

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/McHENRY	59	1
		ILLINOIS	CONTRACT NO. 60Y22	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE PROJECT IS LOCATED IN THE VILLAGE OF ISLAND LAKE

**TRAFFIC DATA**

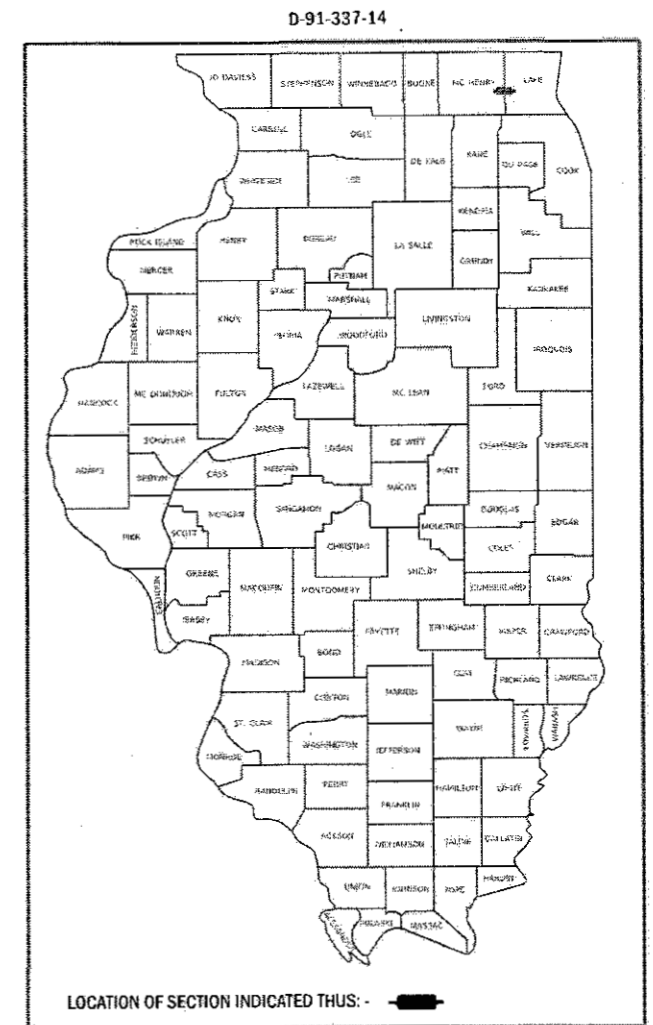
2016 ADT = 20,600 (IL-176)

POSTED SPEED = 35 MPH (IL-176)

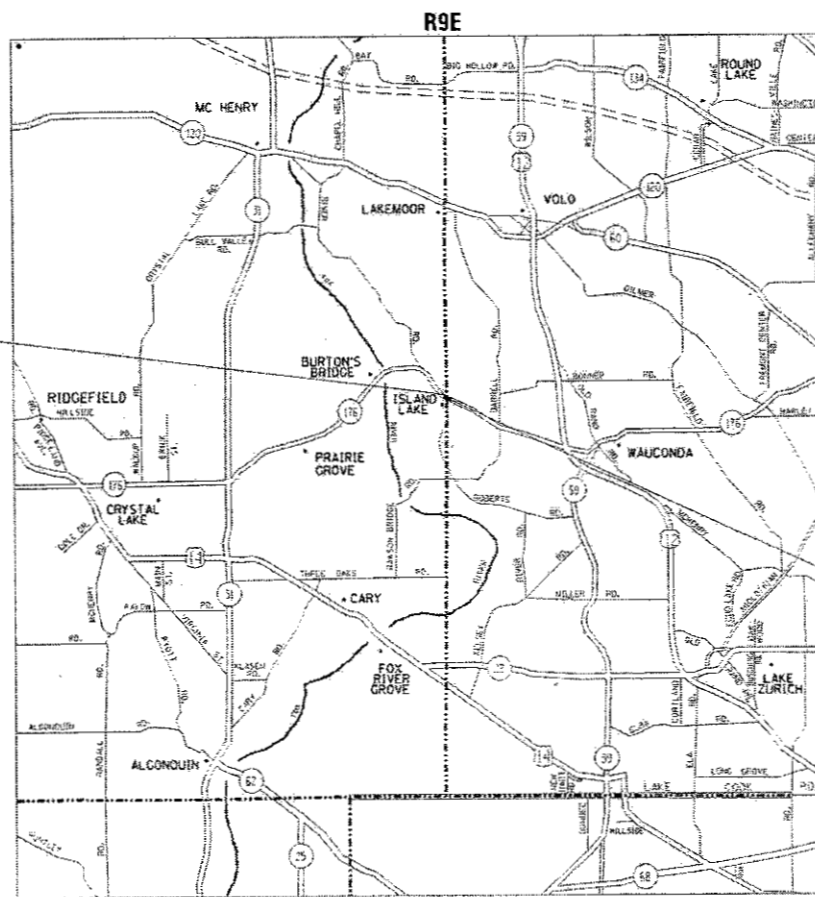
2013 ADT = 6,650 (ROBERTS RD.)

POSTED SPEED = 35 MPH (ROBERTS RD.)

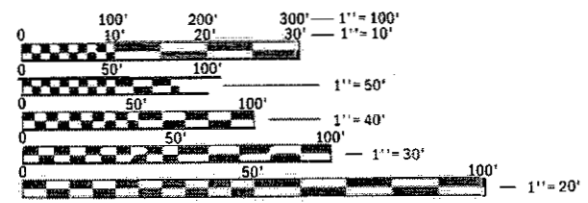
**PROPOSED  
HIGHWAY PLANS**  
FAP ROUTE 335: IL-176 (STATE RD.)  
AT ROBERTS ROAD  
SECTION : 145N-4(14)  
PROJECT: CMAQ-53W1(019)  
CHANNELIZATION, TRAFFIC SIGNAL  
MODERNIZATION AND RETAINING WALL  
LAKE & McHENRY COUNTIES  
C-91-337-14



PROJECT BEGINS  
STA 493 + 73



PROJECT ENDS  
STA 501 + 05



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

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

PROJECT ENGINEER: J. ALAIN MIDY (847)-221-3056  
PROJECT MANAGER: FAWAD AQUEEL (847) 705-4247

NUNDA TOWNSHIP  
GROSS & NET LENGTH OF IMPROVEMENT = 732.0 FT. = 0.138 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 15 2018  
Anthony J. Quigley / AS  
REGIONAL ENGINEER

June 29 2018  
Paul P. Chaf  
ENGINEER OF DESIGN AND ENVIRONMENT

June 29 2018  
Paul P. Chaf  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 60Y22

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
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10-12	ALIGNMENT, TIES & BENCHMARKS PLAN
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16	PLAT OF HIGHWAYS
17	PROPOSED PAVEMENT MARKING PLAN
18-37	PROPOSED TRAFFIC SIGNAL PLANS
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55	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) (TC-14)
56	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS (TC-16)
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58-59	CROSS SECTION PLANS

**COMMITMENTS**

EDUCATE PERSONNEL WORKING ON SITE ABOUT THE BLANDING'S TURTLE. POST PHOTOS OF JUVENILE AND ADULT BLANDING'S TURTLES AT A CENTRAL LOCATION.

INSTALL EXCLUSIONARY SILT FENCE AROUND THE ENTIRE PROJECT AREA TO PREVENT TURTLES FROM ENTERING THE CONSTRUCTION AREA.

CONDUCT DAILY INSPECTIONS DURING CONSTRUCTION TO ENSURE THAT EXCLUSIONARY FENCING IS PROPERLY INSTALLED (DUG INTO THE GROUND) AND TO CHECK OF TURTLES ARE PRESENT.

TRENCHES SHOULD BE COVERED AT THE END OF EACH WORK DAY. BEFORE STARTING EACH WORK DAY, TRENCHES AND EXCAVATIONS SHOULD BE ROUTINELY INSPECTED TO ENSURE NO TURTLES (OR OTHER REPTILES) HAVE BECOME TRAPPED WITHIN THEM.

IF BLANDING'S TURTLES ARE ENCOUNTERED, CREWS SHOULD STOP WORK IMMEDIATELY AND CONTACT IDNR AT 630-399-3242 OR 217-557-0483.

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-10	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006-03	DIAGONAL CURB RAMPS FOR SIDEWALKS
424011-03	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424016-04	MID-BLOCK CURB RAMPS FOR SIDEWALKS
424021-04	DEPRESSED CORNER FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
604001-04	FRAME AND LIDS, TYPE 1
606001-07	CONCRETE CURB TYPE B & COMBINATION CONCRETE CURB AND GUTTER
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15'
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W SLOW, MOVING OPERATIONS- DAY ONLY.
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK CORNER OR CROSSWALK CLOSURE
701901-07	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAIL
720006-04	SIGN PANEL ERECTION DETAILS
814001-03	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-07	STEEL MAST ARM ASSEMBLY & POLE 16' THROUGH 55'
878001-10	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

**GENERAL NOTES (CONTINUED)**

ALL DROP-OFFS GREATER THEN 18 INCHES MUST BE BACKFILLED AT THE END OF EACH WORK DAY AND EXCAVATED AREA MUST BE PROTECTED WITH DEVICES PLACED AT THE DROP-OFF ELEVATION TO PRESERVE LANE WIDTH. THE REFLECTIVE AREA AND WARNING LIGHT SHALL BE RAISED TO THE ELEVATION ABOVE TRAVELING LANE AS REQUIRED BY STANDARD 701901.

**GENERAL NOTES**

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF ISLAND LAKE

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40 MM) WHERE THE SPEED LIMIT IS 45 MPH (45 KM/H) OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (45 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE RESIDENT ENGINEER SHALL CONTACT MR. WALTER CZARNY, IDOT'S AREA TRAFFIC FIELD ENGINEER, VIA EMAIL AT WALTER.CZARNY@ILLINOIS.GOV OR AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

PRIOR TO EMBANKMENT PLACEMENT, ALL VEGETATION, LOOSE MATERIAL, AND UNSTABLE MATERIAL SHOULD BE REMOVED TO DEPTH ENCOUNTERED AND REPLACED WITH SUITABLE EMBANKMENT MATERIAL. ANY EMBANKMENT WIDENING ON EXISTING SLOPES SHOULD BE BENCHED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS, THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

A CONCRETE APRON SHALL NOT BE REQUIRED FOR NEW UPS INSTALLATIONS ADJACENT TO EXISTING IMPERVIOUS SURFACES THAT SATISFY THE NEED OF THE CONCRETE APRON, AS DIRECTED BY THE ENGINEER

ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT (OR COMBINATION CURB AND GUTTER (THE TYPE SPECIFIED ON THE PLANS)), WILL BE DETERMINED IN THE FIELD BY THE ENGINEER

THE THICKNESS OF THE HMA MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED

FILE NAME =	USER NAME = gullumeffp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, LIST OF STATE STANDARDS &amp; GENERAL NOTES FAP 355 /IL 176 (STATE ROAD)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pe:\IL884EBID\INTEG\Illinois.gov\PIDOT\Documents\IDOT Offices\District 1\Projects\176\355\176-0100\Design\176589-Design.dgn		CHECKED -	REVISED -			355	145N-4(14)	LAKE/MCHENRY	56	2
PLOT SCALE = 100.0568' / in.		DATE -	REVISED -			SCALE: 1"=50'		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.
PLOT DATE = 5/18/2018						FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 60Y22

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	MCHENRY COUNTY					TOTAL QUANTITIES	MCHENRY COUNTY									
				ROADWAY 0004 80%FED 20%STATE	TRAFFIC SIGNAL 0021 80%FED 10%STATE 5%VILLAGE 5%COUNTY	TRAFFIC SIGNAL 0021 INTER CONNECT 80%FED 20%STATE	RETAINING WALL 0044 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE		ROADWAY 0004 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE	TRAFFIC SIGNAL 0021 80%FED 10%STATE 5%VILLAGE 5%COUNTY	TRAFFIC SIGNAL 0021 INTER CONNECT 80%FED 20%STATE	RETAINING WALL 0044 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE				
20200100	EARTH EXCAVATION	CU YD	159	159						40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	7	5.3					1.7
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	99	99						40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	198	151					47
20400800	FURNISHED EXCAVATION	CU YD	180	180						40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	68	50					18
20800150	TRENCH BACKFILL	CU YD	51	51						40603565	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	TON	470	358					112
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	265	265						42001300	PROTECTIVE COAT	SO YD	266	165					101
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	16	16						42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SO FT	670						670
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	16	16						42400800	DETECTABLE WARNINGS	SO FT	26						26
25200110	SODDING, SALT TOLERANT	SO YD	1320	1320						44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SO YD	4492	3347					1145
25200200	SUPPLEMENTAL WATERING	UNIT	15	15						44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	744	744					
28000400	PERIMETER EROSION BARRIER	FOOT	730	730						44000600	SIDEWALK REMOVAL	SO FT	660						660
28000510	INLET FILTERS	EACH	2	2						44201815	CLASS D PATCHES, TYPE II, 14 INCH	SO YD	50	50					
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SO YD	315	315						44201851	CLASS D PATCHES, TYPE II, 17 INCH	SO YD	12	12					
35501318	HOT-MIX ASPHALT BASE COURSE, 8 1/2"	SO YD	315	315						48101200	AGGREGATE SHOULDERS, TYPE B	TON	890	890					
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	3237	2464				773											

FILE NAME =	USER NAME = gulfnamep	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	* SPECIALTY ITEM <b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pn\NLD\BEB\BITE\G\Illinois\p\PROJECT\Documents\NVA	D:\I\as\GIS\118 N\Pro\sets\PIPO509\CADD\p\Dist\p\PIPO509\PIPO509.dwg	CHECKED -	REVISED -			355	145N-4(14)	LAKE/MCHENRY	59	3
PLLOT SCALE = 1000000 ' / IN.	DATE -	REVISED -	REVISED -			CONTRACT NO. 60Y22				
PLLOT DATE = 6/8/2018	DATE -	REVISED -	REVISED -			FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	MCHENRY COUNTY					LAKE CO.	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	MCHENRY COUNTY					LAKE CO.
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50200100	STRUCTURE EXCAVATION	CU YD	292				292			* 63000005	STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	500	500					
50300225	CONCRETE STRUCTURES	CU YD	98.4				98.4			* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1	1					
50500505	STUD SHEAR CONNECTORS	EACH	258				258			* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1	1					
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	12380				12380			63200310	GUARDRAIL REMOVAL	FOOT	278	278					
52200100	FURNISHING SOLDIER PILES (HP SECTION)	FOOT	974				974			* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	370	370					
52200200	DRILLING AND SETTING SOLDIER PILES (IN SOIL)	CU FT	3786				3786			* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1					
52200250	UNTREATED TIMBER LAGGING	SO FT	1779				1779			* 66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2					
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	36	36						67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6					
58700300	CONCRETE SEALER	SO FT	3119				3119			67100100	MOBILIZATION	L SUM	1	1					
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	1294				1294			70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1					
60201340	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	1					1		70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1					
60208240	CATCH BASINS, TYPE C, TYPE 24 FRAME AND GRATE	EACH	1	1						70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1					1	
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	1	1						70300100	SHORT TERM PAVEMENT MARKING	FOOT	4800	4800					
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	742	742						70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	1600	1600					

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pw:\NLD\B4E\BID\W\EG\it\tds\p\p\DOT\Document\5100	Off\Task\Dist\it\N\Projects\SP\0509-CA\0Data\Design\PI\0509	CHECKED -	REVISED -			355	145N-4(14)	LAKE/MCHENRY	59	4	
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PLOT DATE = 6/8/2018	DATE -	REVISED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.			

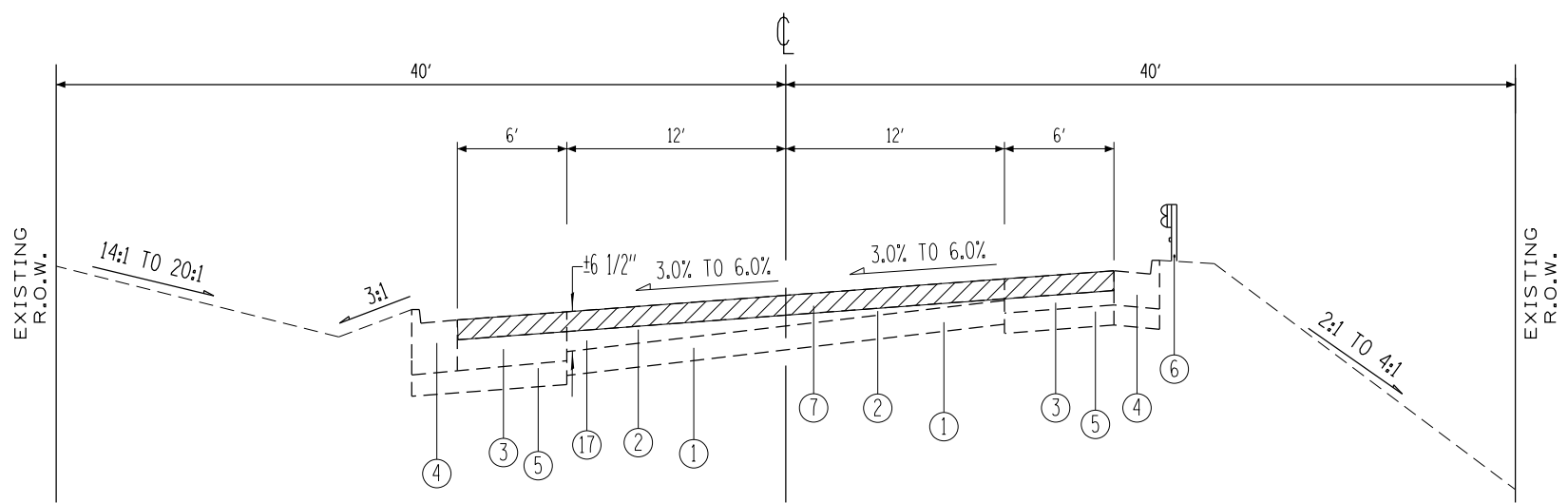
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70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SO FT	247.1	146.4				100.7	* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	30	30				
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3000	2800				200	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	20	20				
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	650	450				200	* 81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1280		634	646		
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	180	180					* 81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	115		115			
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	90	65				25	* 81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	298		298			
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	2400	2400					* 81400100	HANDHOLE	EACH	7		5	2		
* 72000100	SIGN PANEL - TYPE 1	SO FT	4.5		4.5				* 81400200	HEAVY-DUTY HANDHOLE	EACH	4		4			
* 72000200	SIGN PANEL - TYPE 2	SO FT	60		60				* 81400300	DOUBLE HANDHOLE	EACH	1		1			
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	247.1	146.4				100.7	* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2			2		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	3000	2800				200	* 86400100	TRANSCEIVER - FIBER OPTIC	EACH	1		1			
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	650	450				200	* 87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	5285			5285		
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	180	180					* 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	157		157			
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	90	65				25		* SPECIALTY ITEM							

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* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	420		420				* 87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1		1			
* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	921		921				* 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	24		24			
* 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1237		1237				* 87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4			
* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1815		1815				* 87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10		10			
* 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	52		52				* 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	35		35			
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1373		1373				* 87900200	DRILL EXISTING HANDHOLE	EACH	2		1	1		
* 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4		4				* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4		4			
* 87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1		1				* 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1		1			
* 87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1		1				* 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4		4			
* 87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1		1				* 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	2		2			

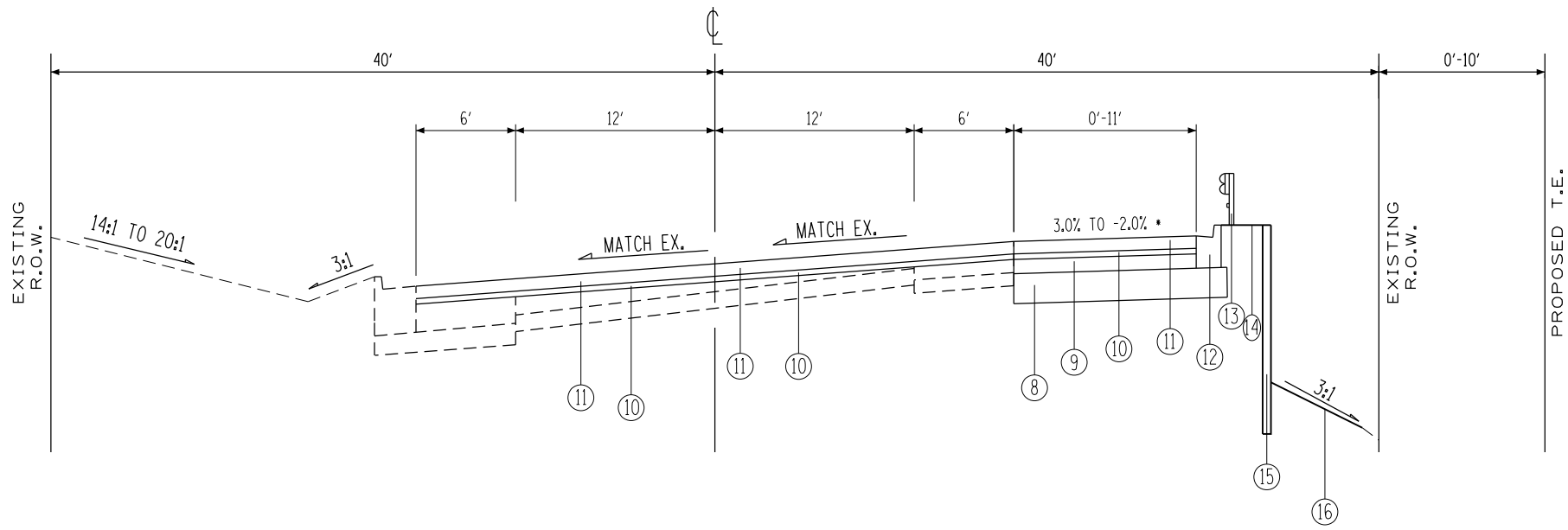
SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE					SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	MCHENRY COUNTY					CODE NO	ITEM	UNIT	TOTAL QUANTITIES	MCHENRY COUNTY					
				ROADWAY 0004 80%FED 20%STATE	TRAFFIC SIGNAL 0021 80%FED 10%STATE 52%VILLAGE 5%COUNTY	TRAFFIC SIGNAL 0021 INTER CONNECT 80%FED 20%STATE	RETAINING WALL 0044 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE					ROADWAY 0004 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE	TRAFFIC SIGNAL 0021 80%FED 10%STATE 52%VILLAGE 5%COUNTY	TRAFFIC SIGNAL 0021 INTER CONNECT 80%FED 20%STATE	RETAINING WALL 0044 80%FED 20%STATE	ROADWAY 0004 80%FED 20%STATE
* 88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8		8				X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	2	2					
* 88500100	INDUCTIVE LOOP DETECTOR	EACH	8		8				X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SO FT	2460	2460					
* 88600100	DETECTOR LOOP, TYPE I	FOOT	679		679				* X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1	1					
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	2		2				* X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	5337			5337			
* 89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1				Z0004562	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	120					120	
* 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	7756			7756			Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1					
* 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1				** Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	2	2					
* 89502380	REMOVE EXISTING HANDHOLE	EACH	8		8				Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	102.8	102.8					
* 89502382	REMOVE EXISTING DOUBLE HANDHOLE	EACH	1		1				* Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1			1			
* 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9		9				Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	483				483		
* X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	3807			3807			Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1					
* X1400081	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1		1													
* X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1		1													

\*\*NON-PARTICIPATING ITEM  
\* SPECIALTY ITEM

FILE NAME =	USER NAME = gullikm/p	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>SUMMARY OF QUANTITIES</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PH:\VLD\B\EBID\INT\EG\Illinois\p\PH\DOT\Document\1\DOT	Offices\District\Projects\PT0509\CAD\Draw\Design\PT0509	CHECKED -	REVISED -									355	145N-4(14)	LAKE/MCHENRY	59	7
PLOT SCALE = 100,0000' / 1in.	DATE -	REVISED -	REVISED -									CONTRACT NO. 60Y22				
PLOT DATE = 6/8/2018	DATE -	REVISED -	REVISED -									FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



EXISTING TYPICAL CROSS SECTION  
IL 176/ STATE ROAD  
(STA. 493+73 TO STA. 501+05)



PROPOSED TYPICAL CROSS SECTION  
IL 176/ STATE ROAD  
(STA. 493+73 TO STA. 501+05)

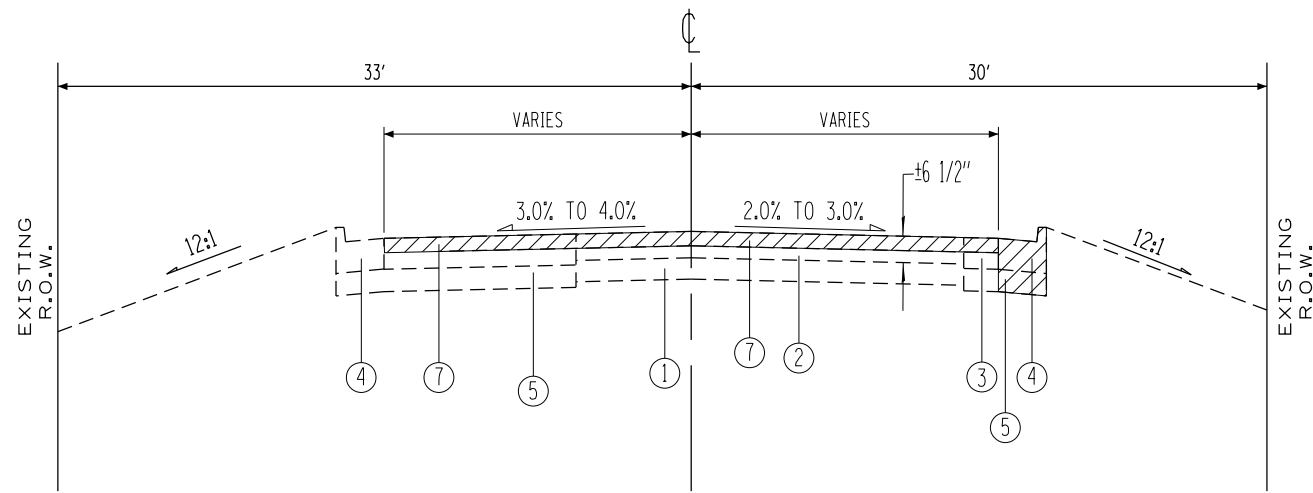
• RIGHT TURN LANE CROSS SLOPE TRANSITION:  
STA. 495+96.5 TO STA. 497+01.5: CROSS SLOPE = 3.0%  
STA. 497+01.5 TO STA. 497+81.5: CROSS SLOPE TRANSITIONS FROM 3.0% TO -2.0%  
STA. 497+81.5 TO STOP BAR: CROSS SLOPE = -2.0%

- LEGEND**
- ① EXISTING P.C.C. PAVEMENT, ± 10"
  - ② EXISTING HMA SURFACE COURSE, ± 6 1/2"
  - ③ EXISTING HMA WIDENING, ± 12"
  - ④ EXISTING CURB & GUTTER, TYPE B-6.24
  - ⑤ EXISTING SUB-BASE GRANULAR MATERIAL, 4"
  - ⑥ EXISTING GUARDRAIL
  - ⑦ PROPOSED HMA SURFACE REMOVAL, 2 1/2"
  - ⑧ PROPOSED AGGREGATE SUBGRADE IMPROVEMENT, 12"
  - ⑨ PROPOSED HMA BASE COURSE, 8 1/2" (2 1/4 in Min. LIFTS)
  - ⑩ PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), N50, IL 4.75 3/4"
  - ⑪ PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "E", N70, 1 3/4"
  - ⑫ PROPOSED CURB AND GUTTER, B6.12
  - ⑬ PROPOSED GUARDRAIL
  - ⑭ PROPOSED AGGR. SHOULDER STABILIZATION
  - ⑮ PROPOSED RETAINING WALL
  - ⑯ PROPOSED TOPSOIL, 6"
  - ⑰ EXISTING HMA SURFACE OVERLAY

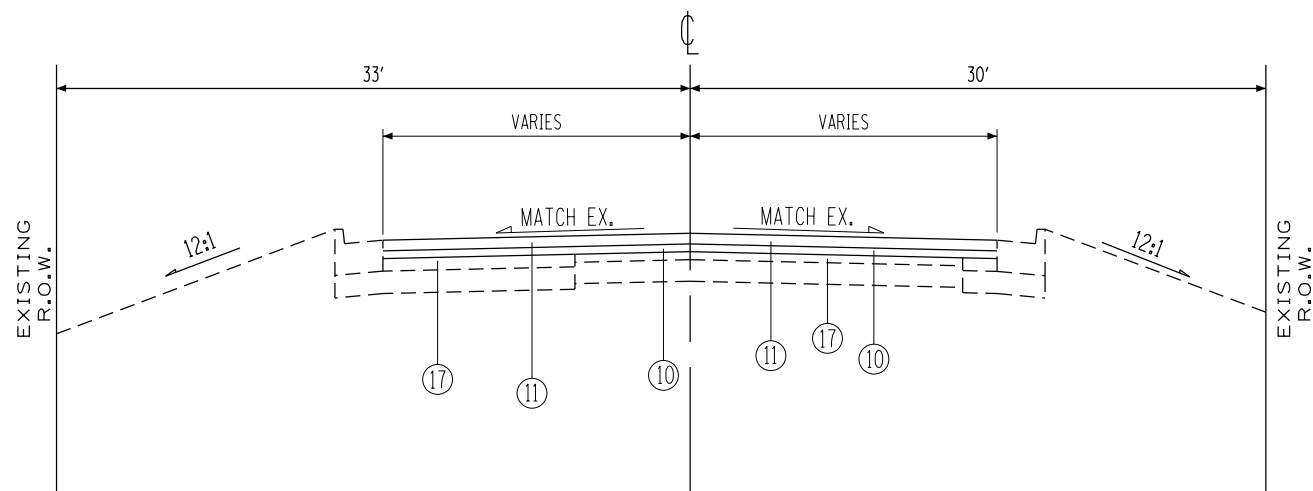
HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AIR VOIDS (%) @Ndes	QUALITY MANAGEMENT PROGRAM (QMP)
<b>PAVEMENT WIDENING</b>		
POLYMERIZED HMA SURFACE COURSE, MIX "E", N70 (IL 9.5 mm)	4% AT 70 GYR.	QC/QA
POLYMERIZED LEVELING BINDER (MACHINE METHOD), N50 (IL-4.75 mm)	3.5% AT 50 GYR.	QC/QA
HMA BASE COURSE, 8 1/2" (HMA BINDER IL-19 mm)	4% AT 90 GYR.	QC/QA
<b>PAVEMENT RESURFACING</b>		
POLYMERIZED HMA SURFACE COURSE, MIX "E", N70 (IL 9.5 mm)	4% AT 70 GYR.	QC/QA
POLYMERIZED LEVELING BINDER (MACHINE METHOD), N50 (IL-4.75 mm)	3.5% AT 50 GYR.	QC/QA
<b>PATCHING</b>		
CLASS D PATCH (HMA BINDER, IL-19.0 mm)	4% AT 70 GYR.	QC/QA
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP)		

**NOTES:**  
THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQ YD/IN  
"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 DISTRICT ONE SPECIAL PROVISIONS."  
FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS  
QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE





EXISTING TYPICAL CROSS SECTION  
ROBERTS ROAD & MIDWAY DRIVE  
(STA. 197+27.8 TO STA. 300+92.1)



PROPOSED TYPICAL CROSS SECTION  
ROBERTS ROAD & MIDWAY DRIVE  
(STA. 197+27.8 TO STA. 300+92.1)

- LEGEND**
- ① EXISTING P.C.C. PAVEMENT, ± 10"
  - ② EXISTING HMA SURFACE COURSE, ± 6 1/2"
  - ③ EXISTING HMA WIDENING, ± 12"
  - ④ EXISTING CURB & GUTTER, TYPE B-6.24
  - ⑤ EXISTING SUB-BASE GRANULAR MATERIAL, 4"
  - ⑥ EXISTING GUARDRAIL
  - ⑦ PROPOSED HMA SURFACE REMOVAL, 2 1/2"
  - ⑧ PROPOSED AGGREGATE SUBGRADE IMPROVEMENT, 12"
  - ⑨ PROPOSED HMA BASE COURSE, 8 1/2" (2 1/4 in Min. LIFTS)
  - ⑩ PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), N50, IL 4.75 3/4"
  - ⑪ PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "E", N70, 1 3/4"
  - ⑫ PROPOSED CURB AND GUTTER, B6.12
  - ⑬ PROPOSED GUARDRAIL
  - ⑭ PROPOSED HMA SHOULDER STABILIZATION
  - ⑮ PROPOSED RETAINING WALL
  - ⑯ PROPOSED TOPSOIL, 6"
  - ⑰ EXISTING HMA SURFACE OVERLAY

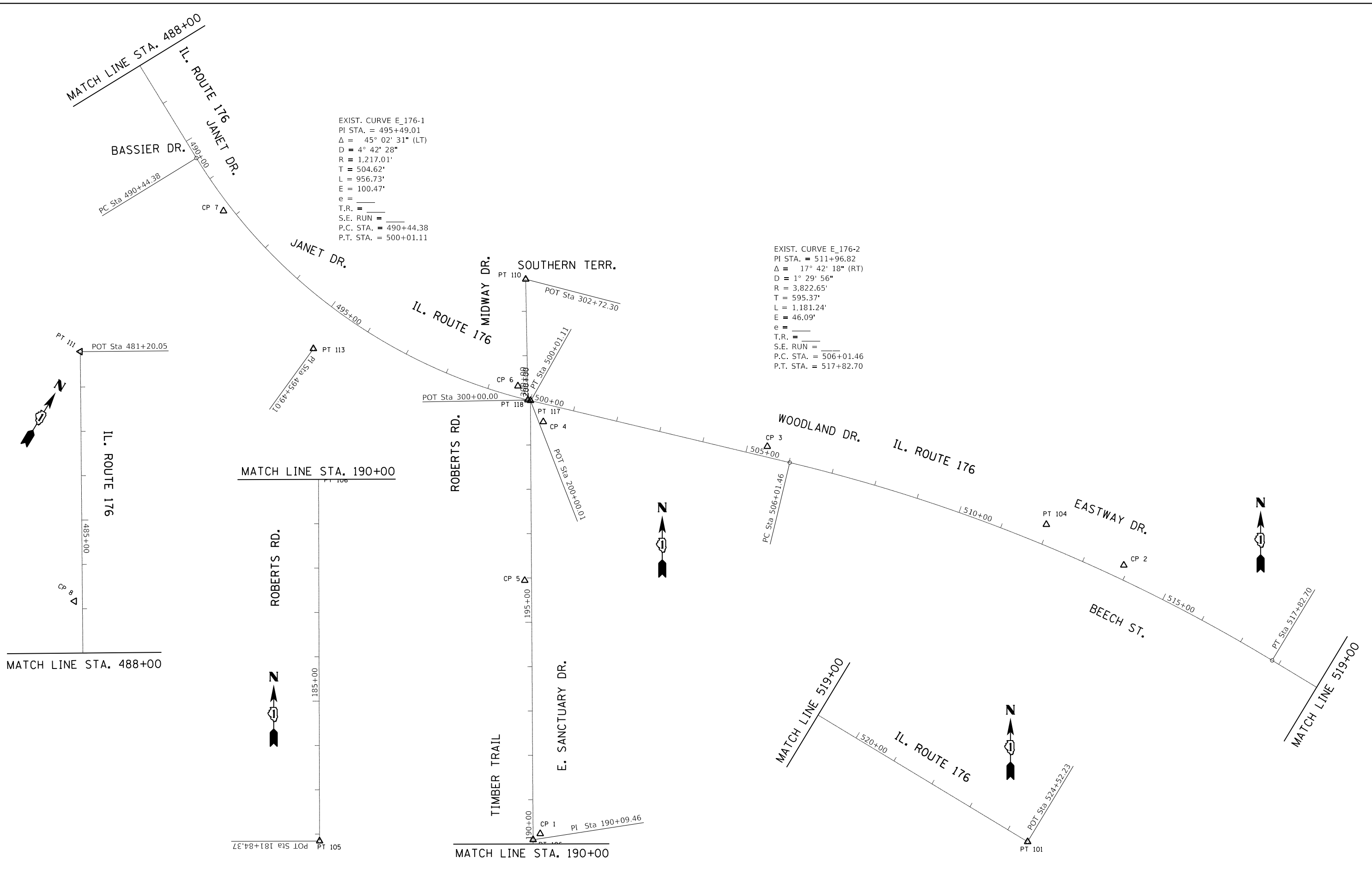
## EARTHWORK SCHEDULE (IL 176)

IL RTE 176 AT ROBERTS ROAD	EARTH EXCAVATION (CU. YD.)	TOP SOIL EXCAVATION (CU. YD.)	EXCAVATION USED AS EMBANKMENT (SHRINKAGE 15%) (CU. YD.)	EMBANKMENT (CU. YD.)	TOP SOIL PLACEMENT (CU. YD.)	EARTH WORK BALANCE SURPLUS (+) OR SHORTAGE (-) (CU. YD.)	TOP SOIL BALANCE SURPLUS (+) OR SHORTAGE (-) (CU. YD.)
	159	265	135	245	99	-110	99
<b>TOTAL</b>	159	265	135	245	99	-110	99

MATCH LINE STA. 488+00  
 IL. ROUTE 176  
 JANET DR.  
 BASSIER DR.  
 PC Sta 490+44.38  
 CP 1

EXIST. CURVE E\_176-1  
 PI STA. = 495+49.01  
 $\Delta = 45^\circ 02' 31''$  (LT)  
 $D = 4^\circ 42' 28''$   
 $R = 1,217.01'$   
 $T = 504.62'$   
 $L = 956.73'$   
 $E = 100.47'$   
 $e =$   
 T.R. =  
 S.E. RUN =  
 P.C. STA. = 490+44.38  
 P.T. STA. = 500+01.11

EXIST. CURVE E\_176-2  
 PI STA. = 511+96.82  
 $\Delta = 17^\circ 42' 18''$  (RT)  
 $D = 1^\circ 29' 56''$   
 $R = 3,822.65'$   
 $T = 595.37'$   
 $L = 1,181.24'$   
 $E = 46.09'$   
 $e =$   
 T.R. =  
 S.E. RUN =  
 P.C. STA. = 506+01.46  
 P.T. STA. = 517+82.70



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	DRAWN -	REVISED -
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PLOT DATE = 5/11/2018	DATE -	REVISED -

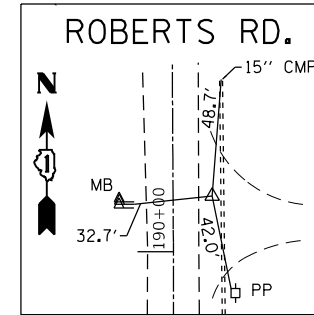
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ALIGNMENTS, TIES AND BENCHMARKS  
 IL. RTE. 176 AT ROBERTS RD.**

SCALE: SHEET OF SHEETS STA. TO STA.

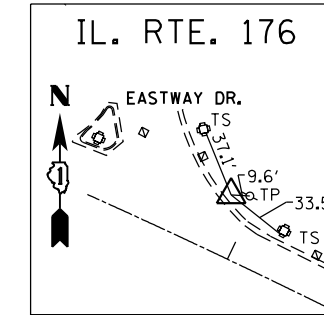
F.A.P. RTE. 355	SECTION 145N-4(14)	COUNTY MCHENRY	TOTAL SHEETS 59	SHEET NO. 10
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

ROUTE	POINT	NORTHING	EASTING	STATION
IL. RTE. 176 CURVE E_176-1	PI	2,041,960.8750	1,020,269.2099	495+49.01
	PC	2,042,391.0338	1,020,005.3734	490+44.38
	PT	2,041,843.6272	1,021,042.7926	500+01.11
IL. RTE. 176 CURVE E_176-2	PI	2,041,565.8075	1,021,923.0153	511+96.82
	PC	2,041,704.1388	1,021,343.9418	506+01.46
	PT	2,041,257.9221	1,022,432.5919	517+82.70
IL. RTE. 176	A10	2,043,178.9636	1,019,522.0993	481+20.05
	A11	2,040,911.6857	1,023,005.6427	524+52.23
MIDWAY DRIVE	118	2,041,845.2630	1,020,753.2628	300+00.00
	110	2,042,117.5157	1,020,748.2344	302+72.30
ROBERTS ROAD	105	2,040,028.2729	1,020,767.3733	181+84.37
	106	2,040,853.3564	1,020,764.9823	190+09.46
	117	2,041,843.8877	1,020,758.9367	200+00.01



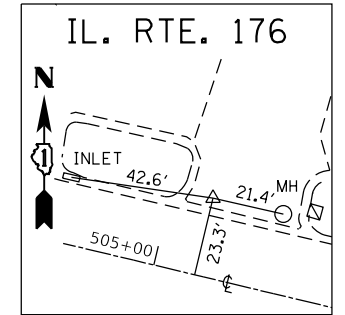
**CONTROL POINT 1**

NAIL SET  
 STA. 190+23.23, 16.22 RT  
 N=2040867.2248  
 E=1020781.1186  
 ELEV.=749.2304



**CONTROL POINT 2**

"X" CUT SET  
 STA. 513+87.23, 31.12 LT  
 N=2041472.6056  
 E=1022097.6745  
 ELEV.=765.9255



**CONTROL POINT 3**

MAG NAIL SET  
 STA. 505+43.96, 23.44 LT  
 N=2041740.2971  
 E=1021293.4610  
 ELEV.=764.4651

**BENCHMARK #BM1**

ELEV. = 767.319

□ -CUT IN SOUTHEASTERLY CORNER OF CONCRETE BASE OF TRAFFIC CONTROL BOX IN NORTHWEST CORNER OF EASTWAY/BEECH & IL. V176.

**BENCHMARK #BM2**

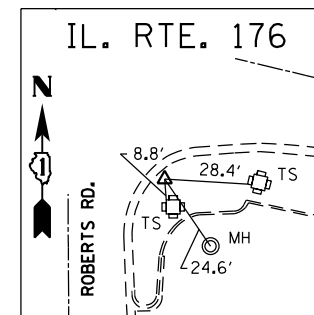
ELEV. = 750.696

□ -CUT IN N.W. CORNER OF CONCRETE BASE OF HANDHOLE ± 1300' WEST OF ROBERTS ON SOUTHWEST SIDE OF IL. 176. 485+35/22R

**BENCHMARK #BM3**

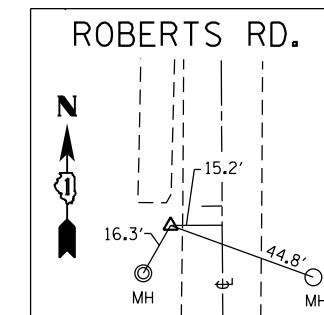
ELEV. = 769.929

□ -CUT IN CONCRETE BASE OF T/S W/MASTARM IN SOUTHEAST CORNER OF IL. 176 & ROBERTS RD.



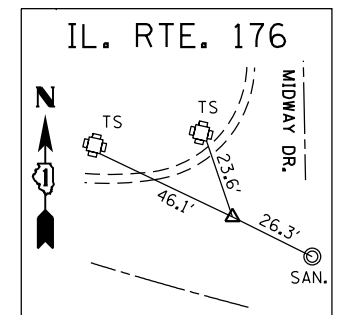
**CONTROL POINT 4**

"X" CUT SET  
 STA. 500+39.40, 39.78 RT  
 N=2041796.0350  
 E=1020788.0226  
 ELEV.=769.3515



**CONTROL POINT 5**

MAG NAIL SET  
 STA. 195+94.31, 15.34 RT  
 N=2041438.1056  
 E=1020746.0753  
 ELEV.=750.2328



**CONTROL POINT 6**

MAG NAIL SET  
 STA. 499+64.15, 24.76 LT  
 N=2041876.6570  
 E=1020730.6976  
 ELEV.=770.6633

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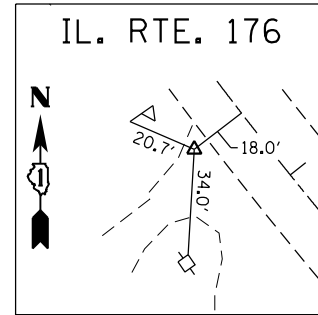
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	DRAWN -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 5/11/2018	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ALIGNMENTS, TIES AND BENCHMARKS  
 IL. RTE. 176 AT ROBERTS RD.

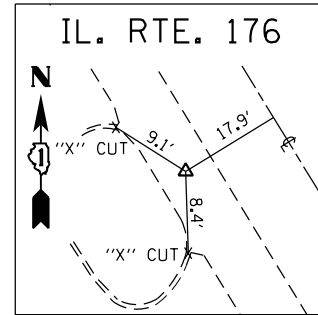
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	MCHENRY	59	11
			CONTRACT NO. 60Y22	
ILLINOIS FED. AID PROJECT				



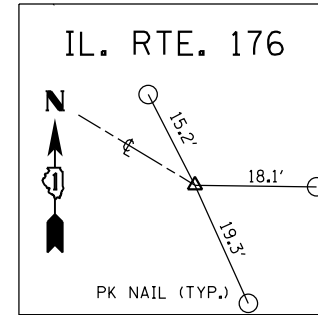
**CONTROL POINT 7**

MAG NAIL SET  
 STA. 491+76.48, 17.71 RT  
 N=2042271.5526  
 E=1020066.4116  
 ELEV.=768.3491



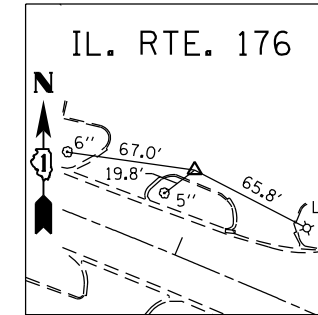
**CONTROL POINT 8**

MAG NAIL SET  
 STA. 86+82.75, 17.90 RT  
 N=2042689.9383  
 E=1019801.0381  
 ELEV.=752.6345



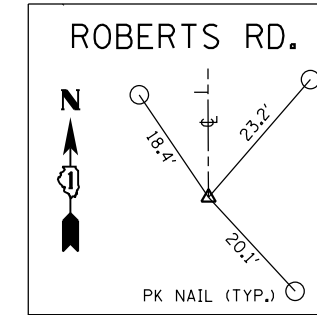
**POINT 101**

MAG NAIL SET  
 STA. 524+52.23, 00.00  
 N=2040911.6857  
 E=1023005.6427  
 ELEV.=762.1069



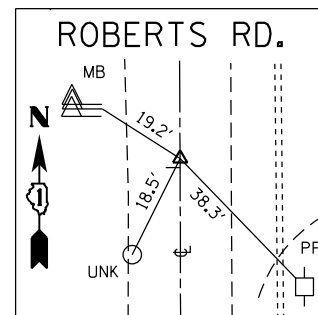
**POINT 104**

MAG NAIL SET  
 STA. 511+92.08, 46.09 LT  
 N=2041565.8075  
 E=1021923.0153  
 ELEV.=769.1511



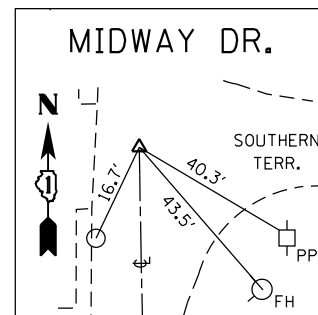
**POINT 105**

MAG NAIL SET  
 STA. 181+84.37, 00.00  
 N=2040028.2729  
 E=1020767.3733  
 ELEV.=762.5410



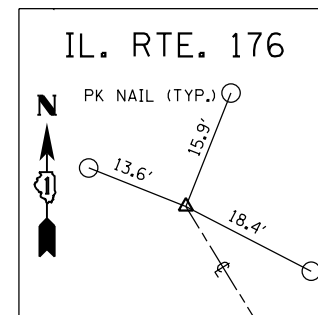
**POINT 106**

MAG NAIL SET  
 STA. 190+09.46, 00.00  
 N=2040853.3564  
 E=1020764.9823  
 ELEV.=749.2021



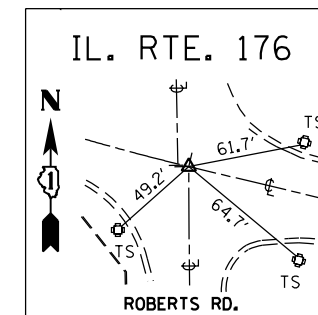
**POINT 110**

POT MIDWAY DR.  
 STA. 302+72.30  
 N=2042117.5157  
 E=1020748.2344  
 ELEV.=767.8052



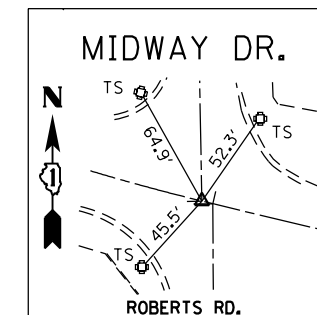
**POINT 111**

MAG NAIL SET  
 STA. 481+20.05, 00.00  
 N=2043178.9636  
 E=1019522.0993  
 ELEV.=753.6422



**POINT 117**

MAG NAIL SET AT C - C  
 ROBERTS RD. - IL. RTE. 176  
 STA. 200+00 - 500+00  
 N=2041843.8877  
 E=1020758.9367  
 ELEV.=UNKNOWN



**POINT 118**

MAG NAIL SET AT C - C  
 MIDWAY DR. - IL. RTE. 176  
 STA. 300+00 - 499+94.15  
 N=2041845.2630  
 E=1020753.2628  
 ELEV.=UNKNOWN

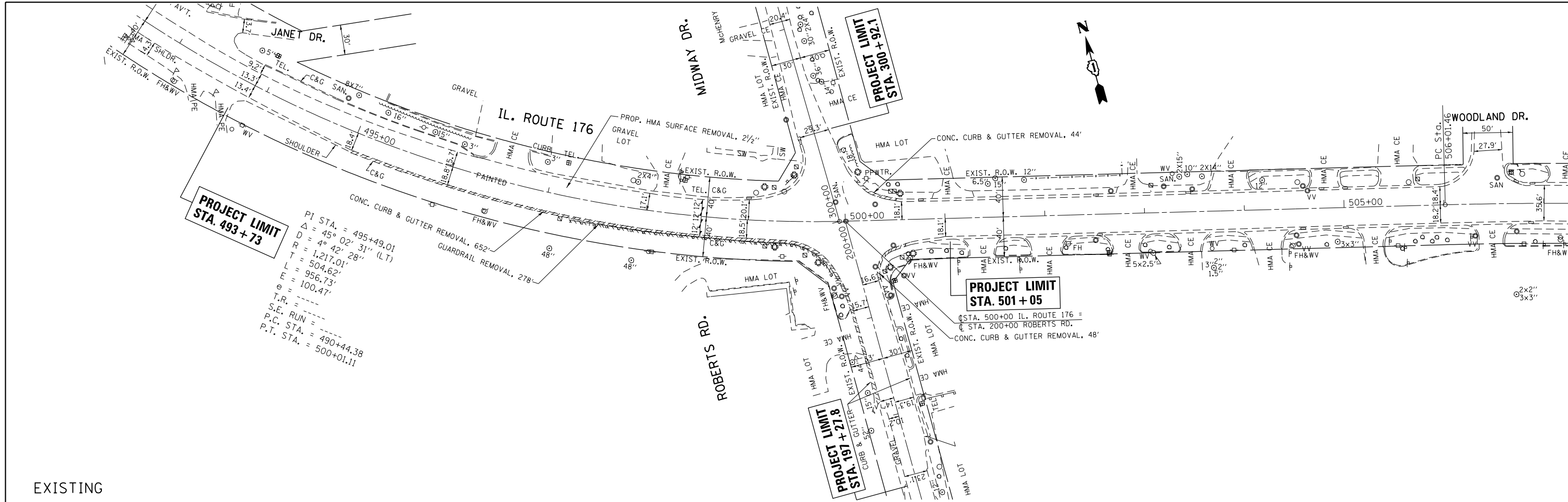
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USER NAME = quillamefp	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 5/11/2018	DATE -	REVISED -

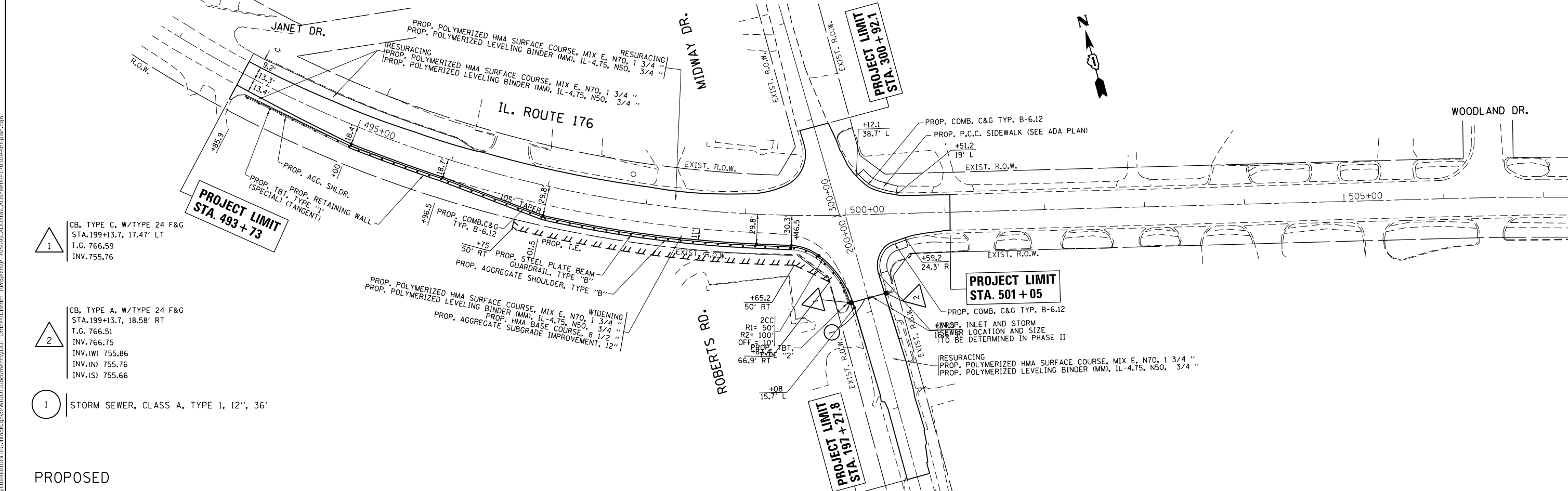
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>ALIGNMENTS, TIES AND BENCHMARKS</b>			
<b>IL. RTE. 176 AT ROBERTS RD.</b>			
SCALE:	SHEET	OF SHEETS	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	MCHENRY	59	12
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				



PI STA. = 495+49.01  
 Δ = 45° 02' 31" (LT)  
 D = 4° 42' 28"  
 R = 1,217.01'  
 L = 504.62'  
 E = 956.73'  
 e = 100.47'  
 T.R. = ----  
 S.E. RUN = ----  
 P.C. STA. = 490+44.38  
 P.T. STA. = 500+01.11



- 1 CB, TYPE C, W/TYPE 24 F&G  
STA. 199+13.7, 17.47' LT  
T.G. 766.59  
INV. 755.76
- 2 CB, TYPE A, W/TYPE 24 F&G  
STA. 199+13.7, 18.58' RT  
T.G. 766.51  
INV. 766.75  
INV. (W) 755.86  
INV. (N) 755.76  
INV. (S) 755.66
- 1 STORM SEWER, CLASS A, TYPE 1, 12", 36'

MODEL: D:\default  
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 PROJECT: 17050903\0000\1000000.dwg  
 OFFICE: 1000000  
 DESIGNED: 11/11/2018

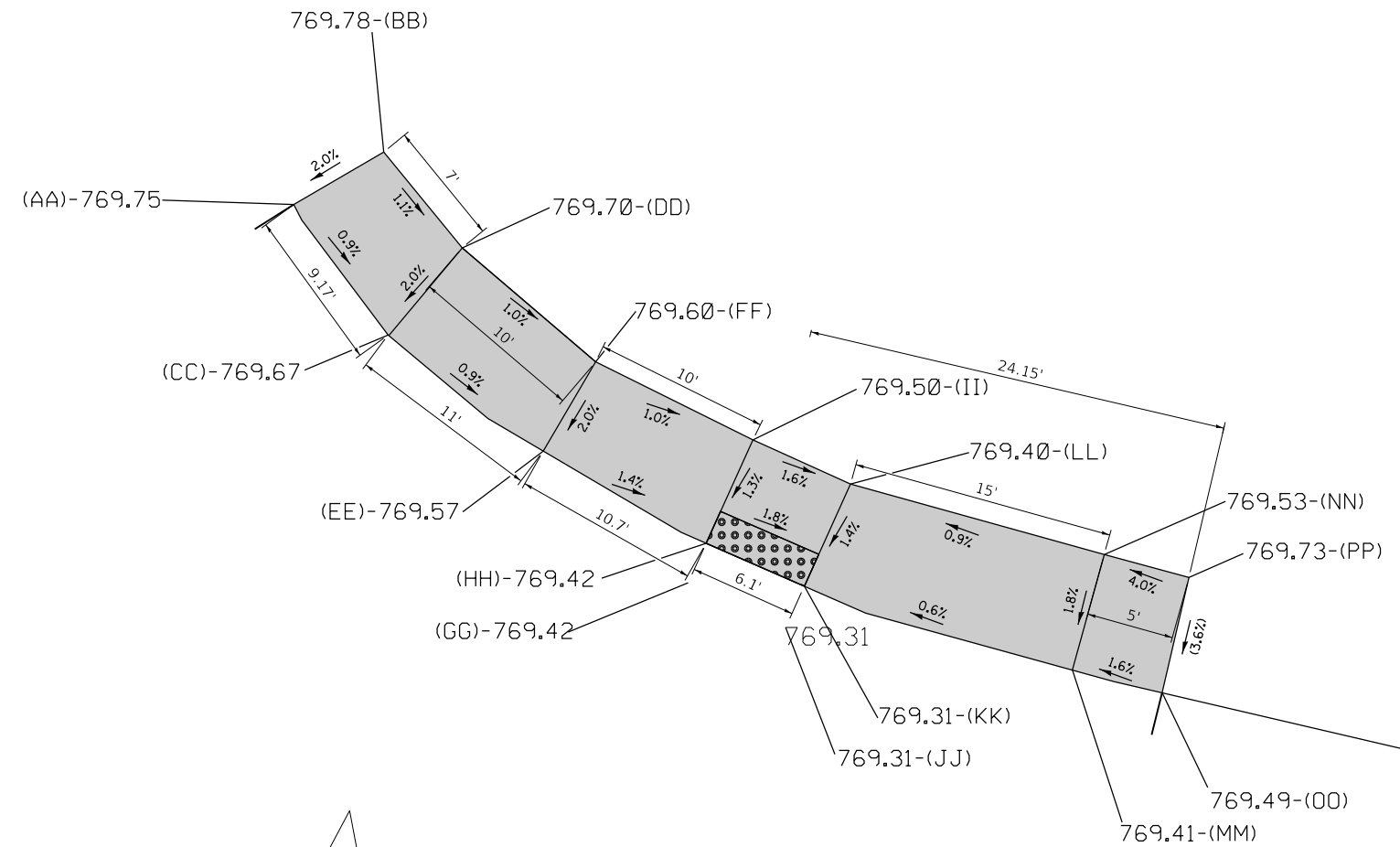
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING & PROPOSED ROADWAY PLAN  
IL. RTE. 176 AT ROBERTS RD.**

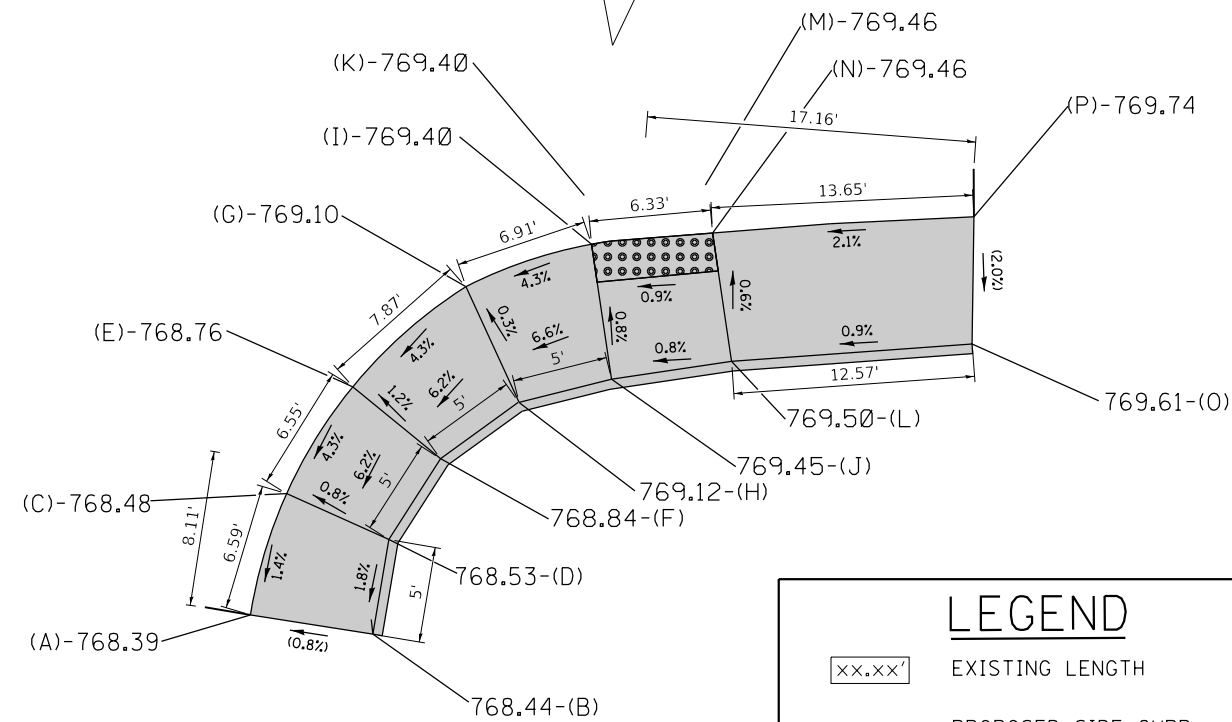
USER NAME = quillametp	DESIGNED -	REVISED -
DRAWN -	REVISED -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 5/11/2018	DATE -	REVISED -

SCALE: 1" = 50'	SHEET OF SHEETS	STA. TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			355	145N-4(14)	LAKE/McHENRY	59	13
			CONTRACT NO. 60Y22			ILLINOIS FED. AID PROJECT	

	STATION	OFFSET		STATION	OFFSET
AA	500+18.34	35.8850' LT	II	500+46.90	28.9294' LT
BB	500+22.63	39.9947' LT	JJ	500+51.20	18.9753' LT
CC	500+25.29	29.9117' LT	KK	500+51.69	21.4994' LT
DD	500+29.24	35.7208' LT	LL	500+52.90	27.7733' LT
EE	500+35.42	25.5326' LT	MM	500+67.66	20.4099' LT
FF	500+37.15	31.1658' LT	NN	500+67.89	27.2343' LT
GG	500+45.21	20.1491' LT	OO	500+72.92	20.3409' LT
HH	500+45.68	22.5790' LT	PP	500+72.89	27.0818' LT



	STATION	OFFSET		STATION	OFFSET
A	500+33.20	54.1911' RT	I	500+45.99	31.2793' RT
B	500+39.63	53.6875' RT	J	500+48.64	37.8777' RT
C	500+33.56	47.6069' RT	K	500+45.03	28.9021' RT
D	500+39.30	48.6987' RT	L	500+54.50	35.5229' RT
E	500+35.62	41.3943' RT	M	500+51.04	26.9039' RT
F	500+40.94	43.9751' RT	N	500+98.60	29.2482' RT
G	500+40.14	39.9468' RT	O	500+66.49	31.7307' RT
H	500+44.23	40.1660' RT	P	500+65.04	25.2563' RT



**LEGEND**

	EXISTING LENGTH		PROPOSED SIDEWALK
	PROPOSED SIDE CURB		DETECTABLE WARNINGS
	EXISTING ELEVATION/SLOPE		SIDEWALK REMOVAL REPLACE W/TOPSOIL & SOD

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

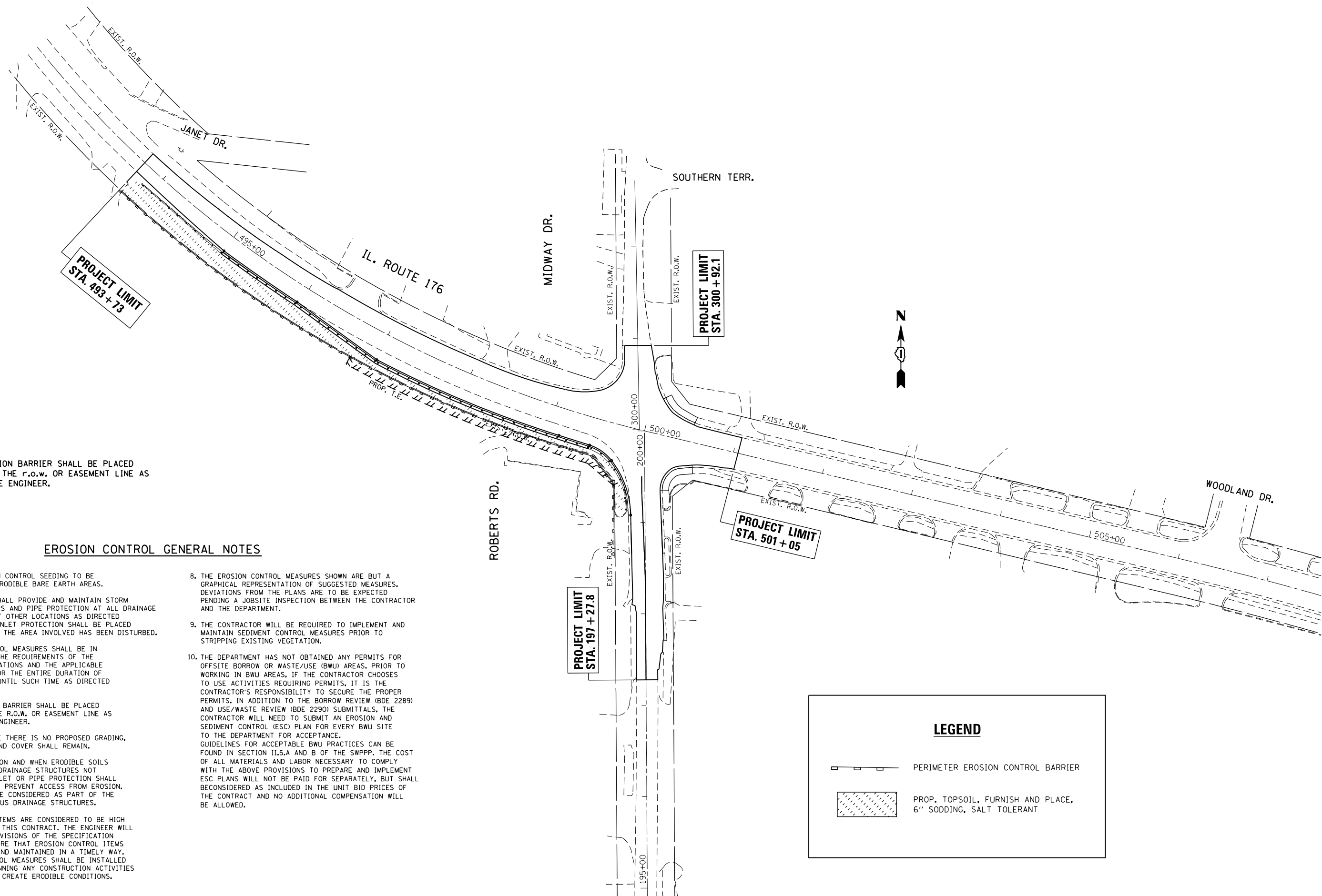
ADA RAMP PLAN  
FAP 355 / IL 176 (STATE ROAD)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/McHENRY	59	14
CONTRACT NO. 60Y22				

SCALE: SHEET OF SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

USER NAME = guillaumejp	DESIGNED -	REVISED -
PLOT SCALE = 10.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 5/11/2018	CHECKED -	REVISED -
	DATE -	REVISED -




**NOTE:**

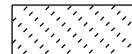
PERIMETER EROSION BARRIER SHALL BE PLACED 12 INCHES FROM THE r.o.w. OR EASEMENT LINE AS DIRECTED BY THE ENGINEER.

**EROSION CONTROL GENERAL NOTES**

1. TEMPORARY EROSION CONTROL SEEDING TO BE PROVIDED AT ALL ERODIBLE BARE EARTH AREAS.
2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN STORM DRAIN INLET FILTERS AND PIPE PROTECTION AT ALL DRAINAGE STRUCTURES AND AT OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. INLET PROTECTION SHALL BE PLACED IMMEDIATELY AFTER THE AREA INVOLVED HAS BEEN DISTURBED.
3. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE STATE STANDARD FOR THE ENTIRE DURATION OF THE CONTRACT OR UNTIL SUCH TIME AS DIRECTED BY THE ENGINEER.
4. PERIMETER EROSION BARRIER SHALL BE PLACED 12 INCHES FROM THE R.O.W. OR EASEMENT LINE AS DIRECTED BY THE ENGINEER.
5. AT ANY AREA WHERE THERE IS NO PROPOSED GRADING, THE EXISTING GROUND COVER SHALL REMAIN.
6. DURING CONSTRUCTION AND WHEN ERODIBLE SOILS ARE EXPOSED, ALL DRAINAGE STRUCTURES NOT PROTECTED WITH INLET OR PIPE PROTECTION SHALL BE KEPT SEALED TO PREVENT ACCESS FROM EROSION. THIS WORK SHALL BE CONSIDERED AS PART OF THE COST OF THE VARIOUS DRAINAGE STRUCTURES.
7. EROSION CONTROL ITEMS ARE CONSIDERED TO BE HIGH PRIORITY ITEMS ON THIS CONTRACT. THE ENGINEER WILL IMPLEMENT ALL PROVISIONS OF THE SPECIFICATION NECESSARY TO ASSURE THAT EROSION CONTROL ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY WAY. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE BEGINNING ANY CONSTRUCTION ACTIVITIES WHICH POTENTIALLY CREATE ERODIBLE CONDITIONS.
8. THE EROSION CONTROL MEASURES SHOWN ARE BUT A GRAPHICAL REPRESENTATION OF SUGGESTED MEASURES. DEVIATIONS FROM THE PLANS ARE TO BE EXPECTED PENDING A JOBSITE INSPECTION BETWEEN THE CONTRACTOR AND THE DEPARTMENT.
9. THE CONTRACTOR WILL BE REQUIRED TO IMPLEMENT AND MAINTAIN SEDIMENT CONTROL MEASURES PRIOR TO STRIPPING EXISTING VEGETATION.
10. THE DEPARTMENT HAS NOT OBTAINED ANY PERMITS FOR OFFSITE BORROW OR WASTE/USE (BWU) AREAS. PRIOR TO WORKING IN BWU AREAS, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING PERMITS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER PERMITS. IN ADDITION TO THE BORROW REVIEW (BDE 2289) AND USE/WASTE REVIEW (BDE 2290) SUBMITTALS, THE CONTRACTOR WILL NEED TO SUBMIT AN EROSION AND SEDIMENT CONTROL (ESC) PLAN FOR EVERY BWU SITE TO THE DEPARTMENT FOR ACCEPTANCE. GUIDELINES FOR ACCEPTABLE BWU PRACTICES CAN BE FOUND IN SECTION II.5.A AND B OF THE SWPPP. THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS TO PREPARE AND IMPLEMENT ESC PLANS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**LEGEND**

 PERIMETER EROSION CONTROL BARRIER

 PROP. TOPSOIL, FURNISH AND PLACE, 6" SODDING, SALT TOLERANT

FILE NAME =	USER NAME = guillaumefp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. ROUTE 176 AT ROBERTS RD. EROSION CONTROL AND LANDSCAPING PLAN</b>	F.A.P. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =
						355	145N-4(14)	LAKE/McHENRY	59	15
						CONTRACT NO. 60Y22				
						ILLINOIS FED. AID PROJECT				
PLOT SCALE = 100.0000' / in. PLOT DATE = 5/11/2018				CHECKED - DATE -		REVISED - REVISED -		SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.		

PART OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 44 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, ILLINOIS.

PARCEL NUMBER	TOTAL HOLDINGS ACRES	PART TAKEN ACRES	AREA IN EXISTING R.O.W. ACRES	REMAINDER AREA ACRES	EASEMENT AREA		PARCEL INDEX NUMBER
					ACRES	SQUARE FEET	
1MCO001TE	5.496	0		5.496	0.069	3,009	15-20-478-005 15-20-478-006 15-20-478-008 15-20-478-016

LEGEND

SECTION CORNER  
QUARTER SECTION CORNER

SECTION - QUARTER SECTION LINE  
PLATTED LOT LINES  
PROPERTY (DEED) LINE  
APL  
APPARENT PROPERTY LINE  
EXISTING CENTERLINE  
PROPOSED CENTERLINE  
EXISTING RIGHT OF WAY LINE  
PROPOSED RIGHT OF WAY LINE  
EXISTING EASEMENT  
PROPOSED EASEMENT  
EXISTING ACCESS CONTROL LINE  
PROPOSED ACCESS CONTROL LINE  
MEASURED DIMENSION  
COMPUTED DIMENSION  
RECORDED DIMENSION  
EXISTING BUILDING

IRON PIPE OR ROD FOUND  
CUT CROSS FOUND OR SET

"MAG" NAIL SET  
5/8" REBAR SET

IRON PIPE OR ROD FOUND  
"MAG" NAIL SET  
CUT CROSS FOUND OR SET  
5/8" REBAR SET

GRAPHIC SCALE  
FEET  
0 40  
SCALE: 1" = 40'

BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD83 (2011 ADJUSTMENT), EAST ZONE AND THE WEST EXISTING RIGHT OF WAY LINE OF ROBERTS ROAD BEARS N 00° 23' 03" W

IL-176  
PROPOSED CONSTRUCTION  
Δ = 45° 02' 31"  
D = 02° 42' 28"  
R = 1217.01  
L = 956.73  
PC STA 490+44.38  
N 2,042,391.034  
E 1,020,005.373  
PI STA 495+49.00  
N 2,041,960.875  
E 1,020,269.210  
PT STA 500+01.11  
N 2,041,843.627  
E 1,020,760.025

POINT OF BEGINNING  
1MCO001TE  
MOST NORTHERLY  
NORTHEAST CORNER  
OF PROPERTY CONVEYED  
BY DOCUMENT 92R055275  
RECORDED OCTOBER 12, 1992  
STA 499+51.00  
39.74' RT

- SURVEY NOTES:
- ALL DIMENSIONS ARE MEASURED UNLESS OTHERWISE SPECIFIED.
  - BEARING, DISTANCES, AND COORDINATES SHOWN HEREIN REFERENCE THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) "GRID".
  - ALL MEASURED AND CALCULATED DISTANCES ARE "GRID" NOT "GROUND". TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES SHOWN BY THE COMBINATION FACTOR OF 0.99997405.
  - AREAS SHOWN ON THIS PLAT ARE "GROUND".
  - FIELD SURVEY COMPLETED ON DECEMBER 8, 2016.
- STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN, IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
  - STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
  - PERMANENT SURVEY MARKER, I.D.O.T. STANDARD 2135 (TO BE SET BY OTHERS)
  - RIGHT OF WAY STAKING PROPOSED TO BE SET

STATE OF ILLINOIS )  
COUNTY OF COOK )

THIS IS TO CERTIFY THAT WE, ENVIRONMENTAL DESIGN INTERNATIONAL INC, ILLINOIS PROFESSIONAL DESIGN FIRM LAND SURVEYING CORPORATION, NUMBER 184-001224, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREIN IN SECTION 20, TOWNSHIP 44 NORTH, RANGE 9 EAST OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED AT CHICAGO, ILLINOIS THIS 8TH DAY OF MAY, A.D. 2018.

Wm J. Fleming  
WILLIAM J. FLEMING  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-003226  
LICENSE EXPIRATION DATE: 11/30/2018

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.



COORDINATES ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD '83 (2011), AND IL-176 STA 500+00.00 = ROBERTS ROAD STA 200+00.00 HAS A VALUE OF 2,041,843.888 NORTH & 1,020,758.937 EAST

STATION	OFFSET	NORTH	EAST
496+75.00	40.59' RT	2,041,925.164	1,020,437.166
496+75.00	50.00' RT	2,041,916.917	1,020,432.634
499+49.60	50.00' RT	2,041,808.555	1,020,696.528
499+51.00	39.74' RT	2,041,818.028	1,020,700.722
499+81.38	63.81' RT	2,041,786.552	1,020,725.037
499+81.95	66.13' RT	2,041,784.153	1,020,725.054

PTB 162/16 EDI PROJECT 1173.023.24

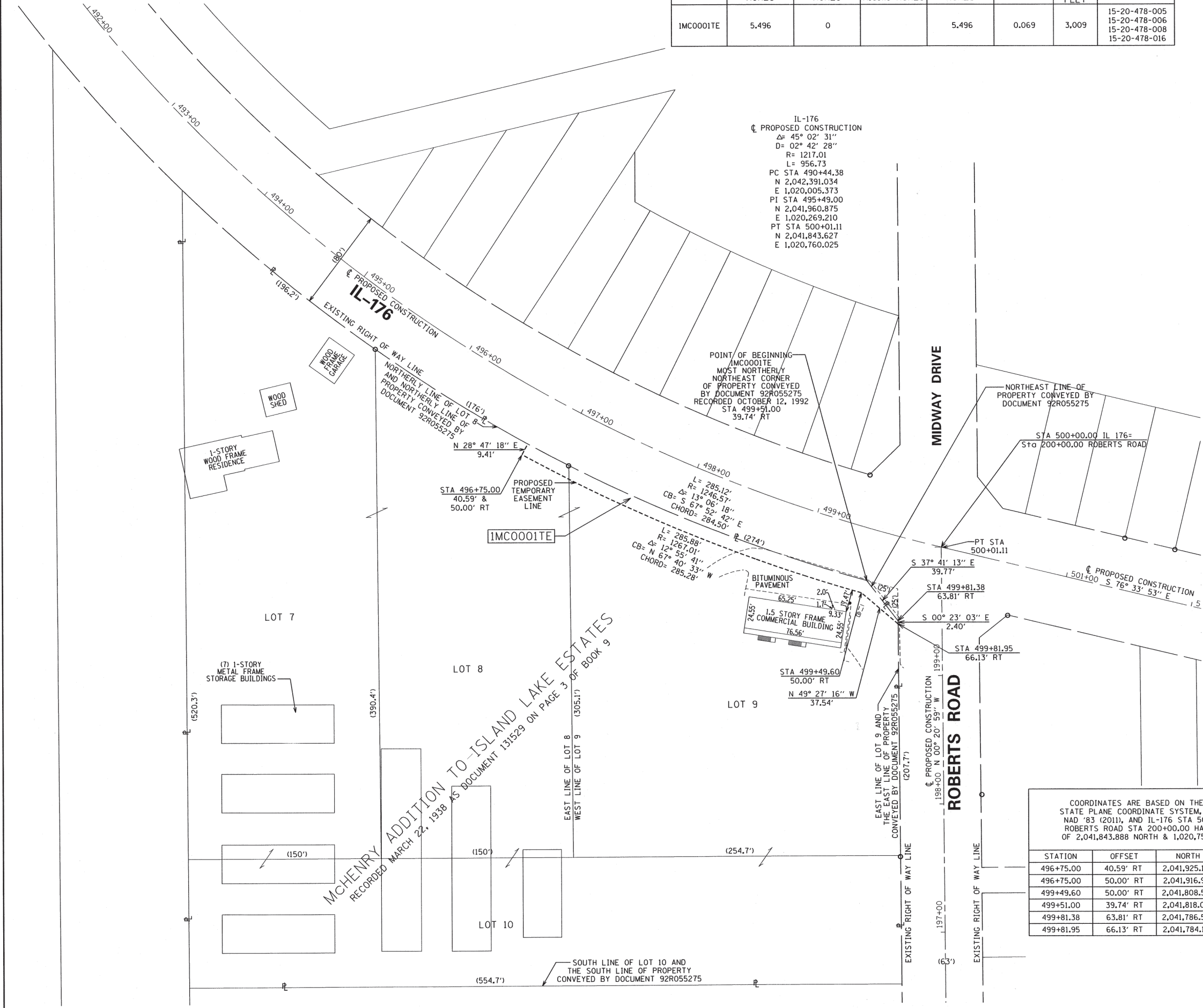
Environmental Design International Inc.  
Civil, Survey, Environmental and Construction Inspection Services  
33 W. MONROE STREET, SUITE 1825, CHICAGO, IL 60603  
Ph. (312) 345-1400 Fax (312) 345-0529  
www.envdesign.com MBE/WBE/DBE

Excellence. Dedication. Innovation.

**PLAT OF HIGHWAYS**  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**IL-176**

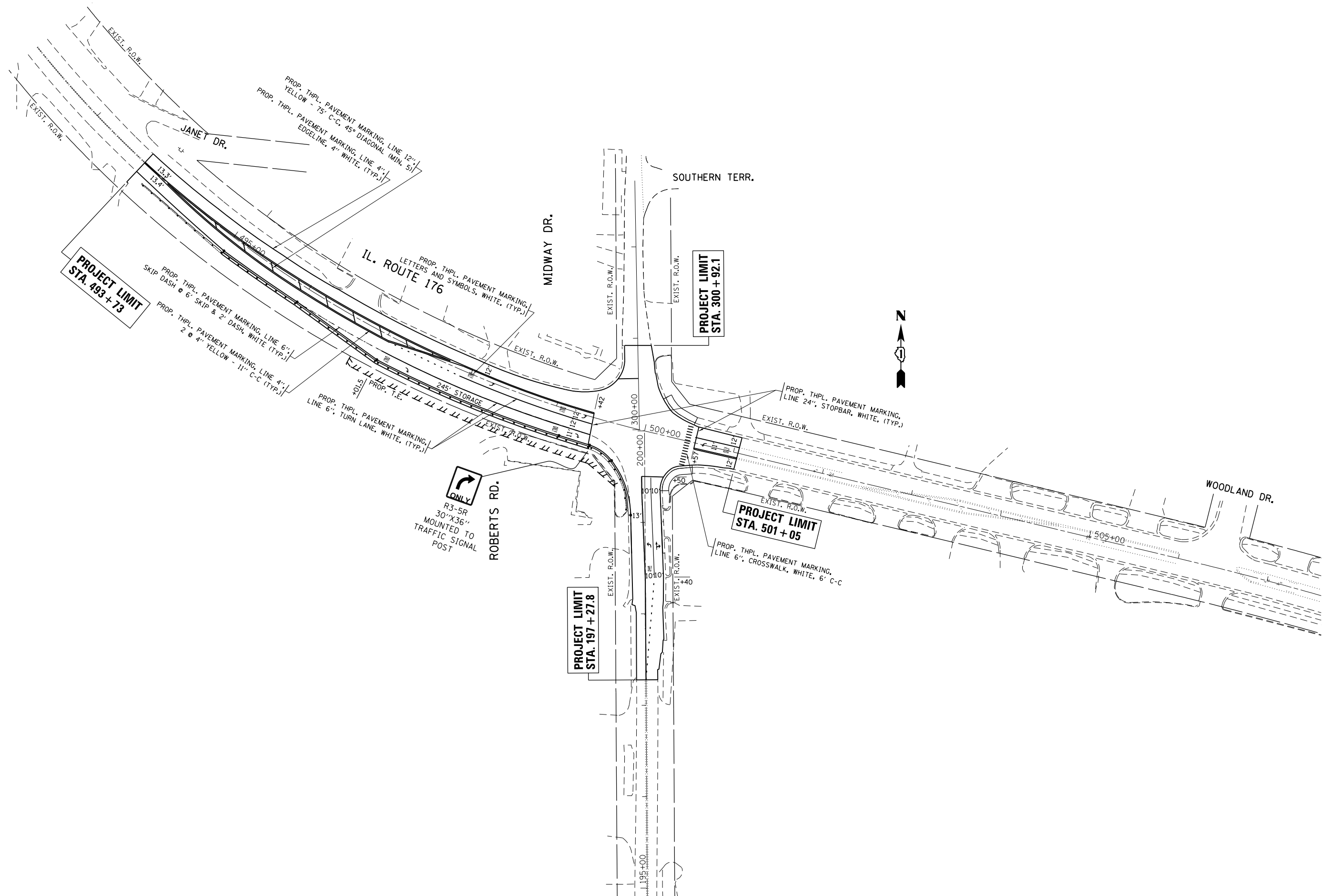
LIMITS:  
SECTION: AT ROBERTS ROAD COUNTY: McHENRY  
STATION: 492+00.00 TO STATION 501+00.00 JOB NO.: R-91-040-13  
SCALE: 1" = 40' SHEET 2 OF 2 SHEETS

BUREAU OF LAND ACQUISITION  
201 WEST CENTER COURT  
SCHAUMBURG, ILLINOIS 60196



REVISION DATE: / / REVISION MADE BY:

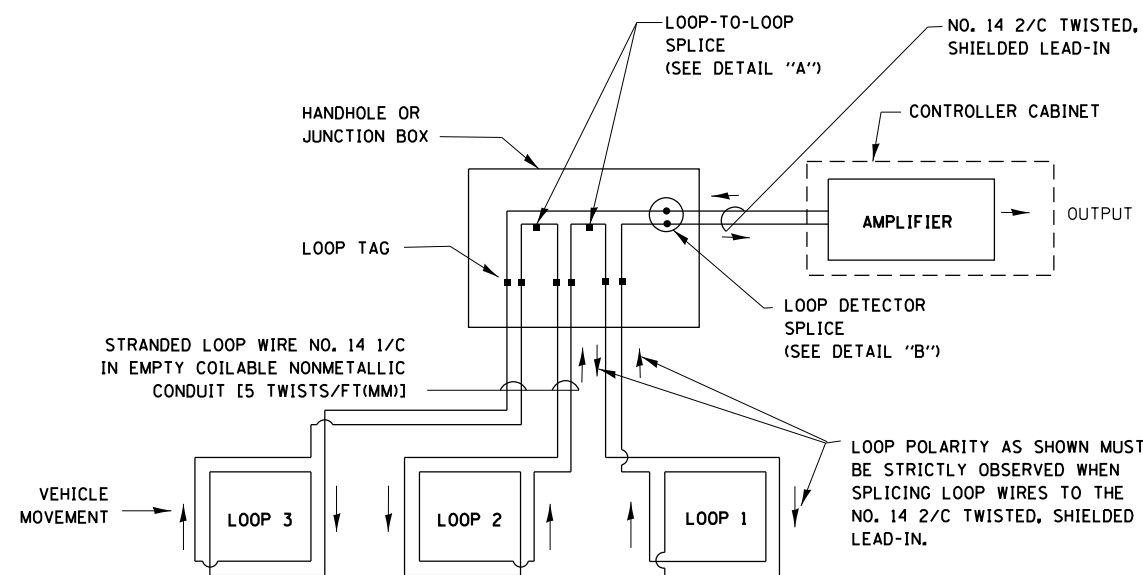




FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. ROUTE 176 AT ROBERTS RD. PAVEMENT MARKING PLAN</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\PI70509\Drawings\CAD\Sheets\PI70509-sht-pmk.dgn		REVISIONS	REVISED -					355	145N-4(14)	LAKE/McHENRY	59	17
		CHECKED -	REVISED -					CONTRACT NO. 60Y22				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
	PLOT SCALE = 100.0000' / in.			SCALE: 1"=50'	SHEET NO.	OF SHEETS	STA.	TO STA.				
	PLOT DATE = 5/11/2018											

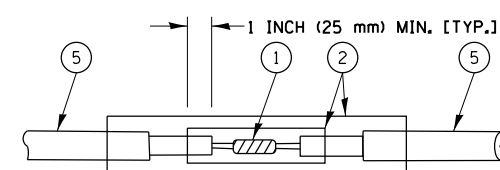
**LOOP DETECTOR NOTES**

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

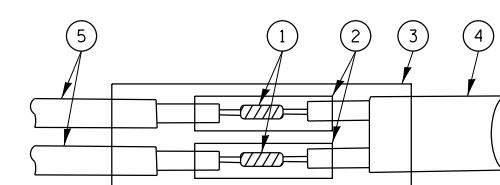


**DETECTOR LOOP WIRING SCHEMATIC**

- 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.



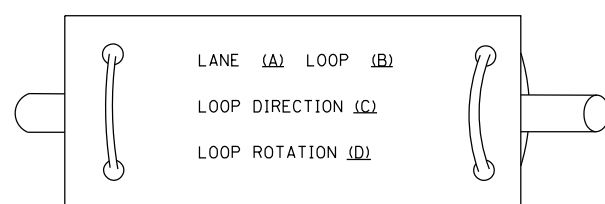
**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



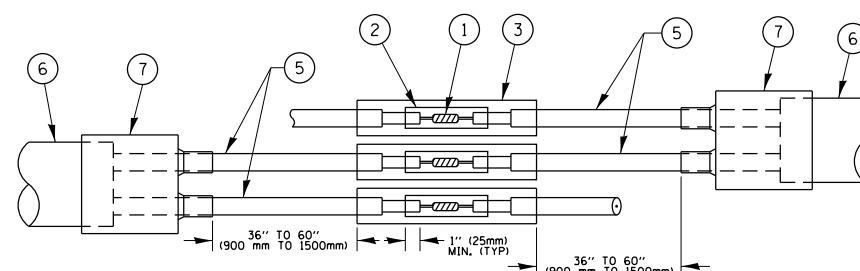
**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**TYPE I LOOP**

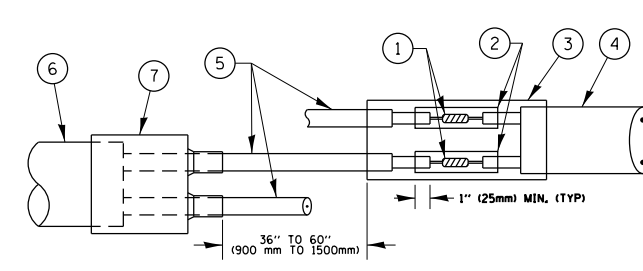
**LOOP LEAD-IN CABLE TAG**



- 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.



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

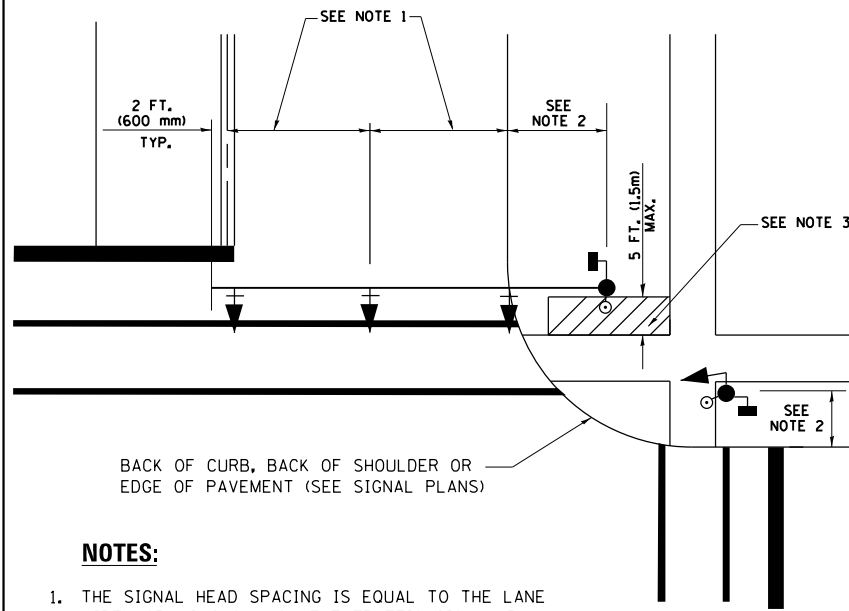
**PRE-FORMED LOOP**

**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.
- ⑥ PRE-FORMED LOOP
- ⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED -	<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.
pw:\IL\084EBIDINTEG\Illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\PI705\Drawings\Design\DistStd.dgn	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			355	145N-4(14)	LAKE/MCHENRY	59	18
Default	PLOT DATE = 5/10/2018	DATE -	REVISED -			<b>TS-05</b>		<b>CONTRACT NO. 60Y22</b>		
						SCALE: NONE	SHEET 2 OF 7 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT	

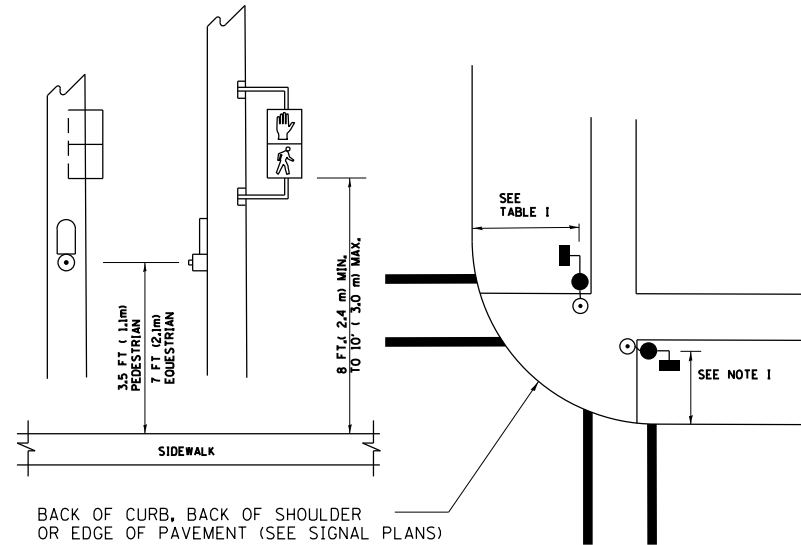
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST  
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR  
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN  
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



**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."

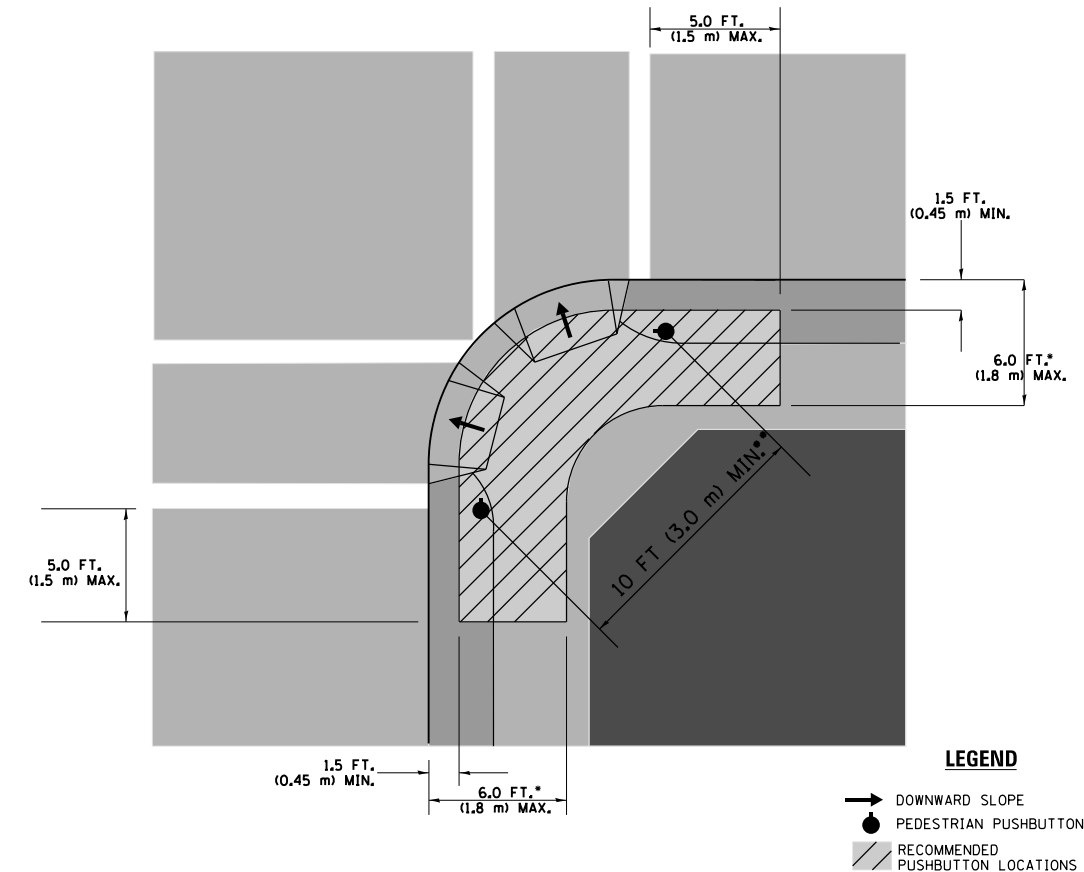
**PEDESTRIAN SIGNAL POST  
AND  
PEDESTRIAN PUSH BUTTON POST**



**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**



- 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:**

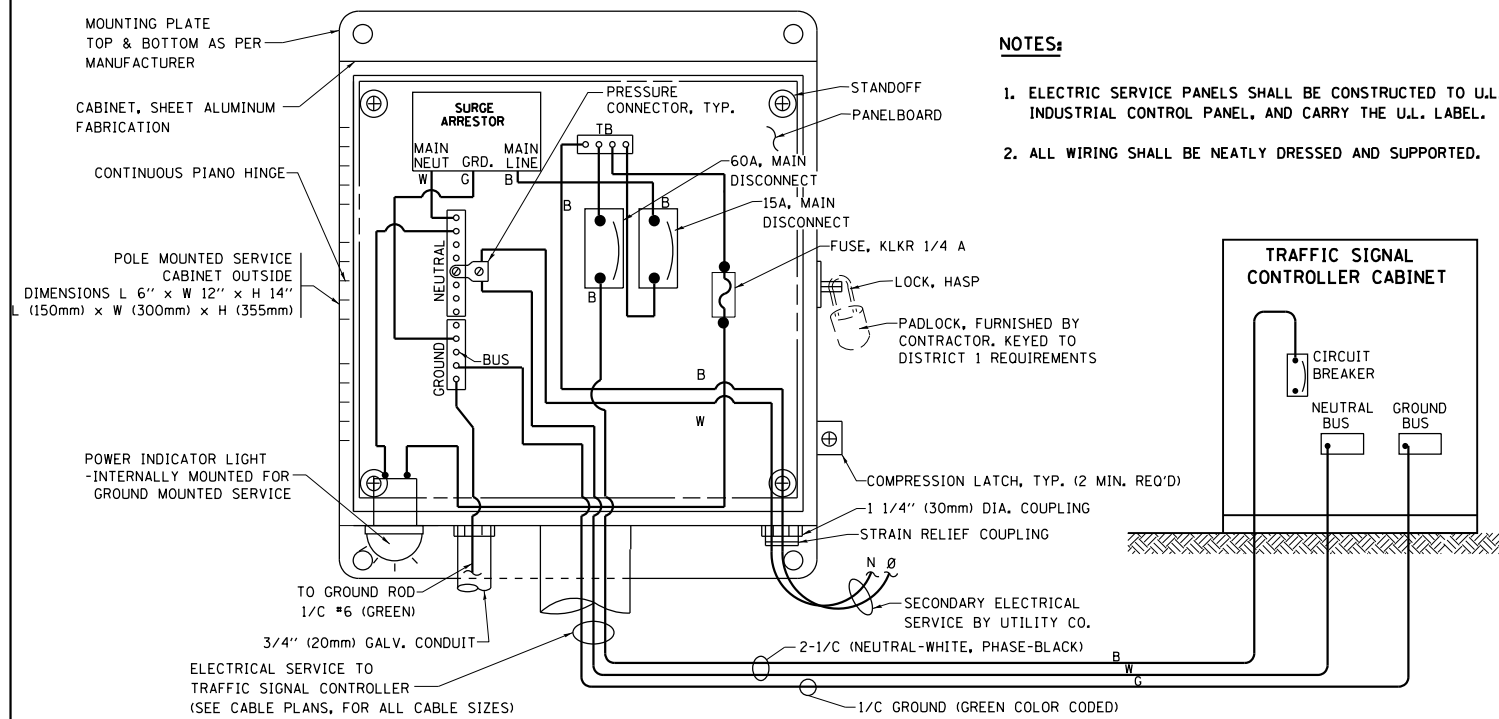
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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**

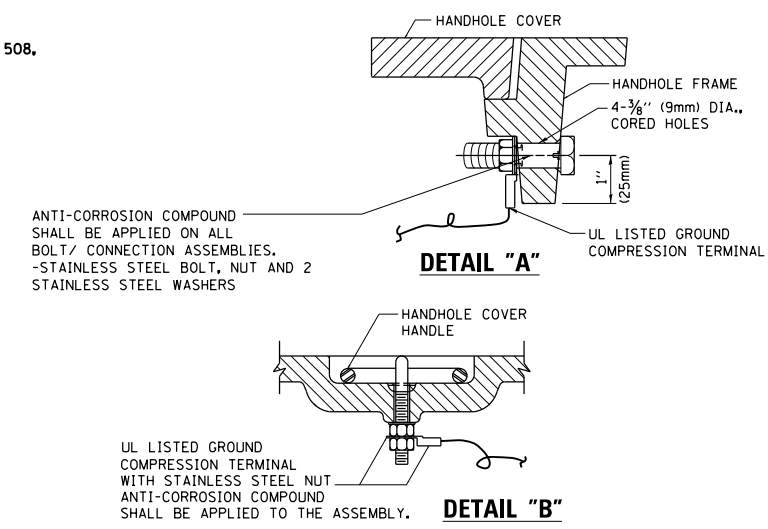
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

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

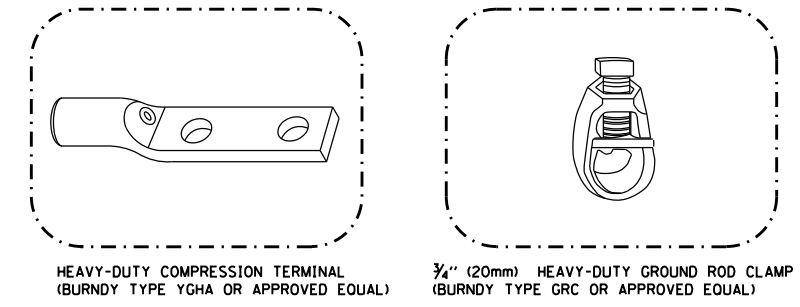
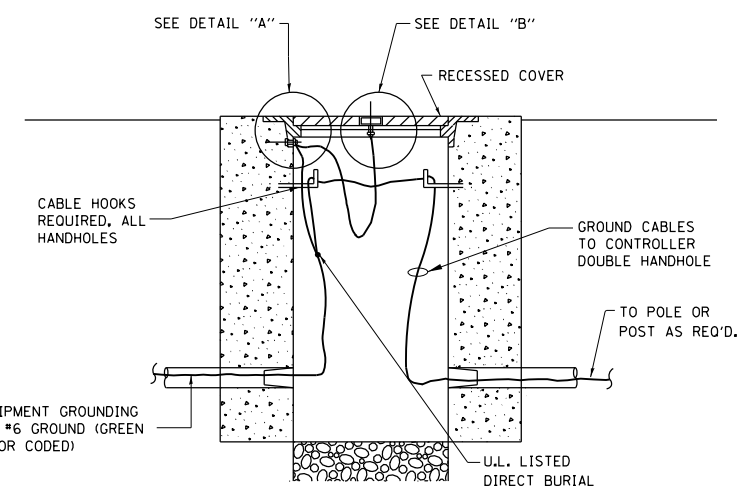


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)**

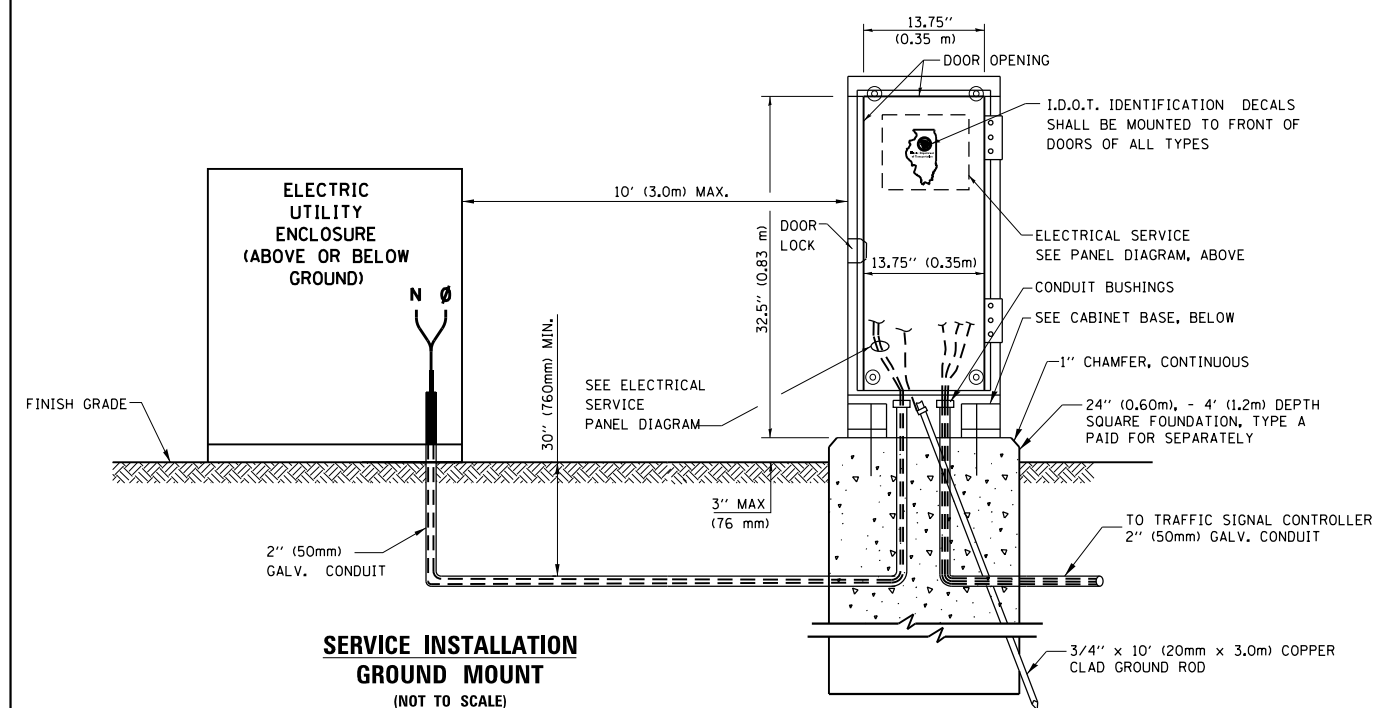
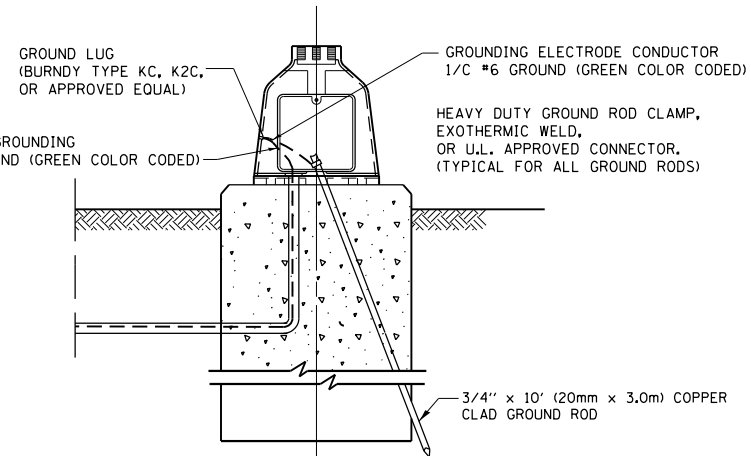
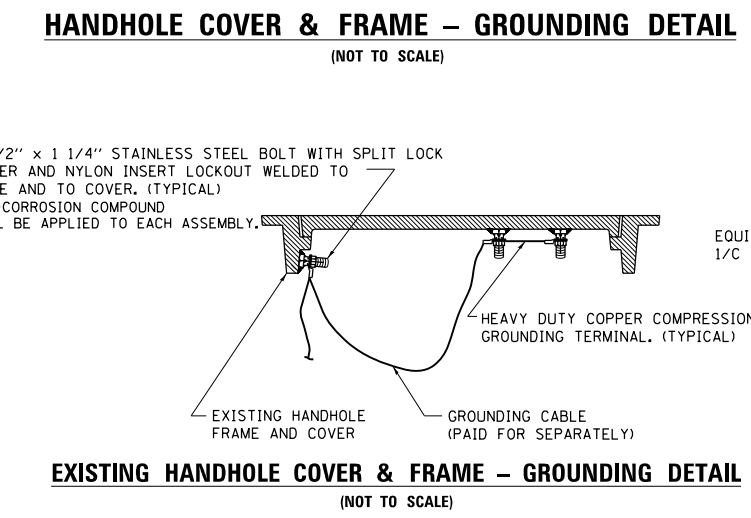


**NOTES:**  
**GROUNDING SYSTEM**

- 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 ENCLOSED. 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.

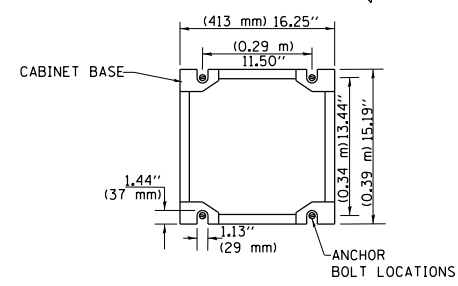


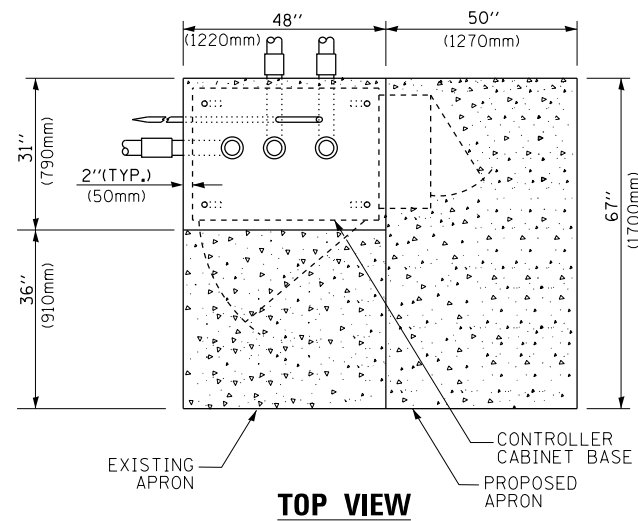
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
  - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



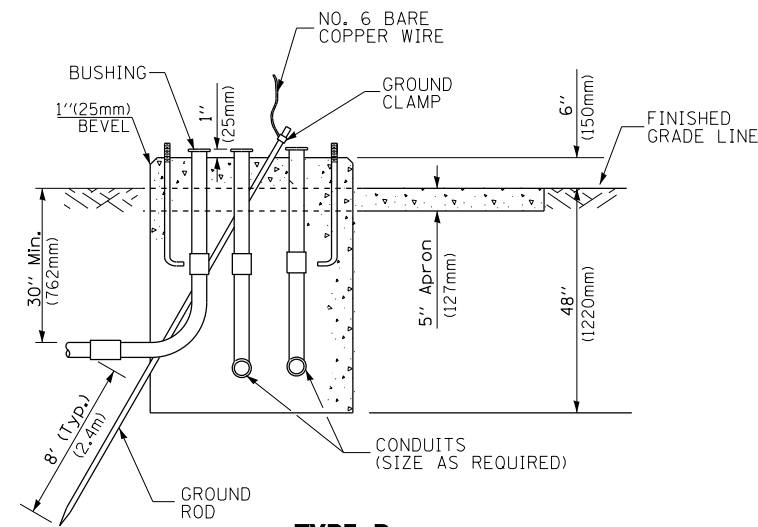
**SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)**

**CABINET - BASE BOLT PATTERN (NOT TO SCALE)**

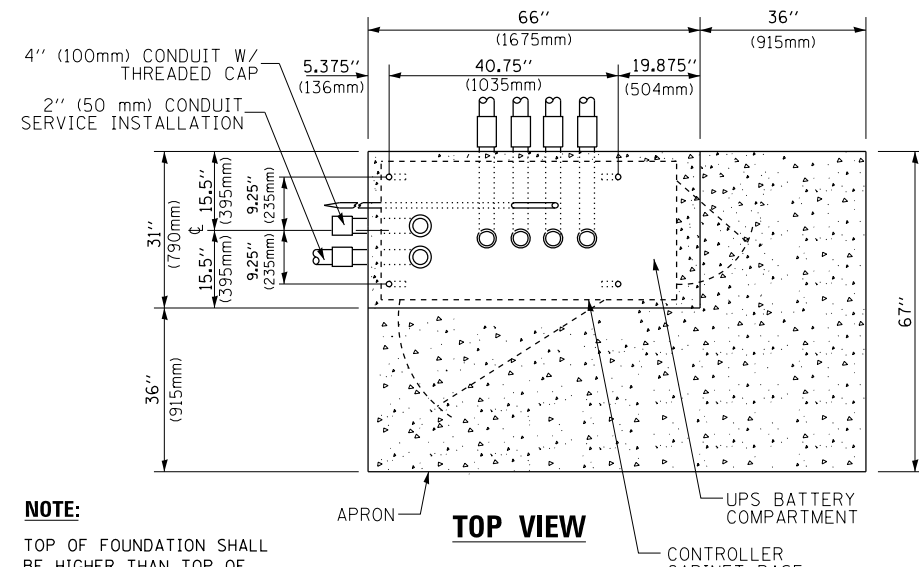




**TOP VIEW**



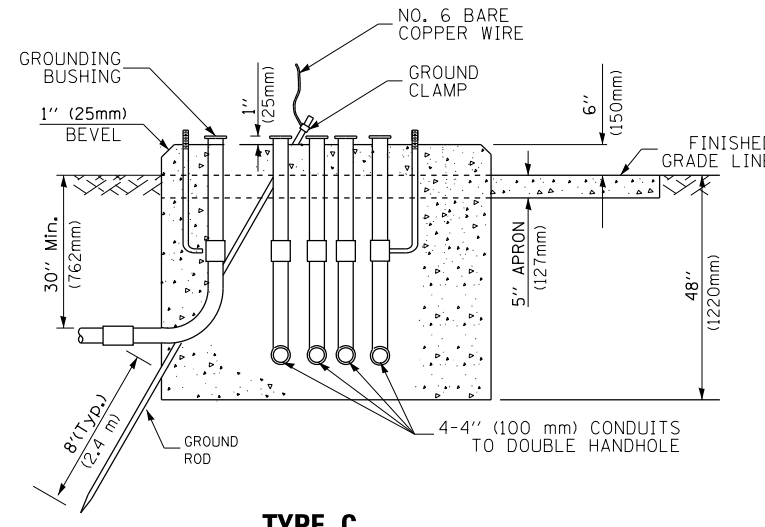
**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



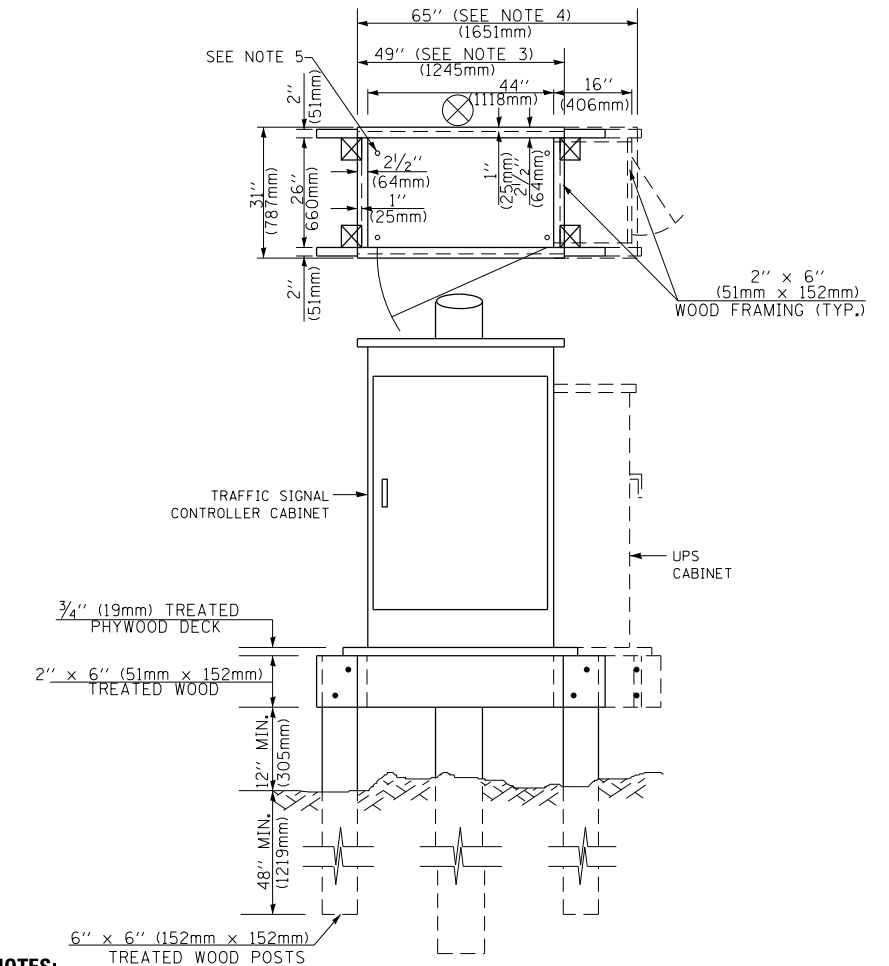
**TOP VIEW**

**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)

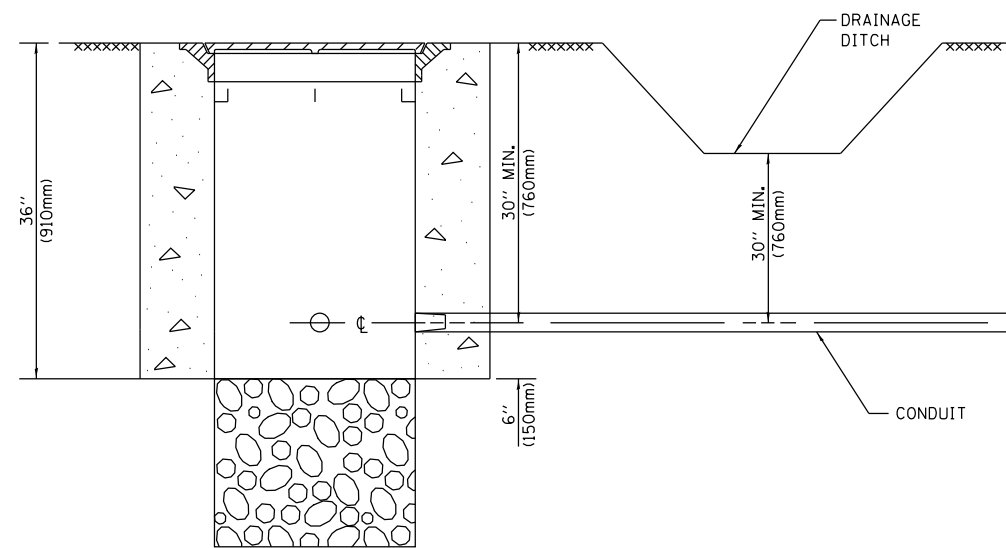
**DEPTH OF FOUNDATION**

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 less than 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 up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	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..

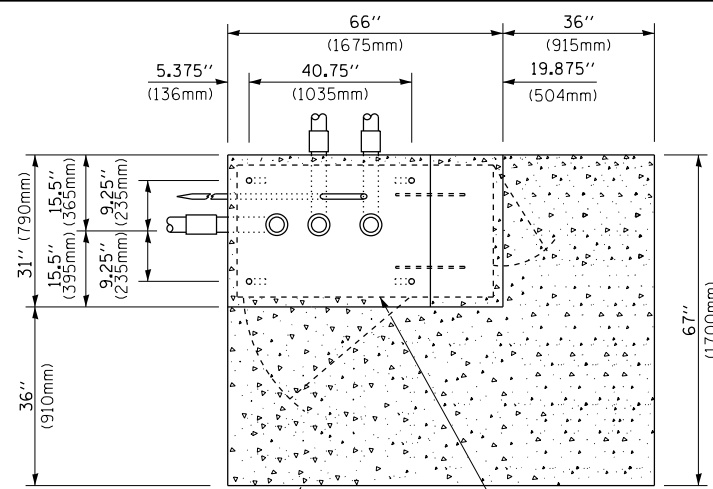
**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**



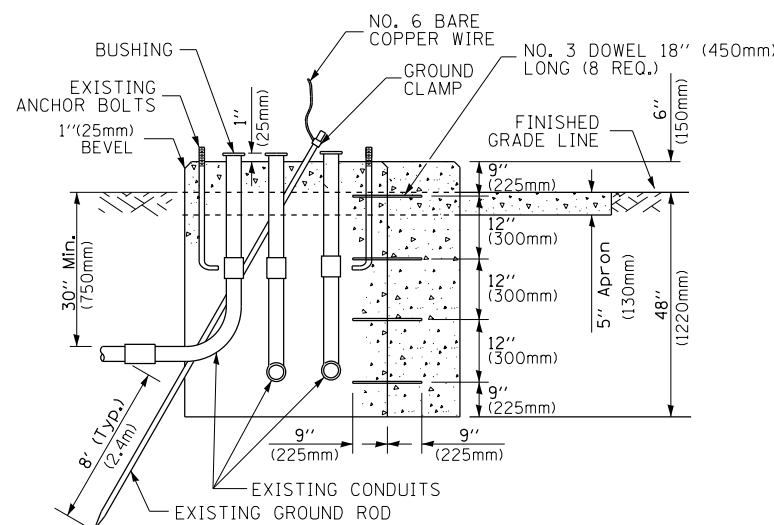
**NOTES:**

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)



**TOP VIEW**  
(NOT TO SCALE)

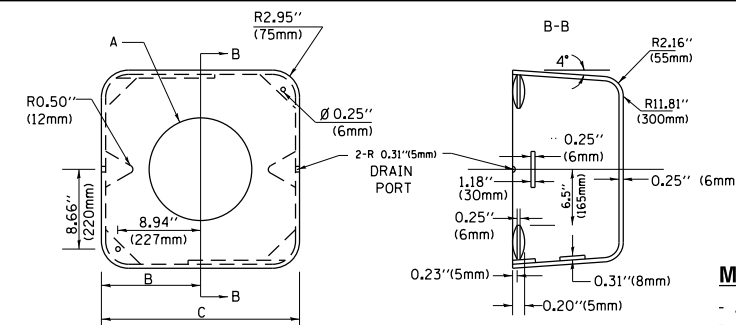


**MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION**  
(NOT TO SCALE)

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	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.



**MATERIAL:**

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

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

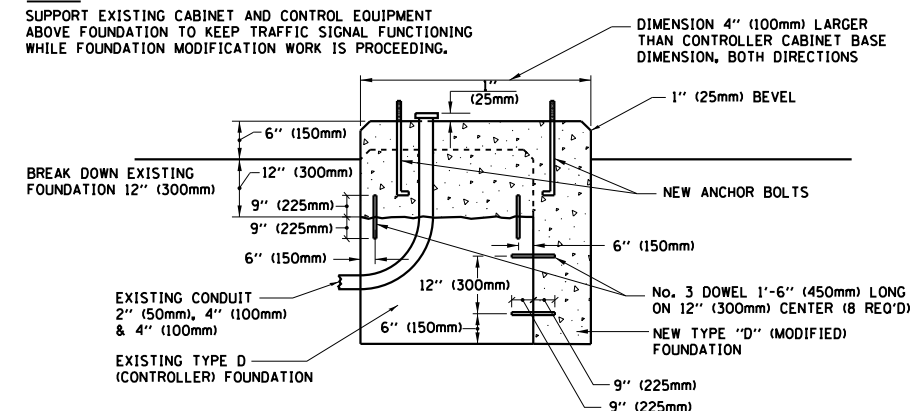
**SHROUD**

**NOTES:**

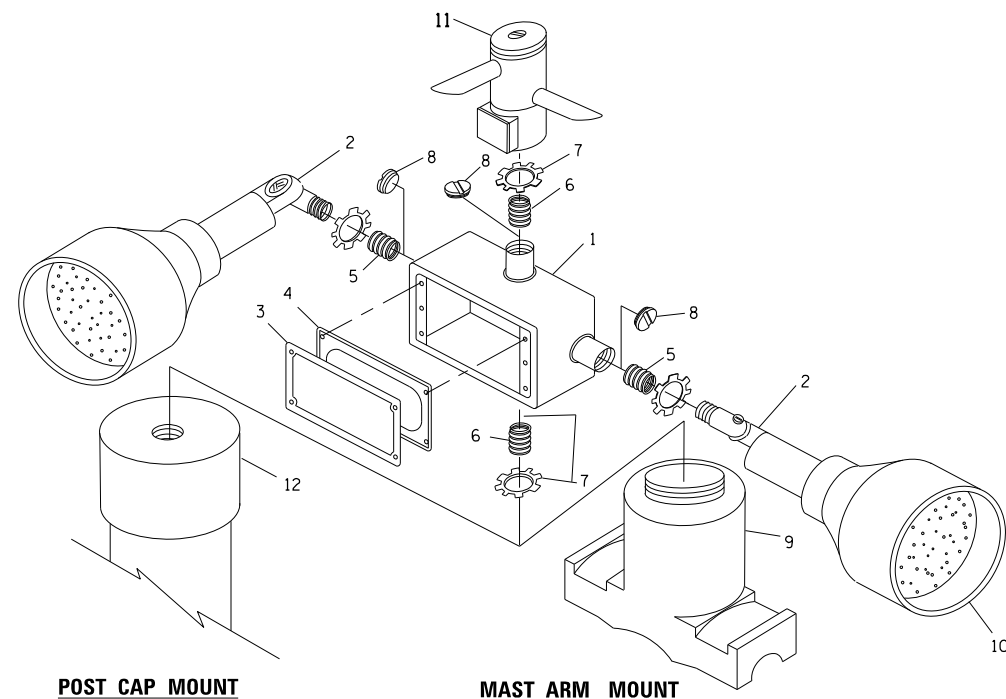
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

**NOTE:**

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



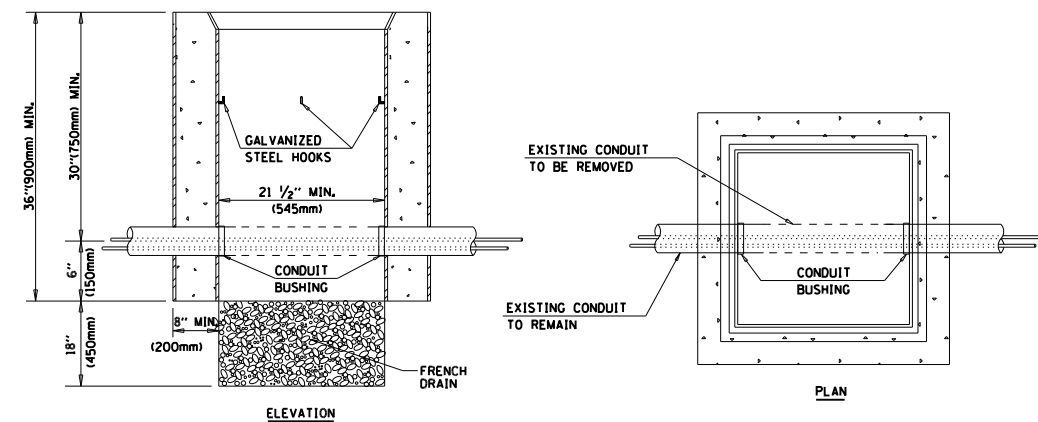
**MODIFY EXISTING TYPE "D" FOUNDATION**



**POST CAP MOUNT**

**MAST ARM MOUNT**

**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**



**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**

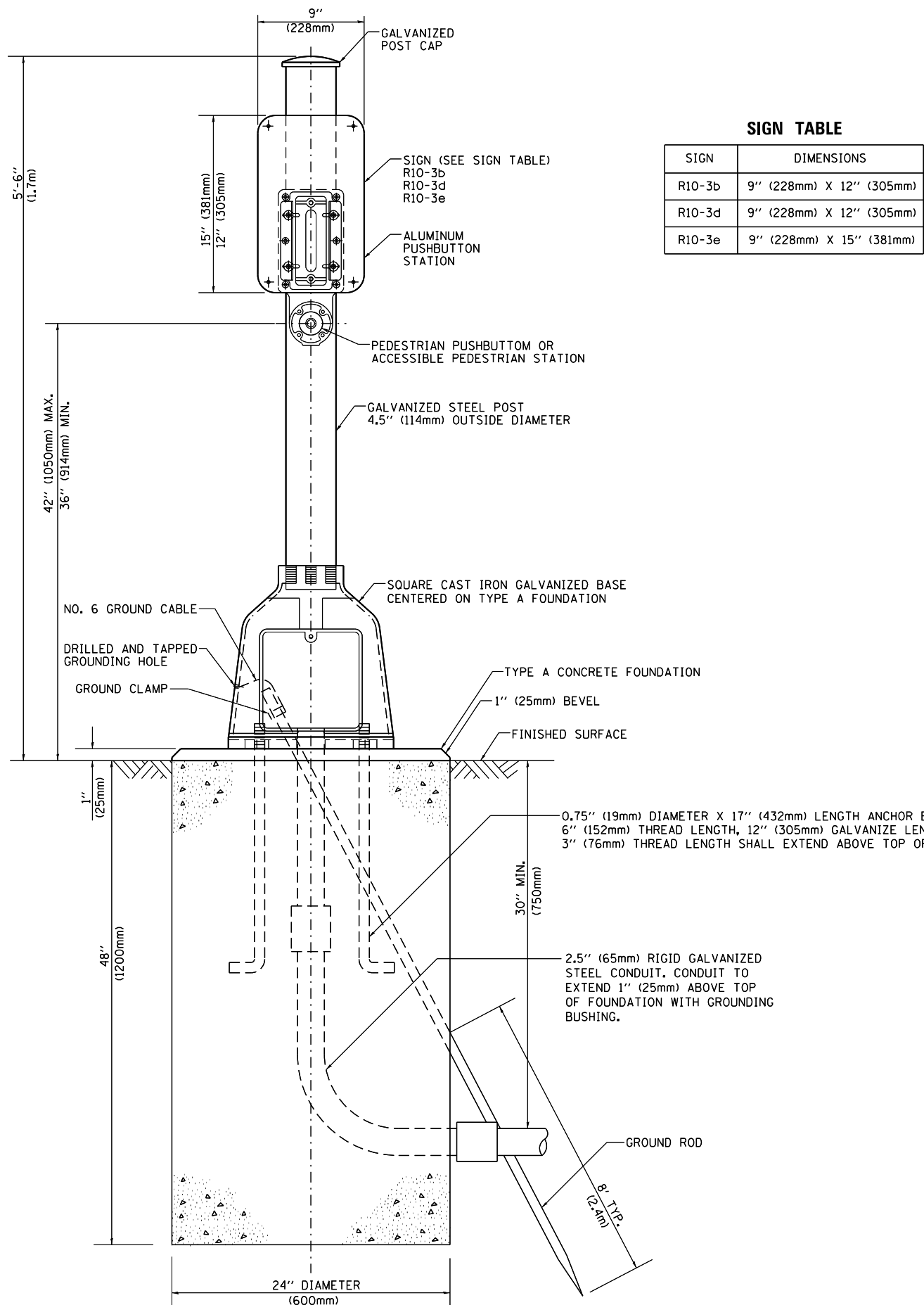
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Default	PLOT DATE = 5/10/2018	DATE -	REVISED -

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

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

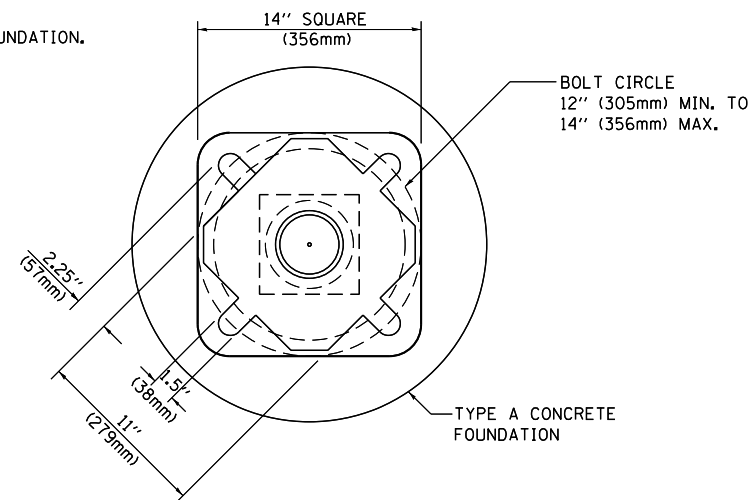
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	22
TS-05		CONTRACT NO.	60Y22	
ILLINOIS FED. AID PROJECT				



**SIGN TABLE**

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



**BOLT PATTERN**

**PEDESTRIAN PUSH BUTTON POST, TYPE A**

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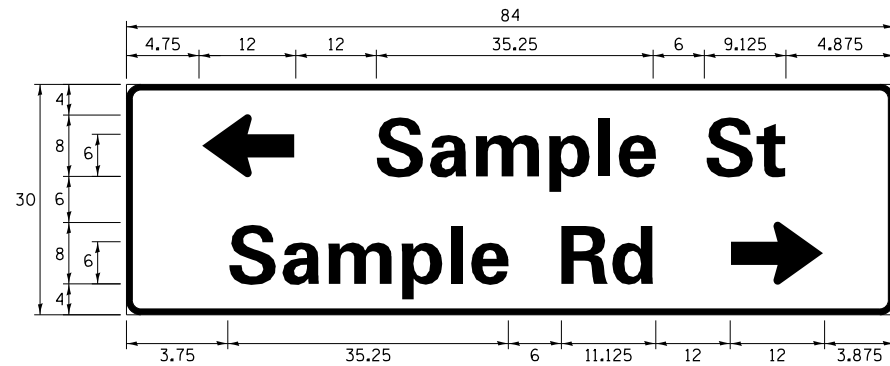
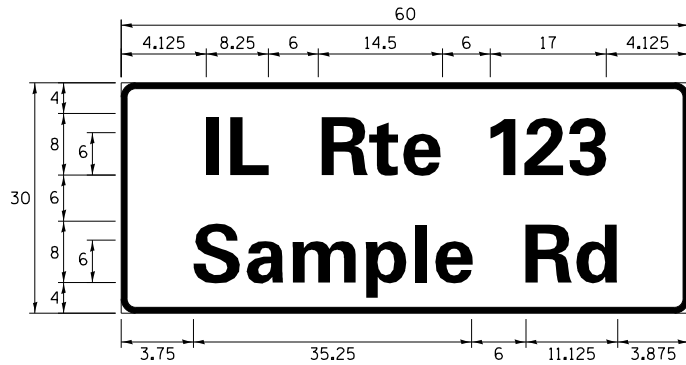
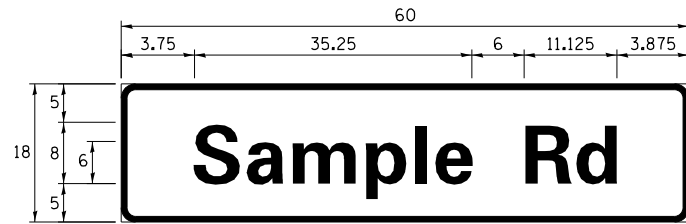
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	23
TS-05		CONTRACT NO. 60Y22		
ILLINOIS FED. AID PROJECT				

**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	-

ALL DIMENSIONS ARE IN INCHES EXCEPT NOTED OTHERWISE

**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 SHALL BE 3/4" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6", 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:**

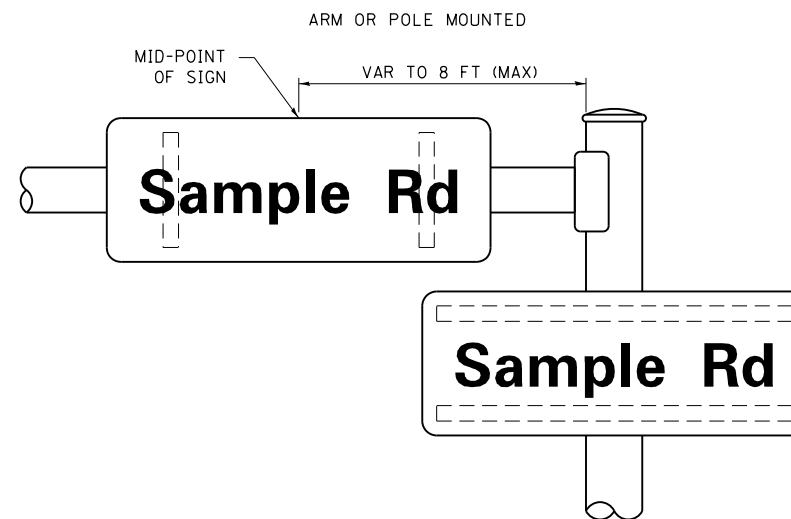
- J.O. HERBERT COMPANY, INC  
MIDLOTHIAN, VA
- WESTERN REMAC, INC.  
WOODRIDGE, IL

**PARTS LISTING:**

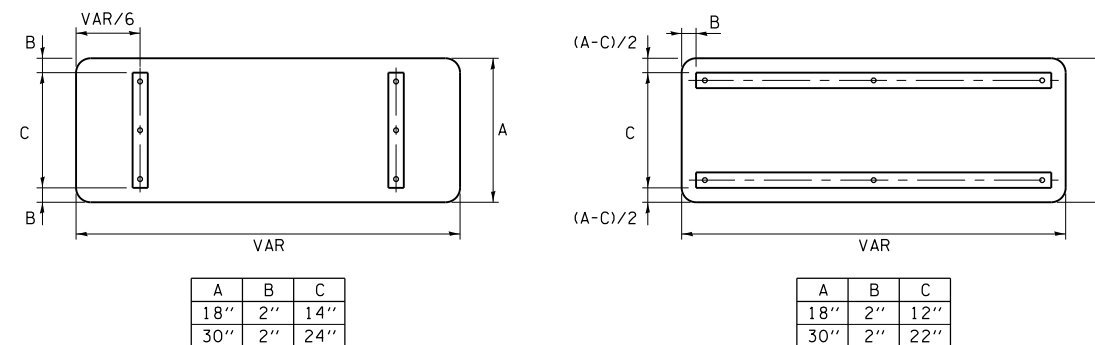
- SIGN CHANNEL PART \*HPN053 (MED. CHANNEL)  
SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3  
SELF TAPPING WITH NEOPRENE WASHER  
PART \*HPN034 (UNIVERSAL)
- BRACKETS CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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

**MOUNTING LOCATION**



**SUPPORTING CHANNELS**



**STANDARD ALPHABETS SPACING CHART**

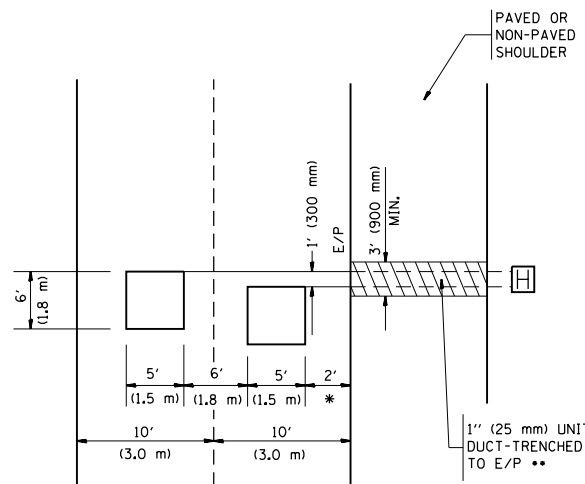
( 8" ) UPPER CASE AND ( 6" ) LOWER CASE

CHARACTER	FHWA SERIES "C"			CHARACTER	FHWA SERIES "D"		
	LEFT SPACING ( INCH)	WIDTH ( INCH)	RIGHT SPACING ( INCH)		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



**LOOPS NEXT TO SHOULDERS**

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



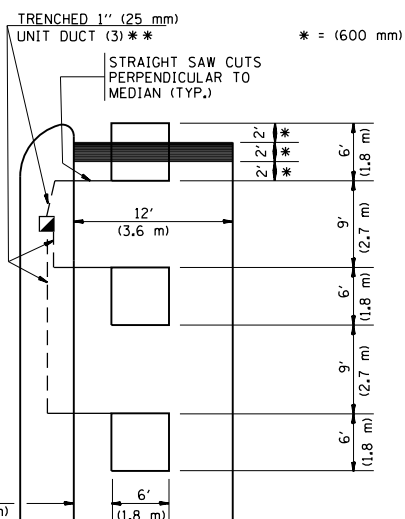
\* = (600 mm)

\*\* 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.

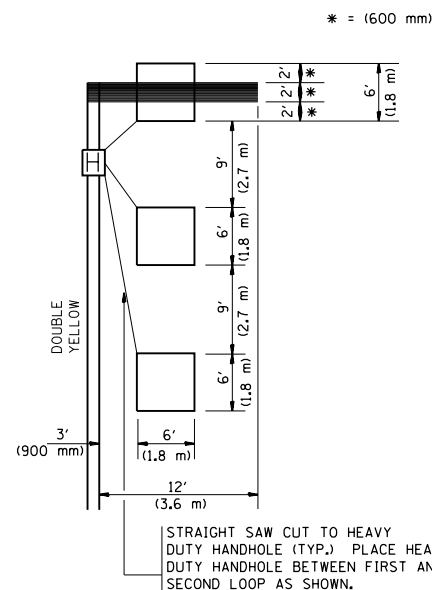


\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

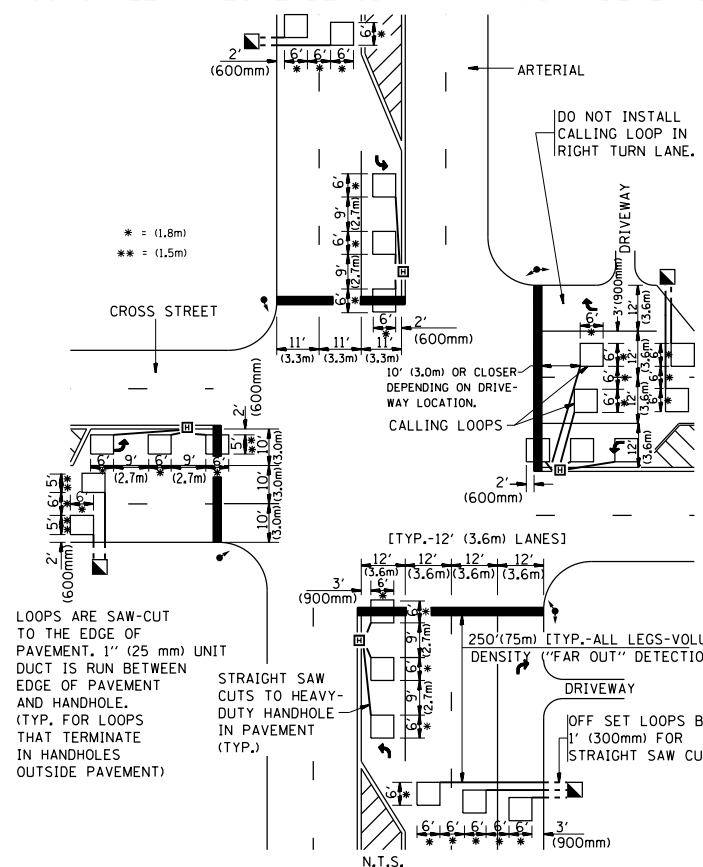
**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH**

(PROTECTED / PERMITTED LEFT TURN PHASING)



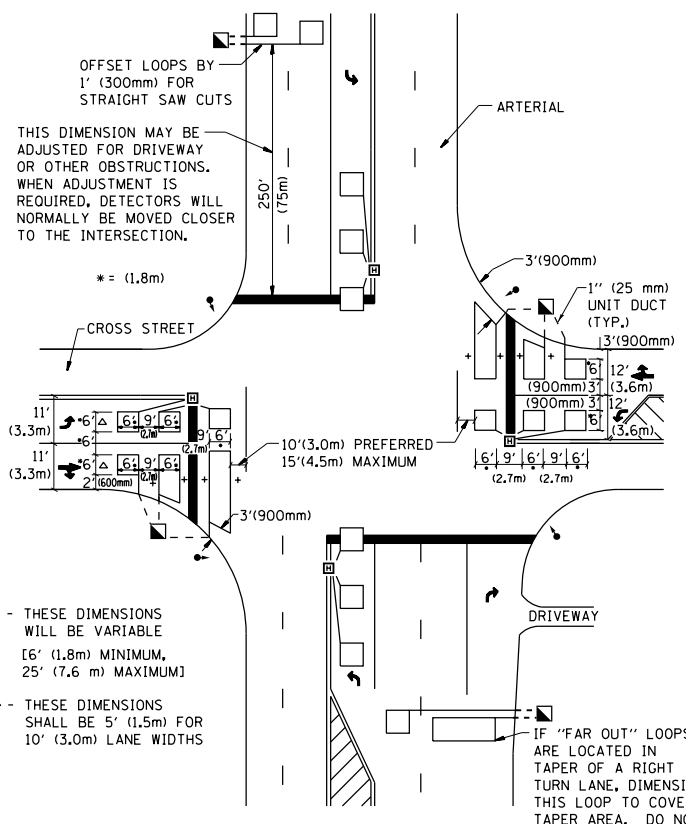
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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

**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 SEPARATELY. 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:**

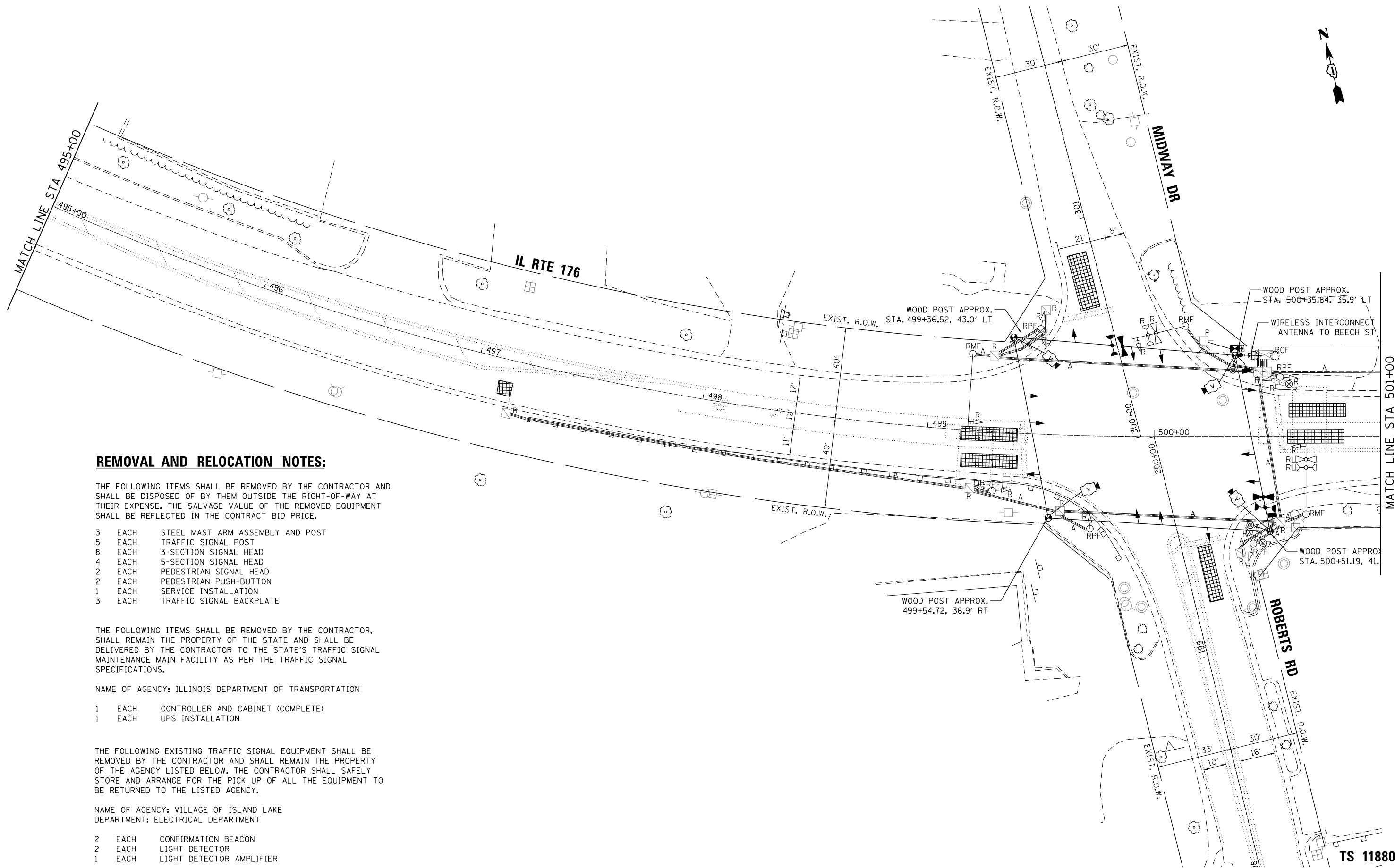
ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

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.

FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\work\11084EBID\INTEG\illinois.gov\PIWID\Documents\IDOT Offices\District 1\Projects\PI7050\Drawings\Design\DistStd.dgn		CHECKED - R.K.F.	REVISED -		355	145N-4(14)	LAKE/MCHENRY	59	25		
PLOT SCALE = 100.0000' / in.		DATE -	REVISED -		<b>TS-07</b>		<b>CONTRACT NO. 60Y22</b>				
PLOT DATE = 5/10/2018					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

TS SHT NO 09

FILE NAME = M:\CHICAGO PROJECTS\12-03-07\280R-IL\_176 at Roberts Rd\05-Design\0512-03-07\280R-Sheets\01-02-Temp Plan.dgn



**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.

- 3 EACH STEEL MAST ARM ASSEMBLY AND POST
- 5 EACH TRAFFIC SIGNAL POST
- 8 EACH 3-SECTION SIGNAL HEAD
- 4 EACH 5-SECTION SIGNAL HEAD
- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 3 EACH TRAFFIC SIGNAL BACKPLATE

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

NAME OF AGENCY: ILLINOIS DEPARTMENT OF TRANSPORTATION

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 1 EACH UPS INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR THE PICK UP OF ALL THE EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY.

NAME OF AGENCY: VILLAGE OF ISLAND LAKE  
DEPARTMENT: ELECTRICAL DEPARTMENT

- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER

USER NAME = esolutz	DESIGNED - ECS	REVISED -
	DRAWN - ECS	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - PAW	REVISED -
PLOT DATE = 5/11/2018	DATE - 05/09/2018	REVISED -

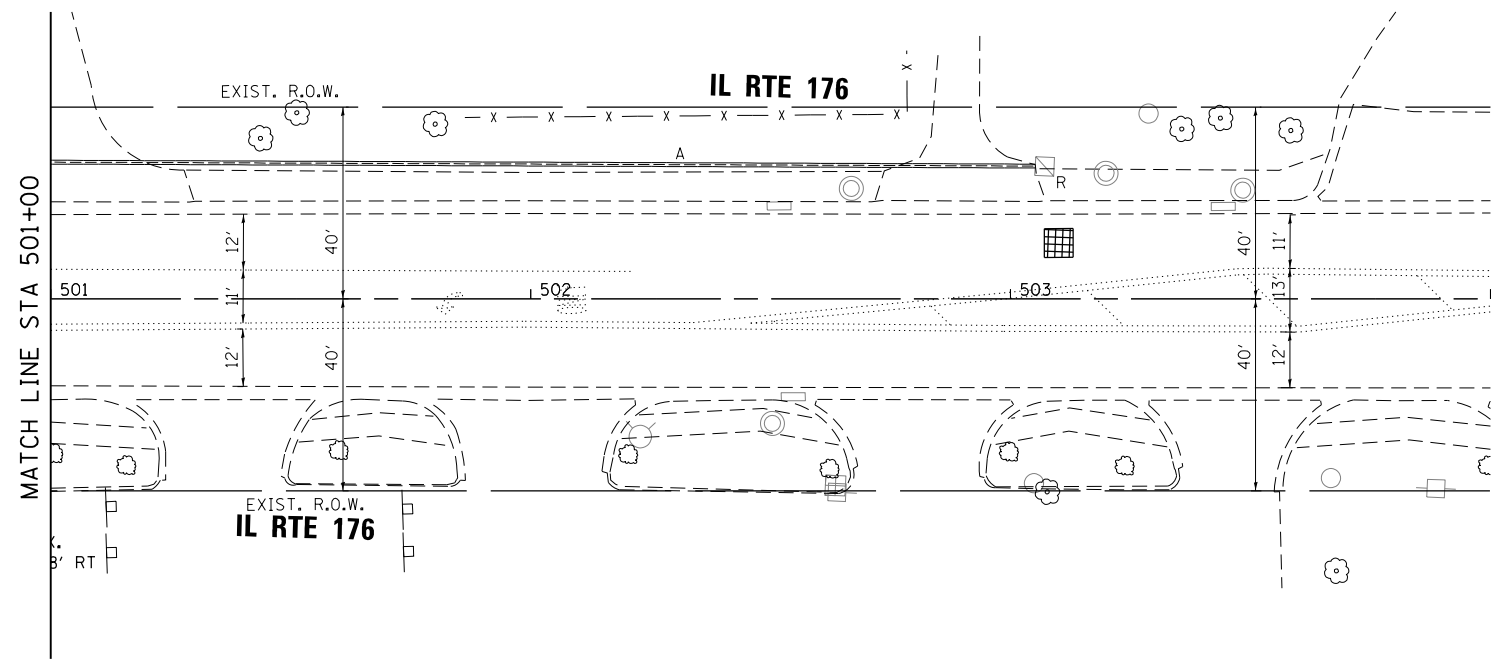
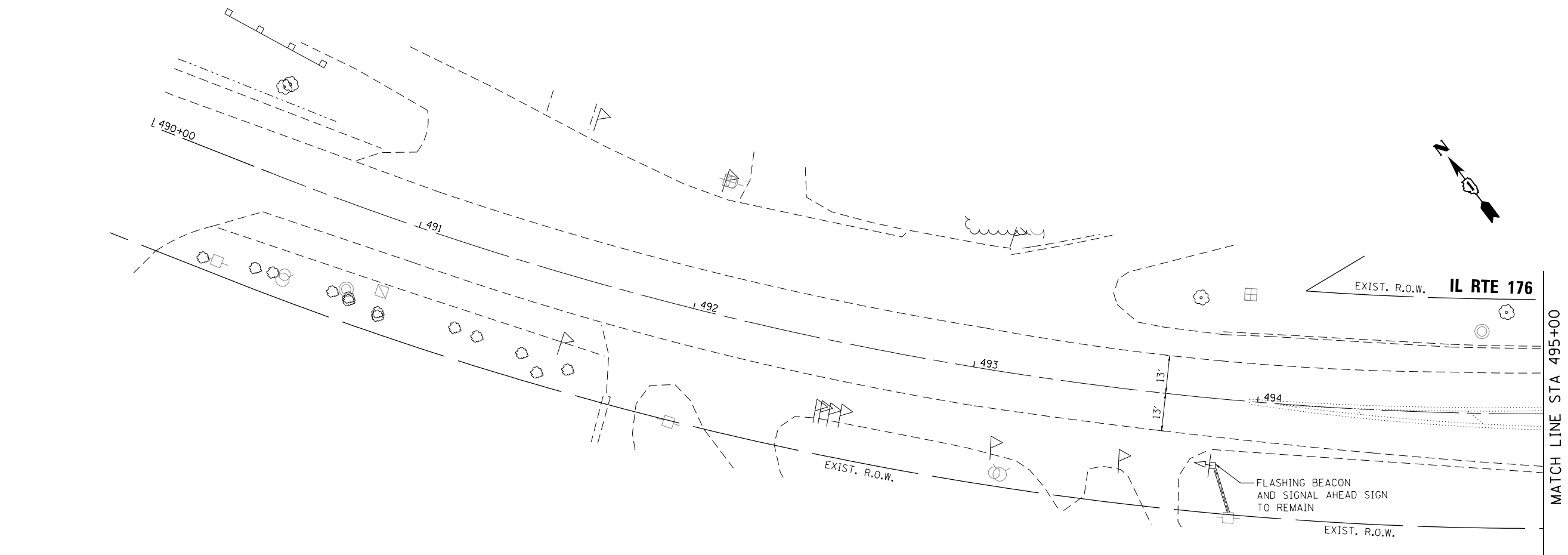
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND  
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN (SHEET 1 OF 2)  
IL RTE 176 AND ROBERTS RD/MIDWAY DR

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHEMRY/LAKE	59	26
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

TS 11880  
EAGLE 4F



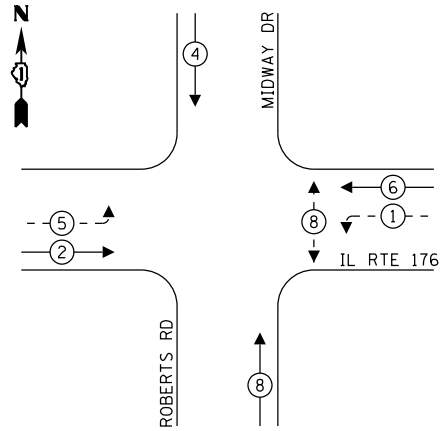
USER NAME = esolutz	DESIGNED - ECS	REVISED -
DRAWN - ECS	REVISED -	
PLOT SCALE = 40.0000' / in.	CHECKED - PAW	REVISED -
PLOT DATE = 5/8/2018	DATE - 05/09/2018	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN (SHEET 2 OF 2) IL RTE 176 AND ROBERTS RD/MIDWAY DR			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	27
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

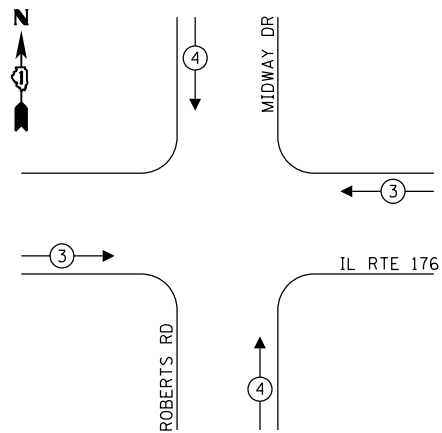
**TEMPORARY CONTROLLER SEQUENCE**



**LEGEND:**

- ← ⊛ → PROTECTED PHASE
- ← ⊛ - - PROTECTED/PERMITTED PHASE
- ← ⊛ → PEDESTRIAN PHASE
- ⊛ OL OVERLAP

**TEMPORARY EMERGENCY VEHICLE  
PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				465.8

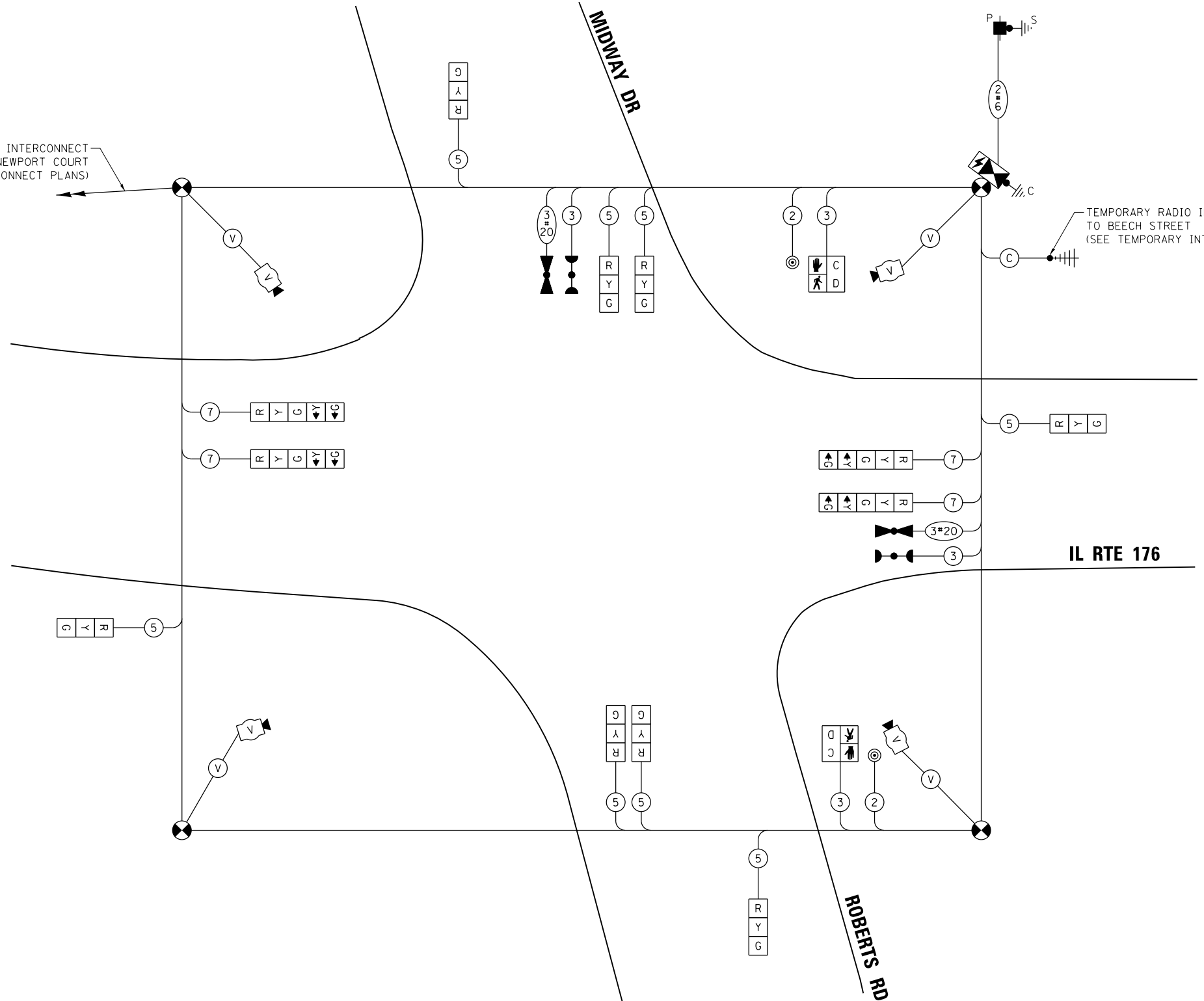
ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W CENTER COURT  
SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MIKE LENOX  
PHONE: (815) 490-2869  
COMPANY: COMMONWEALTH EDISON  
ACCOUNT NUMBER: ---

TEMPORARY FIBER INTERCONNECT  
TO NEWPORT COURT  
(SEE TEMPORARY INTERCONNECT PLANS)

TEMPORARY RADIO INTERCONNECT  
TO BEECH STREET  
(SEE TEMPORARY INTERCONNECT PLANS)



**CABLE PLAN**  
(NOT TO SCALE)

TS SHT NO 11  
FILE NAME = M:\CHICAGO PROJECTS\12-03-03-072808-IL-176 at Roberts Rd\05-Drawing\CD\12-03-072808-Sheets\03-Temp Cable Plan.dgn

DESIGNED - ECS	REVISED -
DRAWN - ECS	REVISED -
CHECKED - PAW	REVISED -
DATE - 05/09/2018	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

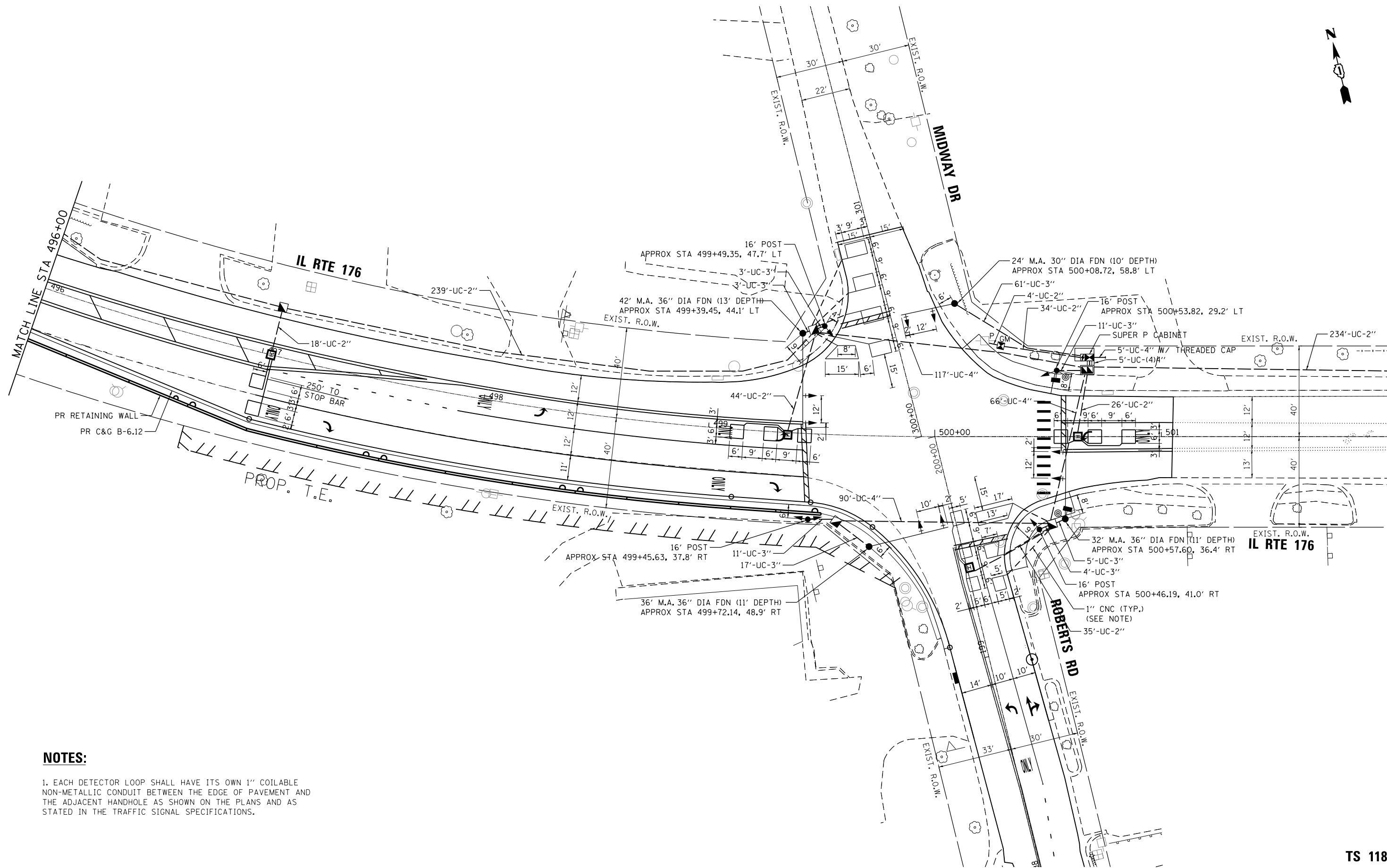
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM,  
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
IL RTE 176 AND ROBERTS RD /MIDWAY DR

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	28
CONTRACT NO. 60Y22				

**TS 11880**  
**EAGLE 4F**

ILLINOIS FED. AID PROJECT



**NOTES:**

1. EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NON-METALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

TS SHT NO 12

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PLOT SCALE = 40.0000' / in.	DRAWN - ECS	REVISED -
PLOT DATE = 5/11/2018	CHECKED - PAW	REVISED -
	DATE - 05/09/2018	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN (SHEET 1 OF 2)  
IL RTE 176 AND ROBERTS RD /MIDWAY DR**

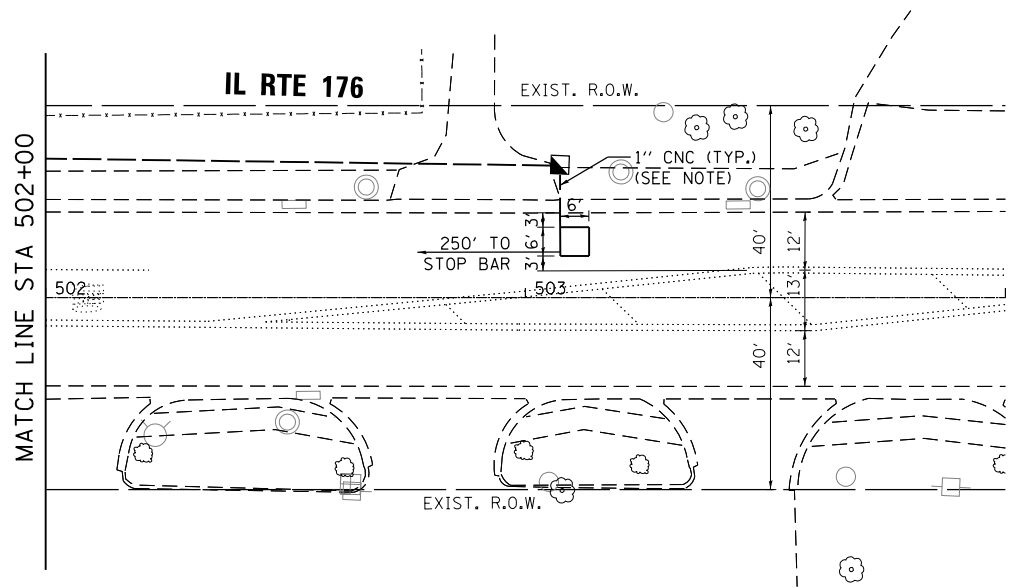
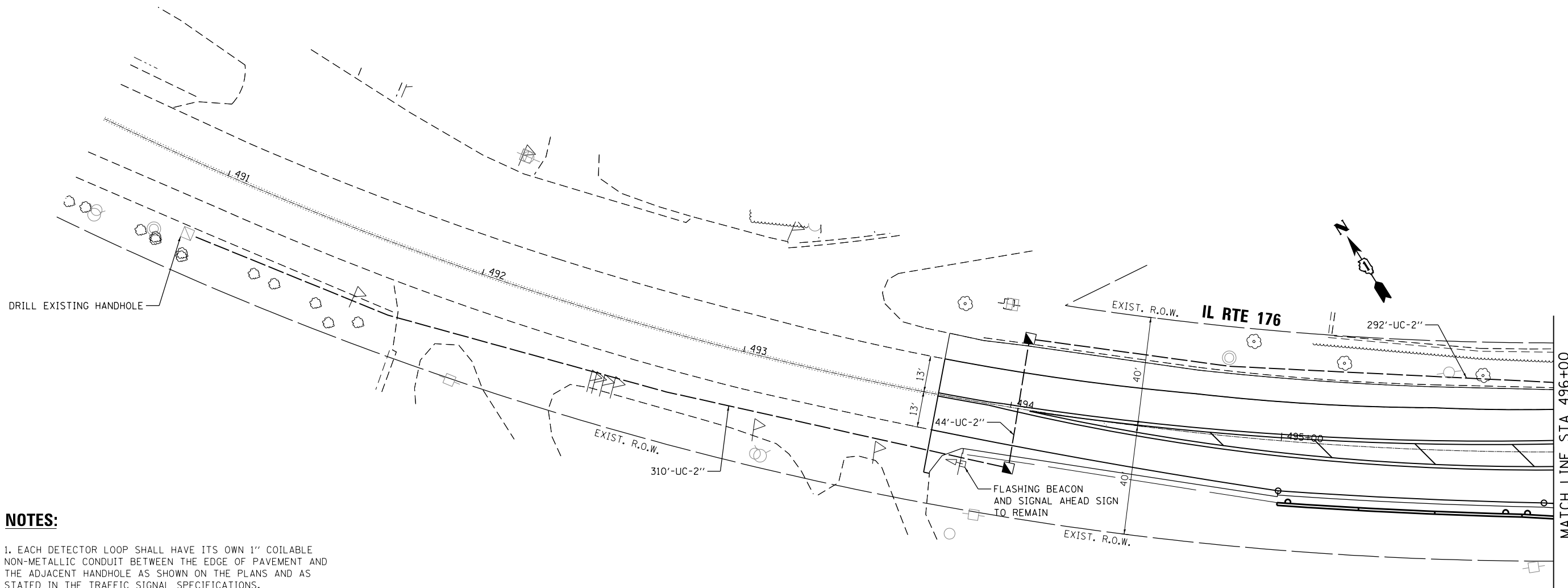
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	29
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

**TS 11880  
EAGLE 4F**

**NOTES:**

1. EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NON-METALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.



MATCH LINE STA 496+00

MATCH LINE STA 502+00

TS 11880  
EAGLE 4F

USER NAME = esolutz	DESIGNED - ECS	REVISED -
DRAWN - ECS	REVISED -	
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PLOT DATE = 5/8/2018	DATE - 05/09/2018	REVISED -

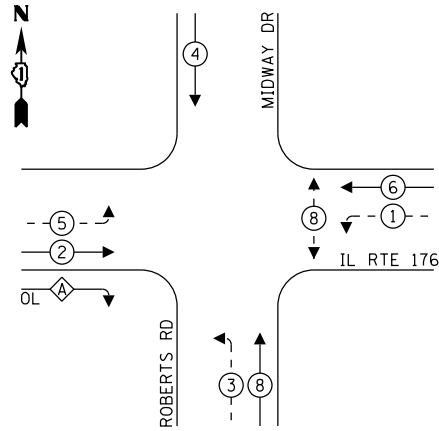
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN (SHEET 2 OF 2)  
IL RTE 176 AND ROBERTS RD /MIDWAY DR

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	30
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

**PROPOSED CONTROLLER SEQUENCE**



**LEGEND:**

- ← \* → PROTECTED PHASE
- ← - \* - → PROTECTED/PERMITTED PHASE
- ← \* → PEDESTRIAN PHASE
- ← \* OL → OVERLAP

**RIGHT TURN OVERLAP PHASE DESIGNATION:**

OVERLAP LETTER = PERMISSIVE PHASE + PROTECTED PHASE

A = 2 + 3

PROP. TRACER CABLE

PROP. INTERCONNECT TO NEWPORT COURT

PROP. TRACER CABLE

PROP. INTERCONNECT TO BEECH STREET

PROP. TRACER CABLE

PROP. INTERCONNECT TO BEECH STREET

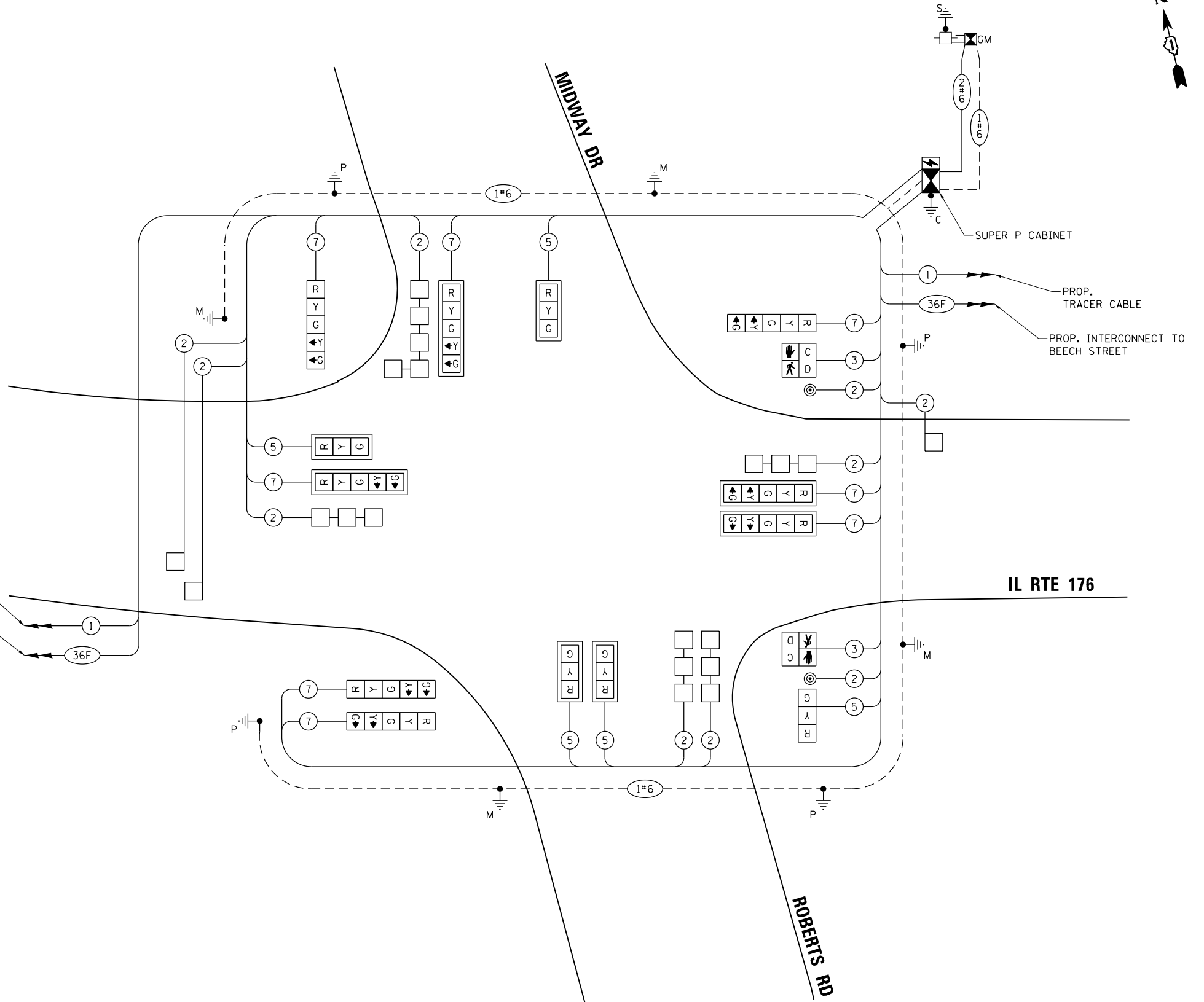
**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13.0
(GREEN)	13	12	45	70.2
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	2	20	100	40.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				335.7

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W CENTER COURT  
SCHAUMBURG, IL 60196

ENERGY SUPPLY: CONTACT: MIKE LENOX  
PHONE: (815) 490-2869  
COMPANY: COMMONWEALTH EDISON  
ACCOUNT NUMBER: ---



**CABLE PLAN**  
(NOT TO SCALE)

TS SHT NO 14

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE  
IL RTE 176 AND ROBERTS RD /MIDWAY DR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	31
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.

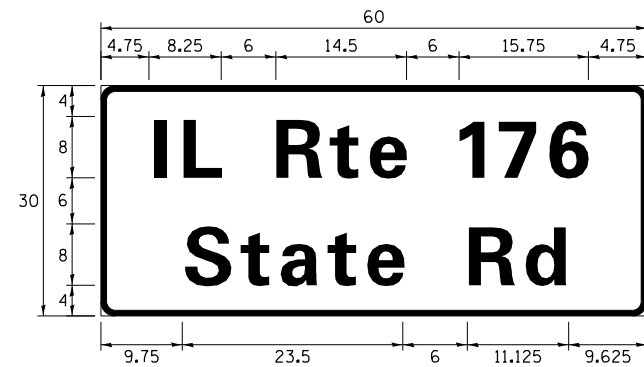
**TS 11880**  
**EAGLE 4F**

Default

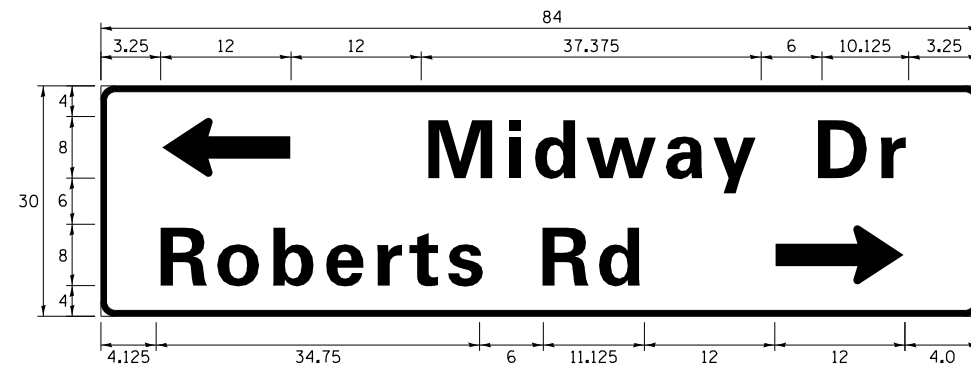
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PLOT DATE = 5/11/2018	CHECKED -	PAW	REVISED -	
	DATE -	05/09/2018	REVISED -	

**SIGN PANEL – TYPE 1 OR TYPE 2**

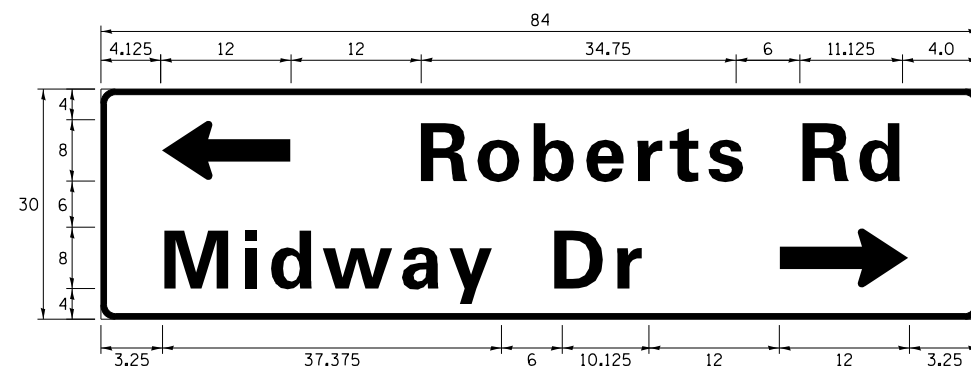
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	12.5	2	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	17.5	2	ZZ	1



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	17.5	2	ZZ	1

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

**SCHEDULE OF QUANTITIES**

ITEM DESCRIPTION	UNITS	TOTAL QTY.
SIGN PANEL - TYPE 2	SQ FT	60
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	634
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	115
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	298
HANDHOLE	EACH	5
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	1
TRANSEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	157
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	420
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	921
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1237
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1815
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	52
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1373
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	24
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10
CONCRETE FOUNDATION, TYPE E, 36-INCH DIAMETER	FOOT	35
DRILL EXISTING HANDHOLE	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE I	FOOT	679
PEDESTRIAN PUSH-BUTTON	EACH	2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	8
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

TS SHT NO 15  
FILE NAME = M:\CHICAGO PROJECTS\176-03-072808-IL-176 at Roberts Rd\05-Design\05-12-03-072808-Sheets\1.Mast Arm Sign & S00.dgn

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	DRAWN - ECS	REVISED -
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PLOT DATE = 5/11/2018	DATE - 05/09/2018	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

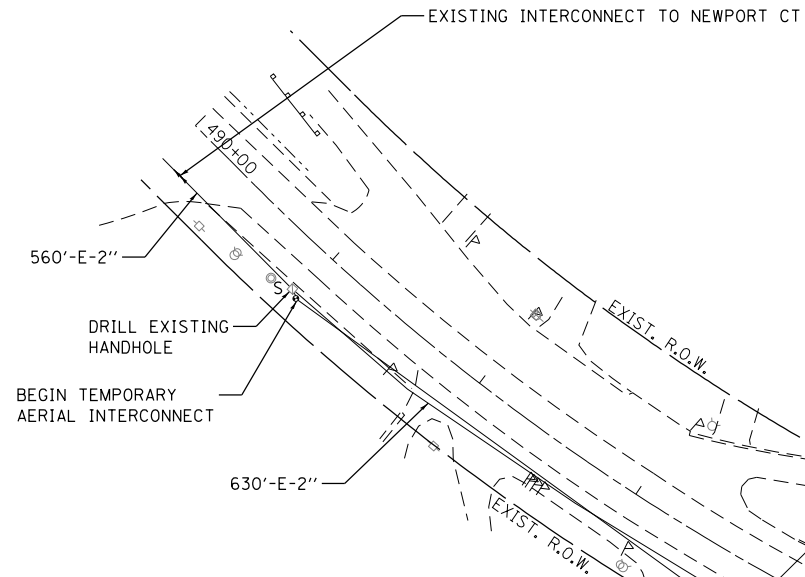
**MAST ARM MOUNTED STREET NAME SIGNS  
AND SCHEDULE OF QUANTITIES  
IL RTE 176 AT ROBERTS RD /MIDWAY DR**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	32
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

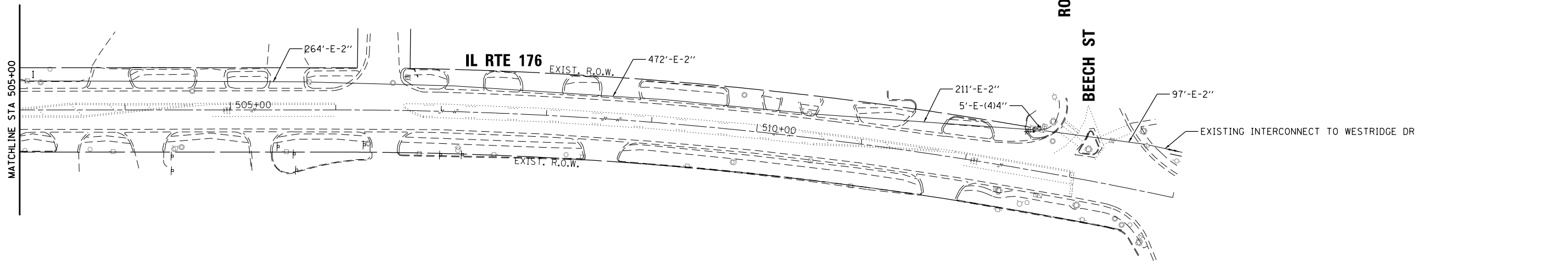
SCALE: SHEET OF SHEETS STA. TO STA.

**TS 11880  
EAGLE 4F**





NOTE  
 WIRELESS INTERCONNECT TO BE USED FROM ROBERTS RD TO BEECH STREET AND AERIAL FIBER INTERCONNECT TO BE USE FROM ROBERTS RD TO NEWPORT COURT. PULL EXISTING FIBER OPTIC CABLE AND TRACER CABLE FROM BEECH STREET TO HANDHOLE WEST OF ROBERTS ROAD. TEMPORARY FIBER AND EXISTING FIBER TO BE SPLICED IN A WEATHERPROOF ENCLOSURE MOUNTED ON THE WOOD POLE IN A WORKMANLIKE MANNER. THE CONTRACTOR SHALL STAGE WORK SO THE DURATION OF INTERRUPTION TO THE COMMUNICATIONS IS MINIMAL. COST SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

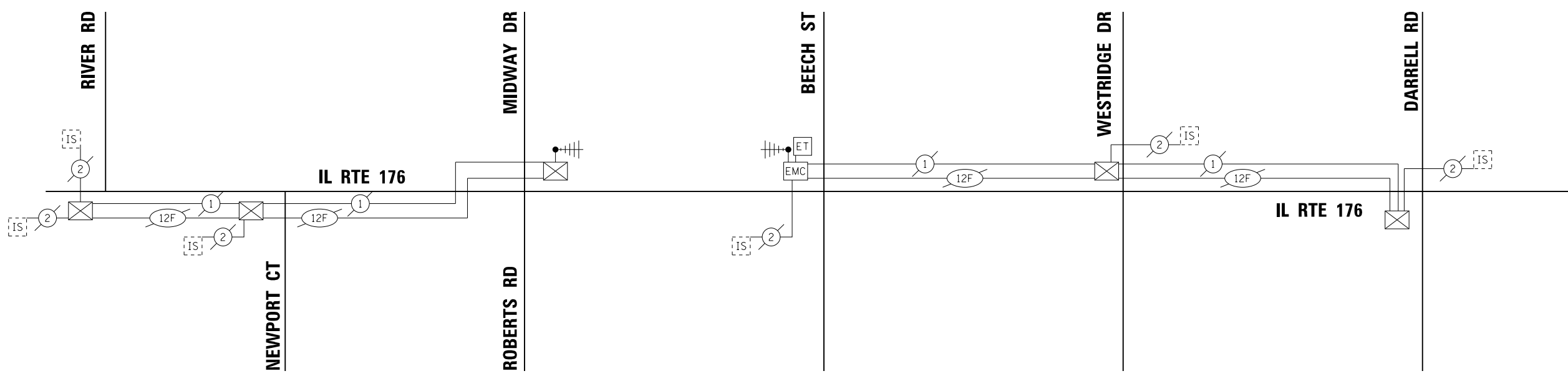
TEMPORARY INTERCONNECT PLAN  
 IL RTE 176 - RIVER RD TO DARRELL RD

EAGLE 4F

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PLOT DATE = 5/8/2018	DATE - 05/09/2018	REVISED -

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHEMRY/LAKE	59	33
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				



TS SHT NO 17

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

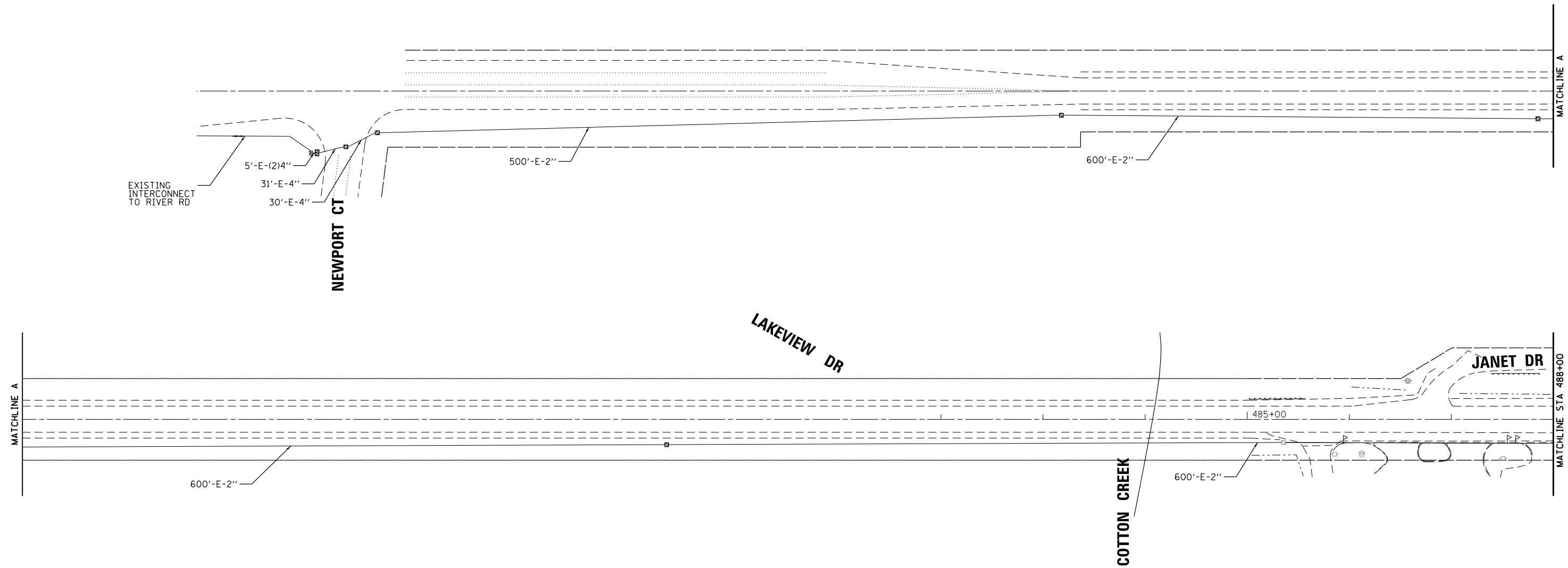
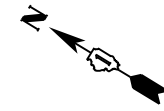
TEMPORARY INTERCONNECT SCHEMATIC			
IL RTE 176 - RIVER RD TO DARRELL RD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	34
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

EAGLE 4F

TS SHT NO 18

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EAGLE 4F

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

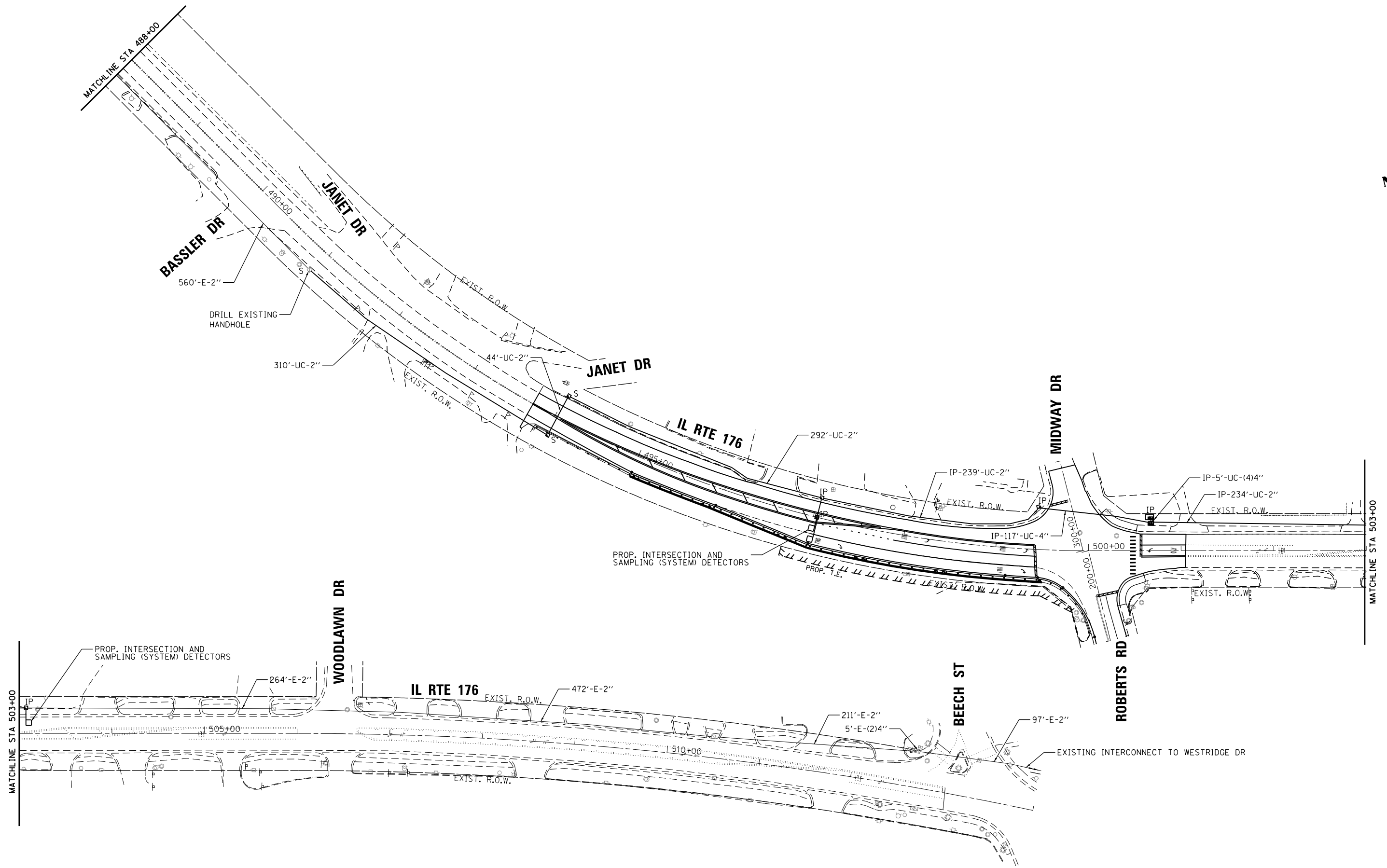
INTERCONNECT PLAN			
IL RTE 176 - RIVER RD TO DARRELL RD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	35
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

TS SHT NO 19

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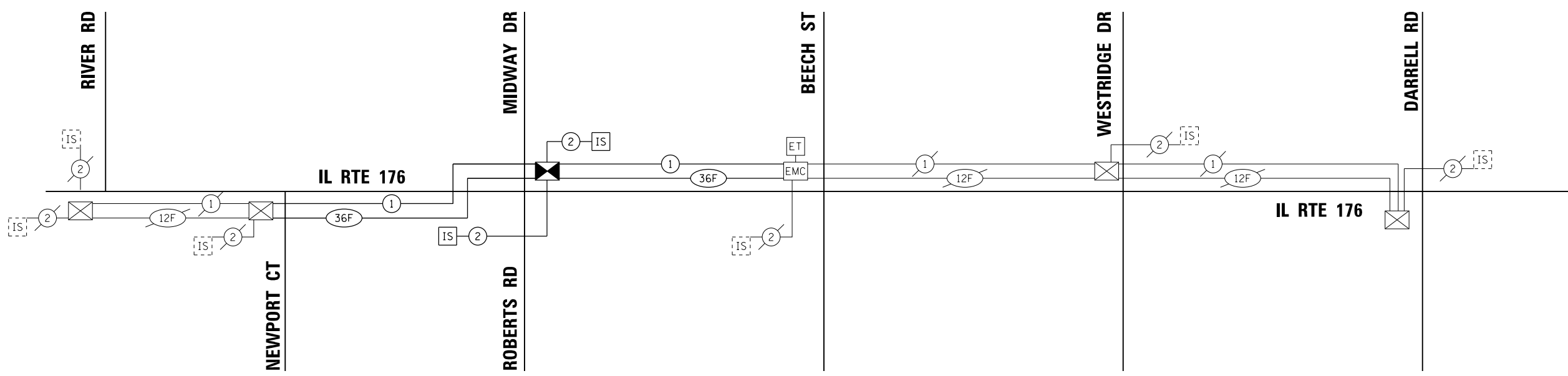
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PLOT DATE = 5/10/2018	DATE - 05/09/2018	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>INTERCONNECT PLAN</b>			
<b>IL RTE 176 - RIVER RD TO DARRELL RD</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	36
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

**EAGLE 4F**



**SCHEDULE OF QUANTITIES**

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	646
HANDHOLE	EACH	2
MAINTENANCE OF EXISTING TRAFFIC SIGNAL	EACH	2
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	5285
DRILL EXISTING HANDHOLE	EACH	1
* REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	7756
ROD AND CLEAN EXISTING CONDUIT	FOOT	3807
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM 24F	FOOT	5337
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM-LEVEL 2	EACH	1

\* NOMINAL QUANTITY TO BE USED AS NEEDED AND AS APPROVED BY THE ENGINEER

TS SHT NO 20

FILE NAME = M:\CHICAGO PROJECTS\12-03-07\2008 IL 176 at Roberts Rd\05\_Design\CON\12-03-07\2008-Sheets\10-Interconnect\_Schematic.dgn

Default

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	DATE - 05/09/2018	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

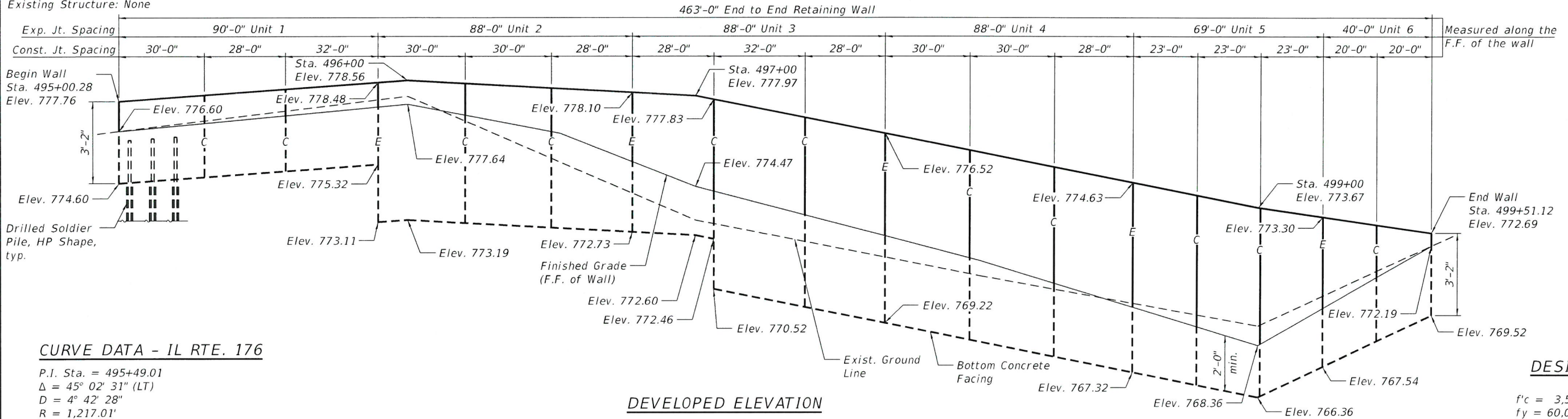
INTERCONNECT SCHEMATIC			
IL RTE 176 - RIVER RD TO DARRELL RD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	McHENRY/LAKE	59	37
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

EAGLE 4F

Benchmark: Cut Square in concrete base of traffic signal with mast arm in south east corner of IL 176 and Roberts Road. Elevation = 769.93.

Existing Structure: None



**CURVE DATA - IL RTE. 176**

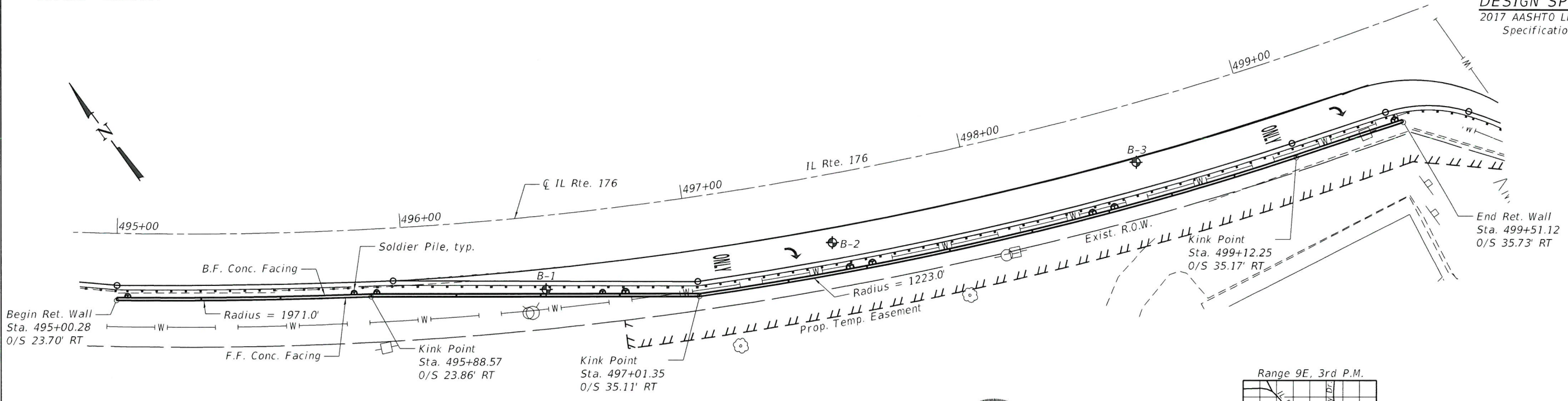
P.I. Sta. = 495+49.01  
 $\Delta = 45^\circ 02' 31''$  (LT)  
 $D = 4^\circ 42' 28''$   
 $R = 1,217.01'$   
 $T = 504.62'$   
 $L = 956.73'$   
 $E = 100.47'$   
 P.C. Sta. = 490+44.38  
 P.T. Sta. = 500+01.11

**DEVELOPED ELEVATION**

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)

**DESIGN SPECIFICATIONS**  
 2017 AASHTO LRFD Bridge Design Specifications, 8th Edition



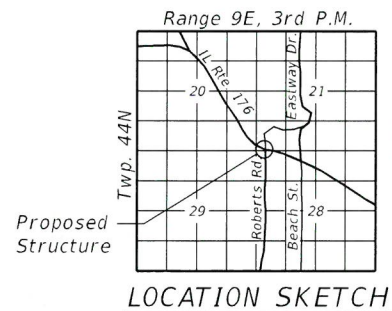
**PLAN**

**LEGEND**

- ◆ Soil Borings
- F.F. Front Face
- B.F. Back Face
- C Construction Joint
- E Expansion Joint



DATE SIGNED: 05/10/2018  
 EXP. DATE: 11/30/2018



**GENERAL PLAN AND ELEVATION**

**RETAINING WALL**  
 F.A.U. RTE. 335 (IL RTE. 176)  
 SECTION 145N-4(14)  
 MCHENRY COUNTY  
 STATION 495+00 TO 499+50

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	CHECKED - SPS	REVISED -

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

SHEET 1 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	38
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Notes, Index of Sheets, Total Bill of Material
3. Plan and Elevation I
4. Plan and Elevation II
5. Plan and Elevation III
6. Soldier Pile Section and Details
7. Soldier Pile Details and Bill of Material
8. Boring Logs I
9. Boring Logs II

**SEQUENCE OF CONSTRUCTION**

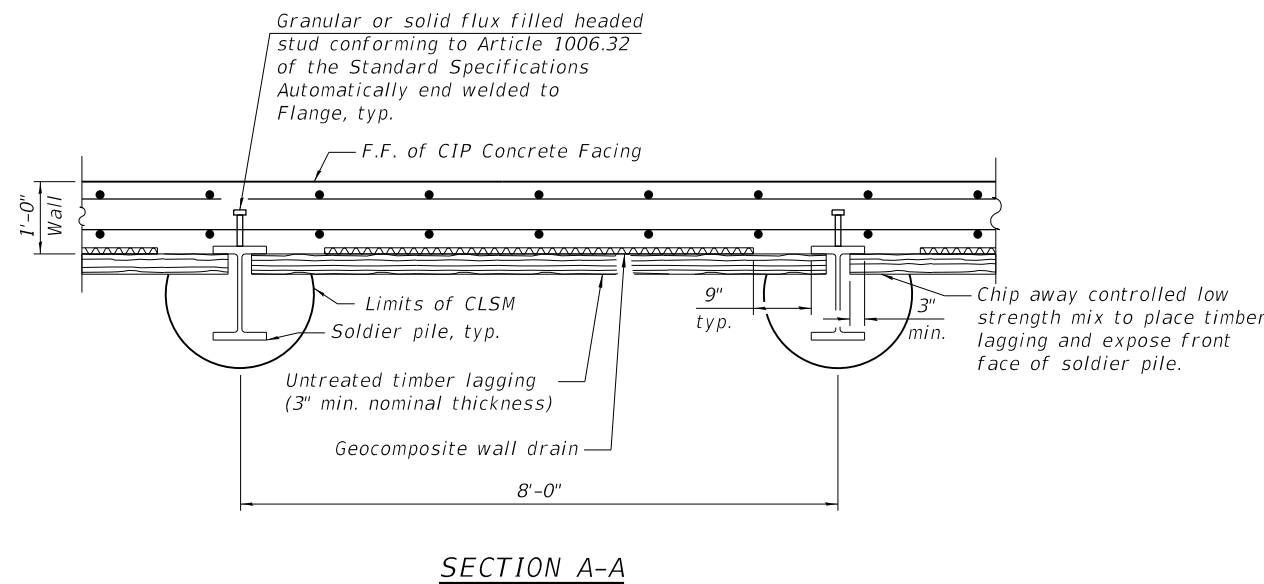
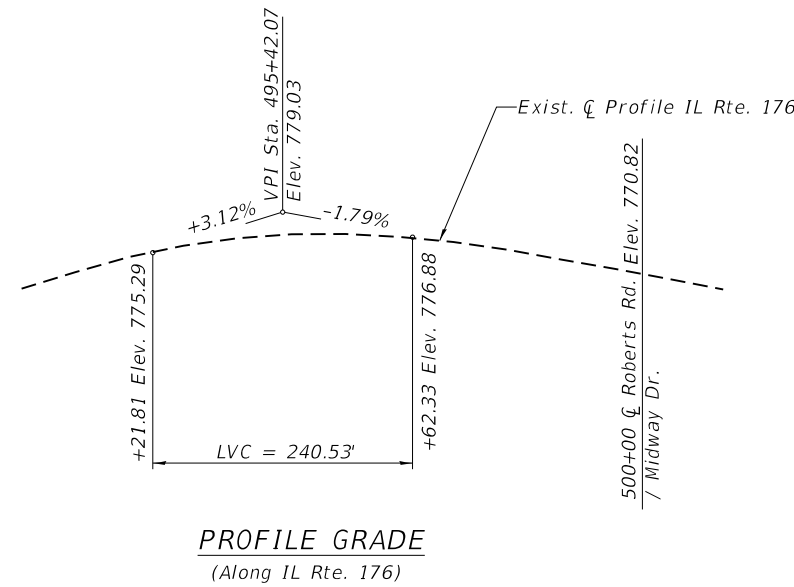
1. Locate existing utilities that are to remain. Contractor to coordinate any required improvements to, or removals of, existing utilities with utility owner.
2. Drill for Soldier Pile shafts, install soldier piles and concrete encasement.
3. Excavate earth in front of wall and install geocomposite wall drain and timber lagging.
4. Construct concrete facing as shown in the plans.

**GENERAL NOTES**

1. Reinforcement bars designated "(E)" shall be epoxy coated.
2. Concrete sealer shall be applied to exposed surfaces of the facing.
3. Existing utilities in conflict with retaining wall construction shall be protected or relocated according to directions given on the roadway plans.
4. The Contractor shall take all necessary precautions not to contaminate groundwater during the drilled shaft construction operation. Contractor is responsible for the proper containment and disposal of the contaminated groundwater and spoils resulting from Contractor's means and methods. No additional cost will be paid for this effort.
5. The Contractor shall provide a method to assure the soldier piles achieve at least the plan tip elevations. The soldier pile locations and elevations shall meet the tolerances provided in the Standard Specifications. Any additional measured required to satisfy the construction tolerances will not be paid for separately but shall be included in Drilling and Setting Soldier Piles (In Soil).
6. Any storage of construction equipment and material behind the wall is not allowed.
7. Earth excavation in front of the wall shall be gradual and no more than 4'-0" of earth shall be excavated at a time in front of the wall. The elevation difference between adjacent excavated areas in front of wall shall not vary by more than 6'-0" over a distance of 50'-0" as measured along the length of the wall.
8. Concrete for Drilled Soldier Pile Encasement shall be in accordance with Section 522 of Standard Specifications, except that the mix design of concrete shall attain a compressive strength of 7,000 psi at 14 days. Soldier Pile Encasement shall extend from top of pile elevation to bottom of pile tip. Cost included with Drilling and Setting Soldier Piles (In Soil).
9. Structure Excavation is measured 2'-0" from the front face of the wall to back of soldier pile concrete facing panel.
10. The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

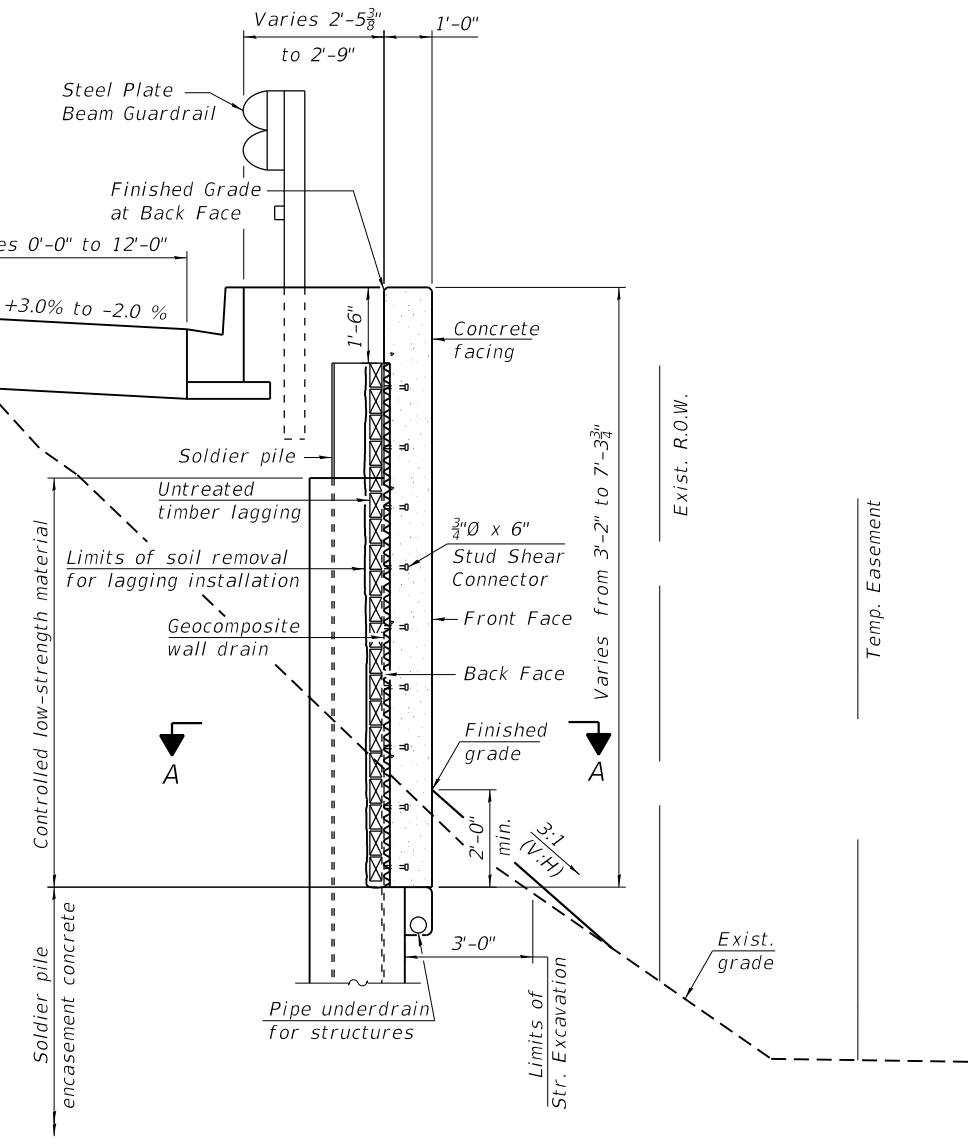
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structure Excavation	Cu Yd	292
Concrete Structures	Cu Yd	98.4
Stud Shear Connectors	Each	258
Reinforcement Bars, Epoxy Coated	Pound	12,380
Furnishing Soldier Piles (HP Section)	Foot	974
Drilling and Setting Soldier Piles (In Soil)	Cu Yd	3786
Untreated Timber Lagging	Sq Ft	1779
Concrete Sealer	Sq Ft	3119
Geocomposite Wall Drain	Sq Yd	1294
Pipe Underdrains for Structures, 4"	Foot	483



**SECTION A-A**

See Sheet 7 of 9 for joint details and pipe underdrain details.



**TYPICAL SECTION THRU SOLDIER PILE WALL**

MODEL: Default  
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USER NAME =	sapant	DESIGNED -	AB	REVISED -	
CHECKED -	JMT	REVISIONS -			
PLOT SCALE =	0.1667' / in.	DRAWN -	SAT	REVISED -	
PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

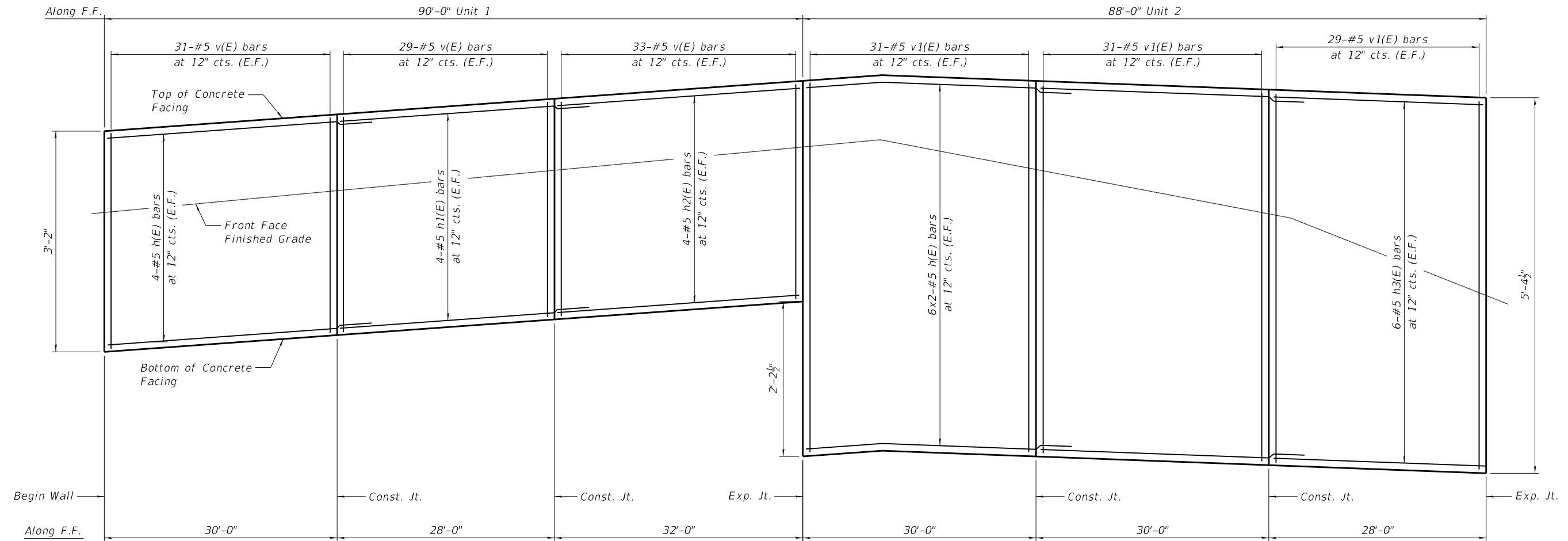
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS, TOTAL BILL OF MATERIAL**

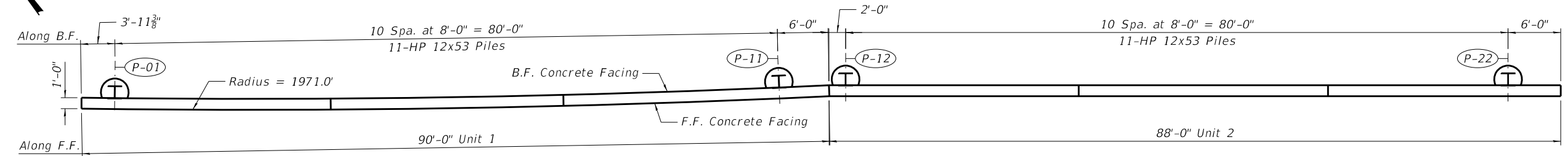
SHEET 2 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	39
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

MODEL: Default  
 FILE NAME: Q:\Engineering\Live\Projects\13038 IDOT DUR\Work Order #4 - 60Y22\CADD\CADD Sheets\Structural\160Y22-003-Plan and Elev.dgn



**ELEVATION**



**PLAN**

**LEGEND**  
 B.F. - denotes Back Face  
 E.F. - denotes Each Face  
 F.F. - denotes Front Face

**MIN. BAR LAP**  
 #5 Bars = 3'-7"

- NOTES:**
1. See Sheet 2 of 9 for typical wall section details.
  2. See Sheet 6 of 9 for soldier pile layout.
  3. See Sheet 7 of 9 for details and Bill of Material.
  4. Bars indicated thus 6x2-#5 etc. indicates 6 lines of bars with 2 lengths per line.



USER NAME =	sapant	DESIGNED -	AB	REVISED -	
		CHECKED -	JMT	REVISED -	
PLOT SCALE =	10.6667' / in.	DRAWN -	SAT	REVISED -	
PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PLAN AND ELEVATION - I**

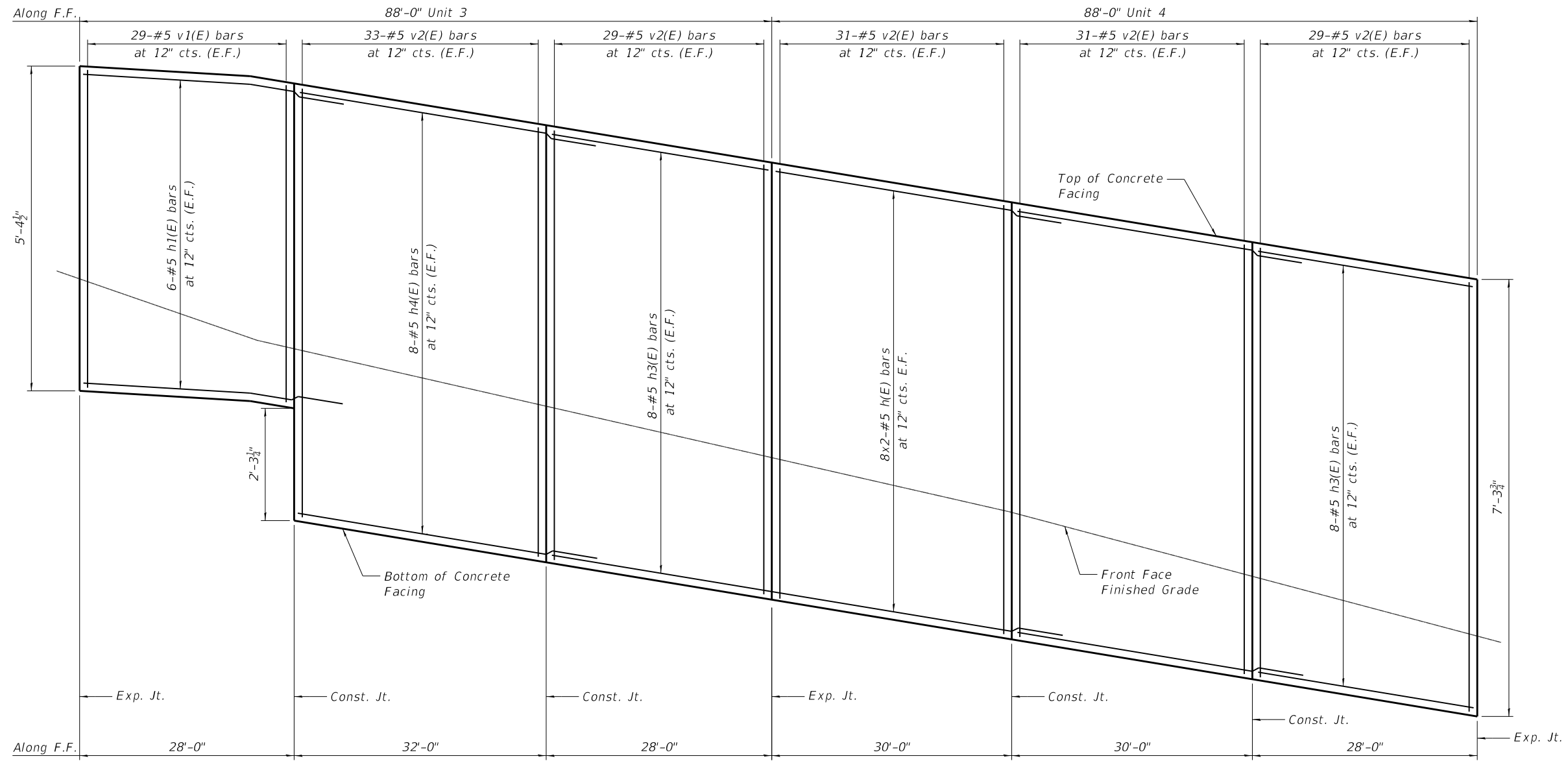
SHEET 3 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	40
CONTRACT NO. 60Y22				

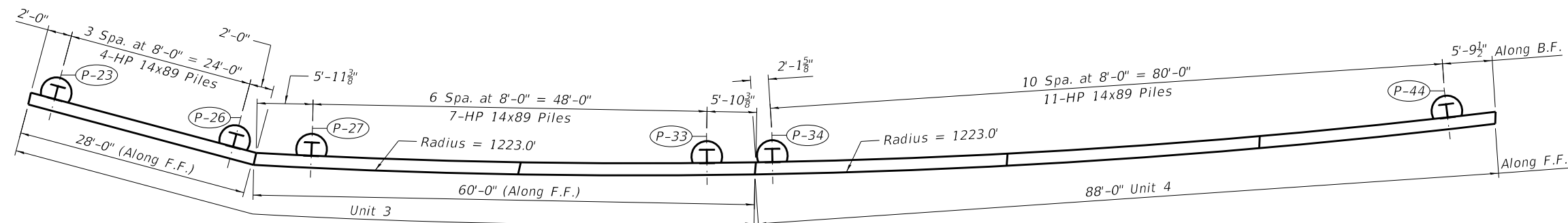
ILLINOIS FED. AID PROJECT



MODEL: Default  
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**ELEVATION**



**PLAN**

**LEGEND**

B.F. - denotes Back Face  
 E.F. - denotes Each Face  
 F.F. - denotes Front Face

**MIN. BAR LAP**  
 #5 Bars = 3'-7"

**NOTES:**

1. See Sheet 2 of 9 for typical wall section details.
2. See Sheet 6 of 9 for soldier pile layout.
3. See Sheet 7 of 9 for details and Bill of Material.
4. Bars indicated thus 6x2-#5 etc. indicates 6 lines of bars with 2 lengths per line.



USER NAME =	sapant	DESIGNED -	AB	REVISED -	
		CHECKED -	JMT	REVISED -	
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PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

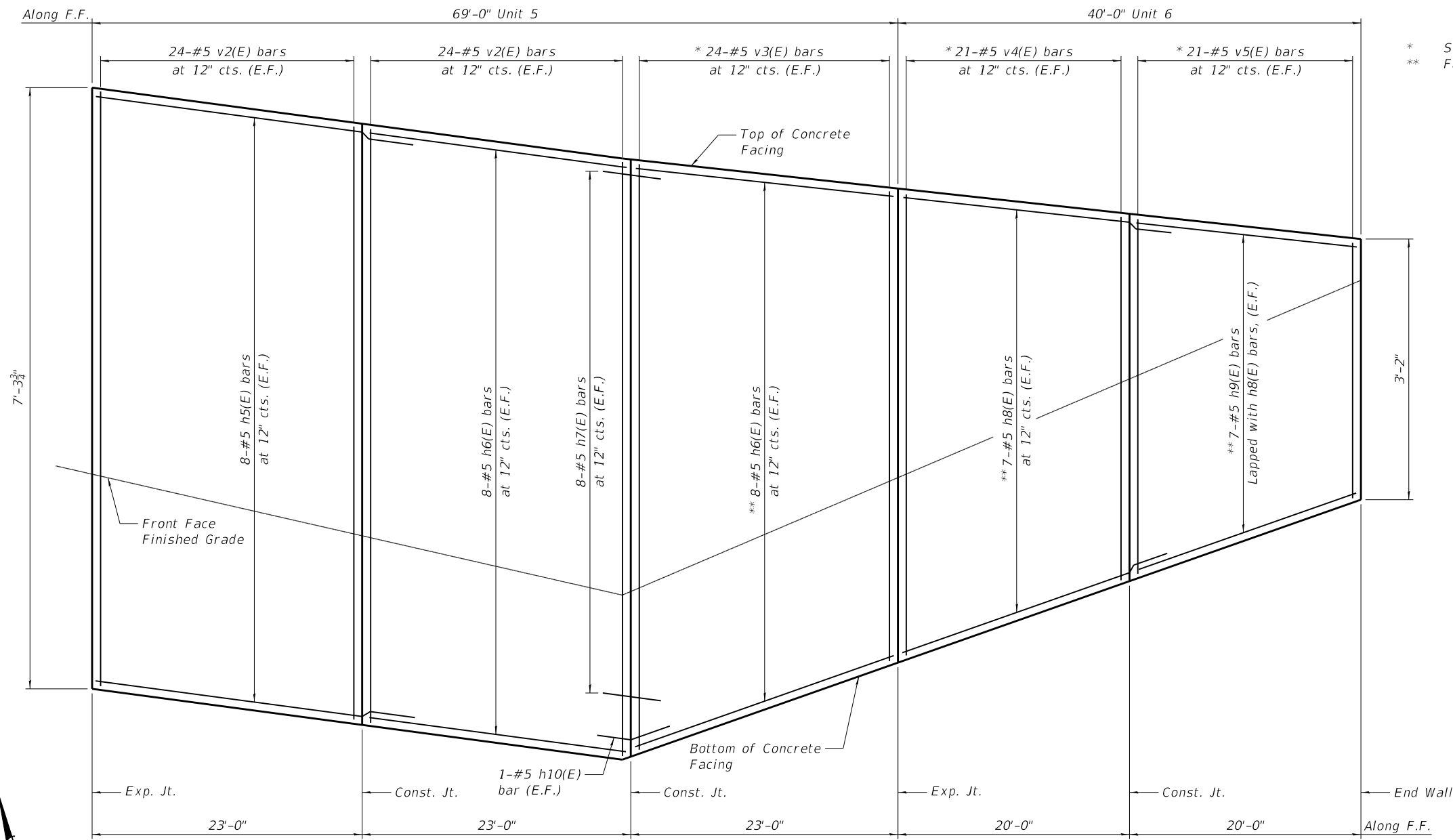
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PLAN AND ELEVATION - II**

SHEET 4 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	41
			CONTRACT NO. 60Y22	
ILLINOIS FED. AID PROJECT				

MODEL: Default  
 FILE NAME: Q:\Engineering\Live\Projects\13038 IDOT DUR\Work Order #4 - 60Y22\CADD\CADD Sheets\Structural\160Y22-005-Plan and Elev Ill.dgn



\* See Cutting Diagram  
 \*\* Fan bars to fit

ELEVATION



MIN. BAR LAP  
 #5 Bar = 3'-7"

PLAN

LEGEND

B.F. - denotes Back Face  
 E.F. - denotes Each Face  
 F.F. - denotes Front Face

NOTES:

1. See Sheet 2 of 9 for typical wall section details.
2. See Sheet 6 of 9 for soldier pile layout.
3. See Sheet 7 of 9 for details, bar cutting diagram and Bill of Material.
4. Bars indicated thus 6x2-#5 etc. indicate 6 lines of bars with 2 lengths per line.



USER NAME =	sapant	DESIGNED -	AB	REVISED -	
CHECKED -	JMT	REVISIED -		REVISED -	
PLOT SCALE =	10,6667' / in.	DRAWN -	SAT	REVISED -	
PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

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PLAN AND ELEVATION - III

SHEET 5 OF 9 SHEETS

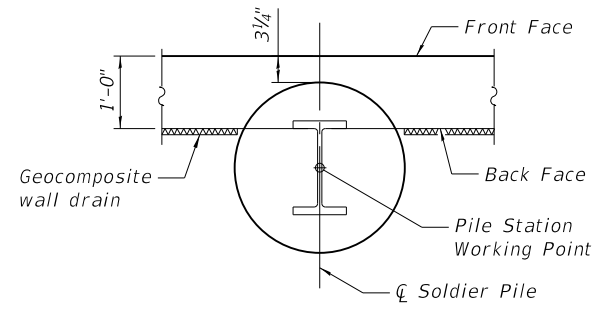
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	42
CONTRACT NO. 60Y22				

ILLINOIS FED. AID PROJECT

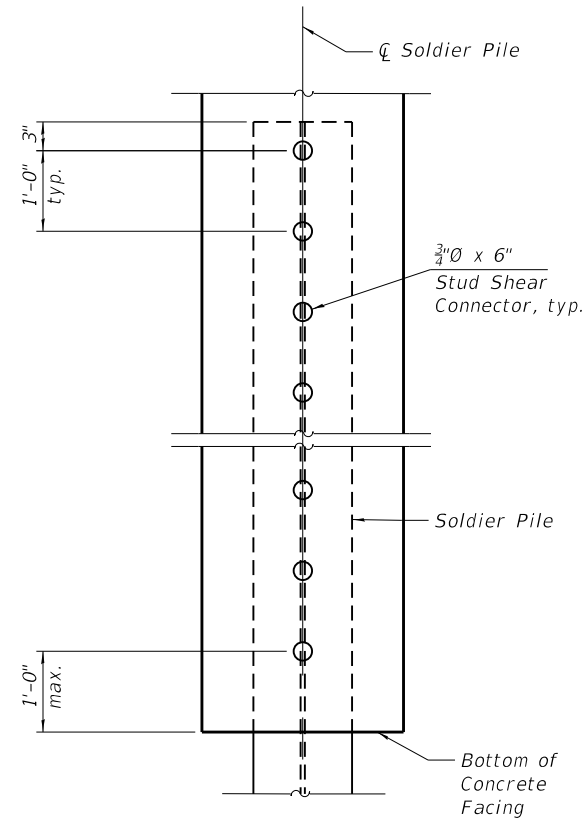
**SOLDIER PILE LAYOUT**

Pile	Station at Working Point	Offset	Section	Shaft Dia.	Top of Wall Elev.	Bottom of Wall Elev.	Top of Pile Elev.	Pile Tip Elev.	Pile Length	Number of Stud Shear Connectors
P-01	495+04.15	22.20' RT	HP 12x53	2.00 ft.	777.79	774.63	776.29	763.29	13.00 ft.	2
P-02	495+12.00	22.12' RT	HP 12x53	2.00 ft.	777.85	774.69	776.35	763.35	13.00 ft.	2
P-03	495+19.86	22.07' RT	HP 12x53	2.00 ft.	777.92	774.76	776.42	763.42	13.00 ft.	2
P-04	495+27.71	22.03' RT	HP 12x53	2.00 ft.	777.98	774.82	776.48	763.48	13.00 ft.	2
P-05	495+35.57	22.02' RT	HP 12x53	2.00 ft.	778.04	774.88	776.54	763.54	13.00 ft.	2
P-06	495+43.43	22.02' RT	HP 12x53	2.00 ft.	778.11	774.95	776.61	763.61	13.00 ft.	2
P-07	495+51.28	22.04' RT	HP 12x53	2.00 ft.	778.17	775.01	776.67	763.67	13.00 ft.	2
P-08	495+59.14	22.08' RT	HP 12x53	2.00 ft.	778.23	775.07	776.73	763.73	13.00 ft.	2
P-09	495+66.99	22.14' RT	HP 12x53	2.00 ft.	778.30	775.14	776.80	763.80	13.00 ft.	2
P-10	495+74.85	22.22' RT	HP 12x53	2.00 ft.	778.36	775.20	776.86	763.86	13.00 ft.	2
P-11	495+82.70	22.32' RT	HP 12x53	2.00 ft.	778.42	775.26	776.92	763.92	13.00 ft.	2
P-12	495+90.57	22.51' RT	HP 12x53	2.00 ft.	778.48	773.11	776.98	763.98	13.00 ft.	4
P-13	495+98.41	22.96' RT	HP 12x53	2.00 ft.	778.55	773.18	777.05	764.05	13.00 ft.	4
P-14	496+06.24	23.45' RT	HP 12x53	2.00 ft.	778.52	773.15	777.02	764.02	13.00 ft.	4
P-15	496+14.07	24.00' RT	HP 12x53	2.00 ft.	778.48	773.11	776.98	763.98	13.00 ft.	4
P-16	496+21.89	24.60' RT	HP 12x53	2.00 ft.	778.43	773.06	776.93	763.93	13.00 ft.	4
P-17	496+29.71	25.24' RT	HP 12x53	2.00 ft.	778.38	773.01	776.88	762.88	14.00 ft.	4
P-18	496+37.51	25.94' RT	HP 12x53	2.00 ft.	778.34	772.97	776.84	762.84	14.00 ft.	4
P-19	496+45.31	26.70' RT	HP 12x53	2.00 ft.	778.29	772.92	776.79	762.79	14.00 ft.	4
P-20	496+53.10	27.50' RT	HP 12x53	2.00 ft.	778.25	772.88	776.75	762.75	14.00 ft.	4
P-21	496+60.87	28.35' RT	HP 12x53	2.00 ft.	778.20	772.83	776.70	762.70	14.00 ft.	4
P-22	496+68.64	29.26' RT	HP 12x53	2.00 ft.	778.16	772.79	776.66	761.66	15.00 ft.	4
P-23	496+76.40	30.14' RT	HP 14x89	2.50 ft.	778.11	772.74	776.61	758.61	18.00 ft.	4
P-24	496+84.14	31.15' RT	HP 14x89	2.50 ft.	778.06	772.69	776.56	758.56	18.00 ft.	4
P-25	496+91.87	32.20' RT	HP 14x89	2.50 ft.	778.02	772.65	776.52	758.52	18.00 ft.	4
P-26	496+99.58	33.31' RT	HP 14x89	2.50 ft.	777.97	772.60	776.47	758.47	18.00 ft.	4
P-27	497+07.28	33.60' RT	HP 14x89	2.50 ft.	777.81	770.50	776.31	757.31	19.00 ft.	6
P-28	497+15.06	33.62' RT	HP 14x89	2.50 ft.	777.64	770.33	776.14	757.14	19.00 ft.	6
P-29	497+22.84	33.63' RT	HP 14x89	2.50 ft.	777.47	770.16	775.97	756.97	19.00 ft.	6
P-30	497+30.62	33.65' RT	HP 14x89	2.50 ft.	777.31	770.00	775.81	756.81	19.00 ft.	6
P-31	497+38.40	33.66' RT	HP 14x89	2.50 ft.	777.14	769.83	775.64	756.64	19.00 ft.	6
P-32	497+46.18	33.67' RT	HP 14x89	2.50 ft.	776.97	769.66	775.47	756.47	19.00 ft.	6
P-33	497+53.97	33.68' RT	HP 14x89	2.50 ft.	776.80	769.49	775.30	756.30	19.00 ft.	6
P-34	497+61.75	33.69' RT	HP 14x89	2.50 ft.	776.63	769.32	775.13	756.13	19.00 ft.	6
P-35	497+69.53	33.70' RT	HP 14x89	2.50 ft.	776.46	769.15	774.96	755.96	19.00 ft.	6
P-36	497+77.31	33.71' RT	HP 14x89	2.50 ft.	776.29	768.98	774.79	755.79	19.00 ft.	6
P-37	497+85.09	33.72' RT	HP 14x89	2.50 ft.	776.12	768.81	774.62	755.62	19.00 ft.	6
P-38	497+92.87	33.72' RT	HP 14x89	2.50 ft.	775.95	768.64	774.45	755.45	19.00 ft.	6
P-39	498+00.65	33.73' RT	HP 14x89	2.50 ft.	775.79	768.48	774.29	755.29	19.00 ft.	6
P-40	498+08.43	33.73' RT	HP 14x89	2.50 ft.	775.62	768.31	774.12	755.12	19.00 ft.	6
P-41	498+16.21	33.73' RT	HP 14x89	2.50 ft.	775.45	768.14	773.95	754.95	19.00 ft.	6
P-42	498+23.99	33.73' RT	HP 14x89	2.50 ft.	775.29	767.98	773.79	754.79	19.00 ft.	6
P-43	498+31.78	33.73' RT	HP 14x89	2.50 ft.	775.12	767.81	773.62	753.62	20.00 ft.	6
P-44	498+39.56	33.72' RT	HP 14x89	2.50 ft.	774.96	767.65	773.46	753.46	20.00 ft.	6
P-45	498+47.34	33.72' RT	HP 14x89	2.50 ft.	774.79	767.48	773.29	753.29	20.00 ft.	6
P-46	498+55.12	33.72' RT	HP 14x89	2.50 ft.	774.63	767.32	773.13	753.13	20.00 ft.	6
P-47	498+62.90	33.71' RT	HP 14x89	2.50 ft.	774.46	767.15	772.96	752.96	20.00 ft.	6
P-48	498+70.68	33.70' RT	HP 14x89	2.50 ft.	774.29	766.98	772.79	752.79	20.00 ft.	6
P-49	498+78.46	33.69' RT	HP 14x89	2.50 ft.	774.13	766.82	772.63	752.63	20.00 ft.	6
P-50	498+86.24	33.68' RT	HP 14x89	2.50 ft.	773.96	766.65	772.46	752.46	20.00 ft.	6
P-51	498+94.02	33.67' RT	HP 14x89	2.50 ft.	773.80	766.59	772.30	752.30	20.00 ft.	6
P-52	499+01.81	33.66' RT	HP 14x89	2.50 ft.	773.64	766.99	772.14	752.14	20.00 ft.	5
P-53	499+09.59	33.65' RT	HP 14x89	2.50 ft.	773.49	767.38	771.99	752.99	19.00 ft.	5
P-54	499+17.37	33.64' RT	HP 14x89	2.50 ft.	773.34	767.78	771.84	752.84	19.00 ft.	4
P-55	499+25.15	33.69' RT	HP 14x89	2.50 ft.	773.19	768.17	771.69	753.69	18.00 ft.	4
P-56	499+32.94	33.78' RT	HP 14x89	2.50 ft.	773.04	768.57	771.54	754.54	17.00 ft.	3
P-57	499+40.72	33.93' RT	HP 14x89	2.50 ft.	772.89	768.97	771.39	755.39	16.00 ft.	3
P-58	499+48.50	34.13' RT	HP 14x89	2.50 ft.	772.74	769.37	771.24	755.24	16.00 ft.	2

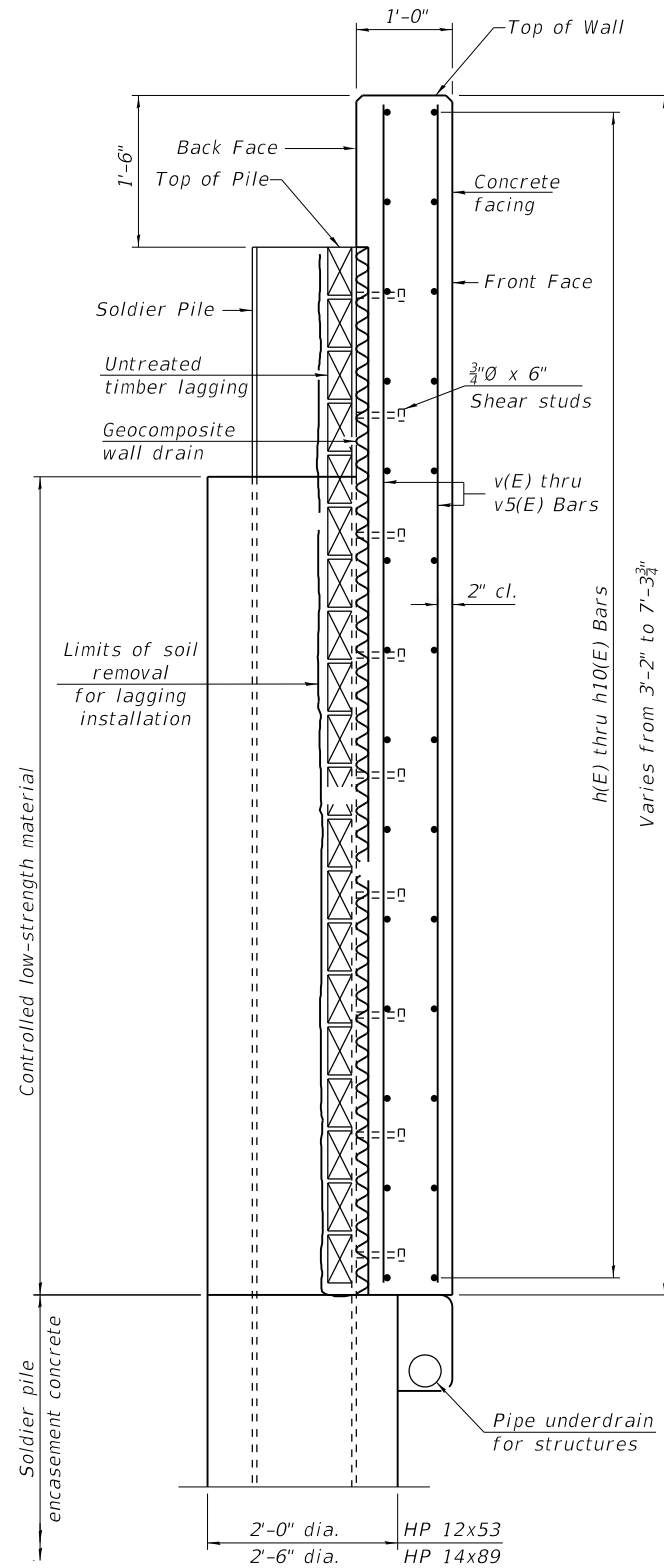
HP 12x53 = 293 ft.  
HP 14x89 = 681 ft.



**SOLDIER PILE WORKING POINT**



**STUD SHEAR CONNECTOR DETAIL**



**SECTION THRU SOLDIER PILE RETAINING WALL**

**NOTES:**

- Controlled low-strength material extends from the existing ground line to the bottom of the concrete facing. Soldier pile encasement concrete extends from the bottom of the concrete facing to the bottom pile tip. Cost of soldier pile encasement concrete shall be included with Drilling and Setting Soldier Piles (In Soil).
- The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications.
- Stud Shear Connectors shall be 3/4"Ø x 6" granular solid flux filled headed studs, automatically end welded to the soldier pile.
- See Sheet 7 of 9 for Pipe Underdrain details.
- Stations and offsets are measured along the  $\phi$  of IL Rte. 176.

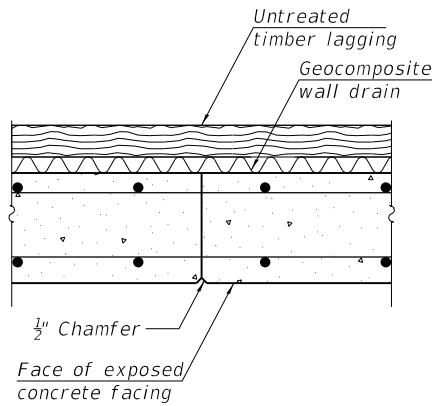
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOLDIER PILE SECTION AND DETAILS**

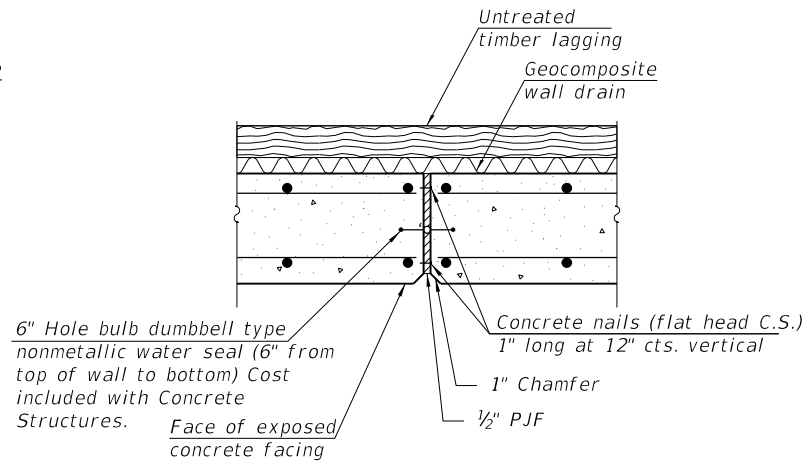
SHEET 6 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	43
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

USER NAME =	sapant	DESIGNED -	AB	REVISED -	
CHECKED -	JMT	REVISIONS -			
PLOT SCALE =	0.1667' / in.	DRAWN -	SAT	REVISED -	
PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

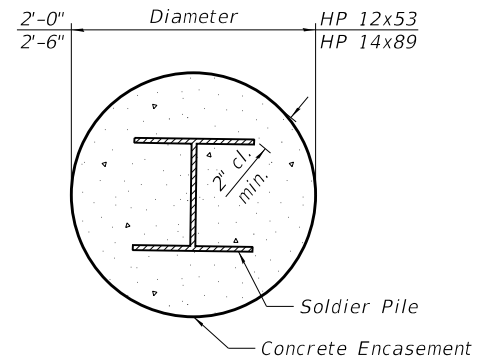


**CONSTRUCTION JOINT**

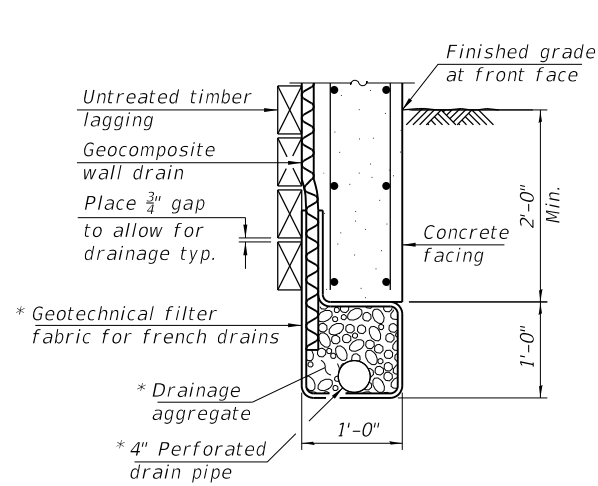


**EXPANSION JOINT**

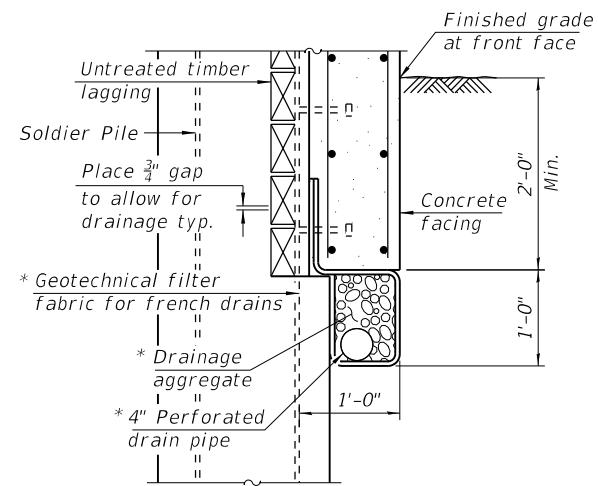
**JOINT DETAILS**



**SOLDIER PILE ENCASEMENT**



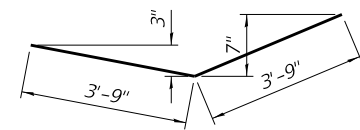
**BETWEEN SOLDIER PILES**



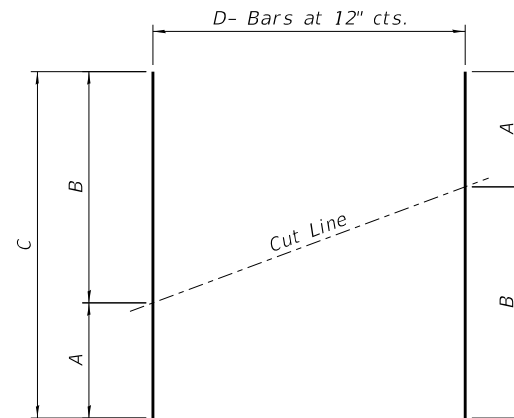
**AT SOLDIER PILES**

**PIPE UNDERDRAIN DETAILS**

\* Cost included with the cost of Pipe Underdrains for Structures, 4"



**BAR h10(E)**



**BAR CUTTING DIAGRAM**

Order bars full length, Cut as shown and use remaining bars in opposite face.

Bar	A	B	C	D
v3(E)	5'-5"	6'-11"	12'-4"	24
v4(E)	4'-1"	5'-5"	9'-6"	21
v5(E)	2'-10"	4'-1"	6'-11"	21

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	64	#5	33'-7"	————
h1(E)	20	#5	31'-7"	————
h2(E)	8	#5	31'-10"	————
h3(E)	44	#5	27'-10"	————
h4(E)	16	#5	35'-7"	————
h5(E)	16	#5	26'-7"	————
h6(E)	32	#5	22'-10"	————
h7(E)	14	#5	7'-6"	————
h8(E)	14	#5	23'-7"	————
h9(E)	14	#5	19'-10"	————
h10(E)	2	#5	7'-6"	————
v(E)	186	#5	2'-10"	————
v1(E)	240	#5	5'-0"	————
v2(E)	402	#5	6'-11"	————
v3(E)	24	#5	12'-4"	————
v4(E)	21	#5	9'-6"	————
v5(E)	21	#5	6'-11"	————
Structure Excavation		Cu. Yd.	292	
Concrete Structures		Cu. Yd.	98.4	
Stud Shear Connectors		Each	258	
Reinforcement Bars, Epoxy Coated		Pound	12,380	
Furnishing Soldier Piles (HP Section)		Foot	974	
Drilling and Setting Soldier Piles (In Soil)		Cu. Yd.	3786	
Untreated Timber Lagging		Sq. Ft.	1779	
Concrete Sealer		Sq. Ft.	3119	
Geocomposite Wall Drain		Sq. Yd.	1294	
Pipe Underdrains for Structures, 4"		Foot	483	

For details of piles and Concrete Encasement, see sheet 2 of 9.

MODEL: Default  
FILE NAME: C:\Engineering\Live\Projects\13038 IDOT DUR\Work Order #4 - 60Y22\CADD\CADD Sheets\Structural\160Y22-007-SPW Det. BOM.dgn  
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USER NAME =	sapant	DESIGNED -	AB	REVISED -	
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PLOT SCALE =	0.1667' / in.	DRAWN -	SAT	REVISED -	
PLOT DATE =	5/10/2018	CHECKED -	SPS	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE DETAILS AND BILL OF MATERIALS

SHEET 7 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	44
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

SEECO CONSULTANTS, INC. SOIL BORING LOG										Page 1 Of 1	
ROUTE <b>FAP 355</b>		DESCRIPTION <b>Proposed IL Rte. 176 &amp; Roberts Road Improvement Project</b>								Date <b>11/29/17</b>	
SECTION <b>145N-3(14)</b>		LOCATION <b>IL Rte. 176 &amp; Roberts Road, McHenry Co., IL</b>				SEC		TWP. <b>RNG. PM</b>		Logged By <b>JW</b>	
COUNTY <b>McHenry</b>		STRUCTURE NO. (Exist.) (Prop.)				SEC		TWP. <b>RNG. PM</b>		Logged By <b>JW</b>	
Boring No. <b>B-1</b>		Drilling Method <b>AASHTO T 206-09</b>				Hammer Type <b>Automatic Hammer</b>		SEC		TWP. <b>RNG. PM</b>	
Station <b>496+50</b>		ELEV. (ft.)		S U M (blows) (TSF) (%)		Surf. Wat. El.		ELEV. (ft.)		S U M (blows) (TSF) (%)	
Offset <b>26.04' RT</b>		DEPTH (ft.)		N Qu T.		Groundwater Elev.:		DEPTH (ft.)		S U M (blows) (TSF) (%)	
Ground Surface El. <b>+99.56 +/- ft</b>		H N Qu T.		M O I S T.		When Drilling <b>DRY</b>		DEPTH (ft.)		S U M (blows) (TSF) (%)	
		M.S.L. (ft.)		(blows) (TSF) (%)		at Completion <b>DRY</b>		DEPTH (ft.)		S U M (blows) (TSF) (%)	
		After Hrs						DEPTH (ft.)		S U M (blows) (TSF) (%)	
11" BITUMINOUS CONCRETE PAVEMENT											
		98.6		1.0				16.0			
SANDY CLAY, Brown, Trace Fine Gravel, Stiff, Moist (A-6)				9				8			
(With Clayey Sand @ 1'-2.5')		2.0		11		1.75 P		11		3.3	
		3.0						11			
		4.0		6				9			
		5.0		7		1.75 P		12			
		5.0		15				11		20.4	
		80.1						20.0			
		79.6									
SILT, Brown, Little Fine Sand, Medium Dense, Moist (A-4)											
End of Boring @ 20.0 Feet.											
Note:											
1) State Plane Coordinates: N 2041924.528, E 1020499.052											
2) Boring elevation in feet is shown with respect to Temporary Benchmark BM-1 with an assumed elevation of 100.00 feet is the center of the ring on the traffic signal vault located on the southside of IL RTE 176 (W. State Road), West of the West end of the existing southside guardrail, approximately 8 feet South and approximately 10 feet West of B-1.											
		93.6		6.0		7		21.0			
SAND AND GRAVEL, Brown, Fine, Some Light Gray Cobble Pieces, Medium Dense to Dense to Very Dense, Dry (A-1-b)		7.0		11		1.4		22.0			
(Sample 3 Interval @ 6' to 7.5' was an Auger Sample Due to No Recovery)		8.0		15				23.0			
		9.0		20				24.0			
		10.0		22		6.2		25.0			
		11.0		20				26.0			
		12.0		21				27.0			
		13.0		25		4.9		28.0			
		14.0		31				29.0			
		86.1						30.0			
SAND, Brown, Fine, Little Fine Gravel, Medium Dense, Dry (A-1-b)		14.0		6							
		15.0		13		4.1					
				11							

N=Standard Penetration Test-Blows per six inches to drive 2" O.D. (QU)B=Bulge S=Shear P=Penetrometer Test  
 Split Spoon Sampler 24" with 140lb hammer falling 30" DRILL RIG: D-50  
 4.25" Diameter Hollow Stem Augers used between Split Spoon Sample intervals unless noted otherwise.

SEECO Job No. 10612G-20

SEECO CONSULTANTS, INC. SOIL BORING LOG										Page 1 Of 1	
ROUTE <b>FAP 355</b>		DESCRIPTION <b>Proposed IL Rte. 176 &amp; Roberts Road Improvement Project</b>								Date <b>11/29/17</b>	
SECTION <b>145N-3(14)</b>		LOCATION <b>IL Rte. 176 &amp; Roberts Road, McHenry Co., IL</b>				SEC		TWP. <b>RNG. PM</b>		Logged By <b>JW</b>	
COUNTY <b>McHenry</b>		STRUCTURE NO. (Exist.) (Prop.)				SEC		TWP. <b>RNG. PM</b>		Logged By <b>JW</b>	
Boring No. <b>B-2</b>		Drilling Method <b>AASHTO T 206-09</b>				Hammer Type <b>Automatic Hammer</b>		SEC		TWP. <b>RNG. PM</b>	
Station <b>497+50</b>		ELEV. (ft.)		S U M (blows) (TSF) (%)		Surf. Wat. El.		ELEV. (ft.)		S U M (blows) (TSF) (%)	
Offset <b>24' RT</b>		DEPTH (ft.)		N Qu T.		Groundwater Elev.:		DEPTH (ft.)		S U M (blows) (TSF) (%)	
Ground Surface El. <b>+98.17 +/- ft</b>		H N Qu T.		M O I S T.		When Drilling <b>DRY</b>		DEPTH (ft.)		S U M (blows) (TSF) (%)	
		M.S.L. (ft.)		(blows) (TSF) (%)		at Completion <b>DRY</b>		DEPTH (ft.)		S U M (blows) (TSF) (%)	
		After Hrs						DEPTH (ft.)		S U M (blows) (TSF) (%)	
12" BITUMINOUS CONCRETE PAVEMENT											
		97.2		1.0				16.0			
CLAY, Brown, With to Trace Fine Sand, Trace Fine Gravel, Very Stiff, Moist (A-6)				6				16			
		2.0		8		2.50 P		22		3.7	
		3.0		7				32			
		4.0		12				24			
		5.0		9		2.00 P		30		4.2	
		5.0		9				33			
		80.1						20.0			
		78.2									
End of Boring @ 20.0 Feet.											
Note:											
1) State Plane Coordinates: N 2041892.931, E 1020567.847											
2) Boring elevation in feet is shown with respect to Temporary Benchmark BM-1 with an assumed elevation of 100.00 feet is the center of the ring on the traffic signal vault located on the southside of IL RTE 176 (W. State Road), West of the West end of the existing southside guardrail, approximately 8 feet South and approximately 10 feet West of B-1.											
		89.7		6.0		5		21.0			
CLAY, Brown, Trace Fine Sand and Gravel, Hard, Moist (A-6)		7.0		7		3.25 P		22.0			
		8.0		8				23.0			
		89.7						24.0			
CLAY, Brown, Trace Fine Sand and Gravel, Hard, Moist (A-6)		9.0		6		5.25 P		24.0			
		10.0		9				25.0			
SAND, Brown, Fine, Trace Fine Gravel, Medium Dense, Dry (A-1-b)		11.0		14				26.0			
		12.0		16				27.0			
		13.0		19		5.25 P		28.0			
		85.7		31				29.0			
CLAY, Brown, Trace Fine Sand and Gravel, Hard, Moist (A-6)		14.0		15				30.0			
		15.0		20		4.4					
SAND AND GRAVEL, Brown, Fine, Some Cobble Pieces, Dense to Very Dense, Dry (A-1-b)		14.0		20							
		15.0		22							

N=Standard Penetration Test-Blows per six inches to drive 2" O.D. (QU)B=Bulge S=Shear P=Penetrometer Test  
 Split Spoon Sampler 24" with 140lb hammer falling 30" DRILL RIG: D-50  
 4.25" Diameter Hollow Stem Augers used between Split Spoon Sample intervals unless noted otherwise.

SEECO Job No. 10612G-20

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PLOT SCALE = 0.1667' / in.	CHECKED - JMT	REVISED -
PLOT DATE = 5/10/2018	DRAWN - SAT	REVISED -
	CHECKED - SPS	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS - I

SHEET 8 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	45
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				

# SOIL BORING LOG

ROUTE **FAP 355** DESCRIPTION **Proposed IL Rte. 176 & Roberts Road Improvement Project** Date **11/29/17** Logged By **JW**

SECTION **145N-3(14)** LOCATION **IL Rte. 176 & Roberts Road, McHenry Co., IL** SEC TWP. RNG. PM

COUNTY **McHenry** STRUCTURE NO. (Exist.) (Prop.)

Drilling Method **AASHTO T 206-09** Hammer Type **Automatic Hammer**

Boring No. <b>B-3</b>	<table border="1"> <tr><td><b>E</b></td><td><b>D</b></td><td><b>S</b></td><td><b>U</b></td><td><b>M</b></td></tr> <tr><td><b>L</b></td><td><b>E</b></td><td><b>P</b></td><td><b>C</b></td><td><b>O</b></td></tr> <tr><td><b>E</b></td><td><b>P</b></td><td><b>T</b></td><td><b>S</b></td><td><b>I</b></td></tr> <tr><td><b>V.</b></td><td><b>T</b></td><td><b>H</b></td><td><b>N</b></td><td><b>Q</b></td></tr> <tr><td><b>(M.S.L.)</b></td><td><b>(ft.)</b></td><td><b>(blows)</b></td><td><b>(TSF)</b></td><td><b>(%)</b></td></tr> </table>	<b>E</b>	<b>D</b>	<b>S</b>	<b>U</b>	<b>M</b>	<b>L</b>	<b>E</b>	<b>P</b>	<b>C</b>	<b>O</b>	<b>E</b>	<b>P</b>	<b>T</b>	<b>S</b>	<b>I</b>	<b>V.</b>	<b>T</b>	<b>H</b>	<b>N</b>	<b>Q</b>	<b>(M.S.L.)</b>	<b>(ft.)</b>	<b>(blows)</b>	<b>(TSF)</b>	<b>(%)</b>	Surf. Wat. El. _____	<table border="1"> <tr><td><b>E</b></td><td><b>D</b></td><td><b>S</b></td><td><b>U</b></td><td><b>M</b></td></tr> <tr><td><b>L</b></td><td><b>E</b></td><td><b>P</b></td><td><b>C</b></td><td><b>O</b></td></tr> <tr><td><b>E</b></td><td><b>P</b></td><td><b>T</b></td><td><b>S</b></td><td><b>I</b></td></tr> <tr><td><b>V.</b></td><td><b>T</b></td><td><b>H</b></td><td><b>N</b></td><td><b>Q</b></td></tr> <tr><td><b>(M.S.L.)</b></td><td><b>(ft.)</b></td><td><b>(blows)</b></td><td><b>(TSF)</b></td><td><b>(%)</b></td></tr> </table>	<b>E</b>	<b>D</b>	<b>S</b>	<b>U</b>	<b>M</b>	<b>L</b>	<b>E</b>	<b>P</b>	<b>C</b>	<b>O</b>	<b>E</b>	<b>P</b>	<b>T</b>	<b>S</b>	<b>I</b>	<b>V.</b>	<b>T</b>	<b>H</b>	<b>N</b>	<b>Q</b>	<b>(M.S.L.)</b>	<b>(ft.)</b>	<b>(blows)</b>	<b>(TSF)</b>	<b>(%)</b>
<b>E</b>		<b>D</b>	<b>S</b>	<b>U</b>	<b>M</b>																																																
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<b>V.</b>	<b>T</b>	<b>H</b>	<b>N</b>	<b>Q</b>																																																	
<b>(M.S.L.)</b>	<b>(ft.)</b>	<b>(blows)</b>	<b>(TSF)</b>	<b>(%)</b>																																																	
Station <b>498+59.31</b>	Groundwater Elev.: _____																																																				
Offset <b>20.37' RT</b>	When Drilling <b>DRY</b>																																																				
Ground Surface El. <b>+96.16 +/- ft</b>	at Completion <b>DRY</b>																																																				
	After _____ Hrs																																																				

11.5" BITUMINOUS CONCRETE PAVEMENT	95.2	1.0						80.2	16.0				
SILTY SAND, Brown, Trace Fine Gravel, Medium Dense, Dry (A-2-4)	94.2	2.0	5		8.4				15				2.7
CLAY, Brown and Dark Brown, Trace Fine Sand and Gravel, Very Stiff, Moist (A-6)		3.0	10	2.00	16.9				46				
		4.0	10						48				
		5.0	8	2.25	16.3				17				3.9
		6.0	6						15				
SANDY LOAM, Brown and Dark Brown, Little Fine Gravel, Medium Dense, Dry (A-2-6)		7.0	5		8.3				15				
		8.0	5						17				
		9.0	8	6.75	13.5				15				
		10.0	9						15				
CLAY, Brown, Trace Fine Gravel, Hard, Moist (A-6)		11.0	15		16.6				19				
		12.0	17						11				
SILT, Brown, Medium Dense to Dense, Moist (A-4)		13.0	15						15				
		14.0	15		2.9				11				
		15.0	17						15				
SAND, Brown, Little Fine Gravel, Contains Cobble Pieces, Dense, Dry (A-1-b)	84.2	12.0	19						15				

SAND AND GRAVEL, Brown and Light Brown, Medium Course to Fine, Some Cobble Pieces, Very Dense to Dense, Dry (A-1-b)

End of Boring @ 20.0 Feet.

Note:

- 1) State Plane Coordinates: N 2041859.922, E 1020665.062
- 2) Boring elevation in feet is shown with respect to Temporary Benchmark BM-1 with an assumed elevation of 100.00 feet is the center of the ring on the traffic signal vault located on the southside of IL RTE 176 (W. State Road), West of the West end of the existing southside guardrail, approximately 8 feet South and approximately 10 feet West of B-1

*Central Analysis # 2*

N=Standard Penetration Test-Blows per six inches to drive 2" O.D. (QU)B=Bulge S=Shear P=Penetrometer Test  
 Split Spoon Sampler 24" with 140lb Hammer falling 30" DRILL RIG: D-50  
 4.25" Diameter Hollow Stem Augers used between Split Spoon Sample intervals unless noted otherwise.

SEECO Job No. 10612G-20

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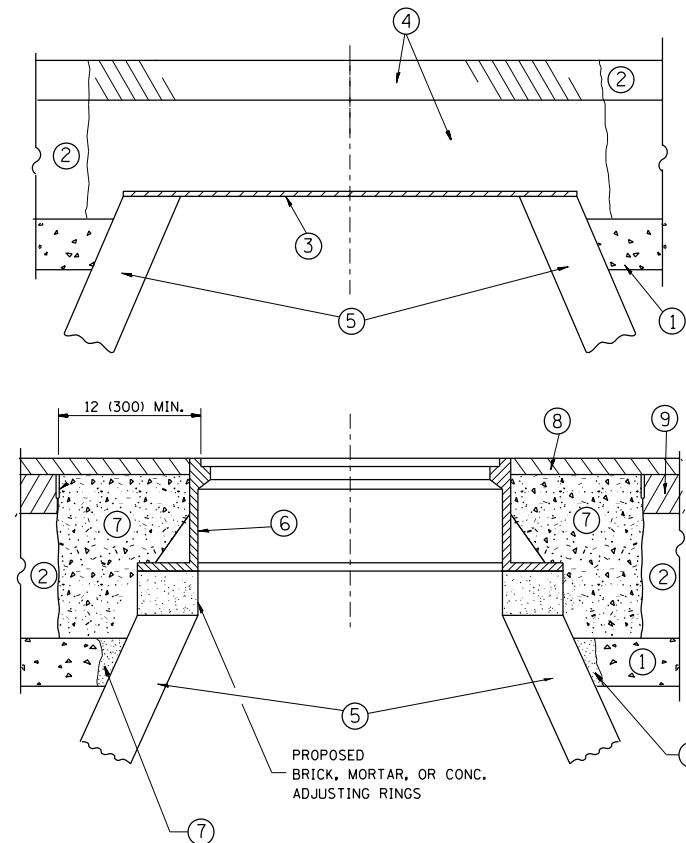
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	CHECKED - SPS	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS - II

SHEET 9 OF 9 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	145N-4(14)	MCHENRY	59	46
CONTRACT NO. 60Y22				
ILLINOIS FED. AID PROJECT				



**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 A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

**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:**

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)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

**NOTES:**

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.

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.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

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.

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

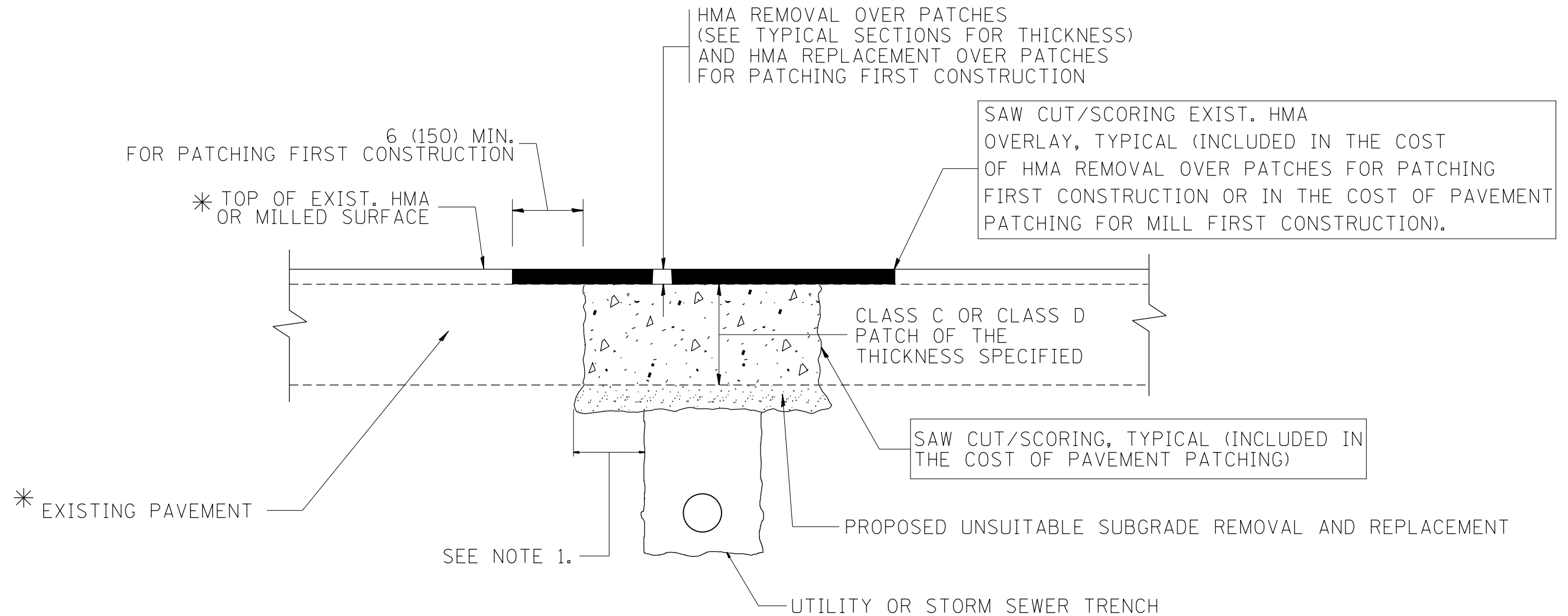
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	PLOT DATE = 5/10/2018	DATE - 10-25-94	REVISED - R. BORO 12-06-11

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	47
BD600-03 (BD-8)		CONTRACT NO. 60Y22		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

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

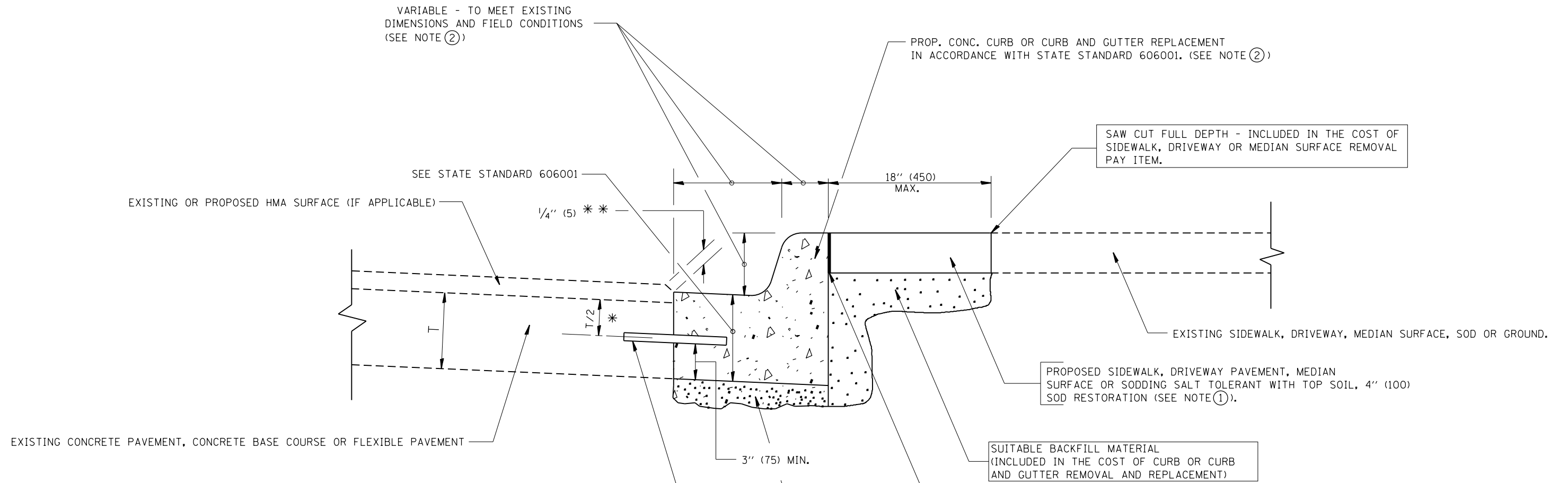
SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

FILE NAME =	USER NAME = guillaumejp	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw\11084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\PI708\Drawings\Design\DistStd.dgn	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED - R. BORO 01-01-07					355	145N-4(14)	LAKE/MCHENRY	59	48
	PLOT DATE = 5/10/2018	DATE - 10-25-94	REVISED - R. BORO 09-04-07		BD400-04 (BD-22)			CONTRACT NO. 60Y22				
			REVISED - K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





- \* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
  - \*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.
- NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.
- SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY.
- ② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED
  - ③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
  - ④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
  - ⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
  - ⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
  - ⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
  - ⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

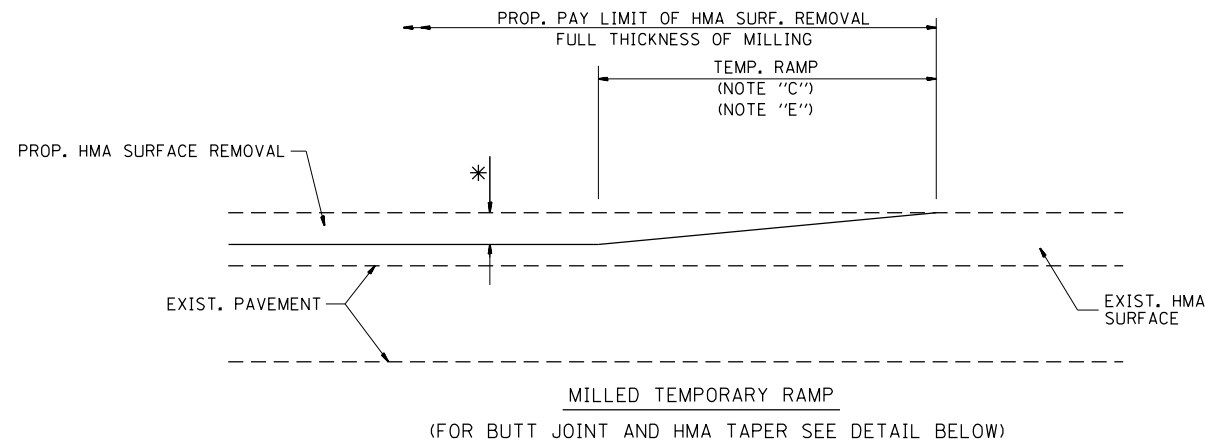
- PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)
- UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.
- REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

**BASIS OF PAYMENT:**  
 THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

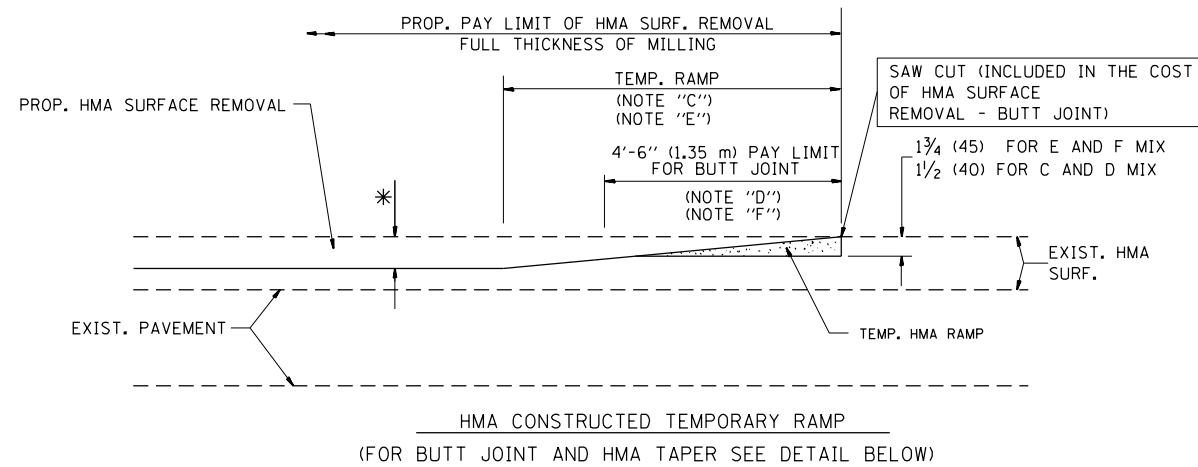
# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

FILE NAME =	USER NAME = guillaumejp	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG\illinois.gov\PWIDOT\Documents\DOT Offices\District 1\Projects\PI705\Drawings\Design\DistStd.dgn			REVISED - A. ABBAS 03-21-97			355	145N-4(14)	LAKE/MCHENRY	59	49
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - M. GOMEZ 01-22-01				<b>BD600-06 (BD-24)</b>		CONTRACT NO. 60Y22		
PLOT DATE = 5/10/2018	DATE - 03-11-94	REVISED - R. BORO 12-15-09	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT

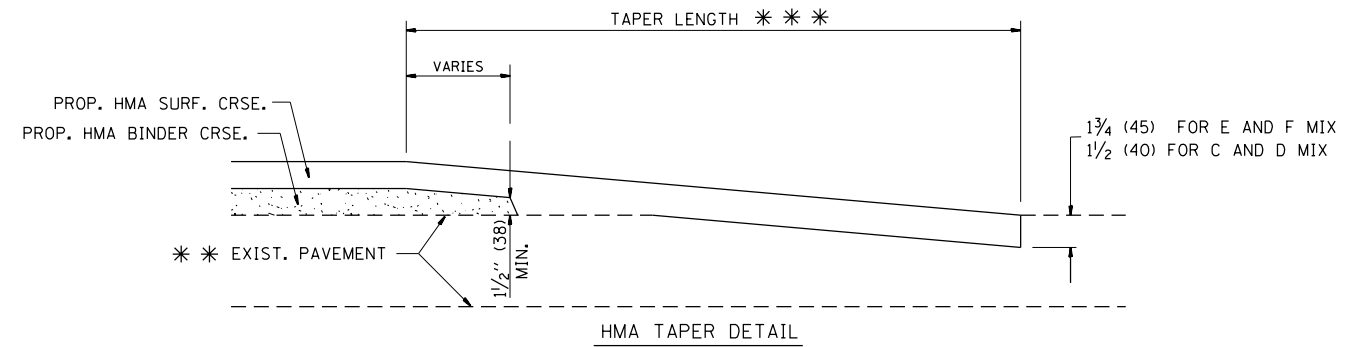
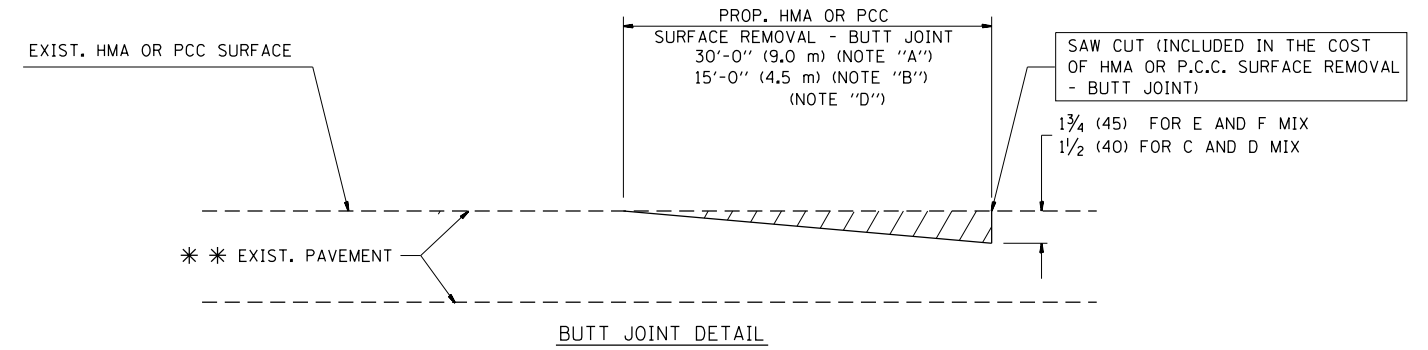


**OPTION 1**



**OPTION 2**

**TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

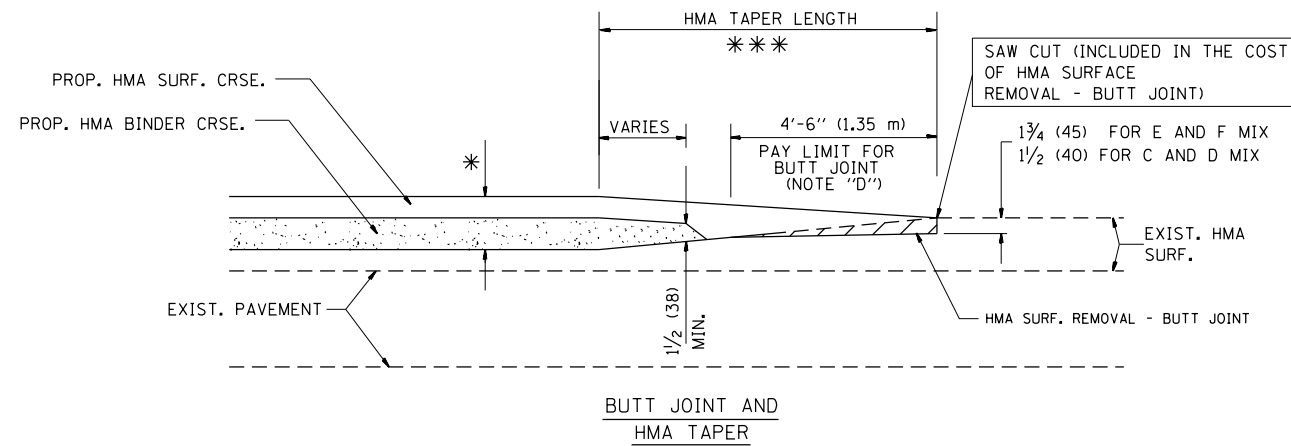
**NOTES**

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

**BASIS OF PAYMENT:**

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

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



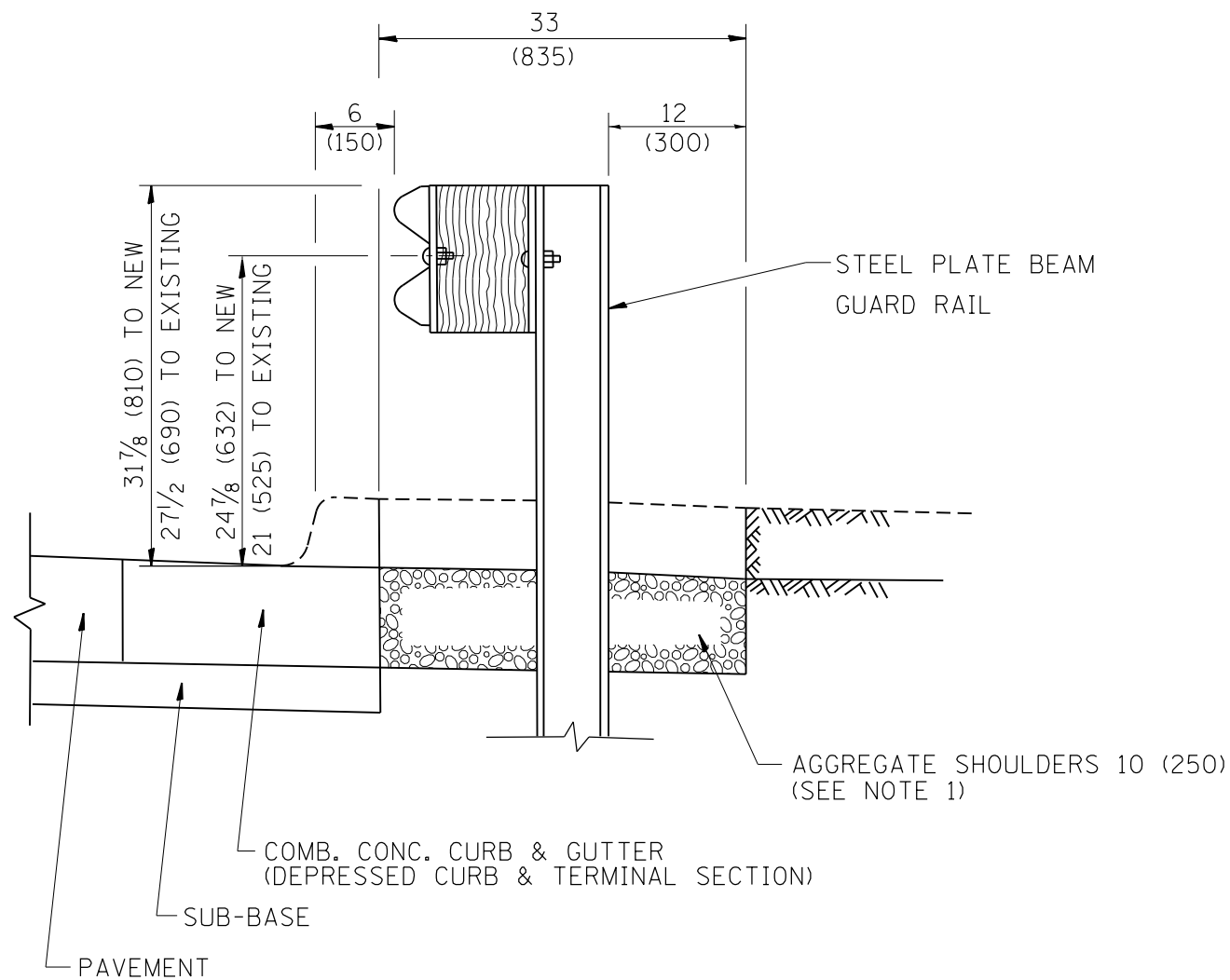
**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**

FILE NAME =	USER NAME = guillaumejp	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
pw\11084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\PI705\DRAWING\Design\DistStd.dgn			REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 5/10/2018	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>BUTT JOINT AND HMA TAPER DETAILS</b>	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.

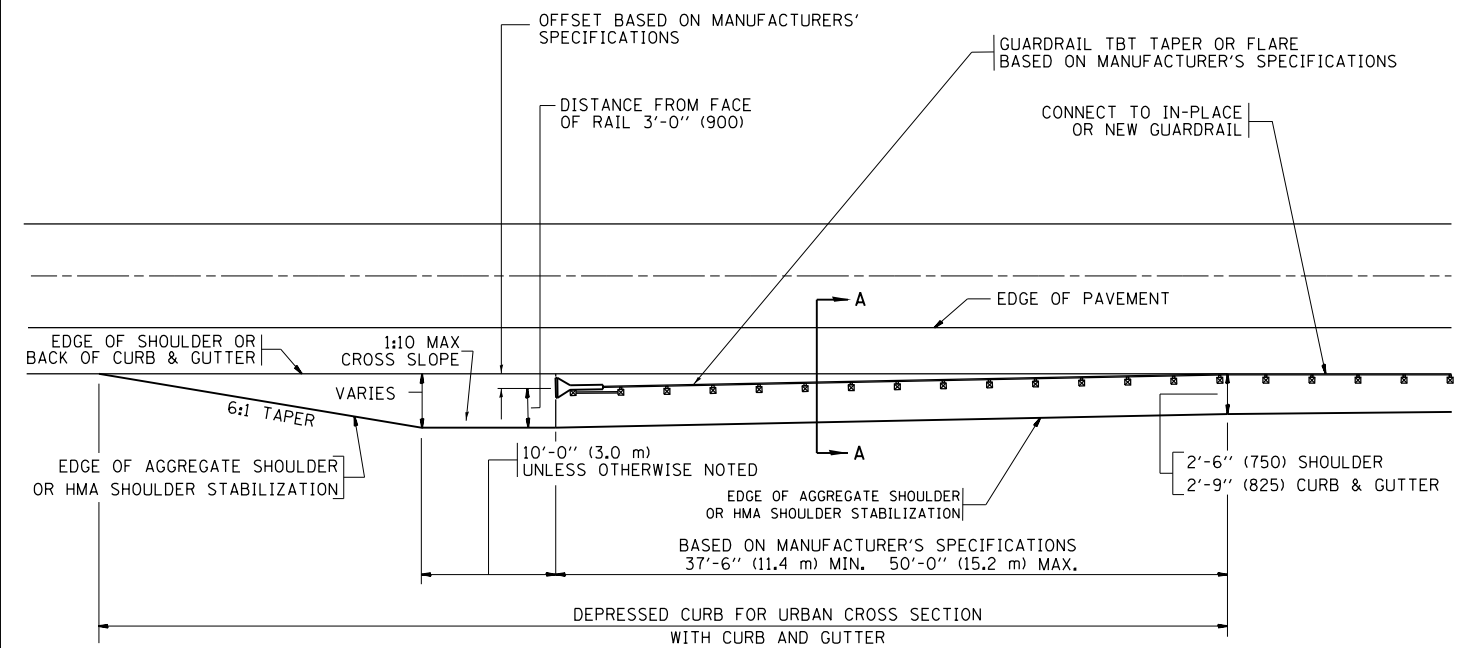
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	50
<b>BD400-05 BD32</b>		<b>CONTRACT NO. 60Y22</b>		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**SECTION A-A**

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
  2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
  3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM  
GUARD RAIL ADJACENT TO CURB AND GUTTER  
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL  
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

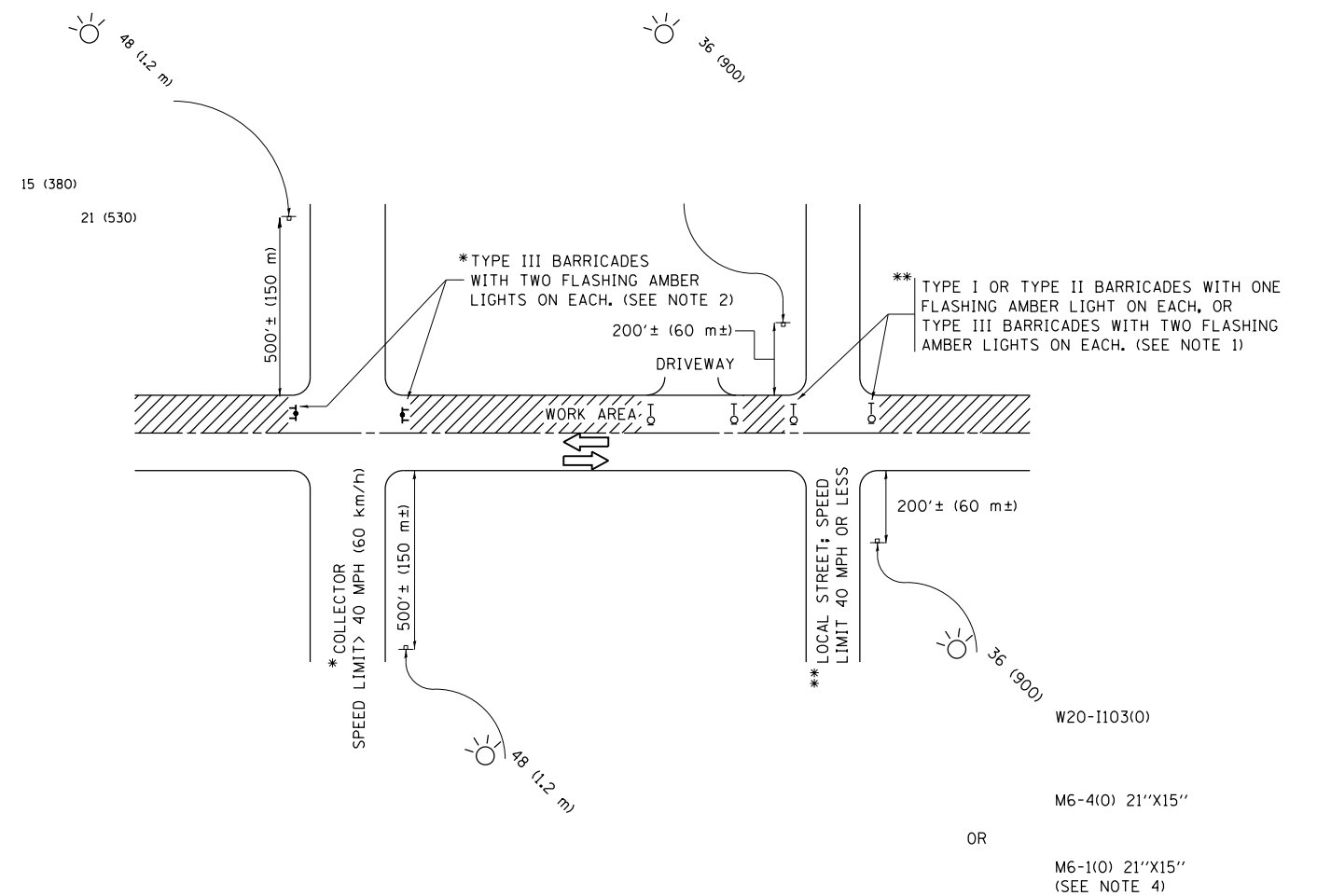
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pw:\IL\084EBIDINTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 1\Projects\PI705\Drawings\Design\DistStd.dgn			REVISED - R. BORO 01-01-07
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED - R. BORO 12-08-2008
	PLOT DATE = 5/10/2018	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAILS FOR DEPRESSED CURB & GUTTER AND  
SHOULDER TREATMENT AT TBT TY 1 SPL.**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	51
BD600-10 (BD 34)		CONTRACT NO. 60Y22		
FED. ROAD DIST. NO. 1 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) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. 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. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE 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.

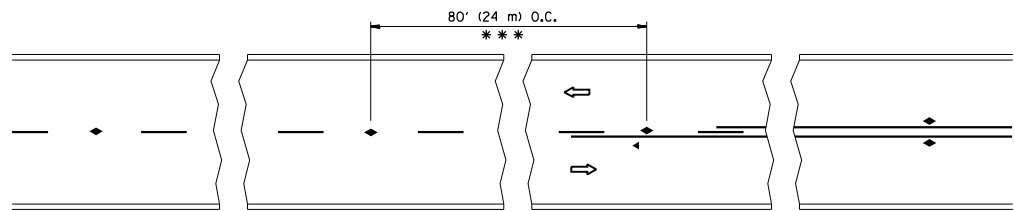
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p:\11084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 1\Projects\PI7050\Drawings\Design\DistStd.dgn			REVISED - T. RAMMACHER 01-06-00
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 5/10/2018	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

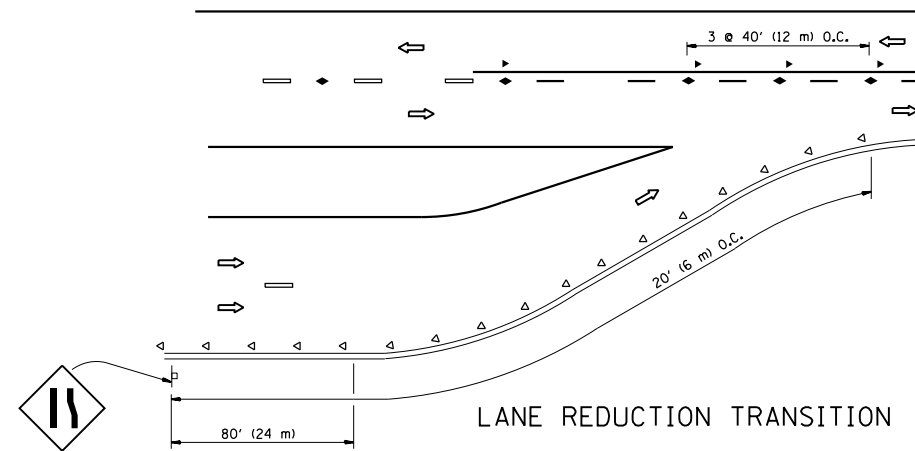
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	52
<b>TC-10</b>			<b>CONTRACT NO. 60Y22</b>	
ILLINOIS FED. AID PROJECT				

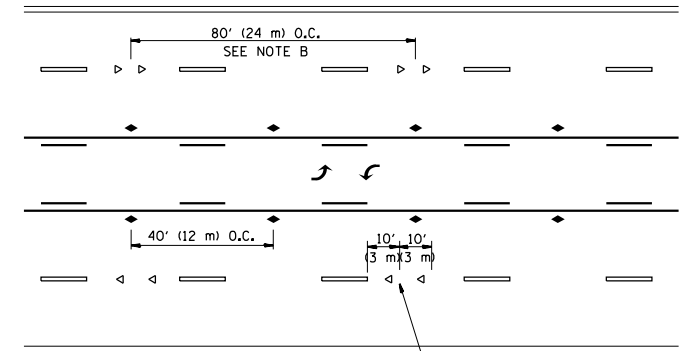


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

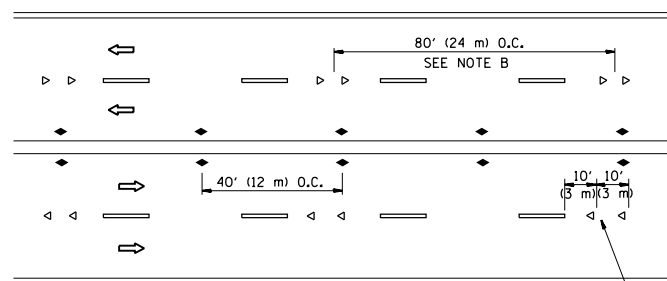
TWO-LANE/TWO-WAY



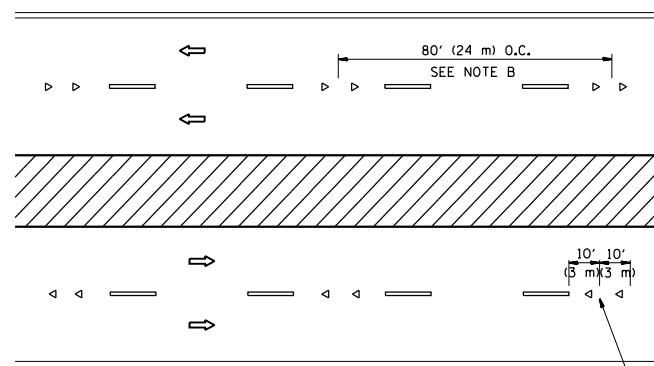
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

SYMBOLS

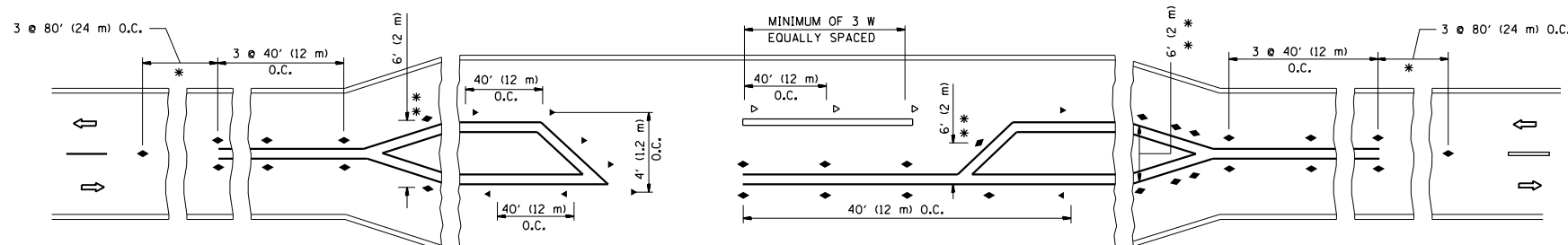
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

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



LEFT TURN

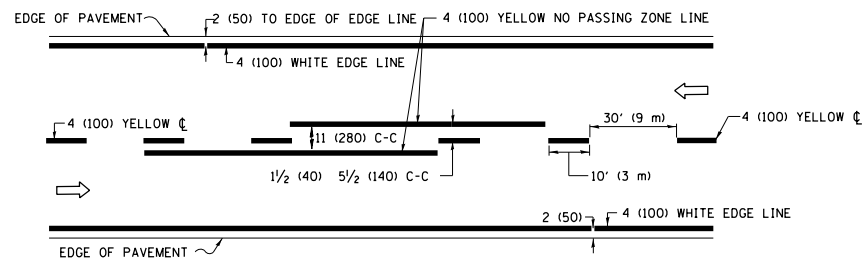
\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

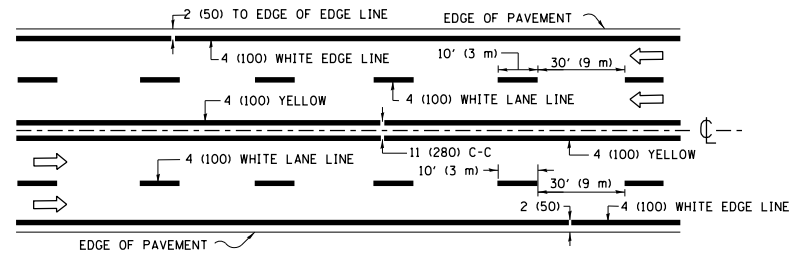
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		DATE -	REVISED - T. RAMMACHER 01-06-00
			REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

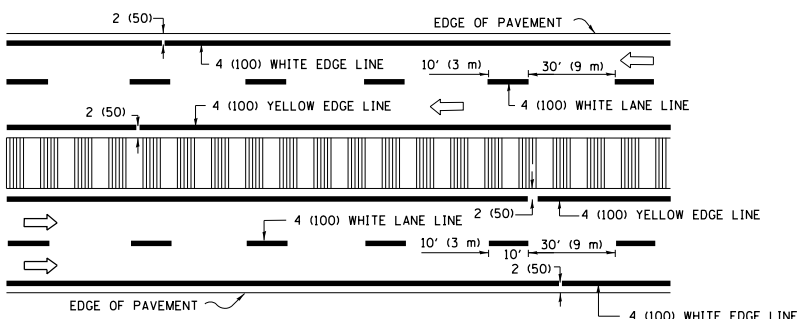
TYPICAL APPLICATIONS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		355	145N-4(14)	LAKE/MCHENRY	59	53
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		CONTRACT NO. 60Y22		
		STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



**2-LANE ROADWAY**

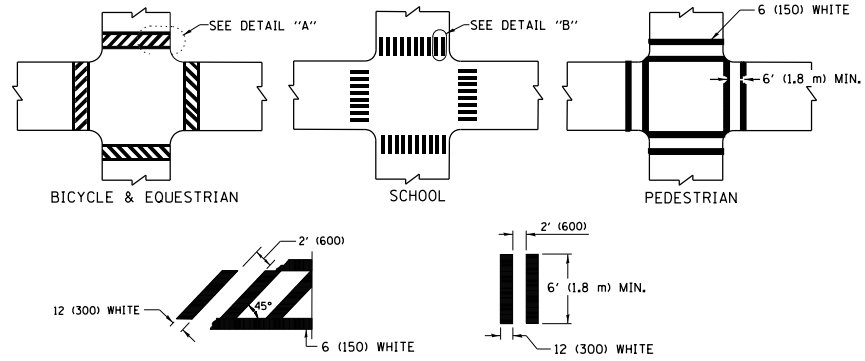


**MULTI-LANE UNDIVIDED**



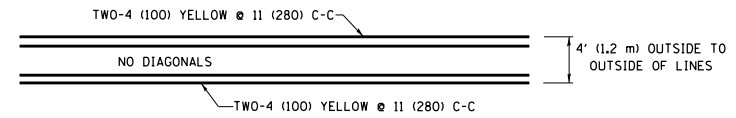
**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

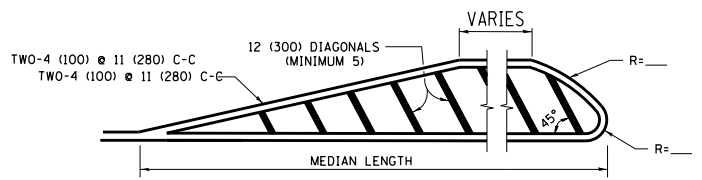


**TYPICAL CROSSWALK MARKING**

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

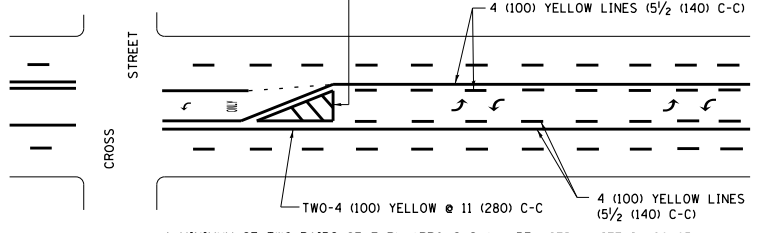


**4' (1.2 m) WIDE MEDIANS ONLY**

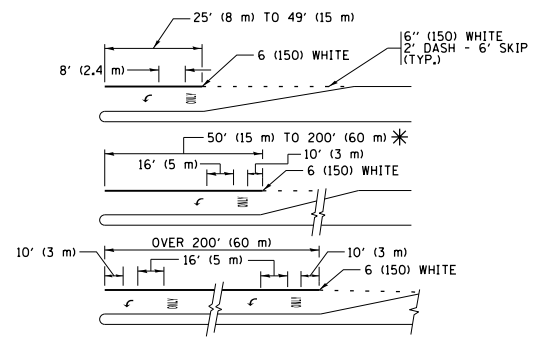


**MEDIANS OVER 4' (1.2 m) WIDE**

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

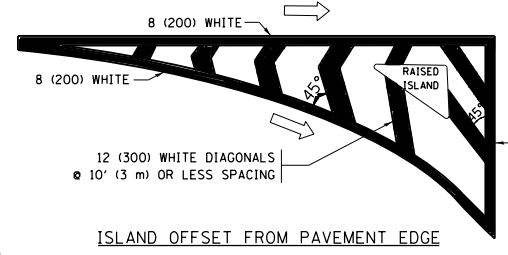


**MEDIAN WITH TWO-WAY LEFT TURN LANE  
TYPICAL PAINTED MEDIAN MARKING**

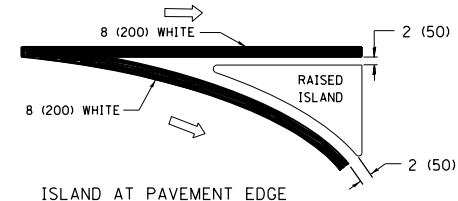


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

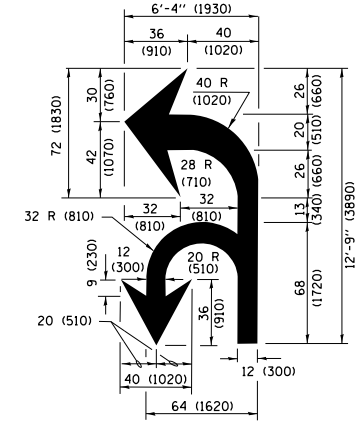
**TYPICAL LEFT (OR RIGHT) TURN LANE  
TYPICAL TURN LANE MARKING**



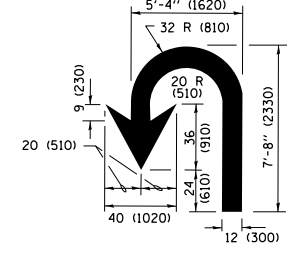
**ISLAND OFFSET FROM PAVEMENT EDGE**



**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) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 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 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <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.

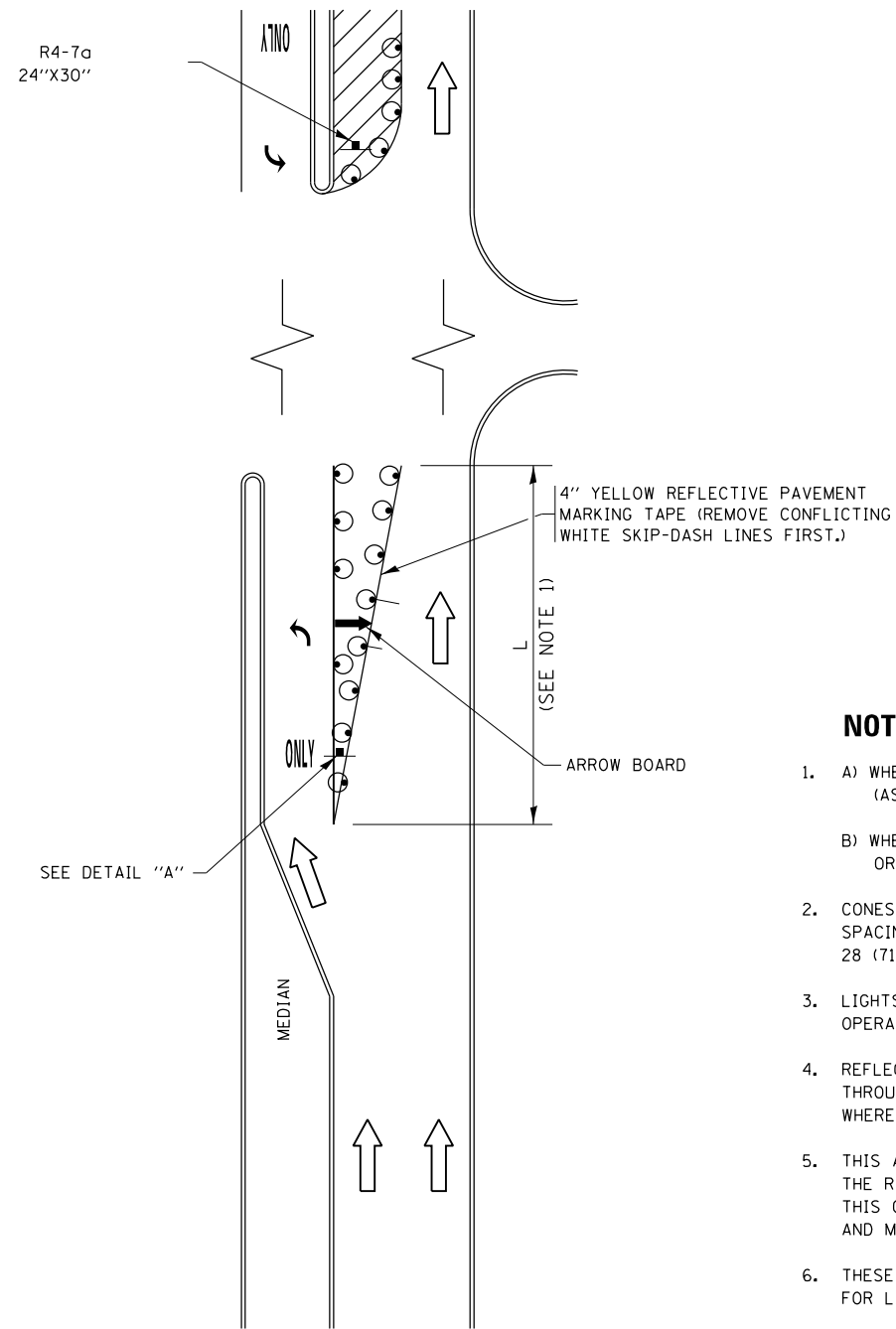
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pw\1\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\PI705\Drawings\Design\DistStd.dgn		CHECKED -	REVISED - C. JUCIUS 07-01-13
Default	PLOT SCALE = 100.0000' / in.	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
	PLOT DATE = 5/10/2018		REVISED - C. JUCIUS 04-12-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

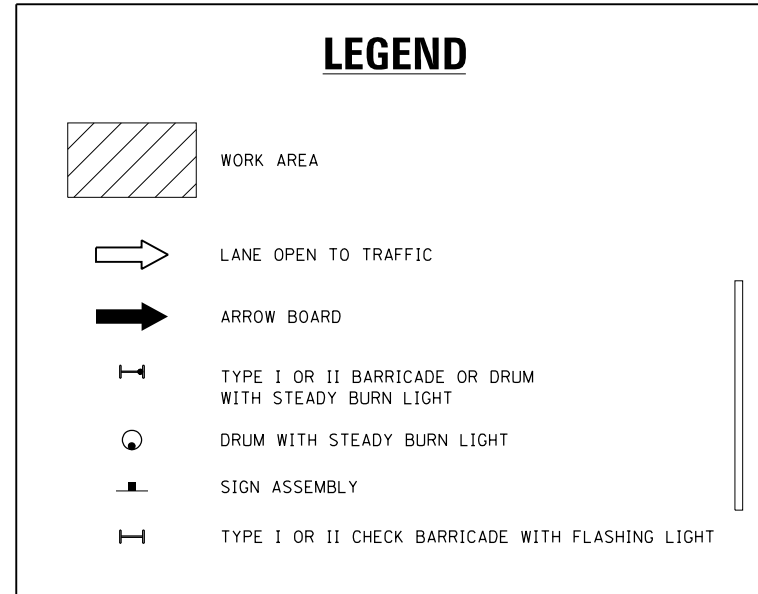
<b>DISTRICT ONE</b>			
<b>TYPICAL PAVEMENT MARKINGS</b>			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	54
<b>TC-13</b>		<b>CONTRACT NO. 60Y22</b>		
ILLINOIS FED. AID PROJECT				

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



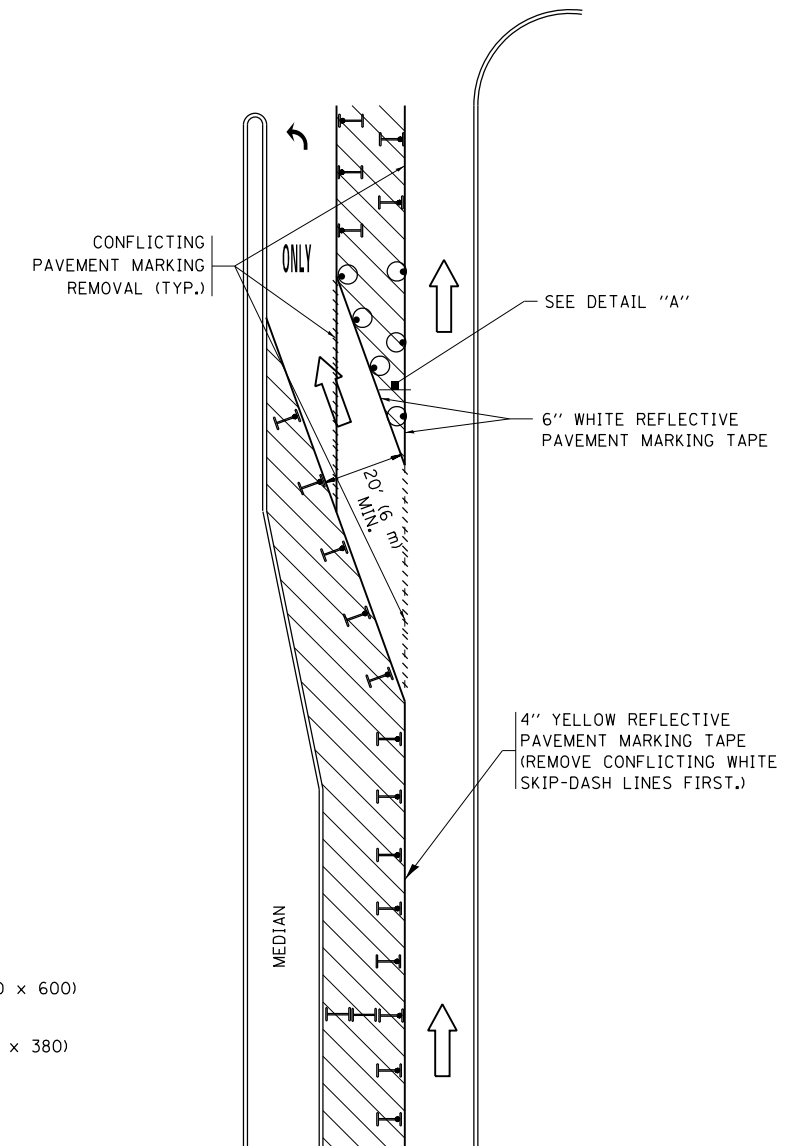
**FIGURE 1**



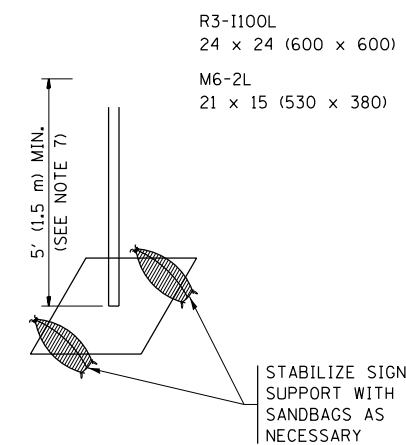
### NOTES:

1. A) WHEN "L" IS  $\leq$  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-I100R 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 PREQUIREMENTS.
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.

# TURN BAY ENTRANCE WITHIN A LANE CLOSURE



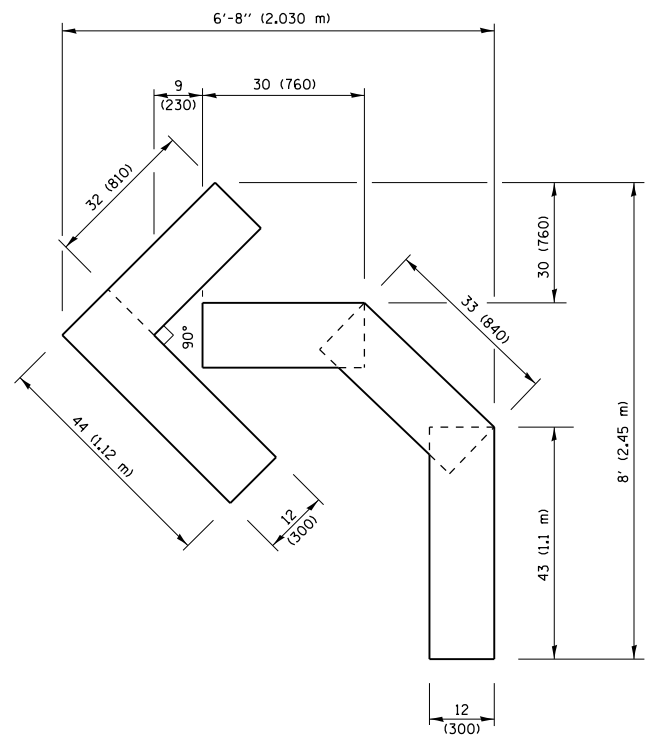
**FIGURE 2**



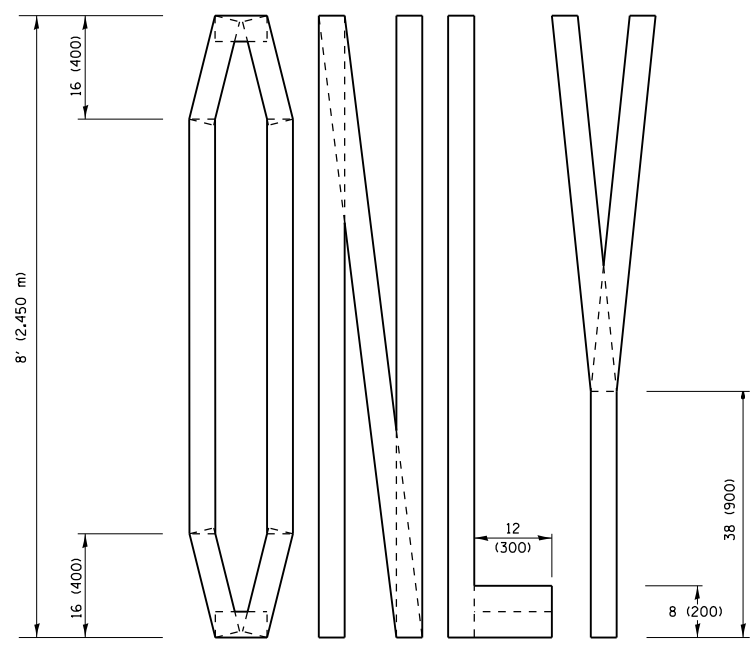
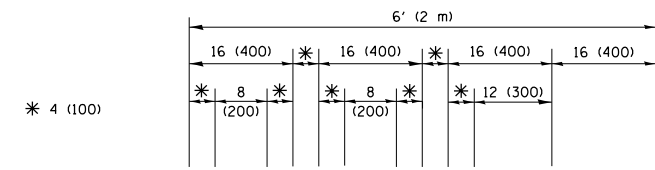
**DETAIL A**

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

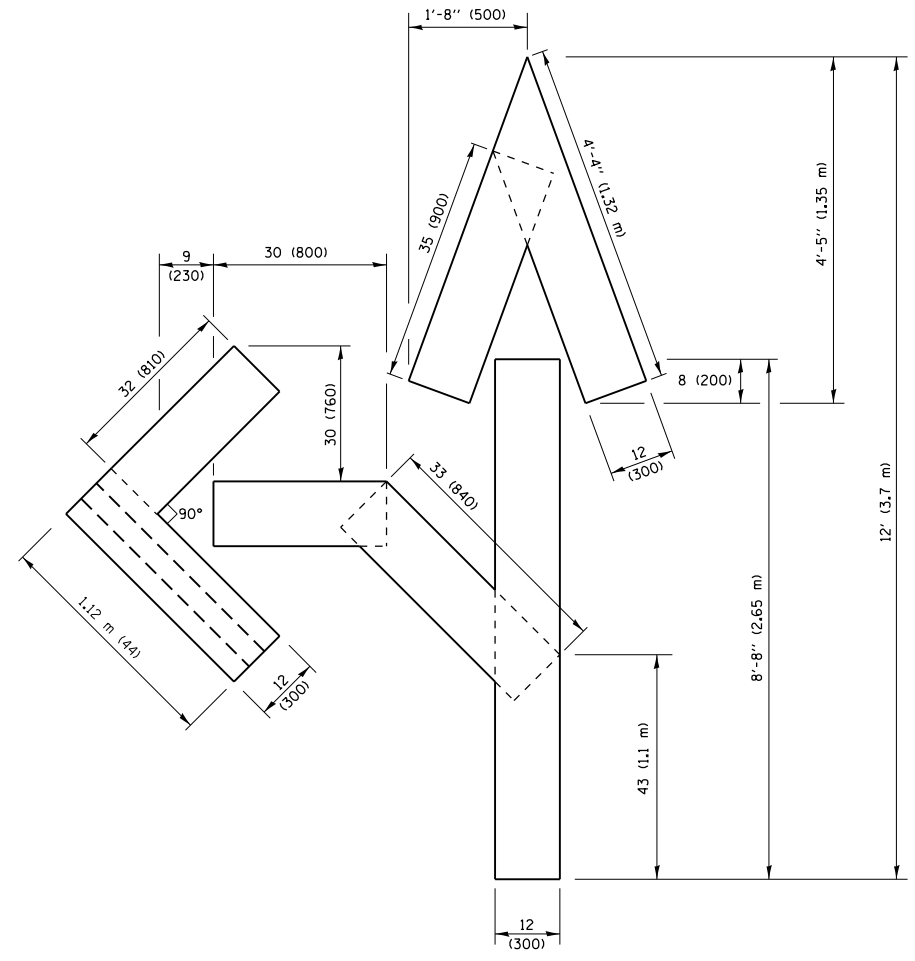
FILE NAME =	USER NAME = guillaumejp	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)</b>			F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default		REVISED - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13					355	145N-4(14)	LAKE/MCHENRY	59	55
	PLOT SCALE = 100.0000' / in.	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16		<b>TC-14</b>			<b>CONTRACT NO. 60Y22</b>				
	PLOT DATE = 5/10/2018	REVISED - T. RAMMACHER 01-06-00	REVISED -		SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		



**QUANTITY**  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.41 sq. m)

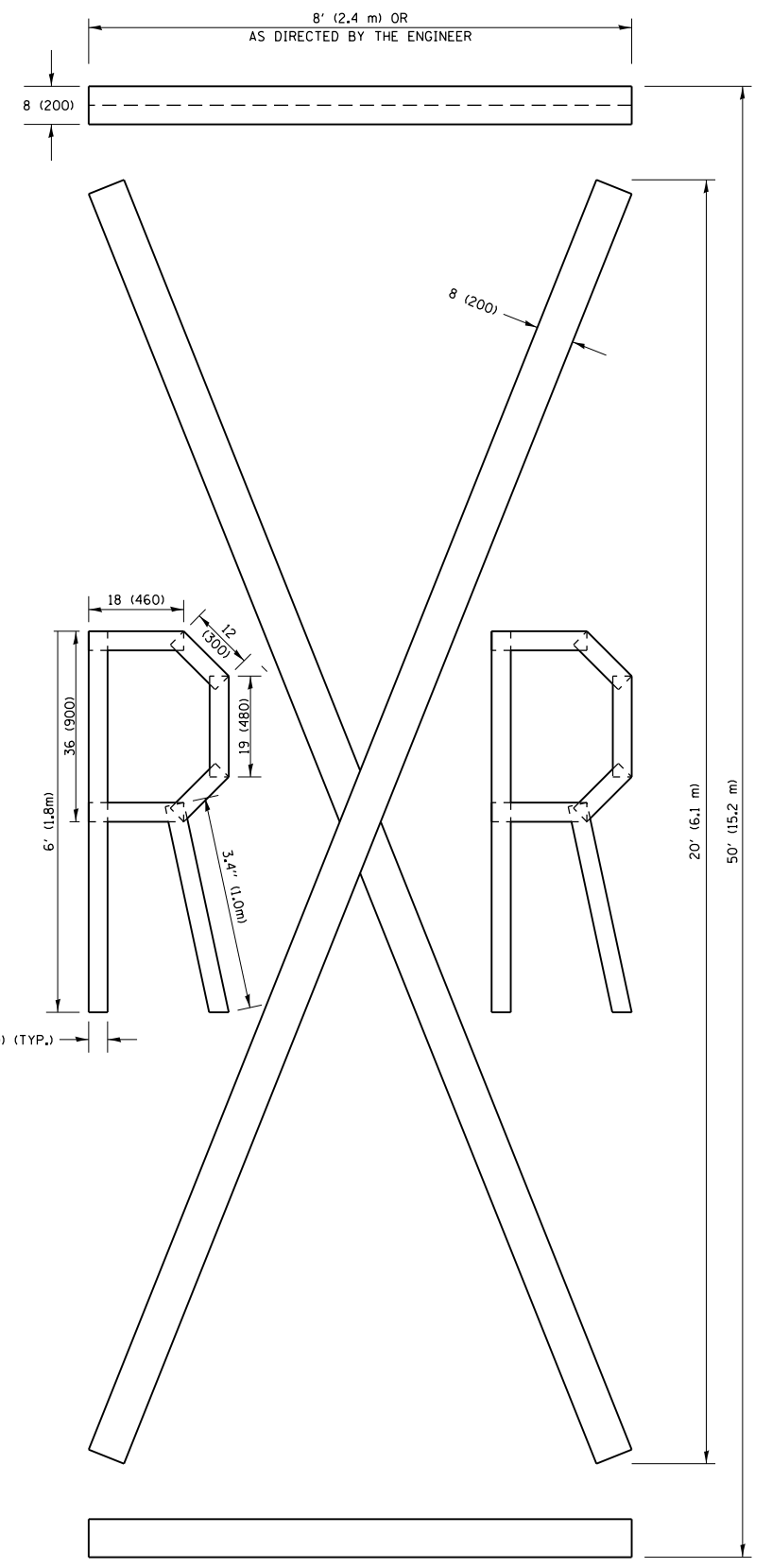


**QUANTITY**  
 4 (100) LINE = 64.1 ft. (19.5 m)  
 21.4 sq. ft. (1.99 sq. m)



**QUANTITY**  
 4 (100) LINE = 82.5 ft. (25.1 m)  
 27.5 sq. ft. (2.53 sq. m)

**NOTE:**  
 ALL QUANTITIES OF PLACEMENT ARE REPRESENTED  
 IN LINEAR FEET OF 4" LINES TO MATCH THE  
 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS  
 THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



**QUANTITY**  
 4 (100) LINE = 225.9 ft. (68.9 m)  
 75.3 sq. ft. (6.99 sq. m)

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

FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED -T. RAMMACHER 03-02-98
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\PI708\Drawings\DistStd.dgn		CHECKED -	REVISED -E. GOMEZ 08-28-00
		DATE -	REVISED -E. GOMEZ 08-28-00
			REVISED -A. SCHUETZE 09-15-16

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
355	145N-4(14)	LAKE/MCHENRY	59	56
<b>TC-16</b>		<b>CONTRACT NO.</b>	60Y22	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





**NOTES:**

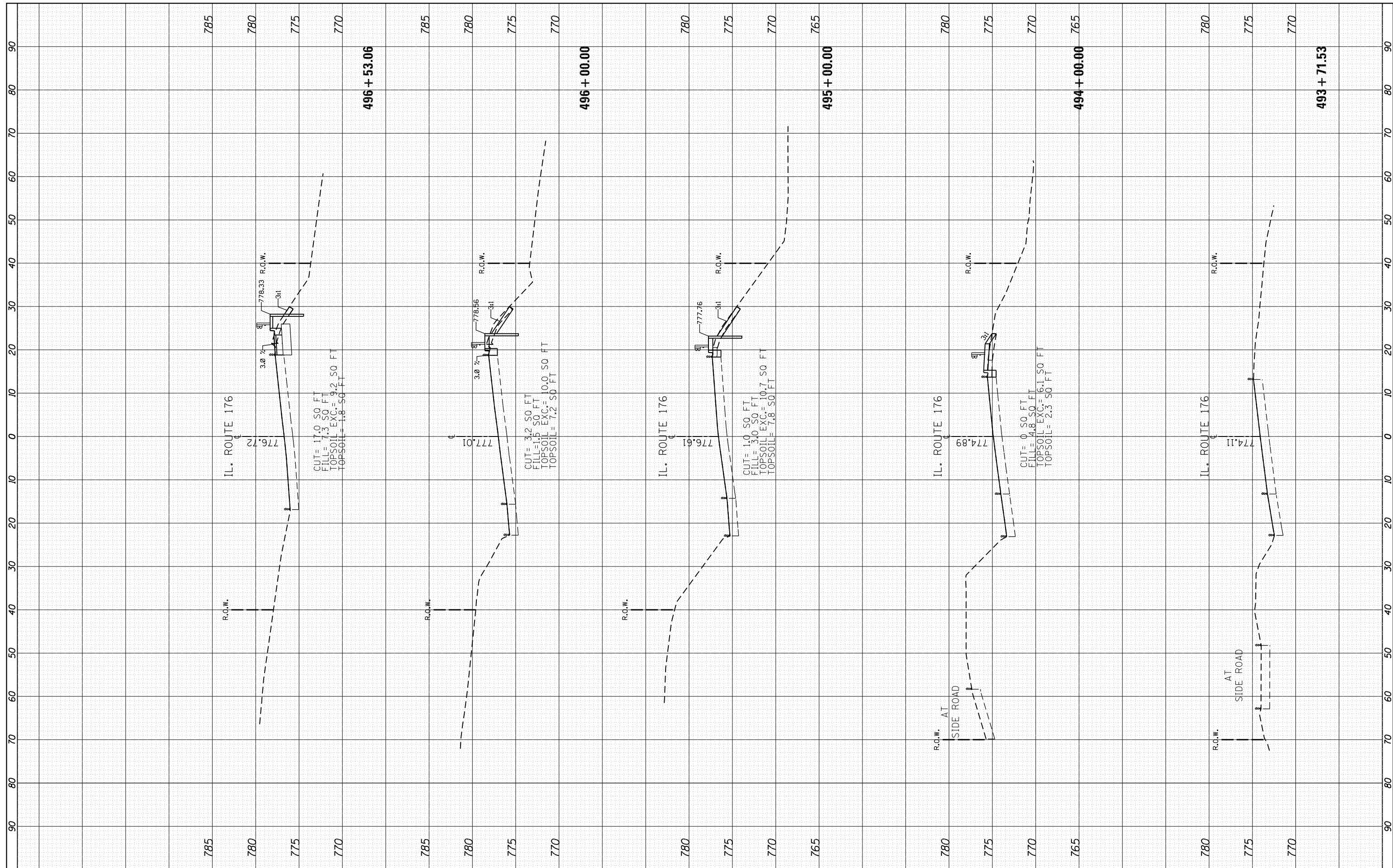
1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
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.

FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED - R. MIRS 09-15-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ARTERIAL ROAD INFORMATION SIGN</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG.illinois.gov\PWIDOT\Documents\IDOT Offices\District 1\Projects\PI705\DRAWING\Design\DistStd.dgn		REVISED - R. MIRS 12-11-97	REVISED - T. RAMMACHER 02-02-99			355	145N-4(14)	LAKE/MCHENRY	59	57
PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED - C. JUCIUS 01-31-07				<b>TC-22</b>		<b>CONTRACT NO. 60Y22</b>		
PLOT DATE = 5/10/2018	DATE -					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

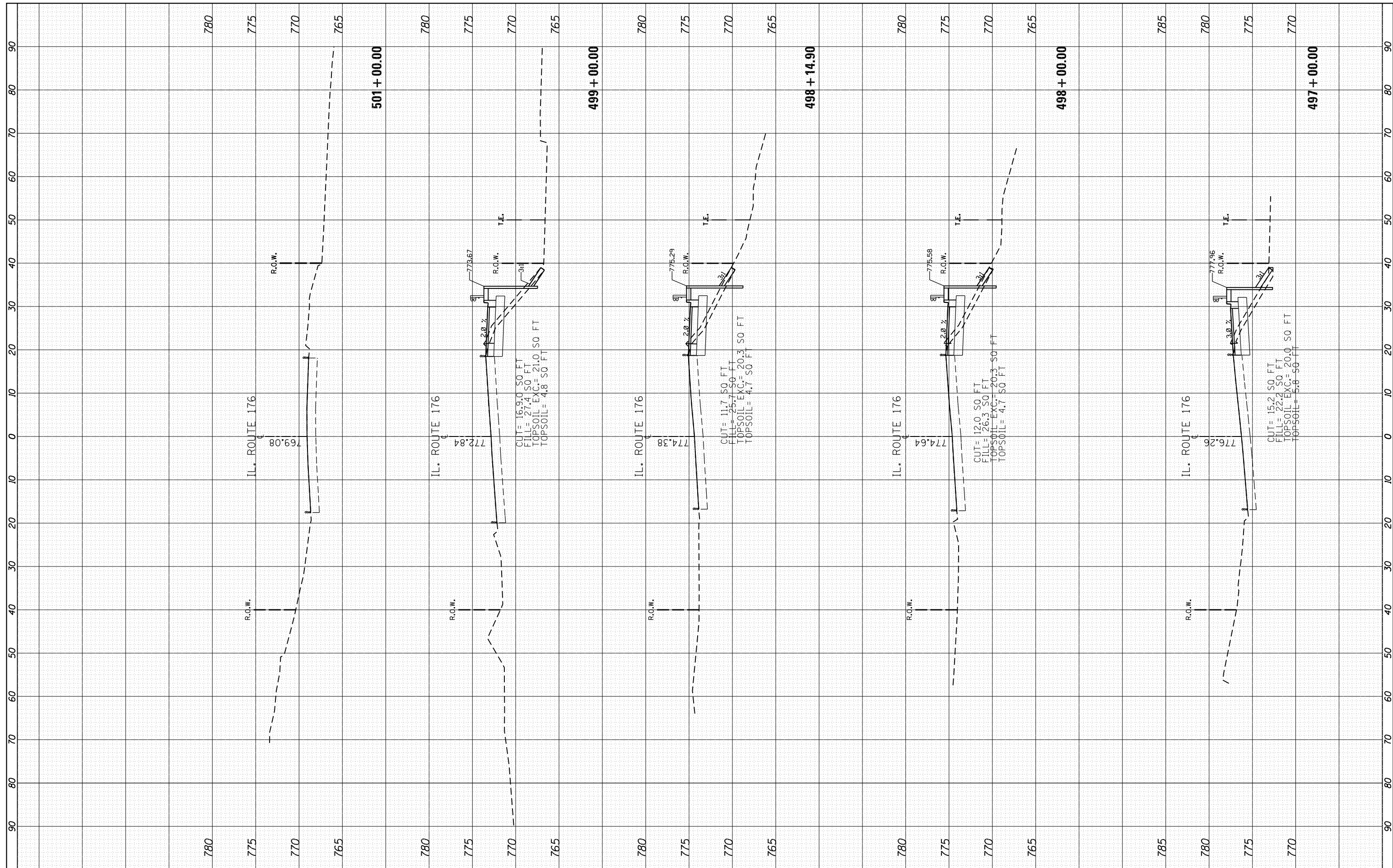
ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>IL ROUTE 176 ROBERTS RD.</b> <b>CROSS SECTIONS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
p:\11\084EBIDINTEG\Illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\P170509\CAD\DRAWING\P170509-sht-xssht-IL176.dgn	NOT OFFICES\District 1\Projects\P170509\CAD\DRAWING\P170509-sht-xssht-IL176.dgn	CHECKED -	REVISED -			335	145N-4(14)	LAKE/MCH.	59	58	
PLOT SCALE = 20.0000' / in.	CHECKED -	REVISED -	REVISED -			CONTRACT NO.					
PLOT DATE = 5/11/2018	DATE -	REVISED -	REVISED -			SCALE:	SHEET NO.	OF SHEETS	STA. 493+71.53 TO STA. 496+53.06	ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME =	USER NAME = guillaumejp	DESIGNED -	REVISÉ -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL ROUTE 176 ROBERTS RD. CROSS SECTIONS</b>			F.A.P. RTE. 335	SECTION 145N-4(14)	COUNTY LAKE/MCH.	TOTAL SHEETS 59	SHEET NO. 59
		REVISÉ -	REVISÉ -		SCALE:	SHEET NO. OF SHEETS	STA. 497+00.00 TO STA. 501+00.00	CONTRACT NO.				
		CHECKED -	REVISÉ -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISÉ -									