


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	1
		ILLINOIS	CONTRACT NO. 62P68	


FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENTS LOCATED IN THE VILLAGE OF ORLAND PARK, ORLAND TOWNSHIP, AND COOK COUNTY


H.W. LOCHNER, INC.
STRUCTURAL ENGINEER
ARSALAN M. KHAN, S.E.
#081006258
DATE: 12/17/2021
APPLIES TO SHEET 37-68
EXP. 11/30/2022



H.W. LOCHNER, INC.
PROFESSIONAL ENGINEER
ANDREW W. MCKENNA, P.E.
#062.053651
DATE: 12/17/2021
APPLIES TO SHEET 1-11, 14-36, 69-73
EXP. 11/30/2023



MILLENNIA PROFESSIONAL SERVICES
PROFESSIONAL LAND SURVEYOR
JAMES G. MAURER, P.L.S.
#3213
DATE: 12/17/2021
APPLIES TO SHEET 12-13
EXP. 11/30/2022



PROPOSED HIGHWAY PLANS

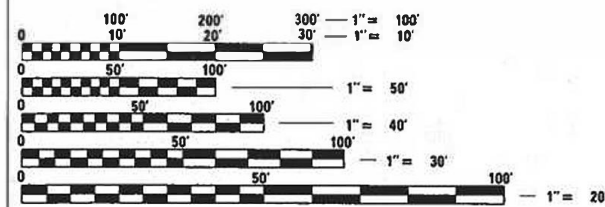
FAP ROUTE 351: US 6 (159TH ST.)
EAST OF 104TH AVE.
SECTION: 2021-150-BY

BRIDGE EXTENSION AND SIDEWALK REPLACEMENT
COOK COUNTY
C-91-033-22



IL RTE 7/U.S. RTE 6 (159TH ST)
OTHER PRINCIPAL ARTERIAL
EXISTING AOT (2021) 18,400 WEST OF 104TH
EXISTING AOT (2021) 28,600 EAST OF 104TH
DESIGN SPEED = 45 MPH
POSTED SPEED = 40 TO 45 MPH

104TH AVE
MAJOR COLLECTOR
EXISTING AOT (2021) 3,550
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH



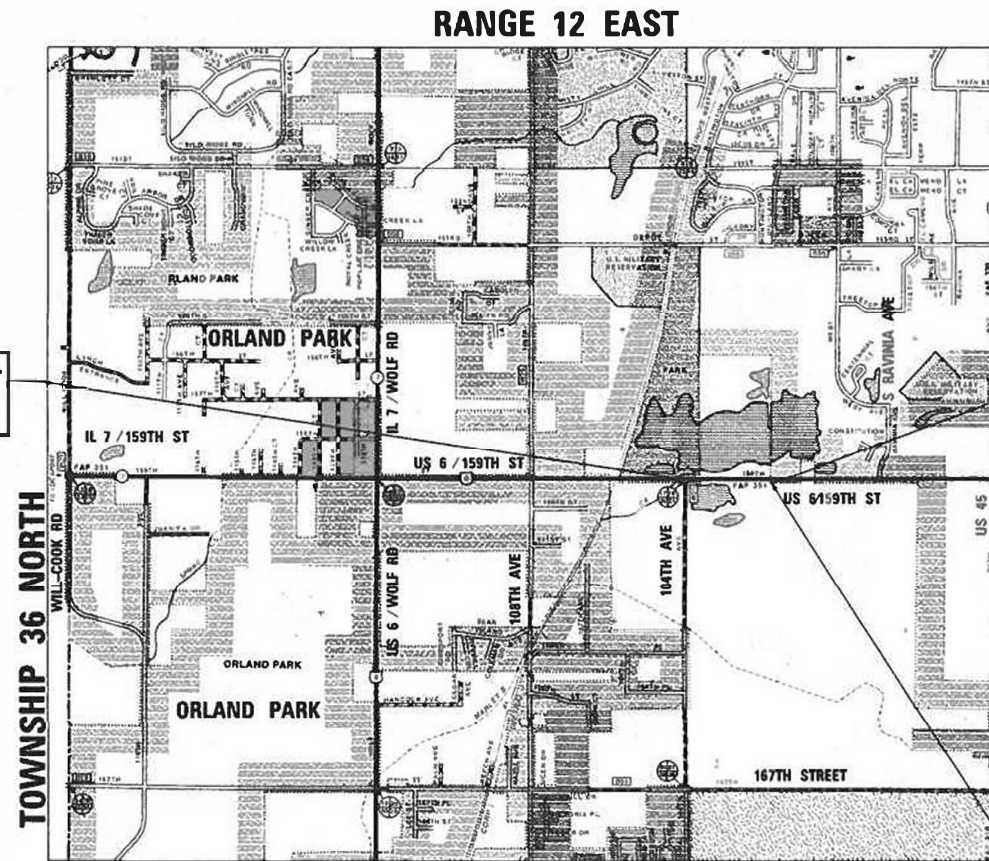
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: CRAIG BAUER (847) 705-4265
PROJECT MANAGER: LONG TRAN (847) 705-4232

CONTRACT NO. 62P68

BEGIN IMPROVEMENT
STA. 381 + 95.00



END IMPROVEMENT
STA. 400 + 86.89

BRIDGE EXTENSION
STA. 395 + 47.60 TO
STA. 398 + 34.60
EXIST. SN 016-D012
PROP. SN 016-D012

LOCHNER

H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
225 WEST WASHINGTON STREET, 12TH FLOOR
CHICAGO, IL 60606

GROSS LENGTH = 1,891.89 FT. = 0.358 MILE
NET LENGTH = 1,891.89 FT. = 0.358 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED ~~December 22, 2021~~
Jose Rios
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 4, 2022

Stephen M. Smith
ENGINEER OF DESIGN AND ENVIRONMENT
February 4, 2022
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

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HIGHWAY STANDARDS

STANDARD NO.	TITLE
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420101-07	24' (7.2 m) JOINTED PCC PAVEMENT
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
424011-04	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
601001-05	PIPE UNDERDRAINS
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701611-01	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- ALL DAMAGE TO DEPARTMENT OWNED UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE. THIS SHALL INCLUDE ALL TEMPORARY REPAIRS REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS.
- THE WORK REQUIRED TO CONNECT ANY SEWER TO AN EXISTING OR PROPOSED DRAINAGE STRUCTURE OR PIPE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE SEWER ITEMS.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF ORLAND PARK.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- TEN FOOT (10) TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
- THE OFFSETS TO DRAINAGE STRUCTURES ARE TO THE CENTER OF THE STRUCTURE. THE RIM ELEVATIONS FOR DRAINAGE STRUCTURES LOCATED WITHIN CURB AND GUTTER ARE AT THE EDGE OF PAVEMENT. THE RIM ELEVATIONS FOR DRAINAGE STRUCTURES LOCATED OUTSIDE THE CURB AND GUTTER ARE TO THE CENTER OF STRUCTURE (CONCENTRIC STRUCTURE ASSUMED FOR CALCULATION OF RIM ELEVATION).
- CONTACT PATRICE HARRIS AT PATRICE.HARRIS@ILLINOIS.GOV, TWO WEEKS PRIOR TO INSTALLING PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE CONTRACTOR SHALL MAINTAIN EXISTING STREET ACCESS AND EXISTING DRIVEWAY ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT UNLESS OTHERWISE NOTED ON THE PLANS.
- THE SUBGRADE STABILITY SHALL BE VERIFIED BY PROOF ROLLING WITH A FULLY LOADED TANDEM-AXLE TRUCK.
- 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.
- ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENTS IS TO BE REMOVED AND REPLACED AS DIRECT BY THE ENGINEER AT CONTRACTOR EXPENSE.
- PIPE UNDERDRAINS SHALL BE INSTALLED ACCORDING TO SECTION 601 OF THE SSRBC AND STANDARD 601001-05. TOP OF PIPE UNDERDRAINS SHALL BE PLACED MINIMUM 6" BELOW THE AGGREGATE SUBGRADE IMPROVEMENT LAYER. THE COST OF MAKING PIPE UNDERDRAINS CONNECTIONS TO DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF THE PIPE UNDERDRAINS.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DISTRICT ONE STANDARDS

- TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC-26 DRIVEWAY ENTRANCE SIGNING

MWRD GENERAL NOTES

- DISTRICT FACILITIES MUST BE PROTECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING MWRD FACILITIES FROM ALL CONSTRUCTION OPERATIONS, VIBRATIONS AND HEAVY EQUIPMENT.
- NO ACCESS HATCHES AND MANHOLE COVERS ON MWRD STRUCTURES AND MANHOLES WITHIN THE PROJECT AREA SHALL BE BURIED OR COVERED. NO DEBRIS SHALL ENTER MWRD STRUCTURES, SEWERS, OR FACILITIES.
- MWRD PERSONNEL SHALL HAVE 24 HOUR-A-DAY UNRESTRICTED ACCESS TO ALL MWRD STRUCTURES, SEWERS, OR FACILITIES. FOR ANY QUESTIONS REGARDING ACCESS TO OUR FACILITIES OR FIELD LOCATIONS, PLEASE CONTACT MR. PAUL SOBANSKI, AT (708) 588-4080.
- MWRD MANHOLES SHALL BE LOCATED, PROTECTED AND/OR ADJUSTED TO GRADE IF NECESSARY. AUTHORIZATION MAY BE OBTAINED BY CONTACTING MR. CEDRIC ROBERTSON, MANAGING ENGINEER, AT (708)-588-3896.

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS PROJECT.

MODEL: D:\p\d\h\l\p\1000005\06\03_CADD\01_Sheets\Civil\162968-2-ah-Intersect-std-05-01-stds.dgn

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME = GGIFORD	DESIGNED - JS	REVISED -
	DRAWN - JS	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/29/2021	DATE - 1/3/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS, STANDARDS, AND GENERAL NOTES			
159TH STREET			
SCALE: N/A	SHEET 1	OF 1 SHEETS	STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	2
				CONTRACT NO. 62P68
ILLINOIS FED. AID PROJECT				

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	20101000	TEMPORARY FENCE	FOOT	836	836				
	20200100	EARTH EXCAVATION	CU YD	699	699				
	20400800	FURNISHED EXCAVATION	CU YD	10	10				
	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	44	44				
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	420	420				
*	25000210	SEEDING, CLASS 2A	ACRE	0.50	0.50				
*	25000310	SEEDING, CLASS 4	ACRE	0.25	0.25				
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	68	68				
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	68	68				
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	68	68				
*	25100115	MULCH, METHOD 2	ACRE	0.75	0.75				
*	25100135	MULCH, METHOD 4	ACRE	0.75	0.75				
*	25100630	EROSION CONTROL BLANKET	SQ YD	3,630	3,630				

* DENOTES A SPECIALTY ITEM

MODEL: D:\p1\1\LOCHNER\10000005106\03_CADD\01_Sheets\Civil\162568-3-sht-504.dgn

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H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME = GGFFORD	DESIGNED - GG	REVISED -
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PLOT DATE = 12/27/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 1 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	3
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
*	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	75	75				
*	28000400	PERIMETER EROSION BARRIER	FOOT	1,117	1,117				
*	28000510	INLET FILTERS	EACH	23	23				
	30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	15	15				
	30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	1,198	1,198				
	31101600	SUBBASE GRANULAR MATERIAL, TYPE B 8"	SQ YD	200	200				
	35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	416	416				
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	935	935				
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	59	59				
	40604010	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, MIX "D", N50	TON	35	35				
	42000060	WELDED WIRE REINFORCEMENT	SQ YD	49	49				
	42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	49	49				
	42001300	PROTECTIVE COAT	SQ YD	49	49				

* DENOTES A SPECIALTY ITEM

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LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
 159TH STREET**

SCALE: N/A SHEET 2 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	4
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	30	30				
	42400800	DETECTABLE WARNINGS	SQ FT	40	40				
	44000100	PAVEMENT REMOVAL	SQ YD	1,280	1,280				
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	810	810				
	44000600	SIDEWALK REMOVAL	SQ FT	757	757				
	44003100	MEDIAN REMOVAL	SQ FT	57	57				
	50102400	CONCRETE REMOVAL	CU YD	55.4		1.3		54.1	
	50200100	STRUCTURE EXCAVATION	CU YD	507		14		493	
	50300225	CONCRETE STRUCTURES	CU YD	148.0		1.2		146.8	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	715.6		26.8		688.8	
	50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	42.0				42.0	
	50300260	BRIDGE DECK GROOVING	SQ YD	1,219				1,219	
	50300300	PROTECTIVE COAT	SQ YD	1,537		97		1,440	

* DENOTES A SPECIALTY ITEM

MODEL: D:\p\h\l\000005106\03_CADD\01_Sheets\CH\1D162968-3-sht-504.dgn

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H. W. LOCHNER, INC.
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 3 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	5
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	185,050			6,910	178,140	
*	51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	5,935				5,935	
*	51202305	DRIVING PILES	FOOT	5,935				5,935	
*	51203200	TEST PILE METAL SHELLS	EACH	5				5	
	51500100	NAME PLATES	EACH	1				1	
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	118				118	
	52318802	DRAINAGE SYSTEM FOR STRUCTURES	L SUM	1				1	
	54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	7	7				
	550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	63	63				
	55100500	STORM SEWER REMOVAL 12"	FOOT	74	74				
	58700300	CONCRETE SEALER	SQ FT	1,056			60	996	
	60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	1	1				
	60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	26	26				

* DENOTES A SPECIALTY ITEM

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H. W. LOCHNER, INC.
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 4 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	6
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	60108204	PIPE UNDERDRAINS, TYPE 2, 4"	FOOT	30	30				
	60500050	REMOVING CATCH BASINS	EACH	3	3				
	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	30	30				
	61000050	CONCRETE THRUST BLOCKS	EACH	7	7				
*	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	263	263				
*	63302000	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 2	EACH	1	1				
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	208	208				
*	66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1				
*	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	60	60				
	67100100	MOBILIZATION	L SUM	1	1				
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	583	583				

* DENOTES A SPECIALTY ITEM

MODEL: D:\m\h\l\LOCHNER\1000005106\03_CADD\01_Sheets\Civil\11627868-3-sht-504.dgn

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 5 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	7
			CONTRACT NO. 62P68	
		ILLINOIS FED. AID PROJECT		

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	10,576	10,576				
*	78009000	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	59	59				
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1,194	1,194				
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	461	461				
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	121	121				
*	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	121	121				
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	687	687				
*	81028390	UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	780	780				
*	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1					1
	X0327036	BIKE PATH REMOVAL	SQ YD	423	423				
	X0322936	REMOVE EXISTING FLARED END SECTION	EACH	3	3				
*	X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, TANGENT	EACH	1	1				
	X6700407	ENGINEER'S FIELD OFFICE, TYPE A (D1)	CAL MO	5	5				

* DENOTES A SPECIALTY ITEM

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME = GGIFFORD	DESIGNED - GG	REVISED -
PLOT SCALE =	DRAWN - GG	REVISED -
PLOT DATE = 12/27/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 6 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	8
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

SPECIALTY ITEM	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	ROADWAY	LAND BRIDGES		TRAFFIC SIGNALS
					URBAN	S.N. 016-D011	S.N. 016-D012	159TH & 104TH	
					0004	0008	0008	0021	
					100% STATE	100% STATE	100% STATE	100% STATE	
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1				
	X8140230	HANDHOLE, COMPOSITE CONCRETE (SPECIAL)	EACH	1	1				
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1				
	Z0018004	DRAINAGE SCUPPERS, DS-12	EACH	7			7		
	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	13	13				
	Z0062456	TEMPORARY PAVEMENT	SQ YD	200	200				
*	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1					1
Ø	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500			500		

* DENOTES A SPECIALTY ITEM

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME = GGIFFORD	DESIGNED - GG	REVISED -
	DRAWN - GG	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

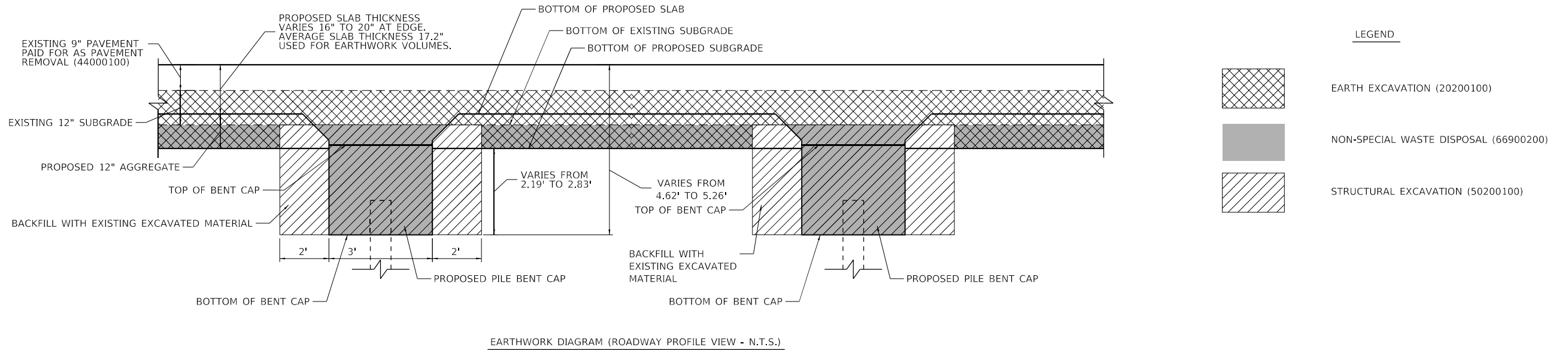
**SUMMARY OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET 7 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	9
CONTRACT NO. 62P68			Ø 0042	
ILLINOIS FED. AID PROJECT				

EARTHWORK SUMMARY									
LOCATION	EARTH EXCAVATION (20200100)	EXCAVATION USED AS EMBANKMENT, ADJ. FOR SHRINKAGE (15%)	EMBANKMENT	EARTHWORK BALANCE WASTE (+), SHORTAGE (-)	FURNISHED EXCAVATION (20400800)	TOPSOIL STRIPPING	TOPSOIL PLACEMENT	TOPSOIL EXCAVATION AND PLACEMENT (21101505)	NON-SPECIAL WASTE DISPOSAL (66900200)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
382+06.1 TO 387+00.0	34	29	39	-10	* 10	50	50	50	0
393+99.6 TO 394+14.6	18	0	0	0	0	0	0	0	0
394+14.6 TO 394+44.6	23	0	0	0	0	0	0	0	0
394+44.6 TO 398+34.6	624	0	0	0	0	266	266	266	208
398+88.8 TO 400+86.9	0	0	0	0	0	104	104	104	0
TOTAL	699	29	39	-10	10	420	420	420	208

NOTE:
SEE STRUCTURAL SHEETS FOR STRUCTURE EXCAVATION QUANTITIES.
*A QUANTITY OF 10 CU YD OF FURNISHED EXCAVATION IS PROVIDED TO ALLOW FOR THE SIDEWALK RETROFIT AND PARKWAY RESTORATION CONSTRUCTION TO OCCUR PRIOR TO THE LAND BRIDGE EXTENSION.



PAVING OPERATIONS SCHEDULE OF QUANTITIES									
STA.	STA.	AGGREGATE SUBGRADE IMPROVEMENT (30300001) (CU YD)	AGGREGATE SUBGRADE IMPROVEMENT 12" (30300112) (SQ YD)	AGGREGATE BASE COURSE, TYPE B 6" (35101800) (SQ YD)	BITUMINOUS MATERIALS (PRIME COAT) (40600275) (POUND)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (40603080) (TON)	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, MIX "D", N50 (40604010) (TON)	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB (42000080) (SQ YD)	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (60605000) (FOOT)
382+58.53	382+68.02			5	10	1			
393+99.60	395+00.00	15	288	91	205	13	8	49	30
395+00.00	398+34.60		910	320	720	45	27		
TOTAL		15	1,198	416	935	59	35	49	30

MODEL: D:\p\l\1\10000051\06\03_CADD\01_Sheets\CH\11D162588-A-dnt-std.dwg

LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

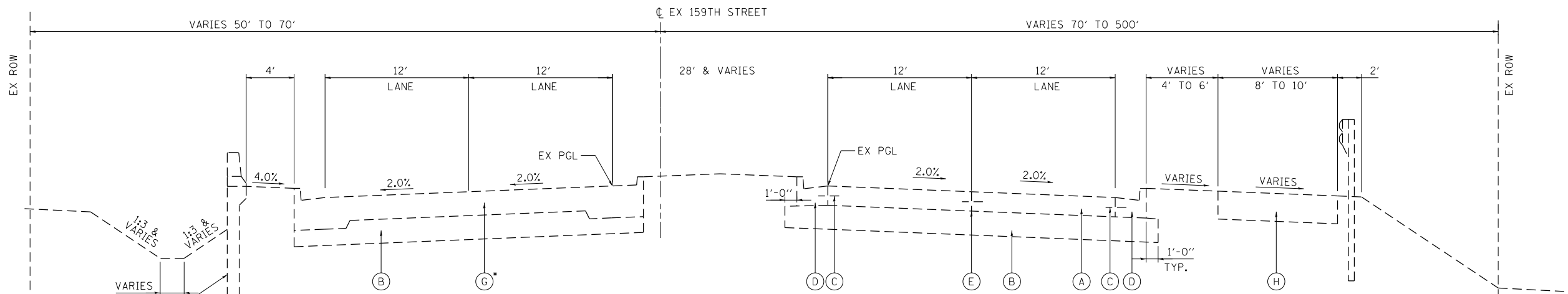
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	DRAWN - GG	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
159TH STREET**

SCALE: N/A SHEET OF SHEETS STA. N/A TO STA. N/A

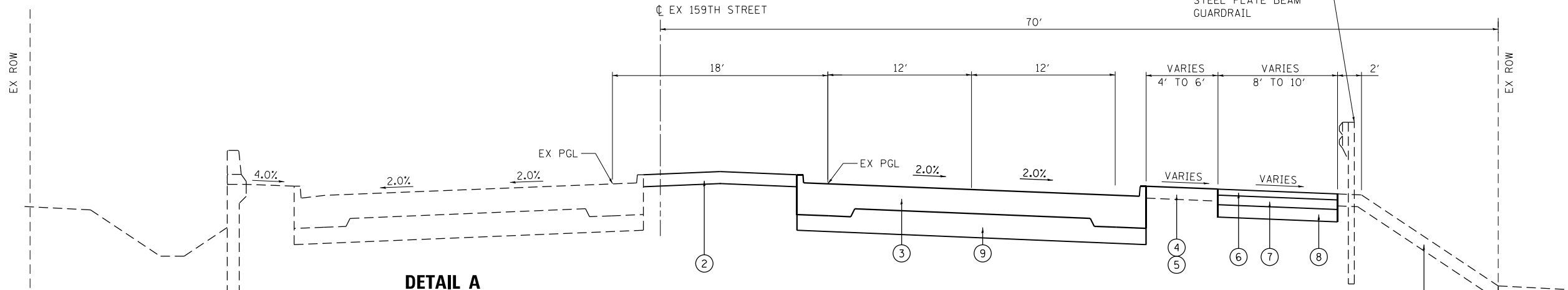
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	10
CONTRACT NO. 62P68				
		ILLINOIS	FED. AID PROJECT	



**EXISTING TYPICAL SECTION
159TH STREET**

STA. 393+99.60 TO STA. 398+34.60

* EXISTING PCC PAVEMENT FROM STA. 393+99.60 TO STA. 395+97.60
 EXISTING DRY LAND BRIDGE FROM STA. 395+97.60 TO STA. 402+33.60



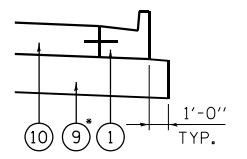
**PROPOSED TYPICAL SECTION
159TH STREET**

STA. 394+44.60 TO STA. 398+34.60

PAVEMENT CONNECTOR STA. 393+99.60 TO STA. 394+14.60 SEE DETAIL A
 BRIDGE APPROACH PAVEMENT STA. 394+14.60 TO STA. 394+44.60

SEE MOT TYPICAL SECTION SHEET 21 FOR MEDIAN RESTORATION WITHIN LIMITS OF TEMPORARY PAVEMENT WITHIN CROSSOVER

DETAIL A



* AGGREGATE SUBGRADE IMPROVEMENT 12" EXTENDS 1'-0" BEYOND C&G ON NORTH AND SOUTH SIDE OF PAVEMENT CONNECTOR

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS Ndes	QUALITY MANAGEMENT PROGRAM (QMP)
TEMPORARY PAVEMENT		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5FG), 2"	4% @ 70 Gyr.	QC/OA
HOT-MIX ASPHALT BINDER COURSE, N70 (IL-19.0), 8"	4% @ 70 Gyr.	QC/OA
MULTI-USE PATH		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5FG), 1 1/2"	4% @ 50 Gyr.	QC/OA
HOT-MIX ASPHALT BINDER COURSE, N50 (IL-19.0), 2 1/2"	4% @ 50 Gyr.	QC/OA

QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/OA); QUALITY CONTROL FOR PERFORMANCE (QCP)

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

THE AC TYPE FOR POLYMERIZED HMA MIXTURES 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.

NOTES

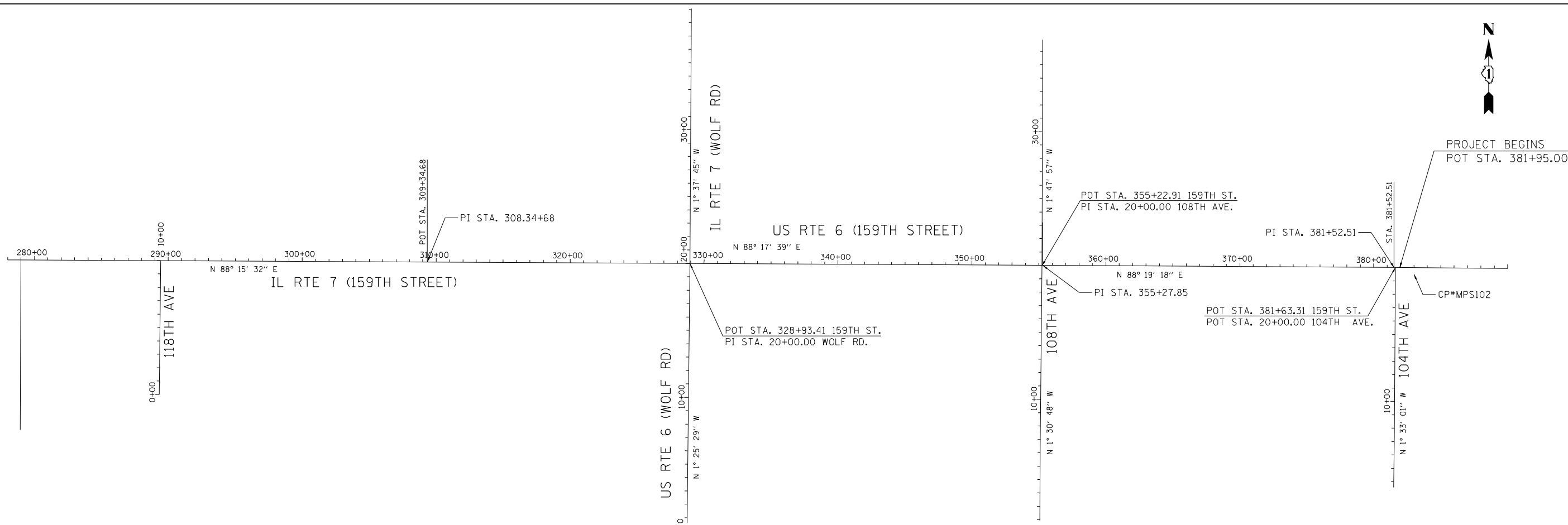
1. PROPOSED TOPSOIL, 6" AND PROPOSED TOPSOIL, 24" WILL CONSIST OF EXISTING TOPSOIL AND PAID FOR AS 'TOPSOIL EXCAVATION AND PLACEMENT'.

EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT 9" (JOINTED)
- (B) AGGREGATE SUBGRADE 12"
- (C) NO. 6 EPOXY COATED TIE BARS 24" LONG @ 24" CTS
- (D) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (E) LONGITUDINAL SAWED JOINT WITH NO. 6 EPOXY COATED
- (F) RETAINING WALL (SEE STRUCTURAL DRAWINGS FOR DETAILS)
- (G) EXISTING DRY LAND BRIDGE
- (H) MULTI-USE PATH

PROPOSED LEGEND

- (1) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (2) PROPOSED TOPSOIL, 24" - SEE NOTE 1
- (3) DRY LAND BRIDGE (SEE STRUCTURAL DRAWINGS FOR DETAILS)
- (4) PROPOSED TOPSOIL, 6" - SEE NOTE 1
- (5) SEE LANDSCAPE PLANS FOR PERMANENT GROUND COVER INFO
- (6) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5FG), 1 1/2"
- (7) HOT-MIX ASPHALT BINDER COURSE, N50 (IL-19.0), 2 1/2"
- (8) AGGREGATE BASE COURSE, TYPE B, 6"
- (9) AGGREGATE SUBGRADE IMPROVEMENT 12"
- (10) PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB (VARIES FROM 9" TO 15")

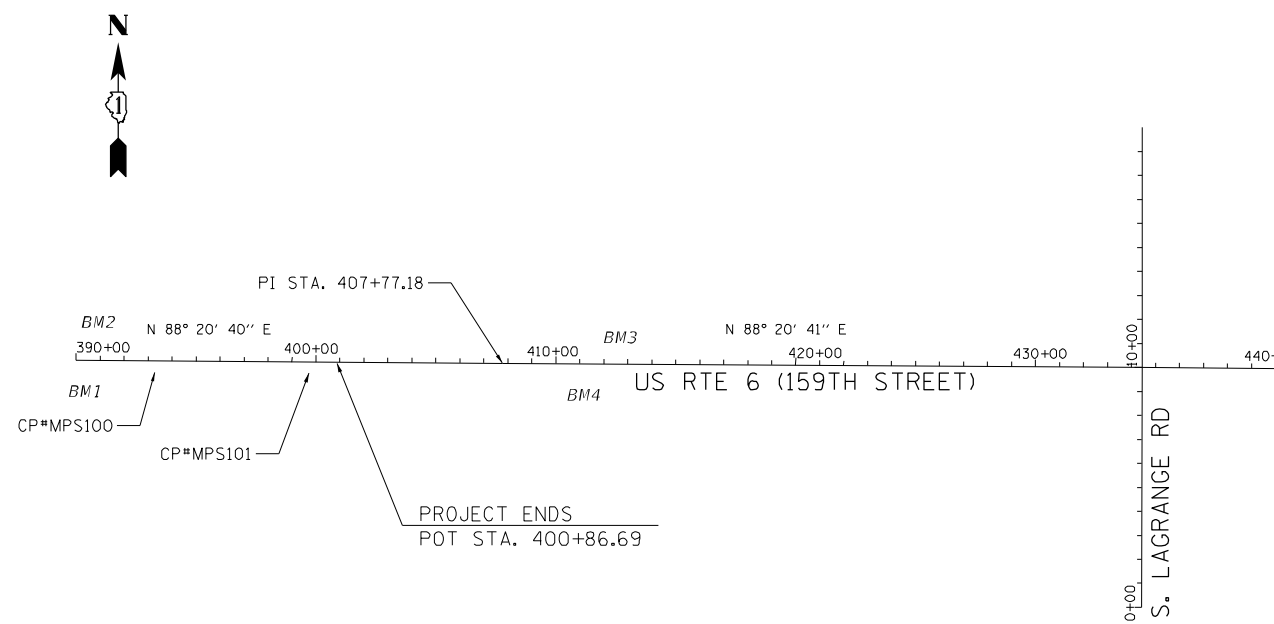


PROJECT BEGINS
POT STA. 381+95.00

BENCHMARKS

DATUM NOTE: THE VERTICAL DATUM IS BASED ON THE ORIGINAL SURVEY DATUM (NGVD29).
GPS RECEIVERS MUST BE CALIBRATED TO PROJECT CONTROLS.

- BENCHMARK 1
SOUTHWEST FLANGE BOLT WITH "X" ON FIRE HYDRANT ON SOUTH SIDE OF 159TH STREET, ACROSS FROM HOUSE #10300
ELEVATION = 689.66
- BENCHMARK 2
SQUARE CUT ON EAST HEADWALL OF CREEK AT HOUSE #10300 ON NORTH SIDE OF 159TH STREET.
ELEVATION = 688.26
- BENCHMARK 3
SQUARE CUT ON WEST HEADWALL AT 1ST DRIVEWAY WEST OF COSTCO ON NORTH SIDE OF 159TH STREET.
ELEVATION = 686.47
- BENCHMARK 4
RAILROAD SPIKE IN NORTH FACE OF THE 4TH POWER POLE, WEST OF COSTCO ON SOUTH SIDE OF 159TH STREET.
ELEVATION = 685.82



PROJECT ENDS
POT STA. 400+86.69

P:\2011\MS1017_P1B157_5_IL7_USE_159th_Lochner\CADD\Shets\20211201\09-D162P68-ah-align.dgn
 USER: inguycn
 PLOT SCALE = 800.0000' / in.
 PLOT DATE = 12/10/2021



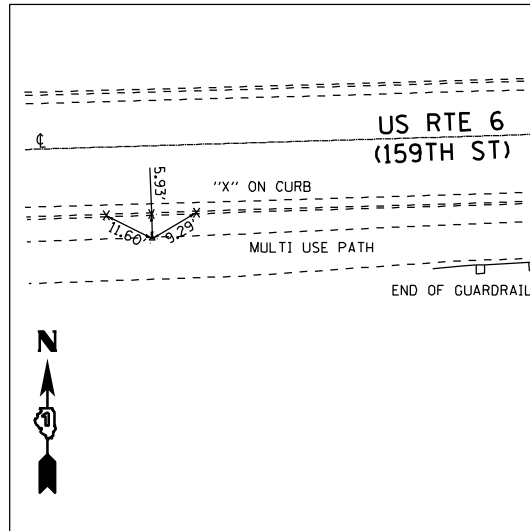
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PLOT DATE =	12/10/2021	DATE -	12/10/2021	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US RTE 6 (159TH STREET)
ALIGNMENT, TIES AND BENCHMARKS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	2021-150-BY	COOK	73	12
CONTRACT NO. 62P68				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONTROL POINT #MPS100

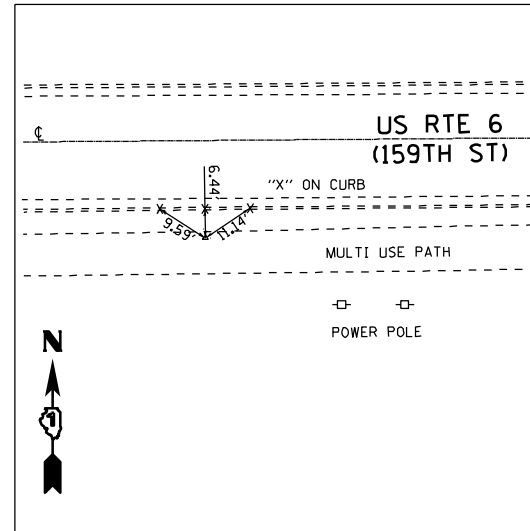
SET MAG NAIL IN BIT MULTI USE PATH

STA. 393+29.21, 46.45' RT.

N 1797528.943

E 1111549.981

ELEV. 690.394



CONTROL POINT #MPS101

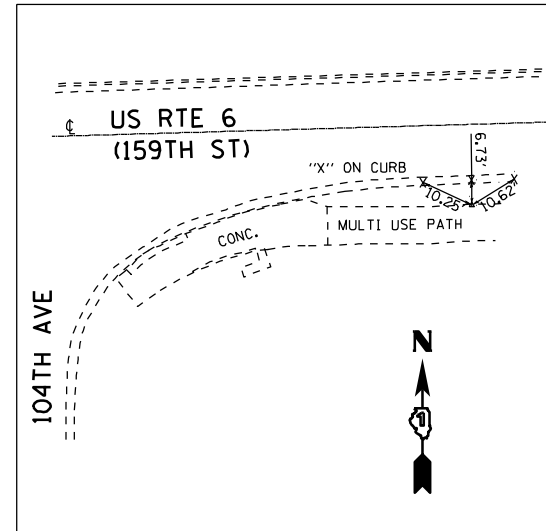
SET MAG NAIL IN BIT MULTI USE PATH

STA. 399+71.08, 47.02' RT.

N 1797546.917

E 1112191.607

ELEV. 687.424



CONTROL POINT #MPS102

SET MAG NAIL IN BIT MULTI USE PATH

STA. 383+00.64, 47.28' RT.

N 1797498.405

E 1110521.861

ELEV. 687.334

DATUM NOTE:

THE VERTICAL DATUM IS BASED ON THE ORIGINAL SURVEY DATUM (NGVD29). GPS RECEIVERS MUST BE CALIBRATED TO PROJECT CONTROLS.

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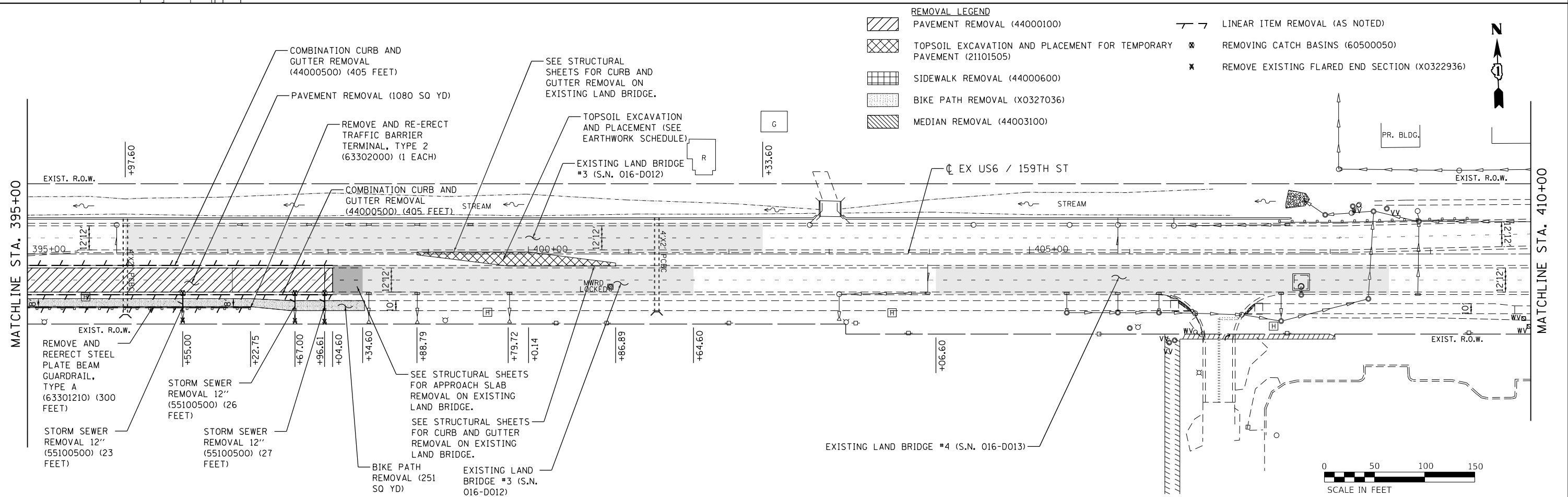
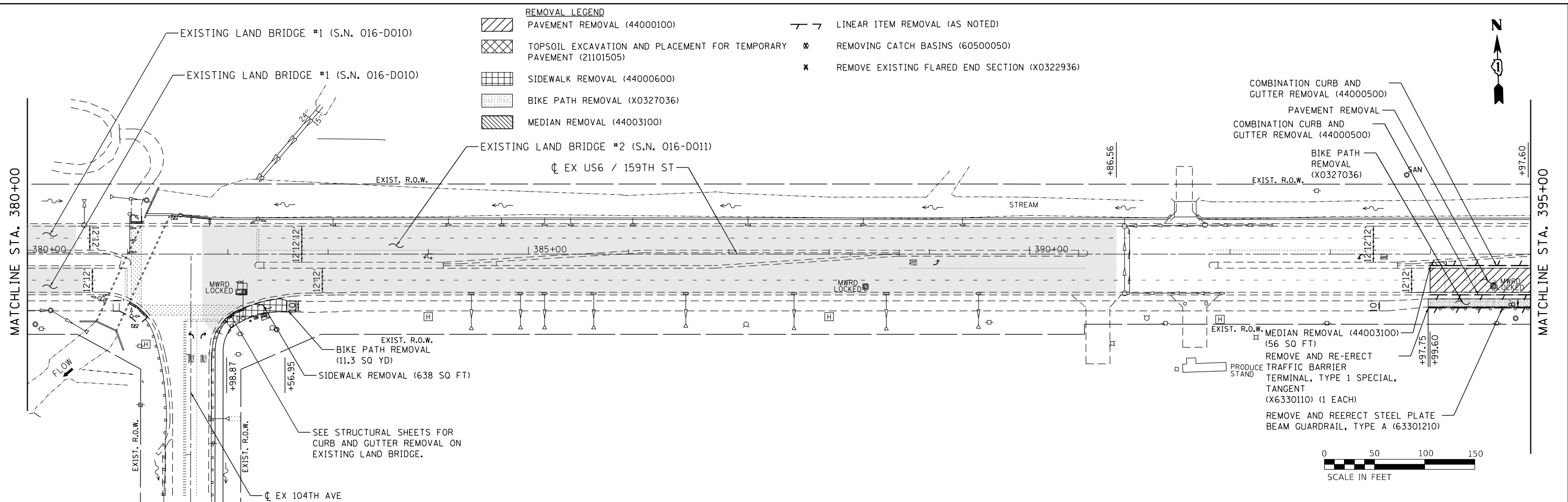
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	DRAWN - LN	REVISED -
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PLOT DATE = 12/10/2021	DATE - 12/10/2021	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US RTE 6 (159TH STREET)
ALIGNMENT, TIES AND BENCHMARKS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	2021-150-BY	COOK	73	13
CONTRACT NO. 62P68				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

USER NAME = GGFFORD	DESIGNED - JS	REVISED -
PLOT SCALE =	DRAWN - JS	REVISED -
PLOT DATE = 12/27/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

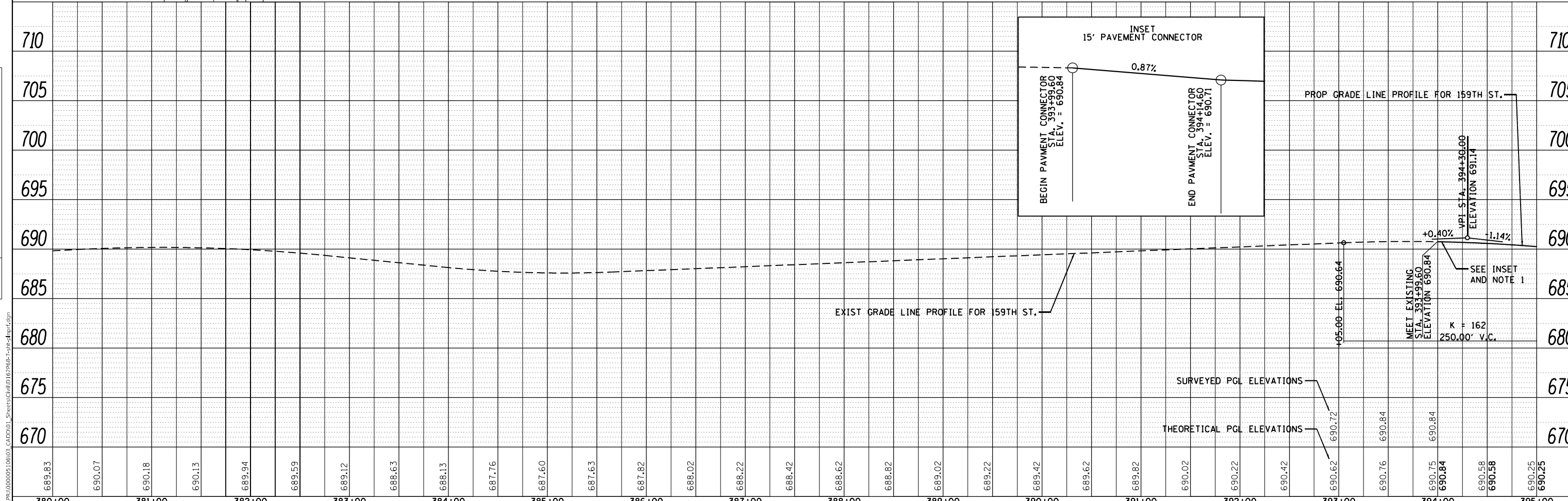
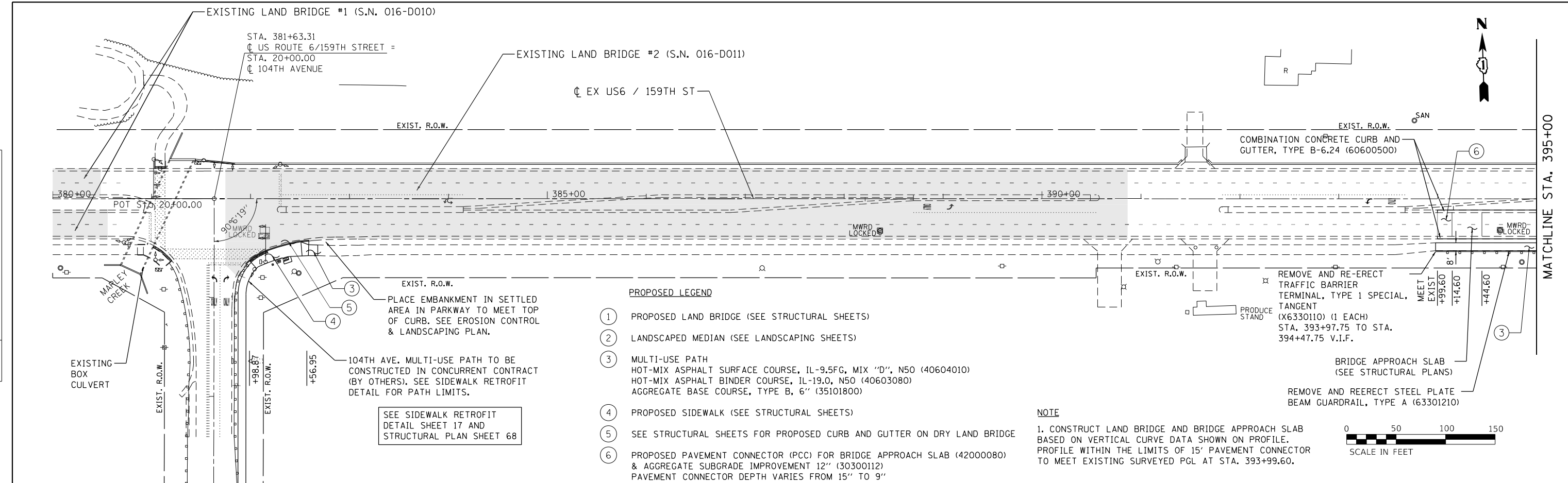
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
159TH STREET
 SCALE: 1"=50' SHEET 1 OF 1 SHEETS STA. 380+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	14
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNMENT CHECKED	
	NOTE BOOK	
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PROFILE	SURVEYED	DATE
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	FILE NAME	

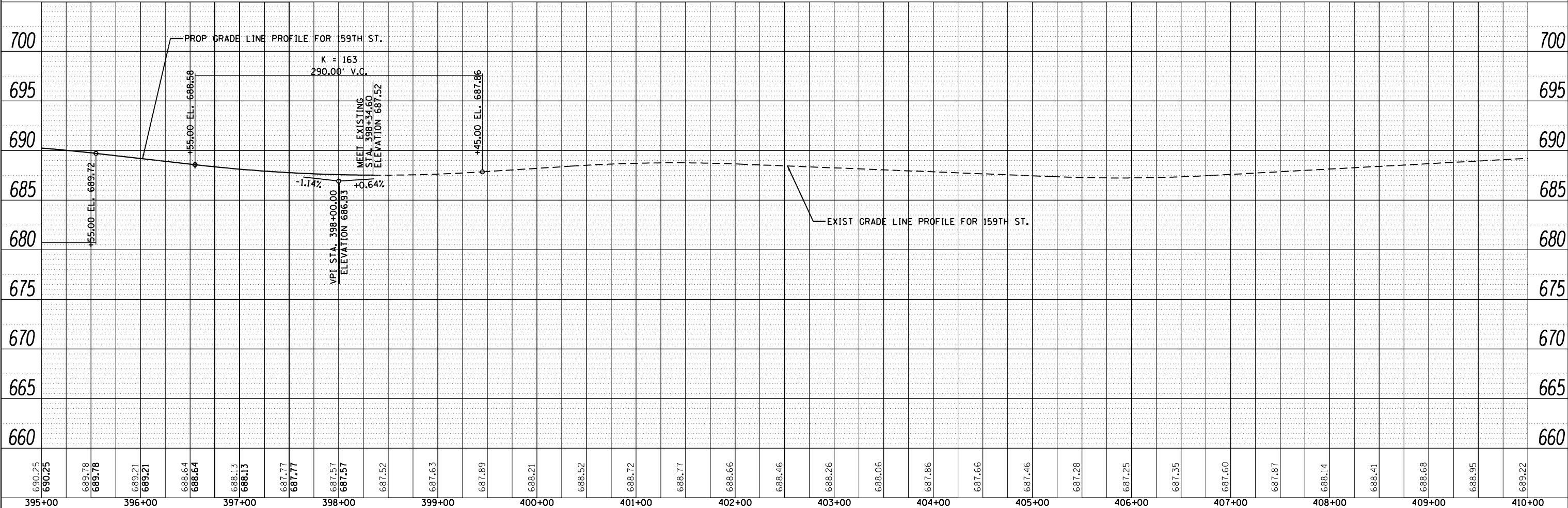
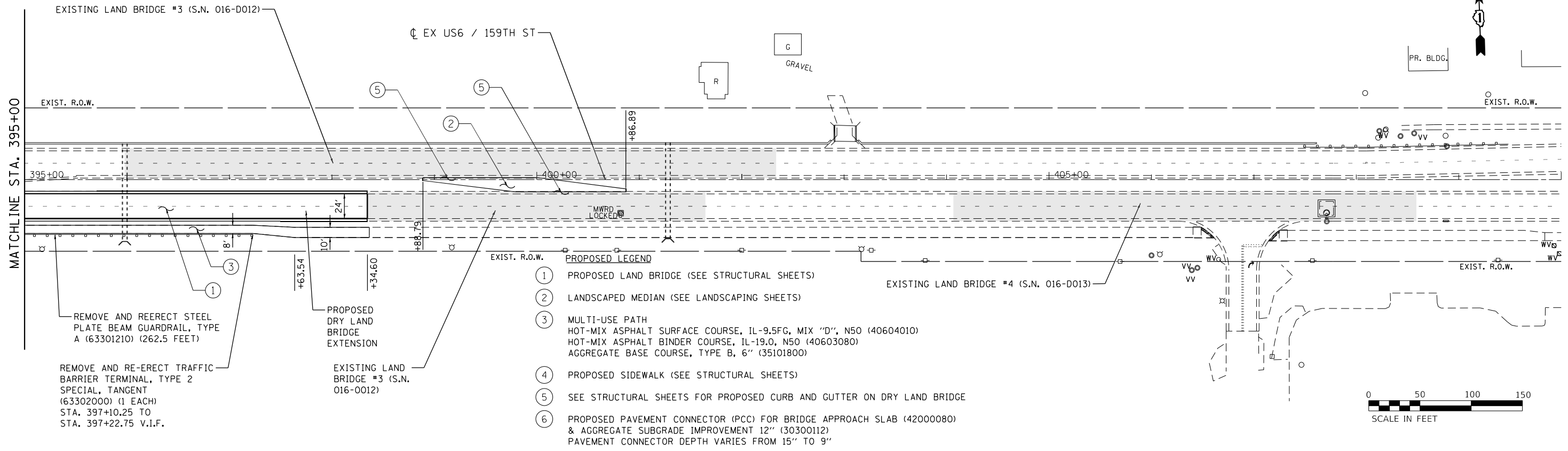


LOCHNER H. W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME = GGFFORD DESIGNED - JS DRAWN - JS CHECKED - AM DATE - 1/3/2022	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED ROADWAY PLAN & PROFILE 159TH STREET	SCALE: 1/4" = 30' SHEET 1 OF 2 SHEETS STA. 380+00 TO STA. 395+00	COUNTY COOK CONTRACT NO. 62P68	TOTAL SHEETS 73 SHEET NO. 15
	F.A.P. RTE. 351 SECTION 2021-150-BY ILLINOIS FED. AID PROJECT						

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
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	STRUCTURE NOTATION SHEET	

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LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

USER NAME = GGIFFORD	DESIGNED - JS	REVISED -
	DRAWN - JS	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED ROADWAY PLAN & PROFILE
159TH STREET

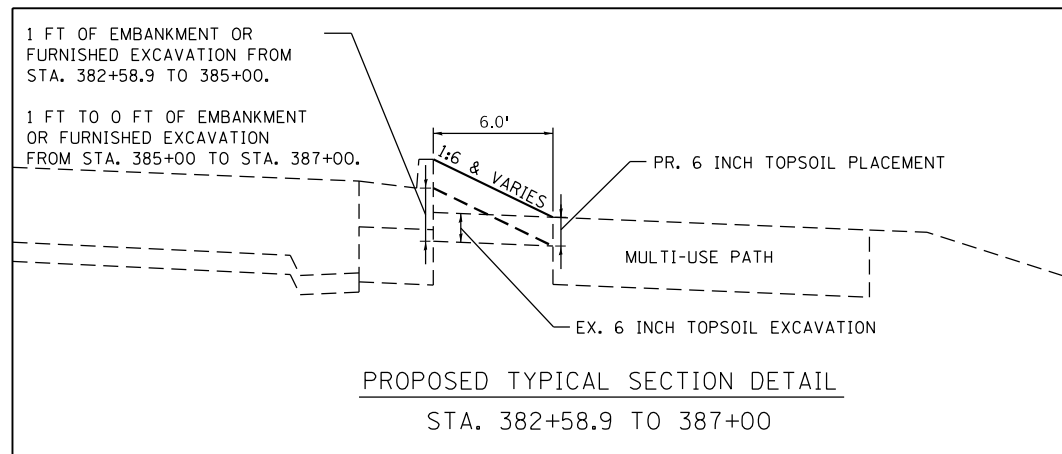
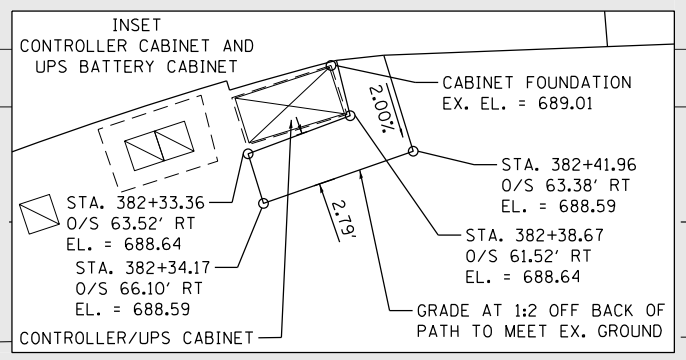
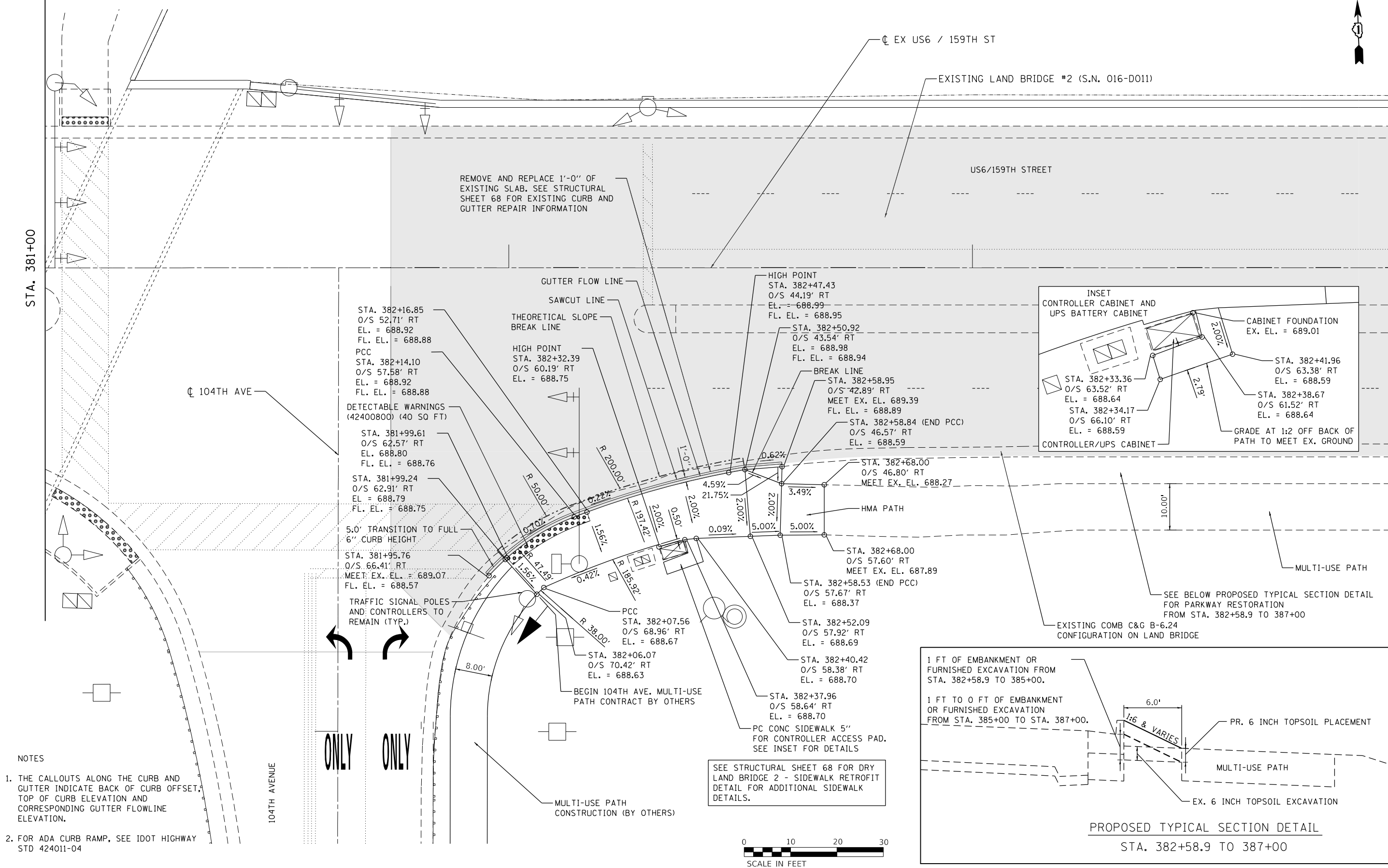
SCALE: 1" = 30'
 SHEET 2 OF 2 SHEETS
 STA. 395+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	16
				CONTRACT NO. 62P68
ILLINOIS FED. AID PROJECT				



STA. 381+00

STA. 384+00



- NOTES
1. THE CALLOUTS ALONG THE CURB AND GUTTER INDICATE BACK OF CURB OFFSET, TOP OF CURB ELEVATION AND CORRESPONDING GUTTER FLOWLINE ELEVATION.
 2. FOR ADA CURB RAMP, SEE IDOT HIGHWAY STD 424011-04

ONLY ONLY

SEE STRUCTURAL SHEET 68 FOR DRY LAND BRIDGE 2 - SIDEWALK RETROFIT DETAIL FOR ADDITIONAL SIDEWALK DETAILS.



LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
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	DATE - 1/3/2022	REVISED -

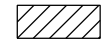










STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SIDEWALK RETROFIT DETAIL
 159TH STREET

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. 381+00 TO STA. 384+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	17
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

MAINTENANCE OF TRAFFIC LEGEND

	WORK ZONE
	TEMPORARY PAVEMENT
	DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT, SPACED @ 50' C-C
	DRUM, SPACED @ 50' C-C
	DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT, SPACED @ 50' C-C
	TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT, SPACED @ 50' C-C
	TUBULAR MARKER, SPACED @ 50' C-C
	TYPE III BARRICADE WITH FLASHING MONODIRECTIONAL LIGHTS
	FLASHING ARROW BOARD
	DIRECTION OF TRAFFIC
	STAGING SIGN

TEMPORARY PAVEMENT MARKING LEGEND

- (A) TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE, WHITE EDGE LINE (70307120)
- (B) TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE, YELLOW EDGE LINE (70307120)

MAINTENANCE OF TRAFFIC NOTES

- THE TRAFFIC CONTROL PLANS SHALL SERVE AS A GUIDE FOR SAFE DIVERSION OF TRAFFIC DURING EXECUTION OF THIS CONTRACT. HOWEVER, THE CONTRACTOR MAY IMPROVE OR MODIFY THE TRAFFIC CONTROL 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.
- ALL HIGHWAY TRAFFIC CONTROL STANDARDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE LUMP SUM PRICE FOR TRAFFIC CONTROL AND PROTECTION, SPECIAL.
- THE ENGINEER SHALL BE INFORMED 48 HOURS IN ADVANCE OF ANY CHANGE TO THE STAGING PLANS, OR ANY CHANGE IN STAGE.
- THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ACCESS TO ALL MINOR ROADS, ENTRANCES, AND APPROACHES WITHIN THE PROJECT LIMITS DURING CONSTRUCTION ACTIVITIES AT THE DIRECTION OF THE ENGINEER.
- ALL EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE COVERED OR REMOVED IN ACCORDANCE WITH ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS.
- ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE NOTED.
- ANY SAW CUTTING OF THE EXISTING PAVEMENT FOR STAGE CONSTRUCTION SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQ YD FOR "PAVEMENT REMOVAL".
- PRIOR TO INSTALLING POST MOUNTED SIGNS, THE CONTRACTOR SHALL CONTACT J.U.L.I.E.
- EXISTING PAVEMENT MARKINGS THAT INTERFERE WITH STAGE CONSTRUCTION PAVEMENT MARKINGS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR MUST VERIFY FIELD CONDITIONS BEFORE STARTING ANY WORK. CONFLICTS, DISCREPANCIES, OMISSIONS MUST BE REPORTED TO THE ENGINEER.
- ANY IDOT SIGN THAT IS COVERED OR CHANGED SHALL BE DONE IN A MANNER WHICH DOES NOT DAMAGE ANY SIGNS OR POSTS. ANY SIGN OR POST WHICH THE ENGINEER DETERMINES HAS BEEN DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S OWN EXPENSE.
- TRAFFIC CONTROL AND PROTECTION FOR THE SIDE ROADS, INTERSECTIONS AND DRIVEWAYS SHALL FOLLOW DISTRICT 1 DETAIL TC-10.
- THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN.HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- TEMPORARY INFORMATION SIGNING IS PROVIDED IN THE QUANTITIES AND ESTIMATES TO BE USED AT THE DISCRETION OF THE ENGINEER.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING IS THE CONSTRUCTION STAGING FOR THIS PROJECT. THE PURPOSE OF THIS STAGING IS TO MINIMIZE DELAYS TO THE MOTORIST. THE CONTRACTOR MAY ALTER THE SEQUENCE OF CONSTRUCTION WITH THE PRIOR APPROVAL OF THE ENGINEER. THE MAINTENANCE OF TRAFFIC AND CONSTRUCTION STAGING LISTED BELOW IS APPLICABLE FOR ALL STAGES OF WORK:

104TH INTERSECTION SIDEWALK REPAIR:

MAINTENANCE OF TRAFFIC:

- TRAFFIC ON 159TH ST. WILL REMAIN OPEN AND MAINTAINED IN BOTH DIRECTIONS, WITH TRAFFIC CUT DOWN FROM 2 LANES TO 1 THROUGH THE WORK ZONE.
- PLACE TRAFFIC CONTROL DEVICES ON 159TH ST. ACCORDING TO THE STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER. UTILIZE THE IDOT HIGHWAY STANDARDS LISTED ON PAGE 2.
- SHIFT 159TH ST. TRAFFIC TO TEMPORARY TRAFFIC LANES ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- ALL SIDE STREETS WILL REMAIN OPEN IN BOTH DIRECTIONS.
- UTILIZE BARRICADES TO PROTECT SIDE ROADS, DRIVEWAYS, AND INTERSECTIONS PER DISTRICT 1 DETAIL TC-10.
- UTILIZE EXISTING PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.
- CONTRACTOR TO MAINTAIN EXISTING TRAFFIC SIGNAL AT 104TH AVE. AND 159TH ST. THIS WORK WILL BE PAID FOR AS MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.
- CONTRACTOR TO UPDATE TRAFFIC SIGNAL TIMING AS APPROPRIATE DURING THIS STAGE, TO PREVENT DELAYS AND LONG QUEUES ALONG 159TH ST. THIS WORK SHALL BE PAID FOR AS TEMPORARY TRAFFIC SIGNAL TIMING.

CONSTRUCTION ACTIVITIES:

- REMOVE EXISTING CONCRETE SIDEWALK PAVEMENT AND DETECTABLE WARNING AT SE CORNER OF 159TH ST & 104TH AVE.
- REPLACE CONCRETE SIDEWALK AND DETECTABLE WARNING ACCORDING TO THE ADA PLANS AND PLAN AND PROFILES.

PRESTAGE:

MAINTENANCE OF TRAFFIC:

- TRAFFIC ON 159TH ST. WILL REMAIN OPEN AND MAINTAINED IN BOTH DIRECTIONS, WITH TRAFFIC CUT DOWN FROM 2 LANES TO 1 THROUGH THE WORK ZONE.
- PLACE TRAFFIC CONTROL DEVICES ON 159TH ST. ACCORDING TO THE STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER. UTILIZE THE IDOT HIGHWAY STANDARDS LISTED ON PAGE 2.
- SHIFT 159TH ST. TRAFFIC TO TEMPORARY TRAFFIC LANES ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- ALL SIDE STREETS WILL REMAIN OPEN IN BOTH DIRECTIONS.
- UTILIZE BARRICADES TO PROTECT SIDE ROADS, DRIVEWAYS, AND INTERSECTIONS PER DISTRICT 1 DETAIL TC-10.
- UTILIZE EXISTING PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.

CONSTRUCTION ACTIVITIES:

- REMOVE EXISTING MEDIAN AND CURB AND GUTTER ALONG 159TH ST. AS CALLED OUT ON THE STAGING AND TRAFFIC CONTROL PLANS, STRUCTURAL DRAWINGS, AND AS DIRECTED BY THE ENGINEER.
- CONSTRUCT TEMPORARY PAVEMENT ALONG MEDIAN ON 159TH ST. ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.

STAGE 1:

MAINTENANCE OF TRAFFIC:

- REPLACE ALL PRESTAGE TRAFFIC CONTROL DEVICES WITH STAGE 1 TRAFFIC CONTROL DEVICES ON 159TH ST. ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- TRAFFIC ON 159TH ST. WILL REMAIN OPEN AND MAINTAINED IN BOTH DIRECTIONS, WITH TRAFFIC CUT DOWN FROM 2 LANES TO 1 THROUGH THE WORK ZONE.
- SHIFT 159TH ST. TRAFFIC TO TEMPORARY TRAFFIC LANES ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- ALL SIDE STREETS WILL REMAIN OPEN IN BOTH DIRECTIONS.
- UTILIZE BARRICADES TO PROTECT SIDE ROADS, DRIVEWAYS, AND INTERSECTIONS PER DISTRICT 1 DETAIL TC-10.
- UTILIZE EXISTING PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.

CONSTRUCTION ACTIVITIES:

- CONSTRUCT EXTENSION OF DRY LAND BRIDGE AS NOTED ON THE STRUCTURAL PLANS, STAGING AND TRAFFIC CONTROL PLANS, AND AS DIRECTED BY THE ENGINEER.

STAGE 2:

MAINTENANCE OF TRAFFIC:

- TRAFFIC ON 159TH ST. WILL REMAIN OPEN AND MAINTAINED IN BOTH DIRECTIONS, WITH TRAFFIC CUT DOWN FROM 2 LANES TO 1 THROUGH THE WORK ZONE.
- REPLACE ALL STAGE 1 TRAFFIC CONTROL DEVICES WITH STAGE 2 TRAFFIC CONTROL DEVICES ON 159TH ST. ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- SHIFT 159TH ST. TRAFFIC TO TEMPORARY TRAFFIC LANES ACCORDING TO STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- ALL SIDE STREETS WILL REMAIN OPEN IN BOTH DIRECTIONS.
- UTILIZE BARRICADES TO PROTECT SIDE ROADS, DRIVEWAYS, AND INTERSECTIONS PER DISTRICT 1 DETAIL TC-10.
- UTILIZE EXISTING PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.

CONSTRUCTION ACTIVITIES:

- REMOVE EXISTING TEMPORARY PAVEMENT ALONG MEDIAN AREA ON 159TH ST. AS SHOWN ON STAGING AND TRAFFIC CONTROL PLANS AND AS DIRECTED BY THE ENGINEER.
- CONSTRUCT MEDIAN AND CURB AND GUTTER ALONG 159TH ST. AS SHOWN ON STRUCTURAL PLANS, STAGING AND TRAFFIC CONTROL PLANS, AND AS DIRECTED BY THE ENGINEER.

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H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

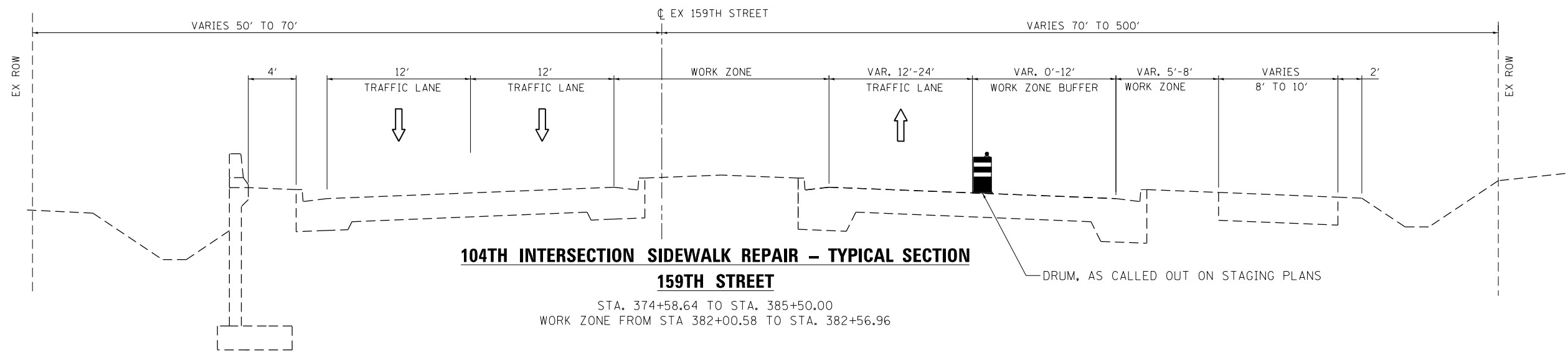
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC LEGEND, GENERAL NOTES, AND SEQUENCE
159TH STREET

SCALE: N/A SHEET 1 OF 1 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	18
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



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 CHICAGO, ILLINOIS 60606

LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

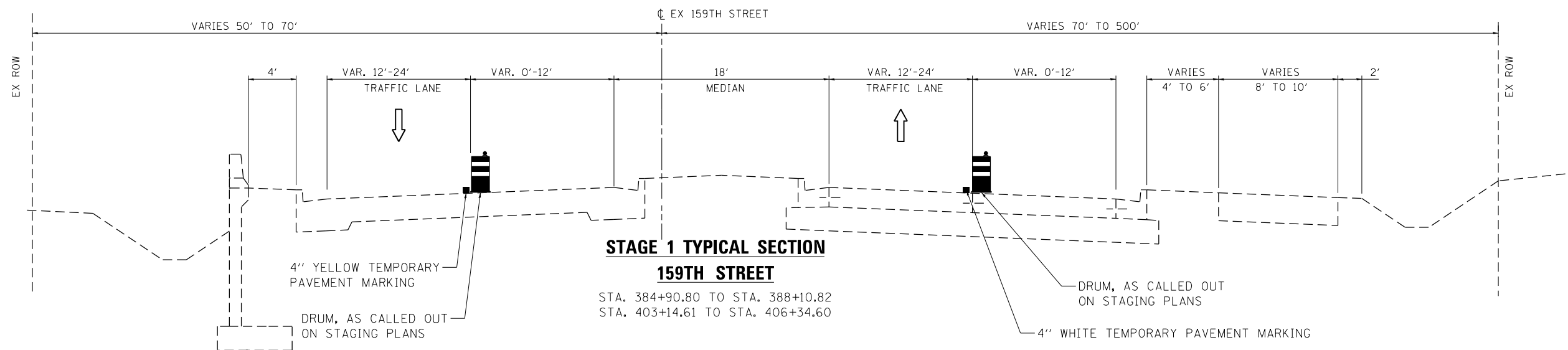
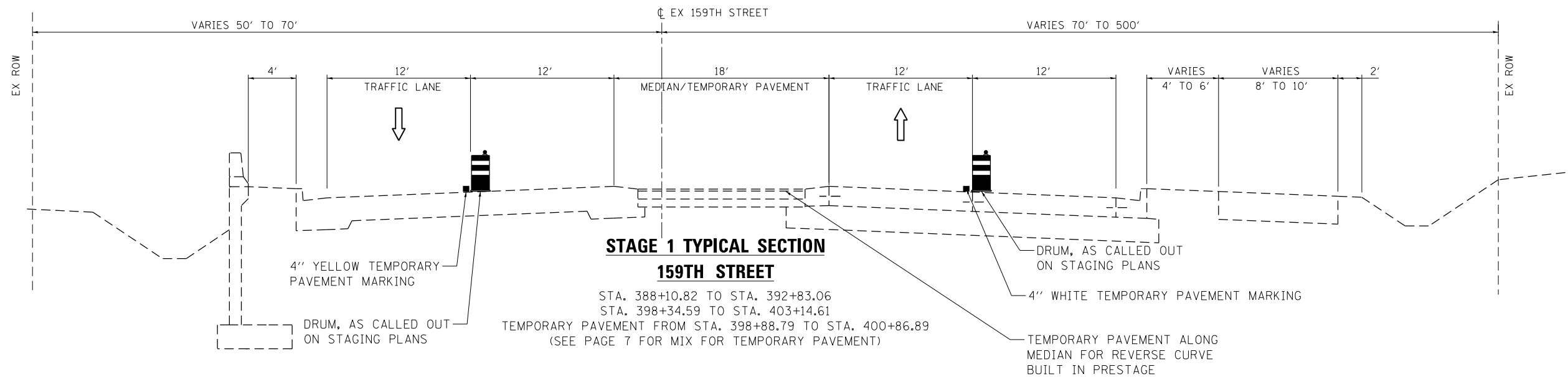
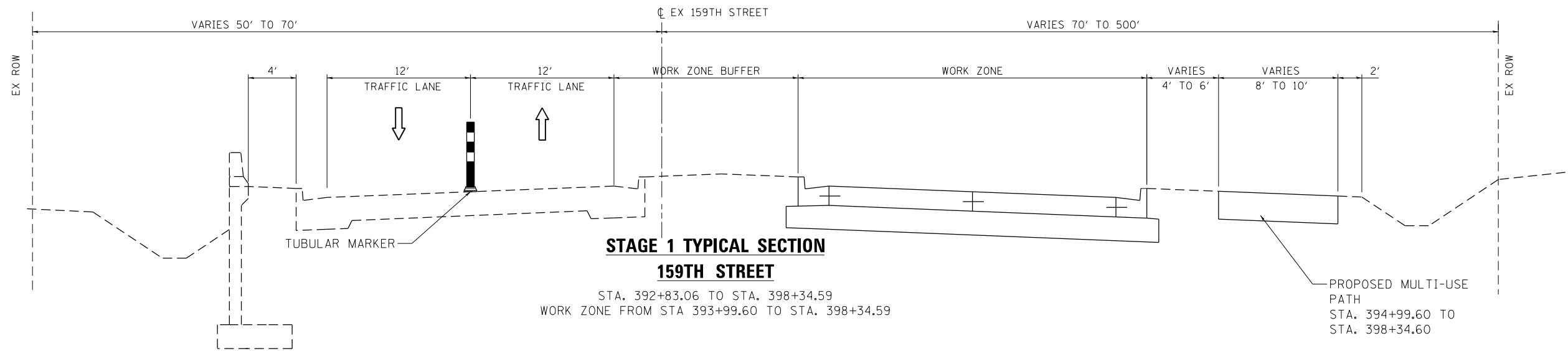
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS – SIDEWALK RETROFIT
159TH STREET

SCALE: N/A SHEET 1 OF 3 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	19
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

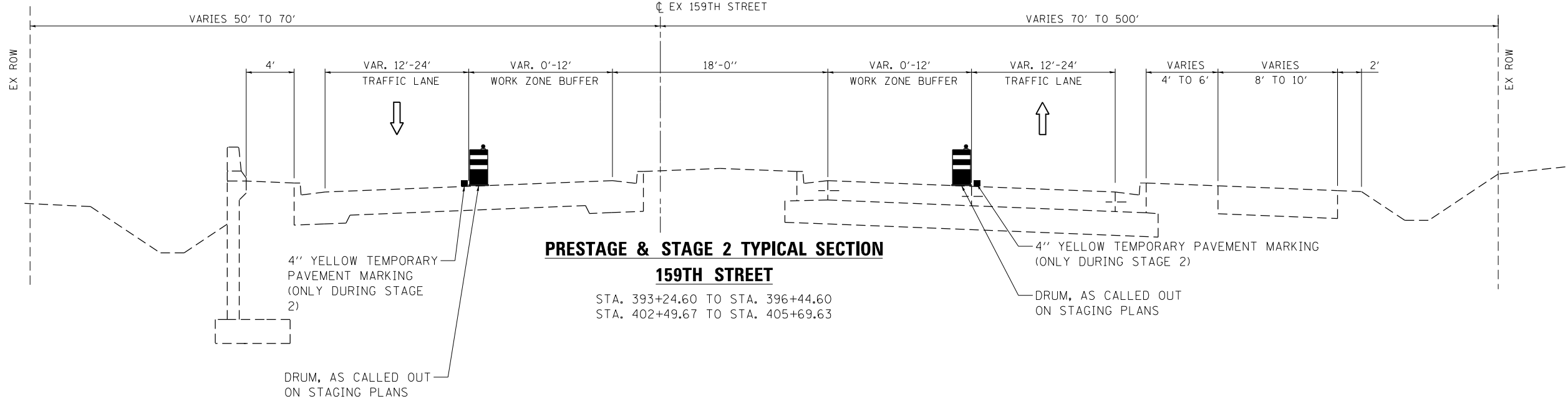
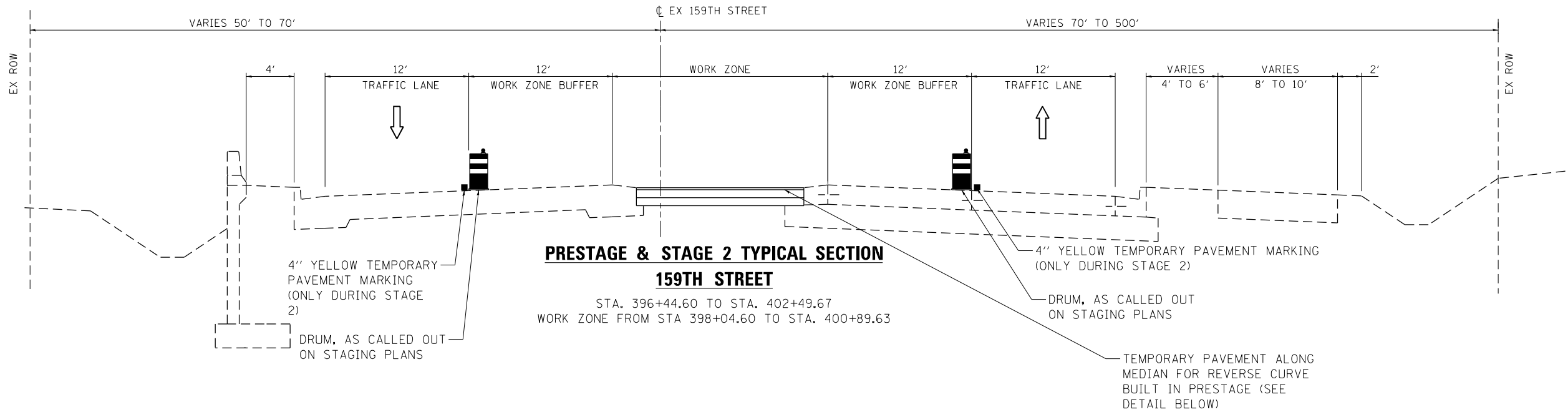
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOT TYPICAL SECTIONS - STAGE 1
159TH STREET

SCALE: N/A SHEET 2 OF 3 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	20
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



TEMPORARY PAVEMENT DETAIL

	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5FG), 2"
	HOT-MIX ASPHALT BINDER COURSE, N70 (IL-19.0), 8"
	SUBBASE GRANULAR MATERIAL, TYPE B, 8"

PRESTAGE: CONTRACTOR TO EXCAVATE 24" OF TOPSOIL, AND BUILD 18" OF TEMPORARY PAVEMENT PER ABOVE DETAIL.

STAGE 2: CONTRACTOR TO REMOVE 18" OF TEMPORARY PAVEMENT AND PLACE 24" OF TOPSOIL TO MATCH EXISTING CONDITION.

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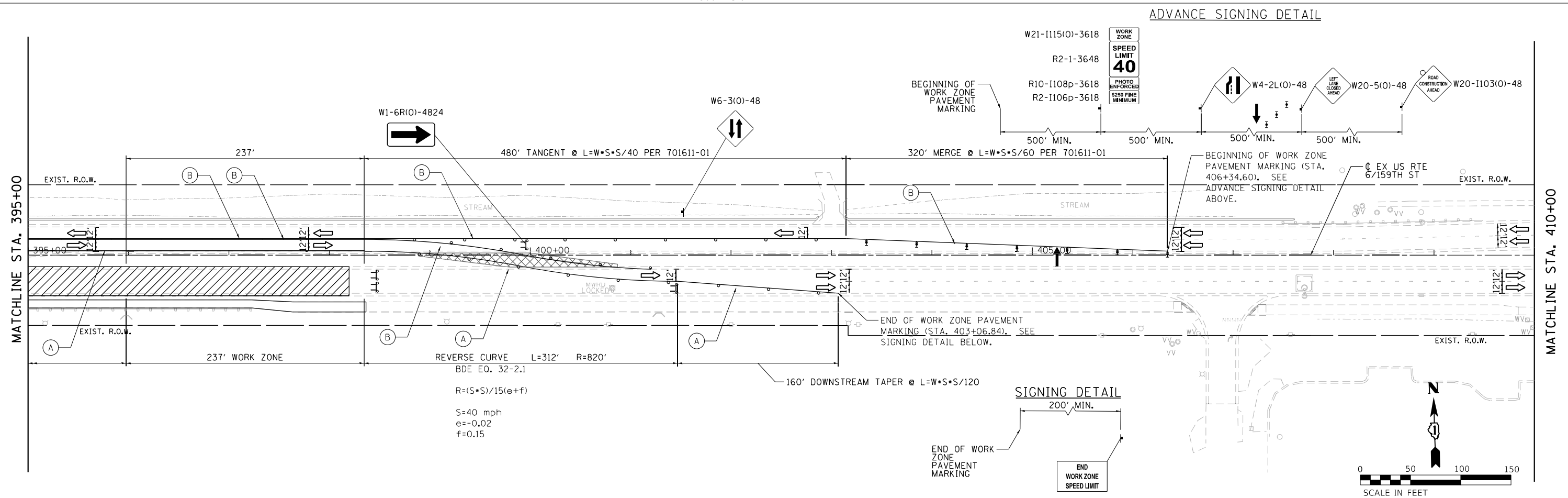
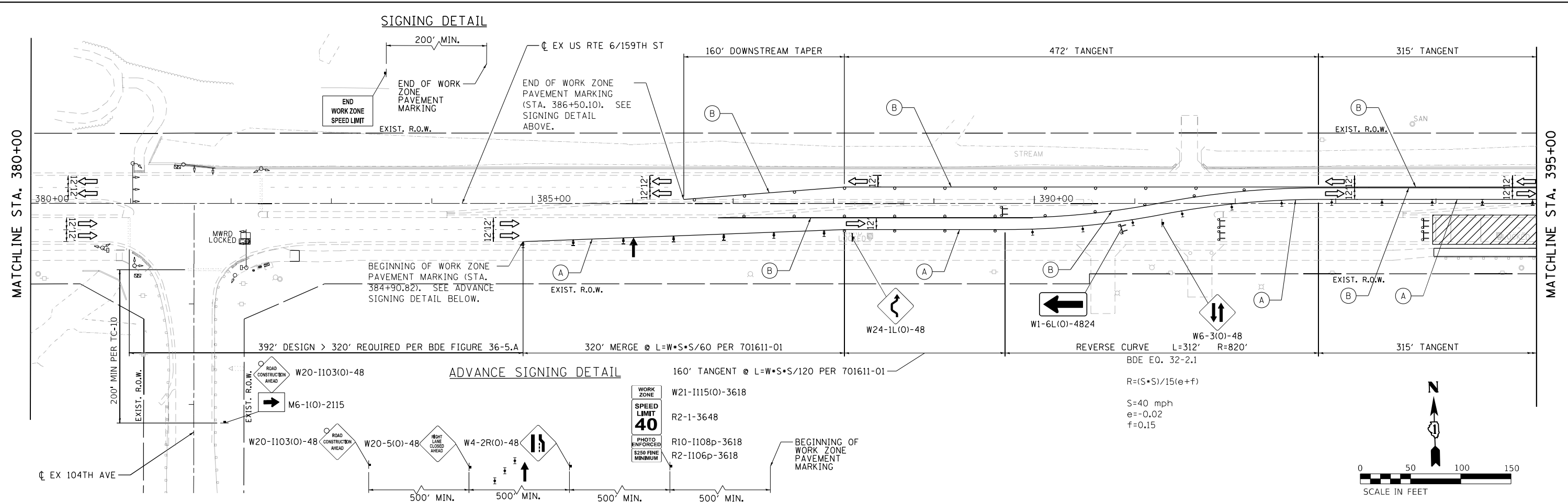
LOCHNER
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 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

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PLOT DATE = 12/27/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

MOT TYPICAL SECTIONS – PRESTAGE & STAGE 2 159TH STREET				
SCALE: N/A	SHEET 3	OF 3 SHEETS	STA. N/A	TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	21
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

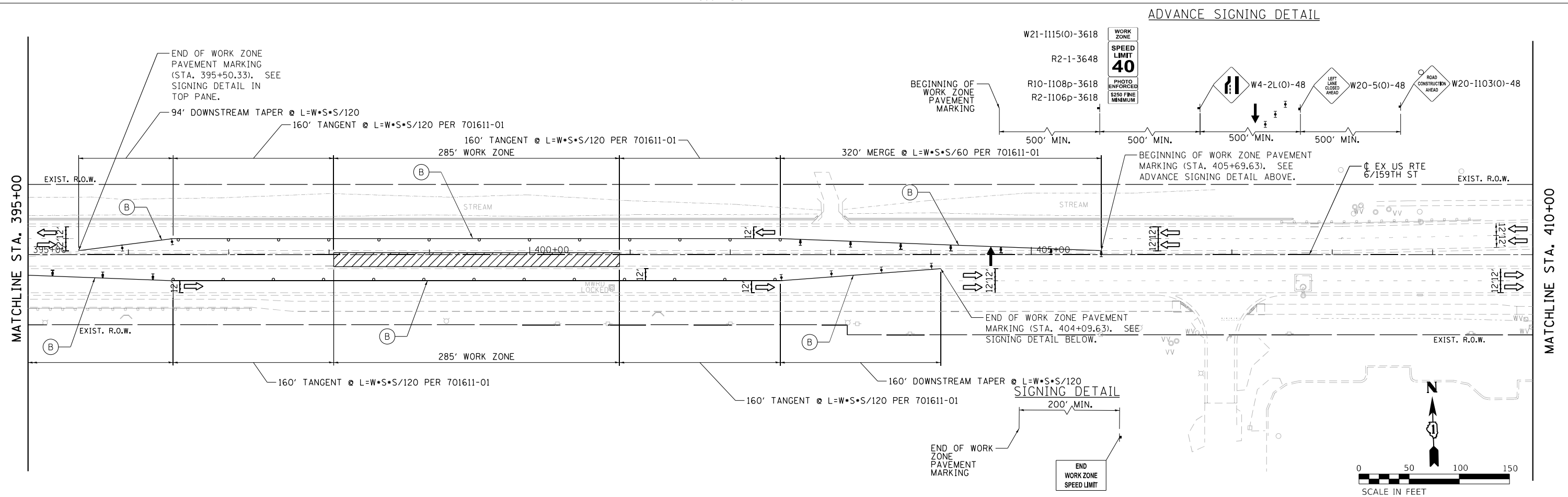
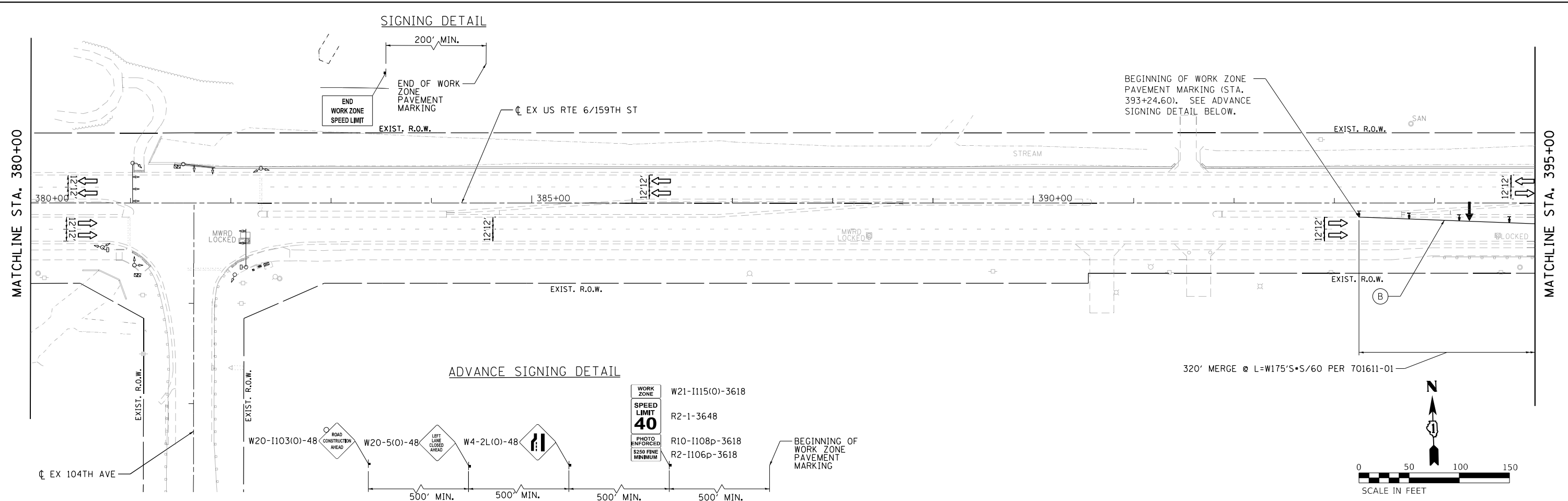
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PLOT DATE = 12/27/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC – STAGE 1
 159TH STREET**

SCALE: 1"=50' SHEET 2 OF 3 SHEETS STA. 380+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	22
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



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 DATE: 12/27/2021

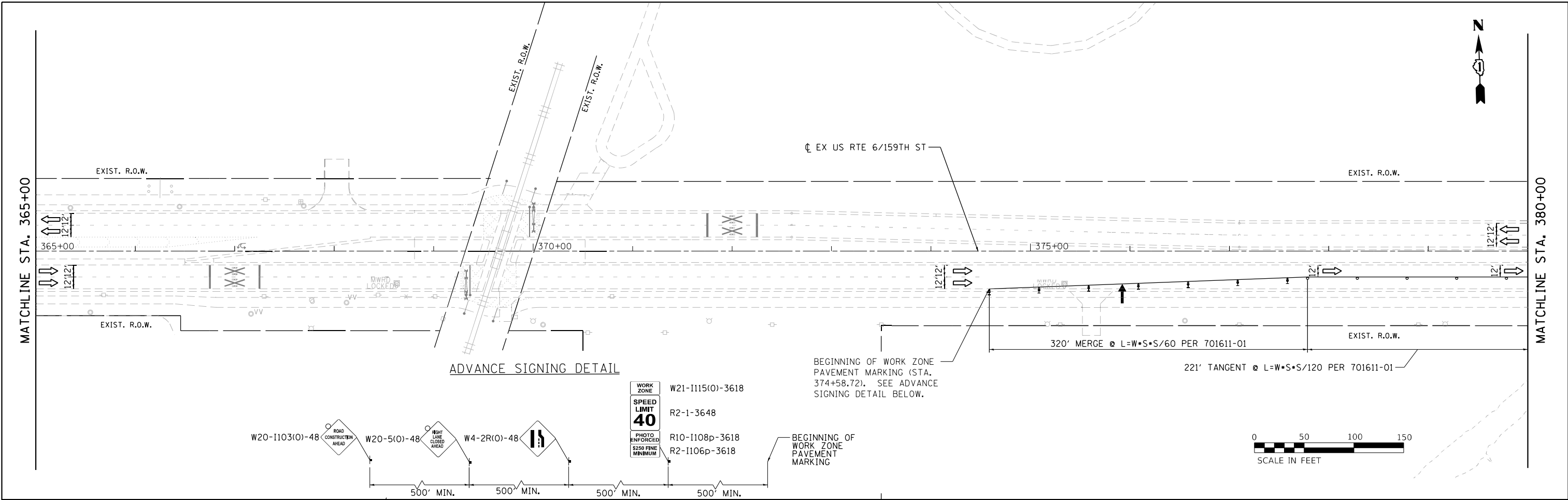
LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

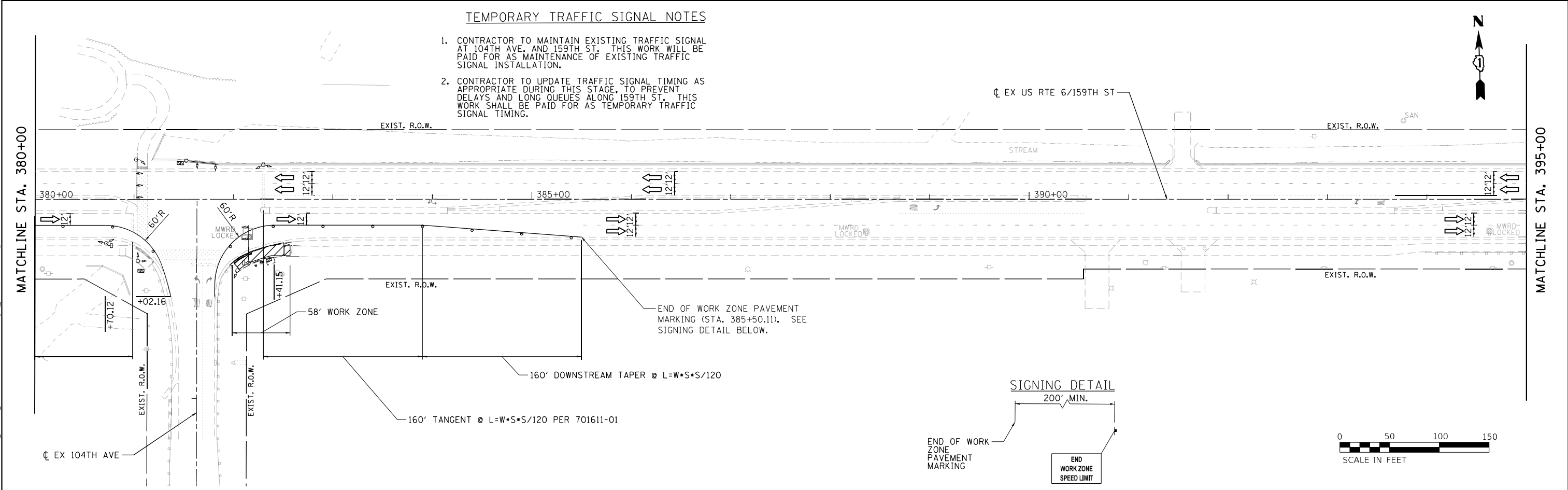
MAINTENANCE OF TRAFFIC – PRESTAGE & STAGE 2
159TH STREET
 SCALE: 1"=50' SHEET 3 OF 3 SHEETS STA. 380+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	23
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



TEMPORARY TRAFFIC SIGNAL NOTES

1. CONTRACTOR TO MAINTAIN EXISTING TRAFFIC SIGNAL AT 104TH AVE. AND 159TH ST. THIS WORK WILL BE PAID FOR AS MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.
2. CONTRACTOR TO UPDATE TRAFFIC SIGNAL TIMING AS APPROPRIATE DURING THIS STAGE, TO PREVENT DELAYS AND LONG QUEUES ALONG 159TH ST. THIS WORK SHALL BE PAID FOR AS TEMPORARY TRAFFIC SIGNAL TIMING.



LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

USER NAME = GGFFORD	DESIGNED - JS	REVISED -
PLOT SCALE =	DRAWN - JS	REVISED -
PLOT DATE = 12/29/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC – 104TH INTERSECTION SIDEWALK RETROFIT
 159TH STREET**

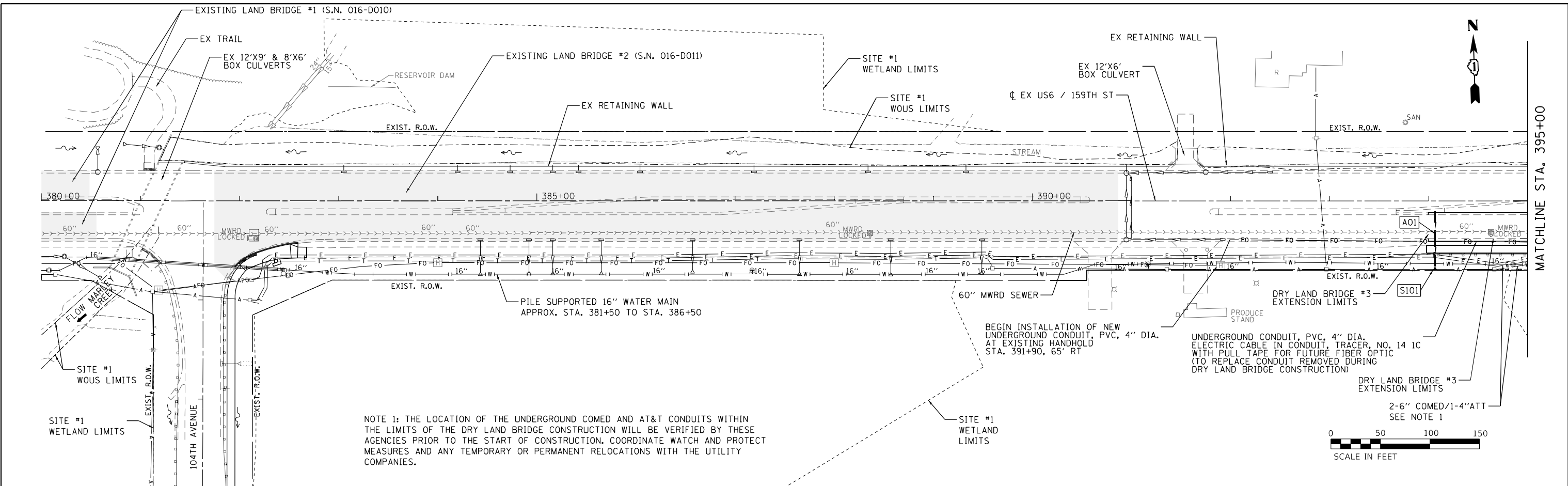
SCALE: 1"=50' SHEET 1 OF 3 SHEETS STA. 365+00 TO STA. 395+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	24
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

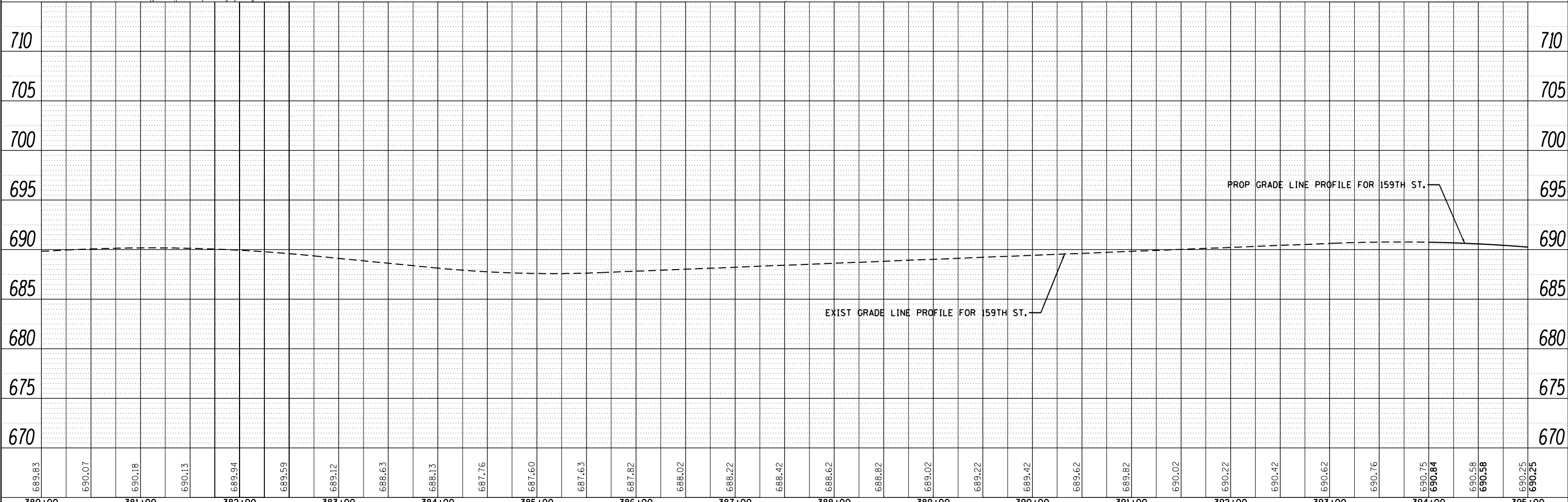
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PROFILE	SURVEYED	DATE
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NOTE 1: THE LOCATION OF THE UNDERGROUND COMED AND AT&T CONDUITS WITHIN THE LIMITS OF THE DRY LAND BRIDGE CONSTRUCTION WILL BE VERIFIED BY THESE AGENCIES PRIOR TO THE START OF CONSTRUCTION. COORDINATE WATCH AND PROTECT MEASURES AND ANY TEMPORARY OR PERMANENT RELOCATIONS WITH THE UTILITY COMPANIES.



380+00	381+00	382+00	383+00	384+00	385+00	386+00	387+00	388+00	389+00	390+00	391+00	392+00	393+00	394+00	395+00																		
689.83	690.07	690.18	690.13	689.94	689.59	689.12	688.63	688.13	687.76	687.60	687.63	687.82	688.02	688.22	688.42	688.62	688.82	689.02	689.22	689.42	689.62	689.82	690.02	690.22	690.42	690.62	690.76	690.75	690.84	690.58	690.58	690.25	690.25

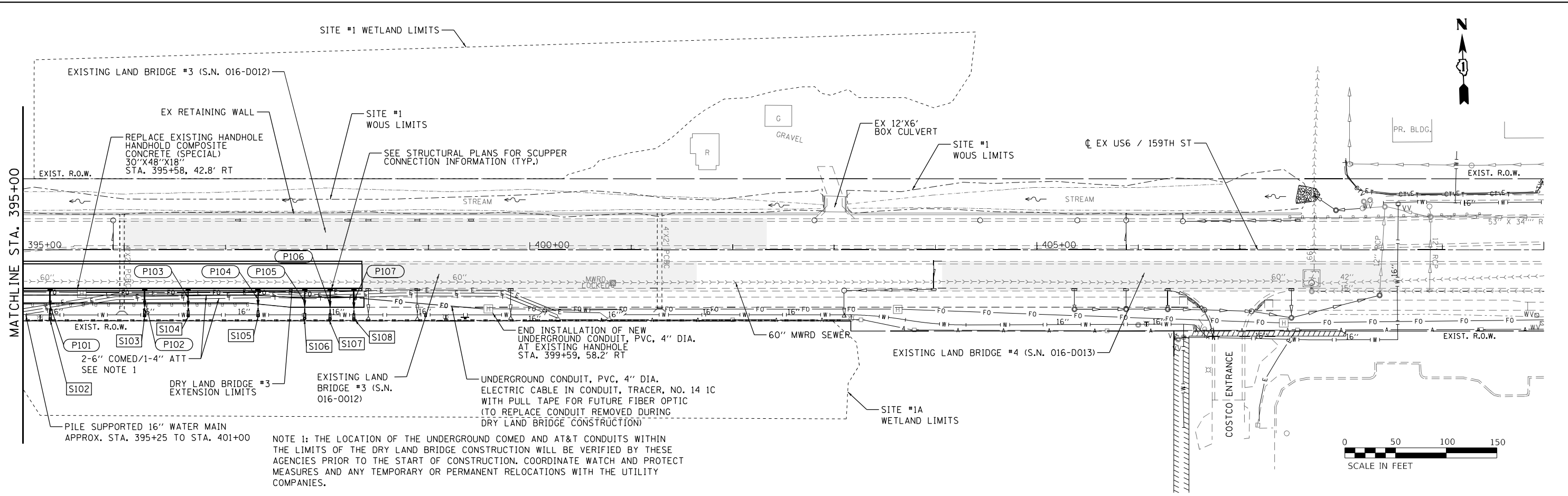
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

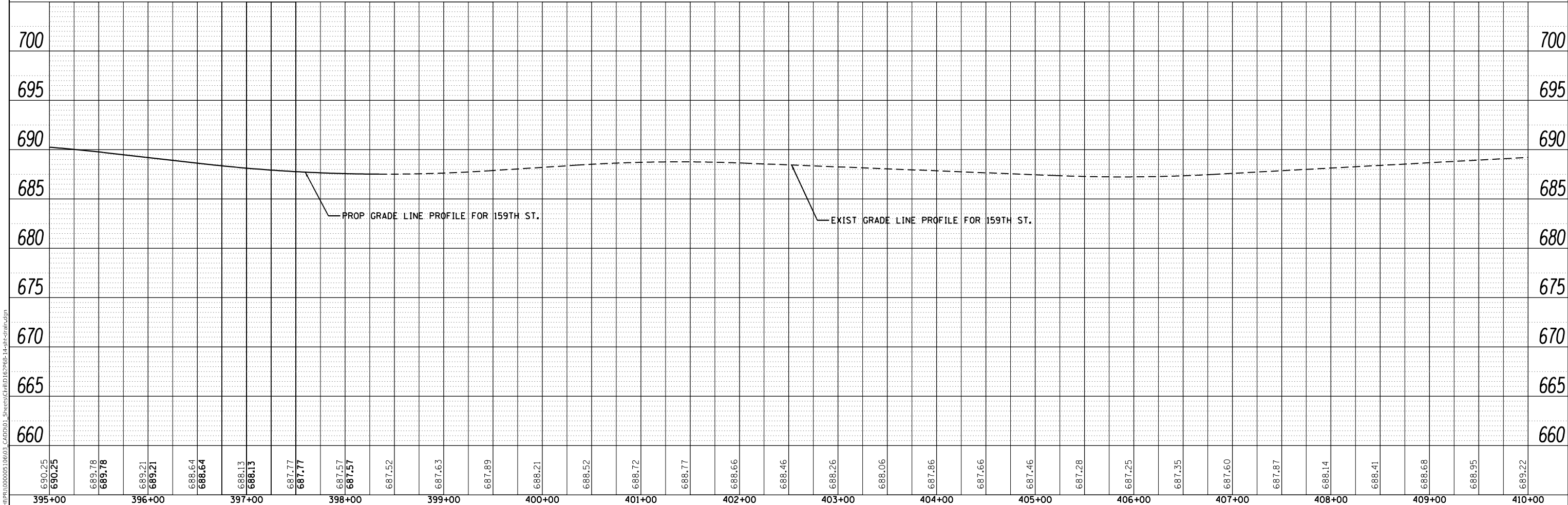
DRAINAGE & UTILITY PLAN AND PROFILE			
159TH STREET			
SCALE: 1" = 50'	SHEET	OF SHEETS	STA. 380+00 TO STA. 395+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
COOK	2021-150-BY	COOK	73	25
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	GRADES CHECKED	
	STRUCTURE NOTATION CHECKED	
NOTE BOOK NO.	CADD FILE NAME	



PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION CHECKED	
NOTE BOOK NO.	NOTATION SHIPPED	



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STRUCTURE SCHEDULE										
STRUCTURE NO.	LOCATION			TYPE	CONC THRUST BLOCKS	RIM ELEV.	INVERT ELEVATION			
	STATION	OFFSET					NORTH	SOUTH	EAST	WEST
S101	394+06.2	69.8	RT	CONC HDWL FOR P DRAIN			684.94			
S102	395+27.0	69.1	RT	PRC FLAR END SEC 12	1		682.20			
S103*	396+20.0	66.0	RT	PRC FLAR END SEC 12	1		682.84			
S104*	396+63.0	66.0	RT	PRC FLAR END SEC 12	1		682.37			
S105*	397+32.0	66.0	RT	PRC FLAR END SEC 12	1		682.38			
S106	397+78.0	68.4	RT	PRC FLAR END SEC 12	1		681.77			
S107	398+03.0	69.0	RT	PRC FLAR END SEC 12	1		681.72			
S108	398+26.5	69.1	RT	PRC FLAR END SEC 12	1		681.67			
					TOTAL	7				

*INSTALL ABOVE EXISTING TRIAX GEOGRID/GEO-FABRIC WRAP AROUND & GRANULAR BACKFILL (SEE CROSS SECTIONS)

STORM SEWER SCHEDULE							
SEWER NO.	TYPE	FROM	TO	SIZE (INCH)	LENGTH (FEET)	SLOPE (%)	TBF (CU YD)
P101	STORM SEW CL A 2	*	S102	12	10.5	1.00	-
P102	STORM SEW CL A 2	*	S103	12	7.3	1.00	-
P103	STORM SEW CL A 2	*	S104	12	7.3	1.00	-
P104	STORM SEW CL A 2	*	S105	12	6.4	1.00	-
P105	STORM SEW CL A 2	*	S106	12	5.8	1.00	-
P106	STORM SEW CL A 2	*	S107	12	6.3	1.00	-
P107	STORM SEW CL A 2	*	S108	12	6.5	1.00	-

*MEASURED FROM PROPOSED THRUST BLOCK LOCATION FOR BRIDGE DRAINAGE SYSTEM (BACK EDGE OF PATH)

PIPE UNDERDRAIN SCHEDULE							
SEWER NO.	STATION	TYPE	U/S INV ELEV.	LENGTH (FEET)	SLOPE (%)	D/S INV ELEV.	CONNECTING DRAIN STRUCTURE
A01	394+06.2	PIPE UNDERDR T 1 4	688.63	30	0.50	688.48	40.58' RT
		PIPE UNDERDRAIN 4 SP	688.48	26	13.62	684.94	S101

NOTE: MAINTAIN 2.1 FOOT DEPTH AND 0.5% SLOPE UNDERNEATH THE PAVEMENT

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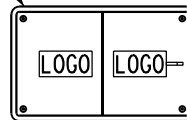
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAINAGE SCHEDULES 159TH STREET			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	27
			CONTRACT NO. 62P68	
		ILLINOIS	FED. AID PROJECT	

LID SHALL BE 2-PIECE GASKETED, BOLTED AND HAVE LOGO THAT READS: "VILLAGE OF ORLAND PARK LOGO - FIBER OPTIC"



LID SHALL BE FLUSH WITH GRADE

3/8-16 UNC STAINLESS STEEL HEX HEAD BOLT W/ WASHER (2)

CABLE HOOK

(2) 30"x48"x18"D STACKED POLYMER CONCRETE HANDHOLES (DEPTH, D, SPECIFIED IN PLANS) (TYPE QUAZITE PG STYLE)

OPEN BOTTOM

36" MINIMUM

CONDUITS AS SHOWN ON PLANS TO EXTEND 2" ABOVE STONE BASE (MAX. 10° BEND INTO HANDHOLE)

12" CRUSHED STONE FOR DRAIN

NOTES:

1. POLYMER CONCRETE HANDHOLE AND LID SHALL BE GREY.
2. BOX & LID SHALL MEET/EXCEED ANSI TIER 15 LOADING REQUIREMENTS AND BE UL LISTED.

HANDHOLE, COMPOSITE CONCRETE (SPECIAL)

N. T. S.

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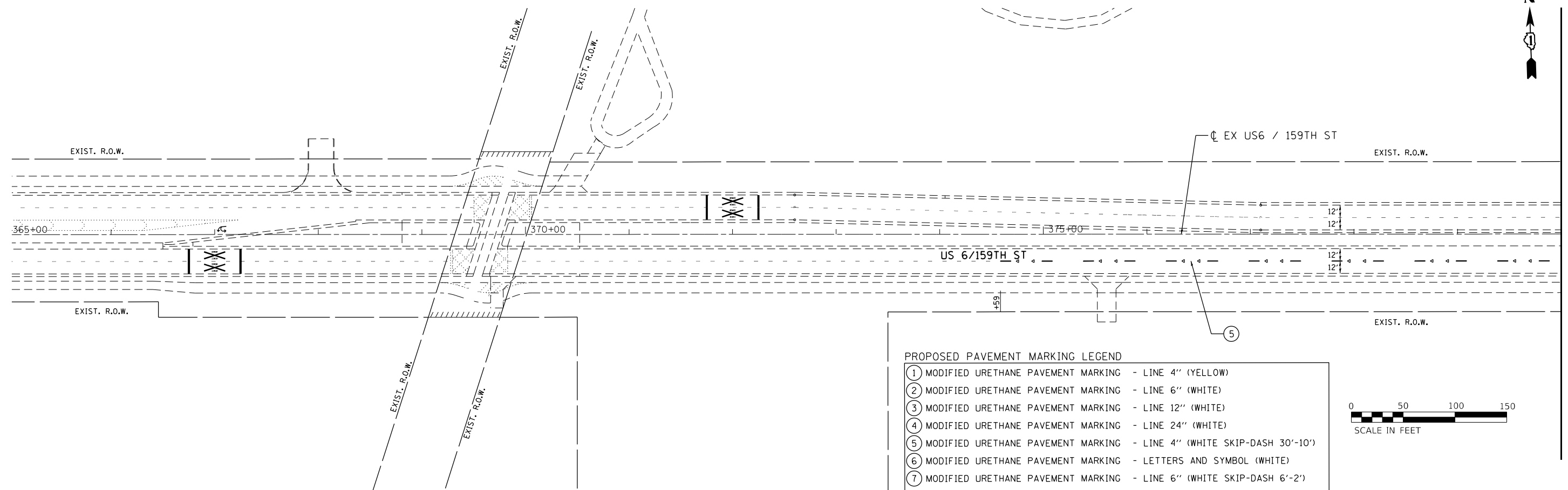
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PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE & UTILITY DETAILS
159TH STREET**

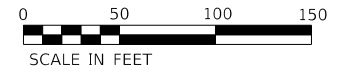
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	28
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



PROPOSED PAVEMENT MARKING LEGEND

①	MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (YELLOW)
②	MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE)
③	MODIFIED URETHANE PAVEMENT MARKING - LINE 12" (WHITE)
④	MODIFIED URETHANE PAVEMENT MARKING - LINE 24" (WHITE)
⑤	MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (WHITE SKIP-DASH 30'-10')
⑥	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOL (WHITE)
⑦	MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE SKIP-DASH 6'-2')



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 CHICAGO, ILLINOIS 60606

LOCHNER
 H. W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

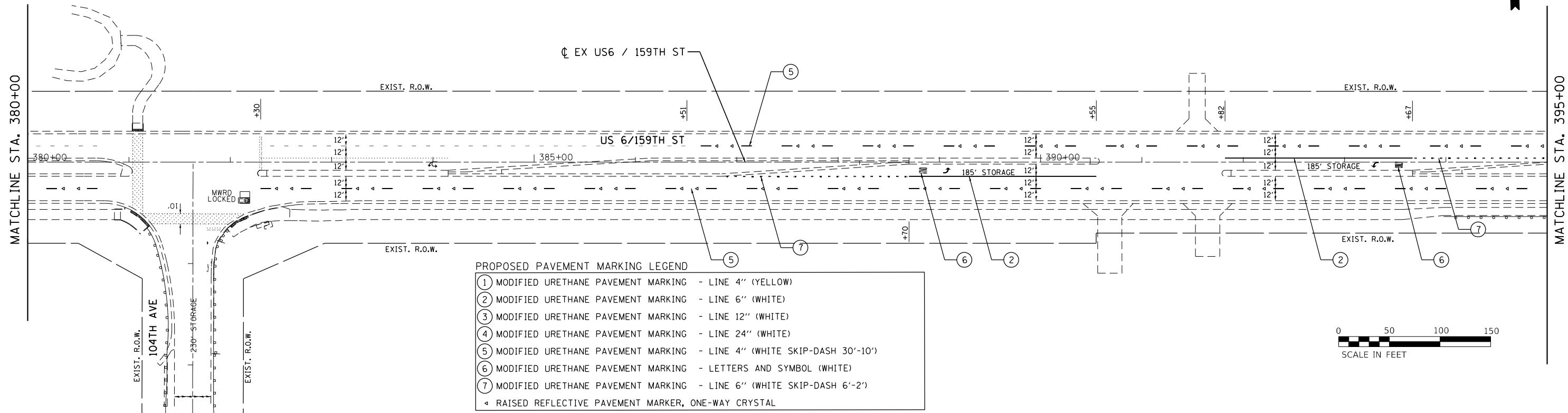
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PLOT DATE = 12/29/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
 159TH STREET

SCALE: 1"=50' SHEET 1 OF 2 SHEETS STA. 365+00 TO STA. 380+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	29
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

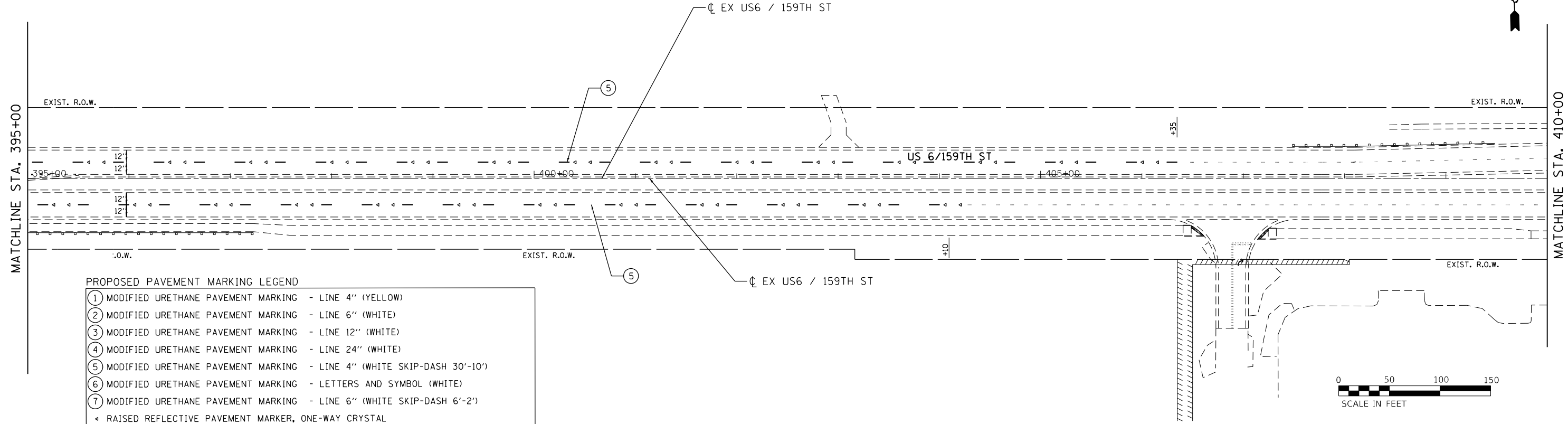


- PROPOSED PAVEMENT MARKING LEGEND**
- ① MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (YELLOW)
 - ② MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE)
 - ③ MODIFIED URETHANE PAVEMENT MARKING - LINE 12" (WHITE)
 - ④ MODIFIED URETHANE PAVEMENT MARKING - LINE 24" (WHITE)
 - ⑤ MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (WHITE SKIP-DASH 30'-10')
 - ⑥ MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOL (WHITE)
 - ⑦ MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE SKIP-DASH 6'-2')
 - ◄ RAISED REFLECTIVE PAVEMENT MARKER, ONE-WAY CRYSTAL



MATCHLINE STA. 395+00

MATCHLINE STA. 380+00



- PROPOSED PAVEMENT MARKING LEGEND**
- ① MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (YELLOW)
 - ② MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE)
 - ③ MODIFIED URETHANE PAVEMENT MARKING - LINE 12" (WHITE)
 - ④ MODIFIED URETHANE PAVEMENT MARKING - LINE 24" (WHITE)
 - ⑤ MODIFIED URETHANE PAVEMENT MARKING - LINE 4" (WHITE SKIP-DASH 30'-10')
 - ⑥ MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOL (WHITE)
 - ⑦ MODIFIED URETHANE PAVEMENT MARKING - LINE 6" (WHITE SKIP-DASH 6'-2')
 - ◄ RAISED REFLECTIVE PAVEMENT MARKER, ONE-WAY CRYSTAL



MATCHLINE STA. 410+00

MATCHLINE STA. 395+00

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LOCHNER
H. W. LOCHNER, INC.
225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

USER NAME = GGIFFORD	DESIGNED - JS	REVISED -
PLOT SCALE =	DRAWN - JS	REVISED -
PLOT DATE = 12/29/2021	CHECKED - AM	REVISED -
	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
159TH STREET**

SCALE: 1"=50' SHEET 2 OF 2 SHEETS STA. 380+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

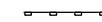




EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. THE WORK DESCRIBED ON THESE DRAWINGS IS AN INTEGRAL PART OF THE STORM WATER POLLUTION PREVENTION PLAN USED TO OBTAIN A NPDES PERMIT FROM IEPA FOR THE CONSTRUCTION OF THIS PROJECT.
2. THE PURPOSE OF THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDED FOR THIS PROJECT IS TO LIMIT THE SEDIMENT POLLUTION IMPACT OF ANY STORM WATER DISCHARGES THAT ORIGINATE ON THIS SITE OR OFF-SITE FLOWS THAT FLOW OVER THE DISTURBED AREAS ON DOWNSTREAM AREAS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT. A COPY OF THE EROSION AND SEDIMENT CONTROL SCHEDULE BEING IMPLEMENTED BY THE CONTRACTOR WILL BE ON THE CONSTRUCTION SITE AT ALL TIMES.
4. TO THE MAXIMUM EXTENT POSSIBLE, ALL FLOWS ORIGINATING OFF THE CONSTRUCTION SITE WILL BE DIVERTED AROUND DISTURBED AREAS OR WILL BE CONVEYED THROUGH THE SITE IN A MANNER THAT UNTREATED ON-SITE RUNOFF DOES NOT MIX WITH THE OFF-SITE RUNOFF.
5. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITY.
6. ALL PERMANENT SEDIMENT BASINS, PERMANENT STORM WATER CONTROL MEASURES, AND RUNOFF CONTROL MEASURES REQUIRED TO KEEP OFF-SITE RUNOFF FROM FLOWING OVER THE CONSTRUCTION AREA WILL BE INSTALLED BEFORE CLEARING AND STRIPPING OF THE SITE PROCEEDS. PRIOR TO PROCEEDING WITH GENERAL EARTHWORK ON A PROJECT THE CONTRACTOR WILL OBTAIN APPROVAL OF HIS PROPOSED EARTHWORK AND STABILIZATION SCHEDULE.
7. A MAXIMUM OF 10 ACRES MAY BE IN SOME STAGE OF GRADING AT A SINGLE TIME. ADDITIONAL AREAS (UP TO 10 ACRES) MAY BE CLEARED BUT WILL NOT BE STRIPPED OF VEGETATION UNTIL THE GRADED AREAS HAVE BEEN PROTECTED FROM EROSION THROUGH INSTALLATION OF EITHER TEMPORARY OR PERMANENT MEASURES. WHENEVER POSSIBLE, THE GRADING WILL BE COMPLETED TO THE DESIGN GRADE AND THE PERMANENT VEGETATION PLAN IMPLEMENTED PRIOR TO STARTING GRADING ACTIVITIES ON THE NEXT SITE.
8. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA WILL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDAR DAYS. TEMPORARY STABILIZATION THROUGH USE OF GROUND COVER, MULCHING, OR OTHER APPROVED MEASURES WILL BE INSTALLED WITHIN 1 DAY WHENEVER SITE DEVELOPMENT WORK, GRADING OR OTHER EARTH DISTURBING ACTIVITIES CEASE TO BE CONTINUOUS FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE 1/14 DAY REQUIREMENT IS TAKEN TO MEAN THAT THE STABILIZATION OPERATION IS COMPLETE OR NEARING COMPLETION IN THE DEFINED TIME. TEMPORARY STABILIZATION MAY BE USED FOR AREAS THAT WILL BECOME DISTURBED AGAIN AFTER 14 DAYS. AREAS DIRECTLY TRIBUTARY TO SPRING CREEK SHALL BE SAME DAY STABILIZED TO ENSURE PROTECTION OF THE IMPAIRED WATERWAY.
9. THE CONTRACTOR SHALL DESIGNATE ONE OF HIS EMPLOYEES AS RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS. THIS PERSON IS TO BE KNOWLEDGEABLE ABOUT INSTALLATION AND MAINTENANCE OF THE REQUIRED MEASURES AND IS TO HAVE TAKEN AN APPROVED EROSION AND SEDIMENT CONTROL COURSE. THIS EMPLOYEE IS TO HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTIONS CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN GIVEN BY THE ENGINEER. ALL MEASURES WILL BE INSPECTED BY THIS INDIVIDUAL AND THE ENGINEER ON A REGULAR BASIS (AT LEAST ONCE EVERY 7 DAYS) AND AFTER RAINFALL EVENTS GREATER THAN 0.5 INCH, OR SNOW FALL EQUIVALENT. ADDITIONALL DURING WINTER MONTHS, ALL MEASURES SHALL BE CHECKED AFTER EACH SIGNIFICANT SNOWFALL.

10. SEDIMENT TRAPS, SEDIMENT BASINS, DITCHES, SEDIMENT CONTROL, SILT FENCE, STONE OUTLET STRUCTURES, EARTH BERMS, ETC. SHALL BE MAINTAINED DURING THE CONSTRUCTION SEASON AS WELL AS THE WINTER MONTHS AND OTHER TIMES WHEN THE PROJECT IS CLOSED DOWN. TRAPS WILL BE CLEANED WHEN THEY ARE 50% FILLED, STONE OUTLET STRUCTURES SHALL HAVE SEDIMENT REMOVED WHEN IT REACHES 50% THE HEIGHT OF THE CONTROL DEVICE. PERIMETER BARRIER FENCE SHALL HAVE SEDIMENT REMOVED WHEN IT REACHES ONE-THIRD OF THE BARRIER HEIGHT. THESE SPOILS WILL BE REMOVED TO AN APPROVED SITE.
11. SALVAGED TOPSOIL SHALL BE PLACED ON WELL DRAINED LAND AWAY FROM INTERMITTENT AND LIVE STREAMS OR WETLANDS WITH THE APPROPRIATE RUNOFF CONTROL AND SEDIMENT CONTROL MEASURES INSTALLED AROUND THE STORAGE SITE, AND STABILIZED IMMEDIATELY AFTER FINAL SHAPING OF THE PILE IN ACCORDANCE WITH MULCH, METHOD 2. THE CONTRACTOR WILL PROVIDE AN ADEQUATE QUANTITY OF PERIMETER EROSION BARRIER TO CONTROL THE PERIMETER OF THE STOCKPILE.
12. MATERIALS EXCAVATED FOR THE CONSTRUCTION OR CLEANOUT OF SEDIMENT TRAPS OR SEDIMENT BASINS SHALL NOT BE STOCKPILED IN THE VICINITY OF THE TRAP OR BASIN. IT WILL EITHER BE PLACED IN AN EMBANKMENT OR WASTED AS DIRECTED BY THE ENGINEER.
13. EXCAVATION TO BE USED FOR EMBANKMENTS SHALL NOT BE STOCKPILED UNLESS PERIMETER CONTROLS ARE UTILIZED. WHEN THIS MATERIAL IS STOCKPILED FOR THE CONVENIENCE OF THE CONTRACTOR THE COST OF THE CONTROLS ARE BORNE BY THE CONTRACTOR. IF THE MATERIAL IS STOCKPILED AT THE DIRECTION OF THE ENGINEER THE DEPARTMENT WILL ASSUME THE COSTS OF THE CONTROLS.
14. SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING MEASURE PRIOR TO RELEASE FROM THE SITE.
15. WHEN THE CONTRACTOR REQUESTS A CHANGE TO POSTPONE COMPLETION OF THE EXCAVATION OF A SPECIFIC AREA AS A CONTINUOUS OPERATION AND PLACING THE TOPSOIL AS DEFINED IN THE STANDARD SPECIFICATIONS, THE ENGINEER MAY ALLOW THE CONTRACTOR TO STABILIZE THE AREA USING TEMPORARY STABILIZATION PROVIDING THE FOLLOWING CONDITIONS ARE MET:
 - (A) ALL AREAS BEING STABILIZED ARE 3:1 SLOPES OR FLATTER.
 - (B) THE CONTRACTOR BEARS THE COST OF PREPARING THE SEED BED AND STABILIZING THE AREA WITH TEMPORARY STABILIZATION.
 - (C) ALL REQUIRED SEDIMENT CONTROL MEASURES FOR THE SECTION OF ROAD IN QUESTION HAVE BEEN INSTALLED AND ARE BEING MAINTAINED.
16. SEEDING USAGE (SEE LANDSCAPING PLANS)
 - CLASS 2A SALT TOLERANT ROADSIDE MIX USED FOR NEW CONSTRUCTION OF LIMITED ACCESS ROUTES INTENDED TO BE MOWED BY IDOT.
 - CLASS 4 USED ON SPECIFIC EMBANKMENT SLOPES AND AT SPECIFIC PROPOSED DITCHES AS SHOWN ON LANDSCAPING PLANS.
 - TEMPORARY EROSION CONTROL SEEDING : USED IN AREAS REQUIRING SHORT TERM TEMPORARY SEEDING DURING CONSTRUCTION. AN ESTIMATED QUANTITY OF MULCH, METHOD 2 AND MULCH, METHOD 4 IS INCLUDED FOR TEMPORARY STABILIZATION TO BE USED AS DIRECTED BY THE ENGINEER.
17. IN AREAS WHERE A PERMANENT VEGETATIVE COVER IS PRACTICABLE AND INCLUDED IN THE CONTRACT DOCUMENTS, A SPECIAL EFFORT SHOULD BE MADE TO ESTABLISH A COVER AS SOON AS A DISTURBED AREA IS BROUGHT TO FINAL GRADE.

18. THE DEPARTMENT HAS NOT OBTAINED ANY PERMITS FOR OFFSITE BORROW, WASTE, USE (BWU) AREAS. PRIOR TO WORKING IN BWU AREAS, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING PERMITS IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER PERMITS. IN ADDITION TO THE BORROW REVIEW (BDE 2289) AND USE/WASTE REVIEW (BDE 2290) SUBMITTALS, THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL (ESC) PLAN FOR EVERY BWU SITE TO THE DEPARTMENT FOR ACCEPTANCE. GUIDELINES FOR ACCEPTABLE BWU PRACTICES CAN BE FOUND IN SECTION 11.G.1 AND 2 OF IDOT SWPPP FORM BDE 2342A. THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS TO PREPARE AND IMPLEMENT ESC PLANS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

EROSION & SEDIMENT CONTROL/LANDSCAPING LEGEND

	PERIMETER EROSION BARRIER	
	INLET FILTER	
	SEEDING, CLASS 2A WITH EROSION CONTROL BLANKET	
	SEEDING, CLASS 4 WITH EROSION CONTROL BLANKET	
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WETLAND NO INTRUSION		

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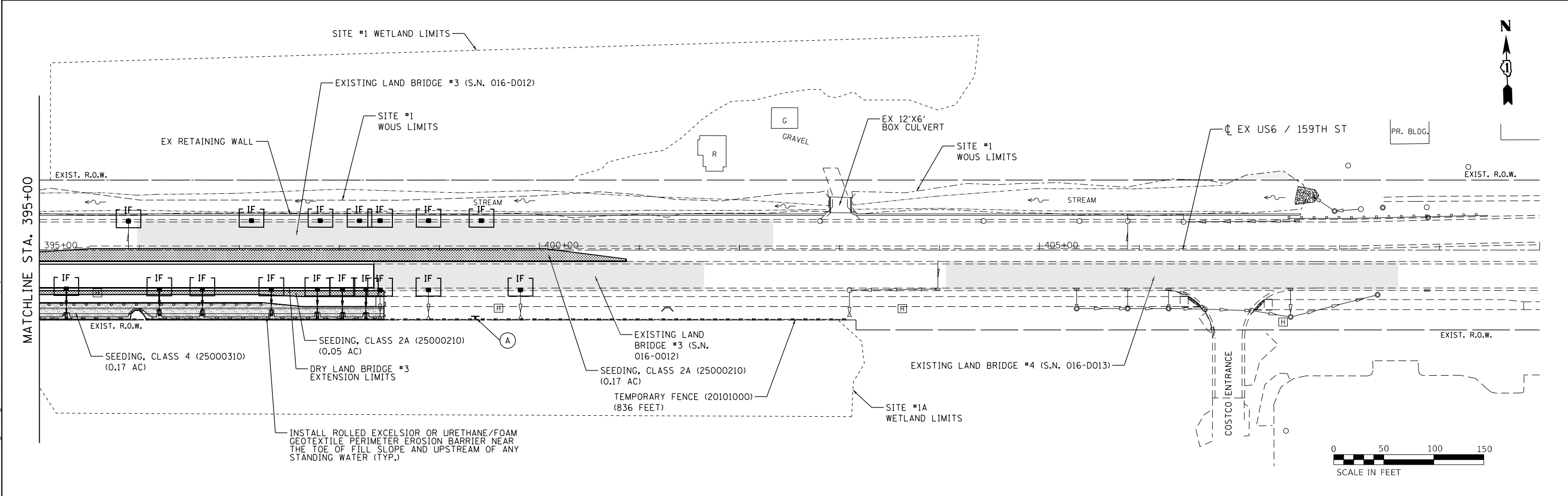
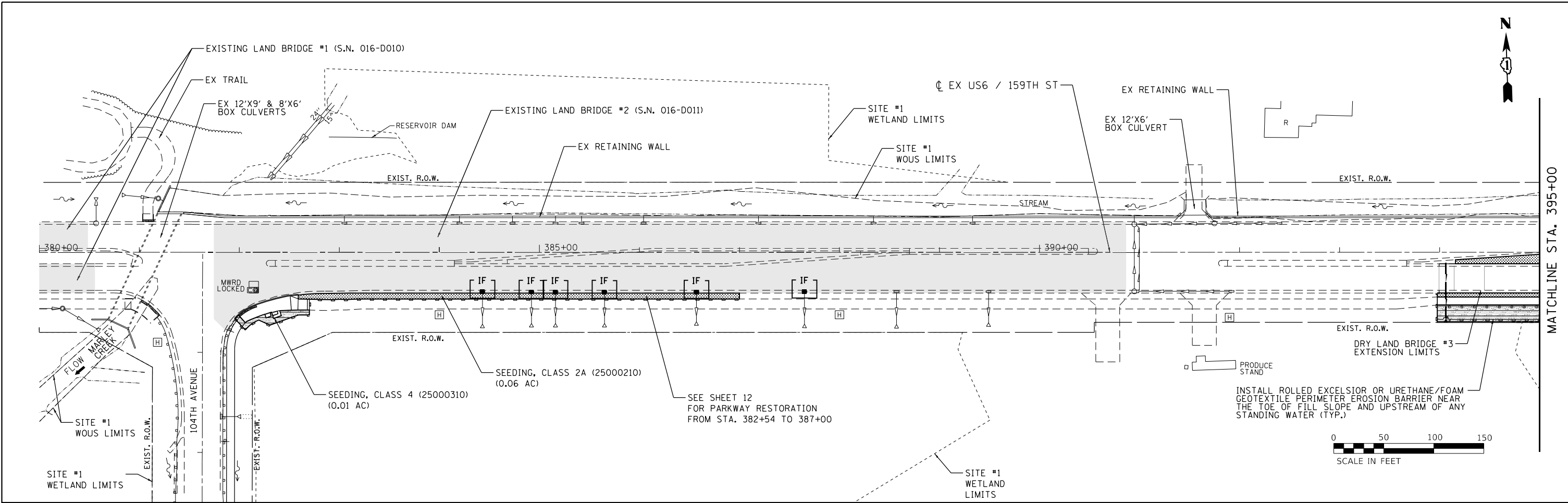
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PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION & SEDIMENT CONTROL GENERAL NOTES 159TH STREET

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	31
				CONTRACT NO. 62P68
		ILLINOIS	FED. AID PROJECT	



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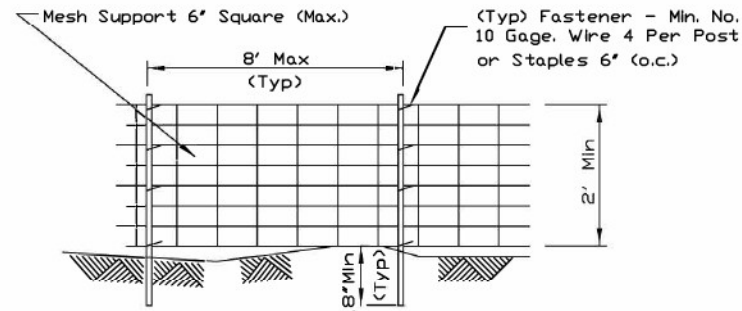
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PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

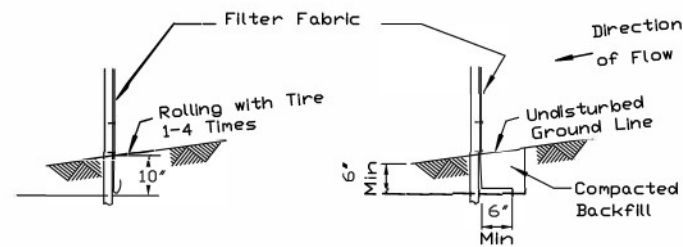
EROSION & SEDIMENT CONTROL AND LANDSCAPING PLAN
159TH STREET
 SCALE: 1" = 50' SHEET OF SHEETS STA. 380+00 TO STA. 410+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	32
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

SILT FENCE WITH WIRE SUPPORT PLAN



ELEVATION



FABRIC ANCHOR DETAIL

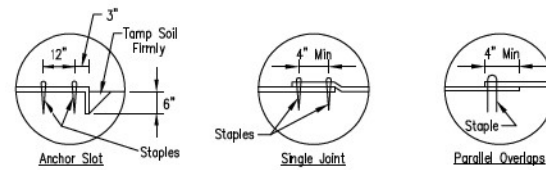
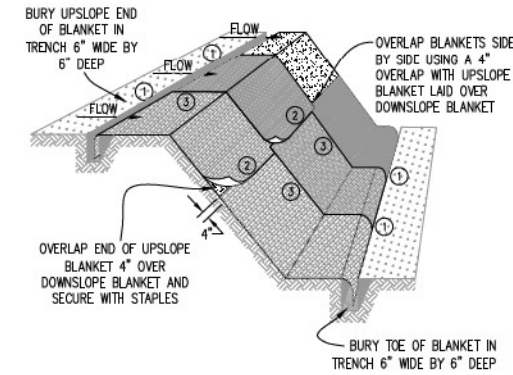
STATIC SLICE INSTALLATION TRENCH INSTALLATION

NOTES:

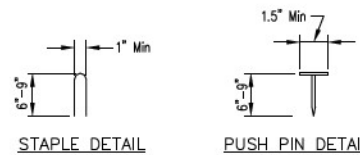
- Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
- Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 class 2 with equivalent opening size of at least 30 for nonwoven and 40 for woven.
- Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE Project _____		STANDARD DWG. NO. IUM-620A(W)
Designed _____ Date _____		SHEET 1 OF 2
Checked _____ Date _____		DATE 3-16-2012
Approved _____ Date _____		

AUTOCAD2006



DETAIL 1 DETAIL 2 DETAIL 3



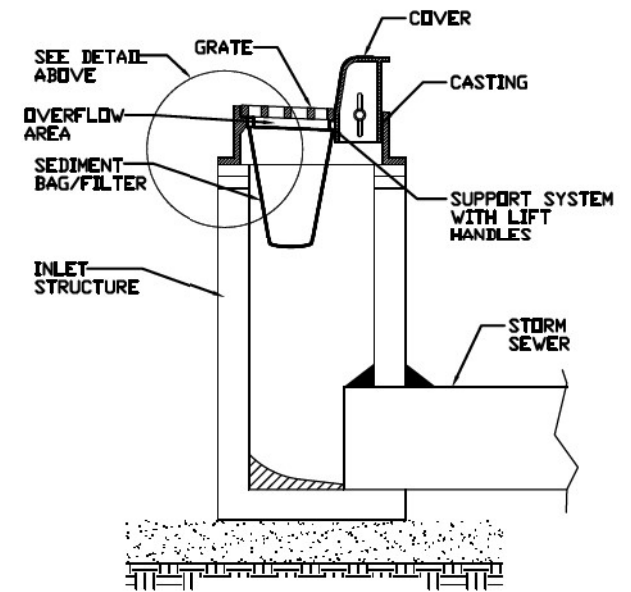
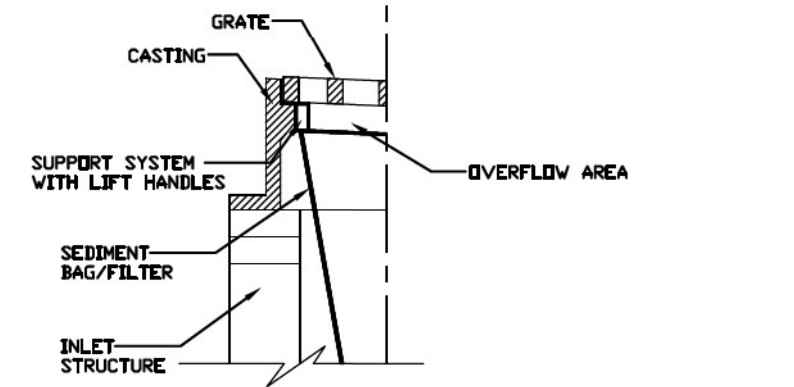
STAPLE DETAIL PUSH PIN DETAIL

NOTES:

- Staples shall be placed in a diamond pattern at 2 per s.y. for stitched blankets. Non stitched shd use 4 staples per s.y. of material. This equates to 200 staples with stitched blanket and 400 staples with non-stitched blanket per 100 s.y. of material.
- Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
- Erosion control material shall be placed in contact with the soil over a prepared seedbed.
- All anchor slots shall be stapled at approximately 12" intervals.

PROJECT NO. IUM-530	EROSION CONTROL BLANKET INSTALLATION DETAILS	DESIGNED _____ DATE _____
		CHECKED _____ DATE _____
		APPROVED _____ DATE _____

INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION



REFERENCE Project _____		STANDARD DWG. NO. IUM-561D
Designed _____ Date _____		SHEET 1 OF 1
Checked _____ Date _____		DATE 01-11-11
Approved _____ Date _____		

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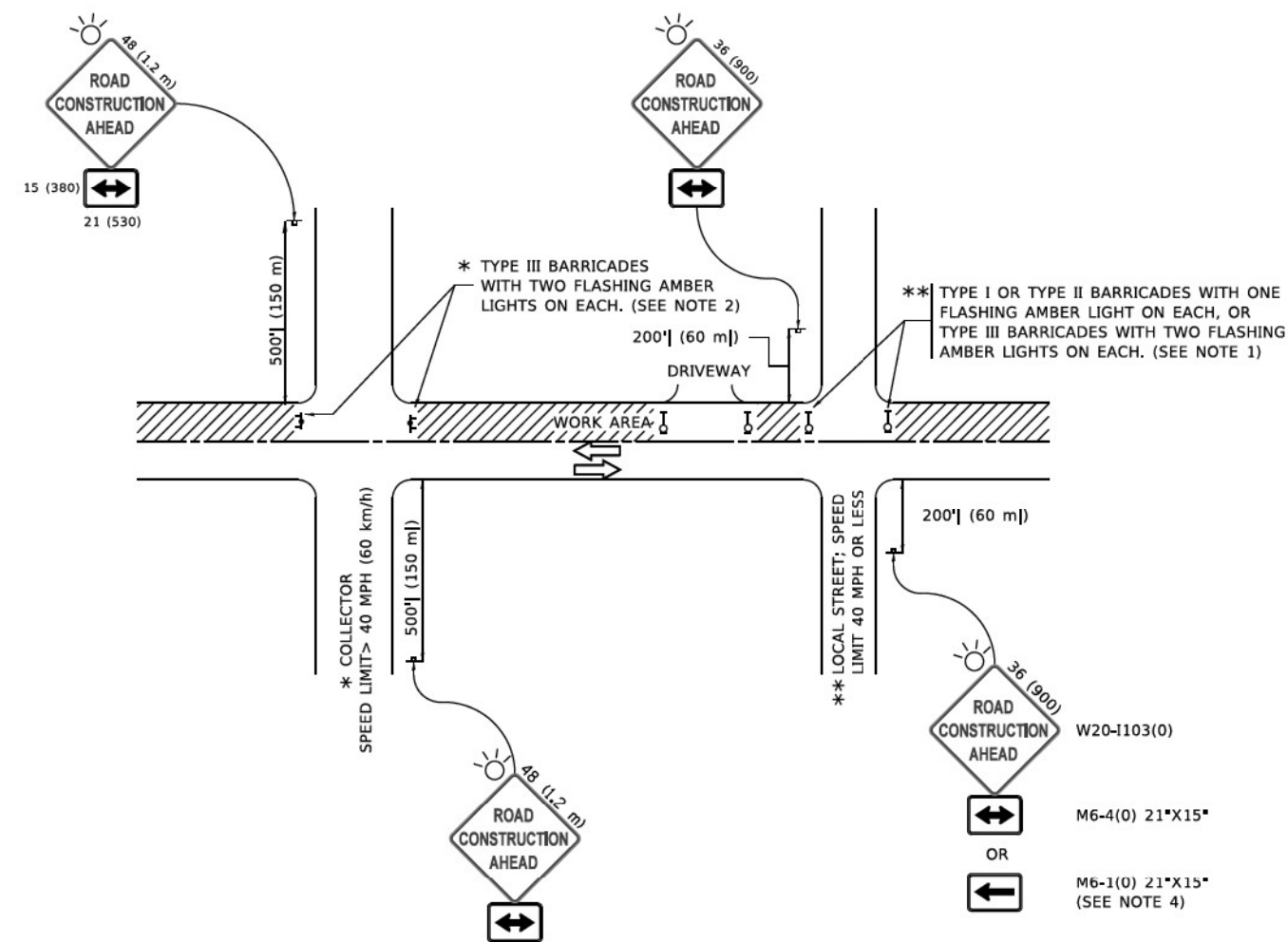
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PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION & SEDIMENT CONTROL DETAILS
159TH STREET**

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.P. RTE. 351	SECTION 2021-150-BY	COUNTY COOK	TOTAL SHEETS 73	SHEET NO. 33
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



NOTES:

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

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

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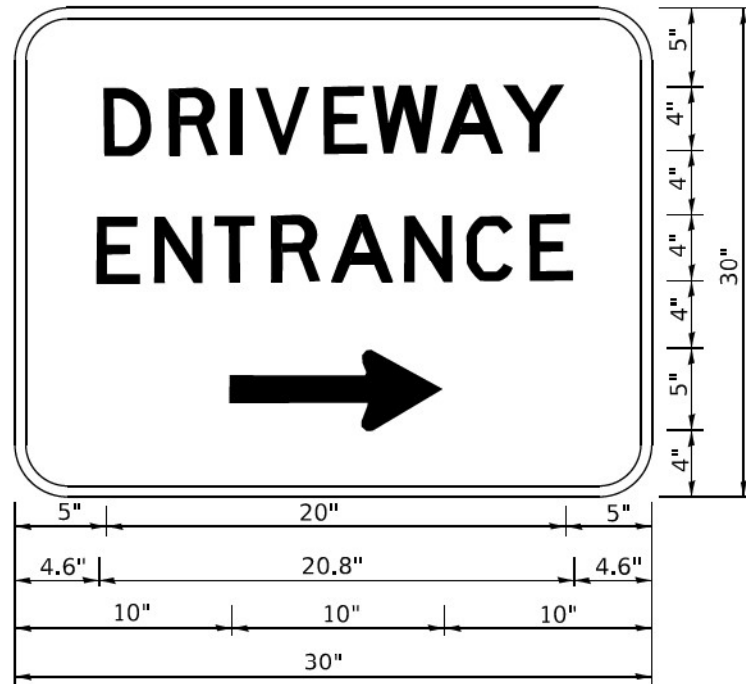
USER NAME	footemj	DESIGNED	L.H.A.	REVISED	A. HOUSEH 10-15-96
DRAWN	-	REVISION	T. RAMMACHER 01-06-00		
PLOT SCALE	50,0000 1 / in.	CHECKED	-	REVISED	A. SCHUETZE 07-01-13
PLOT DATE	3/4/2019	DATE	06-89	REVISED	A. SCHUETZE 09-15-16

**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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-15-BY	COOK	73	34
TC-10		CONTRACT NO. 62P68		
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".

THE USE OF DRIVEWAY ENTRANCE SIGNS MUST BE APPROVED BY THE ENGINEER AND THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR. A NOMINAL QUANTITY FOR TEMPORARY INFROMATION SIGNING IS PROVIDED.

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 PROJECT: ...
 DATE: ...

USER NAME	DESIGNED -	REVISED -
footemj	-	C. JUCIUS 02-15-07
DRAWN -	REVISED -	
PLOT SCALE = 50,0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

DRIVEWAY ENTRANCE SIGNING

SCALE: NONE SHEET OF SHEETS STA. TO STA.

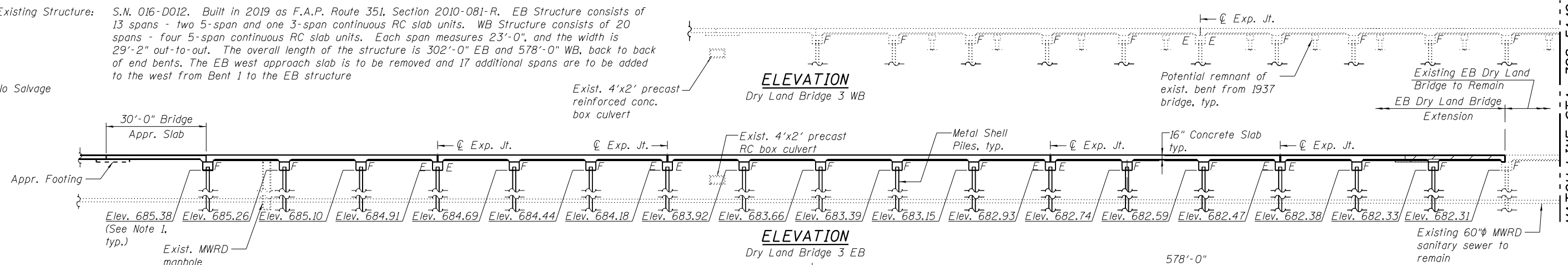
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	36
TC-26			CONTRACT NO. 62P68	
ILLINOIS FED. AID PROJECT				

Bench Mark: B.M. #1 Southwest flange bolt with "X" on hydrant. Sta. 391+17, O/S 64' RT, Elev. 689.66

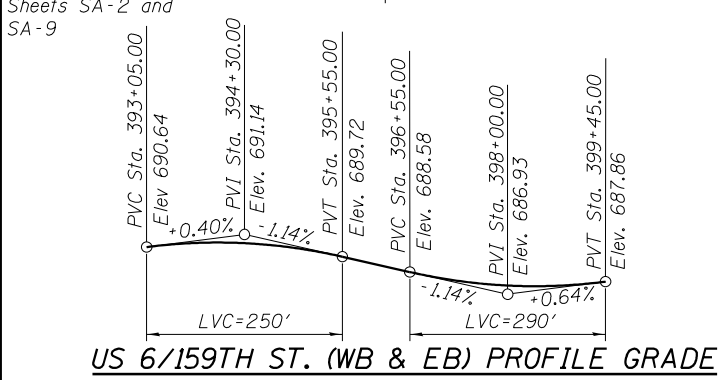
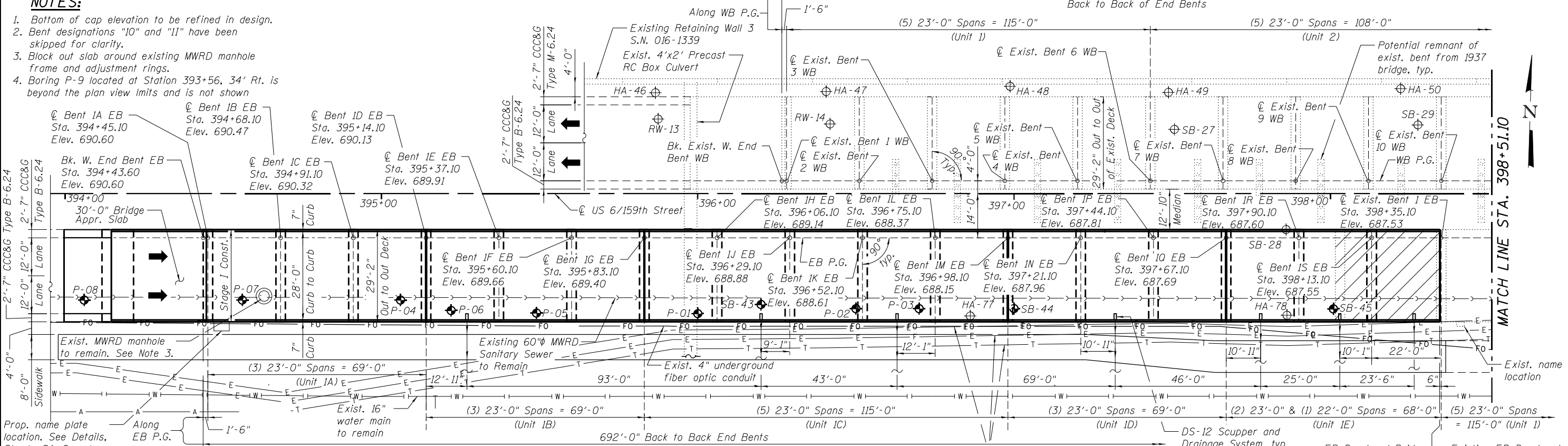
Original Structure: S.N. D016-D012. Built in 1937 as S.B.I. Route 53, Section 537-R. Structure consisted of 20-spans - four 5-span continuous reinforced concrete slab units supported on timber piles. Each unit had a width of 20'-0" and a length of 115'-0". The overall length of the structure is 460'-0". Structure was removed and replaced under Section 2010-081-R. Portions of the structure that did not interfere with the new structure and more than 1'-0" below grade may still remain.

Existing Structure: S.N. 016-D012. Built in 2019 as F.A.P. Route 351, Section 2010-081-R. EB Structure consists of 13 spans - two 5-span and one 3-span continuous RC slab units. WB Structure consists of 20 spans - four 5-span continuous RC slab units. Each span measures 23'-0", and the width is 29'-2" out-to-out. The overall length of the structure is 302'-0" EB and 578'-0" WB, back to back of end bents. The EB west approach slab is to be removed and 17 additional spans are to be added to the west structure from Bent 1 to the EB structure

No Salvage



- NOTES:**
- Bottom of cap elevation to be refined in design.
 - Bent designations "10" and "11" have been skipped for clarity.
 - Block out slab around existing MWRD manhole frame and adjustment rings.
 - Boring P-9 located at Station 393+56, 34' Rt. is beyond the plan view limits and is not shown



SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.130g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.238g
 Soil Site Class = E

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
 2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2012 Interims

LEGEND

- Prior Soil Boring Location
- Soil Boring Location
- Existing Appr. Slab Removal (Paid for as 'Concrete Removal')
- CCC&G Combination Concrete Curb and Gutter

DESIGN STRESSES

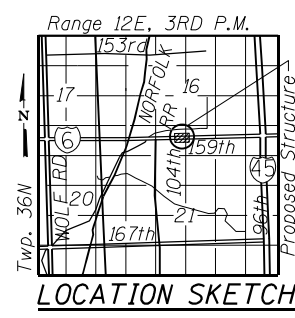
FIELD UNITS

f'_c = 3,500 psi
 f'_c = 4,000 psi (Superstructure)
 f_y = 60,000 psi (Reinforcement)
 f_y = 50,000 psi (M270 Grade 50)

081-006258
 LICENSED
 STRUCTURAL
 ENGINEER
 OF
 ILLINOIS

EXPIRES: 11-30-2022

APPROVED
 For Structural Adequacy
 H.W. Lochner, Inc.
 Arsalan M. Khan, S.E.
 Date: 12/17/2021



GENERAL PLAN & ELEVATION 1
DRY LAND BRIDGE 3
US ROUTE 6 / 159TH STREET
F.A.P. RTE 351 - SEC. 2021-150-BY
COOK COUNTY
STATION 399+15.00
STRUCTURE NO. 016-D012

LOCHNER
 H.W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

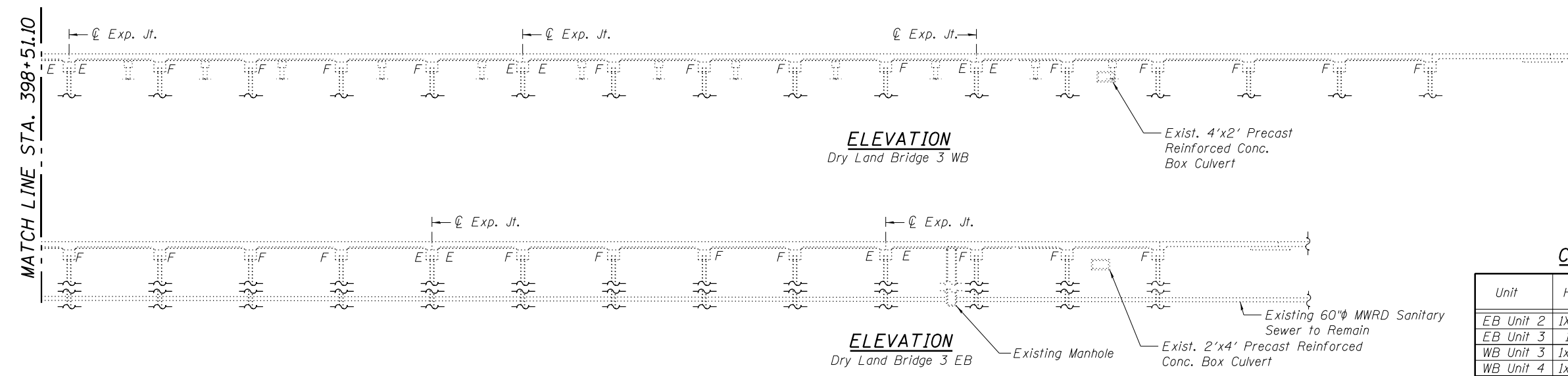
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PLOT DATE	CHECKED - AMK	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. SA-1 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	37
CONTRACT NO. 62P68				

ILLINOIS FED. AID PROJECT

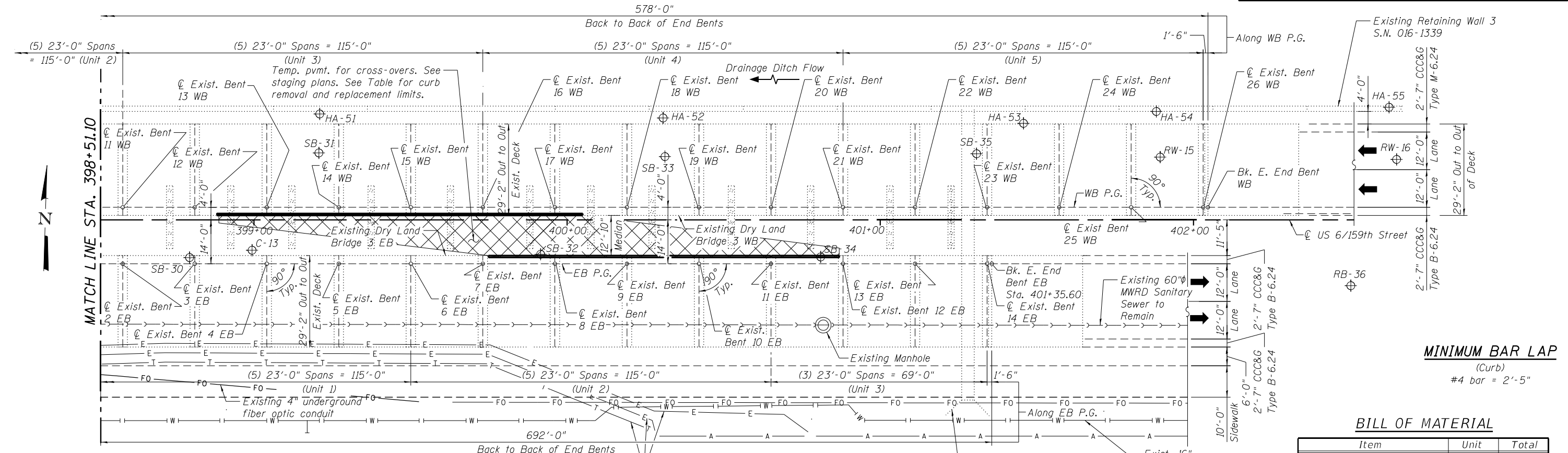


**BILL OF MATERIAL
CURB REPLACEMENT**

Bar	No.	Size	Length	Shape
b100(E)	4	#4	24'-3"	—
b101(E)	1	#4	21'-4"	—
b102(E)	4	#4	23'-0"	—
b103(E)	2	#4	17'-1"	—
d(E)	232	#5	0'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	370
Concrete Superstructure			Cu. Yd.	2.4
Protective Coat			Sq. Yd.	26

CURB REINFORCEMENT TABLE

Unit	Horizontal Bars	Dowel Bar
EB Unit 2	1x4- #4 b100(E) bars	91- #5 d(E) bars
EB Unit 3	1x1- #4 b101(E) bar	23- #5 d(E) bars
WB Unit 3	1x4- #4 b102(E) bars	85- #5 d(E) bars
WB Unit 4	1x2- #4 b103(E) bars	33- #5 d(E) bars



MINIMUM BAR LAP

(Curb)
#4 bar = 2'-5"

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	CU YD	54.0

CURB REMOVAL AND REPLACEMENT LIMITS

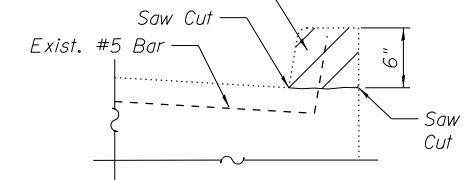
WB South Curb	Sta. 398+88.75 to Sta. 400+05.00
EB North Curb	Sta. 399+74.90 to Sta. 400+86.90

Note: See sheet SA-18 for expansion joint modification details at Bents 11 EB and 16 WB.

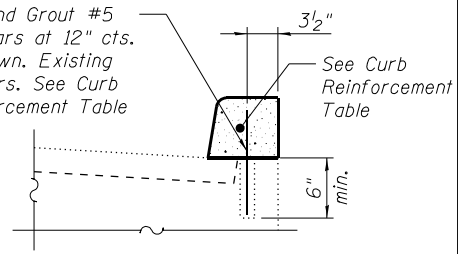
LEGEND

- ⊕ Prior Soil Boring Location
- ⊙ Soil Boring Location
- ▨ Existing Appr. Slab Removal
- CCC&G Combination Concrete Curb and Gutter

Remove existing curb and burn existing #5 Bar flush with removed surface. Grind rebar smooth and seal with epoxy. Cost Included with Concrete Removal

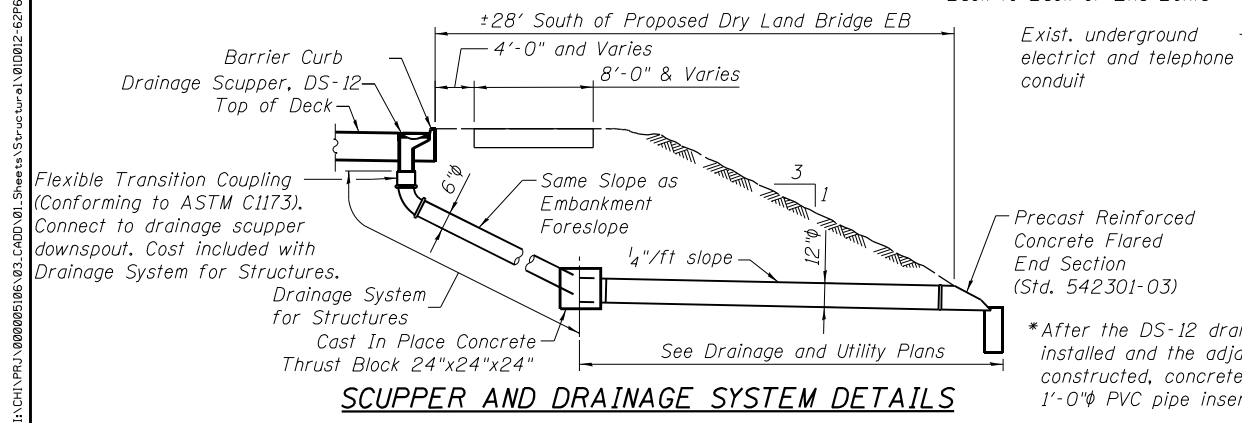


Drill and Grout #5 existing #5 bars at 12" cts. Alt. btwn. Existing #5 bars. See Curb Reinforcement Table



See Sheet SA-4 for barrier curb dimensions

SCUPPER AND DRAINAGE SYSTEM DETAILS



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225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

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FILE NAME = *FILES*	CHECKED - AMK	REVISED
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PLOT DATE	CHECKED - AMK	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION 2
STRUCTURE NO. 016-D012**
SHEET NO. SA-2 OF SA-31 SHEETS

F.A.P. RFE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	38
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

- Reinforcement bars designated (E) shall be epoxy coated.
- Protective coat shall be applied to surfaces of bridge deck, approach slabs and curbs.
- Concrete Sealer shall be applied to the designated areas of the Expansion Bent Caps. See Sheet SA-20 for locations.
- Refer to Roadway Plans for type and quantity of fill material required within the limits of Dry Land Bridge.
- 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 work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The Contractor shall verify locations of all underground utilities before driving piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department.
- Excavation for placement of slab shall be paid for as Earth Excavation. See Roadway Plans.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	54.1		54.1
Structure Excavation	Cu. Yd.		493	493
Concrete Structures	Cu. Yd.		146.8	146.8
Concrete Superstructure	Cu. Yd.	688.8		688.8
Concrete Superstructure (Approach Slab)	Cu. Yd.	42.0		42.0
Bridge Deck Grooving	Sq. Yd.	1,219		1,219
Protective Coat	Sq. Yd.	1,440		1,440
Reinforcement Bars, Epoxy Coated	Pound	162,320	15,820	178,140
Furnishing Metal Shell Piles 14"x0.25"	Foot		5,935	5,935
Driving Piles	Foot		5,935	5,935
Test Pile Metal Shells	Each		5	5
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	118		118
Concrete Sealer	Sq. Ft.		996	996
Drainage Scuppers, DS-12	Each	7		7
Drainage System for Structures	L Sum	1		1

INDEX OF SHEETS

SHEET NO.	TITLE
SA-1	General Plan & Elevation 1
SA-2	General Plan & Elevation 2
SA-3	General Notes, Bill of Material, and Index of Sheets
SA-4	Construction Staging
SA-5	Top of Slab Elevation Plan EB
SA-6	Top of Slab Elevations EB 1
SA-7	Top of Slab Elevations EB 2
SA-8	Top of Approach Slab Elevations
SA-9	Deck Plan & Cross Section 1
SA-10	Superstructure Details 1
SA-11	Deck Plan & Cross Section 2
SA-12	Superstructure Details 2
SA-13	Deck Plan & Cross Section 3
SA-14	Superstructure Details 3
SA-15	Approach Slab Details 1
SA-16	Approach Slab Details 2
SA-17	Preformed Joint Strip Seal
SA-18	Expansion Joint Modifications
SA-19	Drainage Scupper, DS-12
SA-20	Typical Bent Details 1
SA-21	Typical Bent Details 2
SA-22	Typical Bent Details 3
SA-23	Metal Shell Piles
SA-24	Soil Borings 1
SA-25	Soil Borings 2
SA-26	Soil Borings 3
SA-27	Soil Borings 4
SA-28	Soil Borings 5
SA-29	Soil Borings 6
SA-30	Soil Borings 7
SA-31	Soil Borings 8

STATION 399+15.00
EXTENDED 202_ BY
STATE OF ILLINOIS
FAP RTE. 351 - SEC. 2021-150-BY
LOADING HL-93
STRUCTURE NO. 016-D012

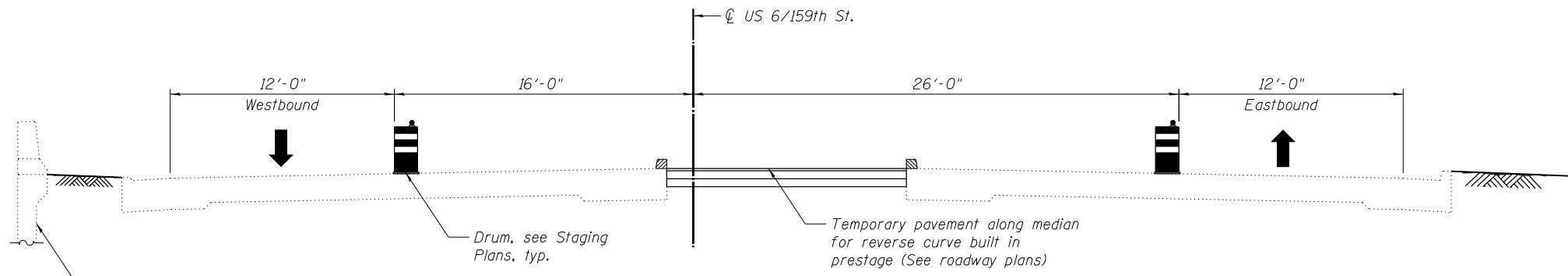
NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to the new Name Plate. Cost included with Name Plates.
See Name Plate Bumpout Detail on Sheet S-9

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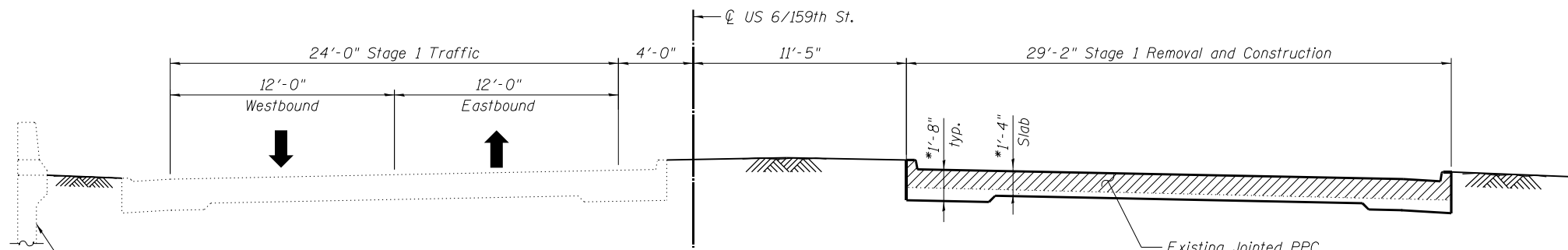
LOCHNER H.W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - FJM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, BILL OF MATERIAL, AND INDEX OF SHEETS STRUCTURE NO. 016-D012	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE =	CHECKED - AMK	REVISED			ILLINOIS FED. AID PROJECT				



PRESTAGE & STAGE 2 CONSTRUCTION

(Looking East)

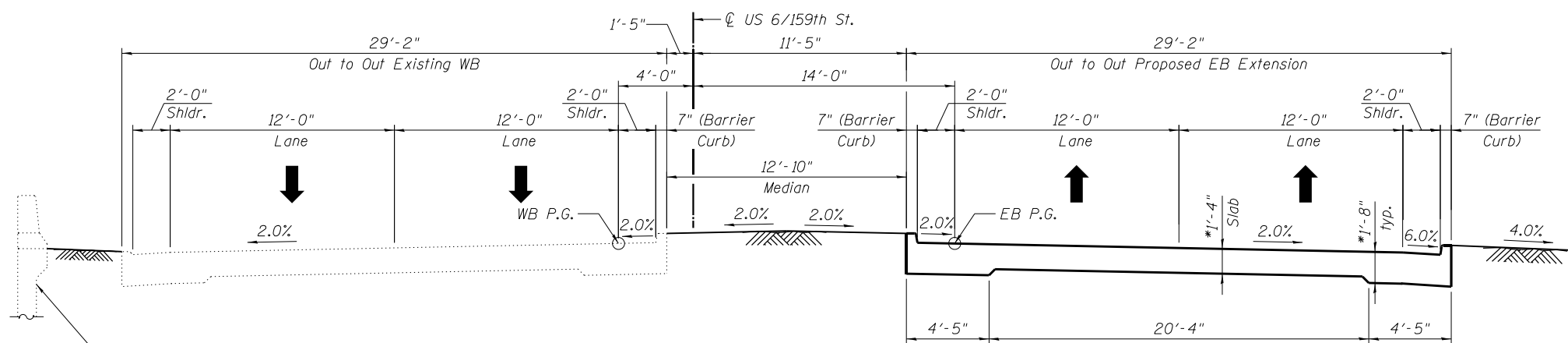
(Applies to curb removal limits for cross-over pavement. See Sheet SA-2 for limits.)



STAGE 1 CONSTRUCTION

(Looking East)

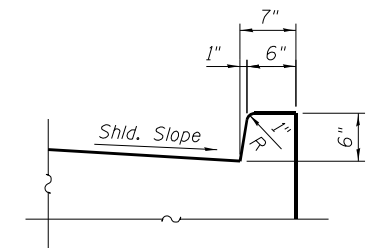
* Subject to Refinement during the Design Phase



CROSS SECTION

(Looking East)

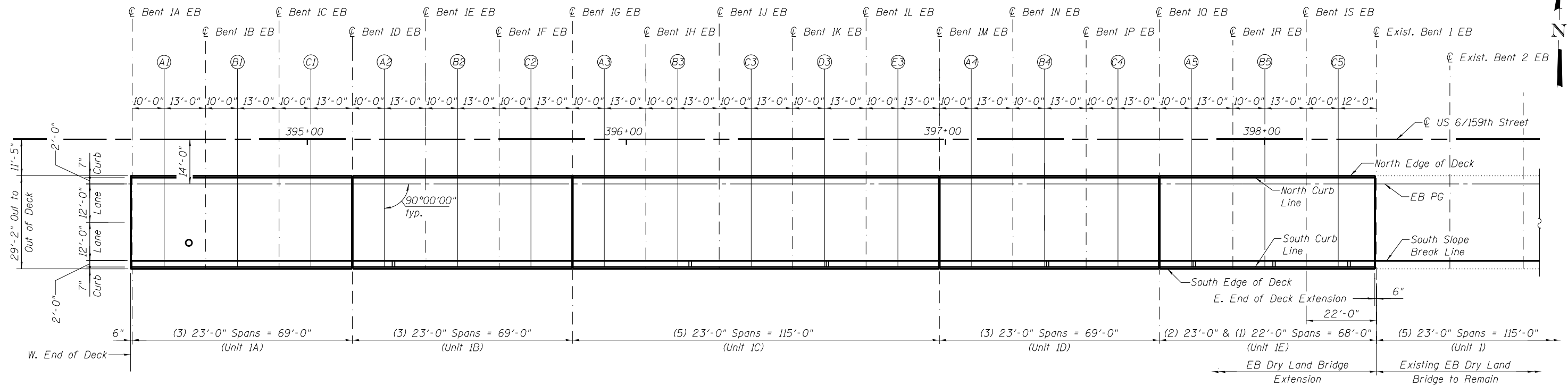
* Subject to Refinement during the Design Phase



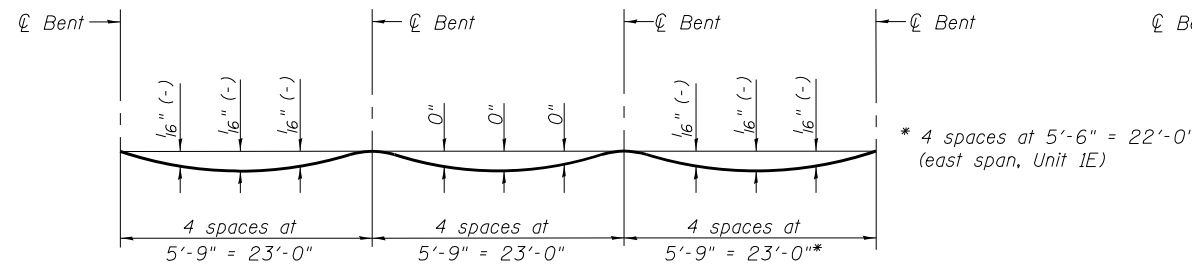
BARRIER CURB DETAIL

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LOCHNER H.W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME =	DESIGNED - FIM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONSTRUCTION STAGING STRUCTURE NO. 016-D012	F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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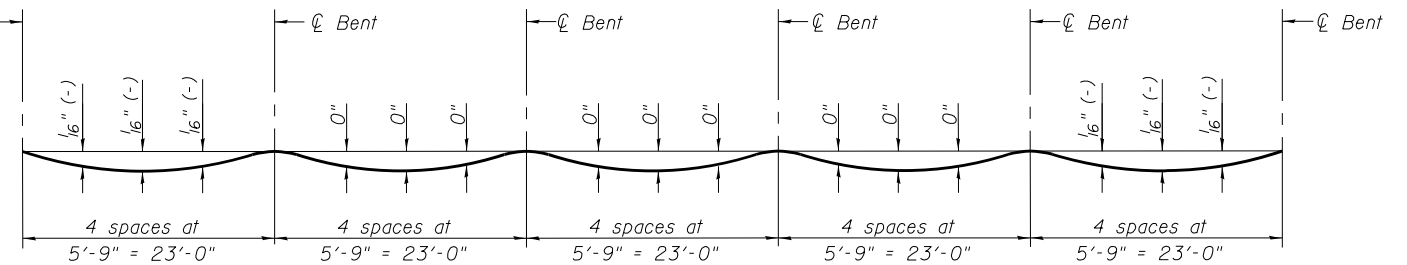
PLAN DECK UNITS - DRY LAND BRIDGE 3 EASTBOUND



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 3-Span units - EB Unit 1A, Unit 1B, Unit 1D, and Unit 1E).

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 SA-6 and SA-7.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete).
(For 5-Span units - EB Unit 1C).

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 SA-6 and SA-7.

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PLOT DATE =	CHECKED - AMK	REVISED

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TOP OF SLAB ELEVATION PLAN EB
STRUCTURE NO. 016-D012

SHEET NO. SA-5 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	41
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	11.42	691.14	691.14
☉ EB Bent 1A	394+45.10	11.42	691.14	691.14
A1	394+55.10	11.42	691.09	691.09
☉ EB Bent 1B	394+68.10	11.42	691.01	691.01
B1	394+78.10	11.42	690.95	690.95
☉ EB Bent 1C	394+91.10	11.42	690.86	690.86
C1	395+01.10	11.42	690.78	690.78
☉ EB Bent 1D	395+14.10	11.42	690.67	690.67
A2	395+24.10	11.42	690.58	690.58
☉ EB Bent 1E	395+37.10	11.42	690.45	690.45
B2	395+47.10	11.42	690.34	690.34
☉ EB Bent 1F	395+60.10	11.42	690.20	690.20
C2	395+70.10	11.42	690.09	690.09
☉ EB Bent 1G	395+83.10	11.42	689.94	689.94
A3	395+93.10	11.42	689.83	689.83
☉ EB Bent 1H	396+06.10	11.42	689.68	689.68
B3	396+16.10	11.42	689.56	689.56
☉ EB Bent 1J	396+29.10	11.42	689.42	689.42
C3	396+39.10	11.42	689.30	689.30
☉ EB Bent 1K	396+52.10	11.42	689.15	689.15
D3	396+62.10	11.42	689.04	689.04
☉ EB Bent 1L	396+75.10	11.42	688.91	688.91
E3	396+85.10	11.42	688.81	688.81
☉ EB Bent 1M	396+98.10	11.42	688.69	688.69
A4	397+08.10	11.42	688.60	688.60
☉ EB Bent 1N	397+21.10	11.42	688.50	688.50
B4	397+31.10	11.42	688.43	688.43
☉ EB Bent 1P	397+44.10	11.42	688.35	688.35
C4	397+54.10	11.42	688.29	688.29
☉ EB Bent 1Q	397+67.10	11.42	688.23	688.23
A5	397+77.10	11.42	688.19	688.19
☉ EB Bent 1R	397+90.10	11.42	688.14	688.14
B5	398+00.10	11.42	688.12	688.12
☉ EB Bent 1S	398+13.10	11.42	688.09	688.09
C5	398+23.10	11.42	688.07	688.07
E. End of Deck Ext.	398+34.60	11.42	688.07	688.07

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	12.00	690.64	690.64
☉ EB Bent 1A	394+45.10	12.00	690.64	690.64
A1	394+55.10	12.00	690.59	690.59
☉ EB Bent 1B	394+68.10	12.00	690.51	690.51
B1	394+78.10	12.00	690.45	690.45
☉ EB Bent 1C	394+91.10	12.00	690.36	690.36
C1	395+01.10	12.00	690.28	690.28
☉ EB Bent 1D	395+14.10	12.00	690.17	690.17
A2	395+24.10	12.00	690.08	690.08
☉ EB Bent 1E	395+37.10	12.00	689.95	689.95
B2	395+47.10	12.00	689.84	689.84
☉ EB Bent 1F	395+60.10	12.00	689.70	689.70
C2	395+70.10	12.00	689.59	689.59
☉ EB Bent 1G	395+83.10	12.00	689.44	689.44
A3	395+93.10	12.00	689.33	689.33
☉ EB Bent 1H	396+06.10	12.00	689.18	689.18
B3	396+16.10	12.00	689.06	689.06
☉ EB Bent 1J	396+29.10	12.00	688.92	688.92
C3	396+39.10	12.00	688.80	688.80
☉ EB Bent 1K	396+52.10	12.00	688.65	688.65
D3	396+62.10	12.00	688.54	688.54
☉ EB Bent 1L	396+75.10	12.00	688.41	688.41
E3	396+85.10	12.00	688.31	688.31
☉ EB Bent 1M	396+98.10	12.00	688.19	688.19
A4	397+08.10	12.00	688.10	688.10
☉ EB Bent 1N	397+21.10	12.00	688.00	688.00
B4	397+31.10	12.00	687.93	687.93
☉ EB Bent 1P	397+44.10	12.00	687.85	687.85
C4	397+54.10	12.00	687.79	687.79
☉ EB Bent 1Q	397+67.10	12.00	687.73	687.73
A5	397+77.10	12.00	687.69	687.69
☉ EB Bent 1R	397+90.10	12.00	687.64	687.64
B5	398+00.10	12.00	687.62	687.62
☉ EB Bent 1S	398+13.10	12.00	687.59	687.59
C5	398+23.10	12.00	687.57	687.57
E. End of Deck Ext.	398+34.60	12.00	687.57	687.57

EB PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	14.00	690.60	690.60
☉ EB Bent 1A	394+45.10	14.00	690.60	690.60
A1	394+55.10	14.00	690.55	690.55
☉ EB Bent 1B	394+68.10	14.00	690.47	690.47
B1	394+78.10	14.00	690.41	690.41
☉ EB Bent 1C	394+91.10	14.00	690.32	690.32
C1	395+01.10	14.00	690.24	690.24
☉ EB Bent 1D	395+14.10	14.00	690.13	690.13
A2	395+24.10	14.00	690.04	690.04
☉ EB Bent 1E	395+37.10	14.00	689.91	689.91
B2	395+47.10	14.00	689.80	689.80
☉ EB Bent 1F	395+60.10	14.00	689.66	689.66
C2	395+70.10	14.00	689.55	689.55
☉ EB Bent 1G	395+83.10	14.00	689.40	689.40
A3	395+93.10	14.00	689.29	689.29
☉ EB Bent 1H	396+06.10	14.00	689.14	689.14
B3	396+16.10	14.00	689.02	689.02
☉ EB Bent 1J	396+29.10	14.00	688.88	688.88
C3	396+39.10	14.00	688.76	688.76
☉ EB Bent 1K	396+52.10	14.00	688.61	688.61
D3	396+62.10	14.00	688.50	688.50
☉ EB Bent 1L	396+75.10	14.00	688.37	688.37
E3	396+85.10	14.00	688.27	688.27
☉ EB Bent 1M	396+98.10	14.00	688.15	688.15
A4	397+08.10	14.00	688.06	688.06
☉ EB Bent 1N	397+21.10	14.00	687.96	687.96
B4	397+31.10	14.00	687.89	687.89
☉ EB Bent 1P	397+44.10	14.00	687.81	687.81
C4	397+54.10	14.00	687.75	687.75
☉ EB Bent 1Q	397+67.10	14.00	687.69	687.69
A5	397+77.10	14.00	687.65	687.65
☉ EB Bent 1R	397+90.10	14.00	687.60	687.60
B5	398+00.10	14.00	687.58	687.58
☉ EB Bent 1S	398+13.10	14.00	687.55	687.55
C5	398+23.10	14.00	687.53	687.53
E. End of Deck Ext.	398+34.60	14.00	687.53	687.53

Note: Stations and offsets are taken relative to ☉ US-6/159th Street. Positive offset value indicates offset to the right.

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CHICAGO, ILLINOIS 60606

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS EB 1
STRUCTURE NO. 016-D012

SHEET NO. SA-6 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	42
			CONTRACT NO. 62P68	
ILLINOIS FED. AID PROJECT				

SOUTH SLOPE BREAK LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	38.00	690.12	690.12
☉ EB Bent 1A	394+45.10	38.00	690.12	690.12
A1	394+55.10	38.00	690.07	690.07
☉ EB Bent 1B	394+68.10	38.00	689.99	689.99
B1	394+78.10	38.00	689.93	689.93
☉ EB Bent 1C	394+91.10	38.00	689.84	689.84
C1	395+01.10	38.00	689.76	689.76
☉ EB Bent 1D	395+14.10	38.00	689.65	689.65
A2	395+24.10	38.00	689.56	689.56
☉ EB Bent 1E	395+37.10	38.00	689.43	689.43
B2	395+47.10	38.00	689.32	689.32
☉ EB Bent 1F	395+60.10	38.00	689.18	689.18
C2	395+70.10	38.00	689.07	689.07
☉ EB Bent 1G	395+83.10	38.00	688.92	688.92
A3	395+93.10	38.00	688.81	688.81
☉ EB Bent 1H	396+06.10	38.00	688.66	688.66
B3	396+16.10	38.00	688.54	688.54
☉ EB Bent 1J	396+29.10	38.00	688.40	688.40
C3	396+39.10	38.00	688.28	688.28
☉ EB Bent 1K	396+52.10	38.00	688.13	688.13
D3	396+62.10	38.00	688.02	688.02
☉ EB Bent 1L	396+75.10	38.00	687.89	687.89
E3	396+85.10	38.00	687.79	687.79
☉ EB Bent 1M	396+98.10	38.00	687.67	687.67
A4	397+08.10	38.00	687.58	687.58
☉ EB Bent 1N	397+21.10	38.00	687.48	687.48
B4	397+31.10	38.00	687.41	687.41
☉ EB Bent 1P	397+44.10	38.00	687.33	687.33
C4	397+54.10	38.00	687.27	687.27
☉ EB Bent 1Q	397+67.10	38.00	687.21	687.21
A5	397+77.10	38.00	687.17	687.17
☉ EB Bent 1R	397+90.10	38.00	687.12	687.12
B5	398+00.10	38.00	687.10	687.10
☉ EB Bent 1S	398+13.10	38.00	687.07	687.07
C5	398+23.10	38.00	687.05	687.05
E. End of Deck Ext.	398+34.60	38.00	687.05	687.05

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	40.00	690.00	690.00
☉ EB Bent 1A	394+45.10	40.00	690.00	690.00
A1	394+55.10	40.00	689.95	689.95
☉ EB Bent 1B	394+68.10	40.00	689.87	689.87
B1	394+78.10	40.00	689.81	689.81
☉ EB Bent 1C	394+91.10	40.00	689.72	689.72
C1	395+01.10	40.00	689.64	689.64
☉ EB Bent 1D	395+14.10	40.00	689.53	689.53
A2	395+24.10	40.00	689.44	689.44
☉ EB Bent 1E	395+37.10	40.00	689.31	689.31
B2	395+47.10	40.00	689.20	689.20
☉ EB Bent 1F	395+60.10	40.00	689.06	689.06
C2	395+70.10	40.00	688.95	688.95
☉ EB Bent 1G	395+83.10	40.00	688.80	688.80
A3	395+93.10	40.00	688.69	688.69
☉ EB Bent 1H	396+06.10	40.00	688.54	688.54
B3	396+16.10	40.00	688.42	688.42
☉ EB Bent 1J	396+29.10	40.00	688.28	688.28
C3	396+39.10	40.00	688.16	688.16
☉ EB Bent 1K	396+52.10	40.00	688.01	688.01
D3	396+62.10	40.00	687.90	687.90
☉ EB Bent 1L	396+75.10	40.00	687.77	687.77
E3	396+85.10	40.00	687.67	687.67
☉ EB Bent 1M	396+98.10	40.00	687.55	687.55
A4	397+08.10	40.00	687.46	687.46
☉ EB Bent 1N	397+21.10	40.00	687.36	687.36
B4	397+31.10	40.00	687.29	687.29
☉ EB Bent 1P	397+44.10	40.00	687.21	687.21
C4	397+54.10	40.00	687.15	687.15
☉ EB Bent 1Q	397+67.10	40.00	687.09	687.09
A5	397+77.10	40.00	687.05	687.05
☉ EB Bent 1R	397+90.10	40.00	687.00	687.00
B5	398+00.10	40.00	686.98	686.98
☉ EB Bent 1S	398+13.10	40.00	686.95	686.95
C5	398+23.10	40.00	686.93	686.93
E. End of Deck Ext.	398+34.60	40.00	686.93	686.93

SOUTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W. End of Deck	394+44.60	40.58	690.50	690.50
☉ EB Bent 1A	394+45.10	40.58	690.50	690.50
A1	394+55.10	40.58	690.45	690.45
☉ EB Bent 1B	394+68.10	40.58	690.37	690.37
B1	394+78.10	40.58	690.31	690.31
☉ EB Bent 1C	394+91.10	40.58	690.22	690.22
C1	395+01.10	40.58	690.14	690.14
☉ EB Bent 1D	395+14.10	40.58	690.03	690.03
A2	395+24.10	40.58	689.94	689.94
☉ EB Bent 1E	395+37.10	40.58	689.81	689.81
B2	395+47.10	40.58	689.70	689.70
☉ EB Bent 1F	395+60.10	40.58	689.56	689.56
C2	395+70.10	40.58	689.45	689.45
☉ EB Bent 1G	395+83.10	40.58	689.30	689.30
A3	395+93.10	40.58	689.19	689.19
☉ EB Bent 1H	396+06.10	40.58	689.04	689.04
B3	396+16.10	40.58	688.92	688.92
☉ EB Bent 1J	396+29.10	40.58	688.78	688.78
C3	396+39.10	40.58	688.66	688.66
☉ EB Bent 1K	396+52.10	40.58	688.51	688.51
D3	396+62.10	40.58	688.40	688.40
☉ EB Bent 1L	396+75.10	40.58	688.27	688.27
E3	396+85.10	40.58	688.17	688.17
☉ EB Bent 1M	396+98.10	40.58	688.05	688.05
A4	397+08.10	40.58	687.96	687.96
☉ EB Bent 1N	397+21.10	40.58	687.86	687.86
B4	397+31.10	40.58	687.79	687.79
☉ EB Bent 1P	397+44.10	40.58	687.71	687.71
C4	397+54.10	40.58	687.65	687.65
☉ EB Bent 1Q	397+67.10	40.58	687.59	687.59
A5	397+77.10	40.58	687.55	687.55
☉ EB Bent 1R	397+90.10	40.58	687.50	687.50
B5	398+00.10	40.58	687.48	687.48
☉ EB Bent 1S	398+13.10	40.58	687.45	687.45
C5	398+23.10	40.58	687.43	687.43
E. End of Deck Ext.	398+34.60	40.58	687.43	687.43

Note: Stations and offsets are taken relative to ☉ US-6/159th Street. Positive offset value indicates offset to the right.

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CHICAGO, ILLINOIS 60606

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STATE OF ILLINOIS
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TOP OF SLAB ELEVATIONS EB 2
STRUCTURE NO. 016-D012

SHEET NO. SA-7 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	43
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62P68	

NORTH EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	11.42	691.25
A	394+24.60	11.42	691.22
B	394+34.60	11.42	691.18
E. End of W. Appr. Slab	394+44.60	11.42	691.14

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	12.00	690.75
A	394+24.60	12.00	690.72
B	394+34.60	12.00	690.68
E. End of W. Appr. Slab	394+44.60	12.00	690.64

EB PG & NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	14.00	690.71
A	394+24.60	14.00	690.68
B	394+34.60	14.00	690.64
E. End of W. Appr. Slab	394+44.60	14.00	690.60

SOUTH SLOPE BREAK LINE

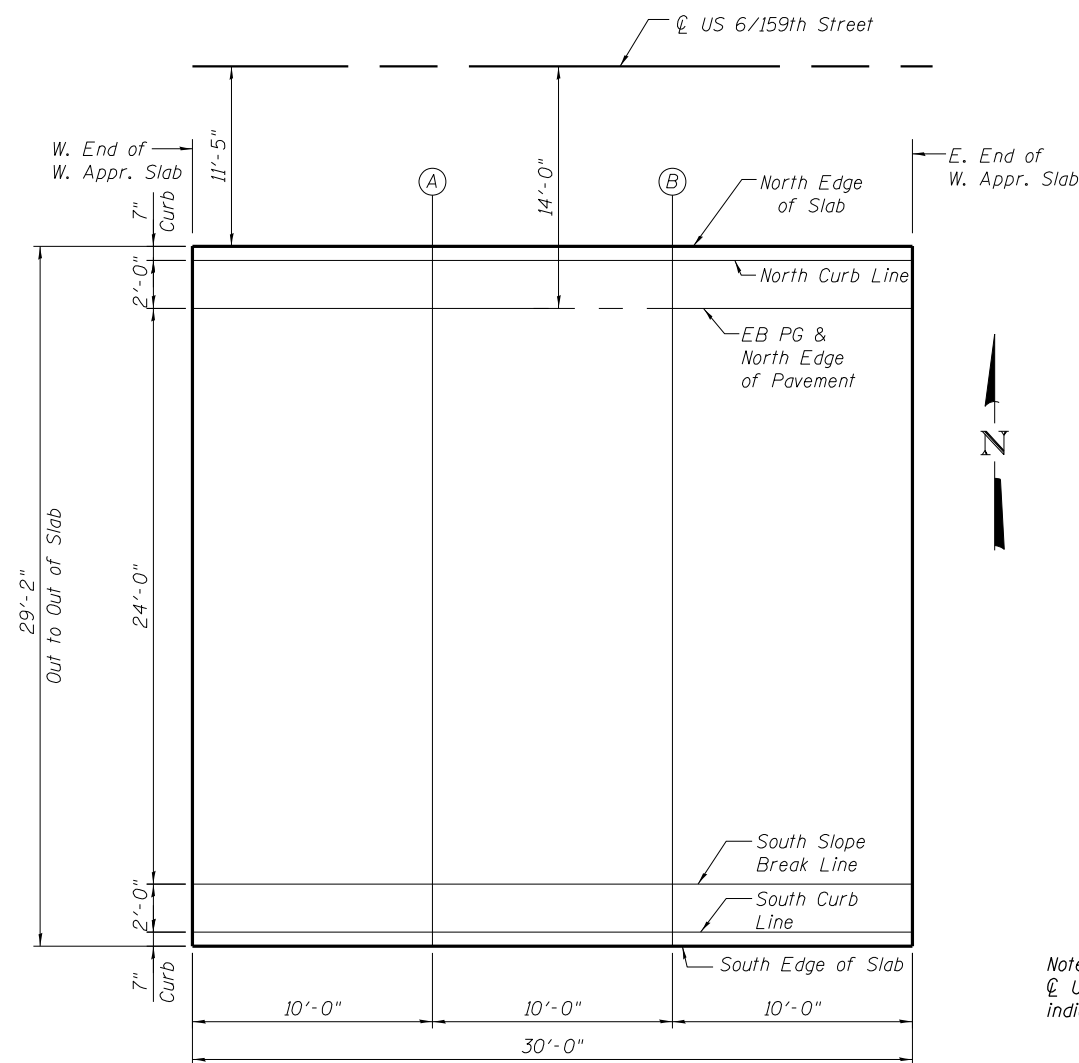
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	38.00	690.23
A	394+24.60	38.00	690.20
B	394+34.60	38.00	690.16
E. End of W. Appr. Slab	394+44.60	38.00	690.12

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	40.00	690.11
A	394+24.60	40.00	690.08
B	394+34.60	40.00	690.04
E. End of W. Appr. Slab	394+44.60	40.00	690.00

SOUTH EDGE OF SLAB

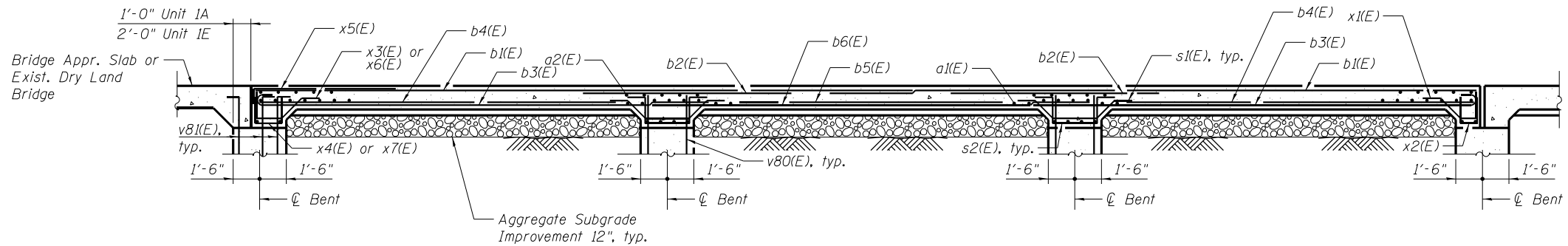
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	394+14.60	40.58	690.61
A	394+24.60	40.58	690.58
B	394+34.60	40.58	690.54
E. End of W. Appr. Slab	394+44.60	40.58	690.50



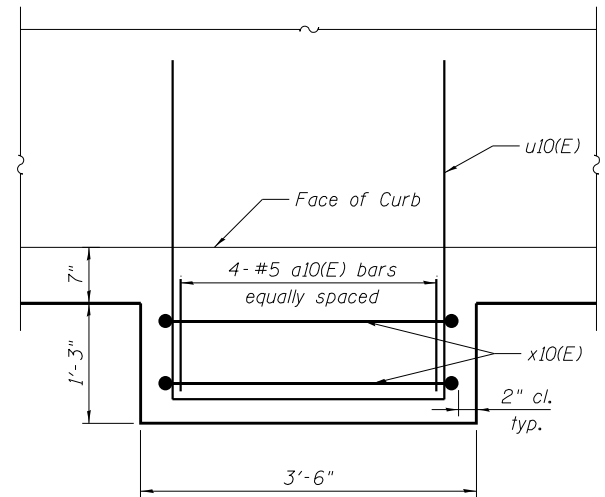
Note: Stations and offsets are taken relative to $\text{C US6/159th Street}$. Positive offset value indicates offset to the right.

PLAN - EASTBOUND WEST APPROACH SLAB

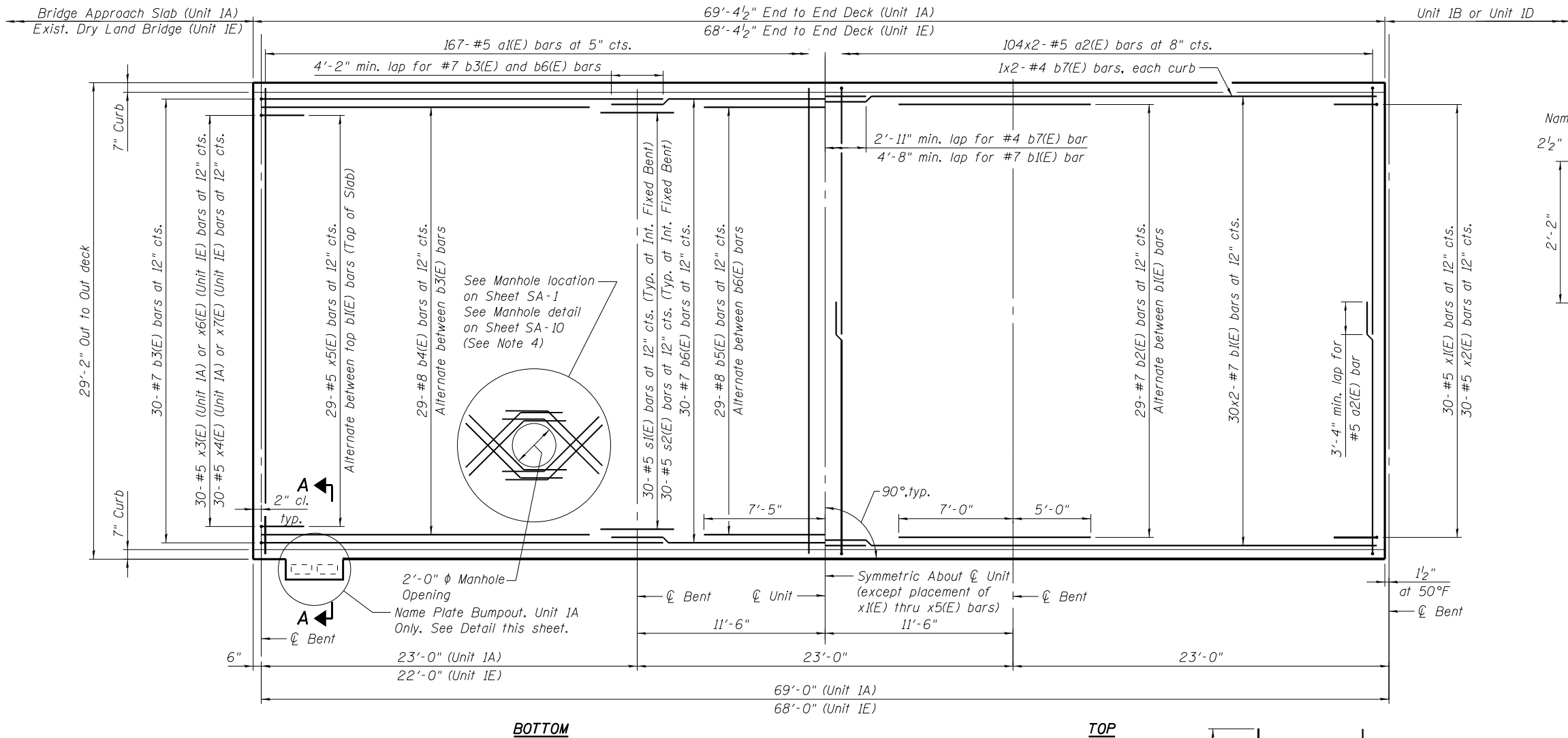
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END UNIT ELEVATION

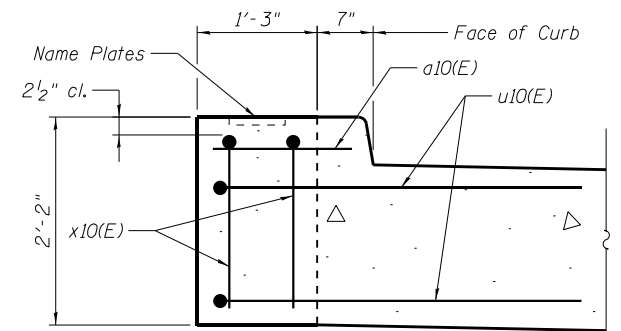


NAME PLATE BUMPOUT DETAIL



3 SPAN END UNIT PLAN

(EB Unit 1A and 1E)



SECTION A-A

NAME PLATE BUMPOUT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	4	#5	1'-5"	—
u10(E)	2	#5	12'-2"	U
x10(E)	2	#5	6'-4"	U
Reinforcement Bars, Epoxy Coated			Pound	50
Concrete Superstructure			Cu. Yd.	0.4

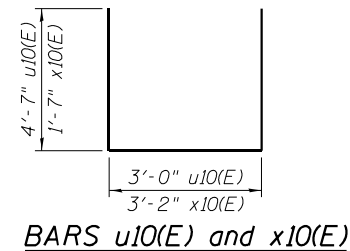
NOTES

- See Sheet SA-10 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.
- For Span arrangements, work this sheet with Sheets SA-1.
- 1 manhole is placed in EB unit 1A. Cut reinforcement bars to bars to clear manhole opening.
- 3 scuppers are placed in EB Unit 1E. Scuppers not shown in plan view. For location details, see Sheets SA-1. For typical scupper reinforcement details, see Sheet SA-10.

MINIMUM BAR LAP

(Deck)

- #4 bar (Top) = 2'-11"
- #5 bar (Top) = 3'-4"
- #7 bar (Top) = 4'-8"
- #7 bar = 4'-2"



BARS u10(E) and x10(E)

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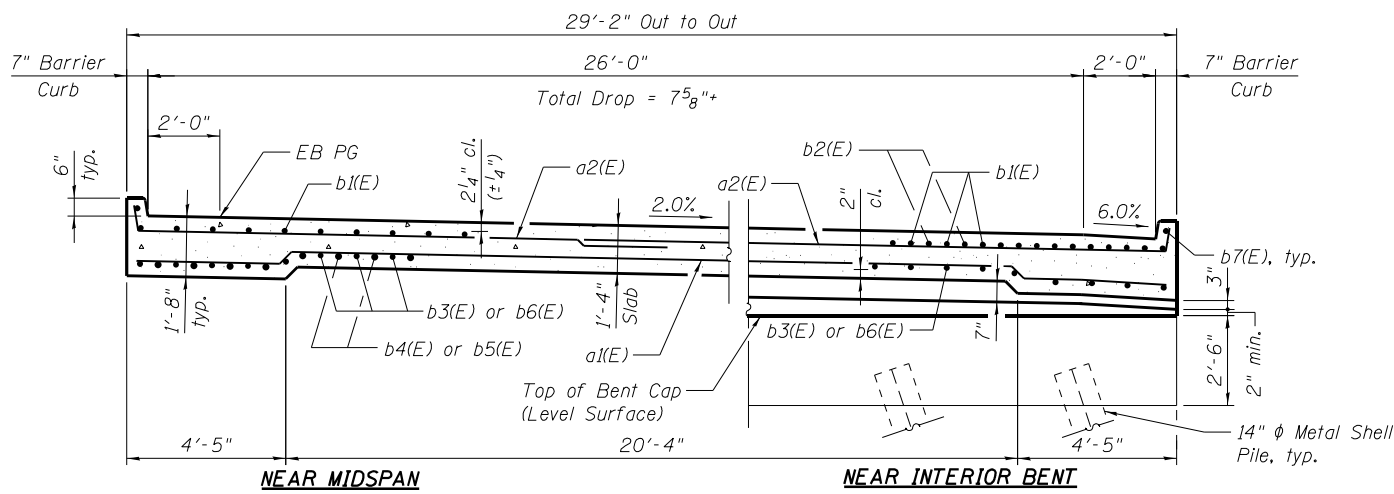
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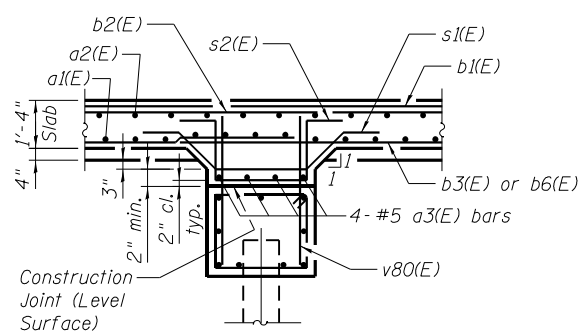
**DECK PLAN & CROSS SECTION 1
STRUCTURE NO. 016-D012**

SHEET NO. SA-9 OF SA-31 SHEETS

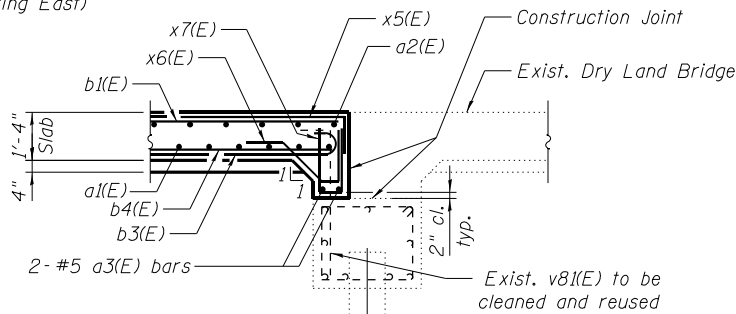
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	45
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



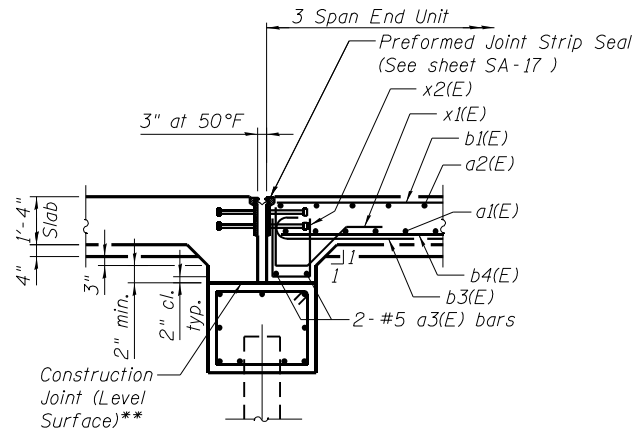
**3 SPAN END UNIT
EB BRIDGE CROSS SECTION**
(Looking East)



**FIXED PILE BENT
CAP SECTION**

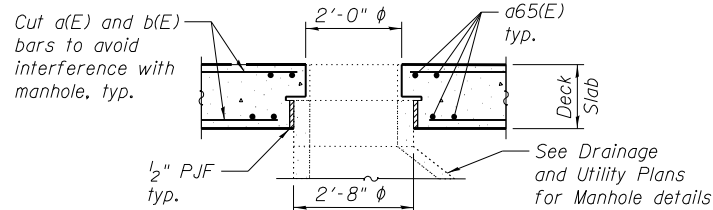


**EAST END PILE BENT
CAP SECTION**

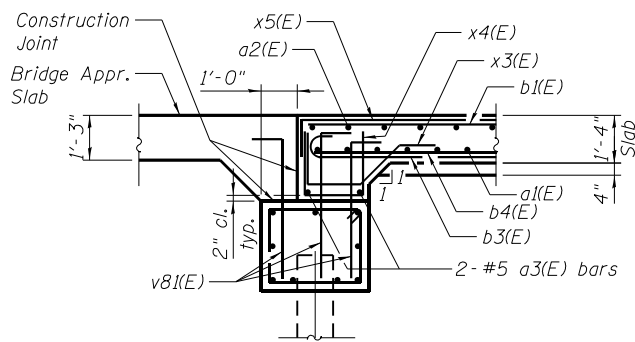


**EXPANSION PILE BENT
CAP SECTION**

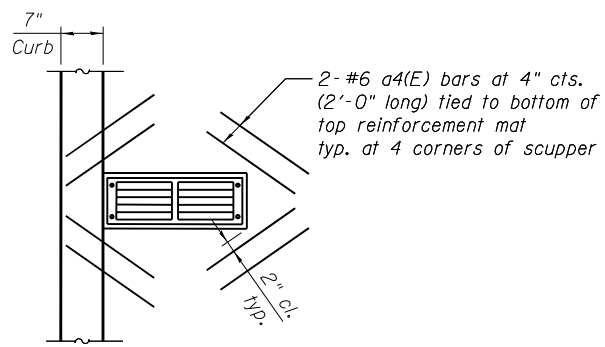
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. 1/8" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing 1/8" neoprene sheet is included with CONCRETE STRUCTURES.



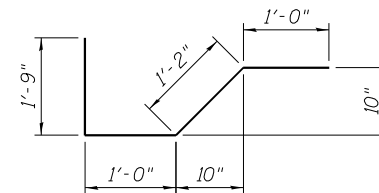
SECTION B-B



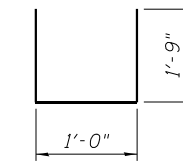
**WEST END PILE BENT
CAP SECTION**



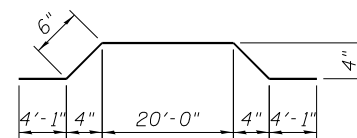
SCUPPER REINFORCEMENT



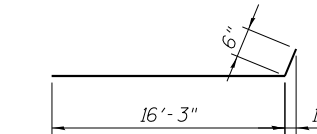
BAR x1(E)



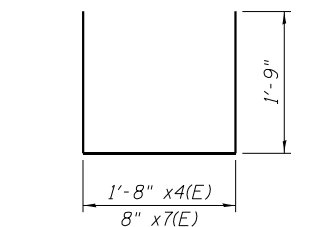
BAR x2(E)



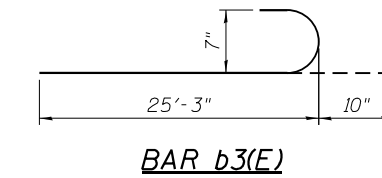
BAR a1(E)



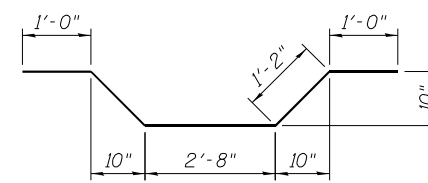
BAR a2(E)



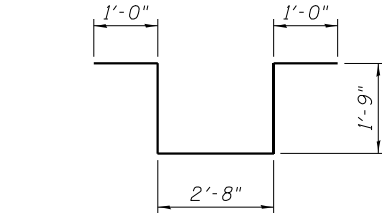
BAR x4(E) and x7(E)



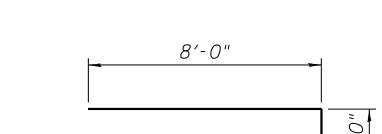
BAR b3(E)



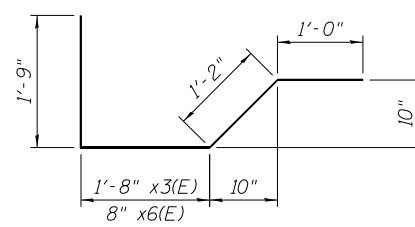
BAR s1(E)



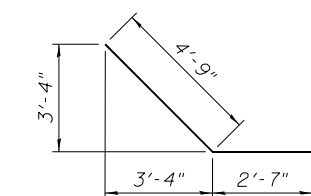
BAR s2(E)



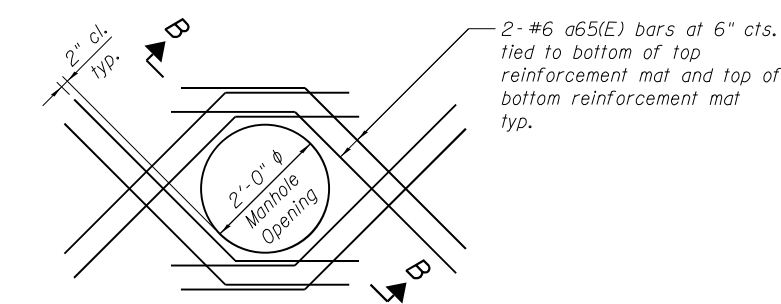
BAR x5(E)



BAR x3(E) and x6(E)



BAR a65(E)



MANHOLE REINFORCEMENT

**BILL OF MATERIAL
FOR 3 SPAN END UNITS**

Bar	No.	Size	Length	Shape
a1(E)	334	#5	29'-2"	
a2(E)	416	#5	16'-9"	
a3(E)	24	#5	28'-10"	
b1(E)	120	#7	37'-1"	
b2(E)	116	#7	12'-0"	
b3(E)	120	#7	26'-1"	
b4(E)	116	#8	20'-1"	
b5(E)	58	#8	14'-10"	
b6(E)	60	#7	27'-10"	
b7(E)	8	#4	36'-1"	
s1(E)	120	#5	7'-0"	
s2(E)	120	#5	8'-2"	
x1(E)	60	#5	4'-11"	
x2(E)	60	#5	4'-6"	
x3(E)	30	#5	5'-7"	
x4(E)	30	#5	5'-2"	
x5(E)	58	#5	8'-10"	
x6(E)	30	#5	4'-7"	
x7(E)	30	#5	4'-2"	
Reinforcement Bars, Epoxy Coated			Pound	52,320
Concrete Superstructure			Cu. Yd.	241.8
Protective Coat			Sq. Yd.	466
Bridge Deck Grooving			Sq. Yd.	402

The above quantities include 2 units: EB Unit 1A and 1E

**MANHOLE REINFORCEMENT
BILL OF MATERIAL
FOR ONE MANHOLE**
(1 Required)

Bar	No.	Size	Length	Shape
a65(E)	16	#6	7'-4"	
Reinforcement Bars, Epoxy Coated			Pound	180

**SCUPPER REINFORCEMENT
BILL OF MATERIAL
FOR SCUPPERS**

Bar	No.	Size	Length	Shape
a4(E)	24	#6	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	90

The above quantities include reinforcement for 3 scuppers.

NOTES

1. Cut b1(E) bars to clear drainage scuppers.
2. Space b3(E) thru b6(E) bars to avoid interference with drainage scuppers.
3. See Sheet SA-4 for Barrier Curb Detail.
4. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

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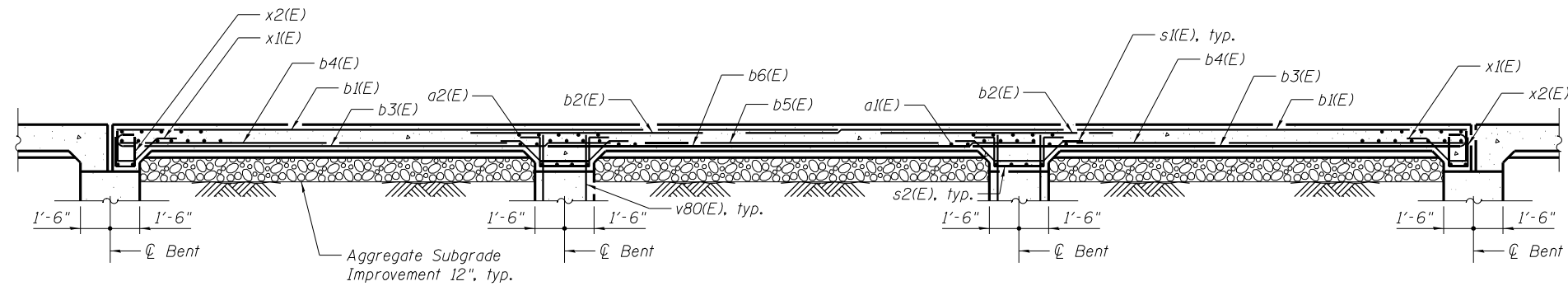
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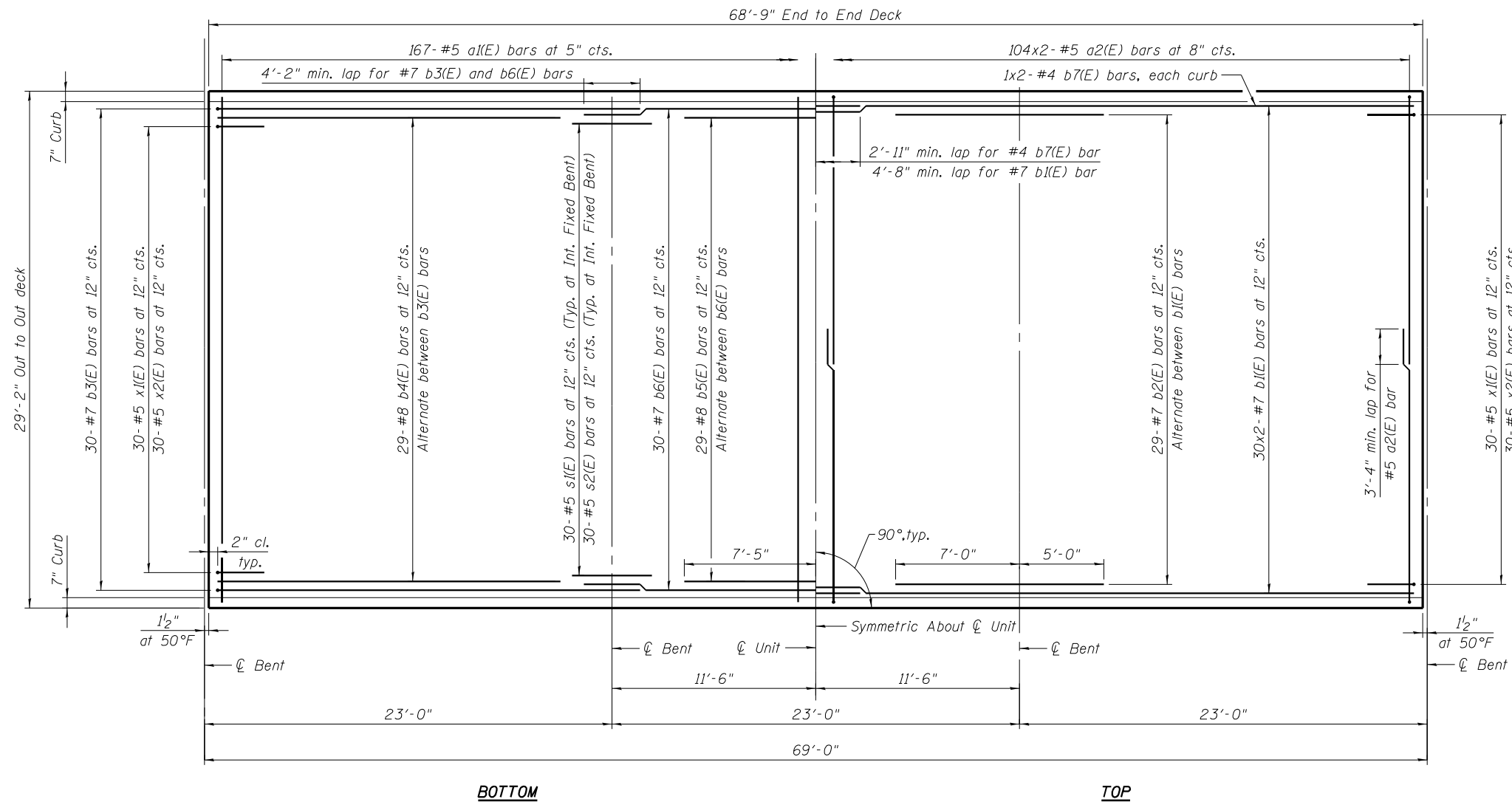
**SUPERSTRUCTURE DETAILS 1
STRUCTURE NO. 016-D012**

SHEET NO. SA-10 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	46
CONTRACT NO. 60L72				
ILLINOIS FED. AID PROJECT				



INTERIOR UNIT ELEVATION



BOTTOM

TOP

3 SPAN INTERIOR UNIT PLAN

(EB Unit 1B and 1D)

MINIMUM BAR LAP

(Deck)

- #4 bar (Top) = 2'-11"
- #5 bar (Top) = 3'-4"
- #7 bar (Top) = 4'-8"
- #7 bar = 4'-2"

NOTES

1. See Sheet SA-12 for superstructure details and Bill of Material.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For Span arrangements, work this sheet with Sheet SA-1.
4. Scuppers not shown in plan view. For location details, see Sheet SA-1.
5. 1 scupper is placed in EB Unit 1B.
1 scupper is placed in EB Unit 1D.
Scuppers not shown in plan view. For location details, see Sheets SA-1. For typical scupper reinforcement details, see Sheet SA-12.

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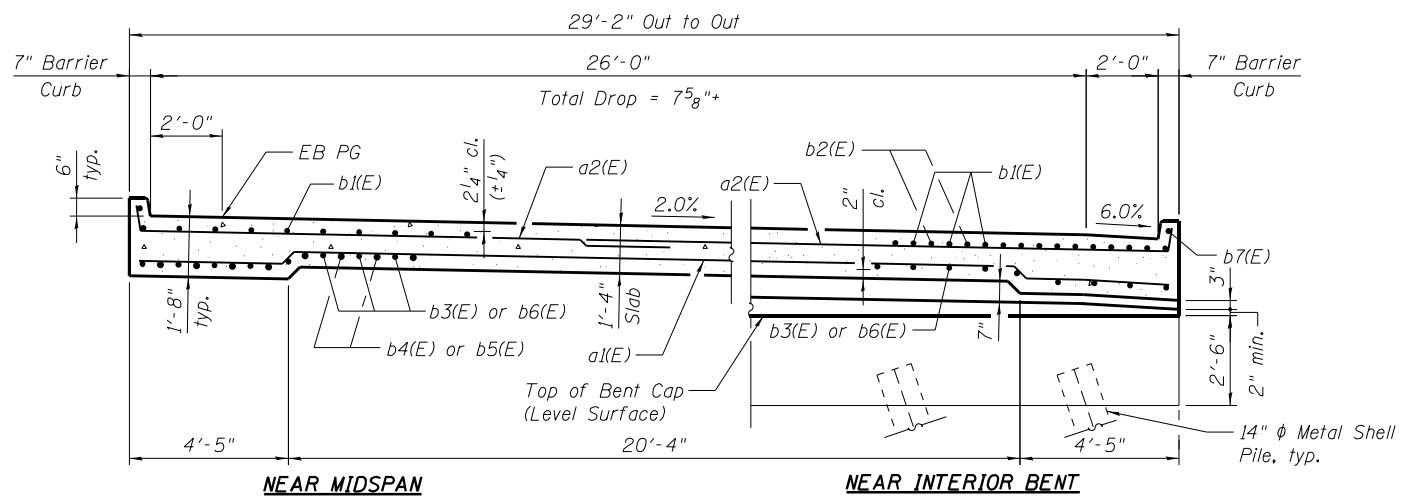
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**DECK PLAN & CROSS SECTION 2
STRUCTURE NO. 016-D012**

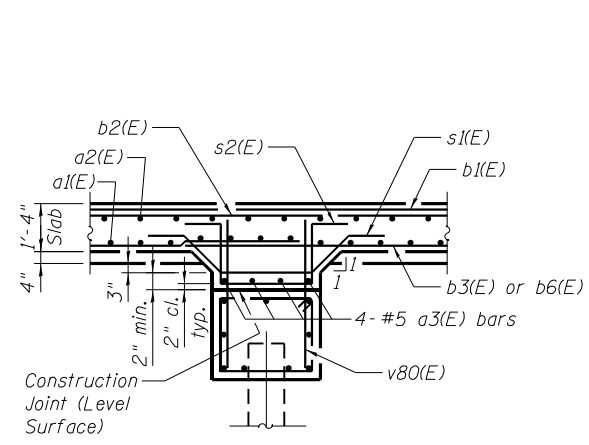
SHEET NO. SA-11 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	47
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

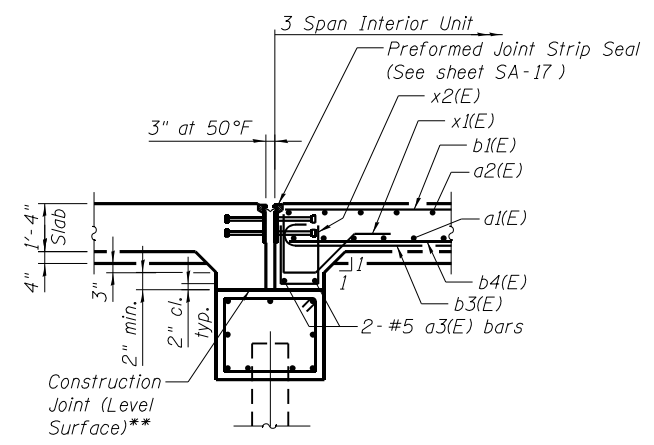


**3 SPAN INTERIOR UNIT
EB BRIDGE CROSS SECTION**

(Looking East)
* Tilt #5 a2(E) bars as required to maintain clearance

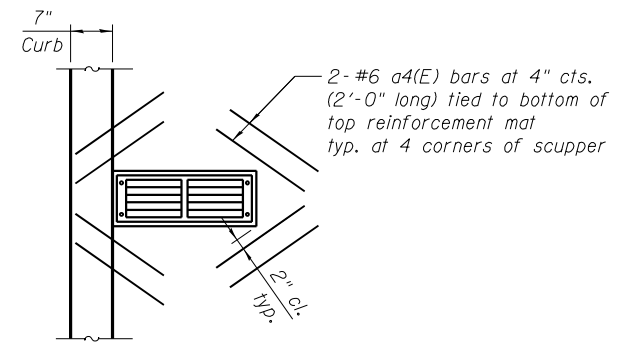


**FIXED PILE BENT
CAP SECTION**

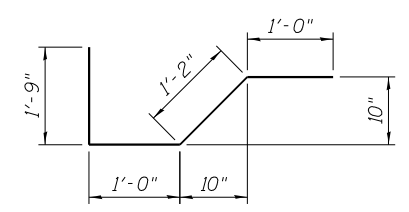


EXPANSION PILE BENT

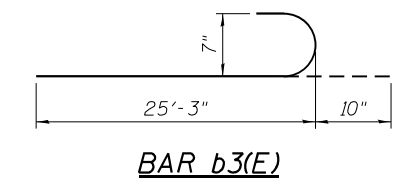
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. 1/8" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing 1/8" neoprene sheet is included with CONCRETE STRUCTURES.



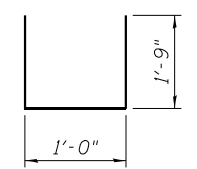
SCUPPER REINFORCEMENT



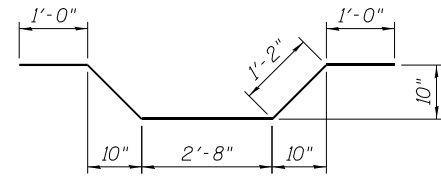
BAR x1(E)



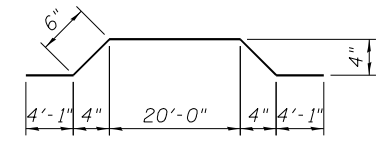
BAR b3(E)



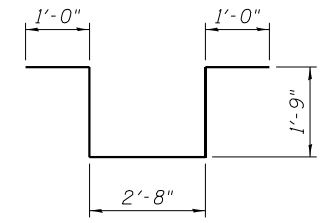
BAR x2(E)



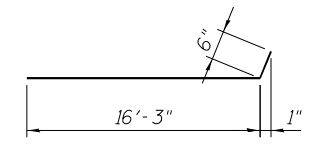
BAR s1(E)



BAR a1(E)



BAR s2(E)



BAR a2(E)

**BILL OF MATERIAL
FOR 3 SPAN INTERIOR UNITS**

Bar	No.	Size	Length	Shape
a1(E)	334	#5	29'-2"	
a2(E)	416	#5	16'-9"	
a3(E)	24	#5	28'-10"	
b1(E)	120	#7	37'-1"	
b2(E)	116	#7	12'-0"	
b3(E)	120	#7	26'-1"	
b4(E)	116	#8	20'-1"	
b5(E)	58	#8	14'-10"	
b6(E)	60	#7	27'-2"	
b7(E)	8	#4	36'-1"	
s1(E)	120	#5	7'-0"	
s2(E)	120	#5	8'-2"	
x1(E)	120	#5	4'-11"	
x2(E)	120	#5	4'-6"	
Reinforcement Bars, Epoxy Coated			Pound	51,620
Concrete Superstructure			Cu. Yd.	239.8
Protective Coat			Sq. Yd.	462
Bridge Deck Grooving			Sq. Yd.	398

The above quantities include all 2 units: EB Units 1B, and 1D.

**SCUPPER REINFORCEMENT
BILL OF MATERIAL
FOR SCUPPERS**

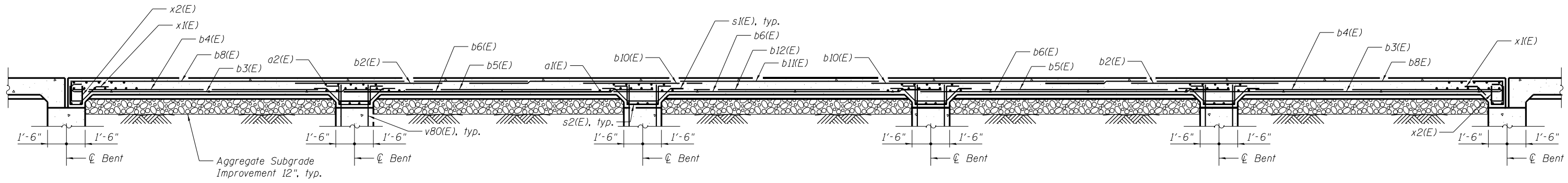
Bar	No.	Size	Length	Shape
a4(E)	16	#6	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	60

The above quantities include reinforcement for 2 scuppers.

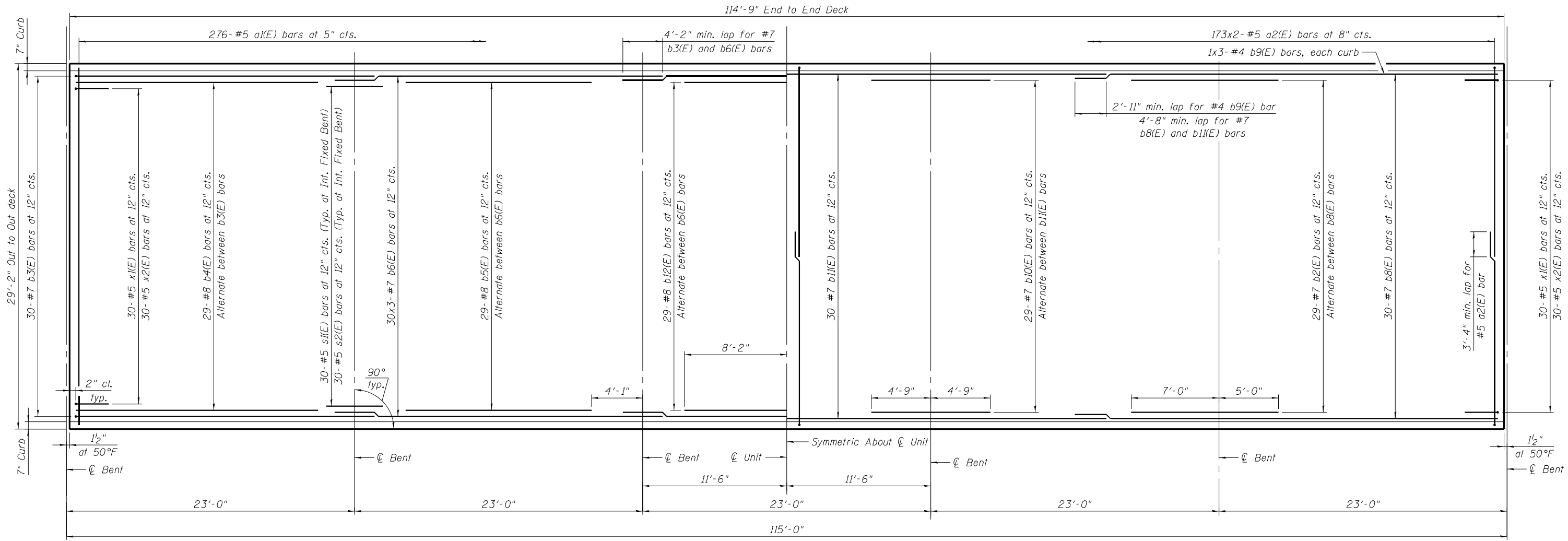
NOTES

1. Cut b1(E) bars to clear drainage scuppers.
2. Space b3(E) thru b6(E) bars to avoid interference with drainage scuppers.
3. See Sheet SA-4 for Barrier Curb Detail.

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INTERIOR UNIT ELEVATION



BOTTOM

TOP

5 SPAN INTERIOR UNIT PLAN
(EB Unit 1C)

MINIMUM BAR LAP
(Deck)
#4 bar (Top) = 2'-11"
#5 bar (Top) = 3'-4"
#7 bar (Top) = 4'-8"
#7 bar = 4'-2"

- NOTES**
- See Sheet SA-14 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.
 - For Span arrangements, work this sheet with Sheets SA-1.
 - 2 scuppers are placed in EB Unit 1C. Scuppers not shown in plan view. For location details, see Sheets SA-1. For typical scupper reinforcement details, see Sheet SA-14.

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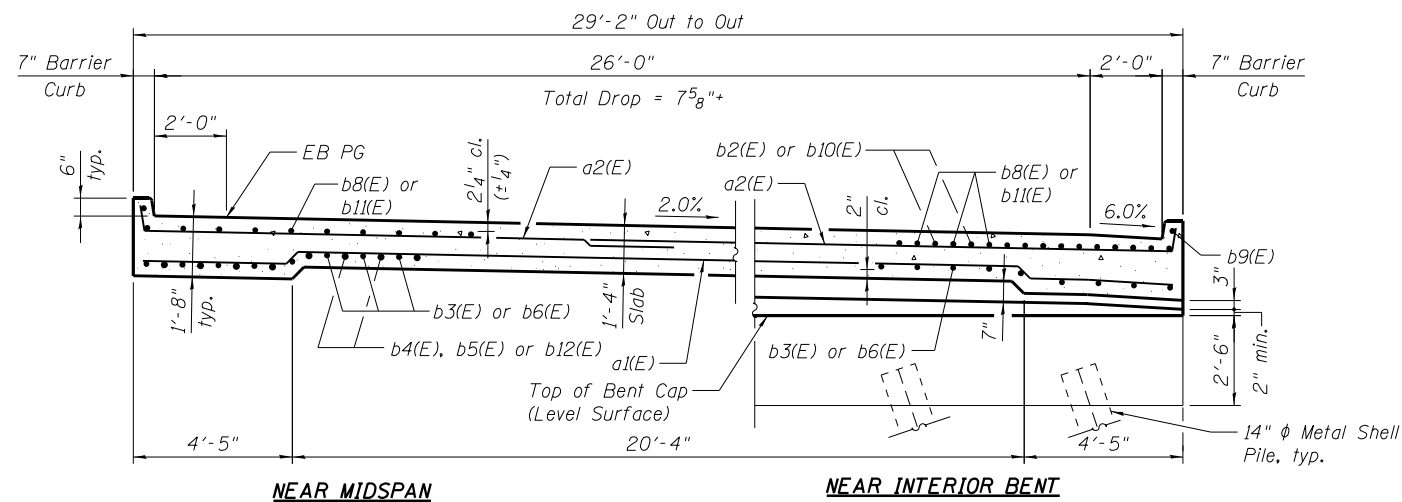
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PLOT DATE =	CHECKED - AMK	REVISED

STATE OF ILLINOIS
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DECK PLAN & CROSS SECTION 3
STRUCTURE NO. 016-D012

SHEET NO. SA-13 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	49
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



**5 SPAN INTERIOR UNIT
EB BRIDGE CROSS SECTION**

(Looking East)

* Tilt #5 a2(E) bars as required to maintain clearance

**BILL OF MATERIAL
FOR 5 SPAN INTERIOR UNITS**

Bar	No.	Size	Length	Shape
a1(E)	276	#5	29'-2"	
a2(E)	346	#5	16'-9"	
a3(E)	20	#5	28'-10"	
b2(E)	58	#7	12'-0"	
b3(E)	60	#7	26'-1"	
b4(E)	58	#8	20'-1"	
b5(E)	58	#8	14'-10"	
b6(E)	90	#7	27'-2"	
b8(E)	60	#7	37'-4"	
b9(E)	6	#4	40'-4"	
b10(E)	58	#7	9'-6"	
b11(E)	30	#7	51'-0"	
b12(E)	29	#8	16'-4"	
s1(E)	120	#5	7'-0"	
s2(E)	120	#5	8'-2"	
x1(E)	60	#5	4'-11"	
x2(E)	60	#5	4'-6"	
Reinforcement Bars, Epoxy Coated			Pound	42,760
Concrete Superstructure			Cu. Yd.	203.8
Protective Coat			Sq. Yd.	385
Bridge Deck Grooving			Sq. Yd.	332

The above quantities include 1 unit: EB Unit IC.

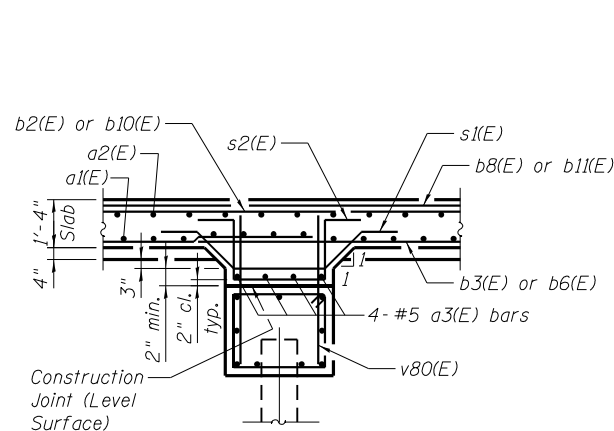
**SCUPPER REINFORCEMENT
BILL OF MATERIAL
FOR SCUPPERS**

Bar	No.	Size	Length	Shape
a4(E)	16	#6	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	60

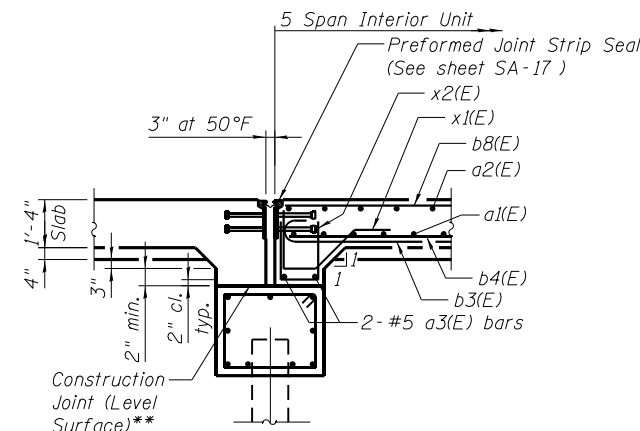
The above quantities include reinforcement for 2 scuppers.

NOTES

1. Cut b8(E) and/or b11(E) bars to clear drainage scuppers.
2. Space b3(E) thru b6(E) and b12(E) bars to avoid interference with drainage scuppers.
3. See Sheet SA-4 for Barrier Curb Detail.

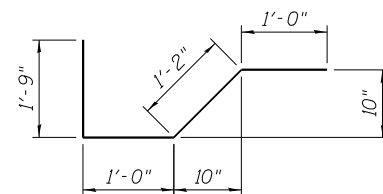


**FIXED PILE BENT
CAP SECTION**

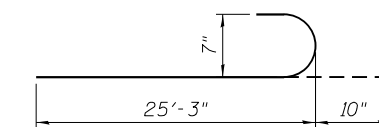


EXPANSION PILE BENT

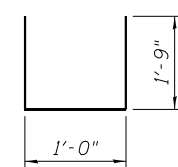
** Top concrete surface of the expansion pier caps shall be finished to a very smooth finish. 1/8" neoprene sheet shall be placed on the entire top surface of the expansion pier caps prior to pouring the superstructure slab. Cost of furnishing and installing 1/8" neoprene sheet is included with CONCRETE STRUCTURES.



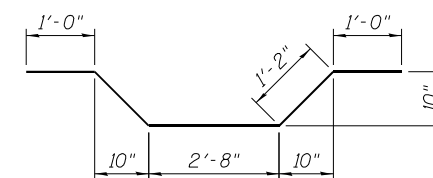
BAR x1(E)



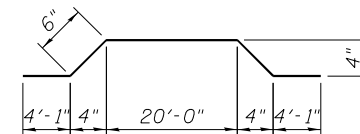
BAR b3(E)



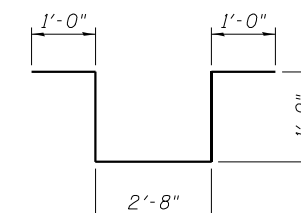
BAR x2(E)



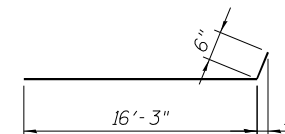
BAR s1(E)



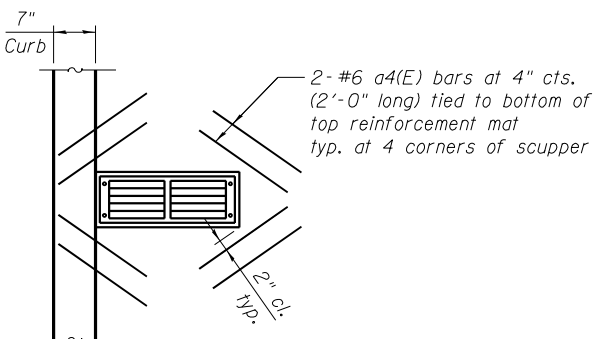
BAR a1(E)



BAR s2(E)



BAR a2(E)



SCUPPER REINFORCEMENT

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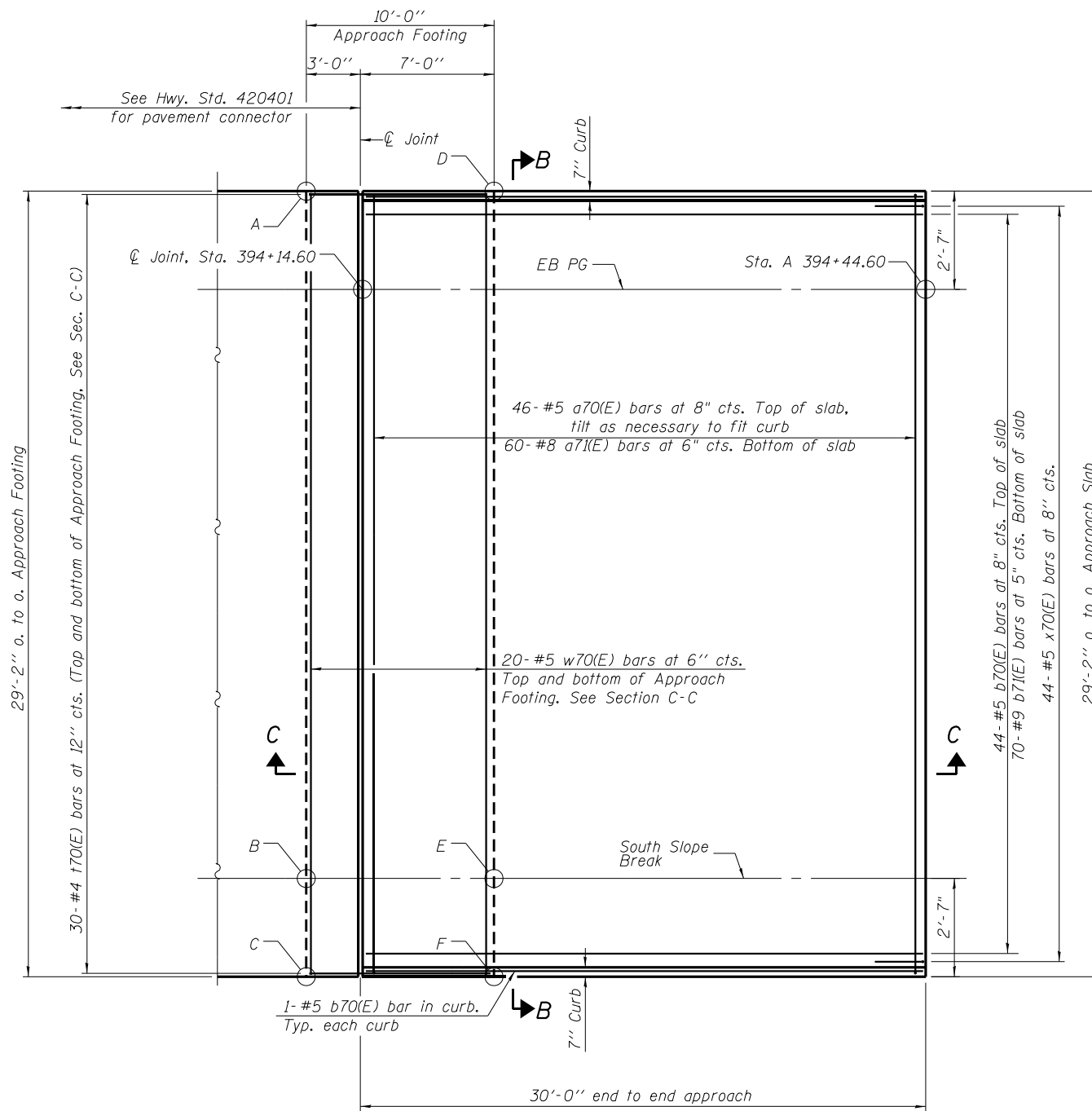
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**SUPERSTRUCTURE DETAILS 3
STRUCTURE NO. 016-D012**

SHEET NO. SA-14 OF SA-31 SHEETS

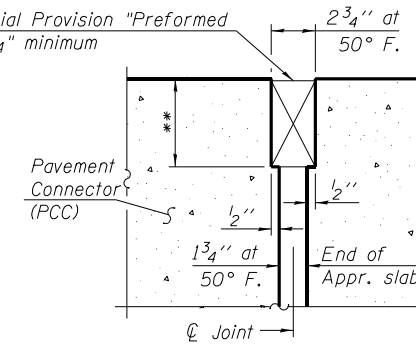
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	50
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	

Notes:
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the end unit (1A) length plus the length of the bridge approach slabs.
 See sheet SA-16 for Sections B-B and C-C.



PLAN

*** Expansion joint. See Special Provision "Preformed Pavement Joint Seal". Recess $\frac{1}{4}$ " minimum. Run out to out curb



DETAIL A

*** Cost included with Concrete Superstructure.
 ** Per manufacturer's recommendations

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTINGS

Point	Top	Bottom
A	689.41	688.58
B	688.88	688.05
C	688.73	687.89
D	689.37	688.53
E	688.84	688.00
F	688.68	687.85

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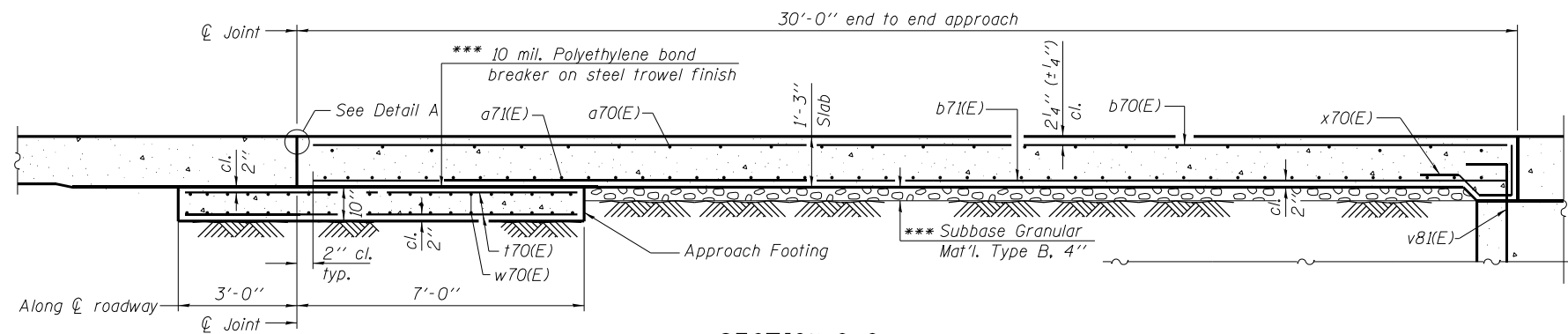
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**APPROACH SLAB DETAILS 1
 STRUCTURE NO. 016-D012**

SHEET NO. SA-15 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	51
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



SECTION C-C

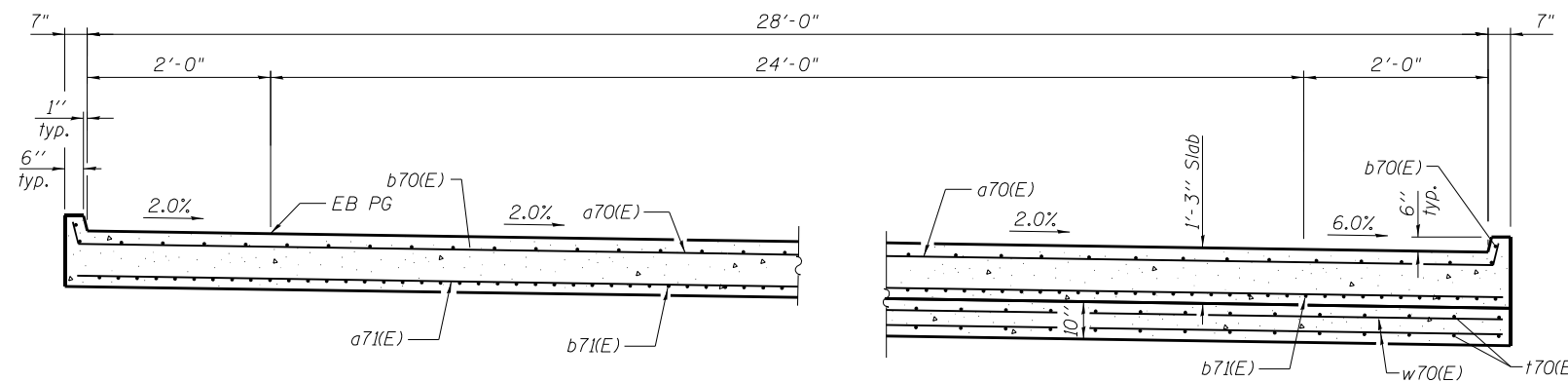
*** Cost included with Concrete Superstructure.

NOTES

1. See Sheet SA-15 for Detail A.
2. Approach slab and concrete curb shall be paid for as Concrete Superstructure (Approach Slab).
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v81(E) bar details, see Sheet SA-20.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. Cost of excavation for approach footing included with Concrete Structures.

BILL OF MATERIAL FOR APPROACH SLAB

Bar	No.	Size	Length	Shape
a70(E)	46	#5	29'-4"	—
a71(E)	60	#8	28'-10"	—
b70(E)	46	#5	29'-8"	—
b71(E)	70	#9	29'-8"	—
t70(E)	60	#4	9'-8"	—
w70(E)	40	#5	28'-10"	—
x70(E)	44	#5	6'-6"	└
Reinforcement Bars, Epoxy Coated			Pound	16,400
Concrete Superstructure (Approach Slab)			Cu. Yd.	42.0
Concrete Structures			Cu. Yd.	9.1
Bridge Deck Grooving			Sq. Yd.	87
Protective Coat			Sq. Yd.	101

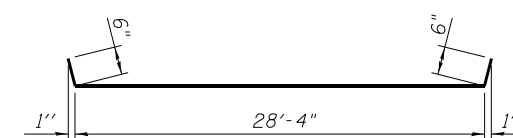


NEAR END BENT

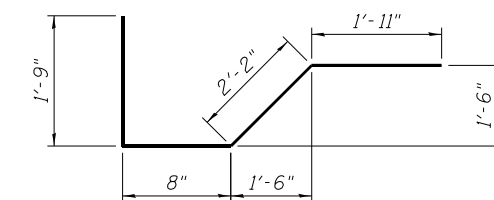
SECTION B-B

Looking East
(See Plan for dimensions not shown)

AT APPROACH FOOTING



BAR a70(E)



BAR x70(E)

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225 WEST WASHINGTON STREET
12 TH FLOOR
CHICAGO, ILLINOIS 60606

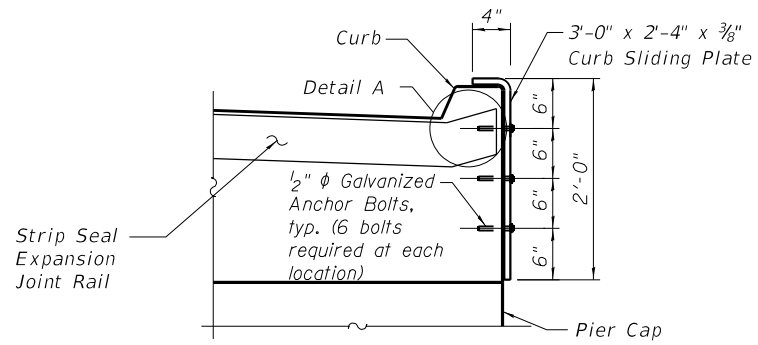
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

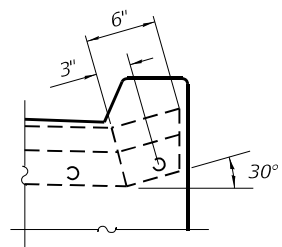
**APPROACH SLAB DETAILS 2
STRUCTURE NO. 016-D012**

SHEET NO. SA-16 OF SA-31 SHEETS

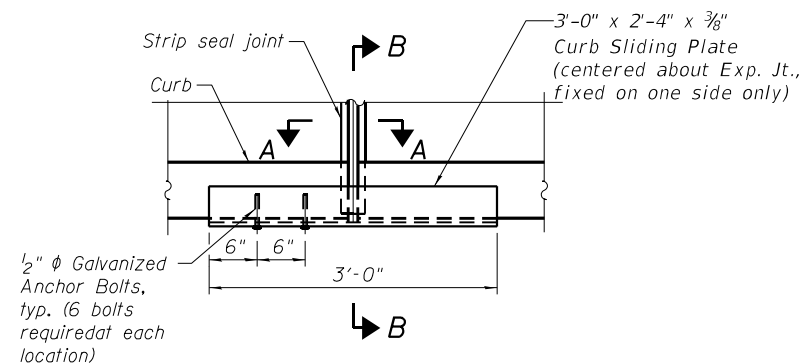
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	52
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



SECTION B-B

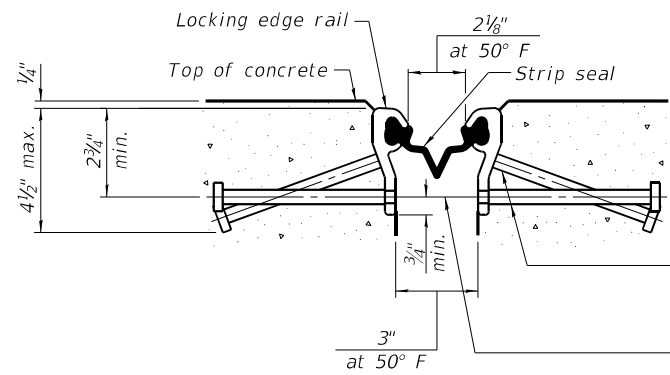


DETAIL A

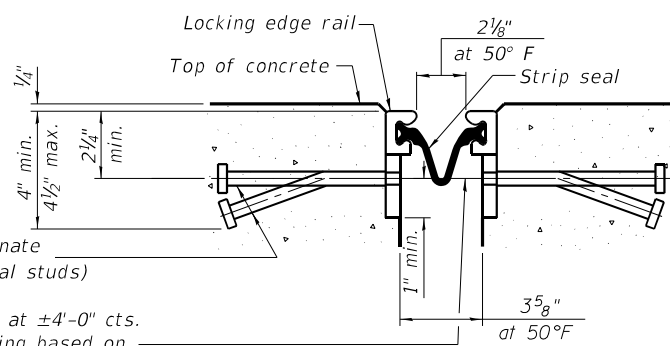


PLAN

Typical at each end of Expansion Joints



SHOWING ROLLED RAIL JOINT

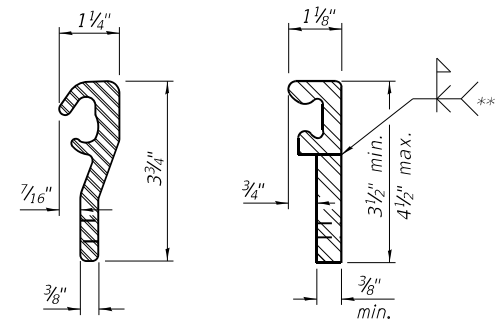


SHOWING WELDED RAIL JOINT

* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 3/8" Ø threaded rods in 7/16" Ø 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.

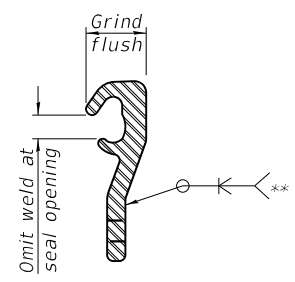
SECTION A-A

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



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 1/4". 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 4 1/2" 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 curb sliding plates and galvanized anchor bolts included with Preformed Joint Strip Seal.
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and curb 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	116

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LOCHNER
 H.W. LOCHNER, INC.
 225 WEST WASHINGTON STREET
 12 TH FLOOR
 CHICAGO, ILLINOIS 60606

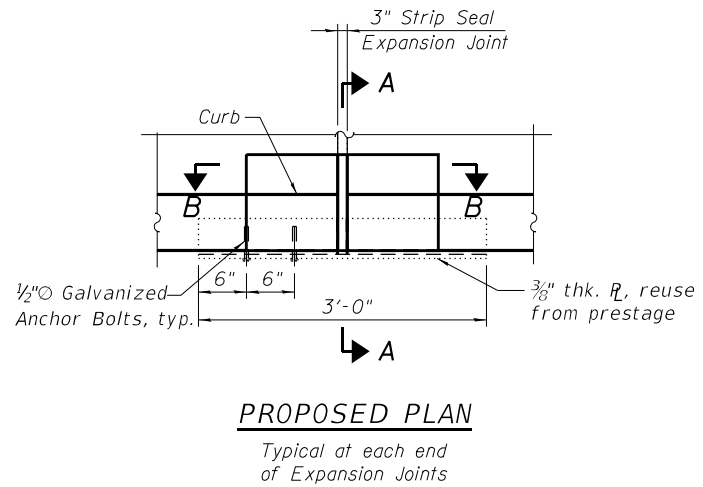
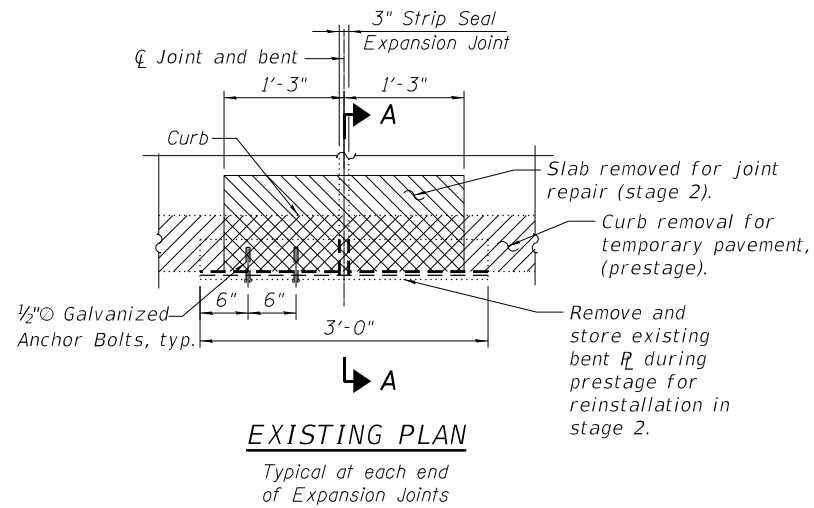
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**STATE OF ILLINOIS
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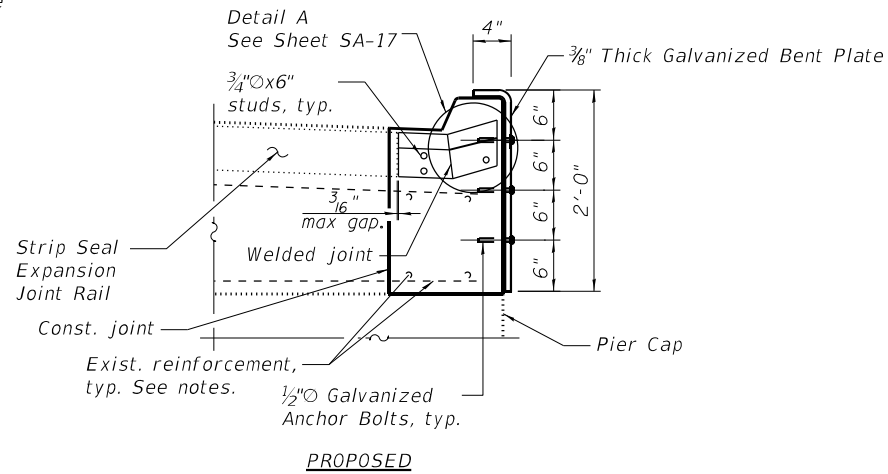
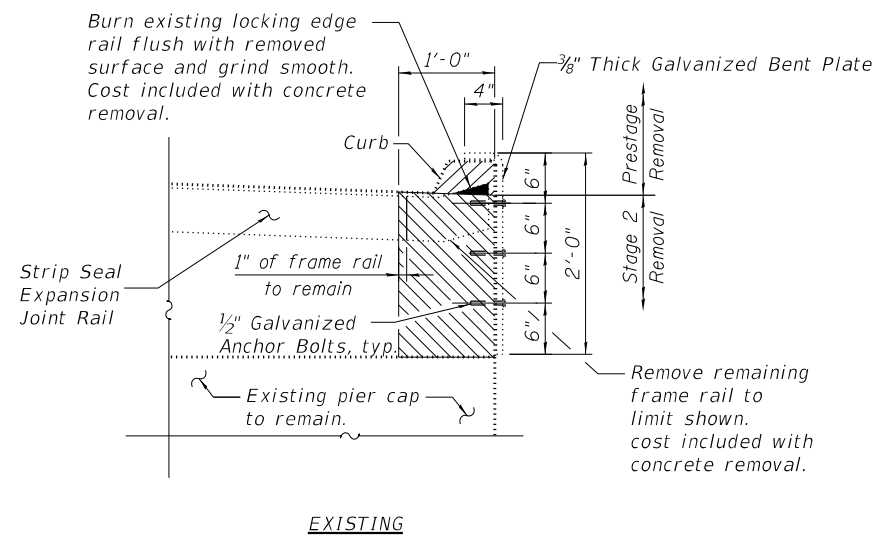
**PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 016-D012**

SHEET NO. SA-17 OF SA-31 SHEETS

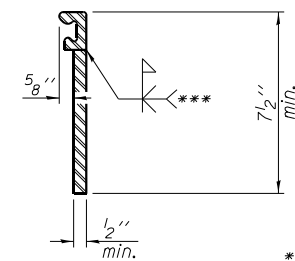
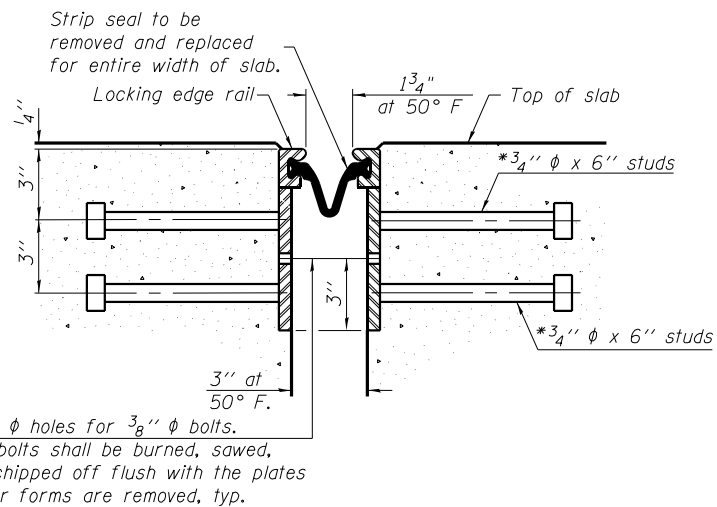
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	53
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				



Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the existing 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 shall match the existing. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" 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;
 Cost of curb sliding plates and galvanized anchor bolts included with Preformed Joint Strip Seal.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.



SECTION A-A



SECTION B-B

WELDED RAIL

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	CU YD	0.1
Concrete Superstructure	CU YD	0.6
Preformed Joint Strip Seal	FOOT	2

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

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LOCHNER
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 CHICAGO, ILLINOIS 60606

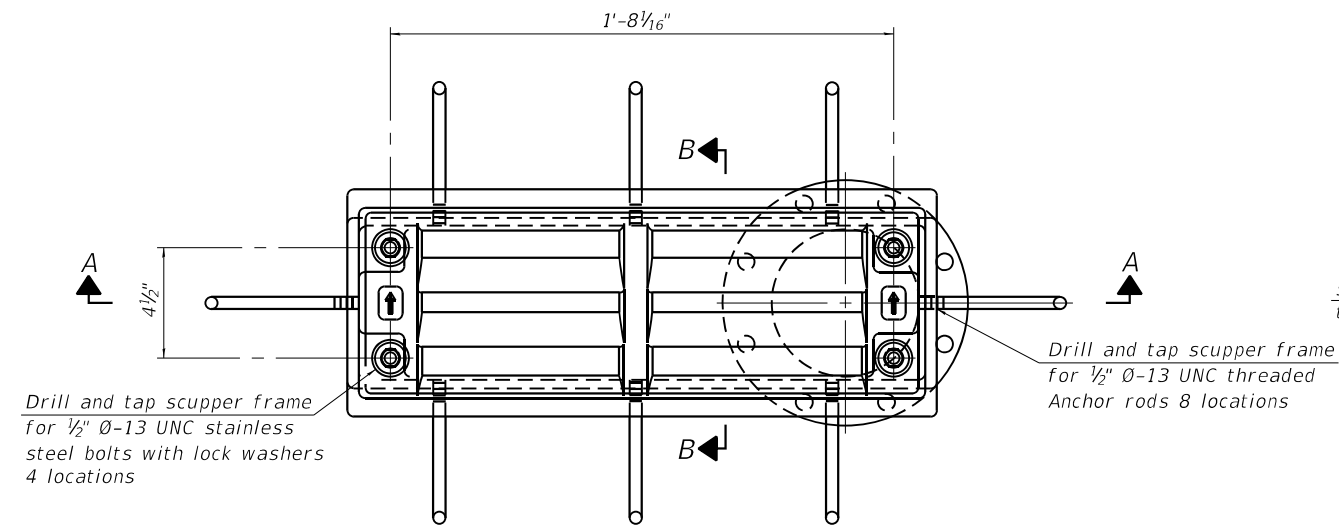
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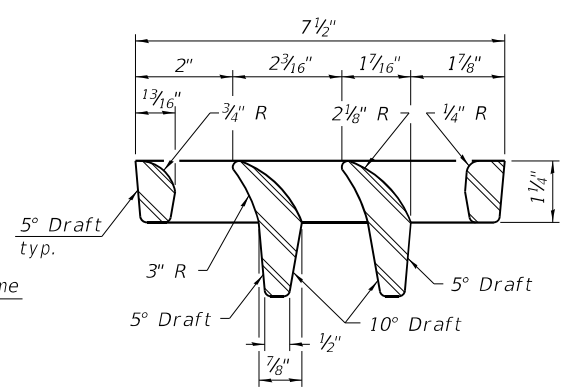
EXPANSION JOINT MODIFICATIONS
 STRUCTURE NO. 016-D012

SHEET NO. SA-18 OF SA-31 SHEETS

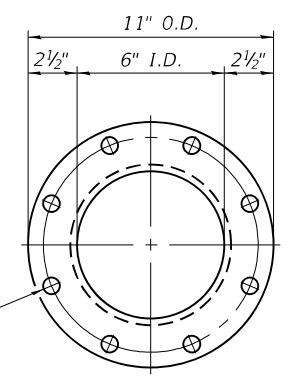
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	54
				CONTRACT NO. 62P68
ILLINOIS FED. AID PROJECT				



PLAN



VANE GRATE 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.

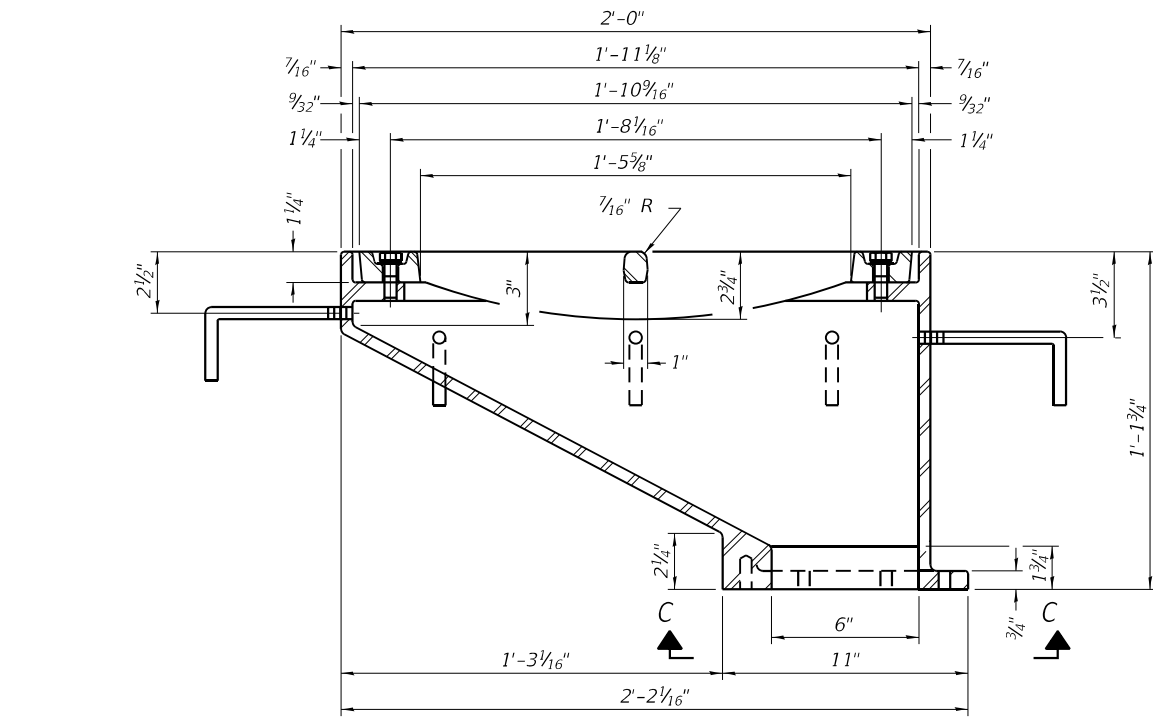
Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

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.

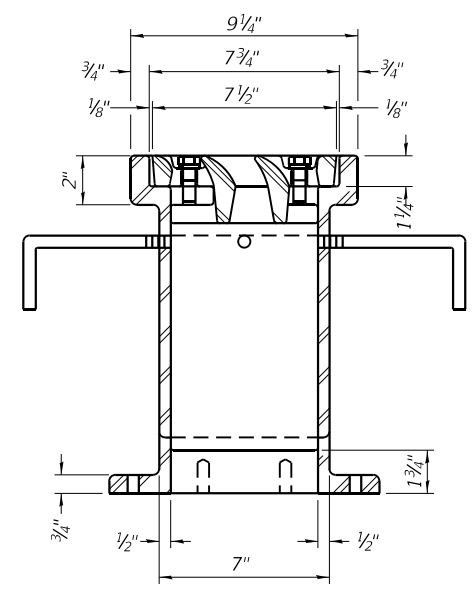
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

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-12.

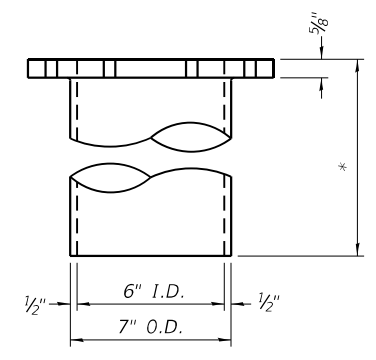


SECTION A-A

See sheets SA-2 of SA-31 for scupper location relative to curb.

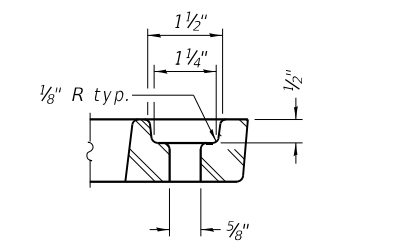


SECTION B-B

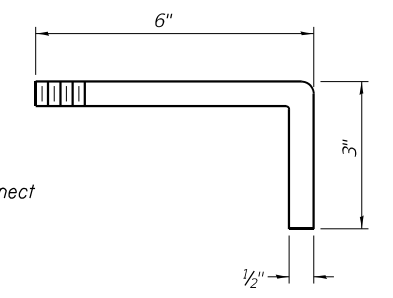


DOWNSPOUT

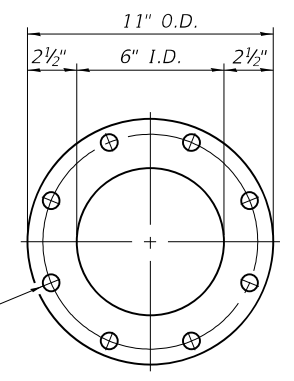
* Downspout length as required to connect to Drainage System for Structures.



GRATE BOLT HOLE DETAIL



ANCHOR ROD DETAIL



VIEW C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	7

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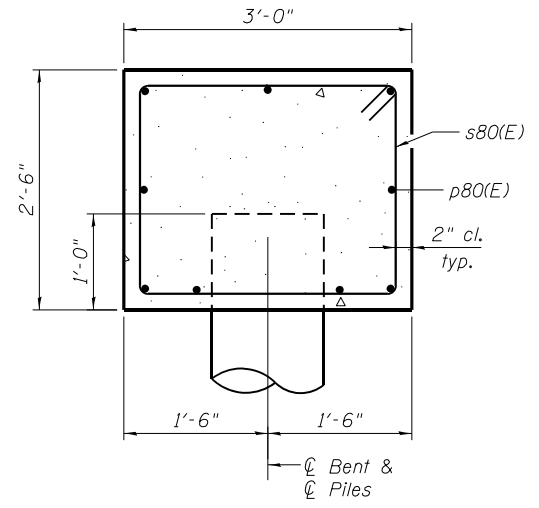
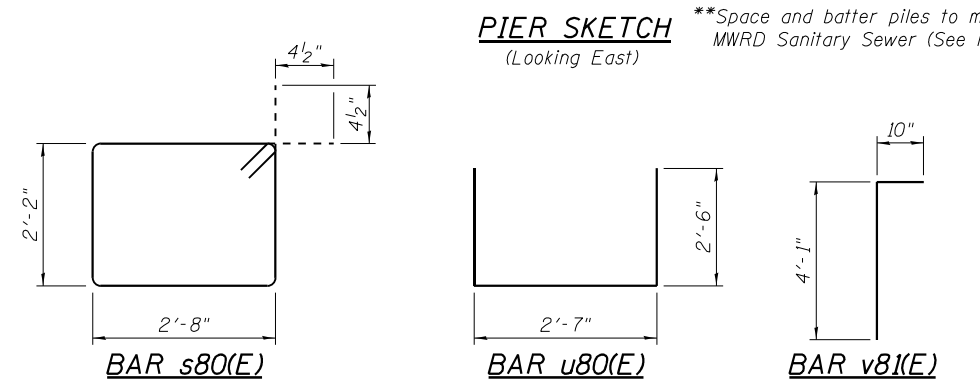
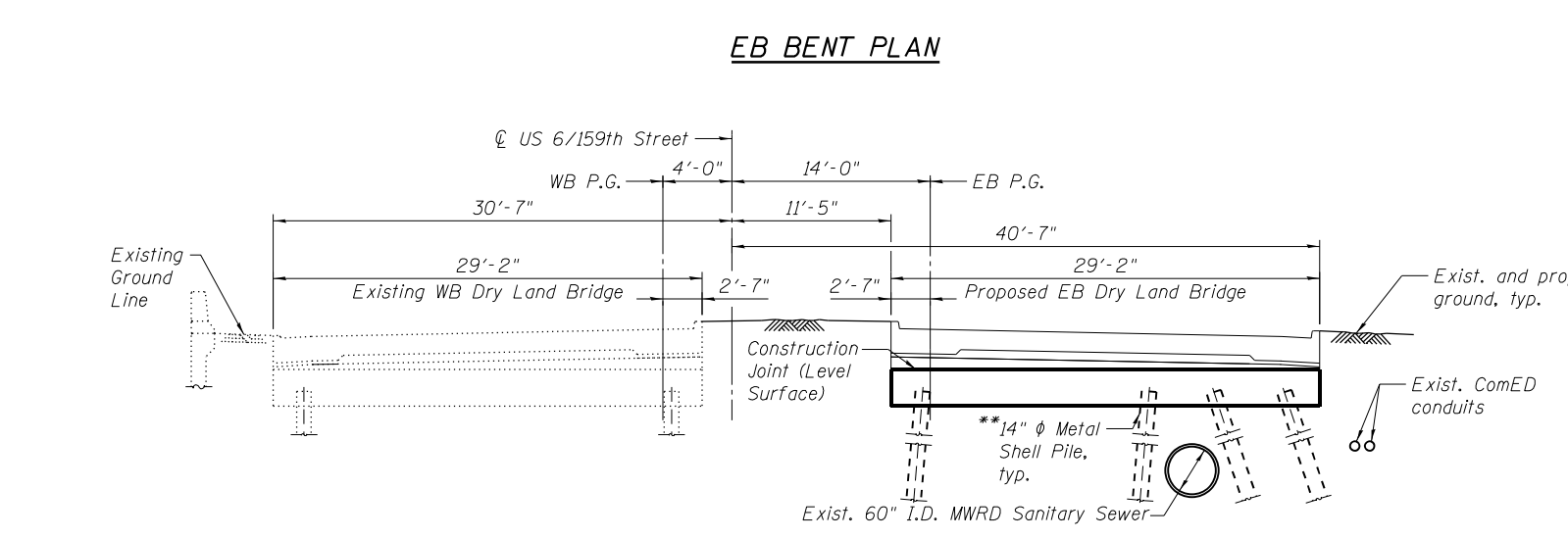
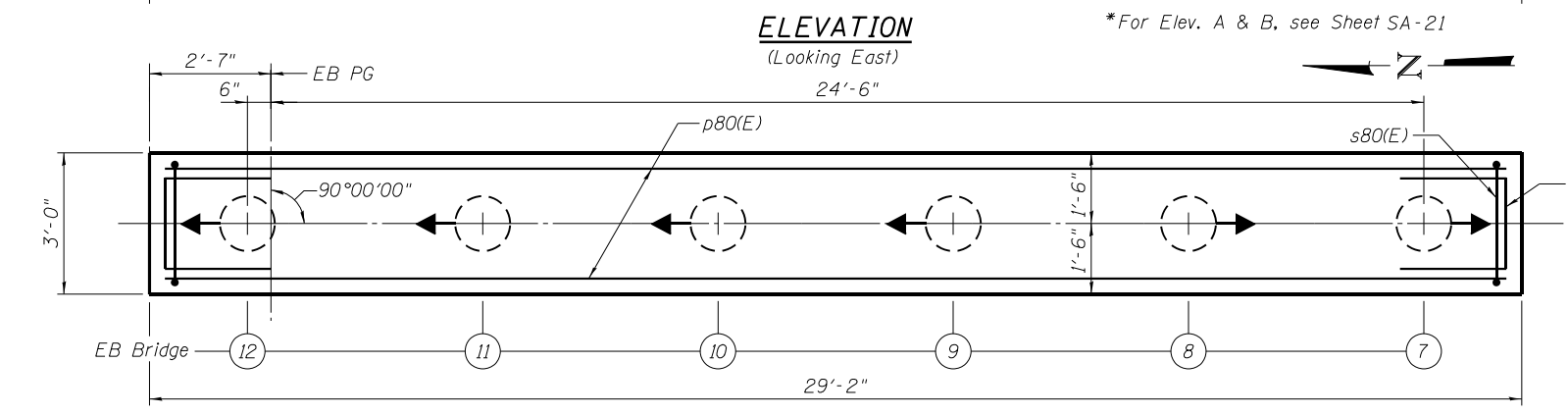
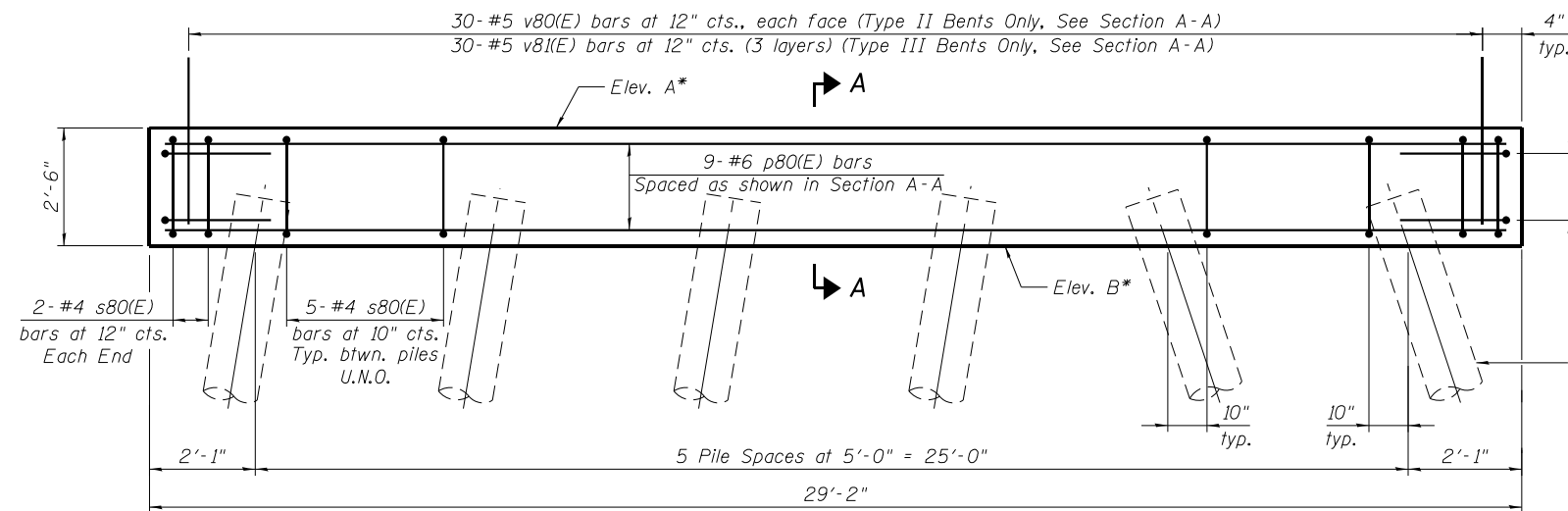
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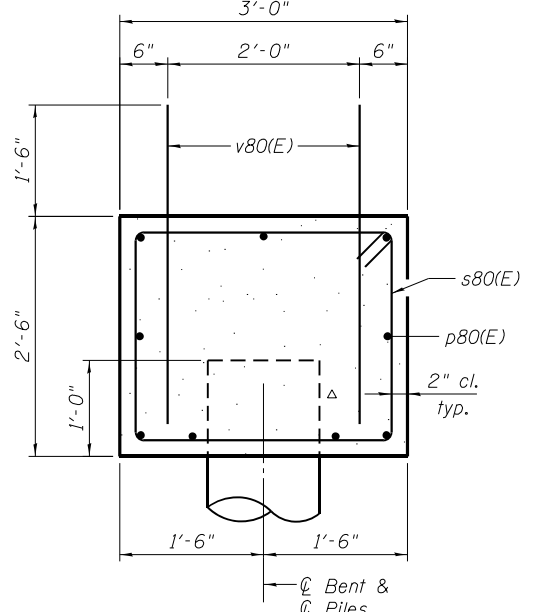
DRAINAGE SCUPPER DS-12
STRUCTURE NO. 016-0012

SHEET NO. SA-19 OF SA-31 SHEETS

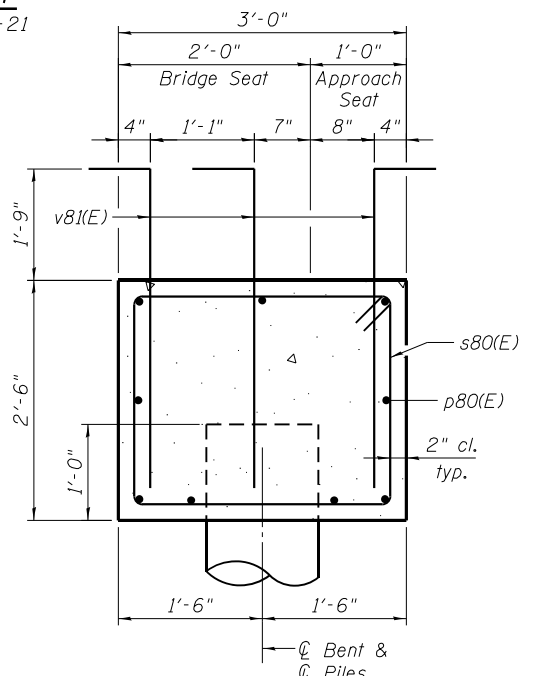
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	55
CONTRACT NO. 62P68			ILLINOIS FED. AID PROJECT	



TYPE I BENT
SECTION A-A THRU EXPANSION BENT
(See "EASTBOUND BENT TABLE" on Sheet SA-21 for detail bent information)



TYPE II BENT
SECTION A-A THRU FIXED BENT
(See "EASTBOUND BENT TABLE" on Sheet SA-21 for detail bent information)



TYPE III BENT
SECTION A-A THRU END BENT
(See "EASTBOUND BENT TABLE" on Sheet SA-21 for detail bent information)

PILE DATA
Type: Metal Shell - 14 in. dia. x 0.25 in. wall
Nominal Required Bearing: See Table
Factored Resistance Available: See Table
Est. Length: See Table
No. Production Piles: See Table
No. Test Piles: See Table

LEGEND
Indicates Pile Battered in Direction of Arrow

- NOTES**
- For Metal Shell Pile Details, see Sheet SA-23.
 - For Pile Data Table, see Sheet SA-21 and SA-22.
 - Apply Concrete Sealer to top and sides of Bent Cap of EB Bents 1G, 1M, and 1O.
 - For pile bent layout, see Sheets SA-1 and SA-2.
 - The Contractor shall coordinate with MWRD to verify the location of the existing 60" I.D. MWRD sanitary sewer pipe in the field and advise the Engineer of discrepancies prior to the pile installation. The Contractor must take special precautions to avoid damage to the existing MWRD facilities when driving the 14" ϕ metal shell piles. The Contractor may propose other means of pile installation provided they are done so at no extra cost to the Department. If the Contractor elects to vary from the design requirements shown on the plans, revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer.

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LOCHNER H.W. LOCHNER, INC. 225 WEST WASHINGTON STREET 12 TH FLOOR CHICAGO, ILLINOIS 60606	USER NAME = FILE NAME = *FILES* PLOT SCALE = PLOT DATE =	DESIGNED - FJM CHECKED - AMK DRAWN - FJM CHECKED - AMK	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL BENT DETAILS 1 STRUCTURE NO. 016-D012 SHEET NO. SA-20 OF SA-31 SHEETS	F.A.P. RTE. = 351 SECTION = 2021-150-BY COUNTY = COOK TOTAL SHEETS = 73 SHEET NO. = 56	CONTRACT NO. 62P68 ILLINOIS FED. AID PROJECT

EASTBOUND BENT TABLE

BENT CAP TABLE				PILE DATA TABLE					PILE BATTER INFORMATION					
Bent	Type of Pile Bent	Elev. A	Elev. B	Nominal Required Bearing (kips)	Factored Resistance Available (kips)	Est. Pile Length (ft.)	No. Prod. Piles	No. Test Piles	Pile No. 7	Pile No. 8	Pile No. 9	Pile No. 10	Pile No. 11	Pile No. 12
IA	III	687.88	685.38	360	140	56	5	1	-4:12	-4:12	2:12	2:12	2:12	2:12
IB	II	687.76	685.26	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IC	II	687.60	685.10	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
ID	I	687.41	684.91	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IE	II	687.19	684.69	360	140	56	5	1	-4:12	-4:12	2:12	2:12	2:12	2:12
IF	II	686.94	684.44	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IG	I	686.68	684.18	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IH	II	686.42	683.92	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IJ	II	686.16	683.66	360	140	56	5	1	-4:12	-4:12	2:12	2:12	2:12	2:12
IK	II	685.89	683.39	360	140	56	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IL	II	685.65	683.15	440	140	69	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IM	I	685.43	682.93	440	140	69	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IN	II	685.24	682.74	440	140	69	5	1	-4:12	-4:12	2:12	2:12	2:12	2:12
IP	II	685.09	682.59	440	140	69	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IQ	I	684.97	682.47	390	140	68	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IR	II	684.88	682.38	390	140	68	6	0	-4:12	-4:12	2:12	2:12	2:12	2:12
IS	II	684.83	682.33	390	140	68	5	1	-4:12	-4:12	2:12	2:12	2:12	2:12

Note: For pile bent layout, see Sheets SA-1 and SA-2.

Note: A positive batter indicates piles to be battered toward the \odot US 6/159th Street.
A negative batter indicates piles to be battered away from the \odot US 6/159th Street.

BILL OF MATERIAL BENT IA EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	90	#5	4'-11"	└
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		1110	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		280	
Driving Piles	Foot		280	
Test Pile Metal Shells	Each		1	

BILL OF MATERIAL BENT IB EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	

BILL OF MATERIAL BENT IC EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	

BILL OF MATERIAL BENT ID EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		640	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	
Concrete Sealer	Sq. Ft.		249	

BILL OF MATERIAL BENT IE EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		280	
Driving Piles	Foot		280	
Test Pile Metal Shells	Each		1	

BILL OF MATERIAL BENT IF EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	

BILL OF MATERIAL BENT IG EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		640	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	
Concrete Sealer	Sq. Ft.		249	

BILL OF MATERIAL BENT IH EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	

BILL OF MATERIAL BENT IJ EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		280	
Driving Piles	Foot		280	
Test Pile Metal Shells	Each		1	

BILL OF MATERIAL BENT IK EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.		8.1	
Reinforcement Bars, Epoxy Coated	Pound		880	
Structure Excavation	Cu. Yd.		29	
Furnishing Metal Shell Piles - 14" X 0.25"	Foot		336	
Driving Piles	Foot		336	

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CHICAGO, ILLINOIS 60606

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL BENT DETAILS 2
STRUCTURE NO. 016-D012**

SHEET NO. SA-21 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	57
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL BENT 1L EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	880		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	414		
Driving Piles	Foot	414		

BILL OF MATERIAL BENT 1M EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	640		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	414		
Driving Piles	Foot	414		
Concrete Sealer	Sq. Ft.	249		

BILL OF MATERIAL BENT 1N EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	880		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	345		
Driving Piles	Foot	345		
Test Pile Metal Shells	Each	1		

BILL OF MATERIAL BENT 1P EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	880		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	414		
Driving Piles	Foot	414		

BILL OF MATERIAL BENT 1Q EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	640		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	408		
Driving Piles	Foot	408		
Concrete Sealer	Sq. Ft.	249		

BILL OF MATERIAL BENT 1R EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	880		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	408		
Driving Piles	Foot	408		

BILL OF MATERIAL BENT 1S EB

Bar	No.	Size	Length	Shape
p80(E)	9	#6	28'-10"	—
s80(E)	29	#4	10'-5"	□
u80(E)	6	#5	7'-7"	┌
v80(E)	60	#5	3'-10"	—
Concrete Structures	Cu. Yd.	8.1		
Reinforcement Bars, Epoxy Coated	Pound	880		
Structure Excavation	Cu. Yd.	29		
Furnishing Metal Shell Piles - 14" X 0.25"	Foot	340		
Driving Piles	Foot	340		
Test Pile Metal Shells	Each	1		

Note: For pile bent layout, see Sheets SA-1 and SA-2.

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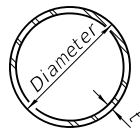
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL BENT DETAILS 3
STRUCTURE NO. 016-D012

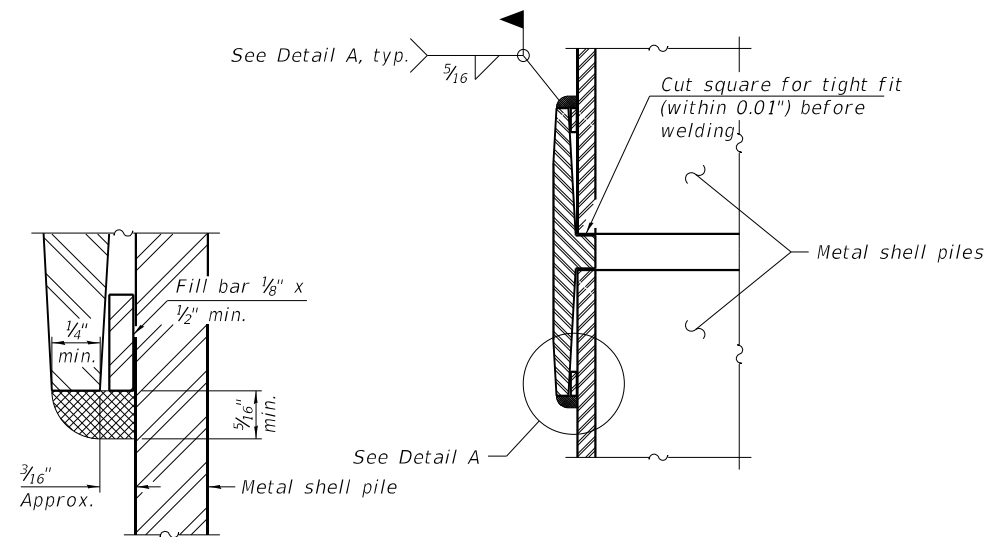
SHEET NO. SA-22 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	58
CONTRACT NO. 62P68				
ILLINOIS FED. AID PROJECT				

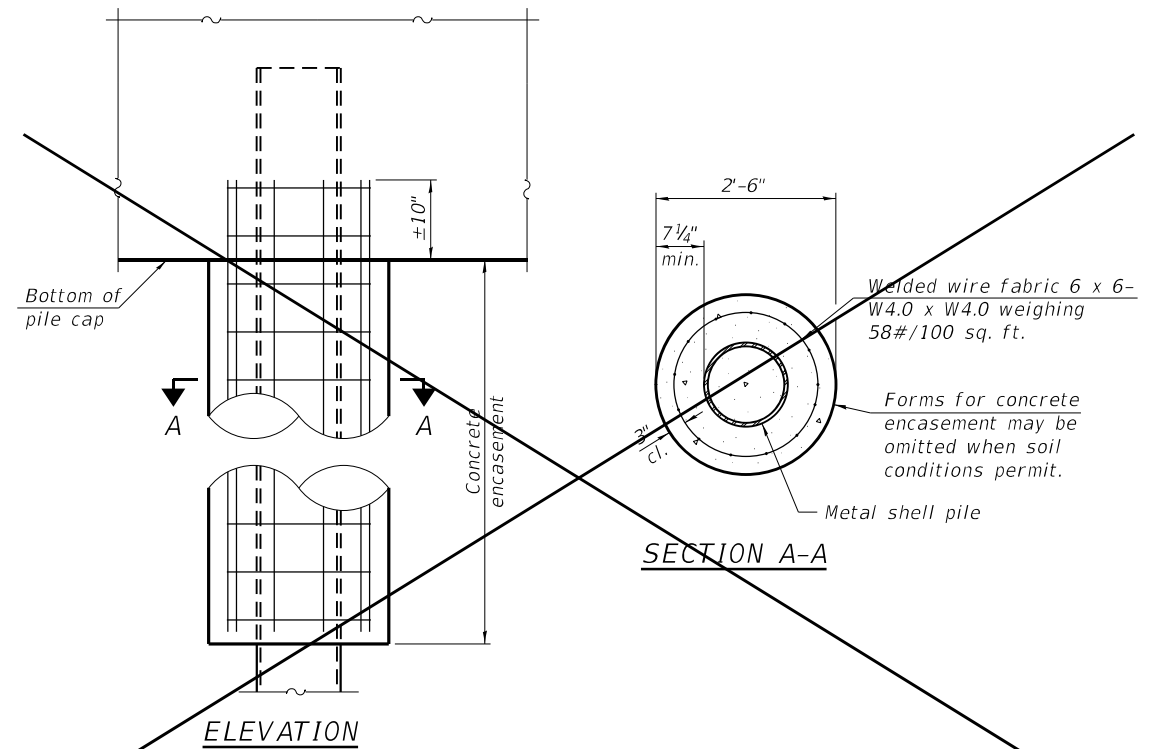


METAL SHELL PILE TABLE

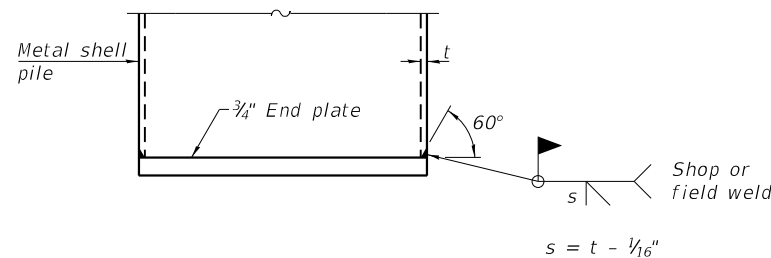
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A



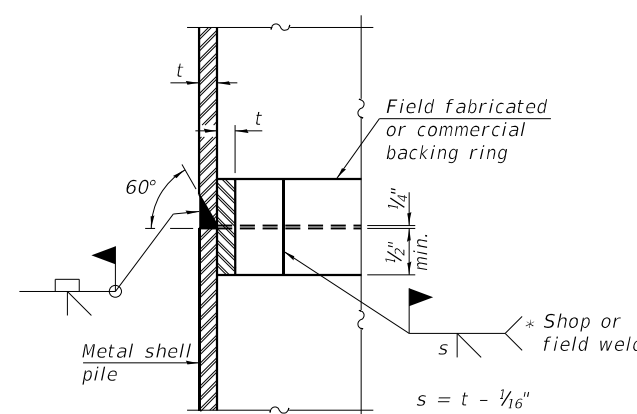
INDIVIDUAL PILE CONCRETE ENCASEMENT
(When specified)



END PLATE ATTACHMENT

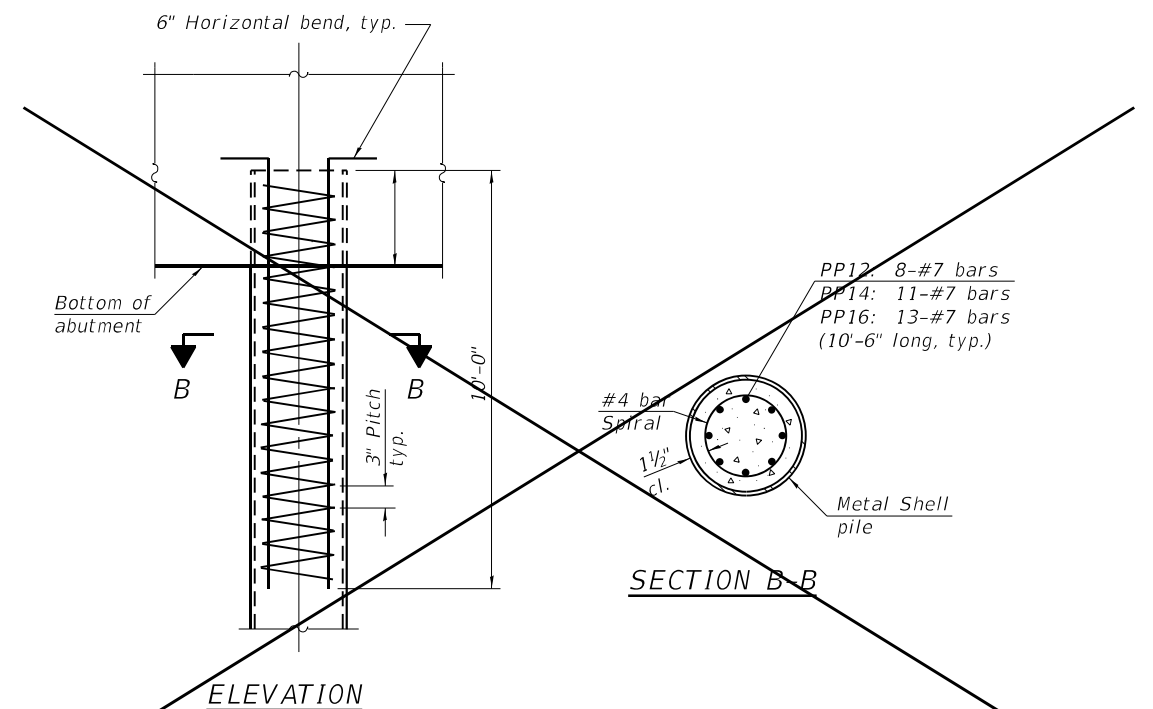
WELDED COMMERCIAL SPLICE

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

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F-MS 1-1-2020

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
STRUCTURE NO. 016-D012**

SHEET NO. SA-23 OF SA-31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	59
CONTRACT NO. 62P68				

ILLINOIS FED. AID PROJECT

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.



GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/11/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY SP

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____
 Station _____
 BORING NO. P-01
 Station 396+00
 Offset 38.00ft Right
 Ground Surface Elev. 687.84 ft

DEPTH (ft)	DIAMETER (in)	UNIFORMITY COEFFICIENT (U)	SOIL TYPE	MOISTURE (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs)
687.00			10.0" CONCRETE		n/a	n/a				
684.84	4	2.60	CLAY LOAM-brown & gray spotted black-very stiff (Fill)	18						
682.34	3	B								
679.84	1	1.60	ORGANIC SILTY CLAY-black-stiff	38						
677.34	2	B								
674.84	1	0.60	PEAT-black-very loose	150						
672.34	2	B								
670.34	2		LOAM-gray-very loose	16						
667.89	2									
665.39	1		SILTY CLAY-gray-very stiff	19						
662.89	3	1.50								
660.39	3	B	CLAY-gray-stiff	20						
657.89	3									
655.39	4	1.40		18						
652.89	5	B								
650.39			End Of Boring @ -17.5'. Boring backfilled with cuttings.							

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The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/11/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY SP

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____
 Station _____
 BORING NO. P-02
 Station 396+50
 Offset 36.40ft Right
 Ground Surface Elev. 687.39 ft

DEPTH (ft)	DIAMETER (in)	UNIFORMITY COEFFICIENT (U)	SOIL TYPE	MOISTURE (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (Hrs)
686.56			10.0" CONCRETE		n/a	n/a				
684.56	20	3.10	CLAY LOAM-brown & gray spotted black-very stiff (Fill)	20						
681.89	5	B								
679.39	3	1.60	ORGANIC SILTY CLAY-black-stiff	38						
676.89	5	B								
674.39	2	0.60	PEAT-black-loose	218						
671.89	3	B								
669.39	4		LOAM-gray-very loose	15						
666.89	1									
664.39	2		SILTY LOAM-gray-loose	19						
661.89	3	1.80								
659.39	5	B	CLAY-gray-stiff	23						
656.89	3									
654.39	5	1.80		22						
651.89	9	B								
649.39			End Of Boring @ -20.0'. Boring backfilled with cuttings.							

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The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/11/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY SP

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station _____
 BORING NO. P-03 Station 396+70
 Offset 36.40ft Right
 Ground Surface Elev. 686.89 ft

SOIL	DEPTH (ft)	U (tsf)	M (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	DEPTH (ft)	U (tsf)	M (%)
10.0" CONCRETE	686.06			n/a	n/a			
CRUSHED STONE-medium dense	11		5					
	6							
CLAY LOAM-brown & gray-very stiff	4	2.70	14					
	6	B						
	7							
ORGANIC SILTY CLAY-black-loose	2		35					
	2							
	3							
PEAT-black-very loose	2	0.40	276					
	1	B						
	2							
LOAM-gray-very loose	1		15					
	1							
	1							
SILTY LOAM-gray-very loose to loose	1		20					
	1							
	1							
	2							
	3		17					
	5							
CLAY-gray-very stiff	4							
	6	2.40	20					
	7	B						
	7							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/12/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station _____
 BORING NO. P-04 Station 395+06
 Offset 33.70ft Right
 Ground Surface Elev. 685.07 ft

SOIL	DEPTH (ft)	U (tsf)	M (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	DEPTH (ft)	U (tsf)	M (%)
10.0" CONCRETE	684.23			n/a	n/a			
CLAY LOAM-brown & gray-hard (Fill)	8	4.10	14					
	5	B						
	5							
	3							
	6	3.90	14					
	5	B						
	5							
SILTY SAND & GRAVEL-gray-medium dense	4		15					
	11							
	1							
No Recovery	1		NR					
	1							
	1							
SILTY CLAY-gray-soft	3	0.40	39					
	4	B						
	5							
SILTY LOAM-gray-very loose	1		16					
	2							
	2							
End Of Boring @ -15.0'. Boring backfilled with cuttings.	670.07							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/13/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____	D	B	U	M	Surface Water Elev. _____ n/a ft	D	B	U	M
Station _____	E	L	C	O	Stream Bed Elev. _____ n/a ft	E	L	C	O
BORING NO. P-05	P	L	S	I	Groundwater Elev.: _____	P	L	S	I
Station 395+49	T	O	Q	S	First Encounter 682.9 ft	T	O	Q	S
Offset 37.80ft Right	H	S	u	T	Upon Completion _____ ft	H	S	u	T
Ground Surface Elev. 688.95 ft	(ft)	(/6")	(tsf)	(%)	After Hrs. _____	(ft)	(/6")	(tsf)	(%)

9.0" CONCRETE	688.20				End Of Boring @ -20.0'. Boring backfilled with cuttings.				
CRUSHED STONE-medium dcnsc		5							
		6		5					
		4							
685.95									
CLAY LOAM-brown & gray spotted black-stiff to very stiff (Fill)		2							
		1	0.90	20					
		4	B						
		-5							
		3							
		3	2.10	23					
		7	B						
680.95									
PEAT-black-loose		2							
		2	0.20	120					
		4	B						
		-10							
678.45									
ORGANIC SILTY CLAY-dark gray to gray-stiff		2							
		1	0.30	43					
		1	B						
		1							
		1	0.18	34					
		3	B						
		-15							
673.45									
SILTY SAND & GRAVEL-gray-very loose		1							
		2		19					
		2							
		2							
		2		17					
668.95		2							
		-20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/13/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. _____	D	B	U	M	Surface Water Elev. _____ n/a ft	D	B	U	M
Station _____	E	L	C	O	Stream Bed Elev. _____ n/a ft	E	L	C	O
BORING NO. P-06	P	L	S	I	Groundwater Elev.: _____	P	L	S	I
Station 395+22	T	O	Q	S	First Encounter 671.6 ft	T	O	Q	S
Offset 37.00ft Right	H	S	u	T	Upon Completion _____ ft	H	S	u	T
Ground Surface Elev. 686.56 ft	(ft)	(/6")	(tsf)	(%)	After Hrs. _____	(ft)	(/6")	(tsf)	(%)

9.0" CONCRETE	685.81				End Of Boring @ -20.0'. Boring backfilled with cuttings.				
CRUSHED STONE-medium dcnsc		9							
		7		6					
		5							
683.56									
CLAY LOAM-brown & gray-very stiff (Fill)		2							
		3	2.30	18					
		6	B						
		-5							
		3							
		3	2.10	26					
		4	B						
678.56									
PEAT-black-loose		1							
		2	0.20	107					
		3	B						
		-10							
676.06									
ORGANIC SILTY CLAY-dark gray-soft		1							
		1	0.60	36					
		1	B						
		1							
		1	0.18	34					
		3	B						
		-15							
673.56									
SILTY SAND & GRAVEL-gray-very loose		2							
		2		16					
		1							
		-15							
671.06									
CLAY LOAM-gray-medium stiff to stiff		1							
		1	0.70	25					
		2	B						
		3							
		5	1.70	20					
		7	B						
666.56		-20							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/26/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station _____
 BORING NO. P-07 Station 394+56
 Offset 33.70ft Right
 Ground Surface Elev. 686.20 ft

D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
-----------------------------	--------------------------------	----------------------------	------------------------------	----------------------------	-------------------------	-----------------------------	--------------------------------	----------------------------	------------------------------

12.0" CONCRETE	685.20					End Of Boring @ -20.0'. Boring backfilled with cuttings.			
CLAY LOAM-brown & gray spotted black-stiff to very stiff (Fill)	11	2.40	16						
	6	B							
	2								
	2	1.20	26						
	3	B							
	-5								
CLAYEY GRAVEL & SAND-gray-medium dense (Fill)	680.70								
	4								
	8		8						
	5								
ORGANIC SILTY CLAY-brown & gray-soft	678.20								
	1								
	2	0.40	38						
	1	B							
	-10								
SANDY SILT with Gravel-brown & gray-very loose to loose	675.70								
	2								
	4		13						
	4								
becoming gray @ -13.0'									
	1								
	2		17						
	2								
	-15								
CLAY LOAM-gray-very stiff	670.70								
	3								
	5	2.40	18						
	6	B							
CLAY-gray-soft	668.20								
	2								
	2	0.30	25						
	2	B							
	-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 1 of 1

Date 10/26/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SW1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station _____
 BORING NO. P-08 Station 394+06
 Offset 33.70ft Right
 Ground Surface Elev. 685.50 ft

D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
-----------------------------	--------------------------------	----------------------------	------------------------------	----------------------------	-------------------------	-----------------------------	--------------------------------	----------------------------	------------------------------

12.0" CONCRETE	684.50					End Of Boring @ -15.0'. Boring backfilled with cuttings.			
CRUSHED STONE-medium dense	12								
	7		13						
	20								
CLAY LOAM-brown & gray-very stiff (Fill)	682.50								
	3								
	6	3.10	16						
	6	B							
	-5								
SANDY SILT-dark brown & gray-loose to medium dense	680.00								
	6								
	5		15						
	5								
	4								
	4		16						
	3								
	-10								
CLAY LOAM-gray-stiff to very stiff	675.00								
	2								
	4	1.80	20						
	5	B							
	4								
	4	2.10	21						
	5	B							
	-15								
End Of Boring @ -15.0'. Boring backfilled with cuttings.	670.50								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 2

Date 10/12/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. _____
 Station _____

BORING NO. SB-43
 Station 396+20
 Offset 35.10ft Right
 Ground Surface Elev. 687.80 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)
------------	-----------------------	------------------------------------	--------------------------	------------	-----------------------	------------------------------------	--------------------------

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)
686.97			CLAY LOAM-gray-stiff (continued)				
	8				2		
	8				3	1.30	24
	4				5	B	
684.80			SILTY SAND & GRAVEL-gray-medium dense				
	2				6		
	4	2.90			5		18
	6	B			7		
	-5				-25		
682.30			SILT-gray-medium dense				
	2				6		
	1	0.18			7		14
	1	B			8		
679.80							
	1				5		
	2	0.30			6		18
	2	B			6		
	-10				-30		
674.80			SILT-gray-very loose to loose				
	1						
	3	0.60					
	3	B					
	2				3		
	3	1.10			3		19
	4	B			2		
	-15				-35		
	1						
	2	1.20					24
	5	B					
	1				2		
	2	1.30			1		26
	4	B			3		
	-20				-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 2 of 2

Date 10/12/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY AW

SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. _____
 Station _____

BORING NO. SB-43
 Station 396+20
 Offset 35.10ft Right
 Ground Surface Elev. 687.80 ft

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)
------------	-----------------------	------------------------------------	--------------------------	------------	-----------------------	------------------------------------	--------------------------

DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)	DEPTH (ft)	BLOW COUNT (blows/6")	UNIFIED SOIL CLASSIFICATION (USCS)	MATERIAL DESCRIPTION (%)
645.80			SILTY SAND & GRAVEL-gray-medium dense (continued)				
			SAND & GRAVEL-gray-very dense				
	5				19		
	5				50/3"		14
	5				-65		
			SILT-gray-dense				
	6				18		
	6				19		17
	6				14		
	-50				-70		
635.80			SAND & GRAVEL-gray-loose				
			SILTY CLAY LOAM-gray-loose				
	1				10		
	3				14		12
	4				18		
	-55				-75		
630.80			End Of Boring @ -75.0'. Boring backfilled with cuttings.				
			SILTY SAND & GRAVEL-gray-medium dense				
	10						
	7						
	6						
	-60				-80		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 2

Date 10/11/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY DD

SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Dry to 10' ft Upon Completion n/a ft After Hrs.	D E P T H	B L O W S	U C S Qu	M O I S T	
												(ft)
10.0" CONCRETE					685.35		ORGANIC SILTY CLAY-dark gray-medium stiff (continued)					
CRUSHED STONE-dense		14						0		0.50	38	
		18		6				0		B		
		12			683.18		SILTY CLAY-gray-soft					
CLAY LOAM-brown & gray-very stiff (Fill)		4						1		0.40	33	
		5	2.50	19				1		B		
		6	B					1		B		
		-5						-25				
		5					SILTY CLAY LOAM-gray-medium stiff					
		8	2.10	20				2		0.60	17	
		10	B					2		B		
SILTY SAND & GRAVEL-gray-very loose (Fill)		2			678.18		SILTY SAND & GRAVEL-gray-loose					
		1		16				2				
		2						3			15	
		-10						-30				
PEAT-black-very loose		1			675.68		CLAY LOAM-gray-very stiff to hard					
		1		393								
		1										
		1						5				
		1		324				6	2.30	B	21	
		1						17	B			
		-15						-35				
		0										
		0		251								
		0										
ORGANIC SILTY CLAY-dark gray-medium stiff		1			668.18			7				
		1	0.60	52				9	4.20	B	19	
		1	B					15	B			
		-20						-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 2 of 2

Date 10/11/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY DD

SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. n/a ft	Stream Bed Elev. n/a ft	Groundwater Elev.: First Encounter Dry to 10' ft Upon Completion n/a ft After Hrs.	D E P T H	B L O W S	U C S Qu	M O I S T	
												(ft)
CLAY LOAM-gray-very stiff to hard (continued)					644.18		SILTY LOAM-gray-medium dense (continued)					
		5										
		7		27								
		8										
		-45						-65				
SILTY LOAM-gray-medium dense					639.18		CLAY LOAM-gray-very stiff					
		4										
		6	2.10	20				7	8	2.40	18	
		9	B					8	23	B		
		-50						-70				
		6										
		8	2.90	21				5	12		6	
		14	B					12	12			
		-55						-75				
		8										
		9		14								
		11										
		-60						-80				
SILTY LOAM-gray-medium dense					629.18		GRAVEL-gray-medium dense					
		8										
		9										
		11										
		-60						-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

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GSI Job No. 10195

SOIL BORING LOG

Page 1 of 2

Date 10/12/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY DD

SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H ft	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Groundwater Elev.: First Encounter Dry to 10' ft Upon Completion n/a ft After Hrs.
9.0" CONCRETE					665.20					
CRUSHED STONE-loose	684.95	5					3			
		4		5			1		35	
		3					1			
CLAY LOAM-brown & gray-stiff (Fill)	682.70				662.70					
		2					0			
		2	1.30	18			0	0.20	61	
		-5	B				0	B		
		3					0			
		2	1.10	31			0	0.40	50	
		2	B				0	B		
ORGANIC SILTY CLAY-black-very loose	677.70									
		2					0			
		3	1.30	23			0	0.30	52	
		-10	B				0	B		
PEAT-black-very loose	675.20									
		0		50						
		0			653.70					
		0					2			
		0		139			3	1.60	30	
		-15	0				6	B		
		0								
		0		149	648.70					
		0								
		0		247			8			
		-20	4				16	B	21	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)



GSI Job No. 10195

SOIL BORING LOG

Page 2 of 2

Date 10/12/21

ROUTE IL Route 7/U.S. Route 6 (159th St.) DESCRIPTION IL Rte. 7 from Will Cook Rd. to Ravinia Av. LOGGED BY DD

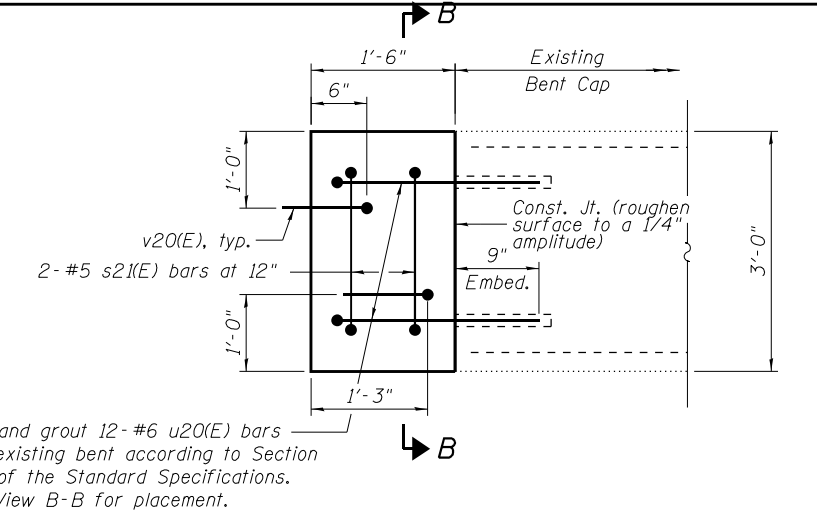
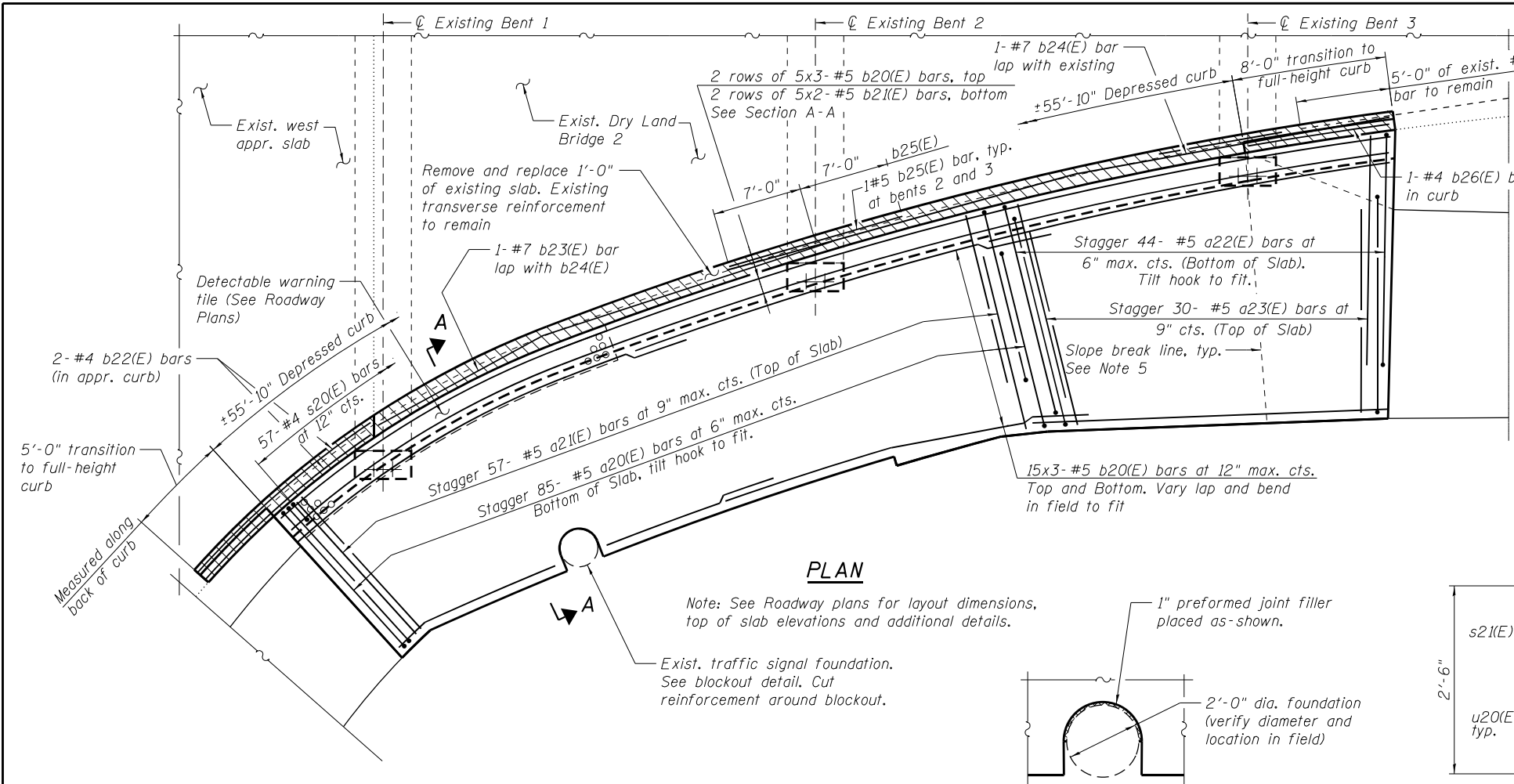
SECTION 2010-081-R LOCATION SE1/4, SEC. 17, TWP. T36N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD HSA/ROTARY HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H ft	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Groundwater Elev.: First Encounter Dry to 10' ft Upon Completion n/a ft After Hrs.
CLAY LOAM-gray-very stiff (continued)										
					623.70					
		6					8			
		8	2.20	16			12	2.30	16	
		-45	12	B			19	B		
					618.70					
		4					8			
		6	2.10	16			10	3.20	34	
		-50	10	B			18	B		
					613.70					
		6					10			
		7	2.30	5			11		12	
		-55	10	B			14			
					610.70					
					628.70					
SILTY SAND & GRAVEL-gray-medium dense										
		7					11		13	
		-60	15							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

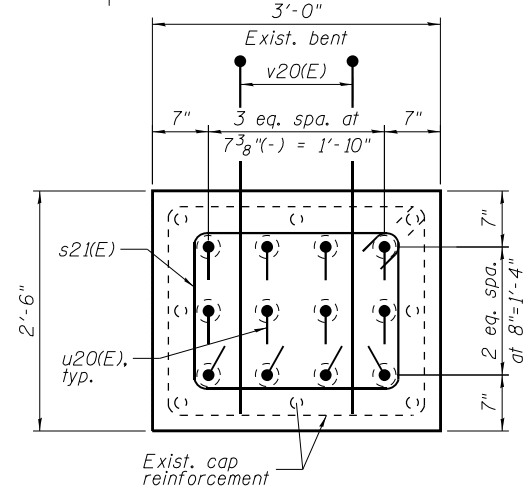
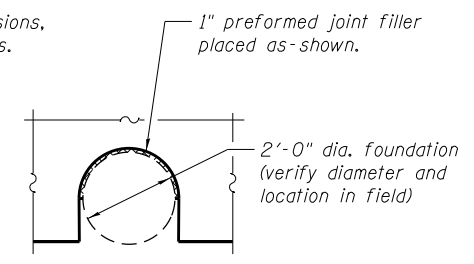
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Drill and grout 12- #6 u20(E) bars into existing bent according to Section 584 of the Standard Specifications. See View B-B for placement.

PLAN - BENT CAP EXTENSION DETAIL

BLOCKOUT AT LIGHT POLE FOUNDATION



VIEW B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	85	#5	10'-10"	
a21(E)	57	#5	9'-8"	
a22(E)	44	#5	13'-2"	
a23(E)	30	#5	12'-0"	
b20(E)	120	#5	24'-0"	
b21(E)	20	#5	34'-0"	
b22(E)	2	#4	12'-3"	
b23(E)	1	#7	26'-0"	
b24(E)	1	#7	36'-0"	
b25(E)	2	#7	14'-0"	
b26(E)	1	#4	7'-8"	
s20(E)	57	#4	6'-1"	
s21(E)	6	#4	7'-5"	
u20(E)	36	#6	2'-9"	
v20(E)	6	#5	4'-11"	
Concrete Removal			Cu. Yd.	1.3
Structure Excavation			Cu. Yd.	14
Concrete Structures			Cu. Yd.	1.2
Concrete Superstructure			Cu. Yd.	26.8
Protective Coat			Sq. Yd.	97
Reinforcement Bars, Epoxy Coated			Pound	6,910
Concrete Sealer			Sq. Ft.	60

LOADING HL-93
75 psf Pedestrian Live Load
DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2012 Interims

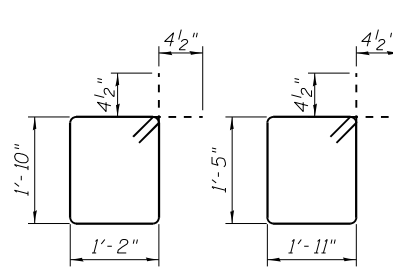
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)

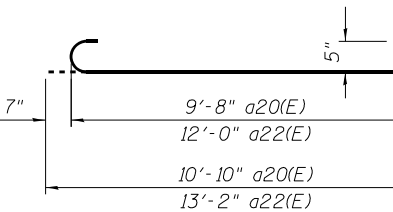
MINIMUM BAR LAPS

#4 bars = 2'-5"
#5 bars = 3'-6"
#7 bars = 4'-8"

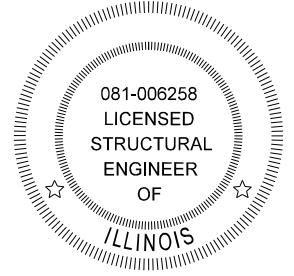
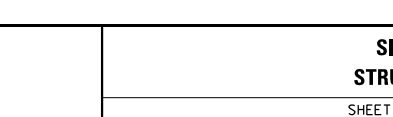
Bars b23(E) and b24(E)



Bar s20(E) Bar s21(E)



Bar u20(E) Bars a20(E) and a22(E)



Arsalan M. Khan
H.W. Lochner, Inc.
Arsalan M. Khan, S.E.
Date: 12/17/2021

NOTES

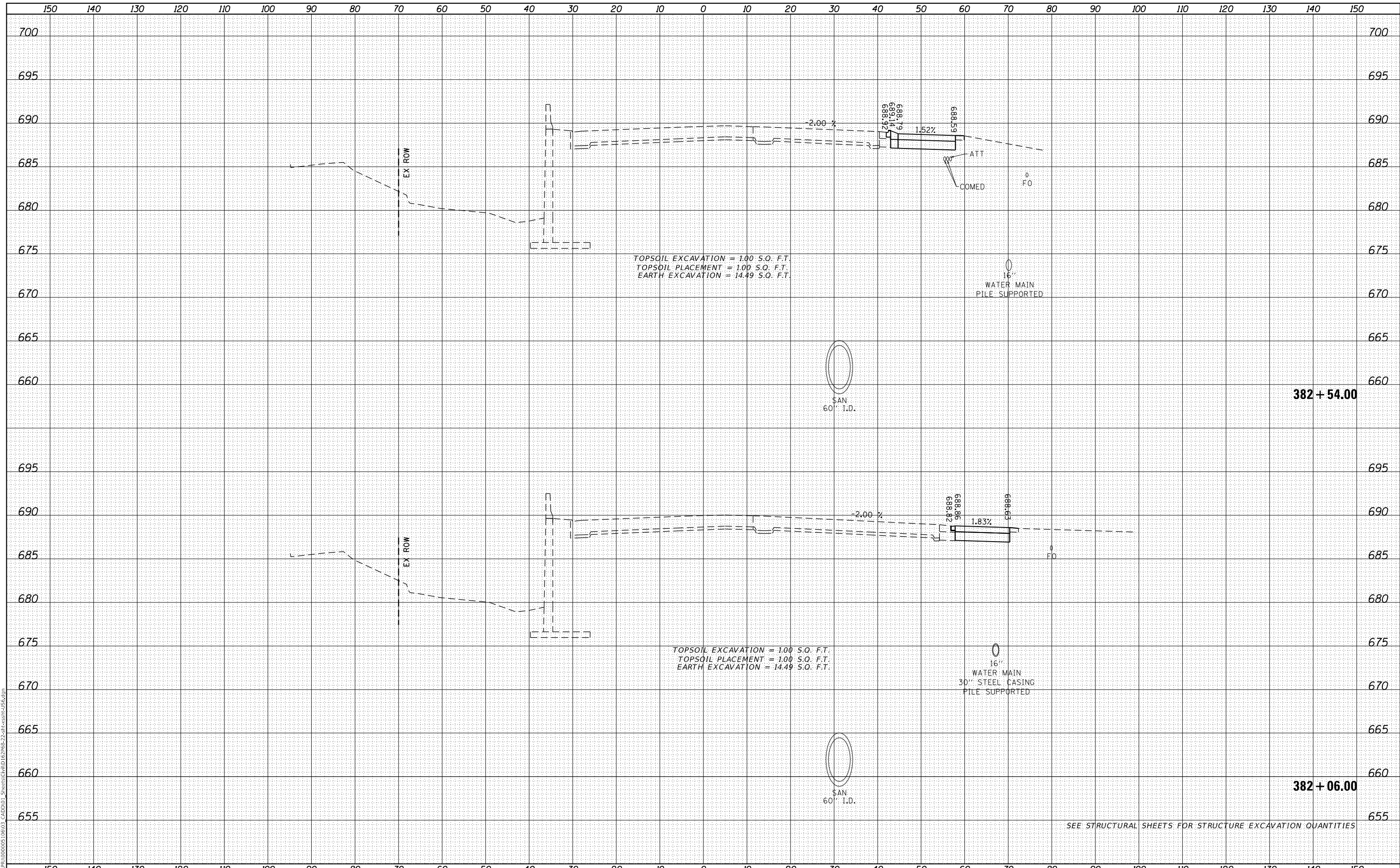
- Reinforcement bars designated (E) shall be epoxy coated.
- Concrete Sealer shall be applied to the tops and sides of the bent extensions
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Bars indicated thus 16x3-#5 etc. indicate 16 lines of bars with 3 lengths per line.
- Bend slab reinforcement as needed to maintain 2" clearance at slope breaks.
- Refer to the Roadway Plans for existing sidewalk removal and earth excavation required for slab construction.
- The bottom of the edge beam shall be straight-lined between the tops of existing bents. A minimum thickness of 2'-2" shall be maintained.

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BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

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

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SEE STRUCTURAL SHEETS FOR STRUCTURE EXCAVATION QUANTITIES

USER NAME =	GGIFFORD	DESIGNED -	GG	REVISED -	
		DRAWN -	GG	REVISED -	
PLOT SCALE =		CHECKED -	AM	REVISED -	
PLOT DATE =	12/27/2021	DATE -	1/3/2022	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

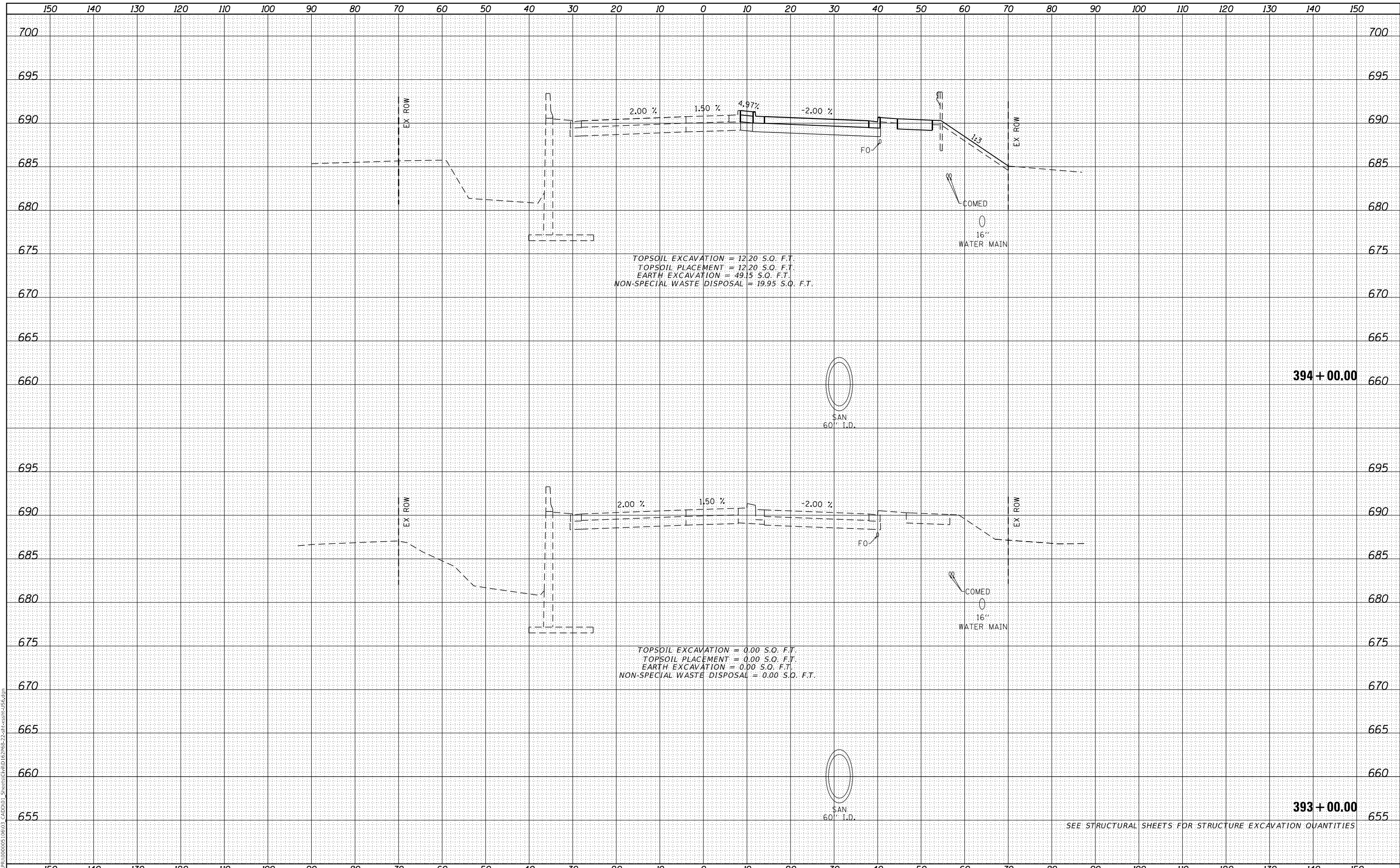
CROSS SECTIONS 159TH STREET	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	69
			CONTRACT NO. 62P68	
		ILLINOIS	FED. AID PROJECT	

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

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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USER NAME = GGFFORD	DESIGNED - GG	REVISED -
	DRAWN - GG	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

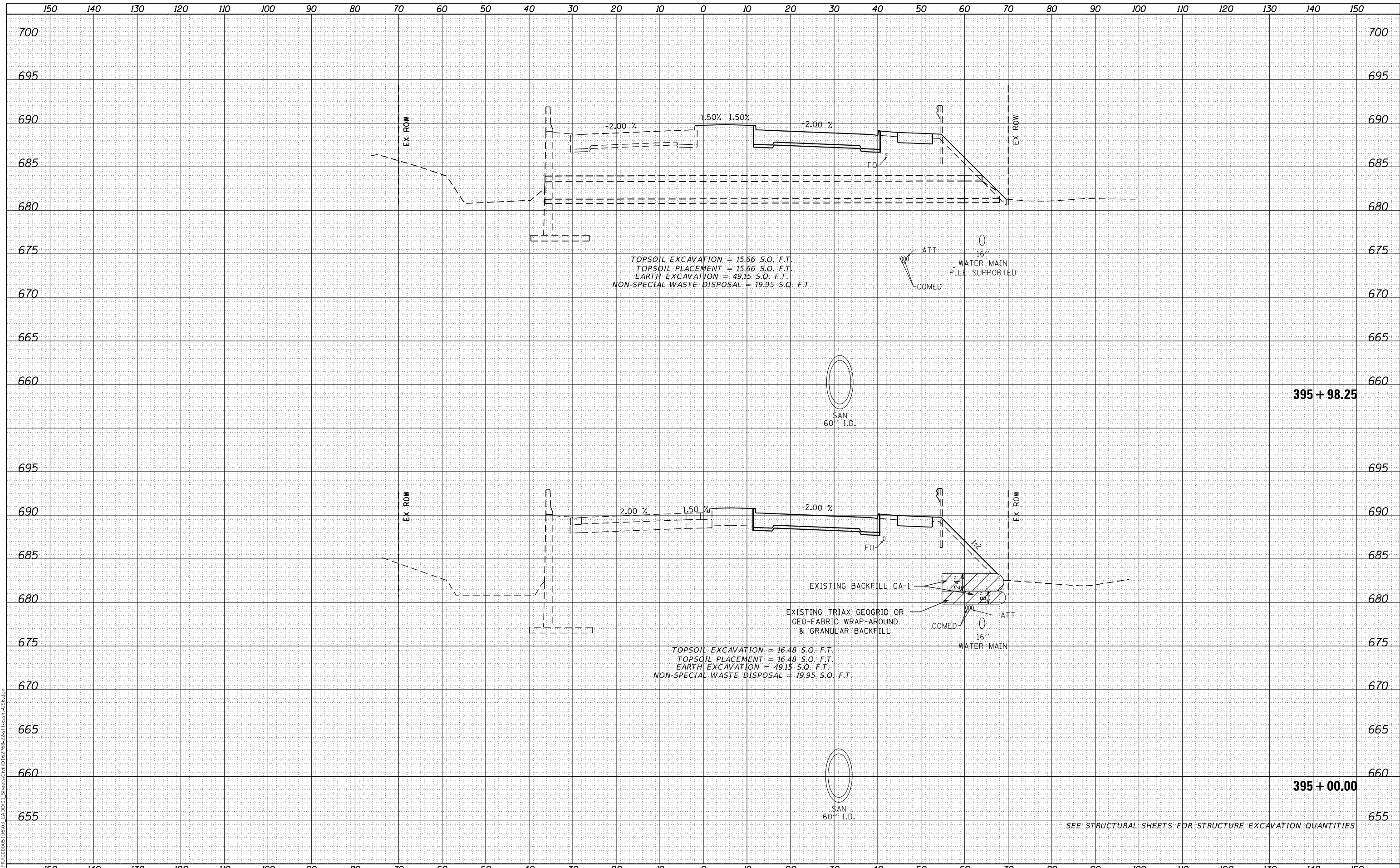
CROSS SECTIONS 159TH STREET	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	70
				CONTRACT NO. 62P68
ILLINOIS FED. AID PROJECT				

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

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

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USER NAME =	GGIFFORD	DESIGNED -	GG	REVISED -	
		DRAWN -	GG	REVISED -	
PLOT SCALE =		CHECKED -	AM	REVISED -	
PLOT DATE =	12/27/2021	DATE -	1/3/2022	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS 159TH STREET	
SCALE: H: 1"=10' V: 1"=8'	SHEET OF SHEETS STA. TO STA.

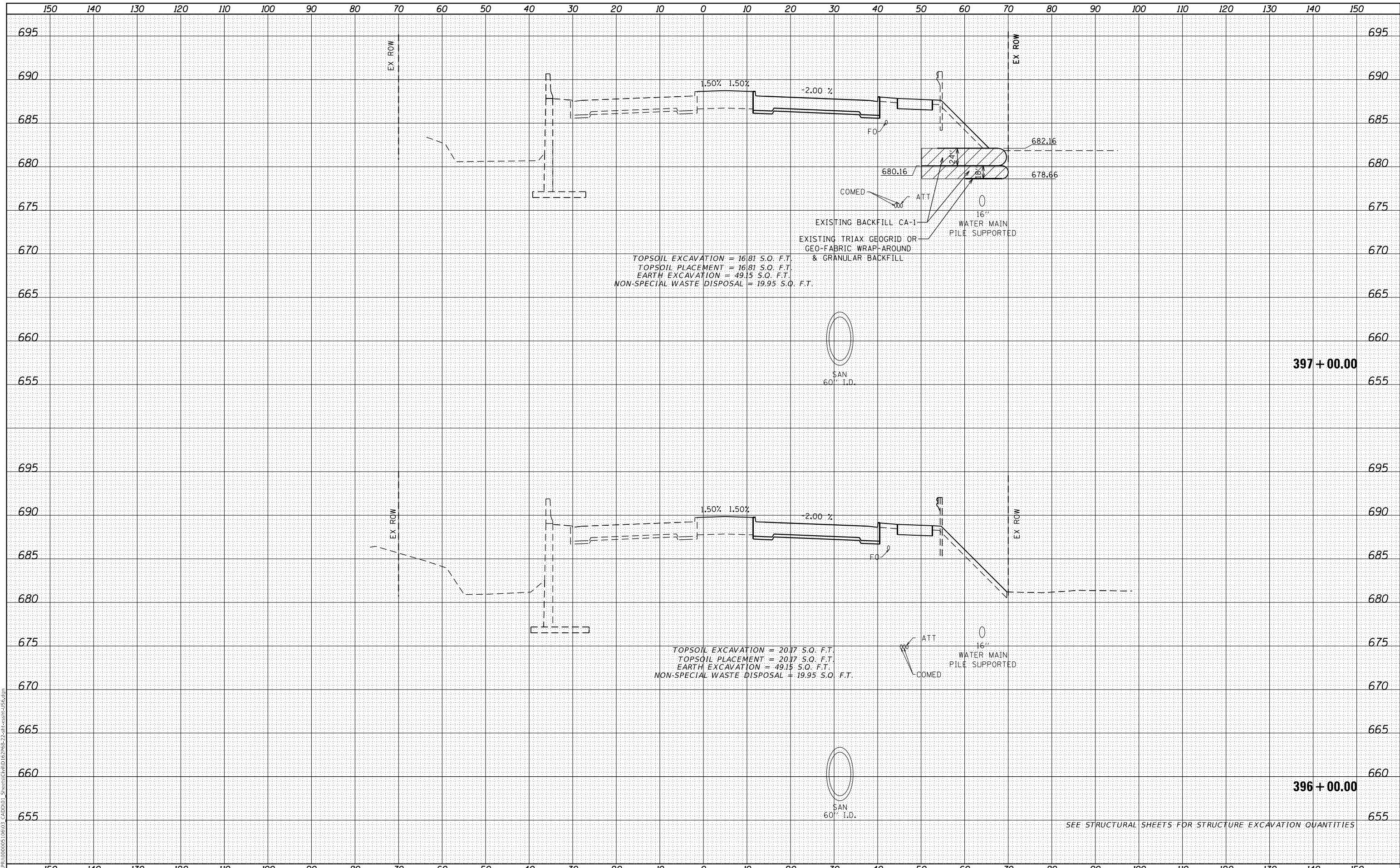
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	2021-150-BY	COOK	73	71
				CONTRACT NO. 62P68
		ILLINOIS	FED. AID PROJECT	

SEE STRUCTURAL SHEETS FOR STRUCTURE EXCAVATION QUANTITIES

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

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

MODEL: Definit
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USER NAME =	GGIFFORD	DESIGNED -	GG	REVISED -	
		DRAWN -	GG	REVISED -	
PLOT SCALE =		CHECKED -	AM	REVISED -	
PLOT DATE =	12/27/2021	DATE -	1/3/2022	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

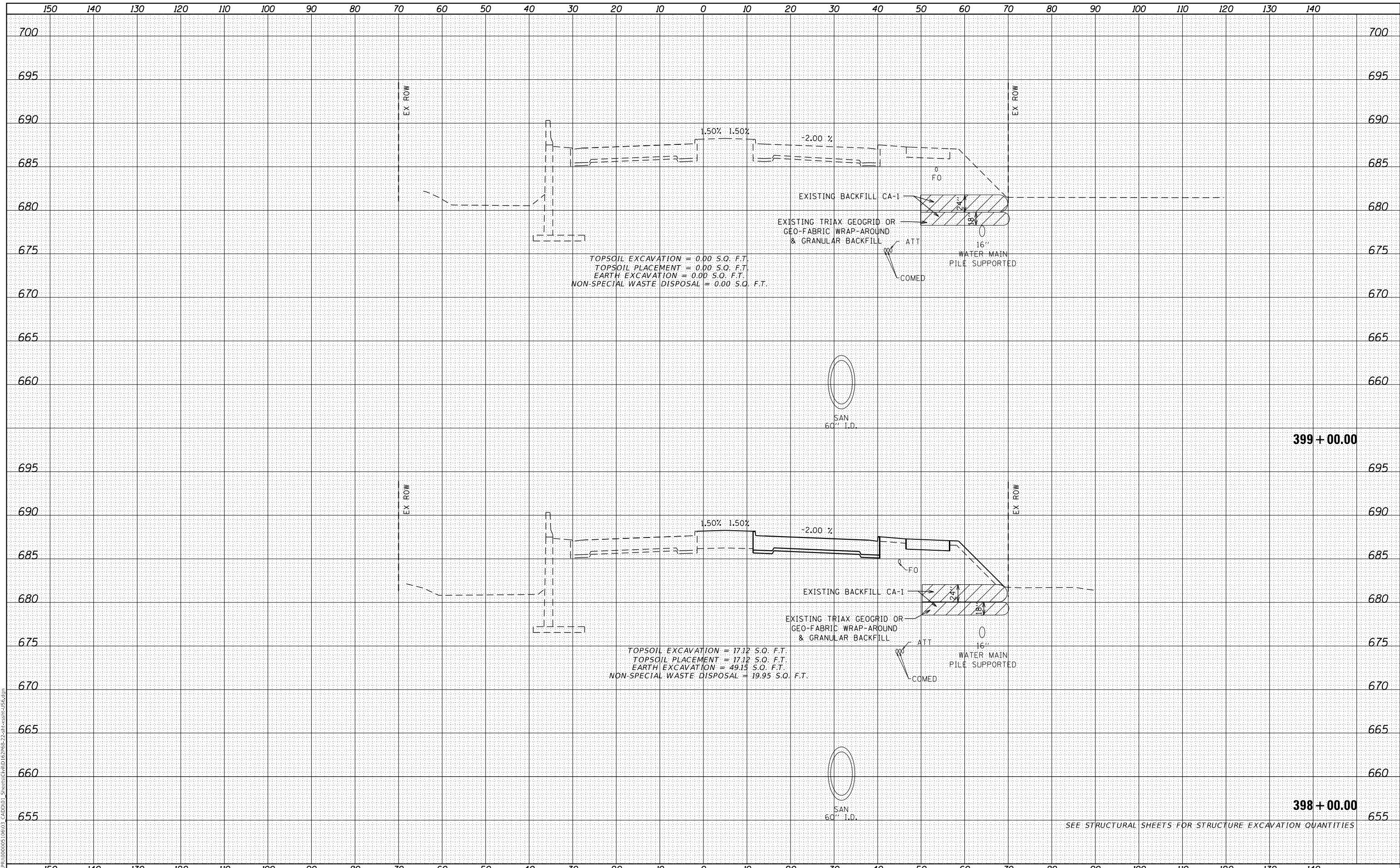
CROSS SECTIONS 159TH STREET	
SCALE: H: 1"=10' V: 1"=8'	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	72
				CONTRACT NO. 62P68
				ILLINOIS FED. AID PROJECT

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

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

MODEL: Definit
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USER NAME = GGIFFORD	DESIGNED - GG	REVISED -
	DRAWN - GG	REVISED -
PLOT SCALE =	CHECKED - AM	REVISED -
PLOT DATE = 12/27/2021	DATE - 1/3/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS 159TH STREET	
SCALE: H: 1"=10' V: 1"=8'	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
351	2021-150-BY	COOK	73	73
				CONTRACT NO. 62P68
				ILLINOIS FED. AID PROJECT

SEE STRUCTURAL SHEETS FOR STRUCTURE EXCAVATION QUANTITIES