

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	MC HENRY	32	1
		ILLINOIS	CONTRACT NO. 62K57	

**TRAFFIC DATA**

IL31 NORTH/SOUTH  
US 14 EAST/WEST

**ADT 2017**

31800/24000  
28200/23200

**SPEED POSTED**

55/55  
40/40

**PROPOSED  
HIGHWAY PLANS**

IL-31 AT US-14 (NORTHWEST HWY) *FAP 305*

SECTION: 2019-184-L

PROJECT:

REPLACE LIGHT TOWERS & FOUNDATIONS

MC HENRY COUNTY

C-91-159-20

CITY OF CRYSTAL LAKE

SEE LOCATION MAP, INDEX OF SHEETS  
AND IDOT HIGHWAY STANDARDS LIST  
ON SHEET E-KP1



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

JULIE  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811  
MEADE ELECTRIC CO. DISTRICT ONE ELECTRICAL  
MAINTENANCE CONTRACTOR LOCATES IDOT ELECTRICAL  
EQUIPMENT AND UNDERGROUND CABLES  
773-287-7672

**DELTA ENGINEERING GROUP, LLC**  
111 W. JACKSON BLVD., CHICAGO, IL 60604  
MAIN 312-377-7700 FAX 312-427-8148



*Civil Drawings*  
*G. Czystaczon*  
DATE: 01-31-2020  
EXPIRES: 11-30-2021



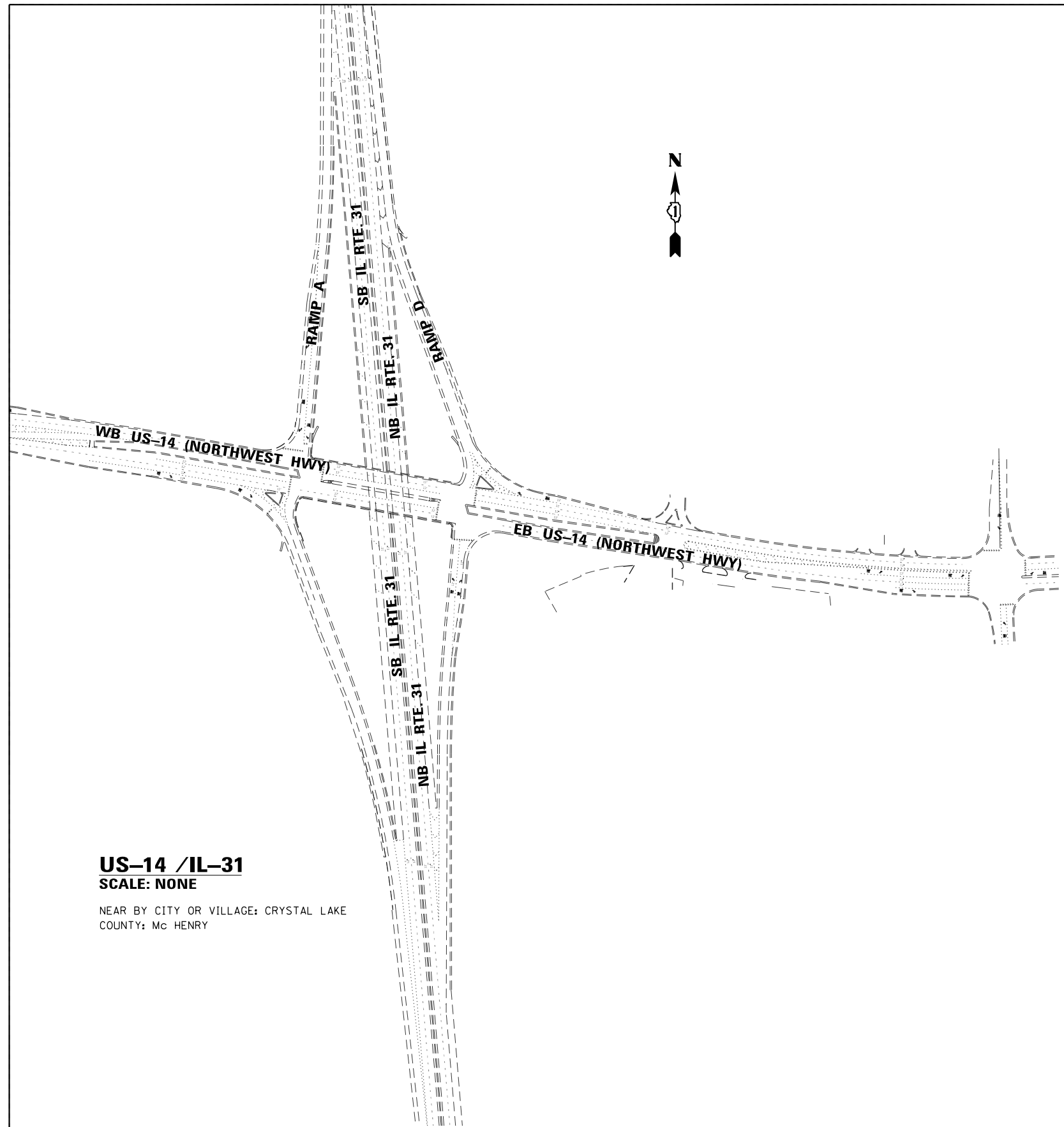
*H. Master*  
DATE: 01-31-2020  
EXPIRES: 11-30-2021

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
SUBMITTED: *Jan 31 2020*  
*Anthony J. Ramsey* REGIONAL ENGINEER  
*March 20 2020* *E.A. Etk*  
ENGINEER OF DESIGN AND ENVIRONMENT  
*March 20 2020* *Jim J. Jun*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

PROJECT ENGINEER: TONY GODINHO (847)-705-4442  
PROJECT MANAGER: DARYLE DREW (847)-705-4424

CONTRACT NO. 62K57



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**US-14 /IL-31**  
**SCALE: NONE**

NEAR BY CITY OR VILLAGE: CRYSTAL LAKE  
COUNTY: Mc HENRY

**IDOT HIGHWAY STANDARDS**

- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 630001-12 STEEL PLATE BEAM GUARDRAIL
- 701101-05 OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
- 701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >45 MPH
- 701601-09 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 701701-10 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 782006-01 GUARDRAIL AND BARRIER REFLECTOR MOUNTING DETAILS

**E-KP1**



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

**LOCATION MAP**

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	2
			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

Section: 2019-184-L  
Contract No.: 62K57  
(D-91-351-20) (C-91-159-20)

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE ROADWAY 0005 MCHENRY	100% STATE HIGHWAY LIGHTING 0021 MCHENRY
				20101000	TEMPORARY FENCE
20200100	EARTH EXCAVATION	CU YD	40	40	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,677	1,677	
25000210	SEEDING, CLASS 2A	ACRE	0.35	0.35	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	26	26	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	26	26	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	26	26	
25100630	EROSION CONTROL BLANKET	SQ YD	1,677	1,677	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	84	84	
28000305	TEMPORARY DITCH CHECKS	FOOT	70	70	
28000400	PERIMETER EROSION BARRIER	FOOT	2,967	2,967	
28000500	INLET AND PIPE PROTECTION	EACH	4	4	
31102100	SUBBASE GRANULAR MATERIAL, TYPE C 4"	SQ YD	67	67	
44004250	PAVED SHOULDER REMOVAL	SQ YD	67	67	
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	67	67	
63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	200	200	
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	40	40	
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2	
* 66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1	
* 66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1	
* 66901006	REGULATED SUBSTANCES MONITORING	CAL DA	5	5	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500	500	
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2	
78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	40	40	
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	625		625

Section: 2019-184-L  
Contract No.: 62K57  
(D-91-351-20) (C-91-159-20)

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE ROADWAY 0005 MCHENRY	100% STATE HIGHWAY LIGHTING 0021 MCHENRY
				81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL
81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	8		8
81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	2		2
81300830	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8"	EACH	2		2
81603081	UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE),	FOOT	7,700		7,700
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1,600		1,600
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	86		86
82110021	LUMINAIRE, LED, UNDERPASS, WALLMOUNT, OUTPUT DESIGNATION D	EACH	8		8
83050810	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	30		30
83050910	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 2-15 FT. MAST ARMS	EACH	2		2
83600365	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 10" X 8'	EACH	32		32
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	32		32
84200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	8.00		8
X0323927	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	6		6
X0327234	LIGHTING UNIT IDENTIFICATION DECAL	EACH	52		52
X1400190	REMOVAL OF HIGH MAST LUMINAIRES, SALVAGE	EACH	6		6
X1400273	REMOVAL OF EXISTING TOWER LUMINAIRE, NO SALVAGE	EACH	17		17
X1400341	REMOVAL OF LUMINAIRE, SALVAGE	EACH	52		52
X7010216	TRAFFIC CONTROL AND PROTECTION, SPECIAL	L SUM	1	1	
X8420500	REMOVAL OF LIGHT TOWER, SALVAGE	EACH	2		2
X8420502	REMOVAL OF LIGHT TOWER, NO SALVAGE	EACH	6		6
X8420510	REMOVAL OF TOWER FOUNDATION	EACH	8		8
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	53	53	
Z0033020	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	84		84
Ø Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500	

\* - SPECIALTY ITEM  
Ø 0042

E-QTY1



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	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	3
CONTRACT NO. 62K57			ILLINOIS FED. AID PROJECT	

### LIGHT TOWER REPLACEMENT INFORMATION

LIGHTING CONTROLLER "L" NUMBER	LIGHTING CONTROLLER CABINET DESIGNATION	MAIN ROUTE	CROSS ST.	LOCATION IN CITY/VILLAGE	COUNTY	LIGHT TOWER STRUCTURE NUMBER	LATITUDE	LONGITUDE	EXISTING TOWERS TO BE REMOVED NO SALVAGE	EXISTING TOWERS TO BE REMOVED & SALVAGE	EXISTING FOUNDATION TO BE REMOVED	EXISTING TOWER HEIGHT (FT)	PROPOSED TOWER HEIGHT (FT)	PROPOSED RECOMMENDED FOUNDATION DEPTH (FT)	PROPOSED FOUNDATION DIAMETER (INCHES)	EXISTING LUMINAIRE VOLTAGE	EXISTING HIGHMAST HPS LUMINAIRE - NO SALVAGE (QUANTITY)	EXISTING HIGHMAST LED LUMINAIRE 3000K TO BE SALVAGE (QUANTITY)	PROPOSED HIGHMAST LUMINAIRES (QUANTITY - LED TYPE)	PROPOSED WORK INFO
L2305	MA	US 14 (Northwest Hwy)	IL 31	CRYSTAL LAKE	MCHENRY	3MAAB1	42.224674	-88.287613	X		X	120	N/A	N/A	N/A	240	3-750W	3-LED 46,500 LUMENS	N/A	REPLACE WITH NEW LIGHT POLES, METAL FOUNDATIONS, T-BASES & LED ROADWAY LUMINAIRES, 4000K
						3MAAB2	42.225470	-88.288484	X		X	120				240	3-750W			
						3MACD2	42.227121	-88.288092	X		X	100				240	3-750W			
						3MAEF3	42.224122	-88.286845	X		X	100				240	3-750W			
						3MAGH2	42.225876	-88.286443	X		X	100				240	3-750W			
						2MAGH3	42.226338	-88.287193	X		X	100				240	2-750W			
						3MACD1	42.225991	-88.287755		X	X	100				240				
						3MAEF2	42.225329	-88.287089		X	X	100				240				

EXISTING LIGHT POLES								PROPOSED WORK INFO
TOTAL POLE QUANTITY	TOTAL LUMINAIRE QUANTITY	QUANTITY OF LUMINAIRES						
		HPS						
		100W	150W	200W	250W	310W	400W	
52	52						52	REPLACE WITH LED LUMINAIRES 4000K

UNDERPASS	
EXISTING LPS	PROPOSED WORK INFO
QUANTITY- WATT	REPLACE WITH LED LUMINAIRES 4000K
8-55W	

CONTROLLER	LOCATION	LATITUDE	LONGITUDE	SUPPLY VOLTAGE	LUMINAIRE OPERATING VOLTAGE
MA, L2305	US 14 at IL 31	42.225499	-88.285088	240 / 480	240



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOWER REPLACEMENT GROUPED PER LOCATION**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	4
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

E-TLC1

**MAINTENANCE OF TRAFFIC GENERAL NOTES**

1. THE CONTRACTOR'S VEHICLES MUST ALWAYS MOVE WITH AND NOT AGAINST OR ACROSS THE FLOW OF TRAFFIC, AND THEY MUST ENTER OR LEAVE WORK AREAS IN A MANNER WHICH IS NOT HAZARDOUS TO TRAFFIC AND WILL NOT INTERFERE WITH NORMAL TRAFFIC. THE CONTRACTOR'S VEHICLES MUST NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES ARE NOT PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN AREAS DESIGNATED BY THE ENGINEER.
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE FIELD FIT TO CONDITIONS AS DIRECTED BY THE ENGINEER.
3. EXISTING TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR AFTER THE TRAFFIC CONTROL REQUIREMENTS ARE MET OR AS AUTHORIZED BY THE ENGINEER; ANY SIGNS OR DEVICES LEFT IN PLACE ARE TO BE PROTECTED FROM DAMAGE AND MAINTAINED.
4. BORING PITS ARE TO BE PLACED AT LEAST 15' FROM THE EDGE OF ANY PAVEMENT OPEN TO TRAFFIC UNLESS LOCATED BEHIND TEMPORARY CONCRETE BARRIER, GUARDRAIL OR OTHER MAN-MADE OR NATURAL BARRIERS. TEMPORARY BARRIERS ERECTED FOR PROTECTION BY THE CONTRACTOR SHALL MEET THE APPROVAL OF THE ENGINEER.
5. IF BORING PIT IS LOCATED WITHIN THE CLEAR ZONE BUT OUTSIDE OF CONSTRUCTION CLEAR ZONE, TRAFFIC CONTROL AND PROTECTION MUST REMAIN IN PLACE ADJACENT TO BORING PIT UNTIL EXCAVATED AREA IS FILLED.
6. TOWER ASSEMBLY LAYDOWN AREAS MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. ADDITIONAL TRAFFIC CONTROL WILL NOT BE PROVIDED SOLELY FOR TOWER LAYDOWN AREAS.
7. CONTRACTOR SHALL ENSURE THAT ALL DROP-OFFS ARE LESS THAN 12 INCHES WITHIN 8 FEET OF THE EDGE OF THE NEAREST OPEN TRAFFIC LANE. IF DROP-OFFS ARE 12 INCHES OR GREATER THE TRENCH MUST BE BACKFILLED.

**EROSION AND SEDIMENT CONTROL GENERAL NOTES**

1. THE CONSTRUCTION LIMITS WILL BE STAKED AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION . THE CONSTRUCTION LIMITS MAY BE ADJUSTED BY THE ENGINEER TO PRESERVE TREES AND NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR CHANGES IN CONSTRUCTION LIMITS.
2. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION OPERATIONS WHICH WILL POTENTIALLY CREATE ERODIBLE CONDITIONS. PLACEMENT AND MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS WILL BE UTILIZED THROUGHOUT THE CONSTRUCTION LIMITS.
3. THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL DURING CONSTRUCTION.
4. TEMPORARY EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 280 OF THE STANDARD SPECIFICATIONS AND CONTRACT SPECIAL PROVISIONS.
5. ALL EROSION CONTROL MEASURES WILL BE MAINTAINED IN ACCORDANCE WITH THE IDOT EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONSTRUCTION INSPECTION AND IDOT'S BEST MANAGEMENT PRACTICES.
6. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN HIGHWAY STANDARD 280001.
7. THE EROSION CONTROL MEASURES SHOWN ARE A REPRESENTATION OF SUGGESTED MEASURES. DEVIATIONS FROM THIS PLAN ARE TO BE EXPECTED PENDING A JOBSITE INSPECTION BETWEEN THE CONTRACTOR AND THE DEPARTMENT.
8. TEMPORARY STOCKPILE LOCATIONS SHALL BE APPROVED BY THE ENGINEER AND WILL REQUIRE PERIMETER EROSION BARRIER AND TEMPORARY SEEDING WHICH ARE INCLUDED IN THE COST OF DIRECTIONAL BORE.
9. THE CONTRACTOR SHALL INSTALL AND MAINTAIN INLET AND PIPE PROTECTION AT ALL LOCATIONS SHOWN IN PLANS PRIOR TO THE START OF WORK. THE INLET AND PIPE PROTECTION SHALL BE MAINTAINED UNTIL NO LONGER REQUIRED OR AS DIRECTED BY THE ENGINEER.
10. DURING CONSTRUCTION OPERATIONS, WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR DRAINAGE STRUCTURES SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY.
11. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF INLET AND PIPE PROTECTION.
12. FOR PERMANENT EROSION CONTROL, THE CONTRACTOR SHALL PLACE TOPSOIL SO THAT IS HAS A BOND WITH THE EXISTING SURFACE TO WHICH IT IS APPLIED . IT SHALL BE DISKED, RAKED, OR OTHERWISE BROKEN UP IF NECESSARY TO PROVIDE SUCH BOND.

HOT MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	% AIR VOIDS @ NPDS	QUALITY MANAGEMENT PROGRAM (QMP)
SHOULDERS		
HOT MIX ASPHALT BINDER COURSE, IL- 19.0, NPDES	4% @ 50 GYR	QC/QA or QCP
HOT MIX ASPHALT SURFACE COURSE, MIX "D" IL- 9.5, NPDES	4% @ 50 GYR	QC/QA or QCP

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LB/ SQ YD/ INCH

THE "AC" FOR POLYMERIZED MIXTURES 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.

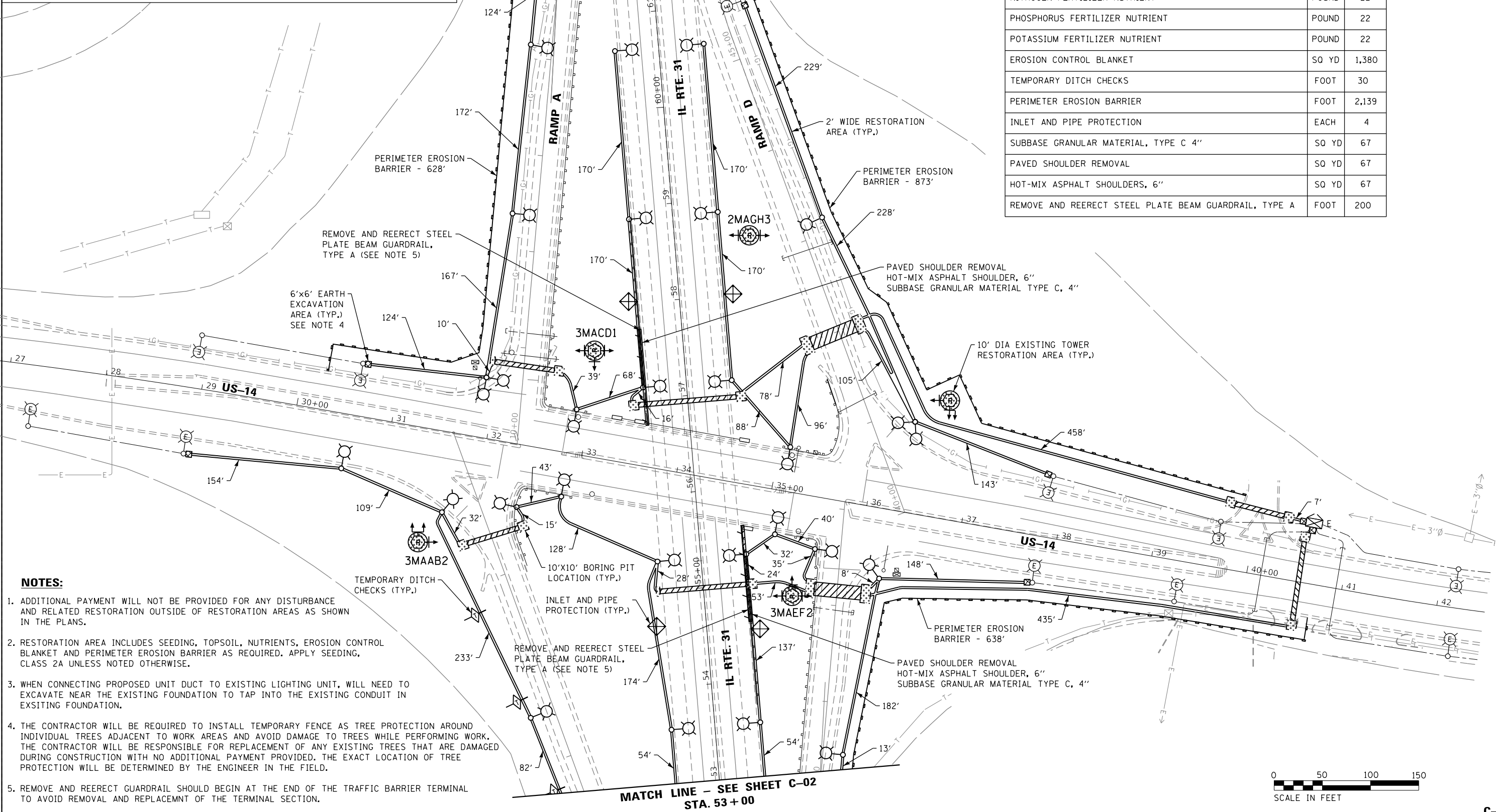
FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.

QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE

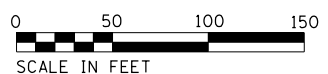
**LEGEND**

	10'x10' LIGHTING UNIT RESTORATION AREA		REMOVED LIGHT TOWER
	10' DIA. EXISTING TOWER RESTORATION AREA		EXISTING LIGHTING UNIT
	2' WIDE RESTORATION AREA (UNLESS OTHERWISE NOTED)		PROPOSED LIGHTING UNIT
	CONDUIT DIRECT BORE		
	10'x10' BORING PIT LOCATION (UNLESS OTHERWISE NOTED)		
	EXISTING UNIT DUCT		
	6'x6' EARTH EXCAVATION AREA WITH RESTORATION		
	PERIMETER EROSION BARRIER		

PAY ITEM DESCRIPTION	UNIT	QTY
EARTH EXCAVATION	CU YD	28
TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,380
SEEDING, CLASS 2A	ACRE	0.29
NITROGEN FERTILIZER NUTRIENT	POUND	22
PHOSPHORUS FERTILIZER NUTRIENT	POUND	22
POTASSIUM FERTILIZER NUTRIENT	POUND	22
EROSION CONTROL BLANKET	SQ YD	1,380
TEMPORARY DITCH CHECKS	FOOT	30
PERIMETER EROSION BARRIER	FOOT	2,139
INLET AND PIPE PROTECTION	EACH	4
SUBBASE GRANULAR MATERIAL, TYPE C 4"	SQ YD	67
PAVED SHOULDER REMOVAL	SQ YD	67
HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	67
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	200



- NOTES:**
- ADDITIONAL PAYMENT WILL NOT BE PROVIDED FOR ANY DISTURBANCE AND RELATED RESTORATION OUTSIDE OF RESTORATION AREAS AS SHOWN IN THE PLANS.
  - RESTORATION AREA INCLUDES SEEDING, TOPSOIL, NUTRIENTS, EROSION CONTROL BLANKET AND PERIMETER EROSION BARRIER AS REQUIRED. APPLY SEEDING, CLASS 2A UNLESS NOTED OTHERWISE.
  - WHEN CONNECTING PROPOSED UNIT DUCT TO EXISTING LIGHTING UNIT, WILL NEED TO EXCAVATE NEAR THE EXISTING FOUNDATION TO TAP INTO THE EXISTING CONDUIT IN EXSITING FOUNDATION.
  - THE CONTRACTOR WILL BE REQUIRED TO INSTALL TEMPORARY FENCE AS TREE PROTECTION AROUND INDIVIDUAL TREES ADJACENT TO WORK AREAS AND AVOID DAMAGE TO TREES WHILE PERFORMING WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING TREES THAT ARE DAMAGED DURING CONSTRUCTION WITH NO ADDITIONAL PAYMENT PROVIDED. THE EXACT LOCATION OF TREE PROTECTION WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
  - REMOVE AND REERECT GUARDRAIL SHOULD BEGIN AT THE END OF THE TRAFFIC BARRIER TERMINAL TO AVOID REMOVAL AND REPLACEMNT OF THE TERMINAL SECTION.



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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CIVIL SITE PLAN  
US-14 / IL 31 - SHEET 1 OF 2

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	6
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

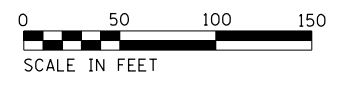
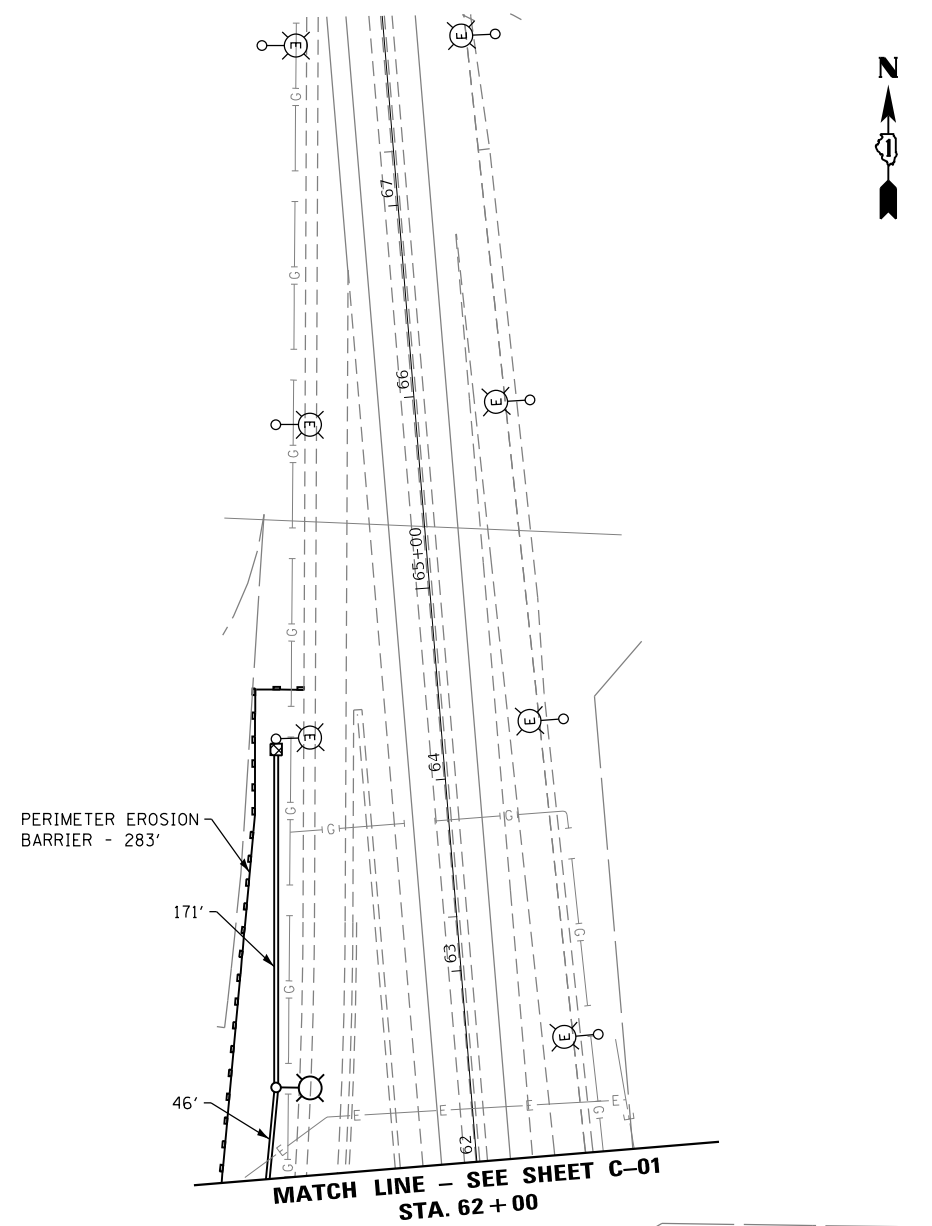
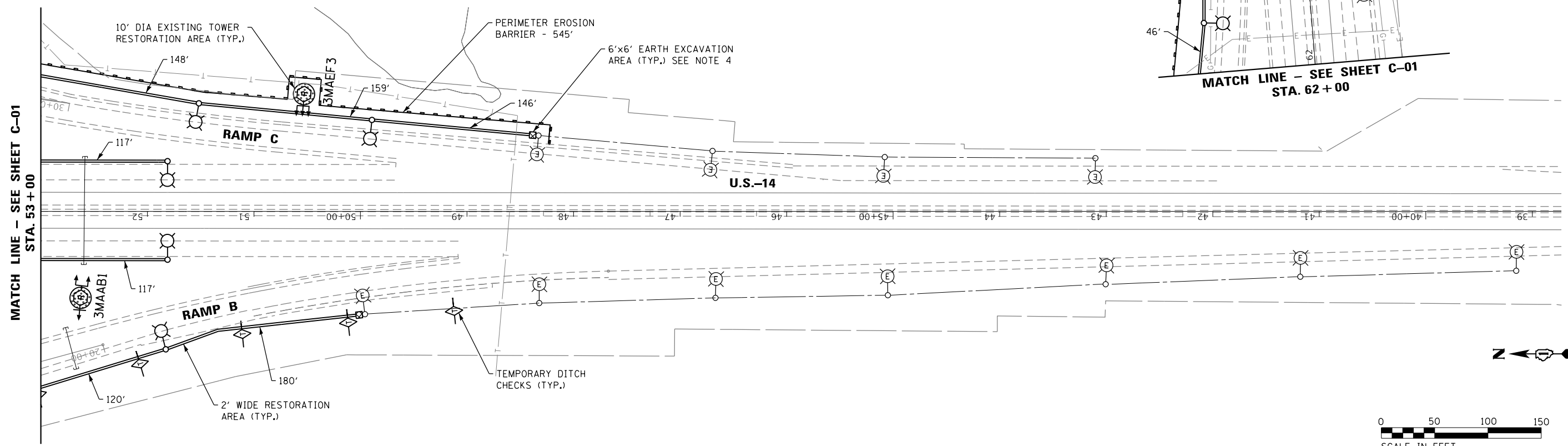
C-01

LEGEND	
	10'x10' LIGHTING UNIT RESTORATION AREA
	10' DIA. EXISTING TOWER RESTORATION AREA
	2' WIDE RESTORATION AREA (UNLESS OTHERWISE NOTED)
	CONDUIT DIRECT BORE
	10'x10' BORING PIT LOCATION (UNLESS OTHERWISE NOTED)
	EXISTING UNIT DUCT
	6'x6' EARTH EXCAVATION AREA WITH RESTORATION
	PERIMETER EROSION BARRIER
	REMOVED LIGHT TOWER
	EXISTING LIGHTING UNIT
	PROPOSED LIGHTING UNIT

PAY ITEM DESCRIPTION	UNIT	QTY
EARTH EXCAVATION	CU YD	12
TOPSOIL FURNISH AND PLACE, 4"	SO YD	297
SEEDING, CLASS 2A	ACRE	0.06
NITROGEN FERTILIZER NUTRIENT	POUND	4
PHOSPHORUS FERTILIZER NUTRIENT	POUND	4
POTASSIUM FERTILIZER NUTRIENT	POUND	4
EROSION CONTROL BLANKET	SO YD	297
TEMPORARY DITCH CHECKS	FOOT	40
PERIMETER EROSION BARRIER	FOOT	828

**NOTES:**

- ADDITIONAL PAYMENT WILL NOT BE PROVIDED FOR ANY DISTURBANCE AND RELATED RESTORATION OUTSIDE OF RESTORATION AREAS AS SHOWN IN THE PLANS.
- RESTORATION AREA INCLUDES SEEDING, TOPSOIL, NUTRIENTS, EROSION CONTROL BLANKET AND PERIMETER EROSION BARRIER AS REQUIRED.
- WHEN CONNECTING PROPOSED UNIT DUCT TO EXISTING LIGHTING UNIT, WILL NEED TO EXCAVATE NEAR THE EXISTING FOUNDATION TO TAP INTO THE EXISTING CONDUIT IN EXISTING FOUNDATION.
- THE CONTRACTOR WILL BE REQUIRED TO INSTALL TEMPORARY FENCE AS TREE PROTECTION AROUND INDIVIDUAL TREES ADJACENT TO WORK AREAS AND AVOID DAMAGE TO TREES WHILE PERFORMING WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING TREES THAT ARE DAMAGED DURING CONSTRUCTION WITH NO ADDITIONAL PAYMENT PROVIDED. THE EXACT LOCATION OF TREE PROTECTION WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.



USER NAME = #USER*	DESIGNED - NS	REVISED -
PLOT SCALE = #SCALE*	DRAWN - NS	REVISED -
PLOT DATE = #DATE*	CHECKED - GC	REVISED -
	DATE - 03-10-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.

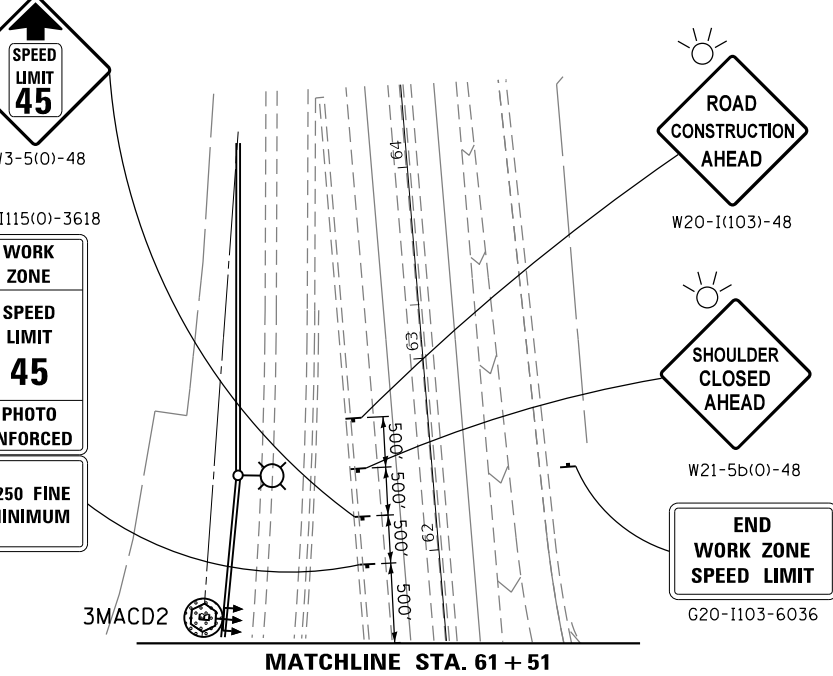
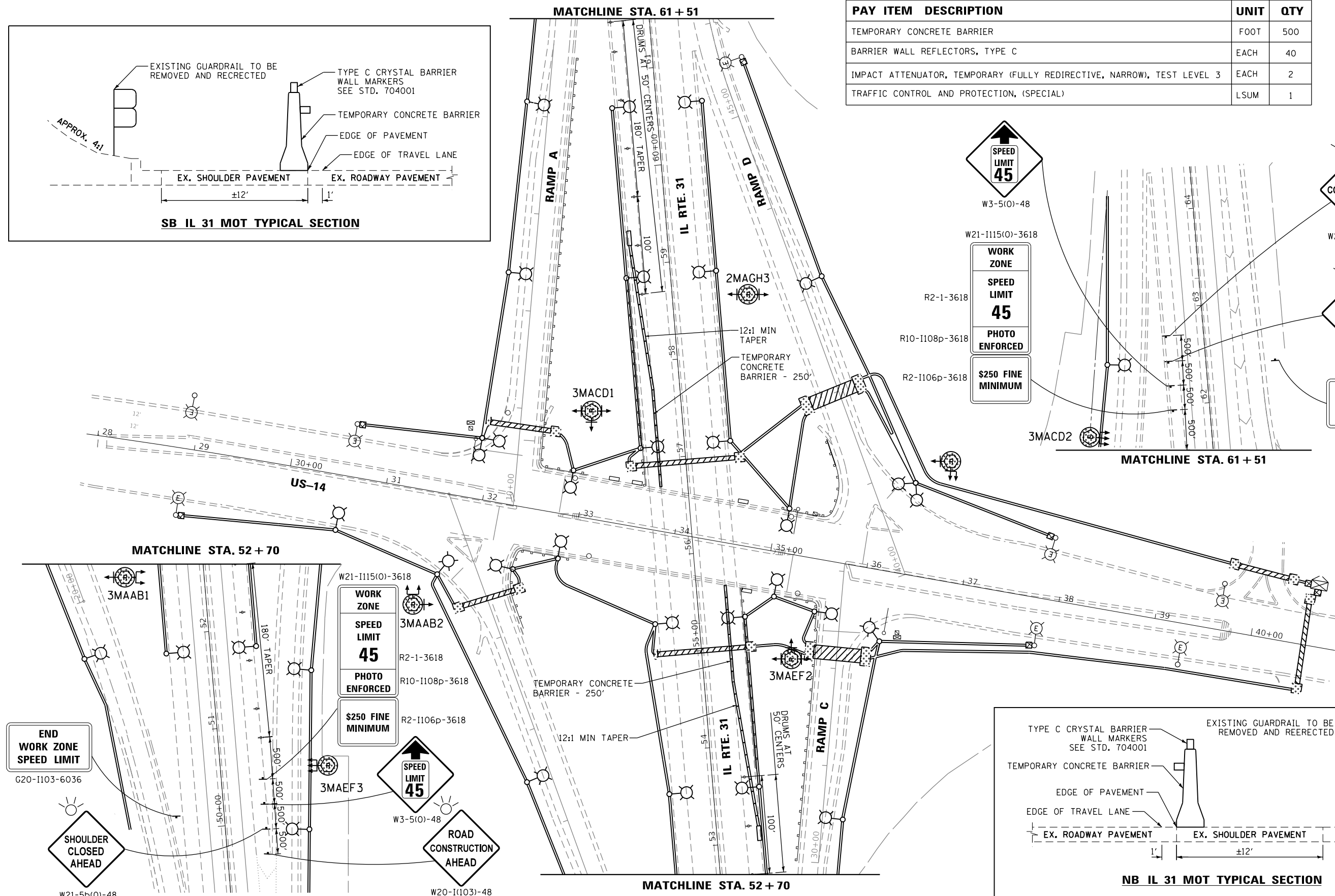
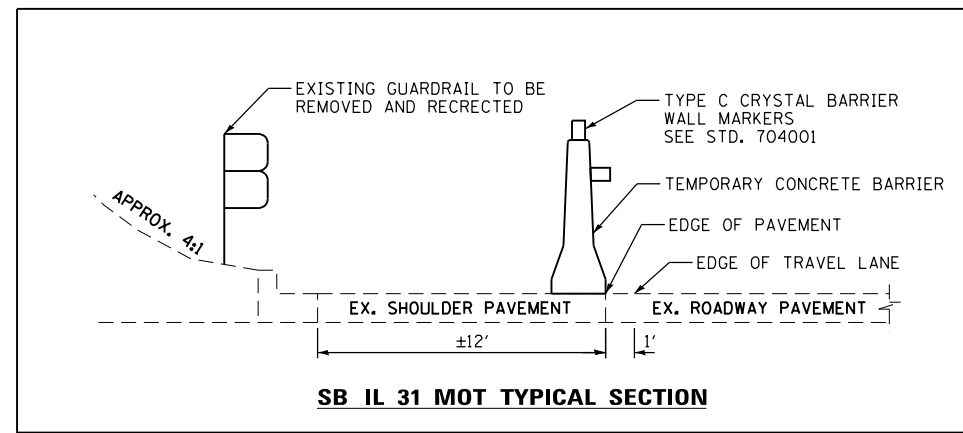
CIVIL SITE PLAN  
US-14 / IL 31 - SHEET 2 OF 2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	7
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

C-02



PAY ITEM DESCRIPTION	UNIT	QTY
TEMPORARY CONCRETE BARRIER	FOOT	500
BARRIER WALL REFLECTORS, TYPE C	EACH	40
IMPACT ATTENUATOR, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1



USER NAME = *USER*	DESIGNED - NS	REVISED -
PLOT SCALE = *SCALE*	DRAWN - NS	REVISED -
PLOT DATE = *DATE*	CHECKED - GC	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN  
US-14 / IL 31 - SHEET 1 OF 1

SCALE: SHEET OF SHEETS STA. 398+45 TO STA. 412+62

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	8
			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

C-03



**GENERAL NOTES:**

- ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST CODES, STANDARDS, AND THE IDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED ON APRIL 2016, AND SUPPLEMENT SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED ON JAN 1, 2020.
- THE CONTRACTOR MUST VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT PLANS WHICH COULD AFFECT HIS WORK UNDER THIS CONTRACT FOR OPERATION OF THE EXISTING ROADWAY LIGHTING SYSTEM.
- NO MATERIAL OR EQUIPMENT SHALL BE DELIVERED TO THE JOB SITE WITHOUT PRIOR INSPECTION AND APPROVAL BY THE ENGINEER. ANY MATERIAL AND EQUIPMENT NOT APPROVED BY THE ENGINEER MUST BE REMOVED FROM JOB SITE AT THE CONTRACTOR'S EXPENSE.
- ALL UNDERGROUND UNIT DUCT SHALL BE 30 INCHES MINIMUM BELOW GRADE PER IDOT SECTION 810. UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH UNDERDRAINS, AND UNDERGROUND UTILITIES.
- ALL SPLICING MUST BE IN TOWER / POLE BASES WITH WATERPROOF SEALANT AND HEAT SHRINKABLE PLASTIC CAPS. UNLESS NOTED OTHERWISE.
- TEMPORARY SUPPORTS FOR EXISTING UTILITIES SHALL BE PROVIDED IF REQUIRED.
- NO LIGHTING CIRCUIT OR PORTION THEREOF SHALL BE REMOVED FROM NIGHT TIME OPERATION OF EXISTING LIGHTING WITHOUT THE APPROVAL OF THE ENGINEER. ALL EXISTING LIGHTING SHALL OPERATE FROM DUSK TO DAWN DAILY FOR DURATION OF THE PROJECT TO MAINTAIN ILLUMINATION OF TRAVELED ROADWAYS.
- EXISTING LIGHTING TOWER / TEMPORARY LIGHTING WILL REMAIN OPERATIONAL UNTIL PROPOSED LIGHT POLES STARTS FUNCTIONING.
- SWITCHOVER OF CABLE CONNECTIONS TO PROPOSED LIGHTING TOWER OR LIGHT POLES FROM EXISTING LIGHTING TOWER / TEMPORARY LIGHTING POLES SHALL TAKE PLACE DURING DAY TIME.
- THE CONTRACTOR IS ADVISED THAT IN THE EVENT OF SNOW, HE SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF ANY MAINTENANCE OF TRAFFIC PROTECTIVE DEVICE REQUIRED FOR THE TRAFFIC OPERATIONS THAT WOULD INTERFERE WITH SNOW REMOVAL OPERATION PERFORMED BY THE STATE IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS.
- PROPOSED POLE FOUNDATIONS ARE SHOWN AS APPROXIMATE LOCATIONS. IT CAN BE ADJUSTED IN THE FIELD TO AVOID EXISTING UNDERGROUND CABLE & UTILITY CONFLICTS, PER APPROVAL BY ENGINEER.
- REMOVAL AND DISPOSAL OF SURPLUS, UNSTABLE, UNSUITABLE, AND ORGANIC MATERIALS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS.


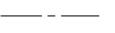

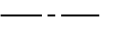




**CONTACT NOTES:**

- CALL JULIE OR DIGGER FOR CABLE LOCATES, CALL IDOT EMC AT (708) 524-2145 FOR IDOT MAINTAINED CABLE LOCATES. THE PROPOSED TOWER FOUNDATIONS & PROPOSED UNIT DUCTS SHOULD ONLY BE INSTALLED AFTER THE LOCATES HAVE BEEN COMPLETED.

**REMOVAL NOTES:**

- LOCATIONS OF EXISTING LIGHTING TOWERS SHOWN ON PLAN DRAWINGS ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL REVIEW THE CONTRACT DRAWINGS AND ASCERTAIN EXISTING SITE CONDITIONS TO VERIFY THE EXTENT OF DEMOLITION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR PERFORMING ALL REMOVAL REQUIRED IN THIS CONTRACT.
- COMMENCEMENT OF WORK SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF EXISTING FOUNDATIONS AND UNIT DUCT FOR THIS WORK AND ACCESS TO WORK SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR ADDITIONAL LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORSEEN DURING SUCH AN EXAMINATION.
- ALL SALVAGE EXISTING EQUIPMENT INCLUDING, LIGHT TOWERS, LUMINAIRES, SHALL BE RETURNED TO STATE STOCK. THE CONTRACTOR SHALL CALL EMC AT (708) 524-2145 FOR MORE DETAILS AND DELIVERY PLACE.
- REMOVE EXISTING TOWER FOUNDATION, GROUND RODS, UNIT DUCT UP TO 10FT FROM THE CENTER OF FOUNDATION. THE VOID CAUSED BY THE REMOVAL OF THE TOWER FOUNDATION SHALL BE BACKFILLED WITH SUITABLE EXCAVATED MATERIAL APPROVED BY THE ENGINEER. BACKFILL INCIDENTAL TO COST OF FOUNDATION REMOVAL.
- LOCATIONS SELECTED FOR COLLECTION OF DEBRIS AND/OR STORAGE OF EQUIPMENT SHALL BE AS APPROVED BY THE ENGINEER.
- ALL EXISTING TOWERS TO BE REMOVED AND NO SALVAGE SHALL BE SCRAPPED AND DISPOSED OF IN A LEGAL MANNER.
- TOWER CONCRETE FOUNDATION SHALL BE REMOVED TO AT LEAST 2 FT BELOW GRADE. REMOVE EXISTING WORK PAD WHERE APPLICABLE. THE COST OF THIS SHALL BE INCLUDED IN FOUNDATION REMOVAL UNLESS NOTED OTHERWISE.
- VERIFY AND LOCATE UNDERGROUND CIRCUIT (UNIT DUCTS) ROUTING OF TOWERS UNDER REMOVAL AS PER SECTION 803. MARK THE ROUTING SO THAT DURING DIGGING OF TRENCH FOR PROPOSED UNIT DUCT THE EXISTING UNIT DUCT IS PROTECTED TO MAINTAIN THE LIGHTING SYSTEM IN OPERATION.

**SYMBOL LEGEND:**

-  REMOVE EXISTING LIGHTING TOWER AND FOUNDATION, HIGH MAST LUMINAIRES TO BE SALVAGED TO IDOT OR OTHERWISE INDICATED
-  EXISTING UNIT DUCT, SIZE AS PER PLANS
-  UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
-  PROPOSED UNIT DUCT, SIZE AS PER PLANS
-  EXISTING IDOT LIGHTING CONTROLLER
-  PROPOSED LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM METAL FOUNDATION, 10" X 8" LONG BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H, 4000 KELVIN LUMINAIRE SAFETY CABLE ASSEMBLY
-  REPLACE EXISTING HPS LUMINAIRES TO LED LUMINAIRES LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H, 4000 KELVIN INSTALL LUMINAIRE SAFETY CABLE EXISTING HPS LUMINAIRES SALVAGE TO IDOT
-  PROPOSED UNDERPASS LUMINAIRE, LED, UNDERPASS, WALLMOUNT, OUTPUT DESIGNATION D

**ABBREVIATIONS:**

- E EXISTING TO REMAIN
- E.O.P. EDGE OF PAVEMENT
- EMC ELECTRICAL MAINTENANCE CONTRACT
- FT FEET OR FOOT
- GND GROUND
- JB JUNCTION BOX
- MA MAST ARM
- NO. NUMBER
- N.T.S. NOT TO SCALE
- P PROPOSED
- PVC POLYVINYL CHLORIDE
- RGS RIGID GALVANISED STEEL
- R REMOVE
- STA. STATION
- U.N.O. UNLESS NOTED OTHERWISE
- HPS HIGH PRESSURE SODIUM

 DELTA ENGINEERING GROUP, LLC	USER NAME = *USER*	DESIGNED - HM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SYMBOLS LEGEND, GENERAL NOTES AND REMOVAL NOTES</b>	F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED - KK	REVISED -			2019-184-L	Mc Henry	32	9	
PLOT DATE = 3/11/2020	DATE - 03-10-2020	REVISED -	SCALE: NONE	SHEET 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT <b>CONTRACT NO. 62K57</b>			

DESCRIPTION	UNIT	QTY
REMOVAL OF LIGHT TOWER, NO SALVAGE	EACH	4
REMOVAL OF TOWER FOUNDATION	EACH	6
REMOVAL OF HIGH MAST LUMINAIRES, SALVAGE	EACH	6
REMOVAL OF LIGHT TOWER, SALVAGE	EACH	2
REMOVAL OF EXISTING TOWER LUMINAIRE, NO SALVAGE	EACH	11

**NOTE:**

1. REFER TO REMOVAL NOTES ON SHEET E-L1.

EXISTING LIGHT TOWER TO BE REMOVED, NO SALVAGE. LUMINAIRES TO BE REMOVED, NO SALVAGE. REMOVE EXISTING FOUNDATION AND SERVICE PAD

EXISTING LIGHT TOWER TO BE REMOVED, SALVAGE. LUMINAIRES TO BE REMOVED AND SALVAGED TO IDOT. REMOVE EXISTING FOUNDATION AND SERVICE PAD

CONTRACTOR TO WATCH AND PROTECT EXISTING ATT BURIED 300 PAIR CABLE (TYP.)

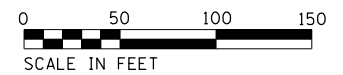
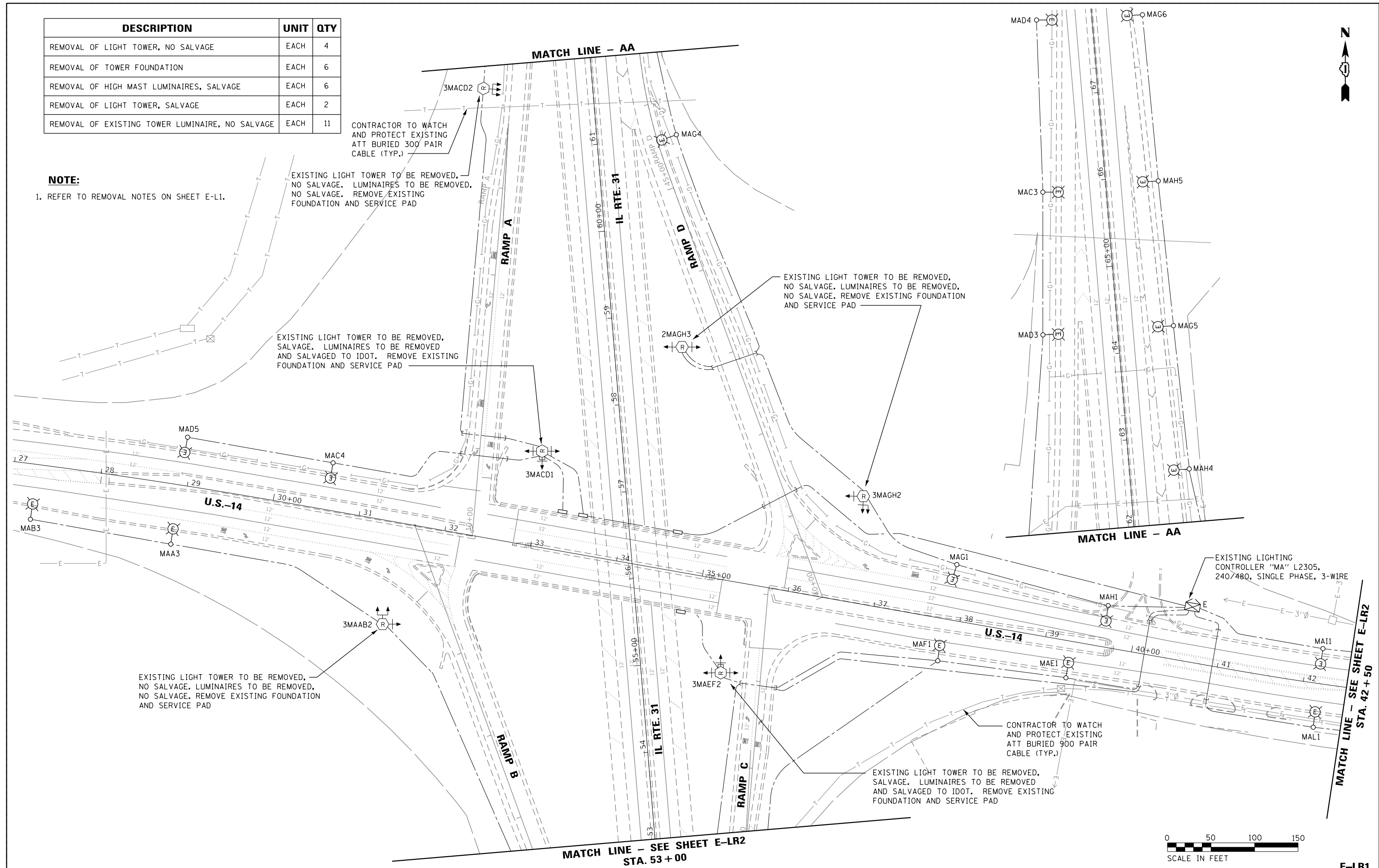
EXISTING LIGHT TOWER TO BE REMOVED, NO SALVAGE. LUMINAIRES TO BE REMOVED, NO SALVAGE. REMOVE EXISTING FOUNDATION AND SERVICE PAD

EXISTING LIGHT TOWER TO BE REMOVED, NO SALVAGE. LUMINAIRES TO BE REMOVED, NO SALVAGE. REMOVE EXISTING FOUNDATION AND SERVICE PAD

EXISTING LIGHT TOWER TO BE REMOVED, SALVAGE. LUMINAIRES TO BE REMOVED AND SALVAGED TO IDOT. REMOVE EXISTING FOUNDATION AND SERVICE PAD

CONTRACTOR TO WATCH AND PROTECT EXISTING ATT BURIED 900 PAIR CABLE (TYP.)

EXISTING LIGHTING CONTROLLER "MA" L2305, 240/480, SINGLE PHASE, 3-WIRE



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 03-10-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LIGHTING REMOVAL PLAN  
US-14 / IL 31 - SHEET 1 OF 2

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	10
			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

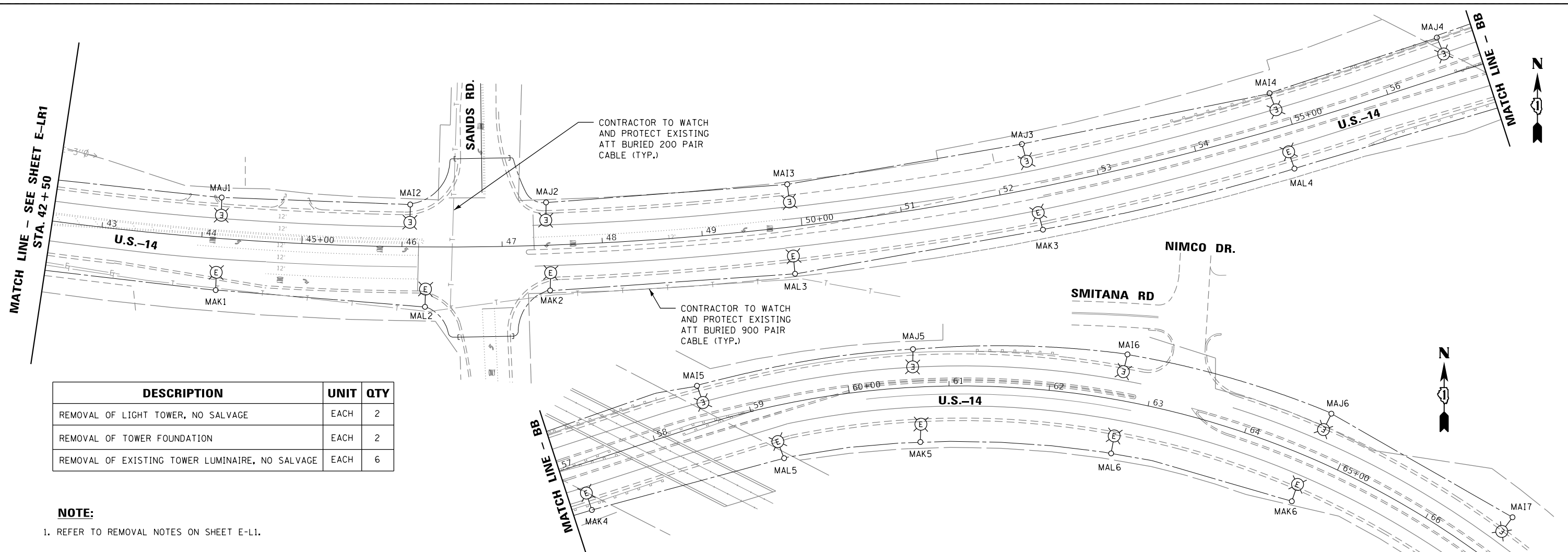
E-LR1

MATCH LINE - SEE SHEET E-LR2  
STA. 42 + 50

MATCH LINE - SEE SHEET E-LR2  
STA. 53 + 00

MATCH LINE - AA

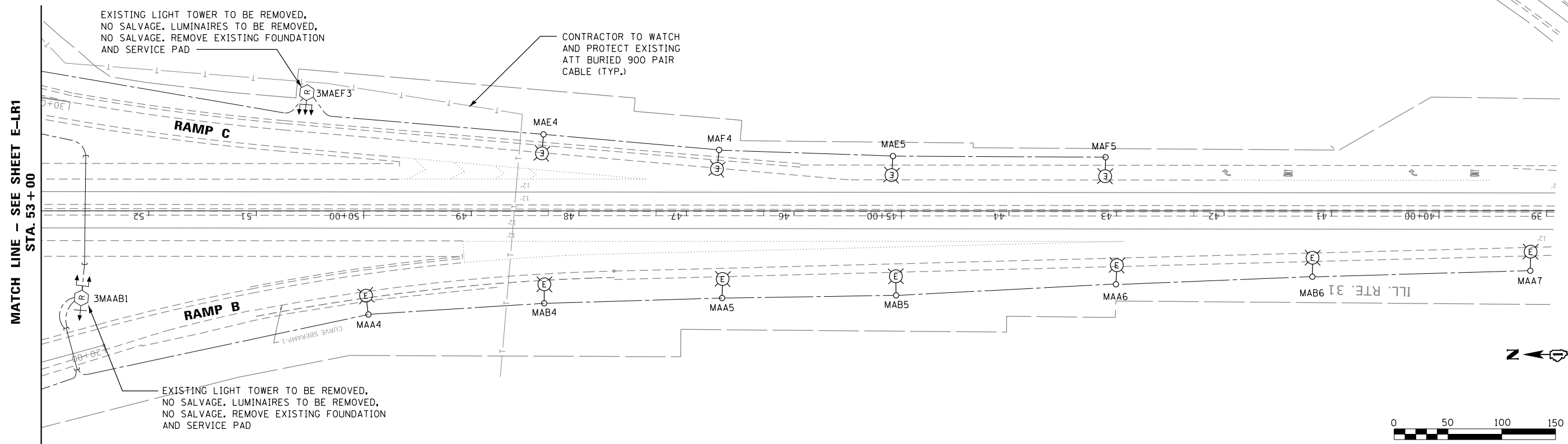
MATCH LINE - AA



DESCRIPTION	UNIT	QTY
REMOVAL OF LIGHT TOWER, NO SALVAGE	EACH	2
REMOVAL OF TOWER FOUNDATION	EACH	2
REMOVAL OF EXISTING TOWER LUMINAIRE, NO SALVAGE	EACH	6

**NOTE:**

- REFER TO REMOVAL NOTES ON SHEET E-L1.



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 03-10-2020	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>LIGHTING REMOVAL PLAN US-14 / IL 31 - SHEET 2 OF 2</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

<b>E-LR2</b>			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
	2019-184-L	Mc Henry	32
			SHEET NO. 11
CONTRACT NO. 62K57			
ILLINOIS FED. AID PROJECT			



MATCH LINE - SEE SHEET E-LT1  
STA. 42+50

P28	STA. 51+52, OFFSET, 18' FROM EDGE OF TRAVELED PAVEMENT
P29	STA. 49+90, OFFSET, 18' FROM EDGE OF TRAVELED PAVEMENT
P30	STA. 51+81, OFFSET, 18' FROM EDGE OF TRAVELED PAVEMENT
P31	STA. 51+81, OFFSET, 18' FROM EDGE OF TRAVELED PAVEMENT
P32	STA. 51+83, OFFSET, 18' FROM EDGE OF TRAVELED PAVEMENT

DESCRIPTION	UNIT	QTY
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	1100
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	5
LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 10" X 8'	EACH	5
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	5
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	39
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	39
REMOVAL OF LUMINARIE, SALVAGE	EACH	34
LIGHTING UNIT IDENTIFICATION DECAL	EACH	34

SEE NOTE 4 (TYP.) FOR ALL EXISTING LIGHT POLE

CONTRACTOR TO WATCH AND PROTECT EXISTING ATT BURIED 200 PAIR CABLE (TYP.)

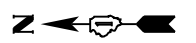
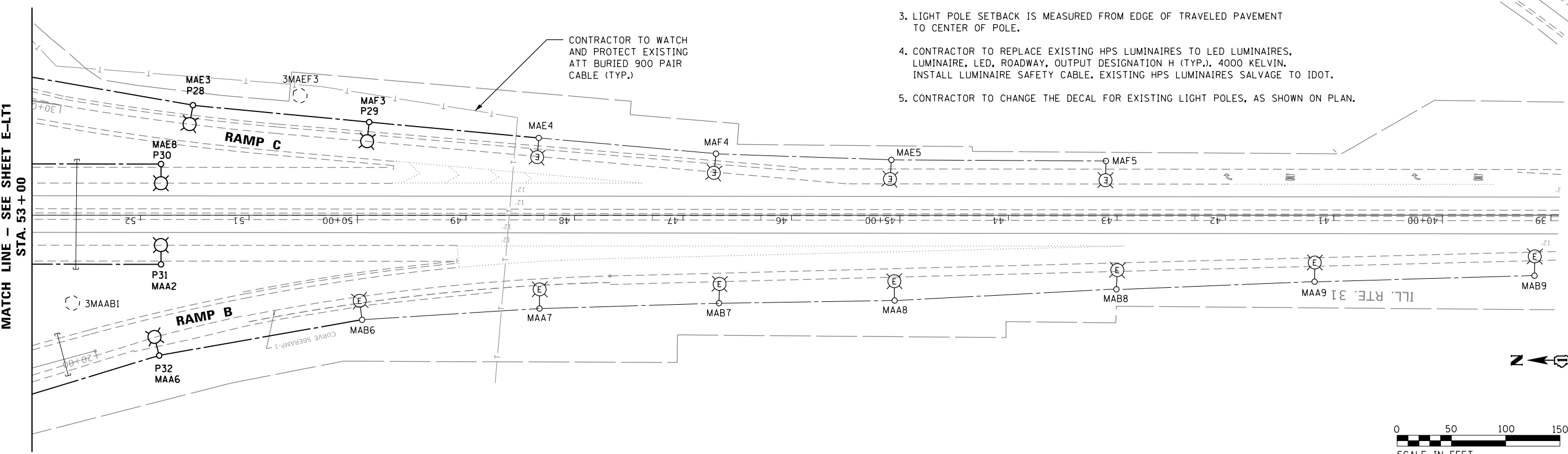
CONTRACTOR TO WATCH AND PROTECT EXISTING ATT BURIED 900 PAIR CABLE (TYP.)

CONTRACTOR TO WATCH AND PROTECT EXISTING ATT BURIED 900 PAIR CABLE (TYP.)

**NOTES:**

- REFER SHEET E-L1 FOR GENERAL NOTES.
- INSTALL LUMINAIRE SAFETY CABLE ON PROPOSED LIGHT POLE.
- LIGHT POLE SETBACK IS MEASURED FROM EDGE OF TRAVELED PAVEMENT TO CENTER OF POLE.
- CONTRACTOR TO REPLACE EXISTING HPS LUMINAIRES TO LED LUMINAIRES, LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H (TYP.), 4000 KELVIN. INSTALL LUMINAIRE SAFETY CABLE. EXISTING HPS LUMINAIRES SALVAGE TO IDOT.
- CONTRACTOR TO CHANGE THE DECAL FOR EXISTING LIGHT POLES, AS SHOWN ON PLAN.

MATCH LINE - SEE SHEET E-LT1  
STA. 53+00



USER NAME : *USER*	DESIGNED - HM	REVISED -
PLOT SCALE : *SCALE*	DRAWN - AM	REVISED -
PLOT DATE : *DATE*	CHECKED - KK	REVISED -
	DATE - 03-10-2020	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

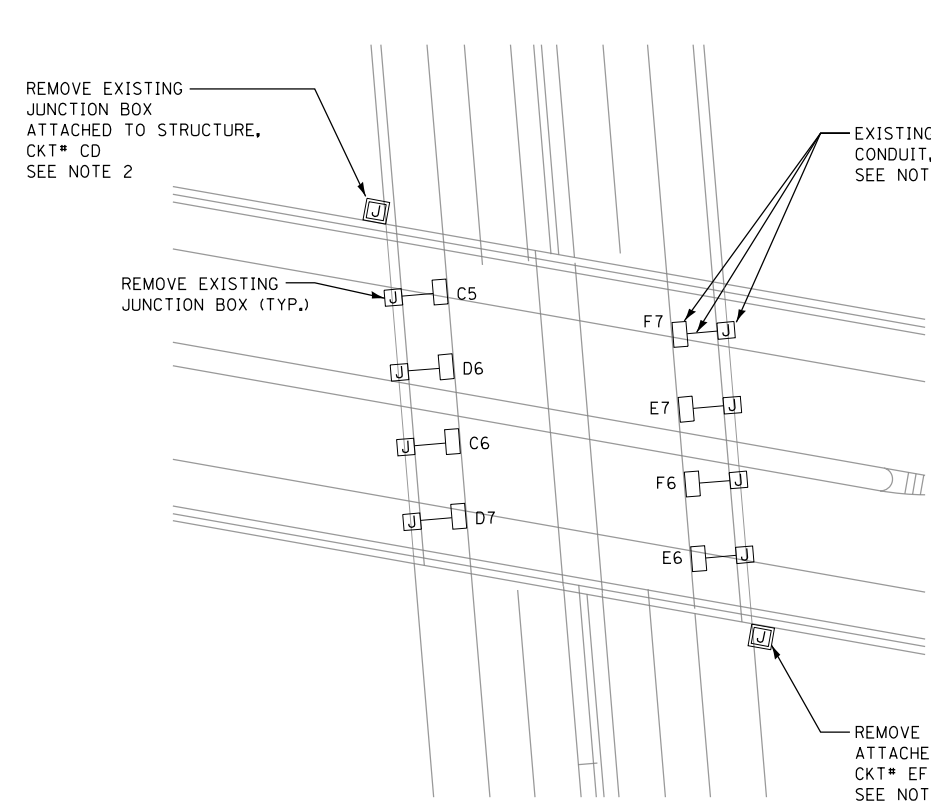
<b>LIGHTING PLAN</b>			
<b>US-14 / IL 31 - SHEET 2 OF 2</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	13
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

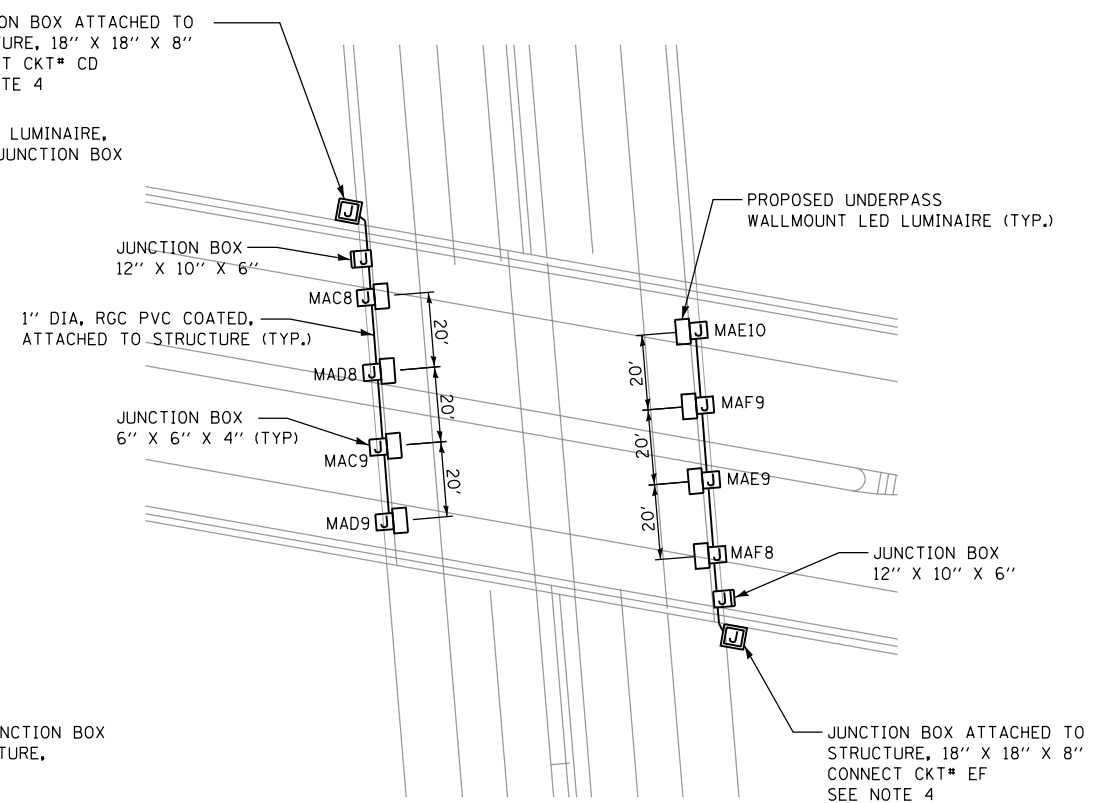
E-LT2



DESCRIPTION	UNIT	QTY
REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	8
LUMINAIRE, LED, UNDERPASS, WALLMOUNT, OUTPUT DESIGNATION D	EACH	8
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1600
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	8
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 18" X 8"	EACH	2
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	2
CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	220



**EXISTING UNDERPASS LIGHTING**  
N.T.S.



**PROPOSED UNDERPASS LIGHTING**  
N.T.S.

**NOTE:**

1. REFER TO REMOVAL NOTES ON SHEET E-L1.
2. CONTRACTOR TO REMOVE EXISTING UNDERPASS LUMINAIRES AND SCRAPPED. REMOVE CONDUIT, JUNCTION BOX AND ELECTRIC CABLES. THIS WORK WILL BE PAID UNDER PAYITEM (84200600) REMOVAL OF LIGHTING UNIT, NO SALVAGE.
3. SEE IDOT STANDARD SHEET BE-903 ON SHEET SD-01, FOR PROPOSED UNDERPASS LUMINAIRE INSTALLATION DETAILS.
4. INSTALL NEW FUSE HOLDERS, 30 AMP FUSES AND NEUTRAL SLUG INSIDE JUNCTION BOX.



USER NAME = \$USER*	DESIGNED - HM	REVISED -
	DRAWN - AM	REVISED -
PLOT SCALE = \$SCALE*	CHECKED - KK	REVISED -
PLOT DATE = \$DATE*	DATE - 01-31-2020	REVISED -

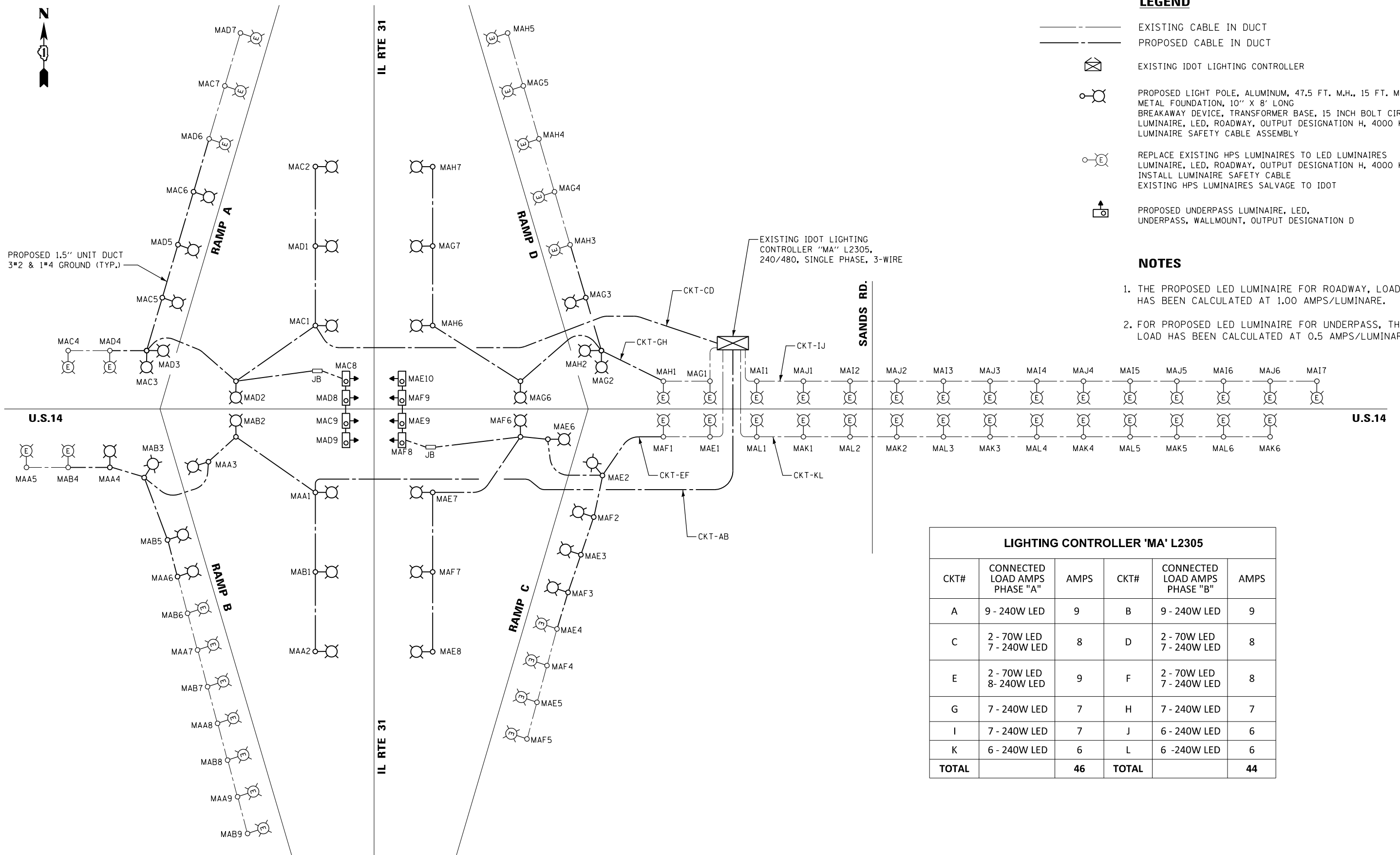
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

UNDERPASS LIGHTING PLAN  
US-14 / IL 31

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	14
			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

E-LT3



**LEGEND**

- EXISTING CABLE IN DUCT
- PROPOSED CABLE IN DUCT
- EXISTING IDOT LIGHTING CONTROLLER
- PROPOSED LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM METAL FOUNDATION, 10" X 8' LONG BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H, 4000 KELVIN LUMINAIRE SAFETY CABLE ASSEMBLY
- REPLACE EXISTING HPS LUMINAIRES TO LED LUMINAIRES LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H, 4000 KELVIN INSTALL LUMINAIRE SAFETY CABLE EXISTING HPS LUMINAIRES SALVAGE TO IDOT
- PROPOSED UNDERPASS LUMINAIRE, LED, UNDERPASS, WALLMOUNT, OUTPUT DESIGNATION D

**NOTES**

1. THE PROPOSED LED LUMINAIRE FOR ROADWAY, LOAD HAS BEEN CALCULATED AT 1.00 AMPS/LUMINAIRE.
2. FOR PROPOSED LED LUMINAIRE FOR UNDERPASS, THE LOAD HAS BEEN CALCULATED AT 0.5 AMPS/LUMINAIRE.

LIGHTING CONTROLLER 'MA' L2305					
CKT#	CONNECTED LOAD AMPS PHASE "A"	AMPS	CKT#	CONNECTED LOAD AMPS PHASE "B"	AMPS
A	9 - 240W LED	9	B	9 - 240W LED	9
C	2 - 70W LED 7 - 240W LED	8	D	2 - 70W LED 7 - 240W LED	8
E	2 - 70W LED 8 - 240W LED	9	F	2 - 70W LED 7 - 240W LED	8
G	7 - 240W LED	7	H	7 - 240W LED	7
I	7 - 240W LED	7	J	6 - 240W LED	6
K	6 - 240W LED	6	L	6 - 240W LED	6
<b>TOTAL</b>		<b>46</b>	<b>TOTAL</b>		<b>44</b>



USER NAME = \$USER*	DESIGNED - HM	REVISED -
	DRAWN - AM	REVISED -
PLOT SCALE = \$SCALE*	CHECKED - KK	REVISED -
PLOT DATE = \$DATE*	DATE - 01-31-2020	REVISED -

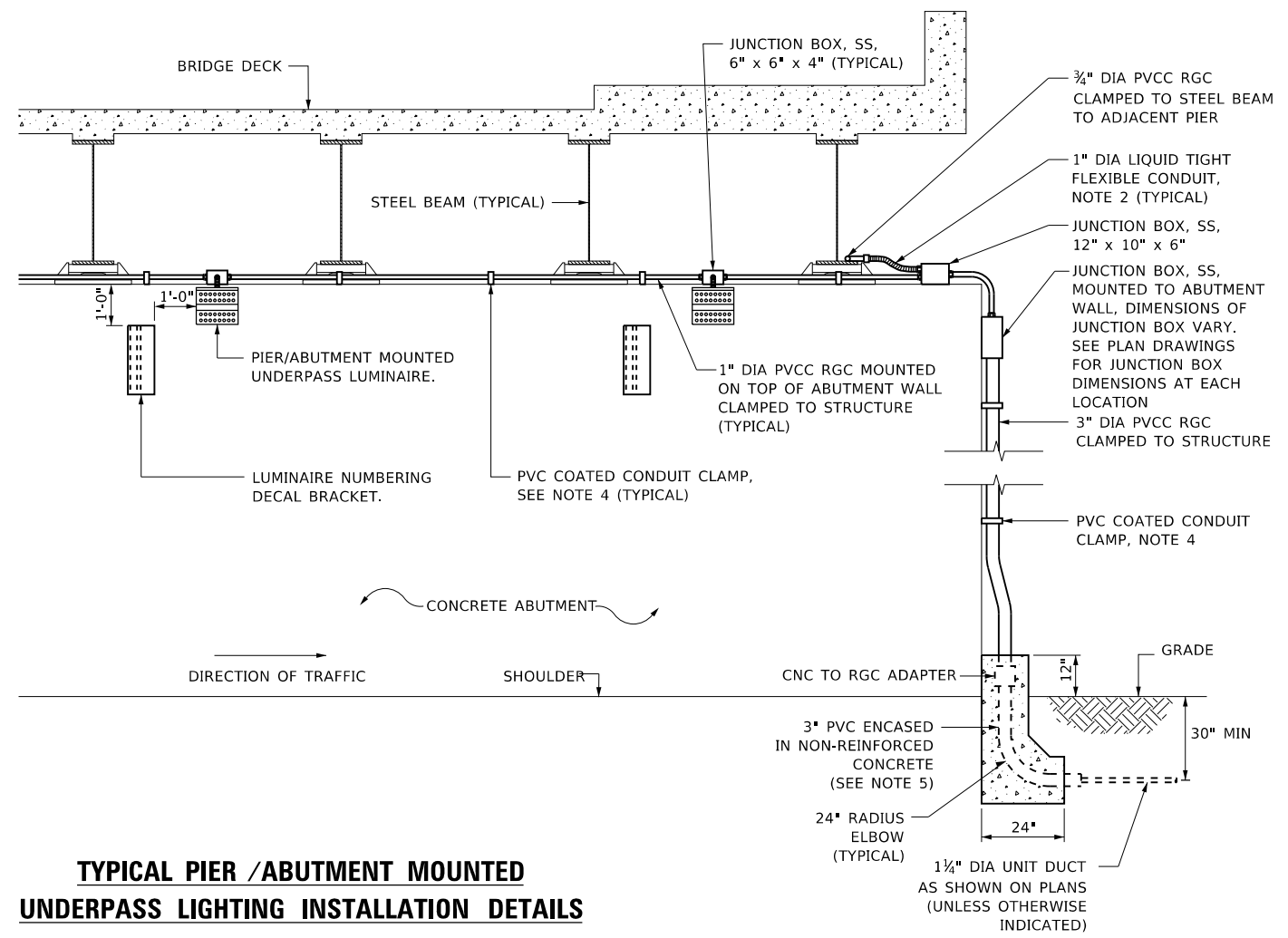
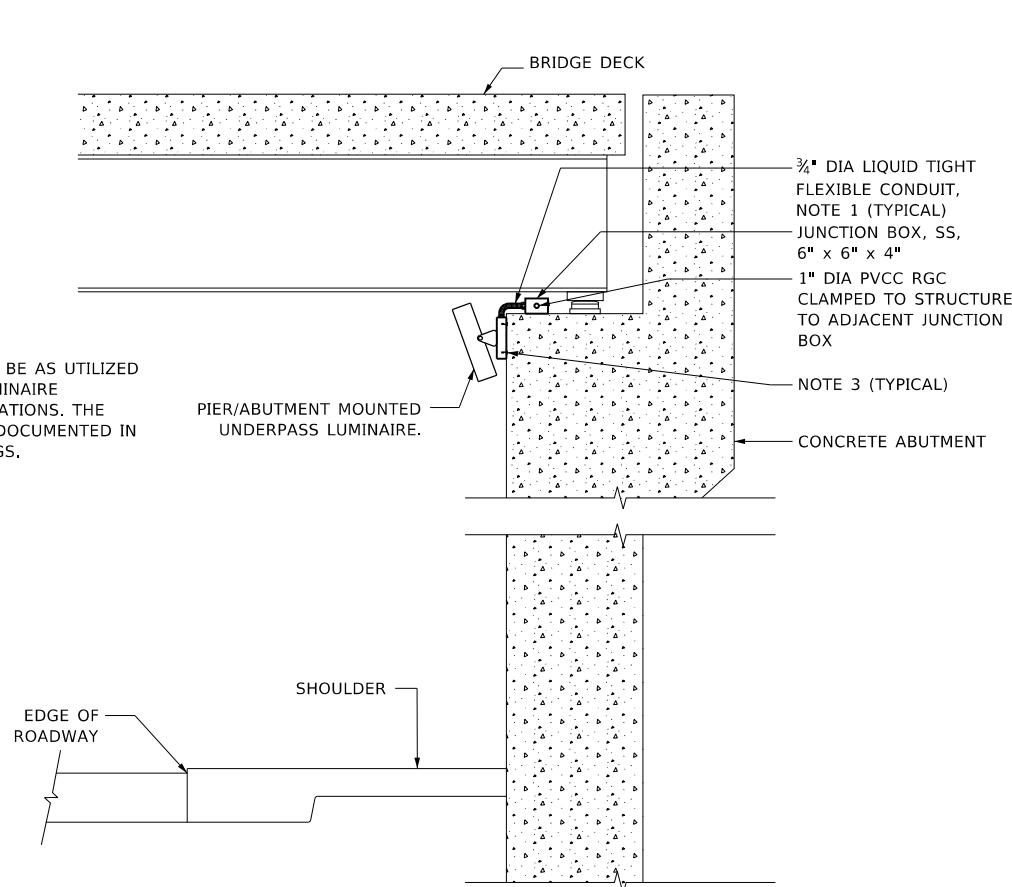
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SINGLE LINE DIAGRAM CONTROLLER MA  
US-14 / IL 31  
SCALE: SHEET OF SHEETS STA. TO STA.

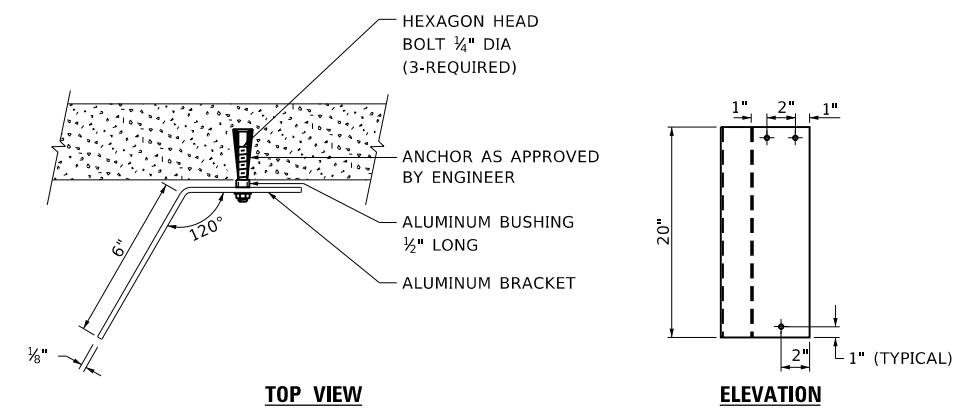
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	15
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

E-LT4

**NOTE:**  
LUMINAIRE TILT SHALL BE AS UTILIZED IN THE APPROVED LUMINAIRE PHOTOMETRIC CALCULATIONS. THE TILT ANGLE MUST BE DOCUMENTED IN THE RECORD DRAWINGS.

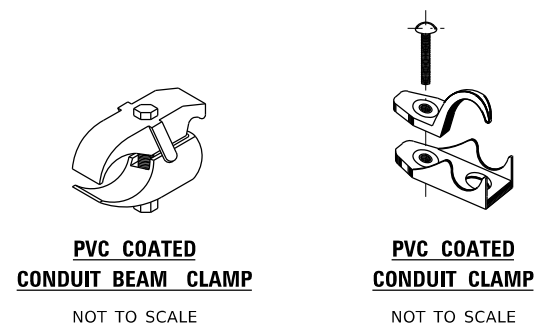


**TYPICAL PIER /ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS**



**LUMINAIRE NUMBERING DECAL BRACKET**

NOT TO SCALE



**NOTES:**

- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE " DIA. RIGID STEEL CONDUIT AND " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
- SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
- UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL WITH 1/2" ALUMINUM SPACERS. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
- EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
- SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
- THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
- ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

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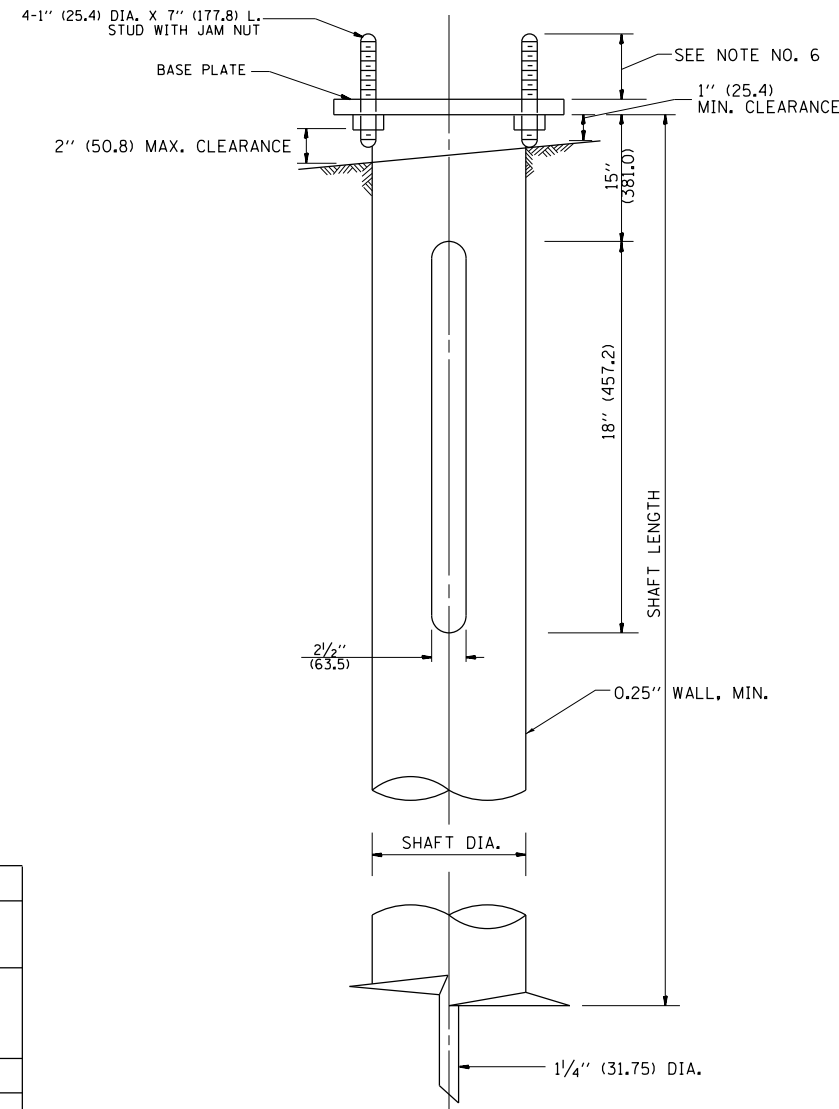
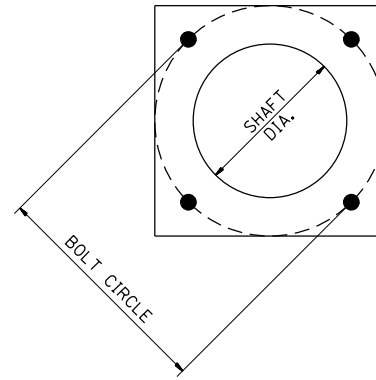
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>PIER /ABUTMENT MOUNTED LED UNDERPASS LUMINAIRE INSTALLATION DETAILS</b>			
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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<b>BE-903</b>		CONTRACT NO. 62K57		
ILLINOIS FED. AID PROJECT				

**SD-01**





**HELIX FOUNDATION SIZE**

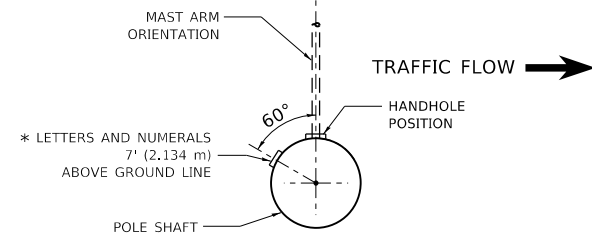
POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
31 FT.-35 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
36 FT.-40FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
41 FT.-45 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1 1/4"

**METAL HELIX FOUNDATION MATERIALS**

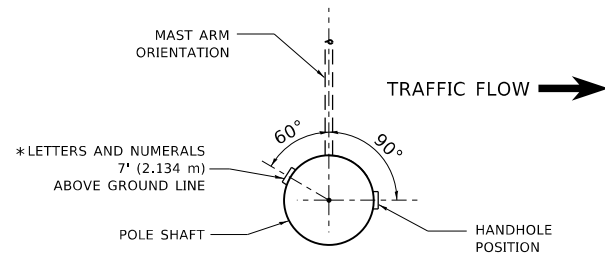
ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

**NOTES:**

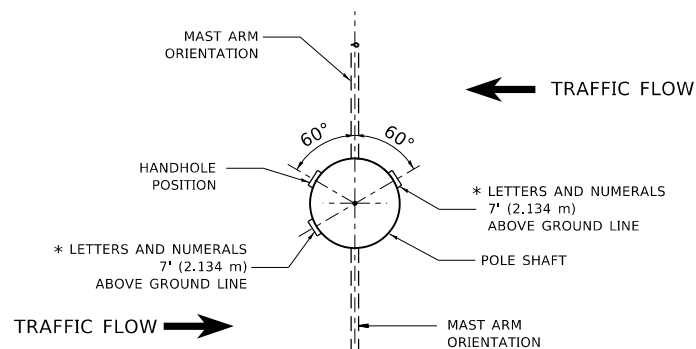
- ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
- ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
- THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
- ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
- METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
- THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
- THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ( $\pm 1^\circ$ ) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC ( $\pm 0.188$ ) TO THE SHAFT AXIS.
- THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC ( $\pm 0.125$ ) AND IN LINE ( $\pm 2^\circ$ ).
- THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.



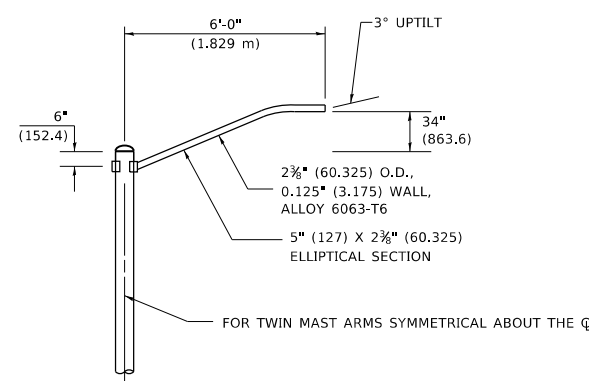
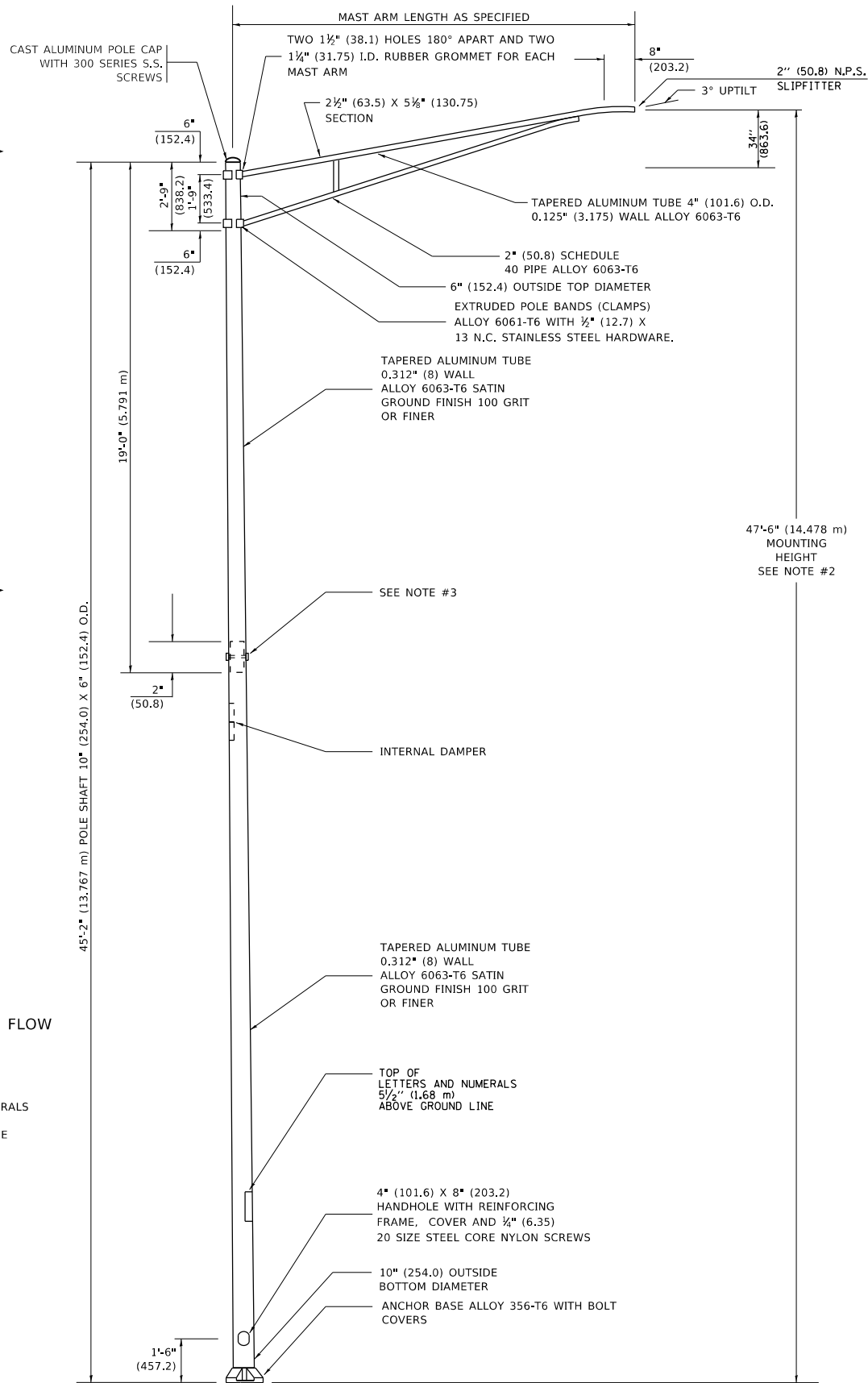
**POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL**



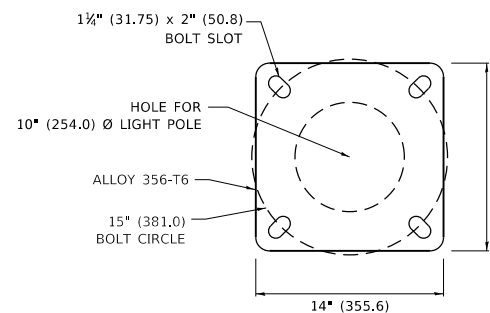
**POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES**



**POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES**

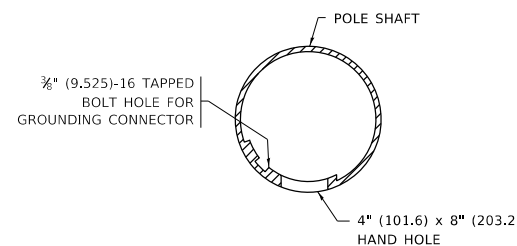


**6' (1.8 m) SINGLE MEMBER MAST ARM (N.T.S.)**



**LIGHT POLE BASE PLATE DETAIL**

15 INCH (381.0) BOLT CIRCLE



**HANDHOLE DETAIL (N.T.S.)**

**NOTES**

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
- TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
- THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
- THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
- LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
- LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
- LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.

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	DRAWN -	REVISED - R. TOMSONS 09-03-03
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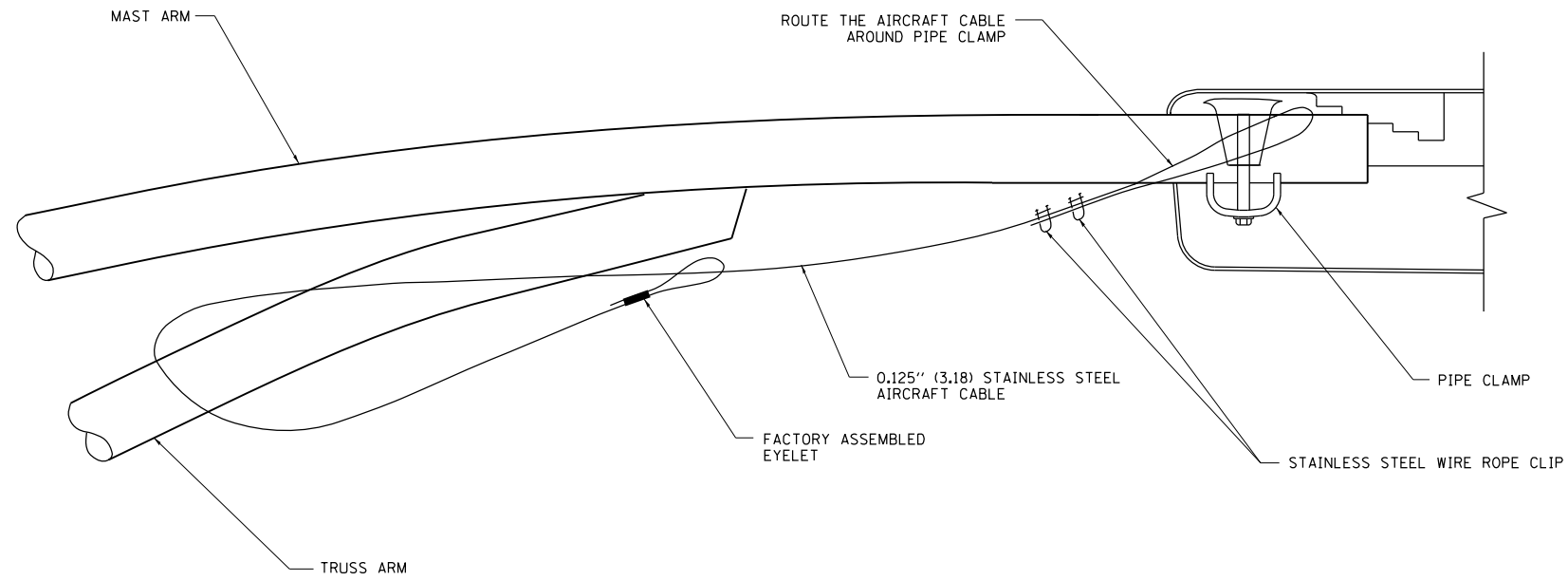
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ALUMINUM LIGHT POLE  
47'-6" (14.478 m) MOUNTING HEIGHT**

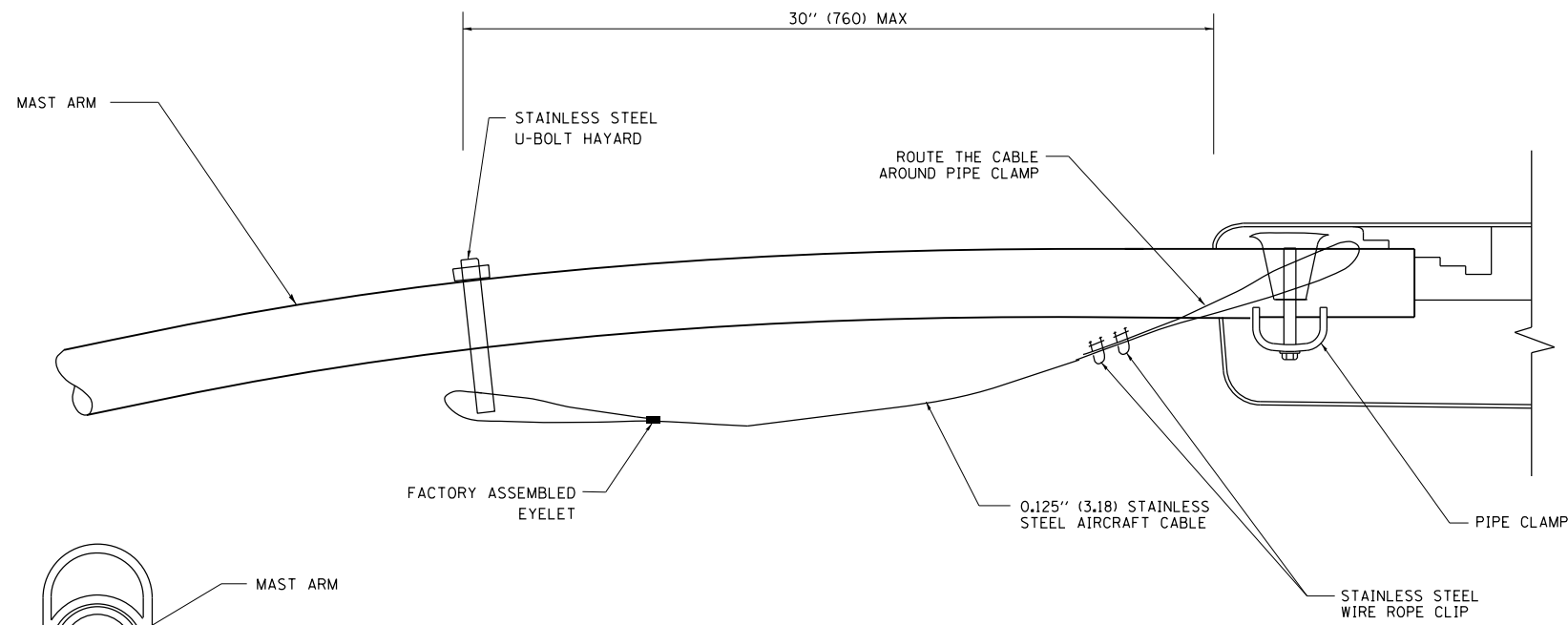
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BE-400			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

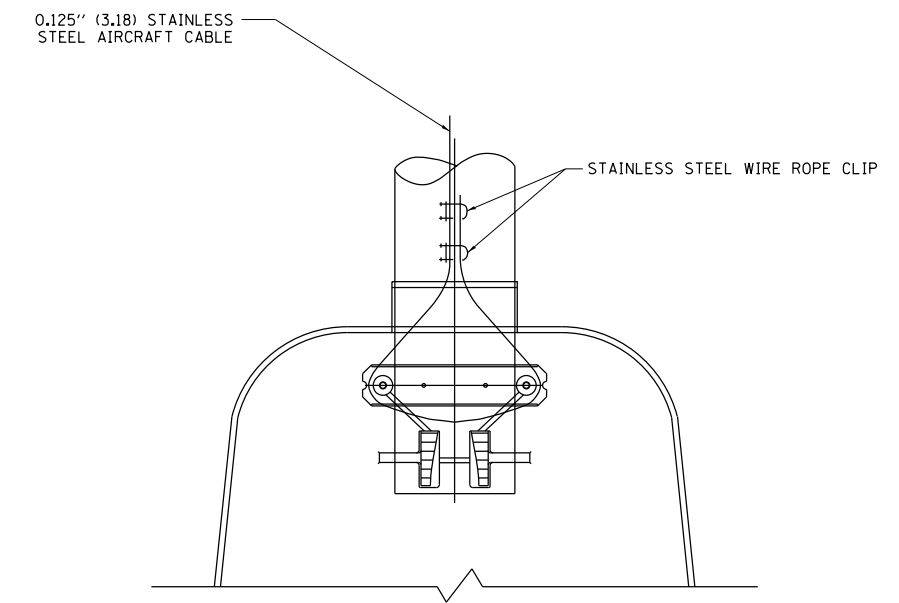
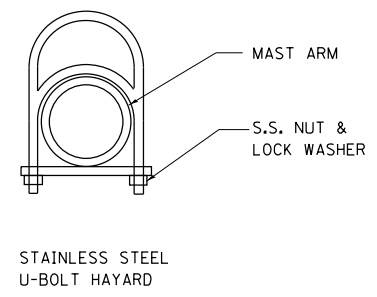
SD-03



**SIDE VIEW (TRUSS ARM)**  
N.T.S.



**SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)**  
N.T.S.

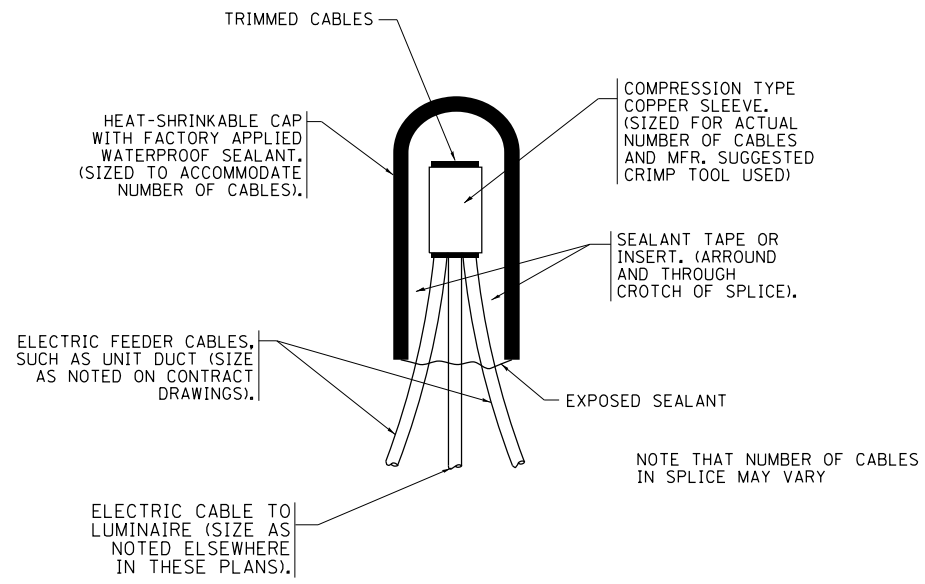


**BOTTOM VIEW**  
N.T.S.

**NOTES:**

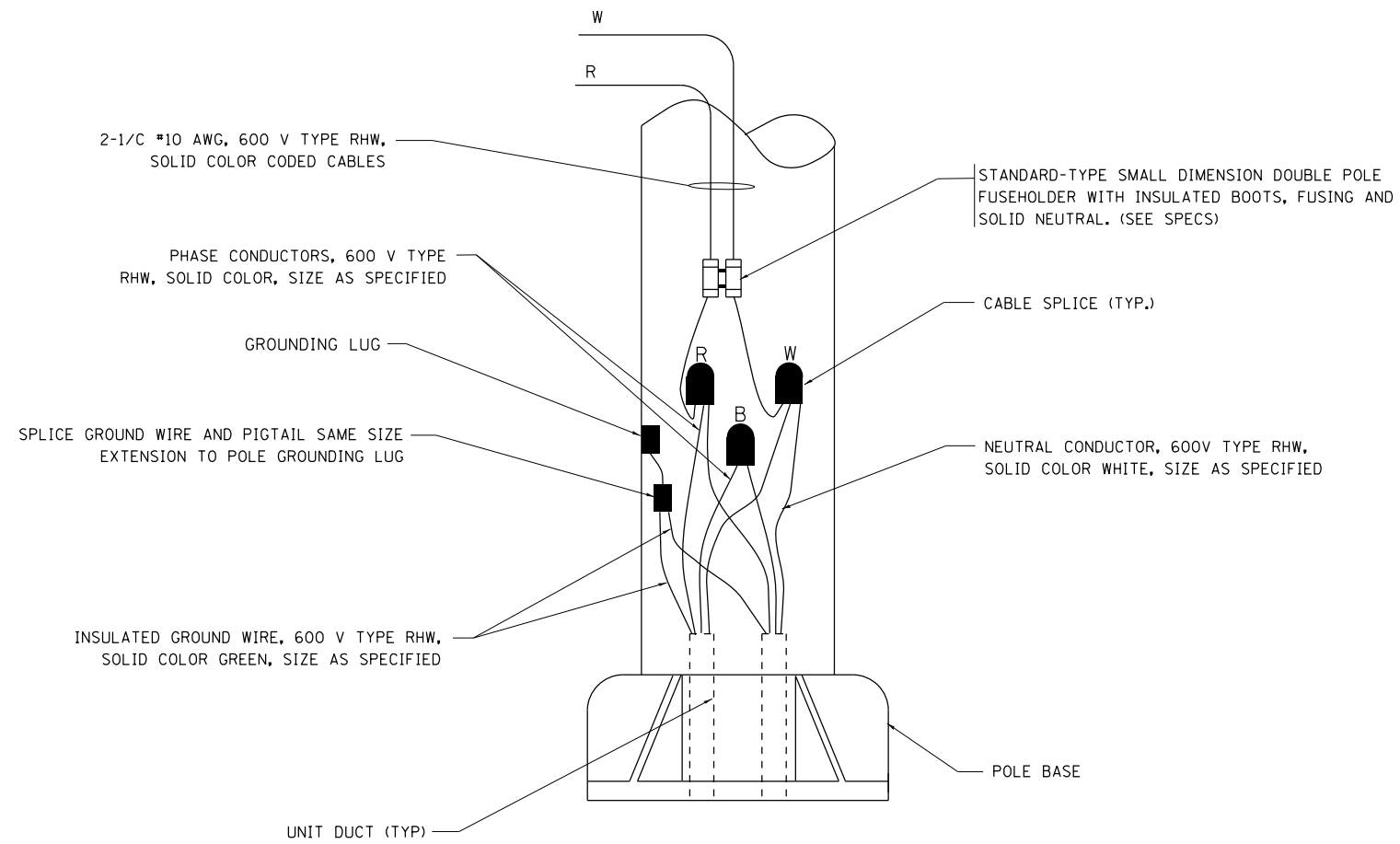
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

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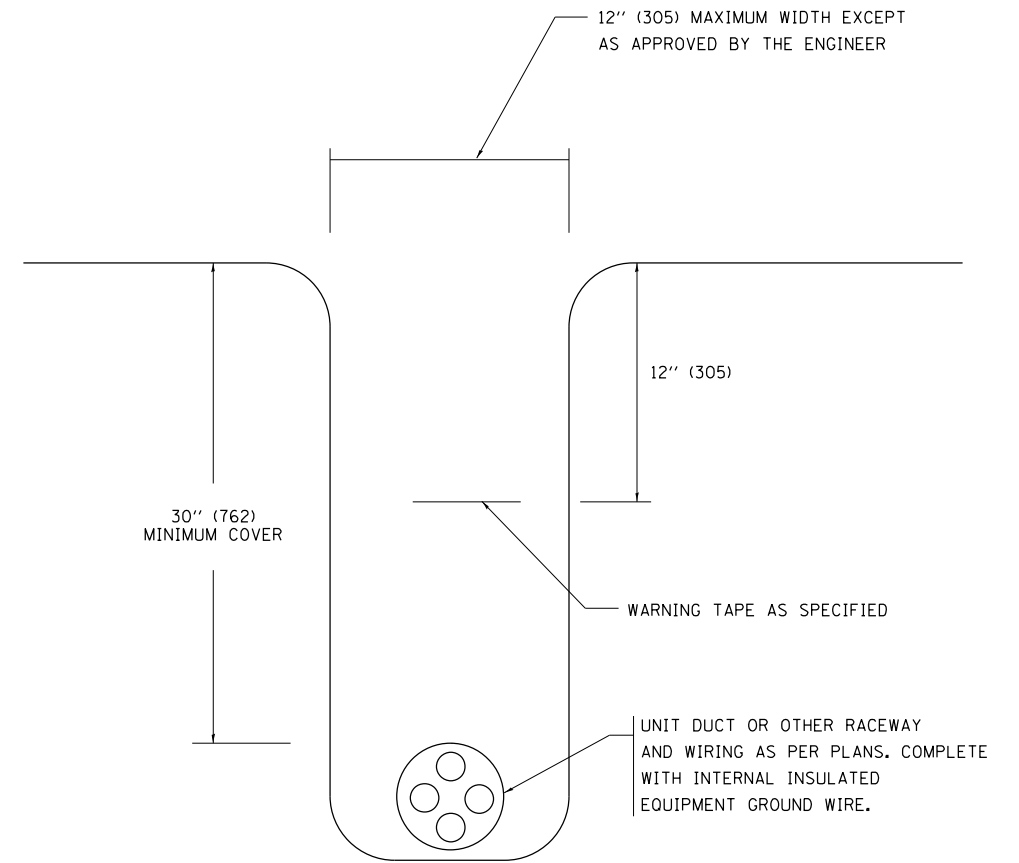
**TYPICAL SPLICE DETAIL**

N.T.S.



**POLE WIRING DETAIL**

N.T.S.

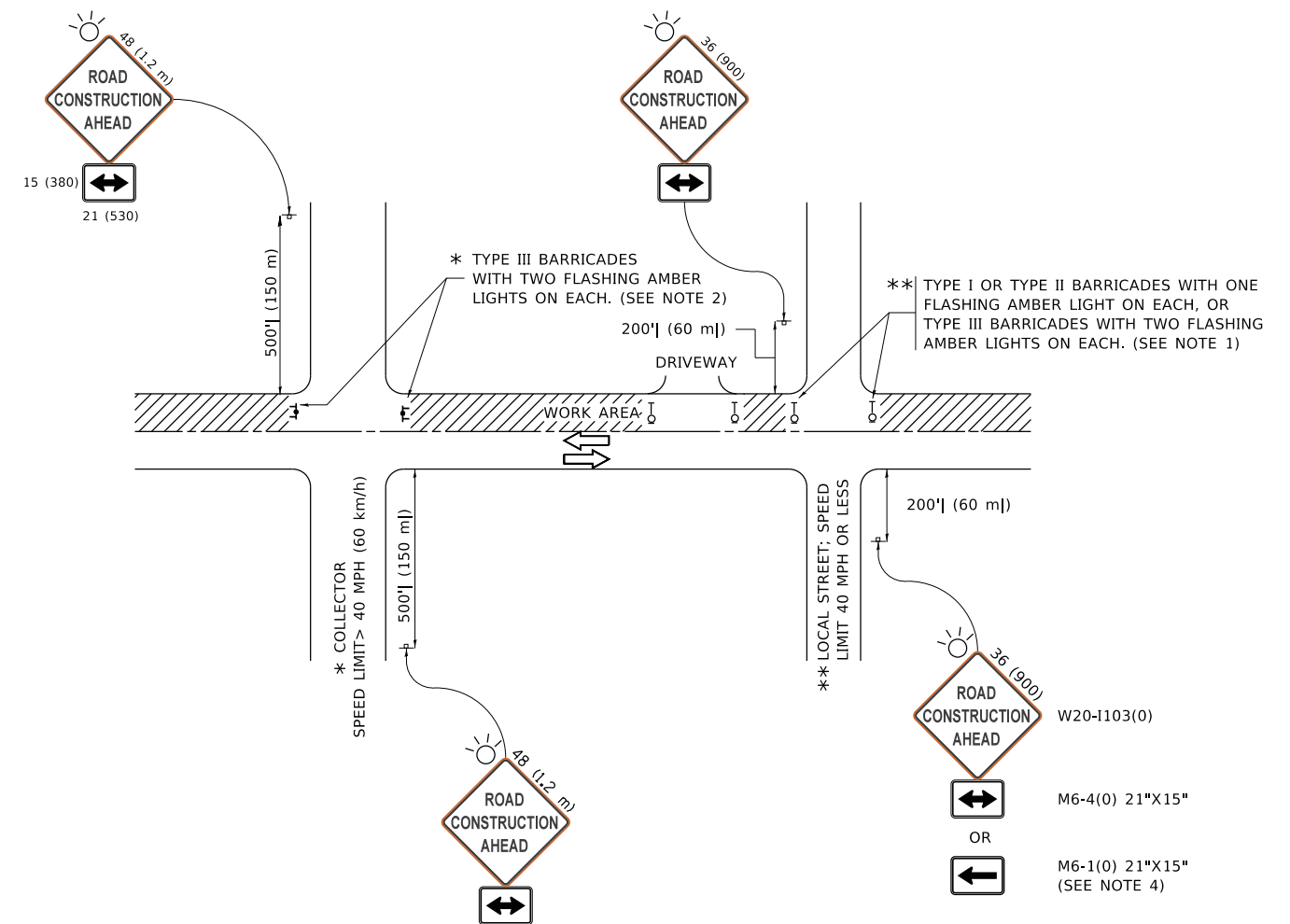


**TYPICAL WIRING IN TRENCH DETAIL**

N.T.S.

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		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

SD-05



**NOTES:**

- 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:
  - 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.
  - 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.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - 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.
  - 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.
- 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.
- SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- 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.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- 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.

SD-06

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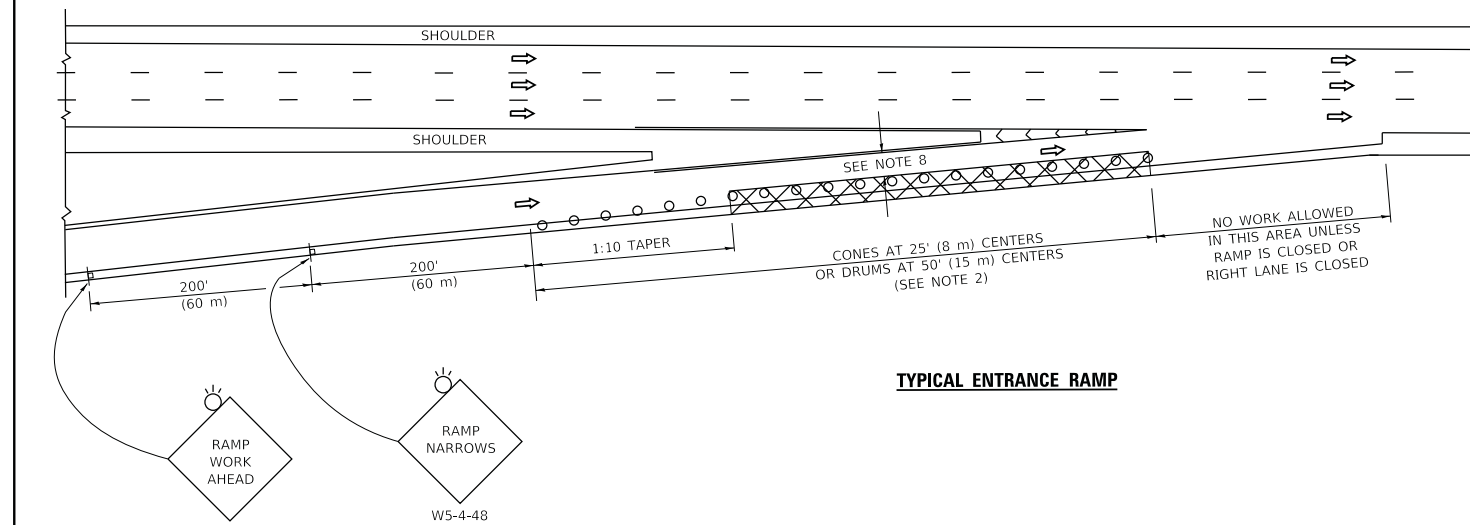
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

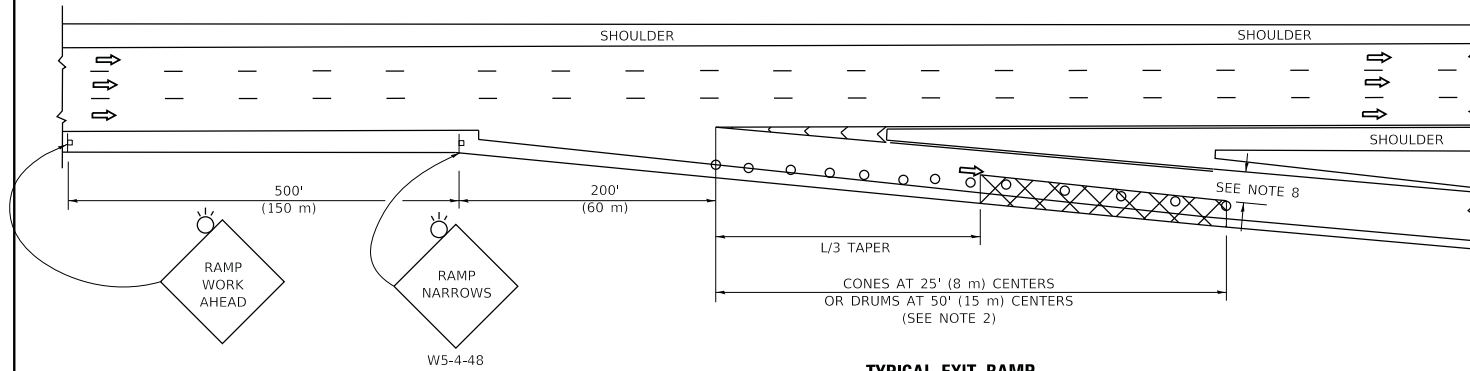
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<b>TC-10</b>			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

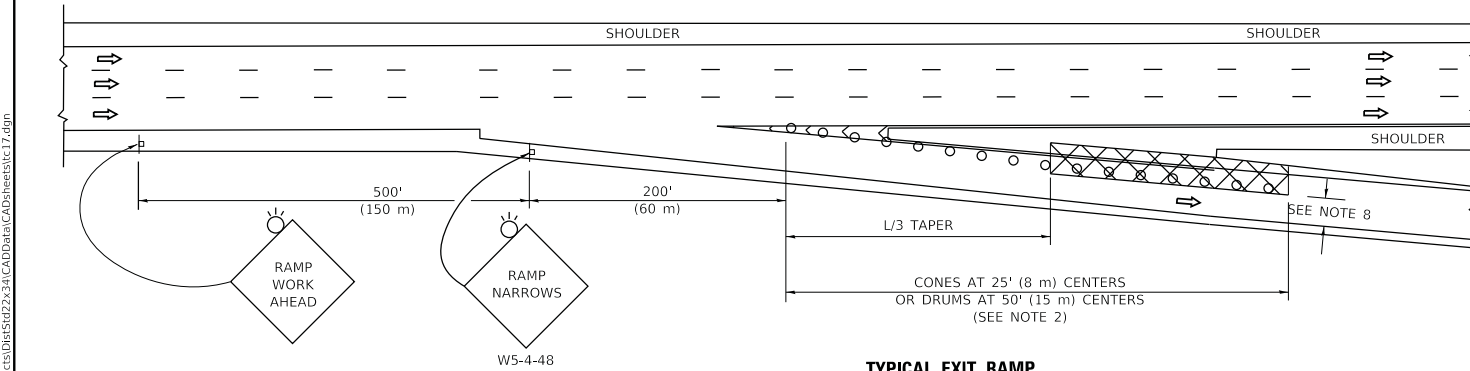
**PARTIAL RAMP CLOSURE DETAILS**



**TYPICAL ENTRANCE RAMP**



**TYPICAL EXIT RAMP**



**TYPICAL EXIT RAMP**

**SYMBOLS**

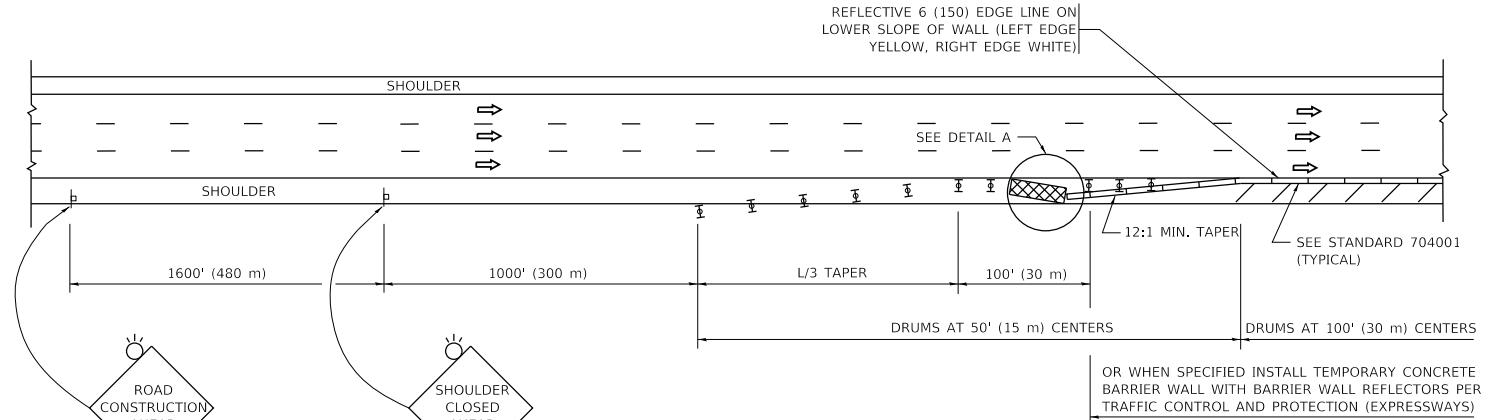
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

**GENERAL NOTES:**

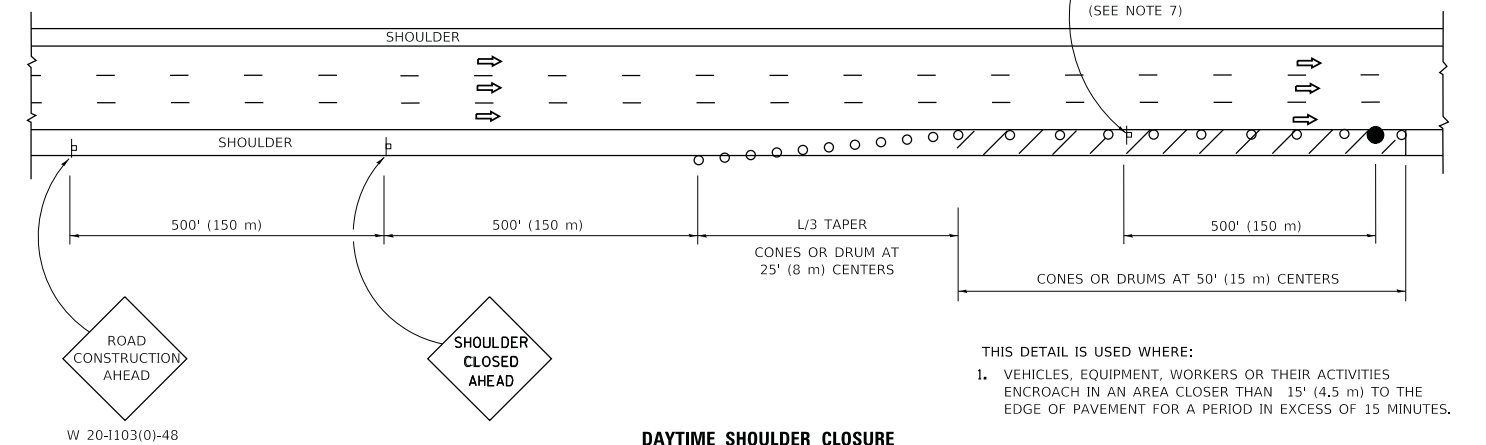
- THE "L" DISTANCE EQUALS:
 

SPEED LIMIT	FORMULAS
45 mph (80 km/h)	METRIC ENGLISH
OR GREATER:	$L = 0.65(W)(S)$ $L = (W)(S)$
	W = WIDTH OF OFFSET IN FEET (METERS)
	S = NORMAL POSTED SPEED MPH (KM/H)
- TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTACLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

**SHOULDER CLOSURE DETAILS**



**PERMANENT SHOULDER CLOSURE**



**DAYTIME SHOULDER CLOSURE**

- THIS DETAIL IS USED WHERE:
- VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



**DETAIL "A"**  
IMPACT ATTENUATOR, TEMPORARY  
(SEE NOTE 5)

- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
- 12' MIN. WIDTH TANGENT SECTION  
16' MIN. WIDTH CURVE SECTION.

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

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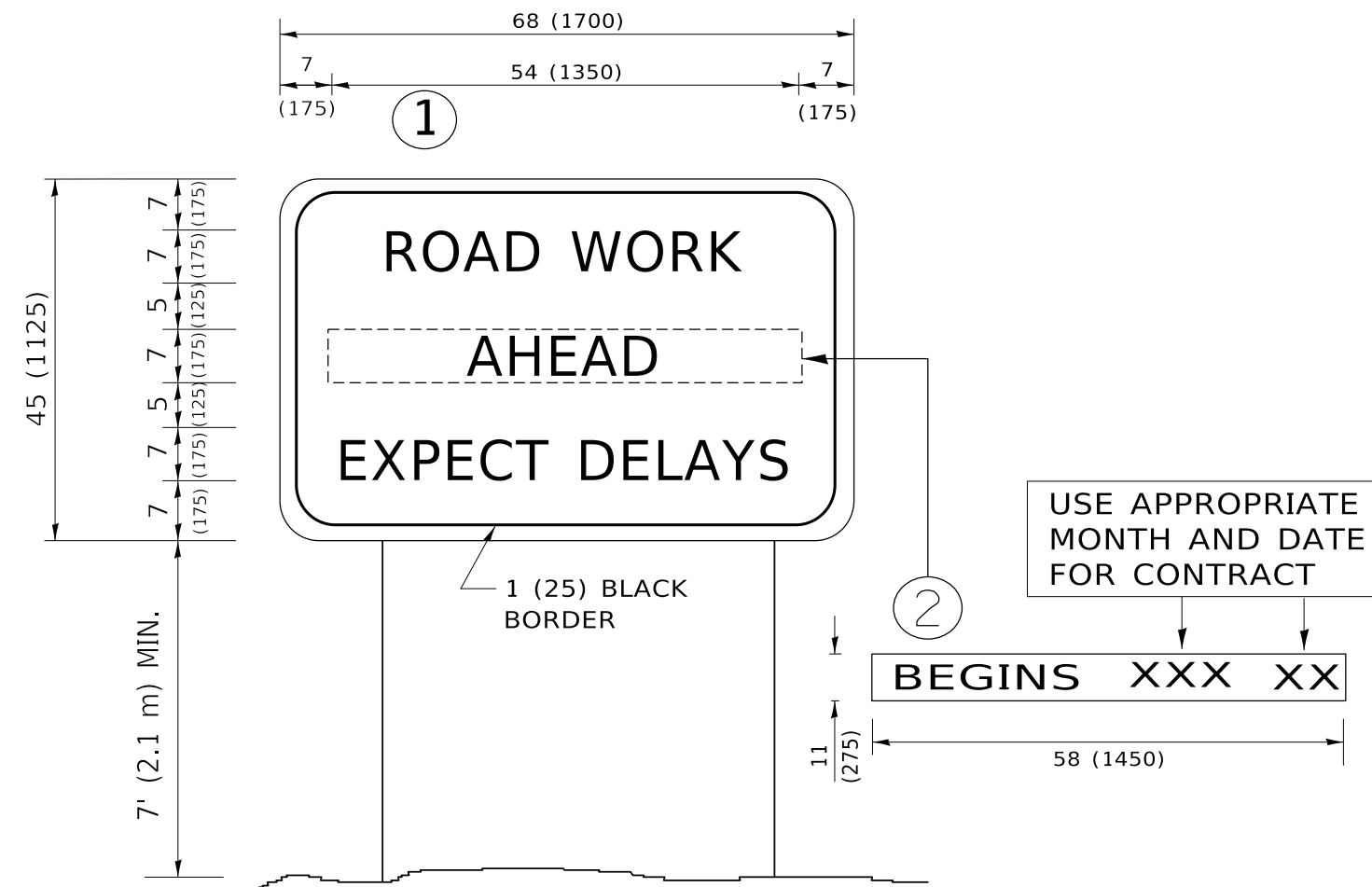
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PLOT DATE = 3/4/2019	DATE - 11-96	REVISED - M.D. 01-18

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

<b>TRAFFIC CONTROL DETAILS FOR FREEWAY</b>			
<b>SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b>			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	MCHENRY	32	22
<b>TC-17</b>		CONTRACT NO. 62K57		
ILLINOIS FED. AID PROJECT				

SD-07



**NOTES:**

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

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

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	DRAWN -	REVISED - R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD  
INFORMATION SIGN**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	MCHENRY	32	23
TC-22			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

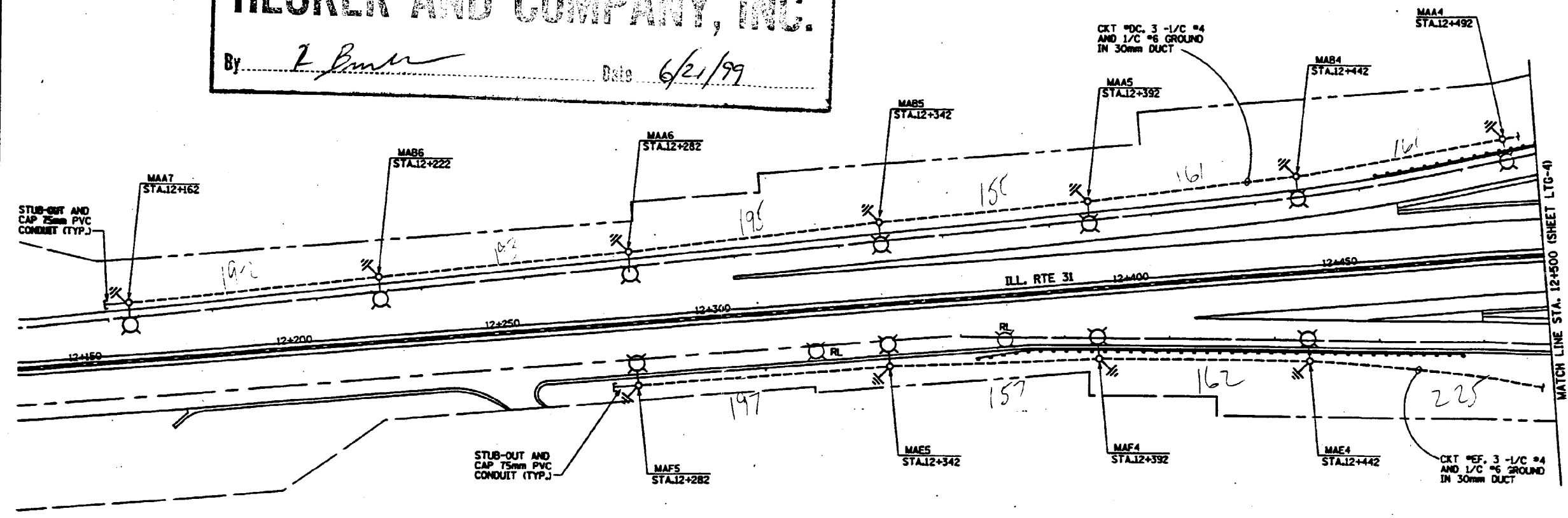
SD-08

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
336	McHENRY	318	170
STA. 00+000 TO STA. 00+000			
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT	
# 12048 & 112VBR-1			

# RECORD DRAWINGS

## HECKER AND COMPANY, INC.

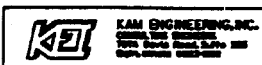
By *T. Bunker* Date 6/21/99



35.24  
 UD - 1798 + slack = 1833.24  
 T+B - 1798 - 548M  
 12 RODS - 11'

P:\PROJECTS\JOB217 - 1104 / 817-81.00M

REFERENCE ONLY



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 336 (ILL. RTE. 31)  LIGHTING PLAN ILL. ROUTE 31
NAME	DATE	
		SCALE = 1:500 DATE: 10-23-97 DRAWN BY: NS CHECKED BY: ADD

LTG-3



USER NAME = \$USER\$	DESIGNED - HM	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN - AM	REVISED -
PLOT DATE = \$DATE\$	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**EXISTING LIGHTING PLAN  
FOR REFERENCE ONLY**

SCALE:      SHEET      OF      SHEETS      STA.      TO      STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	24
ILLINOIS FED. AID PROJECT				CONTRACT NO. 62K57

E-ELP-1



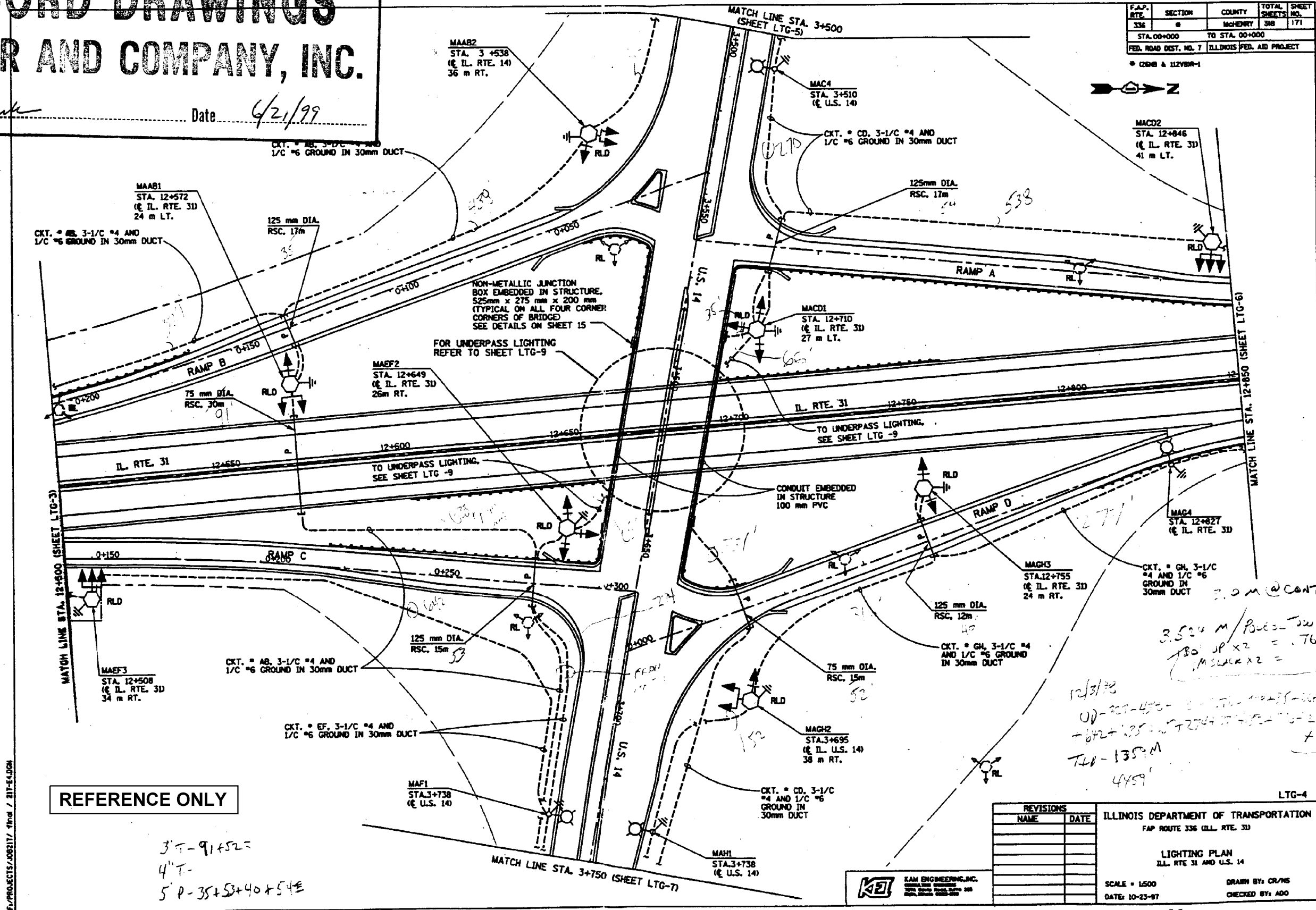
# RECORD DRAWINGS

## HECKER AND COMPANY, INC.

By R. Burke Date 6/21/99

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
336	8	McHENRY	348 171
STA. 00+000 TO STA. 00+000		ILLINOIS FED. AID PROJECT	

\* C288 & 112VBA-1



Handwritten calculations and notes:

3.524 m / Piece = 1.524  
 180' up x 2 = 360'  
 1.524 x 2 = 3.048  
 360' + 3.048 = 363.048'  
 1416' + 423' = 1839'  
 1839' - 135' = 1704'  
 1704' / 3 = 568'

E:\PROJECTS\082117\_99nd / 211-94.DWG



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

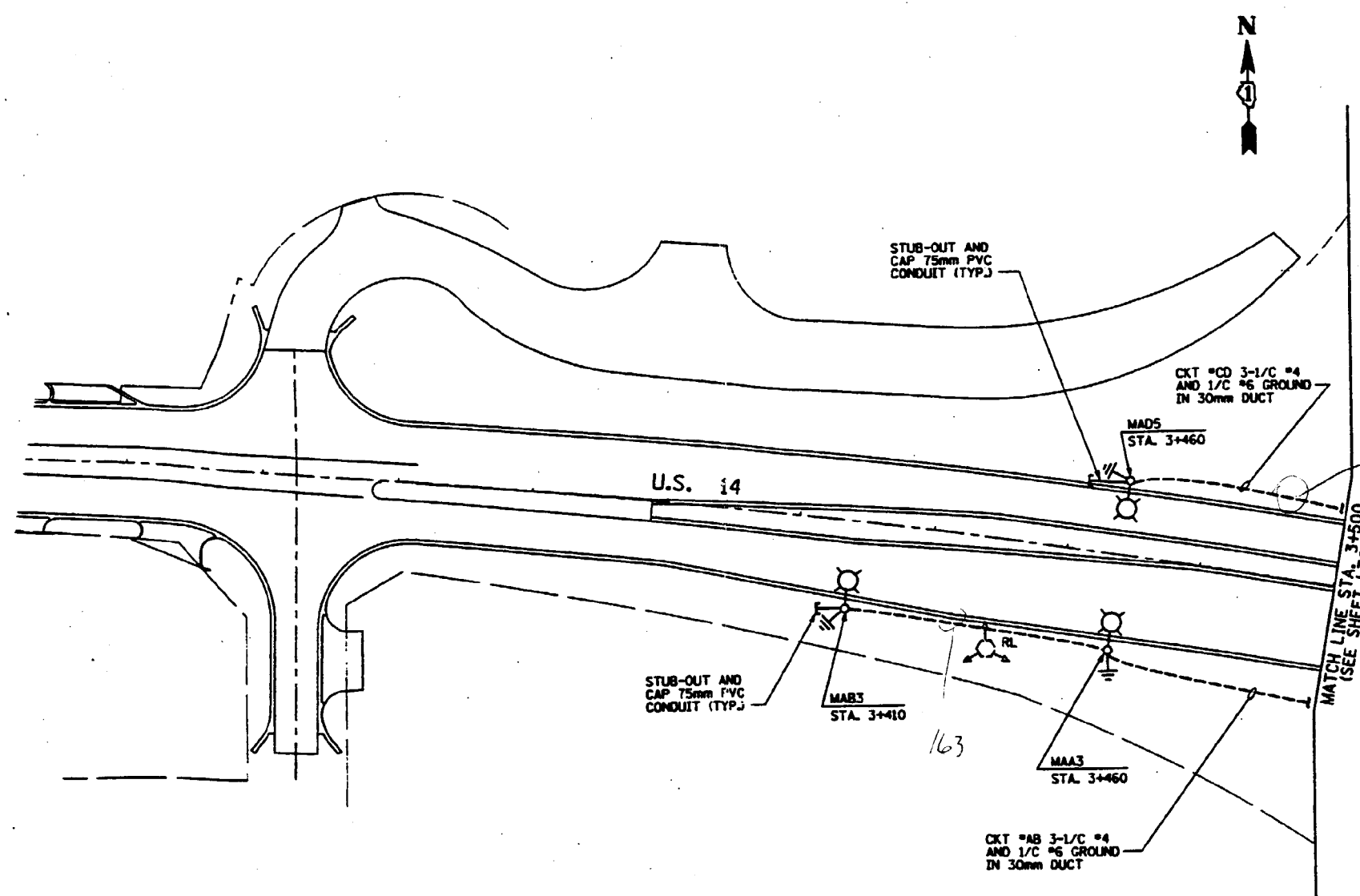
EXISTING LIGHTING PLAN  
 FOR REFERENCE ONLY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	25
CONTRACT NO. 62K57				ILLINOIS FED. AID PROJECT

E-ELP-2

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	#	McHENRY	318	172
STA. 00+000		TO STA. 00+000		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
* 0298 & 12258-1				



**RECORD DRAWINGS**  
**HECKER AND COMPANY, INC.**  
 By R. Burke Date 6/24/99

*UD - 49.7 + 7.05  
 T&B - 49.7  
 6.1000 - 3*

REFERENCE ONLY

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 336 (ILL. RTE. 3D)
NAME	DATE	
		LIGHTING PLAN U.S. 14
SCALE = 1:500		DRAWN BY: NS CHECKED BY: ADD
DATE: 10-23-97		

LTC-5

F:\PROJECTS\JOB2117.dwg / 311-8808H



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

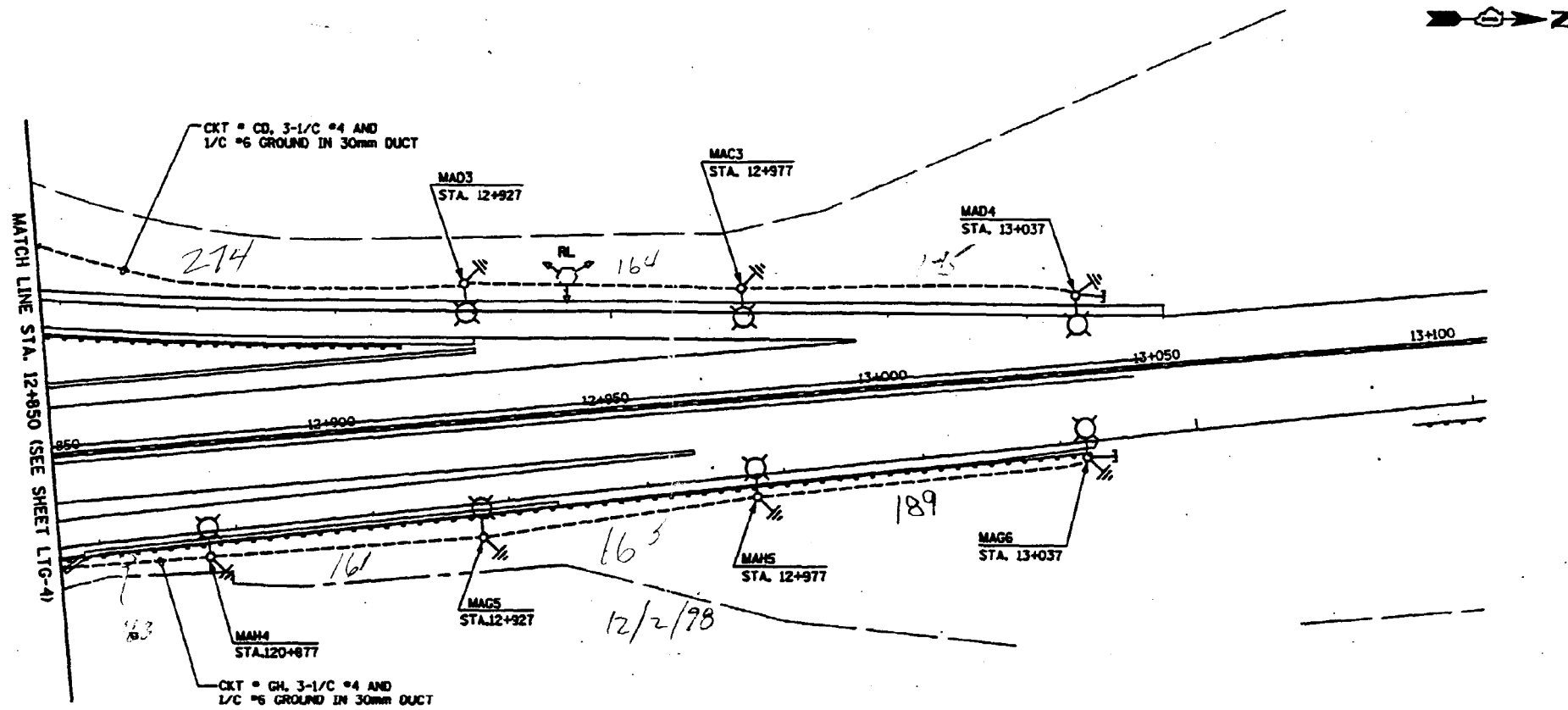
EXISTING LIGHTING PLAN FOR REFERENCE ONLY			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	26
				CONTRACT NO. 62K57
ILLINOIS FED. AID PROJECT				

E-ELP-3

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
336		McHENRY	318 173
STA. 00+000 TO STA. 00+000			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			

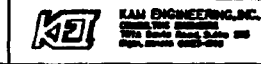
• (228) & (228A)-1



**RECORD DRAWINGS**  
**HECKER AND COMPANY, INC.**  
 By R. Buss Date 6/21/99

JD-399 m + SLACK = 420.2  
 TB-399 -  
 6 RODS - 7

REFERENCE ONLY

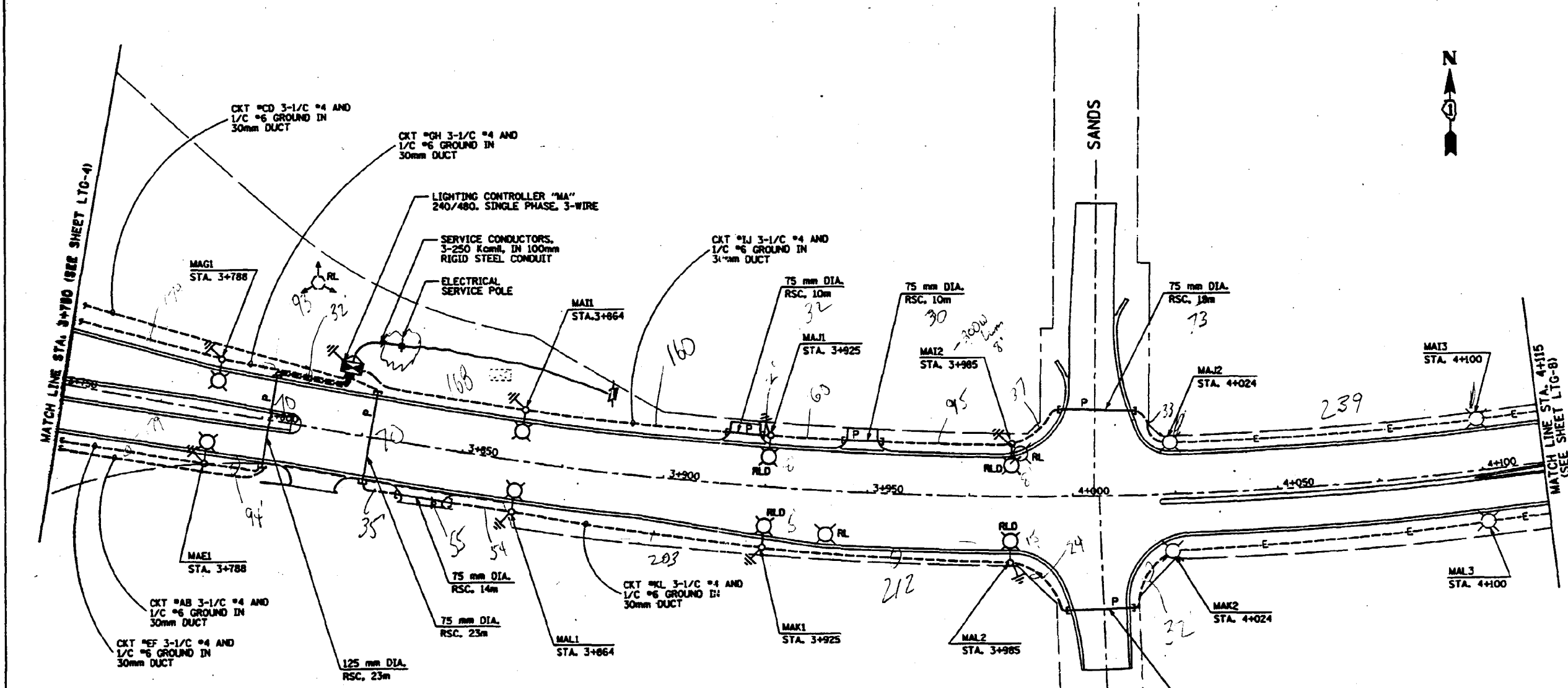


REVISIONS	
NAME	DATE

LTG-6  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP ROUTE 336 (ILL. RTE. 33)  
 LIGHTING PLAN  
 ILL. RTE 31  
 SCALE = 1:500  
 DATE: 10-23-97  
 DRAWN BY: MS  
 CHECKED BY: ADO

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
336	8	McHENRY	318 174
STA. 00+000		TO STA. 00+000	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT	

\* 268 & 112VDR-1



# RECORD DRAWINGS HECKER AND COMPANY, INC.

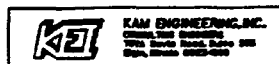
By R. Brink Date 6/21/99  
 3" T - 70 + 73 + 76 + 32 + 70 + 35 = 336

**NOTE:**  
 THE EXISTING LIGHTING UNITS TO REMAIN SHALL BE RE-LETTERED WITH THE NEW CIRCUIT IDENTIFICATION NUMBERS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

REFERENCE ONLY

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 336 (ILL. RTE. 30)
NAME	DATE	
		LIGHTING PLAN U.S. 14

SCALE = 1/8" = 1'-0"  
 DATE: 10-23-97  
 DRAWN BY: NS  
 CHECKED BY: ADO



F:\PROJECTS\SUBJECT\find / 211-ET.DWG



USER NAME = #USER*	DESIGNED - HM	REVISED -
PLOT SCALE = #SCALE*	DRAWN - AM	REVISED -
PLOT DATE = #DATE*	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN  
FOR REFERENCE ONLY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	28
ILLINOIS FED. AID PROJECT				CONTRACT NO. 62K57

E-ELP-5

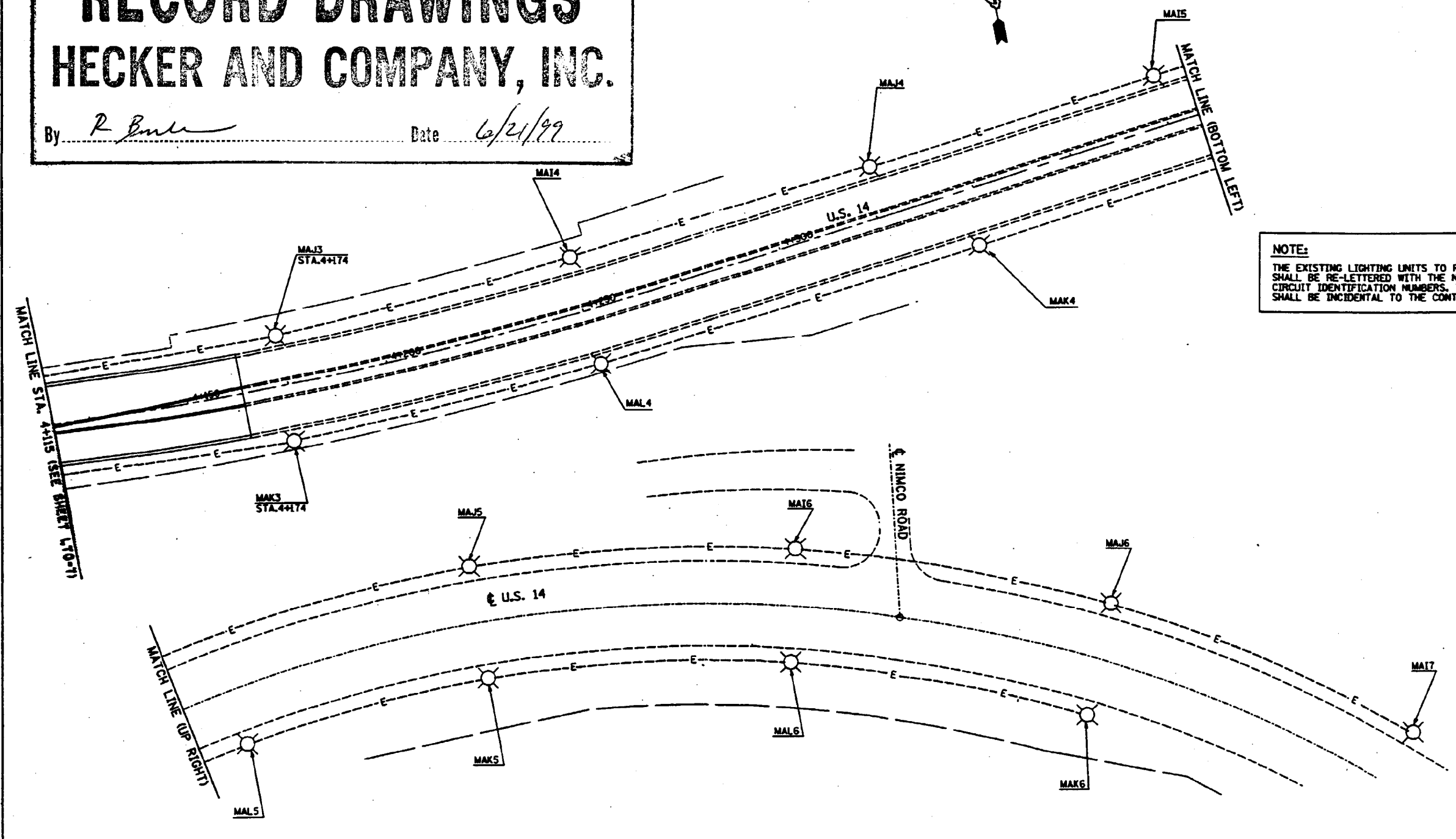
# RECORD DRAWINGS

## HECKER AND COMPANY, INC.

By R. Burt Date 6/21/99

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	8	MC HENRY	318	175
STA. 00+000		TO STA. 00+000		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

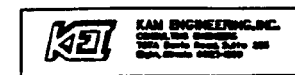
# 0248 & 112VBR-1



**NOTE:**  
 THE EXISTING LIGHTING UNITS TO REMAIN SHALL BE RE-LETTERED WITH THE NEW CIRCUIT IDENTIFICATION NUMBERS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.

P:\PROJECTS\JOB217 - Road / 217-ELDPN

REFERENCE ONLY



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 FAP ROUTE 336 (ILL. RTE. 3D)

LIGHTING PLAN  
 U.S. 14

SCALE = 1:500  
 DATE: 10-23-97

DRAWN BY: MS  
 CHECKED BY: ADG

LTC-8



USER NAME = #USER#	DESIGNED - HM	REVISED -
PLOT SCALE = #SCALE#	DRAWN - AM	REVISED -
PLOT DATE = #DATE#	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

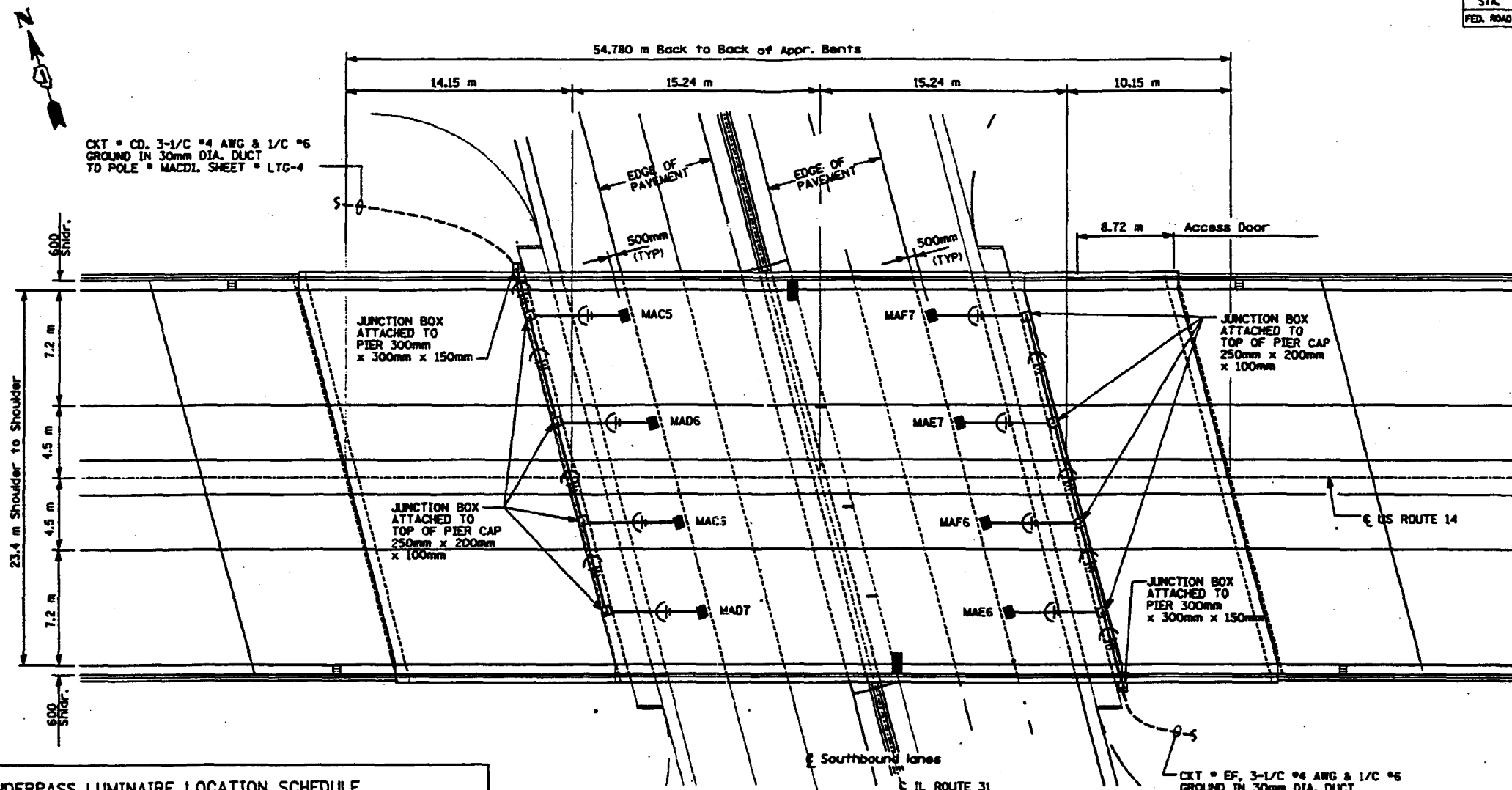
**EXISTING LIGHTING PLAN  
 FOR REFERENCE ONLY**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	29
				CONTRACT NO. 62K57
ILLINOIS FED. AID PROJECT				

E-ELP-6

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	2201122V-1	MCHEERY	318	176
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		



UNDERPASS LUMINAIRE LOCATION SCHEDULE		
LUMINAIRE NO.	LOCATION	REMARKS
MACS & MAF7	CENTERED BETWEEN BEAMS 2 AND 3	
MAD6 & MAE7	CENTERED BETWEEN BEAMS 4 AND 5	
MACS & MAF6	CENTERED BETWEEN BEAMS 6 AND 7	
MAD7 & MAE6	BETWEEN COLUMNS 8 AND 9	

PLAN

- LEGEND:**
- UNDERPASS LUMINAIRE, SSW LPS
  - JUNCTION BOX (SIZE AS INDICATED ON PLANS)
  - ELECTRIC CABLE IN CONDUIT, (EPR-TYPE RW) NO. 10 AWG UNLESS OTHERWISE SPECIFIED, NUMBER OF CONDUCTORS AS INDICATED ON PLANS.
  - CROSS-HATCHED LINES DENOTE NUMBER OF WIRES IN CONDUIT. ANY CIRCUIT WITHOUT FURTHER DESIGNATION IS A 3-WIRE CIRCUIT.
  - 25mm (1") RIGID STEEL CONDUIT
  - PHASE (S) AS NEEDED
  - NEUTRAL WHITE
  - GROUND GREEN

**NOTE**  
L FOR DETAILS SEE SHEETS LTC-17 & LTC-18

**RECORD DRAWINGS**  
**HECKER AND COMPANY, INC.**

By *R. Buer* Date *6/21/99*

REFERENCE ONLY

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 336 (ILL. RTE. 31)  UNDERPASS LIGHTING IL ROUTE 31 & US ROUTE 14
NAME	DATE	

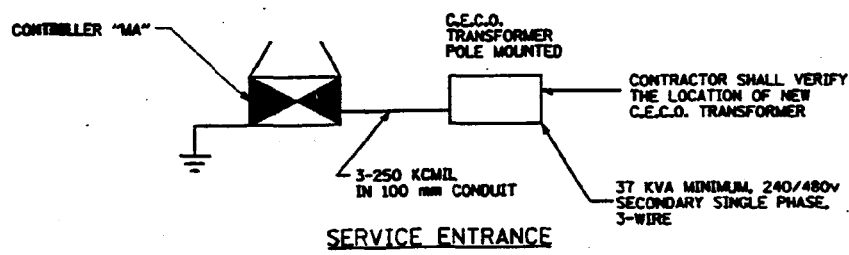
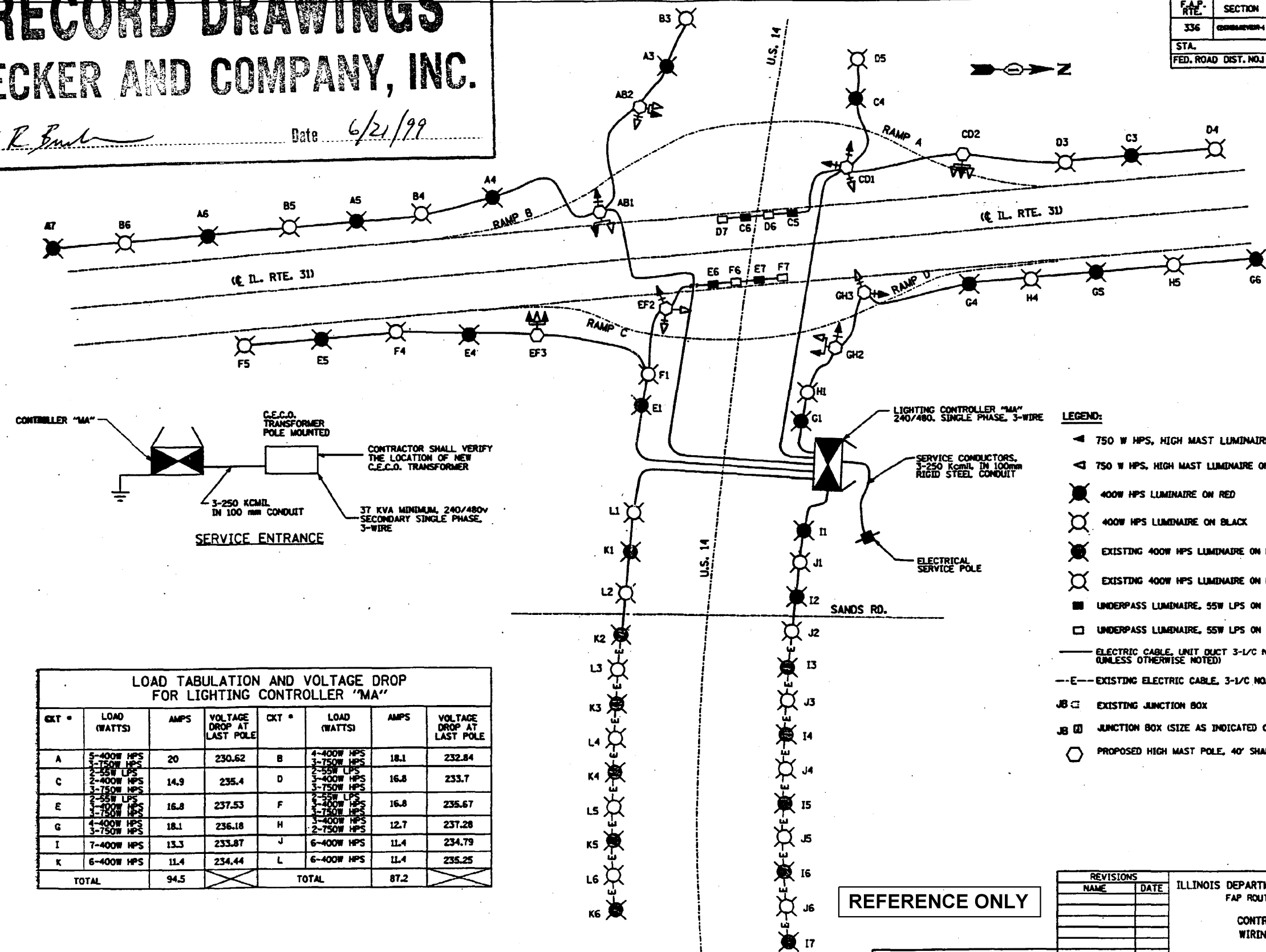
SCALE = 1/8" = 1'-0"  
DATE: 10-23-97  
DRAWN BY: CR  
CHECKED BY: ADG

# RECORD DRAWINGS

## HECKER AND COMPANY, INC.

By R. Eubank Date 6/21/99

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	08000000-1	MC HENRY	318	177
STA.		TO STA.		
FED. ROAD DIST. NO. J		ILLINOIS	FED. AID PROJECT	



**LOAD TABULATION AND VOLTAGE DROP FOR LIGHTING CONTROLLER "MA"**

CKT #	LOAD (WATTS)	AMPS	VOLTAGE DROP AT LAST POLE	CKT #	LOAD (WATTS)	AMPS	VOLTAGE DROP AT LAST POLE
A	5-400W HPS 2-750W HPS 2-55W LPS	20	230.62	B	4-400W HPS 3-750W HPS 2-55W LPS	18.1	232.84
C	2-400W HPS 3-750W HPS 2-55W LPS	14.9	235.4	D	2-400W HPS 3-750W HPS 2-55W LPS	16.8	233.7
E	2-400W HPS 3-750W HPS 2-55W LPS	16.8	237.53	F	2-400W HPS 3-750W HPS 2-55W LPS	16.8	235.67
G	4-400W HPS 3-750W HPS	18.1	236.18	H	3-400W HPS 2-750W HPS	12.7	237.28
I	7-400W HPS	13.3	233.87	J	6-400W HPS	11.4	234.79
K	6-400W HPS	11.4	234.44	L	6-400W HPS	11.4	235.25
TOTAL		94.5		TOTAL		87.2	

- LEGEND:**
- ▲ 750 W HPS, HIGH MAST LUMINAIRE ON RED
  - △ 750 W HPS, HIGH MAST LUMINAIRE ON BLACK
  - 400W HPS LUMINAIRE ON RED
  - 400W HPS LUMINAIRE ON BLACK
  - (with slash) EXISTING 400W HPS LUMINAIRE ON RED
  - (with slash) EXISTING 400W HPS LUMINAIRE ON BLACK
  - UNDERPASS LUMINAIRE, 55W LPS ON RED
  - UNDERPASS LUMINAIRE, 55W LPS ON BLACK
  - ELECTRIC CABLE, UNIT DUCT 3-1/C NO. 4 AND 1/C NO. 6 GROUND (UNLESS OTHERWISE NOTED)
  - - - EXISTING ELECTRIC CABLE, 3-1/C NO. 4 AND 1/C NO. 6 GROUND
  - JB □ EXISTING JUNCTION BOX
  - JB □ (with size) JUNCTION BOX (SIZE AS INDICATED ON PLANS)
  - (with shaft) PROPOSED HIGH MAST POLE, 40' SHAFT

F:\PROJECT\JOB#-217\FINAL\217-LTG9

REFERENCE ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAP ROUTE 336 (ILL.RTE.31)  
CONTROLLER "MA"  
WIRING DIAGRAM

SCALE: NONE      DRAWN BY CR  
DATE: 10-23-97      CHECKED BY ADO



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

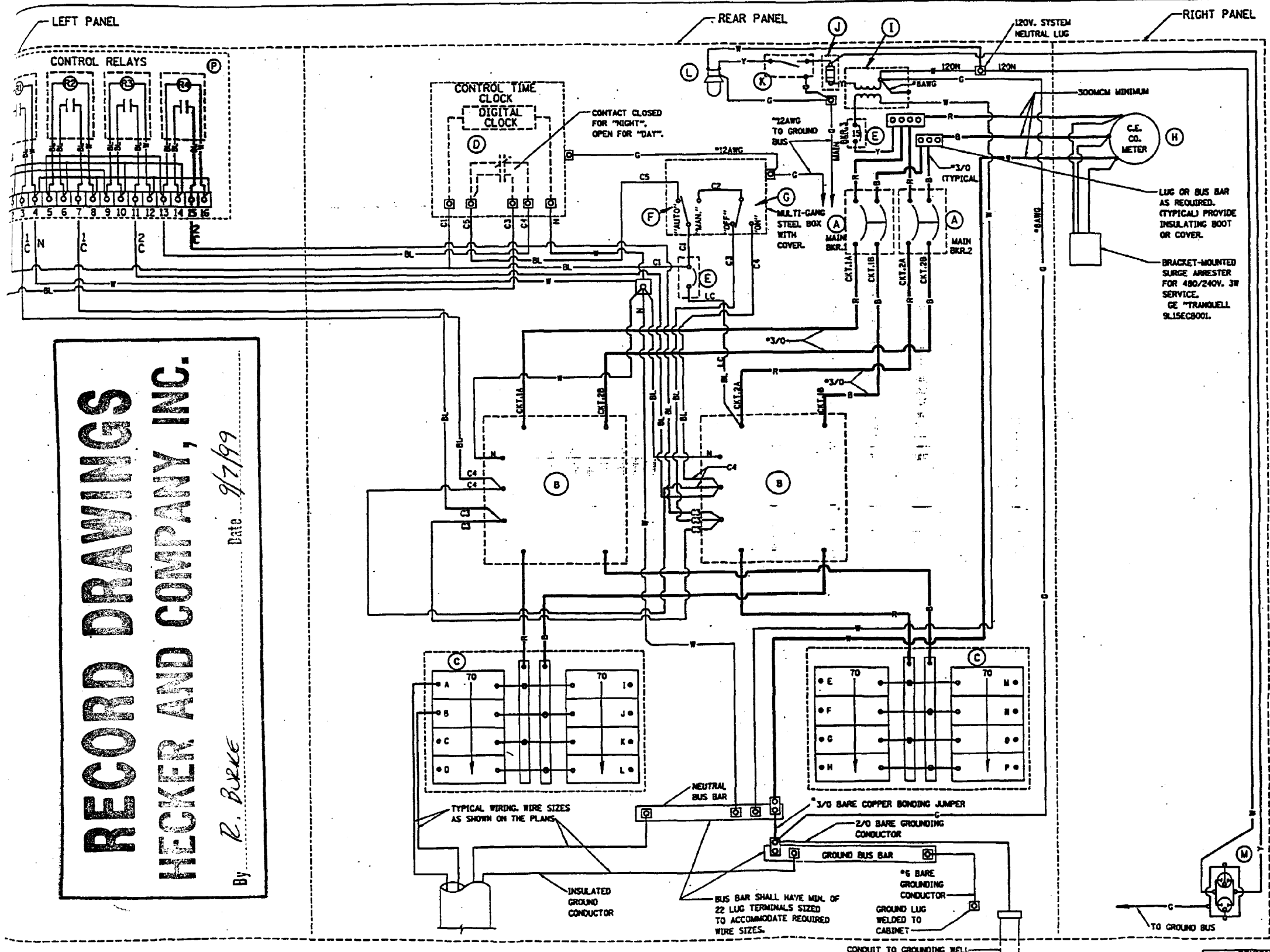
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN FOR REFERENCE ONLY			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	31
CONTRACT NO. 62K57				
ILLINOIS FED. AID PROJECT				

E-ELP-8

STATE	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
ILL.	336	McHENRY	318	179



ITEM	QUANT.	DESCRIPTION
A	2	CIRCUIT BREAKER, MOLDED CASE-THERMAL MAGNETIC, 2-POLE, 500V, 4-C. 225A FRAME, 175A, NON-INTERCHANGABLE TRIP, BOLT-ON TYPE, INTERRUPTING CAPACITY OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPERES AT 480V.
B	2	LIGHTING CONTACTOR REMOTE CONTROL SWITCH MECHANICALLY HELD, ASCO SEC. MOUNTED ON SUB PANEL 200A, 2P, 600V, WITH 240V. COIL.
C	2	PANEL BOARD (EXTERIOR ONLY) 480/240V, SINGLE PHASE WITH 200A, COPPER MAINS AND EIGHT 1P-10A BOLT-ON BRANCH BREAKERS EACH RATED 27TV, WITH INTERRUPTING CAPACITY OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 27TV.
D	1	TIME CLOCK, 240V, 60 HZ, MICROPROCESSOR BASED 2-CHANNEL CONTROLLER WITH ASTRONOMIC FUNCTIONS, RATED FOR -30 DEGREES C. TO +70 DEGREES C.
E	2	CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 27TV, BOLT-ON TYPE, 15A WITH AN INTERRUPTING RATING OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 27TV.
F	1	CONTROL SWITCH MOMENTARY CONTACT, SPDT, 20A, 240V.
G	1	CONTROL SWITCH TOGGLE TYPE, SPDT, 20A, 240V, PREMIUM SPEC. GRADE.
H	1	SOCKET FOR ELECTRIC UTILITY COMPANY METER.
I	1	STEP DOWN TRANSFORMER 240V-120V, 1KVA.
J	2	FUSE HOLDER 15A, 250V, 5A, FUSE.
K	1	20A SPST MICRO SWITCH MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED.
L	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT, WITH GLOBE AND GUARD AND MOUNTING BOX.
M	1	GFI RECEPTACLE, 120V, 20A, PREMIUM SPEC. GRADE, NOMA REFERENCE 5-15R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER.

- NOTES:**
- ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION, OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF-STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 2-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS. NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS. INTERNAL CABINET WIRING SHALL BE IDENTIFIED AS INDICATED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END. IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.
  - ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.  
R = RED    BL = BLUE    W = WHITE  
B = BLACK    Y = YELLOW    G = GREEN
  - PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
  - ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12AWG STRANDED UNLESS OTHERWISE INDICATED.
  - ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
  - THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL"
  - SEE CABINET AND FOUNDATION DETAIL SHEET FOR SCHEMATIC DIAGRAM AND DEVICE LAYOUT.
  - CONTROL RELAYS CAN BE ELIMINATED IF THE CONTROL TIME CLOCK OUTPUT CONTACTS ARE RATED FOR CONTACTOR INRUSH CURRENT.

**RECORD DRAWINGS**  
**HECKER AND COMPANY, INC.**  
 By *R. Burke* Date *9/7/99*

REVISIONS	NAME	DATE
C. BRATLEY		06-30-86
M. BURKS		07-25-91
S. MARLET		10-11-93

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 P.O. BOX 336 (ILL. RTE. 33)  
 CONTROL CABINET, CONSOLE TYPE  
 PANEL LAYOUT

REVISIONS  
 DATE 10/11/93

REFERENCE ONLY



USER NAME = *USER*	DESIGNED - HM	REVISED -
PLOT SCALE = *SCALE*	DRAWN - AM	REVISED -
PLOT DATE = *DATE*	CHECKED - KK	REVISED -
	DATE - 01-31-2020	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING PLAN  
 FOR REFERENCE ONLY

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-184-L	Mc Henry	32	32
			CONTRACT NO. 62K57	
ILLINOIS FED. AID PROJECT				

E-ELP-9