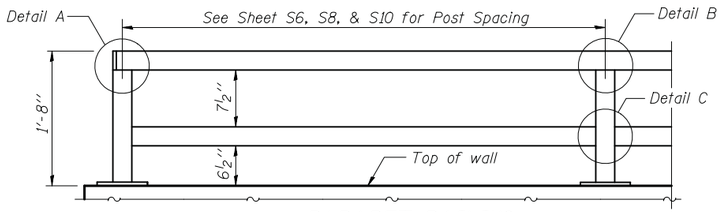
DETAIL A



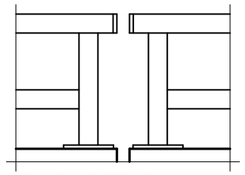
DETAIL B



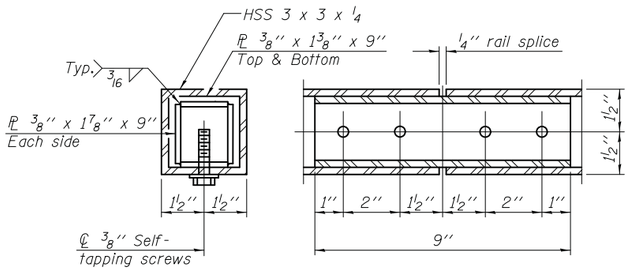
DETAIL C



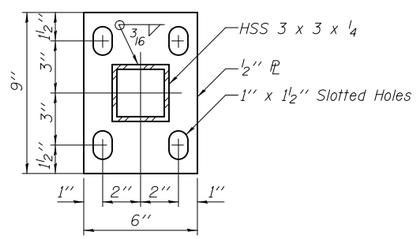
PARAPET RAILING ELEVATION
(Inside Face of Two Element Rail)



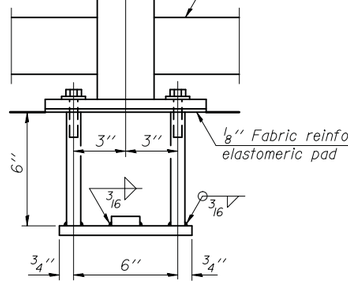
PARAPET RAILING ELEVATION AT EXPANSION JOINT

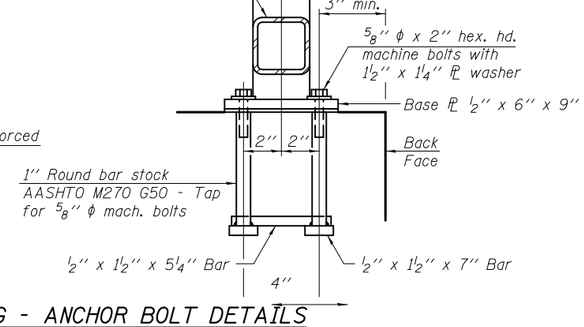


PARAPET RAILING - RAIL SPLICE



PARAPET RAILING - BASE PL





PARAPET RAILING - ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing, Special	Foot	212

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DESIGNED - M. RENDINO	REVISED -	
CHECKED - G. HATLESTAD	REVISED -	
DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET RAILING DETAILS
CULVERT & WINGWALLS
WEILAND ROAD; F.A.U. 2665
SHEET NO. S10 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	287
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Date 5/6/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Culvert Headwalls(S. of Marvins Way)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-16 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 62+38
Offset 62' L of CL
Ground Surface Elev. 670.05 (ft.)

Groundwater Depth
First Encounter 10.5' (ft.)
Upon Completion 8.0' (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Black CLAY TOPSOIL (12")	669.05					
Brown, Grey, Black CLAY, little Sand, little Gravel, A-6, very stiff to stiff			3 3-3	3.69	22
		3			
			2 3-3	1.94	23
	664.55	6			
Grey CLAY, trace Sand, trace Gravel, A-6, very stiff to hard			2 4-4	3.76	17
		9	3 3-7	4.85	16
	659.55				
Grey SAND (f-c) and GRAVEL, A-1, wet, medium dense		12	7 11-12	--	10
		15	8 9-9	--	8
			12 10-9	--	14
	652.05	18			
Grey CLAY, trace Sand, trace Gravel, A-6, stiff to very stiff			5 6-7	1.94	14
Grey CLAY, trace Sand, trace Gravel, A 6, stiff to very stiff-		21	3 2-3	2.91	15
		24	3 4-8	2.87	20
	645.05				
End of Boring at 25'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Date 5/6/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Culvert Headwalls(S. of Marvins Way)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-17 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 62+19
Offset 68' R of CL
Ground Surface Elev. 674.71 (ft.)

Groundwater Depth
First Encounter 19.5' (ft.)
Upon Completion 16.3' (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Black CLAY, A-7-6			3 3-2	--	22
		3			
			3 3-5	--	28
		6			
	667.51		2 2-2	--	35
Grey CLAY, trace Sand, trace Gravel, A-6, hard to very stiff		9	4 3-6	1.5 P	25
		12	5 5-8	5.04	16
		15	6 7-9	--	16
			3 3-6	2.52	17
		18			
	655.21		3 9-10	3.88	17
Grey Sandy LOAM, A-2-4, wet, slightly dense		21	5 5-4	--	18
	651.71				
Grey CLAY, trace Sand, trace Gravel, A-6, very stiff		24	5 10-4	2.52	14
	649.71				
End of Boring at 25'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

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DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
CULVERT & WINGWALLS
WEILAND ROAD; F.A.U. 2665
SHEET NO. S11 OF S11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	288
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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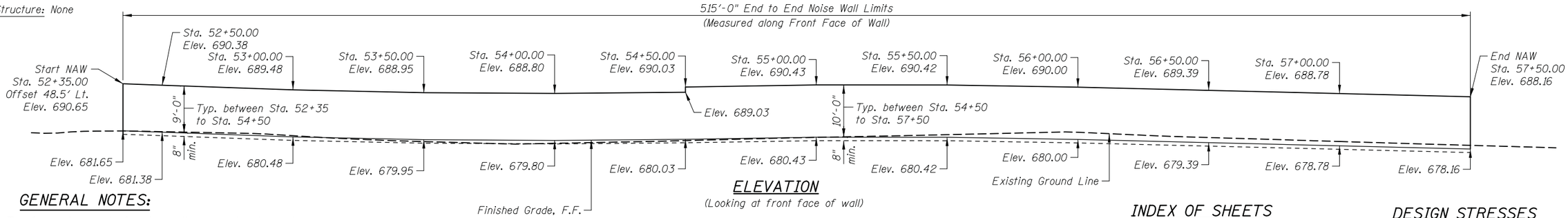
Benchmark: Cross Cut in Southwest Flange Bolt of First Fire Hydrant North of Newtown Drive on the West Side of Weiland Road. Weiland Road Sta. 54+30.66, Offset 42.51' Lt., Elevation 681.41

Maintenance of Traffic: Traffic will be maintained during construction.

Existing Structure: None



ELEVATION

(Looking at front face of wall)

GENERAL NOTES:

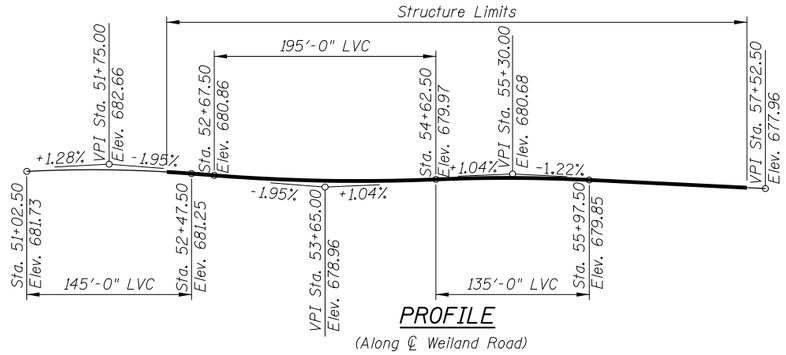
1. The foundation, posts & noise wall panels shall be designed to accommodate the ultimate or maximum Noise Wall height and earth retainment conditions. An active earth pressure of 40 psf per foot depth/equivalent fluid pressure can be used in design for drained conditions. A lateral earth pressure of 85 psf per foot depth/equivalent fluid pressure should be used for undrained conditions below the design water level.

2. The foundation is to be designed by the Contractor. The foundation is not to be placed within 1'-0" of any pipes or utilities.

3. The Contractor shall verify any obstruction to pipes and utilities prior to construction of foundation.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims
2002 AASHTO Guide Specifications for Structural Design of Sound Barriers



PROFILE

(Along ℄ Weiland Road)

INDEX OF SHEETS

LOADING

Wind Load on Noise Wall = 25 psf

DESIGN STRESSES

FIELD UNITS

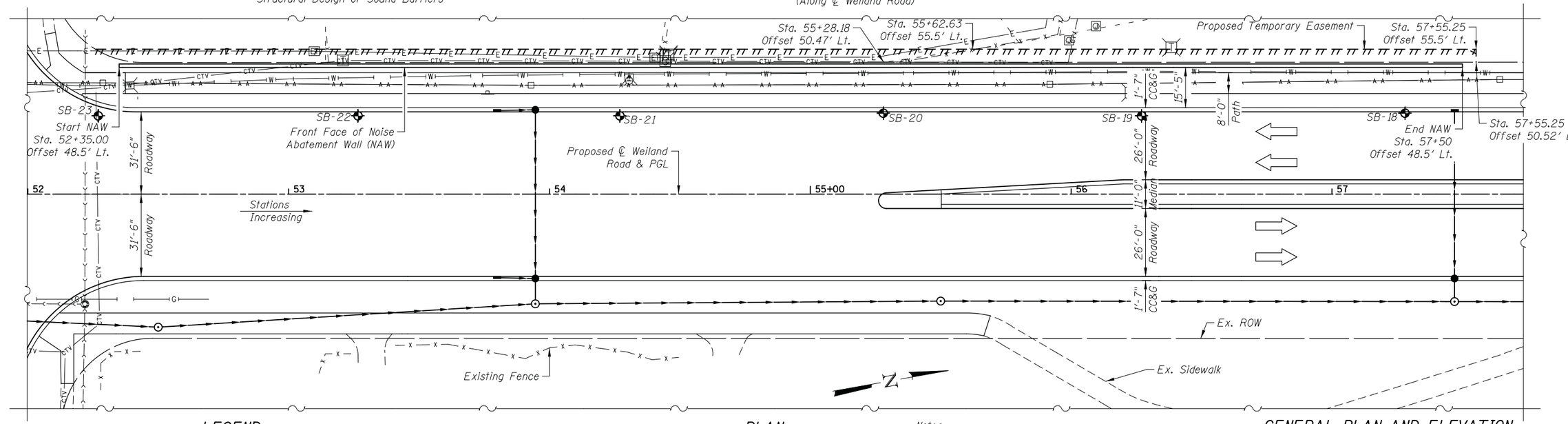
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 4,500 psi (Precast panels)
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Fabric)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL QUANTITY
Noise Abatement Wall, Ground Mounted	Sq. Ft.	5,279
Anti-Graffiti Protection System	Sq. Ft.	10,557
Staining Concrete Structures	Sq. Ft.	10,557



LEGEND

- Existing fence
- Existing underground telephone
- Existing underground cable
- Existing underground gasline
- Existing underground electric
- Existing underground water
- Existing storm sewer
- Proposed storm sewer
- Soil boring

PLAN

Offsets are measured from ℄ Weiland Road to the front face of the noise wall posts.

Notes:
Offsets are measured from ℄ Weiland & PGL to the front face of the Noise Abatement Wall.
NAW - Noise Abatement Wall
BF - Back Face
FF - Front Face

GENERAL PLAN AND ELEVATION
NOISE ABATEMENT WALL
WEILAND ROAD F.A.U. RTE 2665
SECTION 14-00158-11-WR
LAKE COUNTY, STA. 52+35 TO STA. 57+50

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
NOISE ABATEMENT WALL
WEILAND ROAD; F.A.U. 2665
SHEET NO. N1 OF N5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	289
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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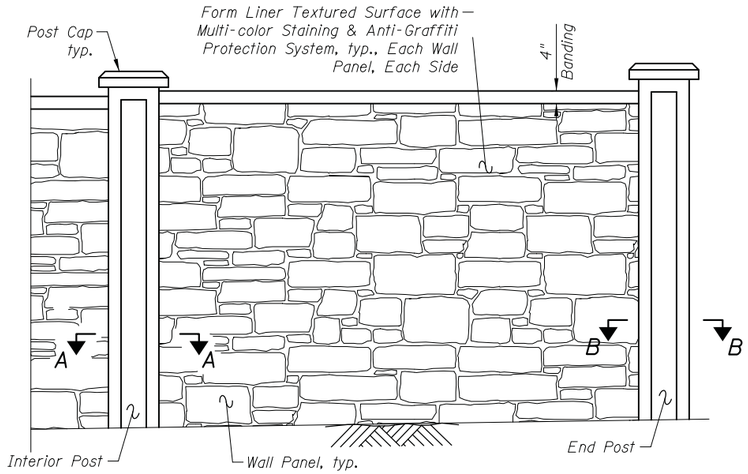
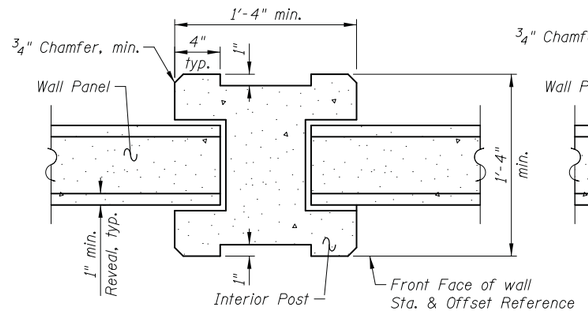
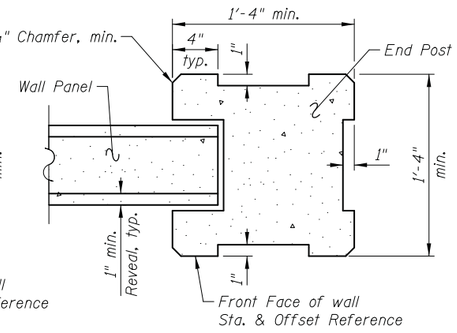


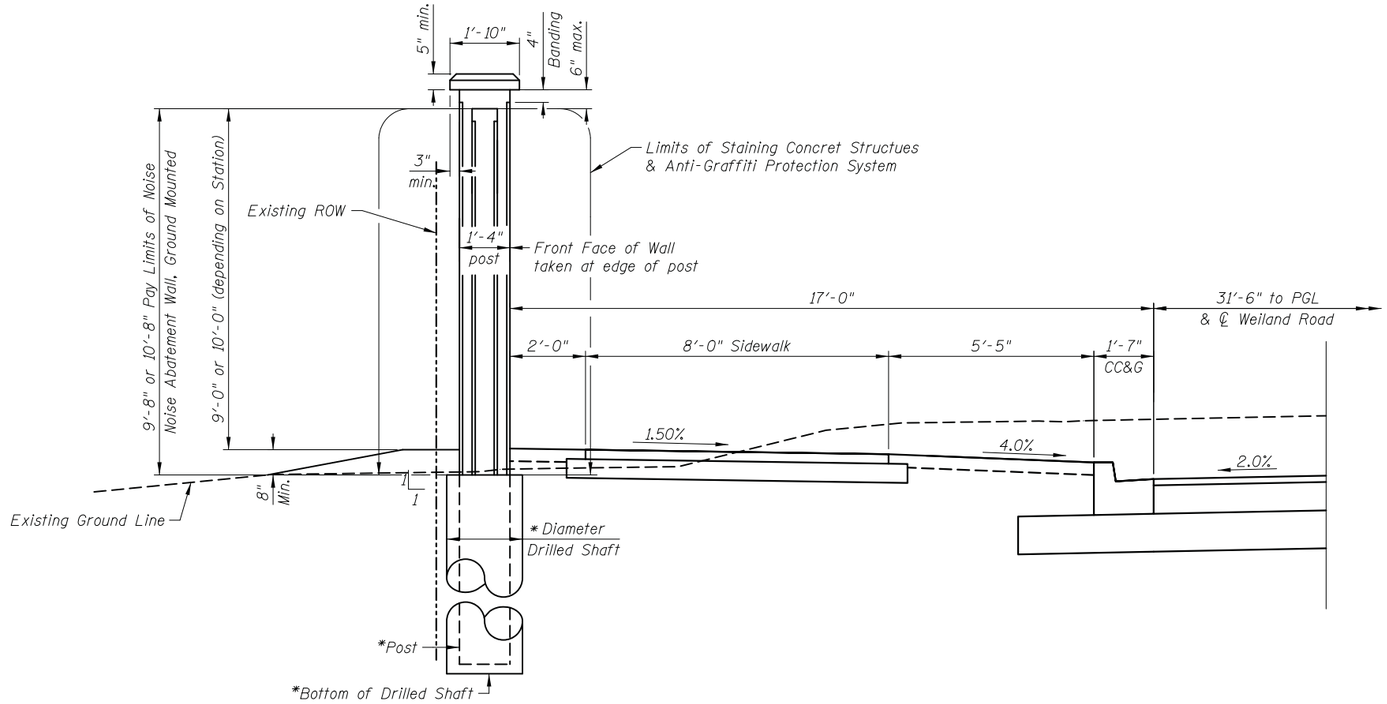
PARTIAL NOISE ABATEMENT WALL ELEVATION



SECTION A-A
Interior Post

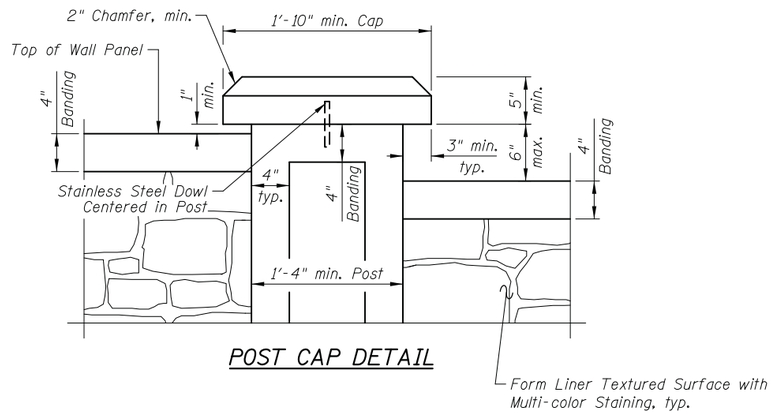


SECTION B-B
Corner Post



TYPICAL SECTION THRU NOISE WALL

* Type, size and spacing of posts, Noise wall panels, drilled shaft size and embedment, reinforcement details and wall limits including top & bottom of wall to be determined by the noise wall supplier during construction.



POST CAP DETAIL

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Two Pierce Place, Suite 1400
Itasca, Illinois 60143
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL DETAILS
NOISE ABATEMENT WALL
WEILAND ROAD; F.A.U. 2665
SHEET NO. N2 OF N5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	290
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Page 1 of 1

Date 5/6/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-18 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 57+28
Offset 31' L of CL
Ground Surface Elev. 678.62 (ft.)

Groundwater Depth
First Encounter _____ (ft.)
Upon Completion _____ (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Black CLAY TOPSOIL (12")	677.62				
Brown CLAY, little Sand, little Gravel, A-6, very stiff	675.62	3	3 2-1	2.0 P	14
Brown Clay LOAM, A-6, firm	673.12	6	0 0-2	0.58	20
Grey CLAY, trace Sand, trace Gravel, A-6, hard to very stiff	663.62	9	3 5-6	5.35	15
		12	3 5-6	4.19	14
			4 9-8	3.69	16
			4 8-8	--	14
End of Boring at 15'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Page 1 of 1

Date 5/9/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-19 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 56+27
Offset 30' L of CL
Ground Surface Elev. 679.84 (ft.)

Groundwater Depth
First Encounter none (ft.)
Upon Completion dry (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Black CLAY TOPSOIL (10")	679.04				
Dark Brown CLAY, some Sand, some Gravel: FILL, very stiff	676.84	3	2 3-3	3.0 P	19
Brown SAND (f-c) some Gravel: FILL, slightly dense	674.34	6	4 4-4	--	12
Brown CLAY, little Sand, trace Gravel, A-6, stiff	669.34	9	2 4-4	1.36	18
			3 3-4	1.24	18
Grey CLAY, trace Sand, trace Gravel, A-6, stiff	664.84	12	2 2-3	1.51	16
			3 6-14	1.94	17
End of Boring at 15'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS I
NOISE ABATEMENT WALL
WEILAND ROAD; F.A.U. 2665
SHEET NO. N3 OF N5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	291
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Date 5/9/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-20 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 55+28
Offset 31' L of CL
Ground Surface Elev. 680.08 (ft.)

Groundwater Depth
First Encounter -- (ft.)
Upon Completion -- (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Brown SAND, trench backfill					
			2 2-3	--	4
		3			
676.58					
Boring abandoned due to utility conflicts					

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Date 5/9/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-21 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 54+27
Offset 30' L of CL
Ground Surface Elev. 680.07 (ft.)

Groundwater Depth
First Encounter none (ft.)
Upon Completion dry (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Pavement Materials					
679.07					
Black CLAY, A-7-6: FILL, stiff			2 1-3	1.25 P	36
		3			
676.57					
Brown SAND (f-m), A-3, trench backfill, very loose to slightly dense			1 1-1	--	4
		6			
			1 2-2	--	5
672.07					
Grey CLAY, trace Sand, trace Gravel, A-6, very stiff		9	1 3-6	3.88	15
		12	6 8-12	3.30	17
			9 9-10	--	16
665.07					
End of Boring at 15'					

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

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DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS II
NOISE ABATEMENT WALL
WEILAND ROAD; F.A.U. 2665
SHEET NO. N4 OF N5 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	292
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Page 1 of 1

Date 5/9/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-22 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 53+27
Offset 30' L of CL
Ground Surface Elev. 680.48 (ft.)

Groundwater Depth
First Encounter 13.0' (ft.)
Upon Completion 12.2' (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Pavement Materials	679.48				
Grey, some Brown CLAY, little Sand, little Gravel: FILL	677.48	3	2 1-2	--	27
Brown SAND (f-m), A-3: FILL, very loose	674.98	6	2 1-2	--	4
Brown and Grey CLAY, little Sand, trace Gravel, A-6		9	3 3-6	--	14
possible cobbles	669.98	12	6 6-9	--	19
Grey CLAY, trace Sand, trace Gravel, A-6, very stiff			10 22-26	--	17
wet Gravel seam at 13.0'	665.48		6 9-12	3.03	14
End of Boring at 15'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

MIDLAND STANDARD ENGINEERING & TESTING, INC.

STRUCTURE FOUNDATION BORING LOG

Page 1 of 1

Date 5/9/14

ROUTE FA 0187 DESCRIPTION Weiland Road LOGGED BY MHP

SECTION 07-00094-00-PV LOCATION Noise Wall(N. of Newton Drive)

COUNTY Lake STRUCTURE NO. _____ (Exist) _____ (Prop.) _____

BORING NO. SB-23 DRILLING METHOD HSA HAMMER TYPE Automatic

Station 52+27
Offset 30' L of CL
Ground Surface Elev. 681.57 (ft.)

Groundwater Depth
First Encounter 13.0' (ft.)
Upon Completion 12.5' (ft.)
After _____ Hrs. _____ (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Pavement Materials	680.57				
Brown and Grey CLAY, little Sand, trace Gravel, A-6, very stiff		3	6 5-6	--	19
		6	3 4-5	3.49	17
		9	2 4-4	2.33	15
	671.07	12	3 5-7	2.52	16
Grey CLAY, trace Sand, trace Gravel, A-6, hard	668.57		5 6-8	4.27	15
Grey SAND (f-c) and GRAVEL, A-1, wet, medium dense	666.57		8 7-7	--	5
End of Boring at 15'					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

CIVILTECH
Two Pierce Place, Suite 1400
Itasca, Illinois 60143
Tel: 630.773.3900 Fax: 630.773.3975
www.civiltechinc.com

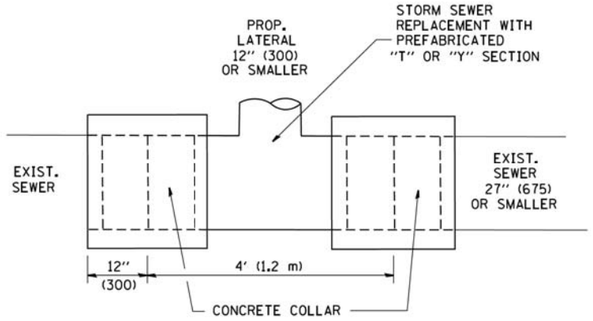
DRAWN - M. RENDINO	REVISED -	
DESIGNED - M. RENDINO	REVISED -	
CHECKED - G. HATLESTAD	REVISED -	
DATE - 11/13/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS III
NOISE ABATEMENT WALL
WEILAND ROAD; F.A.U. 2665
SHEET NO. N5 OF N5 SHEETS

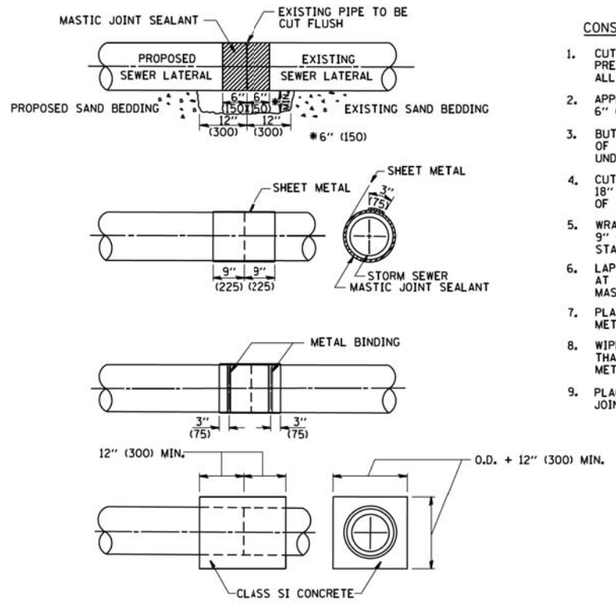
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	293
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

MPR 11/13/2018 12:12:44 PM J:\2819\cad\sheet\Stage2\15-Structures\Noise Wall\05_Noise WallBoring Logs III.dgn



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER
OF 27" (675) OR SMALLER

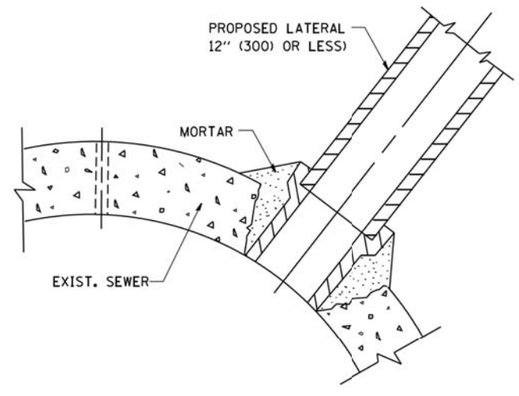


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL
CONNECTION TO EXISTING SEWER
OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".

B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

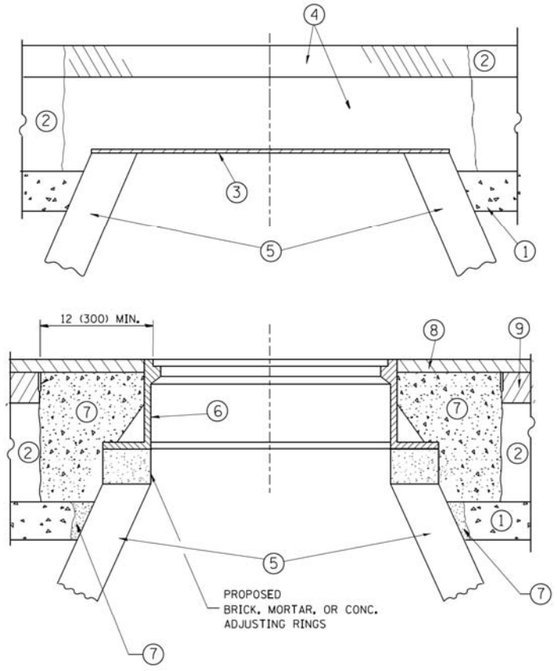
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd07.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. SHAH 09-09-94					2665	14-00158-11-WR	LAKE	537	294
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94					BD500-01 (BD-7)		CONTRACT NO. 61E24		
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

(1) SUB-BASE GRANULAR MATERIAL
(2) EXISTING PAVEMENT
(3) 36 (900) DIAMETER METAL PLATE
(4) PROPOSED CRUSHED STONE AND HMA SURFACE MIX
(5) EXISTING STRUCTURE
(6) FRAME AND LID (SEE NOTES)
(7) CLASS PP-1* CONCRETE
(8) PROPOSED HMA SURFACE COURSE
(9) PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

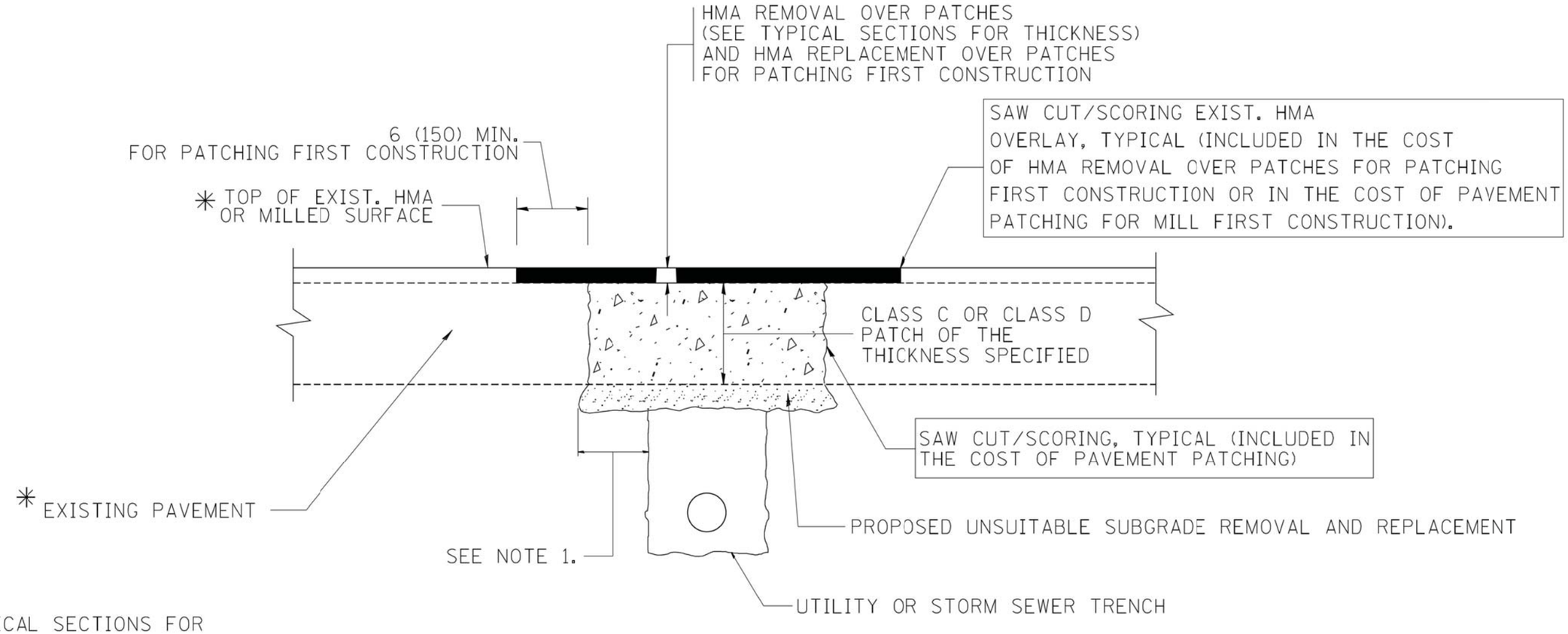
FILE NAME = c:\pw_work\pwidot\bauerdl\d0108315\bd08.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 1968.5000 ' / in	CHECKED -	REVISED - R. BORO 03-09-11
	PLOT DATE = 12/6/2011	DATE - 10-25-94	REVISED - R. BORO 12-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	295
	BD600-03 (BD-8)	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

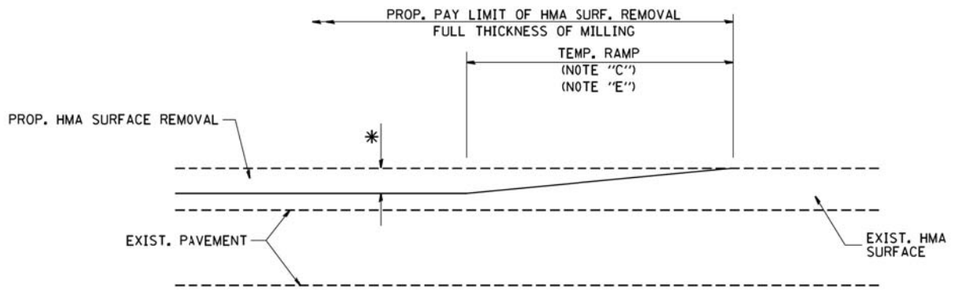
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4½ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

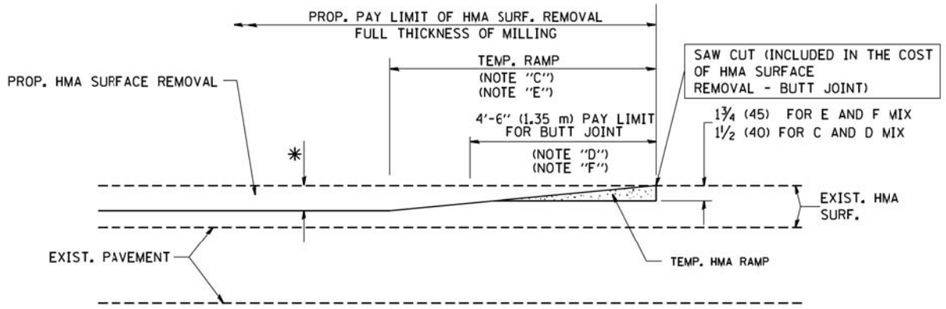
FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07			2665	14-00158-11-WR	LAKE	537	296
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07			BD400-04 (BD-22)		CONTRACT NO. 61E24		
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

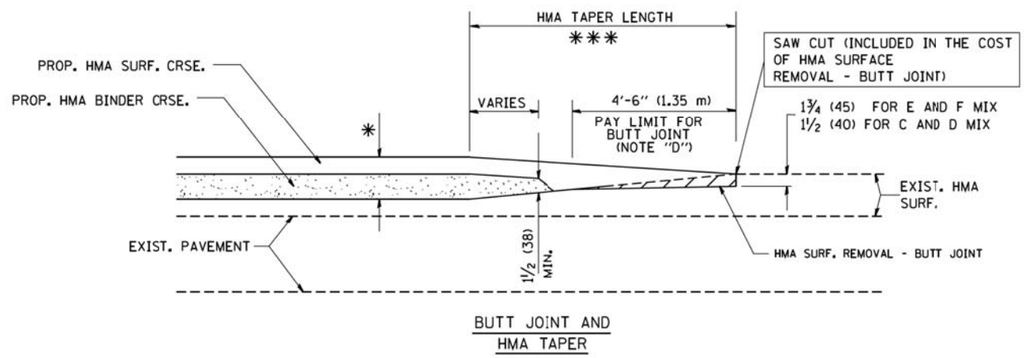


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

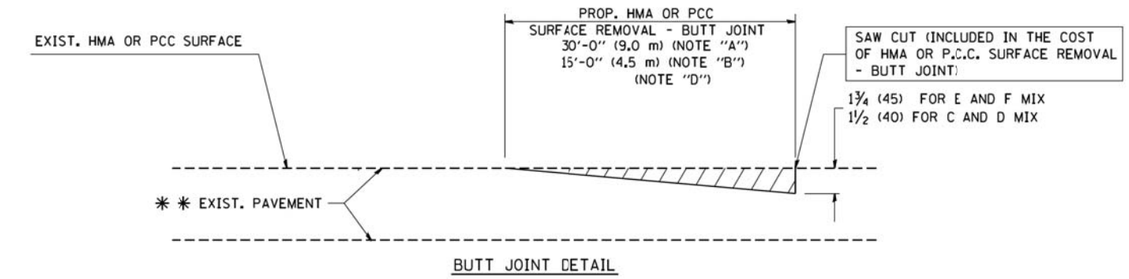
OPTION 2

TYPICAL TEMPORARY RAMP

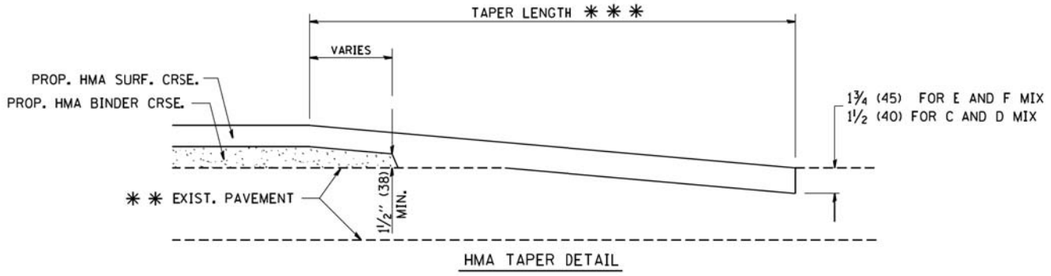


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

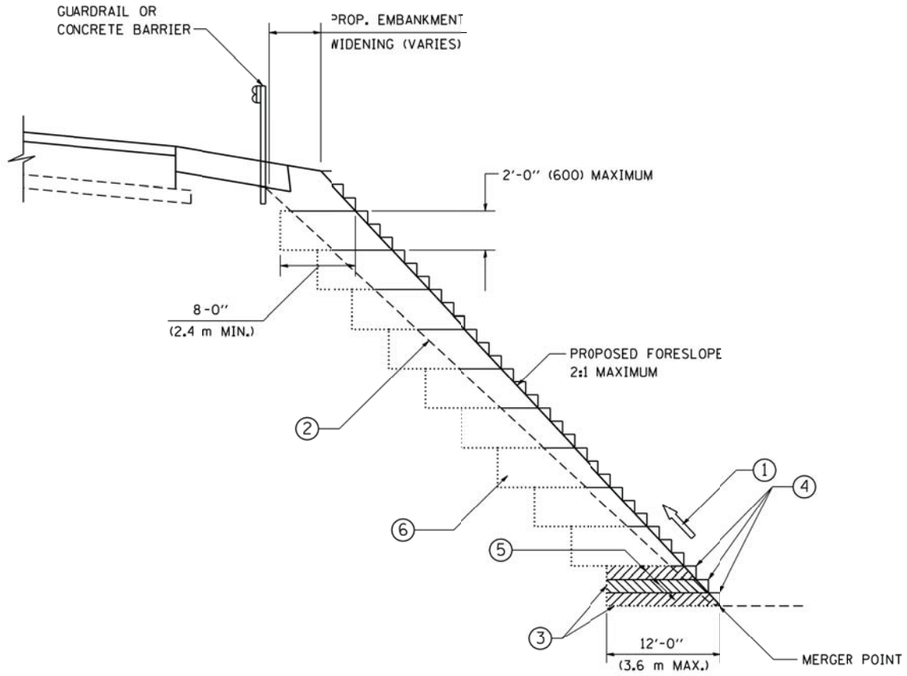
FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	297
	BD400-05 BD32	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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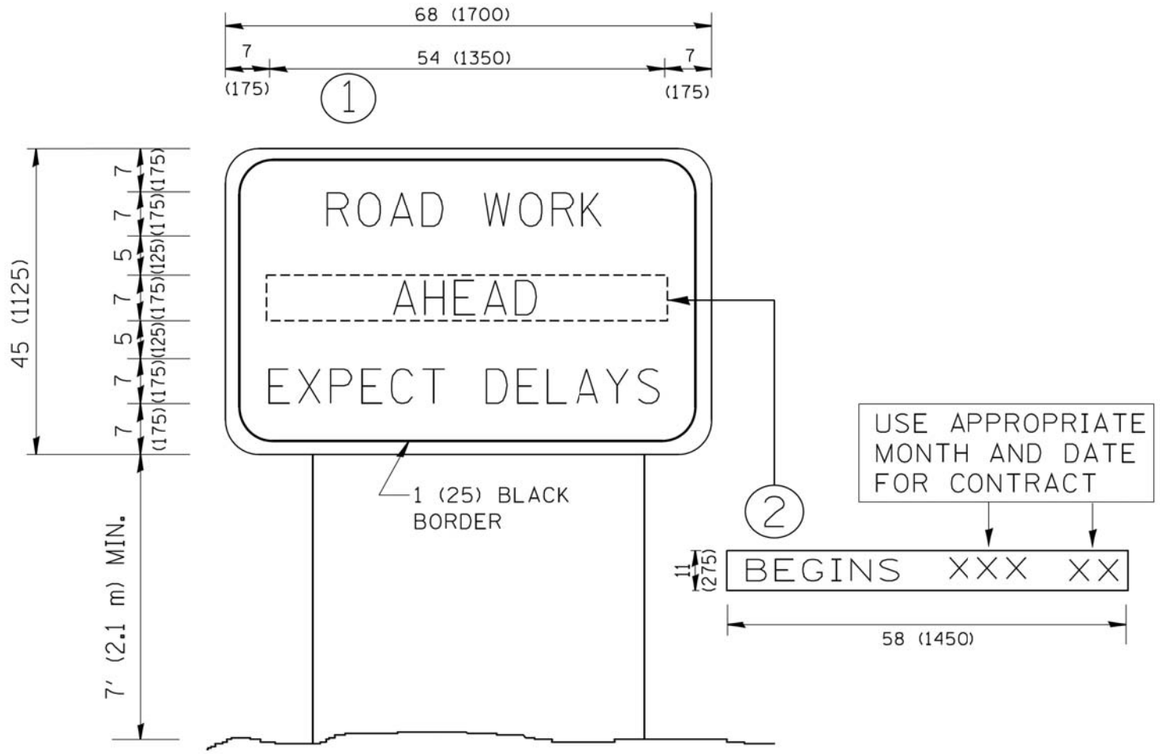
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	298
	BD-51	**CONTRACT NO.** 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

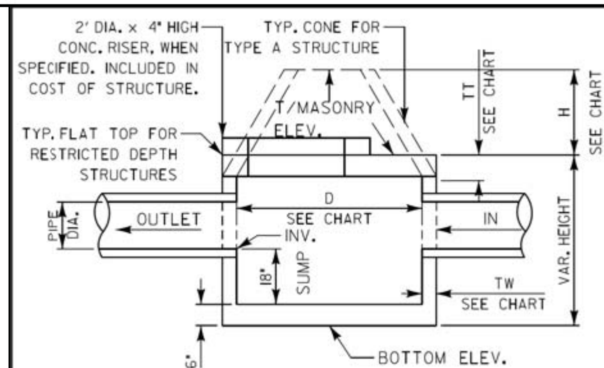
FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

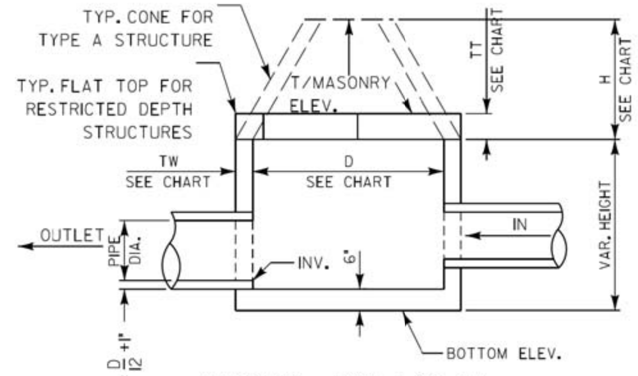
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	299
	TC-22	CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CATCH BASINS - TYPE A OR R.D.

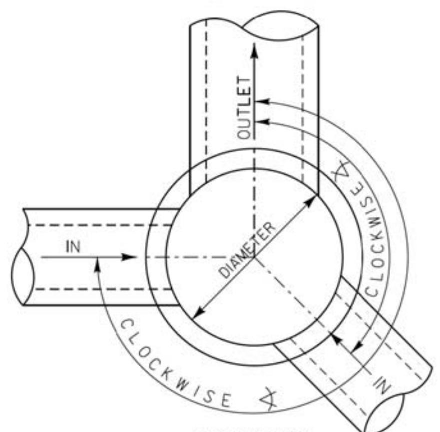
SEE IDOT STD. 602001 & 602601



MANHOLES - TYPE A OR R.D.

SEE IDOT STD. 602401 & 602601

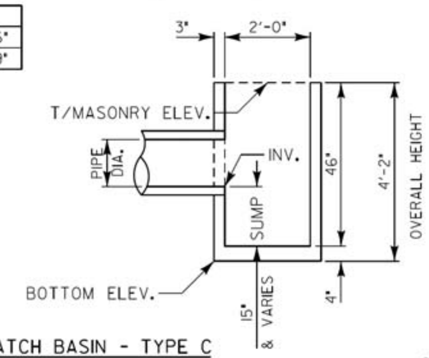
D	TW	TT	H
4'	4"	6"	2'-6"
5'	5"	8"	3'-9"



STRUCTURE

OPENING LAYOUT

SEE "SCHEDULE OF DRAINAGE STRUCTURES" LC0000 Sheet 3



CATCH BASIN - TYPE C

SEE IDOT STD. 602011

SCALE: 1" = 3'

REVISIONS	DATE

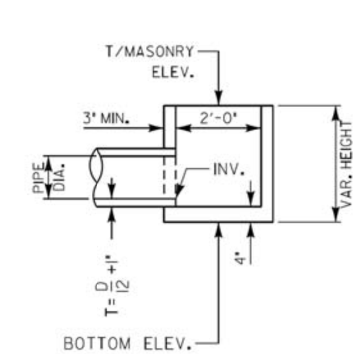
LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

MATERIALS LETTING DRAINAGE STRUCTURE DETAIL

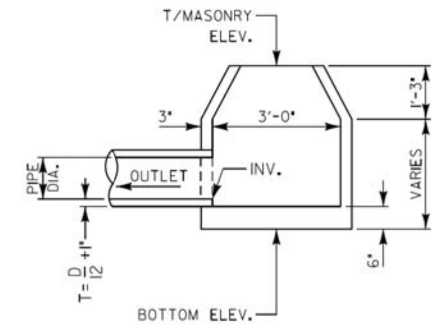
SHEET 1 OF 3

LC0000



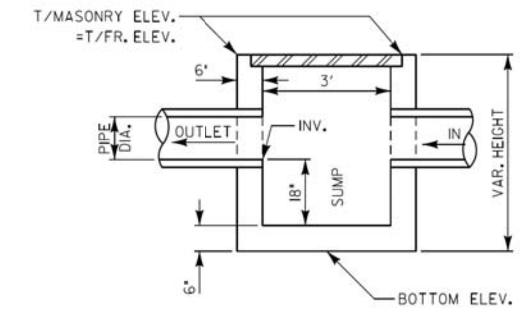
INLET - TYPE A

SEE IDOT STD. 602301



INLET - TYPE B

SEE IDOT STD. 602306



FLUSH INLET BOX

SEE IDOT STD. 542546

SCALE: 1" = 3'

FRAME & GRATE INCLUDED IN COST OF STRUCTURE (FOR 542546 ONLY)

DESIGN NOTES:

ALL STRUCTURES SHALL BE IN CONFORMANCE WITH THEIR RESPECTIVE IDOT STANDARD DRAWINGS EXCEPT:

1. STEPS ARE NOT REQUIRED.
2. THE BOTTOMS SHALL BE CAST WITH THE BARREL.

REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

MATERIALS LETTING DRAINAGE STRUCTURE DETAIL

SHEET 2 OF 3

LC0000

SCHEDULE OF DRAINAGE STRUCTURES FOR MATERIALS LETTING

TYPE	STANDARD	STATION	OVERALL HEIGHT	TOP MASONRY	ELEVATIONS			OUTLET PIPE SIZE	IN PIPES		COMMENTS
					BOTTOM	INVERTS			SIZE	DIRECTION (CLOCKWISE ANG.)	
						OUT	IN				

REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

SCHEDULE OF DRAINAGE STRUCTURES FOR MATERIALS LETTING

SHEET 3 OF 3

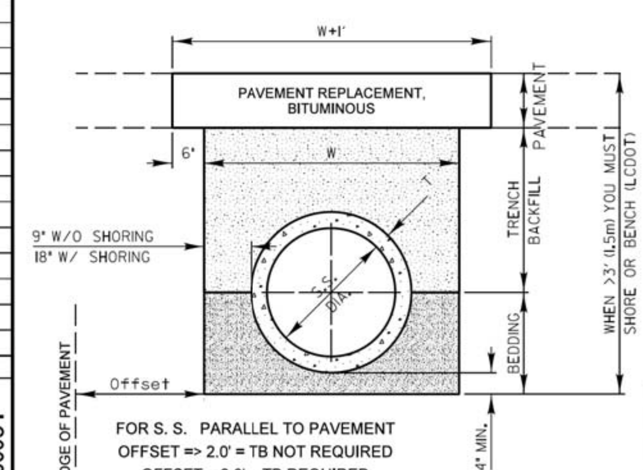
LC0000

ENGLISH		TRENCH WIDTH (W)		MIN OFFSET FROM E.O.P.* FOR NO TB		½ PIPE AREA [O.D.]
S.S. DIA.	T	WITHOUT SHORING	WITH SHORING	WITHOUT SHORING	WITH SHORING	
(IN)	(IN)	(FT)	(FT)	(FT)	(FT)	(SQ FT)
10	2.00	2.67	4.17	3.33	4.08	0.53
12	2.00	2.83	4.33	3.42	4.17	0.70
15	2.25	3.13	4.63	3.56	4.31	1.04
18	2.50	3.42	4.92	3.71	4.46	1.44
21	2.75	3.71	5.21	3.85	4.60	1.92
24	3.00	4.00	5.50	4.00	4.75	2.45
27	3.25	4.29	5.79	4.15	4.90	3.06
30	3.50	4.58	6.08	4.29	5.04	3.73
36	4.00	5.17	6.67	4.58	5.33	5.28
42	4.50	5.75	7.25	4.88	5.63	7.09
48	5.00	6.33	7.83	5.17	5.92	9.17

* TO CENTER LINE OF PIPE

DESIGN NOTES:

1. Trench backfill is required if the storm sewer or culvert offset from the edge of the pavement is less than the tabulated values (the inner trench wall is closer than 2' to the edge of pavement)
2. Payment for the trench backfill shall not exceed the quantity computed using the maximum trench width dimensions. If the trench is excavated beyond these limits, the contractor shall furnish and place any additional trench backfill at his/her expense.
3. If the trench width is less than the above maximum values, payment will be based on the actual dimensions of the dug trench.
4. Bedding shall be placed from 4" under the pipe to the spring line of the pipe and is incidental to the corresponding storm sewer or culvert pay item.
5. If any part of the excavation for a drainage structure falls within 2' of the edge of pavement, the space between the side of the excavation and the outer surface of the drainage structure shall be filled with trench backfill. The cost of this item is included in the pay item for the drainage structure.



FOR S. S. PARALLEL TO PAVEMENT
OFFSET => 2.0' = TB NOT REQUIRED
OFFSET < 2.0' = TB REQUIRED

SCALE: 1" = 2'

REVISIONS	DATE
Text Revision	11/06/07
Text Update	7/14/11

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

TRENCH WIDTHS FOR TRENCH BACKFILL & PAVEMENT REPLACEMENT, BITUMINOUS

LC0020

FINAL SURVEY		
NOTE BOOK	SURVEYED	BY / DATE
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY		
NOTE BOOK	SURVEYED	BY / DATE
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

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DESIGNED - PK	REVISED -
DRAWN - PK	REVISED -
CHECKED - JRV	REVISED -
DATE - 10/8/2018	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

LCDOT HIGHWAY STANDARDS

SHEET NO. 1 OF 16 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2665	14-00158-11-WR	LAKE	537	300
		CONTRACT NO. 61E24		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		