

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR INDEX OF HIGHWAY STANDARDS, SEE SHEET NO. 2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

FAP ROUTE 0374 (MILWAUKEE AVENUE - IL21)  
AT ZENITH DRIVE / CASTILIAN COURT  
TRAFFIC SIGNAL MODERNIZATION AND ADA  
RAMP INSTALLATION  
SECTION: 21-00203-00-TL  
PROJECT: B939(349)  
VILLAGE OF GLENVIEW  
COOK COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	1

ILLINOIS CONTRACT NO. 61J39

TRAFFIC DATA

MILWAUKEE AVENUE (IL21)  
POSTED SPEED LIMIT: 45 MPH  
2022 ADT = 30,000

ZENITH DRIVE  
POSTED SPEED LIMIT: 20 MPH  
2022 ADT = 1,400

CASTILIAN COURT  
POSTED SPEED LIMIT: 20 MPH  
2022 ADT = 700

FUNCTIONAL CLASSIFICATION

MILWAUKEE AVENUE (IL21):  
OTHER PRINCIPAL ARTERIAL

ZENITH DRIVE:  
LOCAL ROAD

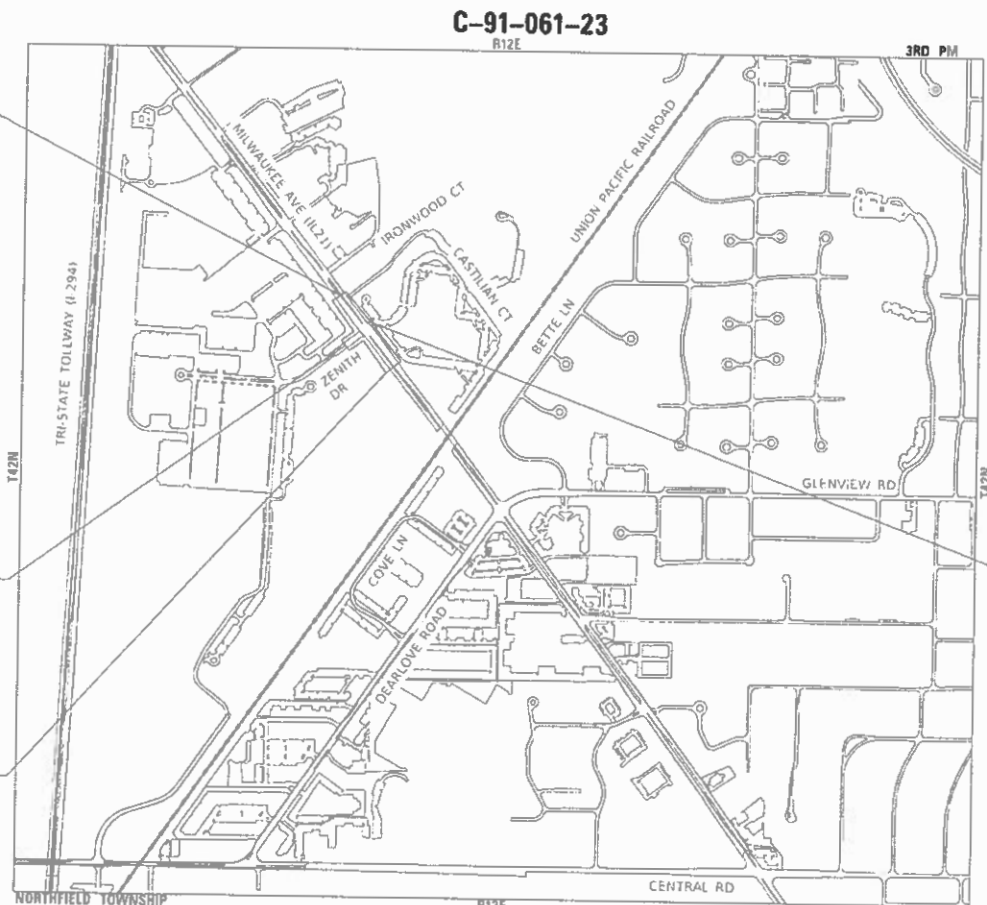
CASTILIAN COURT:  
LOCAL ROAD

BEGIN MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 96+95

BEGIN ZENITH DRIVE  
IMPROVEMENT  
STA 8+50

END MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 103+21

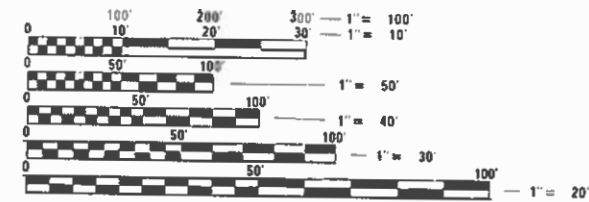
END CASTILIAN COURT  
IMPROVEMENT  
STA 20+58



LOCATION MAP  
GROSS LENGTH = 750 FT. = 0.14 MILE  
NET LENGTH = 750 FT. = 0.14 MILE



LOCATION OF SECTION INDICATED THUS: -



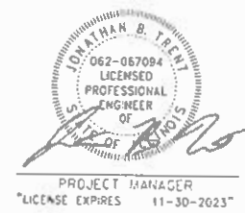
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JULIE DESIGN STAGE REQUEST  
DIG. NO. X301202



CONTACT JULIE AT 811 OR 800-692-0123  
WITH THE FOLLOWING:  
COUNTY = COOK  
CITY/TOWNSHIP = VILLAGE OF GLENVIEW - TOWNSHIP 42 N  
SEC. & 1/4 SEC. NO. = SECTION 32  
48 HOURS (2 working days) BEFORE YOU DIG

PROJECT ENGINEER: GORDON FOLEY  
PROJECT MANAGER: JONATHAN TRENT, PE  
CONTRACT NO. 61J39



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

APPROVED 2-13-2023  
*[Signature]*

VILLAGE OF GLENVIEW  
ENGINEERING DIVISION MANAGER

PASSED 2-21-2023  
*[Signature]*

DISTRICT 1 ENGINEER OF  
LOCAL ROADS AND STREETS

RELEASING FOR BID  
BASED ON LIMITED  
REVIEW FEBRUARY 21, 2023  
*[Signature]*

REGIONAL ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

B&W PROJECT NO.: 212221 DATE: 02-08-2023

FEDERAL AID PROGRAM ENGINEER: CARMEN E. RAMOS, P.E., SCHLAUBURG, IL

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## HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-11	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424021-06	DEPRESSED CORNER FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
602001-02	CATCH BASIN TYPE A
602301-04	INLET - TYPE A
602601-06	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-05	FRAME AND LIDS TYPE 1
604091-05	FRAME AND GRATE TYPE 24
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
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
814001-03	HANDHOLES
814006-03	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
876001-04	PEDESTRIAN PUSH BUTTON POST
877001-08	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877006-06	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS
878001-11	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS

## DISTRICT ONE DETAILS

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) (TC-14)
ARTERIAL ROAD INFORMATION SIGN (TC-22)
DISTRICT ONE - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING (TS-07)

## COMMITMENTS

THERE ARE NO COMMITMENTS ON THIS PROJECT.

## GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE DETAILS IN THE PLANS, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, THE JANUARY 1, 2022 EDITION OF THE "THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (REFERRED TO AS THE "STANDARD SPECIFICATIONS"), THE JANUARY 1, 2023 EDITION OF THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", THE NOVEMBER 2021 REVISION OF THE "ILLINOIS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", THE DECEMBER 1, 2022 EDITION OF THE "MANUAL OF TEST PROCEDURES FOR MATERIALS", AND THE 8<sup>TH</sup> EDITION OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS".
- THE LOCATIONS OF UTILITIES SHOWN ON THE PLANS REPRESENTS ONLY THE OPINION OF THE VILLAGE AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER AND THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES, INCLUDING SPRINKLER SYSTEMS, EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL NOTIFY THE VILLAGE PUBLIC WORKS ADMINISTRATOR AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK TO OBTAIN VILLAGE UTILITY LOCATIONS.
- THE CONTRACTOR SHALL SUBMIT PARTIAL WAIVERS OF LIEN FROM ALL SUBCONTRACTORS AND SUPPLIERS WITH EACH PARTIAL PAYMENT ESTIMATE AND CONTRACTOR'S AFFIDAVIT FOR SUBCONTRACTORS AND SUPPLIERS WITH SECOND PAYMENT REQUEST FOR THE PREVIOUS PAYMENT ESTIMATES AND THEN WITH ALL SUBSEQUENT PAYMENT ESTIMATES.
- THE ENGINEER WILL FURNISH A RESIDENT ENGINEER (RE) TO ASSIST THE ENGINEER IN PROVIDING JOB-SITE OBSERVATION OF THE CONTRACTOR'S WORK. THE RE WILL PROVIDE BASE LINES, BENCHMARKS AND REFERENCE POINTS, ASSIST THE CONTRACTOR WITH INTERPRETATION OF THE PLANS AND SPECIFICATIONS, OBSERVE IN GENERAL IF THE CONTRACTOR'S WORK IS IN CONFORMITY WITH THE CONTRACT DOCUMENTS, AND MONITOR THE CONTRACTOR'S PROGRESS AS RELATED TO THE DATE OF COMPLETION. THE LIMITATIONS ON AUTHORITY AND RESPONSIBILITY OF THE ENGINEER SHALL ALSO APPLY TO THE ENGINEER'S CONSULTANTS, RESIDENT ENGINEER AND ASSISTANTS.
- THE CONTRACTOR MAY OBTAIN MUNICIPAL WATER IN BULK, AT NO CHARGE, AS LONG AS THERE IS NOT A "WATERING BAN" IN EFFECT. THE INDISCRIMINATE USE OF FIRE HYDRANTS IS STRICTLY PROHIBITED. WATER FOR CONSTRUCTION SHALL BE METERED OR OTHERWISE ACCOUNTED FOR AND A DAILY LOG MAINTAINED. THE CONTRACTOR SHALL PROVIDE THE WATER TRUCK AND DRIVER REQUIRED TO OBTAIN AND TRANSPORT THIS WATER. THE VILLAGE RESERVES THE RIGHT TO RESTRICT OR REFUSE THE USE OF VILLAGE WATER IF DEEMED NECESSARY.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER, RESIDENTS AND THE VILLAGE WHEN ACCESS TO DRIVEWAYS WILL BE TEMPORARILY CLOSED DUE TO CURB AND GUTTER AND/OR DRIVEWAY REPLACEMENT. THE CONTRACTOR SHALL DISTRIBUTE NOTICES PROVIDED BY THE VILLAGE TO RESIDENTS AT LEAST 24 HOURS PRIOR TO PLANNED CLOSURE. EVERY EFFORT SHALL BE MADE TO ACCOMMODATE ACCESS TO THESE PROPERTIES INCLUDING KNOCKING ON DOORS WHEN DRIVEWAYS ARE ABOUT TO BE CLOSED.
- ALL FRAME AND LID CASTINGS LOCATED WITHIN THE PAVEMENT WHICH REQUIRE RESETTING TO FINISH GRADE SHALL BE BACKFILLED WITH CLASS SI CONCRETE MEETING SECT. 1020 OF THE STANDARD SPECIFICATIONS. CLASS PP CONCRETE SHALL BE USED IF PLACEMENT OF SURFACE COURSE IS PLANNED IN LESS THAN 72 HOURS. HMA MATERIALS WILL NOT BE ALLOWED AS BACKFILL AROUND AN ADJUSTED CASTING. THIS WORK SHALL APPLY TO ALL CASTINGS ADJUSTED OR RECONSTRUCTED AS PART OF THIS CONTRACT.
- THE TOP OF ALL NEW CURB BOXES ON DRAINAGE STRUCTURES SHALL BE STAMPED "DUMP NO WASTE - DRAINS TO RIVER".
- THE CONTRACTOR WILL BE REQUIRED TO USE A STEEL PLATE OR PLATES TO CLOSE ANY GAPS OCCURRING WHEN A FRAME IS OFFSET FROM THE STRUCTURE. THE STEEL PLATE SHALL BE 1/2-INCH THICK AND APPROXIMATELY 6-INCH WIDE BY 24-INCH LONG. SOME ADJUSTMENT IN SIZE MAY BE NECESSARY TO PREVENT THE STEEL PLATE FROM OVERHANGING THE OUTSIDE OF THE STRUCTURE WALL. THE STEEL PLATE SHALL BE BEDDED IN AND COVERED WITH MORTAR.
- NO OPEN TRENCH OR PIT SHALL REMAIN UNPROTECTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BACKFILL THE TRENCH AND/OR PIT OR ERECT A STABLE AND SECURE SIX (6) FOOT HIGH CHAIN LINK FENCE AROUND THE PERIMETER OF EXCAVATION, ALONG WITH A STEEL PLATE OVER THE EXCAVATION TO PREVENT ANY ACCESS TO THE EXCAVATION WITHOUT THE CONTRACTOR'S PERMISSION. ALL EXCESS EXCAVATED MATERIAL AND DELIVERED MATERIAL FROM THE INSTALLATION OF UTILITIES AND/OR ROAD SHALL BE REMOVED AND DISPOSED OF OFF-SITE THE SAME DAY. CONTRACTOR IS NOT ALLOWED TO STOCKPILE MORE THAN 5 CUBIC YARDS OF MATERIAL OVERNIGHT. IF ANY MATERIAL STOCKPILES WILL REMAIN OVERNIGHT HIGHER THAN TWO (2) FEET, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ERECT A STABLE AND SECURE SIX (6) FOOT HIGH CHAIN LINK FENCE AROUND THE PERIMETER OF THE STOCKPILED MATERIAL. THESE FENCES SHALL BE INSTALLED AND GATE/S LOCKED AT ALL TIMES EXCEPT WHEN ACCESS BY THE CONTRACTOR IS REQUIRED.
- ALL POSTS, RAILROAD TIES, AND DECORATIVE TIMBER IN CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE REMOVED AND RELOCATED AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION AND SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR WHEN REMOVING THESE ITEMS TO PRESERVE THEM FROM HARM. ITEMS NOT RELOCATED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
- PRIOR TO CONSTRUCTION OF ANY PROPOSED UTILITIES AND FOUNDATIONS, THE CONTRACTOR SHALL EXCAVATE AND LOCATE THE EXISTING UTILITIES TO VERIFY THEIR LOCATION, SIZE, AND DEPTH TO ENSURE THAT GRADE CONFLICTS WILL NOT OCCUR.
- STORM STRUCTURE OFFSET LOCATIONS ARE TO THE EDGE OF PAVEMENT IF THE STRUCTURE IS IN THE CURB LINE OR TO THE CENTER OF STRUCTURE IF THE STRUCTURE IS NOT IN THE CURBLINE.
- FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL NEW STRUCTURES SHALL BE ADJUSTED TO THE FINAL ELEVATION OF THE AREA IN WHICH THEY ARE LOCATED.
- A PORTABLE BATHROOM(S) SHALL BE PLACED ON THE JOB SITE(S) AND RELOCATED WHEN NECESSARY SO IT IS ACCESSIBLE TO WORKERS. IF WORK IS OCCURRING AT SEVERAL LOCATIONS, ONE PORTABLE BATHROOM SHALL BE PLACED AT EACH LOCATION WITHIN A REASONABLE DISTANCE FROM THE WORK AS DETERMINED BY THE ENGINEER.
- CONTRACTOR SHALL TAKE PRECAUTION BY PRESERVING EXISTING TREES WITHIN THE RIGHT OF WAY. IF ANY DAMAGE OCCURS, TREES SHALL BE REPLACED IN KIND PER ARTICLE 201.07 REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL REQUIREMENTS STATED HEREIN.

## MAINTENANCE OF TRAFFIC NOTES

- EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES. ANY CHANGE IN TRAFFIC CONTROL SHALL HAVE PRIOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) DAYS NOTICE IN ADVANCE OF CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR IS HEREBY ADVISED OF THE FOLLOWING PROJECT THAT MAY BE UNDER CONSTRUCTION DURING THE SAME TIME AS THIS CONTRACT: ILLINOIS DEPARTMENT OF TRANSPORTATION, SMART OVERLAY AND ADA IMPROVEMENTS - MILWAUKEE AVENUE FROM GLENVIEW ROAD TO 400 FT NORTH OF KENNICOTT LANE, CONTRACT NUMBER 62N53, NOVEMBER 18, 2022 LETTING DATE. THE CONTRACTOR WILL BE REQUIRED TO COOPERATE WITH THIS ADJACENT CONTRACT IN ACCORDANCE WITH SECTION 105.08 OF THE STANDARD SPECIFICATIONS AND MAY BE REQUIRED TO MODIFY STAGING OPERATIONS IN ORDER TO MEET THESE REQUIREMENTS. CONTRACTOR COOPERATION SHALL INCLUDE, BUT NOT BE LIMITED TO, MAINTENANCE OF TRAFFIC, TRAFFIC SIGNAL MAINTENANCE AND DETECTOR LOOP INSTALLATION.
- TRAFFIC SHALL BE MAINTAINED ACCORDING TO THE APPLICABLE HIGHWAY STANDARDS. LANE CLOSURES SHALL BE LIMITED TO BETWEEN THE HOURS OF 8:30AM TO 4:30PM. ALL LANES ON ALL STREETS SHALL BE OPEN TO 2 WAY TRAFFIC AT THE END OF EACH DAY, MAINTAINING THE EXISTING LANE AND ROADWAY WIDTHS.
- THE CONTRACTOR SHALL CONTACT KALPANA KANNAN-HOSADURGA, THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

### INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS

SCALE:	SHEET 1 OF 1 SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	2
CONTRACT NO.				61J39
ILLINOIS		FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS
				0028	0028	0028	0021
				URBAN	URBAN	URBAN	URBAN
20200100	EARTH EXCAVATION	CU YD	96	96			
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	18	18			
20800150	TRENCH BACKFILL	CU YD	5	5			
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	361	361			
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	125	125			
25200110	SODDING, SALT TOLERANT	SQ YD	125	125			
# 25200200	SUPPLEMENTAL WATERING	UNIT	7	7			
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	3	3			
28000400	PERIMETER EROSION BARRIER	FOOT	300	300			
28000510	INLET FILTERS	EACH	5	5			
# 30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	7	7			
# 30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	119	119			
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	272	272			
35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ YD	104	104			
42001300	PROTECTIVE COAT	SQ YD	1,898	1,898			

\* SPECIALTY ITEM  
# SPECIAL PROVISION

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES**

SCALE: SHEET 1 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	3
CONTRACT NO.			61139	
ILLINOIS FED. AID PROJECT				

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS
				0028	0028	0028	0021
				URBAN	URBAN	URBAN	URBAN
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,475	1,475			
44000100	PAVEMENT REMOVAL	SQ YD	15	15			
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	345	345			
44000600	SIDEWALK REMOVAL	SQ FT	1,170	1,170			
44201789	CLASS D PATCHES, TYPE II, 12 INCH	SQ YD	30	30			
550A2320	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 12"	FOOT	6	6			
60201340	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	1	1			
60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	1	1			
60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	1	1			
60500060	REMOVING INLETS	EACH	1	1			
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	180	180			
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	140	140			
*# 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	114	114			
*# 66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2			
*# 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1			

\* SPECIALTY ITEM  
# SPECIAL PROVISION

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>SUMMARY OF QUANTITIES</b>			
SCALE:	SHEET 2 OF 8 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	4
CONTRACT NO.			61139	
ILLINOIS FED. AID PROJECT				



**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE	
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS	
				0004 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	
#*	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1			
#*	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	5	5			
	67100100	MOBILIZATION	L SUM	1	1			
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1			
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1			
	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1			
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1			
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1			
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	248	248			
	72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	2	2			
	72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	9	9			
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	12	12			
*	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	780		780		
*	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	75		75		
*	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	433		433		

\* SPECIALTY ITEM  
# SPECIAL PROVISION

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 FILE NAME: P:\GLV\WV212221-Milwaukee\_Zenith\CAD\Sheets\_Phase 2\12221\_PH2\_SHT-500\_01.dgn



USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-500_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE:		SHEET 3 OF 8 SHEETS	STA.	TO STA.
--------	--	---------------------	------	---------

**SUMMARY OF QUANTITIES**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	5
CONTRACT NO.			61139	
ILLINOIS		FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY 0004	TRAFFIC SIGNALS 0021	INTERCONNECT 0021	TRAFFIC SIGNALS 0021
				URBAN	URBAN	URBAN	URBAN
* # 81400100	HANDHOLE	EACH	4		4		
* # 81400200	HEAVY-DUTY HANDHOLE	EACH	2		2		
* # 81400300	DOUBLE HANDHOLE	EACH	2		2		
* # 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1			1	
* # 85100500	PAINT NEW TRAFFIC SIGNAL POST	EACH	3				3
* # 85100600	PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	2				2
* # 85100701	PAINT NEW MAST ARM AND POLE, 40 FOOT AND OVER	EACH	1				1
* # 86400100	TRANSCEIVER - FIBER OPTIC	EACH	1			1	
* # 87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2,083			2,083	
* # 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,251		1,251		
* # 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,849		1,849		
* # 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,385		1,385		
* # 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,290		1,290		
* # 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2,231		2,231		
* # 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	167		167		

\* SPECIALTY ITEM  
# SPECIAL PROVISION

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 KROBERSON  
 2/15/2023 2:31:01 PM  
 FILE NAME: P:\GLV\WV212221-Milwaukee\_Zenith\CAD\Sheets\_Phase 2\12221\_PH2\_SHT-500\_01.dgn



USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-500_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES	
SCALE:	SHEET 4 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	6
CONTRACT NO.			61139	
ILLINOIS		FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS
				0004 URBAN	0021 URBAN	0021 URBAN	0021 URBAN
* # 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1,341		1,341		
* # 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16		16		
* # 87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4		
* # 87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	14		14		
* # 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	38		38		
* # 87900200	DRILL EXISTING HANDHOLE	EACH	2		2		
* # 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7		7		
* # 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1		1		
* # 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2		2		
* # 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4		4		
* # 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8		8		
* # 88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	11		11		
* # 88500100	INDUCTIVE LOOP DETECTOR	EACH	6		6		
* # 88600100	DETECTOR LOOP, TYPE I	FOOT	346		346		
* # 88700200	LIGHT DETECTOR	EACH	2				2

\* SPECIALTY ITEM  
# SPECIAL PROVISION

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 KROBERSON  
 2/15/2023 2:31:05 PM  
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USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-SOQ_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>SUMMARY OF QUANTITIES</b>			
SCALE:	SHEET 5 OF 8 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	7
CONTRACT NO.			61139	
ILLINOIS		FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS
				0004 URBAN	0021 URBAN	0021 URBAN	0021 URBAN
* # 88700300	LIGHT DETECTOR AMPLIFIER	EACH	1				1
* # 89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1		
* # 89500120	REMOVE EXISTING SERVICE INSTALLATION	EACH	1		1		
* # 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1,843			1,843	
* # 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1		
* # 89502376	REBUILD EXISTING HANDHOLE	EACH	1		1		
* # 89502380	REMOVE EXISTING HANDHOLE	EACH	5		5		
* # 89502382	REMOVE EXISTING DOUBLE HANDHOLE	EACH	1		1		
* # 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	7		7		
* # X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	542				542
* # X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	800			800	
* # X0327698	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4				4
# X1200160	CONNECTION TO EXISTING DRAINAGE STRUCTURE	EACH	1	1			
* # X1400108	FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL)	EACH	1		1		
* # X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1		1		

\* SPECIALTY ITEM  
# SPECIAL PROVISION

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
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	DRAWN - KAR	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_P2_SHT-SOQ_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>SUMMARY OF QUANTITIES</b>			
SCALE:	SHEET 6 OF 8 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	8
CONTRACT NO.			61139	
ILLINOIS		FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY 0004	TRAFFIC SIGNALS 0021	INTERCONNECT 0021	TRAFFIC SIGNALS 0021
				URBAN	URBAN	URBAN	URBAN
* # X1400388	VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	2		2		
* # X1400424	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	754				754
# X2130010	EXPLORATION TRENCH (SPECIAL)	FOOT	20		20		
# X4240800	DETECTABLE WARNINGS (SPECIAL)	SQ FT	94	94			
# X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	1	1			
* # X8510502	PAINT NEW MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 1-UNDER 40 FEET, 1-OVER 40 FEET	EACH	1				1
* # X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1		1		
* # X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2,083			2,083	
* # X8752700	TRAFFIC SIGNAL POST, ALUMINUM 16 FT. (SPECIAL)	EACH	3				3
* # X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8		8		
* # X8771210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT. (SPECIAL)	EACH	2		2		
* # X8771250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT. (SPECIAL)	EACH	1		1		
* # XX009572	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 44 FT. AND 34 FT. (SPECIAL)	EACH	1		1		
# Z0007430	TEMPORARY SIDEWALK	SQ FT	60	60			
# Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1			

\* SPECIALTY ITEM  
# SPECIAL PROVISION

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 Kroberson  
 2/15/2023 2:31:13 PM  
 FILE NAME: P:\GLV\WV212221-Milwaukee\_Zenith\CAD\Sheets\_Phase 2\12221\_PH2\_SHT-500\_01.dgn



USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-500_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>SUMMARY OF QUANTITIES</b>			
SCALE:	SHEET 7 OF 8 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	9
CONTRACT NO.			61139	
ILLINOIS		FED. AID PROJECT		



## SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	80% FEDERAL 10% STATE 10% VILLAGE	100% VILLAGE
				ROADWAY	TRAFFIC SIGNALS	INTERCONNECT	TRAFFIC SIGNALS
				0028	0028	0028	0021
				URBAN	URBAN	URBAN	URBAN
# Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	78	78			
* # Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1			1	
# Z0062456	TEMPORARY PAVEMENT	SQ YD	5	5			
* # Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1		1		
^ # Z0076600	TRAINEES	HOUR	500	500			
^ # Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500			

\* SPECIALTY ITEM  
 # SPECIAL PROVISION

^ 0042

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 BAXTER & WOODMAN CONSULTING ENGINEERS  
 PLOTTED BY: KROBERSON  
 PLOT DATE: 2/15/2023 2:31:17 PM  
 FILE NAME: P:\GLV\W212221-Milwaukee Zenith\CAD\Sheets\_Phase 2\212221\_PH2\_SHT-SOQ\_01.dgn



USER NAME = kroberson	DESIGNED - GJF	REVISED -
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PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-SOQ_01.dgn

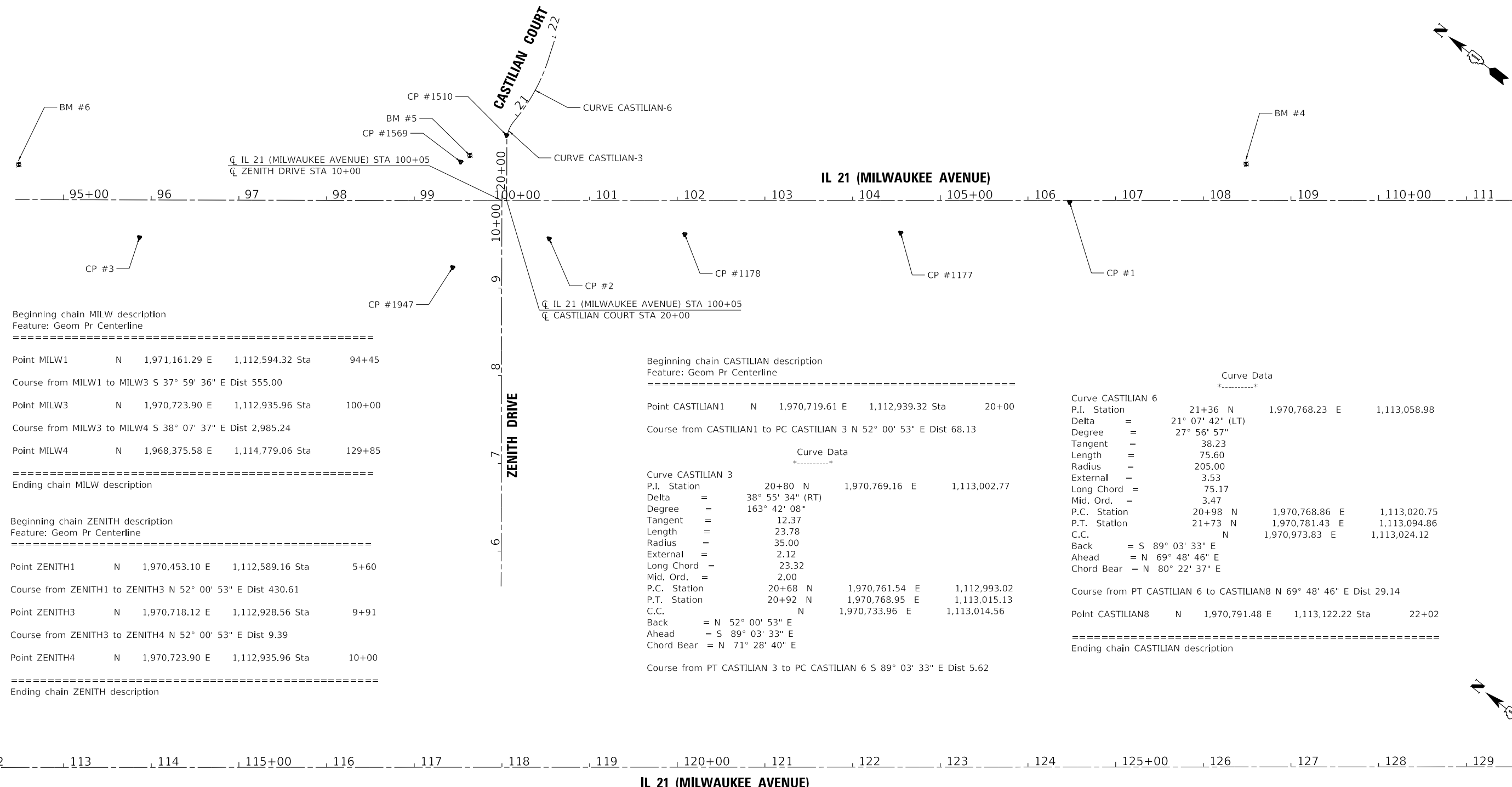
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES		
SCALE:	SHEET 8 OF 8 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	10
CONTRACT NO.			61J39	
<small>ILLINOIS FED. AID PROJECT</small>				

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 Kroberson  
 2/15/2023 2:31:21 PM  
 FILE NAME: P:\GLV\212221-Milwaukee\_Zenith\CAD\Sheets\_Phase 2\12221\_PH2\_SHT-AlignTies.dgn

MATCH LINE STA 112+00  
 SEE ABOVE RIGHT



Beginning chain MILW description  
 Feature: Geom Pr Centerline  
 =====  
 Point MILW1 N 1,971,161.29 E 1,112,594.32 Sta 94+45  
 Course from MILW1 to MILW3 S 37° 59' 36" E Dist 555.00  
 Point MILW3 N 1,970,723.90 E 1,112,935.96 Sta 100+00  
 Course from MILW3 to MILW4 S 38° 07' 37" E Dist 2,985.24  
 Point MILW4 N 1,968,375.58 E 1,114,779.06 Sta 129+85  
 =====  
 Ending chain MILW description

Beginning chain ZENITH description  
 Feature: Geom Pr Centerline  
 =====  
 Point ZENITH1 N 1,970,453.10 E 1,112,589.16 Sta 5+60  
 Course from ZENITH1 to ZENITH3 N 52° 00' 53" E Dist 430.61  
 Point ZENITH3 N 1,970,718.12 E 1,112,928.56 Sta 9+91  
 Course from ZENITH3 to ZENITH4 N 52° 00' 53" E Dist 9.39  
 Point ZENITH4 N 1,970,723.90 E 1,112,935.96 Sta 10+00  
 =====  
 Ending chain ZENITH description

Beginning chain CASTILIAN description  
 Feature: Geom Pr Centerline  
 =====  
 Point CASTILIAN1 N 1,970,719.61 E 1,112,939.32 Sta 20+00  
 Course from CASTILIAN1 to PC CASTILIAN 3 N 52° 00' 53" E Dist 68.13

Curve Data  
 \*-----\*

Curve CASTILIAN 3  
 P.I. Station 20+80 N 1,970,769.16 E 1,113,002.77  
 Delta = 38° 55' 34" (RT)  
 Degree = 163° 42' 08"  
 Tangent = 12.37  
 Length = 23.78  
 Radius = 35.00  
 External = 2.12  
 Long Chord = 23.32  
 Mid. Ord. = 2.00  
 P.C. Station 20+68 N 1,970,761.54 E 1,112,993.02  
 P.T. Station 20+92 N 1,970,768.95 E 1,113,015.13  
 C.C. N 1,970,733.96 E 1,113,014.56  
 Back = N 52° 00' 53" E  
 Ahead = S 89° 03' 33" E  
 Chord Bear = N 71° 28' 40" E

Course from PT CASTILIAN 3 to PC CASTILIAN 6 S 89° 03' 33" E Dist 5.62

Curve Data  
 \*-----\*

Curve CASTILIAN 6  
 P.I. Station 21+36 N 1,970,768.23 E 1,113,058.98  
 Delta = 21° 07' 42" (LT)  
 Degree = 27° 56' 57"  
 Tangent = 38.23  
 Length = 75.60  
 Radius = 205.00  
 External = 3.53  
 Long Chord = 75.17  
 Mid. Ord. = 3.47  
 P.C. Station 20+98 N 1,970,768.86 E 1,113,020.75  
 P.T. Station 21+73 N 1,970,781.43 E 1,113,094.86  
 C.C. N 1,970,973.83 E 1,113,024.12  
 Back = S 89° 03' 33" E  
 Ahead = N 69° 48' 46" E  
 Chord Bear = N 80° 22' 37" E

Course from PT CASTILIAN 6 to CASTILIAN8 N 69° 48' 46" E Dist 29.14

Point CASTILIAN8 N 1,970,791.48 E 1,113,122.22 Sta 22+02

=====

Ending chain CASTILIAN description

**BENCHMARKS**

- BM #4 CHISELED SQUARE ON NORTHWEST CORNER OF EAST PARAPET WALL OF BRIDGE OVER RAILROAD APPROX. 75' SOUTHEAST LIMITS ON EAST SIDE OF IL 21 (MILWAUKEE AVENUE)  
ELEV = 693.792
- BM #5 CHISELED SQUARE ON SOUTHWEST CORNER OF TRAFFIC SIGNAL CABINET ON NORTHEAST CORNER OF IL 21 (MILWAUKEE AVENUE) AND ZENITH DRIVE  
ELEV = 668.138
- BM #6 NORTH ARROW BONNET BOLT ON FIRE HYDRANT ON EAST SIDE OF IL 21 (MILWAUKEE AVENUE) AT ADDRESS 1205  
ELEV = 672.382



USER NAME = kroberson	DESIGNED - GJF	REVISED -
DRAWN - KAR	REVISOR -	
PLOT SCALE = 60.0000' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-AlignTies.dgn

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

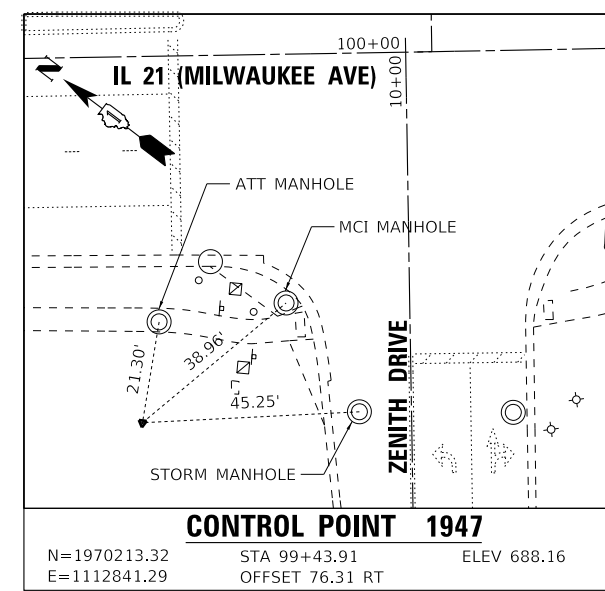
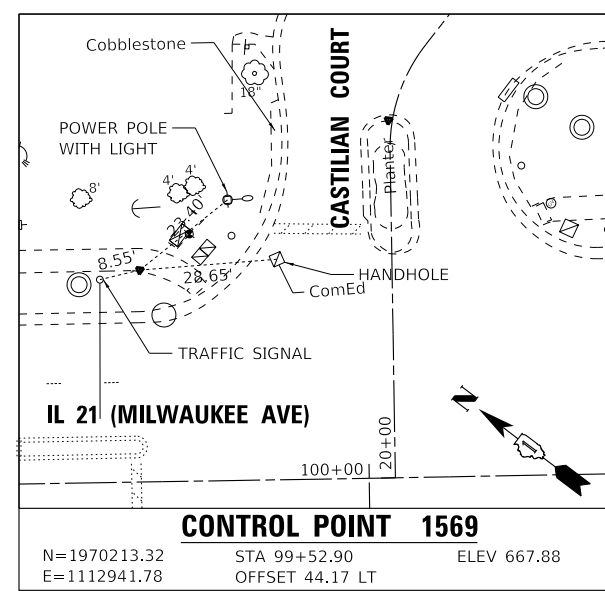
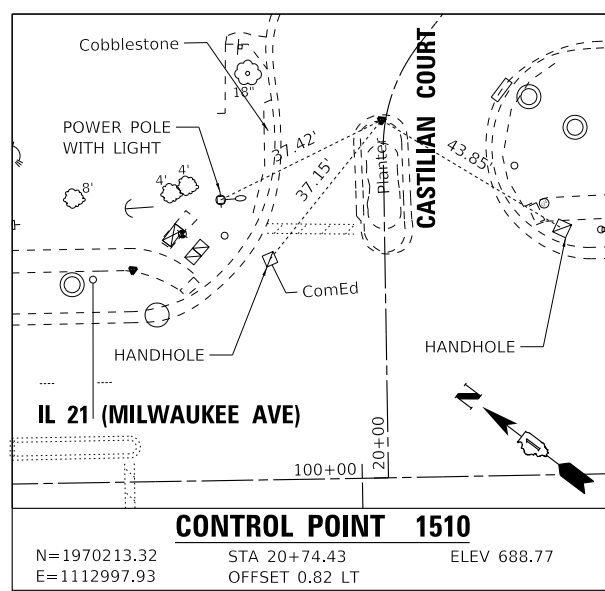
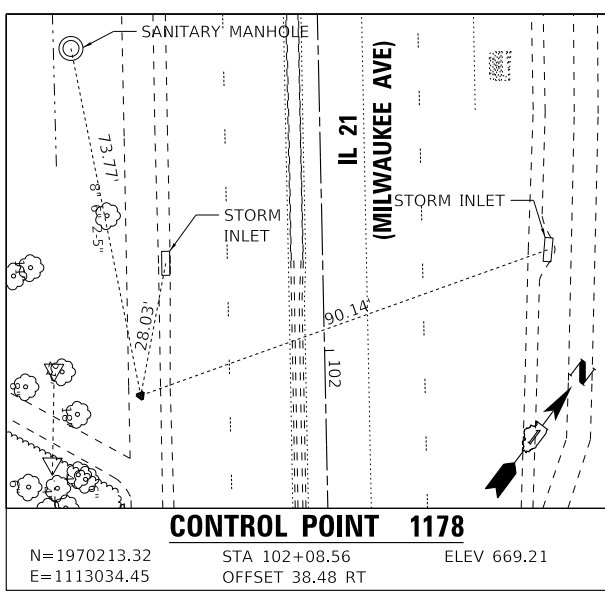
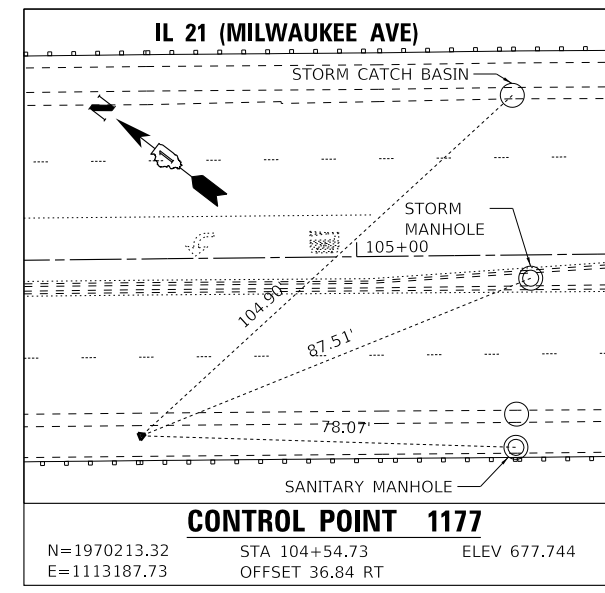
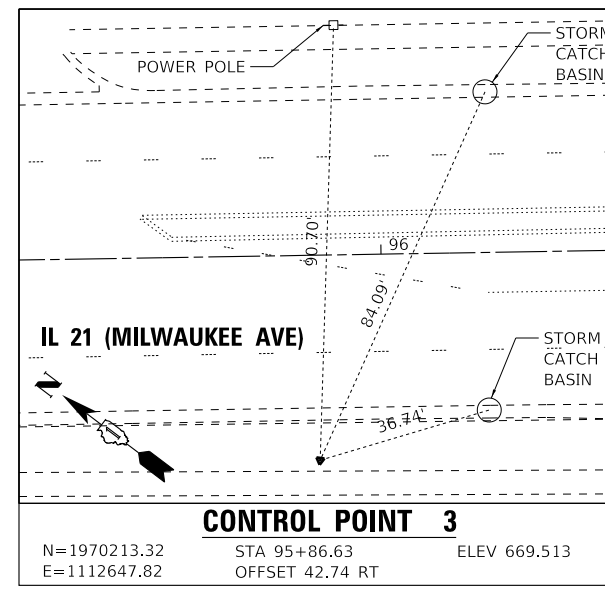
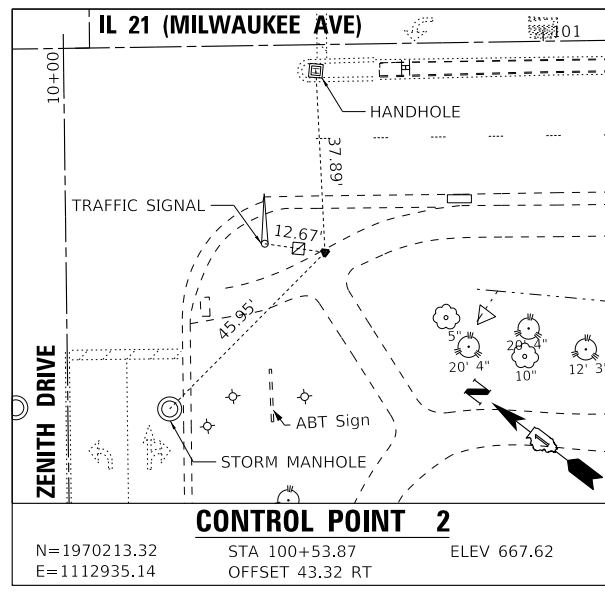
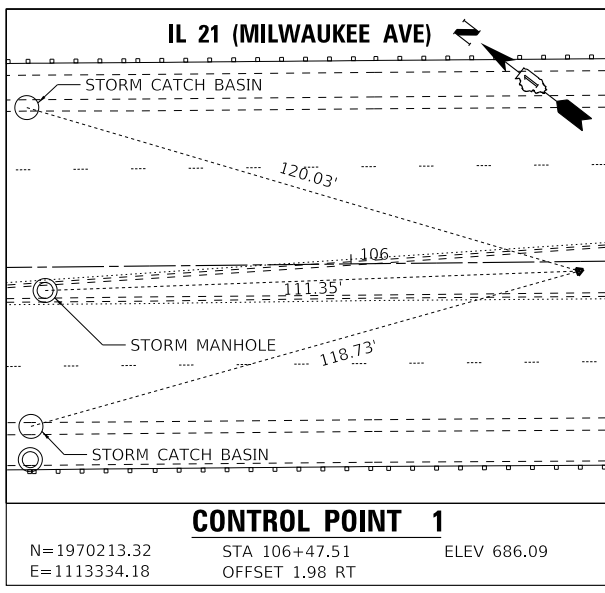
**ALIGNMENT, TIES AND BENCHMARKS**

SCALE: 1" = 60' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	11
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	

MATCH LINE STA 112+00  
 SEE BELOW LEFT

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
 Kroberson  
 2/15/2023 2:31:23 PM  
 FILE NAME: P:\GLV\212221-Milwaukee\_Zenith\CAD\Sheets\_Phase 2\212221\_PH2\_SHT-AlignTies1.dgn  
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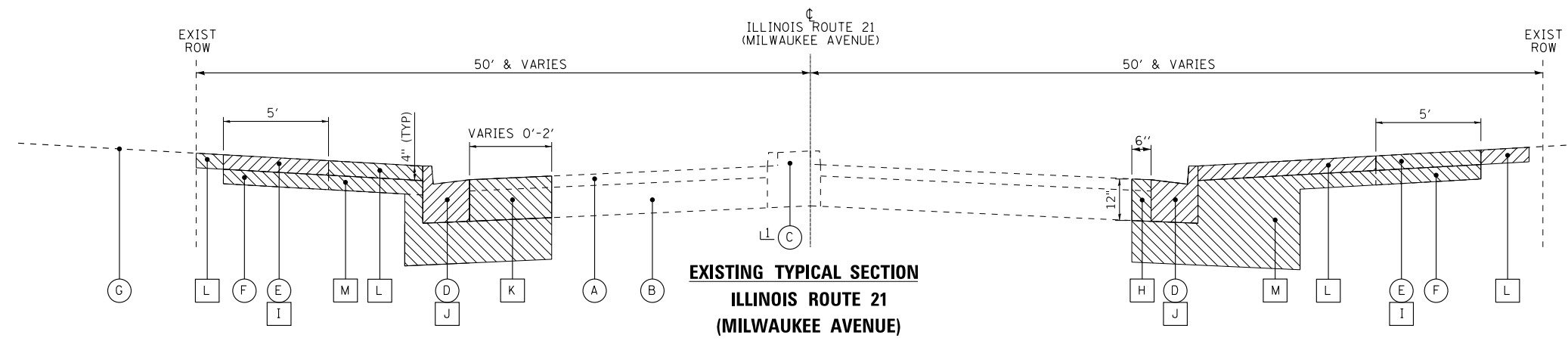
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TIES

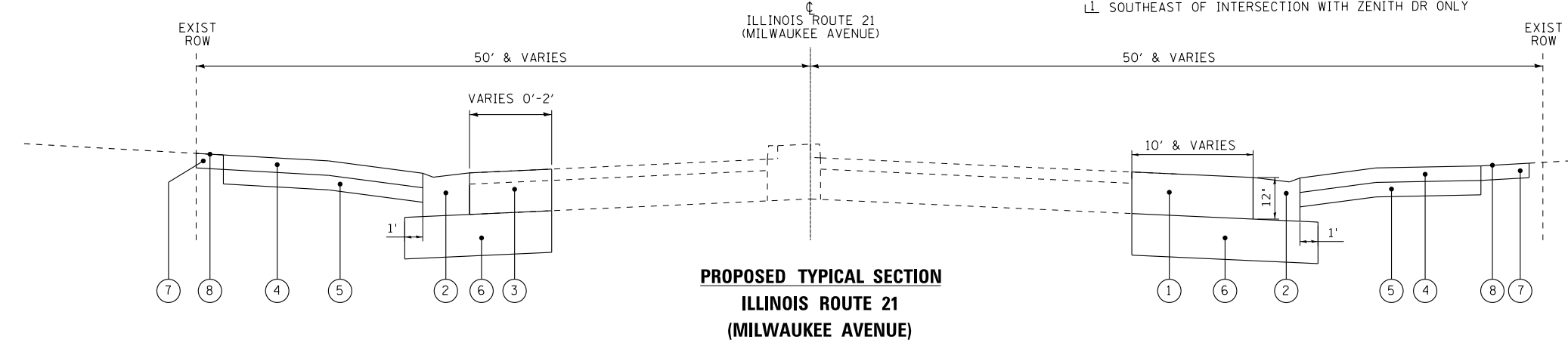
SCALE: 1" = 20' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	12
CONTRACT NO. 61J39				
ILLINOIS FED. AID PROJECT				

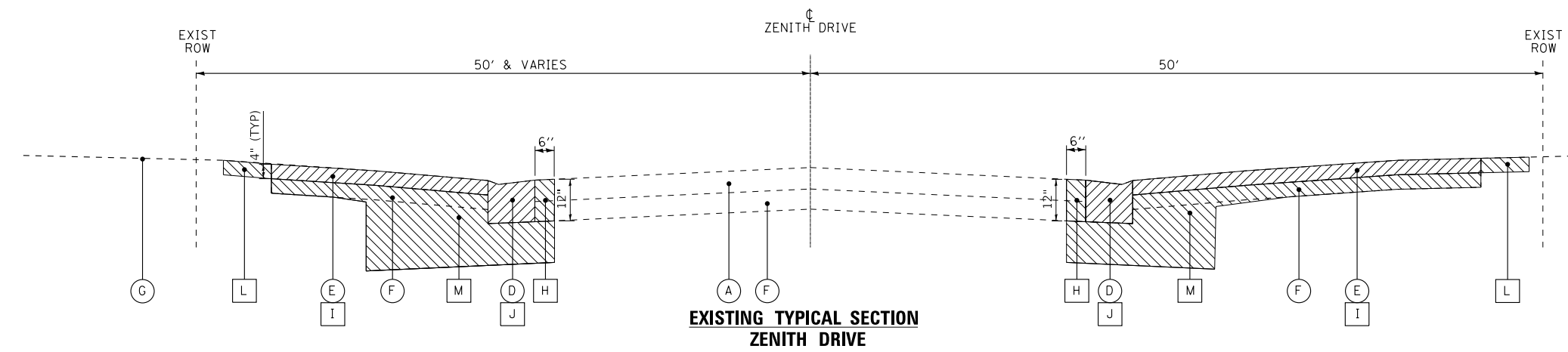
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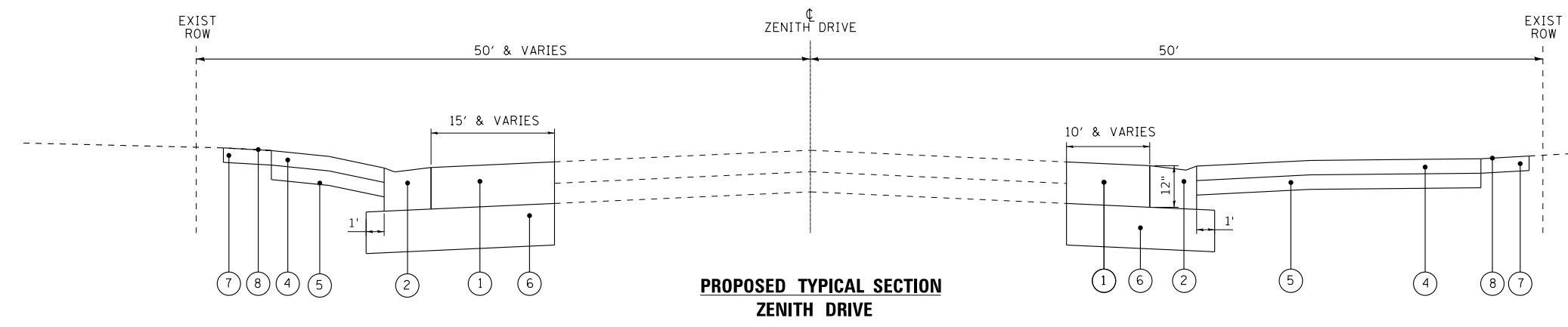
**EXISTING TYPICAL SECTION  
 ILLINOIS ROUTE 21  
 (MILWAUKEE AVENUE)**



**PROPOSED TYPICAL SECTION  
 ILLINOIS ROUTE 21  
 (MILWAUKEE AVENUE)**



**EXISTING TYPICAL SECTION  
 ZENITH DRIVE**



**PROPOSED TYPICAL SECTION  
 ZENITH DRIVE**

**EXISTING LEGEND**

- (A) EXISTING HOT-MIX ASPHALT PAVEMENT
- (B) EXISTING PCC PAVEMENT
- (C) EXISTING RAISED MEDIAN
- (D) EXISTING COMBINATION CONCRETE CURB AND GUTTER
- (E) EXISTING PCC SIDEWALK
- (F) EXISTING AGGREGATE BASE
- (G) GROUND SURFACE
- (H) PAVEMENT REMOVAL
- (I) SIDEWALK REMOVAL
- (J) COMBINATION CONCRETE CURB AND GUTTER REMOVAL
- (K) CLASS D PATCHES - 12"
- (L) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
- (M) EARTH EXCAVATION
- (Hatched) ITEM TO BE REMOVED

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT BASE COURSE - 12"
- (2) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MILWAUKEE AV) OR TYPE B-6.12 (CASTILIAN CT & ZENITH DR)
- (3) CLASS D PATCHES - 12"
- (4) PCC SIDEWALK - 5"
- (5) AGGREGATE BASE COURSE TYPE B - 4"
- (6) AGGREGATE SUBGRADE IMPROVEMENT - 12"
- (7) TOPSOIL, FURNISH AND PLACE - 4"
- (8) SODDING, SALT TOLERANT

**NOTES**

1. AGGREGATE SUBGRADE IMPROVEMENT (CU YD) HAVE BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSTABLE AND/OR UNSUITABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ABOVE ITEM WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC OR DYNAMIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.04 OF THE SSRBC AND IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.
2. ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENTS IS TO BE REMOVED AND REPLACED AS DIRECT BY THE ENGINEER AT CONTRACTOR EXPENSE.
3. THE AGGREGATE GRADATION FOR THE AGGREGATE SUBGRADE IMPROVEMENT 12" LOWER LIFT SHALL BE CS 1 OR RR 1.



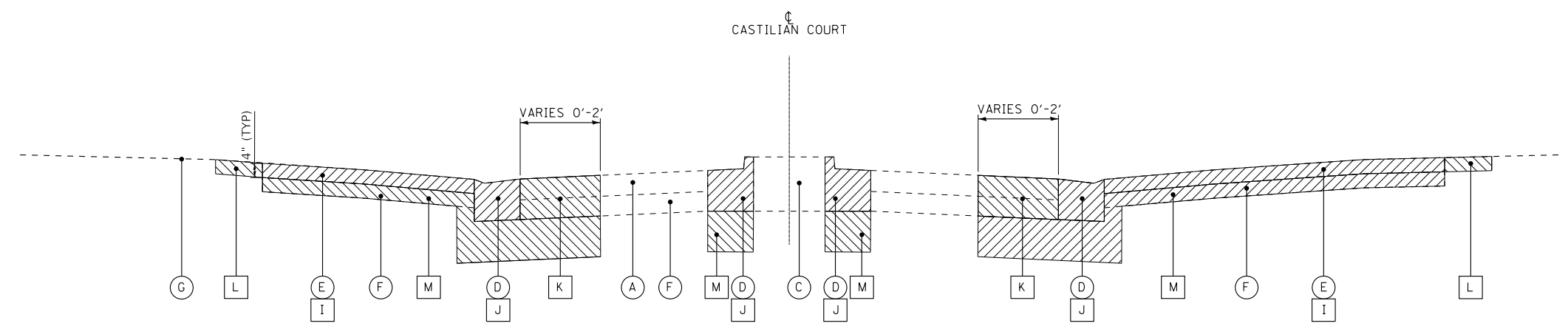
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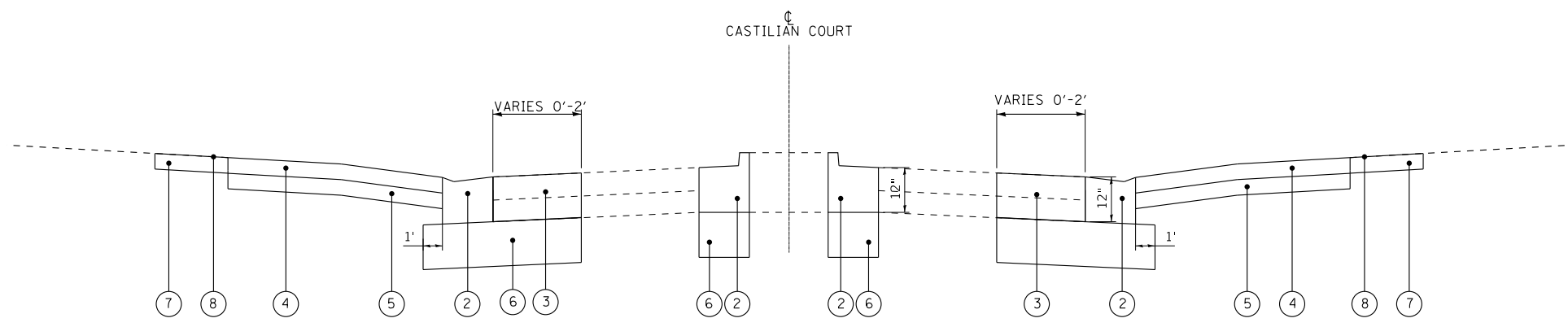
<b>TYPICAL SECTIONS</b>	
SCALE: NTS	SHEET 1 OF 2 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	13
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	

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 2/15/2023  
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**EXISTING TYPICAL SECTION  
CASTILIAN COURT**



**PROPOSED TYPICAL SECTION  
CASTILIAN COURT**

**EXISTING LEGEND**

- (A) EXISTING HOT-MIX ASPHALT PAVEMENT
- (B) EXISTING PCC PAVEMENT
- (C) EXISTING RAISED MEDIAN
- (D) EXISTING COMBINATION CONCRETE CURB AND GUTTER
- (E) EXISTING PCC SIDEWALK
- (F) EXISTING AGGREGATE BASE
- (G) GROUND SURFACE
- (H) PAVEMENT REMOVAL
- (I) SIDEWALK REMOVAL
- (J) COMBINATION CONCRETE CURB AND GUTTER REMOVAL
- (K) CLASS D PATCHES - 12"
- (L) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
- (M) EARTH EXCAVATION
- (Hatched) ITEM TO BE REMOVED

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT BASE COURSE - 12"
- (2) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MILWAUKEE AV) OR TYPE B-6.12 (CASTILIAN CT & ZENITH DR)
- (3) CLASS D PATCHES - 12"
- (4) PCC SIDEWALK - 5"
- (5) AGGREGATE BASE COURSE TYPE B - 4"
- (6) AGGREGATE SUBGRADE IMPROVEMENT - 12"
- (7) TOPSOIL, FURNISH AND PLACE - 4"
- (8) SODDING, SALT TOLERANT

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

MIXTURE TYPE	AIR VOIDS @ Ndes	QMP
<b>PAVEMENT WIDENING</b>		
HOT-MIX ASPHALT BASE COURSE (HMA BINDER IL-19.0mm), 12"	4% @ 70 Gyr.	LR1030-2
<b>PATCHING</b>		
CLASS D PATCHES (HMA BINDER IL-19.0mm), 12"	4% @ 70 Gyr.	LR1030-2
<b>TEMPORARY PAVEMENT / SIDEWALK</b>		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5mm), 2"	4% @ 50 Gyr.	LR1030-2
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PER LR1030-2		

NOTES:  
 1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.  
 2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.  
 3. PAVEMENT WIDENING AND PATCHING SHALL BE FLUSH WITH THE EXISTING EDGE OF PAVEMENT AND CURB & GUTTER. IDOT CONTRACT NUMBER 62N53 WILL THEN MILL 1.75" THROUGH THE INTERSECTION AND INSTALL SURFACE COURSE.



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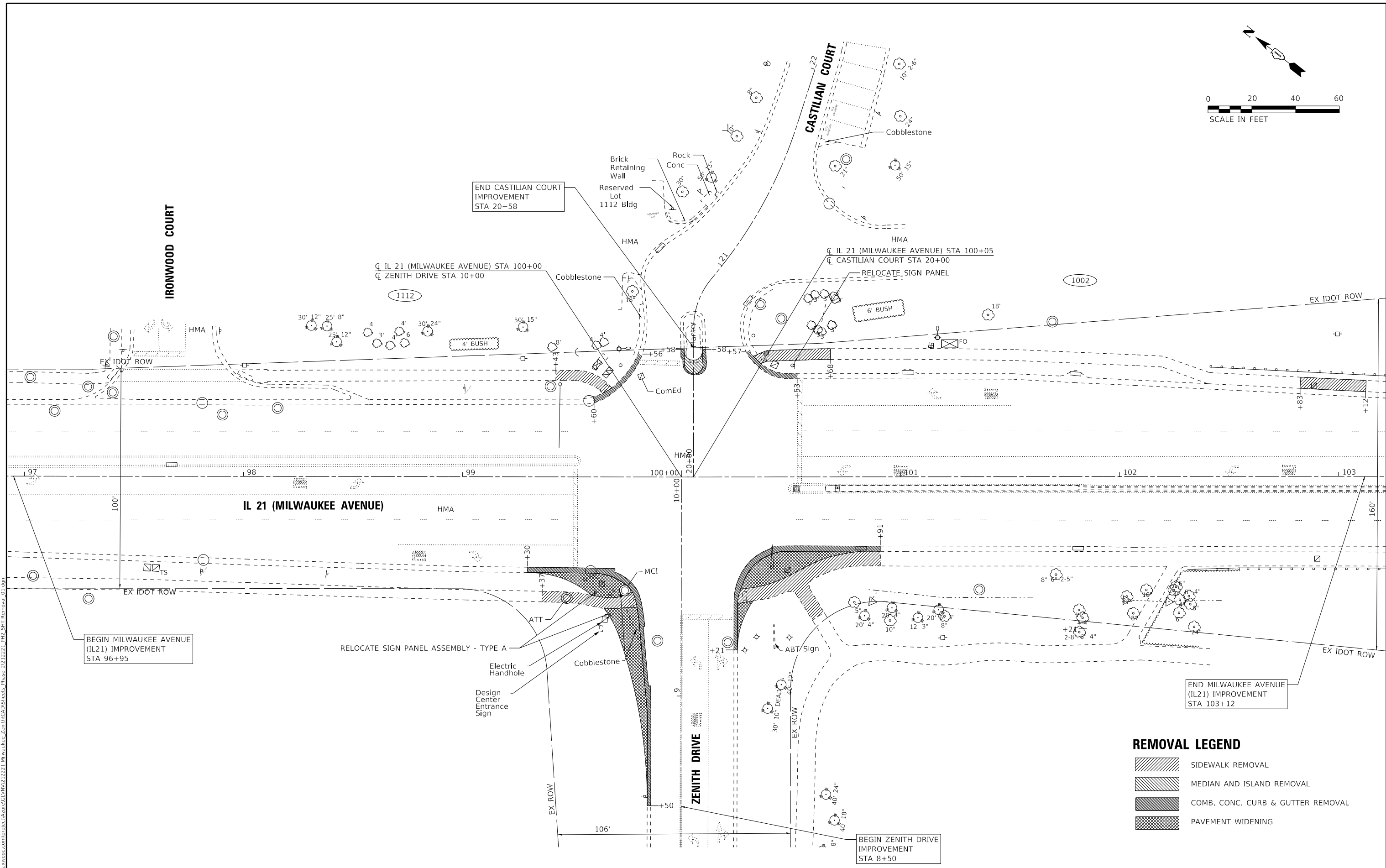
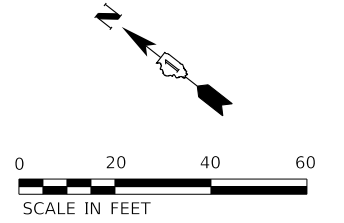
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TYPICAL SECTIONS**

SCALE: NTS SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	14
CONTRACT NO. 61J39				
ILLINOIS		FED. AID PROJECT		





BEGIN MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 96+95

END CASTILIAN COURT  
IMPROVEMENT  
STA 20+58

END MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 103+12

BEGIN ZENITH DRIVE  
IMPROVEMENT  
STA 8+50

**REMOVAL LEGEND**

	SIDEWALK REMOVAL
	MEDIAN AND ISLAND REMOVAL
	COMB. CONC. CURB & GUTTER REMOVAL
	PAVEMENT WIDENING

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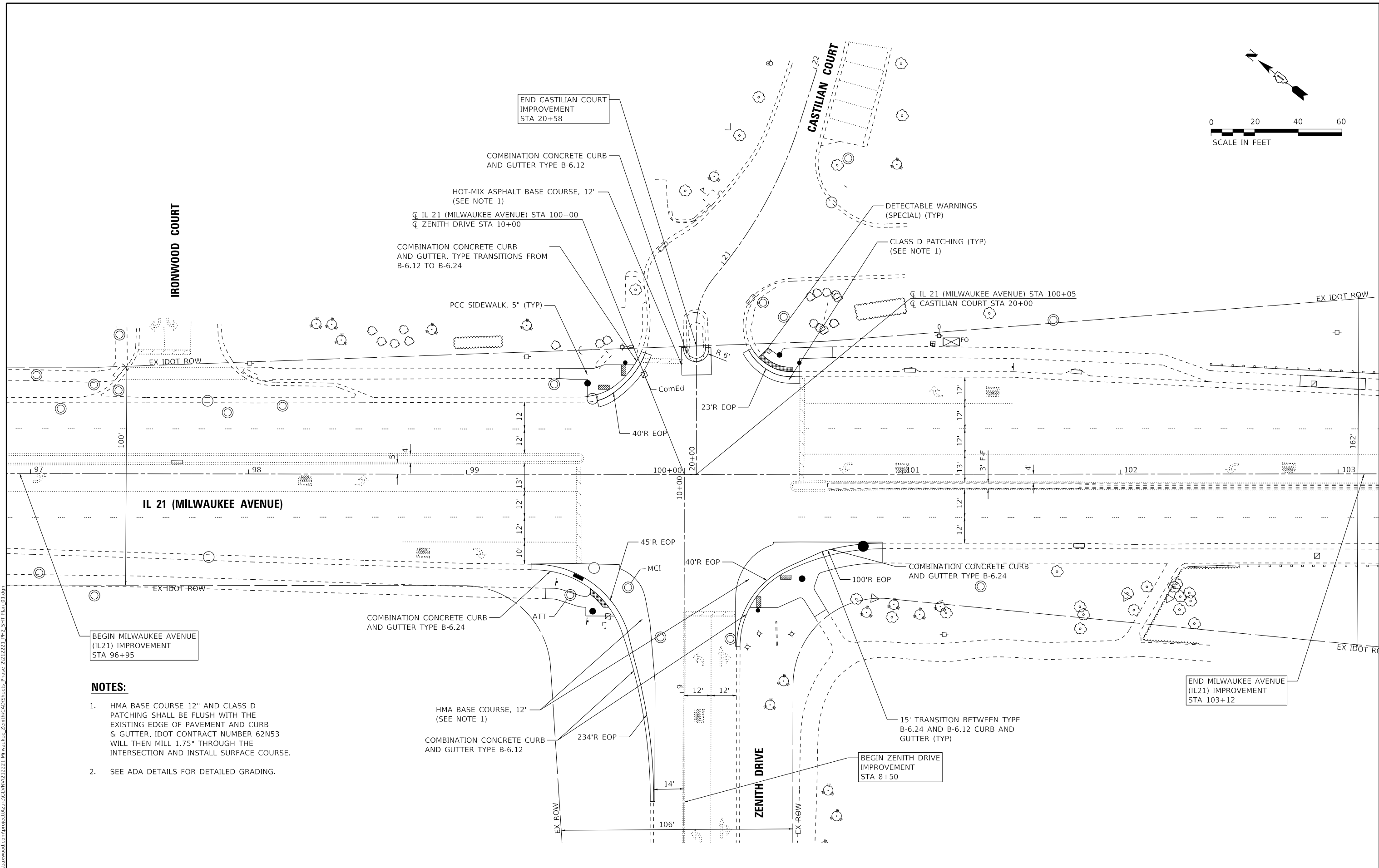
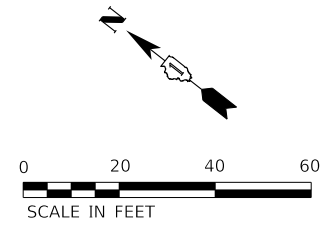
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**REMOVAL PLAN**  
**MILWAUKEE AVENUE & ZENITH DRIVE**

SCALE: 1" = 20'

SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	15
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	



- NOTES:**
- HMA BASE COURSE 12" AND CLASS D PATCHING SHALL BE FLUSH WITH THE EXISTING EDGE OF PAVEMENT AND CURB & GUTTER. IDOT CONTRACT NUMBER 62N53 WILL THEN MILL 1.75" THROUGH THE INTERSECTION AND INSTALL SURFACE COURSE.
  - SEE ADA DETAILS FOR DETAILED GRADING.

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
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 2/15/2023  
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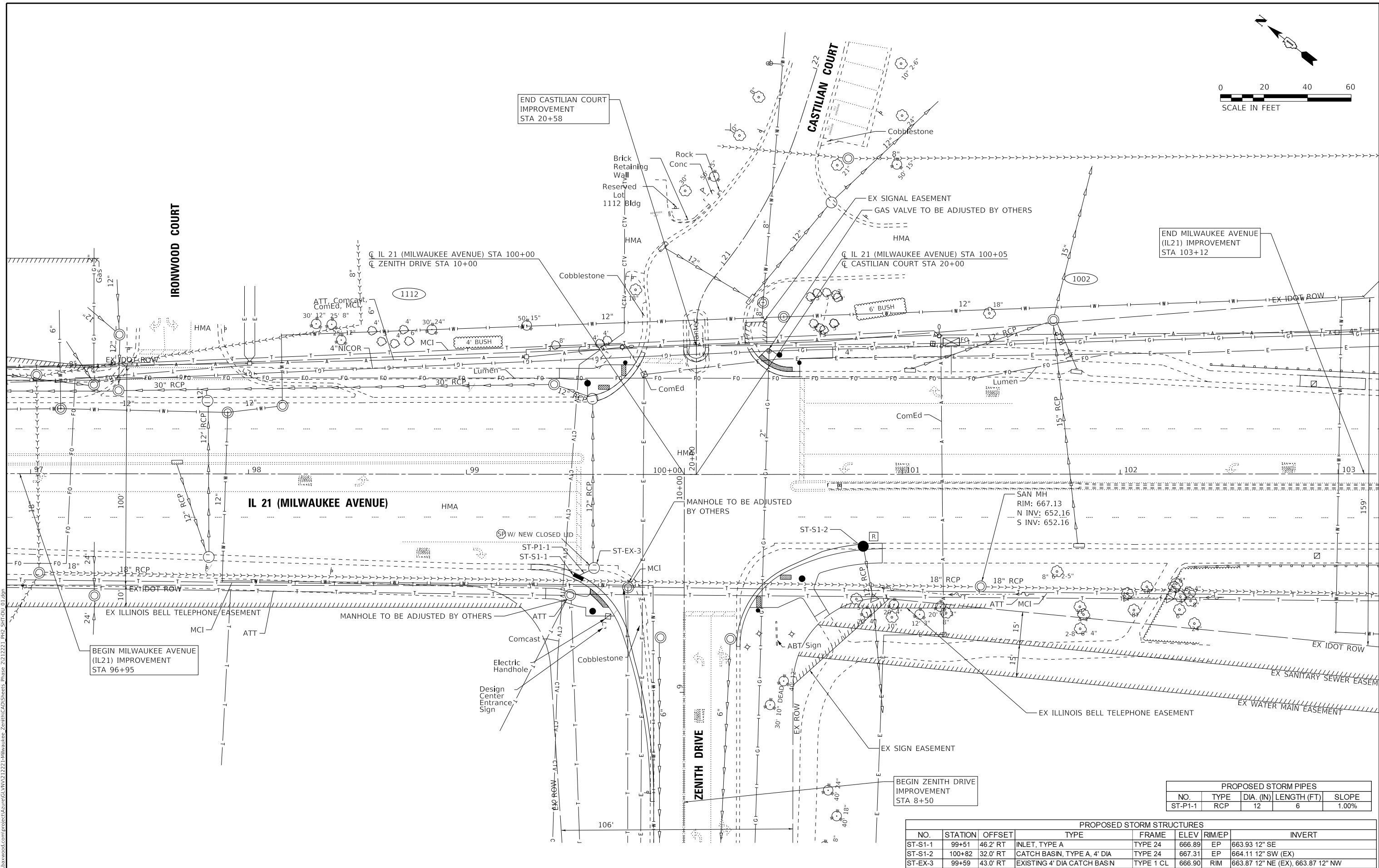
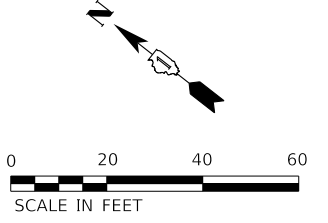


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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>ROADWAY PLAN</b>	
<b>MILWAUKEE AVENUE &amp; ZENITH DRIVE</b>	
SCALE: 1" = 20'	SHEET 1 OF 1 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	16
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	



END MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 103+12

END CASTILIAN COURT  
IMPROVEMENT  
STA 20+58

BEGIN MILWAUKEE AVENUE  
(IL21) IMPROVEMENT  
STA 96+95

BEGIN ZENITH DRIVE  
IMPROVEMENT  
STA 8+50

PROPOSED STORM PIPES				
NO.	TYPE	DIA. (IN)	LENGTH (FT)	SLOPE
ST-P1-1	RCP	12	6	1.00%

PROPOSED STORM STRUCTURES						
NO.	STATION	OFFSET	TYPE	FRAME	ELEV RIM/EP	INVERT
ST-S1-1	99+51	46.2' RT	INLET, TYPE A	TYPE 24	666.89 EP	663.93 12" SE
ST-S1-2	100+82	32.0' RT	CATCH BASIN, TYPE A, 4' DIA	TYPE 24	667.31 EP	664.11 12" SW (EX)
ST-EX-3	99+59	43.0' RT	EXISTING 4' DIA CATCH BASIN	TYPE 1 CL	666.90 RIM	663.87 12" NE (EX), 663.87 12" NW

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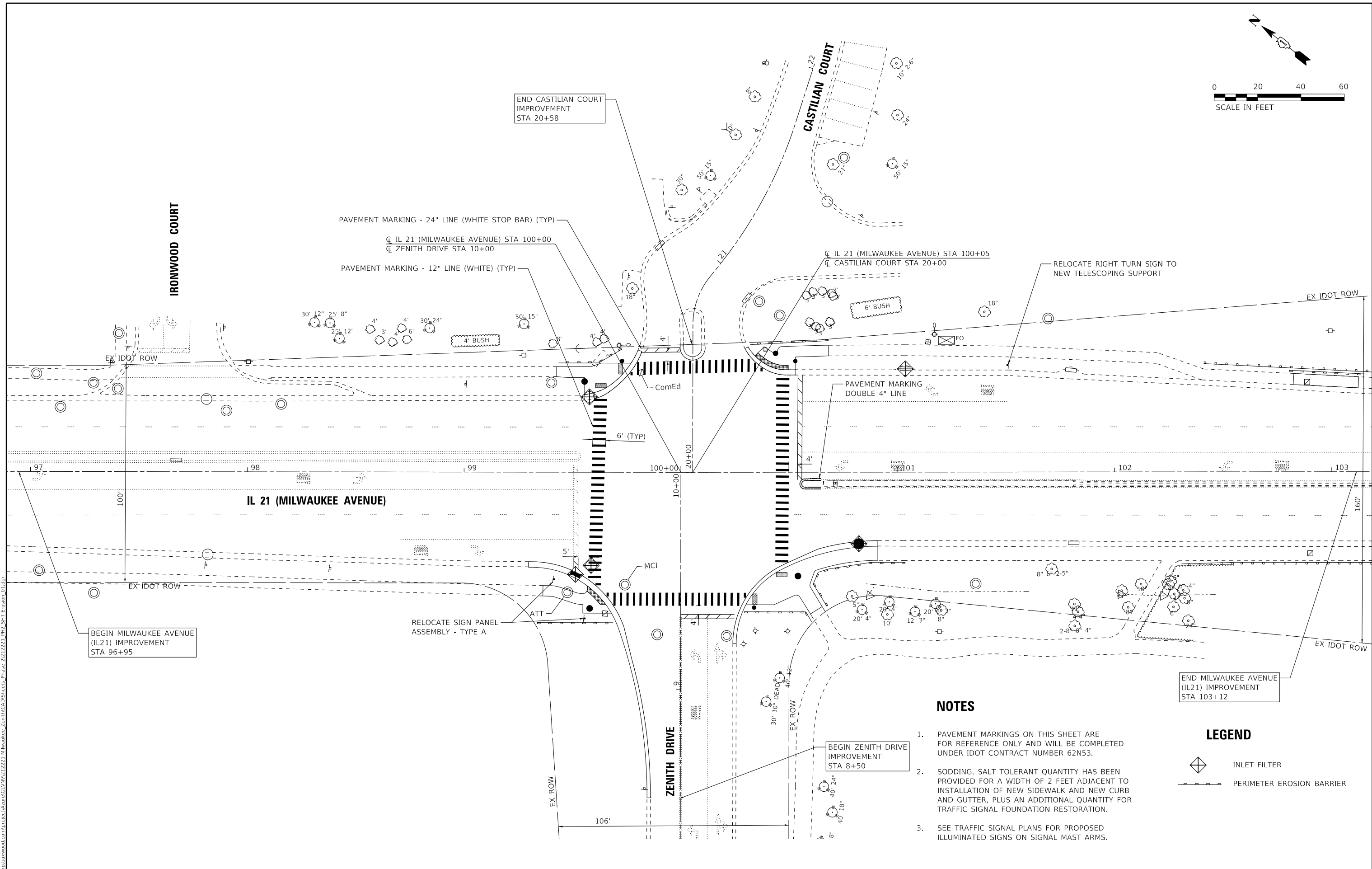
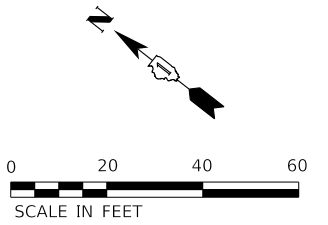
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**DRAINAGE AND UTILITY PLAN**  
**MILWAUKEE AVENUE & ZENITH DRIVE**

SCALE: 1" = 20'

SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	17
CONTRACT NO. 61J39				
ILLINOIS FED. AID PROJECT				



**NOTES**

1. PAVEMENT MARKINGS ON THIS SHEET ARE FOR REFERENCE ONLY AND WILL BE COMPLETED UNDER IDOT CONTRACT NUMBER 62N53.
2. SODDING, SALT TOLERANT QUANTITY HAS BEEN PROVIDED FOR A WIDTH OF 2 FEET ADJACENT TO INSTALLATION OF NEW SIDEWALK AND NEW CURB AND GUTTER, PLUS AN ADDITIONAL QUANTITY FOR TRAFFIC SIGNAL FOUNDATION RESTORATION.
3. SEE TRAFFIC SIGNAL PLANS FOR PROPOSED ILLUMINATED SIGNS ON SIGNAL MAST ARMS.

**LEGEND**

- INLET FILTER
- PERIMETER EROSION BARRIER

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DEPARTMENT OF TRANSPORTATION

<b>EROSION CONTROL, LANDSCAPE, SIGNAGE AND PAVEMENT MARKING PLAN</b>	
SCALE: 1" = 20'	SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	18
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61J39	

# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONTROLLER CABINET			HANDHOLE -SQUARE -ROUND			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD		
COMMUNICATION CABINET			HEAVY DUTY HANDHOLE -SQUARE -ROUND			SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		
MASTER CONTROLLER			DOUBLE HANDHOLE			PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
MASTER MASTER CONTROLLER			JUNCTION BOX			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
UNINTERRUPTABLE POWER SUPPLY			RAILROAD CANTILEVER MAST ARM			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SERVICE INSTALLATION -(P) POLE MOUNTED			RAILROAD FLASHING SIGNAL			NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED		
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED			RAILROAD CROSSING GATE			GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)		
TELEPHONE CONNECTION			RAILROAD CROSSBUCK			ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
STEEL MAST ARM ASSEMBLY AND POLE			RAILROAD CONTROLLER CABINET			COAXIAL CABLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			VENDOR CABLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY			SYSTEM ITEM			FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
WOOD POLE			INTERSECTION ITEM			GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE		
GUY WIRE			REMOVE ITEM					
SIGNAL HEAD			RELOCATE ITEM					
SIGNAL HEAD WITH BACKPLATE			ABANDON ITEM					
SIGNAL HEAD OPTICALLY PROGRAMMED			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED					
FLASHER INSTALLATION -(FS) SOLAR POWERED			MAST ARM POLE AND FOUNDATION TO BE REMOVED					
PEDESTRIAN SIGNAL HEAD			SIGNAL POST AND FOUNDATION TO BE REMOVED					
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			DETECTOR LOOP, TYPE I					
RADAR DETECTION SENSOR			PREFORMED DETECTOR LOOP					
VIDEO DETECTION CAMERA			SAMPLING (SYSTEM) DETECTOR					
RADAR/VIDEO DETECTION ZONE			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
PAN, TILT, ZOOM (PTZ) CAMERA			QUEUE AND SAMPLING (SYSTEM) DETECTOR					
EMERGENCY VEHICLE LIGHT DETECTOR			WIRELESS DETECTOR SENSOR					
CONFIRMATION BEACON			WIRELESS ACCESS POINT					
WIRELESS INTERCONNECT								
WIRELESS INTERCONNECT RADIO REPEATER								

TS SHEET NO. 1

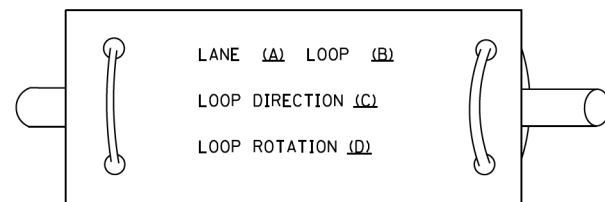
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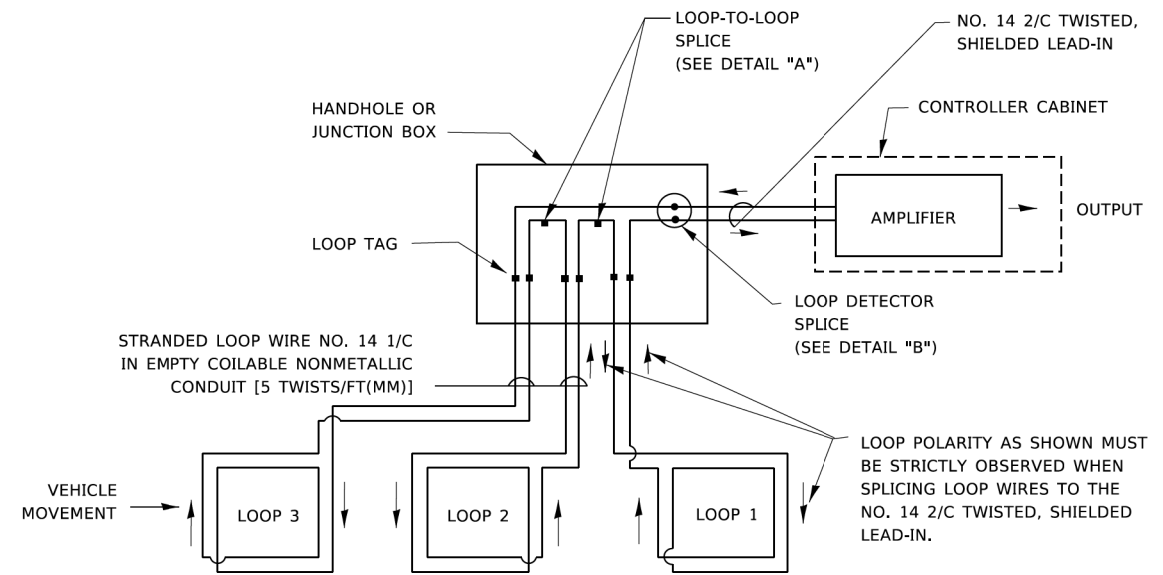
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

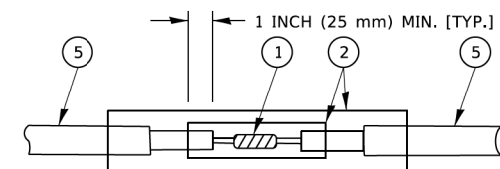


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

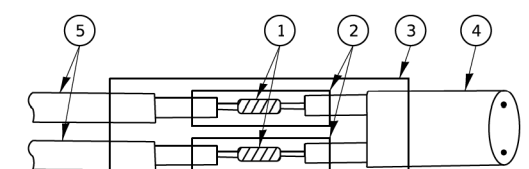


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES. SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE,
- THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

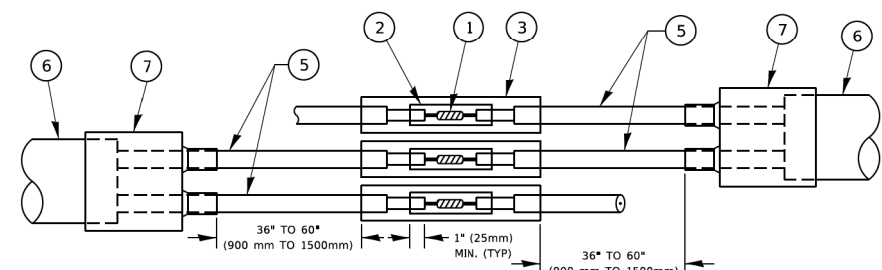


DETAIL "A"  
LOOP-TO-LOOP SPLICE

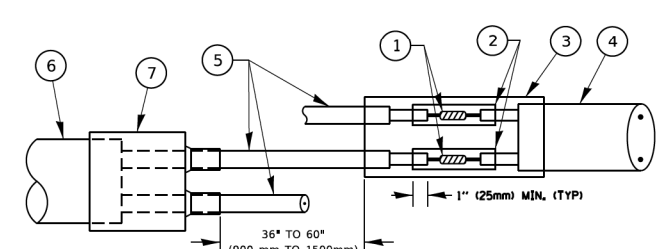


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

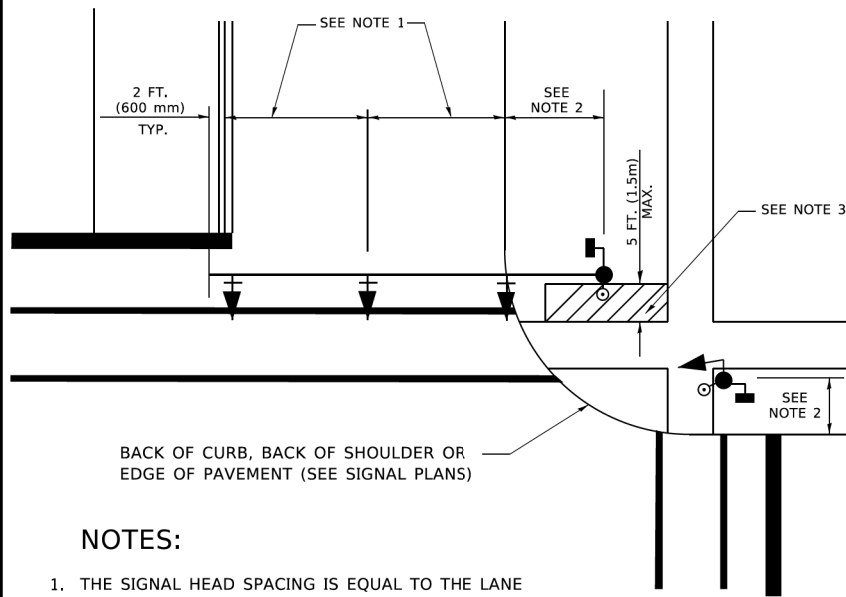
- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PREFORMED LOOP
- 6 XL POLYOLEFIN 2 CONDUCTOR
- 7 BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

TS SHEET NO. 2

USER NAME = footemj PLOT SCALE = 50,0000' / 1". PLOT DATE = 3/4/2019	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS		F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 20
	CHECKED - DATE -	REVISED - REVISED -				SCALE: NONE SHEET 2 OF 7 SHEETS STA. TO STA.		TS-05 CONTRACT NO. 61J39 ILLINOIS FED. AID PROJECT		

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

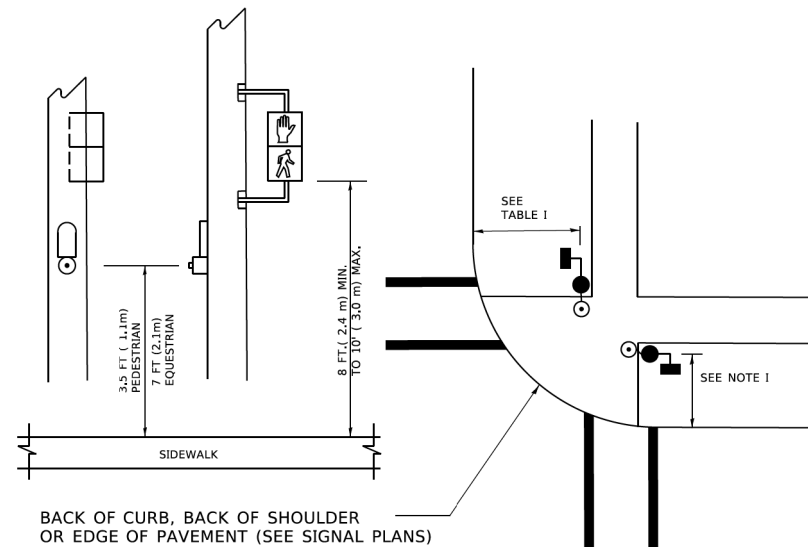
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

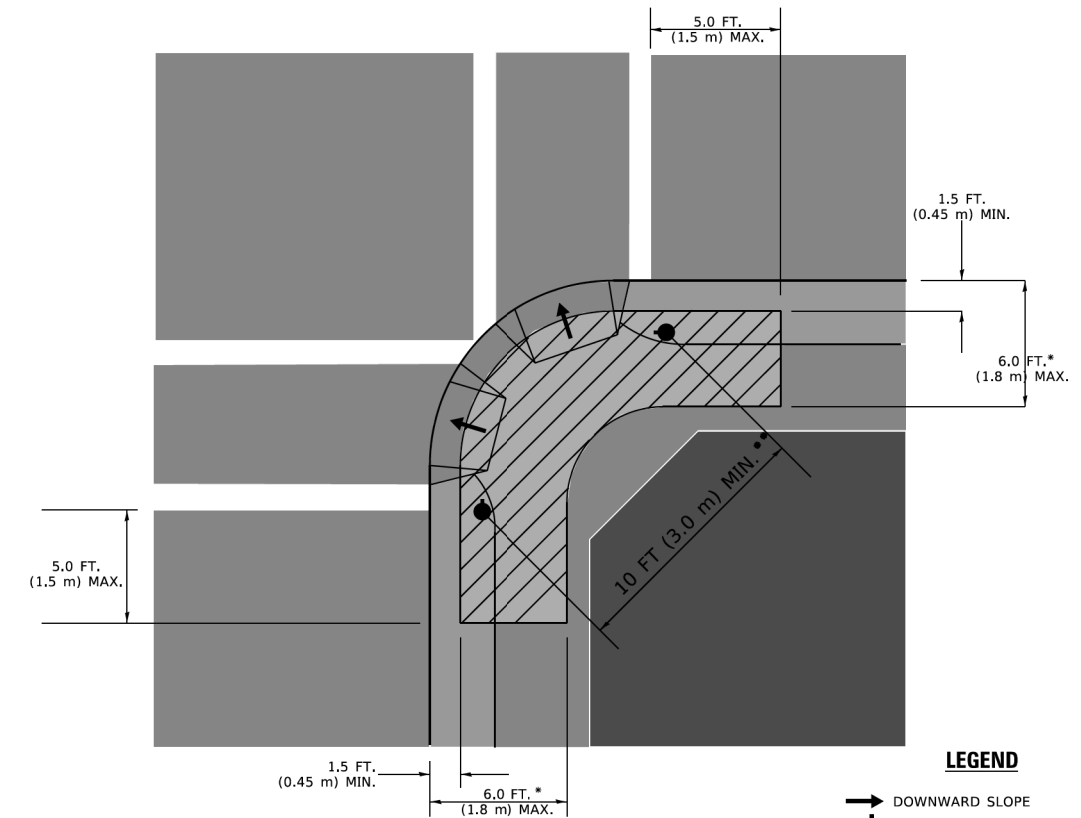
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



**LEGEND**

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- RECOMMENDED PUSHBUTTON LOCATIONS

- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT ( 1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.3m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.3m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

TS SHEET NO. 3

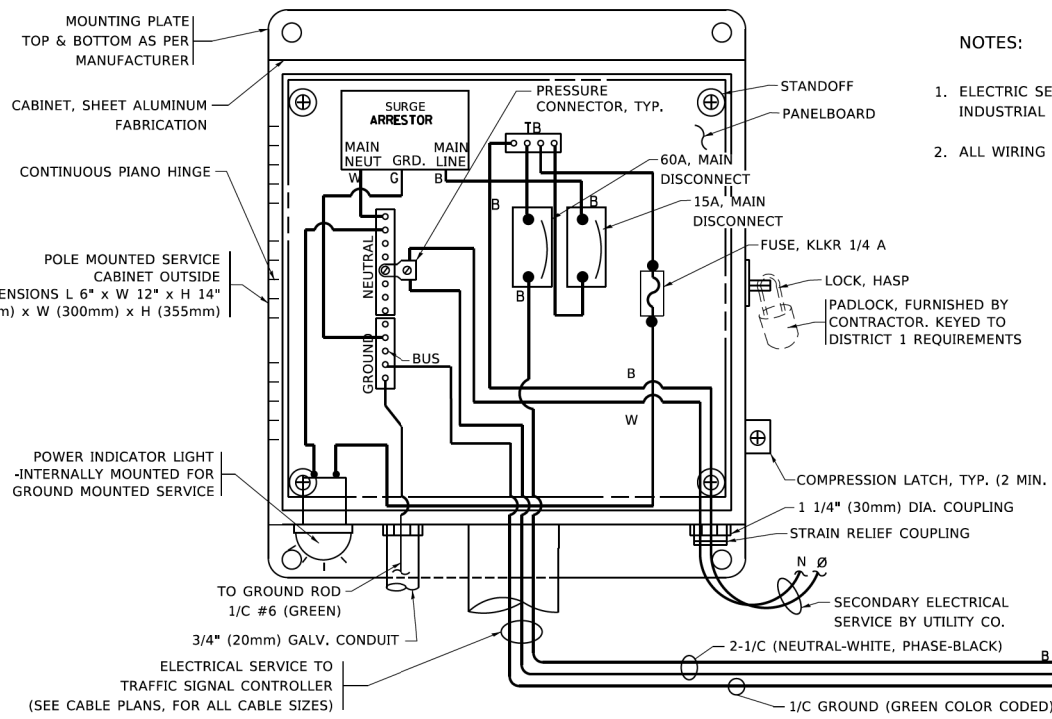
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	DRAWN -	REVISED -
PLOT SCALE = 50,0000 ' / ft.	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

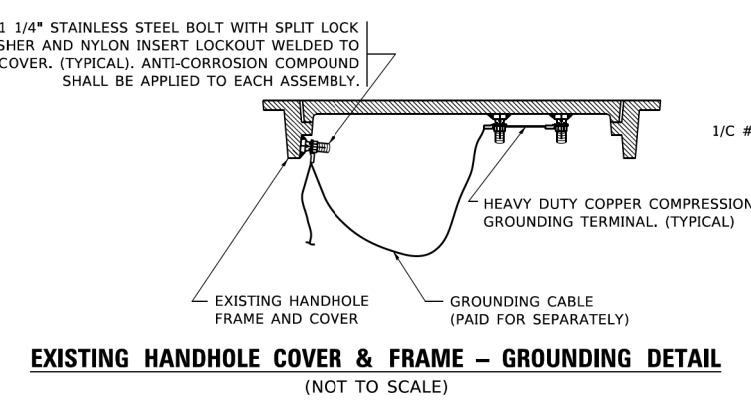
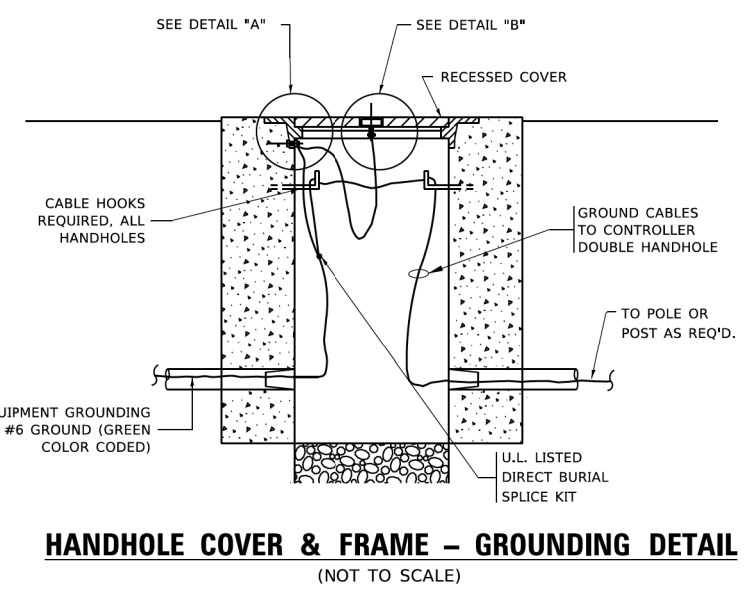
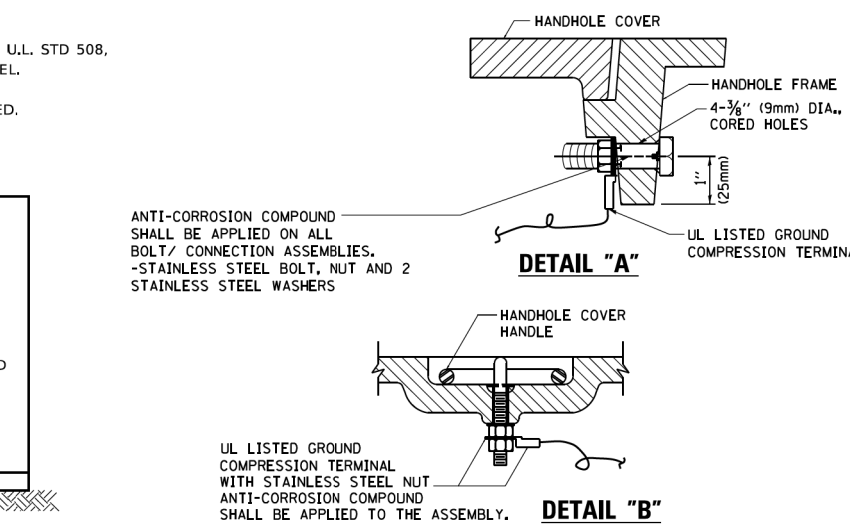
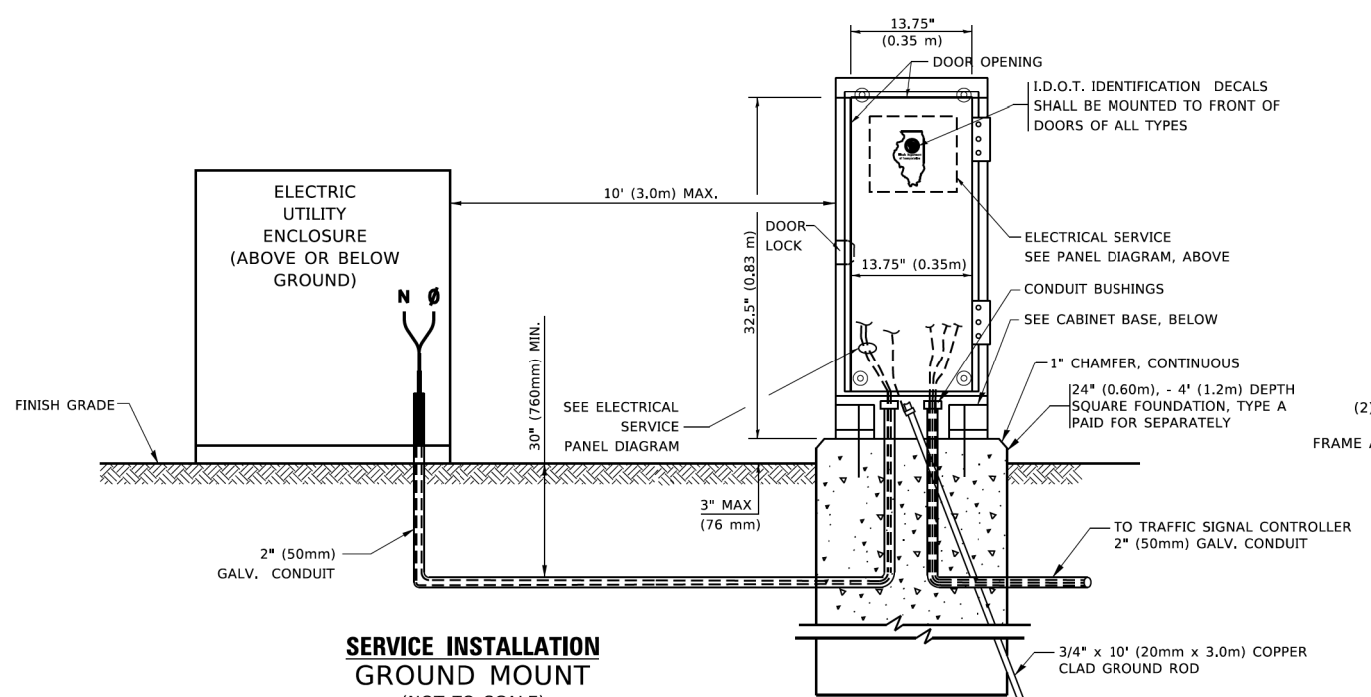
**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET 3 OF 7 SHEETS STA. TO STA.

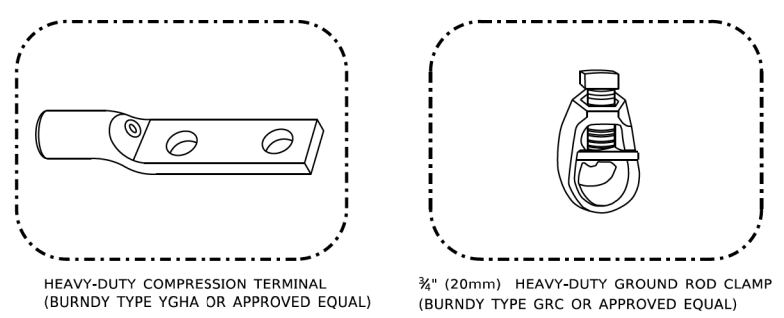
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	21
<b>TS-05</b>		CONTRACT NO. 61J39		
ILLINOIS FED. AID PROJECT				



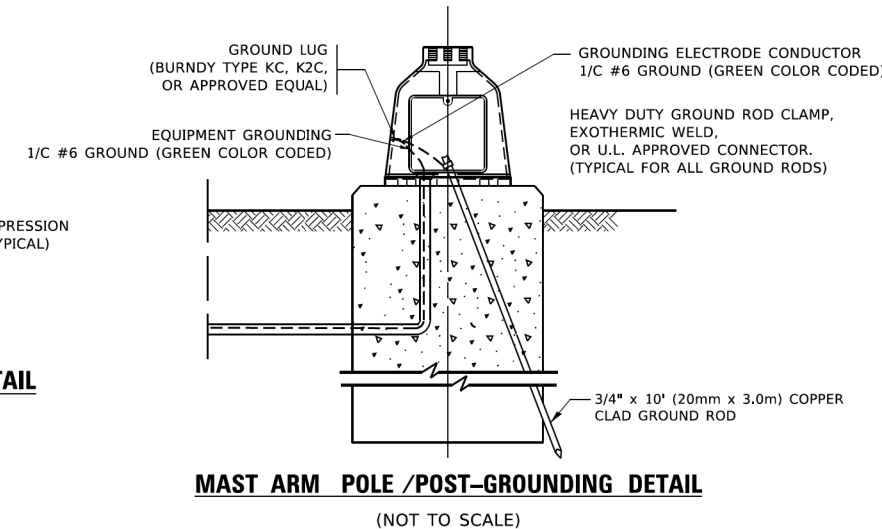
**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



- NOTES:**
- GROUNDING SYSTEM**
- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
  - THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
  - ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
  - THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
  - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  - 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  - 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  - 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



TS SHEET NO. 4

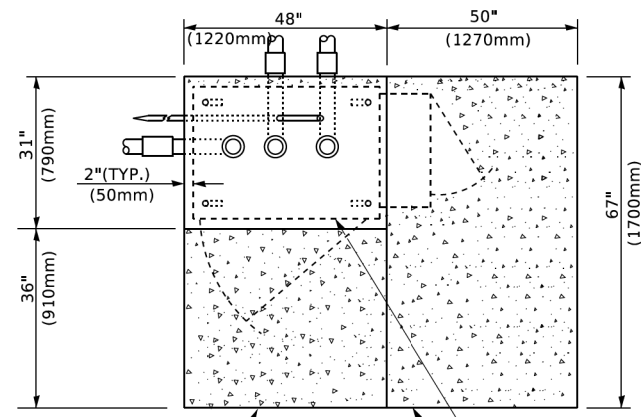
USER NAME = footemj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE**  
**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

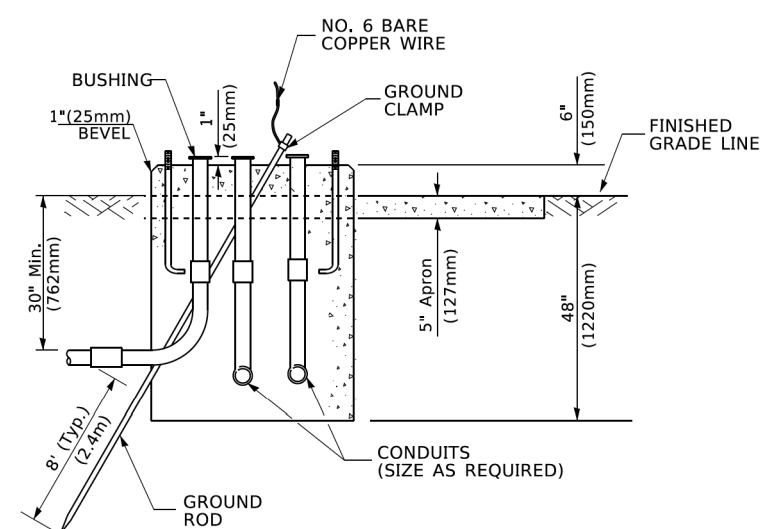
SCALE: NONE SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	22
<b>TS-05</b>		CONTRACT NO. 61J39		
ILLINOIS		FED. AID PROJECT		

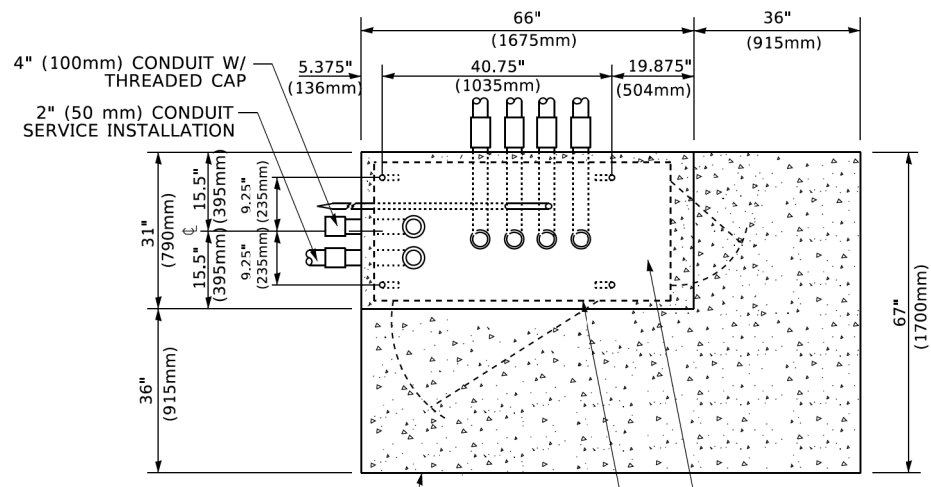


**TOP VIEW**

EXISTING APRON  
CONTROLLER CABINET BASE  
PROPOSED APRON



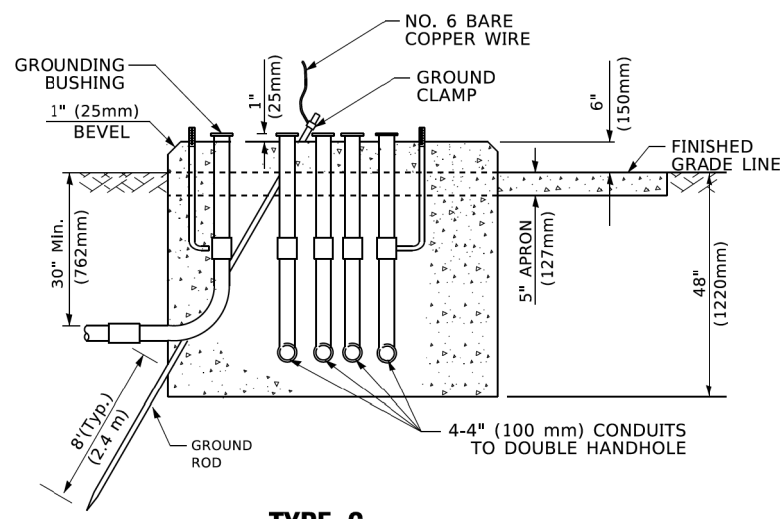
**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



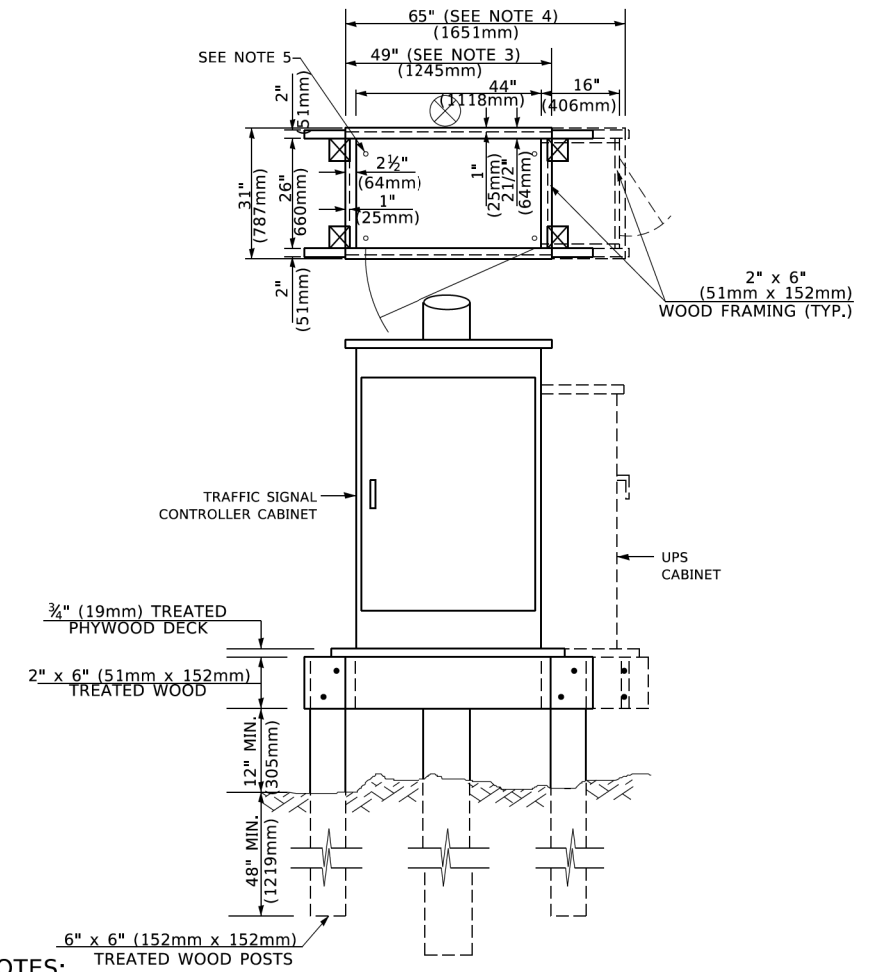
**TOP VIEW**

4" (100mm) CONDUIT W/ THREADED CAP  
2" (50 mm) CONDUIT SERVICE INSTALLATION  
APRON  
UPS BATTERY COMPARTMENT  
CONTROLLER CABINET BASE

**NOTE:**  
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C  
FOR GROUND MOUNTED  
SUPER P (TYPE IV) AND SUPER R (TYPE V)  
CONTROLLER CABINETS**



**NOTES:**

- BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK**

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

**VERTICAL CABLE LENGTH**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

**DEPTH OF FOUNDATION**

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

**NOTES:**

- 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.
- Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
- For mast arm assemblies with dual arms refer to state standard 878001..

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**

TS SHEET NO. 5

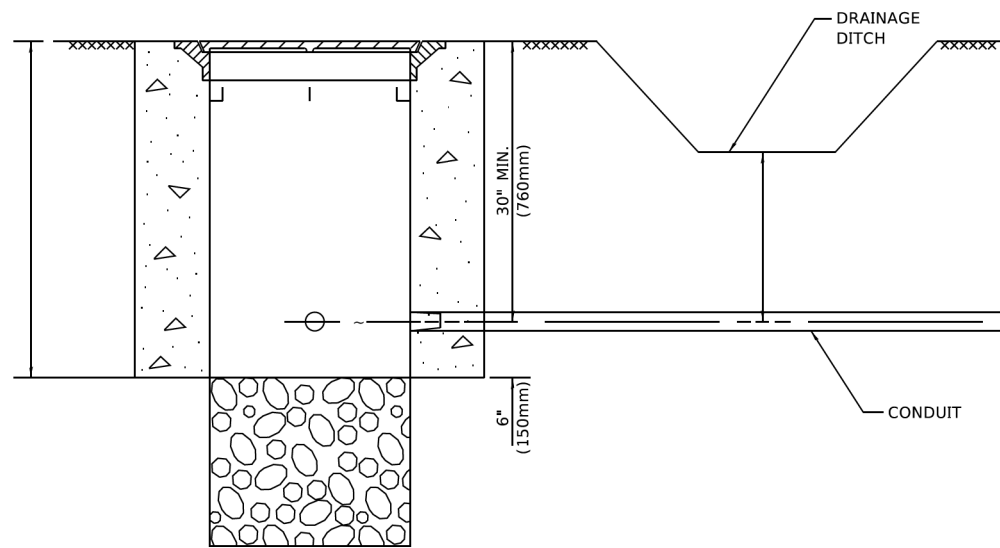
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	DRAWN -	REVISED -
PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE SHEET 5 OF 7 SHEETS STA. TO STA.

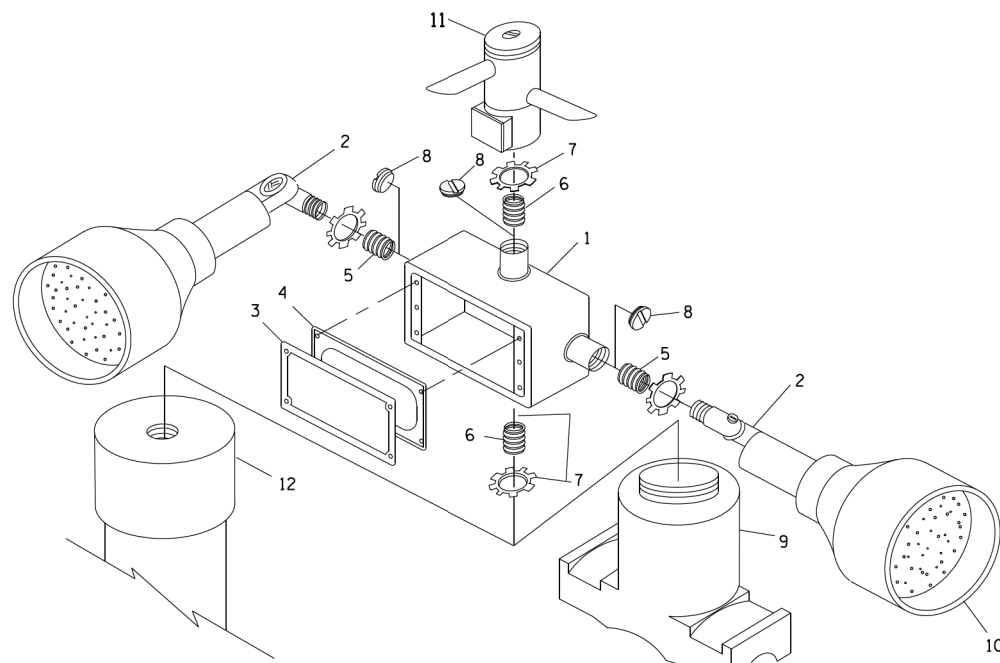
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	23
TS-05			CONTRACT NO. 61J39	
ILLINOIS FED. AID PROJECT				



**NOTES:**

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

**HANDHOLE WITH MINIMUM CONDUIT DEPTH**  
(NOT TO SCALE)

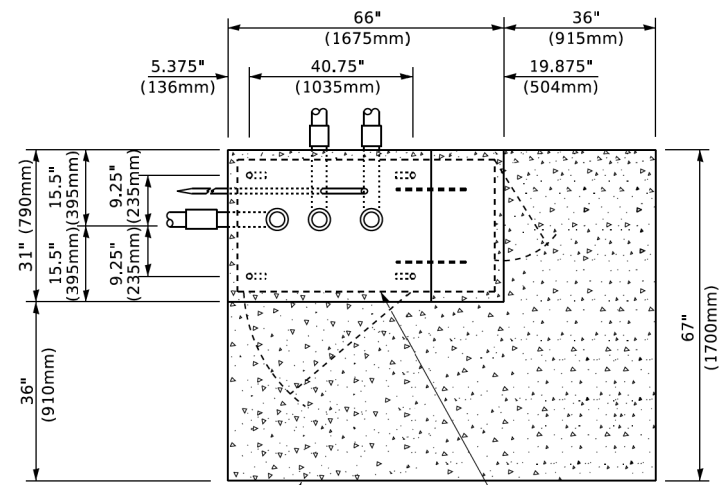


**POST CAP MOUNT**      **MAST ARM MOUNT**  
**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION**  
**BEACON MOUNTING DETAIL**

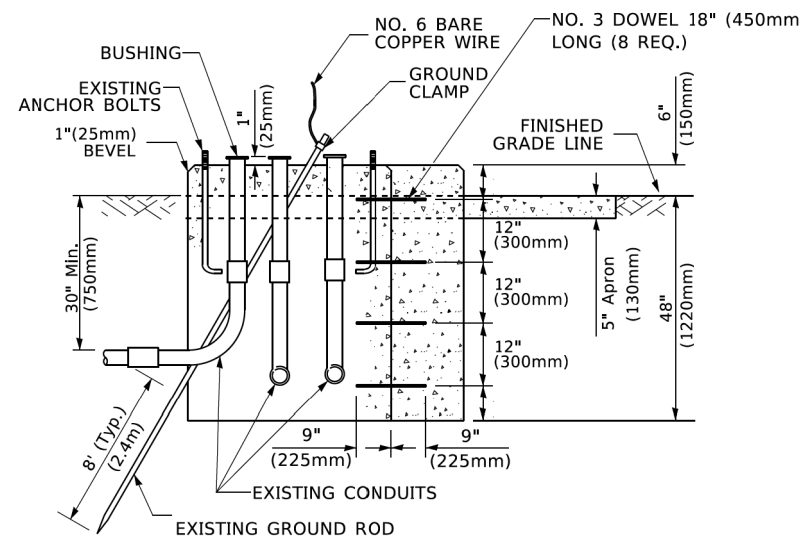
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

**NOTES:**

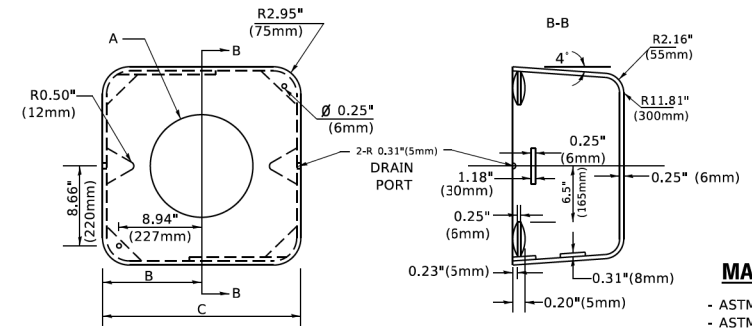
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



**TOP VIEW**  
(NOT TO SCALE)



**MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION**  
(NOT TO SCALE)



**MATERIAL**  
- ASTM A36 STEEL  
- ASTM A-123 HOT DIPPED GALVANIZED

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

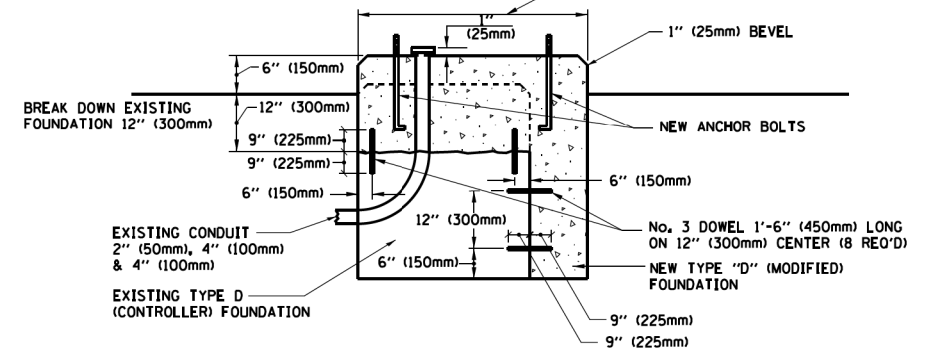
**SHROUD**

**NOTES:**

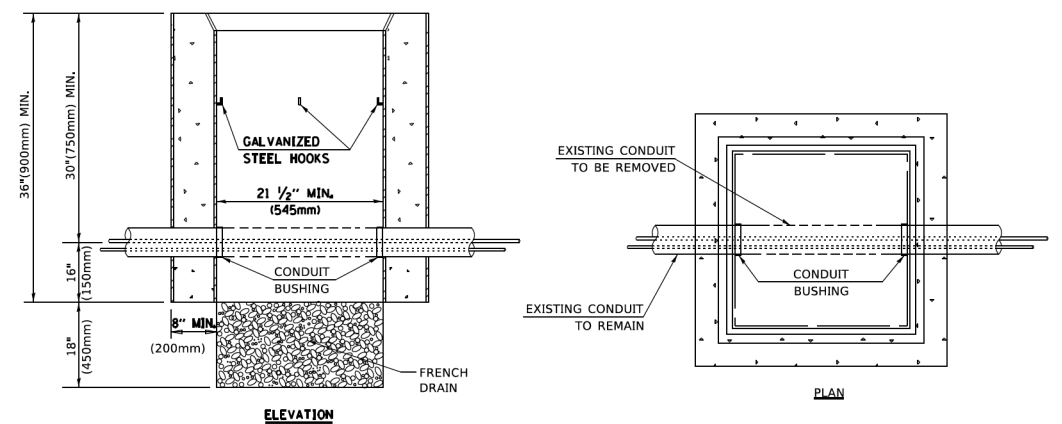
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

**NOTE:**

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



**MODIFY EXISTING TYPE "D" FOUNDATION**



**NOTES:**

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

**HANDHOLE TO INTERCEPT EXISTING CONDUIT**

TS SHEET NO. 6

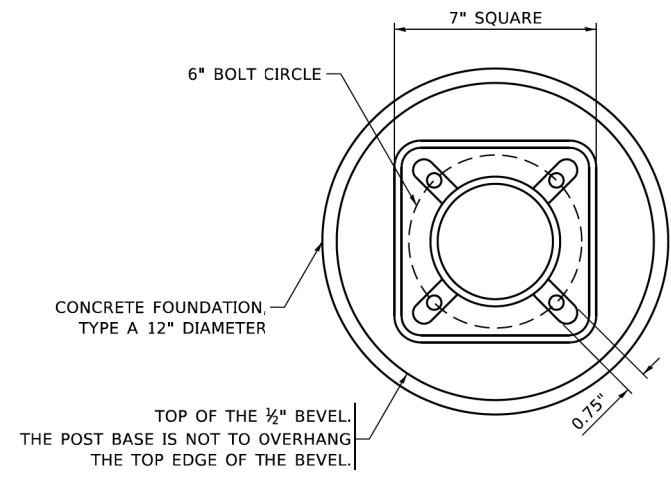
USER NAME = footemj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>DISTRICT ONE</b>			
<b>STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			
SCALE: NONE	SHEET 6	OF 7 SHEETS	STA. TO STA.

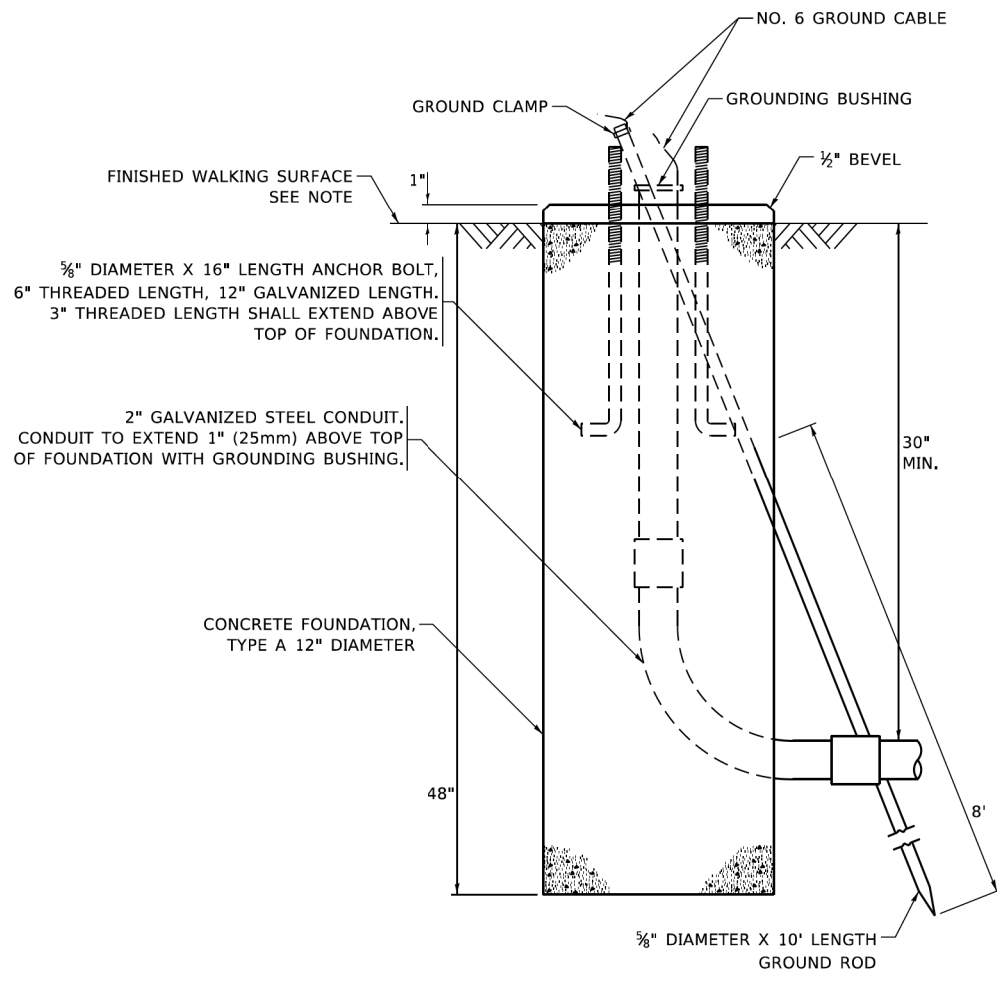
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	24
<b>TS-05</b>		CONTRACT NO. 61J39		
ILLINOIS FED. AID PROJECT				



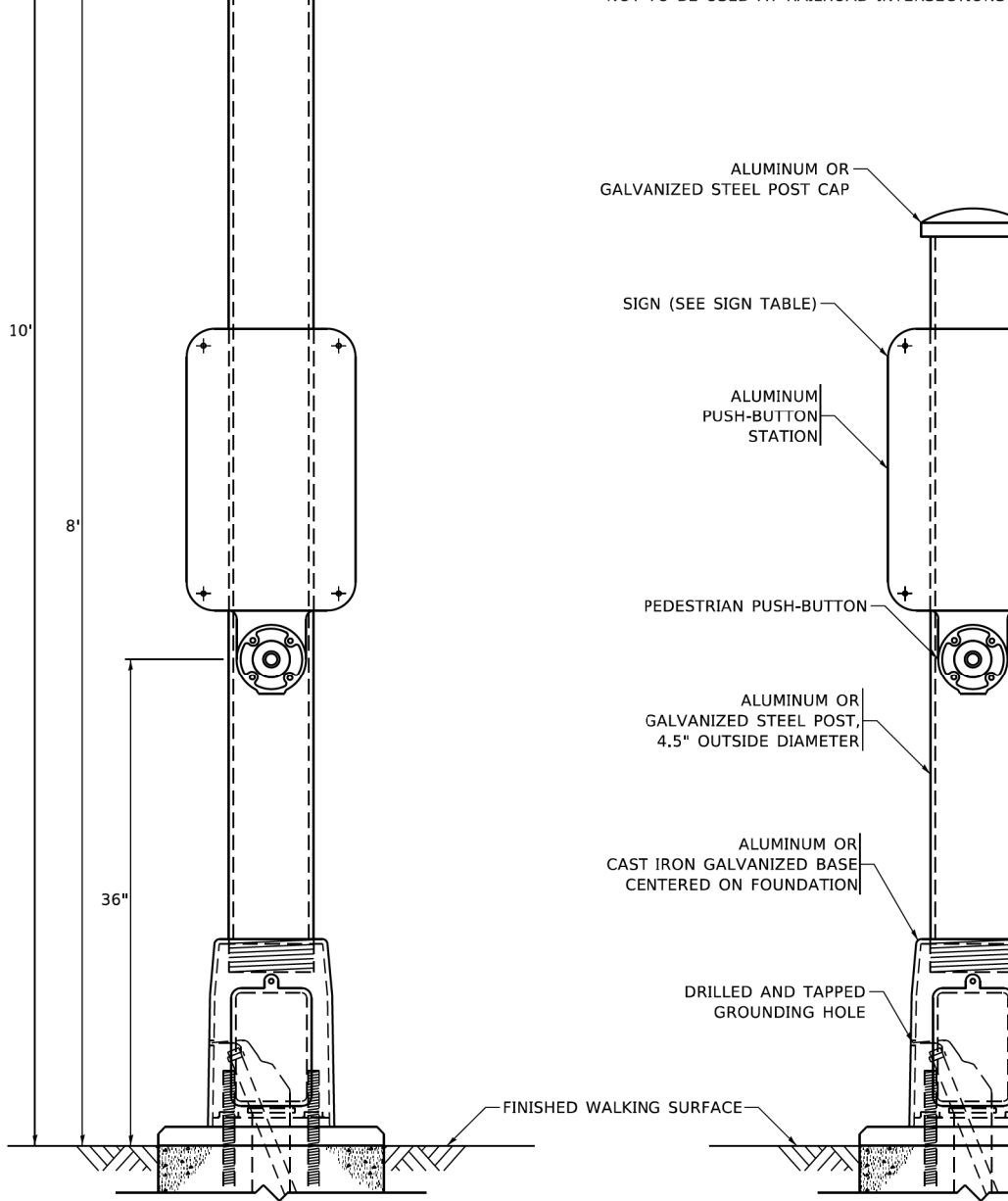
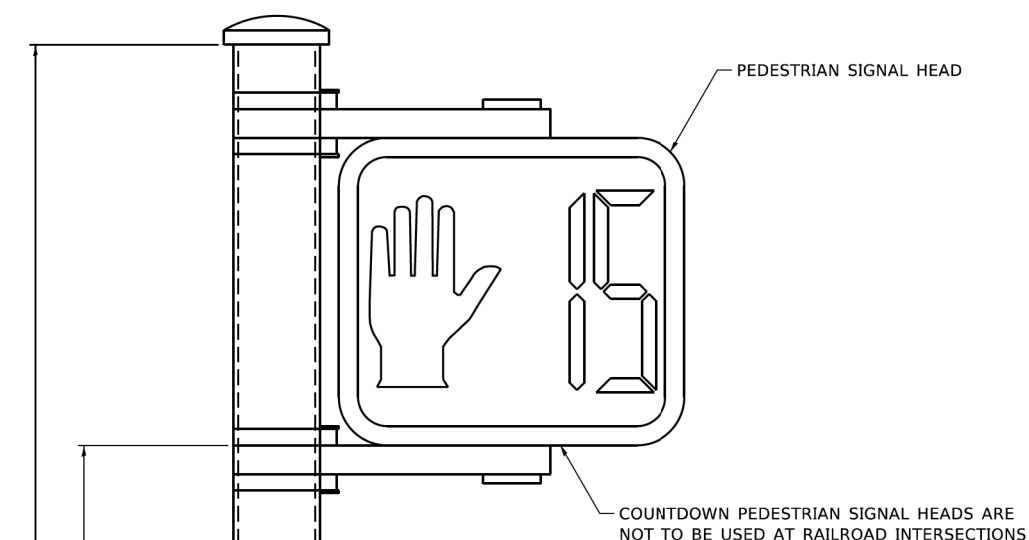


**BOLT PATTERN**

**NOTE:**  
1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.

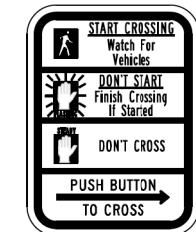


**CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER**

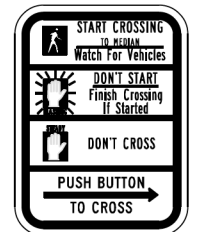


**PEDESTRIAN SIGNAL POST, 10 FT.**

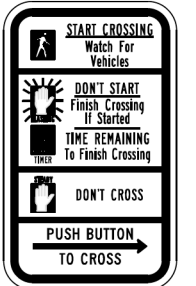
**PEDESTRIAN SIGNAL POST, 5 FT.**



**R10-3b**



**R10-3d**



**R10-3e**

**SIGN TABLE**

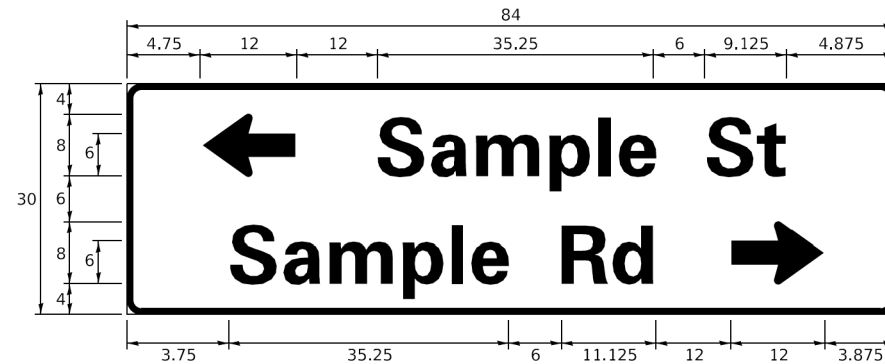
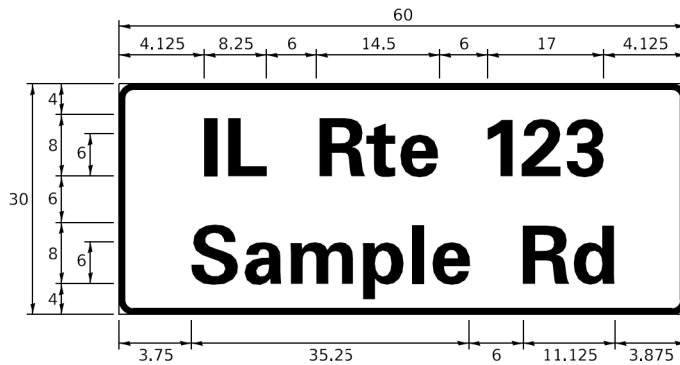
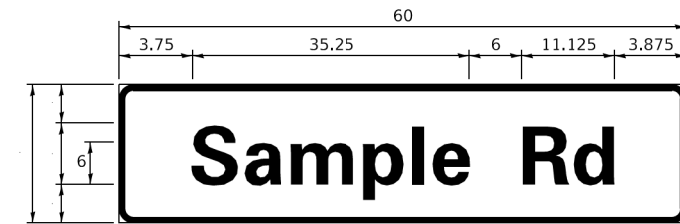
SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 12"

**NOTES:**  
1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.  
2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.  
3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

TS SHEET NO. 7

USER NAME = gagllanobt	DESIGNED - IP	REVISED - 10-15-2020	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 100,000' / in.	DRAWN - IP	REVISED -			374	21-00203-00-TL	COOK	44	25	
PLOT DATE = 11/23/2020	CHECKED - LP	REVISED -			<b>TS-05</b>		CONTRACT NO. 61J39			
	DATE - 10-15-2018	REVISED -			ILLINOIS FED. AID PROJECT					
			SCALE: NONE		SHEET 7 OF 7 SHEETS		STA. TO STA.			

**SIGN PANEL – TYPE 1 OR TYPE 2**



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

**COMMON STREET NAME ABBREVIATIONS AND WIDTHS**

NAME	ABBREVIATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

**GENERAL NOTES**

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012. AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8'-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

**LOCAL SUPPLIERS:**

- J.O. HERBERT COMPANY, INC  
MIDLOTHIAN, VA
- WESTERN REMAC, INC.  
WOODRIDGE, IL

**PARTS LISTING:**

- SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
- SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
- BRACKETS SELF TAPPING WITH NEOPRENE WASHER
- CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING PART #HPN034 (UNIVERSAL)

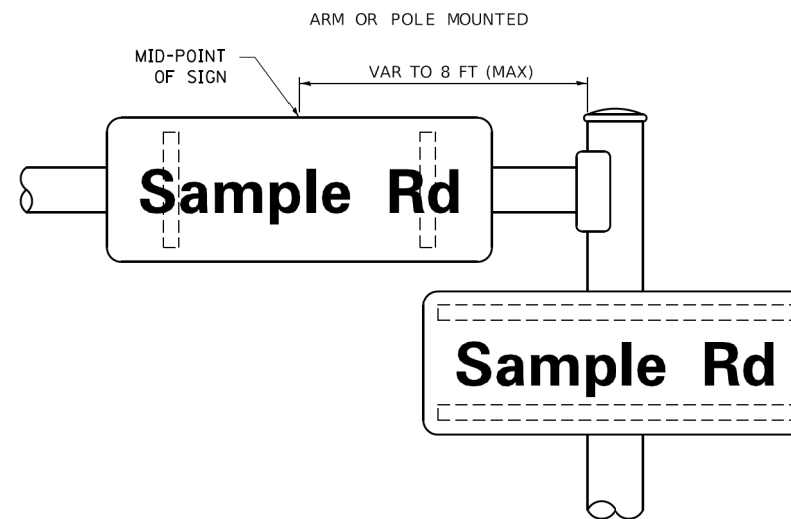
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

**STANDARD ALPHABETS SPACING CHART**

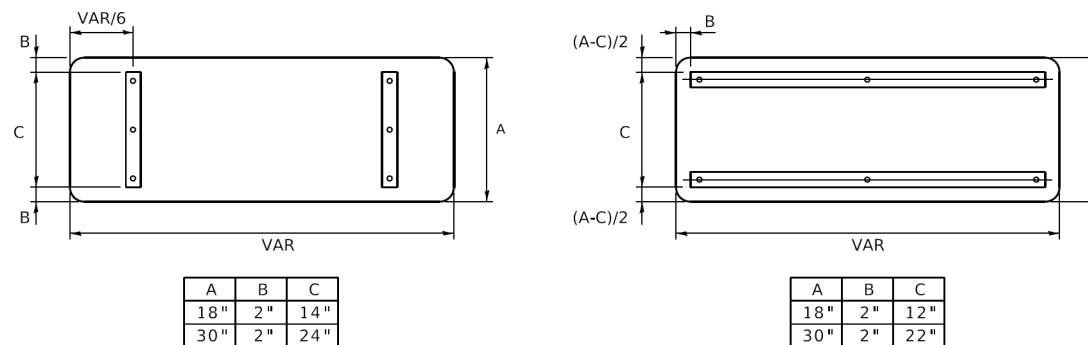
(8") UPPER CASE AND (6") LOWER CASE

CHARACTER	FHWA SERIES "C"			FHWA SERIES "D"			
	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

**MOUNTING LOCATION**



**SUPPORTING CHANNELS**



TS SHEET NO. 8

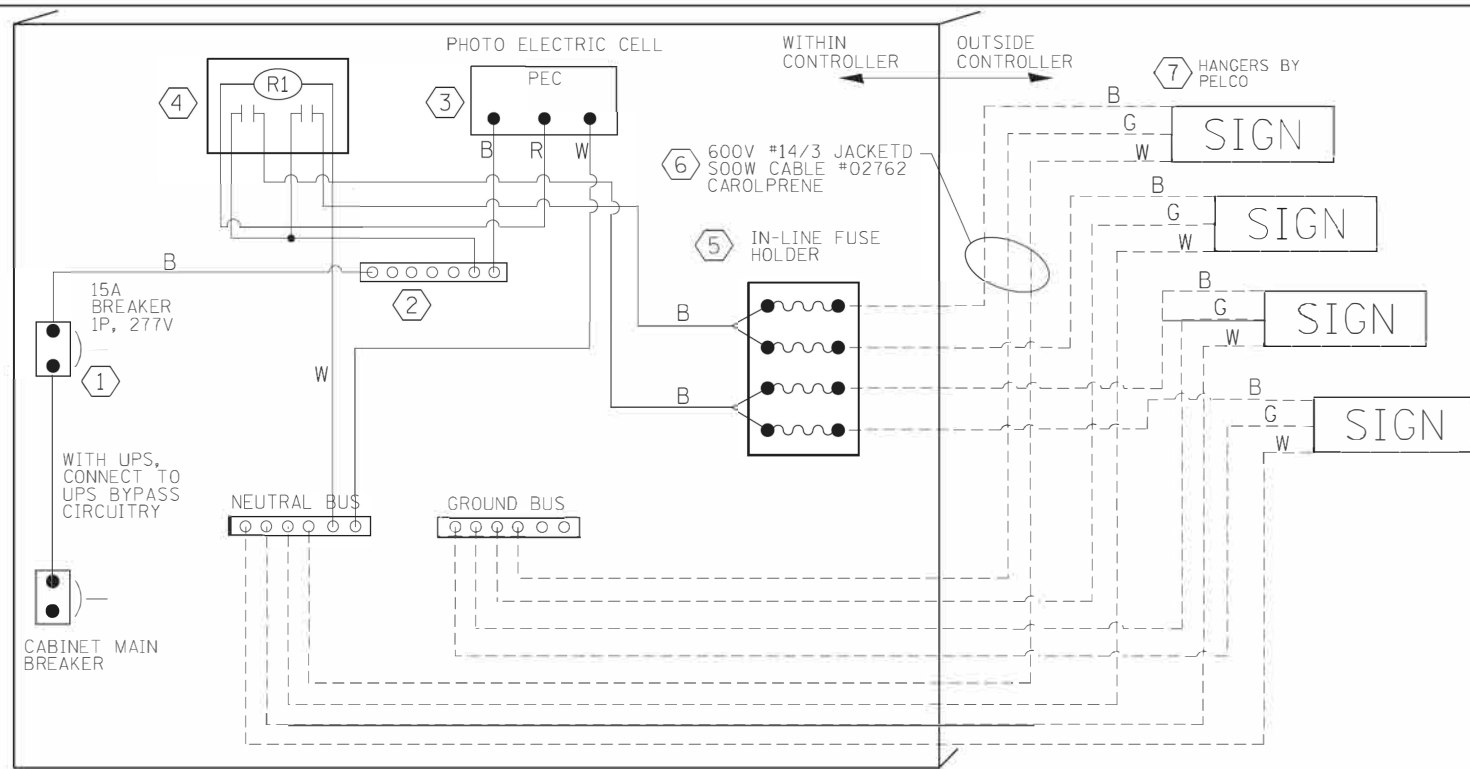
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PLOT DATE = 3/4/2019	DATE - 10/01/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
MAST ARM MOUNTED STREET NAME SIGNS

F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 26
TS-02		CONTRACT NO. 61J39		
ILLINOIS FED. AID PROJECT				

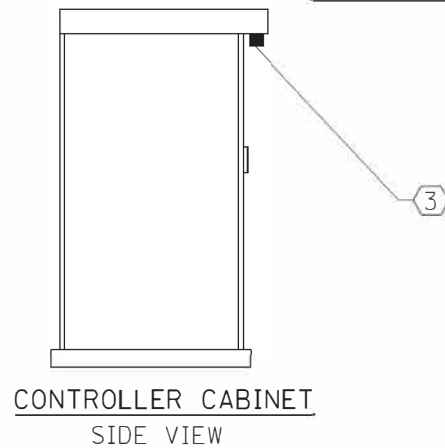
SCALE: SHEET OF SHEETS STA. TO STA.



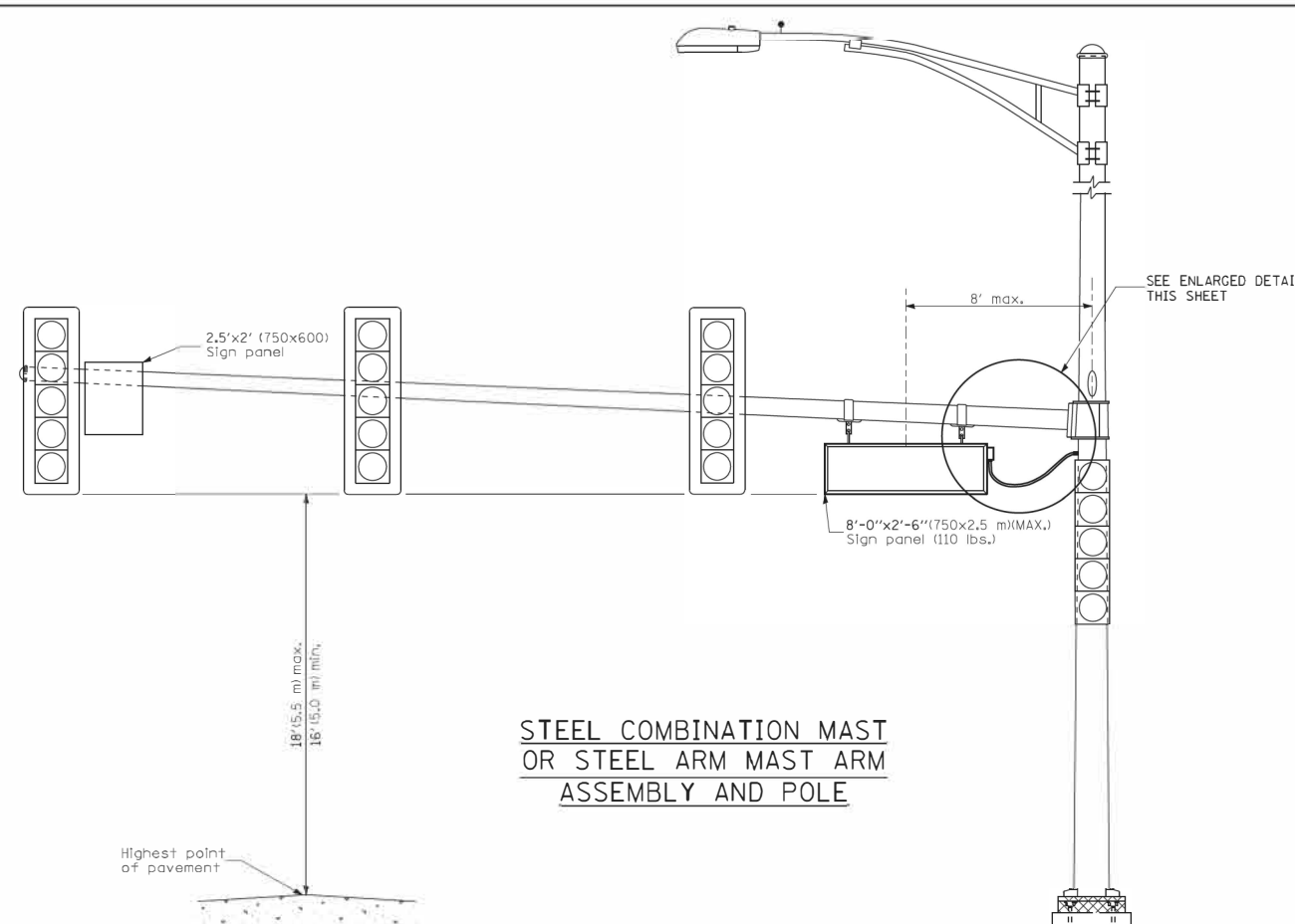
LED SIGN WIRING DETAIL

DESCRIPTION	MANUFACTURER	MODEL	NOTES
① CIRCUIT BREAKER		15 AMPERE	Molded case, Thermal Mag. min. R.I. of 14K R.M.S. symmetrical ampere at 277V.
② TERMINAL BLOCK	MARATHON	1502 DJSV	
③ PHOTO ELECTRIC CONTROL	FISHER PIERCE	B124-1.5-07762	
④ CONTROL RELAY	SQUARE D	8501X020V02	BOLT ON W/SCREW TERMINAL
⑤ INLINE FUSE HOLDER WITH 5 AMP FUSE	BUSSMAN	S-8000 BK/S-8-3-4-R	
⑥ ELECTRIC CABLE, NO. 14, 3/C (BLACK, WHITE, GREEN)	CAROLPRENE/S00W	02762	
⑦ SIGN MOUNTING HARDWARE	PELCO	SE-5015	S.S. HARDWARE

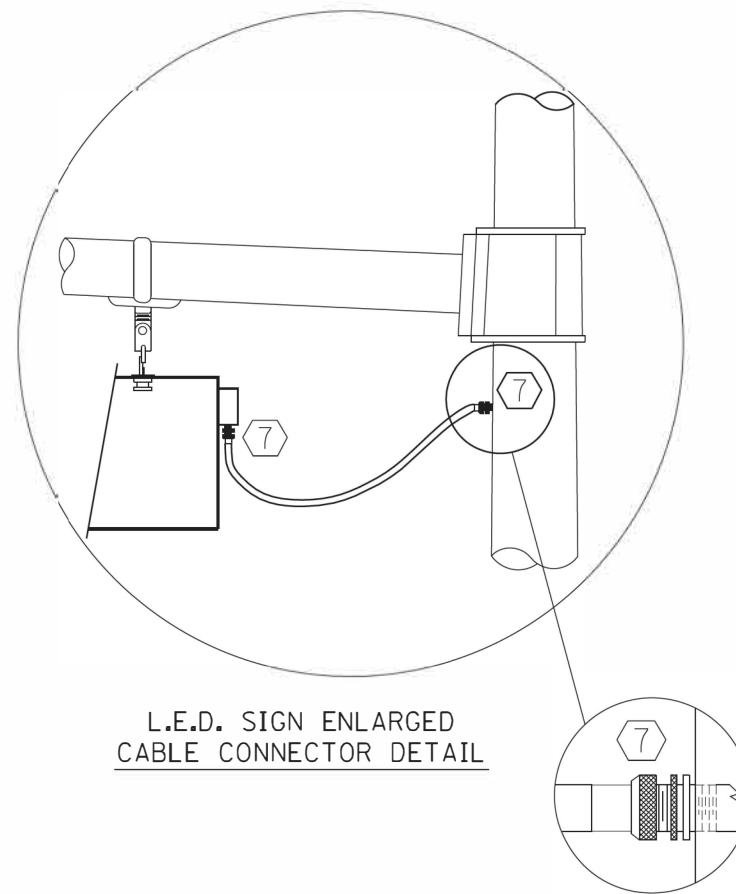
BILL OF MATERIALS



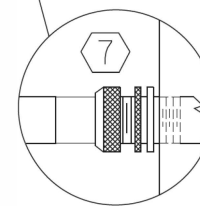
CONTROLLER CABINET SIDE VIEW



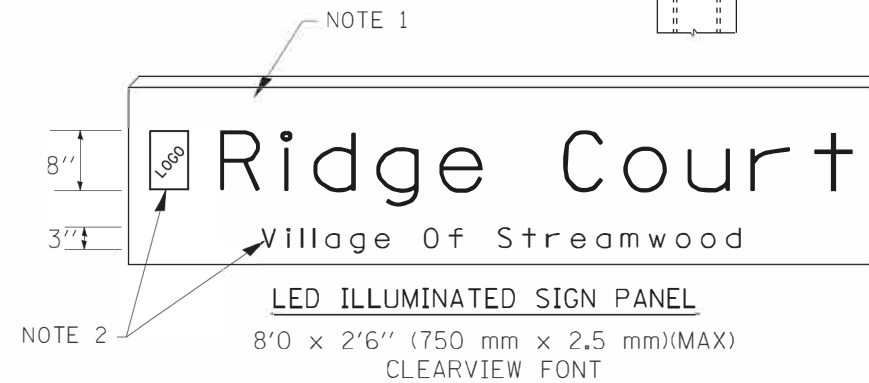
STEEL COMBINATION MAST OR STEEL ARM MAST ARM ASSEMBLY AND POLE



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



L.E.D. SIGN ENLARGED CABLE CONNECTOR DETAIL



- LED ILLUMINATED SIGN PANEL  
8'0" x 2'6" (750 mm x 2.5 mm)(MAX)  
CLEARVIEW FONT
- NOTES:
- SIGNS SHALL BE DUAL SIDED. FRONT AND BACK OF SIGN WILL BE THE SAME.
  - CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN. VERIFY WITH ENGINEER.
  - SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS. THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
  - ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:  
R = RED      BL = BLUE      W = WHITE  
B = BLACK      Y = YELLOW      G = GREEN
  - ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
  - ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

FILE NAME =	USER NAME = kanthaphixaybo	DESIGNED - BCK	REVISED -
cs:\pwork\pwork\kanthaphixaybo\d011261	tr of fic legend.v8.dgn	DRAWN - BCK	REVISED -
	PLOT SCALE = 19.9688" / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 4/12/2011	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
LIGHTED STREET NAME SIGN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	27
CONTRACT NO. 61J39				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**REMOVAL AND RELOCATION NOTES:**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH STEEL MAST ARM ASSEMBLY AND POST
- 1 EACH ALUMINUM MAST ARM ASSEMBLY AND POST
- 5 EACH TRAFFIC SIGNAL POST
- 10 EACH 3-SECTION SIGNAL HEAD
- 4 EACH 5-SECTION SIGNAL HEAD
- 3 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE OF ILLINOIS, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE STOCK:

- 1 EACH CONTROLLER CABINET (COMPLETE) \*
- 1 EACH UNINTERRUPTABLE POWER SUPPLY

\* IF THE EXISTING CABINET IS TYPE M40, IT SHALL BE DISPOSED OF BY THE CONTRACTOR.

TEMPORARY WIRELESS INTERCONNECT TO DEARLOVE ROAD/GLENVIEW ROAD SEE SHEET 33

APPROX. STA 99+45.8, 50.2' LT

TEMPORARY SIDEWALK (SEE NOTE 2)

APPROX. STA 100+57.1, 54.9' LT (SEE NOTE 2)

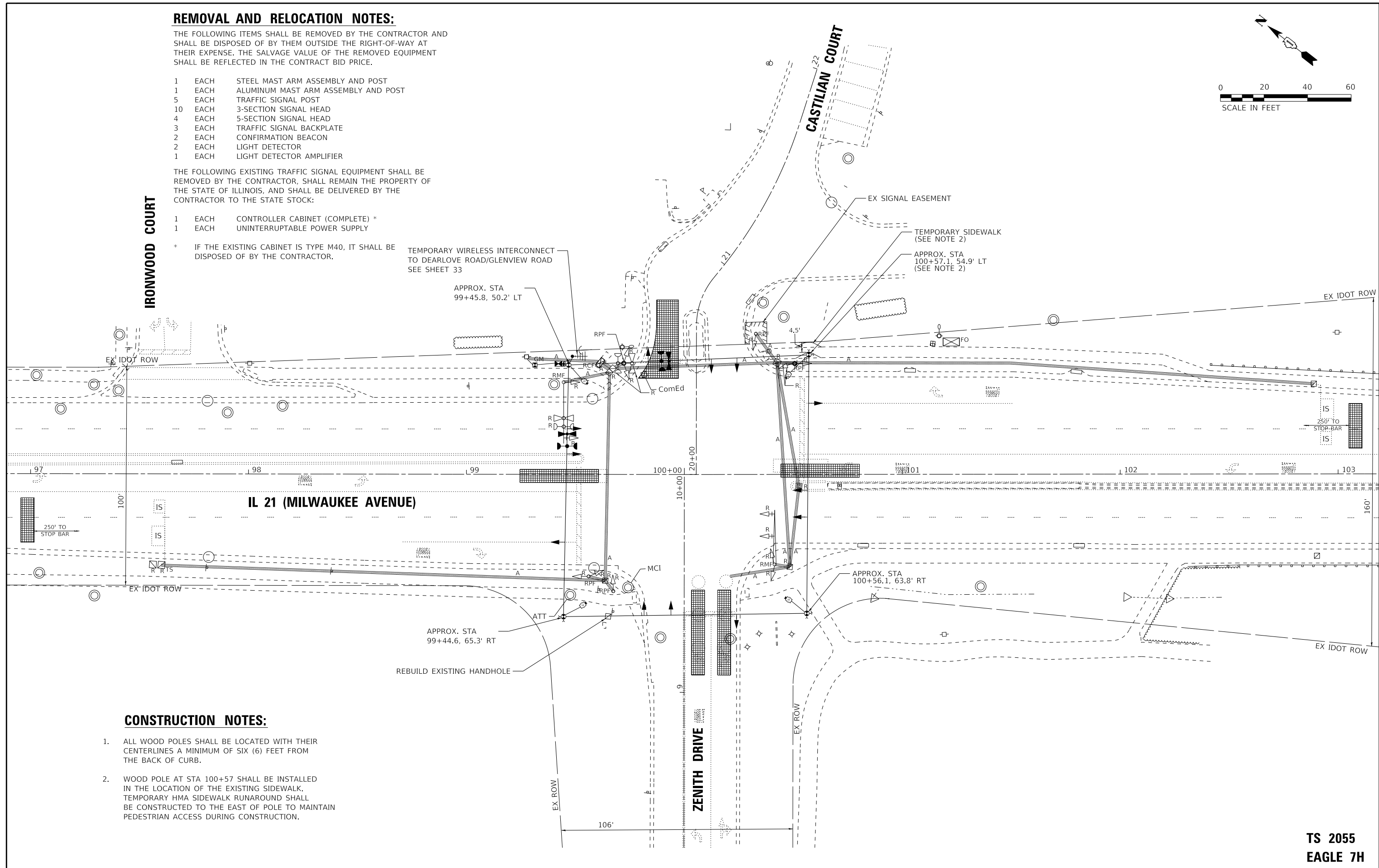
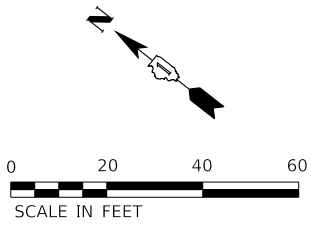
APPROX. STA 100+56.1, 63.8' RT

APPROX. STA 99+44.6, 65.3' RT

REBUILD EXISTING HANDHOLE

**CONSTRUCTION NOTES:**

1. ALL WOOD POLES SHALL BE LOCATED WITH THEIR CENTERLINES A MINIMUM OF SIX (6) FEET FROM THE BACK OF CURB.
2. WOOD POLE AT STA 100+57 SHALL BE INSTALLED IN THE LOCATION OF THE EXISTING SIDEWALK. TEMPORARY HMA SIDEWALK RUNAROUND SHALL BE CONSTRUCTED TO THE EAST OF POLE TO MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.



TS SHEET NO.10

**TS 2055  
EAGLE 7H**



USER NAME = kroberson	DESIGNED - GJF	REVISED -
DRAWN - KAR	REVISIONS -	
PLOT SCALE = 20.0000 "/td> <td>CHECKED - JBT</td> <td>REVISED -</td>	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Temp Traffic_01.dgn

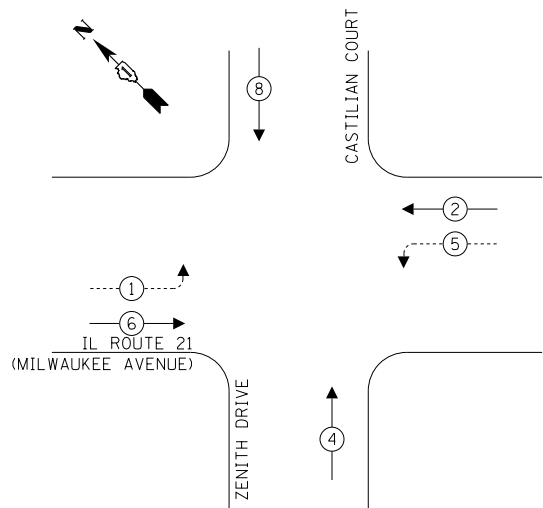
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN MILWAUKEE AVENUE (IL 21) AT ZENITH DR / CASTILIAN CT**

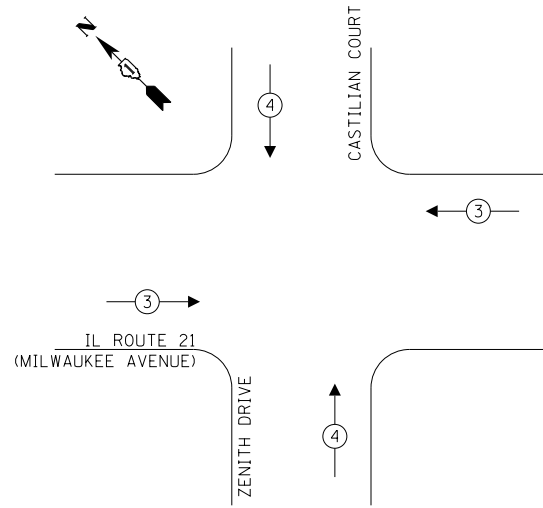
SCALE: 1" = 20' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	28
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61J39	

**PROPOSED CONTROLLER SEQUENCE**



**PROPOSED EMERGENCY VEHICLE  
PREEMPTION SEQUENCE**



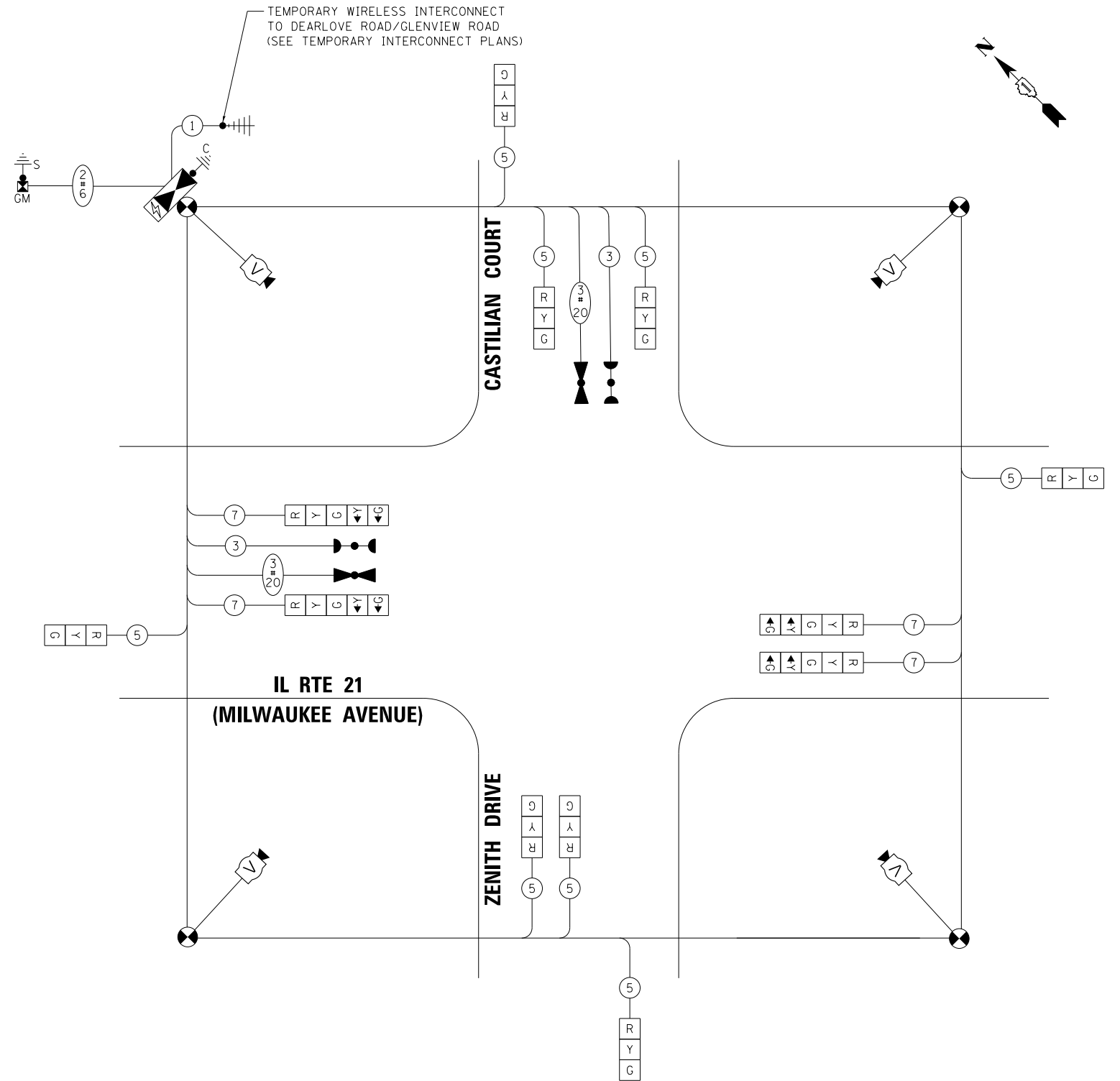
**LEGEND:**

- ← ⊙ ← PROTECTED PHASE
- ← ⊙ ····· PROTECTED/PERMITTED PHASE
- ← ⊙ → PEDESTRIAN PHASE
- ← ⊙ OL → OVERLAP

**TRAFFIC SIGNAL  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
<b>SIGNAL HEAD</b>			
3 - SECTION	8	11	88
4 - SECTION	0	14	0
5 - SECTION	4	13	52
<b>PROGRAMMABLE SIGNALS</b>			
3 - SECTION	0	22	0
4 - SECTION	0	32	0
5 - SECTION	0	28	0
PED. SIGNAL	0	15	0
CONTROLLER	1	150	150
MASTER CONTROLLER	0	100	0
UPS	1	25	25
<b>DETECTION</b>			
RADAR	0	20	0
VIDEO	4	20	80
BLANK-OUT SIGN	0	25	0
NETWORK SWITCH II OR III	0	35	0
CELLULAR MODEM	0	15	0
<b>TOTAL UPS SIZING</b>			395
UPS CHARGING	1	225	225
BATTERY HEATER MAT	0	180	0
CABINET HEATER	0	200	0
FLASHER	0	15	0
LED STREET NAME SIGN	0	120	0
LUMINAIRE	0	240	0
<b>TOTAL SERVICE WIRE SIZING</b>			225

ENERGY COSTS TO:  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096  
ENERGY SUPPLY CONTACT TERRI BLACK  
PHONE: 847-816-5239  
COMPANY: COMMONWEALTH EDISON  
ACCOUNT NUMBER: ---



TS SHEET NO.11

**TS 2055  
EAGLE 7H**



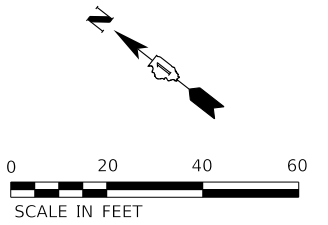
USER NAME = kroberson	DESIGNED - GJF	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - KAR	REVISED -
PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Temp Cable Plan_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

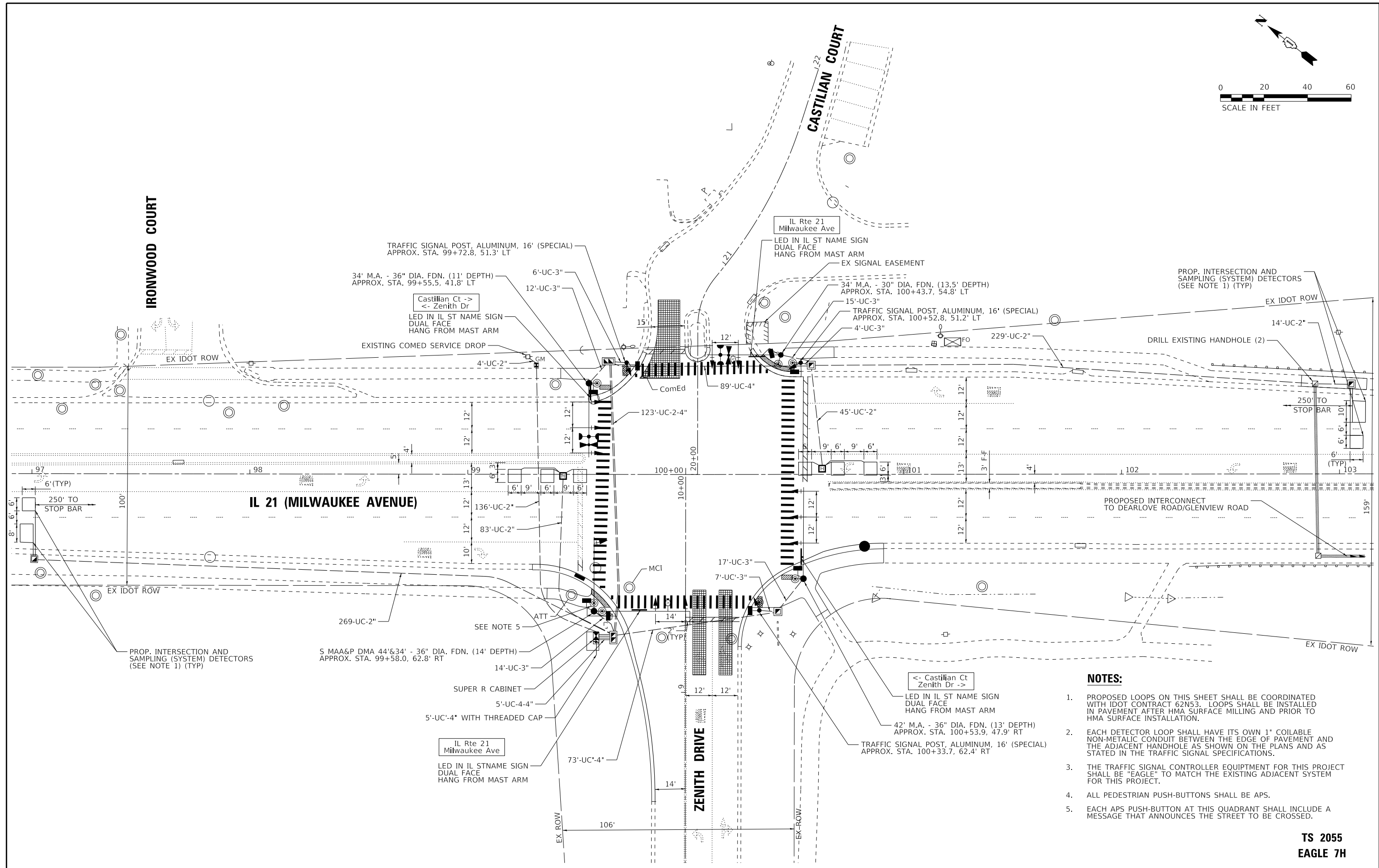
**TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,  
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
MILWAUKEE AVENUE (IL 21) AT ZENITH DR / CASTILIAN CT**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	29
CONTRACT NO.			61139	
ILLINOIS FED. AID PROJECT				



TS SHEET NO. 12

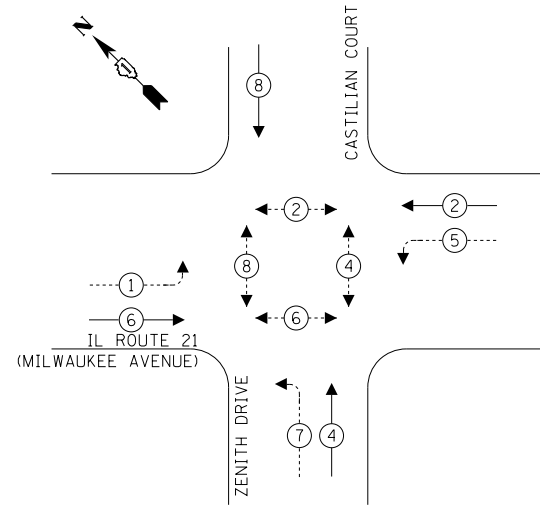


- NOTES:**
1. PROPOSED LOOPS ON THIS SHEET SHALL BE COORDINATED WITH IDOT CONTRACT 62N53. LOOPS SHALL BE INSTALLED IN PAVEMENT AFTER HMA SURFACE MILLING AND PRIOR TO HMA SURFACE INSTALLATION.
  2. EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NON-METALIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.
  3. THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM FOR THIS PROJECT.
  4. ALL PEDESTRIAN PUSH-BUTTONS SHALL BE APS.
  5. EACH APS PUSH-BUTTON AT THIS QUADRANT SHALL INCLUDE A MESSAGE THAT ANNOUNCES THE STREET TO BE CROSSED.

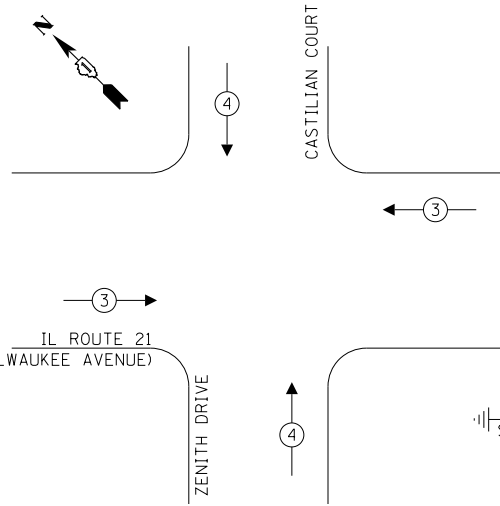
**TS 2055  
EAGLE 7H**

	USER NAME = kroberson	DESIGNED - GJF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	<b>TRAFFIC SIGNAL MODERNIZATION PLAN</b> <b>MILWAUKEE AVENUE (IL 21) AT ZENITH DRIVE / CASTILIAN CT</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 20.0000' / in.	DRAWN - KAR	REVISED -		374	21-00203-00-TL	COOK	44	30			
	PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -		CONTRACT NO. 61J39							
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Signal Modernization_01.dgn	ILLINOIS FED. AID PROJECT									
					SCALE: 1" = 20'	SHEET 1 OF 1 SHEETS	STA. TO STA.					

**PROPOSED CONTROLLER SEQUENCE**



**PROPOSED EMERGENCY VEHICLE  
PREEMPTION SEQUENCE**



**LEGEND:**

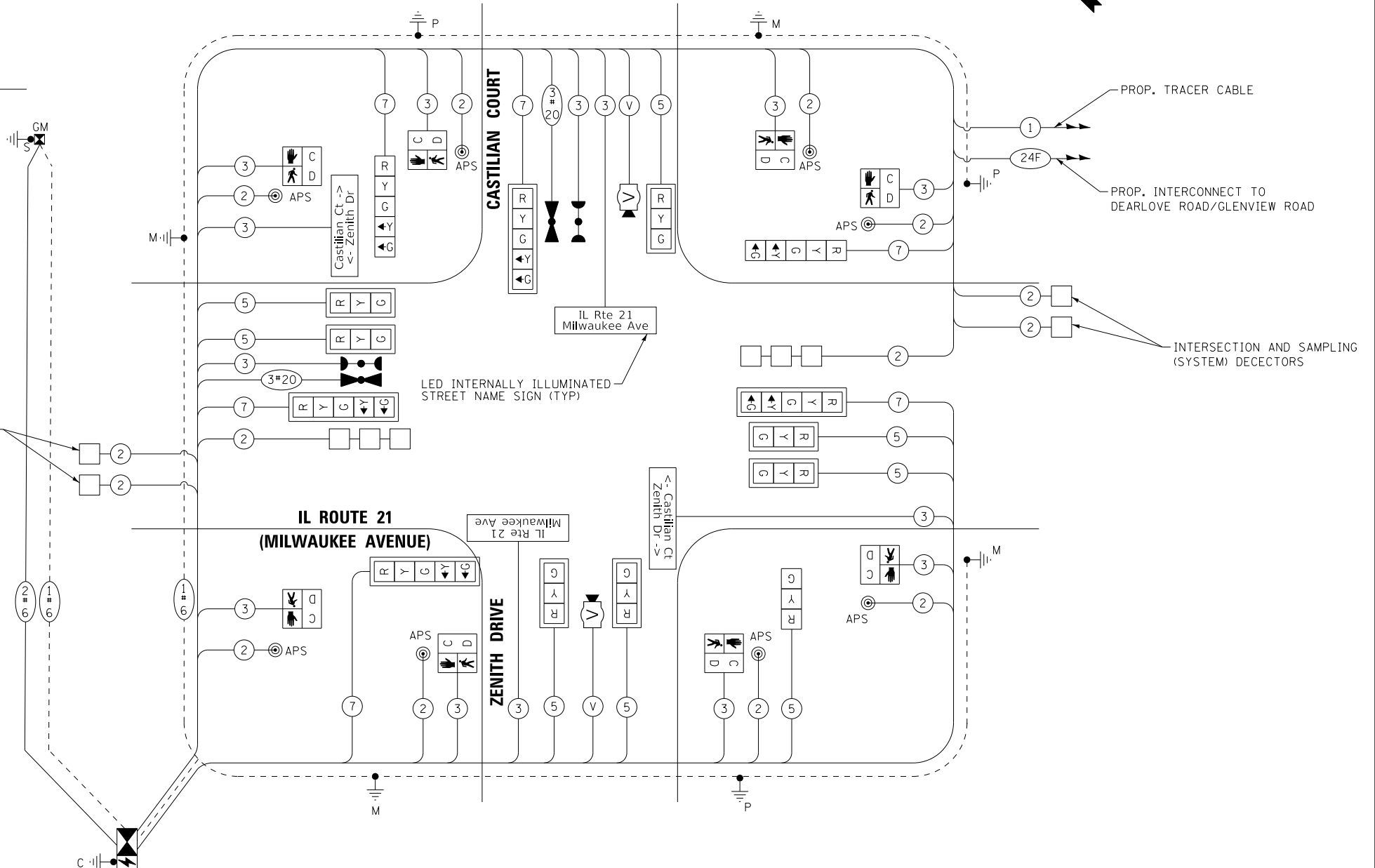
- ← ⊙ → PROTECTED PHASE
- ← ⊙ ⊙ → PROTECTED/PERMITTED PHASE
- ← ⊙ ⊙ ⊙ → PEDESTRIAN PHASE
- ← ⊙ ⊙ ⊙ ⊙ → OVERLAP

**TRAFFIC SIGNAL  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
<b>SIGNAL HEAD</b>			
3 - SECTION	8	11	88
4 - SECTION	0	14	0
5 - SECTION	6	13	78
<b>PROGRAMMABLE SIGNALS</b>			
3 - SECTION	0	22	0
4 - SECTION	0	32	0
5 - SECTION	0	28	0
PED. SIGNAL	8	15	120
CONTROLLER	1	150	150
MASTER CONTROLLER	0	100	0
UPS	1	25	25
<b>DETECTION</b>			
RADAR	0	20	0
VIDEO	2	20	40
BLANK-OUT SIGN	0	25	0
NETWORK SWITCH II OR III	0	35	0
CELLULAR MODEM	0	15	0
<b>TOTAL UPS SIZING</b>			501
UPS CHARGING	1	225	225
BATTERY HEATER MAT	0	180	0
CABINET HEATER	0	200	0
FLASHER	0	15	0
LED STREET NAME SIGN	4	120	480
LUMINAIRE	0	240	0
<b>TOTAL SERVICE WIRE SIZING</b>			705

ENERGY COSTS TO:  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096  
ENERGY SUPPLY CONTACT TERRI BLACK  
PHONE: 847-816-5239  
COMPANY: COMMONWEALTH EDISON  
ACCOUNT NUMBER: ---

INTERSECTION AND SAMPLING  
(SYSTEM) DETECTORS



**CABLE PLAN**

(NOT TO SCALE)

TS SHEET NO. 13



USER NAME = kroberson  
DESIGNED - GJF  
DRAWN - KAR  
PLOT SCALE = 20.0000" / in.  
CHECKED - JBT  
PLOT DATE = 2/15/2023

REVISED -  
REVISED -  
REVISED -  
DATE - 02-15-2023  
FILE - 212221\_PH2\_SHT-TS-Cable Plan\_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

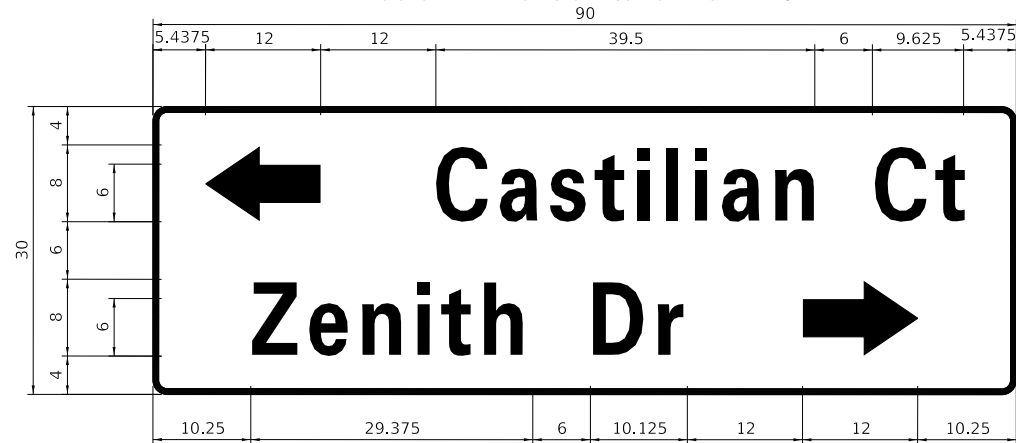
SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	31
CONTRACT NO. 61J39				
ILLINOIS FED. AID PROJECT				

**TS 2055  
EAGLE 7H**

**SIGN PANEL – FOR LED INTERNALLY ILLUMINATED STREET NAME SIGNS**

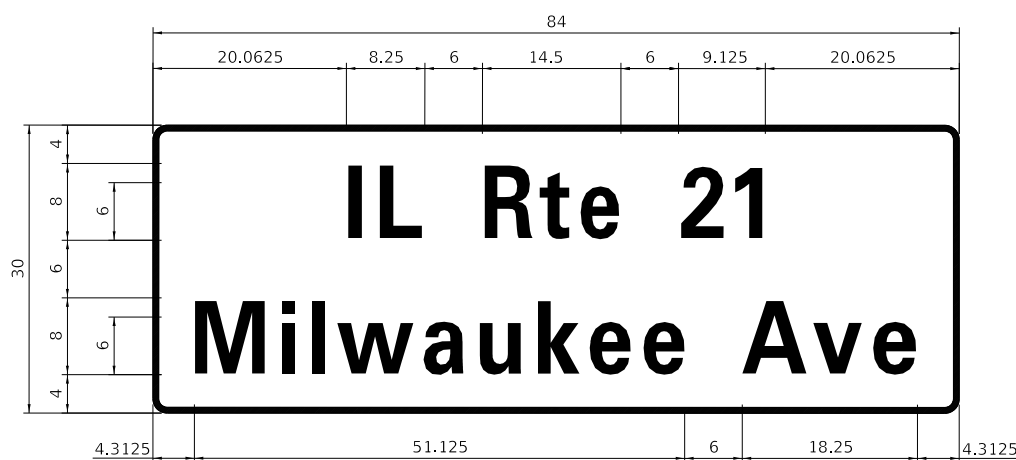
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)
D	18.75



DESIGN SERIES	AREA (SQ FT)
D	18.75



DESIGN SERIES	AREA (SQ FT)
D	17.5

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MOUNTED STREET NAMES SIGNS DETAIL.

**SCHEDULE OF QUANTITIES**

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	780
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	75
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	433
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	2
PAINT NEW TRAFFIC SIGNAL POST	EACH	3
PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	2
PAINT NEW MAST ARM AND POLE, 40 FOOT AND OVER	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1251
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1849
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1385
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1290
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2231
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	167
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1341
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	14
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	38
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	11
INDUCTIVE LOOP DETECTOR	EACH	6
DETECTOR LOOP, TYPE I	FOOT	346
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING SERVICE INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE	EACH	1
REMOVE EXISTING HANDHOLE	EACH	5
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	542
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	2
EXPLORATION TRENCH (SPECIAL)	FOOT	20
PAINT NEW MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 1-UNDER 40 FEET, 1-OVER 40 FEET	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
TRAFFIC SIGNAL POST, ALUMINUM 16 FT. (SPECIAL)	EACH	3
ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT. (SPECIAL)	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT. (SPECIAL)	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 44 FT. AND 34 FT. (SPECIAL)	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	754

\*

\* NOMINAL QUANTITY TO BE USED AT THE DIRECTION OF THE ENGINEER

TS SHEET NO. 14



USER NAME = kroberson	DESIGNED - GJF	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - KAR	REVISED -
PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Mast Arm Signs_01.dgn

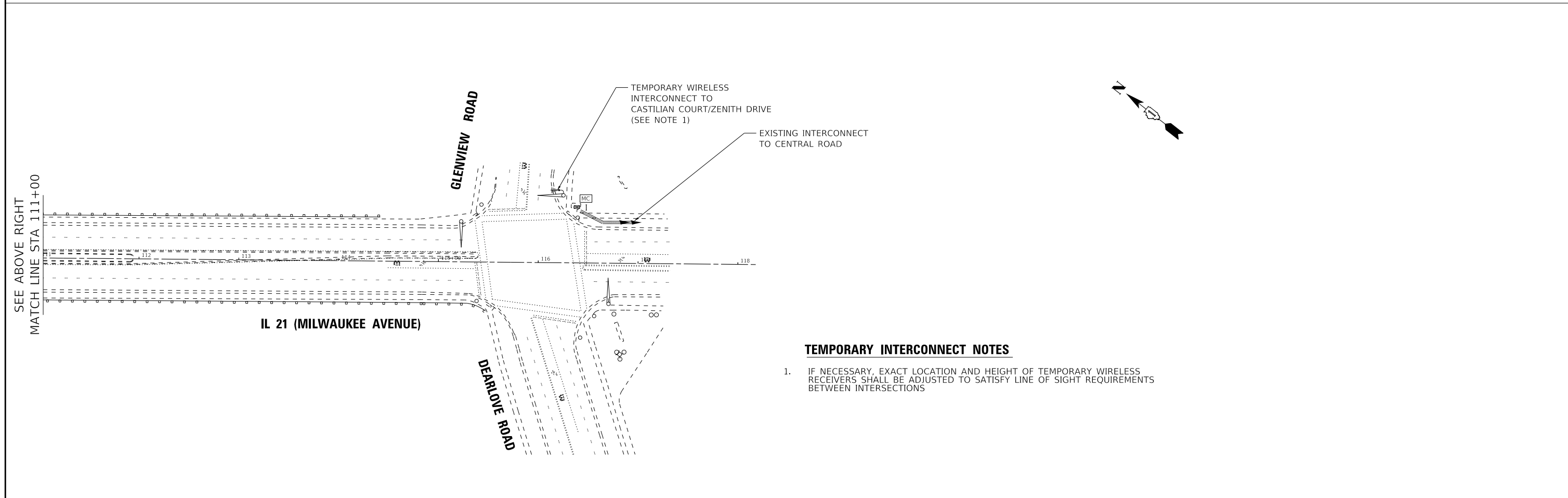
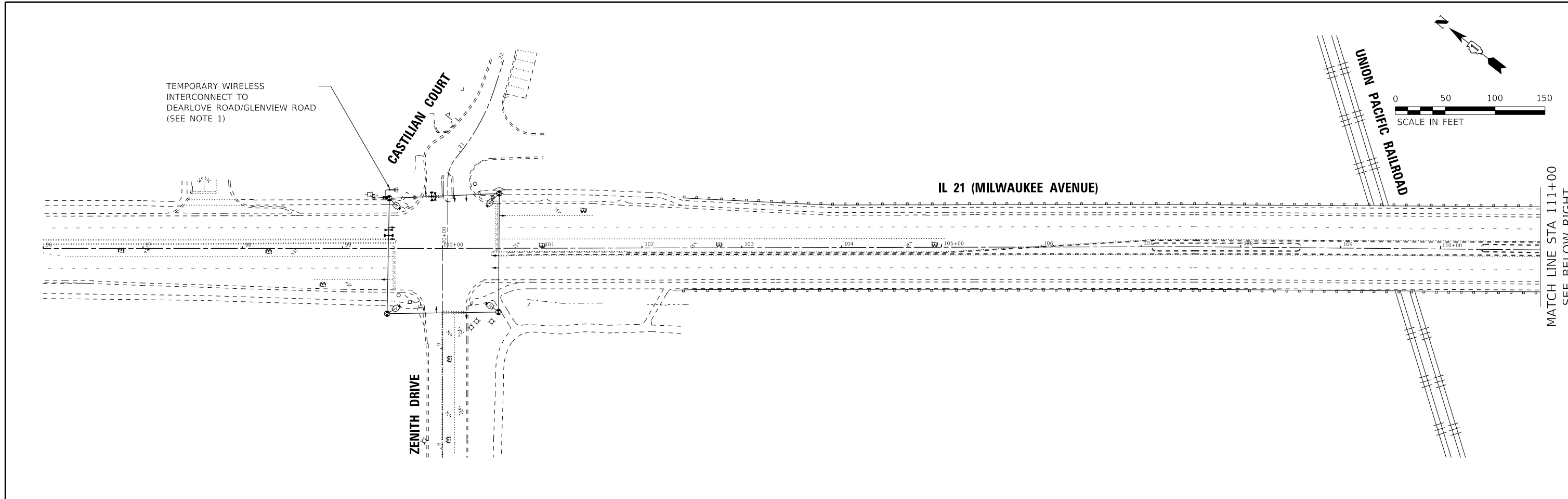
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**MAST ARM MOUNTED STREET NAME SIGNS  
AND SCHEDULE OF QUANTITIES**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	32
CONTRACT NO.			61J39	
ILLINOIS FED. AID PROJECT				





**TEMPORARY INTERCONNECT NOTES**

1. IF NECESSARY, EXACT LOCATION AND HEIGHT OF TEMPORARY WIRELESS RECEIVERS SHALL BE ADJUSTED TO SATISFY LINE OF SIGHT REQUIREMENTS BETWEEN INTERSECTIONS

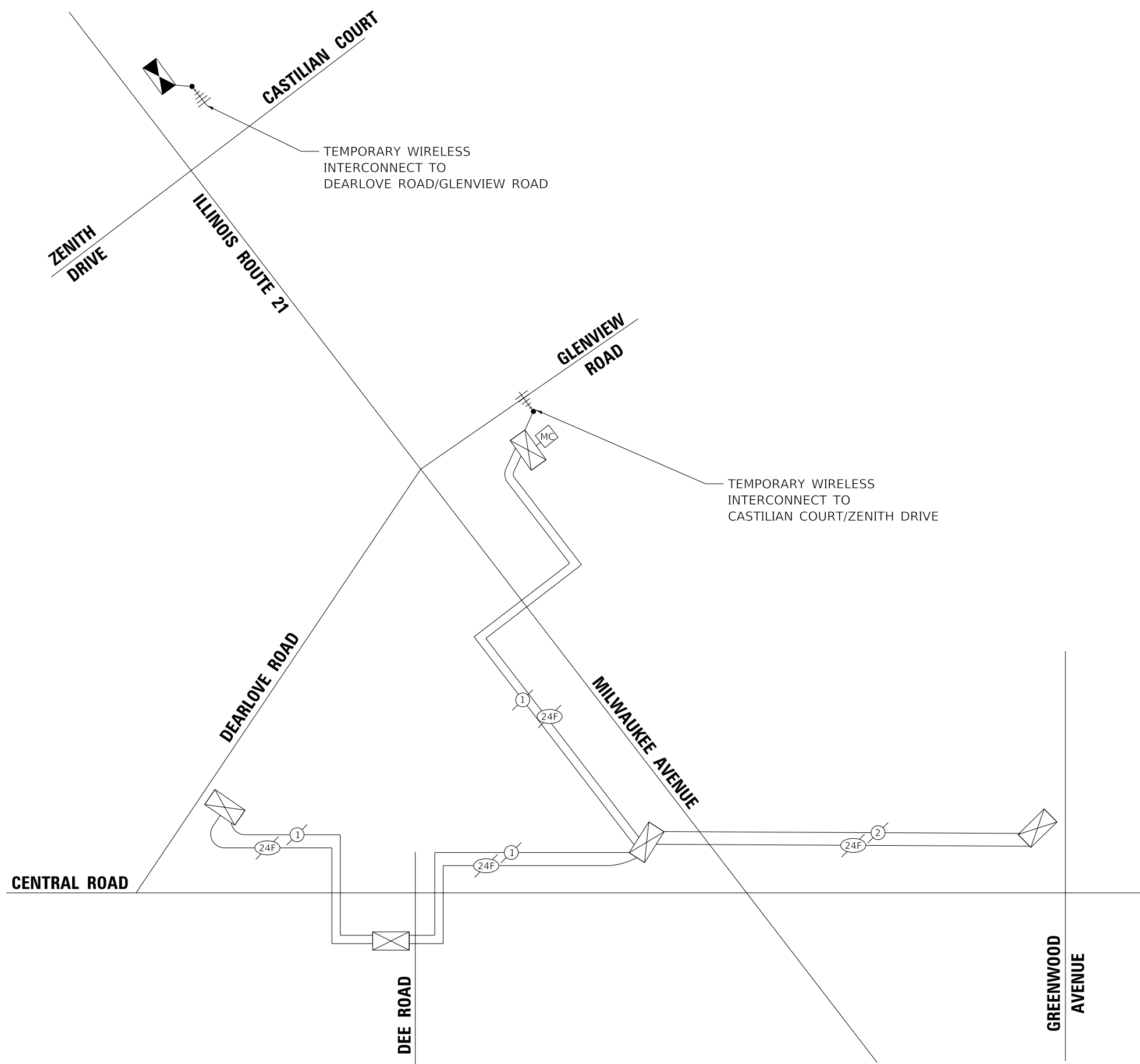


USER NAME = kroberson	DESIGNED - GJF	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - KAR	REVISED -
PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Temp Interconnect Plan_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>TEMPORARY INTERCONNECT PLAN</b>			
<b>IL ROUTE 21 (MILWAUKEE AVENUE)</b>			
<b>FROM ZENITH DR / CASTILIAN CT TO DEARLOVE RD / GLENVIEW RD</b>			
SCALE: 1"=50'	SHEET 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	33
			CONTRACT NO. 61J39	
ILLINOIS FED. AID PROJECT				



TEMPORARY WIRELESS  
INTERCONNECT TO  
DEARLOVE ROAD/GLENVIEW ROAD

TEMPORARY WIRELESS  
INTERCONNECT TO  
CASTILIAN COURT/ZENITH DRIVE

TS SHEET NO. 16



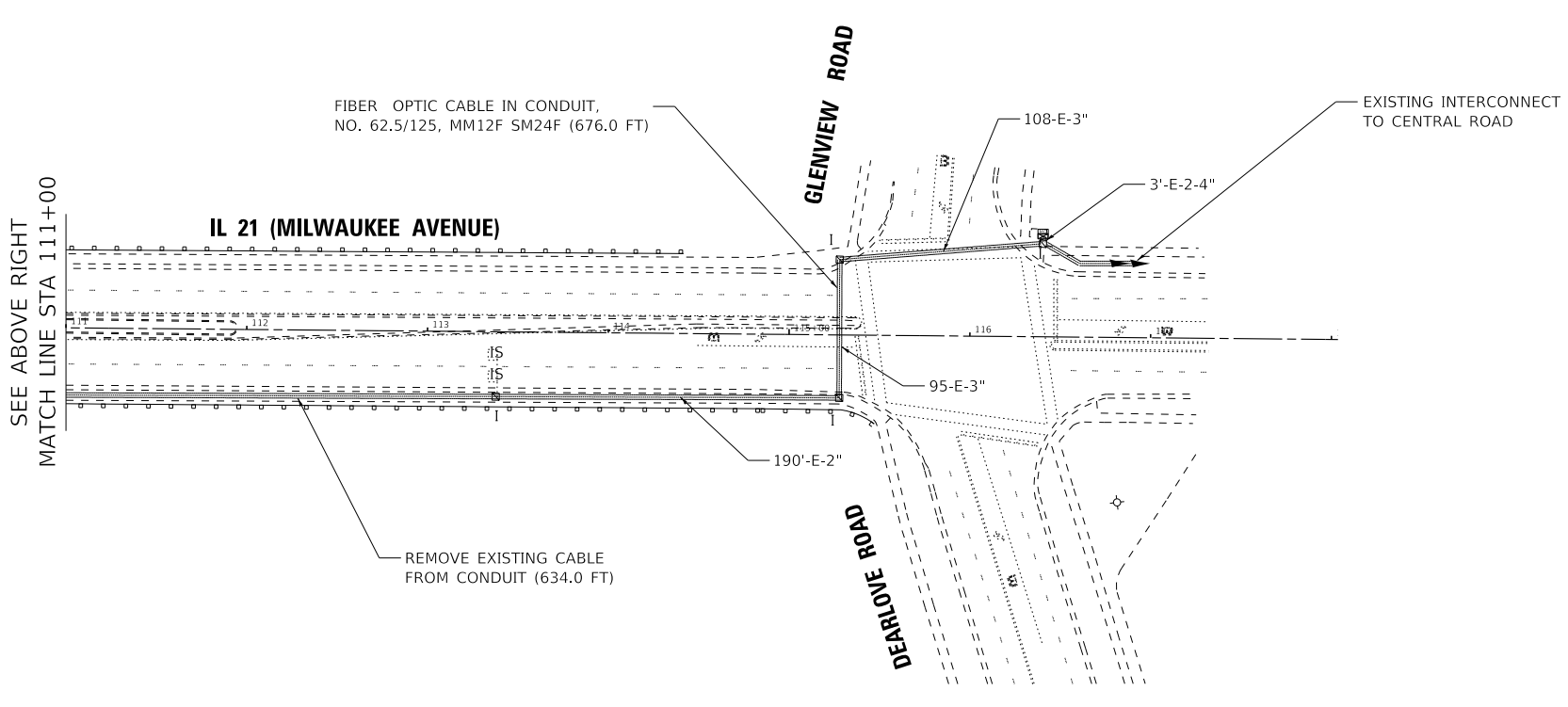
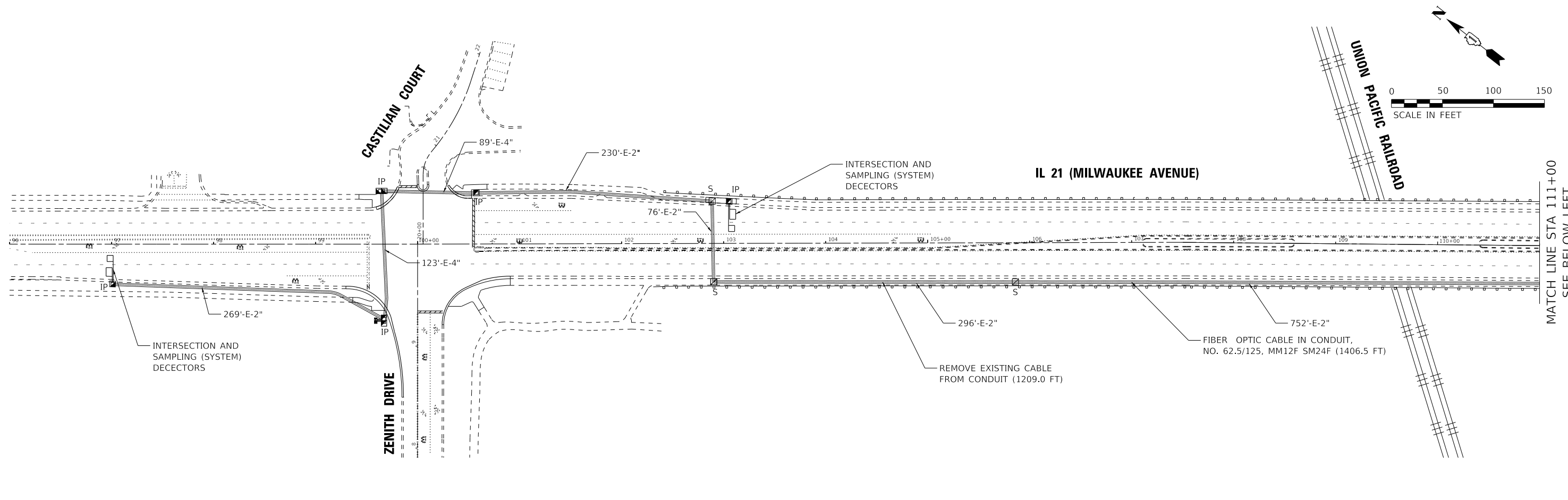
USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Temp Interconnect Schematic_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC  
IL ROUTE 21 (MILWAUKEE AVENUE)  
FROM ZENITH DR TO GLENVIEW RD

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	34
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	



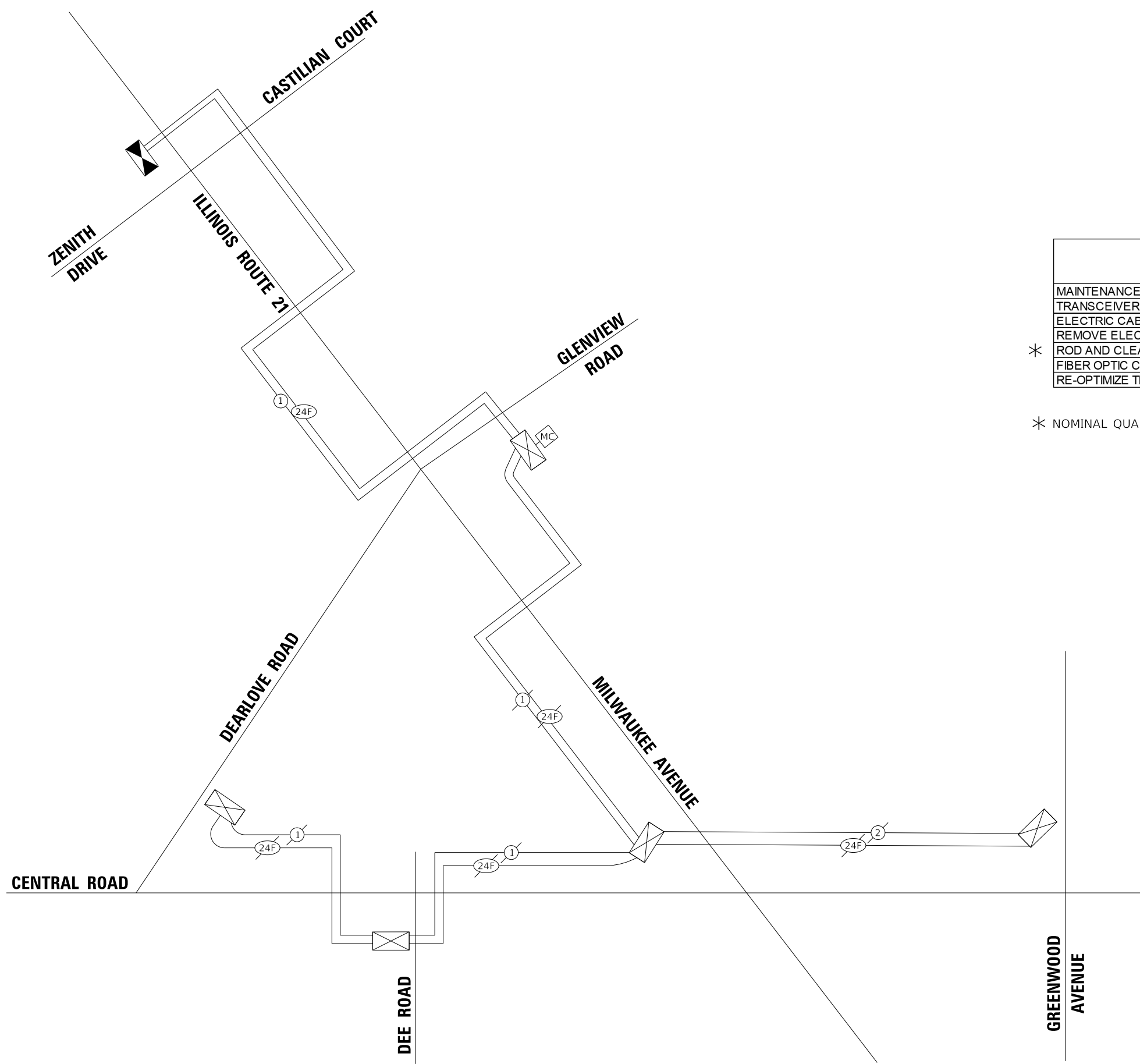
USER NAME = kroberson	DESIGNED - GJF	REVISED -
PLOT SCALE = 50.0000' / in.	DRAWN - KAR	REVISED -
PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Interconnect_Plan_01.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**INTERCONNECT PLAN**  
**IL ROUTE 21 (MILWAUKEE AVENUE)**  
**FROM ZENITH DR / CASTILIAN CT TO DEARLOVE RD / GLENVIEW RD**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	35
ILLINOIS			FED. AID PROJECT	

SCALE: 1"=50' SHEET 1 OF 1 SHEETS STA. TO STA.



**SCHEDULE OF QUANTITIES**

ITEM DESCRIPTION	UNITS	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2083
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1838
* ROD AND CLEAN EXISTING CONDUIT	FOOT	800
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2083
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1

\* NOMINAL QUANTITY TO BE USED AT THE DIRECTION OF THE ENGINEER

TS SHEET NO. 18



USER NAME = kroberson	DESIGNED - GJF	REVISED -
	DRAWN - KAR	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JBT	REVISED -
PLOT DATE = 2/15/2023	DATE - 02-15-2023	FILE - 212221_PH2_SHT-TS-Interconnect Schematic_01.dgn

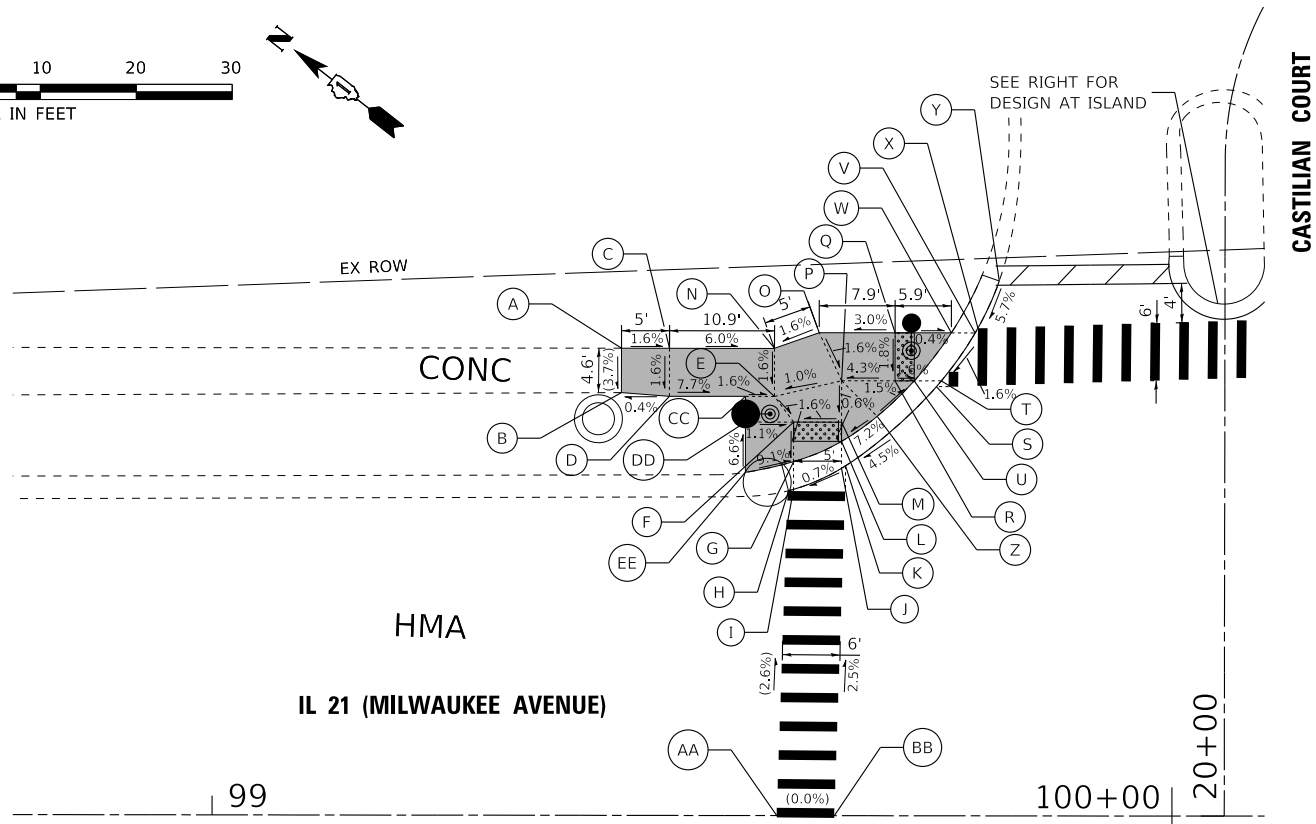
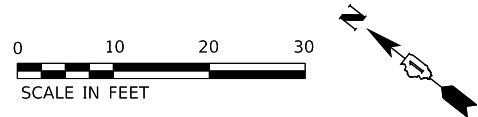
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**PROPOSED INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES**  
**IL ROUTE 21 (MILWAUKEE AVENUE)**  
**FROM ZENITH DR / CASTILIAN CT TO DEARLOVE RD / GLENVIEW RD**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 36
ILLINOIS			FED. AID PROJECT	

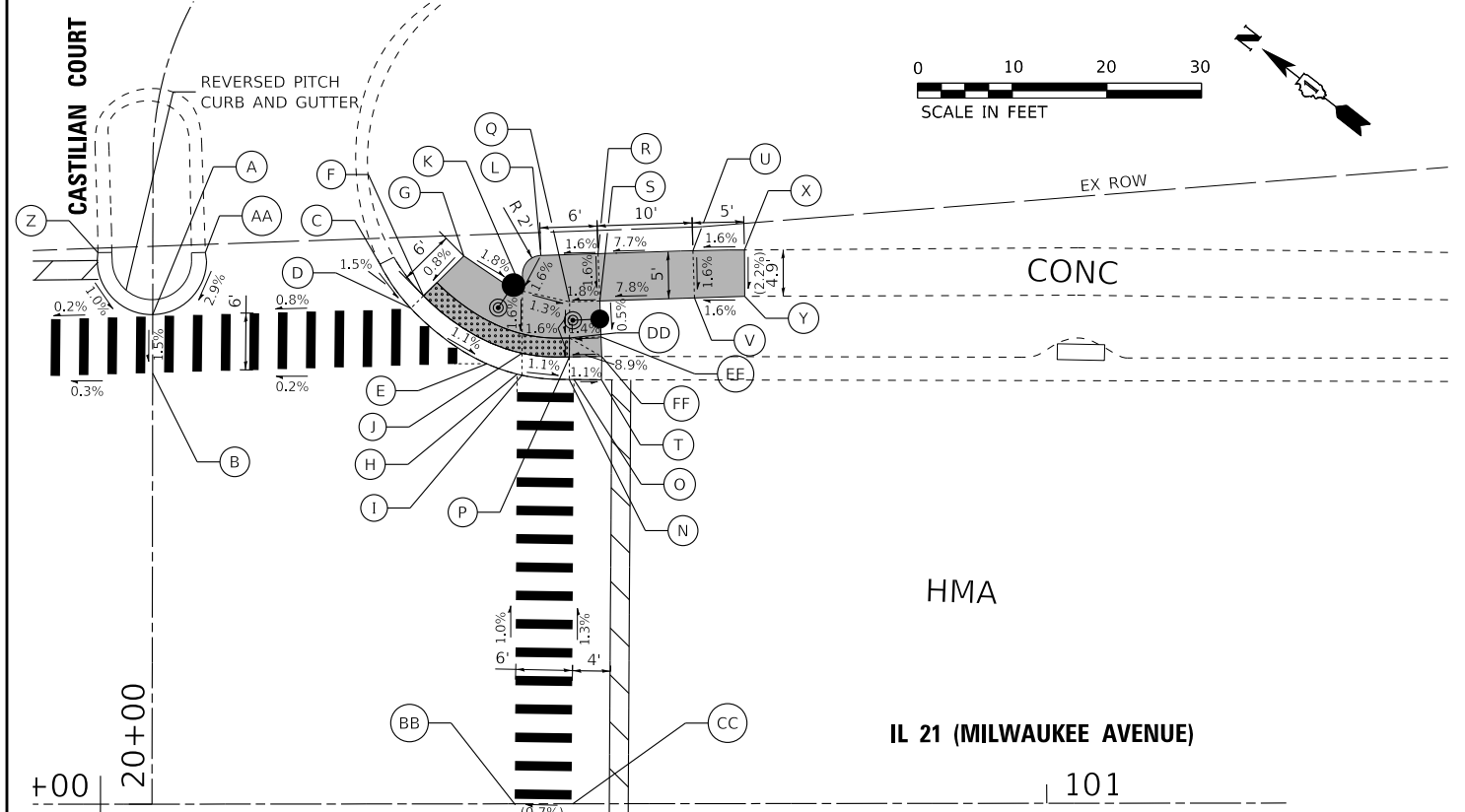
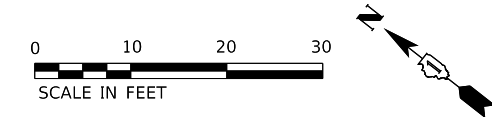
CONTRACT NO. 61J39



	STATION	OFFSET	ELEVATION
A	99+42.6	48.7' LT	(668.08')
B	99+42.6	44.1' LT	(667.90')
C	99+47.6	48.7' LT	668.00'
D	99+47.6	43.7' LT	667.92'
E	99+58.5	43.7' LT	667.26'
F	99+60.5	41.0' LT	667.21'
G	99+60.5	36.9' LT	667.14'
H	99+60.0	33.8' LT	(667.18')
I	99+60.5	34.0' LT	667.18'
J	99+66.0	36.5' LT	667.23'
K	99+71.1	40.4' LT	667.27'
L	99+65.5	39.0' LT	667.31'
M	99+65.5	41.0' LT	667.32'
N	99+58.5	48.7' LT	667.34'
O	99+63.2	50.3' LT	667.42'
P	99+65.5	45.3' LT	667.33'
Q	99+71.1	50.3' LT	667.68'
R	99+71.1	45.3' LT	667.59'
S	99+75.4	44.7' LT	667.54'
T	99+75.9	45.3' LT	667.56'
U	99+73.1	45.3' LT	667.56'
V	99+79.4	50.3' LT	667.65'
W	99+77.0	50.3' LT	667.65'
X	99+79.7	50.8' LT	667.66'
Y	99+81.9	55.7' LT	(667.97')
Z	99+69.2	41.6' LT	667.64'
AA	99+58.8	CL	(668.05')
BB	99+64.8	CL	(668.05')

	STATION	OFFSET	ELEVATION
CC	99+55.5	43.7' LT	667.31'
DD	99+55.5	41.0' LT	667.27'
EE	99+55.5	35.8' LT	(667.61')

- LEGEND**
- (X.X') EXISTING LENGTH/ELEVATION
  - (X.X%) EXISTING SLOPE
  - PROPOSED SIDEWALK
  - ▨ DETECTABLE WARNINGS



	STATION	OFFSET	ELEVATION
A	100+05.6	51.6' LT	667.71'
B	100+05.6	45.6' LT	(667.62')
C	100+29.6	57.1' LT	(667.86')
D	100+32.9	52.4' LT	667.77'
E	100+40.1	46.9' LT	667.67'
F	100+34.2	53.7' LT	667.77'
G	100+38.5	57.9' LT	667.82'
H	100+44.1	45.4' LT	667.63'
I	100+44.6	45.3' LT	667.62'
J	100+44.6	47.6' LT	667.58'
K	100+44.6	54.2' LT	667.69'
L	100+44.6	56.0' LT	667.72'
M	100+46.6	58.0' LT	667.76'
N	100+49.6	44.9' LT	667.57'
O	100+50.1	44.9' LT	667.56'
P	100+49.6	47.2' LT	667.53'
Q	100+49.5	53.1' LT	667.56'
R	100+52.7	58.1' LT	667.58'
S	100+52.7	53.1' LT	667.56'
T	100+53.0	44.8' LT	(667.53')
U	100+63.0	58.4' LT	668.37'
V	100+63.0	53.5' LT	668.29'
X	100+68.1	58.5' LT	(668.45')
Y	100+68.1	53.6' LT	(668.34')

	STATION	OFFSET	ELEVATION
Z	99+99.7	58.3' LT	(667.80')
AA	100+11.1	58.3' LT	(667.96')
BB	100+43.8	CL	(668.08')
CC	100+49.8	CL	(668.12')
DD	100+49.6	49.2' LT	667.50'
EE	100+53.0	49.2' LT	667.54'
FF	100+53.0	47.3' LT	(667.83')

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2024  
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PLOT DATE = 2/15/2023	CHECKED - JBT	REVISED -
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**MILWAUKEE AVENUE & ZENITH DRIVE**  
**ADA DETAILS**  
SCALE: 1" = 10' SHEET 1 OF 2 SHEETS STA. TO STA.

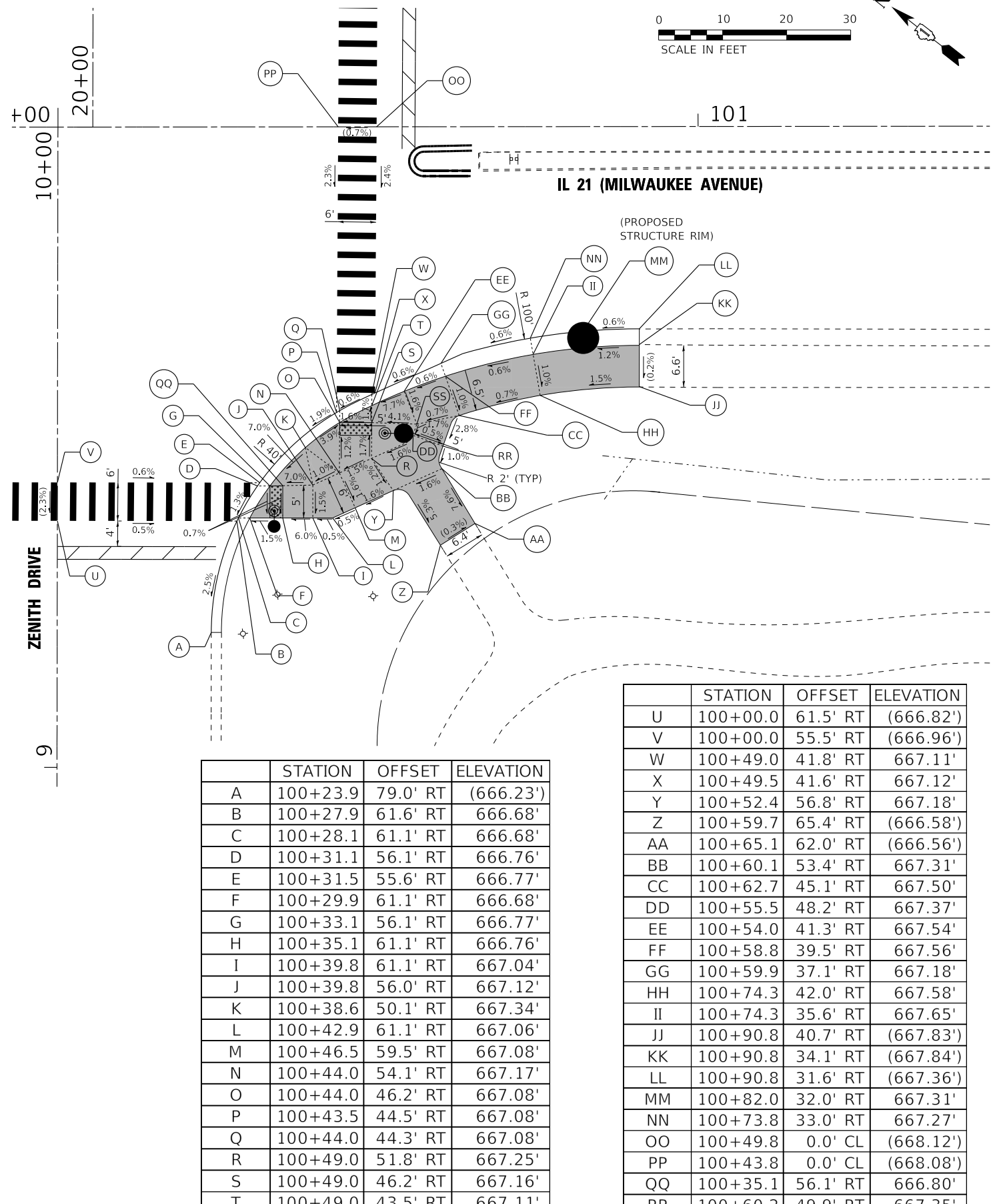
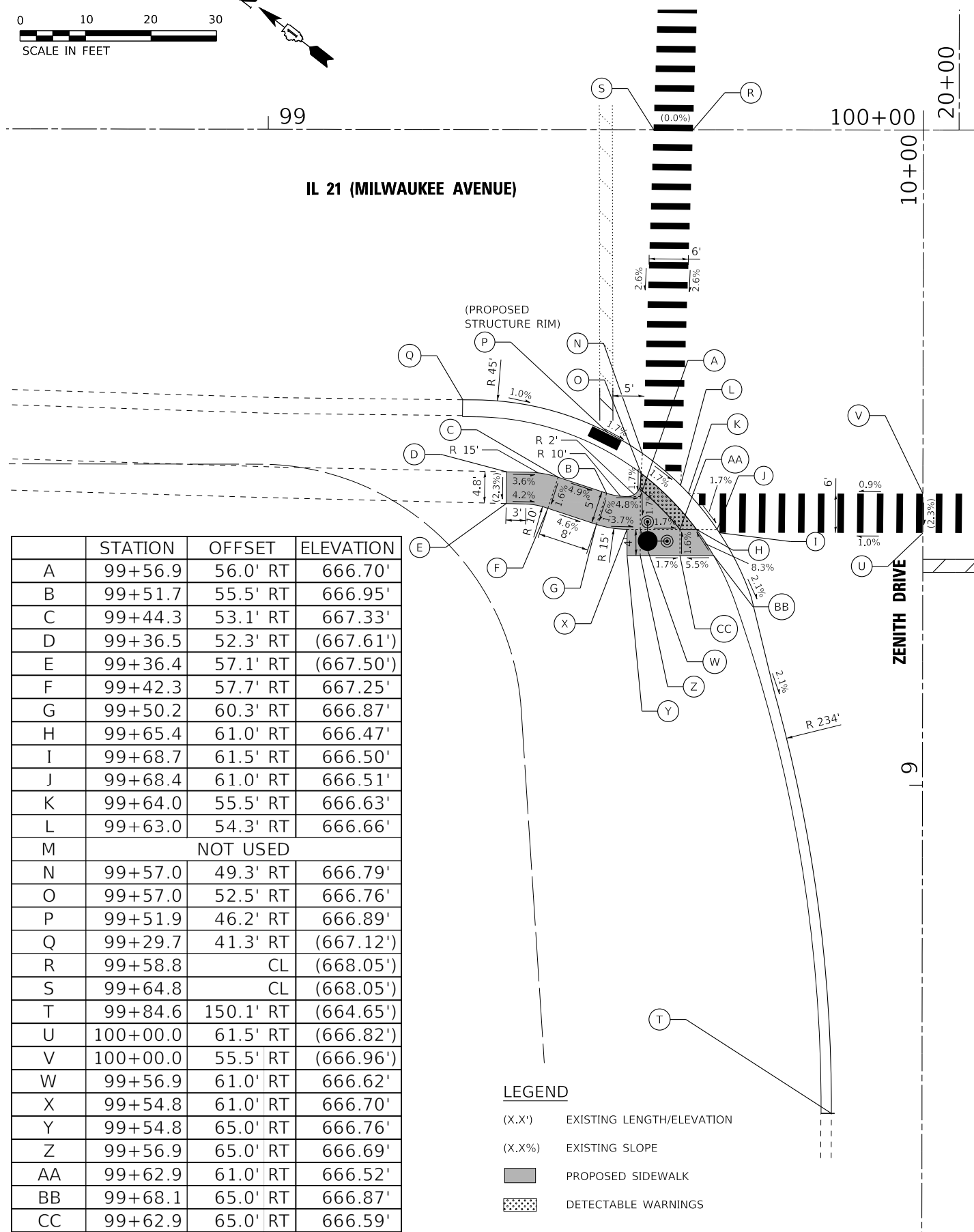
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	37
CONTRACT NO. 61J39			ILLINOIS FED. AID PROJECT	



	STATION	OFFSET	ELEVATION
A	99+56.9	56.0' RT	666.70'
B	99+51.7	55.5' RT	666.95'
C	99+44.3	53.1' RT	667.33'
D	99+36.5	52.3' RT	(667.61')
E	99+36.4	57.1' RT	(667.50')
F	99+42.3	57.7' RT	667.25'
G	99+50.2	60.3' RT	666.87'
H	99+65.4	61.0' RT	666.47'
I	99+68.7	61.5' RT	666.50'
J	99+68.4	61.0' RT	666.51'
K	99+64.0	55.5' RT	666.63'
L	99+63.0	54.3' RT	666.66'
M	NOT USED		
N	99+57.0	49.3' RT	666.79'
O	99+57.0	52.5' RT	666.76'
P	99+51.9	46.2' RT	666.89'
Q	99+29.7	41.3' RT	(667.12')
R	99+58.8	CL	(668.05')
S	99+64.8	CL	(668.05')
T	99+84.6	150.1' RT	(664.65')
U	100+00.0	61.5' RT	(666.82')
V	100+00.0	55.5' RT	(666.96')
W	99+56.9	61.0' RT	666.62'
X	99+54.8	61.0' RT	666.70'
Y	99+54.8	65.0' RT	666.76'
Z	99+56.9	65.0' RT	666.69'
AA	99+62.9	61.0' RT	666.52'
BB	99+68.1	65.0' RT	666.87'
CC	99+62.9	65.0' RT	666.59'

**LEGEND**

- (X.X') EXISTING LENGTH/ELEVATION
- (X.X%) EXISTING SLOPE
- PROPOSED SIDEWALK
- ▨ DETECTABLE WARNINGS



	STATION	OFFSET	ELEVATION
A	100+23.9	79.0' RT	(666.23')
B	100+27.9	61.6' RT	666.68'
C	100+28.1	61.1' RT	666.68'
D	100+31.1	56.1' RT	666.76'
E	100+31.5	55.6' RT	666.77'
F	100+29.9	61.1' RT	666.68'
G	100+33.1	56.1' RT	666.77'
H	100+35.1	61.1' RT	666.76'
I	100+39.8	61.1' RT	667.04'
J	100+39.8	56.0' RT	667.12'
K	100+38.6	50.1' RT	667.34'
L	100+42.9	61.1' RT	667.06'
M	100+46.5	59.5' RT	667.08'
N	100+44.0	54.1' RT	667.17'
O	100+44.0	46.2' RT	667.08'
P	100+43.5	44.5' RT	667.08'
Q	100+44.0	44.3' RT	667.08'
R	100+49.0	51.8' RT	667.25'
S	100+49.0	46.2' RT	667.16'
T	100+49.0	43.5' RT	667.11'

	STATION	OFFSET	ELEVATION
U	100+00.0	61.5' RT	(666.82')
V	100+00.0	55.5' RT	(666.96')
W	100+49.0	41.8' RT	667.11'
X	100+49.5	41.6' RT	667.12'
Y	100+52.4	56.8' RT	667.18'
Z	100+59.7	65.4' RT	(666.58')
AA	100+65.1	62.0' RT	(666.56')
BB	100+60.1	53.4' RT	667.31'
CC	100+62.7	45.1' RT	667.50'
DD	100+55.5	48.2' RT	667.37'
EE	100+54.0	41.3' RT	667.54'
FF	100+58.8	39.5' RT	667.56'
GG	100+59.9	37.1' RT	667.18'
HH	100+74.3	42.0' RT	667.58'
II	100+74.3	35.6' RT	667.65'
JJ	100+90.8	40.7' RT	(667.83')
KK	100+90.8	34.1' RT	(667.84')
LL	100+90.8	31.6' RT	(667.36')
MM	100+82.0	32.0' RT	667.31'
NN	100+73.8	33.0' RT	667.27'
OO	100+49.8	0.0' CL	(668.12')
PP	100+43.8	0.0' CL	(668.08')
QQ	100+35.1	56.1' RT	666.80'
RR	100+60.2	49.9' RT	667.35'
SS	100+56.1	46.4' RT	667.45'

STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
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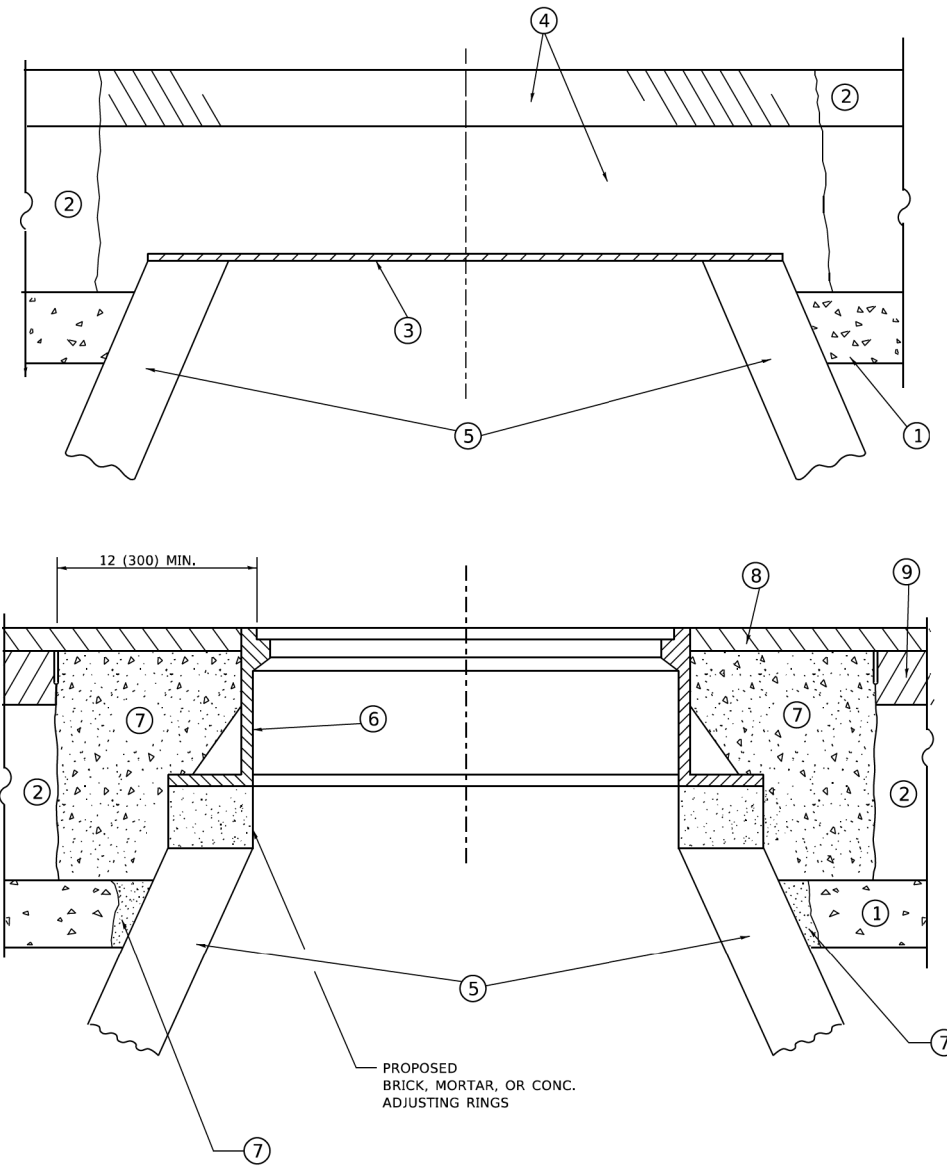
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MILWAUKEE AVENUE & ZENITH DRIVE  
ADA DETAILS

SCALE: 1" = 10' SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 38
CONTRACT NO. 61J39				ILLINOIS FED. AID PROJECT



**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND HMA SURFACE MIX APPROVED BY THE ENGINEER. (MIN. 1 1/2 (40) HMA TO REMAIN AFTER MILLING).

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS\*PP-1 CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

\* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS\*PP-1 CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

**LOCATION OF STRUCTURES**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**BASIS OF PAYMENT**

- 1. REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."
- 2. THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.
- 3. NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.
- 4. WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

**NOTES**

- 1. EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.
- 2. IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.
- 3. CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.
- 4. THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

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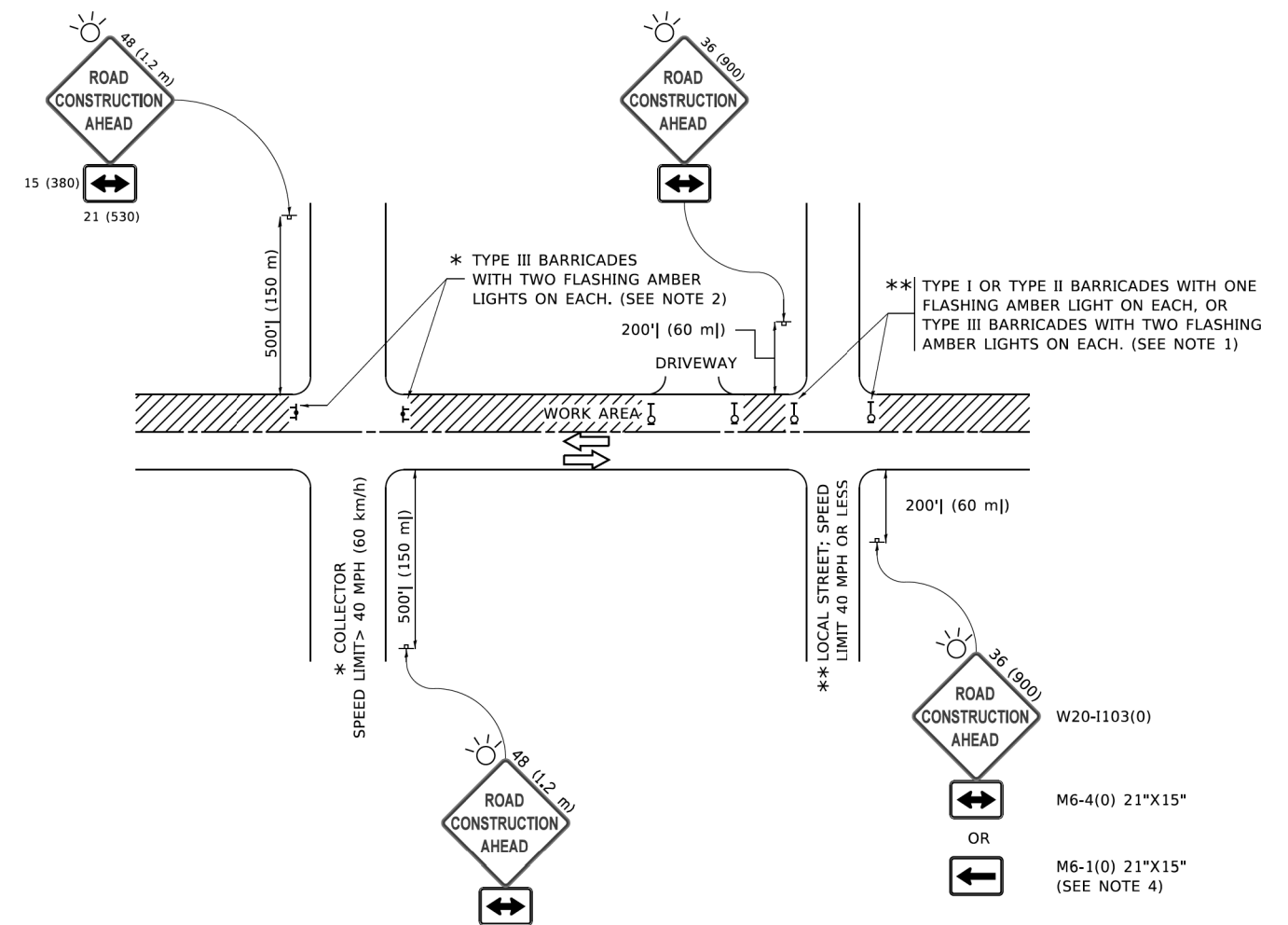
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PLOT DATE = 11/18/2022	DATE - 10-25-94	REVISED - K. SMITH 11-18-22

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR  
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	39
<b>BD600-03 (BD-08)</b>		CONTRACT NO. 61J39		
ILLINOIS FED. AID PROJECT				



**NOTES:**

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - b) BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

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PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED - T. RAMMACHER 01-06-00
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED - A. SCHUETZE 07-01-13
		REVISED - A. SCHUETZE 09-15-16

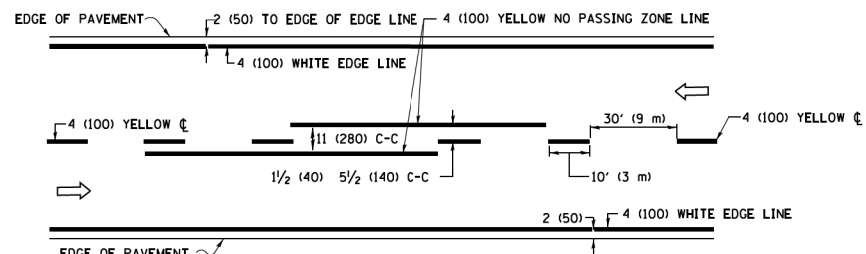
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

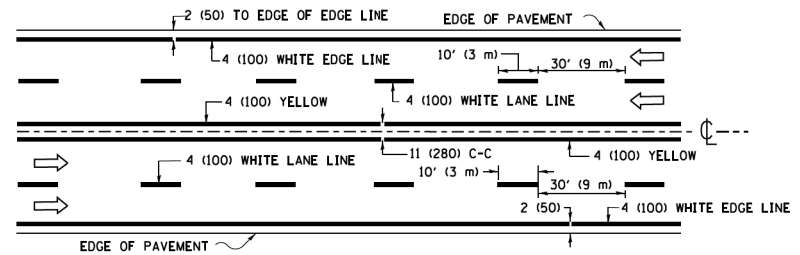
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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<b>TC-10</b>			CONTRACT NO. 61J39	
ILLINOIS FED. AID PROJECT				

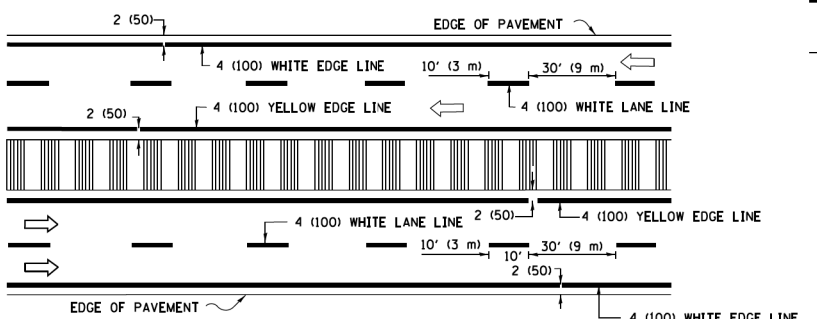




**2-LANE ROADWAY**

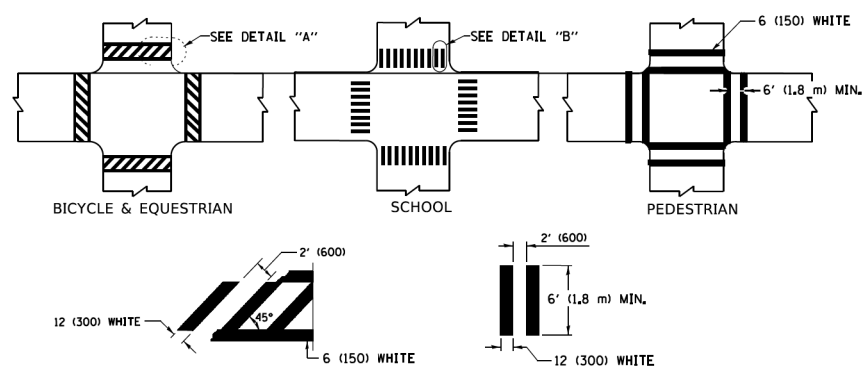


**MULTI-LANE UNDIVIDED**



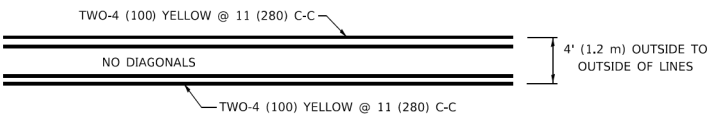
**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

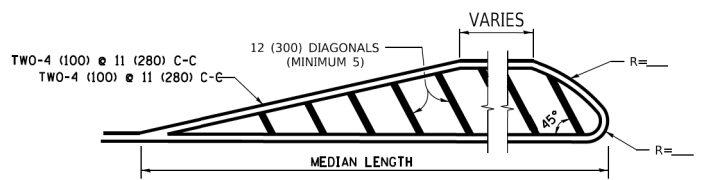


**TYPICAL CROSSWALK MARKING**

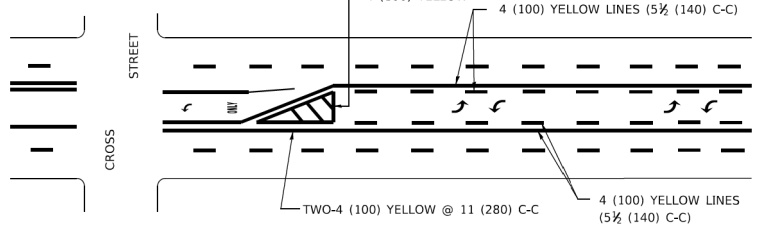
\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



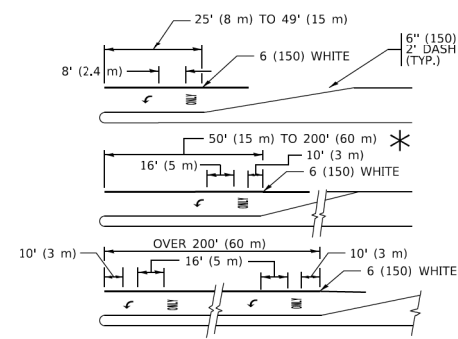
**4' (1.2 m) WIDE MEDIANS ONLY**



**MEDIANS OVER 4' (1.2 m) WIDE**



**MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING**



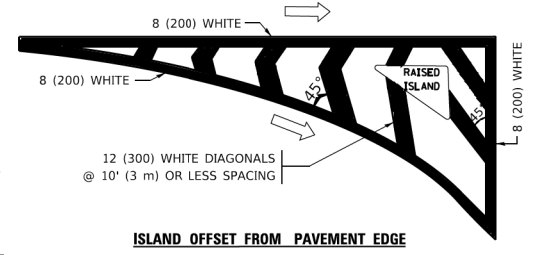
**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**

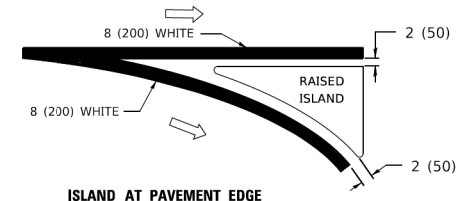
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

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

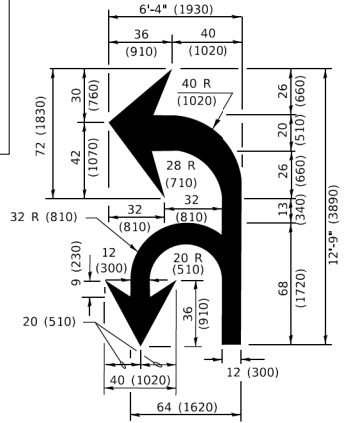
TC-13 IS FOR REFERENCE ONLY. PAVEMENT MARKINGS WILL BE COMPLETED UNDER IDOT CONTRACT NUMBER 62N53



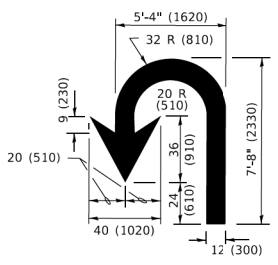
**ISLAND OFFSET FROM PAVEMENT EDGE**



**ISLAND AT PAVEMENT EDGE TYPICAL ISLAND MARKING**



**COMBINATION LEFT AND U-TURN**



**U-TURN**

**LANE REDUCTION TRANSITION**  
\* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE: FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 2' (600) APART 2' (600) APART	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE.
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" 15' 6" (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: *R*=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH *X*=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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

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

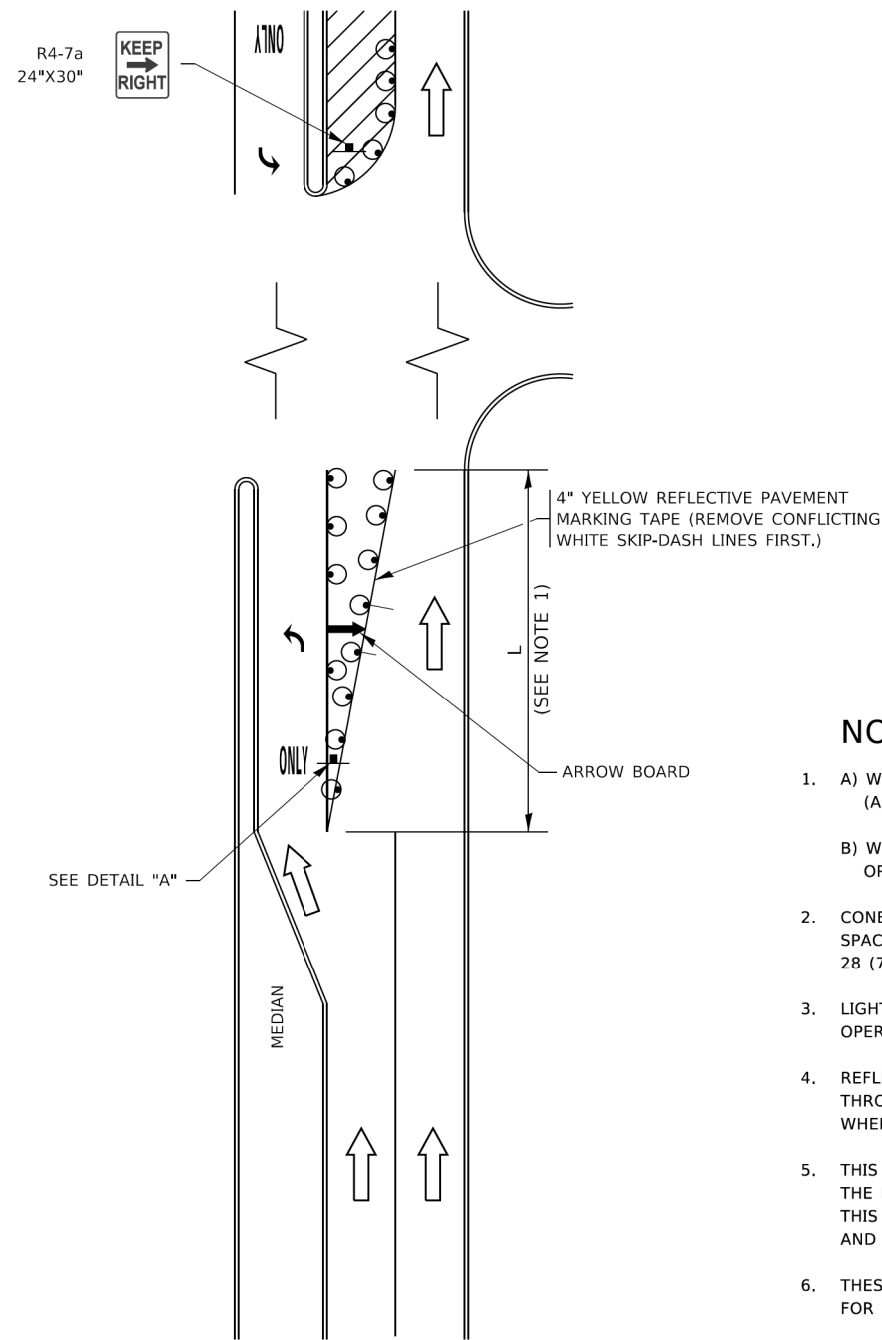
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 LICENSE NO. ...  
 PLOT DATE = 3/4/2019

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PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED - C. JUCIUS 07-01-13
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
		REVISED - C. JUCIUS 04-12-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

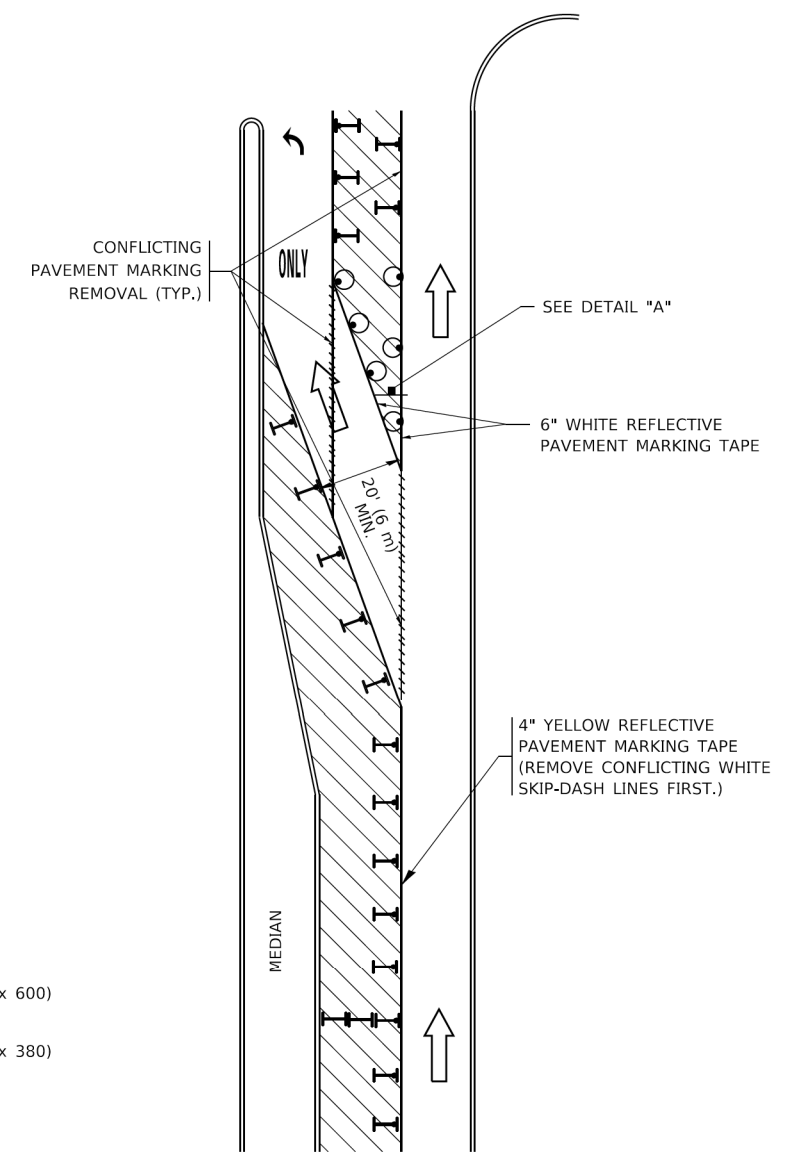
<b>DISTRICT ONE</b>		F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 41
<b>TYPICAL PAVEMENT MARKINGS</b>		<b>TC-13</b>		CONTRACT NO. 61J39		
SCALE: NONE	SHEET 1 OF 2 SHEETS	STA. TO STA.	ILLINOIS / FED. AID PROJECT			

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



**FIGURE 1**

# TURN BAY ENTRANCE WITHIN A LANE CLOSURE



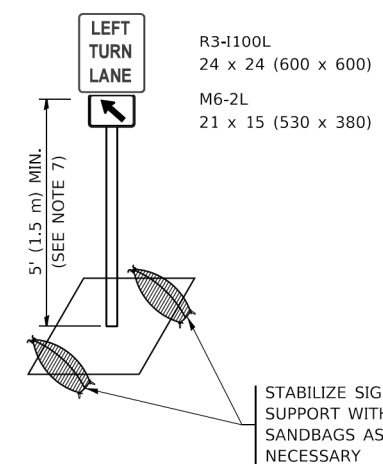
**FIGURE 2**

### LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

### NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.  
B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-1100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH REQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



**DETAIL A**

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

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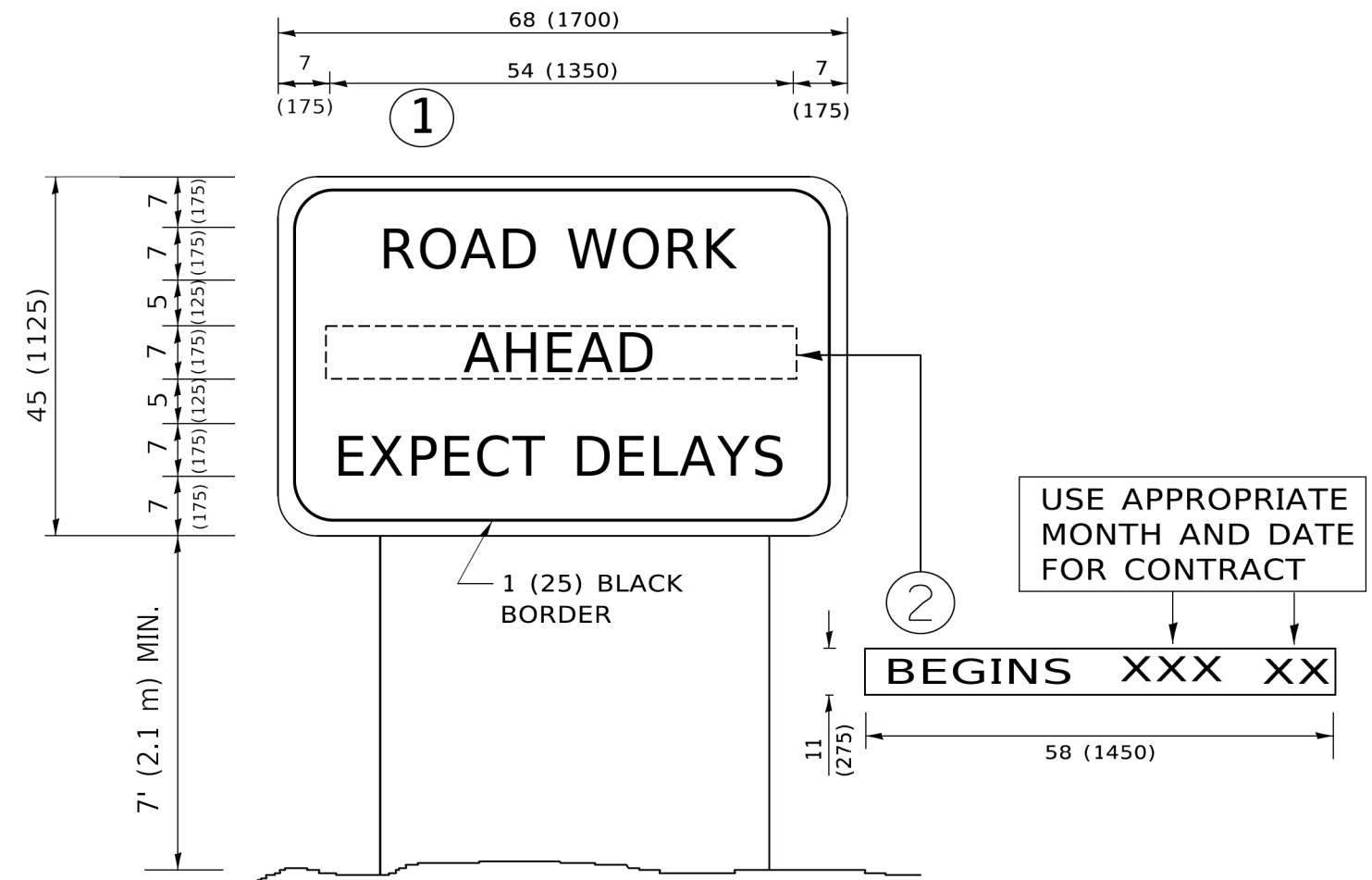
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PLOT DATE = 3/4/2019	DATE - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

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

F.A.P. RTE. 374	SECTION 21-00203-00-TL	COUNTY COOK	TOTAL SHEETS 44	SHEET NO. 42
TC-14		CONTRACT NO. 61J39		
ILLINOIS FED. AID PROJECT				



**NOTES:**

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

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

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USER NAME = jrbaxter	DESIGNED -	REVISED - R. MIRS 09-15-97
PLOT SCALE = 50,0000 ' / ft.	DRAWN -	REVISED - R. MIRS 12-11-97
PLOT DATE = 3/4/2019	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

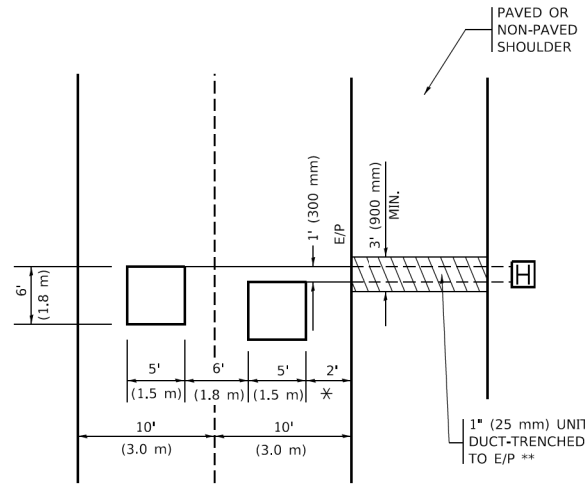
**ARTERIAL ROAD  
INFORMATION SIGN**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	43
TC-22			CONTRACT NO. 61J39	
ILLINOIS FED. AID PROJECT				

**LOOPS NEXT TO SHOULDERS**

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

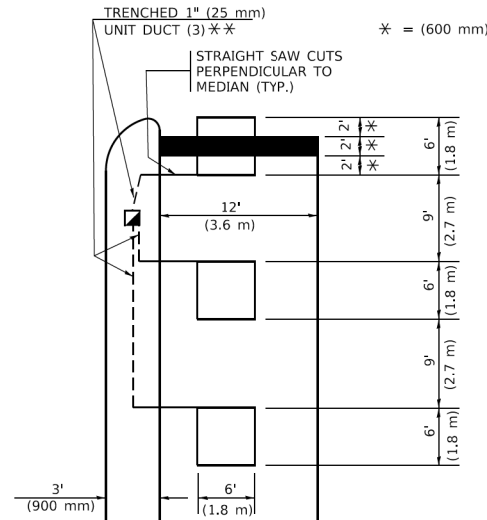


\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS**  
**VOLUME DENSITY ("FAR OUT" DETECTION)**  
**ON SAME APPROACH**  
**(PROTECTED / PERMITTED LEFT TURN PHASING)**

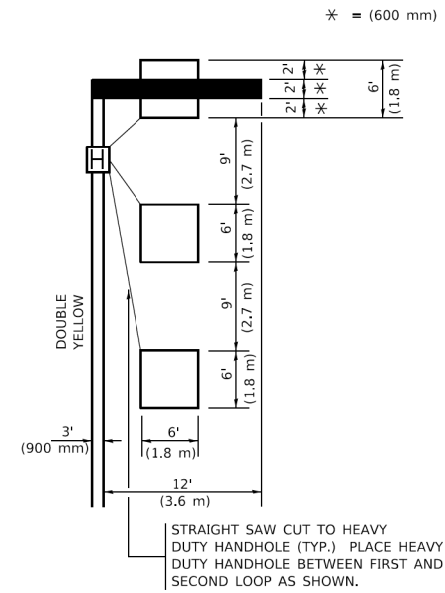
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS**  
**VOLUME DENSITY ("FAR OUT" DETECTION)**  
**ON SAME APPROACH**  
**(PROTECTED / PERMITTED LEFT TURN PHASING)**



NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**NOTES:**

**VEHICLES LOOP DETECTORS**

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- \* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- \* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- \* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

**PLACEMENT OF DETECTORS**

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

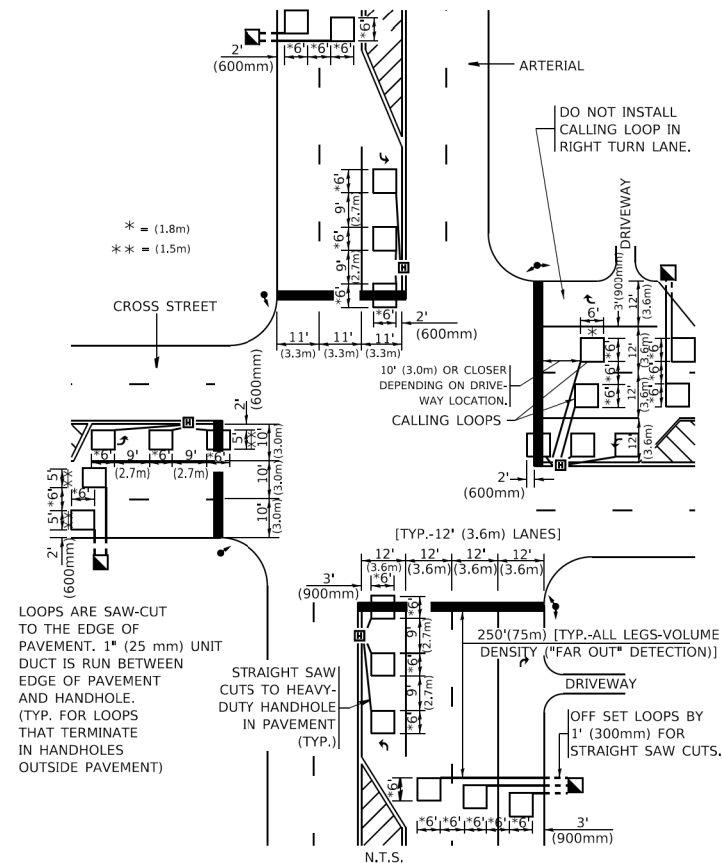
"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

**NOTE:**

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

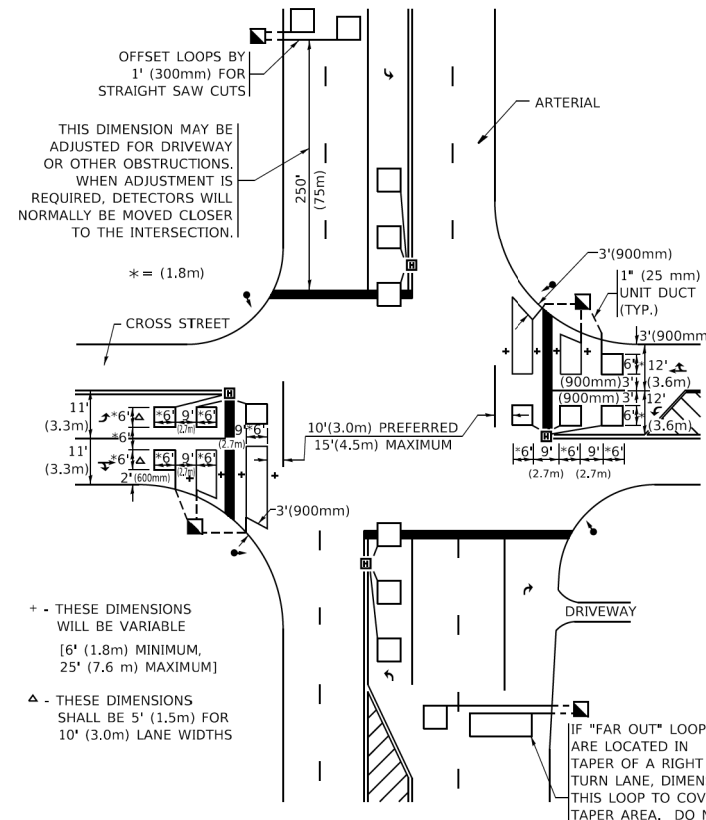
THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)**  
**CROSS STREET-NON VOLUME DENSITY ("FAR OUT" DETECTION)**



**DETAIL 1**  
N.T.S.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)**  
**CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



**DETAIL 2**  
N.T.S.

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PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1 - DETECTOR LOOP INSTALLATION**  
**DETAILS FOR ROADWAY RESURFACING**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	21-00203-00-TL	COOK	44	44
TS-07		CONTRACT NO. 61J39		
SCALE: NONE		ILLINOIS   FED. AID PROJECT		