01-17-2020 LETTING ITEM 008

008

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	2019-065-I	WILL	26	1
	ILLINOIS	CONTRACT NO. 62J42		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAI 80 (INTERSTATE 80)
SECTION 2019–065–I
PROJECT NO STP–0MD1(854)
WB FRANKFORT WEIGH STATION – SCALE #10
STATION IMPROVEMENT
WILL COUNTY

C–91–430–19

D-91-197-19

LOCATION OF SECTION INDICATED THUS: –

FOR INDEX OF SHEETS, SEE SHEET NO. 2

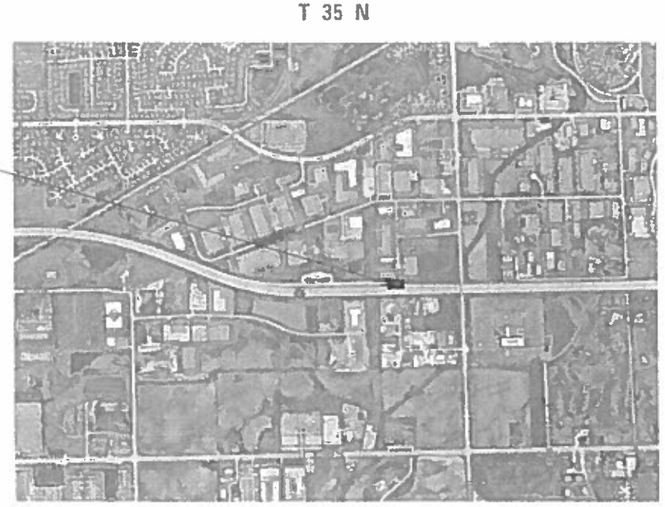
FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

IMPROVEMENT IS LOCATED IN THE VILLAGE OF TINLEY PARK.

TRAFFIC DATA
FUNCTIONAL CLASSIFICATION: INTERSTATE
2010 ADT = 104200
P.V = 89.4% S.U. = 2.9% M.U. = 7.7%
POSTED SPEED = 65 MPH
DESIGN SPEED = 65 MPH

T 35 N

IMPROVEMENT LOCATION



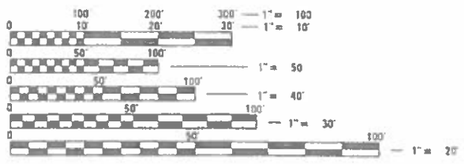
R 12 E

N

LOCATION MAP
NOT TO SCALE

FRANKFORT TOWNSHIP

GROSS LENGTH = 50.00 FT. = 0.009 MILES
NET LENGTH = 50.00 FT. = 0.009 MILES



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

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

JOSEPH D. HAVEL
062-042728
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Signed:
Date: 10/11/2019
License Expires: 11/30/2021

EFK•Moen
Civil Engineering Design

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 15 2019

Anthony J. Quigley 10/23 REGIONAL ENGINEER

Dec 6 2019 for E.A.C.K.

ENGINEER OF DESIGN AND ENVIRONMENT

Dec 6 2019 Paul E. Kh

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PROJECT ENGINEER: KEITH DONOVAN, PE (217)782–8414
PROJECT MANAGER: FAWAD AQUEEL, PE (847)705–4247

CONTRACT NO. 62J42

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-09	PAVEMENT JOINTS
483001-05	PCC SHOULDER
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701901-08	TRAFFIC CONTROL DEVICES

PROPOSED PAVEMENT PATCHING SCHEDULE

LOCATION	PAVEMENT PATCHING(SPECIAL) SQ YD	44213204 TIE BARS 3/4" EACH	Z0018913 DRILL AND GROUT #8 TIE BARS EACH
PAVEMENT - WEST OF SCALE	40.8		9
PAVEMENT - EAST OF SCALE	40.8		9
PAVEMENT - AT SCALE	1.4		
SHOULDER - NORTH OF SCALE	12.8	5	
SHOULDER - SOUTH OF SCALE	9.9	5	
TOTAL	106	10	18

PROPOSED PAVEMENT MARKING SCHEDULE

LOCATION	78009008 MODIFIED URETHANE PAVEMENT MARKING - LINE 8" FOOT	78009012 MODIFIED URETHANE PAVEMENT MARKING - LINE 12" FOOT	X0327980 PAVEMENT MARKING REMOVAL - WATER BLASTING SQ FT
AT SCALE	361	463	212

TEMPORARY PAVEMENT MARKING SCHEDULE

LOCATION	70300250 TEMPORARY PAVEMENT MARKING - LINE 8" FOOT	X7030005 TEMPORARY PAVEMENT MARKING REMOVAL SQ FT
EXIT RAMP OPENING	600	400

TEMPORARY INFORMATION SIGNING SCHEDULE

SIGN TYPE	UNIT SIZE SQ FT	QUANTITY EA	Z0030850 TEMPORARY INFORMATION SIGNING SQ FT
RAMP CLOSURE ADVANCE WARNING SIGN	20.0	3	60.0
RAMP CLOSURE ADVANCE INFORMATION SIGN	20.0	2	40.0
		TOTAL	100

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTORS SHALL CALL "J.U.L.I.E" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. USE DRILL AND GROUT #8 EPOXY-COATED TIE BARS, CONFORMING TO ART 1006.10 OF THE STANDARD SPECIFICATIONS, FOR ALL TRANSVERSE JOINTS. REFER TO THE "PAVEMENT PATCHING (SPECIAL) TIE BAR DETAILS" ON THE TYPICAL SECTIONS.
5. USE #6 EPOXY-COATED TIE BARS, CONFORMING TO ART 1006.10 OF THE STANDARD SPECIFICATIONS, FOR ALL LONGITUDINAL JOINTS. REFER TO THE "LONGITUDINAL CONSTRUCTION JOINT (TIE BAR GROUTED IN PLACE)" DETAIL ON HIGHWAY STANDARD 420001 PAVEMENT JOINTS.
6. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
8. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
9. THE ENGINEER SHALL CONTACT REGINA COOPER, AREA TRAFFIC FIELD ENGINEER, AT REGINA.COOPER2@ILLINOIS.GOV A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
10. THE ENGINEER SHALL CONTACT KEITH DONOVAN, WEIGHT ENFORCEMENT ENGINEER, AT KEITH.DONOVAN@ILLINOIS.GOV OR 217-782-8414 A MINIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING CONSTRUCTION.
11. WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED THEIR LOCATION.
12. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
13. FOR IDOT-OWNED UNDERGROUND ASSET IDENTIFICATION CONTACT IDOT DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR (EMC), MEADE ELECTRIC CO INC., TED TROYNER AT 1-708-588-2544.
14. FOR SCALE PIT DRAINAGE LINES LOCATION CONTACT NEW LENOX MAINTENANCE YARD AT 1-815-485-6393, 2504 OR 2505.
15. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
16. ALL PAVEMENT PATCHING LOCATIONS WILL BE AS SHOWN ON THE PLANS AND AS DETERMINED IN THE FIELD BY THE ENGINEER.

TRAFFIC CONTROL NOTES

1. UTILIZE DISTRICT 1 STANDARD TC-08 TO CLOSE RAMP DURING CONSTRUCTION.
2. PLACE RAMP CLOSURE ADVANCE WARNING SIGNS ("RAMP CLOSED") AT THE FOLLOWING EXIT GUIDE SIGNS:
   1) WEIGH STATION 1 1/2 MILES SIGN AT EXIT 148B (IL 43 / HARLEM AVE NORTH)
   2) WEIGH STATION 1 MILE SIGN AT EXIT 148A (IL 43 / HARLEM AVE SOUTH)
   3) WEIGH STATION EXIT SIGN AT WEIGH STATION EXIT RAMP
3. DURING CONSTRUCTION, PLACE TEMPORARY PAVEMENT MARKING - LINE 8" (70300250) SOLID WHITE ACROSS EXIT RAMP OPENING. AFTER CONSTRUCTION, REMOVAL OF THIS LINE WILL BE PAID FOR AS TEMPORARY PAVEMENT MARKING REMOVAL (X7030005).

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I-80) WB FRANKFORT WEIGH STATION – SCALE #10
INDEX OF SHEETS, HIGHWAY STANDARDS, NOTES, AND SCHEDULES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	2
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

* SPECIAL PROVISION REQUIRED

** DENOTES SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE 80% FED / 20% STATE ROADWAY 0044 URBAN
	44213204	TIE BARS 3/4"	EACH	10	10
**	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	3	3
**	66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1
**	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	1
**	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	1
**	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	2	2
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	2
	67100100	MOBILIZATION	L SUM	1	1
	70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	600	600
**	78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	361	361
**	78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	463	463
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	212	212
* **	X1400184	REMOVING WEIGH-IN-MOTION COMPONENTS	L SUM	1	1
*	X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1
*	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	400	400
*	Z0018913	DRILL AND GROUT #8 TIE BARS	EACH	18	18
* **	Z0026290	FURNISHING AND INSTALLING WEIGH-IN- MOTION COMPONENTS	L SUM	1	1
*	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	100	100
*	X4420201	PAVEMENT PATCHING (SPECIAL)	SQ YD	106	106

REV. - MS

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FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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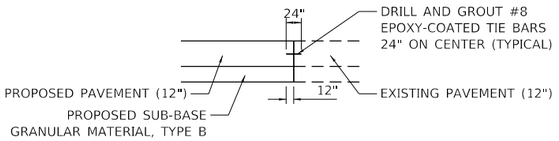
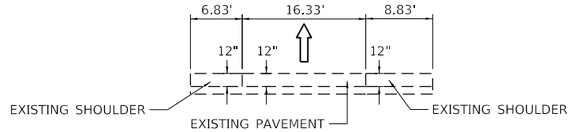
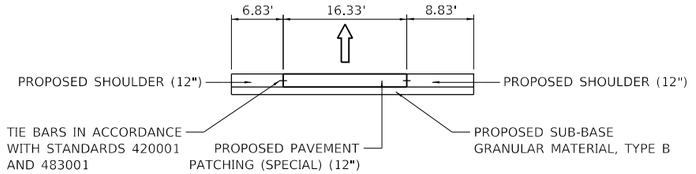
	ILLINOIS	FED. AID PROJECT		



PAVEMENT PATCHING (SPECIAL)
TIE BAR DETAILS



TYPICAL SECTION
STA. 1224+65 TO 1225+15



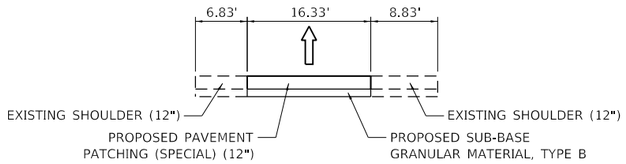
PROPOSED TYPICAL SECTION
STA. 1224+83.5 TO 1224+96.5

NOTES

1. PAVEMENT PATCHING (SPECIAL) INCLUDES PREPARATION OF THE EXISTING BASE MATERIAL AND THE ADDITION OF SUB-BASE GRANULAR MATERIAL, TYPE B AS NECESSARY.

2. THE PAVEMENT PATCHING SHALL BE TIED TO THE EXISTING PAVEMENT IN ACCORDANCE WITH DETAIL ON THIS SHEET. THE PAVEMENT PATCHING SHALL MATCH EXISTING PAVEMENT THICKNESS AND SLOPE.

3. REMOVAL AND REPLACEMENT OF SHOULDER SHALL BE PAID FOR AS PAVEMENT PATCHING (SPECIAL). THE PAVEMENT PATCHING SHALL MATCH EXISTING SHOULDER THICKNESS AND SLOPE.



PROPOSED TYPICAL SECTION
STA. 1224+65 TO 1224+83.5
STA. 1224+96.5 TO 1225+15

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FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
TYPICAL SECTIONS

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

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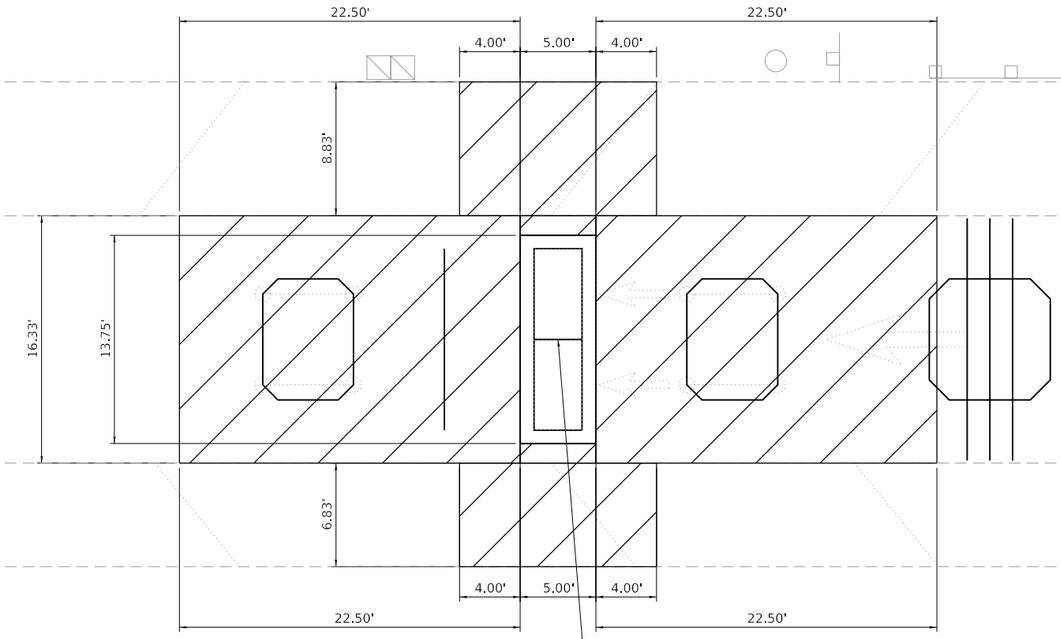
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			



LEGEND

PAVEMENT PATCHING (SPECIAL)
SEE TYPICAL SECTIONS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
PROPOSED ROADWAY PLAN

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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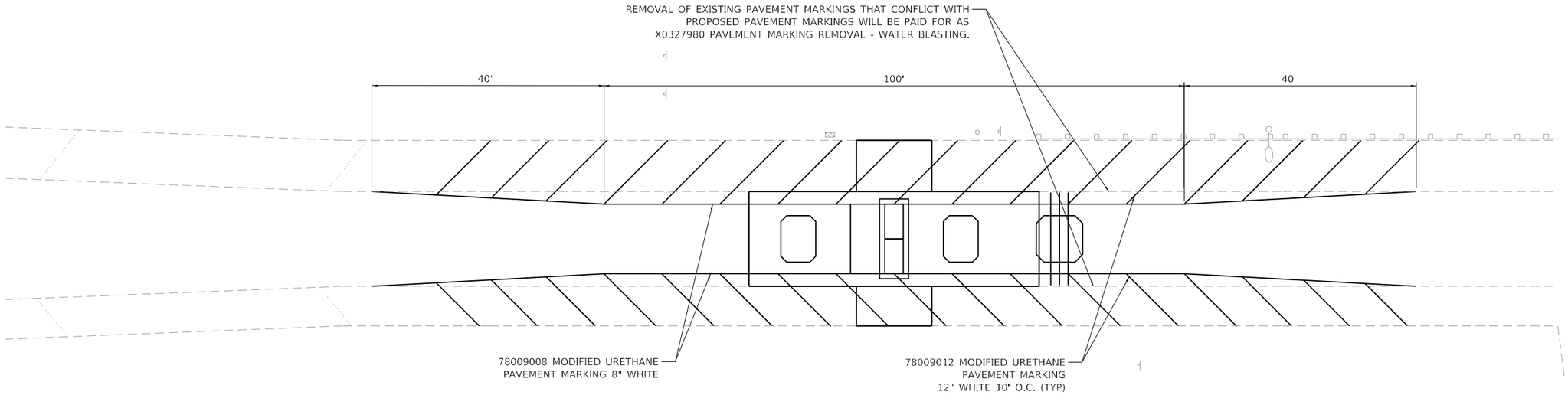
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
PROPOSED PAVEMENT MARKING PLAN

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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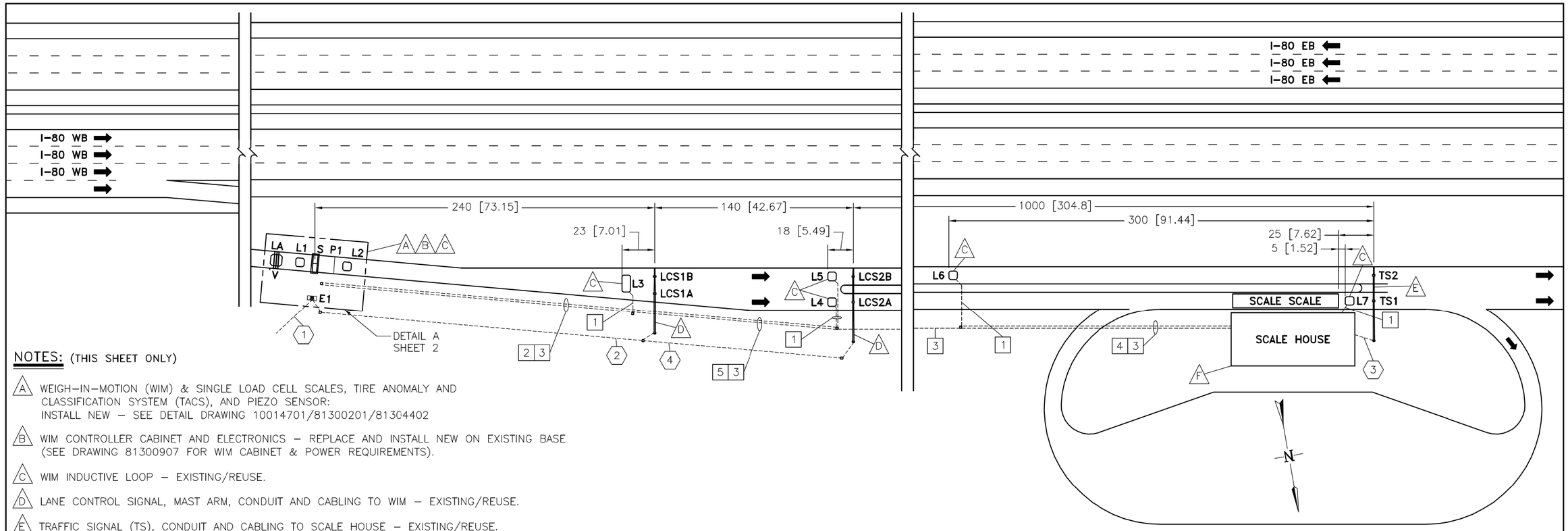
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			



NOTES: (THIS SHEET ONLY)

A WEIGH-IN-MOTION (WIM) & SINGLE LOAD CELL SCALES, TIRE ANOMALY AND CLASSIFICATION SYSTEM (TACS), AND PIEZO SENSOR:
INSTALL NEW – SEE DETAIL DRAWING 10014701/81300201/81304402

B WIM CONTROLLER CABINET AND ELECTRONICS – REPLACE AND INSTALL NEW ON EXISTING BASE (SEE DRAWING 81300907 FOR WIM CABINET & POWER REQUIREMENTS).

C WIM INDUCTIVE LOOP – EXISTING/REUSE.

D LANE CONTROL SIGNAL, MAST ARM, CONDUIT AND CABLING TO WIM – EXISTING/REUSE.

E TRAFFIC SIGNAL (TS), CONDUIT AND CABLING TO SCALE HOUSE – EXISTING/REUSE.

F SCALE HOUSE EQUIPMENT: WIM ELECTRONICS, OPERATOR DISPLAY/CONTROLS, PRINTER – INSTALL NEW – SEE DRAWING 813009 FOR POWER DETAIL.

GENERAL NOTES:

ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES SHALL BE DONE WITHIN A PULL BOX BY SOLDERING THEN SEALING FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES MAY BE DIFFERENT FROM THAT SHOWN TO MEET REQUIREMENTS.

AC POWER CABLES MUST BE RUN IN SEPARATE CONDUITS/PULLBOXES FROM SIGNAL CABLES OR SEPARATED INSIDE PULLBOXES WITH A DIVIDER.

SENSOR SPACING SHOWN IS TYPICAL SPACING REQUIREMENT, ACTUAL SENSOR SPACING MAY BE ALTERED TO SUIT SITE CONDITIONS BY THE IRD FIELD REPRESENTATIVE.

SITE CONDITIONS MUST MEET ROAD SURFACE CONDITIONS AS DEFINED IN THE ACCEPTANCE PERFORMANCE TEST SECTION FROM THE SPECIFICATIONS TO ACHIEVE OPTIMAL WIM SYSTEM PERFORMANCE.

PIEZO SENSORS MUST BE A MINIMUM OF 6' [1.83m] AWAY FROM CRACKS, JOINTS OR SAWCUTS WHEN POSSIBLE.

CABLES MUST BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.

ADDITIONAL DRAINAGE MAY BE REQUIRED DEPENDING ON SLOPE OF ROADWAY.

IRD RECOMMENDS THE MINIMUM SIZE FOR PULL BOXES IS 18" [45.7cm] X 18" [45.7cm] X 12" [30.5cm].

EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.

SEE 81300911 FOR POWER REQUIREMENTS.

DRAWING NOT TO SCALE.

LEGEND:

E – ELECTRONICS ENCLOSURE
L – INDUCTIVE LOOP
LCS – LANE CONTROL SIGNAL
O/H – OVERHEIGHT DETECTOR
P – PIEZOELECTRIC SENSOR
S – SINGLE LOAD CELL SCALE
SVC – SIDEVIEW CAMERA
T – TEMPERATURE SENSOR
TS – TRAFFIC SIGNAL
V – VECTORSENSE SENSOR
☒ – CABINET
[1] – SIGNAL CONDUIT
⟨1⟩ – POWER CONDUIT
⟨A⟩ – NOTE

SIGNAL CONDUITS: (THIS SHEET ONLY)

[1] CONDUIT (EXISTING)
2–1C 14AWG (LOOP WIRE) (EXISTING)

[2] CONDUIT (EXISTING)
3–2C 14AWG (LOOP LEADS L3,L4,L5) (EXISTING)

[3] CONDUIT (EXISTING)
1–12 STRAND MULTIMODE FIBER OPTIC (WIM COM) (EXISTING)

[4] CONDUIT (EXISTING)
1–2C 14AWG (LOOP LEADS L6) (EXISTING)

[5] CONDUIT (EXISTING)
2–2C 14AWG (LOOP LEADS L4,L5) (EXISTING)

POWER CONDUITS: (THIS SHEET ONLY)

⟨1⟩ CONDUIT
1–WIM CABINET POWER (EXISTING)

⟨2⟩ CONDUIT (EXISTING)
CABLING (EXISTING) – (LCS1,LCS2)

⟨3⟩ CONDUIT (EXISTING)
CABLING (EXISTING) – (TS)

⟨4⟩ CONDUIT (EXISTING)
CABLING (EXISTING) – (LCS2)

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE	MKa/TDe			

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ird®

NOT TO SCALE

SIZE: B

DIMENSIONS IN: FEET [m]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
SITE LAYOUT
RAMP SORTER SYSTEM
I-80 FRANKFORT (WB)

DWG. No. **MILRSS14**

REV.: 1

CAD FILE: MILRSS14_1.DWG

SHEET 1 OF 2

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PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -	

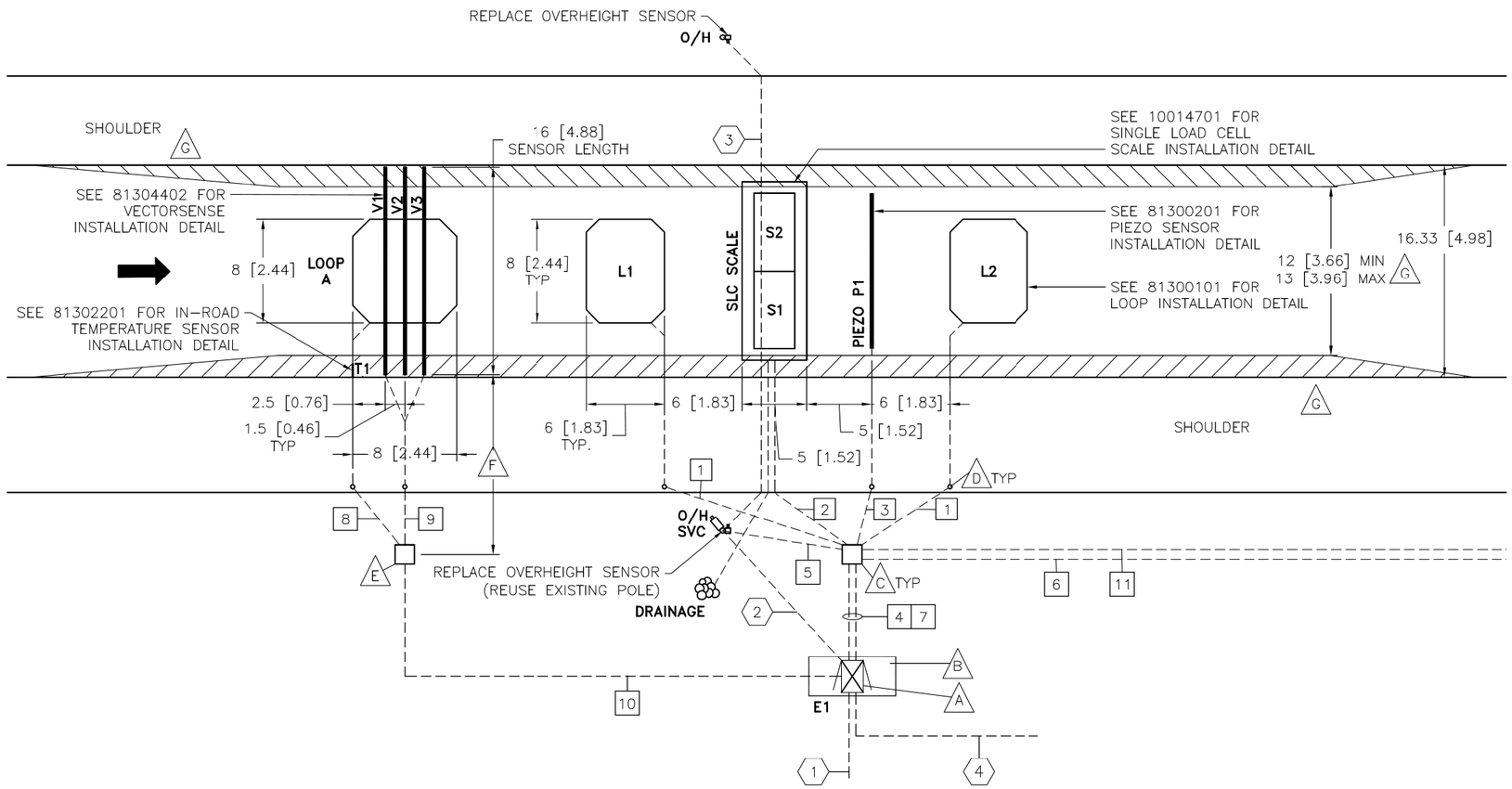
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I-80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH-IN-MOTION SCALE DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	7
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

DETAIL A



SIGNAL CONDUITS: (THIS SHEET ONLY)

1. 1" CONDUIT
   1–2C 14AWG (LOOP WIRE)
2. 2" CONDUIT
   2–3PR 20AWG (SLC LEAD)
   4–2C 18AWG (OFF–SCALE LEAD)
3. 1" CONDUIT
   1–RG58 COAXIAL CABLE (PIEZO LEAD)
4. 2" CONDUIT
   5–2C 14AWG (LOOP LEADS)
   1–RG58 COAXIAL CABLE (PIEZO LEAD)
   2–3PR 20AWG (SLC LEAD)
   4–2C 18AWG (OFF–SCALE LEAD)
5. 2" CONDUIT
   1–2C 18AWG (OVERHEIGHT SIGNAL)
   1–CAT5 NETWORK CABLE (SVC)
6. 2" CONDUIT
   1–12 STRAND MULTIMODE FIBER OPTIC CABLE
7. 2" CONDUIT
   1–12 STRAND MULTIMODE FIBER OPTIC CABLE
   1–2C 18AWG (OVERHEIGHT SIGNAL)
   1–CAT5 NETWORK CABLE (SVC)
8. 2" CONDUIT
   1–2C 14AWG (LOOP WIRE)
   1–TEMPERATURE SENSOR LEAD
9. 1" CONDUIT
   3–COAXIAL CABLE (VECTORSENSE LEAD)
10. 2" CONDUIT
    2–CAT5 NETWORK CABLE
    1–8AWG GROUND WIRE
11. 2" CONDUIT
    3–2C 14AWG (LOOP LEAD)

POWER CONDUITS: (THIS SHEET ONLY)

1. E1 ENCLOSURE POWER (SEE DWG 81300907 FOR DETAIL)
2. 2" CONDUIT
   2–2C + GND 0.6A (OVERHEIGHT POWER)
3. 2" CONDUIT
   1–2C + GND 0.3A (OVERHEIGHT POWER)
4. 2" CONDUIT
   LCS POWER

NOTES: (THIS SHEET ONLY)

A. CABINET WITH WIM ELECTRONICS.
B. CABINET BASE.
C. PULL BOX.
D. DRILL THROUGH SHOULDER FOR CONDUIT.
E. PULL BOX WITH VECTORSENSE ELECTRONICS.
F. MAX 16 [4.88] FROM END OF SENSORS TO CENTER OF FIRST PULL BOX.
G. TAPER LANE STRIPING TO CREATE 12 [3.66] TO 13 [3.96] LANE TO DIRECT VEHICLES OVER CENTER OF SENSORS.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE	MKa/TDe			

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: FEET [m]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
SITE LAYOUT
RAMP SORTER SYSTEM
I-80 FRANKFORT (WB)

DWG. No. **MILRSS14**

REV.: 1

CAD FILE: MILRSS14_1.DWG

SHEET 2 OF 2

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

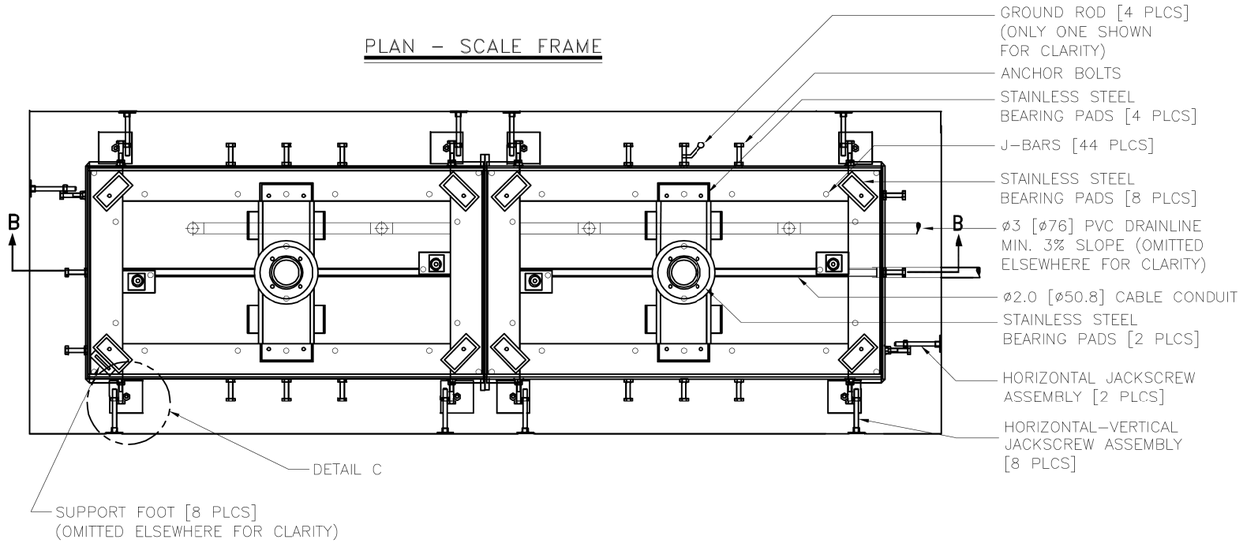
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	8
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: z:\17002.23 IDOT D1 PTB 181-04 W023 Frankfort WIM\IDGN\Dxs\dgn\ProWimRoots\sheets\D1621J42-sht-detailsWIM-02.dgn

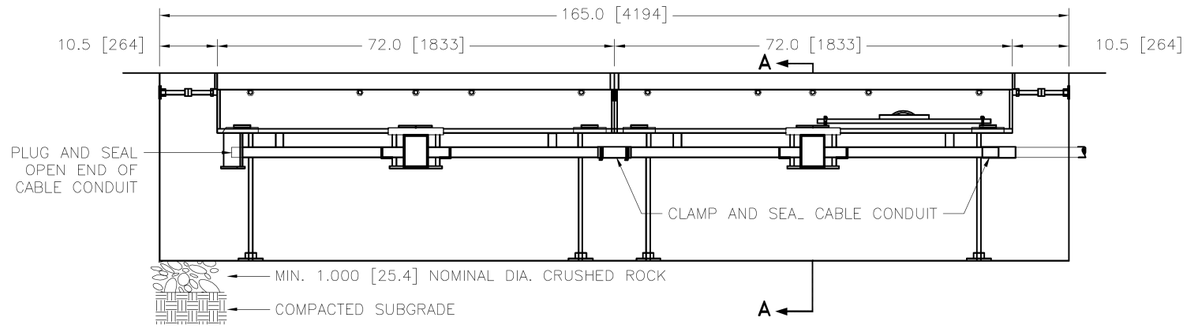
PLAN – SCALE FRAME



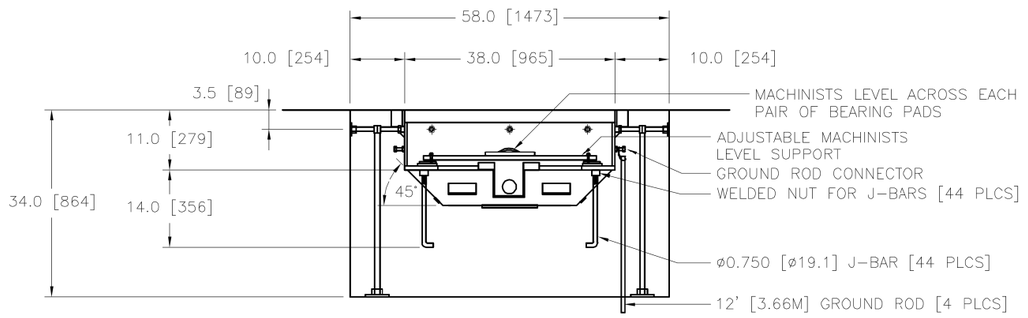
GENERAL INSTALLATION INSTRUCTIONS:

1. SHIPMENT INCLUDES: FRAMES, J–BARS, O–RINGS, ALL NECESSARY CONCRETE ANCHOR BOLTS, JACK SCREWS, LOCATING SCREWS, SUPPORT PADS, CONDUIT CONNECTING HOSE AND CLAMPS.
2. INSTALL CONCRETE ANCHOR BOLTS, JACK SCREWS AND J–BARS ONTO SCALE FRAMES.
3. EXCAVATE SCALE VAULT TO DEPTH OF 40" [1016mm] AND COMPACT PIT BOTTOM. TIGHTEN JAMB NUTS.
4. PLACE 6" [152.4mm] OF 1" [25.4mm] NOMINAL CRUSHED ROCK AND VIBRATE COMPACT.
5. INSTALL GROUND CLAMPS AND GROUND RODS.
6. SET FRAME IN PREPARED PIT WITH NECESSARY REBAR CAGE IN PLACE.
7. INSTALL DRAIN PIPES AND CONDUITS. SEAL ALL CONNECTIONS. DRAINAGE AT EDGE OF ROADWAY MUST ALLOW FREE FLOW AWAY FROM THE OUTLET OF DRAIN PIPE. THE OUTLET MUST BE WELL ABOVE THE HIGH WATER LEVEL OF THE DITCH OR MANHOLE. THE FLOW ALONG THE DRAIN AND AWAY FROM THE OUTLET MUST BE MAINTAINED AT ALL TIMES.
8. USE JACK SCREWS TO POSITION FRAME PROPERLY – HORIZONTALLY AND VERTICALLY.
9. LOCATE THE EDGE OF THE SCALE FRAME FLUSH WITH THE SURROUNDING ROAD SURFACE USING A 6' LEVEL.
10. FINAL SET OF THE SCALE USING A MACHINISTS LEVEL MOUNTED ON AN ADJUSTABLE SUPPORT, SPANNING ACROSS THE ADJACENT SCALE BEARING PADS TO ENSURE THAT ALL FRAME EDGES ARE PARALLEL AND THERE IS NOT TWIST IN THE SCALE FRAME.
11. WET PIT WALLS.
12. POUR AND VIBRATE CONCRETE AROUND FRAME. CONCRETE SHOULD HAVE MAX SLUMP OF 3" [76.2mm].
13. SLOPE AND FINISH SCALE FRAME FLOOR FOR PROPER DRAINAGE TO DRAIN PIPE INLET.
14. CONCRETE MUST MEET THE FOLLOWING SPECIFICATIONS:
    1500PSI [10MPA] – NSTALL PLATFORM IN FRAME
    3000PSI [20MPA] – OPEN TO TRAFFIC
    4500PSI [30MPA] – JLTIMATE STRENGTH

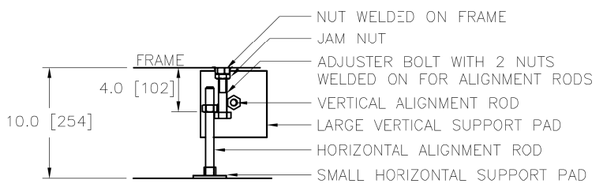
SECTION B–B



SECTION A–A



DETAIL C
FLAME ALIGNMENT JACK SCREWS



REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	RELEASED AS REV. A.	B.B.	R.Cz.	R.J.K.	DEC 1/95
B	ADD ANGLE BRACKETS. CHANGE DRAIN TO ABS PIPE.	D.J.B.	DPr	RCz	NOV 7/97
C	CHANGE CABLE CONDUIT FROM 1.5" TO 2". ECO-06	LHo/GDo	GDo	DBz	MAY 23/01
D	ADD PLATFORM LIFTING HOLES, CONCRETE STRENGTH REQUIREMENTS, CHANGE DOWEL. ECO-08	LHo/GDo	BCI	GDo	June 28/05
E	CHANGE DRAIN, UPDATE NOTES - AS PER ECO-13630	MKa/THa	THa	JBu	APR 23/19

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: INCHES [mm]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION
SINGLE LOAD CELL SCALE
SCALE FRAME DETAIL

DWG. No. **10014701** REV.: E

CAD FILE: 10014701_E.DWG SHEET 1 OF 2

USER NAME = MSlick	DESIGNED - JH	REVISED -	
	DRAWN - AZ	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -	
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

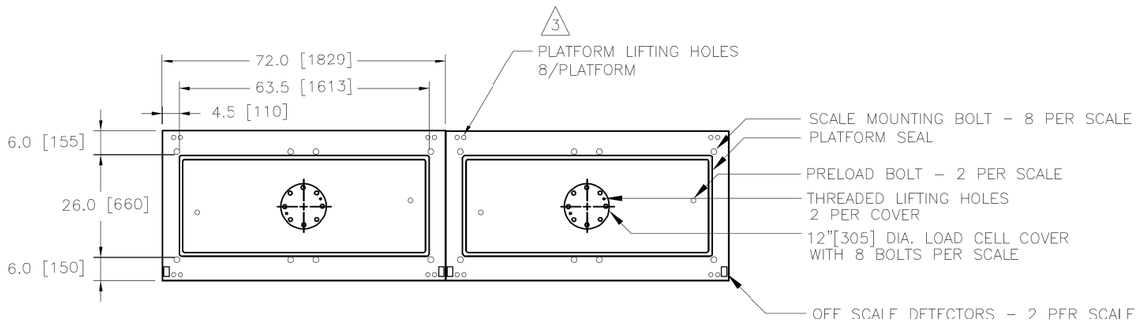
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	9
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: Z:\17002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Default\Pen\Mini\Plots\sets\D162J42-cht-details\WIM-03.dgn

SCALE DETAIL



NOTES:

1 REINFORCEMENTS AND DOWELS AS SHOWN ARE MINIMUM REQUIREMENTS AND MAY BE SUPERCEDED BY STATE CONSTRUCTION CODES.

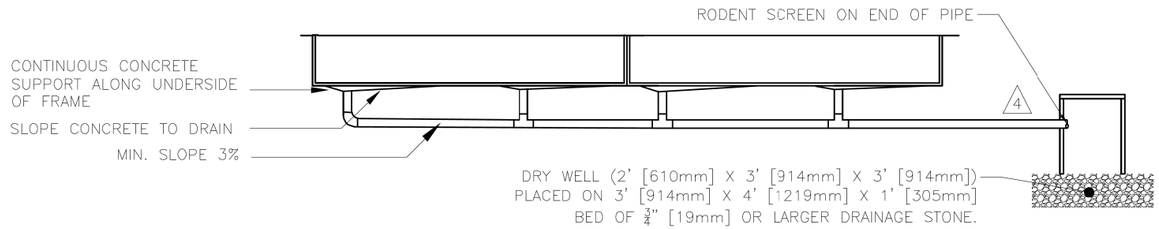
2 FOR PCC PAVEMENTS INSTALL ø1–1/8" [28.5mm] X 16" [406mm] EPOXY COATED DOWELS IN ø1–1/4" [19mm] X 8" [203mm] DEEP HOLE @ 16" [406mm] O.C. SECURE DOWEL INTO HOLE WITH EPOXY. ENSURE DOWELS ARE EXACTLY 90° TO LONGITUDINAL PAVEMENT DIRECTION BOTH VERTICALLY AND HORIZONTALLY. GREASE DOWELS.

3 SEE 69028801 FOR LIFTING PROCEDURE.

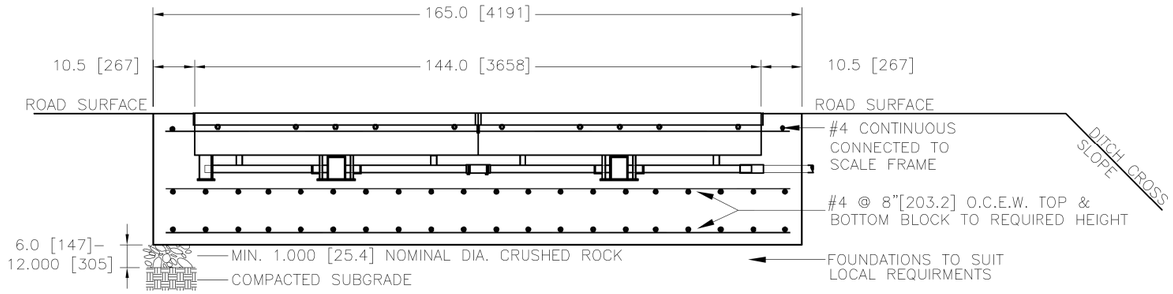
4 DRAINS FROM EACH SCALE MAY BE BROUGHT BACK INDIVIDUALLY TO DRY WELL.

5 SEE 693001–03 FOR INSTALLATION REQUIREMENTS DETAILS.

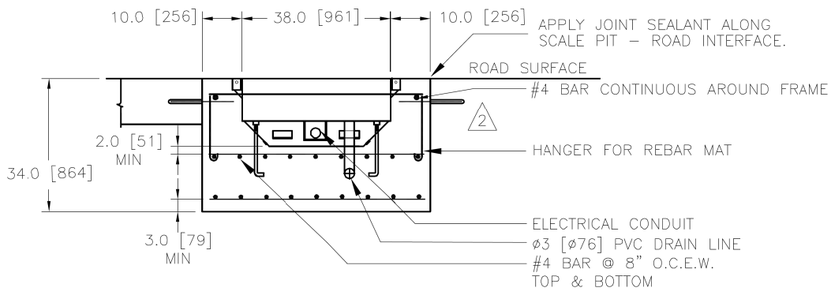
DRAIN DETAIL



SIDE VIEW
(DRAIN AND J–BARS OMITTED FOR CLARITY)



END VIEW



REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	RELEASED AS REV. A.	B.B.	R.Cz.	R.J.K.	DEC 1/95
B	ADD ANGLE BRACKETS. CHANGE DRAIN TO ABS PIPE.	D.J.B.	DPr	RCz	NOV 7/97
C	CHANGE CABLE CONDUIT FROM 1.5" TO 2". ECO-06	LHo/GDo	GDo	DBz	MAY 23/01
D	ADD PLATFORM LIFTING HOLES, CONCRETE STRENGTH REQUIREMENTS, CHANGE DOWEL. ECO-08	LHo/GDo	BCI	GDo	June 28/05
E	CHANGE DRAIN, UPDATE NOTES - AS PER ECO-13630	MKa/THa	THa	JBu	APR 23/19

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: INCHES [mm]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION
SINGLE LOAD CELL SCALE
SCALE FRAME DETAIL

DWG. No. **10014701**

REV.: E

CAD FILE: 10014701_E.DWG

SHEET 2 OF 2

MODEL: Default
FILE NAME: Z:\17002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Default\pnl\Plotsheets\D162J42-sht-detailsWIM-04.dgn

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	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

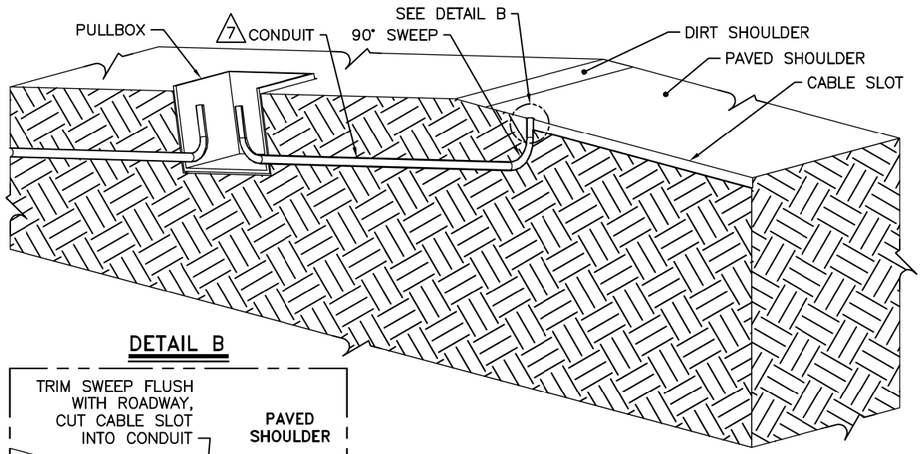
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

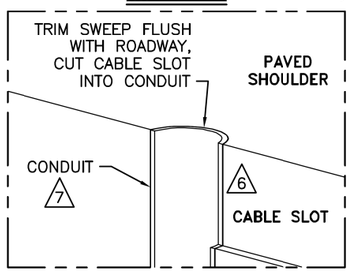
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	10
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

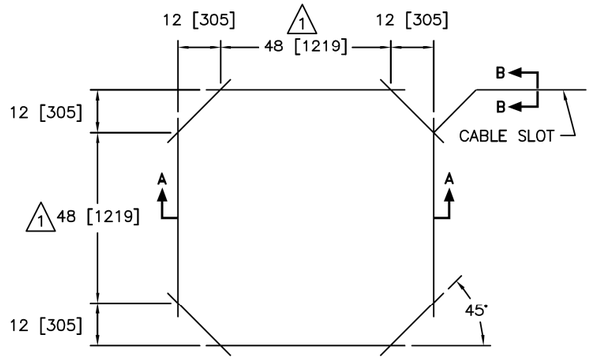
CABLE ROUTING DETAILS



DETAIL B

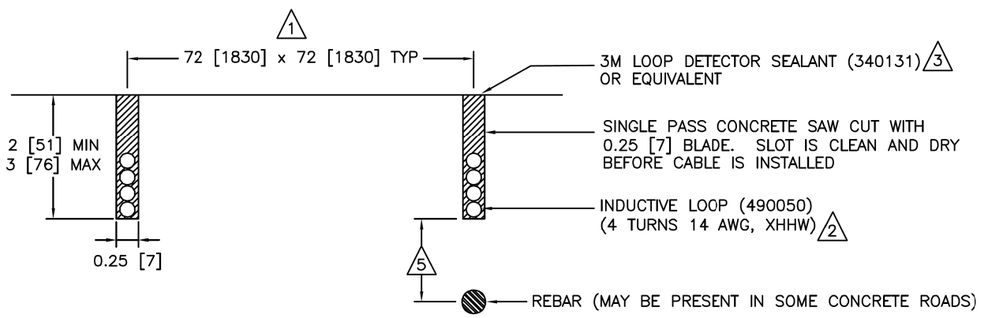


LOOP DIMENSION DETAIL

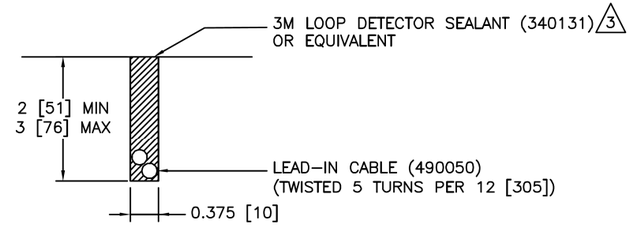


72 [1830] x 72 [1830] LOOP SHOWN

SECTION A–A



SECTION B–B



NOTES:

1. LOOP SIZE AS SPECIFIED ON SITE LAYOUT AND IN ACCORDANCE WITH IRD 3EGR0001.
2. NUMBER OF TURNS AS SPECIFIED ON SITE LAYOUT AND IN ACCORDANCE WITH IRD 3EGR0001.
3. USE CAULKING GUN 340132 OR 340148.
4. LOOP INSTALLATION MANUALS 690279 – PERMANENT OCTAGON LOOPS
5. 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.
6. CORE DRILL OR CUT NOTCH IN PAVED SHOULDER FOR SWEEP. PLUG SWEEP OPENING, COVER WITH LOOP SEALANT.
7. NON–METALLIC FLEX OR PVC CONDUIT.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	INITIAL RELEASE	JGi/GDo	DPr	GDo	DEC 21/05
B	ADD NOTE 5. ECO-01.	JGi/ACo	DPr	DBo	AUG 31/06
C	UPDATE CABLE ROUTING DETAILS AS PER REDLINES - ECO-2008.	JGi/MLo	THa	MLo	FEB 17/11
D	MOVE REBAR IMAGE AND NOTE TO SECTION AA - ECO-4753.	JGi/SpJ	DMu	THa	JUN 7/13
E	ADD NOTE 7, REMOVE SQUARE LOOP; ECO 11011	LPRa/THa	*LPra*	THa	MAR 9/17

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: INCHES [mm]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION
XHHW
VEHICLE DETECTION LOOPS

DWG. No. **81300101** REV.: E

CAD FILE: 81300101.DWG

SHEET 1 OF 1

USER NAME = MSlick	DESIGNED - JH	REVISED -	
	DRAWN - AZ	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -	
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

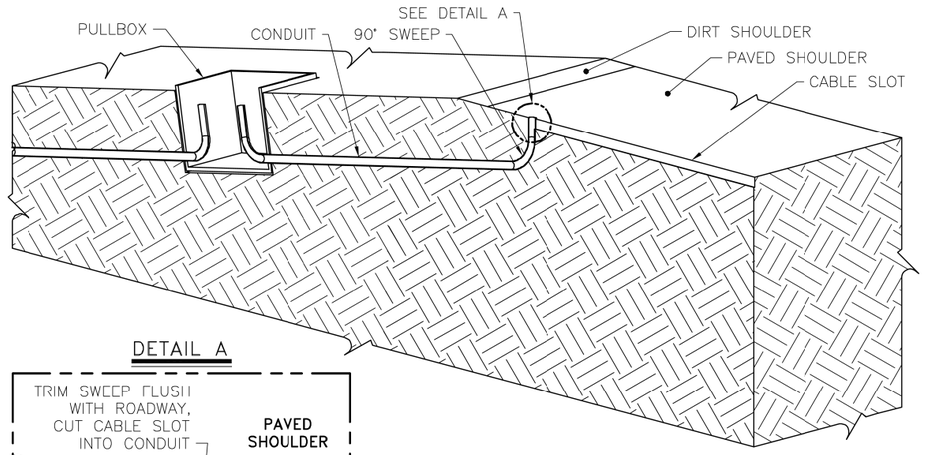
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

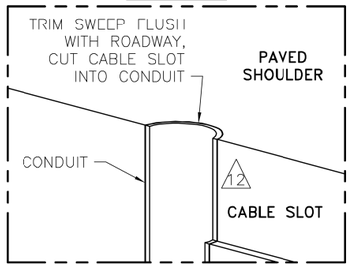
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	11
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plotsheets\D162142-alt-detailsWIM-05.dgn

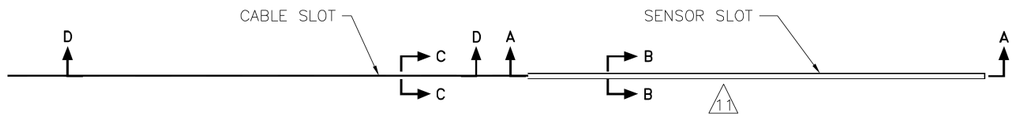
SECTION D–D (CABLE ROUTING DETAILS)



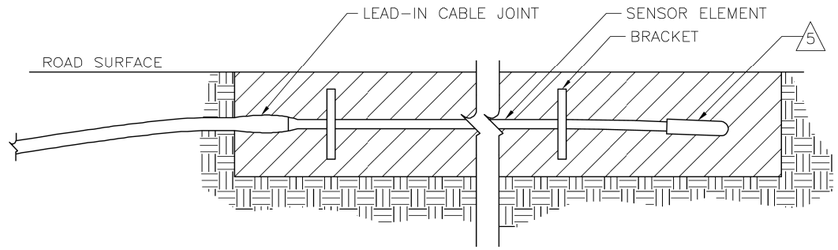
DETAIL A



PLAN VIEW – SENSOR INSTALLATION



SECTION A–A



NOTES:

1 CRACKS OR SAW CUTS IN THE ROADWAY MUST NOT BE LOCATED CLOSER THAN 18 [450] UPSTREAM AND 18 [450] DOWNSTREAM OF THE PIEZOELECTRIC SENSOR.

2 SLOT LENGTH IS 6 [152] LONGER THAN SENSOR.

3 USE THE DEPTH GAGE SUPPLIED WITH EACH SENSOR TO SET THE SENSOR AT THE CORRECT DEPTH. CHECK DEPTH ALONG THE ENTIRE LENGTH OF THE SENSOR.

4 SPACE THE BRACKETS EVENLY OVER THE LENGTH OF THE SENSOR, USING ALL SUPPLIED 0.75 [19] BRACKETS. EXTRA 1.0 [25] BRACKETS ARE SUPPLIED WHICH ARE USED ONLY IN THE CASE THAT THE SLOT IS CUT TOO WIDE.

5 PUT A SLIGHT BEND AT THE END OF THE SENSOR TO LOWER THE HEIGHT OF THE END CAP TO THE SAME HEIGHT AS THE SENSOR TO ENSURE SUFFICIENT DEPTH OF ENCAPSULANT ABOVE THE SENSOR.

6 USE CAULKING GUN 340132 OR 340148.

7 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.

8 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.

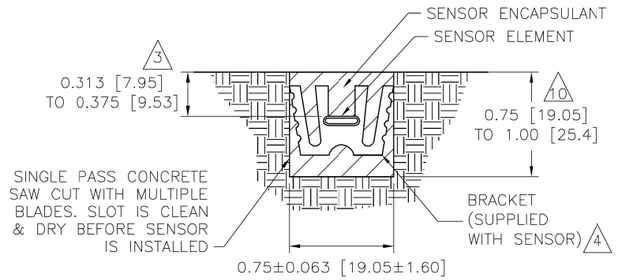
9 PIEZO INSTALLATION MANUAL: 690275.

10 FOR ADDITIONAL PROTECTION OF THE SENSOR, INSTALLATION DEPTH MAY BE INCREASED WITH CORRESPONDING INCREASE IN CUT DEPTH AND GROUT. DECREASED SIGNAL AMPLITUDE AND QUALITY WILL RESULT.

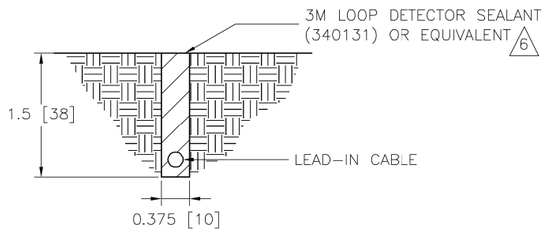
11 LOCATE AND ORIENT SENSOR AND CABLING ACCORDING TO SYSTEM DOCUMENTATION.

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

SECTION B–B



SECTION C–C



REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	INITIAL RELEASE	GDo/JGi	DPr	GDo	DEC 21/05
B	CHANGES AS PER ECO-01.	JGi/HFe	MLo	THa	SEP 14/09
C	IN "PLAN VIEW - SENSOR...", REMOVE LANE OUTLINES; ADD NOTE 11; UPDATE CABLE ROUTING DETAILS PER ECO-1852.	JGi/SpJ	Michael Lockerbie	THa	JAN 25/11

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: INCHES [mm]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION BL TYPE PIEZO SENSOR

DWG. No. **81300201** REV.: C

CAD FILE: 81300201.DWG

SHEET 1 OF 1

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

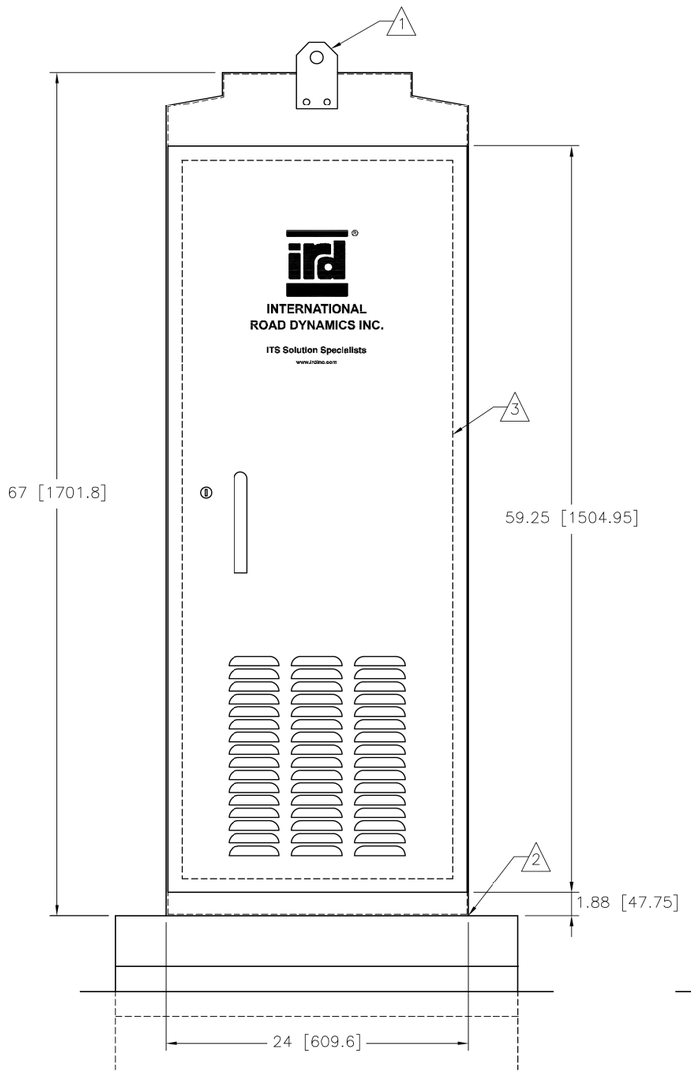
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

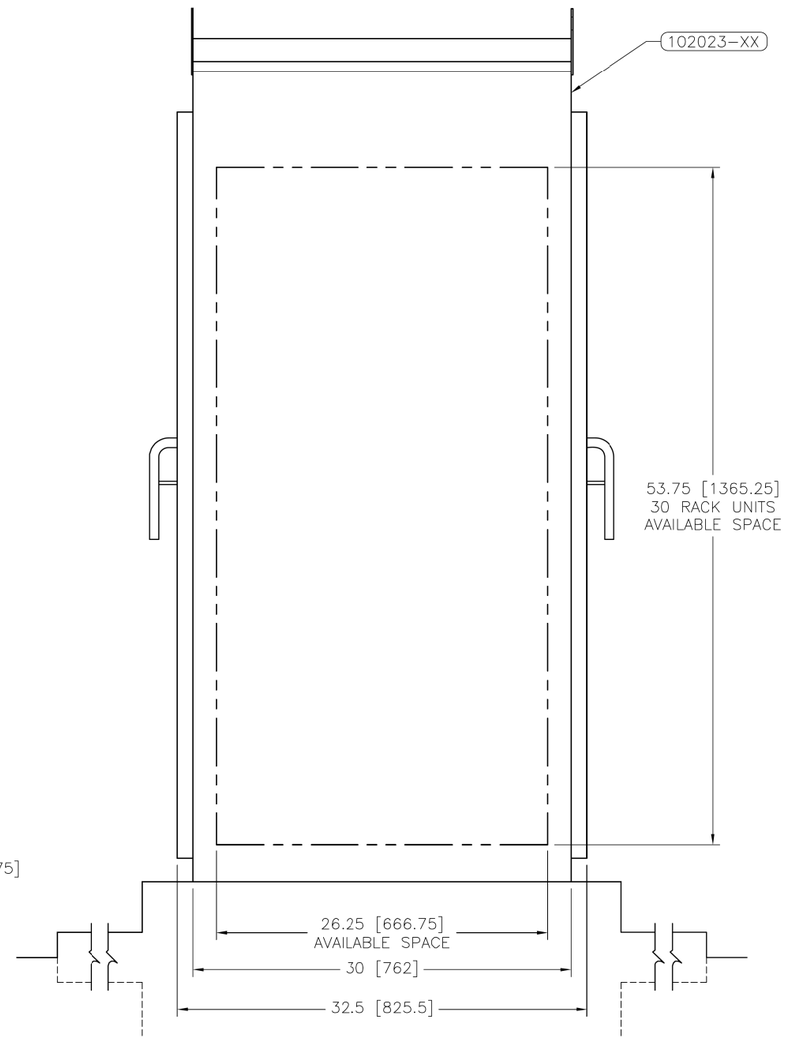
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	12
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: z:\17002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Default\Pen\Plots\sheets\D162J42-cht-detailsWIM-06.dgn

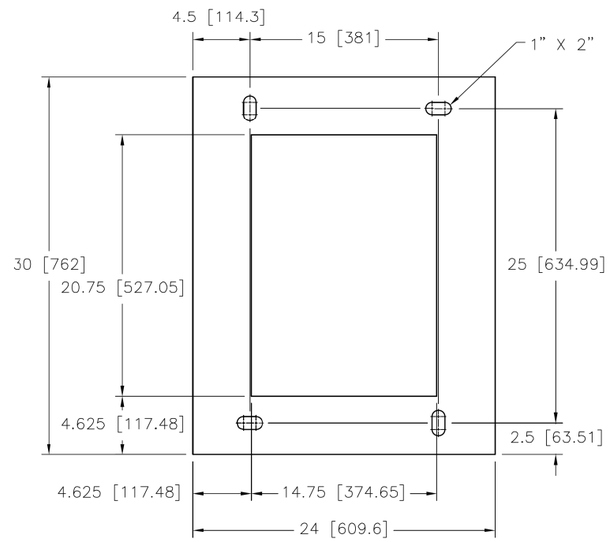
FRONT VIEW



SIDE VIEW



PAD MOUNTING PATTERN



NOTES:

1. LIFTING EYE. MAY BE UNBOLTED AND ROTATED 180° FOR STORAGE.
2. SEAL CABINET TO FOUNDATION JOINT WITH SILICONE SEALANT TO PREVENT WATER INTRUSION. LOCATE CABINET ABOVE HIGH WATER LEVEL.
3. REMOVABLE 19" EIA RACK.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	INITIAL RELEASE	JGi/DPr	DPr	DBo	Mar 30/06

CONFIDENTIAL

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NOT TO SCALE

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION
334 NEMA 3R SERIES iCBNT
ROADSIDE ELECTRONICS

SIZE:	DWG. No.	REV.:
B	**81300902**	A

DIMENSIONS IN: INCHES [mm]	CAD FILE: 81300902.DWG	SHEET 1 OF 1

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

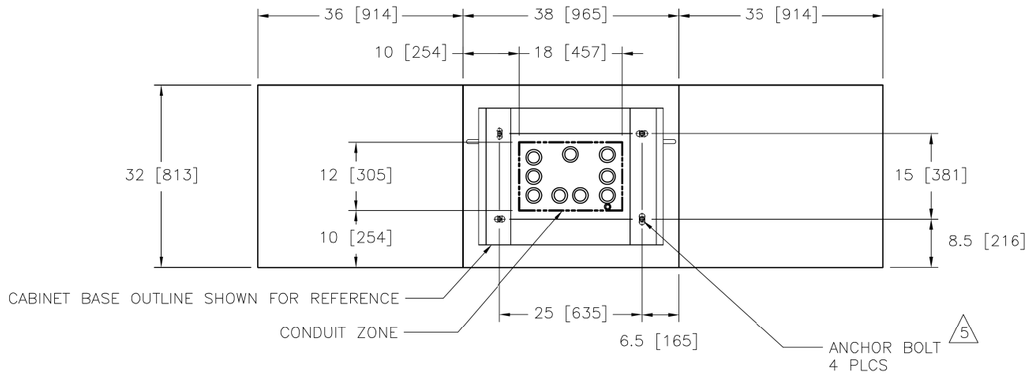
FAI 80 (I-80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH-IN-MOTION SCALE DETAILS

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

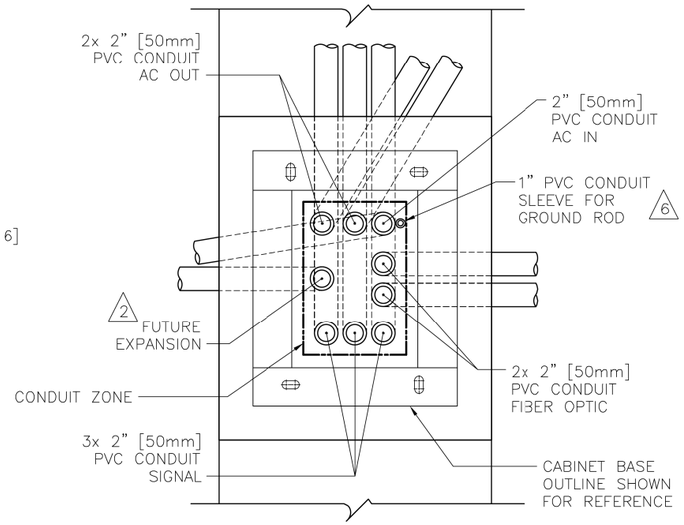
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	13
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: Z:\17002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plots\sheets\D1623\42-sht-details\WIM-07.dgn

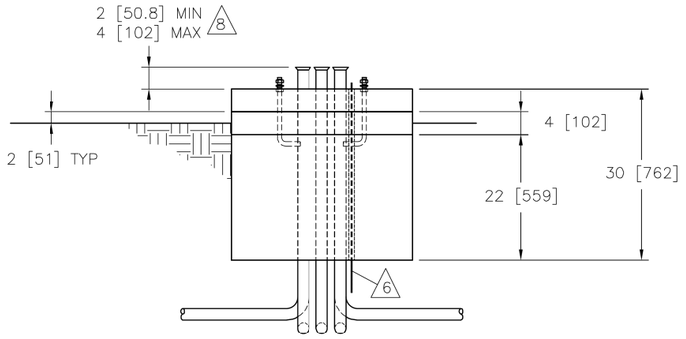
TOP VIEW – CABINET MOUNTING



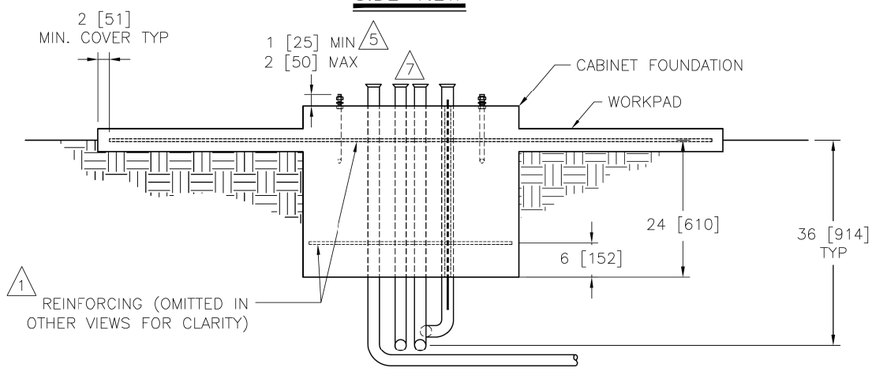
DETAIL A – MINIMUM CONDUITS 3



FRONT VIEW



SIDE VIEW



NOTES:

1. 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.
2. SPARE CONDUIT MUST BE CAPPED, STUBBED 24" [600mm] PAST FOUNDATION, AND LABELED.
3. 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.
5. 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".
6. GROUND ROD MUST BE PROVIDED TO MEET LOCAL ELECTRICAL CODE.
7. 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)

8. 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 INSTA_LED OR NO SHARP EDGES.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	INITIAL RELEASE	JGi/DPr	DPr	DBo	Mar 30/06

CONFIDENTIAL

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ird®

NOT TO SCALE

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
CABINET FOUNDATION
334 SERIES iCBNT
ROADSIDE ELECTRONICS

SIZE:	DWG. No.	REV.:
B	81300905	A

DIMENSIONS IN: INCHES [mm]	CAD FILE:	SHEET 1 OF 1
	81300905.DWG	

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	14
		CONTRACT NO. 62J42		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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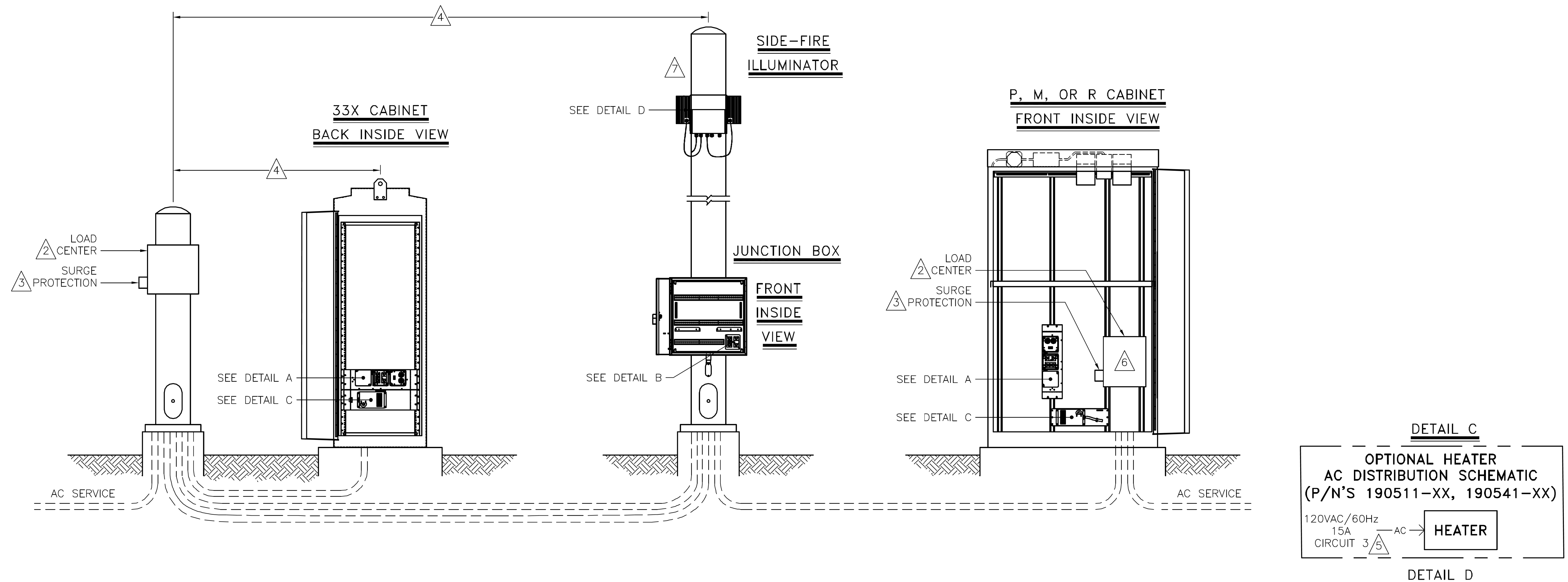

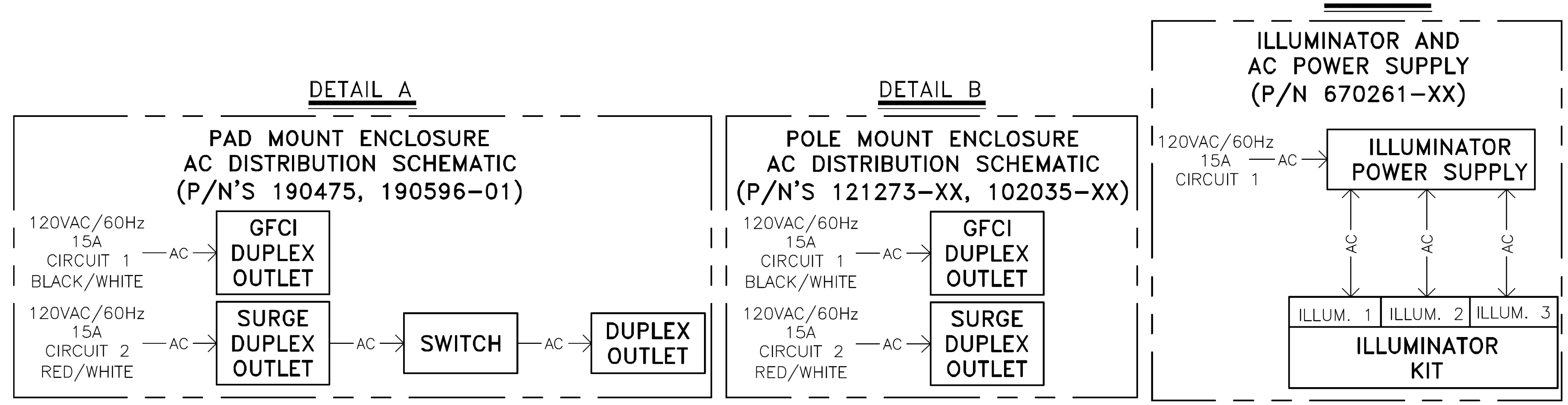

NOTES:

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 CQO18M100RB60 OR P/N QO2L70RB, FOR UL USE P/N QO112M100RB OR P/N QO24L70RB 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.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
C	CHANGES AS PER ECO-04	SSt/MGa	MLo	BMc	JAN 9/07
D	MODIFY AC DISTRIBUTION PANEL TO MATCH 190475; SECONDARY ENCLOSURE WIRING; NOTES AS PER ECO-11.	JGi/BMc	DPr	RBe	July 24/09
E	ADJUST NOTES 3 & 5 PER REDLINES - ECO-2248.	JGi/CHe	CHe	MLo	MAR 18/11
F	REFER TO REDLINES - ECO-2890	JGi/MLo	MLo	SpJ	AUG. 25/11
G	CHANGED AS PER ECO-6095.	YMa	MGa	YMa	APR 22/14

CONFIDENTIAL

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: N/A

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
120VAC CABINET POWER INSTALLATION
ROAD SIDE ELECTRONICS

DWG. No. **81300907** REV.: G

CAD FILE: 81300907.DWG SHEET 1 OF 1

MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plotsheets\D162J42-sht-detailsWIM-09.dgn

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	DRAWN - AZ	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -	
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

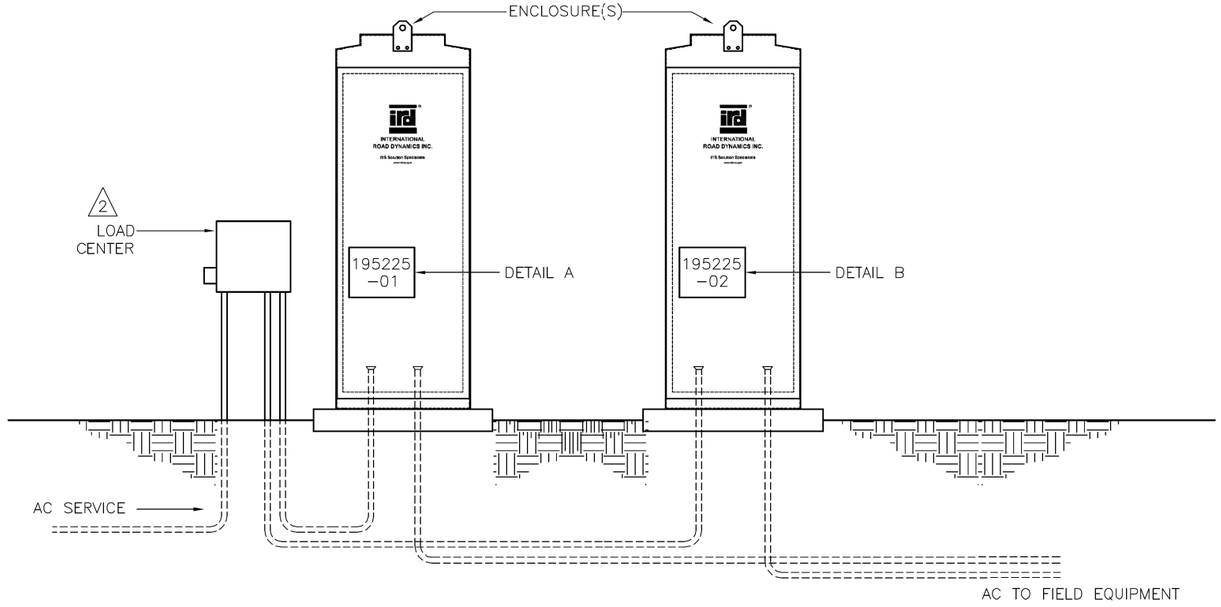
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

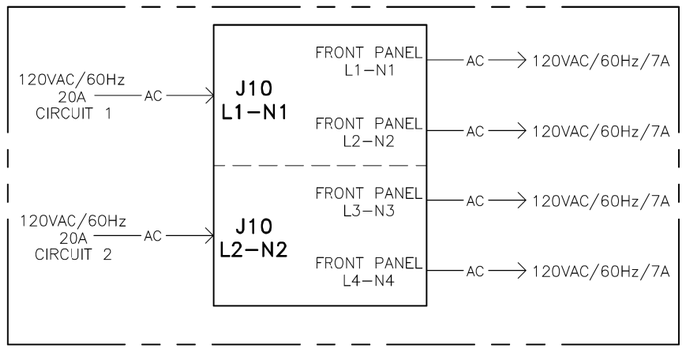
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	15

CONTRACT NO. 62J42

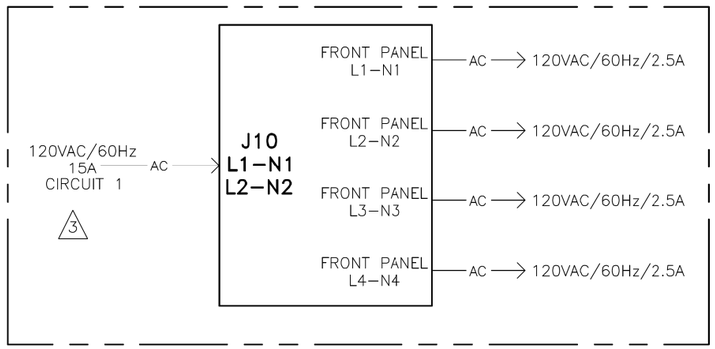
ILLINOIS FED. AID PROJECT



DETAIL A



DETAIL B



NOTES:

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 FOR CABINET AND LOAD CENTER POWER INSTALLATION DETAIL SEE IRD DWG# 81300907

3 CONNECT L1 TO L2 AND N1 TO N2.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	PREVIOULSY PRE-RELEASED AS REV 1	SSt/BMc	BMc	MLo	OCT 10/06
B	CHANGE PN 195195-01 TO 195225-01; CHANGE PN 195195-02 TO 195225-02. ECO-05.	JGi/MLo	DFI	MLo	FEB 9/07
C	CHANGES AS PER ECO-06.	SSt/BMc	MLo	MGa	OCT 25/07

CONFIDENTIAL

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: N/A

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
120VAC OUTPUT PNL POWER INSTALLATION ROAD SIDE ELECTRONICS

DWG. No. **81300908** REV.: C

CAD FILE: 81300908.DWG

SHEET 1 OF 1

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

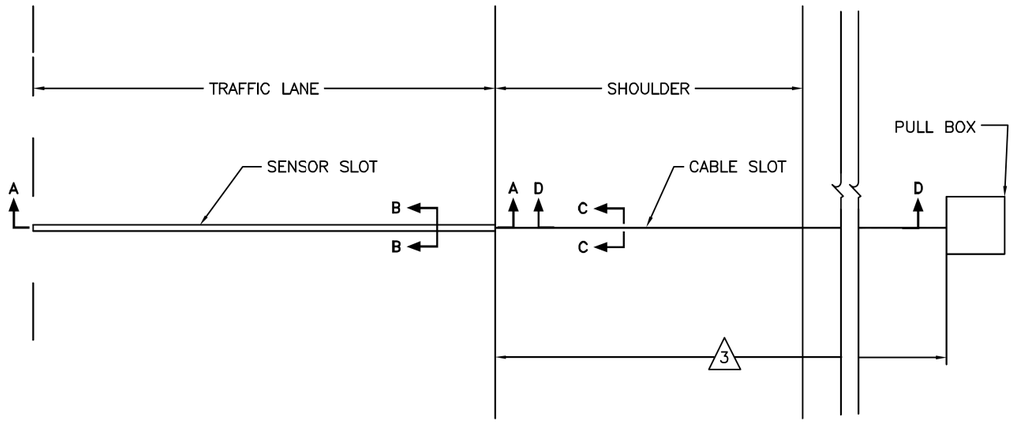
FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

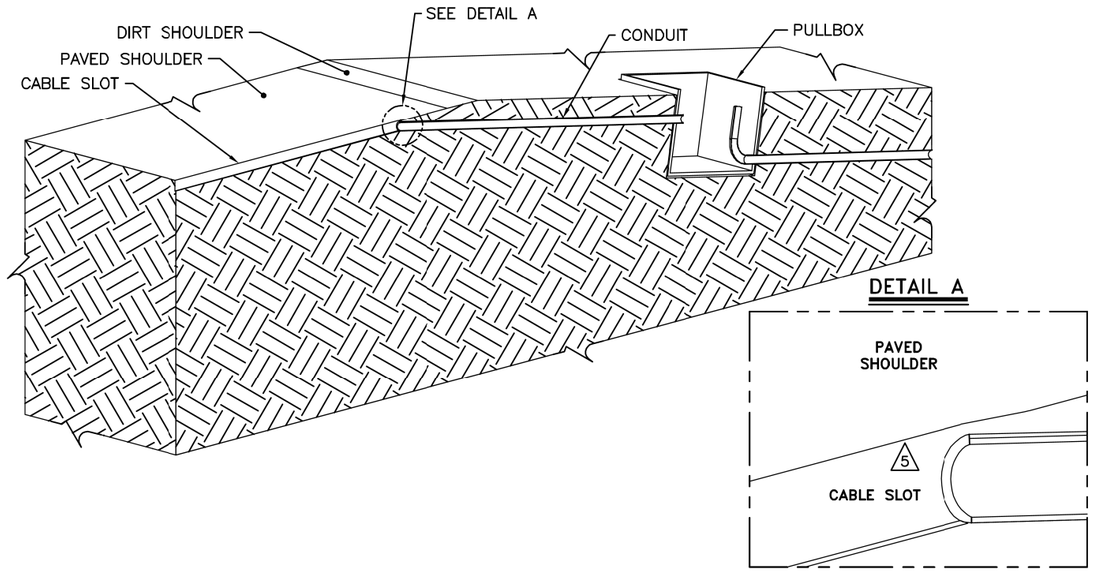
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	16
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\DotAlignPrelim\Plotsheets\ID162J42-ith-detailsWIM-10.dgn

PLAN VIEW – SENSOR INSTALLATION



SECTION D–D (CABLE ROUTING DETAILS)



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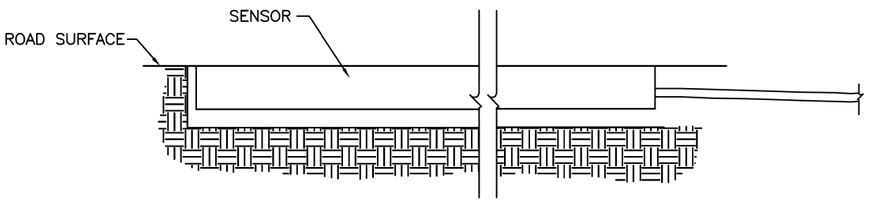
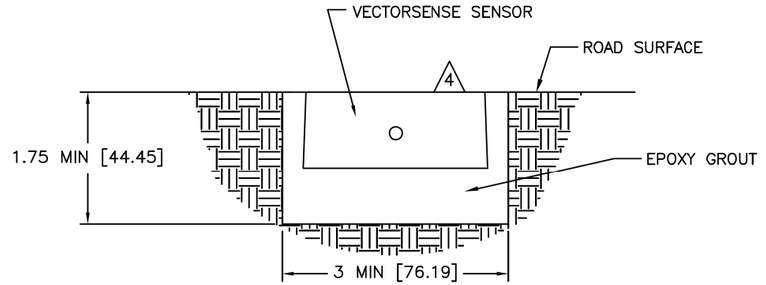


SECTION B–B



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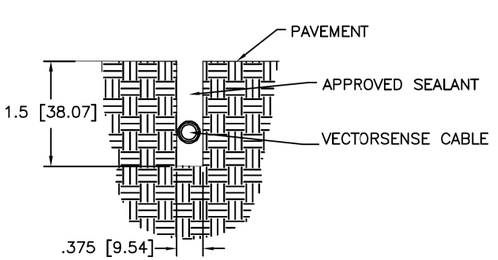

NOTES:

1 CRACKS IN THE ROADWAY MUST NOT BE LOCATED CLOSER THAN 18 [450] UPSTREAM AND 18 [450] DOWNSTREAM OF THE SENSOR.

2 SLOT LENGTH IS 2 [51] LONGER THAN SENSOR.

△3 16' [6.1m] MAXIMUM DISTANCE BETWEEN SENSOR AND ELECTRONICS.

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

△5 CHIP END OF SAW CUT CABLE SLOT TO CREATE SUFFICIENT OPENING FOR CABLE ENTRY INTO CONDUIT

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
A	INITIAL RELEASE ECO-12046	LPra	LPra	THa	OCT 25/17

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: INCHES [mm]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
INSTALLATION DETAIL VECTORSENSE

DWG. No. **81304402**

REV.: A

CAD FILE: 81304402.DWG

SHEET 1 OF 1

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	17
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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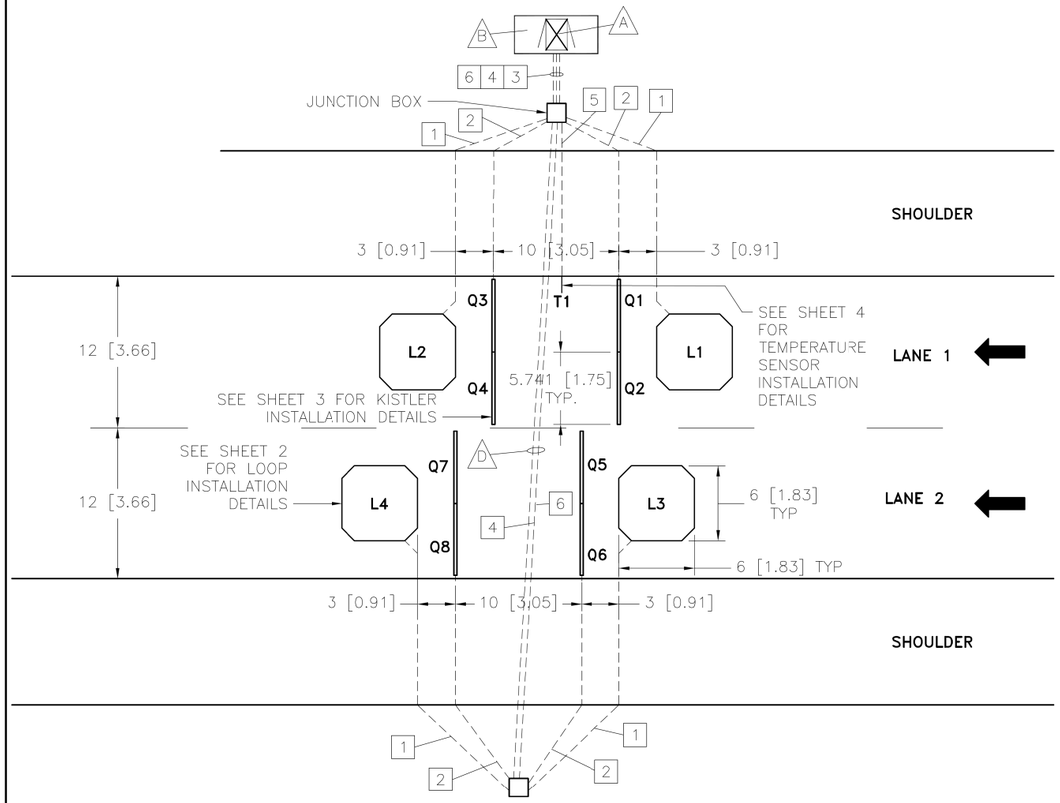

SIGNAL CONDUITS: (THIS SHEET ONLY)

1. 1" [25mm] CONDUIT
   1 – LOOP LEAD
2. 1" [25mm] CONDUIT
   2 – LINEAS® QUARTZ WIM SENSORS BY KISTLER LEADS
3. 2" [51mm] CONDUIT
   2 – LOOP LEADS
   4 – LINEAS® QUARTZ WIM SENSORS BY KISTLER LEADS
   1 – TEMPERATURE SENSOR LEAD
4. 2" [51mm] CONDUIT
   2 – LOOP LEADS
   4 – LINEAS® QUARTZ WIM SENSORS BY KISTLER LEADS
5. 1" [25mm] CONDUIT
   1 – TEMPERATURE SENSOR LEAD
6. 2" [51mm] CONDUIT
   SPARE

GENERAL NOTES:

ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES ARE DONE IN PULL BOX AND ARE SOLDERED THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.

POWER CABLES MUST BE RUN IN SEPARATE CONDUITS/PULL BOXES FROM SIGNAL CABLES.

SENSOR SPACING SHOWN IS TYPICAL SPACING REQUIREMENT, ACTUAL SENSOR SPACING MAY BE ALTERED TO SUIT SITE CONDITIONS BY THE IRD FIELD REPRESENTATIVE.

SITE CONDITIONS MUST MEET CURRENT ASTM E1318 REQUIREMENTS TO ACHIEVE OPTIMAL WIM SYSTEM PERFORMANCE.

CABLES MUST BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.

ADDITIONAL DRAINAGE MAY BE REQUIRED DEPENDING ON SLOPE OF ROADWAY. DRAINAGE CONSISTS OF 1–1/2" ABS PIPE SLOPED TO RIP RAP DRAINAGE PIT IN DITCH.

TEMPERATURE SENSOR MUST BE INSTALLED AS SHOWN IN DRAWING.

IRD RECOMMENDS THAT PULL BOXES BE NO FURTHER THAN 200' [61m] APART. IRD RECOMMENDS THE MINIMUM SIZE FOR PULL BOXES IS 18" [45.7cm] X 18" [45.7cm] X 12" [30.5cm].

SEPARATE CONDUITS AND PULL BOXES MUST BE USED FOR AC POWER AND LOW VOLTAGE SIGNAL/FIBER OPTIC CABLES.

EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE. CONDUITS ARE LABELED LEFT TO RIGHT, TOP TO BOTTOM.

SEE DRAWING 81300907 FOR POWER WIRING REQUIREMENTS.

DRAWING NCT TO SCALE.

LEGEND:

L – INDUCTIVE LOOP
Q – LINEAS® QUARTZ WIM SENSOR BY KISTLER
T – TEMPERATURE SENSOR

NOTES: (THIS SHEET ONLY)

A. CABINET WITH WIM ELECTRONICS.

B. CABINET BASE.

C. PAVEMENT ON EITHER SIDE OF EACH SENSOR MUST BE FREE OF JOINTS AND CRACKS FOR 2' [0.61m].

D. CONDUIT SHALL BE PLACED USING BORING, JACKING OR ALTERNATIVE METHOD THAT DOES NOT REQUIRE THE SURFACE OF THE ROAD TO BE CUT.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE.	YMa/TDe			

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: FEET [m]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
SITE LAYOUT
QUARTZ SENSOR WIM
ILLINOIS

DWG. No. **MILWIM07**

REV.: 1

CAD FILE: MILWIM07.DWG

SHEET 1 OF 4

USER NAME = MSlick	DESIGNED - JH	REVISED -	
	DRAWN - AZ	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -	
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

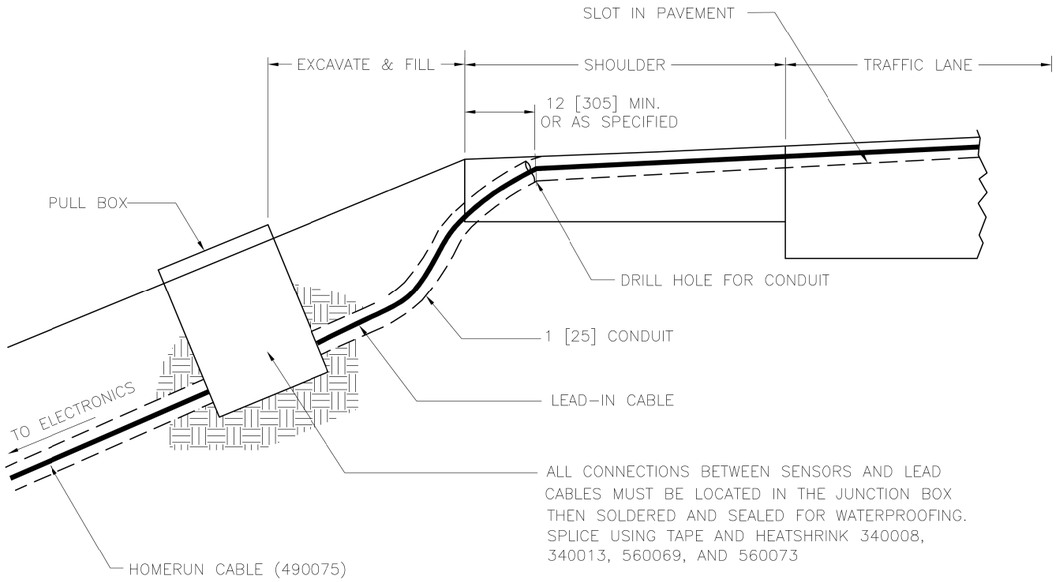
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	18
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		

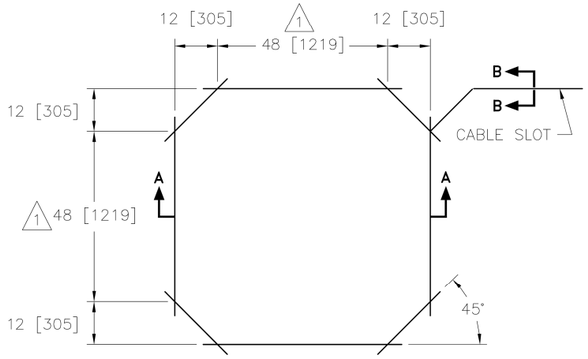
MODEL: Default
FILE NAME: Z:\17002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plotsheets\D162J42-cht-detailsWIM-12.dgn

INSTALLATION DETAILS – XHHW VEHICLE DETECTION LOOPS

LOOP CABLE ROUTING DETAILS

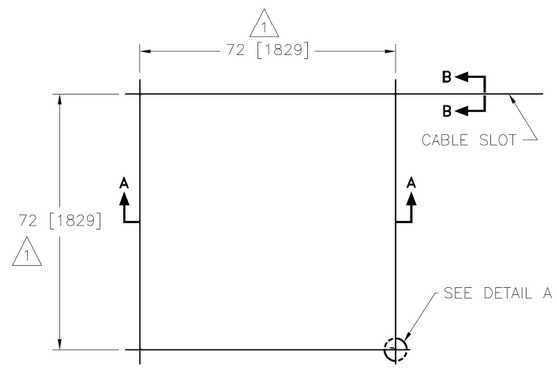


OCTAGON LOOP DIMENSION DETAIL



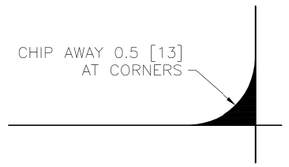
72 [1830] x 72 [1830] LOOP SHOWN

SQUARE LOOP DIMENSION DETAIL

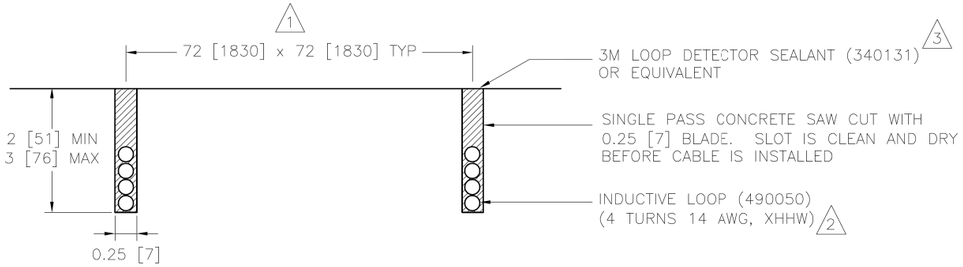


72 [1830] x 72 [1830] LOOP SHOWN

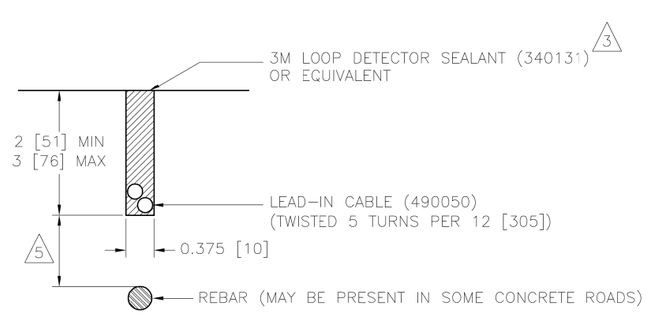
DETAIL A



SECTION A–A



SECTION B–B



NOTES:

1. LOOP SIZE AS SPECIFIED ON SITE LAYOUT AND IN ACCORDANCE WITH IRD 3EGR0001.
2. NUMBER OF TURNS AS SPECIFIED ON SITE LAYOUT AND IN ACCORDANCE WITH IRD 3EGR0001.
3. USE CAULKING GUN 340132 OR 340148.
4. LOOP INSTALLATION MANUALS:
   690279 – PERMANENT OCTAGON LOOPS
   690289 – PERMANENT SQUARE LOOPS
5. 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.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE.	YMa/TDe			

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NOT TO SCALE

SIZE: B

DIMENSIONS IN: FEET [m]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
SITE LAYOUT
QUARTZ SENSOR WIM
ILLINOIS

DWG. No. **MILWIM07**

REV.: 1

CAD FILE: MILWIM07.DWG

SHEET 2 OF 4

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

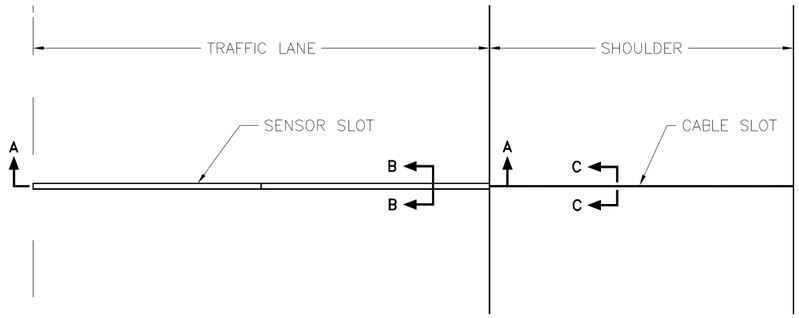
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	19
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		

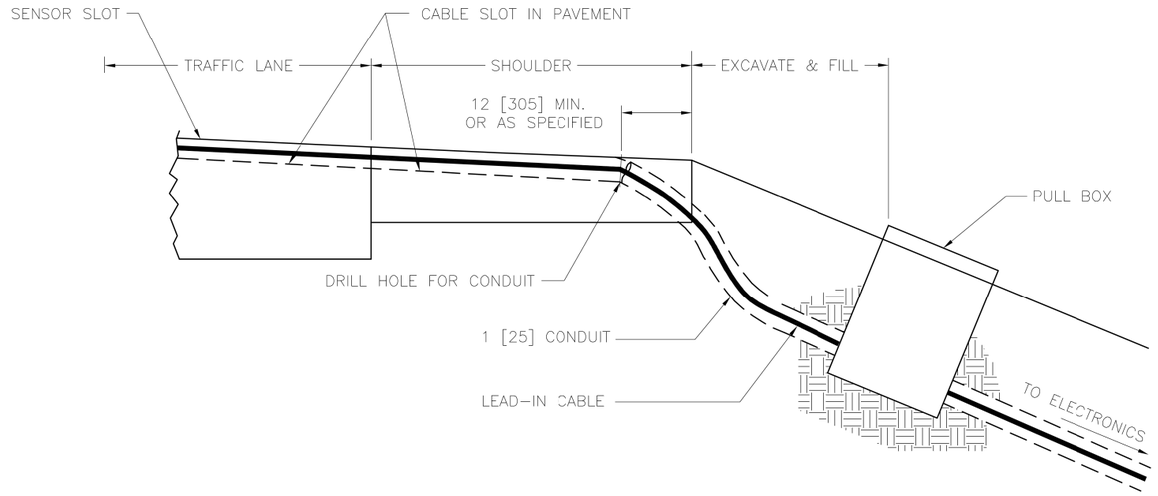
MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 W023 Frankfort WIM\DGN\Desktop\Prelim\Plotsheets\D162142-sht-detailsWIM-13.dgn

INSTALLATION DETAILS – 1.75m KISTLER SENSOR

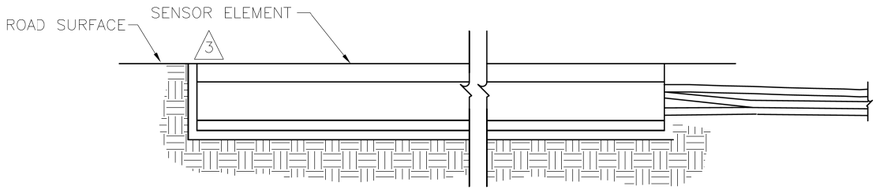
PLAN VIEW – SENSOR INSTALLATION



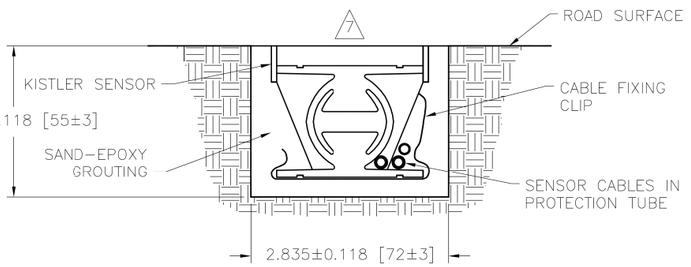
CABLE ROUTING DETAILS



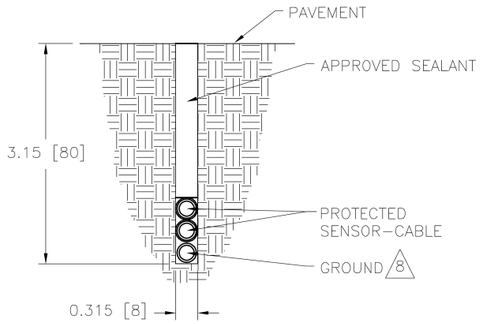
SECTION A–A



SECTION B–B



SECTION C–C



NOTES:

1 CRACKS OR SAW CUTS IN THE ROADWAY MUST NOT BE LOCATED CLOSER THAN 18 [450] UPSTREAM AND 18 [450] DOWNSTREAM OF THE KISTLER SENSOR.

2 SLOT LENGTH IS 6 [152] LONGER THAN SENSOR.

3 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 KISTLER INSTALLATION MANUAL: 690359.

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

8 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.

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE.	YMa/TDe			

CONFIDENTIAL

THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO IRD AND IS THEREFORE NOT TO BE DISCLOSED TO OTHERS OR USED FOR PRODUCTION WITHOUT WRITTEN PERMISSION FROM INTERNATIONAL ROAD DYNAMICS INC.

ird®

NOT TO SCALE

SIZE: B

DIMENSIONS IN: FEET [m]

INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

DWG. TITLE:
SITE LAYOUT
QUARTZ SENSOR WIM
ILLINOIS

DWG. No. **MILWIM07**

REV.: 1

CAD FILE: MILWIM07.DWG

SHEET 3 OF 4

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

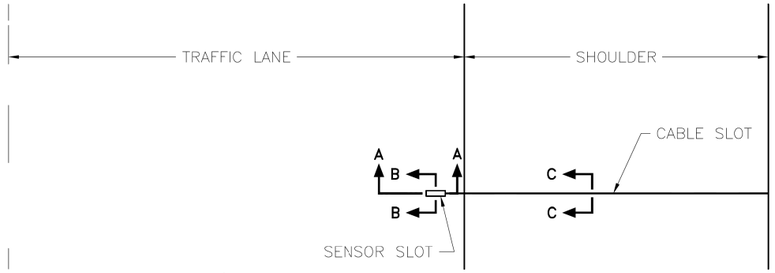
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	20
		CONTRACT NO. 62J42		
	ILLINOIS	FED. AID PROJECT		

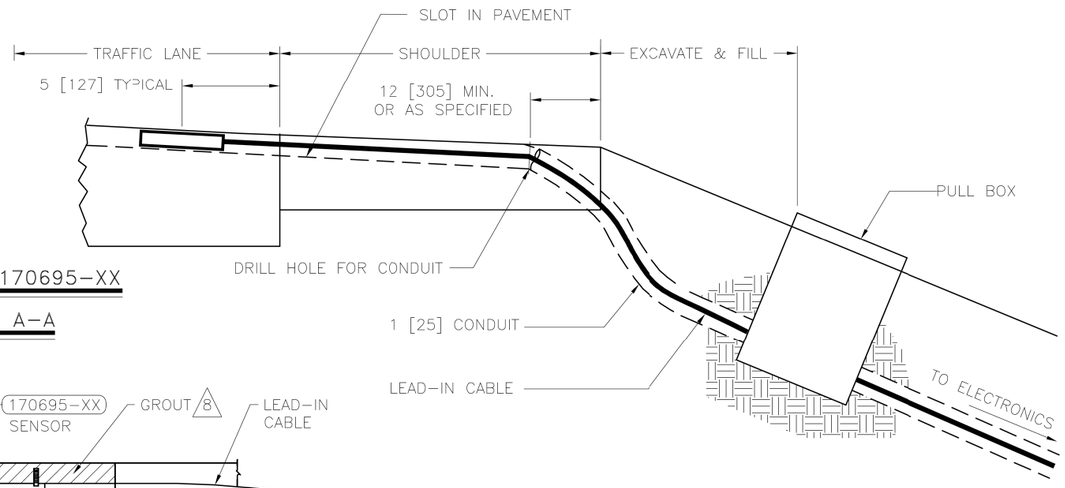
MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plotsheets\D162J42-sht-detailsWIM-14.dgn

INSTALLATION DETAILS – IN ROAD TEMPERATURE SENSOR

PLAN VIEW – SENSOR INSTALLATION

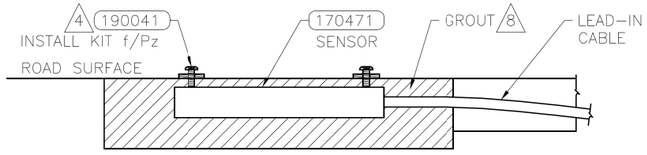


CABLE ROUTING DETAILS



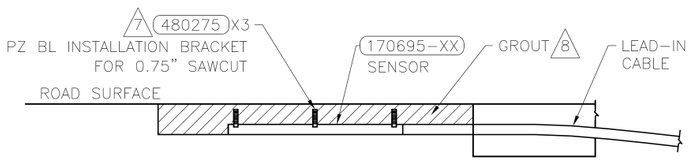
SENSOR P/N 170471

SECTION A–A

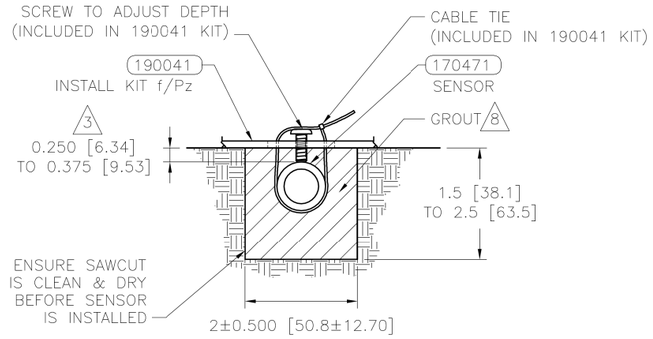


SENSOR P/N 170695-XX

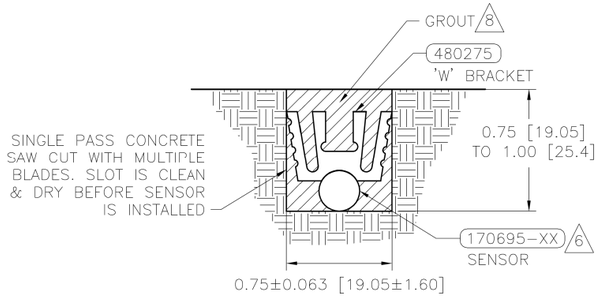
SECTION A–A



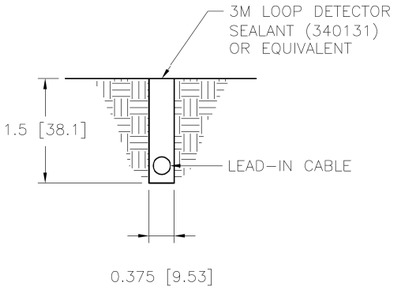
SECTION B–B



SECTION B–B



SECTION C–C



NOTES:

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.
3. SET THE SENSOR AT THE CORRECT DEPTH.
4. PLACE A BRACKET AT EACH END OF THE SENSOR,
5. LCCATE SENSOR IN SAME PAVEMENT AND WITHIN 6' [2M] OF THE TEMPERATURE COMPENSATED DEVICE. AVOID PLACING IN WHEEL PATH.
6. WEDGE SENSOR AGAINST FLOOR OF CUT UNDER "W" CLIP (P/N 480275).
7. SPACE THREE BRACKETS (P/N 480275) EVENLY OVER THE LENGTH OF THE SENSOR,
8. 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)

REV.	DESCRIPTION	DWN/DSN	APPR.	APPR.	DATE
1	PRELIMINARY RELEASE.	YMa/TDe			

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INTERNATIONAL ROAD DYNAMICS INC.
SASKATOON SASKATCHEWAN CANADA

NOT TO SCALE

DWG. TITLE:
SITE LAYOUT
QUARTZ SENSOR WIM
ILLINOIS

SIZE: B

DWG. No. **MILWIM07**

REV.: 1

DIMENSIONS IN: FEET [m]

CAD FILE: MILWIM07.DWG

SHEET 4 OF 4

USER NAME = MSlick	DESIGNED - JH	REVISED -
	DRAWN - AZ	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -

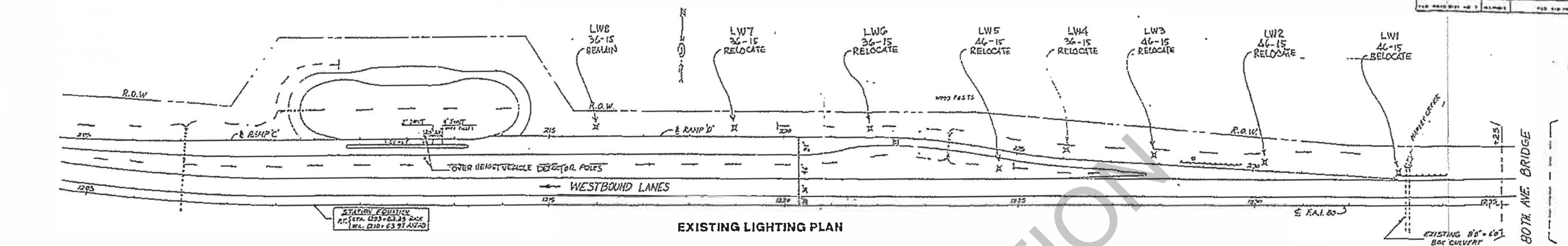
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 80 (I–80) WB FRANKFORT WEIGH STATION – SCALE #10
WEIGH–IN–MOTION SCALE DETAILS

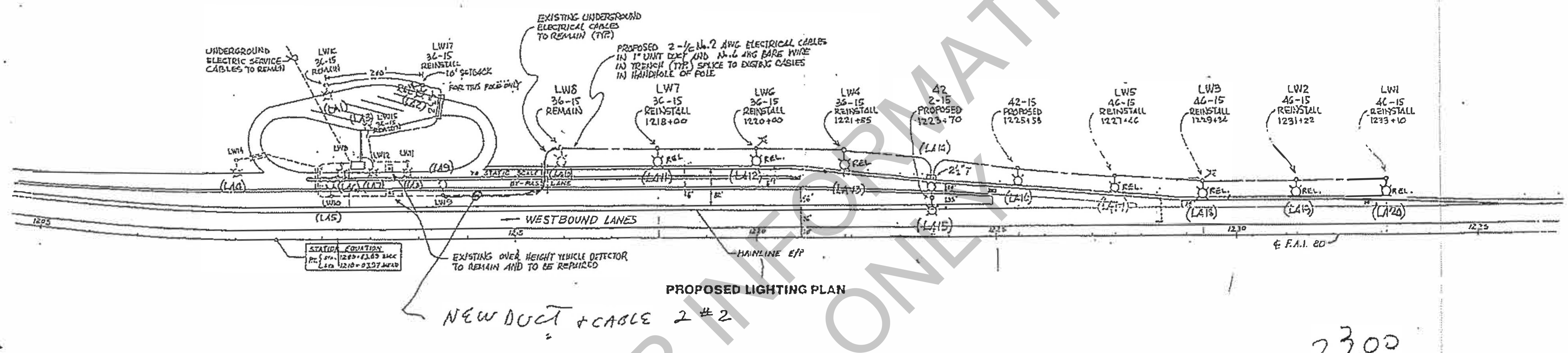
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	21
		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: z:\17002-23 IDOT DJ PTB 181-04 WO23 Frankfort WIM\DGN\Design\Preliminl\Plots\sheets\D1162J42-sht-detailsWIM-15.dgn



EXISTING LIGHTING PLAN



PROPOSED LIGHTING PLAN

ELECTRICAL SYMBOLS

LW4 36-15 RELOCATE — EXISTING LIGHTING UNIT TO BE RELOCATED WITH POLE NUMBERING ON POLE: 36 FT. MOUNTING HEIGHT ALUMINUM POLE, MOUNTED ON TRANSFORMER BASE, 15 IN. BOLT CIRCLE AT BOTTOM OF THE T-BASE; 15 FT. MAST ARM; HIGH PRESSURE SODIUM LUMINAIRE.

LW1 46-15 RELOCATE — EXISTING LIGHTING UNIT TO BE RELOCATED WITH POLE NUMBERING ON POLE: 46 FT. MOUNTING HEIGHT ALUMINUM POLE, MOUNTED ON TRANSFORMER BASE, 22 IN. BOLT CIRCLE AT BOTTOM OF THE T-BASE; 15 FT. MAST ARM; HIGH PRESSURE SODIUM LUMINAIRE.

42-15 PROPOSED — PROPOSED LIGHTING UNIT TO BE OBTAINED FROM STATE STOCK: 42 FT. MOUNTING HEIGHT ALUMINUM POLE, 15 IN. BOLT CIRCLE, BREAKAWAY COUPLINGS (COUPLINGS TO BE FURNISHED); 15 FT. MAST ARM (TWIN WHERE SHOWN); 310 WATT HIGH PRESSURE SODIUM LUMINAIRE.

ELECTRICAL SYMBOLS

REL. — RELOCATED LIGHTING UNIT

GROUND ROD

2½"T — GALVANIZED RIGID STEEL CONDUIT IN TRENCH

EXISTING LIGHTING UNIT TO REMAIN IN PLACE

POLE SETBACK — ALL LIGHTING UNITS SHALL BE LOCATED 18 FT. FROM EDGE OF PAVEMENT

(LA1) — PROPOSED POLE NUMBERING (TYP.)*

* COST OF POLE NUMBERING INCIDENTAL TO RELOCATION OF POLES.

REVISIONS	
NAME	DATE

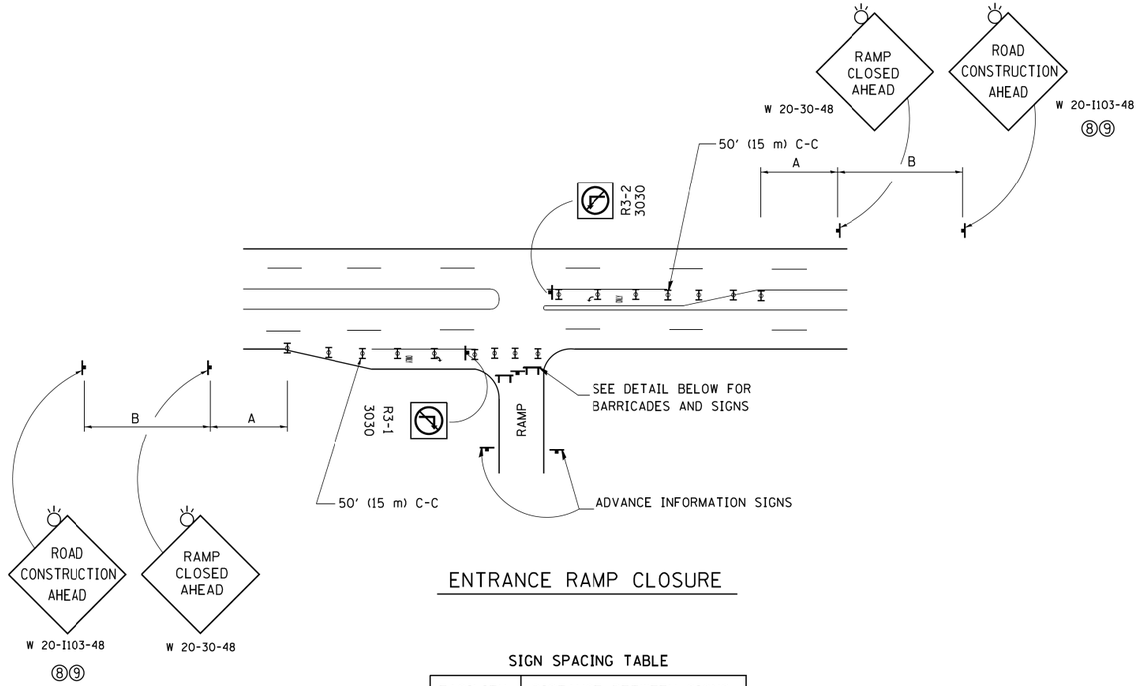
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80 WESTBOUND
LIGHTING PLAN
SCALE: VERT HORIZ. — DRAWN BY
DATE — CHECKED BY

USER NAME = MSlick	DESIGNED - JH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAI 80 (I-80) WB FRANKFORT WEIGH STATION - SCALE #10 RECORD LIGHTING PLAN (FOR INFORMATION ONLY)
	DRAWN - AZ	REVISED -		
PLOT SCALE = 2.0000 ' / in.	CHECKED - MS	REVISED -		
PLOT DATE = 10/17/2019	DATE - 10/17/2019	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	22
		CONTRACT NO. 62J42		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
FILE NAME: Z:\17002.23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Design\Prelim\Plansheets\D162J42-sht-details\Light-01.dgn

FOR INFORMATION ONLY

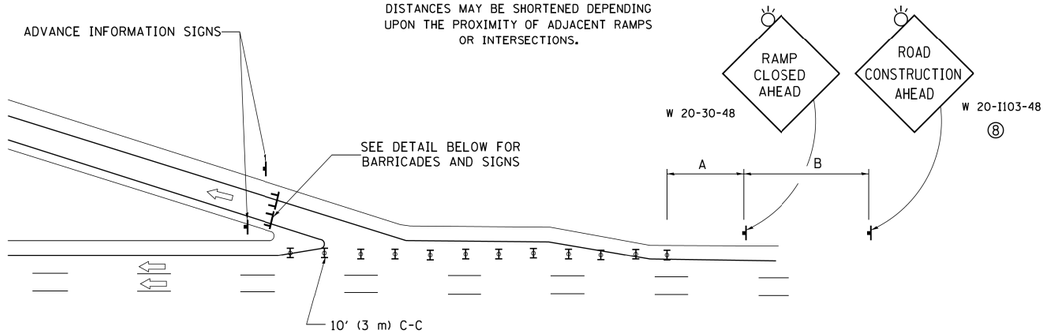


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS A	DISTANCE BETWEEN SIGNS B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

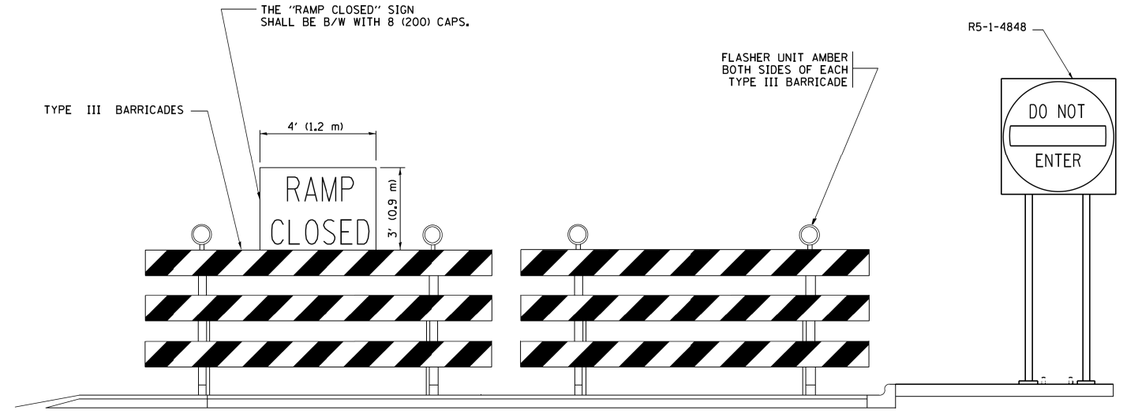


EXIT RAMP CLOSURE

SYMBOLS

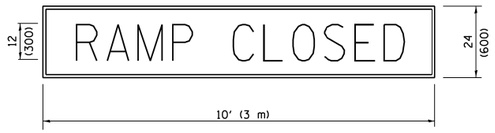
TYPE II BARRICADE OR DRUM

TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

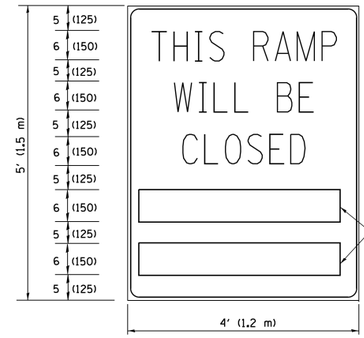
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

½ (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

1. CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
2. VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
3. A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEEDED BY A W20-7 FLAGGER WARNING SIGN.
4. ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
5. THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
7. THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
8. ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
9. ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

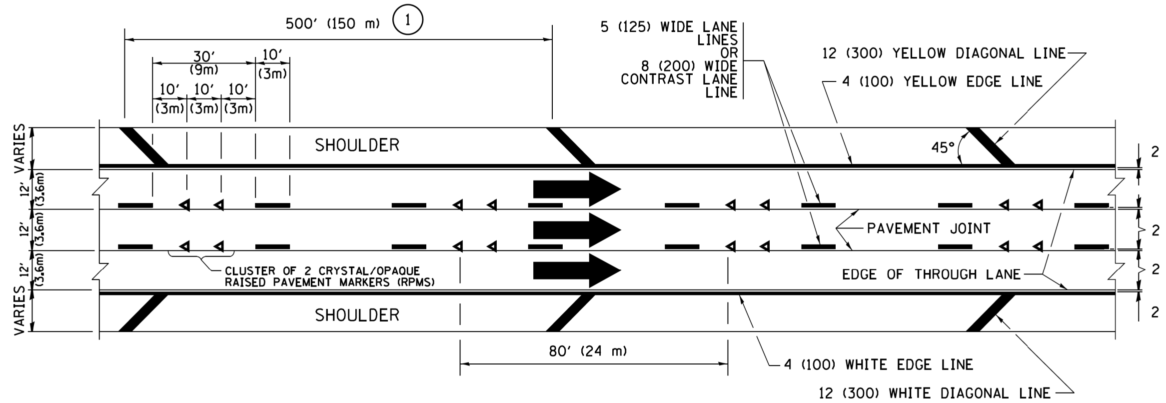
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

MODEL: Default
FILE NAME: 21\7002-23 IDOT D1 PTB 181-04 WO23 Frankfort WIM\DGN\Dedan\Pwilm\Plots\sheets\D1621423-sht-detailsD1-01.dgn

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\DRAWN\CADData\CADsheets\sc08.dgn	USER NAME = footemj	DESIGNED - D.W.S.	REVISED - S.P.B. 01-07	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ENTRANCE AND EXIT RAMP CLOSURE DETAILS**
Default	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - S.P.B. 12-09		
	PLOT DATE = 11/27/2017	DATE - 02-83	REVISED - M.D. 06-13		
			REVISED - M.D. 01-18		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	23
	TC-08	CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

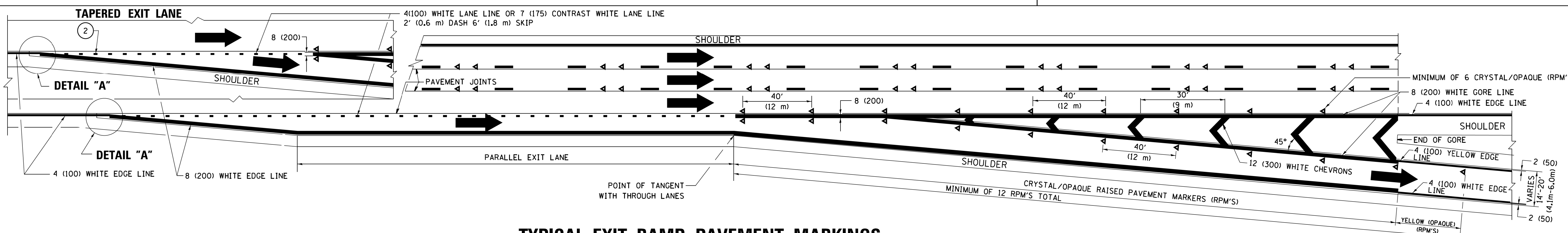
sc08.dgn 11/27/2017 7:49:07 AM User:footemj



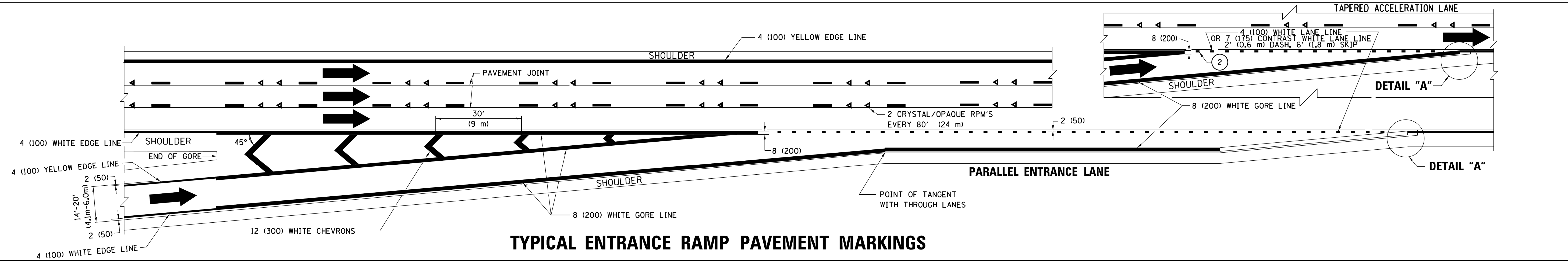
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

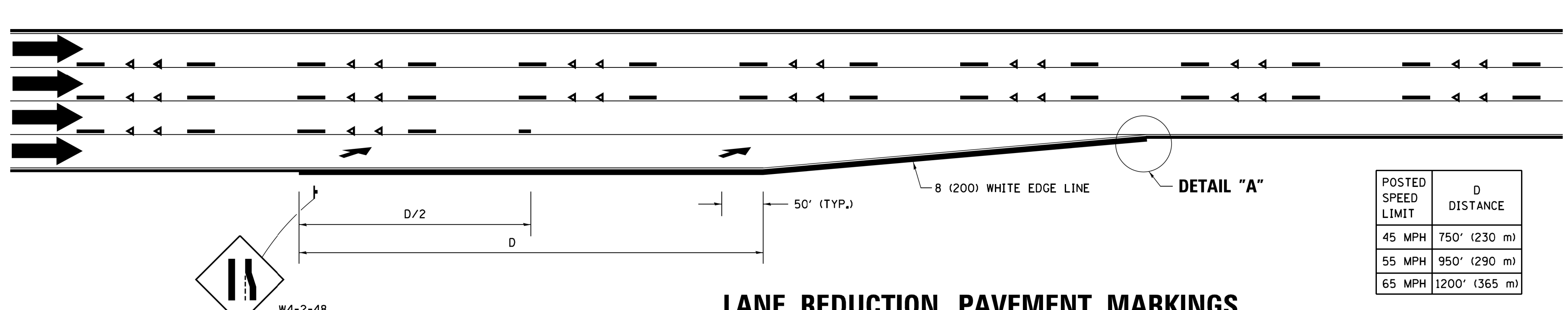
1. THERMOPLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA PAVEMENTS.
2. POLYUREA OR MODIFIED URETHANE PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON PCC PAVEMENTS.
3. PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, INLAID OR GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENTS.
4. CONTRAST PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON PCC PAVEMENT.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

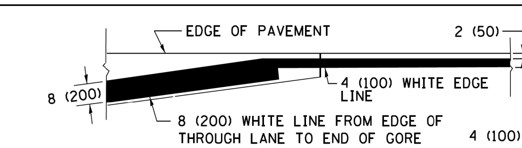


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)

LANE REDUCTION PAVEMENT MARKINGS



DETAIL "A"

NOTES:

1. THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
2. 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.

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		DRAWN -	REVISED - S.P.B. 01-10
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - M.D. 05-13
Default	PLOT DATE = 9/6/2017	DATE - 01-90	REVISED - M.D. 09-17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE | SHEET 1 OF 2 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	24

TC-12 | CONTRACT NO. 62J42

ILLINOIS FED. AID PROJECT

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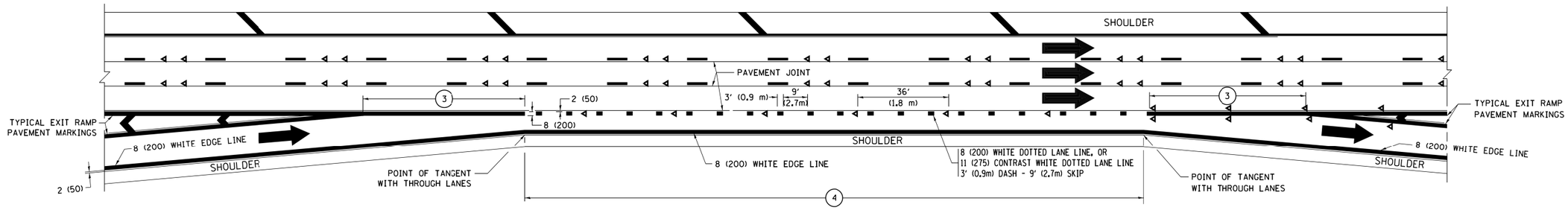
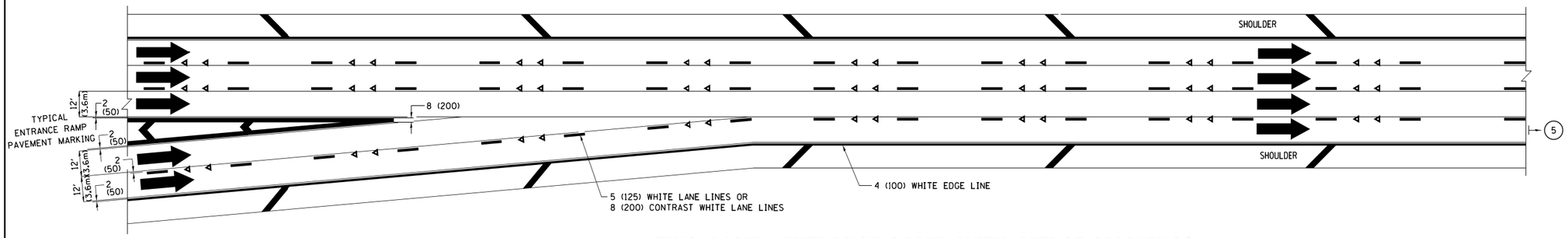
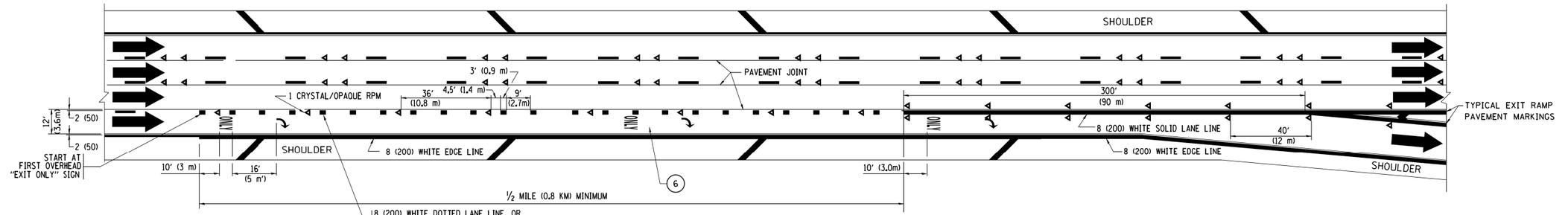


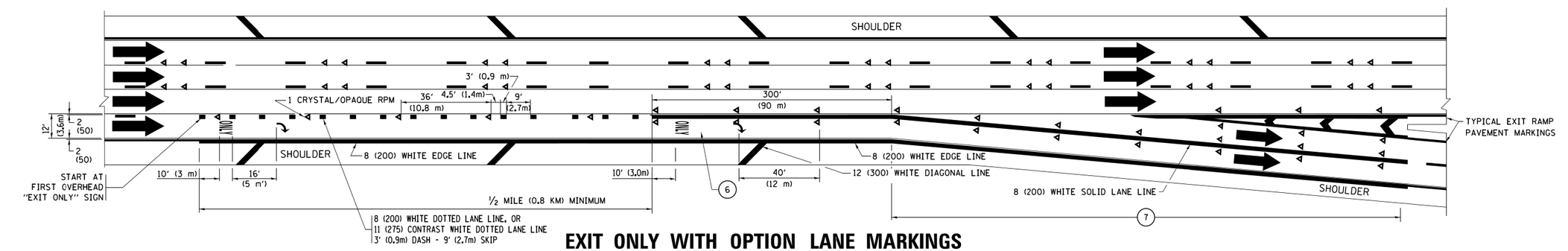
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

NOTES:

3. OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
4. 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
5. FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
6. ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
7. CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

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	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - S.P.B. 01-07		
Default	PLOT DATE = 9/6/2017	DATE - 01-90	REVISED - S.P.B. 01-10		
			REVISED - M.D. 09-17		SCALE: NONE | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	25
	TC-12	CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

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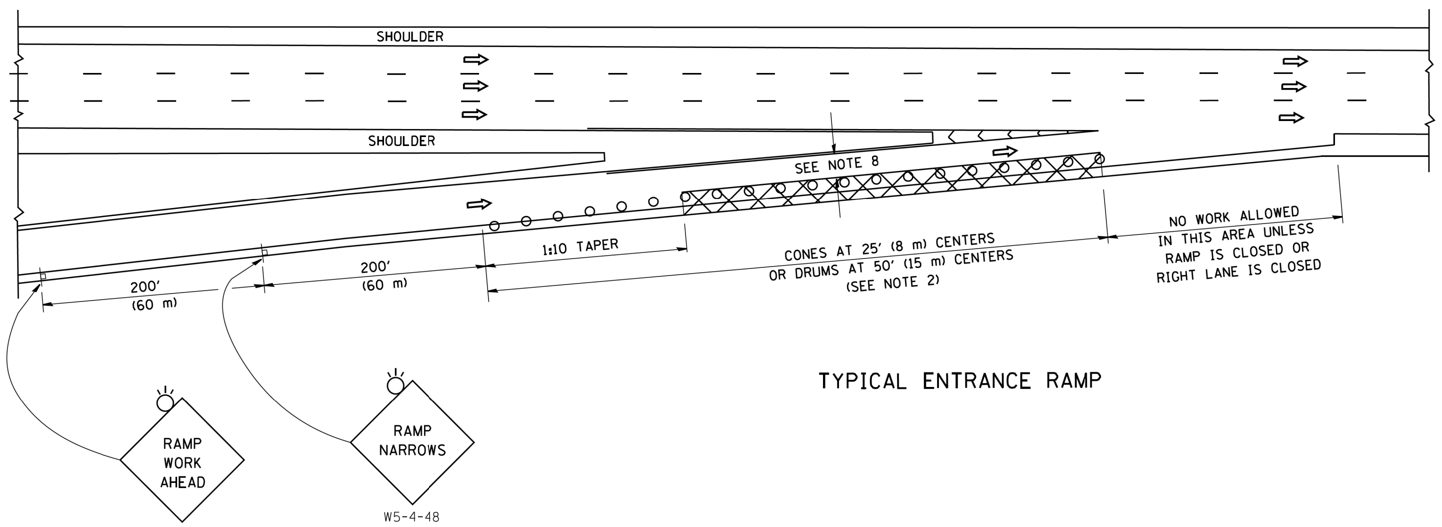
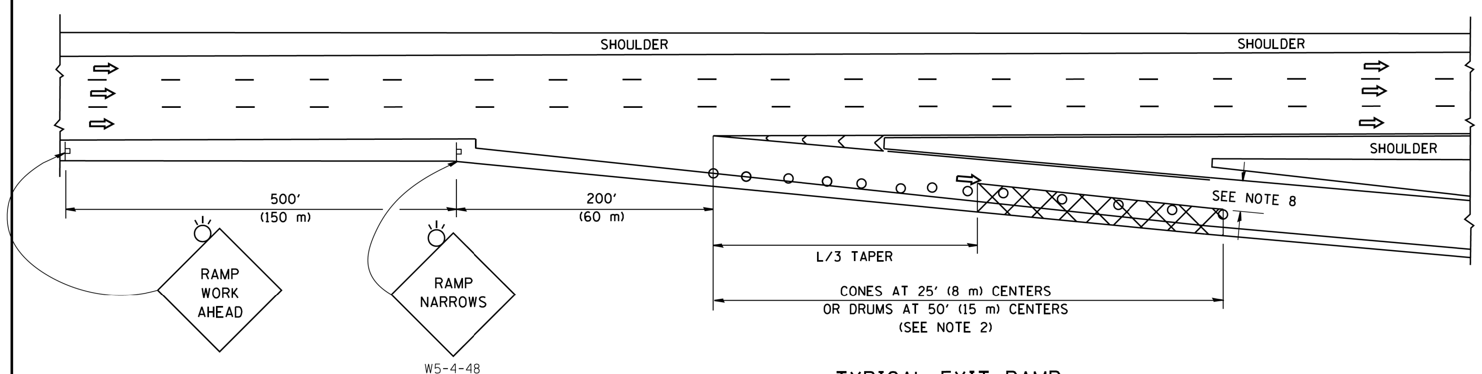
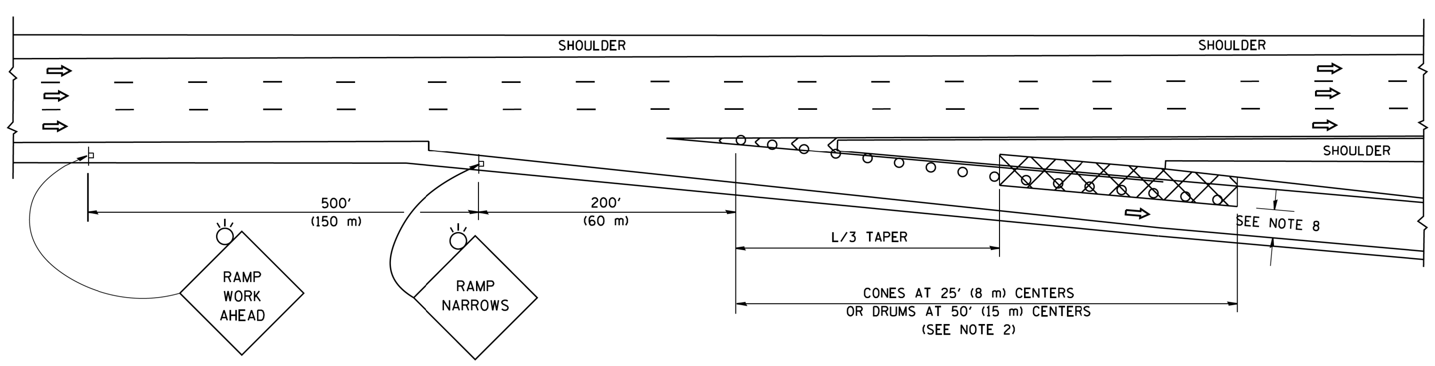
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP

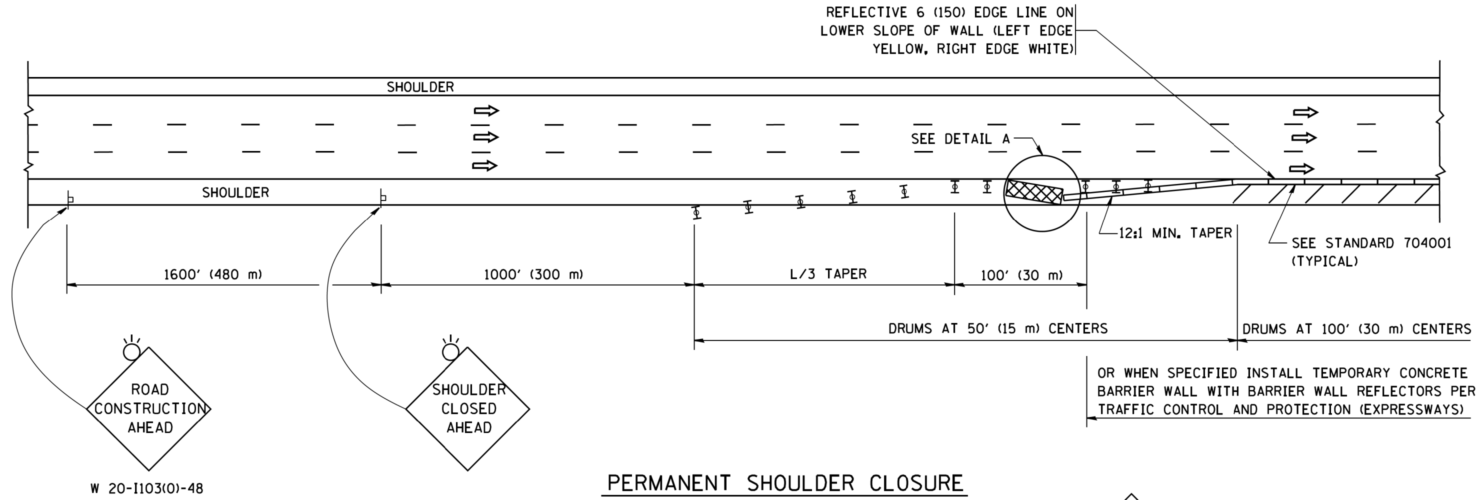


TYPICAL EXIT RAMP

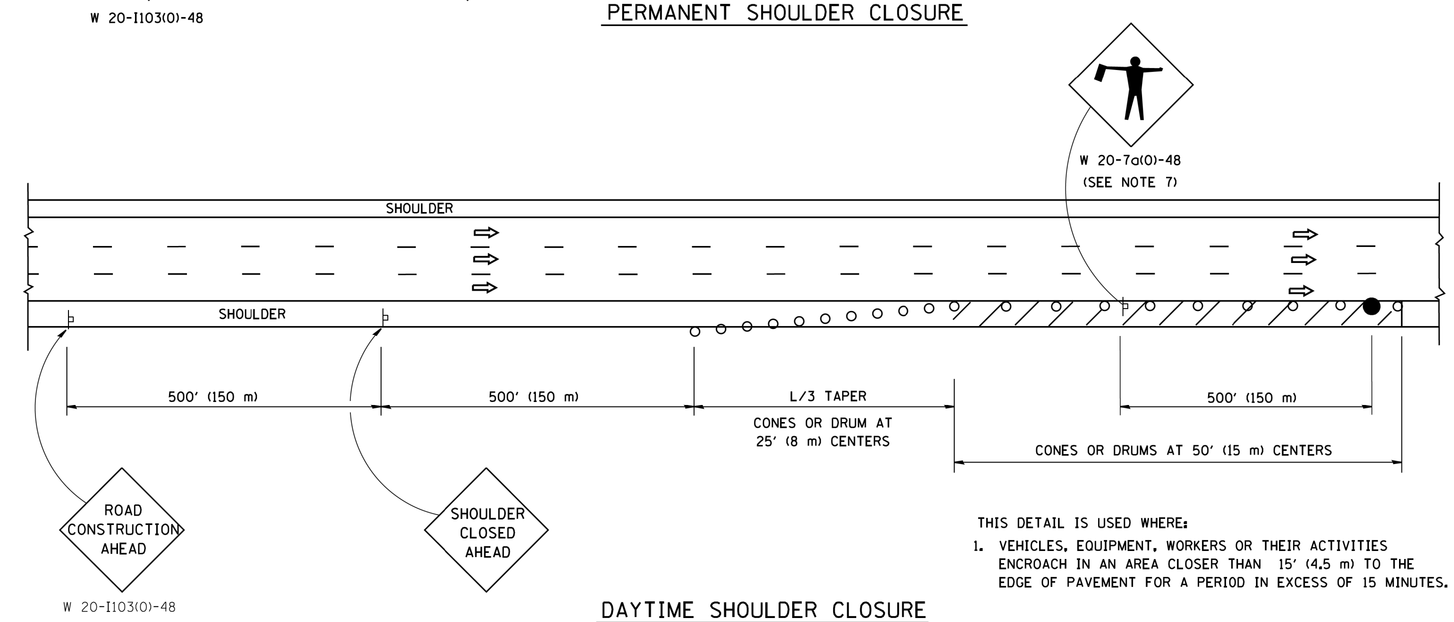


TYPICAL EXIT RAMP

SHOULDER CLOSURE DETAILS



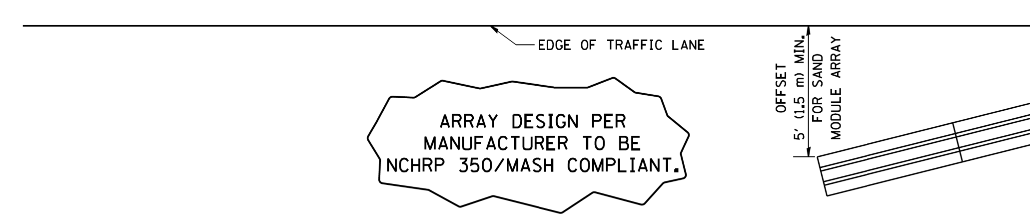
PERMANENT SHOULDER CLOSURE



THIS DETAIL IS USED WHERE:

1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

DAYTIME SHOULDER CLOSURE



DETAIL "A"
IMPACT ATTENTUATOR, TEMPORARY
(SEE NOTE 5)

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS METRIC	FORMULAS ENGLISH
45 mph (80 km/h) OR GREATER:	L=0.65(W)(S)	L=(W)(S)

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)

2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTICLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENTUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
   a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
   b. THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.

   THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
   16' MIN. WIDTH CURVE SECTION.

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

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - S.P.B. 01-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2019-065-I	WILL	26	26
TC-17		CONTRACT NO. 62J42		
	ILLINOIS FED. AID PROJECT			

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