F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	1
	ILLINOIS	CONTRACT NO. 62P14		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

PROJECT IS LOCATED IN THE CITY OF PARK CITY AND VILLAGE OF GURNEE

TRAFFIC DATA:

WASHINGTON ST
S.N. 049-0016, S.N. 049-0097 2019 ADT = 38,900

DESIGN CLASSIFICATION = MINOR ARTERIAL

DESIGN SPEED = 45 MPH

POSTED SPEED = 45 MPH

U.S. 41
S.N. 049-0016, 2017 ADT = 53,700

DESIGN CLASSIFICATION = PRINCIPAL ARTERIAL

DESIGN SPEED = 55 MPH

POSTED SPEED = 55 MPH

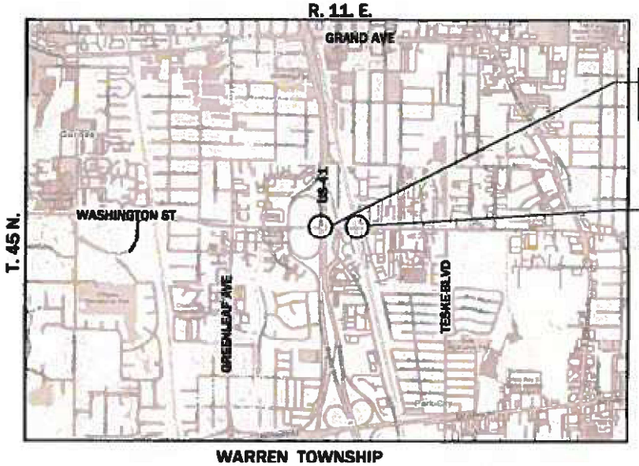
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 346 (US 41) AT WASHINGTON STREET
F.A.U. ROUTE 1223 (WASHINGTON STREET) AT UP RR (0.1 MILES E. OF US 41)
SECTION 2021-077-B-R&FL
BRIDGE DECK REPLACEMENT AND BRIDGE DECK OVERLAY
PROJECT: NHPP-STP-66GC(527)
LAKE COUNTY

C-91-216-21

3rd P.M.
R. 11. E.

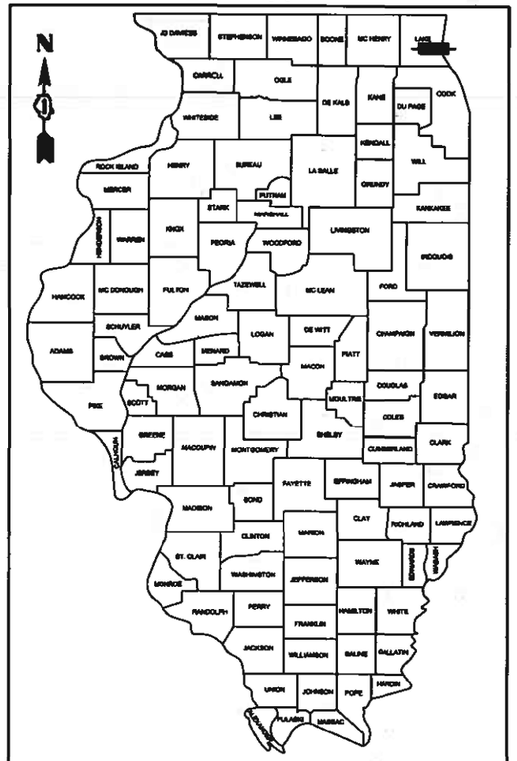


WARREN TOWNSHIP

LOCATION MAP
NOT TO SCALE

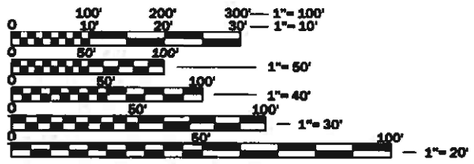
GROSS LENGTH = 2,344 FT. = 0.44 MILES
NET LENGTH = 988 FT. = 0.19 MILES

D-91-180-21



LOCATION OF SECTION INDICATED THUS: -

LIN ENGINEERING, LTD.
Consulting Engineers
Westmont, Illinois



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

SHIRAZ TARIQUE
062-064219
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

3/21/2022

Shiraz Tarique — Date
Illinois Registered Engineer No. 062-064219
Registration Expires Nov. 30, 2023

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 21 20 22
REGIONAL ENGINEER
May 13, 2022
ENGINEER OF DESIGN AND ENVIRONMENT
May 13, 2022
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: PRAVEEN KAINI, PE. (847-705-4237)
PROJECT MANAGER: J. ALAIN MIDY, PE. (847-221-3056)

CONTRACT NO. 62P14

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEM
420401-13	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606301-04	PC CONCRETE ISLANDS AND MEDIANS
630001-12	STEEL PLATE BEAM GUARDRAIL
631006-08	TRAFFIC BARRIER TERMINAL, TYPE 1B
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701422-10	LANE CLOSURE, MULTILANE, FOR SPEEDS >= 45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >= 45 MPH
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAIL
728001-01	TELESCOPING STEEL SIGN SUPPORT
731001-01	BASE FOR TELESCOPING STEEL SIGN SUPPORT
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

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BD-32	BUTT JOINT AND HMA TAPER DETAILS
BM-21	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
TC-08	ENTRANCE AND EXIT RAMP CLOSURE DETAIL
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC-14	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
TC-16	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS
TC-22	ARTERIAL ROAD INFORMATION SIGN
TC-26	DRIVEWAY ENTRANCE SIGNING

LAKE COUNTY STANDARDS

LC7805	RECESSED REFLECTIVE PAVEMENT MARKER

GENERAL NOTES

THE THICKNESS OF HMA 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 IS PLACED.

SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THEN GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE CONTRACTOR SHALL CALL "J.U.L.I.E" AT (800) 892-0123 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH BURIED ELECTRIC, TELEPHONE, AND GAS UTILITIES ARE IN THE AREA. 48 HOUR NOTIFICATION IS REQUIRED.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS THAT CONFLICT WITH TEMPORARY MARKINGS, IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR PROPOSED STRIPING AT THE COMPLETION OF THIS CONTRACT. EXACT LOCATIONS OF ALL PROPOSED PAVEMENT MARKINGS SHALL BE DIRECTED BY THE RESIDENT ENGINEER.

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

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH AFFECTED UTILITY COMPANIES AND THE VILLAGE OF PARK CITY.

THE CONTRACTOR SHALL MAINTAIN ALL ROADWAYS OPEN TO TRAFFIC AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.

THE CONTRACTOR SHALL USE CARE NEAR ANY AND ALL EXISTING ITEMS THAT WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

DURING CONSTRUCTION OPERATIONS, IF ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES SUCH THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKDAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL UTILITY STRUCTURES SHALL BE FREE FROM DUST AND DEBRIS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

PERMANENT PAVEMENT MARKINGS SHALL BE AS SPECIFIED IN THE PLANS AND SHALL BE PLACED IN ACCORDANCE WITH THE "DISTRICT ONE TYPICAL PAVEMENT MARKINGS" DETAILS. (TC-13, DISTRICT ONE TYPICAL PAVEMENT MARKINGS).

TWO WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS, THE ENGINEER SHALL CONTACT FADI SULTAN THE AREA TRAFFIC FIELD ENGINEER, AT FADI.SULTAN@ILLINOIS.GOV.

THE SUBGRADE STABILITY SHALL BE VERIFIED BY PROOF ROLLING WITH A FULL LOADED TANDEM AXLE TRUCK.

ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTORS VEHICLES AND/OR EQUIPMENT IS TO BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

A MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR 14 DAYS IN ADVANCE OF ANY STAGE CHANGES OR FULL EXPRESSWAY CLOSURES. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO: LANE AND RAMP CLOSURES, EXISTING GEOMETRICS, AND EQUIPMENT AND MATERIAL LOCATION.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4155. ARTERIAL TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV, A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING ANY WORK.

GEOTECHNICAL FABRIC FOR GROUND STABILIZATION AND/OR AGGREGATE SUBGRADE IMPROVEMENT (CU YD) HAVE BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSTABLE AND/OR UNSUITABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ABOVE ITEM WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC OR DYNAMIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.04 OF THE SSRBC AND IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.

THE SEEDING DATES FOR BARE EARTH SEEDING OF MIXTURE CLASS 2A SHALL BE FROM APRIL 1 TO JUNE 1 AND FROM AUGUST 15 TO SEPTEMBER 30. ALL SEEDING NOT SOWN ACCORDINGLY TO THE SPECIFIED SEASONAL DATE SHALL REQUIRE PRIOR WRITTEN APPROVAL FROM THE ENGINEER, FAILURE TO SECURE SUCH APPROVAL SHALL RESULT IN THE REJECTION OF THE SEEDING AND REPLACEMENT BY THE CONTRACTOR AT THEIR EXPENSE.

THE CONTRACTOR SHALL CONTACT RICK WILLMAN, PACE TRANSPORTATION ENGINEER, VIA EMAIL AT RICHARD.WILLMAN@PACEBUS.COM A MINIMUM OF 2 WEEKS IN ADVANCE OF BEGINNING ANY WORK.

THE AGGREGATE GRADATION FOR THE AGGREGATE SUBGRADE IMPROVEMENT 12" LOWER LIFT SHALL BE CS 1 OR RR 1.

THE CONTRACTOR SHALL PROTECT OVERHEAD WIRES FROM DAMAGE BY CONSTRUCTION ACTIVITIES. IF LARGE EQUIPMENT WILL BE USED NEAR EXISTING OR PROPOSED OVERHEAD LINES, FACILITY PROTECTION MAY BE REQUIRED. PLEASE CALL (800) 334-7661 TO CREATE A TICKET FOR LINE PROTECTION AS SOON AS POSSIBLE.

COMMITMENTS

NONE.

HOT- MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AIR VOIDS @ NDES	QUALITY MANAGEMENT PROGRAM (QMP)
BUTT JOINT		
POLY, HMA SURFACE COURSE, IL-9.5, MIX "E", N70	4% @ 70 GYR.	QC/QA
WASHINGTON ST PAVEMENT		
POLY, HMA SURFACE COURSE, IL-9.5, MIX "E", N70, 2"	4% @ 70 GYR.	QC/QA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, VAR. DEPTH	4% @ 90 GYR.	QC/QA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 2 1/4"	4% @ 90 GYR.	QC/QA
TEMPORARY PAVEMENT		
HMA SURFACE COURSE, MIX "D", N70, 2"	4% @ 70 GYR.	QC/QA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 8"	4% @ 70 GYR.	QC/QA
HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARDRAIL		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 6"	4% @ 90 GYR.	QC/QA
PAVEMENT CONNECTOR (HMA)		
POLY, HMA SURFACE COURSE, IL-9.5, MIX "E", N70, 2"	4% @ 70 GYR.	QC/QA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90, 7 1/2"	4% @ 90 GYR.	QC/QA
HOT-MIX ASPHALT STABILIZED SUBBASE 4"		
STABILIZED SUBBASE - HOT-MIX ASPHALT, 4" (HMA BINDER IL-19.0)	3% @ 50 GYR.	QC/QA
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP)		

MIXTURE TABLE NOTES

1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.
2. THE AC TYPE FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE AC TYPE SHALL BE "PG 64-22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.
3. PC CONCRETE TEMPORARY PAVEMENT SHALL CONSIST OF CLASS PV CONCRETE MEETING THE REQUIREMENTS OF ART. 1020 OF THE STANDARD SPECIFICATIONS. TEMPORARY PCC PAVEMENT DOES NOT REQUIRE DOWEL BARS.
4. PC CONCRETE TEMPORARY PAVEMENT SHALL CONSIST OF 8" TEMPORARY PCC PAVEMENT. 4" SUBBASE GRANULAR MATERIAL TYPE B (CA-6) SHALL BE PLACED UNDERNEATH BOTH THE HMA AND PCC TEMPORARY PAVEMENT OPTIONS. THIS COST IS INCLUDED IN THE PRICE PER SQ YD FOR TEMPORARY PAVEMENT.

FACTORS FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

SEEDING, CLASS 2A	200 LB/ACRE
SHORT TERM PAVEMENT MARKING	10 FT/100 FT
NITROGEN FERTILIZER NUTRIENT	90 LB/ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90 LB/ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LB/ACRE
GRANULAR MATERIAL	2.05 TONS/CU YD

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Westmont, Illinois

USER NAME = rober	DESIGNED - NH	REVISED -	
	DRAWN - NH	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 4/27/2022	DATE - 03/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
INDEX, HIGHWAY STANDARDS & GENERAL NOTES

SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	2
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
20200100	EARTH EXCAVATION	CU YD	8		8
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	122		122
21101615	TOPSOIL FURNISH AND PLACE 4"	SQ YD	451		451
25000210	SEEDING, CLASS 2A	ACRE	0.25		0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	30		30
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	30		30
25100630	EROSION CONTROL BLANKET	SQ YD	451		451
28000400	PERIMETER EROSION BARRIER	FOOT	696		696
28000510	INLET FILTERS	EACH	14	12	2
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	41		41
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	541		541
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	892	796	96
31200500	STABILIZED SUBBASE - HOT MIX ASPHALT, 4"	SQ YD	97		97
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	690		690

* SPECIALTY ITEM

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Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 1 OF 10 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	3
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

REV-SEP

CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	541		541
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	627	627	
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	84		84
40604172	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "E", N70	TON	114		114
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	445		445
42000411	PORTLAND CEMENT CONCRETE PAVEMENT 9 1/2" (JOINTED)	SQ YD	97		97
44000100	PAVEMENT REMOVAL	SQ FT	3,869		3,869
44000152	HOT-MIX ASPHALT REMOVAL, 3/4"	SQ YD	165		165
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	890	631	259
44003100	MEDIAN REMOVAL	SQ FT	6,418	5,349	1,069
50102400	CONCRETE REMOVAL	CU YD	62.7	21.7	41.0
50104650	SLOPE WALL REMOVAL	SQ YD	344	344	
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1
50157300	PROTECTIVE SHIELD	SQ YD	1,700	1,119	581

* SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
50200100	STRUCTURE EXCAVATION	CU YD	212.0		212.0
50300225	CONCRETE STRUCTURES	CU YD	89.2		89.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	467.1	25.3	441.8
50300260	BRIDGE DECK GROOVING	SQ YD	2,080.0		2,080.0
50300300	PROTECTIVE COAT	SQ YD	4,579	2,276	2,303
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	236.2		236.2
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,160		3,160
50500505	STUD SHEAR CONNECTORS	EACH	6,300		6,300
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	217,980	2,470	215,510
50800515	BAR SPLICERS	EACH	858	25	833
51100100	SLOPE WALL 4 INCH	SQ YD	344	344	
51500100	NAME PLATES	EACH	1		1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	348	172	176
52200010	TEMPORARY SHEET PILING	SQ FT	270		270

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
	58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	212.0		212.0
	58700300	CONCRETE SEALER	SQ FT	3,827	3,706	121
	59000200	EPOXY CRACK INJECTION	FOOT	440	440	
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	117		117
	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	275.0	275.0	
	60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4		4
	60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	236		236
	60260100	INLETS TO BE ADJUSTED	EACH	1	1	
	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	890	631	259
	60618730	CONCRETE MEDIAN, TYPE M-2.06	SQ FT	5,266	5,266	
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	240.0		240.0
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4		4
	63200310	GUARDRAIL REMOVAL	FOOT	781		781
*	~~66900200~~	~~NON-SPECIAL WASTE DISPOSAL~~	~~CU YD~~			

* SPECIALTY ITEM

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Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 4 OF 10 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	6
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

REV-SEP

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
*	~~66900530~~	~~SOIL DISPOSAL ANALYSIS~~	~~EACH~~			
*	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	4		4
	67100100	MOBILIZATION	L SUM	1	0.5	0.5
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	90	45	45
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	180	90	90
	70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	888		888
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	6,702		6,702
	70307100	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS - TYPE IV TAPE	SQ FT	775	583	192
	70307120	TEMPORARY PAVEMENT MARKING-LINE 4" - TYPE IV TAPE	FOOT	19,856	11,228	8,628
	70307130	TEMPORARY PAVEMENT MARKING - LINE 6" - TYPE IV TAPE	FOOT	3,026	2,942	84
	70307210	TEMPORARY PAVEMENT MARKING - LINE 24" - TYPE IV TAPE	FOOT	368	203	165

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,775.0	712.5	1,062.5
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,762.5	675.0	1,087.5
	70600255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	8	4	4
	70600322	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	8	4	4
*	72000100	SIGN PANEL - TYPE 1	SQ FT	20	20	
*	72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	2	2	
*	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	25.0	25.0	
*	73100100	BASE FOR TELESCOPING STEEL SIGN SUPPORT	EACH	2	2	
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1,982		1,982
*	78000300	THERMOPLASTIC PAVEMENT MARKING - LINE 5"	FOOT	1,340		1,340
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	34		34
*	78004620	PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - LINE 4"	FOOT	1,239	708	531
*	78004630	PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - LINE 6"	FOOT	1,967	1,626	341
*	78006100	PREFORMED THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	FOOT	463	328	135

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
*	78006180	PREFORMED THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	296	234	62
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	4,405	2,822	1,583
*	78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	4,220	3,192	1,028
*	78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	64		64
*	78100300	REPLACEMENT REFLECTOR	EACH	91	58	33
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	11		11
*	78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	285	136	149
*	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	6,279	3,668	2,611
*	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	263		263
*	81400100	HANDHOLE	EACH	2		2
*	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	5	3	2
*	85000400	MAINTENANCE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2	1	1
*	87900200	DRILL EXISTING HANDHOLE	EACH	2		2
*	88600700	PREFORMED DETECTOR LOOP	FOOT	76		76

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
*	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1
*	89501250	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2	1	1
*	89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	260		260
*	X0324256	FIBER OPTIC CABLE SPLICE	EACH	1		1
*	X0327032	TEMPORARY VIDEO DETECTION	EACH	1		1
*	X1400450	REBUILD EXISTING HEAVY-DUTY HANDHOLE	EACH	5	4	1
	X4400100	PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	175		175
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	460		460
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1,722	1,722	
	X6700407	ENGINEERS' FIELD OFFICE, TYPE A (D1)	CAL MO	12	6	6
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.5	0.5
	X7010410	SPEED DISPLAY TRAILER	CAL MO	12	6	6
*	X7810300	RECESSED REFLECTIVE PAVEMENT MARKER	EACH	18	18	
*	X7810301	RECESSED REFLECTIVE PAVEMENT MARKER (HMA)	EACH	12		12

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
	Z0001700	APPROACH SLAB REPAIR (FULL DEPTH)	SQ YD	1	1	
	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	3,430		3,430
	Z0001905	STRUCTURAL STEEL REPAIR	POUND	210		210
	Z0005216	HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL	SQ YD	53		53
	Z0006016	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 3/4 INCHES	SQ YD	2,268	2,268	
	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	2,268	2,268	
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ YD	133	85	48
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5
	Z0015802	PLUG EXISTING DECK DRAINS	EACH	4	4	
	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	4	4	
	Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	7		7
	Z0018051	DRAINAGE SCUPPER TO BE ADJUSTED	EACH	12	12	
	Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	2,091	2,091	
*	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	50	20	30
*	Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	5	3	2

* SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	CONSTRUCTION CODE NHPP 80% FED/20% STATE SN 049-0016 0059 BRIDGE	CONSTRUCTION CODE STP 80% FED/20% STATE SN 049-0097 0013 BRIDGE
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		1
	Z0062456	TEMPORARY PAVEMENT	SQ YD	611	611	
*	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	3	2	1
Ø	Z0076600	TRAINEES	HOURS	500	500	
Ø	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500	500	

* SPECIALTY ITEM

Ø 0042

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 2.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET 10 OF 10 SHEETS | STA. TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	12

CONTRACT NO. 62P14

ILLINOIS FED. AID PROJECT

REV-SEP

LANDSCAPING TABLE

FROM STATION	TO STATION	LT/RT	SEEDING, CLASS 2A	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER
			ACRE	SQ YD	FOOT
57+00.00	58+94.00	RT	0.03	130.34	195.83
57+00.00	58+73.00	LT	0.02	115.85	173.14
60+06.00	61+60.00	RT	0.02	97.52	153.58
59+87.00	61+60.00	LT	0.02	106.59	172.59
		ROUNDED TOTAL	0.25	451	696

EARTHWORK SCHEDULE

EARTH EXCAVATION	STRUCTURE EXCAVATION	EARTH EXC. ADJ. FOR SHRINKAGE (15%)	EMBANKMENT	TOPSOIL, 4"	EARTHWORK BALANCE (+/-)
CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
8	212	187	2	50	-135

SUBBASE GRANULAR MATERIAL, TYPE B 4"

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
39+56.83	43+75.46	RT/LT	184.80
44+90.67	50+64.51	RT/LT	560.97
53+30.28	54+42.98	RT/LT	49.38
55+72.86	57+74.21	RT/LT	96.02
		ROUNDED TOTAL	892

INLET FILTERS

FROM STATION	LT/RT	EACH
51+05.57	RT	1
51+05.57	LT	1
51+15.68	RT	1
51+15.68	LT	1
51+25.41	LT	1
51+25.41	RT	1
52+65.03	RT	1
52+63.81	LT	1
52+75.13	RT	1
52+75.32	LT	1
52+85.05	RT	1
52+84.60	LT	1
62+21.25	RT	1
62+23.01	LT	1
	TOTAL	14

AGGREGATE SUBGRADE IMPROVEMENT 12"

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
55+72.86	57+74.21	RT/LT	96.02
57+74.21	57+98.75	LT/RT	242.16
60+28.26	60+52.71	LT/RT	202.65
		ROUNDED TOTAL	541

STABILIZED SUBBASE-HOT MIX ASPHALT, 4"

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
55+72.86	57+74.21	RT/LT	96.02
		ROUNDED TOTAL	97

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
57+25.00	57+55.00	RT/LT	303.96
61+30.00	61+60.00	RT/LT	236.19
		ROUNDED TOTAL	541

PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
50+29.53	50+64.53	LT	143.22
50+29.53	50+64.53	RT	152.17
53+30.28	53+65.28	LT	189.35
53+30.28	53+65.28	RT	142.16
		ROUNDED TOTAL	627

BITUMINOUS MATERIALS (TACK COAT)

FROM STATION	TO STATION	LT/RT	POUND
57+55.00	57+74.00	LT/RT	126.64
60+53.00	61+30.00	LT/RT	562.81
		ROUNDED TOTAL	690

HOT-MIX ASPHALT BINDER COURSE, IL-19.0,N90

FROM STATION	TO STATION	LT/RT	TON
60+53.00	60+73.00	LT/RT	25.70
60+73.00	61+30.00	LT/RT	57.84
		ROUNDED TOTAL	84

POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-.95, MIX "E", N70

FROM STATION	TO STATION	LT/RT	TON
57+55.00	57+74.00	LT/RT	26.27
60+53.00	61+30.00	LT/RT	87.55
		ROUNDED TOTAL	114

PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
57+74.21	57+98.75	RT/LT	242.16
60+19.18	60+52.83	RT/LT	202.65
		ROUNDED TOTAL	445

PORTLAND CEMENT CONCRETE PAVEMENT 9 1/2" JOINTED

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
55+72.86	57+74.21	RT/LT	96.02
		ROUNDED TOTAL	97

PAVEMENT REMOVAL

FROM STATION	TO STATION	LT/RT	AREA (SQ FT)
57+74.21	58+00.00	LT	840.47
57+74.21	58+00.00	RT	1,182.36
60+28.15	60+52.89	RT/LT	1,845.47
		ROUNDED TOTAL	3,869

HOT-MIX ASPHALT REMOVAL, 3/4"

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
60+52.71	60+72.91	RT/LT	164.24
		ROUNDED TOTAL	165

COMBINATION CURB AND GUTTER REMOVAL

FROM STATION	TO STATION	LT/RT	FOOT
47+49.48	50+64.50	RT	315.10
47+49.28	50+64.49	LT	315.10
57+55.22	58+09.49	RT	55.00
60+19.35	61+30.03	LT	111.00
60+37.76	61+30.07	RT	93.00
		ROUNDED TOTAL	890

MEDIAN REMOVAL

FROM STATION	TO STATION	LT/RT	AREA (SQ FT)
44+90.67	50+64.51	RT/LT	5048.69
53+30.00	54+42.31	RT/LT	299.46
55+72.86	58+00.99	RT/LT	1068.98
		ROUNDED TOTAL	6,418

INLETS TO BE ADJUSTED

FROM STATION	LT/RT	EACH
57+99.04	RT	1
	TOTAL	1

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24

FROM STATION	TO STATION	LT/RT	FOOT
47+49.48	50+64.50	RT	315.10
47+49.28	50+64.49	LT	315.10
57+55.22	58+09.49	RT	55.00
60+19.35	61+30.03	LT	111.00
60+37.76	61+30.07	RT	93.00
		ROUNDED TOTAL	890

CONCRETE MEDIAN, TYPE M-2.06

FROM STATION	TO STATION	LT/RT	AREA (SQ FT)
44+90.67	50+64.51	RT/LT	5,048.69
53+30.00	54+42.00	RT/LT	216.55
		ROUNDED TOTAL	5,266

GUARDRAIL REMOVAL

FROM STATION	TO STATION	LT/RT	FOOT
57+55.29	61+30.06	RT	374.98
57+25.00	61+30.04	LT	405.09
		ROUNDED TOTAL	781

STEEL PLATE BEAM GUARDRAIL,TY A, 6' POSTS

FROM STATION	TO STATION	LT/RT	FOOT
57+55.29	57+89.23	RT	34.00
57+25.00	57+68.12	LT	44.00
60+59.10	61+30.06	RT	91.00
60+39.36	61+30.04	LT	71.00
		ROUNDED TOTAL	240.00

TRAFFIC BARRIER TERMINAL, TYPE 6

FROM STATION	TO STATION	LT/RT	EACH
57+89.23	58+28.62	RT	1
57+68.12	58+07.25	LT	1
59+99.97	60+39.36	LT	1
60+19.71	60+59.10	RT	1
		TOTAL	4

TEMPORARY CONCRETE BARRIER

FROM STATION	TO STATION	LT/RT	FOOT
STAGE 1			
49+65.55	53+64.76	LT	400.00
50+49.64	53+49.64	LT	300.00
56+28.59	62+14.71	LT	587.50
56+65.04	61+40.04	LT	475.00
STAGE 2			
49+80.39	53+79.69	RT	12.50
		ROUNDED TOTAL	1,775.0

RELOCATE TEMPORARY CONCRETE BARRIER

FROM STATION	TO STATION	LT/RT	FOOT
STAGE 2			
49+80.39	53+79.69	RT	387.50
50+49.86	53+37.36	RT	287.50
56+28.00	62+38.99	RT	612.50
56+65.00	61+40.00	RT	475.00
		ROUNDED TOTAL	1,762.5

SIGN PANEL TYPE 1

FROM STATION	LT/RT	AREA (SQ FT)
44+98.16	RT	5.00
44+98.16	RT	5.00
54+37.34	LT	5.00
54+37.34	LT	5.00
	ROUNDED TOTAL	20

REMOVE SIGN PANEL ASSEMBLY - TYPE B

FROM STATION	LT/RT	EACH
39+71.13	RT	1
43+62.15	LT	1
	TOTAL	2

TELESCOPING STEEL SIGN SUPPORT

FROM STATION	LT/RT	FOOT
44+98.16	RT	12.5
54+37.34	LT	12.5
	TOTAL	25.0

BASE FOR TELESCOPING STEEL SIGN SUPPORT

FROM STATION	LT/RT	EACH
44+98.16	RT	1
54+37.34	LT	1
	TOTAL	2

TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS - TYPE IV TAPE

FROM STATION	LT/RT	AREA (SQ FT)
STAGE 1		
37+00.00	RT	36.4
38+20.00	RT	36.4
43+40.00	RT	36.4
43+40.00	RT	36.4
46+95.00	LT	46.8
46+95.00	LT	46.8
54+00.00	LT	46.8
54+84.91	LT	46.8
55+27.41	RT	36.4
55+38.40	RT	31.2
55+98.91	LT	46.8
STAGE 2		
37+46.72	RT	36.4
37+70.23	RT	36.4
42+44.17	RT	36.4
42+84.17	RT	36.4
46+25.53	LT	36.4
46+25.53	LT	36.4
53+91.40	RT	31.2
54+87.00	LT	31.2
56+19.92	RT	31.2
56+94.88	RT	15.6
ROUNDED TOTAL		775

TEMPORARY PAVEMENT MARKING-LINE 24" TYPE IV TAPE

FROM STATION	LT/RT	FOOT
STAGE 1		
43+71.87	RT	42.00
44+94.44	LT	55.00
54+08.94	LT	16.00
54+84.35	LT	24.00
55+31.05	RT	23.00
55+88.46	LT	13.00
STAGE 2		
43+71.32	RT	50.60
44+94.26	LT	54.66
54+10.96	RT	11.00
54+85.67	LT	39.00
55+31.05	RT	23.00
56+00.94	RT	16.00
ROUNDED TOTAL		368

TEMPORARY PAVEMENT MARKING-LINE 4" TYPE IV TAPE

FROM STATION	TO STATION	LT/RT	FOOT
STAGE 1			
33+39.84	38+82.72	RT	566.93
39+20.03	44+11.80	RT	550.77
39+55.04	43+72.02	RT/LT	417.26
44+59.75	54+76.86	RT	1,113.36
44+90.28	54+10.87	RT/LT	1,844.98
44+94.41	54+72.49	LT	992.79
55+32.64	65+29.60	LT	1,026.26
55+46.61	64+80.11	RT	949.67
55+86.54	65+29.60	RT/LT	1,840.52
STAGE 2			
33+13.08	38+25.56	RT/LT	516.54
33+39.84	38+46.23	RT	506.75
39+20.03	43+71.26	RT	470.36
39+56.83	43+72.04	RT/LT	418.65
44+94.48	54+75.26	LT	1,047.61
44+94.49	54+12.84	RT	1,844.82
45+05.23	54+41.07	RT	936.81
55+25.71	67+99.91	LT	1,355.54
55+42.02	57+37.81	RT	256.66
56+89.27	64+80.00	RT	793.67
55+99.02	64+80.00	RT/LT	1,765.56
64+80.00	68+00.00	LT	639.99
		ROUNDED TOTAL	19,856

IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2

FROM STATION	LT/RT	EACH
STAGE 1		
49+46.41	RT	1
50+29.64	LT	1
53+49.64	LT	1
53+64.77	LT	1
56+08.41	RT	1
56+45.04	LT	1
61+40.04	LT	1
62+14.86	RT	1
	TOTAL	8

TEMPORARY PAVEMENT MARKING-LINE 6" TYPE IV TAPE

FROM STATION	TO STATION	LT/RT	FOOT
STAGE 1			
36+34.84	37+25.91	RT	22.77
36+65.45	38+22.81	RT	157.35
37+25.91	38+64.61	RT	278.79
40+62.36	42+19.04	RT	38.66
40+62.36	42+19.04	RT	38.66
42+19.04	43+71.94	RT	152.90
42+19.04	43+71.94	RT	152.90
44+95.24	47+19.55	LT	224.31
44+95.24	47+19.55	LT	224.31
47+19.55	48+66.42	LT	37.08
47+19.55	48+89.93	LT	42.60
STAGE 2			
35+55.95	37+39.28	RT	45.83
36+08.08	36+71.97	RT	15.97
36+71.97	38+64.61	RT	348.39
37+39.28	38+64.65	RT	125.38
40+31.84	41+72.21	RT	35.09
40+32.22	42+11.82	RT	45.00
41+72.21	43+71.65	RT	400.01
42+11.82	43+71.48	RT	159.66
44+95.24	46+57.55	LT	162.31
44+95.42	46+57.55	LT	162.13
46+57.55	47+69.77	LT	28.14
46+57.55	48+30.53	LT	43.25
57+37.81	60+75.13	RT	84.33
		ROUNDED TOTAL	3,026

IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2

FROM STATION	LT/RT	EACH
STAGE 2		
49+60.80	RT	1
50+30.12	LT	1
53+37.36	LT	1
53+79.77	LT	1
56+07.98	RT	1
56+45.00	LT	1
61+40.00	LT	1
62+39.14	RT	1
	TOTAL	8

BARRIER WALL REFLECTORS, TYPE C

FROM STATION	TO STATION	LT/RT	EACH
STAGE 1			
49+65.55	53+64.76	LT	32
50+49.64	53+49.64	LT	36
56+28.59	62+14.71	LT	48
56+65.04	61+40.04	LT	57
STAGE 2			
49+80.39	53+79.69	RT	32
50+49.86	53+37.36	RT	36
56+28.00	62+38.99	RT	25
56+65.00	61+40.00	RT	19
		TOTAL	285

GUARDRAIL REFLECTORS, TYPE A

FROM STATION	TO STATION	LT/RT	EACH
57+55.29	57+89.23	RT	2
57+20.55	57+68.12	LT	2
60+59.20	61+30.06	RT	4
60+39.36	61+30.04	LT	3
		TOTAL	11

PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
57+55.00	57+74.21	RT/LT	174.25
		ROUNDED TOTAL	175

HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH)

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
60+72.91	61+30.00	RT/LT	459.07
		ROUNDED TOTAL	460

HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARDRAIL

FROM STATION	TO STATION	LT/RT	AREA (SQ YD)
57+55.39	58+04.48	RT	10.66
60+38.58	61+30.08	LT	21.68
60+38.05	61+30.05	RT	20.36
		TOTAL	53

PAVEMENT MARKING REMOVAL - WATER BLASTING

FROM STATION	TO STATION	LT/RT	AREA (SQ FT)
4" REMOVAL			
33+13.08	38+06.63	RT/LT	164.67
33+39.84	38+82.72	RT	188.05
33+39.88	43+71.66	RT	86.00
39+56.81	43+75.47	RT/LT	279.36
39+26.96	44+10.39	RT	176.96
44+60.17	54+77.17	RT	361.03
44+90.72	54+43.31	RT/LT	636.17
44+91.00	54+40.90	RT	79.18
44+93.85	54+75.26	LT	337.95
44+94.22	54+41.08	LT	78.92
55+26.02	57+25.00	LT	83.71
55+42.02	57+25.00	RT	90.43
55+73.37	64+80.11	RT	75.56
55+78.39	57+25.00	RT/LT	261.61
55+83.44	68+00.00	LT	101.38
57+25.00	57+91.91	LT	22.10
57+25.00	57+99.06	LT	49.15
57+25.00	58+00.93	RT	50.62
57+25.00	57+50.34	RT	17.11
57+91.91	60+20.57	LT	86.83
57+98.65	60+26.47	RT/LT	329.81
58+09.48	60+37.16	RT	81.54
60+20.74	68+00.00	LT	259.69
60+26.11	68+00.00	LT	348.19
60+29.87	64+80.11	RT	212.68
60+37.16	64+80.32	RT	147.52
6" REMOVAL			
34+77.93	36+39.39	RT	20.18
35+55.95	37+39.30	RT	22.92
36+39.39	38+06.67	RT	83.64
37+39.30	38+64.65	RT	62.67
40+31.84	42+10.84	RT	22.36
40+53.30	42+10.68	RT	19.67
42+10.68	43+71.73	RT	80.41
42+10.84	43+71.73	RT	80.62
44+94.07	47+19.64	LT	112.68
44+94.36	47+19.64	LT	112.68
47+19.64	49+50.08	LT	28.81
47+19.64	49+27.35	LT	25.96
50+09.11	52+09.40	RT	25.03
52+09.40	54+40.64	RT	115.60
55+83.58	57+23.44	LT	70.00
57+23.44	59+34.28	LT	26.37
57+50.34	63+41.30	RT	73.87

PAVEMENT MARKING REMOVAL - WATER BLASTING

FROM STATION	TO STATION	LT/RT	AREA (SQ FT)
12" REMOVAL			
57+85.93	57+93.65	RT	9.53
57+98.91	60+27.91	RT/LT	63.98
60+97.13	61+16.25	RT/LT	23.59
24" REMOVAL			
39+26.96		RT	61.15
43+71.24		RT	106.75
44+63.01		RT	54.62
44+94.49		LT	110.59
54+41.14		RT	83.73
54+71.99		LT	50.17
55+42.02		RT	45.36
55+83.44		LT	79.46
		ROUNDED TOTAL	6,279

DRAINAGE SCUPPER TO BE ADJUSTED

FROM STATION	LT/RT	EACH
51+05.57	RT	1
51+05.57	LT	1
51+15.68	RT	1
51+15.68	LT	1
51+25.41	LT	1
51+25.41	RT	1
52+65.03	RT	1
52+63.81	LT	1
52+75.13	RT	1
52+75.32	LT	1
52+85.05	RT	1
52+84.60	LT	1
	TOTAL	12

TEMPORARY PAVEMENT

FROM STATION	TO STATION	LT/RT	FOOT
44+90.67	50+64.51	RT/LT	560.97
53+30.28	54+42.98	RT/LT	49.38
		ROUNDED TOTAL	611

CONCRETE HEADWALLS FOR PIPE DRAINS

FROM STATION	LT/RT	EACH
58+11.50	LT	1
58+41.15	RT	1
59+85.75	LT	1
60+13.82	RT	1
	TOTAL	4

TEMPORARY INFORMATION SIGNING

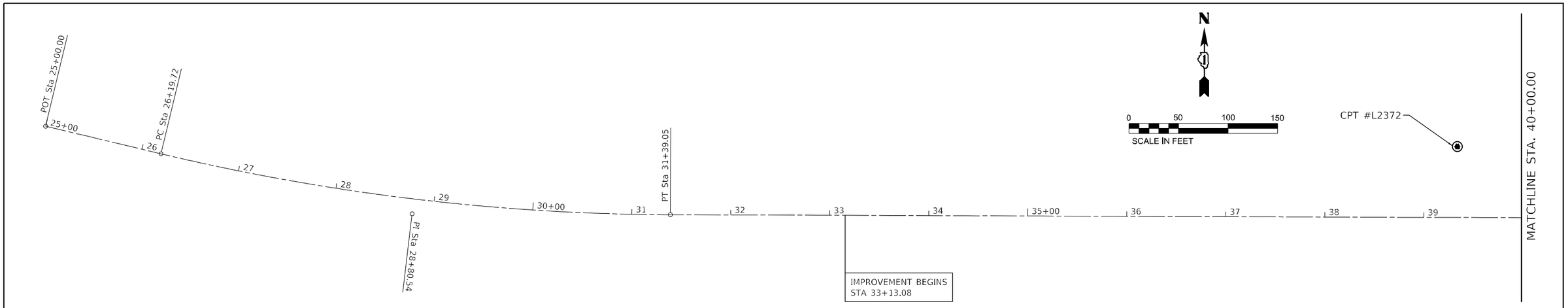
STATION	LT/RT	TYPE	AREA (SQ FT)
STAGE 1			
38+58.72	RT	R10-7	5.00
39+72.90	RT	R10-7	5.00
65+31.67	LT	R7-102	5.00
66+76.17	LT	R7-102	5.00
69+42.00	LT	R7-102	5.00
STAGE 2			
38+58.79	RT	R10-7	5.00
39+51.77	RT	R10-7	5.00
65+25.21	LT	R7-102	5.00
66+75.31	LT	R7-102	5.00
69+44.50	LT	R7-102	5.00
		ROUNDED TOTAL	50

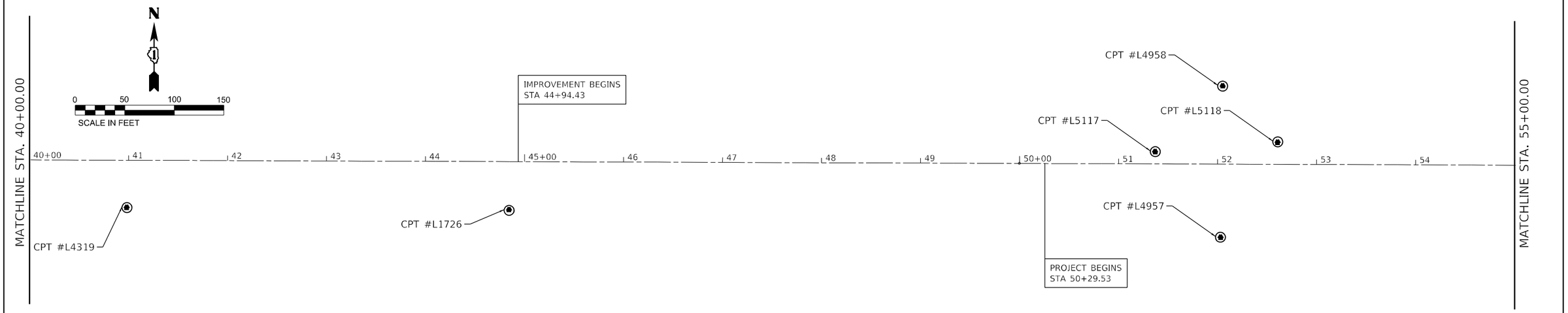
PAVEMENT MARKING SCHEDULE

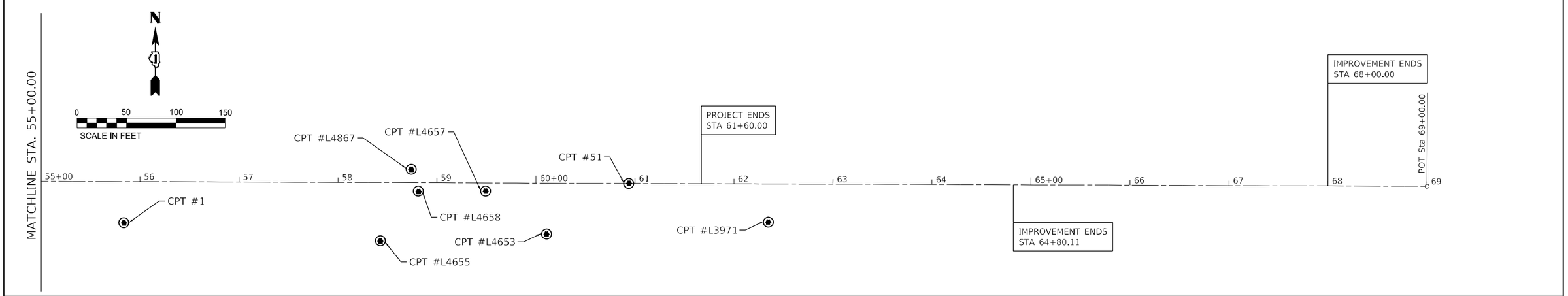
FROM STATION	TO STATION	LT/RT	THERMOPLASTIC PAVEMENT MARKING			PREFORMED PLASTIC PAVEMENT MARKING, TYPE D		PREFORMED THERMOPLASTIC PAVEMENT MARKING	PREFORMED THERMOPLASTIC PAVEMENT MARKING	MODIFIED URETHANE PAVEMENT MARKING			REPLACEMENT REFLECTOR	RECESSED REFLECTIVE PAVEMENT MARKER	RECESSED REFLECTIVE PAVEMENT MARKER (HMA)
			LINE 4"	LINE 5"	LINE 12"	LINE 4"	LINE 6"	LETTERS & SYMBOLS	LINE 24"	LINE 4"	LINE 5"	LINE 12"			
			FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH
33+13.08	38+06.63	RT/LT								494.00					
33+39.84	38+82.72	RT									564.14				
33+39.88	38+64.61	RT				131.20							14		
34+77.93	36+39.39	RT					40.36								
35+55.95	37+39.30	RT					45.84								
36+39.39	38+06.67	RT					167.28								
36+74.77		RT						36.40							
37+39.30	38+64.65	RT					125.35								
37+54.42		RT						36.40							
39+26.96		RT							30.57						
39+26.96	44+10.39	RT									530.88				
39+56.81	43+75.47	RT/LT								419.11					
39+61.95	43+71.66	RT				102.48							11		
40+31.84	42+10.84	RT					44.72								
40+53.30	42+10.68	RT					39.34								
42+10.68	43+71.73	RT					160.81								
42+10.84	43+71.73	RT					161.24								
42+21.47		RT						72.80							
43+71.24		RT							53.38						
44+60.17	54+77.17	RT									1,083.09				
44+63.01		RT							27.31						
44+90.72	54+43.31	RT/LT								1,908.51					
44+90.99	50+29.53	RT											14		
44+91.00	54+40.90	RT				237.53									
44+93.85	54+75.26	LT									1,013.85				
44+94.07	47+19.64	LT					225.35								
44+94.22	54+41.08	LT				236.76									
44+94.22	50+29.53	LT											14		
44+94.36	47+19.64	LT					225.35								
44+94.49		LT							55.29						
45+35.91		LT						72.80							
47+09.64		LT						72.80							
47+19.64	49+50.08	LT					57.61								
47+19.64	49+27.35	LT					51.93								
50+09.11	52+09.40	RT					50.06								
50+29.53	50+64.53	RT												1	
50+29.53	50+64.53	LT												1	
50+64.53	53+30.28	RT												7	
50+64.53	53+30.28	LT												7	
52+09.40	54+40.64	RT					231.20								
53+30.28	53+65.28	RT												1	
53+30.28	53+65.28	LT												1	
53+65.28	54+41.09	RT											2		
53+65.28	54+40.90	LT											3		
53+99.03		RT						36.40							
54+41.14		RT							41.86						

PAVEMENT MARKING SCHEDULE

FROM STATION	TO STATION	LT/RT	THERMOPLASTIC PAVEMENT MARKING			PREFORMED PLASTIC PAVEMENT MARKING, TYPE D		PREFORMED THERMOPLASTIC PAVEMENT MARKING	PREFORMED THERMOPLASTIC PAVEMENT MARKING	MODIFIED URETHANE PAVEMENT MARKING			REPLACEMENT REFLECTOR	RECESSED REFLECTIVE PAVEMENT MARKER	RECESSED REFLECTIVE PAVEMENT MARKER (HMA)
			LINE 4"	LINE 5"	LINE 12"	LINE 4"	LINE 6"	LETTERS & SYMBOLS	LINE 24"	LINE 4"	LINE 5"	LINE 12"			
			FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH
54+71.99		LT							25.09						
55+23.56		RT						36.40							
55+26.02	57+25.00	LT									251.14				
55+42.02		RT							22.68						
55+42.02	57+25.00	RT									271.28				
55+73.37	64+80.11	RT				226.69									
55+73.37	57+25.00	RT											4		
55+78.39	57+25.00	RT/LT								593.86					
55+83.44	68+00.00	LT				304.14									
55+83.44		LT							39.73						
55+83.44	57+25.00	LT											4		
55+83.58	57+23.44	LT					140.00								
57+13.44		LT						36.40							
57+23.44	59+34.28	LT					52.75								
57+25.00	57+99.06	LT	147.44												
57+25.00	58+00.93	RT	151.86												
57+25.00	57+91.91	LT		66.30											
57+25.00	57+50.34	RT		51.34											
57+25.00	58+03.40	RT													2
57+25.00	57+94.14	LT													2
57+50.34	63+41.30	RT					147.74								
57+85.93	57+93.65	RT			9.53										
57+91.91	60+20.57	LT									260.50				
57+98.65	60+26.47	RT/LT								989.43					
57+98.91	60+27.91	RT/LT										63.98			
58+09.48	60+37.16	RT									244.62				
60+20.74	68+00.00	LT		779.06											
60+23.60	61+60.00	LT													4
60+26.11	68+00.00	LT	1,044.56												
60+29.87	64+80.11	RT	638.03												
60+32.90	61+60.00	RT													4
60+37.16	64+80.32	RT		442.57											
60+97.13	61+16.25	RT/LT			23.59										
61+60.00	64+80.11	RT											9		
61+60.00	68+00.00	LT											16		
62+47.93		RT/LT						15.60							
62+54.13		RT/LT						15.60							
64+10.54		RT/LT						15.60							
64+16.74		RT/LT						15.60							
		ROUNDED TOTAL	1,982	1,340	34	1,239	1,967	463	296	4,405	4,220	64	91	18	12







LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR ALIGNMENT, TIES AND BENCHMARKS
		DRAWN - IS	REVISED -		
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -		
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -		SCALE: 1"=50' SHEET 1 OF 2 SHEETS STA. 25+00.00 TO STA. 68+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	18
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

CONTROL POINTS

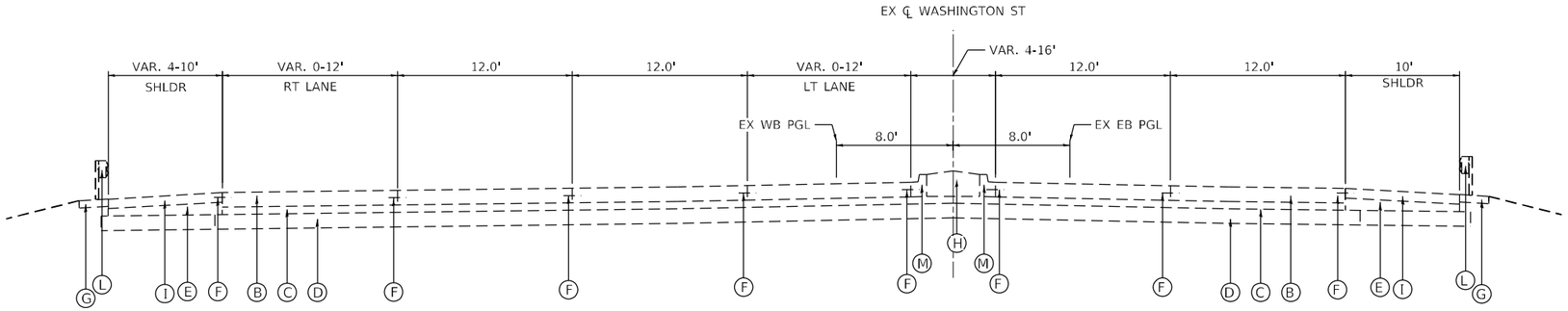
CONTROL POINT #	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESCRIPTION
L2372	2074032.165	1101511.675	699.304	39+33.57	71.62 LT	1/2" REBAR W/ CAP
L4319	2073912.394	1101676.291	706.447	40+98.61	47.58 RT	CHISILED "X" IN CONCRETE
L1726	2073909.966	1102062.412	721.824	44+84.74	48.63 RT	SET MAG NAIL
L5117	2073968.660	1102714.911	728.199	51+37.03	12.37 LT	CHISILED "X" IN SHOULDER ON STRUCTURE
L4957	2073882.200	1102781.018	726.325	52+03.44	73.85 RT	1/2" REBAR W/ CAP
L4958	2074035.030	1102783.176	725.449	52+05.06	78.98 LT	1/2" REBAR W/ CAP
L5118	2073978.164	1102838.717	727.988	52+60.80	22.32 LT	CHISILED "X" ON LANE LINE ON STRUCTURE
1	2073912.994	1103161.737	746.765	55+84.05	41.71 RT	
L4655	2073894.805	1103420.766	735.870	58+43.14	58.98 RT	SET 60 D NAIL
L4867	2073967.127	1103451.864	715.648	58+73.98	13.45 LT	SET 60 D NAIL
L4658	2073944.596	1103459.361	715.097	58+81.56	9.06 RT	
L4657	2073944.993	1103527.069	714.500	59+49.26	8.42 RT	
L4653	2073901.637	1103588.485	731.056	60+10.83	51.55 RT	1/2" REBAR W/ CAP
51	2073952.899	1103671.865	733.746	60+94.03	0.00 LT	
L3971	2073913.737	1103812.558	729.183	62+34.86	38.66 RT	CHISILED "X" IN CONCRETE

ALIGNMENT COORDINATES

	STATION	NORTHING	EASTING
POT	34+00.00	2073962.436	1100977.851
POT	67+00.00	2073950.753	1104277.830

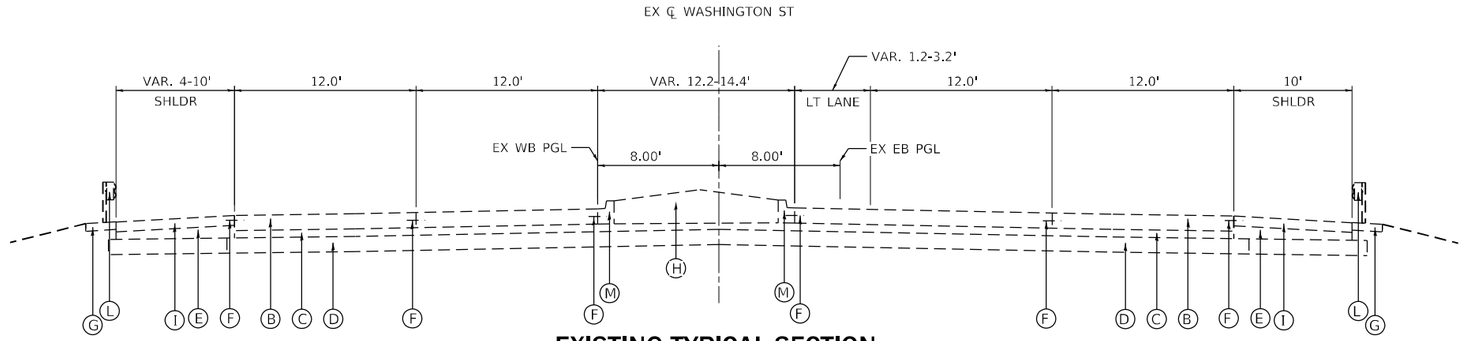
BENCHMARK LIST

BM #	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESCRIPTION
BM 1	2073910.761	1102663.472	744.39	50+85.00	44.37 RT	"X" IN THE N. CONC BASE OF LIGHT POLE S. SIDE OF WASHINGTON, STA 50+85, ELEV 744.39
BM 2	2073903.136	1103136.534	747.41	55+56.97	51.42 RT	CHISELED "□ " IN N.W. CORNER OF CONC BASE OF TRAFFIC CONTROL BOX IN THE S.E. CORNER OF WASHINGTON& SKOKIE RD. ELEV. 747.41



EXISTING TYPICAL SECTION

STA 44+90.62 TO STA 50+29.53
(LOOKING EAST)



EXISTING TYPICAL SECTION

STA 50+29.53 TO STA 50+64.53
(LOOKING EAST)

STRUCTURE AND BRIDGE APPROACH SLAB OMISSION
STA 50+64.53 TO 53+30.28

EXISTING LEGEND

- (A) EX BITUMINOUS CONCRETE SURFACE COURSE, 2"
- (B) EX P.C.C. PAVEMENT, 9 1/2" (HINGE JOINTED)
- (C) EX STABILIZED SUB-BASE, 4"
- (D) EX AGGREGATE SUBGRADE, 12"
- (E) EX SUB-BASE GRANULAR MATL.
- (F) EX TIE BAR
- (G) EX AGGREGATE SHOULDERS
- (H) EX CONCRETE MEDIAN, TYPE M-2
- (I) EX PCC SHOULDER, 9 1/2"
- (J) EX COMBINATION C&G, TYPE B-6.24
- (K) EX BITUMINOUS STABILIZATION
- (L) EX GUARDRAIL
- (M) EX COMBINATION C&G, TYPE M-2.12

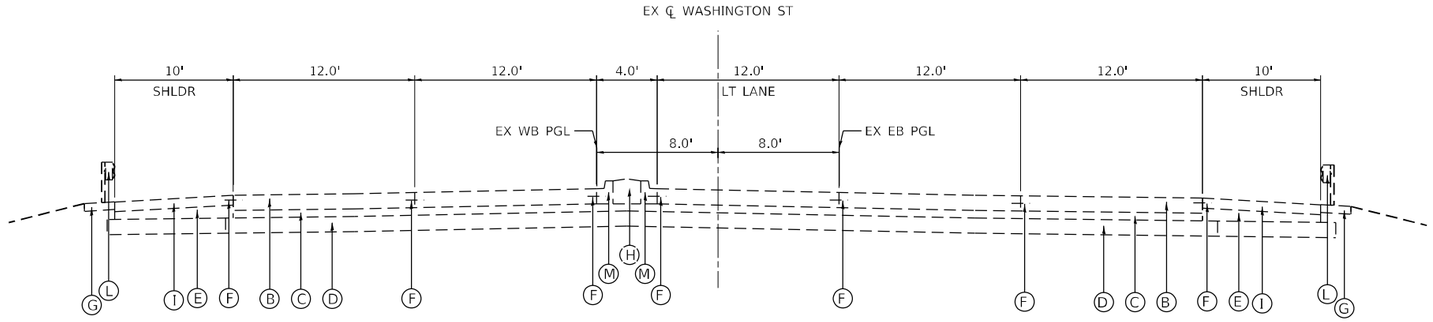
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TYPICAL SECTIONS

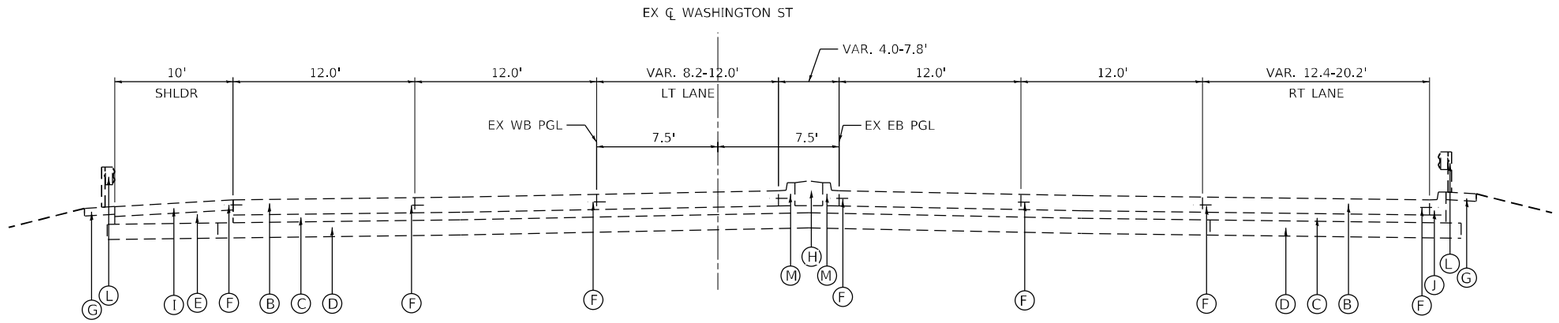
SCALE: N.T.S. | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	20
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		



EXISTING TYPICAL SECTION

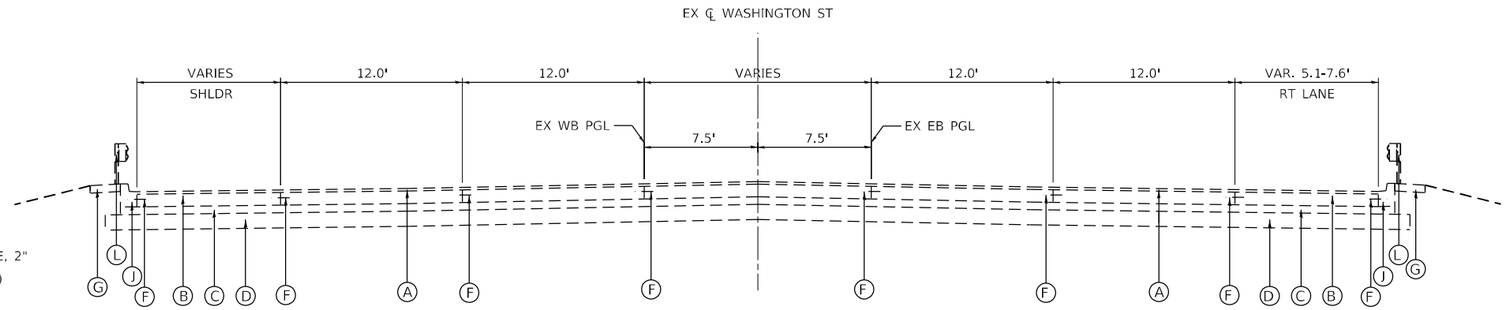
STA 53+30.28 TO STA 53+65.28
(LOOKING EAST)



EXISTING TYPICAL SECTION

STA 57+25.00 TO STA 57+89.33
(LOOKING EAST)

STRUCTURE AND BRIDGE APPROACH SLAB OMISSION
STA 57+89.33 TO 60+37.71



EXISTING TYPICAL SECTION

STA 60+37.71 TO STA 61+60.00
(LOOKING EAST)

EXISTING LEGEND

- (A) EX BITUMINOUS CONCRETE SURFACE COURSE, 2"
- (B) EX P.C.C. PAVEMENT, 9 1/2" (HINGE JOINTED)
- (C) EX STABILIZED SUB-BASE, 4"
- (D) EX AGGREGATE SUBGRADE, 12"
- (E) EX SUB-BASE GRANULAR MATL.
- (F) EX TIE BAR
- (G) EX AGGREGATE SHOULDERS
- (H) EX CONCRETE MEDIAN, TYPE M-2
- (I) EX PCC SHOULDER, 9 1/2"
- (J) EX COMBINATION C&G, TYPE B-6.24
- (K) EX BITUMINOUS STABILIZATION
- (L) EX GUARDRAIL
- (M) EX COMBINATION C&G, TYPE M-2.12

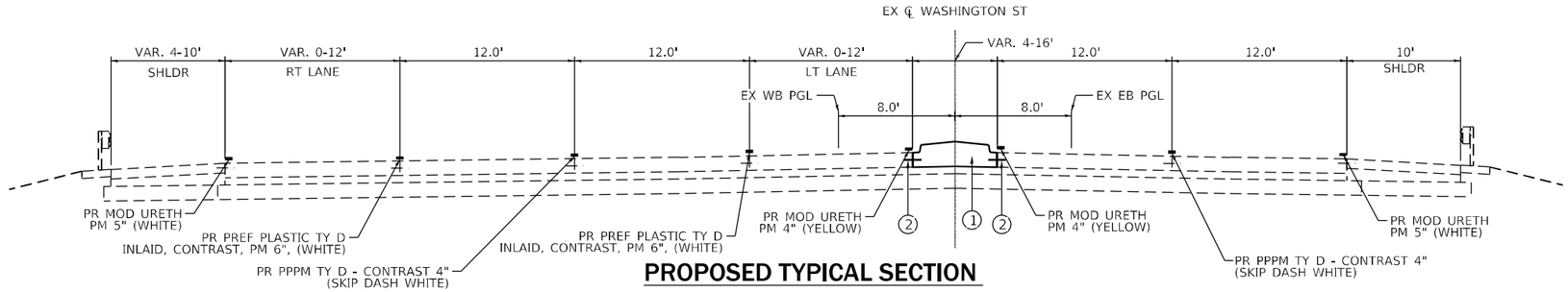
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TYPICAL SECTIONS

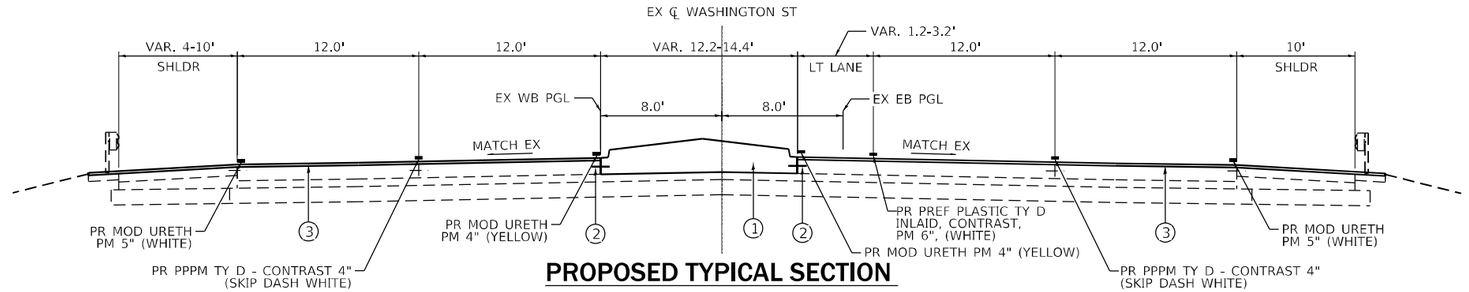
SCALE: N.T.S. | SHEET 2 OF 5 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	21
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT NHPP-66GC(527)			



PROPOSED TYPICAL SECTION

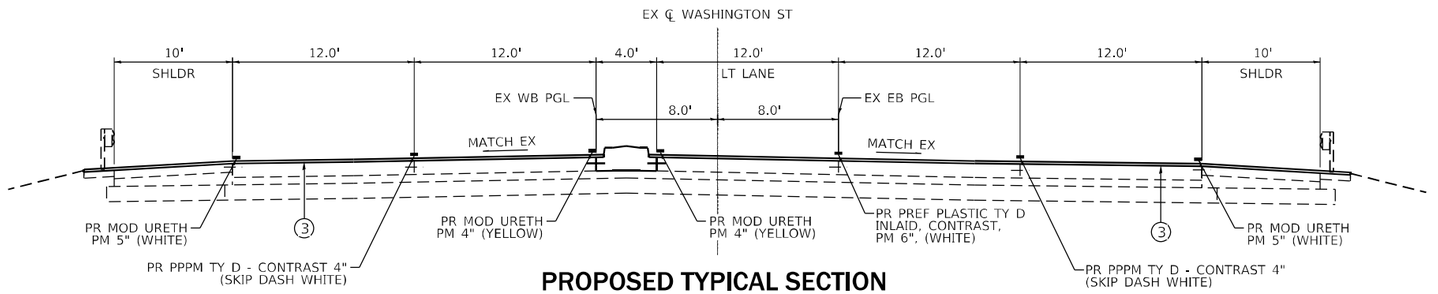
STA 44+90.62 TO STA 50+29.53
(LOOKING EAST)



PROPOSED TYPICAL SECTION

STA 50+29.53 TO STA 50+64.53
(LOOKING EAST)

STRUCTURE AND BRIDGE APPROACH SLAB OMISSION
STA 50+64.53 TO 53+30.28



PROPOSED TYPICAL SECTION

STA 53+30.28 TO STA 53+65.28
(LOOKING EAST)

PROPOSED LEGEND

1. PR CONC MED, TY M-2.06
2. PR TIE BARS - INCIDENTAL TO MEDIAN, C&G, OR TEMP PVMT
3. PR PCC BUTT JOINT
4. PR PCC TEMP PVMT TO REMAIN (SEE DETAIL)
5. PR HMA BUTT JOINT
6. PR P HMA SC IL-9.5 E N70, 2"
7. PR HMA BIND CSE IL-19.0, N90, VAR. DEPTH (2.25"-3.28")
8. PR GUARDRAIL
9. PR HMA STABILIZATION 6" AT SPBGR
10. PR B-6.24 C&G
11. PR BRIDGE APPROACH CONNECTOR PVT (HMA)
12. PR AGG SUBGRADE IMP, 12"
13. PR HMA BIND CSE IL-19.0, N90, 2.25"
14. PR SUBBASE GRANULAR MATERIAL, TYPE B 4"

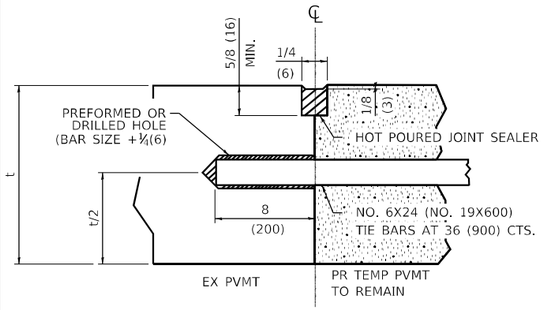
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TYPICAL SECTIONS

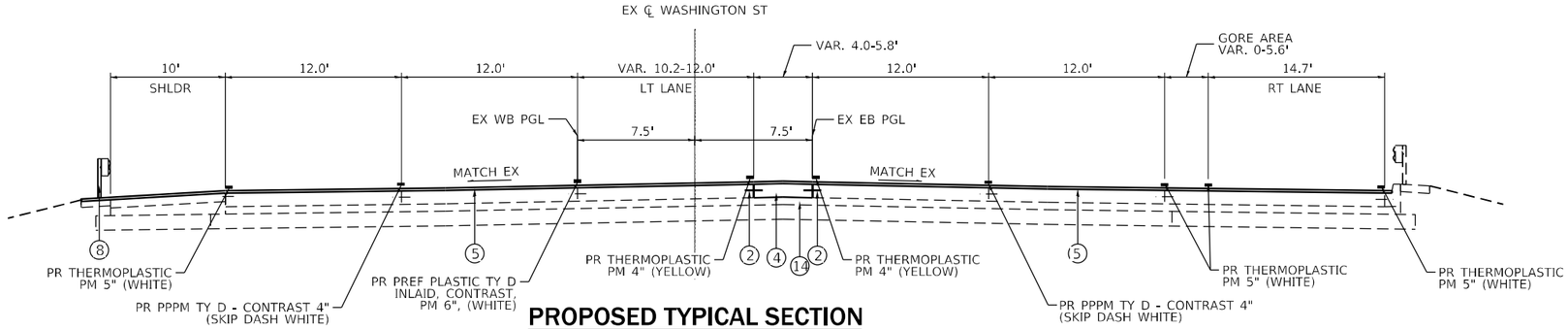
SCALE: N.T.S. | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	22
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT NHPP-66GC(527)			



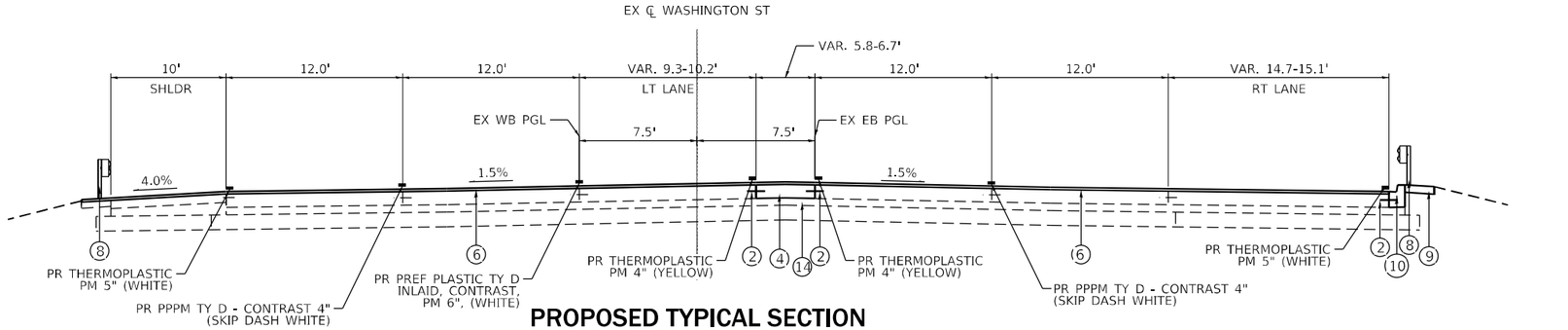
TEMPORARY PAVEMENT TO REMAIN LONGITUDINAL CONSTRUCTION JOINT

(TIE BAR GROUTED IN PLACE)



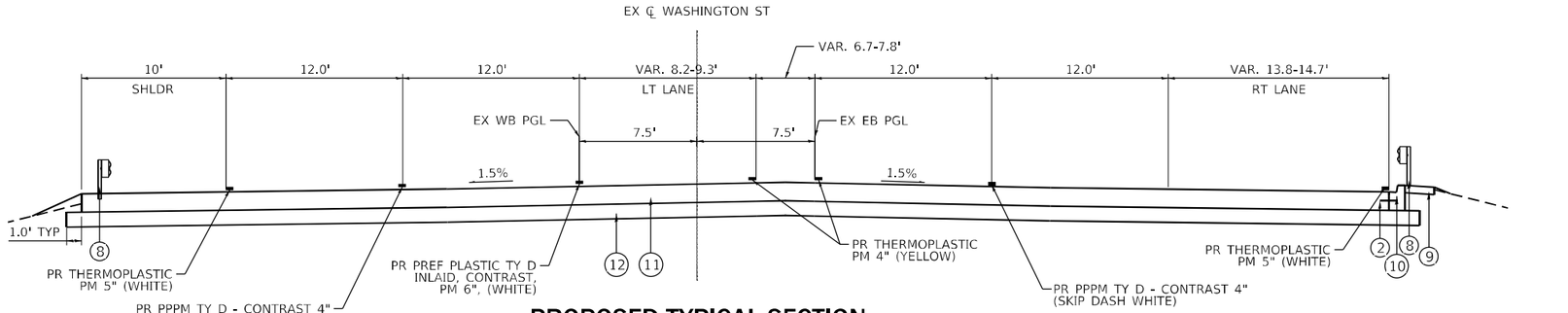
PROPOSED TYPICAL SECTION

STA 57+25.00 TO STA 57+55.00
(LOOKING EAST)



PROPOSED TYPICAL SECTION

STA 57+55.00 TO STA 57+74.21
(LOOKING EAST)



PROPOSED TYPICAL SECTION

STA STA 57+74.21 TO STA 57+89.21
(LOOKING EAST)

STRUCTURE AND BRIDGE APPROACH SLAB OMISSION
STA 57+89.21 TO 60+37.71

PROPOSED LEGEND

1. PR CONC MED, TY M-2.06
2. PR TIE BARS - INCIDENTAL TO MEDIAN, C&G, OR TEMP PVMT
3. PR PCC BUTT JOINT
4. PR PCC TEMP PVMT TO REMAIN (SEE DETAIL)
5. PR HMA BUTT JOINT
6. PR P HMA SC IL-9.5 E N70, 2"
7. PR HMA BIND CSE IL-19.0, N90, VAR. DEPTH (2.25"-3.28")
8. PR GUARDRAIL
9. PR HMA STABILIZATION 6" AT SPBGR
10. PR B-6.24 C&G
11. PR BRIDGE APPROACH CONNECTOR PVT (HMA)
12. PR AGG SUBGRADE IMP, 12"
13. PR HMA BIND CSE IL-19.0, N90, 2.25"
14. PR SUBBASE GRANULAR MATERIAL, TYPE B 4"

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

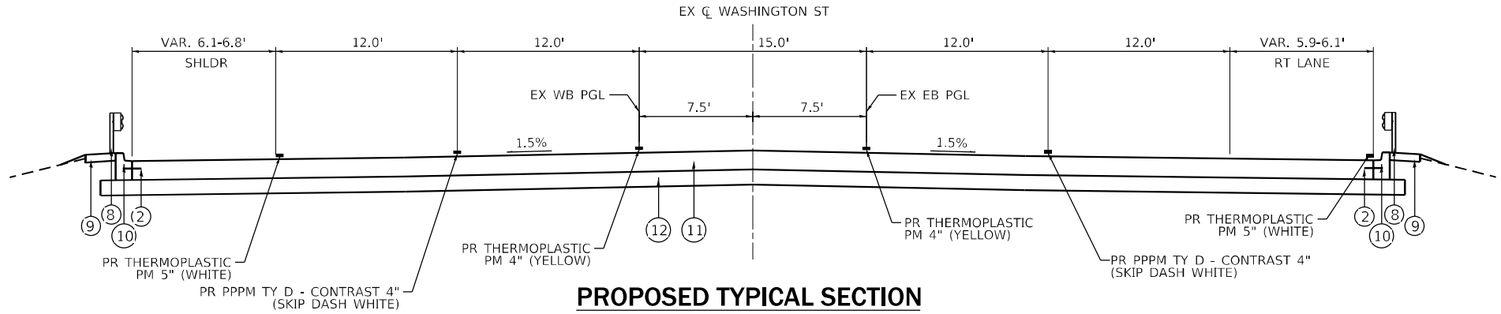
USER NAME = 14nho	DESIGNED - IS	REVISED -	
	DRAWN - IS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TYPICAL SECTIONS

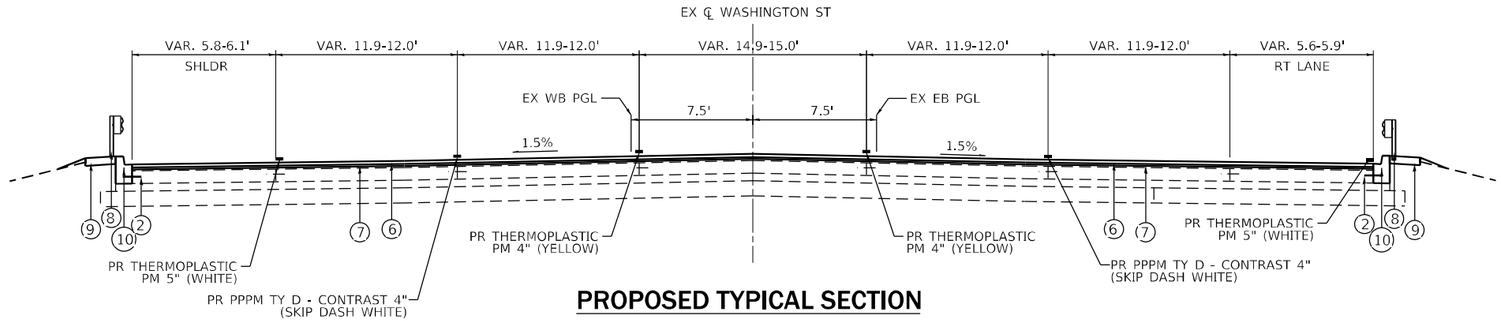
SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	23
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		



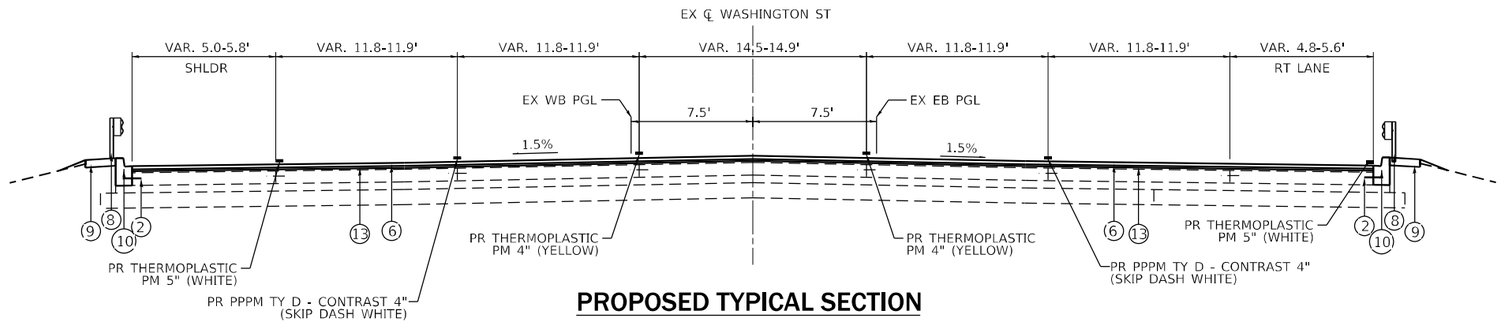
PROPOSED TYPICAL SECTION

STA 60+37.71 TO STA 60+52.71
(LOOKING EAST)



PROPOSED TYPICAL SECTION

STA 60+52.71 TO STA 60+72.19
(LOOKING EAST)

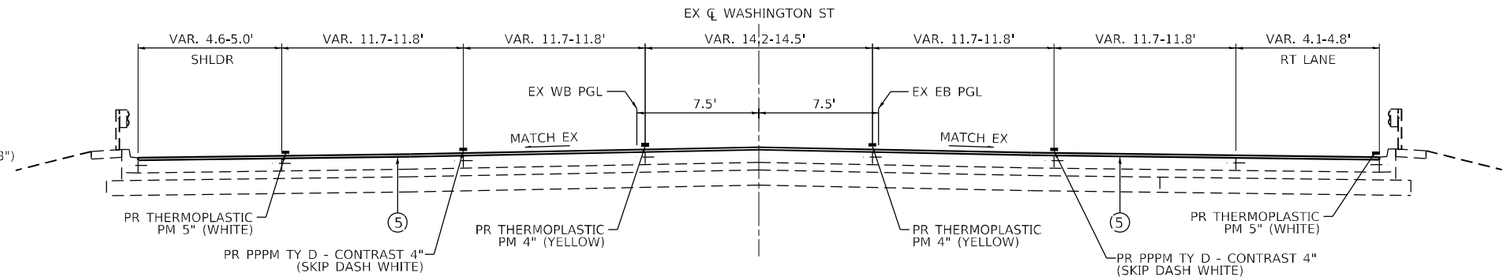


PROPOSED TYPICAL SECTION

STA 60+72.91 TO STA 61+30.00
(LOOKING EAST)

PROPOSED LEGEND

1. PR CONC MED, TY M-2.06
2. PR TIE BARS - INCIDENTAL TO MEDIAN, C&G, OR TEMP PVMT
3. PR PCC BUTT JOINT
4. PR PCC TEMP PVMT TO REMAIN (SEE DETAIL)
5. PR HMA BUTT JOINT
6. PR P HMA SC IL-9.5 E N70, 2"
7. PR HMA BIND CSE IL-19.0, N90, VAR. DEPTH (2.25"-3.28")
8. PR GUARDRAIL
9. PR HMA STABILIZATION 6" AT SPBGR
10. PR B-6.24 C&G
11. PR BRIDGE APPROACH CONNECTOR PVT (HMA)
12. PR AGG SUBGRADE IMP, 12"
13. PR HMA BIND CSE IL-19.0, N90, 2.25"
14. PR SUBBASE GRANULAR MATERIAL, TYPE B 4"



PROPOSED TYPICAL SECTION

STA 61+30.00 TO STA 61+60.00
(LOOKING EAST)

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR TYPICAL SECTIONS
		DRAWN - IS	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -		SCALE: N.T.S. SHEET 5 OF 5 SHEETS STA. TO STA.
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -		

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	24
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT NHPP-66GC(527)	

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. THE MAINTENANCE OF TRAFFIC PLANS SHALL SERVE AS A GUIDE FOR THE SAFE DIVERSION OF TRAFFIC DURING THE EXECUTION OF THIS CONTRACT. THE CONTRACTOR MAY MODIFY THE MAINTENANCE OF TRAFFIC PLANS TO MEET CONSTRUCTION NEEDS BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. ANY CHANGES TO THE TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

2. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH TEMPORARY MARKINGS SHALL BE REMOVED. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PAVEMENT MARKING REMOVAL - WATER BLASTING.

3. ALL EXISTING PAVEMENT MARKING LINES AND EXISTING RECESSED REFLECTIVE PAVEMENT MARKER REFLECTORS ALONG WASHINGTON STREET THAT ARE REMOVED AS A RESULT OF A CONFLICT WITH THE REVISED TRAFFIC PATTERNS, OUTSIDE OF THE PAVEMENT MARKING LIMITS SHOWN IN THE PLANS, SHALL BE RE-ESTABLISHED FOR PROPOSED STRIPING AT THE COMPLETION OF THIS CONTRACT.

4. ALL TRAFFIC CONTROL DEVICES SHALL BE REFLECTORIZED PRIOR TO INSTALLATION AND CLEANED AS SPECIFIED IN THE TRAFFIC CONTROL SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

5. FOR STABILIZATION, ANY REQUIRED TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

6. EXISTING SIGNS WITHIN THE LIMITS OF TRAFFIC CONTROL WHICH ARE OBSTRUCTED BY OR OTHERWISE INTERFERED WITH BY CONSTRUCTION OPERATIONS OF DESIGNATED TRAFFIC CONTROL, SHALL BE COVERED OR REMOVED BY THE CONTRACTOR UNLESS SPECIFIED IN THE PLANS OR WHEN DIRECTED BY THE ENGINEER. THIS WORK SHALL BE AS SPECIFIED IN ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS.

7. SEE STRUCTURAL PLANS FOR BRIDGE DECK OVERLAY AND JOINT REPAIR INFORMATION.

8. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE ARTERIAL TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING ANY WORK.

9. CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED TWO WEEKS PRIOR TO ALL TRAFFIC STAGE CHANGES ON EACH APPROACH OF THE EFFECTED ROADWAY TO WARN MOTORISTS OF THE UPCOMING EVENT. THE SIGN MESSAGES SHALL BE REVISED TWO WEEKS THEREAFTER WITH MESSAGES WARNING TRAFFIC OF POTENTIAL TRAFFIC DELAYS, QUEUING AND/OR WITH MESSAGES NOTIFYING TRAFFIC TO USE ALTERNATE ROUTES. THE SIGN LOCATIONS AND MESSAGES SHALL BE DETERMINED BY THE ENGINEER.

10. ALL LANE CLOSURES ON US 41 SHALL BE SETUP IN ACCORDANCE WITH STANDARDS 701411 AND 701422

11. THE CONTRACTOR SHALL CONTACT RICK WILLMAN, PACE TRANSPORTATION ENGINEER, VIA EMAIL AT RICHARD.WILLMAN@PACEBUS.COM A MINIMUM OF 2 WEEKS IN ADVANCE OF BEGINNING ANY WORK.

SUGGESTED SEQUENCE OF OPERATIONS

PRE-STAGE

1. REMOVE EXISTING CONCRETE MEDIANS AND INSTALL TEMPORARY PAVEMENT UTILIZING STANDARDS 701601 ,701602, & 701701.

2. INSTALL TEMPORARY TRAFFIC SIGNAL SYSTEM AS SHOWN ON THE TRAFFIC SIGNAL PLANS.

3. DURING THE ALLOWABLE LANE CLOSURES HOURS LISTED IN THE CONTRACT SPECIAL PROVISIONS, UTILIZE HIGHWAY STANDARDS 701411 & 701422 ALONG NB & SB US ROUTE 41 TO INSTALL TRAFFIC CONTROL DEVICES AS REQUIRED TO CONSTRUCT PROTECTIVE SHIELDING UNDERNEATH S.N. 049-0016 AS SHOWN IN THE STRUCTURAL PLANS. ALSO CONSTRUCT PROTECTIVE SHIELDING UNDERNEATH S.N. 049-0097.

STAGE 1

1. SHIFT ONE THROUGH LANE OF EB WASHINGTON STREET TO THE NORTH SIDE OF THE MEDIAN UTILIZING THE EXISTING INSIDE WB THROUGH LANE PAVEMENT. CLOSE EXISTING WB WASHINGTON STREET AS SHOWN ON THE MOT PLAN.

2. INSTALL TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS AS PER DISTRICT STANDARDS TC-10, TC-13, TC-14, & TC-22 AND AS SHOWN IN THE STAGE 1 STAGING PLANS.

3. PERFORM BRIDGE DECK OVERLAY ON SN. 049-0016 AND BRIDGE DECK REPLACEMENT WORK ON SN. 049-0097 WORK AS SHOWN IN THE STAGE 1 STAGING AND STRUCTURAL PLANS.

4. ADJUST EXISTING DRAINAGE STRUCTURES ALONG OUTSIDE SHOULDER AT LOCATIONS SHOWN IN THE ROADWAY PLAN.

5. REMOVE EXISTING GUARDRAIL AND INSTALL PROPOSED GUARDRAIL AT LOCATIONS SHOWN IN THE ROADWAY PLAN.

STAGE 2

1. SHIFT ONE THROUGH LANE OF WB WASHINGTON STREET TO THE SOOUTH SIDE OF THE MEDIAN UTILIZING THE EXISTING INSIDE EB THROUGH LANE PAVEMENT. CLOSE EXISTING EB WASHINGTON STREET AS SHOWN ON THE MOT PLAN.

2. INSTALL TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS AS PER DISTRICT STANDARDS TC-10, TC-13, TC-14, & TC-22 AND AS SHOWN IN THE STAGE 1 STAGING PLANS.

3. PERFORM BRIDGE DECK OVERLAY ON SN. 049-0016 AND BRIDGE DECK REPLACEMENT WORK ON SN. 049-0097 WORK AS SHOWN IN THE STAGE 1 STAGING AND STRUCTURAL PLANS.

4. ADJUST EXISTING DRAINAGE STRUCTURES ALONG OUTSIDE SHOULDER AT LOCATIONS SHOWN IN THE ROADWAY PLAN.

5. REMOVE EXISTING GUARDRAIL AND INSTALL PROPOSED GUARDRAIL AT LOCATIONS SHOWN IN THE ROADWAY PLAN.

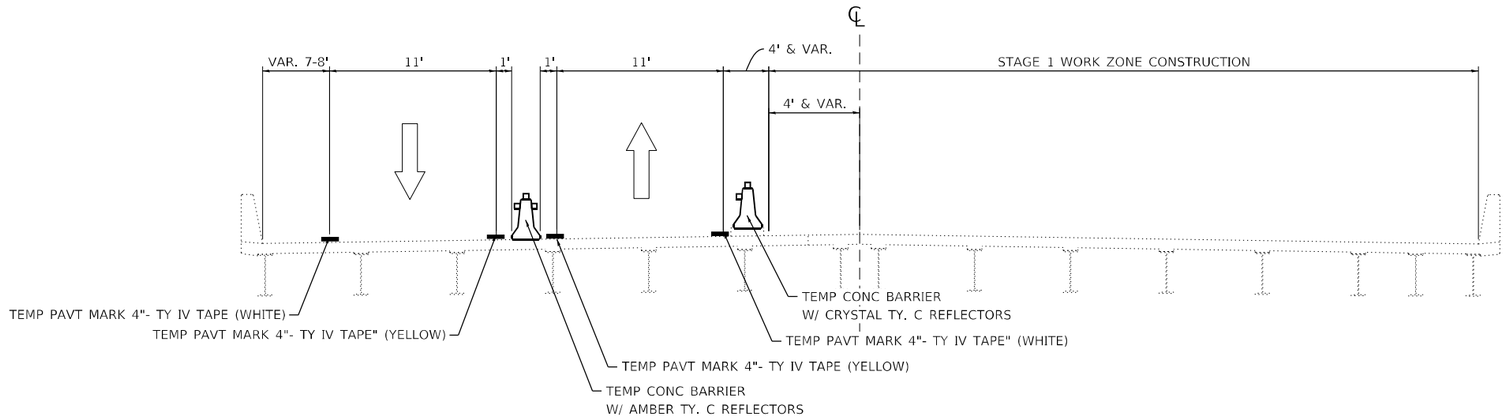
POST STAGE

1. REMOVE EXISTING TEMPORARY PAVEMENT AND CONSTRUCT RAISED MEDIAN FROM WEST OF FRONTAGE ROAD TO EAST OF THE UNION PACIFIC RAIL ROAD REMOVED DURING PRE-STAGE CONSTRUCTION USING STANDARDS 701601, 701602, & 701701.

2. RE-INSTATE EXISTING PAVEMENT MARKING AND INSTALL RAISED REFLECTIVE MARKER TO MATCH HE EXISTING PAVEMENT MARKING CONFIGURATION.

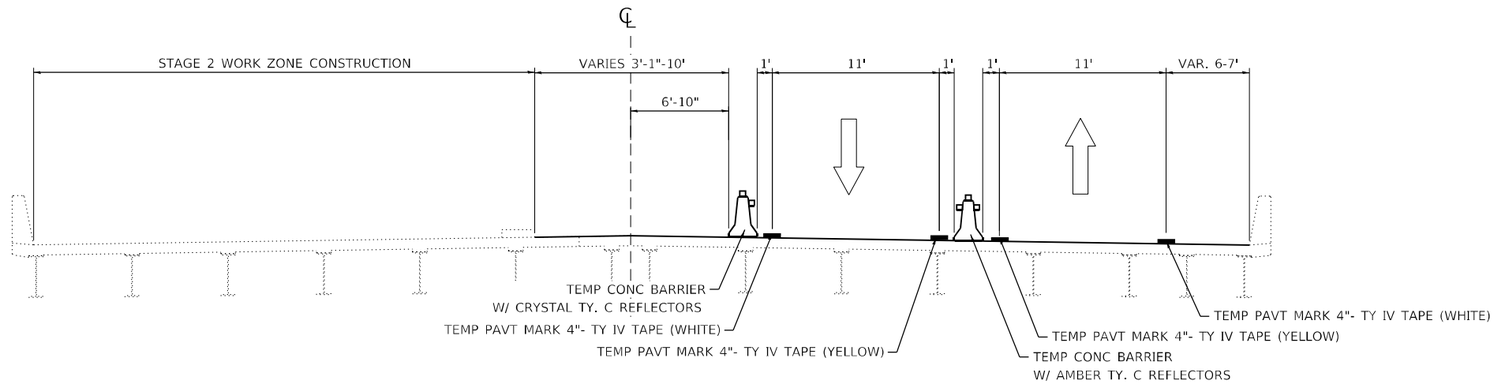
3. INSTALL SIGN PANELS WITH ASSEMBLY AND POLE TO MATCH THE EXISTING SIGN CONFIGURATION.

4. DURING THE ALLOWABLE LANE CLOSURES HOURS LISTED IN THE CONTRACT SPECIAL PROVISIONS, UTILIZE HIGHWAY STANDARDS 701411 & 701422 ALONG NB & SB US ROUTE 41 TO INSTALL TRAFFIC CONTROL DEVICES AS REQUIRED TO REMOVE PROTECTIVE SHIELDING UNDERNEATH S.N. 049-0016 THAT WAS CONSTRUCTED IN PRE-STAGE. ALSO REMOVE PROTECTIVE SHIELDING UNDERNEATH S.N. 049-0097.



S.N. 049-0016 STAGE 1 TYPICAL SECTION

WASHINGTON STREET OVER US RTE 41
LOOKNG EAST (TYP)

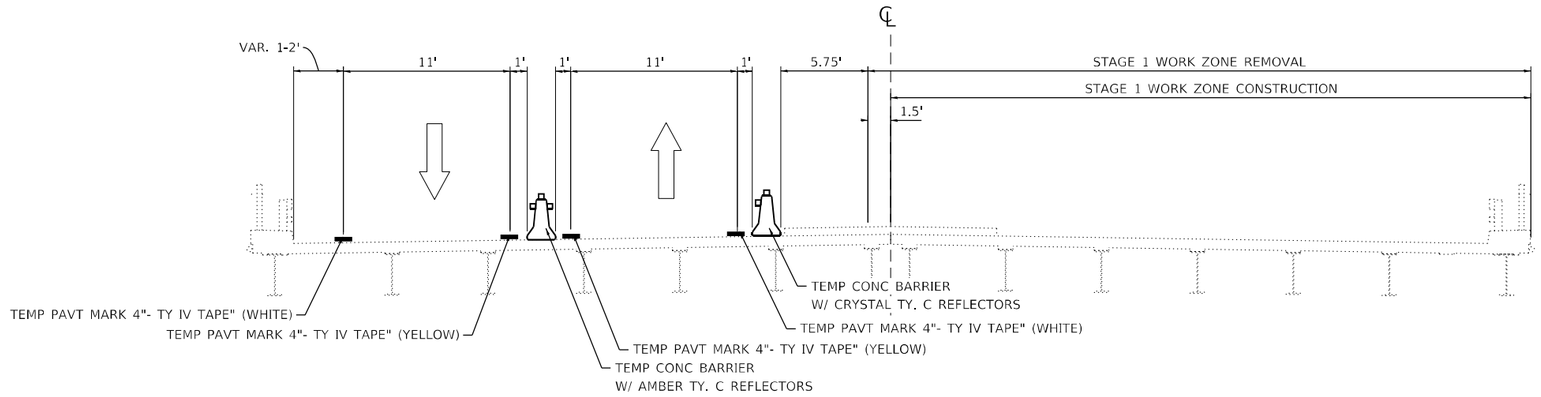


S.N. 049-0016 STAGE 2 TYPICAL SECTION

WASHINGTON STREET OVER US RTE 41
LOOKNG EAST (TYP)

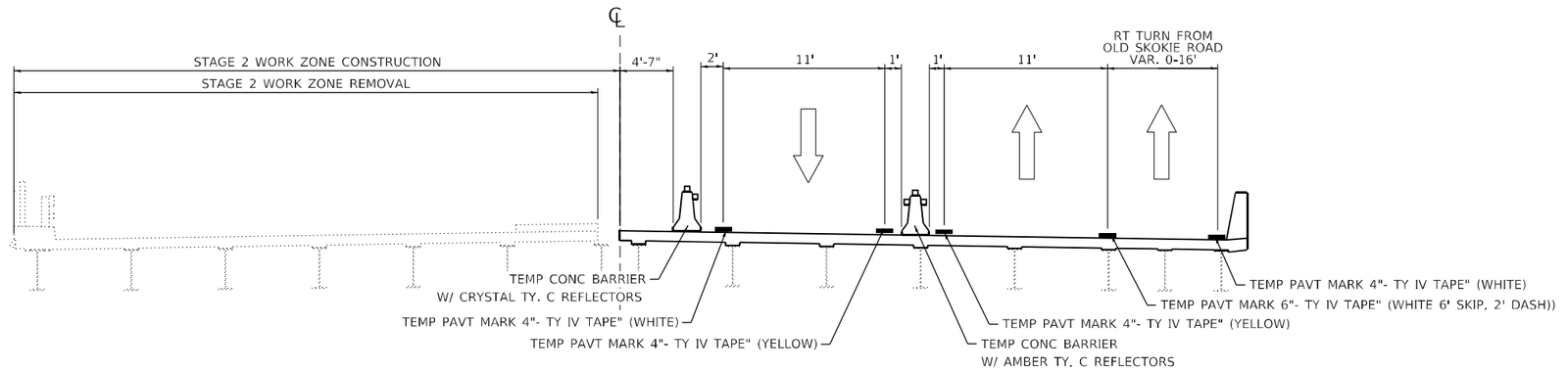
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR STAGING PLAN: TYPICAL SECTIONS
		DRAWN - IS	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -		SCALE: N.T.S. SHEET 2 OF 9 SHEETS STA. TO STA.
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -		

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	26
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	



S.N. 049-0097 STAGE 1 TYPICAL SECTION

WASHINGTON STREET OVER UPRR
LOOKNG EAST (TYP)



S.N. 049-0097 STAGE 2 TYPICAL SECTION

WASHINGTON STREET OVER UPRR
LOOKNG EAST (TYP)

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Consulting Engineers
Westmont, Illinois

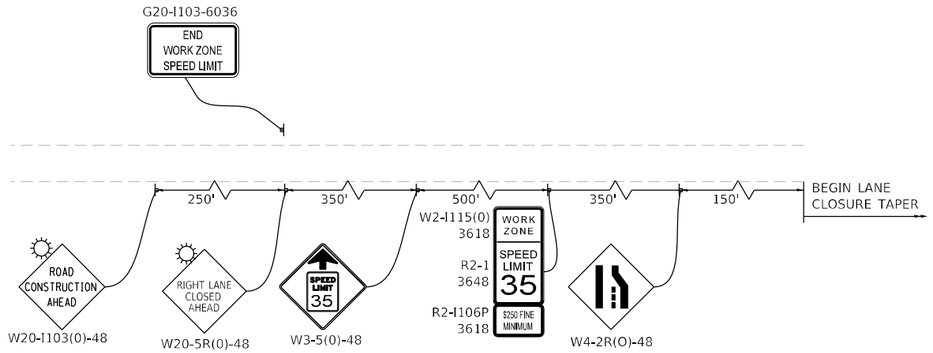
USER NAME = 14nho	DESIGNED - IS	REVISED -	
	DRAWN - IS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

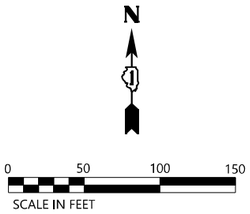
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: TYPICAL SECTIONS

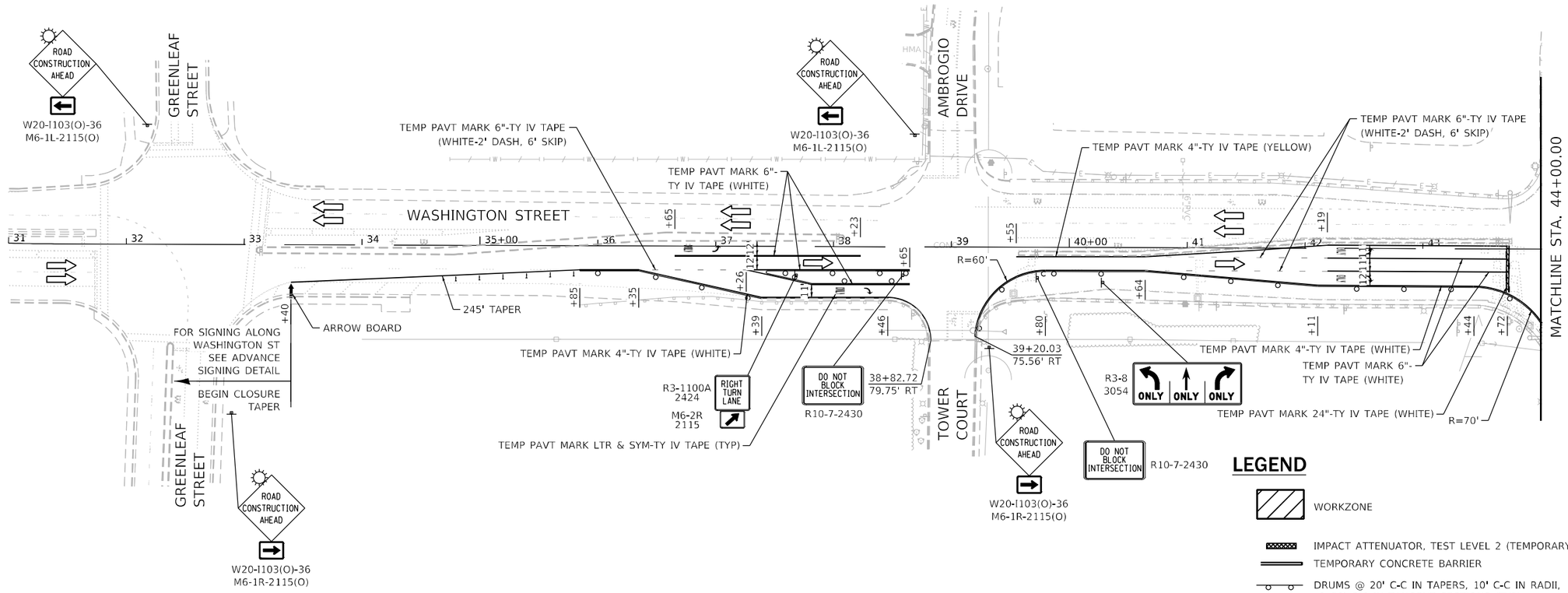
SCALE: N.T.S. | SHEET 3 OF 9 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	27
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	





ADVANCE SIGNING DETAIL



LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: STAGE 1

SCALE: 1"=50' | SHEET 4 OF 9 SHEETS | STA. 33+40.00 | TO STA. 44+00.00

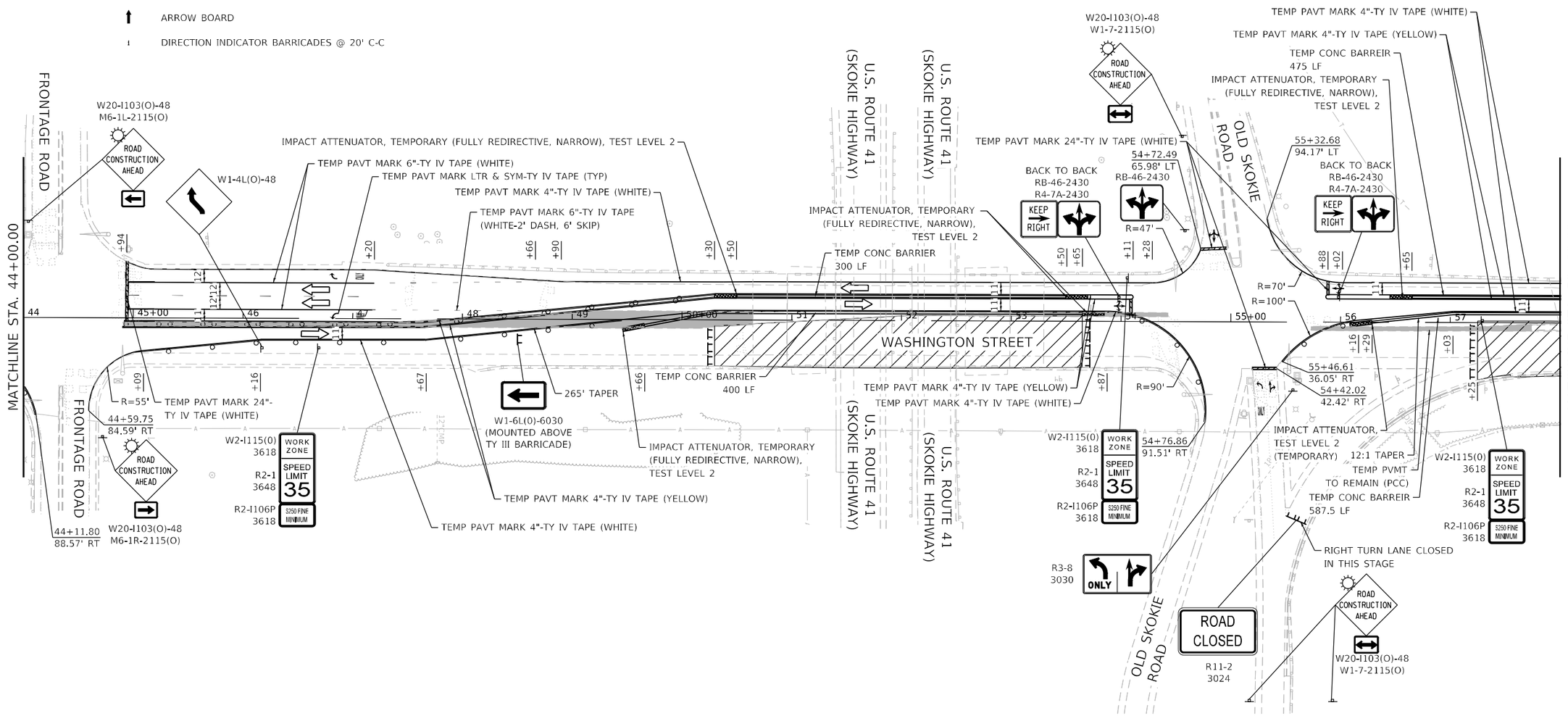
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	28
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	

LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

N

0 50 100 150
SCALE IN FEET

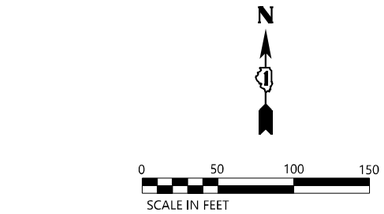


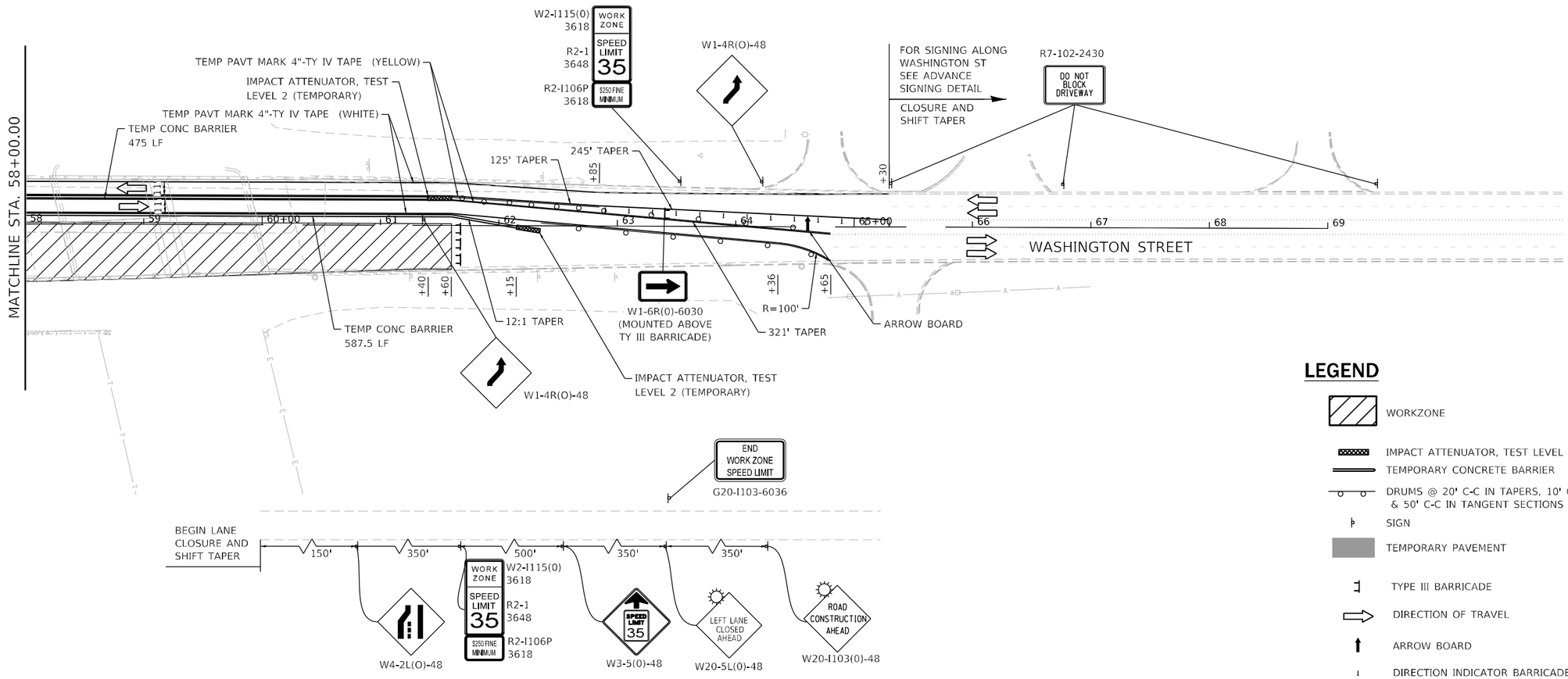
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - IS	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -	
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: STAGE 1

SCALE: 1"=50' | SHEET 5 OF 9 SHEETS | STA. 44+00.00 | TO STA. 58+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	29
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	





ADVANCE SIGNING DETAIL

LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

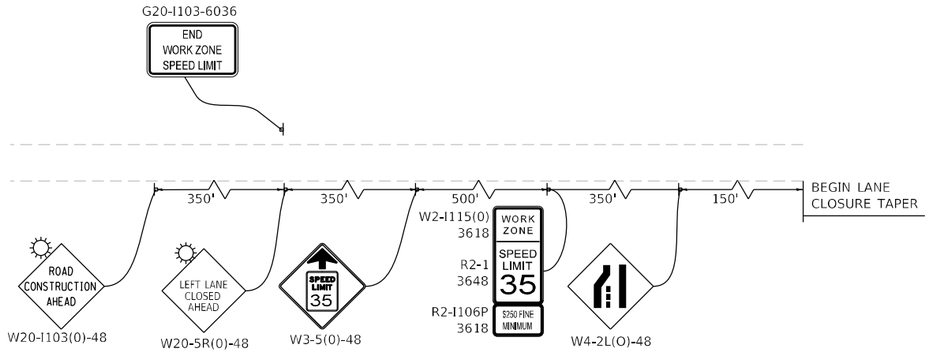
USER NAME = 14nho	DESIGNED - IS	REVISED -	
	DRAWN - IS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

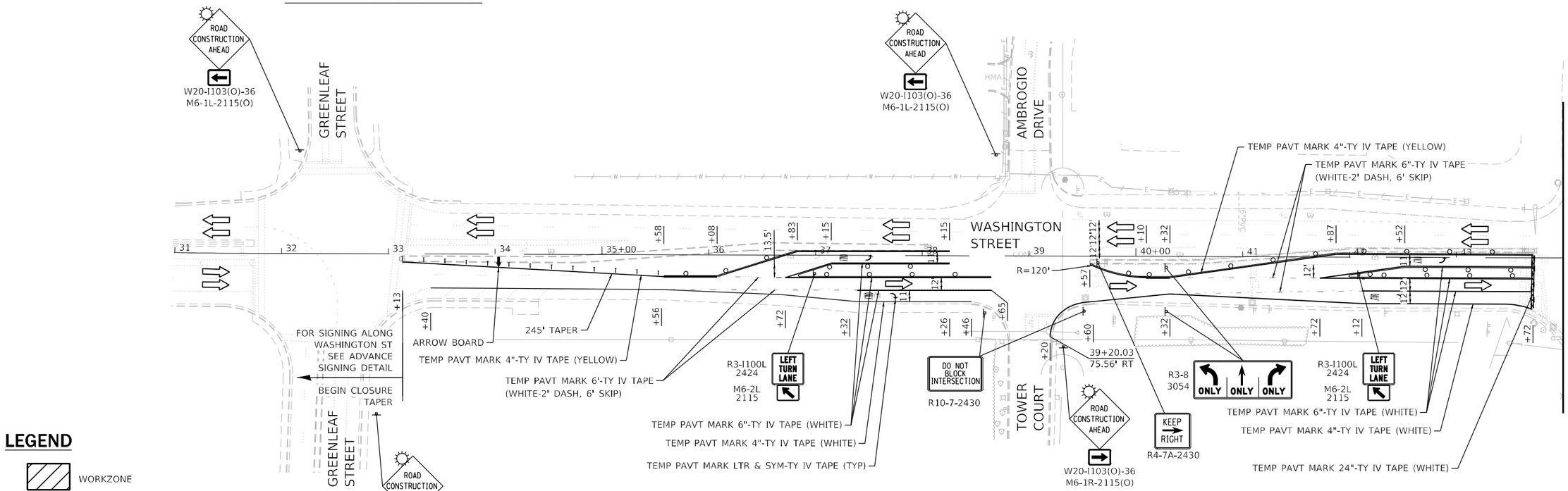
F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: STAGE 1

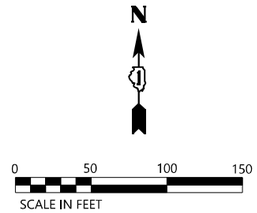
SCALE: 1"=50' | SHEET 6 OF 9 SHEETS | STA. 58+00.00 | TO STA. 65+30.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	30
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



ADVANCE SIGNING DETAIL





LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: STAGE 2

SCALE: 1"=50' | SHEET 7 OF 9 SHEETS | STA. 33+13.00 | TO STA. 44+00.00

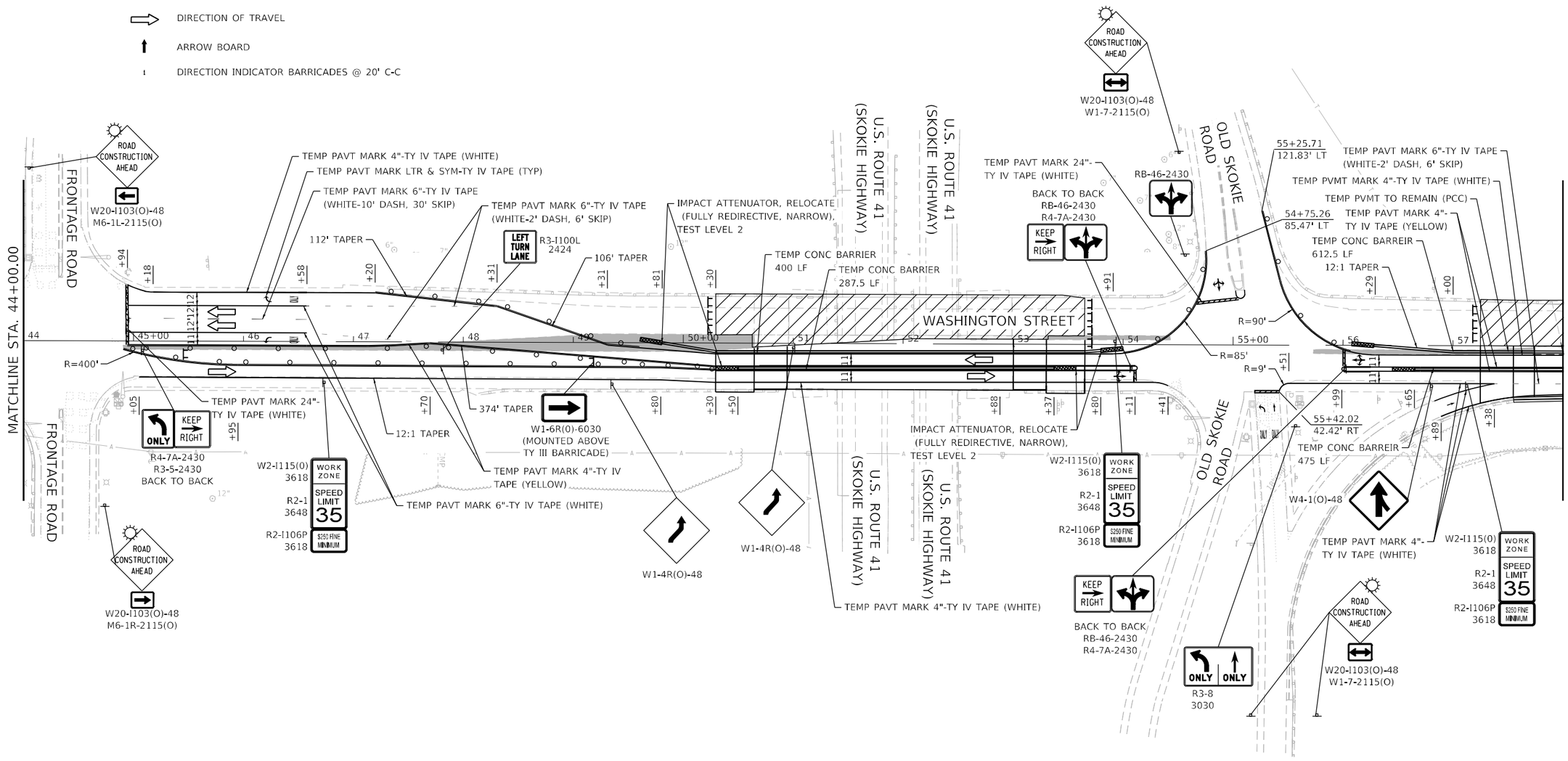
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	31
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

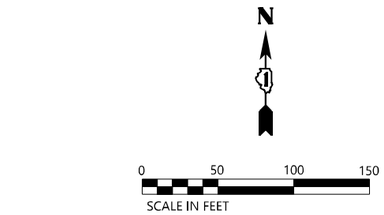
N

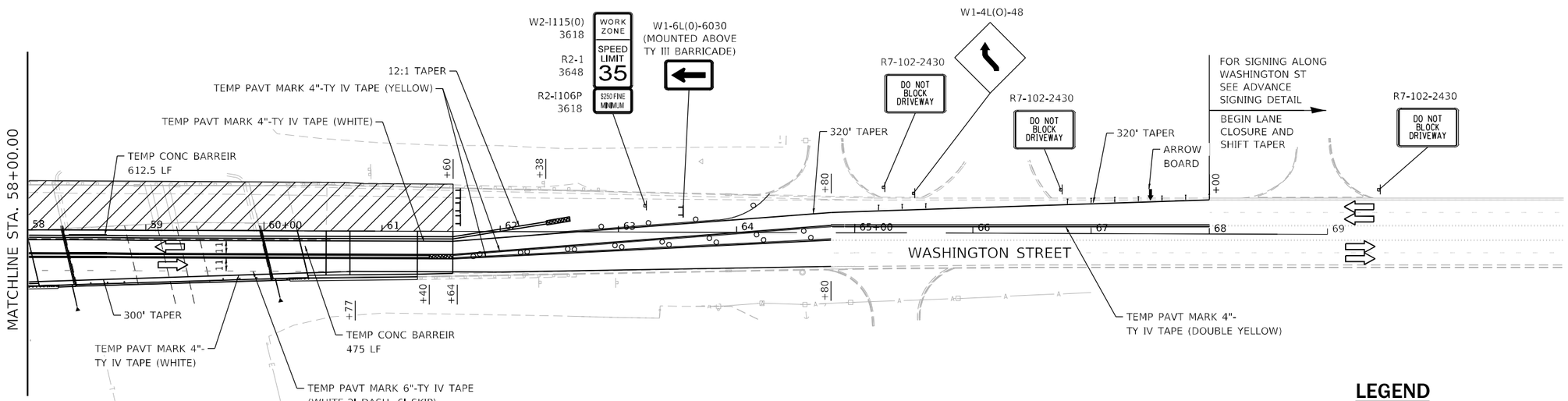
0 50 100 150
SCALE IN FEET

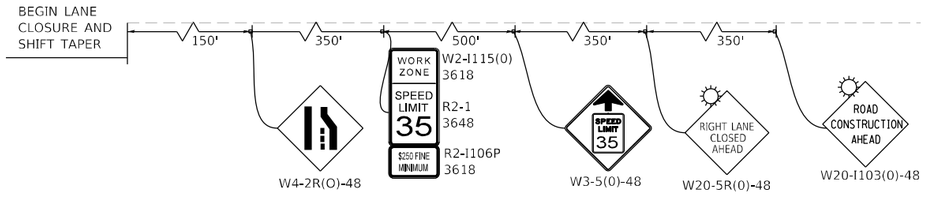


LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR STAGING PLAN: STAGE 2
		DRAWN - IS	REVISED -		
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -		SCALE: 1"=50' SHEET 8 OF 9 SHEETS STA. 44+00.00 TO STA. 58+00.00
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -		

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	32
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			







ADVANCE SIGNING DETAIL

LEGEND

- WORKZONE
- IMPACT ATTENUATOR, TEST LEVEL 2 (TEMPORARY)
- TEMPORARY CONCRETE BARRIER
- DRUMS @ 20' C-C IN TAPERS, 10' C-C IN RADII, & 50' C-C IN TANGENT SECTIONS (TYP)
- SIGN
- TEMPORARY PAVEMENT
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- ARROW BOARD
- DIRECTION INDICATOR BARRICADES @ 20' C-C

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
STAGING PLAN: STAGE 2

SCALE: 1"=50' | SHEET 9 OF 9 SHEETS | STA. 58+00.00 | TO STA. 68+00.00

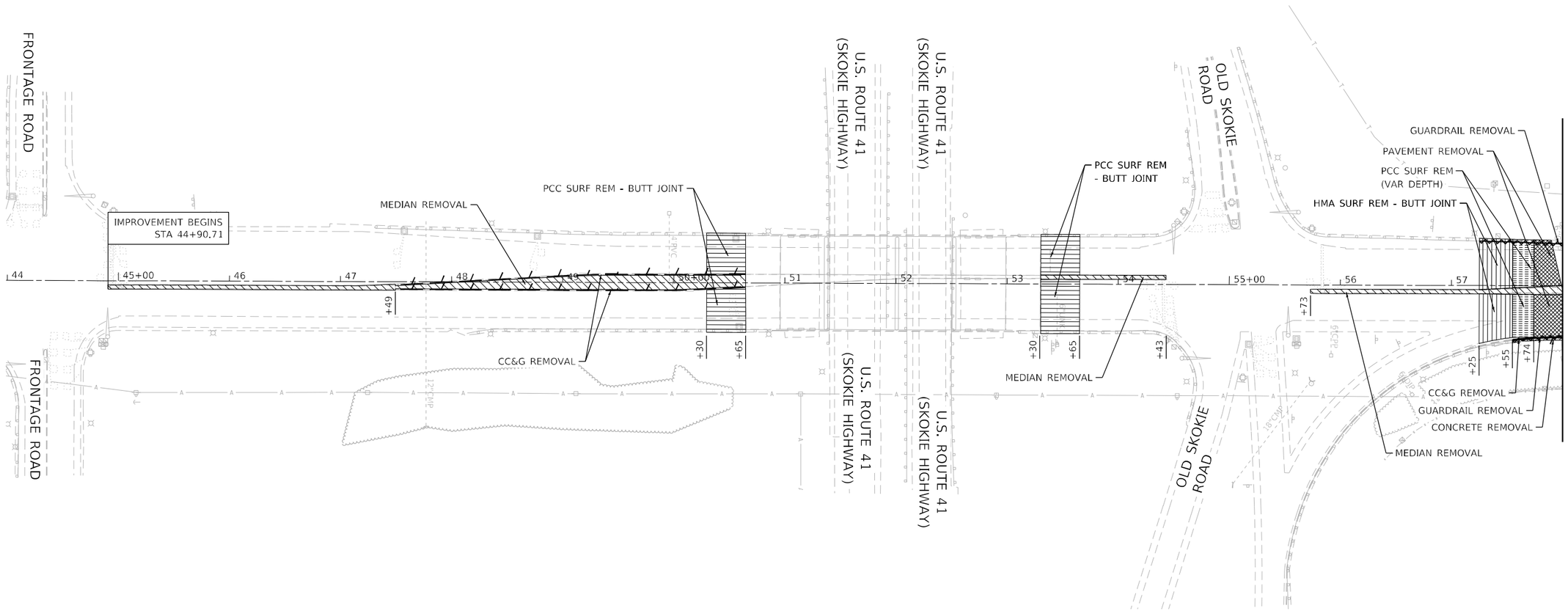
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	33
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

REMOVAL LEGEND

- PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)
- PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT
- HOT-MIX ASPHALT SURFACE REMOVAL, ¾"
- HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
- CONCRETE REMOVAL
- MEDIAN REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL
- GUARDRAIL REMOVAL

N

0 50 100 150
SCALE IN FEET



LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - JK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - JK	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -	
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
REMOVAL PLAN

SCALE: 1"=50' | SHEET 1 OF 2 SHEETS | STA. 44+00.00 | TO STA. 58+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	34

CONTRACT NO. 62P14

ILLINOIS | FED. AID PROJECT

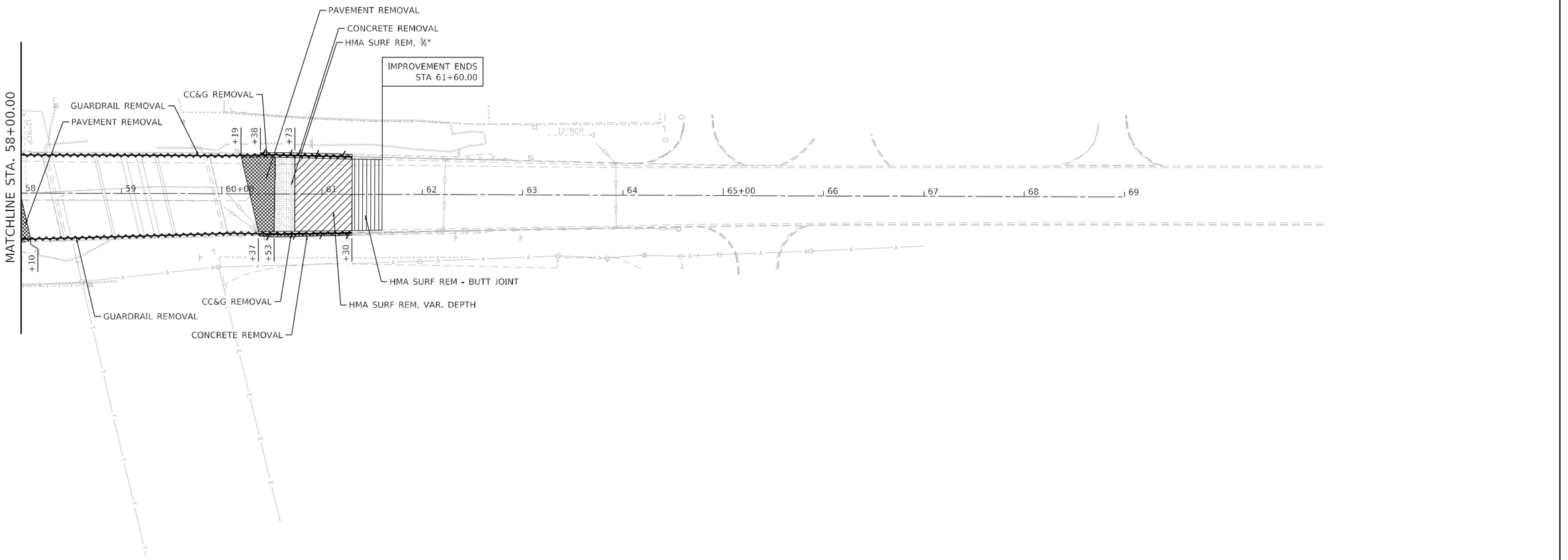
REMOVAL LEGEND

- PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)
- PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT
- HOT-MIX ASPHALT SURFACE REMOVAL, ¾"
- HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
- CONCRETE REMOVAL
- MEDIAN REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL
- GUARDRAIL REMOVAL

N

0 50 100 150

SCALE IN FEET



LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - JK	REVISED -
		DRAWN - JK	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

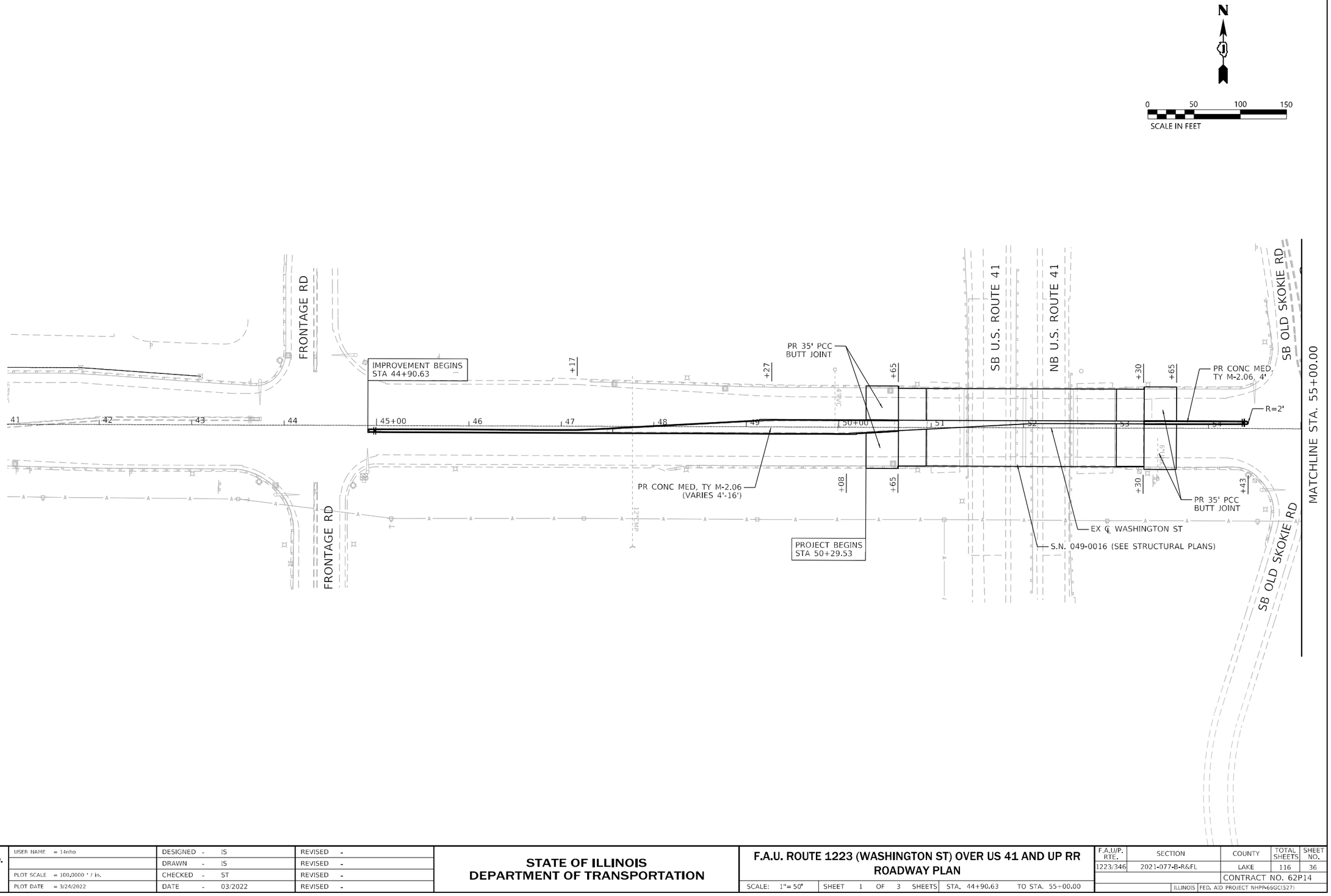
F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
REMOVAL PLAN

SCALE: 1"=50' | SHEET 2 OF 2 SHEETS | STA. 58+00.00 | TO STA. 61+60.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	35

CONTRACT NO. 62P14

ILLINOIS | FED. AID PROJECT



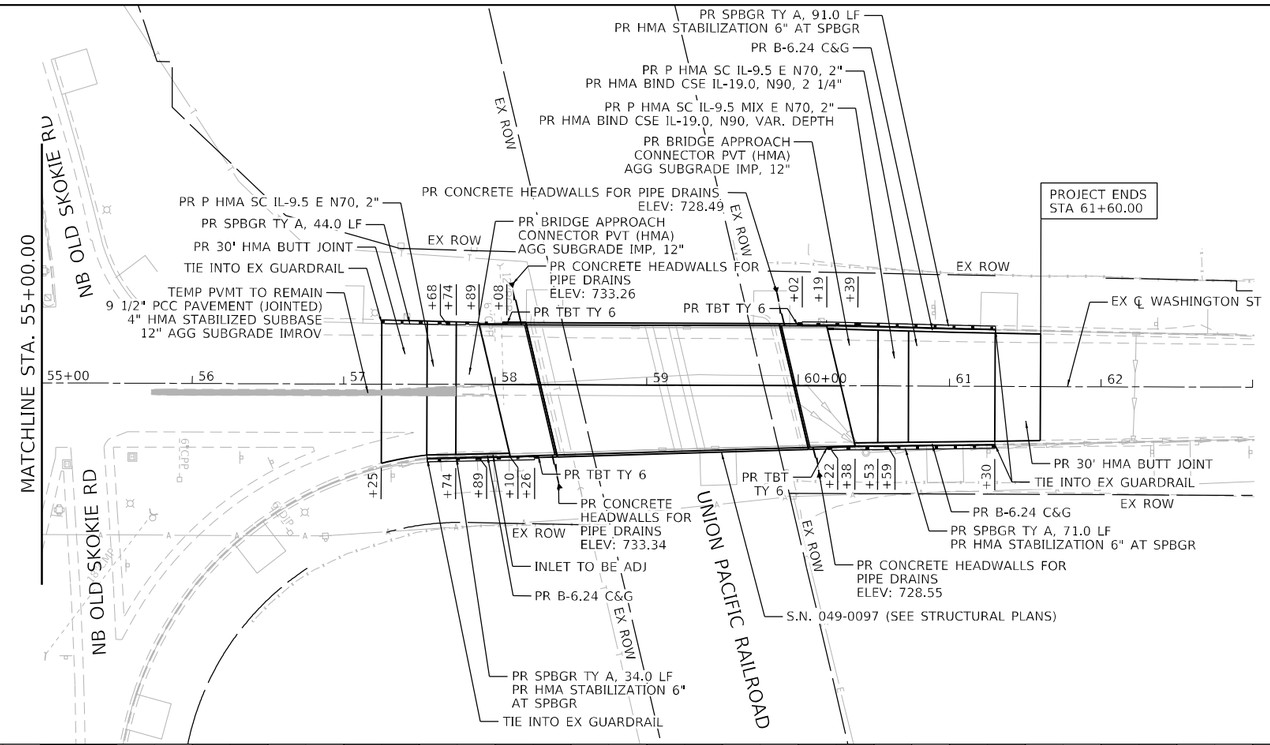
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

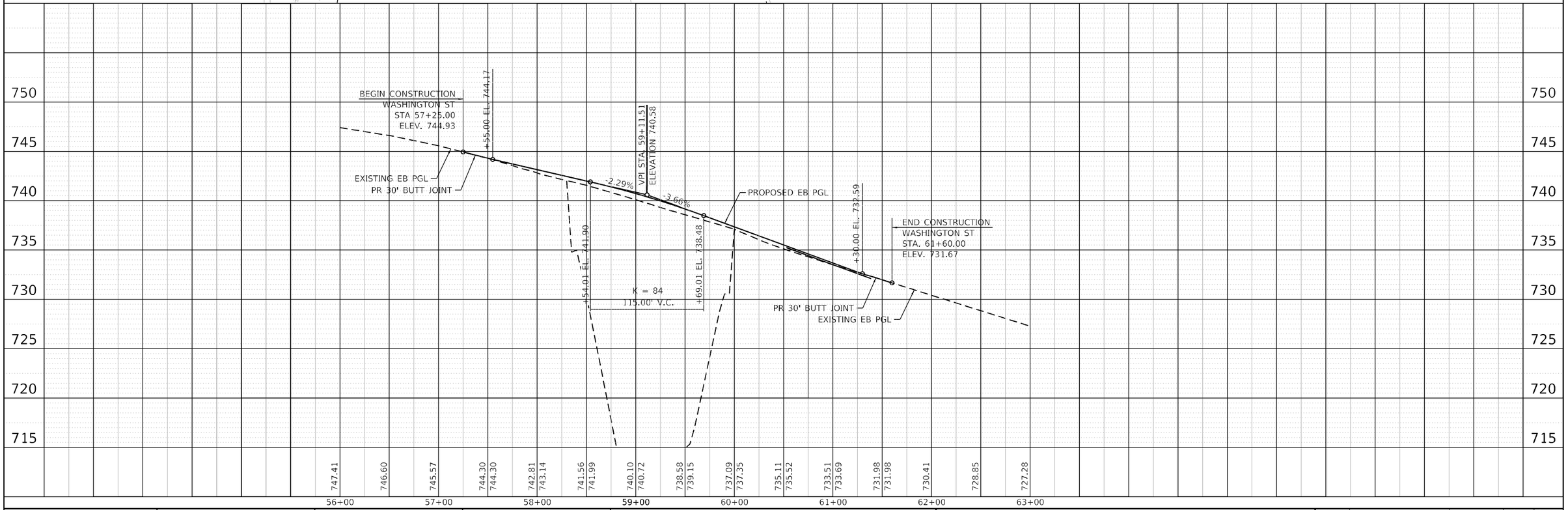
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
ROADWAY PLAN

SCALE: 1"= 50' | SHEET 1 OF 3 SHEETS | STA. 44+90.63 | TO STA. 55+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	36
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		





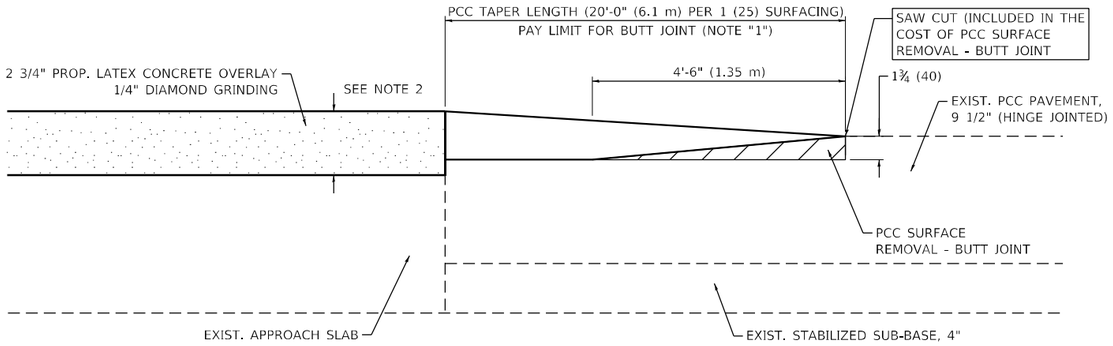
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

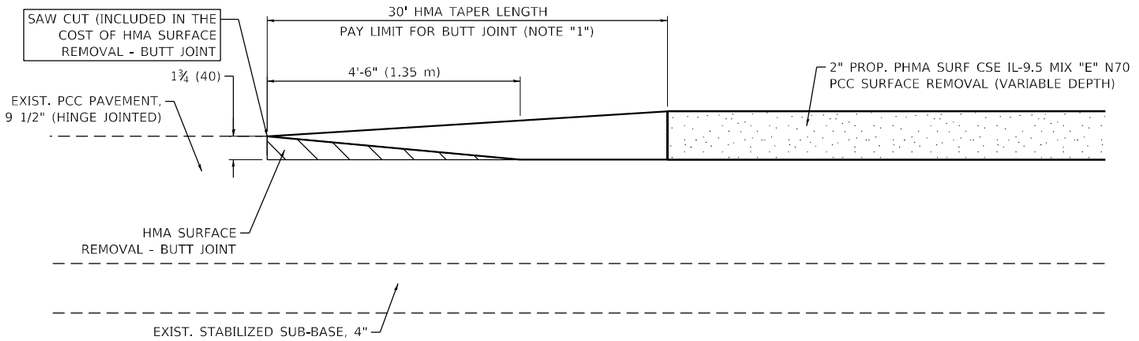
F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
ROADWAY PLAN & PROFILE

SCALE: 1"=50' | SHEET 2 OF 3 SHEETS | STA. 55+00.00 TO STA. 61+60.00

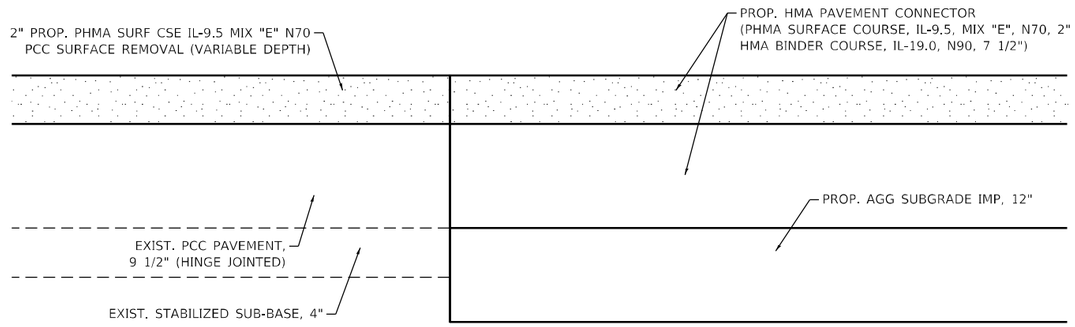
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	37
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT NHPP-66GC(527)		



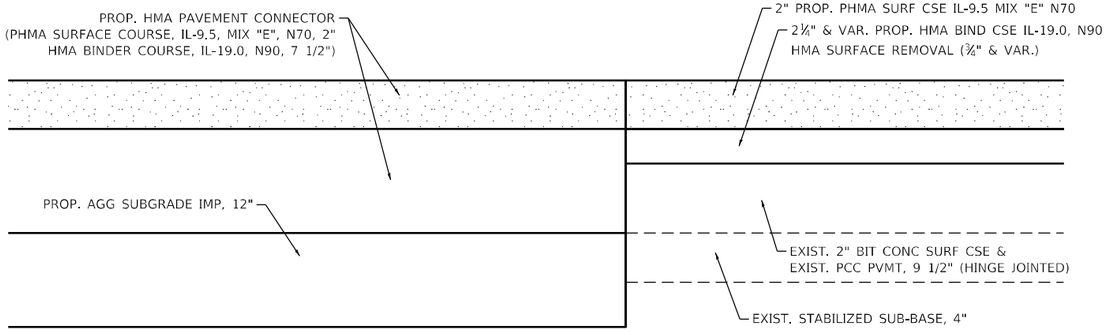
BUTT JOINT AND PCC TAPER FOR SCARIFICATION ON EXIST. PCC PAVEMENT SURFACE & PROP. LATEX OVERLAY



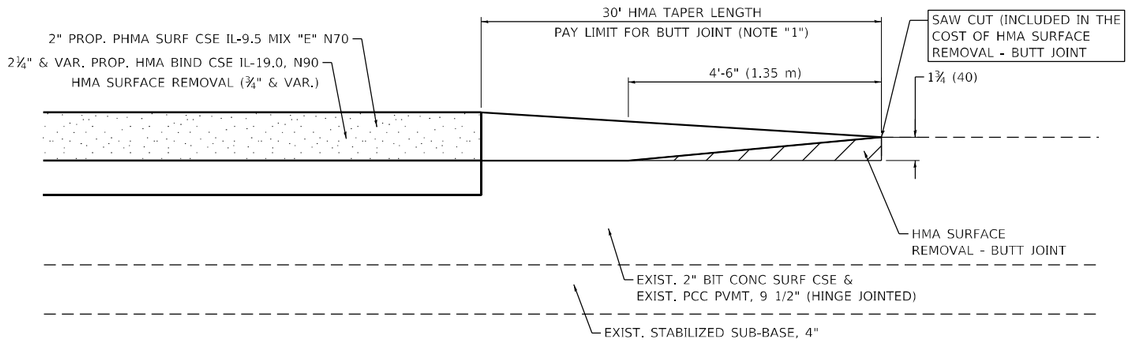
BUTT JOINT AND HMA TAPER FOR SCARIFICATION ON EXIST. PCC PAVEMENT SURFACE & PROP. HMA RESURFACING



PAVEMENT TRANSITION DETAIL - PROP. HMA RESURFACING ON EXIST. PCC PAVEMENT SURFACE & PROP. HMA PAVEMENT CONNECTOR



PAVEMENT TRANSITION DETAIL - PROP. HMA PAVEMENT ON EXIST. HMA PAVEMENT SURFACE & PROP. HMA PAVEMENT CONNECTOR



BUTT JOINT AND HMA TAPER FOR SCARIFICATION ON EXIST. HMA PAVEMENT SURFACE WITH PROP. HMA PAVEMENT

NOTES:

1. THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
2. SEE BRIDGE PLANS FOR SCARIFICATION THICKNESS.
3. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

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

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

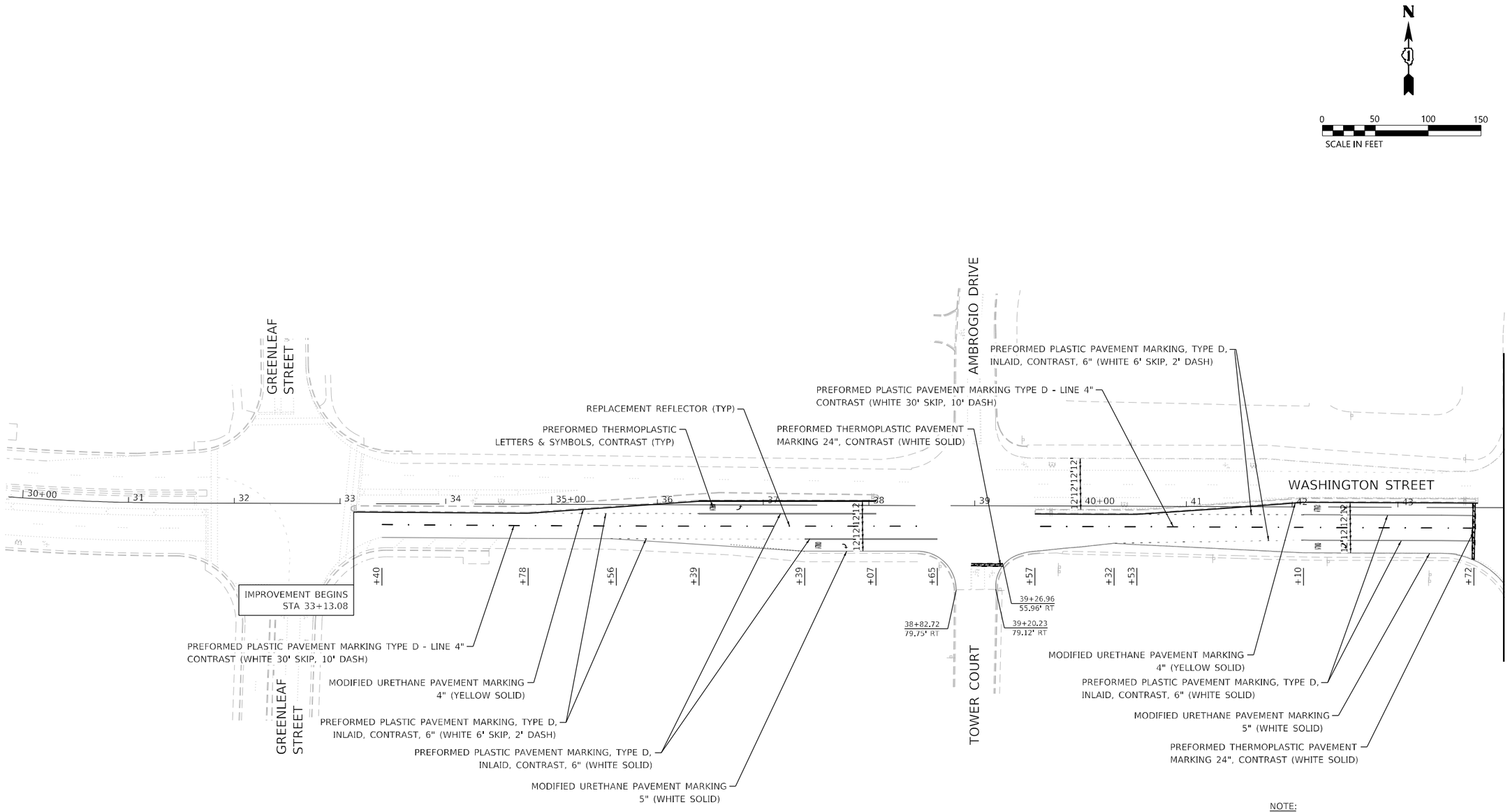
USER NAME = 14nha	DESIGNED - RC	REVISED -	
	DRAWN - RC	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HMA/PCC BUTT JOINT TAPER AND PAVEMENT TRANSITION DETAILS

SCALE: N.T.S. | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	38
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



NOTE:

1. CONTRACTOR SHALL RECORD ALL EXISTING PAVEMENT MARKINGS AND RESTORE AT THE END OF THE CONTRACT.
2. CONTRACTOR SHALL RECORD ALL EXISTING SIGNS AND RESTORE AT THE END OF THE CONTRACT.

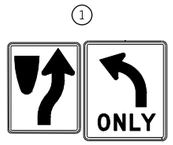
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
PAVEMENT MARKING AND SIGNING PLAN

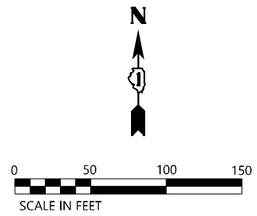
SCALE: 1"=50' | SHEET 1 OF 3 SHEETS | STA. 33+13.08 | TO STA. 44+00.00

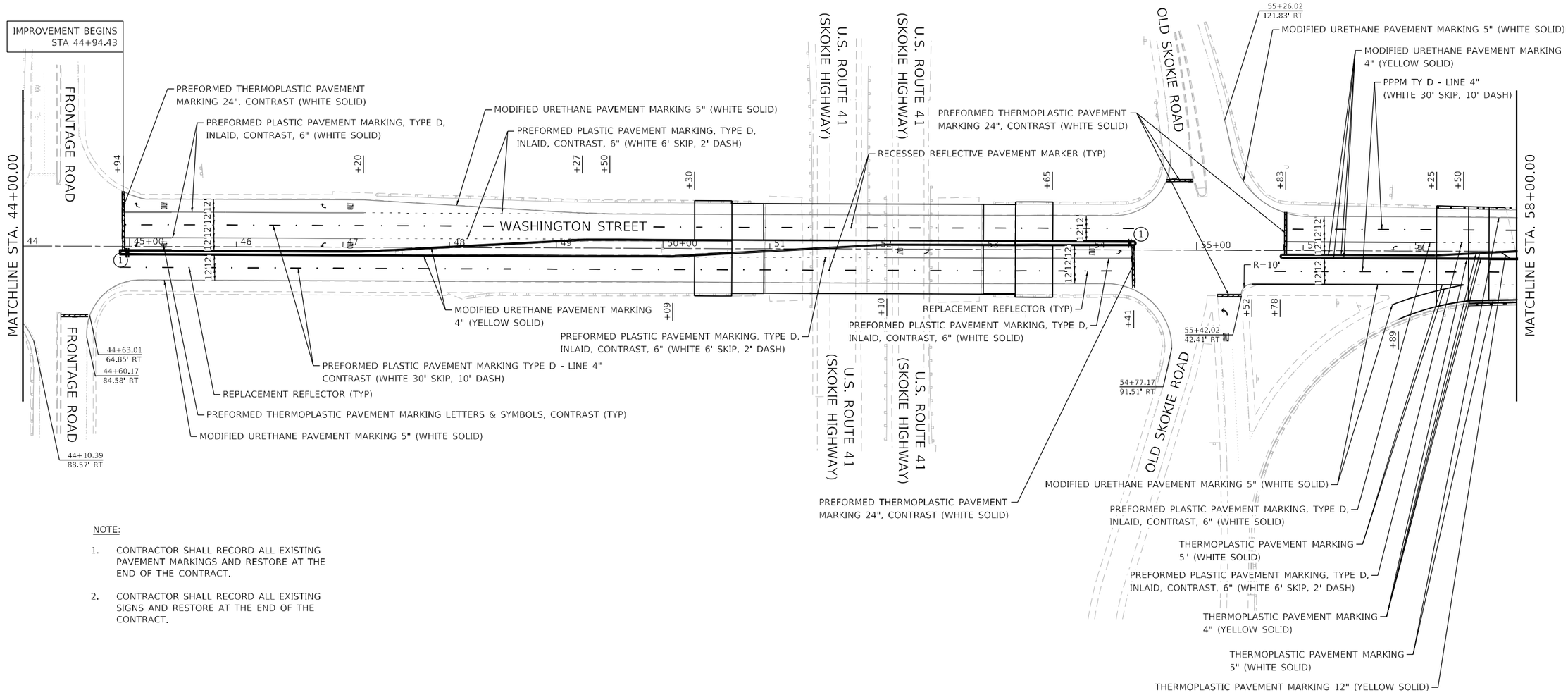
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	39
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



R4-7 24"x30" R3-5 24"x30"

BACK TO BACK TELESCOPING STEEL SIGN SUPPORT & BASE





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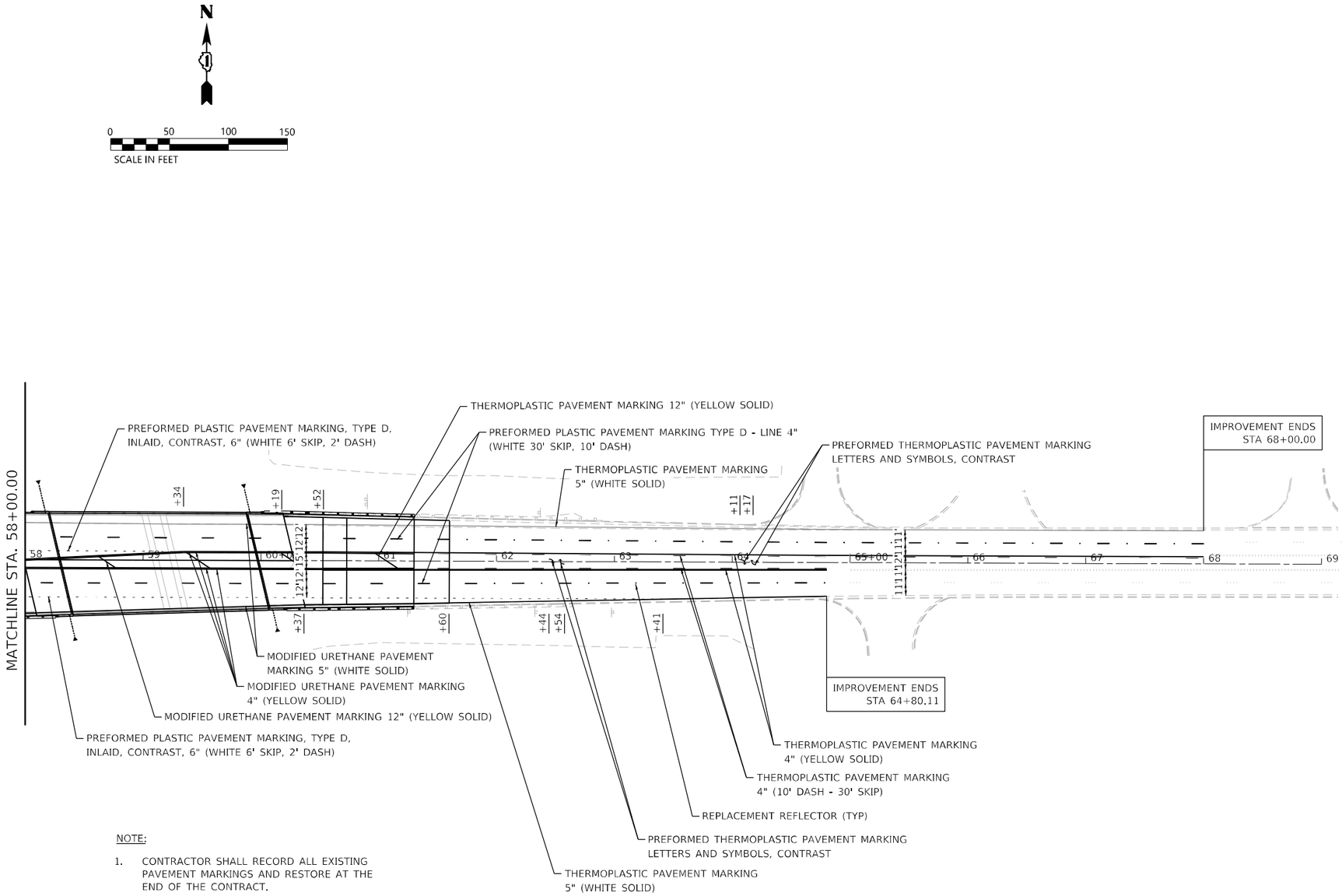
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
PAVEMENT MARKING AND SIGNING PLAN

SCALE: 1"=50' | SHEET 2 OF 3 SHEETS | STA. 44+00.00 TO STA. 58+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	40
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	



NOTE:

1. CONTRACTOR SHALL RECORD ALL EXISTING PAVEMENT MARKINGS AND RESTORE AT THE END OF THE CONTRACT.

2. CONTRACTOR SHALL RECORD ALL EXISTING SIGNS AND RESTORE AT THE END OF THE CONTRACT.

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
PAVEMENT MARKING AND SIGNING PLAN

SCALE: 1"=50' | SHEET 3 OF 3 SHEETS | STA. 58+00.00 | TO STA. 68+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	41
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

N

0 50 100 150

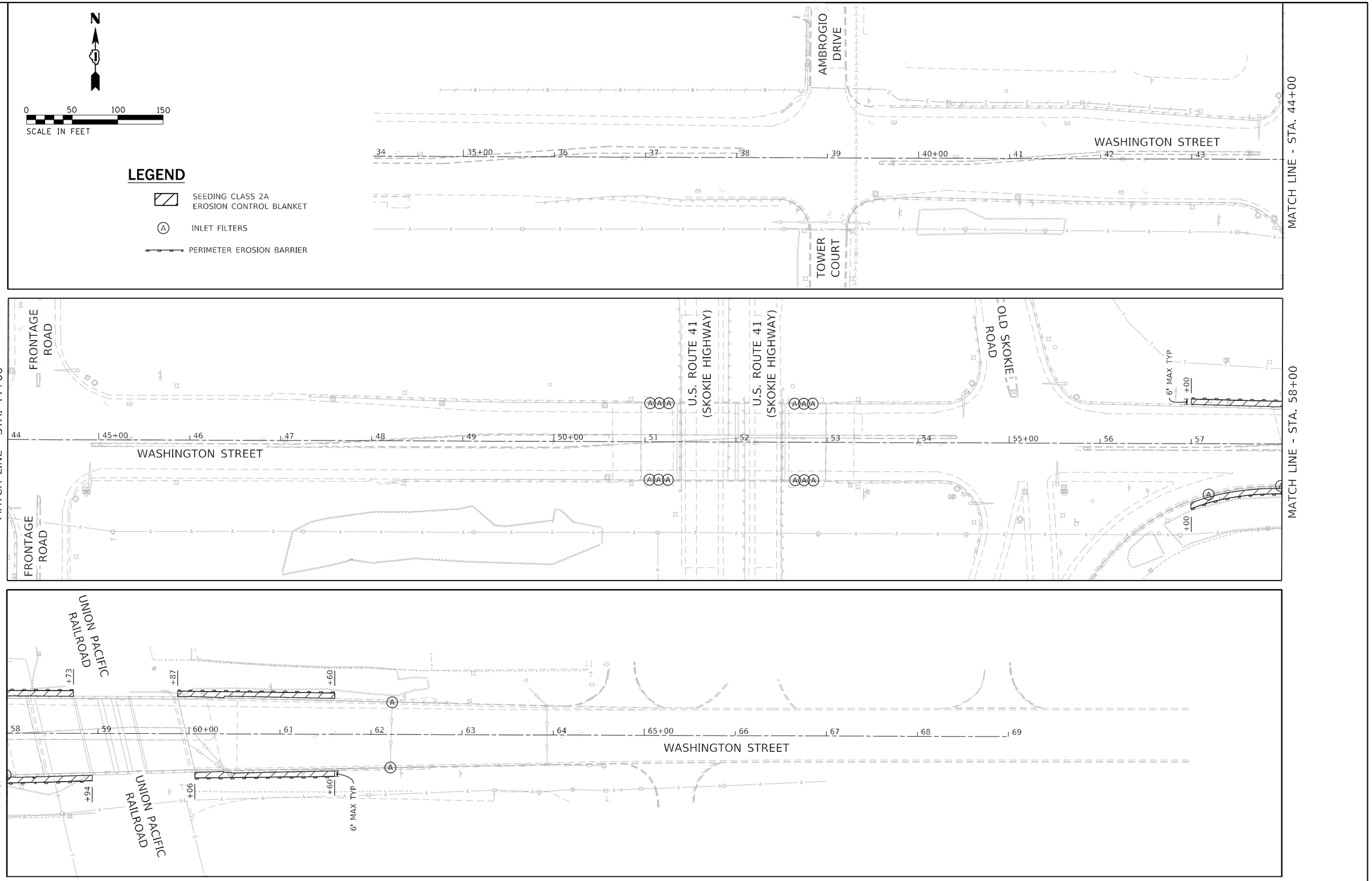
SCALE IN FEET

LEGEND

SEEDING CLASS 2A
EROSION CONTROL BLANKET

INLET FILTERS

PERIMETER EROSION BARRIER



LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN - IS	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -	
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
EROSION CONTROL PLAN

SCALE: 1"=50' | SHEET 1 OF 1 SHEETS | STA. 39+00.00 TO STA. 65+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-07-B-R&FL	LAKE	116	42
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	CC	CC
MASTER CONTROLLER	MC	MC
MASTER MASTER CONTROLLER	MMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	RR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND	H	H
DOUBLE HANDHOLE		
JUNCTION BOX	J	J
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET	RR	RR
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P P	P P
SAMPLING (SYSTEM) DETECTOR	S S	S S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS IS	IS IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS QS	QS QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	P	P
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	P RB	P RB
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	C D
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED	5	5
GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

TS SHT NO. 1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A.I./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	43
	TS–05	CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

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LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

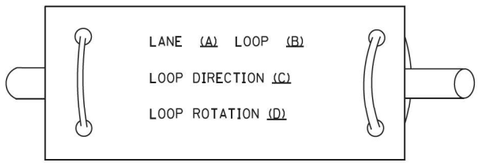
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND 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.

LOOP LEAD-IN CABLE TAG

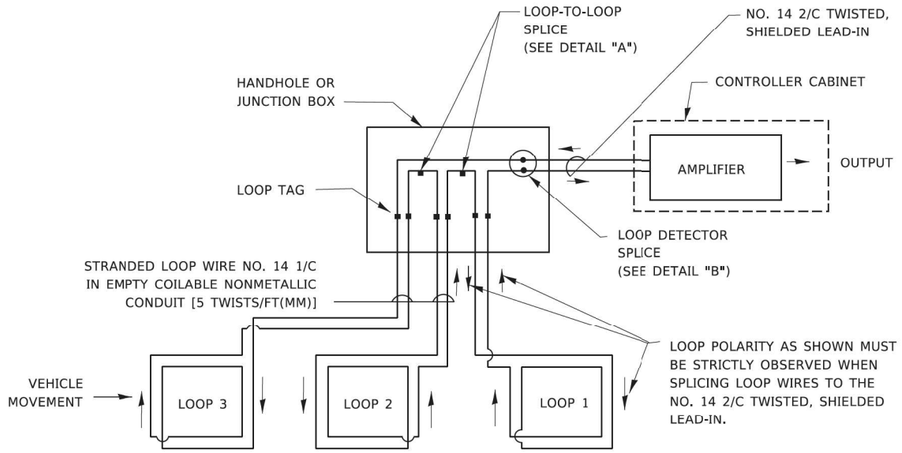


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

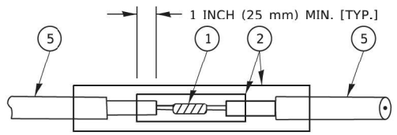
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

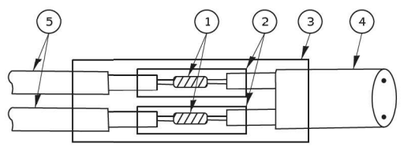


DETECTOR LOOP WIRING SCHEMATIC

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

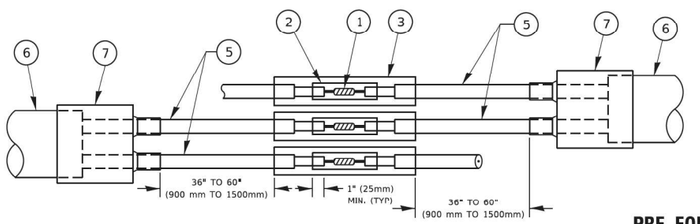


DETAIL "A"
LOOP-TO-LOOP SPLICE

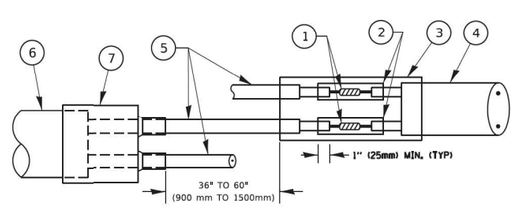


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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 LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PRE-FORMED LOOP

(6) XL POLYOLEFIN 2 CONDUCTOR

(7) BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 2 OF 7 SHEETS | STA. | TO STA.

F.A.U/F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	44
	TS-05	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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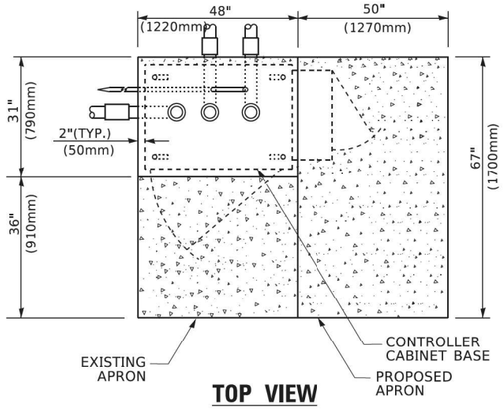
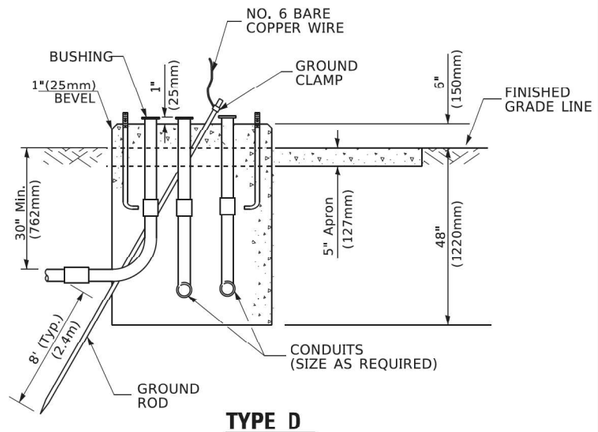
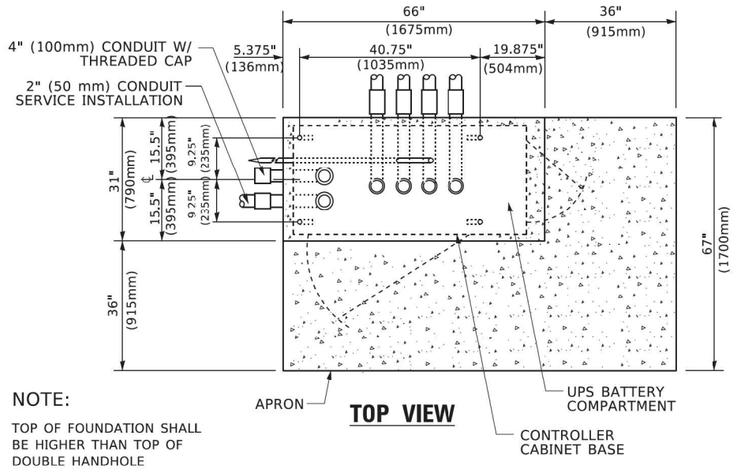


TOP VIEW



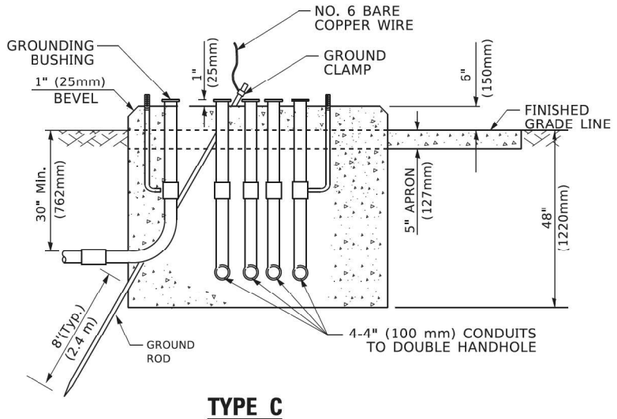
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



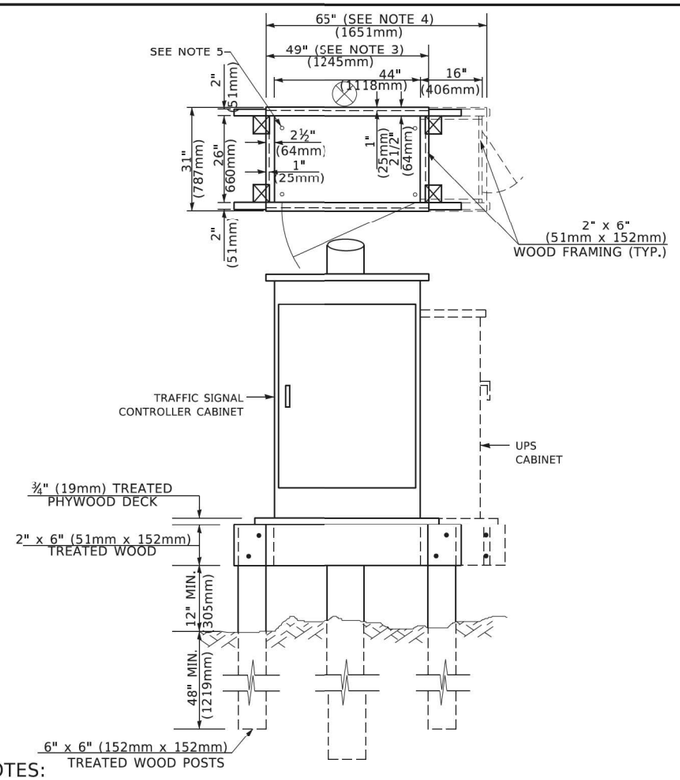
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



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



NOTES:

1. 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
2. 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.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. 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.
6. 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)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. 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.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A.U/P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	45
	TS-05	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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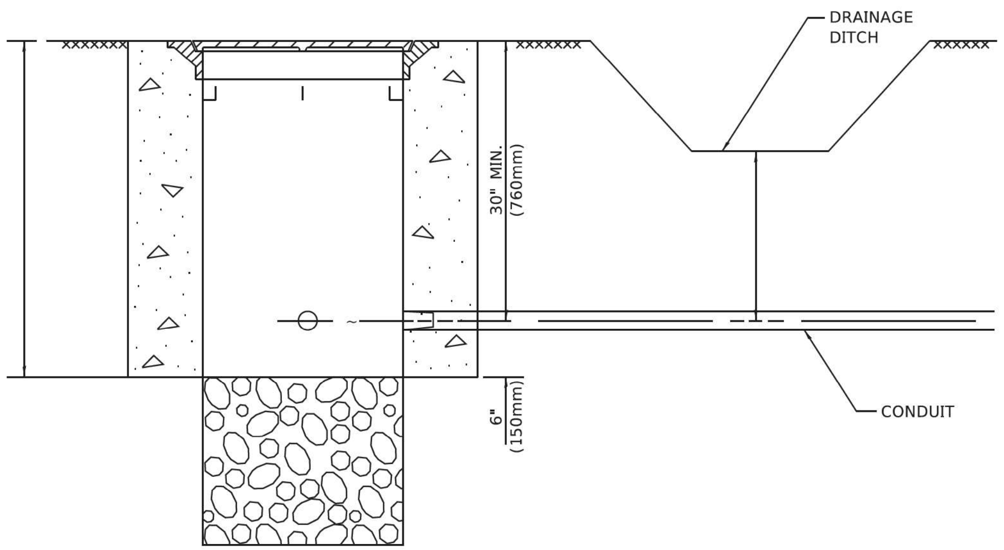
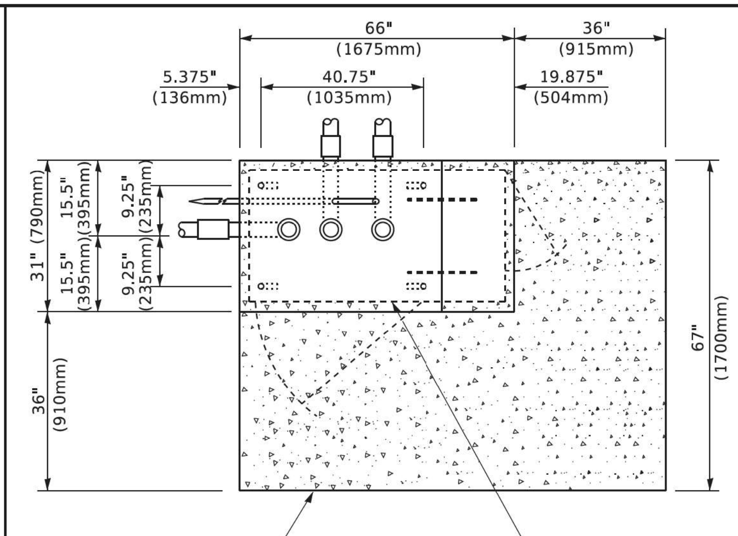


NOTES:

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.

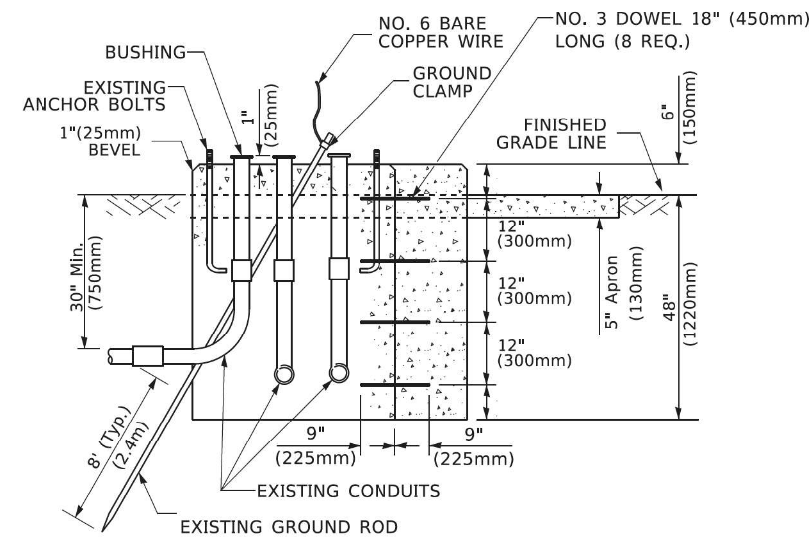
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



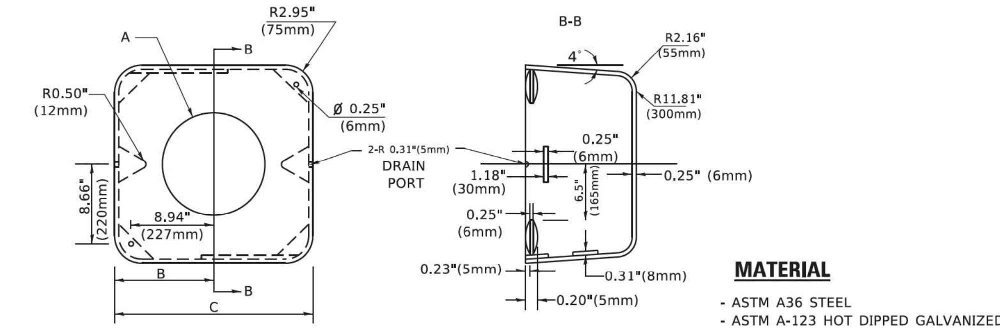
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL

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

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

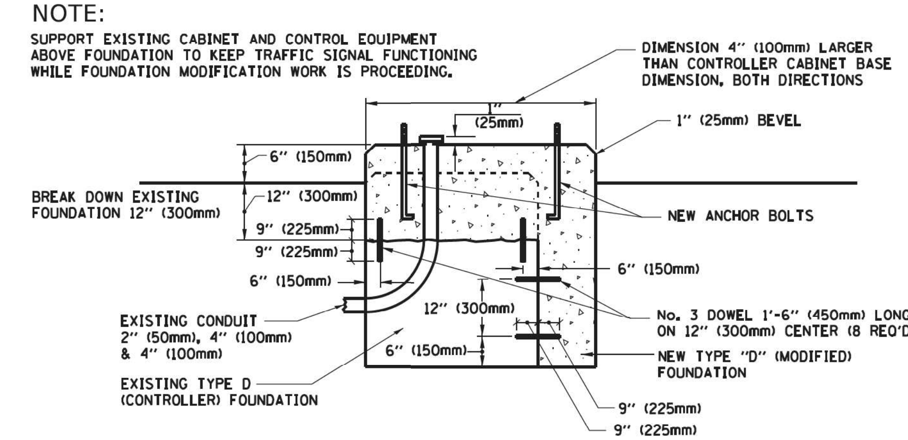
SHROUD

NOTES:

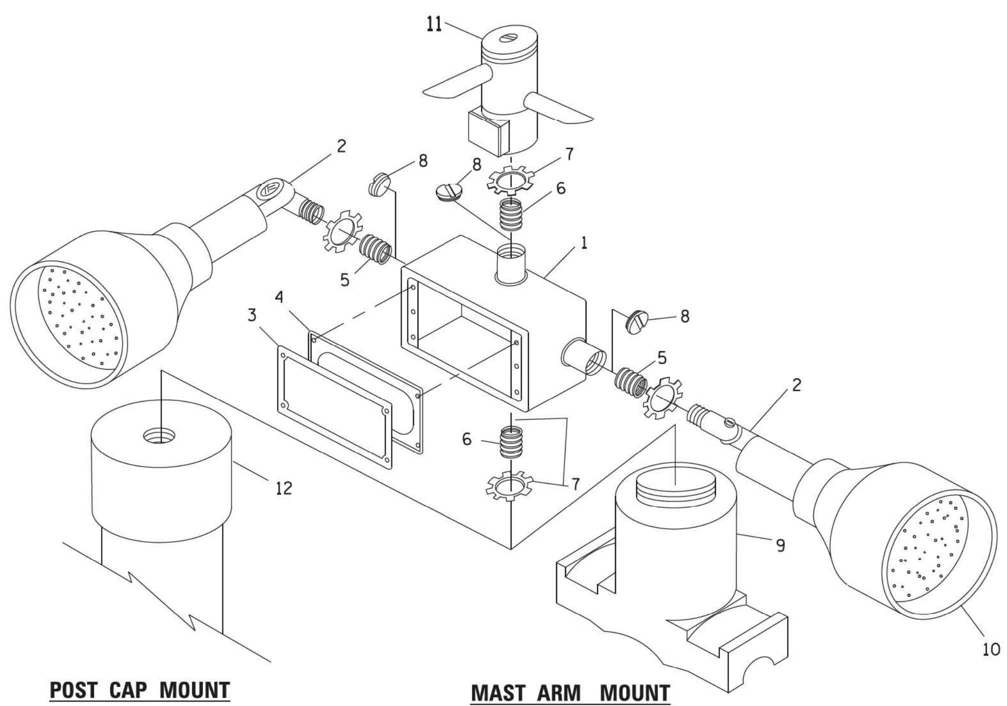
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION

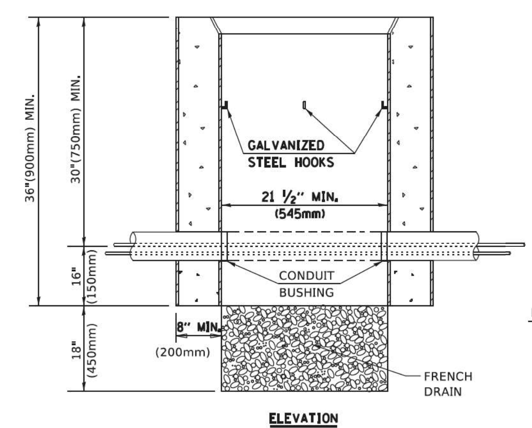


EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

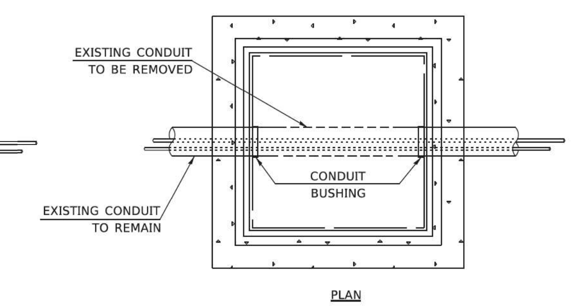
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST 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.



ELEVATION



PLAN

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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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. TO STA.

TS–05

F.A.U/P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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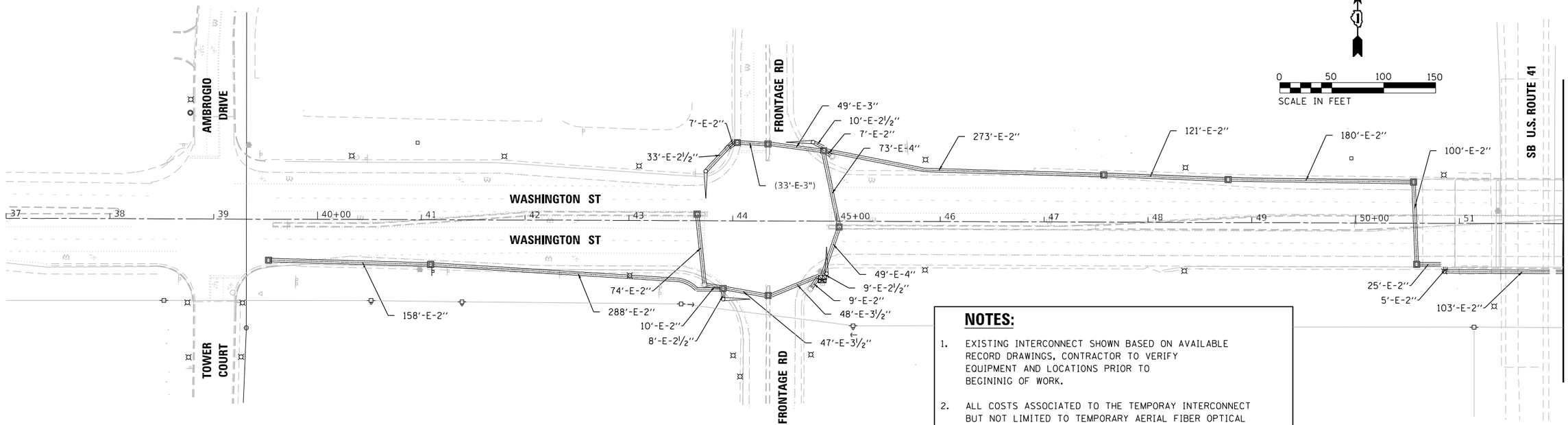
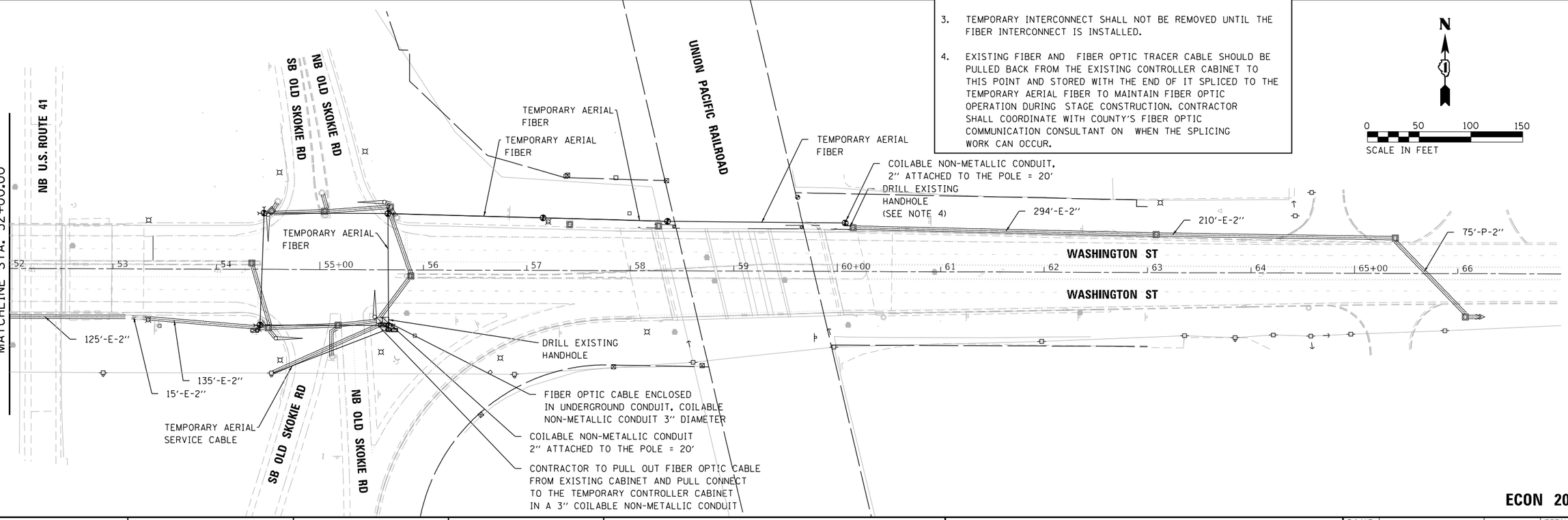
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



NOTES:

1. EXISTING INTERCONNECT SHOWN BASED ON AVAILABLE RECORD DRAWINGS, CONTRACTOR TO VERIFY EQUIPMENT AND LOCATIONS PRIOR TO BEGININIG OF WORK.
2. ALL COSTS ASSOCIATED TO THE TEMPORAY INTERCONNECT BUT NOT LIMITED TO TEMPORARY AERIAL FIBER OPTICAL CABLE, DRILLING EXISTING HANDHOLE, TERMINATION, SPLICING, COILABLE NON-METALLIC CONDUIT, AND ADDITIONAL INTERCONNECT CONNECT WOOD POLES SHALL BE INCLUDED IN THE COST OF TEMPORARY SIGNAL INSTALLATION.
3. TEMPORARY INTERCONNECT SHALL NOT BE REMOVED UNTIL THE FIBER INTERCONNECT IS INSTALLED.
4. EXISTING FIBER AND FIBER OPTIC TRACER CABLE SHOULD BE PULLED BACK FROM THE EXISTING CONTROLLER CABINET TO THIS POINT AND STORED WITH THE END OF IT SPLICED TO THE TEMPORARY AERIAL FIBER TO MAINTAIN FIBER OPTIC OPERATION DURING STAGE CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH COUNTY'S FIBER OPTIC COMMUNICATION CONSULTANT ON WHEN THE SPLICING WORK CAN OCCUR.



ECON 205

TS SHT NO. 5

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY INTERCONNECT PLAN

SCALE: 1"=50' | SHEET 1 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	47
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT NHPP-66GC(527)	

CONSTRUCTION NOTES:

1. EXISTING SIGNAL HEADS TO BE BAGGED AT THE START OF PRE-STAGE AFTER THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL AND VIDEO DETECTION AND SHALL BE REMAIN BAGGED THROUGH OUT STAGE 2. SIGNAL HEADS TO BE UNBAGGED AT THE END OF STAGE 2.

2. TEMPORARY AERIAL FIBER OPTIC SHALL BE INSTALLED PRIOR PRE-STAGE 1, AND SPLICED AT THE EXISTING HANDHOLE LOCATIONS SHOWN ON THE TEMPORARY SIGNAL AND TEMPORARY INTERCONNECT PLAN. THE COST OF TEMPORARY AERIAL FIBER OPTIC AND SPLICING SHALL BE INCLUDED AS PART OF "TEMPORARY SIGNAL INSTALLATION" WORK.

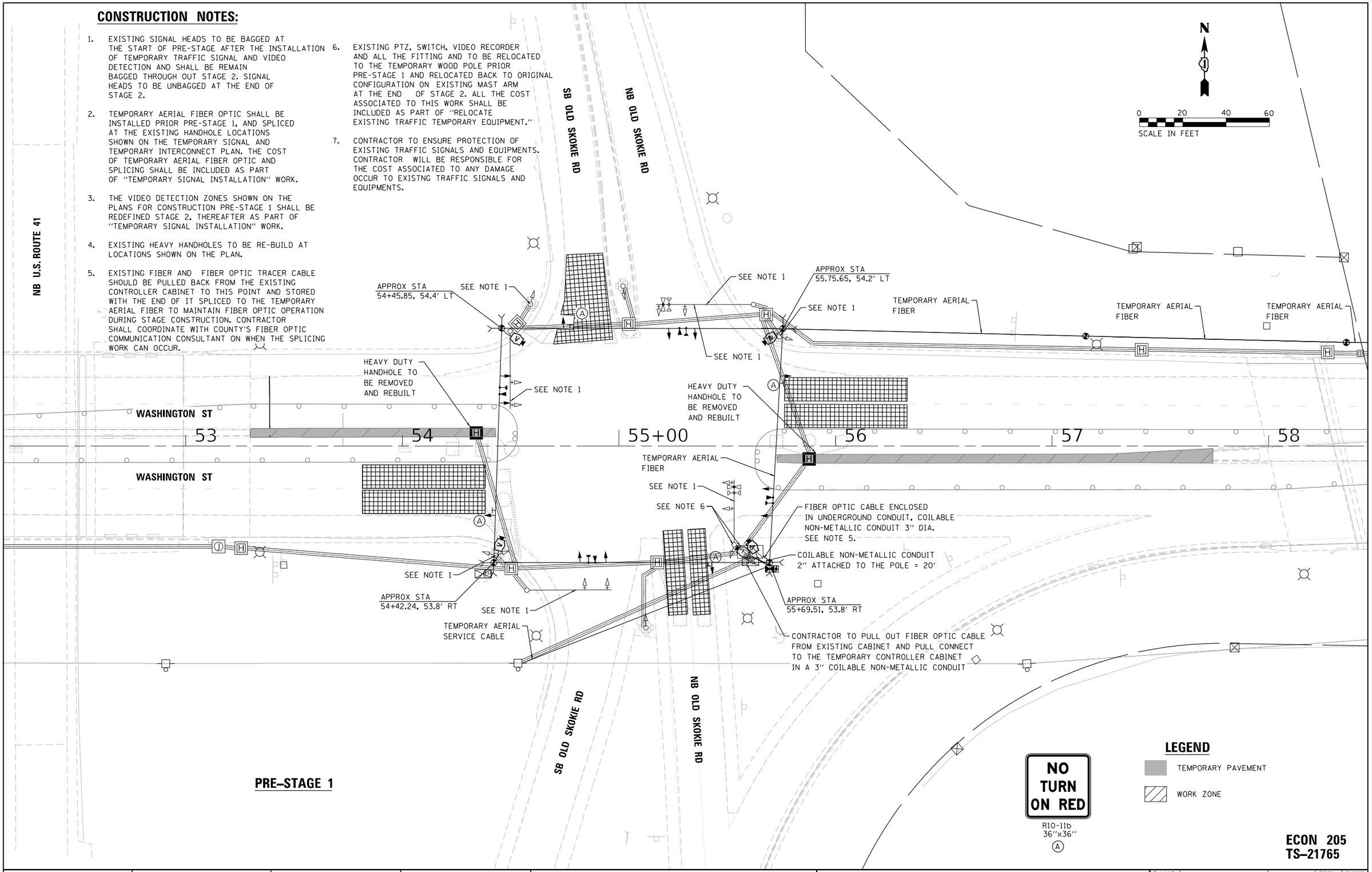
3. THE VIDEO DETECTION ZONES SHOWN ON THE PLANS FOR CONSTRUCTION PRE-STAGE 1 SHALL BE REDEFINED STAGE 2, THEREAFTER AS PART OF "TEMPORARY SIGNAL INSTALLATION" WORK.

4. EXISTING HEAVY HANDHOLES TO BE RE-BUILD AT LOCATIONS SHOWN ON THE PLAN.

5. EXISTING FIBER AND FIBER OPTIC TRACER CABLE SHOULD BE PULLED BACK FROM THE EXISTING CONTROLLER CABINET TO THIS POINT AND STORED WITH THE END OF IT SPLICED TO THE TEMPORARY AERIAL FIBER TO MAINTAIN FIBER OPTIC OPERATION DURING STAGE CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH COUNTY'S FIBER OPTIC COMMUNICATION CONSULTANT ON WHEN THE SPLICING WORK CAN OCCUR.

6. EXISTING PTZ, SWITCH, VIDEO RECORDER AND ALL THE FITTING AND TO BE RELOCATED TO THE TEMPORARY WOOD POLE PRIOR PRE-STAGE 1 AND RELOCATED BACK TO ORIGINAL CONFIGURATION ON EXISTING MAST ARM AT THE END OF STAGE 2. ALL THE COST ASSOCIATED TO THIS WORK SHALL BE INCLUDED AS PART OF "RELOCATE EXISTING TRAFFIC TEMPORARY EQUIPMENT."

7. CONTRACTOR TO ENSURE PROTECTION OF EXISTING TRAFFIC SIGNALS AND EQUIPMENTS. CONTRACTOR WILL BE RESPONSIBLE FOR THE COST ASSOCIATED TO ANY DAMAGE OCCUR TO EXISTNG TRAFFIC SIGNALS AND EQUIPMENTS.



TS SHT NO. 6

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = lmsid	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/30/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1

SCALE: 1"=20' | SHEET 2 OF 8 SHEETS | STA. | TO STA.

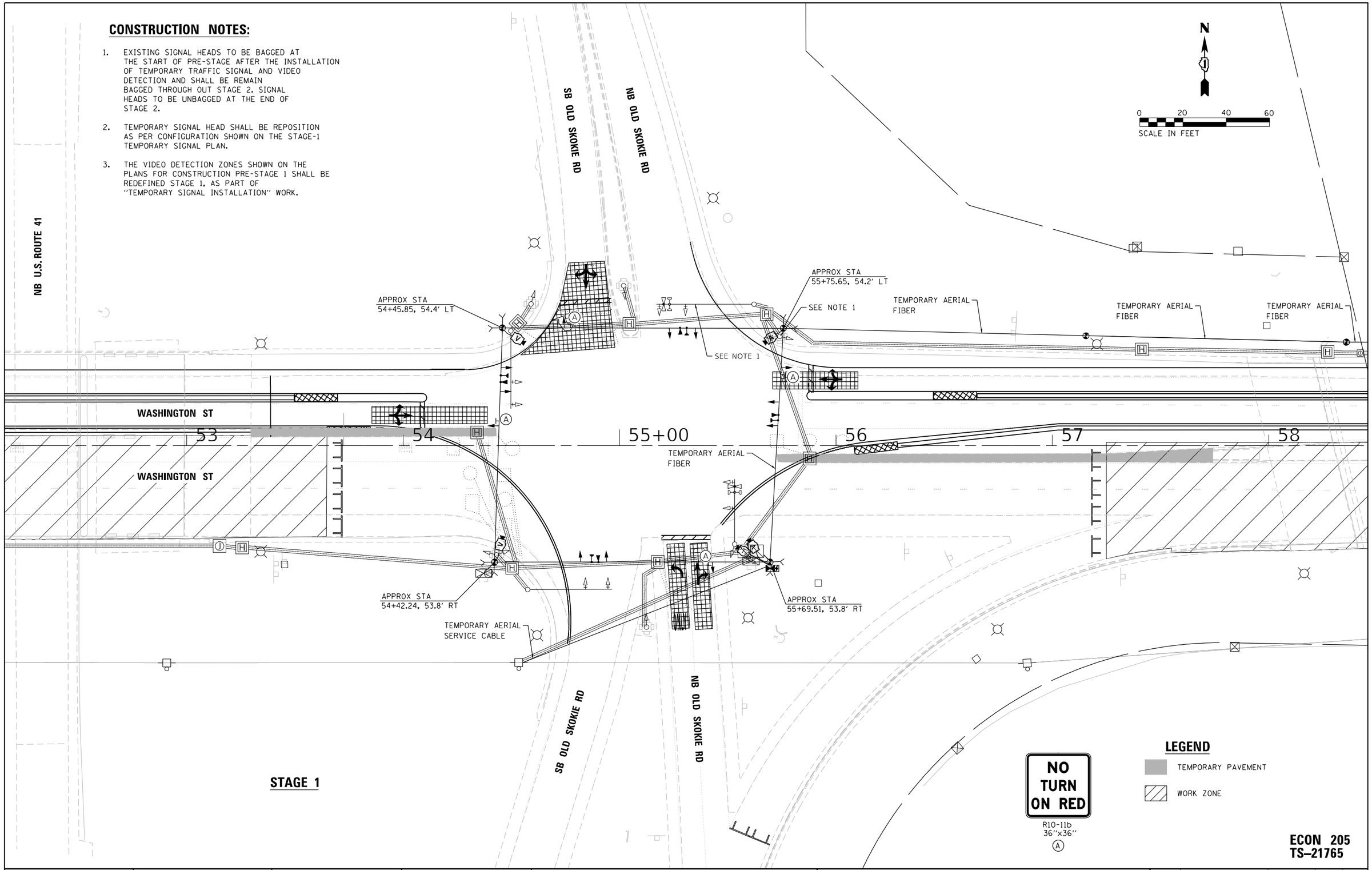
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	48
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT NHPP-66GC(527)			

CONSTRUCTION NOTES:

1. EXISTING SIGNAL HEADS TO BE BAGGED AT THE START OF PRE-STAGE AFTER THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL AND VIDEO DETECTION AND SHALL BE REMAIN BAGGED THROUGH OUT STAGE 2. SIGNAL HEADS TO BE UNBAGGED AT THE END OF STAGE 2.

2. TEMPORARY SIGNAL HEAD SHALL BE REPOSITION AS PER CONFIGURATION SHOWN ON THE STAGE-1 TEMPORARY SIGNAL PLAN.

3. THE VIDEO DETECTION ZONES SHOWN ON THE PLANS FOR CONSTRUCTION PRE-STAGE 1 SHALL BE REDEFINED STAGE 1, AS PART OF "TEMPORARY SIGNAL INSTALLATION" WORK.



ECON 205
TS–21765

TS SHT NO. 7

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nha	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

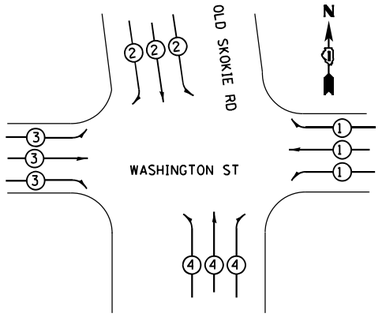
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1

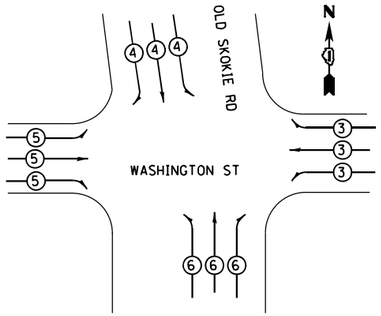
SCALE: 1"=20' | SHEET 3 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	49
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT NHPP-66GC(527)		

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

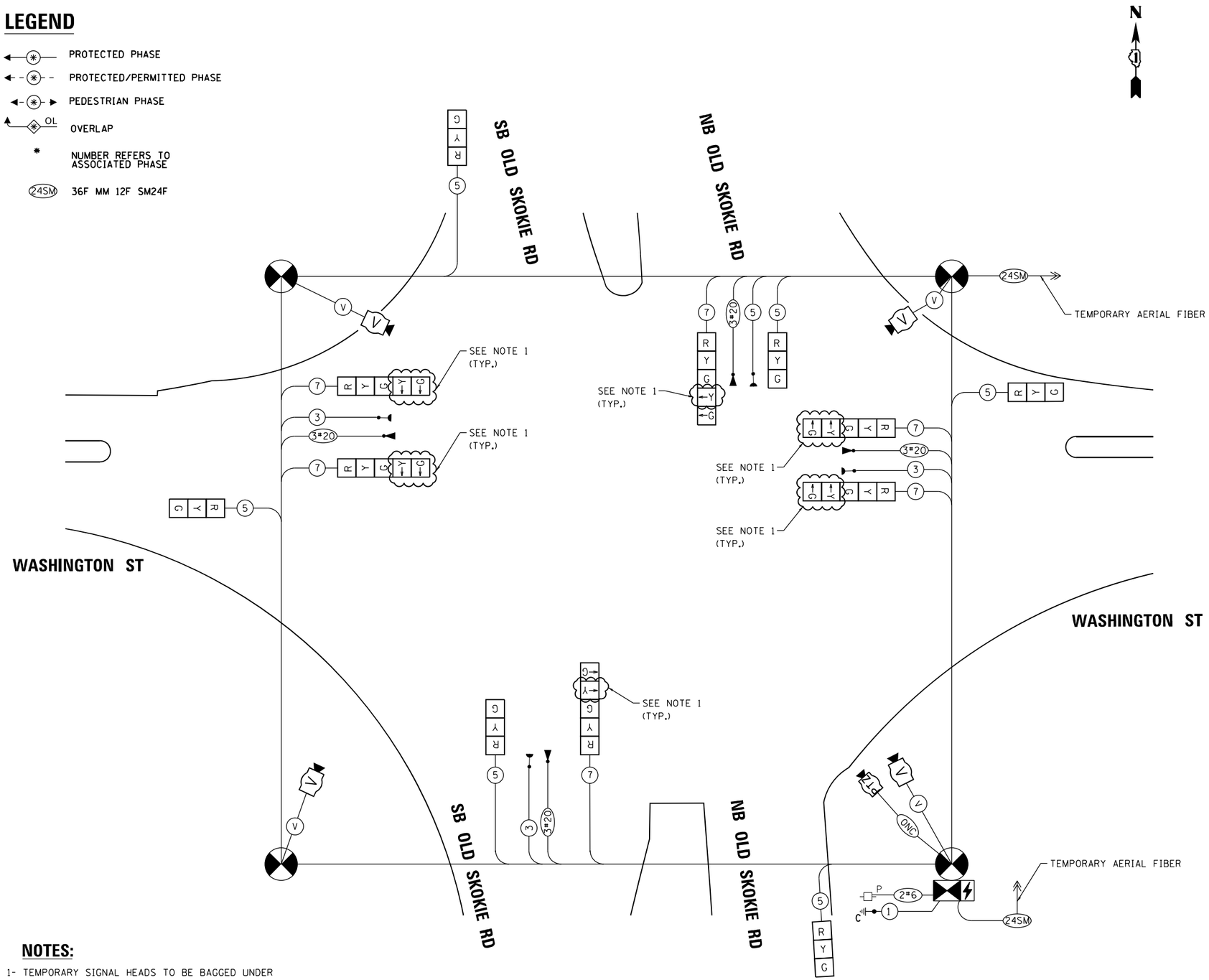
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	PERCENT % OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	-	10	50	60.0
(YELLOW)	12	-	13	5	7.8
(GREEN)	12	-	10	45	54.0
PERMISSIVE ARROW	12	-	10	10	12.0
PEDESTRIAN SIGNAL	-	-	20	100	-
CONTROLLER	1	-	100	100	100.0
UPS	1	-	25	100	25.0
ILLUM. SIGN (BLACK OUT)	-	-	25	5	-
VIDEO DETECTION SYSTEM	1	-	150	100	150.0
ILLUM. STREET NAME SIGN	-	-	120	50	-
LUMINAIRE (COMBO POLE)	-	-	400	50	-
PTZ / SURVEILLANCE CAMERA	1	-	60	100	60
				TOTAL =	468.8

ENERGY COSTS TO:

LAKE COUNTY DIVISION OF TRANSPORTATION
600 WINCHESTER ROAD
LIBERTYVILLE, IL 60048
ENERGY SUPPLY: CONTACT: MS. TERRI BLECK
PHONE: (847) 816- 5234
COMPANY: COMED

LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP
- * — NUMBER REFERS TO ASSOCIATED PHASE
- 24SM — 36F MM 12F SM24F



NOTES:

1- TEMPORARY SIGNAL HEADS TO BE BAGGED UNDER STAGE 1.
2- REFER INTERCONNECT SCHEMATIC PLAN SHEET FOR TRAFFIC SIGNAL PAY ITEMS & QUANTITY.

TEMPORARY CABLE PLAN

PRE-STAGE 1 & STAGE 1
(NOT TO SCALE)

ECON 205
TS–21765

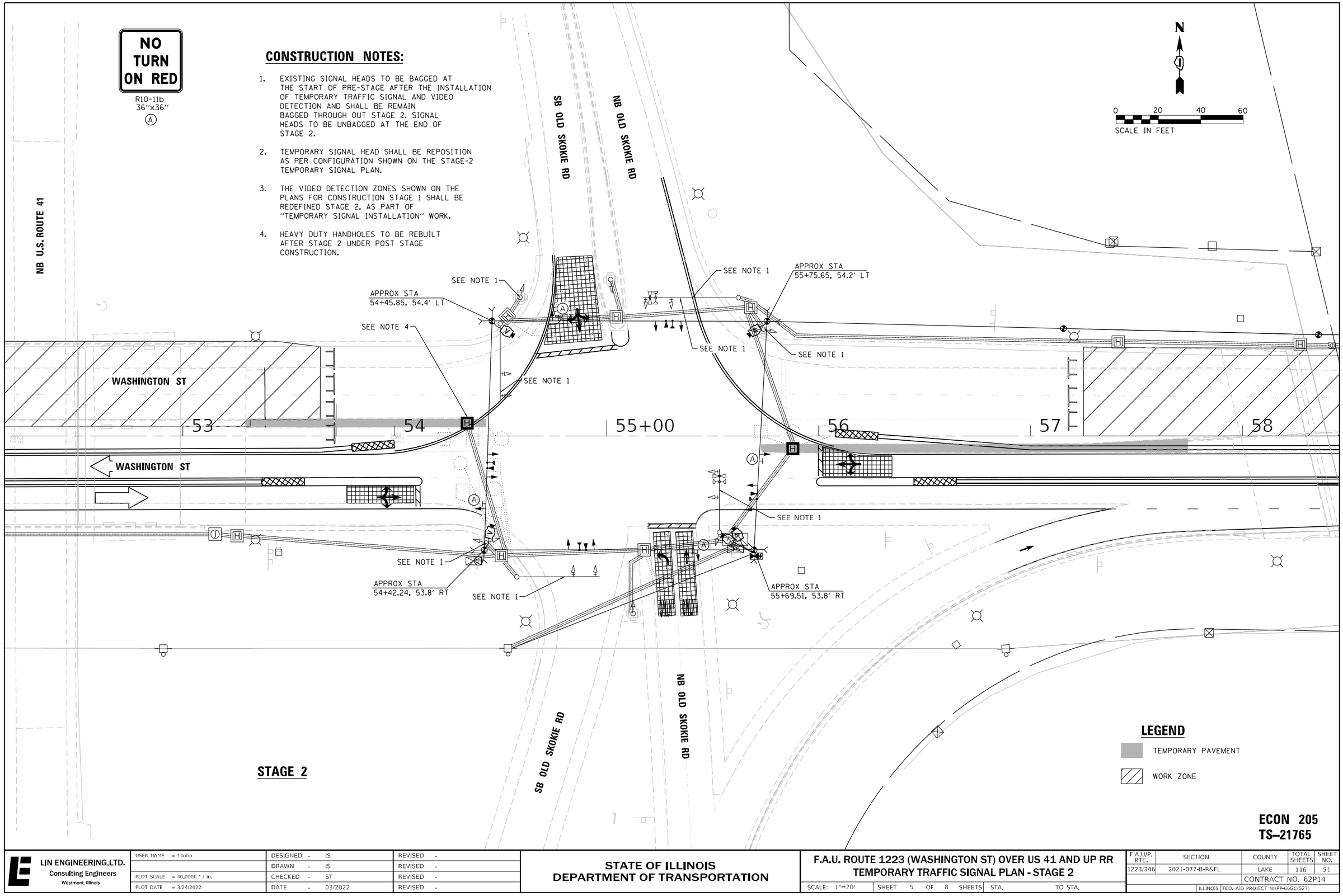
TS SHT NO. 8

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - IS	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ST	REVISED -	
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY CABLE PLAN - PRE-STAGE 1 & STAGE 1

SCALE: N.T.S. | SHEET 4 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	50
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT NHPP-66GC(527)	



TS SHT NO. 9

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED - IS	REVISED -
		DRAWN - IS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ST	REVISED -
	PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

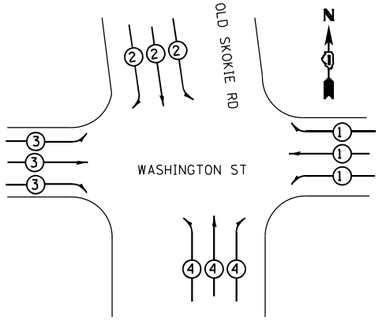
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2

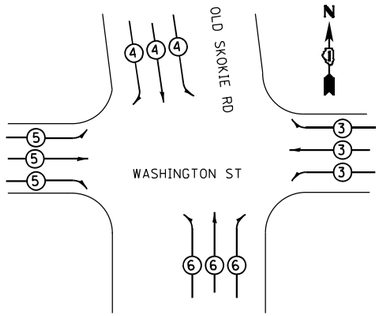
SCALE: 1"=20' | SHEET 5 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	51
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT NHPP-66GC(527)	

TEMPORARY CONTROLLER SEQUENCE

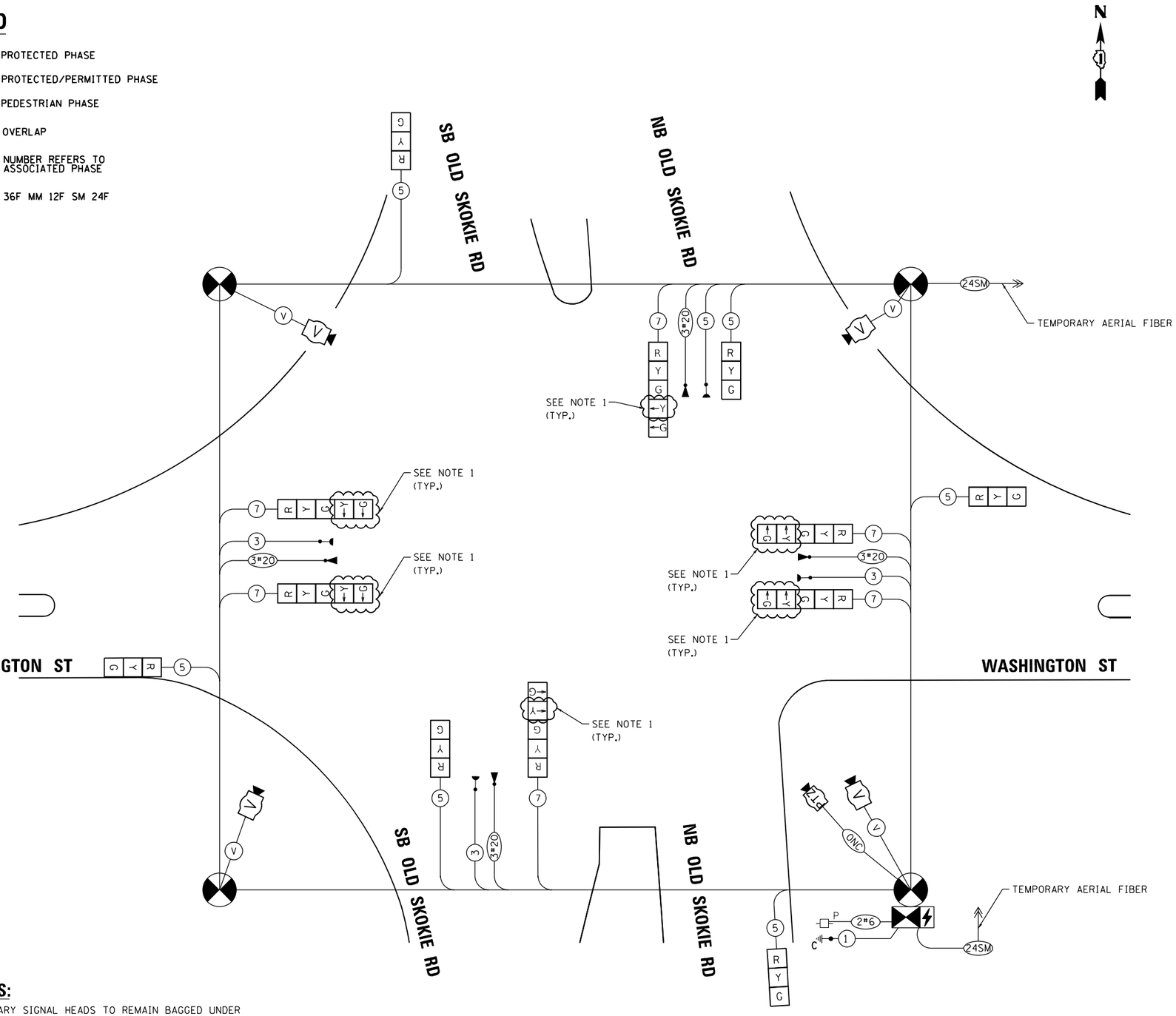


TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP
- * — NUMBER REFERS TO ASSOCIATED PHASE
- 24SM — 36F MM 12F SM 24F



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	PERCENT % OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	-	10	50	60.0
(YELLOW)	12	-	13	5	7.8
(GREEN)	12	-	10	45	54.0
PERMISSIVE ARROW	12	-	10	10	12.0
PEDESTRIAN SIGNAL	-	-	20	100	-
CONTROLLER	1	-	100	100	100.0
UPS	1	-	25	100	25.0
ILLUM. SIGN (BLACK OUT)	-	-	25	5	-
VIDEO DETECTION SYSTEM	1	-	150	100	150.0
ILLUM. STREET NAME SIGN	-	-	120	50	-
LUMINAIRE (COMBO POLE)	-	-	400	50	-
PTZ / SURVEILLANCE CAMERA	1	-	60	100	60
				TOTAL =	468.8

ENERGY COSTS TO:

LAKE COUNTY DIVISION OF TRANSPORTATION
600 WINCHESTER ROAD
LIBERTYVILLE, IL 60048
ENERGY SUPPLY: CONTACT: MS. TERRI BLECK
PHONE: (847) 816- 5234
COMPANY: COMED

NOTES:

1- TEMPORARY SIGNAL HEADS TO REMAIN BAGGED UNDER STAGE 2.

2- REFER INTERCONNECT SCHEMATIC PLAN SHEET FOR TRAFFIC SIGNAL PAY ITEMS & QUANTITY.

TEMPORARY CABLE PLAN

STAGE 2
(NOT TO SCALE)

ECON 205
TS–21765

TS SHT NO. 10

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -	
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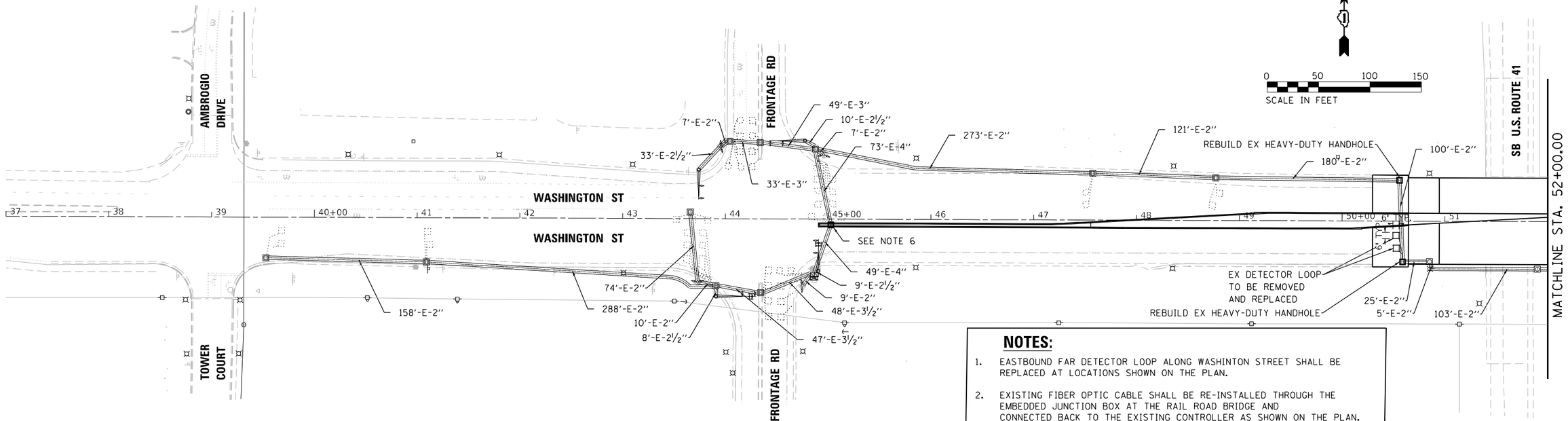
PLOT SCALE = 40.0000 ' / in.	CHECKED - ST	REVISED -	
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
TEMPORARY CABLE PLAN - STAGE 2

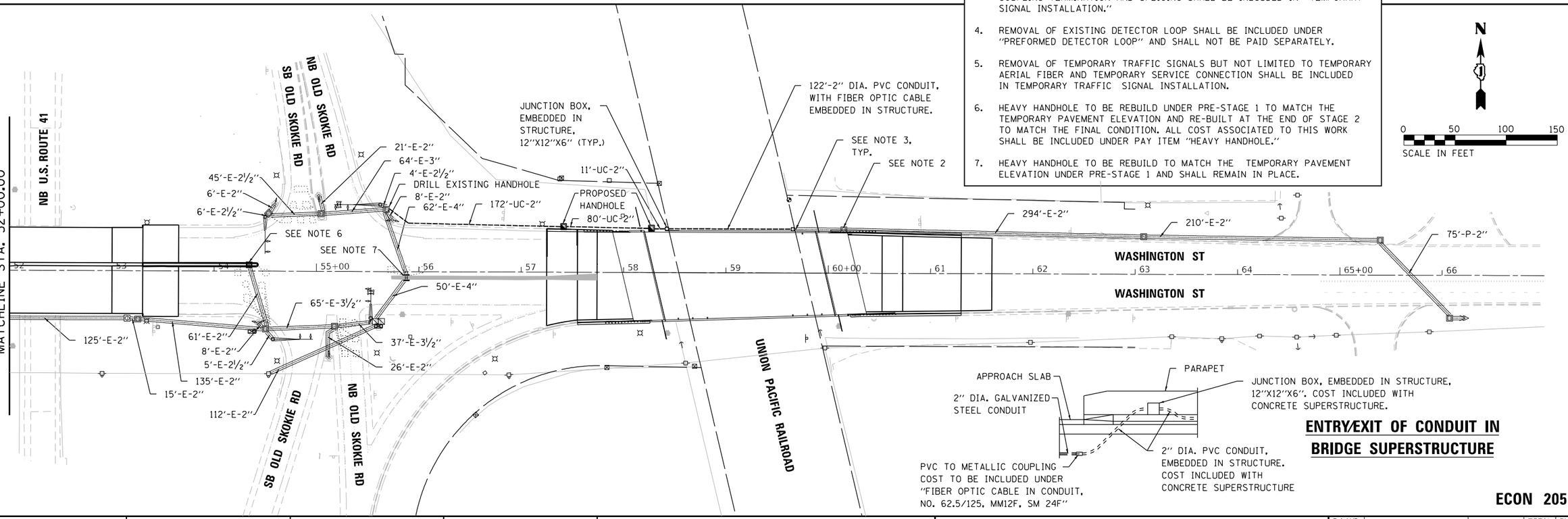
SCALE: N.T.S. | SHEET 6 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	52
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT NHPP-66GC(527)			



NOTES:

1. EASTBOUND FAR DETECTOR LOOP ALONG WASHINTON STREET SHALL BE REPLACED AT LOCATIONS SHOWN ON THE PLAN.
2. EXISTING FIBER OPTIC CABLE SHALL BE RE-INSTALLED THROUGH THE EMBEDDED JUNCTION BOX AT THE RAIL ROAD BRIDGE AND CONNECTED BACK TO THE EXISTING CONTROLLER AS SHOWN ON THE PLAN.
3. ALL COST ASSOCIATED TO FIBER OPTIC CONNECTION OF THE EXISTING CONDUIT TO THE PROPOSED 2" CONDUIT, INCLUDING BUT NOT LIMITED TO COUPLING TERMINATION AND SPLICING SHALL BE INLCUDED IN "TEMPORARY SIGNAL INSTALLATION."
4. REMOVAL OF EXISTING DETECTOR LOOP SHALL BE INCLUDED UNDER "PREFORMED DETECTOR LOOP" AND SHALL NOT BE PAID SEPARATELY.
5. REMOVAL OF TEMPORARY TRAFFIC SIGNALS BUT NOT LIMITED TO TEMPORARY AERIAL FIBER AND TEMPORARY SERVICE CONNECTION SHALL BE INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION.
6. HEAVY HANDHOLE TO BE REBUILD UNDER PRE-STAGE 1 TO MATCH THE TEMPORARY PAVEMENT ELEVATION AND RE-BUILT AT THE END OF STAGE 2 TO MATCH THE FINAL CONDITION. ALL COST ASSOCIATED TO THIS WORK SHALL BE INCLUDED UNDER PAY ITEM "HEAVY HANDHOLE."
7. HEAVY HANDHOLE TO BE REBUILD TO MATCH THE TEMPORARY PAVEMENT ELEVATION UNDER PRE-STAGE 1 AND SHALL REMAIN IN PLACE.



ENTRY/EXIT OF CONDUIT IN BRIDGE SUPERSTRUCTURE

ECON 205

TS SHT NO. 11

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

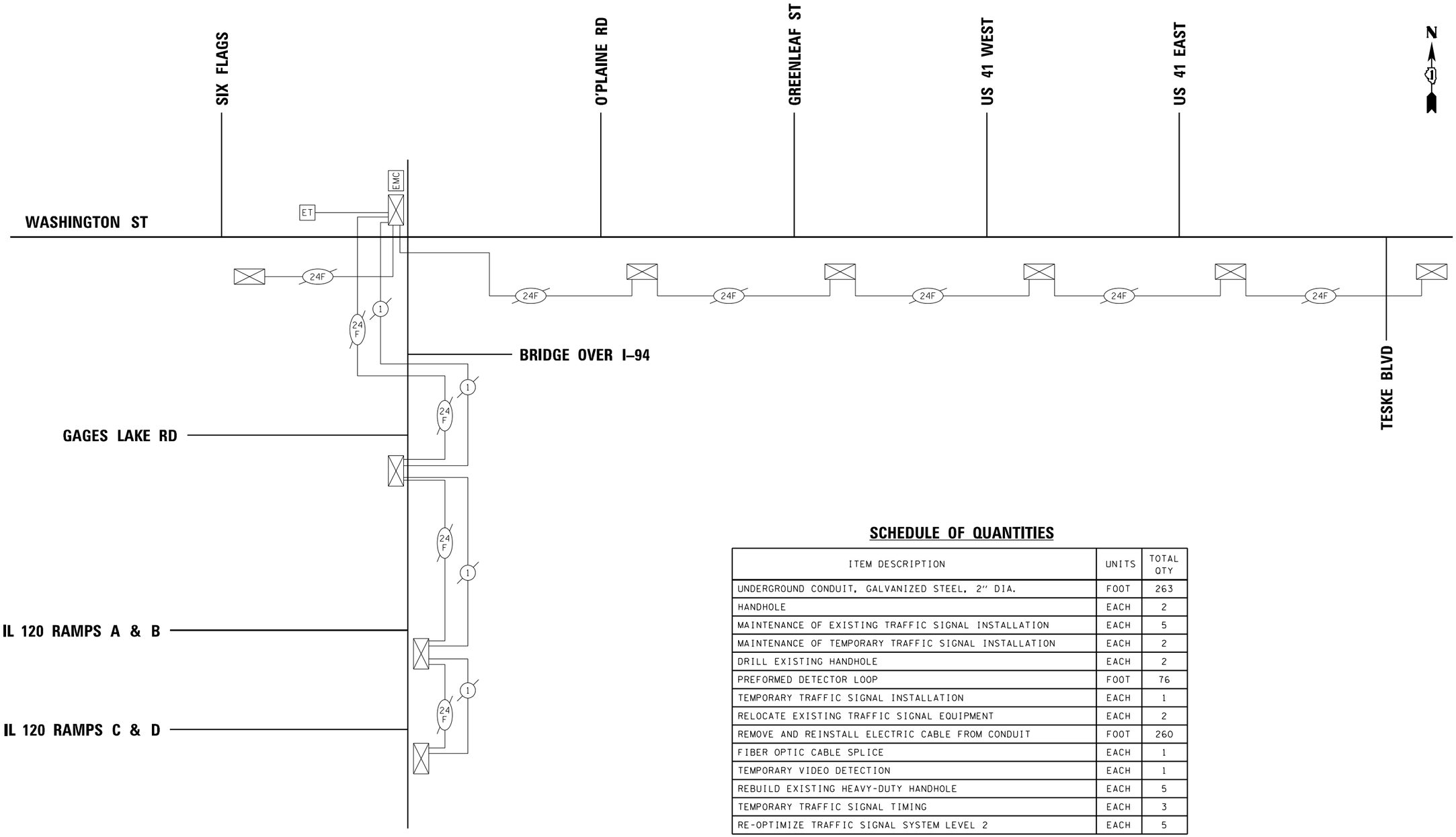
USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
INTERCONNECT PLAN

SCALE: 1"=50' | SHEET 7 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	53
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		



SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	263
HANDHOLE	EACH	2
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	5
MAINTENANCE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2
DRILL EXISTING HANDHOLE	EACH	2
PREFORMED DETECTOR LOOP	FOOT	76
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	260
FIBER OPTIC CABLE SPLICE	EACH	1
TEMPORARY VIDEO DETECTION	EACH	1
REBUILD EXISTING HEAVY-DUTY HANDHOLE	EACH	5
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	3
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	5

TS SHT NO. 12

ECON 205

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - IS	REVISED -
	DRAWN - IS	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

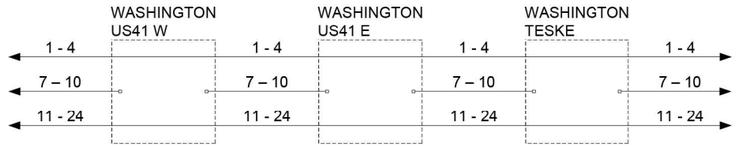
F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
INTERCONNECT SCHEMATIC

SCALE: N.T.S. | SHEET 8 OF 8 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	54
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		

PARSONS

EXISTING



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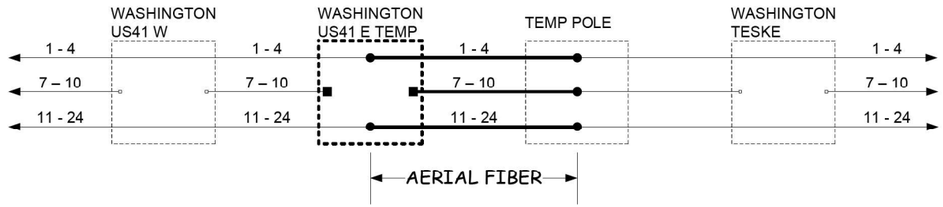
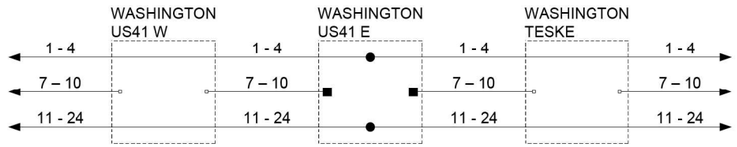


FINAL



EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

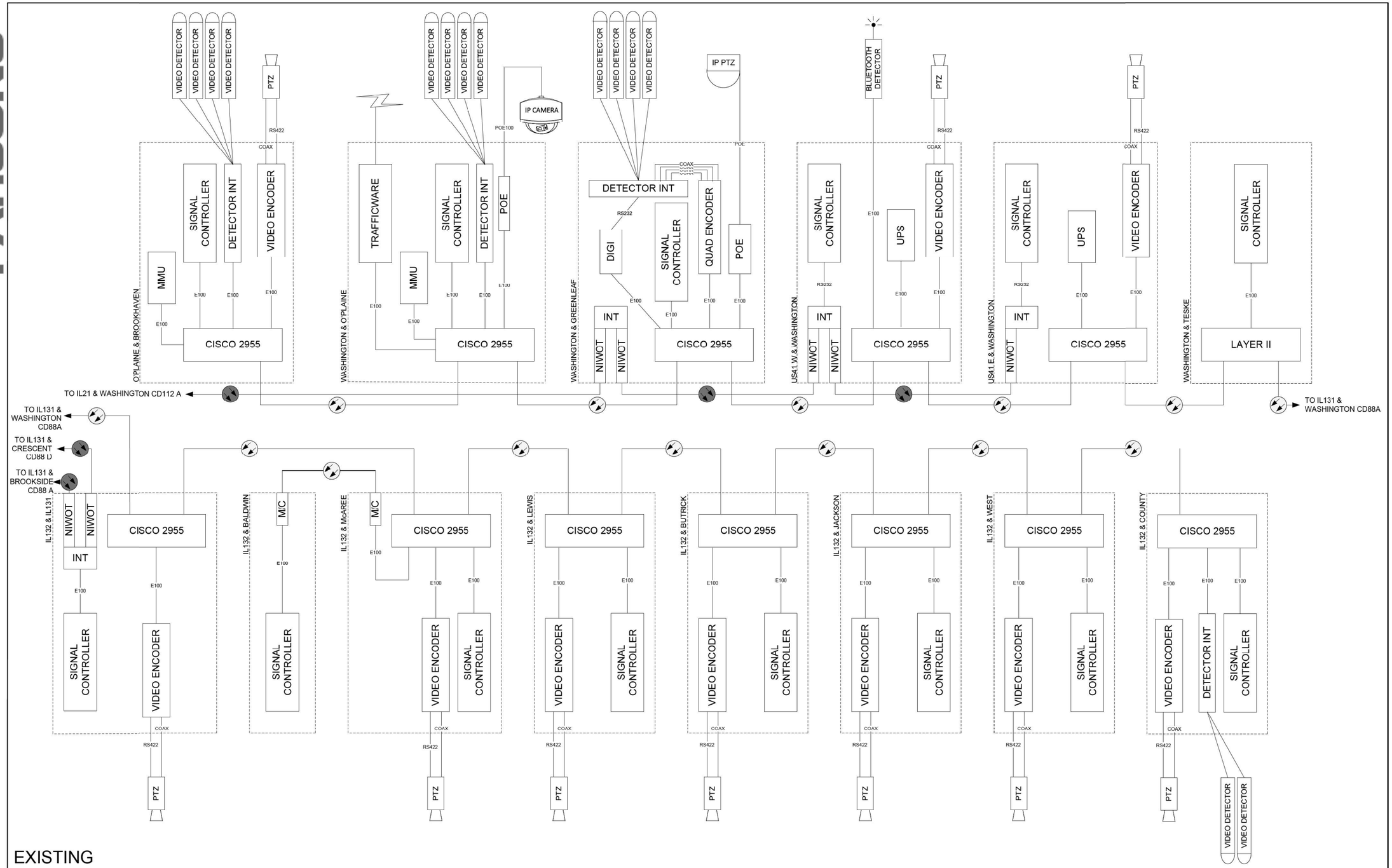
NEW FUSION SPLICE / NEW FIBER

	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	WASHINGTON US41 FIBER SPLICING DIAGRAM	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -								
	CHECKED - DG	REVISED -								
	DATE 2022.02.03	REVISED -			SCALE N/A					

TS SHT NO. 13

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR FIBER SPLICING DETAIL	F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			1223/346	2021-077-B-R&FL	LAKE	116	55
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 62P14		
	PLOT DATE = 3/24/2022	DATE -	REVISED -		SCALE: N/A SHEET 1 OF 4 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT NHPP-66GC(527)		

PARSONS

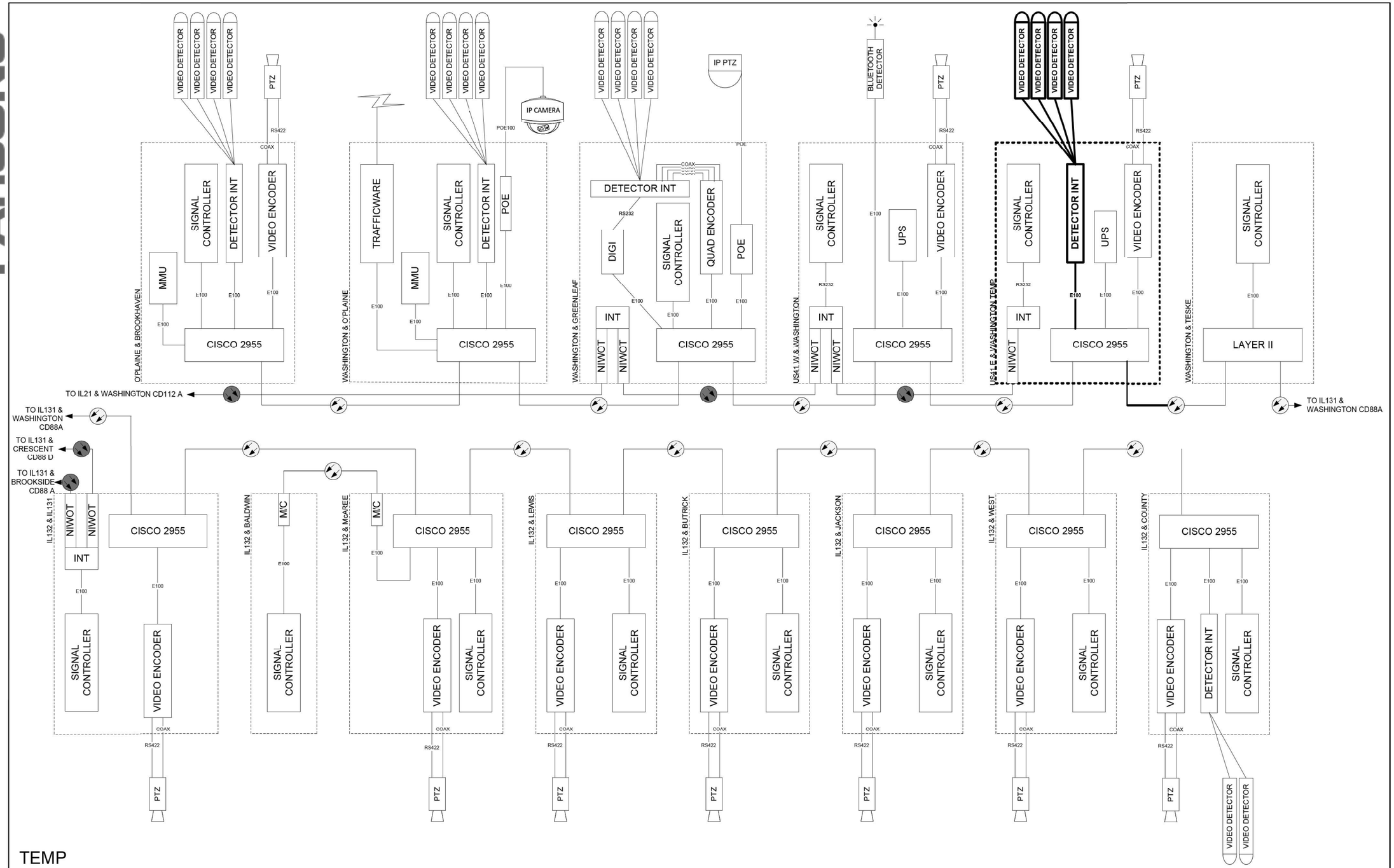


	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	88B IL131 / WASHINGTON	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -								
	CHECKED - DG	REVISED -								
	DATE 2022.02.03	REVISED -			SCALE N/A					

TS SHT NO. 14

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR FIBER SPLICING DETAIL	F.A.U./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			1223/346	2021-077-B-R&FL	LAKE	116	56
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		SCALE: N/A SHEET 2 OF 4 SHEETS STA. TO STA.			CONTRACT NO. 62P14		
	PLOT DATE = 3/24/2022	DATE -	REVISED -				ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		

PARSONS

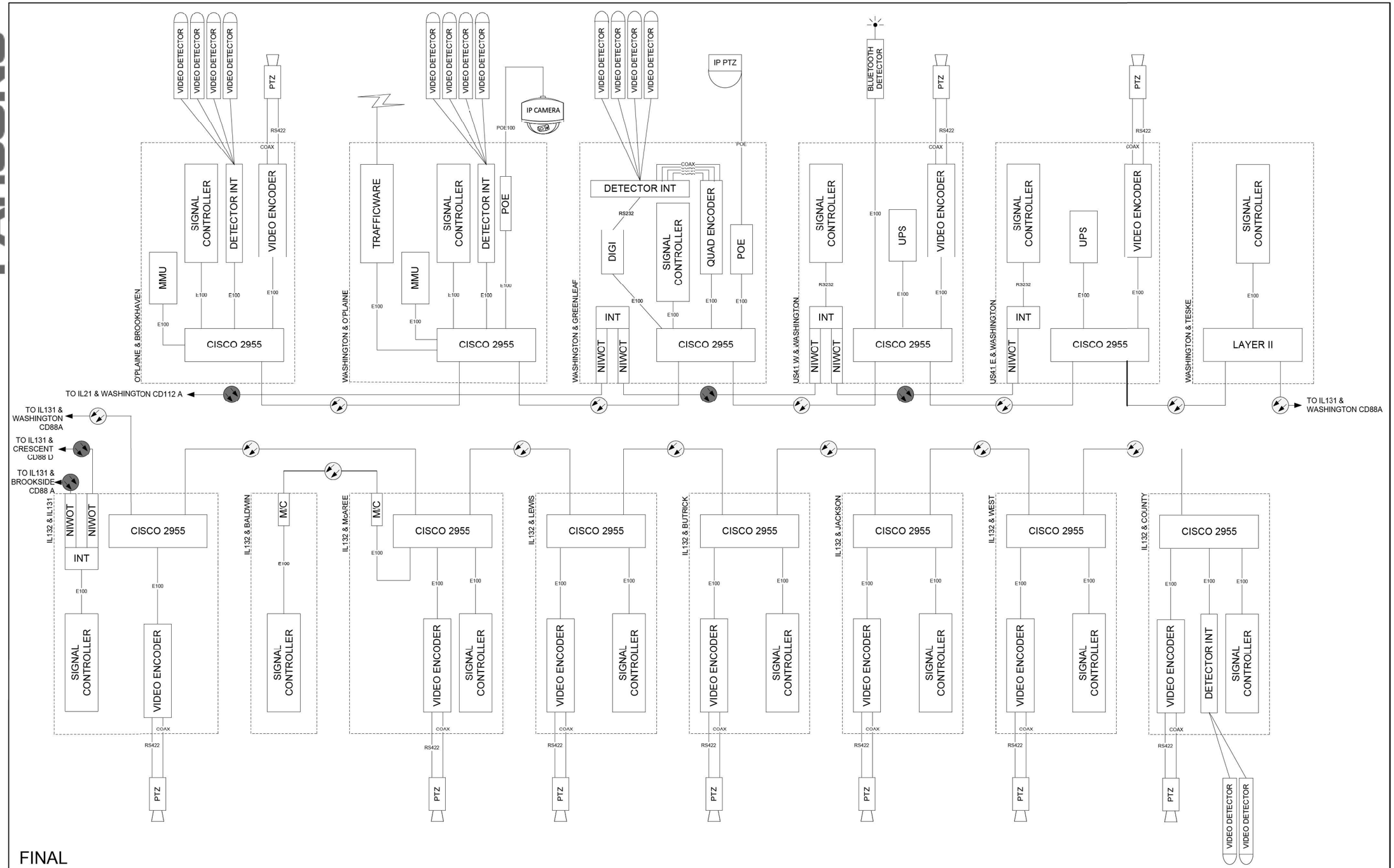


	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	88B IL131 / WASHINGTON	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -								
	CHECKED - DG	REVISED -								
	DATE 2022.02.03	REVISED -			SCALE N/A					

TS SHT NO. 15

LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR FIBER SPLICING DETAIL	F.A.U./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			1223/346	2021-077-B-R&FL	LAKE	116	57
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 62P14		
	PLOT DATE = 3/24/2022	DATE -	REVISED -		SCALE: N/A SHEET 3 OF 4 SHEETS STA. TO STA.			ILLINOIS	FED. AID PROJECT NHPP-66GC(527)	

PARSONS



FINAL

	DESIGNED - DG	REVISED -		LAKE COUNTY DIVISION OF TRANSPORTATION	88B IL131 / WASHINGTON	ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
	DRAWN - YM	REVISED -								
	CHECKED - DG	REVISED -								
	DATE 2022.02.03	REVISED -			SCALE N/A					

TS SHT NO. 16

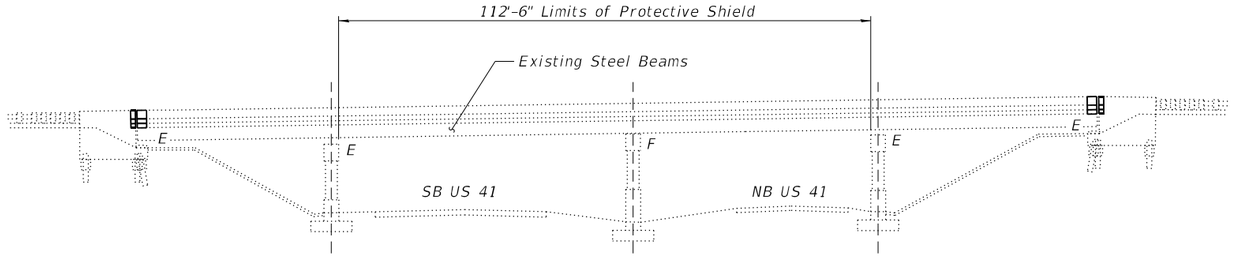
LIN ENGINEERING,LTD. Consulting Engineers Westmont, Illinois	USER NAME = 14nho	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR FIBER SPLICING DETAIL
		DRAWN -	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		SCALE: N/A SHEET 4 OF 4 SHEETS STA. TO STA.
	PLOT DATE = 3/24/2022	DATE -	REVISED -		

F.A.U./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	58
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT NHPP-66GC(527)		

Existing Structure: SN 049-0016 built in 1961 as FA Route 42, Section 10-HB at Sta. 500+05. In 1996, the deck and approach slabs were replaced, the structure was widened, and abutment bearings were replaced. The structure is a 4-span bridge with a 7½" deck on steel beams, measuring 205'-9" back to back abutments, 87'-2" out to out, with no skew. The substructure consists of concrete pile supported stub abutments and multi-column concrete piers supported on spread footing foundations. Stage construction shall be utilized to maintain one lane of traffic in each direction at all times.

SCOPE OF WORK

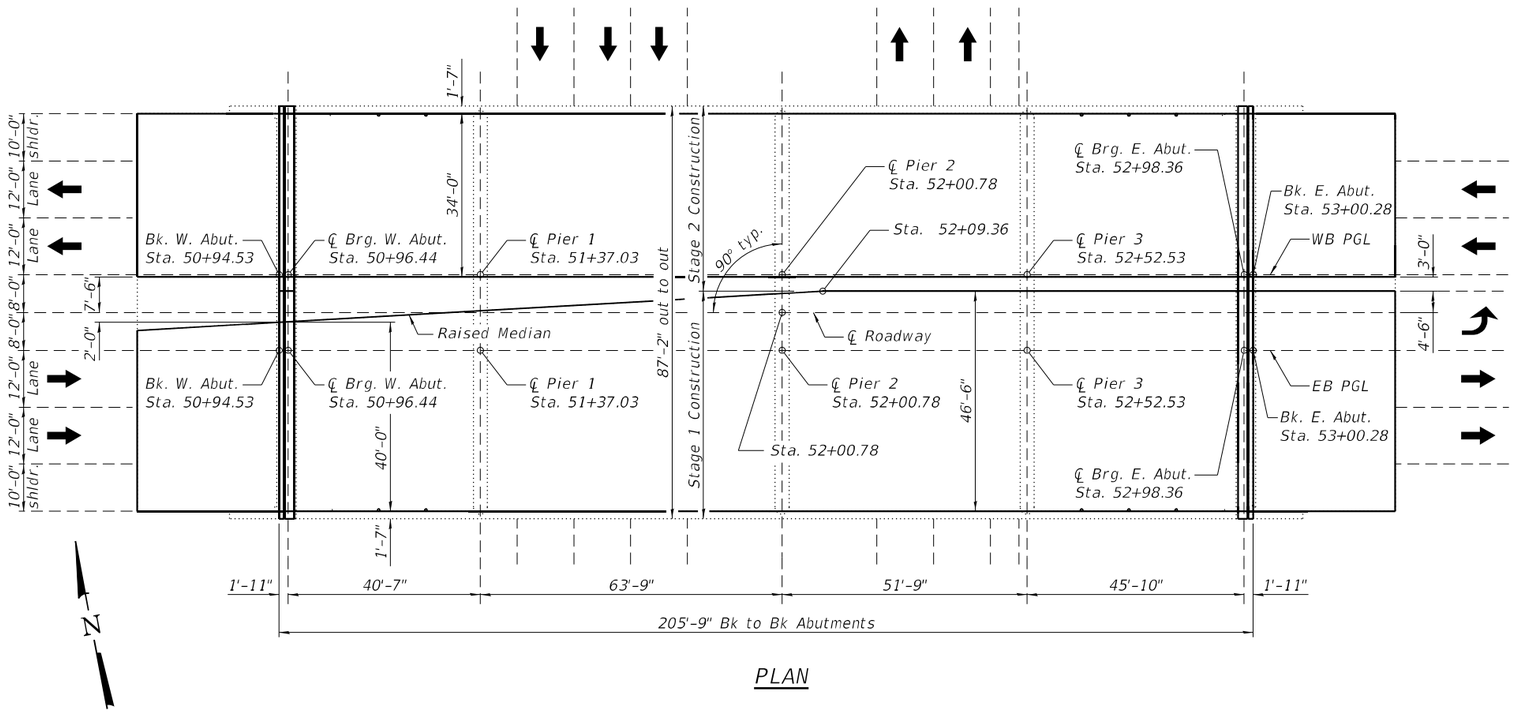
1. Remove portions of existing concrete deck and parapets as required to replace expansion joints at abutments.
2. Perform ¾" scarification to top of existing bridge deck and approach slabs.
3. Complete concrete repairs to the bridge deck, approach slabs and parapets. Inject wide cracks in approaches with epoxy.
4. Provide new strip seal expansion joints and adjacent superstructure concrete over abutments.
5. Place 2¾" latex concrete overlay on deck and approach slabs.
6. Perform ¼" diamond grinding on new overlay.
7. Perform bridge deck grooving on new overlay and apply protective coat to new overlay and the top/inside surface of new parapet and median concrete.
8. Apply Concrete Sealer to top/inside surfaces of existing parapets, existing median surfaces, and top surfaces of bridge seats.
9. Perform repairs on substructure units.
10. Perform repairs on slope wall and fill void beneath southwest corner of slope wall with CLSM.



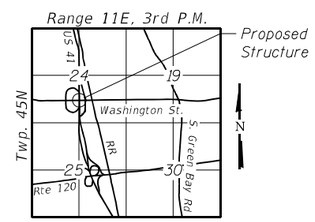
ELEVATION

Note:
Up to ¼" may be ground off the bridge deck and bridge approach slab overlays.

INDEX OF SHEETS



PLAN



LOCATION SKETCH

MICHAEL T. HALEY 081-005991 CHATHAM
LICENSED STRUCTURAL ENGINEER ★ STATE OF ILLINOIS ★

Michael T. Haley 03/24/2022

Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 081-005991
Expires 11/30/2022

DESIGN SPECIFICATIONS

(New Construction)
2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS - NEW CONSTRUCTION
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)

LOADING HS-20

(Original Construction)
No allowance for future wearing surface.

GENERAL PLAN AND ELEVATION
WASHINGTON STREET OVER US 41
F.A.P. 346 SECTION 10(HB)BR(89)
LAKE COUNTY
STATION 52+00.78
STRUCTURE NO. 049-0016

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

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PLOT DATE = 3/24/2022		CHECKED - CL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	59
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.

2. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

   As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

   Any cracks that cannot be removed by grinding ¼ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

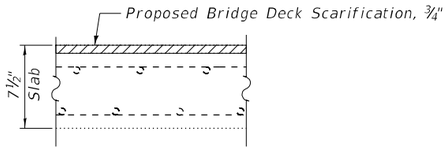
4. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

5. Cost of removal and disposal of existing expansion joints shall be included in the cost of Concrete Removal.

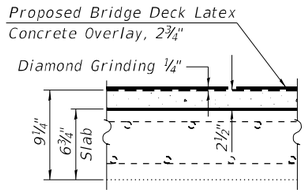
6. Protective Coat shall be applied to the top surface of new overlay and the inside and top faces of new concrete adjacent to joints.

7. Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the concrete adjacent to joints is poured at an ambient temperature other than 50°F.

8. Expansion joints shall be fabricated to conform to the existing cross slope of the bridge.



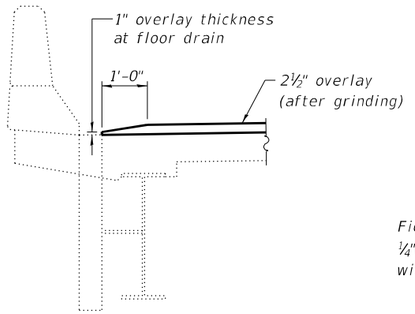
EXISTING BRIDGE DECK
CROSS SECTION



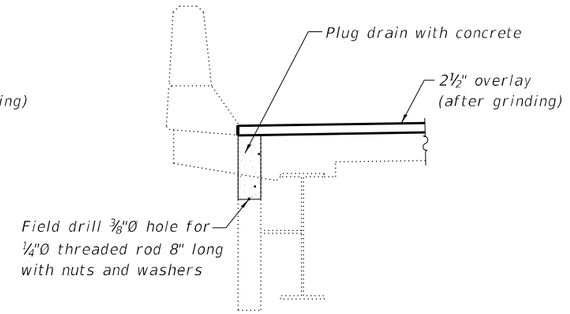
PROPOSED BRIDGE DECK
CROSS SECTION

TOTAL BILL OF MATERIAL

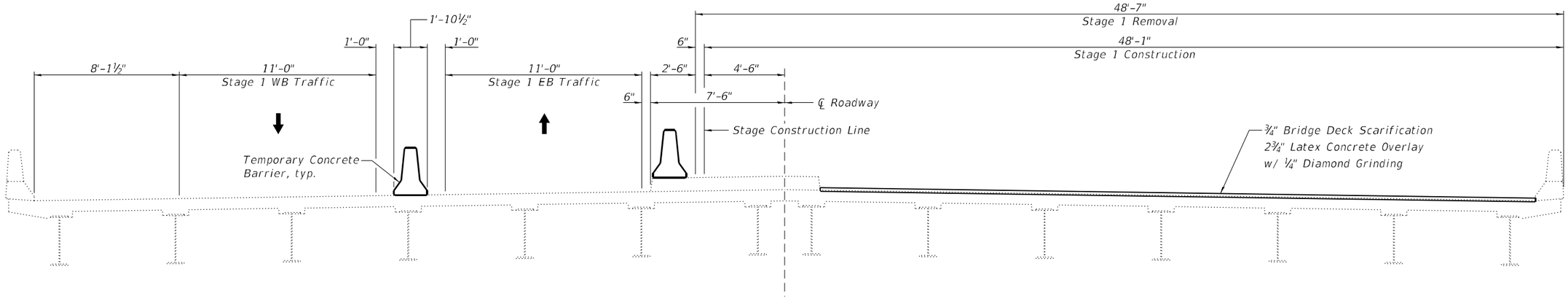
ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	21.7	–	21.7
Protective Shield	Sq. Yd.	1,119	–	1,119
Concrete Superstructure	Cu. Yd.	25.3	–	25.3
Protective Coat	Sq. Yd.	2,276	–	2,276
Reinforcement Bars, Epoxy Coated	Pound	2,470	–	2,470
Bar Splicers	Each	25	–	25
Preformed Joint Strip Seal	Foot	172	–	172
Concrete Sealer	Sq. Ft.	3,706	–	3,706
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,722	–	1,722
Approach Slab Repair (Full Depth)	Sq. Yd.	1	–	1
Bridge Deck Latex Concrete Overlay, 2¾ Inches	Sq. Yd.	2,268	–	2,268
Bridge Deck Scarification, 3/4 Inch	Sq. Yd.	2,268	–	2,268
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	–	85	85
Diamond Grinding (Bridge Section)	Sq. Yd.	2,091	–	2,091
Epoxy Crack Injection	Foot	–	440	440
Slope Wall 4 Inch	Sq. Yd.	–	344	344
Slope Wall Removal	Sq. Yd.	–	344	344
Controlled Low-Strength Material	Cu. Yd.	–	275	275
Plug Existing Deck Drains	Each	4	–	4



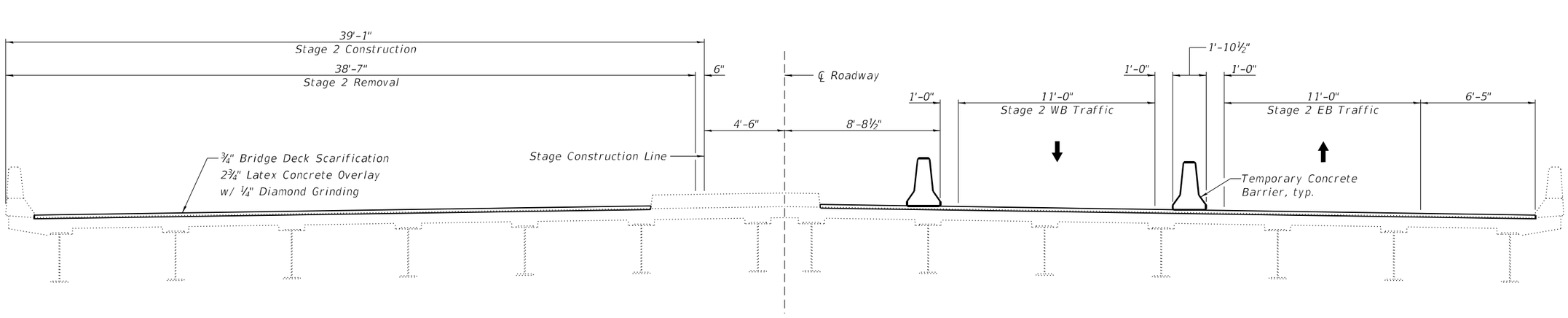
OVERLAY AT DRAIN DETAIL



PLUGGING DECK DRAIN DETAIL



STAGE 1 REMOVAL & CONSTRUCTION



STAGE 2 REMOVAL & CONSTRUCTION

Notes:
All sections are looking east.
See Roadway Plans for Temporary Concrete Barrier quantities.
All transverse dimensions are measured radial to ℄ Roadway.

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Consulting Engineers
Springfield, Illinois

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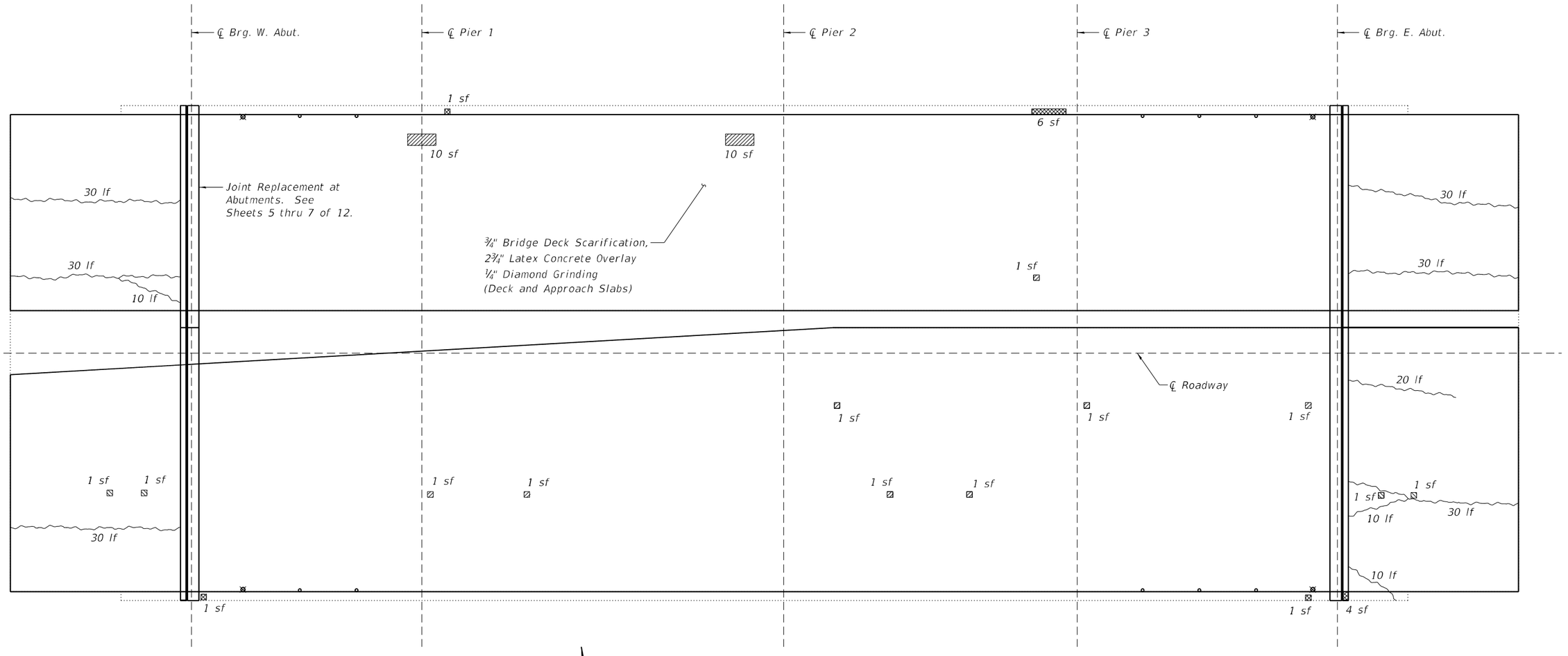
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 049-0016
SHEET 3 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	61
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



LEGEND

- Indicates Approach Slab Repair (Full Depth)
- Indicates Deck Slab Repair (Partial) (For information only)
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Epoxy Crack Injection
- Plug Existing Deck Drains
- sf – Square Feet
- lf – Linear Feet

N

DECK PLAN

Notes:
Repair areas shown are estimated. The Engineer shall document actual locations of repairs on As-Built Plans.
Quantity listed for Deck Slab Repair (Partial) is for information only. See Bridge Deck Latex Concrete Overlay Special Provisions.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Approach Slab Repair (Full Depth)	Sq. Yd.	1
Deck Slab Repair (Partial Depth)	Sq. Yd.	4
Plug Existing Deck Drains	Each	4
Epoxy Crack Injection	Foot	230
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft	13

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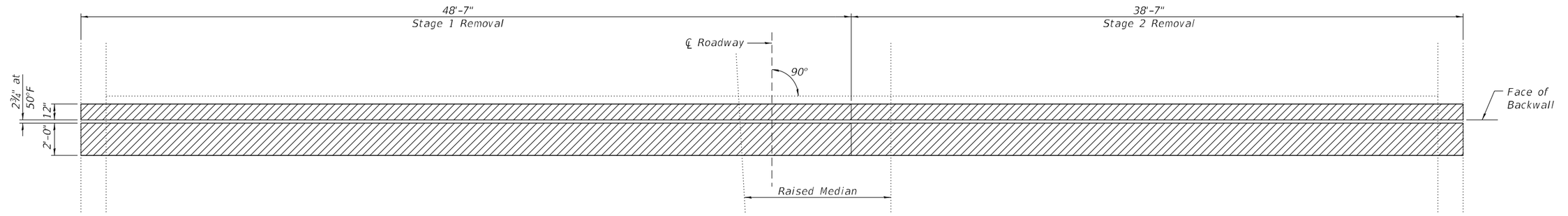
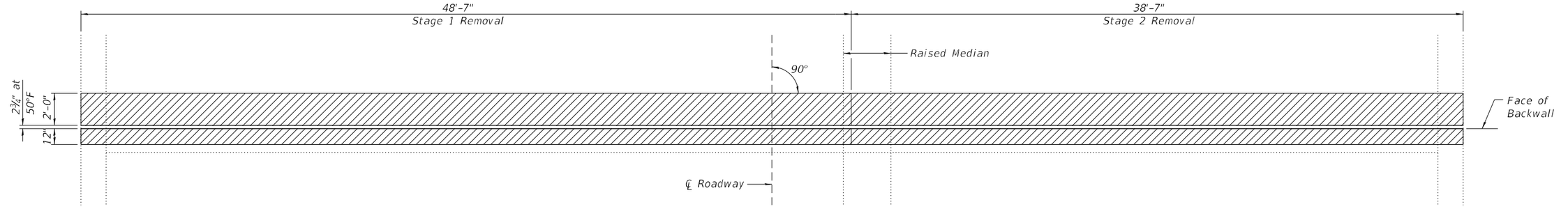
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SLAB REPAIR PLAN
STRUCTURE NO. 049-0016
SHEET 4 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	62
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



JOINT REMOVAL AT WEST ABUTMENT



JOINT REMOVAL AT EAST ABUTMENT

Notes:
Hatched areas indicate limits of Concrete Removal.
See Sheet 7 of 12 for Sections.

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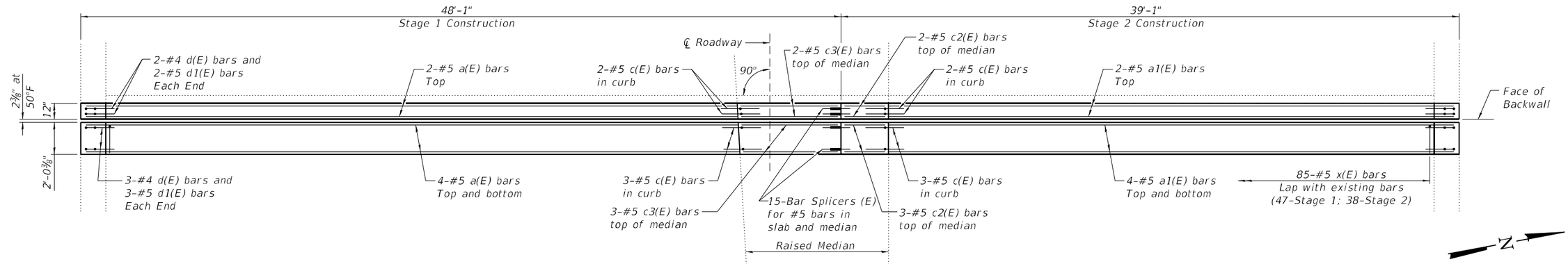
PLOT DATE = 3/24/2022	CHECKED - CL	REVISED -	

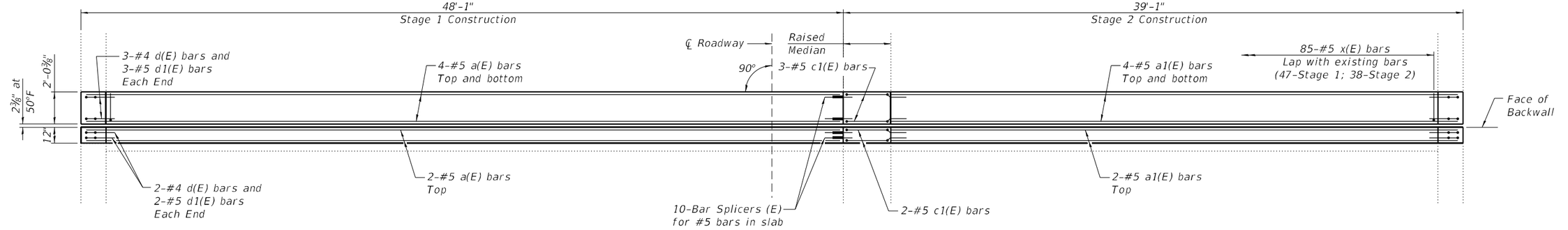
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
STRUCTURE NO. 049-0016
SHEET 5 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	63
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



JOINT REPLACEMENT AT WEST ABUTMENT



JOINT REPLACEMENT AT EAST ABUTMENT

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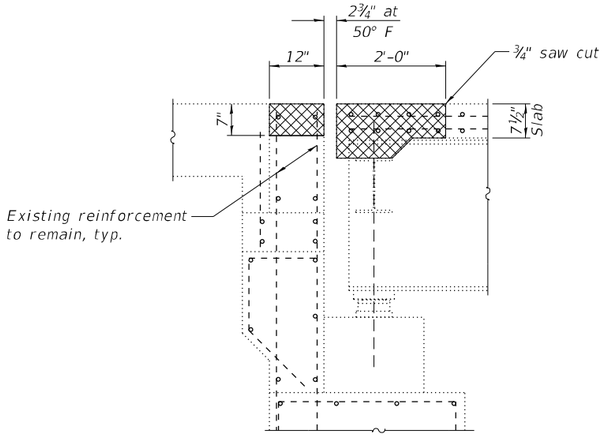
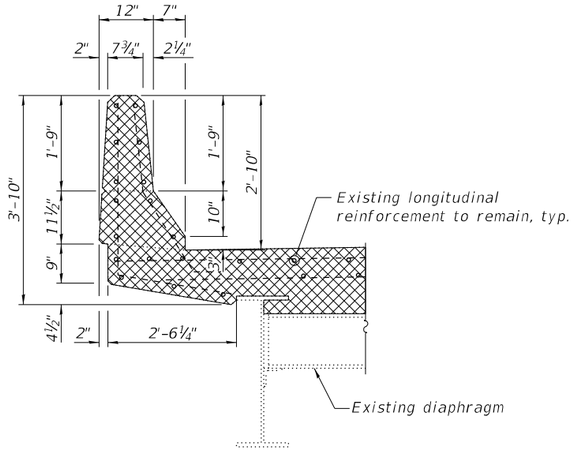
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
STRUCTURE NO. 049-0016
SHEET 6 OF 12 SHEETS

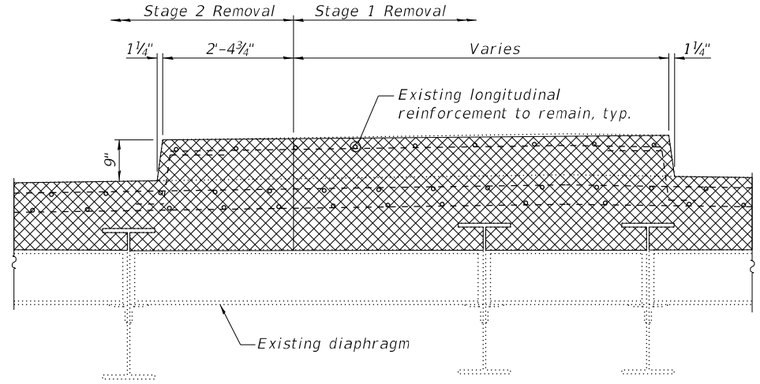
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	64
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



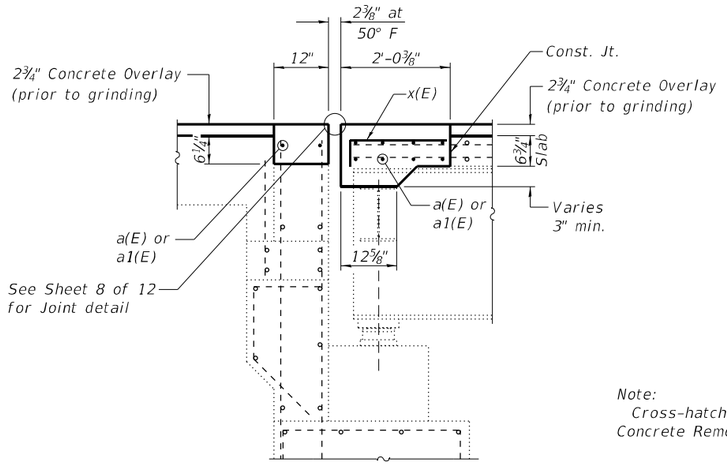
SECTION THRU JOINT AT ABUTMENTS
(Showing Removal)



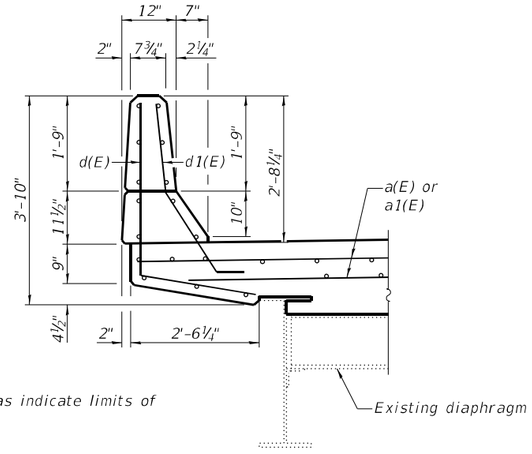
SECTION THRU PARAPET AT JOINT
(Showing Removal)



SECTION THRU MEDIAN AT JOINT
(Showing Removal; Looking East)

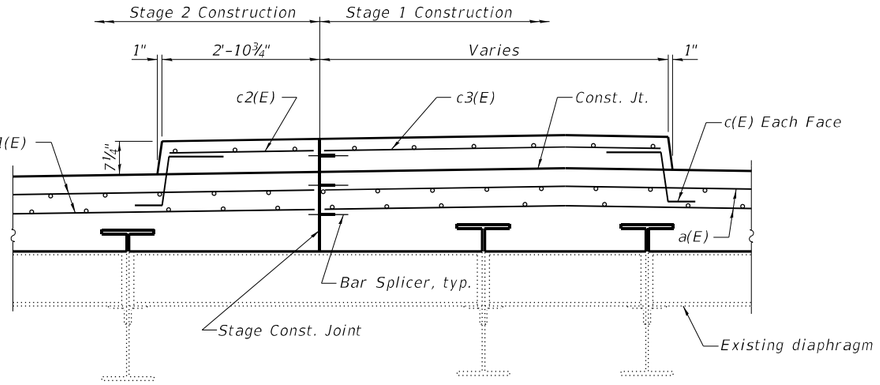


SECTION THRU JOINT AT ABUTMENTS
(Showing Proposed)

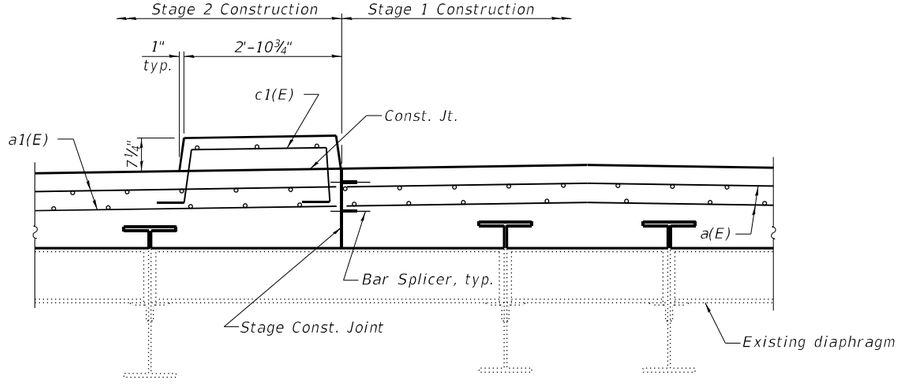


Note:
Cross-hatched areas indicate limits of Concrete Removal.

SECTION THRU PARAPET AT JOINT
(Showing Proposed)



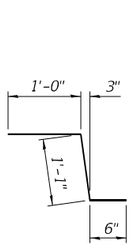
SECTION THRU MEDIAN AT WEST JOINT
(Showing Proposed; Looking East)



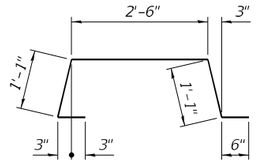
SECTION THRU MEDIAN AT EAST JOINT
(Showing Proposed; Looking East)

BILL OF MATERIAL

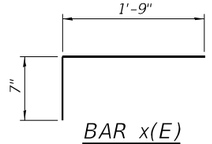
Bar	No.	Size	Length	Shape
a(E)	20	#5	47'-7"	
a1(E)	20	#5	38'-7"	
c(E)	10	#5	2'-7"	
c1(E)	5	#5	5'-8"	
c2(E)	5	#5	2'-6"	
c3(E)	5	#5	6'-1"	
d(E)	20	#4	5'-3"	
d1(E)	20	#5	3'-10"	
x(E)	170	#5	2'-4"	
Concrete Removal			Cu. Yd.	21.7
Concrete Superstructure			Cu. Yd.	25.3
Reinforcement Bars, Epoxy Coated			Pound	2,470



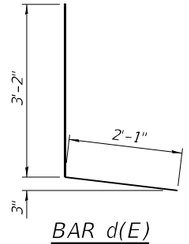
BAR c(E)



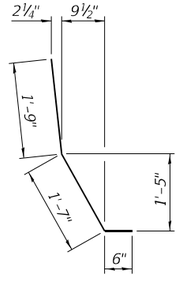
BAR c1(E)



BAR x(E)

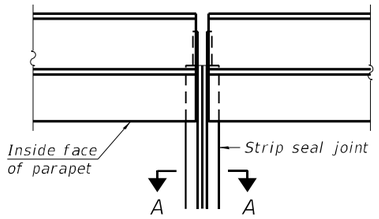


BAR d(E)

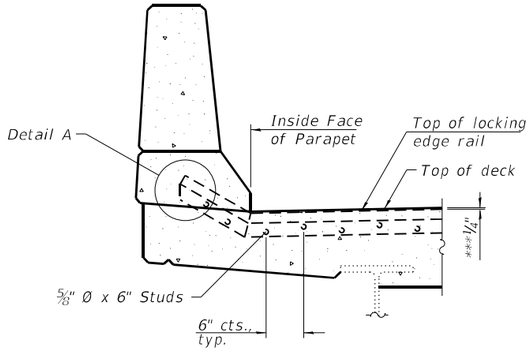


BAR d1(E)

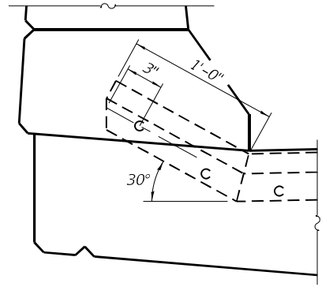
(Sheet 3 of 3)



PLAN AT PARAPET



SECTION AT PARAPET



DETAIL A

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

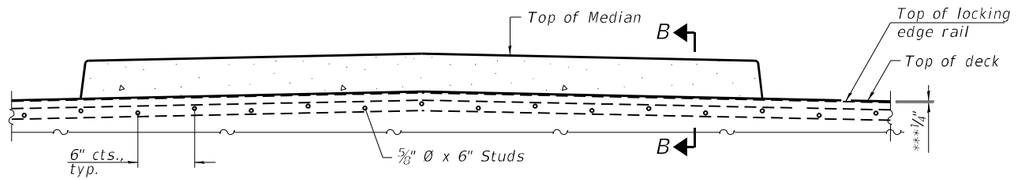
The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

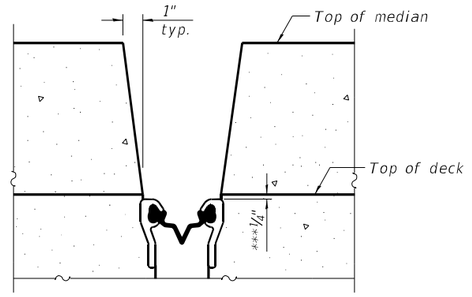
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

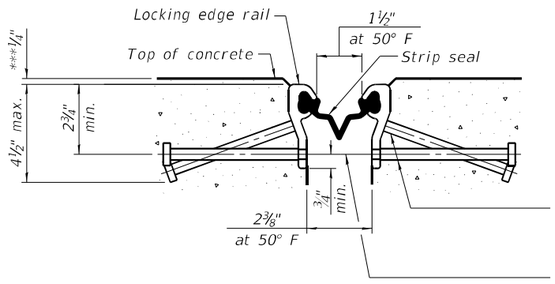
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required.



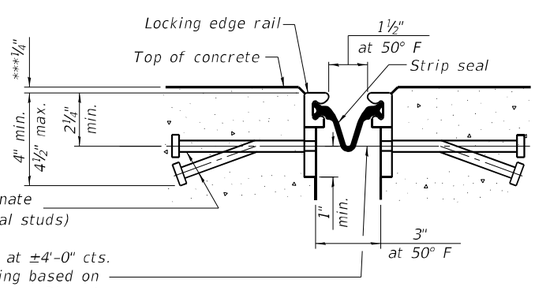
SECTION AT MEDIAN



SECTION B-B



SHOWING ROLLED RAIL JOINT



SHOWING WELDED RAIL JOINT

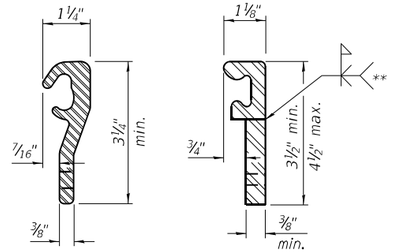
* ⅜" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

⅜" ϕ threaded rods in 7/16" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

***After grinding

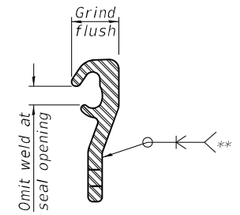


ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	172

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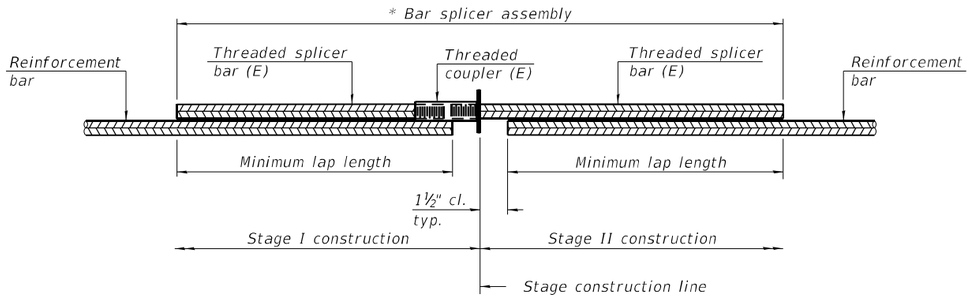
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 049-0016
SHEET 8 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	66
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



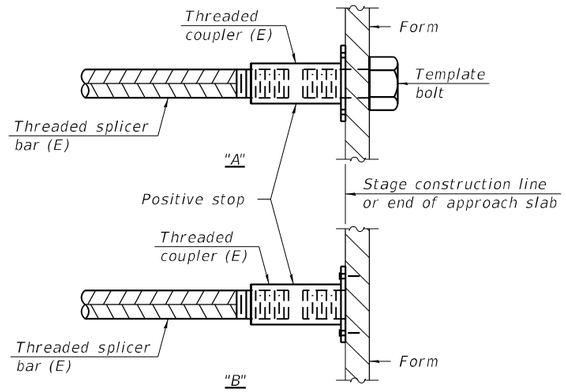
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

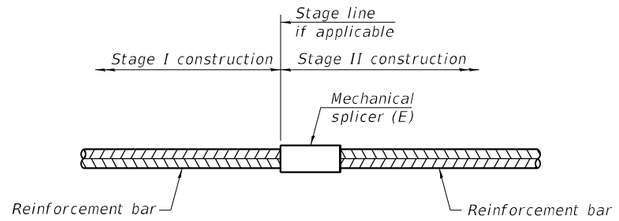
** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

Location	Bar size	No. assemblies required	Minimum lap length
Abutment	#5	4	3'-0"
Deck	#5	16	3'-6"
Median	#5	5	3'-0"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-1-2020

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 049-0016
SHEET 9 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	67
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

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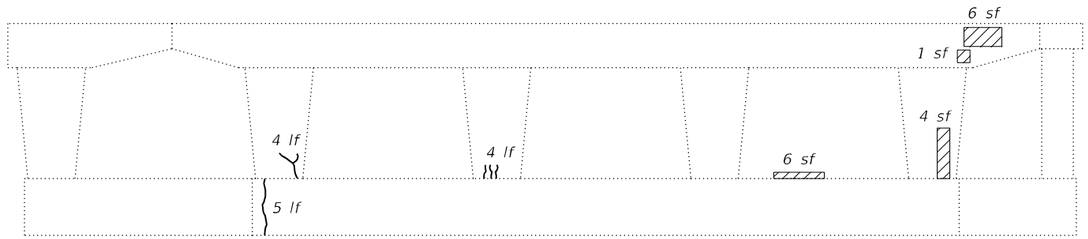
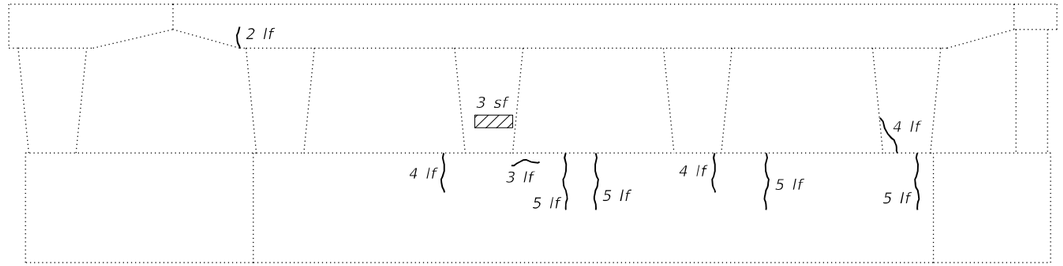


WEST FACE OF PIER 1



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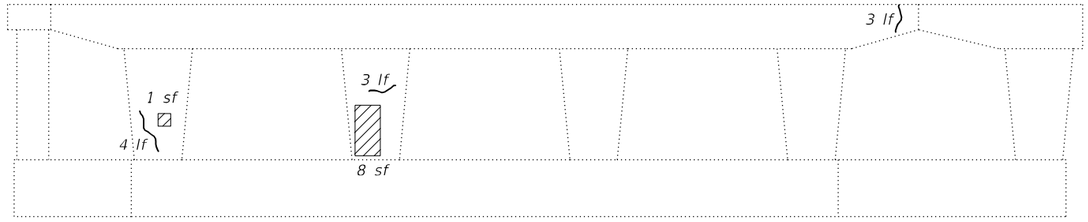

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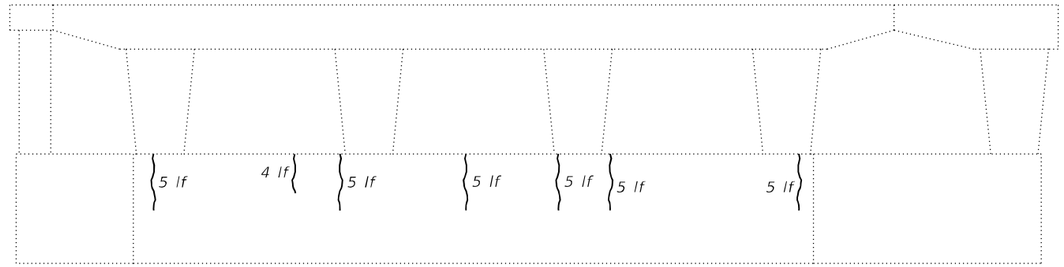

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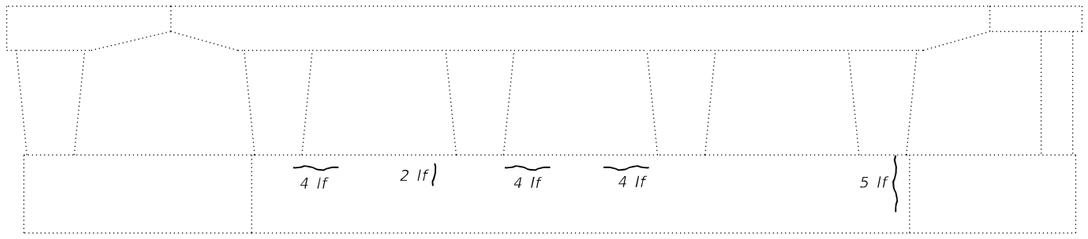
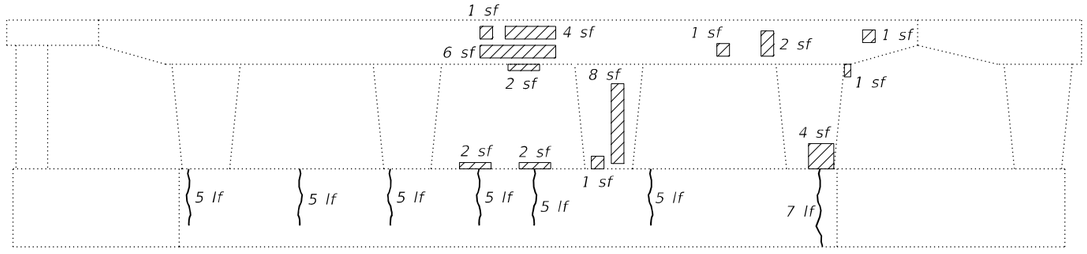


WEST FACE OF PIER 3



EAST FACE OF PIER 3

Note:
Repair of the existing piers shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5")
- Epoxy Crack Injection
- sf Square Feet
- lf Linear Feet

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	64
Epoxy Crack Injection	Foot	150

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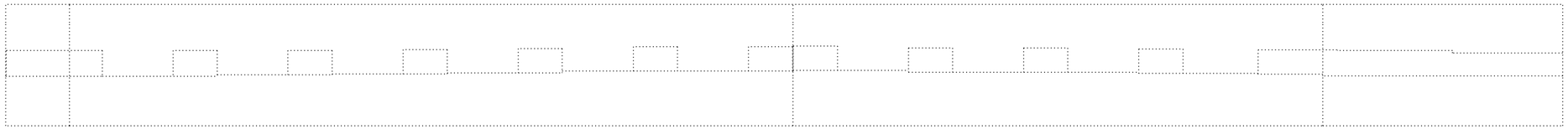
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

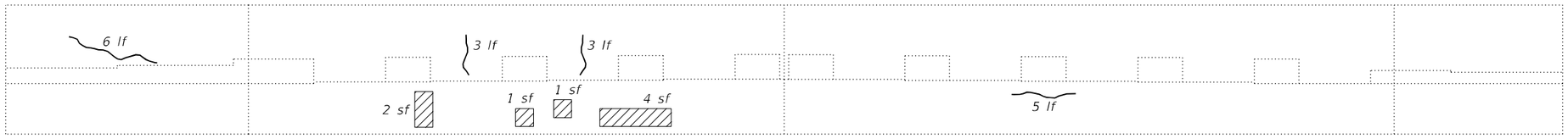
SUBSTRUCTURE REPAIRS
STRUCTURE NO. 049-0016
SHEET 10 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	68
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



WEST ABUTMENT

(Looking West)



EAST ABUTMENT

(Looking East)

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5")
- Epoxy Crack Injection
- sf Square Feet
- lf Linear Feet

Note:
Repair of the existing abutments shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	8
Epoxy Crack Injection	Foot	17

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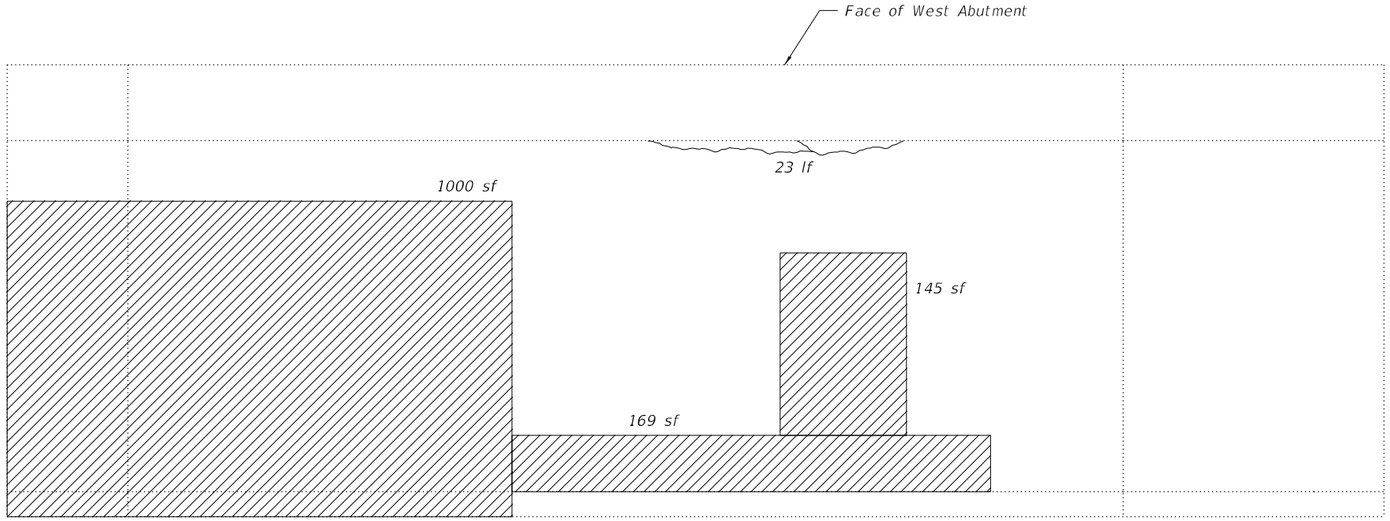
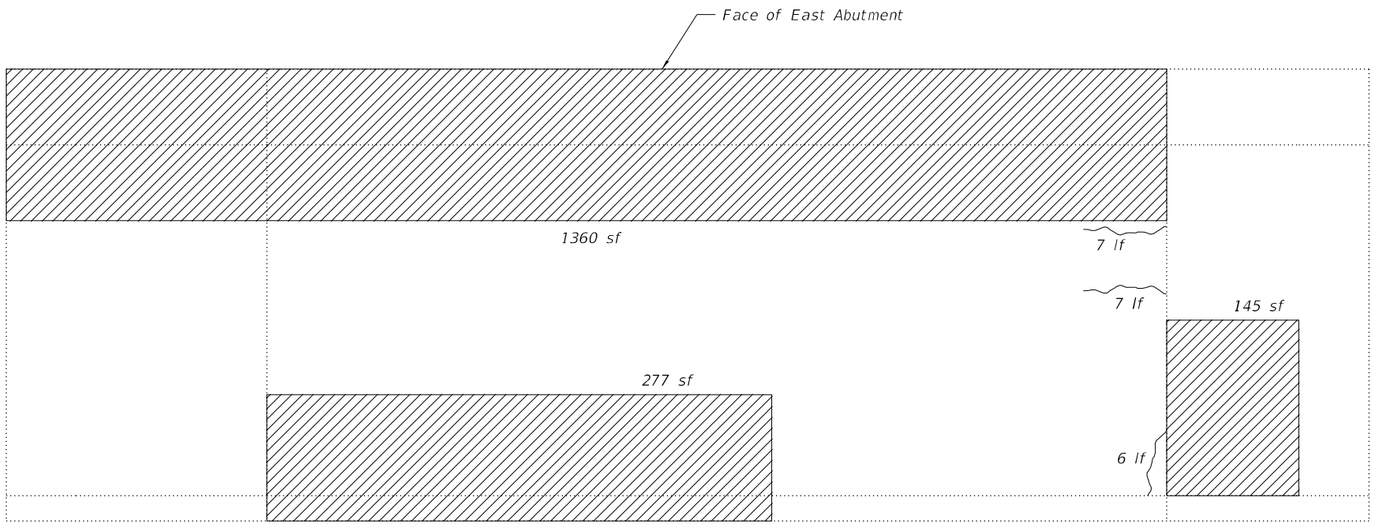
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS
STRUCTURE NO. 049-0016
SHEET 11 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	69
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



WEST SLOPE WALL PLAN



EAST SLOPE WALL PLAN

Notes:

Hatched areas indicate assumed limits of Slope Wall Removal and Slope Wall 4 Inch. Actual limits to be determined by the Engineer.

All silt, sand and other debris in gutter at bottom of slope wall to be removed. Cost included with Slope Wall Removal.

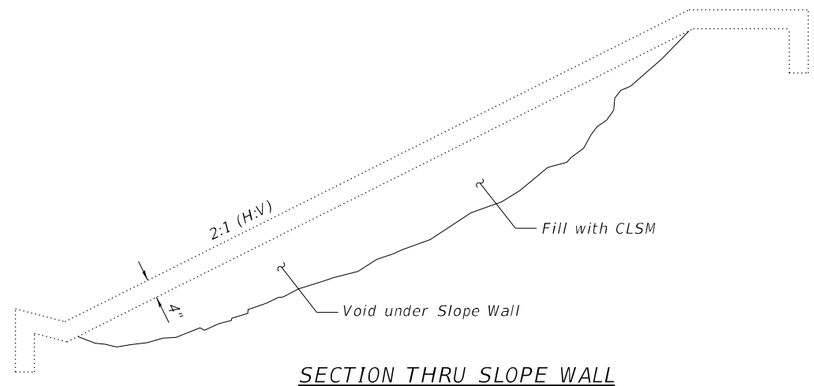
Slope Wall shall be reinforced with welded wire fabric, 6" x 6" – W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Slope Wall Removal	Sq. Yd.	344
Slope Wall 4 Inch	Sq. Yd.	344
Controlled Low-Strength Material	Cu. Yd.	275
Epoxy Crack Injection	Foot	43

LEGEND

- Slope Wall Removal and Replacement
- Epoxy Crack Injection
- sf Square Feet
- lf Linear Feet



SECTION THRU SLOPE WALL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

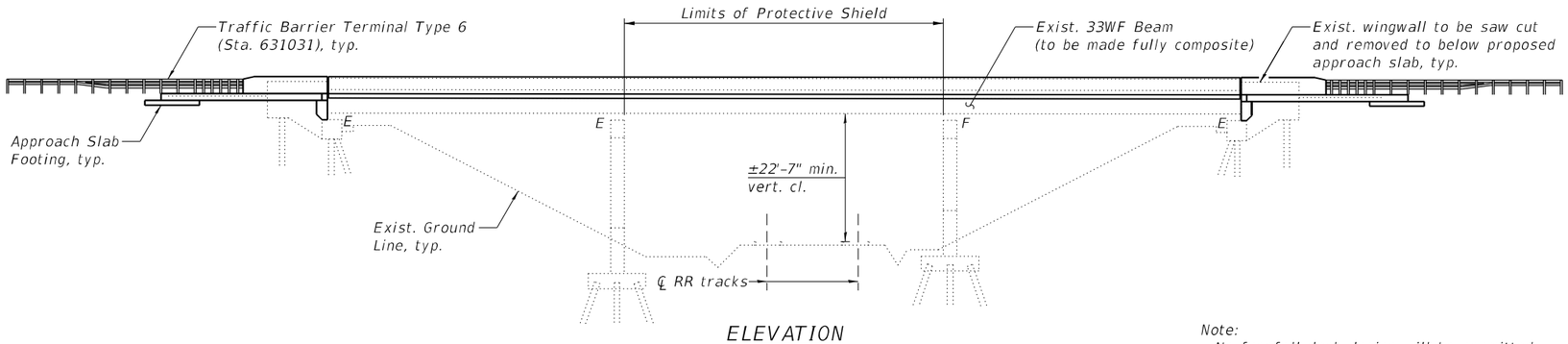
SLOPE WALL REPAIR DETAILS
STRUCTURE NO. 049-0016
SHEET 12 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
346	10(HB)BR(89)	LAKE	116	70
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

Benchmark: "X" in north concrete base of light pole south side of Washington Street, Sta. 50+85, Elev. 744.39.

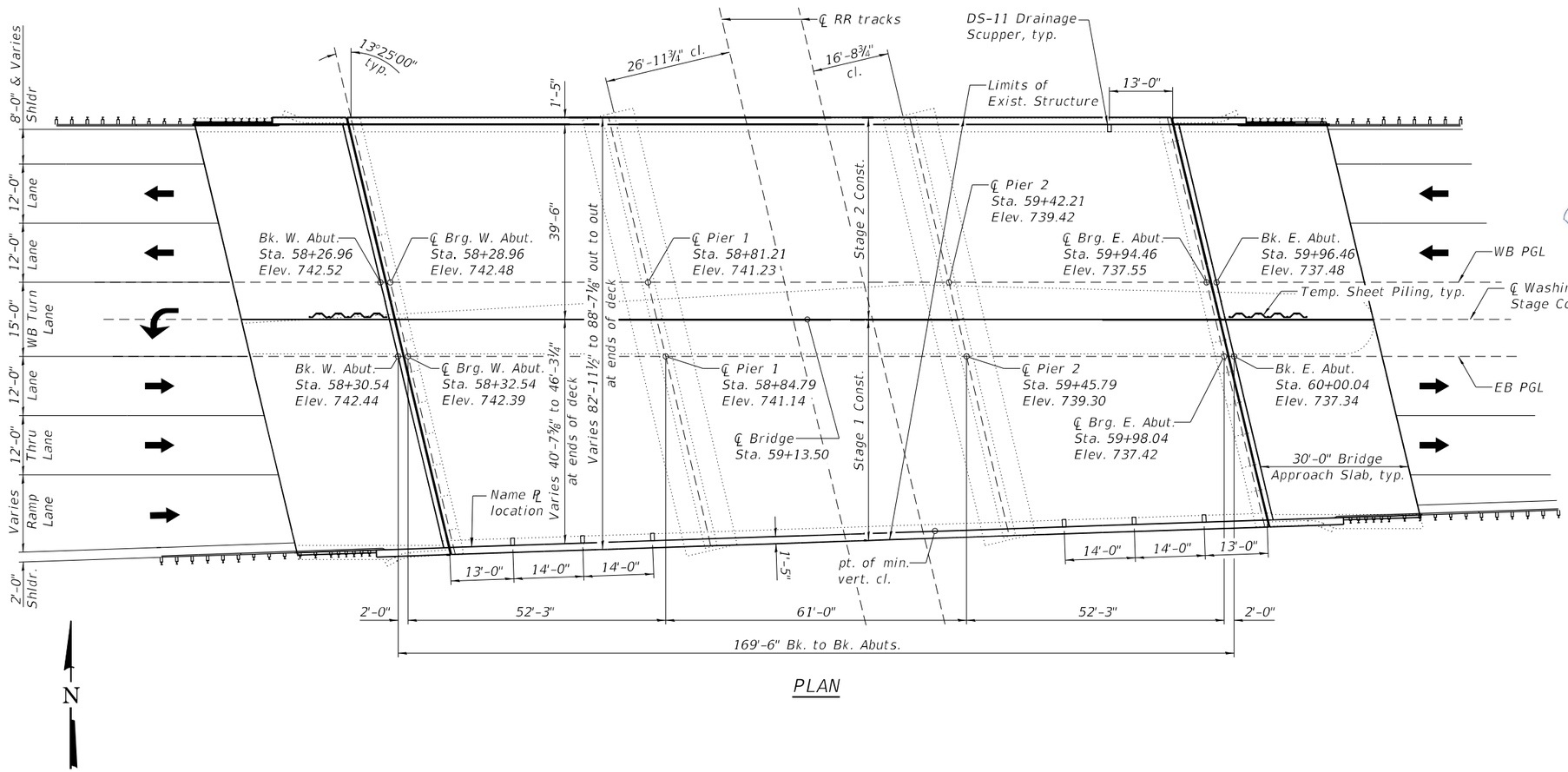
Existing Structure : Structure Number 049-0097, originally built in 1961 as F.A. Route 42 under Section 10-VB. Deck repairs with placement of concrete overlay, abutment bearing replacement, approach slab replacement, and steel painting were performed in 1996 as F.A.U. Route 1223 under Section 10(VB)BR(89). The structure is a three span continuous steel beam superstructure supported by stub abutments and multi-column concrete piers on pile supported footings. The back to back abutment length is 169'-6" and the out to out deck width varies from 82'-11" at the east abutment to 88'-6" at the west abutment. Stage construction shall be utilized to maintain one lane of traffic in each direction at all times.

No salvage.



ELEVATION

Note:
No freefall deck drains will be permitted in the span over the tracks.



PLAN

SCOPE OF WORK

1. Remove and replace existing concrete deck utilizing stage construction, while providing protective shield over RR tracks.
2. Provide new strip seal expansion joints at abutments.
3. Make new deck composite full length.
4. Remove and replace bridge approach slabs.
5. Remove and reconstruct abutment backwalls and provide drainage system behind abutments.
6. Perform concrete repairs on substructure units as required.
7. Replace end diaphragms at East Abutment.
8. Remove portion of wingwalls for construction of new approach slabs.

DESIGN SPECIFICATIONS

(New Construction)
2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
f'c = 4,000 psi (superstructure)
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (M270 Grade 36)
FIELD UNITS (Exist. Construction)
fc = 1,400 psi (superstructure)
fc = 1,000 psi (substructure)
fs = 20,000 psi (reinforcement)
fs = 18,000 psi (structural steel)

LOADING HS20-44

(New Construction)
Allow 50#/sq. ft. for future wearing surface.

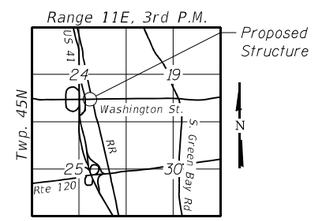
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.034g
Site Coefficient (S) = 1.0

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
MICHAEL T. HALEY
081-005991
CHATHAM
STATE OF ILLINOIS

Michael T. Haley 03/24/2022
Michael T. Haley Date
Licensed Structural Engineer
State of Illinois No. 081-005991
Expires 11/30/2022



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
WASHINGTON STREET OVER UP RR
FAU 1223 SECTION 10(VB)BR(89)
LAKE COUNTY
STATION 59+13.50
STRUCTURE NO. 049-0097

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DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	71
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

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GENERAL NOTES

Fasteners shall be ASTM F3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts 7/8 in. Ø, holes 15/16 in. Ø, unless otherwise noted.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Concrete Sealer shall be applied to the front face of the abutment backwalls.

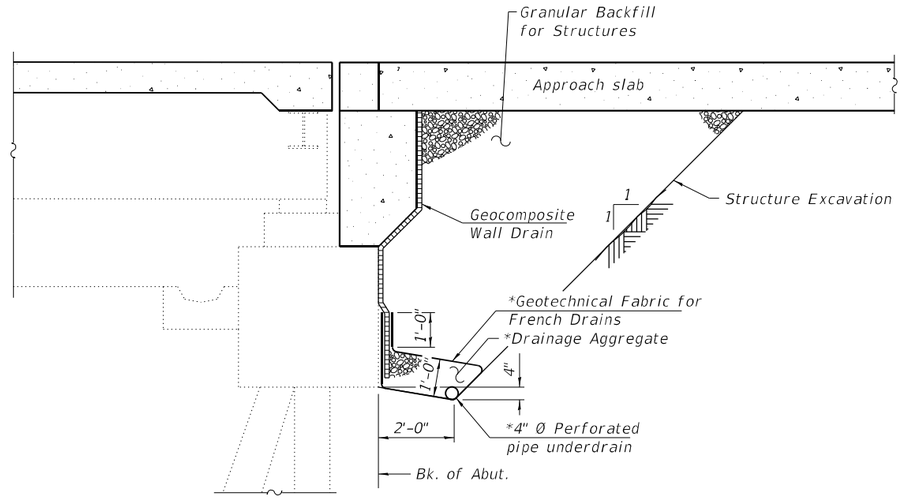
Cleaning and field painting of structural steel shall be done under a separate painting contract.

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	–	41.0	41.0
Removal of Existing Concrete Deck	Each	1	–	1
Protective Shield	Sq. Yd.	581	–	581
Structure Excavation	Cu. Yd.	–	212	212
Concrete Structures	Cu. Yd.	–	89.2	89.2
Concrete Superstructure	Cu. Yd.	433.8	8.0	441.8
Bridge Deck Grooving	Sq. Yd.	2,080	–	2,080
Protective Coat	Sq. Yd.	2,303	–	2,303
Concrete Superstructure (Approach Slab)	Cu. Yd.	236.2	–	236.2
Furnishing and Erecting Structural Steel	Pound	3,160	–	3,160
Stud Shear Connectors	Each	6,300	–	6,300
Reinforcement Bars, Epoxy Coated	Pound	202,060	13,450	215,510
Bar Splicers	Each	725	108	833
Name Plates	Each	1	–	1
Preformed Joint Strip Seal	Foot	176	–	176
Temporary Sheet Piling	Sq. Ft.	–	270	270
Granular Backfill for Structures	Cu. Yd.	–	212	212
Concrete Sealer	Sq. Ft.	–	121	121
Geocomposite Wall Drain	Sq. Yd.	–	117	117
Pipe Underdrains for Structures 4"	Foot	–	236	236
Structural Steel Removal	Pound	3,430	–	3,430
Structural Steel Repair	Pound	210	–	210
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	–	48	48
Drainage Scuppers, DS-11	Each	7	–	7



SECTION THRU ABUTMENT

(Horiz. dims. at right angles)

*Included in the cost of Pipe Underdrains for Structures.

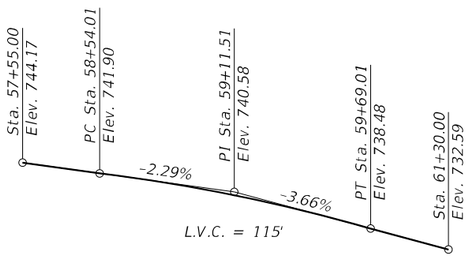
Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STATION 59+13.50
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.U. RT. 1223 SEC. 10(VB)BR(89)
LOADING HS20-44
STRUCTURE NO. 049-0097

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.



WASHINGTON STREET PROFILE GRADE

(Along EB & WB inside edge of pavement)

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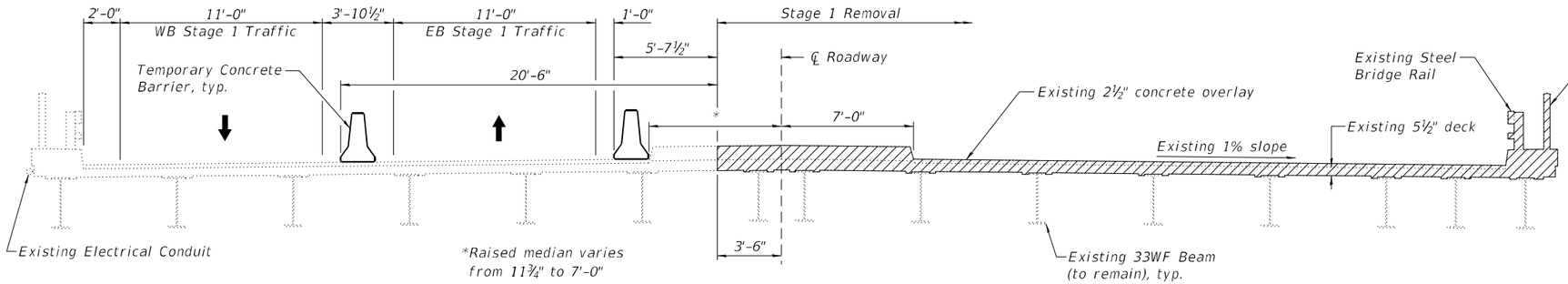
Consulting Engineers
Springfield, Illinois

USER NAME=	DESIGNED - CZ	REVISED -	
	CHECKED - CL	REVISED -	
PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 5/2/2022	CHECKED - MTH	REVISED -	

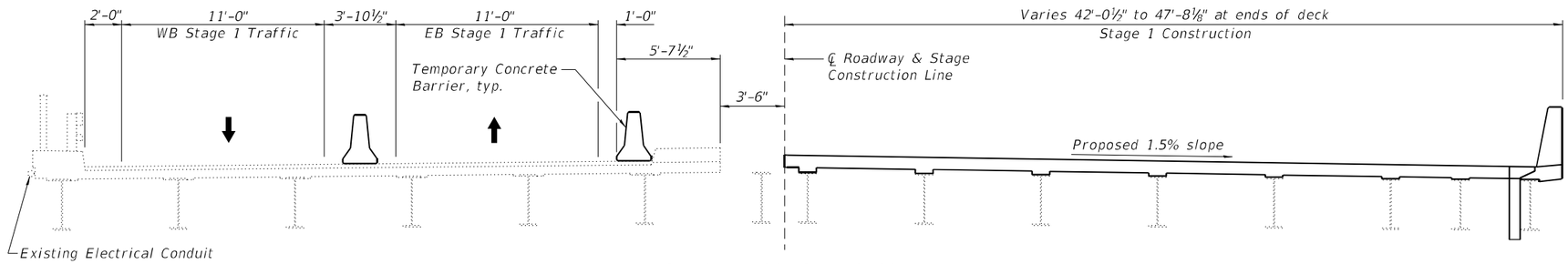
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 049-0097
SHEET 2 OF 28 SHEETS

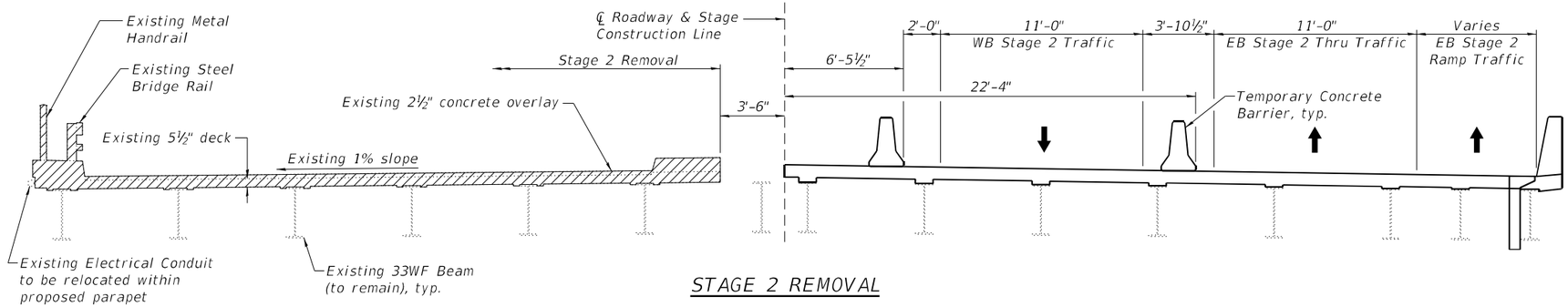
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	72
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



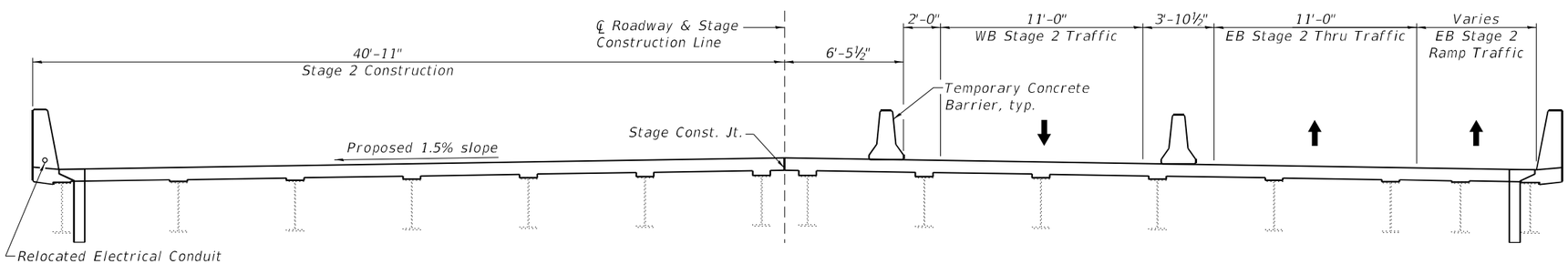
STAGE 1 REMOVAL



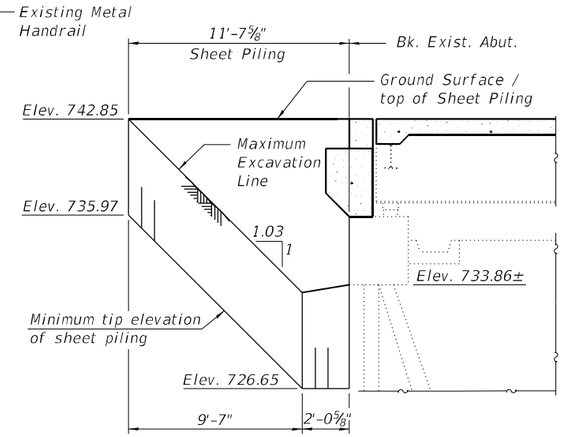
STAGE 1 CONSTRUCTION



STAGE 2 REMOVAL



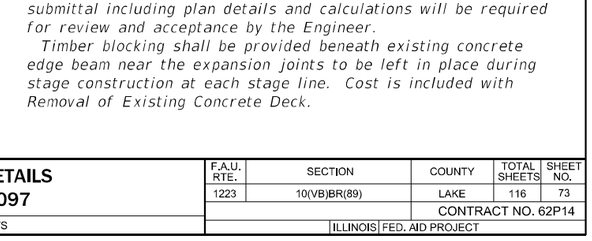
STAGE 2 CONSTRUCTION



TEMPORARY SHEET PILING AT WEST ABUTMENT

(Dimensions along stage construction line)

Min. Section Modulus for sheeting = 5.21 in^3/ft (typ.)



TEMPORARY SHEET PILING AT EAST ABUTMENT

(Dimensions along stage construction line)

Notes:

See Sheet 4 of 28 for details of Temporary Concrete Barrier.

See roadway plans for quantity of Temporary Concrete Barrier.

Cost of removal of existing railing, electrical conduit and wearing surface is included with Removal of Existing Deck.

All sections are looking East.

Hatching represents limits of removal.

Dimensions are measured at right angles to ℄ Roadway unless noted otherwise.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

Timber blocking shall be provided beneath existing concrete edge beam near the expansion joints to be left in place during stage construction at each stage line. Cost is included with Removal of Existing Concrete Deck.

MODEL: Default
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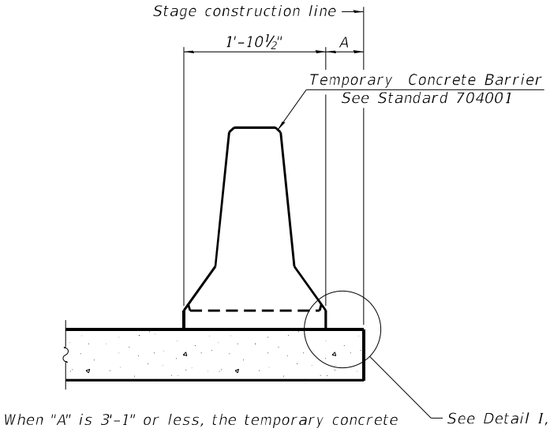
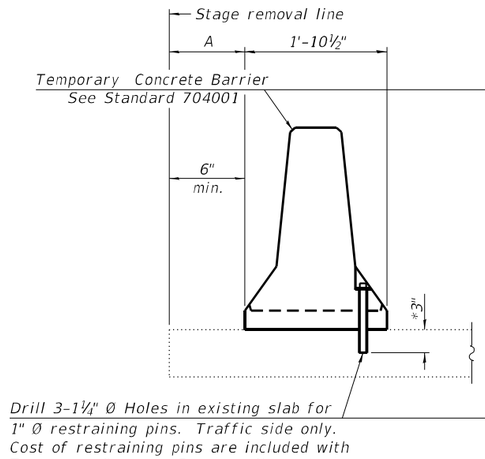
LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME=	DESIGNED - CZ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 049-0097
		CHECKED - CL	REVISED -		
	PLOT SCALE=	DRAWN - AJF	REVISED -		
	PLOT DATE = 5/6/2022	CHECKED - MTH	REVISED -		SHEET 3 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	73
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



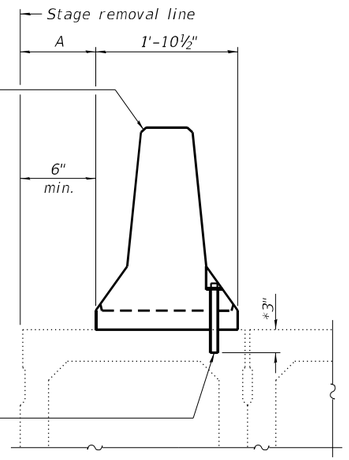
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

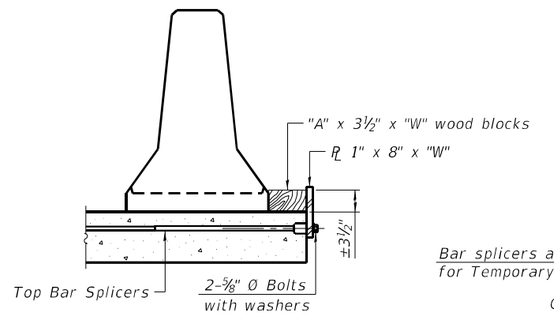
EXISTING SLAB



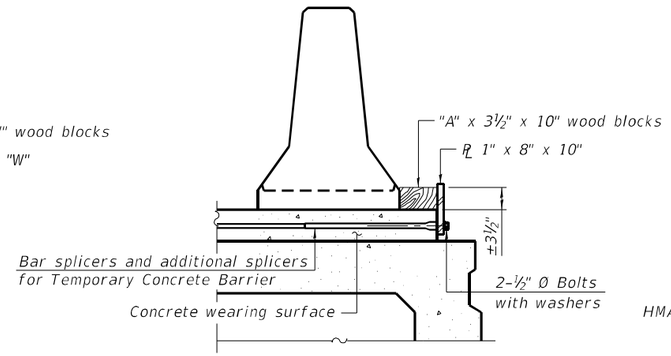
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

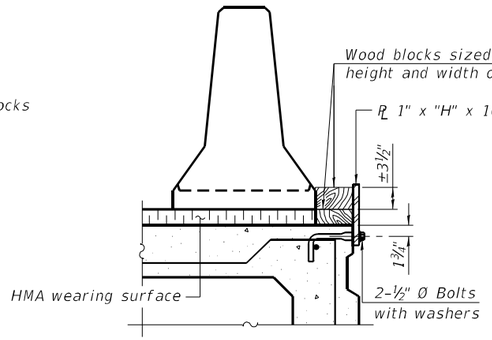
SECTIONS THRU SLAB OR DECK BEAM



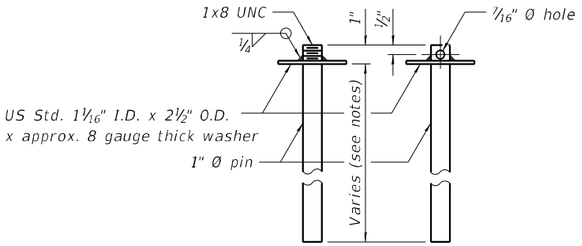
DETAIL I



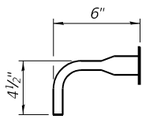
DETAIL II



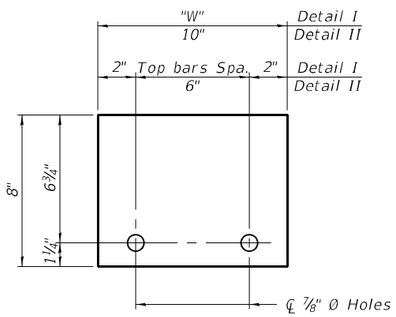
DETAIL III



RESTRAINING PIN

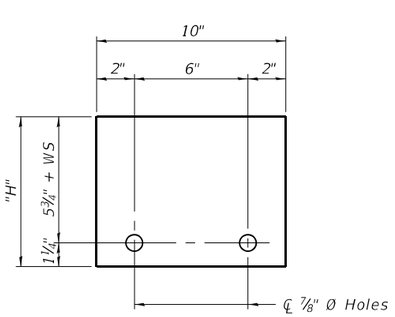


BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER ℄ 1" x 8" x "W"

(Detail I and II)



STEEL RETAINER ℄ 1" x "H" x 10"

(Detail III)

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

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Springfield, Illinois

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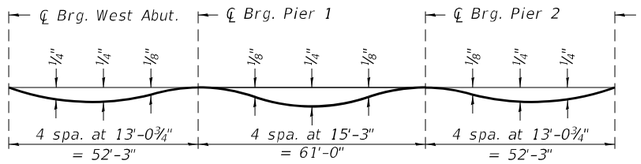
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 049-0097

SHEET 4 OF 28 SHEETS

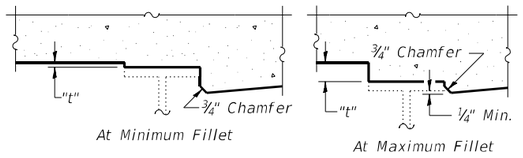
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	74
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 6 thru 8 of 28.

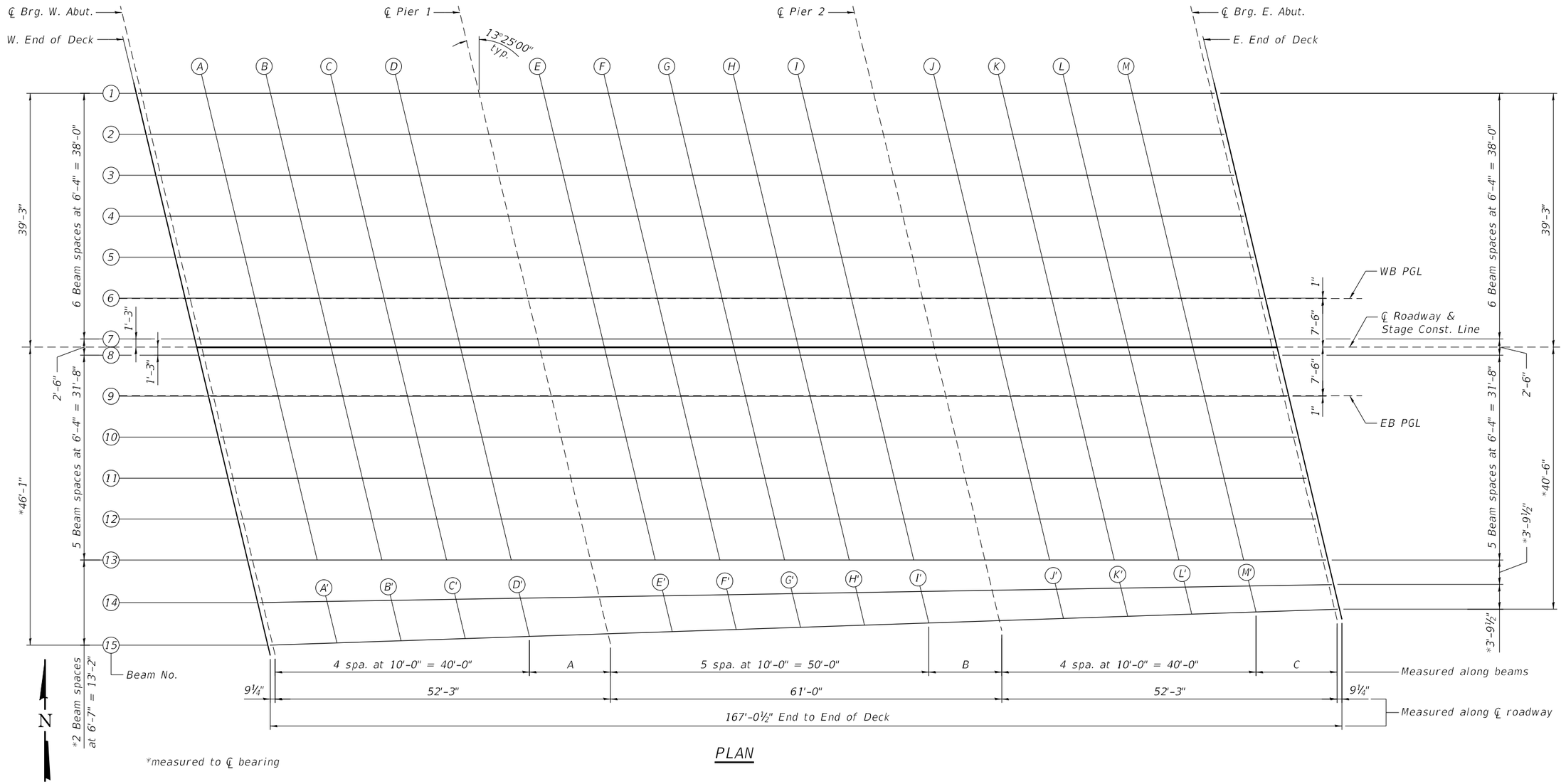


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6 thru 8 of 28, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DIMENSION TABLE

Location	A	B	C
Beams 1-13	12'-3"	11'-0"	12'-3"
Beam 14	12'-0⅝"	10'-9⅛"	12'-0⅝"
Beam 15	11'-10⅜"	10'-6½"	11'-10⅜"



*measured to ℄ bearing

PLAN

(Sheet 1 of 4)

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PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 5 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	75
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+20.62	-39.25	742.19	742.19
℄ Brg. W. Abut.	58+21.39	-39.25	742.17	742.17
A	58+31.39	-39.25	741.94	741.96
B	58+41.39	-39.25	741.72	741.73
C	58+51.39	-39.25	741.49	741.50
D	58+61.39	-39.25	741.25	741.26
℄ Pier 1	58+73.64	-39.25	740.95	740.95
E	58+83.64	-39.25	740.69	740.70
F	58+93.64	-39.25	740.42	740.43
G	59+03.64	-39.25	740.14	740.15
H	59+13.64	-39.25	739.85	739.86
I	59+23.64	-39.25	739.54	739.54
℄ Pier 2	59+34.64	-39.25	739.19	739.19
J	59+44.64	-39.25	738.86	738.87
K	59+54.64	-39.25	738.52	738.53
L	59+64.64	-39.25	738.16	738.18
M	59+74.64	-39.25	737.80	737.81
℄ Brg. E. Abut.	59+86.89	-39.25	737.35	737.35
E. End of Deck	59+87.66	-39.25	737.32	737.32

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+22.13	-32.92	742.25	742.25
℄ Brg. W. Abut.	58+22.90	-32.92	742.23	742.23
A	58+32.90	-32.92	742.00	742.02
B	58+42.90	-32.92	741.78	741.80
C	58+52.90	-32.92	741.55	741.57
D	58+62.90	-32.92	741.31	741.32
℄ Pier 1	58+75.15	-32.92	741.01	741.01
E	58+85.15	-32.92	740.75	740.75
F	58+95.15	-32.92	740.48	740.49
G	59+05.15	-32.92	740.19	740.21
H	59+15.15	-32.92	739.90	739.91
I	59+25.15	-32.92	739.59	739.59
℄ Pier 2	59+36.15	-32.92	739.24	739.24
J	59+46.15	-32.92	738.90	738.91
K	59+56.15	-32.92	738.56	738.58
L	59+66.15	-32.92	738.20	738.23
M	59+76.15	-32.92	737.84	737.86
℄ Brg. E. Abut.	59+88.40	-32.92	737.39	737.39
E. End of Deck	59+89.17	-32.92	737.36	737.36

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+23.64	-26.58	742.31	742.31
℄ Brg. W. Abut.	58+24.41	-26.58	742.29	742.29
A	58+34.41	-26.58	742.07	742.08
B	58+44.41	-26.58	741.84	741.86
C	58+54.41	-26.58	741.60	741.63
D	58+64.41	-26.58	741.37	741.38
℄ Pier 1	58+76.66	-26.58	741.06	741.06
E	58+86.66	-26.58	740.80	740.81
F	58+96.66	-26.58	740.53	740.54
G	59+06.66	-26.58	740.24	740.26
H	59+16.66	-26.58	739.95	739.96
I	59+26.66	-26.58	739.64	739.64
℄ Pier 2	59+37.66	-26.58	739.28	739.28
J	59+47.66	-26.58	738.95	738.95
K	59+57.66	-26.58	738.60	738.62
L	59+67.66	-26.58	738.24	738.27
M	59+77.66	-26.58	737.88	737.90
℄ Brg. E. Abut.	59+89.91	-26.58	737.43	737.43
E. End of Deck	59+90.68	-26.58	737.40	737.40

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+25.15	-20.25	742.37	742.37
℄ Brg. W. Abut.	58+25.92	-20.25	742.35	742.35
A	58+35.92	-20.25	742.13	742.14
B	58+45.92	-20.25	741.90	741.92
C	58+55.92	-20.25	741.66	741.68
D	58+65.92	-20.25	741.43	741.44
℄ Pier 1	58+78.17	-20.25	741.12	741.12
E	58+88.17	-20.25	740.86	740.86
F	58+98.17	-20.25	740.58	740.59
G	59+08.17	-20.25	740.29	740.31
H	59+18.17	-20.25	739.99	740.01
I	59+28.17	-20.25	739.68	739.69
℄ Pier 2	59+39.17	-20.25	739.33	739.33
J	59+49.17	-20.25	738.99	739.00
K	59+59.17	-20.25	738.64	738.66
L	59+69.17	-20.25	738.28	738.30
M	59+79.17	-20.25	737.92	737.93
℄ Brg. E. Abut.	59+91.42	-20.25	737.47	737.47
E. End of Deck	59+92.19	-20.25	737.44	737.44

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+26.66	-13.92	742.43	742.43
℄ Brg. W. Abut.	58+27.43	-13.92	742.42	742.42
A	58+37.43	-13.92	742.19	742.20
B	58+47.43	-13.92	741.96	741.98
C	58+57.43	-13.92	741.72	741.74
D	58+67.43	-13.92	741.49	741.49
℄ Pier 1	58+79.68	-13.92	741.18	741.18
E	58+89.68	-13.92	740.91	740.91
F	58+99.68	-13.92	740.63	740.64
G	59+09.68	-13.92	740.34	740.36
H	59+19.68	-13.92	740.04	740.05
I	59+29.68	-13.92	739.73	739.73
℄ Pier 2	59+40.68	-13.92	739.37	739.37
J	59+50.68	-13.92	739.03	739.04
K	59+60.68	-13.92	738.68	738.70
L	59+70.68	-13.92	738.32	738.34
M	59+80.68	-13.92	737.96	737.97
℄ Brg. E. Abut.	59+92.93	-13.92	737.51	737.51
E. End of Deck	59+93.70	-13.92	737.48	737.48

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+28.17	-7.58	742.49	742.49
℄ Brg. W. Abut.	58+28.94	-7.58	742.48	742.48
A	58+38.94	-7.58	742.25	742.26
B	58+48.94	-7.58	742.02	742.04
C	58+58.94	-7.58	741.78	741.80
D	58+68.94	-7.58	741.54	741.55
℄ Pier 1	58+81.19	-7.58	741.23	741.23
E	58+91.19	-7.58	740.96	740.97
F	59+01.19	-7.58	740.69	740.70
G	59+11.19	-7.58	740.39	740.41
H	59+21.19	-7.58	740.09	740.10
I	59+31.19	-7.58	739.78	739.78
℄ Pier 2	59+42.19	-7.58	739.42	739.42
J	59+52.19	-7.58	739.08	739.08
K	59+62.19	-7.58	738.72	738.74
L	59+72.19	-7.58	738.36	738.38
M	59+82.19	-7.58	738.00	738.01
℄ Brg. E. Abut.	59+94.44	-7.58	737.55	737.55
E. End of Deck	59+95.22	-7.58	737.52	737.52

Note:
Stations and offsets are measured along ℄ roadway.

MODEL: Default
FILE NAME: E:\1910-19\Struct\049-0097\Final Design\CADD\CADD_Sheets\049009 7-62P14-006-TopofSlabElevations.dgn

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LIN ENGINEERING,LTD.
Consulting Engineers
Springfield, Illinois

USER NAME=	DESIGNED - CZ	REVISED -	
	CHECKED - CL	REVISED -	
PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 6 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	76
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

WB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+28.19	-7.50	742.49	742.49
℄ Brg. W. Abut.	58+28.96	-7.50	742.48	742.48
A	58+38.96	-7.50	742.25	742.26
B	58+48.96	-7.50	742.02	742.04
C	58+58.96	-7.50	741.79	741.80
D	58+68.96	-7.50	741.54	741.55
℄ Pier 1	58+81.21	-7.50	741.23	741.23
E	58+91.21	-7.50	740.97	740.97
F	59+01.21	-7.50	740.69	740.70
G	59+11.21	-7.50	740.40	740.41
H	59+21.21	-7.50	740.09	740.10
I	59+31.21	-7.50	739.78	739.78
℄ Pier 2	59+42.21	-7.50	739.42	739.42
J	59+52.21	-7.50	739.08	739.08
K	59+62.21	-7.50	738.72	738.74
L	59+72.21	-7.50	738.36	738.38
M	59+82.21	-7.50	738.00	738.01
℄ Brg. E. Abut.	59+94.46	-7.50	737.55	737.55
E. End of Deck	59+95.24	-7.50	737.52	737.52

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+29.68	-1.25	742.55	742.55
℄ Brg. W. Abut.	58+30.46	-1.25	742.54	742.54
A	58+40.46	-1.25	742.31	742.32
B	58+50.46	-1.25	742.08	742.09
C	58+60.46	-1.25	741.84	741.86
D	58+70.46	-1.25	741.60	741.61
℄ Pier 1	58+82.71	-1.25	741.29	741.29
E	58+92.71	-1.25	741.02	741.02
F	59+02.71	-1.25	740.74	740.75
G	59+12.71	-1.25	740.44	740.45
H	59+22.71	-1.25	740.14	740.15
I	59+32.71	-1.25	739.82	739.83
℄ Pier 2	59+43.71	-1.25	739.46	739.46
J	59+53.71	-1.25	739.12	739.12
K	59+63.71	-1.25	738.76	738.78
L	59+73.71	-1.25	738.40	738.42
M	59+83.71	-1.25	738.04	738.05
℄ Brg. E. Abut.	59+95.96	-1.25	737.59	737.59
E. End of Deck	59+96.73	-1.25	737.56	737.56

℄ ROADWAY & STAGE CONST. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+29.98	0.00	742.57	742.57
℄ Brg. W. Abut.	58+30.75	0.00	742.55	742.55
A	58+40.75	0.00	742.32	742.33
B	58+50.75	0.00	742.09	742.10
C	58+60.75	0.00	741.86	741.87
D	58+70.75	0.00	741.61	741.62
℄ Pier 1	58+83.00	0.00	741.30	741.30
E	58+93.00	0.00	741.03	741.03
F	59+03.00	0.00	740.75	740.76
G	59+13.00	0.00	740.45	740.46
H	59+23.00	0.00	740.15	740.16
I	59+33.00	0.00	739.83	739.84
℄ Pier 2	59+44.00	0.00	739.47	739.47
J	59+54.00	0.00	739.13	739.13
K	59+64.00	0.00	738.77	738.78
L	59+74.00	0.00	738.41	738.42
M	59+84.00	0.00	738.04	738.05
℄ Brg. E. Abut.	59+96.25	0.00	737.60	737.60
E. End of Deck	59+97.02	0.00	737.57	737.57

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+30.28	1.25	742.54	742.54
℄ Brg. W. Abut.	58+31.05	1.25	742.52	742.52
A	58+41.05	1.25	742.29	742.30
B	58+51.05	1.25	742.06	742.08
C	58+61.05	1.25	741.83	741.84
D	58+71.05	1.25	741.59	741.59
℄ Pier 1	58+83.30	1.25	741.27	741.27
E	58+93.30	1.25	741.00	741.00
F	59+03.30	1.25	740.72	740.73
G	59+13.30	1.25	740.43	740.44
H	59+23.30	1.25	740.12	740.13
I	59+33.30	1.25	739.80	739.81
℄ Pier 2	59+44.30	1.25	739.44	739.44
J	59+54.30	1.25	739.10	739.10
K	59+64.30	1.25	738.74	738.76
L	59+74.30	1.25	738.38	738.39
M	59+84.30	1.25	738.01	738.03
℄ Brg. E. Abut.	59+96.55	1.25	737.57	737.57
E. End of Deck	59+97.32	1.25	737.54	737.54

EB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+31.77	7.50	742.41	742.41
℄ Brg. W. Abut.	58+32.54	7.50	742.39	742.39
A	58+42.54	7.50	742.17	742.18
B	58+52.54	7.50	741.94	741.96
C	58+62.54	7.50	741.70	741.72
D	58+72.54	7.50	741.46	741.46
℄ Pier 1	58+84.79	7.50	741.14	741.14
E	58+94.79	7.50	740.87	740.87
F	59+04.79	7.50	740.58	740.59
G	59+14.79	7.50	740.29	740.30
H	59+24.79	7.50	739.98	739.99
I	59+34.79	7.50	739.66	739.67
℄ Pier 2	59+45.79	7.50	739.30	739.30
J	59+55.79	7.50	738.95	738.96
K	59+65.79	7.50	738.60	738.61
L	59+75.79	7.50	738.23	738.25
M	59+85.79	7.50	737.87	737.88
℄ Brg. E. Abut.	59+98.04	7.50	737.42	737.42
E. End of Deck	59+98.81	7.50	737.39	737.39

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+31.79	7.58	742.41	742.41
℄ Brg. W. Abut.	58+32.56	7.58	742.39	742.39
A	58+42.56	7.58	742.16	742.18
B	58+52.56	7.58	741.93	741.96
C	58+62.56	7.58	741.70	741.72
D	58+72.56	7.58	741.45	741.46
℄ Pier 1	58+84.81	7.58	741.14	741.14
E	58+94.81	7.58	740.87	740.87
F	59+04.81	7.58	740.58	740.59
G	59+14.81	7.58	740.29	740.30
H	59+24.81	7.58	739.98	739.99
I	59+34.81	7.58	739.66	739.66
℄ Pier 2	59+45.81	7.58	739.29	739.29
J	59+55.81	7.58	738.95	738.96
K	59+65.81	7.58	738.59	738.61
L	59+75.81	7.58	738.23	738.25
M	59+85.81	7.58	737.86	737.88
℄ Brg. E. Abut.	59+98.06	7.58	737.42	737.42
E. End of Deck	59+98.83	7.58	737.39	737.39

Note:
Stations and offsets are measured along ℄ roadway.

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Springfield, Illinois

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PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 7 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	77
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+33.30	13.92	742.28	742.28
℄ Brg. W. Abut.	58+34.07	13.92	742.26	742.26
A	58+44.07	13.92	742.03	742.05
B	58+54.07	13.92	741.80	741.82
C	58+64.07	13.92	741.57	741.59
D	58+74.07	13.92	741.32	741.33
℄ Pier 1	58+86.32	13.92	741.00	741.00
E	58+96.32	13.92	740.73	740.73
F	59+06.32	13.92	740.44	740.45
G	59+16.32	13.92	740.15	740.16
H	59+26.32	13.92	739.84	739.85
I	59+36.32	13.92	739.52	739.52
℄ Pier 2	59+47.32	13.92	739.15	739.15
J	59+57.32	13.92	738.80	738.81
K	59+67.32	13.92	738.44	738.46
L	59+77.32	13.92	738.08	738.10
M	59+87.32	13.92	737.71	737.73
℄ Brg. E. Abut.	59+99.57	13.92	737.27	737.27
E. End of Deck	60+00.34	13.92	737.24	737.24

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+34.81	20.25	742.15	742.15
℄ Brg. W. Abut.	58+35.58	20.25	742.13	742.13
A	58+45.58	20.25	741.90	741.92
B	58+55.58	20.25	741.67	741.69
C	58+65.58	20.25	741.44	741.45
D	58+75.58	20.25	741.19	741.20
℄ Pier 1	58+87.83	20.25	740.87	740.87
E	58+97.83	20.25	740.59	740.59
F	59+07.83	20.25	740.30	740.31
G	59+17.83	20.25	740.00	740.02
H	59+27.83	20.25	739.69	739.71
I	59+37.83	20.25	739.37	739.38
℄ Pier 2	59+48.83	20.25	739.00	739.00
J	59+58.83	20.25	738.65	738.66
K	59+68.83	20.25	738.29	738.31
L	59+78.83	20.25	737.93	737.95
M	59+88.83	20.25	737.56	737.58
℄ Brg. E. Abut.	60+01.08	20.25	737.11	737.11
E. End of Deck	60+01.85	20.25	737.09	737.09

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+36.32	26.58	742.02	742.02
℄ Brg. W. Abut.	58+37.09	26.58	742.00	742.00
A	58+47.09	26.58	741.77	741.79
B	58+57.09	26.58	741.54	741.56
C	58+67.09	26.58	741.30	741.32
D	58+77.09	26.58	741.05	741.06
℄ Pier 1	58+89.34	26.58	740.73	740.73
E	58+99.34	26.58	740.45	740.46
F	59+09.34	26.58	740.16	740.18
G	59+19.34	26.58	739.86	739.88
H	59+29.34	26.58	739.55	739.56
I	59+39.34	26.58	739.23	739.23
℄ Pier 2	59+50.34	26.58	738.85	738.85
J	59+60.34	26.58	738.51	738.51
K	59+70.34	26.58	738.14	738.16
L	59+80.34	26.58	737.78	737.80
M	59+90.34	26.58	737.41	737.43
℄ Brg. E. Abut.	60+02.59	26.58	736.96	736.96
E. End of Deck	60+03.37	26.58	736.94	736.94

BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+37.83	32.92	741.89	741.89
℄ Brg. W. Abut.	58+38.61	32.92	741.87	741.87
A	58+48.61	32.92	741.65	741.66
B	58+58.61	32.92	741.41	741.44
C	58+68.61	32.92	741.17	741.19
D	58+78.61	32.92	740.92	740.93
℄ Pier 1	58+90.86	32.92	740.59	740.59
E	59+00.86	32.92	740.32	740.32
F	59+10.86	32.92	740.02	740.04
G	59+20.86	32.92	739.72	739.74
H	59+30.86	32.92	739.41	739.42
I	59+40.86	32.92	739.08	739.09
℄ Pier 2	59+51.86	32.92	738.71	738.71
J	59+61.86	32.92	738.36	738.36
K	59+71.86	32.92	737.99	738.01
L	59+81.86	32.92	737.63	737.65
M	59+91.86	32.92	737.26	737.28
℄ Brg. E. Abut.	60+04.11	32.92	736.81	736.81
E. End of Deck	60+04.88	32.92	736.79	736.79

BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+39.41	39.51	741.76	741.76
℄ Brg. W. Abut.	58+40.17	39.50	741.74	741.74
A'	58+50.17	39.33	741.51	741.53
B'	58+60.17	39.16	741.28	741.31
C'	58+70.17	38.99	741.04	741.06
D'	58+80.17	38.82	740.79	740.80
℄ Pier 1	58+92.21	38.62	740.47	740.47
E'	59+02.21	38.45	740.19	740.20
F'	59+12.21	38.28	739.90	739.91
G'	59+22.21	38.11	739.60	739.62
H'	59+32.21	37.94	739.29	739.30
I'	59+42.21	37.77	738.96	738.97
℄ Pier 2	59+52.97	37.59	738.60	738.60
J'	59+62.97	37.42	738.25	738.25
K'	59+72.97	37.25	737.89	737.90
L'	59+82.97	37.08	737.53	737.54
M'	59+92.97	36.91	737.16	737.17
℄ Brg. E. Abut.	60+05.01	36.71	736.72	736.72
E. End of Deck	60+05.78	36.70	736.70	736.70

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	58+40.98	46.11	741.62	741.62
℄ Brg. W. Abut.	58+41.74	46.08	741.61	741.61
A'	58+51.74	45.74	741.38	741.39
B'	58+61.73	45.40	741.15	741.17
C'	58+71.73	45.06	740.91	740.93
D'	58+81.72	44.72	740.66	740.67
℄ Pier 1	58+93.58	44.32	740.35	740.35
E'	59+03.57	43.98	740.07	740.07
F'	59+13.56	43.64	739.78	739.79
G'	59+23.56	43.30	739.48	739.49
H'	59+33.55	42.96	739.17	739.18
I'	59+43.55	42.62	738.84	738.85
℄ Pier 2	59+54.09	42.26	738.49	738.49
J'	59+64.08	41.92	738.14	738.15
K'	59+74.08	41.58	737.78	737.79
L'	59+84.07	41.24	737.42	737.44
M'	59+94.07	40.90	737.06	737.07
℄ Brg. E. Abut.	60+05.92	40.50	736.63	736.63
E. End of Deck	60+06.69	40.47	736.61	736.61

Note:
Stations and offsets are measured along ℄ roadway.

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Springfield, Illinois

USER NAME =	DESIGNED - CZ	REVISED -	
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PLOT SCALE =	DRAWN - AJF	REVISED -	
PLOT DATE = 5/2/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 8 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	78
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

NORTH FACE OF CURB

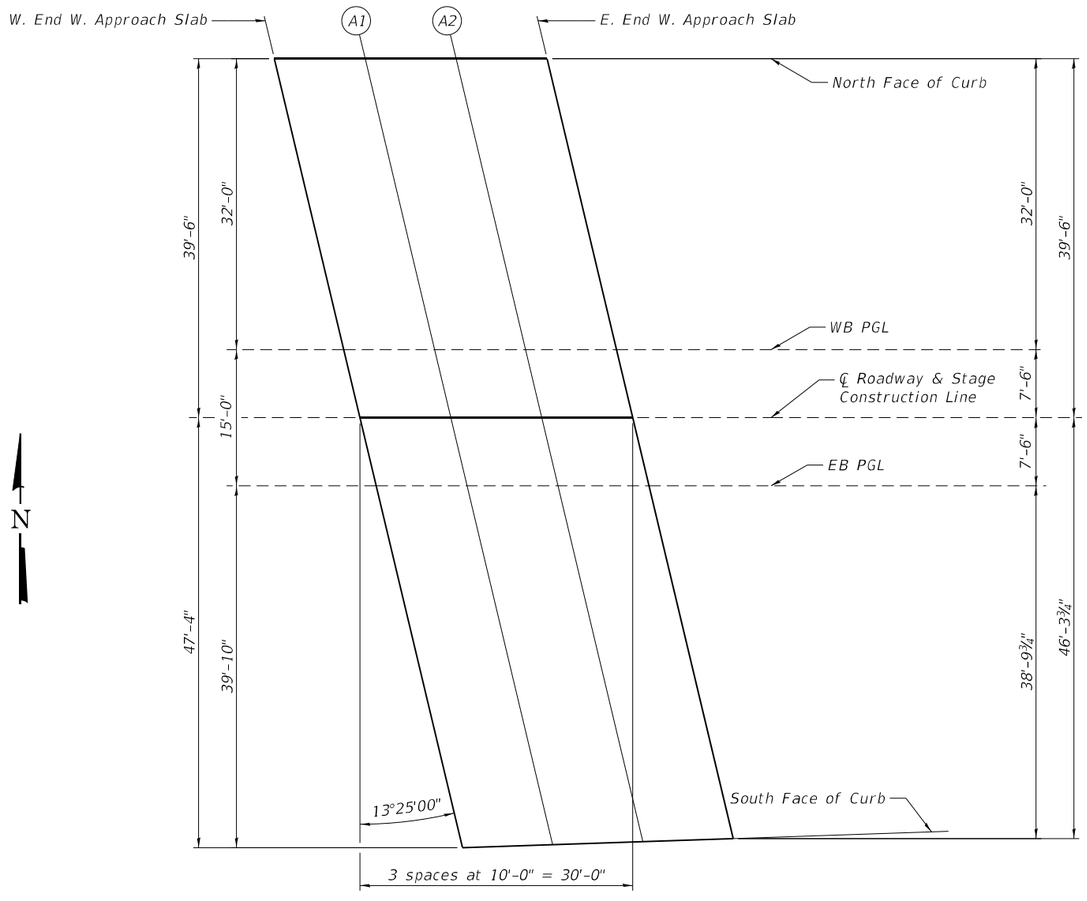
Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	57+89.33	-39.50	742.90
A1	57+99.33	-39.50	742.67
A2	58+09.33	-39.50	742.45
E. End W. Approach Slab	58+19.33	-39.50	742.22

WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	57+96.96	-7.50	743.21
A1	58+06.96	-7.50	742.98
A2	58+16.96	-7.50	742.75
E. End W. Approach Slab	58+26.96	-7.50	742.52

℄ ROADWAY & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	57+98.75	0.00	743.28
A1	58+08.75	0.00	743.05
A2	58+18.75	0.00	742.82
E. End W. Approach Slab	58+28.75	0.00	742.59



WEST APPROACH PLAN

EB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	58+00.54	7.50	743.13
A1	58+10.54	7.50	742.90
A2	58+20.54	7.50	742.67
E. End W. Approach Slab	58+30.54	7.50	742.44

SOUTH FACE OF CURB

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	58+10.03	47.33	742.31
A1	58+19.95	46.99	742.09
A2	58+29.87	46.66	741.87
E. End W. Approach Slab	58+39.79	46.32	741.65

Note:
Stations and offsets are measured along ℄ roadway.

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Consulting Engineers
Springfield, Illinois

USER NAME=	DESIGNED - CZ	REVISED -	
	CHECKED - CL	REVISED -	
PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 5/6/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 9 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	79
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

NORTH FACE OF CURB

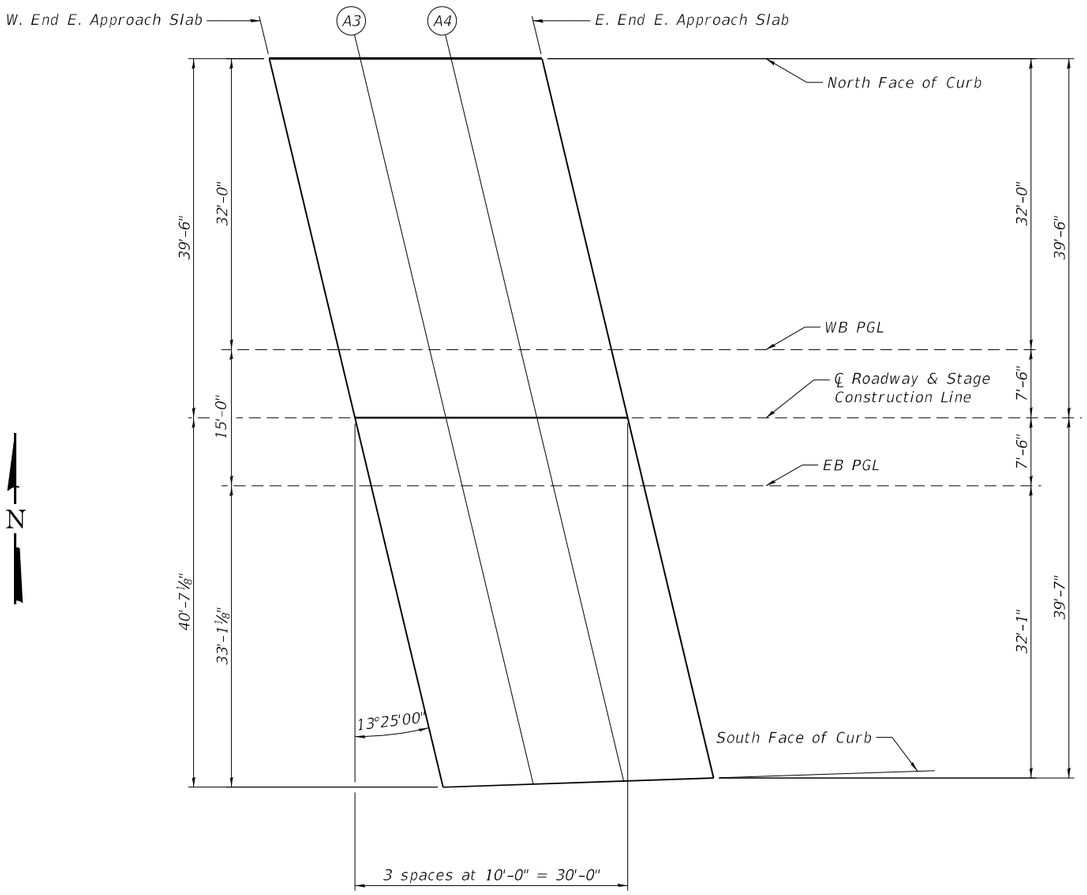
Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	59+88.83	-39.50	737.27
A3	59+98.83	-39.50	736.91
A4	60+08.83	-39.50	736.54
E. End E. Approach Slab	60+18.83	-39.50	736.18

WB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	59+96.47	-7.50	737.48
A3	60+06.47	-7.50	737.11
A4	60+16.47	-7.50	736.74
E. End E. Approach Slab	60+26.47	-7.50	736.38

℄ ROADWAY & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	59+98.26	0.00	737.52
A3	60+08.26	0.00	737.16
A4	60+18.26	0.00	736.79
E. End E. Approach Slab	60+28.26	0.00	736.42



EAST APPROACH PLAN

EB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	60+00.05	7.50	737.34
A3	60+10.05	7.50	736.98
A4	60+20.05	7.50	736.61
E. End E. Approach Slab	60+30.05	7.50	736.25

SOUTH FACE OF CURB

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	60+07.95	40.60	736.56
A3	60+17.87	40.26	736.20
A4	60+27.79	39.93	735.84
E. End E. Approach Slab	60+37.71	39.59	735.48

Note:
Stations and offsets are measured along ℄ roadway.

MODEL: Default
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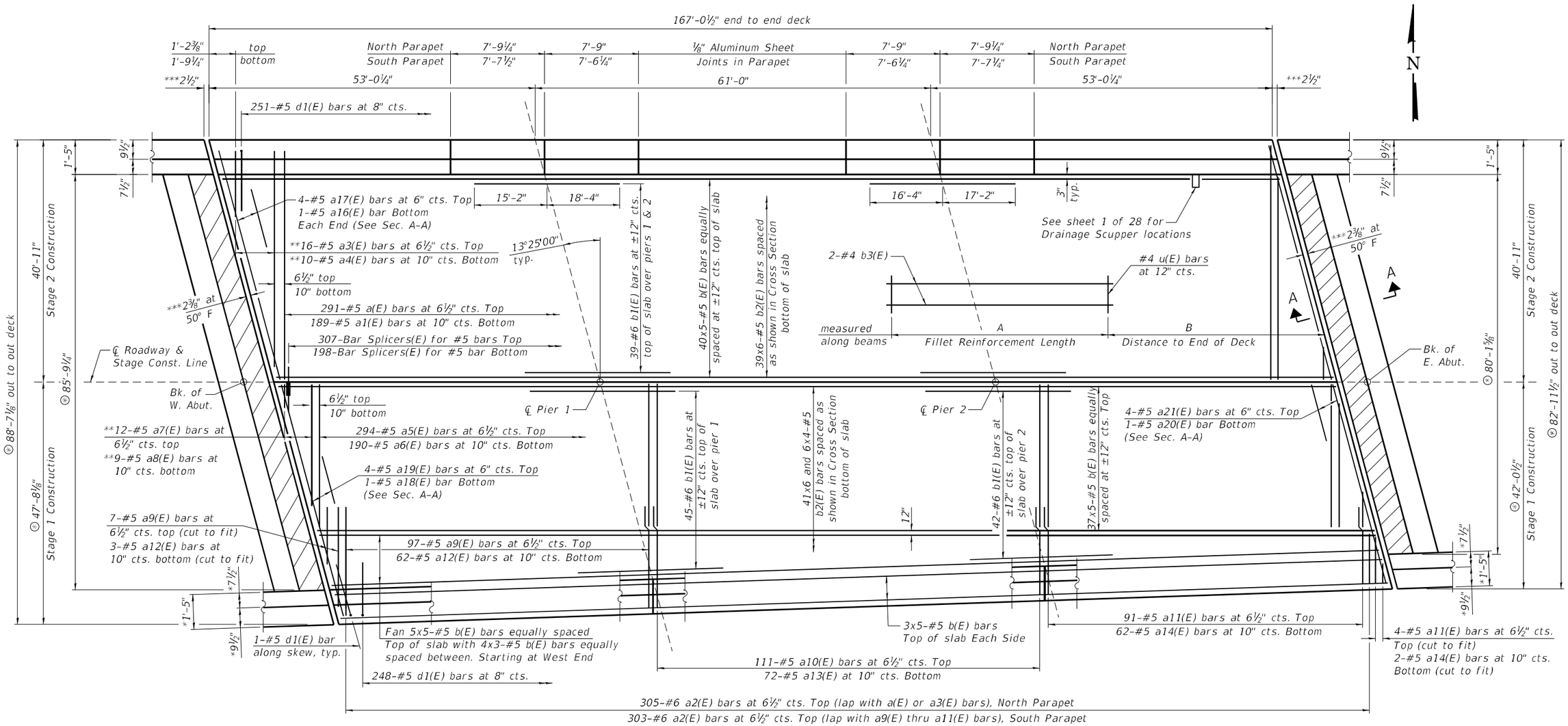
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 049-0097
SHEET 10 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	80
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



PLAN

Notes:
See sheet 13 of 28 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 14 of 28 for placement of x(E) bars and Section A-A.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

MINIMUM BAR LAP

#5 bar = 3'-6"
#4 bar = 2'-5"

Ⓐ Measured at end of deck.
* Measured at right angles to south face of bridge.
** See Field Cutting Diagrams on sheet 13 of 28.
*** Dimension showing concrete opening. For joint opening see sheet 19 of 28.

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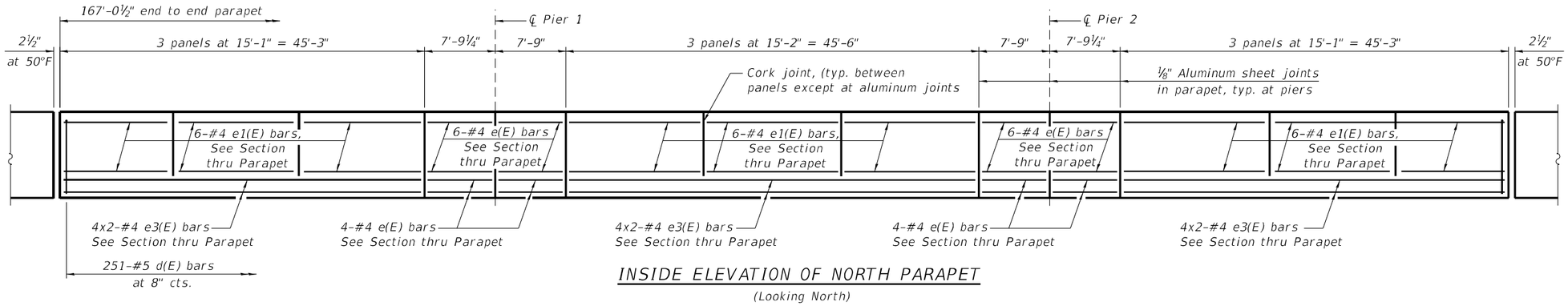
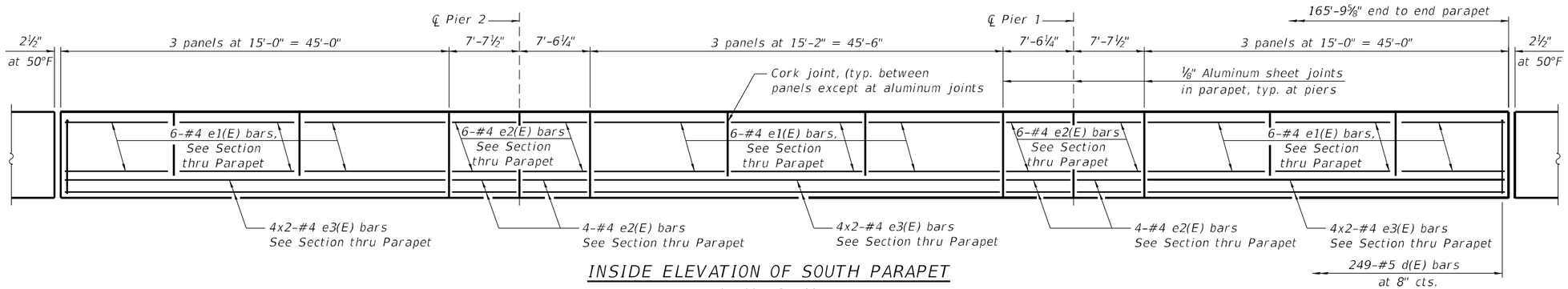
		CHECKED - CL	REVISED -		
	PLOT SCALE=	DRAWN - AJF	REVISED -		
	PLOT DATE = 5/6/2022	CHECKED - MTH	REVISED -		SHEET 11 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	81
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



INSIDE ELEVATION OF NORTH PARAPET

(Looking North)



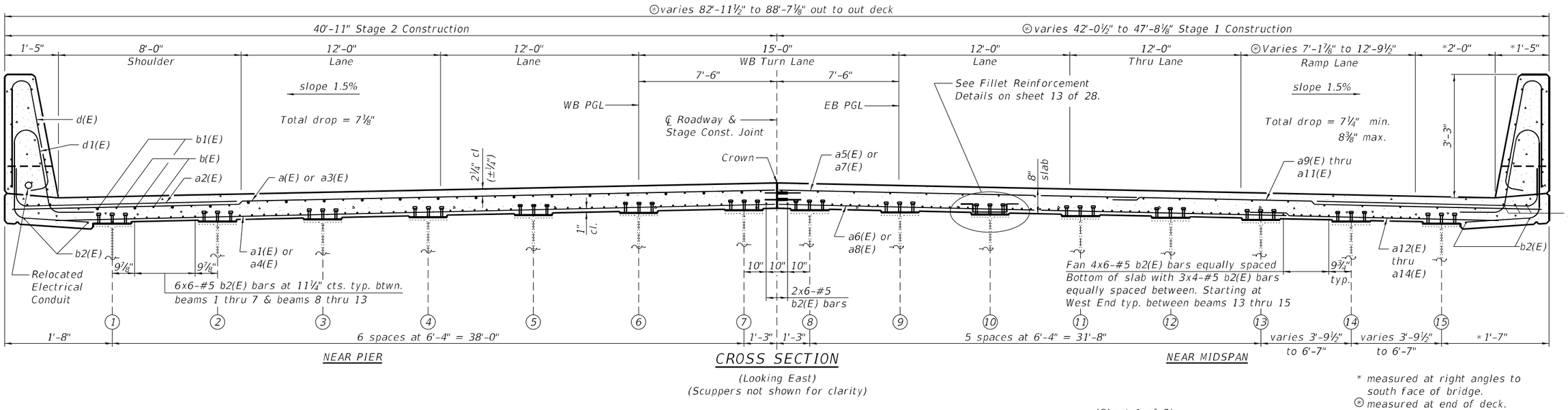
INSIDE ELEVATION OF SOUTH PARAPET

(Looking South)

Notes:
Bars indicated thus 1x2-#4 etc. indicates 1 line of bars with 2 lengths per line.
See sheet 13 of 28 for superstructure details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 2'-5"



NEAR PIER

CROSS SECTION

(Looking East)
(Scuppers not shown for clarity)

NEAR MIDSPAN

* measured at right angles to south face of bridge.
℗ measured at end of deck.

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	PLOT SCALE=	DRAWN - AJF	REVISED -		
	PLOT DATE = 5/6/2022	CHECKED - MTH	REVISED -		SHEET 12 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	82
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

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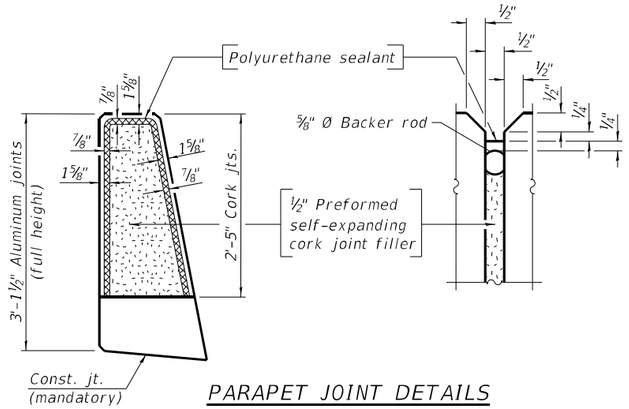
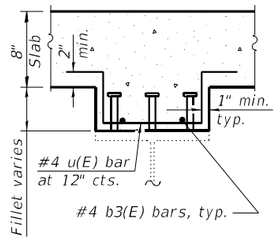


PARAPET JOINT DETAILS

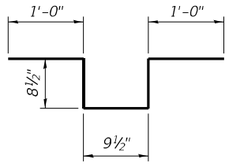


FILLET REINFORCEMENT

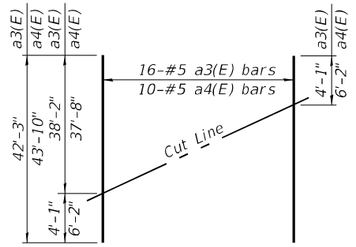
(Fillet Depth ≥ 6")

FILLET REINFORCEMENT TABLE

Beam	A	B	# u(E) bars	# b3(E) bars
1	62'-0"	60'-0"	63	2
2	92'-0"	40'-0"	93	3
3	122'-0"	30'-0"	123	4
4	62'-0"	90'-0"	63	2
5 thru 10	150'-0"	15'-0"	151	5
11 thru 13	122'-0"	40'-0"	123	4
14	92'-0"	55'-0"	93	3

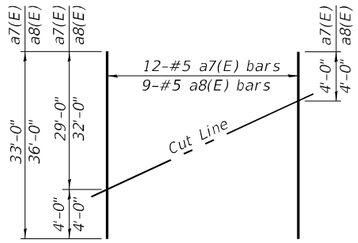


BAR u(E)



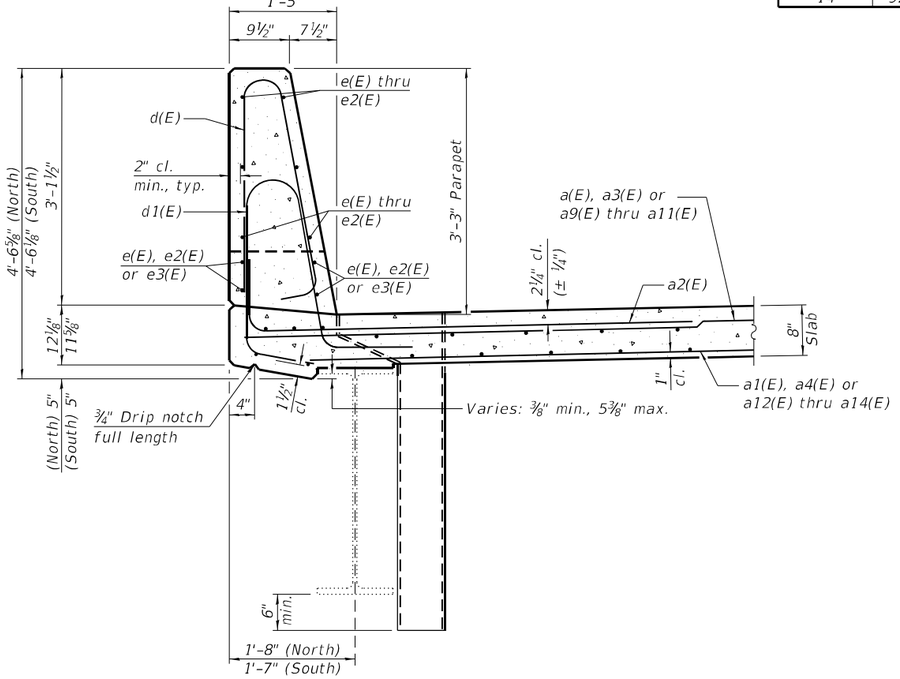
FIELD CUTTING DIAGRAM

Order a3(E) and a4(E) bars full length.
Cut as shown and use remainder of bars in opposite end of deck.

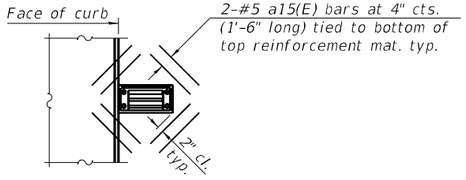


FIELD CUTTING DIAGRAM

Order a7(E) and a8(E) bars full length.
Cut as shown and use remainder of bars in opposite end of deck.

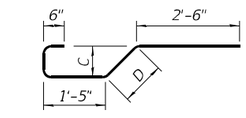


SECTION THRU PARAPET



PLAN

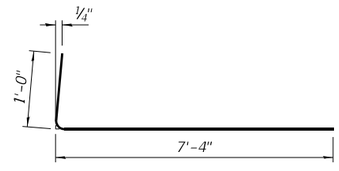
Cut longitudinal reinforcement to clear drainage scuppers.



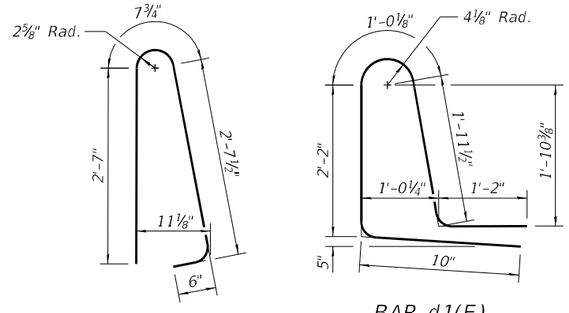
BARS x(E), x1(E) & x2(E)

x(E) VARIABLES

Bar	C	D
x(E)	8½"	1'-0"
x1(E)	1'-0"	1'-5"
x2(E)	1'-2"	1'-7¾"

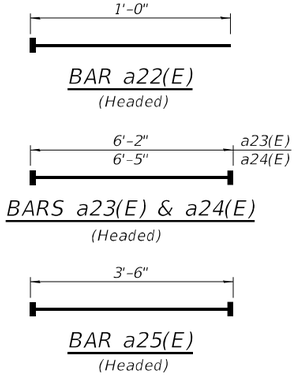


BAR a2(E)



BAR d(E)

BAR d1(E)



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	291	#5	40'-7"	
a1(E)	189	#5	40'-3"	
a2(E)	608	#6	8'-4"	
a3(E)	16	#5	42'-3"	
a4(E)	10	#5	43'-10"	
a5(E)	294	#5	29'-7"	
a6(E)	190	#5	32'-9"	
a7(E)	12	#5	33'-0"	
a8(E)	9	#5	36'-0"	
a9(E)	104	#5	21'-3"	
a10(E)	111	#5	19'-6"	
a11(E)	95	#5	17'-6"	
a12(E)	65	#5	17'-9"	
a13(E)	72	#5	16'-0"	
a14(E)	64	#5	14'-0"	
a15(E)	56	#5	1'-6"	
a16(E)	2	#5	41'-4"	
a17(E)	8	#5	41'-8"	
a18(E)	1	#5	48'-3"	
a19(E)	4	#5	48'-7"	
a20(E)	1	#5	42'-8"	
a21(E)	4	#5	43'-0"	
a22(E)	12	#5	1'-0"	
a23(E)	66	#5	6'-2"	
a24(E)	6	#5	6'-5"	
a25(E)	6	#5	3'-6"	
b(E)	452	#5	36'-3"	
b1(E)	166	#6	33'-6"	
b2(E)	504	#5	30'-9"	
b3(E)	112	#4	32'-6"	
d(E)	500	#5	6'-5"	
d1(E)	500	#5	7'-2"	
e(E)	40	#4	7'-6"	
e1(E)	108	#4	14'-9"	
e2(E)	40	#4	7'-3"	
e3(E)	48	#4	23'-9"	
u(E)	1710	#4	4'-3"	
x(E)	46	#5	6'-2"	
x1(E)	108	#5	6'-10"	
x2(E)	4	#5	7'-3"	
Reinforcement Bars, Epoxy Coated		Lbs.	115,770	
Concrete Superstructure		Cu. Yds.	426.0	

Notes:

The ⅛" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

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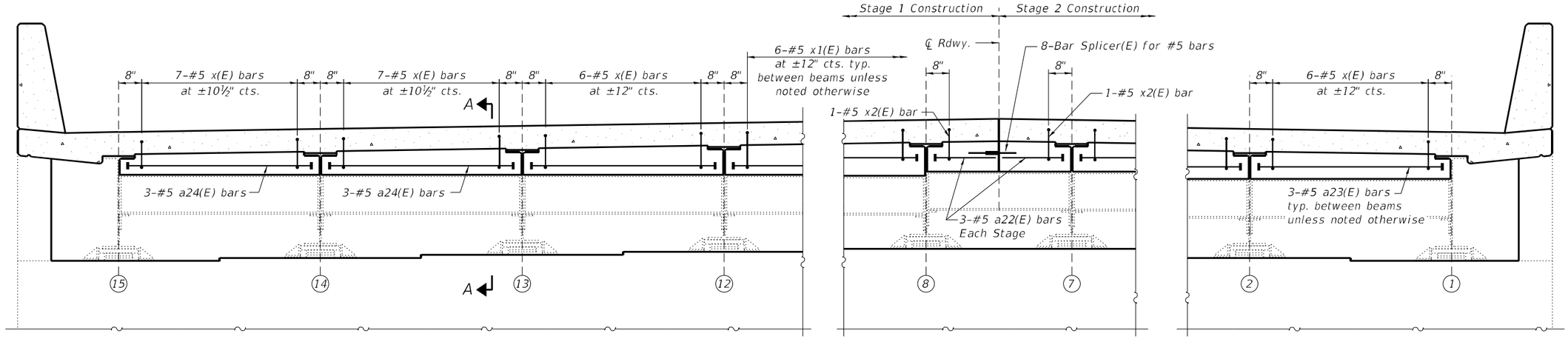
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

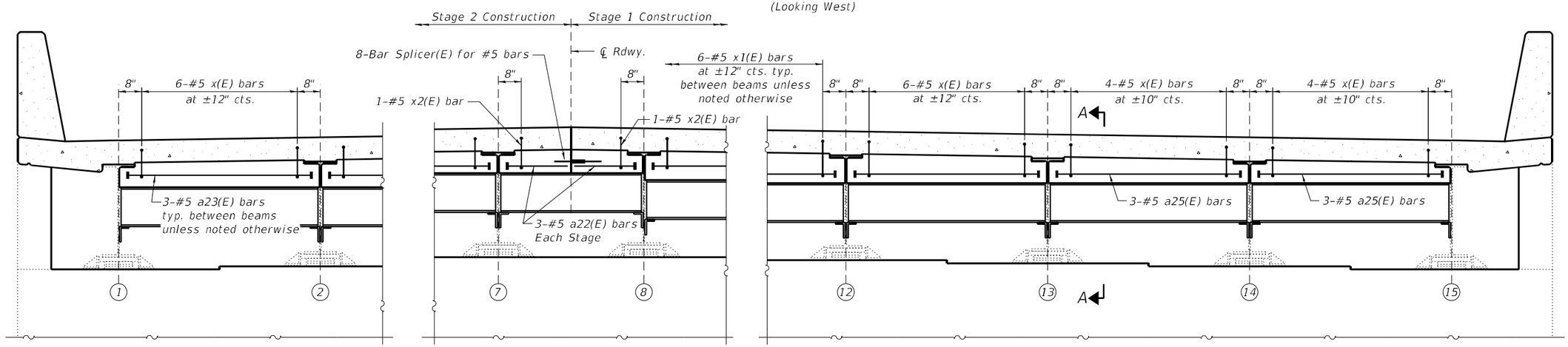
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 049-0097
SHEET 13 OF 28 SHEETS

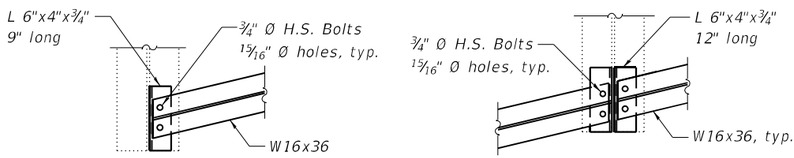
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	83
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



DIAPHRAGM AT WEST ABUTMENT

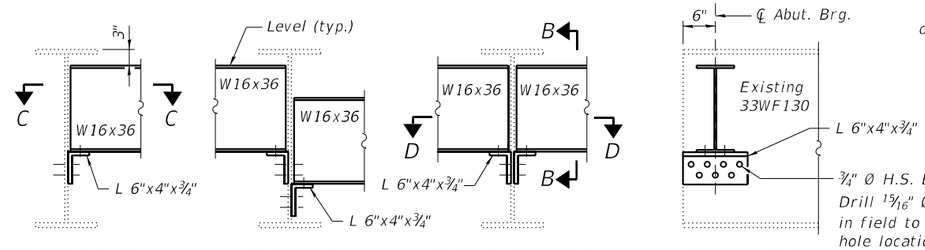
(Looking West)





SECTION C-C

SECTION D-D



AT BEAMS 1 & 15

AT BEAM 8

TYPICAL INTERIOR

SECTION B-B

DIAPHRAGM AT EAST ABUTMENT

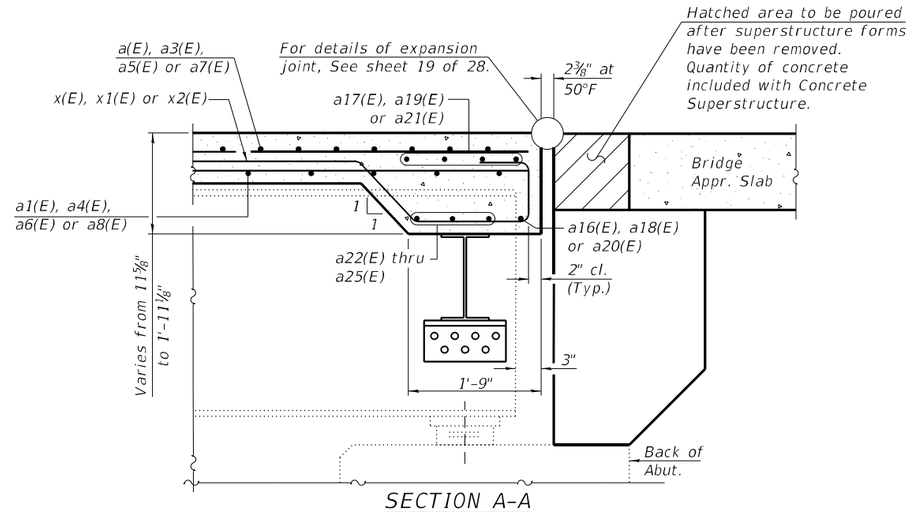
(Looking East)

Notes:

See sheet 13 of 28 for superstructure details and Bill of Material.

The x(E), x1(E) and x2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

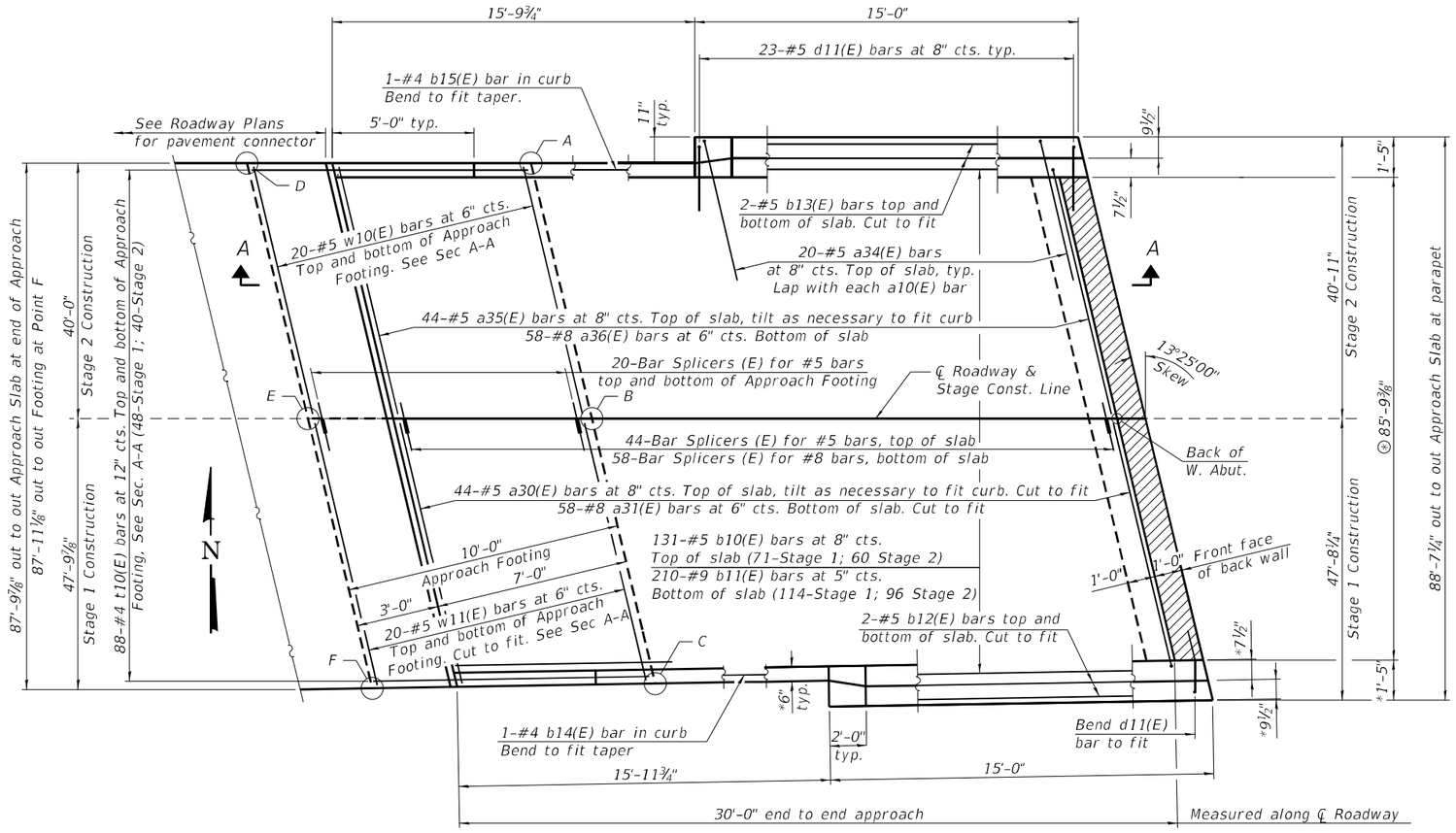
Two hardened washers required for each set of oversized holes.



SECTION A-A

(at Rt. ℄'s)

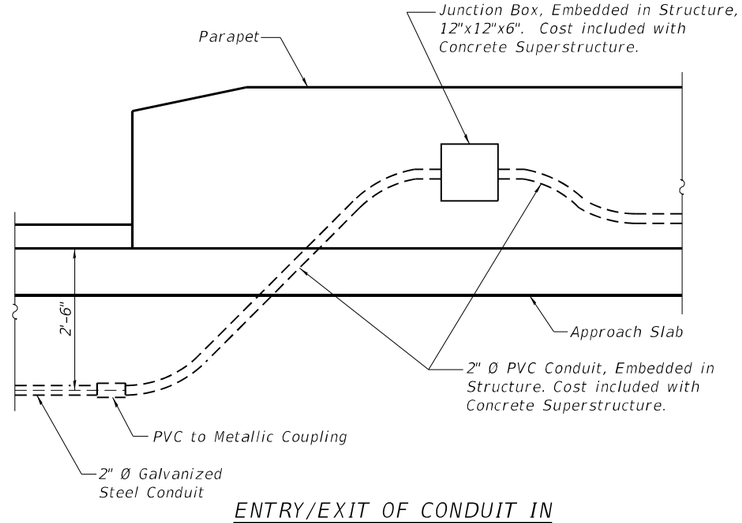
END DIAPHRAGM D1 AT EAST ABUTMENT



WEST APPROACH PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

West Approach		
Point	Top	Bottom
A	741.48	740.65
B	741.87	741.03
C	740.89	740.06
D	741.72	740.89
E	742.10	741.27
F	741.12	740.29

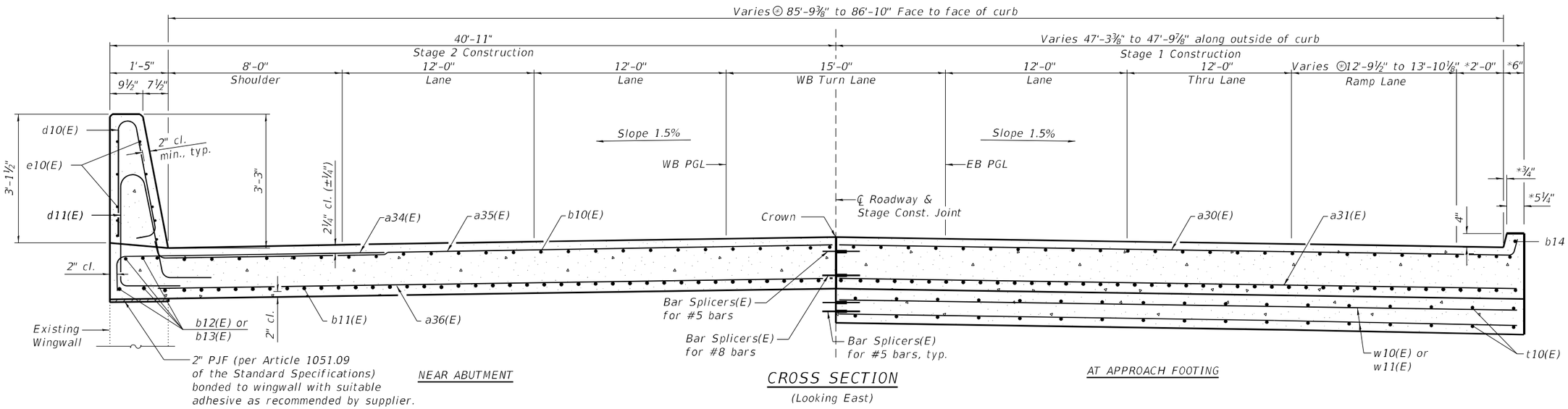


ENTRY/EXIT OF CONDUIT IN BRIDGE SUPERSTRUCTURE

(Located at End of North Parapet)

* Measured at right angles to south face of bridge.

℗ Measured at deck side of hatch block.



NEAR ABUTMENT

CROSS SECTION

(Looking East)

AT APPROACH FOOTING

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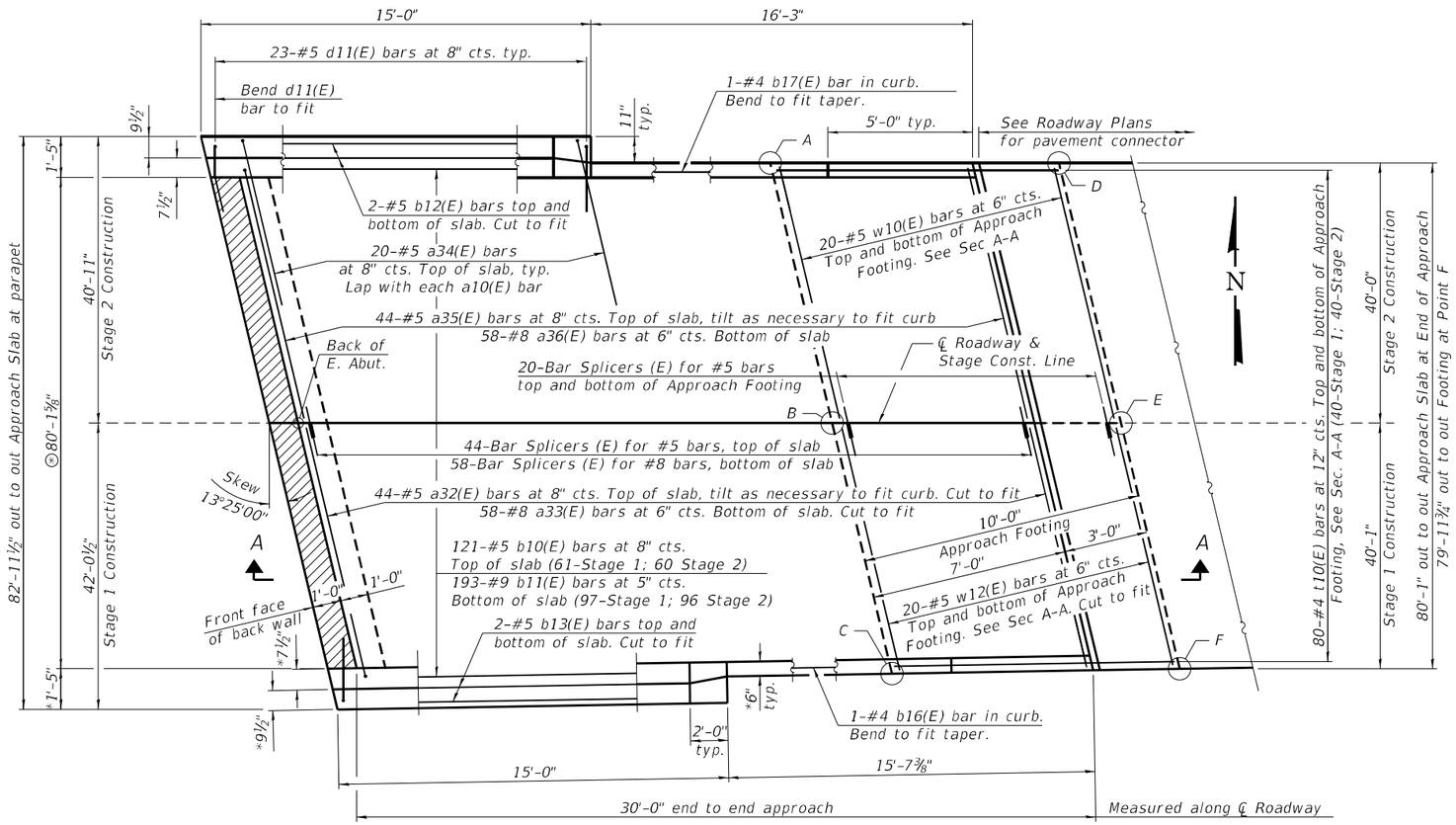
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-0097
SHEET 15 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	85
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

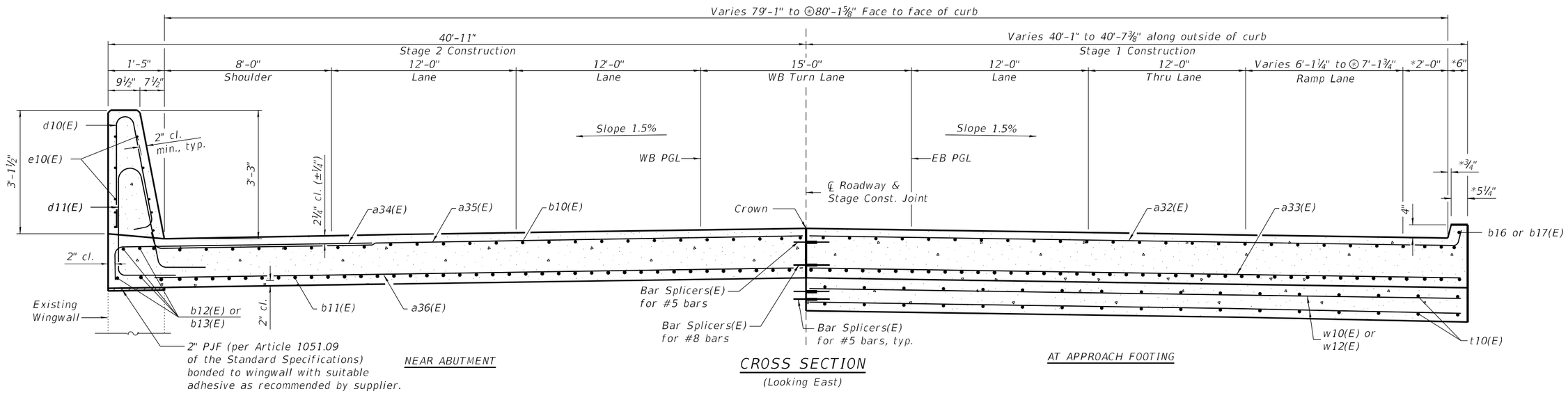
TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

East Approach		
Point	Top	Bottom
A	735.19	734.35
B	735.44	734.60
C	734.48	733.65
D	734.81	733.98
E	735.06	734.23
F	734.11	733.28



EAST APPROACH PLAN

* Measured at right angles to south face of bridge.
⊗ Measured at deck side of hatch block.



NEAR ABUTMENT

CROSS SECTION

(Looking East)

AT APPROACH FOOTING

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		CHECKED - CL	REVISED -		
	PLOT SCALE=	DRAWN - AJF	REVISED -		
	PLOT DATE = 5/6/2022	CHECKED - MTH	REVISED -		SHEET 16 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	86
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

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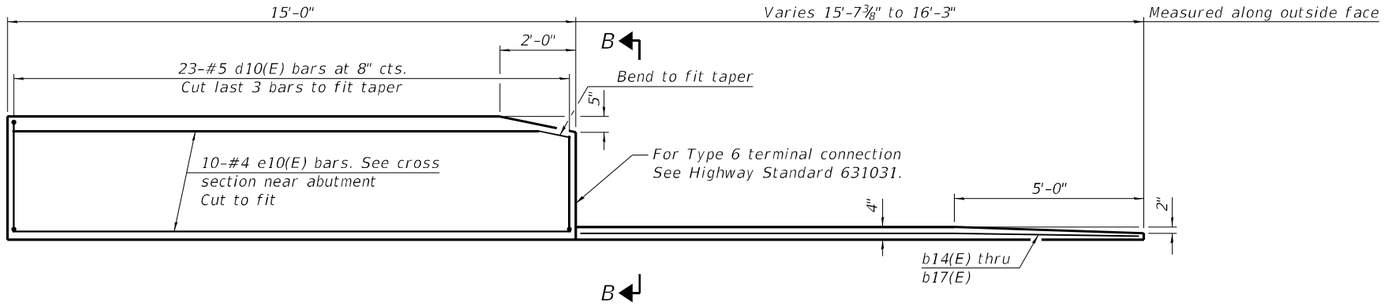
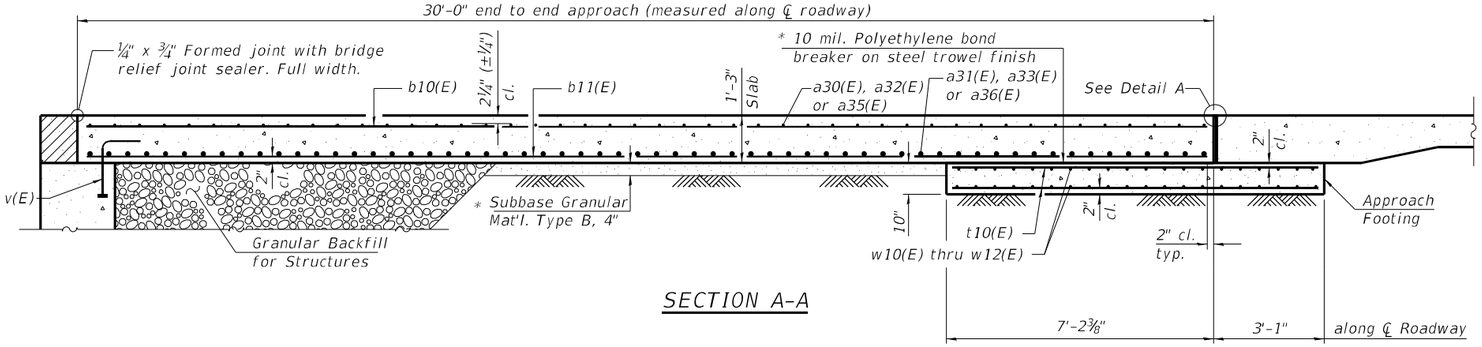
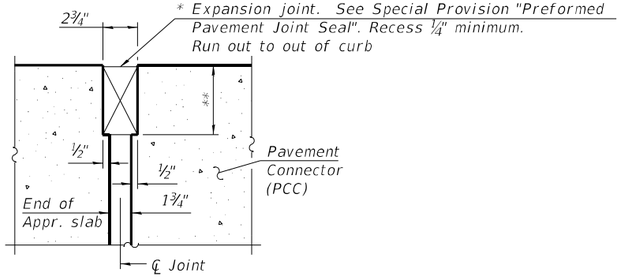


INSIDE ELEVATION OF PARAPET AND CURB



SECTION A-A

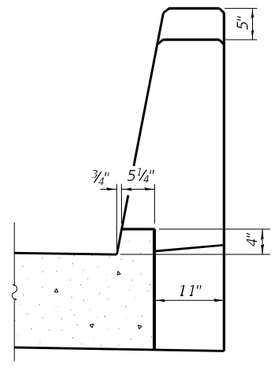


DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)

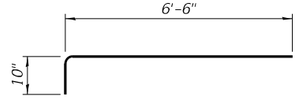
* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

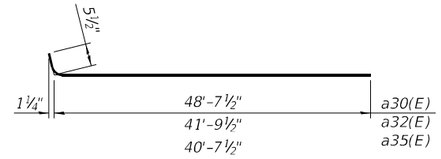


VIEW B-B

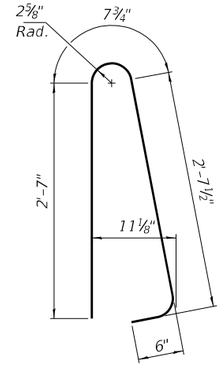
Notes:
- Parapet concrete shall be paid for as Concrete Superstructure.
- Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 28.



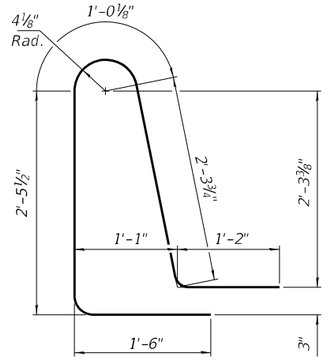
BAR a34(E)



BARS a30(E), a32(E) & a35(E)



BAR d10(E)



BAR d11(E)

WEST APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a30(E)	44	#5	49'-1"	
a31(E)	58	#8	48'-10"	
a34(E)	40	#5	7'-4"	
a35(E)	44	#5	41'-1"	
a36(E)	58	#8	40'-10"	
b10(E)	131	#5	29'-8"	
b11(E)	210	#9	29'-8"	
b12(E)	4	#5	14'-8"	
b13(E)	4	#5	15'-0"	
b14(E)	1	#4	15'-8"	
b15(E)	1	#4	15'-6"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	15'-0"	
t10(E)	88	#4	10'-0"	
w10(E)	40	#5	40'-10"	
w11(E)	40	#5	48'-11"	
Concrete Superstructure			Cu. Yd.	3.9
Concrete Superstructure (Approach Slab)			Cu. Yd.	122.7
Concrete Structures			Cu. Yd.	27.1
Reinforcement Bars, Epoxy Coated			Pound	48,970

EAST APPROACH
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a32(E)	44	#5	42'-3"	
a33(E)	58	#8	41'-6"	
a34(E)	40	#5	7'-4"	
a35(E)	44	#5	41'-1"	
a36(E)	58	#8	40'-10"	
b10(E)	121	#5	29'-8"	
b11(E)	198	#9	29'-8"	
b12(E)	4	#5	14'-8"	
b13(E)	4	#5	15'-0"	
b16(E)	1	#4	15'-4"	
b17(E)	1	#4	15'-11"	
d10(E)	46	#5	6'-5"	
d11(E)	46	#5	8'-6"	
e10(E)	20	#4	15'-0"	
t10(E)	80	#4	10'-0"	
w10(E)	40	#5	40'-10"	
w12(E)	40	#5	41'-3"	
Concrete Superstructure			Cu. Yd.	3.9
Concrete Superstructure (Approach Slab)			Cu. Yd.	113.5
Concrete Structures			Cu. Yd.	24.8
Reinforcement Bars, Epoxy Coated			Pound	45,620

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Consulting Engineers
Springfield, Illinois

USER NAME=	DESIGNED - CZ	REVISED -	
	CHECKED - CL	REVISED -	
PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-0097
SHEET 17 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	87
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

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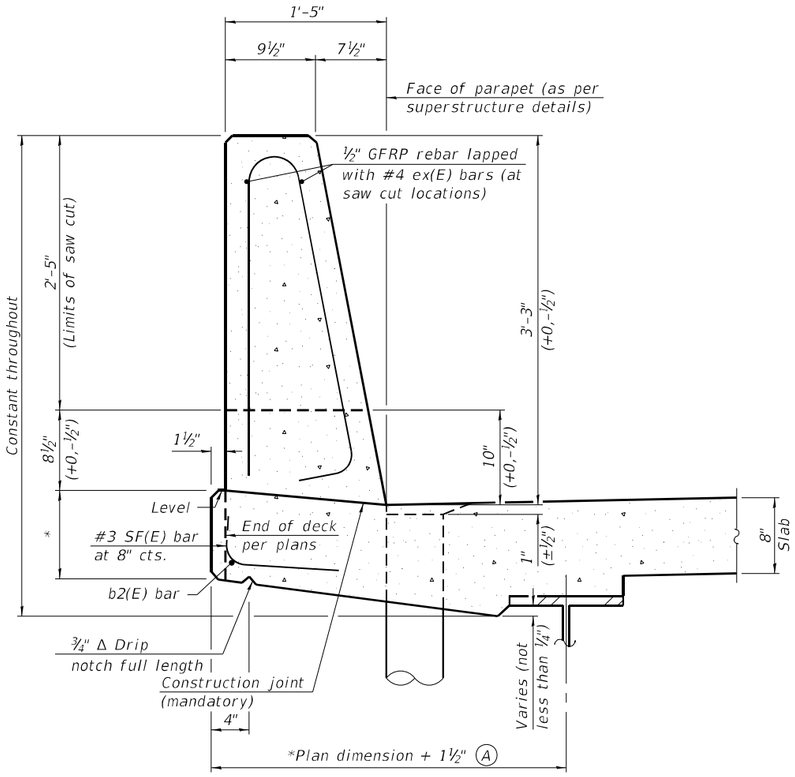
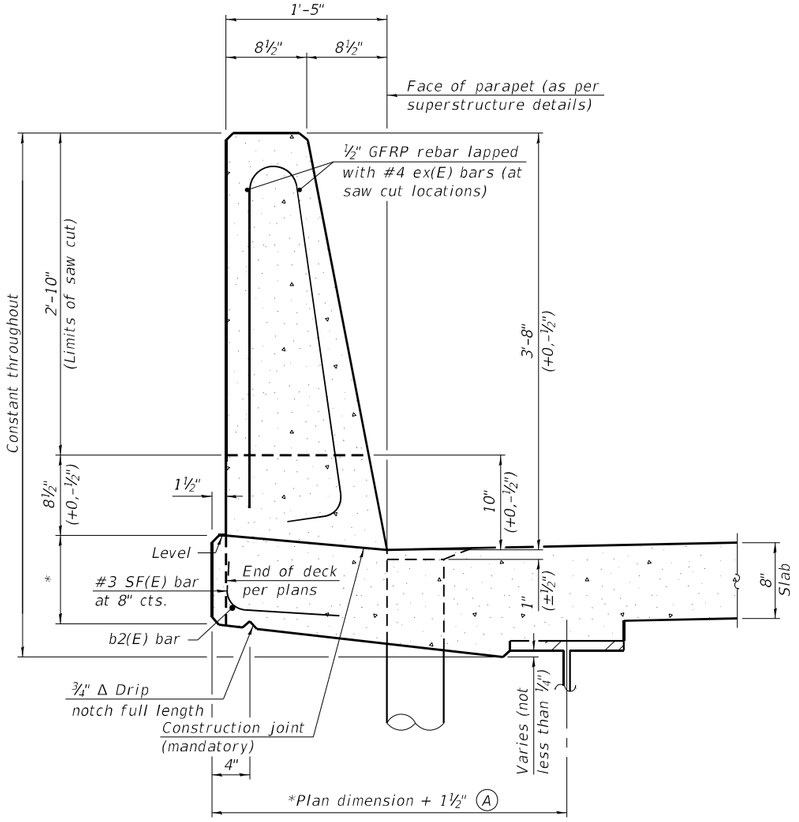


39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)



44" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.

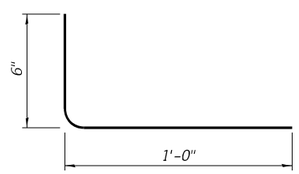
Notes:

All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.

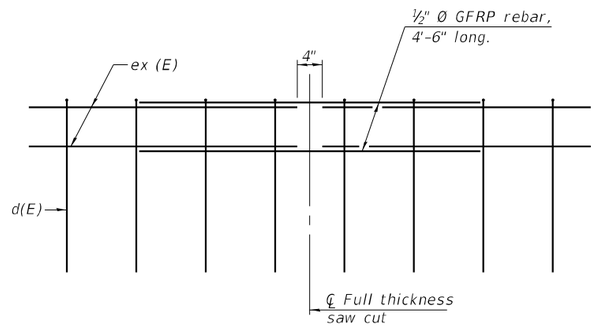
Place full depth aluminum sheets as shown on superstructure details.

Replace all cork joint filler locations with a full thickness saw cut.

Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

SFP 39-44 1-1-2020

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME=	DESIGNED - CZ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 049-0097
		CHECKED - CL	REVISED -		
	PLOT SCALE=	DRAWN - AJF	REVISED -		SHEET 18 OF 28 SHEETS
	PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	88
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

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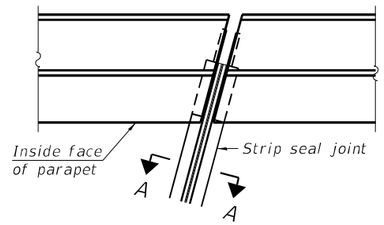
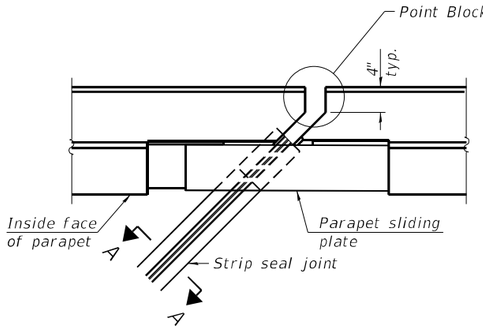
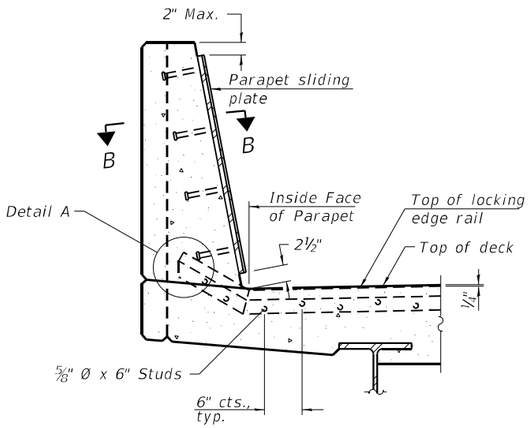


FOR SKEWS ≤ 30°



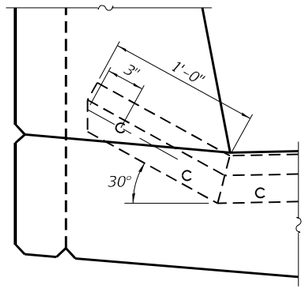
FOR SKEWS > 30°

PLAN AT PARAPET

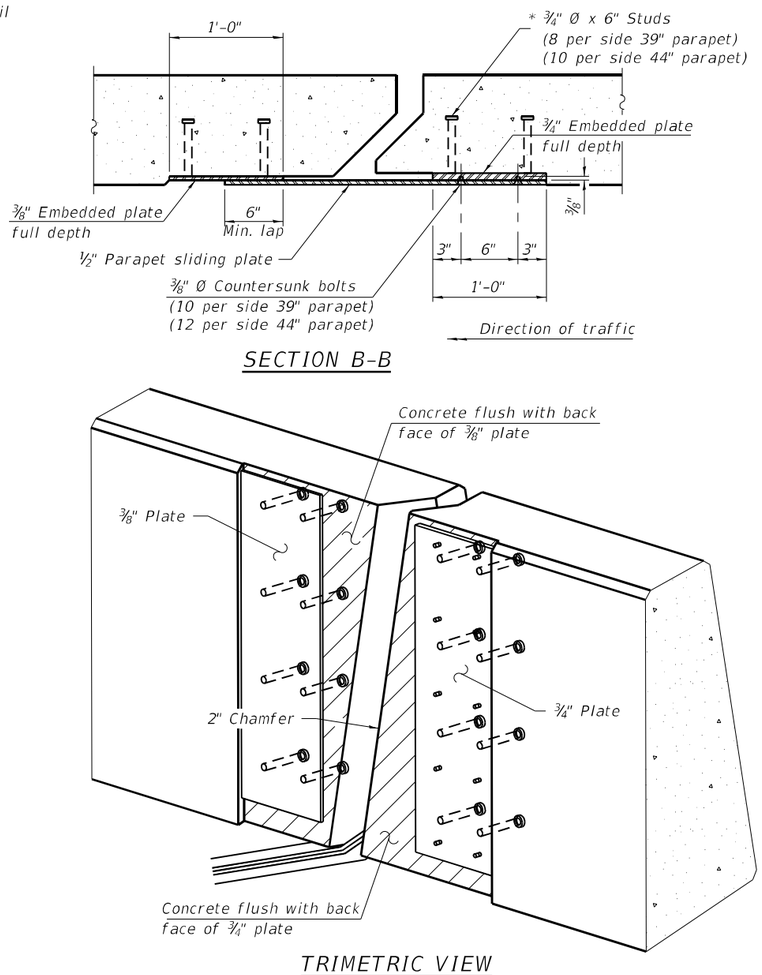


SECTION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



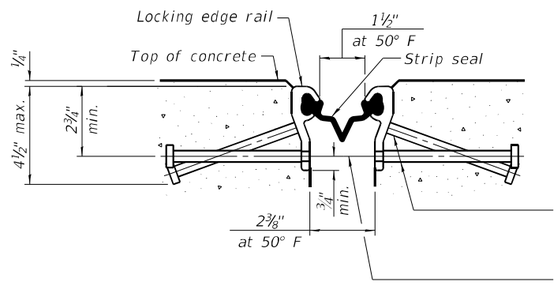
DETAIL A



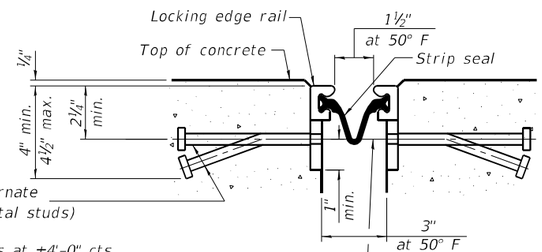
TRIMETRIC VIEW

(Showing embedded plates only)

SECTION B-B



SHOWING ROLLED RAIL JOINT



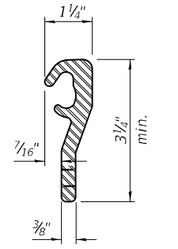
SHOWING WELDED RAIL JOINT

* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

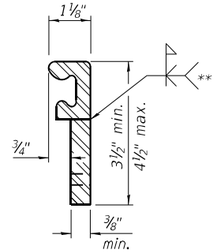
3/8" ϕ threaded rods in 7/16" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



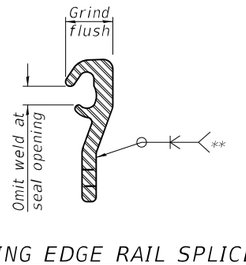
ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	176

EJ-SS

1-1-2020

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME=	DESIGNED - CZ	REVISED -	
	CHECKED - CL	REVISED -	
PLOT SCALE=	DRAWN - AJF	REVISED -	
PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 049-0097
SHEET 19 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	89
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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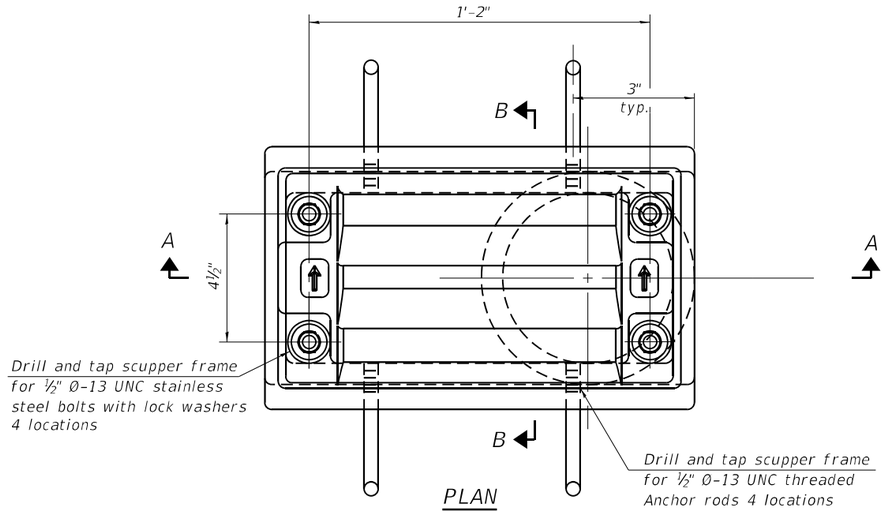
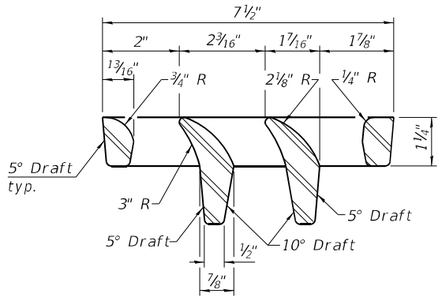
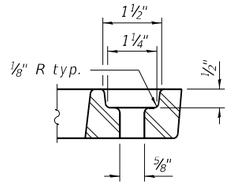


PLAN



VANE GRATE DETAIL



GRATE BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

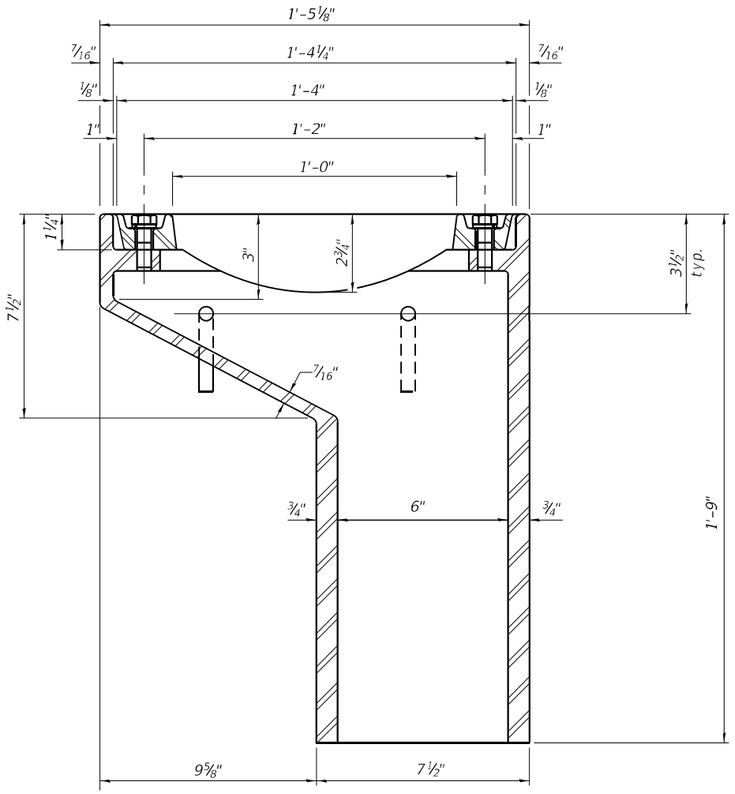
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

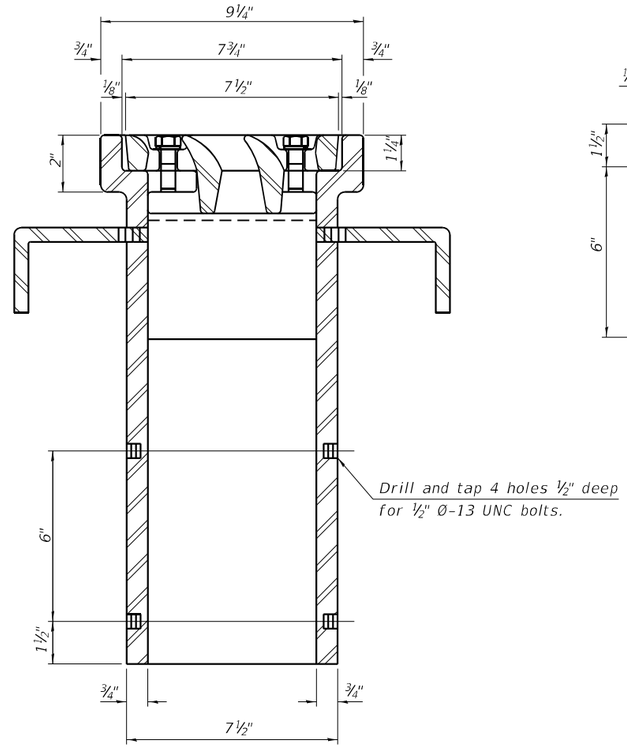
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.

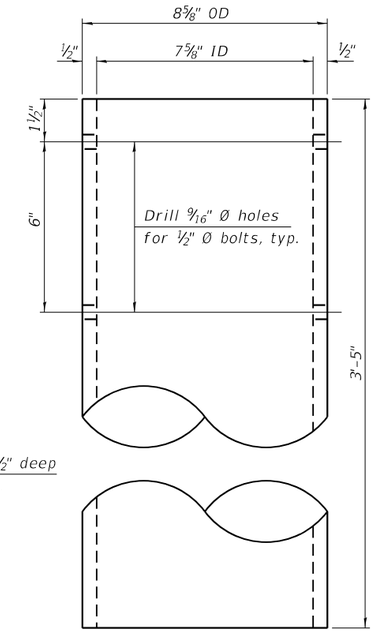


SECTION A-A

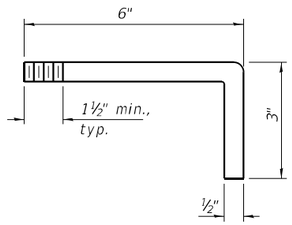
See sheet 13 of 28 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR ROD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	7

DS-11 1-1-2020

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME=	DESIGNED - CZ	REVISED -
		CHECKED - CL	REVISED -
	PLOT SCALE=	DRAWN - AJF	REVISED -
	PLOT DATE = 3/24/2022	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER DS-11
STRUCTURE NO. 049-0097
SHEET 20 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	90
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
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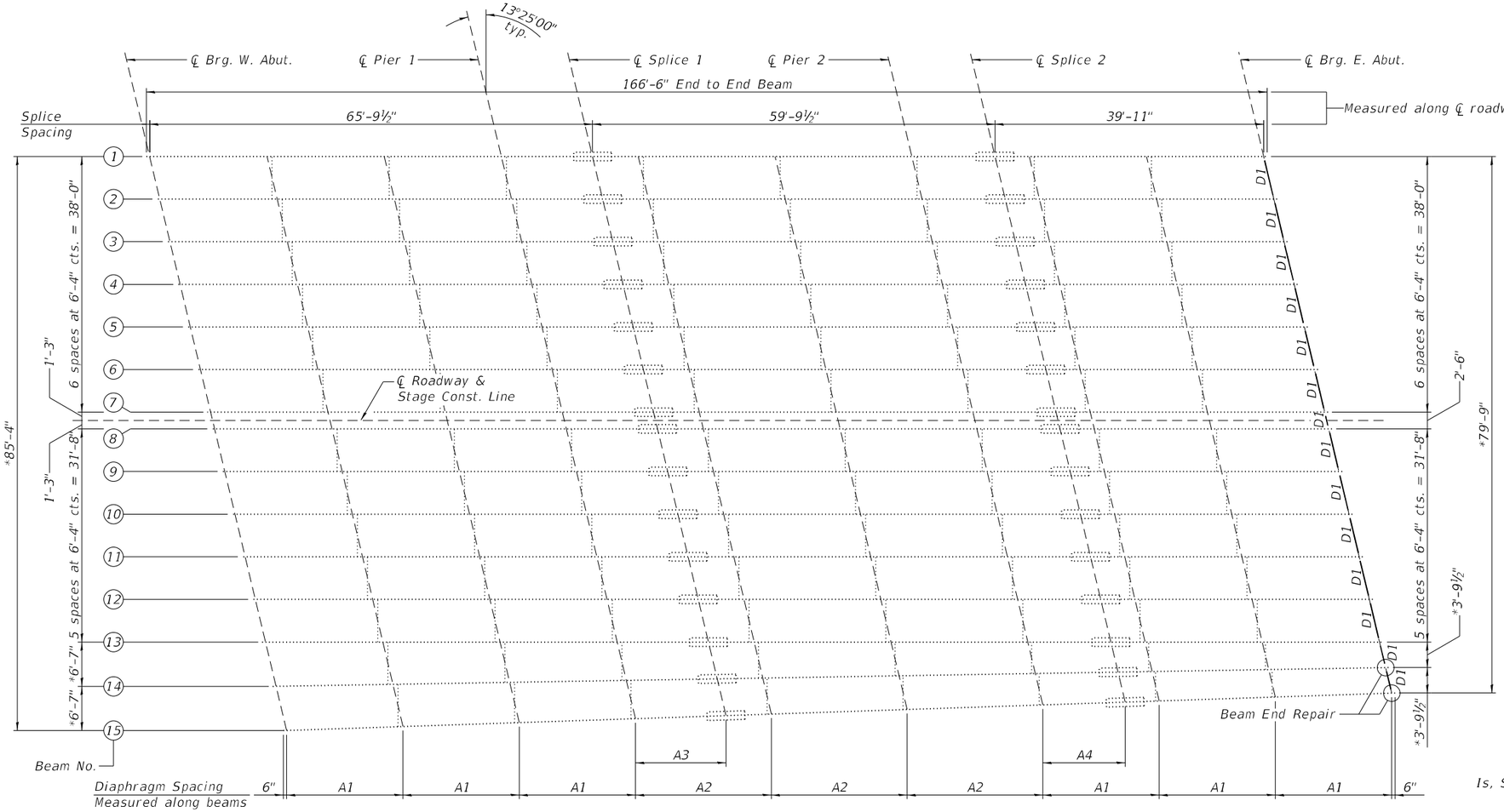
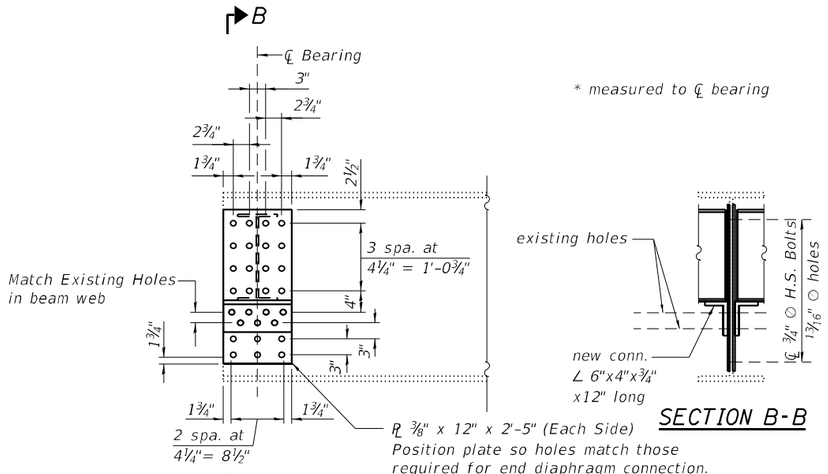


FRAMING PLAN

EXISTING INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Piers	0.5 Sp. 2
Is	(in^4)	6710	6710	6710
Ic(n)	(in^4)	18942	9261	18942
Ic(3n)	(in^4)	13926	9261	13926
Ss	(in^3)	405	405	405
Sc(n)	(in^3)	613	473	613
Sc(3n)	(in^3)	554	473	554
℘	(k/')	0.793	0.793	0.793
M℘	('k)	158	255	114
s℘	(k/')	0.492	0.492	0.492
Ms℘	('k)	98	158	71
M℄	('k)	308	240	294
MI	('k)	87	66	79
5/3 [M℄ + I]	('k)	658	509	622
Ma	('k)	1188	1199	1049
* Mu	('k)	–	–	–
fs℘ non-comp	(ksi)	4.67	7.54	3.37
fs℘ (comp)	(ksi)	2.12	4.01	1.53
fs 5/3 [M℄ + M$_I$]	(ksi)	12.87	12.92	12.18
fs (Overload)	(ksi)	19.66	24.47	17.08
** fs (Total)	(ksi)	25.56	31.81	22.20
VR	(k)	34.8	51.3	37.2

* Compact section
** Braced non-compact and partially braced section.

EXISTING INTERIOR BEAM REACTION TABLE			
		Abuts.	Piers
R℘	(k)	26.4	80.7
R℄	(k)	32.5	39.7
R$_I$	(k)	9.2	8.3
R$_{Total}$	(k)	68.1	128.7



* measured to ℄ bearing

SECTION B-B

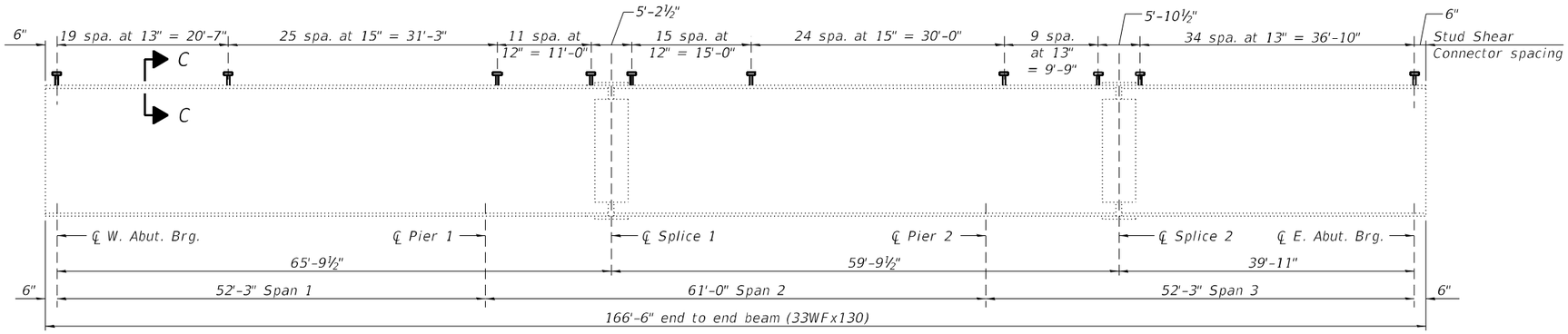
BEAM END REPAIRS
(East end of Beams 14 & 15)

DIMENSION TABLE

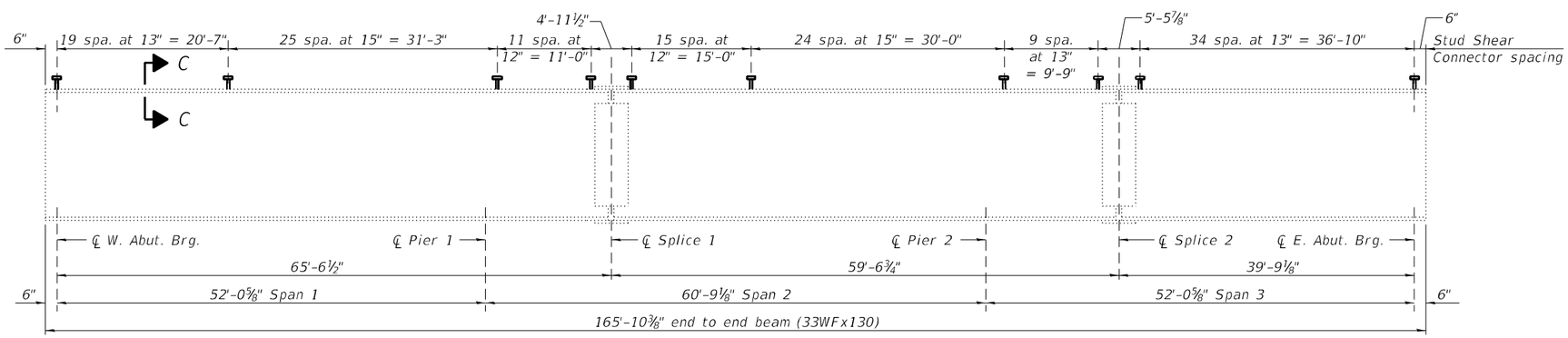
Location	A1	A2	A3	A4
Beams 1-13	17'-5"	20'-4"	13'-6½"	12'-4"
Beam 14	17'-4¼"	20'-3"	13'-5⅞"	12'-3⅜"
Beam 15	17'-3½"	20'-2¼"	13'-5¼"	12'-2⅞"

Notes:
Existing end diaphragms at East abutment shall be removed and replaced.
See sheet 14 of 28 for details of Diaphragm D1.
See sheet 22 of 28 for Beam Elevation and Shear Stud Details.

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads ($in.^4$ and $in.^3$).
Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads ($in.^4$ and $in.^3$).
Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
℘: Un-factored non-composite dead load (kips/ft.).
M℘: Un-factored moment due to non-composite dead load (kip-ft.).
s℘: Un-factored long-term composite (superimposed) dead load (kips/ft.)
Ms℘: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
M℄: Un-factored live load moment (kip-ft.).
MI: Un-factored moment due to impact (kip-ft.).
Ma: Factored design moment (kip-ft.).
$1.3\ [M℘ + Ms℘ + \frac{5}{3}(M℄ + MI)]$
Mu: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
fs (Overload): Sum of stresses as computed from the moments below (ksi).
$M℘ + Ms℘ + \frac{5}{3}(M℄ + MI)$
fs (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M℘ + Ms℘ + \frac{5}{3}(M℄ + MI)]$
VR: Maximum℄ + impact shear range within the composite portion of the span for stud shear connector design (kips).



EXISTING BEAM ELEVATION (BEAMS 1 THRU 13)



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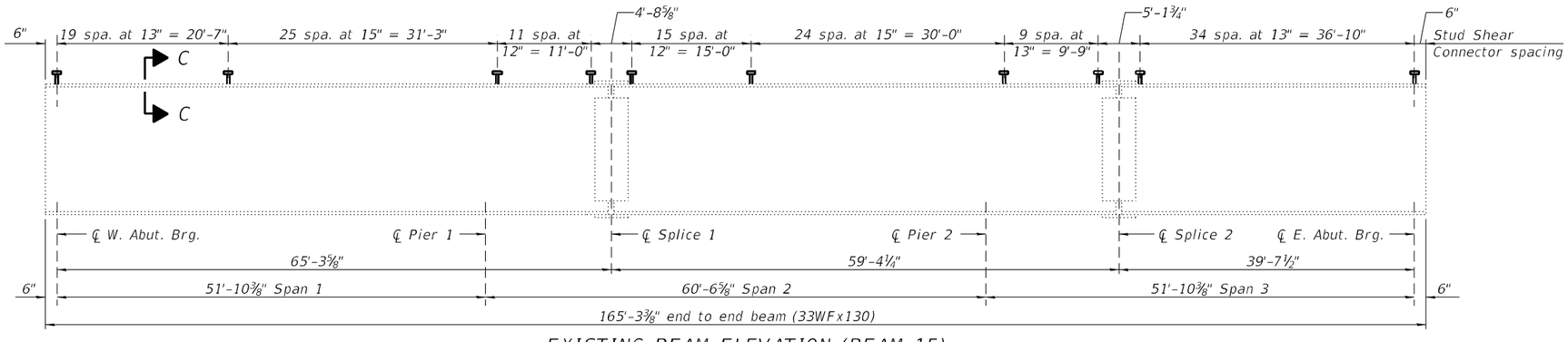

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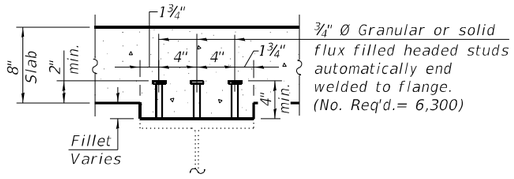


SECTION C-C

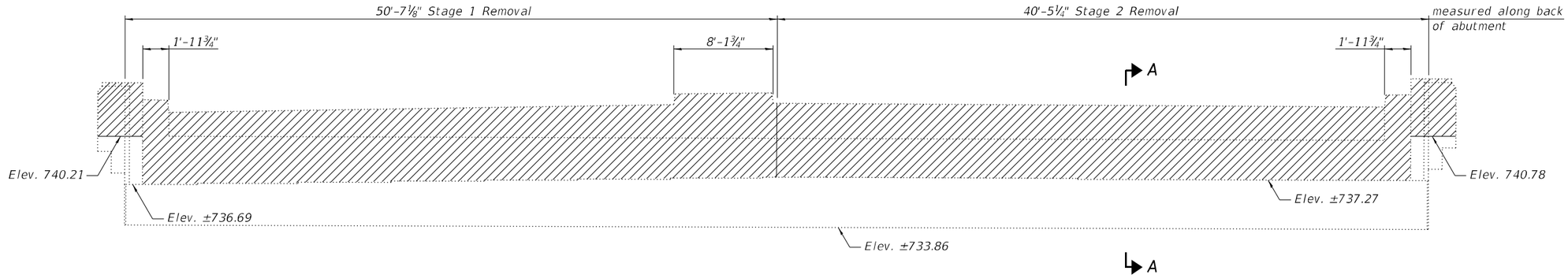
(Fillet Depth < 6")

See detail on sheet 13 of 28 for when fillet heights exceed 6 inches.

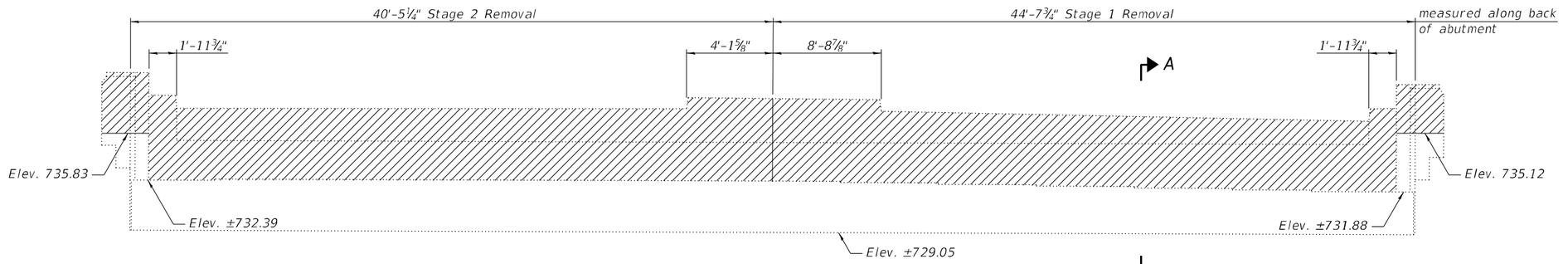
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	3,160
Stud Shear Connectors	Each	6,300
Structural Steel Removal	Pound	3,430
Structural Steel Repair	Pound	210

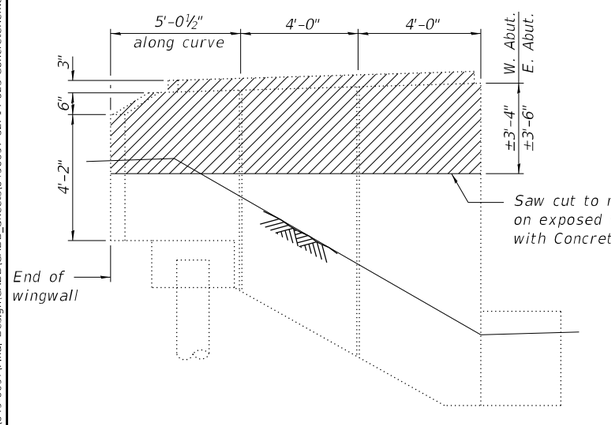
Notes:
Cost of end diaphragms included with Furnishing and Erecting Structural Steel.
Cost of beam repairs included with Structural Steel Repair.



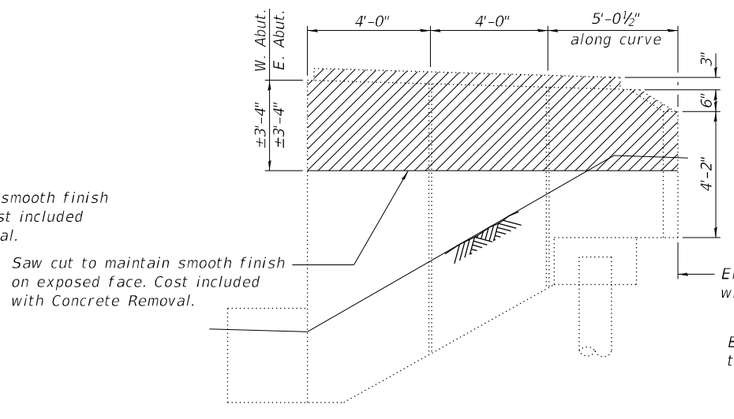
WEST ABUTMENT ELEVATION
(Looking West)



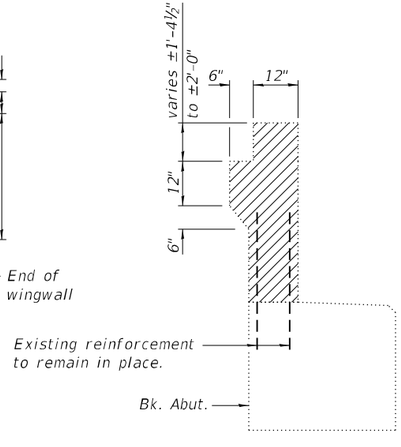
EAST ABUTMENT ELEVATION
(Looking East)



SOUTH WINGWALL



NORTH WINGWALL



SECTION A-A

Notes:

Existing reinforcement bars extending into concrete removal areas shall be cleaned, straightened and incorporated into new concrete, in accordance with IDOT Standard Specifications Article 501.03. Cost included in "Concrete Removal".

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system, in accordance with IDOT Standard Specifications Article 501.03. Cost included in "Concrete Removal".

See Roadway plans for Approach Slab Removal pay item.

Hatched areas indicate limits of Concrete Removal.

Seal exposed rebar at top of wall with epoxy. Cost included with Concrete Removal.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	41.0

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL DETAILS
STRUCTURE NO. 049-0097
SHEET 23 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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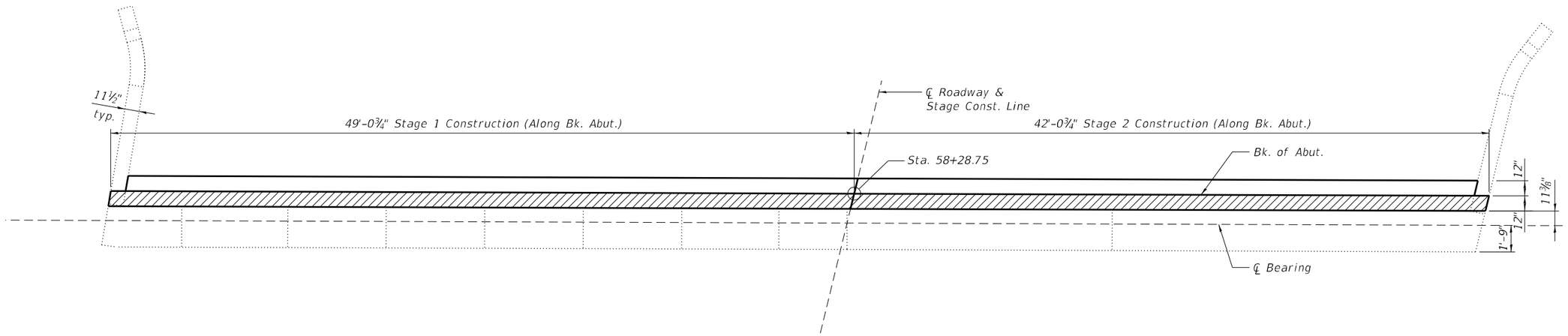
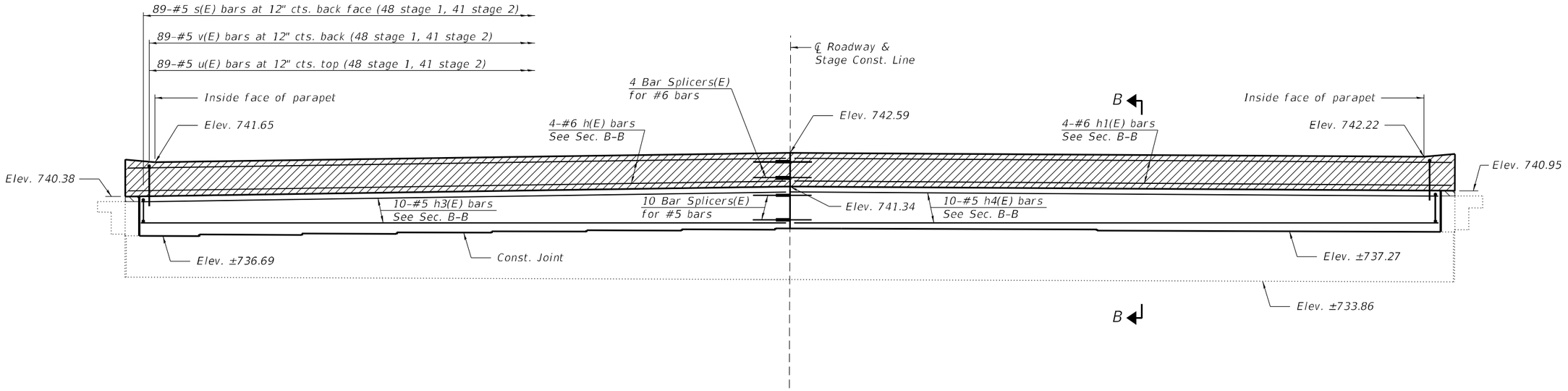
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



N

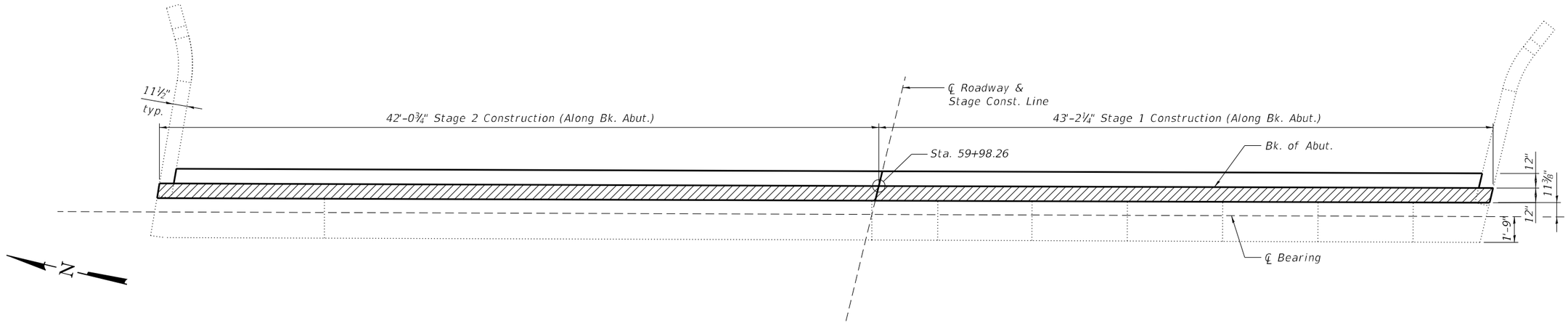
PLAN - WEST ABUTMENT

Notes:
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
See sheet 26 of 28 for Section B-B, bar bend details and Bill of Material.
Existing bearing seat elevations are based on existing plans with datum adjustment.



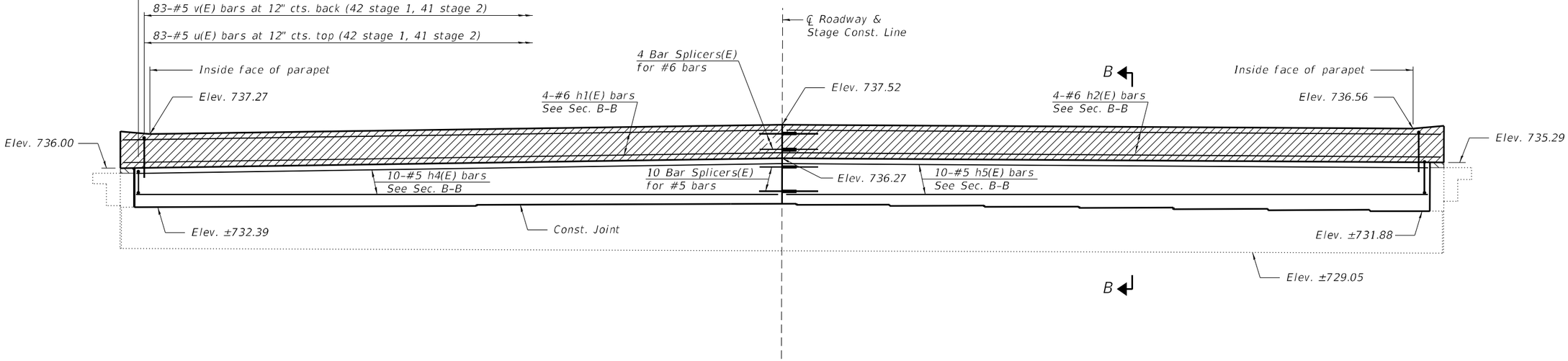
ELEVATION - WEST ABUTMENT

(Looking West)



PLAN - EAST ABUTMENT

Notes:
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
See sheet 26 of 28 for Section B-B, bar bend details and Bill of Material.
Existing bearing seat elevations are based on existing plans with datum adjustment.



ELEVATION - EAST ABUTMENT

(Looking East)

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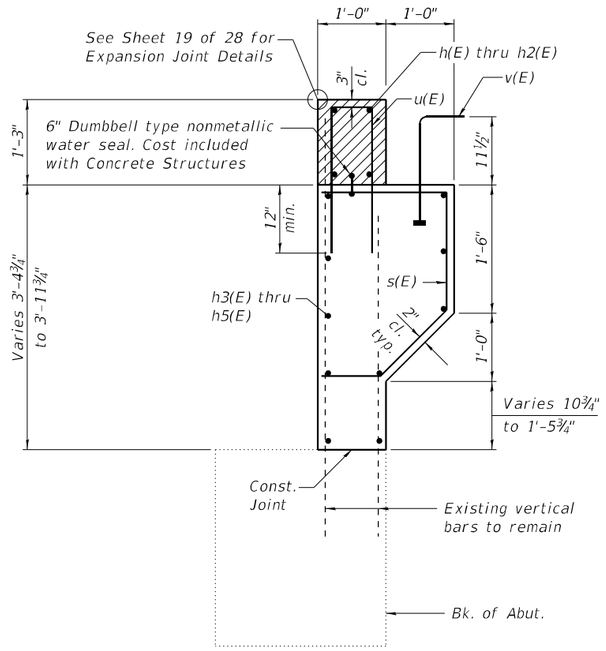
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

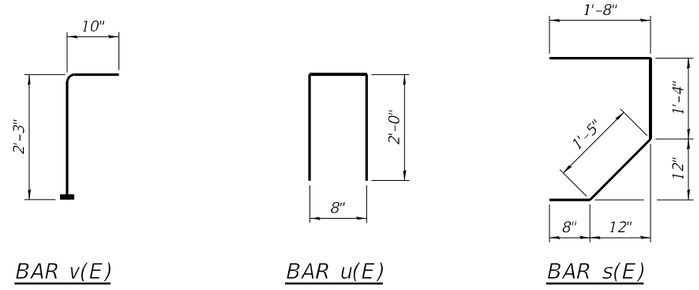
EAST ABUTMENT DETAILS
STRUCTURE NO. 049-0097
SHEET 25 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	95
		CONTRACT NO. 62P14		
	ILLINOIS	FED. AID PROJECT		



SECTION B-B

(Dimensions at right angles)



BAR v(E)
(Headed)

BAR u(E)

BAR s(E)

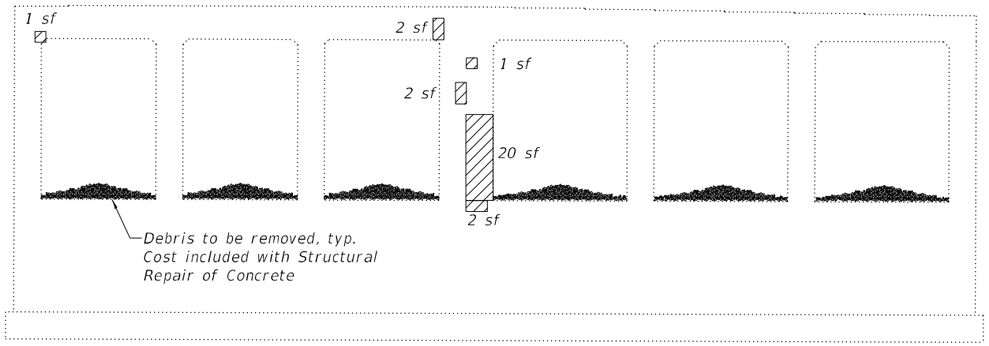
Note:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

WEST ABUTMENT BILL OF MATERIAL

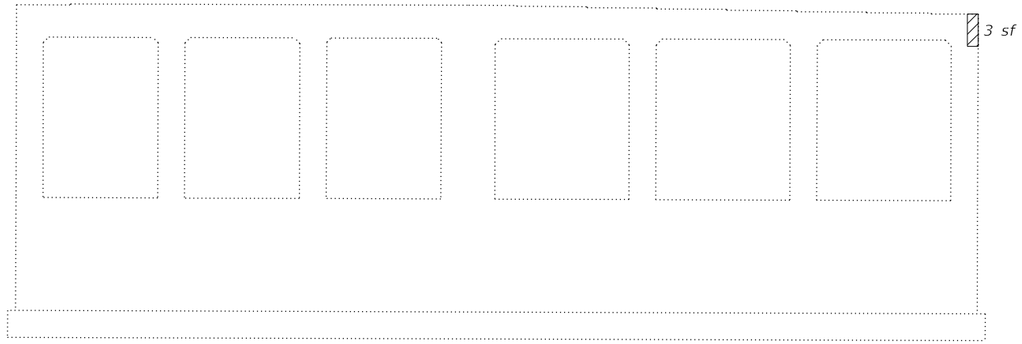
Bar	No.	Size	Length	Shape
h(E)	4	#6	48'-9"	———
h1(E)	4	#6	41'-9"	———
h3(E)	10	#5	47'-9"	———
h4(E)	10	#5	40'-9"	———
s(E)	89	#5	5'-1"	⅂
u(E)	89	#5	4'-8"	∩
v(E)	89	#5	3'-1"	⌈
Structure Excavation		Cu. Yd.	110	
Concrete Structures		Cu. Yd.	19.7	
Concrete Superstructure		Cu. Yd.	4.1	
Reinforcement Bars, Epoxy Coated		Pound	2,660	
Concrete Sealer		Sq. Ft.	63	

EAST ABUTMENT BILL OF MATERIAL

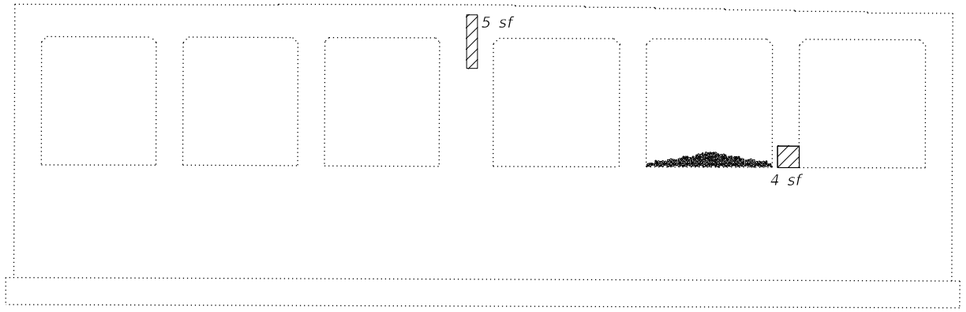
Bar	No.	Size	Length	Shape
h1(E)	4	#6	41'-9"	———
h2(E)	4	#6	42'-11"	———
h4(E)	10	#5	40'-9"	———
h5(E)	10	#5	41'-11"	———
s(E)	83	#5	5'-1"	⅂
u(E)	83	#5	4'-8"	∩
v(E)	83	#5	3'-1"	⌈
Structure Excavation		Cu. Yd.	102	
Concrete Structures		Cu. Yd.	17.6	
Concrete Superstructure		Cu. Yd.	3.9	
Reinforcement Bars, Epoxy Coated		Pound	2,490	
Concrete Sealer		Sq. Ft.	58	



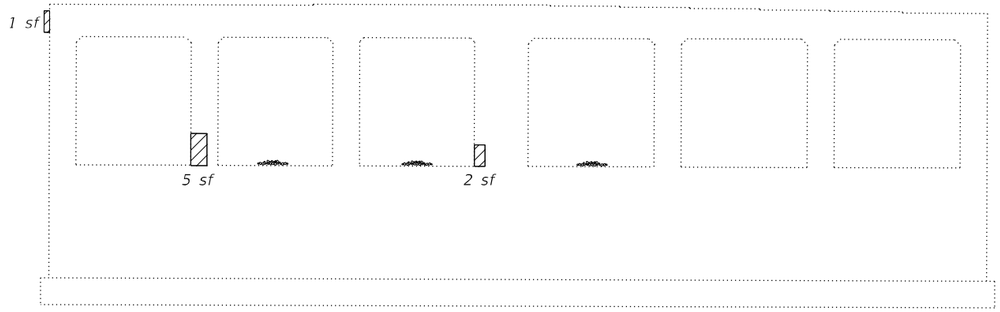
PIER 1
(Looking East)



PIER 1
(Looking West)



PIER 2
(Looking East)



PIER 2
(Looking West)

LEGEND

▨ Structural Repair of Concrete (Depth ≤ 5")

sf Square Feet

Note:
Repair of the existing piers shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	48

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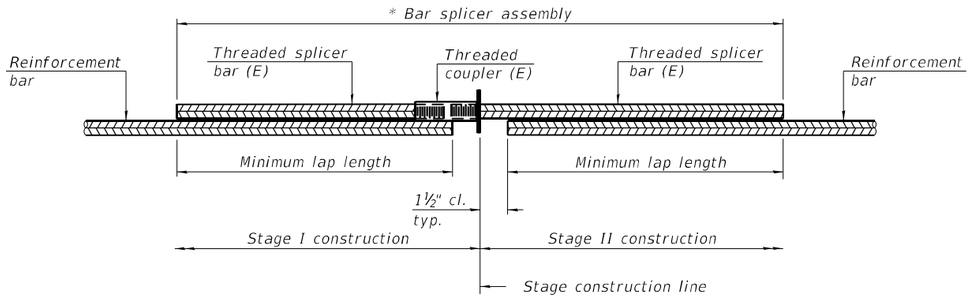
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER REPAIR DETAILS
STRUCTURE NO. 049-0097
SHEET 27 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	97
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



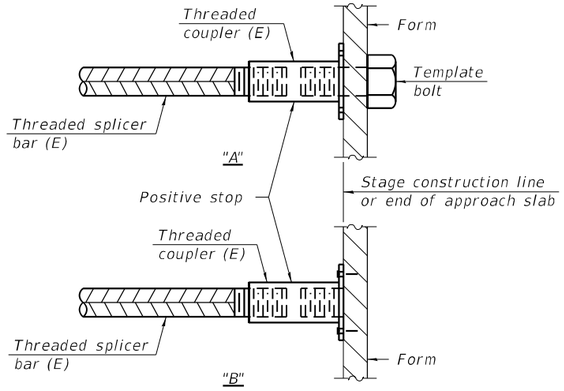
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

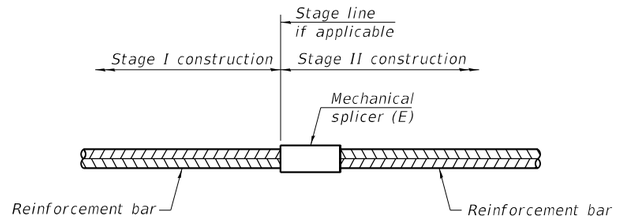
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck Slab	#5	521	3'-6"
Approach Slab	#5	168	3'-4"
Approach Slab	#8	116	4'-9"
Abutments	#5	20	3'-6"
Abutments	#6	8	4'-0"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-1-2020

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DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 049-0097
SHEET 28 OF 28 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	10(VB)BR(89)	LAKE	116	98
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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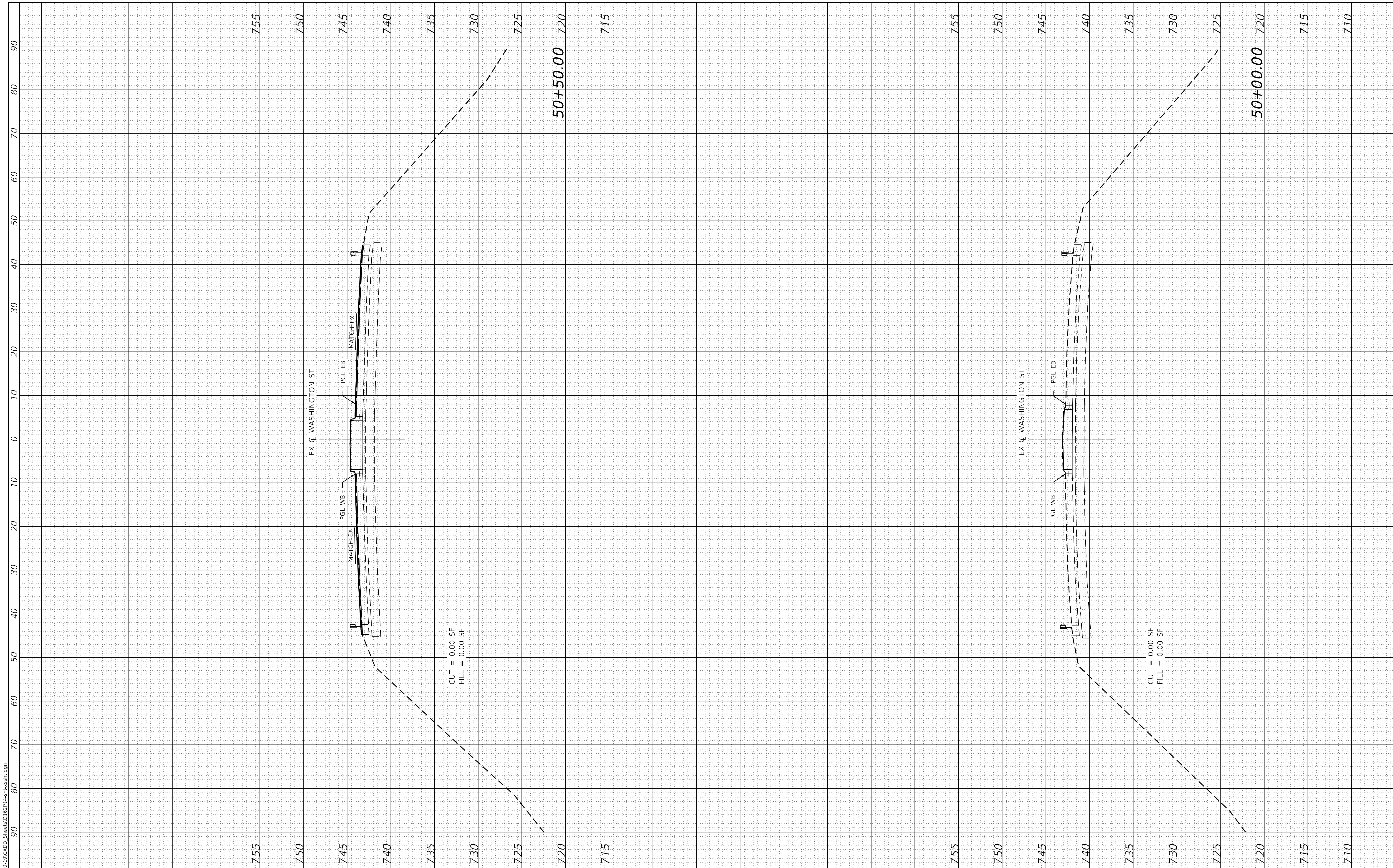

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F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
CROSS SECTIONS

SCALE: | SHEET 1 OF 5 SHEETS | STA. 50+00.00 TO STA. 50+50.00

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		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

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	AREAS		
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	AREAS		
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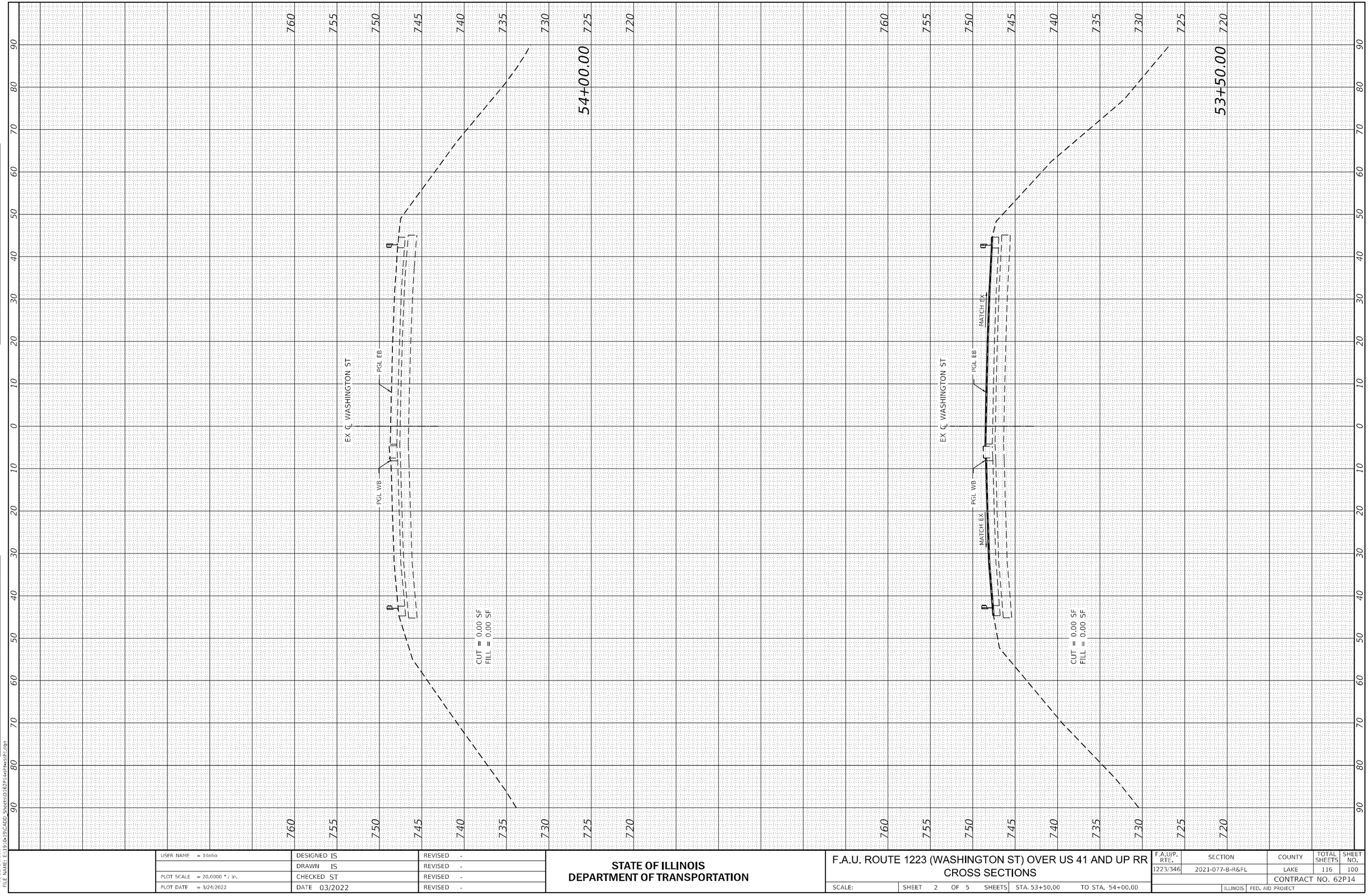

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PLOT DATE = 3/24/2022	DATE 03/2022	REVISED -	

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F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
CROSS SECTIONS

SCALE: | SHEET 2 OF 5 SHEETS | STA. 53+50.00 | TO STA. 54+00.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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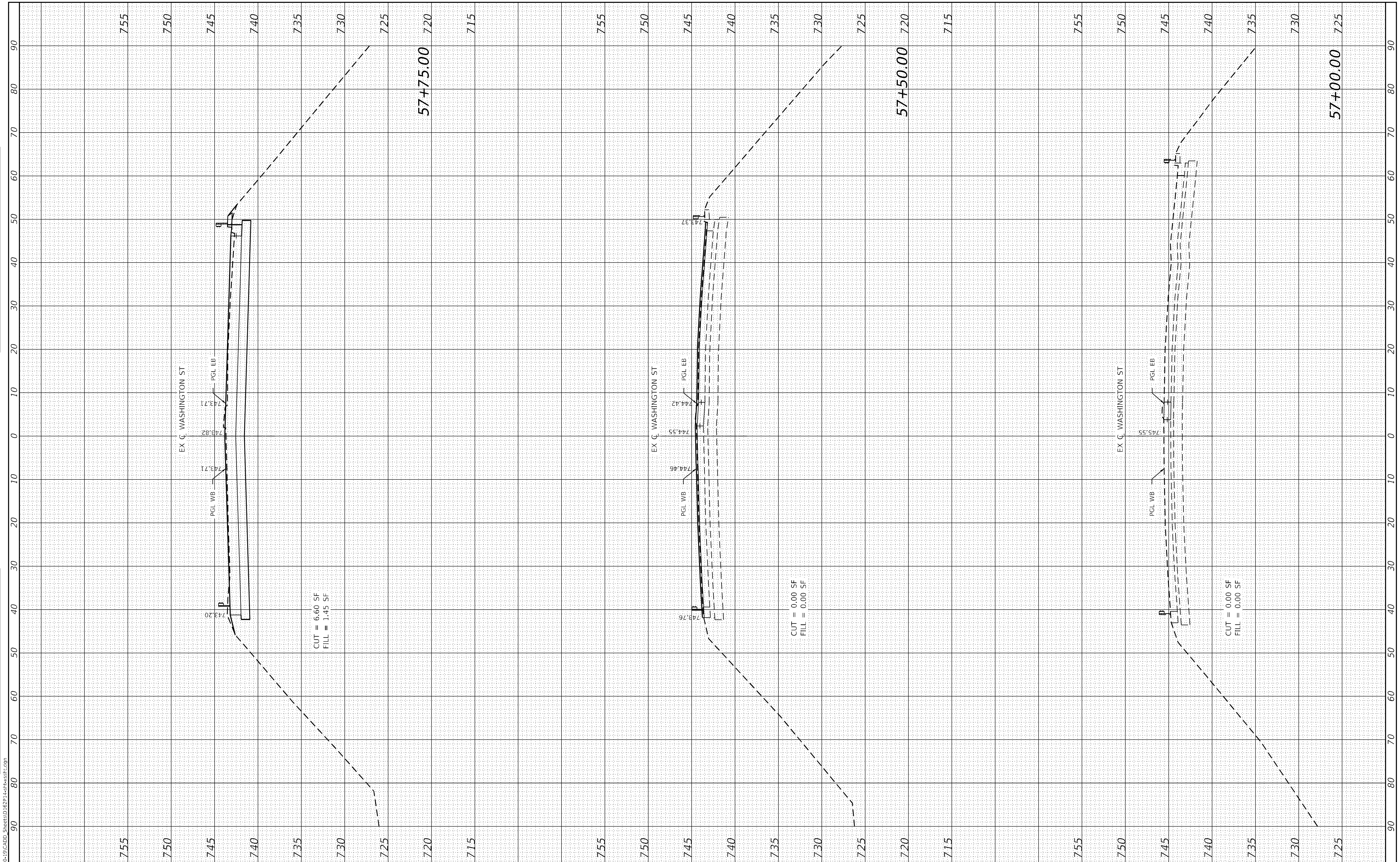
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



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F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
CROSS SECTIONS

SCALE: | SHEET 3 OF 5 SHEETS | STA. 57+00.00 TO STA. 57+75.00

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	101

CONTRACT NO. 62P14

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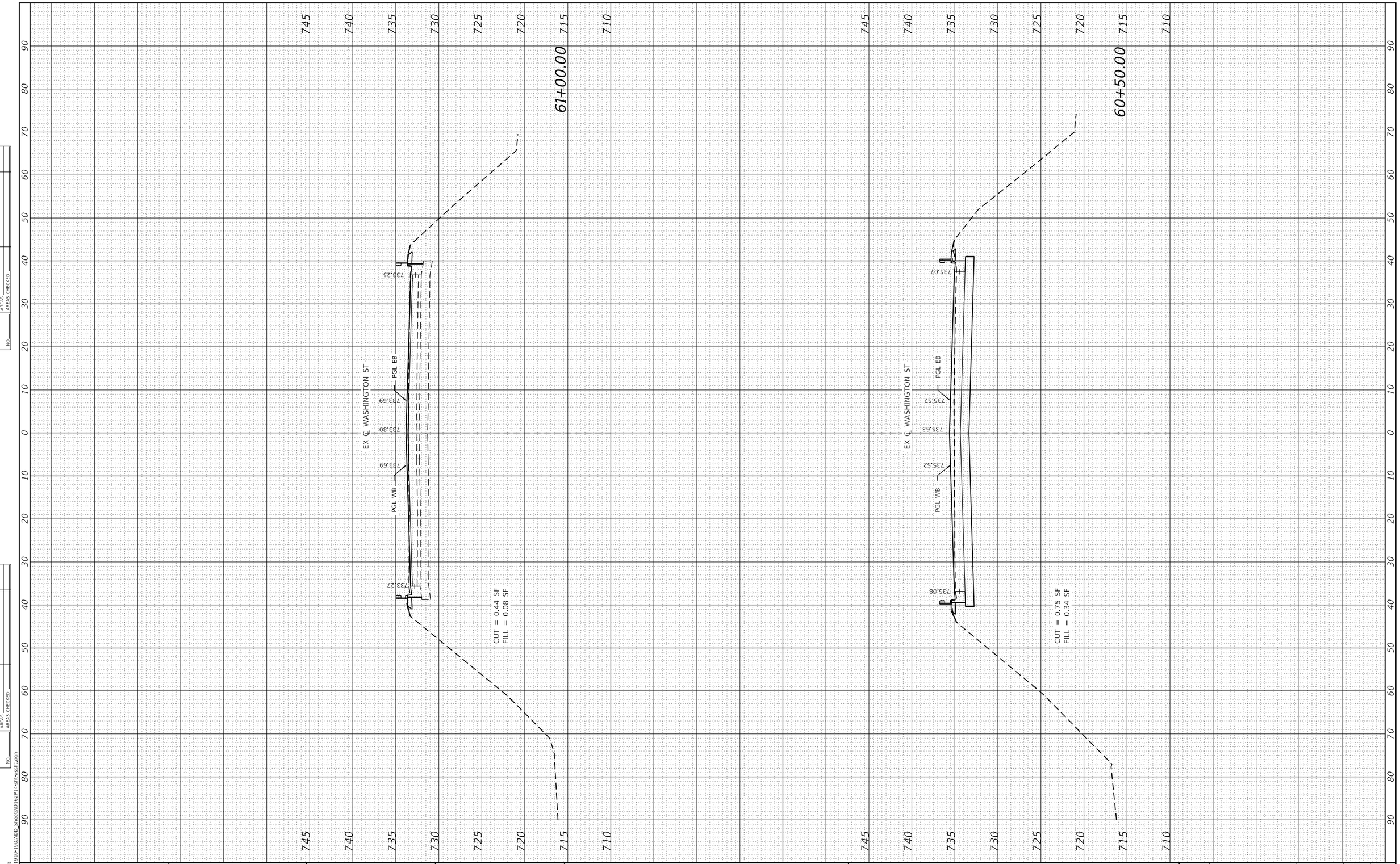

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F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
CROSS SECTIONS

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F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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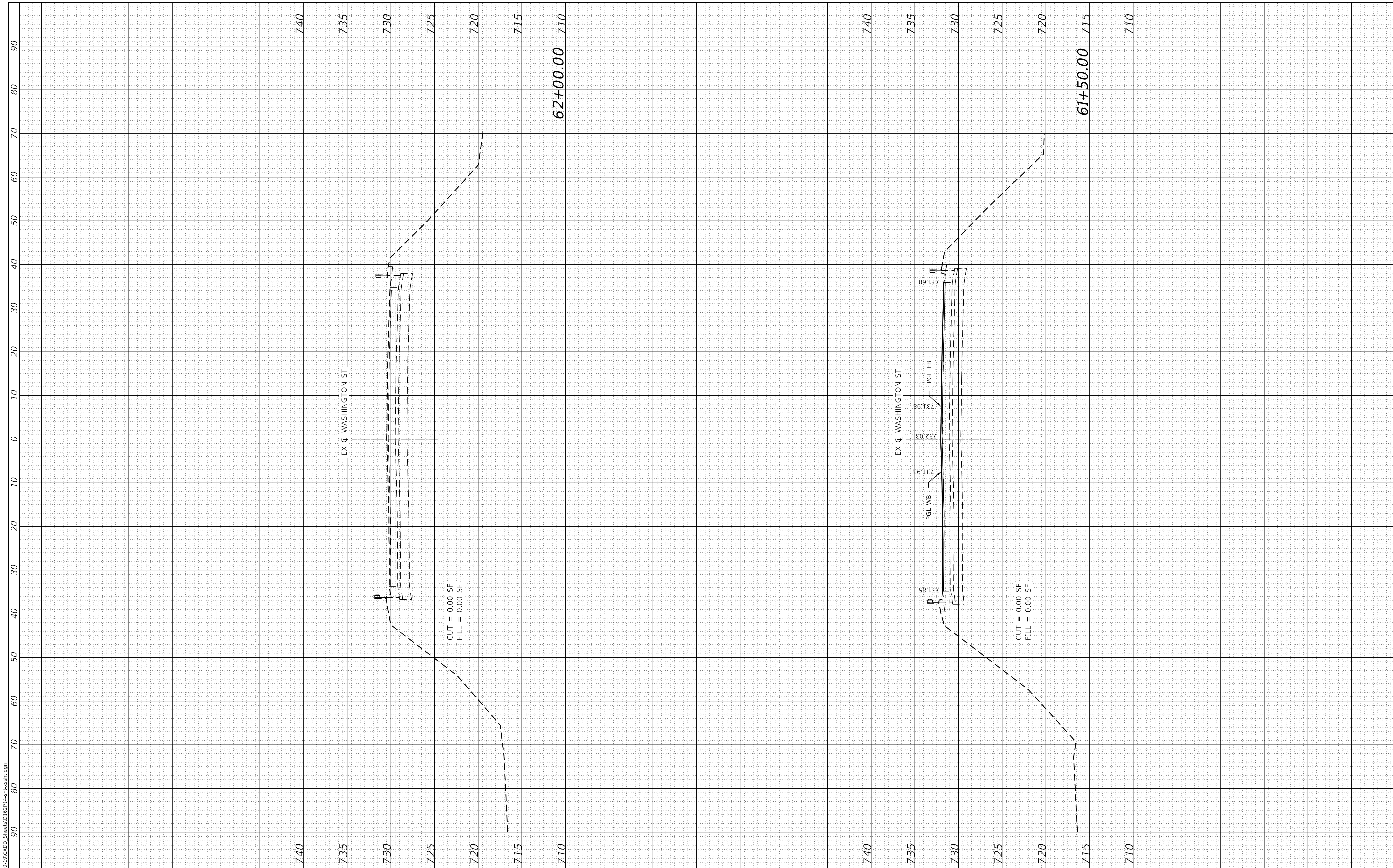
		CONTRACT NO. 62P14		
		ILLINOIS	FED. AID PROJECT	



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ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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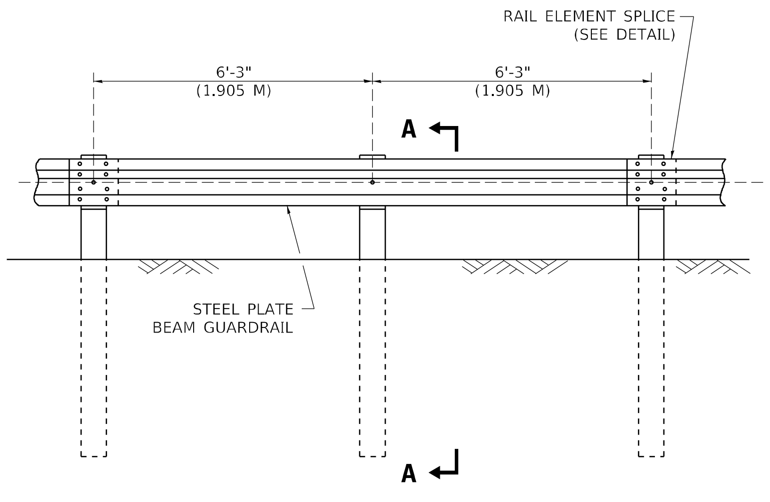
	DRAWN IS	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED ST	REVISED -
PLOT DATE = 3/24/2022	DATE 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1223 (WASHINGTON ST) OVER US 41 AND UP RR
CROSS SECTIONS

SCALE: | SHEET 5 OF 5 SHEETS | STA. 61+50.00 TO STA. 62+00.00

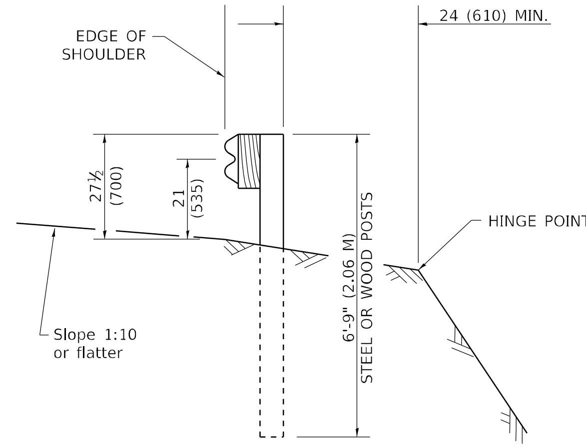
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	103
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



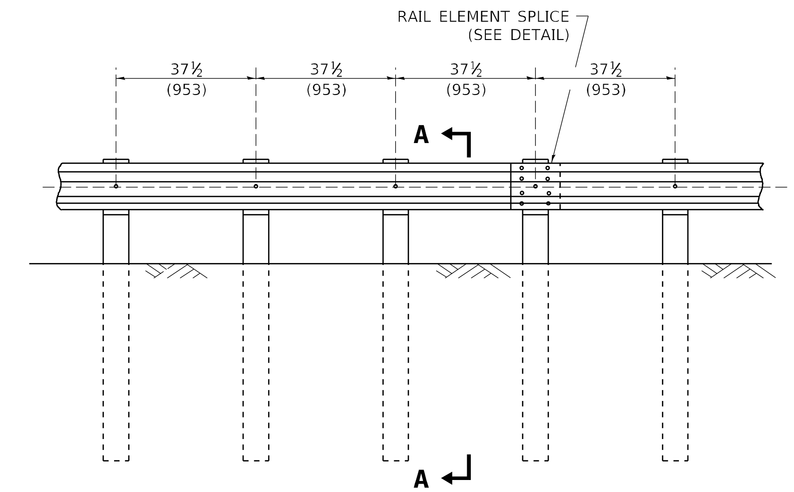
ELEVATION

TYPE A

6'-3" (1.905 M) TYPICAL POST SPACING



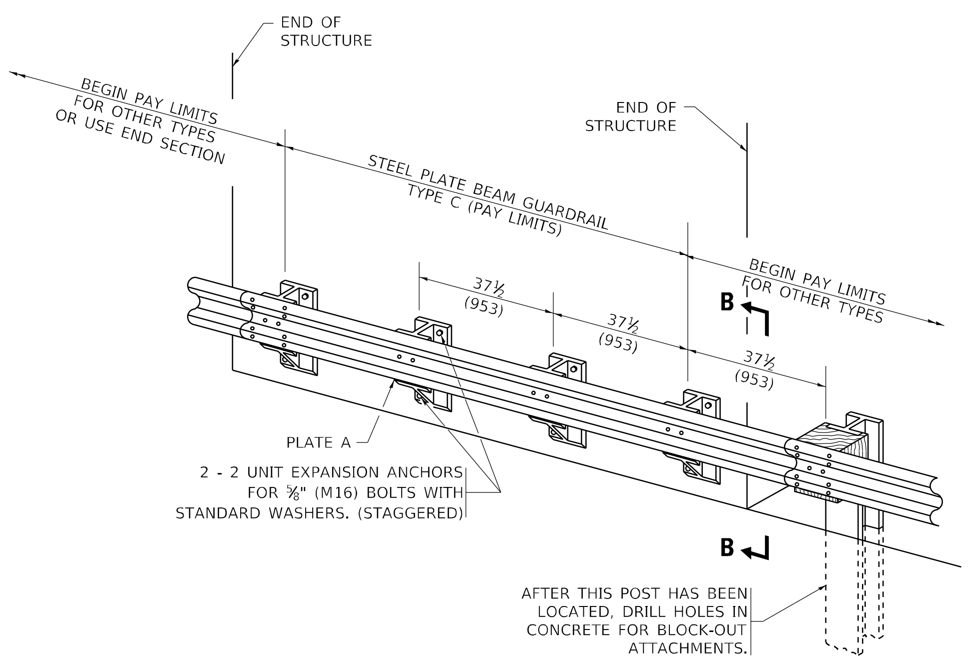
SECTION A–A



ELEVATION

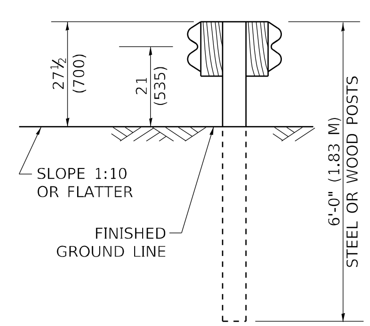
TYPE A

37½ (953) CLOSED POST SPACING

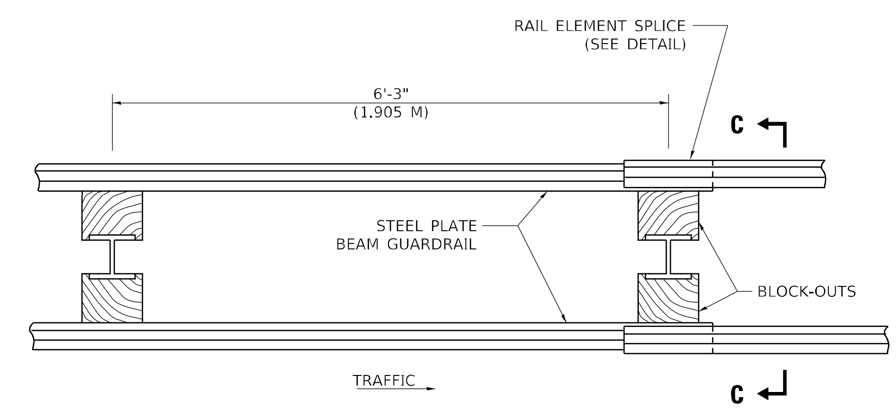


TYPE C

37½ (953) BLOCK-OUT SPACING



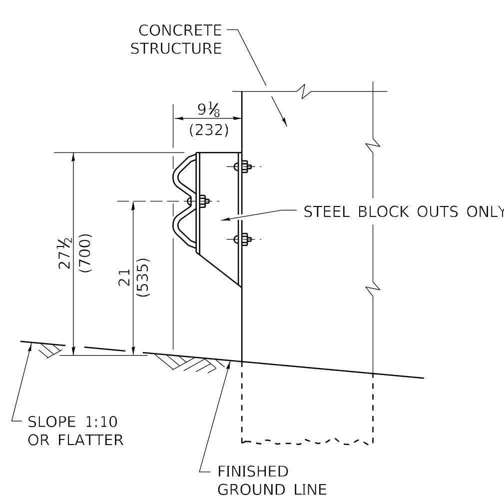
SECTION C–C



PLAN

TYPE D

DOUBLE STEEL PLATE BEAM GUARDRAIL
6'-3" (1.905 M) TYPICAL POST SPACING



SECTION B–B

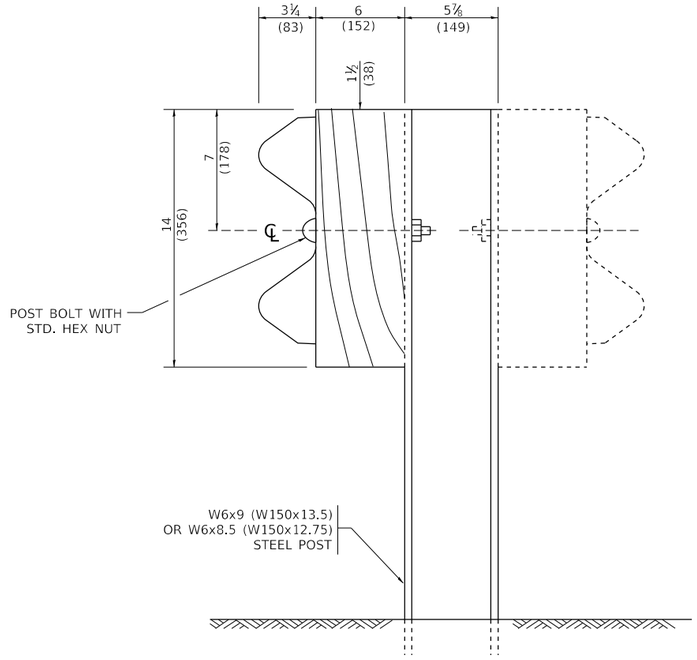
GENERAL NOTES

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

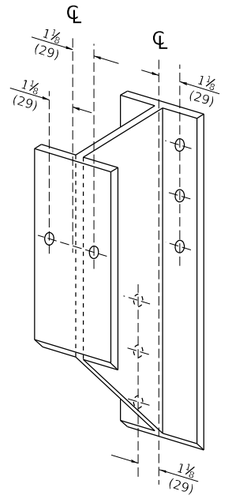
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

THE EXISTING STEEL POSTS MAY BE DRILLED TO MATCH THE BOLT PATTERN SHOWN HEREIN FOR THE WOOD BLOCK-OUT, OR A NEW STEEL POST SHALL BE PROVIDED.

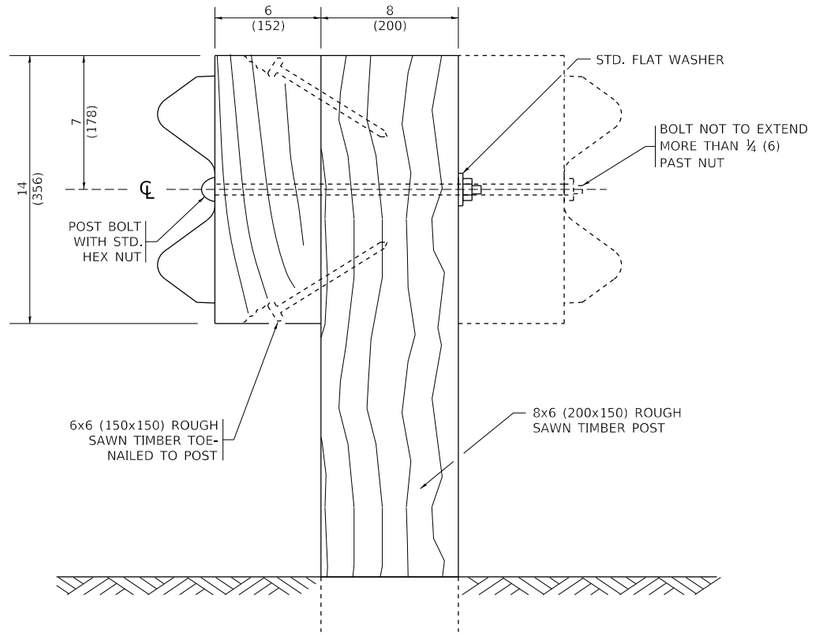
THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.



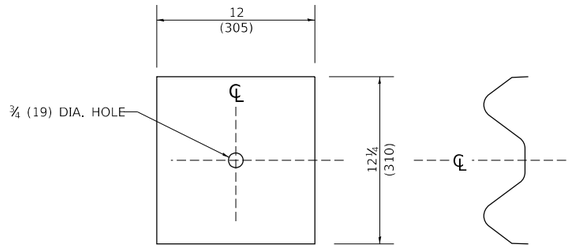
STEEL POST CONSTRUCTION



STEEL BLOCK–OUT DETAIL



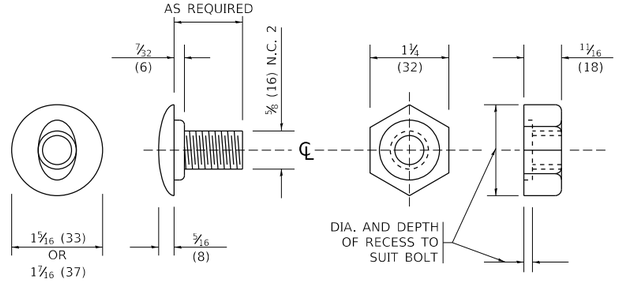
WOOD POST CONSTRUCTION



NOTE:

PLATE A SHALL BE PLACED BETWEEN RAIL ELEMENT AND BLOCK-OUT AT NON-SPLICE MOUNTING POINTS ONLY WHEN STEEL BLOCK-OUTS ARE USED.

PLATE A



POST OR SPLICE BOLT & NUT

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	DRAWN -	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/11/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL

SCALE: NONE | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A.U./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	105
	BM-21	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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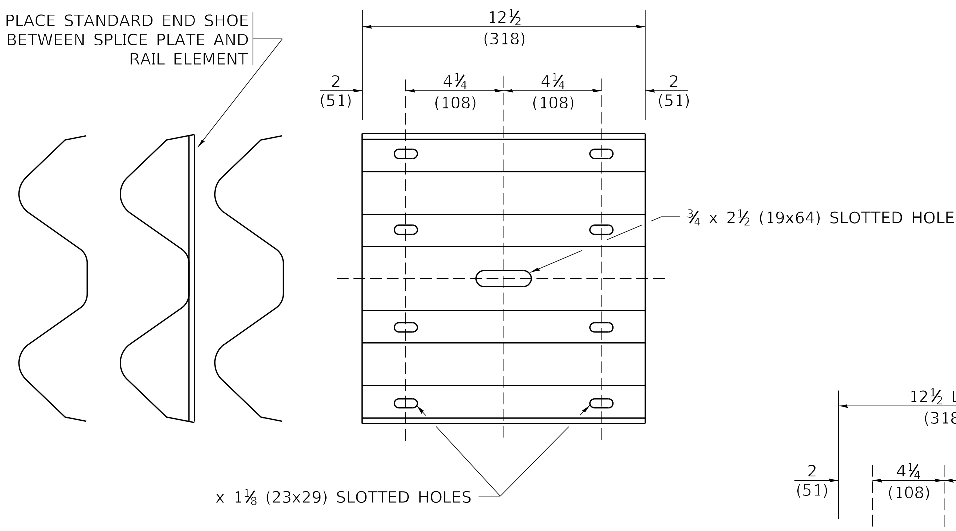
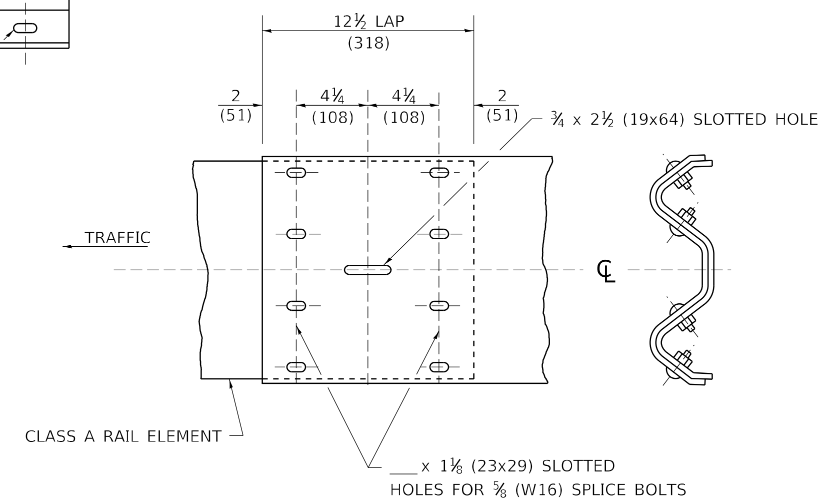
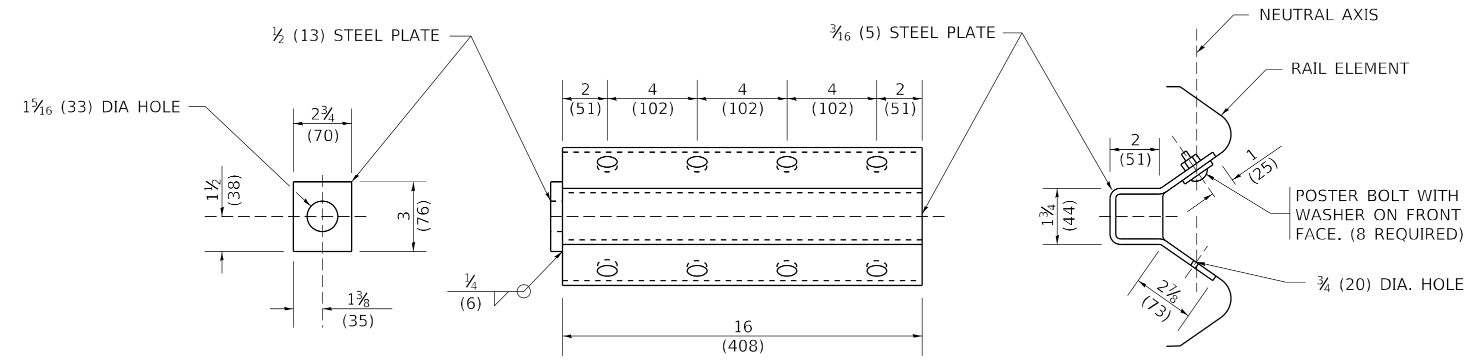


SPLICE PLATE



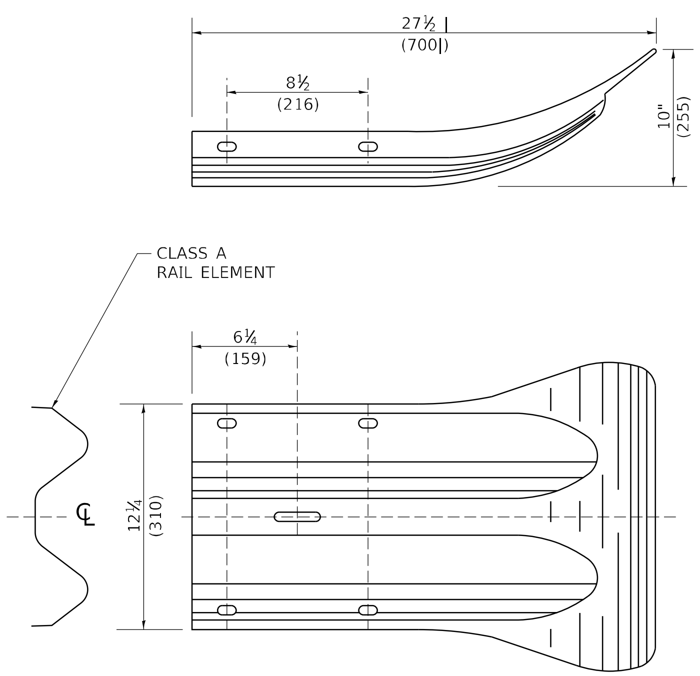
RAIL ELEMENT SPLICE



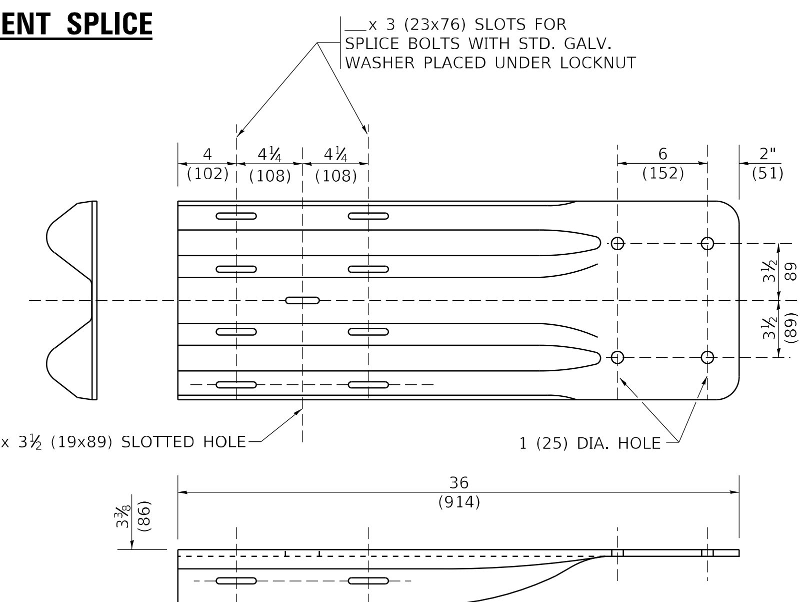
NOTE:

ANCHOR PLATE T SHALL BE USED TO ATTACH CABLE ASSEMBLY TO GUARDRAIL WHEN REQUIRED ON TRAFFIC BARRIER TERMINALS.

ANCHORE PLATE T DETAILS



END SECTION



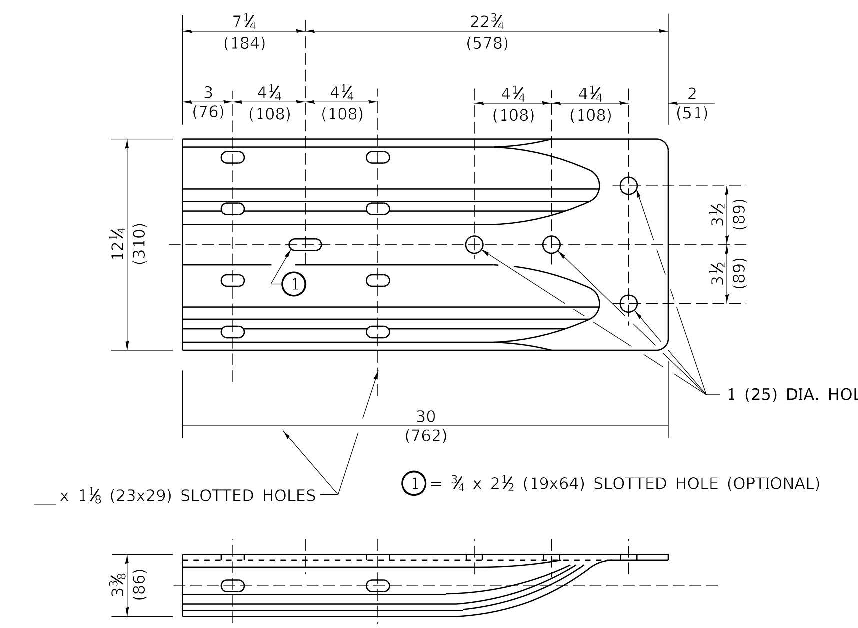
END SHOE

NOTE:

WHEN END SHOE IS ATTACHED TO A BRIDGE PARAPET WHICH HAS AN EXPANSION JOINT, THE BOLTS SHALL BE PROVIDED WITH A LOCKNUT OR DOUBLE NUT AND SHALL BE TIGHTENED ONLY TO A POINT THAT WILL ALLOW GUARDRAIL MOVEMENT.

THE STANDARD END SHOE SHALL BE ATTACHED TO THE CONCRETE WITH PRE-DRILLED OR SELF-DRILLING ANCHOR BOLTS. THE ANCHOR CONE SHALL BE SET FLUSH WITH THE SURFACE OF THE CONCRETE.

EXTERNALLY THREADED STUDS PROTRUDING FROM THE SURFACE OF THE CONCRETE WILL NOT BE PERMITTED.



ALTERNATE END SHOE

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	DRAWN -	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/11/2019	DATE -	REVISED -	

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

SCALE: NONE | SHEET 3 OF 4 SHEETS | STA. TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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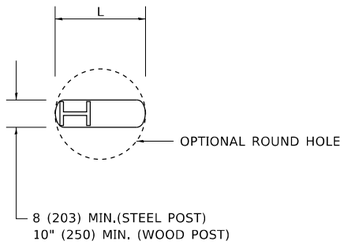
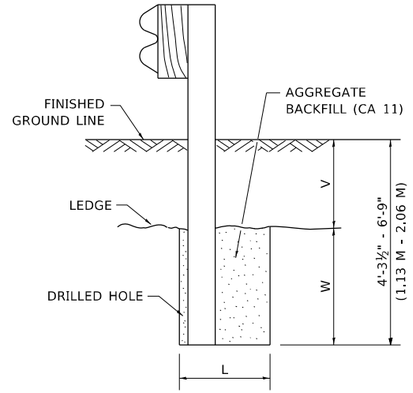
BM-21		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		



PLAN

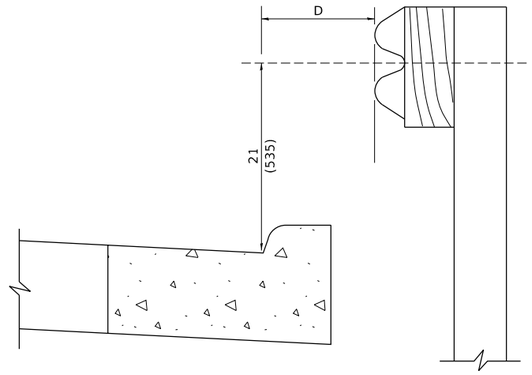


NOTE:

LEDGE LINE IS TOP OF ROCK LEDGE OR HARD SLAG FILL.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED



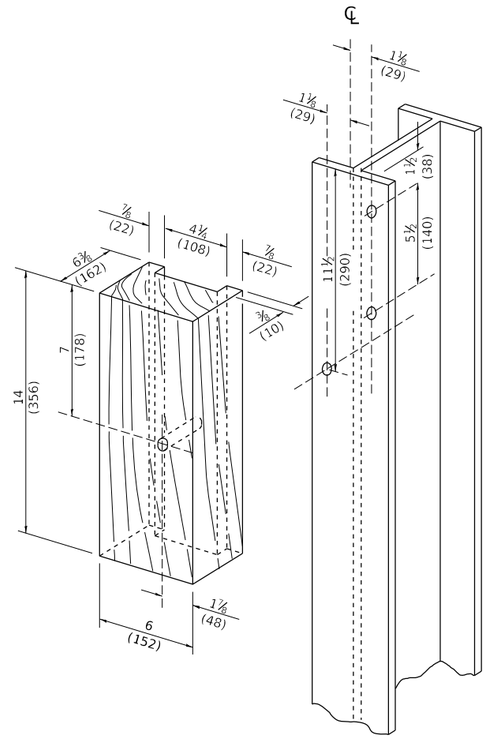
NOTE:

IF IT IS NECESSARY FOR D TO BE MORE THAN 12 (300) AND LESS THAN 10'-0" (3.0 M) TYPE M-2 (M-5) CURB AND GUTTER (STD. 606001) SHALL BE USED IN FRONT OF AND IN ADVANCE OF THE GUARDRAIL.

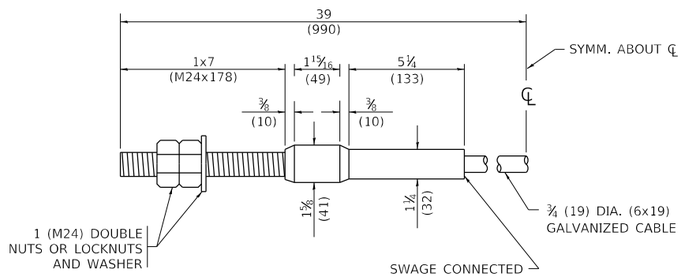
GUARDRAIL PLACED BEHIND CURB

(D = O DESIRABLE TO 12 (300) MAXIMUM)

V	W	L	
		STEEL POST	WOOD POST
0 - 18 (0 - 460)	24 (610)	21 (530)	23 (580)
>18 - 41.5 (> 460 - 825)	12 (305)	8 (203)	10 (250)
>41.5 - 53.5 (> 825 - 1.13 M)	12 - 0 (350 - 0)	8 (203)	10 (250)



WOOD BLOCK – OUT AND STEEL POST DETAILS



CABLE ASSEMBLY

(40,000 LBS (18,100 KG) MIN. BREAKING STRENGTH)
TIGHTEN TO TAUT TENSION

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	DRAWN -	REVISED -
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PLOT DATE = 3/11/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL

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

F.AU/P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	107
	BM-21	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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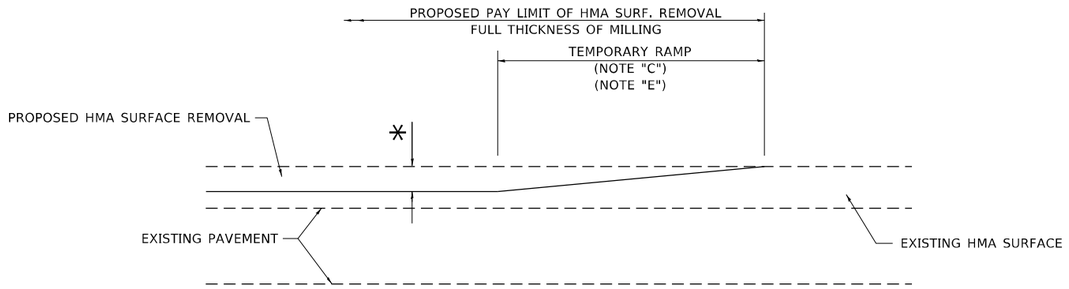
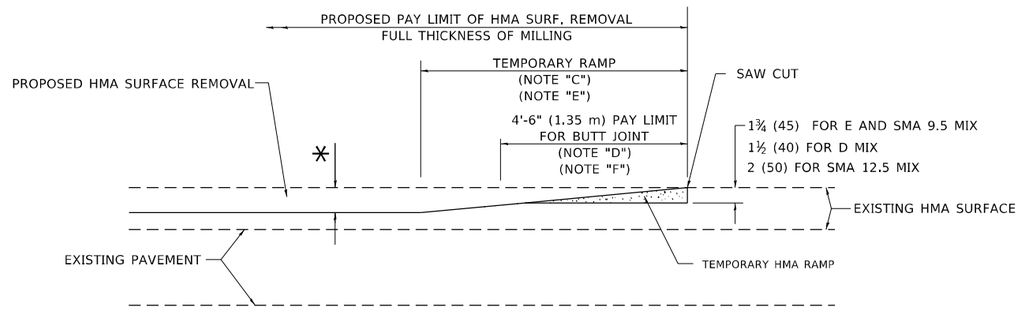


MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

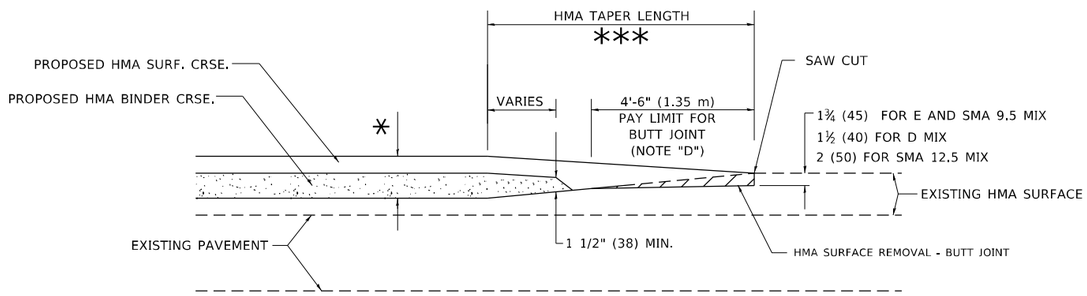


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

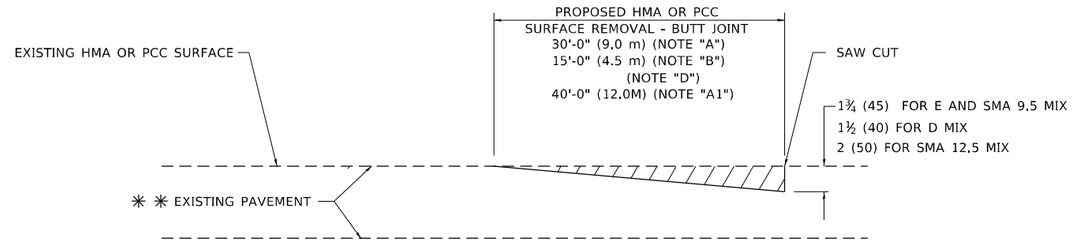
OPTION 2

TYPICAL TEMPORARY RAMP

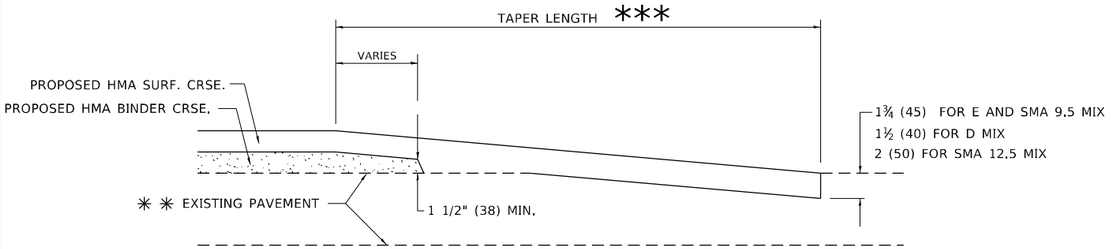


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

GENERAL NOTES

A. MAINLINE ARTERIAL ROADWAYS AND MAJOR SIDE ROADS.

A1. INTERSTATES

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' - 4" (1.02m) PER 1 INCH (25 mm) OF MILLING THICKNESS.

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

F. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

*** 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

1. 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".

2. THE TEMPORARY RAMP AND SAW CUT SHALL BE INCLUDED IN THE UNIT COST FOR HMA OR PCC SURFACE REMOVAL-BUTT JOINT.

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

USER NAME = demancnelt	DESIGNED - M. DE YONG	REVISED - A. ABBAS 03-21-97	
	DRAWN -	REVISED - M. GOMEZ 04-06-01	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - R. BORO 01-01-07	
PLOT DATE = 2/2/2022	DATE - 06-13-90	REVISED - K. SMITH 02-01-22	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

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

F.A.U./RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	108
	BD400-05 BD-32	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

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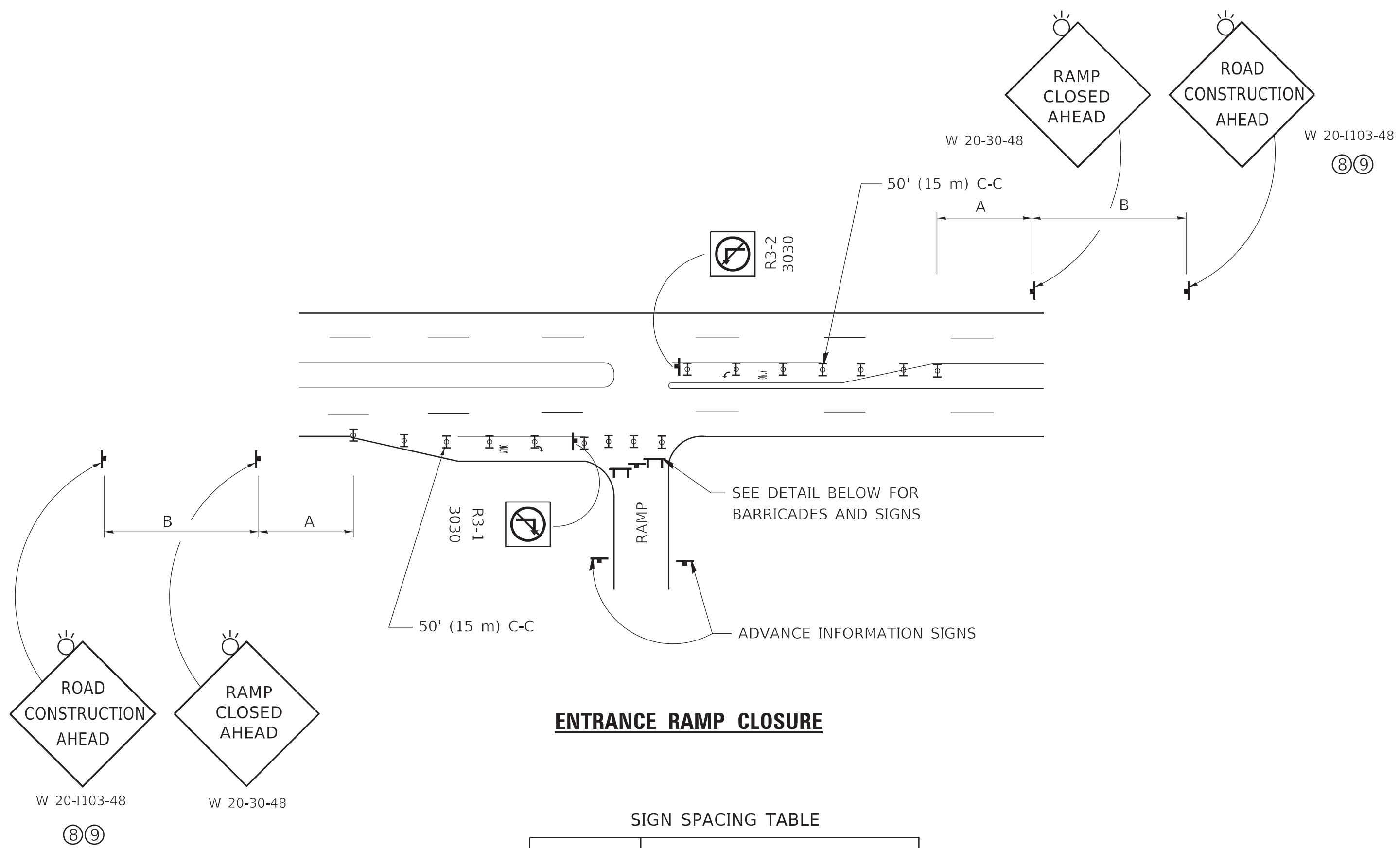
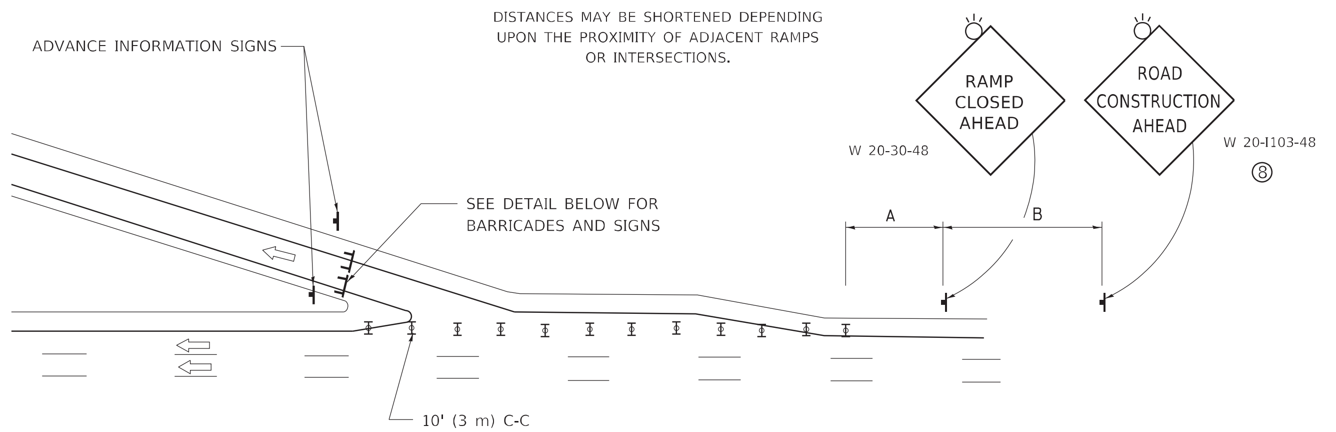


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

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

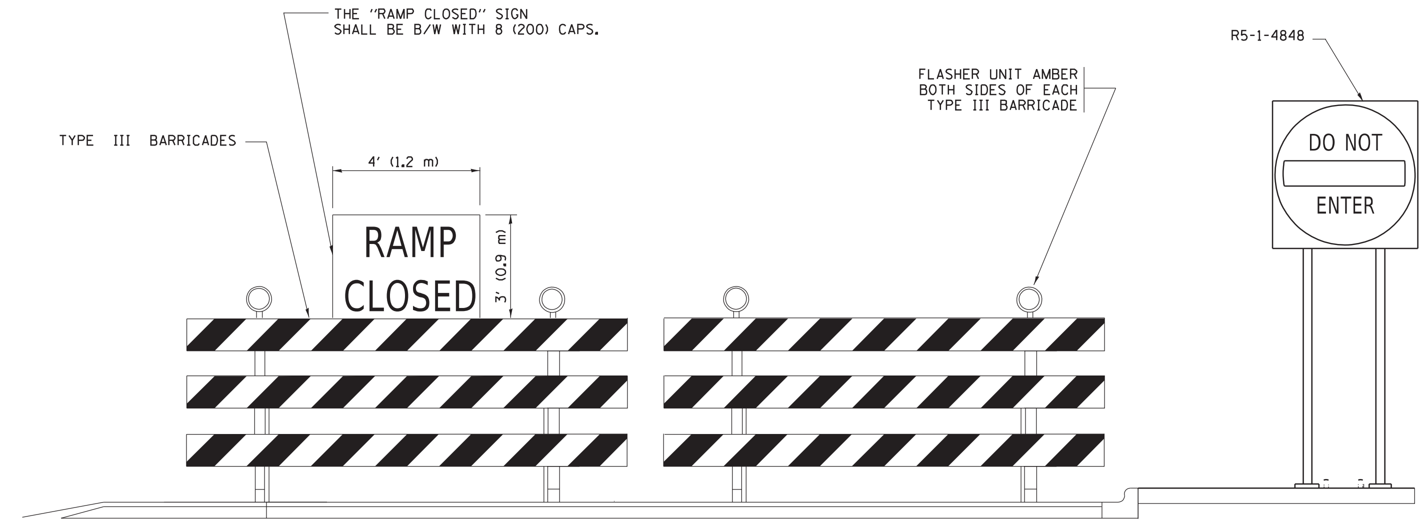
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

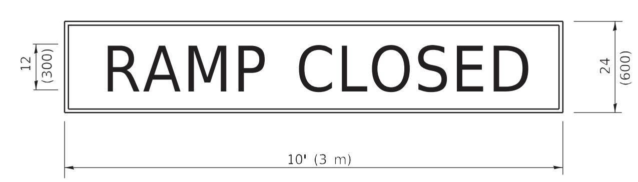
SYMBOLS

- TYPE II BARRICADE OR DRUM
- TYPE III BARRICADE WITH 2 FLASHING LIGHTS



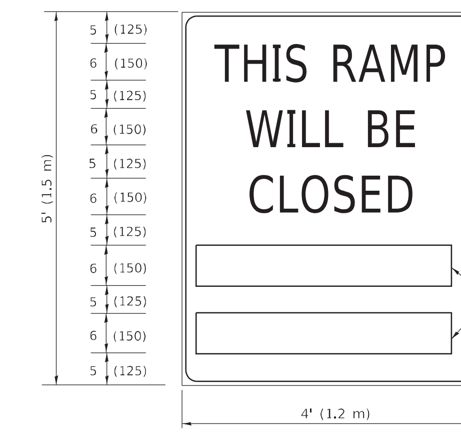
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE
BACKGROUND MOUNTED
DIAGONALLY
E MOD FONT
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

½ (12) BORDER

E MOD FONT

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

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

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

GENERAL NOTES:

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

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

USER NAME = footemj	DESIGNED - D.W.S.	REVISED - S.P.B._01-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED - S.P.B._12-09	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - M.D._06-13	
PLOT DATE = 3/4/2019	DATE - 02-83	REVISED - M.D._01-18	

ENTRANCE_AND_EXIT_RAMP CLOSURE_DETAILS

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

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	109
TC-08		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
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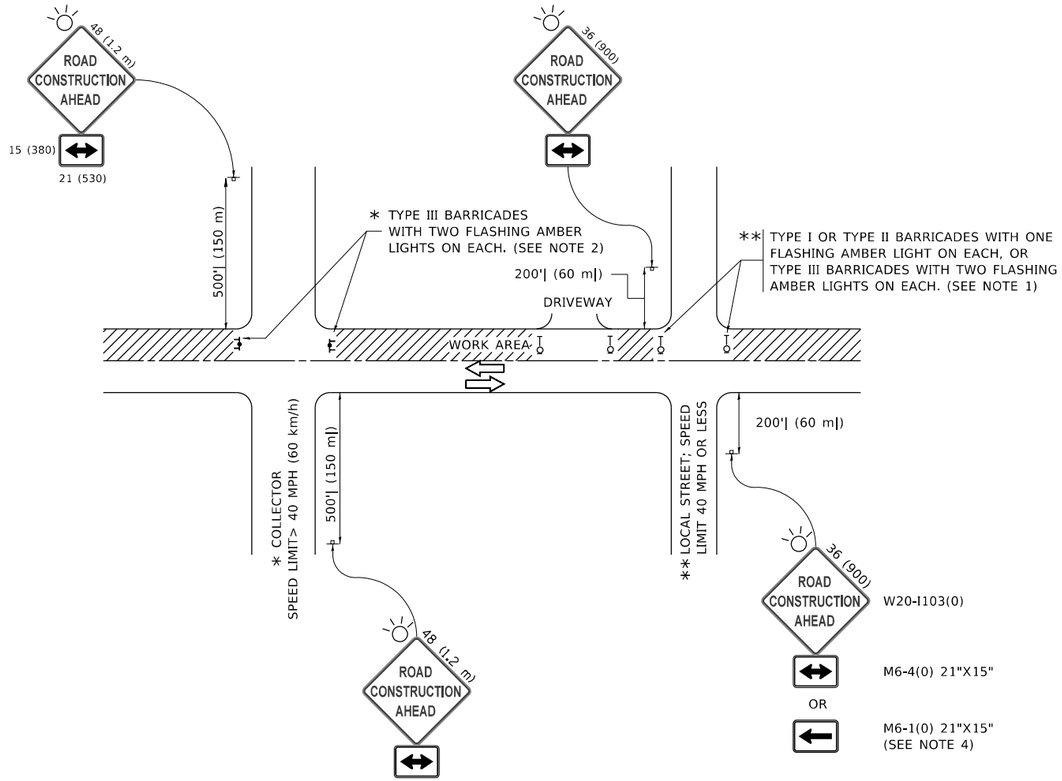

NOTES:

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.

USER NAME = footem}	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 3/4/2019	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.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	110
	TC–10	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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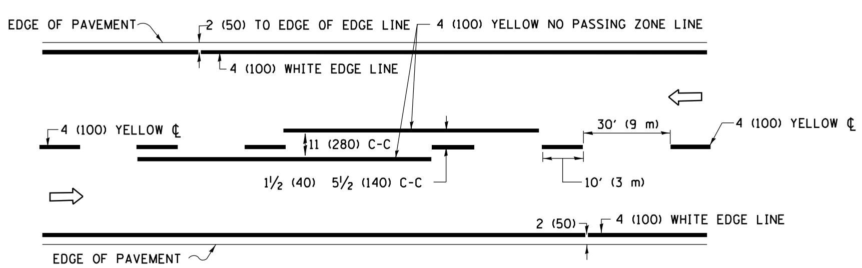
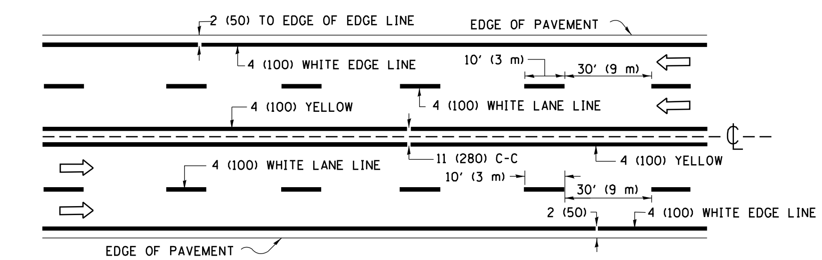
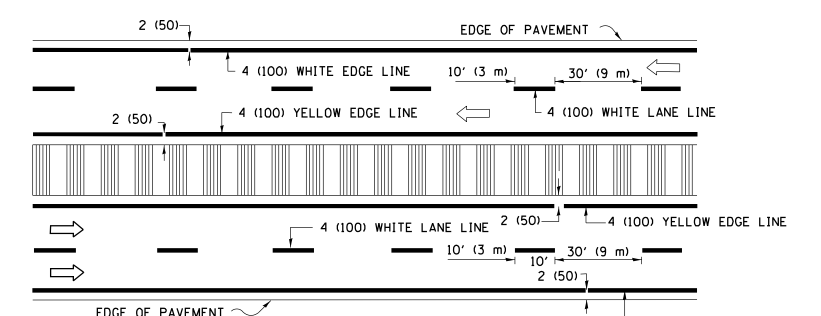


2–LANE ROADWAY



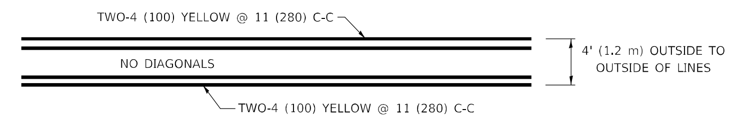
MULTI–LANE UNDIVIDED



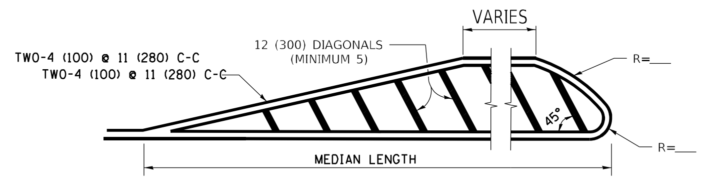
MULTI–LANE DIVIDED

WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING



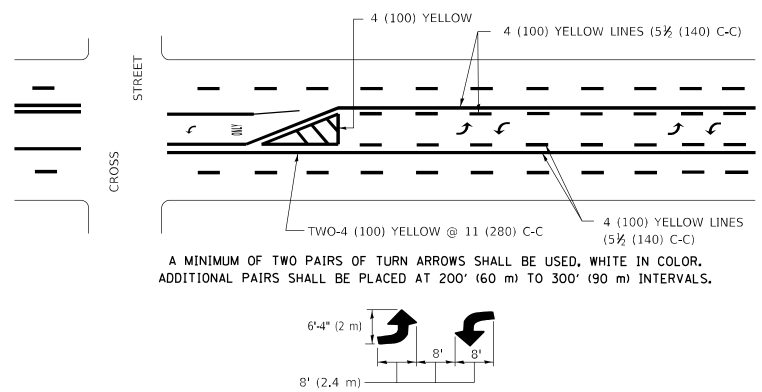
4' (1.2 m) WIDE MEDIANS ONLY



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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))

MEDIANS OVER 4' (1.2 m) WIDE

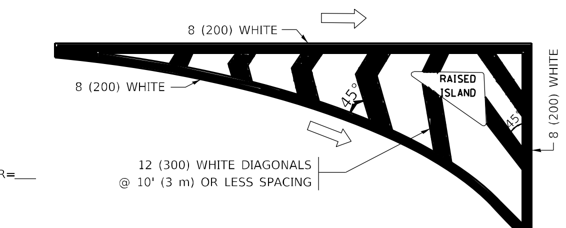


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

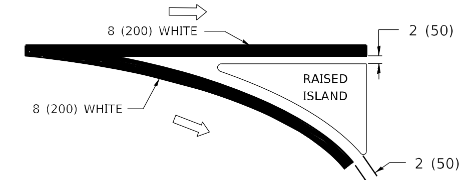
6'-4" (2 m) 8' 8' 8' (2.4 m)

MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

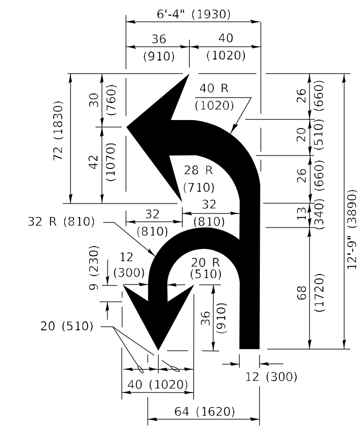


ISLAND OFFSET FROM PAVEMENT EDGE

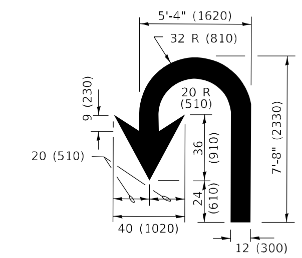


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

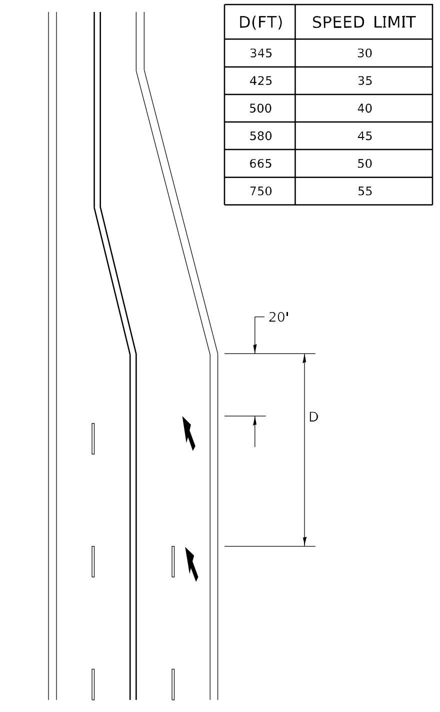


COMBINATION LEFT AND U–TURN



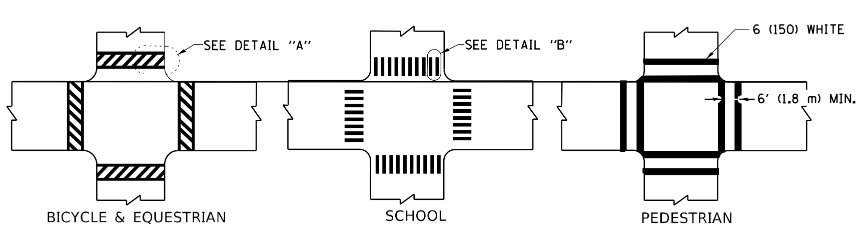
U–TURN

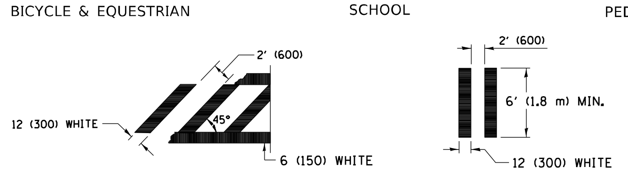
D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55



LANE REDUCTION TRANSITION

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

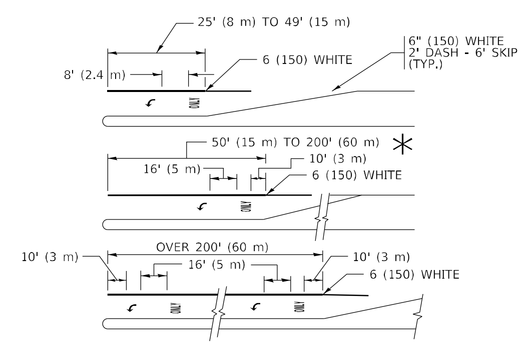




DETAIL "A" DETAIL "B"

TYPICAL CROSSWALK MARKING

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



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* 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

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	5½ (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: 5½ (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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
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.

USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED - C. JUCIUS 07-01-13	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15	
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16	

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS
TC-13

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

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	111
		CONTRACT NO. 62P14		
		ILLINOIS FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Std22x34\CADData\CADsheets\tc13.dgn

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

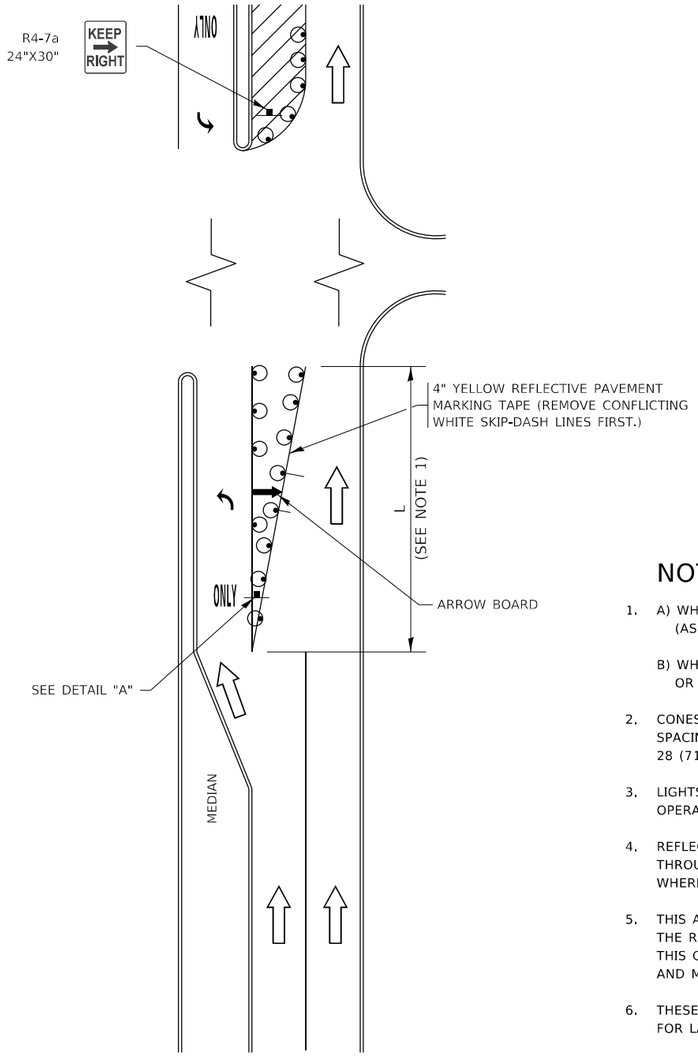
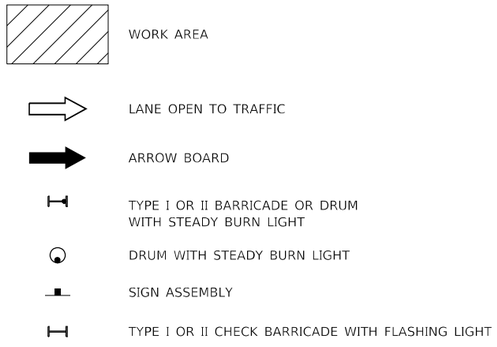


FIGURE 1

LEGEND



NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.

   B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.

2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.

3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.

4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.

5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-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

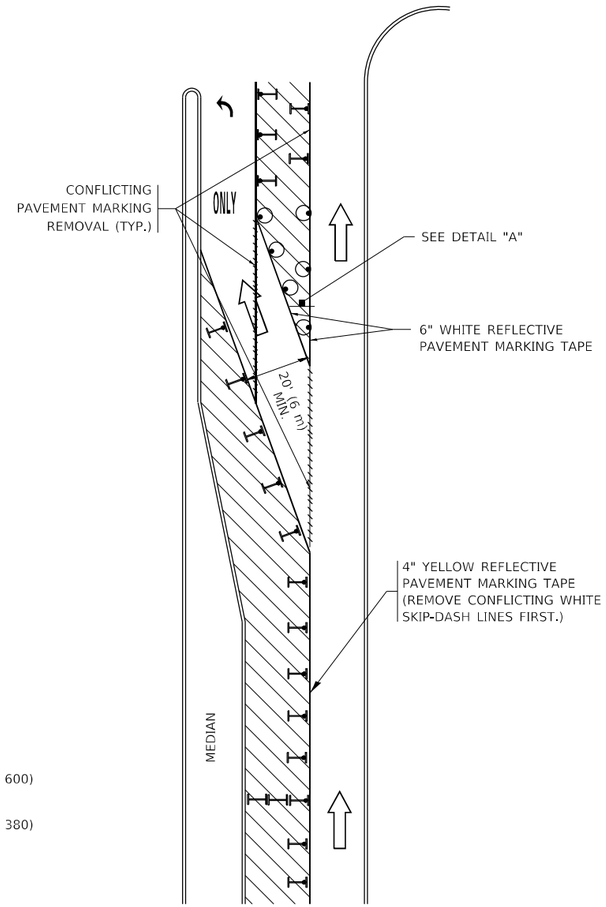
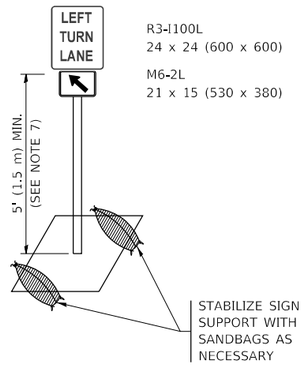


FIGURE 2



DETAIL A

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

MODEL: Default
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USER NAME = footem]	DESIGNED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	
	DRAWN - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13	
PLOT SCALE = 50.0000 ' / in.	CHECKED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16	
PLOT DATE = 3/4/2019	DATE - T. RAMMACHER 01-06-00	REVISED -	

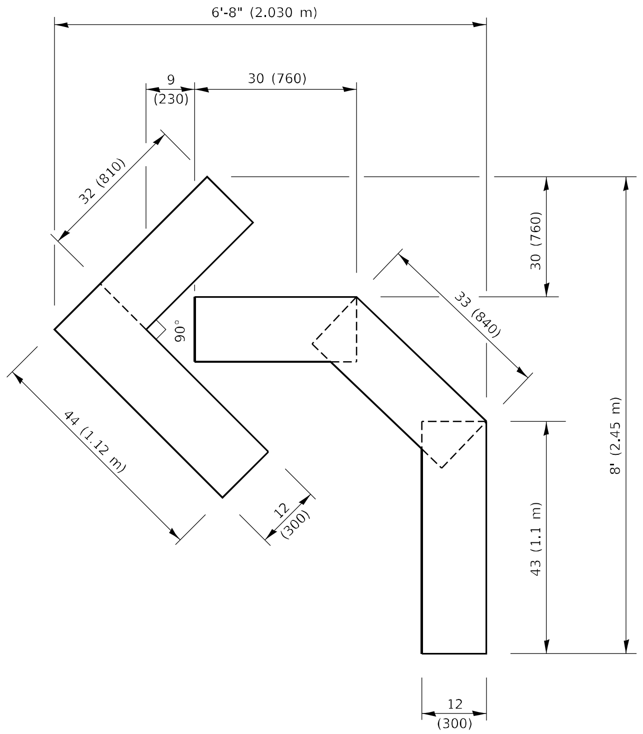
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

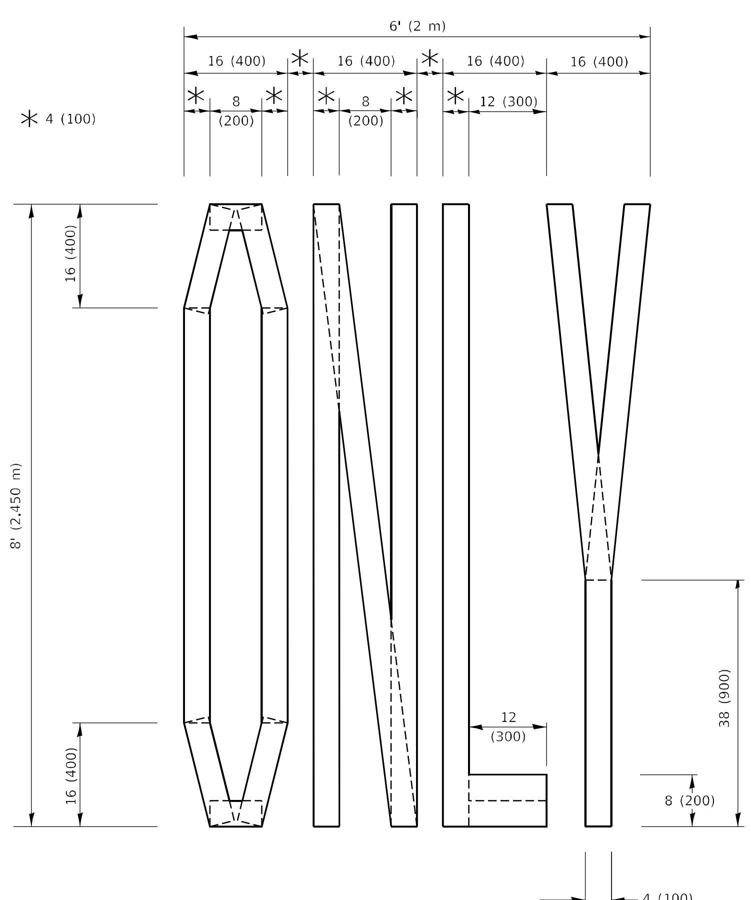
F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	112
	TC-14	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			

tc14.dgn 3/4/2019 10:36:01 AM User=footemi



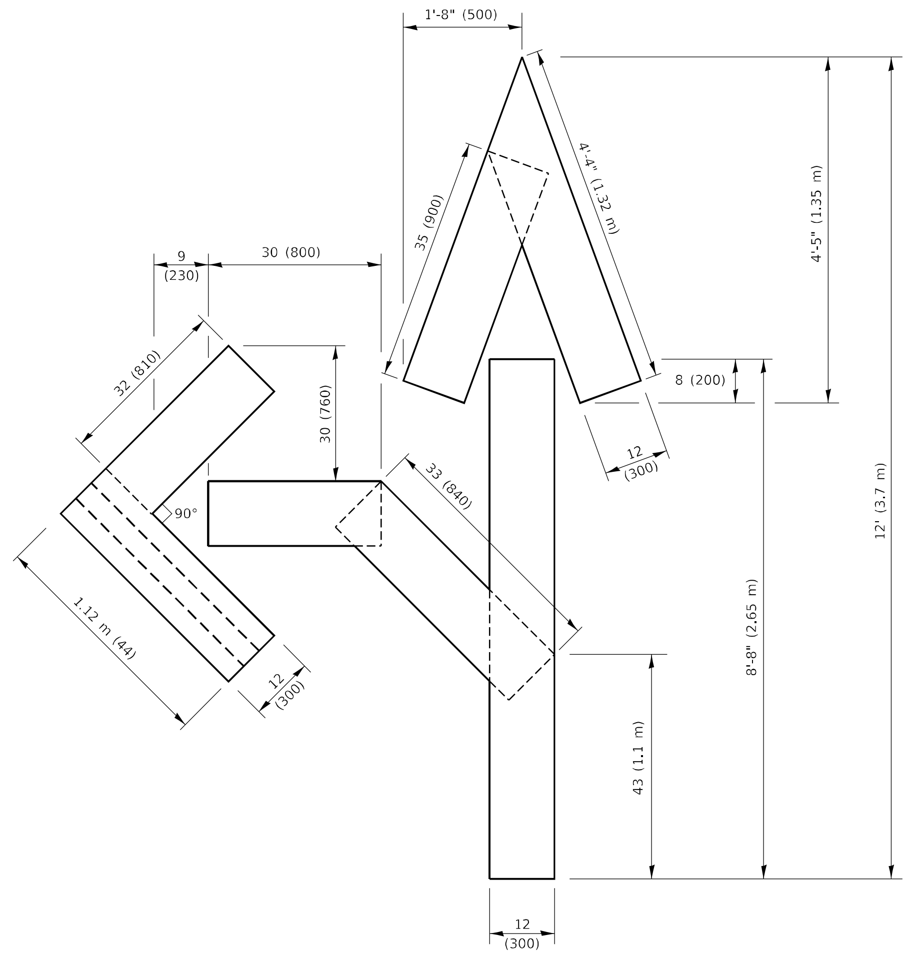
QUANTITY

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)

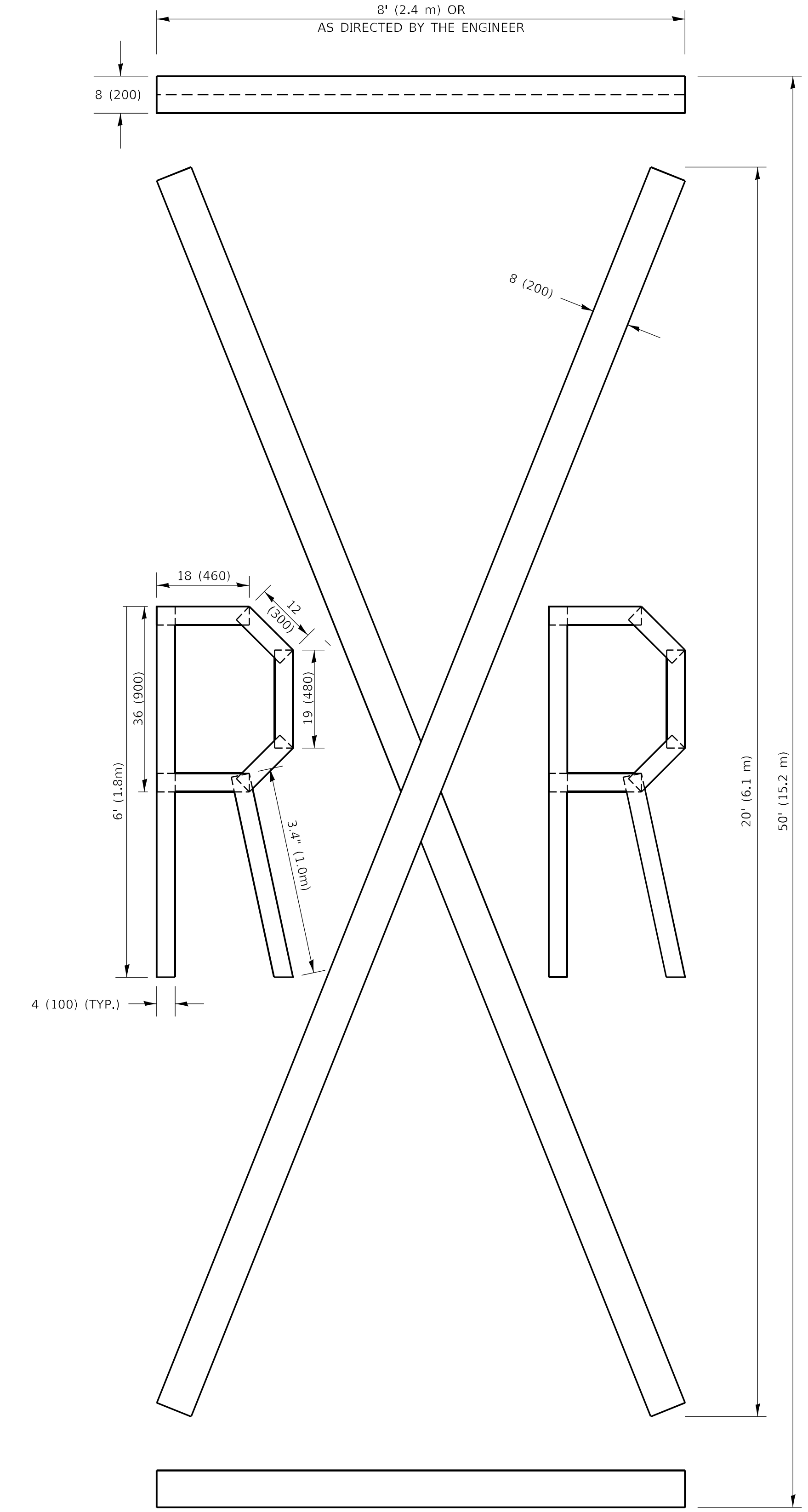


QUANTITY

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.



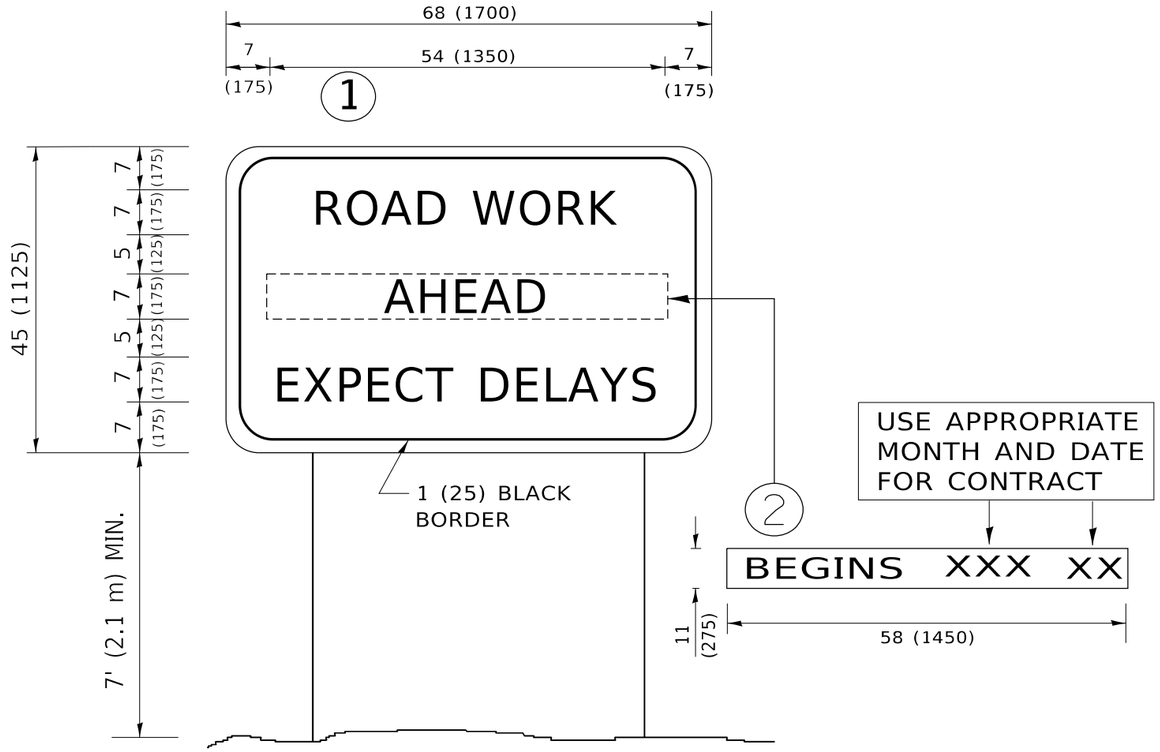
QUANTITY

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.

USER NAME = footemj	DESIGNED -	REVISED - T. RAMMACHER 03-02-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS	F.A.U/P. RTE.: 1223/346	SECTION: 2021-077-B-R&FL; COUNTY: LAKE; TOTAL SHEETS: 116; SHEET NO.: 113
	DRAWN -	REVISED - E. GOMEZ 08-28-00			TC-16	CONTRACT NO. 62P14
PLOT SCALE = 50.0068 ' / in.	CHECKED -	REVISED - E. GOMEZ 08-28-00				ILLINOIS FED. AID PROJECT
PLOT DATE = 3/4/2019	DATE - 09-18-94	REVISED - A. SCHUETZE 09-15-16		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.		

MODEL: Default
FILE NAME: pw:\\IL084EIIIDNTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\Std22x34\CADData\CADSheets\tc16.dgn



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.

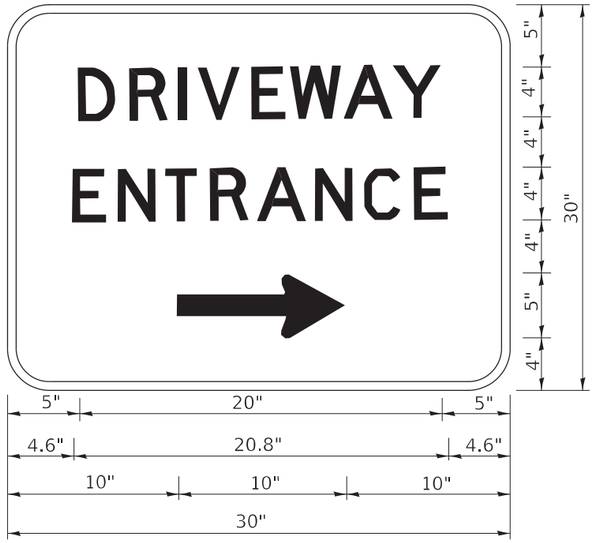
USER NAME = footemj	DESIGNED -	REVISED -	R. MIRS 09-15-97
	DRAWN -	REVISED -	R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED -	C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

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

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	114
	TC–22	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
"DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

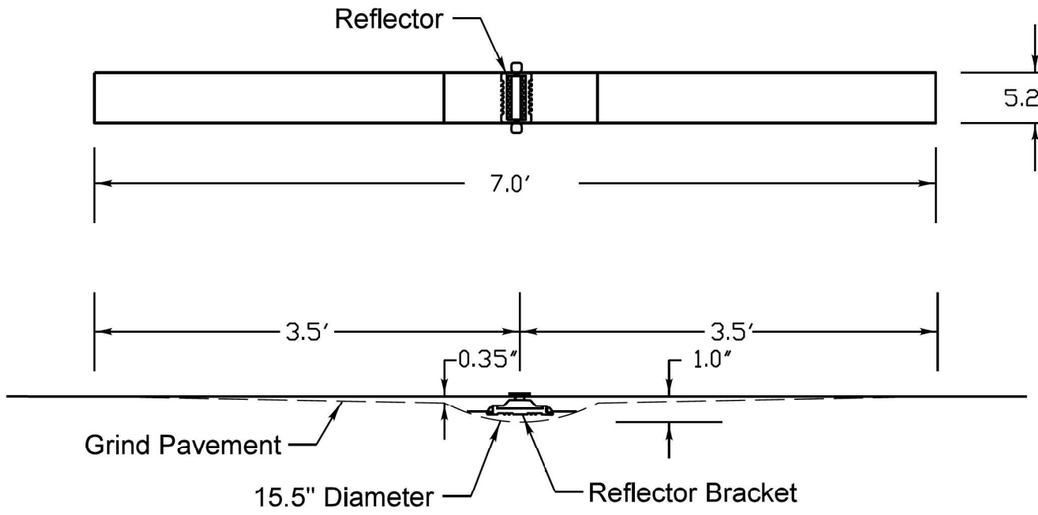
USER NAME = leysa	DESIGNED -	REVISED - C. JUCIUS 02-15-07	
	DRAWN -	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/6/2021	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY ENTRANCE SIGNING

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

F.A.U./P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/348	2021-077-B-R&FL	LAKE	116	115
	TC-26	CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			



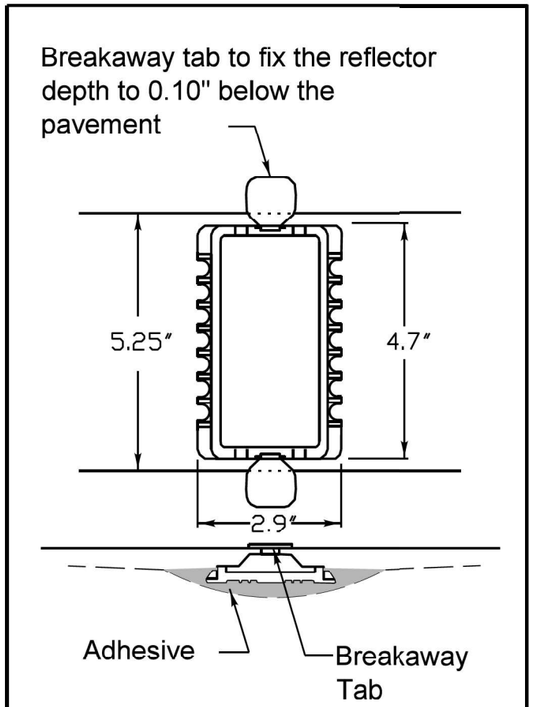
Notes

1. The reflective pavement marker lens shall be a 3M 190 series pavement marker or an approved equal.

2. The reflector bracket shall be made of a polycarbonate and shall be a MarkerOne Series R100 or an approved equal.

3. The adhesive used shall meet the requirements of AASHTO M237 specification for adhesives to be used in cementing asphalt surfaces.

4. Markers shall be placed at 40' intervals on lane lines and painted medians and 40' intervals on curves and approaching intersections as shown on LCDOT standard LC7800.



Reflector Bracket Detail

REVISIONS	DATE

LakeCounty
Division of Transportation

APPROVED BY: JN
DATE: 12/02/13

RECESSED REFLECTIVE PAVEMENT MARKER

LC7805

LIN ENGINEERING,LTD.
Consulting Engineers
Westmont, Illinois

USER NAME = 14nho	DESIGNED - RC	REVISED -
	DRAWN - RC	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - ST	REVISED -
PLOT DATE = 3/24/2022	DATE - 03/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY STANDARDS

SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U/P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223/346	2021-077-B-R&FL	LAKE	116	116
		CONTRACT NO. 62P14		
	ILLINOIS FED. AID PROJECT			