

018

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.J. ATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	1
		ILLINOIS	CONTRACT NO. 62K23	

* 75+2=77 TOTAL SHEETS

JAMES F. MC NALLY
03-061255
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXPIRES: 11-30-2021

BAXTER & WOODMAN
JAMES F. McNally, P.E.
DATE: 03/16/2020
SIGNATURE AND SEAL APPLIES TO DRAWING(S):

PHILIP J. MINGA
062-045292
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXPIRES: 11-30-2021

SEC3, LLC
PHILIP J. MINGA, P.E.
DATE: 03/16/2020
SIGNATURE AND SEAL APPLIES TO DRAWING(S):

BRANDON L. BUZZELL
081-006358
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
EXPIRES: 11-30-2020

BAXTER & WOODMAN
BRANDON L. BUZZELL, P.E., S.E.
DATE: 03/15/2020
SIGNATURE AND SEAL APPLIES TO DRAWING(S):

ROBERT J. DEMING
062-057483
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXPIRES: 11-30-2021

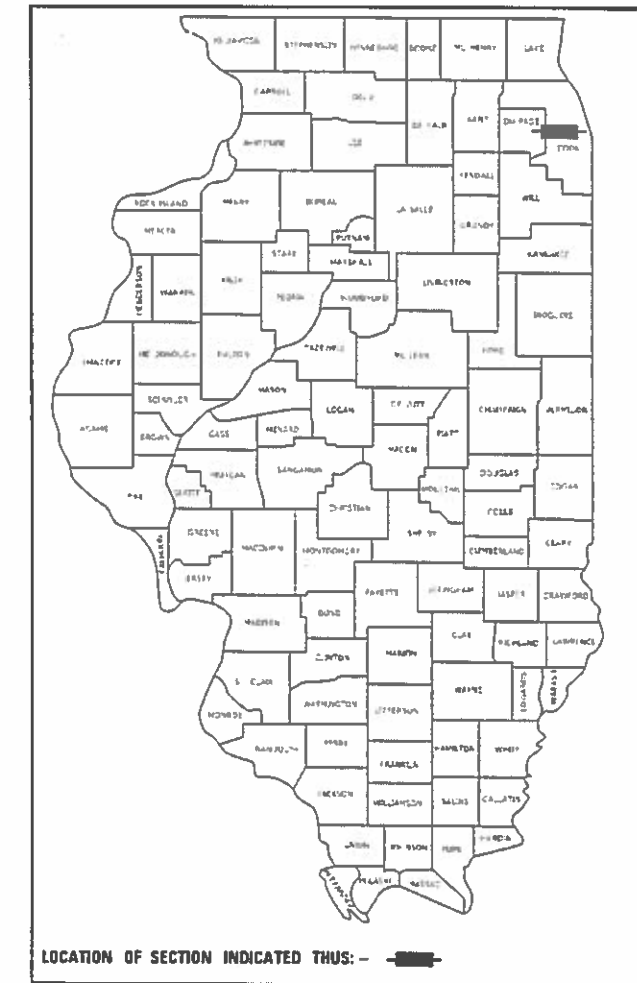
PRIMERA ENGINEERS, LTD.
ROBERT J. DEMING, P.E.
DATE: 03/16/2020
SIGNATURE AND SEAL APPLIES TO DRAWING(S):

ZAIDA MORILLO
081-008252
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
EXPIRES: 11-30-2020

PRIMERA ENGINEERS, LTD.
ZAIDA MORILLO, P.E., S.E.
DATE: 03/16/2020
SIGNATURE AND SEAL APPLIES TO DRAWING(S):

PROPOSED HIGHWAY PLANS

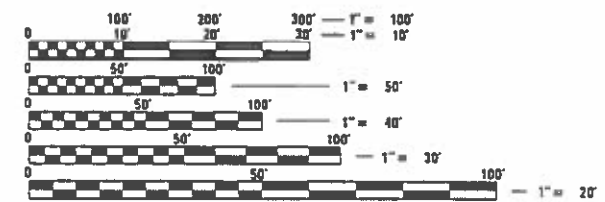
FAI ROUTE I-290 / IL 110 EISENHOWER EXPRESSWAY FROM 25TH AVE TO CIRCLE AVE SECTION: 2019-151-BR BRIDGE REPAIR COOK COUNTY



THIS IMPROVEMENT IS LOCATED WITHIN THE VILLAGES OF BELLWOOD, MAYWOOD, FOREST PARK, AND BROADVIEW.

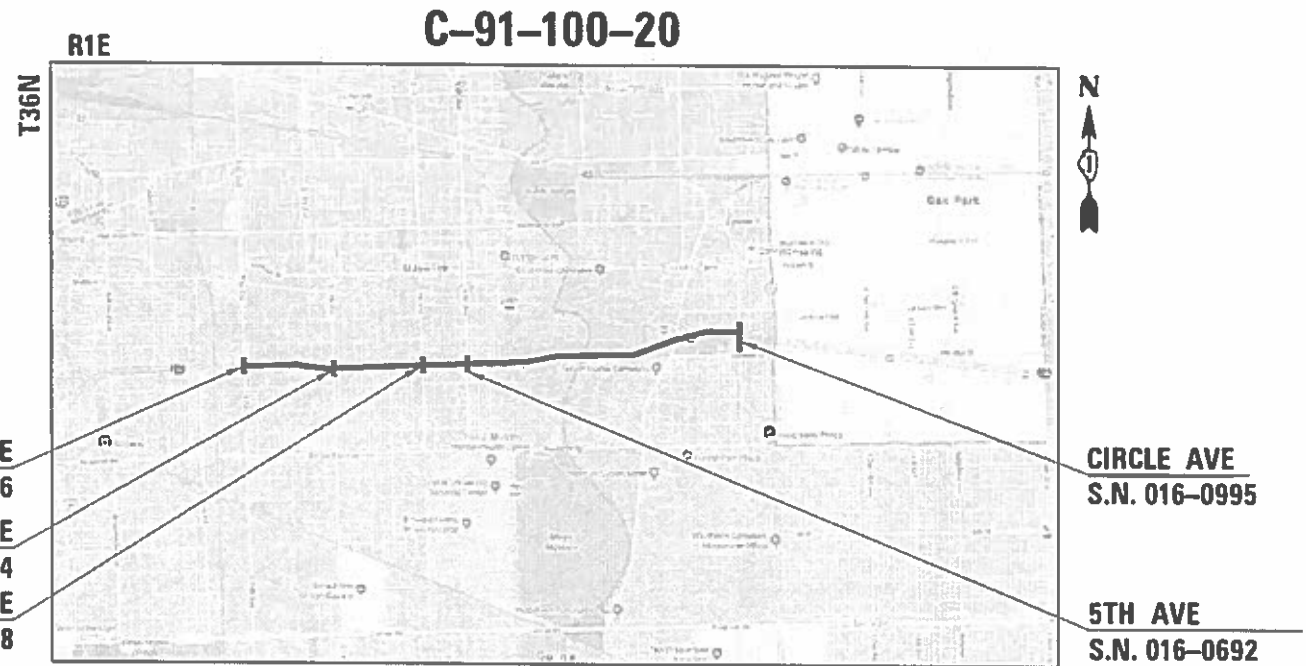
DESIGN DESIGNATION (TRAFFIC DATA) - POSTED SPEED

- FAI-290 - INTERSTATE (193,300) - 55 MPH
- 25TH AVE - MINOR ARTERIAL (23,900) - 30 MPH
- 17TH AVE - MAJOR COLLECTOR (8,400) - 30 MPH
- 9TH AVE - MAJOR COLLECTOR (8,250) - 30 MPH
- 5TH AVE - MAJOR COLLECTOR (9,600) - 30 MPH
- CIRCLE AVE - MAJOR COLLECTOR (4,550) - 30 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 EXCAVATORS
1-800-892-0123 OR 811



LOCATION MAP (NOT TO SCALE)

GROSS LENGTH = 15,154 FT. = 2.87 MILES
NET LENGTH = 15,154 FT. = 2.87 MILES

PROJECT ENGINEER: PRAVEEN KAINI, PE (847) 705-4237
PROJECT MANAGER: FAWAD AQUEEL, PE, PTOE (847) 705-4247



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 17, 2020

Anthony J. Quigley REGIONAL ENGINEER
March 20, 2020

Mark [Signature] ENGINEER OF DESIGN AND ENVIRONMENT
March 20, 2020

James M. [Signature] DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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INDEX OF SHEETS

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 32-38 S.N. 016-0694 17TH AVE BRIDGE
 39-46 S.N. 016-2058 9TH AVE BRIDGE
 47-53 S.N. 016-0692 5TH AVE BRIDGE
 * 54-61 S.N. 016-0995 CIRCLE AVE BRIDGE * 61A & 61B SHEETS ADDED HERE]
 62-75 DISTRICT ONE DETAILS



GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTING AND MAINTAINING AN ELECTRONIC LOG OF ALL STAKEOUT SURVEY THAT IS PERFORMED ON THE JOB, EITHER BY HIM/HER OR ANY SUB-CONTRACTOR PERFORMING THE STAKEOUT. UPON REQUEST, ALL LOGS SHALL BE SUBMITTED TO THE DEPARTMENT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS WORK, BUT SHALL BE CONSIDERED INCLUDED IN THE COST FOR CONSTRUCTION LAYOUT.
2. ALL ELEVATIONS IN THE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE LATEST EDITION.
4. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.
5. THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY TRAFFIC OPERATIONS ENGINEER AT WWW.IDOTLCS.COM TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL DAILY LANE, RAMP, AND SHOULDER CLOSURES AND 7 DAYS IN ADVANCE OF ALL PERMANENT AND WEEKEND CLOSURES ON ALL FREEWAYS AND/OR EXPRESSWAYS IN DISTRICT ONE. THIS ADVANCE NOTIFICATION IS CALCULATED BASED ON WORKWEEK OF MONDAY THROUGH FRIDAY AND SHALL NOT INCLUDE WEEKENDS NOR HOLIDAYS.
6. TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS, THE ENGINEER SHALL CONTACT KYLIE VOGRIN, AREA TRAFFIC FIELD ENGINEER AT KYLIE.VOGRIN@ILLINOIS.GOV.
7. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

HIGHWAY STANDARDS

STD NO.	TITLE
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701316-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS ≥ 45MPH
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSEWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701446-10	TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

COMMITMENTS:

NONE

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

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

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	2
CONTRACT NO. 62K23				
ILLINOIS			FED. AID PROJECT	

1 REV. 4/14/2020 SEP

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SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE				
					BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE
					0047	0047	0047	0047	0047
					100% STATE	100% STATE	100% STATE	100% STATE	100% STATE
					25TH AVE SN 016-0686	17TH AVE SN 016-0694	9TH AVE SN 016-2058	5TH AVE SN 016-0692	CIRCLE AVE SN 016-0995
	50102400	CONCRETE REMOVAL	CU YD	2		0.7		1.6	
	50157300	PROTECTIVE SHIELD	SQ YD	392	152		103		137
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.7		0.6		1.1	
	52000035	PREFORMED JOINT SEAL 2 3/4"	FOOT	140	140				
	52000015	PREFORMED JOINT SEAL 1 1/2"	FOOT	512	140	124	124	124	
	52000037	PREFORMED JOINT SEAL 3"	FOOT	124			124		
	52000025	PREFORMED JOINT SEAL 2"	FOOT	38					38
	52000039	PREFORMED JOINT SEAL 3 1/4"	FOOT	200				124	76
	52000030	PREFORMED JOINT SEAL 2 1/2"	FOOT	38					38
	52000045	PREFORMED JOINT SEAL 3 3/4"	FOOT	124		124			
	50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	19060	6090	3030	2290	3510	4140
	52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12					12
	52100510	ANCHOR BOLTS, 3/4"	EACH	32					32
	52100505	ANCHOR BOLTS, 5/8"	EACH	48					48
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	1	1	1	1	2
	67100100	MOBILIZATION	L SUM	1	0.2	0.2	0.2	0.2	0.2
	70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	197	197				
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1462.5	262.5	400	400	400	
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1450	250.0	400	400	400	
	70600255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	13	1	4	4	4	
	70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	7.0	1.0	2	2	2	
	70600322	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	13	1	4	4	4	
	70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	7	1	2	2	2	
	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5047	2137	800	1040	1070	
	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	729		234		495	
	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1995		752	1243		
	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	139		49	46	44	
	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	2485	455	410	410	410	800
	78009024	MODIFIED URETHANE PAVEMENT MARKING - LINE 24"	FOOT	150		50	48	52	
	78100300	REPLACEMENT REFLECTOR	EACH	110	22	22	22	22	22
	X0326766	CLEAN & RESEAL RELIEF JOINT	FOOT	52					52
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	5335	914	1505	1949	967	
	X0900031	JACK, REMOVE, AND REINSTALL EXISTING BEARINGS	EACH	0					0
	X0900085	REMOVE EXISTING JOINT	FOOT	76					76
	X2700003	GROOVING FOR RECESSED PAVEMENT MARKING 8"	FOOT	366	57	103	103	103	
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.2	0.2	0.2	0.2	0.2
	X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	0.2	0.2	0.2	0.2	0.2
	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	66	66				
	X7800956	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - CONTRAST - LINE 7"	FOOT	366	57	103	103	103	
	Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	86	8	27	23	28	
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	12					12
	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	19880	6030	2850	2410	3490	5100

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	3
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT				

REV. 4/14/2020 SEP

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. TRAFFIC CONDITIONS, CRASHES, AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY OR REMOVE LANE CLOSURES OR CHANNELIZATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. COMPLIANCE WITH THIS REQUIREMENT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE OF THE MAINTENANCE OF TRAFFIC ITEM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 2.
3. THE MAINTENANCE OF TRAFFIC PLANS SHALL SERVE AS A GUIDE FOR THE SAFE DIVERSION OF TRAFFIC DURING EXECUTION OF THIS CONTRACT. THE CONTRACTOR MAY MODIFY THE MAINTENANCE OF TRAFFIC PLANS TO MEET CONSTRUCTION NEEDS, BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. ANY CHANGES TO THE TRAFFIC CONTROL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE ENGINEER SHALL BE INFORMED IN WRITING A MINIMUM OF 48 HOURS IN ADVANCE OF ANY CHANGE TO THE MAINTENANCE OF TRAFFIC PLANS. CONTACT THE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT 847-705-4151. REFER TO THE "KEEPING THE EXPRESSWAY OPEN TO TRAFFIC" SPECIAL PROVISION FOR LANE CLOSURE AND STAGE REQUIREMENTS.
4. CONFLICTING EXISTING PAVEMENT MARKINGS SHALL BE REMOVED PER STAGE AS NEEDED. THIS WILL BE PAID FOR AS PAVEMENT MARKING REMOVAL - WATER BLASTING (X0327980).
5. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY PAVEMENT MARKINGS THAT CONFLICT WITH THE STAGING. REMOVAL OF PAVEMENT MARKING TAPE WILL BE PAID FOR AS TEMPORARY PAVEMENT MARKING REMOVAL (X7030005).
- 6.
7. ALL SIGN ASSEMBLIES SHALL BE CERTIFIED BY THE CONTRACTOR AS MEETING THE APPLICABLE REQUIREMENTS OF NCHRP REPORT 350, TEST LEVEL 3 AND SHALL BE APPROVED BY THE ENGINEER.
8. THE CONTRACTOR SHALL REMOVE OR COVER ALL EXISTING SIGNS THAT CONFLICT WITH OR DO NOT APPLY TO THE REVISED TRAFFIC PATTERNS AND SHALL RESTORE THE SIGNS AT THE END OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. COMPLIANCE WITH THIS REQUIREMENT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE OF THE MAINTENANCE OF TRAFFIC ITEM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
9. THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE TO THE ENGINEER OF ANY CONSTRUCTION WORK THAT MAY IMPACT ANY ROADWAY LIGHTING
10. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ANY EXISTING SIGNS REMOVED, BUT NOT RELOCATED, FROM THE PROJECT. THE CONTRACTOR SHALL PROPERLY STORE RELOCATED SIGNS AS APPROVED BY THE ENGINEER UNTIL THEY ARE PROPERLY RE-ERECTED.
11. CONFLICTING PAVEMENT MARKER REFLECTORS SHALL BE REMOVED PER STAGE AS NEEDED. EXISTING REFLECTORS THAT ARE DAMAGED SHALL ALSO BE REPLACED. THE REPLACEMENT OF THE REFLECTORS WILL BE PAID FOR AS REPLACEMENT REFLECTOR (70100300).
12. PLEASE ENSURE OUR FACILITY LOCATIONS ARE IDENTIFIED PRIOR TO PROCEEDING WITH ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING OUR FACILITIES FROM ALL CONSTRUCTION OPERATIONS, VIBRATIONS AND HEAVY EQUIPMENT. IT IS REQUESTED THAT DURING CONSTRUCTION, EXTRA CAUTION BE TAKEN TO PROTECT THE SAFETY AND INTEGRITY OF OUR FACILITIES. IN ORDER TO MAINTAIN SERVICE, NO ACCESS HATCHES AND MANHOLE COVERS ON MWRD STRUCTURES AND MANHOLES WITHIN IN 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 ALL MWRD FACILITIES. FOR ANY QUESTIONS REGARDING ACCESS TO OUR FACILITY OR FIELD LOCATION, PLEASE CONTACT MR. STEVE WHITEHEAD, SENIOR CIVIL ENGINEER, AT (708) 588-4080. WE FURTHER REQUEST THAT MWRD MANHOLES BE LOCATED, PROTECTED AND/OR ADJUSTED TO GRADE. IF NECESSARY, AUTHORIZATION MAY BE OBTAINED BY CONTACTING MR. CEDRIC ROBERTSON, MANAGING ENGINEER, AT (708) 751-3234.
13. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR FOR ARTERIALS AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV AT LEAST 72 HOURS BEFORE BEGINNING WORK.

BRIDGE WORK NOTES

1. THE NOTES BELOW ARE TYPICAL FOR THE REPAIR WORK TAKING PLACE ON EACH OF THE BRIDGES.
2. LONG TERM CLOSURES SHALL NOT OCCUR SIMULTANEOUSLY ON ADJACENT BRIDGES. FOR EXAMPLE, LONG TERM CLOSURES SHALL NOT TAKE PLACE ON THE 9TH AVENUE AND 17TH AVENUE BRIDGES AT THE SAME TIME. DURING THE LANE CLOSURES DECK REPAIRS AND STEEL REPAIRS CAN BE DONE CONCURRENTLY. DECK OR APPROACH SLAB REPAIRS ADJACENT TO POLYMER CONCRETE MUST BE DONE ON SEPARATE DAYS.
3. EXPANSION JOINT REMOVAL AND REPLACEMENT WILL BE DONE ALL IN ONE DAY (BOTH ENDS), BUT WILL REQUIRE CLOSURES IN BOTH DIRECTIONS AT DIFFERENT TIMES.
4. DAYTIME LANE CLOSURES ON I-290 RAMP & MAINLINE ARE NOT PERMITTED.

PEDESTRIAN ACCESS

1. A MINIMUM OF ONE SIDEWALK SHALL REMAIN OPEN AT ALL TIMES ACROSS BRIDGES.
2. SIDEWALKS SHALL BE CLOSED ANY TIME CONSTRUCTION IS TAKING PLACE ON THE SIDEWALK, ADJACENT PARAPET, PARAPET FENCE, OR ADJACENT ROADWAY/BRIDGE LANE.
3. SIGNAGE FOUND ON IDOT HIGHWAY STANDARD 701801 SHALL BE UTILIZED TO CLOSE A SIDEWALK.

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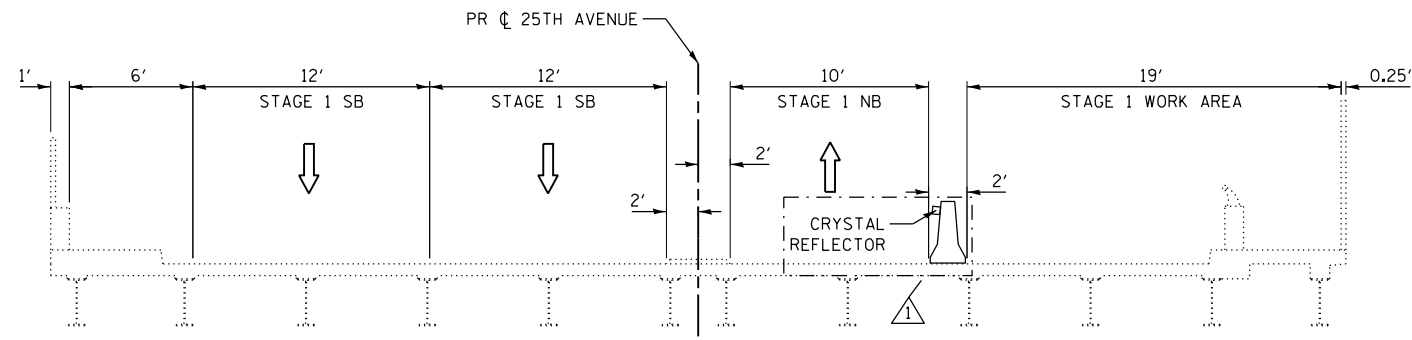
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

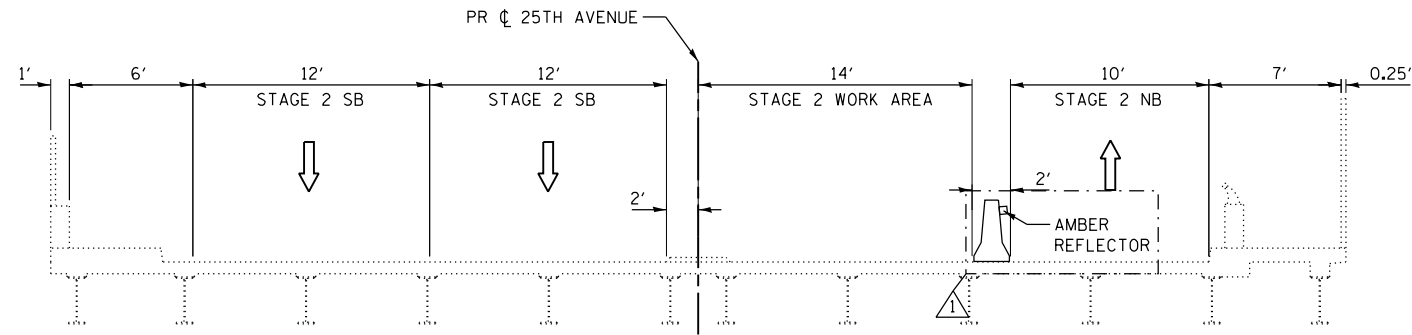
MAINTENANCE OF TRAFFIC: STAGING NOTES			
SCALE:	SHEET 1 OF 14 SHEETS	STA.	TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	5
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT BRIDGE REPAIR				

REV. 4/14/2020 SEP

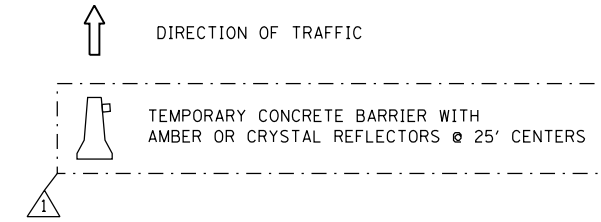


25TH AVENUE BRIDGE
(SN 016-0686)
STAGE 1



25TH AVENUE BRIDGE
(SN 016-0686)
STAGE 2

MOT TYPICAL LEGEND



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 100 S. WACKER DRIVE SUITE 700, CHICAGO IL 60606 - P:312-405-8900 F:312-406-2405



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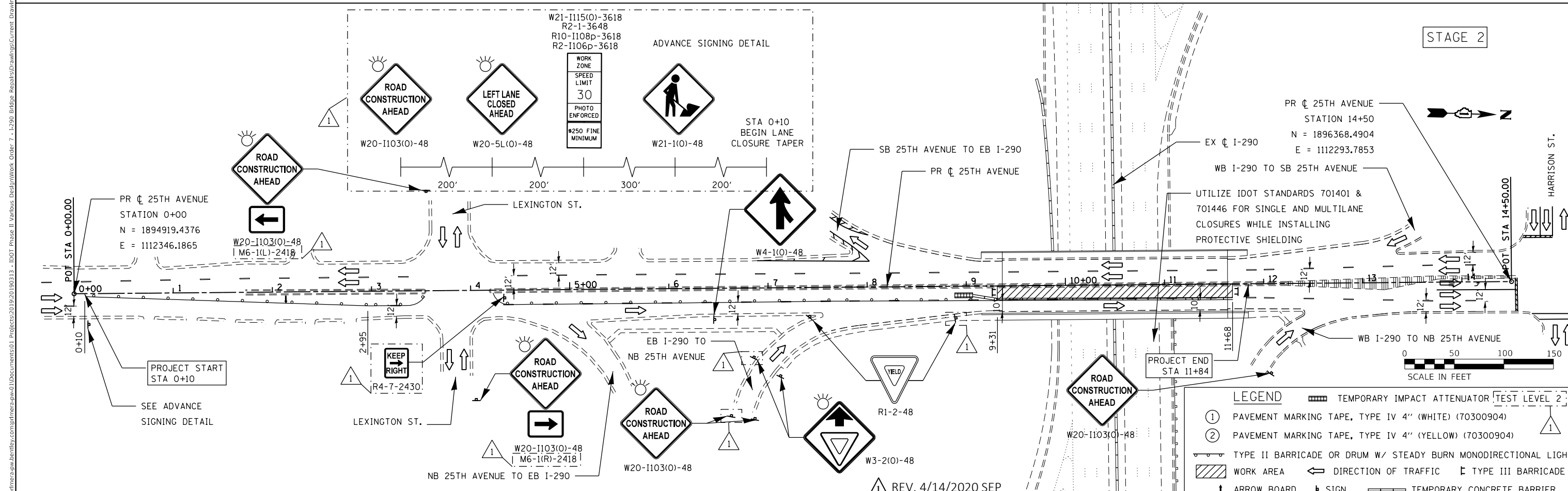
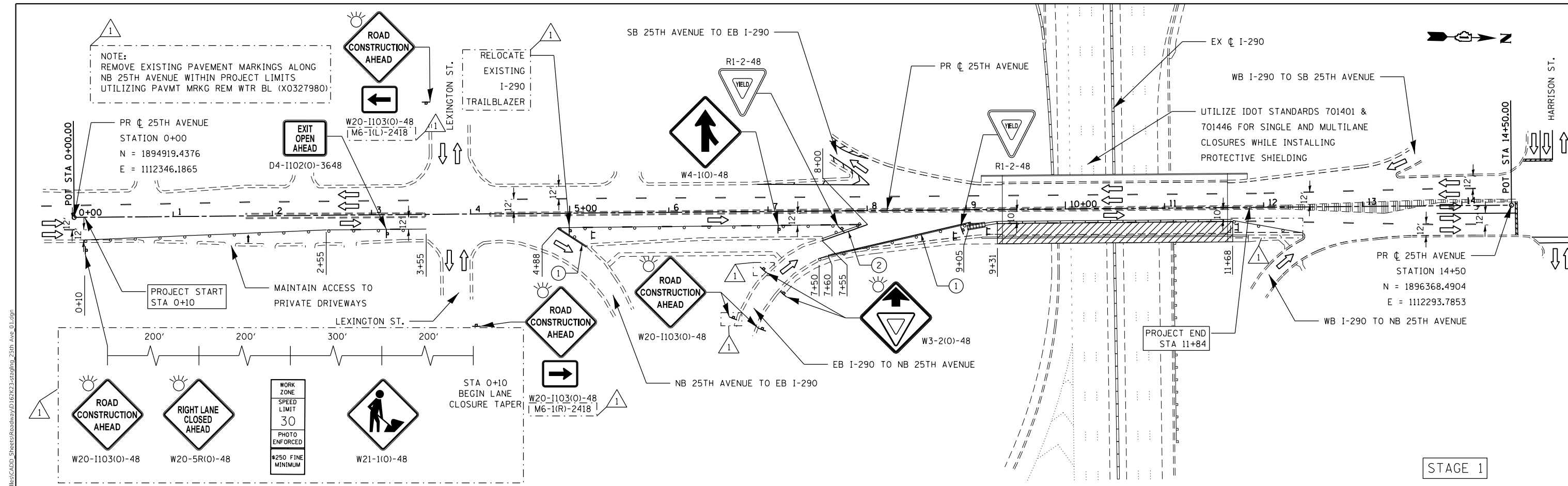
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
TYPICAL SECTIONS

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A. RTE.		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				290	2019-151-BR
				CONTRACT NO. 62K23	
				ILLINOIS	FED. AID PROJECT

1 REV. 4/14/2020 SEP



USER NAME = jrice	DESIGNED -	REVISED - 4/10/2020 JMR
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 4/10/2020	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC PLAN
25TH AVENUE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	8
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT				

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 100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606 - P:312-405-0910 F:312-405-0915

MAINTENANCE OF TRAFFIC SEQUENCING NOTES (17TH AVENUE)

STAGE 1

CLOSE OUTSIDE LANES AND SIDEWALK ON WEST SIDE OF BRIDGE TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG BATAAN DR AND HARRISON ST.



STAGE 2

CLOSE INSIDE LANES AND SIDEWALK ON EAST SIDE OF BRIDGE TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG BATAAN DR AND HARRISON ST.



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REV. 4/14/2020 SEP

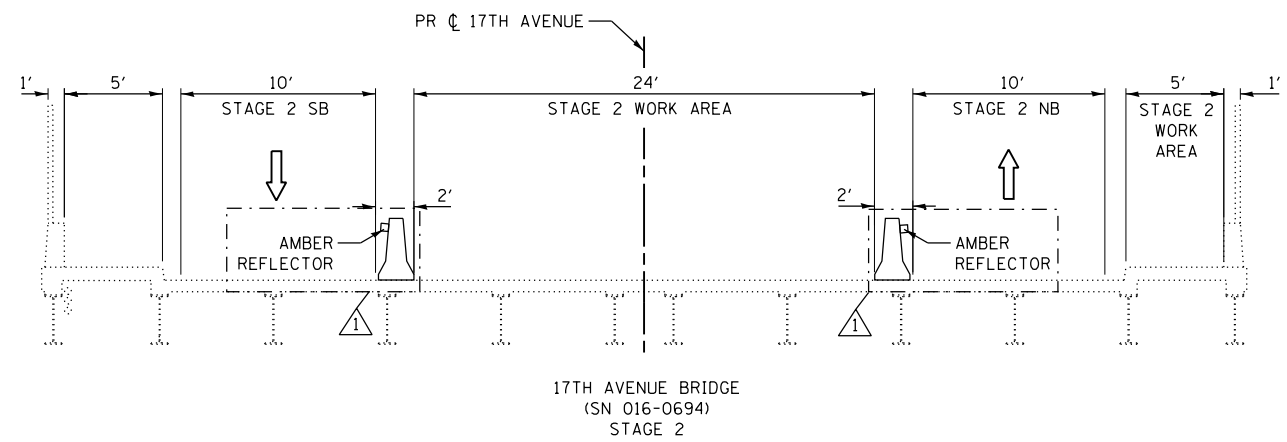
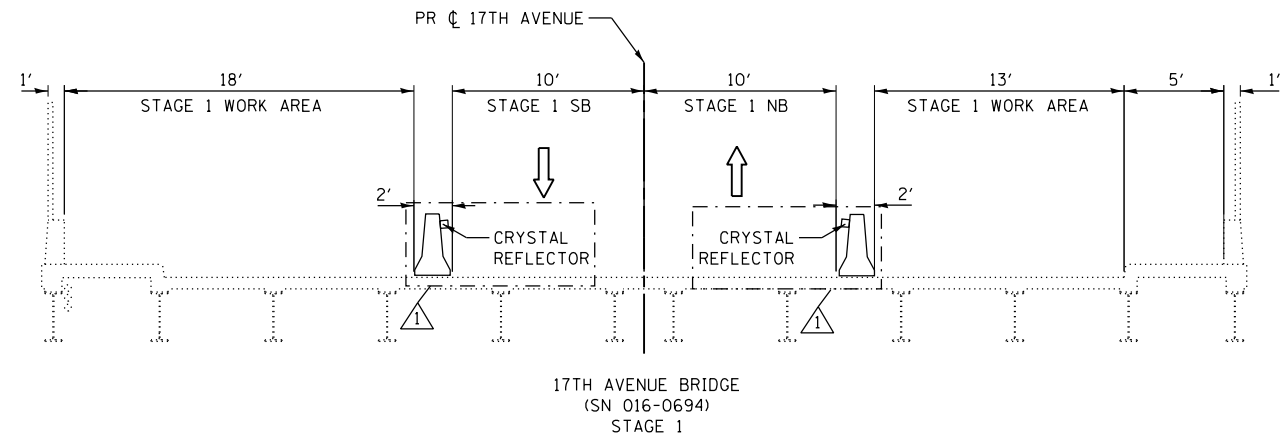
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

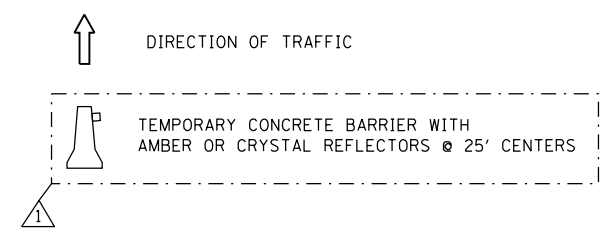
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STAGING DESCRIPTION

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	9
CONTRACT NO. 62K23				
ILLINOIS		FED. AID PROJECT		



MOT TYPICAL LEGEND



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 100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606 - P:312-405-0910 F:312-406-4945



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PLOT DATE = 4/10/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

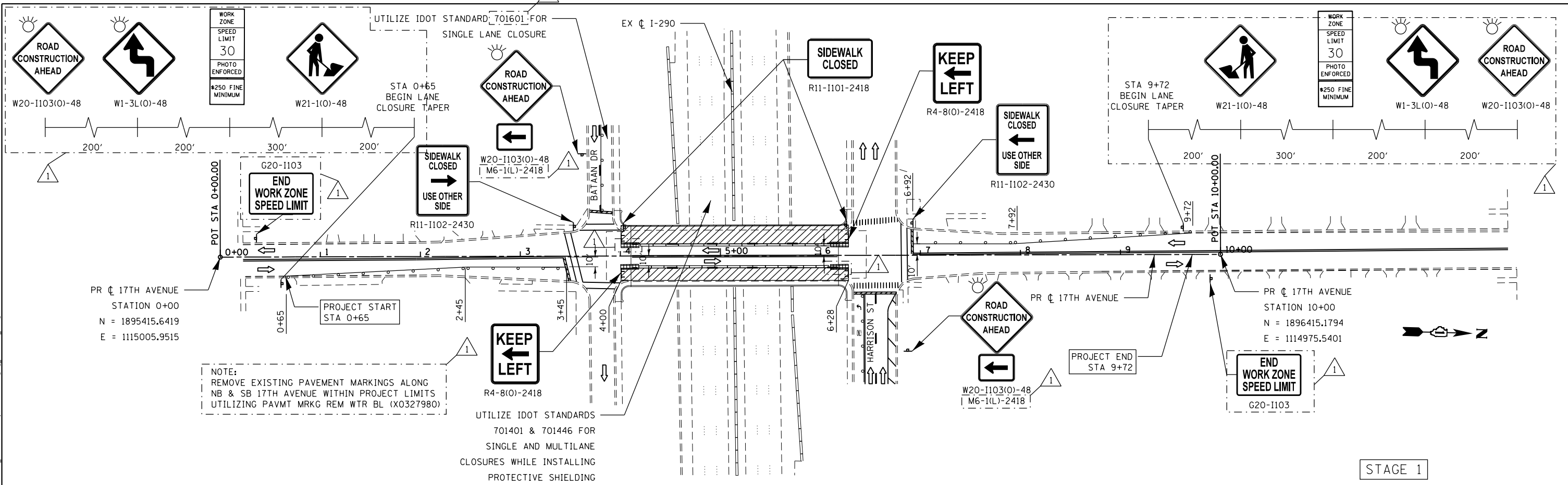
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TYPICAL SECTIONS

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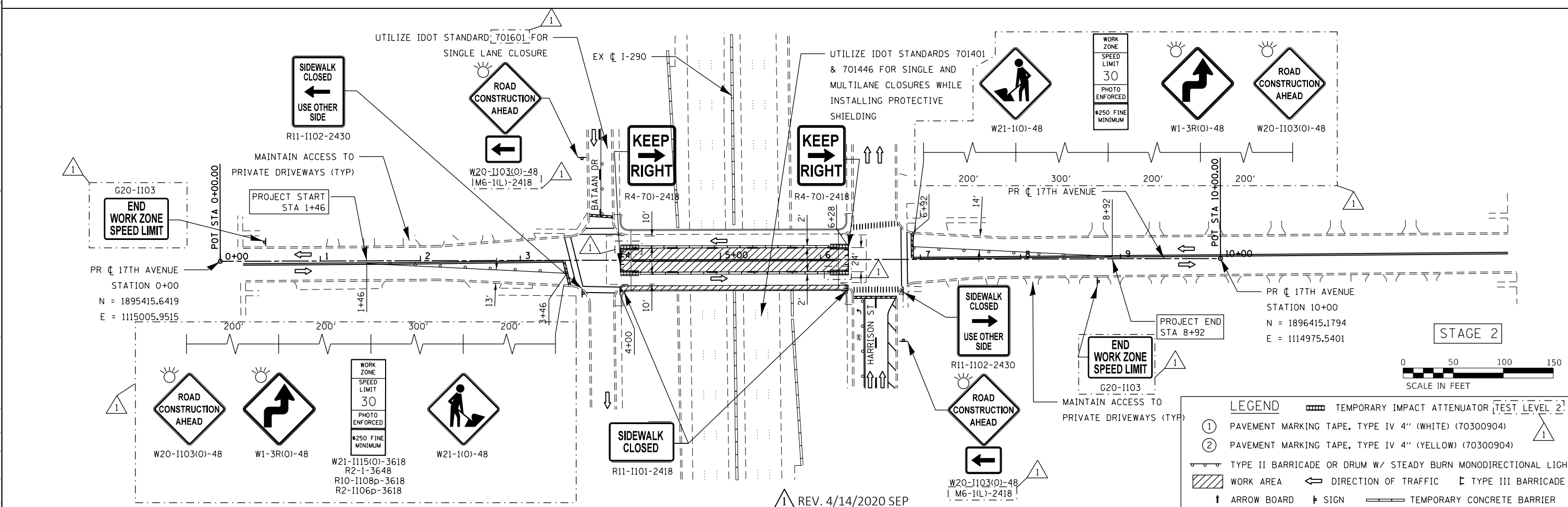
REV. 4/14/2020 SEP

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290	2019-151-BR	COOK	75	10
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT				

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 DATE: 4/10/2020



STAGE 1



STAGE 2

LEGEND

- ① PAVEMENT MARKING TAPE, TYPE IV 4" (WHITE) (70300904)
- ② PAVEMENT MARKING TAPE, TYPE IV 4" (YELLOW) (70300904)
- TYPE II BARRICADE OR DRUM W/ STEADY BURN MONODIRECTIONAL LIGHT
- WORK AREA
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- ↑ ARROW BOARD
- ↓ SIGN
- TEMPORARY IMPACT ATTENUATOR
- TEST LEVEL 2
- TEMPORARY CONCRETE BARRIER

REV. 4/14/2020 SEP



USER NAME = jrice	DESIGNED -	REVISED - 4/10/2020 JMR
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 4/10/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
17TH AVENUE

SCALE: 50:1	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	11
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT				

MAINTENANCE OF TRAFFIC SEQUENCING NOTES (9TH AVENUE)

STAGE 1

CLOSE OUTSIDE LANES AND SIDEWALK ON WEST SIDE OF BRIDGE TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG HARRISON ST.



STAGE 2

CLOSE INSIDE LANES AND SIDEWALK ON EAST SIDE OF BRIDGE TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG HARRISON ST.



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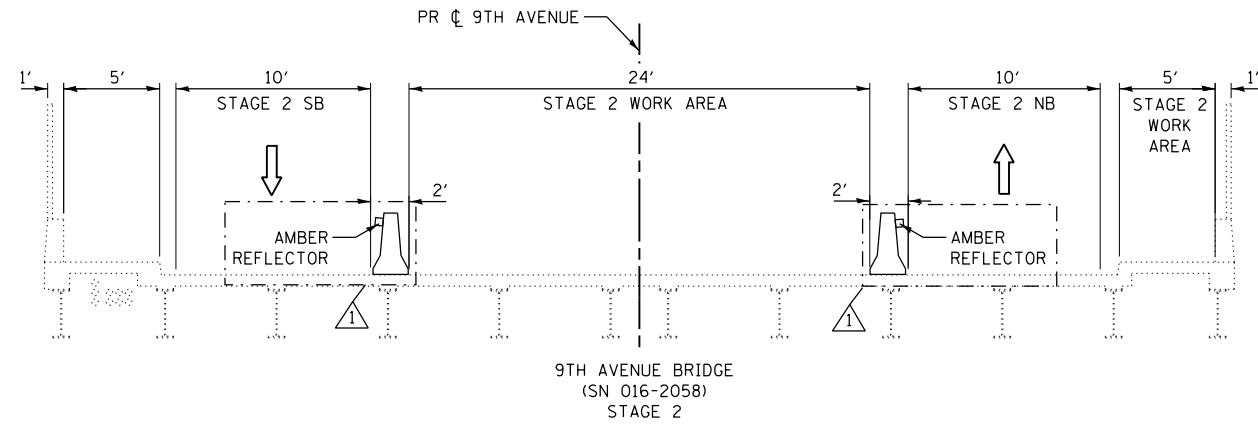
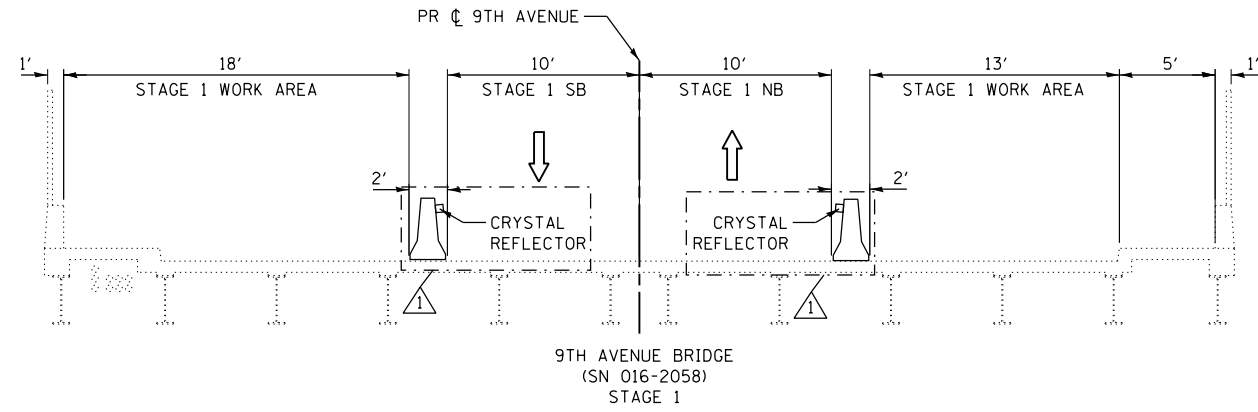
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

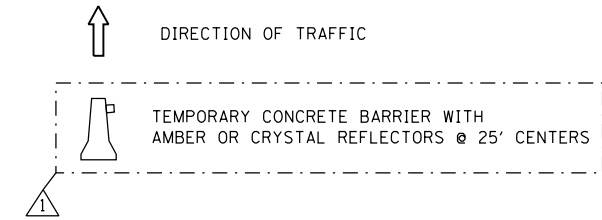
**MAINTENANCE OF TRAFFIC PLAN
STAGING DESCRIPTION**

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	12
CONTRACT NO. 62K23				
		ILLINOIS	FED. AID PROJECT	



MOT TYPICAL LEGEND



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 100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606 - P:312-405-0910 F:312-406-2415



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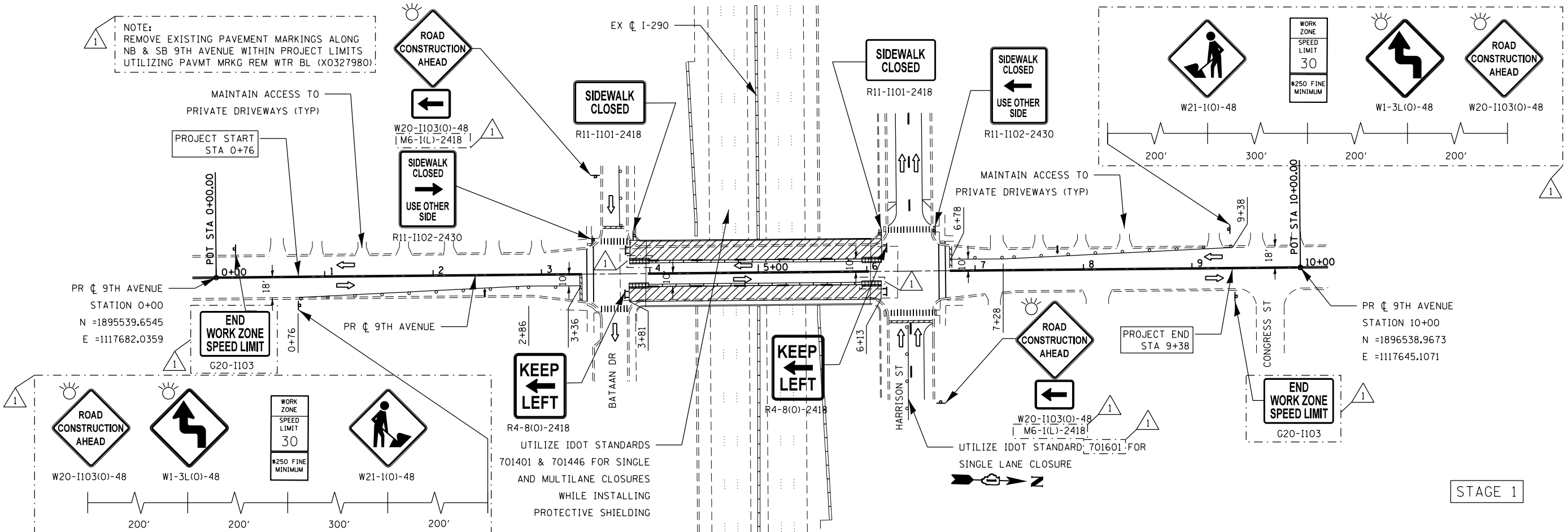
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
TYPICAL SECTIONS

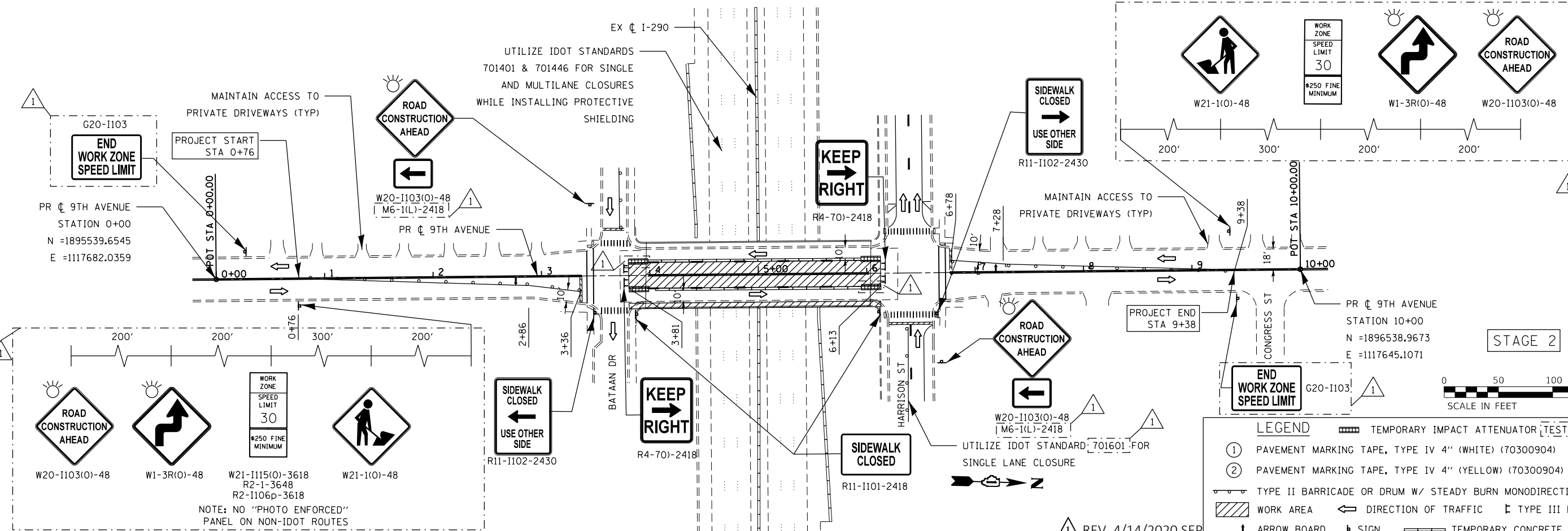
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REV. 4/14/2020 SEP				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	13
			CONTRACT NO. 62K23	
		ILLINOIS	FED. AID PROJECT	

NOTE:
REMOVE EXISTING PAVEMENT MARKINGS ALONG
NB & SB 9TH AVENUE WITHIN PROJECT LIMITS
UTILIZING PAVMT MRKG REM WTR BL (X0327980).



STAGE 1



STAGE 2

- LEGEND**
- ① PAVEMENT MARKING TAPE, TYPE IV 4" (WHITE) (70300904)
 - ② PAVEMENT MARKING TAPE, TYPE IV 4" (YELLOW) (70300904)
 - TYPE II BARRICADE OR DRUM W/ STEADY BURN MONODIRECTIONAL LIGHT
 - WORK AREA
 - DIRECTION OF TRAFFIC
 - TYPE III BARRICADE
 - ARROW BOARD
 - SIGN
 - TEMPORARY CONCRETE BARRIER
 - TEMPORARY IMPACT ATTENUATOR
 - TEST LEVEL 2

REV. 4/14/2020 SEP

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USER NAME = jrice	DESIGNED -	REVISED - 4/10/2020 JMR
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PLOT DATE = 4/10/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
9TH AVENUE

SCALE: 50:1 SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	14
CONTRACT NO. 62K23				

ILLINOIS FED. AID PROJECT

MAINTENANCE OF TRAFFIC SEQUENCING NOTES (5TH AVENUE)

STAGE 1

CLOSE OUTSIDE LANES AND SIDEWALK ON WEST SIDE OF BRIDGE TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG BATAAN DR AND HARRISON ST.



STAGE 2

CLOSE INSIDE LANES TO PERFORM BRIDGE REPAIRS. UTILIZE IDOT STANDARDS 701401 & 701446 FOR SINGLE AND MULTILANE CLOSURES ALONG I-290 WHILE INSTALLING PROTECTIVE SHIELDING. UTILIZE IDOT STANDARD 701601 FOR SINGLE LANE CLOSURE ALONG BATAAN DR AND HARRISON ST.



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 100 N. WACKER DRIVE SUITE 700, CHICAGO IL 60606 - P:312-405-8900 F:312-406-2405



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PLOT DATE = 4/10/2020	DATE -	REVISED -

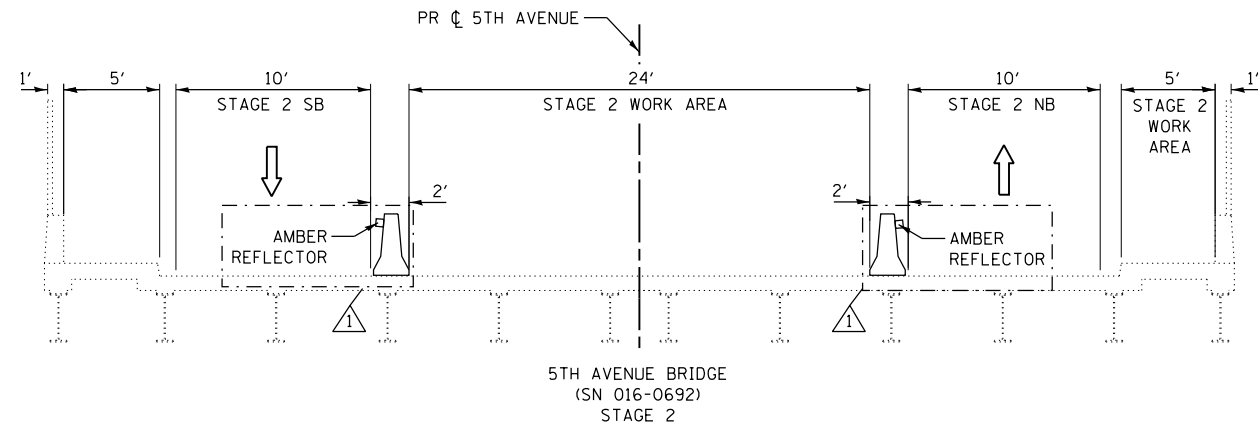
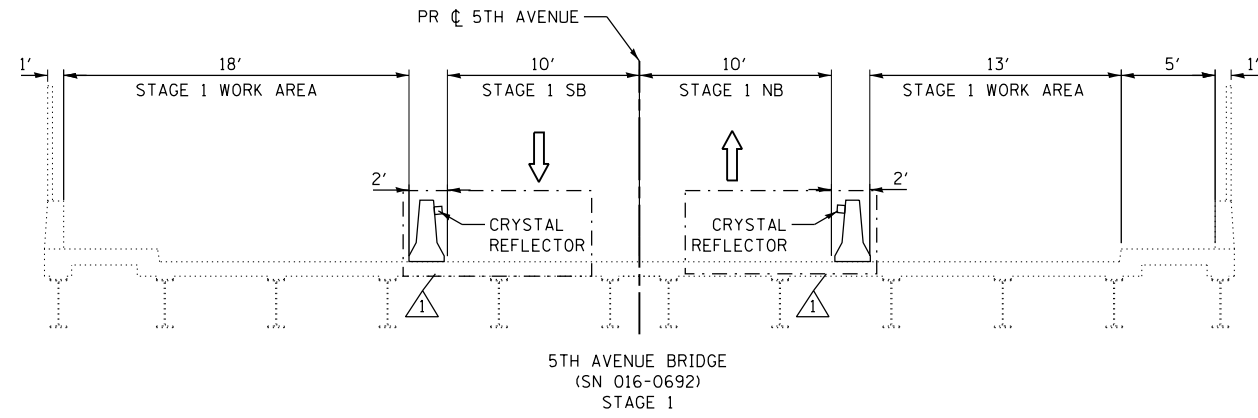
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC PLAN
STAGING DESCRIPTION**

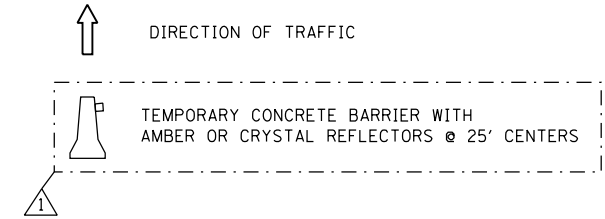
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CONTRACT NO. 62K23				
ILLINOIS			FED. AID PROJECT	

REV. 4/14/2020 SEP



MOT TYPICAL LEGEND



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 100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606 - P:312-405-0910 F:312-405-0915



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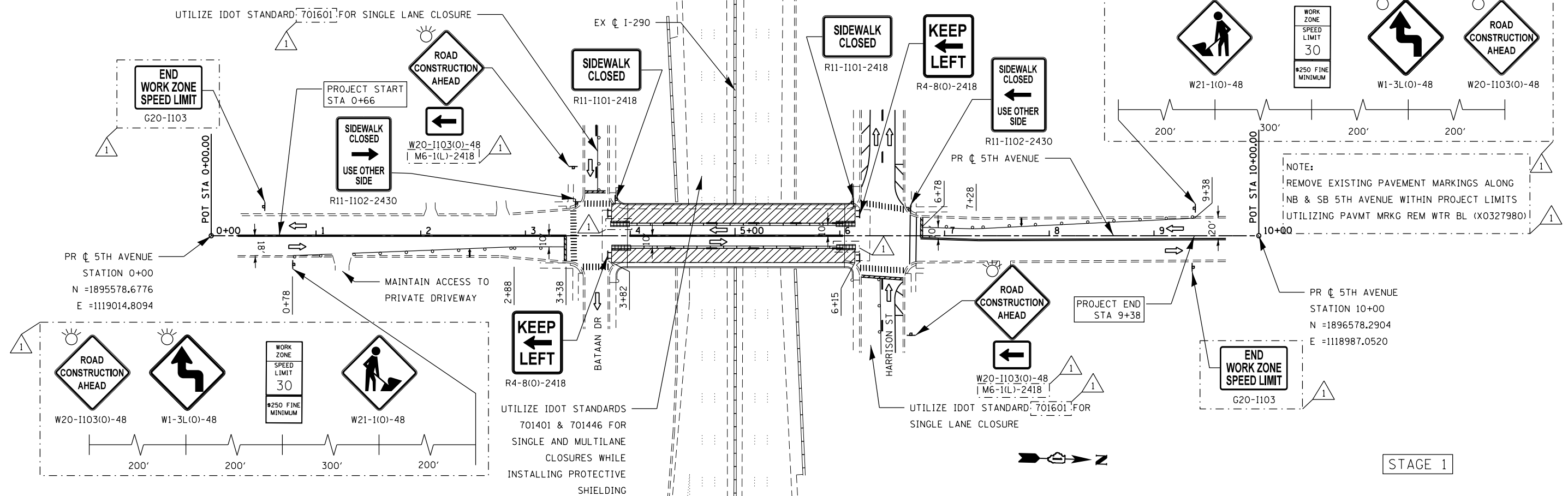
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
TYPICAL SECTIONS

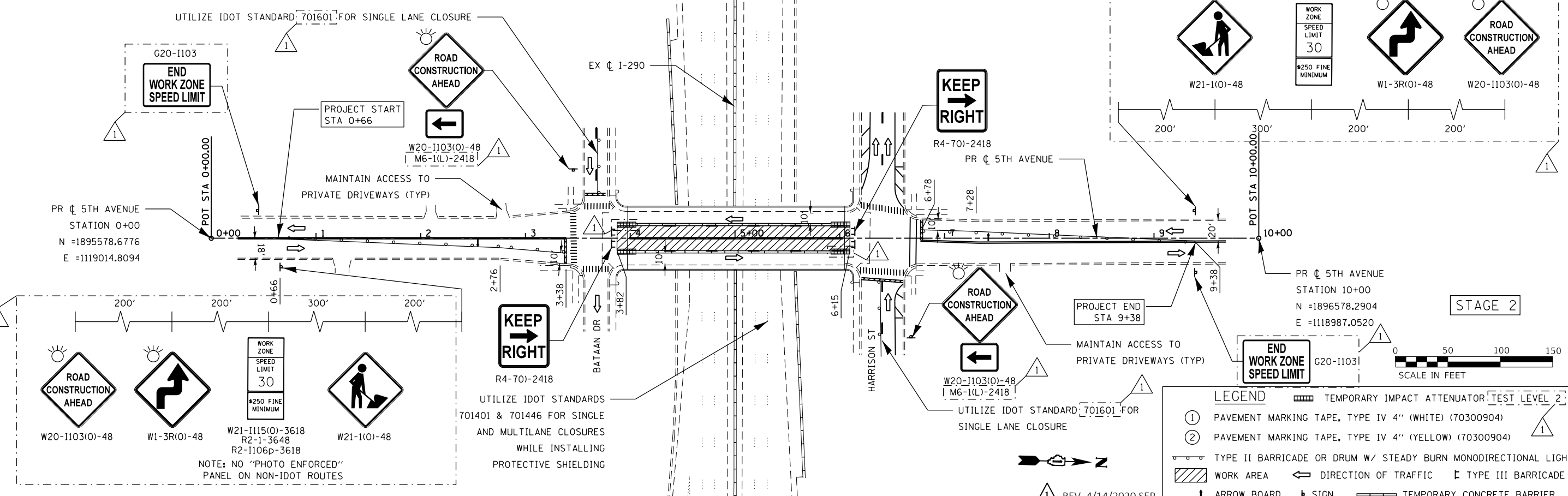
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F.A. RTE. 290	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-151-BR	COOK	75	16
CONTRACT NO. 62K23				
		ILLINOIS	FED. AID PROJECT	

REV. 4/14/2020 SEP



STAGE 1



STAGE 2

LEGEND

①	PAVEMENT MARKING TAPE, TYPE IV 4" (WHITE) (70300904)
②	PAVEMENT MARKING TAPE, TYPE IV 4" (YELLOW) (70300904)
	TYPE II BARRICADE OR DRUM W/ STEADY BURN MONODIRECTIONAL LIGHT
	WORK AREA
	DIRECTION OF TRAFFIC
	TYPE III BARRICADE
	ARROW BOARD
	SIGN
	TEMPORARY CONCRETE BARRIER

REV. 4/14/2020 SEP



USER NAME = jrice	DESIGNED -	REVISED - 4/10/2020 JMR
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	DATE -	REVISED -

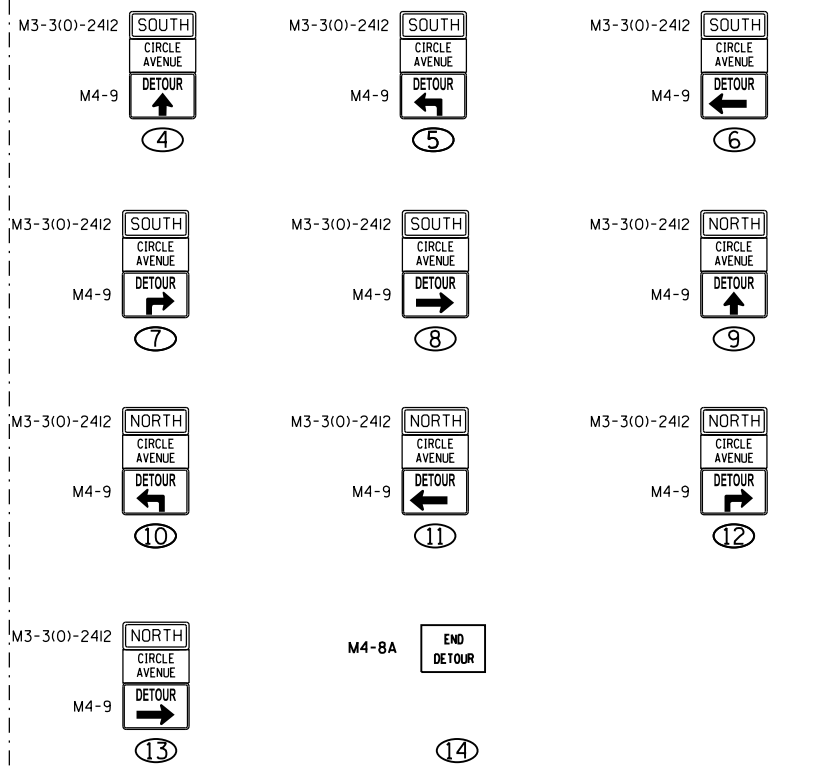
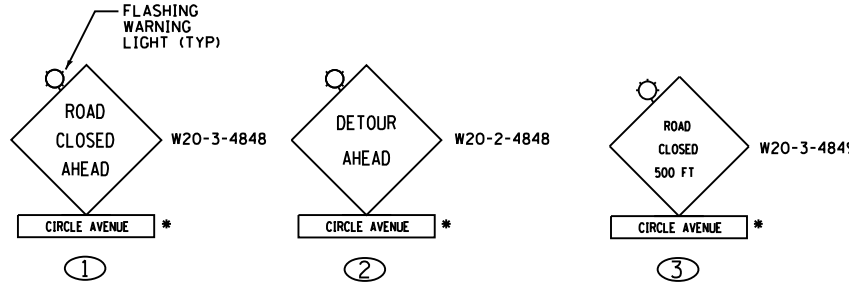
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PLAN
5TH AVENUE

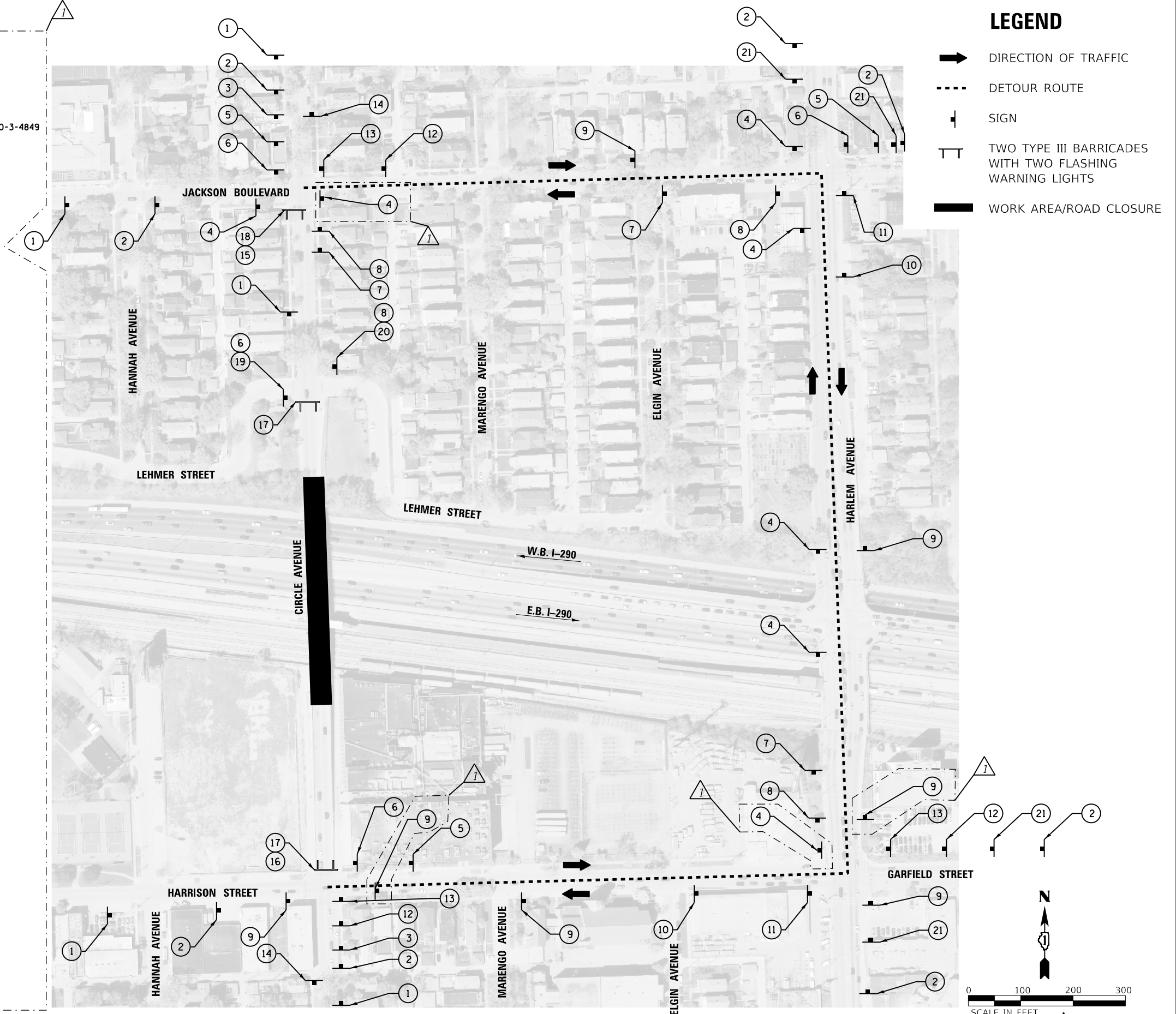
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	17
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT				

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 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2020
 morning 4/10/2020 7:58:02 AM
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* STREET NAME SIGN SHALL NOT BE USED WHEN SIGN IS LOCATED ON CIRCLE AVENUE



LEGEND

- DIRECTION OF TRAFFIC
- DETOUR ROUTE
- SIGN
- TWO TYPE III BARRICADES WITH TWO FLASHING WARNING LIGHTS
- WORK AREA/ROAD CLOSURE



USER NAME = mornjg	DESIGNED -	REVISED - 4/10/2020
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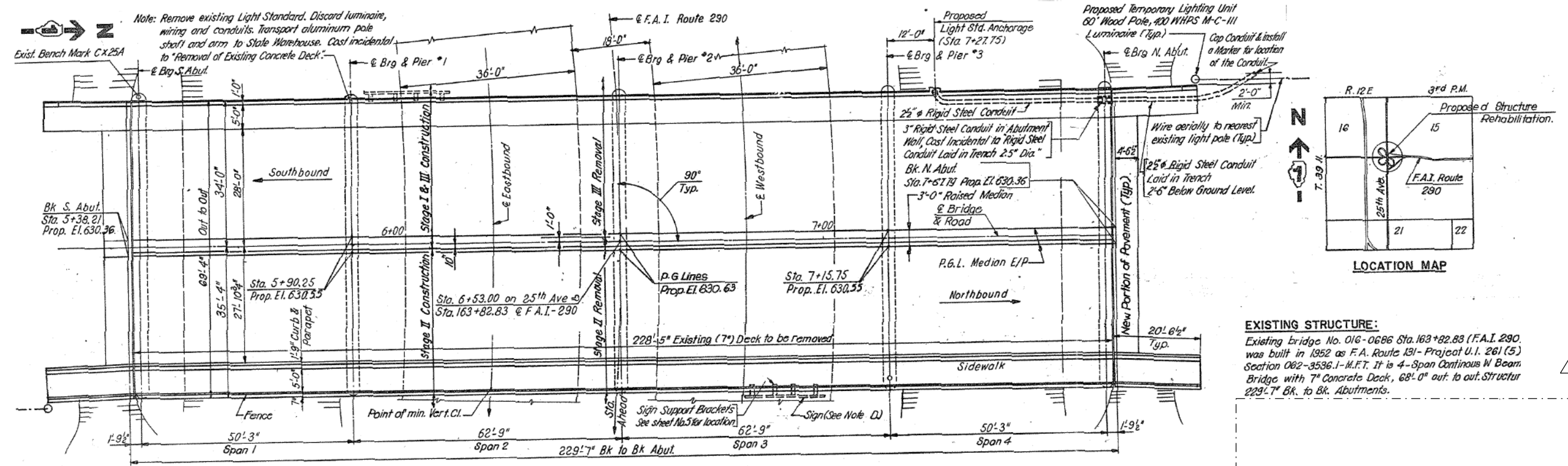
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - DETOUR			
CIRCLE AVENUE			
SCALE: 1" = 100'	SHEET 14	OF 14 SHEETS	STA. TO STA.

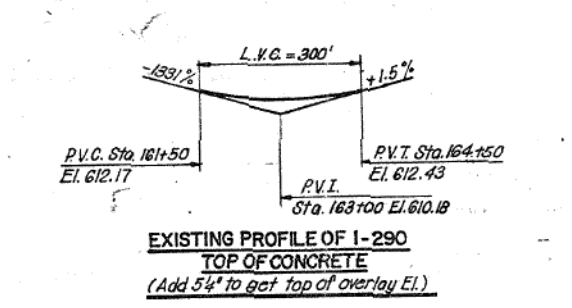
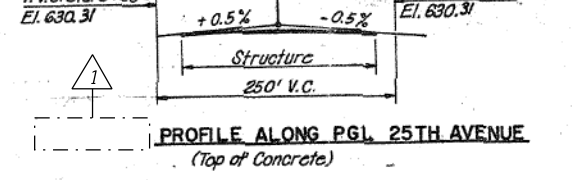
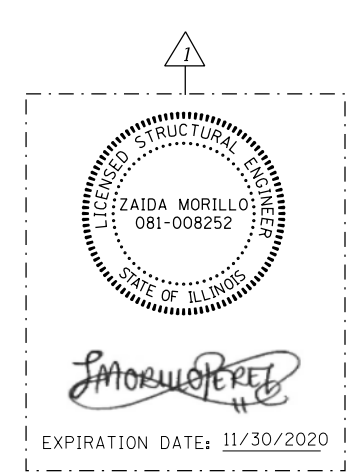
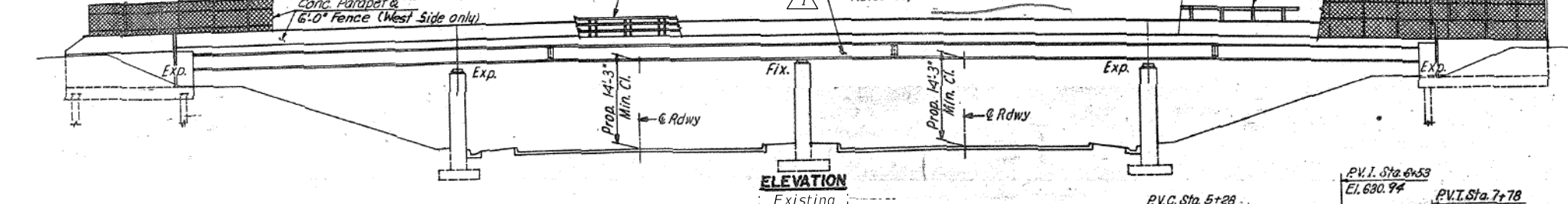
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	18
CONTRACT NO. 62K23				
ILLINOIS FED. AID PROJECT BRIDGE REPAIR				

REV. 4/14/2020 SEP

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 4/13/2020 9:28:47 AM



BENCH MARK A Standard Cook County bronze disk set on the Southwest Pier on the 25th Ave. overpass, 34.50 feet West of the centerline of 25th Ave.; 15.80 feet Southeast of a 9 inch tree; and 50.20 feet South of aluminum pole on Bridge Pole 15 marked Rd/10. El. 630.175



EXISTING STRUCTURE:
 Existing Bridge No. 016-0686 Sta. 163+82.83 (F.A.I. 290) was built in 1952 as F.A. Route 131 - Project U.I. 261 (5) Section 082-3536.1-M.F.T. It is 4-Span Continuous W Beam Bridge with 7" Concrete Deck, 68'-0" out. to out. Structure 229'-7" Bk. to Bk. Abutments.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 STRUCTURE NO. 016-0686 (25TH AVE.)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	24
			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

GENERAL NOTES

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 the 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.

All fasteners shall be ASTM A325 Type 1, Mechanically galvanized bolts. Bolts 3/4" Ø, holes 13/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel = 12,670 lbs.

All structural steel shall be AASHTO M270 Grade 50.

New structural steel shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel".

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Structural Steel Removal quantity is shown for bidding purposes only and will not be measured for payment.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Deck & Joint Repair Details
4. Protective Shield Details
5. Expansion Joint Repair Details
6. Structural Steel Repair Location Plan
7. Structural Steel Repairs I
8. Structural Steel Repairs II

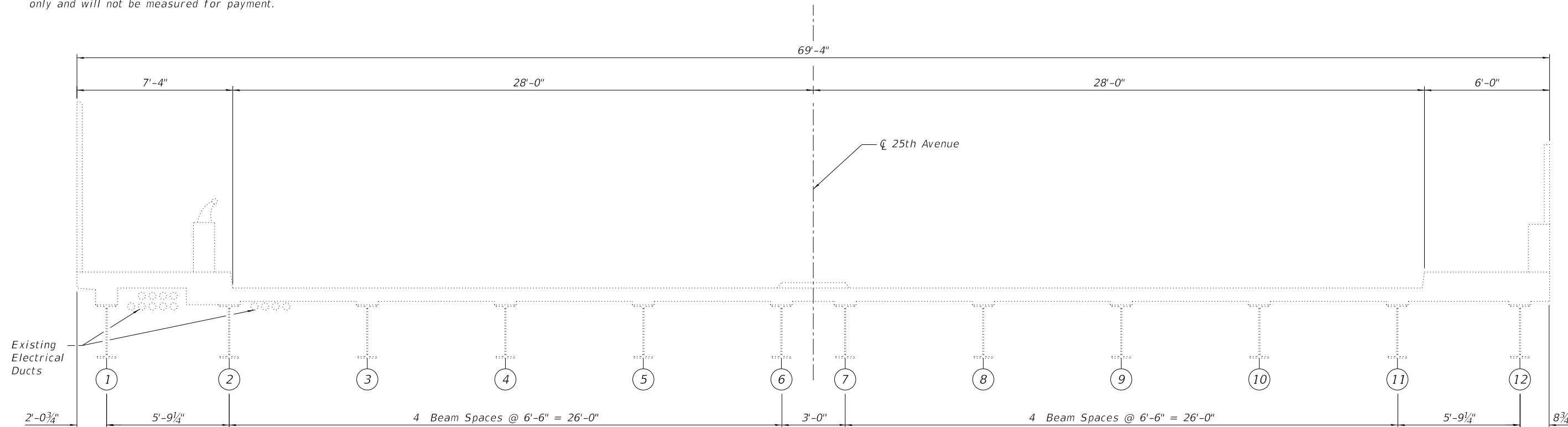
SCOPE OF WORK

1. Repair approach slab, deck and sidewalk at partial depth.
2. Remove and replace existing diaphragms at abutments.
3. Repair beam ends.
4. Repair expansion joint at both ends.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq. Yd.	152
Furnishing and Erecting Structural Steel	Pound	5,910
Preformed Joint Seal 1 1/2"	Foot	140
Approach Slab Repair (Partial Depth)	Sq. Yd.	8
Structural Steel Removal	Pound	6,030
Structural Steel Repair	Pound	6,760
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	4
Cleaning Bridge Seats	Sq. Ft.	60
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Partial)	Sq. Yd.	8
*Temporary Shoring and Cribbing	L. Sum	0.2

*Contract-wide item. See Special Provisions

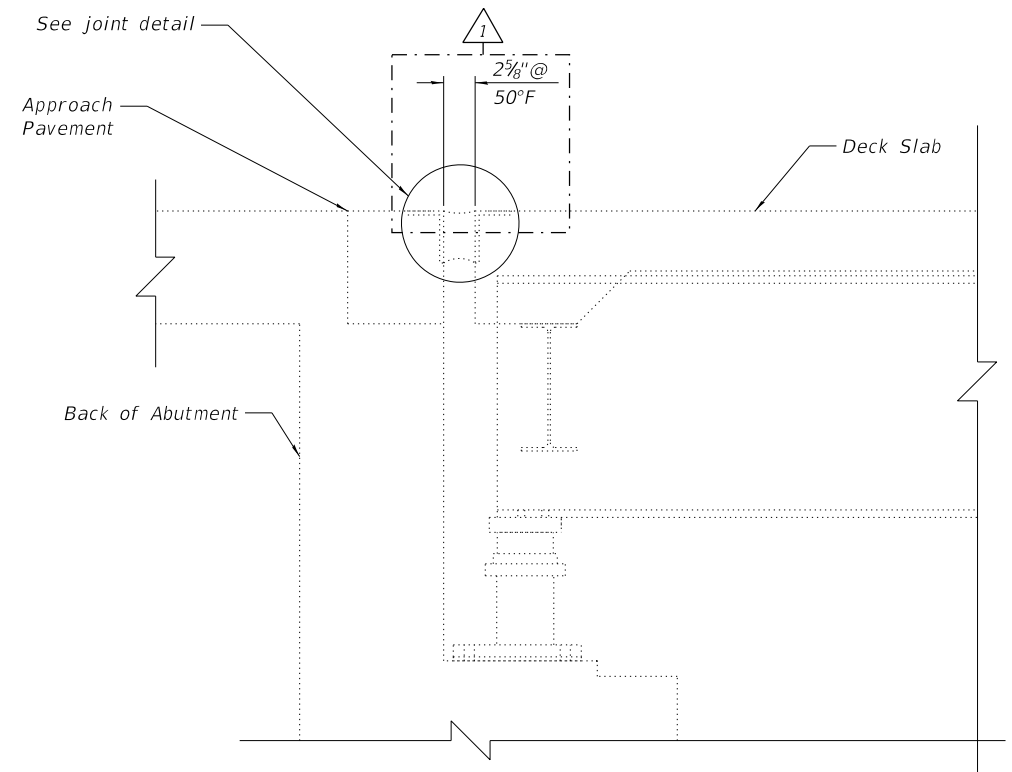


EXISTING BRIDGE CROSS SECTION
Looking South

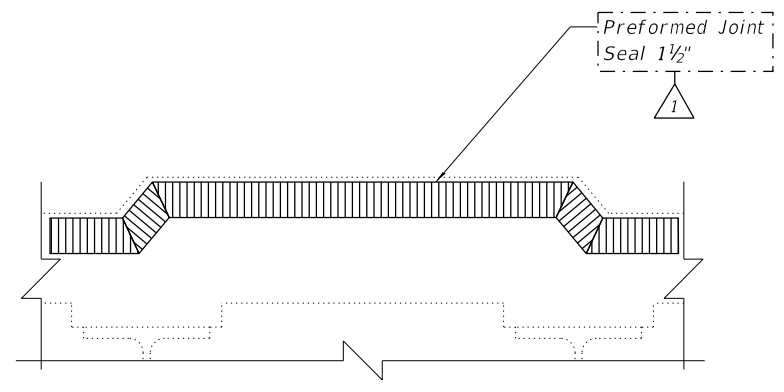
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	25
ILLINOIS			CONTRACT NO. 62K23	

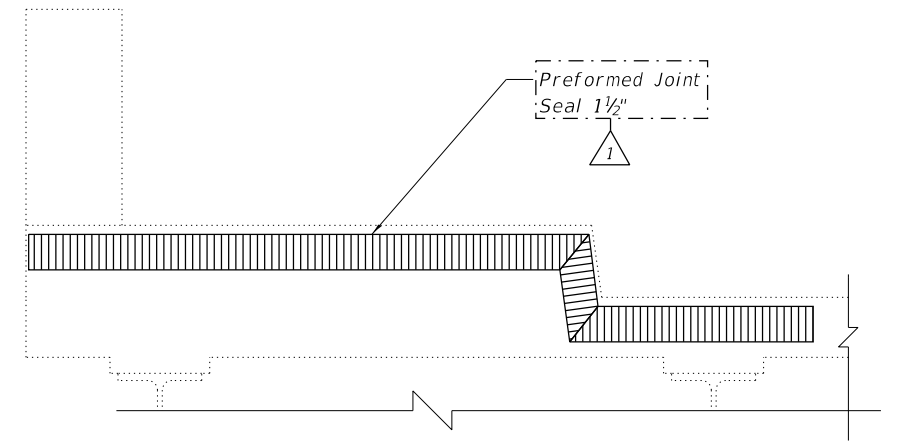
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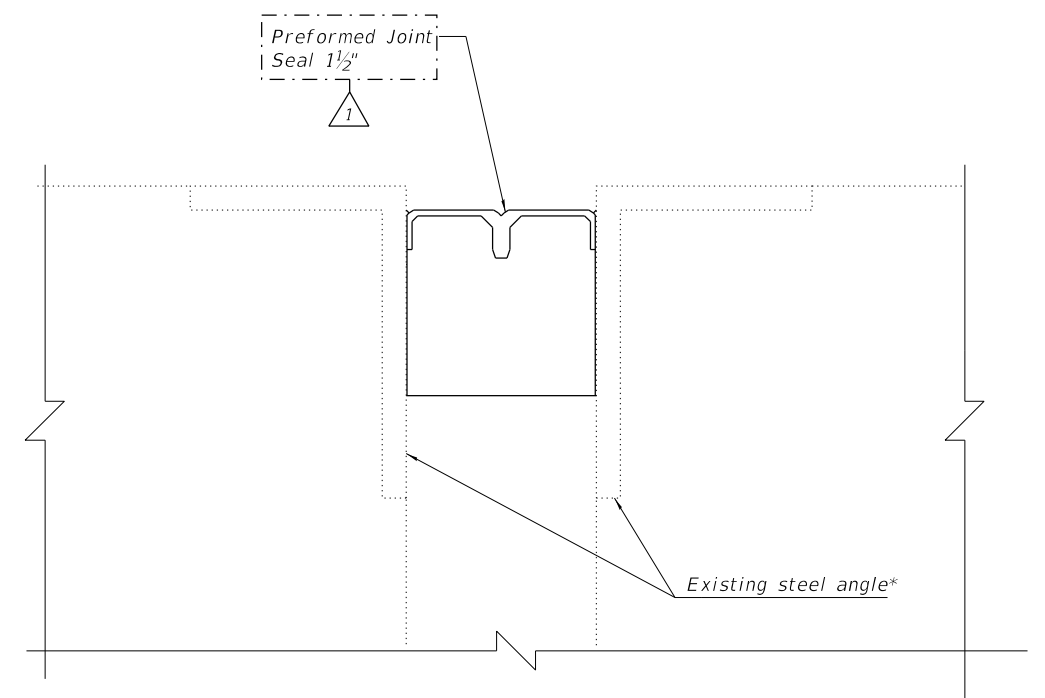
TYPICAL SECTION AT ABUTMENTS



TYPICAL SECTION THRU MEDIAN



TYPICAL SECTION THRU SIDEWALK



JOINT DETAIL

* Install Preformed Joint Seal against existing concrete at sidewalks

Notes:
 Removal of existing seal is included in the cost of Preformed Joint Seal.
 See sheet 3 of 8 for locations of joint repair.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Seal 1 1/2"	Foot	140



REV. 4/14/2020 SEP



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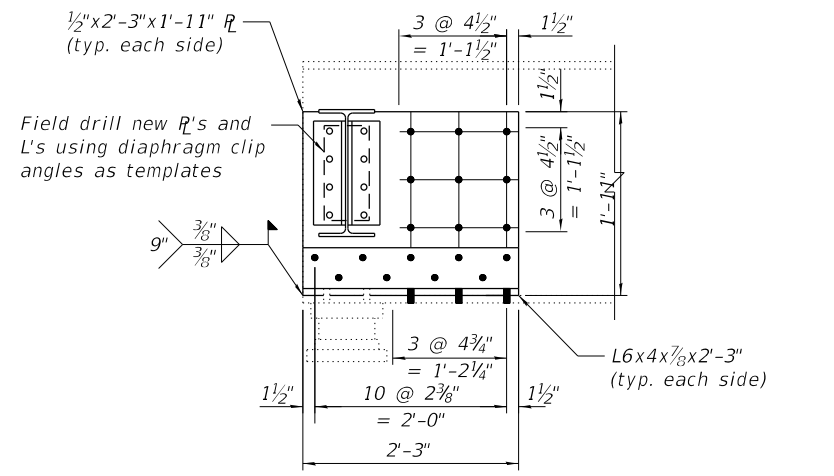
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPAIR DETAILS
 STRUCTURE NO. 016-0686 (25TH AVE.)

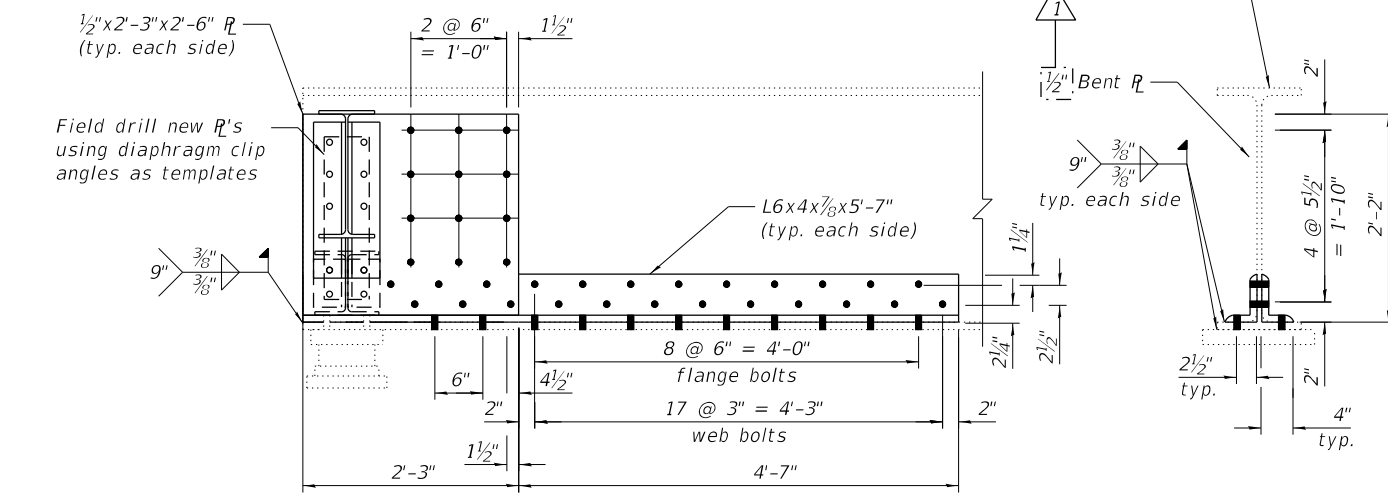
SHEET 5 OF 8 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	28
			CONTRACT NO. 62K23	
ILLINOIS				

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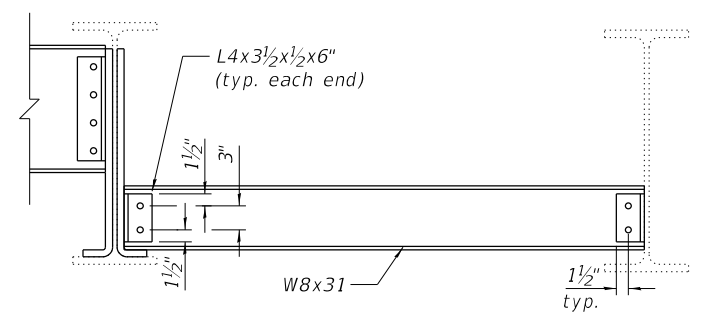


TYPE A BEAM END REPAIR

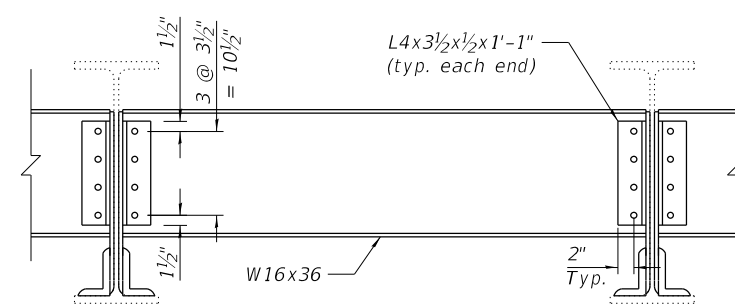


TYPE B BEAM END REPAIR
 Type C similar

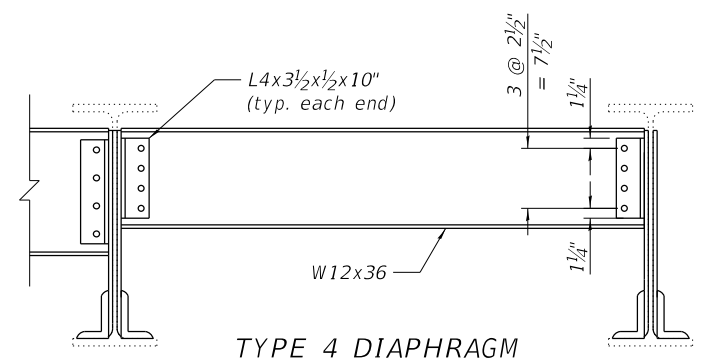
Notes:
 All holes 13/16" Ø for 3/4" Ø bolts unless noted otherwise.
 Cost of drilling holes in existing steel members is included with Structural Steel Repairs.
 All plates shall be 1/2" thick unless noted otherwise.
 See sheet 6 of 8 for repair locations.
 Field Drill holes in diaphragms to allow for adjustment
 Installation of new diaphragms shall not commence until all bolts for new web plates and clip angles are fully tightened.
 Existing bearing studs to be cut flush with bottom of beam bottom flange.



TYPE 1 DIAPHRAGM



TYPE 2 DIAPHRAGM
 Type 3 Similar



TYPE 4 DIAPHRAGM

TABLE 1- DIAPHRAGMS

Diaphragm Type	Size	Length	Quantity
1	W8x31	5'-6 3/4"	2
2	W16x36	6'-3 3/8"	10
2A	W16x36	6'-3 3/8"	6
3	W16x36	2'-9 3/8"	2
4	W12x36	5'-6 1/4"	1
4A	W12x36	5'-7 1/8"	1

TABLE 2- BOLTS

Beam	South Abutment		North Abutment	
	Diaphragm	Plate Repair	Diaphragm	Plate Repair
1	6	-	6	-
2	18	55	18	55
3	16	24	16	24
4	16	24	16	24
5	16	-	16	24
6	16	24	16	24
7	16	24	16	24
8	16	-	16	24
9	16	24	16	24
10	16	-	16	24
11	16	55	16	55
12	12	24	12	-

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	5,910
Structural Steel Removal	Pound	6,030
Structural Steel Repair	Pound	6,760

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL REPAIRS II
 STRUCTURE NO. 016-0686 (25TH AVE.)

SHEET 8 OF 8 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	31
CONTRACT NO. 62K23				
ILLINOIS				

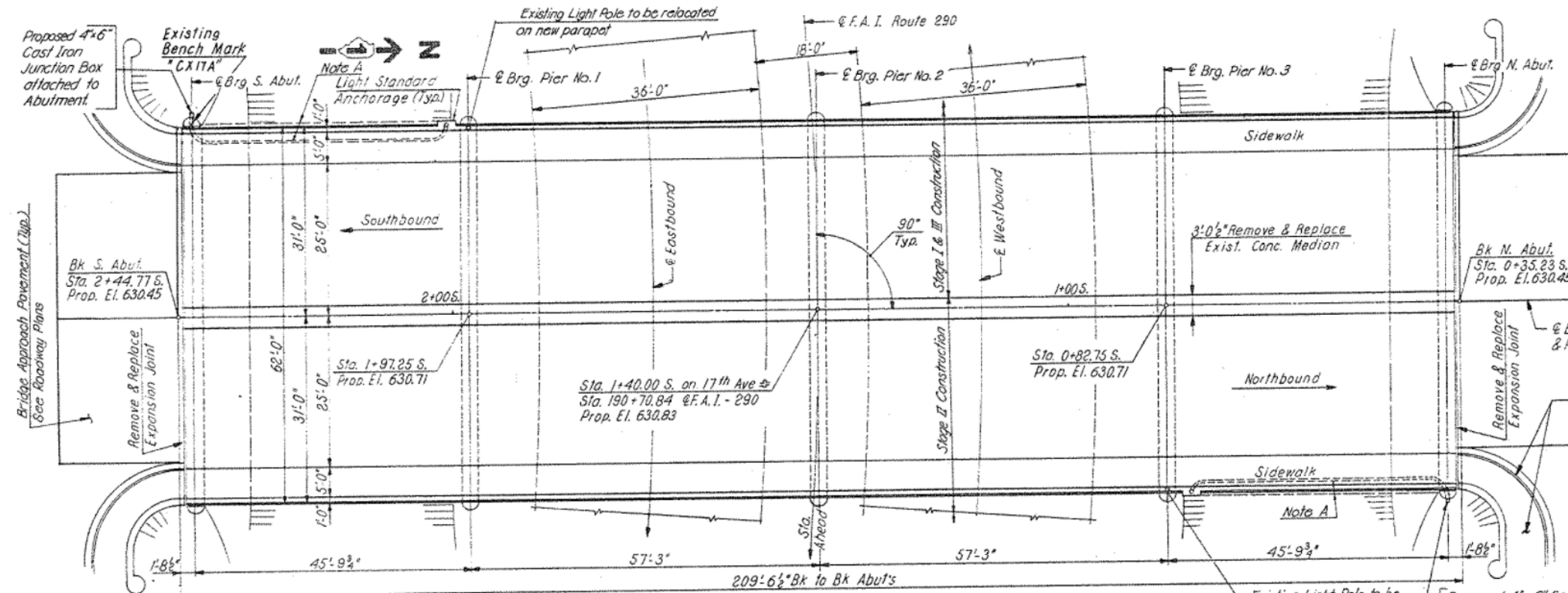
REV. 4/14/2020 SEP



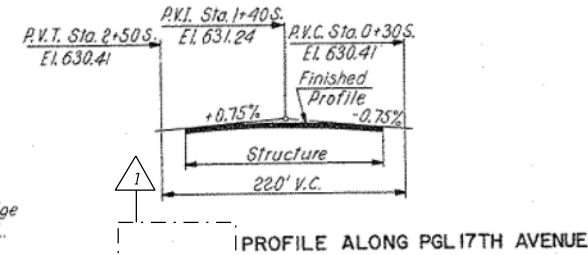
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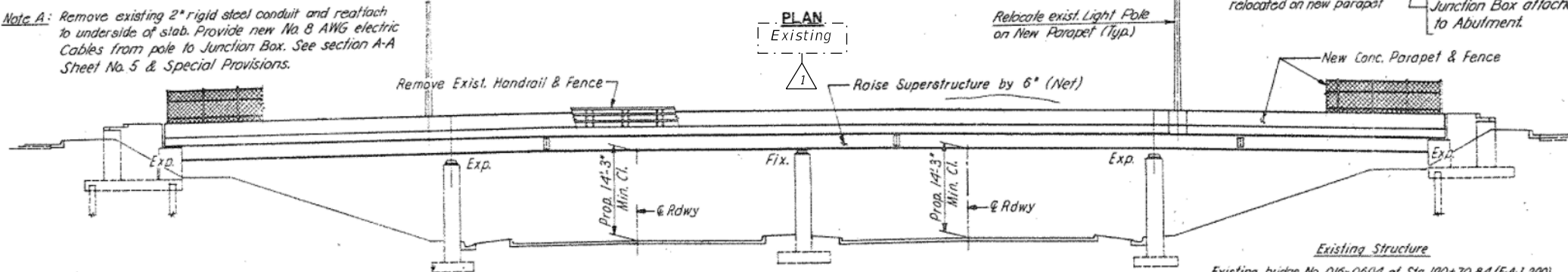
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F.A.I. 290		COOK	36	12



BENCH MARK A standard Cook County bronze disk set on the Southwest Pier of the overpass, 31.70 feet West of the centerline of the 17th Ave.; and 30.50 feet North of the centerline of Balaan Drive. El. 630.305



Note A: Remove existing 2" rigid steel conduit and reattach to underside of slab. Provide new No. 8 AWG electric Cables from pole to Junction Box. See section A-A Sheet No. 5 & Special Provisions.



STATE OF ILLINOIS
 LICENSED STRUCTURAL ENGINEER
 ZAIDA MORILLO
 081-008252
 EXPIRATION DATE: 11/30/2020

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 STRUCTURE NO. 016-0694 (17TH AVE.)

SHEET 1 OF 7 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	32
			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

GENERAL NOTES

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 the 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.

All fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4"Ø, Holes 13/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel = 6,470 lbs.

All structural steel shall be AASHTO M270 Grade 50.

New structural steel shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel". Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the the presence of lead on this project.

The Structural Steel Removal quantity is shown for bidding purposes only and will not be measured for payment.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Deck & Joint Repair Details
4. Expansion Joint Repair Details
5. Structural Steel Repair Location Plan
6. Structural Steel Repairs I
7. Structural Steel Repairs II

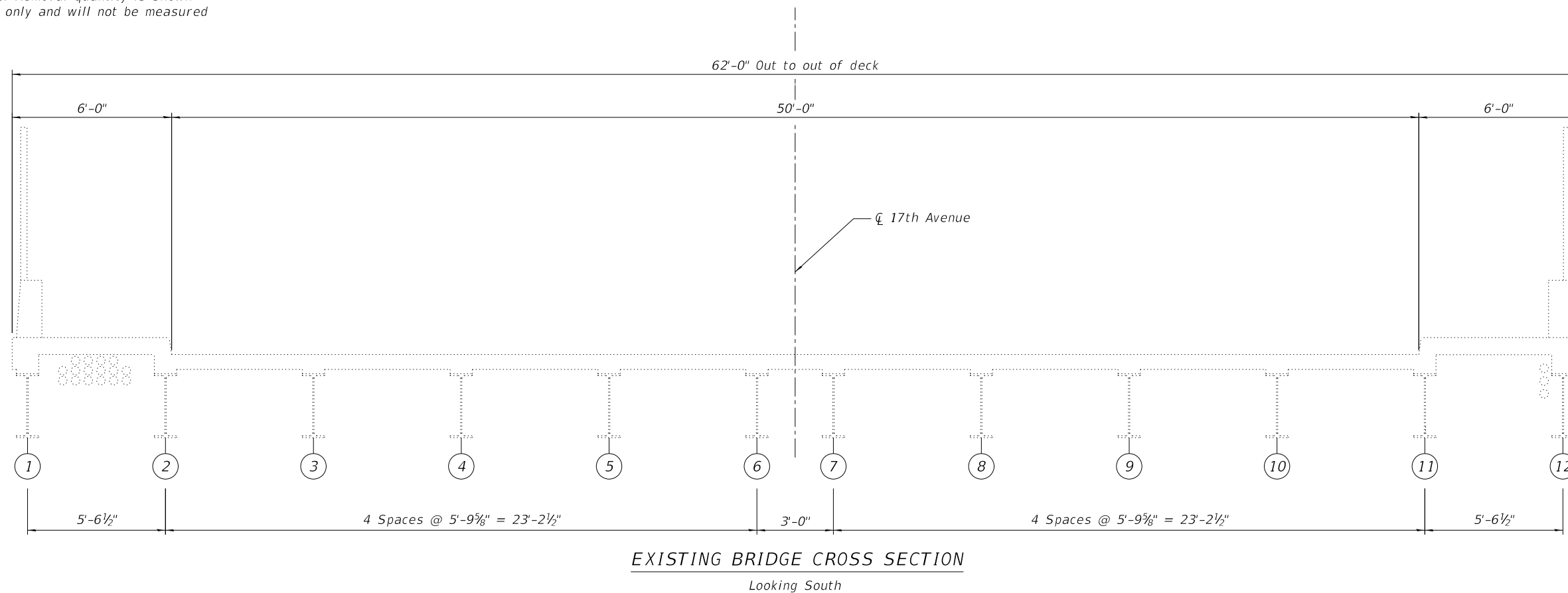
SCOPE OF WORK

1. Repair approach slab deck and sidewalk at partial depth.
2. Remove and replace existing diaphragms at abutments.
3. Repair beam ends.
4. Repair expansion joint at both ends.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	0.7
Furnishing and Erecting Structural Steel	Pound	2790
Preformed Joint Seal 1 1/2" x 1"	Foot	124
Approach Slab Repair (Partial Depth)	Sq. Yd.	26.7
Structural Steel Removal	Pound	2850
Structural Steel Repair	Pound	3680
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	91
Cleaning Bridge Seats	Sq. Ft.	60
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Partial)	Sq. Yd.	15.2
Polymer Concrete	Cu. Ft.	3.2
Concrete Superstructure	Cu. Yd.	0.6
*Temporary Shoring and Cribbing	L. Sum	0.2

*Contract-wide item. See Special Provisions.

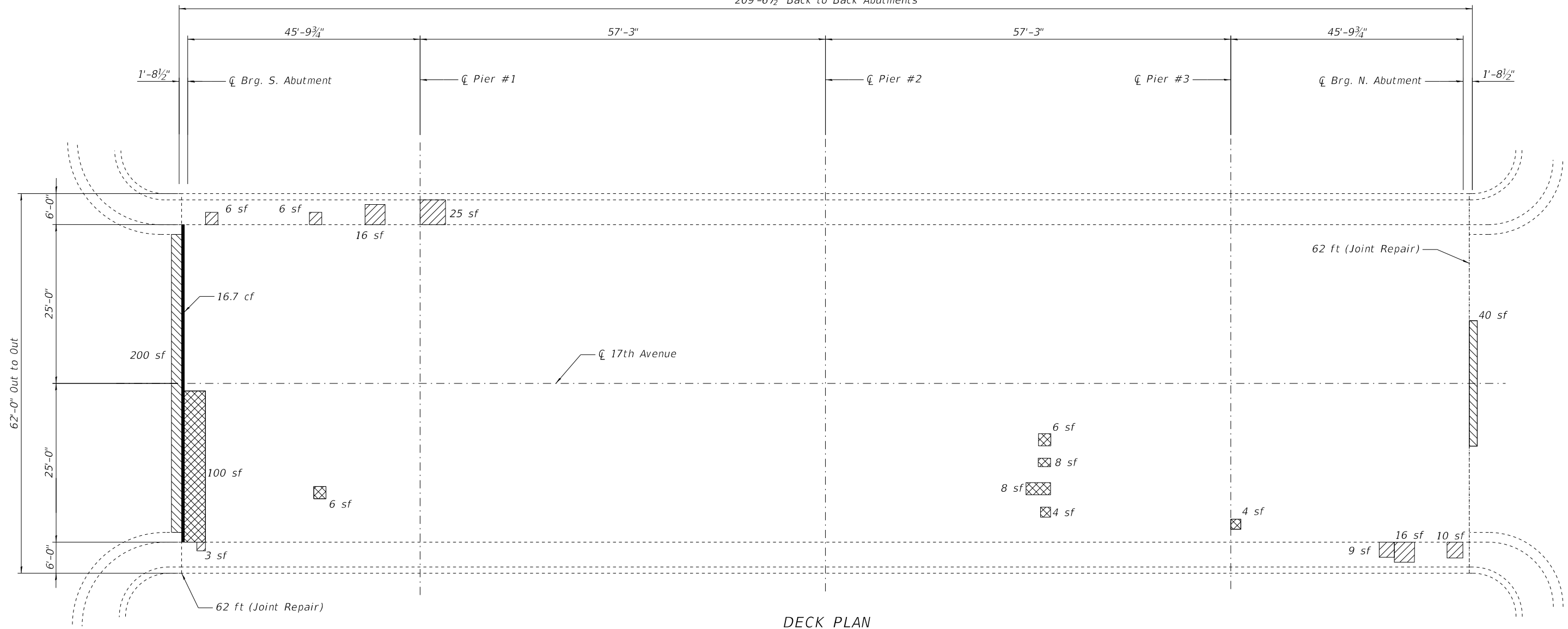
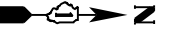


EXISTING BRIDGE CROSS SECTION

Looking South

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	33
			CONTRACT NO. 62K23	



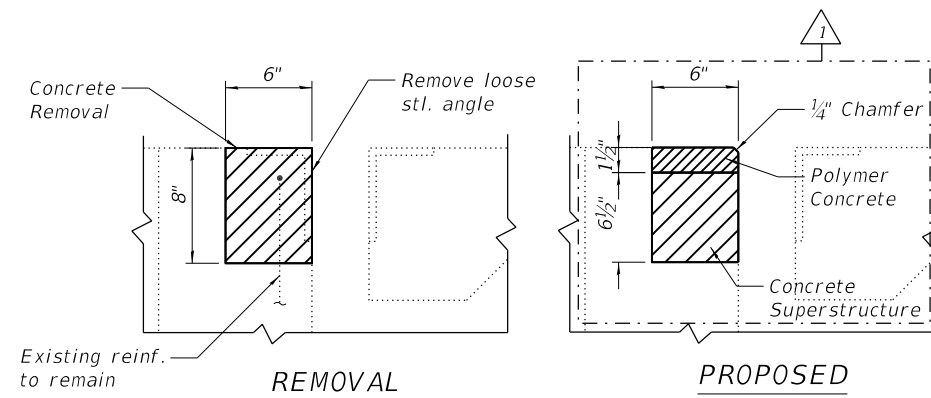
DECK PLAN

LEGEND

- Deck Slab Repair (Partial)
- Bridge Sidewalk Repair (Partial Depth)
- Approach Slab Repair (Partial Depth)
- Polymer Concrete

NOTES:

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Cost for angle removal included with Concrete Removal.
 Areas of deck repairs are estimated. Actual repair areas shall be determined in the field by the Engineer.
 A nominal full depth deck repair quantity has been provided as a guide for bidding purposes. Actual full depth repair areas shall be determined in the field by the Engineer.
 See Sheet 4 for joint repair details.



TYPICAL JOINT SECTION AT POLYMER CONCRETE REPAIR

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	0.7
Approach Slab Repair (Partial Depth)	Sq. Yd.	26.7
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	91
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Partial)	Sq. Yd.	15.2
Polymer Concrete	Cu. Ft.	3.2
Concrete Superstructure	Cu. Yd.	0.6

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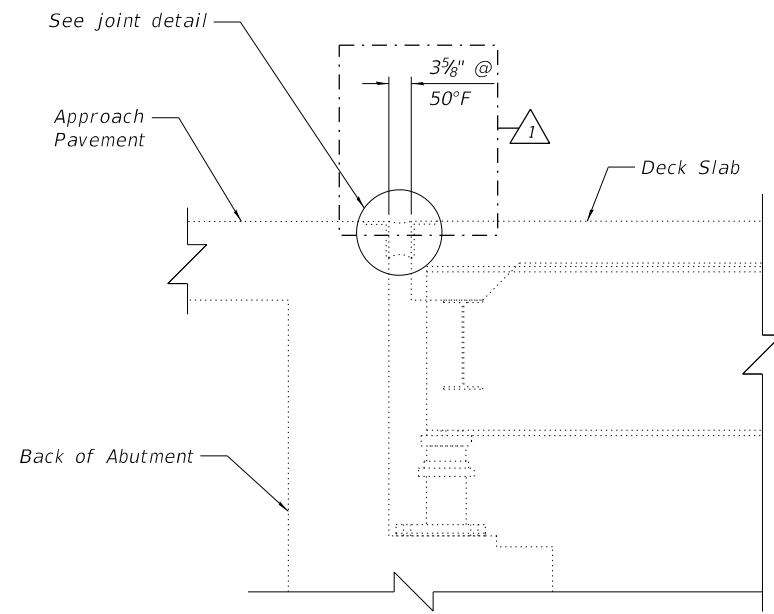
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK & JOINT REPAIR DETAILS
STRUCTURE NO. 016-0694 (17TH AVE.)

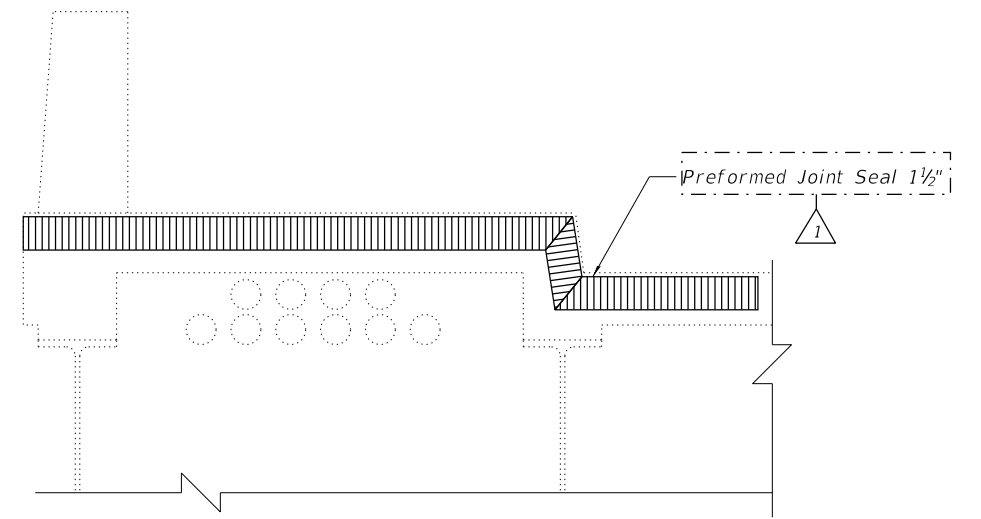
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290	2019-151-BR	COOK	75	34
			CONTRACT NO. 62K23	
ILLINOIS				

REV. 4/14/2020 SEP

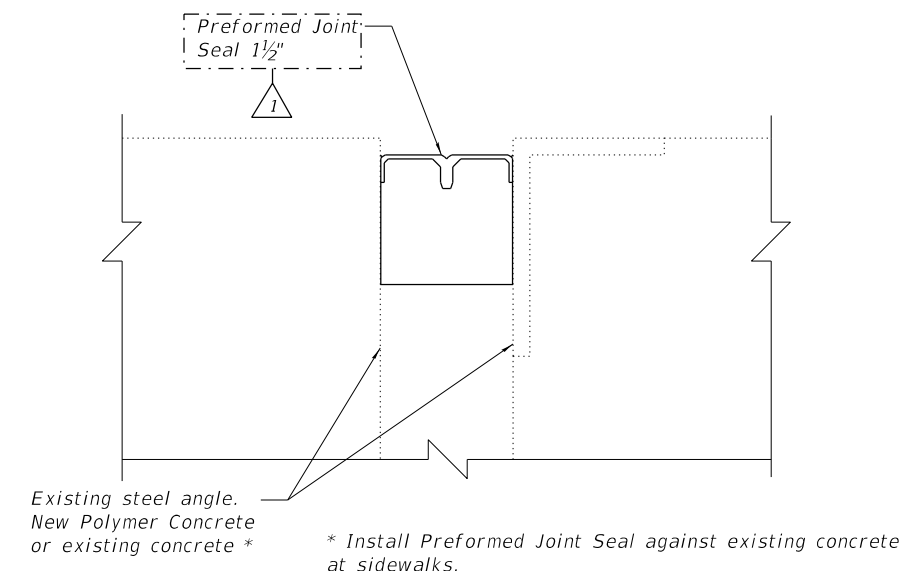
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TYPICAL SECTION AT ABUTMENTS



TYPICAL SECTION THRU SIDEWALK



JOINT DETAIL

Notes:
 Removal of existing seal is included in the cost of Preformed Joint Seal.
 See sheet 3 of 7 for locations of joint repair and Polymer Concrete repair locations.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Seal 1 1/2"	Foot	124

1



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

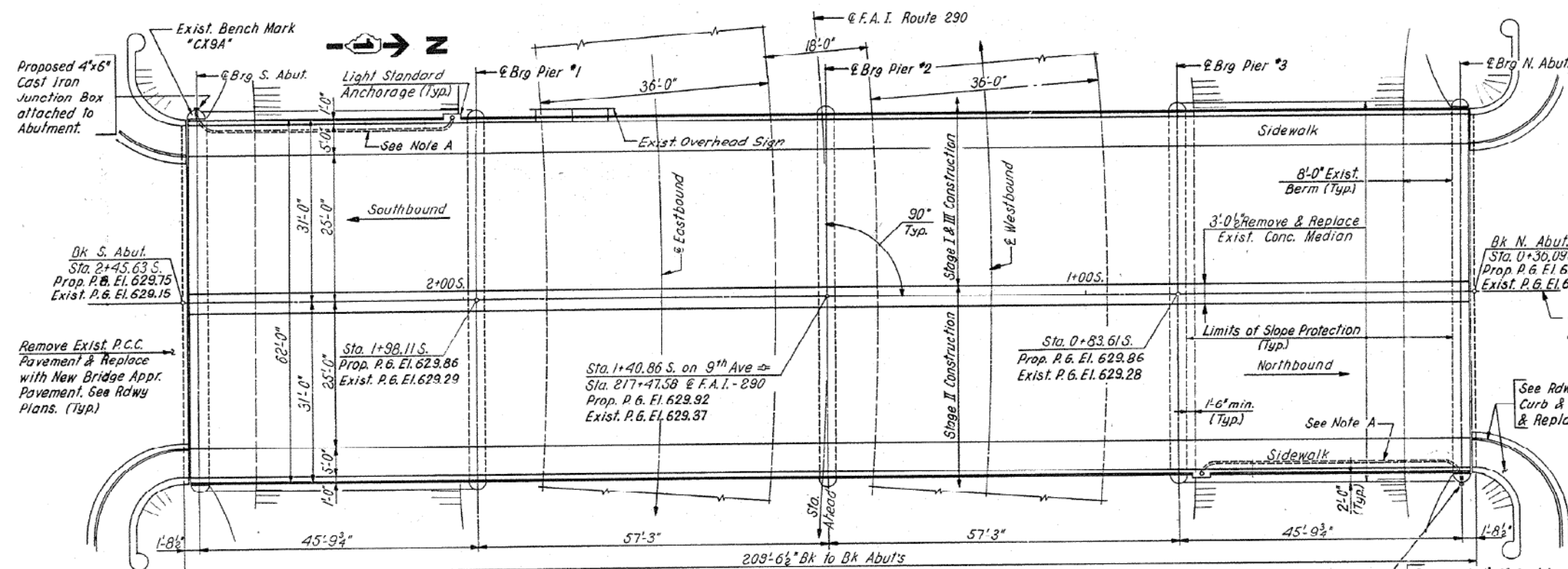
**EXPANSION JOINT REPAIR DETAILS
 STRUCTURE NO. 016-0694 (17TH AVE.)**

SHEET 4 OF 7 SHEETS

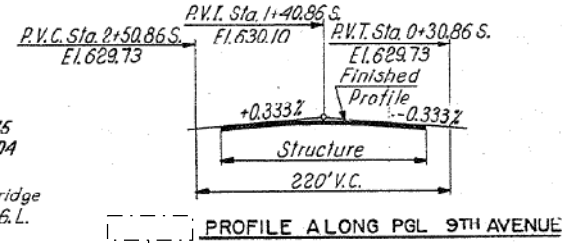
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	35
			CONTRACT NO. 62K23	
ILLINOIS				

1 REV. 4/14/2020 SEP

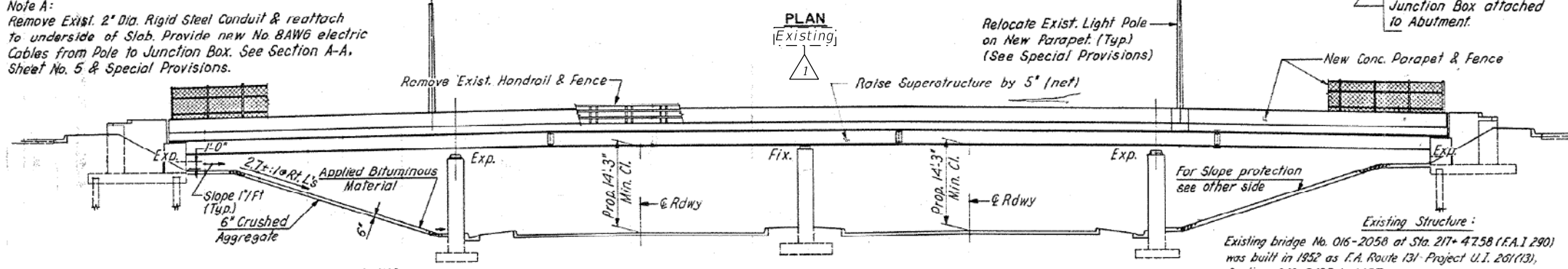
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BENCH MARK A standard Cook County bronze disk set on the Southwest Pier of the overpass. 32 feet West of the centerline of 9th Ave., and 29.50 feet North of the centerline of Balaan Drive. El. 629.630



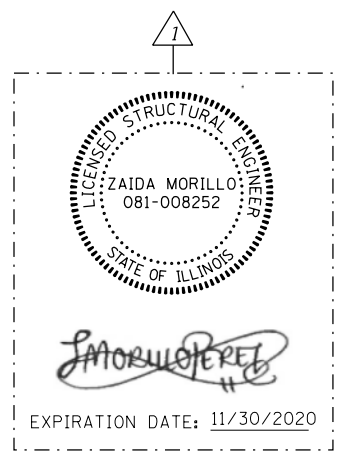
Note A:
 Remove Exist. 2" Dia. Rigid Steel Conduit & reattach to underside of Slab. Provide new No. 8AWG electric Cables from Pole to Junction Box. See Section A-A, Sheet No. 5 & Special Provisions.



TYP DETAILS OF SLOPE PAVING
 (See Special Provisions)

ELEVATION
 [Existing]

Existing Structure:
 Existing bridge No. 016-2058 at Sta. 217+47.58 (F.A.I. 290) was built in 1952 as F.A. Route 131-Project U.I. 261(13), Section 062-3435-1-M.F.T. It is a 4-Spans Continuous W Beam Bridge with 7" Concrete Deck, 62'-0" out to out Structure, 209'-6 1/2" Bk. to Bk. Abutments.



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-2058 (9TH AVE.)

SHEET 1 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	39
			CONTRACT NO. 62K23	
ILLINOIS				

REV. 4/14/2020 SEP

GENERAL NOTES

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 the 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.

All fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4" Ø, holes 13/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel = 5,750 lbs.

All structural steel shall be AASHTO M270 Grade 50.

New structural steel shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel". Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the the presence of lead on this project.

The Structural Steel Removal quantity is shown for bidding purposes only and will not be measured for payment.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Deck & Joint Repair Details
4. Protective Shield Details
5. Expansion Joint Repair Details
6. Structural Steel Repair Location Plan
7. Structural Steel Repairs I
8. Structural Steel Repairs II

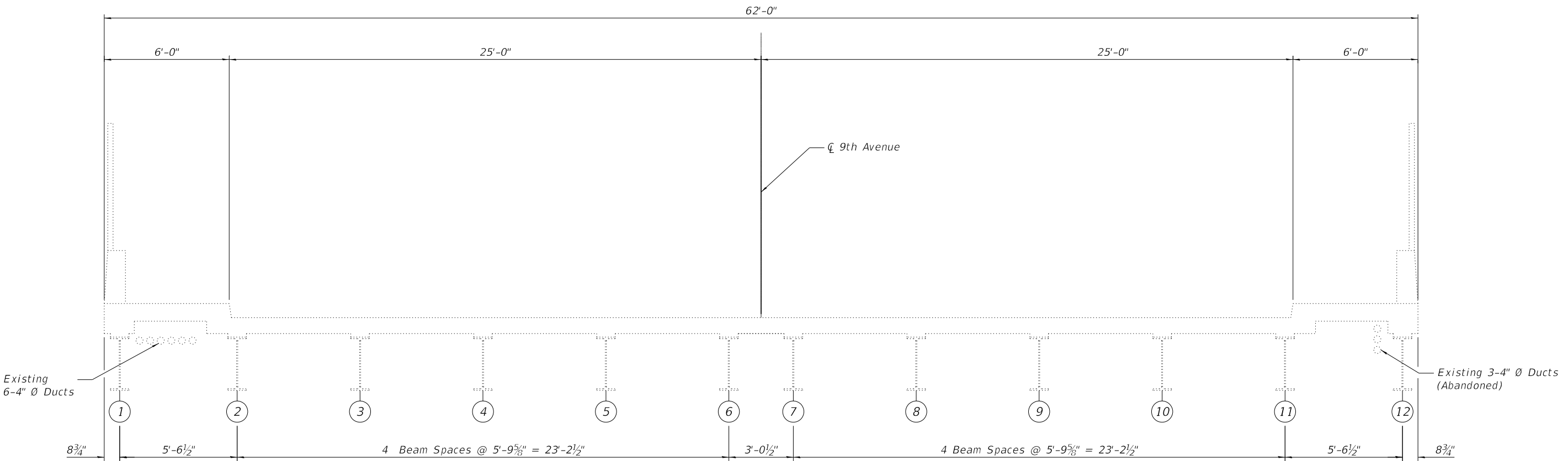
SCOPE OF WORK

1. Repair approach slab and sidewalk at partial depth.
2. Remove and replace existing diaphragms at abutments.
3. Repair beam ends.
4. Repair expansion joint at both ends.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield	Sq. Yd.	103
Furnishing and Erecting Structural Steel	Pound	12,290
Preformed Joint Seal (1 1/2" Depth)	Foot	124
Approach Slab Repair (Partial Depth)	Sq. Yd.	23
Structural Steel Removal	Pound	2,410
Structural Steel Repair	Pound	13,820
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	294
Cleaning Bridge Seats	Sq. Ft.	50
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Temporary Shoring and Cribbing	L. Sum	0.2

*Contract-wide item. See Special Provisions.



EXISTING BRIDGE CROSS SECTION
Looking South

LEGEND

② Beam Number

① REV. 4/14/2020 SEP

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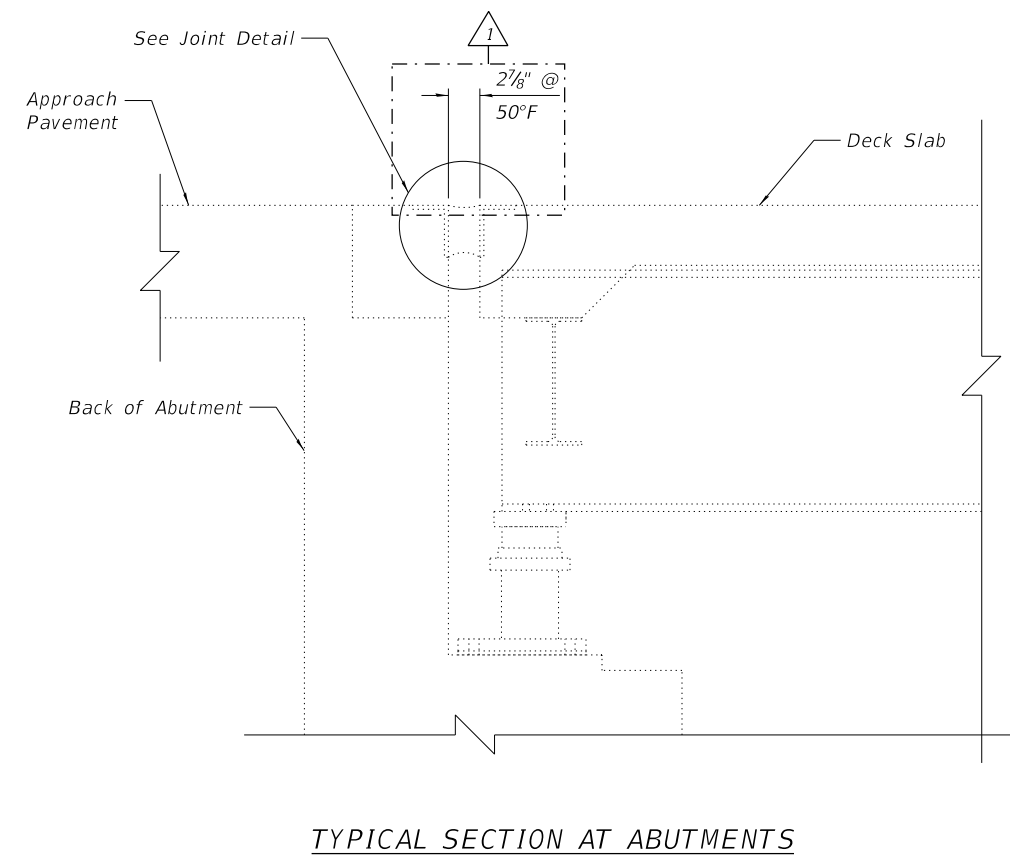
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DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 016-2058 (9TH AVE.)

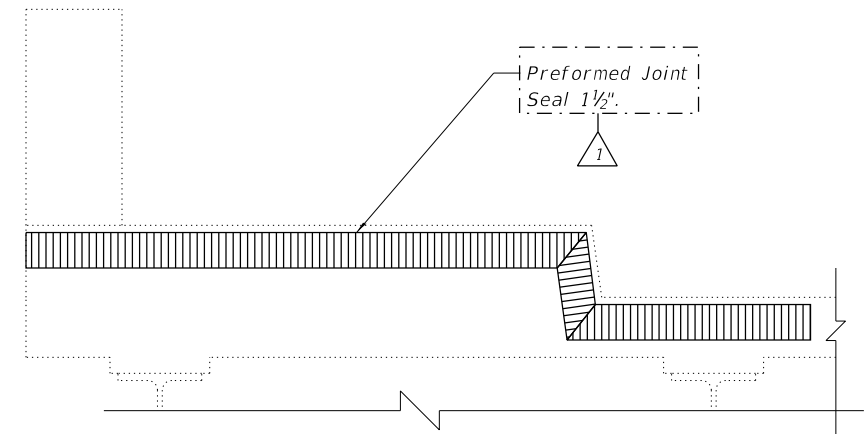
SHEET 2 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS				

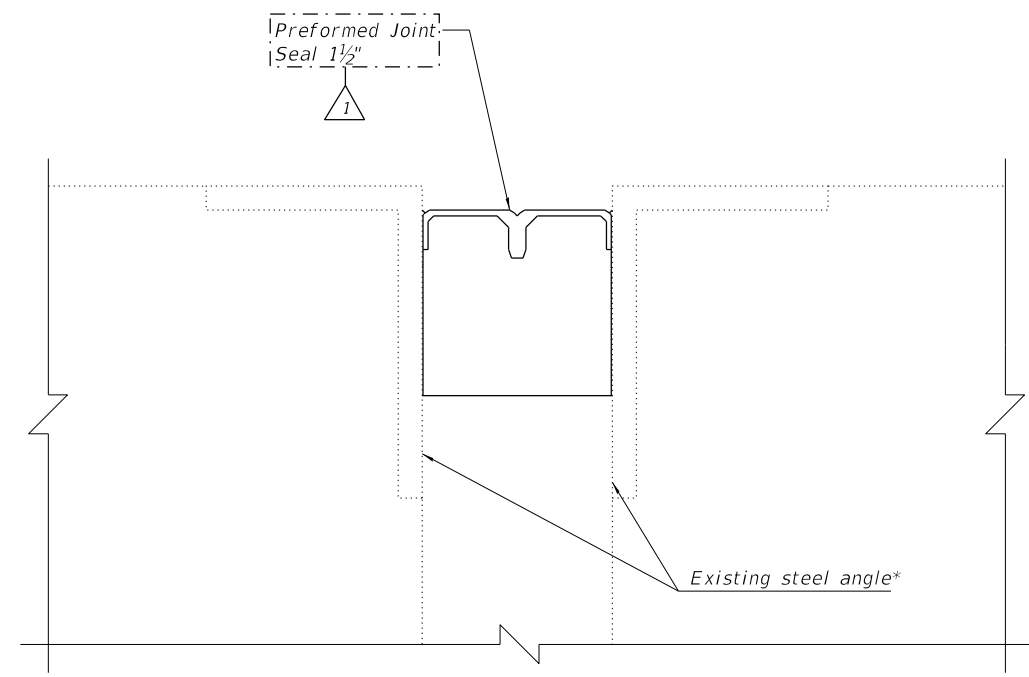
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 100 S. WACKER DRIVE SUITE 700, CHICAGO, IL 60606 P:312-405-8900 F:312-405-8905



TYPICAL SECTION AT ABUTMENTS



TYPICAL SECTION THRU SIDEWALK



JOINT DETAIL

* Install Preformed Joint Seal against existing concrete at sidewalks

Notes:
 Removal of existing seal is included in the cost of Preformed Joint Seal.
 See sheet 3 of 8 for locations of joint repair.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Seal 1 1/2"	Foot	124



REV. 4/14/2020 SEP



USER NAME =	jrice	DESIGNED	NA	REVISED	4/10/2020 NA
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PLOT SCALE =	40,0000' / in.	DRAWN	NA	REVISED	-
PLOT DATE =	4/10/2020	CHECKED	ZM	REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

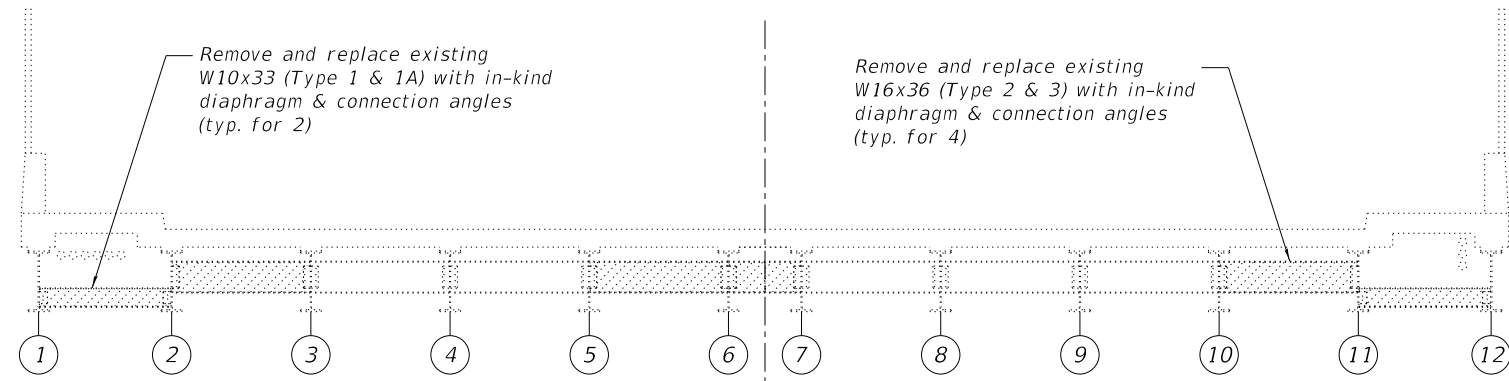
EXPANSION JOINT REPAIR DETAILS
 STRUCTURE NO. 016-2058 (9TH AVE.)

SHEET 5 OF 8 SHEETS

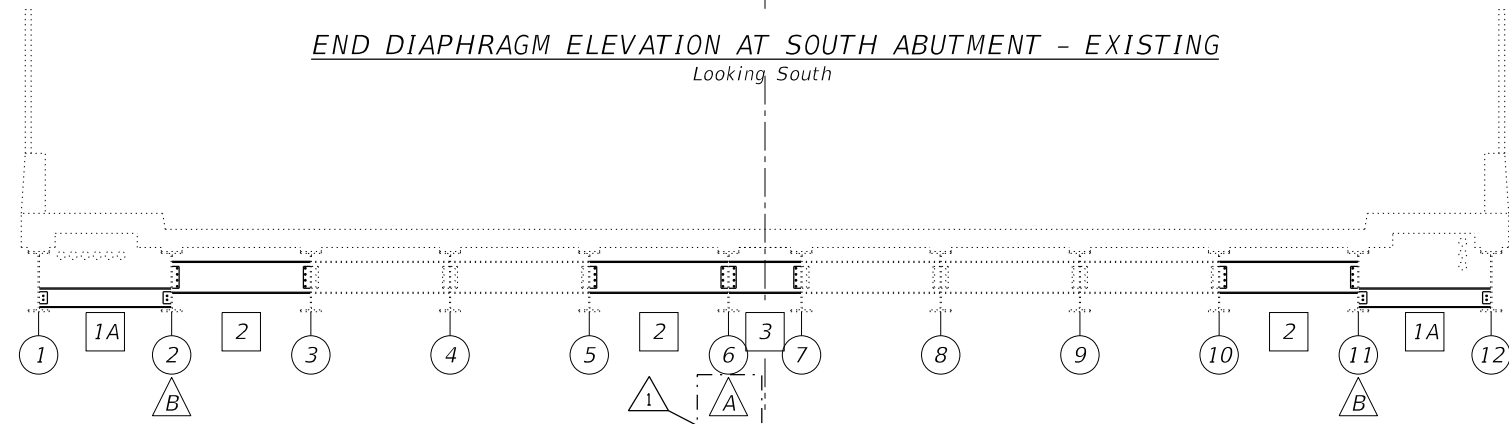
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			CONTRACT NO. 62K23	

ILLINOIS

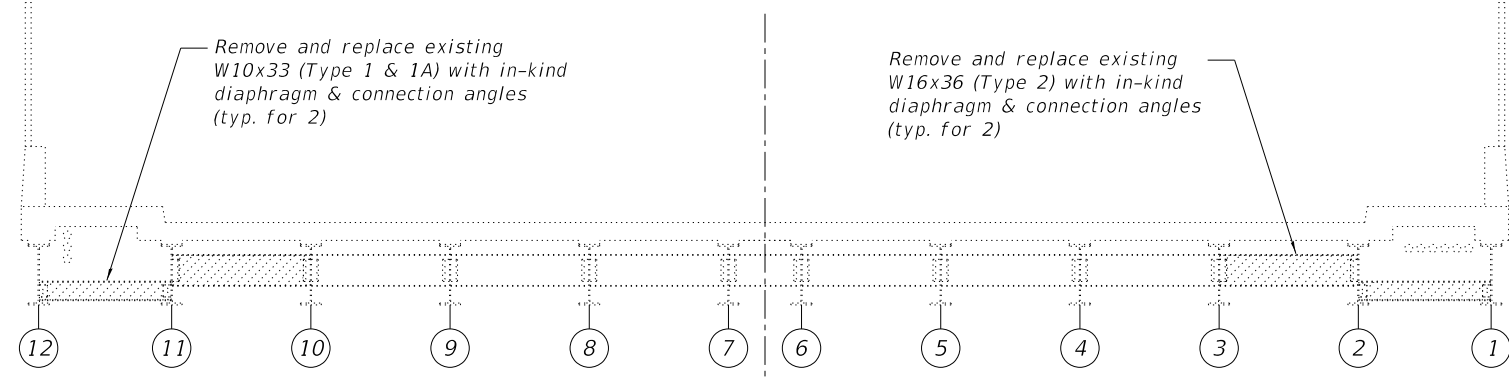
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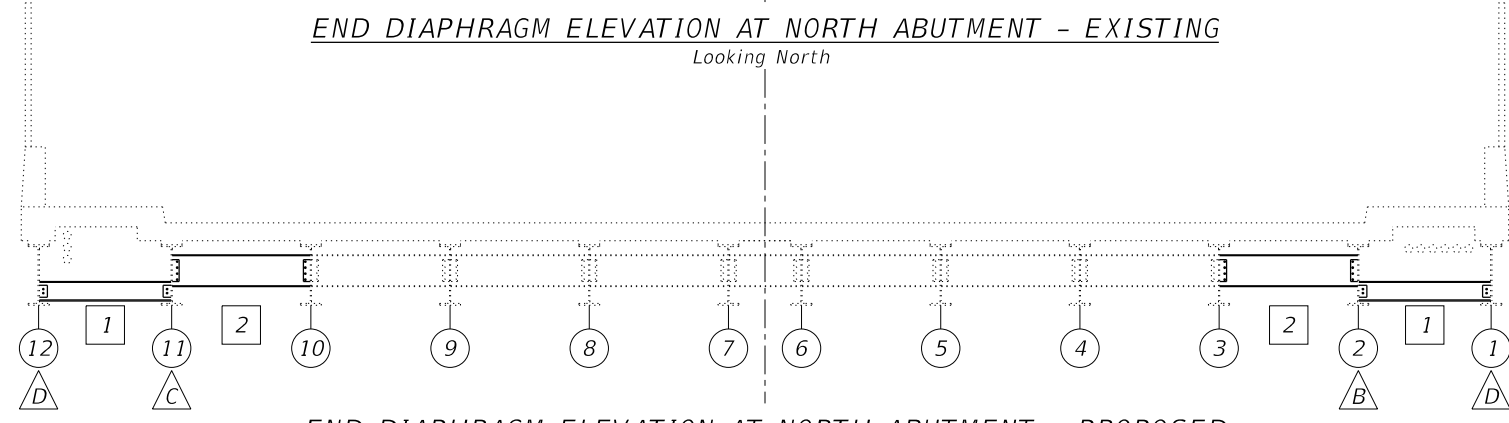
END DIAPHRAGM ELEVATION AT SOUTH ABUTMENT - EXISTING
 Looking South



END DIAPHRAGM ELEVATION AT SOUTH ABUTMENT - PROPOSED
 Looking South



END DIAPHRAGM ELEVATION AT NORTH ABUTMENT - EXISTING
 Looking North



END DIAPHRAGM ELEVATION AT NORTH ABUTMENT - PROPOSED
 Looking North

- LEGEND**
- Steel Removal
 - Beam Number
 - Beam End Repair Type
 - Diaphragm Type

Notes:
 See Sheet 8 for beam end repair details.



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PLOT SCALE =	40,0000' / in.	DRAWN	NA	REVISED	-
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

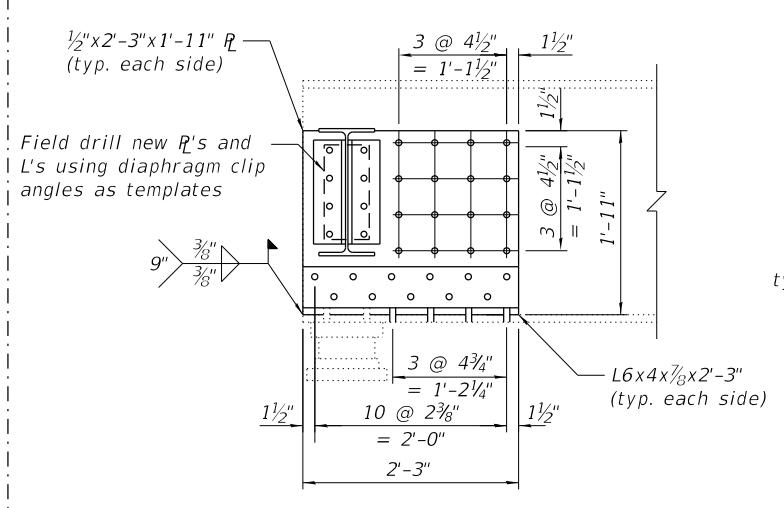
**STRUCTURAL STEEL REPAIRS I
 STRUCTURE NO. 016-2058 (9TH AVE.)**

SHEET 7 OF 8 SHEETS

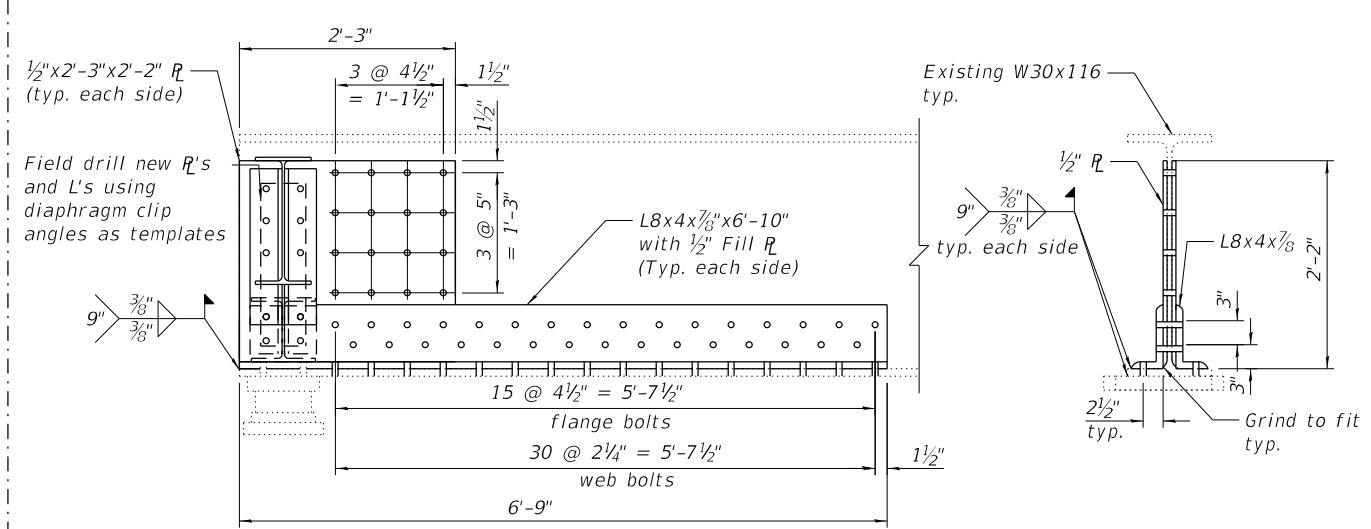
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ILLINOIS			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

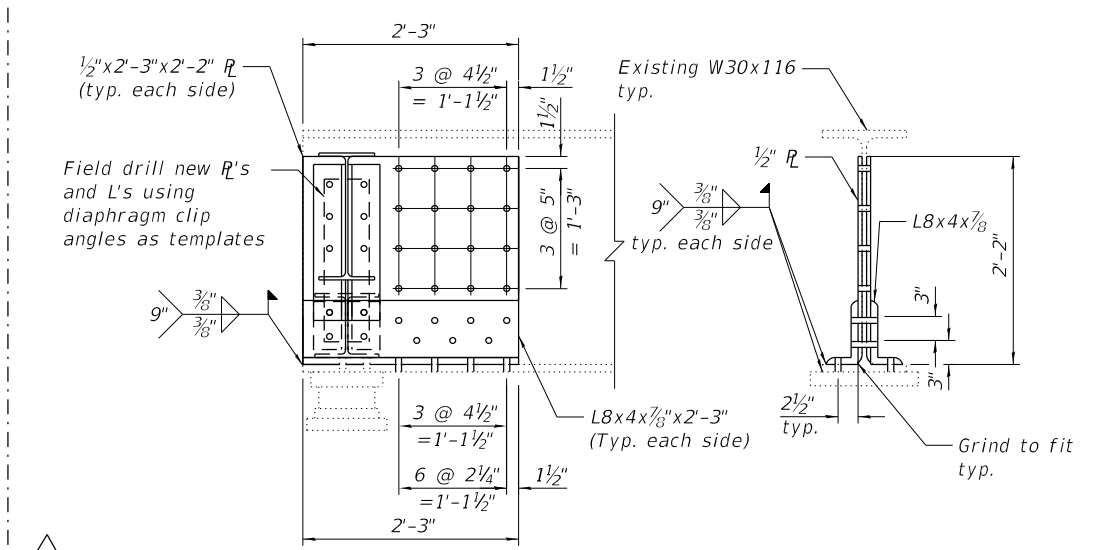
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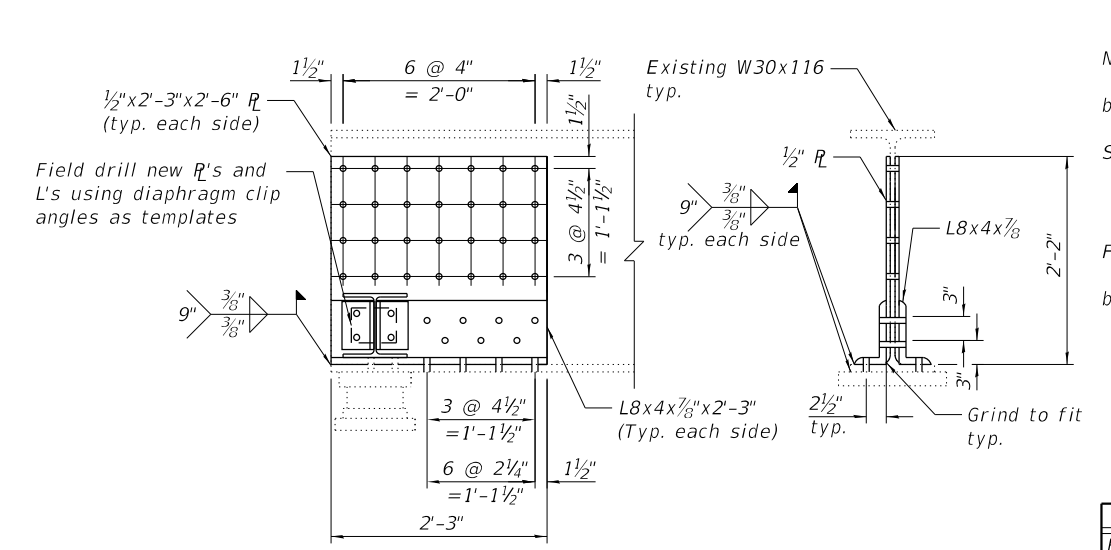
TYPE A BEAM END REPAIR



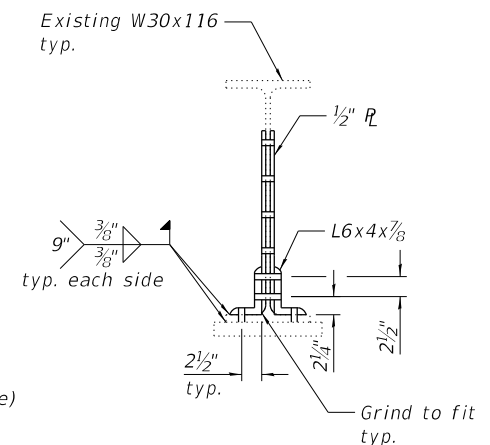
TYPE B BEAM END REPAIR



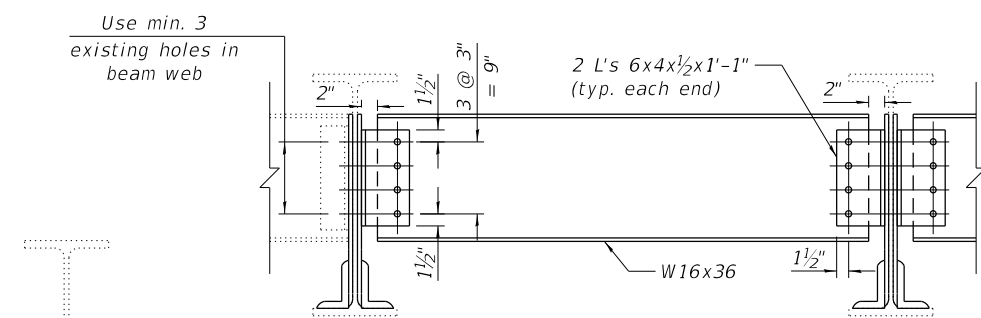
TYPE C BEAM END REPAIR



TYPE D BEAM END REPAIR



Section near Fill R



TYPE 1 DIAPHRAGM
Type 1A similar

TYPE 2 DIAPHRAGM
Type 3 similar

TABLE 1- DIAPHRAGMS

Diaphragm Type	Size	Length	Quantity
1	W10x33	4'-11"	2
1A	W10x33	4'-11 1/2"	2
2	W16x36	5'-4"	5
3	W16x36	2'-7 1/2"	1

TABLE 2- BOLTS

Beam	South Abutment		North Abutment	
	Diaphragm	Plate Repair	Diaphragm	Plate Repair
1	6	-	6	25
2	18	55	18	55
3	12	-	12	-
4	-	-	-	-
5	12	-	-	-
6	16	24	-	-
7	12	-	-	-
8	-	-	-	-
9	-	-	-	-
10	12	-	12	-
11	18	55	18	19
12	6	-	6	24

Notes:
 Existing bearing studs to be cut flush with bottom of beam bottom flange.
 Cost of drilling holes in existing steel members is included with Structural Steel Repairs
 All holes 13/16" Ø for 3/4" Ø bolts unless noted otherwise.
 All plates shall be 1/2" thick unless noted otherwise.
 See sheet 5 of 7 for repair locations.
 Field drill holes in diaphragms to allow for adjustment.
 Installation of new diaphragms shall not commence until all bolts for new web plates and clip angles are fully tightened.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing & Erecting Structural Steel	Pound	12,410
Structural Steel Removal	Pound	2,410
Structural Steel Repair	Pound	13,920

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL REPAIRS II
STRUCTURE NO. 016-2058 (9TH AVE.)

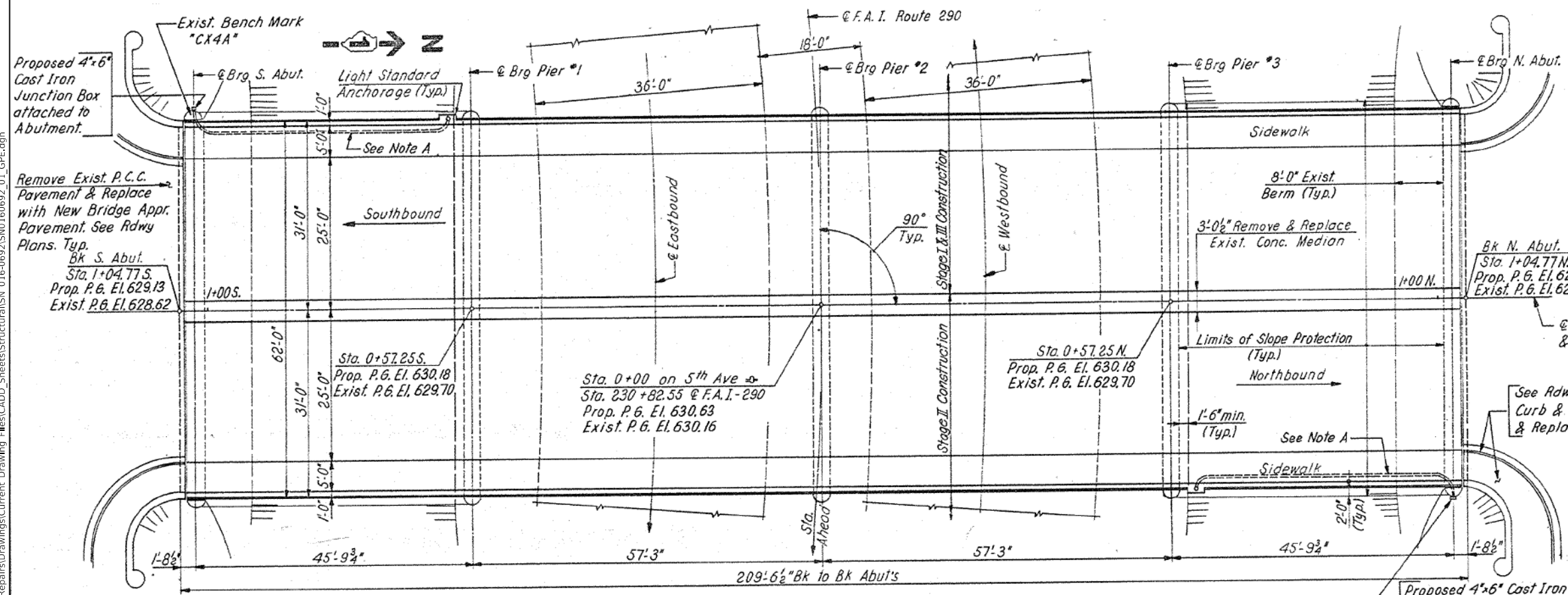
SHEET 8 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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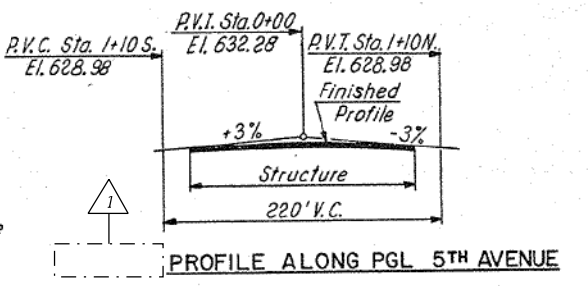
CONTRACT NO. 62K23

REV. 4/14/2020 SEP

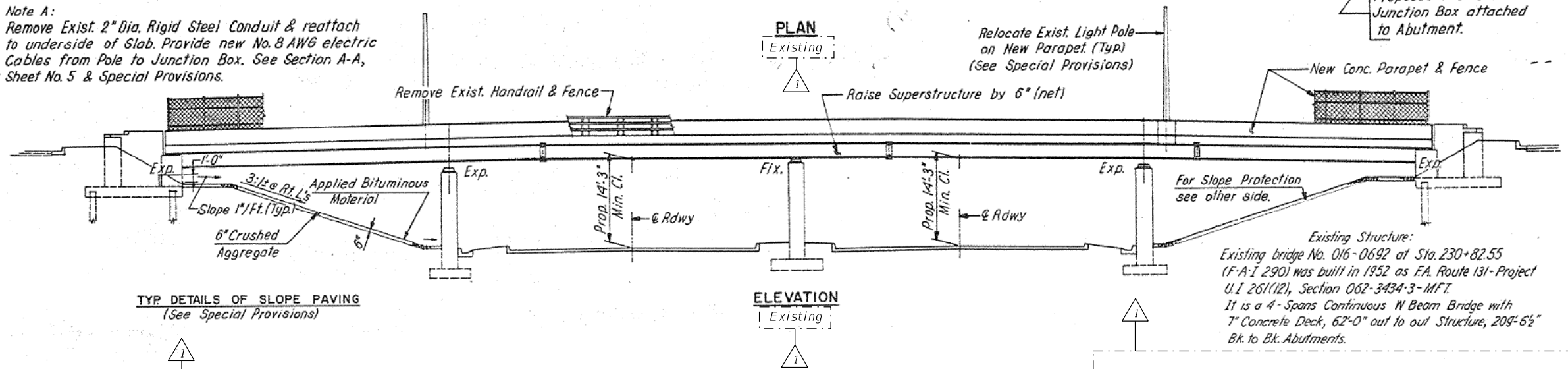
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BENCH MARK A standard County bronze disk set on the Southwest Pier of the Fifth Ave. overpass. 32 feet West of the centerline of Fifth Ave.; and 31 feet North of the centerline of Bataan Drive. El. 629.00!



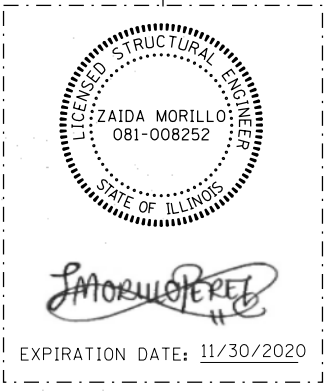
Note A:
 Remove Exist. 2" Dia. Rigid Steel Conduit & reattach to underside of Slab. Provide new No. 8 AWG electric Cables from Pole to Junction Box. See Section A-A, Sheet No. 5 & Special Provisions.



TYP DETAILS OF SLOPE PAVING
 (See Special Provisions)

ELEVATION
 Existing

Existing Structure:
 Existing bridge No. 016-0692 at Sta. 230+82.55 (F.A.I. 290) was built in 1952 as F.A. Route 131-Project U.I. 261(12), Section 062-3434-3-MFT. It is a 4-Span Continuous W Beam Bridge with 7" Concrete Deck, 62'-0" out to out Structure, 209'-6 1/2" Bk. to Bk. Abutments.



USER NAME =	corozco	DESIGNED	CAO	REVISED	4/10/2020 NA
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PLOT DATE =	4/13/2020	DRAWN	CAO	REVISED	-
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-0692 (5TH AVE.)

SHEET 1 OF 7 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	47
			CONTRACT NO. 62K23	
ILLINOIS				

REV. 4/14/2020 SEP

GENERAL NOTES

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 the 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.

All fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4" Ø, holes 13/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel = 8730 lbs.

All structural steel shall be AASHTO M270 Grade 50.

New structural steel shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel".

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the the presence of lead on this project.

The Structural Steel Removal quantity is shown for bidding purposes only and will not be measured for payment.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Deck & Joint Repair Details
4. Expansion Joint Repair Details
5. Structural Steel Repair Location Plan
6. Structural Steel Repairs I
7. Structural Steel Repairs II

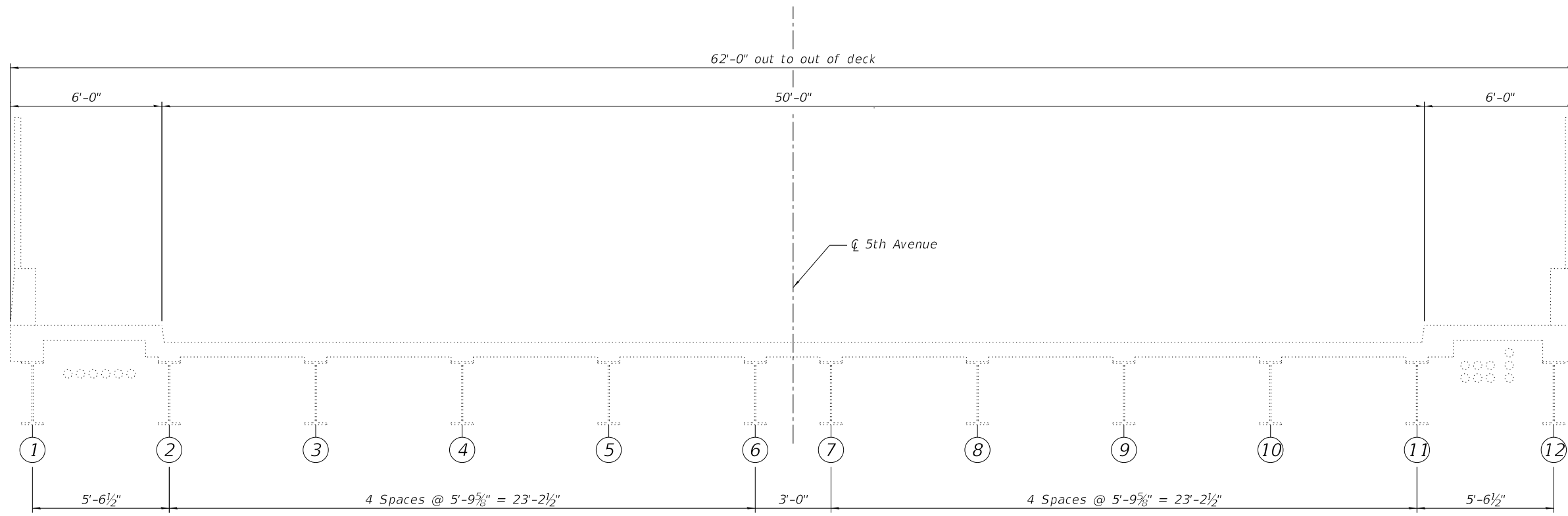
SCOPE OF WORK

1. Repair approach slab, deck and sidewalk at partial depth.
2. Remove and replace existing diaphragms at abutments.
3. Repair beam ends.
4. Repair expansion joint at both ends.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	1.6
Furnishing and Erecting Structural Steel	Pound	3,510
Prefomed Joint Seal 1 1/2"	Foot	124
Approach Slab Repair (Partial Depth)	Sq. Yd.	28
Structural Steel Removal	Pound	3,490
Structural Steel Repair	Pound	4,650
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	326
Cleaning Bridge Seats	Sq. Ft.	50
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Partial Depth)	Sq. Yd.	1
Polymer Concrete	Cu. Ft.	6.5
Concrete Superstructure	Cu. Yd.	1.1
Temporary Shoring and Cribbing	L. Sum	0.2

*Contract-wide item. See Special Provisions.



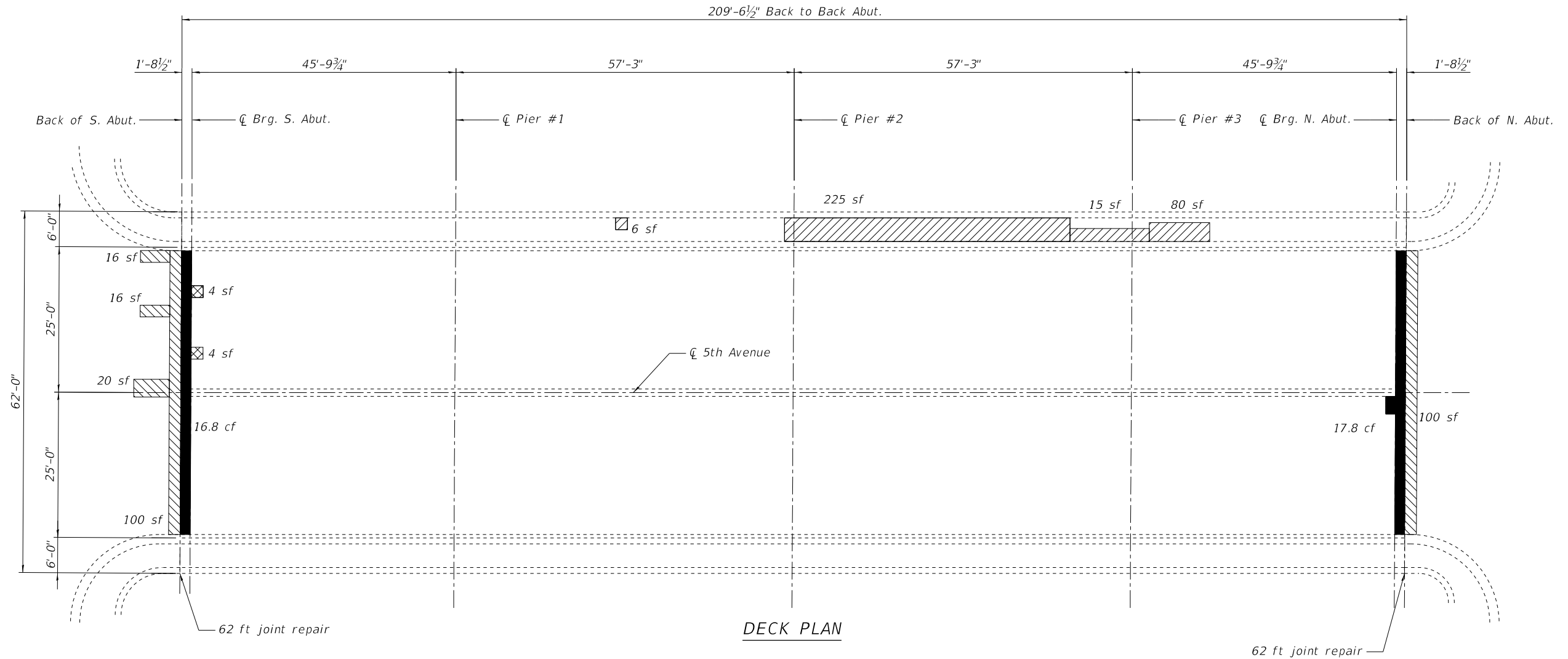
EXISTING BRIDGE CROSS SECTION
Looking South

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PLOT DATE = 4/10/2020	DRAWN CAO	REVISED -
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 62K23	
ILLINOIS				

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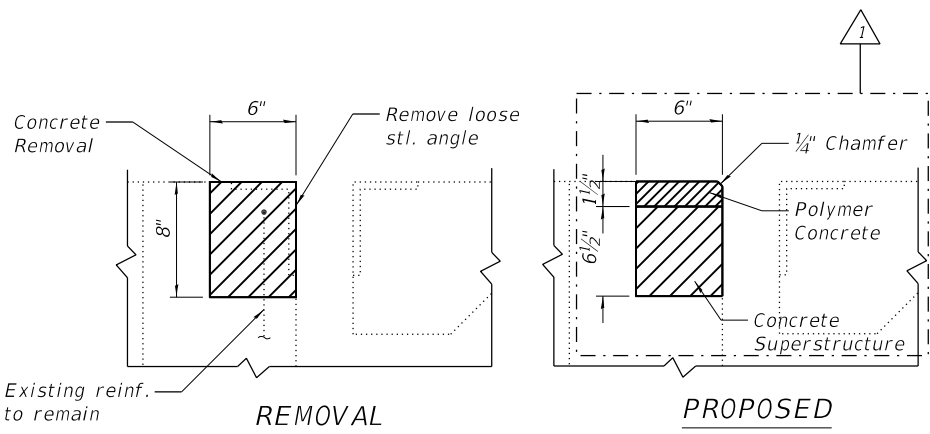
DECK PLAN

LEGEND

- Approach Slab Repair (Partial Depth)
- Bridge Sidewalk Repair (Partial Depth)
- Deck Slab Repair (Partial)
- Polymer Concrete

NOTES:

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Cost for steel angle removal included with Concrete Removal.
 Areas of deck repairs are estimated. Actual repair areas shall be determined in the field by the Engineer.
 A nominal full depth deck repair quantity has been provided as a guide for bidding purposes. Actual full depth repair areas shall be determined in the field by the Engineer.
 See Sheet 4 for joint repair details.



TYPICAL JOINT SECTION AT POLYMER CONCRETE REPAIR

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Approach Slab Repair (Partial Depth)	Sq. Yd.	28
Deck Slab Repair (Partial)	Sq. Yd.	1
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	326
Polymer Concrete	Cu. Ft.	6.5
Concrete Removal	Cu. Yd.	1.6
Concrete Superstructure	Cu. Yd.	1.1



USER NAME =	jrice	DESIGNED	CAO	REVISED -	4/10/2020 NA
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

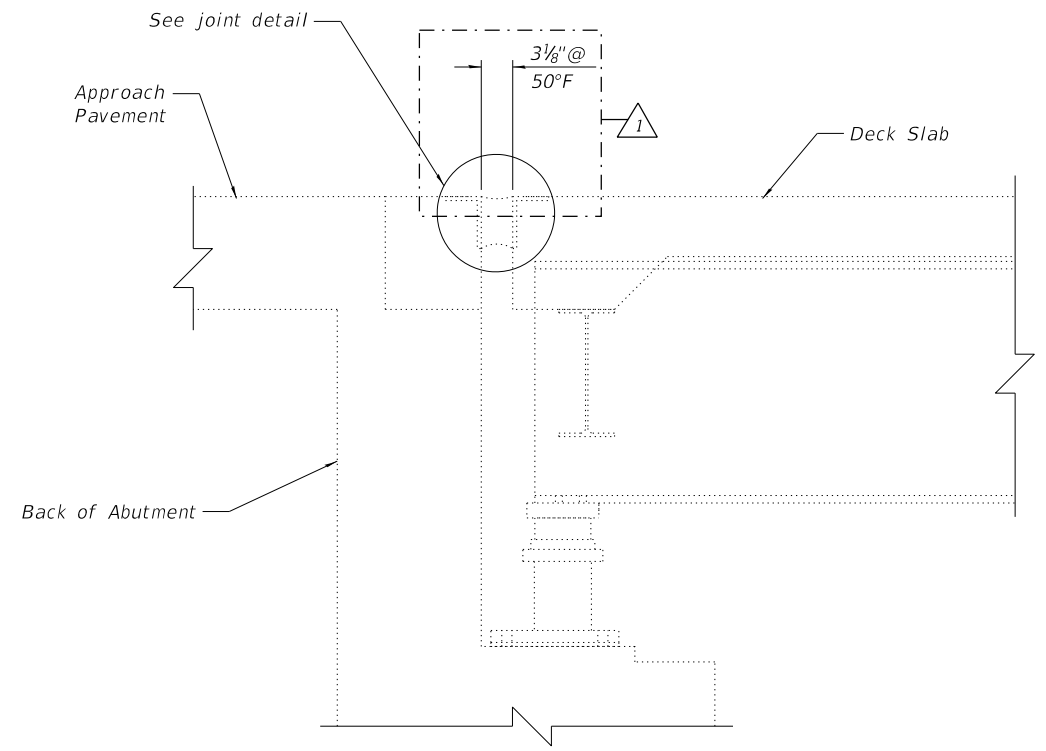
DECK & JOINT REPAIR DETAILS
 STRUCTURE NO. 016-0692 (5TH AVE.)

SHEET 3 OF 7 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	49
			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

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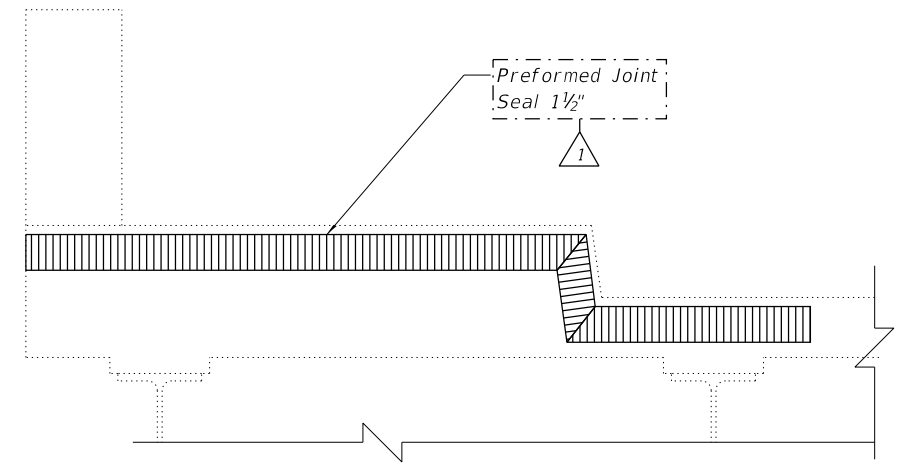


TYPICAL SECTION AT ABUTMENTS

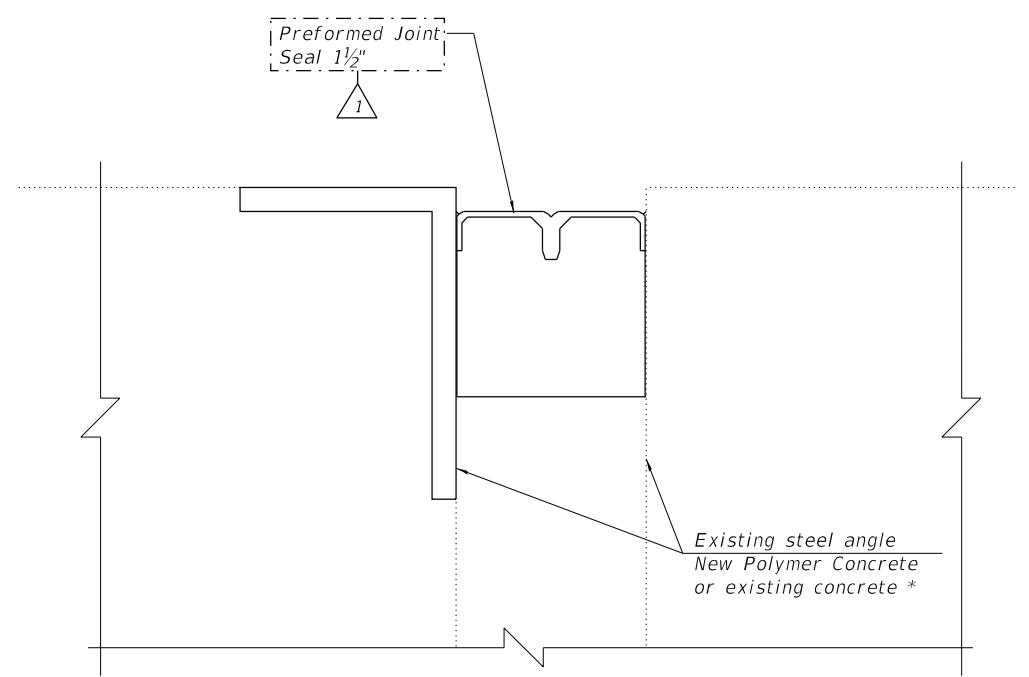
Notes:
 Removal of existing seal is included in the cost of Preformed Joint Seal.
 See sheet 3 of 7 for locations of joint repair and Polymer Concrete repair locations.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Seal 1 1/2"	Foot	124



TYPICAL SECTION THRU SIDEWALK



* Install Preformed Joint Seal against existing concrete at sidewalks.

JOINT DETAIL

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

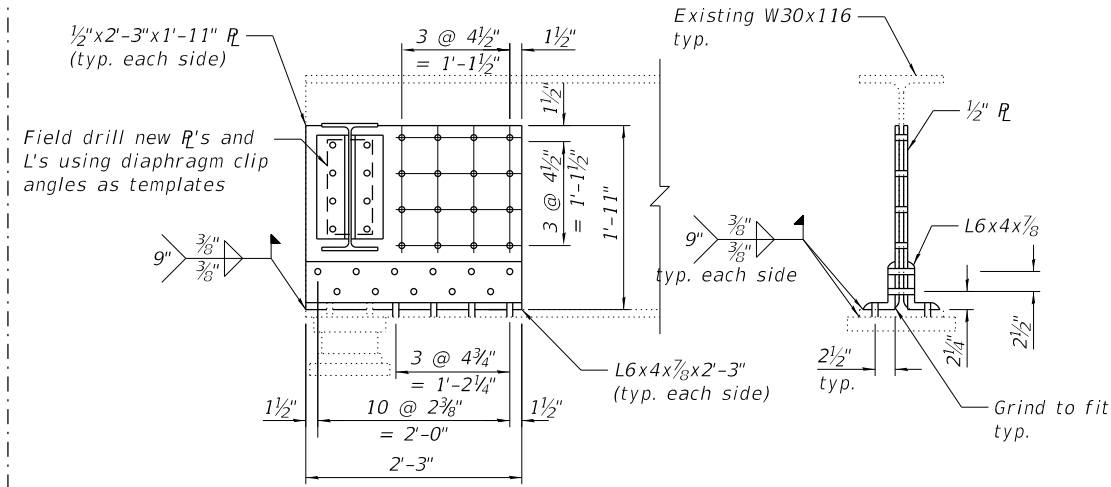
EXPANSION JOINT REPAIR DETAILS
 STRUCTURE NO. 016-0692 (5TH AVE.)

SHEET 4 OF 7 SHEETS

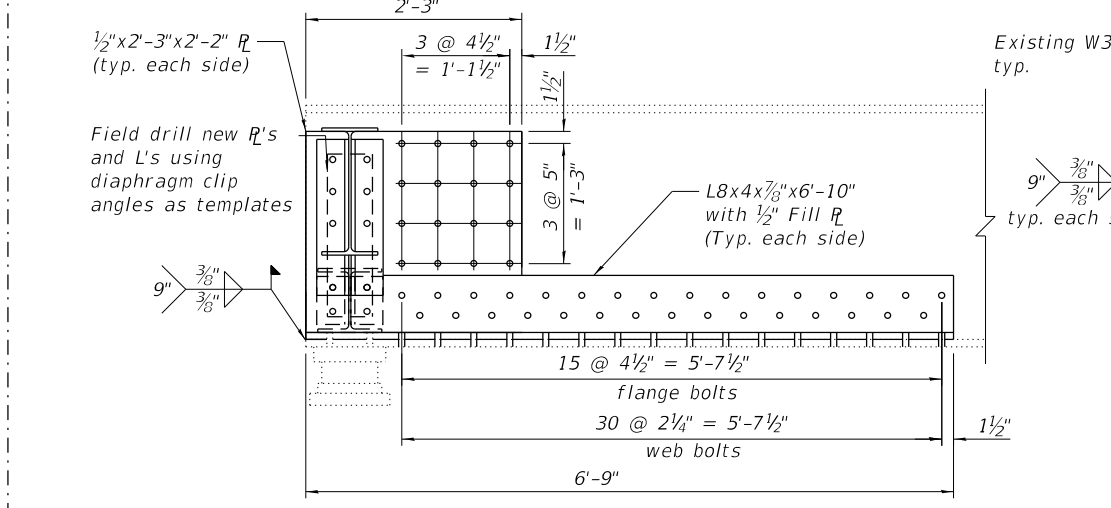
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ILLINOIS			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

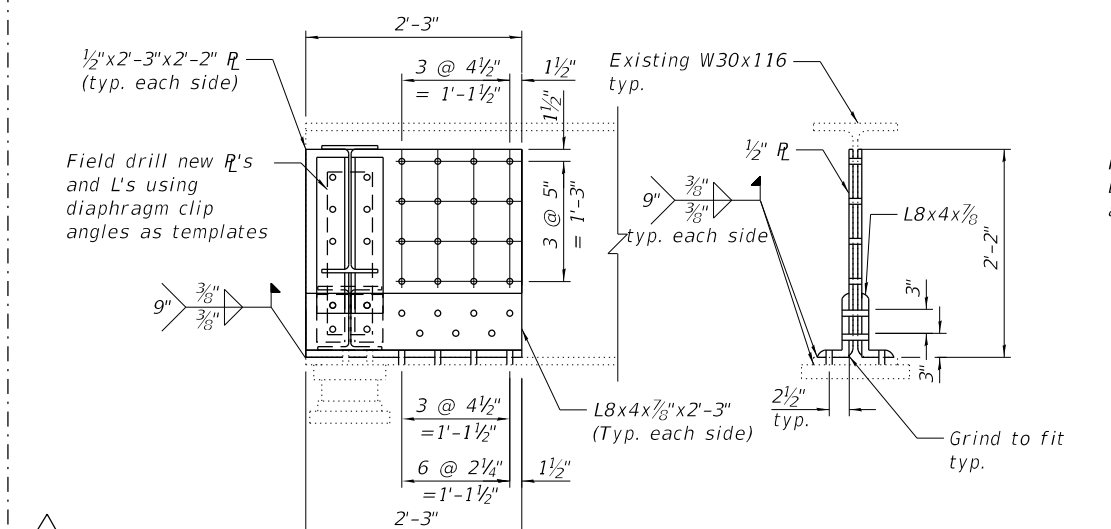
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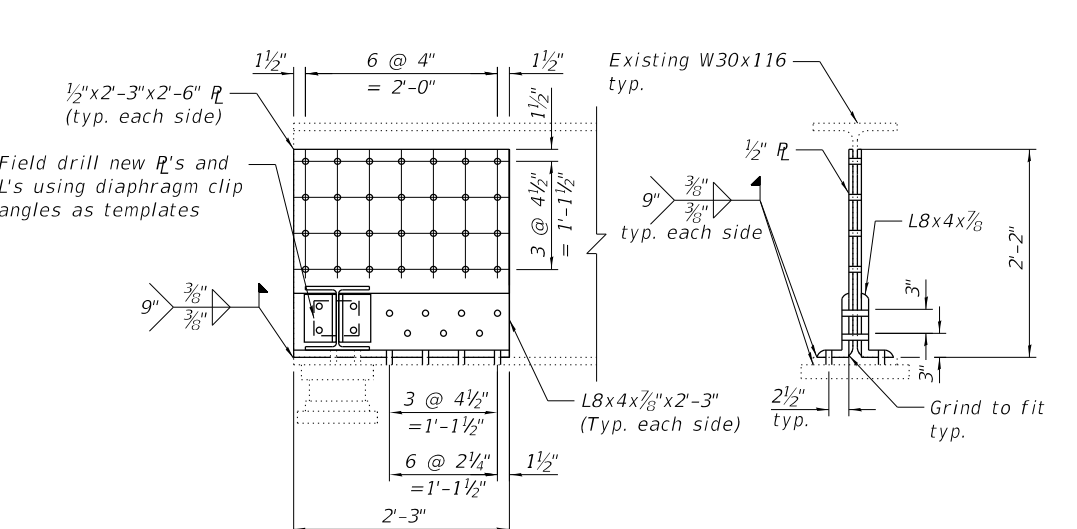
TYPE A BEAM END REPAIR



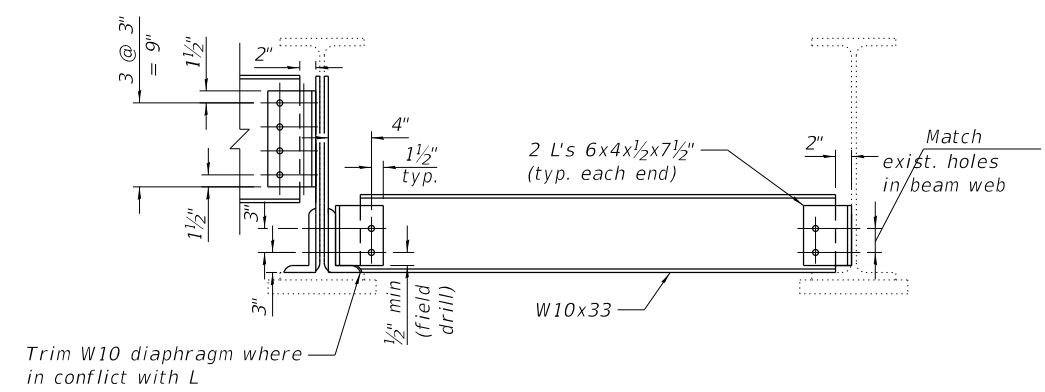
TYPE B BEAM END REPAIR



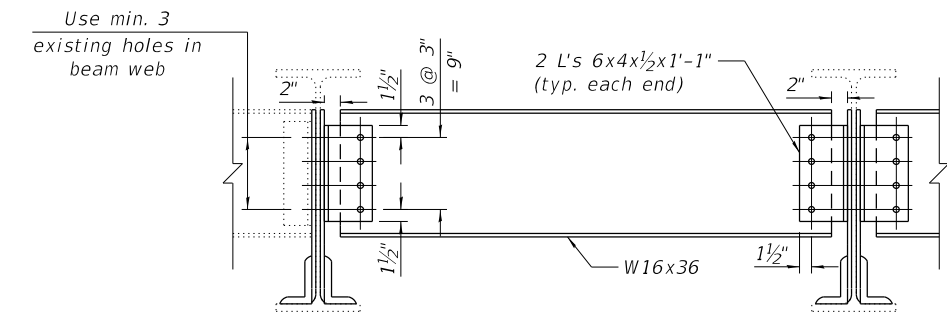
TYPE C BEAM END REPAIR



TYPE D BEAM END REPAIR



TYPE 1 DIAPHRAGM
Type 1A similar



TYPE 2 DIAPHRAGM
Type 2A & 3 similar

TABLE 1- DIAPHRAGMS

Diaphragm Type	Size	Length	Quantity
1	W10x33	4'-9"	2
1A	W10x33	4'-11 1/2"	2
2	W16x36	5'-4"	4
2A	W16x36	5'-4 1/2"	5
3	W16x36	2'-7 1/2"	1

TABLE 2- BOLTS

Beam	South Abutment		North Abutment	
	Diaphragm	Plate Repair	Diaphragm	Plate Repair
1	6	25	6	25
2	18	19	18	19
3	12	-	12	-
4	-	-	-	-
5	-	-	16	24
6	-	-	16	24
7	-	-	12	-
8	-	-	12	-
9	12	-	16	24
10	16	24	16	24
11	18	55	18	55
12	6	-	6	-

Notes:
 Existing bearing studs to be cut flush with bottom of beam bottom flange.
 Cost of drilling holes in existing steel members is included with Structural Steel Repairs
 All holes 13/16" Ø for 3/4" Ø bolts unless noted otherwise.
 All plates shall be 1/2" thick unless noted otherwise.
 See sheet 5 of 7 for repair locations.
 Field drill holes in diaphragms to allow for adjustment.
 Installation of new diaphragms shall not commence until all bolts for new web plates and clip angles are fully tightened.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	3,510
Structural Steel Removal	Pound	3,490
Structural Steel Repair	Pound	4,650



USER NAME = jrice	DESIGNED CAO	REVISED - 4/10/2020 NA
PLOT SCALE = 40,0000' / in.	CHECKED ZM	REVISED -
PLOT DATE = 4/10/2020	DRAWN CAO	REVISED -
	CHECKED ZM	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

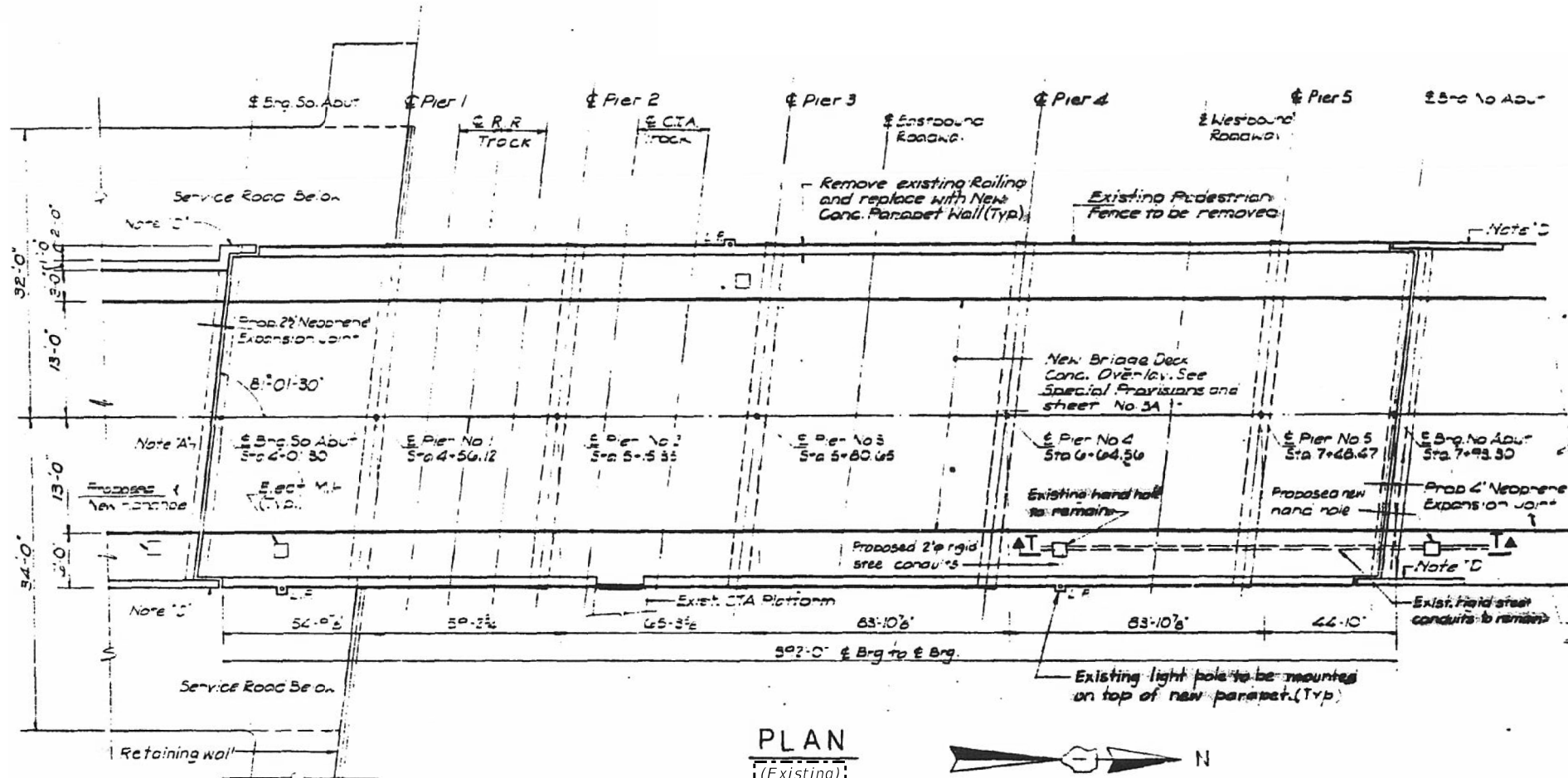
**STRUCTURAL STEEL REPAIRS II
STRUCTURE NO. 016-0692 (5TH AVE.)**

SHEET 7 OF 7 SHEETS

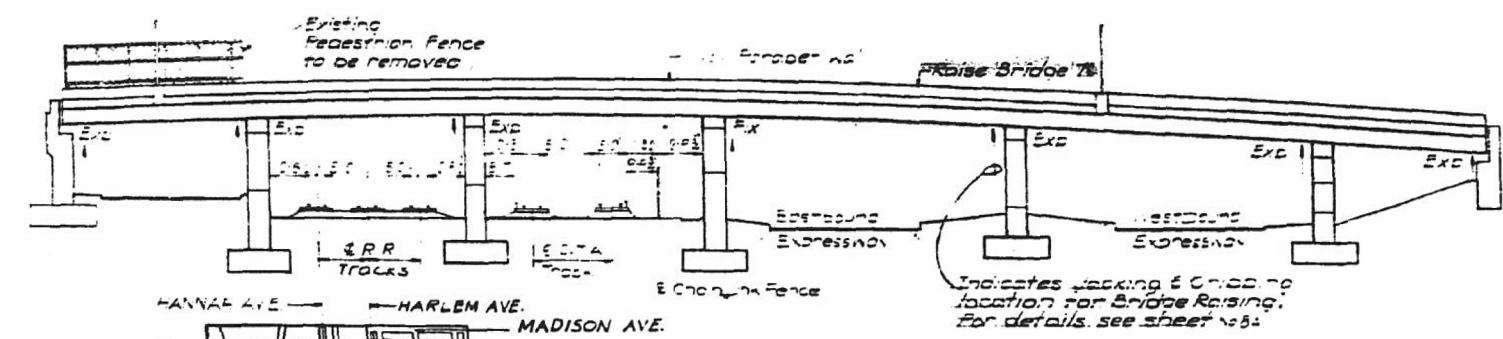
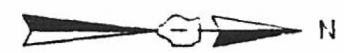
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			CONTRACT NO. 62K23	
ILLINOIS				

REV. 4/14/2020 SEP

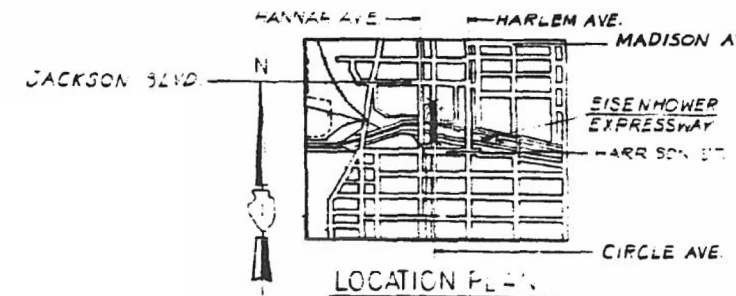
BENCH MARK
 ELEVATION 622.94
 CUT CROSS IN TOP OF FIRE HYDRANT
 SOUTH FLANGE BOLT AT NORTHWEST
 CORNER LEMNER STREET AND CIRCLE AVENUE



PLAN
(Existing)

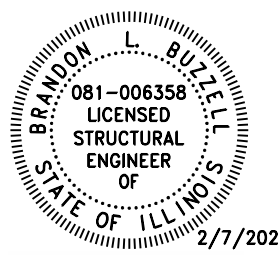


ELEVATION
(Existing)



LOCATION PLAN

Note A
 Remove and replace approach pavement from abutments to Sta 3+77.36 Approach and to Sta 8+17.47 (N Approach) with Branders 2362. For balance of work at Approaches, see sheet No. 084.



Brandon Buzell
 "LICENSE EXPIRES 11-30-2020"

REV. 4/14/2020 SEP

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-0995 (CIRCLE AVE.)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	54
			CONTRACT NO. 62K23	

SHEET 1 OF 8 SHEETS

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.
Bolts 3/4-in. Ø, holes 1 1/16-in. Ø, unless otherwise noted.

All structural steel shall be AASHTO M 270 Grade 50.

All structural steel shall be hot dip galvanized according to the Special Provision "Hot Dip Galvanizing for Structural Steel."

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

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Concrete repairs shall receive final surface finish according to Article 420.09(e)(1). Cost included with the appropriate repair item.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
3. Deck & Joint Repair Details
4. Protective Shield Details
5. Expansion Joint Details
6. Structural Steel Repair Location Plan
7. Structural Steel Repair I
8. Structural Steel Repair II
- 8A. South Abutment Bearing Details
- 8B. North Abutment Bearing Details

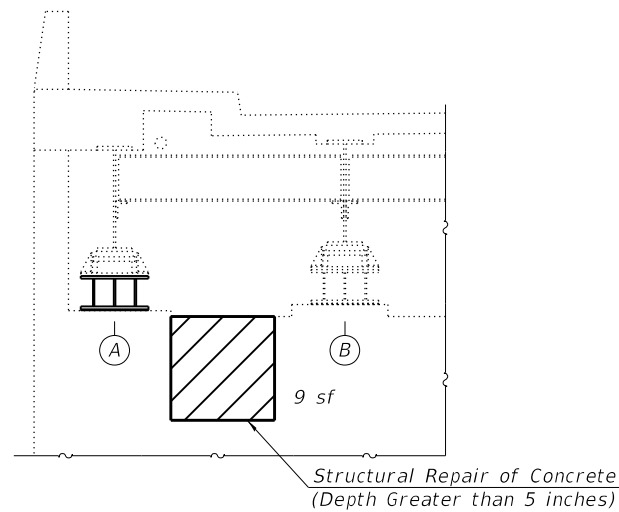
SCOPE OF WORK

1. Expansion joints replacement.
2. Deck slab repairs.
3. Protective shield installation and removal.
4. Bridge sidewalk repairs.
5. Diaphragm removal and replacement at abutments.
6. Beam end repairs.
7. Bolster removal and replacement with extensions at abutments.
8. Bearing removal and replacement at abutments.

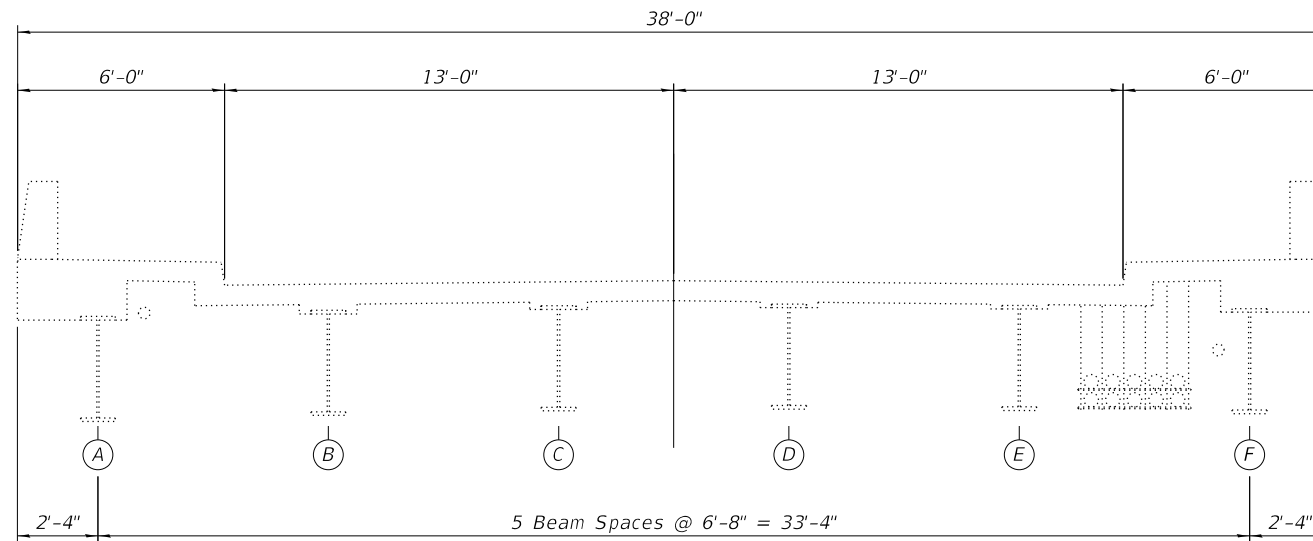
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Protective Shield	Sq. Yd.	137
Furnishing and Erecting Structural Steel	Pound	4,140
Preformed Joint Seal 2"	Foot	38
Preformed Joint Seal 2 1/2"	Foot	38
Elastomeric Bearing Assembly, Type II	Each	12
Anchor Bolts, 5/8"	Each	48
Clean & Reseal Relief Joint	Foot	52
Remove Existing Joint	Foot	76
Jack and Remove Existing Bearings	Each	12
Structural Steel Removal	Pound	5,100
Structural Steel Repair	Pound	2,470
Bridge Sidewalk Repair (Partial Depth)	Sq. Ft.	56
Cleaning Bridge Seats	Sq. Ft.	173
Structural Repair of Concrete (Depth Greater than 5 inches)	Sq. Ft.	9
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Partial)	Sq. Yd.	14
Polymer Concrete	Cu. Ft.	8.5
Temporary Shoring and Cribbing	L. Sum	0.2

* Contract-wide item. See Special Provisions



SOUTH ABUTMENT PARTIAL ELEVATION
Looking south



EXISTING BRIDGE CROSS SECTION
Looking south

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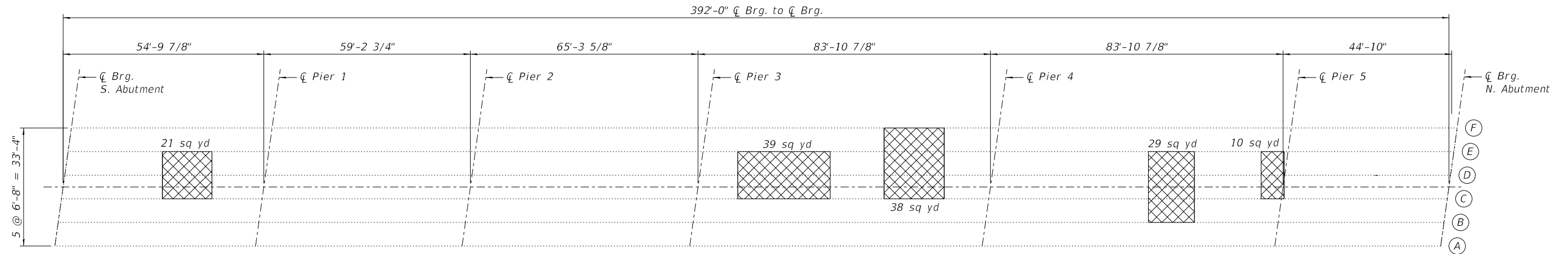
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 016-0995 (CIRCLE AVE.)**

SHEET 2 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	55
ILLINOIS			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP



EXISTING FRAMING PLAN

LEGEND

- Protective Shield
- Beam Label
-

BILL OF MATERIAL

Item	Unit	Total
Protective Shield	Sq. Yd.	137

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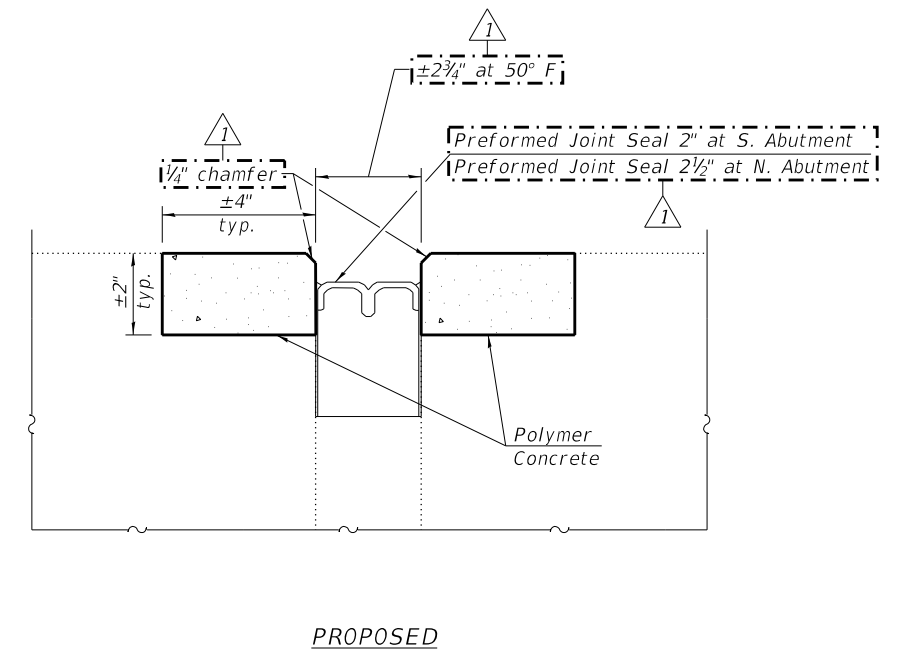
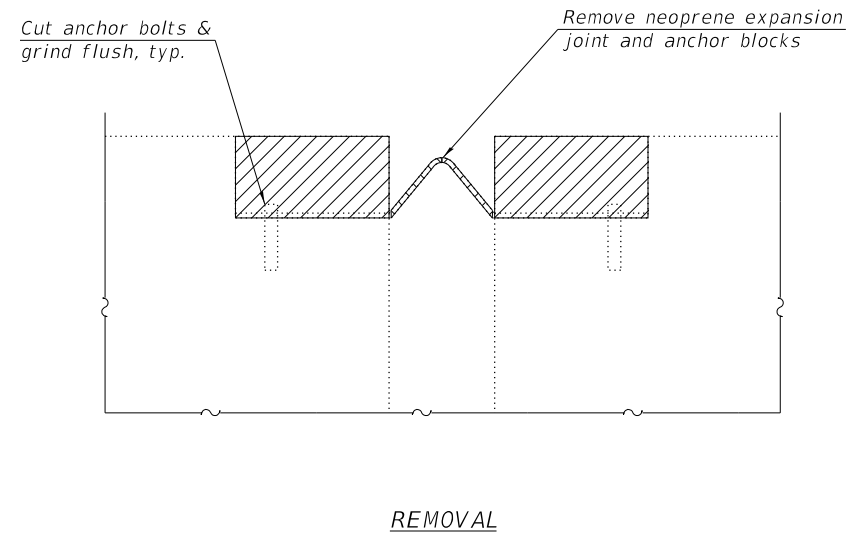
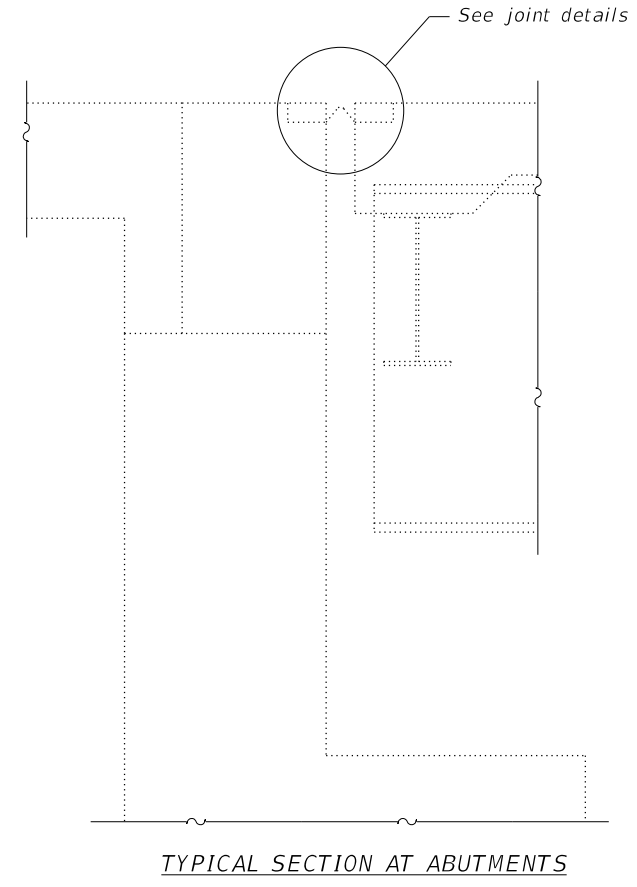
**PROTECTIVE SHIELD DETAILS
STRUCTURE NO. 016-0995 (CIRCLE AVE.)**

SHEET 4 OF 8 SHEETS

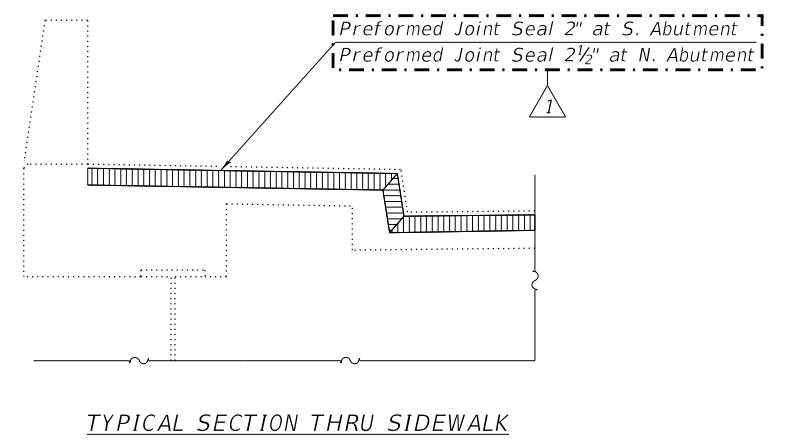
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	57
ILLINOIS			CONTRACT NO. 62K23	

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JOINT DETAIL
 (Dimensions are at right angles to abutment)



BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Seal 2"	Foot	38
Preformed Joint Seal 2 1/2"	Foot	38
Polymer Concrete	Cu. Ft.	8.5

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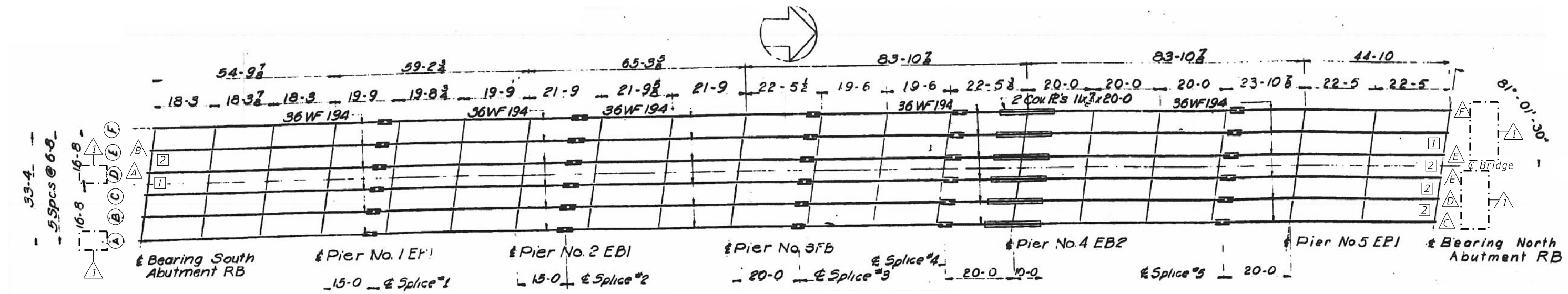
**EXPANSION JOINT DETAILS
 STRUCTURE NO. 016-0995 (CIRCLE AVE.)**

SHEET 5 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	58
ILLINOIS			CONTRACT NO. 62K23	

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STRUCTURAL STEEL REPAIR LOCATION PLAN

Note: Replace all bolsters and bearings with new bearings and extensions

- LEGEND**
- (A) Beam Label
 - (A) Beam End Repair Type
 - [1] Diaphragm Type

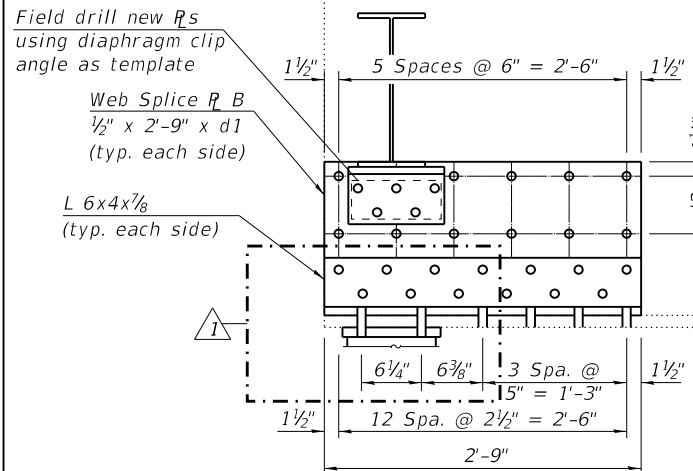
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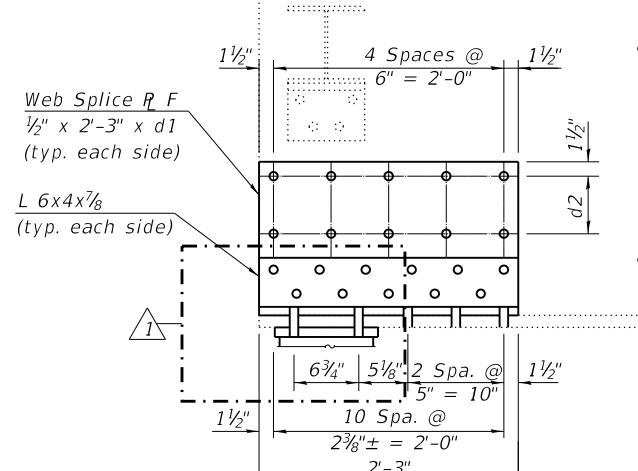
STRUCTURAL STEEL REPAIR LOCATION PLAN
STRUCTURE NO. 016-0995 (CIRCLE AVE.)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	59
ILLINOIS			CONTRACT NO. 62K23	

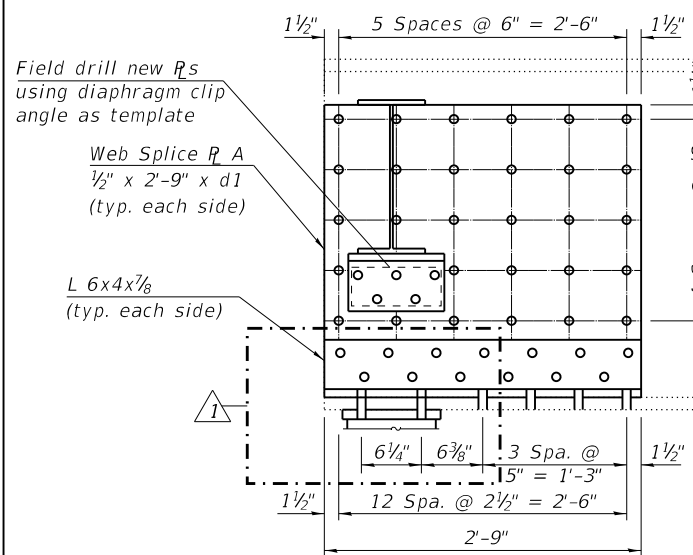
1 REV. 4/14/2020 SEP



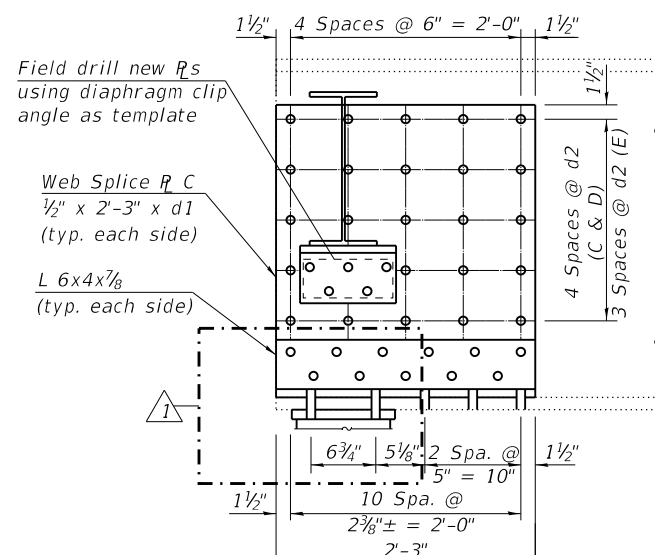
TYPE B BEAM END REPAIR



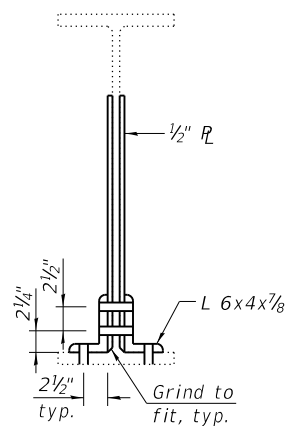
TYPE F BEAM END REPAIR



TYPE A BEAM END REPAIR



TYPE C BEAM END REPAIR
Types D & E Similar



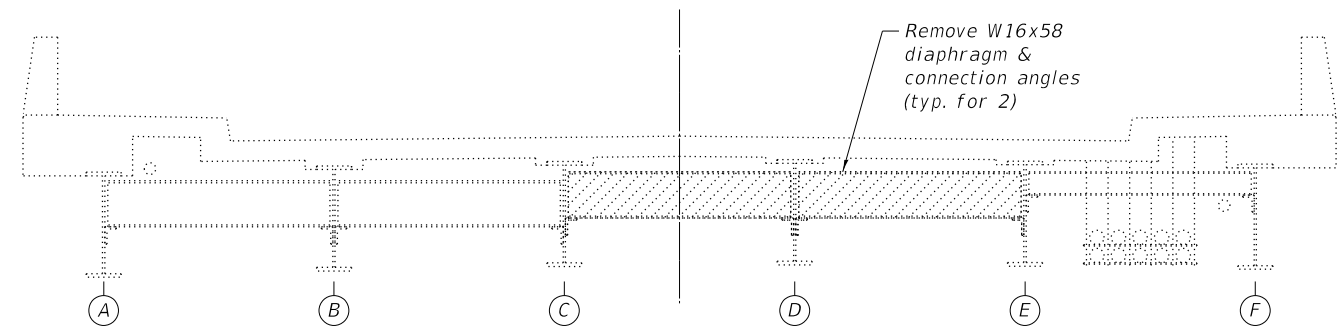
TYPICAL SECTION

TABLE 1 - BEAM END REPAIRS

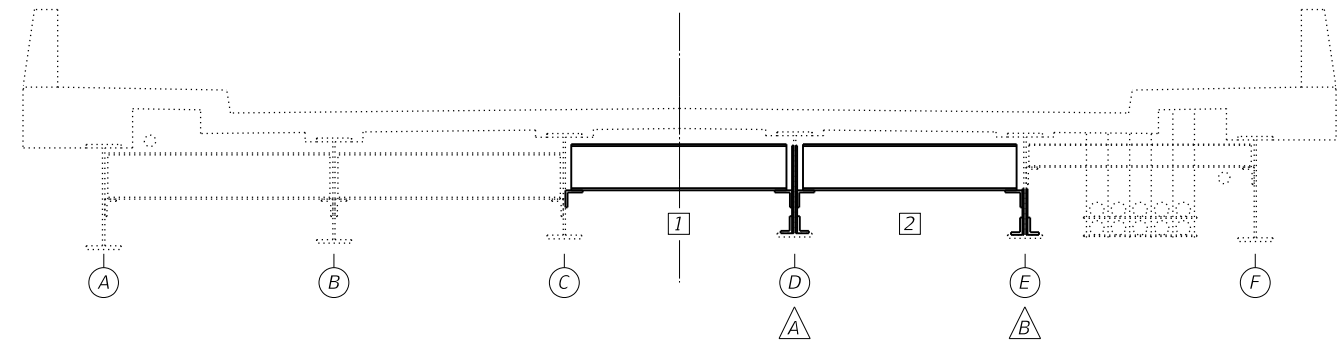
Beam End Repair Type	d1	d2	Quantity
A	2'-6 1/2"	5 1/4"	1
B	1'-4"	6"	1
C	2'-6 1/2"	5 1/4"	1
D	2'-5 1/4"	5"	1
E	2'-2 3/4"	5 3/4"	2
F	1'-4"	6"	1

LEGEND

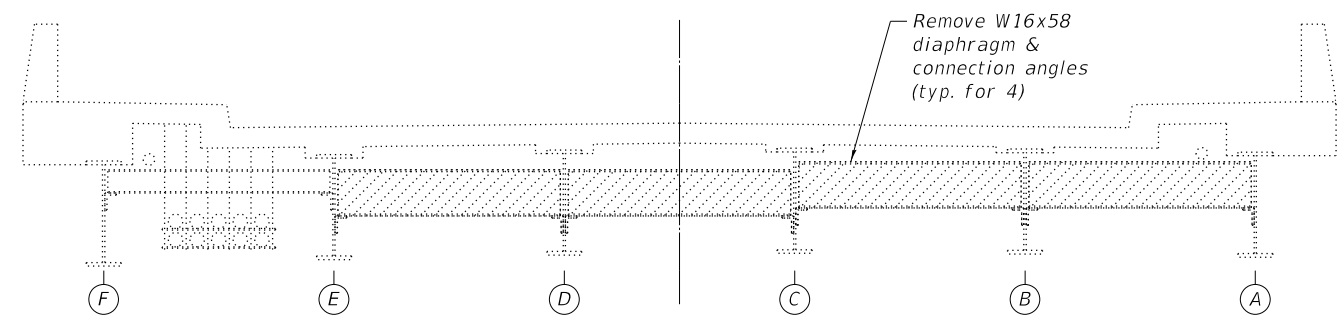
- (A) Beam Label
- (A) Beam End Repair Type
- (I) Diaphragm Type



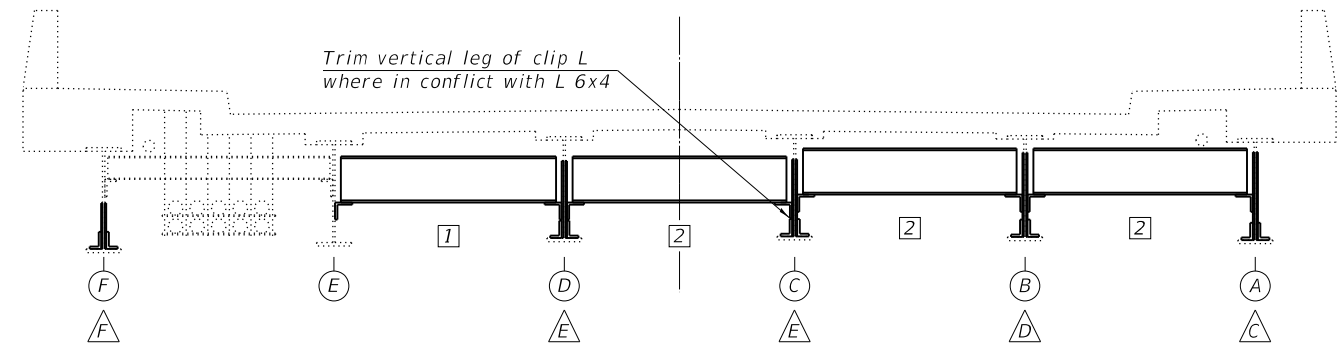
END DIAPHRAGM ELEVATION AT SOUTH ABUTMENT - EXISTING



END DIAPHRAGM ELEVATION AT SOUTH ABUTMENT - PROPOSED



END DIAPHRAGM ELEVATION AT NORTH ABUTMENT - EXISTING



END DIAPHRAGM ELEVATION AT NORTH ABUTMENT - PROPOSED

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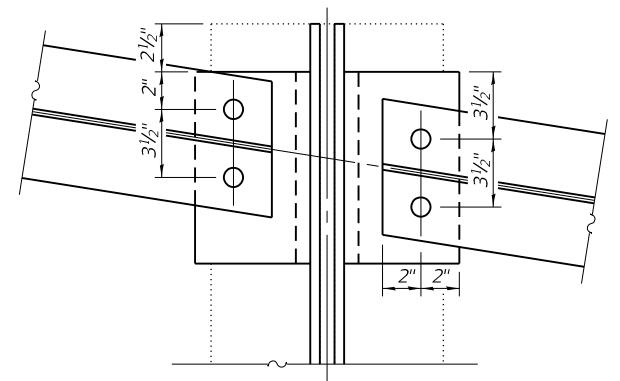
**STRUCTURAL STEEL REPAIRS I
STRUCTURE NO. 016-0995 (CIRCLE AVE.)**

SHEET 7 OF 8 SHEETS

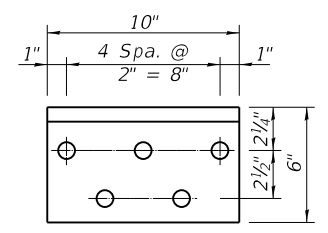
F.A.I. RTE. 290	SECTION 2019-151-BR	COUNTY COOK	TOTAL SHEETS 75	SHEET NO. 60
	CONTRACT NO. 62K23		ILLINOIS	

REV. 4/14/2020 SEP

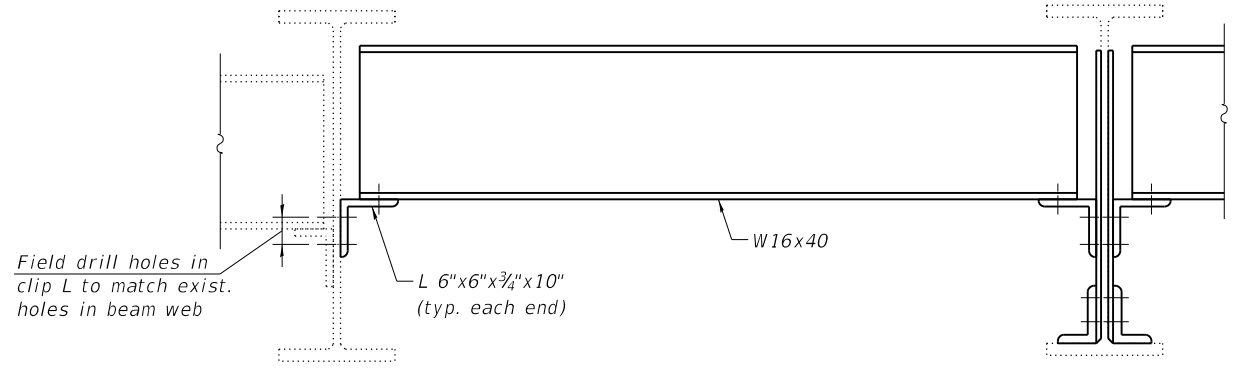
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TYPICAL DIAPHRAGM PLAN



CLIP ANGLE DETAILS
Typ. except field drill holes in offset clip angles at Beam C



TYPE 1 DIAPHRAGM
Type 2 Similar

Field drill 1 5/16" O holes in new Rs and Ls to match exist.

TABLE 2 - DIAPHRAGMS

Diaphragm Type	Size	Length	Quantity
1	W16x40	6'-3 5/8"	2
2	W16x40	6'-3 1/8"	4

TABLE 3 - BOLTS

Beam	South Abutment		North Abutment	
	Diaphragm	Plate Repair	Diaphragm	Plate Repair
A	-	-	7	41
B	-	-	9	41
C	8	-	12	35
D	9	50	9	36
E	7	32	7	-
F	-	-	-	27

Note: Table does not include bolts for connecting extension top plate to beam bottom flange.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	4,140
Structural Steel Removal	Pound	5,100
Structural Steel Repair	Pound	2,470

Notes:
 Cost of drilling holes in existing steel members is included with Structural Steel Repair.
 See sheet 6 of 8 for repair locations.
 Field drill holes in diaphragms to allow for adjustment.
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."
 Installation of new diaphragms shall not commence until all bolts for new web plates and clip angles are fully tightened.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL REPAIRS II
STRUCTURE NO. 016-0995 (CIRCLE AVE.)

SHEET 8 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	61
ILLINOIS			CONTRACT NO. 62K23	

REV. 4/14/2020 SEP

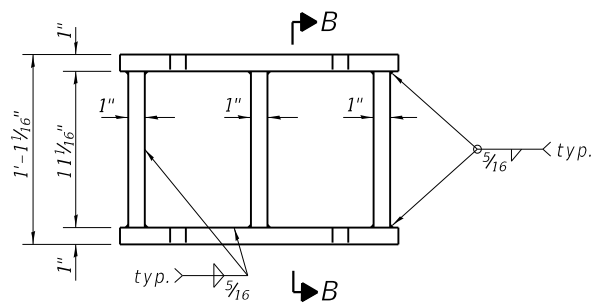
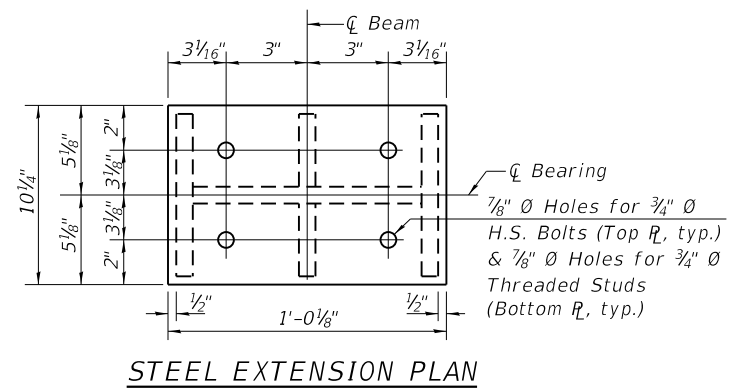
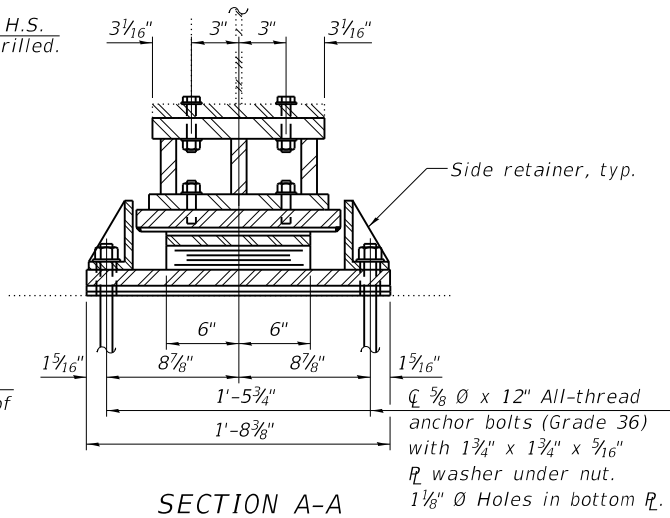
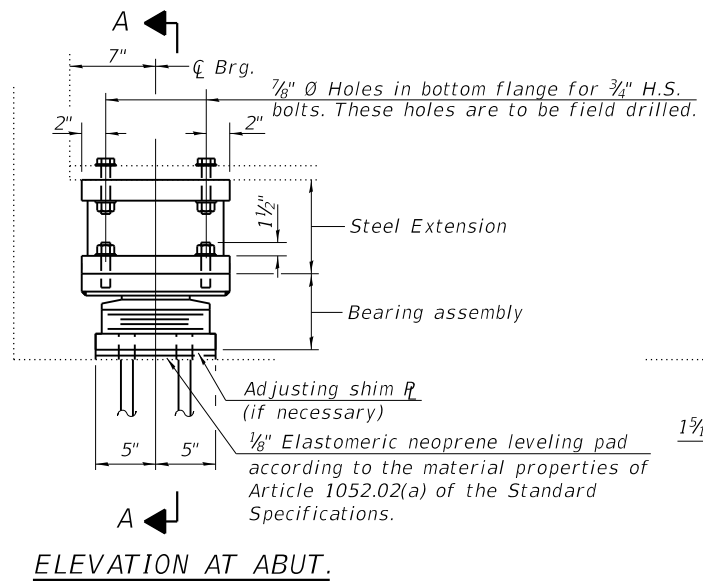


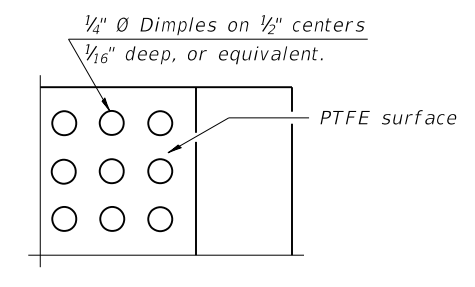
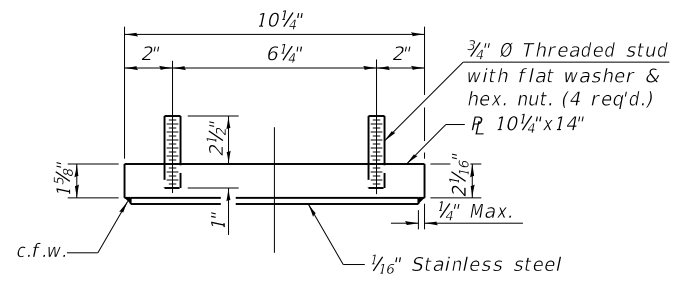
TABLE 4 - SOUTH ABUTMENT BEAM REACTIONS

	South Abutment
R @ (k)	26.4
R L (k)	34.5
Imp. (k)	9.6
R total (k)	70.5

Notes:
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Remove bearing sole plates welded to beam bottom flanges using the air-arc method. Cost is included with Jack and Remove Existing Bearings.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment ust account for deck heave due to pack rust (if present).
 Min. jack capacity = 53 tons.
 Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

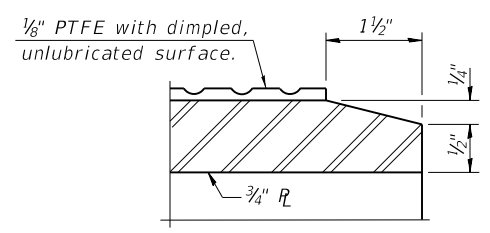
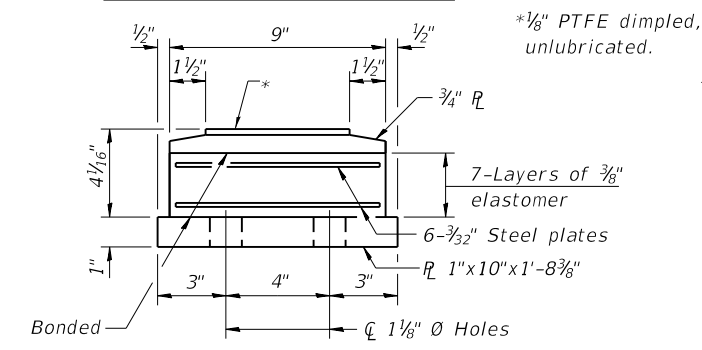
TYPE II ELASTOMERIC EXP. BRG.

Note: See sheet 7 of 8 for beam end repairs. Provide longer bolts for connection of extension top plate to beam bottom flange at beam end repair locations.



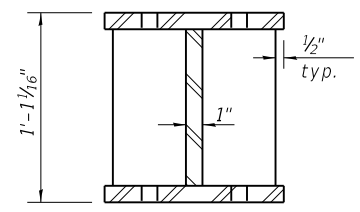
TOP BEARING ASSEMBLY

PLAN-PTFE SURFACE

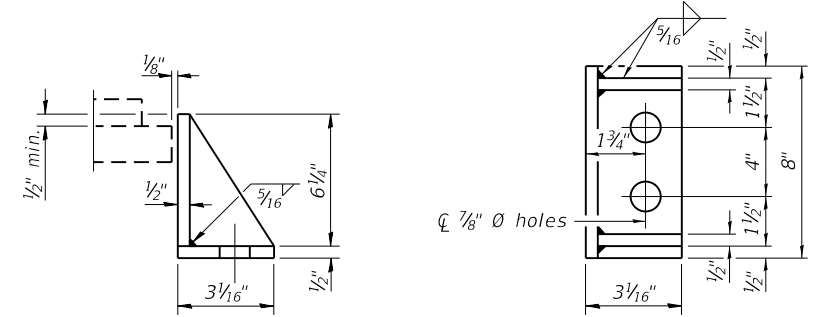


BOTTOM BEARING ASSEMBLY

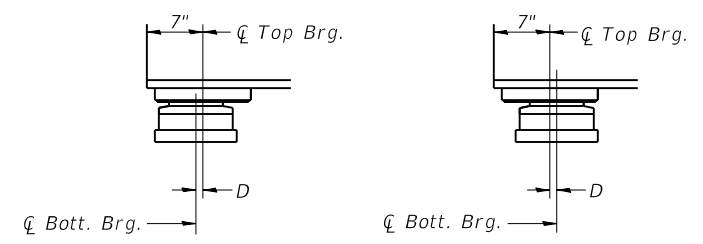
SECTION THRU PTFE



SECTION B-B



SIDE RETAINER
 Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F.
 ABOVE 50°F.
 D = 1/8 inch per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.
EXPANSION BEARING ORIENTATION
 The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts, 5/8"	Each	24
Jack and Remove Existing Bearings	Each	6

Added sheet

SHEET ADDED 4/14/2020 SEP

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 DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT BEARING DETAILS
 STRUCTURE NO. 016-0995 (CIRCLE AVE.)

SHEET 8A OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2019-151-BR	COOK	75	61A
				CONTRACT NO. 62K23
ILLINOIS				

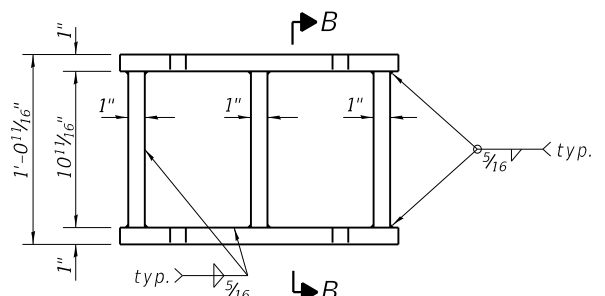
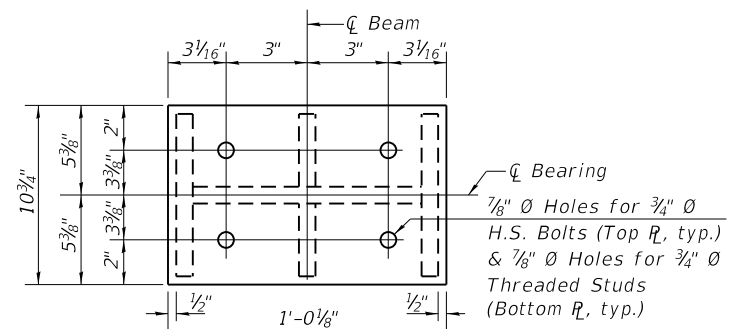
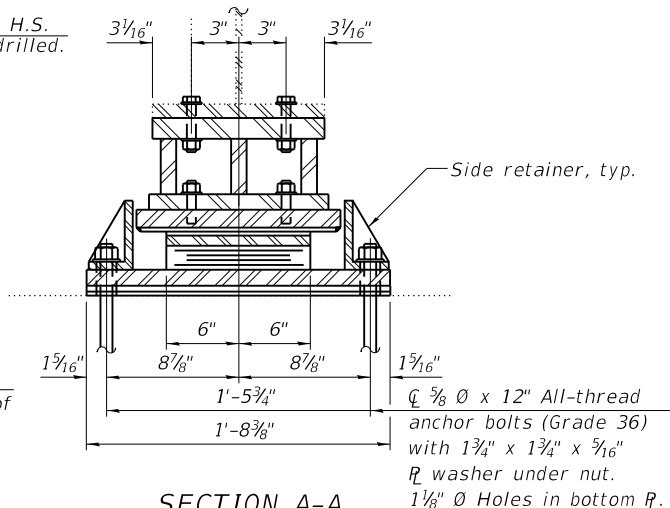
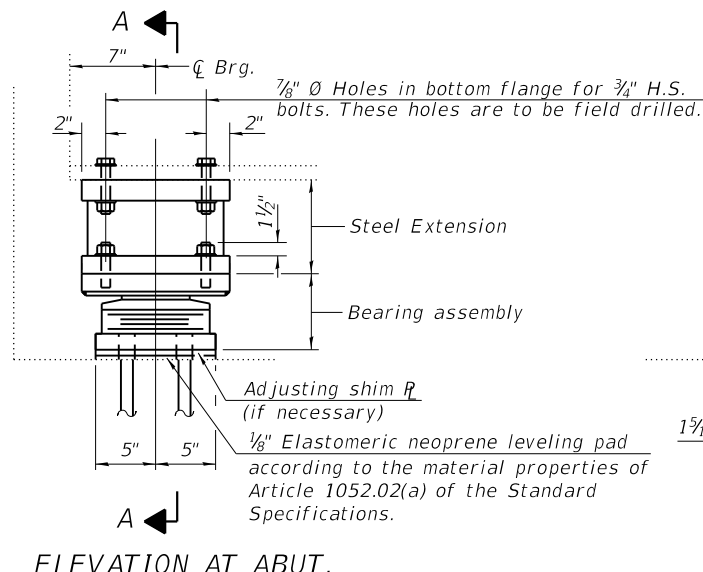
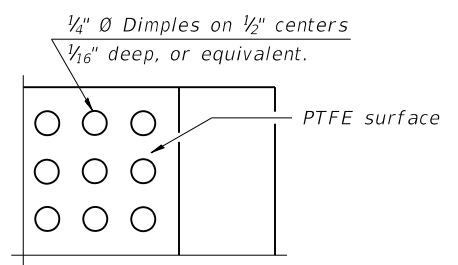
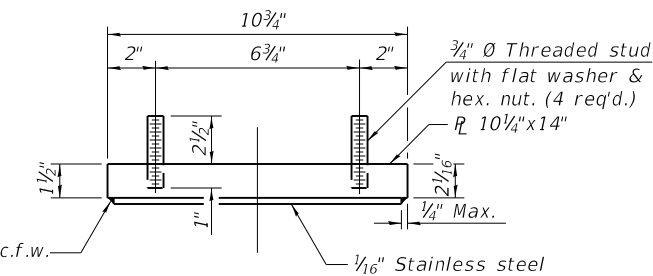


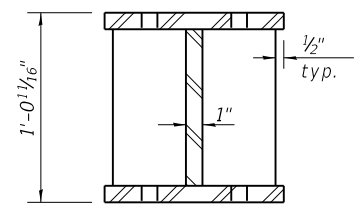
TABLE 5 - NORTH ABUTMENT BEAM REACTIONS

	North Abutment
R \bar{D} (k)	16.7
R \bar{L} (k)	33.2
Imp. (k)	9.8
R total (k)	59.7

Notes:
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Remove bearing sole plates welded to beam bottom flanges using the air-arc method. Cost is included with Jack and Remove Existing Bearings.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment ust account for deck heave due to pack rust (if present).
 Min. jack capacity = 53 tons.
 Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The $\frac{1}{8}$ " PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of $\frac{1}{8}$ " PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 Two $\frac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

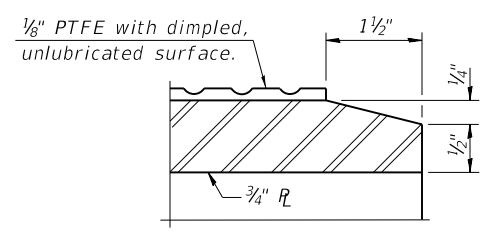
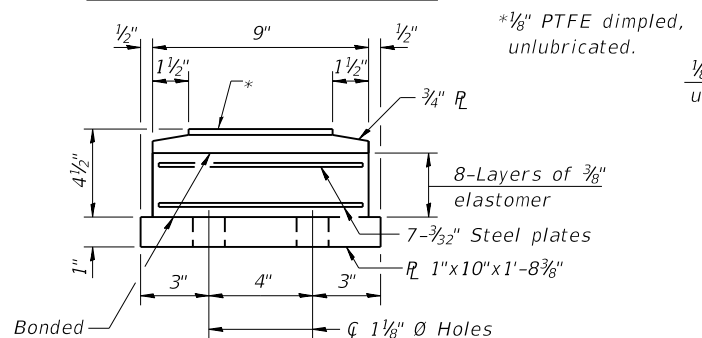


STEEL EXTENSION ELEVATION



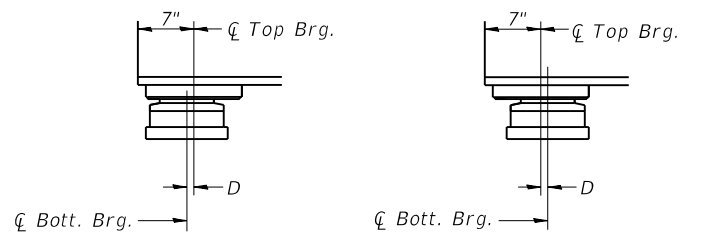
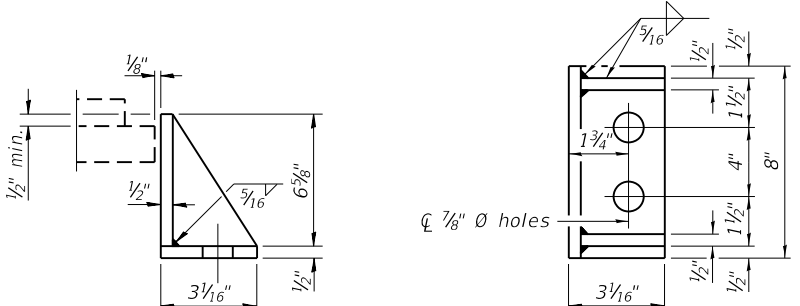
TOP BEARING ASSEMBLY

PLAN-PTFE SURFACE



SECTION THRU PTFE

BOTTOM BEARING ASSEMBLY



BELOW 50°F. ABOVE 50°F.
 D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

EXPANSION BEARING ORIENTATION

The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts, $\frac{5}{8}$ "	Each	24
Jack and Remove Existing Bearings	Each	6

\triangle SHEET ADDED 4/14/2020 SEP

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 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM
 LICENSE NO. - 184-001121 - EXPIRES 4/30/2020
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BAXTER & WOODMAN
 Consulting Engineers

USER NAME = mornij	DESIGNED - AS	REVISED - 4/10/2020 AS
PLOT SCALE = 0.1667' / in.	CHECKED - BLB	REVISED -
PLOT DATE = 4/10/2020	DRAWN - AS	REVISED -
	DATE - 04/10/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT BEARING DETAILS
STRUCTURE NO. 016-0995 (CIRCLE AVE.)

SHEET 8B OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	2019-151-BR	COOK	75	61B
				CONTRACT NO. 62K23
				ILLINOIS