STATE OF ILLINOIS

SECTION DS WIM 2020-1 RUNOS CONTRACT NO. 70E09

FOR INDEX OF SHEETS, SEE SHEET NO. 2 FOR SUMMARY OF QUANTITIES, SEE SHEET NOS. 3-4

# **DEPARTMENT OF TRANSPORTATION**

# **CURRENT TRAFFIC DATA**

F.A.I. 74 / (I-74)

13,200 (WB) 2019 ADT 70.1 3.4 M.U. % 26.5

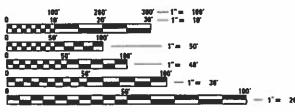
TRUCK RTE. = CLASS I N.H.S. RTE. =

# **DESIGN DESIGNATION**

**INTERSTATE** 

#### **TOWNSHIP**

**OAKWOOD** 



ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS 1-800-892-0123 OR 811

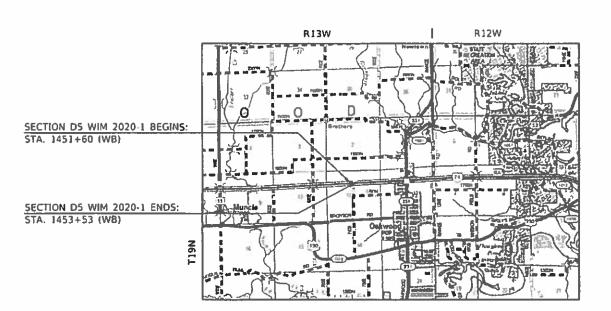
PROJECT ENGINEER: JASON STULTS, P.E. SQUAD LEADER: GREG EAGLIN **DESIGNER: JASON GOBLE** PHONE NUMBER: (217)465-4181

# **PROPOSED** HIGHWAY PLANS

F.A.I. ROUTE 74 (I-74) SECTION D5 WIM 2020-1 PROJECT STP-8EKK(831) **MISCELLANEOUS VERMILION COUNTY** 

C-95-058-19

VIRTUAL WEIGH STATION 1.0 MI. WEST OF OAKWOOD INTERCHANGE



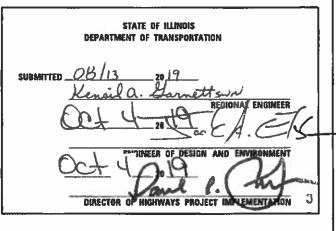
-		SCALE FOR	MAIN MAP	+	
6	1	2	1		5 Miles
B 31	200	N (CO)	11,000	70 ECC	25 000 Feet
1	2	1 4	5	1 7	A Edwards

NET LENGTH = 193.00 FT. = 0.036 MILE

GROSS LENGTH = 193,00 FT. = 0.036 MILE

D-95-044-19





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## **INDEX OF SHEETS**

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2 **GENERAL NOTES** 

2 COMMITMENTS

3-4 SUMMARY OF QUANTITIES

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MISC. EXISTING TYPICAL CROSS SECTION DETAILS

SCHEDULE OF QUANTITIES

PLAN SHEET

9 **EROSION CONTROL PLAN** 

10-22 WEIGH IN MOTION DETAILS

## LIST OF HIGHWAY STANDARDS

000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

001006 DECIMAL OF AN INCH AND OF A FOOT

280001-07 TEMPORARY EROSION CONTROL SYSTEMS

601001-05 PIPE UNDERDRAINS

601101-02 CONCRETE HEADWALL FOR PIPE UNDERDRAINS

701101-05 OFF-RD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE

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701400-09 APPROACH TO LANE CLOSURE, FREEWAY / EXPRESSWAY

701401-12 LANE CLOSURE, FREEWAY / EXPRESS WAY

701428-01 TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY / EXPRESSWAY

TRAFFIC CONTROL DEVICES 701901-08

805001-01 **ELECTRICAL SERVICE INSTALLATION DETAILS** 

814001-03 HANDHOLES

838001-01 BREAKAWAY DEVICES

878001-10 CONCRETE FOUNDATION DETAILS 886001-01

**DETECTOR LOOP INSTALLATIONS** 

## **GENERAL NOTES**

G.N.-100A

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.09A

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

#### **COMMITMENTS**

SCALE: N-T-S

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

USER NAME = GobleJR	DESIGNED - JRG	REVISED -	
	DRAWN - JRG	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2019	DATE -	REVISED -	

# **SUMMARY OF QUANTITIES**

FAI 74 (I-74	N OF WORK:	LOCATIO	
RURAL			
INTERSTATE			
STA. 1451+60 TO STA. 1453+53			
VERMILION COUNTY			
80% FEDERAL / 20% STATE	BREAKOUT:	FUNDING	
0044	TYPE CODE:	CONSTRUCTION	
TOTAL QUANTITY	UNIT	ITEM	CODE NO.
380.0	CU YD	FURNSIHED EXCAVATION	20400800
0.25	ACRE	SEEDING, CLASS 2A	25000210
23.0	POUND	NITROGEN FERTILIZER NUTRIENT	25000400
23.0	POUND	PHOSPHORUS FERTILIZER NUTRIENT	25000500
23.0	POUND	POTASSIUM FERTILIZER NUTRIENT	25000600
0.25	ACRE	MULCH, METHOD 2	25100115
4.0	SQ YD	EROSION CONTROL BLANKET	25100630
25.0	POUND	TEMPORARY EROSION CONTROL SEEDING	280000250
213.0	FOOT	PERIMITER EROSION BARRIER	28000400
1.0	EACH	CONCRETE HEADWALLS FOR PIPE DRAINS	60100060
12.0	FOOT	PIPE UNDERDRAINS 4" (SPECIAL)	60108100
1.0	L SUM	MOBILIZATION	67100100
1.0	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	70100800
		CHANGEABLE MESSAGE SIGN	70107025

MODEL: \$MODELNAME\$
FILE NAME: pw://plantoom.dof.illipois.o

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

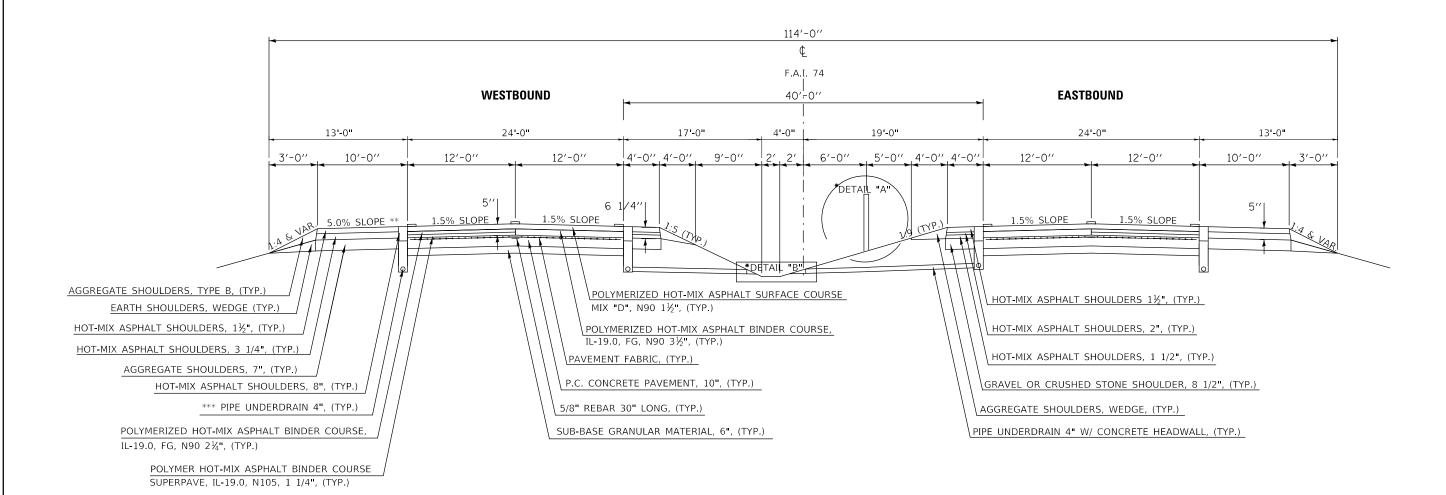
# **SUMMARY OF QUANTITIES**

			CONSTRUCTION	ON TYPE CODE:	0044
	CODE NO.	ITEM		UNIT	TOTAL QUANTITY
*	81028360	UNDERGRO	DUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	158.
*	81702400	ELECTRIC (	CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	135
*	81702441	ELECTRIC (	CABLE IN CONDUIT, 600V (XLP-TYPE USE) 2-12/C, 1-12/C GROUND	FOOT	23
*	X8050115	SERVICE IN	ISTALLATION, TYPE A (MODIFIED)	EACH	1
*	Z0026290	FURNISHIN	G AND INSTALLING WEIGH-IN-MOTION COMPONENTS	L SUM	1
SPEC	CIALTY ITEM				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

# **EXISTING TYPICAL CROSS SECTION**

**STATION TO STATION 1451+60 1453+53** 



- \* SEE 'MISC. EXISTING TYPICAL CROSS SECTION DETAILS'
- \*\* ALLOWABLE MINIMUM SHOULDER SLOPE = 4.0% ALLOWABLE MAXIMUM SHOULDER SLOPE = 6.0%
- \*\*\* PIPE UNDERDRAIN 4"
  STATION 1451+60 TO STATION 1453+53

Offices\District	
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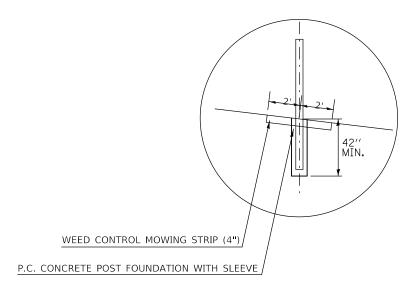
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	DRAWN JRG	REVISED -	
PLOT SCALE = 40.0000 '/ in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2019	DATE -	REVISED -	

SCALE:

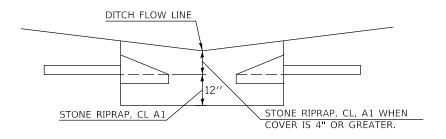
						F.A.I. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHE
EXISTING TYPICAL CROSS SECTION			74	D5 WIM 2020-	1	VERMILION	22	5			
									CONTRACT	NO.	70E0
	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOI	S FED. A	ID PROJECT		

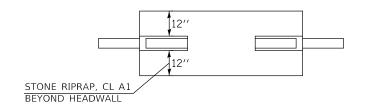
# MISC. EXISTING TYPICAL CROSS SECTION DETAILS

# DETAIL "A" HIGH TENSION CABLE BARRIER



DETAIL "B"
UNDERDRAIN OUTLET BELOW
DITCH GRADE TYPICAL DETAIL





STA. 1451+60 TO STA. 1453+53

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USER NAME = GobleJR	DESIGNED JRG	REVISED -
	DRAWN JRG	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2019	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

MIS	C. EXIS	STING	TY	PICAL	CROS	S S	ECTION	DETAI	LS
	SHEET	1	0F	1 9	SHEETS	STA	١.	TO	STA.

SCALE:

#### **FURNISHED EXCAVATION SCHEDULE**

20400800					
FURNISHED	STATION	то	STATION	LOCATION	
EXCAVATION					
(CU YD)					
86.67	1452+12.42		1451+60.42	D.L. SHLDR	W.B.
120.00	1452+74.42		1452+12.42	D.L. SHLDR	W.B.
173.33	1453+78.42		1452+74.42	D.L. SHLDR	W.B.
380.00	TOTAL =	-			
380.00	USE =	Į.			
CU YD					

#### 25100630 EROSION CONTROL BLANKET

LOCATION	STATION	OFFSET	QUANTITY (SQ YD)
FS DITCH	1453+34	LT. 67.15	4.0
		TOTAL =	4.0
			SQ YD

#### **SEEDING SCHEDULE**

						25000210	28000250	25000400	25000500	25000600	25100115
	LOCATION	STATION	то	STATION	AREA	SEEDING	TEMPORARY	NITROGEN	PHOSPHORUS	POTASSIUM	MULCH
						CLASS 2A	EROSION CONTROL	FERTILIZER	FERTILIZER	FERTILIZER	METHOD 2
							SEEDING	NUTRIENT	NUTRIENT	NUTRIENT	
							100 LB/ACRE	90 LB / ACRE	90 LB / ACRE	90 LB / ACRE	
					(SQ FT)	(ACRE)	(POUND)	(POUND)	(POUND)	(POUND)	(ACRE)
W.B	D.L. DITCH	1451+30		1453+90	2760.00	0.063	6.34	5,70	5.70	5.70	0.063
W.D	D.L. DITCH	1431730		1433730	2700.00	0.003	0.54	3.70	3.70	3.70	0.003
					TOTAL =	0.063	6.34	5.70	5.70	5.70	0.063
					USE =	0.250	25.00	23.00	23.00	23.00	0.250
						ACRE	POUND	POUND	POUND	POUND	ACRE

#### 28000400 PERIMETER EROSION BARRIER

LOCATION	STATION	то	LOCATION	STATION	OFFSET	QUANTITY
					(FT)	(FT)
WB DL ROW	1451+50.00		WB DL ROW	1453+63.00	99 LT.	213.0
VVB DL ROVV	1451750.00		WB DL ROW	1455765.00	99 L1.	213.0
		<u> </u>				
					TOTAL =	213.0
						FT

#### 60108100 PIPE UNDERDRAINS 4" (SPECIAL)

#### 60100060 CONCRETE HEADWALLS FOR PIPE DRAINS

			60108100	60100060
	LOCATION	STATION	PIPE	CONC HDWL
			UNDERDRAIN	FOR PIPE
			4" (SPECIAL)	DRAIN
			(FT)	(EACH)
WB DL	FRONT SLOPE DITCH	1453+30	12.0	1.0
		TOTAL =	12.0	1.0
			FT	EACH

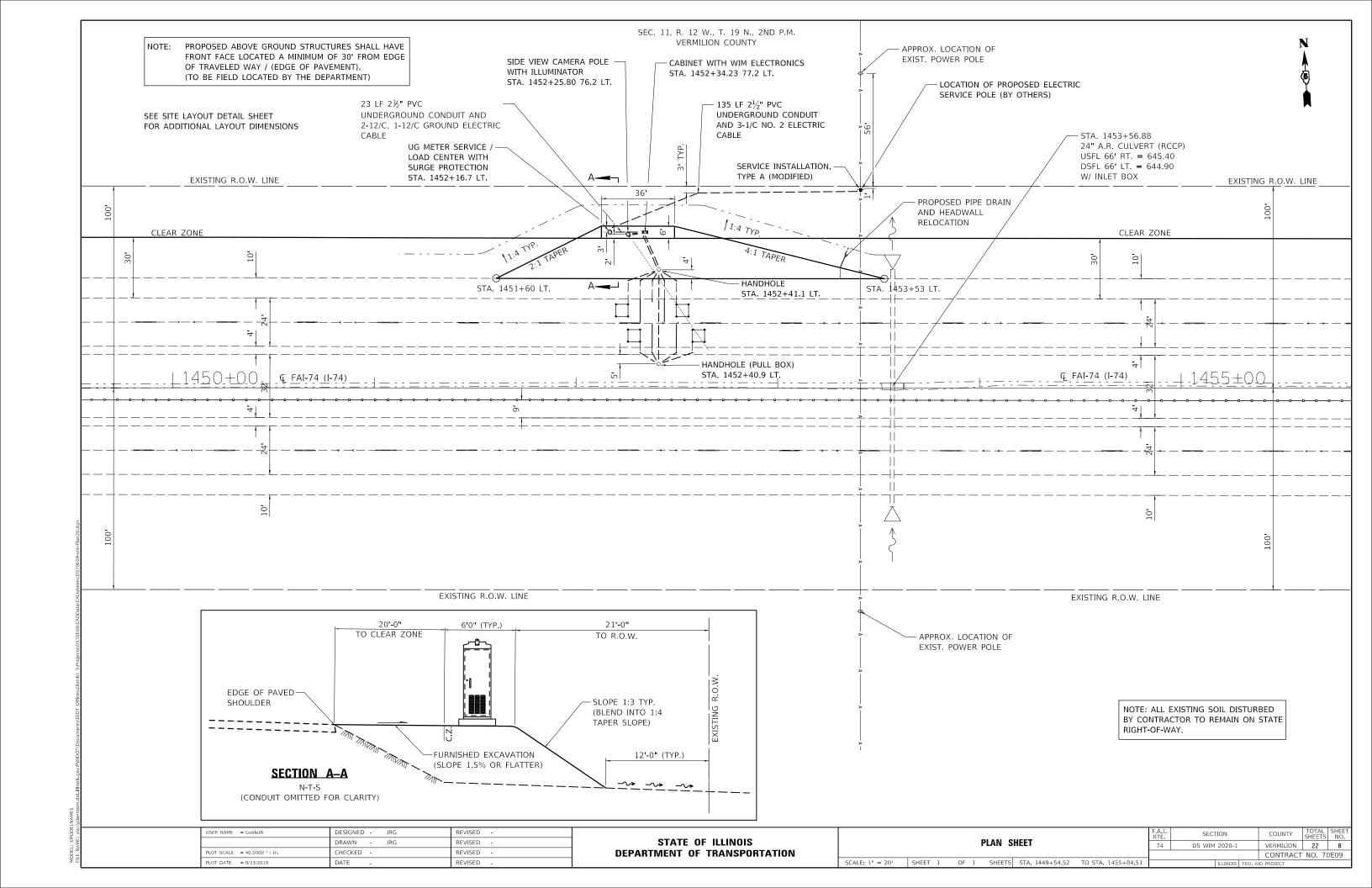
 USER NAME
 = GobleJR
 DESIGNED
 JRG
 REVISED

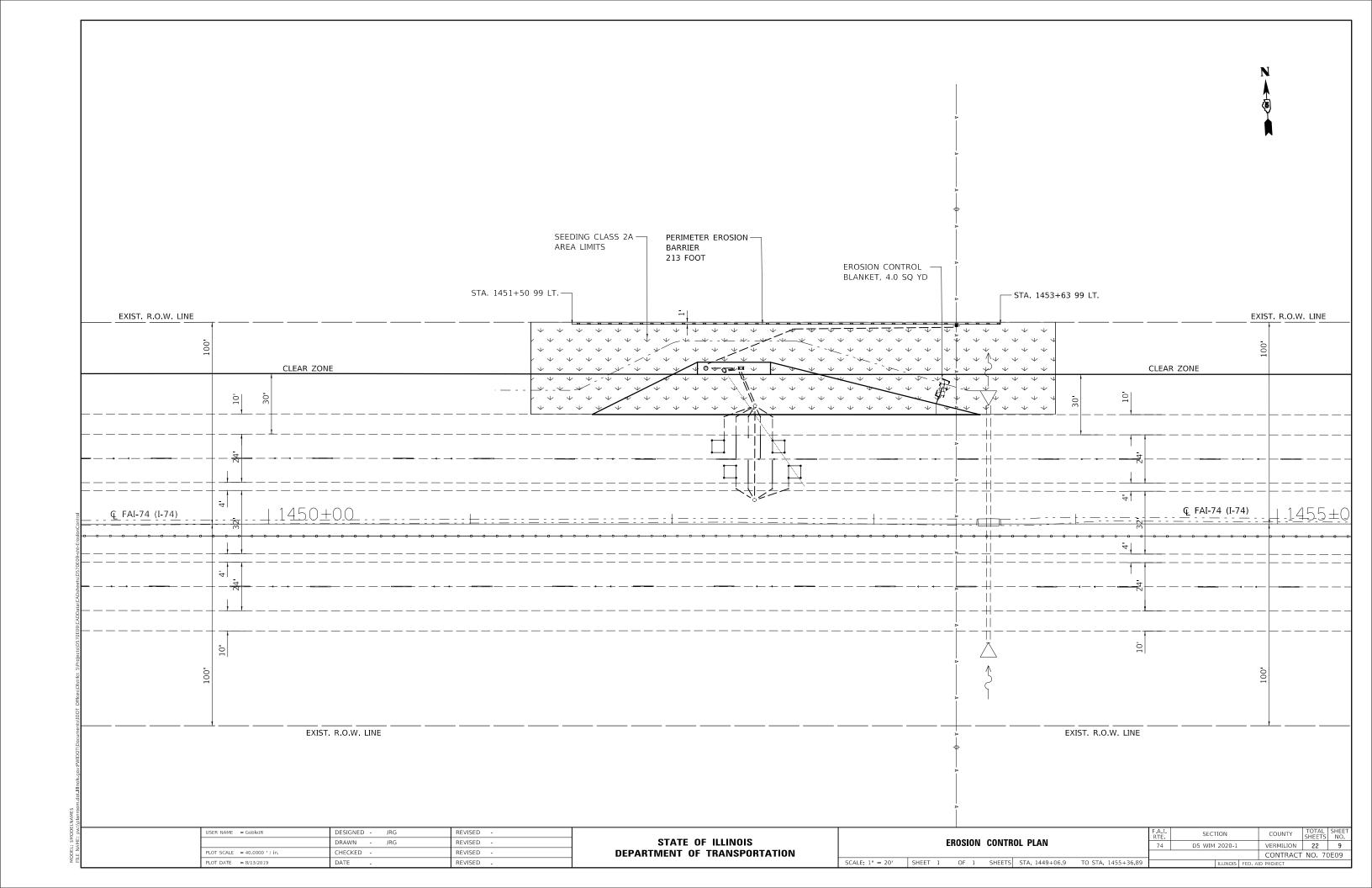
 DRAWN
 JRG
 REVISED

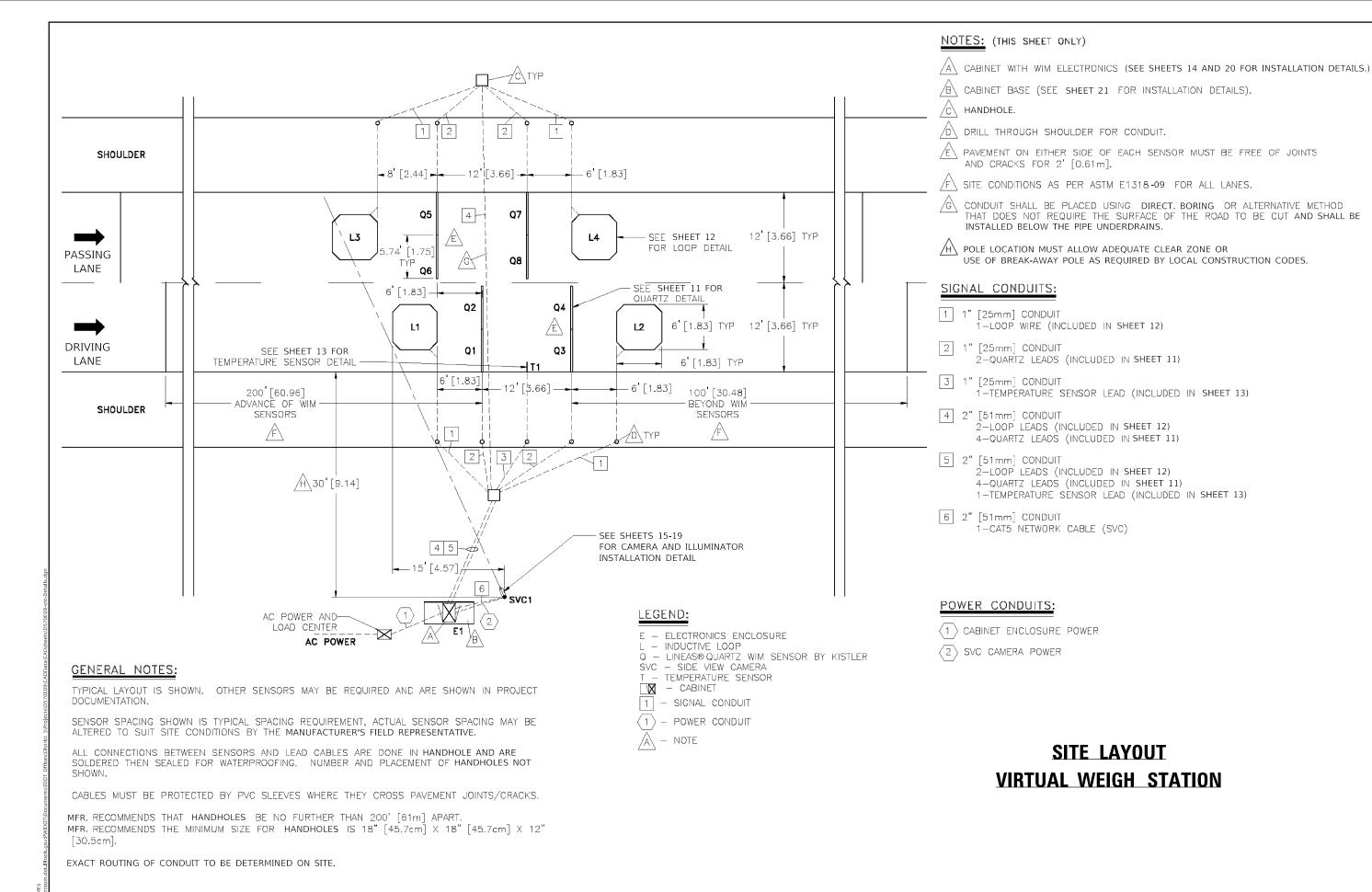
 PLOT SCALE
 = 40.0000 ' / in.
 CHECKED
 REVISED

 PLOT DATE
 = 8/13/2019
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION







STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

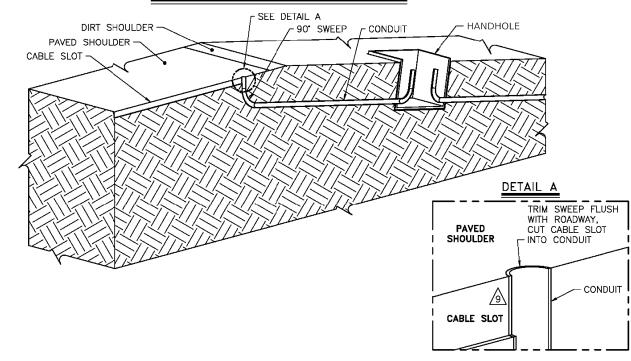
 WEIGH IN MOTION DETAILS
 FATE. 74

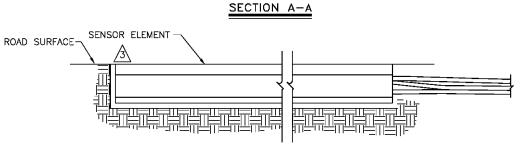
 SCALE: N-T-S
 SHEET 1 OF 13 SHEETS STA. TO STA.

#### SECTION D-D (CABLE ROUTING DETAILS)

# TRAFFIC LANE SHOULDER CABLE SLOT CABLE SLOT CABLE SLOT

PLAN VIEW - SENSOR INSTALLATION





#### NOTES:

- 1 CRACKS OR SAW CUTS IN THE ROADWAY MUST NOT BE LOCATED CLOSER THAN 18 [450] UPSTREAM AND 18 [450] DOWNSTREAM OF THE SENSOR.
- 2 SLOT LENGTH IS 6 [152] LONGER THAN SENSOR.

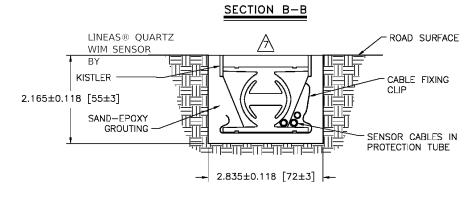
SET SENSOR FLUSH WITH OR SLIGHTLY HIGHER THAN ROAD SURFACE USING INCLUDED LEVELING BEAMS.

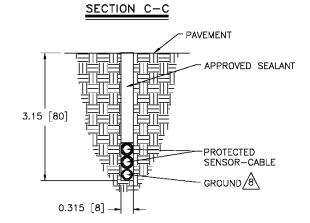
- 4 CHECK THE RESISTANCE OF THE SENSOR BY PLACING A DIGITAL MULTIMETER ACROSS THE CENTER CONDUCTOR OF THE BNC CONNECTOR AND THE OUTER BODY. THE READING SHOULD BE INFINITY.
- 5 CHECK THE VOLTAGE OUTPUT OF THE SENSOR BY MONITORING THE METER WHEN A TRUCK PASSES OVER THE SENSOR INSTALLED IN THE ROADWAY, AS THE TRUCK PASSES OVER THE SENSOR, VOLTAGE DEFLECTION SHOULD BE OBSERVED.
- 6 FOR INSTALLATION PROCESS REFER TO MANUFACTURER'S INSTALLATION MANUAL.

SENSOR MUST BE GROUND FLUSH WITH ROAD SURFACE AFTER GROUT HAS CURED.

IF SIGNIFICANT NOISE SOURCES ARE IDENTIFIED, OVERHEAD POWER SOURCES ETC., CONNECT OPTIONAL GROUND WIRE AS PER 690359 SECTION 4.5. OTHER END OF GROUND WIRE CONNECTS TO CABINET GROUND BUSBAR.

© CORE DRILL OR CUT NOTCH IN PAVED SHOULDER FOR SWEEP. PLUG SWEEP OPENING, COVER WITH LOOP SEALANT.





# **SENSOR INSTALLATION**

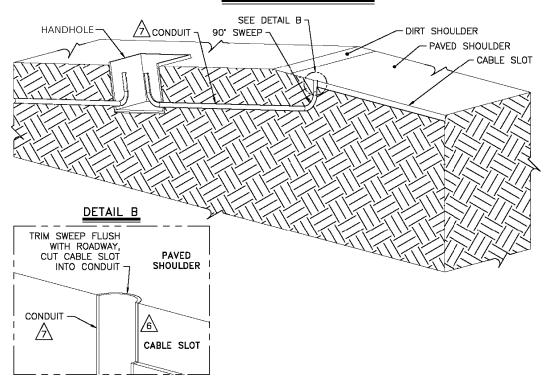
USER NAME = GobleJR	DESIGNED - JRG	REVISED -
	DRAWN - JRG	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.I. | SECTION | COUNTY | SHEET | NO. | SHEET | SHEET | NO. | SHEET | SHEET

ODEL: \$MODELNAME\$

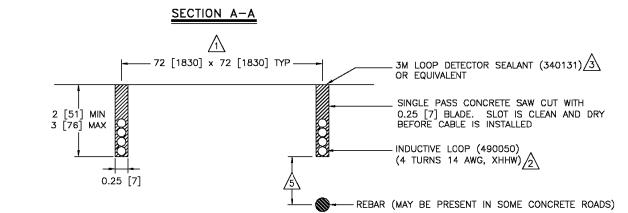
#### CABLE ROUTING DETAILS

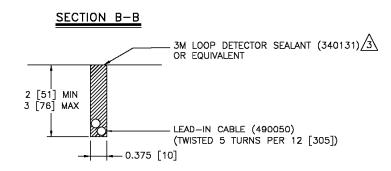


# 12 - 48 [1219] — + -12 [305] 12 [305] 12 [305] CABLE SLOT 48 [1219] 12 [305]

72 [1830] x 72 [1830] LOOP SHOWN

LOOP DIMENSION DETAIL





#### NOTES:

1 LOOP SIZE AS SPECIFIED ON SITE LAYOUT.

NUMBER OF TURNS AS SPECIFIED ON SITE LAYOUT.

3 USE CAULKING GUN 340132 OR 340148.

4 LOOP INSTALLATION MANUALS 690279 - PERMANENT OCTAGON LOOPS

IF THE LOOP IS INSTALLED OVER REBAR, THERE MUST BE A MINIMUM OF 2 [50.8] CONCRETE BELOW AND A MINIMUM OF 1 [25.4] FILL ABOVE THE WIRES.

CORE DRILL OR CUT NOTCH IN PAVED SHOULDER FOR SWEEP. PLUG SWEEP OPENING, COVER WITH LOOP SEALANT.

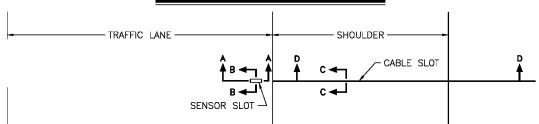
NON-METALLIC FLEX OR PVC CONDUIT.

## **DETECTION LOOP INSTALLATION**

USER NAME = GobleJR	DESIGNED - JRG	REVISED -	
	DRAWN - JRG	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/13/2019	DATE -	REVISED -	

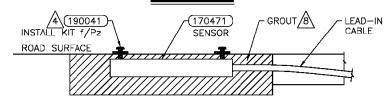
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	l R								A.I. SECTION			SHEET NO.	
	WEIGH IN MOTION DETAILS							D5 WIM 2020-	1	VERMILION	22	12	
										CONTRACT NO. 70E09			
SCALE: N-T-S SHEET 3 OF 13 SHEETS STA. TO STA.							ILLINOIS	FED. A	ID PROJECT				

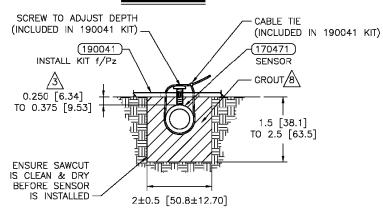


#### SENSOR P/N 170471

#### SECTION A-A



#### SECTION B-B



#### NOTES: (THIS SHEET ONLY)

- 1 CRACKS OR SAW CUTS IN THE ROADWAY MUST NOT BE LOCATED CLOSER THAN 18" [450MM] UPSTREAM AND 18 [450MM] DOWNSTREAM OF THE TEMPERATURE SENSOR.
- 2 SLOT LENGTH IS 4" [102MM] LONGER THAN SENSOR.

SET THE SENSOR AT THE CORRECT DEPTH.

A PLACE A BRACKET AT EACH END OF THE SENSOR,

5 LOCATE SENSOR IN SAME PAVEMENT AND WITHIN 6' [2M] OF THE TEMPERATURE COMPENSATED DEVICE. AVOID PLACING IN WHEEL PATH.

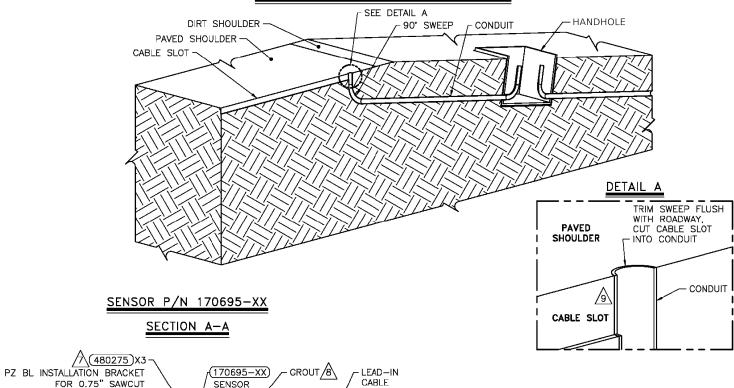
WEDGE SENSOR AGAINST FLOOR OF CUT UNDER "W" CLIP (P/N 480275).

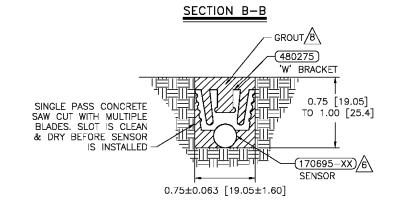
SPACE THREE BRACKETS (P/N 480275) EVENLY OVER THE LENGTH OF THE SENSOR,

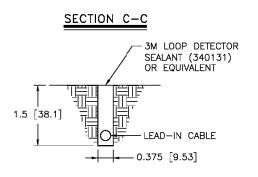
USE GROUT OF SAME TYPE AS THAT OF SENSOR BEING COMPENSATED:
PIEZO - USE AS475 (340028) OR PU200 (IT2000285)
KISTLER - USE KISTLER GROUT (340139) OR FLEXOLITH (340082)

CORE DRILL OR CUT NOTCH IN PAVED SHOULDER FOR SWEEP. PLUG SWEEP OPENING, COVER WITH LOOP SEALANT.

#### SECTION D-D (CABLE ROUTING DETAILS)





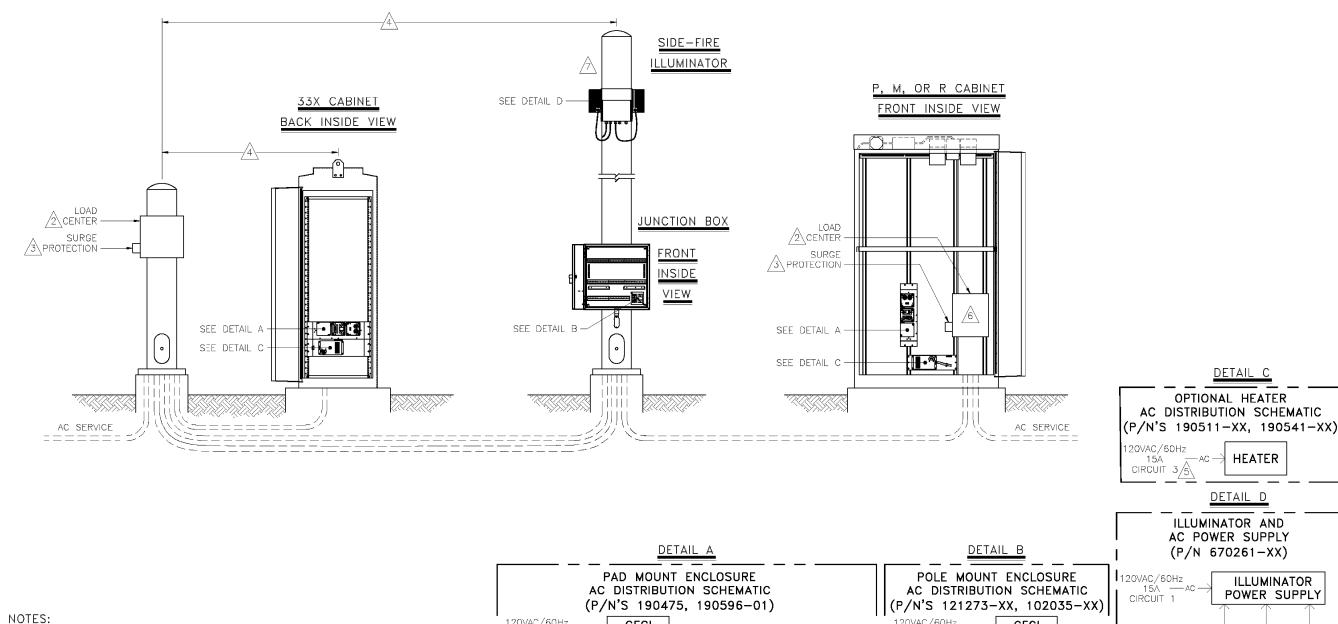


### IN-ROADWAY TEMPERATURE SENSOR

USER NAME = GODIEJR	DESIGNED - JRG	REVISED -
	DRAWN - JRG	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2019	DATE -	REVISED -

ROAD SURFACE

	F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
WEIGH IN MOTION DETAILS	74	D5 WIM 2020-1	VERMILION	22	13
			CONTRACT	NO. 70	E09
SCALE: N-T-S SHEET 4 OF 13 SHEETS STA. TO STA.		ILLINOIS FED. A	ID PROJECT		



1 ALL ELECTRICAL DEVICES, GROUNDING, BONDING, WIRING AND MOUNTING MUST MEET THE CANADIAN ELECTRICAL CODE PART I AND/OR NATIONAL ELECTRICAL CODE NFPA70 AND LOCAL ELECTRICAL CODE.

2 PROVIDE SUITABLE INDOOR OR OUTDOOR LOAD CENTER. IRD RECOMMENDS FOR CSA USE SQUARE D P/N CQ018M100RB60 OR P/N Q02L70RB, FOR UL USE P/N Q0112M100RB OR P/N Q024L70RB OR EQUIVALENT.

3 EQUIPMENT MUST BE PROTECTED WITH AN ANSI/IEEE C62.41 CATEGORY C RATED PROTECTION DEVICE WITH A MINIMUM PEAK CURRENT HANDLING CAPABILITY OF 36KA (8/20μS) INSTALLED AT THE LOAD CENTER OR SUB LOAD CENTER.

4 30m MAXIMUM CABLE LENGTH BETWEEN CATEGORY C PROTECTOR AND ENCLOSURE(S).

5 CIRCUIT 3 OPTIONAL DEPENDING ON PRESENCE OF HEATER.

6 LOAD CENTER MAY BE LOCATED INSIDE ENCLOSURE WHERE SPACE PERMITS.

/7\ REFER TO PRODUCT DOCUMENTATION FOR OEM EQUIPMENT NOT SHOWN.

#### 120VAC/60Hz 15A CIRCUIT 1 — AC -120VAC/60Hz 15A CIRCUIT 1 — AC — GFCI GFCI DUPLEX DUPLEX OUTLET | | BLACK/WHITE OUTLET BLACK/WHITE 120VAC/60Hz 15A 120VAC/60Hz SURGE SURGE DUPLEX 15A CIRCUIT 2 — AC — CIRCUIT 2 -AC-DUPLEX — AC — SWITCH DUPLEX OUTLET OUTLET OUTLET RED/WHITE RED/WHITE

# **120VAC CABINET POWER INSTALLATION** AND LOAD CENTER DETAIL

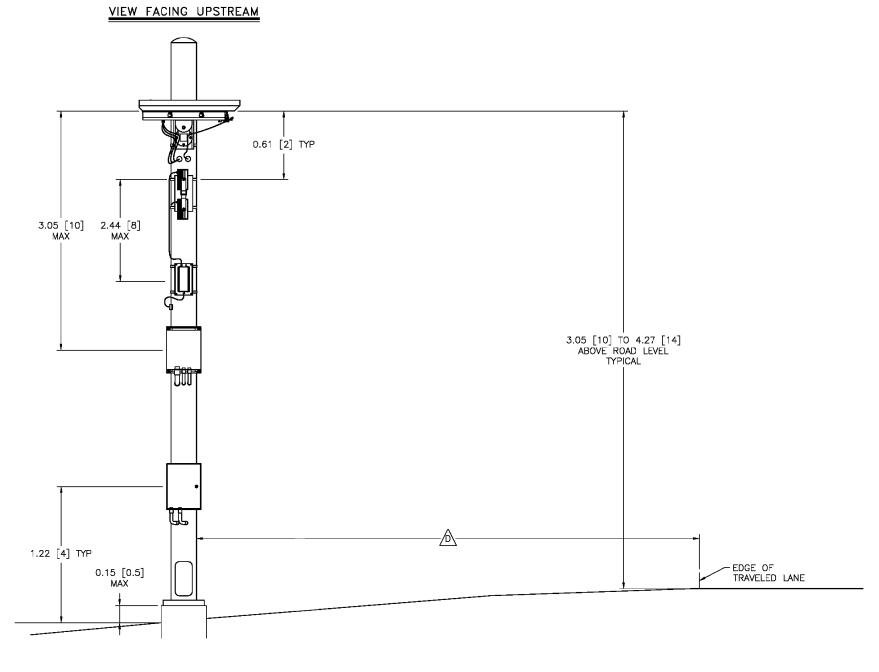
ILLUM. 2 ILLUM. 3

**ILLUMINATOR** 

KIT

USER NAME = GobleJR	DESIGNED - JRG	REVISED -					F.A.I. RTE	SECTION	COUNTY TOTAL SH	EET
	DRAWN - JRG	REVISED -	STATE OF ILLINOIS	WEIGH IN MOTION DETAILS			74	D5 WIM 2020-1	VERMILION 22 1	14
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						CONTRACT NO. 70E0	9
PLOT DATE = 8/13/2019	DATE -	REVISED -		SCALE: N-T-S	SHEET 5 OF 13 SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT	

#### RF/SIDE FIRE CAMERA/POLE



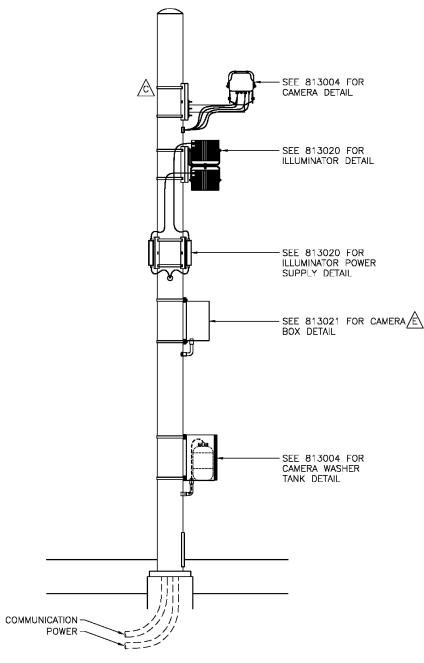
#### NOTES: (THIS SHEET ONLY)

- A POLE AND FOUNDATION DESIGN MAY REQUIRE REVIEW BY LOCAL PROFESSIONAL ENGINEER.
- B CONDUITS TO MEET LOCAL ELECTRIC CODE.

CONTRACTOR TO SUPPLY 3/4" STAINLESS STEEL BANDING FOR ATTACHING EQUIPMENT.

POLE LOCATION MUST ALLOW ADEQUATE RIGHT-OF-WAY OR PROTECT WITH GUIDERAIL OR USE OF BREAK-AWAY POLE AS REQUIRED BY LOCAL CONSTRUCTION CODES.

CAMERA BOX FOR FIBER OPTIC COMMUNICATION REQUIRED WHERE CABLE RUN TO WIM CABINET EXCEEDS 75m [246ft].



VIEW FACING ROADWAY

**SITE LAYOUT SIDE FIRE CAMERA WITH ILLUMINATOR** 

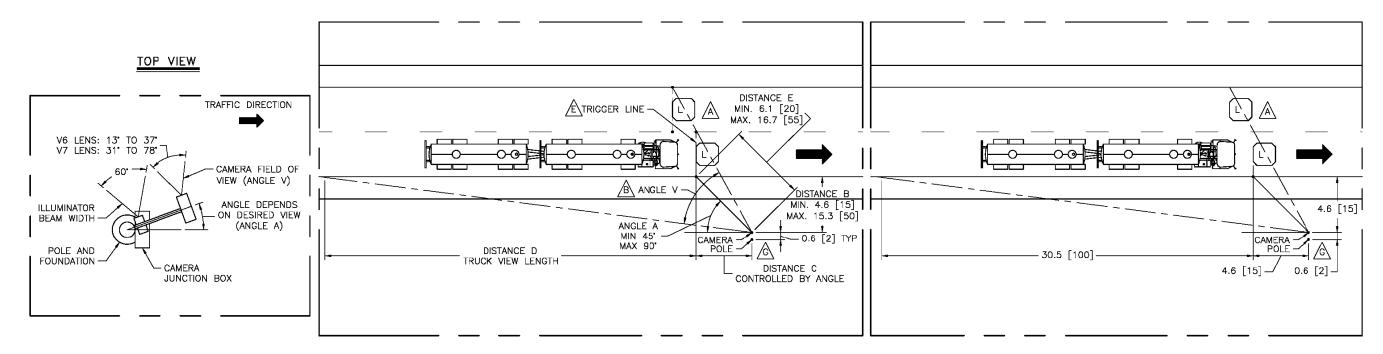
USER NAME = GobleJR	DESIGNED - JRG	REVISED -
	DRAWN - JRG	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 8/13/2019	DATE -	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SECTION WEIGH IN MOTION DETAILS VERMILION 22 15 D5 WIM 2020-1 CONTRACT NO. 70E09 SCALE: N-T-S SHEET 6 OF 13 SHEETS STA. TO STA.



#### TYPICAL LAYOUT



#### NOTES: (THIS SHEET ONLY)

ADDITIONAL LANES MAY BE COVERED BY A SINGLE CAMERA, TRIGGER LOOPS IN ADJACENT LANES SHOULD BE IN—LINE WITH THE UPSTREAM EDGE OF THE CAMERA FIELD OF VIEW.

NOTE: VEHICLES IN CLOSER LANE MAY BE BLOCKED BY THE VEHICLES IN FARTHER LANES.

ANGLE V IS CONTROLLED BY CAMERA ZOOM. SEE TOP VIEW.

C DISTANCE E LIMITED BY ILLUMINATOR RANGE

 $E = \sqrt{B^2 + C^2}$ 

D FOR NON-TYPICAL LAYOUTS, USE 3EGR0015 - SIDE FIRE CAMERA POSITION CALCULATOR TO POSITION CAMERA.

IMAGE CAPTURE TO BE TRIGGERED BY LEADING EDGE OF LOOP SIGNAL.

THE "IDENTIFICATION" VIEW CONFIGURATION PROVIDES AN ENHANCED VIEW OF THE TRACTOR CAB COMPARED TO THE REST OF THE TRUCK. THIS CONFIGURATION IS RECOMMENDED AS IT ALLOWS FOR BETTER VEHICLE IDENTIFICATION. THE "CLASSIFICATION" VIEW PROVIDES A LESS DISTORTED VIEW OF THE ENTIRE TRUCK; IDEAL FOR IDENTIFICATION OF VEHICLE CLASS.

POLE TO BE POSITIONED AWAY FROM CAMERA LOCATION TO ACCOUNT FOR CAMERA LENS/POLE OFFSET.

Δ				ANGLE			
<u>F</u>	CONFIGURATION TYPE	В	С	D	Е	Α	٧
	IDENTIFICATION VIEW (RECOMMENDED)	4.6 [15]	4.6 [15]	30.5 [100]	6.5 [21.2]	<b>45</b> °	54°
	CLASSIFICATION VIEW	9.1 [30]	6.1 [20]	30.5 [100]	11 [36.1]	56'	51°

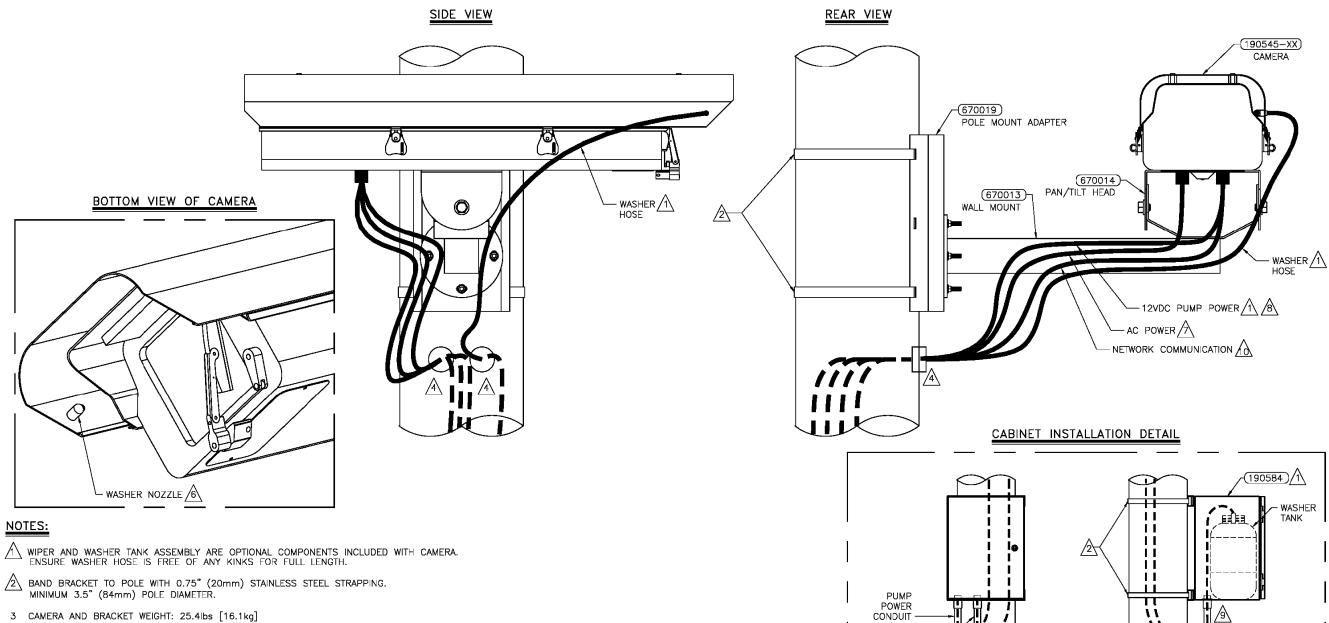
# SITE LAYOUT SIDE FIRE CAMERA WITH ILLUMINATOR

TO STA.

SECTION D5 WIM 2020-1

VERMILION 22 16
CONTRACT NO. 70E09

USER NAME = GobleJR	DESIGNED - JRG	REVISED -			
	DRAWN - JRG	REVISED -	STATE OF ILLINOIS		WEIGH IN MOTION DETAILS
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		
PLOT DATE = 8/13/2019	DATE -	REVISED -		SCALE: N-T-S	SHEET 7 OF 13 SHEETS STA. 1



# **NETWORK SFC - SIDE OF POLE CVO STANDARD SYSTEM**

WASHER HOSE

CONDUIT

REFER TO 81303501 FOR CABLE POLE ENTRY DETAIL.

5 WASHER TANK WEIGHT: 47.2lbs [21.4kg]

ADJUST SPRAYER NOZZLE (IF PRESENT) TO DIRECT SPRAY SLIGHTLY BELOW CENTER OF THE CAMERA ENCLOSURE WINDOW.

SEE 81300907 OR 81300911 FOR SECONDARY ENCLOSURE AC POWER DETAIL.

MAXIMUM POWER CONSUMPTION IS 150W WITH WASHER/WIPER AND 110W WITHOUT.

MHITE AND BLACK PUMP POWER WIRES OF PUMP POWER CABLE ARE TERMINATED INSIDE CAMERA ENCLOSURE AT TERMINAL BLOCKS LABELED "1" AND "2" RESPECTIVELY.

INSTALL 1" LIQUIDTITE CONDUIT INCLUDED WITH P/N 190584 NEAR THE BACK OF THE ENCLOSURE TO ALLOW INSERTION OF TANK.

USE ETHERNET SURGE ARRESTOR WHEN CONNECTING NETWORK COMMUNICATION AT ISINC CABINET.

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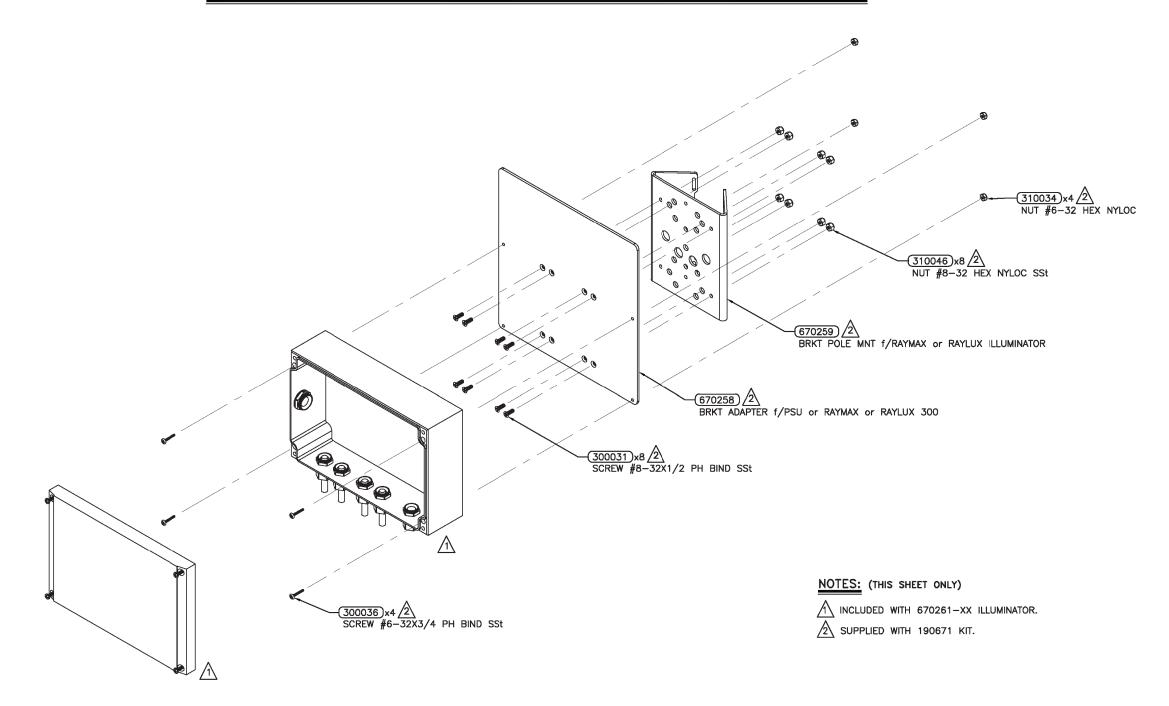
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

							F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
WEIGH IN MOTION DETAILS							74	D5 WIM 2020-1	VERMILION	22	17	
									CONTRACT	NO. 7	DE09	
SCALE: N-T-S	SHEET 8	OF	13 SF	HEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT					

1" STEEL COUPLER

WELDED INTO POLE

#### STEP 1 - ASSEMBLE POWER SUPPLY TO ADAPTER PLATE 670258 AND POLE MOUNT BRACKET 670259

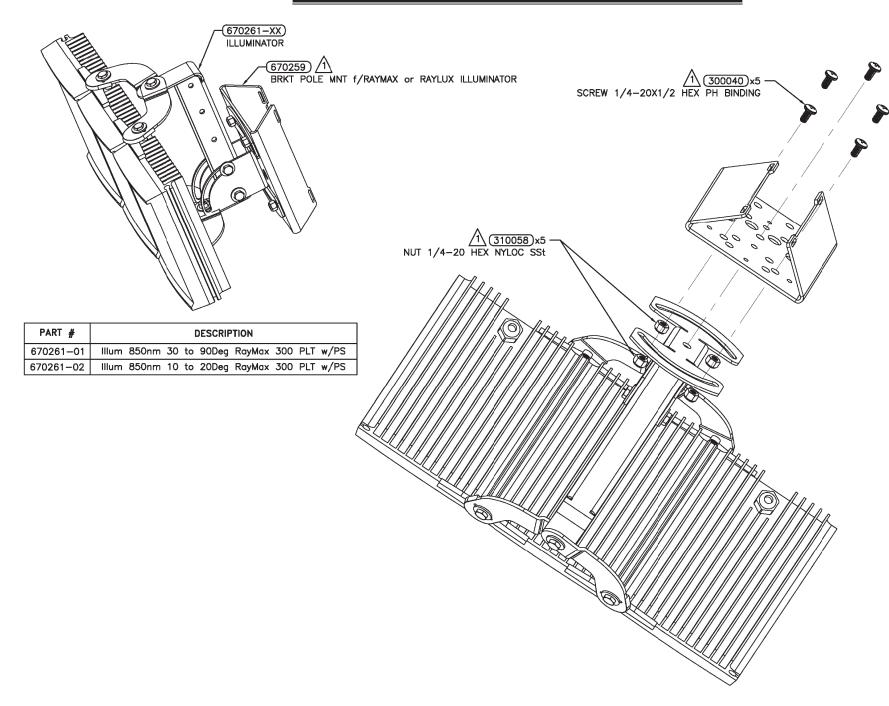


# RAYTEC VARIABLE ANGLE CVO SF ILLUMINATOR

USER NAME = GobleJR	DESIGNED - JRG	REVISED -					F.A.I. RTF	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
	DRAWN - JRG	REVISED -	STATE OF ILLINOIS	WEIGH IN MOTION DETAILS				D5 WIM 2020-1	VERMILION	22 18
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION					CONTRACT	NO. 70E09	
PLOT DATE = 8/13/2019	DATE -	REVISED -		SCALE: N-T-S	SHEET 9 OF 13 SHEETS STA.	TO STA.		ILLINOIS FED. A	D PROJECT	

NAME: pw:\\planroom.dot.lllInols.gov:PWIDOT\Documents\IDOT Offices\District 5

#### STEP 2 - ASSEMBLE ILLUMINATOR TO POLE MOUNT BRACKET 670259



NOTES: (THIS SHEET ONLY)

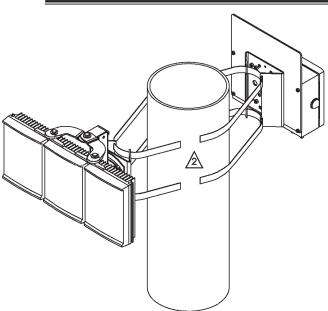
SUPPLIED WITH 190671 KIT.

USE 1/2" STAINLESS STEEL BANDING AND BUCKLES OR MOUNTING BRACKET ON THE POLE. REFER TO BRACKET INSTALLATION INSTRUCTIONS AND LOCAL CODE FOR REQUIREMENTS.

#### STEP 3 - MOUNT ASSEMBLIES TO POLE TO SUIT SITE CONDITIONS

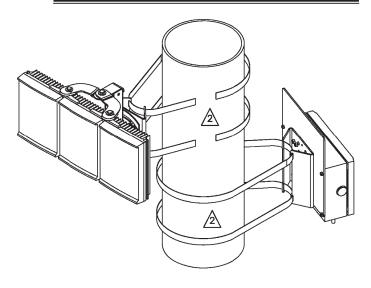
#### STEP 3A - ASSEMBLIES ON POLE USING SAME BANDING

ORIENT ANGLE TO EACH OTHER AS REQUIRED



#### STEP 3B - ORIENT ASSEMBLIES ON POLE AT DIFFERENT ELEVATIONS

ANGLE EACH ASSEMBLY ON POLE AS REQUIRED

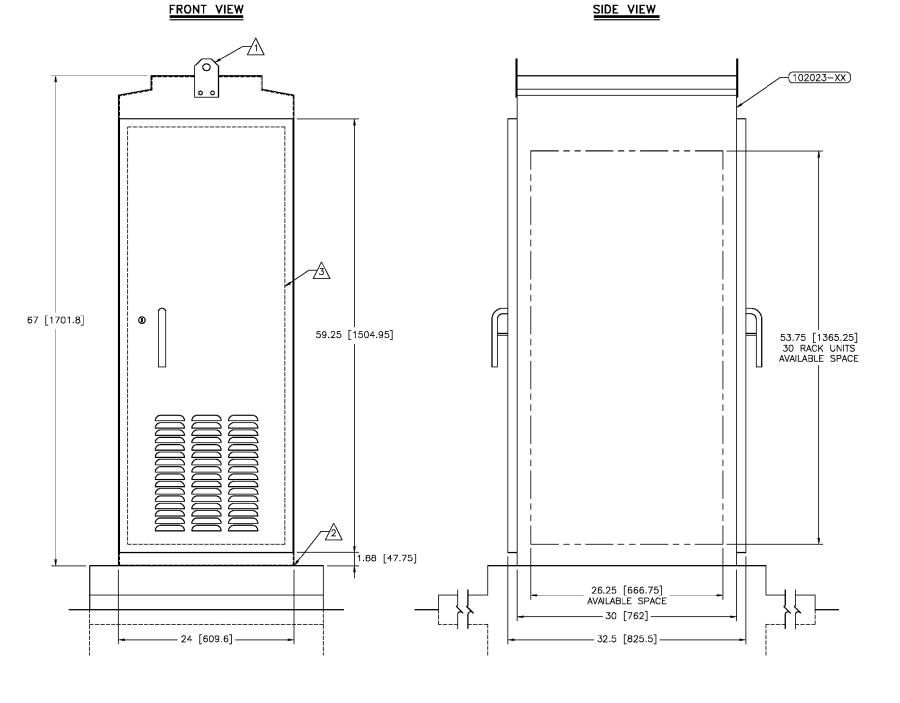


**RAYTEC VARIABLE ANGLE CVO SF ILLUMINATOR** 

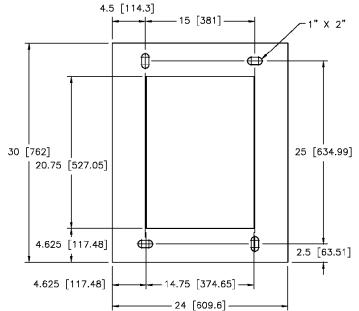
REVISED DRAWN -REVISED HECKED REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SECTION WEIGH IN MOTION DETAILS D5 WIM 2020-1 VERMILION 22 19 CONTRACT NO. 70E09 SCALE: N-T-S SHEET 10 OF 13 SHEETS STA.



#### PAD MOUNTING PATTERN



#### NOTES:

LIFTING EYE. MAY BE UNBOLTED AND ROTATED 180° FOR STORAGE.

 $\stackrel{\textstyle \sum}{}$  seal cabinet to foundation joint with silicone sealant to prevent water intrusion. Locate cabinet above high water level.

REMOVABLE 19" EIA RACK.

# **CABINET INSTALLATION**

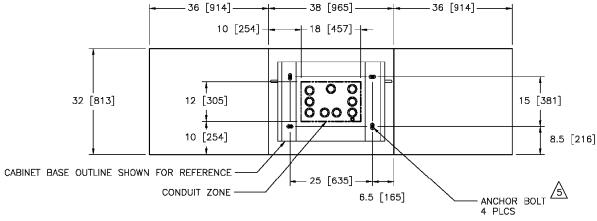
JSER NAME = GobleJR DESIGNED - JRG REVISED DRAWN -JRG REVISED LOT SCALE = 100.0000 ' / in. CHECKED -REVISED PLOT DATE = 8/13/2019 DATE

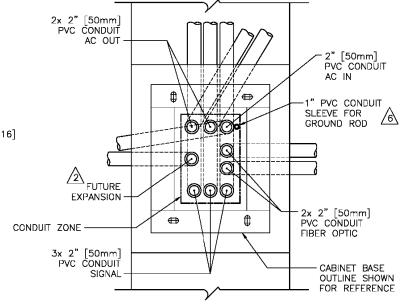
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

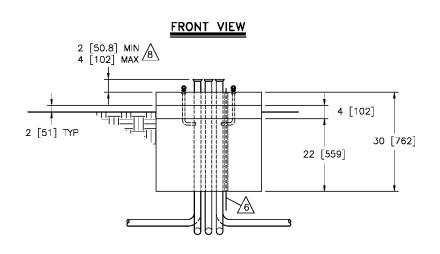
SECTION **WEIGH IN MOTION DETAILS** D5 WIM 2020-1 VERMILION 22 20 CONTRACT NO. 70E09 SCALE: N-T-S SHEET 11 OF 13 SHEETS STA. TO STA.

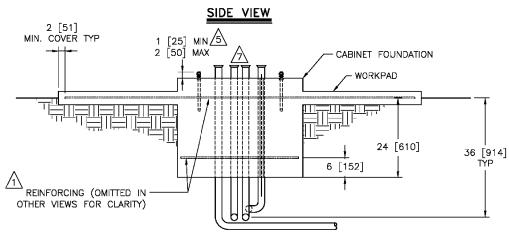
#### TOP VIEW - CABINET MOUNTING











#### NOTES:

INSTALL REINFORCING MATS. #4 [12M] BAR 12" [300mm] ON CENTER EACH WAY. EPOXY COAT OR GALVANIZE. REINFORCEMENTS ARE MINIMUM REQUIREMENTS AND MAY BE SUPERSEDED BY LOCAL CONSTRUCTION CODES.

SPARE CONDUIT MUST BE CAPPED, STUBBED 24" [600mm] PAST FOUNDATION, AND LABELED.

ALL CONDUITS SHOWN SHALL BE FURNISHED AND INSTALLED IN FOUNDATION IN ACCORDANCE WITH LOCAL CODES. CAP IF NOT USED. ADDITIONAL CONDUITS MAY BE REQUIRED. CONDUITS SHALL EXIT FOUNDATION IN DIRECTION APPROPRIATE FOR SITE GEOMETRY.

4 CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 3000 PSI [20.7 MPa] MINIMUM.

CABINET ANCHORS MUST BE GALVANIZED OR STAINLESS STEEL AND MAY BE CAST IN PLACE, CHEMICAL OR EXPANSION TYPE DRILLED INTO BASE. TYPICAL SIZE IS 3/4" NC x 12" x 4".

GROUND ROD MUST BE PROVIDED TO MEET LOCAL ELECTRICAL CODE.

SEAL ALL CONDUIT ENDS WITH STEEL WOOL AND DUCT SEAL TO REDUCE RODENT OR INSECT INTRUSION AND MOISTURE. DO NOT USE PERMANENT SEALANT AS CONDUITS MAY NEED TO BE REENTERED IN THE FUTURE FOR CABLE REPLACEMENT OR ADDITIONS.

#### NOTES: (CONTINUED)

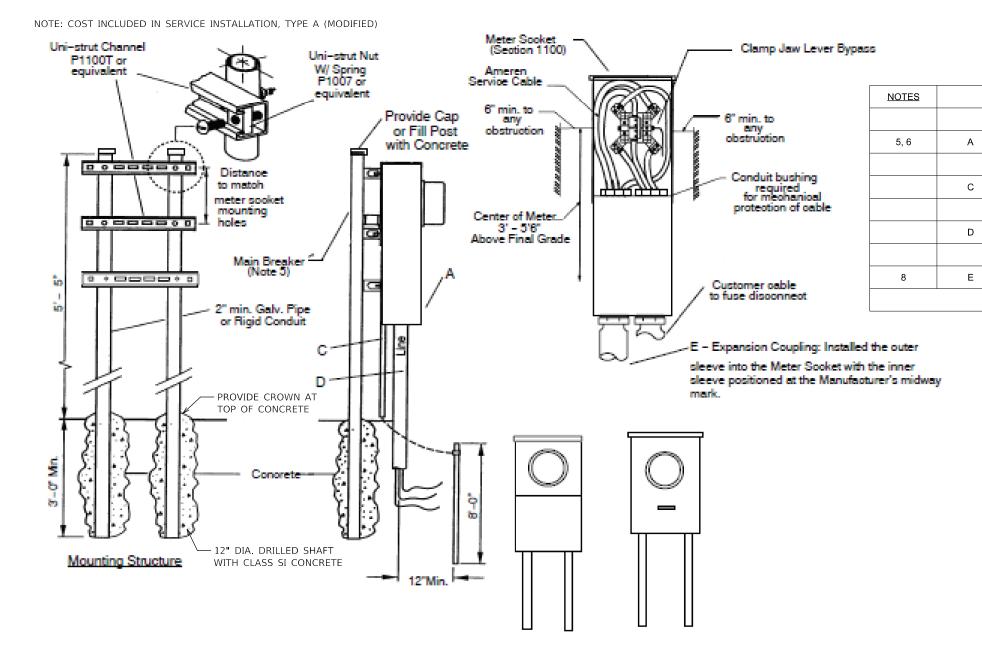
THE CABINET BASE CONDUIT MUST BE HIGHER THAN SURROUNDING PULL BOXES.
THE HEIGHT OF CONDUITS ENDING IN THE CABINET MUST BE HIGHER THAN THE OTHER
END TO PREVENT WATER ENTRY DUE TO HYDROSTATIC PRESSURE. ALL CONDUITS SHALL
HAVE END BELLS INSTALLED OR NO SHARP EDGES.

SCALE: N-T-S

# **CABINET FOUNDATION INSTALLATION**

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DRAWN - JR	G REVISED -
PLOT SCALE = 100.0000 / in CHECKED -	REVISED -
PLOT DATE = 8/13/2019 DATE -	REVISED -

						F.A.I. RTE	SEC <sup>-</sup>	TION	COUNTY	TOTAL SHEETS	SHEET NO.		
						74	D5 WIM	VERMILION	22	21			
											CONTRACT	NO. 70	DE09
	SHEET	12	OF	13	SHEETS	STA.	TO STA.		TILLINOIS FED. AID PROJECT				



#### NOTES: AMEREN ELECTRIC REQUIREMENTS

- 1 The installation of all entrance equipment, conductors and conduit shall conform to local codes or the latest NEC requirements.
- 2 All material shall be furnished and installed by Contractor.
- 3 NEC approved ground required.
- Different arrangements of the service equipment (fuse/breaker box) may be used side-by-side or below meter.
- 5 Refer to Ameren Section 1100 for meter sockets or combo units requirement.
- Instrument rated meter sockets in IL: stock% 4054378 8 terminal and stock# 4054353 13 terminal
- 7 Refer to Ameren Section 200 for meter mounting height.
- When an expansion coupling is required, it should be installed so that the outer sleeve into the meter socket with the inner sleeve positioned at the Manufacturer's midway mark.

# UNDERGROUND METER SERVICE / LOAD CENTER AMEREN ELECTRIC METER REQUIREMENTS

DESCRIPTION

1/2 INCH PVC CONDUIT

METER SOCKET, CLAMP JAW LEVER BYPASS

CONDUIT - ELECTRICAL GRADE SCHEDULE 80 PVC

EXPANSION COUPLING, SCHEDULE 40 PVC, 8 INCH FALL

USER NAME = GobleJR	DESIGNED - JRG	REVISED -					F.A.I. RTF	SECTION	COUNTY	TOTAL	SHEET NO.
	DRAWN - JRG	REVISED -	STATE OF ILLINOIS	WEIGH IN MOTION DETAILS			74	D5 WIM 2020-1	VERMILION	22	22
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						CONTRAC	Γ NO. 7	0E09
PLOT DATE = 8/13/2019	DATE -	REVISED -		SCALE: N-T-S	SHEET 13 OF 13 SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		