THE VILLAGE OF TINLEY PARK
Cook County, Illinois
Will County, Illinois

RESOLUTION
NO. 2022-R-026

A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLAGE OF TINLEY PARK AND SCHOOL DISTRICT 140 FOR THE INSTALLATION OF SCHOOL ZONE SAFETY LIGHTS

MICHAEL W. GLOTZ, PRESIDENT
NANCY M. O'CONNOR, VILLAGE CLERK

WILLIAM P. BRADY
WILLIAM A. BRENNAN
DIANE M. GALANTE
DENNIS P. MAHONEY
MICHAEL G. MUELLER
COLLEEN M. SULLIVAN
Board of Trustees

Published in pamphlet form by authority of the President and Board of Trustees of the Village of Tinley Park

INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLGAGE OF TINLEY PARK AND SCHOOL DISTRICT 140 FOR THE INSTALLATION OF SCHOOL ZONE SAFETY LIGHTS

WHEREAS, the Village of Tinley Park is a Municipal Corporation situated in Will and Cook Counties, (hereinafter referred to as "VILLAGE") under and by virtue of the Constitution and laws of the State of Illinois and has acted in the exercise of its statutory authority in the exercise of this agreement; and

WHEREAS, Kirby School District 140 is a body corporate and politic (hereinafter referred to as the "DISTRICT"); and

WHEREAS, Article VII, Section 10, of the Constitution of the State of Illinois of 1970 provides that units of local government may contract or otherwise associate among themselves to obtain or share services and to exercise, combine or transfer any power or function in any manner not prohibited by law or by ordinance; and

WHEREAS, the Illinois Intergovernmental Cooperation Act, (Illinois Compiled Statutes, Chapter 5, Section 220/1 et seq.), authorizes municipalities to exercise jointly with any public agency of the State, including other units of local government, any power, privilege, or authority which may be exercised by a unit of local government individually, and to enter into contracts for the performance of governmental services, activities, and undertakings; and

WHEREAS, the VILLAGE and DISTRICT, in order to facilitate the safe passage of students and faculty, are desirous of installing two solar powered school safety light flashers at 167th Street and 80th Avenue in the VILLAGE.

WHEREAS, the VILLAGE and the DISTRICT have elected to cooperate with each other and set forth the rights and responsibilities of each party regarding the cost of the two solar powered school safety light flashers.

NOW THEREFORE, in consideration of the mutual promises, obligations and undertakings set forth herein, the VILLAGE and the DISTRICT agree as follows:

1. The above Recitals are substantive and are incorporated herein by reference as if fully set forth in this paragraph 1.

2. The VILLAGE shall install, at the DISTRICT'S shared expense, two solar powered school safety light flashers pursuant VILLAGE and the DISTRICT specifications, and as further described in **Exhibit A**.

3. Upon completion of the project, the DISTRICT shall be solely responsible for the maintenance, damage/repair, and energy costs of the two solar powered school safety light flashers at 167th Street and 80th Avenue.

4. The VILLAGE shall, at its own expense, make or cause to be made all surveys, construction plans, specifications, and estimates, furnish resident engineering and the construction engineer and provide or cause to be provided the material inspection of the project which is to be built in accordance with the approved plans and specifications.

5. Upon award of the contract for the improvement, the VILLAGE will invoice the DISTRICT for 50% of the amount of the estimated DISTRICT share of the construction costs not to exceed forty thousand dollars ($40,000.00). Upon completion of the improvement and final acceptance by the DISTRICT, the VILLAGE and the DISTRICT will agree on each agency's final share of the costs for the improvement based on the final actual costs.

6. This document shall be the final embodiment of the Agreement by and between the DISTRICT and VILLAGE. No oral changes or modifications for this Agreement shall be permitted or allowed. Changes or modification to this Agreement shall be made only in writing and upon the necessary and proper approvals of the DISTRICT and the VILLAGE.

7. All provisions of this Agreement shall be deemed severable, and if for any reason any portion of this Agreement is deemed invalid or unenforceable, or contrary to or in conflict with then applicable law then in any of such events, the invalid, unenforceable, conflicting or materially incompatible provisions shall be severed and deleted from this Agreement, without affecting the validity or enforceability of other provisions hereof.

8. This Agreement shall be binding upon and inure to the benefits of the parties hereto, their successors and assigns.

9. Venue for this agreement shall be in the courts of the Twelfth Judicial Circuit, Will County, Illinois and shall be governed by the laws of the State of Illinois irrespective of choice of law considerations.

10. Any notices under this Agreement shall be sent as follows:

If to the DISTRICT:

Kirby School District 140
16931 Grissom Drive
Tinley Park, IL 60477

If to the VILLAGE:

Village of Tinley Park 16250 S. Oak Park Avenue Tinley Park, IL 60477	Peterson, Johnson & Murray Chicago, LLC 200 West Adams St., Suite 2125 Chicago, IL 60606

The PARTIES agree that each shall be responsible to notify the other of any changes in notification procedures.

Dated at Joliet, Illinois this 20th day of April, 2022

ATTEST:

By Lisa M. Strand
BOARD Secretary

By
Board President

(Seal)

Dated at Tinley Park, Illinois, this 5th day of April, 2022

Michael W. Glotz
Village President

ATTEST:

Nancy M. O'Connor
Village Clerk

STATE OF ILLINOIS)
COUNTY OF COOK) SS
COUNTY OF WILL)

CERTIFICATE

I, NANCY M. O'CONNOR, Village Clerk of the Village of Tinley Park, Counties of Cook and Will and State of Illinois, DO HEREBY CERTIFY that the foregoing is a true and correct copy of Resolution No. 2022-R-026, "**A RESOLUTION AUTHORIZING AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLAGE OF TINLEY PARK AND SCHOOL DISTRICT 140 FOR THE INSTALLATION OF SCHOOL ZONE SAFETY LIGHTS**," which was adopted by the President and Board of Trustees of the Village of Tinley Park on April 5, 2022.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of the Village of Tinley Park this 5th day of April, 2022.

_____
VILLAGE CLERK

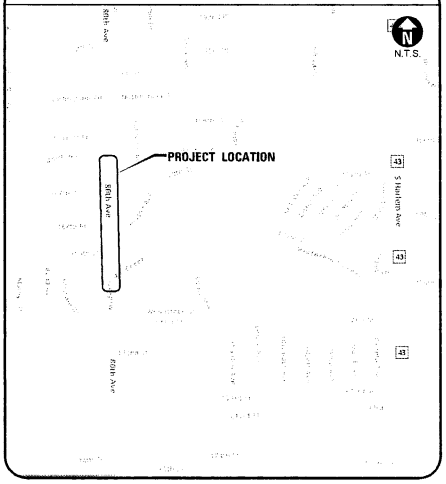
EXHIBIT A

SCHOOL ZONE FLASHING BEACON SIGN ASSEMBLY INSTALLATION

80TH AVENUE AT 167TH STREET
TINLEY PARK, ILLINOIS 60477

INDEX

LOCATION / VICINITY MAP



IDOT STANDARDS

STD. NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-05	OFF - ROAD OPERATIONS, MULTILANE, 15' TO 24' FROM EOP
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT DETAIL
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
878001-11	CONCRETE FOUNDATION DETAILS

BENCH MARK LOCATION

CALL JULIE 1-800-892-0123
WITH THE FOLLOWING
COUNTY - COOK
CITY-TOWNSHIP - TINLEY PARK
SEC. & 1/4 SEC. NO.
48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN., & HOLIDAYS

3-14-2022
ENGINEER DATE

GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-045853
EXPIRATION DATE: 11-30-2023

GEORGE M. ZIEGLER 062-045853 REGISTERED PROFESSIONAL ENGINEER ILLINOIS

CLIENT : **VILLAGE OF TINLEY PARK**
16250 OAK PARK AVENUE
TINLEY PARK, IL 60477

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

PROFESSIONAL DESIGN FIRM No.: 184-001742
EXPIRATION DATE: 04-30-2023

SUMMARY OF QUANTITIES

ITEM	UNIT	TOTAL	80th Avenue - 167th Street to 170th Place
SIGN PANEL - TYPE 1	SQ FT	47	47
SIGN PANEL - TYPE 2	SQ FT	24	24
REMOVE SIGN PANEL - TYPE 1	SQ FT	53	53
RELOCATE SIGN PANEL - TYPE 1	SQ FT	40	40
TELESCOPING STEEL SIGN SUPPORT	FOOT	107	107
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2	2
CONCRETE FOUNDATION, TYPE A	FOOT	8	8
REMOVE EXISTING SIGN POST	EACH	10	10
TRAFFIC CONTROL AND PROTECTION, COMPLETE	EACH	1	1
FLASHING BEACON INSTALLATION, SOLAR POWERED	EACH	2	2

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9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

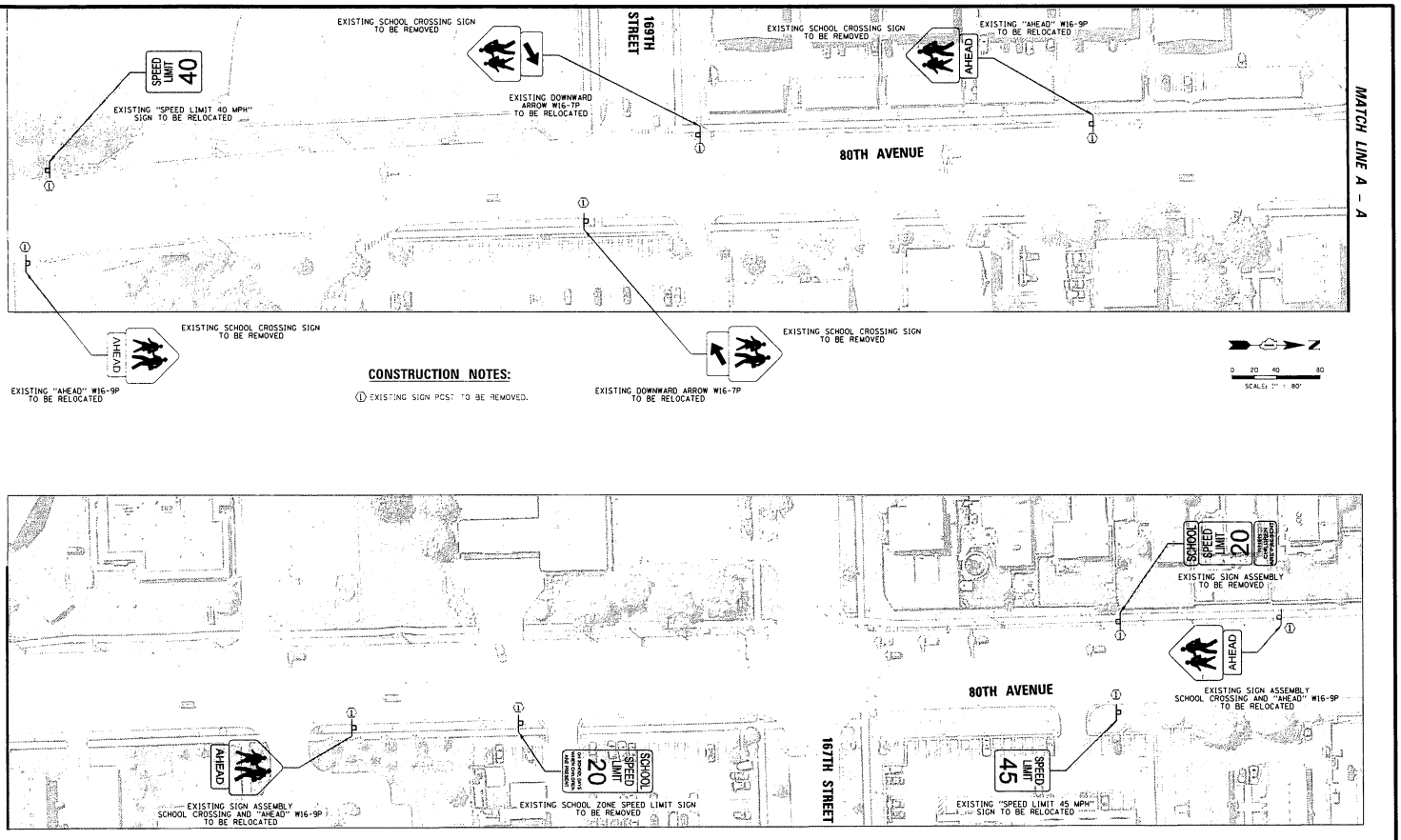
CLIENT:
VILLAGE OF TINLEY PARK
16250 OAK PARK AVENUE
TINLEY PARK, IL 60477

NO.	DATE	NATURE OF REVISION

DSGN. EAJ
DWN. BG
CHKD. CMZ
SCALE:
PLOT DATE: 3/13/2022
CAD USER: ejensen
CHKD. MODEL: Default
FILE NAME: N:\TPK\TPARK\160373\160373.0002\Traffic\02_500_160373-028.dgn

TITLE:
SUMMARY OF QUANTITIES
80TH AVENUE AND 167TH STREET
TINLEY PARK, ILLINOIS

PROJ. NO. 160373.0002B
DATE: 3/3/2022
SHEET 2 OF 21
DRAWING NO.



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Rosemont, Illinois 60018
(847) 823-0500

CLIENT:
VILLAGE OF TINLEY PARK
16250 OAK PARK AVENUE
TINLEY PARK, IL 60477

NO.	DATE	NATURE OF REVISION	CHKD.

DSGN.	EAJ
DWN.	BD
CHKD.	CMZ
SCALE:	1" = 80'
PLOT DATE:	3/13/2022
CAD USER:	ejensen
MODEL:	Default

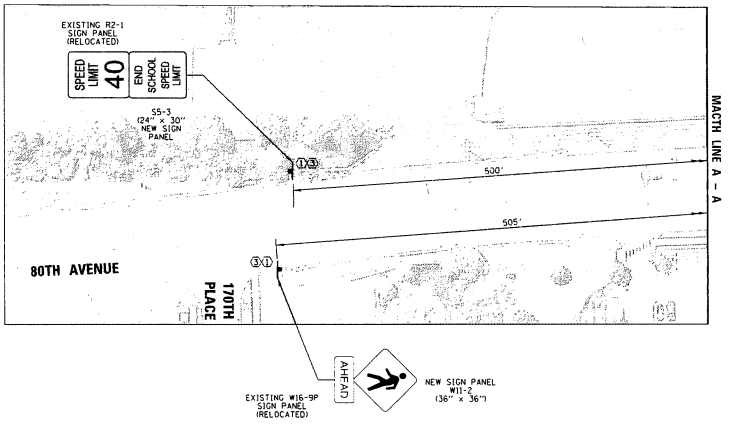
FILE NAME: m:\tinleypark\60373\60373.0002\traffic\04_rem_60373-02b.dgn

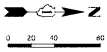
TITLE:
SIGN REMOVAL PLAN
80TH AVENUE FROM 167TH STREET TO 169TH STREET
TINLEY PARK, ILLINOIS

PROJ. NO.	160373.0002B
DATE:	3/3/2022
SHEET	3 OF 21
DRAWING NO.	

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL RELOCATE THE EXISTING SIGN PANEL AND/OR INSTALL A NEW SIGN PANEL ON THE PROPOSED TELESCOPING STEEL SIGN SUPPORT.
2. THE FLASHING BEACON ASSEMBLIES SHALL BE PROGRAMMED TO OPERATE FROM 8:15 A.M. TO 8:45 A.M. AND FROM 3:15 P.M. TO 3:45 P.M., MONDAY THROUGH FRIDAY DURING THE SCHOOL YEAR AND HAVE A HOLIDAY SCHEDULE PROGRAMMED AS WELL. THE CONTRACTOR SHALL COORDINATE WITH THE VILLAGE FOR PROGRAMMING APPROVAL OF THE FLASHERS.
3. ALL SIGNS INSTALLED ON TELESCOPING STEEL SIGN SUPPORTS SHALL BE OFFSET 2' FROM FACE OF CURB TO EDGE OF SIGN IN ACCORDANCE WITH IDOT HIGHWAY STANDARD 720006. FLASHING BEACON CONCRETE FOUNDATIONS SHALL BE OFFSET 4' FROM BACK OF CURB TO CENTER OF FOUNDATION IN ACCORDANCE WITH IDOT DI DETAIL TS-05.
4. EXISTING SIGNS AND EXISTING SIGN POST SHALL REMAIN.





NOTE:

1. PROPOSED MUTCD SIGNS, W16-9P AND W11-2, SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND.

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

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

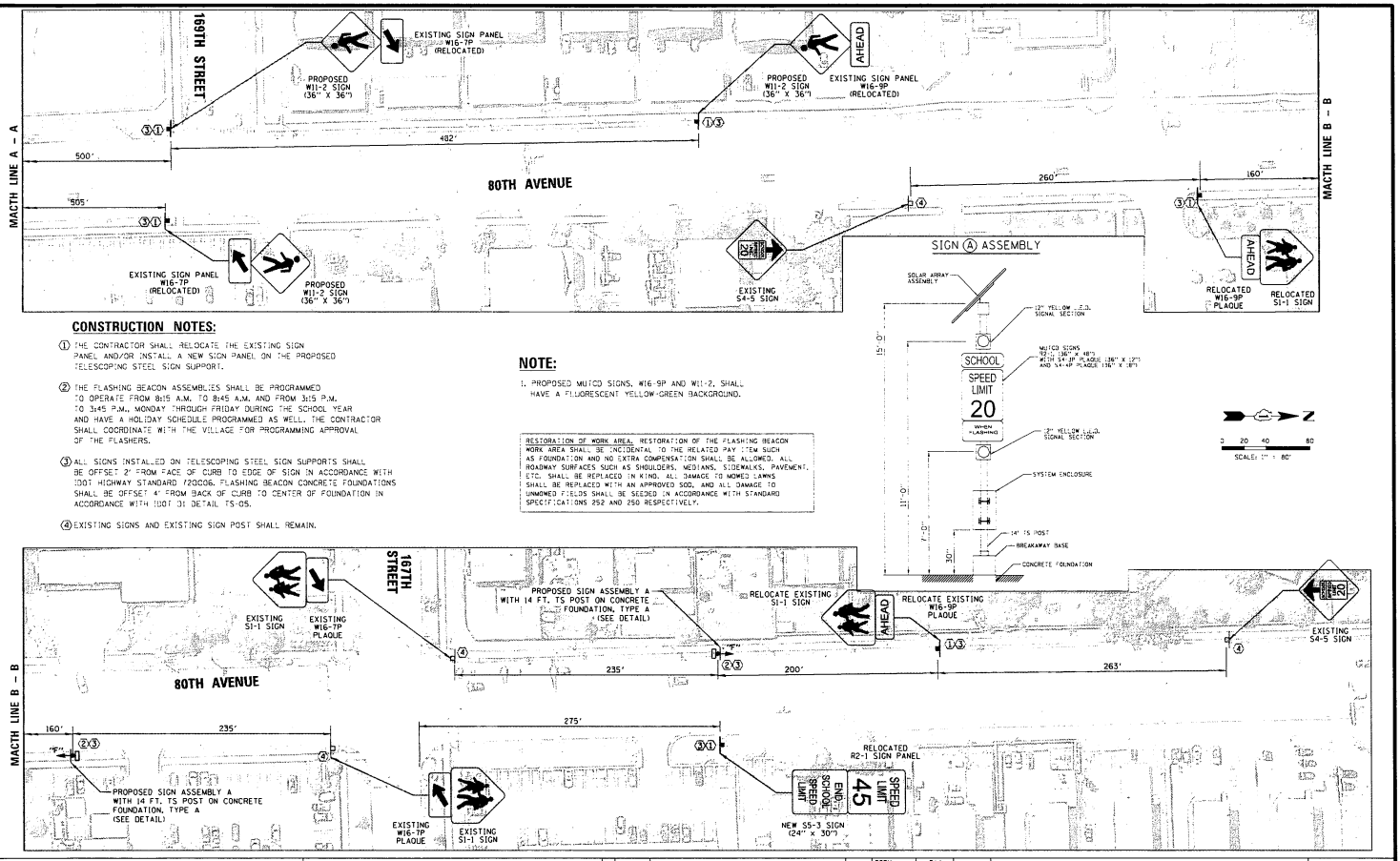
CLIENT:
VILLAGE OF TINLEY PARK
16250 OAK PARK AVENUE
TINLEY PARK, IL 60477

NO.	DATE	NATURE OF REVISION	CHKD.
FILE NAME	N:\TINLEYPARK\160313\160313_00028\Traffic\DS_PED_160313-028...dgn		

DSGN.	EAJ
DWN.	BG
CHKD.	CMZ
SCALE:	1" = 80'
PLOT DATE:	3/13/2022
CAD USER:	ejensen
MODEL:	Default

TITLE:
FLASHING BEACON INSTALLATION AND SIGNING PLAN
(SHEET 1 OF 2)
80TH AVENUE FROM 167TH STREET TO 169TH STREET
TINLEY PARK, ILLINOIS

PROJ. NO.	160313.00028
DATE:	3/3/2022
SHEET	4 OF 21
DRAWING NO.	



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16250 OAK PARK AVENUE
TINLEY PARK, IL 60477

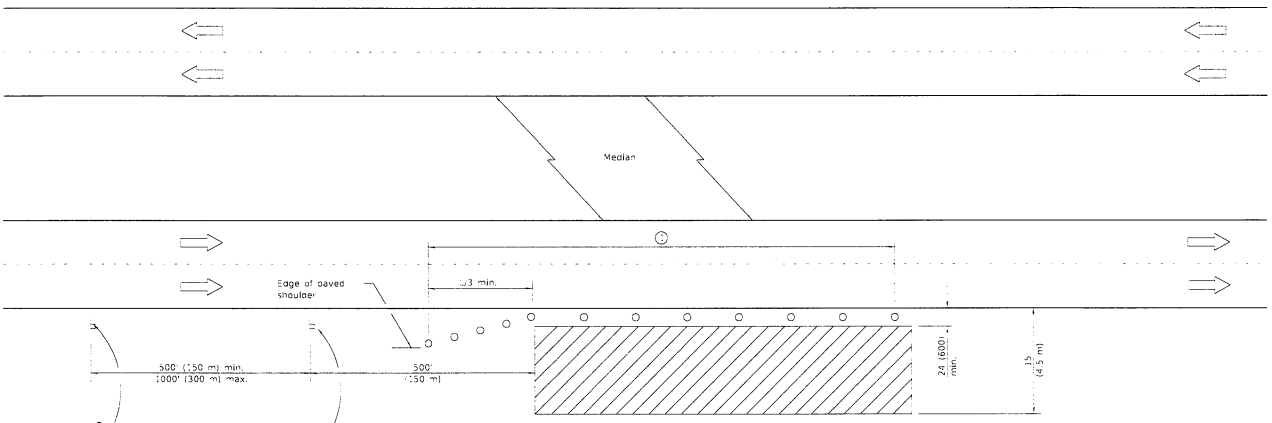
NO.	DATE	NATURE OF REVISION

DSGN.	EAJ
DWN.	BG
CHKD.	CMZ
SCALE:	1" = 80'
PLOT DATE:	3/13/2022
CAD USER:	elensen
MODEL:	Default

FILE NAME: N:\TINLEYPARK\160373\160373_0002B\Traffic\06_PED\160373-02B.dgn

TITLE:
FLASHING BEACON INSTALLATION AND SIGNING PLAN (SHEET 2 OF 2)
80TH AVENUE FROM 167TH STREET TO 169TH STREET
TINLEY PARK, ILLINOIS

PROJ. NO.	160373.00028
DATE:	3/3/2022
SHEET	5 OF 21
DRAWING NO.	



For contract construction projects

W20-1103(0)-48

W21-1(0)-48

For maintenance and utility projects

W20-1(0)-48

TYPICAL APPLICATIONS

Utility operations
Culvert extensions
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Shoulder repair
Sign installation and maintenance

SYMBOLS

Work area

Sign

Cone, drum or barricade

(1) When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24' (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	$L=(W)(S)$	$L=0.65(W)(S)$

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

Illinois Department of Transportation

PASSED April 1, 2016
ENGINEER OF SAFETY ENGINEERING

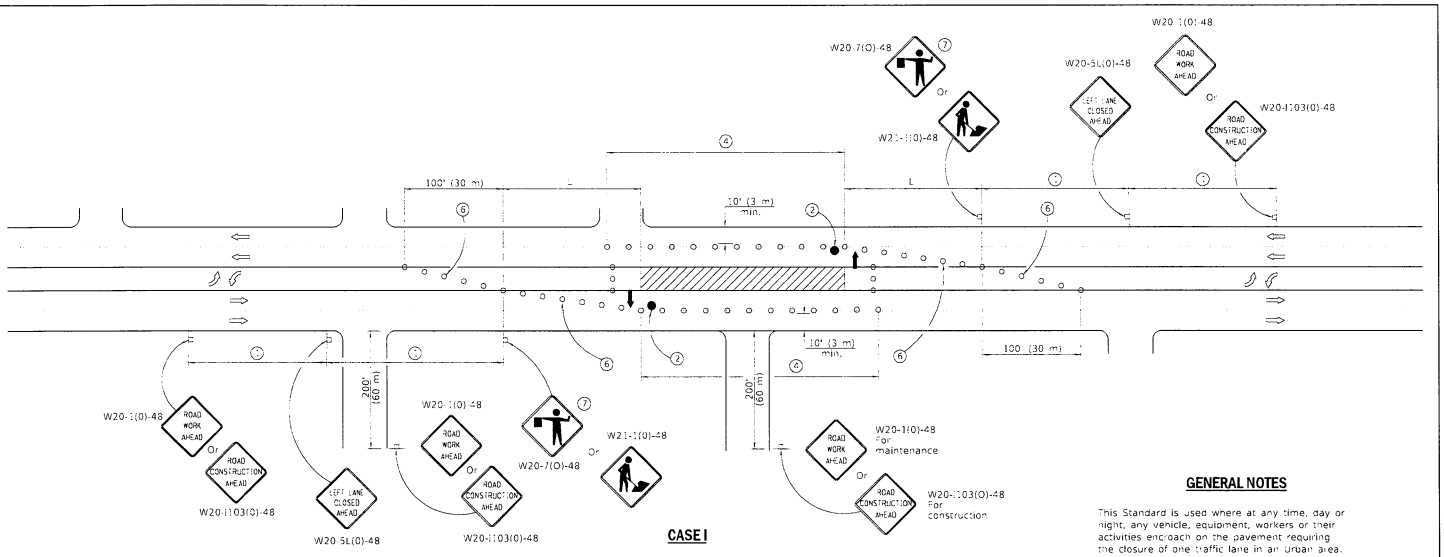
APPROVED April 1, 2016
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-14

DATE	REVISIONS
4-1-16	Corrected typo in title.
1-1-14	Revised workers sign number to agree with current MUTCD.

OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE

STANDARD 701101-05



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
≤45	200' (60 m)

SYMBOLS

- Arrow board
- Work area
- Barricade or drum with steady burning nondirectional light
- Flagger with traffic control sign
- Cone, drum or barricade
- Sign on portable or permanent support
- Type III barricade with flashing lights

CASE I

1. Refer to SIGN SPACING TABLE for distances.
2. Required for speeds > 40 mph (70 km/h).
3. Required if work exceeds 500' (164 m) or 1 block, repeat every 1 mile (1.6 km).
4. Cones at 25' (8 m) centers for 250' (75 m) on approach. Additional cones may be placed at 50' (15 m) centers. When drums or type I or II barricades are used, the interval between devices may be doubled.
5. For approved sideroad closures.
6. Cones, drums or barricades at 20' (6 m) centers in taper.
7. Use flagger sign only when flagger is present.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

If the work operation is performed between 9:00 a.m. and 3:00 p.m. and does not exceed 15 min. Traffic protection shall be as shown for Standard 701426.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

Illinois Department of Transportation

APPROVED January 1, 2019
ENGINEER OF SAFETY, PROG. AND ENGINEERING

APPROVED January 2, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

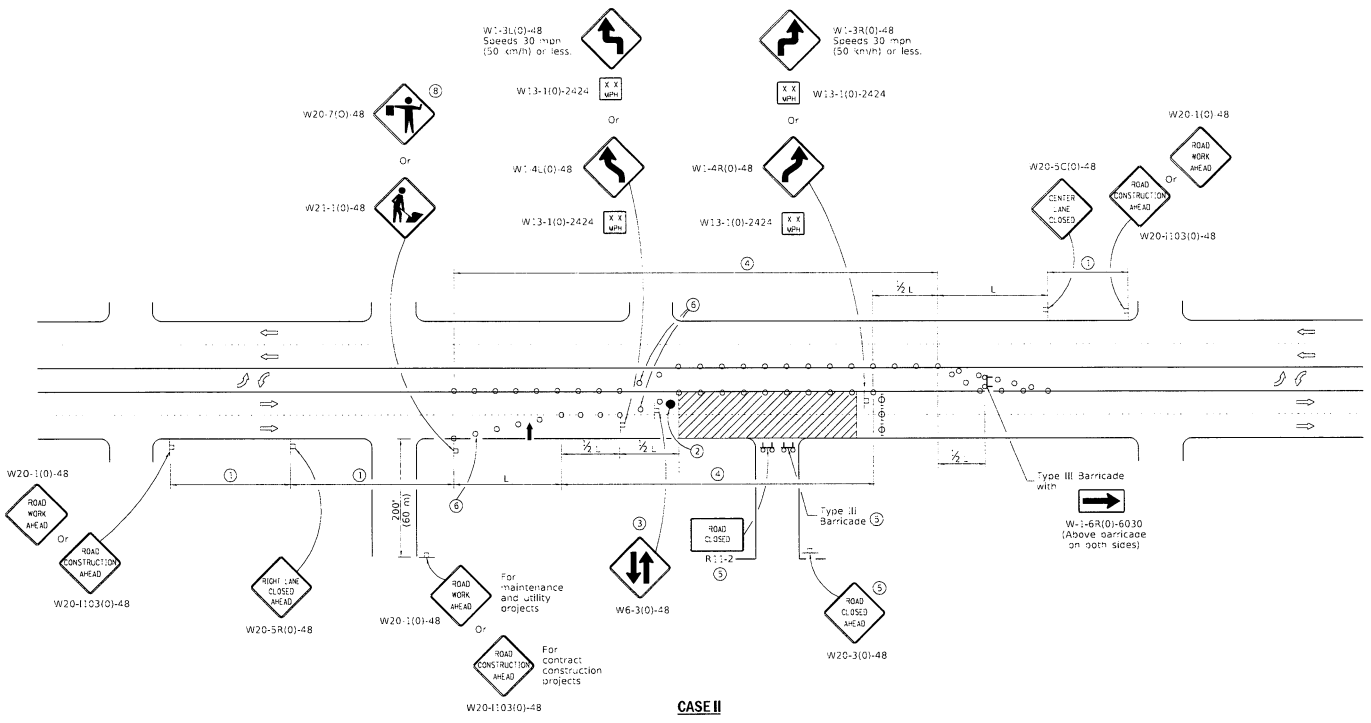
BDE 2013

DATE	REVISIONS
1-1-19	Revised to allow cones at night.
1-1-18	Moved arrow boards into
	closed lanes for CASE I.

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 1 of 4)

STANDARD 701602-10



CASE II

Illinois Department of Transportation

APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING

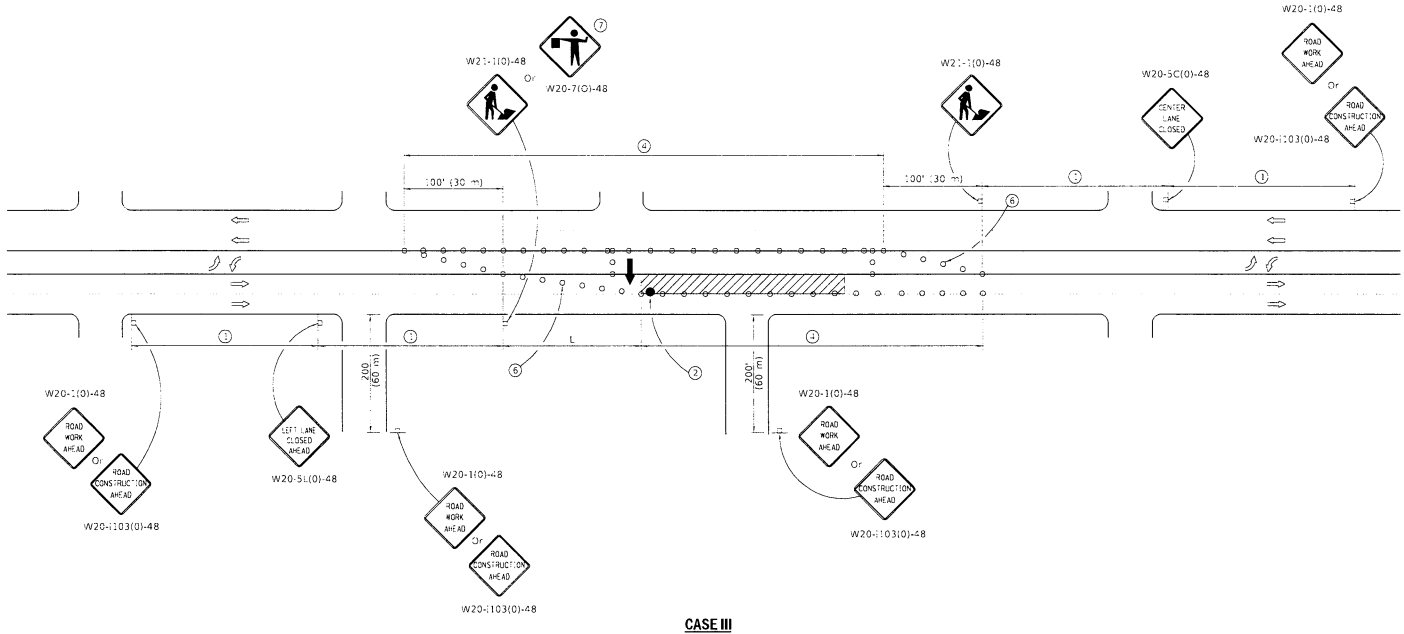
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

BDE/SDD 1113

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 2 of 4)

STANDARD 701602-10



CASE III

Illinois Department of Transportation

APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING

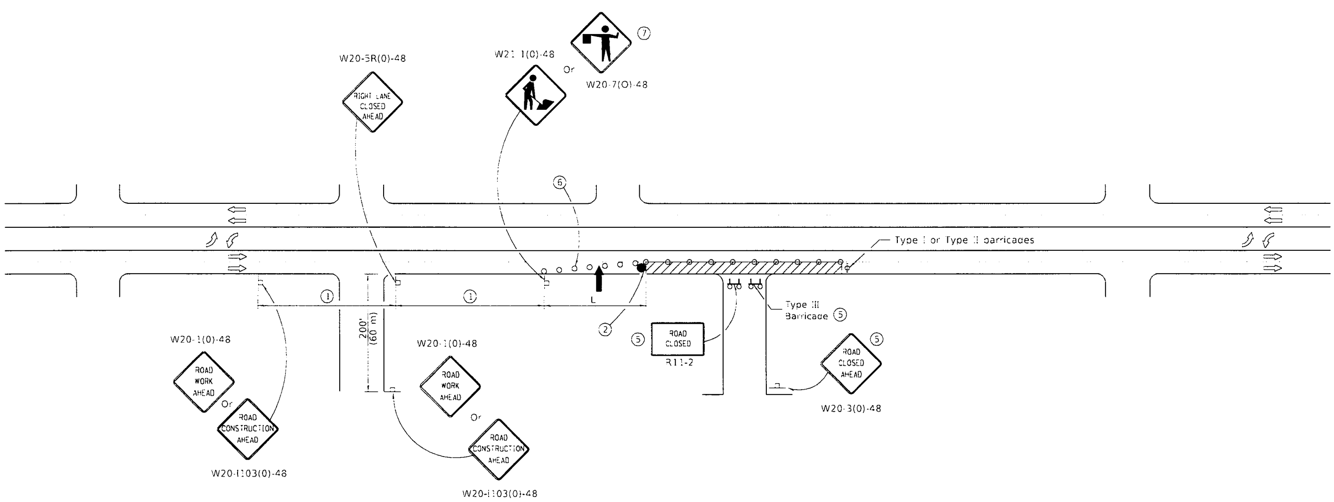
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 11-15

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 3 of 4)

STANDARD 701602-10



CASE IV

Illinois Department of Transportation

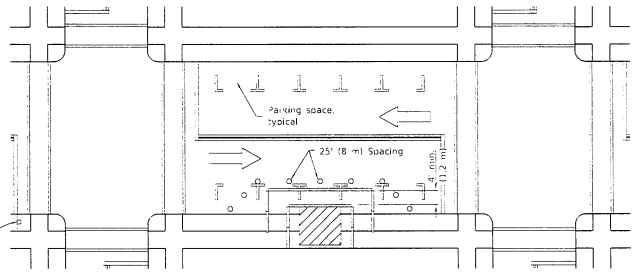
APPROVED January 1, 2019
ENGINEER OF SAFETY PROG. AND ENGINEERING
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-13

URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE

(Sheet 4 of 4)

STANDARD 701602-10

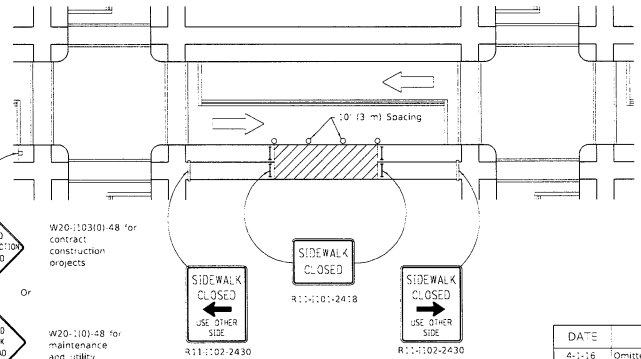


② ROAD CONSTRUCTION AHEAD — W20-[103(0)-48 for contract construction projects

Or

③ ROAD WORK AHEAD — W20-1(0)-48 for maintenance and utility projects

SIDEWALK DIVERSION



② ROAD CONSTRUCTION AHEAD — W20-[103(0)-48 for contract construction projects

Or

③ ROAD WORK AHEAD — W20-1(0)-48 for maintenance and utility projects

SIDEWALK CLOSURE

② Omit whenever duplicated by road work traffic control.

SYMBOLS

- Work area
- Sign on portable or permanent support
- Barricade or drum
- Cone, drum or barricade
- Type III barricade
- Detectable pedestrian channelizing barricade

GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

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

Illinois Department of Transportation

PASSED April 1 2016
ENGINEER OF SAFETY ENGINEERING

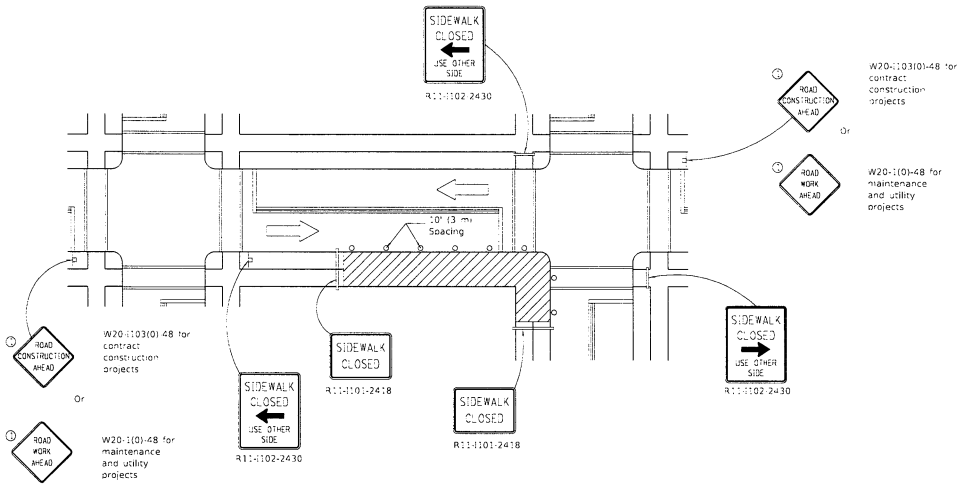
APPROVED April 1 2016
ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
4-1-16	Omitted orange safety fence
	from standard as this is
	covered in the std. spec.
1-1-12	Added SIDEWALK DIVERSION.
	Modified appearance of
	plan views. Renamed Std.

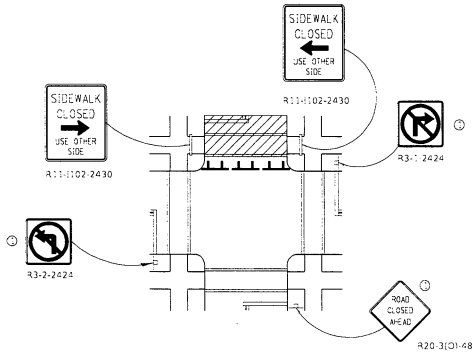
SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 1 of 2)

STANDARD 701801-06



CORNER CLOSURE



CROSSWALK CLOSURE

Illinois Department of Transportation

PASSED April 1 2016
ENGINEER OF SAFETY ENGINEERING

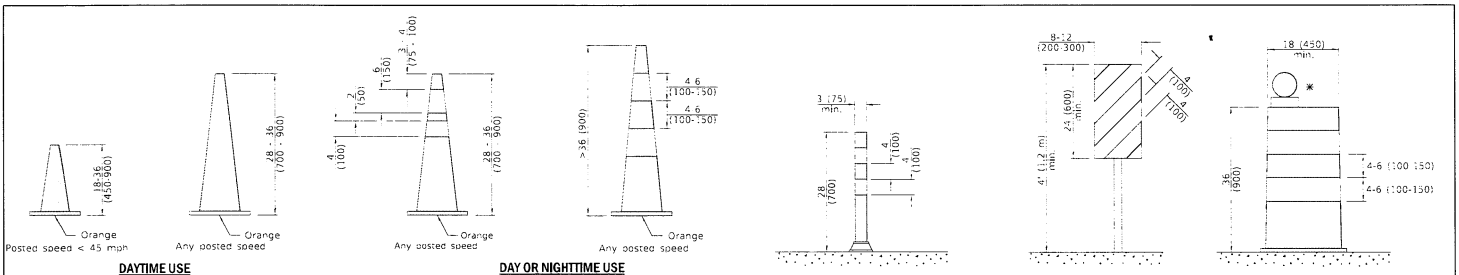
APPROVED April 1 2016
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 2 of 2)

STANDARD 701801-06



DAYTIME USE

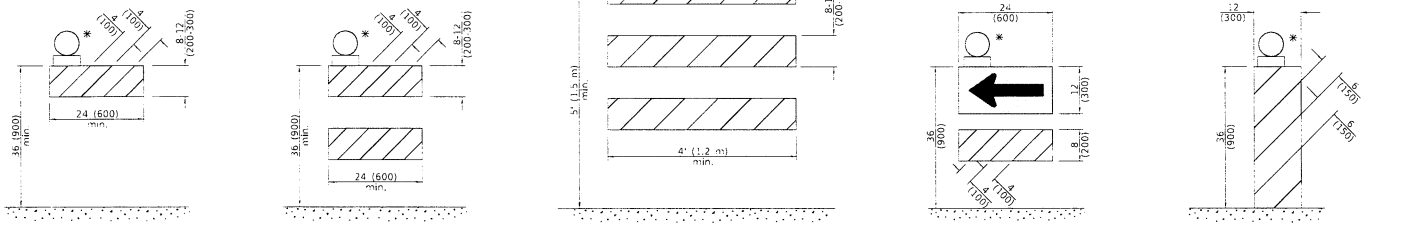
CONES

DAY OR NIGHTTIME USE

TUBULAR MARKER

VERTICAL PANEL
POST MOUNTED

DRUM



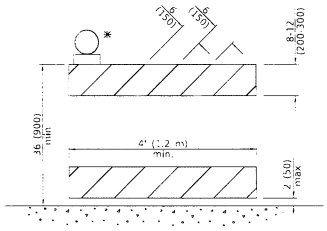
TYPE I BARRICADE

TYPE II BARRICADE

TYPE III BARRICADE

DIRECTION INDICATOR BARRICADE

VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

* Warning lights (if required)

GENERAL NOTES

All heights shown shall be measured above the pavement surface.

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

Illinois Department of Transportation

APPROVED January 1, 2015
ENGINEER OF SAFETY PROG. AND ENGINEERING

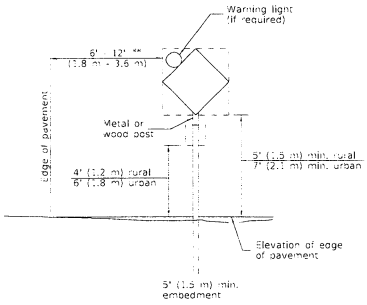
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-19	Revised cone usage and added cones ≥36" (900 m) height.
1-1-18	Revised END WORK ZONE SPEED LIMIT sign from orange to white background.

TRAFFIC CONTROL DEVICES

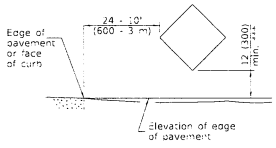
(Sheet 1 of 3)

STANDARD 701901-08



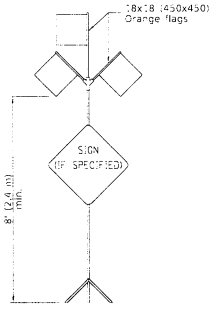
POST MOUNTED SIGNS

** When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



SIGNS ON TEMPORARY SUPPORTS

*** When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



HIGH LEVEL WARNING DEVICE

G20-1104(0)-6036 G20-1105(0)-6024

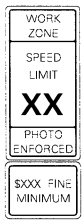
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

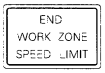
Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING



W21-1115(0)-3618
R2-1-3648
R10-1108a-3618 ****
R2-1106a-3618

Sign assembly as shown on Standards or as allowed by District Operations.

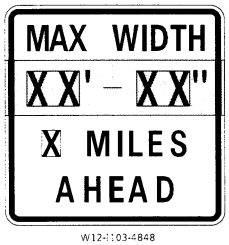


G20-1103-6036

This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

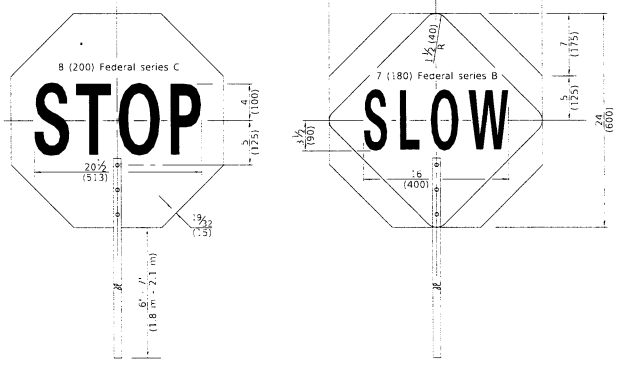
**** R10-1108p shall only be used along roadways under the jurisdiction of the State.



W12-1103-4848

WIDTH RESTRICTION SIGN

XX'-XX" width and X miles are variable.



FLAGGER TRAFFIC CONTROL SIGN

Illinois Department of Transportation

APPROVED January 1 2019
ENGINEER OF SAFETY, TRAFFIC AND ENGINEERING

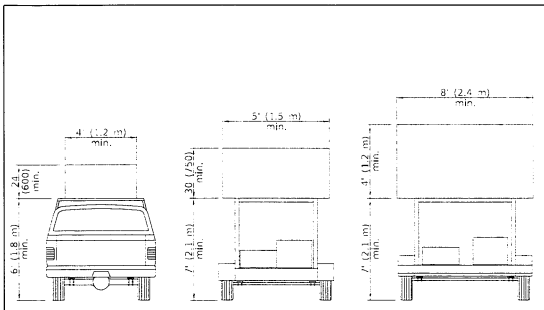
APPROVED January 1 2019
ENGINEER OF DESIGN AND ENVIRONMENT

RIGHT CLICK

TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

STANDARD 701901-08

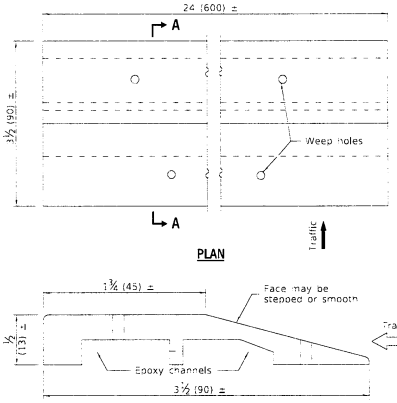


TYPE A ROOF MOUNTED

TYPE B ROOF OR TRAILER MOUNTED

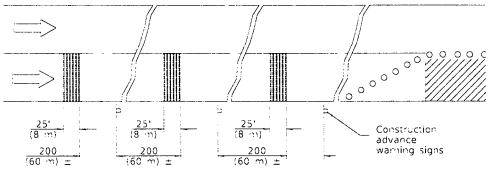
TYPE C TRAILER MOUNTED

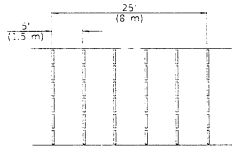
ARROW BOARDS



PLAN

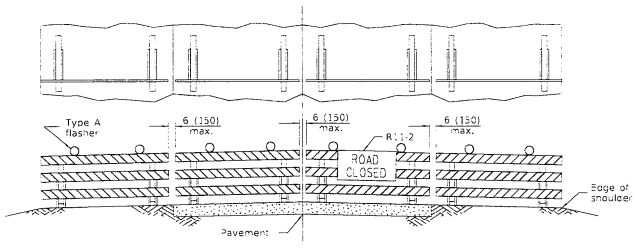
SECTION A-A





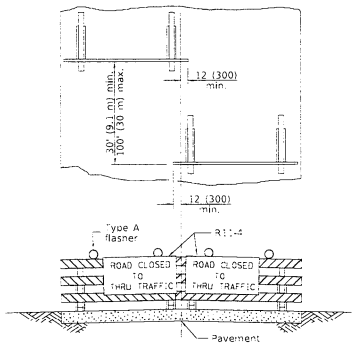
TYPICAL INSTALLATION

TEMPORARY RUMBLE STRIPS



ROAD CLOSED TO ALL TRAFFIC

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.



ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

Illinois Department of Transportation

APPROVED JANUARY 1, 2019
ENGINEER OF SAFETY, PROG. AND ENGINEERING

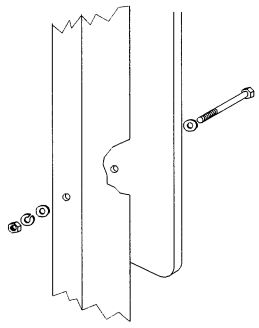
APPROVED JANUARY 7, 2019
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-19

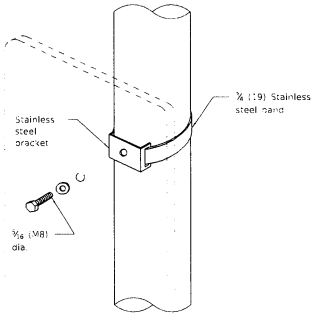
TRAFFIC CONTROL DEVICES

(Sheet 3 of 3)

STANDARD 701901-08

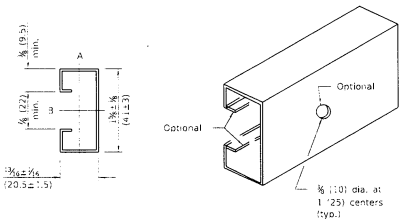


Sign panel 36 (900) wide or less

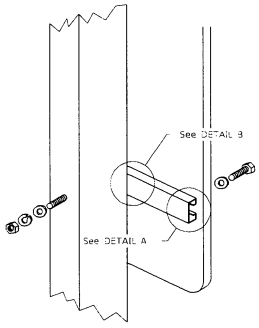


Sign panel 36 (900) wide or less

Section modulus (minimum)	Axis A	Axis B
Steel	0.050 in.³ (819 mm³)	0.105 in.³ (1720 mm³)
Aluminum	0.150 in.³ (2458 mm³)	0.315 in.³ (5162 mm³)

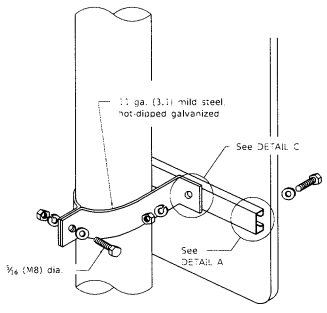


SUPPORTING CHANNEL DETAILS



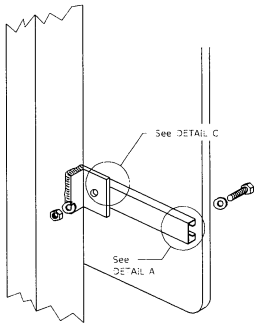
Sign panel over 36 (900) wide

WOOD OR TELESCOPING STEEL POSTS

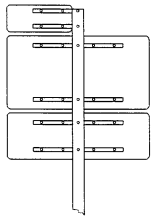


Sign panel over 36 (900) wide

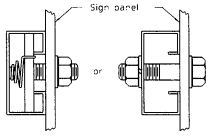
LIGHT OR SIGNAL STANDARDS



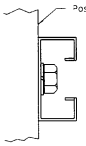
BREAKAWAY STEEL TUBING POSTS
(All sign panel sizes)



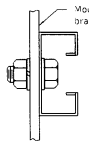
ROUTE MARKER ASSEMBLY



DETAIL A



DETAIL B



DETAIL C

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

Illinois Department of Transportation

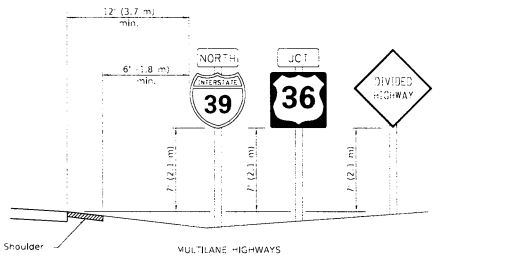
PASSED January 1 2016
ENGINEER OF OPERATIONS

APPROVED January 1 2009
ENGINEER OF DESIGN AND ENVIRONMENT

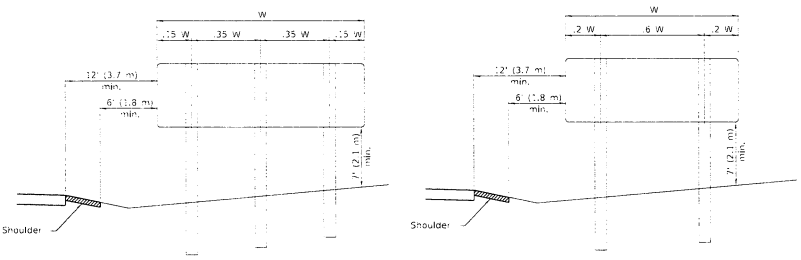
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 23.9-6.

SIGN PANEL MOUNTING DETAILS

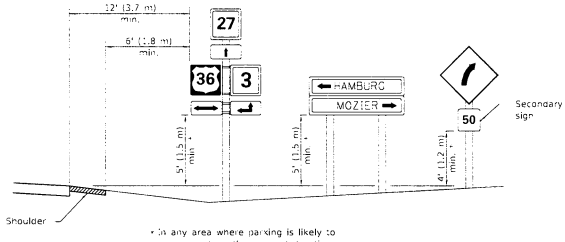
STANDARD 720001-01



MULTILANE HIGHWAYS

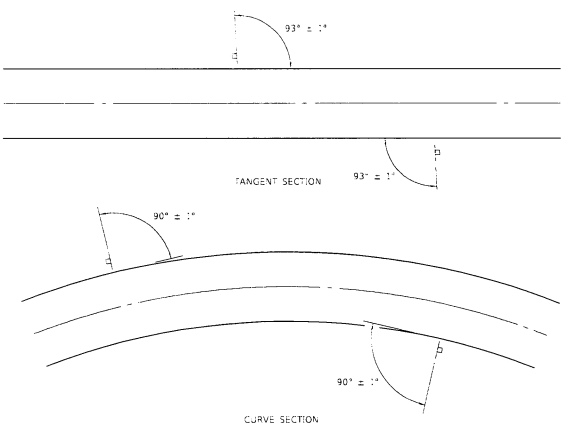


POST SPACING FOR NON-FREEWAY SIGN PANELS

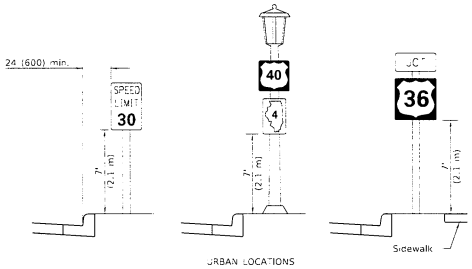


* In any area where parking is likely to occur or where there are obstructions to view or where signs are located over sidewalks, the height shall be at least 7' (2.1 m).

TWO LANE RURAL HIGHWAYS



GROUND MOUNT SIGN POSITIONING



URBAN LOCATIONS

TYPICAL INSTALLATIONS

Signs in any area shall be erected to a uniform height above the edge of the pavement.

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

DATE	REVISIONS
1-1-14	Added shoulders and slopes.
	Changed sign distances
	from roadway and shoulder.
1-1-12	Rev. sign elev. for multilane
	hwy's. Revised sign elev. and
	dist. to curb for rural loc.

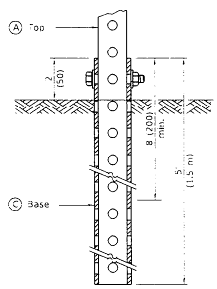
SIGN PANEL ERECTION DETAILS

STANDARD 720006-04

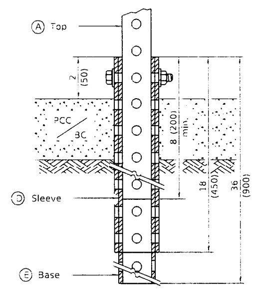
Illinois Department of Transportation

PASSED January 1, 2014
ENGINEER OF OPERATIONS

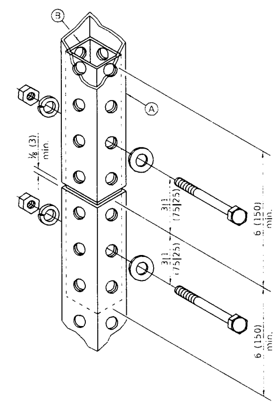
APPROVED January 1, 2014
ENGINEER OF DESIGN AND ENVIRONMENT



GROUND MOUNT DETAIL



PAVEMENT MOUNT DETAIL



SPLICE DETAIL

Ⓐ	2 x 2 x var. (51 x 51 var.)
Ⓑ	1¾ x 1¾ x 12 (44 x 44 x 300)
Ⓒ	2¼ x 2¼ x 60 (57 x 57 x 1500)
Ⓓ	2½ x 2½ x 18 (64 x 64 x 450)
Ⓔ	2¼ x 2¼ x 36) (57 x 57 x 900)

GENERAL NOTES

All bolts ⅜ (M10) hex head zinc or cadmium plated.

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

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPPOVED January 1 2009

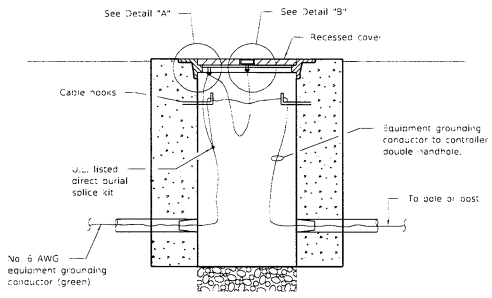
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07

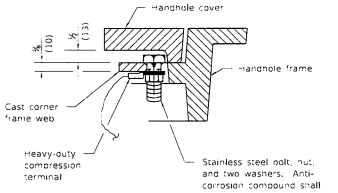
DATE	REVISIONS
1-1-09	Switched units to
	English (metric).
1-1-07	New Standard. Used to
	be part of Standard
	720006.

TELESCOPING STEEL SIGN SUPPORT

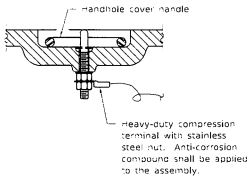
STANDARD 728001-01



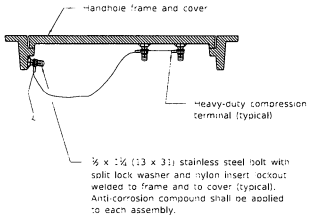
BONDING A HANDHOLE COVER & FRAME



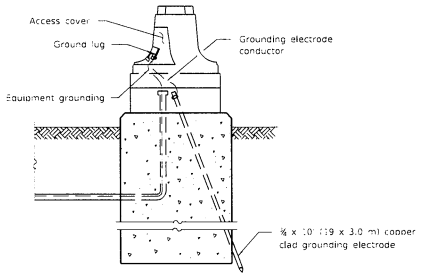
DETAIL "A"



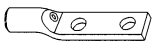
DETAIL "B"



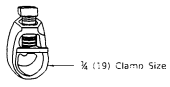
BONDING AN EXISTING HANDHOLE COVER & FRAME



GROUNDING A MAST ARM POLE/POST



HEAVY-DUTY COMPRESSION TERMINAL



HEAVY-DUTY GROUND ROD CLAMP

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

Illinois Department of Transportation

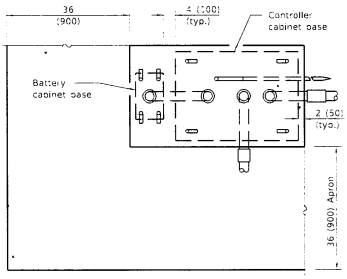
PASSED January 1 2005
ENGINEER OF OPERATIONS

APPROVED January 1 2009
ENGINEER OF DESIGN AND ENVIRONMENT

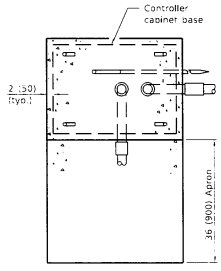
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-07	Revised terminology.

TRAFFIC SIGNAL GROUNDING & BONDING

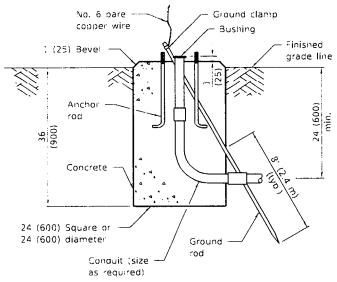
STANDARD 873001-02



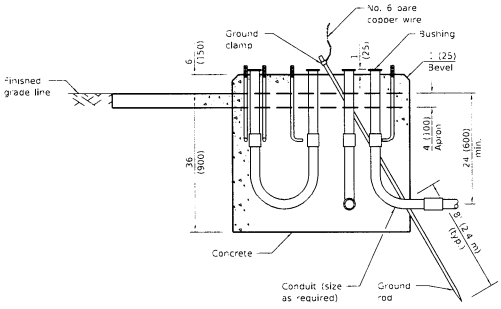
TOP VIEW



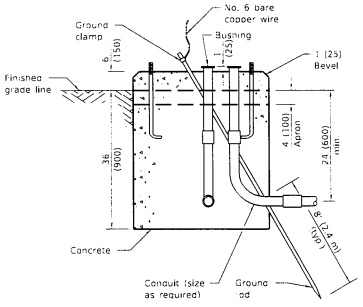
TOP VIEW



TYPE A



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET

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

Illinois Department of Transportation

PASSED January 1, 2021
ENGINEER OF OPERATIONS

APPROVED January 1, 2021
ENGINEER OF DESIGN AND ENVIRONMENT

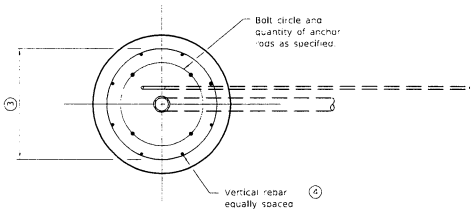
SHEET 1 OF 2

DATE	REVISIONS
1-1-21	Revised anchor rod end in Type E detail.
1-1-15	Revised TYPE E detail.

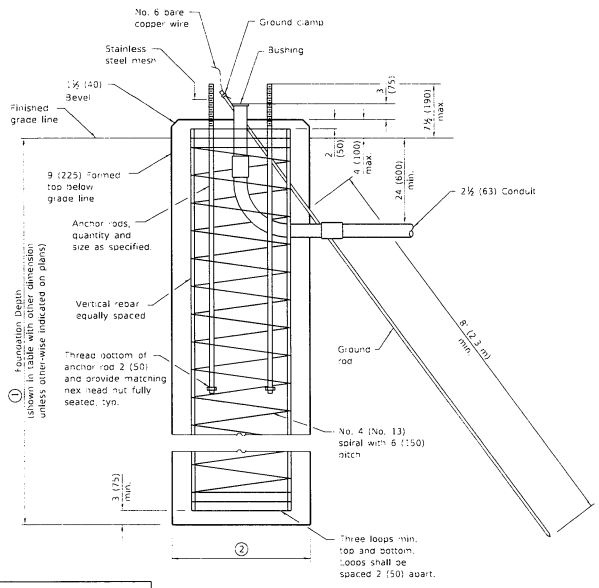
CONCRETE FOUNDATION DETAILS

(Sheet 1 of 2)

STANDARD 878001-11



TOP VIEW



TYPE E

Mast Arm Length	1 Foundation Depth *	2 Foundation Diameter	3 Spiral Diameter	4 Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30 (750)	24 (600)	8	6 (19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30 (750)	24 (600)	8	6 (19)
	11'-0" (3.4 m)	36 (900)	30 (750)	12	7 (22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36 (900)	30 (750)	12	7 (22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36 (900)	30 (750)	12	7 (22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42 (1060)	36 (900)	16	8 (25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42 (1060)	36 (900)	16	8 (25)

* For standard and combination mast arm assemblies. Foundation depths for standard dual mast arms with the longest arm length upto and including 55' (16.8 m) shall be increased by 1' (0.3 m) of that shown in the table, based on the longer of the two arms.

These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

Illinois Department of Transportation

PASSED January 1 2021
ENGINEER OF OPERATIONS

APPROVED January 1 2021
ENGINEER OF DESIGN AND ENVIRONMENT

6 of 11 sheets

CONCRETE FOUNDATION DETAILS

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STANDARD 878001-11

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COOK COUNTY

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2022, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the Supplemental Specifications (if applicable) which apply to and govern the flashing beacon installation for the project area along 80th Ave (County Hwy W32) at 167th Street; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

DESCRIPTION OF PROJECT

The work consists of signage changes and installing solar powered flashing beacon sign assemblies for the school zone located along 80th Ave (County Hwy W32) near 167th Street.

CCDOTH PERMIT

The work involves County right-of-way and a permit is required to construct this project. The contractor will be required to acquire a $20,000 bond and submit associated permit and insurance documentation. The costs associated with acquiring the bond and submitting associated documents shall be included in the contract cost.

SPECIAL PROVISION
FOR
TRAFFIC SIGNAL WORK GENERAL

Effective: 01/01/18
Revised: 5/1/21 (Revised Phone Number)

All work and equipment performed and installed under this contract, shall be governed and shall comply to the State of Illinois "Standard Specifications for Road and Bridge Construction" latest edition, herein referred to as the Standard Specifications and the "District One Standard Design Details"; the State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition; the "National Electrical Code" latest edition herein referred to as the NEC; the National Electrical Manufacturers Association, herein referred to as NEMA (all publications for traffic control items) latest editions; the International Municipal Signal Association, herein referred to as IMSA "Official Wire & Cable Specifications Manual" latest edition; the Institute of Transportation Engineers, herein referred to as the ITE, Technical Report No.1, "A Standard for Adjustable Face Vehicular Traffic Control Heads"; AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals" and the "Supplemental Specifications" and "Recurring Special Provisions" noted herein.

The following Special Provisions supplement the above specifications, manuals, and code. The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new unless otherwise noted herein. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. Traffic signal construction and maintenance work shall be performed by personnel holding IMSA Traffic Signal Technician Level II certification. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

In order to reduce possible vehicular conflicts with fixed objects and avoid public criticism, it is necessary to require that no posts, poles, heads, or controller cabinets be installed until all traffic signal control equipment is brought to and located on the job site.

The construction, installation and/or removal work shall be accomplished at all the intersections within the limits of this project or as shown in the plans.

Description of Work. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Control of Traffic Signal Materials.

All work shall meet the requirements of the "Standard Specifications for Road and Bridge Construction", except as follows:

The controller and all control equipment shall be of a manufacturer that is approved by this Department. All equipment shall have a representative and shop located in the six (6) county Chicago areas. All equipment installed in the controller cabinet shall be from a single supplier. The supplier shall be responsible for service and support for this equipment.

The intent of this Section is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new unless otherwise noted herein. Traffic materials and equipment shall bear the U.L. label whenever such labeling is available.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

The application of all coatings, epoxy, galvanizing, painting, etc., to metal products shall be domestically applied.

Metal material other than iron and steel, which are not domestically produced, may be accepted provided:

(a) The contractor notifies the Department in advance of his/her intension to use other than domestically manufactured or produced material.

(b) Written evidence is provided in English of compliance with all requirements of the specifications.

(c) Physical tests conducted by the department verify the acceptability of the material.

Before any signal equipment, including mast arm assemblies, poles, controller cabinets, all control equipment and signal heads, are delivered to the job site, the Contractor shall obtain and forward to the Engineer a certified, notarized statement from the manufacturer, containing the catalog numbers of the equipment and/or material, guaranteeing that the equipment and/or material, after manufacture, comply in all respects with the requirements of the Specifications and these Special Provisions.

All material approval requests shall be within thirty (30) consecutive calendar days after the Contract is awarded, or at the pre-construction meeting, whichever is first. A list of major traffic signal items can be found in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be done at the Contractor's own risk and may be subject to removal and disposal at the Contractor's expense.

The Contractor must submit the following for approval by the Engineer:

- Four (4) complete set of manufacturer's descriptive literature, drawings, and specifications of the traffic signal equipment, handholes, junction box, cable, conduit and all associated items that will be installed on the contract. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.

- Partial or incomplete submittal will be returned without review.

- The contractor shall supply samples of all wire and cable, and shall make up and supply samples of each type of cable splice proposed for use in the work for the-Engineer's approval.

- Seven (7) complete shop drawings of the mast arm assemblies and poles including combination mast arm poles are required, showing in detail the fabrication, anchor bolts, reinforcing materials, design material, thickness of sections and weld sizes. These drawing shall be approved by IDOT at least 11" x 17" (275mm x 425mm) in size and adequate quality for microfilming.

- Certain non-standard mast arm poles and assemblies will require additional review. The Contractor shall account for additional review time in their schedule.

- Seven (7) copies of a letter from the Traffic Signal Contractor on company letterhead listing contract number or permit number, project location limits, pay item number and description and listing the manufacturer's name and model numbers of the proposed equipment to be supplied and stating that the proposed equipment meets all Contract requirements. The letter will be reviewed by the Engineer to determine whether the equipment to be used is approvable. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.

- Five (5) copies of a letter from the Traffic Signal Contractor listing the System Coordination and Timing (SCAT) consultant's name shall be supplied. The letter will be reviewed by the Engineer to determine whether the SCAT consultant to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.

- Where certifications and/or warranties are specified. The information submitted for approval shall include certifications and warranties. Certifications involving inspections and/or tests of material shall be complete with all test data, dates and times.

- All above shall be stamped with the Section Number, Permit Number, or Contract Number and Intersection(s) name(s). Pay item numbers shall also be included. If the above required information is not on each sheet of the above literature or letters, the equipment and material cuts will not be reviewed and shall be returned to the Contractor.

- All submitted items reviewed and marked 'APPROVED AS SUBMITTED', 'APPROVED AS NOTED', 'DISAPPROVED', 'INCOMPLETE' or ' NOT REVIEW' are to be resubmitted in their entirety, unless otherwise

indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.

- Exceptions, Deviations and Substitutions. In general, exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

- After the engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status. The Engineer's review is for conformance with design concept only. It is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop working, layout drawings, or other documents by the Departments approval thereof. The Contractor must be in full compliance with contract and specification requirements.

- Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure proper placement of contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.

Marking Proposed Locations.

Revise the following to Article 801.09 of the Standard Specifications:

Revise "Marking Proposed Locations for Highway Lighting System" to read "Marking Proposed Locations for Highway Lighting System and Traffic Signals."

It shall be the contractor's responsibility to verify all dimensions and conditions existing in the field prior to ordering materials and beginning construction. This shall include locating the mast arm foundations and verifying the mast arms lengths.

Maintenance and Responsibility.

Revise Article 801.11 to read as follows.

a) Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, Cook County Highway Department, Private Developer, or the Municipality in which they are located. Once the Contractor has begun any work on any portion of the project all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon

Installation", shall become the full responsibility of the Contractor. Automatic Traffic Enforcement equipment is not owned by the County and the Contractor shall not be responsible for maintaining it during construction. The Contractor shall supply the engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number.

b) When the project has a pay item for "Maintenance of Existing Traffic Signal Installation", "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation", the Contractor must notify both the Design Engineer at (312) 603-1734 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

c) Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

d) Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops will require a maintenance transfer. The Contractor is required to notify of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Design Engineer at (312) 603-1734, the Department's Electrical Maintenance Contractor and the owner of automatic traffic enforcement prior to the loop removal, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. Damaged Automatic Traffic Enforcement equipment, including cameras, detectors, or other peripheral equipment, shall be replaced by others, per Permit agreements or other agreements, at no cost to the contract except for City of Chicago projects in which the detectors shall be replaced. See additional requirements in these specifications under Inductive Loop Detector.

e) The Contractor is further advised that the existing traffic signal(s), and/or the existing temporary installation(s), must remain in operation during all construction stages except for the most essential down time. Any shutdown of the traffic signal installation(s), for a period to exceed fifteen (15) minutes, must have the prior approval of the Engineer. Such approval will generally only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns will not be allowed during inclement weather or during Holiday periods. Any other traffic signal shutdown, either for periods in excess of one (1) hour or outside of the 10:00 a.m. to 3:00 p.m. weekday period must have prior approval of the Engineer. The Contractor, prior to the commencement of his work, shall

notify the State Electrical Maintenance Contractor, the Cook County Electrical Maintenance Contractor, or the concerned Municipality, of his intent to perform this work.

f) The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of $1000 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of $1000 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department's Electrical Maintenance Contractor may inspect any signalizing device on the Department's highway system at any time without notification.

g) Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

h) The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display.

i) The Contractor shall maintain the traffic signal in normal operation during short or long-term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries.

Damage to Traffic Signal System.

Add the following to Article 801.12(b).

a) Any damaged equipment or equipment not operating properly from any cause whatsoever shall be replaced with new equipment provided by the contractor at no additional cost to the Contract and/or owner of the traffic signal system all as approved by the Engineer. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection

otherwise the traffic signal will not be accepted. Cable splices outside the controller cabinet will not be allowed.

b) Temporary replacement of damaged or knockdown of a mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

c) Automatic Traffic Enforcement equipment, such as Red-Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause whatsoever, shall be the responsibility of the municipality or the Automatic Traffic Enforcement Company per Permit agreement or other agreements.

Traffic Signal Inspection (Turn – On).

Revise Article 801.15b to read as follows.

a) The Contractor must have all electric work completed, the electrical service installation connected by the utility company and equipment field tested by the Vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines the work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected. The Department will not grant a field inspection until written certification is provided from the Contractor stating the equipment has been field tested and the intersection is operating according to Contract requirements.

b) When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specification, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Design Engineer at (312) 603-1734 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Pre-emption (EVP) is included in the project. When the contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, or TEMPORARY TRAFFIC SIGNAL TIMINGS, the Contractor must notify the SCAT Consultant of the turn-on schedule, as well as stage changes and phase changes during construction.

c) The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a Police Officer to direct traffic at the time of testing.

d) The Contractor shall provide a representative from the control Equipment Vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons. Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

e) Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal turn-on, completeness of the required documentation and successful operation during a minimum 72 hour "burn-in" period following activation of the traffic signal. If approved, traffic signal acceptance shall be verbal at the turn-on inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

f) All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

g) All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Design Engineer at (312) 603-1734 to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of $500 per month per incident.

h) All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices under which the subject materials and signal equipment are paid and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements that have been installed on the job will be at the Contractor's own risk and shall be subject to removal and disposal at the Contractor's expense.

i) The Contractor shall furnish the Cook County Highway Department with any special tools or wrenches that may be required for assembling or maintaining the control equipment and traffic control signal head assemblies.

j) All control cable, when complete in place but before permanent connection, shall be subject to insulation tests at the discretion of the Engineer. The tests shall be made with approved insulation resistance testing equipment rated at 500 volts D.C. and witnessed by the Engineer. Results of these tests shall be submitted to the Department in written form, bearing the Engineers signature and shall become part of the project records. A final inspection of the traffic signal installation shall not be held until results of this insulation test have been received.

k) All equipment such as new controllers and allied central equipment with the exception of cable, conduit, and other materials which require the use of the State of Illinois Materials Testing Laboratories, shall be built in the suppliers shop and inspected by a representative of this Department prior to the installation of such equipment, and upon approval of this equipment an inspection ticket will be issued to the Contractor by the inspection agency (State of Illinois Material Testing Laboratory or the Cook County Highway Mechanical-Electrical Section). The controller and allied control

equipment shall be prepared in the suppliers shop and run under a load of a minimum of 500 watts per phase for at least 48 hours before it is inspected for proper operation and sequencing. After it passes this test an inspection ticket will be issued by the Cook County Highway Mechanical-Electrical Section representative and it can then be delivered to the job site for installation.

l) Upon completion of the installation, a final inspection will be carried out by qualified representatives of the Highway Agencies involved.

m) If the Contractor fails to comply with any of the requirements, the County shall impose such sanction as it may determine to be appropriate including but not limited to withholding all payments to the Contractor on this contract until the provisions of this special provision are complete with and/or implementation of article 108.10 of the standard specifications.

At the final inspection it will be required that the Contractor will have submitted to the Engineer all necessary inspection tickets for all new equipment and materials installed under this Contract. If the Contractor has not obtained the inspection tickets on any portion of the new equipment and materials, the representative of this Department will have the authority to postpone the final inspection until the above has been satisfied. Any postponement of the final inspection for this reason shall not relieve the Contractor of his full maintenance responsibilities until such time as the installation is re-inspected and accepted by the County.

The County requires the following Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. A CD/DVD shall be submitted with separate folders corresponding to each numbered title below. The CD/DVD shall be labelled with date, project location, company and contract or permit number. Record Drawings, Inventory and Material Approvals shall be submitted prior to traffic signal turn-on for review by the Department as described here-in.

The County requires the following from the Contractor at traffic signal turn-on.

1) The Contractor shall, at the turn-on furnish one hard copy set of signal plans (24"x36") of record with field revisions marked in red ink to the maintaining agency.

2) Field Testing. Written notification from the Contractor and the equipment vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13). One hard copy of all contract required performance measurement testing shall also be provided.

3) A knowledgeable representative of the controller equipment supplier shall be required at the permanent and temporary traffic signal turn-on. The representative shall be knowledgeable of both cabinet design and controller functions and shall have sufficient test and spare equipment to make the traffic signal installation operational.

4) Pictures. Digital pictures of a minimum 12M pixels of each intersection approach showing all traffic signal displays and equipment. Pictures shall include controller cabinet equipment in enough detail to clearly identify manufacture and model of major equipment.

5) Materials Approval. The material approval letter. A hard copy shall also be provided.

6) Manuals. Operation and service manuals of the signal controller and associated control equipment. One hard copy shall also be provided.

7) Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies 11" x 17" of the cabinet wiring diagrams shall be provided along with electronic pdf and dgn files of the cabinet wiring diagram. Five hard copies of the cable logs and electronic excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.

8) Controller Programming Settings. The traffic signal controller's timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The controller manufacturer shall also supply a printed form, not to exceed 11" x 17" for recording that data noted above. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

9) All Manufacturer and Contractor warranties and guaranties required by Article 801.14.

10) GPS coordinate of traffic signal equipment as describe in the Record Drawings section herein.

RECORD DRAWINGS

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the 2nd paragraph of Article 801.16 of the Standard Specifications to read:

a. When the work is complete, and seven days before the request for a final inspection, the full-size set of contract drawings. Stamped "RECORD DRAWINGS", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CDROM as well as hardcopy for review and approval. If the contract consists of multiple intersections, each intersection shall be saved as an individual PDF file with TS# and location name in its file name.

b. In addition to the record drawings, copies of the final catalog cuts which have been Approved or Approved as Noted shall be submitted in PDF format along with the record drawings. The PDF files shall clearly indicate the pay item either by filename or PDF Table of Contents referencing the respective pay item number for multi-item PDF files. Specific part or model numbers of items which have been selected shall be clearly visible."

Add the following to Article 801.16 of the Standard Specifications:

"In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following traffic signal components being installed, modified or being affected in other ways by this contract:

- All Mast Arm Poles and Posts
- Traffic Signal Wood Poles
- Rail Road Bungalow
- UPS
- Handholes
- Conduit roadway crossings
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV Camera installations
- Fiber Optic Splice Locations
- Conduit Crossings

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

1. File shall be named: TSXXX-YY-MM-DD (i.e. TS22157_15-01-01)
2. Each intersection shall have its own file
3. Row 1 should have the location name (i.e. 103rd Street at Central Avenue)
4. Row 2 is blank
5. Row 3 is the headers for the columns
6. Row 4 starts the data
7. Column A (Date) – should be in the following format: MM/DD/YYYY
8. Column B (Item) – as shown in the table below
9. Column C (Description) – as shown in the table below
10. Column D and E (GPS Data) – should be in decimal form, per the County special provisions

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2015	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	-87.793378
01/01/2015	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	-87.792571
01/01/2015	ES (Electrical Service)	Ground mount, Pole mount	41.765532	-87.543571
01/01/2015	CC (Controller Cabinet)		41.602248	-87.794053
01/01/2015	RSC (Rigid Steel Crossing)	IL 31 east side crossing south leg to center HH at Klausen	41.611111	-87.790222
01/01/2015	PTZ (PTZ)	NEQ extension pole	41.593434	-87.769876
01/01/2015	POST (Post)		41.651848	-87.762053

01/01/2015	MCC (Master Controller Cabinet)		41.584593	-87.793378
01/01/2015	COMC (Communication Cabinet)		41.584600	-87.793432
01/01/2015	BBS (Battery Backup System)		41.558532	-87.792571

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 1 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have a minimum 1-foot accuracy after post processing GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years."

Location of Underground State and County Maintained Facilities.

Revise Article 803 to read as follows.

County traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger. If this contract requires the services of an electrical contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT and CCHD facilities prior to performing any work. If this contract does not require the services of electrical contractor, the Contractor may request one free locate for existing IDOT and CCHD electrical facilities from the Electrical Maintenance Contractor(s) prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities, locally owned equipment, and leased enforcement camera system facilities, the local Counties or Municipalities may need to be contacted, in the City of Chicago contact D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

Restoration. All areas and plant material damaged by the installation of Traffic Signal posts, mast arm poles, underground cables or conduits, handholes and control cabinets shall be replaced as follows:

- Grass Areas: Replace top soil to a depth of four (4) inches (100 mm), re-grade shoulders, ditch slopes, and open areas back to former existing grades, fertilize, seed and mulch all damaged areas.

- Sod Areas (areas adjacent to residential, commercial and industrial properties and any other areas as directed by the engineer): Fertilize and re-sod damaged areas.
- Plant Materials: Remove and replace damaged trees, shrubs and vines with the same varieties that existed prior to damage.
- Shoulders other than Stabilized and Backslopes, medians, sidewalks, pavement, etc.: Replace shoulder to original condition and restore edge of backslope to original lines and grades. Medians, sidewalks and pavement shall be replaced in kind.
- All brick pavers disturbed in the work area shall be restored to their original configuration or as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer

All damaged landscape shall be replaced in accordance with Section 250 through 254 of the Standard Specifications.

Any damage, due to the installation of traffic signal equipment; or necessary removal at handholes, jacking pits, and inspection openings, of sidewalks, curbs, gutters, median and island paving, and/or pavement, shall be repaired or replaced by the Contractor. Repair or replacement shall be made with a like material of like thickness to the existing surface. Restoration of traffic signal work area shall be included in related pay items such as foundation, conduit, handhole, trench and backfill, etc.

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/un-energized signal sections and visors. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service.

SPECIAL PROVISION
FOR
TRAFFIC SIGNAL POST

Effective: 7/1/16
*Revised: 5/1/21 (Remove Pedestrian Push-button Post)*The furnishing and installation of this item shall meet the requirements of Sections 106.01, 875, 876, 1077.01 and 1077.02 of the Standard Specifications, except as follows:

All posts (steel), bases (cast iron), and related mounting hardware shall be hot-dipped galvanized in accordance with AASHTO M 111. A magnetic field tester may be utilized at any time to determine the thickness of galvanization. Average galvanization thickness shall be 2.0 oz. per square foot and minimum thickness shall be 1.8 oz. per square foot. The Contractor shall use a fabric post tightener to attach the post to the base. If the galvanization on the post is removed using a chain post tightener exposing bare metal, the post shall be rejected and replaced with a new post.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

If the fabricator elects to cut and thread the post after the galvanization process, the bare metal shall immediately be cleaned to remove all cutting solvents and oils, then sprayed with two (2) coats of galvanized compound. If the Department approves painting, powder coating by the manufacturer will be required over the galvanizing.

At intersections where all the posts are not being replaced, the traffic signal base shall match existing condition (octagonal or square). Square base shall be used when all new posts and bases are installed at an intersection.

When octagonal bases are used, the bases shall be cast iron, approximately 15 inches (375 mm) high and 16 inches (400 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced in a 12-1/2" (312 mm) diameter circle.

Bases shall be cast iron and square in shape, approximately 15 inches (375 mm) high and 14 inches (350 mm) across the flat sides at the bottom. All bases shall be designed to accept four (4) 5/8" (15.6 mm) diameter anchor bolts evenly spaced between 12" (300mm) and 14" (350mm) diameter circle.

Welded extensions onto the post shall not be permitted.

Posts are to erected plumb and no shims are allowed between the bottom of the base and the foundation.

When a new post is installed on an existing foundation, the foundation shall be plumbed before the post is installed. It shall not be paid for separately but shall be included in cost for TRAFFIC SIGNAL POST..

Basis of Payment. This work will be paid for at the contract unit price EACH for TRAFFIC SIGNAL POST, GALVANIZED STEEL, of the length specified which price shall be payment in full for furnishing and installing the traffic signal post, base, foundation for pedestrian post, nuts and washers, and pipe cap complete. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with TRAFFIC SIGNAL PAINTING Special Provisions.

SPECIAL PROVISION
FOR
CONCRETE FOUNDATION

Effective: 7/1/16
Revised: 5/1/21 (Add a new pay item)

The installation of a concrete foundation shall meet the requirements of Section 106.01, 878 and 1006.09 of the Standard Specifications, the Standard Drawing for Concrete Foundations and District One Standard Traffic Signal Design Details with the addition as the following:

All anchor bolts shall be according to Section 1006.09, except all anchor bolts shall be hot dipped galvanized a minimum of 12 in. (300 mm) from the threaded end.

All iron and steel products, which are to be incorporated into work shall be domestically manufactured or produced and fabricated. The contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

No foundation is to be poured until the Resident Engineer gives approval as to the depth of the foundation.

Basis of Payment: This work will be paid for at the contract unit price per FOOT (METER) of depth for

CONCRETE FOUNDATION, TYPE A
CONCRETE FOUNDATION, TYPE A – 12" Dia.
CONCRETE FOUNDATION, TYPE C
CONCRETE FOUNDATION, TYPE D
CONCRETE FOUNDATION, TYPE E - 30" (750 mm) Dia.
CONCRETE FOUNDATION, TYPE E - 36" (900 mm) Dia.
CONCRETE FOUNDATION, TYPE E - 42" (900 mm) Dia.

which price shall be payment in full for all necessary excavating or drilling, back filling, disposal of unsuitable material, form work, ground rods and furnishing all materials within the limits of the foundation. The concrete apron in front of the cabinet and UPS shall be included in this pay item.

SPECIAL PROVISION
FOR
FLASHING BEACON INSTALLATION, SOLAR POWERED

This work shall consist of furnishing and installing a new solar flashing beacon, post mounted as shown on the plans and as described herein. This item shall consist of furnishing and installing two 12 inch (300 mm) L.E.D. single section amber flashing LED module on a new traffic signal post as shown on the plans or as directed by the Engineer. The signal head shall be made of polycarbonate. This item shall include furnishing and installing a flasher controller in an aluminum cabinet with discrete solar panels, LED module, battery, electronics, programmable time clock, compact housing, and be capable of operating only during school ingress and egress time with a programmable holiday schedule.

The flash pattern shall be MUTCD compliant and operate in a wig-wag fashion. The battery shall have a life span of a minimum of 5 years and be field replaceable. The battery and electronics may be located inside the solar panel housing or signal head. The sections of the flasher unit shall be secured with stainless steel hardware and unless otherwise noted, the polycarbonate housing shall be black in color.

The controller and all control equipment shall be of a manufacturer that is approved by this Department. The manufacturer shall have a representative and shop located in the six (6) county Chicago areas.

Basis of Payment. This work will be paid for at the contract unit price EACH for FLASHING BEACON INSTALLATION, SOLAR POWERED which price shall be payment in full for furnishing and installing flashing beacon solar powered complete with the necessary connections for proper operation. The traffic signal post, concrete foundation, and sign panels shall be paid for separately as TRAFFIC SIGNAL POST, CONCRETE FOUNDATION and SIGN PANEL of type specified, respectively.

SPECIAL PROVISION
FOR
REMOVE EXISTING SIGN POST

Description: This work shall consist of removing the existing sign post, as indicated in the plans to at least a depth of 3ft. The pay item shall cover all expenses associated with removing the sign post, associated hardware, and restoration of the work area per the Traffic Signal Work General special provision.

Basis of Payment: The work shall be paid for at contract unit price per EACH of REMOVE EXISTING SIGN POST.

SPECIAL PROVISION
FOR
TRAFFIC CONTROL AND PROTECTION, COMPLETE

Description: This work shall consist of providing traffic control and protection, complete within the work zone in accordance with all applicable IDOT standards for lane closures, sidewalk closures and shoulder closures. The IDOT standards include, but are not limited to, the items listed under STANDARDS below.

Standards: 701101, 701602, 701801, 701901

Basis of Payment: The work shall be paid for at contract unit price per EACH of TRAFFIC CONTROL AND PROTECTION, COMPLETE.