

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

SECTION

106-S-N-2

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

345

CULVERT SECTION AND HEADWALL AND WINGWALL DETAILS

STRUCTURE NO. 045-0260

SHEET NO. S4 OF S6 SHEETS

COUNTY

KANE 147 101

CONTRACT NO. 60T09

DATE NAME

USER NAME =

PLOT SCALE =

PLOT DATE =

FILE NAME =

DRAWN

DATE

CHECKED

- BA/DS

- WPK

- 5/19/2014

REVISED

REVISED

REVISED

Geo Services, Inc. Geotechnical Environmental & Civil Engineering 805 Amherst Churt, Suite 204
GCC GCIVICGS, IIIC.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suité 204
Naperville, Illinois 80565 (630) 355-2028
(630) 355-20/3

GSI Job No. __10181-l

SOIL BORING LOG

Page $\underline{1}$ of $\underline{2}$

(630) 355-20	78					3	JIL DUKIN			-	_	_
										Date	4/9	<u>3/12 </u>
ROUTE FAP 345 (I	J.S. Route 20	<u>)</u> DE	SCRI	PTION		U.S. R	oute 20 AT II. Route 47	7/ II. Route 72	LOGGE	ED BY	V	<u>′H</u>
SECTION	106-S-N-2		L	OCAT	ION _	NE 1/4	I, SEC. 31, TWP. T42N	, RNG. R7E, 3 rd F	PM			
COUNTY Kar	ne DF	RILLING	MET	ПОН	Hc	llow S	em Auger/Mud Rotary	HAMMER TY	PE(OME A	utoma	tic
STRUCT. NO.	NA		D	В	U	M	Surface Water Elev.	n/a f	, D	В	ប	М
Station		_	E	L	C S	0	Stream Bed Elev.	n/af	t E	L	C S	0
BORING NO.	CB-05		T	W	_	s	Groundwater Elev.:		T	W	"	S
Station	74+80		Н	S	Qu	Т		Dry to 10.0' f		S	Qu	Т
Ground Surface Elev	7. 926.90	ft	(ft)	(/6")	(tsf)	(%)	Upon Completion After Hrs.			(/6")	(tsf)	(%)
TOPSOIL-black							SANDY CLAY LOAN stiff to stiff (continued	l-gray-medium				
				2		35	Suit to suit (commaed		*****	3		
				2		37				4	0.8	11
3		923.90	_	3					_	6	Р	
SILTY CLAY-dark bro	wn &	320.30		_								
5 plack-medium sun				2	0.8	26				3	1.8	11
<u>.</u>			-5	3	P	20			-25	6	P	'
CLAY-brown-very stiff		921.40							_			
5			_	3					-	3		
				3 4	2.0 P	19				5 7	1.0	11
		918,90	_	-4						-	P	
SANDY CLAY LOAM-	brown-loose			3								
				4	0.5	12				3 5	1.5	11
<u> </u>			-10	. 5	P				-30	7	P	
SAND-brown-medium	dense	916.40	- –									
				8	N/D	10			_			
				10 10	NP	19					j	
GANIEW OLANGIA		913.90										
SANDY CLAY LOAM- stiff to stiff	gray-medium			3					_	3		
				5	2.3	11				5	1.8	11
			-15	7	Р				-35	7	Р	
			_	6	2.0	11			_			
				6	2.0 P	_ ' '	CLAY LOAM-gray-sti		39.90			
			-	3					_	,		

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)

5 1.3 12

BBS, from 137 (Rev. 8-99)



GSI Job No. 10181-I

Naper (Si	est Court, Suite 204 ille, Illikuls 30565 307355-2088				SC	OIL BORING LOG Page 2 o
ROUTE FAF	² 345 (U.S. Route 2	20) DESC	RIPTION		J.S. R	Date <u>4/9</u> <u>Pute 20 AT II. Route 47/ II. Route 72</u> LOGGED BY VI
SECTION	106-S-N-2		LOCAT	ION _	NE 1/4	, SEC. 31, TWP. T42N, RNG. R7E, 3 rd PM
COUNTY	Kane	DRILLING ME	THOD	Ho	llow St	em Auger/Mud Rotery HAMMER TYPE CME Automat
STRUCT. NO. Station	NA NA	D E P	L	U C S	M O I	Surface Water Elevn/a ft Stream Bed Elevn/a ft
BORING NO. Station Offset	CB-05 74+80 40.00ft Right	T	W	Qu	S T	Groundwater Elev.: First Encounter Dry to 10.0' ft Upon Completion n/a ft
Ground Surfa	ce Elev. <u>926.9</u>	00 ft (ft) (/6")	(tsf)	(%)	After Hrs. ft
backfilled with	@ -40.0'. Boring cuttings.		-			
		_	-			
08102			1			
29 99 90		_	7			
1-		-4 -4	5			
בספונוסוסון בחלפטונוסוסון			-			
FIGURE STATE OF THE STATE OF TH		_				
			7			
3		-	-	l		

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)



STATE	E OF	ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

SOIL BORING LOGS I STRUCTURE No. 045 0260		SEC.	rion	COUNTY	TOTAL SHEETS	SHEET NO.
		106-5	5-N-2	KANE	147	102
				CONTRACT	NO. 60	T09
SHEET NO. S5 OF S6 SHEETS	FED. R	OAD DIST. NO. 1	ILLINOIS FED. A	ID PROJECT		

Goo Santione Inc
Geo Services, Inc. Geotechnical Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illiants 50565
(630) 355-28/3

GSI Job No. __10181-!_

805 Amheist Còuir, Suité 204 Naperville, Illiaols 80565 (630) 355-2883			SC	OIL BORING LOG		Page	1	of <u>2</u>
						Date	4/9	9/12
ROUTE FAP 345 (U.S. Route 20) DE	SCRIPTIO	N	U.S. R	oute 20 AT II. Route 47/ II. Route 72	OGGE	D BY	V	<u>'H</u>
SECTION 106-S-N-2	LOCA	TION _	NE 1/4	, SEC. 31, TWP. T42N, RNG. R7E, 3 rd PM				
COUNTY Kane DRILLING	S METHOD	Hc	llow St	em Auger/Mud Rotary HAMMER TYPE		OME A	utoma	tic
STRUCT. NO. NA Station NA BORING NO. CB-06 Station 75+70 Offset 30.00ft Left	D B E L P O T W H S	U C S Qu	M O I S T	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft Groundwater Elev.: First Encounter 923.0 ft	D E P T	вгока	U S Qu	M O I S T
Ground Surface Elev. 926.50 ft	(ft) (/6")	(tsf)	(%)	Upon Completion ft After Hrs ft	(ft)	(/6")	(tsf)	(%)
TOPSOIL-black	2		23	SANDY CLAY LOAM-gray-medium stiff to very stiff (continued)		3		
	2 3		24			7	1.3 P	12
923.50 CLAYEY SAND & GRAVEL-dark brown & gray-very loose	Y 0					6		
921.00	1		25		- <u>-25</u>	7 7	0.8 P	12
SANDY CLAY LOAM-gray-medium stiff to very stiff	2	0.5	11			4 5	1.0	12
	3	Р				6	Р	
	5 4 -10 4	0.5 P	12		-30	4 5 7	1.5 P	12
	6							
	- 6 7	0.5 P	12					
	4 5	2.0	10			4	1.0	14
	- <u>15</u> 6	P			35	9	Р	
	4 7 7	3.0 P	11	889.6 CLAY LOAM-gray-stiff	0			
·	4 5	2.3	9			12 5	1.3	15
	₋₂₀ 7	P P	້	 !	— i0 -40	1 0	P P	ادا

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Buige, 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)



SOIL BORING LOG

Dogg 2 of 2

GSI Job No. __10181-!

Page $\underline{2}$ of $\underline{2}$

Date <u>4/9/12</u>

ROUTE	FAP 345 (U.S. Route 20)	DESCRIPTION	U.S. Route 20 AT II. Route 47/ II. Route 72	LOGGED BY VH
SECTION	106-S-N-2	LOCATION	NE 1/4 SEC 31 TWP T42N PNG P7E 3rd pl	ΛA

COUNTY	Kane	DRILLING	MET	HOD	Ho		tem Auger/Mud Rotary	HAMMER TYPE	CME Automatic
STRUCT. NO.	NA		D	В	U	M	Surface Water Elev.	n/a ft	

Station	1474	ا - ا	_ :		-	Stream Bed Elev.	n/a ft	
		P	0	S	1			
BORING NO.	CB-06	T	W		S	Groundwater Elev.:		
Station	75+70	H	S	Qu	Τ.	First Encounter	923 U 👫 🛣	

DOMING NO.		7-00	_			ł	1 1	Groundwater clev.:		
Station	75	+70	_	Н	S	Qu	T	First Encounter	923.0	ft 🕎
Offset	30.00	Oft Left	_			ĺ	1 (Upon Completion	n/a	ft _
Ground Surfa	ce Elev	926,50	_ ft	(ft)	(/6")	(tsf)	(%)	After Hrs.		ft
End Of Boring	@ -40.0', B	oring								
backfilled with	cuttings.			_						

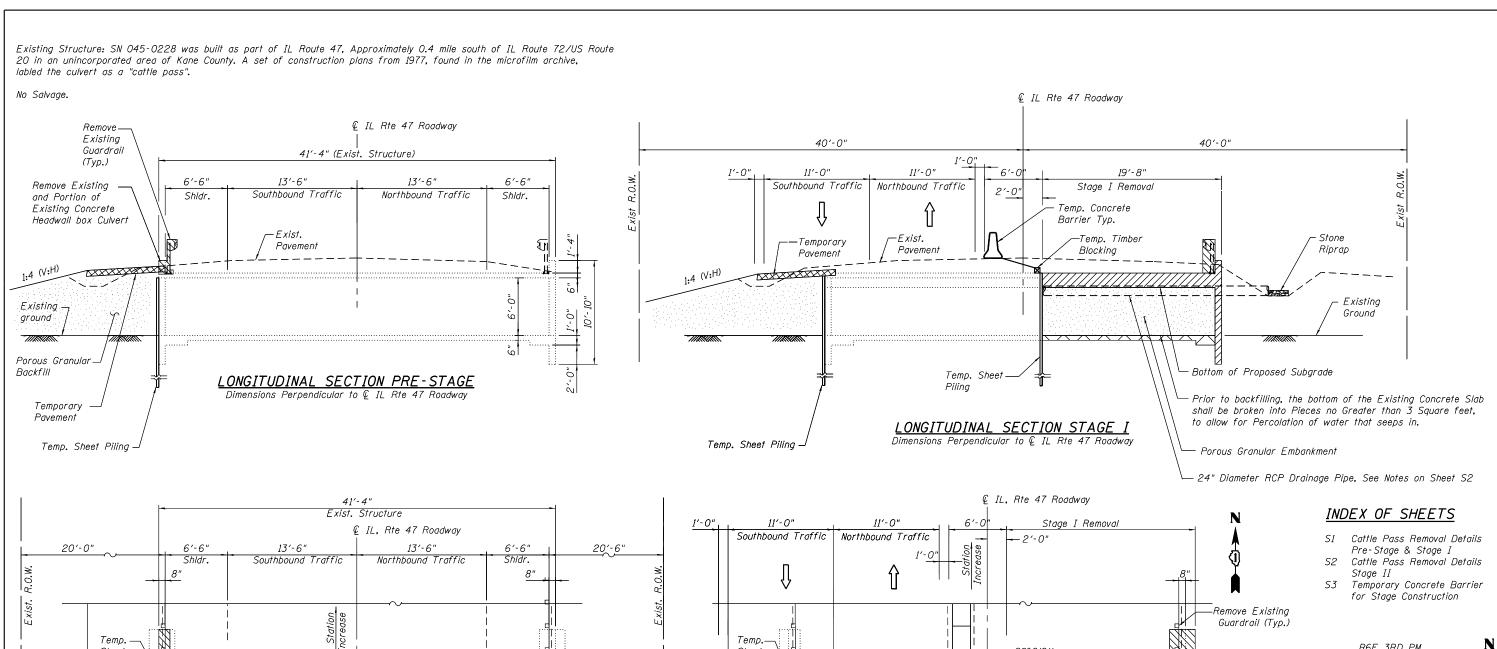
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

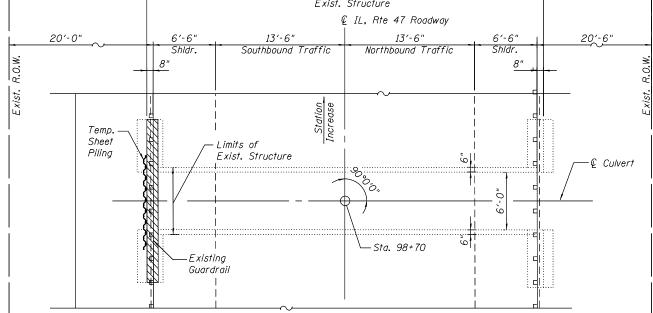
BBS, from 137 (Rev. 8-99)



STATE OF ILLINOIS	
DEPARTMENT OF TRANSPO	RTATION

SOIL BORING LOGS II Structure No. 045 0260		F.A.P. SECTION		TOTAL SHEETS	SHEET NO.	
		106-S-N-2	KANE	147	103	
			CONTRACT	NO. 60	T09	
SHEET NO. S6 OF S6 SHEETS	FED. R	OAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT			





PLAN - PRE-STAGE Dimensions Perpendicular to © IL Rte 47 Roadway

PLAN - STAGE I Dimensions Perpendicular to © IL Rte 47 Roadway

-90°0′0′

-Sta. 98+70

Temp. Sheet Piling (Typ.)

Temp. Concrete Barrier

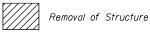
GENERAL PLAN IL ROUTE 47 OVER UN-NAMED DITCH SECTION 106-S-N-2 KANE COUNTY STATION 98+70

STRUCTURE NO. 045-0228

R6E 3RD PM

LOCATION SKETCH

LEGEND



1	USER NAME =	DESIGNED - MBC	REVISED -	_
	PLOT SCALE =	DRAWN - BA/DS	REVISED -	
	PLOT DATE =	CHECKED - WPK	REVISED -	
	FILE NAME =	DATE - 5/19/2014	REVISED -	



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Sheet

Piling

CATTLE PASS REMOVAL DETAILS PRE-STAGE & STAGE I		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		106-S-N-2	KANE	147	104
			CONTRACT	NO. 60	T09
SHEET NO. S1 OF S3 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

−@ Culvert

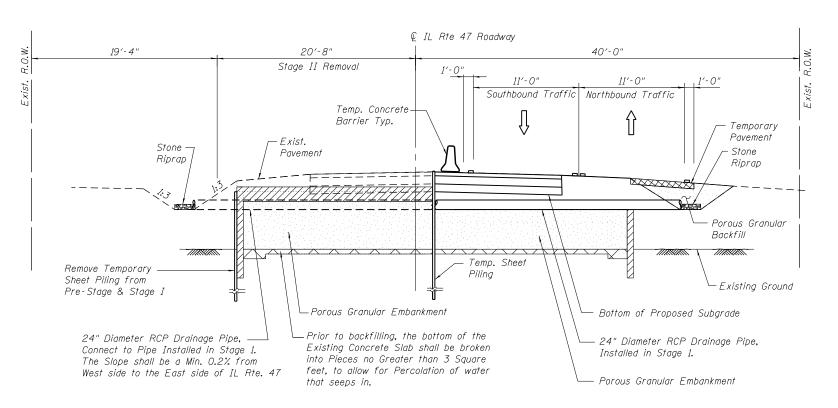
24" Diameter

RCP Drainage

Exist. SN: 045-0228-

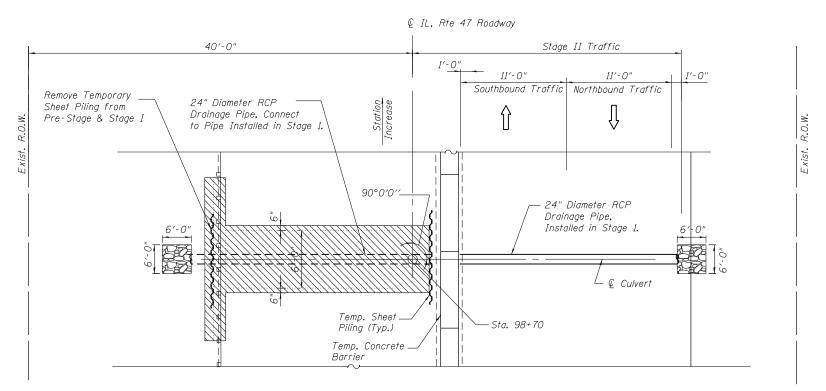
Pipe

= \$DATE\$ = \$FILEL\$ DATE NAME



LONGITUDINAL SECTION STAGE II

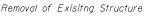
Dimensions Perpendicular to € IL Rte 47 Roadway



PLAN - STAGE II

Dimensions Perpendicular to & IL, Rte 47 Roadway





USER NAME =	DESIGNED	-	MBC	REVISED -	
PLOT SCALE =	DRAWN	-	BA/DS	REVISED -	
PLOT DATE =	CHECKED	-	WPK	REVISED -	
FILE NAME =	DATE	-	5/19/2014	REVISED -	
	PLOT SCALE = PLOT DATE =	PLOT SCALE = DRAWN PLOT DATE = CHECKED	PLOT SCALE = DRAWN - PLOT DATE = CHECKED -	PLOT SCALE =	PLOT SCALE = DRAWN - BA/DS REVISED - PLOT DATE = CHECKED - WPK REVISED -



STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

CATTLE PASS REMOVAL DETAILS 345 STAGE II SHEET NO. S2 OF S3 SHEETS

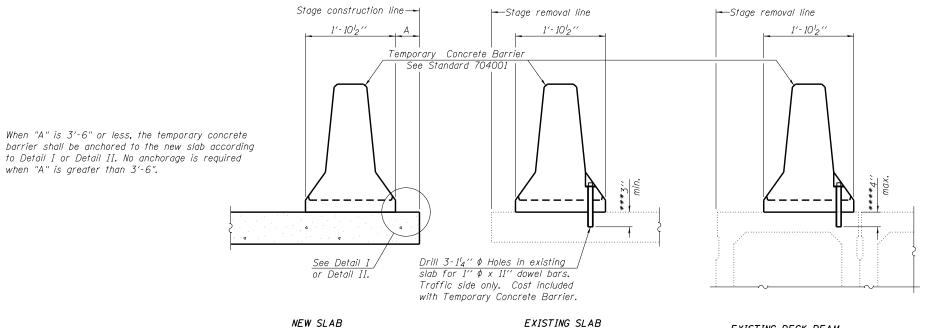
SECTION COUNTY 106-S-N-2 KANE 147 105 CONTRACT NO. 60T09 FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	81
Porous Granular Backfill	Cu. Yd.	434
Stone Riprap, Class A4	Sq. Yd.	8
Stone Riprap, Class A4	Sq. Yd.	27
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	38
Temporary Sheet Piling	Sq. Ft.	634

NOTES:

- 1. See Roadway Plan for Temporary Pavement, Paving Details, Maintenance of Traffic, and additional Quantities.
- 2. Limits for removal of the existing culvert include the entire Top Slab, the Headwalls, the Aprons and all wingwalls down to their Footings.
- 3. The bottom of the box culvert shall be broken into pieces as shown in the plans to allow for percolation of water that seeps in. The Cost of this work shall be included in the item "Removal of Existing Structures" The remaining box culvert will be filled with PGE, and the new 24-inch RCP will lay on top of the PGE under the new pavement.
- 4. The Invert of the Proposed 24-inch RCP should be raised to match the flow Line of the respective existing roadside ditches with a 0.2% minimum Slope from the West to the East side of the road.
- 5. All Longitudinal Sections are looking North.
- 6. Plan Dimentions on Details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 7. See roadway plans for proposed pavement construction.
- 8. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the



NOTES

Detail I - With Bar Splicer or Couplers:

Connect one (1) 1" \times 7" ' \times "W" steel P to the top layer of couplers with $2^{-5}8$ " ϕ bolts screwed to coupler at approximate Q of each barrier panel.

Detail II - With Extended Reinforcement Bars:

Connect one (1) I'' x 7'' x "W" steel 12 to the concrete slab or concrete wearing surface with 2-58" \$\phi\$ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \$\mathbb{C}\$ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

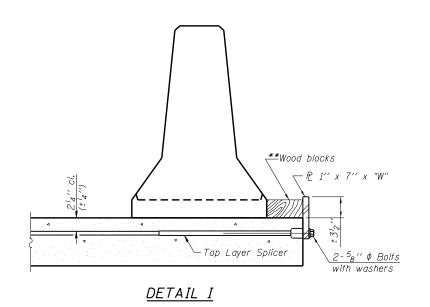
The I'' x 7'' x 'W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

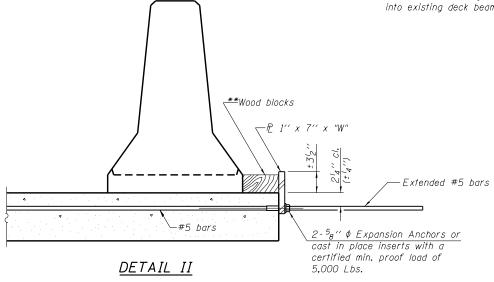
SECTIONS THRU SLAB OR DECK BEAM

*** 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.





Top bars
spacing
3" 3" Detail II

© 78" \$\phi\$ Holes

STEEL RETAINER P 1" x 7" x "W"

* Required only with 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"

\$ PHIER R-27

PLOT DATE FILE NAME 7-1-10

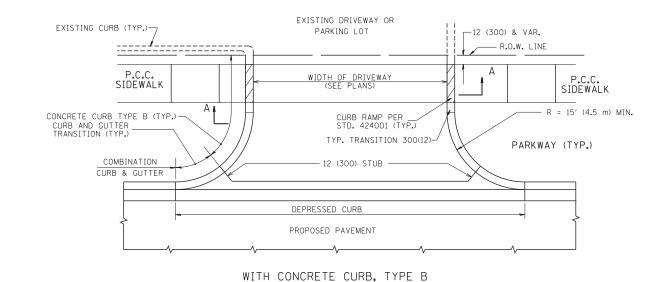
USER NAME =	DESIGNED - MBC	REVISED -	
PLOT SCALE =	DRAWN - BA/DS	REVISED -	
PLOT DATE =	CHECKED - WPK	REVISED -	
FILE NAME =	DATE - 5/19/2014	REVISED -	

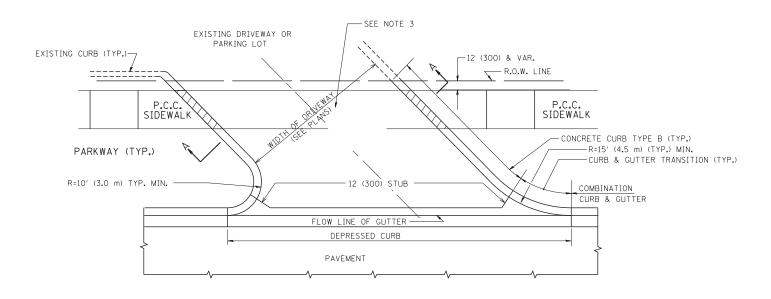


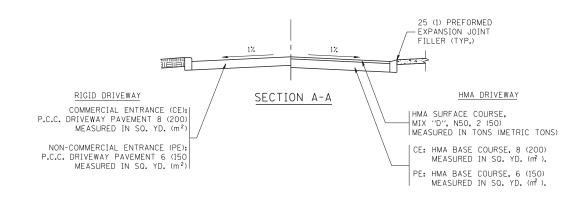
DEPARTMENT OF TRANSPORTATION STRUCTURE NO. 045–02	STATE OF ILLINOIS	TEMPORARY CONCRETE BARRIER FOR STA
		STRUCTURE NO. 045-022

EXISTING DECK BEAM

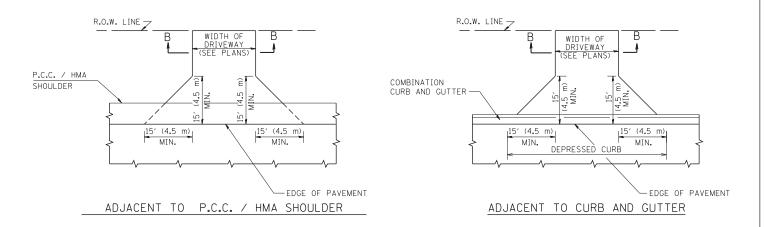
ORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 045-0228		106-S-N-2	KANE	147	106
3111001011L 140. 043-0220			CONTRACT	NO. 60	T09
SHEET NO. S3 OF S36 SHEETS	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. AI	D PROJECT		

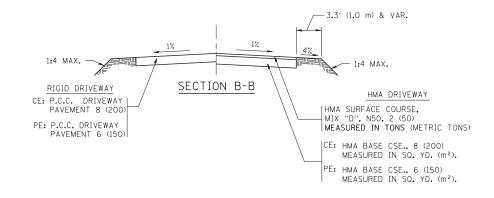






WITH CONCRETE CURB, TYPE B





RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "D", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK, DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY OUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS, SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

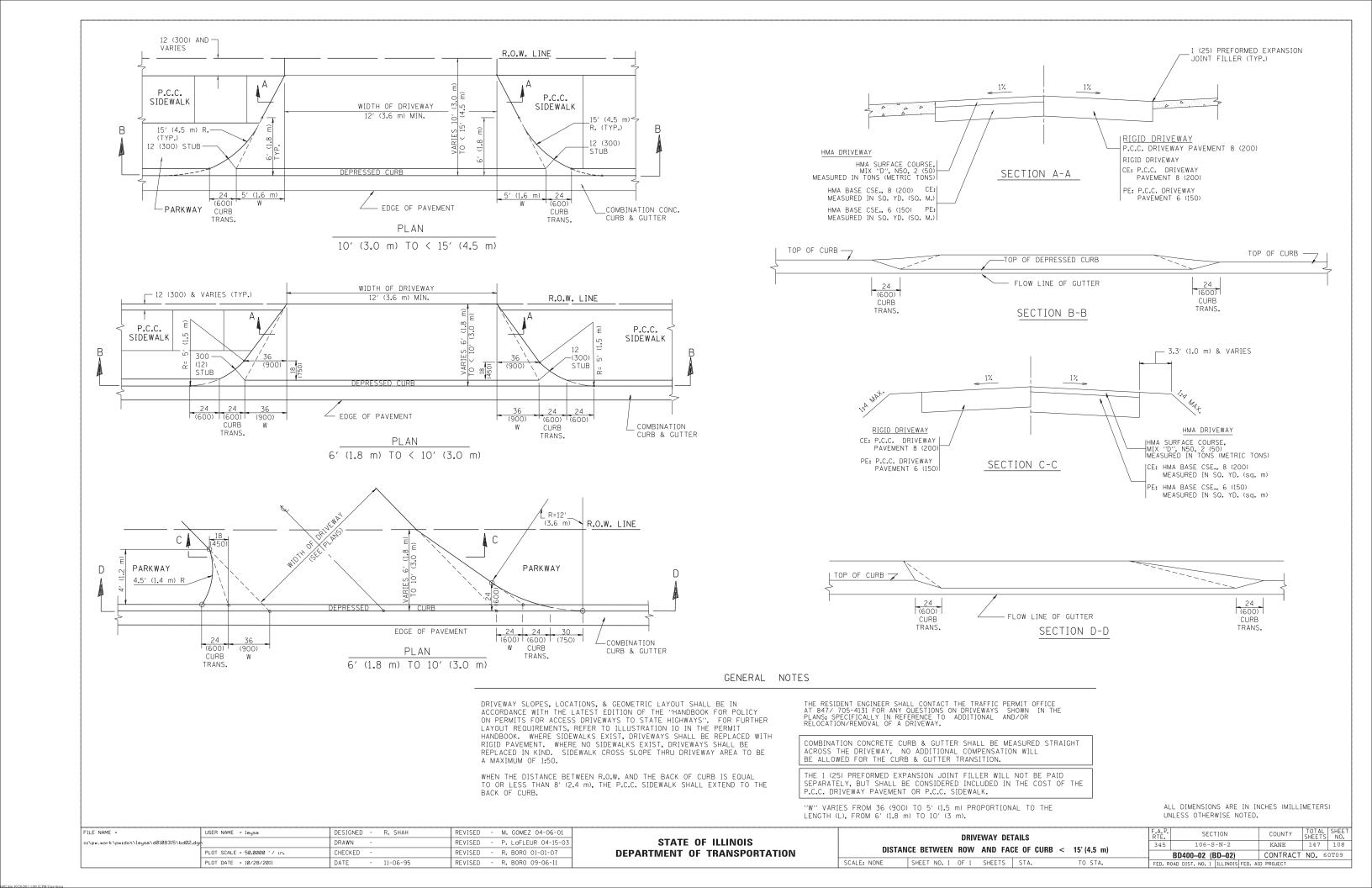
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

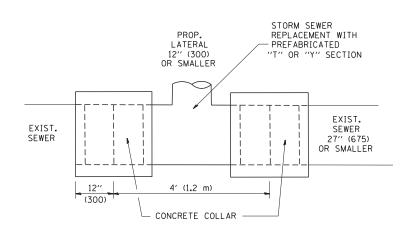
SCALE: NONE

FILE NAME =	USER NAME = leysa	DESIGNED -	R. SHAH	REVISED	- P. LaFLUER 04-15-03
c:\pw_work\pwidot\leysa\d0108315\bd01.dgr		DRAWN -		REVISED	- R. BORO 01-01-07
	PLOT SCALE = 50.0000 '/ in.	CHECKED -		REVISED	- R. BORO 06-11-08
	PLOT DATE = 9/6/2011	DATE -	11-04-95	REVISED	- R. BORO 09-06-11

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

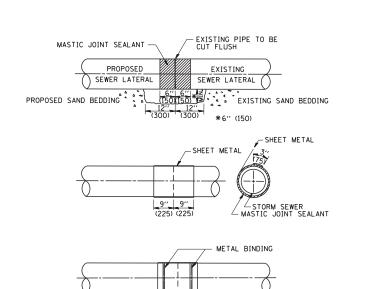
	DF	DRIVEWAY DETAILS – DISTANCE BETWEEN R.O.W.			SECTION	COUNTY TOTAL SHEETS		SHEET NO.		
AND FACE OF CURR 8. EDGE OF SHOULDER > - 15' (4.5 m) 345 106-S-N-2 KANE 147 10	AND FACE OF CURB & EDGE OF SHOULDER > = 15'(4.5 m)		345	106-S-N-2	KANE	147	107			
AND TACE OF CORB & EDGE OF SHOOLDER >= 13 (4.3 III) BD0156-07 (BD-01) CONTRACT NO. 60T09				BD0156-07 (BD-01)	CONTRACT	NO. 60	T09			
SHEET NO. 1 OF 1 SHEETS STA. TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		SHEET NO. 1 OF 1 SHEE	S STA.	TO STA.	FED. R	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





DETAIL "A"

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



 $\frac{3''}{(75)}$ $\frac{3''}{(75)}$

-CLASS SI CONCRETE

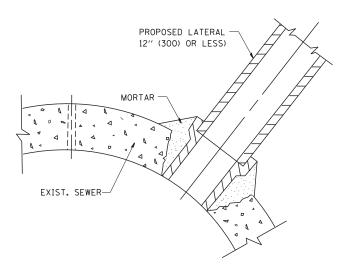
12" (300) MIN

<u>DETAIL "B"</u> CLASS SI CONCRETE COLLAR

O.D. + 12" (300) MIN.

CONSTRUCTION SEQUENCE

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



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

- I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

 A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE
 - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

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

GENERAL

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

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

BASIS OF PAYMENT

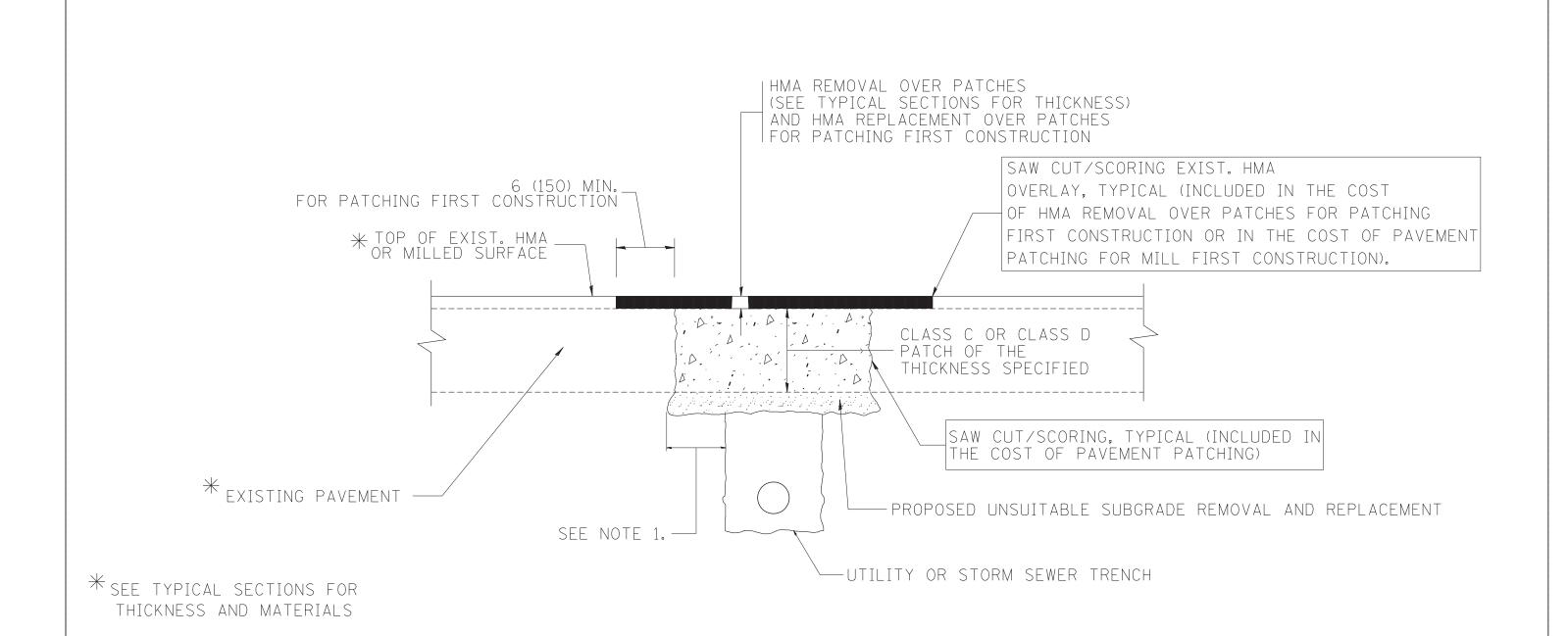
TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING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

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

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

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

FILE NAME =	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92			DETAIL OF STORM SEWER		F.A.P.	SECTION	COUNTY	TOTAL	SHEET
W:\diststd\22x34\bd07.dgn		DRAWN -	REVISED - R. SHAH 09-09-94	STATE OF ILLINOIS				345	106-S-N-2	KANE	147	109
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - R. SHAH 10-25-94	DEPARTMENT OF TRANSPORTATION	CONNECTION TO EXISTING SEWER				BD500-01 (BD-7)	CONTRACT	NO. 6	JT09
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.		FED. ROA	D DIST. NO. 1 ILLINOIS FED. A			\neg



NOTES:

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

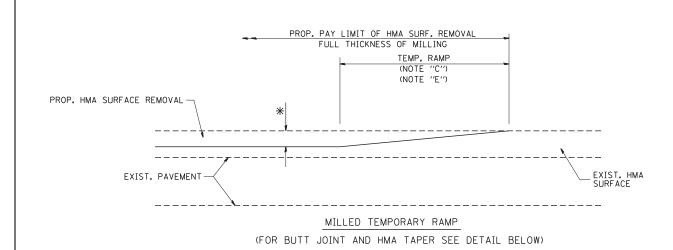
SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

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

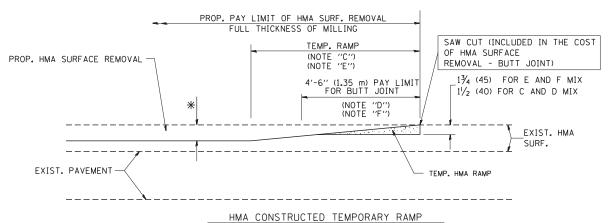
SEQUENCE OF CONSTRUCTION (MILLING FIRST)

- 1. MILL HMA FIRST IF THERE IS AT LEAST 41/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
- 2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

FILE NAME =	USER NAME = bauerd1	DESIGNED - R. SHAH	REVISED -	A. ABBAS 04-27-98			PAVEMENT PATCHING FOR		RTE.	SECTION	COUNTY	SHEETS	NO.
c:\projects\diststd22x34\bd22.dgn		DRAWN -	REVISED -	R. BORO 01-01-07	STATE OF ILLINOIS				345	106-S-N-2	KANE	147	110
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -	R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION		HMA SURFACED PAVEMENT			BD400-04 (BD-22)	CONTRAC	T NO. 6	OT09
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED -	K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. RO	AD DIST. NO. 1 ILLINOIS FED.	. AID PROJECT		



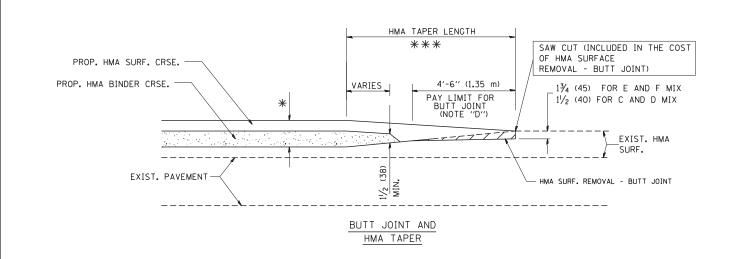
OPTION 1



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2

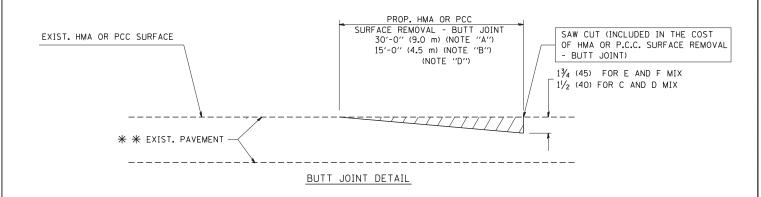
TYPICAL TEMPORARY RAMP

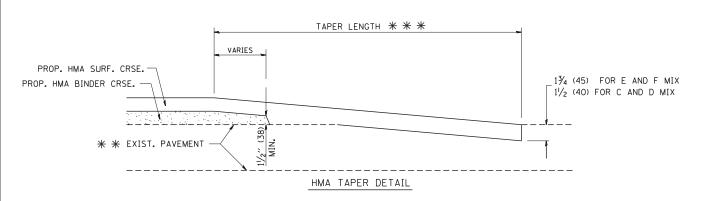


TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

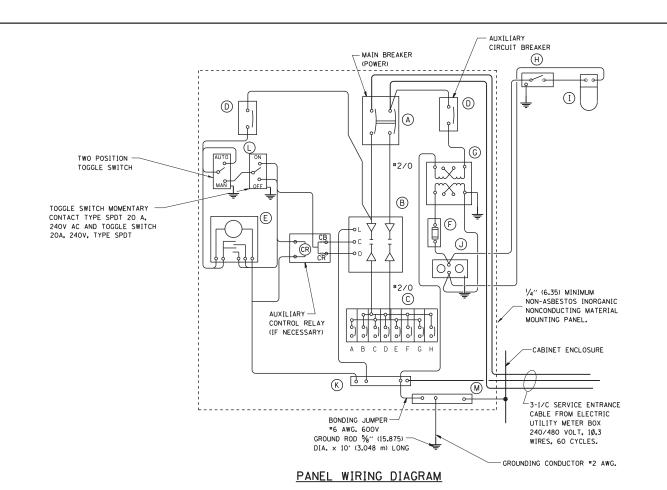
NOTES

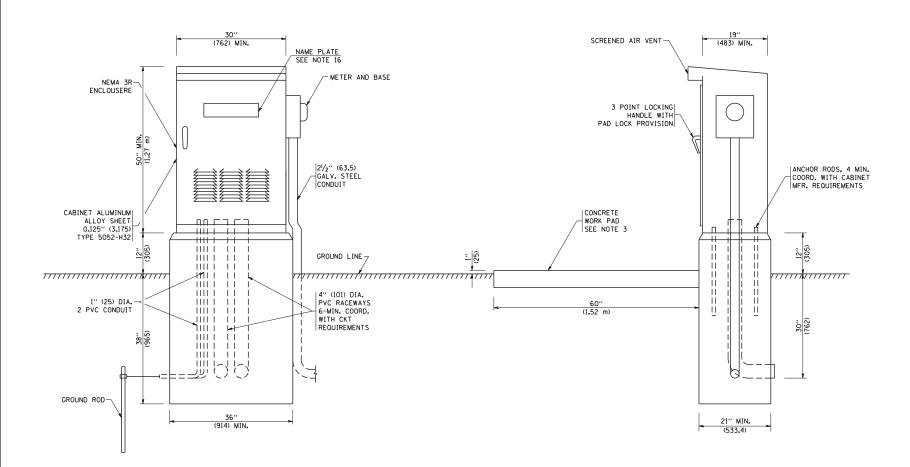
- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- ** * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

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

SCALE: NONE





PANEL EQUIPMENT

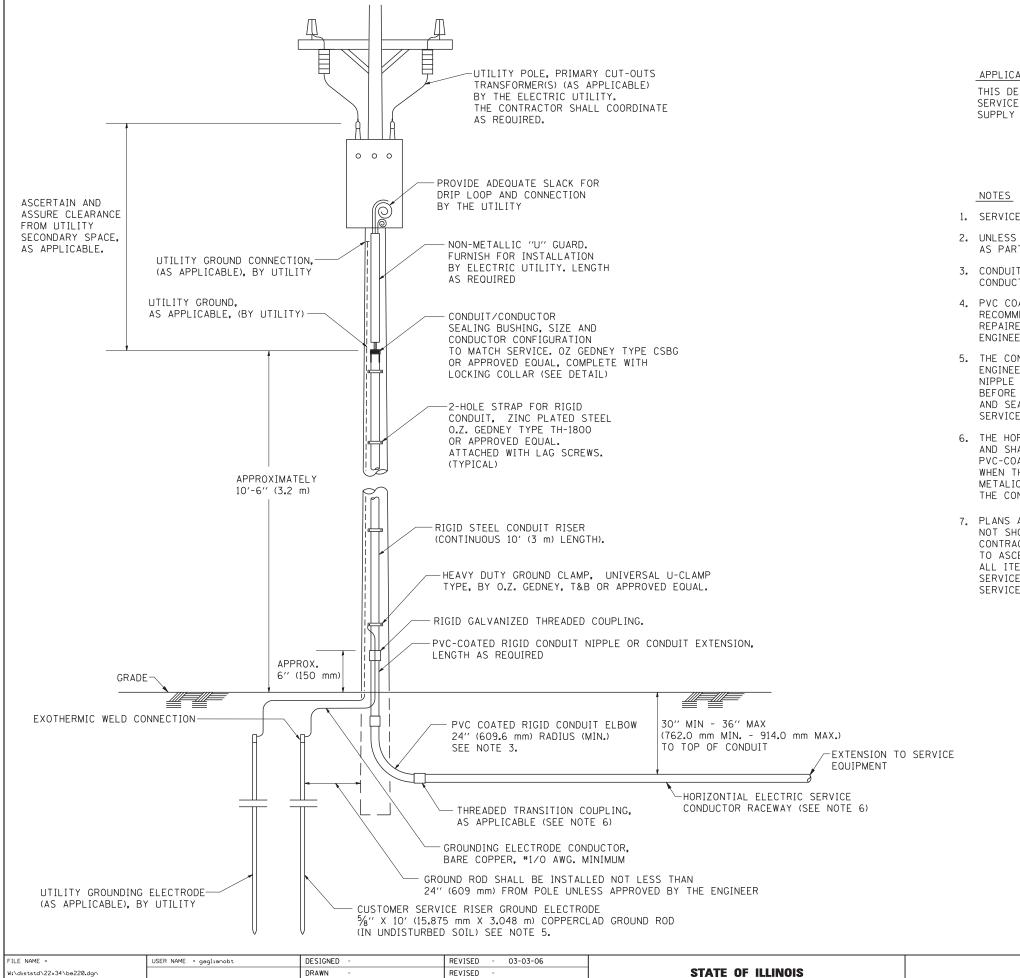
		BILL OF MATERIAL
ITEM	QUANTITY	DESCRIPTION
Α	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
В	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
С	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME , 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER. 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
Ε	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 Hz.
Н	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
К	1	COPPER GROUND BUS $1/4$ " (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BO)
М	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS

NOTES:

- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- 2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- 3. IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL, LEVEL THE 12. ALL WIRING WITHIN THE CABINET SHALL BE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) \times 60" (18.288 m) \times 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- 4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- 5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- 6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
- 7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- 8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- 9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.

- 10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- 11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- COLOR CODED AS INDICATED. R = RED BL = BLUE B = BLACK Y = YELLOW
- 13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- 14. ALL WIRING SHALL BE NEATLY DRESSED AND
- 15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 16. 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-20-04			LIGHTING CONTROLLER		F.A.P.	SECTION	COUNTY	TOTAL	SHEET
W:\diststd\22x34\be215.dgn		DRAWN -	REVISED -	STATE OF ILLINOIS		CINCLE DOOR		345	106-S-N-2	KANE	147	112
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		SINGLE DOOR			BE-215	CONTRACT	NO. 607	.09
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO ST	TA.	FED. ROA	D DIST. NO. 1 ILLINOIS FED. AI			\neg



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DATE

PLOT DATE = 1/4/2008

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DEPARTMENT OF TRANSPORTATION

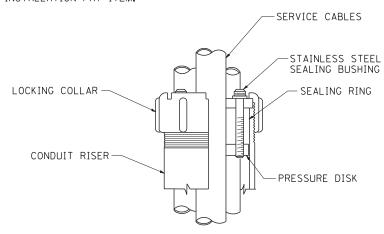
SCALE: NONE

SHEET

APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

- 1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- 2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- 3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- 4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- 5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- 6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE). THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- 7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.

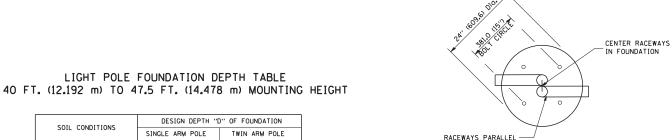


SEALING BUSHING DETAIL

ELECTRIC SERVICE INSTALLAT	TION	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEE NO.
AERIAL REMOTE DISCONNE	PT	345	106-S-N-2	KANE	147	113
ALNIAL, REMOTE DISCONTE	<u>, </u>		BE-220	CONTRACT	NO. 6	0T09
T NO. 1 OF 1 SHEETS STA.	TO STA.	FED. R	OAD DIST. NO. 1 ILLINOIS FED.	AID PROJECT		

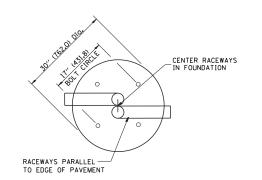






TO EDGE OF PAVEMENT

TOP VIEW



TOP VIEW

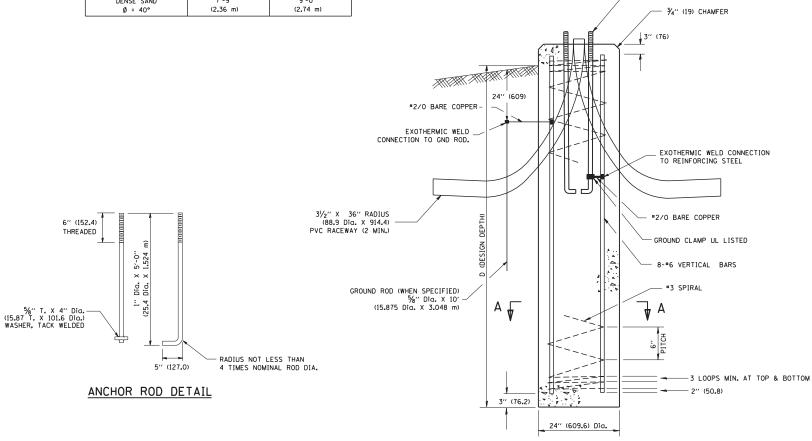
ANCHOR ROD

4-1" Dia, X 5'-0"

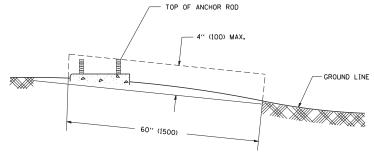
(4-25.4 Dia. X 1.524 m)

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

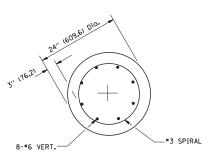
LIGHT POLE FOUNDATION DEPTH TABLE



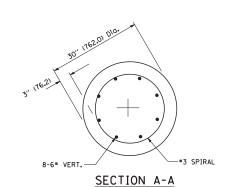
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SCALE: NONE

NOTES

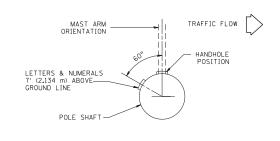
- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 $\rm In.)$ ABOVE THE FINISHED GRADE WITHIN A 60 $\rm In.$ (1.5 m) CHORD ACROSS 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.
- 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
- 6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- 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
- 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 2¾" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- 12. THE CONTRACTOR SHALL USE A *3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE *3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- 13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- 14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

TILL NAME -
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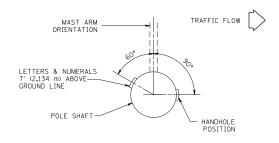
USER NAME = gaglianobt	DESIGNED -	REVISED - 04-22-02
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -
PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

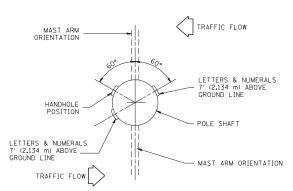
	LIGHT POLE FO	UNDATION		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10' /12 10	32 m) TO 47 1/2' (14.478 m)	M U 45" /2	01 mm\ DOLT CIDCLE	345	106-S-N-2	KANE	147	116
40 (12.18	2 III) 10 47 V2 (14.476 III)	M.U. 19 (9	of Hill / BOLT CINCLE		BE-301	CONTRACT	NO. 60	OT09
ΙE	SHEET NO. 1 OF 1 SHEET	S STA.	TO STA.	FFD. RO	AD DIST. NO. 1 THE INDIS FED. A	ID PROJECT		



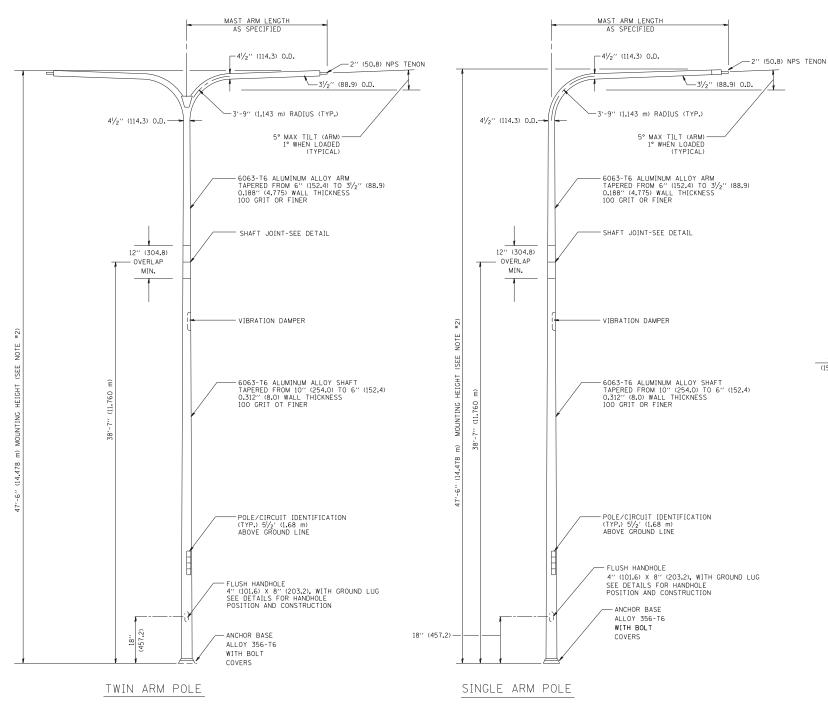
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



- POLE SHAFT 3%" (9.525)-16 TAPPED BOLT HOLE FOR GROUNDING CONNECTOR 4" (101.6) × 8" (203.2) HAND HOLE HANDHOLE DETAIL

(N.T.S.)

SCALE: NONE

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.
- NOT BE ALLOWED.

 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.

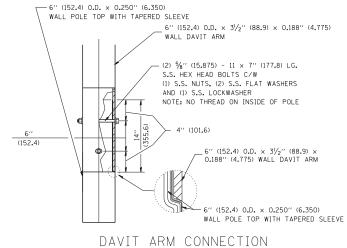
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.

 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.

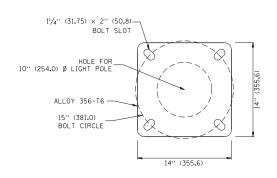
 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.

 8. LIGHTING UINTL DEPOTIFICATION NUMBERS

- 8. LIGHTING UNIT IDENTIFICATION NUMBERS
 SHALL BE INSTALLED BEFORE THE LIGHTING
 UNIT IS ENERGIZED.



[14" (355.6) OVERLAP SHOWN]



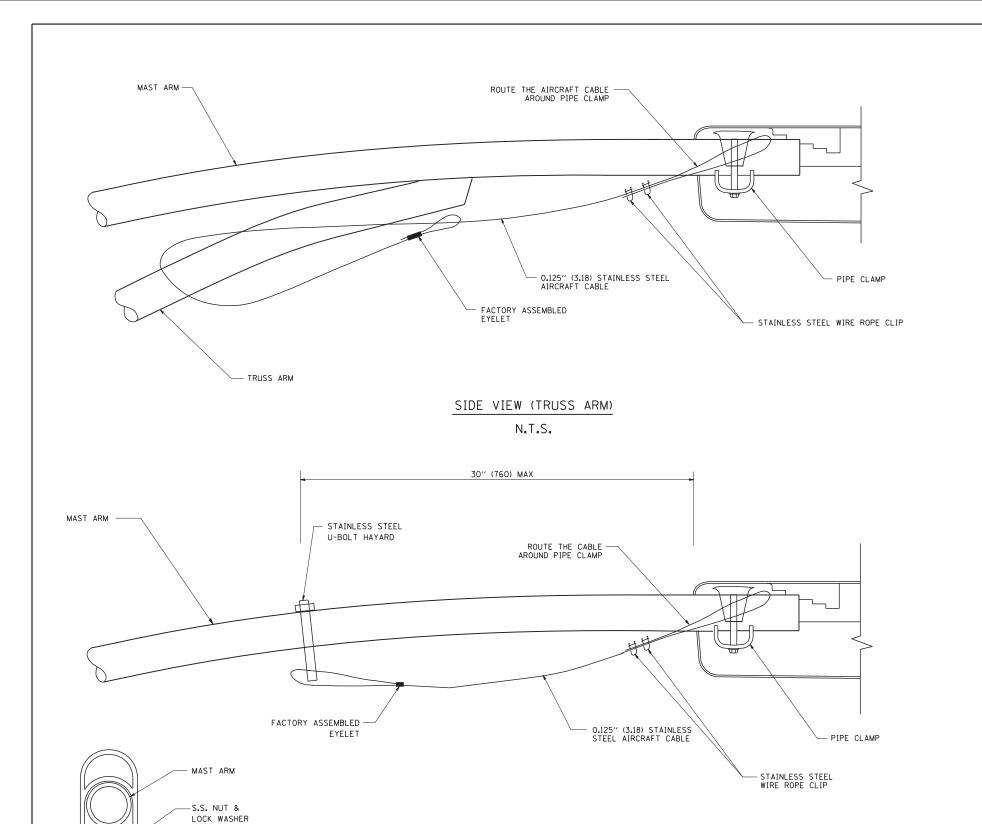
LIGHT POLE BASE PLATE DETAIL

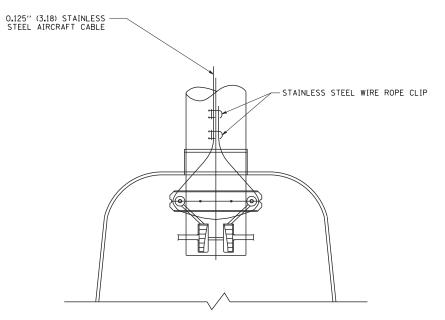
(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)

FILE NAME =	USER NAME = leysa	DESIGNED -	REVISED	-	D. DREW 05-07-92
c:\pw_work\pwidot\leysa\d0108315\be410.dg	n	DRAWN - LEY	REVISED	-	R. TOMSONS 09-06-00
	PLOT SCALE = 50.0000 '/ in.	CHECKED -	REVISED	-	R. TOMSONS 09-02-03
	PLOT DATE = 4/4/2013	DATE -	REVISED	-	R. TOMSONS 01-18-13

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

		DAVI	T LIGHT F	POLE		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	47'-6" (14,478 m) MOUNTING HEIGHT						106-S-N-2	KANE	147	117
	47-0 ((14.470	III) IVIOOIV	IIING IILI	diii		BE-410	CONTRACT	NO. 6	0T09
SHEET NO. 1 OF 1 SHEETS STA. TO STA.					TO STA.	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. AI	D PROJECT		





BOTTOM VIEW N.T.S.

NOTES:

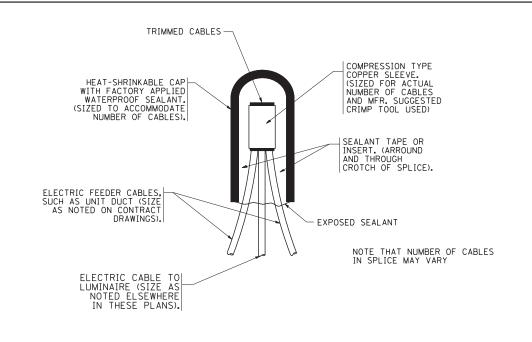
- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
- 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
- 3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
- 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

STAINLESS STEEL U-BOLT HAYARD

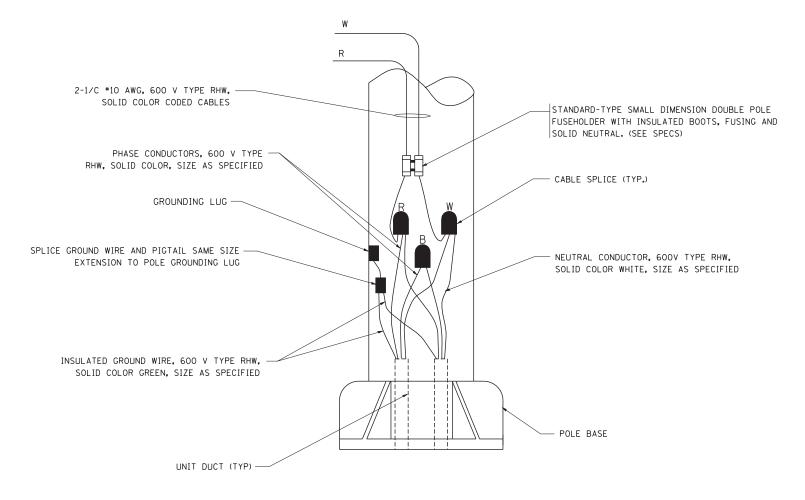
N.T.S.

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03			LUMINAIRE SAFETY CABLE ASSEMBLY	F.A.P.	SECTION	COUNTY	TOTAL	SHEET
W:\diststd\22x34\be701.dgn		DRAWN -	REVISED -	STATE OF ILLINOIS		LUMINAIRE SAFETT GABLE ASSEMBLY	345	106-S-N-2	KANE	147	118
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				BE-701	CONTRACT	T NO. 6	0T09
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED BO		ATD PROJECT		$\overline{}$



TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03			MISC. ELECTRICA	I DETAILS	2	F.A.P.	SECTION	COUNTY	TOTAL SHEET
W:\diststd\22x34\be702.dgn		DRAWN -	REVISED -	STATE OF ILLINOIS			a DEIMILO	•	345	106-S-N-2	KANE	147 119
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		SHEET	Α			BE-702	CONTRAC	T NO. 60T09
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD		AID PROJECT	

12" (305) MAXIMUM WIDTH EXCEPT AS APPROVED BY THE ENGINEER

12" (305)

WARNING TAPE AS SPECIFIED

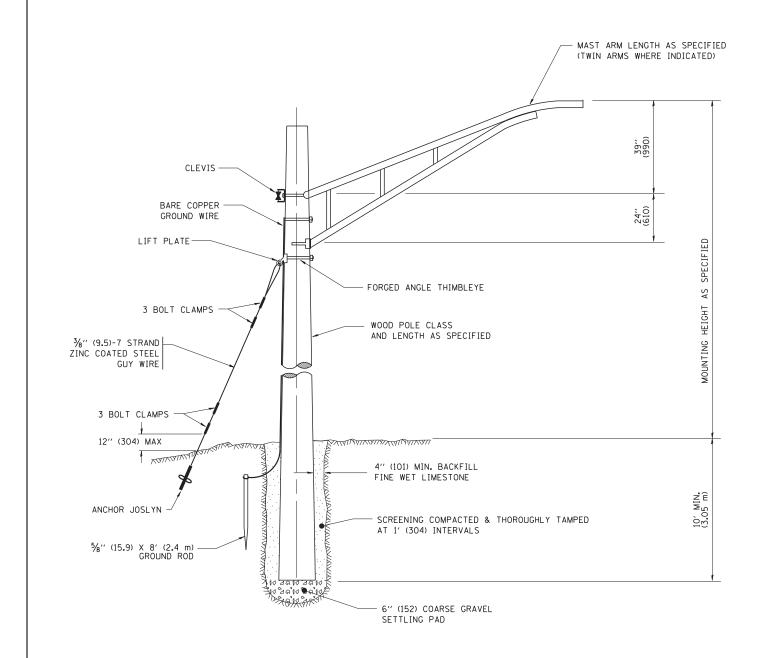
UNIT DUCT OR OTHER RACEWAY
AND WIRING AS PER PLANS. COMPLETE

WITH INTERNAL INSULATED EQUIPMENT GROUND WIRE.

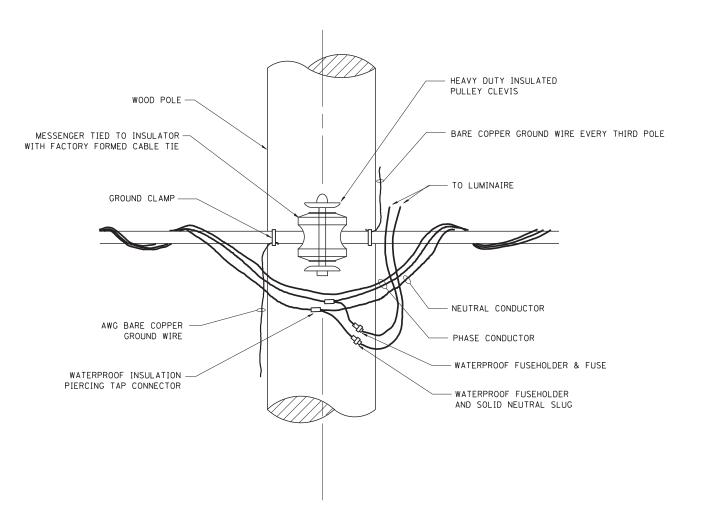
TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

30" (762) MINIMUM COVER



TEMPORARY LIGHT POLE DETAIL

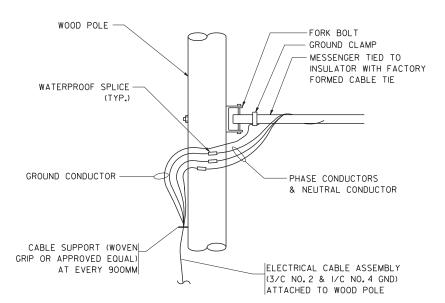


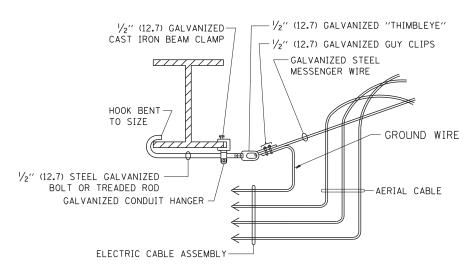
TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

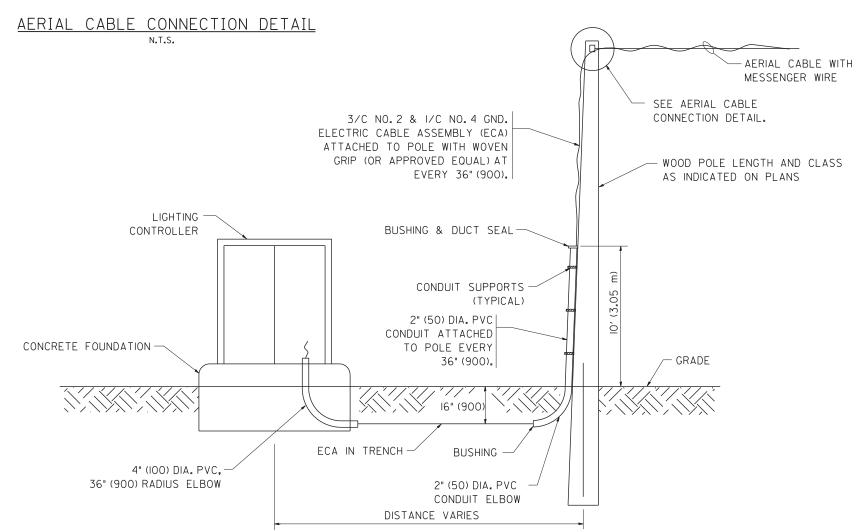
1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03		TEMPORARY LIGHT POLE DETAILS		SECTION	COUNTY	TOTAL SHEET
W:\diststd\22x34\be800.dgn		DRAWN -	REVISED -	STATE OF ILLINOIS	TENT STRUCT LIGHT TOLK DETRIES	345	106-S-N-2	KANE	147 120
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION			BE-800	CONTRACT	NO. 60T09
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROA		ID PROJECT	





AERIAL CABLE ATTACHED TO STRUCTURE NOT TO SCALE



NOTES:

- 1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
- 2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
- 3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
- 4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

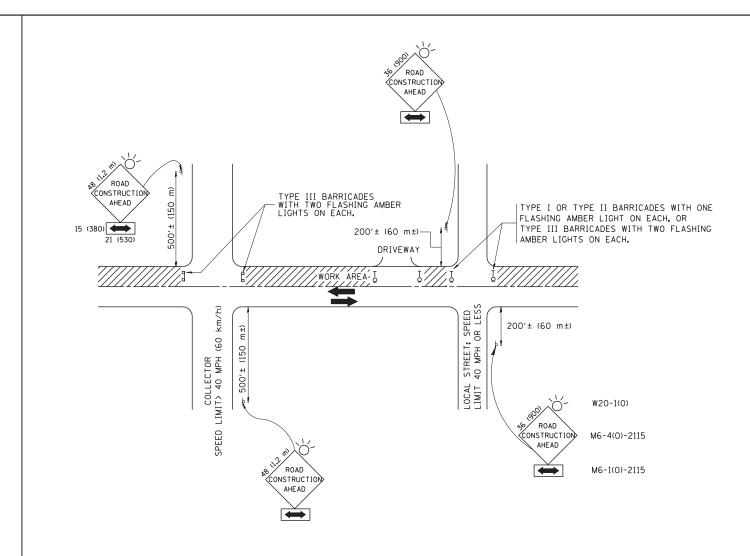
WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL

N.T.S.

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03
W:\diststd\22x34\be801.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE	0F	ILLINOIS
DEPARTMENT ()F '	TRANSPORTATION

		TEMPORARY AERIAL CABL	F.A.P. RTE.	SECTION	COUNTY TOTAL SHEETS		SHEET NO.				
ı							KANE	147	121		
ı				BE-801	CONTRACT NO. 60T09						
ı	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. RO	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- o) ONE ROAD CONSTRUCTION AHEAD SIGN 48×48 (1.2 m \times 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

SCALE: NONE

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

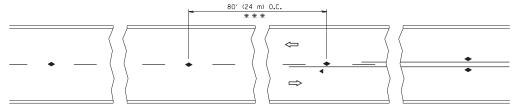
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME =	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
W:\diststd\22x34\tc10.dgn		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

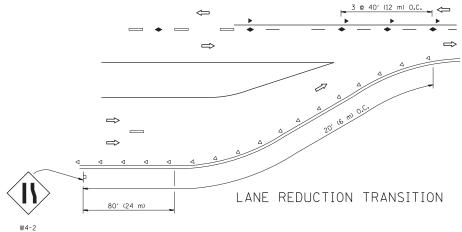
STATI	E OF	: ILLINOIS
DEPARTMENT	OF	TRANSPORTATION

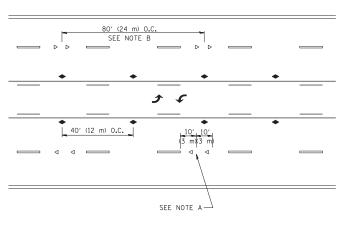
TRAFFIC CONTRO	L AND P	ROTECTIO	N FOR	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.		
SIDE ROADS, INTER	CECTIONS	AND DR	IVEWAVE	345	106-S-N-2	KANE	147	122		
SIDE NUADS, INTER	320110143	AND DR	IVEWAIS	TC-10 CONTRACT NO. 6						
SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	FED. R	DAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT				



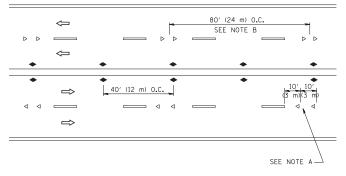
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

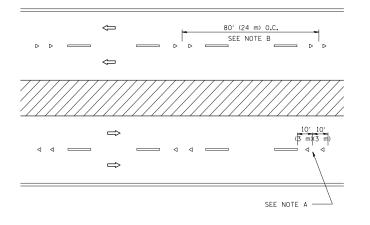




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

- 1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

---- YELLOW STRIPE

── WHITE STRIPE

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/0)
- ◆ TWO-WAY AMBER MARKER

DESIGN NOTES

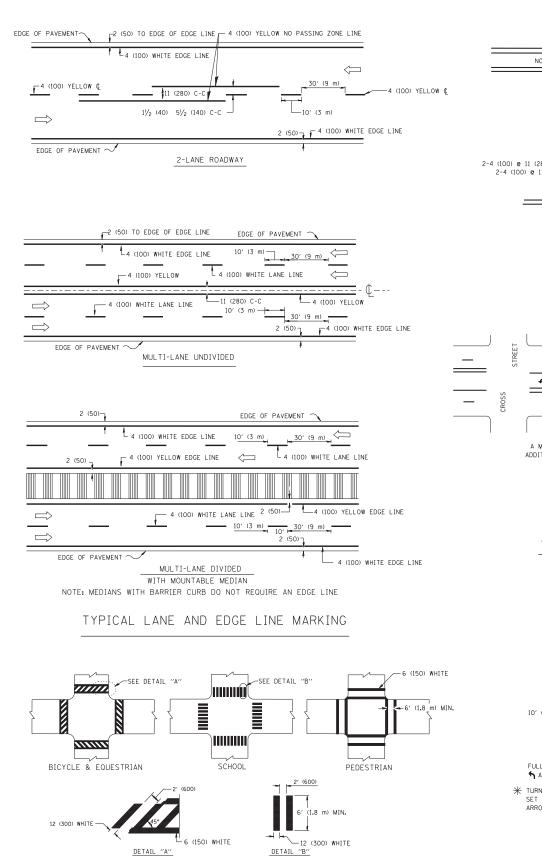
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

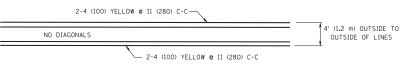
3 © 80' (24 m) 0.C. ** 40' (12 m) 0.C. 40' (12 m) 0.C.	MINIMUM OF 3 W EQUALLY SPACED 40' (12 m) O.C. * SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS
	* * WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

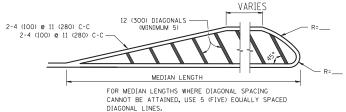
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = leyso	DESIGNED -	REVISED - T. RAMMACHER 09	-19-94			TYPIC	AL APPLICA	ZMOITA		RTE.	SECTION	COUNTY	SHEETS	NO.
c:\pw_work\pwidot\leysa\d0108315\tc11.dgn		DRAWN -	REVISED -T. RAMMACHER 03	-12-99	STATE OF ILLINOIS	DAVOED					345	106-S-N-2	KANE	147	123
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 01-	-06-00	DEPARTMENT OF TRANSPORTATION	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		LUW RESISTANT)	TC-11		CONTRACT NO. 60TO		T09		
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09	-09-09		SCALE: NONE	SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	FED. ROAD	DIST. NO. 1 ILLINOIS FED.	AID PROJECT		



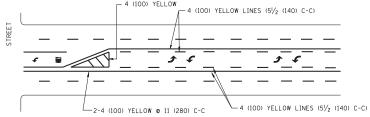


4' (1.2 m) WIDE MEDIANS ONLY

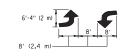


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

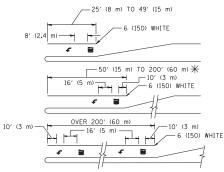


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

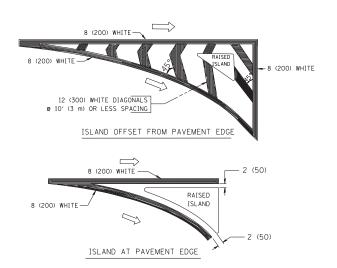


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²) ONLY AREA = 20.8 SO. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

			I	I
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW: EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 51/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EGUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 5EE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1,2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE
	© 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS		WHITE: ONE WAY TRAFFIC	SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (0VER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

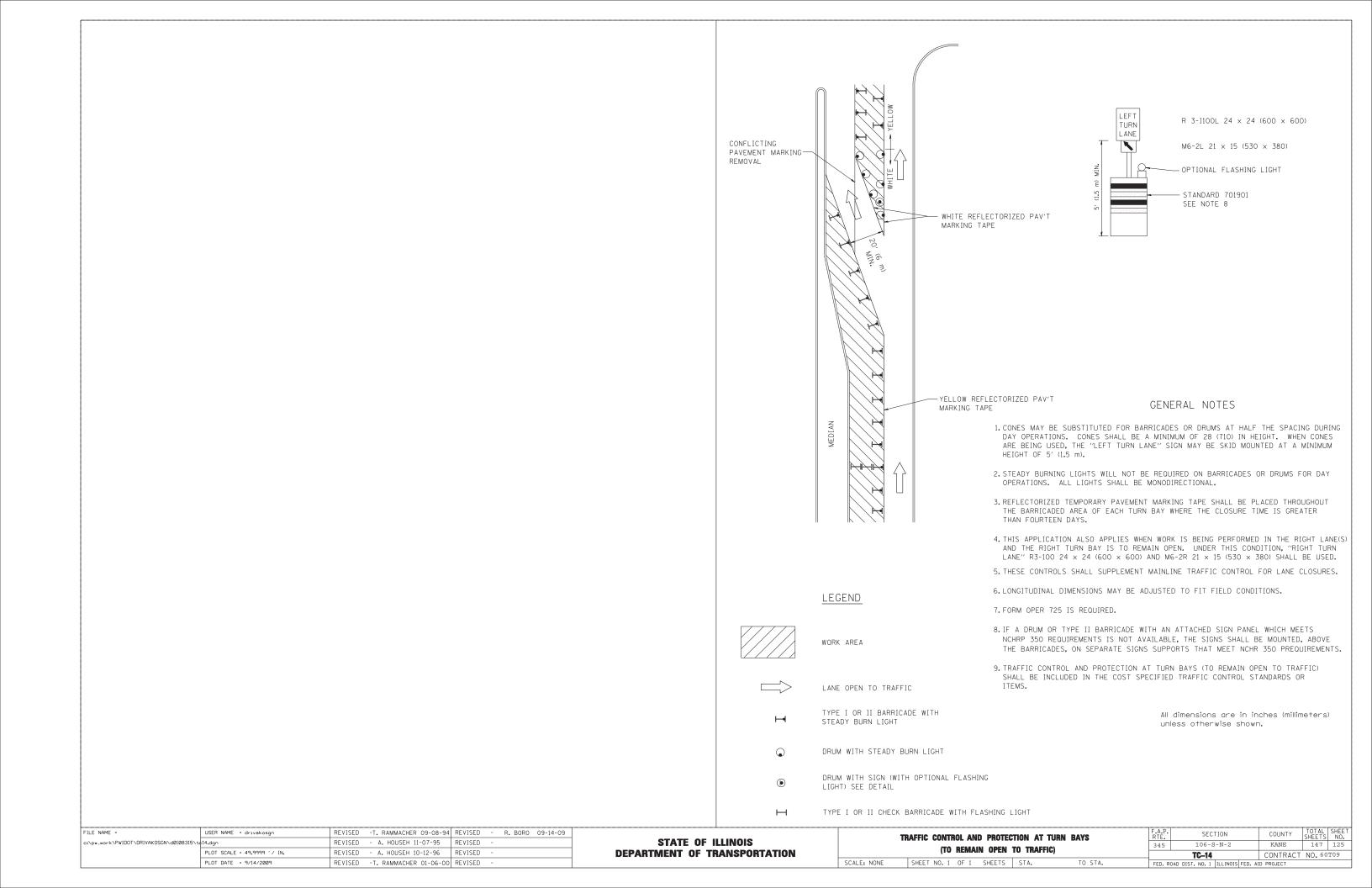
TYPICAL	TURN	LANE	MARKING

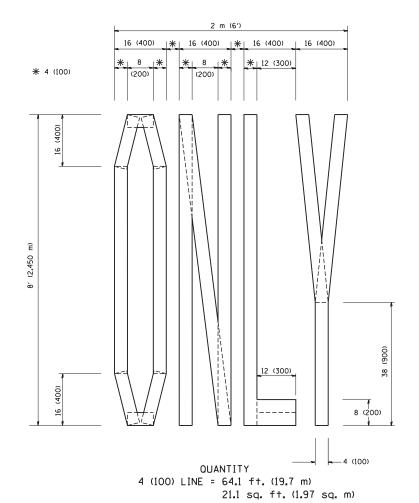
FILE NAME =	USER NAME = drivakosgn	DESIGNED	-	EVERS	REVISED	-T.	RAMMACHER	10-27-94
c:\pw_work\pwidot\drivakosgn\d0108315\tc	l3.dgn	DRAWN	-		REVISED	- C.	JUCIUS	09-09-09
	PLOT SCALE = 50.000 '/ IN.	CHECKED	-		REVISED	-		
	PLOT DATE = 9/9/2009	DATE	-	03-19-90	REVISED	-		

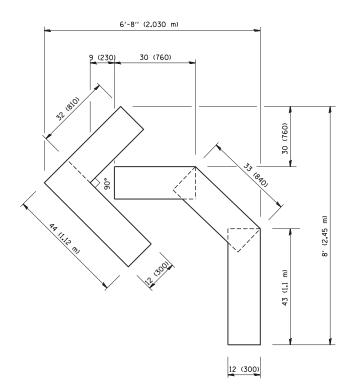
TYPICAL CROSSWALK MARKING

STATE OF	ILLINOIS
DEPARTMENT OF 1	TRANSPORTATION

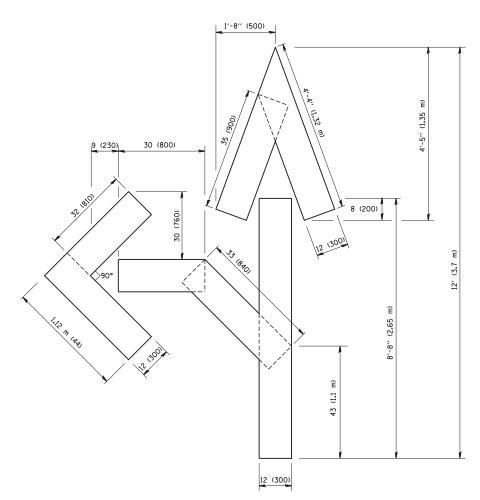
	DISTRICT ON	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
	TYPICAL PAVEMENT	345	106-S-N-2	KANE	147	124		
	ITPICAL PAVEMENT		TC-13	CONTRACT NO. 60T09				
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. RO	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			







OUANTITY 4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.39 sq. m)



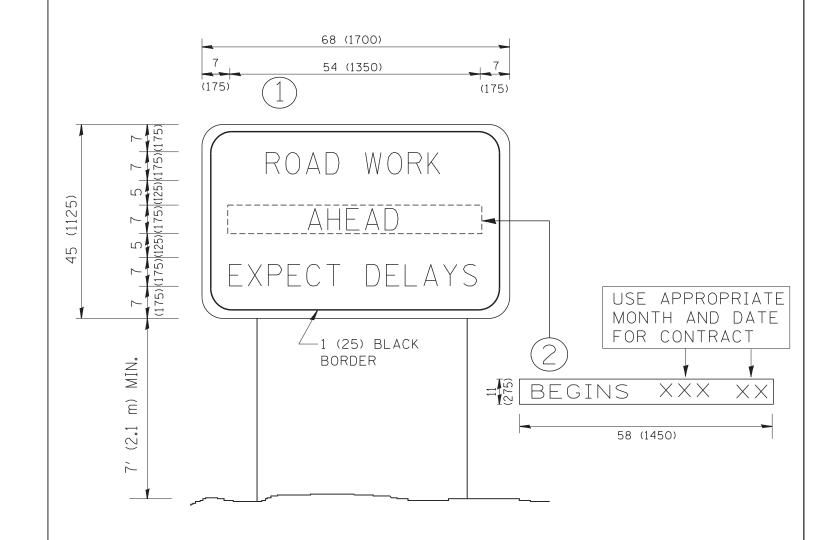
OUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
W:\diststd\22x34\tc16.dgn		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00

STATE	0F	ILLINOIS
DEPARTMENT	OF	TRANSPORTATION

	PAVEMENT MA	RTE. SECTION		COUNTY	SHEETS	NO.	
	EOI	TRAFFIC ST	345	106-S-N-2	KANE	147	126
	FUI	I INAFFIC 31	TC-16 CONTRACT NO. 60TO				
SCALE: NONE	SHEET NO. 1 OF	1 SHEETS	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. AI	D PROJECT		



NOTES:

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

	PLOT SCALE = 50.000 '/ IN. PLOT DATE = 1/4/2008	CHECKED -	REVISED - T. RAMMACHER 02-02-99 REVISED - C. JUCIUS 01-31-07	DEPARTMENT OF TRANSPORTATION	SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.		TC-22	CONTRACT NO. 60	
W:\diststd\22x34\tc22.dgn		DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS	INFORMATION SIGN	345	106-S-N-2	KANE	147 127
FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97		ARTERIAL ROAD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEE

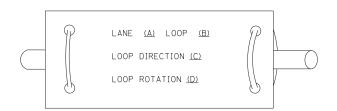
TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R	\bowtie		EMERGENCY VEHICLE LIGHT DETECTOR	R≪	≪	◄	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
AILROAD CONTROL CABINET				CONFIRMATION BEACON	R _{O()}	○ —(]				\prec	
MMUNICATIONS CABINET	C C R	ECC	CC	HANDHOLE	R □			COAXIAL CABLE		<u> </u>	<u> </u>
STER CONTROLLER		EMC	MC		R			VENDOR CABLE FOR CAMERA			
STER MASTER CONTROLLER	R	ЕММС	MMC	HEAVY DUTY HANDHOLE		Н	H	COPPER INTERCONNECT CABLE,			
NINTERRUPTABLE POWER SUPPLY	UPS	EUPS	UPS	DOUBLE HANDHOLE	R O		0	NO. 18 3 PAIR TWISTED, SHIELDED			
RVICE INSTALLATION, POLE OR (G) GROUND MOUNT	- <u></u>	- <u>□</u> -P	- <u>P</u>	JUNCTION BOX UNDERGROUND CONDUIT.	\big 		v	FIBER OPTIC CABLE		—(12F)—	
LEPHONE CONNECTION POLE OR (G) GROUND MOUNT	R	P	P	GALVANIZED STEEL (UC) TEMPORARY SPAN WIRE, TETHER WIRE,	R			NO. 62.5/125, MM12F FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		— <u>24</u> F—	<u> </u>
EEL MAST ARM ASSEMBLY AND POLE	R	0	•	AND CABLE				NO. 02.37123, MINITED SWILET		,	
UMINUM MAST ARM ASSEMBLY AND POLE	R	0		COMMON TRENCH			СТ	FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F		—36F—	—(36F)—
EEL COMBINATION MAST ARM SEMBLY AND POLE WITH LUMINAIRE	^R O–¤——	0-¤	• ×	COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC	GROUND ROD AT (C) CONTROLLER.			
EEL COMBINATION MAST ARM SEMBLY AND POLE WITH PTZ CAMERA	R PTZ 1	Q	PTZ	SYSTEM ITEM INTERSECTION ITEM		S	S IP	(H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C III ├──	^C ıl ⊢⊸
CNAL POST	RO	0	•	REMOVE ITEM	R			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
MPORARY WOOD POLE (CLASS 5 OR	o R⊗	⊗	•	RELOCATE ITEM	RL						
TTER) 45 FOOT (13.7m) MINIMUM				ABANDON ITEM	А			STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	ORMF		
Y WIRE	R	>	>	12" (300mm) TRAFFIC SIGNAL SECTION		R	R	ALUMINUM MAST ARM POLE AND	RMF		
GNAL HEAD	\rightarrow		-	12" (300mm) RED WITH 8" (200mm)		R		FOUNDATION TO BE REMOVED	<u></u>		
NAL HEAD CONSTRUCTION STAGES MBERS INDICATE THE CONSTRUCTION STAGE)			→ ²	YELLOW AND GREEN TRAFFIC SIGNAL FACE			R	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF ○—¤———		
NAL HEAD WITH BACKPLATE	+⊳ ^R	+->	+-			Y	Y				
NAL HEAD OPTICALLY PROGRAMMED	R →>′′P′′	— ▽ ′′p′′	→ "P"	SIGNAL FACE			G ◆ Y	SIGNAL POST AND FOUNDATION TO BE REMOVED	RPF O		
ASHER INSTALLATION DENOTES SOLAR POWER)	R O- ▷ "F"	O-⊳"F"	● → "F"			• ©	◆ G	INTERSECTION & SAMPLING (SYSTEM) DETECTOR			IS
DESTRIAN SIGNAL HEAD	R -□	-0	-			R	R	SAMPLING (SYSTEM) DETECTOR		[5]	S
DESTRIAN PUSHBUTTON DETECTOR	R	©	©	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		()	G	QUEUE DETECTOR		[0]	0
CESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	@APS	APS	"RB" INDICATES REFLECTIVE BACKPLATE		(+ y) (+ c)	← Y				
UMINATED SIGN	R					"P"	"P"	PREFORMED QUEUE DETECTOR		ÎPQÎ	PO
D LEFT TURN''				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		OW W		PREFORMED INTERSECTION AND SAMPLING		PIS	PIS
LUMINATED SIGN O RIGHT TURN''	R			12'' (300mm) PEDESTRIAN SIGNAL HEAD				(SYSTEM) DETECTOR			
TECTOR LOOP, TYPE I		[₁		INTERNATIONAL SYMBOL, OUTLINED				PREFORMED SAMPLING (SYSTEM) DETECTOR		PS ₁	PS
FORMED DETECTOR LOOP		; ; ;	P	12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID		()	*	RAILROA	D SYMBO	DLS	
ROWAVE VEHICLE SENSOR	R [M]]	M	M	PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C C D	₽ C ★ D			<u>EXISTING</u>	<u>PROPOSED</u>
DEO DETECTION CAMERA	R [V]]		V	RADIO INTERCONNECT	## * 0	##+		RAILROAD CONTROL CABINET			
DEO DETECTION ZONE				William The Francisco			· 	RAILROAD CANTILEVER MAST ARM	5	XOX X X	XCX
	R	шш	!!!!!!	RADIO REPEATER	RERR	ERR	RR	FLASHING SIGNAL	2	X O X	X⊖X
N, TILT, ZOOM CAMERA	PTZ	PTZ	PTZ◀	DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE,		<u>(5)</u>					
RELESS DETECTOR SENSOR	RW	W	W	ALL DETECTOR LOOP CABLE TO BE SHIELDED		\sim		CROSSING GATE		X0 X >	X0 X -
RELESS ACCESS POINT	R			GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1	CROSSBUCK		*	*
NAME = USER NAME = footemj		ESIGNED - DAG/BCK		- DAG 1-1-14	- or	•		DISTRICT ONE	F.A.P. RTE.	SECTION	COUNTY TOTAL
.work\pwidot\footemj\d0108315\ts05.dgn PLOT SCALE = 50.0000 '		RAWN - BCK HECKED - DAD	REVISED REVISED		OF ILLINOI			STANDARD TRAFFIC SIGNAL DESIGN DETAILS	345	106-S-N-2 TS-05	KANE 147 CONTRACT NO.

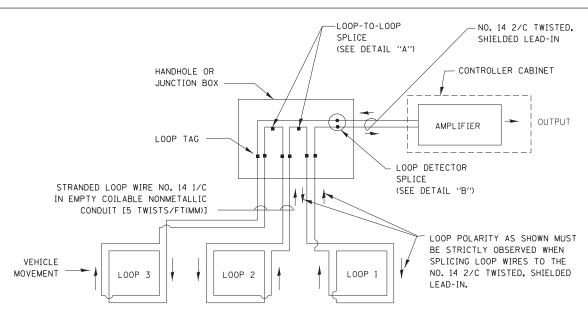
LOOP DETECTOR NOTES

- 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

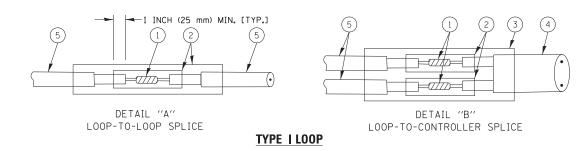


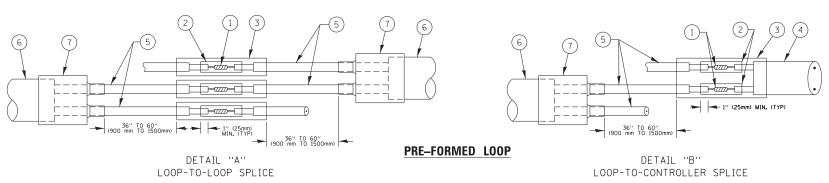
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \$1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



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.





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.

SCALE: NONE

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

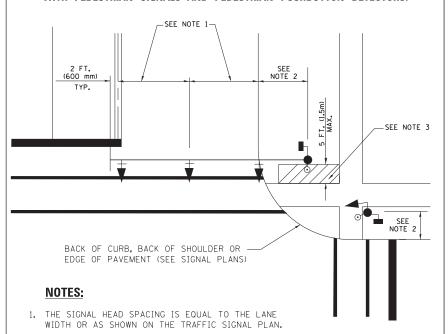
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

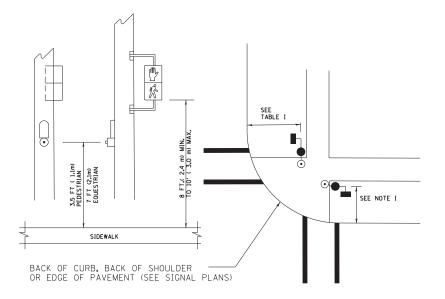
	DIS	STRICT OF	NE .		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
	STANDARD TRAFFI	C CICNIAI	DECIGN	DETAILS	345	106-S-N-2	KANE	147	129
STANDARD TRAFFIC SIGNAL DESIGN DETAILS						TS-05	CONTRACT	NO. 6	0T09
	SHEET NO. 2 OF 7	SHEETS	STA.	TO STA.	FED. R	OAD DIST, NO. 1 ILLINOIS FED. A	ID PROJECT		

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.



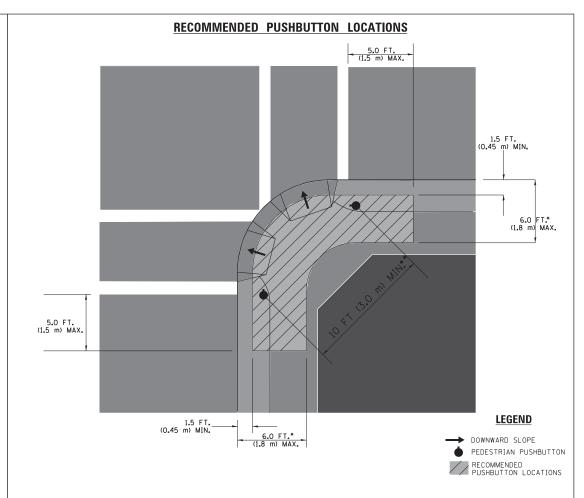
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE 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."

<u>Pedestrian Signal Post</u> <u>and</u> <u>Pedestrian Push Button Post</u>



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



- * 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:

- 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:

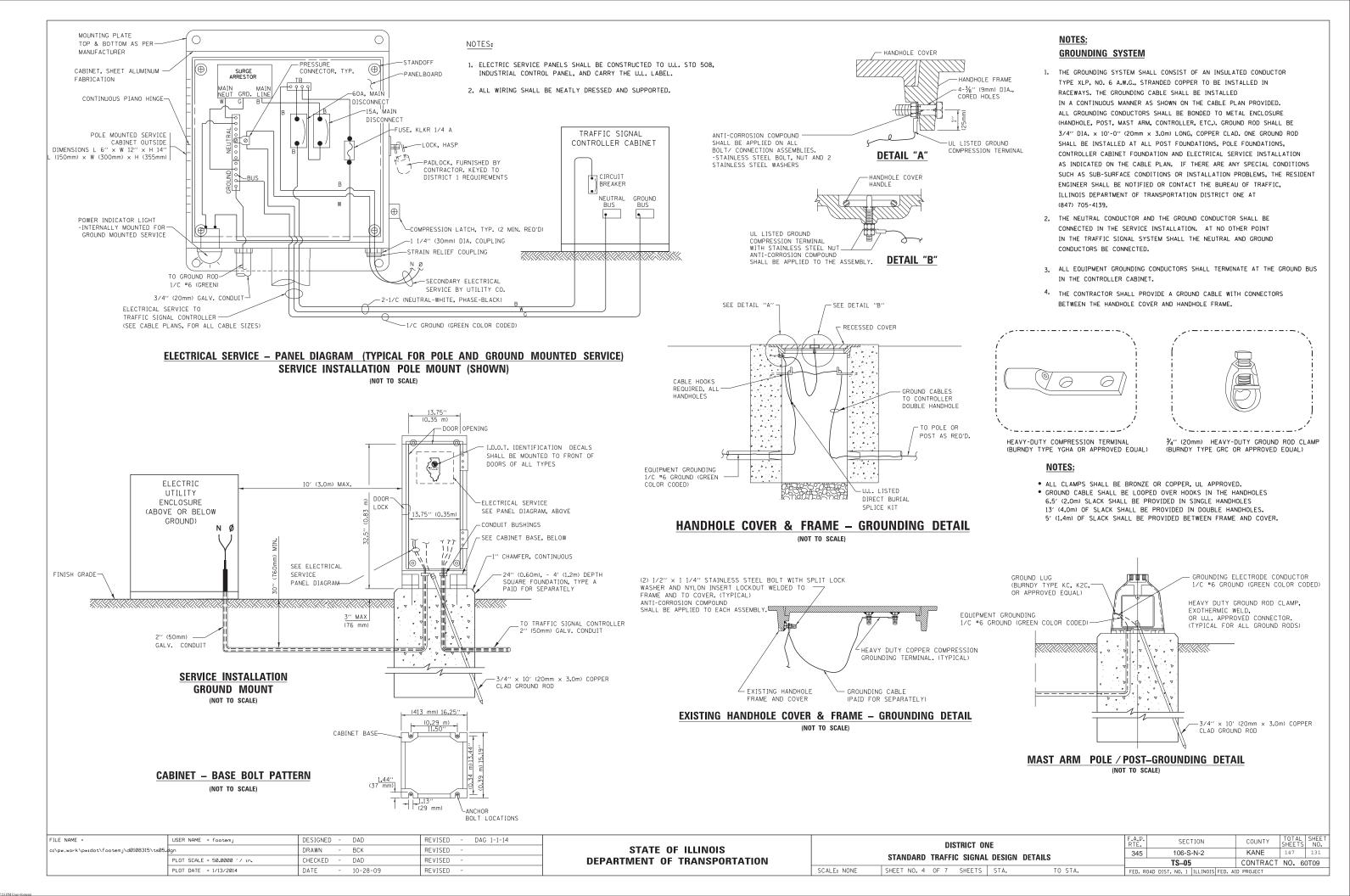
- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 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.

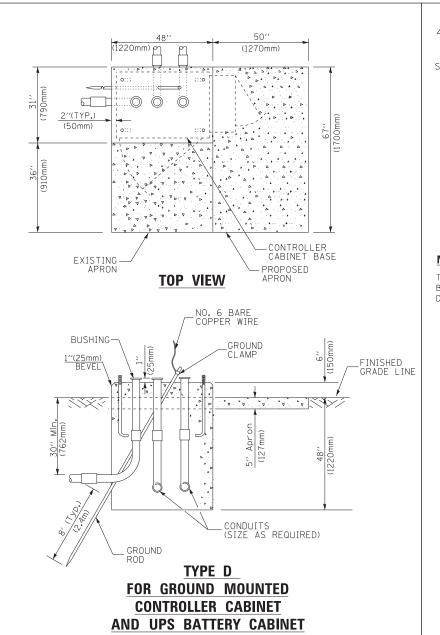
SCALE: NO

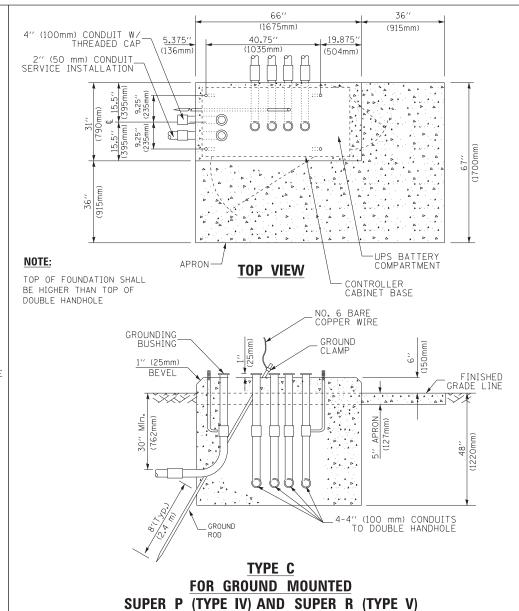
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	PLOT SCALE = 50.0000 '/ in.	CHECKED	-	DAD	REVISED -	-
	PLOT DATE = 1/13/2014	DATE	-	10-28-09	REVISED -	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

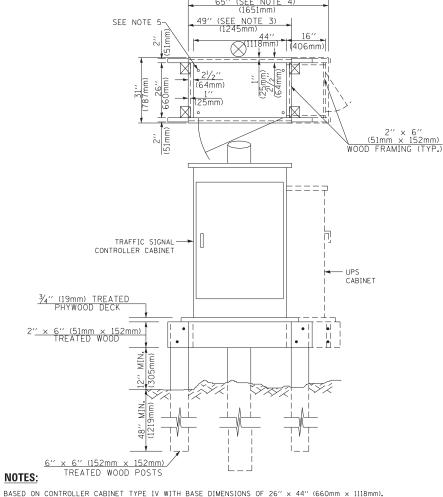
		DIS	STRICT ON	IE	F.A.P. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS								345 106-S-N-2		KANE	147	130
	STANDARD	INALLI	C SIGNAL	DESIGN		TS-05		CONTRACT	NO. 6	50T09		
NONE	SHEET NO. 3	OF 7	SHEETS	STA.		TO STA.	FED. RO	DAD DIST. NO. 1	ILLINOIS FED. AI	ID PROJECT		







CONTROLLER CABINETS



- 1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" × 44" (660mm × 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

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

CABLE SLACK

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

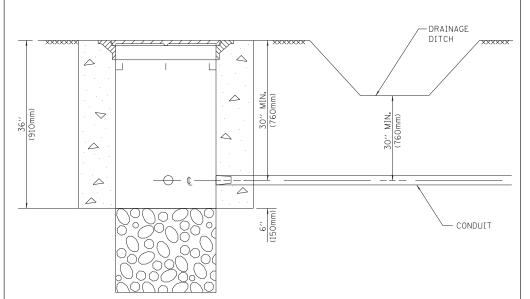
Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6'' (4.1 m)	30'' (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0'' (3.4 m)	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 (Ou) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
- 4. For mast arm assemblies with dual arms refer to state standard 878001...

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

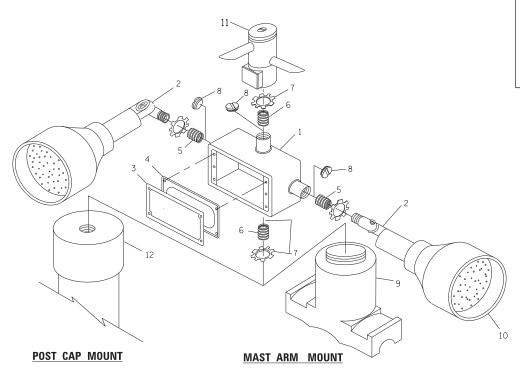
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	PLOT SCALE = 50.0000 '/ in.	CHECKED -	DAD	REVISED -	DEPARTMENT OF TRANSPORTATION		STANDARD TRAFFIC SIGNAL DESIGN DETA	AILS	0.0	TS-05	CONTRACT	T NO. 607	09
	PLOT DATE = 1/13/2014	DATE -	10-28-09	REVISED -		SCALE: NONE	SHEET NO. 5 OF 7 SHEETS STA.	TO STA.	FED. ROAD		D. AID PROJECT		



NOTES:

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

HANDHOLE WITH MINIMUM CONDUIT DEPTH (NOT TO SCALE)



1. ALL ELE GALVANI. 2. ITEM #1-ITEM #2 ITEM #9 10 3. WHEN PC DETECTI AND TAF

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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

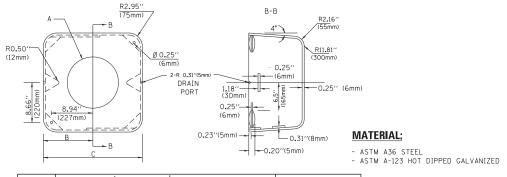
(1675mm) (915mm) 19.875" 5.375" 40.75" (136mm) (1035mm) (504mm) PROPOSED -APRON -CONTROLLER CABINET BASE **TOP VIEW** NO. 3 DOWEL 18" (450mm) LONG (8 REQ.) BUSHING -_GROUND CLAMP / ANCHOR BOLTS 1''(25mm) BEVEL GRADE LINE (ŽOOmm) (300mm) -EXISTING CONDUITS EXISTING GROUND ROD **MODIFY EXISTING TYPE "D" FOUNDATION** TO TYPE "C" FOUNDATION

(NOT TO SCALE

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 ¾''(19 mm) CLOSE NIPPLE 7 ¾''(19 mm) LOCKNUT 8 ¾''(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.

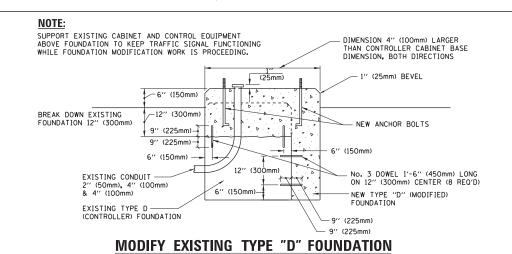


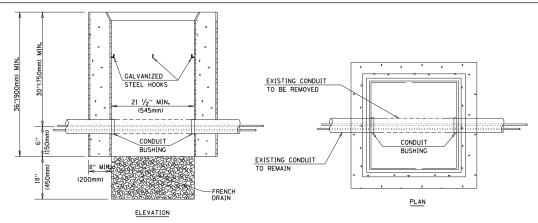
А	В	С	HEIGHT	WEIGHT
VARIES	9.5′′(241mm)	19''(483mm)	7'' (178mm) - 12'' (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7'' (178mm) - 12'' (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26''(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5''(470mm)	37''(940mm)	7" (178mm) - 12" (300mm)	126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

SHROUD

NOTES:

- 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.





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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

