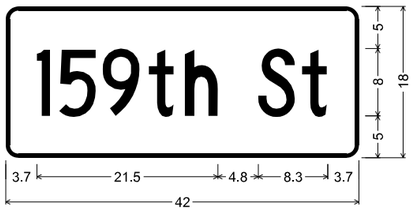
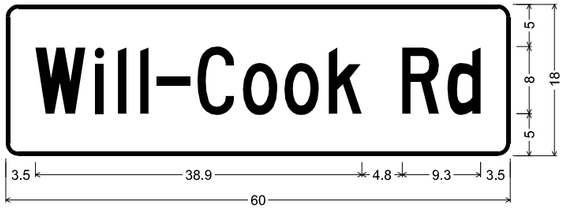
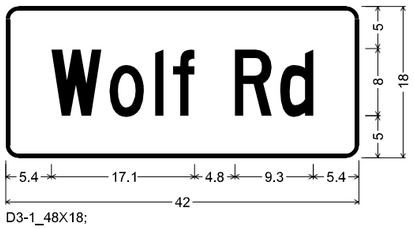
D3-1_48X18; 1.5" Radius, 0.5" Border, White on Green;
[108th Av] C 60% spacing;



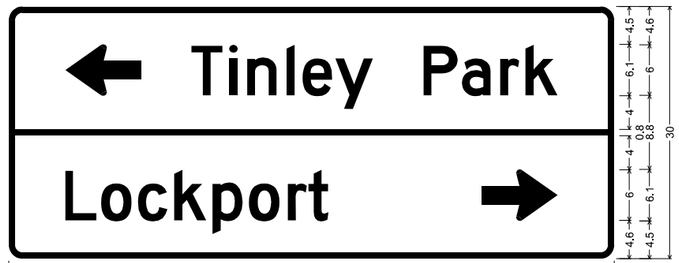
D3-1_42X18;
1.5" Radius, 0.5" Border, White on Green;
[159th St] C 60% spacing;



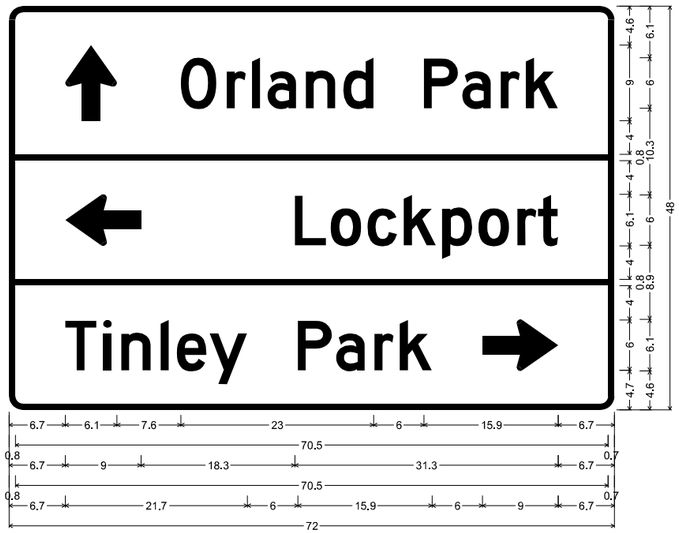
D3-1_60X18; 1.5" Radius, 0.5" Border, White on Green;
[Will-Cook Rd] C 60% spacing;



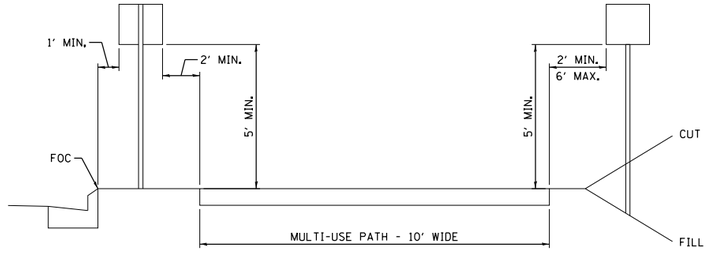
D3-1_48X18;
1.5" Radius, 0.5" Border, White on Green;
[Wolf Rd] C 60% spacing;



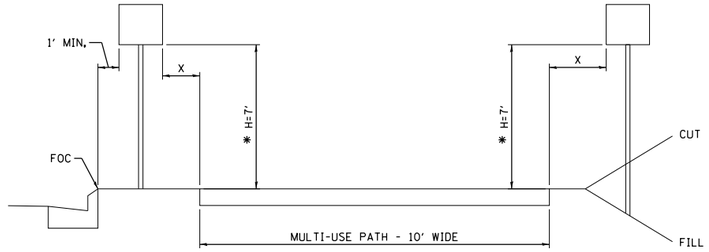
D1-2_72x30; 1.6" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [Tinley Park] D 2K 99% spacing; [Lockport] D 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;



D1-3_72x48; 1.6" Radius, 0.8" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 90°; [Orland Park] D 2K; Standard Arrow Custom 9.0" X 6.1" 180°;
[Lockport] D 2K; [Tinley] D 2K; [Park] D 2K; Standard Arrow Custom 9.0" X 6.1" 0°;



TYPICAL MULTI-USE PATH SIGN PLACEMENT



* H=8' WHEN X LESS THAN 2'

TYPICAL ROADWAY SIGN PLACEMENT
ADJACENT TO MULTI-USE PATH

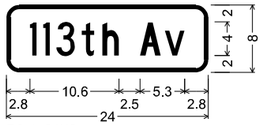
FILE NAME = D160L72-sht-pmkdetails.dgn	USER NAME = jwmiller	DESIGNED - JPW	REVISED -
		DRAWN - CGC	REVISED -
	PLOT SCALE = 1:100	CHECKED - TJN	REVISED -
$MODELNAME$	PLOT DATE = 10/24/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

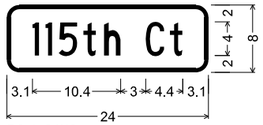
SIGN DETAILS

SCALE: N.T.S. | SHEET 1 OF 2 SHEETS | STA. - | TO STA. -

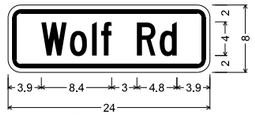
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	301
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



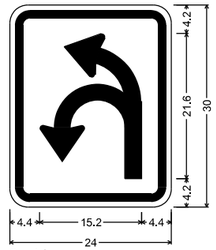
D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[113th] C 90% spacing;
[Av] C 90% spacing;



D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[115th] C 90% spacing;
[Ct] C 90% spacing;

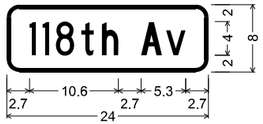


W16-8P_24x8;
1.5" Radius, 0.5" Border, 0.5" Indent, Black on Yellow;
[Wolf] C 2K; [Rd] C 2K;



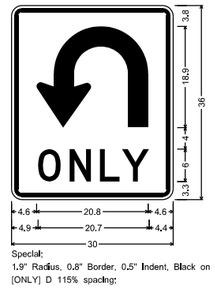
Special;
3.0" Radius, 1.3" Border, 0.8" Indent, Black on White;
EL ir=5.813, s=2.5;

D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[113th] C 90% spacing;
[Ct] C 90% spacing;

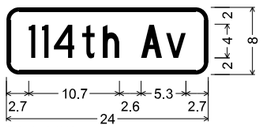


D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[118th] C 90% spacing;
[Av] C 90% spacing;

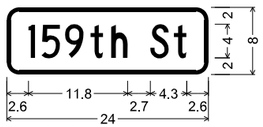
W16-8P_30x8;
1.5" Radius, 0.5" Border, 0.5" Indent, Black on Yellow;
[RavInIa] C 2K; [Av] C 2K;



Special;
1.9" Radius, 0.8" Border, 0.5" Indent, Black on White;
[ONLY] D 115% spacing;

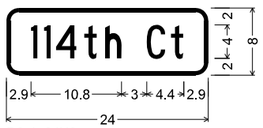


D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[114th] C 90% spacing;
[Av] C 90% spacing;

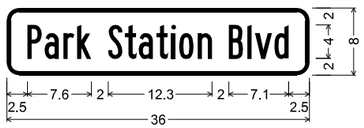


D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[159th] C 90% spacing;
[St] C 90% spacing;

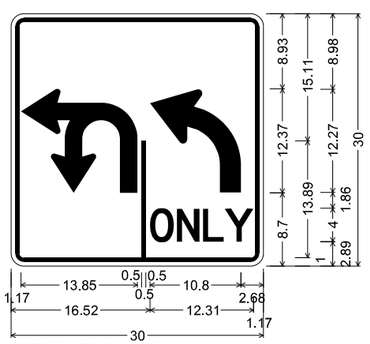
W16-8P_24x8;
1.5" Radius, 0.5" Border, 0.5" Indent, Black on Yellow;
[104th] C 2K; [Av] C 2K;



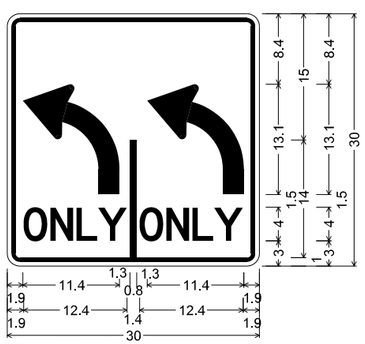
D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[114th] C 90% spacing;
[Ct] C 90% spacing;



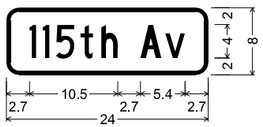
D3-1_36X8;
1.5" Radius, 0.5" Border, White on Green;
[Park] B 50% spacing;
[Station] B 50% spacing;
[Blvd] B 50% spacing;



SPECIAL; R3-8_30x30;
1.50" Radius, 0.50" Border, 0.50" Indent, Black on White;
R3-8a left turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;
Table of widths and spaces.



SPECIAL; R3-8_30X30;
1.5" Radius, 0.5" Border, 0.5" Indent, Black on White;
EL ir=5.813, s=2.5;
[ONLY] D 2K 40% spacing;
EL ir=5.813, s=2.5;
[ONLY] D 2K 40% spacing;



D3-1_24X8;
1.5" Radius, 0.5" Border, White on Green;
[115th] C 90% spacing;
[Av] C 90% spacing;

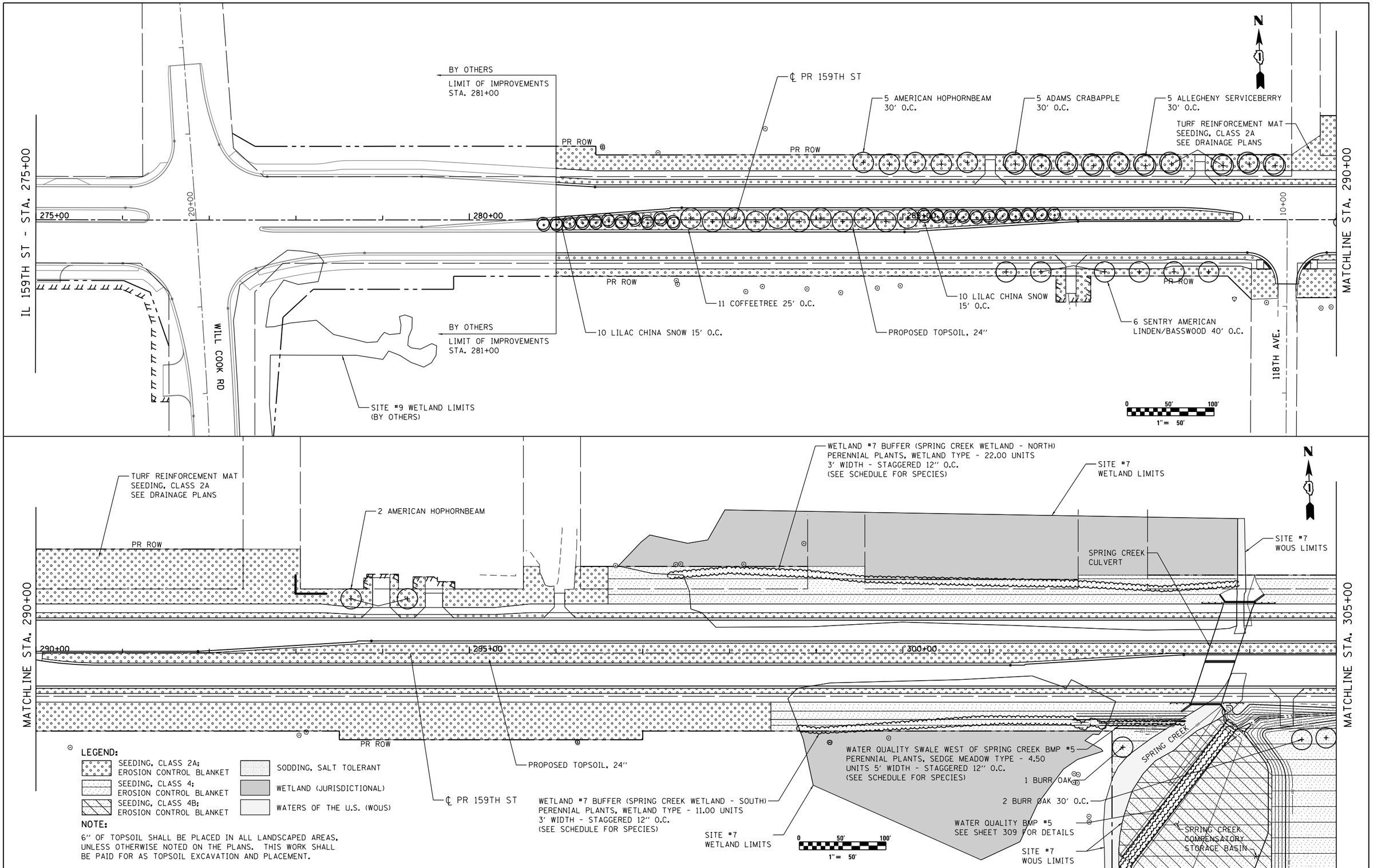
FILE NAME = D160L72-sht-pmkdetails.dgn	USER NAME = jwmiller	DESIGNED - JPW	REVISED -
		DRAWN - CGC	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - TJN	REVISED -
	PLOT DATE = 10/24/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN DETAILS

SCALE: N.T.S. | SHEET 2 OF 2 SHEETS | STA. - | TO STA. -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	302
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



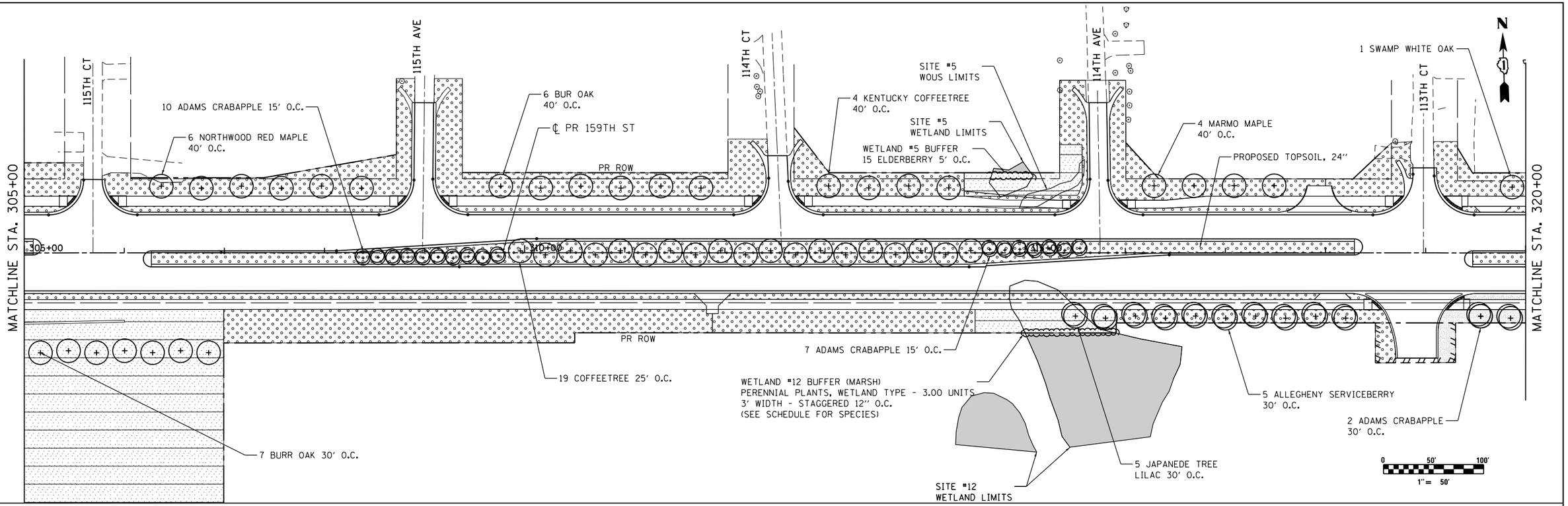
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
$MODELNAME$	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
159TH STREET

SCALE: 1"=50' | SHEET 1 OF 8 SHEETS | STA. 281+00.00 TO STA. 305+00.00

F.AP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	303
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



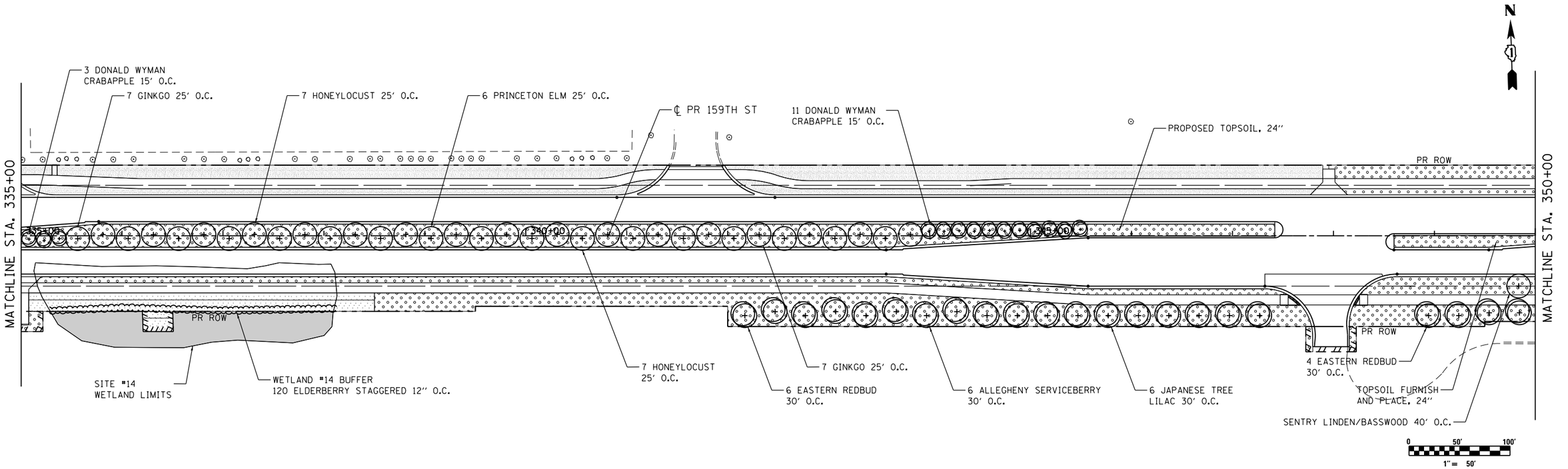
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
159TH STREET

SCALE: 1"=50' | SHEET 2 OF 8 SHEETS | STA. 305+00.00 TO STA. 335+00.00

F.AP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	304
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



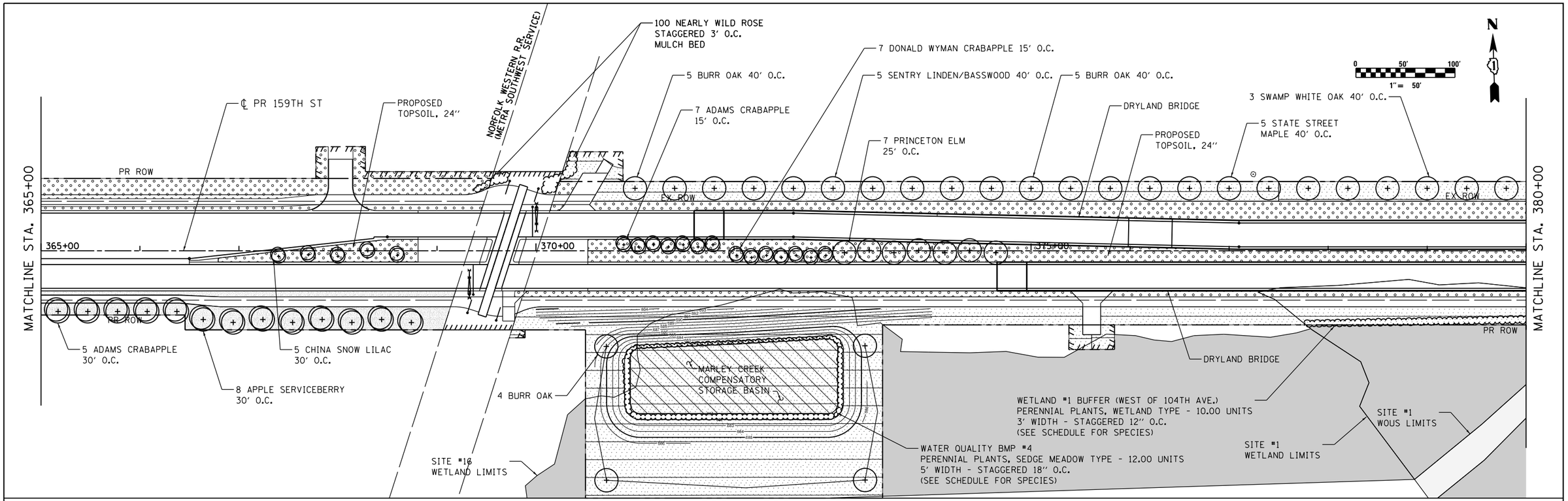
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
159TH STREET

SCALE: 1''=50' | SHEET 3 OF 8 SHEETS | STA. 335+00.00 TO STA. 365+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	305
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



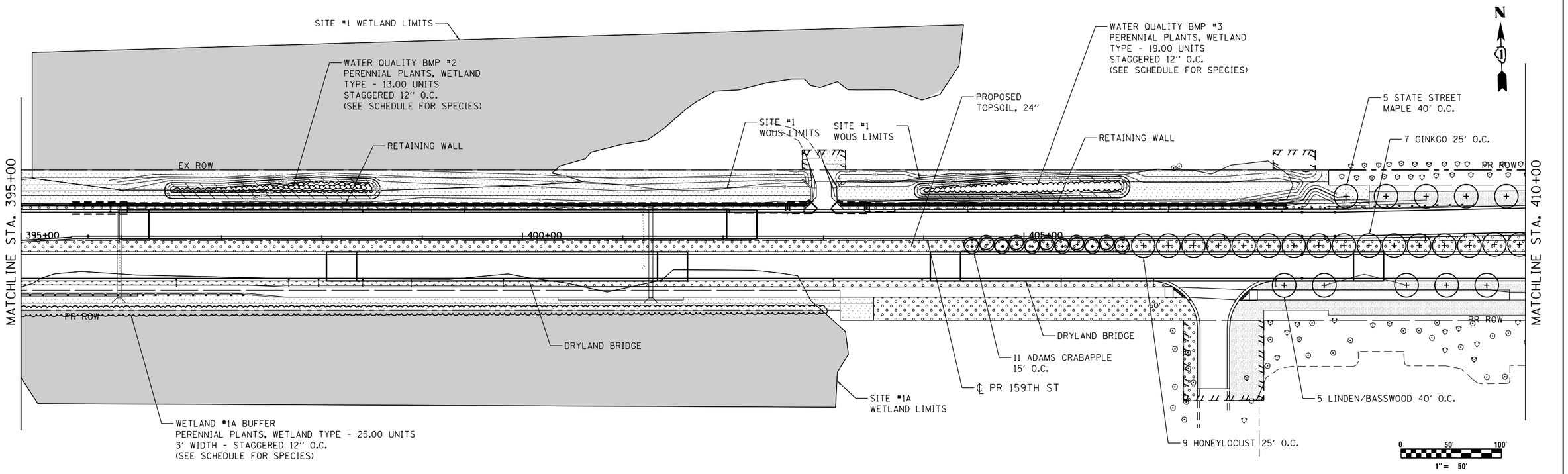
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
$MODELNAME$		DRAWN - JPW	REVISED -
	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

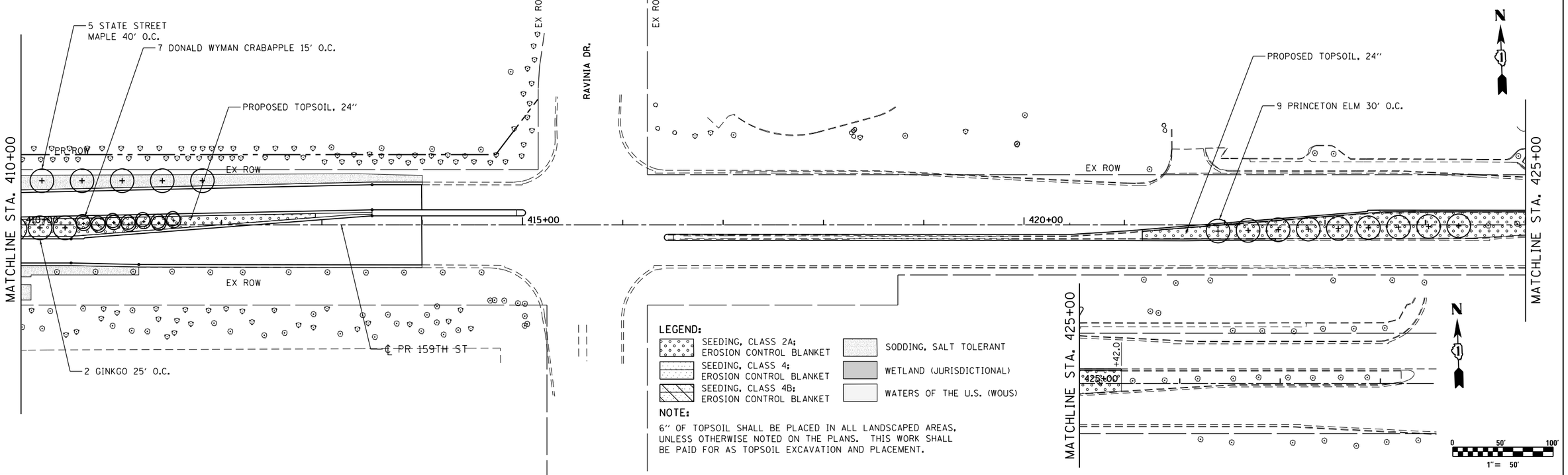
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
159TH STREET

SCALE: 1''=50' | SHEET 4 OF 8 SHEETS | STA. 365+00.00 TO STA. 395+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	306
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		





LEGEND:

- SEEDING, CLASS 2A; EROSION CONTROL BLANKET
- SEEDING, CLASS 4; EROSION CONTROL BLANKET
- SEEDING, CLASS 4B; EROSION CONTROL BLANKET
- SODDING, SALT TOLERANT
- WETLAND (JURISDICTIONAL)
- WATERS OF THE U.S. (WOUS)

NOTE:

6'' OF TOPSOIL SHALL BE PLACED IN ALL LANDSCAPED AREAS, UNLESS OTHERWISE NOTED ON THE PLANS. THIS WORK SHALL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.

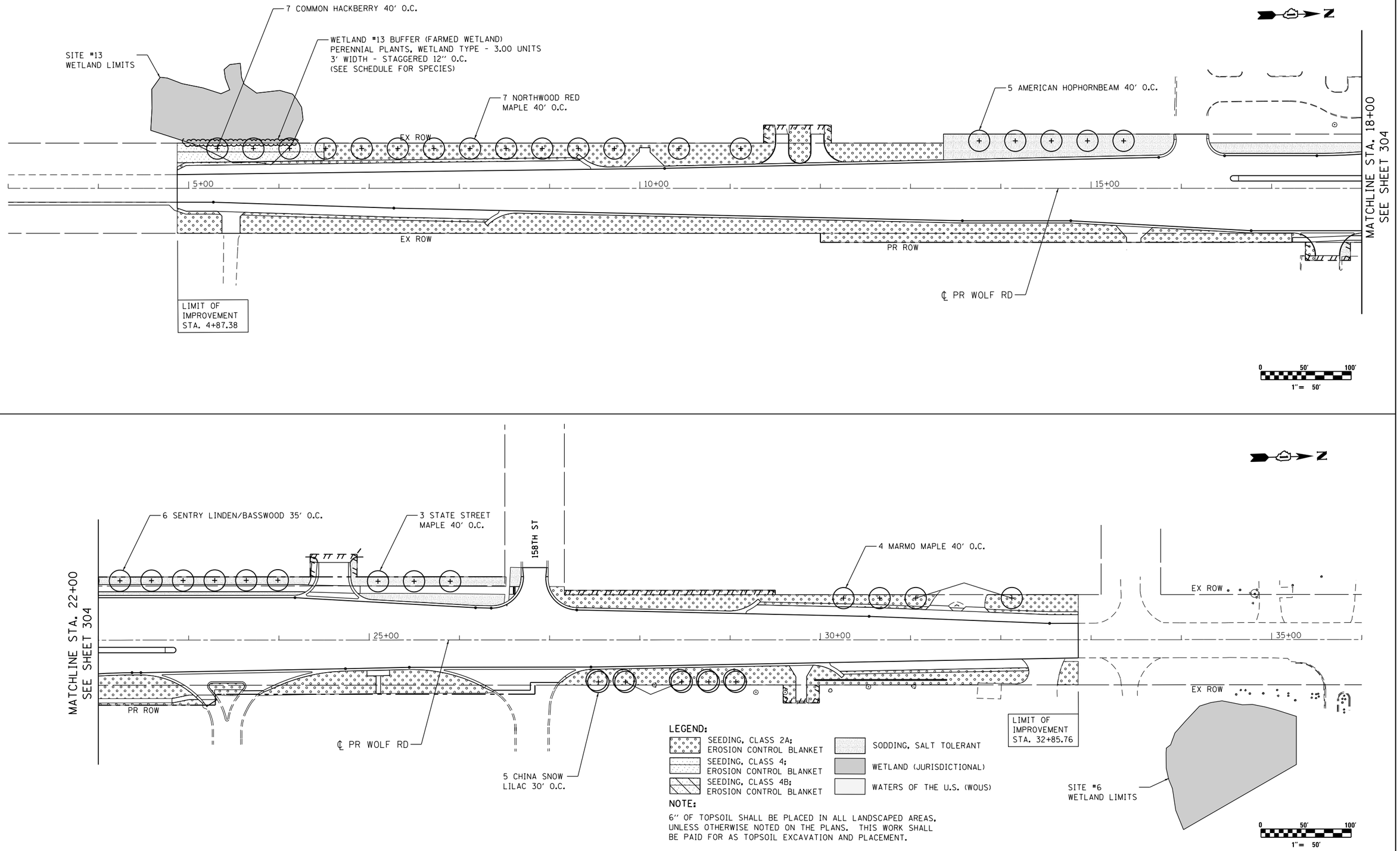
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
159TH STREET

SCALE: 1''=50' | SHEET 5 OF 8 SHEETS | STA. 395+00.00 TO STA. 425+41.80

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	307
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



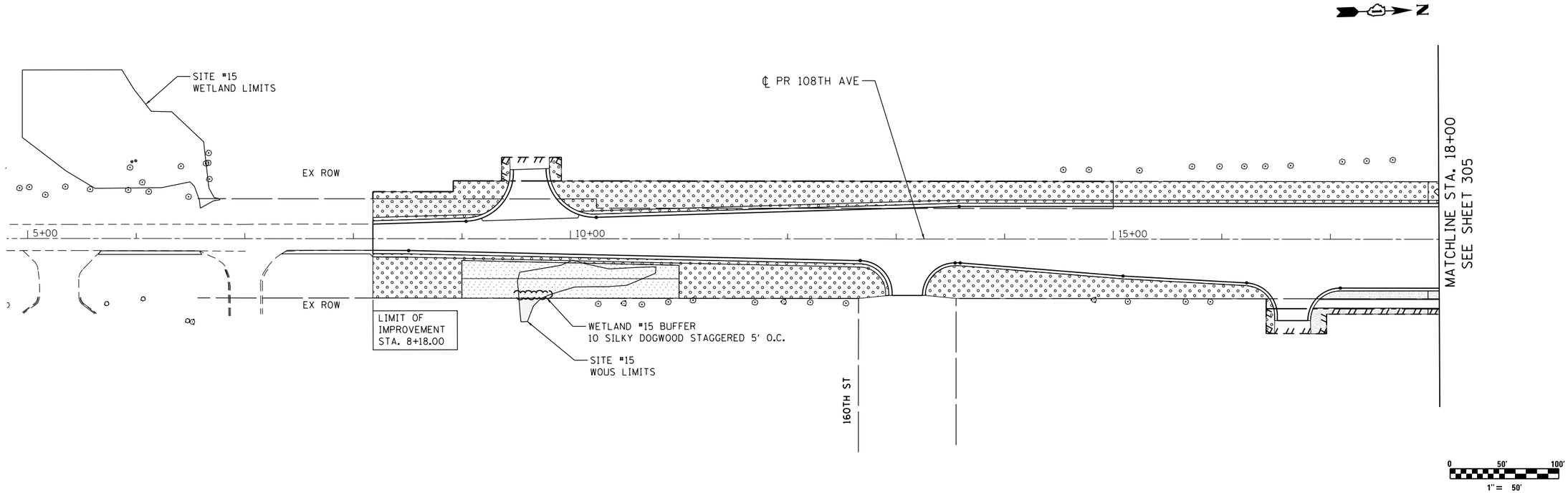
FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

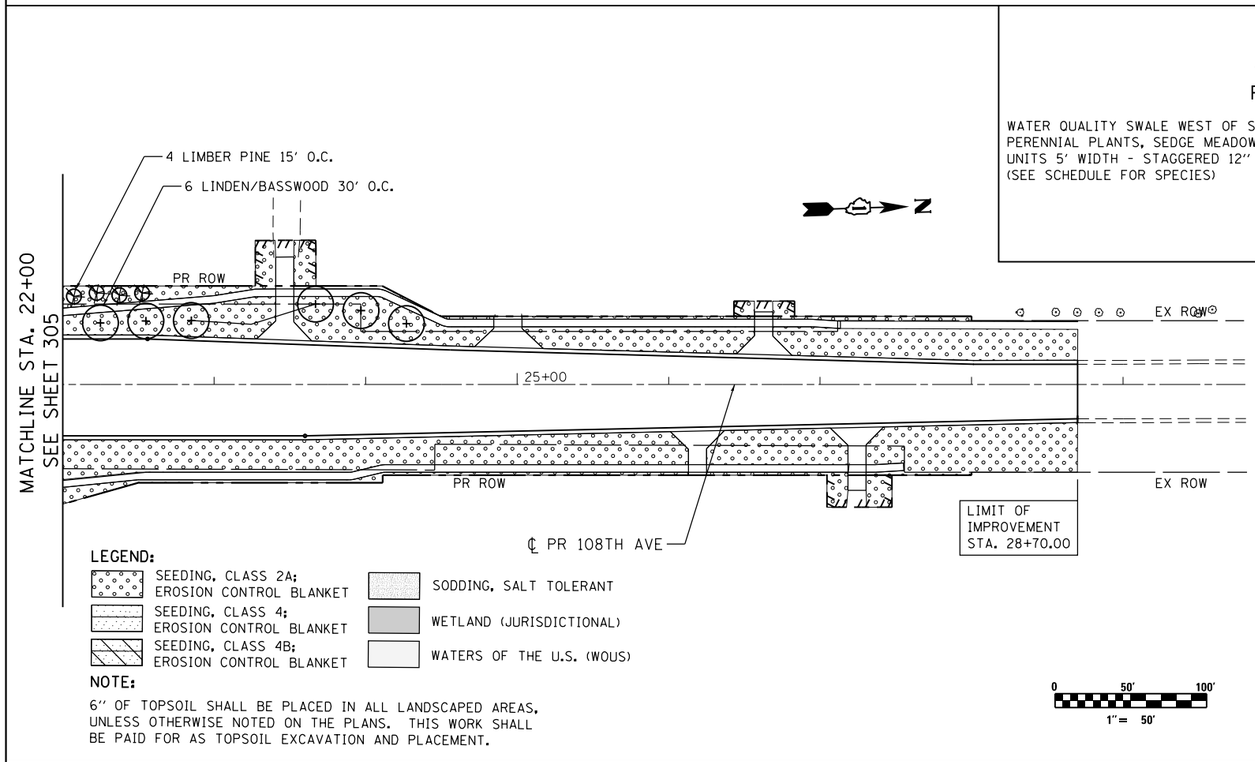
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

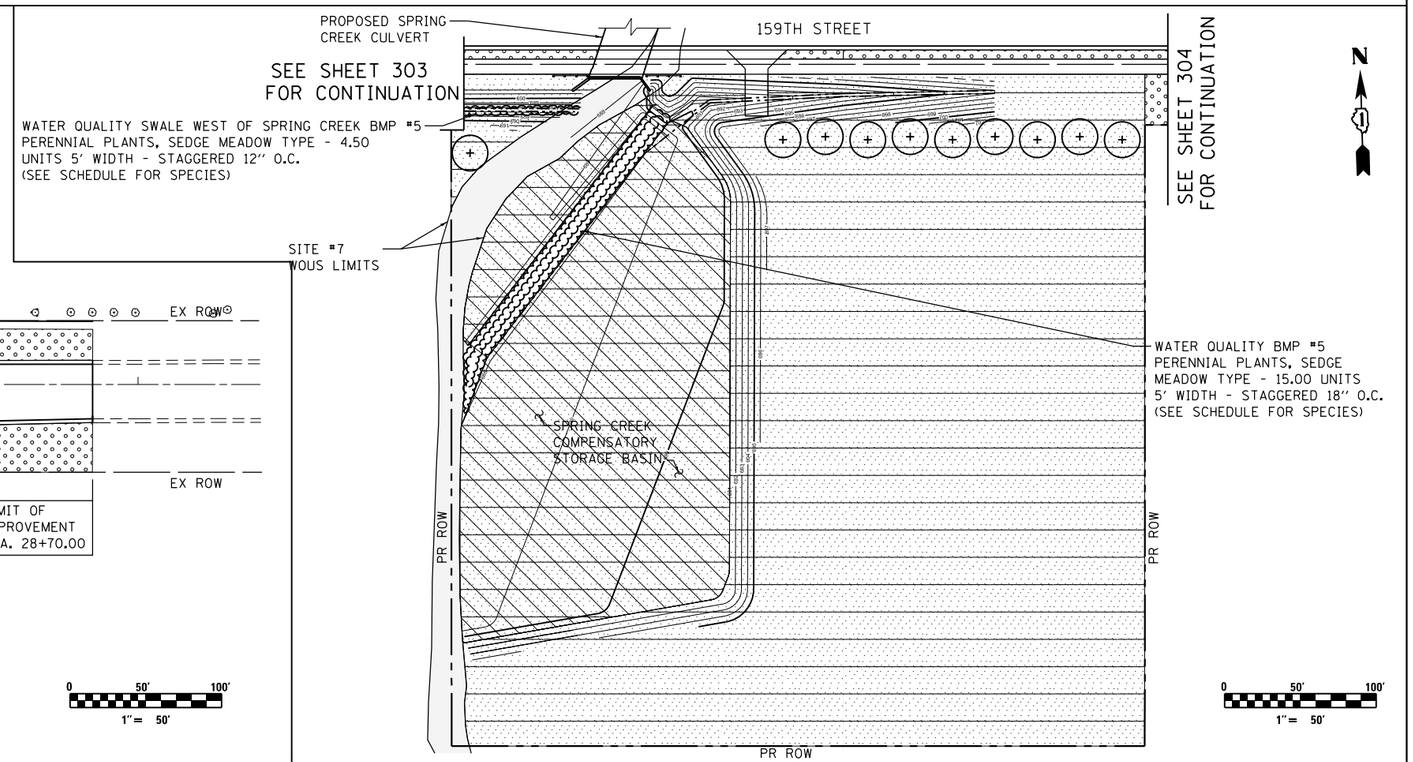
LANDSCAPING PLAN
WOLF ROAD

SCALE: 1''=50' | SHEET 6 OF 8 SHEETS | STA. 4+87.38 TO STA. 32+85.76

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	308
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			







FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = rdanley	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
$MODELNAME$	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING PLAN
108TH AVENUE

SCALE: 1"=50' | SHEET 7 OF 8 SHEETS | STA. 8+18.00 TO STA. 28+70.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	309
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	

SCHEDULE LANDSCAPE ITEMS

ITEM	DESCRIPTION	UNIT	TOTAL	SHEET NUMBER							WATER QUALITY DETAILS				
				269	270	271	272	273	274 (WOLF RD)	275 (108TH AVE)	SPRING CREEK COMP BASIN BMP#5	MARLEY CREEK COMP BASIN BMP #4	MARLEY CREEK BMP#1	MARLEY CREEK BMP#2	MARLEY CREEK BMP#3
A2000216	TREE, ACER X FREEMANII MARMO (MARMO FREEMAN MAPLE), 2" CALIPER, BALLED AND BURLAPPED	EACH	8		4				4						
A2000320	TREE, ACER MIYABEI MORTON (STATE STREET MIYABE MAPLE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	18				5	10	3						
A2002516	TREE, CARPINUS CAROLINIANA (AMERICAN HORNBEAM), 2" CALIPER, BALLED AND BURLAPPED	EACH	5						5						
A2002916	TREE, CELTIS OCCIDENTALIS (COMMON HACKBERRY), 2" CALIPER, BALLED AND BURLAPPED	EACH	7						7						
A2004516	TREE, GINKGO BILOBA PRINCETON SENTRY (PRINCETON SENTRY GINKGO), 2" CALIPER, BALLED AND BURLAPPED	EACH	23			14		9							
A2004716	TREE, GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER (SHADEMASTER THORNLESS COMMON HONEYLOCUST), 2" CALIPER, BALLED AND BURLAPPED	EACH	23			14		9							
A2005020	TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	34	11	23										
A2005670	TREE, OSTRYA VIRGINIANA (AMERICAN HOPHORNBEAM), 8' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	19	7	5	7									
A2006516	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	7		2		5								
A2006716	TREE, QUERCUS MACROCARPA (BUR OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	26	3	13		10								
A2008468	TREE, ULMUS AMERICANA PRINCETON (PRINCETON AMERICAN ELM), 2" CALIPER, BALLED AND BURLAPPED	EACH	21			6	7	8							
B2000666	TREE, AMELANCHIER X GRANDIFLORA (APPLE SERVICEBERRY), 6' HEIGHT, SHRUB FORM, BALLED AND BURLAPPED	EACH	8				8								
B2000964	TREE, AMELANCHIER LAEVIS (ALLEGHENY SERVICEBERRY), 5' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	20	5	5	10									
B2001166	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	10			10									
B2002666	TREE, MALUS ADAMS (ADAMS CRABAPPLE), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	57	5	22	7	12	11							
B2003366	TREE, MALUS DONALD WYMAN (DONALD WYMAN CRABAPPLE), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	46		8	24	7	7							
B2006166	TREE, SYRINGA PEKINENSIS MORTON (CHINA SNOW PEKING LILAC), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	30	20			5		5						
B2006266	TREE, SYRINGA RETICULATA (JAPANESE TREE LILAC), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	19		5	10	4								
C2008224	SHRUB, ROSA NEARLY WILD (NEARLY WILD SHRUB ROSE), 24" HEIGHT, CONTAINER	EACH	100									100			
C2012772	SHRUB, VIBURNUM PRUNIFOLIUM (BLACKHAW VIBURNUM), 6' HEIGHT, BALLED AND BURLAPPED	EACH	4		4										
C2C01424	SHRUB, CORNUS AMOMUM (SILKY DOGWOOD), 2' HEIGHT, CONTAINER	EACH	10							10					
C2C09624	SHRUB, SAMBUCUS CANADENSIS (AMERICAN ELDER), 2' HEIGHT, CONTAINER	EACH	135		15	120									
D2002472	EVERGREEN, PINUS FLEXILIS VANDERWOLF'S PYRAMID (VANDERWOLF'S PYRAMID LIMBER PINE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	5			1				4					
K0013030	PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG	UNIT	162.0	33	6	4	31	25	3				28.0	13.0	19.0
K0013060	PERENNIAL PLANTS, SEDGE MEADOW TYPE, 2" DIAMETER BY 4" DEEP PLUG	UNIT	31.5								19.5	12.0			
K0026850	PERENNIAL PLANT CARE	SQ YD	10,200												
#1009952	TREE, TILIA AMERICANA MCKSENTRY (SENTRY AMERICAN LINDEN/BASSWOOD), 2" CALIPER, BALLED AND BURLAPPED	EACH	31	6	3	5	5		6	6					
#1009997	TREE, ACER RUBRUMNORTHWOOD (NORTHWOOD RED MAPLE), 2" CALIPER, BALLED AND BURLAPPED	EACH	16		6	3		7							
#1009999	TREE, CELTIS OCCIDENTALIS ULZAM (ULTRA COMMON HACKBERRY), 2" CALIPER, BALLED AND BURLAPPED	EACH	16	11		5									

SCHEDULE OF PERENIAL PLANTS

PERENNIAL PLANT, WETLAND TYPE – 162.00 UNITS TOTAL

WETLAND #1 BUFFER (WEST OF 104TH AVE) – 10.00 UNITS

ASCLEPIAS INCARNATA	SWAMP MILKWEED	100 EACH
CALAMOGROSTIS CANADENSIS	BLUE JOINT GRASS	100 EACH
EUPATORIUM PERFOLIATUM	COMMON BONESET	100 EACH
GLYCERIA STRIATA	FOWL MANNA GRASS	100 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	100 EACH
LYCOPUS AMERICANUS	WATER HOREHOUND	100 EACH
LYTHRUM ALATUM	WINGED LOOSESTRIFE	100 EACH
MIMULUS RINGENS	MONKEY FLOWER	100 EACH
PENTHORUM SEDOIDES	DITCH STONECROP	100 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	100 EACH

WETLAND #1 BUFFER (EAST OF 104TH AVE) – 21.00 UNITS

ASCLEPIAS INCARNATA	SWAMP MILKWEED	100 EACH
CALAMOGROSTIS CANADENSIS	BLUE JOINT GRASS	100 EACH
CAREX HYSTERICINA	PORCUPINE SEDGE	100 EACH
CAREX VULPINOIDES	BROWN FOX SEDGE	100 EACH
EUPATORIUM MACUATUM	SPOTTED JOE PYE WEED	100 EACH
EUPATORIUM PERFOLIATUM	COMMON BONESET	100 EACH
GLYCERIA STRIATA	FOWL MANNA GRASS	100 EACH
IRIS VIRGINICA VAR.SHREVEI	BLUE FLAG IRIS	100 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	100 EACH
LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	100 EACH
LYCOPUS AMERICANUS	WATER HOREHOUND	100 EACH
LYTHRUM ALATUM	WINGED LOOSESTRIFE	100 EACH
MIMULUS RINGENS	MONKEY FLOWER	100 EACH
PANICUM VIRGATUM	SWITCH GRASS	100 EACH
PENTHORUM SEDOIDES	DITCH STONECROP	100 EACH
SAGITTARIA LATIFOLIA	ARROWHEAD	100 EACH
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	100 EACH
SCIRPUS ATROVIRENS	DARK GREEN RUSH	100 EACH
SCIRPUS PENDULUS	RED BULRUSH	100 EACH
SPARGANIUM EURYCARPUM	COMMON BUR REED	100 EACH
VERBENA HASTATA	HOARY VERVAIN	100 EACH

WETLAND #1A BUFFER – 25.00 UNITS

ASCLEPIAS INCARNATA	SWAMP MILKWEED	500 EACH
CAREX LACUSTRIS	COMMON LAKE SEDGE	500 EACH
EUPATORIUM PERFOLIATUM	COMMON BONESET	500 EACH
HELIANTHUS GROSSERRATUS	SAW-TOOTHED SUNFLOWER	500 EACH
IRIS VIRGINICA VAR.SHREVEI	BLUE FLAG IRIS	500 EACH

SCHEDULE OF PERENIAL PLANTS (CONT.)

WATER QUALITY BMP #1 – 28.00 UNITS
WATER QUALITY BMP #2 – 13.00 UNITS
WATER QUALITY BMP #3 – 19.00 UNITS

ASCLEPIAS INCARNATA	SWAMP MILKWEED	400 EACH
CALAMOGROSTIS CANADENSIS	BLUE JOINT GRASS	200 EACH
CAREX HYSTERICINA	PORCUPINE SEDGE	200 EACH
CAREX VULPINOIDES	BROWN FOX SEDGE	200 EACH
EUPATORIUM MACUATUM	SPOTTED JOE PYE WEED	200 EACH
EUPATORIUM PERFOLIATUM	COMMON BONESET	400 EACH
GLYCERIA STRIATA	FOWL MANNA GRASS	200 EACH
IRIS VIRGINICA VAR.SHREVEI	BLUE FLAG IRIS	200 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	400 EACH
LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	200 EACH
LYCOPUS AMERICANUS	WATER HOREHOUND	400 EACH
LYTHRUM ALATUM	WINGED LOOSESTRIFE	400 EACH
MIMULUS RINGENS	MONKEY FLOWER	400 EACH
PANICUM VIRGATUM	SWITCH GRASS	200 EACH
PENTHORUM SEDOIDES	DITCH STONECROP	400 EACH
SAGITTARIA LATIFOLIA	ARROWHEAD	200 EACH
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	200 EACH
SCIRPUS ATROVIRENS	DARK GREEN RUSH	200 EACH
SCIRPUS PENDULUS	RED BULRUSH	200 EACH
SPARGANIUM EURYCARPUM	COMMON BUR REED	200 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	400 EACH
VERBENA HASTATA	HOARY VERVAIN	200 EACH

WETLAND #3 BUFFER (FARMED WETLAND) – 4.00 UNITS

IRIS VIRGINICA VAR.SHREVEI	BLUE FLAG IRIS	200 EACH
SAGITTARIA LATIFOLIA	ARROWHEAD	200 EACH

WETLAND #4 BUFFER (SEDGE MEADOW, WET MEADOW) – 3.00 UNITS

ASTER LATERIFLORUS	SIDE-FLOWERING ASTER	150 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	150 EACH

WETLAND #7 BUFFER (SPRING CREEK WETLAND- NORTH) – 22.00 UNITS

ASCLEPIAS INCARNATA	SWAMP MILKWEED	250 EACH
ASTER LATERIFLORUS	SIDE-FLOWERING ASTER	250 EACH
EUPATORIUM RUGOSUM	WHITE SNAKEROOT	250 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	250 EACH
RUDBECKIA LACINIATA	WILD GOLDEN GLOW	250 EACH
SCIRPUS CYPERINUS	WOOL GRASS	250 EACH
SCUTELLARIA LATERIFOLIA	MAD-DOG SKULLCAP	250 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	450 EACH

NOTE:
ALL PERENNIAL PLANTS SHALL BE INTERMIXED, STAGGERED AND SPACED AS NOTED ON PLANS.

FILE NAME = D160L72-sht-lndscp.dgn	USER NAME = jwmiller	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
$MODELNAME$	PLOT DATE = 10/24/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING SCHEDULE

SCALE: | SHEET 8 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	311
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

SCHEDULE OF PERENIAL PLANTS (CONT.)

WETLAND #7 BUFFER (SPRING CREEK WETLAND-SOUTH) – 11.00 UNITS		
ASCLEPIAS INCARNATA	SWAMP MILKWEED	100 EACH
ASTER LATERIFLORUS	SIDE-FLOWERING ASTER	100 EACH
EUPATORIUM RUGOSUM	WHITE SNAKEROOT	100 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	100 EACH
RUDBECKIA LACINIATA	WILD GOLDEN GLOW	100 EACH
SCIRPUS CYPERINUS	WOOL GRASS	100 EACH
SCUTELLARIA LATERIFOLIA	MAD-DOG SKULLCAP	100 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	400 EACH
WETLAND #12 BUFFER (MARSH) – 3.00 UNITS		
ASCLEPIAS INCARNATA	SWAMP MILKWEED	100 EACH
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	100 EACH
CAREX LACUSTRIS	COMMON LAKE SEDGE	100 EACH
WETLAND #13 BUFFER (FARMED WETLAND, WOLF RD) – 3.00 UNITS		
HIBISCUS PALUSTRIS	SWAMP ROSE MALLOW	150 EACH
SCIRPUS FLUVIATILIS	RIVER BULRUSH	150 EACH

SCHEDULE OF PERENIAL PLANTS (CONT.)

PERENIAL PLANT, SEDGE MEADOW TYPE - 31.50 UNITS TOTAL

WATER QUALITY BMP #4 – 12.00 UNITS		
CAREX VULPINOIDEA	BROWN FOX SEDGE	200 EACH
JUNCUS TORREYI	TORREY'S RUSH	200 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	200 EACH
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	200 EACH
SCIRPUS VALIDUS	GREAT BULRUSH	200 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	200 EACH
WATER QUALITY SWALE WEST OF SPRING CREEK BMP #5 – 4.50 UNITS		
CAREX VULPINOIDEA	BROWN FOX SEDGE	50 EACH
JUNCUS TORREYI	TORREY'S RUSH	50 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	50 EACH
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	100 EACH
SCIRPUS VALIDUS	GREAT BULRUSH	100 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	100 EACH
WATER QUALITY BMP #5 – 15.00 UNITS		
CAREX VULPINOIDEA	BROWN FOX SEDGE	250 EACH
JUNCUS TORREYI	TORREY'S RUSH	250 EACH
LEERSIA ORYZOIDES	RICE CUT GRASS	250 EACH
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	250 EACH
SCIRPUS VALIDUS	GREAT BULRUSH	250 EACH
SPARTINA PECTINATA	PRAIRIE CORD GRASS	250 EACH

PERENNIAL PLANT CARE CALENDAR

ACTIVITY	TIME
PLANT PERENNIALS AS PER PLAN	MAY 1 - JUNE 15 AUGUST 15 - SEPTEMBER 15
MULCH PERENNIAL BEDS	24 HOURS AFTER PLANTING
INSTALL SELECTIVE MOW STAKES AS PER PLAN	PRIOR TO PERIOD OF ESTABLISHMENT INSPECTION
PERENNIAL PLANT PERIOD OF ESTABLISHMENT - WATER ONCE EVERY 7 DAYS FOR 4 WEEKS	WITHIN 30 DAYS AFTER PLANTING
REPLACE DEAD PLANTS	AFTER PERIOD OF ESTABLISHMENT INSPECTION
PERENNIAL PLANT CARE (FIRST CYCLE)	30 DAYS AFTER PERIOD OF ESTABLISHMENT INSPECTION
PERENNIAL PLANT CARE (SECOND CYCLE)	60 DAYS AFTER PERIOD OF ESTABLISHMENT INSPECTION
PERENNIAL PLANT CARE (THIRD CYCLE)	90 DAYS AFTER PERIOD OF ESTABLISHMENT INSPECTION
SUPPLEMENTAL WATERING	USE AFTER PERIOD OF EST. INSP. AS DIRECTED BY RESIDENT ENGINEER

NOTE:
ALL PERENNIAL PLANTS SHALL BE INTERMIXED, STAGGERED AND SPACED AS NOTED ON PLANS.

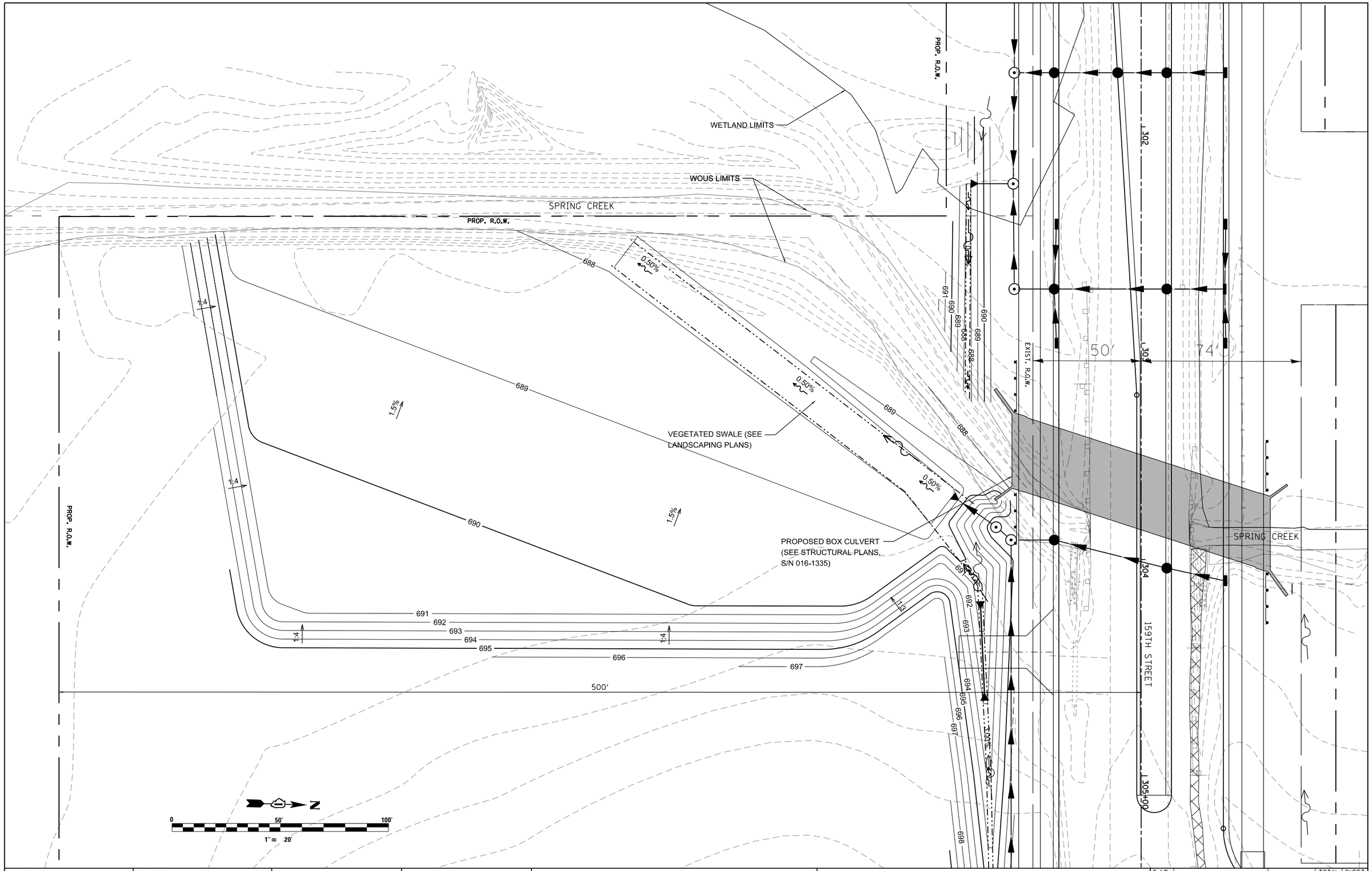
FILE NAME = DI60L72-sht-lndscp.dgn	USER NAME = jwmiller	DESIGNED - JPW	REVISED -
		DRAWN - JPW	REVISED -
	PLOT SCALE = 1:100	CHECKED - JWM	REVISED -
$MODELNAME$	PLOT DATE = 10/24/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING SCHEDULE

SCALE: | SHEET 8 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	312
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		



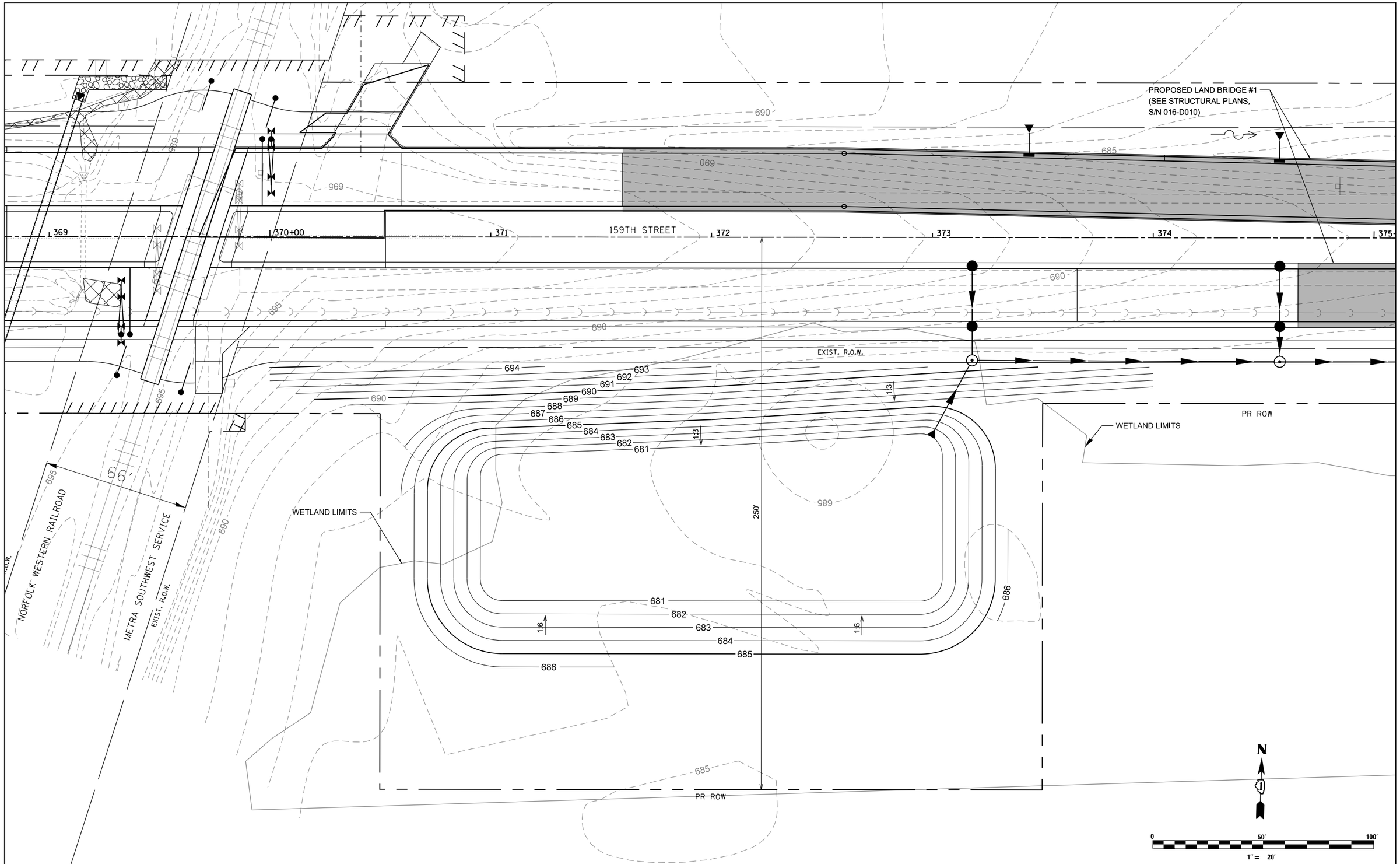
FILE NAME = D160L72-sht-grading.dgn	USER NAME = rdanley	DESIGNED - CGC	REVISED -
		DRAWN - CGC	REVISED -
$MODELNAME$	PLOT SCALE = 1:40	CHECKED - JWM	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GRADING PLAN
SPRING CREEK COMPENSATORY STORAGE BASIN

SCALE: 1" = 20' | SHEET 1 OF 2 SHEETS | STA. - | TO STA. -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	313
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



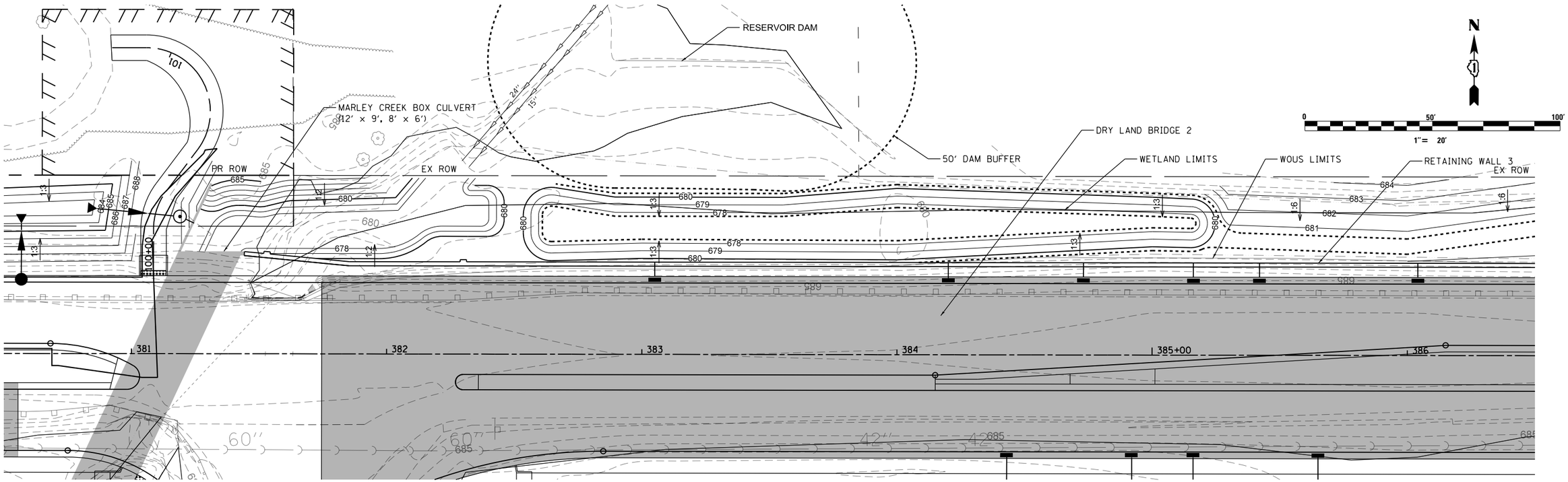
FILE NAME = D160L72-sht-grading.dgn	USER NAME = rdanley	DESIGNED - CGC	REVISED -
		DRAWN - CGC	REVISED -
	PLOT SCALE = 1:40	CHECKED - JWM	REVISED -
$MODELNAME$	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

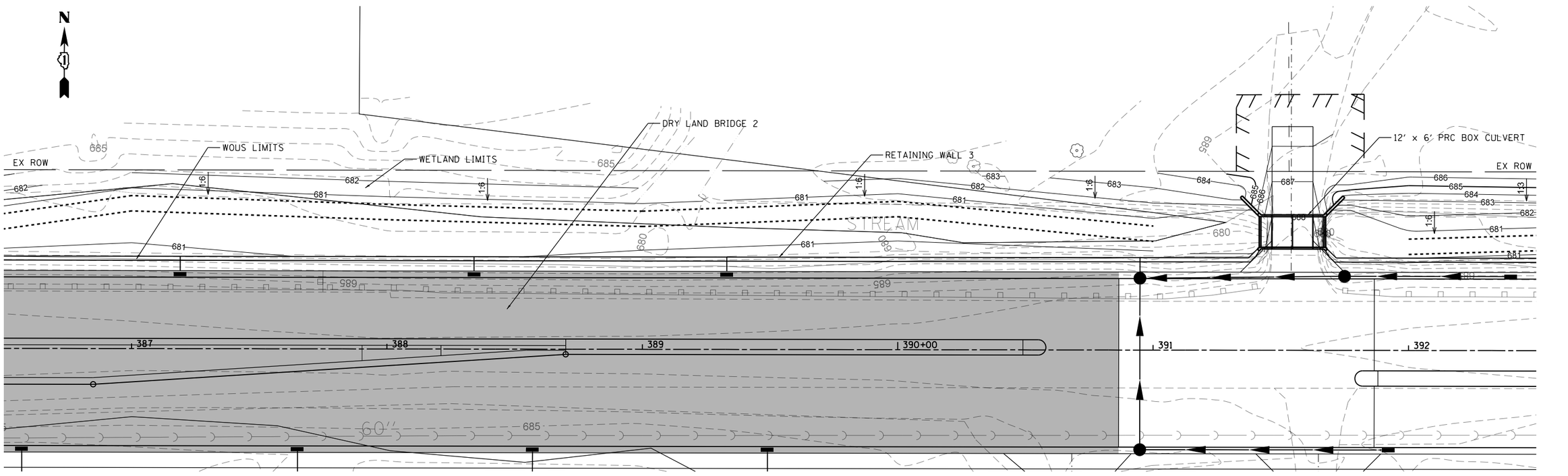
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GRADING PLAN
MARLEY CREEK COMPENSATORY STORAGE BASIN

SCALE: 1" = 20' | SHEET 2 OF 5 SHEETS | STA. - | TO STA. -

F.AP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	314
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			





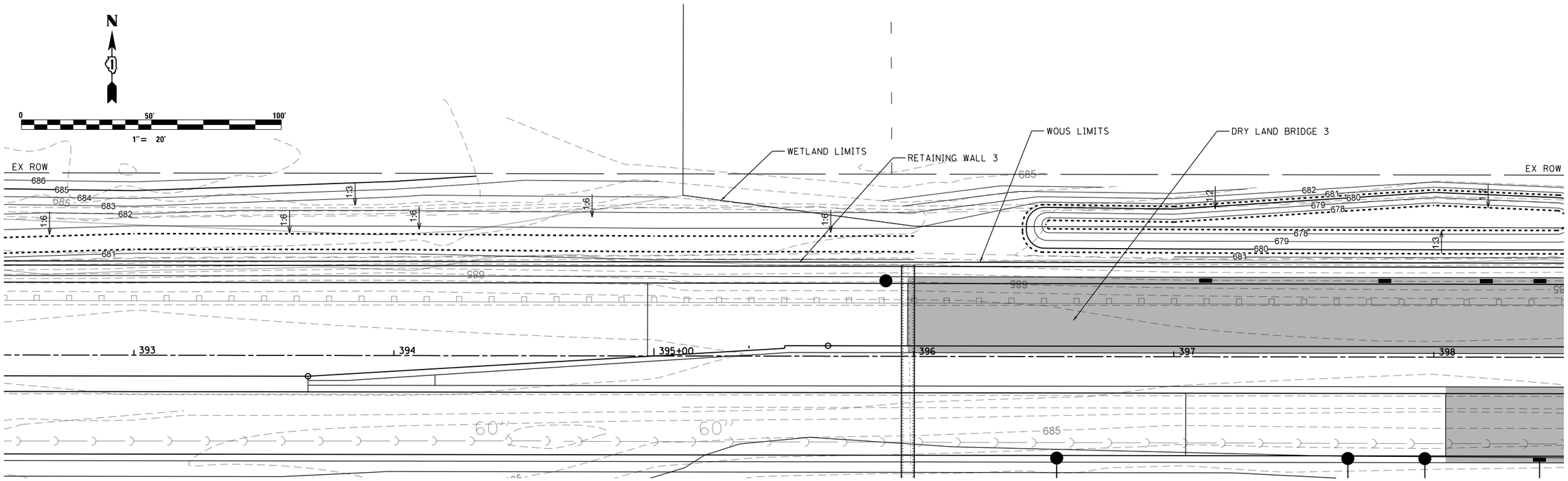
FILE NAME = D160L72-sht-grading.dgn	USER NAME = rdanley	DESIGNED -	REVISED -
		DRAWN -	REVISED -
$MODELNAME$	PLOT SCALE = 1:40	CHECKED -	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

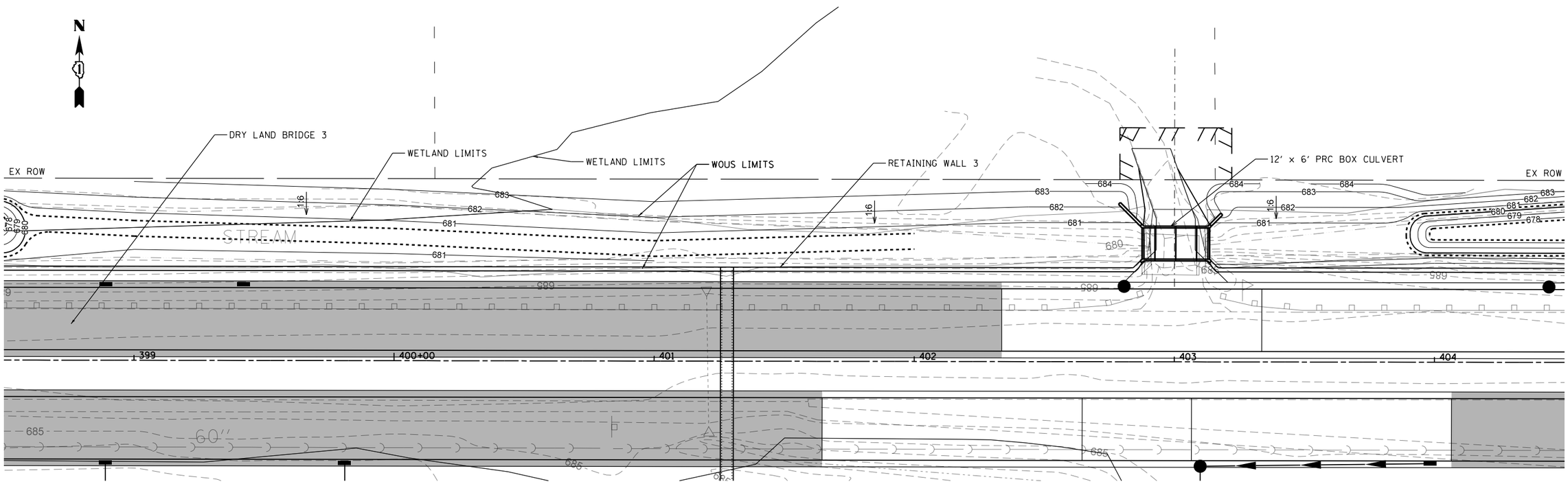
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GRADING PLAN
ABANDONED MARLEY CREEK

SCALE: 1" = 20' | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	315
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			





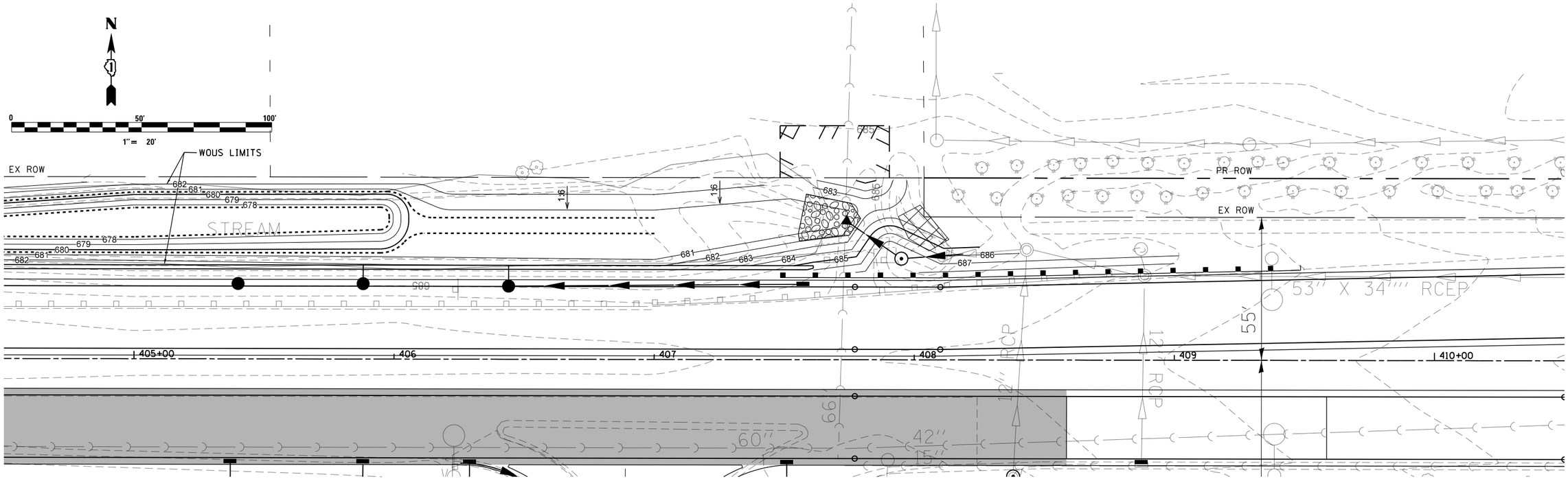
FILE NAME = D160L72-sht-grading.dgn	USER NAME = rdanley	DESIGNED -	REVISED -
		DRAWN -	REVISED -
$MODELNAME$	PLOT SCALE = 1:40	CHECKED -	REVISED -
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GRADING PLAN
ABANDONED MARLEY CREEK

SCALE: 1" = 20' | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.AP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	316
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		



FILE NAME = D160L72-sht-grading.dgn $MODELNAME$	USER NAME = rdanley	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**GRADING PLAN ABANDONED MARLEY CREEK**			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					351	2010-081-R	COOK	1045	317
	PLOT SCALE = 1:40	CHECKED -	REVISED -							CONTRACT NO. 60L72		
	PLOT DATE = 10/23/2014	DATE - 10/28/14	REVISED -		SCALE: 1" = 20'	SHEET 5 OF 5 SHEETS	STA. TO STA.			ILLINOIS FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET			
COMMUNICATIONS CABINET	CC R	ECC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTABLE POWER SUPPLY	UPS R	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G Y G	R Y G Y G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD "RB" INDICATES REFLECTIVE BACKPLATE		R Y G Y G "P"	R Y G Y G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES 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	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		1	1
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F		36F	36F
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RPF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
QUEUE DETECTOR		Q	Q
PREFORMED QUEUE DETECTOR		PQ	PQ
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

TS-1

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		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	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. 1 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R		1045	318
	TS-05	CONTRACT NO. 60L72		
FED. ROAD DIST. NO. 1	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.

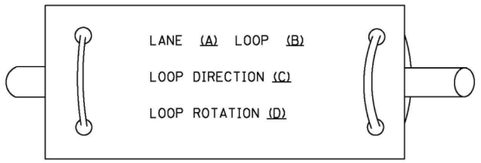
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

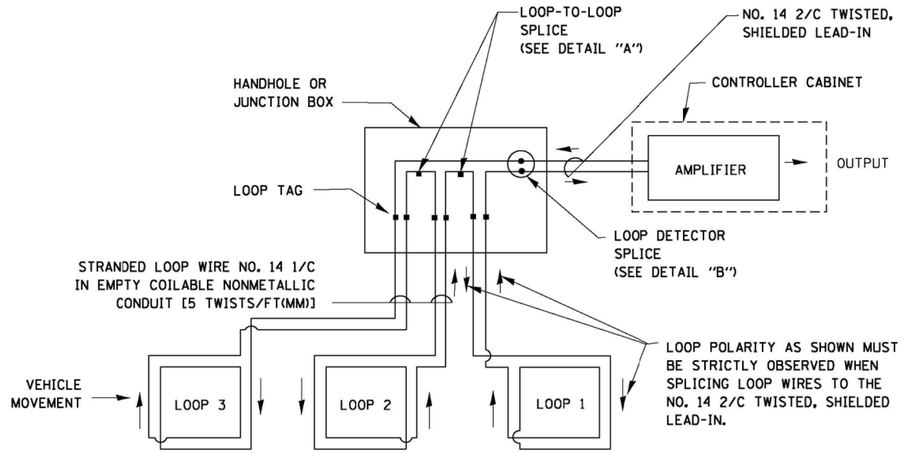


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

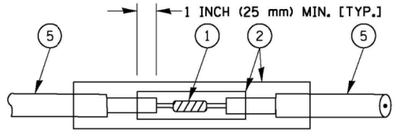
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

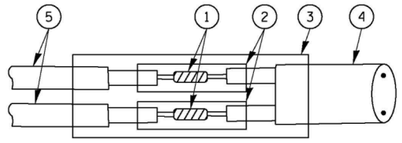


DETECTOR LOOP WIRING SCHEMATIC

- 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.

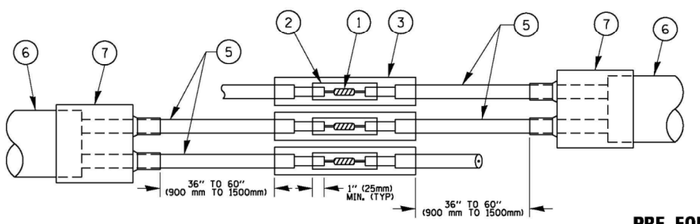


DETAIL "A"
LOOP-TO-LOOP SPLICE



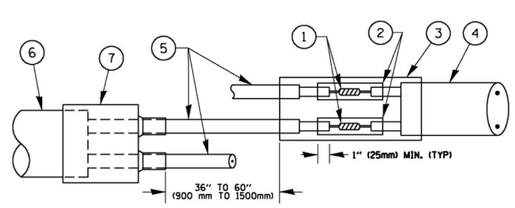
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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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	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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R		1045	319
	TS-05	CONTRACT NO. 60L72		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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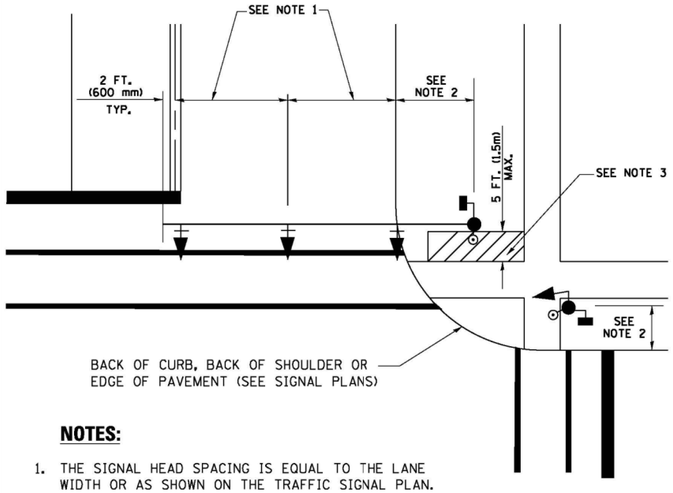
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

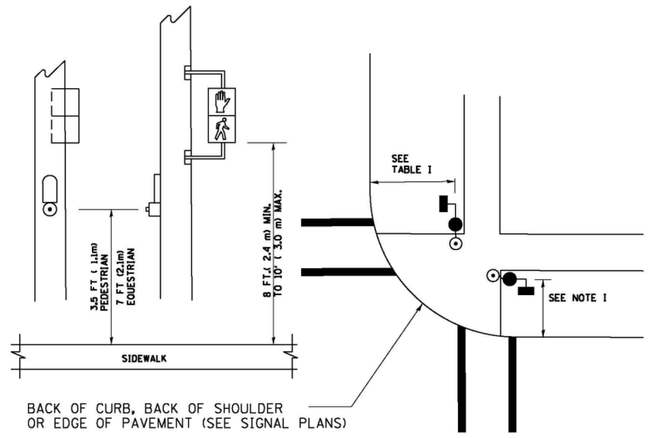
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

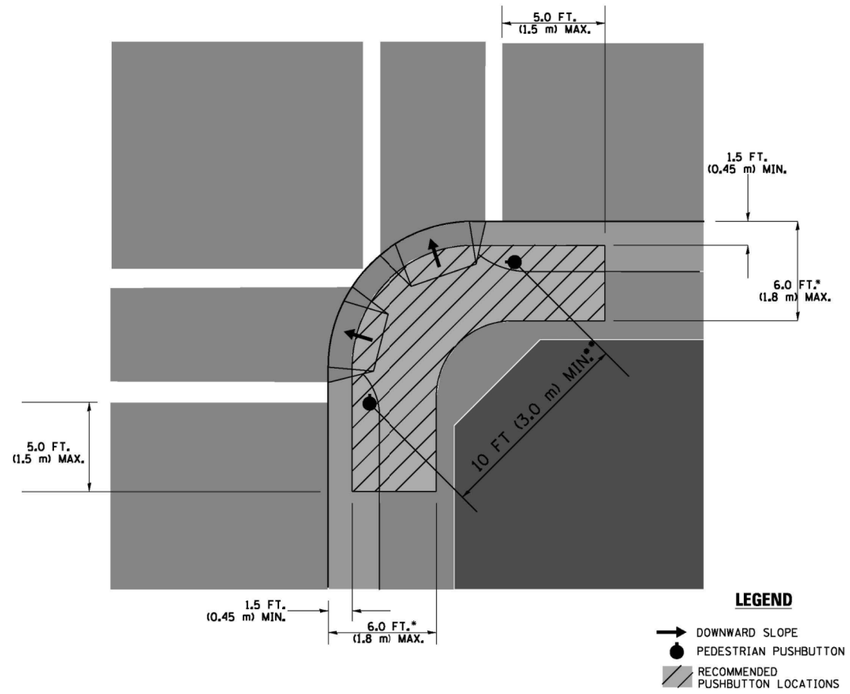
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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.

TS-3

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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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R		1045	320
	TS-05	CONTRACT NO. 60L72		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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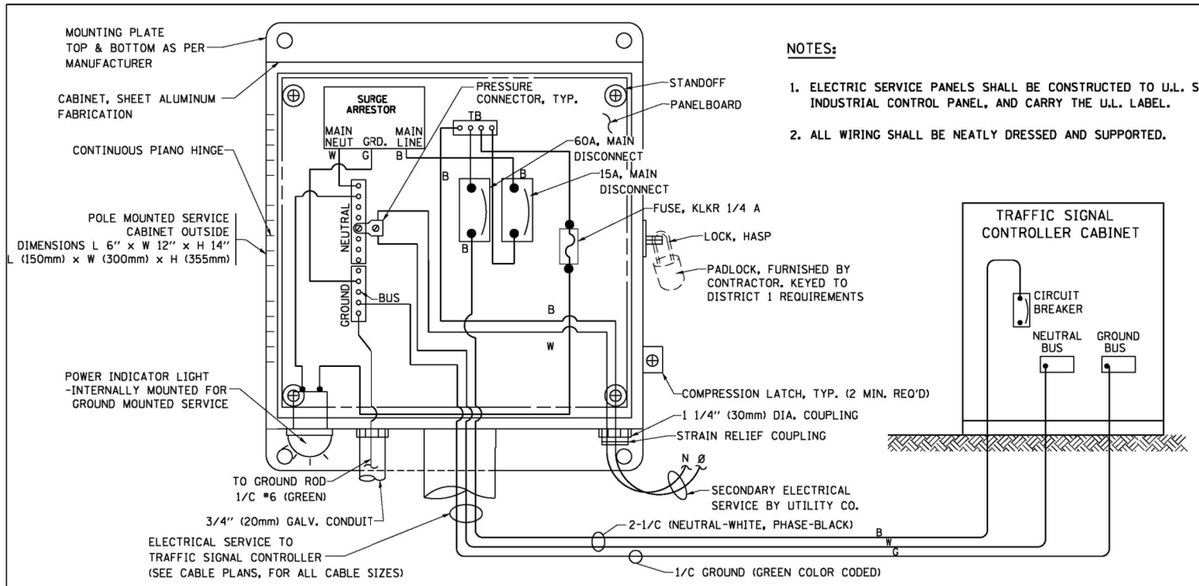


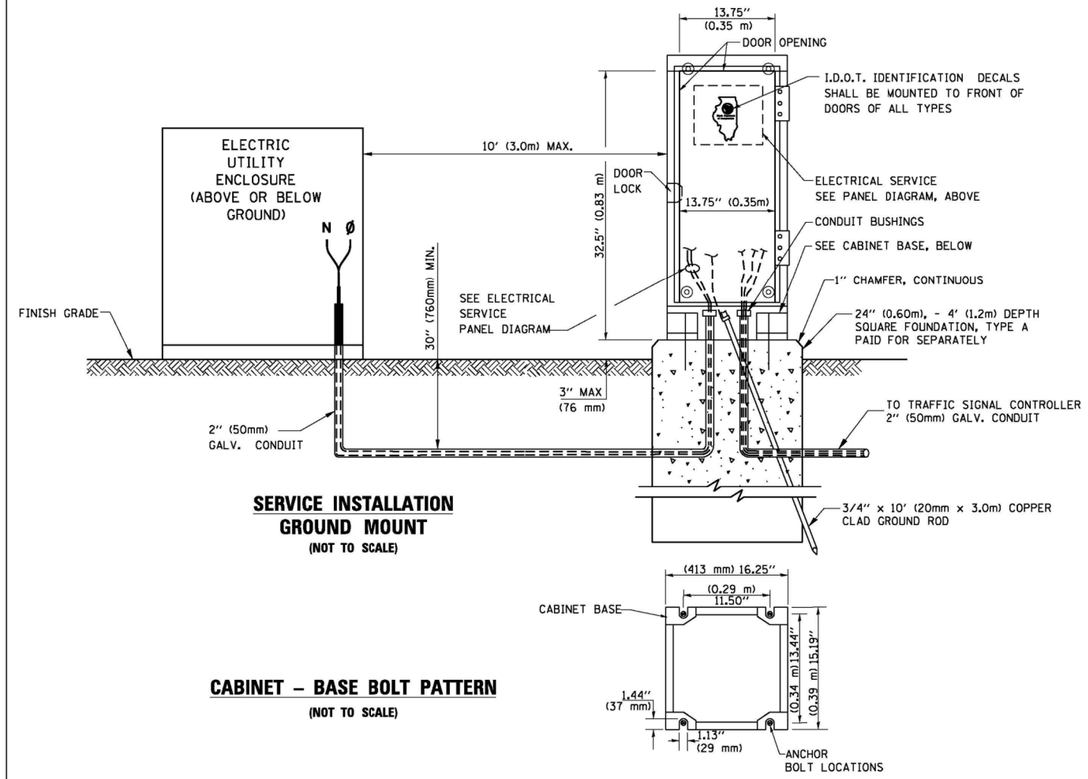
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

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.

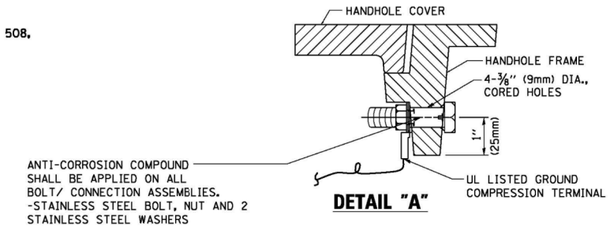


SERVICE INSTALLATION GROUND MOUNT

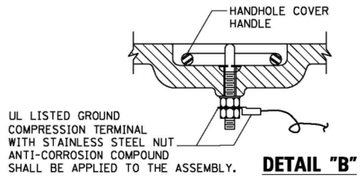
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"



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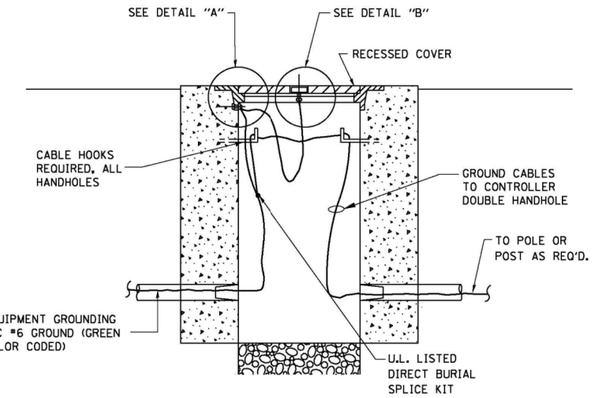
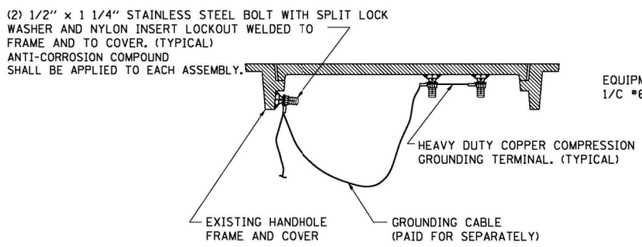


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



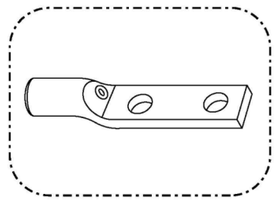
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

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.

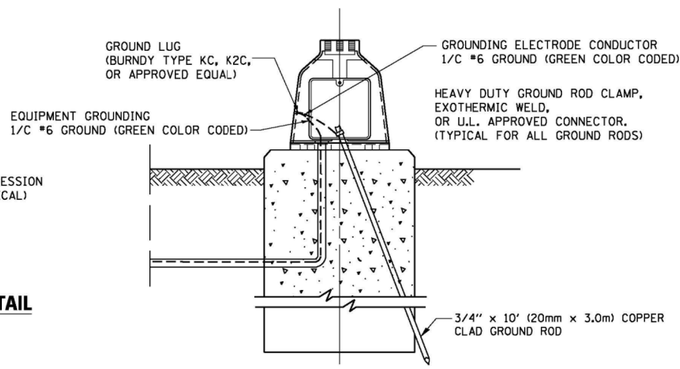


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

3/4" (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.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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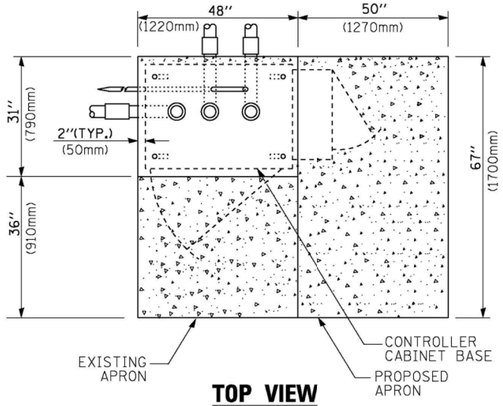
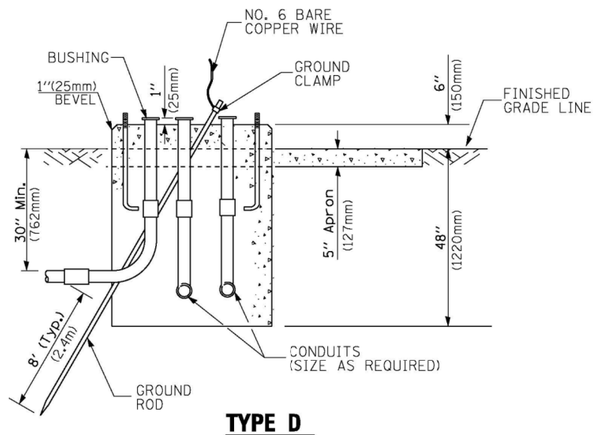
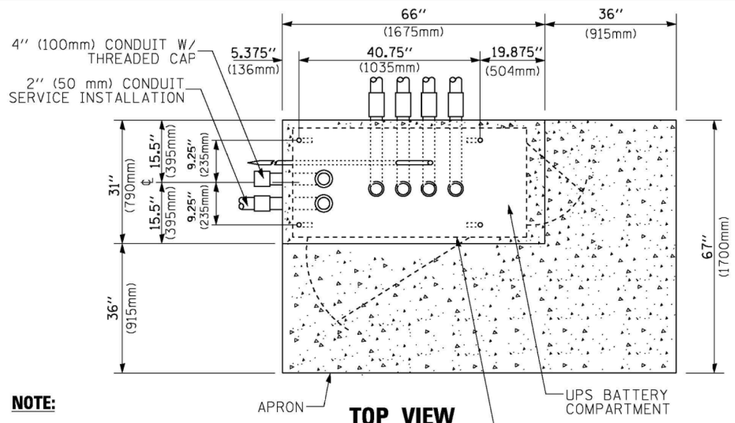
	TS-05	CONTRACT NO.	60L72	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TOP VIEW



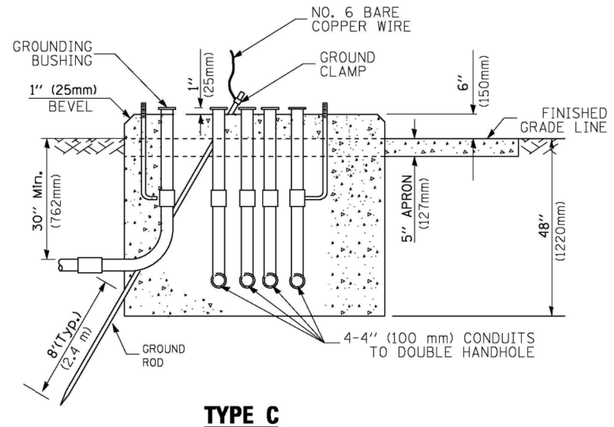
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



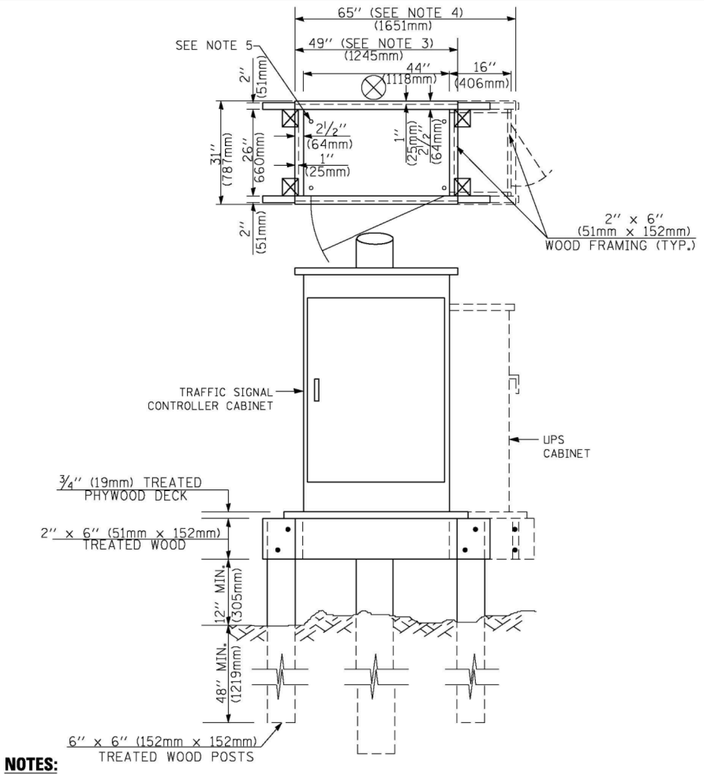
NOTE:

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

TS-5

FILE NAME = c:\pw_work\pwidot\footemj\d0108315\ts05.dgn	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14
		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

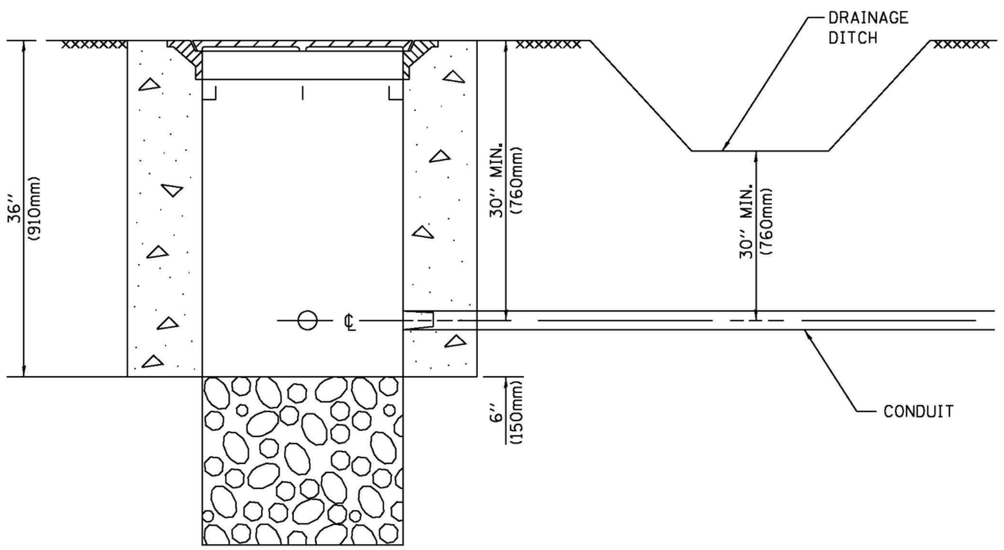
DISTRICT ONE

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R		1045	322
	TS-05	CONTRACT NO. 60L72		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

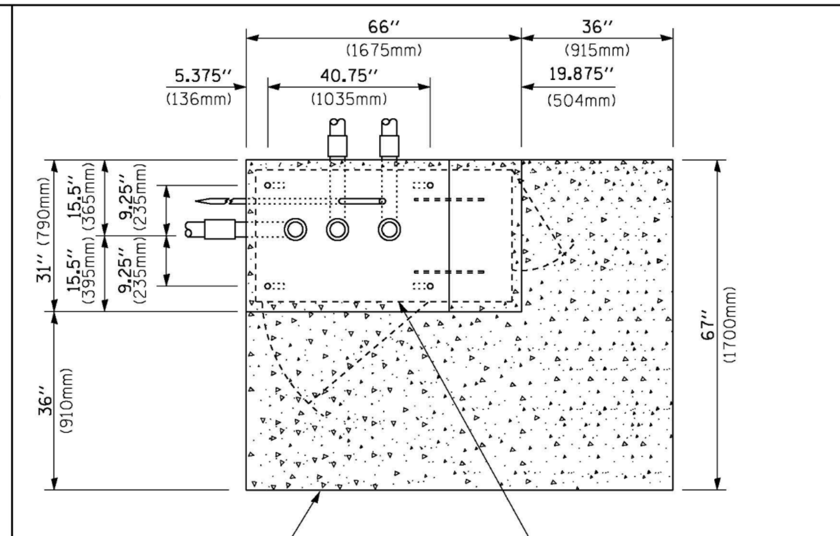
ts05.dgn 1/13/2014 12:30:22 PM FTemp\footemj



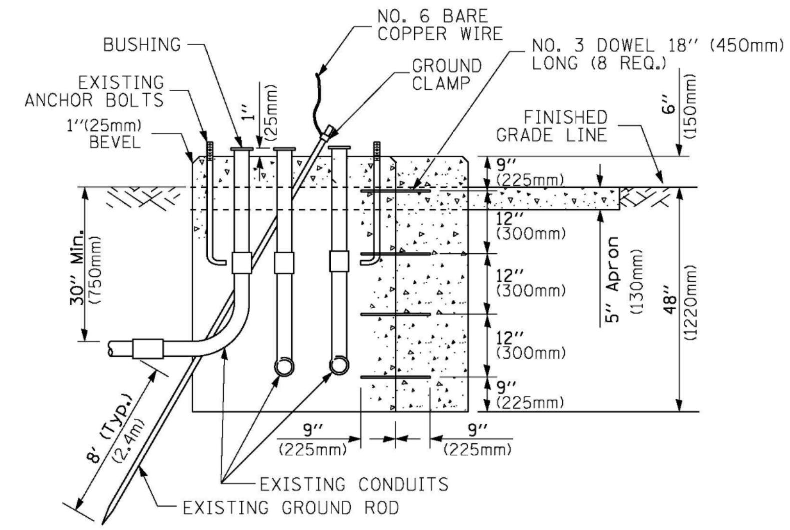
NOTES:

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.

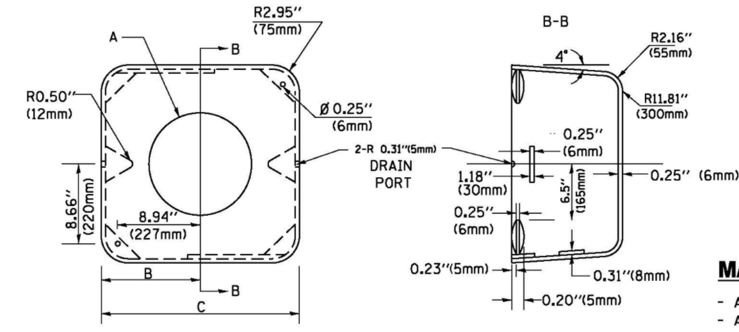
HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



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)

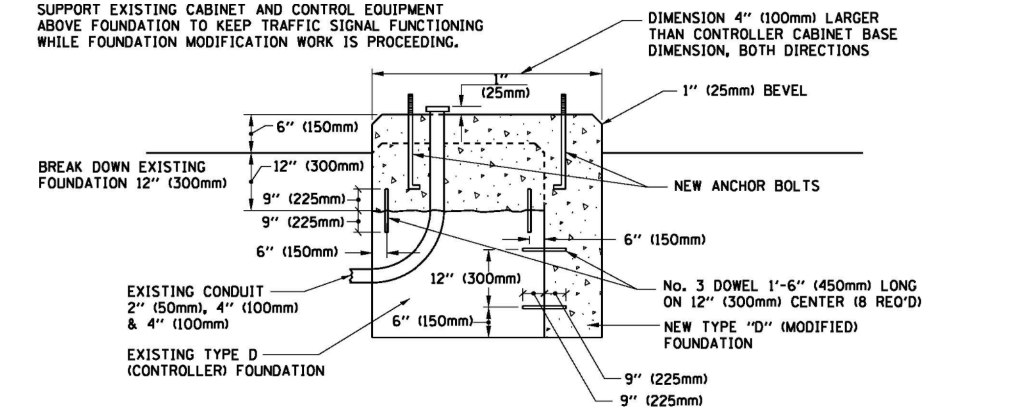
SHROUD

NOTES:

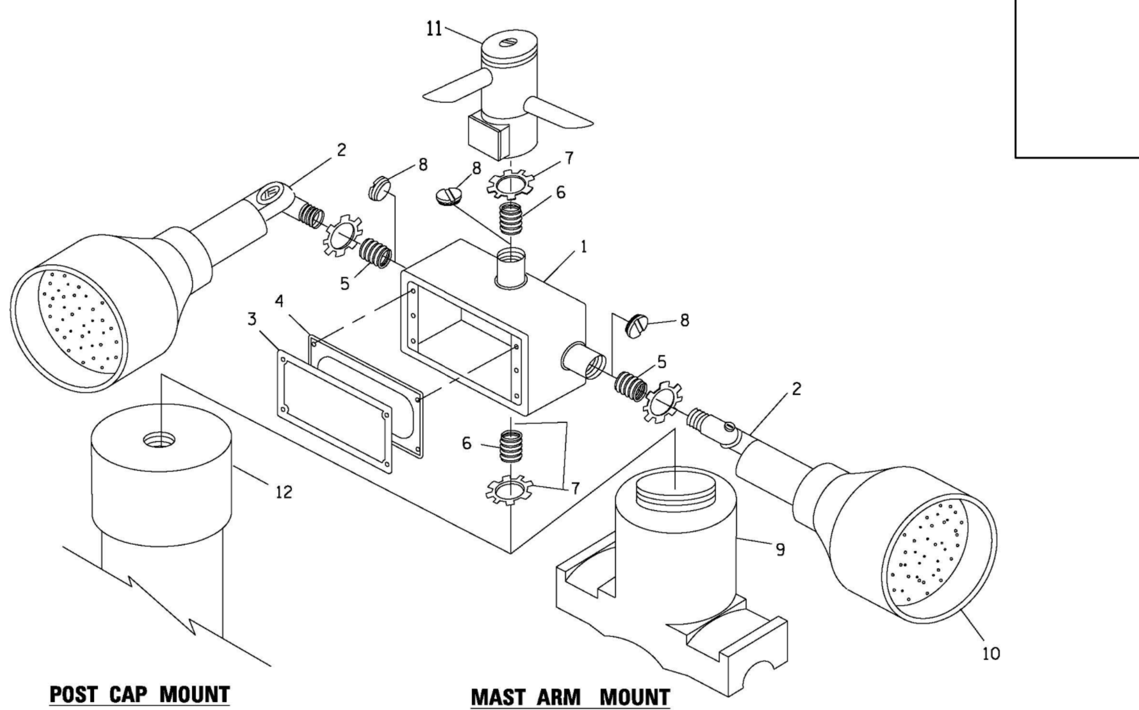
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

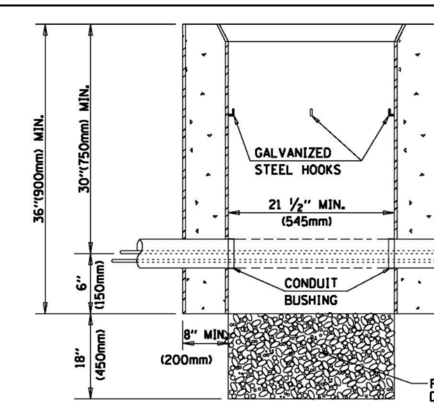
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

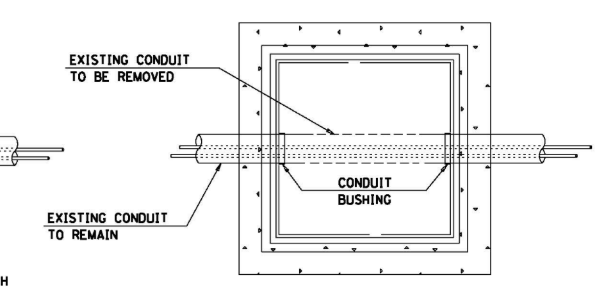
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4"(19 mm) CLOSE NIPPLE
7	3/4"(19 mm) LOCKNUT
8	3/4"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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



ELEVATION



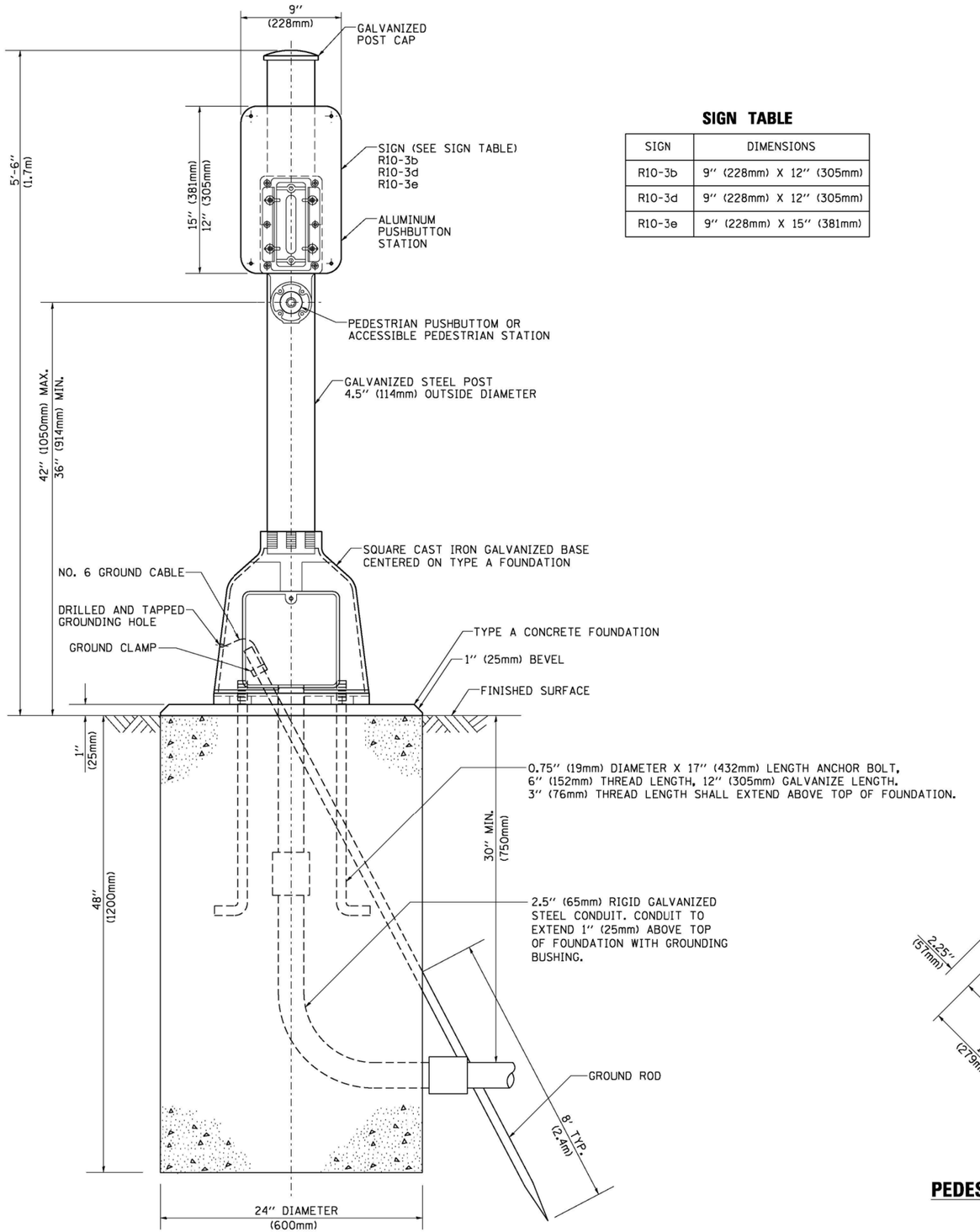
PLAN

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.

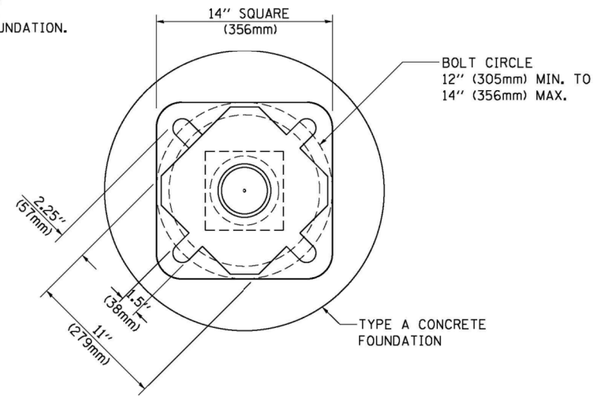
HANDHOLE TO INTERCEPT EXISTING CONDUIT

TS-6



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)

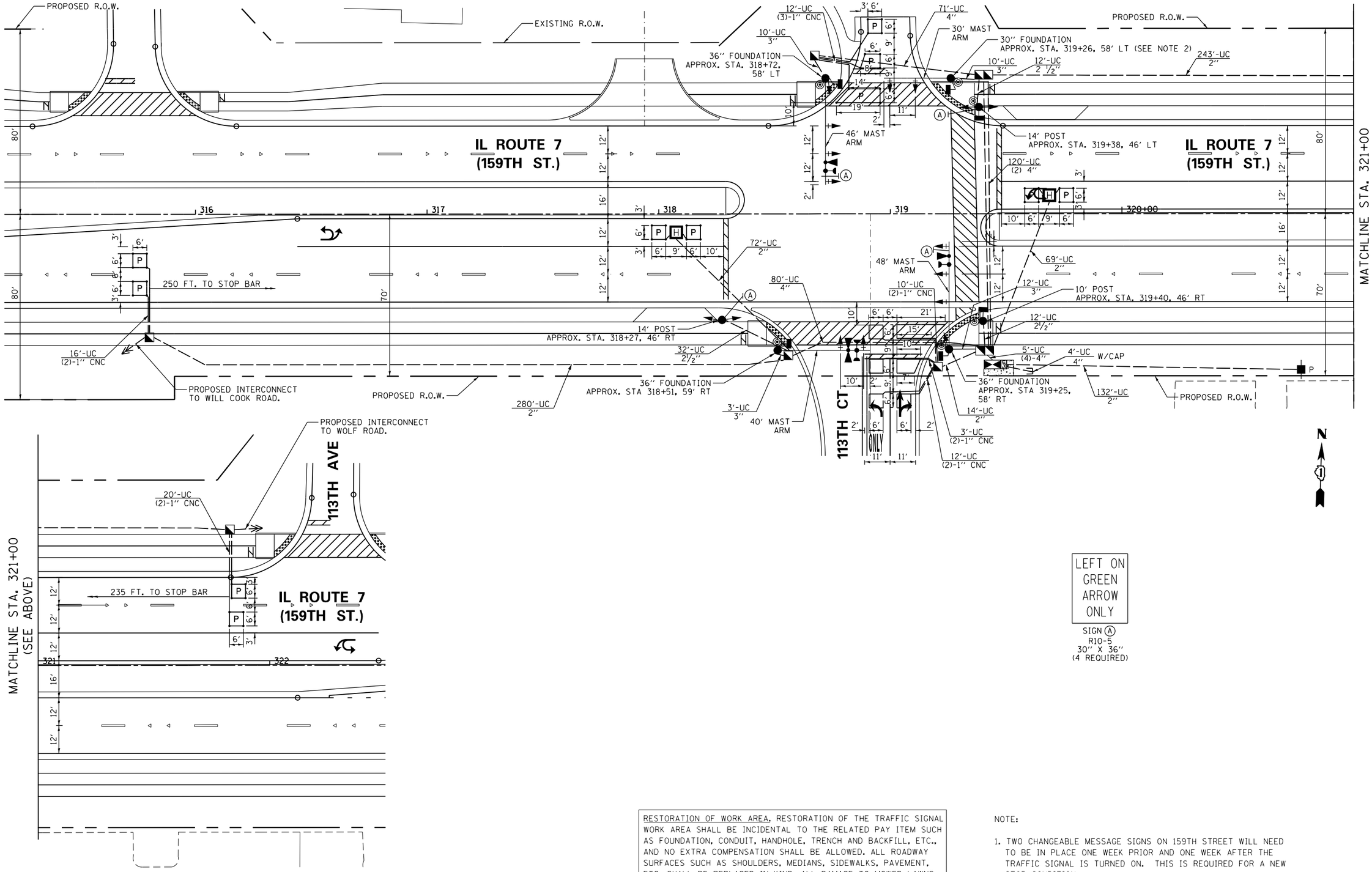


BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

TS-7

FILE NAME = c:\pw_work\pwidot\footemj\d0108315\ts05.dgn	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - GND	REVISED -					351	2010-081-R		1045	324
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -						TS-05	CONTRACT NO. 60L72		
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -		SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30'' X 36''
(4 REQUIRED)

CONTROLLER SHALL BE ''ECONOLITE'' TO MATCH ADJACENT SYSTEM.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:

1. TWO CHANGEABLE MESSAGE SIGNS ON 159TH STREET WILL NEED TO BE IN PLACE ONE WEEK PRIOR AND ONE WEEK AFTER THE TRAFFIC SIGNAL IS TURNED ON. THIS IS REQUIRED FOR A NEW STOP CONDITION
2. CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID UTILITY.

TS-8

FILE NAME = ...\D160L72-sht-TS-15.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 '/ in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
IL ROUTE 7 (159TH ST) & 113TH COURT

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

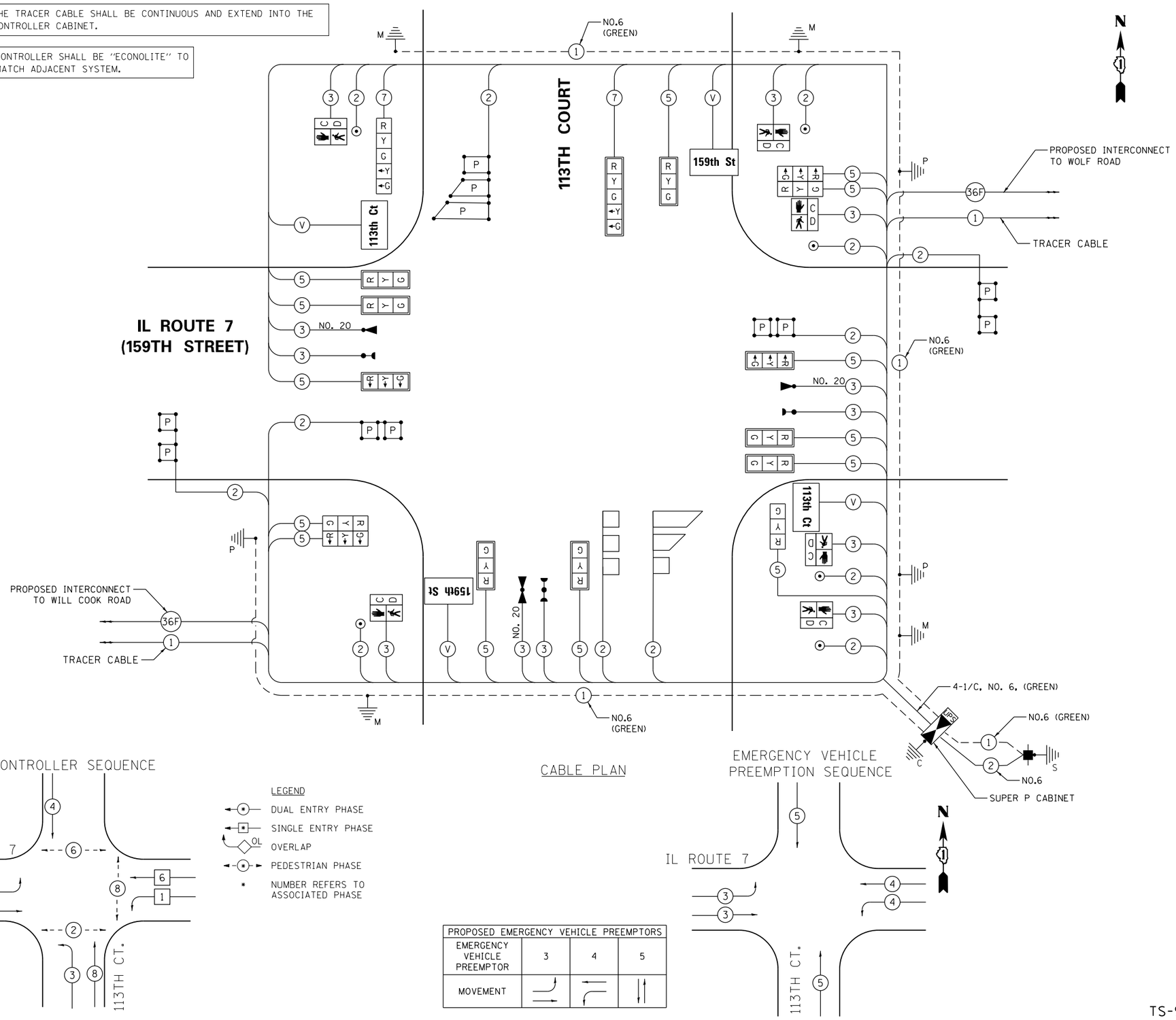
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	325
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

QTY	UNIT	ITEM DESCRIPTION
2	CAL MO	CHANGEABLE MESSAGE SIGN
30	SQ FT	SIGN PANEL - TYPE 1
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
810	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
56	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
35	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
415	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
5	EACH	HANDHOLE
2	EACH	HEAVY-DUTY HANDHOLE
2	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER - FIBER OPTIC
829	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1433	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2488	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
478	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1406	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
162	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
820	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.
12	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
14	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
39	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
9	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
6	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
7	EACH	INDUCTIVE LOOP DETECTOR
244	FOOT	DETECTOR LOOP, TYPE I
344	FOOT	PREFORMED DETECTOR LOOP
3	EACH	LIGHT DETECTOR ✳
1	EACH	LIGHT DETECTOR AMPLIFIER ✳
6	EACH	PEDESTRIAN PUSH-BUTTON
4	EACH	ILLUMINATED STREET NAME SIGN ✳✳✳
580	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO 20 3/C ✳
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL ✳✳
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

✳ 100% COST TO ORLAND FIRE PROTECTION DISTRICT
✳✳ SUPER P CABINET
✳✳✳ 100% COST TO VILLAGE OF ORLAND PARK

THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.



I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

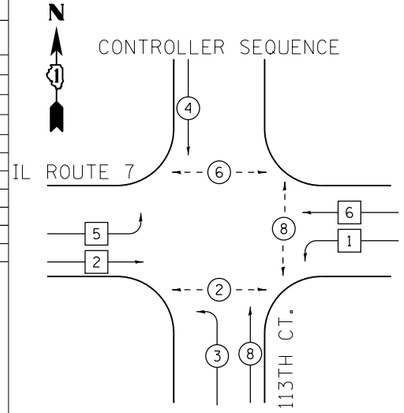
TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16		17	0.50	136.00
(YELLOW)	16		25	0.25	100.00
(GREEN)	16		15	0.25	60.00
ARROW	4		12	0.10	4.8
PED. SIGNAL	6		25	1.00	150.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN			25	1.00	

ENERGY COSTS TO: TOTAL = 550.80

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

CONTROLLER SEQUENCE



LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

CABLE PLAN

PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

EMERGENCY VEHICLE PREEMPTION SEQUENCE

TS-9

FILE NAME = ...\D160L72-sht-TS-16.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
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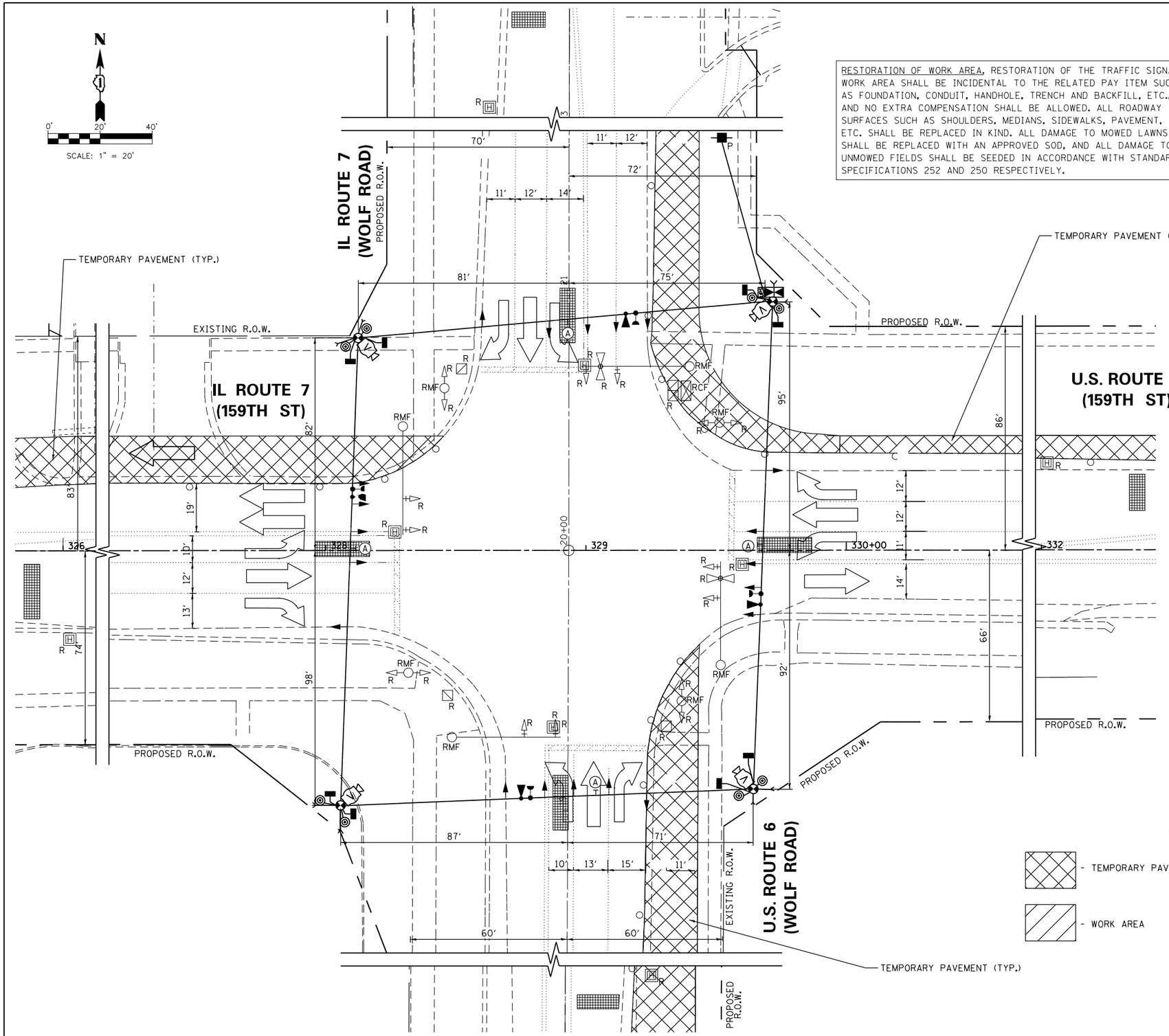
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND PHASE DESIGNATION DIAGRAM
IL ROUTE 7 (159TH STREET) & 113TH COURT

SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A. P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	326
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
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6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
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10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO THE AGENCY LISTED BELOW.

AGENCY: ORLAND FIRE PROTECTION DISTRICT

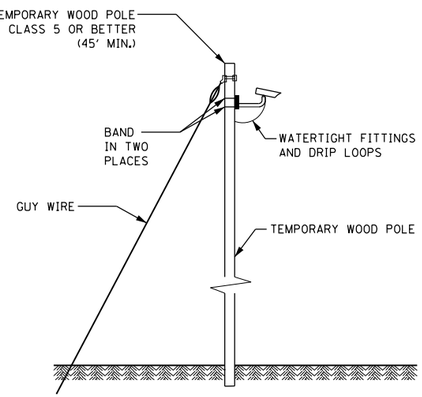
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT 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.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
4	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
4	EACH	SIGNAL HEAD, 2-FACE, 1 3-SECTION, 1 5-SECTION
8	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	STEEL MAST ARM AND POLE
4	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

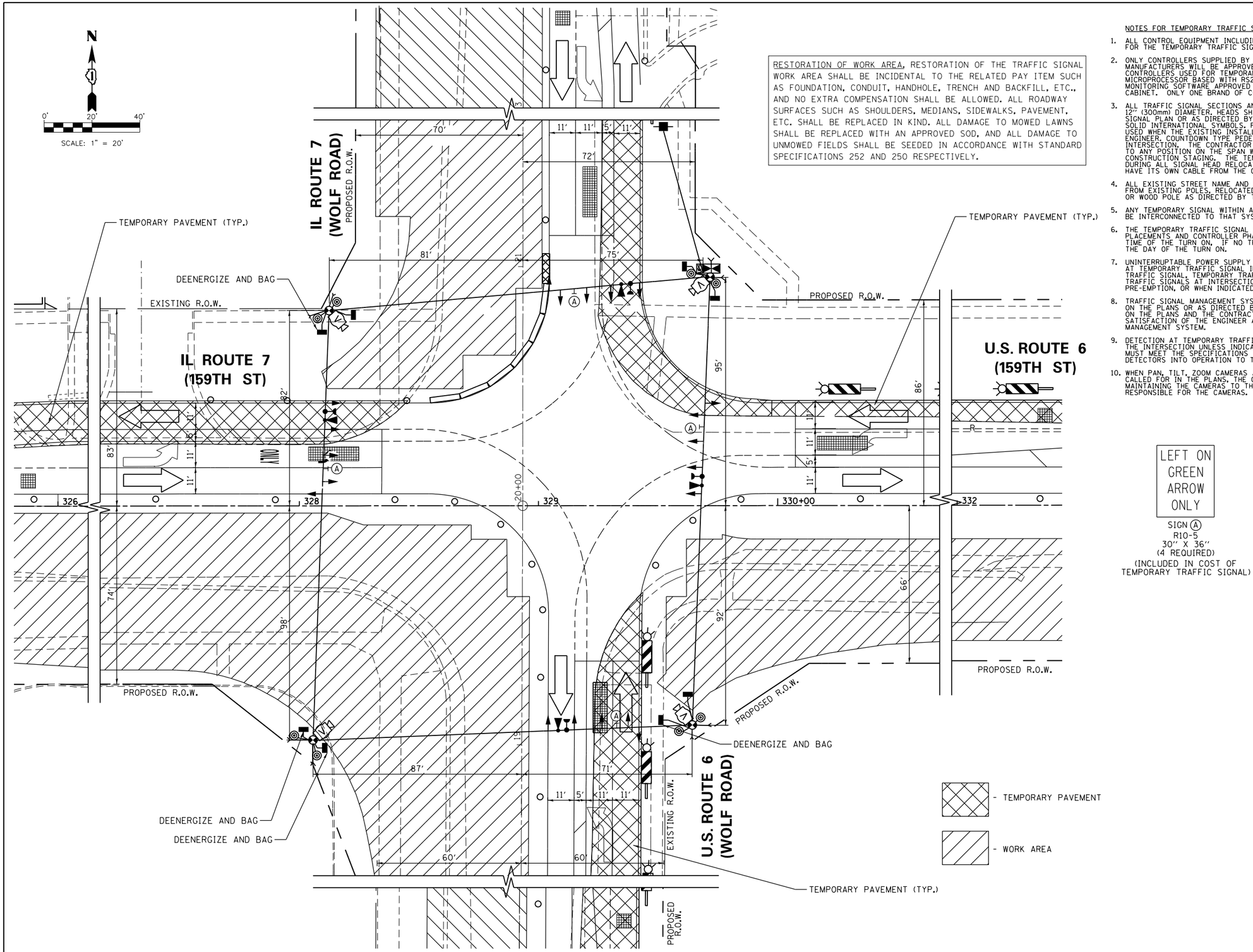


TEMPORARY VIDEO DETECTION MOUNTING DETAIL

NOT TO SCALE

TS-10

FILE NAME = ...\D160L72-sht-tempTS-07AA.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION (PRESTAGE-1) AND REMOVAL PLAN 159TH ST & WOLF RD	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SA	REVISED -			351	2010-081-R	COOK	1045	327
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -						CONTRACT NO. 60L72	
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		SCALE: 1"=20' | SHEET NO. 1 OF 9 SHEETS | STA. | TO STA.			ILLINOIS	FED. AID PROJECT	



NOTES FOR TEMPORARY TRAFFIC SIGNALS:

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LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

TS-11

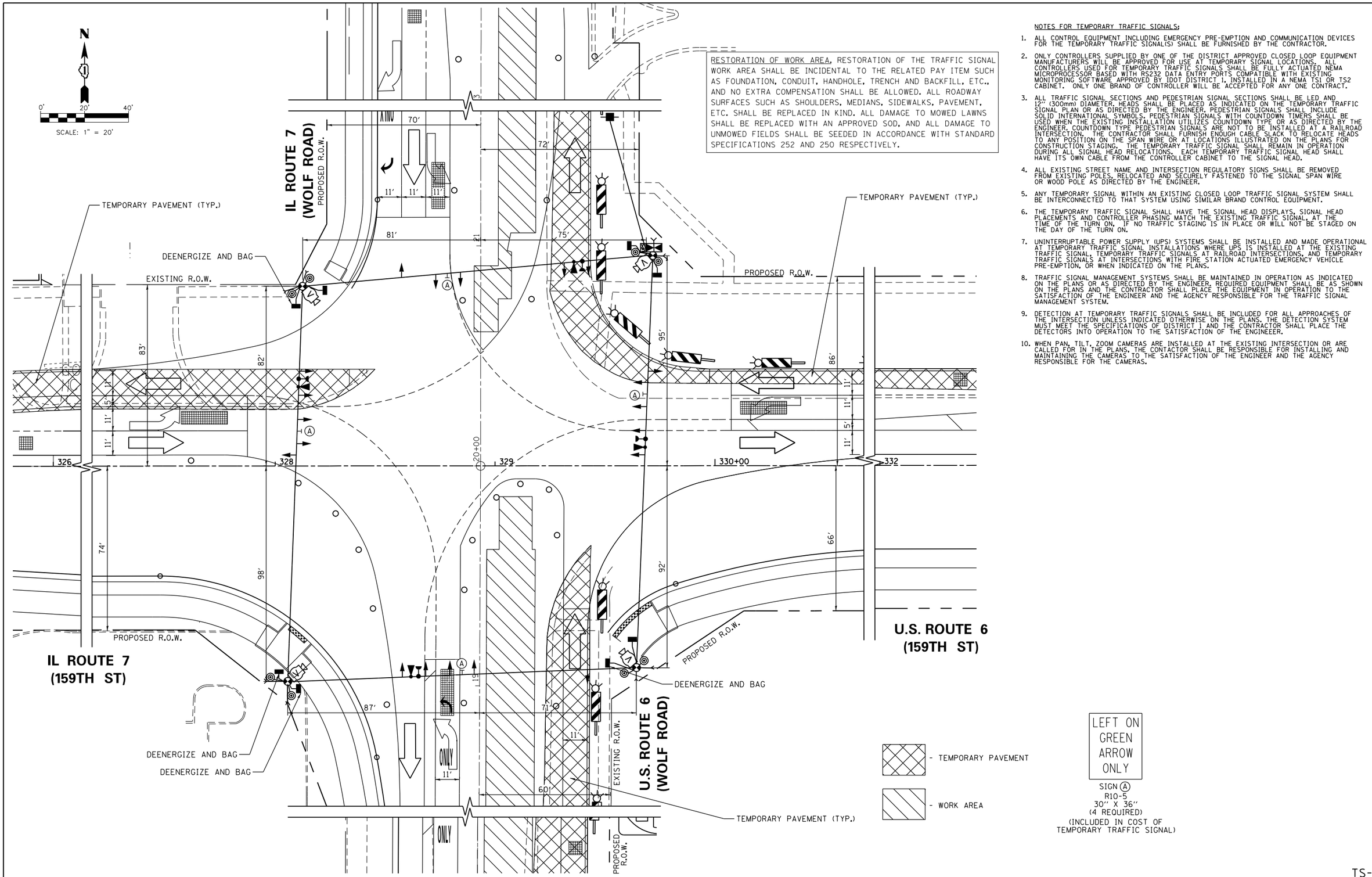
FILE NAME = ...\D160L72-sht-tempTS-07A.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 2 OF 9 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	328
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



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TS-12

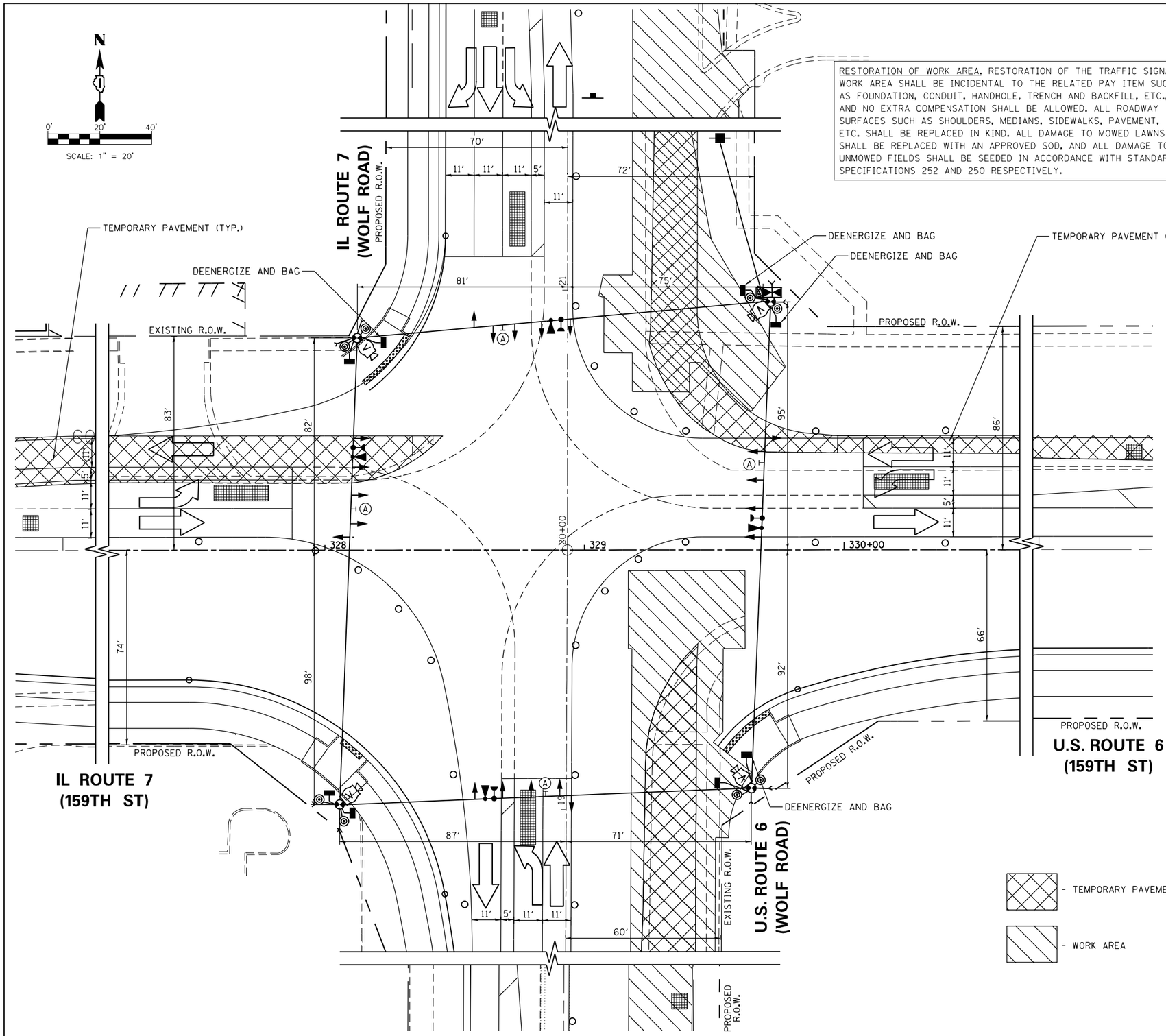
FILE NAME = ...\D160L72-sht-tempTS-07B.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1A)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 3 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	329
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



NOTES FOR TEMPORARY TRAFFIC SIGNALS:

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TS-13

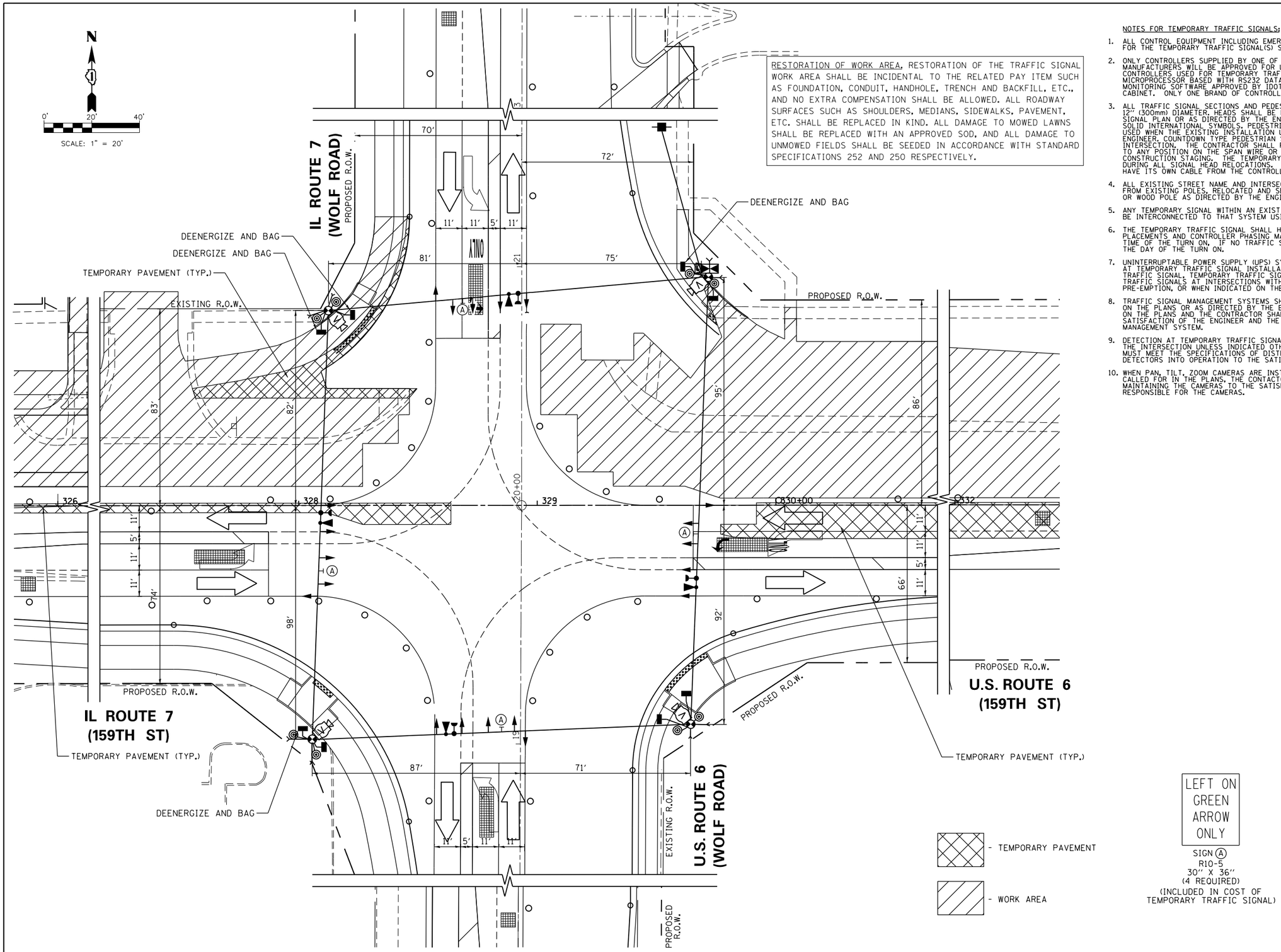
FILE NAME = ...\D160L72-sht-tempTS-07C.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1B)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 4 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	330
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



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TS-14

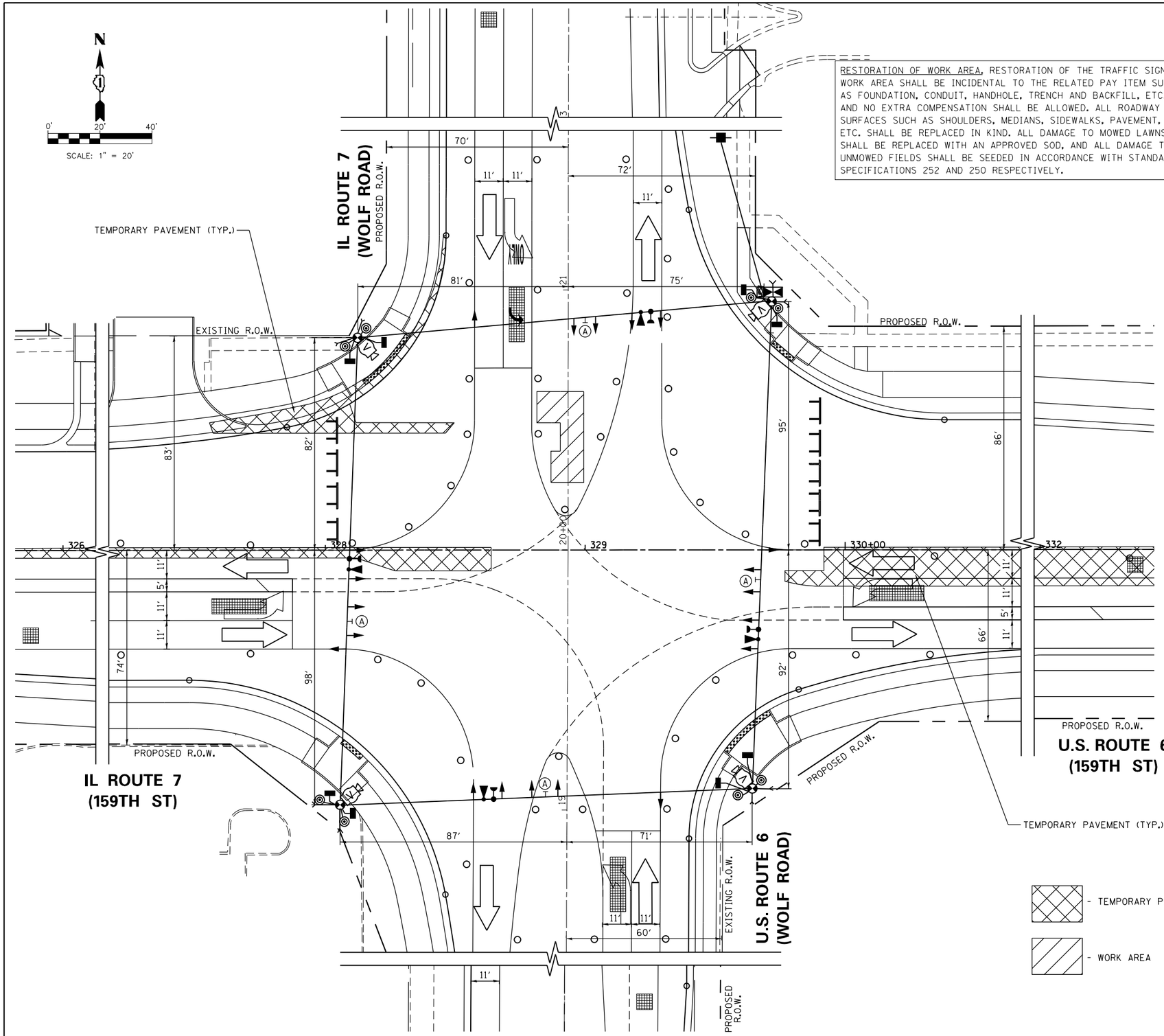
FILE NAME = ...\D160L72-sht-tempTS-070.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 5 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	331
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



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TS-15

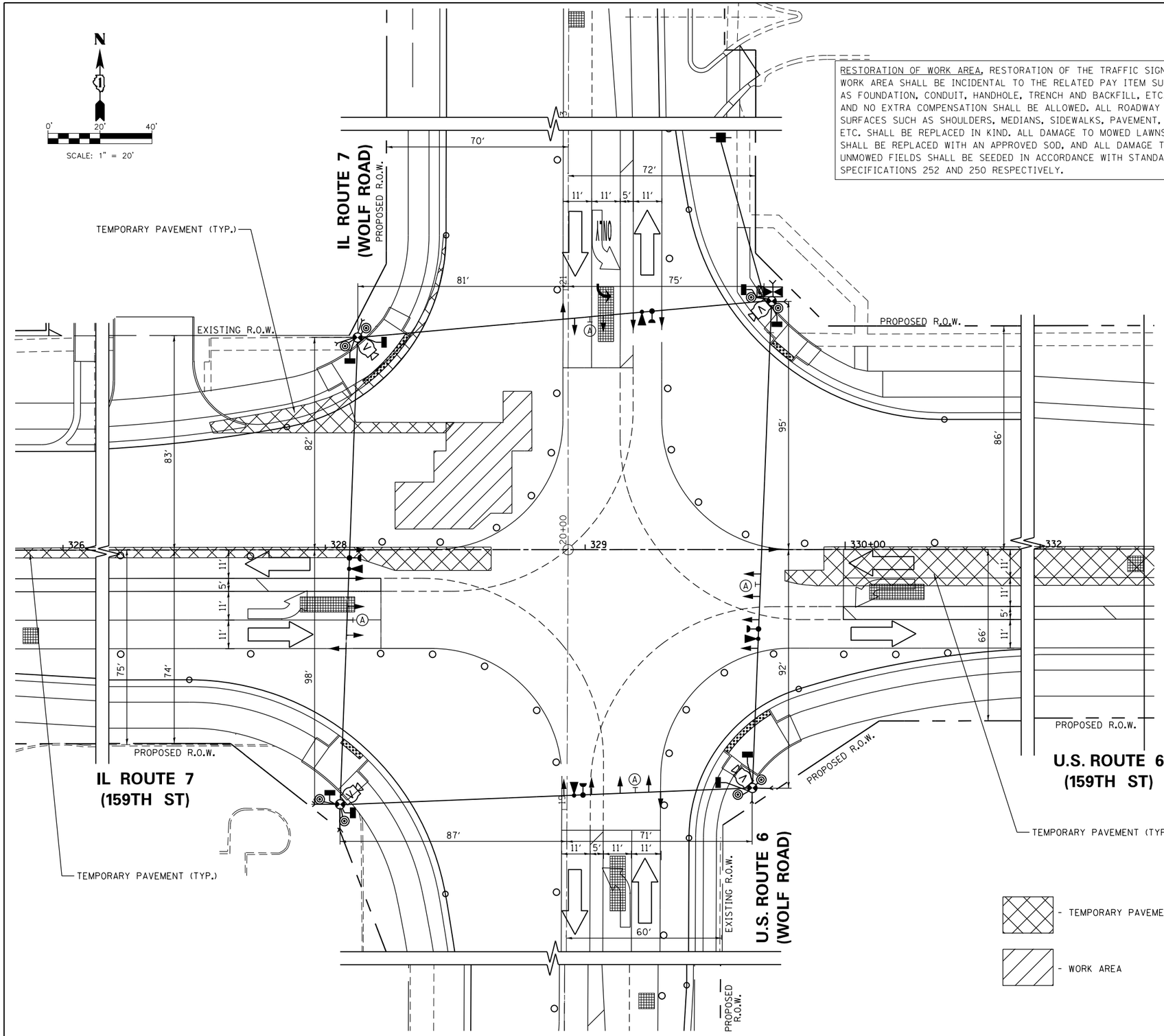
FILE NAME = ...\D160L72-sht-tempTS-07E.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2A)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 6 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	332
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



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TS-16

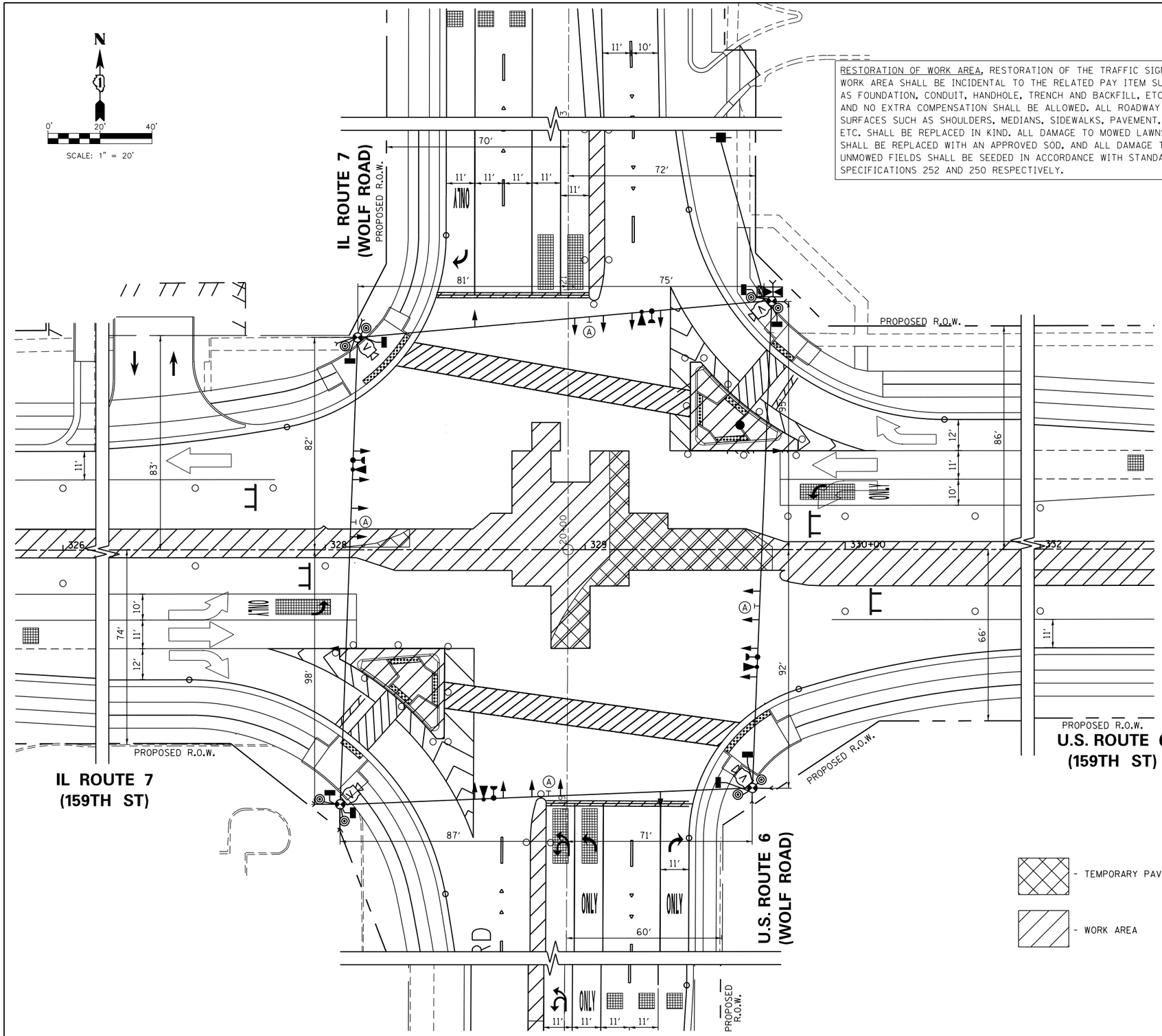
FILE NAME = ...\D160L72-sht-tempTS-07F.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2B)
159TH ST & WOLF RD

SCALE: 1"=20' | SHEET NO. 7 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	333
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		



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CONSTRUCTION NOTES

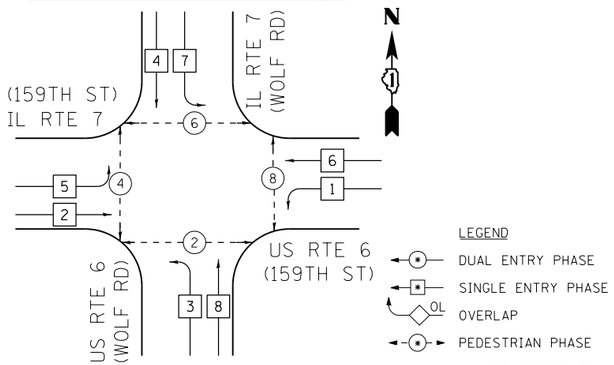
1. CONTRACTOR SHALL MAINTAIN CROSSROAD ACCESS AT ALL TIMES.

TS-17

FILE NAME = ...\D160L72-sht-tempTS-07G.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 3) 159TH ST & WOLF RD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SA	REVISED -			351	2010-081-R	COOK	1045	334
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -						CONTRACT NO. 60L72	
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		SCALE: 1"=20' | SHEET NO. 8 OF 9 SHEETS | STA. | TO STA.			ILLINOIS	FED. AID PROJECT	

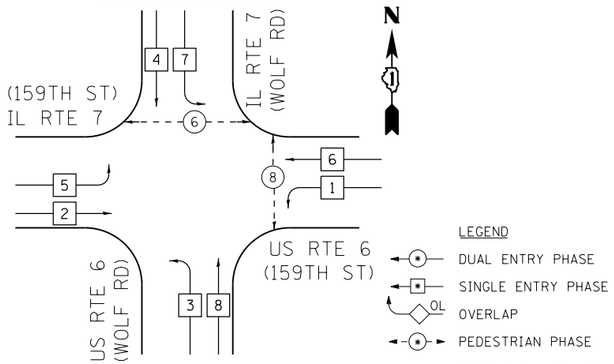
CONTROLLER SEQUENCE

STAGES PRESTAGE1, 2A, 2B, 3



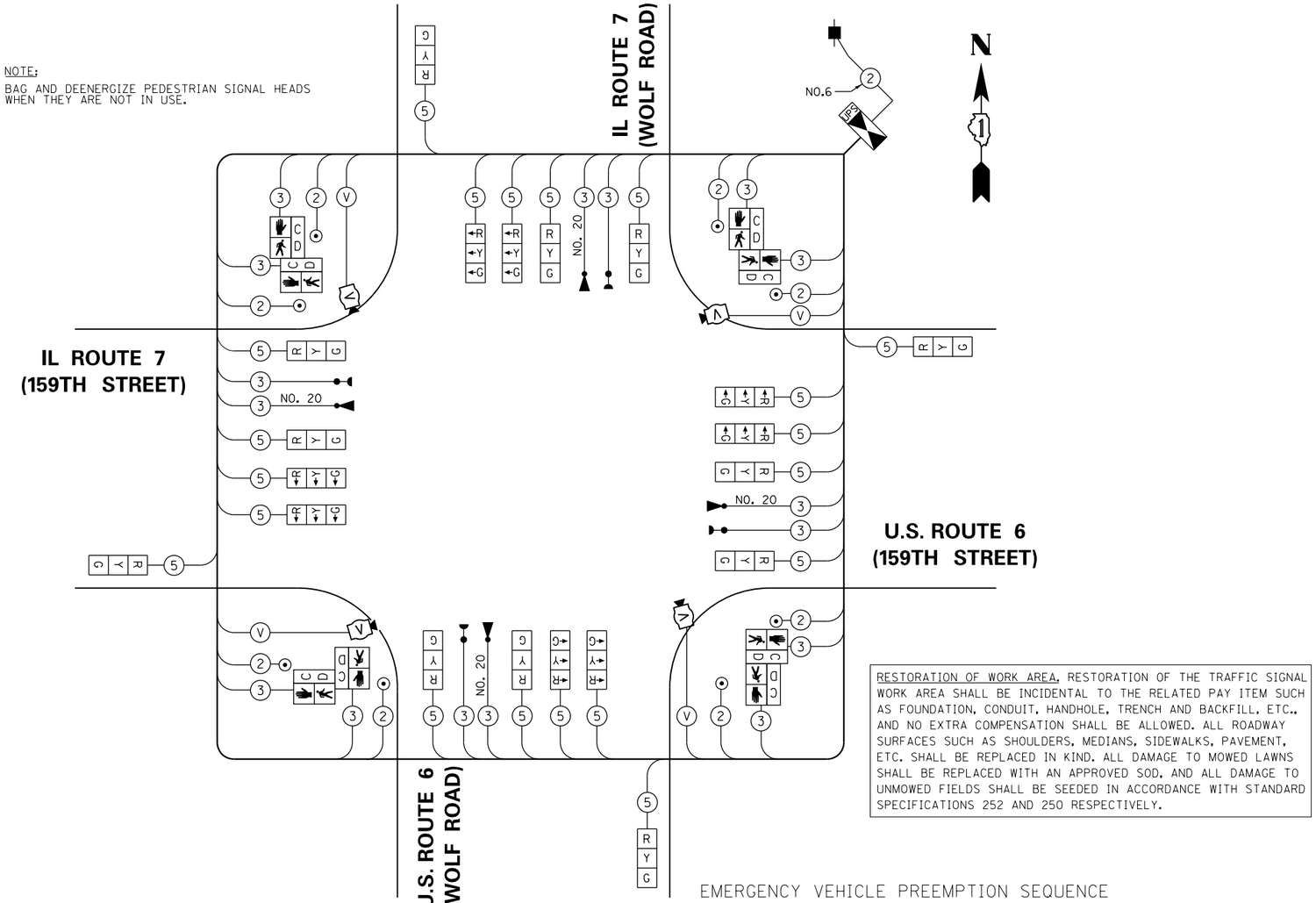
PHASE DESIGNATION DIAGRAM

STAGES 1 AND 1A



PHASE DESIGNATION DIAGRAM

NOTE:
BAG AND DEENERGIZE PEDESTRIAN SIGNAL HEADS WHEN THEY ARE NOT IN USE.



TEMPORARY CABLE PLAN

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

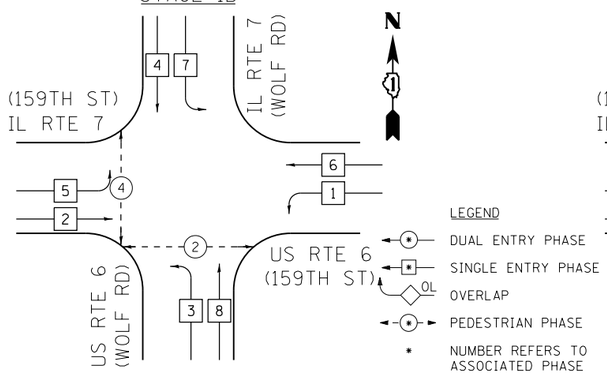
TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	20		17	0.50	170.0
(YELLOW)	20		25	0.25	125.0
(GREEN)	20		15	0.25	75.0
ARROW	-		12	0.10	-
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN	-		25	0.50	-
VIDEO SYSTEM	1	150		1.00	150.0
ENERGY COSTS TO:				TOTAL =	820.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

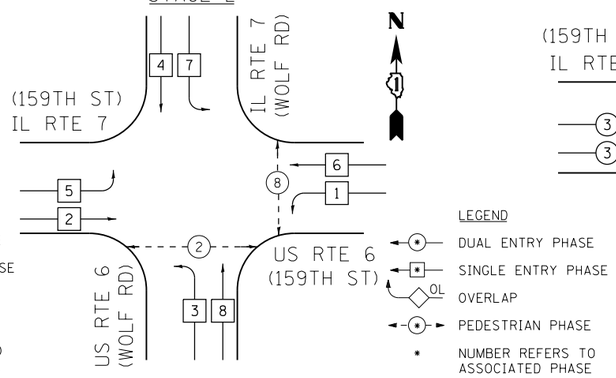
CONTROLLER SEQUENCE

STAGE 1B



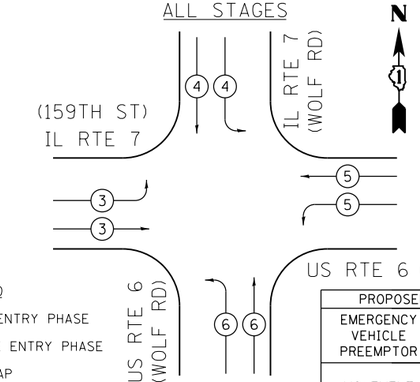
CONTROLLER SEQUENCE

STAGE 2



EMERGENCY VEHICLE PREEMPTION SEQUENCE

ALL STAGES



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

TS-18

FILE NAME = ...\D160L72-sht-tempTS-07H.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM
EMERGENCY VEHICLE PREEMPTION SEQUENCE (ALL STAGES)
159TH ST & WOLF RD

SCALE: N.T.S. | SHEET NO. 9 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	335
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	

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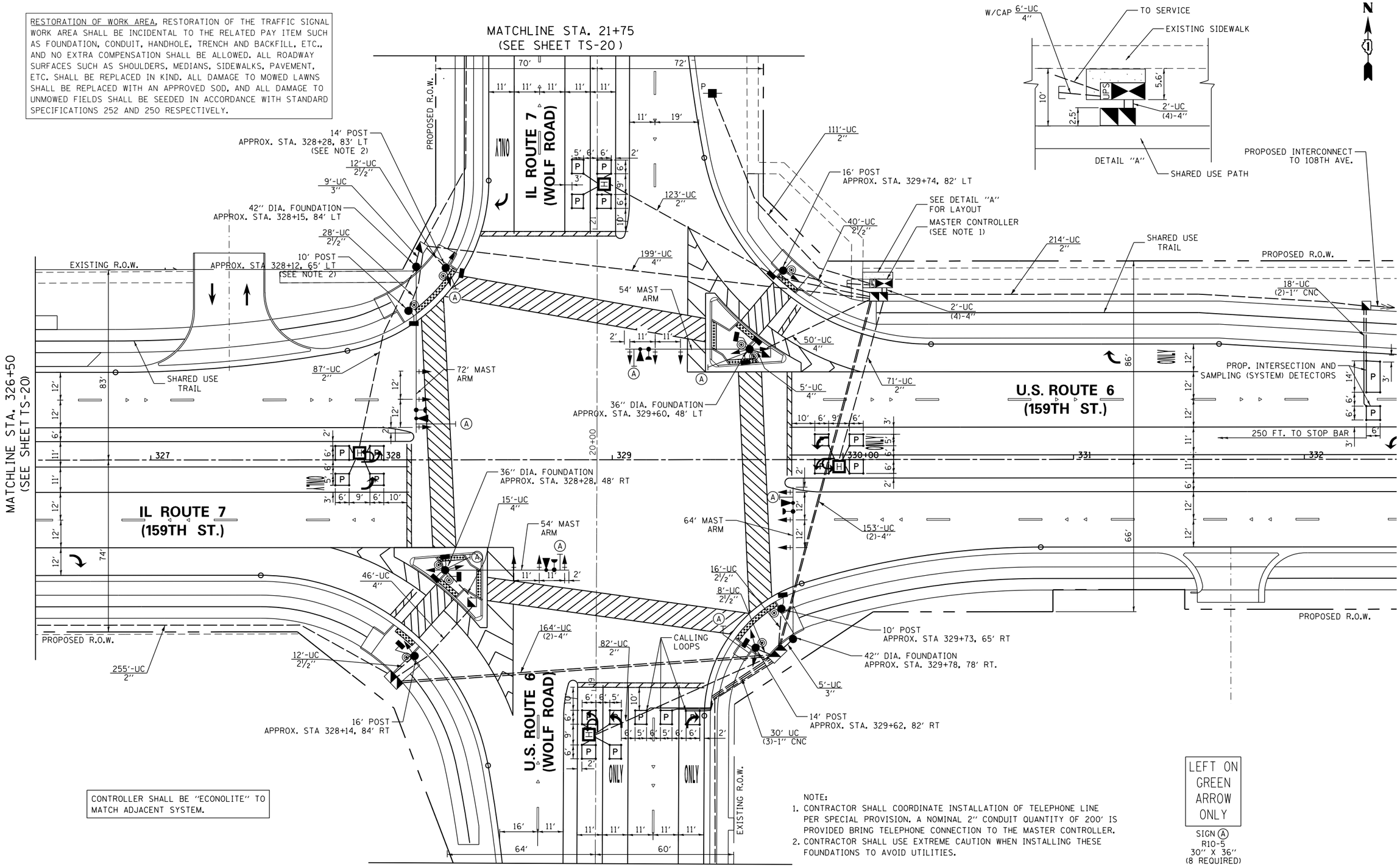


CONTROLLER SHALL BE ''ECONOLITE'' TO MATCH ADJACENT SYSTEM.

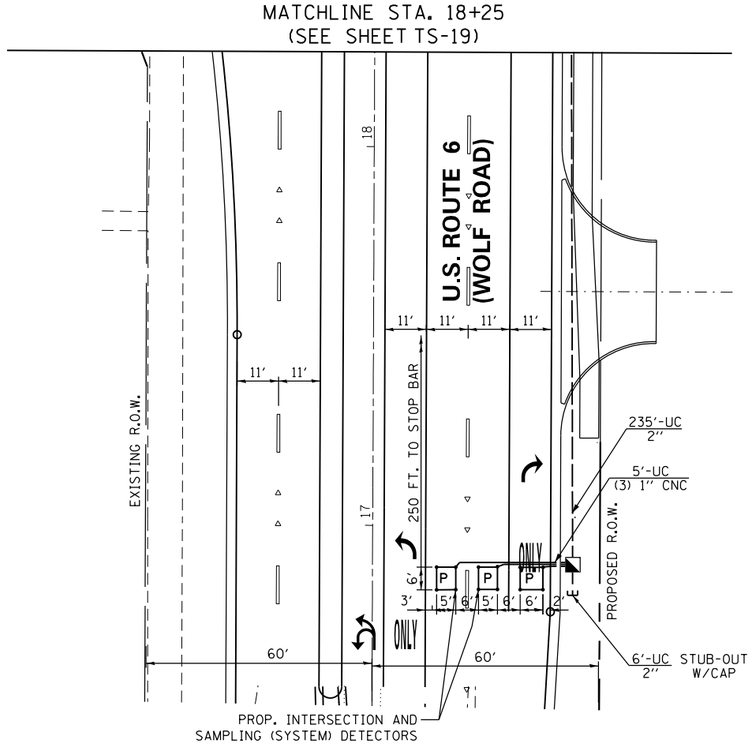
NOTE:
1. CONTRACTOR SHALL COORDINATE INSTALLATION OF TELEPHONE LINE PER SPECIAL PROVISION. A NOMINAL 2'' CONDUIT QUANTITY OF 200' IS PROVIDED BRING TELEPHONE CONNECTION TO THE MASTER CONTROLLER.
2. CONTRACTOR SHALL USE EXTREME CAUTION WHEN INSTALLING THESE FOUNDATIONS TO AVOID UTILITIES.

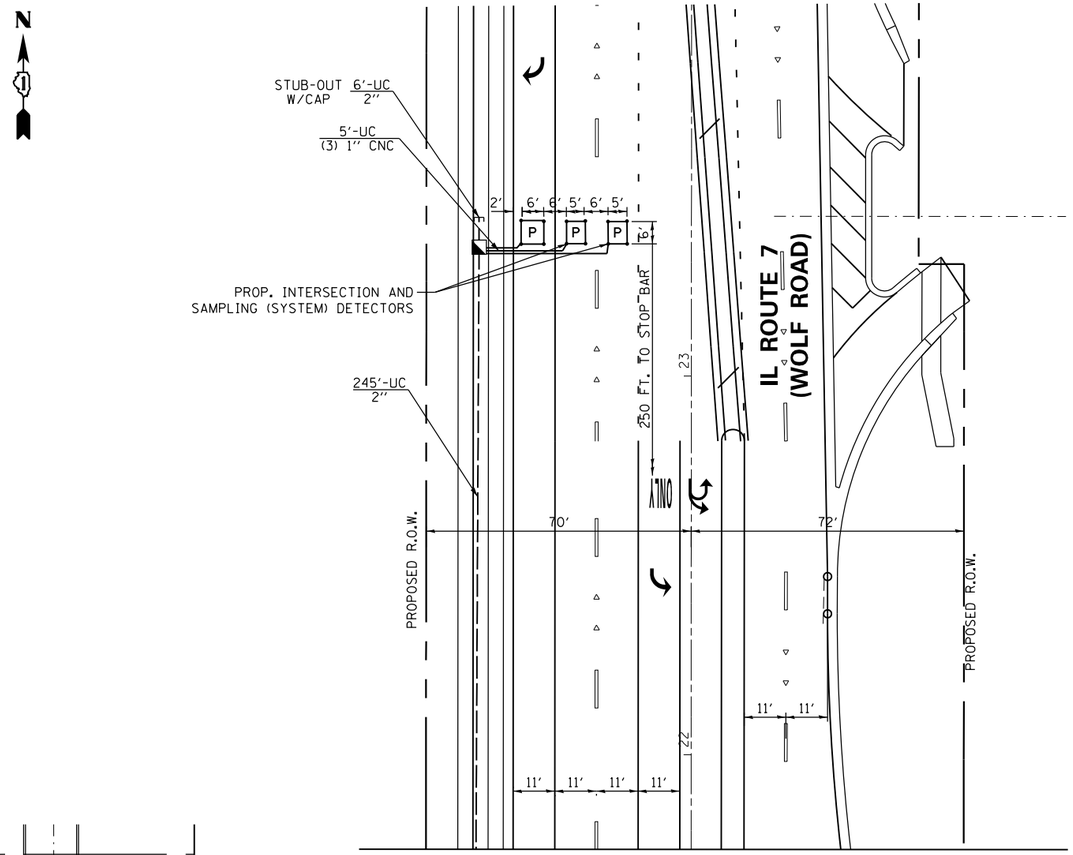
LEFT ON GREEN ARROW ONLY

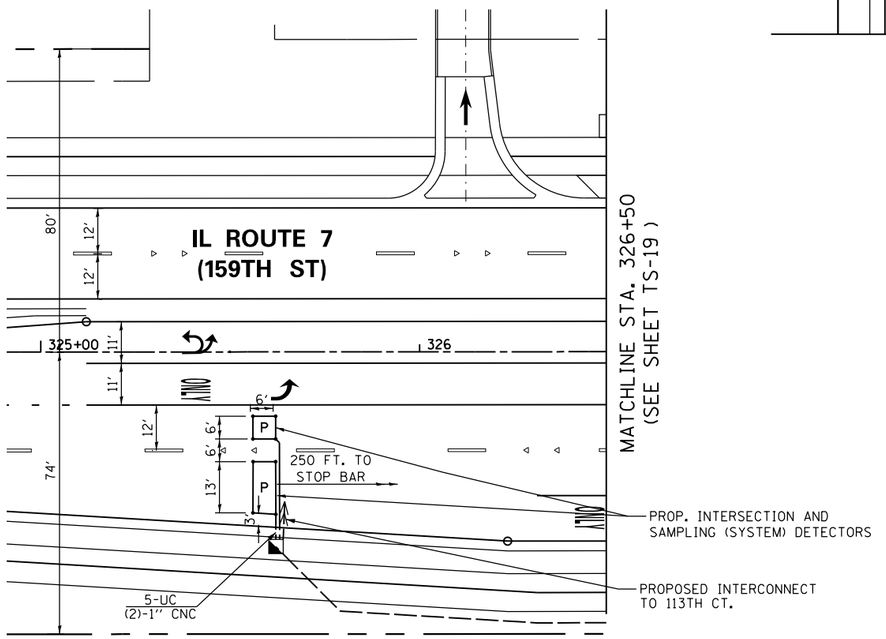
SIGN (A)
R10-5
30'' X 36''
(8 REQUIRED)

TS-19

FILE NAME = ...\D160L72-sht-TS-08.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN 159TH ST AND WOLF RD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - SA	REVISED -			351	2010-081-R	COOK	1045	336
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -						CONTRACT NO. 60L72	
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		SCALE: 1''=20' SHEET NO. 1 OF 3 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		







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FILE NAME = ...\D160L72-sht-TS-08A.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
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	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
159TH ST AND WOLF RD

SCALE: 1"=20' | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

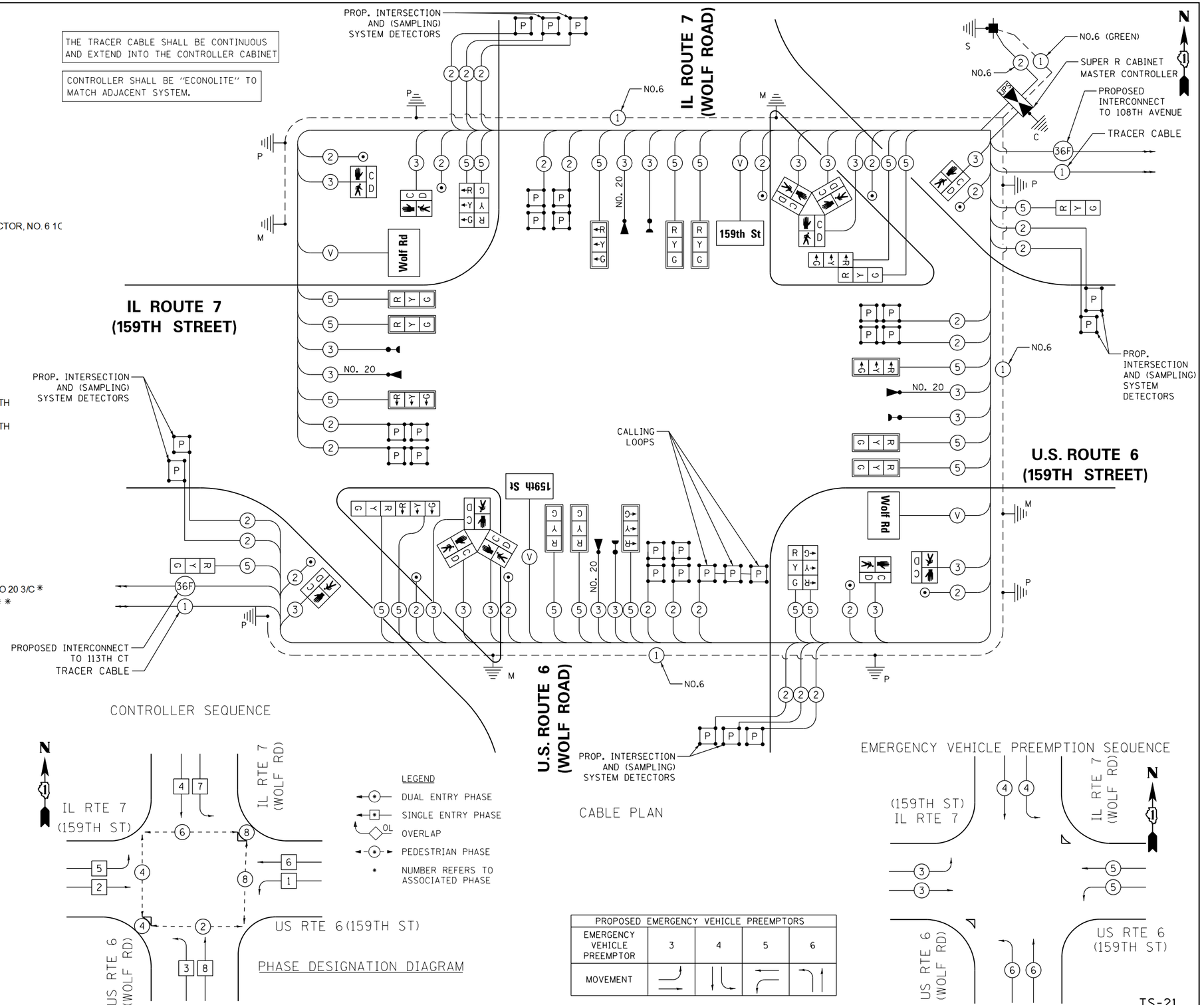
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	337
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

QTY	UNIT	ITEM DESCRIPTION
60	SQ FT	SIGN PANEL - TYPE 1
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1623	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
116	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
14	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
963	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
7	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
3	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER - FIBER OPTIC
2508	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
4337	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
6240	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
6380	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
141	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
1500	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 54 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 64 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 72 FT.
24	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
30	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
46	FOOT	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER
12	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
6	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
19	EACH	INDUCTIVE LOOP DETECTOR
960	FOOT	PREFORMED DETECTOR LOOP
4	EACH	LIGHT DETECTOR *
1	EACH	LIGHT DETECTOR AMPLIFIER *
10	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
4	EACH	ILLUMINATED STREET NAME SIGN * * *
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
12	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1270	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO 20 3/C *
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE V, SPECIAL * *
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

* 100% COST TO ORLAND FIRE PROTECTION DISTRICT
* * SUPER R CABINET
* * * 100% COST TO VILLAGE OF ORLAND PARK

THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.



CABLE PLAN

CONTROLLER SEQUENCE

PHASE DESIGNATION DIAGRAM

PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	22	135	17	0.50	187.0
(YELLOW)	22	135	25	0.25	137.5
(GREEN)	22	135	15	0.25	28.5
ARROW		135	12	0.10	
PED. SIGNAL	12	90	25	1.00	300.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.50	
ENERGY COSTS TO:				TOTAL =	753.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

TS-21

FILE NAME =	USER NAME = sadhikari	DESIGNED - SA	REVISED -
...\D160L72-sht-TS-09.dgn		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND PHASE DESIGNATION DIAGRAM
159TH ST AND WOLF RD

SCALE: N.T.S. | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	338
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

N

0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

THE FOLLOWING EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO THE AGENCY LISTED BELOW.

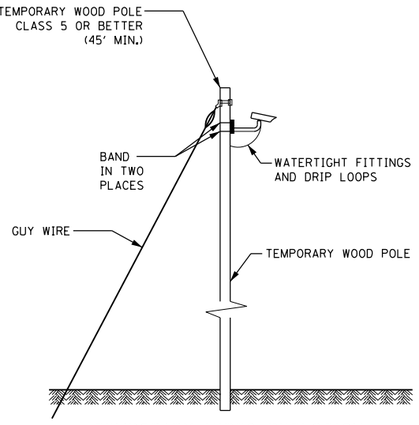
AGENCY: ORLAND FIRE PROTECTION DISTRICT

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT 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.

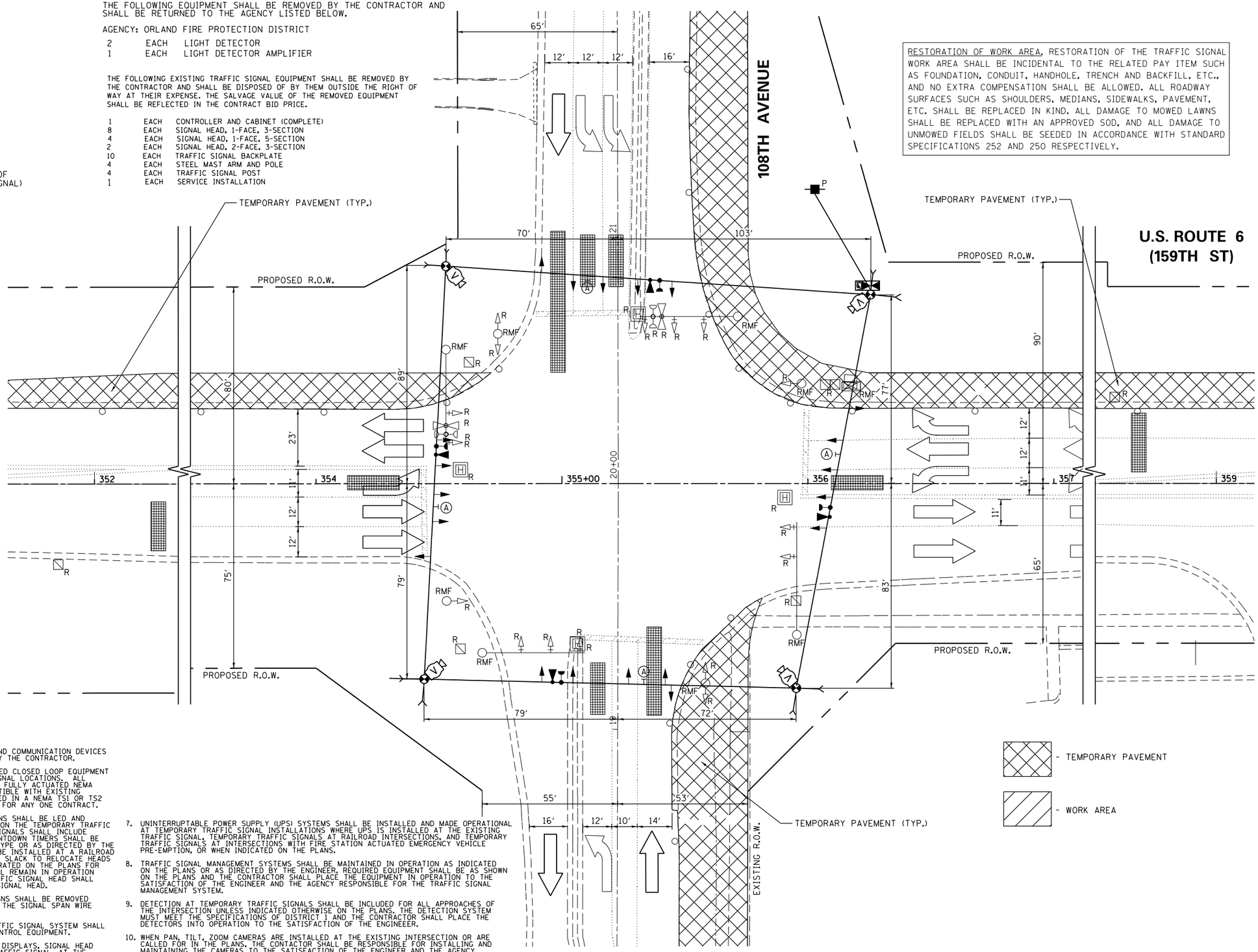
1	EACH	CONTROLLER AND CABINET (COMPLETE)
8	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 3-SECTION
10	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	STEEL MAST ARM AND POLE
4	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL

NOT TO SCALE



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

- TEMPORARY PAVEMENT
- WORK AREA

TS-22

FILE NAME = ...\D160L72-sht-tempTS-10AA.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (PRESTAGE-1) AND REMOVAL PLAN
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 1 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	339
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

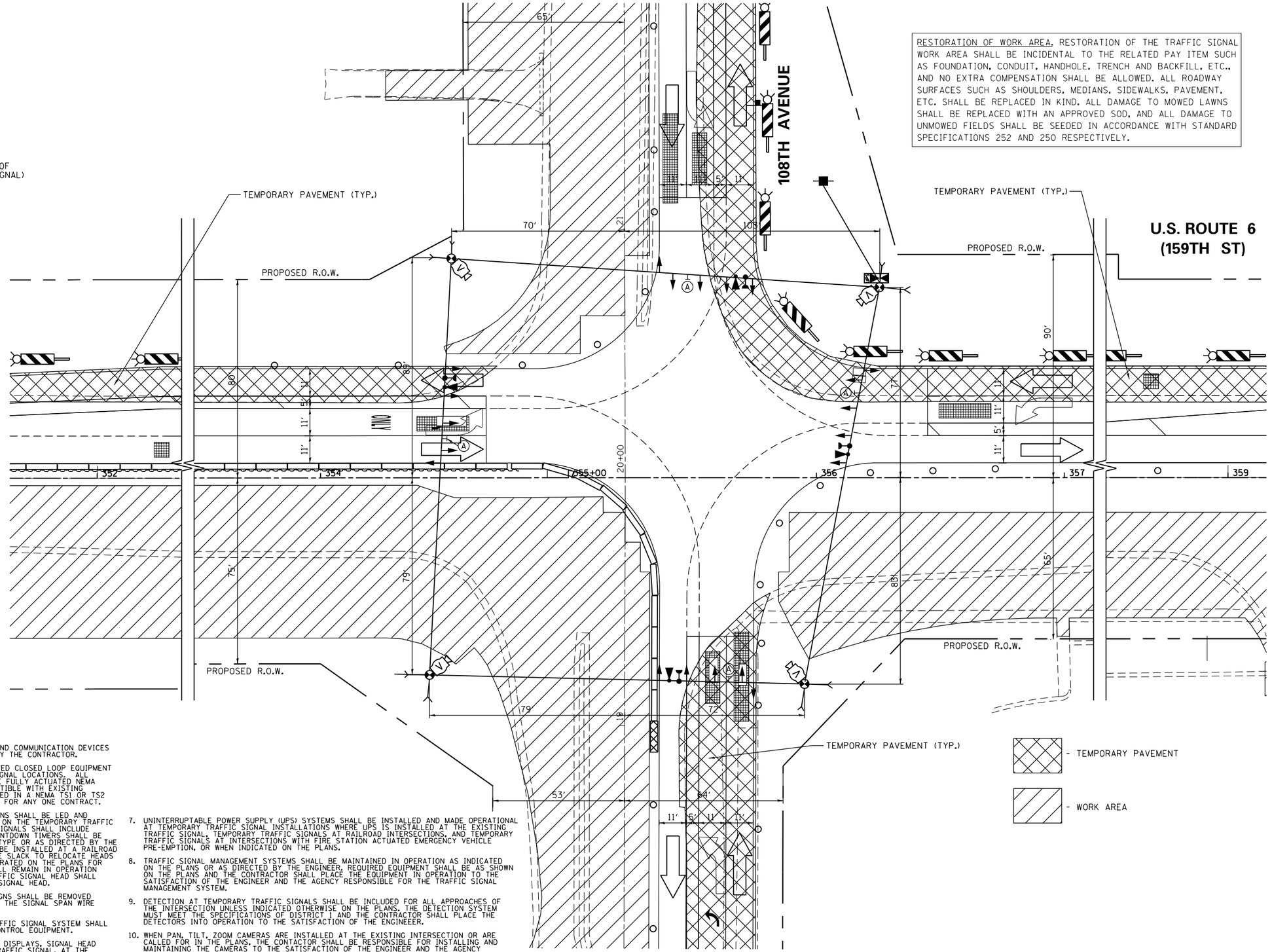
0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

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7. UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
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TS-23

FILE NAME = ...\D160L72-sht-tempTS-10A.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 2 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	340
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

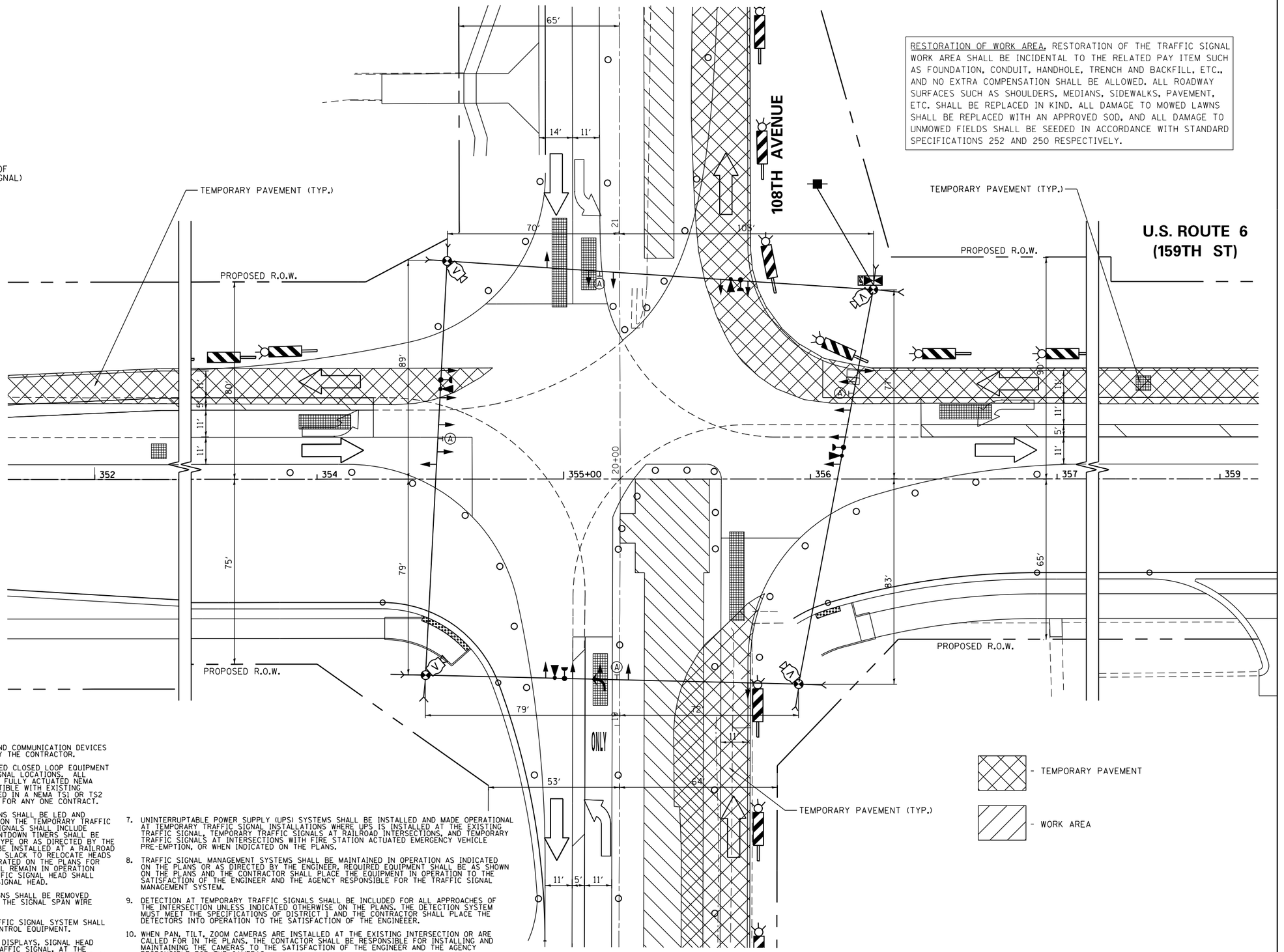
0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

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TS-24

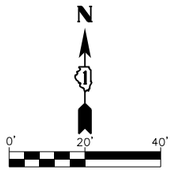
FILE NAME = ...\D160L72-sht-tempTS-108.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1A)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 3 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	341
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

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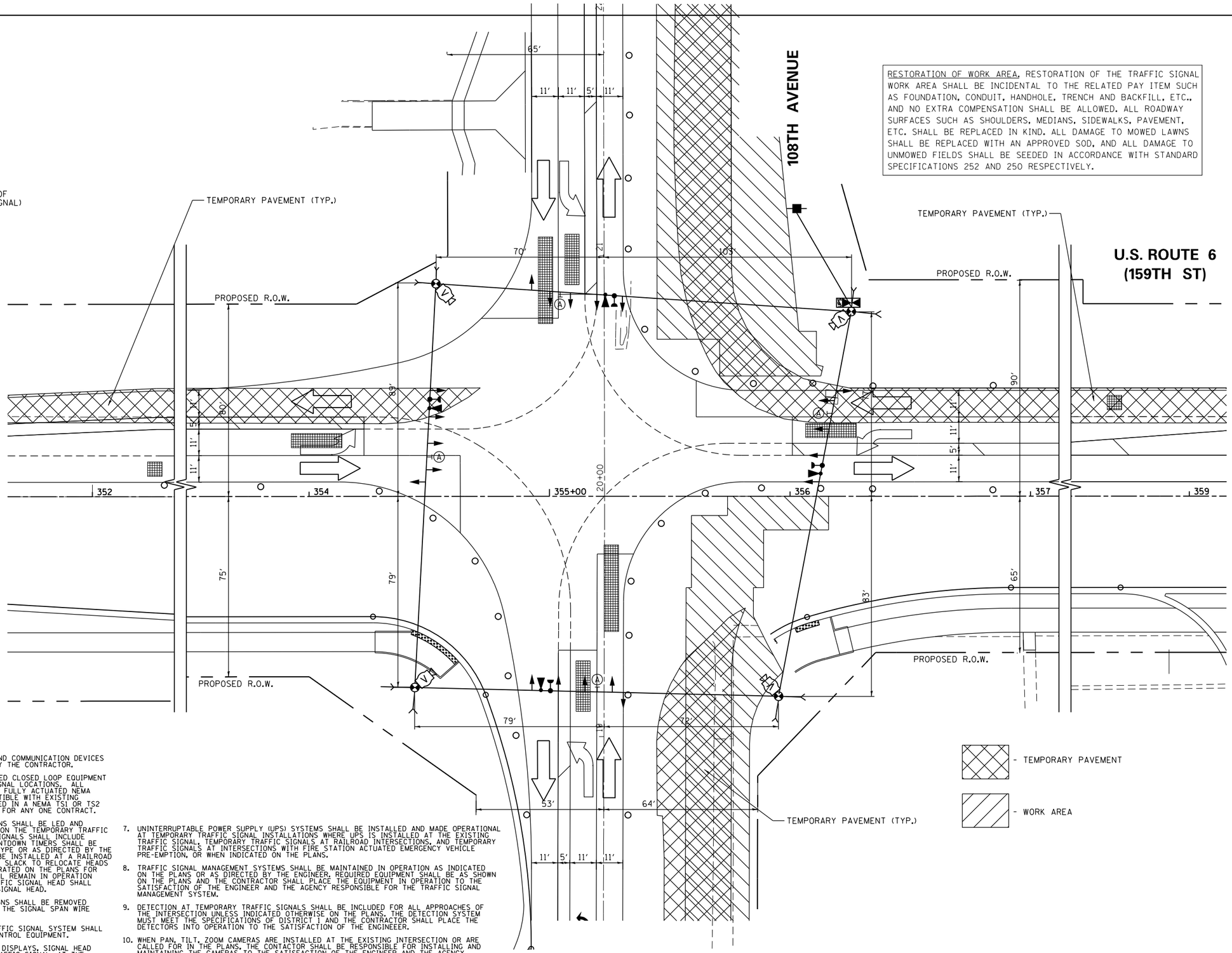

NOTES FOR TEMPORARY TRAFFIC SIGNALS;

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3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

TS-25

FILE NAME = ...\D160L72-sht-tempTS-10C.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1B)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 4 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	342
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

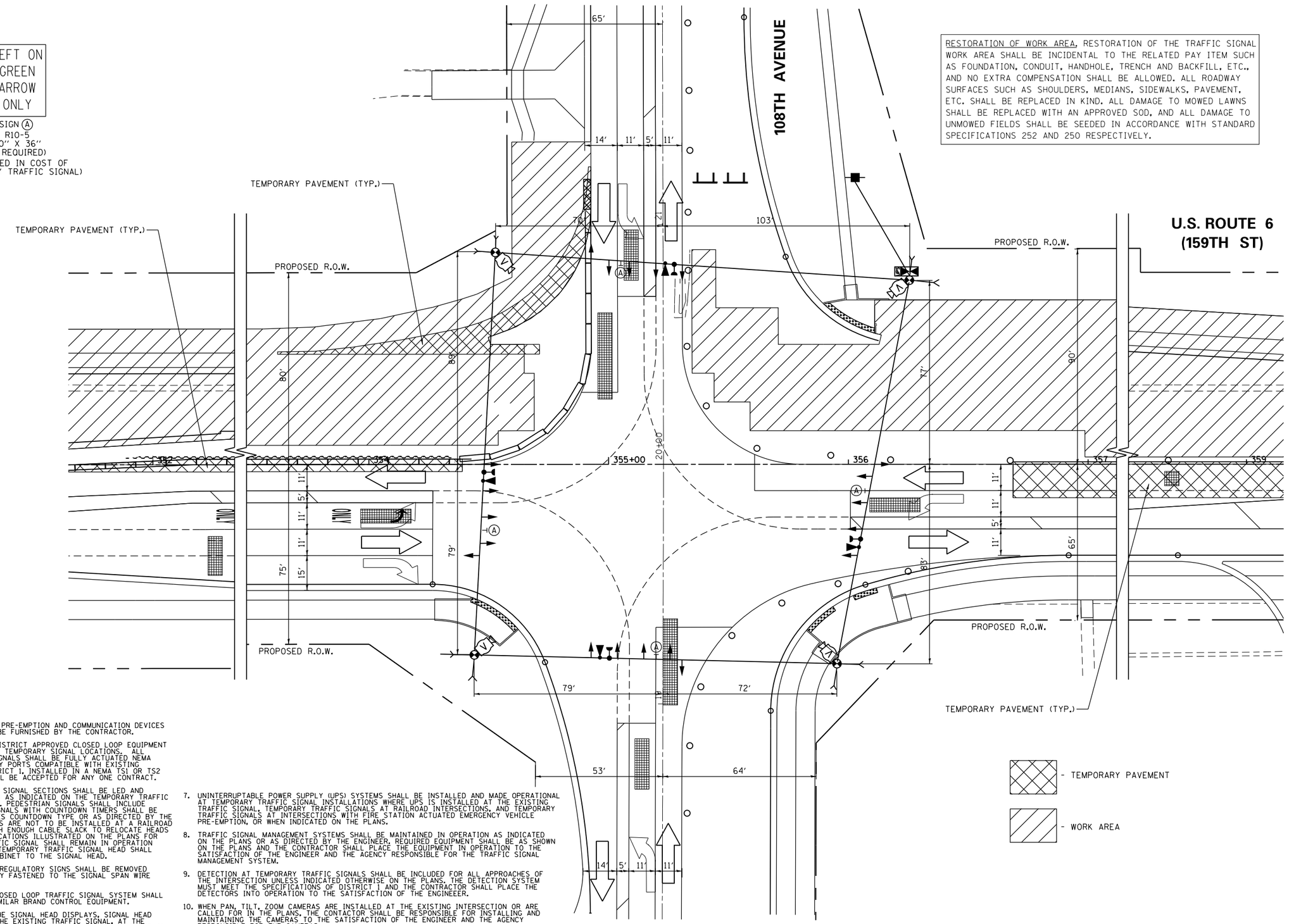
0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
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TS-26

FILE NAME = ...\D160L72-sht-tempTS-10D.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 5 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	343
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

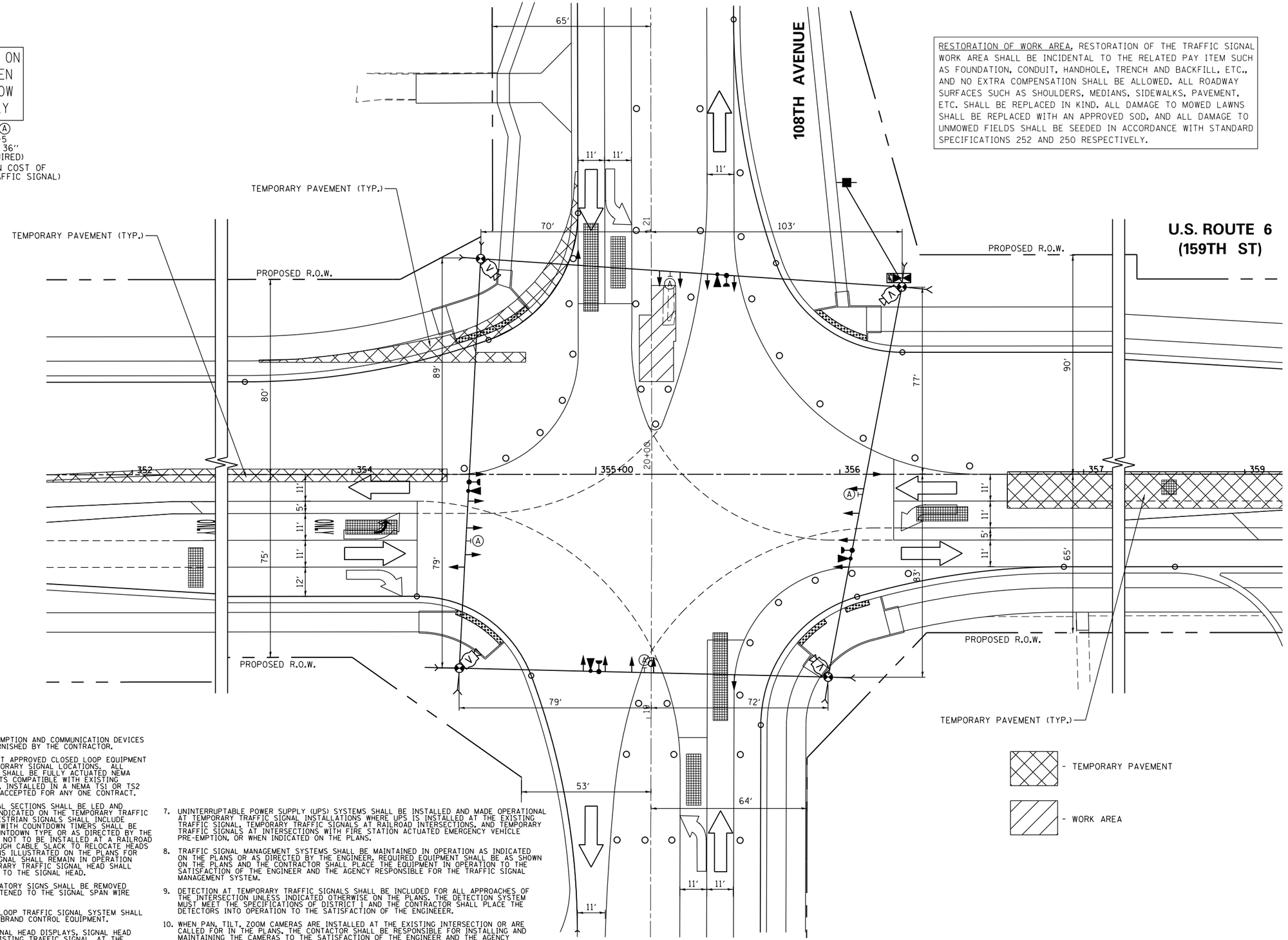
0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
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5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
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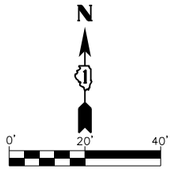
TS-27

FILE NAME = ...\D160L72-sht-tempTS-10E.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2A) U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE
		DRAWN - SA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -		SCALE: 1"=20' SHEET NO. 6 OF 9 SHEETS STA. TO STA.
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		

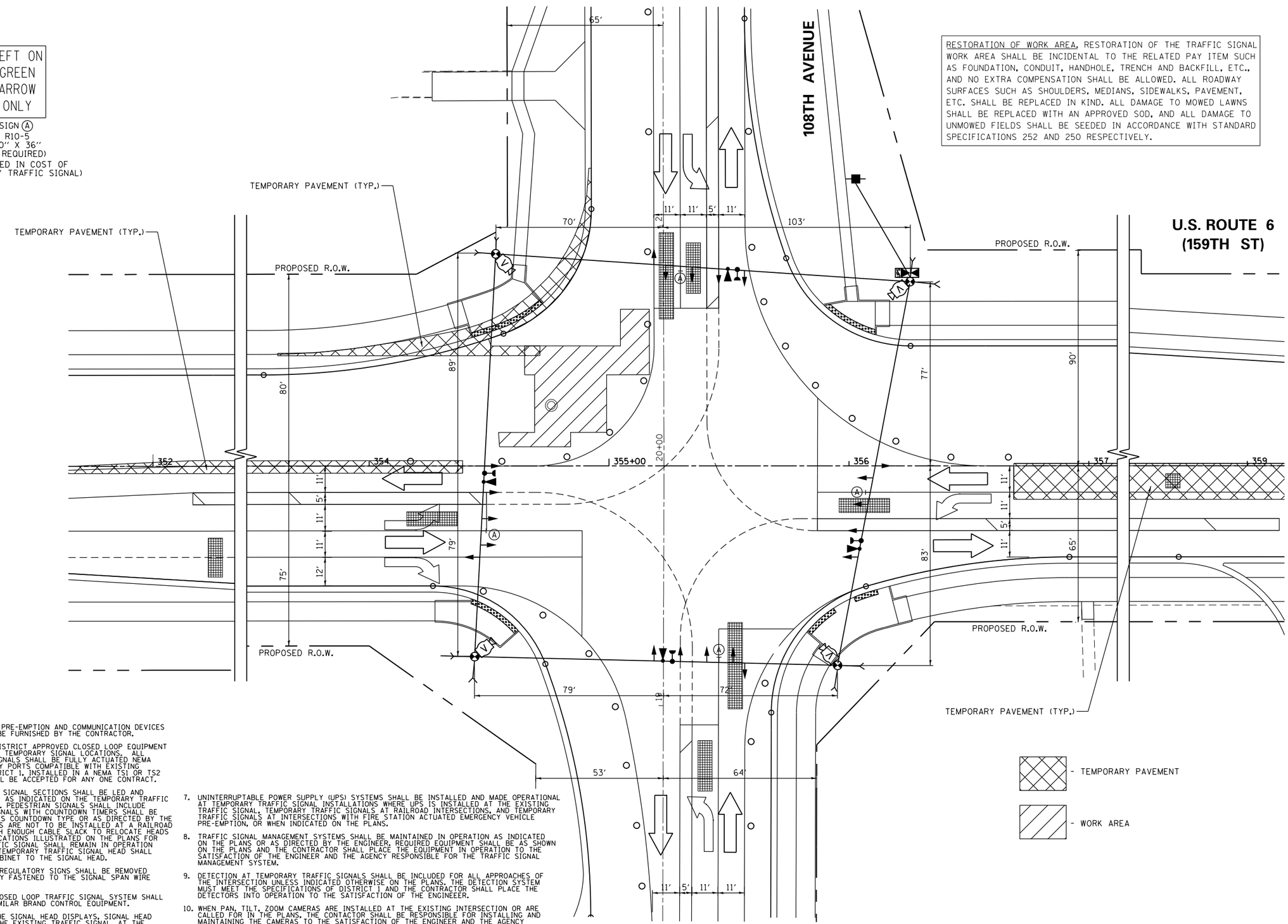
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	344
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTES FOR TEMPORARY TRAFFIC SIGNALS;

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
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7. UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
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FILE NAME = ...\D160L72-sht-tempTS-10F.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2B)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 7 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	345
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	

N

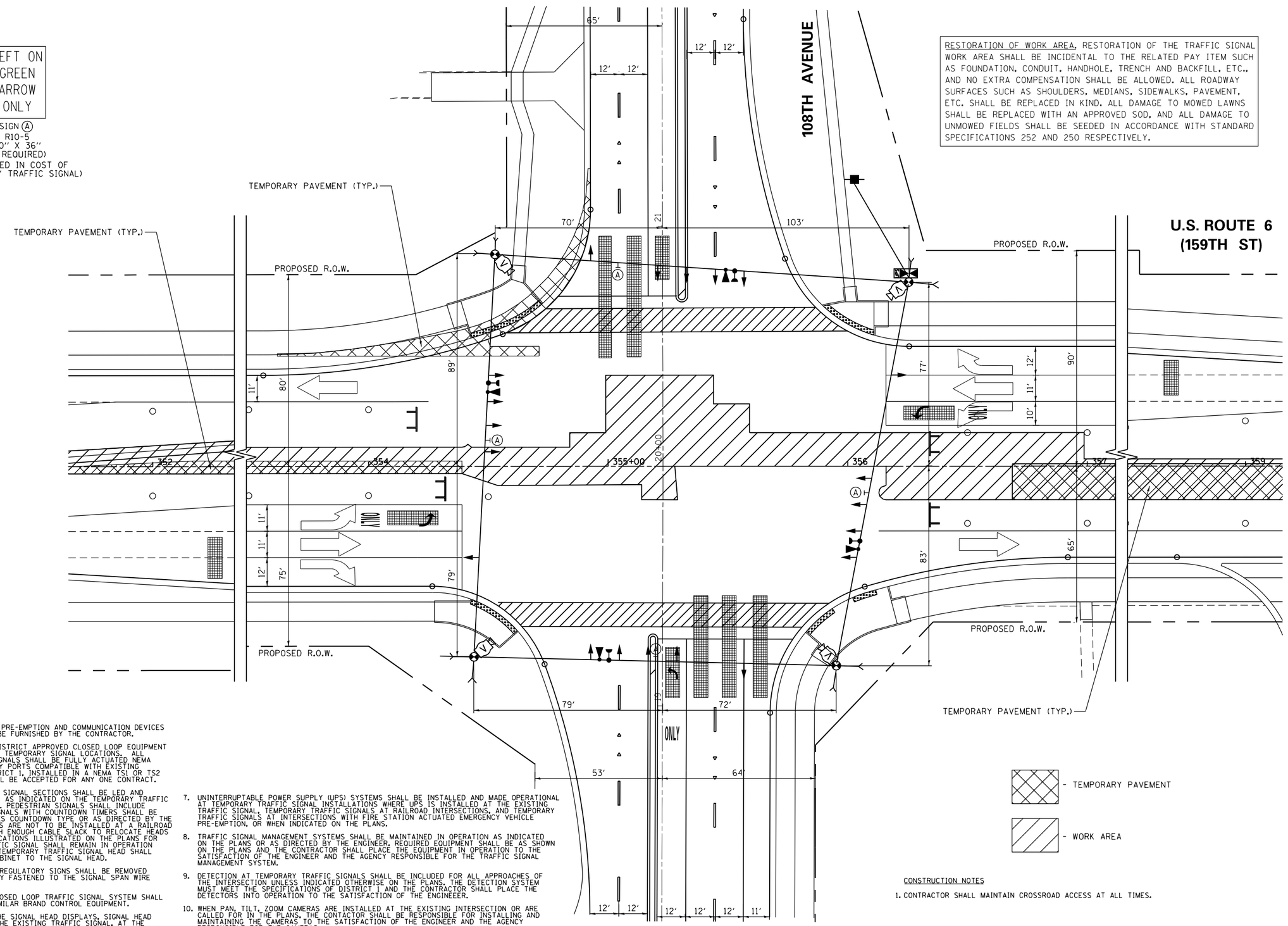
0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



- TEMPORARY PAVEMENT
- WORK AREA

CONSTRUCTION NOTES

1. CONTRACTOR SHALL MAINTAIN CROSSROAD ACCESS AT ALL TIMES.

NOTES FOR TEMPORARY TRAFFIC SIGNALS;

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
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TS-29

FILE NAME = ...\D160L72-sht-tempTS-10G.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

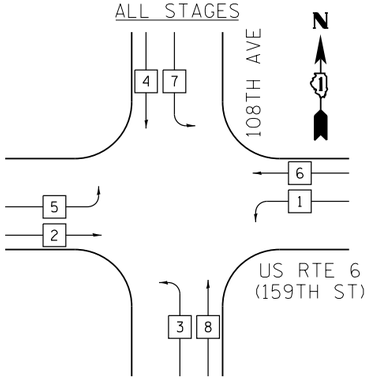
TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 3)
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: 1"=20' | SHEET NO. 8 OF 9 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	346
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

CONTROLLER SEQUENCES

ALL STAGES

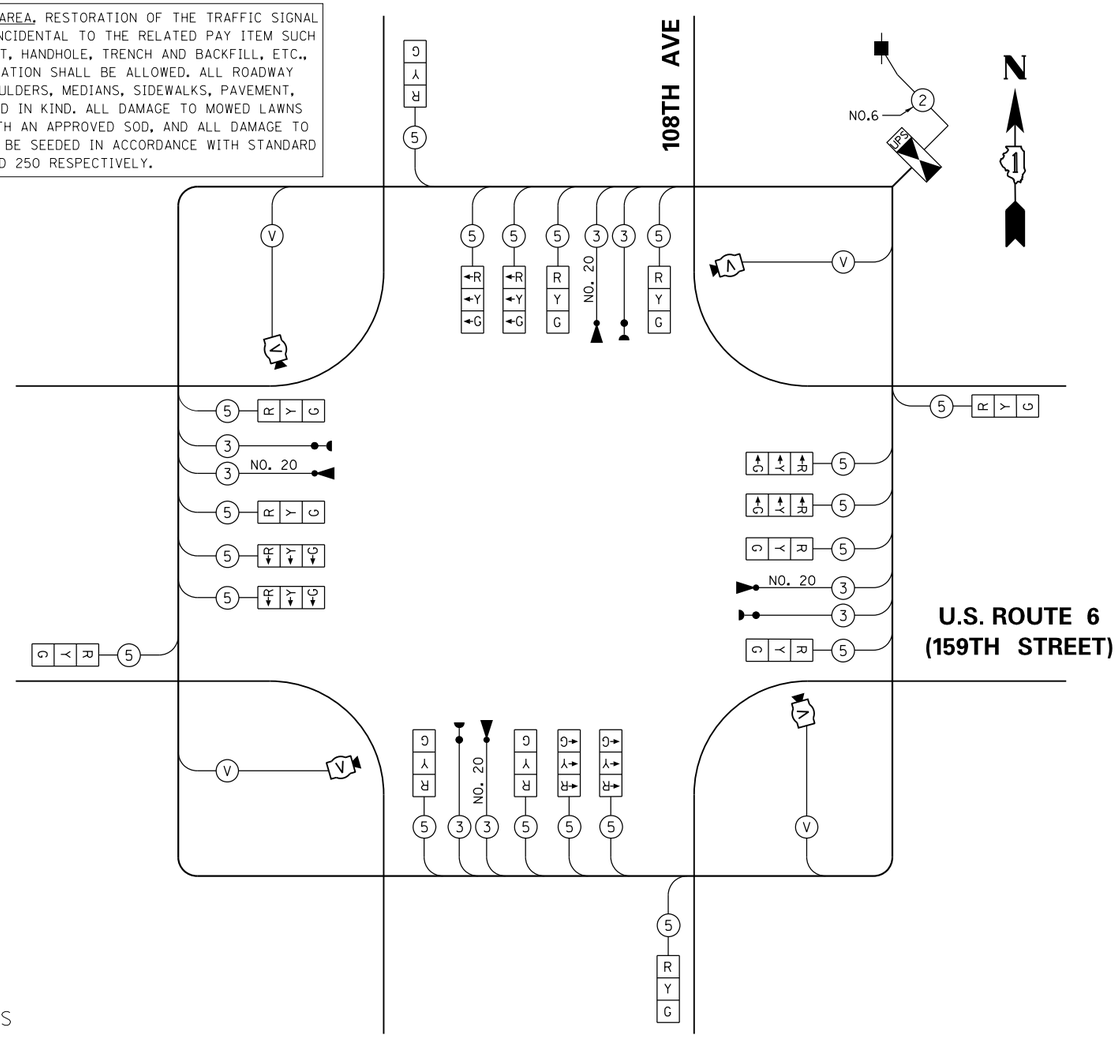


LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

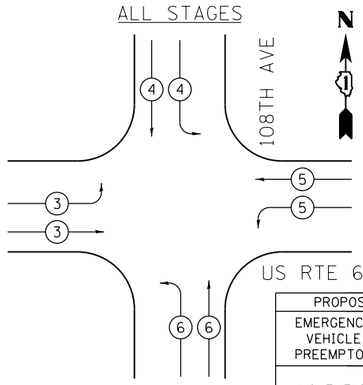
PHASE DESIGNATION DIAGRAM

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



EMERGENCY VEHICLE PREEMPTION SEQUENCES

ALL STAGES



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	20		17	0.50	170.0
(YELLOW)	20		25	0.25	125.0
(GREEN)	20		15	0.25	75.0
ARROW	-		12	0.10	-
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN	-		25	0.50	-
VIDEO SYSTEM	1	150		1.00	150.0

ENERGY COSTS TO: TOTAL = 620.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

TS-30

FILE NAME = ...\D160L72-sht-tempTS-10H.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE (ALL STAGES) U.S. ROUTE 6 (159TH ST) & 108TH AVENUE
		DRAWN - SA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -		SCALE: N.T.S. SHEET NO. 9 OF 9 SHEETS STA. TO STA.
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	347
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.

NOTES:
SEE CONCRETE FOUNDATION DETAILS FOR 42" DIA FOUNDATION (SPECIAL)

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

N

PROPOSED ROW
108TH AVENUE
65'
12' 12' 12' 12' 12'
16' POST
APPROX. STA 354+67, 72' LT
29'-UC
1" CNC
15'-UC
1" CNC
31'-UC
3"
5'-UC
2½"
9'-UC
1" CNC
9'-UC
(2)-1" CNC
42" DIA. FOUNDATION (SPECIAL)
APPROX. STA 354+43, 60' LT
86'-UC
2"
PROPOSED R.O.W.
88'-UC
2"
40'-UC
2"
42" DIA. FOUNDATION (SPECIAL)
APPROX. STA 355+96, 70' LT
W/CAP 4'-UC
4"
5'-UC
(4)-4"
260'-UC
2 "
PROPOSED R.O.W.
15'-UC
2½"
16' POST
APPROX. STA. 356+12, 58' LT
134'-UC
4"
12'-UC
3"
66' MAST
ARM
48' MAST
ARM
71'-UC
2 "
143'-UC
(2)-4"
ONLY
ONLY
MATCHLINE STA. 352+30
(SEE BELOW)
MATCHLINE STA. 358+20
(SEE BELOW)
353
354
355+00
20+00
356
357
358
U.S. ROUTE 6
(159TH ST)
22'-UC
(3)-1" CNC
24'-UC
(2)-1" CNC
44' MAST
ARM
16' POST
APPROX. STA. 354+39, 58' RT
145'-UC
4 "
260'-UC
2"
15'-UC
2½"
4'-UC
3"
PROPOSED R.O.W.
42" DIA. FOUNDATION (SPECIAL)
APPROX. STA. 354+52, 71' RT
66' MAST
ARM
ONLY
42" DIA. FOUNDATION (SPECIAL)
APPROX. STA. 356+17, 56' RT
22'-UC
3"
27'-UC
(2)-1" CNC
32'-UC
(2)-1" CNC
15'-UC
2½"
16' POST
APPROX.
STA 355+85,
73' RT
62'-UC
2"
PROPOSED R.O.W.
EXISTING ROW
53'
64'
PROPOSED INTERCONNECT
TO 104TH AVE.
PROP. INTERSECTION AND
SAMPLING (SYSTEM) DETECTORS
5'-UC
(2)-1" CNC
250 FT. TO
STOP BAR
LEFT ON
GREEN
ARROW
ONLY
SIGN (A)
R10-5
30" X 36"
(4 REQUIRED)
352
PROP. INTERSECTION
AND SAMPLING (SYSTEM)
DETECTORS
250 FT. TO
STOP BAR
5'-UC
(2)-1" CNC
MATCHLINE STA. 352+30
(SEE ABOVE)
PROPOSED INTERCONNECT
TO WOLF ROAD.
MATCHLINE STA. 358+20
(SEE ABOVE)

TS-31

FILE NAME = ...\D160L72-sht-TS-11.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

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

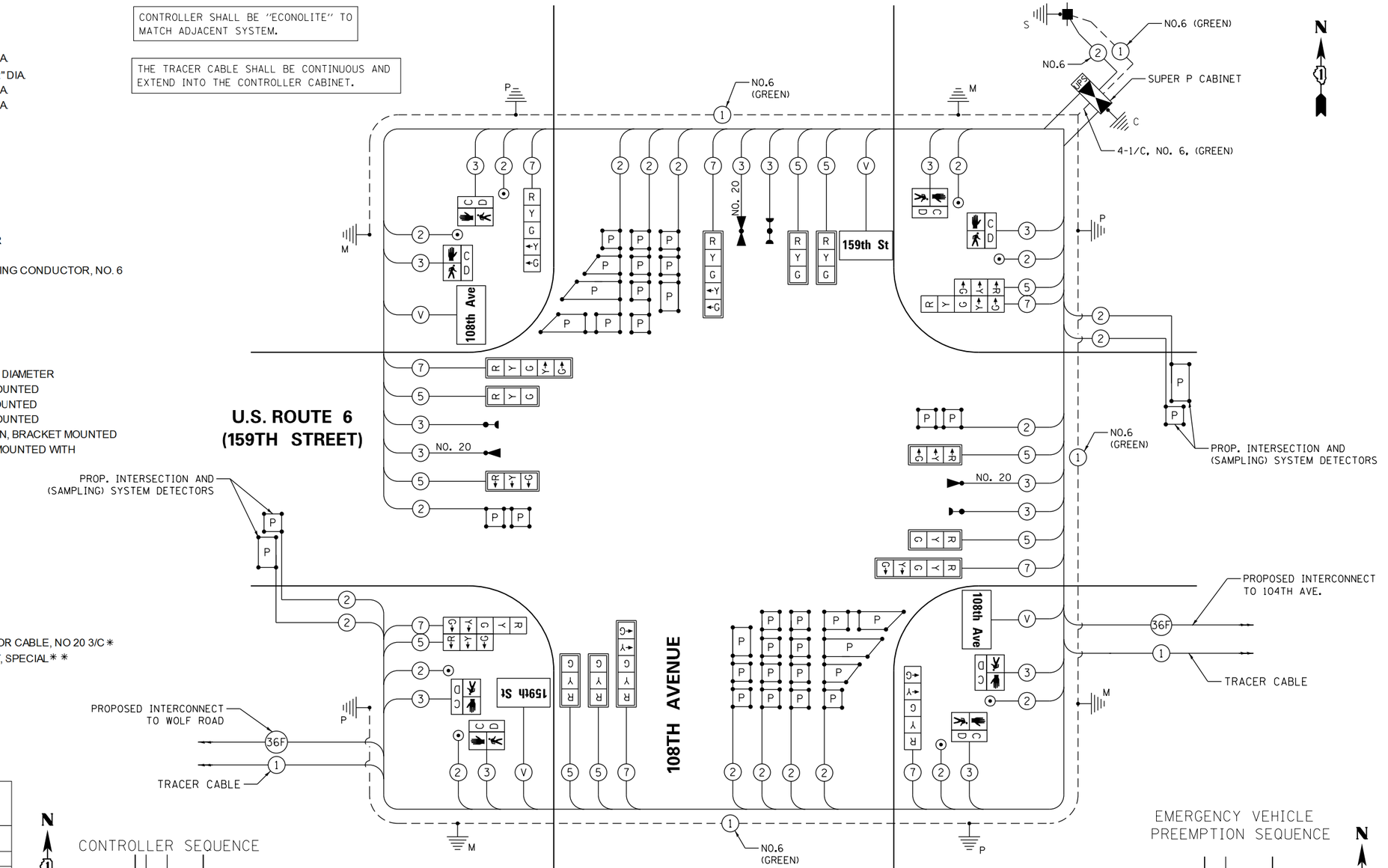
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	348
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

QTY	UNIT	ITEM DESCRIPTION
30	SQ FT	SIGN PANEL - TYPE 1
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
867	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
50	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
69	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
589	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
4	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
2	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER - FIBER OPTIC
1610	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
2300	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2500	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1865	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
3377	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
70	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
940	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 66 FT.
16	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
148	FOOT	CONCRETE FOUNDATION, TYPE E (SPECIAL)42-INCH DIAMETER
8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
13	EACH	INDUCTIVE LOOP DETECTOR
1404	FOOT	PREFORMED DETECTOR LOOP
3	EACH	LIGHT DETECTOR *
1	EACH	LIGHT DETECTOR AMPLIFIER *
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
4	EACH	ILLUMINATED STREET NAME SIGN * * *
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
639	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO 20 3/C *
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL * *
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

* 100% COST TO ORLAND FIRE PROTECTION DISTRICT
* * SUPER P CABINET
* * * 100% COST TO VILLAGE OF ORLAND PARK

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.

THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

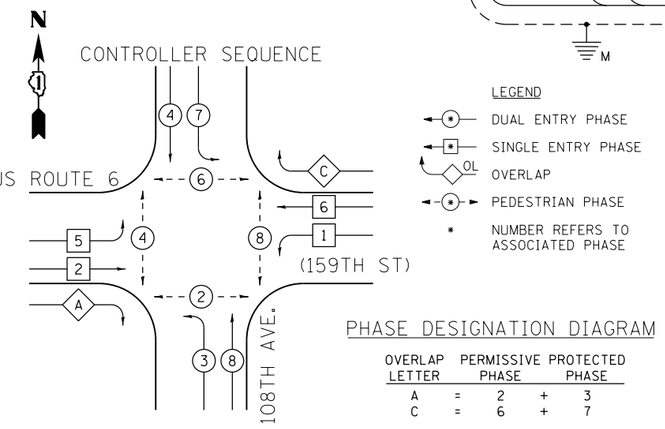


I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	18		17	0.50	153.00
(YELLOW)	18		25	0.25	112.50
(GREEN)	18		15	0.25	67.50
ARROW	16		12	0.10	19.20
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN			25	1.00	
ENERGY COSTS TO:				TOTAL =	652.20

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

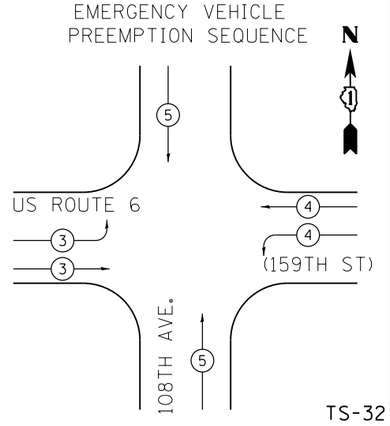
ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED



LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE		PROTECTED PHASE
A	= 2	+	3
C	= 6	+	7



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

TS-32

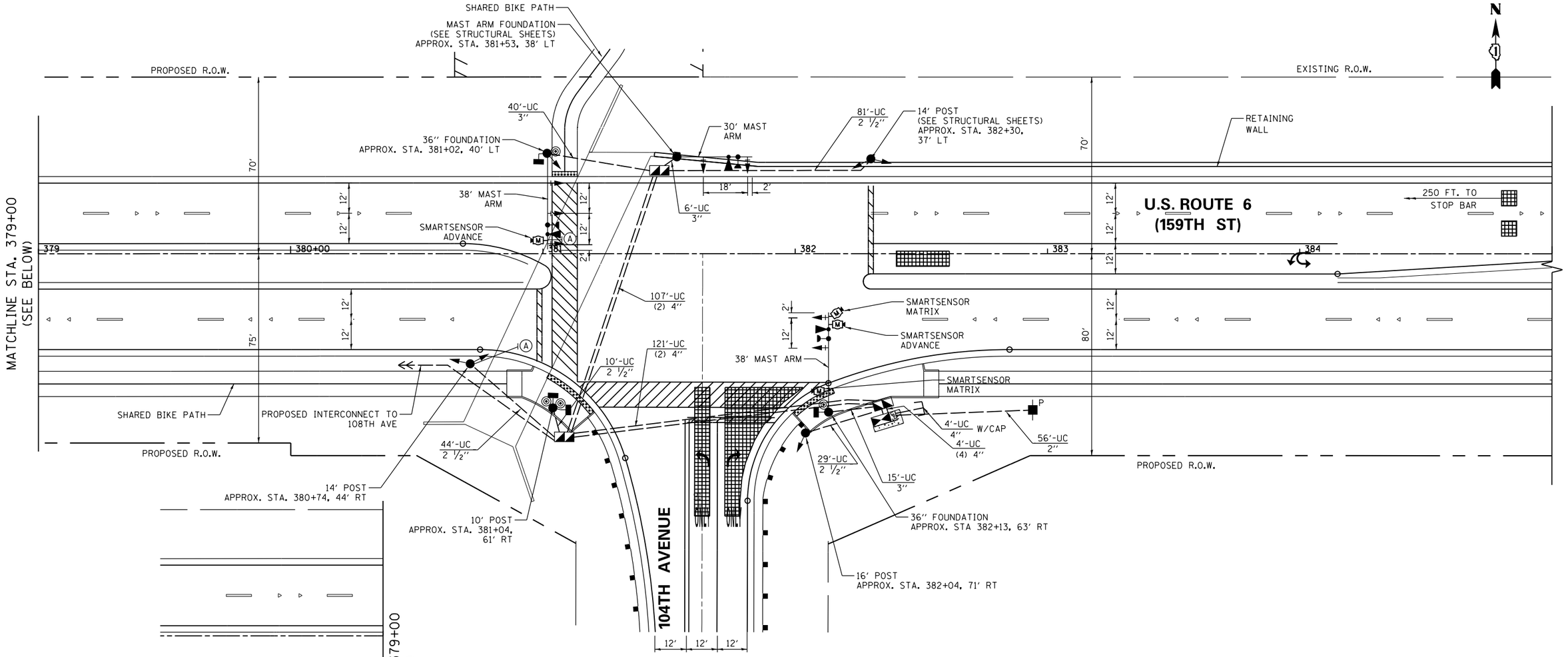
FILE NAME =	USER NAME = sadhikari	DESIGNED - SA	REVISED -
...\D160L72-sht-TS-12.dgn		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, SCHEDULE OF QUANTITIES, EMERGENCY VEHICLE PREEMPTION SEQUENCE AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 6 (159TH STREET) & 108TH AVENUE

SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	349
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(2 REQUIRED)

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.

NOTE:

TWO CHANGEABLE MESSAGE SIGNS ON 159TH STREET WILL NEED TO BE IN PLACE ONE WEEK PRIOR AND ONE WEEK AFTER THE TRAFFIC SIGNAL IS TURNED ON. THIS IS REQUIRED FOR A NEW STOP CONDITION

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME = ...\D160L72-sht-TS-13.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
U.S. ROUTE 6 (159TH STREET) & 104TH AVENUE

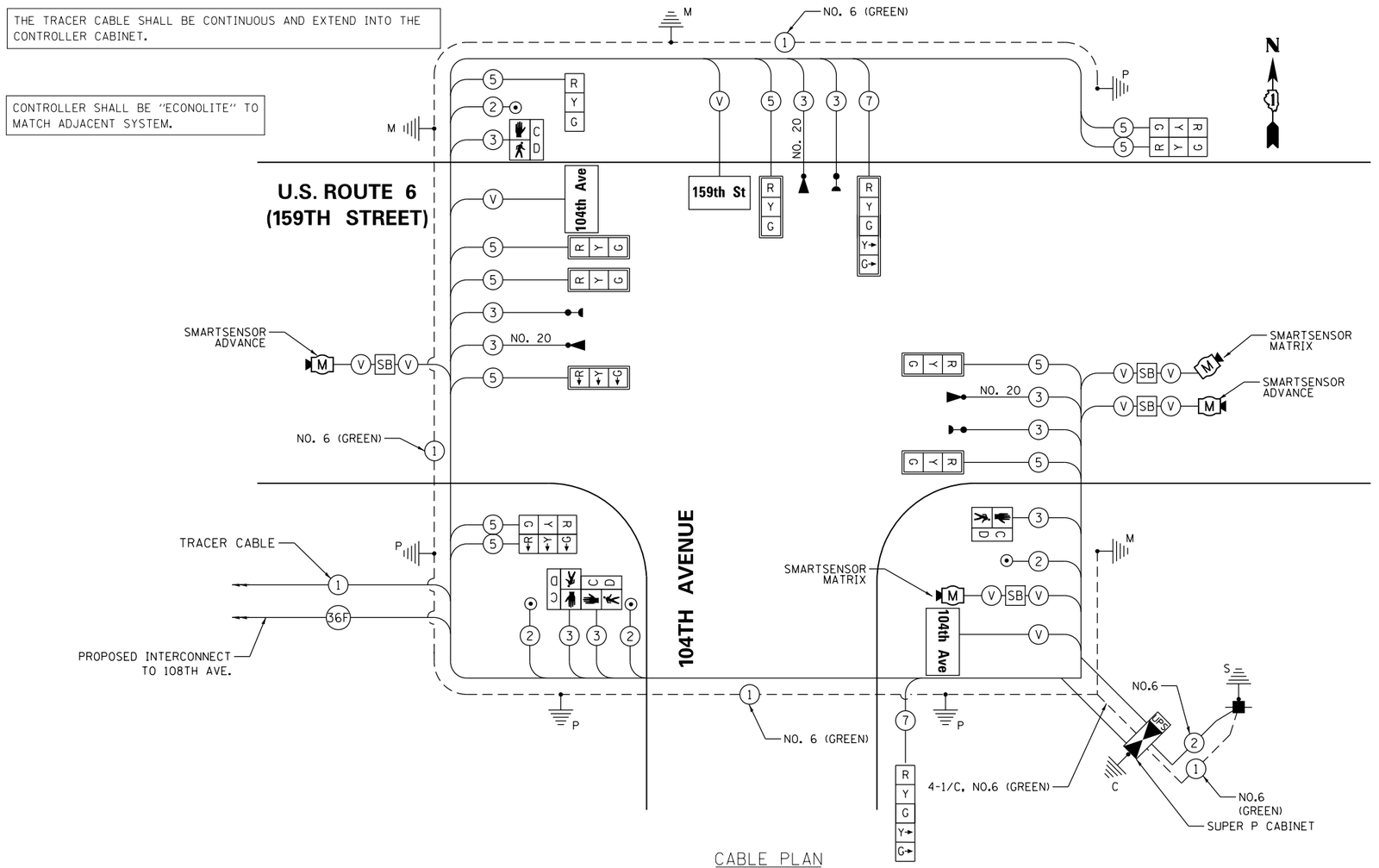
SCALE: 1"=20' | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	350
			CONTRACT NO. 60L72	
		ILLINOIS	FED. AID PROJECT	

QTY	UNIT	ITEM DESCRIPTION
2	CAL MO	CHANGEABLE MESSAGE SIGN
15	SQ FT	SIGN PANEL - TYPE 1
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
56	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
164	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
61	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
476	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
3	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER - FIBER OPTIC
729	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1541	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3135	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
404	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
86	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
950	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
12	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
22	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
6	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
7	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
3	EACH	LIGHT DETECTOR *
1	EACH	LIGHT DETECTOR AMPLIFIER *
4	EACH	PEDESTRIAN PUSH-BUTTON
3	EACH	ILLUMINATED STREET NAME SIGN * * *
796	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO 20 3/C *
2	EACH	MICROWAVE VEHICLE SENSOR (SMARTSENSOR ADVANCE)
2	EACH	MICROWAVE VEHICLE SENSOR (SMARTSENSOR MATRIX)
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL * *
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

CONTROLLER SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.



CABLE PLAN

* 100% COST TO ORLAND FIRE PROTECTION DISTRICT
* * SUPER P CABINET
* * * 100% COST TO VILLAGE OF ORLAND PARK

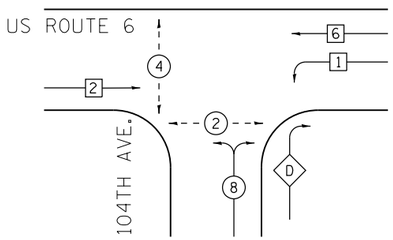
I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	13		17	0.50	110.5
(YELLOW)	13		25	0.25	81.25
(GREEN)	13		15	0.25	48.75
ARROW	4		12	0.10	4.8
PED. SIGNAL	4		25	1.00	100.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.50	
ENERGY COSTS TO:				TOTAL =	445.3

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

CONTROLLER SEQUENCE

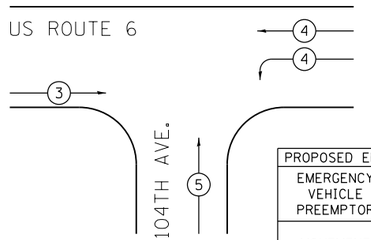


PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
D	=	8	+	1

LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↑

TS-34

FILE NAME = ...\D160L72-sht-TS-14.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES, CABLE PLAN, EMERGENCY VEHICLE PREEMPTION SEQUENCE AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 6 (159TH STREET) & 104TH AVENUE
		DRAWN - SA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - GG	REVISED -		SCALE: N.T.S. SHEET NO. 2 OF 2 SHEETS STA. TO STA.
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	351
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

0' 20' 40'

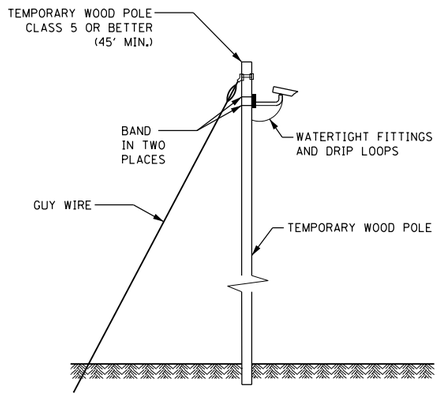
SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(2 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

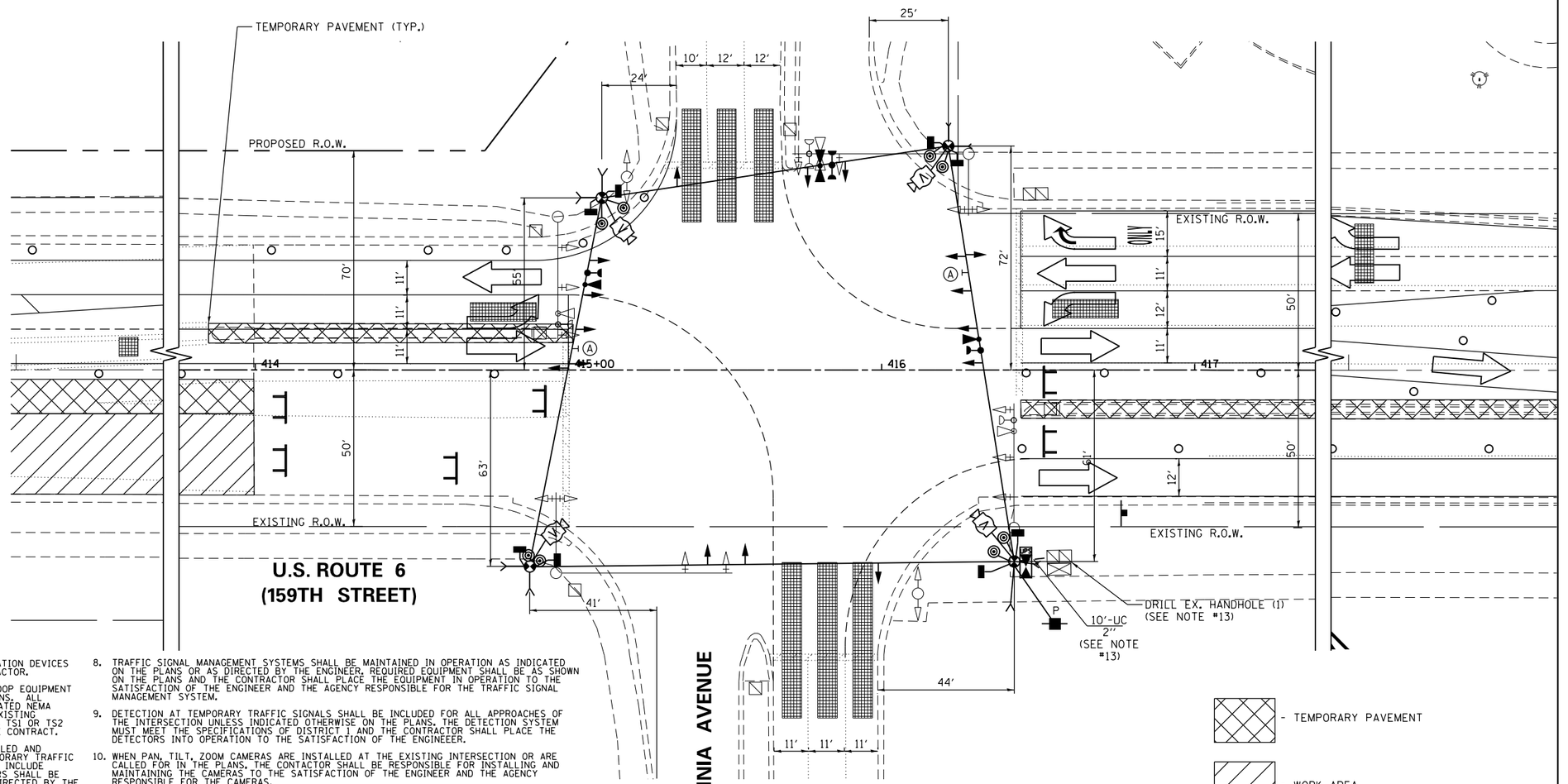
CONTROLLER SHALL BE "EAGLE" TO MATCH ADJACENT SYSTEM.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL

NOT TO SCALE



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13. CONTRACTOR SHALL UTILIZE EXISTING FIBER OPTIC CABLE TO MAINTAIN INTERCONNECT BETWEEN RAVINA AVENUE AND US RTE 45. CONTRACTOR SHALL INSTALL CONDUIT BETWEEN EXISTING DOUBLE HANDHOLE AND TEMPORARY CONTROLLER IN THE SOUTHWEST CORNER AS SHOWN ON THE PLANS. WHEN THE TEMPORARY TRAFFIC SIGNAL IS TURNED ON, THE EXISTING FIBER OPTIC CABLE SHALL BE DISCONNECTED FROM THE EXISTING CONTROLLER AND CONNECTED TO THE TEMPORARY CONTROLLER UTILIZING THIS CONDUIT DURING ALL STAGES. WHEN THE TEMPORARY SIGNAL IS DEACTIVATED, THE CONTRACTOR SHALL REINSTALL THE FIBER OPTIC CABLE TO THE EXISTING CONTROLLER. THE CONTRACTOR SHOULD SEAL THE DRILLED HOLE IN THE DOUBLE HANDHOLE PROPERLY AFTER IT IS NO LONGER NEEDED. ALL WORK ASSOCIATED WITH MAINAINING THE INTERCONNECT SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AND WILL NOT BE PAID FOR SEPERATELY.

TS-35

FILE NAME = ...\D160L72-sht-tempTS-17A.dgn	USER NAME = sadhikari	DESIGNED - GJG	REVISED -
		DRAWN - GJG	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SA	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 1)
U.S. ROUTE 6 (159TH STREET) & RAVINIA AVENUE

SCALE: 1"=20' | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	352
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

N

0' 20' 40'

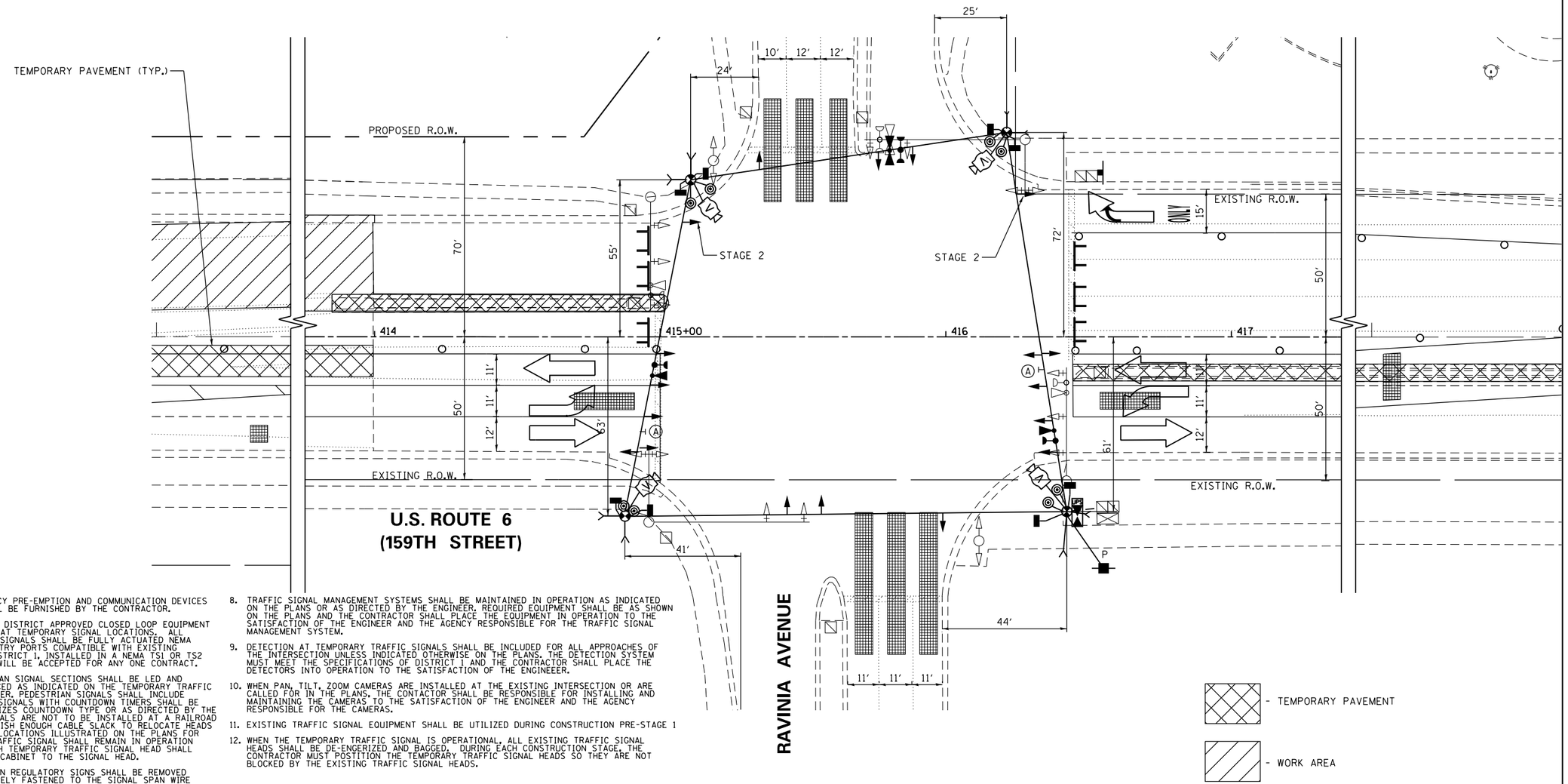
SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(2 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

CONTROLLER SHALL BE "EAGLE" TO MATCH ADJACENT SYSTEM.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



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FILE NAME = ...\D160L72-sht-tempTS-17B.dgn	USER NAME = sadhikari	DESIGNED - GJG	REVISED -
		DRAWN - GJG	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SA	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 2)
U.S. ROUTE 6 (159TH STREET) & RAVINIA AVENUE

SCALE: 1"=20' | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	353
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

N

0' 20' 40'

SCALE: 1" = 20'

LEFT ON GREEN ARROW ONLY

SIGN (A)
R10-5
30" X 36"
(2 REQUIRED)
(INCLUDED IN COST OF TEMPORARY TRAFFIC SIGNAL)

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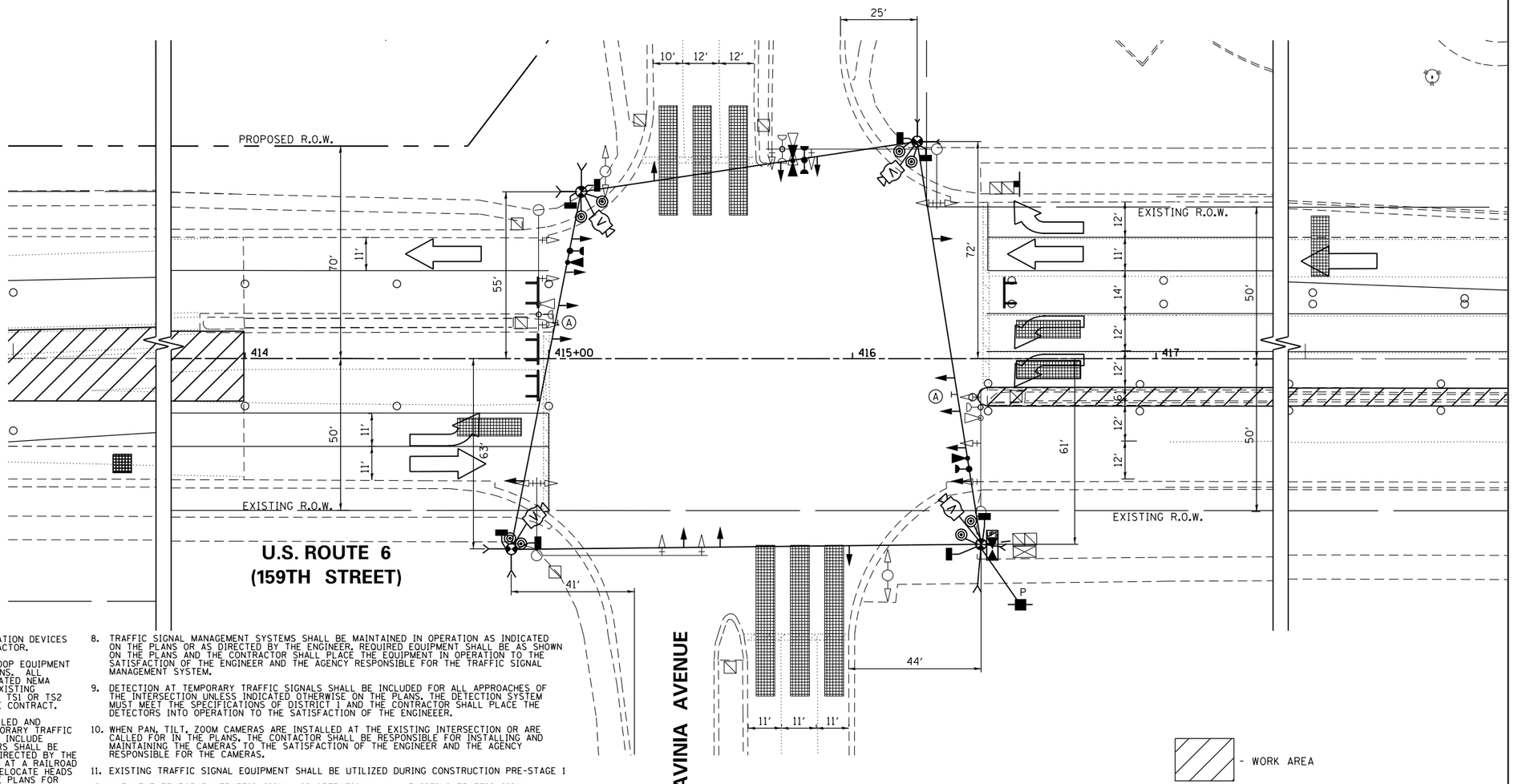

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FILE NAME = ...\D160L72-sht-tempTS-17C.dgn	USER NAME = sadhikari	DESIGNED - GJG	REVISED -
		DRAWN - GJG	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SA	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

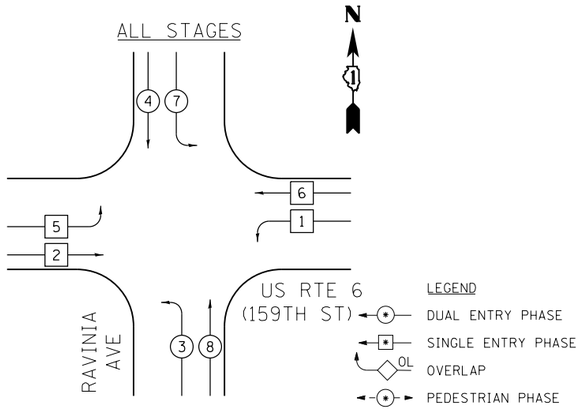
TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGE 3)
U.S. ROUTE 6 (159TH STREET) & RAVINIA AVENUE

SCALE: 1"=20' | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	354
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

CONTROLLER SEQUENCE

ALL STAGES



PHASE DESIGNATION DIAGRAM

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I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

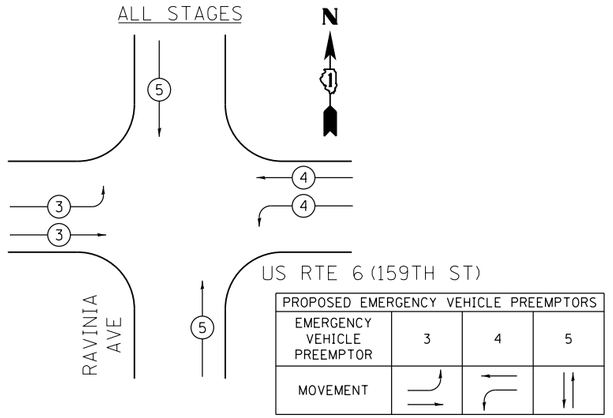
TYPE	NO. OF LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16		17	0.50	136.00
(YELLOW)	16		25	0.25	100.00
(GREEN)	16		15	0.25	60.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
VIDEO SYSTEM	1		150	1.00	150.00

ENERGY COSTS TO: TOTAL = 555.60

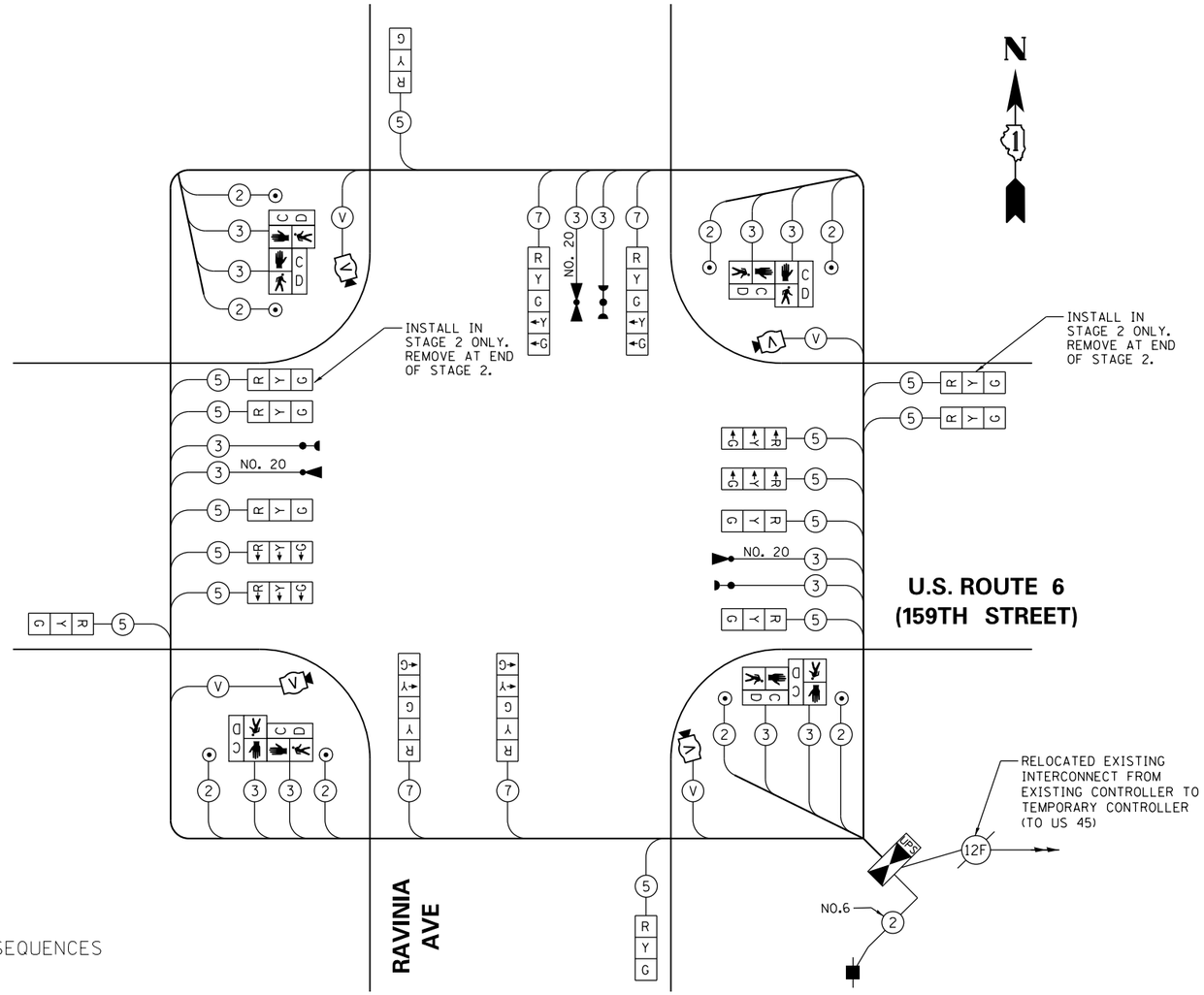
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 1
201 WEST CENTER COURT/SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MARY INFANTI
PHONE: 847-816-5322
COMPANY: COM ED

EMERGENCY VEHICLE PREEMPTION SEQUENCES



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			



TEMPORARY CABLE PLAN

QTY	UNIT	ITEM DESCRIPTION
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

TS-38

FILE NAME = ...\D160L72-sht-tempTS-170.dgn	USER NAME = sadhikari	DESIGNED - GG	REVISED -
		DRAWN - GG	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SA	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

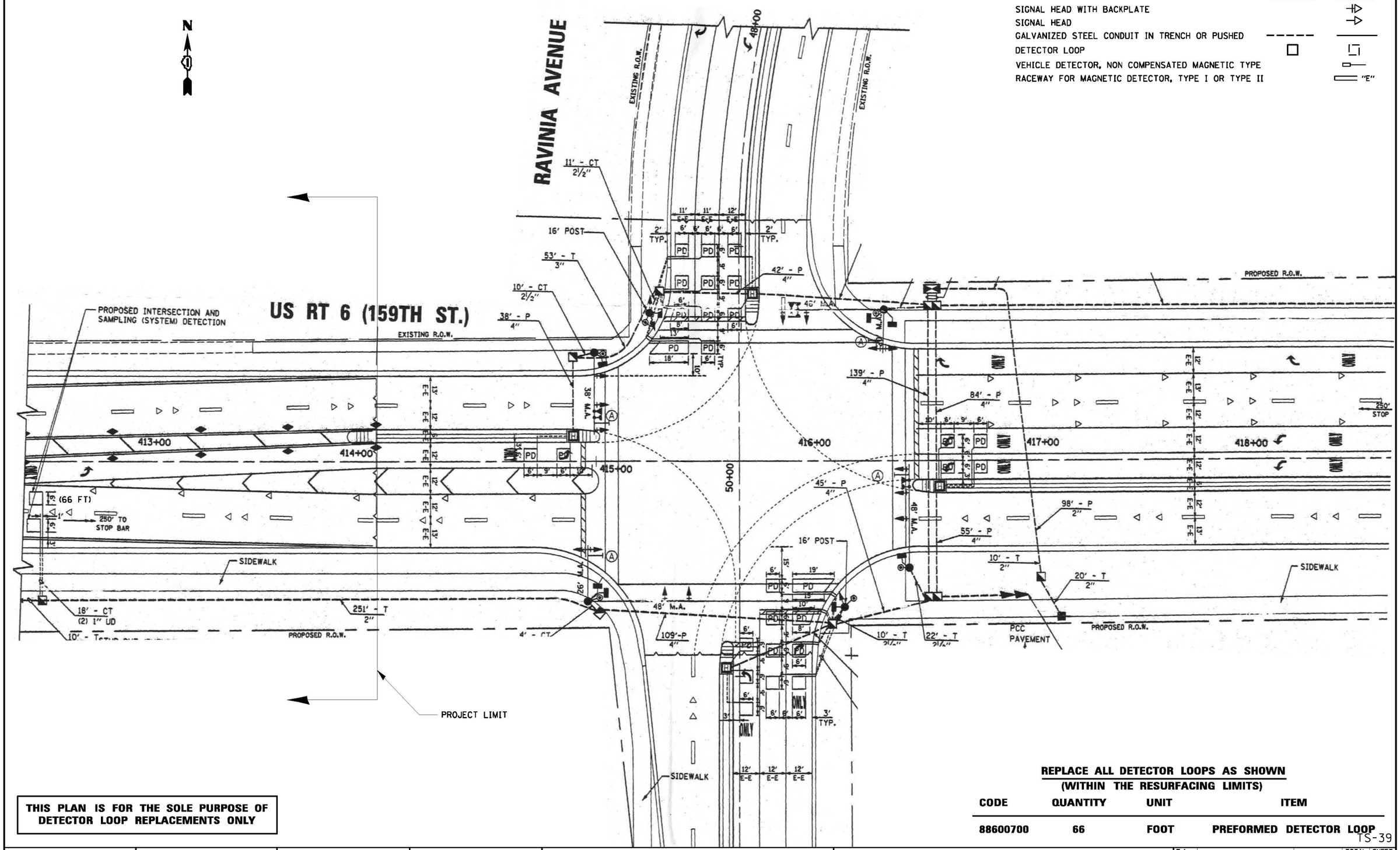
TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM (ALL STAGES)
U.S. ROUTE 6 (159TH ST) & RAVINIA AVE

SCALE: N.T.S. | SHEET NO. 4 OF 5 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	355
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"



THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY

REPLACE ALL DETECTOR LOOPS AS SHOWN
(WITHIN THE RESURFACING LIMITS)

CODE	QUANTITY	UNIT	ITEM
88600700	66	FOOT	PREFORMED DETECTOR LOOP

FILE NAME = S:\WP\Design\Detector Loops Replacement - Resurfacing Project-\Detector Loop-159thRev	USER NAME = plascencia; PLOT SCALE = 100.0000 '/ in.; PLOT DATE = 7/1/2014	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

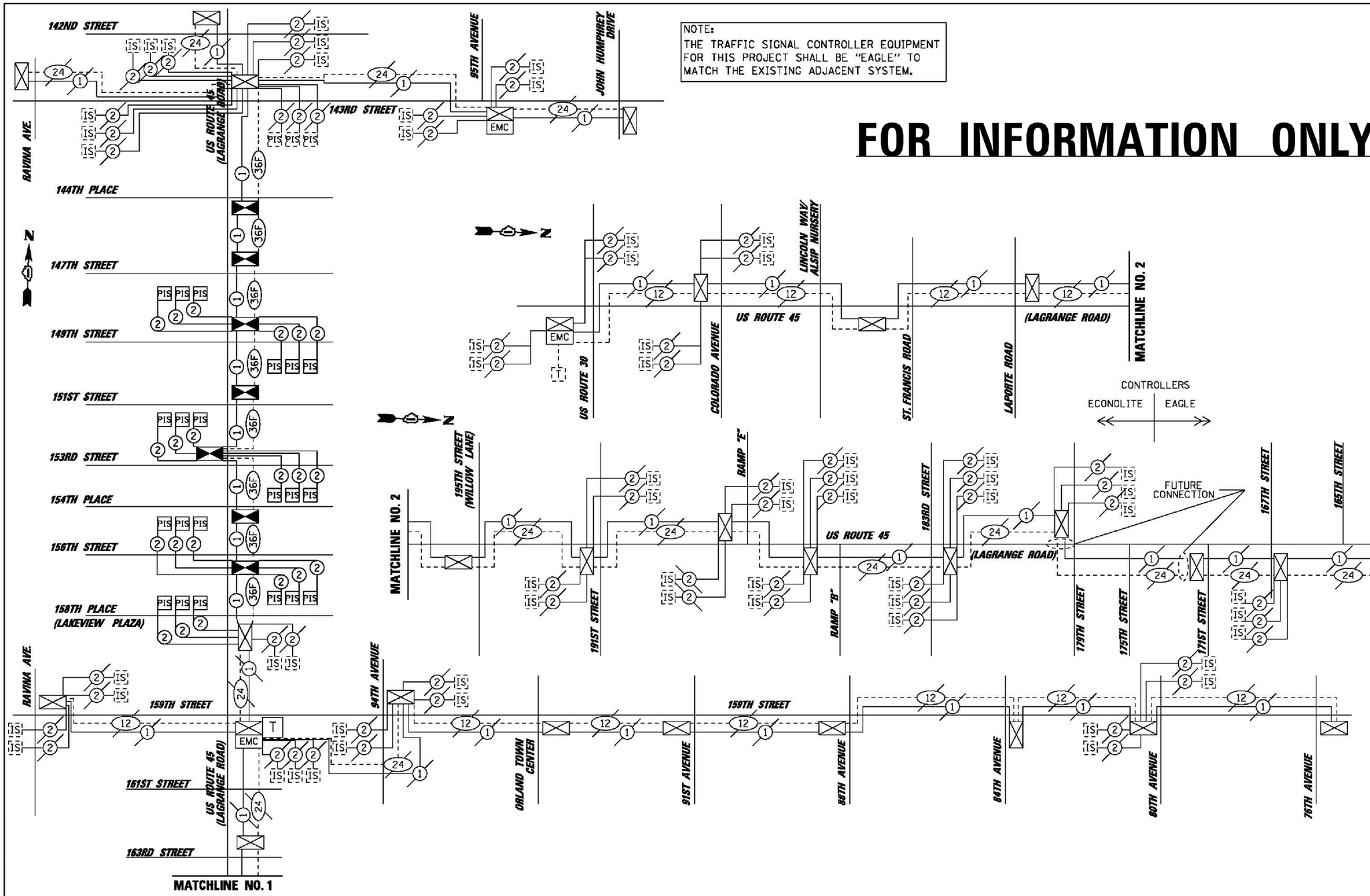
DISTRICT ONE – DETECTOR LOOP REPLACEMENT
· US ROUTE 6 AND RAVINIA AVE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R		1045	356
		CONTRACT NO.	60L72	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FOR INFORMATION ONLY



URS
100 S. WACKER DR.
SUITE 900
CHICAGO, IL 60606
TEL (312)-239-1000
FAX (312)-939-4988

FILE NAME = D160M61-SHT-TS85.dgn	USER NAME = Anthony.Plutz	DESIGNED - MRF	REVISED -
		DRAWN - MRF	REVISED -
SHT_PLAN	P.LOT SCALE = 100.0000 ' / in.	CHECKED - MJL	REVISED -
	P.LOT DATE = 3/14/2013	DATE - 03/13/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
US 45 (LAGRANGE RD)
FROM 159TH STREET TO 143RD STREET

SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	103R-4	COOK	877	409
	TD-85	CONTRACT NO. 60M61		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\D160L72-sht-tempTS-17E.dgn	USER NAME = sadhikari	DESIGNED - GG	REVISED -
		DRAWN - GG	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - SA	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
US 45 (LAGRANGE RD)
FROM 159TH STREET TO 143RD STREET

SCALE: N.T.S. | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	357
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

INTERCONNECT CONDUIT AND HANDHOLES WILL BE INSTALLED IN CONTRACT 60L71 FROM PARKER ROAD TO HANDHOLE STA. 280+12

CONTRACT 60L71 | CONTRACT 60L72

STA 280+12

CONTRACTOR SHALL TIE INTO CONDUIT STUB INSTALLED BY CONTRACT 60L71. CONTRACTOR SHALL COORDINATE THIS WORK WITH 60L71 CONTRACTOR.

475'-UC 2"

595'-UC 2"

280+00 | 285+00 | 290+00 | 10+00

IL ROUTE 7 (159TH ST.)

118TH

MATCHLINE STA. 290+75 SEE BELOW

N

MATCHLINE STA. 290+75 SEE ABOVE

580'-UC 2"

600'-UC 2"

85'-UC 2"

295+00 | 300+00 | 305+00

IL ROUTE 7 (159TH ST.)

MATCHLINE STA. 305+75 SEE SHEET TS-42

N

CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.

TS-41

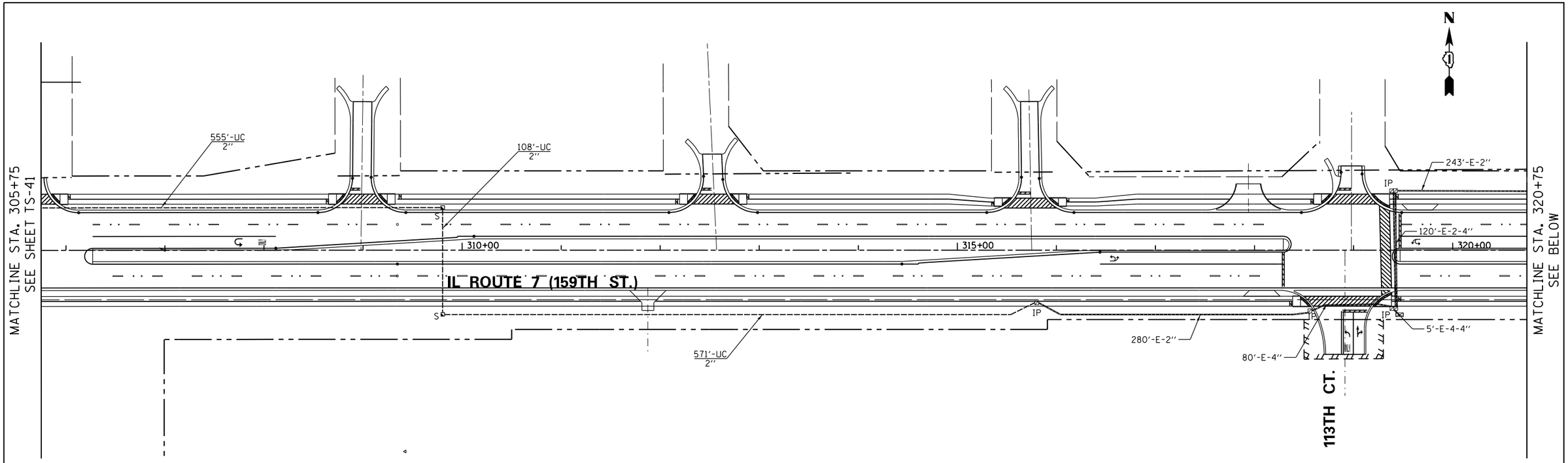
FILE NAME = ...\D160L72-sht-TS41.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

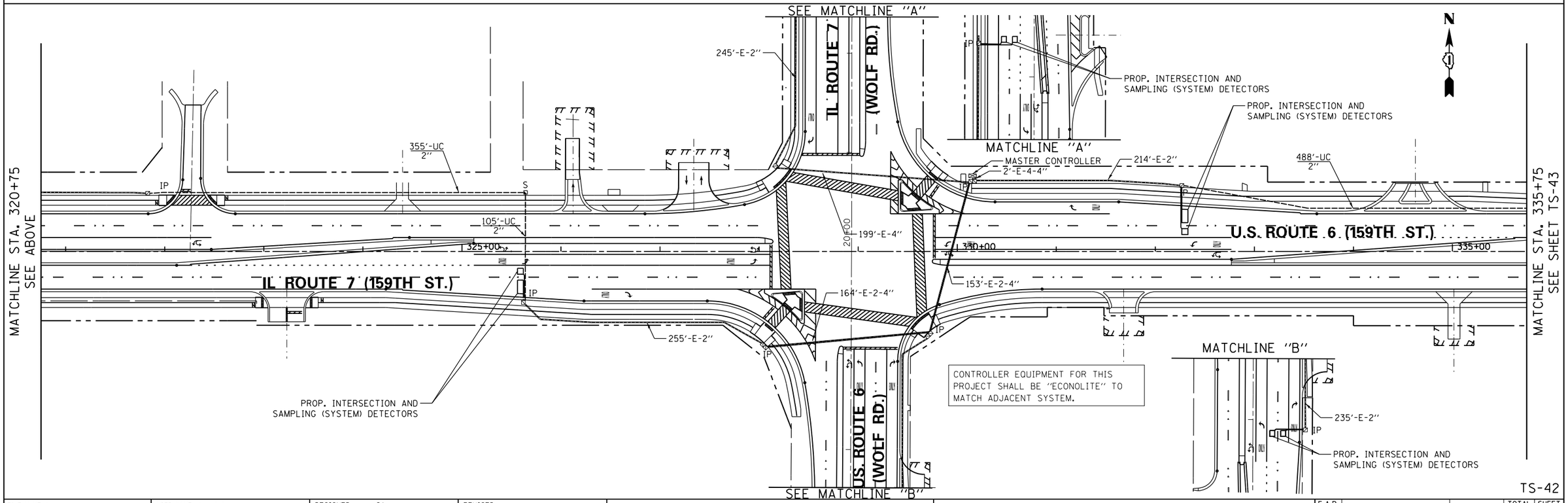
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – U.S. ROUTE 6 (159TH STREET) FROM WILL COOK ROAD TO 104TH AVENUE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	358
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			





TS-42

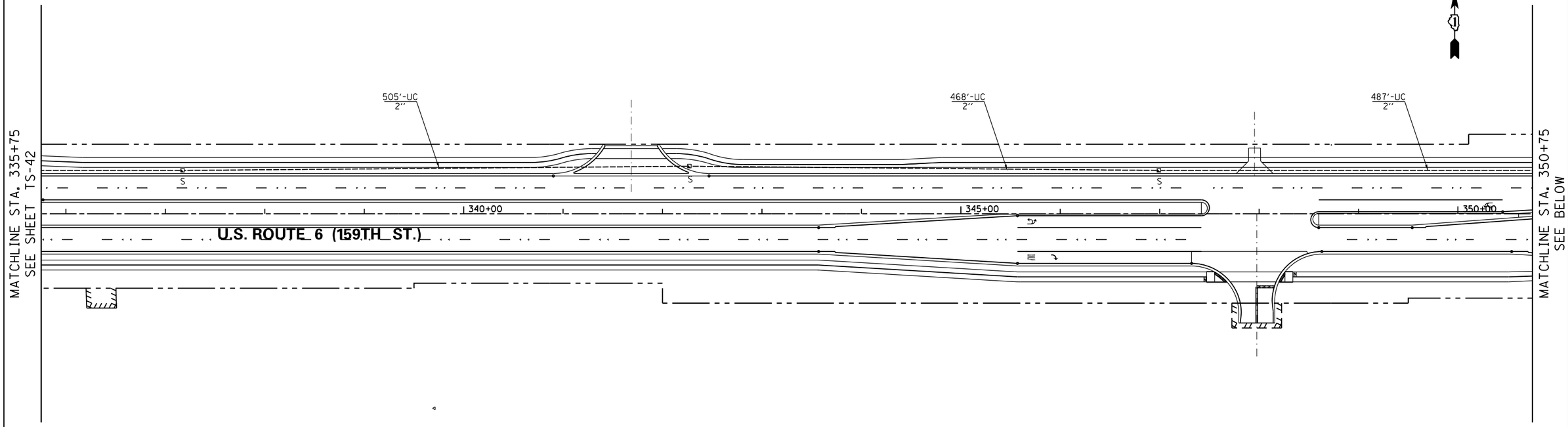
FILE NAME = ...\D160L72-sht-TS42.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

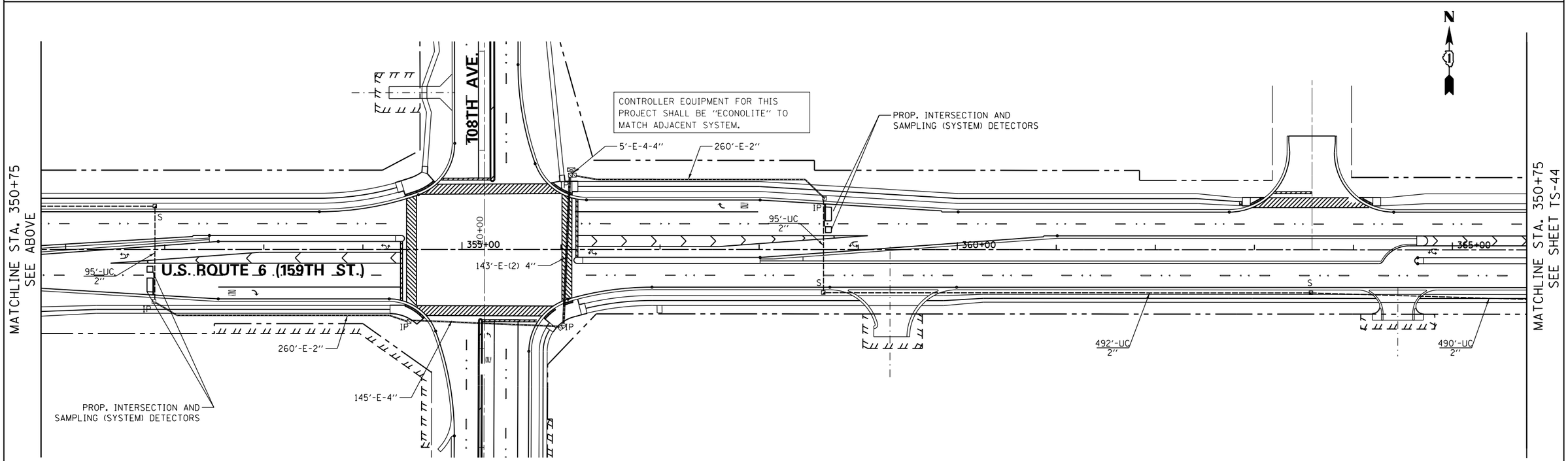
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – U.S. ROUTE 6 (159TH STREET)
FROM WILL COOK ROAD TO 104TH AVENUE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	359
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			





TS-43

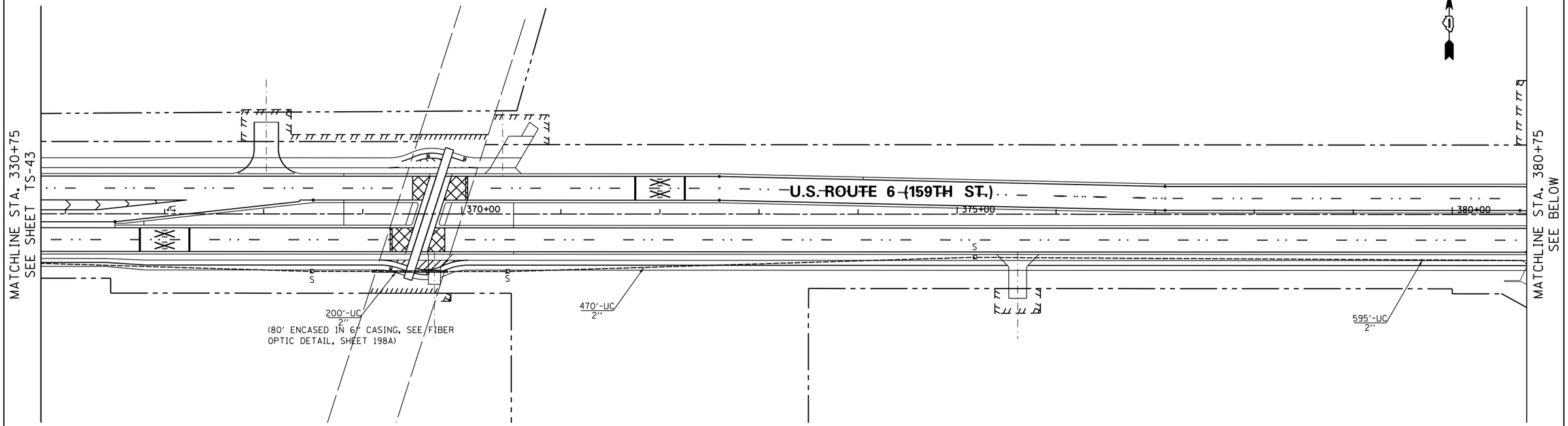
FILE NAME = ...\D160L72-sht-TS43.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – U.S. ROUTE 6 (159TH STREET)
FROM WILL COOK ROAD TO 104TH AVENUE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	360
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



TS-44

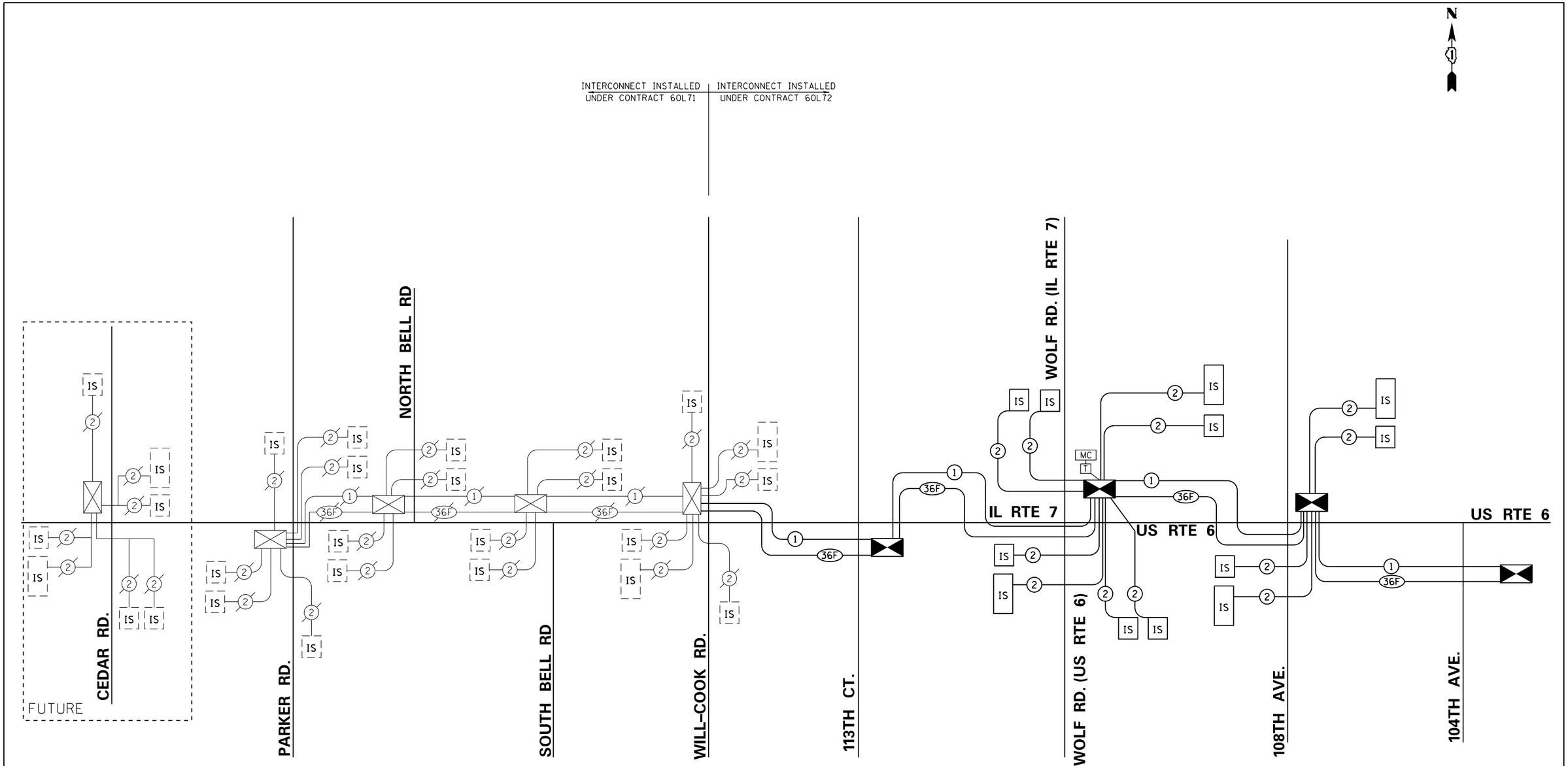
FILE NAME = ...\D160L72-sht-TS43a.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN – U.S. ROUTE 6 (159TH STREET)
FROM WILL COOK ROAD TO 104TH AVENUE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	361
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



QTY	UNIT	ITEM DESCRIPTION
8414	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2"
17	EACH	HANDHOLE
1	EACH	MASTER CONTROLLER (SPECIAL)
11596	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F
11596	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM
80	FOOT	STEEL CASINGS 6"

CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH ADJACENT SYSTEM.

TS-45

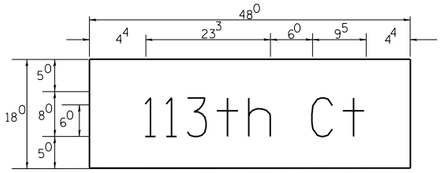
FILE NAME = ...\D160L72-sht-TS44.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

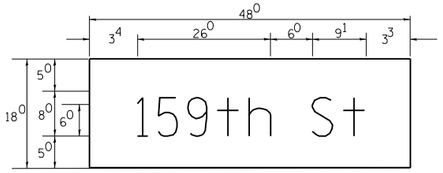
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

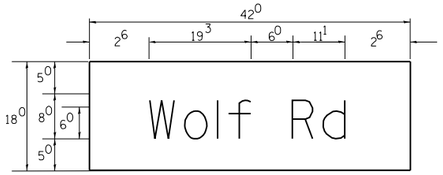
INTERCONNECT SCHEMATIC – 159TH STREET FROM CEDAR ROAD TO 104TH AVENUE

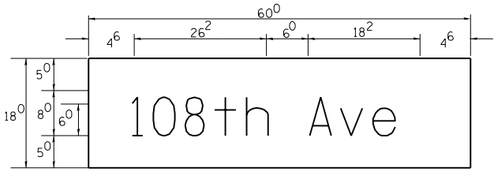
SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

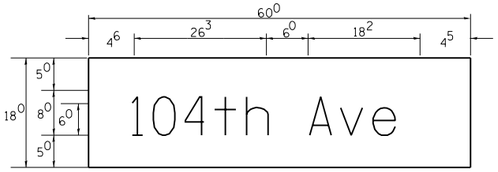
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	362
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	











NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

EXAMPLE, $2\frac{3}{8}$ DENOTES $\frac{3}{8}$"

Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{2}	1^{4}
B	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{6}	1^{7}
C E G	1^{4}	1^{5}	2^{0}	2^{1}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
D O Q R	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
F	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}
H I M N	2^{0}	2^{1}	2^{2}	2^{4}	2^{0}	2^{1}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}	2^{0}	2^{1}
J U	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}
K L	1^{1}	1^{2}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
P	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
S	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
T	1^{1}	1^{2}	1^{6}	1^{7}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
V	0^{6}	1^{0}	1^{4}	1^{5}	1^{1}	1^{2}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
Y	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{5}	0^{7}	0^{5}	0^{6}	0^{6}	1^{0}	1^{1}	1^{2}
Z	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}

Lower Case To Lower Case
Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j l m n q u	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}
b f k o p s	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
c e	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
r	0^{6}	1^{0}	1^{2}	1^{4}	0^{6}	1^{0}	0^{3}	0^{3}	0^{5}	0^{6}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}
t z	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
v y	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}
w	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
x	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}

Number To Number
Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}
1	2^{0}	2^{1}	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}
2 3 4	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{6}	1^{7}	1^{4}	1^{5}
5	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
6	1^{6}	1^{7}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
7	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{5}	0^{5}	0^{6}	1^{2}	1^{4}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}
8	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{4}	1^{5}

UPPER AND LOWER CASE
LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS, SERIES C	6 INCH UPPER CASE LETTERS, SERIES D	8 INCH UPPER CASE LETTERS, SERIES C	8 INCH UPPER CASE LETTERS, SERIES D	LETTERS	6 INCH LOWER CASE LETTERS, SERIES C	6 INCH LOWER CASE LETTERS, SERIES D
A	3^{6}	5^{0}	5^{0}	6^{5}	a	3^{5}	4^{2}
B	3^{2}	4^{0}	4^{3}	5^{3}	b	3^{5}	4^{2}
C	3^{2}	4^{0}	4^{3}	5^{3}	c	3^{5}	4^{1}
D	3^{2}	4^{0}	4^{3}	5^{3}	d	3^{5}	4^{2}
E	3^{0}	3^{5}	4^{0}	4^{7}	e	3^{5}	4^{2}
F	3^{0}	3^{5}	4^{0}	4^{7}	f	2^{3}	2^{6}
G	3^{2}	4^{0}	4^{3}	5^{3}	g	3^{5}	4^{2}
H	3^{2}	4^{0}	4^{3}	5^{3}	h	3^{5}	4^{2}
I	0^{7}	0^{7}	1^{1}	1^{2}	i	1^{1}	1^{1}
J	3^{0}	3^{6}	4^{0}	5^{0}	j	2^{0}	2^{2}
K	3^{2}	4^{1}	4^{3}	5^{4}	k	3^{5}	4^{2}
L	3^{0}	3^{5}	4^{0}	4^{7}	l	1^{1}	1^{1}
M	3^{7}	4^{5}	5^{1}	6^{1}	m	6^{0}	7^{0}
N	3^{2}	4^{0}	4^{3}	5^{3}	n	3^{5}	4^{2}
O	3^{4}	4^{2}	4^{5}	5^{5}	o	3^{6}	4^{3}
P	3^{2}	4^{0}	4^{3}	5^{3}	p	3^{5}	4^{2}
Q	3^{4}	4^{2}	4^{5}	5^{5}	q	3^{5}	4^{2}
R	3^{2}	4^{0}	4^{3}	5^{3}	r	2^{6}	3^{2}
S	3^{2}	4^{0}	4^{3}	5^{3}	s	3^{6}	4^{2}
T	3^{0}	3^{5}	4^{0}	4^{7}	t	2^{7}	3^{2}
U	3^{2}	4^{0}	4^{3}	5^{3}	u	3^{5}	4^{2}
V	3^{5}	4^{4}	4^{7}	6^{0}	v	4^{2}	4^{7}
W	4^{4}	5^{2}	6^{0}	7^{0}	w	5^{5}	6^{4}
X	3^{4}	4^{0}	4^{5}	5^{3}	x	4^{4}	5^{1}
Y	3^{6}	5^{0}	5^{0}	6^{6}	y	4^{6}	5^{3}
Z	3^{2}	4^{0}	4^{3}	5^{3}	z	3^{6}	4^{3}

NUMBER	6 INCH SERIES, C	6 INCH SERIES, D	8 INCH SERIES, C	8 INCH SERIES, D
1	1^{2}	1^{4}	1^{5}	2^{0}
2	3^{2}	4^{0}	4^{3}	5^{3}
3	3^{2}	4^{0}	4^{3}	5^{3}
4	3^{5}	4^{3}	4^{7}	5^{7}
5	3^{2}	4^{0}	4^{3}	5^{3}
6	3^{2}	4^{0}	4^{3}	5^{3}
7	3^{2}	4^{0}	4^{3}	5^{3}
8	3^{2}	4^{0}	4^{3}	5^{3}
9	3^{2}	4^{0}	4^{3}	5^{3}
0	3^{4}	4^{2}	4^{5}	5^{5}

TS-46

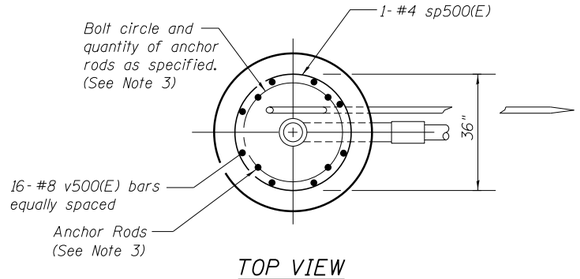
FILE NAME = ...\D160L72-sht-TS45.dgn	USER NAME = sadhikari	DESIGNED - SA	REVISED -
		DRAWN - SA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 10/22/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

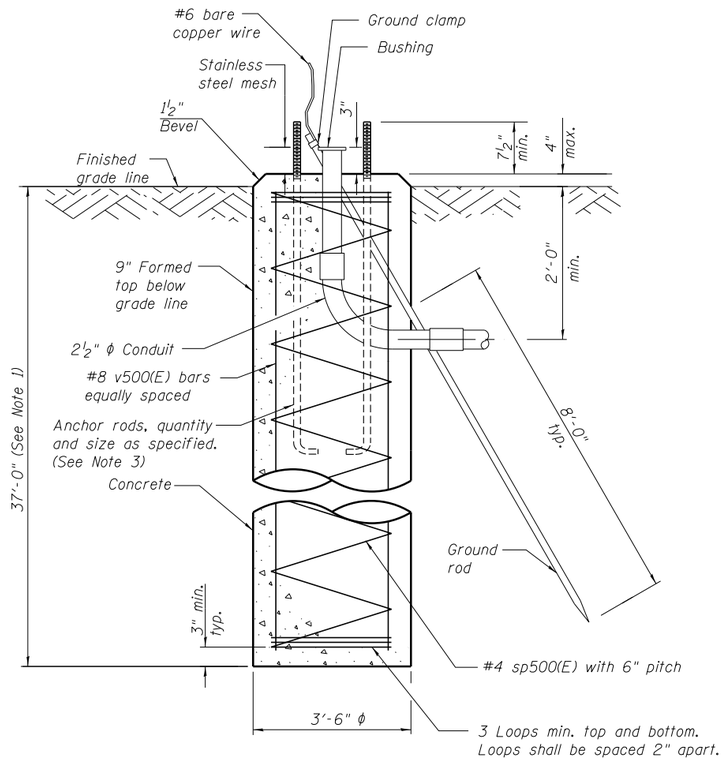
ILLUMINATED STREET NAME SIGNS
STREET NAME SIGNS

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	363
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



TOP VIEW



42" DIAMETER FOUNDATION (SPECIAL)

(Typical of Each Mast Arm Foundation at 159th Street and 108th Avenue)

BILL OF MATERIAL

(For 1-42" ϕ Foundation: 4-Required)

	Bar	No.	Size	Length	Shape
	v500(E)	16	#8	36'-6"	———
*	sp500(E)	1	#4	36'-6"	∧∧∧
**	Reinforcement Bars, Epoxy Coated			Pound	2,052
	Concrete Foundation, Type E 42-Inch Diameter, Special			Foot	37

*Length is height of spiral

**Not measured for payment, cost included with CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER

NOTES

1. The foundation depth shown is for a site with stiff clay with an average Unconfined Compressive Strength (Qu)>1.7 tsf from elevation 672 to elevation 665. The strength of soil at this depth shall be verified in the field by the Engineer during foundation drilling.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. See Standards 877011-05 and 8770012-02 for anchor bolt sizing and additional details.
4. Work this Sheet with Traffic Signal Plans.
5. Contractor shall verify location of utilities prior to drilling.

T:\5106-USGS\Struct\dgn\Signal Foundation\01600000-60L72-001-CF.dgn

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =		DESIGNED - RAB	REVISED
FILE NAME = 01600000-60L72-001-CF.dgn		CHECKED - LJB	REVISED
PLOT SCALE =		DRAWN - EF	REVISED
PLOT DATE =		CHECKED - LJB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FOUNDATION DETAILS

SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	364
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		

Geo Services, Inc.
Geotechnical | Environmental | Civil Engineering
805 Kennett Court, Suite 204
Naperville, Illinois 60565
(630) 355-0616

GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 3/22/12

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY KD

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. _____
Station _____

BORING NO. RB-31
Station 354+38
Offset 27.90ft Right
Ground Surface Elev. 699.70 ft

Surface Water Elev. n/a ft
Stream Bed Elev. n/a ft

Groundwater Elev.:
First Encounter 692.2 ft ▼
Upon Completion n/a ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL-black (Fill)			
698.70			15
CRUSHED ASPHALT & STONE-medium dense	5		
	9		6
	11		
696.70			
ORGANIC CLAY LOAM-black-very loose to loose	1		
	2		53
-5	5		
	1		
	2	1.4	40
	2	B	
691.70			
PEAT-dark brown to black-very loose	ST		
			59
-10			
	1		
	1	0.3	89
	1	B	
686.70			
SILTY CLAY-gray-very soft (Wet)	ST		
		0.3	37
-15		P	
684.20			
ORGANIC SILTY CLAY-dark gray-very loose	6		
	1	0.2	37
	1	B	
681.70			
CLAY-brown & gray-soft to stiff	2		
	2	0.3	19
-20	4	P	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-brown & gray-soft to stiff *(continued)*	2		
	2		18
	3		
	1		
	2	1.0	15
-25	3	P	
674.20			
CLAY LOAM-gray-medium stiff	2		
	3	0.9	17
	4	B	
671.70			
SILTY CLAY LOAM-gray-stiff	2		
	3	1.0	14
-30	5	B	
667.70			
CLAY LOAM-gray-stiff	4		
	6	1.7	16
664.70 -35	9	B	
End Of Boring @ -35.0'. Boring backfilled with cuttings.			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2010\10195 H.W.LOCHNER IL 7 WILL COOK RD TO IL 45 (PTB 157-5)\10195 BORING LOGS\10195_LOG.GPJ 4/17/13

T:\5106-USS\Struct\dgn\Signal Foundation\0160000-60L72-002-SB.dgn

LEGEND

- PROPOSED LIGHTING UNIT
  47.5' M.H., 12' M.A., WITH 240V TYPE S-C-III LED LUMINAIRE
- RELOCATED LIGHTING UNIT
- EXISTING LIGHTING UNIT
- PROPOSED RIGID GALVANIZED STEEL CONDUIT (RGC)
  SIZE AS INDICATED
- PROPOSED UNIT DUCT, AS SPECIFIED IN PLANS
- PROPOSED LIGHTING CONTROLLER, SPECIAL
- EXISTING LIGHTING CONTROLLER
- PROPOSED COMED SERVICE TRANSFORMER
- PROPOSED GROUND ROD, 5/8" X 10 FT
- PROPOSED HANDHOLE

CALL-OUT SAMPLES

DEFINITION	EXAMPLE
CKT. NO. LOCATION SETBACK FROM FACE OF CURB (AS NOTED ON THE PLANS)	MZA1 STA 591+85 SETBACK 7 FT
HC A POLE NUMBER CIRCUIT NUMBER LIGHTING CONTROL CABINET	
CONDUIT SIZE, TYPE LENGTH	4" RGC 100 FT
CIRCUITS CONDUCTORS RACEWAY	CKT. MZAB 3-1/C#8, 1/C#10 GND, 1" DIA. UNIT DUCT
CONTROLLER DESIGNATION LOCATION DESCRIPTION	PROPOSED LIGHTING CONTROLLER "MZ" STA 590+95, 51 FT LT 1-PHASE, 240/480V

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DIA	DIAMETER
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
FT	FEET OR FOOT
FND MET	FOUNDATION METAL
FU	FUSE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HDPE	HIGH DENSITY POLYETHYLENE
HID	HIGH INTENSITY DISCHARGE
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
LED	LIGHT EMITTING DIODE
LITE	LIGHTING
M	METER
M.A.	MAST ARM
M.H.	MOUNTING HEIGHT
NO. #	NUMBER
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
RGS	RIGID GALVANIZED STEEL
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
UD	UNIT DUCT
WP	WOOD POLE
XFMR	TRANSFORMER

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS.
3. ALL NEW CONDUITS, UNIT DUCTS, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL SPECIFICATIONS (LATEST EDITION).
5. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES.
6. RIGID CONDUIT CASINGS UNDER ROADWAYS SHALL EXTEND 2 FT BEYOND THE EDGE OF SHOULDER OR BACK OF CURB, AS APPLICABLE.
7. LED LUMINAIRES SHALL BE GENERAL ELECTRIC LIGHTING MODEL NO. ERS4-3-T3-D1-5-50.

LIGHTING BILL OF MATERIAL

ITEM	UNIT	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	2,833
HANDHOLE	EACH	4
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	7,238
UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	5,573
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 3/0	FOOT	120
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	361
REMOVAL OF POLE FOUNDATION	EACH	7
RELOCATE EXISTING LIGHTING UNIT	EACH	7
LIGHTING CONTROLLER, SPECIAL	EACH	1
LIGHT POLE, SPECIAL	EACH	36
LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	66
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	1
LUMINAIRE, LED, HORIZONTAL MOUNT, SPECIAL	EACH	36

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING GENERAL NOTES AND LEGEND
US 6 / IL 7 (159TH ST) AT WOLF ROAD

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	366
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = ...\D1602_72-sht-light-01.dgn

NOTES:
1. SEE DRAWING E-1 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES
2. ROUTE UNUSED RECEPTACLE CIRCUITS AROUND FOUNDATION

N

114TH AVE
113TH CT
113TH AVE
PROP. ROW
IL RTE 7 / 159TH ST
315+00
320+00
325+00
330+00
335+00
25+00
20+00
17+00
15+00
MATCH LINE STA. 320+50
MATCH LINE STA. 17+00
SPORTSPLEX ENTRANCE
WOLF ROAD
EXIST. ROW

C10A9 (RECP R1) STA 313+51 SETBACK 3.5 FT
C10B9 (RECP R2) STA 315+51 SETBACK 3.5 FT
C10A8 (RECP R1) STA 317+51 SETBACK 3.5 FT
C10B8 (RECP R2) STA 318+57 SETBACK 3.5 FT
C10A7 (RECP R1) STA 319+51 SETBACK 3.5 FT
C10C10 (RECP R3) STA 317+51 SETBACK 3.5 FT
C10D8 (RECP R4) STA 319+16 SETBACK 3.5 FT
C10C9 (RECP R3) STA 319+51 SETBACK 3.5 FT
C10C6 (RECP R3) STA 26+29 SETBACK 3.5 FT OFFSET FOUNDATION
C10D5 (RECP R4) STA 24+95 SETBACK 3.5 FT
C10C5 (RECP R3) STA 23+32 SETBACK 3.5 FT
C10D4 (RECP R4) STA 21+69 SETBACK 3.5 FT
C10C4 (RECP R6) STA 21+69 SETBACK 3.5 FT NOTE 2
C10D3 (RECP R5) STA 329+47 SETBACK 3.5 FT NOTE 2
C10C3 (RECP R6) STA 329+68 SETBACK 3.5 FT NOTE 2
C10C1 (RECP R5) STA 330+34 SETBACK 3.5 FT OFFSET FOUNDATION NOTE 2
C10D1 (RECP R6) STA 331+95 SETBACK 3.5 FT OFFSET FOUNDATION
C10D2 (RECP R6) STA 335+92 SETBACK 3.5 FT
C10C2 (RECP R5) STA 333+92 SETBACK 3.5 FT
C10B1 (RECP R8) STA 332+00 SETBACK 3.5 FT
C10A1 (RECP R7) STA 329+92 SETBACK 3.5 FT NOTE 2
C10B2 (RECP R8) STA 18+89 SETBACK 3.5 FT NOTE 2
C10A2 (RECP R7) STA 18+00 SETBACK 3.5 FT NOTE 2
C10A3 (RECP R7) STA 14+00 SETBACK 3.5 FT
C10B3 (RECP R8) STA 16+00 SETBACK 3.5 FT
C10B4 (RECP R2) STA 18+00 SETBACK 3.5 FT OFFSET FOUNDATION
C10A4 (RECP R1) STA 328+21 SETBACK 3.5 FT
C10B5 (RECP R2) STA 328+36 SETBACK 3.5 FT
C10A5 (RECP R1) STA 327+34 SETBACK 3.5 FT
C10B6 (RECP R2) STA 325+46 SETBACK 3.5 FT
C10A6 (RECP R1) STA 323+63 SETBACK 3.5 FT
C10B7 (RECP R2) STA 321+53 SETBACK 3.5 FT
C10D7 (RECP R4) STA 321+53 SETBACK 3.5 FT
C10C8 (RECP R3) STA 323+63 SETBACK 3.5 FT
C10C7 (RECP R3) STA 327+91 SETBACK 3.5 FT OFFSET FOUNDATION
XD6 (RECP R4) STA 325+46 SETBACK 3.5 FT

(2) 4" RGC 34 FT
(2) 4" RGC 75 FT
(2) 4" RGC 52 FT
(2) 4" RGC 108 FT
(2) 4" RGC 52 FT
(2) 4" RGC 22 FT
(2)4" RGC 22 FT
(2) 4" RGC 36 FT EXIST. ROW
(2) 4" RGC 100 FT
(3) 4" RGC 57 FT
(3) 4" RGC 28 FT
(3) 4" RGC 98 FT
(2) 4" RGC 77 FT
(2) 4" RGC 62 FT
(2) 4" RGC 63 FT
(2) 4" RGC 30 FT
(2) 4" RGC 100 FT
(2) 4" RGC 57 FT
(2) 4" RGC 50 FT
(2) 4" RGC 57 FT

1¼" UD, 3-1/C #4 AND 1/C #6 GND (LITE)
1½" UD, 3-1/C #2 AND 1/C #4 GND (RECP)

3-1/C #3/0 IN 4" RGC
VILLAGE OF ORLAND PARK CONTROLLER "C10" STA 330+81

SCALE IN FEET
0 50 100
SCALE: 1"=50'

E-02

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED LIGHTING PLAN US 6 / IL 7 (159TH ST) AT WOLF ROAD
		DRAWN - BKG	REVISED -		
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -		SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 313+40 TO STA. 335+96
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	367
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

FILE NAME = ...\D1660L72-sht-light-02.dgn

LEGEND

PROPOSED LIGHTING UNIT, 47.5 FT M.H., 12 FT M.A.
LED LUMINAIRE

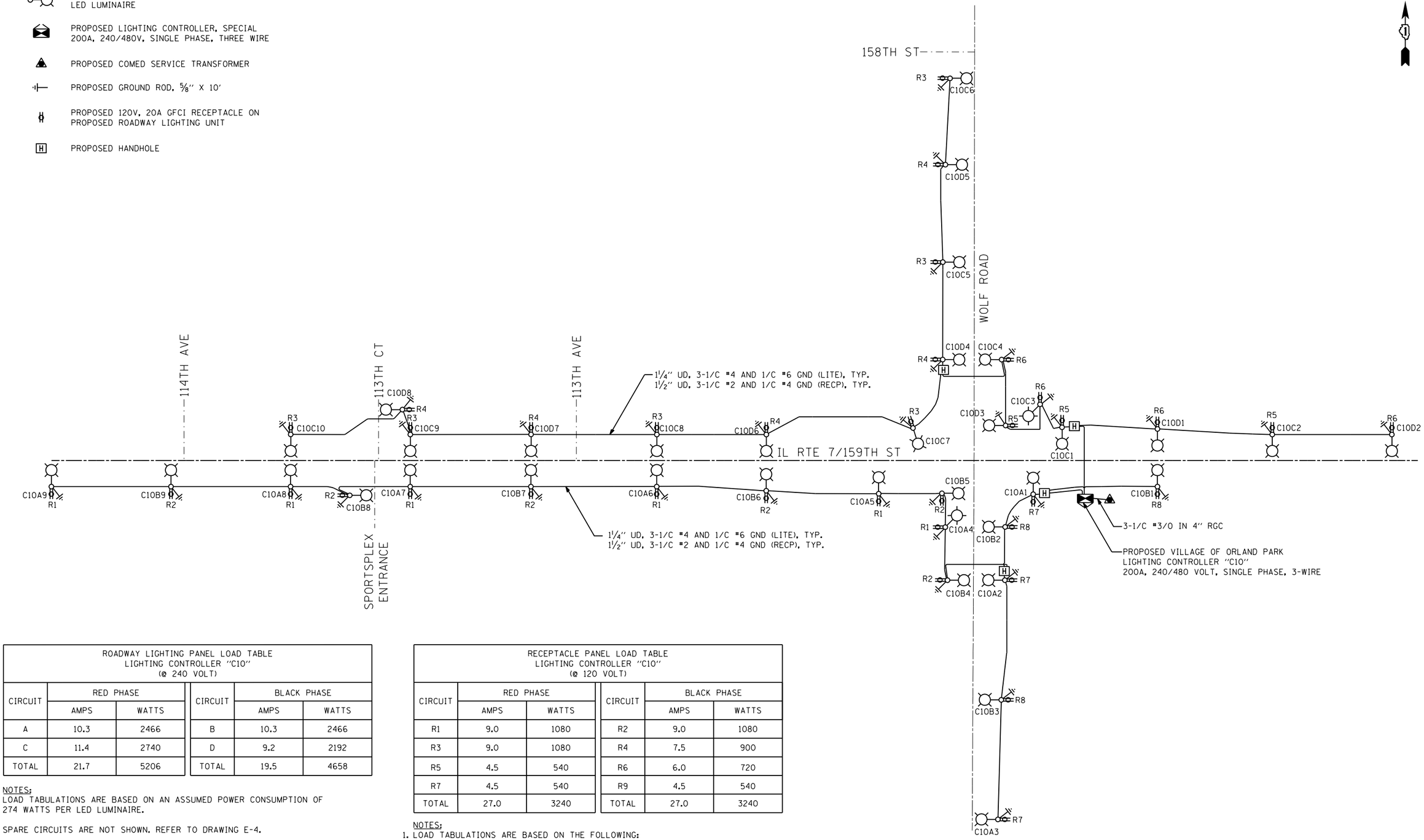
PROPOSED LIGHTING CONTROLLER, SPECIAL
200A, 240/480V, SINGLE PHASE, THREE WIRE

PROPOSED COMED SERVICE TRANSFORMER

PROPOSED GROUND ROD, 5/8" X 10'

PROPOSED 120V, 20A GFCI RECEPTACLE ON
PROPOSED ROADWAY LIGHTING UNIT

PROPOSED HANDHOLE



ROADWAY LIGHTING PANEL LOAD TABLE
LIGHTING CONTROLLER "C10"
(@ 240 VOLT)

CIRCUIT	RED PHASE		CIRCUIT	BLACK PHASE	
	AMPS	WATTS		AMPS	WATTS
A	10.3	2466	B	10.3	2466
C	11.4	2740	D	9.2	2192
TOTAL	21.7	5206	TOTAL	19.5	4658

NOTES:
1. LOAD TABULATIONS ARE BASED ON AN ASSUMED POWER CONSUMPTION OF 274 WATTS PER LED LUMINAIRE.
2. SPARE CIRCUITS ARE NOT SHOWN. REFER TO DRAWING E-4.

RECEPTACLE PANEL LOAD TABLE
LIGHTING CONTROLLER "C10"
(@ 120 VOLT)

CIRCUIT	RED PHASE		CIRCUIT	BLACK PHASE	
	AMPS	WATTS		AMPS	WATTS
R1	9.0	1080	R2	9.0	1080
R3	9.0	1080	R4	7.5	900
R5	4.5	540	R6	6.0	720
R7	4.5	540	R9	4.5	540
TOTAL	27.0	3240	TOTAL	27.0	3240

NOTES:
1. LOAD TABULATIONS ARE BASED ON THE FOLLOWING:
180W RECEPTACLE: 1.5A AT 120V
2. SPARE CIRCUITS ARE NOT SHOWN. REFER TO DRAWING E-4.

E-03

FILE NAME = ...\D1680_72-sht-light-03.dgn

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

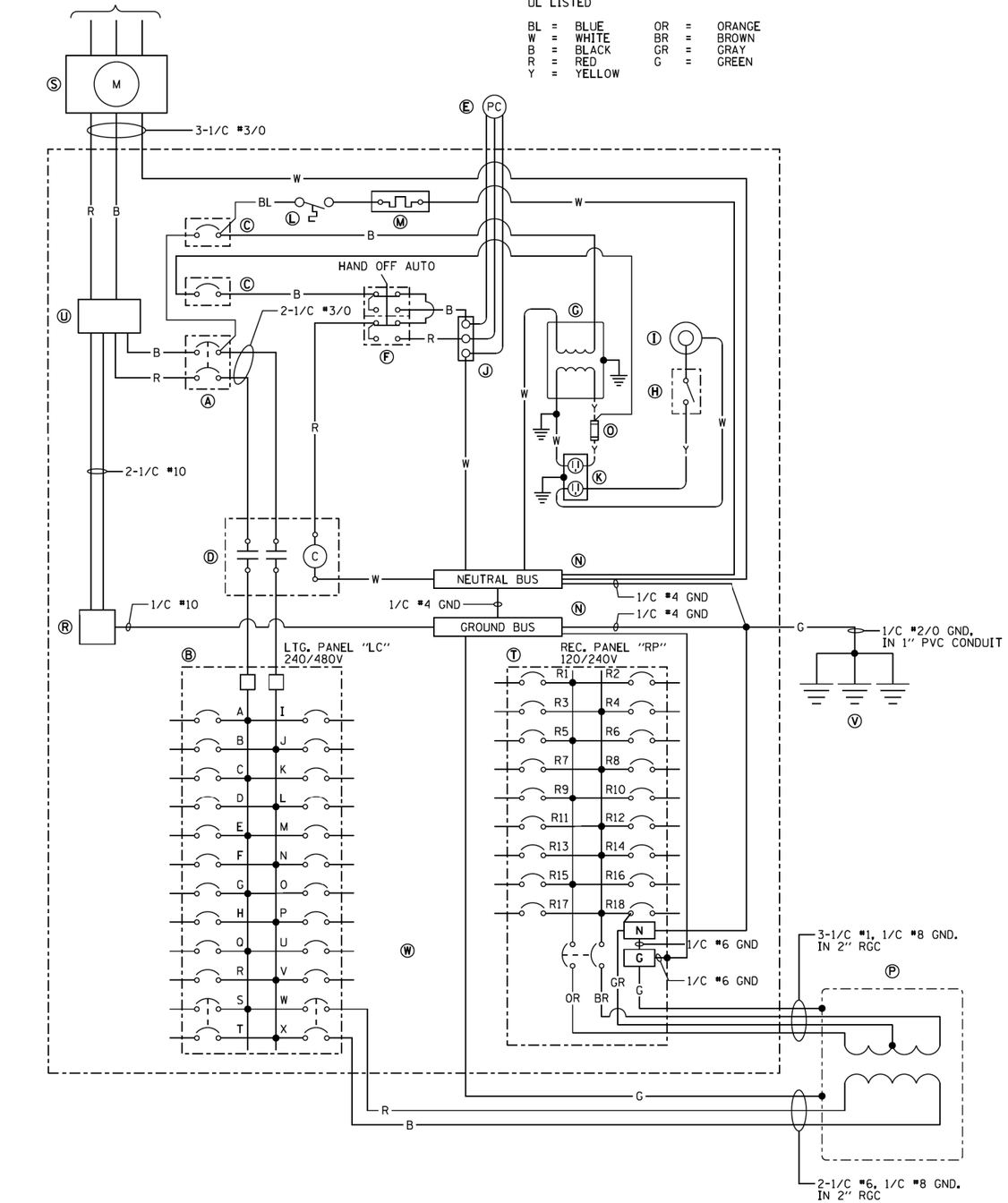
USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE LINE DIAGRAM–CONTROLLER "C10"
US 6 / IL 7 (159TH ST) AT WOLF ROAD

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	368
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

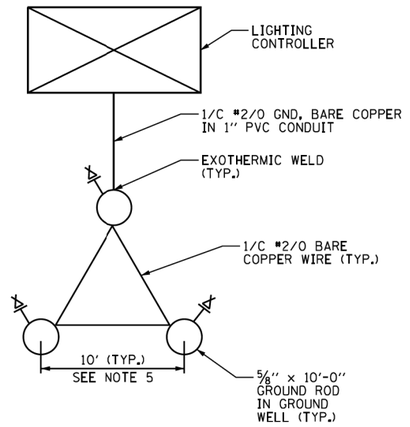


BILL OF MATERIALS

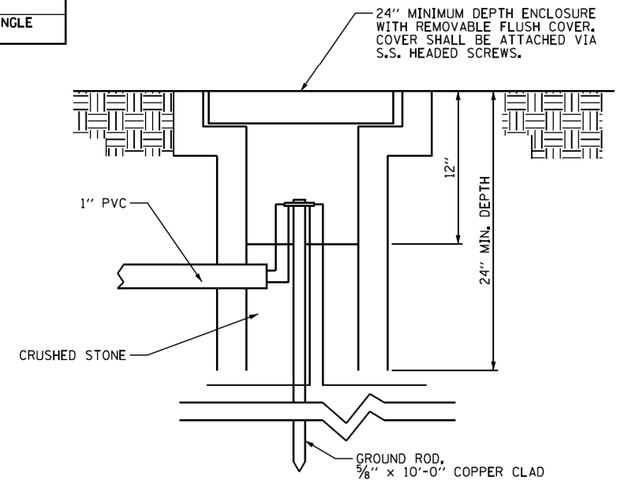
ITEM	QTY.	DESCRIPTION
Ⓐ	1	MAIN CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 200 AMP, 480V, 2-POLE, NON-INTERCHANGEABLE TRIP, INTERRUPTING RATING 25,000 AMPERES AT 480 VOLTS
Ⓑ	1	CUTLER HAMMER, POW-R-LINE C PANELBOARD PRL2A, 480/240 VOLT, 1-PHASE, 3-WIRE, 30 BRANCH CIRCUITS, 225 AMPERE MAIN LUGS, WITH (20) 1 POLE-30 AMPERE, 240 VOLT, BOLT-ON BRANCH CIRCUIT BREAKERS, CATALOG NUMBER GHB1030, INTERRUPTING RATING 14,000 AMPERES AT 277 VOLTS (4 SPARE) AND (2) 2 POLE-50 AMPERE, 480 VOLT, BOLT-ON BRANCH CIRCUIT BREAKERS, INTERRUPTING RATING 14,000 AMPERES AT 480 VOLTS (1 SPARE)
Ⓒ	2	CUTLER HAMMER, EHD1015, 1-POLE, 15 AMPERE, 240 VOLT CIRCUIT BREAKER, INTERRUPTING RATING 14,000 AMPERES AT 277 VOLTS
Ⓓ	1	CUTLER HAMMER, A202K4BA, 2-POLE, 200 AMPERE, CONTACTOR 120V COIL
Ⓔ	1	PHOTOCELL (MOUNTED ON THE FRONT OF THE CABINET UNDER THE DRIP EDGE AND TO THE SIDE OF THE ACCESS DOOR)
Ⓕ	1	SQUARE D, 9001KYK111, HAND-OFF-AUTO SELECTOR SWITCH
Ⓖ	1	JEFFERSON, 21-0071-055, 1 KILOVOLT-AMPERE TRANSFORMER
Ⓗ	1	OMRON, A20G07BK, DOOR SWITCH
Ⓘ	1	GENERAL ELECTRIC, H7-120V-15F-3W-DD, 60 WATT ENCLOSED AND GASKETED INCANDESCENT FIXTURE
Ⓙ	1	CINCH, 3 POINT TERMINAL BLOCK
Ⓚ	1	LEVITON, 6599, 15 AMPERE GROUND FAULT CIRCUIT INTERRUPTOR RECEPTACLE, WITH WEATHERPROOF COVER
Ⓛ	1	WHITE-RODGERS, #2E552, 0-50 DEGREE THERMOSTAT
Ⓜ	1	HOFFMAN #DAH1001A 100 WATT HEATER
Ⓝ	2	COPPER GROUND AND NEUTRAL BUS, MINIMUM 1/4"x1"x12"
Ⓞ	1	BUSSMANN, KTK15, FUSE
Ⓟ	1	OLSUN ELECTRIC CORPORATION, #GS15LE-6, 25 KILOVOLT-AMPERE, 1-PHASE, 480-120/240 VOLT TRANSFORMER IN NEMA 3R ENCLOSURE
Ⓡ	1	BRACKET MOUNTED SURGE ARRESTER FOR 480/240 VOLT, 3 WIRE SERVICE
Ⓢ	1	METER SOCKET FOR ELECTRIC UTILITY COMPANY METER
Ⓣ	1	CUTLER HAMMER, POW-R-LINE C PANELBOARD PRL1A, 240/120 VOLT, 1-PHASE, 3-WIRE, 18 BRANCH CIRCUITS, 100 AMPERE, 2-POLE, 240 VOLT MAIN BREAKER, INTERRUPTING RATING 14,000 AMPERES AT 277 VOLTS, WITH (18) 1 POLE-30 AMPERE, 120 VOLT, BOLT-ON GROUND FAULT CIRCUIT INTERRUPTING BRANCH CIRCUIT BREAKERS, CATALOG NUMBER GHBGFEP1030, INTERRUPTING RATING 14,000 AMPERES AT 120 VOLTS (2 SPARE)
Ⓤ	1	MARATHON, #1402401, 175A, 2-POLE, 600 VOLT POWER DISTRIBUTION BLOCK
Ⓥ	3	COPPER-CLAD GROUND ROD, 5/8"x10'
Ⓦ	18	POWER DIST SPLICE BLOCKS #2 AWG TO #14 AWG SINGLE POLE, (NOT SHOWN ON BACKPLATE)

NOTES:

1. SEE DRAWING E-1 FOR ELECTRICAL SYMBOL LIST AND ABBREVIATIONS AND ELECTRICAL GENERAL NOTES.
2. SEE DRAWING E-5 FOR CONTROLLER CABINET DETAILS.
3. THE CONTROLLER SHALL BE SUITABLE FOR USE AS SERVICE EQUIPMENT PER NEC 230.66 AND U.L. LISTED.
4. BOND PANELBOARD ENCLOSURES "LC" AND "RP" TO THE CONTROLLER ENCLOSURE WITH #6 GND.
5. IF THERE IS NOT ENOUGH RIGHT OF WAY TO INSTALL THE GROUNDING TRIAD AS SHOWN, REDUCE SPACING TO 6'.
6. MANUFACTURER MODEL AND PART NUMBERS SHOWN ARE MINIMUM ACCEPTABLE COMPONENTS AND CAN BE SUBSTITUTED WITH EQUAL OR BETTER MATERIALS FROM OTHER MANUFACTURERS WITH THE WRITTEN APPROVAL FROM THE ENGINEER



GROUND FIELD DETAIL
N.T.S.



GROUND WELL DETAIL
N.T.S.

E-04

FILE NAME = ...\D160L72-sht-light-04.dgn

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

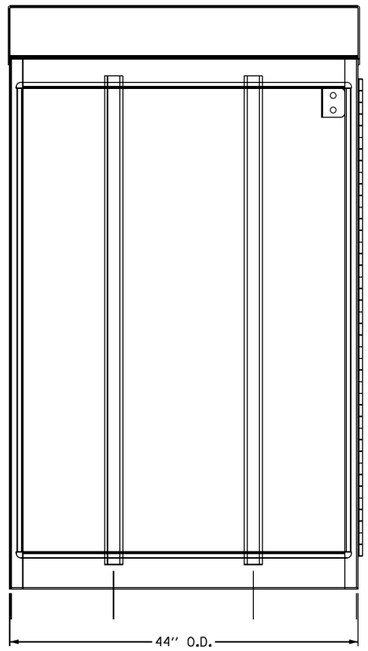
USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

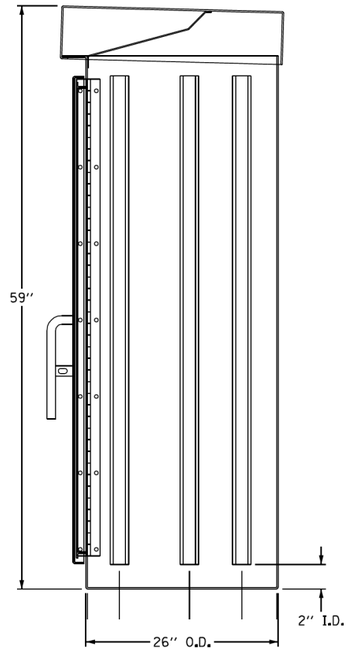
LIGHTING CONTROLLER
WIRING DIAGRAM AND GROUNDING DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	369
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		



FRONT VIEW
DOOR REMOVED



RIGHT SIDE VIEW

SPECIFICATIONS:

PERFORMANCE - THE ENCLOSURE WILL MEET OR EXCEED THE REQUIREMENTS OF A NEMA 3R RATING AND SHALL BE U.L. LISTED PER U.L. 508.

MATERIAL - SHEET ALUMINUM 1/8" THICKNESS, ALLOY 5052 H32. SURFACE SHALL HAVE A SMOOTH, NATURAL ALUMINUM MILL FINISH. ALL WELDS TO BE HELIARC AND SHALL BE NEATLY FORMED AND FREE OF CRACKS, BLOW HOLES, AND OTHER DEFECTS. ALL EDGES TO BE FREE OF BURRS.

CABINET FEATURES - CABINET TOP SLOPED 1/2" TO THE REAR, WITH 1/8" X 1" VENT SLOTS UNDER FRONT OVERHANG.

DOORS AND LOCKS - THE MAIN DOOR IS OF NEMA TYPE 3R CONSTRUCTION WITH CELLULAR NEOPRENE GASKET, WHICH IS RAIN TIGHT. HINGE IS 2" OPEN AND IS CONTINUOUS 14 GAUGE STAINLESS STEEL WITH A 1/4 " DIA. PIN AND IS CAPPED AT THE TOP TO RENDER IT TAMPER PROOF. THE HINGE IS SECURED WITH 1/4-20 STAINLESS STEEL CARRIAGE BOLTS AND ESNA LOCK NUTS.
STANDARD EQUIPMENT INCLUDES A THREE POINT LOCKING SYSTEM, WHICH SECURES THE DOOR AT THE TOP, BOTTOM, AND CENTER. A CORBIN LOCK WITH TWO KEYS IS ALSO FURNISHED. THE MAIN DOOR IS ALSO EQUIPPED WITH A THREE POSITION DOOR STOP, ONE AT 90°, ONE AT 120°, AND ONE AT 180°. DOOR LOCKING RODS ARE 1/4" X 3/4" ALUMINUM TURNED EDGEWAYS WITH 1" NYLON ROLLERS. MAIN DOOR HANDLE IS 3/4" DIAMETER STAINLESS STEEL. THE CABINET DOOR SHALL BE HINGED ON THE RIGHT SIDE WHEN FACING THE FRONT OF THE CABINET.

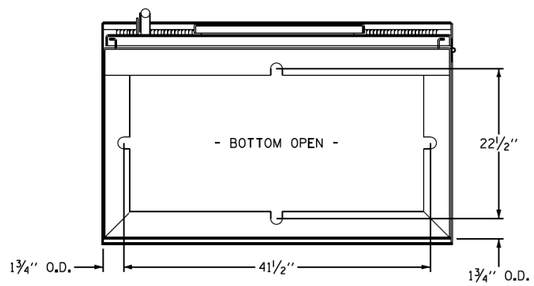
EQUIPMENT MOUNTING - THE CABINET SHALL BE EQUIPPED WITH TWO ADJUSTABLE "L" MOUNTING CHANNELS WELDED TO EACH SIDE WALL AND THE BACK WALL ALLOWING FULL ADJUSTMENT OF SHELVES OR PANELS.

VENTILATION - VENT SLOTS (1/8" X 1") ARE PROVIDED ON THE UNDERSIDE OF THE COVER OVERHANG AND LOUVER SLOTS ARE FORMED IN THE LOWER PORTION OF THE MAIN DOOR. THIS CREATES A NATURAL MOVEMENT OF AIR AND HAS A COOLING EFFECT ON THE ELECTRICAL EQUIPMENT.

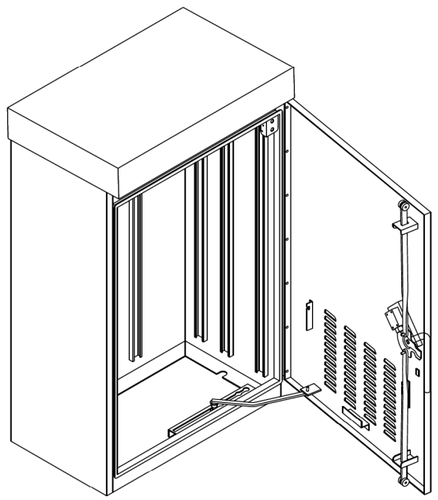
CABINET TYPE FOR PERMANENT CONTROLLER "C1O " IS BASE MOUNTED AND EQUIPPED WITH INSIDE FLANGES AT THE FRONT, BACK, AND SIDES FOR ANCHORING TO A BASE (SEE INSTALLATION DETAILS ON DRAWING E-6.

INDICATED DIMENSIONS REPRESENT THE MINIMUM REQUIREMENTS. DIMENSIONS SHALL BE INCREASED AS REQUIRED TO COMPLY WITH THE CODE AND TO ADEQUATELY HOUSE ALL REQUIRED COMPONENTS WITH AMPLE ROOM FOR ARRANGEMENT AND TERMINATION OF WIRING.

THE SERVICE EQUIPMENT SHALL BE MARKED TO IDENTIFY AS BEING SUITABLE AS SERVICE EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 230.66.



BOTTOM VIEW
MOUNTING PATTERN



ALUMINUM TYPE IV CONTROL CABINET 3R
59"x44"x26"
SCALE: NOT TO SCALE

E-05

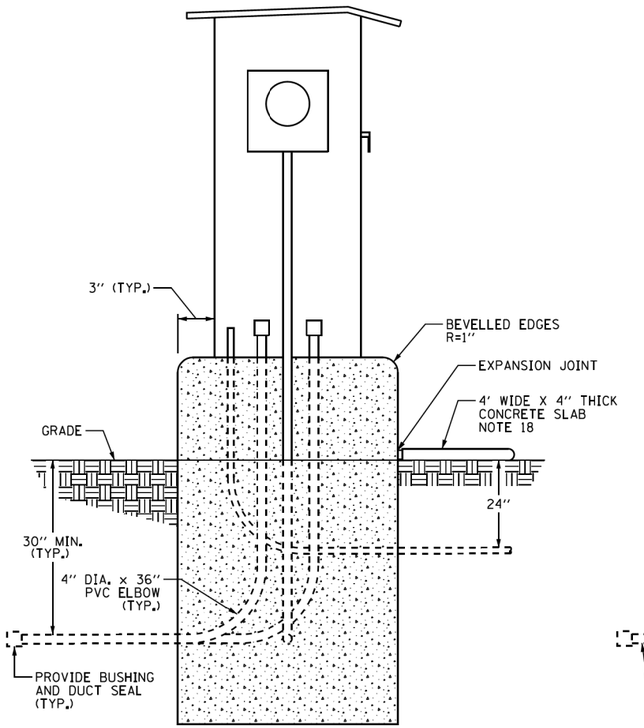
FILE NAME = ...\D1160L72-sht-light-05.dgn

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER CABINET DETAILS
		DRAWN - BKG	REVISED -		
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -		
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -		SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

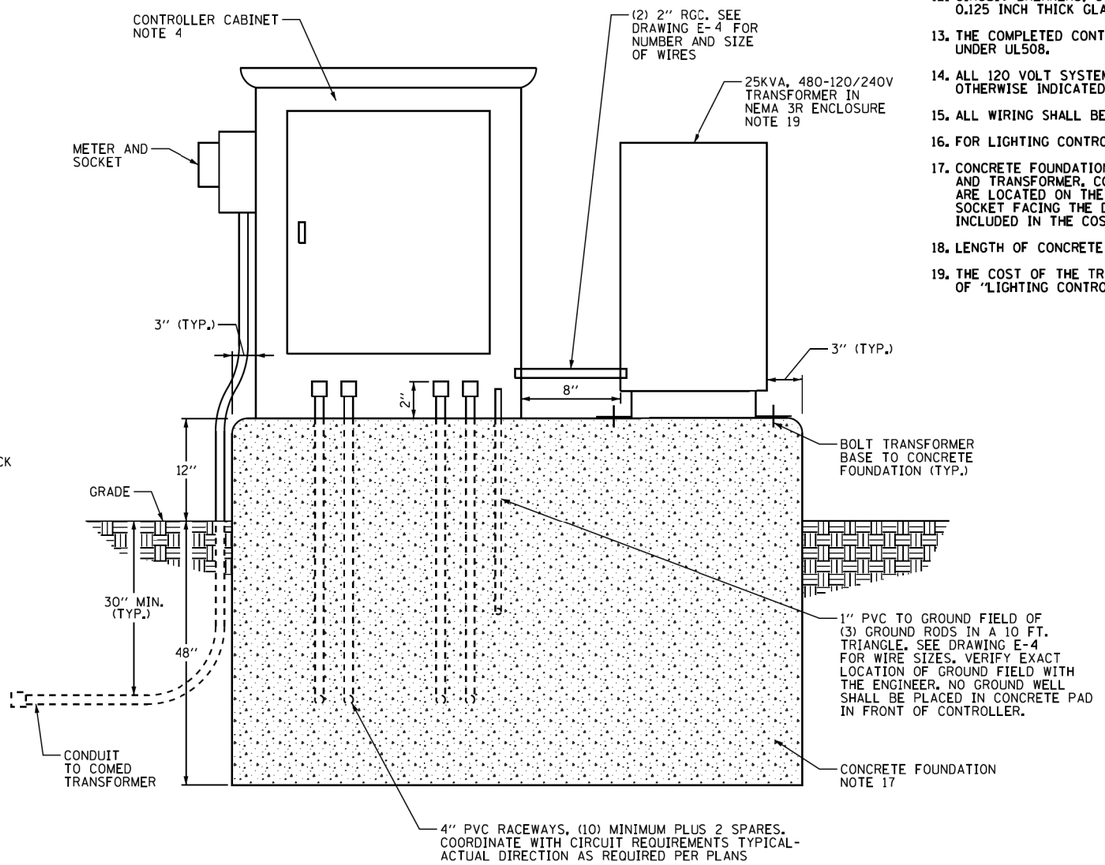
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	370
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

NOTES:

1. COORDINATE PLACEMENT OF RACEWAYS WITH CONTROLLER MANUFACTURER TO ASSURE DOOR LATCH DOES NOT INTEFERE WITH CABLES OR OTHER DEVICES.
2. THE CONTRACTOR SHALL PROVIDE A GROUND FIELD AT EACH CABINET LOCATION. THE GROUND RODS, ANCHOR BOLTS AND REINFORCEMENT STEEL SHALL ALL BE INTERCONNECTED.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF CONTROLLER FOUNDATION AND GROUND FIELD WITH THE ENGINEER.
4. SEE DRAWING E-5 FOR CONTROL CABINET DETAILS.
5. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.
6. NAME PLATE SHALL HAVE ENGRAVED 0.75 INCH HIGH LETTERS FILLED IN BLACK: "ROADWAY LIGHTING CONTROLLER, VILLAGE OF ORLAND PARK".
7. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALLED AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
8. ALL DEVICES SHALL BE FRONT REMOVABLE.
9. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
10. ALL CONTROL WIRING SHALL BE 600V MACHINE TOOL WIRE TYPE MTW.
11. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
12. CIRCUIT BREAKERS, CONTACTORS AND OTHER COMPONENTS SHALL BE PANEL MOUNTED ON 0.125 INCH THICK GLASTIC INSULATION BACK PANEL.
13. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
14. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
15. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
16. FOR LIGHTING CONTROLLER WIRING DIAGRAM, SEE DRAWING E-4.
17. CONCRETE FOUNDATION SHALL BE CONSTRUCTED AS REQUIRED TO SUPPORT CONTROL CABINET AND TRANSFORMER. CONTRACTOR TO INSURE THE CONTROLLER CABINET AND METER SOCKET ARE LOCATED ON THE FOUNDATION END CLOSEST TO THE UTILITY SERVICE, WITH THE METER SOCKET FACING THE DIRECTION OF THE UTILITY SERVICE. CONCRETE FOUNDATION SHALL BE INCLUDED IN THE COST OF "LIGHTING CONTROLLER, SPECIAL" PAY ITEM.
18. LENGTH OF CONCRETE SLAB SHOULD MATCH LENGTH OF CONCRETE FOUNDATION.
19. THE COST OF THE TRANSFORMER AND THE RELATED WORK SHALL BE INCLUDED IN THE COST OF "LIGHTING CONTROLLER, SPECIAL" ITEM.



LEFT SIDE ELEVATION



FRONT ELEVATION

LIGHTING CONTROLLER FOUNDATION DETAILS
N.T.S.

FILE NAME = ...\0160L72-elvt-light-06.dgn

E-06

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BKG	REVISED -
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER FOUNDATION DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	371
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

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C5288
PAGE 1 OF 1

REVISES STANDARD DATED 12-1-93

4-1-98
C5288
PAGE 1 OF 1

1-PH COMPT TR PAD - ESS/RSS

167kVA MAXIMUM CAPACITY

ITEM	MATERIAL DESCRIPTION (By ComEd)		MIC	SI	UNIT	QTY A
A	GROUNDING INSTALLATION	(1) C8550_GG	G			1
C	Wire, Copper; #1/0-19 Strand, Soft Drawn, Tin Coated, Bare,	(1)	G	355082	FT	35
D	Connector, Compression; 1/0 Or 2/0 Stra Cu, Run & Tap.		U	368545	EA	1

NOTES:

APPLICATION

- THIS STANDARD SHALL BE USED FOR THE INSTALLATION OF AN ELECTRIC OR RESIDENTIAL SERVICE STATION FOUNDATION AS DESCRIBED IN THE "INFORMATION AND REQUIREMENTS FOR THE SUPPLY OF ELECTRIC SERVICE BOOK", SECTIONS 2.02 AND 2.07.

SUPPLEMENTARY MATERIAL

(1) WHEN BARE LEAD COVERED CABLES ARE LOCATED OR PLANNED WITHIN 200 FEET, OMIT ITEM "C" AND REPLACE WITH 1/0 LEAD CLAD COPPER CONDUCTOR (SI 360809). SPECIFY STAINLESS STEEL GROUNDS PER C8550.CGG.

(2) PRECAST ALTERNATIVES TO THIS POURED DESIGN MAY BE AVAILABLE. CONTACT CONSTRUCTION STANDARDS GROUP.

INFORMATION

(11) THE CUSTOMER TO INSTALL THE TRANSFORMER FOUNDATION, 1 INCH CONDUITS, AND TRENCH FOR ComEd GROUND WIRE.

(12) ComEd TO PROVIDE AND INSTALL THE GROUND WIRE AND GRID.

(13) AFTER PRIMARY AND SECONDARY CONDUITS ARE IN PLACE, BACKFILL WITH SCREENINGS, SAND, OR FINE EXCAVATED MATERIAL. COMPACT THOROUGHLY BEFORE POURING FOUNDATION.

(14) CONCRETE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE APPLICABLE ACI CODE AND AIR ENTRAINED. IT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. AIR ENTRAINMENT SHALL BE 4 TO 7 PERCENT OF THE VOLUME OF CONCRETE.

(15) TOP OF FOUNDATION TO BE SMOOTH AND LEVEL.

(16) GRADE AWAY FROM FOUNDATION. FINAL GRADE SHALL BE WELL DRAINED AT ALL TIMES.

(17) PRIMARY AND SECONDARY CONDUIT MUST COME THROUGH FOUNDATION IN DESIGNATED AREAS.

(18) SEE C7723 FOR BURNDY-HUSKY DIE SET CROSS REFERENCE.

(19) DO NOT PLACE CONDUITS UNDER THIS SECTION OF FOUNDATION IF AVOIDABLE.

20 DO NOT DISTURB EARTH IN FOUNDATION AREA MORE THAN NECESSARY WHEN INSTALLING CONDUIT.

(21) TERMINATE PRIMARY AND SECONDARY CONDUITS FLUSH WITH TOP OF FOUNDATION.

(22) BOX OUT CONDUIT OPENING.

(23) SECONDARY CONDUIT LOCATION.

(24) PRIMARY CONDUIT LOCATION.

25 PLEASE CONSULT GP 346 (SPCC) OR ENVIRONMENTAL SERVICES IF EITHER OF THE FOLLOWING EXISTS:
- A SINGLE ABOVE GROUND TANK WITH A CAPACITY OF 660 GALLONS OR MORE.
- MORE THAN ONE ABOVE GROUND TANK WITH TOTAL CAPACITY EQUAL TO OR EXCEEDING 1320 GALLONS.

PRESSING TABLE (18)		
ITEM	TOOL & DIE Y-35	NO. OF CRIMPS
D	U-O	1
	U-E	3

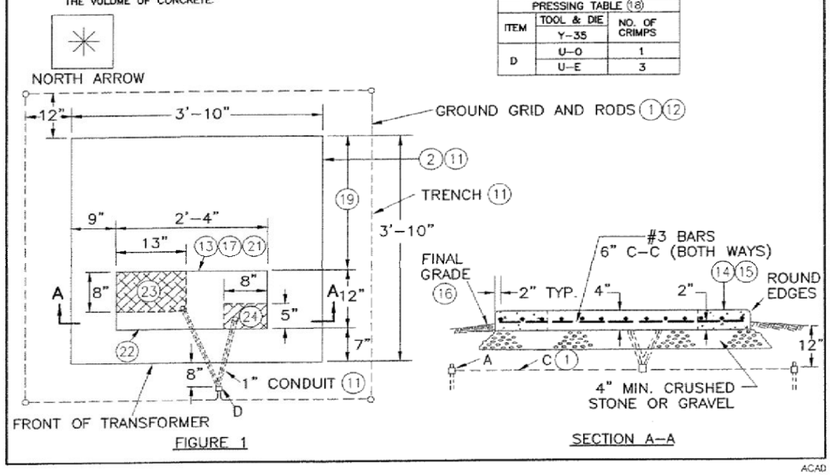

FIGURE 1

SECTION A-A

ACAD

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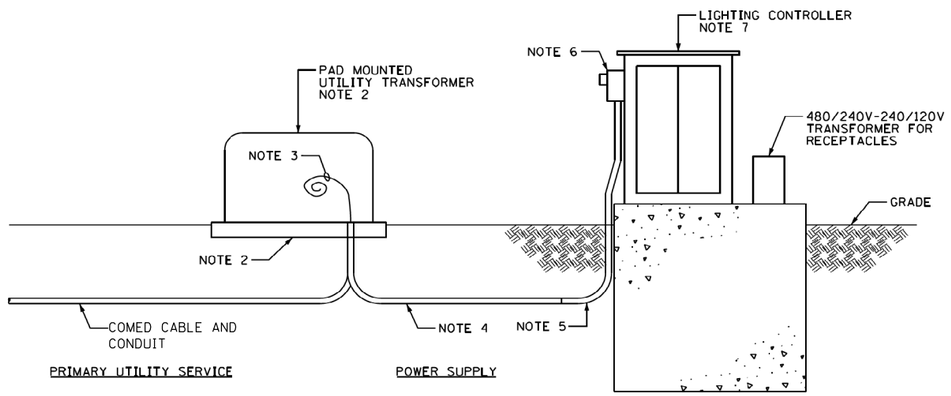
ComEd SYSTEM STANDARD

NOTES:

1. THIS WORK SHALL BE INSTALLED UNDER THE "ELECTRIC SERVICE INSTALLATION" PAY ITEM, UNLESS NOTED OTHERWISE.
2. COMMONWEALTH EDISON COMPANY (COMED) SHALL FURNISH AND INSTALL THE PAD MOUNTED TRANSFORMER COMPLETE WITH GROUNDING SYSTEM INCLUDING GROUND RODS, GROUNDING CONDUCTOR, PRIMARY CABLE, CUT-OUT SWITCH, LIGHTNING ARRESTOR, CONNECTORS, AND ANY OTHER EQUIPMENT AND LABOR DEEMED NECESSARY. SEE COMED SYSTEM STANDARD C5288 FOR INSTALLATION REQUIREMENTS.
3. ELECTRIC SERVICE CONDUCTORS FROM THE INSIDE OF THE CABINET TO THE TRANSFORMER. PROVIDE 10 FT OF SLACK FOR CONNECTION TO TRANSFORMER BY COMED. CABLE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED FOR ELECTRIC CABLE IN CONDUIT. LABEL CABLE ON BOTH ENDS. SEE PLAN DRAWINGS FOR CABLE TYPE AND SIZE.
4. UNDERGROUND CONDUIT. SEE PLAN DRAWINGS FOR CONDUIT MATERIAL AND SIZE.
5. RGC 90 DEGREES LONG SWEEP ELBOW IN TRENCH. SEE PLAN DRAWINGS FOR CONDUIT, TYPE, SIZE, AND QUANTITY. THIS WORK SHALL BE INSTALLED UNDER THE "ELECTRIC SERVICE INSTALLATION" PAY ITEM.
6. UNDER THE "ELECTRIC UTILITY SERVICE CONNECTION" PAY ITEM, COMED SHALL FURNISH AND INSTALL METER ON CONTROLLER CABINET.
7. SEE DRAWING E-6 FOR LIGHTING CONTROLLER AND FOUNDATION DETAILS.
8. SUBMIT A PLAN DRAWING SHOWING THE PROPOSED PRIMARY CONDUIT INSTALLATION TO COMED FOR THEIR APPROVAL. THIS WORK SHALL BE COVERED UNDER THE "ELECTRIC UTILITY SERVICE CONNECTION" PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.



ELECTRIC SERVICE INSTALLATION DETAIL

N.T.S.

E-07

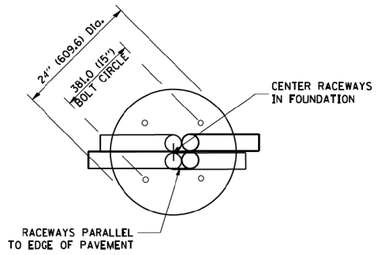
EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION PAD MOUNTED TRANSFORMER
		DRAWN - BKG	REVISED -		
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	372
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

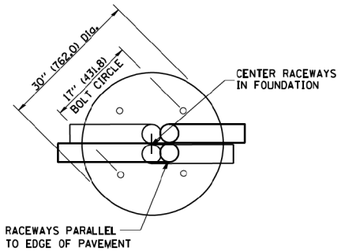
FILE NAME = ...\D1608_72-sht-light-07.dgn

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

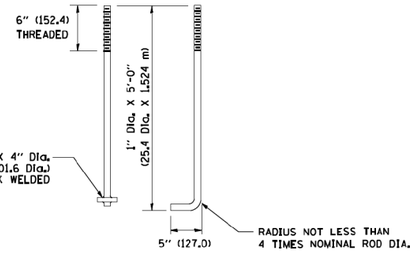
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Ou = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Ou = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Ou = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND Ø = 34°	9'-0" (2.74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



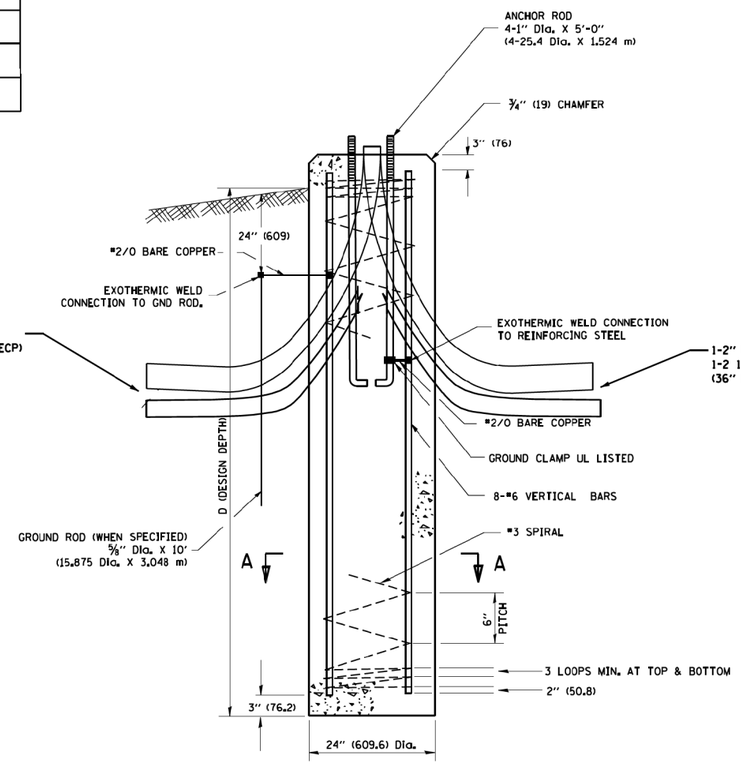
TOP VIEW



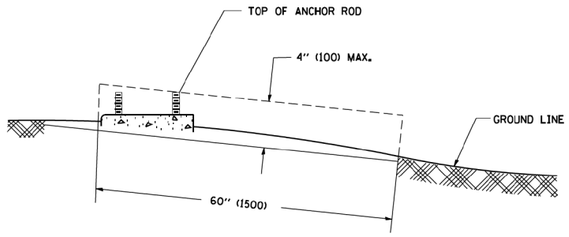
TOP VIEW



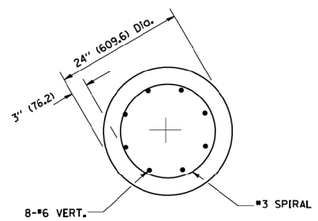
ANCHOR ROD DETAIL



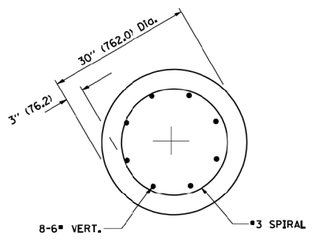
FOUNDATION DETAIL



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 3/4-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 725 (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 MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2 3/4" (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.

E-08

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	373
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

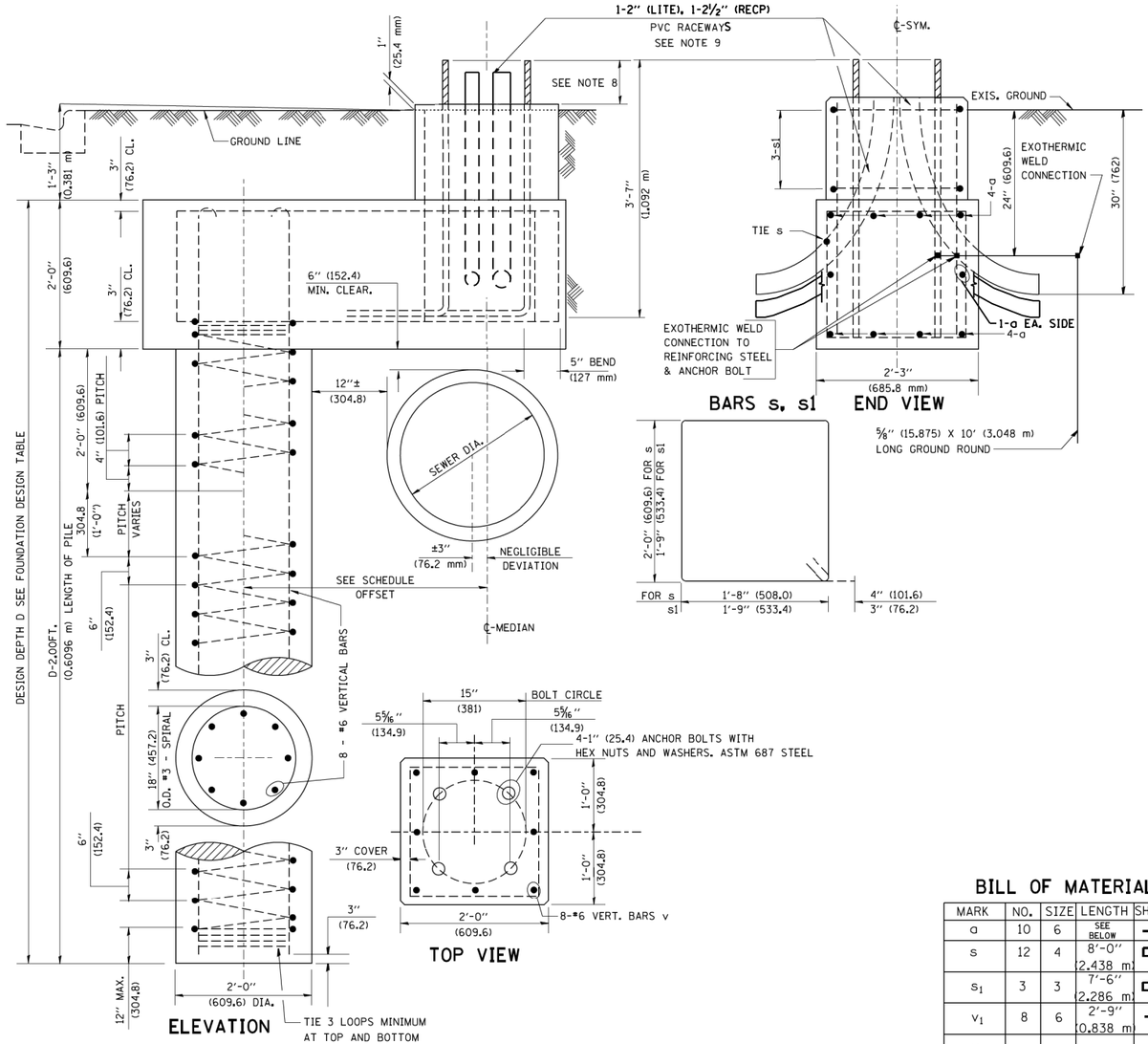
FILE NAME = ...\D1602_72-sht-light-08.dgn

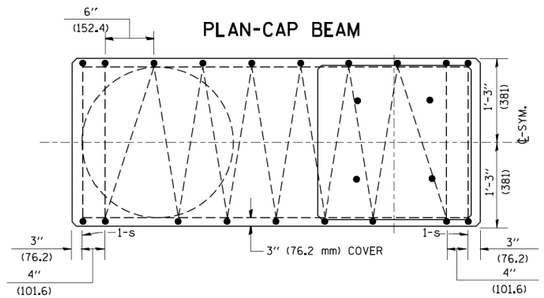
FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13′-0″ (3.962 m)	15′-0″ (4.572 m)	8-#6X12′-6″ (3.810 m)	#3X122′ (37.186 m)	8-#6X14′-3″ (4.343 m)	#3X141′ (42.977 m)
MEDIUM CLAY	9′-6″ (2.896 m)	10′-9″ (3.277 m)	8-#6X9′-0″ (2.743 m)	#3X90′ (27.432 m)	8-#6X10′-0″ (3.048 m)	#3X100′ (30.480 m)
STIFF CLAY	7′-0″ (2.134 m)	8′-0″ (2.438 m)	8-#6X6′-6″ (1.981 m)	#3X66′ (20.112 m)	8-#6X7′-6″ (2.286 m)	#3X76′ (23.165 m)
LOOSE SAND	9′-0″ (2.743 m)	10′-0″ (3.048 m)	8-#6X8′-6″ (2.591 m)	#3X85′ (25.908 m)	8-#6X9′-6″ (2.896 m)	#3X94′ (28.651 m)
MEDIUM SAND	8′-3″ (2.515 m)	9′-0″ (2.743 m)	8-#6X8′-0″ (2.438 m)	#3X78′ (23.774 m)	8-#6X8′-6″ (2.591 m)	#3X85′ (25.908 m)
DENSE SAND	7′-9″ (2.362 m)	9′-0″ (2.743 m)	8-#6X7′-6″ (2.286 m)	#3X73′ (22.250 m)	8-#6X8′-6″ (2.591 m)	#3X85′ (25.908 m)
ROCK OR SOLIDIFIED SLAG	5′-0″ (1.524 m)	5′-0″ (1.524 m)	NONE	NONE	NONE	NONE

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
3. EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24″ (609.6 mm) OR 30″ (762.0 mm) IN DIAMETER.
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 CONCRETE IS PLACED IN THE FORM.
6. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (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.
7. 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″ (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
8. RACEWAYS SHALL PROJECT 1″ (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
9. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.





BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8′-0″ 2.438 m	□
s_1	3	3	7′-6″ 2.286 m	□
v_1	8	6	2′-9″ 0.838 m	—
v_2				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from℄-MED'N FT.	LENGTH of BAR a FT.
UP TO 24″ (609.6 mm)	3′-3″ (0.991 m)	#6 x 5′-3″ (1.600 m)
27″ (685.8 m)TO 36″ (914.4 mm)	3′-9″ (1.143 m)	5′-9″ (1.753 m)
42″ (1066.8 mm) TO 48″ (1219.2 mm)	4′-6″ (1.372 m)	6′-6″ (1.981 m)
54″ (1371.6 mm) TO 60″ (1524.0 mm)	5′-0″ (1.524 m)	7′-0″ (2.134 m)
66″ (1676.4 mm) TO 72″ (1828.8 mm)	5′-6″ (1.676 m)	7′-6″ (2.286 m)

FILE NAME = ...\0160L72-sht-light-09.dgn

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

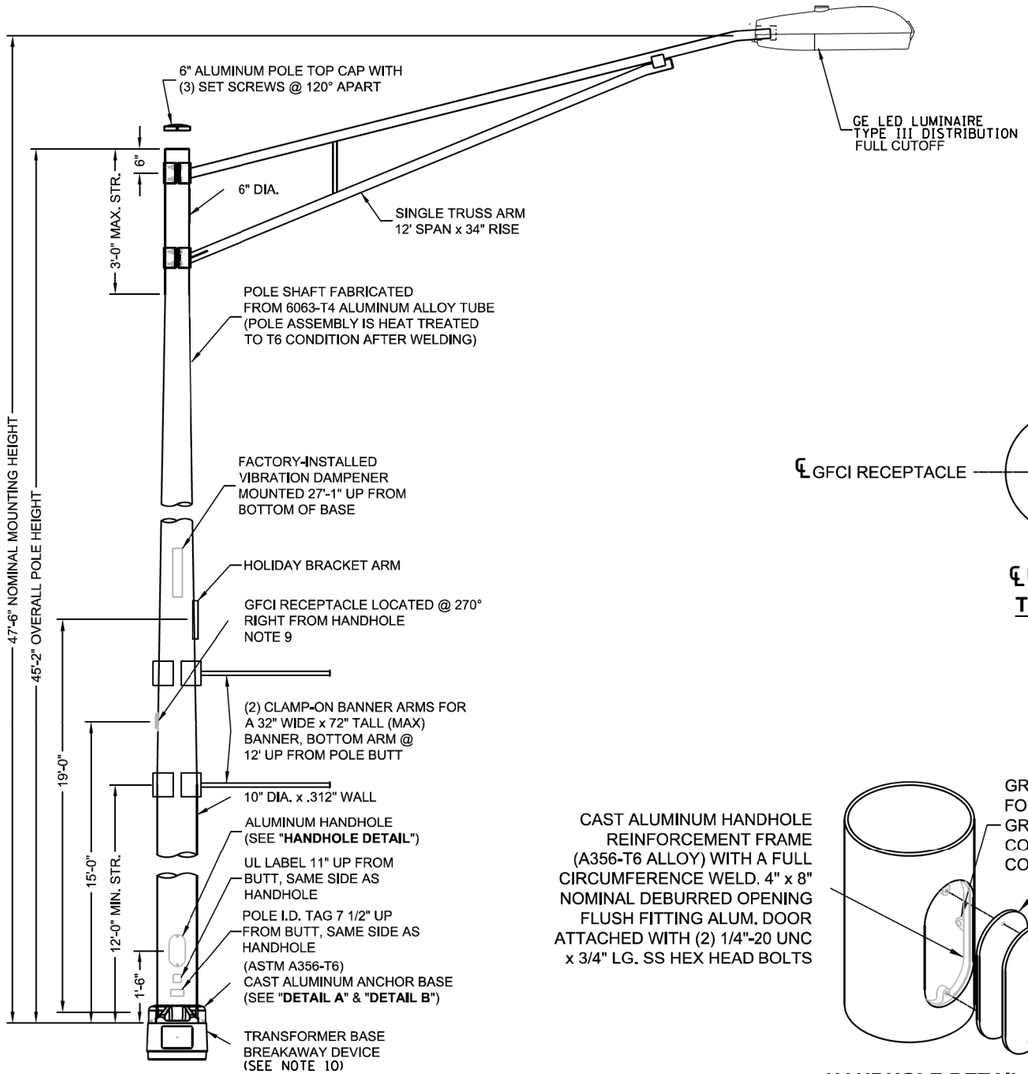
USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00′ / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

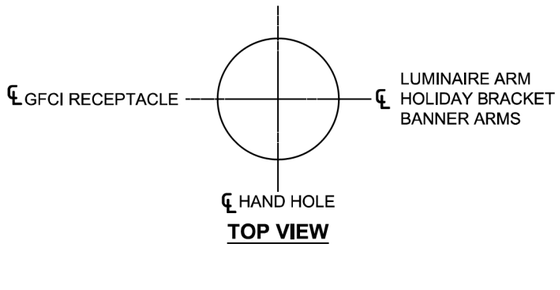
LIGHT POLE OFFSET FOUNDATION DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	374
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

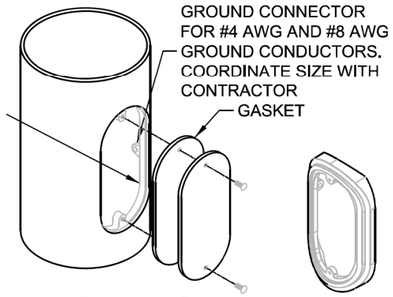


VILLAGE OF ORLAND
LIGHT POLE DETAIL



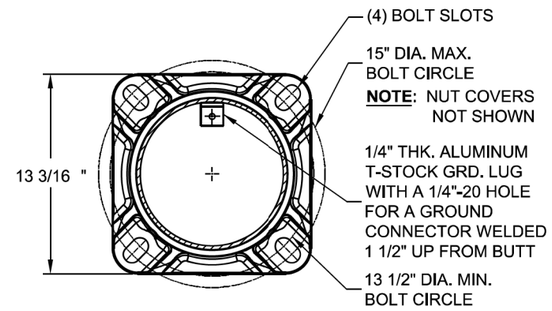
TOP VIEW

CAST ALUMINUM HANDHOLE REINFORCEMENT FRAME (A356-T6 ALLOY) WITH A FULL CIRCUMFERENCE WELD. 4" x 8" NOMINAL DEBURRED OPENING FLUSH FITTING ALUM. DOOR ATTACHED WITH (2) 1/4"-20 UNC x 3/4" LG. SS HEX HEAD BOLTS

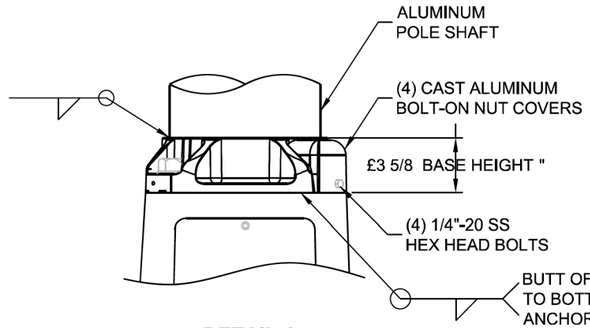


HANDHOLE DETAIL

CAST ALUMINUM FRAME 4" x 8"



DETAIL B



DETAIL A

POLE PART NUMBERS

LIGHT POLE:
VALMONT MODEL # 45026010BT4C
ALUMINUM ALLOY
FINISH: NATURAL

TRANSFORMER BASE:
FINISH: NATURAL

BANNER ARMS:

HOLIDAY BRACKET:
PERMALITES
1305 SCHOOLHOUSE RD
NEW LENOX, IL
815-485-5530
815-953-7116

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. TWO PIECE SHAFT WILL BE MATCHED, MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
4. THE LIGHT POLE WILL MEET AASHTO DESING CRITERIA AS SPECIFIED.
5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. CONTRACTOR SHALL COORDINATE LUGS WITH POLE MANUFACTURER FOR BONDING LUGS.
6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.
9. ALL PROPOSED LIGHTING UNITS SHALL HAVE A 20A, 120V, GFCI RECEPTACLE WITH IN-USE WEATHERPROOF RUGGED U.V. RESISTANT POLYCARBONATE COVER INSTALLED ON BACK OF POLE AT 15'-0" ABOVE THE BASE OF POLE.
10. CONTRACTOR MUST PROVIDE A BREAKAWAY DEVICE, TRANSFORMER BASE WITH 15" DIA. BOLT CIRCLE, FOR ALL PROPOSED LIGHTING UNITS. TRANSFORMER BASE SHALL BE INCLUDED IN PAY ITEM "LIGHT POLE SPECIAL".
11. LIGHT POLE SHALL BE LISTED OR CLASSIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY SUCH AS UL, ETL, OR EQUIVALENT.

FILE NAME = ...\D160L72-sht-light-10.dgn

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

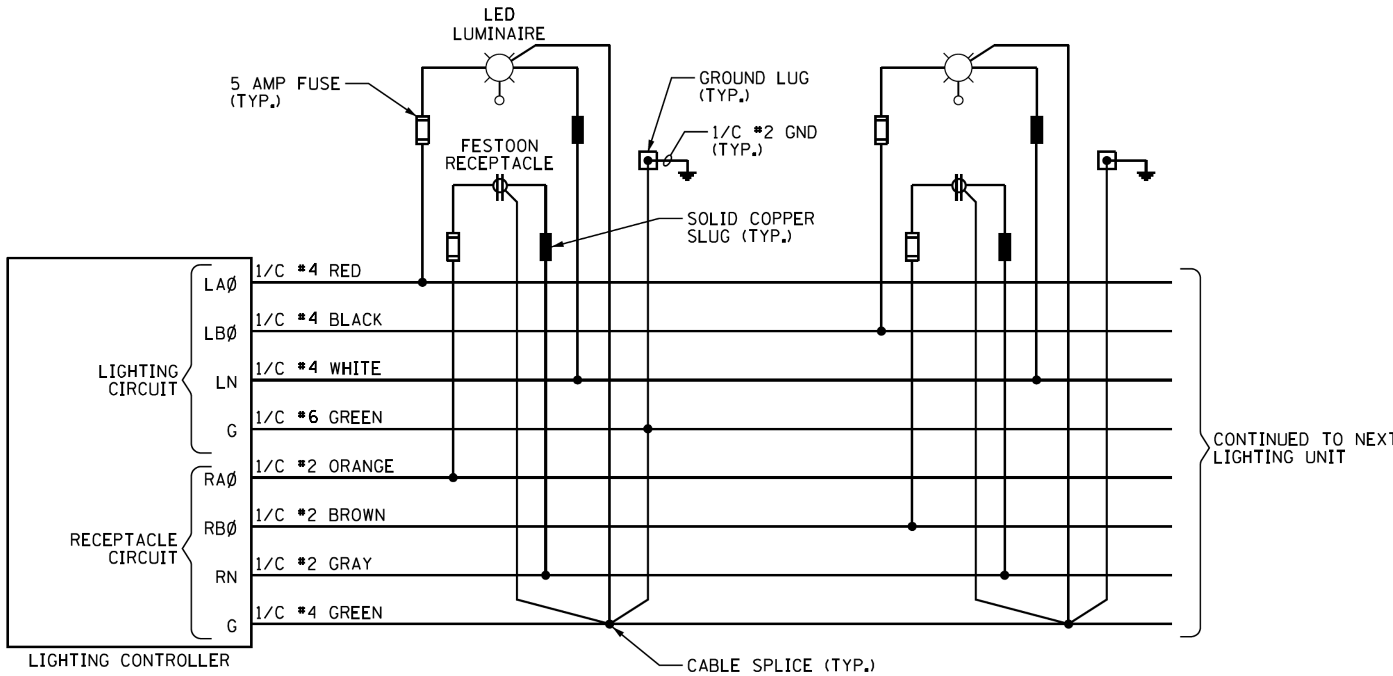
USER NAME = rswanson	DESIGNED - RAS	REVISED -
	DRAWN - BKG	REVISED -
PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

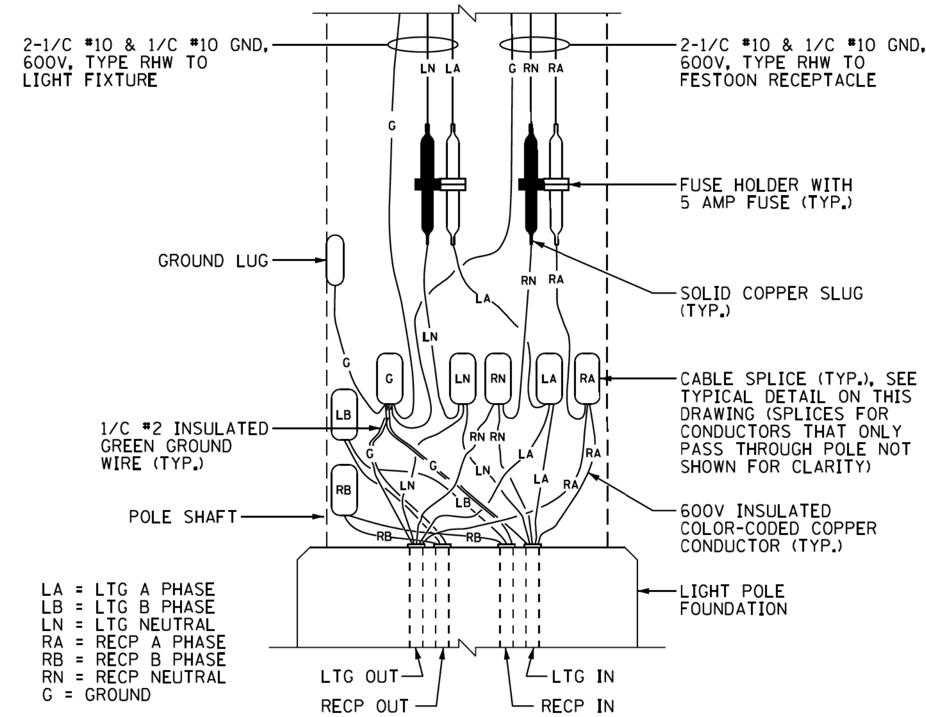
ALUMINUM LIGHT POLE 47'-6" MOUNTING HEIGHT
US 6 /IL 7 (159TH ST) AT WOLF ROAD

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

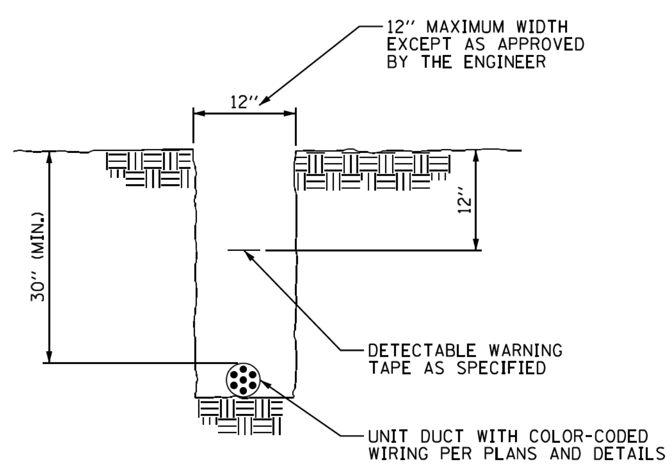
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	375
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



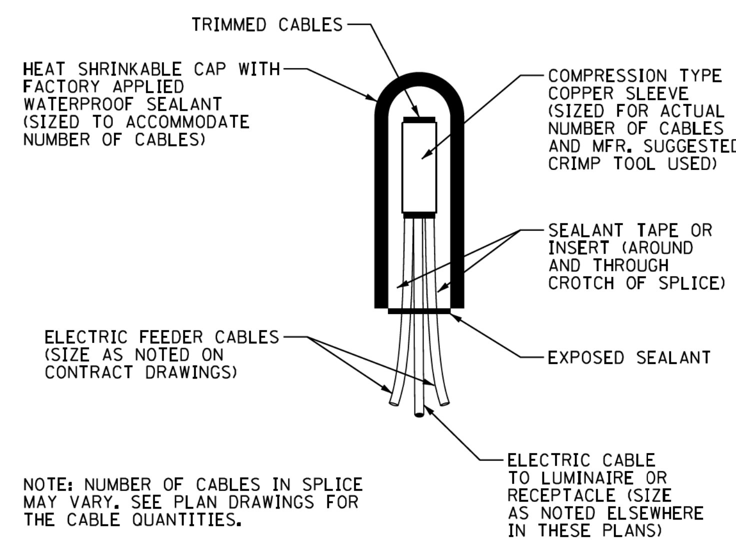
TYPICAL LIGHTING UNIT AND RECEPTACLE WIRING DIAGRAM
N.T.S.



TYPICAL POLE BASE WIRING DETAIL
N.T.S.



TYPICAL UNIT DUCT IN TRENCH DETAIL
N.T.S.



NOTE: NUMBER OF CABLES IN SPLICE MAY VARY. SEE PLAN DRAWINGS FOR THE CABLE QUANTITIES.

TYPICAL SPLICE DETAIL
N.T.S.

E-11

FILE NAME = ...\D160L72-sht-light-11.dgn

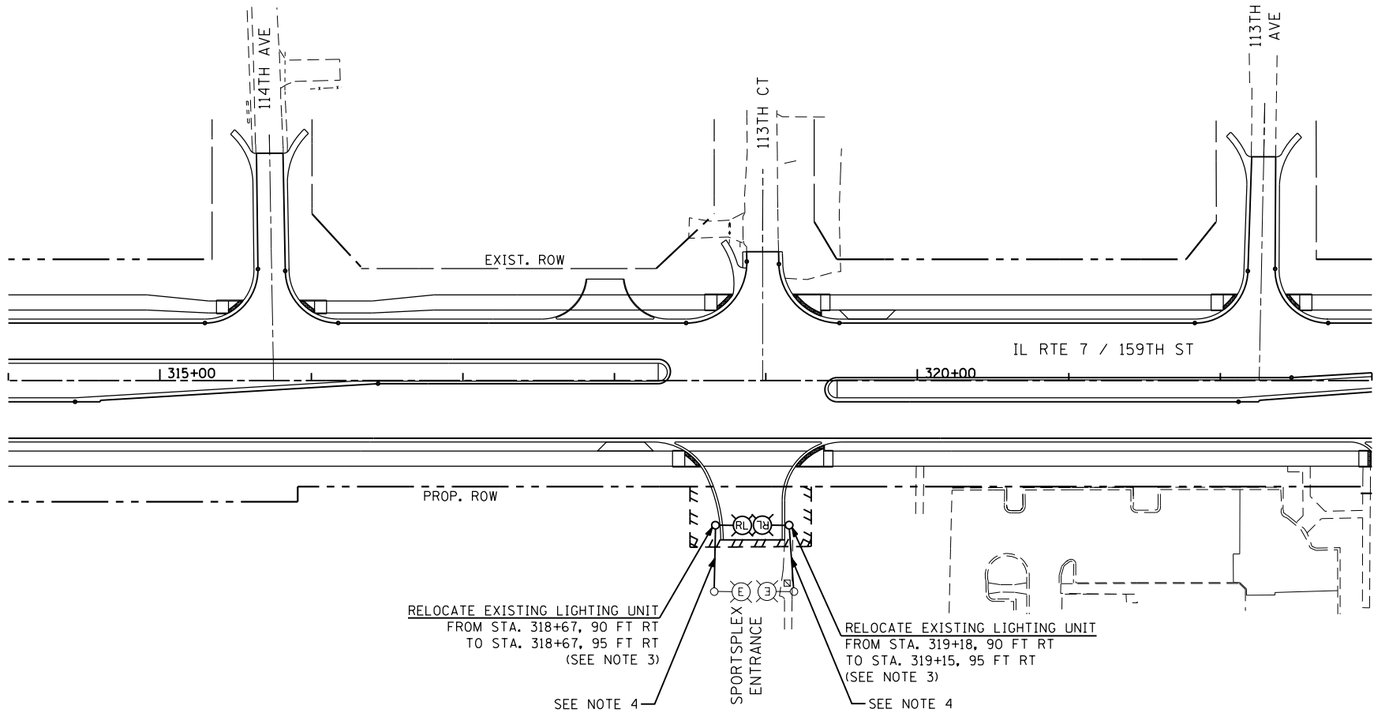
EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRICAL WIRING DIAGRAMS AND DETAILS
		DRAWN - BKG	REVISED -		
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -		
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -		SCALE: NONE · SHEET 1 OF 1 SHEETS · STA. · TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	376
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

NOTES:

1. PROPOSED LIGHT POLE FOUNDATIONS SHALL BE 24" DIAMETER AND WILL BE PAID FOR AS "LIGHT POLE FOUNDATION, 24" DIAMETER." BOLT CIRCLE, ANCHOR BOLT DIAMETER, AND BOLT PROJECTION SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.
2. POLES MUST BE REINSTALLED ON THEIR NEW FOUNDATIONS ON THE SAME WORKING DAY THEY ARE REMOVED.
3. PRECISE LOCATIONS OF NEW FOUNDATIONS SHALL BE ADJUSTED IF REQUIRED TO AVOID EXISTING CONDUITS.
4. LOCATE EXISTING CONDUIT. SPLICE NEW 2" HDPE CONDUIT TO EXISTING CONDUIT AND ROUTE NEW HDPE CONDUIT TO NEW FOUNDATION. PULL EXISTING CABLING BACK AS REQUIRED AND REROUTE TO NEW FOUNDATION VIA NEW HDPE CONDUIT. CONDUIT SPLICING, NEW HDPE CONDUIT, AND CABLE REROUTING ARE INCLUDED IN THE PRICE OF THE ITEM "RELOCATE EXISTING LIGHTING UNIT."
5. PROPOSED LIGHT POLE FOUNDATIONS ON THIS SHEET SHALL BE PROVIDED WITH (2) 3½" PVC RACEWAYS IN LIEU OF THE RACEWAYS SHOWN ON SHEET E-08.

N



SCALE IN FEET
0 50 100
SCALE: 1"=50'

E-12

FILE NAME = ...\D1601L72-sht-light-12.dgn

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswenson	DESIGNED - RAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING RELOCATION PLAN US 6 / IL 7 AT SPORTSPLEX ENTRANCE
		DRAWN - BKG	REVISED -		
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -		
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -		SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 314+00 TO STA. 323+00

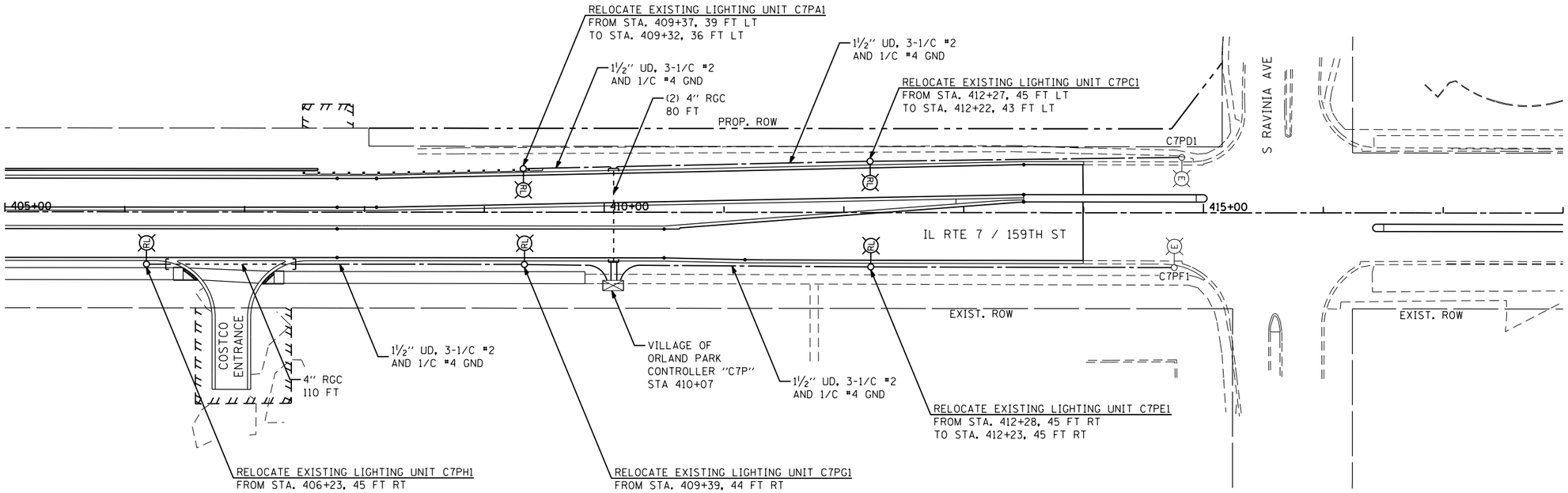
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	377
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		

NOTES:

1. POLES MUST BE REINSTALLED ON THEIR NEW FOUNDATIONS ON THE SAME WORKING DAY THEY ARE REMOVED.

2. PROPOSED LIGHT POLE FOUNDATIONS ON THIS SHEET SHALL BE PROVIDED WITH (2) 3½" PVC RACEWAYS IN LIEU OF THE RACEWAYS SHOWN ON SHEET E-08.

N



SCALE IN FEET

0 50 100

SCALE: 1"=50'

FILE NAME = ...\0160L72-sht-light-13.dgn

E-13

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RAS	REVISED -
		DRAWN - BKG	REVISED -
	PLOT SCALE = 50.00' / IN.	CHECKED - MKR	REVISED -
	PLOT DATE = 10/21/2014	DATE - 10/22/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING RELOCATION PLAN
US 6 / IL 7 AT COSTCO ENTRANCE

SCALE: 1" = 50' | SHEET 1 OF 1 SHEETS | STA. 405+00 | TO STA. 418+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	378
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

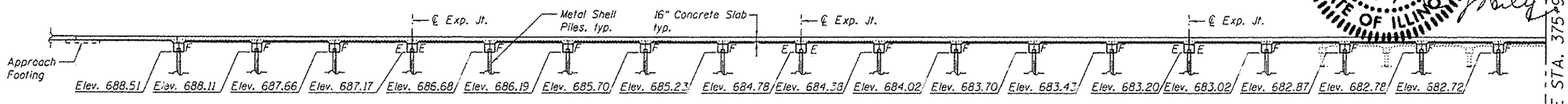
Bench Mark: BM #47 Set at a cross cut on northwest bolt of railroad signal on east side of Norfolk & Western Railroad, Elev. 696.61, ±75' south of US 6 (159th Street) and ±1500' east of 108th Avenue; BM #48 Set at a notch cut on top of northwest wingwall of bridge US 6 over Marley Creek, Elev. 686.47.

Existing Structure: S.N. D016-D010. Built in 1937 as S.B.I. Route 53, Section 537-R at Station 377+53. Structure consists of 20-spans - four 5-span continuous reinforced concrete slab units supported on timber piles. Each unit has a width of 20'-0" and a length of 112'-6". The overall length of the structure is 450'-0". Structure to be removed and replaced using stage construction.

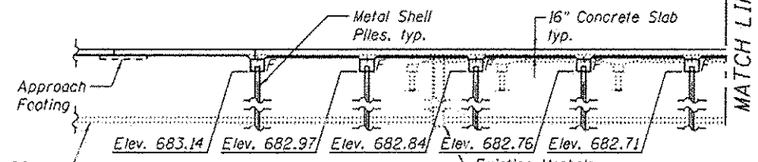
No Salvage

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

JIANQING HONG
081006053
LICENSED STRUCTURAL ENGINEER
Exp. 11/30/16
STATE OF ILLINOIS

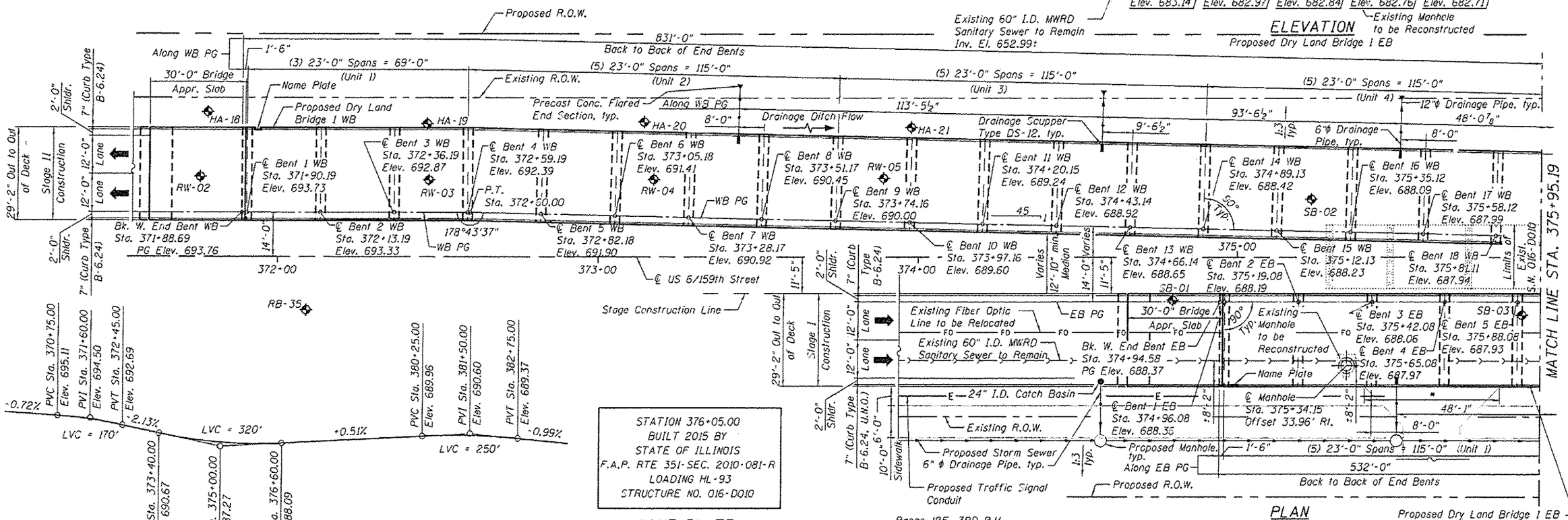


ELEVATION
Proposed Dry Land Bridge 1 WB



Existing 60" I.D. MWRD Sanitary Sewer to Remain Inv. El. 652.99±

ELEVATION
Proposed Dry Land Bridge 1 EB



US 6/159TH ST. (WB & EB) PROFILE GRADE

STATION 376+05.00
BUILT 2015 BY
STATE OF ILLINOIS
F.A.P. RTE 351-SEC. 2010-081-R
LOADING HL-93
STRUCTURE NO. 016-D010

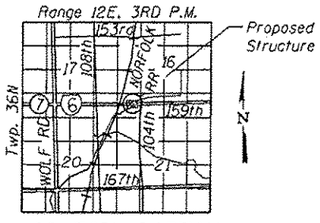
NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2013 Interims.

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.130g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.238g
Soil Site Class = E

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)



LOCATION SKETCH

PLAN
* Use Depressed Curb at driveway entrance from Sta. 375+39.82 to Sta. 375+82.66

LEGEND
Soil Boring Location
U.N.O. Unless Noted Otherwise

GENERAL PLAN & ELEVATION 1
DRY LAND BRIDGE 1
US ROUTE 6 / 159TH STREET
F.A.P. RTE 351 - SEC. 2010-081-R
COOK COUNTY
STATION 376+05.00
STRUCTURE NO. 016-D010

T:\SIBS-USS\Structs\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-GDL72-001-GP.dgn

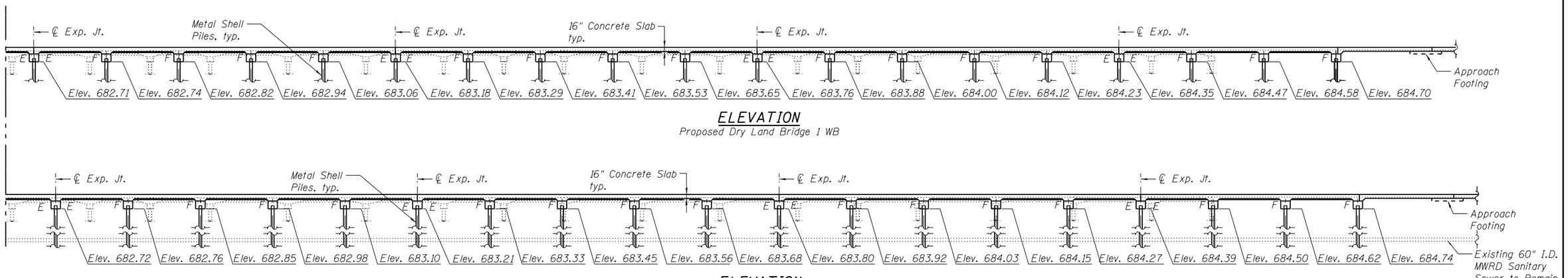
LOCHNER	USER NAME =	DESIGNED - LJB	REVISED
H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	FILE NAME = 016D010-GDL72-001-GP.dgn	CHECKED - RH	REVISED
	PLOT SCALE =	DRAWN - LJB	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 47 SHEETS

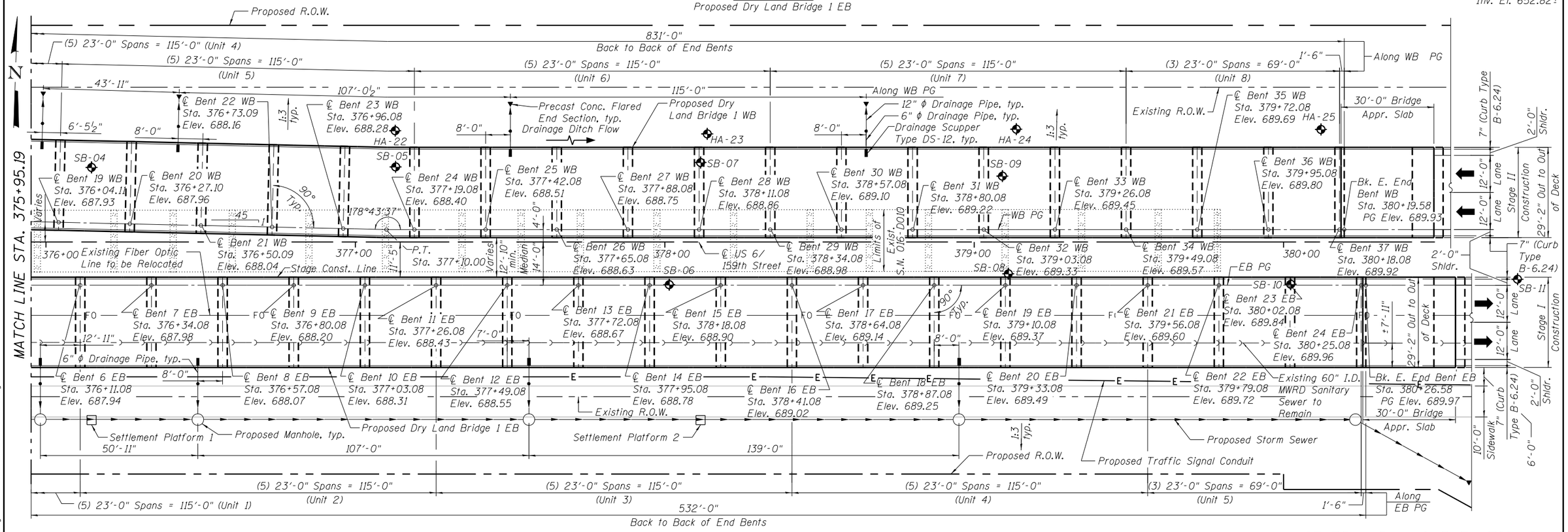
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	379
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

MATCH LINE STA. 375+95.19



ELEVATION
Proposed Dry Land Bridge 1 WB

ELEVATION
Proposed Dry Land Bridge 1 EB



PLAN

SETTLEMENT PLATFORM SCHEDULE

Settlement Platform I.D.	Station	Offset
Settlement Platform 1	376+15.00	58.00' Rt.
Settlement Platform 2	378+12.00	58.00' Rt.

The identified settlement platforms are paid for as SETTLEMENT PLATFORMS.

LEGEND
℄ Soil Boring Location

GENERAL PLAN & ELEVATION 2
DRY LAND BRIDGE 1
US ROUTE 6 / 159TH STREET
F.A.P. RTE 351 - SEC. 2010-081-R
COOK COUNTY
STATION 376+05.00
STRUCTURE NO. 016-D010

T:\5106-056\Struct\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-002-GP.dgn

LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - LJB	REVISED
	FILE NAME = 016D010-60L72-002-GP.dgn	CHECKED - RH	REVISED
	PLOT SCALE =	DRAWN - LJB	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	380
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

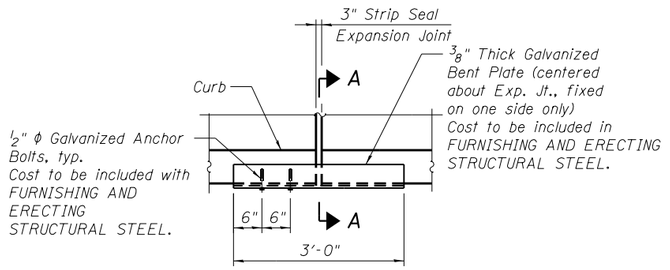
GENERAL NOTES

1. Calculated weight of Structural Steel M270 Grade 36 = 2,370lb.
2. All structural steel shall be AASHTO M 270 Grade 36.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Protective coat shall be applied to surfaces of bridge deck, approach slabs and curbs.
5. Concrete Sealer shall be applied to the designated areas of the Expansion Bent Caps. See Sheet 24 for locations.
6. Refer to Roadway Plans for type and quantity of fill material required within the limits of Dry Land Bridge.
7. Piles shall be driven through 18" diameter precored holes extending to the estimated elevation shown on sheet 25 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles. However, the contractor may cease the precore of piles at the elevation peat is encountered. Loose sand shall be backfilled in the precore holes without compacting.
8. The deck of the existing land bridge shall be removed. The existing bent caps and/or timber piles shall be removed to 2' below bottom of the proposed land bridge slab, abandoned in place and buried under the proposed land bridges.
9. The Contractor shall verify locations of all underground utilities before driving piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department.
10. Excavation for placement of slab shall be paid for as Earth Excavation. See Roadway Plans.

TOTAL BILL OF MATERIAL

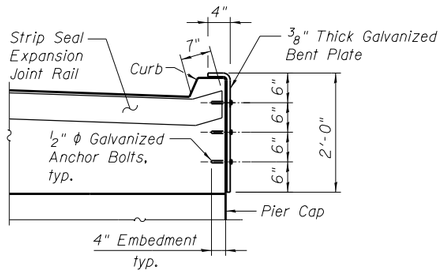
ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.		58	58
Removal of Existing Structures No. 1	Each	1		1
Structure Excavation	Cu. Yd.		1,494	1,494
Concrete Structures	Cu. Yd.		530.5	530.5
Concrete Superstructure	Cu. Yd.	2,589.2		2,589.2
Bridge Deck Grooving	Sq. Yd.	4,249		4,249
Protective Coat	Sq. Yd.	4,955		4,955
Reinforcement Bars, Epoxy Coated	Pound	468,150	58,470	526,620
Furnishing Metal Shell Piles 14"x0.25"	Foot		21,644	21,644
Driving Piles	Foot		21,644	21,644
Test Pile Metal Shells	Each		16	16
Name Plates	Each	2		2
Preformed Joint Strip Seal	Foot	322		322
Concrete Sealer	Sq. Ft.		2,739	2,739
Drainage Scuppers, DS-12	Each	12		12
Drainage System No. 1	Each	1		1
Furnishing and Erecting Structural Steel	Pound	2,370		2,370
Settlement Platforms	Each		2	2

INDEX OF SHEETS

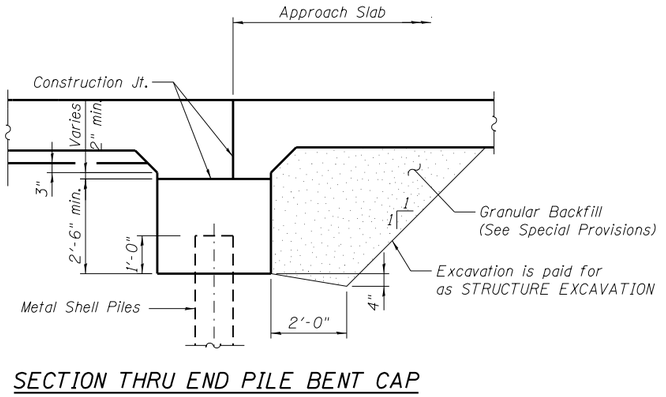


END PLAN OF EXPANSION JOINT DETAILS

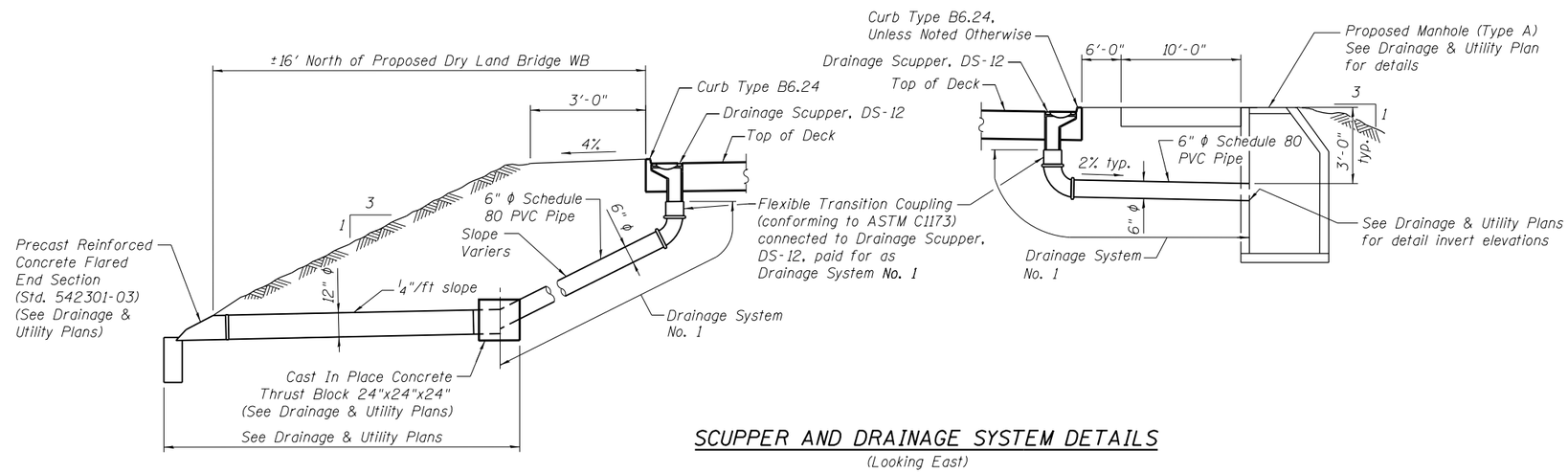
Typical at each end of Expansion Joints



SECTION A-A



SECTION THRU END PILE BENT CAP



SCUPPER AND DRAINAGE SYSTEM DETAILS

(Looking East)

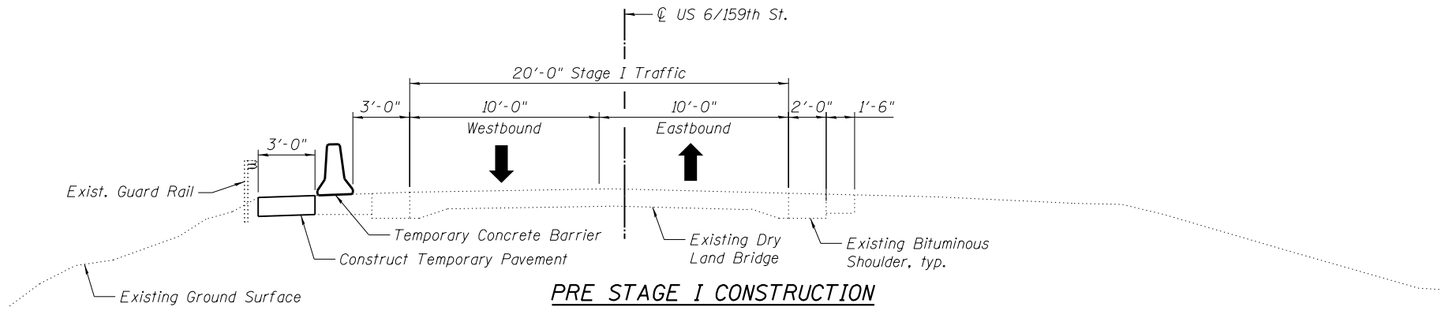
T:\5106-USGS\Structure\dgn\Land Bridges\Land Bridge 1 - 016-0010\016D010-60L72-003-GN.dgn

LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - LJB	REVISED
	FILE NAME = 016D010-60L72-003-GN.dgn	CHECKED - RH	REVISED
	PLOT SCALE =	DRAWN - EF	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

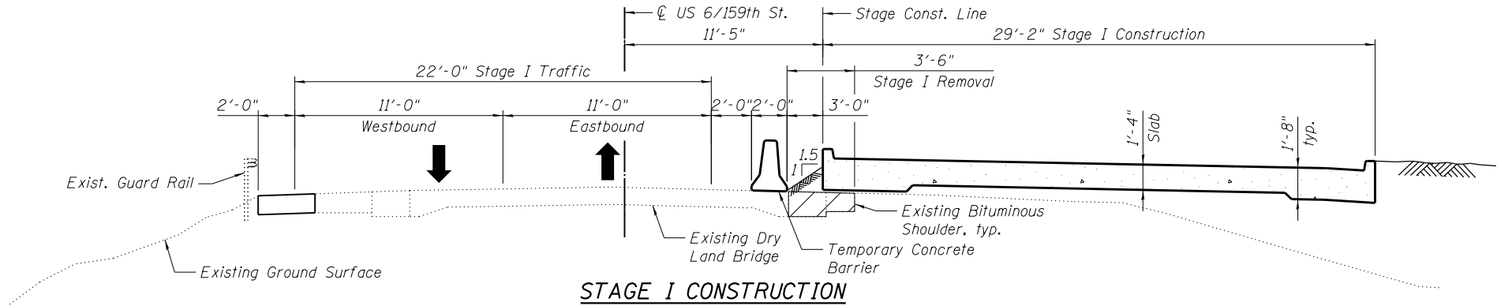
GENERAL NOTES AND BILL OF MATERIAL
STRUCTURE NO. 016–D010
SHEET NO. 3 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	381
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



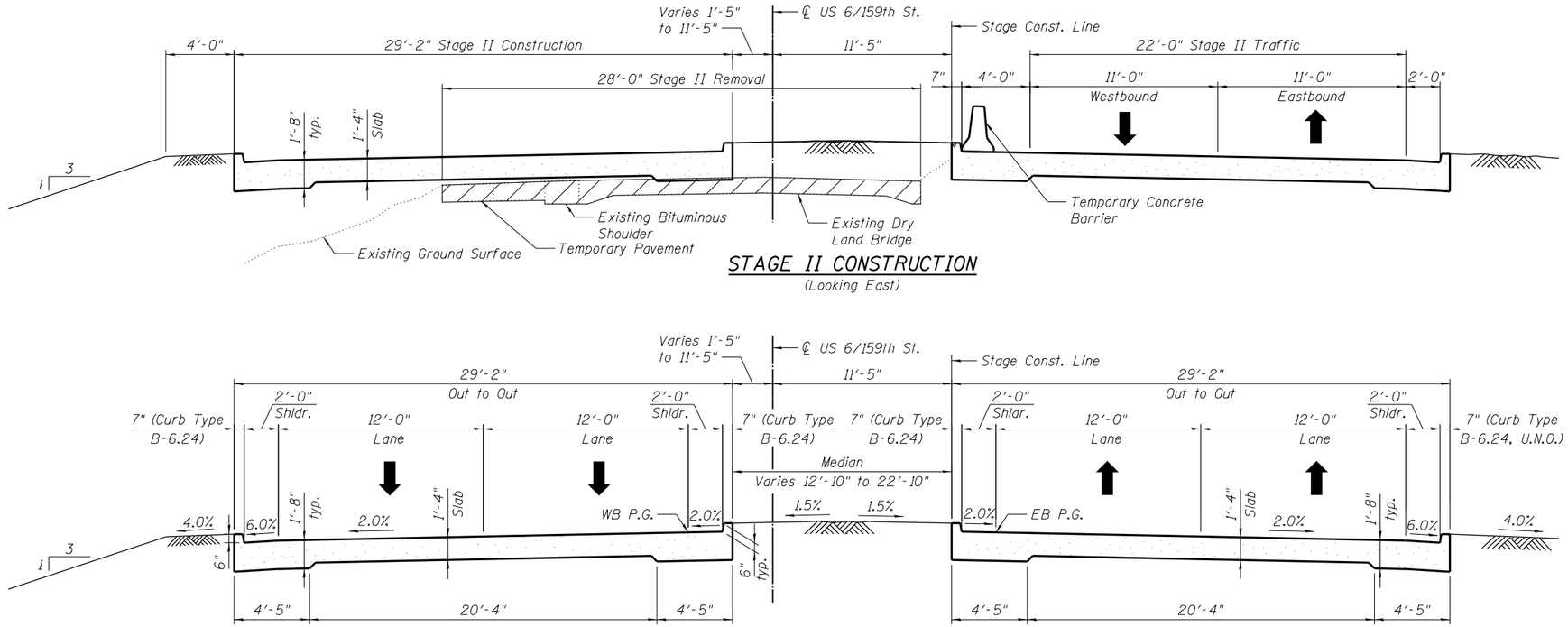
PRE STAGE I CONSTRUCTION

(Looking East)



STAGE I CONSTRUCTION

(Looking East)



STAGE II CONSTRUCTION

(Looking East)

CROSS SECTION

(Looking East)

LEGEND

Existing Structure Removal

U.N.O. Unless Noted Otherwise

T:\5106-USBS\Structr\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-004-MD.dgn

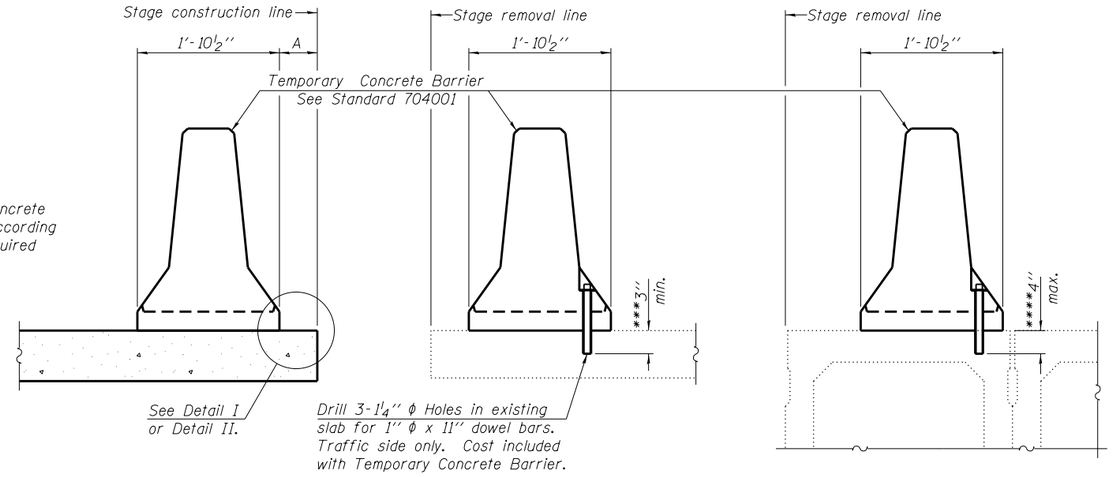
LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - LJB	REVISED
	FILE NAME = 016D010-60L72-004-MD.dgn	CHECKED - RH	REVISED
	PLOT SCALE =	DRAWN - LJB	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING
STRUCTURE NO. 016–D010
SHEET NO. 4 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	382
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel PL to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel PL to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

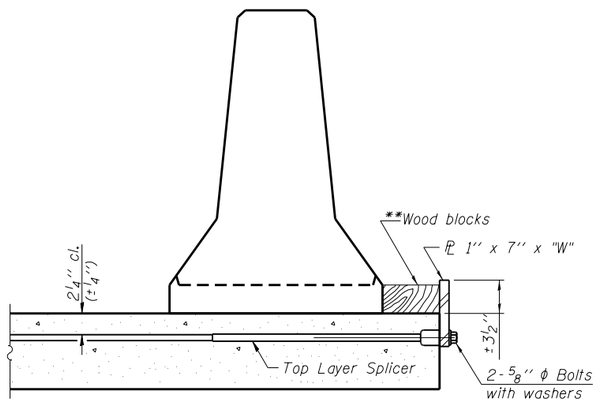
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

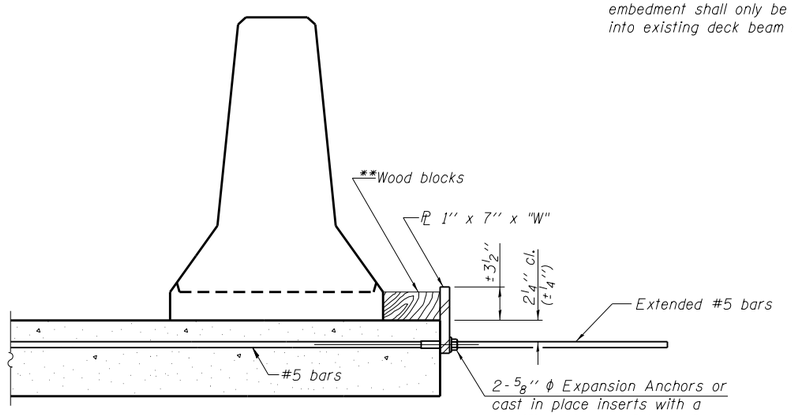
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



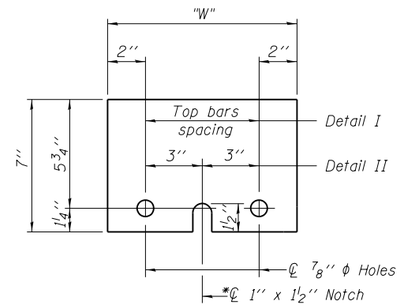
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4''



STEEL RETAINER PL 1'' x 7'' x ''W''

* Required only with Detail II

R-27

7-1-10

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - LJB	REVISED
FILE NAME = 016D010-60L72-005-TC.dgn	CHECKED - RH	REVISED
PLOT SCALE =	DRAWN - EF	REVISED
PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-D010
SHEET NO. 5 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	383
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

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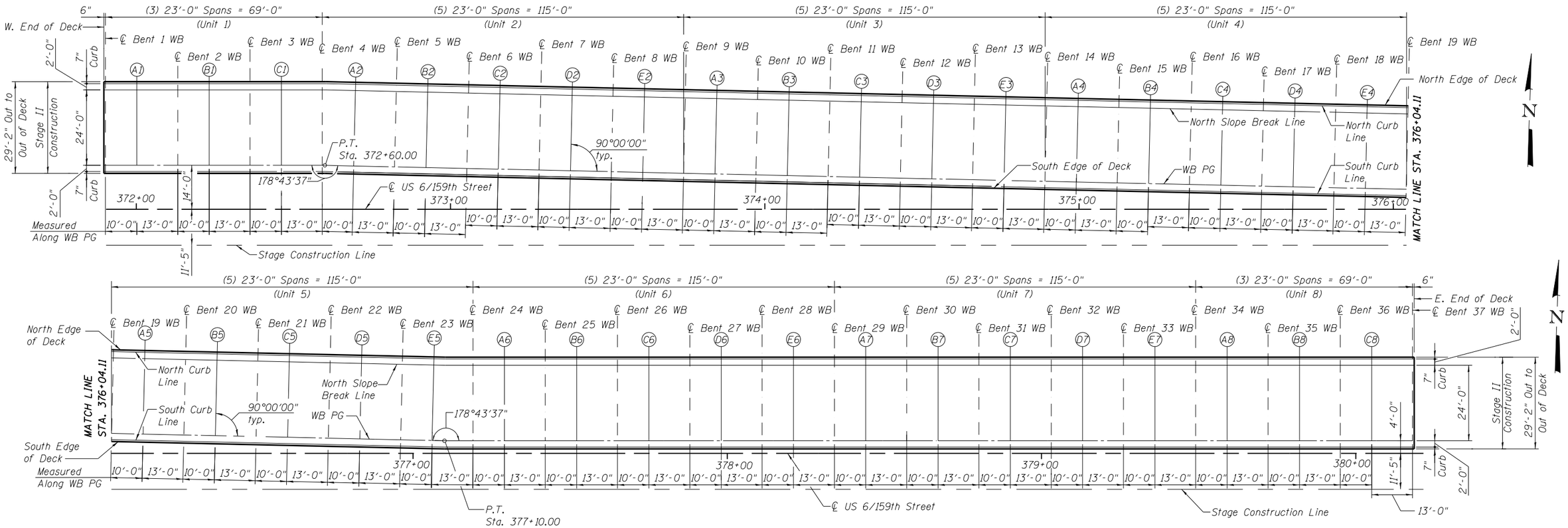
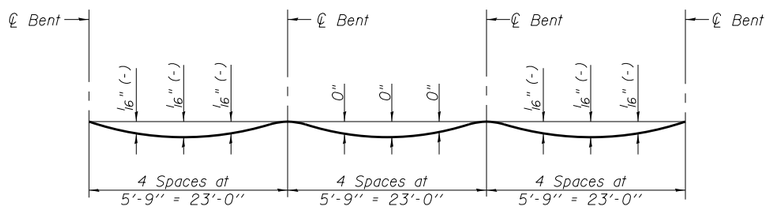


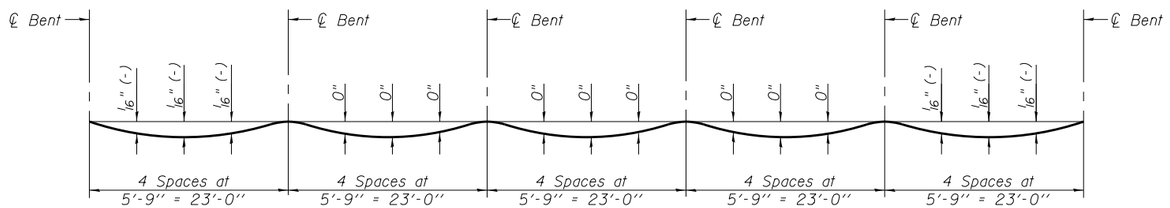
PLAN DECK UNITS - DRY LAND BRIDGE 1 WESTBOUND



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 3-Span units - WB Unit 1 & Unit 8).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 7 and 8 of 47.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 5-Span units - WB Unit 2 thru Unit 7).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 7 and 8 of 47.

T:\5108-US6\Struct\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-006-EL.dgn

LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - RH	REVISED
	FILE NAME = 016D010-60L72-006-EL.dgn	CHECKED - LJB	REVISED
	PLOT SCALE =	DRAWN - EF	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION PLAN WB
STRUCTURE NO. 016-D010
SHEET NO. 6 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	384
		CONTRACT NO. 60L72		
		ILLINOIS FED. AID PROJECT		

NORTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-40.58	693.64	693.64
℄ WB Bent 1	371+90.19	-40.58	693.63	693.63
A1	372+00.19	-40.58	693.46	693.46
℄ WB Bent 2	372+13.19	-40.58	693.23	693.23
B1	372+23.19	-40.58	693.03	693.03
℄ WB Bent 3	372+36.19	-40.58	692.77	692.77
C1	372+46.19	-40.58	692.57	692.57
℄ WB Bent 4	372+59.19	-40.58	692.29	692.29
A2	372+69.78	-40.37	692.06	692.06
℄ WB Bent 5	372+82.78	-40.08	691.79	691.79
B2	372+92.77	-39.86	691.57	691.57
℄ WB Bent 6	373+05.77	-39.57	691.30	691.30
C2	373+15.77	-39.35	691.08	691.08
℄ WB Bent 7	373+28.77	-39.06	690.81	690.81
D2	373+38.76	-38.84	690.59	690.59
℄ WB Bent 8	373+51.76	-38.55	690.33	690.33
E2	373+61.76	-38.33	690.13	690.13
℄ WB Bent 9	373+74.75	-38.04	689.89	689.89
A3	373+84.75	-37.82	689.71	689.71
℄ WB Bent 10	373+97.75	-37.53	689.49	689.49
B3	374+07.75	-37.31	689.32	689.32
℄ WB Bent 11	374+20.74	-37.02	689.13	689.13
C3	374+30.74	-36.80	688.98	688.98
℄ WB Bent 12	374+43.74	-36.51	688.81	688.81
D3	374+53.73	-36.28	688.69	688.69
℄ WB Bent 13	374+66.73	-36.00	688.54	688.54
E3	374+76.73	-35.77	688.44	688.44
℄ WB Bent 14	374+89.73	-35.48	688.31	688.31
A4	374+99.72	-35.26	688.23	688.23
℄ WB Bent 15	375+12.72	-34.97	688.13	688.13
B4	375+22.72	-34.75	688.06	688.06
℄ WB Bent 16	375+35.71	-34.46	687.99	687.99
C4	375+45.71	-34.24	687.94	687.94
℄ WB Bent 17	375+58.71	-33.95	687.89	687.89
D4	375+68.71	-33.73	687.86	687.86
℄ WB Bent 18	375+81.70	-33.44	687.84	687.84
E4	375+91.70	-33.22	687.83	687.83
℄ WB Bent 19	376+04.70	-32.93	687.83	687.83
A5	376+14.69	-32.71	687.84	687.84
℄ WB Bent 20	376+27.69	-32.42	687.86	687.86
B5	376+37.69	-32.20	687.89	687.89
℄ WB Bent 21	376+50.69	-31.91	687.94	687.94
C5	376+60.68	-31.69	688.00	688.00
℄ WB Bent 22	376+73.68	-31.40	688.06	688.06
D5	376+83.68	-31.17	688.12	688.12
℄ WB Bent 23	376+96.67	-30.89	688.18	688.18
E5	377+06.67	-30.66	688.23	688.23
℄ WB Bent 24	377+19.08	-30.58	688.30	688.30
A6	377+29.08	-30.58	688.35	688.35
℄ WB Bent 25	377+42.08	-30.58	688.41	688.41
B6	377+52.08	-30.58	688.46	688.46
℄ WB Bent 26	377+65.08	-30.58	688.53	688.53
C6	377+75.08	-30.58	688.58	688.58
℄ WB Bent 27	377+88.08	-30.58	688.65	688.65
D6	377+98.08	-30.58	688.70	688.70
℄ WB Bent 28	378+11.08	-30.58	688.76	688.76
E6	378+21.08	-30.58	688.82	688.82
℄ WB Bent 29	378+34.08	-30.58	688.88	688.88
A7	378+44.08	-30.58	688.93	688.93
℄ WB Bent 30	378+57.08	-30.58	689.00	689.00
B7	378+67.08	-30.58	689.05	689.05
℄ WB Bent 31	378+80.08	-30.58	689.12	689.12
C7	378+90.08	-30.58	689.17	689.17
℄ WB Bent 32	379+03.08	-30.58	689.23	689.23
D7	379+13.08	-30.58	689.28	689.28
℄ WB Bent 33	379+26.08	-30.58	689.35	689.35
E7	379+36.08	-30.58	689.40	689.40
℄ WB Bent 34	379+49.08	-30.58	689.47	689.47
A8	379+59.08	-30.58	689.52	689.52
℄ WB Bent 35	379+72.08	-30.58	689.59	689.59
B8	379+82.08	-30.58	689.64	689.64
℄ WB Bent 36	379+95.08	-30.58	689.70	689.70
C8	380+05.08	-30.58	689.75	689.75
℄ WB Bent 37	380+18.08	-30.58	689.82	689.82
E. End of Deck	380+18.58	-30.58	689.82	689.82

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-40.00	693.14	693.14
℄ WB Bent 1	371+90.19	-40.00	693.13	693.13
A1	372+00.19	-40.00	692.96	692.96
℄ WB Bent 2	372+13.19	-40.00	692.73	692.73
B1	372+23.19	-40.00	692.53	692.53
℄ WB Bent 3	372+36.19	-40.00	692.27	692.27
C1	372+46.19	-40.00	692.07	692.07
℄ WB Bent 4	372+59.19	-40.00	691.79	691.79
A2	372+69.77	-39.79	691.56	691.56
℄ WB Bent 5	372+82.76	-39.50	691.29	691.29
B2	372+92.76	-39.28	691.07	691.07
℄ WB Bent 6	373+05.76	-38.99	690.80	690.80
C2	373+15.76	-38.77	690.58	690.58
℄ WB Bent 7	373+28.75	-38.48	690.31	690.31
D2	373+38.75	-38.26	690.09	690.09
℄ WB Bent 8	373+51.75	-37.97	689.83	689.83
E2	373+61.74	-37.75	689.63	689.63
℄ WB Bent 9	373+74.74	-37.46	689.39	689.39
A3	373+84.74	-37.23	689.21	689.21
℄ WB Bent 10	373+97.74	-36.95	688.99	688.99
B3	374+07.73	-36.72	688.82	688.82
℄ WB Bent 11	374+20.73	-36.43	688.63	688.63
C3	374+30.73	-36.21	688.49	688.49
℄ WB Bent 12	374+43.72	-35.92	688.31	688.31
D3	374+53.72	-35.70	688.19	688.19
℄ WB Bent 13	374+66.72	-35.41	688.04	688.04
E3	374+76.72	-35.19	687.94	687.94
℄ WB Bent 14	374+89.71	-34.90	687.81	687.81
A4	374+99.71	-34.68	687.73	687.73
℄ WB Bent 15	375+12.71	-34.39	687.63	687.63
B4	375+22.70	-34.17	687.56	687.56
℄ WB Bent 16	375+35.70	-33.88	687.49	687.49
C4	375+45.70	-33.66	687.44	687.44
℄ WB Bent 17	375+58.70	-33.37	687.39	687.39
D4	375+68.69	-33.15	687.36	687.36
℄ WB Bent 18	375+81.69	-32.86	687.34	687.34
E4	375+91.69	-32.64	687.33	687.33
℄ WB Bent 19	376+04.68	-32.35	687.33	687.33
A5	376+14.68	-32.12	687.34	687.34
℄ WB Bent 20	376+27.68	-31.84	687.36	687.36
B5	376+37.68	-31.61	687.39	687.39
℄ WB Bent 21	376+50.67	-31.32	687.44	687.44
C5	376+60.67	-31.10	687.50	687.50
℄ WB Bent 22	376+73.67	-30.81	687.56	687.56
D5	376+83.66	-30.59	687.61	687.61
℄ WB Bent 23	376+96.66	-30.30	687.68	687.68
E5	377+06.66	-30.08	687.73	687.73
℄ WB Bent 24	377+19.08	-30.00	687.80	687.80
A6	377+29.08	-30.00	687.85	687.85
℄ WB Bent 25	377+42.08	-30.00	687.91	687.91
B6	377+52.08	-30.00	687.96	687.96
℄ WB Bent 26	377+65.08	-30.00	688.03	688.03
C6	377+75.08	-30.00	688.08	688.08
℄ WB Bent 27	377+88.08	-30.00	688.15	688.15
D6	377+98.08	-30.00	688.20	688.20
℄ WB Bent 28	378+11.08	-30.00	688.26	688.26
E6	378+21.08	-30.00	688.32	688.32
℄ WB Bent 29	378+34.08	-30.00	688.38	688.38
A7	378+44.08	-30.00	688.43	688.43
℄ WB Bent 30	378+57.08	-30.00	688.50	688.50
B7	378+67.08	-30.00	688.55	688.55
℄ WB Bent 31	378+80.08	-30.00	688.62	688.62
C7	378+90.08	-30.00	688.67	688.67
℄ WB Bent 32	379+03.08	-30.00	688.73	688.73
D7	379+13.08	-30.00	688.78	688.78
℄ WB Bent 33	379+26.08	-30.00	688.85	688.85
E7	379+36.08	-30.00	688.90	688.90
℄ WB Bent 34	379+49.08	-30.00	688.97	688.97
A8	379+59.08	-30.00	689.02	689.02
℄ WB Bent 35	379+72.08	-30.00	689.09	689.09
B8	379+82.08	-30.00	689.14	689.14
℄ WB Bent 36	379+95.08	-30.00	689.20	689.20
C8	380+05.08	-30.00	689.25	689.25
℄ WB Bent 37	380+18.08	-30.00	689.32	689.32
E. End of Deck	380+18.58	-30.00	689.32	689.32

NORTH SLOPE BREAK LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-38.00	693.26	693.26
℄ WB Bent 1	371+90.19	-38.00	693.25	693.25
A1	372+00.19	-38.00	693.08	693.08
℄ WB Bent 2	372+13.19	-38.00	692.85	692.85
B1	372+23.19	-38.00	692.65	692.65
℄ WB Bent 3	372+36.19	-38.00	692.39	692.39
C1	372+46.19	-38.00	692.19	692.19
℄ WB Bent 4	372+59.19	-38.00	691.91	691.91
A2	372+69.72	-37.79	691.69	691.69
℄ WB Bent 5	372+82.72	-37.50	691.41	691.41
B2	372+92.72	-37.28	691.20	691.20
℄ WB Bent 6	373+05.71	-36.99	690.92	690.92
C2	373+15.71	-36.77	690.71	690.71
℄ WB Bent 7	373+28.71	-36.48	690.43	690.43
D2	373+38.71	-36.26	690.22	690.22
℄ WB Bent 8	373+51.70	-35.97	689.95	689.95
E2	373+61.70	-35.75	689.76	689.76
℄ WB Bent 9	373+74.70	-35.46	689.51	689.51
A3	373+84.69	-35.23	689.33	689.33
℄ WB Bent 10	373+97.69	-34.95	689.11	689.11
B3	374+07.69	-34.72	688.95	688.95
℄ WB Bent 11	374+20.69	-34.44	688.75	688.75
C3	374+30.68	-34.21	688.61	688.61
℄ WB Bent 12	374+43.68	-33.92	688.43	688.43
D3	374+53.68	-33.70	688.31	688.31
℄ WB Bent 13	374+66.67	-33.41	688.16	688.16
E3	374+76.67	-33.19	688.06	688.06
℄ WB Bent 14	374+89.67	-32.90	687.93	687.93
A4	374+99.67	-32.68	687.85	687.85
℄ WB Bent 15	375+12.66	-32.39	687.75	687.75
B4	375+22.66	-32.17	687.68	687.68
℄ WB Bent 16	375+35.66	-31.88	687.61	687.61
C4	375+45.65	-31.66	687.56	687.56
℄ WB Bent 17	375+58.65	-31.37	687.51	687.51
D4	375+68.65	-31.15	687.48	687.48
℄ WB Bent 18	375+81.65	-30.86	687.46	687.46
E4	375+91.64	-30.64	687.45	687.45
℄ WB Bent 19	376+04.64	-30.35	687.45	687.45
A5	376+14.64	-30.13	687.46	687.46
℄ WB Bent 20	376+27.63	-29.84	687.48	687.48
B5	376+37.63	-29.61	687.51	687.51
℄ WB Bent 21	376+50.63	-29.33	687.56	687.56
C5	376+60.63	-29.10	687.62	687.62
℄ WB Bent 22	376+73.62	-28.81	687.68	687.68
D5	376+83.62	-28.59	687.73	687.73
℄ WB Bent 23	376+96.62	-28.30	687.80	687.80
E5	377+06.61	-28.08	687.85	687.85
℄ WB Bent 24	377+19.08	-28.00	687.92	687.92
A6	377+29.08	-28.00	687.97	687.97
℄ WB Bent 25	377+42.08	-28.00	688.03	688.03
B6	377+52.08	-28.00	688.08	688.08
℄ WB Bent 26	377+65.08	-28.00	688.15	688.15
C6	377+75.08	-28.00	688.20	688.20
℄ WB Bent 27	377+88.08	-28.00	688.27	688.27
D6	377+98.08	-28.00	688.32	688.32
℄ WB Bent 28	378+11.08	-28.00	688.38	688.38
E6	378+21.08	-28.00	688.44	688.44
℄ WB Bent 29	378+34.08	-28.00	688.50	688.50
A7	378+44.08	-28.00	688.55	688.55
℄ WB Bent 30	378+57.08	-28.00	688.62	688.62
B7	378+67.08	-28.00	688.67	688.67
℄ WB Bent 31	378+80.08	-28.00	688.74	688.74
C7	378+90.08	-28.00	688.79	688.79
℄ WB Bent 32	379+03.08	-28.00	688.85	688.85
D7	379+13.08	-28.00	688.90	688.90
℄ WB Bent 33	379+26.08	-28.00	688.97	688.97
E7	379+36.08	-28.00	689.02	689.02
℄ WB Bent 34	379+49.08	-28.00	689.09	689.09
A8	379+59.08	-28.00	689.14	689.14
℄ WB Bent 35	379+72.08	-28.00	689.21	689.21
B8	379+82.08	-28.00	689.26	689.26
℄ WB Bent 36	379+95.08	-28.00	689.32	689.32
C8	380+05.08	-28.00	689.37	689.37
℄ WB Bent 37	380+18.08	-28.00	689.44	689.44
E. End of Deck	380+18.58	-28.00	689.44	689.44

T:\5106\USS\Structure\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-007-EL.dgn

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - RH	REVISED	
FILE NAME = 016D010-60L72-007-EL.dgn	CHECKED - LJB	REVISED	
PLOT SCALE =	DRAWN - EF	REVISED	
PLOT DATE =	CHECKED - RH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS 1 WB
STRUCTURE NO. 016–D010
SHEET NO. 7 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	385
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

WB PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-14.00	693.74	693.74
℄ WB Bent 1	371+90.19	-14.00	693.73	693.73
A1	372+00.19	-14.00	693.56	693.56
℄ WB Bent 2	372+13.19	-14.00	693.33	693.33
B1	372+23.19	-14.00	693.13	693.13
℄ WB Bent 3	372+36.19	-14.00	692.87	692.87
C1	372+46.19	-14.00	692.67	692.67
℄ WB Bent 4	372+59.19	-14.00	692.39	692.39
A2	372+69.19	-13.80	692.18	692.18
℄ WB Bent 5	372+82.19	-13.51	691.90	691.90
B2	372+92.18	-13.28	691.69	691.69
℄ WB Bent 6	373+05.18	-13.00	691.41	691.41
C2	373+15.18	-12.77	691.20	691.20
℄ WB Bent 7	373+28.17	-12.48	690.92	690.92
D2	373+38.17	-12.26	690.71	690.71
℄ WB Bent 8	373+51.17	-11.97	690.45	690.45
E2	373+61.17	-11.75	690.25	690.25
℄ WB Bent 9	373+74.16	-11.46	690.00	690.00
A3	373+84.16	-11.24	689.82	689.82
℄ WB Bent 10	373+97.16	-10.95	689.60	689.60
B3	374+07.16	-10.73	689.43	689.43
℄ WB Bent 11	374+20.15	-10.44	689.24	689.24
C3	374+30.15	-10.22	689.09	689.09
℄ WB Bent 12	374+43.15	-9.93	688.92	688.92
D3	374+53.14	-9.71	688.80	688.80
℄ WB Bent 13	374+66.14	-9.42	688.65	688.65
E3	374+76.14	-9.20	688.54	688.54
℄ WB Bent 14	374+89.14	-8.91	688.42	688.42
A4	374+99.13	-8.69	688.33	688.33
℄ WB Bent 15	375+12.13	-8.40	688.23	688.23
B4	375+22.13	-8.18	688.17	688.17
℄ WB Bent 16	375+35.12	-7.89	688.09	688.09
C4	375+45.12	-7.66	688.04	688.04
℄ WB Bent 17	375+58.12	-7.38	687.99	687.99
D4	375+68.12	-7.15	687.97	687.97
℄ WB Bent 18	375+81.11	-6.86	687.94	687.94
E4	375+91.11	-6.64	687.93	687.93
℄ WB Bent 19	376+04.11	-6.35	687.93	687.93
A5	376+14.10	-6.13	687.94	687.94
℄ WB Bent 20	376+27.10	-5.84	687.96	687.96
B5	376+37.10	-5.62	687.99	687.99
℄ WB Bent 21	376+50.10	-5.33	688.04	688.04
C5	376+60.09	-5.11	688.09	688.09
℄ WB Bent 22	376+73.09	-4.82	688.16	688.16
D5	376+83.09	-4.60	688.21	688.21
℄ WB Bent 23	376+96.08	-4.31	688.28	688.28
E5	377+06.08	-4.09	688.33	688.33
℄ WB Bent 24	377+19.08	-4.00	688.40	688.40
A6	377+29.08	-4.00	688.45	688.45
℄ WB Bent 25	377+42.08	-4.00	688.51	688.51
B6	377+52.08	-4.00	688.56	688.56
℄ WB Bent 26	377+65.08	-4.00	688.63	688.63
C6	377+75.08	-4.00	688.68	688.68
℄ WB Bent 27	377+88.08	-4.00	688.75	688.75
D6	377+98.08	-4.00	688.80	688.80
℄ WB Bent 28	378+11.08	-4.00	688.86	688.86
E6	378+21.08	-4.00	688.92	688.92
℄ WB Bent 29	378+34.08	-4.00	688.98	688.98
A7	378+44.08	-4.00	689.03	689.03
℄ WB Bent 30	378+57.08	-4.00	689.10	689.10
B7	378+67.08	-4.00	689.15	689.15
℄ WB Bent 31	378+80.08	-4.00	689.22	689.22
C7	378+90.08	-4.00	689.27	689.27
℄ WB Bent 32	379+03.08	-4.00	689.33	689.33
D7	379+13.08	-4.00	689.38	689.38
℄ WB Bent 33	379+26.08	-4.00	689.45	689.45
E7	379+36.08	-4.00	689.50	689.50
℄ WB Bent 34	379+49.08	-4.00	689.57	689.57
A8	379+59.08	-4.00	689.62	689.62
℄ WB Bent 35	379+72.08	-4.00	689.69	689.69
B8	379+82.08	-4.00	689.74	689.74
℄ WB Bent 36	379+95.08	-4.00	689.80	689.80
C8	380+05.08	-4.00	689.85	689.85
℄ WB Bent 37	380+18.08	-4.00	689.92	689.92
E. End of Deck	380+18.58	-4.00	689.92	689.92

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-12.00	693.78	693.78
℄ WB Bent 1	371+90.19	-12.00	693.77	693.77
A1	372+00.19	-12.00	693.60	693.60
℄ WB Bent 2	372+13.19	-12.00	693.37	693.37
B1	372+23.19	-12.00	693.17	693.17
℄ WB Bent 3	372+36.19	-12.00	692.91	692.91
C1	372+46.19	-12.00	692.71	692.71
℄ WB Bent 4	372+59.19	-12.00	692.43	692.43
A2	372+69.14	-11.80	692.22	692.22
℄ WB Bent 5	372+82.14	-11.51	691.94	691.94
B2	372+92.14	-11.29	691.73	691.73
℄ WB Bent 6	373+05.14	-11.00	691.45	691.45
C2	373+15.13	-10.77	691.24	691.24
℄ WB Bent 7	373+28.13	-10.49	690.96	690.96
D2	373+38.13	-10.26	690.75	690.75
℄ WB Bent 8	373+51.12	-9.97	690.49	690.49
E2	373+61.12	-9.75	690.29	690.29
℄ WB Bent 9	373+74.12	-9.46	690.04	690.04
A3	373+84.12	-9.24	689.86	689.86
℄ WB Bent 10	373+97.11	-8.95	689.64	689.64
B3	374+07.11	-8.73	689.47	689.47
℄ WB Bent 11	374+20.11	-8.44	689.28	689.28
C3	374+30.11	-8.22	689.13	689.13
℄ WB Bent 12	374+43.10	-7.93	688.96	688.96
D3	374+53.10	-7.71	688.84	688.84
℄ WB Bent 13	374+66.10	-7.42	688.69	688.69
E3	374+76.09	-7.20	688.58	688.58
℄ WB Bent 14	374+89.09	-6.91	688.46	688.46
A4	374+99.09	-6.69	688.37	688.37
℄ WB Bent 15	375+12.09	-6.40	688.27	688.27
B4	375+22.08	-6.18	688.21	688.21
℄ WB Bent 16	375+35.08	-5.89	688.13	688.13
C4	375+45.08	-5.66	688.08	688.08
℄ WB Bent 17	375+58.07	-5.38	688.03	688.03
D4	375+68.07	-5.15	688.01	688.01
℄ WB Bent 18	375+81.07	-4.86	687.98	687.98
E4	375+91.07	-4.64	687.97	687.97
℄ WB Bent 19	376+04.06	-4.35	687.97	687.97
A5	376+14.06	-4.13	687.98	687.98
℄ WB Bent 20	376+27.06	-3.84	688.00	688.00
B5	376+37.05	-3.62	688.03	688.03
℄ WB Bent 21	376+50.05	-3.33	688.08	688.08
C5	376+60.05	-3.11	688.13	688.13
℄ WB Bent 22	376+73.05	-2.82	688.20	688.20
D5	376+83.04	-2.60	688.25	688.25
℄ WB Bent 23	376+96.04	-2.31	688.32	688.32
E5	377+06.04	-2.09	688.37	688.37
℄ WB Bent 24	377+19.08	-2.00	688.44	688.44
A6	377+29.08	-2.00	688.49	688.49
℄ WB Bent 25	377+42.08	-2.00	688.55	688.55
B6	377+52.08	-2.00	688.60	688.60
℄ WB Bent 26	377+65.08	-2.00	688.67	688.67
C6	377+75.08	-2.00	688.72	688.72
℄ WB Bent 27	377+88.08	-2.00	688.79	688.79
D6	377+98.08	-2.00	688.84	688.84
℄ WB Bent 28	378+11.08	-2.00	688.90	688.90
E6	378+21.08	-2.00	688.96	688.96
℄ WB Bent 29	378+34.08	-2.00	689.02	689.02
A7	378+44.08	-2.00	689.07	689.07
℄ WB Bent 30	378+57.08	-2.00	689.14	689.14
B7	378+67.08	-2.00	689.19	689.19
℄ WB Bent 31	378+80.08	-2.00	689.26	689.26
C7	378+90.08	-2.00	689.31	689.31
℄ WB Bent 32	379+03.08	-2.00	689.37	689.37
D7	379+13.08	-2.00	689.42	689.42
℄ WB Bent 33	379+26.08	-2.00	689.49	689.49
E7	379+36.08	-2.00	689.54	689.54
℄ WB Bent 34	379+49.08	-2.00	689.61	689.61
A8	379+59.08	-2.00	689.66	689.66
℄ WB Bent 35	379+72.08	-2.00	689.73	689.73
B8	379+82.08	-2.00	689.78	689.78
℄ WB Bent 36	379+95.08	-2.00	689.84	689.84
C8	380+05.08	-2.00	689.89	689.89
℄ WB Bent 37	380+18.08	-2.00	689.96	689.96
E. End of Deck	380+18.58	-2.00	689.96	689.96

SOUTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	371+89.69	-11.42	694.28	694.28
℄ WB Bent 1	371+90.19	-11.42	694.27	694.27
A1	372+00.19	-11.42	694.10	694.10
℄ WB Bent 2	372+13.19	-11.42	693.87	693.87
B1	372+23.19	-11.42	693.67	693.67
℄ WB Bent 3	372+36.19	-11.42	693.41	693.41
C1	372+46.19	-11.42	693.21	693.21
℄ WB Bent 4	372+59.19	-11.42	692.93	692.93
A2	372+69.13	-11.21	692.72	692.72
℄ WB Bent 5	372+82.13	-10.92	692.44	692.44
B2	372+92.13	-10.70	692.23	692.23
℄ WB Bent 6	373+05.12	-10.41	691.95	691.95
C2	373+15.12	-10.19	691.74	691.74
℄ WB Bent 7	373+28.12	-9.90	691.46	691.46
D2	373+38.11	-9.68	691.25	691.25
℄ WB Bent 8	373+51.11	-9.39	690.99	690.99
E2	373+61.11	-9.17	690.79	690.79
℄ WB Bent 9	373+74.11	-8.88	690.54	690.54
A3	373+84.10	-8.66	690.36	690.36
℄ WB Bent 10	373+97.10	-8.37	690.14	690.14
B3	374+07.10	-8.15	689.97	689.97
℄ WB Bent 11	374+20.09	-7.86	689.78	689.78
C3	374+30.09	-7.64	689.63	689.63
℄ WB Bent 12	374+43.09	-7.35	689.46	689.46
D3	374+53.09	-7.13	689.34	689.34
℄ WB Bent 13	374+66.08	-6.84	689.19	689.19
E3	374+76.08	-6.61	689.08	689.08
℄ WB Bent 14	374+89.08	-6.33	688.96	688.96
A4	374+99.08	-6.10	688.87	688.87
℄ WB Bent 15	375+12.07	-5.81	688.77	688.77
B4	375+22.07	-5.59	688.71	688.71
℄ WB Bent 16	375+35.07	-5.30	688.63	688.63
C4	375+45.06	-5.08	688.58	688.58
℄ WB Bent 17	375+58.06	-4.79	688.53	688.53
D4	375+68.06	-4.57	688.51	688.51
℄ WB Bent 18	375+81.06	-4.28	688.48	688.48
E4	375+91.05	-4.06	688.47	688.47
℄ WB Bent 19	376+04.05	-3.77	688.47	688.47
A5	376+14.05	-3.55	688.48	688.48
℄ WB Bent 20	376+27.04	-3.26	688.50	688.50
B5	376+37.04	-3.04	688.53	688.53
℄ WB Bent 21	376+50.04	-2.75	688.58	688.58
C5	376+60.04	-2.53	688.63	688.63
℄ WB Bent 22	376+73.03	-2.24	688.70	688.70
D5	376+83.03	-2.02	688.75	688.75
℄ WB Bent 23	376+96.03	-1.73	688.82	688.82
E5	377+06.02	-1.50	688.87	688.87
℄ WB Bent 24	377+19.08	-1.42	688.94	688.94
A6	377+29.08	-1.42	688.99	688.99
℄ WB Bent 25	377+42.08	-1.42	689.05	689.05
B6	377+52.08	-1.42	689.10	689.10
℄ WB Bent 26	377+65.08	-1.42	689.17	689.17
C6	377+75.08	-1.42	689.22	689.22
℄ WB Bent 27	377+88.08	-1.42	689.29	689.29
D6	377+98.08	-1.42	689.34	689.34
℄ WB Bent 28	378+11.08	-1.42	689.40	689.40
E6	378+21.08	-1.42	689.46	689.46
℄ WB Bent 29	378+34.08	-1.42	689.52	689.52
A7	378+44.08	-1.42	689.57	689.57
℄ WB Bent 30	378+57.08	-1.42	689.64	689.64
B7	378+67.08	-1.42	689.69	689.69
℄ WB Bent 31	378+80.08	-1.42	689.76	689.76
C7	378+90.08	-1.42	689.81	689.81
℄ WB Bent 32	379+03.08	-1.42	689.87	689.87
D7	379+13.08	-1.42	689.92	689.92
℄ WB Bent 33	379+26.08	-1.42	689.99	689.99
E7	379+36.08	-1.42	690.04	690.04
℄ WB Bent 34	379+49.08	-1.42	690.11	690.11
A8	379+59.08	-1.42	690.16	690.16
℄ WB Bent 35	379+72.08	-1.42	690.23	690.23
B8	379+82.08	-1.42	690.28	690.28
℄ WB Bent 36	379+95.08	-1.42	690.34	690.34
C8	380+05.08	-1.42	690.39	690.39
℄ WB Bent 37	380+18.08	-1.42	690.46	690.46
E. End of Deck	380+18.58	-1.42	690.46	690.46

T:\5106-USES\Structure\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-008-EL.dgn

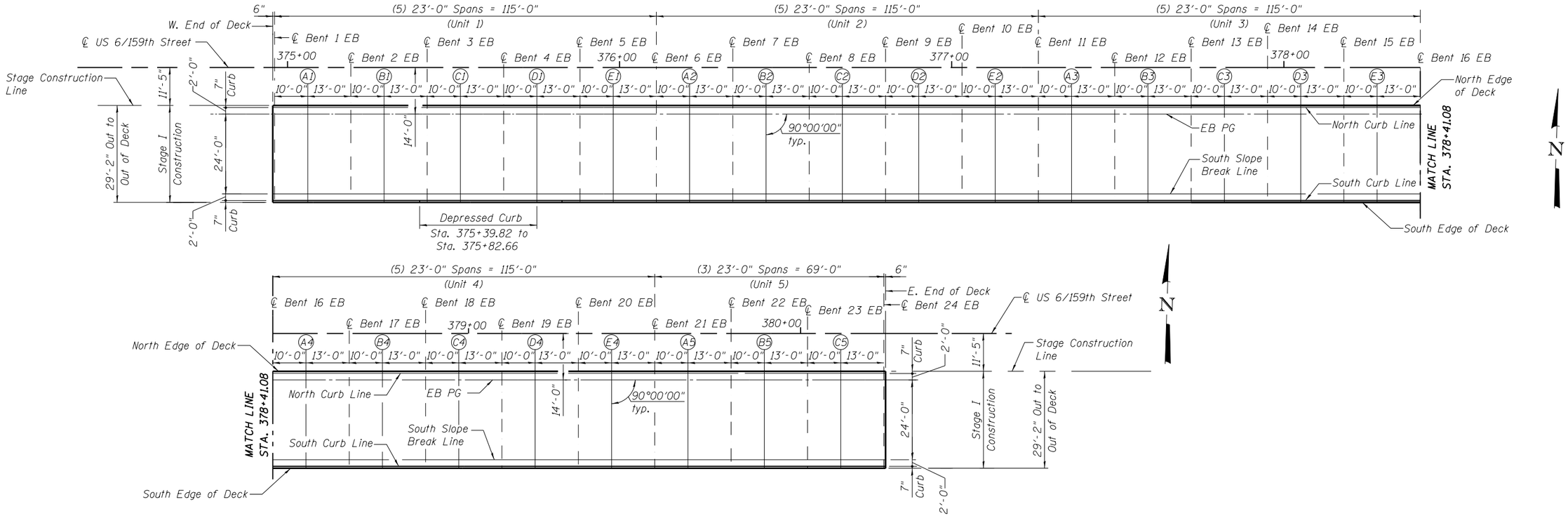
LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - RH	REVISED	
FILE NAME = 016D010-60L72-008-EL.dgn	CHECKED - LJB	REVISED	
PLOT SCALE =	DRAWN - EF	REVISED	
PLOT DATE =	CHECKED - RH	REVISED	

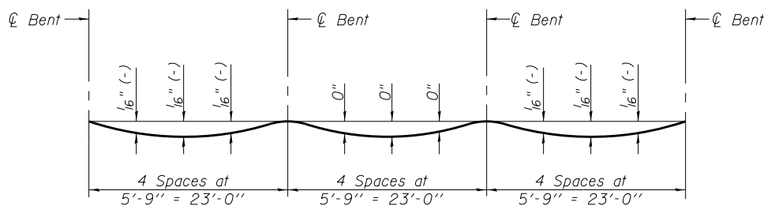
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS 2 WB
STRUCTURE NO. 016-D010
SHEET NO. 8 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	386
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



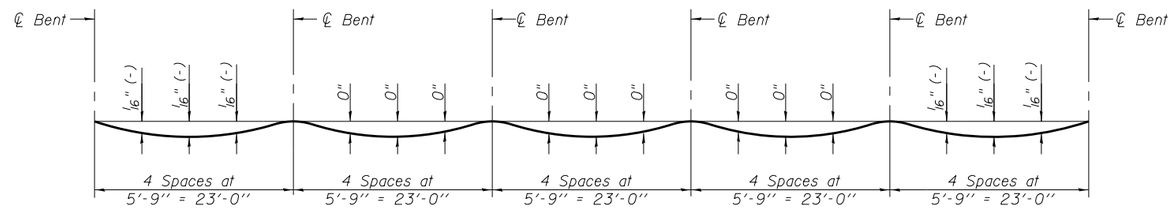
PLAN DECK UNITS - DRY LAND BRIDGE 1 EASTBOUND



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 3-Span units - EB Unit 5).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 10 and 11 of 47.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 5-Span units - EB Unit 1 thru Unit 4).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 10 and 11 of 47.

T:\5106-USGS\Struct\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-009-EL.dgn

LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - RH	REVISED
	FILE NAME = 016D010-60L72-009-EL.dgn	CHECKED - LJB	REVISED
	PLOT SCALE =	DRAWN - EF	REVISED
	PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION PLAN EB
STRUCTURE NO. 016-D010
SHEET NO. 9 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	387
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	11.42	688.90	688.90
℄ EB Bent 1	374+96.08	11.42	688.90	688.90
A1	375+06.08	11.42	688.82	688.82
℄ EB Bent 2	375+19.08	11.42	688.73	688.73
B1	375+29.08	11.42	688.67	688.67
℄ EB Bent 3	375+42.08	11.42	688.60	688.60
C1	375+52.08	11.42	688.56	688.56
℄ EB Bent 4	375+65.08	11.42	688.51	688.51
D1	375+75.08	11.42	688.49	688.49
℄ EB Bent 5	375+88.08	11.42	688.47	688.47
E1	375+98.08	11.42	688.47	688.47
℄ EB Bent 6	376+11.08	11.42	688.48	688.48
A2	376+21.08	11.42	688.49	688.49
℄ EB Bent 7	376+34.08	11.42	688.52	688.52
B2	376+44.08	11.42	688.56	688.56
℄ EB Bent 8	376+57.08	11.42	688.61	688.61
C2	376+67.08	11.42	688.67	688.67
℄ EB Bent 9	376+80.08	11.42	688.74	688.74
D2	376+90.08	11.42	688.79	688.79
℄ EB Bent 10	377+03.08	11.42	688.85	688.85
E2	377+13.08	11.42	688.90	688.90
℄ EB Bent 11	377+26.08	11.42	688.97	688.97
A3	377+36.08	11.42	689.02	689.02
℄ EB Bent 12	377+49.08	11.42	689.09	689.09
B3	377+59.08	11.42	689.14	689.14
℄ EB Bent 13	377+72.08	11.42	689.21	689.21
C3	377+82.08	11.42	689.26	689.26
℄ EB Bent 14	377+95.08	11.42	689.32	689.32
D3	378+05.08	11.42	689.37	689.37
℄ EB Bent 15	378+18.08	11.42	689.44	689.44
E3	378+28.08	11.42	689.49	689.49
℄ EB Bent 16	378+41.08	11.42	689.56	689.56
A4	378+51.08	11.42	689.61	689.61
℄ EB Bent 17	378+64.08	11.42	689.68	689.68
B4	378+74.08	11.42	689.73	689.73
℄ EB Bent 18	378+87.08	11.42	689.79	689.79
C4	378+97.08	11.42	689.84	689.84
℄ EB Bent 19	379+10.08	11.42	689.91	689.91
D4	379+20.08	11.42	689.96	689.96
℄ EB Bent 20	379+33.08	11.42	690.03	690.03
E4	379+43.08	11.42	690.08	690.08
℄ EB Bent 21	379+56.08	11.42	690.14	690.14
A5	379+66.08	11.42	690.20	690.20
℄ EB Bent 22	379+79.08	11.42	690.26	690.26
B5	379+89.08	11.42	690.31	690.31
℄ EB Bent 23	380+02.08	11.42	690.38	690.38
C5	380+12.08	11.42	690.43	690.43
℄ EB Bent 24	380+25.08	11.42	690.50	690.50
E. End of Deck	380+25.58	11.42	690.51	690.51

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	12.00	688.40	688.40
℄ EB Bent 1	374+96.08	12.00	688.40	688.40
A1	375+06.08	12.00	688.32	688.32
℄ EB Bent 2	375+19.08	12.00	688.23	688.23
B1	375+29.08	12.00	688.17	688.17
℄ EB Bent 3	375+42.08	12.00	688.10	688.10
C1	375+52.08	12.00	688.06	688.06
℄ EB Bent 4	375+65.08	12.00	688.01	688.01
D1	375+75.08	12.00	687.99	687.99
℄ EB Bent 5	375+88.08	12.00	687.97	687.97
E1	375+98.08	12.00	687.97	687.97
℄ EB Bent 6	376+11.08	12.00	687.98	687.98
A2	376+21.08	12.00	687.99	687.99
℄ EB Bent 7	376+34.08	12.00	688.02	688.02
B2	376+44.08	12.00	688.06	688.06
℄ EB Bent 8	376+57.08	12.00	688.11	688.11
C2	376+67.08	12.00	688.17	688.17
℄ EB Bent 9	376+80.08	12.00	688.24	688.24
D2	376+90.08	12.00	688.29	688.29
℄ EB Bent 10	377+03.08	12.00	688.35	688.35
E2	377+13.08	12.00	688.40	688.40
℄ EB Bent 11	377+26.08	12.00	688.47	688.47
A3	377+36.08	12.00	688.52	688.52
℄ EB Bent 12	377+49.08	12.00	688.59	688.59
B3	377+59.08	12.00	688.64	688.64
℄ EB Bent 13	377+72.08	12.00	688.71	688.71
C3	377+82.08	12.00	688.76	688.76
℄ EB Bent 14	377+95.08	12.00	688.82	688.82
D3	378+05.08	12.00	688.87	688.87
℄ EB Bent 15	378+18.08	12.00	688.94	688.94
E3	378+28.08	12.00	688.99	688.99
℄ EB Bent 16	378+41.08	12.00	689.06	689.06
A4	378+51.08	12.00	689.11	689.11
℄ EB Bent 17	378+64.08	12.00	689.18	689.18
B4	378+74.08	12.00	689.23	689.23
℄ EB Bent 18	378+87.08	12.00	689.29	689.29
C4	378+97.08	12.00	689.34	689.34
℄ EB Bent 19	379+10.08	12.00	689.41	689.41
D4	379+20.08	12.00	689.46	689.46
℄ EB Bent 20	379+33.08	12.00	689.53	689.53
E4	379+43.08	12.00	689.58	689.58
℄ EB Bent 21	379+56.08	12.00	689.64	689.64
A5	379+66.08	12.00	689.70	689.70
℄ EB Bent 22	379+79.08	12.00	689.76	689.76
B5	379+89.08	12.00	689.81	689.81
℄ EB Bent 23	380+02.08	12.00	689.88	689.88
C5	380+12.08	12.00	689.93	689.93
℄ EB Bent 24	380+25.08	12.00	690.00	690.00
E. End of Deck	380+25.58	12.00	690.01	690.01

EB PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	14.00	688.36	688.36
℄ EB Bent 1	374+96.08	14.00	688.36	688.36
A1	375+06.08	14.00	688.28	688.28
℄ EB Bent 2	375+19.08	14.00	688.19	688.19
B1	375+29.08	14.00	688.13	688.13
℄ EB Bent 3	375+42.08	14.00	688.06	688.06
C1	375+52.08	14.00	688.02	688.02
℄ EB Bent 4	375+65.08	14.00	687.97	687.97
D1	375+75.08	14.00	687.95	687.95
℄ EB Bent 5	375+88.08	14.00	687.93	687.93
E1	375+98.08	14.00	687.93	687.93
℄ EB Bent 6	376+11.08	14.00	687.94	687.94
A2	376+21.08	14.00	687.95	687.95
℄ EB Bent 7	376+34.08	14.00	687.98	687.98
B2	376+44.08	14.00	688.02	688.02
℄ EB Bent 8	376+57.08	14.00	688.07	688.07
C2	376+67.08	14.00	688.13	688.13
℄ EB Bent 9	376+80.08	14.00	688.20	688.20
D2	376+90.08	14.00	688.25	688.25
℄ EB Bent 10	377+03.08	14.00	688.31	688.31
E2	377+13.08	14.00	688.36	688.36
℄ EB Bent 11	377+26.08	14.00	688.43	688.43
A3	377+36.08	14.00	688.48	688.48
℄ EB Bent 12	377+49.08	14.00	688.55	688.55
B3	377+59.08	14.00	688.60	688.60
℄ EB Bent 13	377+72.08	14.00	688.67	688.67
C3	377+82.08	14.00	688.72	688.72
℄ EB Bent 14	377+95.08	14.00	688.78	688.78
D3	378+05.08	14.00	688.83	688.83
℄ EB Bent 15	378+18.08	14.00	688.90	688.90
E3	378+28.08	14.00	688.95	688.95
℄ EB Bent 16	378+41.08	14.00	689.02	689.02
A4	378+51.08	14.00	689.07	689.07
℄ EB Bent 17	378+64.08	14.00	689.14	689.14
B4	378+74.08	14.00	689.19	689.19
℄ EB Bent 18	378+87.08	14.00	689.25	689.25
C4	378+97.08	14.00	689.30	689.30
℄ EB Bent 19	379+10.08	14.00	689.37	689.37
D4	379+20.08	14.00	689.42	689.42
℄ EB Bent 20	379+33.08	14.00	689.49	689.49
E4	379+43.08	14.00	689.54	689.54
℄ EB Bent 21	379+56.08	14.00	689.60	689.60
A5	379+66.08	14.00	689.66	689.66
℄ EB Bent 22	379+79.08	14.00	689.72	689.72
B5	379+89.08	14.00	689.77	689.77
℄ EB Bent 23	380+02.08	14.00	689.84	689.84
C5	380+12.08	14.00	689.89	689.89
℄ EB Bent 24	380+25.08	14.00	689.96	689.96
E. End of Deck	380+25.58	14.00	689.97	689.97

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =		DESIGNED - RH	REVISED
FILE NAME = 016D010-60L72-010-EL.dgn		CHECKED - LJB	REVISED
PLOT SCALE =		DRAWN - EF	REVISED
PLOT DATE =		CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS 1 EB
STRUCTURE NO. 016-D010
SHEET NO. 10 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	388
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

SOUTH SLOPE BREAK LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	38.00	687.88	687.88
℄ EB Bent 1	374+96.08	38.00	687.88	687.88
A1	375+06.08	38.00	687.80	687.80
℄ EB Bent 2	375+19.08	38.00	687.71	687.71
B1	375+29.08	38.00	687.65	687.65
℄ EB Bent 3	375+42.08	38.00	687.58	687.58
C1	375+52.08	38.00	687.54	687.54
℄ EB Bent 4	375+65.08	38.00	687.49	687.49
D1	375+75.08	38.00	687.47	687.47
℄ EB Bent 5	375+88.08	38.00	687.45	687.45
E1	375+98.08	38.00	687.45	687.45
℄ EB Bent 6	376+11.08	38.00	687.46	687.46
A2	376+21.08	38.00	687.47	687.47
℄ EB Bent 7	376+34.08	38.00	687.50	687.50
B2	376+44.08	38.00	687.54	687.54
℄ EB Bent 8	376+57.08	38.00	687.59	687.59
C2	376+67.08	38.00	687.65	687.65
℄ EB Bent 9	376+80.08	38.00	687.72	687.72
D2	376+90.08	38.00	687.77	687.77
℄ EB Bent 10	377+03.08	38.00	687.83	687.83
E2	377+13.08	38.00	687.88	687.88
℄ EB Bent 11	377+26.08	38.00	687.95	687.95
A3	377+36.08	38.00	688.00	688.00
℄ EB Bent 12	377+49.08	38.00	688.07	688.07
B3	377+59.08	38.00	688.12	688.12
℄ EB Bent 13	377+72.08	38.00	688.19	688.19
C3	377+82.08	38.00	688.24	688.24
℄ EB Bent 14	377+95.08	38.00	688.30	688.30
D3	378+05.08	38.00	688.35	688.35
℄ EB Bent 15	378+18.08	38.00	688.42	688.42
E3	378+28.08	38.00	688.47	688.47
℄ EB Bent 16	378+41.08	38.00	688.54	688.54
A4	378+51.08	38.00	688.59	688.59
℄ EB Bent 17	378+64.08	38.00	688.66	688.66
B4	378+74.08	38.00	688.71	688.71
℄ EB Bent 18	378+87.08	38.00	688.77	688.77
C4	378+97.08	38.00	688.82	688.82
℄ EB Bent 19	379+10.08	38.00	688.89	688.89
D4	379+20.08	38.00	688.94	688.94
℄ EB Bent 20	379+33.08	38.00	689.01	689.01
E4	379+43.08	38.00	689.06	689.06
℄ EB Bent 21	379+56.08	38.00	689.12	689.12
A5	379+66.08	38.00	689.18	689.18
℄ EB Bent 22	379+79.08	38.00	689.24	689.24
B5	379+89.08	38.00	689.29	689.29
℄ EB Bent 23	380+02.08	38.00	689.36	689.36
C5	380+12.08	38.00	689.41	689.41
℄ EB Bent 24	380+25.08	38.00	689.48	689.48
E. End of Deck	380+25.58	38.00	689.49	689.49

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	40.00	687.76	687.76
℄ EB Bent 1	374+96.08	40.00	687.76	687.76
A1	375+06.08	40.00	687.68	687.68
℄ EB Bent 2	375+19.08	40.00	687.59	687.59
B1	375+29.08	40.00	687.53	687.53
℄ EB Bent 3	375+42.08	40.00	687.46	687.46
C1	375+52.08	40.00	687.42	687.42
℄ EB Bent 4	375+65.08	40.00	687.37	687.37
D1	375+75.08	40.00	687.35	687.35
℄ EB Bent 5	375+88.08	40.00	687.33	687.33
E1	375+98.08	40.00	687.33	687.33
℄ EB Bent 6	376+11.08	40.00	687.34	687.34
A2	376+21.08	40.00	687.35	687.35
℄ EB Bent 7	376+34.08	40.00	687.38	687.38
B2	376+44.08	40.00	687.42	687.42
℄ EB Bent 8	376+57.08	40.00	687.47	687.47
C2	376+67.08	40.00	687.53	687.53
℄ EB Bent 9	376+80.08	40.00	687.60	687.60
D2	376+90.08	40.00	687.65	687.65
℄ EB Bent 10	377+03.08	40.00	687.71	687.71
E2	377+13.08	40.00	687.76	687.76
℄ EB Bent 11	377+26.08	40.00	687.83	687.83
A3	377+36.08	40.00	687.88	687.88
℄ EB Bent 12	377+49.08	40.00	687.95	687.95
B3	377+59.08	40.00	688.00	688.00
℄ EB Bent 13	377+72.08	40.00	688.07	688.07
C3	377+82.08	40.00	688.12	688.12
℄ EB Bent 14	377+95.08	40.00	688.18	688.18
D3	378+05.08	40.00	688.23	688.23
℄ EB Bent 15	378+18.08	40.00	688.30	688.30
E3	378+28.08	40.00	688.35	688.35
℄ EB Bent 16	378+41.08	40.00	688.42	688.42
A4	378+51.08	40.00	688.47	688.47
℄ EB Bent 17	378+64.08	40.00	688.54	688.54
B4	378+74.08	40.00	688.59	688.59
℄ EB Bent 18	378+87.08	40.00	688.65	688.65
C4	378+97.08	40.00	688.70	688.70
℄ EB Bent 19	379+10.08	40.00	688.77	688.77
D4	379+20.08	40.00	688.82	688.82
℄ EB Bent 20	379+33.08	40.00	688.89	688.89
E4	379+43.08	40.00	688.94	688.94
℄ EB Bent 21	379+56.08	40.00	689.00	689.00
A5	379+66.08	40.00	689.06	689.06
℄ EB Bent 22	379+79.08	40.00	689.12	689.12
B5	379+89.08	40.00	689.17	689.17
℄ EB Bent 23	380+02.08	40.00	689.24	689.24
C5	380+12.08	40.00	689.29	689.29
℄ EB Bent 24	380+25.08	40.00	689.36	689.36
E. End of Deck	380+25.58	40.00	689.37	689.37

SOUTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	374+95.58	40.58	688.26	688.26
℄ EB Bent 1	374+96.08	40.58	688.26	688.26
A1	375+06.08	40.58	688.18	688.18
℄ EB Bent 2	375+19.08	40.58	688.09	688.09
B1	375+29.08	40.58	688.03	688.03
℄ EB Bent 3	375+42.08	40.58	687.58	687.58
C1	375+52.08	40.58	687.54	687.54
℄ EB Bent 4	375+65.08	40.58	687.50	687.50
D1	375+75.08	40.58	687.48	687.48
℄ EB Bent 5	375+88.08	40.58	687.83	687.83
E1	375+98.08	40.58	687.83	687.83
℄ EB Bent 6	376+11.08	40.58	687.84	687.84
A2	376+21.08	40.58	687.85	687.85
℄ EB Bent 7	376+34.08	40.58	687.88	687.88
B2	376+44.08	40.58	687.92	687.92
℄ EB Bent 8	376+57.08	40.58	687.97	687.97
C2	376+67.08	40.58	688.03	688.03
℄ EB Bent 9	376+80.08	40.58	688.10	688.10
D2	376+90.08	40.58	688.15	688.15
℄ EB Bent 10	377+03.08	40.58	688.21	688.21
E2	377+13.08	40.58	688.26	688.26
℄ EB Bent 11	377+26.08	40.58	688.33	688.33
A3	377+36.08	40.58	688.38	688.38
℄ EB Bent 12	377+49.08	40.58	688.45	688.45
B3	377+59.08	40.58	688.50	688.50
℄ EB Bent 13	377+72.08	40.58	688.57	688.57
C3	377+82.08	40.58	688.62	688.62
℄ EB Bent 14	377+95.08	40.58	688.68	688.68
D3	378+05.08	40.58	688.73	688.73
℄ EB Bent 15	378+18.08	40.58	688.80	688.80
E3	378+28.08	40.58	688.85	688.85
℄ EB Bent 16	378+41.08	40.58	688.92	688.92
A4	378+51.08	40.58	688.97	688.97
℄ EB Bent 17	378+64.08	40.58	689.04	689.04
B4	378+74.08	40.58	689.09	689.09
℄ EB Bent 18	378+87.08	40.58	689.15	689.15
C4	378+97.08	40.58	689.20	689.20
℄ EB Bent 19	379+10.08	40.58	689.27	689.27
D4	379+20.08	40.58	689.32	689.32
℄ EB Bent 20	379+33.08	40.58	689.39	689.39
E4	379+43.08	40.58	689.44	689.44
℄ EB Bent 21	379+56.08	40.58	689.50	689.50
A5	379+66.08	40.58	689.56	689.56
℄ EB Bent 22	379+79.08	40.58	689.62	689.62
B5	379+89.08	40.58	689.67	689.67
℄ EB Bent 23	380+02.08	40.58	689.74	689.74
C5	380+12.08	40.58	689.79	689.79
℄ EB Bent 24	380+25.08	40.58	689.86	689.86
E. End of Deck	380+25.58	40.58	689.87	689.87

T:\5106-USGS\Structure\dgn\Local Bridges\Local Bridge 1 - 016-D010\016D010-60L72-011-EL.dgn

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - RH	REVISED	
FILE NAME = 016D010-60L72-011-EL.dgn	CHECKED - LJB	REVISED	
PLOT SCALE =	DRAWN - EF	REVISED	
PLOT DATE =	CHECKED - RH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS 2 EB
STRUCTURE NO. 016-D010
SHEET NO. 11 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	389
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SLAB

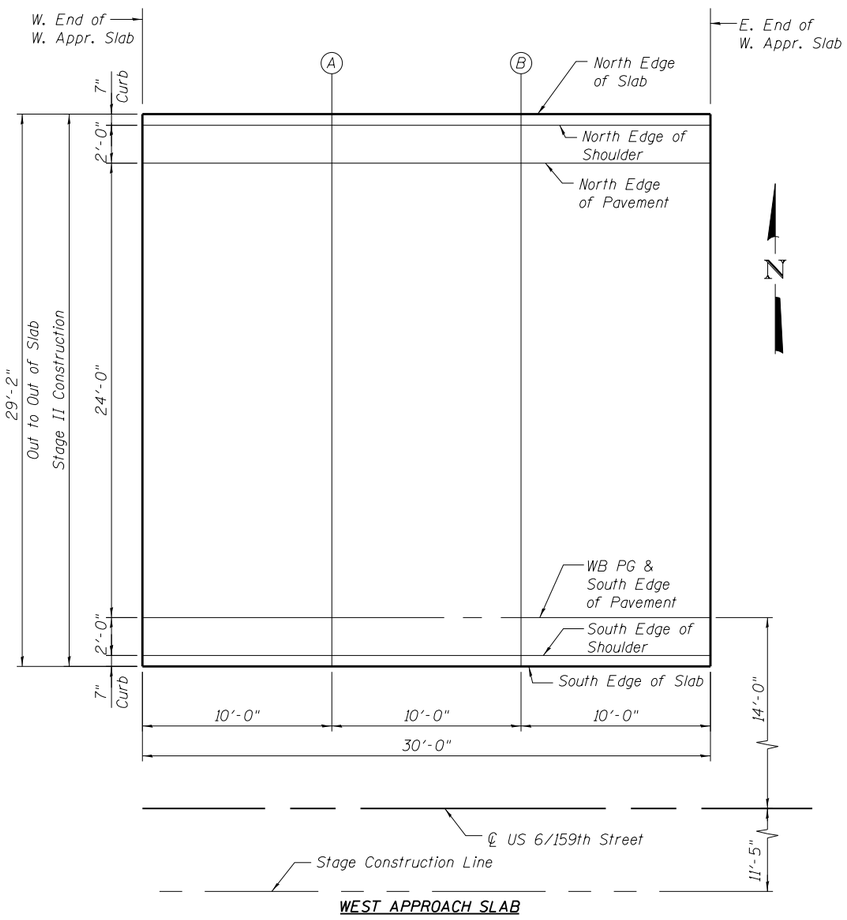
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-40.58	694.10
A	371+69.69	-40.58	693.96
B	371+79.69	-40.58	693.80
E. End of W. Appr. Slab	371+89.69	-40.58	693.64
W. End of E. Appr. Slab	380+18.58	-30.58	689.82
C	380+28.58	-30.58	689.88
D	380+38.58	-30.58	689.93
E. End of E. Appr. Slab	380+48.58	-30.58	689.97

NORTH EDGE OF SHOULDER

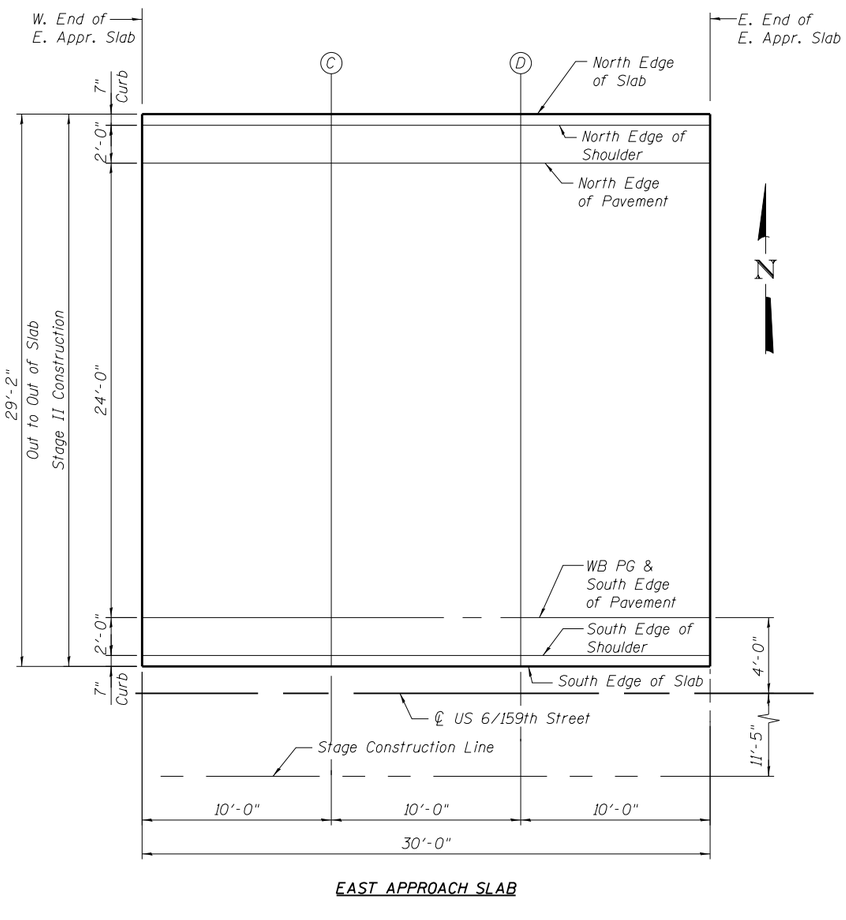
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-40.00	693.60
A	371+69.69	-40.00	693.46
B	371+79.69	-40.00	693.30
E. End of W. Appr. Slab	371+89.69	-40.00	693.14
W. End of E. Appr. Slab	380+18.58	-30.00	689.32
C	380+28.58	-30.00	689.38
D	380+38.58	-30.00	689.43
E. End of E. Appr. Slab	380+48.58	-30.00	689.47

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-38.00	693.72
A	371+69.69	-38.00	693.58
B	371+79.69	-38.00	693.42
E. End of W. Appr. Slab	371+89.69	-38.00	693.26
W. End of E. Appr. Slab	380+18.58	-28.00	689.44
C	380+28.58	-28.00	689.50
D	380+38.58	-28.00	689.55
E. End of E. Appr. Slab	380+48.58	-28.00	689.59



WEST APPROACH SLAB



EAST APPROACH SLAB

WB PG & SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-14.00	694.20
A	371+69.69	-14.00	694.06
B	371+79.69	-14.00	693.90
E. End of W. Appr. Slab	371+89.69	-14.00	693.74
W. End of E. Appr. Slab	380+18.58	-4.00	689.92
C	380+28.58	-4.00	689.98
D	380+38.58	-4.00	690.03
E. End of E. Appr. Slab	380+48.58	-4.00	690.07

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-12.00	694.24
A	371+69.69	-12.00	694.10
B	371+79.69	-12.00	693.94
E. End of W. Appr. Slab	371+89.69	-12.00	693.78
W. End of E. Appr. Slab	380+18.58	-2.00	689.96
C	380+28.58	-2.00	690.02
D	380+38.58	-2.00	690.07
E. End of E. Appr. Slab	380+48.58	-2.00	690.11

SOUTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	371+59.69	-11.42	694.74
A	371+69.69	-11.42	694.60
B	371+79.69	-11.42	694.44
E. End of W. Appr. Slab	371+89.69	-11.42	694.28
W. End of E. Appr. Slab	380+18.58	-1.42	690.46
C	380+28.58	-1.42	690.52
D	380+38.58	-1.42	690.57
E. End of E. Appr. Slab	380+48.58	-1.42	690.61

PLAN - DRY LAND BRIDGE 1 WESTBOUND APPROACH SLAB

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - RH	REVISED
FILE NAME = 016D010-60L72-012-SE.dgn	CHECKED - LJB	REVISED
PLOT SCALE =	DRAWN - EF	REVISED
PLOT DATE =	CHECKED - RH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS 1
STRUCTURE NO. 016-D010
SHEET NO. 12 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	390
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	11.42	689.19
A	374+75.58	11.42	689.09
B	374+85.58	11.42	688.99
E. End of W. Appr. Slab	374+95.58	11.42	688.90
W. End of E. Appr. Slab	380+25.58	11.42	690.51
C	380+35.58	11.42	690.55
D	380+45.58	11.42	690.59
E. End of E. Appr. Slab	380+55.58	11.42	690.63

NORTH EDGE OF SHOULDER

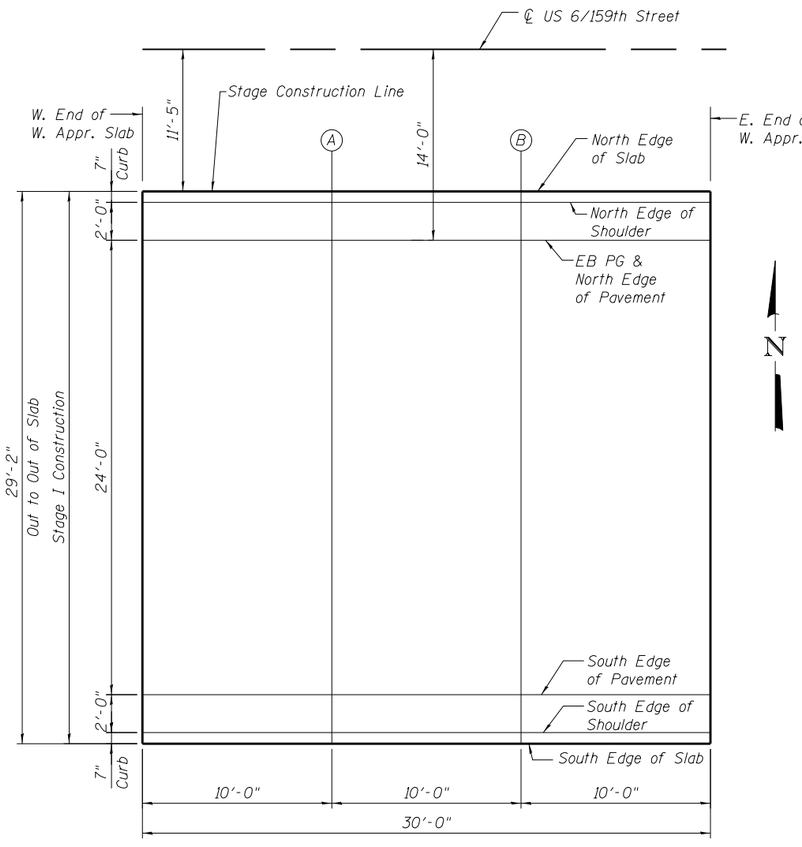
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	12.00	688.69
A	374+75.58	12.00	688.59
B	374+85.58	12.00	688.49
E. End of W. Appr. Slab	374+95.58	12.00	688.40
W. End of E. Appr. Slab	380+25.58	12.00	690.01
C	380+35.58	12.00	690.05
D	380+45.58	12.00	690.09
E. End of E. Appr. Slab	380+55.58	12.00	690.13

EB PG & NORTH EDGE OF PAVEMENT

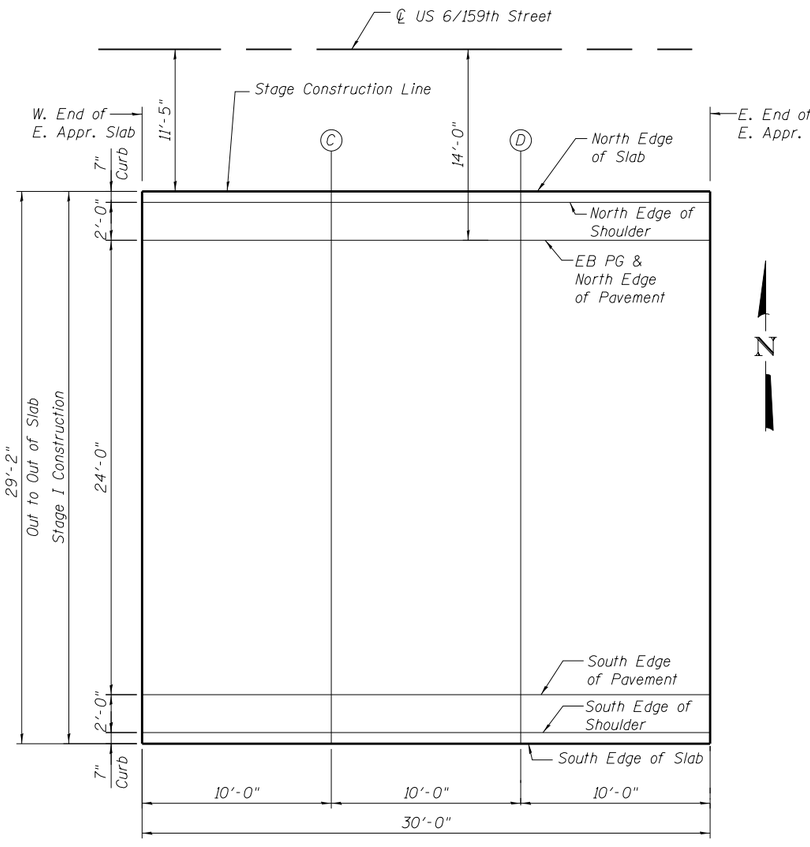
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	14.00	688.65
A	374+75.58	14.00	688.55
B	374+85.58	14.00	688.45
E. End of W. Appr. Slab	374+95.58	14.00	688.36
W. End of E. Appr. Slab	380+25.58	14.00	689.97
C	380+35.58	14.00	690.01
D	380+45.58	14.00	690.05
E. End of E. Appr. Slab	380+55.58	14.00	690.09

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	38.00	688.17
A	374+75.58	38.00	688.07
B	374+85.58	38.00	687.97
E. End of W. Appr. Slab	374+95.58	38.00	687.88
W. End of E. Appr. Slab	380+25.58	38.00	689.49
C	380+35.58	38.00	689.53
D	380+45.58	38.00	689.57
E. End of E. Appr. Slab	380+55.58	38.00	689.61



WEST APPROACH SLAB



EAST APPROACH SLAB

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	40.00	688.05
A	374+75.58	40.00	687.95
B	374+85.58	40.00	687.85
E. End of W. Appr. Slab	374+95.58	40.00	687.76
W. End of E. Appr. Slab	380+25.58	40.00	689.37
C	380+35.58	40.00	689.41
D	380+45.58	40.00	689.45
E. End of E. Appr. Slab	380+55.58	40.00	689.49

SOUTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	374+65.58	40.58	688.55
A	374+75.58	40.58	688.45
B	374+85.58	40.58	688.35
E. End of W. Appr. Slab	374+95.58	40.58	688.26
W. End of E. Appr. Slab	380+25.58	40.58	689.87
C	380+35.58	40.58	689.91
D	380+45.58	40.58	689.95
E. End of E. Appr. Slab	380+55.58	40.58	689.99

PLAN - DRY LAND BRIDGE 1 EASTBOUND APPROACH SLAB

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H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

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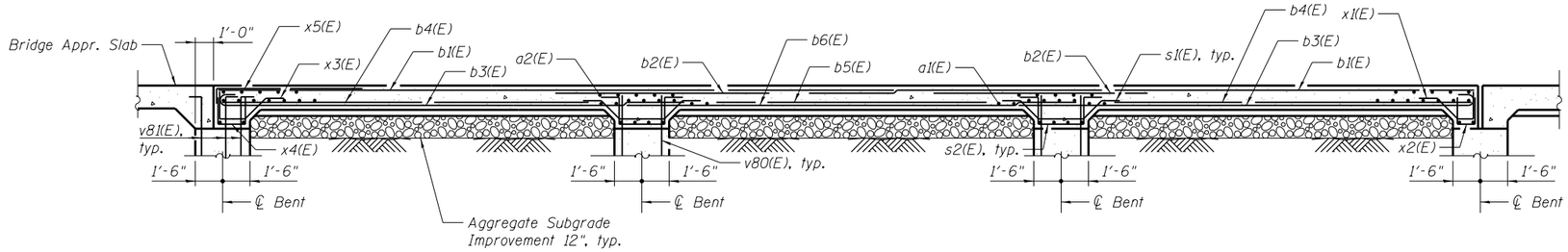
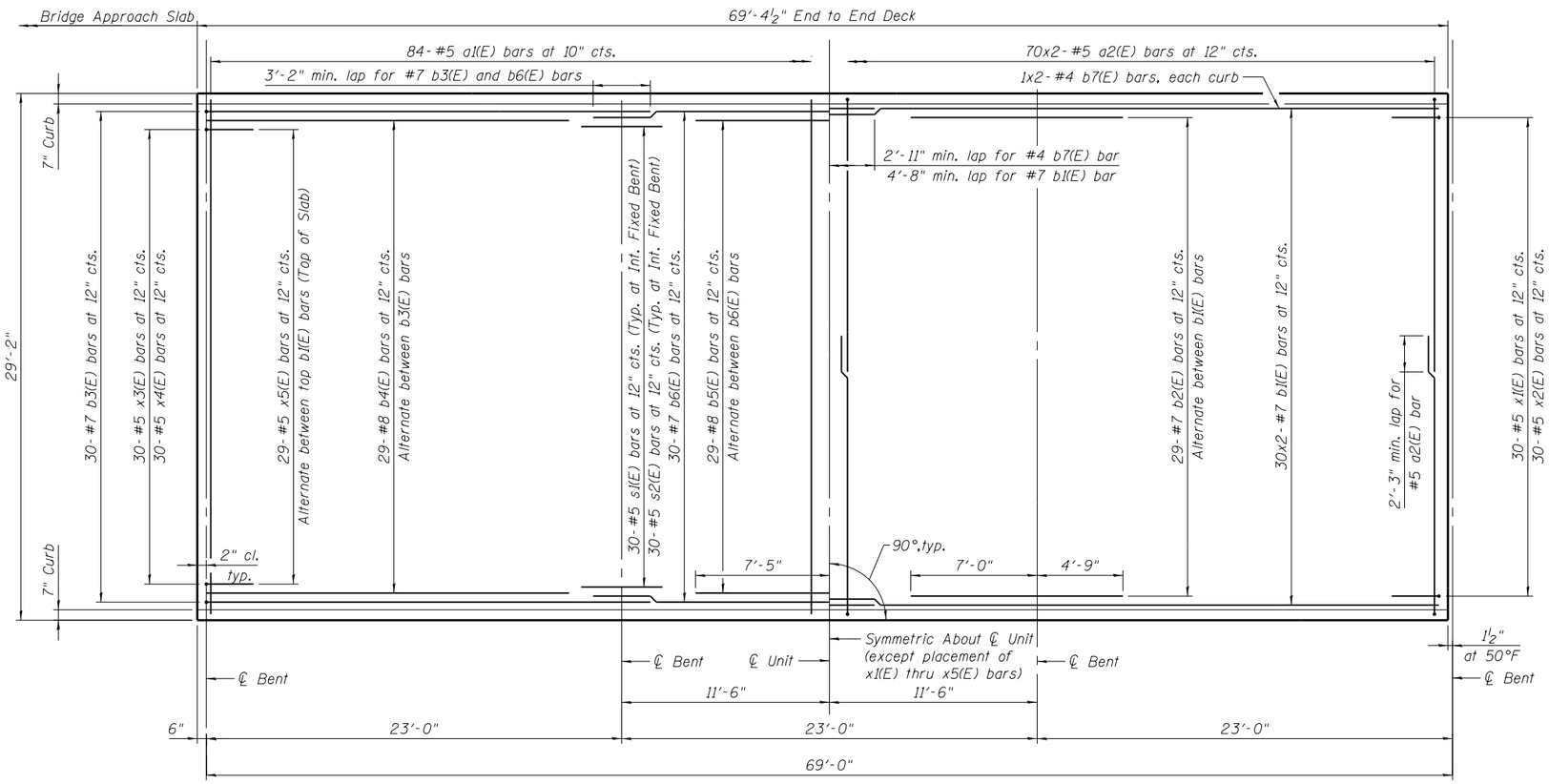
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS 2
STRUCTURE NO. 016-D010
SHEET NO. 13 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	391
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



END UNIT ELEVATION



BOTTOM **TOP**

3 SPAN END UNIT PLAN

(WB Units 1 & 8, EB Unit 5)

MINIMUM BAR LAP

(Deck)

#4 bar (Top) = 2'-11"
#5 bar (Top) = 2'-3"
#7 bar (Top) = 4'-8"
#7 bar = 3'-2"

NOTES

1. See Sheet 15 of 47 for superstructure details and Bill of Material.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For Span arrangements, work this sheet with Sheets 1 and 2.

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H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

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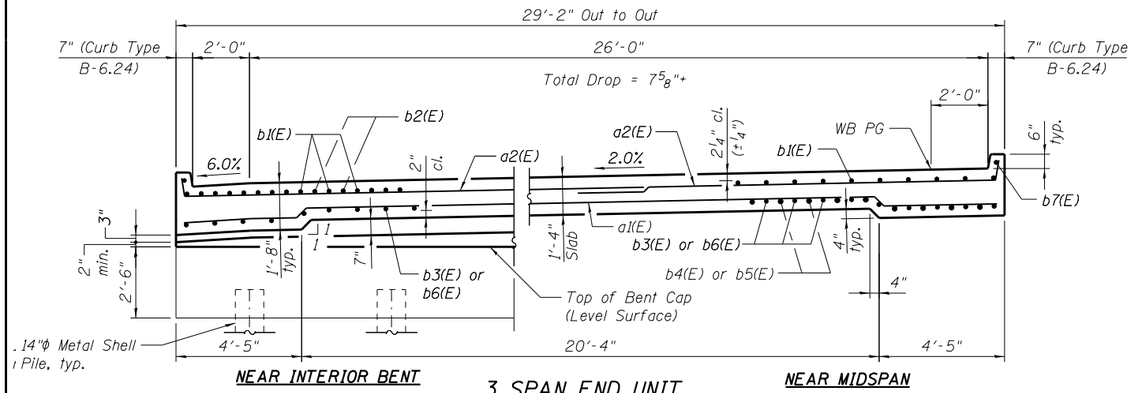
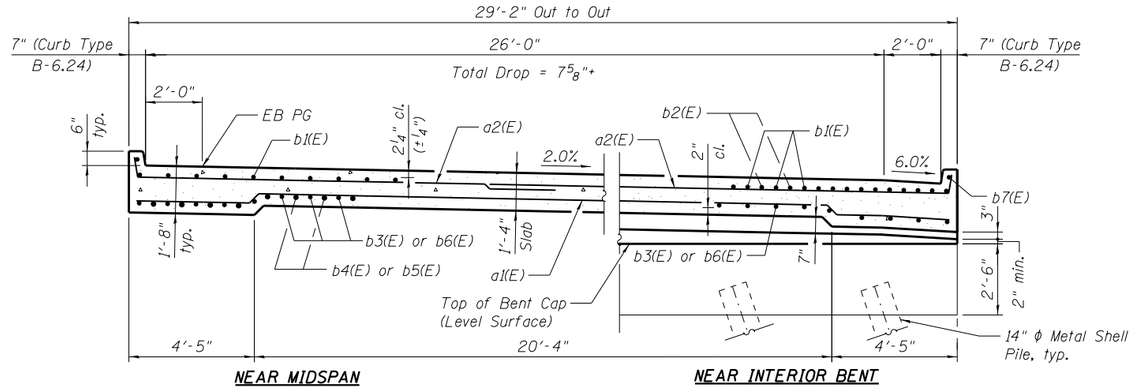
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN & CROSS SECTION 1
STRUCTURE NO. 016-D010
SHEET NO. 14 OF 47 SHEETS

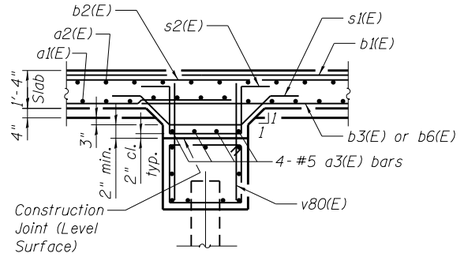
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	392
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



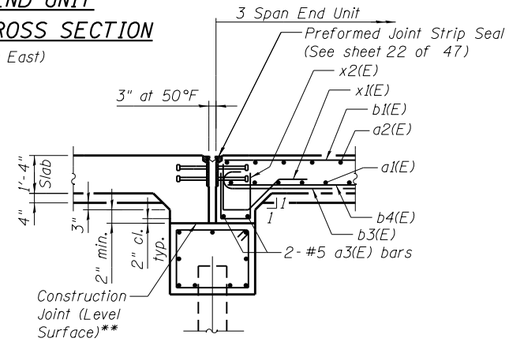
3 SPAN END UNIT
WB BRIDGE CROSS SECTION
(Looking East)



3 SPAN END UNIT
EB BRIDGE CROSS SECTION
(Looking East)

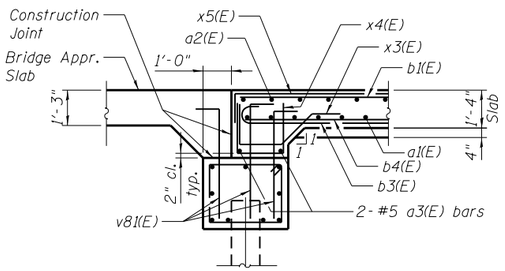


FIXED PILE BENT
CAP SECTION

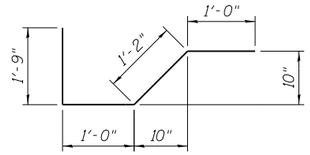


EXPANSION PILE BENT

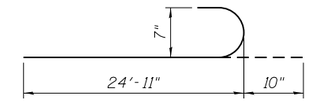
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. ⅛" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing ⅛" neoprene sheet is included with CONCRETE STRUCTURES.



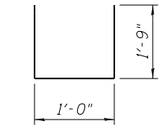
END PILE BENT
CAP SECTION



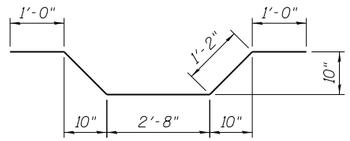
BAR x1(E)



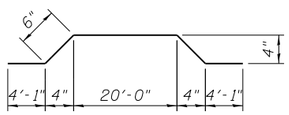
BAR b3(E)



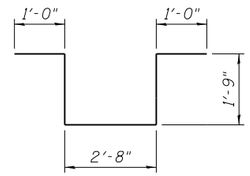
BAR x2(E)



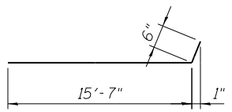
BAR s1(E)



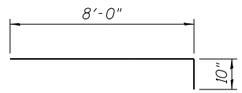
BAR a1(E)



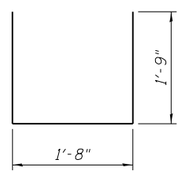
BAR s2(E)



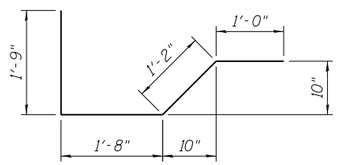
BAR a2(E)



BAR x5(E)



BAR x4(E)



BAR x3(E)

BILL OF MATERIAL
FOR 3 SPAN END UNITS

Bar	No.	Size	Length	Shape
a1(E)	252	#5	29'-2"	
a2(E)	420	#5	16'-1"	
a3(E)	36	#5	28'-10"	
b1(E)	180	#7	36'-11"	
b2(E)	174	#7	11'-9"	
b3(E)	180	#7	25'-9"	
b4(E)	174	#8	20'-1"	
b5(E)	87	#8	14'-10"	
b6(E)	90	#7	26'-2"	
b7(E)	12	#4	36'-1"	
s1(E)	180	#5	7'-0"	
s2(E)	180	#5	8'-2"	
x1(E)	90	#5	4'-11"	
x2(E)	90	#5	4'-6"	
x3(E)	90	#5	5'-7"	
x4(E)	90	#5	5'-2"	
x5(E)	87	#5	8'-10"	
Reinforcement Bars, Epoxy Coated		Pound	66,460	
Concrete Superstructure		Cu. Yd.	362.7	
Protective Coat		Sq. Yd.	699	
Bridge Deck Grooving		Sq. Yd.	603	

The above quantities include all 3 units: WB Units 1 & 8 and EB Unit 5.

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

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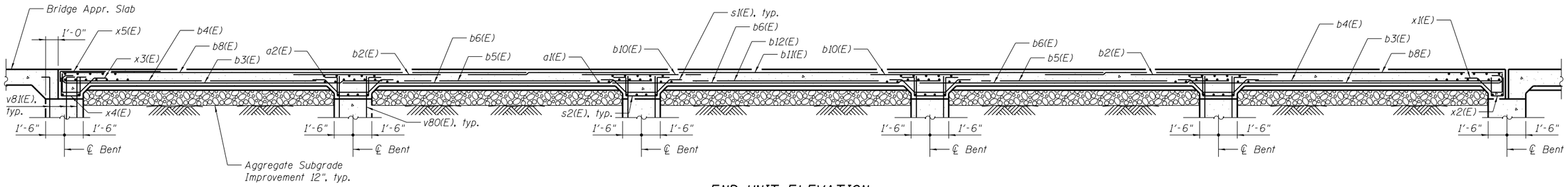
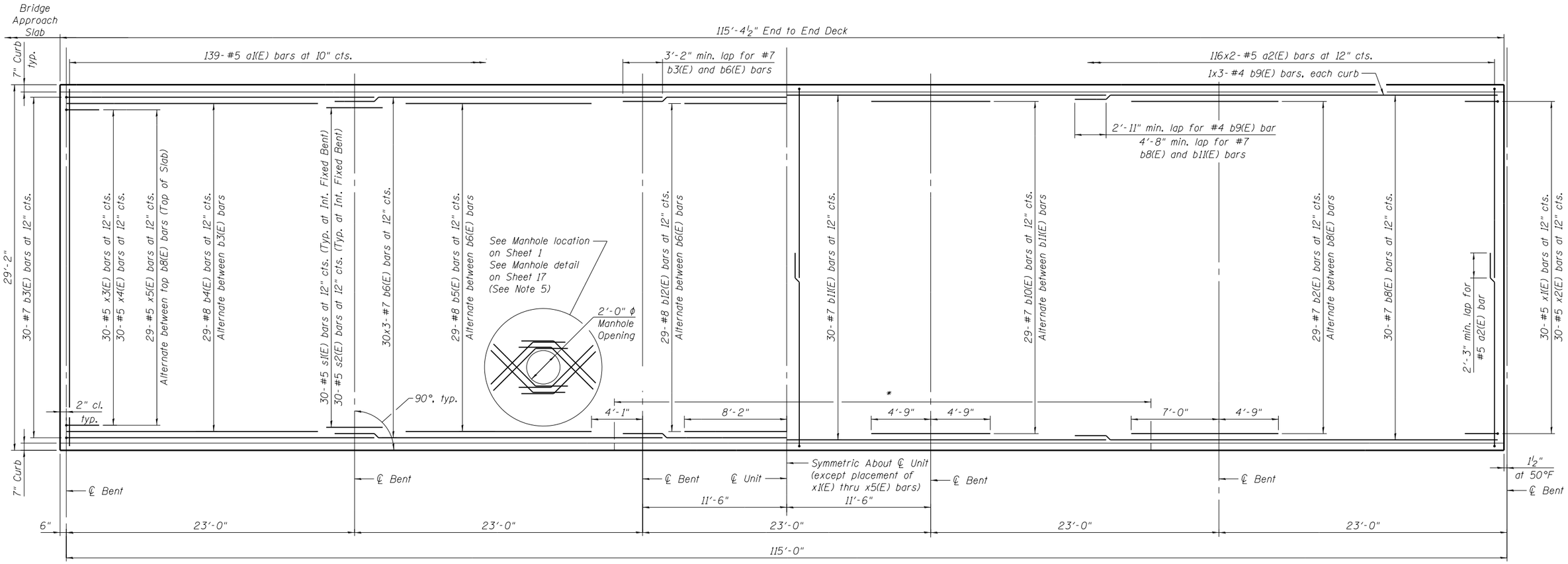
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS 1
STRUCTURE NO. 016–D010
SHEET NO. 15 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	393
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	



END UNIT ELEVATION



BOTTOM

* Depressed Curb from Sta. 375+39.82 to Sta. 375+82.66

5 SPAN END UNIT PLAN

(EB Unit 1)

TOP

MINIMUM BAR LAP

(Deck)

#4 bar (Top) = 2'-11"
#5 bar (Top) = 2'-3"
#7 bar (Top) = 4'-8"
#7 bar = 3'-2"

NOTES

1. See Sheet 17 of 47 for superstructure details and Bill of Material.
2. Bars indicated thus 20 x 3- #5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For Span arrangements, work this sheet with Sheets 1 and 2.
4. 2 scuppers are placed in EB unit 1. Scuppers not shown in plan view. For location details, see Sheets 1 and 2. For typical scupper reinforcement details, see Sheet 17.
5. 1 manhole is placed in EB unit 1. Cut a1(E), a2(E), b2(E), b5(E), b6(E), b8(E) and b11(E) bars to clear 2'-0" ϕ manhole opening.

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12 TH FLOOR
CHICAGO, ILLINOIS 60606

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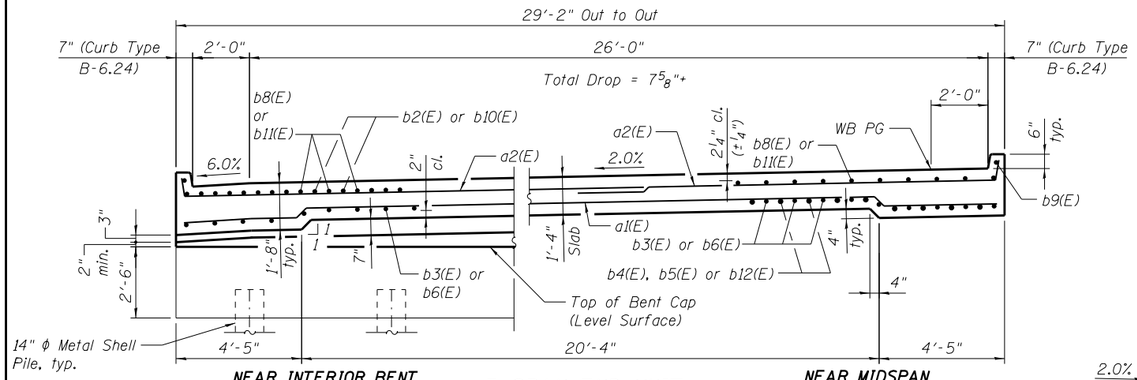
PLOT DATE =	CHECKED - RH	REVISED	

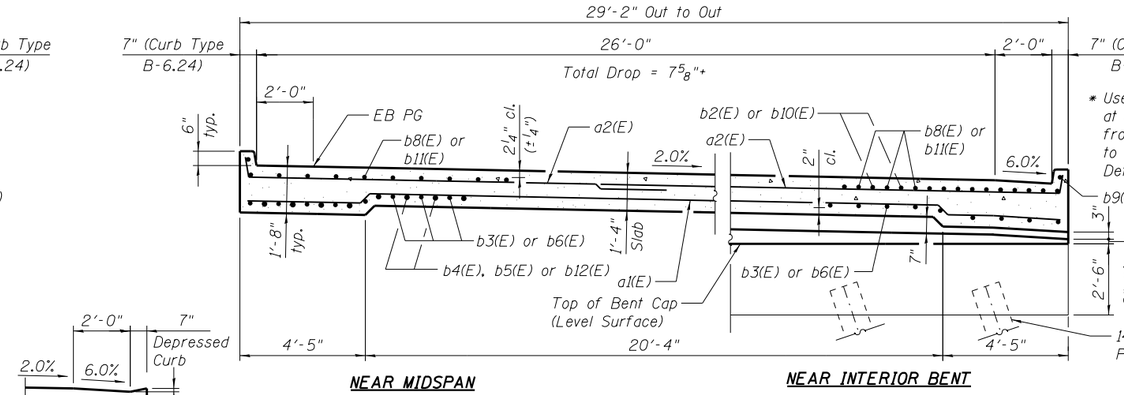
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN & CROSS SECTION 2
STRUCTURE NO. 016–D010
SHEET NO. 16 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	394
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		

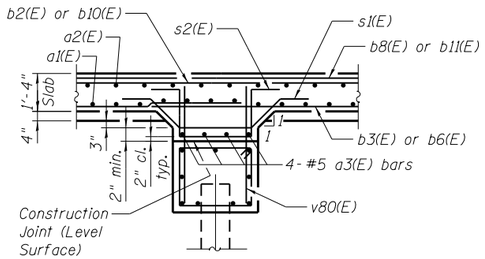


5 SPAN END UNIT
WB BRIDGE CROSS SECTION
(Looking East)

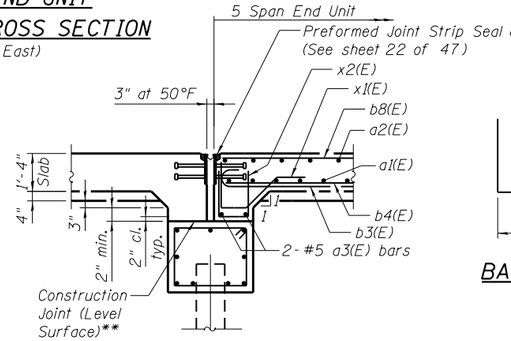


* Use Depressed Curb at driveway entrance from Sta. 375+39.82 to Sta. 375+82.66. See Detail 1 on this sheet.

5 SPAN END UNIT
EB BRIDGE CROSS SECTION
(Looking East)

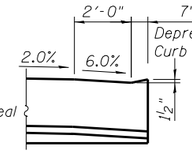


FIXED PILE BENT
CAP SECTION

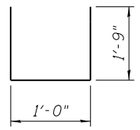


EXPANSION PILE BENT

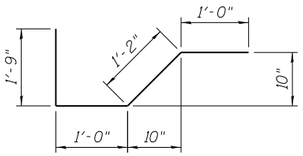
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. 1/8" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing 1/8" neoprene sheet is included with CONCRETE STRUCTURES.



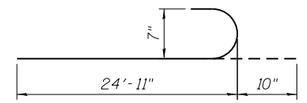
DETAIL 1



BAR x2(E)



BAR x1(E)

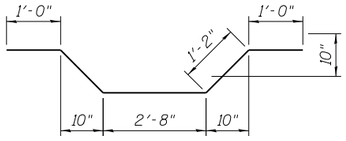


BAR b3(E)

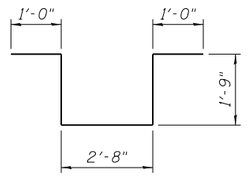
BILL OF MATERIAL
FOR 5 SPAN END UNITS

Bar	No.	Size	Length	Shape
a1(E)	139	#5	29'-2"	
a2(E)	232	#5	16'-1"	
a3(E)	20	#5	28'-10"	
b2(E)	58	#7	11'-9"	
b3(E)	60	#7	25'-9"	
b4(E)	58	#8	20'-1"	
b5(E)	58	#8	14'-10"	
b6(E)	90	#7	26'-2"	
b8(E)	60	#7	37'-2"	
b9(E)	6	#4	40'-4"	
b10(E)	58	#7	9'-6"	
b11(E)	30	#7	50'-8"	
b12(E)	29	#8	16'-4"	
s1(E)	120	#5	7'-0"	
s2(E)	120	#5	8'-2"	
x1(E)	30	#5	4'-11"	
x2(E)	30	#5	4'-6"	
x3(E)	30	#5	5'-7"	
x4(E)	30	#5	5'-2"	
x5(E)	29	#5	8'-10"	
Reinforcement Bars, Epoxy Coated			Pound	36,510
Concrete Superstructure			Cu. Yd.	204.7
Protective Coat			Sq. Yd.	387
Bridge Deck Grooving			Sq. Yd.	334

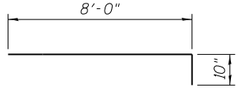
The above quantities include 1 unit: EB Unit 1.



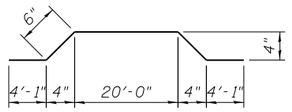
BAR s1(E)



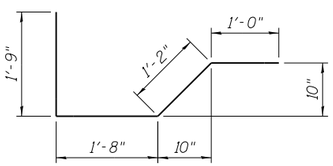
BAR s2(E)



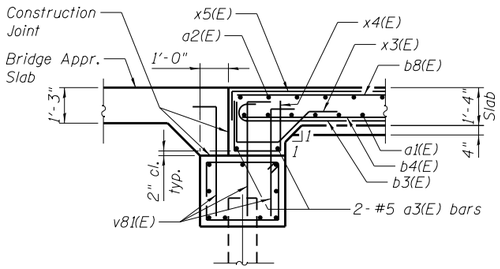
BAR x5(E)



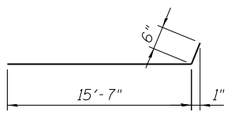
BAR a1(E)



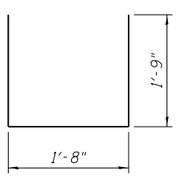
BAR x3(E)



END PILE BENT
CAP SECTION



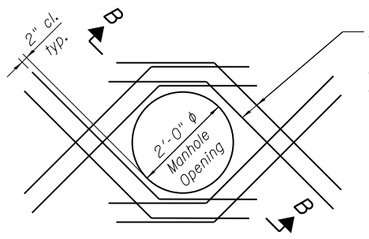
BAR a2(E)



BAR x4(E)

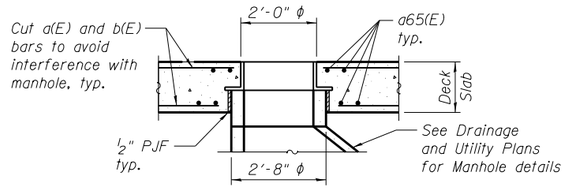
MANHOLE REINFORCEMENT
BILL OF MATERIAL
FOR ONE MANHOLE
(1 Required)

Bar	No.	Size	Length	Shape
a65(E)	16	#6	7'-4"	
Reinforcement Bars, Epoxy Coated			Pound	180

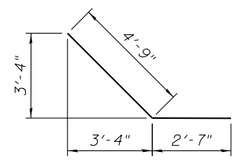


2- #6 a65(E) bars at 6" cts. tied to bottom of top reinforcement mat and top of bottom reinforcement mat typ.

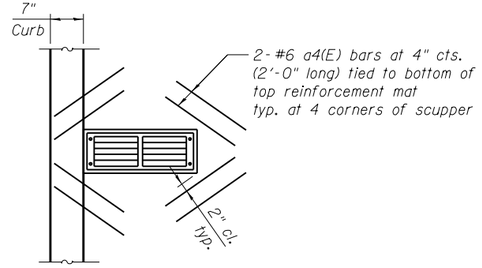
MANHOLE REINFORCEMENT



SECTION B-B



BAR a65(E)



SCUPPER REINFORCEMENT

SCUPPER REINFORCEMENT
BILL OF MATERIAL
FOR SCUPPERS

Bar	No.	Size	Length	Shape
a4(E)	16	#6	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	60

The above quantities include reinforcement for 2 scuppers.

NOTES

1. Cut b8(E) and/or b11(E) bars to clear drainage scuppers.
2. Space b3(E) thru b6(E) and b12(E) bars to avoid interference with drainage scuppers.
3. Bend b9(E) bars to fit curb type transition.

T:\5186-USS\Structr\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-017-DP.dgn

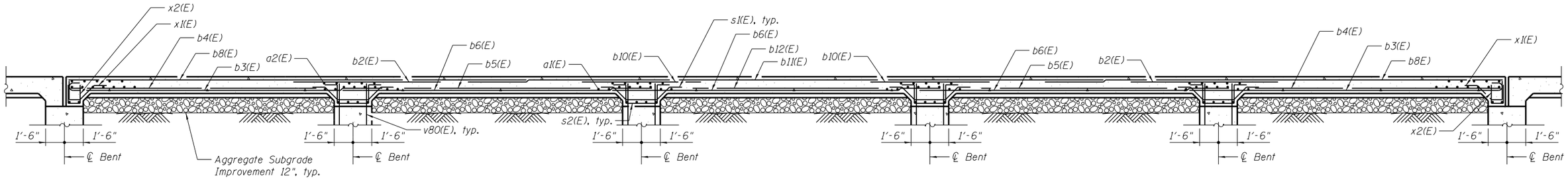
LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =		DESIGNED - LJB	REVISED
FILE NAME = 016D010-60L72-017-DP.dgn		CHECKED - RH	REVISED
PLOT SCALE =		DRAWN - EF	REVISED
PLOT DATE =		CHECKED - RH	REVISED

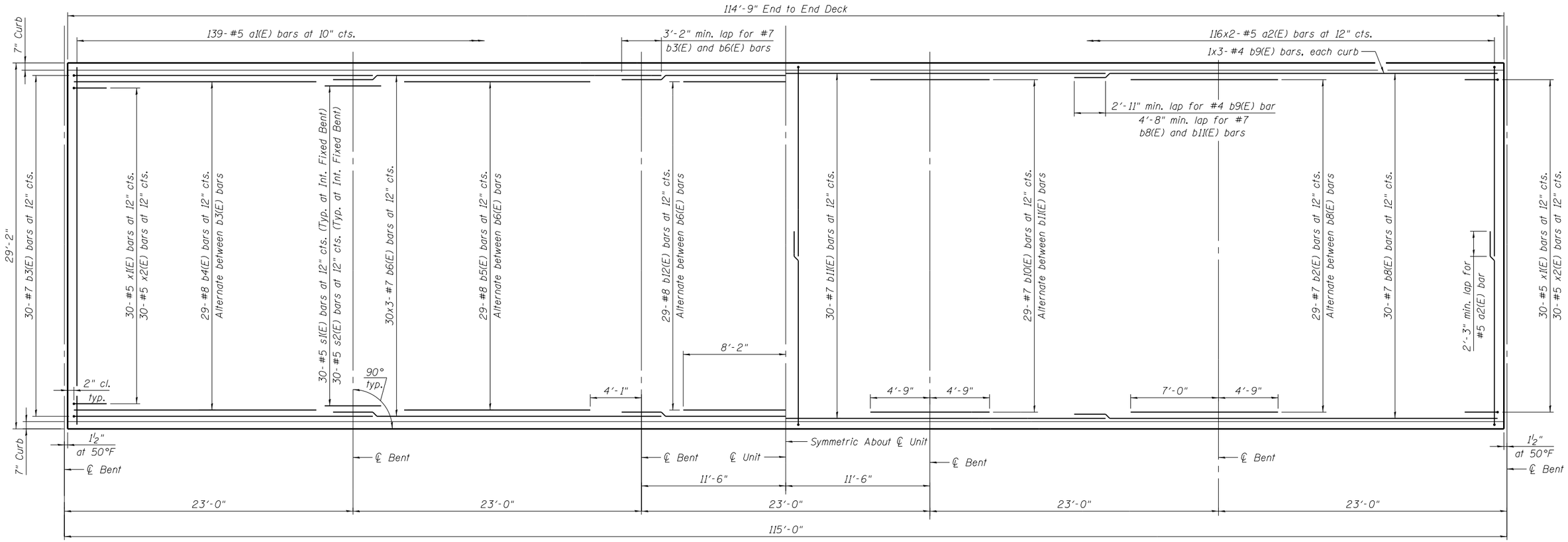
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS 2
STRUCTURE NO. 016-D010
SHEET NO. 17 OF 47 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	395
		CONTRACT NO. 60L72		
		ILLINOIS	FED. AID PROJECT	



INTERIOR UNIT ELEVATION



BOTTOM **TOP**

MINIMUM BAR LAP

(Deck)

#4 bar (Top) = 2'-11"
#5 bar (Top) = 2'-3"
#7 bar (Top) = 4'-8"
#7 bar = 3'-2"

5 SPAN INTERIOR UNIT PLAN

(WB Units 2 thru 7, EB Units 2 thru 4)*

*Bridge decks of WB Unit 2 and Unit 5 are kinked. For detailed geometric layout see Sheets 1 and 2.

NOTES

1. See Sheet 19 of 47 for superstructure details and Bill of Material.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For Span arrangements, work this sheet with Sheets 1 and 2.
4. 1 scupper is placed in WB Units 2, 3, 5, 6 and 7 and EB Units 2, 3 and 4. 2 scuppers are placed in WB Unit 4. Scuppers not shown in plan view. For location details, see Sheets 1 and 2. For typical scupper reinforcement details, see Sheet 19.

T:\5106-1056\Struct\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-018-DP.dgn

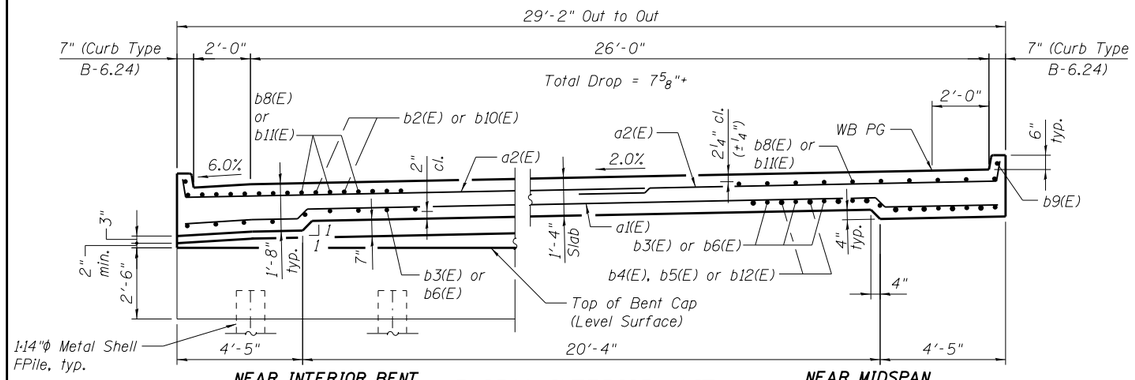
LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - LJB	REVISED	
FILE NAME = 016D010-60L72-018-DP.dgn	CHECKED - RH	REVISED	
PLOT SCALE =	DRAWN - EF	REVISED	
PLOT DATE =	CHECKED - RH	REVISED	

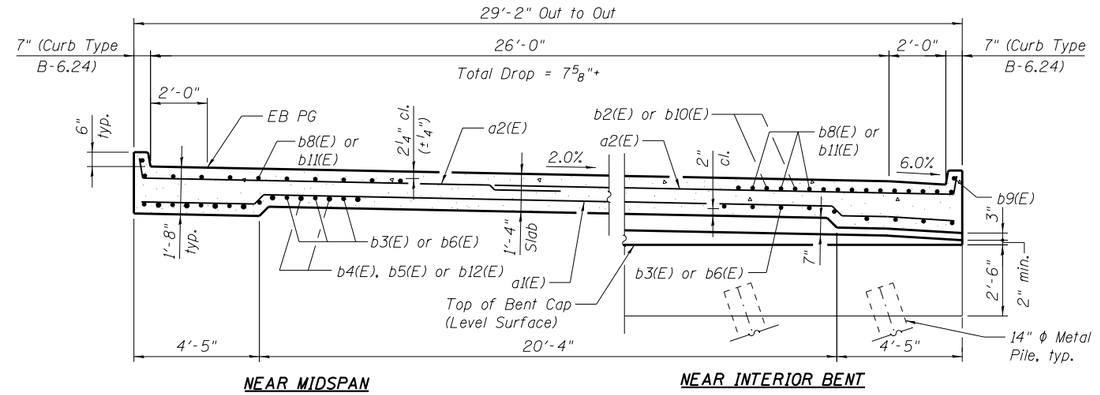
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN & CROSS SECTION 3
STRUCTURE NO. 016-D010
SHEET NO. 18 OF 47 SHEETS

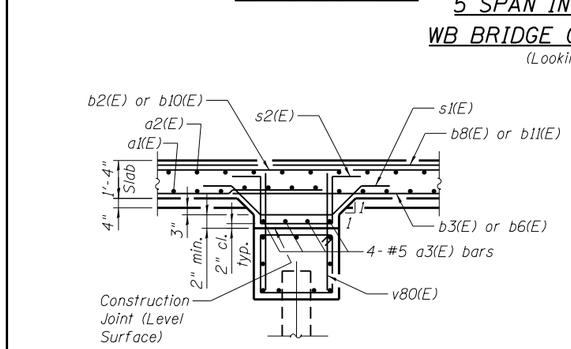
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	396
		CONTRACT NO. 60L72		
	ILLINOIS	FED. AID PROJECT		



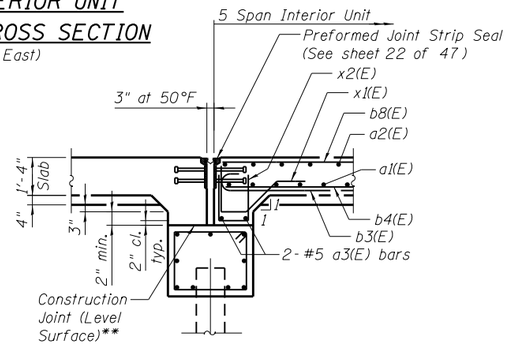
5 SPAN INTERIOR UNIT
WB BRIDGE CROSS SECTION
(Looking East)



5 SPAN INTERIOR UNIT
EB BRIDGE CROSS SECTION
(Looking East)

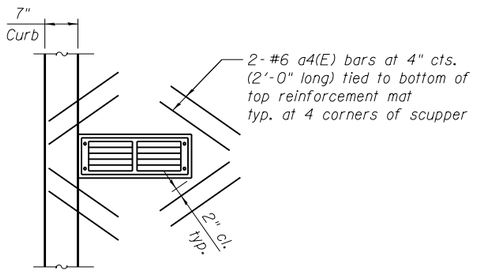


FIXED PILE BENT
CAP SECTION

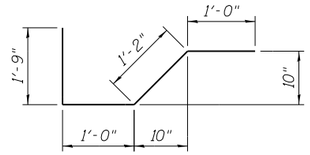


EXPANSION PILE BENT

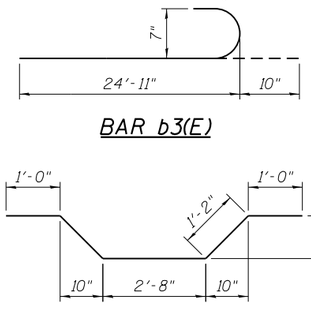
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. ⅛" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing ⅛" neoprene sheet is included with CONCRETE STRUCTURES.



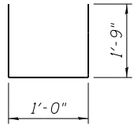
SCUPPER REINFORCEMENT



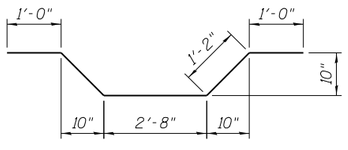
BAR x1(E)



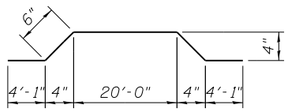
BAR b3(E)



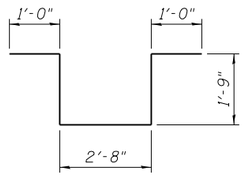
BAR x2(E)



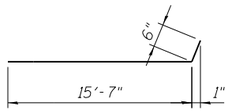
BAR s1(E)



BAR a1(E)



BAR s2(E)



BAR a2(E)

BILL OF MATERIAL
FOR 5 SPAN INTERIOR UNITS

Bar	No.	Size	Length	Shape
a1(E)	1251	#5	29'-2"	
a2(E)	2088	#5	16'-1"	
a3(E)	180	#5	28'-10"	
b2(E)	522	#7	11'-9"	
b3(E)	540	#7	25'-9"	
b4(E)	522	#8	20'-1"	
b5(E)	522	#8	14'-10"	
b6(E)	810	#7	26'-2"	
b8(E)	540	#7	37'-2"	
b9(E)	54	#4	40'-4"	
b10(E)	522	#7	9'-6"	
b11(E)	270	#7	50'-8"	
b12(E)	261	#8	16'-4"	
s1(E)	1080	#5	7'-0"	
s2(E)	1080	#5	8'-2"	
x1(E)	540	#5	4'-11"	
x2(E)	540	#5	4'-6"	
Reinforcement Bars, Epoxy Coated			Pound	325,790
Concrete Superstructure			Cu. Yd.	1834.2
Protective Coat			Sq. Yd.	3465
Bridge Deck Grooving			Sq. Yd.	2988

The above quantities include all 9 units: WB Units 2 thru 7 and EB Units 2 thru 4.

SCUPPER REINFORCEMENT
BILL OF MATERIAL
FOR SCUPPERS

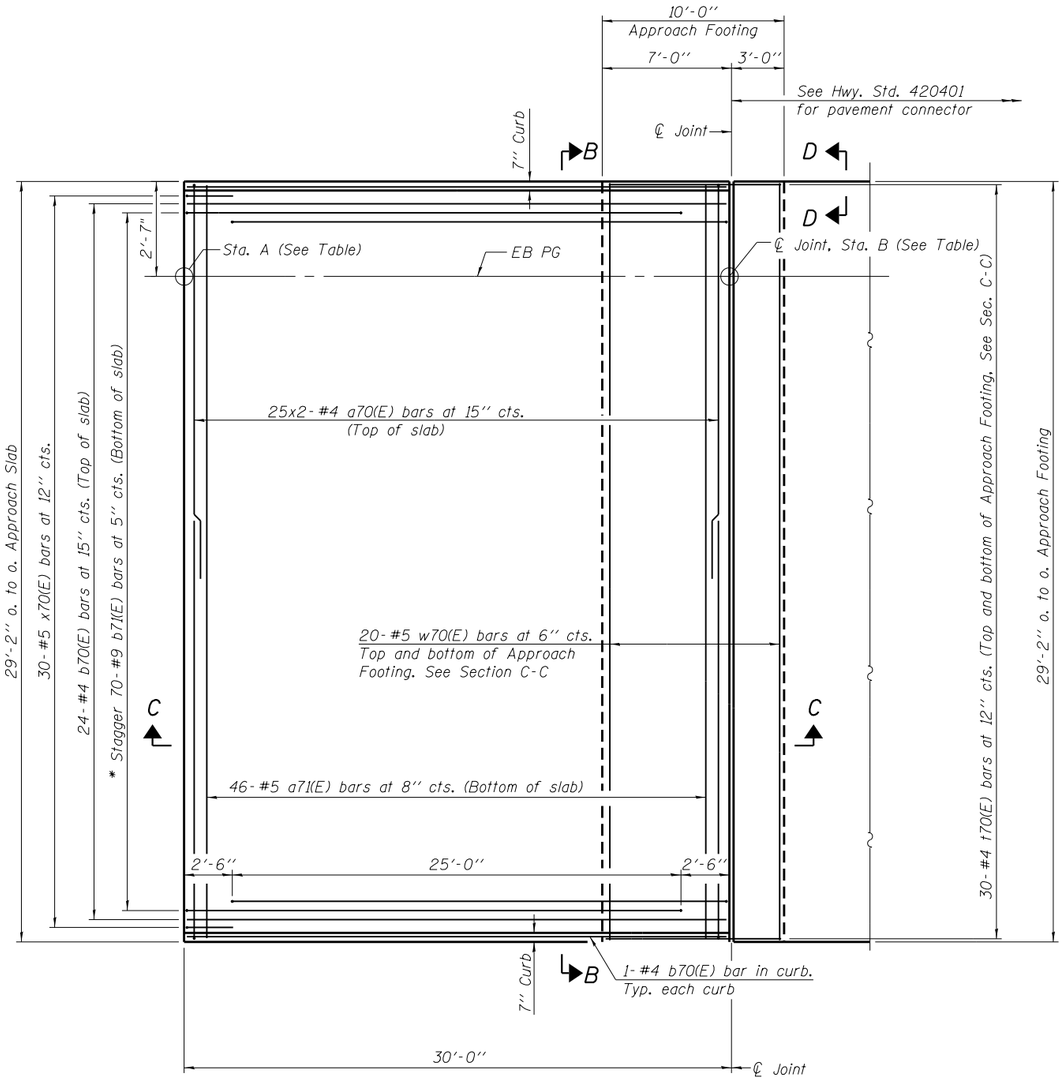
Bar	No.	Size	Length	Shape
a4(E)	80	#6	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	300

The above quantities include reinforcement for 10 scuppers.

NOTES

1. Cut b8(E) and/or b11(E) bars to clear drainage scuppers.
2. Space b3(E) thru b6(E) and b12(E) bars to avoid interference with drainage scuppers.

T:\5186-USB\Structr\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-019-DP.dgn

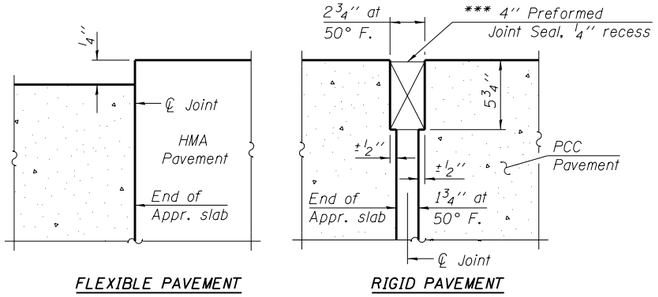


PLAN

EB Bridge, E. Appr. Details as Shown
Details of Other Approach Slabs Similar
* Tilt #9 b71(E) bars as required to maintain clearance.

Notes:
The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be $1\frac{1}{2}$" for installation purposes.

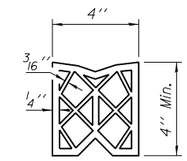
*** Cost included with Concrete Superstructure.



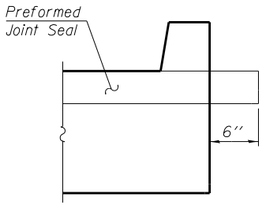
FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A



PREFORMED JOINT SEAL



VIEW D-D

APPROACH STATIONS

	Sta. A	Sta. B
EB Bridge, W. Appr. Sta.	374+95.58	374+65.58
EB Bridge, E. Appr. Sta.	380+25.58	380+55.58
WB Bridge, W. Appr. Sta.	371+89.69	371+59.69
WB Bridge, E. Appr. Sta.	380+18.58	380+48.58

MINIMUM BAR LAP

(Approach)
#4 bar (Top) = 1'-10"

NOTES

1. See sheet 21 of 47 for Sections B-B and C-C.
2. a71(E) and a70(E) bar spacings measured along ℄ Rdwy.

T:\5106-USGS\Struct\dgn\Land Bridges\Land Bridge I - 016-D010\016D010-60L72-020-AS.dgn

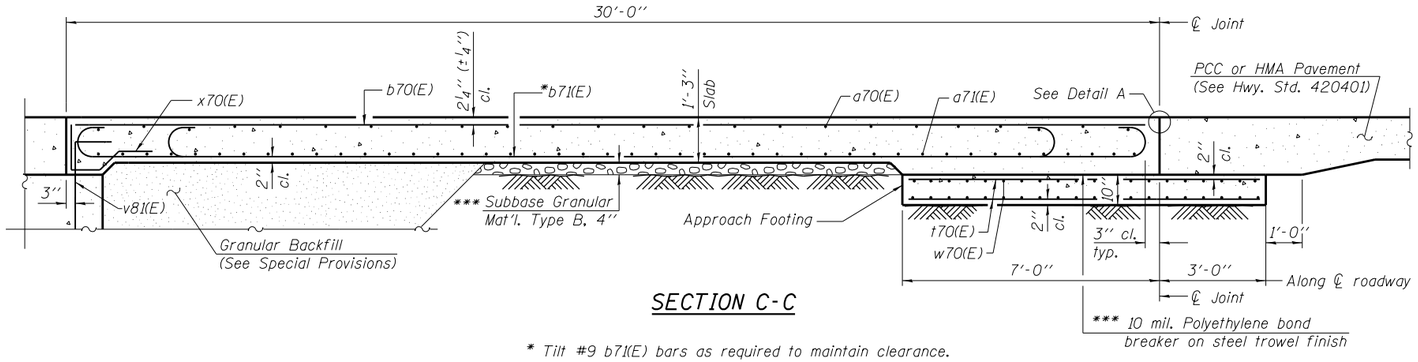
LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME =	DESIGNED - LJB	REVISED	
FILE NAME = 016D010-60L72-020-AS.dgn	CHECKED - RH	REVISED	
PLOT SCALE =	DRAWN - EF	REVISED	
PLOT DATE =	CHECKED - RH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS 1
STRUCTURE NO. 016-D010
SHEET NO. 20 OF 47 SHEETS

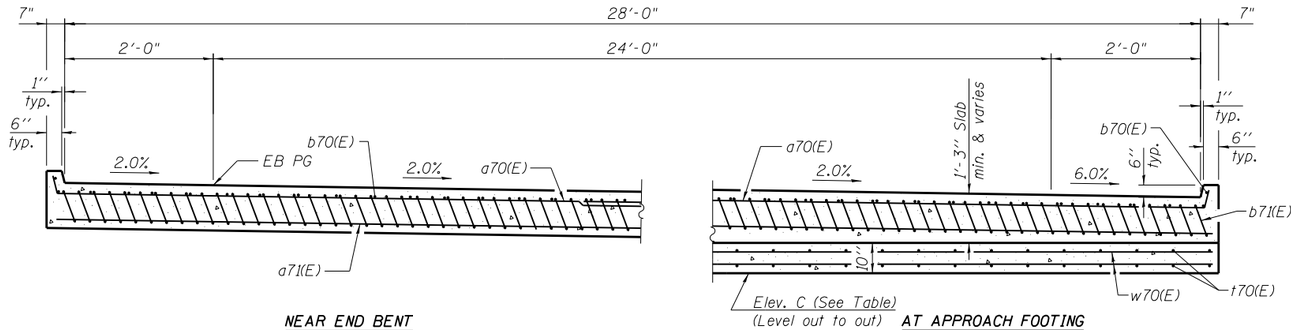
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	398
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



SECTION C-C

* Tilt #9 b71(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.



NEAR END BENT — AT APPROACH FOOTING

SECTION B-B

Looking East
Eastbound Approach Slab Details as shown
Westbound Approach Slab Details similar
(See Plan for dimensions not shown)

APPROACH FOOTING ELEVATIONS

	Elev. C
EB Bridge, W. Appr. Ftg.	685.56
EB Bridge, E. Appr. Ftg.	687.05
WB Bridge, W. Appr. Ftg.	691.08
WB Bridge, E. Appr. Ftg.	687.02

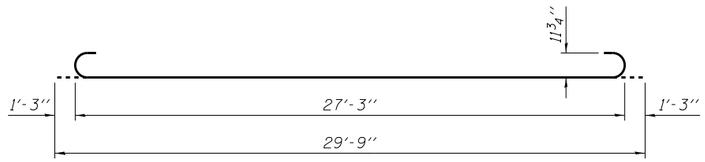
NOTES

1. See Sheet 20 of 47 for Detail A.
2. Approach slab and concrete curb shall be paid for as CONCRETE SUPERSTRUCTURE.
3. Approach footing concrete shall be paid for as CONCRETE STRUCTURES.
4. Reinforcement shall be paid for as REINFORCEMENT BARS, EPOXY COATED.
5. For v81(E) bar details, see Sheet 24 of 47.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. Cost of excavation for approach footing included with STRUCTURE EXCAVATION.
8. For Granular Backfill and drainage treatment details, see Sheet 3 of 47.

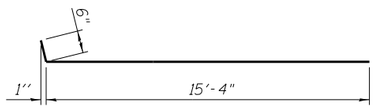
BILL OF MATERIAL FOR APPROACH SLABS

Bar	No.	Size	Length	Shape
a70(E)	200	#4	15'-10"	
a71(E)	184	#5	28'-10"	
b70(E)	104	#4	29'-8"	
b71(E)	280	#9	29'-9"	
t70(E)	240	#4	9'-8"	
w70(E)	160	#5	29'-8"	
x70(E)	120	#5	6'-6"	
Reinforcement Bars, Epoxy Coated			Pound	45,360
Concrete Superstructure			Cu. Yd.	187.6
Concrete Structures			Cu. Yd.	36.4
Structure Excavation			Cu. Yd.	48
Bridge Deck Grooving			Sq. Yd.	324
Protective Coat			Sq. Yd.	404

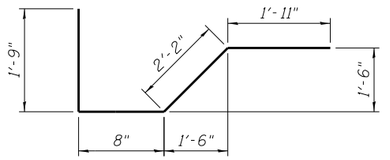
The above quantities include all 4 approach slabs.



BAR b71(E)



BAR a70(E)

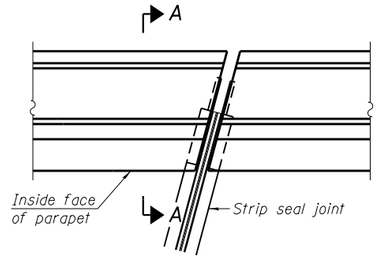


BAR x70(E)

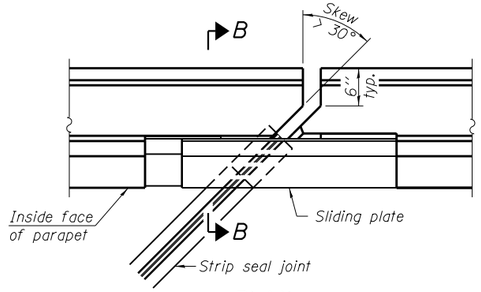
T:\5108-USS\Structure\dgn\Land Bridges\Land Bridge 1 - 016-D010\016D010-60L72-021-AS.dgn

LOCHNER					
H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - LJB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	APPROACH SLAB DETAILS 2 STRUCTURE NO. 016-D010
	FILE NAME = 016D010-60L72-021-AS.dgn	CHECKED - RH	REVISED		SHEET NO. 21 OF 47 SHEETS
	PLOT SCALE =	DRAWN - EF	REVISED		
	PLOT DATE =	CHECKED - RH	REVISED		

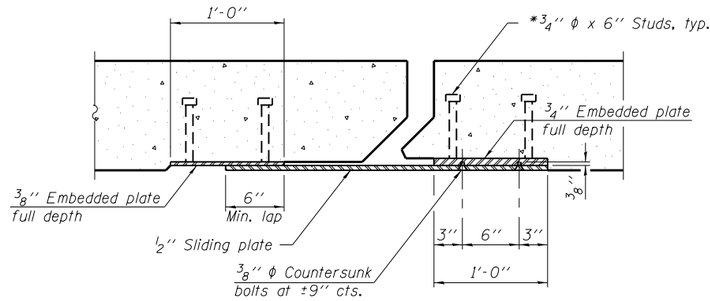
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	399
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			



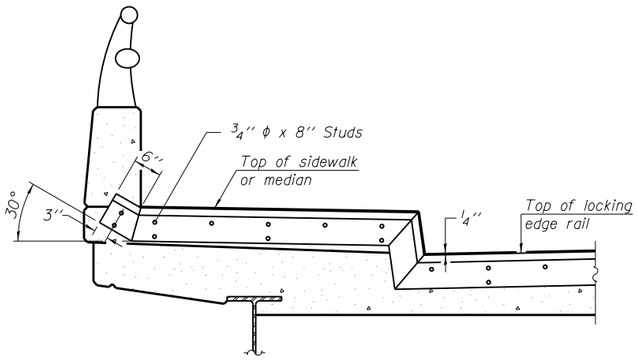
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

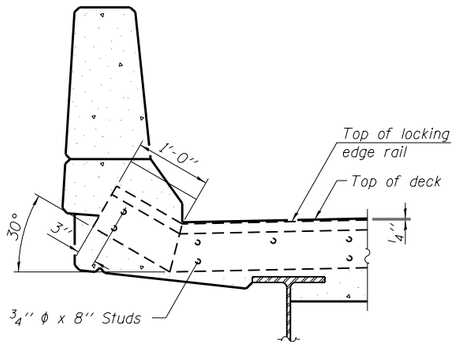


SECTION C-C

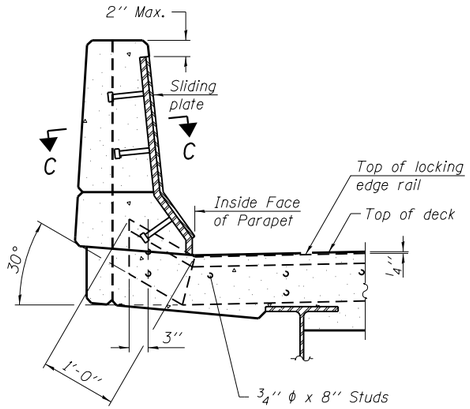


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

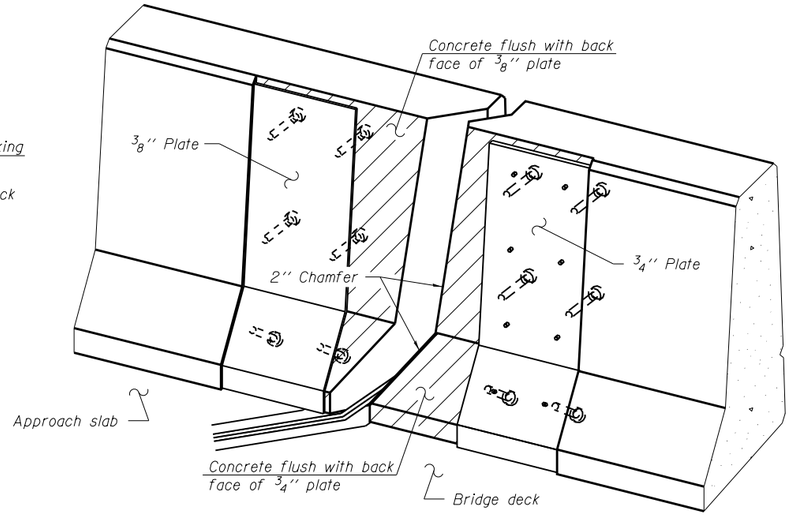
Shorter plates with a single row of studs at 12'' cts. may be necessary on medians which are shallower than 9''. See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4''. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

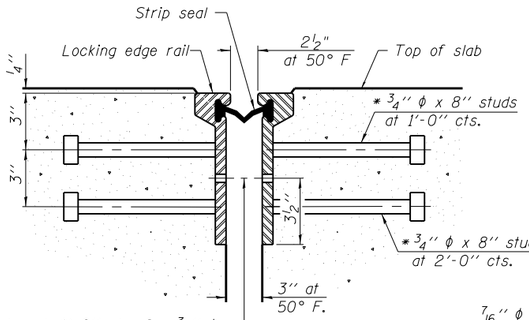
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

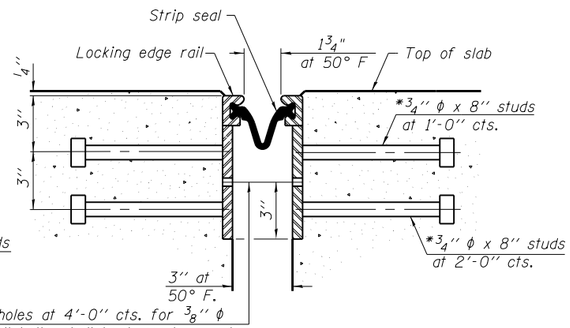
Maximum space between rail segments shall be 3/16'', sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



7/16'' φ holes at 4'-0'' cts. for 3/8'' φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

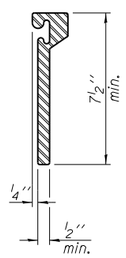
SECTION THRU ROLLED RAIL JOINT



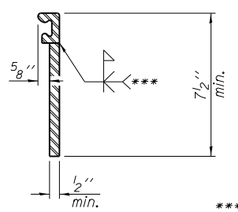
7/16'' φ holes at 4'-0'' cts. for 3/8'' φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

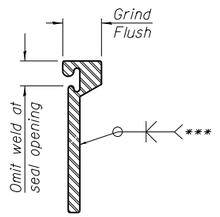
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	322

EJ-SSJ 1-27-12

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LOCHNER						
H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - LJB	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL STRUCTURE NO. 016–D010	
	FILE NAME = 016D010-60L72-022-EJ.dgn	CHECKED - RH	REVISED			
	PLOT SCALE =	DRAWN - EF	REVISED			
	PLOT DATE =	CHECKED - RH	REVISED		SHEET NO. 22 OF 47 SHEETS	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2010-081-R	COOK	1045	400
		CONTRACT NO. 60L72		
	ILLINOIS FED. AID PROJECT			