04-26-2019 LETTING ITEM 023

WAR RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
WAR	2018 140-BR	COOK	172	1
	ILLINOIS	CONTRACT NO. 62H72		

172 + 1 = 173 TOTAL SHEETS

D-91-105-19



LOCATION OF SECTION INDICATED THUS:- ▬

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
VARIOUS LOCATIONS
SECTION: 2018–140–BR
PROJECT: STP–B48R(938)
BRIDGE DECK SEALING
COOK COUNTY

C–91–309–19

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR LOCATION MAPS, SEE SHEET NO. 5 – 8

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

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

CONTRACT NO. 62H72

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 25 2019
Anthony J. Quigley /AHB
REGIONAL ENGINEER
March 22 2019
cc E.A. CK
ENGINEER OF DESIGN AND ENVIRONMENT
March 22 2019
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

REV. 3/15/19

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169A	TC-9 SINGLE LANE WEAVE AND MULTI-LANE WEAVE
170	TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
171	TC-14 TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
172	TC-17 TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

STATE STANDARDS

701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24'' (600 MM) FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24'' (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701400-09	APPRAOCH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMPS FOR SPEEDS > 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS = 40 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701446-09	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
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

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL ''J.U.L.I.E.'' AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE VILLAGE/CITY.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4151 FOR EXPRESSWAYS AND KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV FOR ARTERIALS A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
6. THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF MAINTENANCE.
7. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
8. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
9. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT NO DEBRIS WILL ENDANGER OR INTERFERE WITH TRAFFIC ON THE ROADWAY BENEATH THE BRIDGE ACCORDING TO ARTICLE 107.09 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPROPRIATE PAY ITEM INVOLVED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
10. EXISTING PAVEMENT MARKINGS SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS AND TO PROTECT THE REFLECTIVE PROPERTIES OF THE MARKINGS. THE TEMPORARY COVERING MATERIAL USED SHALL BE SUCH THAT IT WILL NOT AFFECT THE MARKING'S REFLECTIVITY WHEN REMOVED AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC. COST INCLUDED WITH CONCRETE SEALER.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES

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

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	2
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES			URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT		80% FED 20% STATE 0047					
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6					
67100100	MOBILIZATION	L SUM	1	1					
70102620	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701501								
70102622	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701502								
70102625	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701606								
70102630	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701601								
70102632	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701602								
70102635	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701701								
70102640	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701801								
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1					
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	950694	950694					
X7011015	TRAFFIC CONTROL AND PROTECTION	L SUM	1	1					
	(EXPRESSWAYS)								

SUMMARY OF QUANTITIES			URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT		80% FED 20% ST 0047					
70100310	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	1					
	STANDARD 701421								

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	3
		CONTRACT NO. 62H72		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REV. 3/15/19

Location No.	STRUCTURE NUMBER	BRIDGE DECK CONCRETE SEALER (S.F.)	TRAFFIC CONTROL AND PROTECTION, STANDARD									NIGHTTIME WORK ZONE LIGHTING
			701421	701501	701502	701601	701602	701606	701701	701801	Expressways	
1	016-0226	26,634						X	X	X		
2	016-0246	9,415					X		X	X	X	X
3	016-0249	7,419						X	X	X		
4	016-0250	7,317						X		X		
5	016-0251	10,780						X		X		
6	016-0317	39,697				X			X	X		
7	016-0318	13,004				X			X	X		
8	016-0339	13,231						X	X	X		
9	016-0364	23,211				X				X	X	X
10	016-0367	11,759						X	X	X		
11	016-0398	31,128					X		X	X	X	X
12	016-0472	8,009						X		X		
13	016-0610	11,578					X		X	X	X	X
14	016-0634	27,168				X				X		
15	016-0697	13,314						X				
16	016-0698	2,313						X				
17	016-0759	4,098					X	X	X	X		
18	016-0760	4,098					X	X	X	X		
19	016-0761	27,856						X		X		
20	016-0839	15,297					X		X	X	X	X
21	016-0863	12,383						X	X	X		
22	016-0868	10,259						X		X		
23	016-0870	16,380						X	X	X		
24	016-0871	26,612		X						X		
25	016-0872	9,434		X						X		
26	016-0873	5,985		X						X		
27	016-0874	11,948		X						X		
28	016-0962	53,904						X		X		
29	016-1011	92,792						X		X		
30	016-1016	18,299		X						X		
31	016-1054	18,650						X		X		
32	016-1069	8,546		X								
33	016-1094	24,094		X					X	X		
34	016-1509	34,254						X	X	X	X	X
35	016-2533	2,854						X	X	X		
36	016-2549	21,177				X				X		
37	016-2601	17,672						X		X		
38	016-2603	20,021						X		X		
39	016-2605	7,766						X		X		
40	016-2607	9,212						X	X	X		
41	016-2646	3,905						X		X		
42	016-2651	20,823					X		X	X		
43	016-2672	17,008						X		X		
44	016-2719	11,624		X						X		
45	016-2720	14,556						X		X		
46	016-2725	11,147						X		X		
47	016-2740	37,787						X		X		
48	016-2756	22,931	X									
49	016-2782	9,625						X		X		
50	016-2789	4,332						X		X		
51	016-2813	16,602			X					X		
52	016-2818	3,105						X	X	X		
53	016-2844	6,934						X		X		
54	016-3035	21,392						X	X	X		
55	016-7942	7,714	X									
56	016-7943	11,641	X									

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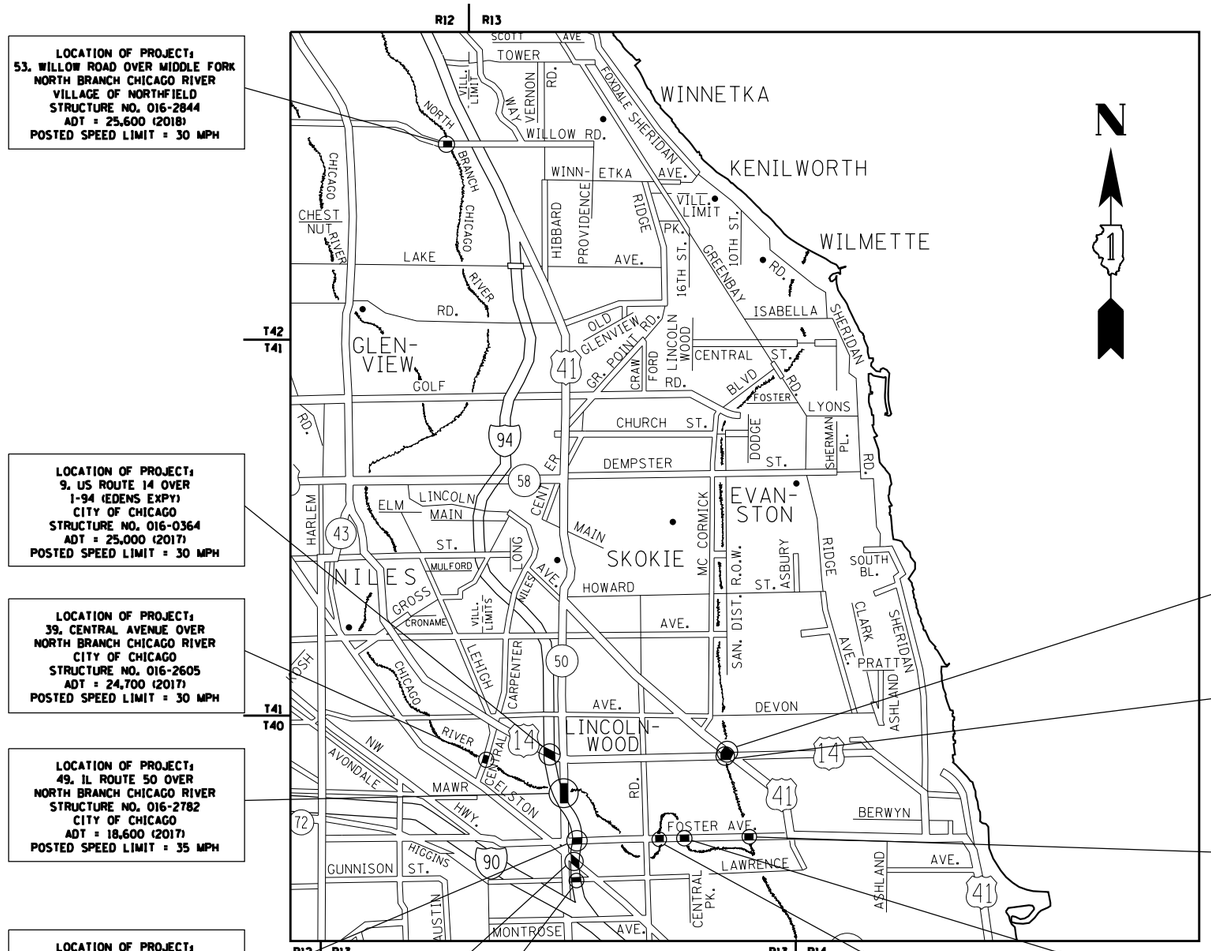
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

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

VAR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	4
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		



LOCATION OF PROJECT:
53. WILLOW ROAD OVER MIDDLE FORK NORTH BRANCH CHICAGO RIVER
VILLAGE OF NORTHFIELD
STRUCTURE NO. 016-2844
ADT = 25,600 (2018)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
9. US ROUTE 14 OVER I-94 (EDENS EXPY)
CITY OF CHICAGO
STRUCTURE NO. 016-0364
ADT = 25,000 (2017)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
39. CENTRAL AVENUE OVER NORTH BRANCH CHICAGO RIVER
CITY OF CHICAGO
STRUCTURE NO. 016-2605
ADT = 24,700 (2017)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
49. IL ROUTE 50 OVER NORTH BRANCH CHICAGO RIVER
STRUCTURE NO. 016-2782
CITY OF CHICAGO
ADT = 18,600 (2017)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
2. FOSTER AVENUE OVER I-94 (EDENS EXPY)
CITY OF CHICAGO
STRUCTURE NO. 016-0246
ADT = 27,600 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
13. ELSTON AVENUE OVER I-94 (EDENS EXPY)
CITY OF CHICAGO
STRUCTURE NO. 016-0610
ADT = 12,800 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
20. LAWRENCE AVENUE OVER I-94 (EDENS EXPY)
CITY OF CHICAGO
STRUCTURE NO. 016-0839
ADT = 15,600 (2014)
POSTED SPEED LIMIT = 30 MPH

NORTHFIELD, NEW TRIER, NILES, EVANSTON, JEFFERSON, ROGERS PARK, LAKE VIEW TOWNSHIPS

LOCATION OF PROJECT:
31. US ROUTE 41 (LINCOLN AVENUE) OVER NORTH SHORE CHANNEL
CITY OF CHICAGO
STRUCTURE NO. 016-1054
ADT = 30,900 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
10. US ROUTE 14 (PETERSON AVENUE) OVER NORTH SHORE CHANNEL
CITY OF CHICAGO
STRUCTURE NO. 016-0367
ADT = 30,700 (2017)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
5. FOSTER AVENUE OVER NORTH SHORE CHANNEL
CITY OF CHICAGO
STRUCTURE NO. 016-0251
ADT = 22,900 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
4. FOSTER AVENUE OVER NORTH BRANCH CHICAGO RIVER WEST
CITY OF CHICAGO
STRUCTURE NO. 016-0250
ADT = 23,000 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
3. FOSTER AVENUE OVER NORTH BRANCH CHICAGO RIVER CENTER
CITY OF CHICAGO
STRUCTURE NO. 016-0249
ADT = 23,000 (2014)
POSTED SPEED LIMIT = 30 MPH

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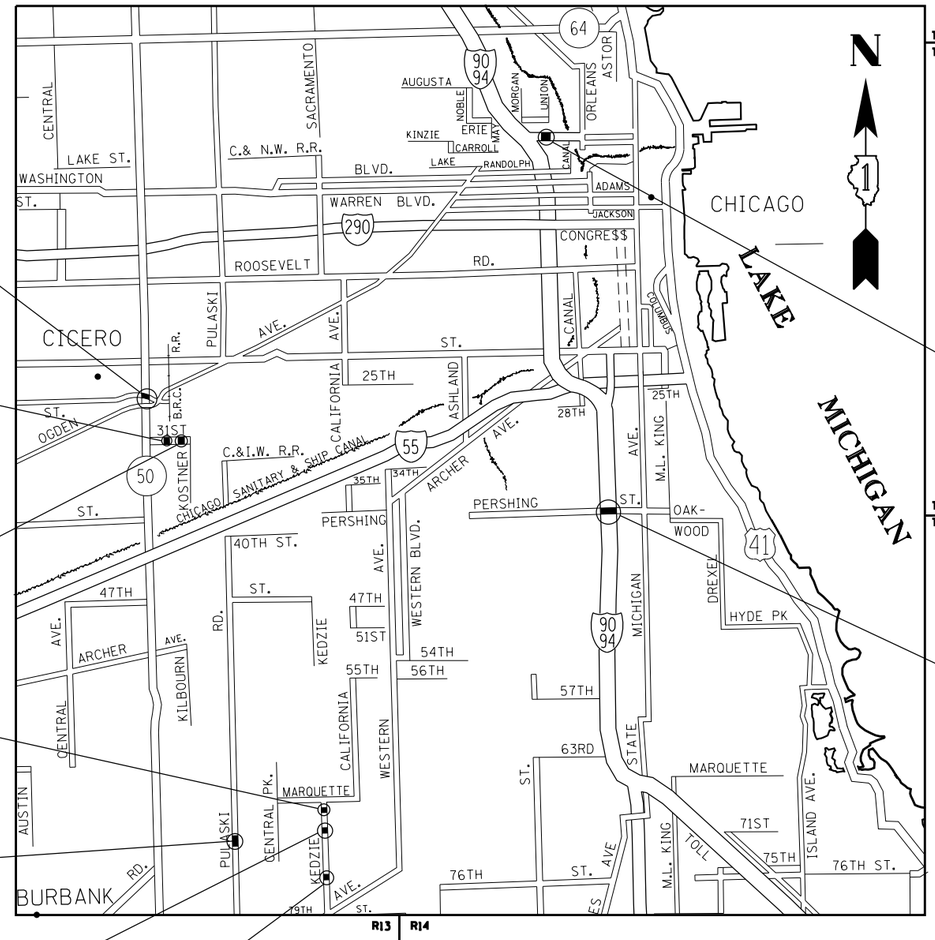
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAPS

SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	5
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	



LOCATION OF PROJECT:
32, 26TH STREET OVER
IL ROUTE 50 (CICERO AVENUE)
CITY OF CICERO
STRUCTURE NO. 016-1069
ADT = 9,600 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
24, 31st STREET OVER
BNSF & BRC RR
CITY OF CHICAGO/CICERO
STRUCTURE NO. 016-0871
ADT = 4,925 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
25, 31st STREET OVER
KILBOURN AVENUE
CITY OF CHICAGO
STRUCTURE NO. 016-0872
ADT = 4,925 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
17, KEDZIE AVENUE OVER
NORTH LAG MARQUETTE PARK
CITY OF CHICAGO
STRUCTURE NO. 016-0759
ADT = 18,200 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
36, PULASKI ROAD OVER
BRC RR
CITY OF CHICAGO
STRUCTURE NO. 016-2549
ADT = 15,800 (2018)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
18, KEDZIE AVENUE OVER
SOUTH LAG MARQUETTE PARK
CITY OF CHICAGO
STRUCTURE NO. 016-0760
ADT = 18,200 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
19, KEDZIE AVENUE OVER
BRC RR
CITY OF CHICAGO
STRUCTURE NO. 016-0761
ADT = 18,200 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
33, MILWAUKEE AVENUE
OVER OHIO FEEDER
CITY OF CHICAGO
STRUCTURE NO. 016-1094
ADT = 8,750 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
11, 39TH STREET (PERSHING ROAD)
OVER I-90/94 (DAN RYAN EXPY)
CITY OF CHICAGO
STRUCTURE NO. 016-0398
ADT = 14,500 (2018)
POSTED SPEED LIMIT = 30 MPH

WEST CHICAGO, NORTH CHICAGO, SOUTH CHICAGO, LAKE,
HYDE PARK, CICERO, AND STICKNEY TOWNSHIPS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAPS

SCALE: | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	6
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

N

1

LOCATION OF PROJECT:
28. ROOSEVELT ROAD OVER
IHB RR & GARDNER ROAD
VILLAGE OF BROADVIEW
STRUCTURE NO. 016-0962
ADT = 28,000 (2018)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
50. ROOSEVELT ROAD OVER
ADDISON CREEK
VILLAGE OF WESTCHESTER
STRUCTURE NO. 016-2789
ADT = 28,000 (2018)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
45. 25TH AVENUE OVER
ADDISON CREEK
VILLAGE OF BROADVIEW
STRUCTURE NO. 016-2720
ADT = 15,300 (2014)
POSTED SPEED LIMIT = 35 MPH

T39
T38

LOCATION OF PROJECT:
8. US ROUTE 12/20/45
OVER SALT CREEK
VILLAGE OF WESTCHESTER
STRUCTURE NO. 016-0339
ADT = 24,300 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
22. 31ST STREET OVER
SALT CREEK
VILLAGE OF LA GRANGE PARK
STRUCTURE NO. 016-0868
ADT = 20,000 (2014)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
44. 17th AVENUE OVER
SALT CREEK
VILLAGE OF RIVERSIDE
STRUCTURE NO. 016-2719
ADT = 10,900 (2014)
POSTED SPEED LIMIT = 35 MPH

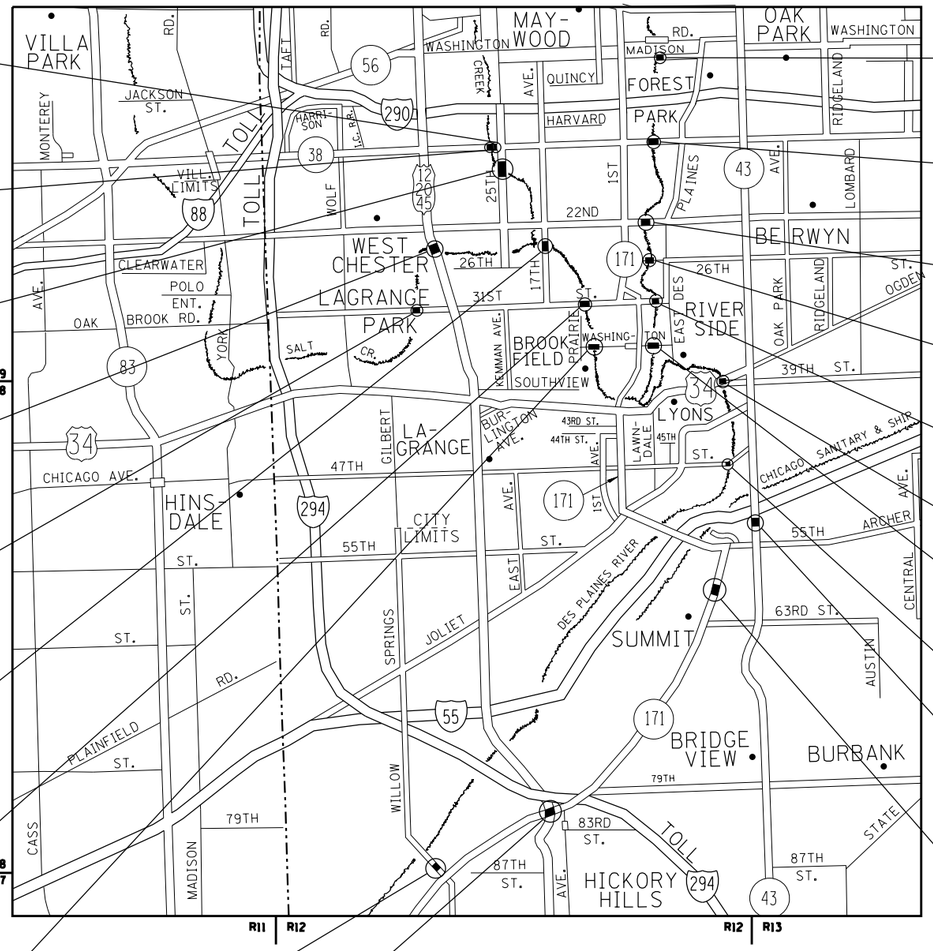
LOCATION OF PROJECT:
46. 31st STREET OVER
SALT CREEK
VILLAGE OF BROOKFIELD
STRUCTURE NO. 016-2725
ADT = 13,600 (2014)
POSTED SPEED LIMIT = 35 MPH

T38
T37

LOCATION OF PROJECT:
26. WASHINGTON AVENUE
OVER SALT CREEK
VILLAGE OF BROOKFIELD
STRUCTURE NO. 016-0873
ADT = 3,600 (2014)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
41. WILLOW SPRINGS ROAD
OVER I & M CANAL
VILLAGE OF WILLOW SPRINGS
STRUCTURE NO. 016-2646
ADT = 17,600 (2014)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
48. ILLINOIS ROUTE 171 (ARCHER AVE.)
OVER US ROUTE 12/20/45
VILLAGE OF WILLLOW SPRINGS
STRUCTURE NO. 016-2756
ADT = 16,500 (2017)
POSTED SPEED LIMIT = 45 MPH



YORK, PROVISO, RIVER FORSET, OAK PARK, RIVERSIDE, BERWYN,
CICERO, STICKNEY, LYONS, LAKE, PALOS, AND WORTH TOWNSHIPS

LOCATION OF PROJECT:
51. MADISON STREET OVER
DES PLAINES RIVER
VILLAGE OF MAYWOOD/RIVER FOREST
STRUCTURE NO. 016-2813
ADT = 13,000 (2018)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
12. ROOSEVELT ROAD OVER
DES PLAINES RIVER
VILLAGE OF FOREST PARK
STRUCTURE NO. 016-0472
ADT = 25,300 (2018)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
14. CERMAK ROAD (22nd STREET)
OVER DES PLAINES RIVER
VILLAGE OF FOREST PARK
STRUCTURE NO. 016-0634
ADT = 34,300 (2018)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
30. 26th STREET OVER
DES PLAINES RIVER
VILLAGE OF NORTH RIVERSDIE
STRUCTURE NO. 016-1016
ADT = 12,700 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
23. 31st STREET OVER
DES PLAINES RIVER
VILLAGE OF RIVERSIDE
STRUCTURE NO. 016-0870
ADT = 10,200 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
1. US ROUTE 34 (OGDEN AVENUE)
OVER DES PLAINES RIVER
VILLAGE OF LYONS
STRUCTURE NO. 016-0226
ADT = 16,400 (2017)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
27. FOREST AVENUE OVER
DES PLAINES RIVER
VILLAGE OF RIVERSIDE
STRUCTURE NO. 016-0874
ADT = 5,650 (2014)
POSTED SPEED LIMIT = 25 MPH

LOCATION OF PROJECT:
47. 47th STREET OVER
DES PLAINES RIVER
VILLAGE OF LYONS
STRUCTURE NO. 016-2740
ADT = 5,750 (2014)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
6 & 7. IL ROUTE 43 (SB & NB
HARLEM AVENUE) OVER CN RR
CITY OF CHICAGO
STRUCTURE NO. 016-0317 & 016-0318
ADT = 25,600 (2018)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
40. IL ROUTE 171 (ARCHER AVENUE)
OVER IHB RR
VILLAGE OF SUMMIT
STRUCTURE NO. 016-2607
ADT = 24,700 (2017)
POSTED SPEED LIMIT = 30 MPH

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	DRAWN -	REVISED -	
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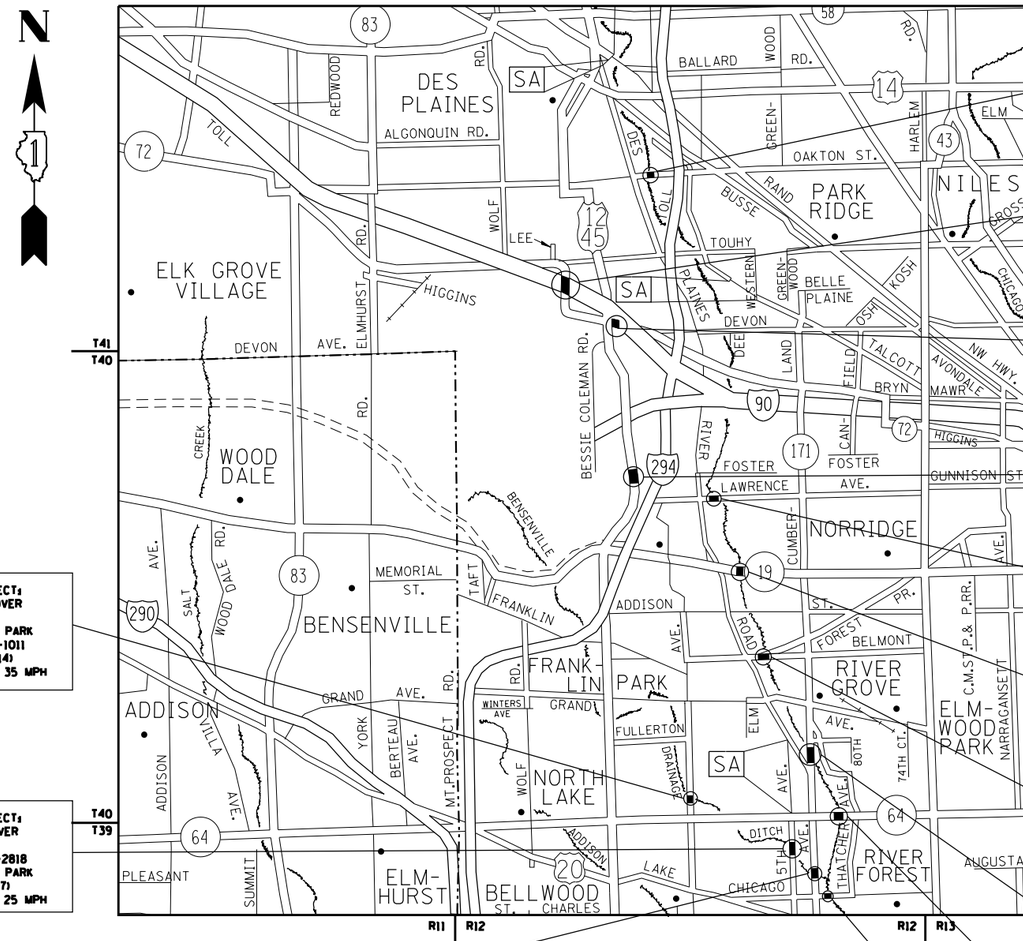
PLOT DATE = 2/1/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAPS

SCALE: | SHEET 3 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	7
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			



LOCATION OF PROJECT:
29. 25th AVENUE OVER
IHB RR
VILLAGE OF MELROSE PARK
STRUCTURE NO. 016-1011
ADT = 18,400 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
52. 5TH AVENUE OVER
SILVER CREEK
STRUCTURE NO. 016-2818
VILLAGE OF MELROSE PARK
ADT = 9,950 (2017)
POSTED SPEED LIMIT = 25 MPH

LOCATION OF PROJECT:
16. IL ROUTE 171 (1st AVENUE)
OVER SILVER CREEK
VILLAGE OF MAYWOOD
STRUCTURE NO. 016-0698
ADT = 27,600 (2017)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
37. IL ROUTE 62 (OAKTON STREET)
OVER DES PLAINES RIVER
VILLAGE OF DES PLAINES
STRUCTURE NO. 016-2601
ADT = 20,300 (2014)
POSTED SPEED LIMIT = 35 MPH

LOCATION OF PROJECT:
34. IL ROUTE 72 (LEE STREET)
I-90 (ADAMS TOLLWAY EXPY)
ROSEMONT/CHICAGO
STRUCTURE NO. 016-1509
ADT = 26,000 (2017)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
35. IL ROUTE 72 (HIGGINS ROAD)
OVER WILLOW CREEK
VILLAGE OF ROSEMONT/DES PLAINES
STRUCTURE NO. 016-2533
ADT = 23,900 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
55 & 56. US ROUTE 12/45 (NB/SB)
RAMP TO BALMORAL AVENUE
CITY OF CHICAGO
STRUCTURE NO. 016-7942 & 016-7943
ADT = 39,800 (2017)
POSTED SPEED LIMIT = 50 MPH

LOCATION OF PROJECT:
38. LAWRENCE AVENUE OVER
DES PLAINES RIVER
CITY OF CHICAGO
STRUCTURE NO. 016-2603
ADT = 22,500 (2014)
POSTED SPEED LIMIT = 45 MPH

LOCATION OF PROJECT:
43. IL ROUTE 19 (IRVING PARK ROAD)
OVER DES PLAINES RIVER
VILLAGE OF SCHILLER PARK
STRUCTURE NO. 016-2672
ADT = 23,700 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
42. BELMONT AVENUE OVER
DES PLAINES RIVER
VILLAGE OF RIVER GROVE
STRUCTURE NO. 016-2651
ADT = 28,400 (2014)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
15. IL ROUTE 171 (1st AVENUE)
OVER DES PLAINES RIVER
VILLAGE OF RIVER GROVE
STRUCTURE NO. 016-0697
ADT = 20,800 (2017)
POSTED SPEED LIMIT = 40 MPH

LOCATION OF PROJECT:
54. IL ROUTE 64 (NORTH AVENUE)
OVER DES PLAINES RIVER
VILLAGE OF RIVER FOREST
STRUCTURE NO. 016-3035
ADT = 46,800 (2017)
POSTED SPEED LIMIT = 30 MPH

LOCATION OF PROJECT:
21. CHICAGO AVENUE
OVER DES PLAINES RIVER
VILLAGE OF MAYWOOD
STRUCTURE NO. 016-0863
ADT = 8,700 (2014)
POSTED SPEED LIMIT = 35 MPH

ELK GROVE, MAINE, NILES, ADDISON, LEYDEN, NORWOOD PARK,
JEFFERSON, YORK, PROVISO, RIVER FOREST, AND OAK PARK TOWNSHIPS

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/1/2019	DATE -	REVISED -	

LOCATION MAPS

SCALE: SHEET 4 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	8
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

Bench Mark: " " Cut at S.E. Wingwall Des Plaines River Bridge at Ogden Ave. USGS El. 610.43

Existing Structure: SN 016-0226 (constructed in 1933) is a six span R.C. T-beam bridge supported by five unreinforced solid wall piers and two reinforced closed abutments, 354.24 ft. back to back of abutments. The roadway width is 44 ft. and there are 8.08 ft. sidewalks on each side for an overall width of 62.67 ft. The Contractor shall remove the existing superstructure and portions of the substructures as required and replace it with a wider superstructure. The road shall be kept open to one lane of traffic each way at all times by using Stage Construction.

No Salvage.

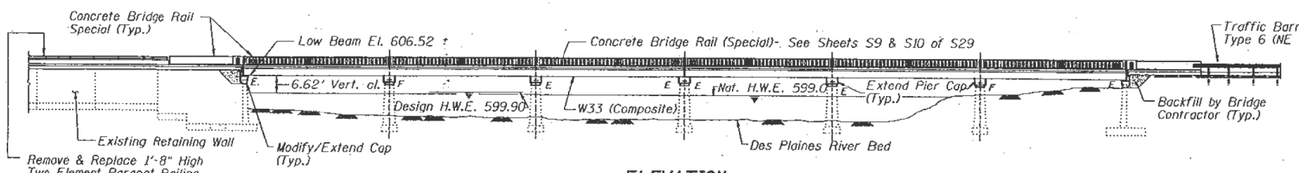
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 311	7B-BR	COOK	68	30
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 51 OF 529 SHEETS

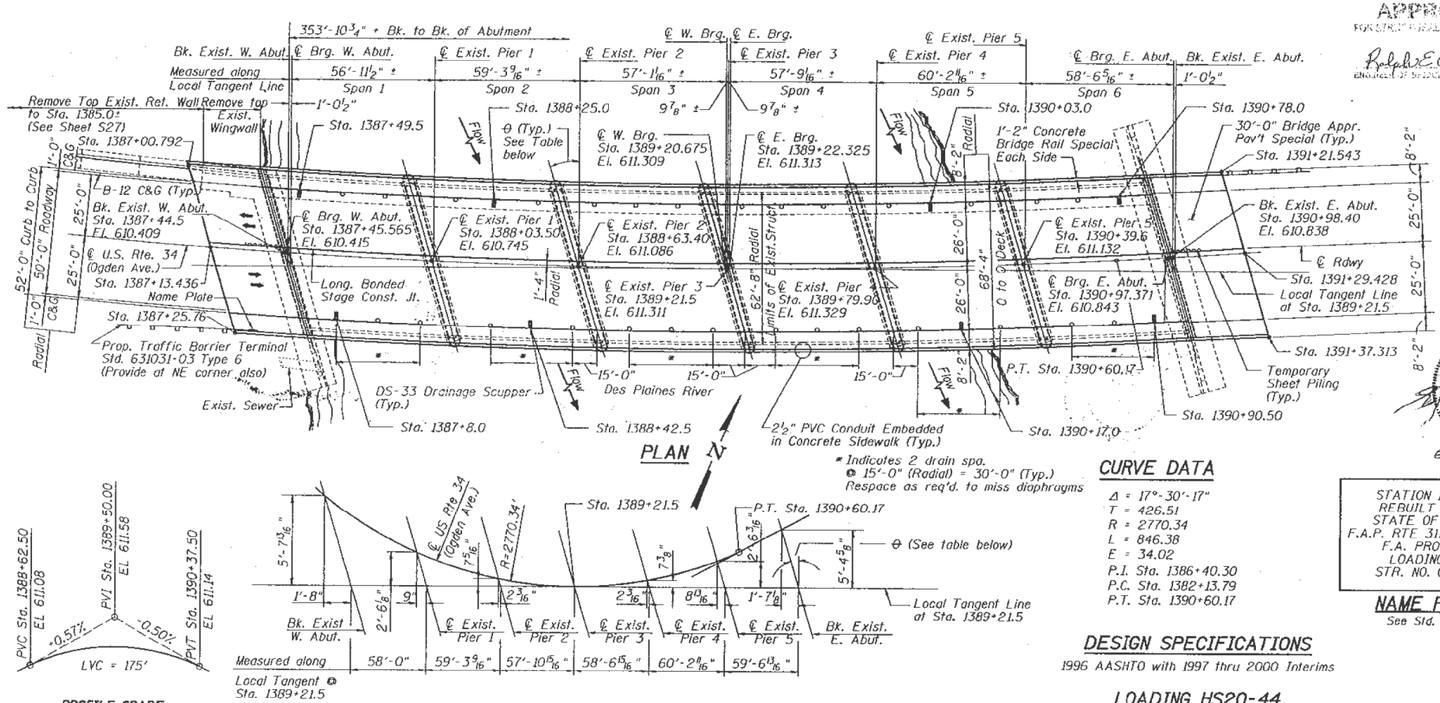
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal *	cu. yd.		144.1	144.1
Concrete Superstructure **	cu. yd.	742.7		742.7
Concrete Structures	cu. yd.		278.5	278.5
Reinforcement Bars, Epoxy Coated	Lbs.	164,740	17,750	182,490
Protective Coat	sq. yd.	2687		2687
Bridge Deck Grooving	sq. yd.	1944		1944
Drainage Scupper, DS-33	Each	8		8
Bar Splicers	Each	1126	200	1326
Bridge Seat Sealer	sq. ft.		585	585
Furnishing and Erecting Structural Steel	L.S.	1		1
Elastomeric Bearing Assembly, Type I	Each	60		60
Name Plates	Each	1		1
Stud Shear Connectors	Each	12,000		12,000
Concrete Bridge Rail, Special	Lin. Ft.	825		825
Bridge Joint System (Exp.), 1 5/8"	Lin. Ft.	215		215
Structure Excavation	cu. yd.		182	182
Porous Granular Embankment	cu. yd.		128	128
Epoxy Crack Sealing	Lin. Ft.		455	455
Temporary Sheet Piling	sq. ft.		440	440
Formed Concrete Repair (D<5")	sq. ft.		82	82
Formed Concrete Repair, (D>5")	sq. ft.		46	46
Floor Drains	Each	28		28

* Includes Removal of Top of Existing Retaining Wall
** Includes Parapets (Sheet S29)



ELEVATION



PLAN

PROFILE GRADE

(Along ℄ U.S. 34)

OFFSET SKETCH

* Indicates 2 drain spa. @ 15'-0" (Radial) = 30'-0" (Typ.) Respace as req'd. to miss diaphragms

Note: Contractor shall field verify skew angles and span lengths shown. See also Gen. Note #7 on sheet S2 of S29.

WATERWAY INFORMATION

Drainage Area = 630.2 sq. miles Low Grade Elev. 610.3 ft. @ Sta. 1387+30

	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	5,922	2,278	2,278	599.0	0	0	599.0	599.0
Design	50	7,362	2,557	2,557	599.9	0	0	599.9	599.9
Base	100	7,894	2,682	2,682	600.3	0	0	600.3	600.3
Max. Calc.	500	8,988	2,931	2,931	601.1	0	0	601.1	601.1

Location	θ
W. Abut.	16°24'55"
Pier 1	16°39'48"
Pier 2	16°32'32"
Pier 3	16°15'00"
Pier 4	16°34'56"
Pier 5	16°18'46"
E. Abut.	16°18'21"

DESIGNED	JM
CHECKED	EMM
DRAWN	MR HH
CHECKED	EMM JM

Date: 7-22-02

C:/CADD/STRUCTURAL/N21506/DGNFILES/OGDDPAE.DGN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ephrem E. Miranda
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
EFREN M. MIRANDA
81,3957
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER
EXP. 11/30/02

CURVE DATA

Δ = 17°-30'-17"
T = 426.51
R = 2770.34
L = 846.38
E = 34.02
P.I. Sta. 1386+40.30
P.C. Sta. 1382+13.79
P.T. Sta. 1390+60.17

STATION 1389+21.5
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE 311 SEC.7B-BR
F.A. PROJ. ACBHF-031( )
LOADING HS20 (025)
STR. NO. 016-0226

NAME PLATE

See Std. 515001

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2000 Interims

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

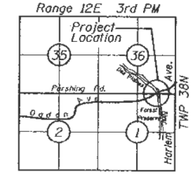
DESIGN STRESSES

EXISTING
f'_c = 3,500 psi
f_s = 33,000 psi (Reinf. in abutments only)

PROPOSED
f'_c = 3,500 psi
f_y = 60,000 psi (Reinf.)
f_y = 36,000 psi (M270 Grade 36)
f_y = 50,000 psi (M270 Grade 50)

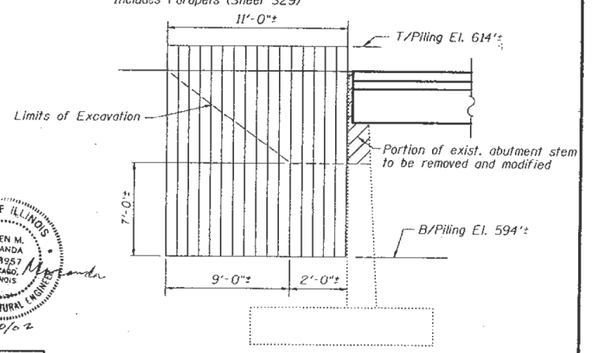
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.0% g
Site Coefficient (S) = 1.0



LOCATION SKETCH

Nakawatase, Wyns and Associates, Inc.
ENGINEERS ARCHITECTS SURVEYORS
205 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606



AT ABUTMENTS

Note
If the Contractor chooses to alter the temporary cantilevered sheet piling requirements shown on these plans for lesser design requirements, then full design submittals sealed by an Illinois Licensed Structural Engineer will be required and submitted to the Department for review and approval.

Excavation Slope at Rt. & Lt. to Abut.

TEMPORARY SHEET PILING DETAILS

Minimum Section Modulus = 18.1 in.³/ft.
Minimum Embedment Depth = 7'-0"±

GENERAL PLAN & ELEVATION

U.S. ROUTE 34 (OGDEN AVE.)
OVER DES PLAINES RIVER
(PUBLIC BODY OF WATER)
STA. 1389+21.5
F.A.P. RTE. 311
SECTION 7B-BR
COOK COUNTY
STRUCTURE NUMBER 016-0226

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN SN: 016-0226
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
PLOT DATE = 1/30/2019	DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	9
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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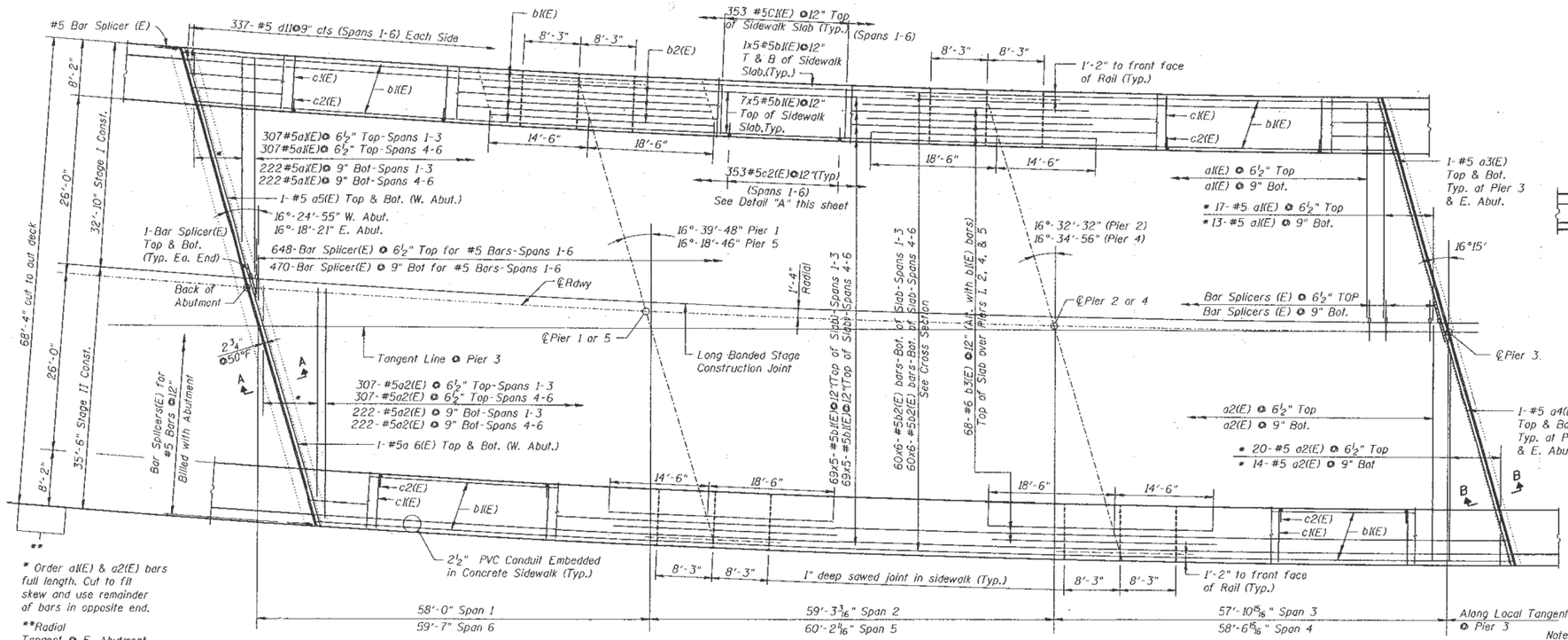
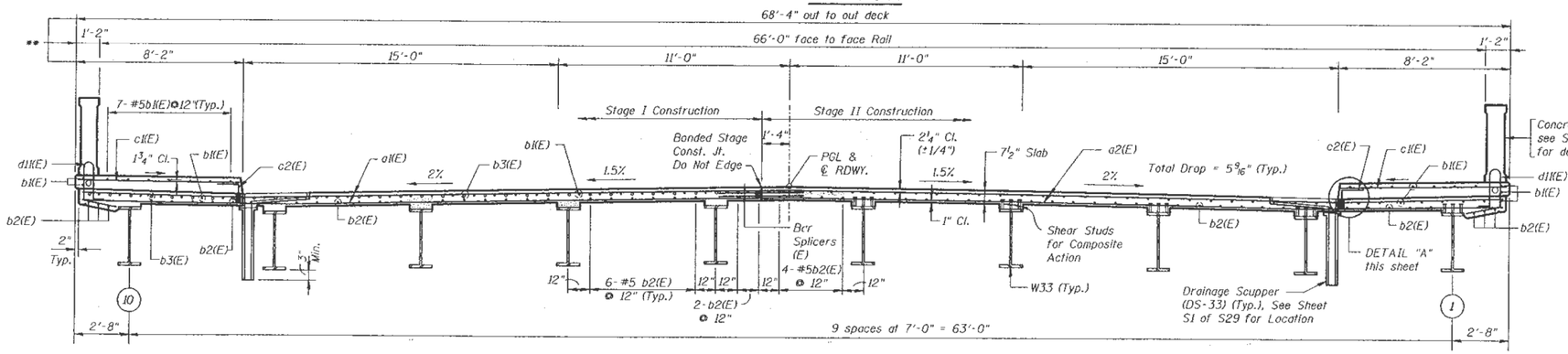
FOR INFORMATION ONLY



HALF PLAN

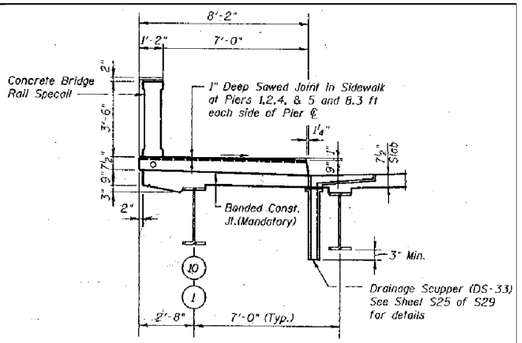


NEAR PIER

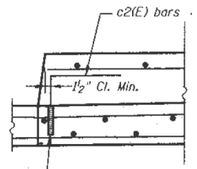
AT MIDSPAN

CROSS SECTION

(Looking East)



SIDEWALK CONFIGURATION & DETAILS



DETAIL "A"

Minimum Bar Laps:
#5 - 2'-2"
#6 - 2'-7"

Notes:

1. See Sheet S8 of S29 for Sec. A-A, Sec. B-B, bar cutting diaphragms and Bill of Material.
2. Reinforcement bars indicated thus: 60 x 6-#5, etc. indicates 60 lines of bars with 6 lengths per line.
3. Reinforcement Bars designated (E) shall be Epoxy Coated.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0226

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	10
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

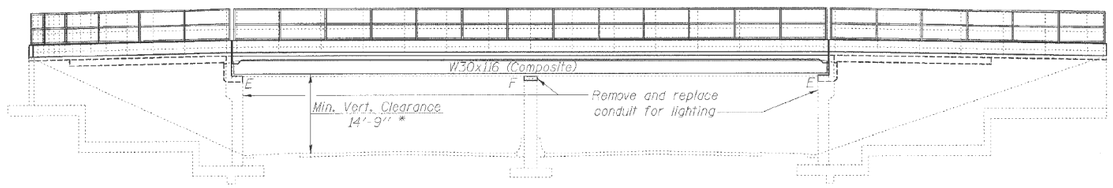
Benchmark: Brass disk in NE sidewalk, Station ±101+08.5, ±33.3' Lt. Elev. 611.24

Existing Structure: SN 016-0246, two-span 116'-0" back to back of abutments, 75'-0" out to out. Superstructure consists of a R.C. deck supported by wide-flange steel girders (which support the existing Protective Shield) on closed abutments. Built as F.A. Route 99, Sec. 263-0101.9-15d in 1956. Bridge deck overlaid and patched in 1982, and repairs performed in 2000. Traffic to be detoured during construction.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1360	0101BR-2	COOK	50	49
PROJ. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

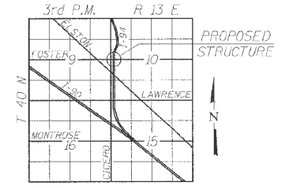
SHEET NO. 1
26 SHEETS

Contract #60A65

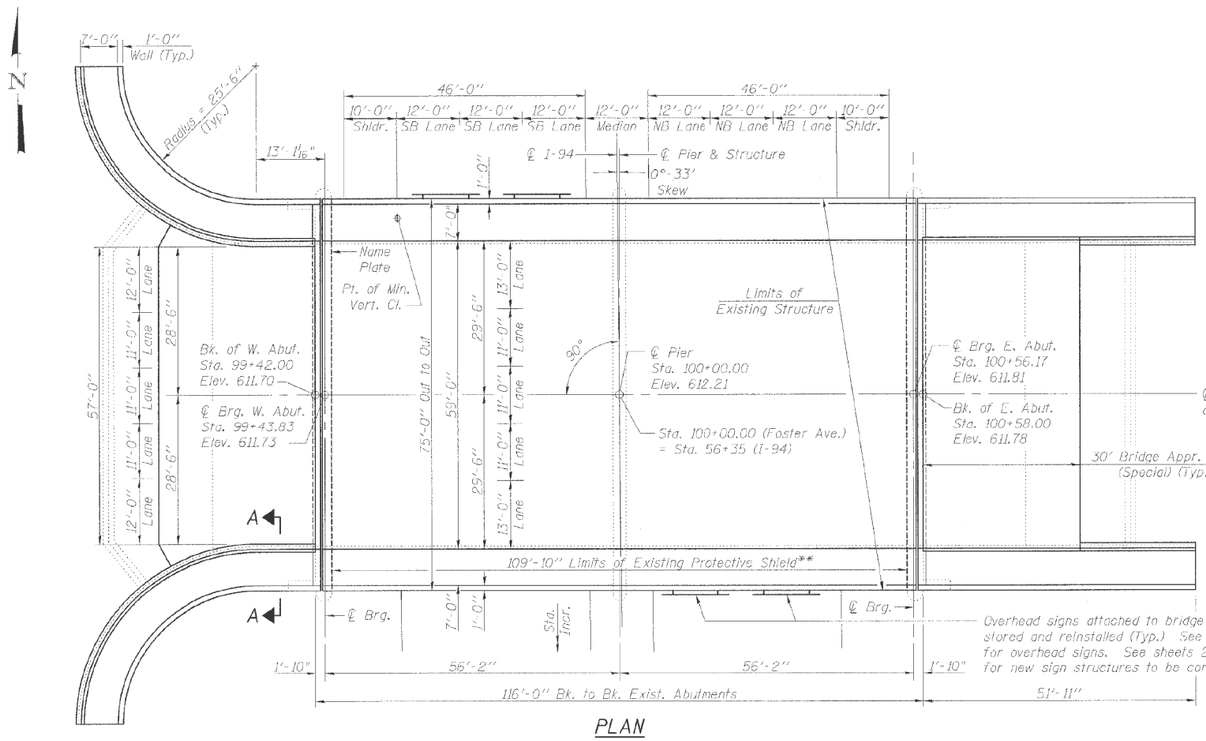


*Derived from existing clearance measured during 2005 survey

ELEVATION



LOCATION SKETCH



PLAN

THE EXISTING PROTECTIVE SHIELD SHOULD MEET THE REQUIREMENTS AND BE REMOVED AS PER PROVISIONS OF CHECK SHEET #22. THE COSTS OF NEEDED REINFORCEMENT OF THE EXISTING PROTECTIVE SHIELD, IF ANY, TO MEET THE REQUIREMENTS OF CHECK SHEET #22, AND THE REMOVAL OF EXISTING PROTECTIVE SHIELD SHALL BE INCLUDED IN THE PAY ITEM "REMOVAL OF EXISTING SUPERSTRUCTURES"

STATION 100+00
REBUILT 20 BY
STATE OF ILLINOIS
F.A. RT. 1360 SEC. 0101BR-2
LOADING HS20
STR. NO. 016-0246

NAME PLATE

See Std. 515001

Provide new name plate directly above existing name plate on west abutment face. Fasten to existing abutment by means of four brass or bronze bolts with countersunk heads. Cost included with Name Plates.

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO (17th Ed.)

DESIGN STRESSES

FIELD UNITS

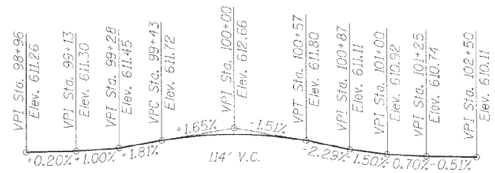
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Grade 50)
f_y = 36,000 psi (M270 Grade 36)

EXISTING CONSTRUCTION

f_s = 20,000 p.s.i. (reinforcement)
f_c = 1,200 p.s.i. (concrete)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0



PROFILE GRADE FOSTER AVENUE

(Along ℄ of Roadway)

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
WILLIAM J. VEGRZYN
41983
HANOVER PARK
IL
LICENSED STRUCTURAL ENGINEER

William J. Vegrzyn 6-29-06
Expires 11-30-06

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, Il 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
FOSTER AVE OVER I-94 (EDENS EXPRESSWAY)
FAU RTE 1360 SECTION 0101BR-2
COOK COUNTY
STATION 100+00
STRUCTURE NO. 016-0246

DATE: 4/30/2006
DRAWN BY BLB
CHECKED BY WJV

6/29/2006 K:\1118295\Structure\Final Plans\Final Plans.dgn

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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0246

SCALE: | SHEET OF SHEETS | STA. | TO STA.

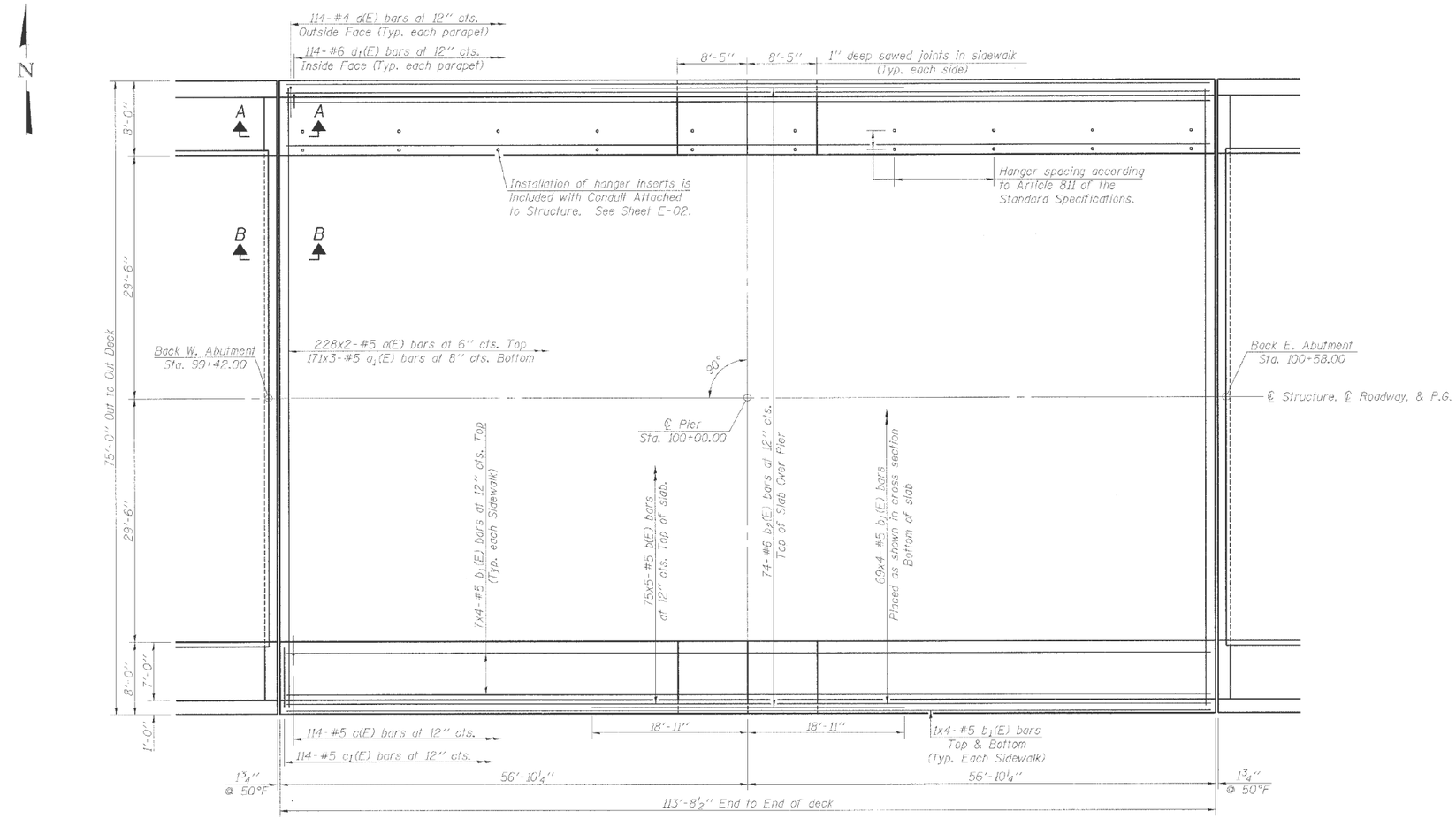
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	11
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1360	0101BR-2	COOK	90	53
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
26 SHEETS

Contract #60A65



PLAN BRIDGE DECK

NOTES

See Sheets 6 and 7 of 26 for Superstructure Details, Parapet Details, Section A-A and B-B, and Bill of Material.

Minimum lap length for #5 Bars = 2'-2".

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 75x5-#5 etc. indicates 75 lines of bars with 5 lengths per line.

See Sheets 23 thru 26 of 26 for Bridge Mount Sign details.

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, Il 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK PLAN
FOSTER AVE. OVER I-94
FAU RTE 1360 - SECTION 0101BR-2
COOK COUNTY
STATION 100+00
STRUCTURE NO. 016-0246

DATE: 4/30/2006
DRAWN BY JMT
CHECKED BY BLB

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

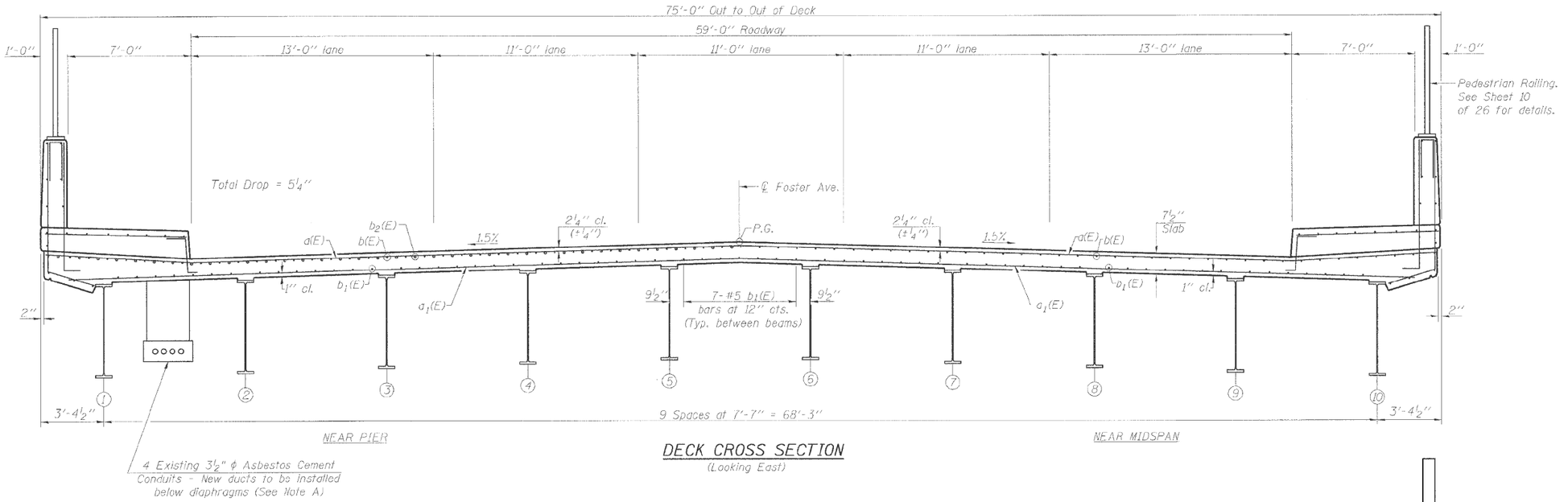
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0246

SCALE: | SHEET OF SHEETS | STA. | TO STA.

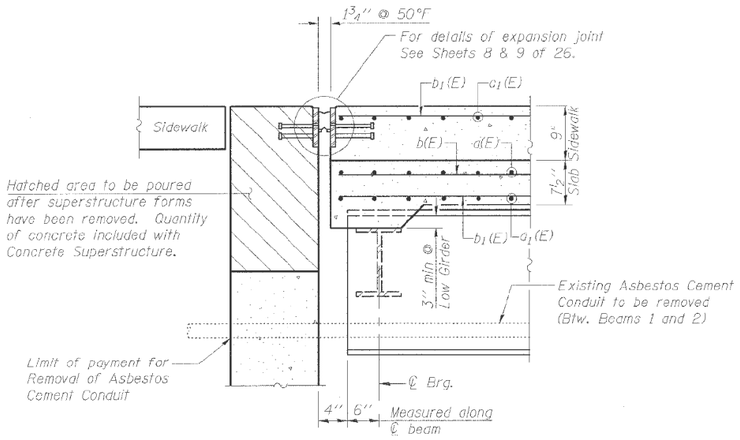
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	12
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

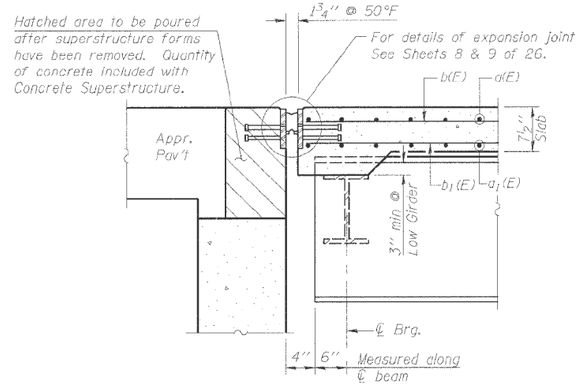


DECK CROSS SECTION

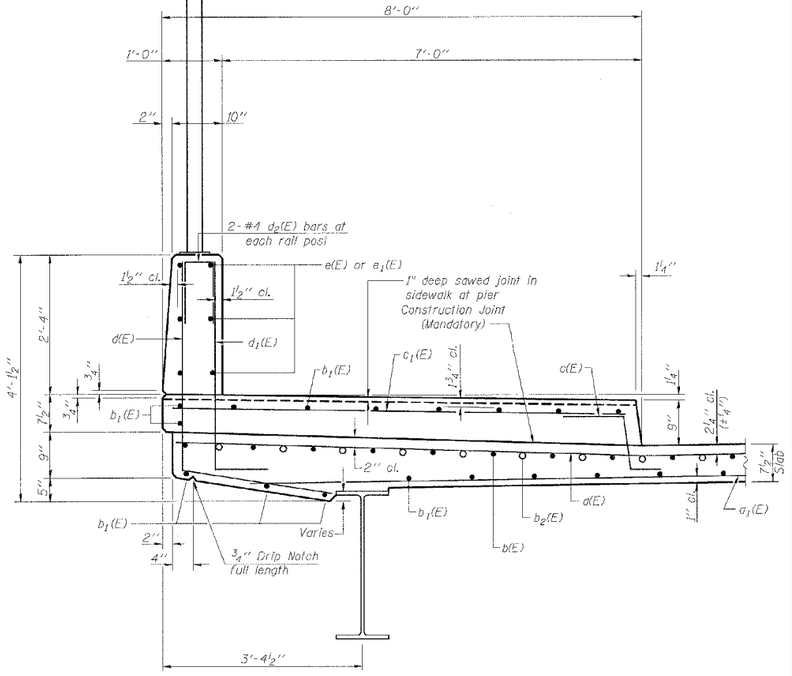
(Looking East)



SECTION A-A



SECTION B-B



SECTION THRU PARAPET & SIDEWALK

(Near Pier)

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0246

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	13
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 1360	21-BZ 1-BR	COOK	187	46
FED ROAD DIST NO 7	ILLINOIS	FED AID PROJECT		

SHEET NO. 1 OF 19 SHEETS

E. (N. "A" Chimney "C" Southeast corner of bridge, south side of sidewalk @ hand rail, Station 36+80, Elevation 599.01

(56' O. to O. & 102' Bk. to Bk.),

W21x62 — High Water Elev. 596.0 — ℄ Brg. — Creosoted Piles

ELEVATION

Exist. Sidewalk — Gore — B-3 — 177' Across River to R 5201 Pulaski — I.B.T. Aerial Cable — Wr. Iron Fence — 13'-4" — 50.24 To C/L — I.B.T. Pole — 7' — 20' ℄ E — ℄ F.A.U. Rte. 1360 Foster Avenue

12'-0" 12'-3" 12'-3" 12'-0" 12'-3"

Cr. Elev. 599.00 — Cr. Elev. 599.00 — 2'-6" Pavement Rem. & Repl. — ℄ Stage Constr. — Bk. Exist. E. Abut. Sta. 36+74 Cr. Elev. 599.00 — Exist. Sidewalk

Stage I Constr. — Stage II Constr. — 4'-0" — 11'-0" — 22'-0" — 11'-0" — 1'-0"

PC Conc. Pavement 10" (Typ)

Sidewalk Removal & Replacement See Roadway Plans

Comb. Conc. Curb & Gutter Type B-6.12 (Mod.)

5'-0" — 51'-0" — 5'-0" Sta. to Bk. Exist. Abut.

PLAN

B-4

STATION 36+23.0
REBUILT IN BY
STATE OF ILLINOIS
S.B.I. RT. 21 SEC. 21-BZ-1-BR
LOADING HS 20
STR. NO. 016-0249

NAME PLATE
See Std. 2113

DESIGN SPECIFICATIONS
AASHTO (1977) and applicable Interims (1978 thru 1983)

LOADING HS20-44
Allow 25#/sq. ft. for future wearing surface

DESIGN STRESSES
FIELD UNITS

f'c = 3,500psi (Superstructure)
fc = 1,400psi (Substructure)
fy = 60,000psi (Reinf.) Superstructure
fs = 24,000psi (Reinf.) Substructure
fy = 50,000psi (Struc. Steel) AASHTO M223, Gr. 50
= 36,000psi (") AASHTO M183

PRECAST UNITS
f'c = 4,500psi
fc = 1,800 psi
fs = 20,000psi

WATERWAY INFORMATION

Drainage Area			Low Grade Elev.		@ Sta.				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Hor. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	3550	788	912	596.0	0.1	0.1	596.1	596.1
Base	100	4120	788	962	597.1	0.2	0.2	597.3	597.3
Overtopping	22	2600	766	766	596.2	1.0	0.0	596.0	596.0
Max. Calc.	500	5520	788	962	599.5	0.3	0.3	599.8	598.8

GENERAL NOTES

114550 — 31; 23230

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu.Yds.		56	56
Expansion Bolts (3/4" ℄)	Ea.		94	94
Class X Concrete	Cu.Yds.	314.5	145.2	459.7
Precast Concrete Bridge Slab	Sq.Ft.	838		838
Reinforcement Bars (Epoxy Coated)	Lbs.	46750		46750
Reinforcement Bars	Lbs.	4340	14630	18970
Removal of Existing Superstructure	Ea.	1		1
Alum. Railing - Type L	Lin.Ft.	317		317
Elastomeric Bearing Assembly (Type I)	Each	26		26
Stud Shear Connectors	Each	3588		3588
Temporary Concrete Barrier	Lin.Ft.	110		110
Name Plates	Ea.	1		1
Structural Steel	L.S.			L.S.
Portland Cement Concrete Pav't. (10")	Sq.Yds.	56		56
Pavement Fabric	Sq.Yds.	56		56
Preformed Joint Seal (2"2")	Lin.Ft.	173		173
Pavement Removal & PCC Replacement Type 1 (10")	Sq.Yds.	31		31
[illegible] Piles (20.1 to 38')	Lin.Ft.	276		276
Protective Coat	Sq.Yds.	1000		1000
Floor Drains	Each	12		12
Structure Excavation	Cu Yds		130	130
Expansion Tie Anchors (3/4" ℄)	Ea.	64		64
Epoxy Crack Sealing	Lin.Ft.		35	35
Repair Concrete Structures	Sq.Ft.		14	14

Proposed reconstruction Bridge #2

R 13 E — Foster — Avenue — Meyer — Avenue — 10 — 11 — 15 — 14 — NORTH

Jefferson Township

LOCATION SKETCH

BRIDGE NO. 2
GENERAL PLAN & ELEVATION
F.A.U. ROUTE 1360 FOSTER AVENUE OVER NORTH BRANCH CHICAGO RIVER
F.A.U. RTE. 1360 SEC. 21-BZ-1-BR
COOK COUNTY
STA. 36 + 23.00

DESIGNED	Patrick M. Petrone
CHECKED	[illegible]
DRAWN	V.H.
CHECKED	[illegible]

April 26 1984
EXAMINED
PASSED
APPROVED

DISTRICT ONE

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0249

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	14
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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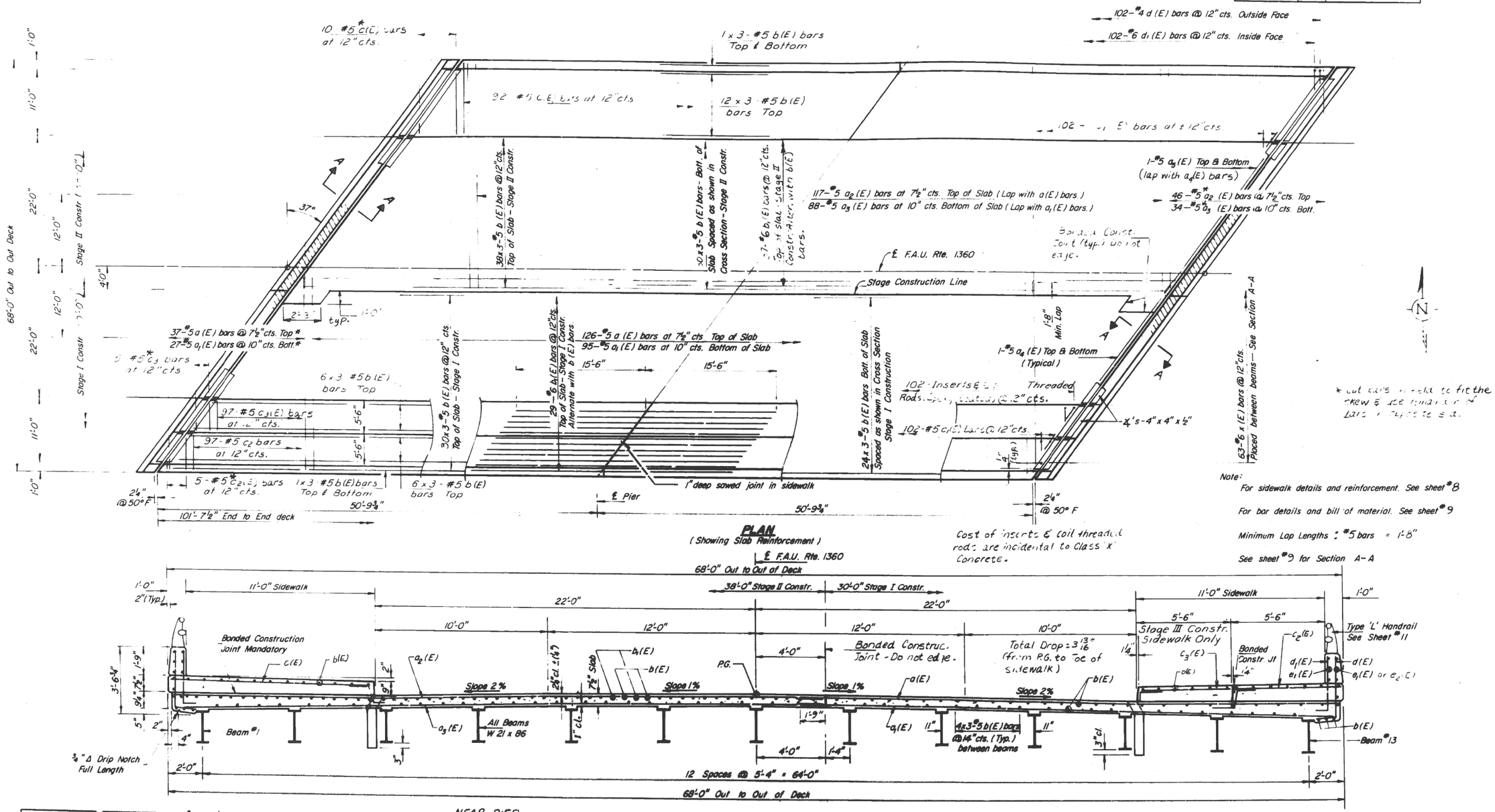
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.U. 1360	21 BZ, I-BR	COOK	97	52
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

SHEET NO 7
19 SHEETS



PLAN
(Showing Slab Reinforcement)

NEAR PIER — CROSS SECTION (Looking East) — NEAR MIDSPAN

DESIGNED	Patricia M Petrone	
CHECKED	Rumstein	
DRAWN	PWS	
CHECKED	Rum	

April 26 1984
EXAMINED James J Rathsam
PASSED
APPROVED
BUREAU OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE
F.A.U. Rte. 1360 SECTION 21-BZ+BR
COOK COUNTY
Sta. 36+23.00

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0249

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	15
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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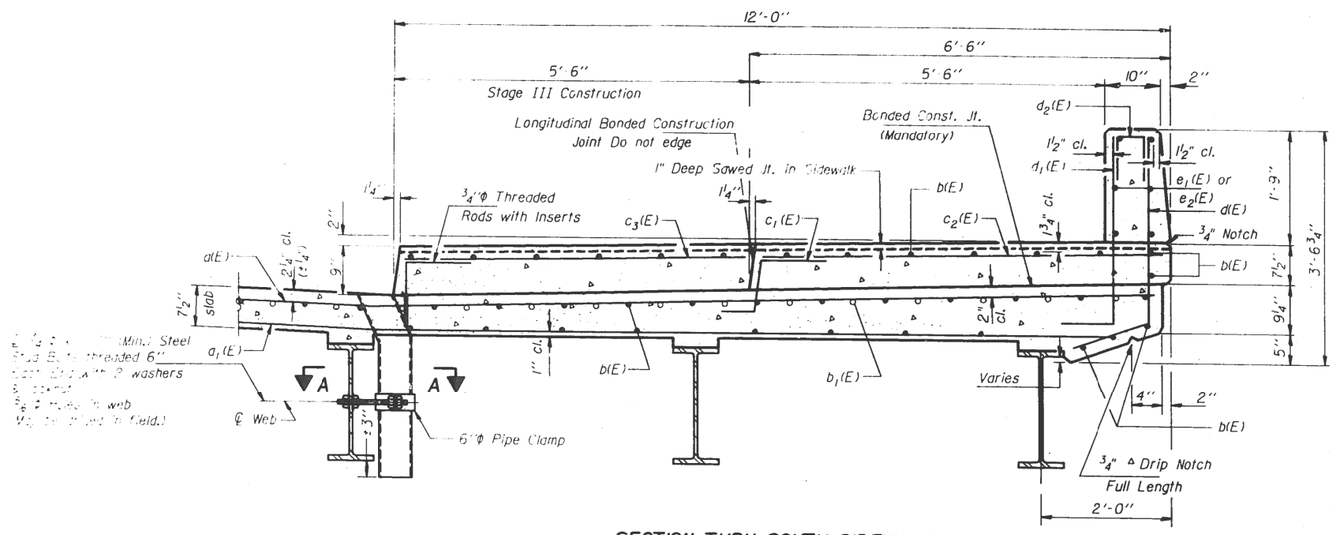
FOR INFORMATION ONLY

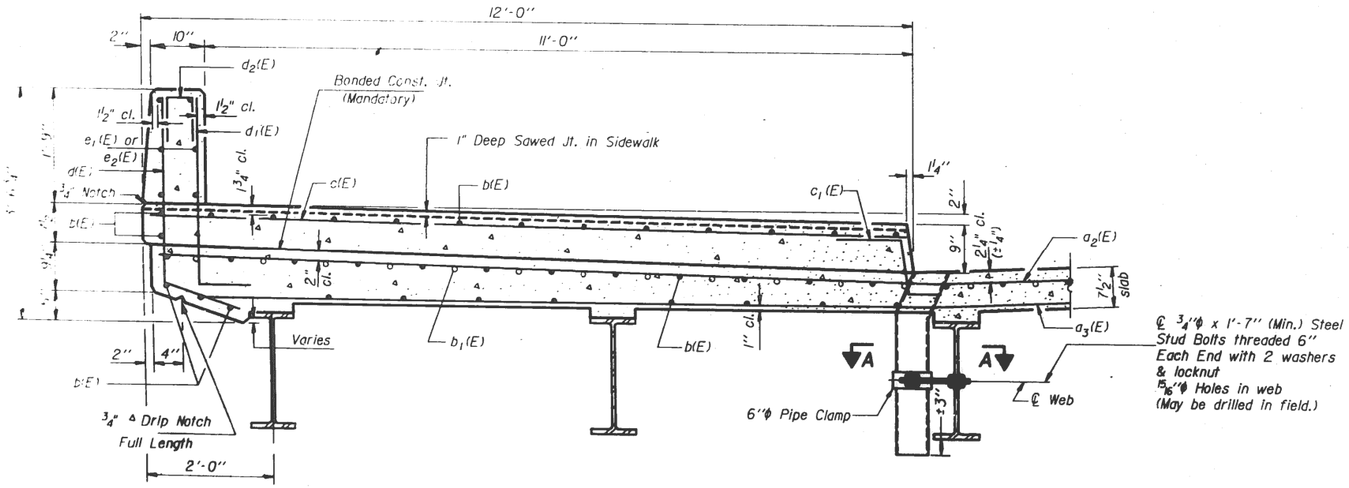
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. RTE. 1360	21 BZ 1 BR	Cook	2	16
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

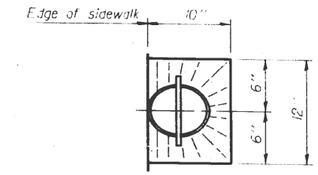
SHEET NO. 8
19 SHEETS



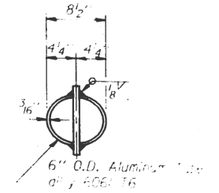
SECTION THRU SOUTH SIDEWALK



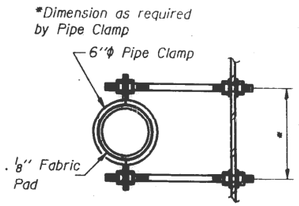
SECTION THRU NORTH SIDEWALK



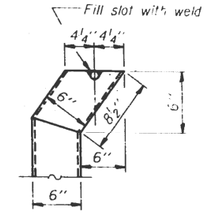
TOP PLAN



TOP PLAN



SECTION A-A



ALUMINUM TUBE

Notes:
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting.
Reinforcement bars designated (E) shall be epoxy coated.
Sidewalk Class X Concrete and Reinforcement Bars are billed with superstructure on Sheet 9.
For parapet details see Sheet 9.

DESIGNED	Patricia M Petrone
CHECKED	K. McCallum
DRAWN	R. P. Summer
CHECKED	R.W.M.

April 26 1984
ENGINEER
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

SIDEWALK DETAILS
F.A.U. RT.1360 SEC.21-BZ-1-BR
COOK COUNTY
STA.36+23.00

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0249

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	16
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 1360	21-BZ	COOK	97	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

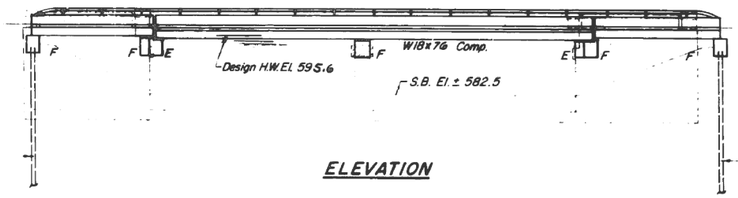
SHEET NO. 1
23 SHEETS

Structure No. 016-0250

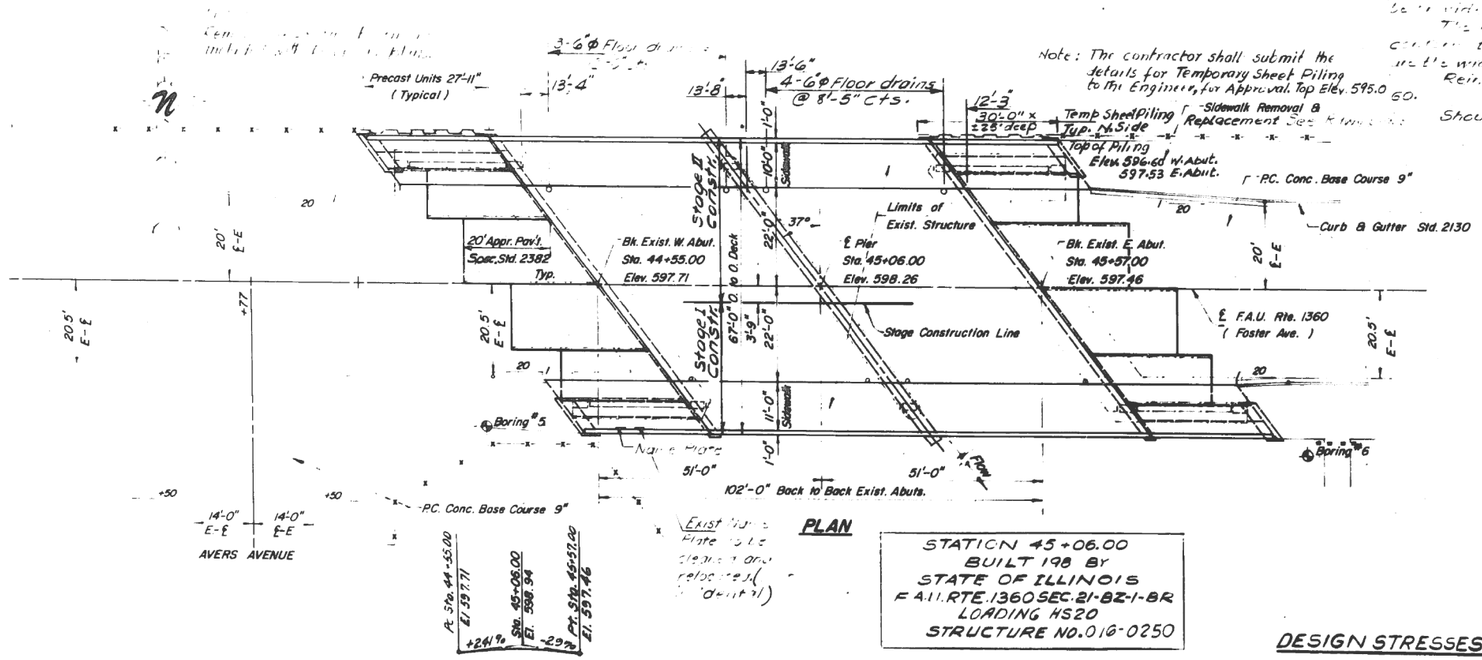
Existing Structure: Built as S.B.I. Rte. 21 at Sta. 45+06 Sec. 21-BZ-1 in 1933. Existing R.C. Deck Girders to be removed and replaced with a concrete slab on W18x76 Steel wide flange Bms. Utilizing stage construction so as to maintain traffic over the structure at all times. The existing structure is 102'-0" Long and 56'-6" Wide out to out.

No Salvage.

Bench Mark: "U" cut in sidewalk south side at west abutment on back of sidewalk by handrail Elev. 600.02



ELEVATION



PLAN

Note: The contractor shall submit the details for Temporary Sheet Piling to the Engineer, for Approval. Top Elev. 595.0

PROFILE GRADE F.A.U. Rte. 1360

STATION 45+06.00
BUILT 198 BY
STATE OF ILLINOIS
F.A.U. RTE. 1360 SEC. 21-BZ-1-BR
LOADING HS20
STRUCTURE NO. 016-0250

NAME PLATE
(See Std. 2113)

GENERAL NOTES

See Proposal for Boring Data

Fasteners shall be high strength bolts. Bolts in ø open holes 1/16" ø, unless otherwise noted.

Calculated weight of Structural Steel M 183 [illegible]

[illegible] Structural Steel except where otherwise noted.

Field welding of shear connectors will not be permitted [illegible] or beyond a point 1/4 the distance from the pier support to the point of dead load contraflexure. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over bearings.

Plan dimensions and details relative to existing structure have been taken from contract plans and are subject to nominal construction variation. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary adjustments to conform to construction. Ordering of materials or beginning of work shall not be cause for additional consideration for a change in the scope of work. However, the Contractor will be paid for the quantity actually furnished at the contract unit price for the item.

Expansion bolts shall consist of alphaset [illegible] Certified proof load = 40,000 lbs. and 3/4" E [illegible]

Pedestal seat surfaces shall be constructed to conform to the [illegible] within a tolerance of 1/8". Angles and shall be placed either [illegible] or shall be [illegible] Type "B" design in such a manner that [illegible] plate of the bearing [illegible] be wider than the [illegible]

The entire [illegible] surface of concrete subject to the [illegible] conform to the Standard Specifications for Metal Fabrication. The Contractor shall [illegible] the width flange beyond the [illegible] plate material.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-31 Grade 60.

Shoulder transition to wingwalls shall be [illegible] with [illegible] concrete. Concrete [illegible]

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu Yds.		86	86
Expansion Bolts 3/4"ø	Each		96	96
Class X Concrete	Cu. Yd.	5.5.5	1.4	1.4.9
Precast Concrete Bridge Slab	Sq. Ft.	838		838
Reinforcement Bars	Pound	4440	(3330)	1110
Reinforcement Bars (Epoxy Coated)	Pound	41360		41360
Removal of Existing Superstructure	Each	1		1
Aluminum Railing Type L	Lin. Ft.	317		317
Floor Drains	Each	14		14
Name Plates	Each	1		1
Structural Steel	Lump Sum	0.26		0.26
Preformed Joint Seal - 2 1/2"	Lin. Ft	168		168
Creosoted Piles (20.1' to 36')	Lin. Ft.		220	220
Protective Coat	Sq Yd.	0.83		0.83
Elastomeric Bearing Assembly Type 1	Each	30		30
Stud Shear Connector	Each	3690		3690
Structure Excavation	Cu. Yd.		125	125
Temporary Concrete Barrier	Lin. Ft.	102		102
Epoxy Crack Sealing	Lin Ft.		30	30
Repair Concrete Structures	Sq. Ft.		44	44
Temporary Sheet Piling	Sq. Ft			1500

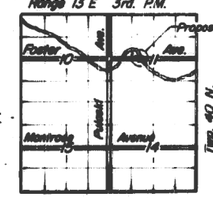
DESIGN STRESSES - FIELD UNITS

f_y = 50,000 p.s.i. (Struct. Steel) AASHTO M 223 Gr. 50
f_y = 36,000 p.s.i. (Struct. Steel) AASHTO M 183
f_c = 3,500 p.s.i. (Super.) f_c = 1400 psi (Sub.)
f_y = 60,000 p.s.i. (Reinforcement) Super.
f_s = 24000 psi (Reinforcement) Sub

PRECAST UNITS
f_c' = 4,500 p.s.i.
f_c = 1,800 p.s.i.
f_s = 20,000 p.s.i.
n = 8

LOADING HS 20-44

Allow 25 lbs/sq. ft. for future wearing surface.
Design Specification: 1977 AASHTO; 1978 thru 1983 Interim Specifications.



Jefferson Township
LOCATION SKETCH

BRIDGE No. 3
GENERAL PLAN
F.A.U. Rte. 1360 Foster Ave. Over North Branch Chicago River
F.A.U. Rte. 1360 Sec. 21-BZ-1-BR
COOK COUNTY
Sta. 45+06.00

WATERWAY INFORMATION

Drainage Area = 119 Sq. Mi. Low Grade Elev. @ Sta.

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Hwt. H.W.E.	Head — Ft. Exist.	Head — Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	3530	855	835	595.6	0.1	0.1	595.7	595.7
Base	100	4120	855	916	596.7	0.3	0.3	597.0	597.0
Overtopping	20	2330	835	868	594.0	0.1	0.1	594.1	594.1
Max. Calc.	500	N/A							

DESIGNED	[illegible]
CHECKED	[illegible]
DRAWN	V.H F.M L.H.
CHECKED	[illegible]

May 1 20 24
EXAMINED [illegible]
PASSED [illegible]
APPROVED [illegible]
DIRECTOR OF HIGHWAYS

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0250

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	17
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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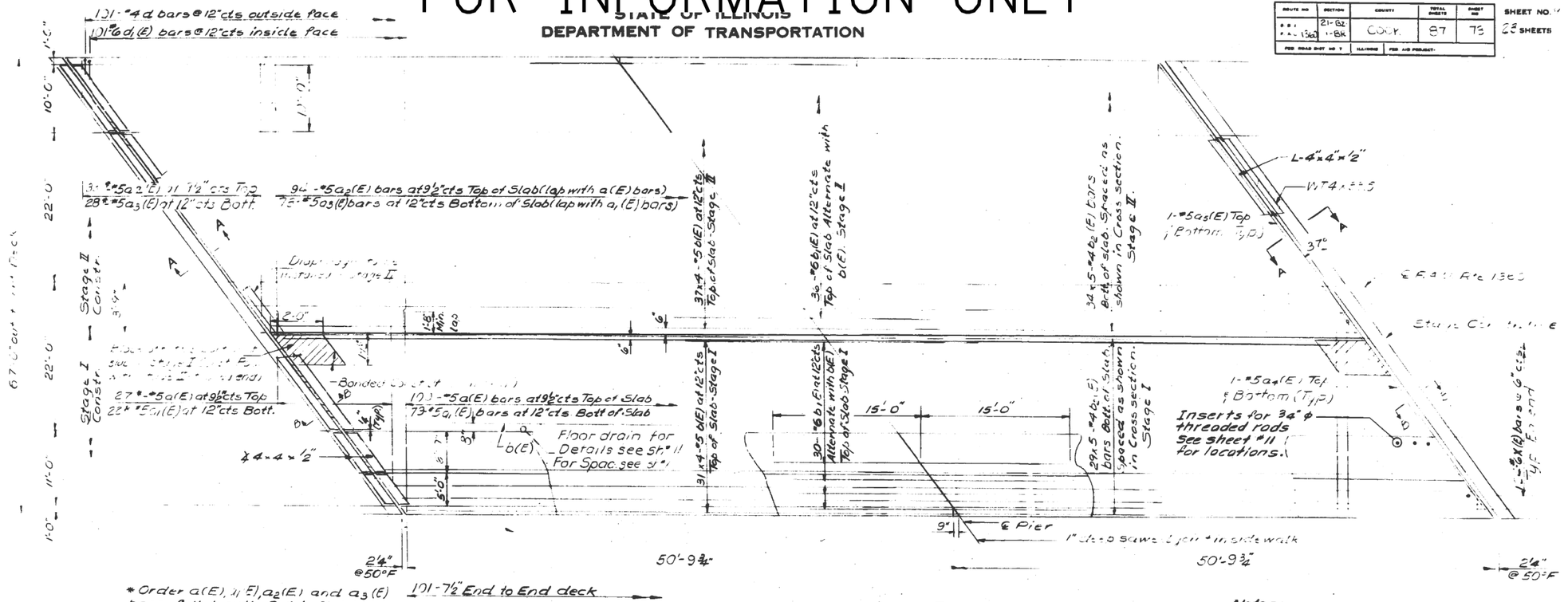
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.U. 1360	21-BZ 1-BR	COOK	87	73
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

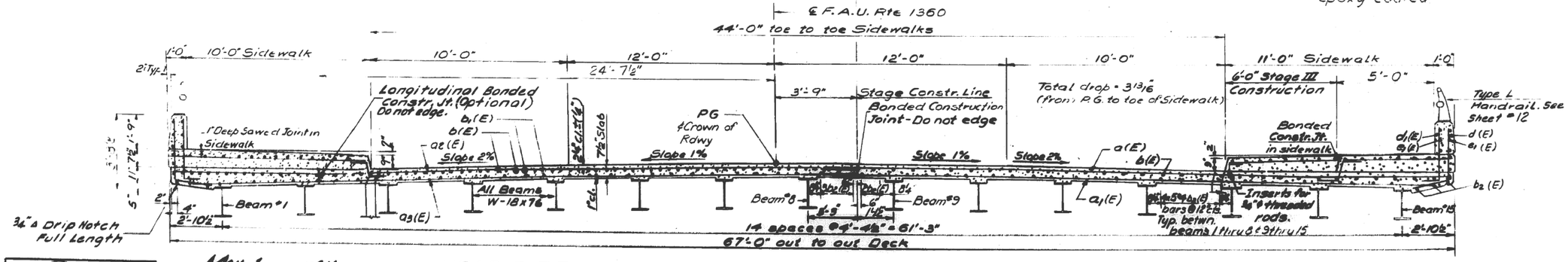
SHEET NO. 17
23 SHEETS



* Order a(E), a1(E), a2(E) and a3(E) bars full length. Cut in field to fit and use remainder of bars at opposite end.

PLAN
(Showing Slab Reinforcement)

Notes:
For Sidewalk details and reinforcement. See sheet #11
For bar details and bill of material. See sheet #10
Minimum Lap lengths - #4 bars = 1'-4"
#5 bars = 1'-5"
See sheet # 10 for Sections A-A and B-B
Reinforcement bars designated (E) shall be epoxy coated



NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

SUPERSTRUCTURE
F.A.U. RTE. 1360 SECTION 21-BZ-1-BR
COOK COUNTY
STA. 45 +06.00

DESIGNED	Ramesh Bavisa
CHECKED	
DRAWN	V.H. F.M.
CHECKED	
APPROVED	

USER NAME = dlazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0250

SCALE:	SHEET OF SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	18
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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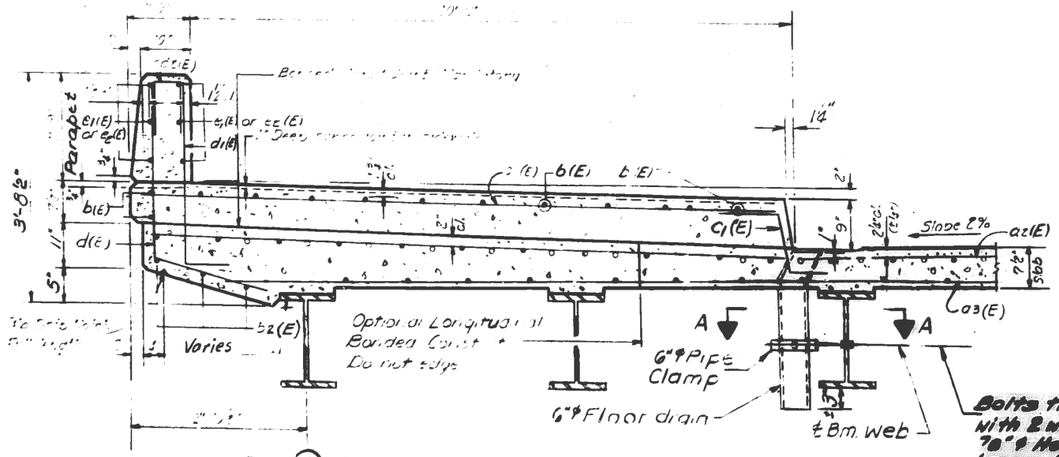
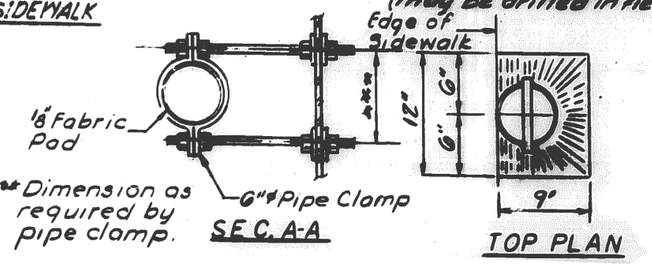
FOR INFORMATION ONLY

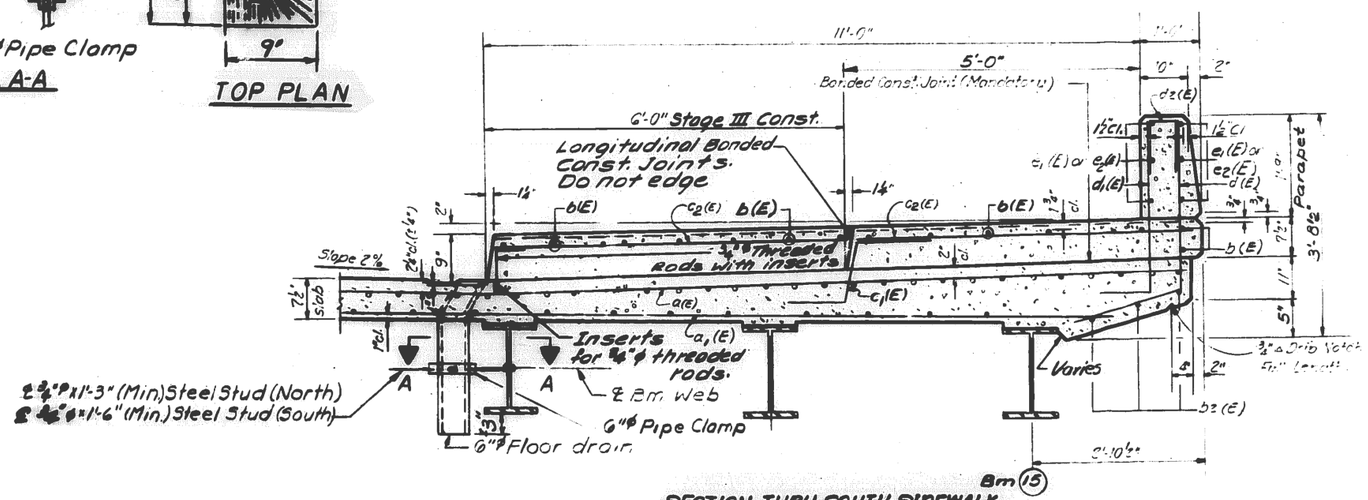


Bm (1) SECTION THRU NORTH SIDEWALK



SEC. A-A

TOP PLAN



Bm (15)

SECTION THRU SOUTH SIDEWALK

Note:
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surfaces of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec SSPC-SP1 & SSPC-Paint 27 prior to painting

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USER NAME = dlazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–0250

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	19
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

Benchmark: Chiseled "a" on seat at South end of East Abutment Elev. 596.33
Existing Structure: Built as S.B.I. Rte 21, Section 21-C-NRM-4, Sta. 38+68.55 in 1935. R.C. Deck on steel girders, R.C. Piers and abutments. 62'-8" O. to O. and 147'-8" Bk. to Bk. Contractor shall remove existing deck and replace with new deck, sidewalks and parapets, utilizing stage construction so as to maintain traffic at all times.
Salvage: None
Structure No. 016-0251.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 1360	21C	COOK	172	10
PED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5 SHEETS

21C-NRM-4-BR

GENERAL NOTES

Fasteners shall be high strength bolts, Bolts "A" open holes (S) unless otherwise noted.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Expansion bolts shall consist of approved expansion anchors providing minimum certified proof load = 4,080 lbs., and 3/4 x 12" hooked bolts.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 (Grade 60).

Spalled areas on piers as designated by the Engineer shall be repaired as specified in "Repair of Concrete Structures" (See Sheet No. 7 of 7 Sheets).

All new structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint.

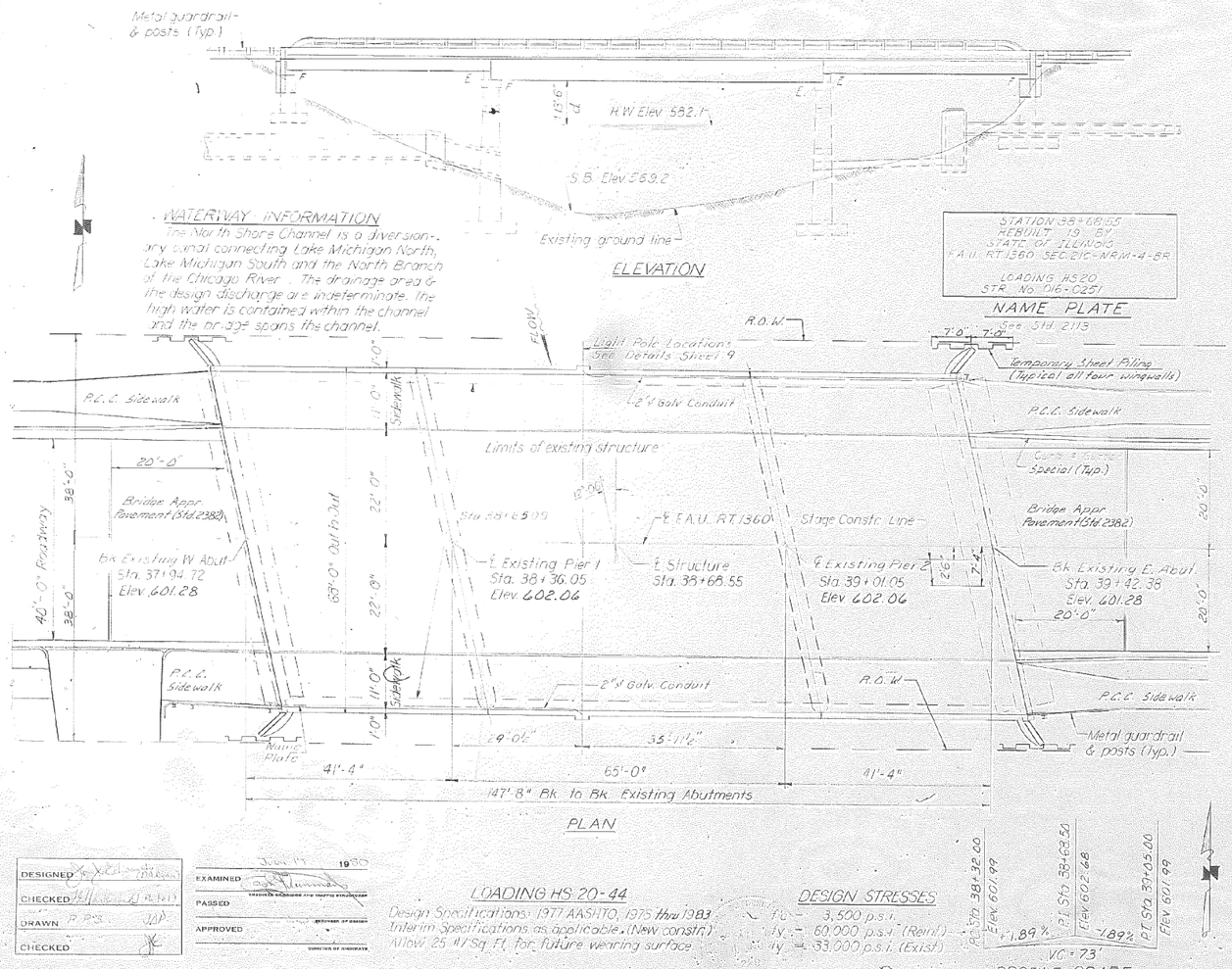
Existing structural steel shall be cleaned and painted - see special provisions.

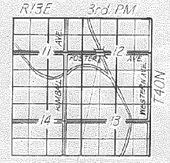
Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

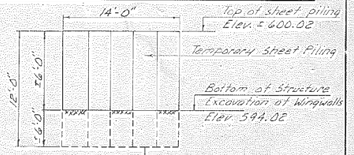
Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

TOTAL BILL OF MATERIAL

Item	Unit	Super-	Sub	Total
Concrete Removal	Cu. Yds.		4	4
Expansion Bolts 3/4"ø	Each		214	214
Removal of Existing Concrete Deck	L.S.	1		1
Protective Coat	Sq. Yds.	1192		1192
Class X Concrete	Cu. Yds.	435.8	21.1	456.9
Structural Steel	Lbs.	6160		6160
Stud Shear Connectors	Each	2688		2688
Aluminum Railing Type L	Lin. Ft.	291		291
Reinforcement Bars	Lbs.		4280	4280
Reinforcement Bars (Epoxy Coated)	Lbs.	85840		85840
Name Plates	Each	1		1
Temporary Sheet Piling	Sq. Ft.		672	672
Preformed Joint Seal (2")	Lin. Ft.	71		71
Preformed Joint Seal (4")	Lin. Ft.	71		71
Temporary Concrete Barrier	Lin. Ft.	150		150
Cleaning & Painting Steel Bridge	L.S.	1		1
Diaphragm Adjustment	Each	40		40
Structure Excavation	Cu. Yds.		30	30
Repair Concrete Structures	Sq. Ft.		231	231
Epoxy Crack Sealing	Lin. Ft.		10	10







DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

LOADING HS 20-44
Design Specifications: 1977 AASHTO, 1975 thru 1983 Interim Specifications as applicable. (New constr.)
Allow 25 #/Sq. Ft. for future wearing surface

DESIGN STRESSES
f'_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (Reinf.)
f_y = 33,000 p.s.i. (Exist.)

BRIDGE NO. 4
GENERAL PLAN AND ELEVATION
FOSTER AVENUE OVER
NORTH SHORE CHANNEL
F.A.U. ROUTE 1360 SEC. 21C-NRM-4-BR
COOK COUNTY
STATION 38+68.55

REVISED: TJD 1-6-84

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0251

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	20
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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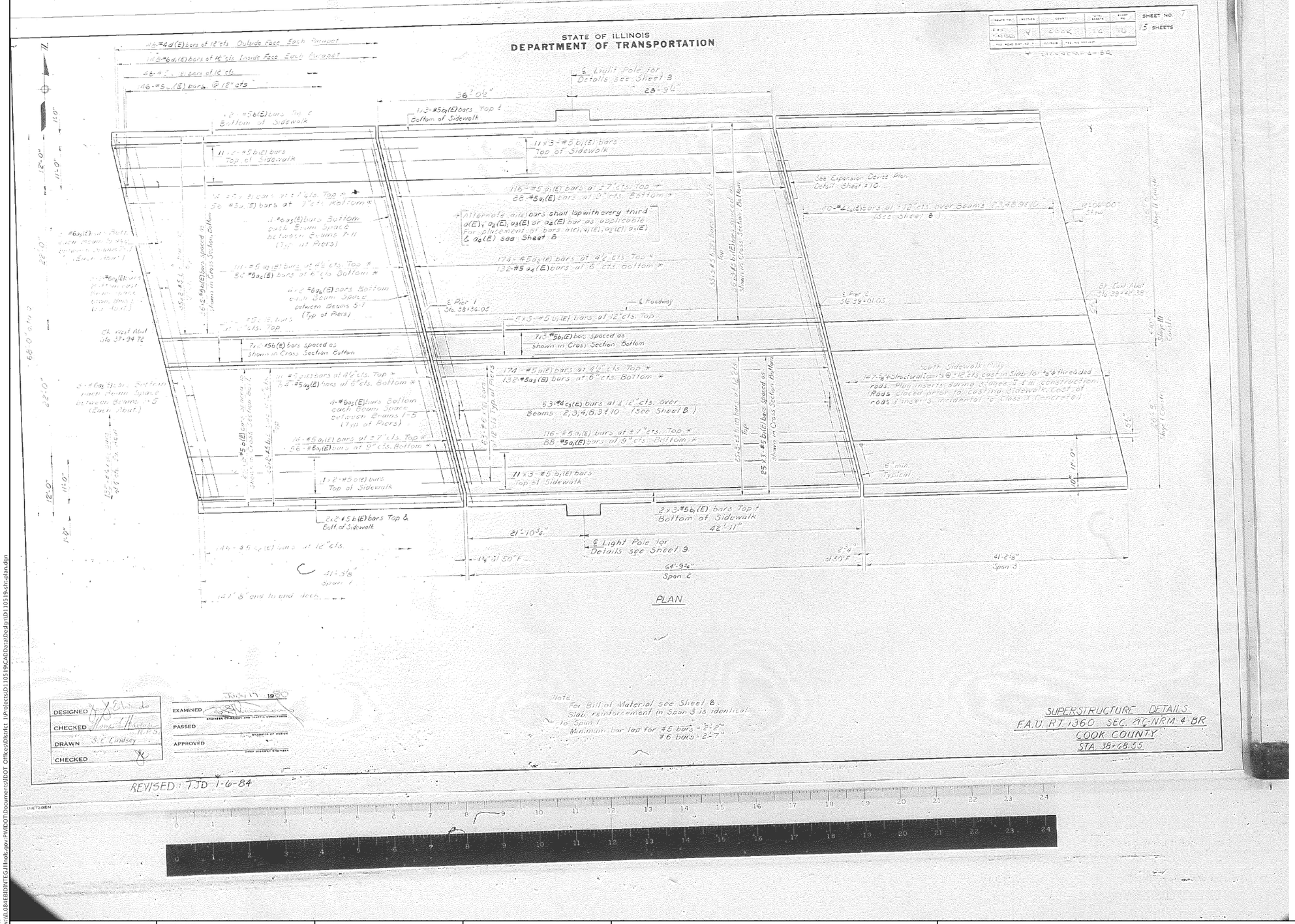

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–0251

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	21
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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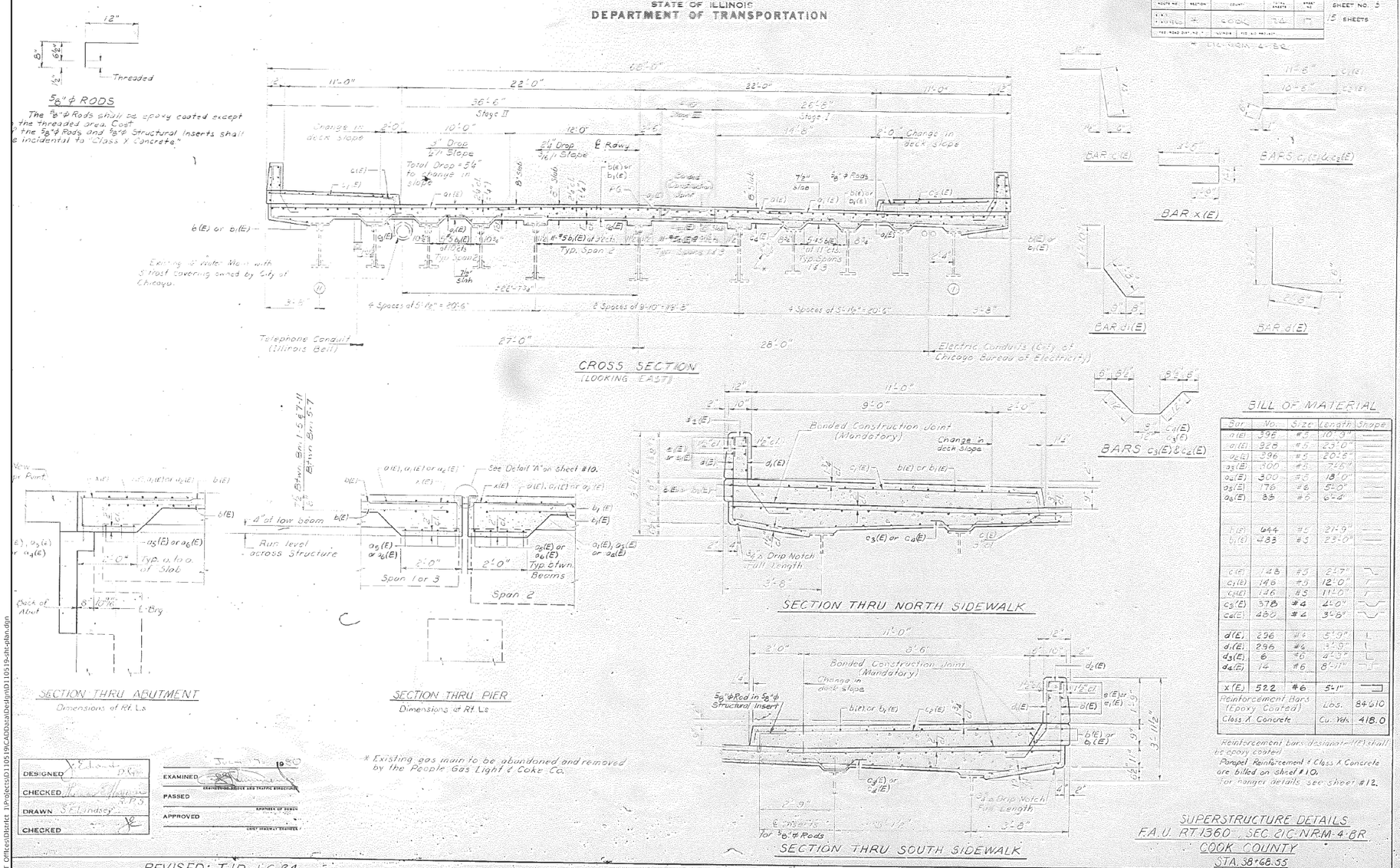
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 5
15 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	398	#5	10'-9"	
a1(E)	928	#5	23'-0"	
a2(E)	396	#5	20'-6"	
a3(E)	300	#5	7'-6"	
a4(E)	300	#5	18'-0"	
a5(E)	176	#6	5'-0"	
a6(E)	88	#6	6'-4"	
b(E)	644	#5	21'-9"	
b1(E)	483	#5	23'-0"	
c(E)	148	#5	2'-7"	
c1(E)	146	#5	12'-0"	
c2(E)	146	#5	11'-0"	
c3(E)	378	#4	4'-0"	
c4(E)	480	#4	3'-8"	
d(E)	296	#4	5'-9"	
d1(E)	296	#4	3'-9"	
d3(E)	6	#6	4'-3"	
d4(E)	14	#6	8'-11"	
x(E)	522	#6	5'-1"	
Reinforcement Bars (Epoxy Coated)			Lbs.	84610
Class X Concrete			Cu. Yds.	418.0

Reinforcement bars designated (E) shall be epoxy coated.
Parapet Reinforcement & Class X Concrete are billed on sheet #10.
For hanger details see sheet #12.

SUPERSTRUCTURE DETAILS
F.A.U. RT. 1360, SEC. 21C-NRM-4-BR
COOK COUNTY
STA. 38+68.55

DESIGNED
CHECKED
DRAWN S.E. Lindsey
CHECKED
EXAMINED
PASSED
APPROVED

REVISED: T.J.D. 1-6-84

MODEL: Default
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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016–0251

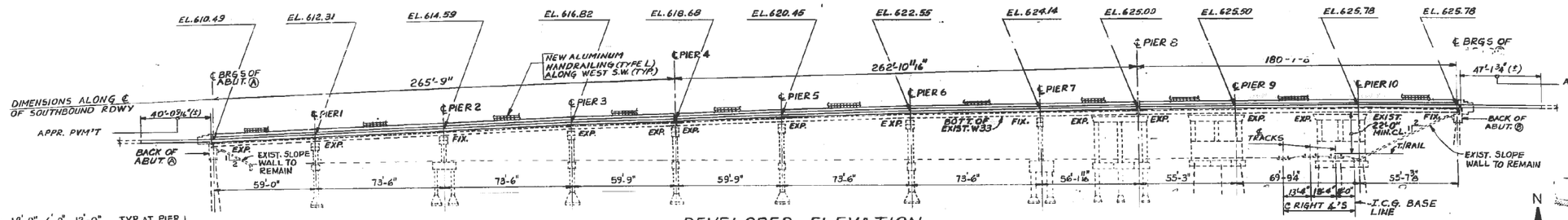
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	22
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

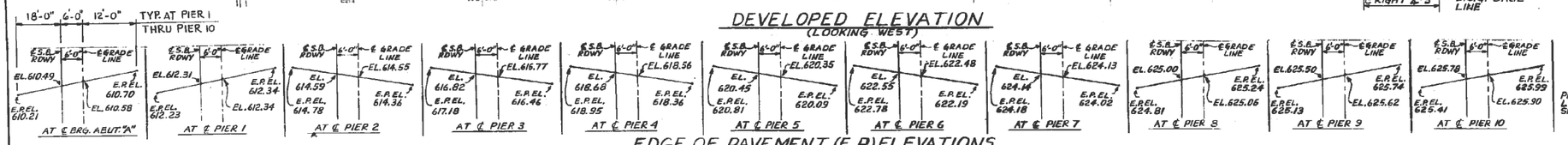
FOR INFORMATION ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	251	26
F.H.W.A. REG.	ILLINOIS	PROJECT(S) / TRACT(S) / MAP(S)		

* 0708(2.6,3)-2323.1 BR-86
SHT. S-1 OF 48



DEVELOPED ELEVATION
(LOOKING WEST)



EDGE OF PAVEMENT (E.P) ELEVATIONS
(LOOKING NORTH)



PLAN

PROFILE T/R OF I.C.G. RAILROAD
(W.B. TRACK)

PROFILE GRADE OF HARLEM AVE.
(SOUTHBOUND ROADWAY)

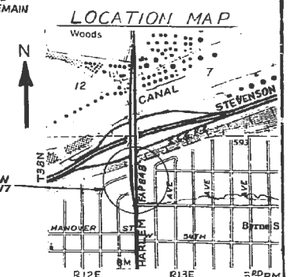
STA. 121 + 83.95 SB
RE-BUILT 198_ BY
STATE OF ILLINOIS
FAP. 848 SEC. 0708.3-2323.1 BR-86
LOADING HS-20
STR. NO. 016-0317

NAME PLATE
(STA. 121+83.95 SB 2113)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Harry J. Hillman
ILLINOIS DEPARTMENT OF TRANSPORTATION

REVISIONS	
MARK	DATE

LOCATION MAP



HORIZONTAL CURVE DATA
(℄ OF SOUTH BOUND RDWY)

P.C.	STA. 116+45.03
P.I.	STA. 118+20.25
P.T.	STA. 119+95.03
Δ	7°-00'-00"
D	2°-00'-00"
T	175.22'
L	350.00'
R	2,864.79'
E	5.35'
S.E.	0.018 ft/ft

TBM "F"
ELEV. 626.96
STATION 120+48 NB @ 26' LT.
"□" - CUT OF SOUTHWEST CRASH WALL OF NORTHBOUND HARLEM AVE. BRIDGE OVER I.C.G. RAILROAD

NOTES:
1. FOR TREATMENT OF EXIST. BRIDGE SEE SHT. S-3
2. —— - INDICATES PROPOSED NEW STRUCTURE
   ---- - INDICATES EXIST. STRUCTURE
3. EXISTING DRAINAGE SCUPPERS TO BE REMOVED AND REPLACED; NEW SCUPPERS TO BE CONNECTED TO EXISTING (CLEANED) RWC.
4. ALL ELEVATIONS SHOWN AT TOP OF DECK.

GENERAL PLAN & ELEVATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (IL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(2.6,3) 2323.1 BR-86
COOK COUNTY
SN 016-0317

DRAWN BY L.S.
CHECKED BY S.V.
DATE

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0317

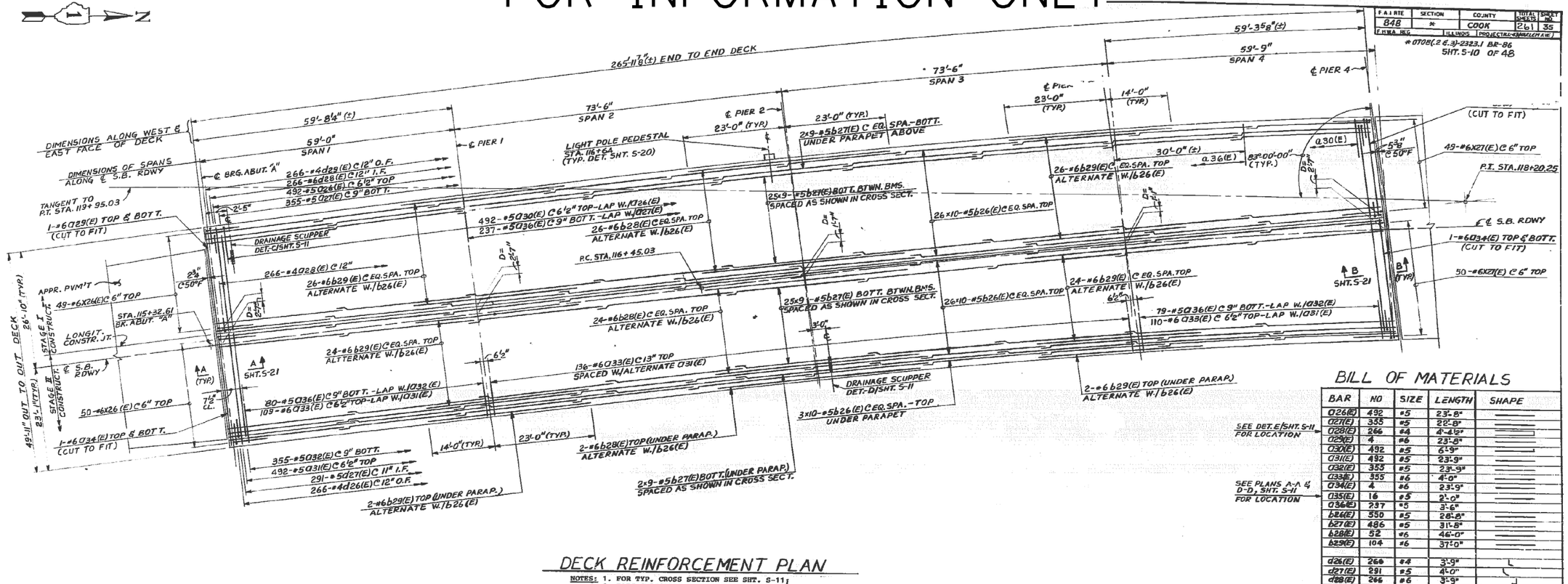
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	23
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	261	35
F.H.W.A. REG.	ILLINOIS	PROJECT NUMBER(S)		

*0708(22E.3)-2323.1 BR-86
SHT. 5-10 OF 48



DECK REINFORCEMENT PLAN

NOTES:
1. FOR TYP. CROSS SECTION SEE SHT. S-11;
2. BARS INDICATED THUS, 25 X 9 - #5, ETC., INDICATED 25 LINES OF BARS W/9 LENGTHS PER LINE.
3. D - IS THE DISTANCE BETWEEN LONGIT. CONSTR. JT. AND ℄ S.B. RDWY.

BILL OF MATERIALS

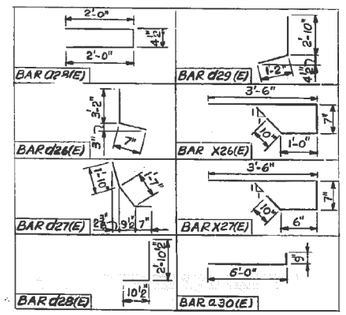
BAR	NO	SIZE	LENGTH	SHAPE
Q26(E)	492	#5	23'-8"	
Q27(E)	355	#5	22'-8"	
Q28(E)	266	#4	4'-4½"	
Q29(E)	4	#6	23'-8"	
Q30(E)	492	#5	6'-9"	
Q31(E)	492	#5	23'-9"	
Q32(E)	355	#5	23'-9"	
Q33(E)	355	#6	4'-0"	
Q34(E)	4	#6	23'-9"	
Q35(E)	16	#5	2'-0"	
Q36(E)	237	#5	3'-6"	
b26(E)	550	#5	28'-8"	
b27(E)	486	#5	31'-8"	
b28(E)	52	#6	46'-0"	
b29(E)	104	#6	37'-0"	
d26(E)	266	#4	3'-9"	L
d27(E)	291	#5	4'-0"	L
d28(E)	266	#6	3'-9"	L
d29(E)	266	#4	4'-0"	L
X26(E)	99	#6	6'-1"	
X27(E)	99	#6	5'-5"	

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS	96745
CLASS "A" CONCRETE	CU. YDS	328.4

(E)-INDICATES EPOXY COATED REBARS

MIN. LAP LENGTH

#4	1'-6"
#5	2'-0"
#6	2'-6"



REVISIONS	
NAME	DATE

UNIT "A"
DECK REINFORCEMENT PLAN
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(22E.3) 2323. 1BR-86
COOK COUNTY
SN.016-0317
SCALE: VERT
HORIZ.
DRAWN BY L.S.
DATE
CHECKED BY S.J.

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0317

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	24
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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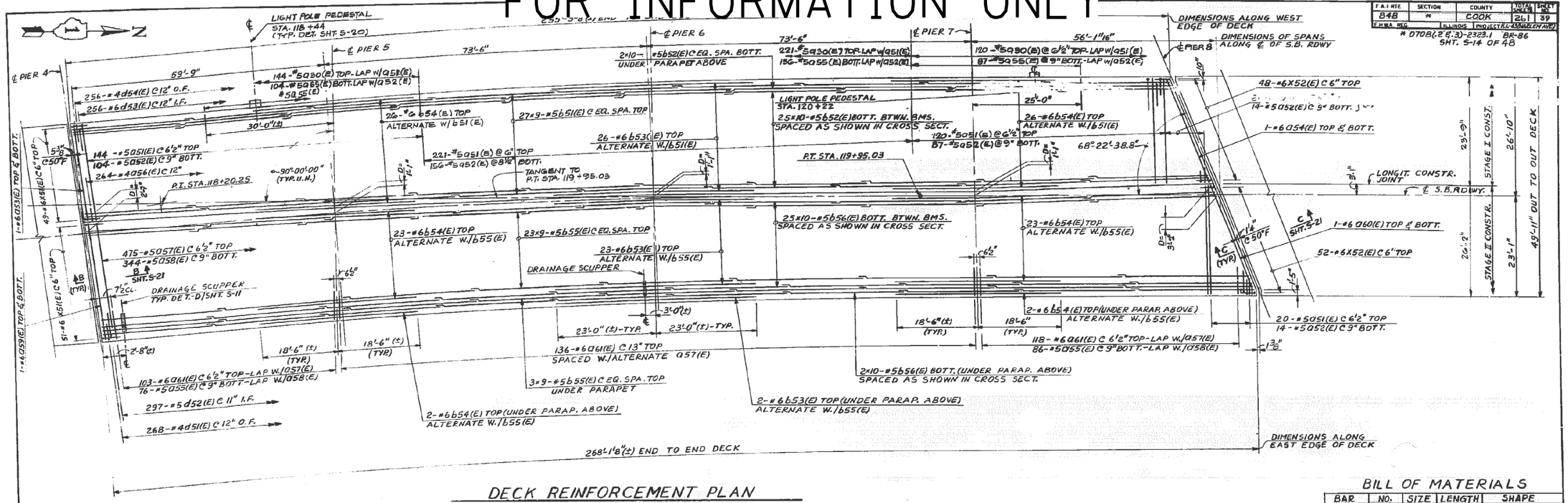
FOR INFORMATION ONLY

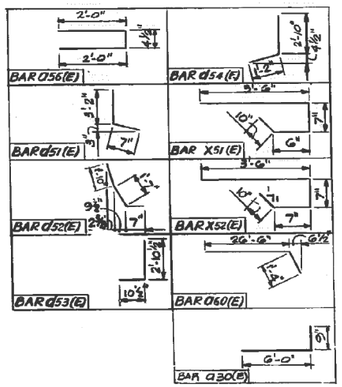
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	M	COOK	261	39
F.H.W.A. REG.	ILLINOIS	PROJECT ILL-43/HARLEM AVE.		

0708(2E.3)-2323.1 BR-86
SHT. S-14 OF 48



DECK REINFORCEMENT PLAN

NOTES:
1. FOR TYP. CROSS SECTION SEE SHT. S-11;
2. ORDER a51(E) & a52(E) BARS FULL LENGTH; CUT TO FIT SKEW AND USE REMAINDER OF BARS @ NORTH-EAST CORNER OF DECK.
3. BARS INDICATED THUS, 26 X 9 - #5 ETC., INDICATES 26 LINES OF BARS W/9 LENGTHS PER LINE.
4. D- IS THE DISTANCE BETWEEN LONGIT. CONSTR. JT. AND ℄ S.B. RDWY.



SEE DET. E/SHT. S-11 FOR LOCATION

SEE PLAN D-D SHT. S-11 FOR LOCATION

BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
a30(E)	485	#5	6'-9"	
a51(E)	505	#5	23'-6"	
a52(E)	361	#5	22'-3"	
a53(E)	2	#6	24'-2"	
a54(E)	2	#6	25'-3"	
a55(E)	509	#5	4'-6"	
a56(E)	264	#4	4'-4½"	
a57(E)	475	#5	24'-0"	
a58(E)	344	#5	23'-9"	
a59(E)	2	#6	25'-8"	
a60(E)	2	#6	28'-0"	
a61(E)	357	#6	5'-9"	
a62(E)	18	#5	2'-0"	
b51(E)	243	#5	31'-6"	
b52(E)	270	#5	28'-6"	
b53(E)	51	#6	46'-0"	
b54(E)	102	#6	37'-0"	
b55(E)	234	#5	31'-10"	
b56(E)	270	#5	28'-10"	
d51(E)	268	#4	3'-9"	
d52(E)	197	#5	4'-0"	
d53(E)	250	#6	3'-9"	
d54(E)	256	#4	4'-0"	
X51(E)	100	#6	3'-5"	
X52(E)	100	#6	5'-6"	

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS	97935
CLASS "X" CONCRETE	CU.YDS	323.5

(E)-INDICATES EPOXY COATED REBARS

MIN. LAP LENGTH	
#4	1'-6"
#5	2'-0"
#6	2'-6"

REVISIONS	
NAME	DATE

UNIT "B"
DECK REINFORCEMENT PLAN
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(2E.3) 2323.1BR-86
COOK COUNTY
SN.016-0317

SCALE: VERT. HORIZ.
DRAWN BY L.S.
DATE
CHECKED BY S.J.

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-0317

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	25
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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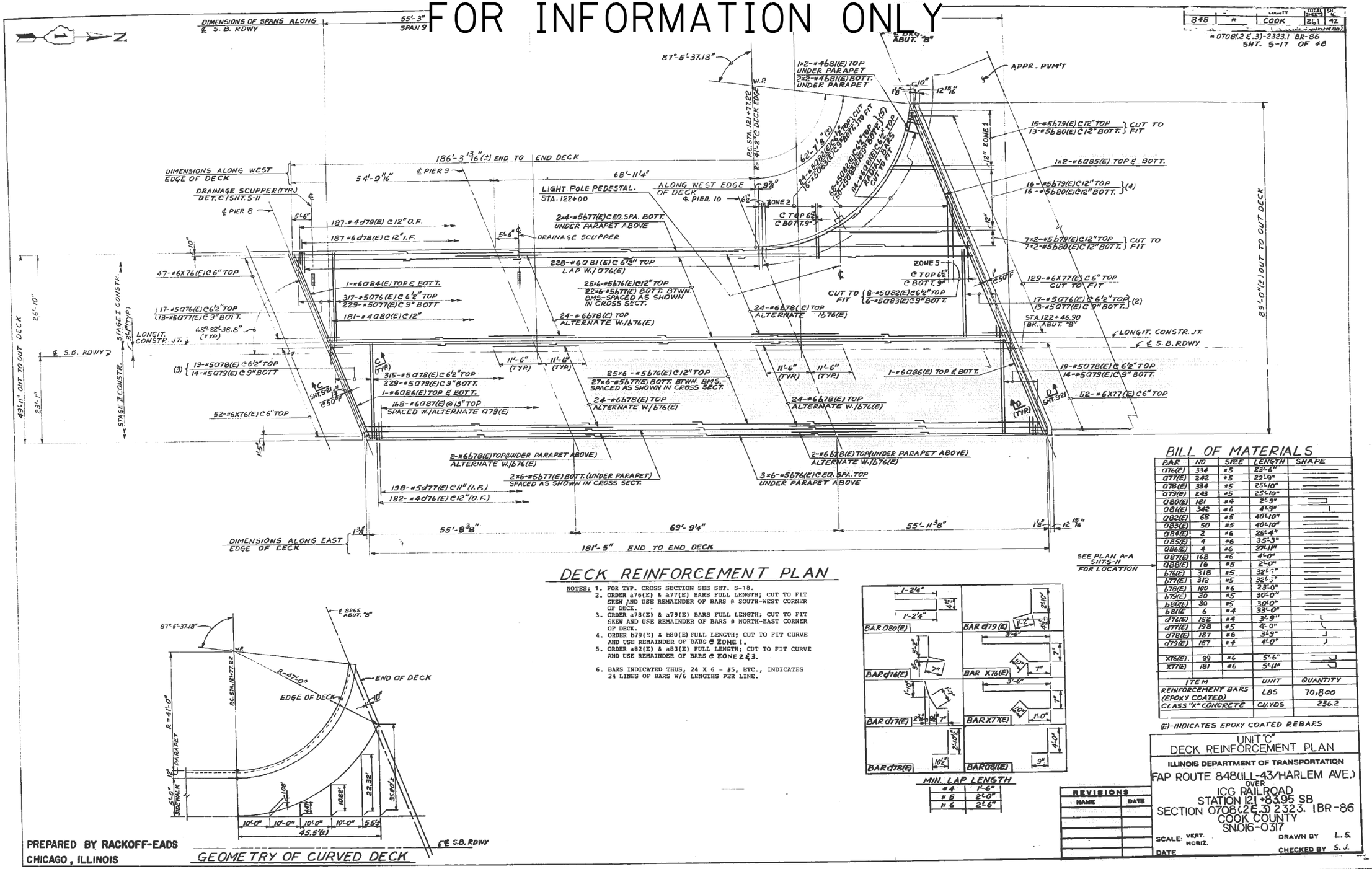
FOR INFORMATION ONLY

848	*	COOK	261	42
		COUNTY	TOTAL SHEETS	SHEET NO.

* 0708(.2 E.3)-2323.1 BR-86
SHT. S-17 OF 48



DECK REINFORCEMENT PLAN

NOTES:
1. FOR TYP. CROSS SECTION SEE SHT. S-18.
2. ORDER a76(E) & a77(E) BARS FULL LENGTH; CUT TO FIT SKEW AND USE REMAINDER OF BARS @ SOUTH-WEST CORNER OF DECK.
3. ORDER a78(E) & a79(E) BARS FULL LENGTH; CUT TO FIT SKEW AND USE REMAINDER OF BARS @ NORTH-EAST CORNER OF DECK.
4. ORDER b79(E) & b80(E) FULL LENGTH; CUT TO FIT CURVE AND USE REMAINDER OF BARS @ ZONE 1.
5. ORDER a82(E) & a83(E) FULL LENGTH; CUT TO FIT CURVE AND USE REMAINDER OF BARS @ ZONE 2 & 3.
6. BARS INDICATED THUS, 24 X 6 - #5, ETC., INDICATES 24 LINES OF BARS W/6 LENGTHS PER LINE.

GEOMETRY OF CURVED DECK

MIN. LAP LENGTH

#4	1'-6"
#5	2'-0"
#6	2'-6"

BILL OF MATERIALS

BAR	NO	SIZE	LENGTH	SHAPE
a76(E)	334	#5	23'-6"	
a77(E)	242	#5	22'-9"	
a78(E)	334	#5	25'-10"	
a79(E)	243	#5	25'-10"	
a80(E)	181	#6	24'-9"	
a81(E)	342	#6	44'-9"	
a82(E)	68	#5	40'-10"	
a83(E)	50	#5	40'-10"	
a84(E)	2	#6	25'-4"	
a85(E)	4	#6	3'-5" 3"	
a86(E)	4	#6	27'-11"	
a87(E)	168	#6	4'-0"	
a88(E)	16	#5	2'-0"	
b76(E)	318	#5	32'-7"	
b77(E)	312	#5	32'-3"	
b78(E)	100	#6	23'-0"	
b79(E)	30	#5	30'-0"	
b80(E)	30	#5	30'-0"	
b81E	6	#4	33'-0"	
d76(E)	182	#4	3'-9"	
d77(E)	198	#5	4'-0"	
d78(E)	187	#6	3'-9"	
d79(E)	187	#4	4'-0"	
X76(E)	99	#6	5'-6"	
X77(E)	181	#6	5'-11"	

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS	70,800
CLASS "X" CONCRETE	CU. YDS	236.2

(E)-INDICATES EPOXY COATED REBARS

REVISIONS	
NAME	DATE

UNIT "C"
DECK REINFORCEMENT PLAN
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(2 E.3) 2323. 1BR-86
COOK COUNTY
SN 016-0317
SCALE: VERT. HORIZ.
DRAWN BY L. S.
DATE
CHECKED BY S. J.

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

D C B A 0 A B C D

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0317

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	26
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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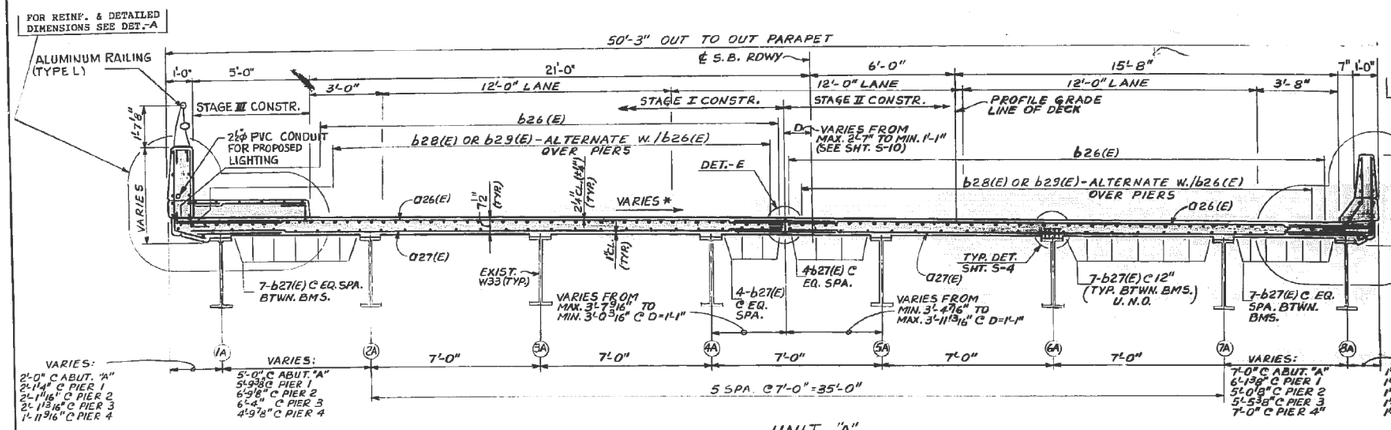
FOR INFORMATION ONLY

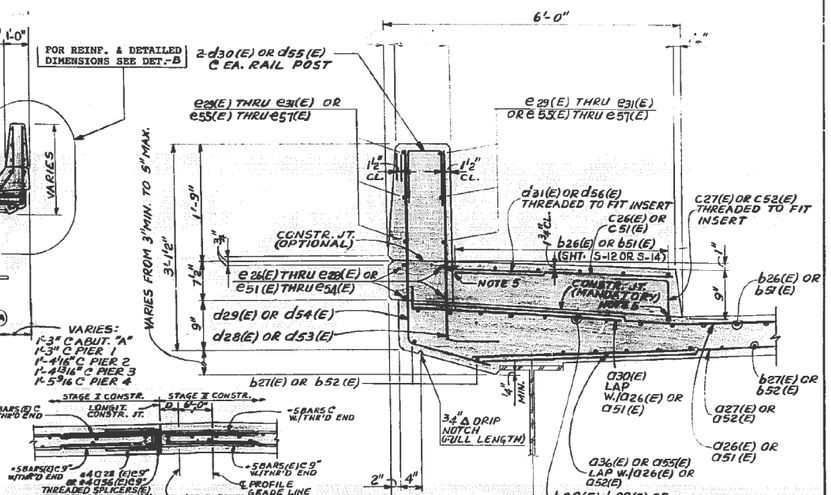
F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	241	36
F.M.W.A. REG.	ILLINOIS	PROJECT(I-43/HARLEM AVE)		

*0708(2&3)-2323.1BR-86
SHT. S-11 OF 48

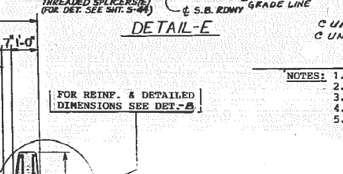


UNIT "A"
TYPICAL CROSS SECTION OF SPANS 1 TO 4
(LOOKING NORTH)

* NOTE: SEE EDGE OF PVM'T ELEVATIONS ON SHT. S-1

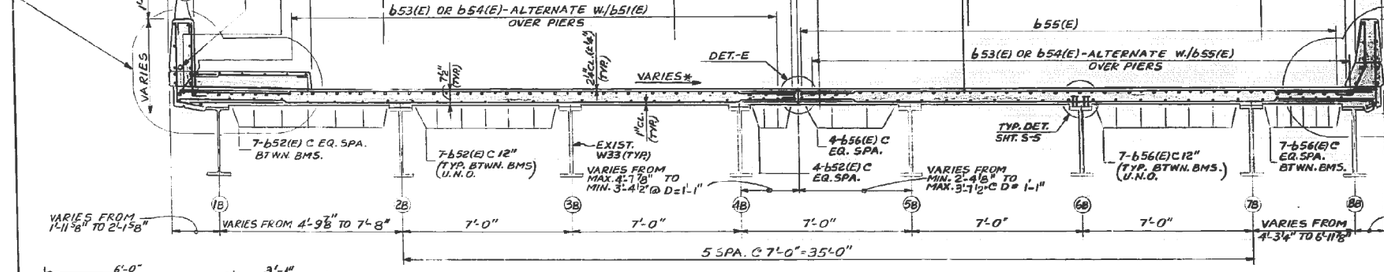


DETAIL-A

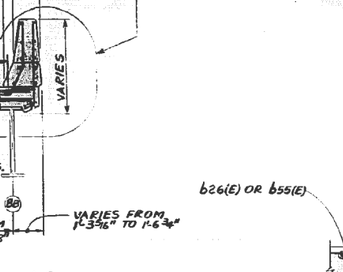


DETAIL-E

NOTES:
1. RAIL POST, SCUPPER & PEDESTAL FOR LIGHT POLE NOT SHOWN FOR CLARITY;
2. FOR SCUPPER SEE DET.-C;
3. FOR PEDESTAL SEE SHT. S-20;
4. FOR RAIL POST SEE SHT. S-12;
5. EPOXY COATED INSERTS TO BE CAPPED DURING STAGE I CONSTRUCTION; COST IS INCIDENTAL TO REINF. BARS (EPOXY COATED).

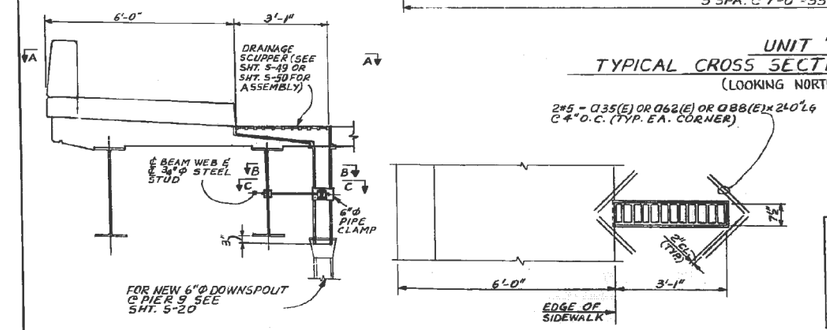


UNIT "B"
TYPICAL CROSS SECTION OF SPANS 5 TO 8
(LOOKING NORTH)



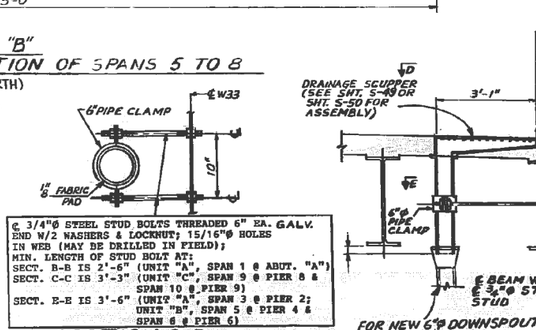
DETAIL-B

NOTES: 1. SCUPPER NOT SHOWN FOR CLARITY;
2. FOR SCUPPER SEE DET.-D.



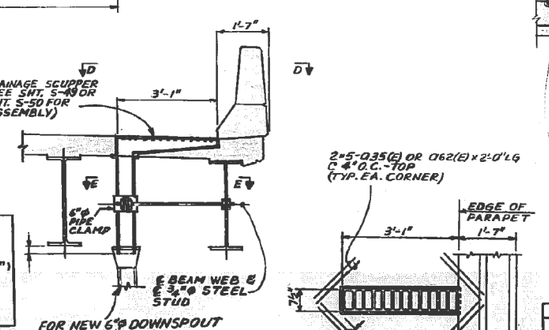
DETAIL-C
PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

TOP PLAN A-A
REINFORCEMENT @ DRAINAGE SCUPPER



SECTION B-B (OPP. HAND)
SECTION C-C (OPP. HAND)
SECTION E-E (AS IS)

NOTE: THE CLAMPING DEVICES BE GALVANIZED IN ACCORDANCE WITH AASHTO M-232



DETAIL-D

TOP PLAN D-D
REINFORCEMENT @ DRAINAGE SCUPPER

REVISIONS	
NAME	DATE

UNIT "A" AND UNIT "B"
TYPICAL CROSS SECTIONS; DETAILS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (IL I-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(2&3) 2323. 1BR-86
COOK COUNTY
SN 016-0317

SCALE VERT
HORIZ.
DRAWN BY L.S.
DATE
CHECKED BY S.J.

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0317

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	27
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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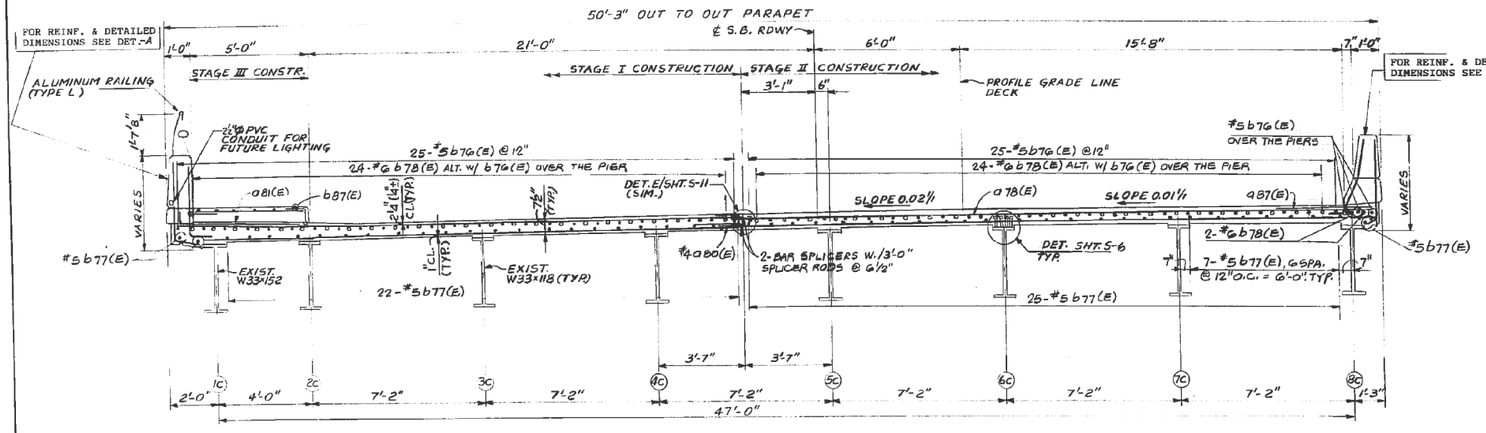
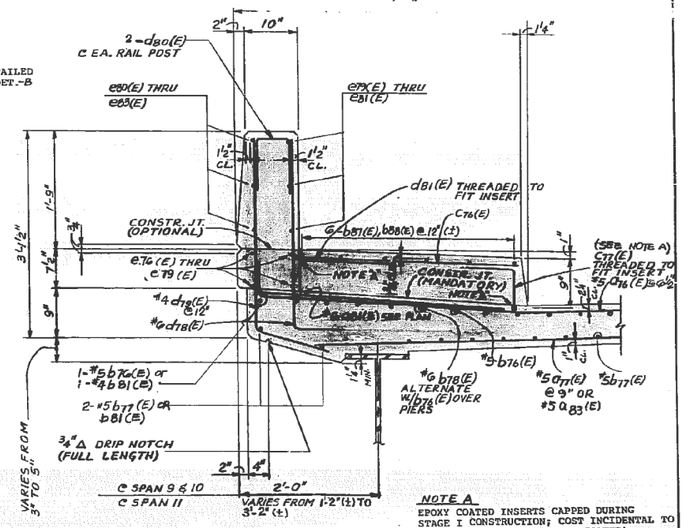
FOR INFORMATION ONLY

F.A.I RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	261	43
F.H.W.A. REG.	ILLINOIS	PROJECT(LE-53/HARLEM AVE)		

*0708(24.3)-2323.1 BR-86

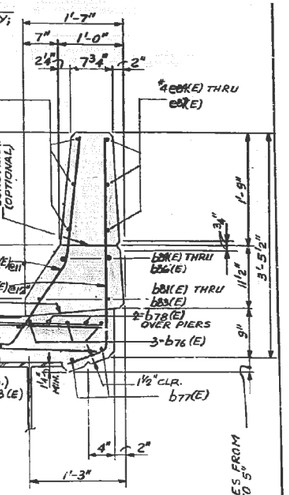


TYPICAL CROSS SECTION OF SPANS 9 & 10
(LOOKING NORTH)

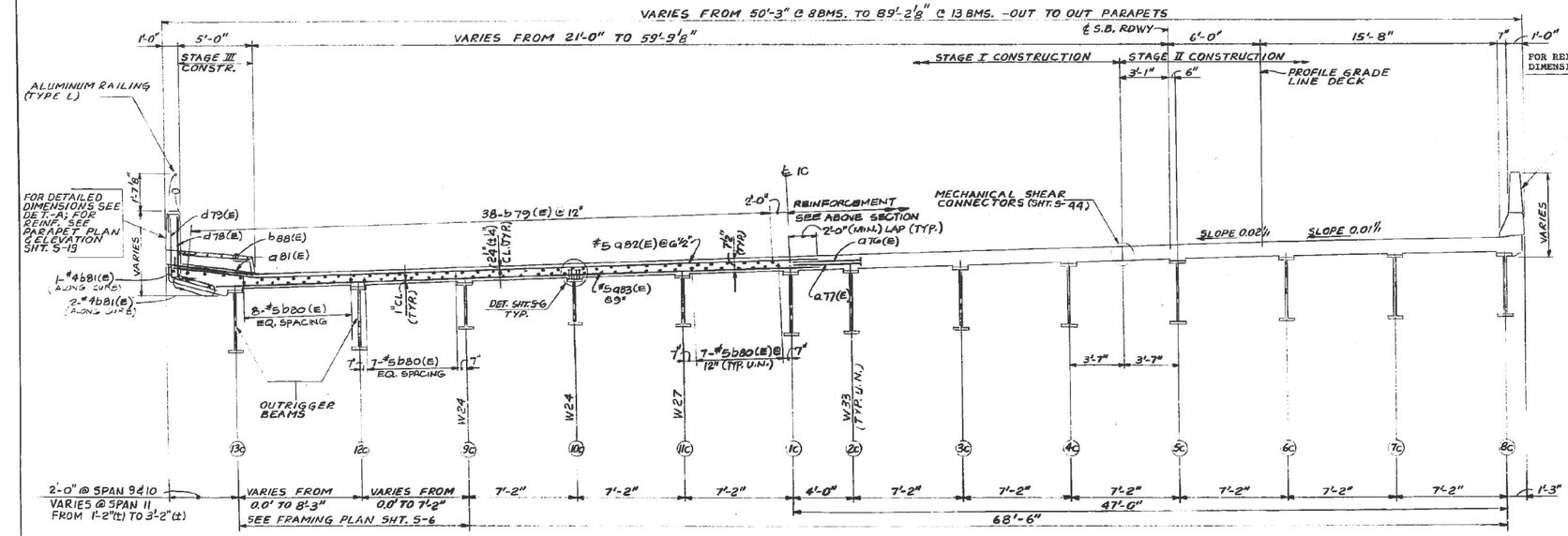


DETAIL-A
RAIL POST & SCUPPER NOT SHOWN FOR CLARITY; FOR SCUPPER SEE DET.-C/SHT. 5-11

NOTE A
EPOXY COATED INSERTS CAPPED DURING STAGE I CONSTRUCTION; COST INCIDENTAL TO REINFORCEMENT BARS (EPOXY COATED)



DETAIL-B



CROSS SECTION OF SPAN 11
(LOOKING NORTH)

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

UNIT "C"
TYPICAL CROSS SECTIONS; DETAILS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 121+83.95 SB
SECTION 0708(24.3) 2323.1 BR-86
COOK COUNTY
SN: 016-0317

SCALE: VERT / HORIZ.
DRAWN BY L. S.
DATE
CHECKED BY S. J.

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0317

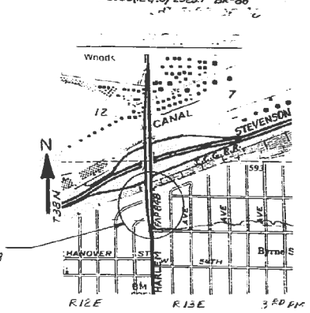
SCALE: | SHEET OF SHEETS | STA. | TO STA.

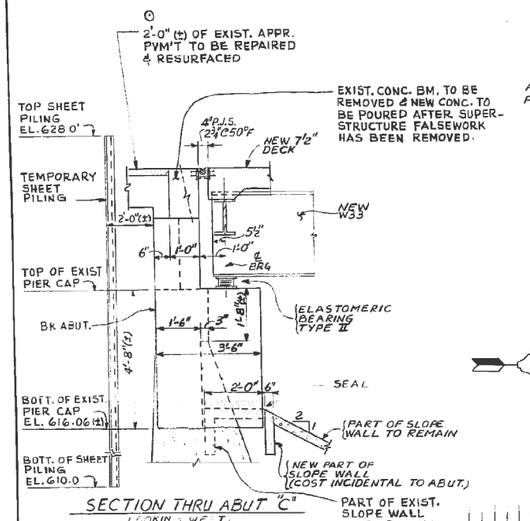
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	28
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

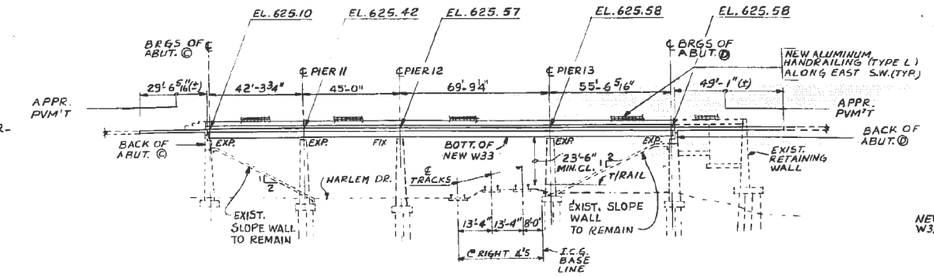
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	261	51
FHWA R.G.	ILLINOIS	PROJECT(S): 4(HARLEM AVE.)		

* 0708(2 E.3)-2323.1 BR-86

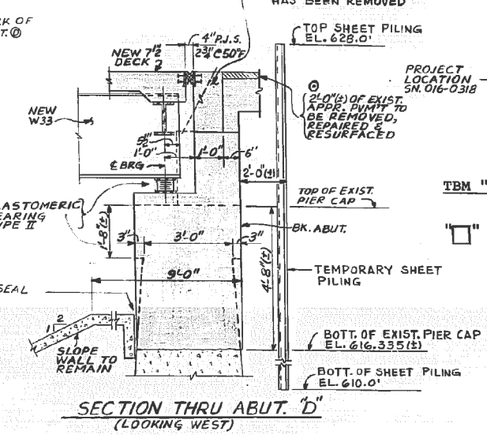




SECTION THRU ABUT "C"
(LOOKING WEST)

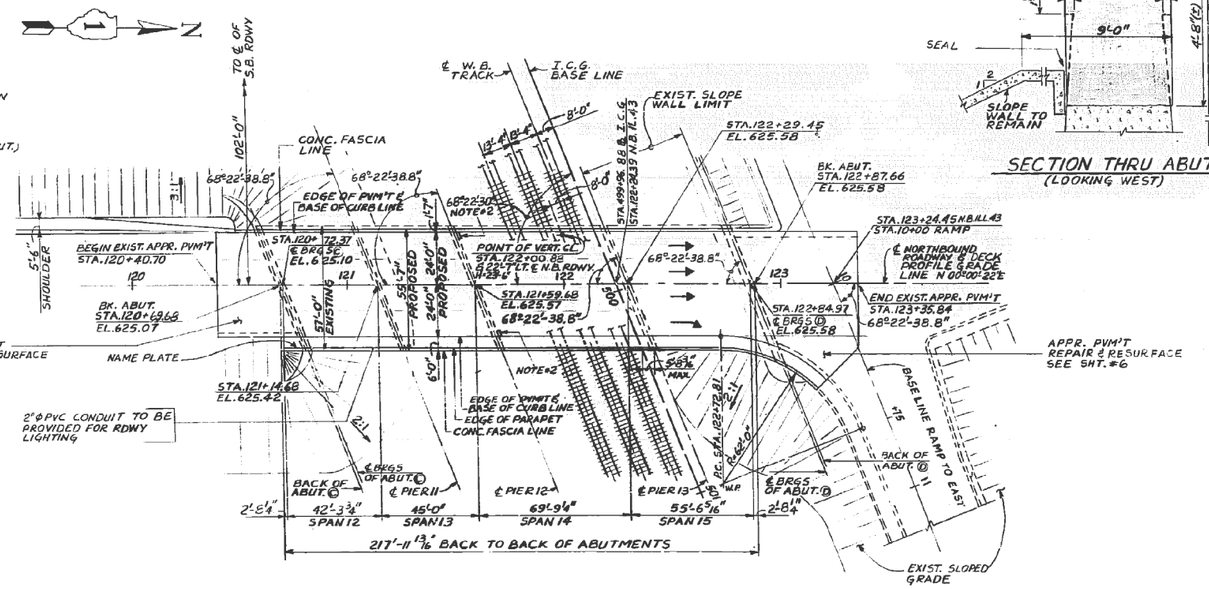


ELEVATION
(LOOKING WEST)

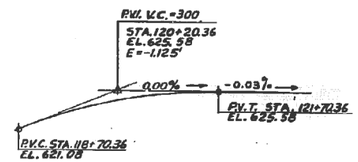


SECTION THRU ABUT. "D"
(LOOKING WEST)

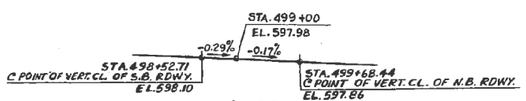
TBM "F"
ELEV. 626.96
STATION 120+48 NB @ 26' LT.
"□" - CUT OF SOUTHWEST CRASH WALL OF NORTHBOUND HARLEM AVE. BRIDGE OVER I.C.G. RAILROAD



PLAN



PROFILE GRADE OF HARLEM AVE.
(NORTHBOUND ROADWAY)



PROFILE T/R OF I.C.G. RAILROAD
(W.B. TRACK)

STA. 122+24.39 NB
RE-BUILT 198__ BY
STATE OF ILLINOIS
FAP. 848 SEC. 0708.2-2323.1 BR-86
LOADING HS-20
STR. NO. 016-0318

NAME PLATE
(STANDARD 2113)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Harry J. Hillman
ALTERNATE ENGINEER & REG. COUNTING ENGINEER

NOTE:
1. —— - INDICATES PROPOSED NEW STRUCTURE
   ---- - INDICATES EXIST. STRUCTURE
2. EXISTING DRAINAGE SCUPPERS TO BE REMOVED AND REPLACED; NEW SCUPPERS TO BE CONNECTED TO EXISTING (CLEANED) RWC.
3. ALL ELEVATIONS SHOWN AT TOP OF DECK.
4. EXISTING ABUTMENT "C" WITH PIER CAP AND EXISTING ABUTMENT "D" WITH PIER CAP TO BE DEMOLISHED TO THE BOTTOM OF EXISTING PIER CAP AND REBUILD AS SHOWN.
5. INCREASE EXIST. PIER CAPS 11, 12 & 13 THICKNESS FOR NEW BEAMS SUPPORT
6. FOR TREATMENT OF EXIST. BRIDGE SEE SHT. S-30

ⓞ 2 FT. WIDE REMOVAL OF APPROACH PAVEMENT TO BE PAID FOR AS CONCRETE REMOVAL, QUANTITY INCLUDED ON SHEETS S-4.0 & S-4.1

REVISIONS	
NAME	DATE

GENERAL PLAN & ELEVATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 122+24.39 NB
SECTION 0708.2 E.3) 2323. 1 BR-86
COOK COUNTY
SN. 016-0318

DRAWN BY L.S.
CHECKED BY S.J.
DATE

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0318

SCALE: | SHEET OF SHEETS | STA. | TO STA.

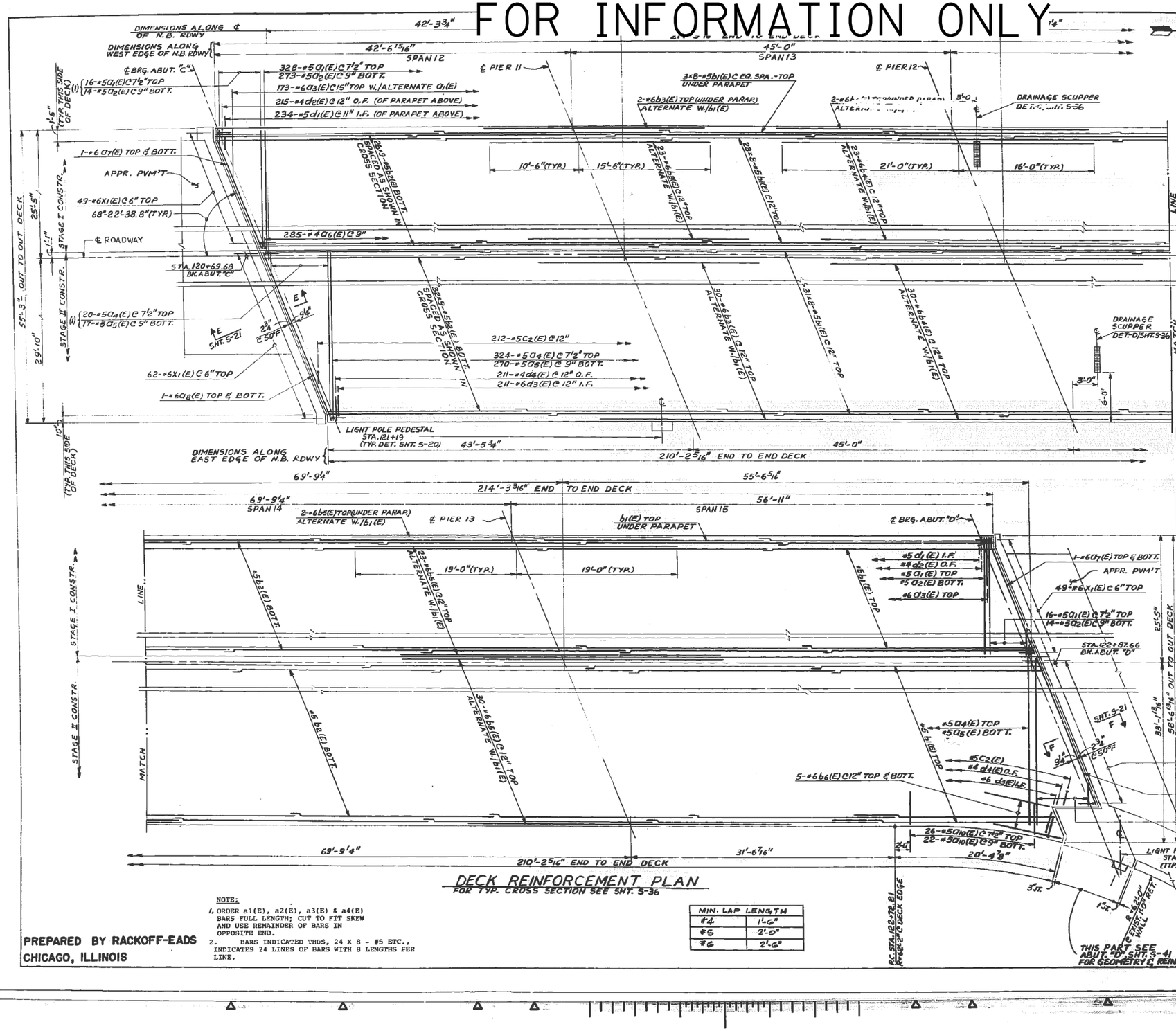
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	29
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	COOK	261	60

F.H.W.A. REG. | ILLINOIS | PROJECT ILL-43/HARLEM AVE.

*0708(2 & 3)-2323.1 BR-86
SHT. S-35 OF 48



DECK REINFORCEMENT PLAN
FOR TYP. CROSS SECTION SEE SHT. S-36

NOTE:
1. ORDER a1(E), a2(E), a3(E) & a4(E) BARS FULL LENGTH; CUT TO FIT SKEW AND USE REMAINDER OF BARS IN OPPOSITE END.
2. BARS INDICATED THUS, 24 X 8 - #5 ETC., INDICATES 24 LINES OF BARS WITH 8 LENGTHS PER LINE.

MIN. LAP LENGTH	
#4	1'-6"
#5	2'-0"
#6	2'-6"

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

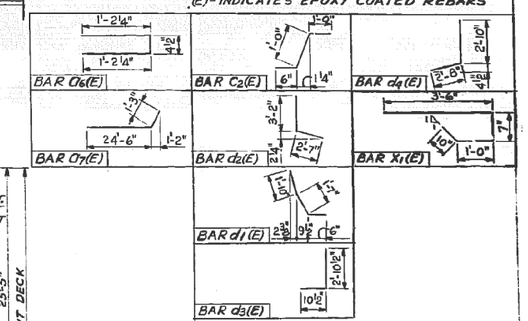
BILL OF MATERIALS

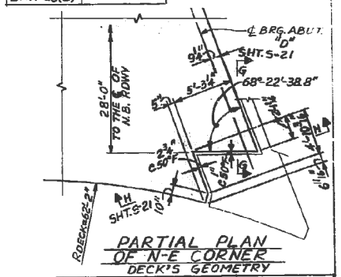
BAR	NO.	SIZE	LENGTH	SHAPE
a1(E)	344	#5	24'-1"	
a2(E)	[illegible]	[illegible]	[illegible]	
a3(E)	173	#6	5'-0"	
[illegible]	[illegible]	[illegible]	[illegible]	
a5(E)	287	#5	29'-4"	
a6(E)	285	#4	2'-9"	
a7(E)	4	#6	25'-9"	
a8(E)	2	#6	33'-0"	
a9(E)	2	#6	31'-0"	
a10(E)	48	#5	6'-9"	
a11(E)	16	#5	2'-0"	
b1(E)	456	#5	28'-6"	
b2(E)	513	#5	25'-0"	
b3(E)	55	#6	26'-0"	
b4(E)	55	#6	37'-0"	
b5(E)	55	#6	38'-0"	
b6(E)	10	#6	12'-0"	
C2(E)	212	#5	2'-6"	
d1(E)	234	#5	3'-11"	
d2(E)	215	#4	5'-9"	
d3(E)	211	#6	3'-9"	
d4(E)	211	#4	5'-6"	
X1(E)	216	#6	5'-11"	

SEE DET. E/SHT. S-36 FOR LOCATION
SEE PLANS A-A & C-C/SHT. S-36 FOR LOCATION
SEE DET. B/SHT. S-36 FOR LOCATION

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS	79,848.
CLASS "X" CONCRETE	CU. YDS	291.

(E)- INDICATES EPOXY COATED REBARS





PARTIAL PLAN OF N-E CORNER
DECK'S GEOMETRY

DECK REINFORCEMENT PLAN

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 122+24.39 NB
SECTION 0708(2 & 3) 2323. 1BR-86
COOK COUNTY
SN016-0318

SCALE: VERT. HORIZ.
DATE
DRAWN BY L.S.
CHECKED BY S.J.

REVISIONS

NAME	DATE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0318

SCALE: | SHEET OF SHEETS | STA. TO STA.

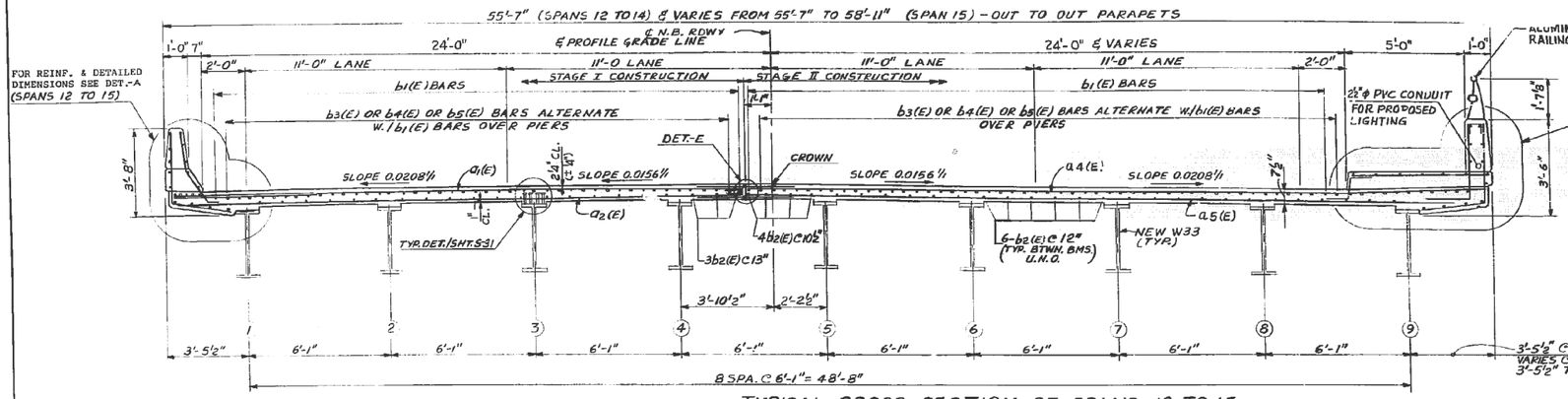
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	30

CONTRACT NO. 62H72
ILLINOIS | FED. AID PROJECT

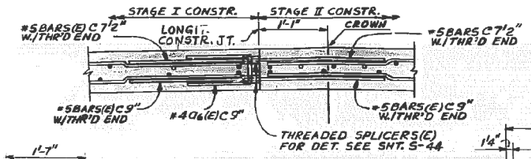
FOR INFORMATION ONLY

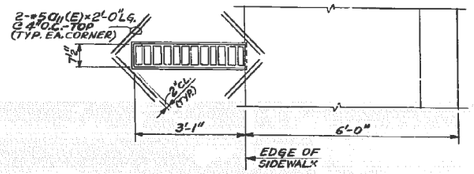
F.A.I RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
848	*	Cook	261	61
F.H.W.A. REG.	ILLINOIS	PROJECT ILL-43 (HARLEM AVE.)		

* 0708(2&3)-2323.1 BR-86
SHT. S-36 OF 48

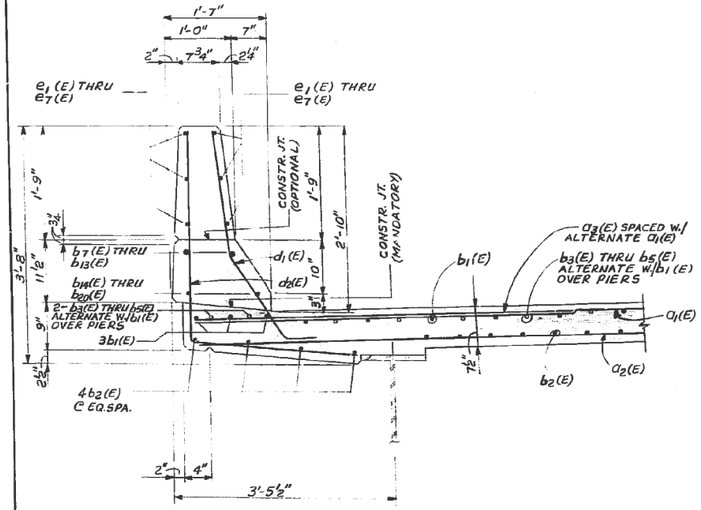


TYPICAL CROSS SECTION OF SPANS 12 TO 15
(LOOKING NORTH)

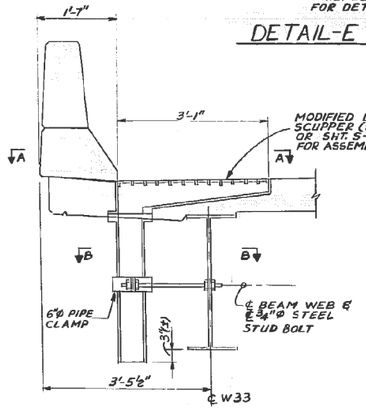




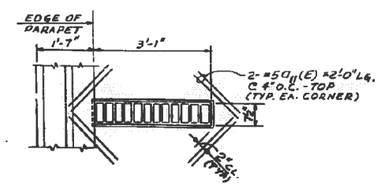
TOP PLAN C-C
(REINFORCEMENT & DRAINAGE SCUPPER)



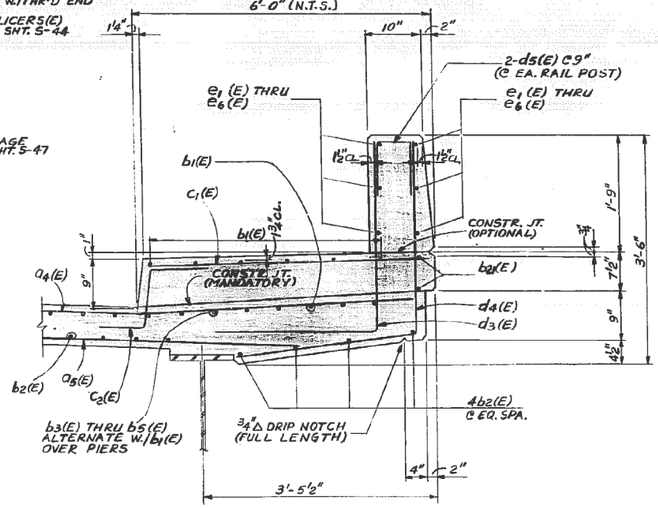
DETAIL-A
SCUPPER & PEDESTAL FOR LIGHT POLE NOT SHOWN FOR CLARITY.
FOR SCUPPER SEE DET-C;
FOR PEDESTAL SEE SHT. S-20.



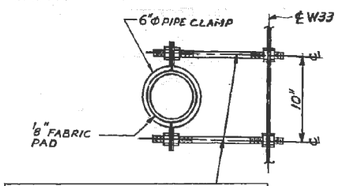
DETAIL-C



TOP PLAN A-A
(REINFORCEMENT & DRAINAGE SCUPPER)



DETAIL-B
RAIL POST, SCUPPER & PEDESTAL FOR LIGHT POLE NOT SHOWN FOR CLARITY.
FOR SCUPPER SEE DET-D;
FOR PEDESTAL SEE SHT S-20.
FOR RAIL POSTS SEE SHT. S-37.



℄ 3/4" ϕ STEEL STUD BOLTS THREADED 6" EA. END W/2 WASHERS & LOCKNUT; 15/16" ϕ HOLES IN WEB (MAY BE DRILLED IN FIELD);
MIN. LENGTH OF STUD BOLT AT:
SECT. B-B IS 2'-0" } SPAN 14 ℄ PIER 12
SECT. D-D IS 3'-3"

SECTION B-B (OPP. HAND)
SECTION D-D (AS 15)

NOTE: THE CLAMPING DEVICES BE GALVANIZED IN ACCORDANCE WITH AASHTO M-232

PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

TYPICAL CROSS SECTION; DETAILS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP ROUTE 848 (ILL-43/HARLEM AVE.)
OVER
ICG RAILROAD
STATION 122+24.39 NB
SECTION 0708(2&3)-2323.1 BR-86
COOK COUNTY
SN 016-0318

SCALE: VERT. / HORIZ.
DRAWN BY L. S.
DATE
CHECKED BY S. J.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0318

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	31
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

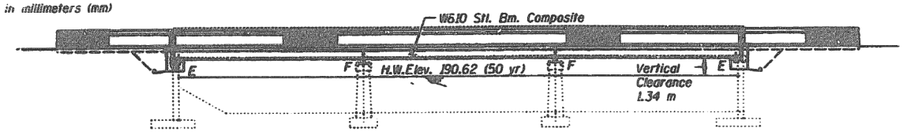
FOR INFORMATION ONLY

Bench Mark: chiseled "□" cut in N.W. Wingwall US 12/20/45 Bridge over Salt Creek Elev. 193.021 (Metric)

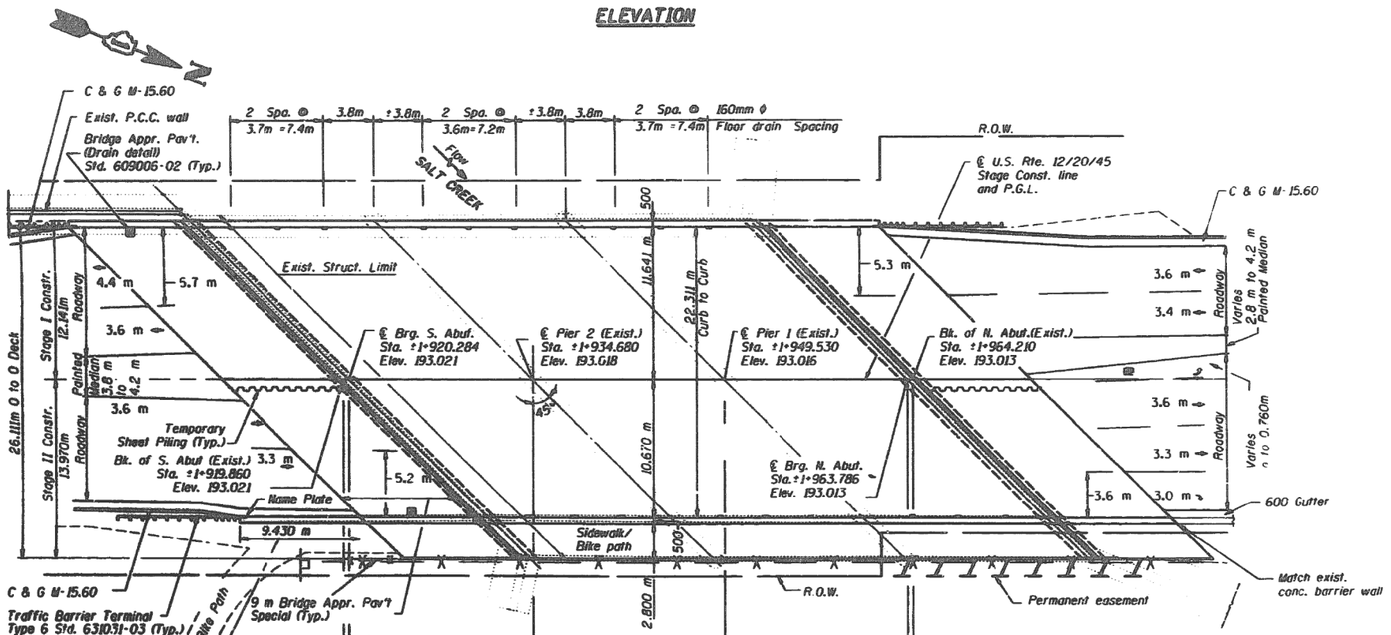
Existing Structure:016-0339. The original construction of bridge is unknown but in 1958 there was superstructure replacement and widening as SBI Rte. 46 Sec. 91-BY-1-R Sta.251+10.00. The Superstructure consists of deck beams 44.35m long by 26.11m wide supported by three spans of 14.68m, 14.85m and 14.82m for total length 44.35 m bk. to bk. of abutment. The structure has closed abutments and two concrete piers. The contractor shall remove and replace R.C. box beams with steel beams and conc. deck. One lane to be maintained in each direction during the rehabilitation of structure. by utilizing stage construction.

No salvage except for the existing hand rail* * To be deliver to maintenance bridge yard, 1101 Beisterfield Road. Elk Grove. IL. Phone No. (847)956-1444

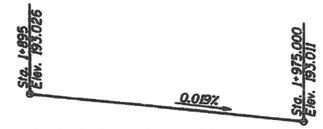
Note: All dimensions are in millimeters (mm) except as noted.



ELEVATION



PLAN



PROFILE GRADE US RTE 12/20/45 (LAGRANGE RD.)

WATERWAY INFORMATION

Drainage Area = 301.22 sq. km.

Exist Low Grade Elev. 192.930 @ Sta. 2+005 Max. Recorded H.W.E.=190.51

Flood	Freq. (Yr.)	Discharge m^3/s	Waterway Opening m^2 Exist.	Waterway Opening m^2 Prop.	Hdt. H.W.E.	Created Head - m Exist.	Created Head - m Prop.	Headwater Elev. (m) Exist.	Headwater Elev. (m) Prop.
	10	60.9	64.90	64.90	190.28	0.02	0.02	190.30	190.30
Design	50	89.2	74.30	74.30	190.62	0.04	0.04	190.66	190.66
Base	100	103.1	79.40	79.40	190.80	0.04	0.04	190.84	190.84
Overtopping									
Max. Calc.	500	133.1	86.30	86.30	191.04	0.07	0.07	191.11	191.11

Note: All waterway elevations are on IDOT datum. To convert to FEMA/USGS, Subtract 0.064m.

LOADING MS18

Allow 4 kN/m² for wearing surface

DESIGN SPECIFICATIONS

AASHTO LRFD with 1997, 1998 & 2000 Interims

DESIGN STRESSES

FIELD UNITS

f'_c = 4 MPa

f_y = 400 MPa (reinforcement)

F_y = 345 Mpa (structural steel M 270 GRADE 345W)

EXISTING STRUCTURE

EXISTING FIELD UNITS

f'_c = 6.89 MPa (Sub.)

f_y = 137.89 MPa (Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC) = B

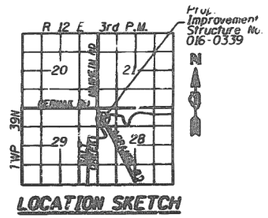
Design Acceleration Coefficient (A) = 0.03g

Soil Coefficient (S) = 1.5

STATION 1+942.105
REBUILT 20 BY
STATE OF ILLINOIS

F.A.P. RTE. 6(BUS)-390(34)
LOADING MS18
STR. NO. 016-0339

NAME PLATE



LOCATION SKETCH

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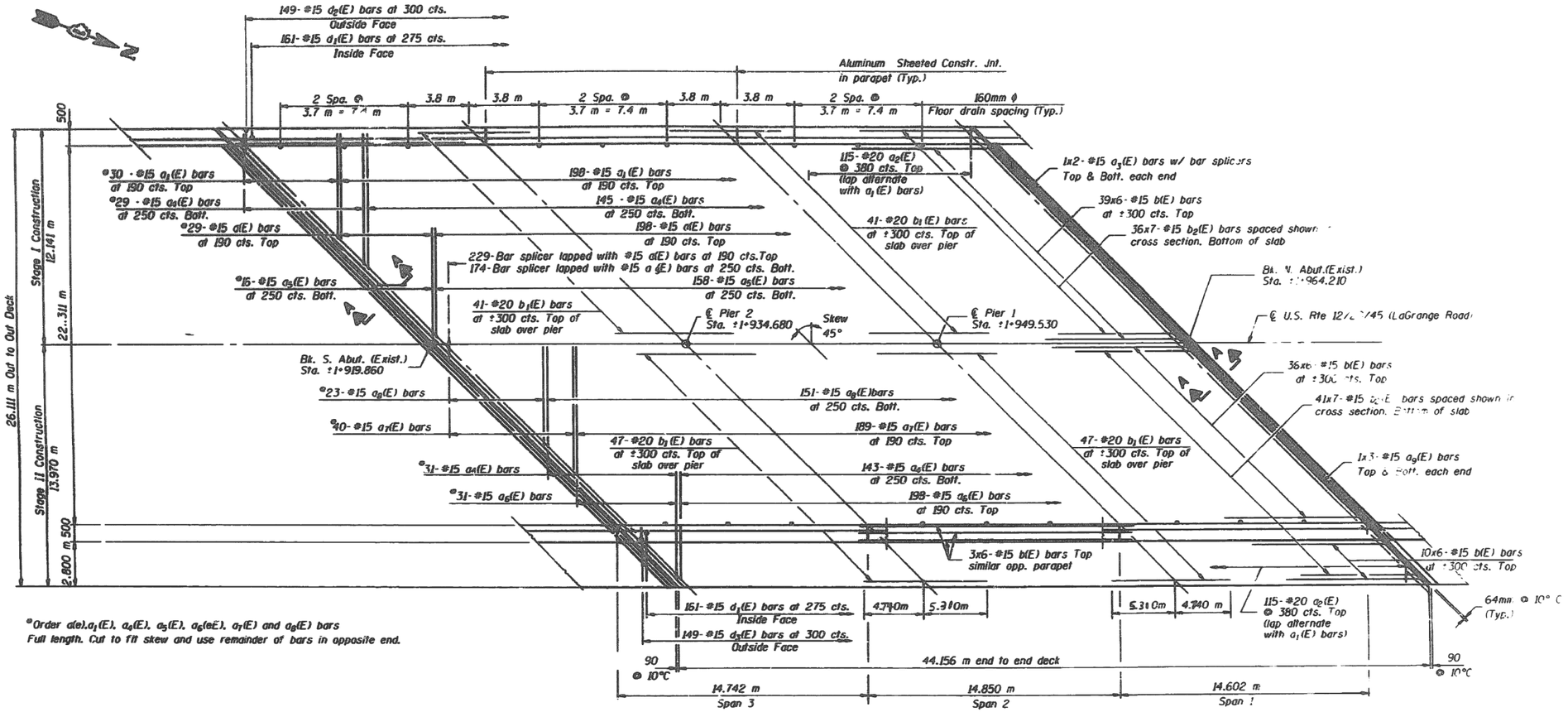
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0339

SCALE: | SHEET OF SHEETS | STA. | TO STA.

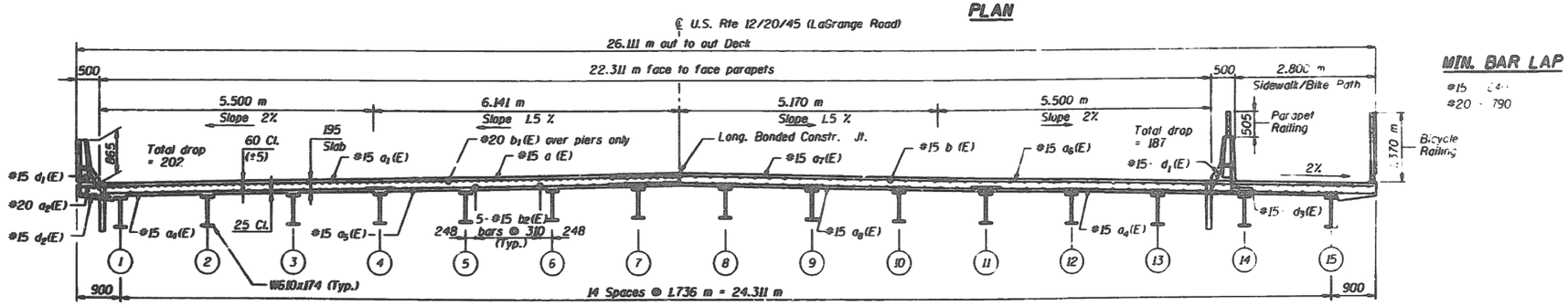
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	32
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



*Order d(e).a_1(E), a_4(E), a_5(E), a_6(eE), a_7(E) and a_8(E) bars Full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN



Near Pier — CROSS SECTION (Looking North) — Near Midspan

MIN. BAR LAP

#15 - 640
#20 - 790

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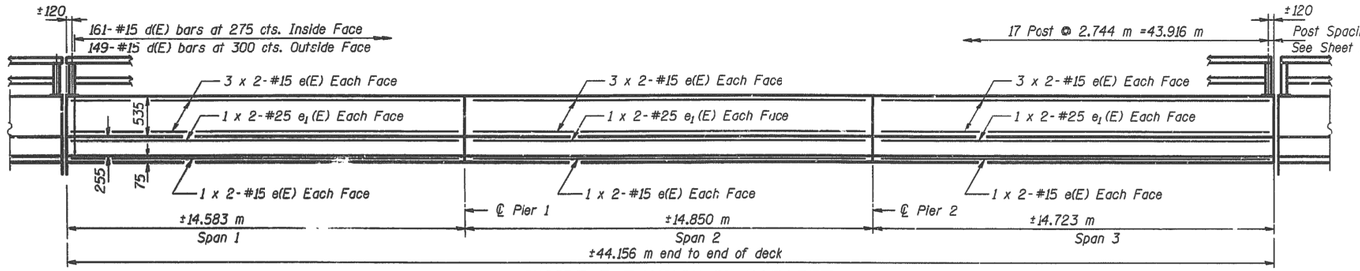
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–0339

SCALE: | SHEET OF SHEETS | STA. | TO STA.

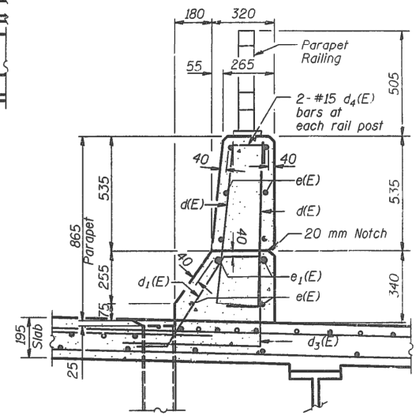
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	33
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

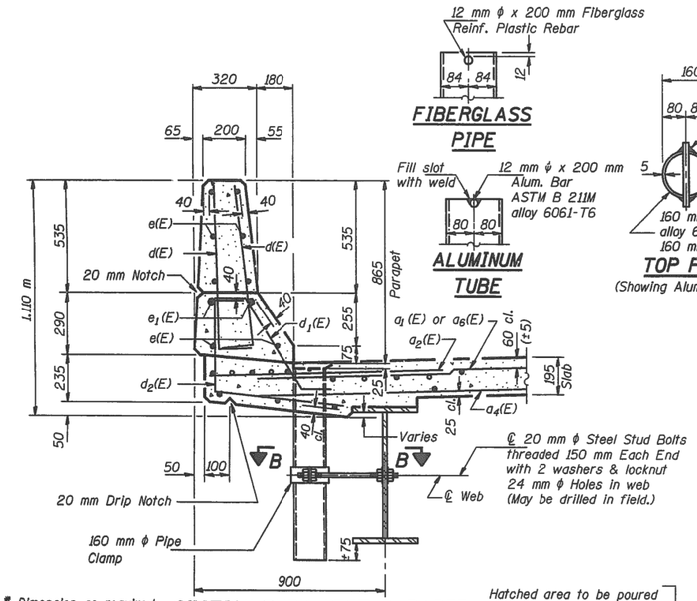


INSIDE ELEVATION OF PARAPET

Shown East Parapet wall. West Parapet similar opp. side



SECTION THRU EAST PARAPET



* Dimension as required by Pipe Clamp

SECTION THRU WEST PARAPET

SECTION B-B

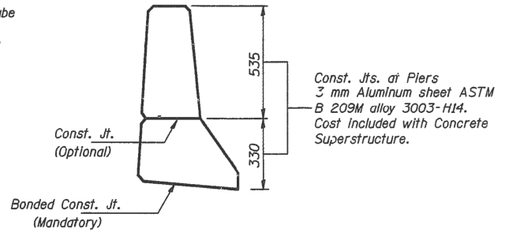
TOP PLAN

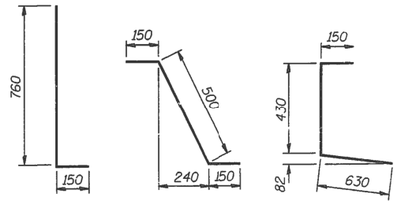
TOP PLAN

(Showing Aluminum Tube)

MIN. BAR LAPS

#15 - 640
#20 - 790





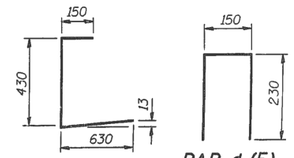
PARAPET JOINT DETAILS

Notes:

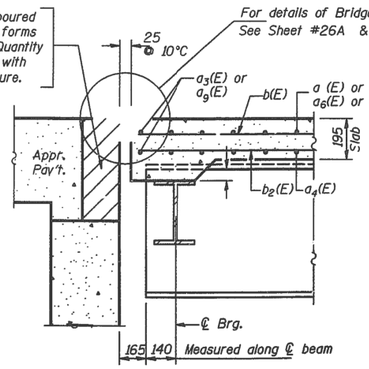
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.

Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 200 MPa minimum.

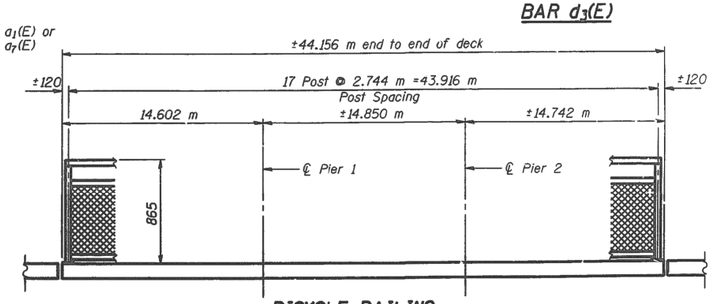
All dimensions are in millimeters (mm) except as noted.



Hatched area to be poured after superstructure forms have been removed. Quantity of Concrete included with Concrete Superstructure.



SECTION A-A



BICYCLE RAILING

See Sheet 11 of 26 for Bicycle Railing details

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 1 x 2-#15 etc. indicates 1 line of bars with 2 lengths per line.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0339

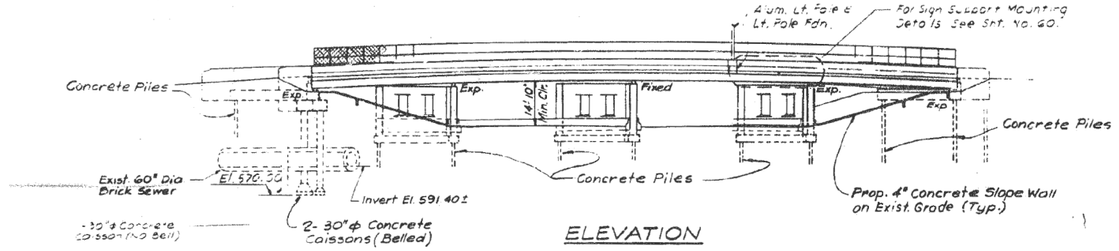
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	34
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

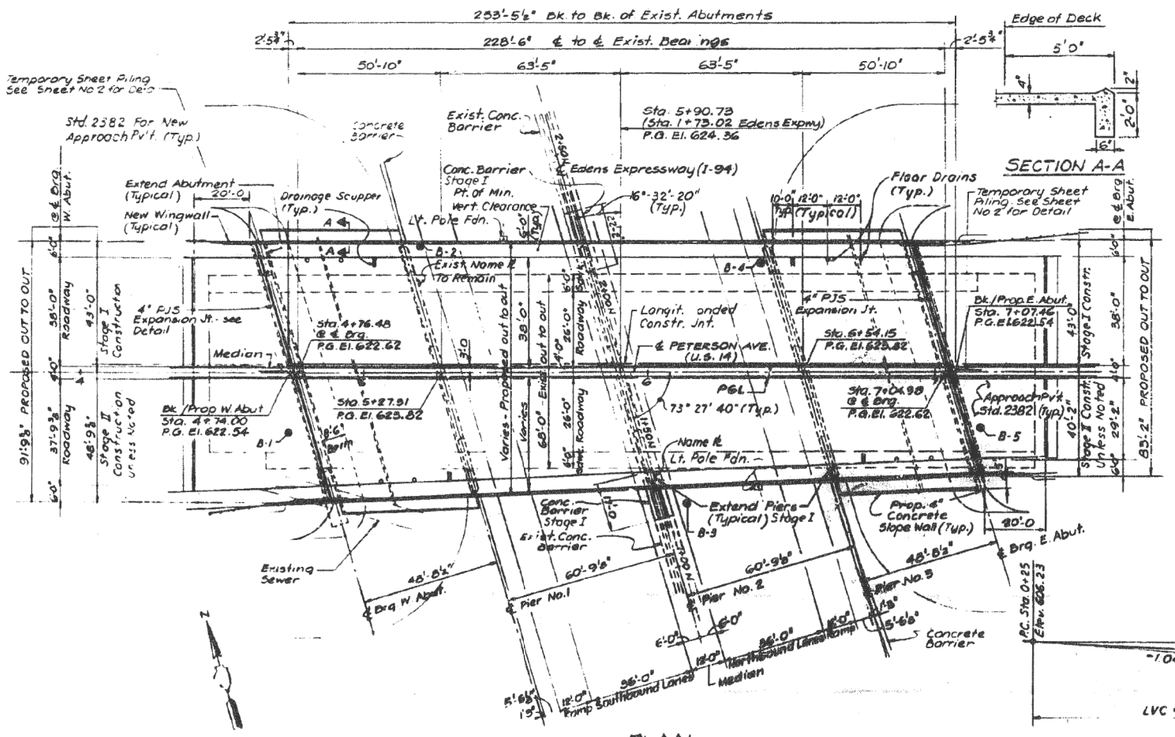
FOR INFORMATION ONLY

BENCH MARK: ELEV. 622.31

Standard Cook County Highway Dept. Disc Set in Sidewalk Concrete Above Scutheast Bridge Pier.



ELEVATION


253'-5½" Bk. to Bk. of Exist. Abutments
228'-6" ℄ to ℄ Exist. Bearings
2'-5¾"
2'-5¾"
50'-10"
63'-5"
63'-5"
50'-10"
Edge of Deck
5'0"
4"
2'0"
6"
Temporary Sheet Piling See Sheet No 2 for Detail
Std. 2382 For New Approach Pv't. (Typ.)
Concrete Barrier
Exist. Conc. Barrier
Sta. 5+90.73 (Sta. 1+73.02 Edens Expwy) P.G. El. 624.36
Edens Expressway (I-94)
SECTION A-A
Extend Abutment (Typical) 20'-0
Drainage Scupper (Typ.)
New Wingwall (Typical)
Conc. Barrier Stage I Pt. of Min. Vert. Clearance
16'-32'-20" (Typ.)
Floor Drains (Typ.)
10'-0" 12'-0" 12'-0" 10'-0" (Typical)
Temporary Sheet Piling See Sheet No 2 for Detail
Lt. Pole Fdn.
B-2
Exist. Name & To Remain
B-4
6" PJS Expansion Jt.
Bk./Prop. E. Abut. Sta. 7+07.46 P.G. El. 622.54
Sta. 4+76.48 ℄ & Brg. P.G. El. 622.62
Sta. 6+54.15 P.G. El. 625.82
Longit. Jointed Constr. Jnt.
℄ PETERSON AVE. (U.S. 14)
Median
Bk./Prop. W. Abut. Sta. 4+74.00 P.G. El. 622.54
Sta. 5+27.91 P.G. El. 625.82
Varies - Proposed cut to suit
Varies
73° 27' 40" (Typ.)
Sta. 7+04.98 ℄ & Brg. P.G. El. 622.62
Approach Pv't. Std. 2382 (Typ.)
B-5
Name & Lt. Pole Fdn.
B-1
Conc. Barrier Stage I
Exist. Conc. Barrier
Extend Piers (Typical) Stage I
Prop. 6" Concrete Slope Wall (Typ.)
B-3
80'-0
Brg. E. Abut.
Existing Sewer
48'-8½"
Brg. W. Abut.
60'-9½"
Pier No. 1
60'-9½"
Pier No. 2
48'-8½"
Pier No. 3
1.5%
6'-0"
6'-0"
84'-0" Northbound Lanes
Median
18'-0"
96'-0"
18'-0"
Ramp Southbound Lanes
5'-6½"
5'-6½"
Concrete Barrier
Stage I Construction
Stage II Construction unless noted
Stage I Constr.
Stage II Constr. Unless Noted
Prop. 38'-0" Roadway
Prop. 43'-0" Roadway
Prop. 40'-0" Roadway
Exist. 36'-0" Roadway
Exist. 40'-0" Roadway
91.98' PROPOSED CUT TO OUT
85.21' PROPOSED CUT TO OUT
4" PJS Expansion Jt. see Detail
Exist. 60" Brick Sewer
Exist. 30" Brick Sewer
Exist. 24" Brick Sewer
Exist. 18" Brick Sewer
Exist. 12" Brick Sewer
Exist. 8" Brick Sewer
Exist. 6" Brick Sewer
Exist. 4" Brick Sewer
Exist. 2" Brick Sewer
Exist. 1" Brick Sewer
Exist. ½" Brick Sewer
Exist. ¼" Brick Sewer
Exist. ⅛" Brick Sewer
Exist. 1/16" Brick Sewer
Exist. 1/32" Brick Sewer
Exist. 1/64" Brick Sewer
Exist. 1/128" Brick Sewer
Exist. 1/256" Brick Sewer
Exist. 1/512" Brick Sewer
Exist. 1/1024" Brick Sewer
Exist. 1/2048" Brick Sewer
Exist. 1/4096" Brick Sewer
Exist. 1/8192" Brick Sewer
Exist. 1/16384" Brick Sewer
Exist. 1/32768" Brick Sewer
Exist. 1/65536" Brick Sewer
Exist. 1/131072" Brick Sewer
Exist. 1/262144" Brick Sewer
Exist. 1/524288" Brick Sewer
Exist. 1/1048576" Brick Sewer
Exist. 1/2097152" Brick Sewer
Exist. 1/4194304" Brick Sewer
Exist. 1/8388608" Brick Sewer
Exist. 1/16777216" Brick Sewer
Exist. 1/33554432" Brick Sewer
Exist. 1/67108864" Brick Sewer
Exist. 1/134217728" Brick Sewer
Exist. 1/268435456" Brick Sewer
Exist. 1/536870912" Brick Sewer
Exist. 1/1073741824" Brick Sewer
Exist. 1/2147483648" Brick Sewer
Exist. 1/4294967296" Brick Sewer
Exist. 1/8589934592" Brick Sewer
Exist. 1/17179869184" Brick Sewer
Exist. 1/34359738368" Brick Sewer
Exist. 1/68719476736" Brick Sewer
Exist. 1/137438953472" Brick Sewer
Exist. 1/274877906944" Brick Sewer
Exist. 1/549755813888" Brick Sewer
Exist. 1/1099511627776" Brick Sewer
Exist. 1/2199023255552" Brick Sewer
Exist. 1/4398046511104" Brick Sewer
Exist. 1/8796093022208" Brick Sewer
Exist. 1/17592186044416" Brick Sewer
Exist. 1/35184372088832" Brick Sewer
Exist. 1/70368744177664" Brick Sewer
Exist. 1/140737488355328" Brick Sewer
Exist. 1/281474976710656" Brick Sewer
Exist. 1/562949953421312" Brick Sewer
Exist. 1/1125899906842624" Brick Sewer
Exist. 1/2251799813685248" Brick Sewer
Exist. 1/4503599627370496" Brick Sewer
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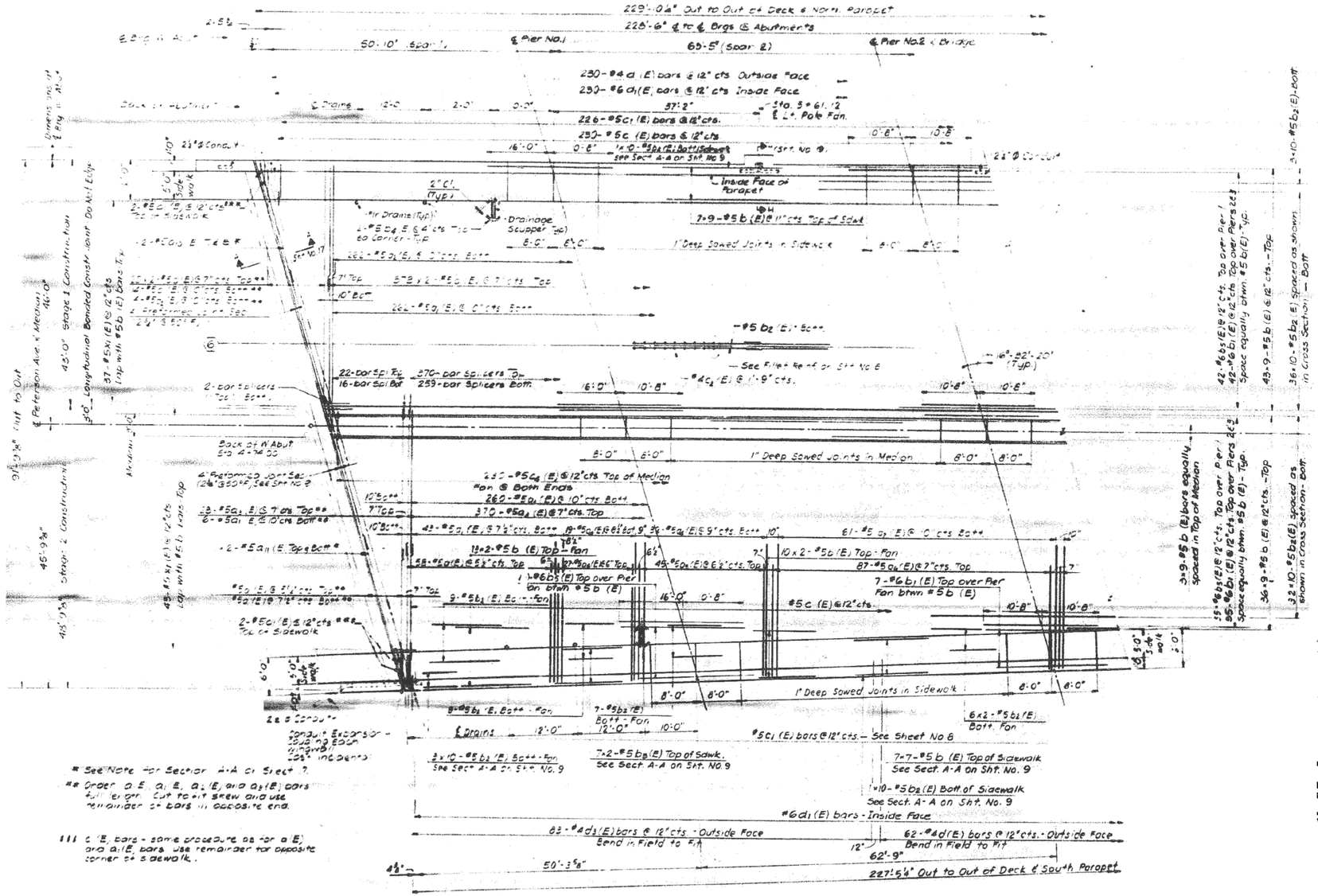
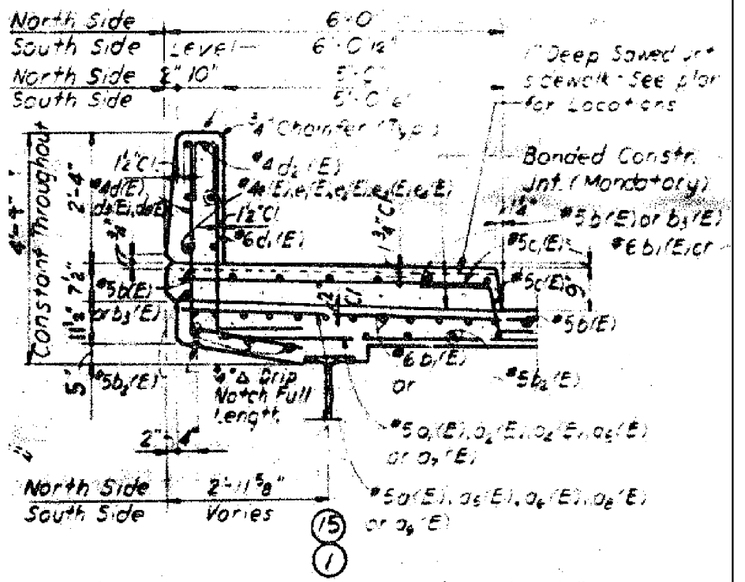
FOR INFORMATION ONLY





SECTION THRU SIDEWALK & PARAPET

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN SN: 016-0364	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR.	2018-140-BR	COOK	172	36
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 62H72				
PLOT DATE = 1/30/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

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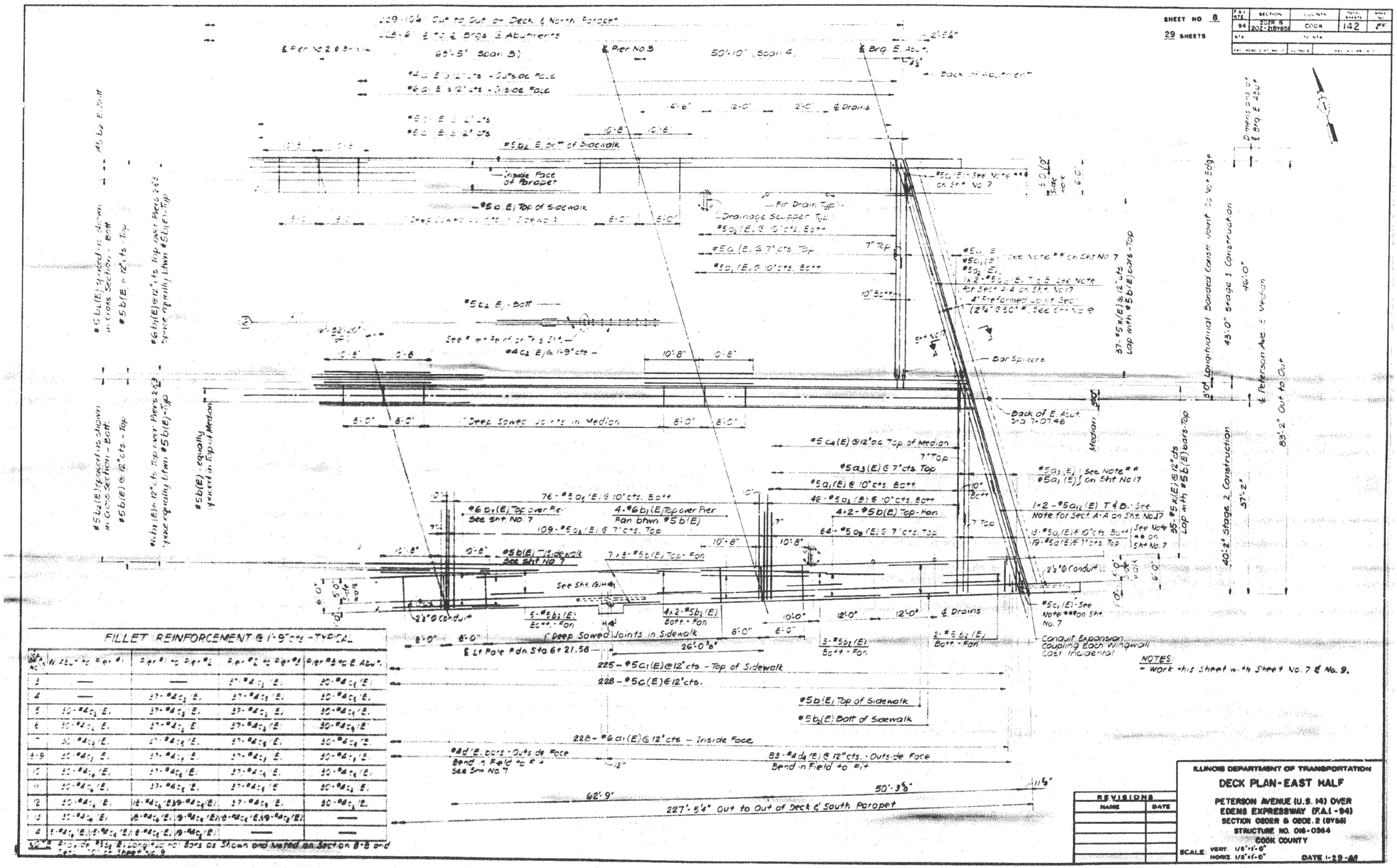
FOR INFORMATION ONLY



FILLET REINFORCEMENT @ 1'-9" cts - TYPICAL

Sht. No.	N. Abut. to Pier #1	Pier #1 to Pier #2	Pier #2 to Pier #3	Pier #3 to E. Abut.
3	—	—	37 - #4 d_{11} E.	30 - #4 d_{12} E.
4	—	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
5	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
6	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
7	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
8-9	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
10	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
11	30 - #4 d_{12} E.	37 - #4 d_{11} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
12	30 - #4 d_{12} E.	18 - #4 d_{11} E. 19 - #4 d_{12} E.	37 - #4 d_{11} E.	30 - #4 d_{12} E.
13	30 - #4 d_{12} E.	18 - #4 d_{11} E. 19 - #4 d_{12} E.	19 - #4 d_{11} E. 18 - #4 d_{12} E.	—
14	5 - #4 d_{12} E. 25 - #4 d_{11} E.	18 - #4 d_{11} E. 19 - #4 d_{12} E.	19 - #4 d_{11} E. 18 - #4 d_{12} E.	—

Note: Fillet Bars Longitudinal to Bars as Shown and Noted on Section B-B and "Typ." on Sht No. 9

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK PLAN - EAST HALF

PETERSON AVENUE (U.S. 14) OVER EDENS EXPRESSWAY (F.A.I. - 94)
SECTION 0828R & 0828.2 (BYBA)
STRUCTURE NO. 016-0364
COOK COUNTY

SCALE: VERT. 1/8"=1'-0" HORIZ. 1/8"=1'-0" DATE 1-28-19

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0364

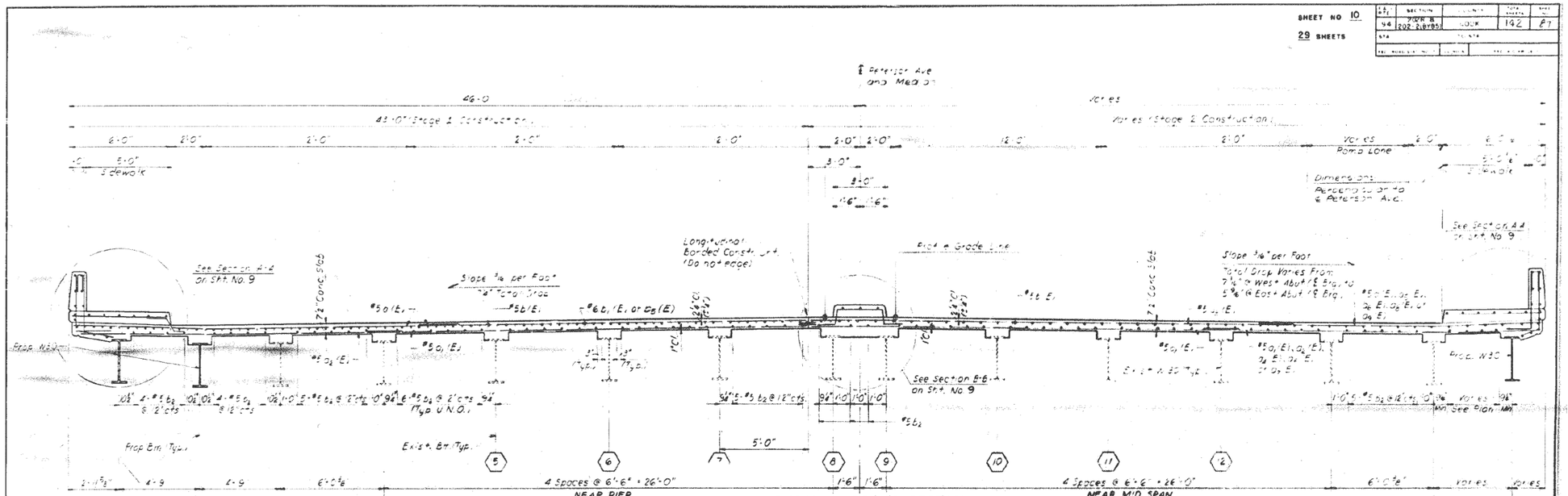
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	37
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

SHEET NO 10
29 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	2018-140-BR (202-2 BYPASS)	COOK	172	67
STA.		TO STA.		



TYPICAL CROSS SECTION
(LOOKING EAST)

SECTION A-A

SECTION B-B

SECTION AT SIDEWALK

ALUMINUM TUBE

PLAN

TOP PLAN C-C

FIBERGLASS PIPE

TOP PLAN
(Showing Aluminum Tube)

BAR d_5(E)

BAR d_4(E), d_3(E) & d_2(E)

BAR d_6(E)

BAR d_1(E)

BAR c_4(E)

BAR d_2(E)

BAR c_2(E), c_3(E), c_5(E), c_6(E)

BAR x_1(E)

BAR c_1(E)

NOTE:

FIBERGLASS PIPE SHALL CONFORM TO ASTM D 2996 WITH SHORT TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MINIMUM. THE SURFACE OF THE FIBERGLASS PIPE SHALL BE FREE OF BOND INHIBITING AGENTS.

THE EXTERIOR SURFACES OF THE FLOOR DRAIN SHALL BE PAINTED WITH THE LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SPECIFIED FOR STRUCTURAL STEEL. THE EXTERIOR SURFACES OF THE ALUMINUM PIPE SHALL BE CLEANED AND GIVEN A WASHCOAT PRETREATMENT IS ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S SPEC. SSPC-SP1 & SSPC-PAINT-27 PRIOR TO PAINTING.

DESIGNED BY JD
CHECKED BY JEM
DRAWN BY BCS
CHECKED BY

NELSON OSTROM BASKIN BERMAN & ASSOC. INC.
CONSULTING ENGINEERS — PARK RIDGE, ILLINOIS

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	662	#5	22'-4"	—	r1(E)	282	#4	5'-5"	L
a1(E)	608	#5	25'-5"	—	a2(E)	458	#6	4'-4"	L
a2(E)	322	#5	19'-9"	—	d4(E)	96	#4	2'-9"	L
a3(E)	393	#5	23'-11"	—	d6(E)	82	#4	6'-8"	L
a4(E)	51	#5	24'-7"	—	d4(E)	82	#4	4'-11"	L
a5(E)	148	#5	2'-4"	—	d5(E)*	10	#6	9'-8"	U
a6(E)	87	#5	19'-9"	—	d6(E)*	6	#6	4'-6"	L
a7(E)	61	#5	23'-0"	—					
a8(E)	109	#5	18'-0"	—	e(E)	36	#3	14'-2"	—
a9(E)	64	#5	15'-7"	—	e1(E)	72	#4	7'-8"	—
a10(E)	8	#5	23'-4"	—	e2(E)	36	#4	5'-6"	—
a11(E)	4	#5	26'-4"	—	e3(E)	36	#4	16'-5"	—
a12(E)	4	#5	21'-10"	—	e4(E)	36	#4	15'-3"	—
					x1(E)	152	#5	4'-5"	—
b(E)	925	#5	27'-6"	—					
b1(E)	165	#6	21'-4"	—					
b2(E)	1066	#5	25'-0"	—					
b3(E)	14	#5	24'-6"	—					
b4(E)	32	#5	2'-0"	—					
b5(E)	87	#6	26'-8"	—					
c(E)	458	#5	2'-5"	—					
c1(E)	455	#5	5'-7"	—					
c2(E)	380	#4	3'-4"	—					
c3(E)	134	#4	7'-0"	—					
c4(E)	290	#5	6'-3"	—					
c5(E)	558	#4	3'-10"	—					
c6(E)	208	#4	4'-2"	—					

Reinforcement Bars designated (E) shall be Epoxy Coated.

* See Sect. H-H on Sht. 19

BILL OF MATERIAL

ITEM	UNIT	QUANT
Class X Concrete Superstructure	Cu. Yds.	724.5
Reinforcement Bars (Epoxy Coated)	Lbs.	145,350
Protective Coat	Sq. Yds.	565
Bar Splicers	Each	669
Floor Drains	Each	8
Drainage Scuppers	Each	4

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

PETERSON AVENUE (U.S. 14) OVER EDENS EXPRESSWAY (F.A.I.-94)
SECTION 2018-140-BR & 2018-2 (BYPS)
STRUCTURE NO. 016-0364
COOK COUNTY

SCALE VERT. NONE
DATE 1-18-19

USER NAME = dlazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0364

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	38
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

60(1,2&3)RS & 60B-1-R(81)

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	*	COOK	102	27
STA.	TO STA			
FED ROAD DIST NO 7	ILLINOIS	FEDERAL AID PROJECT	525	

Sheet 1 of 26

WATERWAY INFORMATION

Drainage Area — Low Grade El. 595.40 At Sta. 120+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design	50	4600	1283	1283	586.9	0	0	586.9	586.9
Base	100	5180	1404	1404	587.9	0	0	587.9	587.9
Overtopping									
Max. Cal.	500	6600		1695	590.3		0		590.3

BENCH MARK:
"□" On South End of 4'x9' Slab on Top of 60" Brick Sewer at S.E. Corner of Peterson Ave. Bridge El. 587.80

PROPOSED STRUCTURE



LOCATION SKETCH

MAJOR WORK ITEMS:

1.- Remove and Replace Existing Bridge Deck, Sidewalks and Parapets.
2.- Remove and Replace Selected Beams.
3.- Modify and Repair Existing Abutments and Piers.
4.- Cleaning & painting existing metal bearings.
5.- Clean and paint existing structural steel.
6.- Repair slopes.
7.- Repair Approaches.

DESIGN CRITERIA:

A.A.S.H.T.O Standard Specifications for Highway Bridges 1977, Interim Specifications for 1978, 1979, 1980, 1981 and 1982.

DESIGN STRESS (CONCRETE):
f'y = 60,000
f'c = 3,500 } (Bridge Superstructure & New Portions of Substructure)

DESIGN STRESSES (STRUCTURAL STEEL):
fs = 27,000 PSI, M223 (Grade 50) } New Superstructure
fs = 20,000 PSI, M183
Design is based on Service Load Design Method
fy = 33,000 PSI (Assumed)
Allowable Service Load Stress = 18,000 PSI } Existing Superstructure

LOADING:
HS20-44
Future Surface Course = 25 PSF.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
James T. Kaylor
Engineer of Bridges and Structures

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN & ELEVATION
F.A.P. ROUTE 525 (U.S. ROUTE 14)
OVER NORTH SHORE CHANNEL
SECTION 60B-1-R(81)
COOK COUNTY
STA. 116+57.00
DRAWN BY: IMG
DATE: 10-17-63
CHECKED BY: GDB, TLB

Structure Number: 016-0367

USER NAME = diazla	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0367

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	39
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

608-I-R(81)

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	102	33
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FEDERAL AID PROJECT	525	

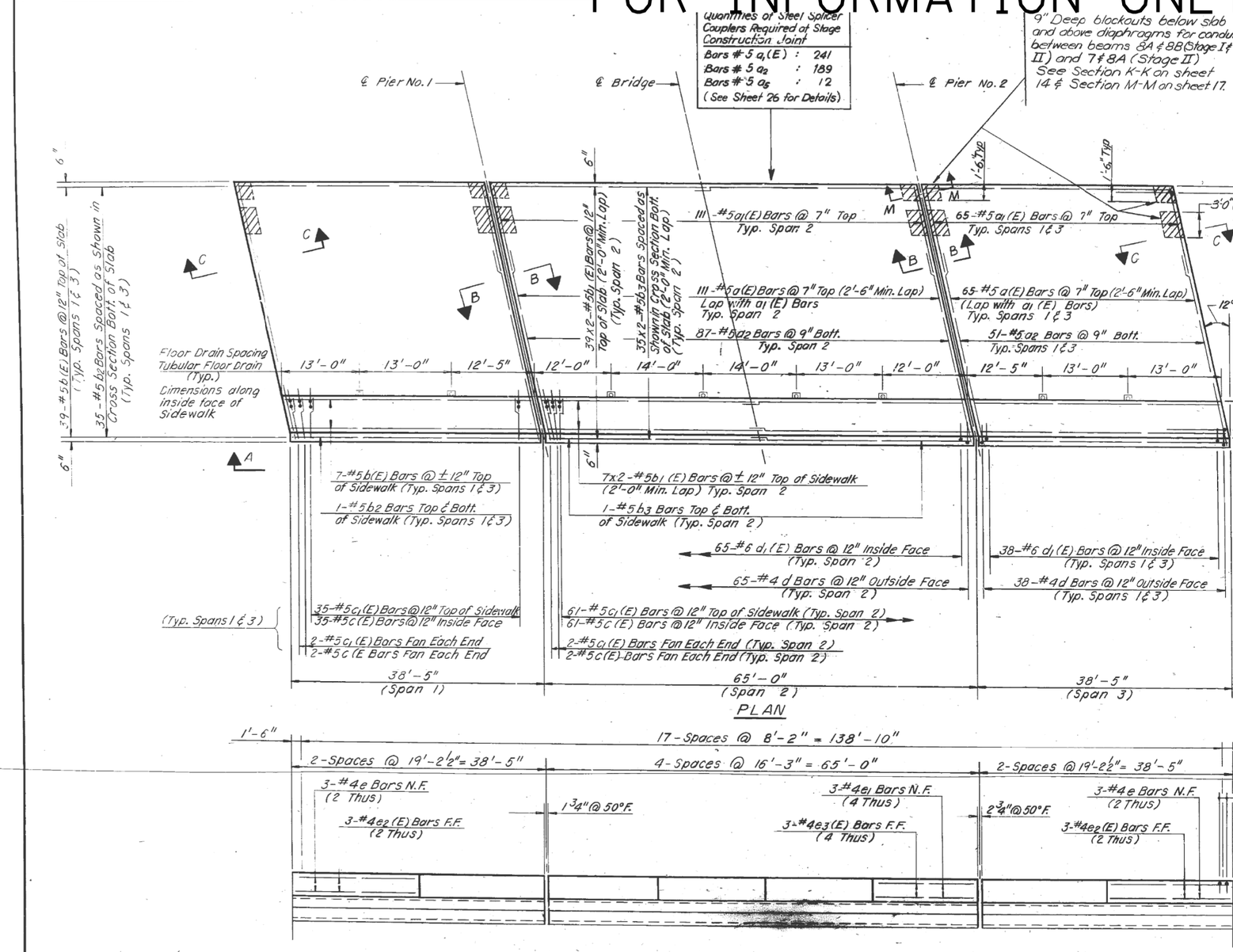
Sheet 7 of 26

Quantities of Steel Splice Couplers Required at Stage Construction Joint

Bars #5 a_1(E) :	241
Bars #5 a_2 :	189
Bars #5 a_3 :	12

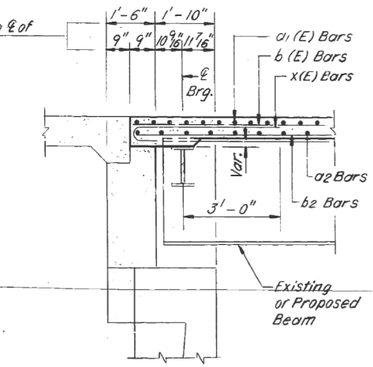
(See Sheet 26 for Details)

9" Deep blockouts below slab and above diaphragms for conduits between beams 8A & 8B (Stage I & II) and 7 & 8A (Stage II) See Section K-K on sheet 14 & Section M-M on sheet 17.



PLAN

ELEVATION A-A



SECTION B-B

SECTION C-C

NOTES:

1. For Typical Cross Section & Bill of Material See Sheet No. 8
2. For Preformed Joint Sealer, Parapet Joint & Floor Drain Details See Sheet No. 9
3. Bars Indicates Thus 20 x 3-#5 etc. Indicates 20 Lines of Bars with 3 Lengths.
4. For location of inserts to be embedded in the bottom of the new slab for conduit and pipe support hanger, refer to Sheet 14.
5. For detail M-M, refer to Sheet 17.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE PLAN & ELEVATION
F.A.P. ROUTE 525 (U.S. ROUTE 14)
OVER NORTH SHORE CHANNEL
SECTION 608-I-R(81)
COOK COUNTY
STA. 116+57.00
DRAWN BY: IMG
DATE : 10-17-83. CHECKED BY: GDW, TLR

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-0367

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	40
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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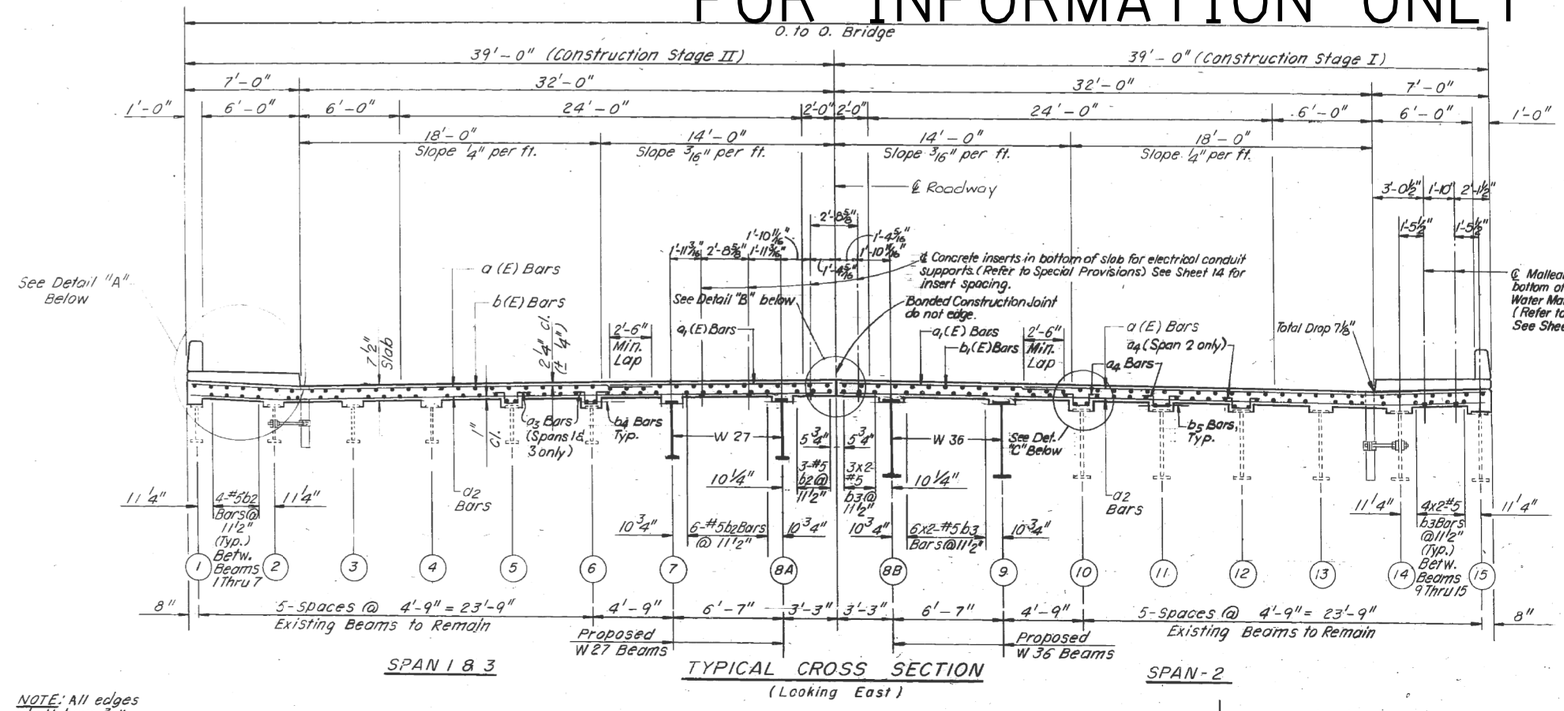
FOR INFORMATION ONLY

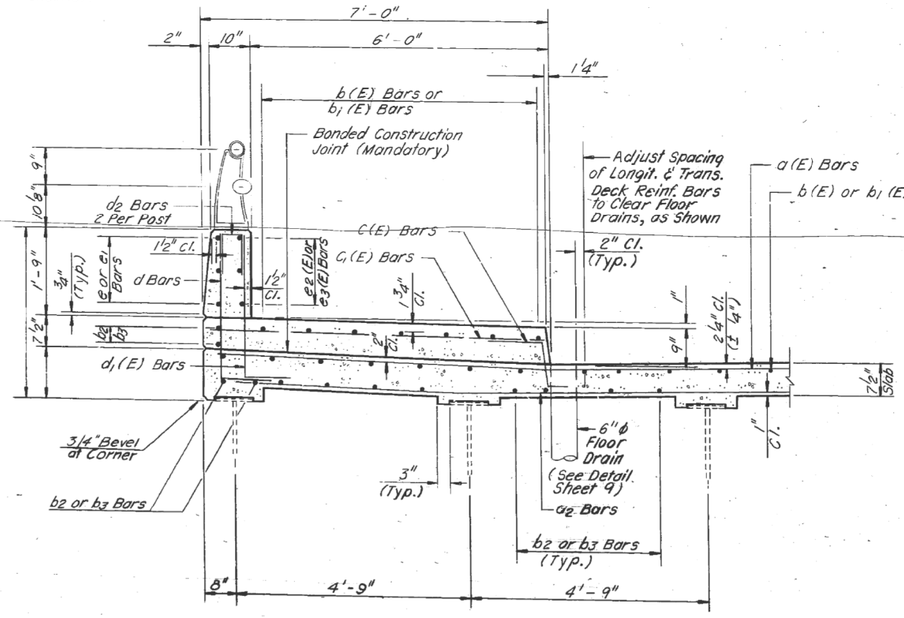
ALT ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	102	34
STA	TO STA			
FED ROAD DIST NO 7	ILLINOIS	FEDERAL AID PROJECT	525	

60B-1-R(81)

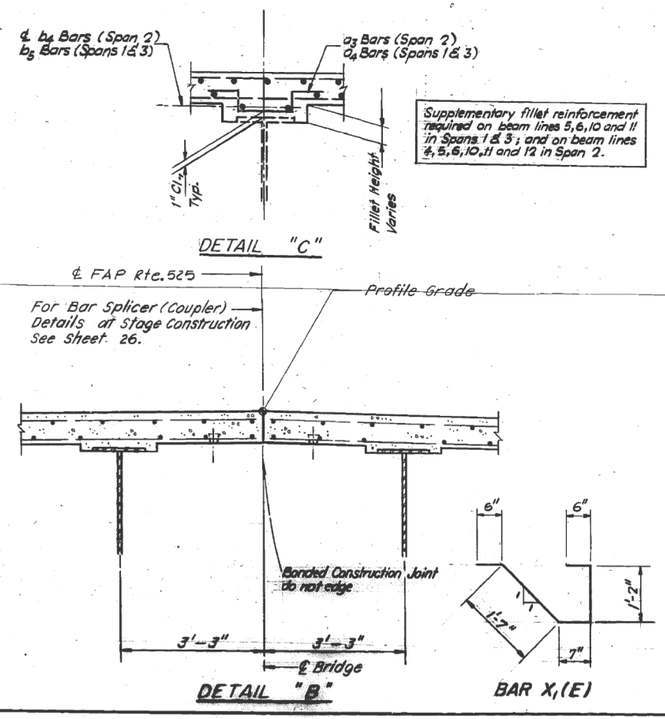
Sheet 8 of 26



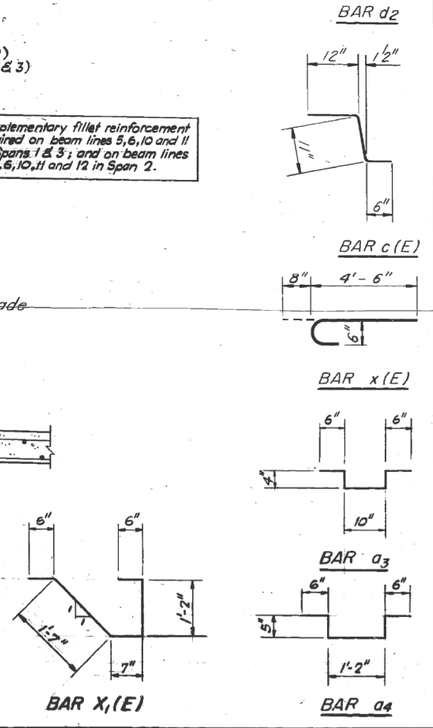
NOTE: All edges shall have ¾" chamfer.



DETAIL "A"



DETAIL "B"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a (E)	482	#5	28'-5"	
a1(E)	482	#5	13'-7"	
a2	378	#5	39'-6"	
a3	132	#4	2'-10"	
a4	104	#4	3'-4"	
a5	24	#5	6'-0"	
b (E)	184	#5	37'-11"	
b1(E)	184	#5	33'-4"	
b2	148	#5	37'-11"	
b3	148	#5	33'-4"	
b4	8	#5	37'-11"	
b5	12	#5	33'-4"	
c (E)	286	#5	2'-5"	
c1(E)	286	#5	6'-8"	
d	282	#4	3'-10"	L
d1(E)	282	#5	3'-9"	L
d2	72	#4	2'-1"	
e	24	#4	18'-10"	
e1	24	#4	15'-11"	
e2(E)	24	#4	18'-10"	
e3(E)	24	#4	15'-11"	
x(E)	304	#6	5'-2"	
x1(E)	72	#4	4'-4"	

Item	Unit	Quantity
Removal of Existing Conc. Deck	L. Sum	1
Class X Concrete	Cu. Yd.	323
Reinforcement Bars (Epoxy Coated)	Lbs.	71,510
Floor Drains	Each	16

All reinforcement bars in deck shall be epoxy coated.

Bill of Material shown includes E.B. & W.B. Lanes. Work this sheet with sheet 7.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE CROSS SECTION & DETAILS
F.A.P. ROUTE 525 (U.S. ROUTE 14)
OVER NORTH SHORE CHANNEL
SECTION 60B-1-R (81)
COOK COUNTY
STA. 116+57.00
DRAWN BY: IMG
DATE : 10-17-83
CHECKED BY: GDW.TLR

8

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0367

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	41
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

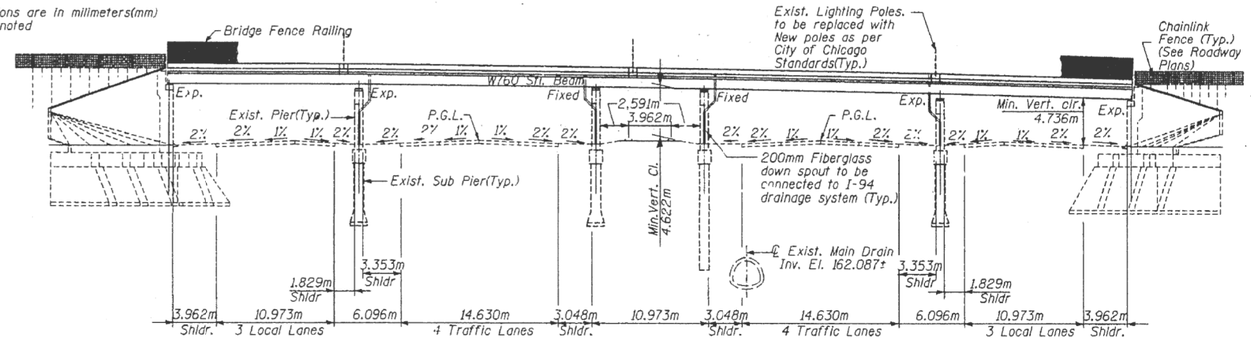
Bench Mark : B.M. #8 :"X" Cut Southern Bolt Fire Hydrant Southwest corner of Pershing Road and Wentworth Avenue Elev. 181.834

Existing Structure: S.N. 016-0398 is a five span continuous steel beam structure with 184mm reinforced concrete deck slab and 50mm of bituminous surfacing. The over all Length of structure from back to back of abutments is 90.678m and out of out deck width is 29.972m. The bridge is located on the tangent horizontal alignment with no skew. The superstructure is supported by cantilever full height abutments on spread footings with reinforced concrete pedestals. The reinforced concrete multi-column piers are supported on drilled shafts. The bridge was built in 1961-62.under Federal Aid project No. I-94-3(29)-54, Section S-2323.2-4B. The existing superstructure will be removed and replaced

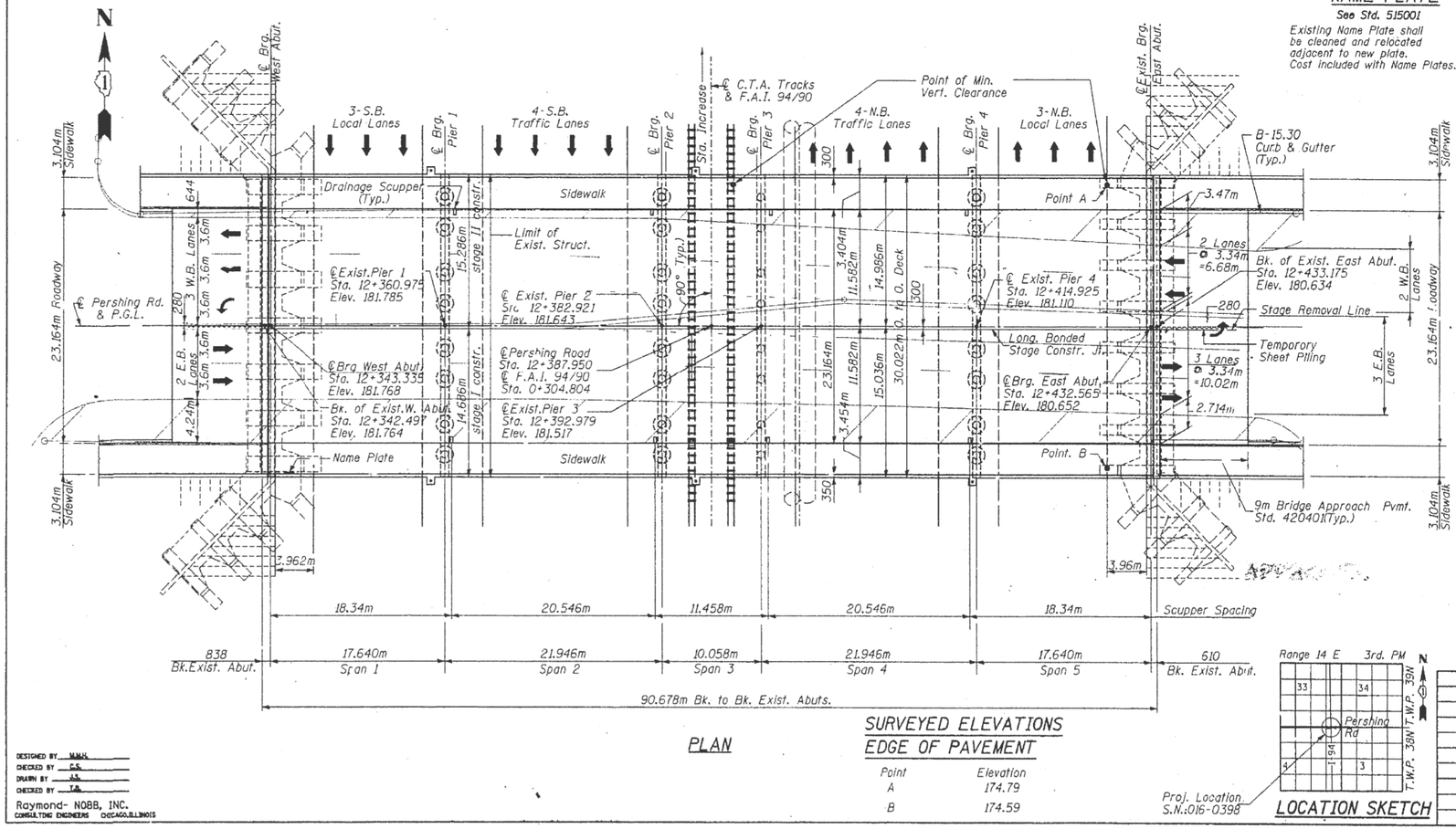
Traffic shall be maintained utilizing stage construction.

No salvage.

Note: All dimensions are in milimeters(mm) except as noted



ELEVATION



PLAN

SURVEYED ELEVATIONS
EDGE OF PAVEMENT

Point	Elevation
A	174.79
B	174.59

LOCATION SKETCH

DESIGNED BY M.M.K.
CHECKED BY C.S.
DRAWN BY J.S.
CHECKED BY T.B.

Raymond- NOBB, INC.
CONSULTING ENGINEERS CHICAGO,ILLINOIS

SHEET NO. 1 OF 29 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1478	2323.2-4B-BR	COOK	115	44
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

AASHTO 1996 and 1997,1998,1999 Interims

LOADING MS18

Allow 2.4 kN/m2 for future wearing surface

DESIGN STRESSES

FIELD UNITS
New Construction
f'c = 24 MPa
fy = 400 MPa (Reinf.)
fy = 345 MPa Structural Steel (M-270M Grade 345)
fy= 250MPa (M-270M Grade 250)

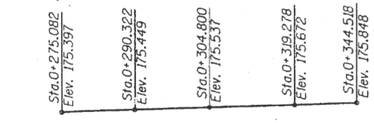
Existing Construction
f'c = 24 MPa
fy = 275 MPa (Reinf.)

STATION 12+387.950
REBUILT 20 BY
STATE OF ILLINOIS
F.A.U. RTE. 1478 SEC. 2323.2-4B-BR
F.A. PROJ.
LOADING MS18
STR. NO. 016-0398

NAME PLATE

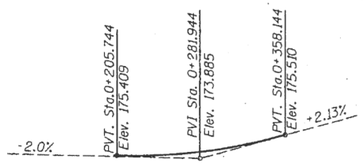
See Std. 515001

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



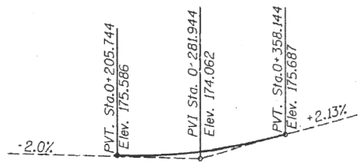
C.T.A. TRACKS TOP OF RAIL ELEVATION

(Field Surveyed at North Bound East Rail)



LOCAL LANES PROFILE GRADE LINE

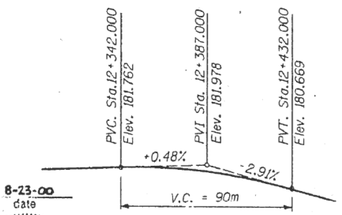
(Along ℄ N. B. & S.B. Expressway)



F.A.I-90/94 (DAN RYAN EXPRESSWAY) PROFILE GRADE LINE

(Along ℄ N. B. & S.B. Expressway)

Note:
F.A.I-90/94 Sta. 9+67(AH) (English Units)= Sta. 0+294.742(Metric Units)
℄ Pershing Road Sta. 10+00 = 0+304.804 (Metric Units)



PROFILE GRADE LINE

(Along ℄ of Pershing Road)

8-23-00
date

STATE OF ILLINOIS
ROBERT BASKIN
No. 2091
STRUCTURAL ENGINEER

expires 11-30-2000
signature

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

PERSHING ROAD(39TH STREET) OVER F.A.I. -94/90
COOK COUNTY

PERSHING ROAD SECTION: 2323.2-4B-BR
STA. 12+387.950 STRUCTURE NO. 016-0398

SCALE: VERT. HORIZ. DATE : 7/21/00

IO\PROJECTS\USTATION~-4651\PERSHING\PREFINAL\BRIDGE\546515HT01.DGN

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

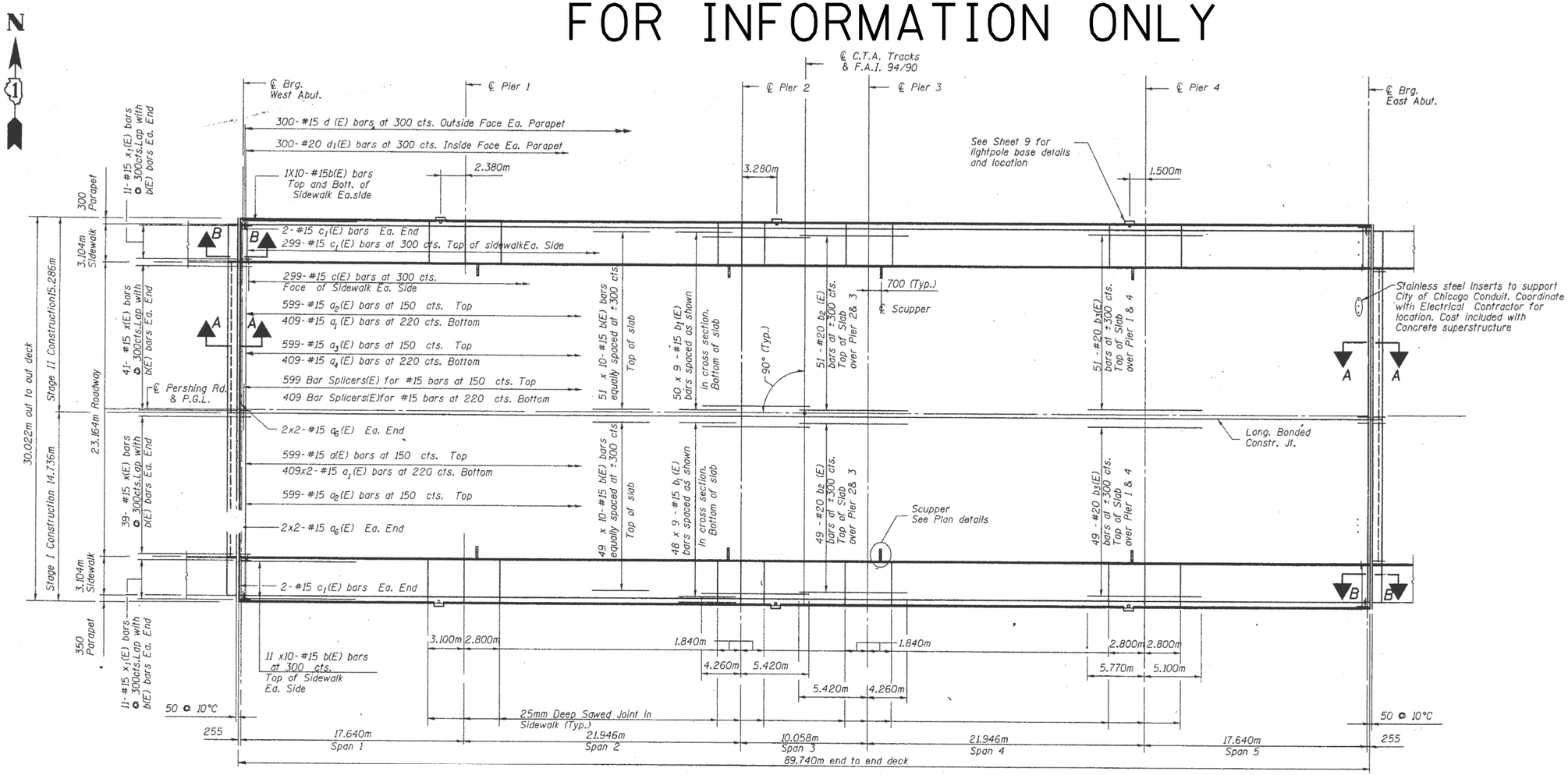
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0398

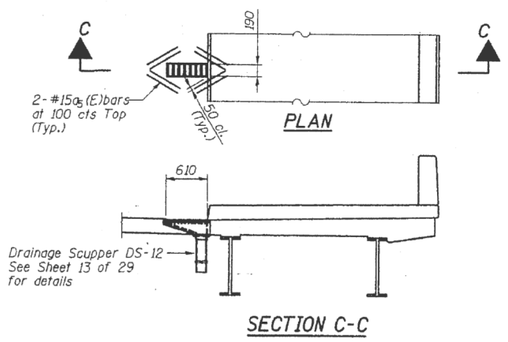
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	42
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

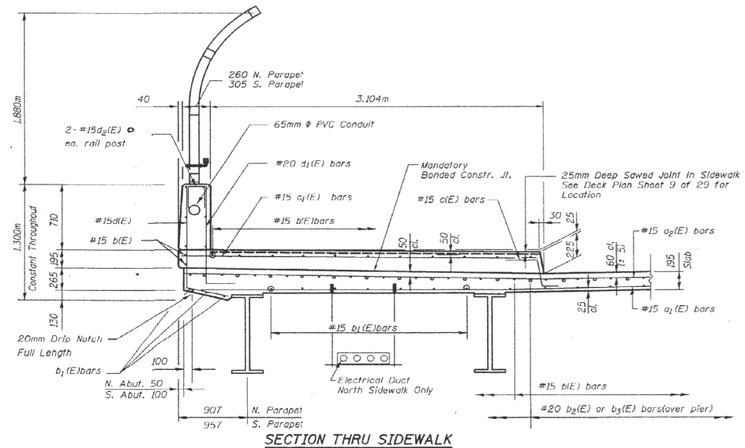
FOR INFORMATION ONLY



PLAN



SECTION C-C



SECTION THRU SIDEWALK

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0398

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	43
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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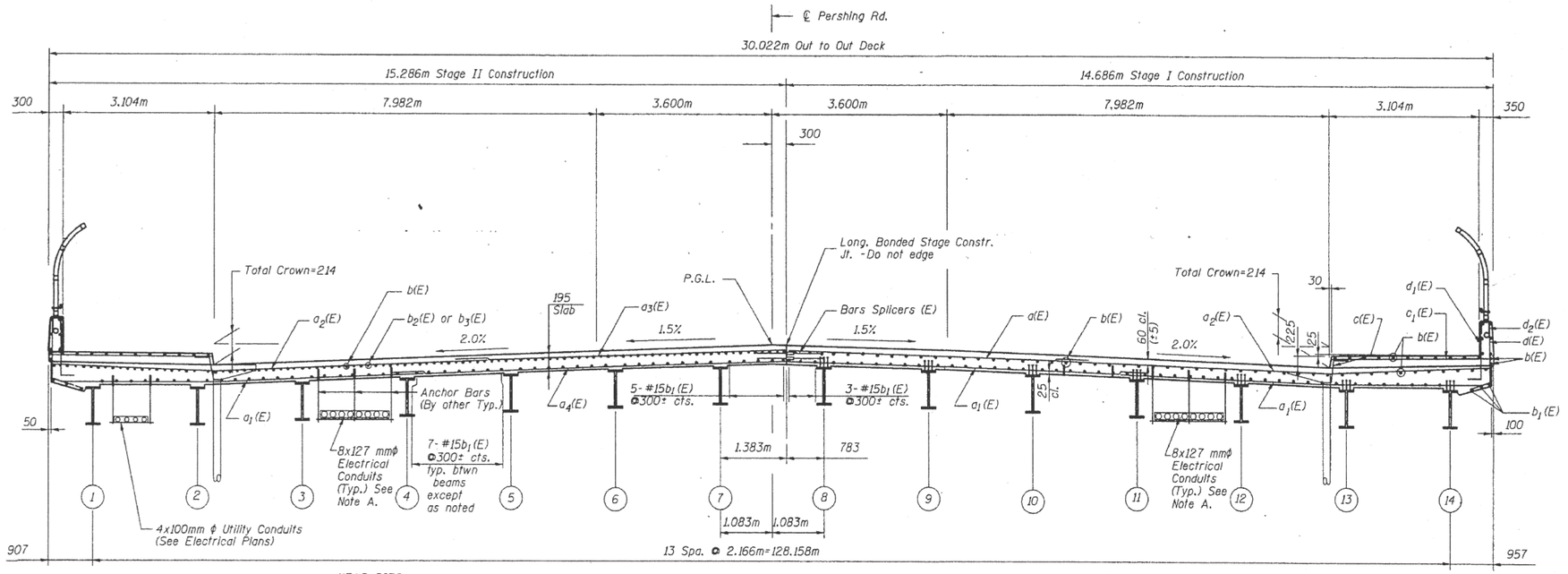
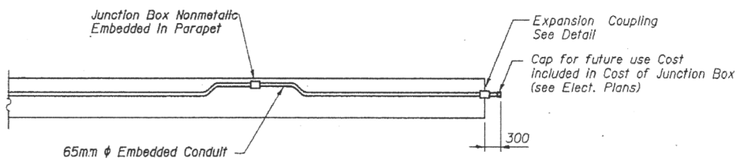
FOR INFORMATION ONLY



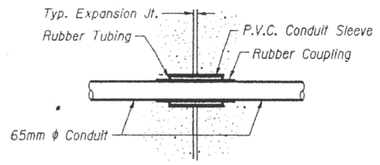
CROSS SECTION

(Looking East)



JUNCTION BOX EMBEDED IN PARAPET WALL

Contractor to verify location of Junction Boxes

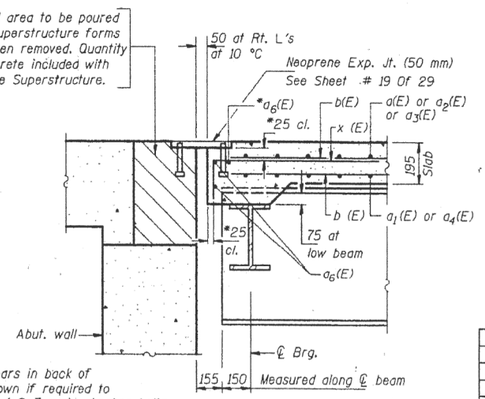


EXPANSIION COUPLING DETAIL FOR EMBEDED CONDUIT AT EXPANSION JOINTS

NOTE A:

Concrete inserts, anchor bars and support elements for electrical conduits shall be provided by Electric Utility owner. Concrete inserts will be cast-in-place in the deck bottom by the Contractor. Cost included in Concrete Superstructure.

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

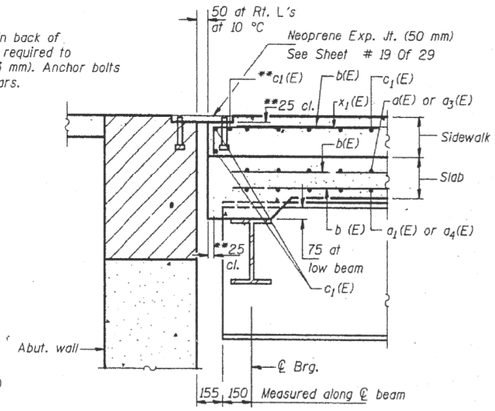


*Place a_6(E) bars in back of anchor bolts as shown if required to maintain 25 mm cl. (+0-3 mm). Anchor bolts should be tied to a (E) bars

SECTION A-A

For Location See Plan Sheet 8 of 29

**Place c_1(E) bars in back of anchor bolts as shown if required to maintain 25 mm cl. (+0-3 mm). Anchor bolts should be tied to c_1(E) bars.



SECTION B-B

For Location See Plan Sheet 8 of 29

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK CROSS SECTION

PERSHING ROAD(39TH STREET) OVER F.A.I. -94/90
COOK COUNTY

PERSHING ROAD — SECTION: 2323.2-4B-BR
STA. 12+387.950 — STRUCTURE NO. 016-0398

SCALE: VERT.
HORIZ.

DATE 17/21/00

D BY MMK
) BY CS
BY JJS
) BY TA

ond- NOBB, INC.
NG ENGINEERS CHICAGO,ILLINOIS

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0398

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	44
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. R. A. 567	JR-WRS (82)	COOK	106	72
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT - 91-271-74		

SHEET NO. 1
SHEETS 17

B.M. #16 - Elev. 622.72 :
Brass Disk (Chicago Metropolitan Sanitary District) @ Sta 56+30. 28' Lt. on Sidewalk @ N.W. Corner of Bridge.

B.M. #15 - Elev. 624.69
X-Cut in S.E. Bonnet Bolt on Fire Hyd. @ Sta. 50+48. 31' Lt.

B.M. #44 - Elev. 621.79
S.S/E Bonnet Bolt on Fire Hyd. @ Sta. 59+03±, 32± Lt.

EXISTING STRUCTURE

The Date of Construction of The Cent... is Unknown. The Structure was widen... width in 1928 as S.B.I. Route 6, Section F-1, Sta. 469+86. It is a two span reinforced concrete girder bridge with the transverse expansion joint located at the center pier. The concrete deck is approximately 9 inches in the center and 7 inches in the widened portion with a 3 inch overlay. It is supported on concrete closed abutments and a solid pier all on spread footing foundations. S.N. 016-0472.

WORK TO BE PERFORMED

The existing superstructure will be removed and replaced with a 7½ inch reinforced concrete deck supported on continuous (2 equal spans) 36" P.P.C. I-Beams. The deck will be constructed to provide a total of four (4) lanes @ 11'-0" and two (2) 5'-0" Sidewalks as indicated on the plan. The existing substructures will be rehabilitated and partially reconstructed. Construction will be staged to provide two-way traffic at all times. For details of stage construction see notes and details on this and other drawings.

DESIGN DATA

DESIGN SPECIFICATIONS

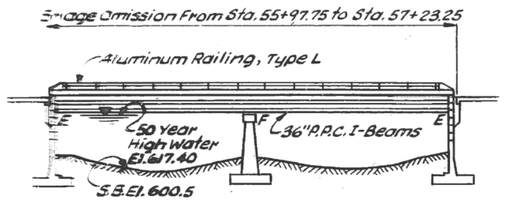
1977 A.A.S.H.T.O. and Interim Specs. 1978, 1979, 1980, 1981 & 1982 As Applicable
1983 I.D.O.T. Standard Specification for Road and Bridge Construction.

LOADING

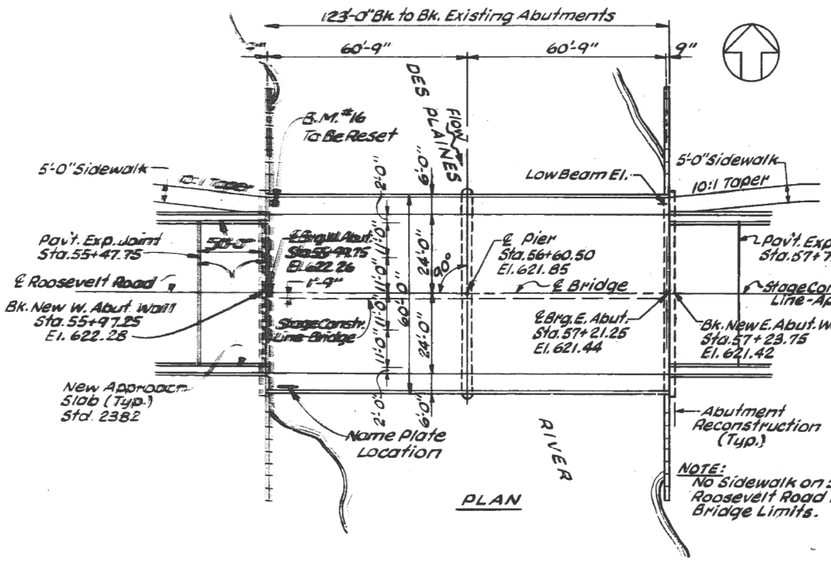
Truck Loading HS 20-44
Future Wearing Surface: 25#/Sq. Ft.

DESIGN STRESSES (NEW CONSTR.)

Substructure & Deck
f'_c = 3500 P.S.I.
f_y = 60,000 P.S.I. reinforcement
= 36,000 P.S.I. struct. steel (M183)
Precast Prestressed Conc. I-Beams
f'_c = 6,000 P.S.I.
f'_{ci} = 4,300 P.S.I.
f'_s = 270,000 P.S.I. (½" ϕ Strands)
f_{si} = 189,000 P.S.I.
f_y = 60,000 P.S.I.



ELEVATION



PLAN

NOTE: No Sidewalk on South Side Roosevelt Road Beyond Bridge Limits.

GENERAL NOTES

All structural steel shall be shop painted with the zinc-silicate and vinyl paint system.

Reinforcement bars shall conform to the requirements of AASHTO M31 or M53 Grade 60.

The cost of drilling the holes and epoxy grouting in the reinforcement bars shall be incidental to the cost of the reinforcement bars. See Special Provisions.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

STATE OF ILLINOIS
FRANK B. WYLIE, JR.
81-4041
ROSEVILLE, ILL.
REGISTERED STRUCTURAL ENGINEER

27 January 1984

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructure	Lump Sum*	-	-	Lump Sum
Concrete Removal	Cu. Yd.	-	39	39
Structure Excavation	Cu. Yd.	-	180	180
Floor Drains	Each	12	-	12
Protective Coat	Sq. Yd.	902	-	902
Class X Concrete	Cu. Yd.	262.3	110.7	373.0
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36 in.	Lin. Ft.	1101	-	1101
Structural Steel	Pound	3130	-	3130
Aluminum Railing, Type L	Lin. Ft.	226	-	226
Reinforcement Bars	Pound	610	9060	9670
Reinforcement Bars (Epoxy Coated)	Pound	51450	-	51450
Name Plates	Each	1	-	1
Temporary Sheet Piling	Sq. Ft.	-	1070	1070
Epoxy Crack Sealing	Lin. Ft.	-	103	103
Repair Concrete Structures	Sq. Ft.	-	35	35
Pref. Joint Seal 2½"	Lin. Ft.	124	-	124
Elastomeric Bearing Assembly, Type I	Each	18	-	18
Galvanized Steel Conduit, 2"	Lin. Ft.	124	-	124

* Includes approx. 583 Cu. Yds. Concrete Superstructure, Railing & Beam removal, 711 Sq. Yds. Bituminous Concrete Surface removal.



PROFILE GRADE, ROOSEVELT ROAD

WATERWAY INFORMATION

DRAINAGE AREA: 474 SQ. MILES LOW GRADE EL. 617.71' @ STA. 62+00

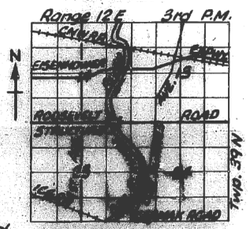
FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST.	OPENING SQ. FT. PROP.	NAT. H.W.E.	HEAD-FT. EXIST.	HEAD-FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	50	5,775	1,500	1,500	617.2'	0.86	0.86	617.76'	617.76'
BASE	100	6,275	1,500	1,500	617.8'	0.86	0.86	618.16'	618.16'
OVERTOPPING	50	5,775		1,500	617.4'		0.96		617.76'
MAX. CALC.	500								

NAME PLATE

See Ill. Std. 2113

STATION 56+60.5
REBUILT 198 BY
STATE OF ILLINOIS
F.A.P.RT. 567 SEC. JR-WRS (82)
F.A. PROJECT DX-567 (51)
LOADING HS20
STR. NO. 016-0472

Note: Existing Name Pl. shall be cleaned & reinstalled below new name Pl. (Cost incidental)



LOCATION PLAN
STRUCTURE NUMBER 016-0472

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
James T. Reynolds
Engineer of Bridges and Structures

GENERAL PLAN AND ELEVATION
F.A. 567 OVER DES PLAINES RIVER
F.A. ROUTE 567 SECTION JR-WRS (82)
COOK COUNTY
STA. 56+60.5

HAZELET & ERDAL
CONSULTING ENGINEERS
FILE NO. 541-03
DRAWN BY B.W.
CHECKED BY C.G.H.
APPROVED BY

Re - JE 6/21/85

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0472

SCALE: | SHEET OF SHEETS | STA. | TO STA.

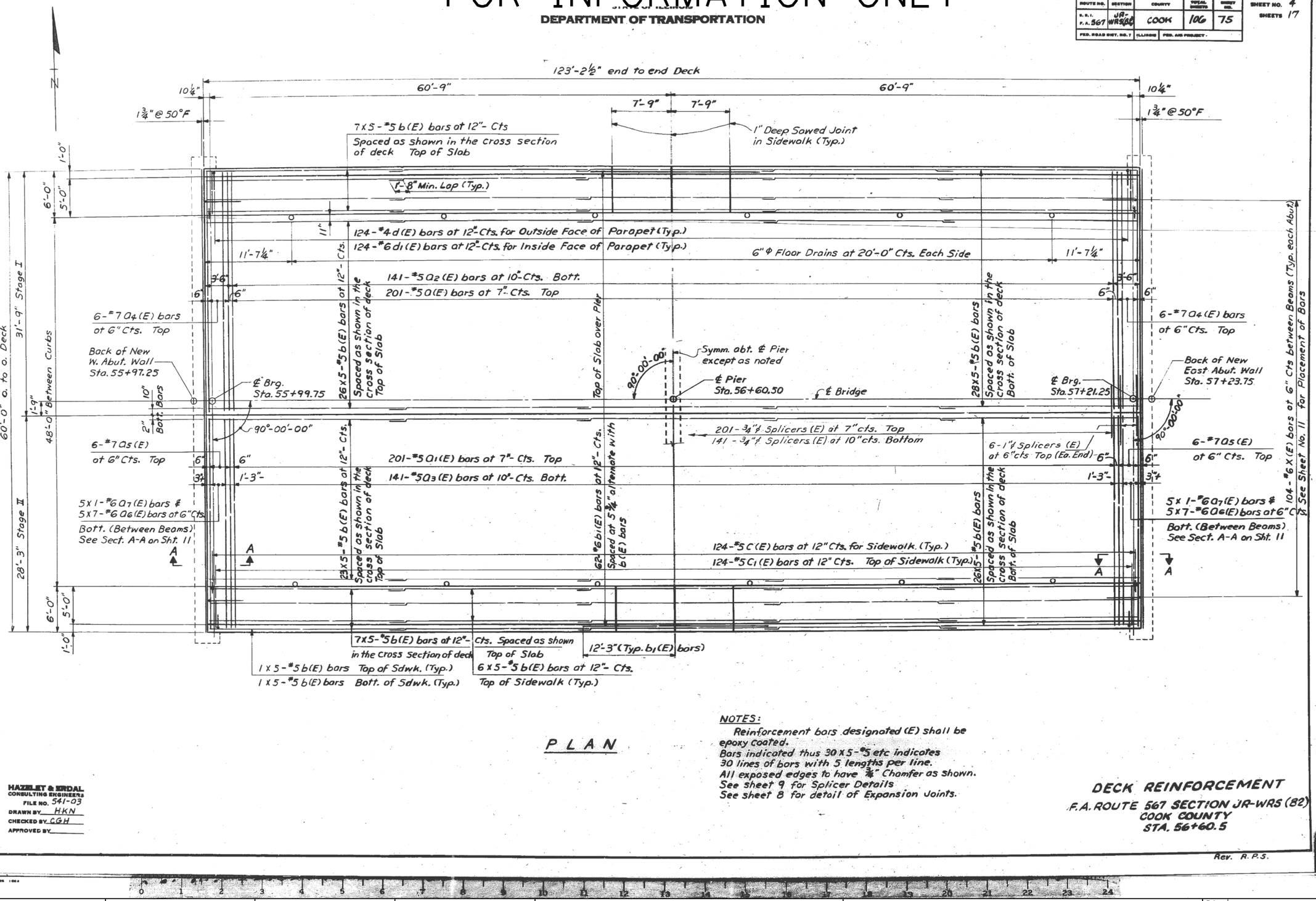
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	45
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. P.A. 567	JR-WRS(82)	COOK	106	75
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 4
SHEETS 17



PLAN

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 30 X 5 - #5 etc indicates 30 lines of bars with 5 lengths per line.
All exposed edges to have ¾" Chamfer as shown.
See sheet 9 for Splicer Details
See sheet 8 for detail of Expansion Joints.

DECK REINFORCEMENT

F.A. ROUTE 567 SECTION JR-WRS (82)
COOK COUNTY
STA. 56+60.5

Rev. R.P.S.

HAZELET & ERDAL
CONSULTING ENGINEERS
FILE NO. 541-03
DRAWN BY HKN
CHECKED BY CGH
APPROVED BY

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0472

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	46
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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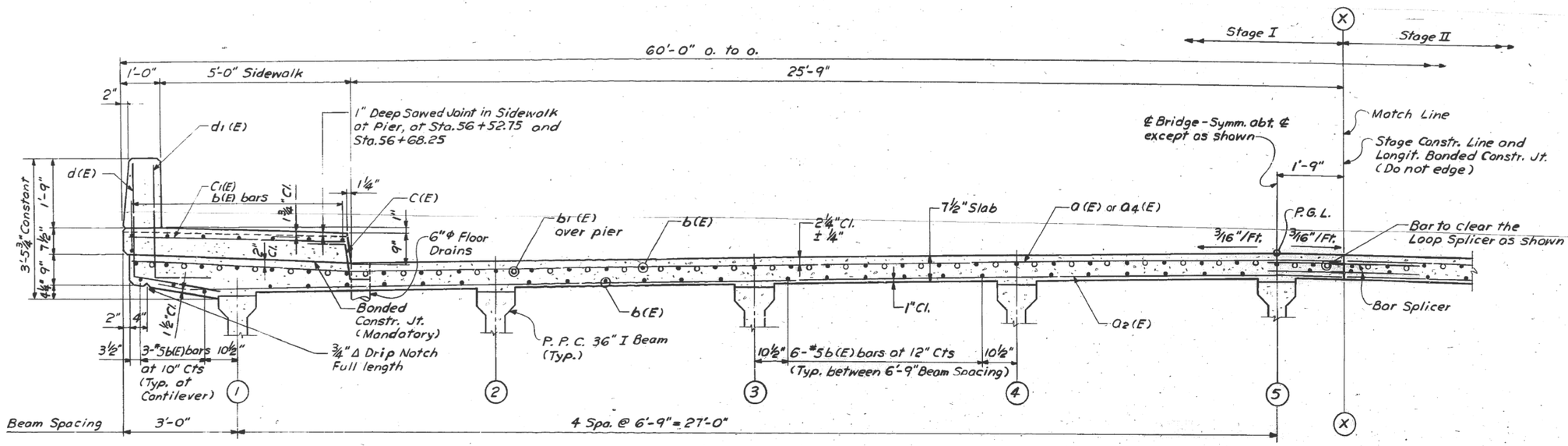
FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 567	JR WRS(82)	COOK	106	76
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 5
SHEETS 17



CROSS SECTION OF DECK
(Looking East)

HAZELET & ERDAL
CONSULTING ENGINEERS
FILE NO. 541-03
DRAWN BY HKN
CHECKED BY CGH
APPROVED BY

DECK REINFORCEMENT
F.A. ROUTE 567 SECTION JR-WRS(82)
COOK COUNTY
STA. 56+60.5

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016-0472

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	47
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Bench Mark: BM #1 South most bolt of fire hydrant located at south west corner of Cicero Ave. and Winnemac Ave. Sta. 48+70.49, 126.75 RT

Existing Structure: No. 016-0610 constructed in 1957 as section 263-0101.8-MFT is a two span continous non-composite rolled steel beam bridge with a 7½" deck. The beams are 147'-4⅛" long from ℄ bearing to ℄ bearing at the abutments and 69'-0" wide out to out. The bridge is supported by two high-walled closed abutments and a frame pier.

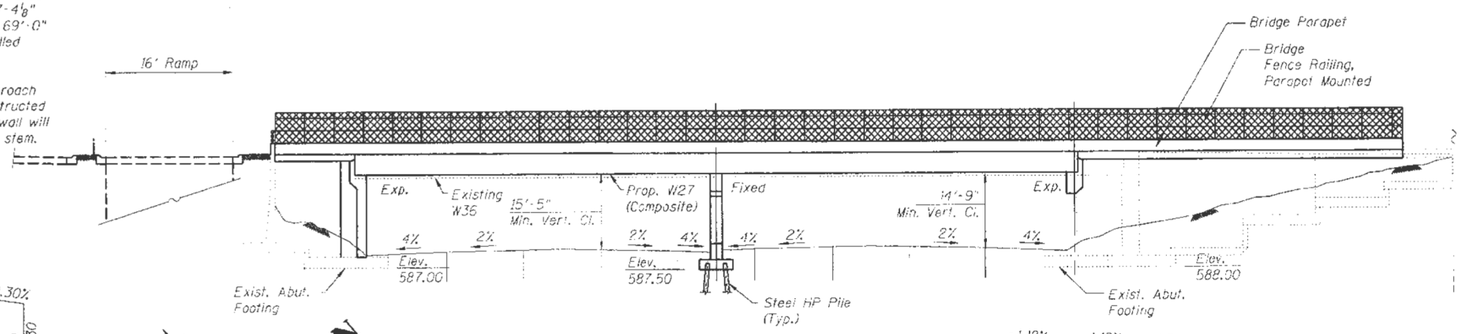
Reconstruction to include Superstructure, Pier, and Approach replacement. West stem wall will be replaced, and constructed utilizing existing spread footing. East abutment stem wall will be partial replaced with repairs to remaining portion of stem.

Traffic will be maintained utilizing stage construction.

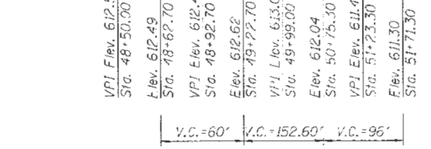
No Salvage

Indicates Soil Boring

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PROFILE GRADE
ELSTON AVE.

PLAN

WAYNE A. TRUEX
REGISTERED STRUCTURAL ENGINEER
001-005429
STATE OF ILLINOIS
8-6-10
Expires 11-30-10

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TJO)
ENGINEER OF BRIDGES AND STRUCTURES

DESIGNED	ASP
CHECKED	WSP
DRAWN	BEM
CHECKED	ASP

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
with 2008 & 2009 Interims

DESIGN STRESSES

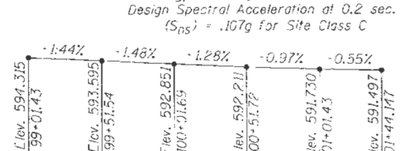
FIELD UNITS

EXISTING	PROPOSED
f'c = 3,000 psi	f'c = 3,500 psi
f_y = 40 ksi (Reinf.)	f_y = 60 ksi (Reinf.)
f_y = 30 ksi (Struct.)	f_y = 50 ksi (Struct.) (M270 Grade 50)
	f_y = 36 ksi (Struct.) (M270 Grade 36)

SEISMIC DATA

Soil Site Class: = C
LRFD Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = .059g for Site Class C
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = .107g for Site Class C

N.B. P.G.L.
I-94



S.B. P.G.L.
I-94

STATION 49+99.23
BUILT BY
STATE OF ILLINOIS
F.A. RT. 94 SEC. 0101.8B
LOADING HL-93
STRUCTURE NO. 016-0610

NAME PLATE

See Sta. 515001
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost to be included with Name Plates.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ELSTON AVENUE OVER I-94
FAI ROUTE 94 SECTION 0101.8B
COOK COUNTY
STATION 49+99.23
STRUCTURE NUMBER 016-0610

DLZ DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220 Arlington Heights Il 60005 (847)-640-0840

SHEET NO. 1 OF 42 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	94	0101.8B	COOK	139	77
			CONTRACT NO. 60C18		
		ILLINOIS FED. AID PROJECT			

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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

GENERAL PLAN
SN: 016-0610

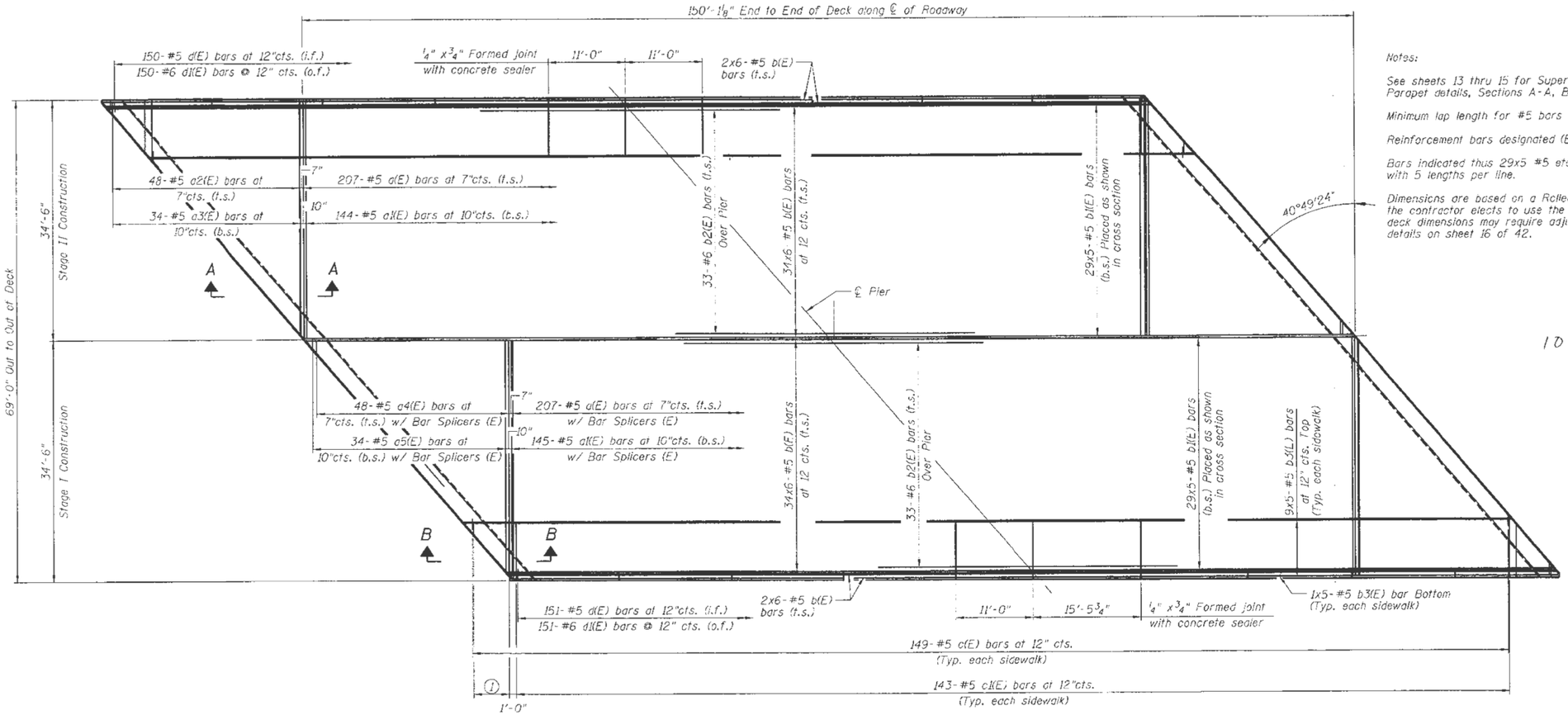
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	48
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Order a2(E), a3(E), a4(E), a5(E) and c2(E) bars full length. Cut to fit skew and use remainder of bars in opposite end on same side of stage construction line.



① 6-#5 c2(E) bars at 12"cts. (Typ. each sidewalk)

PLAN BRIDGE DECK

Notes:

See sheets 13 thru 15 for Superstructure details, Parapet details, Sections A-A, B-B, and Bill of Materials.

Minimum lap length for #5 bars = 2'-2".

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 29x5 #5 etc. indicates 29 lines of bars with 5 lengths per line.

Dimensions are based on a Rolled Rail Strip Seal Joint. If the contractor elects to use the Welded Strip Seal Joint, deck dimensions may require adjustment to satisfy the details on sheet 16 of 42.

10359 SF

DESIGNED	- ASP
CHECKED	- WSP
DRAWN	- BEM
CHECKED	- ASP

LEGEND

t.s. denotes top of slab
b.s. denotes bottom of slab
i.f. denotes inside face of parapet
o.f. denotes outside face of parapet

DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220 Arlington Heights, IL 60005 (847)-640-0840

SUPERSTRUCTURE PLAN
STRUCTURE NUMBER 016-0610

SHEET NO. 12 OF 42 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	94	0101.8B	COOK	139	88
			CONTRACT NO. 60C18		
		ILLINOIS FED. AID PROJECT			

USER NAME = diazia	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-0610

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	49
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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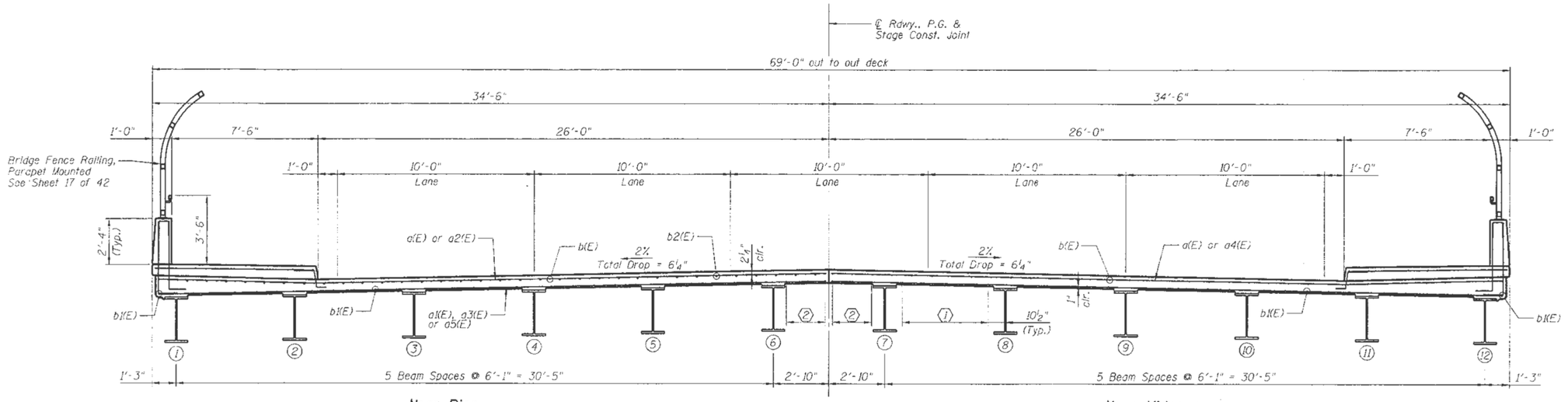


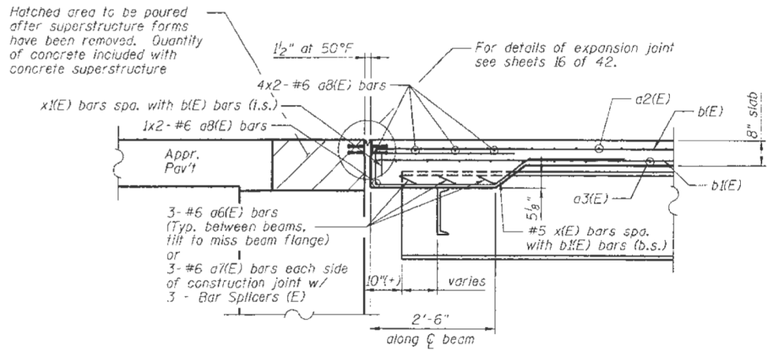
Near Pier

Near Midspan

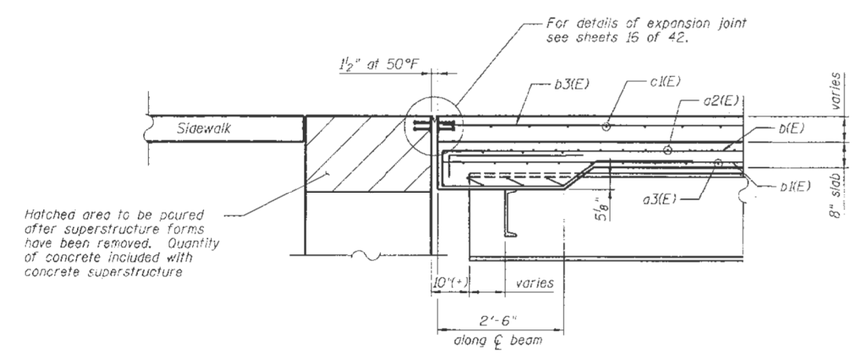
CROSS SECTION
(Looking Ahead Station)

① 5-#5 b1(E) bars at 1'-1" cts. (Typ. between beams)
5-#6 x1(E) bars at 1'-1" cts. (Typ. between beams)

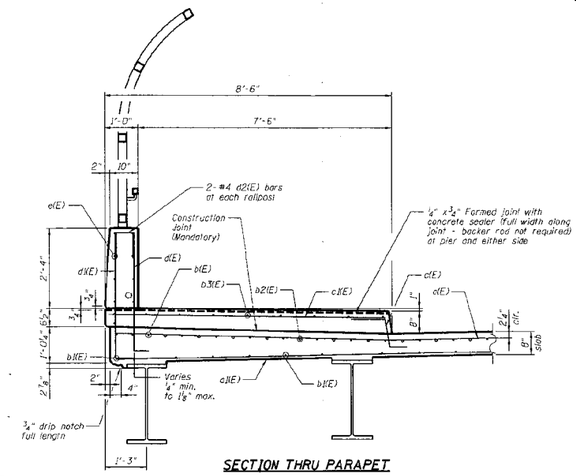
② 3-#5 b1(E) bars
3-#6 x1(E) bars



SECTION A-A



SECTION B-B



SECTION THRU PARAPET

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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0610

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	50
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

TBM #8 - Railroad Spike in North face of power pole at Southeast corner of the Intersection of Cermak Rd. & Railroad Crossing. Sta. 373 + 92 / 52' Right (22nd). El. 626.15

TBM #7 - Railroad Spike in South face of South post of Schuth's Grove Forest Preserve sign ± 100' west of Des Plaines Ave. on North side of Cermak Rd. Sta. 387+07 / 52' left (22nd). El. 623.17.

Exist. Structure

Sta. 377+61.44 S.B.I. Rte. 55 - Sect. 55I-KB Built in 1930 & widened In 1958
Structure No. 016-0633
Substructure : R.C. Solid Piers & Abutments
Superstructure : 4-span R.C. girder
4 @ 61'-2⅜"
Superstructure to be totally removed & replaced with 42" P.P.C. I-Beams.
Top portion of abutments & piers to be removed & replaced.
Existing Wingwall to remain.
Traffic to be maintained utilizing stage construction. No salvage.

Proposed Improvement

Range 12 E. 3rd P.M.

T. 39 N.

Cermak Road

LOCATION SKETCH

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	**	COOK	233	178
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

** SECTION 55IWRS & 55I 1B, XB, YB & YB-11 BR-89

DESIGN SPECIFICATIONS

A.A.S.H.T.O. 1989 & 1990 Interim & 1983 Seismic Guide Specifications

LOADING HS20-44

Allow 25 #/Sq. Ft. for future Wearing Surface

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTRESSED UNITS
f'c = 3,500 psi.	f'c = 6,000 psi.
fy = 60,000 psi. (Rebar.)	f'ci= 4,000 psi.
	f's = 270,000 psi. 11/2" ø Strands
	f'si = 189,000 psi. 11/2" ø Strands

WATERWAY INFORMATION

Drainage Area = 477.00 Sq. Mi. Low Grade Elev. 617.89 @ Sta. 383+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	5785	2036	2036	615.4	0.0	0.0	615.4	615.4
Base	100	6280	2095	2095	615.7	0.0	0.0	615.7	615.7
Overtopping	—								
Max. Calc.	500	7275	2232	2232	616.4	0.0	0.0	616.4	616.4

This portion of embankment backfill by bridge contractor after abut. is in place (Typ.).

Design H.W. El. 615.4
4'-3" Min. Vert. Cl.
El. 609.04 @ rt. ∠s
El. 602.86
El. 604.71
42" P.P.C. I-Beam
Streambed El. 600.50
El. 605.43
El. 609.29
Bk. of Abut.
2:1 @ rt. ∠s
El. ± 598.31
El. ± 595.06
El. ± 595.21

ELEVATION

Bridge Approach Pavement Modified Standard 2382
End Taper Sta. 376+70.01
Temp. Sheet Pile for Stage Construction (Typ.)
Exist. 24" S.S.
Drainage Scupper Special (North side only)
Traffic Signal Junction Box
2"ø G.S. Conduit (Traffic Signal)
Relocate Exist. Lighting Unit
Skew (Typ.) 30°
Light Pole Pedestal
Exist. Superstructure To be Removed
Traffic Signal & Light Pole Junction Box
2"ø PVC Conduit (Light Pole) & 2"ø G.S. Conduit (Traffic Signal)
Exist. 15" S.S.
Begin Taper Sta. 379+09.40
Deceleration Lane
Ped. Sidewalk
Exist. Sidewalk
Exist. 2-24" ø Gas Main
℄ Brg. E. Abut. Sta. 378+83.17 Cr. El. 625.20
20'-0" (Typ.)
30'-0" (Typ)
Stage Constr. Line
Transition Median
℄ Cermak Rd.
Sta. 379+29.21
B-23
℄ Brg. W. Abut. Sta. 376+39.71 Cr. El. 625.20
Bk. W. Abut. Sta. 376+36.38 Cr. El. 625.16
℄ Pier 1 Sta. 377+00.24 Cr. El. 625.14
℄ Pier 2 Sta. 377+61.44 Cr. El. 625.92
℄ Pier 3 Sta. 378+22.64 Cr. El. 625.74
Bk. of E. Abut. Sta. 378+86.49 Cr. El. 625.16
Exist. 12" Gas Main
Sta. 375+93.93
Stage I Removal
Stage II Removal
Stage I Constr.
Stage II Constr.
Work Zone During Stage I Constr.
Work Zone During Stage II Constr.
Vertex
Relocate Exist Lighting Unit
Light Pole Pedestal
Drainage Scupper with 6" ø Downspout (South side only)
Light Pole Junction Box
Bridge Approach Pavement Modified Standard 2382
For traffic terminal barrier See Roadway Plans
New Name Plate
Light Pole Junction Box
2"ø PVC Conduit (Light Pole)
3'-4" 60'-6¼" 61'-2⅜" 61'-2⅜" 60'-6¼" 3'-4"
250'-11¼" Back to Back Abut.

PLAN

Note: For Drainage Scupper locations, see Sheet 7 of 33.
For Light Poles and Traffic Signal Conduit arrangements see sheet 10 of 33.

P.V.C. Sta. 375+86.44 El. 624.43
Bk. of W. Abut. Sta. 376+36.38 El. 625.16
-1.70%
P.V.I. Sta. 377+61.44 El. 627.40
+1.70%
Bk. of E. Abut. Sta. 378+86.49 El. 625.16
P.V.T. Sta. 379+36.44 El. 624.43

V.C. = 350.00'

PROFILE GRADE

℄ Cermak Rd. (22nd St.) FAU 1453

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Gregory Scott 8-28-92 Exp. 11-30-92
Licensed Structural Engineer

Phillip D. Frey
Exp. 11/30/92

Donohue Engineers & Architects

DESIGN BY:	DESIGN CK'D. BY:	DRAWN BY:	CHECKED BY:
J.H.R.	S.C.L.	E.Z.	H.S.

PROJECT NUMBER 18046.007

ILLINOIS DEPARTMENT OF TRANSPORTATION
CERMAK ROAD OVER DES PLAINES RIVER
GENERAL PLAN & ELEVATION
F.A.U. RTE 1453
SECTION 55IWRS & 55I 1B, XC, VB & VB-11 BR-89
STA. 377+61.44
COOK COUNTY
Structure #: 016-0634 Date: August, 1991

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PLOT DATE = 1/30/2019	DATE -	REVISED -

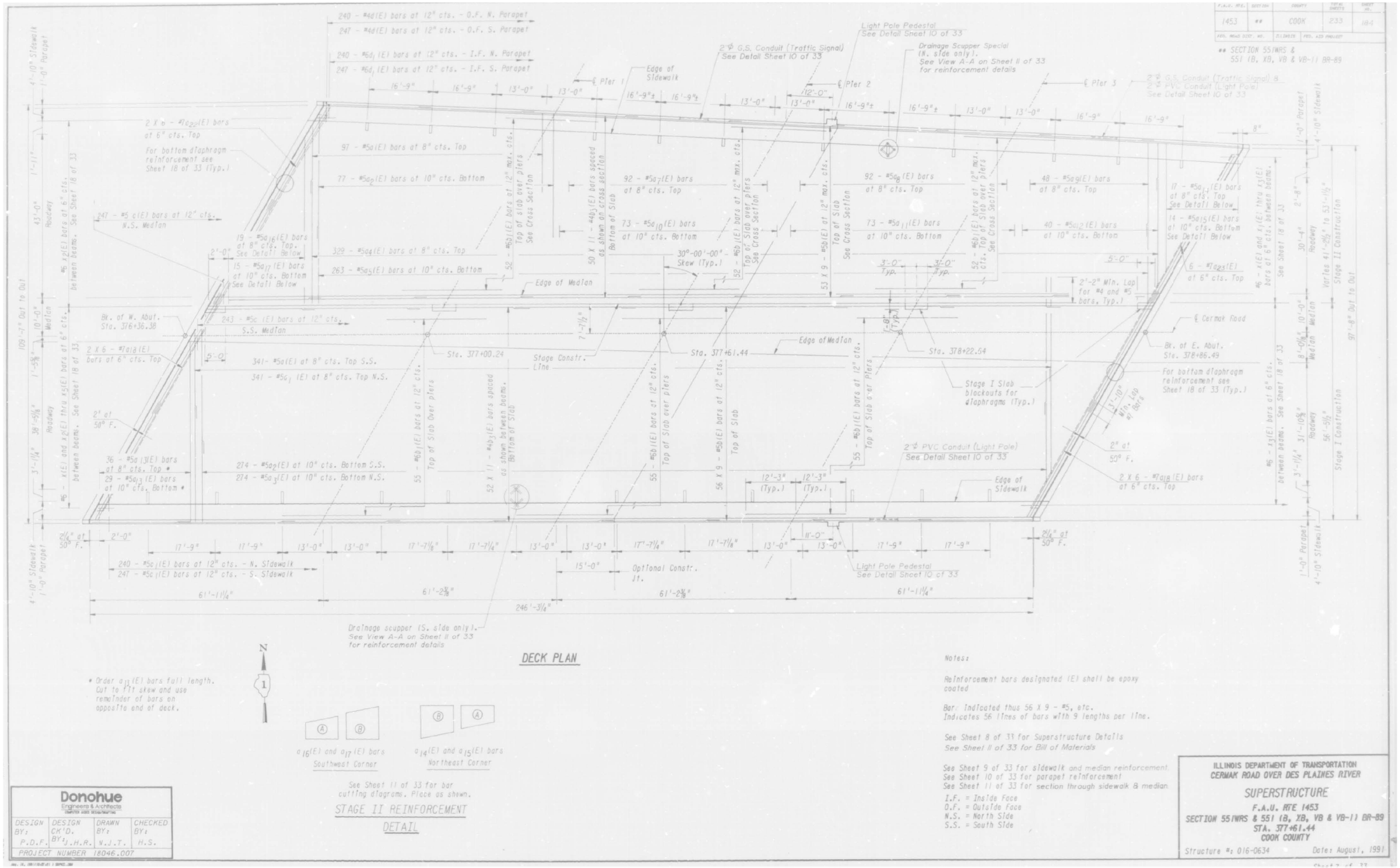
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0634

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	51
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY



Notes:

Reinforcement bars designated (E) shall be epoxy coated

Bar: Indicated thus 56 X 9 - #5, etc. Indicates 56 lines of bars with 9 lengths per line.

See Sheet 8 of 33 for Superstructure Details
See Sheet 11 of 33 for Bill of Materials

See Sheet 9 of 33 for sidewalk and median reinforcement
See Sheet 10 of 33 for parapet reinforcement
See Sheet 11 of 33 for section through sidewalk & median

I.F. = Inside Face
O.F. = Outside Face
N.S. = North Side
S.S. = South Side

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	**	COOK	233	184
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT		

** SECTION 551WRS & 551 IB, XB, VB & VB-11 BR-89

ILLINOIS DEPARTMENT OF TRANSPORTATION
CERMAK ROAD OVER DES PLAINES RIVER

SUPERSTRUCTURE

F.A.U. RTE 1453
SECTION 551WRS & 551 IB, XB, VB & VB-11 BR-89
STA. 377+61.44
COOK COUNTY

Structure #: 016-0634 Date: August, 1991

Donohue
Engineers & Architects

DESIGN BY:	DESIGN CK'D. BY:	DRAWN BY:	CHECKED BY:
P.D.F.	J.H.R.	V.J.T.	H.S.

PROJECT NUMBER 18046.007

USER NAME = diazia	DESIGNED -	REVISED -	
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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0634

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	52
			CONTRACT NO. 62H72	
		ILLINOIS	FED. AID PROJECT	

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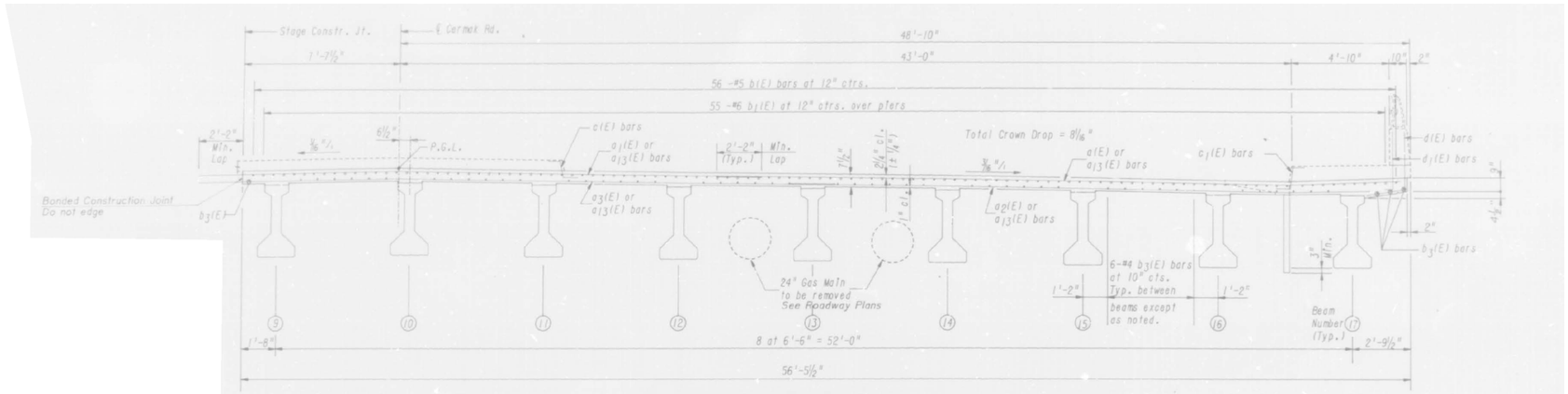
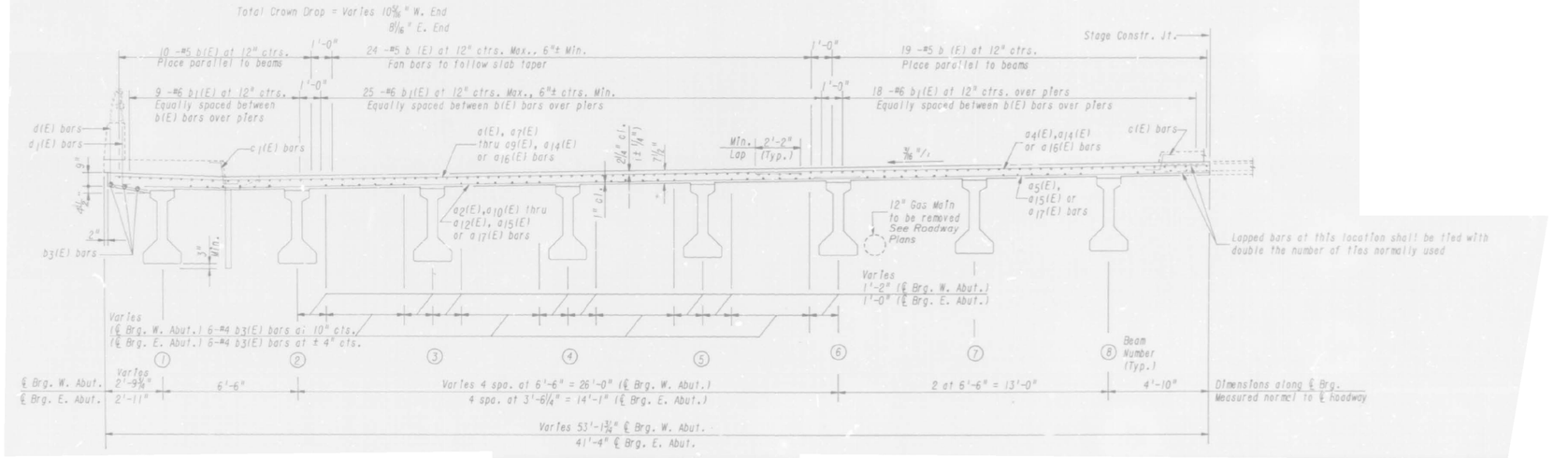
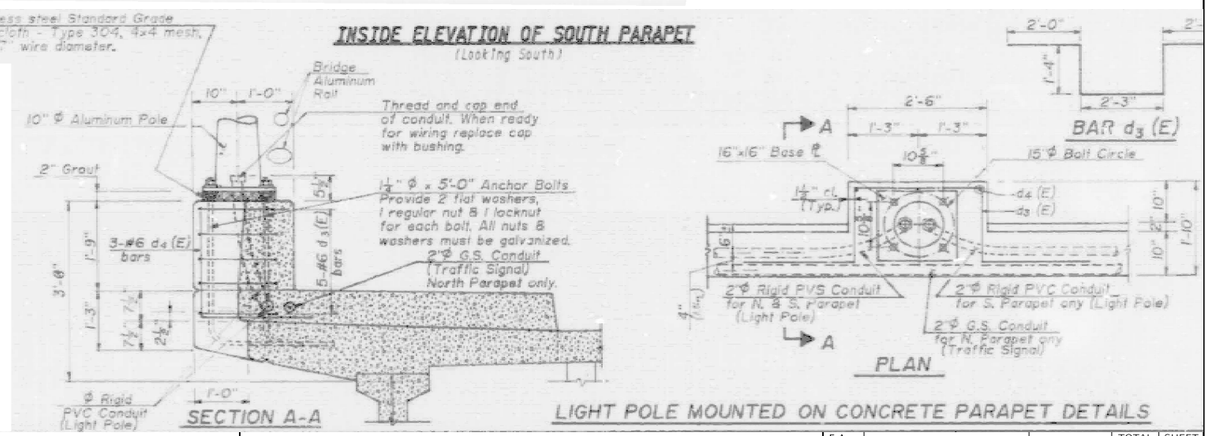


HALF CROSS SECTION STAGE I
(Looking East)



HALF CROSS SECTION STAGE II
(Looking East)



INSIDE ELEVATION OF SOUTH PARAPET
(Looking South)

SECTION A-A

PLAN

LIGHT POLE MOUNTED ON CONCRETE PARAPET DETAILS

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016-0634

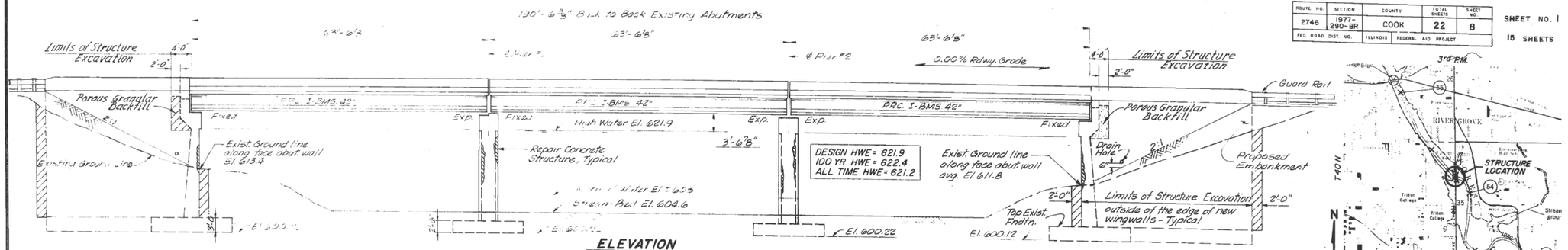
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	53
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

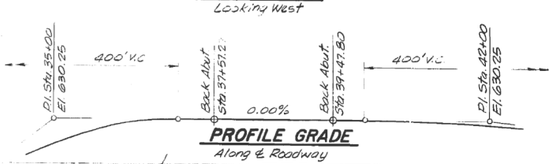
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1977-290-BR	COOK	22	8
FED. ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT		

SHEET NO. 1
15 SHEETS



ELEVATION
Looking West



PROFILE GRADE
Along ℄ Roadway

BENCH MARKS

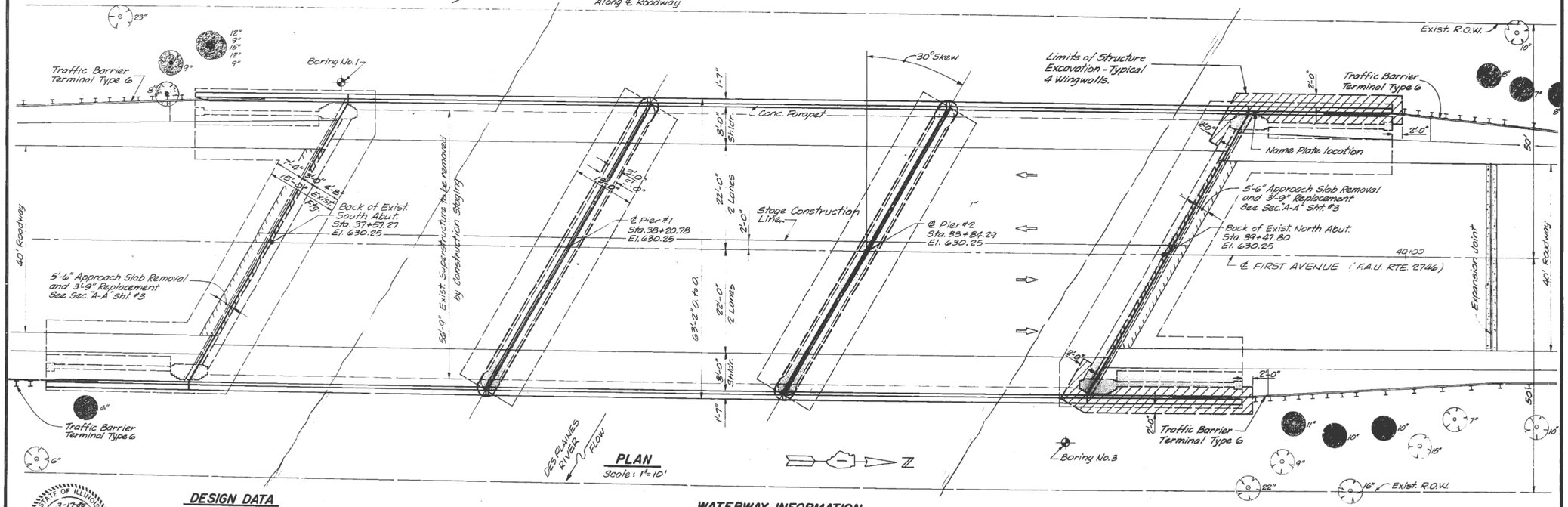
First Avenue Bridge over Des Plaines River, West Walk - Southwest Corner, Chiseled Square Elev. 630.74

BM 304A5 - First Ave. and Fullerton (River Grove) Concrete Monument on S.W. Corner with Iron Pin set in center. CCHD Elev. 628.533
50.0' W. of ℄ of First Ave.
44.0' So of ℄ of Fullerton

DESCRIPTION OF IMPROVEMENT

The Improvement includes the bridge superstructure replacement and repair of substructure and approaches (includes widening) of the structure carrying First Avenue over the Des Plaines River, consisting of a three-span (190'-6 3/8" back to back of abutments) new reinforced concrete deck slab (63'-2" out to out) on new precast prestressed I-beams, on existing piers and abutments with new caps, utilizing stage construction so as to maintain traffic at all times.

LOCATION MAP



PLAN
Scale: 1"=10'

DESIGN DATA

STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, A.A.S.H.T.O. TWELFTH EDITION 1977 AND INTERIMS 1978 & 1979.

DESIGN LOAD: (SUPERSTRUCTURE) HS 20-44 and provisions for 25lbs. p.s.f. of Class I.

DESIGN METHOD: Load Factor Design

DESIGN STRESSES:
Cast in Place Concrete
f'_c = 3,500 psi
f_y = 60,000 psi

Prestressed Concrete Beams
f'_c = 6,000 psi
f'_{ci} = 4,100 psi

Prestressing Steel - 12"ϕ Strands
f'_s = 270,000 psi Extra High Strength
Inital Force per strand is to be 28,900 lbs.
f_{si} = 189,000 psi

STATE OF ILLINOIS
3-17-79
ERICH M. MEES
No. 29460
REGISTERED STRUCTURAL ENGINEER

Erich M. Mees

WIGHT AND COMPANY INCORPORATED

WATERWAY INFORMATION

Drainage Area	454.1 Sq. Miles
Existing Opening	2,346 Sq. Ft.
Proposed Opening - (50 Yr. Flood)	2,346 Sq. Ft.
Required Opening - (50 Yr. Flood)	2,346 Sq. Ft.
Design Frenquency Discharge	5,580 C.F.S.
Created Head for Design Flood	0.1 Ft.
100 Year Discharge	6,080 C.F.S.
Created Head (100 year)	0.1 Ft.

GENERAL PLAN AND ELEVATIONS

FIRST AVENUE OVER THE DES PLAINES RIVER
F.A.U. ROUTE 2746 SECTION-1977-290-BR
COOK COUNTY
STATION 38+52.54
BRIDGE NO. 016-0697 FILE NO. 136

SHEET 8 OF 22

USER NAME = diazia	DESIGNED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0697

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	54
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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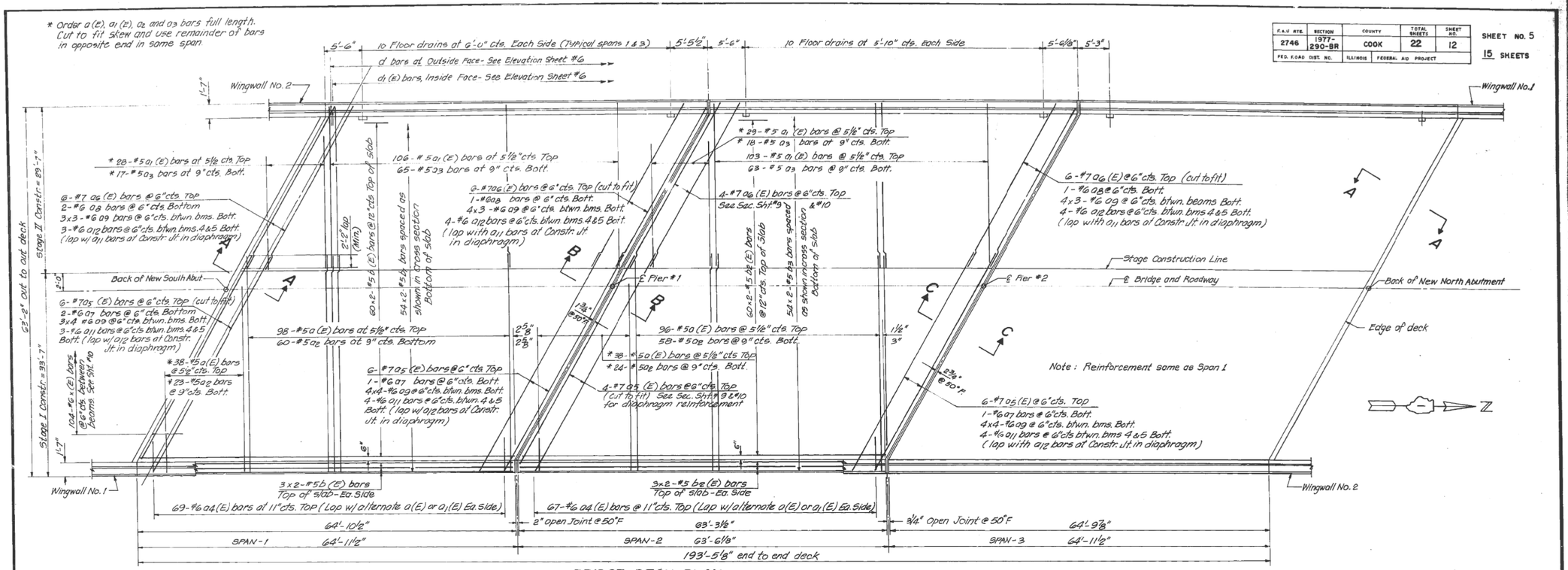
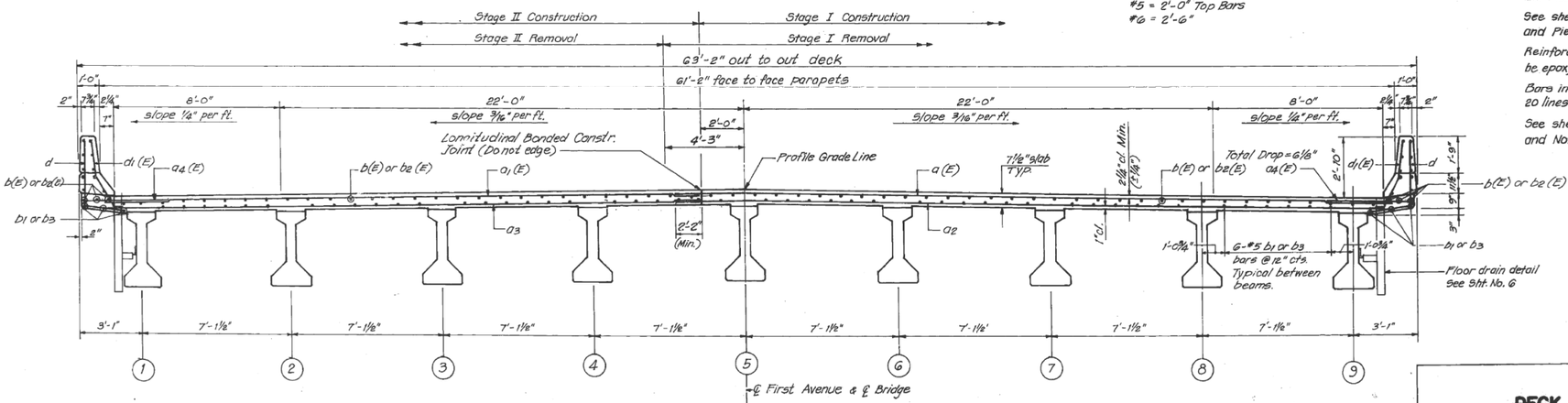
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2746	1977-290-BR	COOK	22	12
FED. ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT		

SHEET NO. 5
15 SHEETS



BRIDGE DECK PLAN

Min. Bar Laps (Except as noted)
#5 = 1'-3" Bottom Bars
#5 = 2'-0" Top Bars
#6 = 2'-6"



CROSS SECTION

Looking North

NOTES:

See sheet #6 for Bill of Materials, Parapet and Floor Drain Details.

See sheet #9 for Sections at Abutments and Piers. See sheet #10 for Diaphragm Details.

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.

Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.

See sheet #3 for Construction Staging Details and Notes.

WRIGHT and COMPANY
ARCHITECTS ENGINEERS LAND SURVEYORS
814 OGDEN AVENUE/DOWNERS GROVE, IL 60515 312-969-7000

DECK PLAN AND SECTION

FIRST AVENUE OVER THE DES PLAINES RIVER
F.A.U. ROUTE 2746 SECTION-1977-290-BR
COOK COUNTY
STATION 38+52.54

BRIDGE NO. 016-0697 FILE NO. 136

SHEET 12 OF 22

MODEL: Default
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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

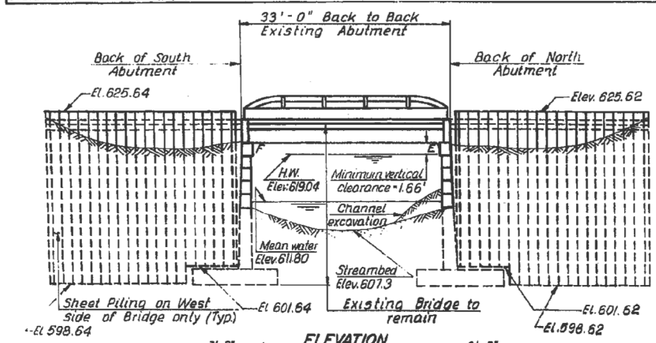
DECK PLAN
SN: 016-0697

SCALE: | SHEET OF SHEETS | STA. | TO STA.

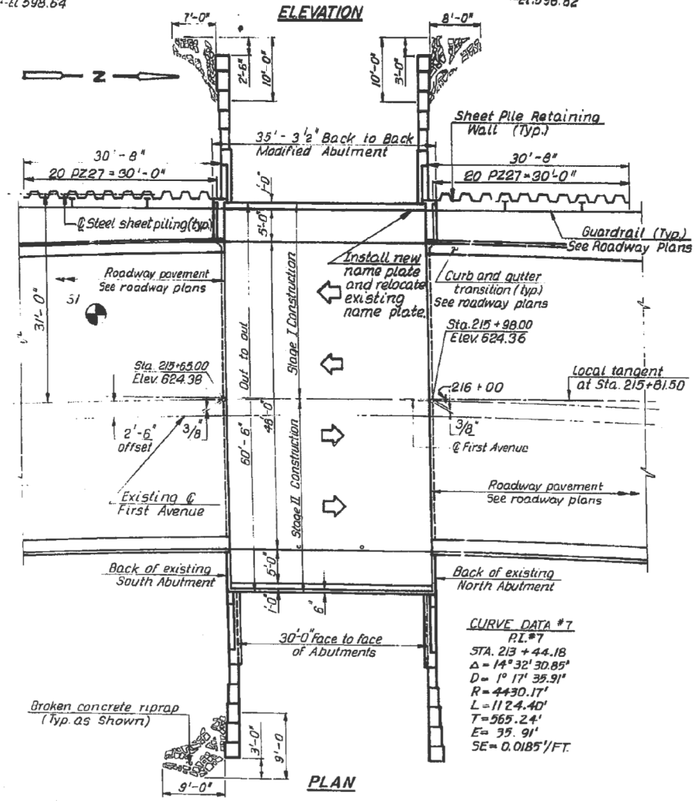
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	55
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

Notes:
The existing bridge is structure #016-0698, built in 1934 as a two-way four lane north-south arterial at Sta. 215 + 81.50 on First Avenue, over Silver Creek approximately 100 ft. north of the First Avenue intersection with Chicago Avenue. The bridge is composed of a single span reinforced concrete "tee" beam superstructure which carries two 11'-0" traffic lanes, one 5'-0" sidewalk and one 1'-6" wide handrail in each direction. The superstructure is simply supported on two cantilevered reinforced concrete abutments founded on piles. The deck spans 31'-6" and is monolithic with reinforced concrete diaphragms which are flush with the backs of the abutments at 33'-0" back to back.
One lane of traffic in each direction will be maintained during staged construction. Under this Contract the bridge will be widened by 4' to the west by modifying the existing abutments, constructing sheet pile retaining walls, adding a steel girder and replacing the west sidewalk and handrail. Also, the east sidewalk and handrail will be reconstructed, the existing wearing surface will be replaced and and repairs will be made to the deck & substructure as needed.
Temporary benchmark #1d is a Brass Monument (Sanitary District of Chicago) at the northwest corner of the bridge (Mon# UDTR 166) Elev. 625.63. Note that TBM # 14 will be destroyed during Stage I construction. Prior to removing monument, Sanitary District of Greater Chicago must be notified in regard to its relocation. All costs associated with resetting the monument will be considered incidental to the contract.



ELEVATION



PLAN

CURVE DATA #7
P.I. #7
STA. 213 + 44.18
Δ = 14° 32' 30.85"
D = 1° 17' 39.9"
R = 4430.17'
L = 1124.40'
T = 565.24'
E = 35.91'
SE = 0.0185'/FT.

LEGEND

- indicates directions of traffic lane
- indicates boring location
- broken concrete riprap

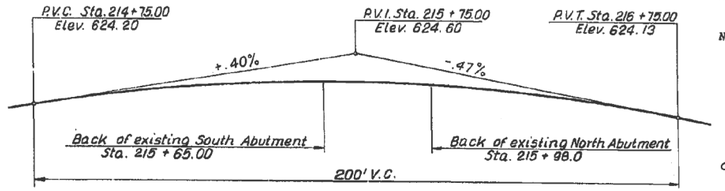
STA. 215+81.50
REBUILT 199_ BY
STATE OF ILLINOIS
F.A.U. RT. 2746 SEC(0505 & 0606)WRS-84
PROJECT TX-6003(853)
LOADING HS 20
STR. NO. 016-0698

NAME PLATE

WATERWAY INFORMATION

Drainage Area 11.6 SQ MI. Low Grade Elev. 624.3 At Sta. 217+30

Flood	Freq. Year	Q (C.F.S.)	Opening(Sq. Ft) Exist.	Opening(Sq. Ft) Prop.	Nat. H.W.E.	Head (Feet) Exist.	Head (Feet) Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design:	50	710	372	372	619.0	0.04	0.04	619.04	619.04
Base:	100	852	372	372	619.0	0.08	0.08	619.08	619.08
Overtopping:									
Max.Calc:	500	1140	372	372	619.0	0.16	0.16	619.16	619.16

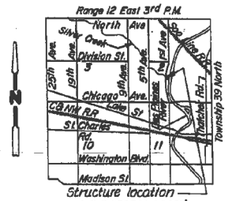


FIRST AVENUE PROFILE GRADE LINE

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL
	Class X Concrete Superstructure	Cu. Yd.	——	26	26
	Structure Excavation	Cu Yd	28	——	28
	Channel Excavation	Cu Yd	75	——	75
	Porous Granular Embankment, Special	Cu Yd	76	——	76
	Protective Coat	Sq Yd	——	18	18
	Concrete Removal	Cu Yd	2	8	10
	Bridge Handrail Removal	Lin Ft	——	64	64
	Floor Drains	Each	——	2	2
	Class X Concrete	Cu Yd	7	30	37
	Furnishing & Erecting Structural Steel	Lbs	——	7750	7750
	Stud Shear Connectors	Each	28	114	142
	Aluminum Railing, Type L	Lin Ft	——	60	60
	Reinforcement Bars, Epoxy Coated	Pound	920	4790	5710
	Steel Sheet Piling	Sq Ft	——	1440	1440
	Name Plates	Each	——	1	1
	Bridge Sidewalk Removal	Sq Ft	——	429	429
	Concrete Bridge Deck Scarification (1¾ Inch)	Sq Yd	——	162	162
	Preformed Joint Seal 2½"	Lin Ft	——	128	128
	Elastomeric Bearing Assembly, Type I	Each	——	1	1
	Bituminous Concrete Removal (Deck)	Sq. Yd.	——	162	162
	Broken Concrete Riprap	Sq Yd	——	15	15
	Epoxy Crack Sealing	Lin Ft	——	56	56
*	Deck Slab Repair (Full Depth, Type I)	Sq Yd	——	4	4
*	Deck Slab Repair (Partial)	Sq Yd	——	60	60
	Epoxy Mortar Repair	Cu. Ft.	——	9	9
	Install & Remove Temporary Concrete Barrier	Unit	——	3	3
	Temporary Concrete Barrier, Terminal Section	Each	——	2	2
	Relocate Temporary Concrete Barrier	Unit	——	5	5
	Protective Shield	Sq. Yd.	245	——	245

* See Special Provisions



LOCATION MAP

SPECIFICATIONS

DESIGN SPECIFICATIONS: American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 1983 with 1984 thru 1988 Interims.
DESIGN LOADING: Live load for new construction is AASHTO HS 20-44. Allowance for future wearing surface is 25 psf. All other loads are as prescribed in AASHTO.
UNIT STRESSES (New Construction Only):
Concrete: f'c = 3,500 psi
Reinforcing Steel: fy = 60,000 psi
Structural Steel: fy = 36,000 psi (M183)
Steel Sheet Piling: fy = 38,500 psi (M202)

FAU ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
2746 (FIRST AVE.)	(0505 & 0606.1)WRS-84	COOK	169	129
1398 (CHICAGO AVE.)	0505 BR-84			
FED. ROAD DIST. NO. 7	ILLINOIS			

GENERAL NOTES

EXISTING DIMENSIONS AND DETAILS: Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation or a change in the unit price bid for the work.
CONCRETE: Exposed edges of concrete shall be chamfered 3/4 inch.
REINFORCEMENT: Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
NAMEPLATES: The existing nameplate shall be removed and stored without damage to it. After or during construction of the new handrails, the existing nameplate shall be cleaned and remounted according to Standard 2113. The cost of this work shall be included in payment for "Class X Concrete". A new nameplate shall also be provided and mounted near the original one in accordance with Standard 2113, & paid for as NAME PLATES.
CHANNEL EXCAVATION: The extent of Channel Excavation shall be limited to the areas in the river near the abutments where excessive siltation has occurred as determined by the Engineer.
BORING DATA: See proposal for boring data.
FASTENERS: Fasteners shall be ⅞" ϕ high strength bolts. (AASHTO M164) with 15/16" ϕ open holes.

ANCHOR BOLTS: Anchor bolts shall be set at south abutment before bolting diaphragms.
FIELD WELDING: Field welding of construction accessories will not be permitted to the bottom flange of the steel beam nor to the top flange for a distance equal to one-fourth the span length from the supports. Field welding in other areas will be permitted only when approved by the Engineer.
STRUCTURAL STEEL: The main load carrying member subject to tensile stress is the wide flange section. This component shall conform to the Supplemental Requirements for Notch Toughness Zone 2.
SHOULDER TRANSITIONS: Shoulder transition to wingwall shall be shaped with broken concrete. Cost Incidental.
EXPANSION BOLTS: Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,060 lbs., and 3/4" Ø x 6".
PAINT: The zinc-silicate and vinyl paint system shall be used for shop and field painting of structural steel.

STATE OF ILLINOIS
JEROME J. GAP
4193
REGISTERED STRUCTURAL ENGINEER

NO.	REVISION DESCRIPTION	BY	DATE
2			
1			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIRST AVENUE OVER SILVER CREEK
STRUCTURE NO. 016-0698
STA. 215+81.50, SECTION (0505 & 0606.1)WRS-84
GENERAL PLAN AND ELEVATION

FIRST AVENUE FROM DES PLAINES RIVER TO LAKE STREET, COOK COUNTY

Designed by DBT
Drawn by EBM
Checked by EP
Date Dec. 1, 1983

HDR Henningson, Durham & Richardson

Drawing No. S1

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0698

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	56
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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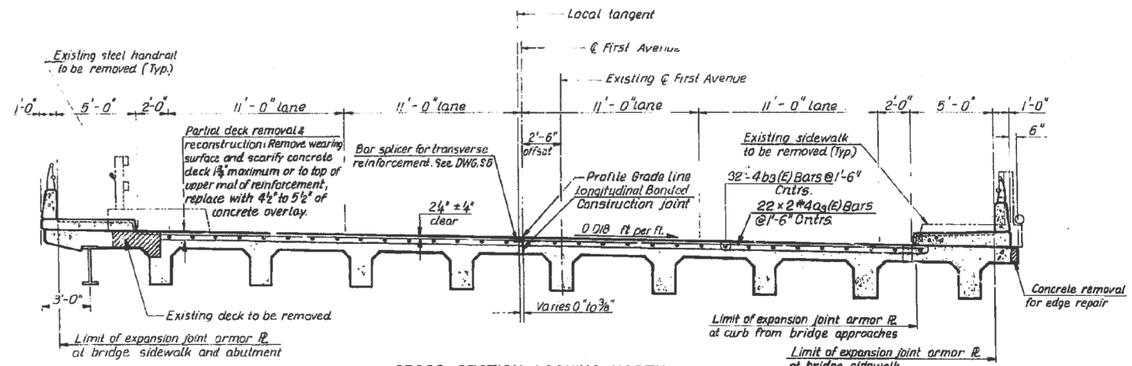
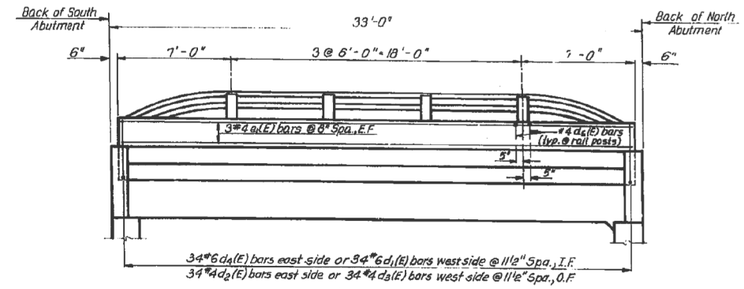
FOR INFORMATION ONLY

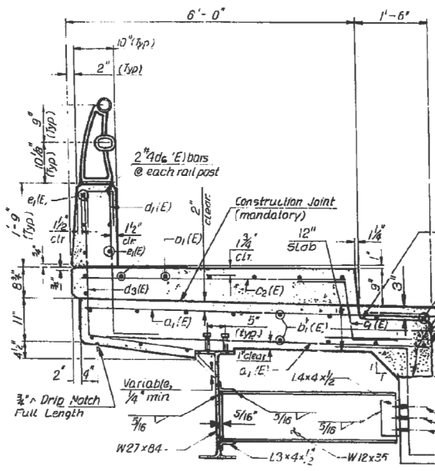
FAU ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
2746 (FIRST AVE.)	(0505 & 0606.1)WRS-84	COOK	169	131
1398(CHICAGO AVE.)	0505 BR-84			
FED. ROAD DIST. NO. 7	ILLINOIS			

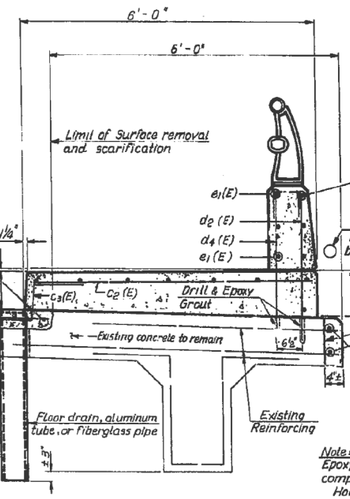


CROSS SECTION LOOKING NORTH



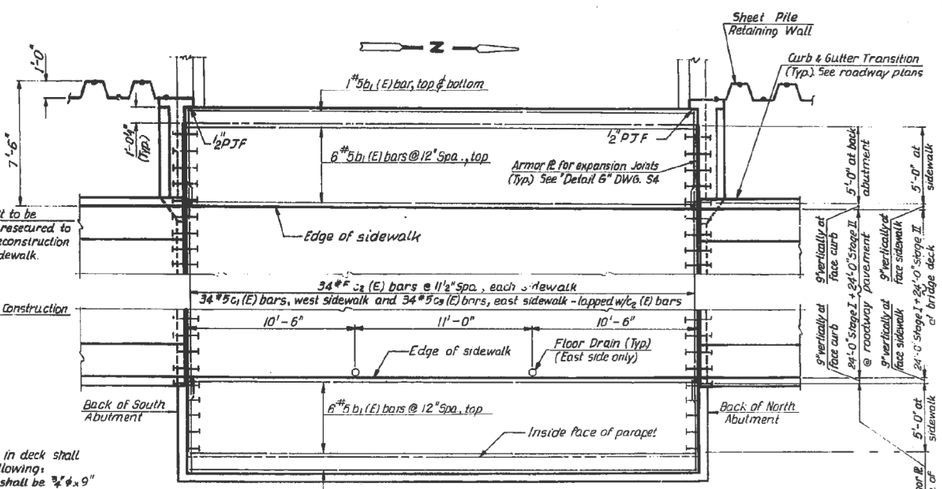
PARAPET AND RAILING ELEVATION





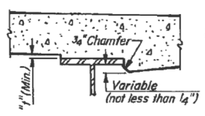
CROSS SECTION THRU SIDEWALKS AND PARAPET LOOKING NORTH

Note:
Epoxy grouted bars in deck shall comply with the following:
Holes for #4 bars shall be ¾"ϕ x 9" minimum deep, and for #5 bars shall be 1"ϕ x 9" minimum deep. Use a grout approved by the Department or in accordance with BSP-11. The method of grout application shall be approved by the engineer.

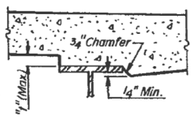


SIDEWALK PLAN

Notes:
Fiberglass pipe shall conform to ASTM: D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The surface of the Fiberglass pipe shall be free of bond inhibiting agents.
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surfaces of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting. Fiberglass pipe to have prewash as per MIL-P-15328
Existing floor drains shall be plugged to prevent overlay concrete from falling thru during placement. Cost incidental



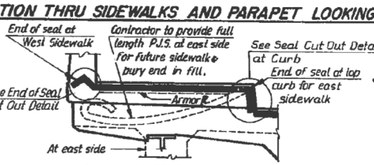
AT MINIMUM FILLET



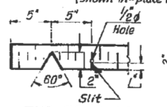
AT MAXIMUM FILLET

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the locations shown in the Girder Elevation, Drawing S-2. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", shown in the Girder Elevation, minus the slab thickness, equal the fillet heights, "t", above top flange of beams.

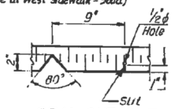
FILLET HEIGHTS



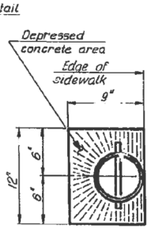
SECTION THRU JOINT SEAL
(Shown in-place at west sidewalk - Solid)



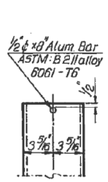
END OF SEAL CUT OUT DETAIL



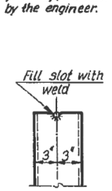
SEAL CUT OUT DETAIL AT CURB



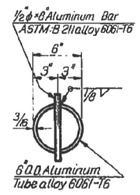
TOP PLAN OF FLOOR DRAIN, FIBERGLASS PIPE SHOWN



FLOOR DRAIN FIBERGLASS PIPE



FLOOR DRAIN ALUMINUM TUBE



TOP PLAN OF ALUMINUM TUBE

NO.	REVISION DESCRIPTION	BY	DATE
2			
1			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIRST AVENUE OVER SILVER CREEK
STRUCTURE NO. 016-0698
STA. 215+81.50, SECTION (0505 & 0606.1) WRS-84
CROSS SECTIONS AND PARAPET ELEVATION
FIRST AVENUE FROM DES PLAINES RIVER TO LAKE STREET, COOK COUNTY

Designed by DBT
Drawn by EBM
Checked by EP
Date Nov. 20, 85

HDR Henningson, Durham & Richardson

Drawing No. S3

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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0698

SCALE: | SHEET OF SHEETS | STA. | TO STA.

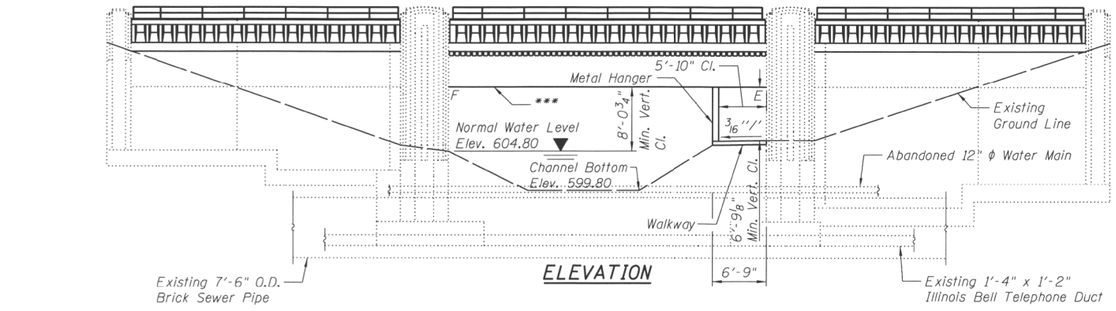
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	57
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

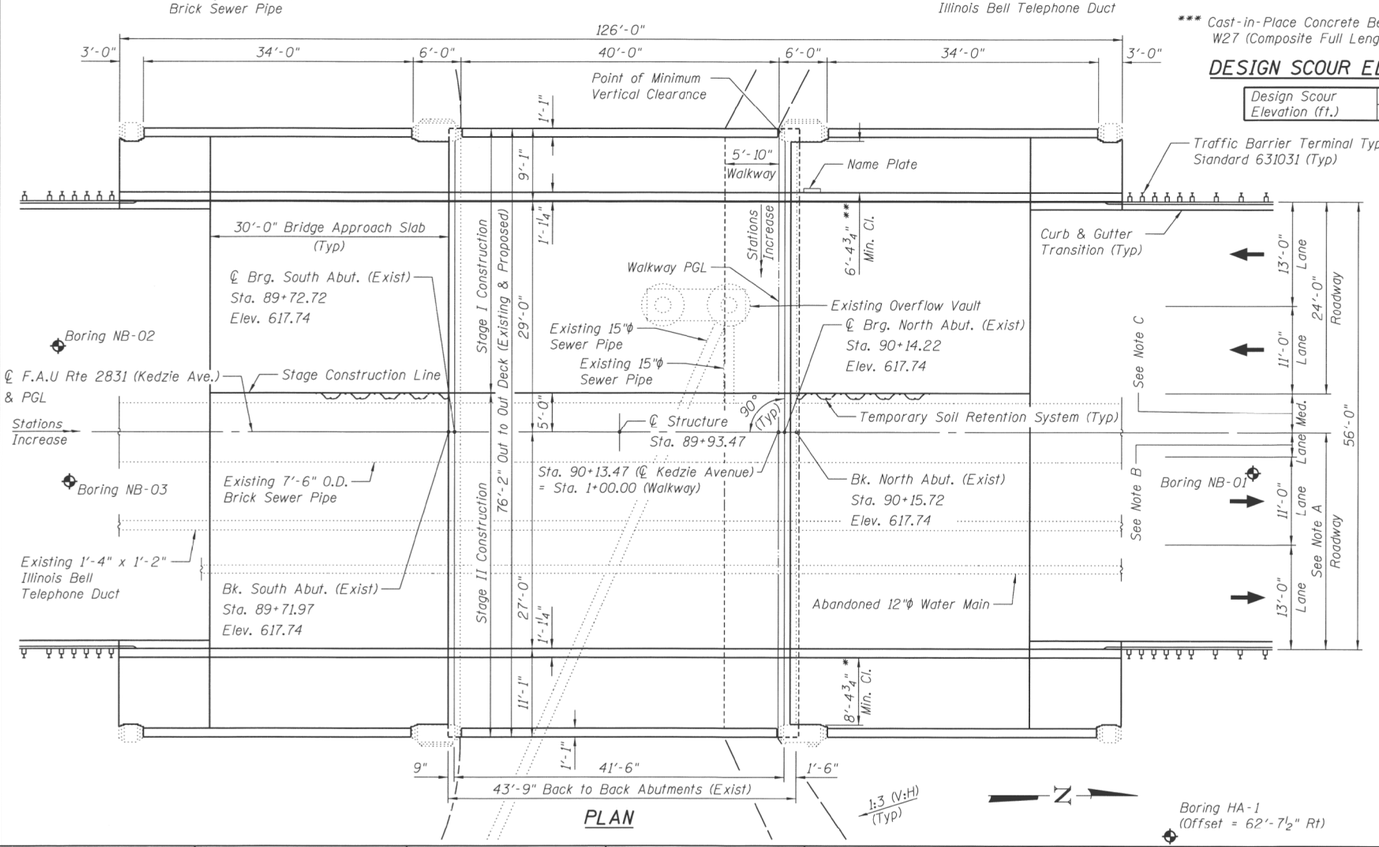
Bench Mark: City of Chicago Bench Number 4988, square cut in northwest corner of concrete post at north end of northeast retaining wall, 36'-7" east of roadway centerline at Station 74+22.07. Elevation = 622.04.

Existing Structure: S.N. 016-0759 built as State Aid Route No. 53, Section 053-2121-M.F.T. at Station 21+76.00 in 1933. The metal walkway beneath the bridge was built in 1959 and rebuilt in 1992. Structure consists of a single span cast-in-place reinforced concrete tee beam superstructure. Substructure consists of cantilevered cast-in-place concrete wall abutments. Length = 43'-9" (back to back abutments). Width = 76'-2" (out-to-out deck). Traffic is to be maintained utilizing stage construction.

No Salvage



ELEVATION



PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

STATE OF ILLINOIS
STEVEN P. KARLOWSKI
81-4663
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER

MARQUETTE PARK NORTH LAGOON
RE-BUILT BY
CITY OF CHICAGO
SEC. 07-E1059-00-BR
F.A.U. RT. 2831 STA. 89+93.47
STR. NO. 016-0759
SUPERSTRUCTURE LOADING HL-93
SUBSTRUCTURE LOADING HS-20

Steven P Karlowski
EXP. 11/30/2012
DATE: 6/17/2011

NAME PLATE
See Std. 515001

Notes

Note A: 24'-0" from Sta 89+41.97 to Sta 90+08.97
Varies from 24'-0" at Sta 90+08.97 to 26'-11½" at Sta 90+45.22

Note B: 0" from Sta 89+41.97 to Sta 90+08.97
Varies from 0" at Sta 90+08.97 to 2'-11½" at Sta 90+45.22

Note C: 8'-0" from Sta 89+41.97 to Sta 90+08.97
Varies from 8'-0" at Sta 90+08.97 to 5'-0½" at Sta 90+45.22

* Typical at all East Post Locations

** Typical at all West Post Locations

*** Cast-in-Place Concrete Beam - Fascia Beams
W27 (Composite Full Length) - Interior Beams

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	593.41	593.41

LOADING HL-93 SUPERSTRUCTURE
LOADING HS20-44 SUBSTRUCTURE

Allow 50 #/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

SUPERSTRUCTURE

2010 AASHTO LRFD Bridge Design Specifications

SUBSTRUCTURE

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

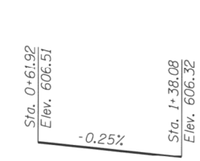
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (Structural Steel) (AASHTO M270 Grade 50)

FIELD UNITS (EXISTING CONSTRUCTION)

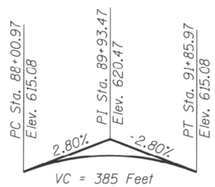
f'_c = 3,500 psi (Assumed)
f_y = 33,000 psi (Reinforcement) (Assumed)

SEISMIC DATA

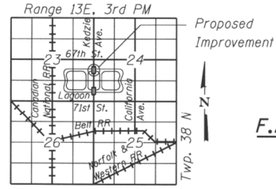
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coeficient (A) = 0.038g
Site Coefficient (S) = 1.0



PROFILE GRADE
WALKWAY
(Along Front Face of North Abutment)



PROFILE GRADE
KEDZIE AVENUE
(Along ℄ Roadway)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
KEDZIE AVENUE OVER
NORTH LAGOON (MARQUETTE PARK)
F.A.U. RTE. 2831 - SEC. 07-E1059-00-BR
COOK COUNTY
STATION 89+93.47
STRUCTURE NO. 016-0759

USER NAME = IEI	DESIGNED - LAN	REVISED -	
	CHECKED - SPK	REVISED -	
PLOT SCALE =	DRAWN - LAN, NEC	REVISED -	
PLOT DATE = 6/17/2011	CHECKED - SPK	REVISED -	

INFRASTRUCTURE ENGINEERING INCORPORATED
33 West Monroe | Suite 1540 | Chicago, IL 60603
P 312.423.9560 | F 312.425.9564 | www.infrastructure-eng.com

CITY OF CHICAGO
DEPARTMENT OF TRANSPORATION

SHEET NO. 1 OF 42 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	102
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

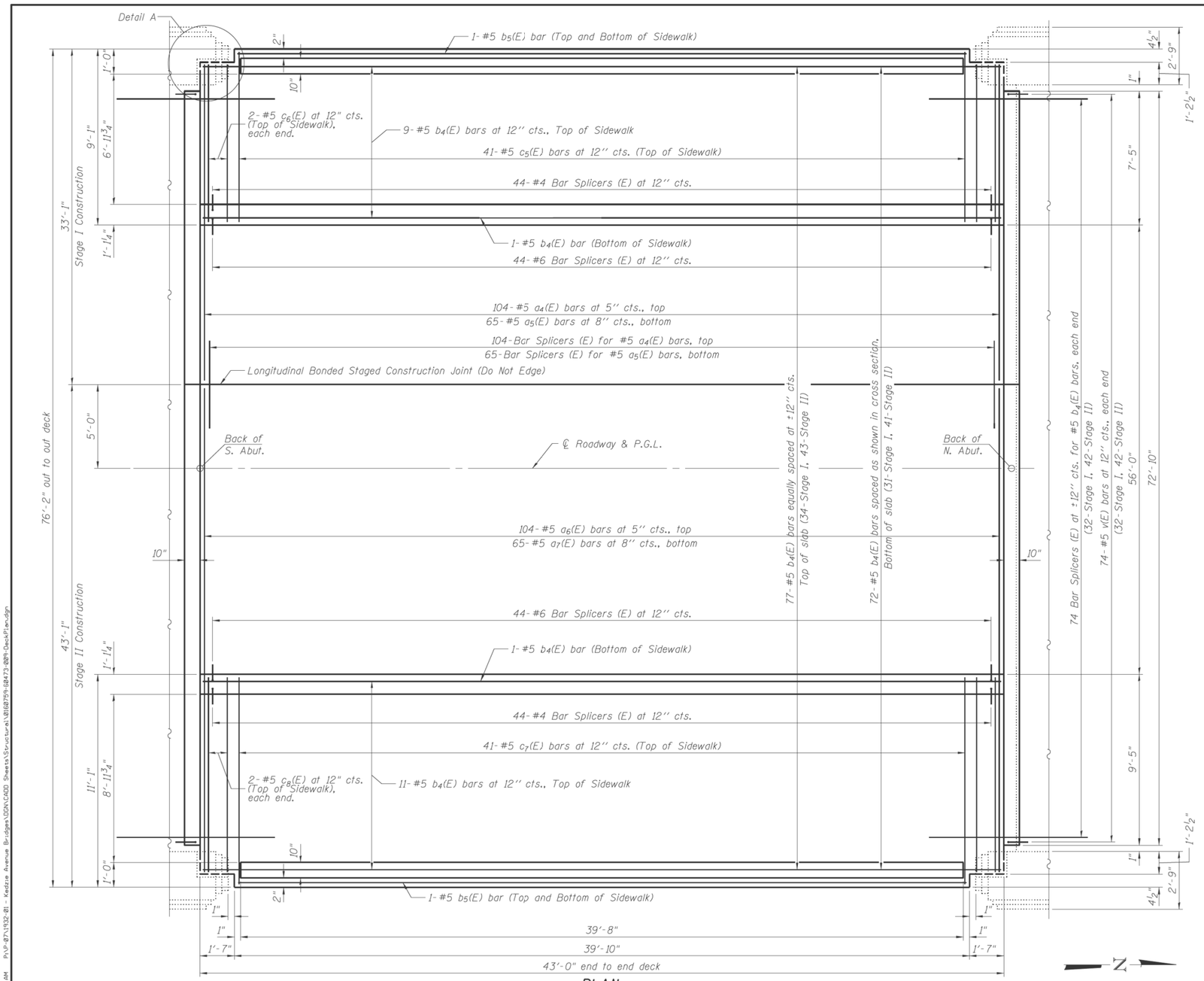
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0759

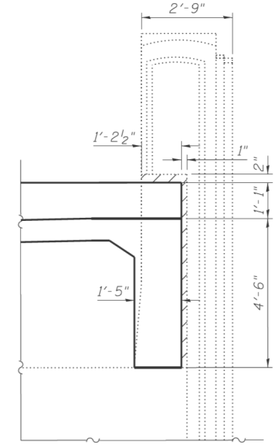
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	58
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

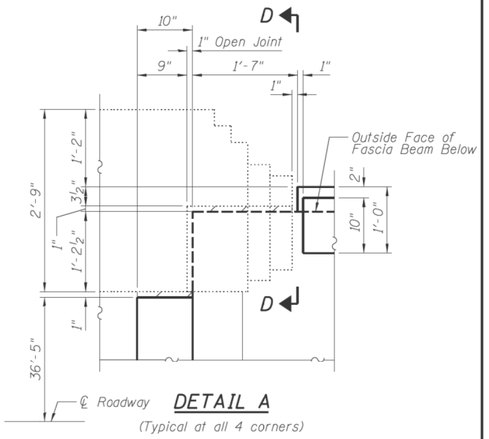
FOR INFORMATION ONLY



PLAN



SECTION D-D



DETAIL A

(Typical at all 4 corners)

Indicates Limits of PJF

Notes:
See sheet 10 of 42 for Deck Cross Section and Concrete Parapet Railing.
See sheet 11 of 42 for Concrete Bridge Railing.
See sheet 12 of 42 for Superstructure Details and Bill of Material.
See sheet 13 of 42 for the South Diaphragm Details.
See sheet 14 of 42 for the North Diaphragm Details.
See sheet 15 of 42 for Cast-in-Place Concrete Beam.
See sheet 38 of 42 for bar splicer details.
PJF to be in accordance with Article 1051.08 of the Standard Specifications. PJF to be bonded to the existing abutment with suitable adhesives as recommended by supplier.

INFRASTRUCTURE ENGINEERING INCORPORATED 33 West Monroe | Suite 1540 | Chicago, IL 60603 P 312.425.9560 | F 312.425.9564 | www.infrastructure-eng.com	USER NAME = IEI	DESIGNED - LAN	REVISED -	CITY OF CHICAGO DEPARTMENT OF TRANSPORATION	DECK PLAN STRUCTURE NO. 016-0759
		CHECKED - SPK	REVISED -		
	PLOT SCALE =	DRAWN - LAN	REVISED -		
	PLOT DATE = 6/23/2011	CHECKED - SPK	REVISED -		SHEET NO. 9 OF 42 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	110
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN SN: 016-0759	
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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			
PLOT DATE = 1/30/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	59
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

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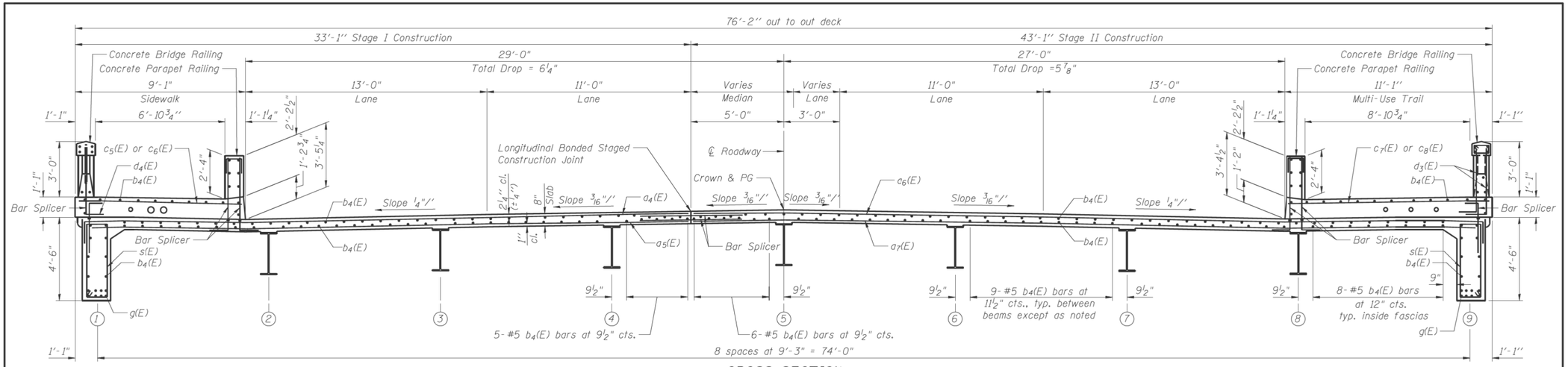
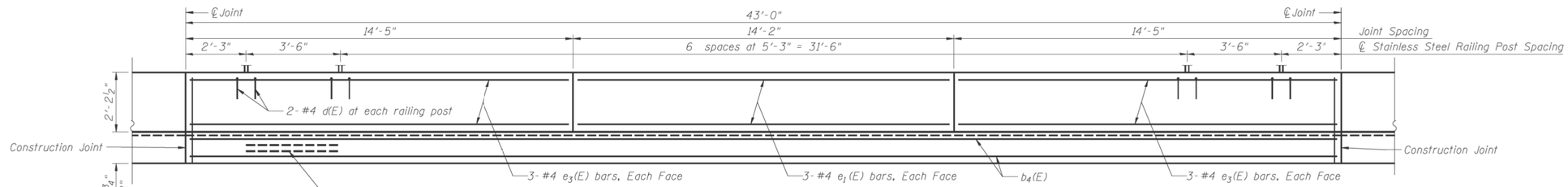
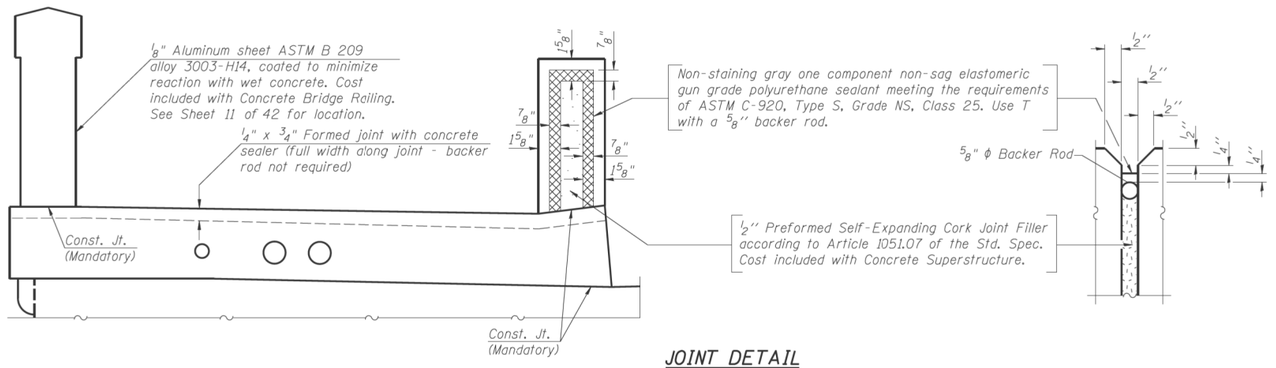
FOR INFORMATION ONLY



CROSS SECTION
(Looking North)



INSIDE ELEVATION OF CONCRETE PARAPET RAILING



JOINT DETAIL

Notes:
- See sheet 9 of 42 for Deck Plan.
- See sheet 11 of 42 for Concrete Bridge Railing.
- See sheet 12 of 42 for Superstructure Details and Bill of Material.
- See sheet 15 of 42 for Cast-in-Place Concrete Beam.
- See sheet 38 of 42 for bar splicer details.
- * For Pay Items see Electrical Drawings.

INFRASTRUCTURE ENGINEERING INCORPORATED 33 West Monroe | Suite 1540 | Chicago, IL 60603 P 312.425.9588 | F 312.425.9564 | www.infrastructureeng.com	USER NAME = IEI PLOT SCALE = PLOT DATE = 6/17/2011	DESIGNED - LAN CHECKED - SPK DRAWN - LAN CHECKED - SPK	REVISED - REVISED - REVISED - REVISED -	CITY OF CHICAGO DEPARTMENT OF TRANSPORATION	DECK CROSS SECTION & CONCRETE PARAPET STRUCTURE NO. 016-0759 SHEET NO. 10 OF 42 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	111
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	60
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

Bench Mark: City of Chicago Bench Number 4988, square cut in northwest corner of northeast retaining wall, 36'-7" east of roadway centerline at Station 74+22.07. Elevation = 622.04.

Existing Structure: S.N. 016-0760 built as State Aid Route No. 53, Section 053-2121-M.F.I. at Station 5+41.00 in 1933. Structure consists of a single span cast-in-place reinforced concrete tee beam superstructure. Substructure consists of cantilevered cast-in-place concrete wall abutments. Length = 43'-9" (back to back abutments). Width = 76'-2" (out-to-out deck). Traffic is to be maintained utilizing stage construction.

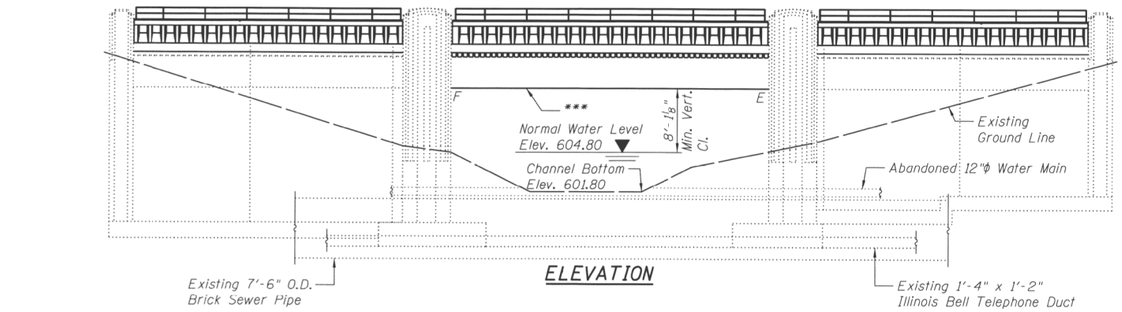
No Salvage

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

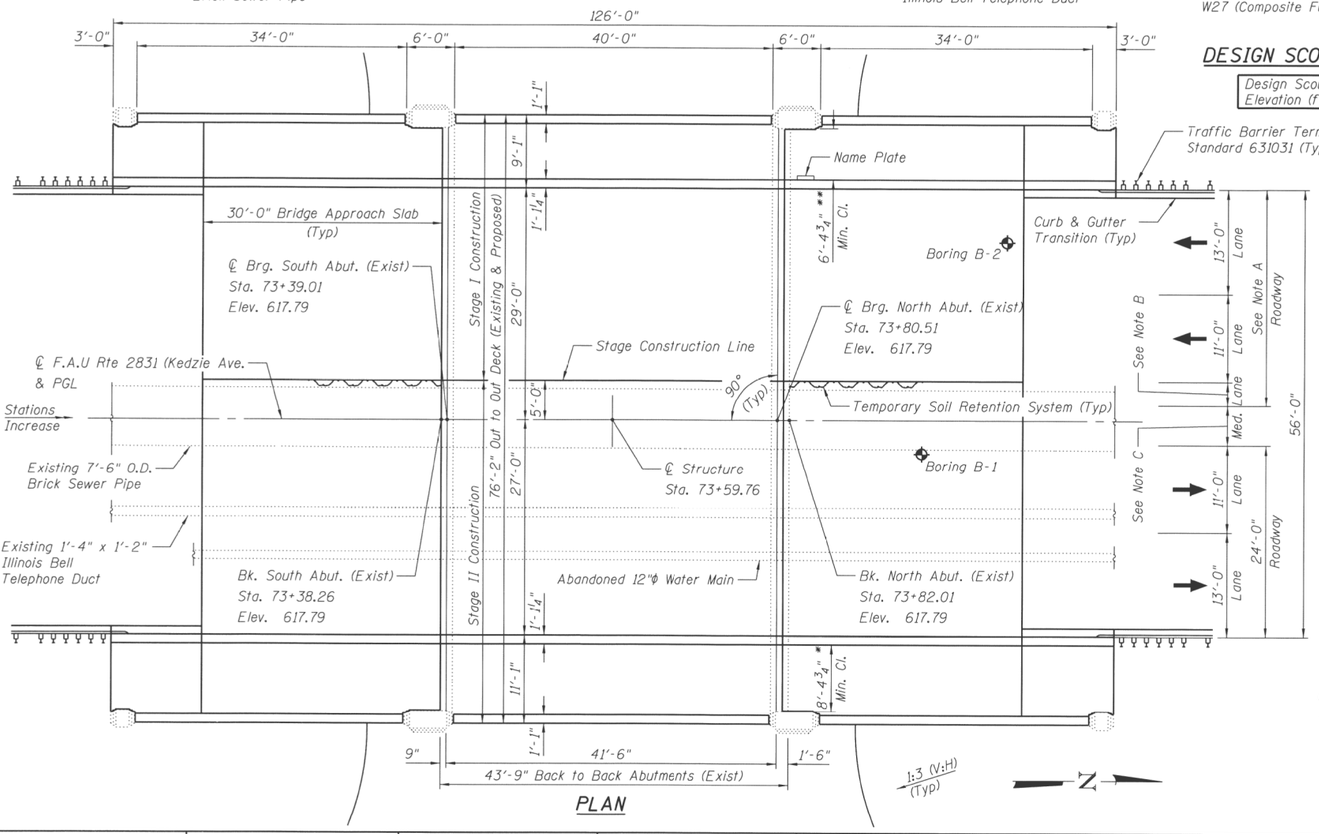
STATE OF ILLINOIS
STEVEN P. KARLOWSKI
81-4663
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER

MARQUETTE PARK SOUTH LAGOON
RE-BUILT BY
CITY OF CHICAGO
SEC. 07-E1059-00-BR
F.A.U. RT. 2831 STA. 73+59.76
STR. NO. 016-0760
SUPERSTRUCTURE LOADING HL-93
SUBSTRUCTURE LOADING HS-20

Steven P. Karlowski
EXP. 11/30/2012
DATE: 6/17/2011



ELEVATION



PLAN

Notes

Note A: Varies from 27'-11½" at Sta 73+08.26 to 24'-0" at Sta 73+61.76 24'-0" from Sta 73+61.76 to Sta 74+11.51

Note B: Varies from 3'-11½" at Sta 73+08.26 to 0" at Sta 73+61.76 0" from Sta 73+61.76 to Sta 74+11.51

Note C: Varies from 4"-0½" at Sta 73+08.26 to 8'-0" at Sta 73+61.76 8'-0" from Sta 73+61.76 to Sta 74+11.51

* Typical at all East Post Locations

** Typical at all West Post Locations

*** Cast-in-Place Concrete Beam - Fascias Beams W27 (Composite Full Length) - Interior Beams

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	593.44	593.44

NAME PLATE

See Std. 515001

LOADING HL-93 SUPERSTRUCTURE
LOADING HS20-44 SUBSTRUCTURE

Allow 50 #/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

SUPERSTRUCTURE

2010 AASHTO LRFD Bridge Design Specifications

SUBSTRUCTURE

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

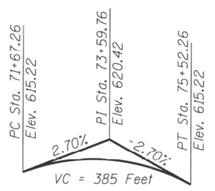
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (Structural Steel) (AASHTO M270 Grade 50)

FIELD UNITS (EXISTING CONSTRUCTION)

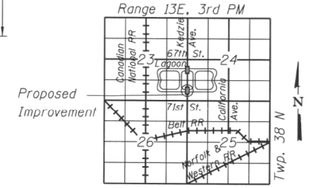
f'_c = 3,500 psi (Assumed)
f_y = 33,000 psi (Reinforcement) (Assumed)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.038g
Site Coefficient (S) = 1.0



PROFILE GRADE
KEDZIE AVENUE
(Along ℄ Roadway)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
KEDZIE AVENUE OVER
SOUTH LAGOON (MARQUETTE PARK)
F.A.U. RTE. 2831 - SEC. 07-E1059-00-BR
COOK COUNTY
STATION 73+59.76
STRUCTURE NO. 016-0760

USER NAME = IEI	DESIGNED - LAN	REVISED -	
	CHECKED - SPK	REVISED -	
PLOT SCALE =	DRAWN - LAN, NEC	REVISED -	
PLOT DATE = 6/17/2011	CHECKED - SPK	REVISED -	

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CITY OF CHICAGO
DEPARTMENT OF TRANSPORATION

SHEET NO. 1 OF 39 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	144
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

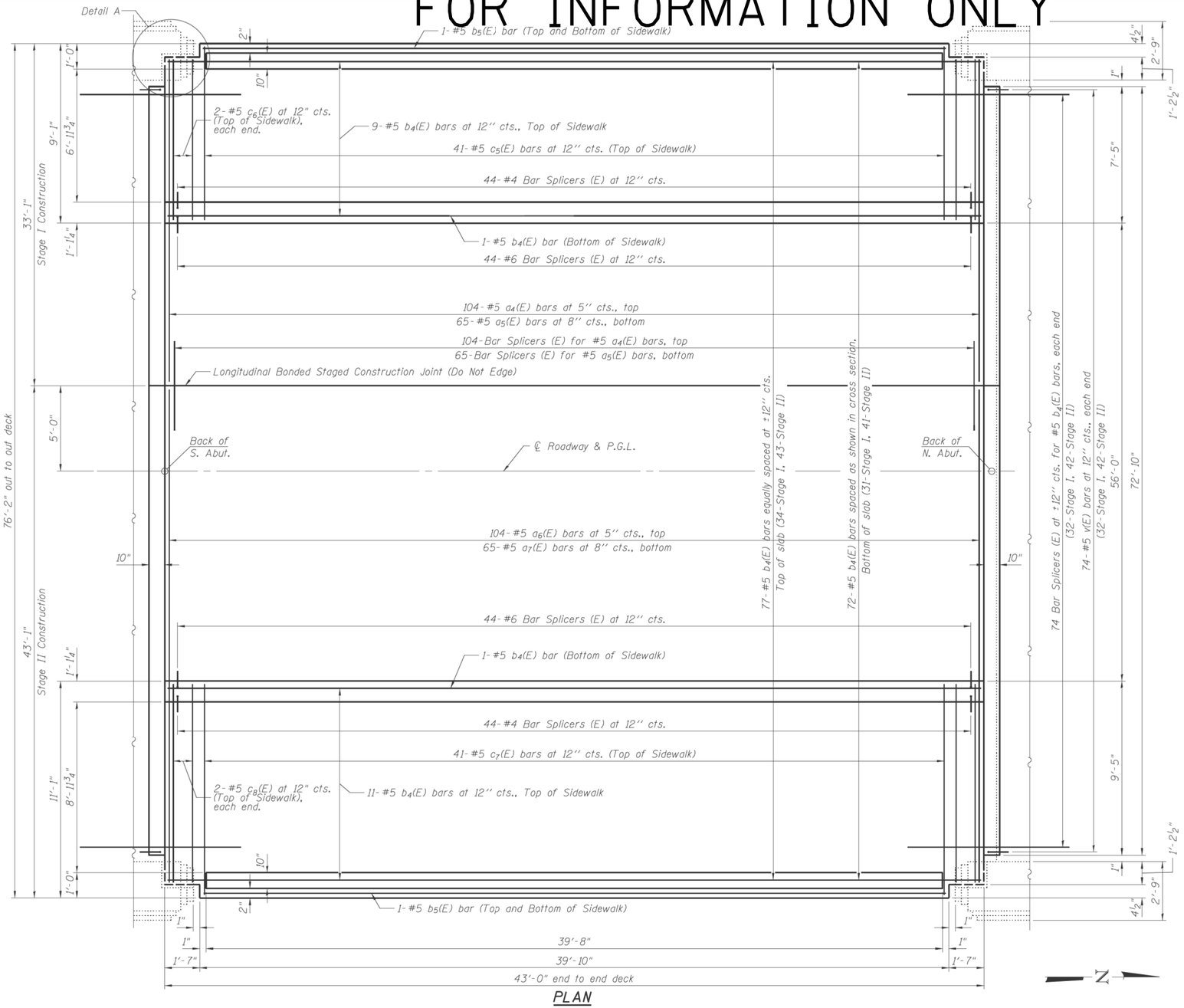
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0760

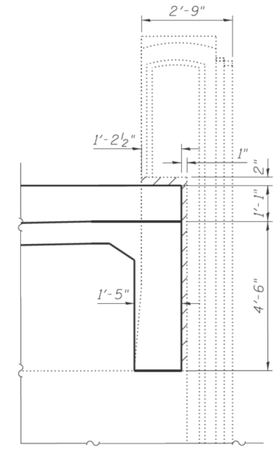
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	61
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

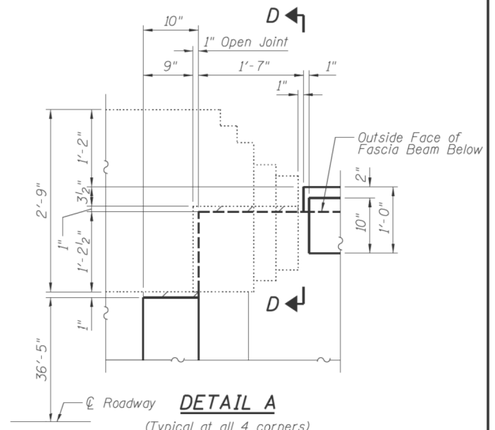
FOR INFORMATION ONLY



PLAN



SECTION D-D



DETAIL A

(Typical at all 4 corners)

Indicates Limits of PJF

Notes:

See sheet 10 of 39 for Deck Cross Section and Concrete Parapet Railing.

See sheet 11 of 39 for Concrete Bridge Railing.

See sheet 12 of 39 for Superstructure Details and Bill of Material.

See sheet 13 of 39 for the South Diaphragm Details.

See sheet 14 of 39 for the North Diaphragm Details.

See sheet 15 of 39 for Cast-in-Place Concrete Beam.

See sheet 36 of 39 for bar splicer details.

PJF to be in accordance with Article 1051.08 of the Standard Specifications. PJF to be bonded to the existing abutment with suitable adhesives as recommended by supplier.

INFRASTRUCTURE ENGINEERING	USER NAME = IEI	DESIGNED - LAN	REVISED -	CITY OF CHICAGO DEPARTMENT OF TRANSPORATION	DECK PLAN STRUCTURE NO. 016-0760
33 West Monroe | Suite 1540 | Chicago, IL 60603		CHECKED - SPK	REVISED -		SHEET NO. 9 OF 39 SHEETS
P 312.425.9560 | F 312.425.9564 | www.infrastructureeng.com	PLOT SCALE =	DRAWN - LAN	REVISED -		
	PLOT DATE = 6/23/2011	CHECKED - SPK	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	152
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

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		DRAWN -	REVISED -		
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	PLOT DATE = 1/30/2019	DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	62
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

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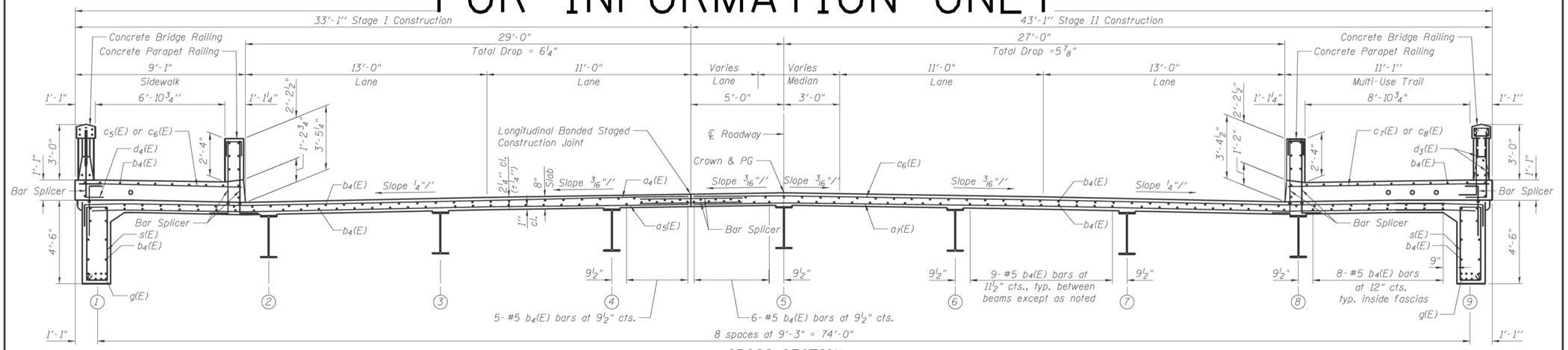
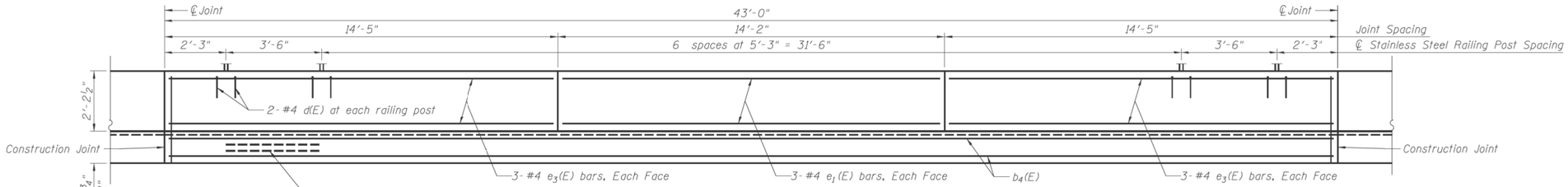
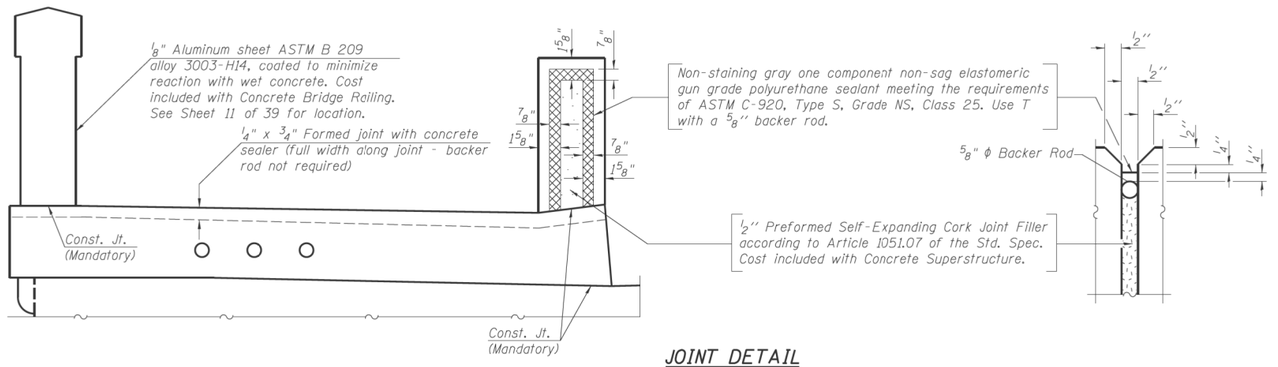
FOR INFORMATION ONLY



CROSS SECTION
(Looking North)



INSIDE ELEVATION OF CONCRETE PARAPET RAILING



JOINT DETAIL

Notes:
- See sheet 9 of 39 for Deck Plan.
- See sheet 11 of 39 for Concrete Bridge Railing.
- See sheet 12 of 39 for Superstructure Details and Bill of Material.
- See sheet 15 of 39 for Cast-in-Place Concrete Beam.
- See sheet 36 of 39 for bar splicer details.
- * For Pay Items see Electrical Drawings.

INFRASTRUCTURE ENGINEERING INCORPORATED, 33 West Monroe	Suite 1540	Chicago, IL 60603, P 312.425.1500 | F 312.425.1564 | www.infrastructureeng.com	USER NAME = IEI	DESIGNED - LAN	REVISED -	CITY OF CHICAGO DEPARTMENT OF TRANSPORATION	DECK CROSS SECTION & CONCRETE PARAPET STRUCTURE NO. 016-0760
				CHECKED - SPK	REVISED -		
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			PLOT DATE = 6/17/2011	CHECKED - SPK	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2831	07-E1059-00-BR	COOK	199	153
		CONTRACT NO. 17349		
		ILLINOIS FED. AID PROJECT		

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	PLOT DATE = 1/30/2019	DATE -	REVISED -		SCALE:	SHEET OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	63
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

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FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

COUNTY	TOTAL SHEETS	SHEET NO.
COOK	172	72

SHEET NO. 1
26 SHEETS

Bench Mark: Chiseled Square cut in top of handrail @ light pole on northwest corner of north abutment. Elev. 649.18

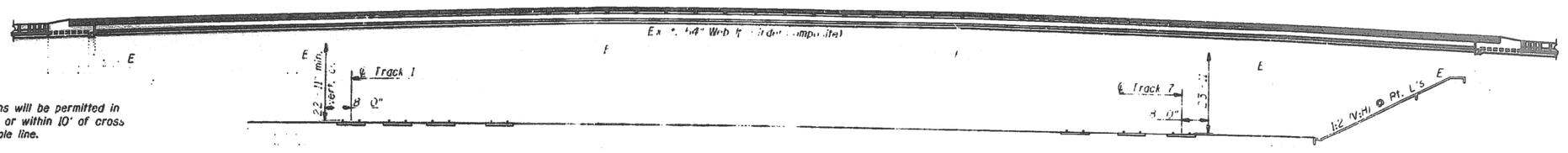
Existing Structure: SN 016-0761 was originally constructed in 1936. Since the initial construction, the bridge was reconstructed in 1977 as F.A.U.S. Rt. 2831, Sec. 1975-50-BR. The superstructure consists of a 5-span continuous steel plate girder supporting a 420' long by 62' wide R.C. deck.

The road shall be kept open to two lanes of traffic at all times by utilizing stage construction.

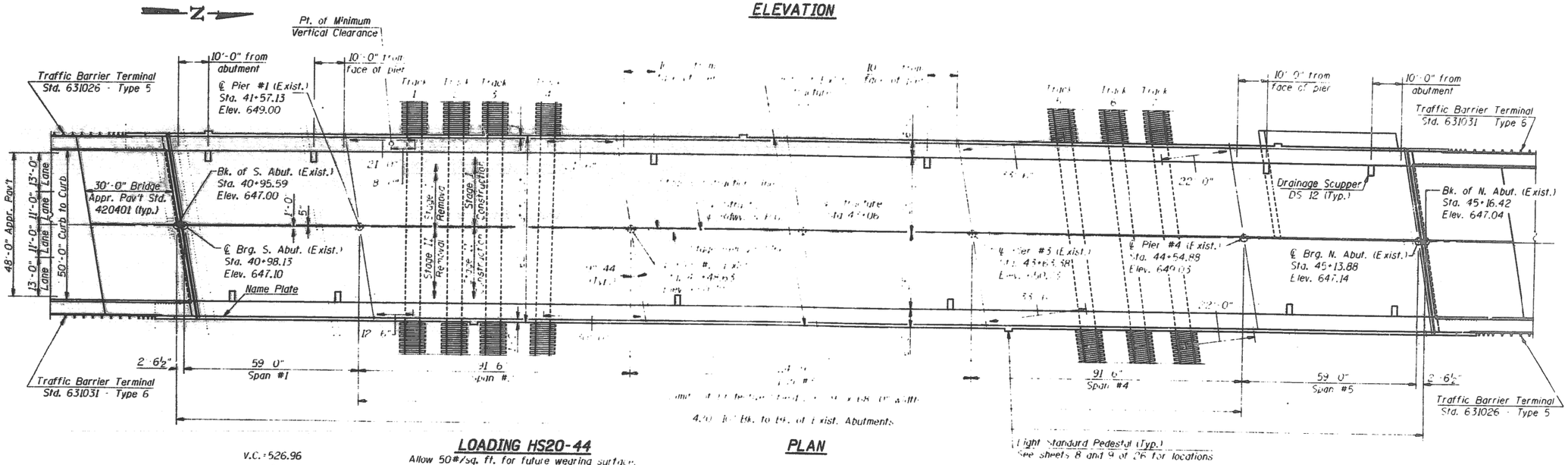
No Salvage.

Notes: No deck drains will be permitted in the span over tracks or within 10' of cross arms of a railroad pole line.

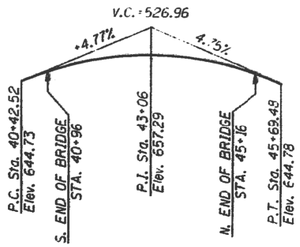
Drain spacings are typical on each side of bridge.



ELEVATION



PLAN



PROFILE GRADE

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2000 Interims

DESIGN STRESSES

NEW CONSTRUCTION

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36,000 psi (structural steel)

EXISTING CONSTRUCTION

f'_c = 1,400 psi
f_y = 40,000 psi (reinforcement)
f_y = 36,000 psi (structural steel)

SEISMIC DATA

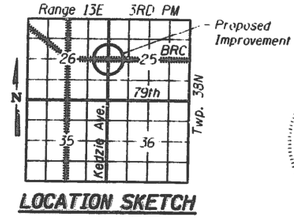
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .04g
Site Coefficient (S) = 1.0

STATION 43+06
REBUILT 200 BY
STATE OF ILLINOIS
F.A.U. RT. 2831
SEC 2000-029 I
F.A. PROJ. _____
LOADING HS20
STR. NO. 016-0761

NAME PLATE

See Std. 515001 Name Plate for Bridges.

Note: The existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates.



LOCATION SKETCH

STATE OF ILLINOIS
WILLIAM J. VEGRZYN
4983
HANOVER PARK IL
LICENSED STRUCTURAL ENGINEER

William J. Vegrzyn 5/31/02
Expires 11-30-02

GENERAL PLAN AND ELEVATION
KEDZIE AVENUE OVER
BELT RAILWAY COMPANY RAILROAD
F.A.U. ROUTE 2831 SECTION 2000-029 I
COOK COUNTY
STATION 43+06
STRUCTURE NUMBER 016-0761

RJN GROUP, INC.
WHEATON, ILLINOIS 60187

DESIGNED	WJV
CHECKED	HPW
DRAWN	WJV
CHECKED	HPW

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0761

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	64
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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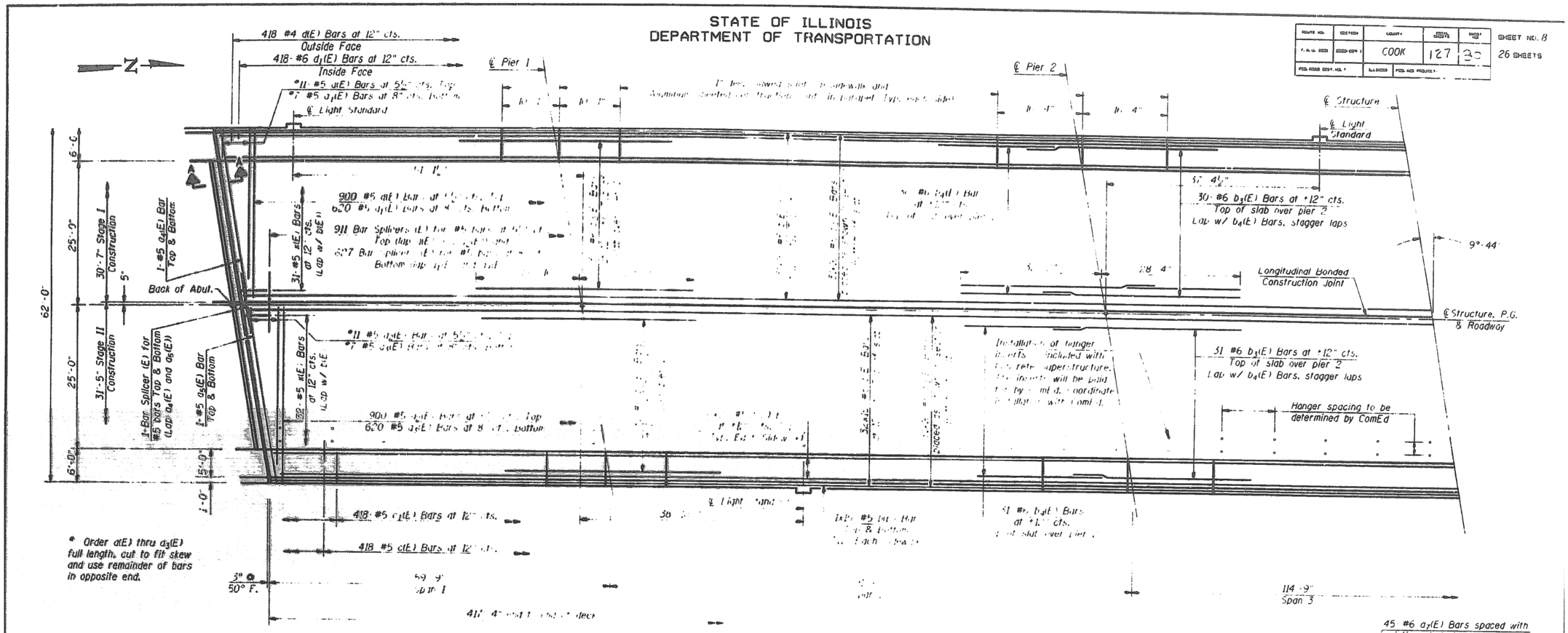
FOR INFORMATION ONLY

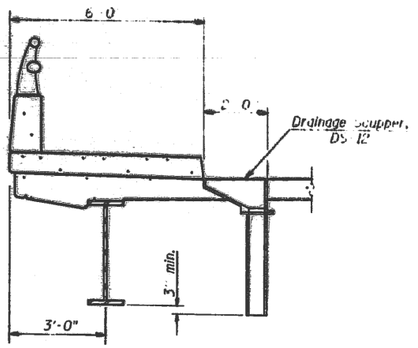
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2831	2000-029 I	COOK	127	30
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

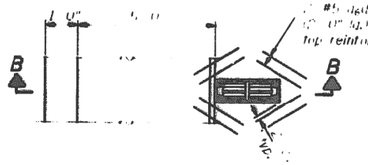
SHEET NO. 8
26 SHEETS



HALF PLAN BRIDGE DECK



SECTION THRU DRAINAGE SCUPPER



PLAN

DESIGNED	BLB
CHECKED	WJV
DRAWN	BLB
CHECKED	WJV

NOTES

See sheets 10 and 11 of 26 for Superstructure Details, Parapet Details, Section A-A, and Bill of Material.

Cut longitudinal and transverse reinforcement to clear drainage scuppers.

Minimum lap length for #4 Bars = 1'-8", #5 Bars = 2'-2", #6 Bars = 2'-7".

Reinforcement Bars designated (E) shall be epoxy coated.

Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

See sheet 25 of 26 for Bar Splicer Details.

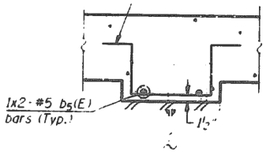
See sheet 1 of 26 for Scupper locations.

See sheet 15 of 26 for Scupper Details.

See sheet 9 of 26 for deck pouring sequence.

See sheet 14 of 26 for lighting details.

45 #6 a7(E) Bars spaced with existing stud shear connectors. (See Sheet 16 of 26 for spacing)



FILLET REINFORCEMENT IN CENTER SPAN

DECK PLAN - SOUTH HALF
KEDZIE AVENUE OVER
BELT RAILWAY COMPANY RAILROAD
F.A.U. ROUTE 2831 SECTION 2000-029 I
COOK COUNTY
STATION 43+06
STRUCTURE NUMBER 016-0761

RJN GROUP, INC.
WHEATON, ILLINOIS 60187

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0761

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	65
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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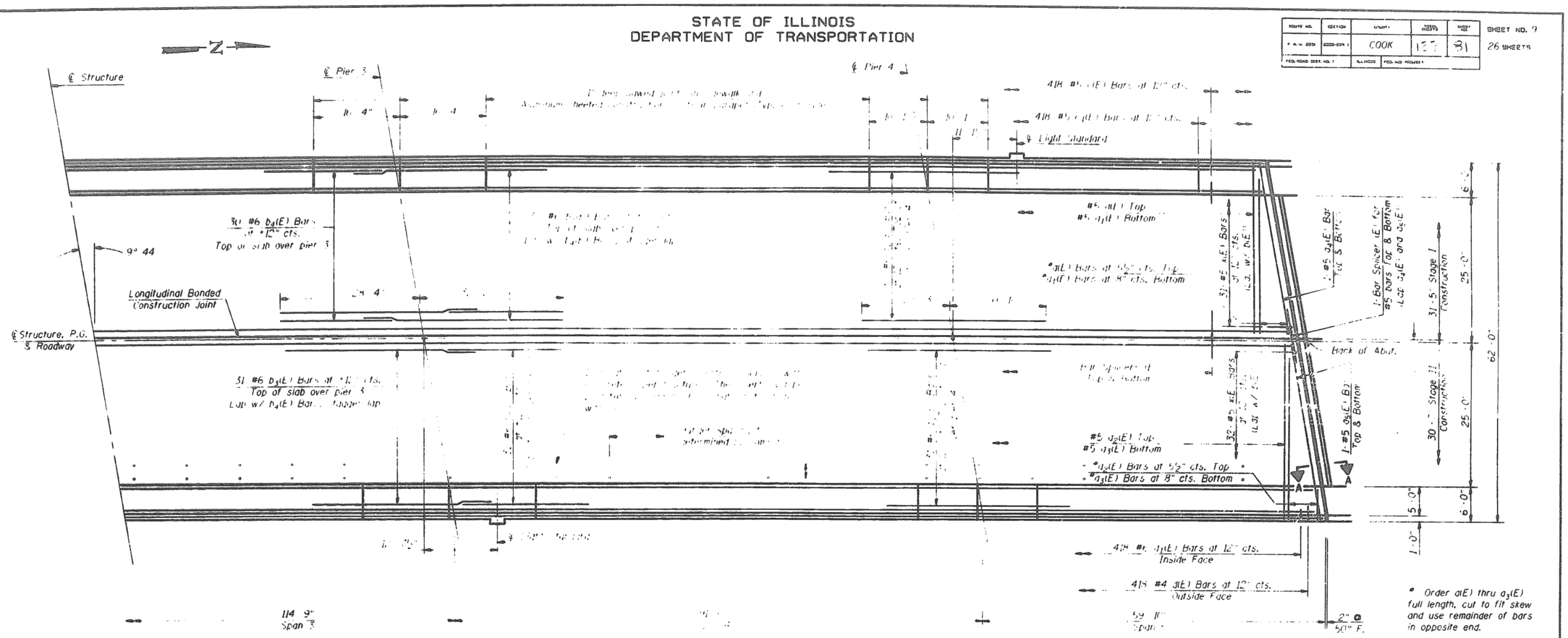
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

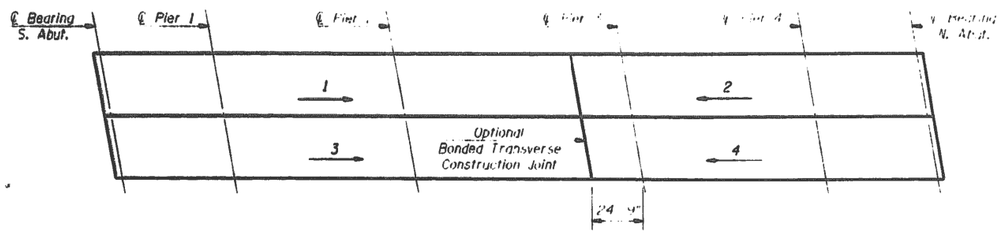
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2831	2000-029 I	COOK	172	31
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
26 SHEETS



* Order a(E) thru a3(E) full length, cut to fit skew and use remainder of bars in opposite end.

HALF PLAN BRIDGE DECK



DECK POURING SEQUENCE

When the deck pour is stopped for the day at one or more of the Transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum modulus of rupture of 650 psi or a minimum compressive strength of 3500 psi.

NOTES

See sheets 10 and 11 of 26 for Superstructure Details, Girder Details, Section A-A, and Bill of Material.

Additional longitudinal and transverse reinforcement to clear drainage scuppers.

Minimum lap length for #4 Bars 1'-8", #5 Bars 2'-2".

Reinforcement Bars designated (E) shall be epoxy coated.

Bars indicated thus 20x5 #5 etc. indicates 20 lines of bars with 5 lengths per line.

See sheet 25 of 26 for Bar Splicer Details.

See sheet 1 of 26 for Scupper locations.

See sheet 15 of 26 for Scupper Details.

See sheet 8 of 26 for Scupper Reinforcement Detail and Fillet Reinforcement in Center Span.

See sheet 14 of 26 for lighting details.

DESIGNED	BLB
CHECKED	WJV
DRAWN	BLB
CHECKED	WJV

DECK PLAN - NORTH HALF
KEDZIE AVENUE OVER
BELT RAILWAY COMPANY RAILROAD
F.A.U. ROUTE 2831 SECTION 2000-029 I
COOK COUNTY
STATION 43+06
STRUCTURE NUMBER 016-0761

RJN GROUP, INC.
WHEATON, ILLINOIS 60187

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0761

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	66
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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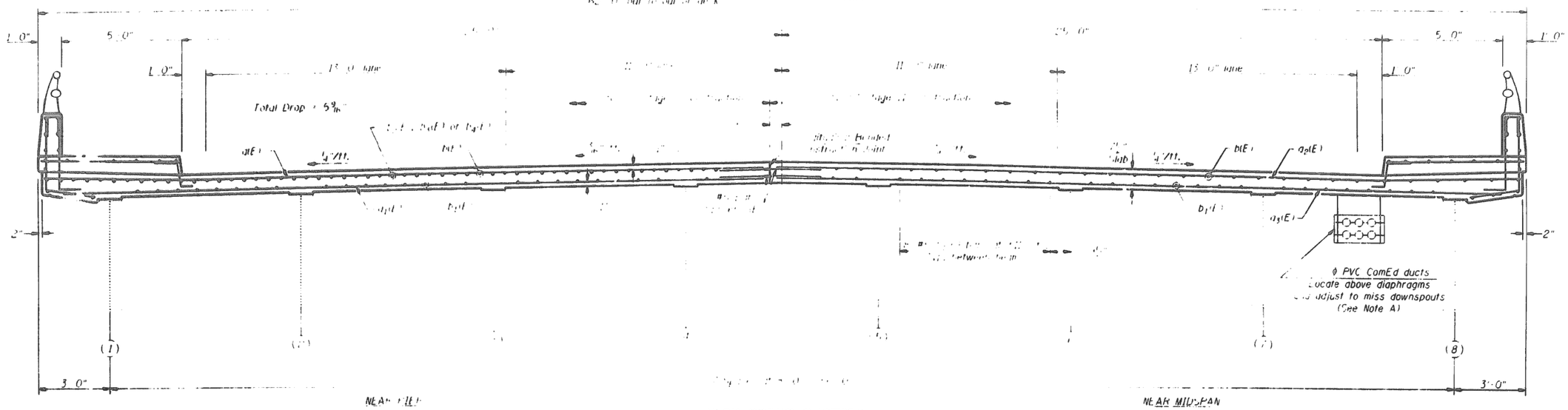
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

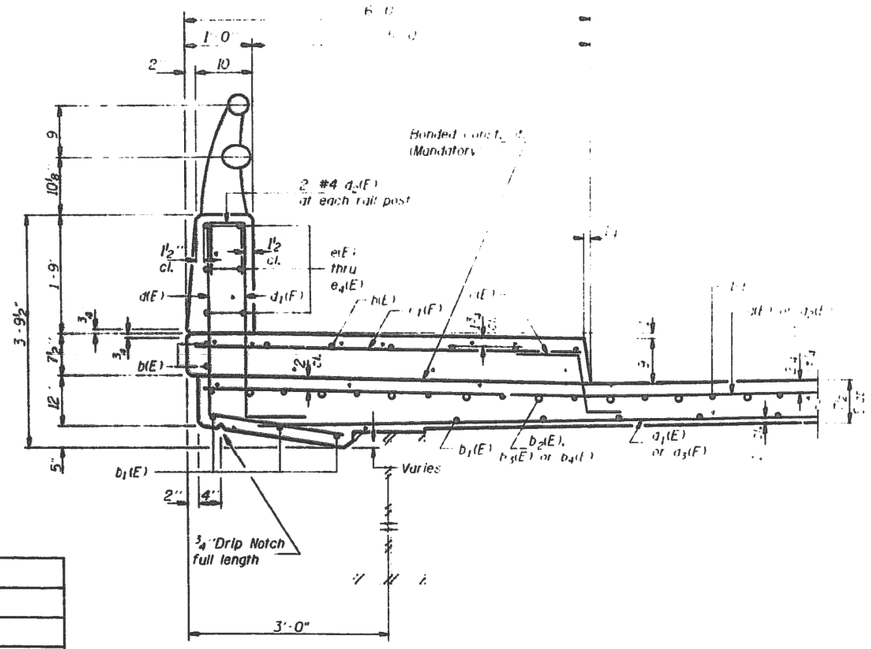
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 2831	2000-029 I	COOK	127	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
26 SHEETS

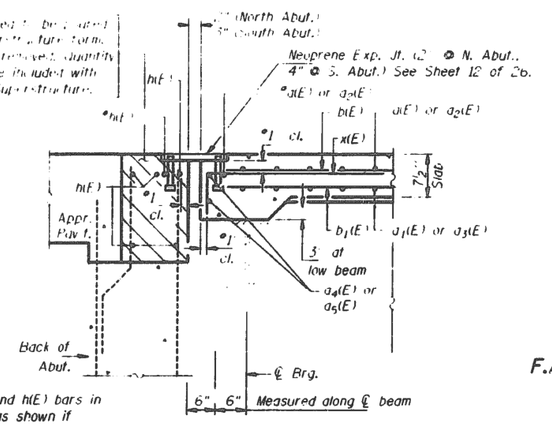


DECK CROSS SECTION
(Looking North)

Note A:
Installation of hanger inserts is included with Concrete Superstructure. The inserts will be paid for by ComEd. Coordinate installation with ComEd.



SECTION THRU SIDEWALK



*Place a(E) or a_2(E) and h(E) bars in back of anchor bolts as shown if required to maintain 1" cl. (±0-1/8"). Anchor bolts should be tied to a(E) or a_2(E) bars and h(E) bars.

SECTION A-A
(All dimensions are at right ∠'s and at 50° F.)

DESIGNED	BLB
CHECKED	WJV
DRAWN	BLB
CHECKED	WJV

CROSS SECTIONS
KEDZIE AVENUE OVER
BELT RAILWAY COMPANY RAILROAD
F.A.U. ROUTE 2831 SECTION 2000-029 I
COOK COUNTY
STATION 43+06
STRUCTURE NUMBER 016-0761

RJN GROUP, INC.
WHEATON, ILLINOIS 60187

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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016-0761

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	67
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Existing Structure No. 016-0839 Constructed in 1957
on F.A. Interstate Route 2- Project I-02-2(8)
Edens Expressway Section 36B-010I.6-M.A.T.

N.R.R. B.M. No. 11 El. 610.035
Chicago Sewer B.M. = 2.76
Leland and Keating Avenues

T.B.M.
Fire Hydrant B. Flange
Bolt S.E. corner Lawrence
and Keating Avenues
El. 612.06

30'-0" New Approach Slab

44'-9" Span 1 | 46'-0" Span 2 | 46'-0" Span 3 | 44'-9" Span 4

New Deck

Light

2" Steel Conduit

Existing 3½" ϕ Ducts in Trench

ϕ Traffic Signal Anchor Bolts.

ϕ Performed Joint Seal

ϕ Performed Joint Filler

ϕ Lawrence Ave. ϕ Structure

ϕ Brgs. No. 1 Abut. Sta. 5+76.28 El. 609.06

ϕ Pier No. 1 Sta. 6+78.03 El. 610.01

ϕ Pier No. 2 Sta. 7+80.03 El. 611.15

ϕ Brgs. 2 Abut. Sta. 7+81.78 El. 611.07

Sta. 6+75.03 ϕ Lawrence Avenue & ϕ Pier No. 2
Sta. 83+03.44 ϕ Edens Expressway
El. 610.79

Existing 3½" ϕ Ducts To remain

2" Steel Conduit

Existing Elec. M.H.

42'-2" ϕ Cond. in Trench

Existing Elec. M.H.

38'-2" ϕ Cond. in Trench

Remove & Replace Existing Concrete Deck

Edens Expressway

NORTHBOUND

SOUTHBOUND

N

PLAN

Light Standard

6'-0" Walk

See Det. B-8 Sht. 2

Parapet

Fascia

Curb

Drain

Note

PART. REM. & REPL. SPEC. 9" (TYP.)

BB STEEL PLATE SHALL BE USED TO MAINTAIN CICERO AVE. TRAFFIC. COST SHALL BE INCIDENTAL

LOCATION SKETCH
SECTION 10-40-13
CITY OF CHICAGO
JEFFERSON TOWNSHIP

LAWRENCE AVENUE BRIDGE RECONSTRUCTION

NOTES:
Entire concrete deck slab, metal handrail & approach slabs to be removed and replaced.
Slope walls to be repaired.
Adjust and reposition all abutment bearings.
Repair spalled concrete; repair cracks and cover exposed reinforcement in substructure.
Clean and paint steel beams and bearings where paint is damaged. See Special Provisions.
Stage construction is to be utilized; maintain 2 lanes of traffic at all times.
All abut. brgs. shall be cleaned by Method II, spot painted with red lead primer paint; Spot painted with non leading aluminum paint over the red lead paint and shall receive one coat of aluminum paint.

DESIGN DATA
Loading
HS 20-44 Plus 25 psf Future Wearing Surface.
Design Specification - AASHTO 1977 w/ 1978, 1979 thru 1981 Interim Specs.
Load Factor Design - Concrete Deck

DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi
fy = 36,000 psi - Structural Steel (M183)
Use Epoxy Coated Reinf. Bars in Top of Slab

Notes:
Light Standards to be removed and installed by others.
Conduit Material and installation including couplings and expansion couplings shall be inspected and approved by the Bureau of Electricity, City of Chicago, before payment is made.
Exist. Electric cables will be removed by the Bureau of Electricity, existing conduits will be removed by the Contractor.

SOUTH ELEVATION

= MET EXIST CONDUITS BEFORE M.H.'s - OK BY CITY CHICAGO BUREAU OF ELEC.

PROFILE of LAWRENCE AVE.

PROFILE of EDENS NORTHBOUND

PROFILE of EDENS SOUTHBOUND

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

NELSON OSTRON BASKIN BERMAN & ASSOC., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Carl E. Hunnemann
Engineer of Bridges and Structures

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 94 SECTION-010I.6 BR-80
STRUCTURE REHABILITATION
LAWRENCE AVE. OVER EDENS EXPRESSWAY
COOK COUNTY
STATION 6+78.03
DATE: 10-15-82

Rev N.M.D 1/25/83

94	010I.6 BR-80	COOK	22	8

SHEET NO. 1
10 SHEETS

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0839

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	68
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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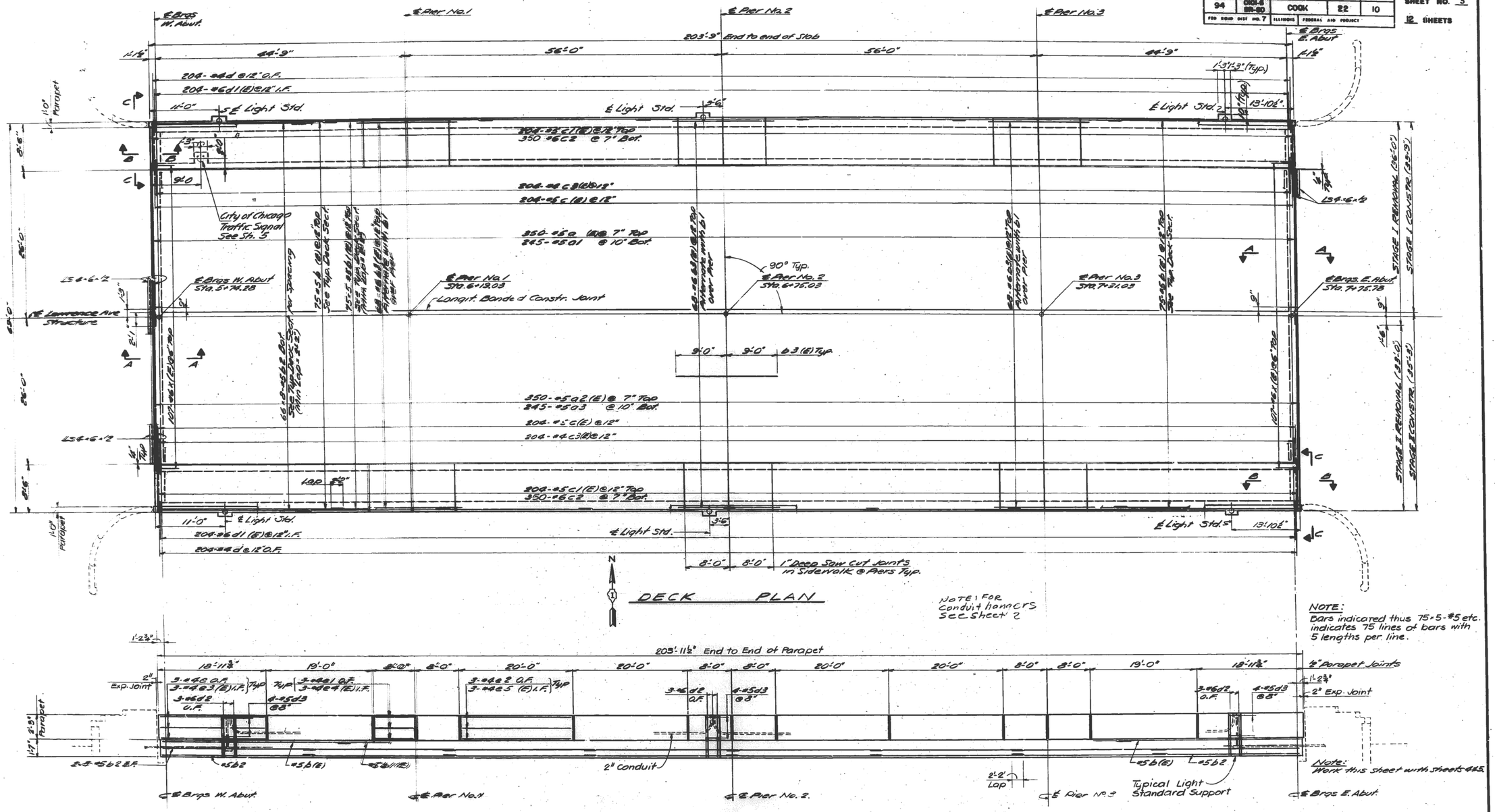
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	0101-6 BR-80	COOK	22	10
FED ROAD DIST NO. 7	ILLINOIS	FEDERAL AID PROJECT		

SHEET NO. 3
12 SHEETS



DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

NELSON OSTROM BASKIN BERMAN & ASSOC., INC.
CONSULTING ENGINEERS CHICAGO, ILLINOIS

DECK PLAN

F.A.I. ROUTE 94 SECTION - 0101-6 BR-80

STRUCTURE REHABILITATION
LAWRENCE AVE. OVER EDENS EXPRESSWAY
COOK COUNTY
STATION 6+75.03
DATE: 10-15-82

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0839

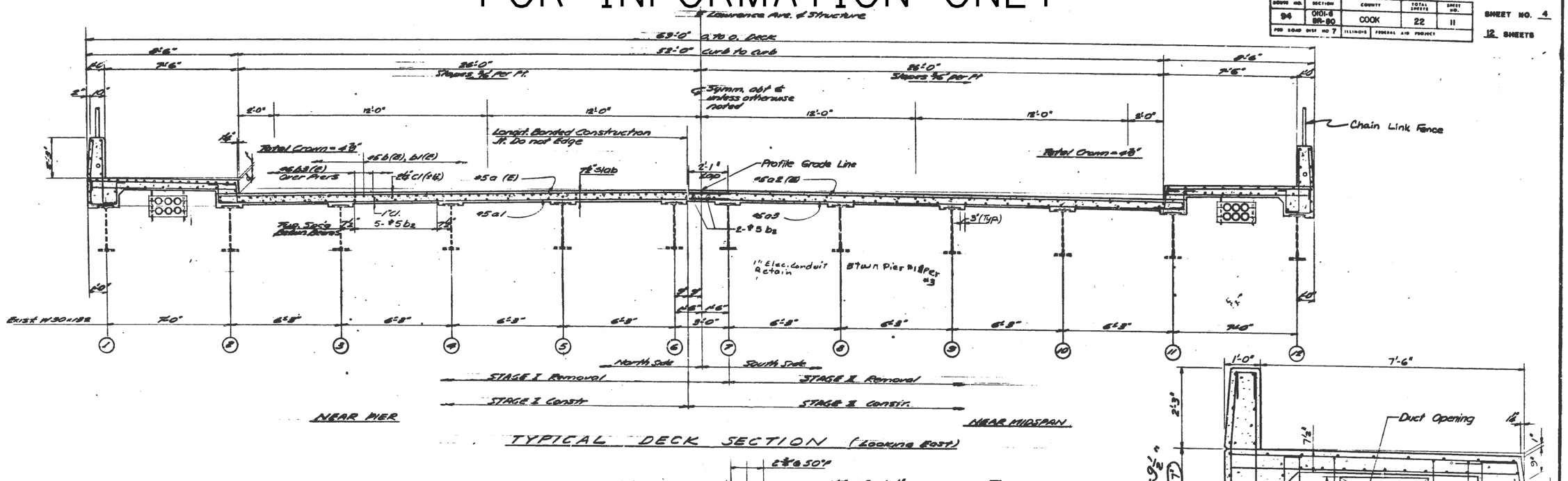
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	69
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

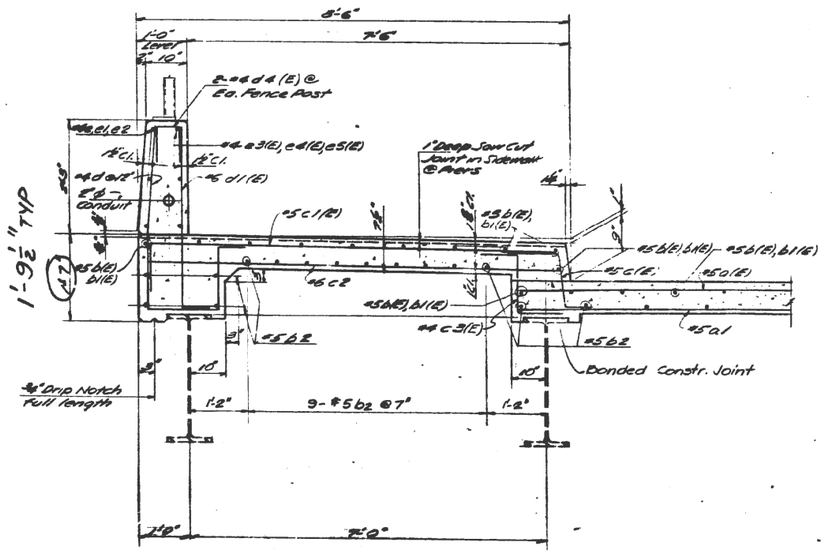
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	0101-6 BR-80	COOK	22	11
FED ROAD DIST NO 7	ILLINOIS	FEDERAL AID PROJECT		

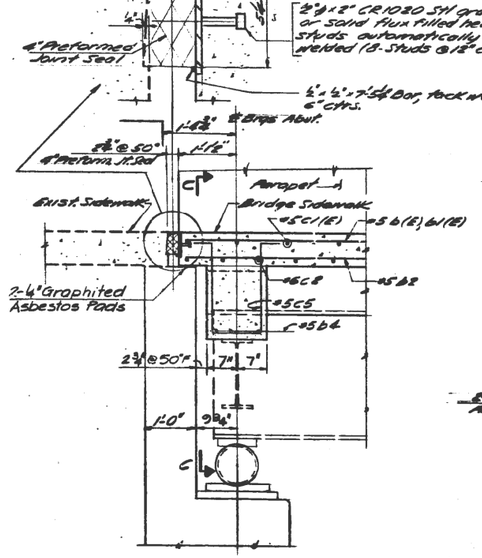
SHEET NO. 4
12 SHEETS



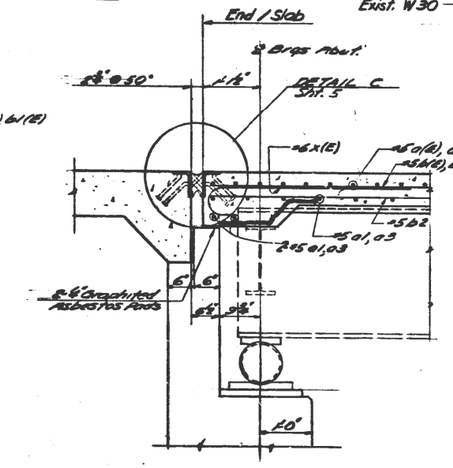
TYPICAL DECK SECTION (Looking East)



SIDEWALK - PARAPET DETAIL



SECTION B-B



SECTION A-A

SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	QUANT.
Class 'X' Concrete	cu. yd.	424.2
Reinforcement Bars	Lbs.	43,494
Reinf. Bars (Epoxy Coated)	Lbs.	56,603
Protective Coat	Sq. yd.	1,691
Removal of Exist. Conc. Deck	Each	1
Preformed Joint Seal 4"	Lin. Ft.	140

Note:
Work this sheet with sheets 3 & 5

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

NELSON OSTROM BASKIN BERMAN & ASSOC., INC.
CONSULTING ENGINEERS CHICAGO, ILLINOIS

DECK SECTION AND DETAILS

F.A.I. ROUTE 94. SECTION - 0101.6 BR-80

STRUCTURE REHABILITATION
LAWRENCE AVE. OVER EDENS EXPRESSWAY
COOK COUNTY

STATION 6+75.03
DATE: 10-15-82

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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0839

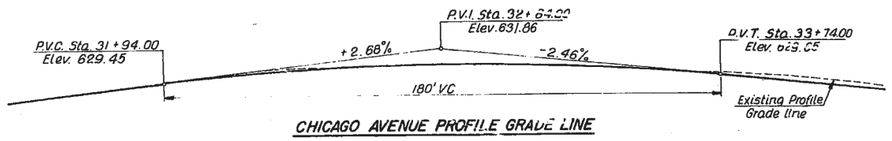
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	70
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

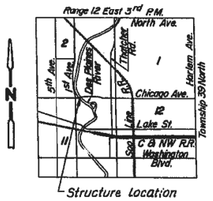
FOR INFORMATION ONLY

FAU ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
2746 (FIRST AVE.) 1398 (CHICAGO AVE.)	(0505 & 0606.1WRS-84 0505 BR-84	COOK	169	112
FED. ROAD DIST. NO. 7	ILLINOIS			

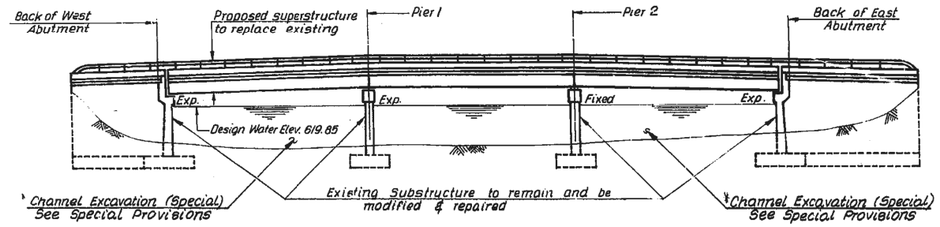
Notes:
The existing bridge, is Structure No. 016 - 0863. This bridge is 56' wide and 200' long. The superstructure consists of three simple spans of reinforced concrete T - Beams and is supported by reinforced concrete piers and abutments. All substructure elements are skewed approximately 35 degrees to the normal.
Temporary benchmark #15 is at the word "OPEN" on the fire hydrant at the northwest corner of Chicago Avenue and First Avenue. Elevation 628.65.



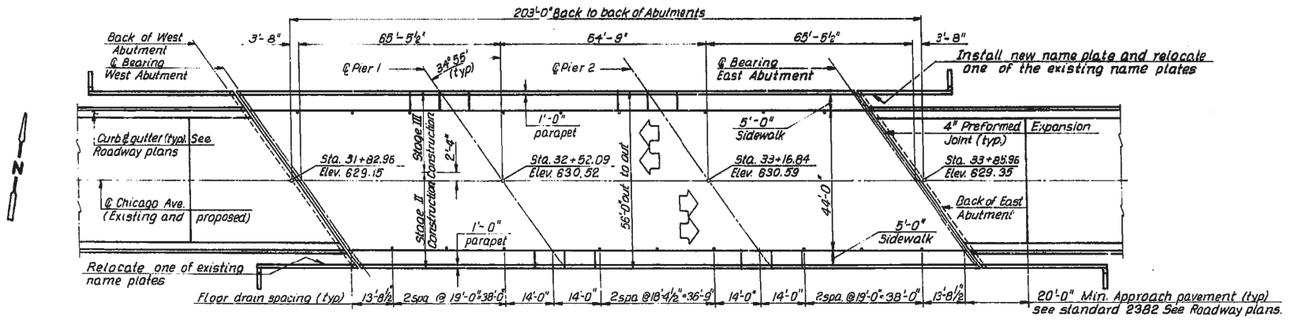
CHICAGO AVENUE PROFILE GRADE LINE



LOCATION MAP



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area 470 — Low Grade Elev. 621.0 — At Sta. 44+70

Flood	Freq. Year	Q (C.F.S.)	Opening (Sq. Ft.) Exist.	Opening (Sq. Ft.) Prop.	Nat. H.W.E.	Head (Feet) Exist.	Head (Feet) Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design:	50	5715	1700	1700	619.85	0.3	0.3	620.15	620.15
Base:	100	6210	1774	1774	620.32	0.4	0.4	620.72	620.72
Overtopping:									
Max.Calc:	500	7180	1923	1923	621.23	0.54	0.54	621.82	621.82

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL
Aluminum Railing, Type L	Lin Ft	--	538	538
Class X Concrete	Cu Yd	234.2	--	234.2
Concrete Removal	Cu Yd	197	0	197
Elastomeric Bearing Assembly, Type I	Each	--	28	28
Epoxy Crack Sealing	Lin Ft	200	--	200
Epoxy Mortar Repair	Cu Ft	70	--	70
Expansion Bolts 3/4 Inch	Each	182	0	182
Floor Drains	Each	--	18	18
Furnishing & Erecting PPC I-Beams, 48"	Lin Ft	--	1,378	1,378
Furnishing & Erecting Structural Steel	Pound	0	4,970	4,970
Name Plates	Each	--	1	1
Preformed Joint Seal 4"	Lin Ft	--	140	140
Protective Coat	Sq Yd	0	410	410
Reinforcement Bars	Pounds	15,880	1,500	17,380
Reinforcement Bars, Epoxy Coated	Pounds	2,080	87,360	89,440
Removal of Existing Superstructures	Lump Sum	--	1	1
Temporary Bridge Rail	Lin Ft	--	200	200
Install & Remove Temp. Conc. Barrier	Unit	--	20	20
Structure Excavation	Cu. Yd.	169	--	169
Temporary Sheet Piling	Sq. Ft.	800	0	800
Class X Concrete Superstructure	Cu. Yd	--	288.3	288.3
Protective Shield	Sq. Yd.	1,435	--	1,435

STA 32+84.46
REBUILT 199_ BY
STATE OF ILLINOIS
F.A.U. RT 1398 SEC. 0505 BR-84
PROJECT IX-6003(853)
LOADING H 520
STR. NO. 016-0863

Note:
One of the existing name plates shall be relocated near the new name plate. See General Notes. For name plate details, see Std. 2113
NAME PLATE

Notes:
For General Notes see Drawing No C2.
Indicates direction of traffic lane.

STATE OF ILLINOIS
JEROME J. SAP
4193
REGISTERED STRUCTURAL ENGINEER

Jerome J. Sap

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHICAGO AVENUE OVER DES PLAINES RIVER
STRUCTURE NO. 016-0863
STATION 32+84.46, SECTION 0505 BR-84
GENERAL PLAN AND ELEVATION

FIRST AVENUE FROM DES PLAINES RIVER TO LAKE STREET, COOK COUNTY

NO.	REVISION DESCRIPTION	BY	DATE
2			
1			

Designed by D.B.T.
Drawn by E.B.M.
Checked by E.P.
Date Jan. 21, 1986

HDR Henningson, Durham & Richardson

Drawing No. C1

Rev. 8-9-89

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0863

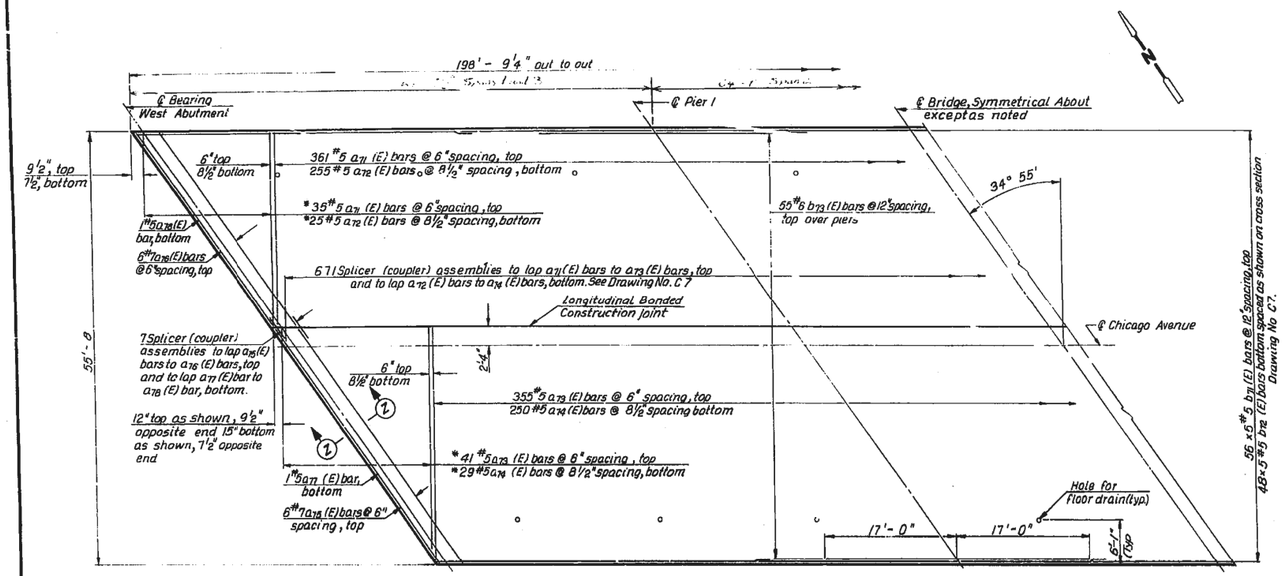
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	71
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
FILE NAME: pw:\\LOB4EBDBNTEG.Illinois.gov:PWIDOT Documents\IDOT Offices\District 1\Projects\D1105191\CADData\Default\D1105191-drwlge.dgn

FOR INFORMATION ONLY

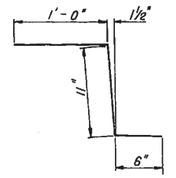
FAU ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
2746 (FIRST AVE.)	(0505 & 0606.1)WRS-84	COOK	169	117
1398 (CHICAGO AVE.)	0505 BR-84			
FED. ROAD DIST. NO. 7	ILLINOIS			



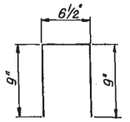
*Order a11 (E), a12 (E), a13 (E) and a14 (E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF DECK PLAN

BAR BENDING DIAGRAMS



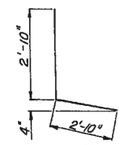
Bar c72 (E)



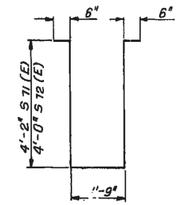
Bar d73 (E)



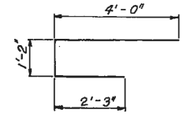
Bar d72 (E)



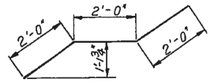
Bar d71 (E)



Bars s71 (E), & s72 (E)



Bar x71 (E)



Bar m13

Min. Bar Laps
#5 bar = 1'-8"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a11(E)	396	#5	25'-2"	
a12(E)	280	#5	24'-2"	
a13(E)	396	#6	29'-10"	
a14(E)	279	#5	28'-10"	
a16(E)	12	#7	36'-6"	
a16(E)	12	#7	30'-10"	
a17(E)	2	#5	36'-6"	
a18(E)	2	#5	30'-10"	
a19	48	#6	9'-4"	
b11(E)	360	#5	41'-6"	
b12(E)	240	#6	41'-6"	
b13(E)	110	#6	34'-0"	
c11(E)	390	#5	5'-8"	
c12(E)	398	#5	2'-6"	
c13(E)	8	#5	5'-8"	
d11(E)	424	#4	4'-10"	
d12(E)	424	#6	3'-9"	
d13(E)	96	#4	2'-1"	
e12(E)	12	#4	9'-9"	
e14(E)	48	#4	8'-0"	
e14(E)	108	#4	15'-8"	
e17(E)	12	#4	11'-2"	
m11	48	#4	9'-9"	
m12	24	#6	8'-0"	
m13	14	#8	6'-0"	
s11(E)	48	#4	6'-11"	
s12(E)	48	#4	6'-9"	
x11(E)	240	#6	7'-5"	

Item	Unit	Quantity
Class X Concrete Superstructure	Cu. Yd.	280
Reinforcement Bars	Pound	1,500
Reinforcement Bars, Epoxy coated	Pound	87,360

Notes:
Quantities for the parapets on the wing walls are not included in this Bill of Material. See Drawing No. C15 for these quantities.
See Drawing C10 for Section 2-2 at Abutments.

NO.	REVISION DESCRIPTION	BY	DATE
2			
1			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHICAGO AVENUE OVER DES PLAINES RIVER
STRUCTURE NO. 016-0863
STATION 32+84.46, SECTION 0505 BR-84
DECK PLAN AND BILL OF MATERIAL

FIRST AVENUE FROM DES PLAINES RIVER TO LAKE STREET, COOK COUNTY

Designed by D.B.T.
Drawn by E.B.M.
Checked by E.P.
Date Jan. 21, 86

HDR Henningson, Durham & Richardson

Drawing No. C 6

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0863

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	72
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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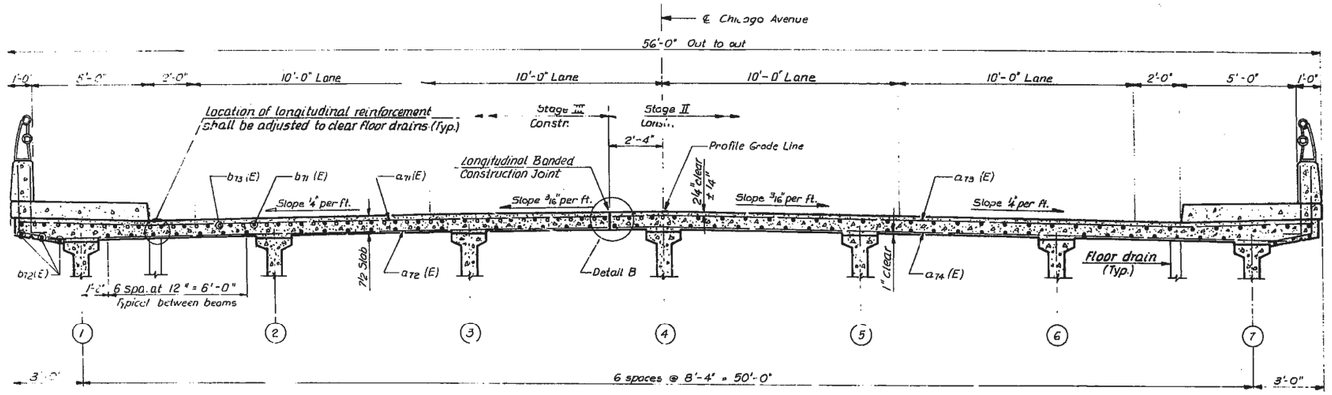
FOR INFORMATION ONLY

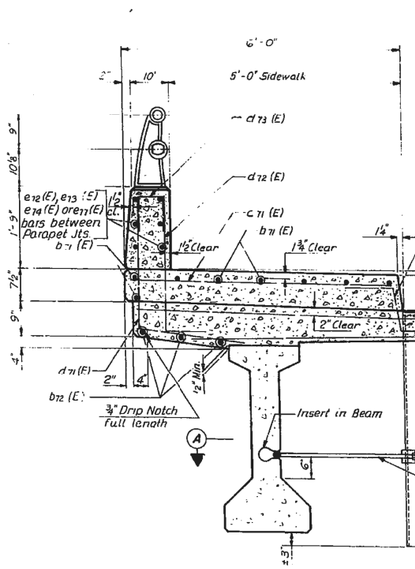
FAU ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
2746 (FIRST AVE.)	10505 & 0606.1WRS-84	COOK	169	118
1398 (CHICAGO AVE.)	0505 BR-84			
FED. ROAD DIST. NO. 7	ILLINOIS			



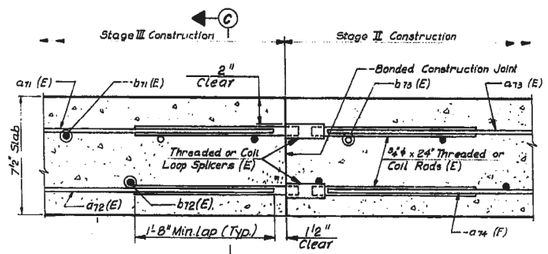
NEAR PIER

NEAR MIDSPAN

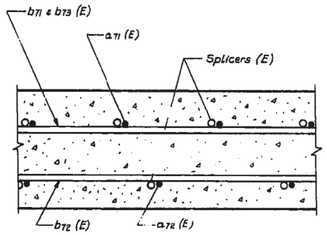
CROSS SECTION LOOKING EAST



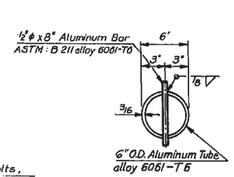
CROSS SECTION THRU SIDEWALK AND PARAPET



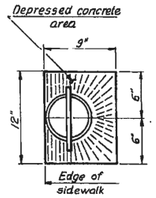
SPLICER DETAILS
No Req'd = 709



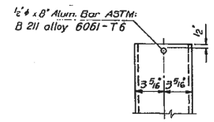
SECTION C-C



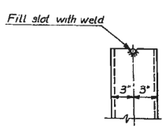
TOP PLAN OF ALUMINUM TUBE FOR FLOOR DRAIN



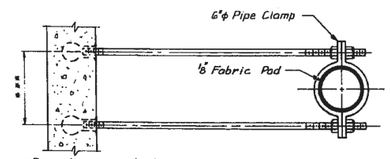
TOP PLAN OF FLOOR DRAIN



FLOOR DRAIN FIBERGLASS PIPE



FLOOR DRAIN ALUMINUM TUBE



SECTION A-A

FLOOR DRAIN NOTES

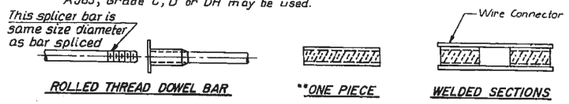
Fiberglass pipe shall conform to ASTM D2996, Designation Code RTRP-11AE-5112. Pipes with Class C or F liner are acceptable. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

The exterior surfaces of Fiberglass Floor Drains shall be painted with one coat of Aluminum paint. Painting of the Fiberglass Floor Drains will not be required when the exterior surfaces of the furnished drains are coated by the manufacturer with silver pigment or a pigment that matches the color of the concrete beam.

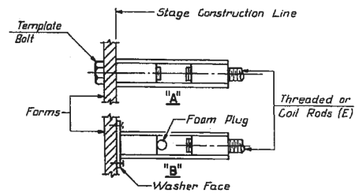
The clamping device and inserts shall be galvanized in accordance with AASHTO M-232.

See Drawing C1 for Floor Drain Spacing.

** Heavy Hex. Nuts, conforming to ASTM A563, Grade C, D or DH may be used.



SPLICER ALTERNATIVES



INSTALLATION AND SETTING METHODS FOR SPLICERS

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

SPLICER NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

The cost of the splicer (coupler) assembly shall be incidental to reinforcement bars (Epoxy Coated).

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

For #5 bars:
(1) Minimum Capacity = 23.0 kips in tension
(2) Minimum *Pull-out Strength = 9.2 kips in tension
(3) Lap with ¾" Splicer (coupler) x 2'-0" Splicer Rods.

For #7 bars:
(1) Minimum Capacity = 45.1 kips in tension
(2) Minimum * Pull-out Strength = 18.0 kips in tension
(3) Lap with 1" ϕ Splicer (coupler) x 3'-5" Splicer Rods (2 req'd)

* 28 day concrete

NO.	REVISION DESCRIPTION	BY	DATE
2			
1			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHICAGO AVENUE OVER DES PLAINES RIVER
STRUCTURE NO. 016-0863
STA. 32 + 84.46, SECTION 0505 BR-84
DECK CROSS SECTION AND DETAILS
FIRST AVENUE FROM DES PLAINES RIVER TO LAKE STREET, COOK COUNTY

Designed by D.B.T.
Drawn by F.J.M.
Checked by E.P.
Date Jan. 21, 1986

HDR Henningson, Durham & Richardson

Drawing No. C7

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0863

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	73
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

SHEET 1 of 15

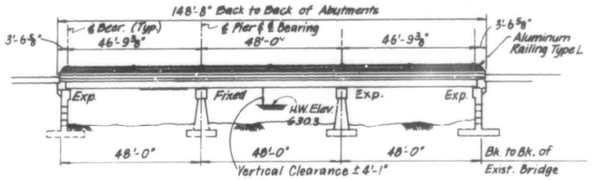
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1467	1288 BR(82)	COOK	25	9
STA.	TO STA.			
FHWA REG.	ILLINOIS FED. AID PROJECT			

BRIDGE DESCRIPTION

31st Street Structure Section 159-0109, I-M.F.T. over Salt Creek in LaGrange Park, Cook County, is a three Span, reinforced concrete deck bridge with four 11 foot lanes and a roadway width of 44'-0" and two five foot sidewalks. The length of the structure End to End is 144'-0".

S.N. 016-0868

Bench Mark - "□" in N.W. Wing Wall of 31st Street Bridge over Salt Creek. Elevation 636.42.

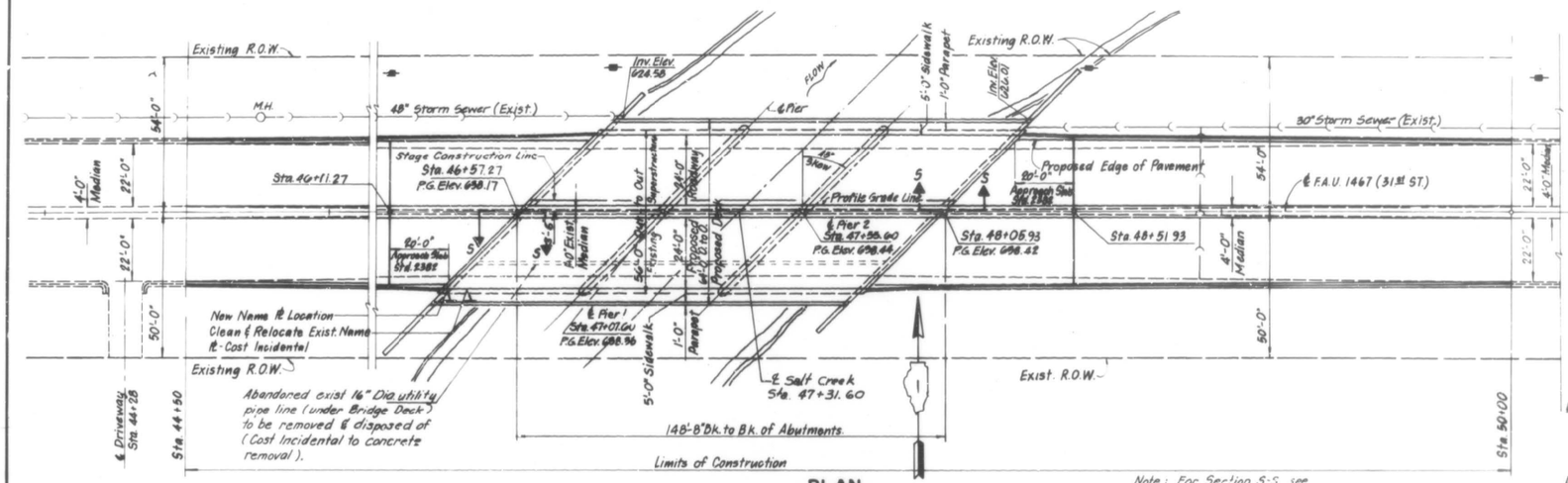


ELEVATION
Proposed Improvement

WATERWAY INFORMATION

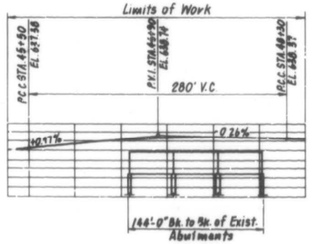
Drainage Area 116 Sq.Mi. Low Grade Elev. 636.7 At Sta. 44 + 00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Hwt. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design:	50	3150	593	593	630.3	0.40	0.40	630.70	630.70
Base:	100	3645	662	662	630.7	0.54	0.54	631.24	631.24
Overtopping:									
Max. Calc.:	500	4700		742	631.7		0.82		632.52

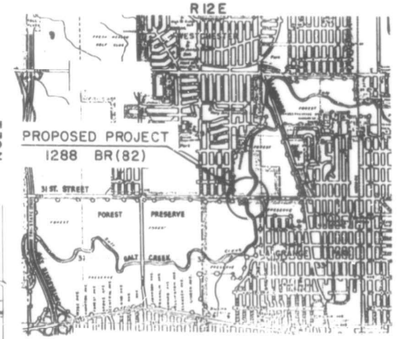


PLAN
Proposed Improvement

Note: For Section S-S, see Sht. #11 of 14.



PROPOSED PROFILE
No Scale



LOCATION MAP

STATION 47 + 31.60
BE BUILT 1918
BY
STATE OF ILLINOIS
F.A.U. RTE. 1467 SEC 1288 BR(82)
F.A.U. PROJ. IX-6003(356)
LOADING HS 20
STR. NO. 016-0868

NAME PLATE
(1 Req'd)
(See Ill. Std. 2113)

DESIGN DATA

DESIGN SPECIFICATIONS:
AASHTO 1971 Standard Specifications for Highway Bridges and 1978 through 1983 interims. Standard Specifications for Road and Bridge Construction, State of Illinois, dated October 1, 1983

DESIGN CRITERIA:
Working Stress for steel stringers.
Ultimate Strength Design for Deck Slab. Live Load HS-20-44
Allow 25 p.s.f. for future wearing surface.

DESIGN STRESSES
Reinforced Concrete: f'_c = 3500 p.s.i. (class X), n = 9
Reinforcement: f_y = 60,000 p.s.i. (new)
f_y = 40,000 p.s.i. (Existing)
(All bars in Deck Slab shall be epoxy coated)
Structural Steel: f_s = 20,000 p.s.i. (M183)
f_s = 27,000 p.s.i. (M 223, Gr. 50)

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS, RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS, AND, ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD 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 THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL SAWING OF EXISTING ASPHALT SURFACE SHALL BE CONSIDERED AS INCIDENTAL TO THE REMOVAL ITEM INVOLVED.

REPAIR AREAS AND CRACKS WERE OBSERVED DURING A FIELD INSPECTION MADE MAY, 1983. SIZE AND LOCATION OF CRACKS AND REPAIR AREAS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FIELD VERIFICATION.

FASTENERS SHALL BE HIGH STRENGTH BOLTS 3/4" ϕ, OPEN HOLES 13/16" ϕ, UNLESS OTHERWISE NOTED.

THE ZINC-SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE SPLICE PLATE MATERIAL AND THE STEEL WIDE FLANGE BEAMS.

THE BACK FACE OF THE NEWLY CONSTRUCTED PORTIONS OF CLOSED ABUTMENTS SHALL BE WATERPROOFED ACCORDING TO ARTICLE 502.11 OF THE STANDARD SPECIFICATIONS.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 GRADE 60.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 55,390 lbs. (M183)
105,500 lbs. (M223, Gr. 50)

TOTAL BILL OF MATERIAL

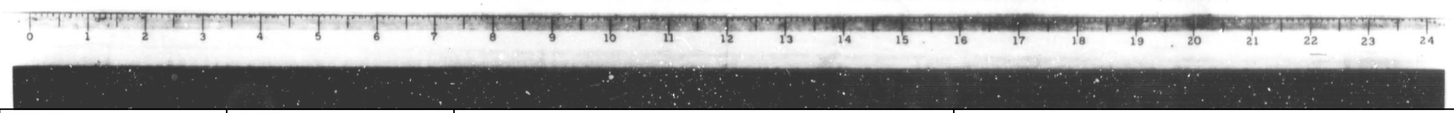
ITEM	UNIT	SUB	SUPER	TOTAL
CLASS X CONCRETE	CU. YD.	225.7	301.8	527.5
REINFORCEMENT BARS	LBS.	18,430		18,430
REINFORCEMENT BARS (EPOXY COATED	LBS		62,500	62,500
PROTECTIVE COAT	SQ. YD		650	650
NAME PLATES	EACH		1	1
ALUMINUM RAILING TYPE L	LIN. FT.		291	291
EXPANSION BOLTS 3/4" ϕ	EACH	450		450
STRUCTUPAL STEEL	L. S.		1	1
CONCRETE REMOVAL	CU. YD.	97.4		97.4
REPAIR CONCRETE STRUCTUPE	SQ. FT	31		31
EPOXY CRACK SEALING	LIN. FT.	311		311
NEOPRENE EXPANSION JOINT (2")	LIN. FT.		181	181
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH		18	18
REMOVAL OF EXISTING SUPERSTRUCTURE	L. S.		1	1
STRUCTURE EXCAVATION	CU. YD.	530.0		530.0
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH		9	9
TEMPORARY SHEET PILING	SQ. FT.	1600		1600

Thomas J. Shannon

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
REHABILITATION OF
31st STREET OVER SALT CREEK
F.A.U. RTE. 1467 COOK COUNTY SEC. NO. 1288 BR(82)

GLOBETROTTERS ENG. CORP. | drawn by J.J. | checked R.P.P. | date 3-1-84 | sheet 9

Rev. 6-6-84 L.H.



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	DRAWN -	REVISED -	GENERAL PLAN SN: 016-0868
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	SCALE: SHEET OF SHEETS STA. TO STA.
PLOT DATE = 1/30/2019	DATE -	REVISED -	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	74
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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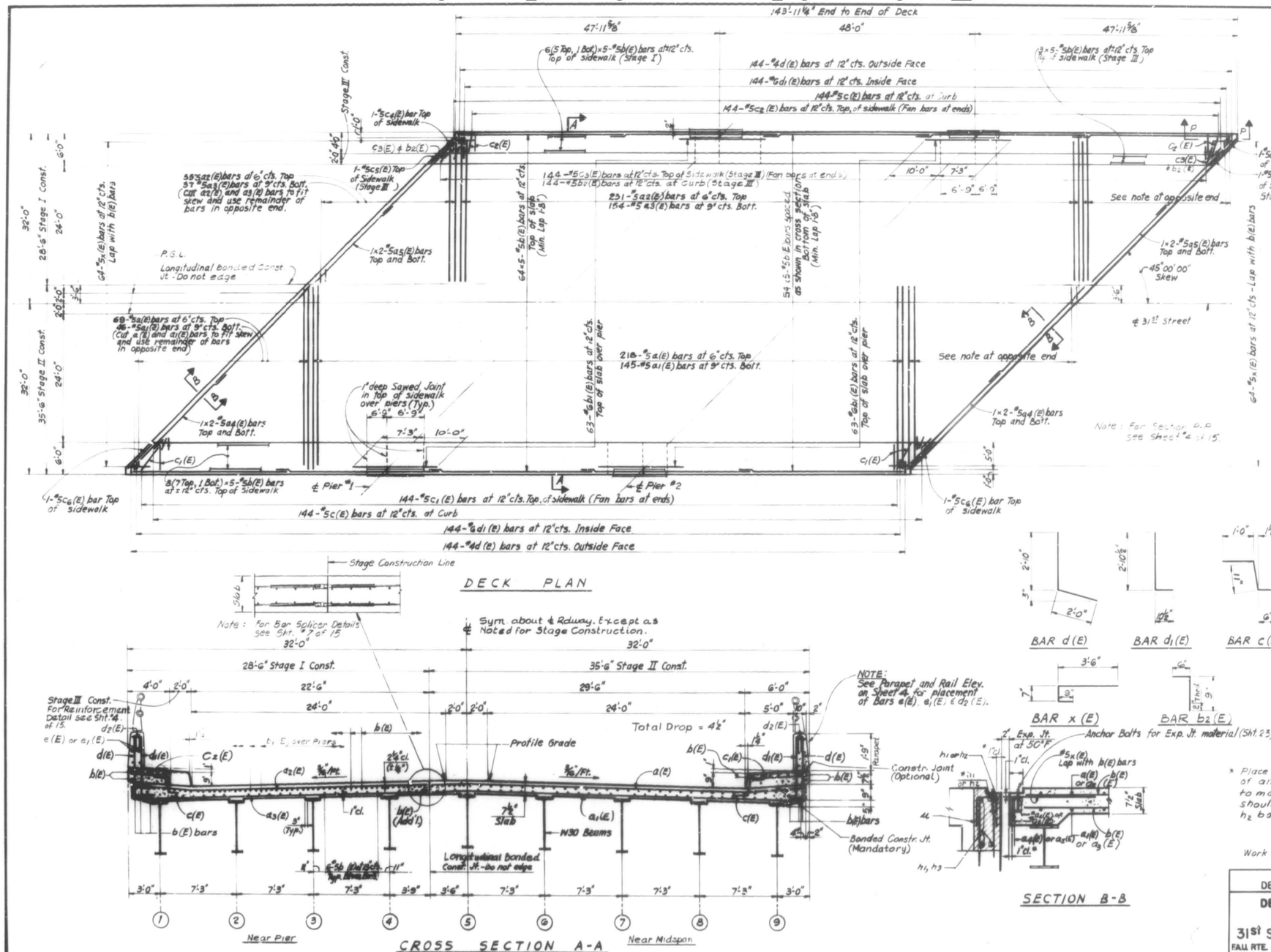
FOR INFORMATION ONLY

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1467	1288 BR (82)	COOK	25	11
STA.	TO STA.			
FHWA REG.	ILLINOIS FED. AID PROJECT			

SHEET 3 OF 15



* Place h_1, h_2 and $a_4(E)$, $a_5(E)$ bars in back of anchor bolt as shown if required to maintain 1" cl. (+0"-1/8"). Anchor Bolts should be tied to $a_4(E)$, $a_5(E)$ and h_1, h_2 bars.

Work this sheet w/ sheet #4 of 15

DECK SLAB-BAR SCHEDULE				
BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	287	#5	35'-0"	
a1 (E)	191	#5	33'-8"	
a2 (E)	287	#5	27'-2"	
a3 (E)	191	#5	26'-2"	
a4 (E)	8	#5	25'-0"	
a5 (E)	8	#5	2[illegible]	
b E	675	#8	30'-0"	
b1(E)	126	#6	17'-3"	
b2(E)	144	#5	1'-3"	
C(E)	288	#5	2'-5"	
C1(E)	144	#5	5'-6"	
C2(E)	144	#5	3'-6"	
C3(E)	144	#5	1'-10"	
C4(E)	2	#5	4'-4"	
C5(E)	2	#5	2'-2"	
C6(E)	2	#5	7'-0"	
d (E)	288	#4	4'-10"	
d1 (E)	288	#6	3'-9"	
x (E)	128	#5	4'-10"	

ITEM	UNIT	QTY.
Reinforcement Bars (Epoxy Coated)	Lbs.	61,210
Class X Concrete	Cu. Yds.	284.3

NOTES:
Reinforcement bars designated (E) shall be epoxy coated

Bars indicated thus: 54-#5's etc., indicates 54 lines of bars with 5 lengths per line.

#5 bars shall be lapped 1'-8" min.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN & DETAILS

REHABILITATION OF
31ST STREET OVER SALT CREEK

FAU RTE. 1467 COOK COUNTY SEC. NO. 1288 BR(82)

GLOBETROTTERS ENG. CORP. | drawn by EK | scale None | checked NAP | date 5-1-94 | SHEET 11

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0868

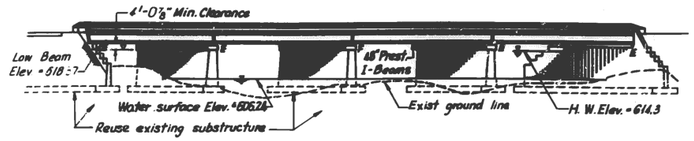
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	75
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

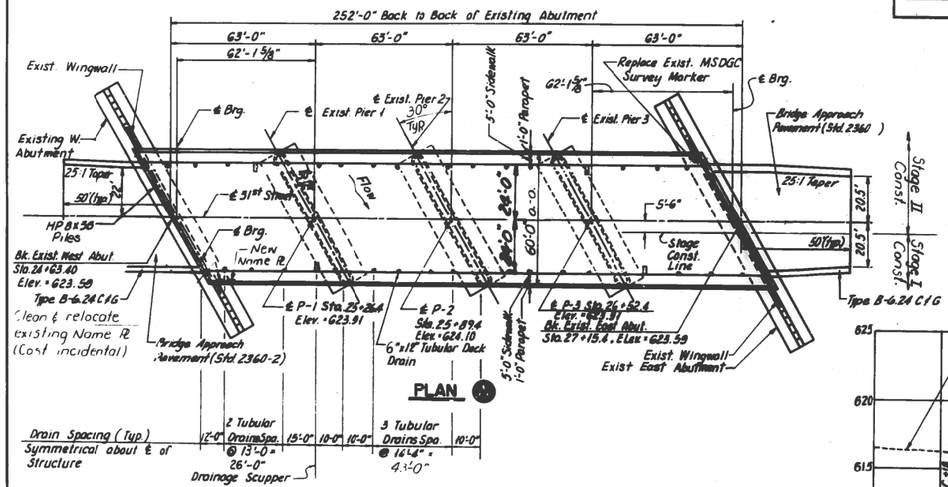
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. / F.A.			196	133
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
26 SHEETS



ELEVATION



Note:
See sheet #5 for location of back of new abutments

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Removal of Existing Superstructures	Each	1		1
Structure Excavation	Cu. Yd.		194	194
Floor Drains	Each	28		28
Drainage Scuppers	Each	4		4
Protective Coat	Sq. Yd.	1839		1839
Class X Concrete	Cu. Yd.	555.2	155.9	711.1
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 Inch	Lin. Ft.	1752		1752
Reinforcement Bars	Pound	2860	13460	16320
Reinforcement Bars (Epoxy Coated)	Pound	118,110		118,110
Furnishing Steel Piles HP8x36	Lin. Ft.		342	342
Name Plates	Each	1		1
Structural Steel	Pound	5020		5020
Preformed Joint Seal 4"	Lin. Ft.	140		140
Elastomeric Bearing Assembly, Type I	Each	21		21
Temporary Concrete Barrier	Lin. Ft.	260		260
Aluminum Railing, Type L	Lin. Ft.	503		503
Concrete Removal	Cu. Yd.		79	79
Permanent Bench Mark	Each			1
Epoxy Crack Sealing	Lin. Ft.		299	299
Repair Concrete Structures	Sq. Ft.		319	319

STATION 25+89.40
BUILT 19 BY
STATE OF ILLINOIS
F.A.U. RT. 1297 SEC. 1314B-R(182)
F.A. PROJECT IX-6003(133)
LOADING HS20
STR. NO. 016-0870

NAME PLATE
(See Std. 2113)

GENERAL NOTES

All structural steel shall be shop painted with the zinc-chromate and vinyl paint system.

The structural steel bearing plates at the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M183.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 (grade 60).

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to normal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation or a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The location and type of permanent bench mark shall be determined by the District.

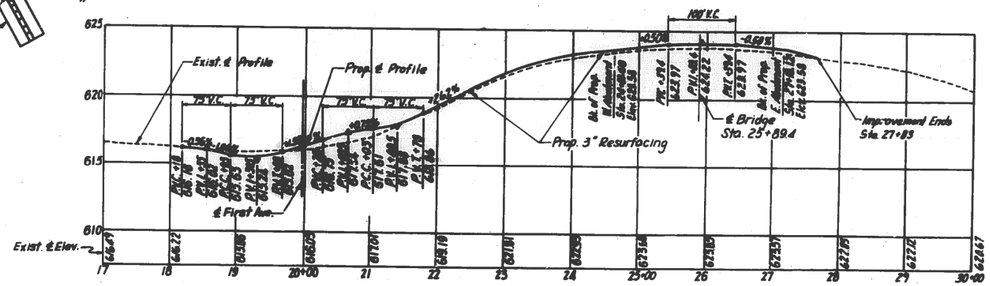
LOADING HS20-44

Design specifications: 1977 AASHTO and 1978 thru 1983 interim specifications as applicable.
Allow 25# per sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3500 psi
fy = 60,000 psi (Reinf.)
fs = 20,000 psi (Struct.)
(AASHTO M-183)

PRECAST PRESTRESSED UNITS
f'c = 5000 psi
f'ci = 4600 psi
f's = 270,000 psi (½" ø Strands)
fsi = 183,000 psi (½" ø Strands)



ROADWAY PROFILE

NOTES

1. Existing Bridge Data: Bridge No. 016-0870; 4-Span reinforced concrete deck Girders with solid concrete capped abutments and piers; 56'-0" wide and 252'-0" long, Built in 1928. Superstructure and portions of the substructure to be removed by the Bridge Contractor - No Salvage.
2. One lane of traffic in each direction shall be maintained on the Bridge during construction in accordance with the staging shown above.
3. Centerline alignment of 31st Street is on tangent at the bridge.
4. No Channel changes or bank protection are proposed.
5. Cook County Dept. of Highways Benchmark: Southwest Corner of Forest Avenue and Parkview Avenue, Elev. = 614.762

WATERWAY INFORMATION

DRAINAGE AREA = 871.8 sq. mi. LOW CHORD ELEV. = 618.86 @ STA. 19+00

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ.FT. EXIST.	OPENING SQ.FT. PROP.	NAT. H.W.E.	HEAD-FT. EXIST.	HEAD-FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	50	5790	1664	1666	614.3	0.04	0.01	614.34	614.31
BASE	100	6290	1726	1726	614.6	0.06	0.06	614.66	614.66
OVERTOPPING									
MAX. CALC.	500	7290		1849	615.2		0.09		618.29

LOCATION SKETCH

DESIGNED	Mary Blazdorf	
CHECKED		
DRAWN	R. Daly	
CHECKED		

EXAMINED May 3, 1984
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

GENERAL PLAN & ELEVATION
F.A.U. ROUTE 1297 (31st STREET) BRIDGE OVER THE DES PLAINES RIVER
F.A.U. RT. 1297 SEC. 1314B-R(182)
COOK COUNTY
STATION 25+89.40

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PLOT DATE = 1/30/2019	DATE -	REVISED -

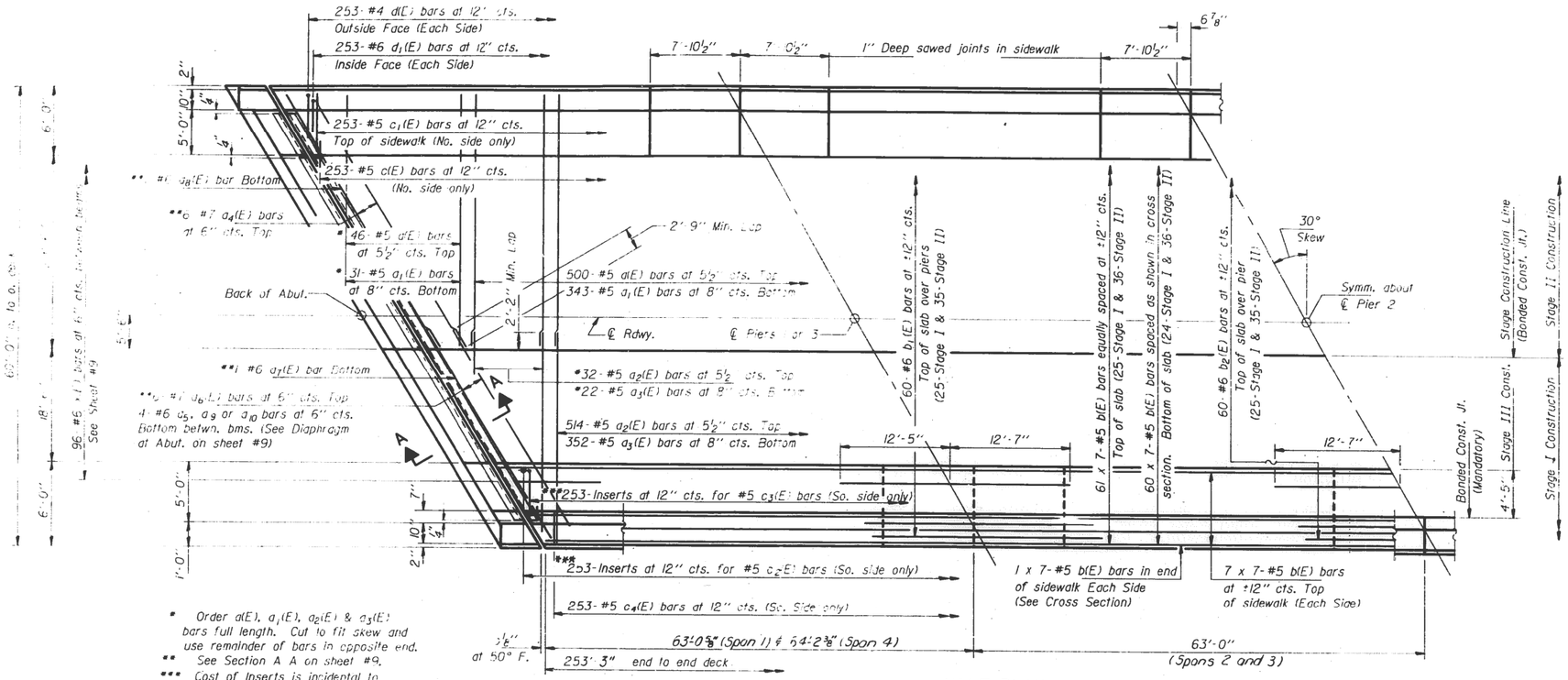
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0870

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	76
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

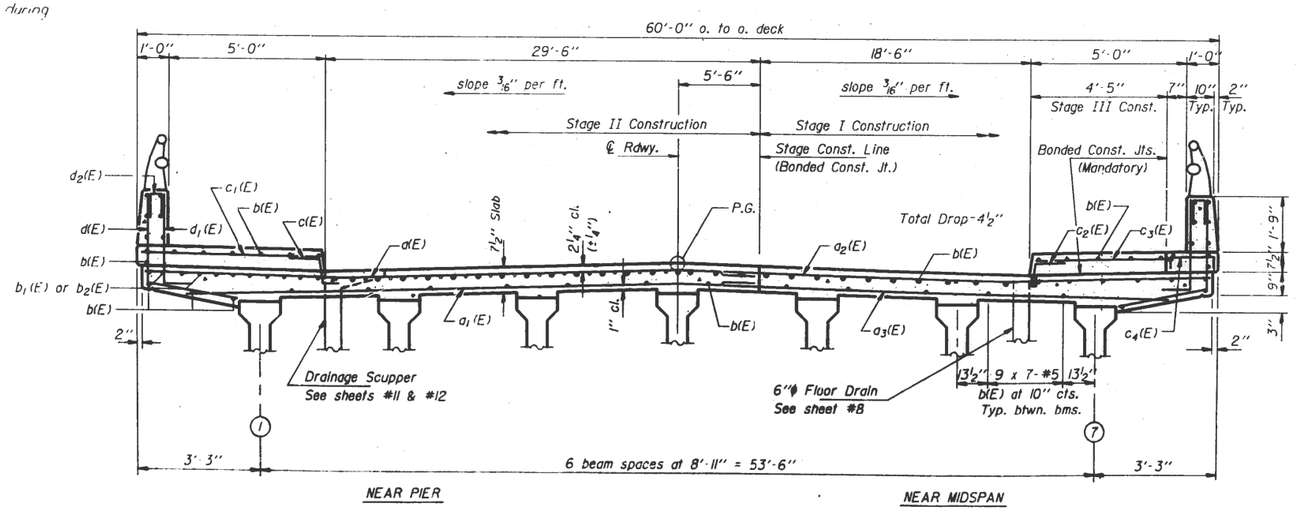


* Order d(E), a_1(E), a_2(E) & a_3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

** See Section A A on sheet #9.

*** Cost of Inserts is incidental to Class X Concrete. Inserts shall be plugged or blocked off during Stage II Construction.

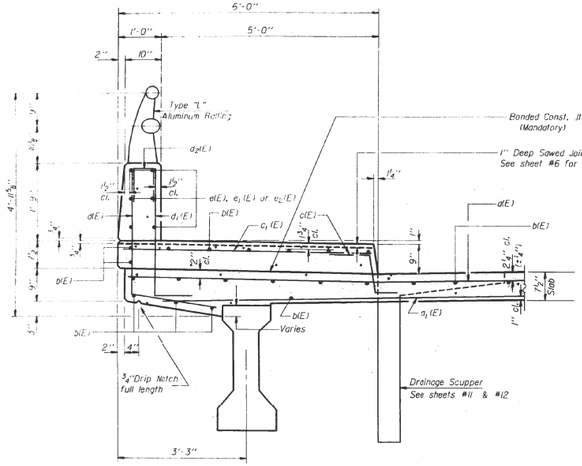
HALF PLAN



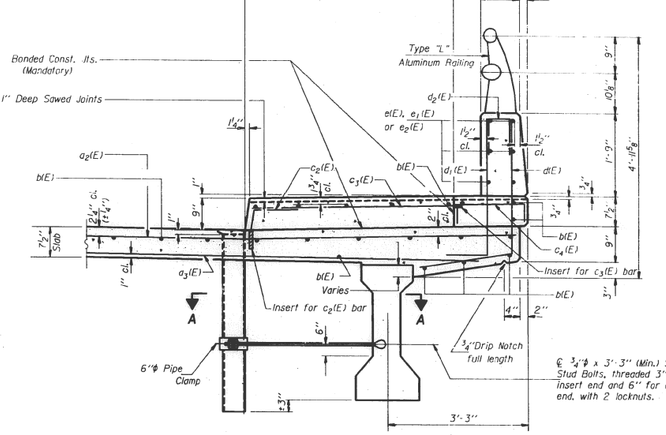
NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking East)



SECTION THRU NORTH SIDEWALK



SECTION THRU SOUTH SIDEWALK

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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–0870

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	77
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

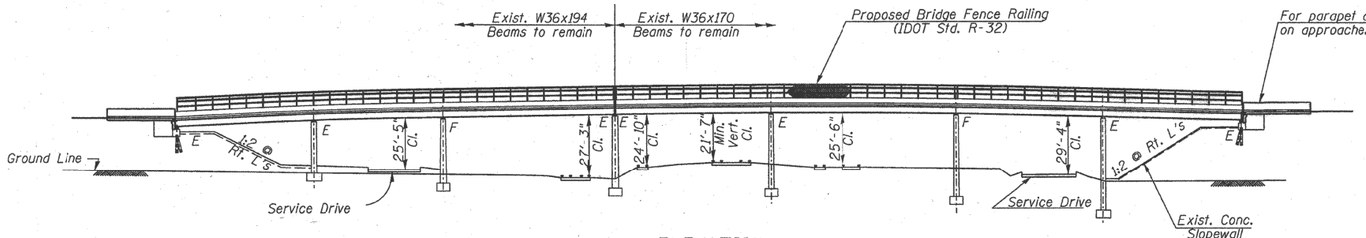
BENCHMARK BM103
Set chiseled cross on sidewalk on NE corner of
the intersection of 31st Street and Kostner Avenue
Sta. 230+77.59, 27.33' Lt. El. 596.16

EXISTING STRUCTURE: SN. 016-0871 originally built in 1957
under section 159-1010.1B M.F.T. The Structure is
a seven-span steel multi-girder bridge. The bridge is
approximately 495'-11" feet long (back to back of abutments),
and 60' wide (out to out of deck)
Traffic to be maintained during the rehabilitation
using stage construction.
No salvage.

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1463	1010.1B	COOK	171	76
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62196
SI of S30



ELEVATION

NOTE:
No deck drains will be permited in spans over tracks or within 10' of cross arms of railroad pole line.

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

(NEW CONSTRUCTION)

f'_c = 3,500 psi
f_y = 36,000 psi (AASHTO M270, Gr. 36)
f_y = 60,000 psi (reinforcement)

(EXISTING CONSTRUCTION)

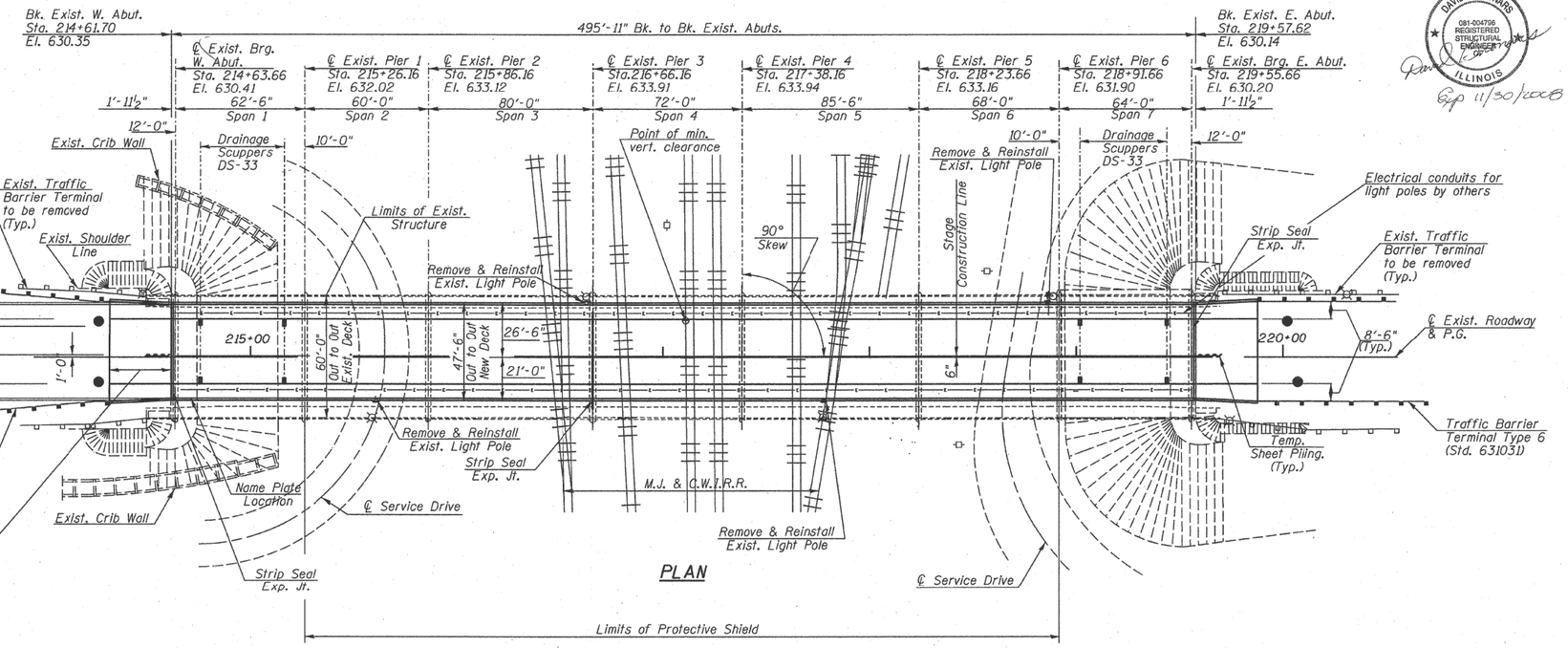
f'_c = 800 psi (w/Earth pressure)
f_y = 33,000 psi (structural steel)
f_y = 40,000 psi (reinforcement)

SEISMIC DATA

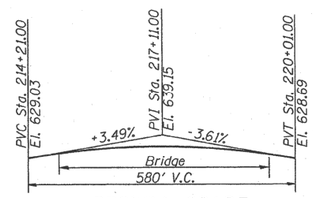
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

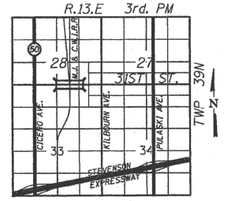
DAVID S. BRONARS
081-004796
REGISTERED
STRUCTURAL
ENGINEER
OF
ILLINOIS
Exp 11/30/2008



PLAN



PROFILE GRADE
(℄ Exist. Roadway)



LOCATION SKETCH

Notes:
1. For approach pavement, see roadway drawings.
2. For quantity of "Remove & Reinstall Light Poles", see roadway drawings.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
31 ST. STREET OVER M.J. & C.W.I.R.R.
F.A.U. ROUTE 1463 SECTION 159-1010.1B
COOK COUNTY
STATION 217+09.66
STR. NO. 016-0871
SCALE: VERT. HORIZ.
DRAWN BY JHR
DATE JANUARY 2008
CHECKED BY CLS

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0871

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	78
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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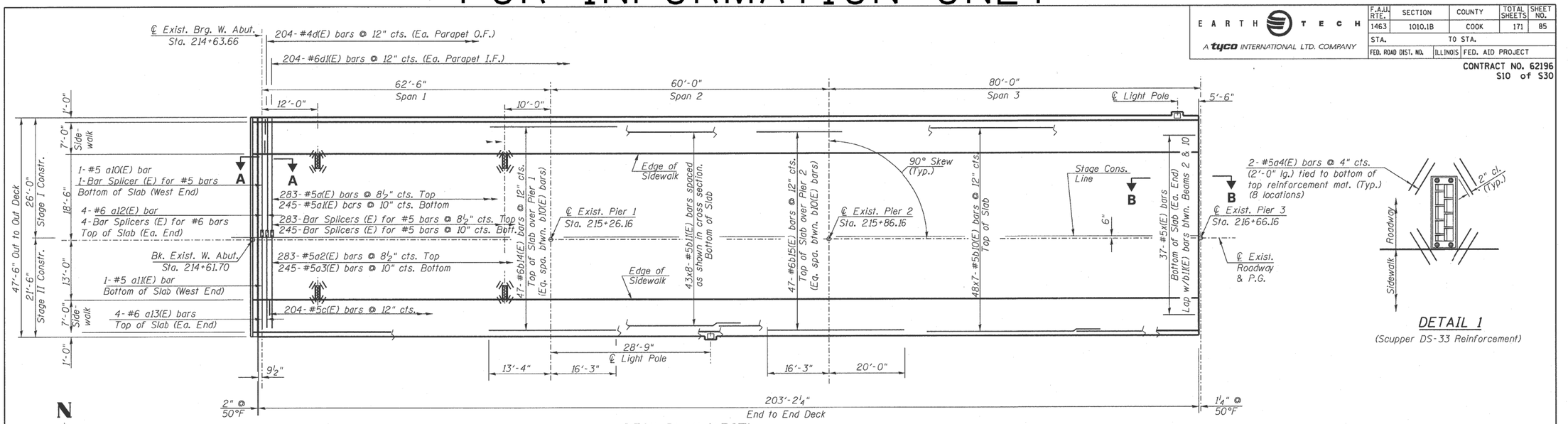
FOR INFORMATION ONLY

EARTH TECH — A tyco INTERNATIONAL LTD. COMPANY

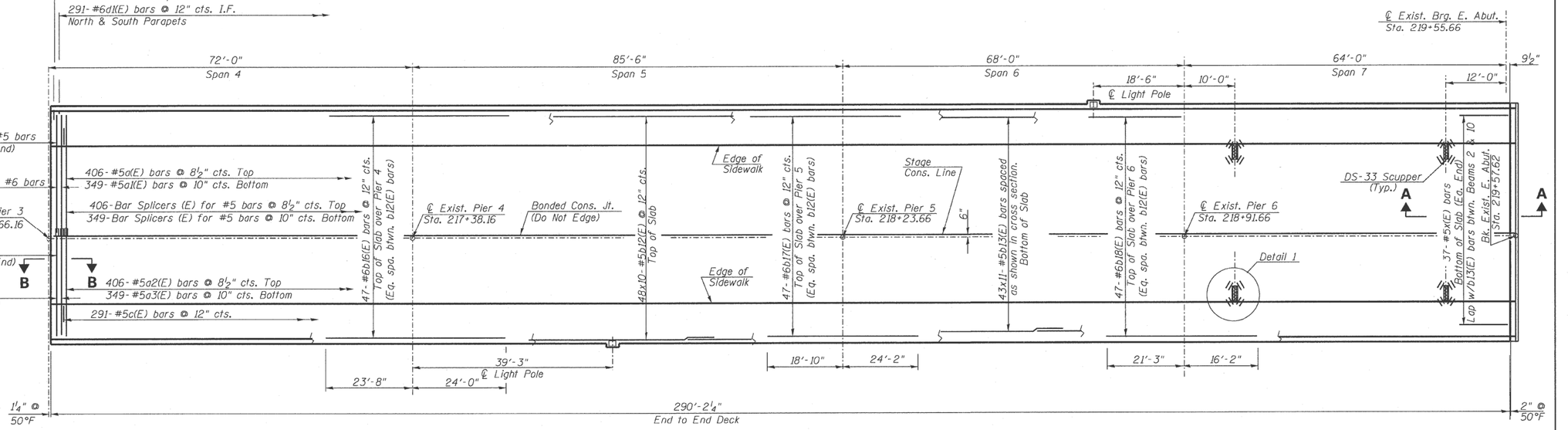
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1463	1010.1B	COOK	171	85
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62196
S10 of S30



DETAIL 1
(Scupper DS-33 Reinforcement)

DECK PLAN (WEST)



DECK PLAN (EAST)

TYP. LAP SPLICE

Bar	Lap
#5	2'-2"
#6	2'-7"

Notes:
1. Work this sheet with Sheets S10 thru S14.
2. See Sheet S15 for expansion joint details.
3. See Sheet S16 for drainage scupper details.
4. See Sheet S17 for bridge fence railing details.
5. Bar indicated thus 20x3-#5, etc. indicates 20 lines of bars with 3 lengths per line.
6. Cut longitudinal reinforcement to clear scuppers.
7. See Sheet S14 for Sections A-A & B-B.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE PLAN
31 ST. STREET OVER M.J. & C.W.I.R.R.
F.A.U. ROUTE 1463 SECTION 159-1010.1B
COOK COUNTY
STATION 217+09.66
STR. NO. 016-0871
SCALE: VERT. HORIZ.
DRAWN BY JHR
DATE JANUARY 2008
CHECKED BY CLS

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0871

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	79
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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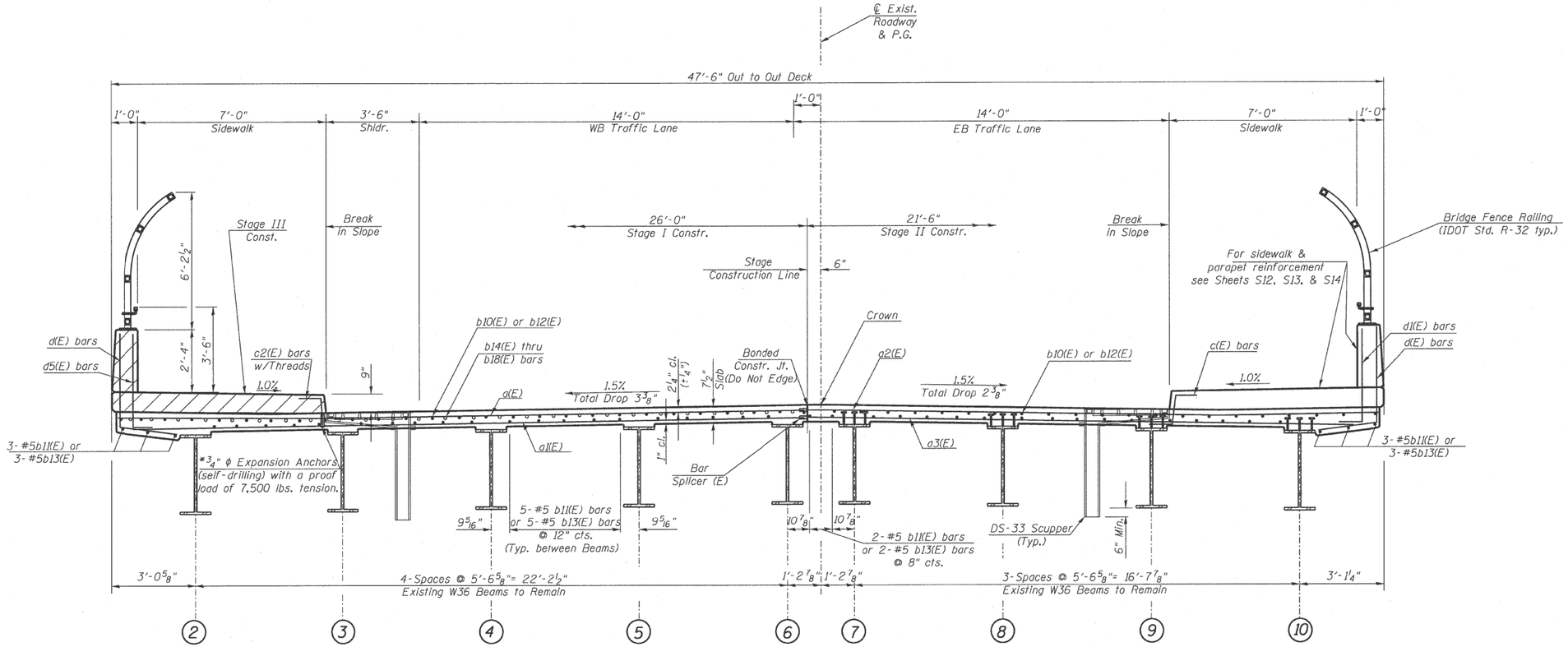
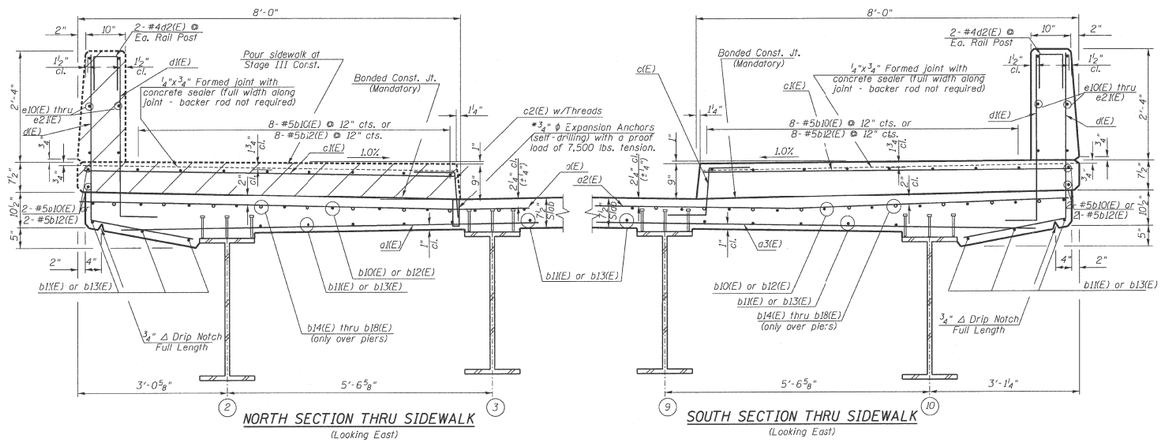
FOR INFORMATION ONLY



PROPOSED CROSS SECTION
(Looking East)



NORTH SECTION THRU SIDEWALK
(Looking East)

SOUTH SECTION THRU SIDEWALK
(Looking East)

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USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016–0871

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	80
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

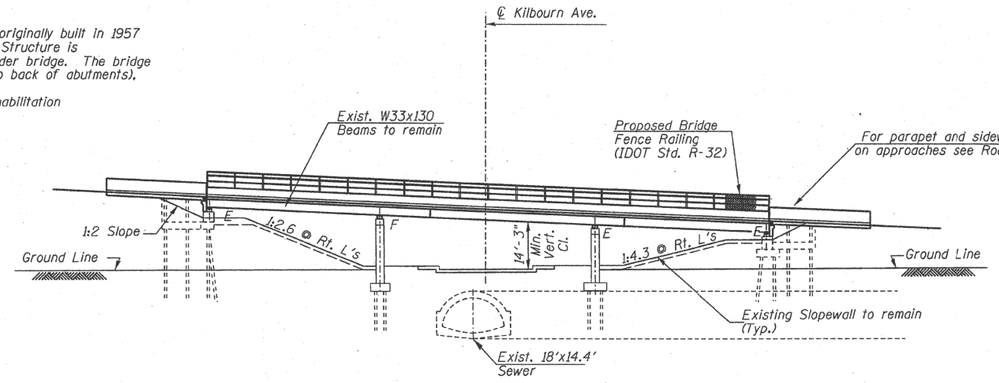
FOR INFORMATION ONLY

BENCHMARK BM103
Set chiseled cross on sidewalk on NE corner of the intersection of 31st Street and Kostner Avenue
Sta. 230+77.59, 27.33' Lt. El. 596.16

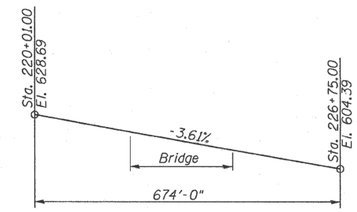
EXISTING STRUCTURE: SN. 016-0872 originally built in 1957 under section 159-1010.1B W.F.T. The Structure is a three-span continuous steel multi-girder bridge. The bridge is approximately 175'-9 3/4" long (back to back of abutments). and 60 feet wide (out to out of deck)
Traffic to be maintained during the rehabilitation using stage construction.
No salvage.

EARTH TECH — A tyco INTERNATIONAL LTD. COMPANY	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1463	1010.1B	COOK	171	106
	STA.	TO STA.			
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62196
S1 of S23

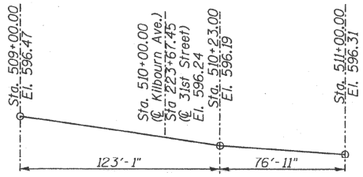


ELEVATION



PROFILE GRADE 31ST STREET

(℄ Exist. Roadway)



PROFILE GRADE KILBOURN AVE.

(℄ Exist. Roadway)
Elev. Based off Survey Data

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges

DESIGN STRESSES

(NEW CONSTRUCTION)

f'_c = 3,500 psi
f_y = 36,000 psi (AASHTO M270, Gr. 36)
f_y = 60,000 psi (reinforcement)

(EXISTING CONSTRUCTION)

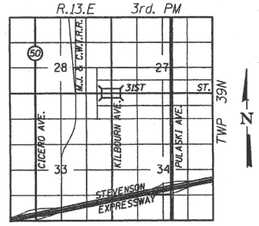
f'_c = 800 psi (w/Earth pressure)
f_y = 33,000 psi (structural steel)
f_y = 40,000 psi (reinforcement)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

PLAN

* Contractor to note existing sewer located below ℄ 31 st Street.



LOCATION SKETCH

DAVID S. BRONARS 061-004796 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS
Exp 11/30/2008

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Notes:
1. For approach pavement, see roadway drawings.
2. For quantity of "Remove & Reinstall Light Poles", see roadway drawings.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
31 ST. STREET OVER KILBOURN AVE.
F.A.U. ROUTE 1463 SECTION 159-1010.1B
COOK COUNTY
STATION 223+67.45
STR. NO. 016-0872
SCALE: VERT. HORIZ.
DRAWN BY JHR
DATE JANUARY 2008
CHECKED BY CLS

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0872

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	81
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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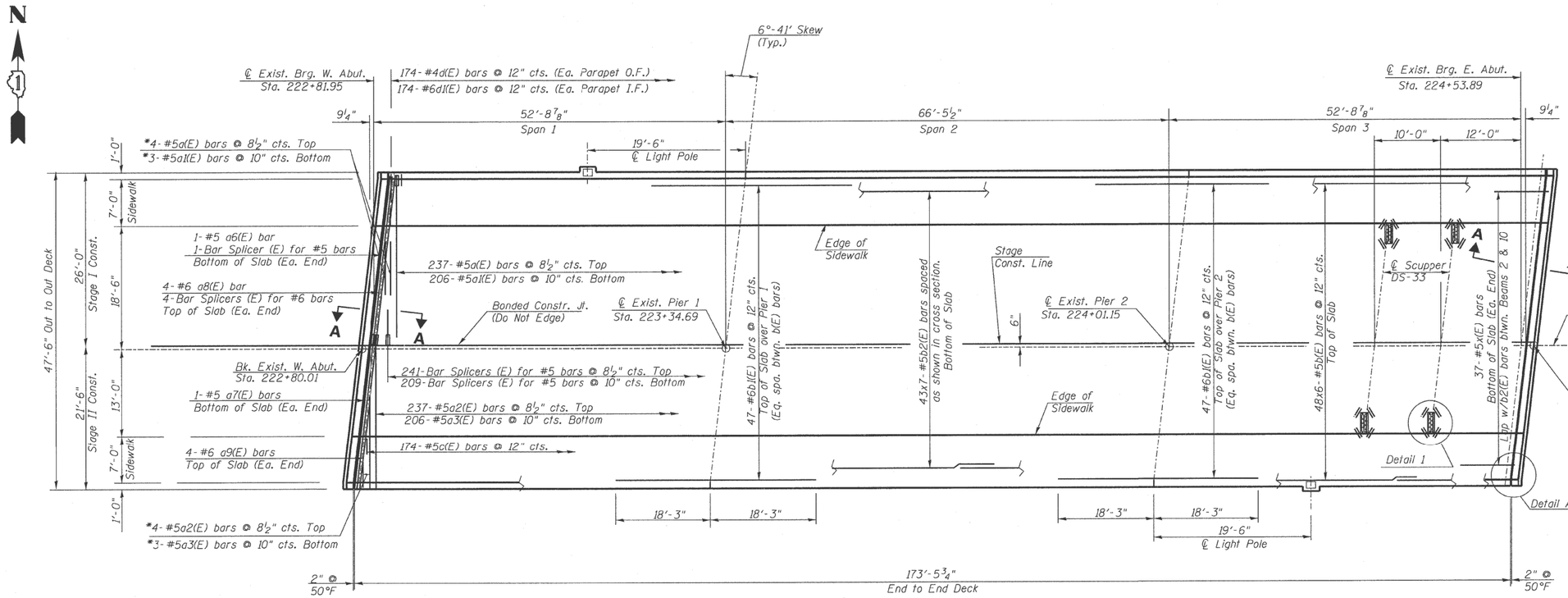
FOR INFORMATION ONLY

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

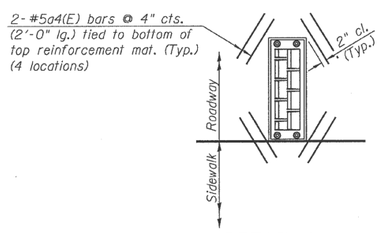
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1463	1010.1B	COOK	171	113
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62196
S8 of S23

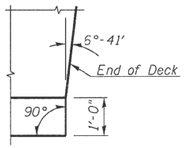


DECK PLAN

* Order d(E), a1(E), a2(E), & a3(E) bars full length. Cut to fit skew & use remainder of bars in other end.



DETAIL 1
(Scupper DS-33 Reinforcement)



DETAIL A

TYP. LAP SPLICE

Bar	Lap
#5	2'-2"
#6	2'-7"

Notes:
1. Work this sheet with Sheets S8 thru S11.
2. See Sheet S12 for expansion joint details.
3. See Sheet S13 for drainage scupper details.
4. See Sheet S14 for bridge fence railing details.
5. Bar indicated thus 20x3-#5, etc. indicates 20 lines of bars with 3 lengths per line.
6. Cut longitudinal reinforcement to clear scuppers.
7. See Sheet S11 for Section A-A.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE PLAN
31 ST. STREET OVER KILBOURN AVE.
F.A.U. ROUTE 1463 SECTION 159-1010.1B
COOK COUNTY
STATION 223+67.45
STR. NO. 016-0872
SCALE: VERT. HORIZ.
DRAWN BY JHR
DATE JANUARY 2008
CHECKED BY CLS

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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

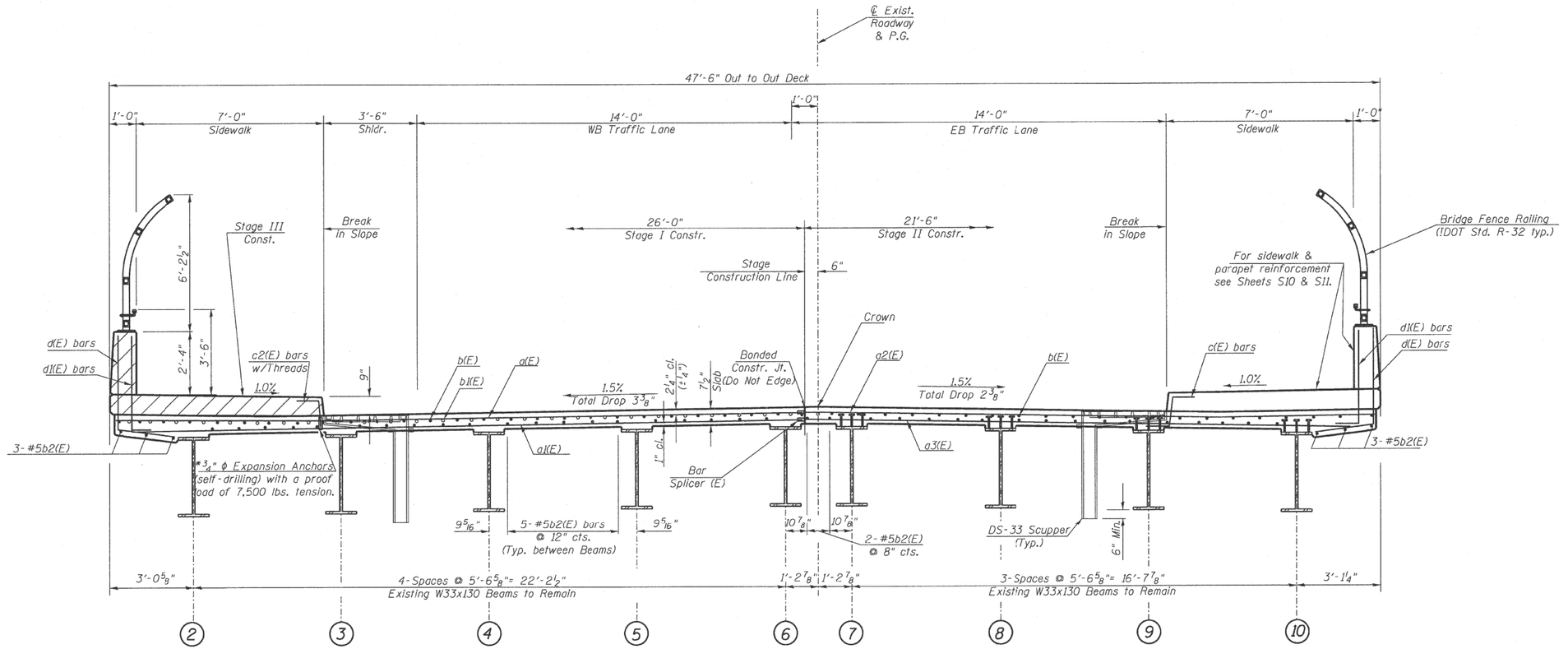
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0872

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	82
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



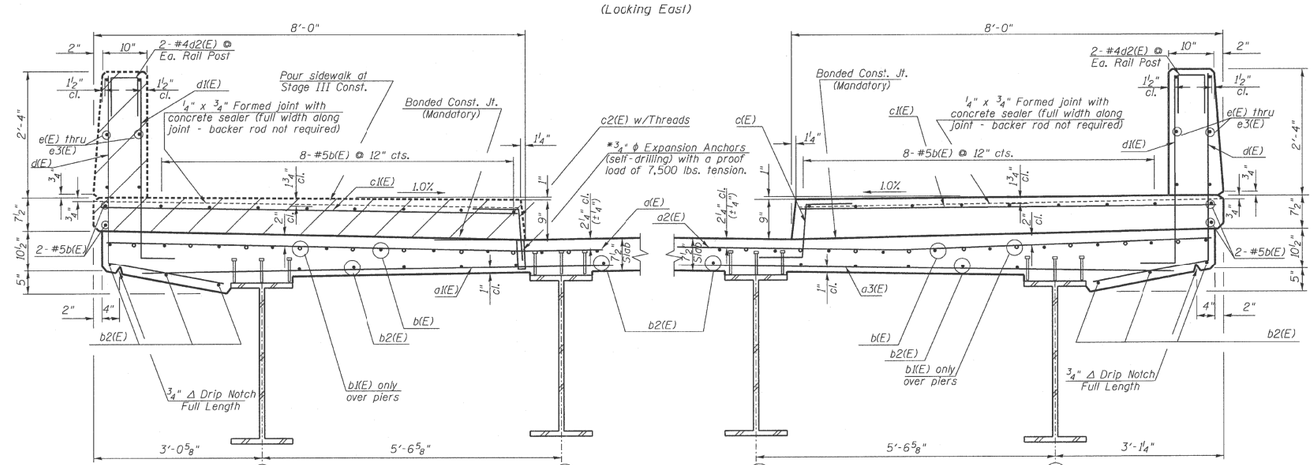
* Cost included with "Reinforcement Bars, Epoxy Coated."

NEAR PIER

NEAR MIDSPAN

PROPOSED CROSS SECTION

(Looking East)



NORTH SECTION THRU SIDEWALK

(Looking East)

SOUTH SECTION THRU SIDEWALK

(Looking East)

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

CROSS SECTION
SN: 016-0872

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	83
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U.			53	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 1
SHEETS 13

STATION 103+61.00
REBUILT 1985 BY
STATE OF ILLINOIS
F.A.U. RTE. 1472
SEC. 0405WRS(82)#0404B-R(83)
LOADING HS20
STR. NO. 016-0873

PROJECT EACIX-6008(312)

NAME PLATE
(See Std. 2113)

Bench Mark: "D" in S.W. wingwall of Washington Ave. Bridge over Salt Creek
Elev. 619.99

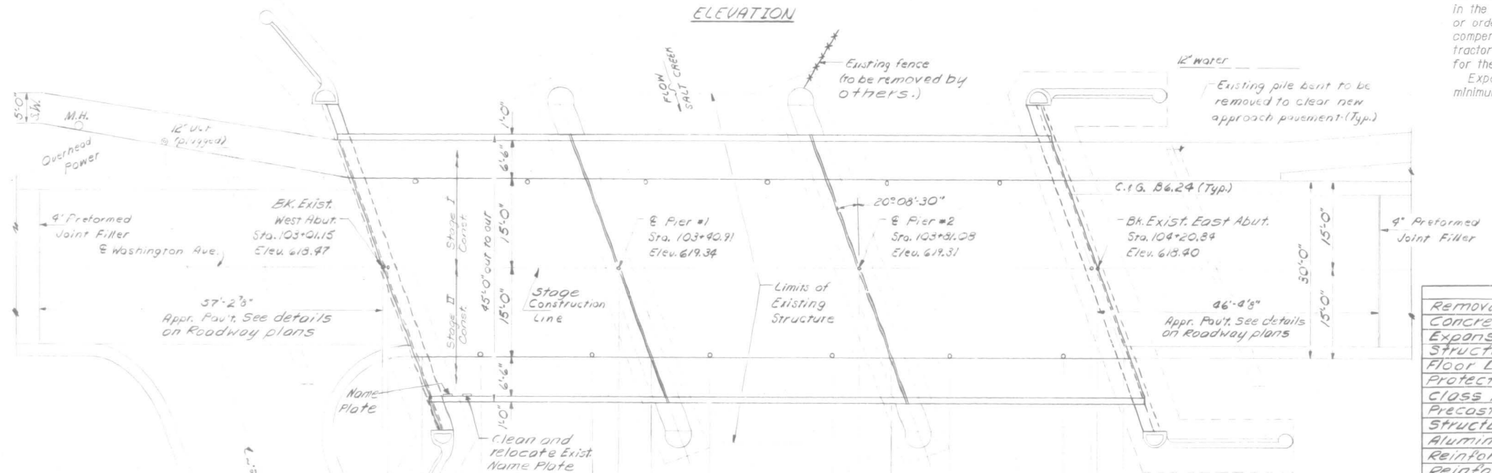
Existing Structure: #016-0873, 3-span RCDG on closed abutments and solid piers. Total length 119.69' and width 37'-3" out to out parapets. Built as Sec. 161-0404-15D-F.A.U. Superstructure and parts of Sub-structure to be removed by Contractor. Sub-structure shall be reused with appropriate rehabilitation. No salvage.

Stage Construction shall be utilized providing one lane of traffic at all Times.

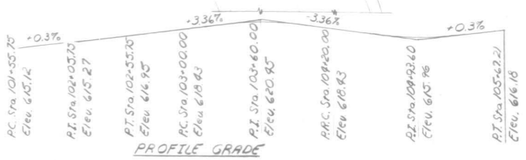


Note: Hatched area indicates concrete removal.

ELEVATION



PLAN



PROFILE GRADE

DESIGN STRESSES
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)

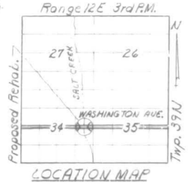
PRECAST PRESTRESSED UNITS
f'c = 5000 psi
f'ci = 4000 psi
f's = 270000 psi ("ϕ strands)
f'si = 189,000 psi ("ϕ strands)

WATERWAY INFORMATION

Drainage Area 135.6 sq.mi. Low Grade Elev. 614.9 @ Sta. 99+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head – Ft. Exist.	Head – Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	1700	850	857	615.5	0.06	0.06	615.56	615.56
Base	100	2690	850	857	616.8	0.10	0.10	616.90	616.90
Overtopping	10	1196		780	614.3		0.10		616.90
Max. Calc.	500								

LOADING HS20-44
Design Specifications: 1977 A.A.S.H.T.O. & 1978 thru 1983 interim specifications. (New const.) Allow 25# / sq. ft. for future wearing surface.



LOCATION MAP

GENERAL NOTES

All structural steel shall be shop painted with the zinc-silicate and vinyl paint system.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$"ϕ x 12" hooked bolts.

TOTAL BILL OF MATERIAL

ITEM	Unit	Super	Sub.	Total
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		53	53
Expansion Bolts-34" ϕ	Each		164	164
Structure Excavation	Cu. Yds.		43	43
Floor Drains	Each	12		12
Protective Coat	Sq. Yd.	660		660
Class X Concrete	Cu. Yd	245.5	46.5	292
Precast Prestressed Concrete I-Beam, 36"	Lin. Ft.	700		700
Structural Steel	Lbs.	4760		4760
Aluminum Railing-Type L	Lin. Ft.	286		286
Reinforcement Bars	Lbs.	200	4390	4590
Reinforcement Bars (Epoxy Coated)	Lbs.	48910		48910
Elastomeric Bearing Assy. Type I	Each	18		18
Name Plates	Each	1		1
Temporary Concrete Barrier	Lin. Ft.	122		122
Preformed Joint Seal (4")	Lin. Ft.	98		98
Epoxy Crack Sealing	Lin. Ft.		67	67
Repair Concrete Structures	Sq. Ft.		12	12

* Denotes portion on Bridge only.

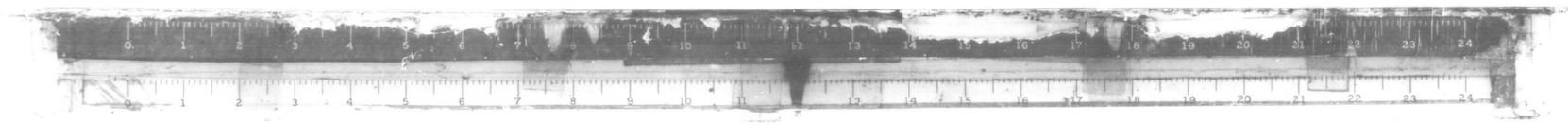
GENERAL PLAN
WASHINGTON AVE. OVER SALT CREEK
F.A.U. RTE. 1472 - SEC. 0405WRS(82)#0404B-R(83)
COOK COUNTY
STA. 103+61.00

DESIGNED Kelly C. Lee
CHECKED [illegible]
DRAWN NC
CHECKED [illegible]

January 9, 1984
EXAMINED James T. Kaufman
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

Revised: 2-14-84 YIG

Revised



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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-0873

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	84
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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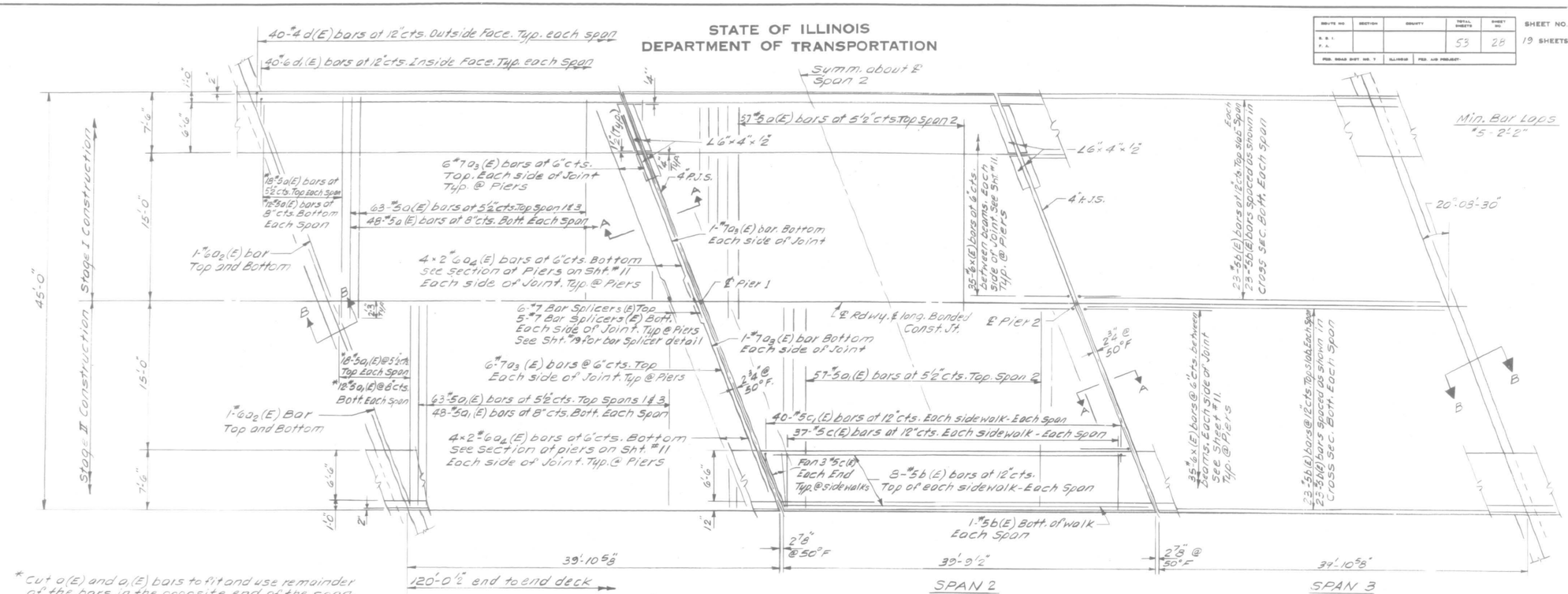
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I.			53	28
F. A.				19 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

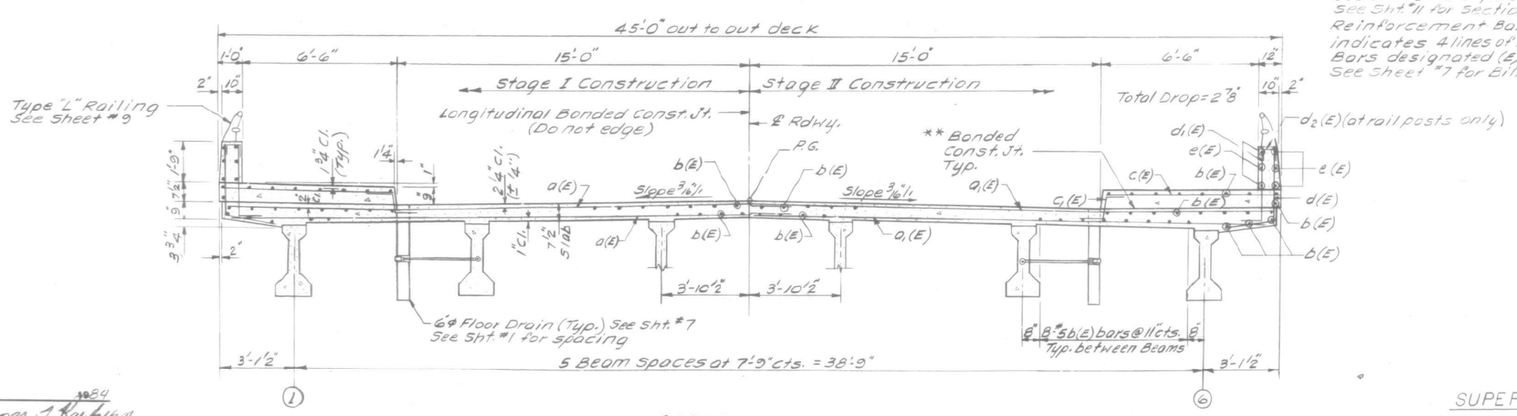
SHEET NO. 6



PLAN

* Cut a(E) and a1(E) bars to fit and use remainder of the bars in the opposite end of the span.

See Sht. #8 for superstructure details & Sect. A-A.
See Sht. #11 for Section B-B.
Reinforcement Bars indicated thus 4-#5 indicates 4 lines of bars with 2 lengths per line.
Bars designated (E) shall be epoxy coated.
See Sheet #7 for Bill of material.



CROSS SECTION
(Looking East)

** Bonded Construction Joint in accordance with Article 504.13(a)(2) of the Standard Specifications.

DESIGNED	Kenneth D. Ketchum	
CHECKED	Michael A. Litt	
DRAWN	TH	
CHECKED	MSC	

Jan. 9 1954
EXAMINED James S. Raybuck
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE
F.A.U. RTE. 1472
SEC. 0405WRS(82) & 0404B-R(83)
COOK COUNTY
STATION. 103+61.00

USER NAME = dlazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0873

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	85
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472	*	COOK	35	17
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(0505RS & 0505.1BR)81

SHEET 1 OF 13

DESCRIPTION OF IMPROVEMENT: FAS Rte. 1472, Sect. No. (2018-140-BR), Cook Co.

Existing structure #016-0874 is approximately 220' long and was widened to its present deck width of 57'-6" in 1938. The existing four span R.C. "T" Beam structure shall have its entire superstructure & pier caps removed. The upper portion of all existing piers, abutments, and wingwalls shall be partially removed to within 2 feet of the bottom of the proposed I beams. New pier caps and abutment/wingwall extensions shall be constructed as shown. New 36" precast, prestressed, reinforced concrete deck beams and cast-in-place reinforced concrete deck/parapets are also to be built.

Staged One Lane traffic to be maintained across bridge as per Std. 2309 AT ALL TIMES.

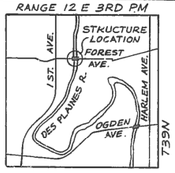
No salvage of superstructure except for ornamental grillwork in parapets.

WATERWAY INFORMATION CHART

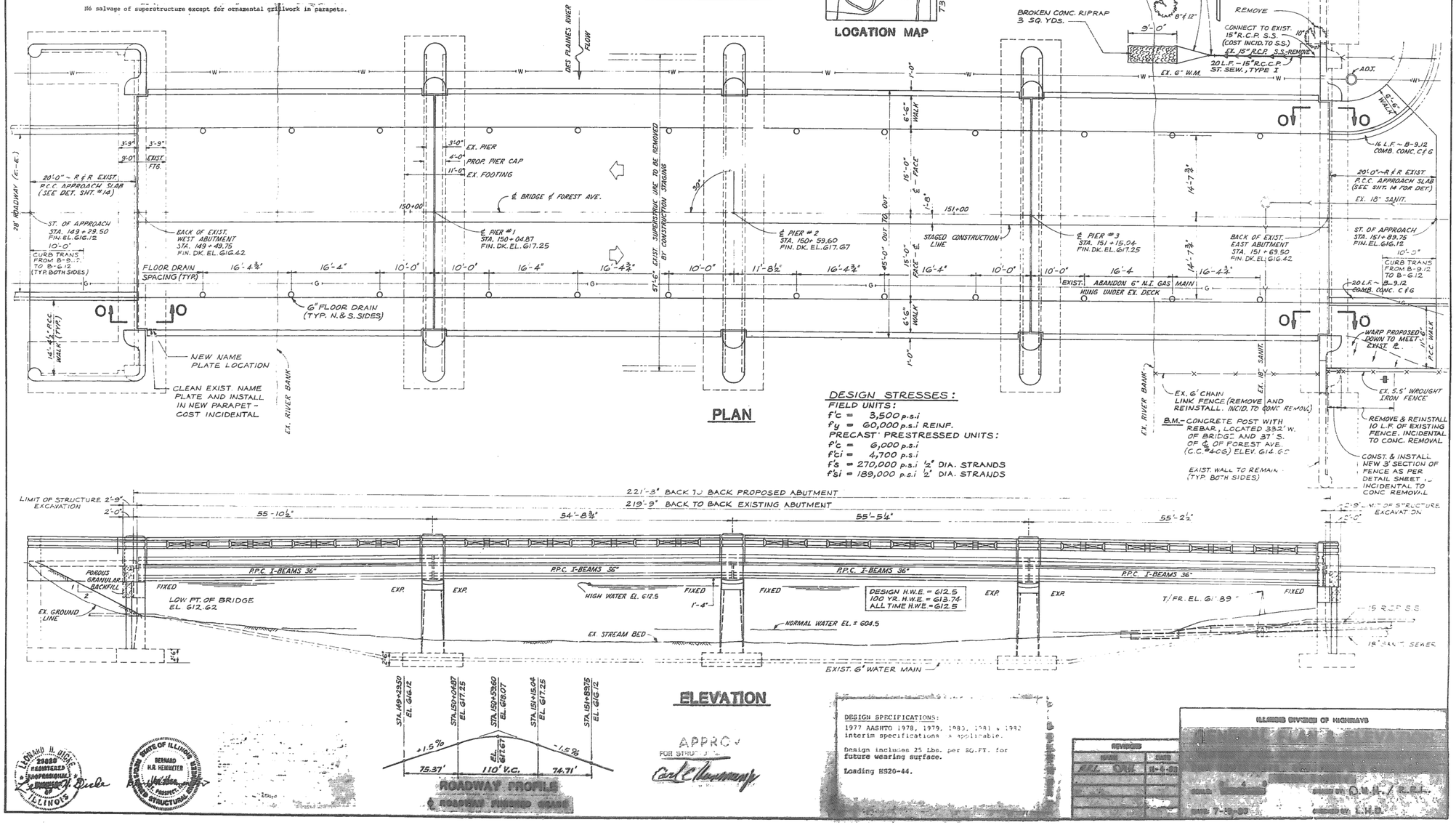
DRAINAGE AREA: 478.5 LOW GRADE ELEV.: 613.65 @ STA.: 154+00

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ.FT. EXIST.	OPENING SQ.FT. PROP.	NAT. H.W.E.	HEAD - FT. EXIST.	HEAD - FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	30	5500	1874		613.34	0.02		613.36	
BASE	100	6300	1874		613.74	0.10		613.84	
OVERTOPPING	100	6300	1874		613.74	0.10		613.84	
MAX. CALC.	500								

RANGE 12 E 3RD PM



LOCATION MAP



PLAN

DESIGN STRESSES:

FIELD UNITS:
f'c = 3,500 p.s.i
fy = 60,000 p.s.i REINF.

PRECAST PRESTRESSED UNITS:
f'c = 6,000 p.s.i
f'ci = 4,700 p.s.i
f's = 270,000 p.s.i ½" DIA. STRANDS
f'si = 189,000 p.s.i ½" DIA. STRANDS

ELEVATION

ROADWAY PROFILE & ROADWAY FINISHED GRADE

APPROVED FOR STRUCTURE
Carl E. Hammarberg

DESIGN SPECIFICATIONS:
1977 AASHTO 1978, 1979, 1980, 1981 & 1982 interim specifications as applicable.
Design includes 25 Lbs. per SQ. FT. for future wearing surface.
Loading HS20-44.

REVISED	DATE
REVISED	11-4-81

ILLINOIS DIVISION OF HIGHWAYS

DISTRICT ONE - C. & E.

DATE 7-12-82 SUPERVISOR, E.H.D.

USER NAME = diazla	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016–0874

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	86
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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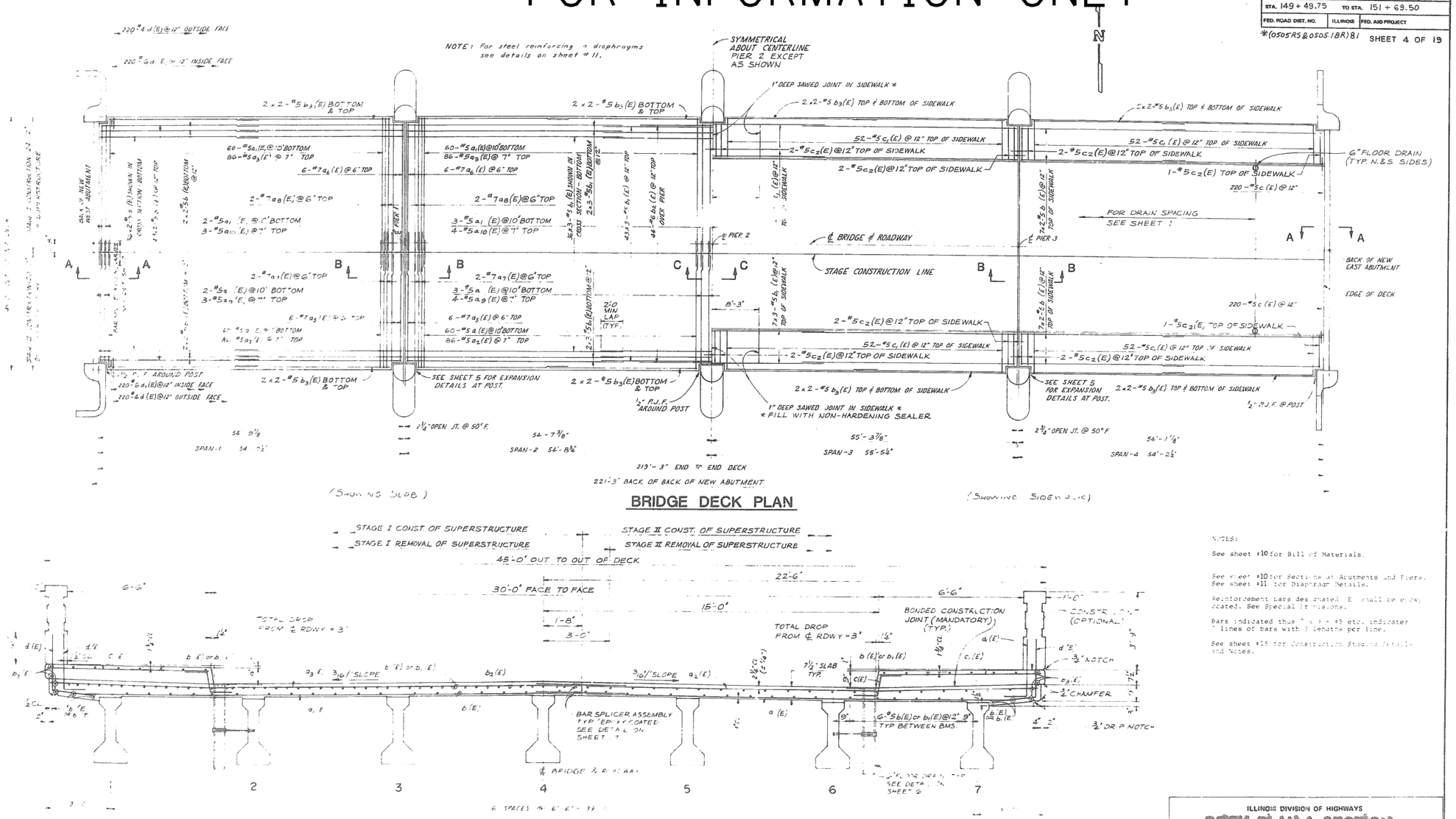
FOR INFORMATION ONLY

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1472	*	COOK	35	20
STA. 149 + 49.75		TO STA. 151 + 69.50		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

*(0505RS & 0505.1BR)81 SHEET 4 OF 19



BRIDGE DECK PLAN

NEAR PIER

CROSS SECTION

LOOKING EAST

NEAR MID-SPAN

NOTES:

See sheet #10 for Bill of Materials.

See sheet #10 for Sections at Abutments and Piers.
See sheet #11 for Diaphragm Details.

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.

Bars indicated thus 7 x 3 = #5 etc. indicates 7 lines of bars with 3 lengths per line.

See sheet #15 for Construction Staging Details and Notes.

REVISIONS	
NAME	DATE
RRL DWH	11-4-83

ILLINOIS DIVISION OF HIGHWAYS

DECK PLAN & SECTION

FOREST AVE. OVER DES PLAINES RIVER

FAU ROUTE 1472 SECTION 0505RS & 0505.1BR

COOK COUNTY

SCALE: 0 4 8 / 0 1 2

DRAWN BY R.R.L./D.W.H.

DATE 7-19-83

CHECKED BY L.H.D.

MODEL: Default
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USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0874

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	87
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

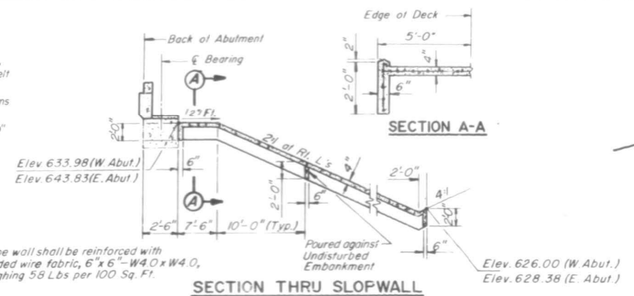
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 567	*	COOK	70	20
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		

* P-VB-R (87)

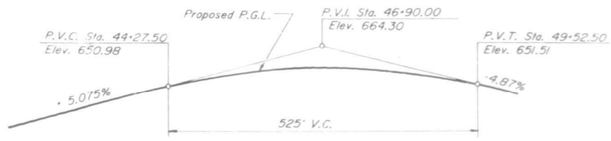
BENCH MARK: "X" Cut in South Bolt on Fire Hydrant at South-West Corner of 24th Ave. and Roosevelt Road Elev. = 629.99

EXISTING STRUCTURE DATA: STR. No. 016-0962. The Bridge, constructed in 1937, as SBI Rt. 6 SEC. PVBDEFP, carries Roosevelt Road over the Indiana Harbor Belt (I.H.B.) Railroad. There are thirteen spans of reinforced concrete deck with steel beams. The existing reinforced concrete piers and abutments are to be rehabilitated and the pier caps replaced. The total length is 814'-9" back to back of abutments, with one four span unit and three, three span units of continous steel beams. The bridge width is 56'-0". The existing superstructure shall be removed and shall be widened 4'-0" to 60'-0" out to out width. Two lanes of traffic shall be maintained at all times utilizing stage construction. No Salvage.



SECTION THRU SLOPEWALL

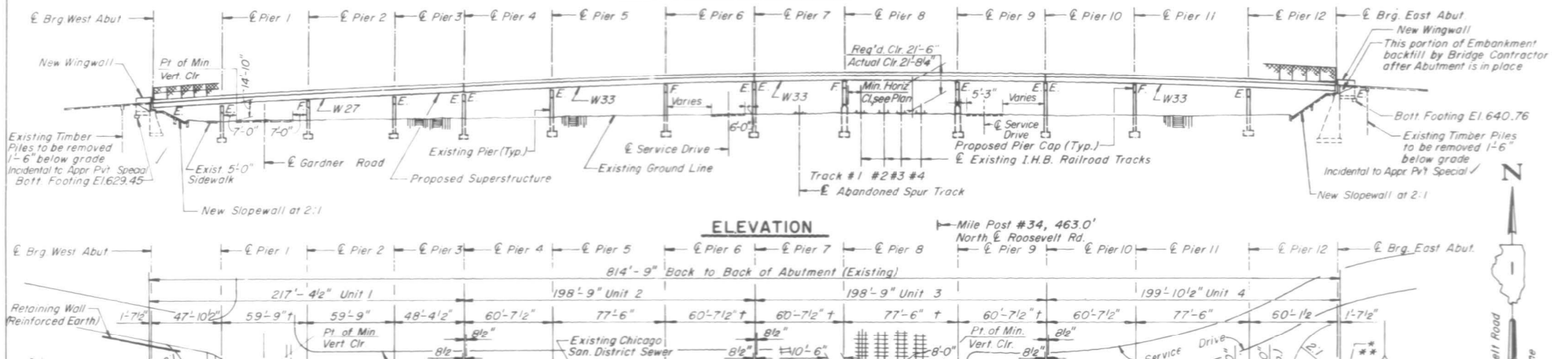
SECTION A-A



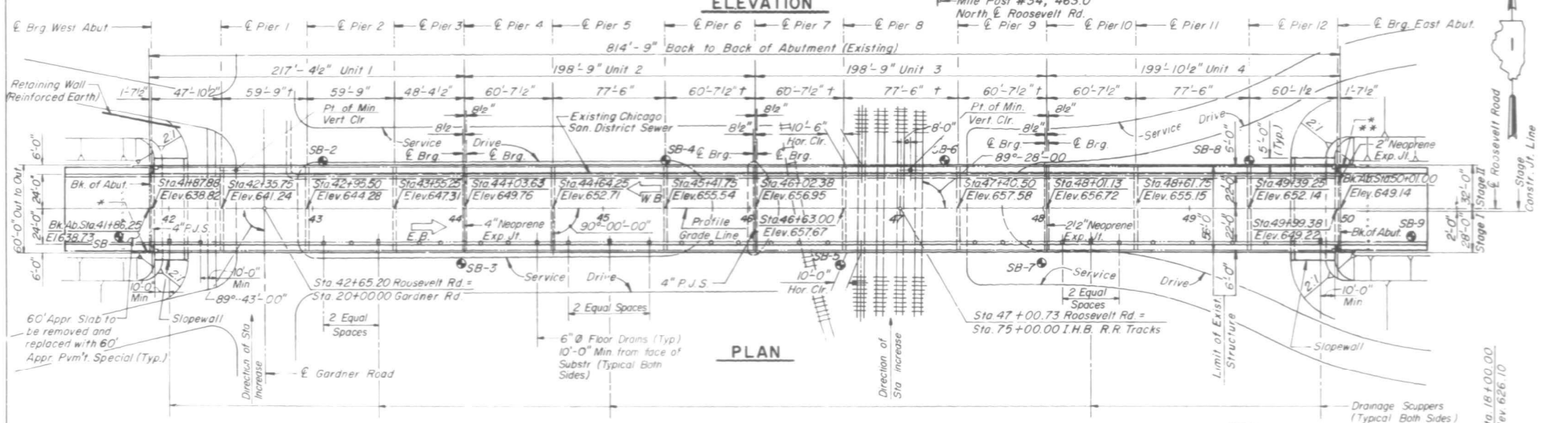
PROFILE GRADE



LOCATION MAP



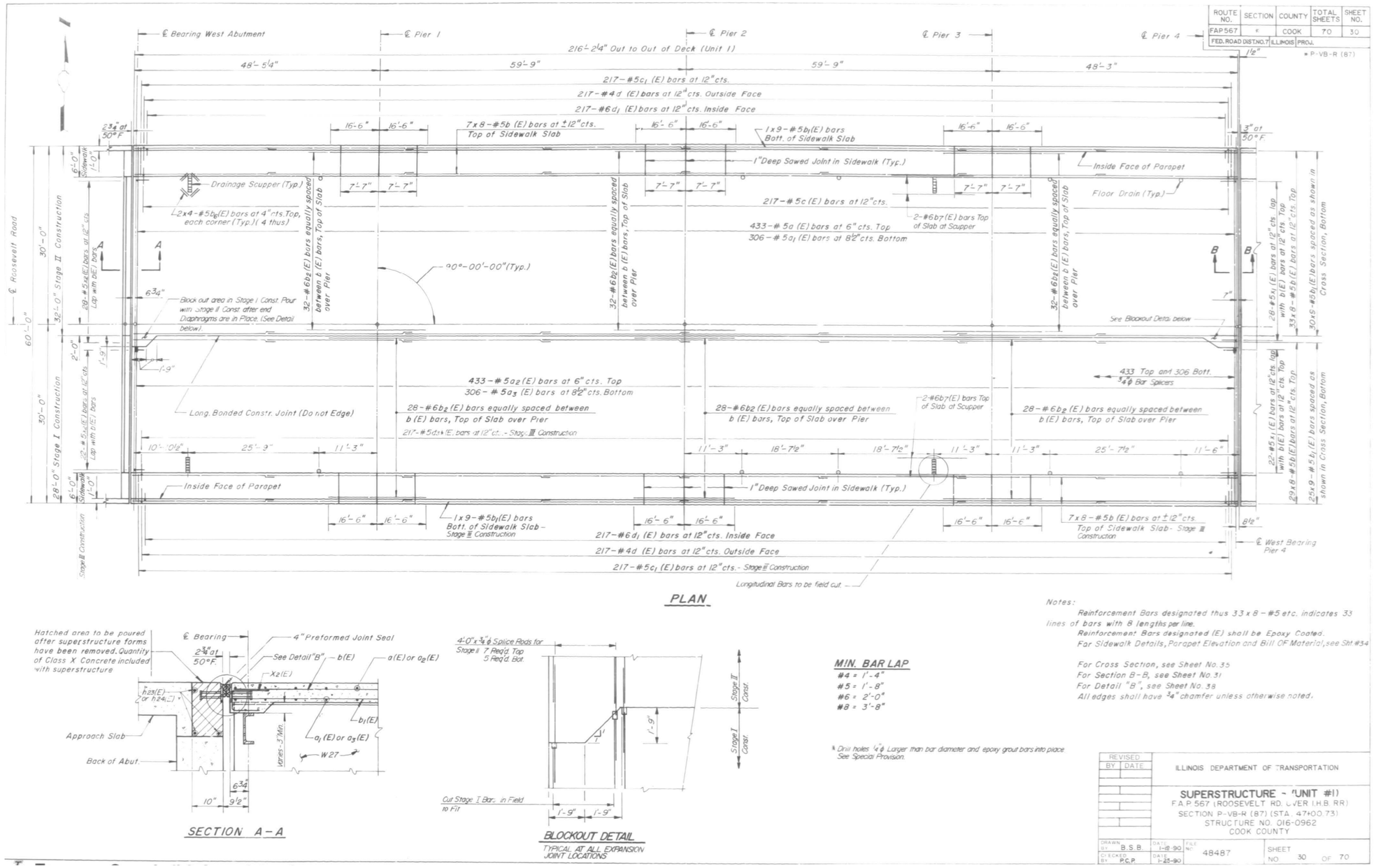
ELEVATION


Mile Post #34, 463.0' North ℄ Roosevelt Rd.
814'-9" Back to Back of Abutment (Existing)
217'-4½" Unit 1
198'-9" Unit 2
198'-9" Unit 3
199'-10½" Unit 4
Retaining Wall (Reinforced Earth)
Pt. of Min. Vert. Clr.
Existing Chicago San. District Sewer
Service Drive
℄ Brg.
Hor. Clr.
Bk. of Abut.
Bk. Ab. Sta. 41+88.25
El. 638.73
Sta. 41+88.88 Elev. 638.82
Sta. 42+35.75 Elev. 641.24
Sta. 42+98.50 Elev. 644.28
Sta. 43+52.25 Elev. 647.31
Sta. 44+03.63 Elev. 649.76
Sta. 44+64.25 Elev. 652.71
Sta. 45+41.75 Elev. 655.54
Sta. 46+02.38 Elev. 656.95
Sta. 46+63.00 Elev. 657.67
Sta. 47+40.50 Elev. 657.58
Sta. 48+01.13 Elev. 656.72
Sta. 48+61.75 Elev. 655.15
Sta. 49+39.25 Elev. 652.14
Sta. 49+99.38 Elev. 649.22
Sta. 50+50.00 Elev. 649.14
Bk. of Abut.
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
4" P.J.S.
4" Neoprene Exp. Jt.
90°-00'-00"
89°-43'-00"
89°-28'-00"
Profile Grade Line
2 Equal Spaces
10'-0" Min
Slopewall
60' Appr. Slab To be removed and replaced with 60' Appr. Pvm't. Special (Typ.)
Sta. 42+65.20 Roosevelt Rd. = Sta. 20+00.00 Gardner Rd.
Direction of Sta. Increase
℄ Gardner Road
6" ℄ Floor Drains (Typ.) 10'-0" Min. from face of Substr. (Typical Both Sides)
Sta. 47+00.73 Roosevelt Rd. = Sta. 75+00.00 I.H.B. R.R. Tracks
Limit of Exist. Structure
Drainage Scuppers (Typical Both Sides)
2" Neoprene Exp. Jt.
Stage I
Stage II
Stage Constr. ℄ Line
Elev. 649.14
Elev. 649.22
6'-0" Out to Out
24'-0"
60'-0" Out to Out
2'-0"
5'-0" (Typ.)
8½"
10½"-6"
8'-0"
8½"-6"
6'-0"
2'-1"
1'-7½"
1'-7½"
1'-7½

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 567	*	COOK	70	30
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		

* P-VB-R (87)



PLAN

SECTION A-A

BLOCKOUT DETAIL

TYPICAL AT ALL EXPANSION JOINT LOCATIONS

MIN. BAR LAP

#4 = 1'-4"
#5 = 1'-8"
#6 = 2'-0"
#8 = 3'-8"

* Drill holes ¼" φ Larger than bar diameter and epoxy grout bars into place. See Special Provision.

Notes:

Reinforcement Bars designated thus 33 x 8 - #5 etc. indicates 33 lines of bars with 8 lengths per line.

Reinforcement Bars designated (E) shall be Epoxy Coated.

For Sidewalk Details, Parapet Elevation and Bill Of Material, see Sht #34

For Cross Section, see Sheet No. 35

For Section B-B, see Sheet No. 31

For Detail "B", see Sheet No. 38

All edges shall have ¾" chamfer unless otherwise noted.

REVISED BY	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE - (UNIT #1)

F.A.P. 567 (ROOSEVELT RD.) OVER I.H.B. RR)

SECTION P-VB-R (87) (STA. 47+00.73)

STRUCTURE NO. 016-0962

COOK COUNTY

DRAWN BY	DATE	FILE NO.	SHEET NO.
B.S.B.	1-18-90	48487	30 OF 70
CHECKED BY P.C.P.	DATE 1-25-90		

USER NAME = diazia	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**DECK PLAN SN: 016-0962**
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 1/30/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	89
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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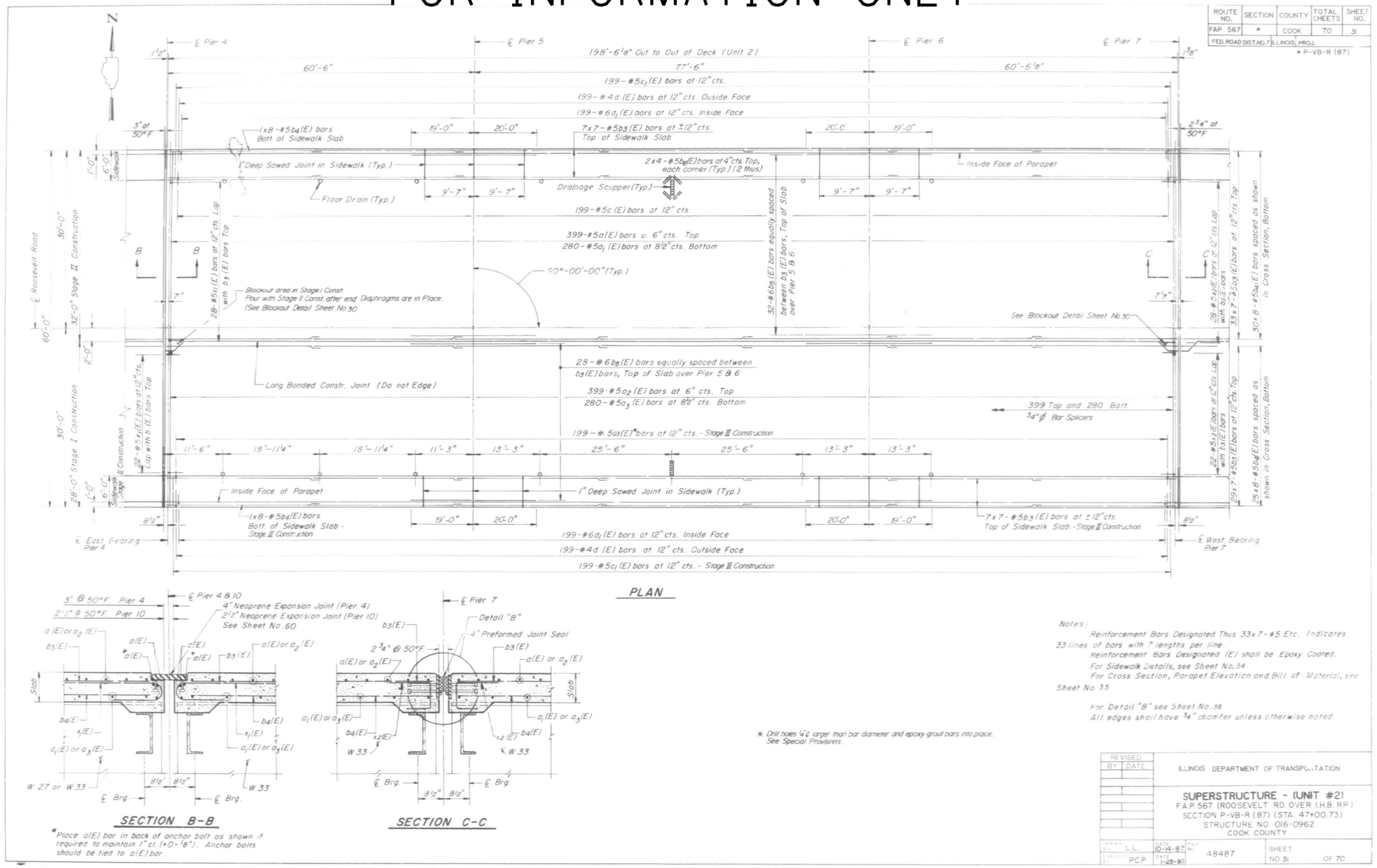
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 567	*	COOK	70	31
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		
		* P-VB-R (87)		



PLAN

SECTION B-B

*Place a(E) bar in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to a(E) bar.

SECTION C-C

* Drill holes 1/4" ∅ larger than bar diameter and epoxy grout bars into place. See Special Provisions.

Notes:

Reinforcement Bars Designated Thus 33x7-#5 Etc. Indicates 33 lines of bars with 7 lengths per line.

Reinforcement Bars Designated (E) shall be Epoxy Coated.

For Sidewalk Details, see Sheet No. 34.

For Cross Section, Parapet Elevation and Bill of Material, see Sheet No. 35.

For Detail "B" see Sheet No. 38.

All edges shall have 3/4" chamfer unless otherwise noted.

REVISED BY	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE - (UNIT #2)
F.A.P. 567 (ROOSEVELT RD. OVER I.H.B. RR.)
SECTION P-VB-R (87) (STA. 47+00.73)
STRUCTURE NO. 016-0962
COOK COUNTY

DRAWN BY	DATE	FILE NO.	SHEET
L.L.	10-14-87	48487	NO. 31 OF 70
CHECKED BY P.C.P	DATE 1-25-90		

MODEL: Default
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USER NAME = diazla	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0962

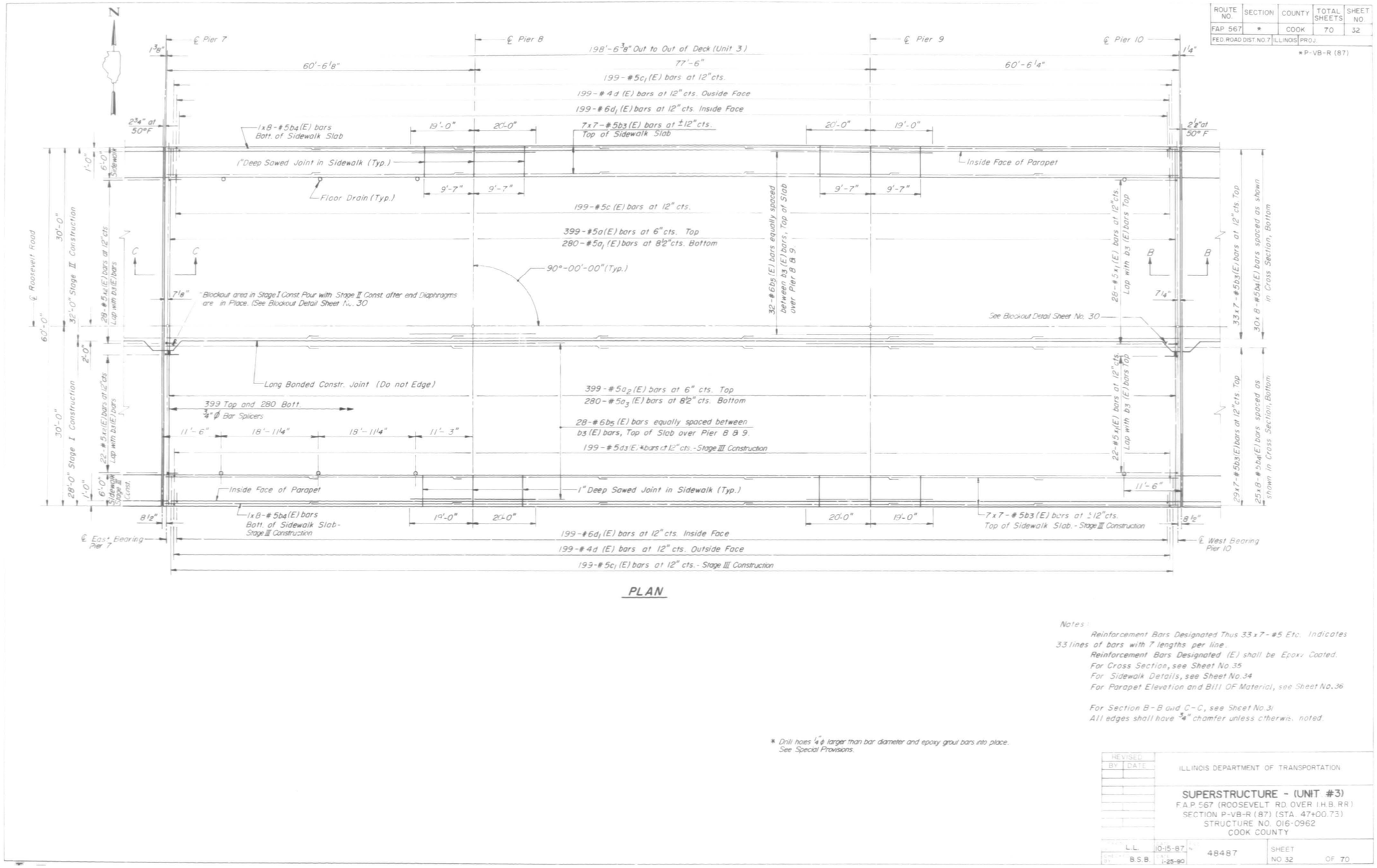
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	90
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 567	*	COOK	70	32
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		

*P-VB-R (87)



PLAN

Notes:

Reinforcement Bars Designated Thus 33 x 7 - #5 Etc. Indicates 33 lines of bars with 7 lengths per line.

Reinforcement Bars Designated (E) shall be Epoxy Coated.

For Cross Section, see Sheet No. 35

For Sidewalk Details, see Sheet No. 34

For Parapet Elevation and Bill OF Material, see Sheet No. 36

For Section B-B and C-C, see Sheet No. 31

All edges shall have 3/4" chamfer unless otherwise noted.

* Drill holes 1/4" ℄ larger than bar diameter and epoxy grout bars into place. See Special Provisions.

REVISED BY	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE - (UNIT #3)

F.A.P. 567 (ROOSEVELT RD. OVER I.H.B. RR.)
SECTION P-VB-R (87) (STA. 47+00.73)
STRUCTURE NO. 016-0962
COOK COUNTY

DRAWN	L.L.	10-15-87	48487	SHEET NO. 32 OF 70
CHECKED	B.S.B.	1-25-90		

USER NAME = dlazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-0962

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	91
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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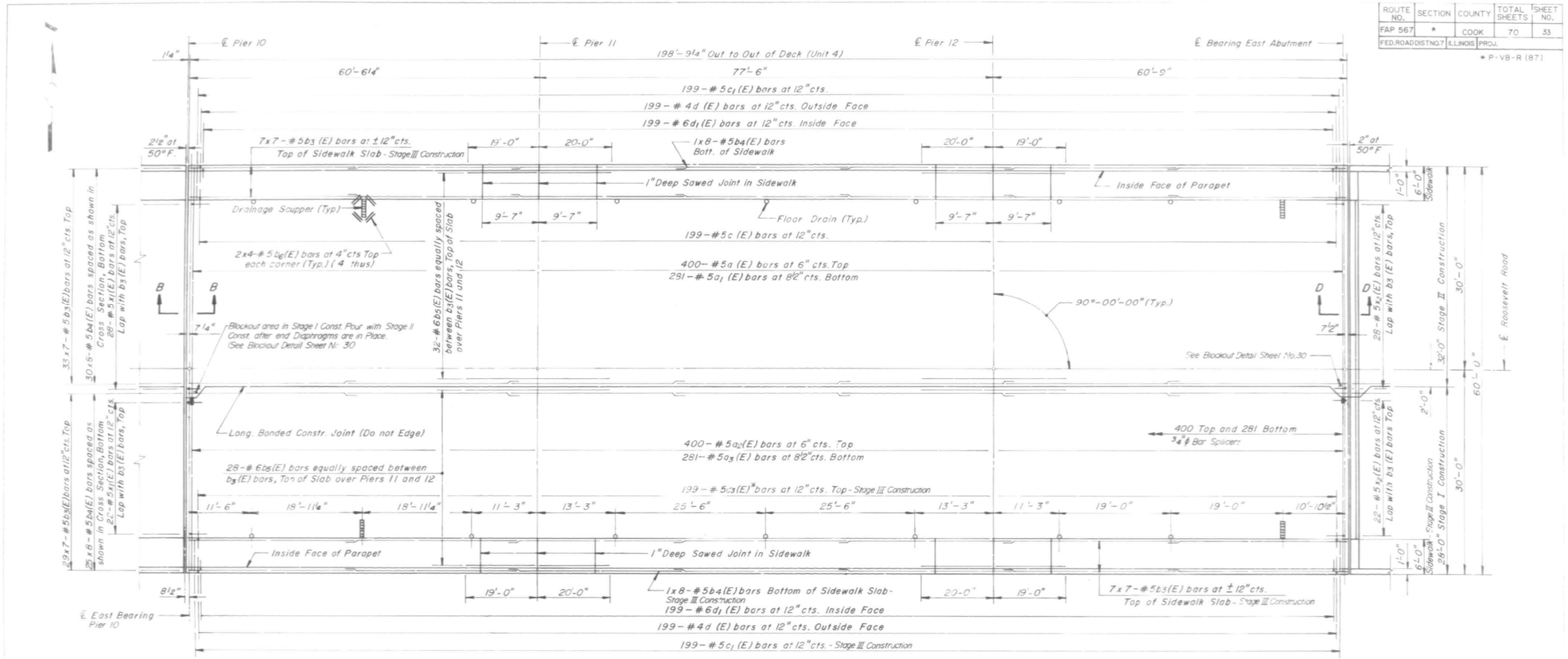
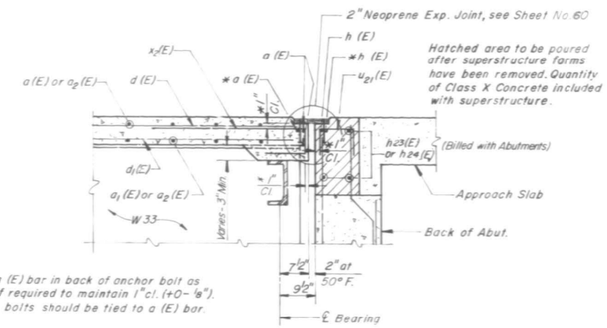
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 567	*	COOK	70	33
FED.ROAD DIST NO.7	ILLINOIS	PROJ.		

* P-VB-R (87)





SECTION D-D

* Place a (E) bar in back of anchor bolt as shown if required to maintain 1" cl. (+0 - 1/8"). Anchor bolts should be tied to a (E) bar.

* Drill holes 1/4 ϕ larger than bar diameter and epoxy grout bars into place. See Special Provisions.

Notes:

Reinforcement Bars designated thus 33x7 - #5 e't'c. indicates 33 line of bars with 7' length per line.

Reinforcement Bars designated (E) shall be Epoxy Coated.

For Parapet Elevation and Bill OF Material, see Sheet No.20

For Cross Section, see Sheet No.35

For Sidewalk Details, see Sheet No.34

For Section E - E, see Sheet No.31

All edges shall have 3/4" chamfer unless otherwise noted.

REVISED BY	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE - (UNIT #4)

F.A.P.567 (ROOSEVELT RD. OVER I.H.B. RR)
SECTION P-VB-R (87) (STA. 47+00.73)
STRUCTURE NO. 016-0962
COOK COUNTY

DESIGN	B.S.B.	10-12-87	48487	SHEET NO. 33 OF 70
DETAIL	P.C.P.	1-25-90		

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-0962

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	92
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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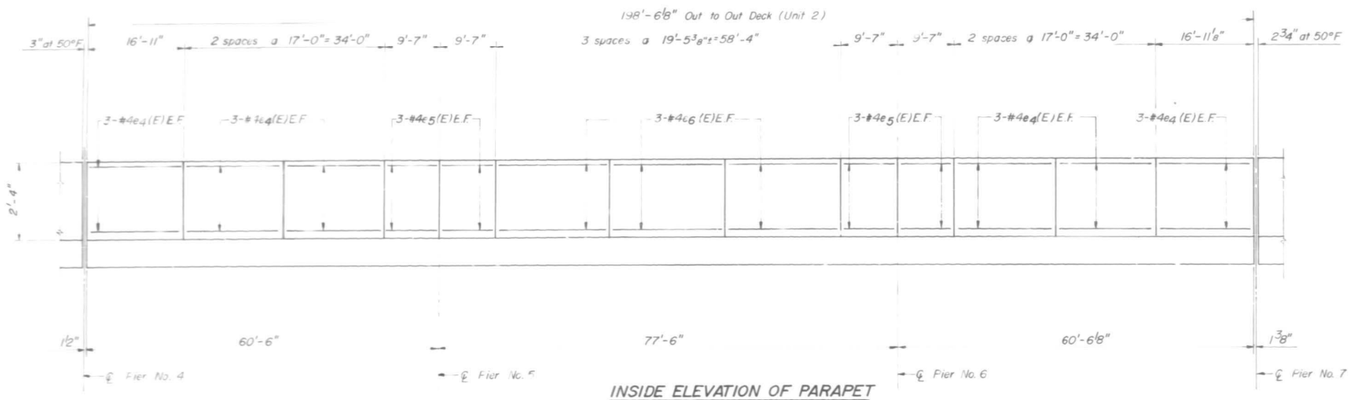
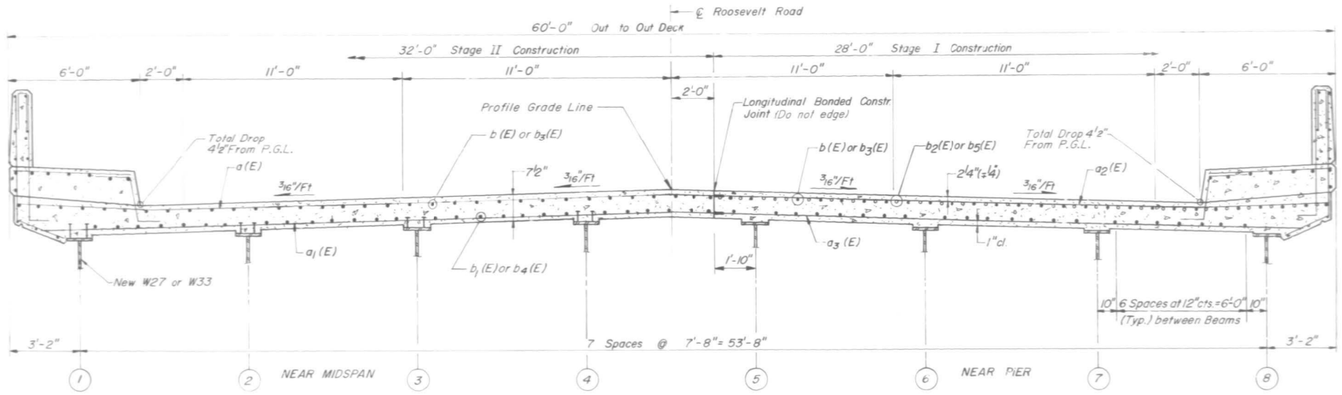
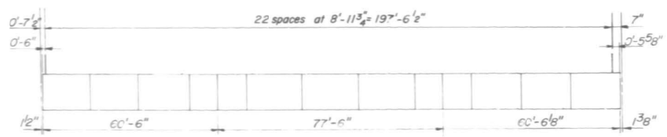
FOR INFORMATION ONLY



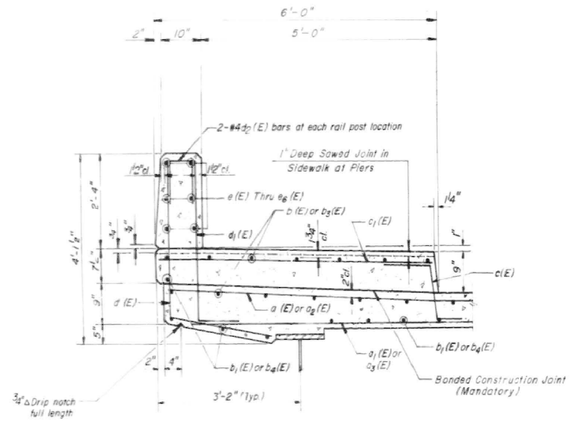
INSIDE ELEVATION OF PARAPET
(Looking North)



TYPICAL CROSS SECTION - ALL UNITS
(Looking East)



PARAPET ELEVATION - RAIL POSTS SPACING



SECTION THRU PARAPET - NORTH
(TYPICAL)

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USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-0962

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	93
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

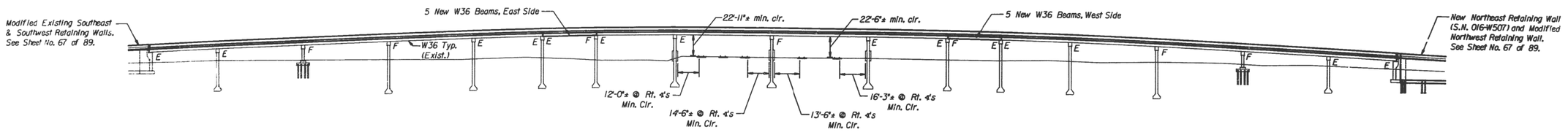
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2714	1010.2R	COOK	89	26
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

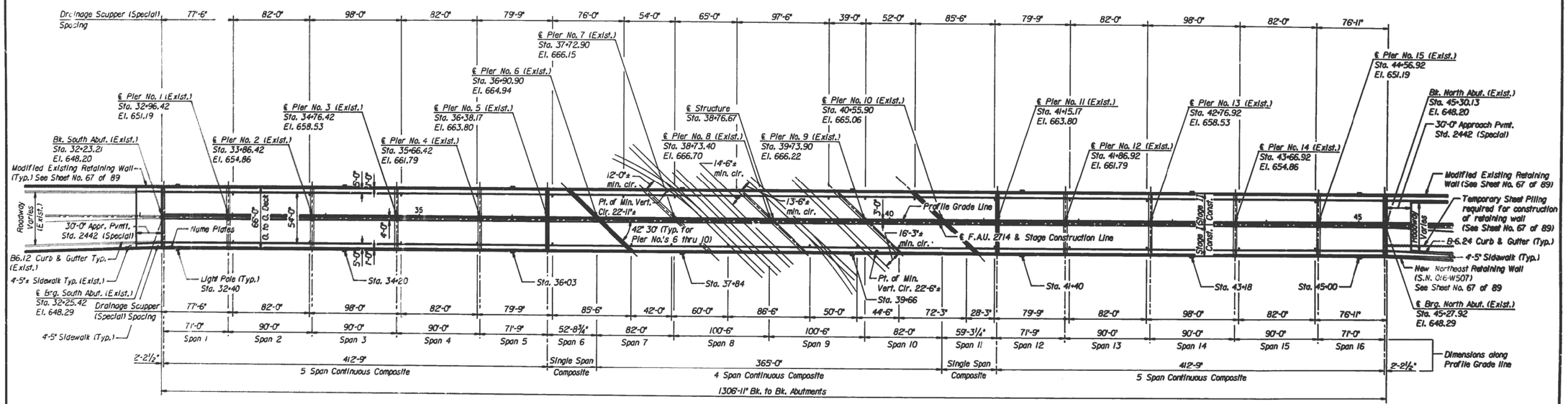
SHEET NO. 1
SHEETS 41

T.B.M.: Railroad spike in light pole in northeast quadrant of 25th Avenue and Armitage Ave. Elev. 637.23

Existing Structure: Structure No. 016-1011, built as 25th Avenue, Section 020-1010.2MFT in 1965 is 66'-0" wide by 1302'-6" long. The existing reinforced concrete deck and steel wide flange beams are supported on multiple column piers and closed abutments. The concrete deck shall be removed. Five beams in Span 6 and five beams in Span 11 shall be replaced with new W36 steel beams. Existing expansion bearings below deck joints shall be replaced. Existing abutments and piers shall be repaired. A new 66'-0" wide composite concrete deck shall be constructed. Existing abutments, piers, and steel beams shall be incorporated into new construction. Traffic shall be staged during construction.



ELEVATION



PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
Engineer of Bridges and Structures

GARY S. POWELL LICENSED STRUCTURAL ENGINEER 081-004771 STATE OF ILLINOIS CHICAGO, ILLINOIS

Signed Gary S. Powell
Gary S. Powell, S.E. IL Lic. No. 081-004771 Expires 11-30-1994

Date 7-23-1993

Bascor, Inc.
consulting engineers and planners

DESIGNED	DAZ
CHECKED	GSP
DRAWN	SAW
CHECKED	GSP

DATE 4-30-1993
rev. 7-26-1993

DESIGN STRESSES

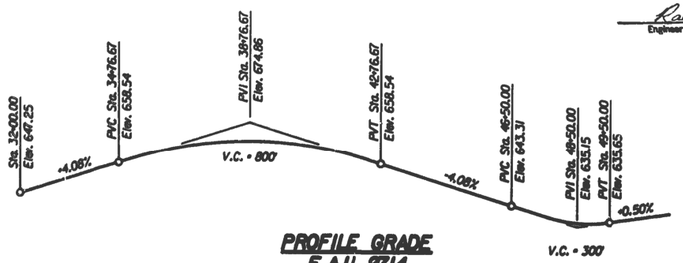
CAST-IN-PLACE CONCRETE
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
STRUCTURAL STEEL
Fy = 36,000 psi (AASHTO M270 Gr. 36)

LOADING

HS20-44
25 psf Future Wearing Surface

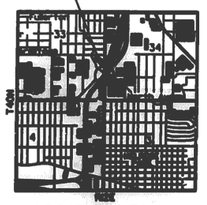
SPECIFICATIONS

Standard Specifications for Highway Bridges, AASHTO 1992.



PROFILE GRADE E.A.U. 2714

Proposed Structure



LOCATION PLAN

GENERAL PLAN & ELEVATION

25TH AVENUE OVER MB RAILROAD
F.A.U. RTE. 2714 SECTION 1010.2R
COOK COUNTY
STA. 38+76.67
S.N. 016-1011

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-1011

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	94
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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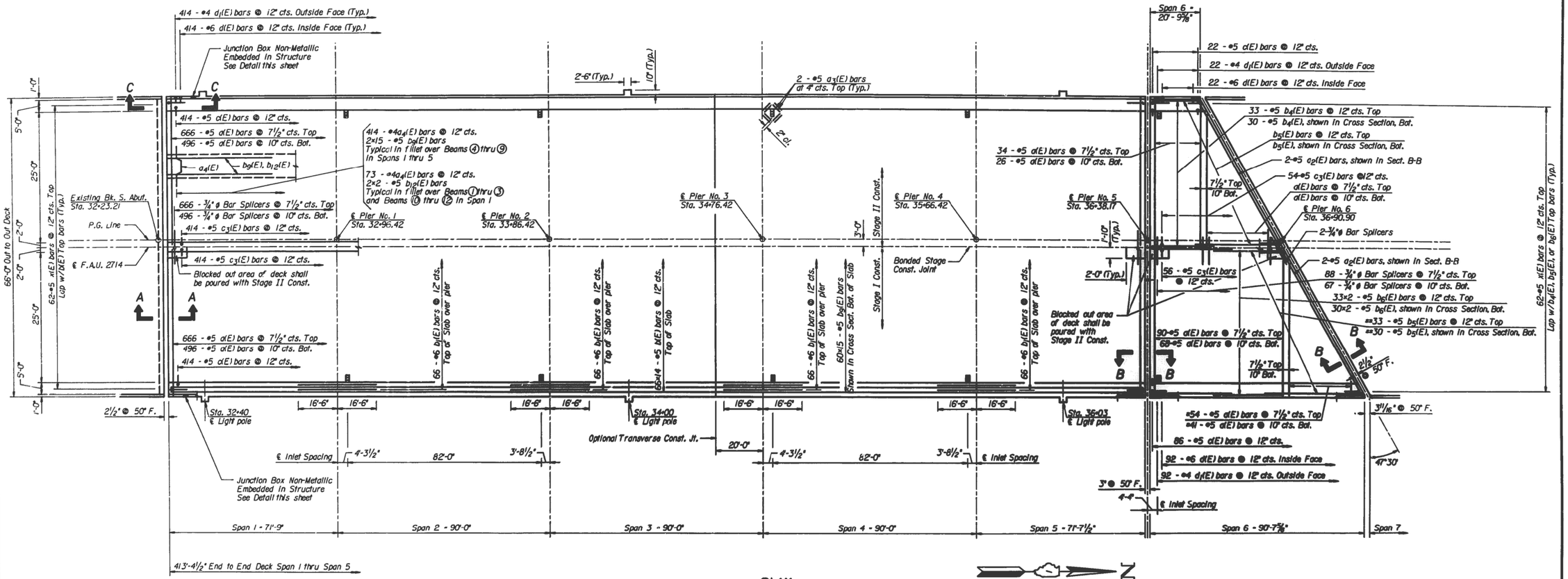
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 18
SHEETS 41



PLAN

Minimum Bar Laps #5 bars = 2'-2"

* Order d(E) bars full length. Cut to fit skew and use remainder of bars in same end, Stage II.

** Order b8(E) bars full length. Cut to fit skew and use remainder of bars in Stage II.

Notes:

Reinforcement bars designated (E) shall be epoxy coated.

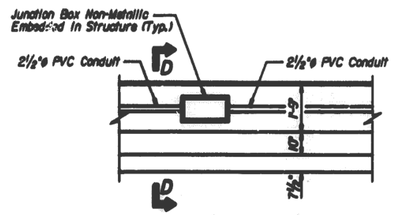
Bars indicated thus: 3#2 - #5 etc. indicates 3 lines of bars with 2 lengths per line.

See Sheet Nos. 21 thru 25 for Superstructure Details and Cross-Sections, Parapet Elevations, and Sections A-A, B-B, & C-C.

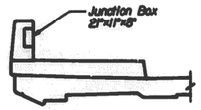
See Sheet No. 25 for Superstructure Bill of Material and Light Pole Support Details.

See Sheet No. 30 for Bar Splicer (Coupler) Details.

Bar Splicers shall be tied with double the number of ties normally used for lap splices.



JUNCTION BOX DETAIL



SECTION D-D

Bascor, Inc.
consulting engineers and planners

DESIGNED	JLT
CHECKED	GSP
DRAWN	KSR
CHECKED	GSP

DATE 4-30-1993
rev. 7-26-1993

FILENAME: 1911301 SPAN1-6.DGN

SUPERSTRUCTURE SPANS 1 TO 6

25TH AVENUE OVER IHB RAILROAD
F.A.U. RTE. 2714 SECTION 1010.2R
COOK COUNTY
STA. 38+76.67
S.N. 016-1011

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1011

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	95
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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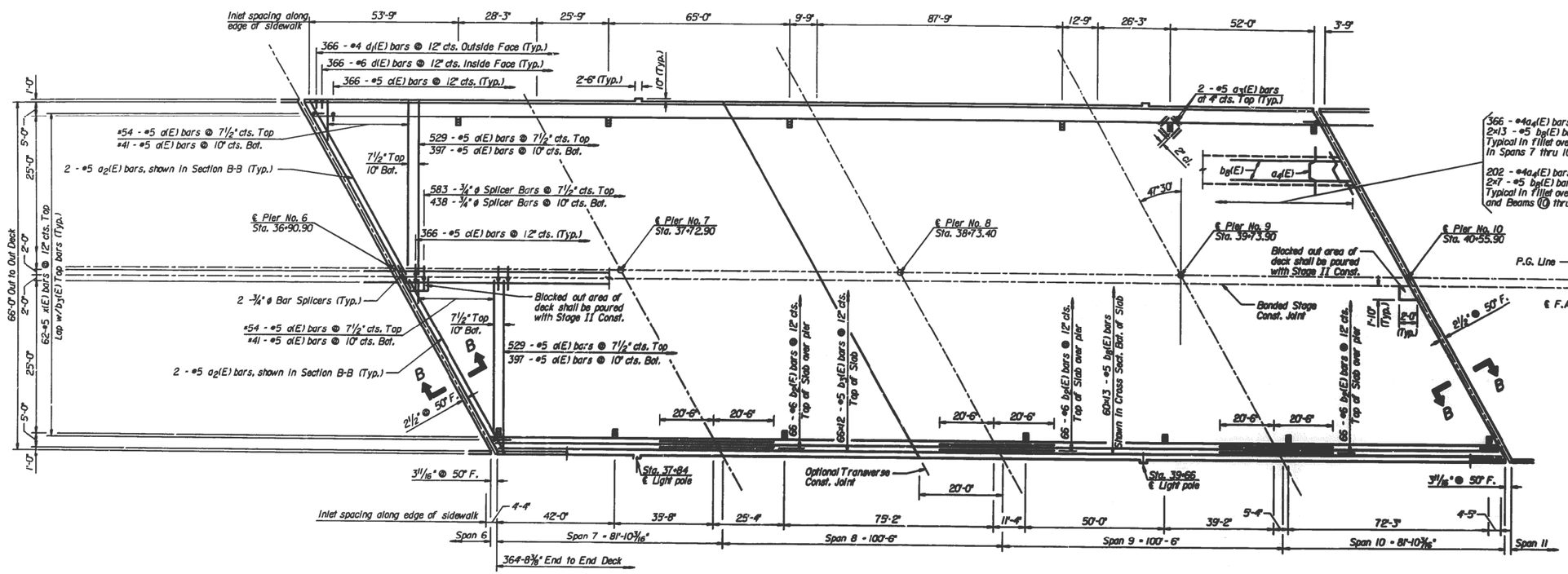
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 19
SHEETS 41



PLAN
Minimum Bar Laps #5 bars = 2'-2"

* Order a(E) bars full length. Cut to fit skew and use remainder of bars in same stage, opposite end.

Notes:

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus: 3x2 - #5 etc. indicates 3 lines of bars with 2 lengths per line.

See Sheet Nos. 21 thru 25 for Superstructure Details and Cross-Sections, Parapet Elevations, and Section B-B.

See Sheet No. 25 for Superstructure Bill of Material and Light Pole Support Details.

See Sheet No. 30 for Bar Splicer (Coupler) Details.

Bar Splicers shall be tied with double the number of ties normally used for lap splices.

Bascor, Inc.
consulting engineers and planners

DESIGNED	JLT
CHECKED	GSP
DRAWN	KSR
CHECKED	GSP

DATE 4-30-1993
rev. 7-26-1993

FILENAME: (91130) SPAN7-10.DGN

SUPERSTRUCTURE SPANS 7 TO 10

25TH AVENUE OVER IHB RAILROAD
F.A.U. RTE. 2714 SECTION 1010.2R
COOK COUNTY
STA. 38+76.67
S.N. 016-1011

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1011

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	96
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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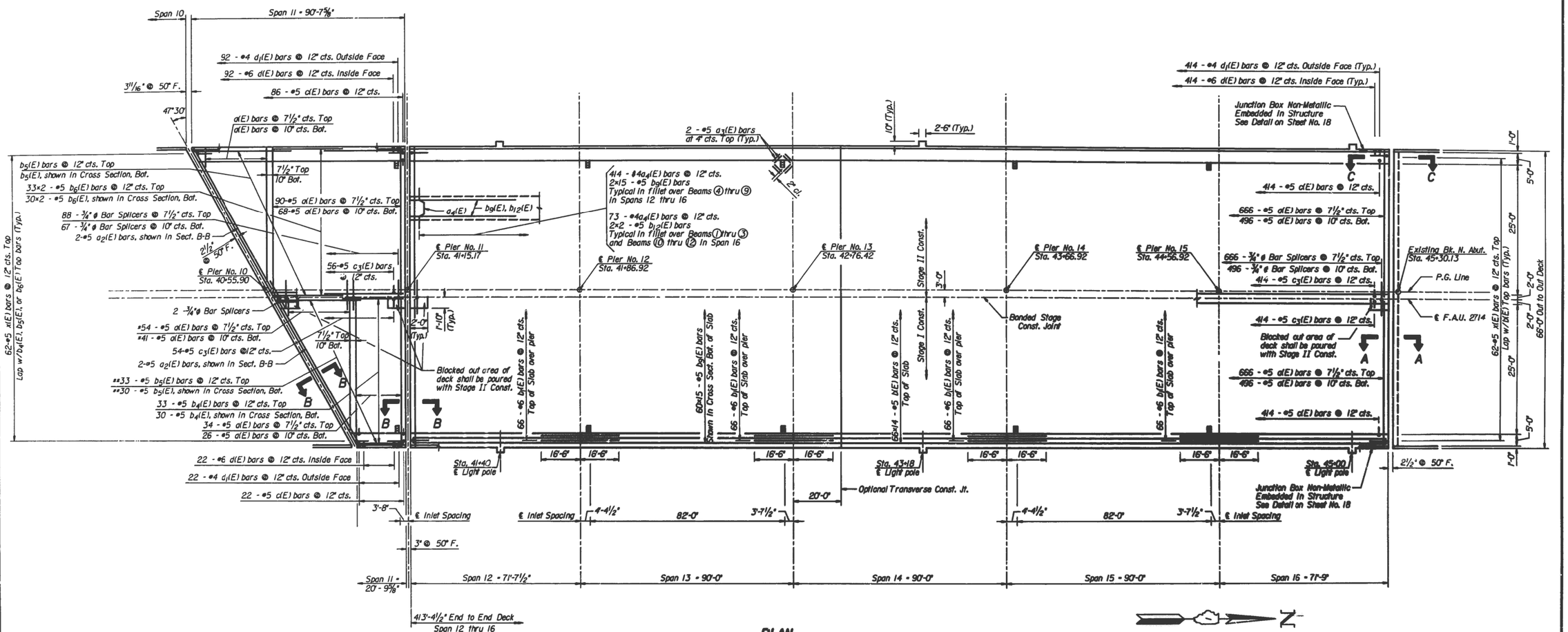
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 20
SHEETS 41



PLAN

Minimum Bar Laps #5 bars = 2'-2"

* Order d(E) bars full length. Cut to fit skew and use remainder of bars in same end, Stage II.

** Order b5(E) bars full length. Cut to fit skew and use remainder of bars in Stage II.

Notes:

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus: 3×2 - #5 etc. indicates 3 lines of bars with 2 lengths per line.

See Sheet Nos. 21 thru 25 for Superstructure Details and Cross-Sections, Parapet Elevations, and Sections A-A, B-B, & C-C.

See Sheet No. 25 for Superstructure Bill of Material and Light Pole Support Details.

See Sheet No. 30 for Bar Splicer (Coupler) Details.

Bar Splicers shall be tied with double the number of ties normally used for lap splices.

Bascor, Inc.
consulting engineers and planners

DESIGNED	JLT
CHECKED	GSP
DRAWN	KSR
CHECKED	GSP

DATE 4-30-1993
rev. 7-26-1993

FILENAME: (91130) SPN11-16.DGN

SUPERSTRUCTURE SPANS 11 TO 16

25TH AVENUE OVER IHB RAILROAD
F.A.U. RTE. 2714 SECTION 1010.2R
COOK COUNTY
STA. 38+76.67
S.N. 016-1011

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1011

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	97
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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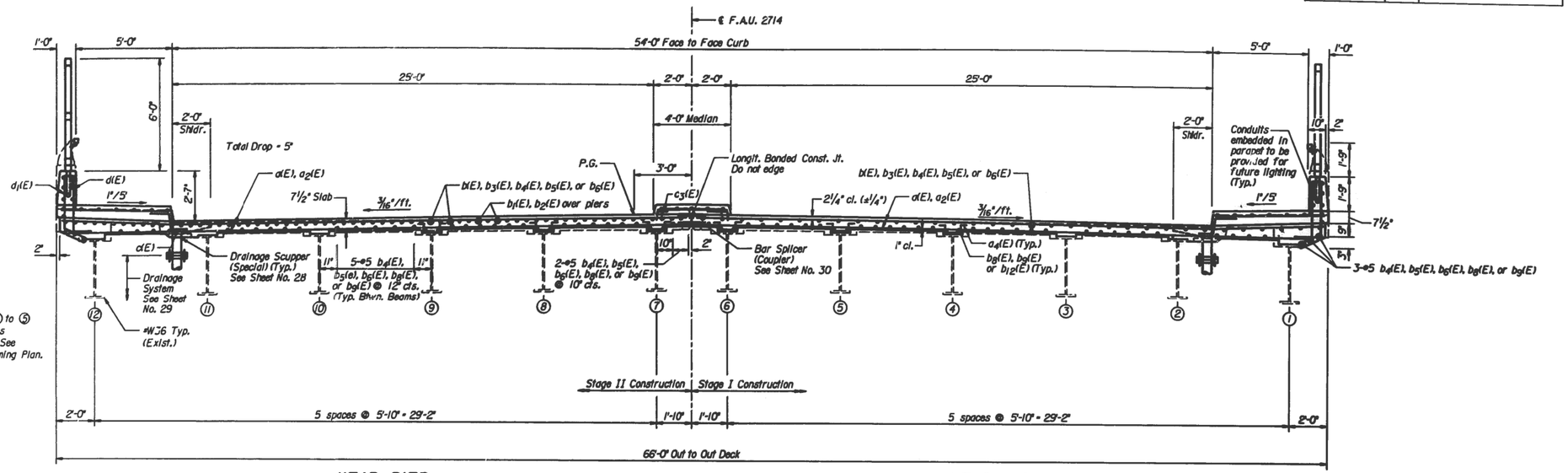
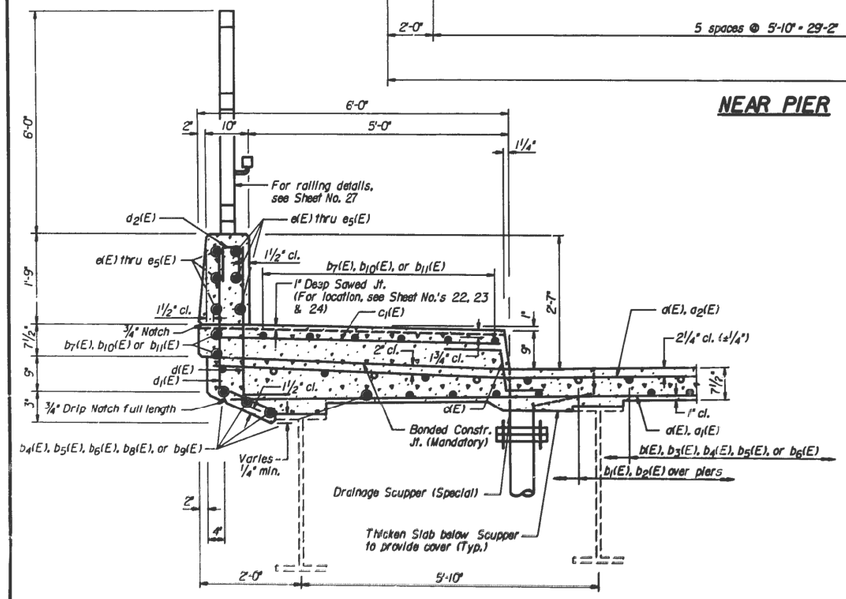
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 21
SHEETS 41

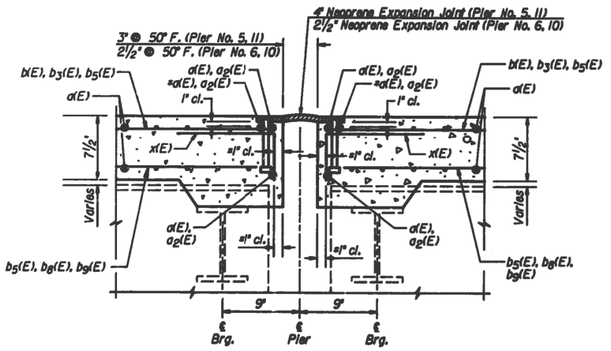


NEAR PIER **NEAR MIDSPAN**

CROSS SECTION
(Looking North)

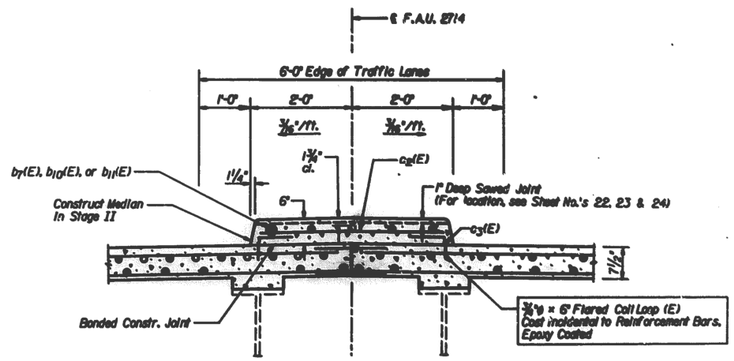


SECTION THRU PARAPET AND SIDEWALK



SECTION B-B
● Pier No.'s 5, 6, 10, 11

* Place d(E) or a2(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to d(E) or a2(E) bars.



SECTION THRU SUPERIMPOSED MEDIAN

Bascor, Inc.
consulting engineers and planners

DESIGNED	JLT
CHECKED	GSP
DRAWN	KSR
CHECKED	GSP

DATE 4-30-1993
rev. 7-26-1993

FILENAME: 191301 SPRDET1.DGN

SUPERSTRUCTURE DETAILS 1

25TH AVENUE OVER MB RAILROAD
F.A.U. RTE. 2714 SECTION 1010.2R
COOK COUNTY
STA. 38+76.67
S.N. 016-1011

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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1011

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	98
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

Bench Mark : B.M. "B" Curb on Bridge N.W. Corner Square Cut In Conc., 22' Lt. Sta. 8+88 El. 625.80

Existing Structure : 4 Simple Span Reinforced Concrete Girders With Concrete Deck. All on Closed Concrete Abutments and Concrete Piers. Back to Back Abuts. 280'-0" and 56'-0" Wide

The Contractor Shall Remove The Existing Superstructure and Replace It With a Four Span Continuous P.P.C. I-Beam Superstructure Utilizing Stage Construction.

The Substructure Is To Be Reused. SN 016-1016

Salvage : None

DESIGN STRE
PRECAST PRESTRESSE

FOR INFORMATION ONLY

f'c = 6,000 psi
f'ci = 4,500 psi
fs = 270,000 psi (½"ϕ Strands)
fsi = 189,000 psi (½"ϕ Strands)

f'c = 3,500 psi (Substructure)
Fy = 60,000 psi (Substructure)

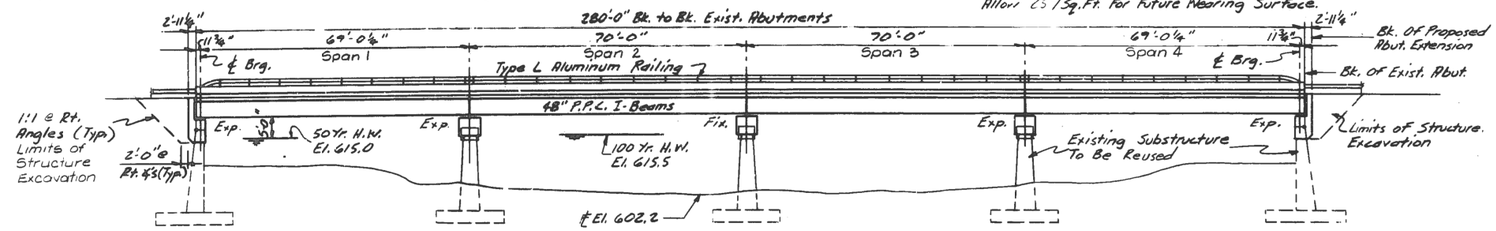
Design Specifications = AASHTO 1977 And All Applicable Interim Specifications ('78 thru '83)

Allow 25#/Sq.Ft. For Future Wearing Surface.

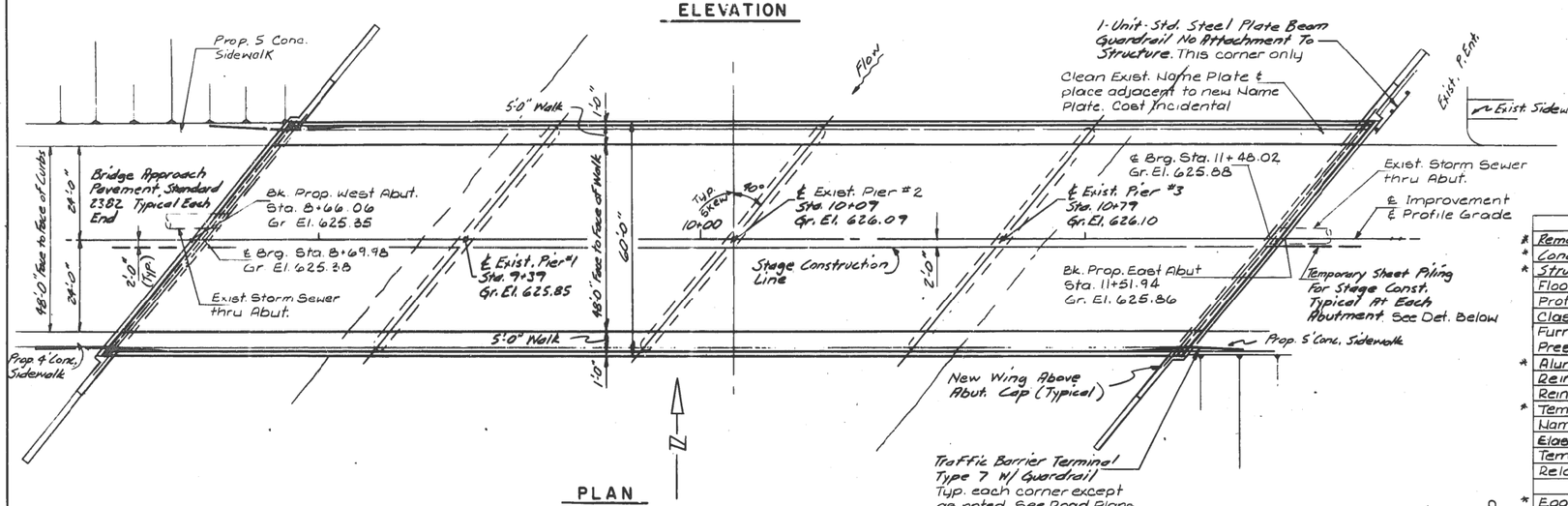
FAU RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1459	*	COOK	53	26
STA.		TO STA.		
CONTRACT NO.		ILL. FED. AID PROJ.		

Sheet 1
17 Sheets

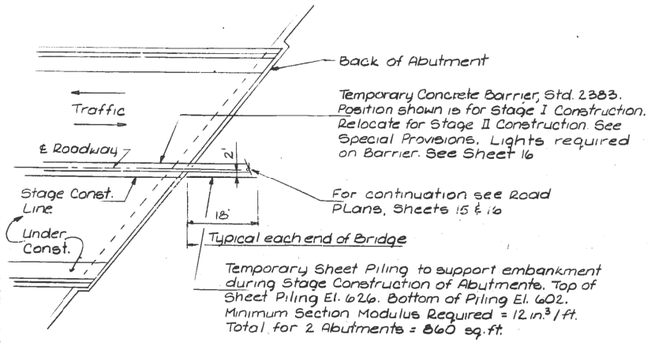
*Sec. 0303-WRS & 1316 B-R(83)



ELEVATION



PLAN



TEMPORARY SHEET PILING & CONCRETE BARRIER DETAIL

STATION 10+09
BUILT 19 BY
STATE OF ILLINOIS
FAU 1459 SEC. 0303-WRS & 1316B-R(83)
FA PROJ ACIX-6003(410)
LOADING HS 20
STR. NO. 016-1016

NAME PLATE
See Standard 2113

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

Frank L. Tilley
ILLINOIS STRUCTURAL No. 3100

GENERAL NOTES

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION OCTOBER 1, 1981, SHALL APPLY.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD 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 THE SCOPE OF THE WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 GRADE 60.

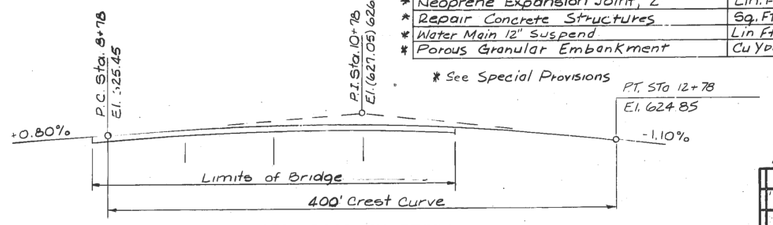
BACKFILL SHALL BE PLACED BEHIND THE ABUTMENT AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.11 OF THE STANDARD SPECIFICATIONS.

THE BACK FACE OF THE NEW ABUTMENT CAP SHALL BE WATERPROOFED ACCORDING TO ARTICLE 503.11 OF THE STANDARD SPECIFICATIONS.

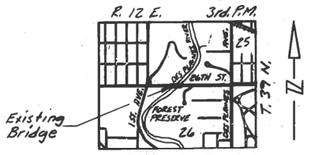
TOTAL BILL OF MATERIALS

	ITEM	UNIT	SUPER	SUB	TOTAL
*	Removal of Existing Superstructure	L. Sum	1	—	1
*	Concrete Removal (Special)	Cu. Yd.	—	125.9	125.9
*	Structure Excavation	Cu. Yd.	—	520	520
	Floor Drains	Each	32	—	32
	Protective Coat	Sq. Yd.	2023	—	2023
	Class X Concrete	Cu. Yd.	645.0	259.1	904.1
	Furnishing & Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	1669	—	1669
*	Aluminum Railing, Type L	Lin. Ft.	553	—	553
	Reinforcement Bars	Pound	3100	25940	29040
	Reinforcement Bars (Epoxy Coated)	Pound	139790	—	139790
*	Temporary Sheet Piling	Sq. Ft.	—	860	860
	Name Plates	Each	1	—	1
	Elastomeric Bearing Assembly, Type I	Each	36	—	36
	Temporary Concrete Barrier	Lin. Ft.	286	—	286
	Relocate Temporary Concrete Barrier	Lin. Ft.	286	—	286
*	Epoxy Crack Sealing	Lin. Ft.	—	50	50
*	Neoprene Expansion Joint, 2"	Lin. Ft.	160	—	160
*	Repair Concrete Structures	Sq. Ft.	—	299	299
*	Water Main 12" Suspend	Lin Ft.	286	—	286
*	Porous Granular Embankment	Cu Yd.	—	720	720

* See Special Provisions



PROPOSED ROADWAY PROFILE



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area 477 Sq. Miles Low Grade El. 621.25 @ Sta. 17+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq.Ft. Exist.	Opening Sq.Ft. Prop.	Net H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	5785	1936	1936	615.0	—	—	615.0	615.0
Base	100	6284	2038	2038	615.5	—	—	615.5	615.5
Overtopping	—	—	—	—	—	—	—	—	—
Max. Calc.	500	7283	—	2201	616.3	—	0.07	—	616.37

LOADING HS20-44

GENERAL PLAN & ELEVATION
FAU 1459 (26th STREET)
BRIDGE OVER DESPLAINES RIVER
SECTION 0303-WRS & 1316 B-R(83)
COOK COUNTY
STATION 10+09

Rev 8-13-84

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-1016

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	99
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

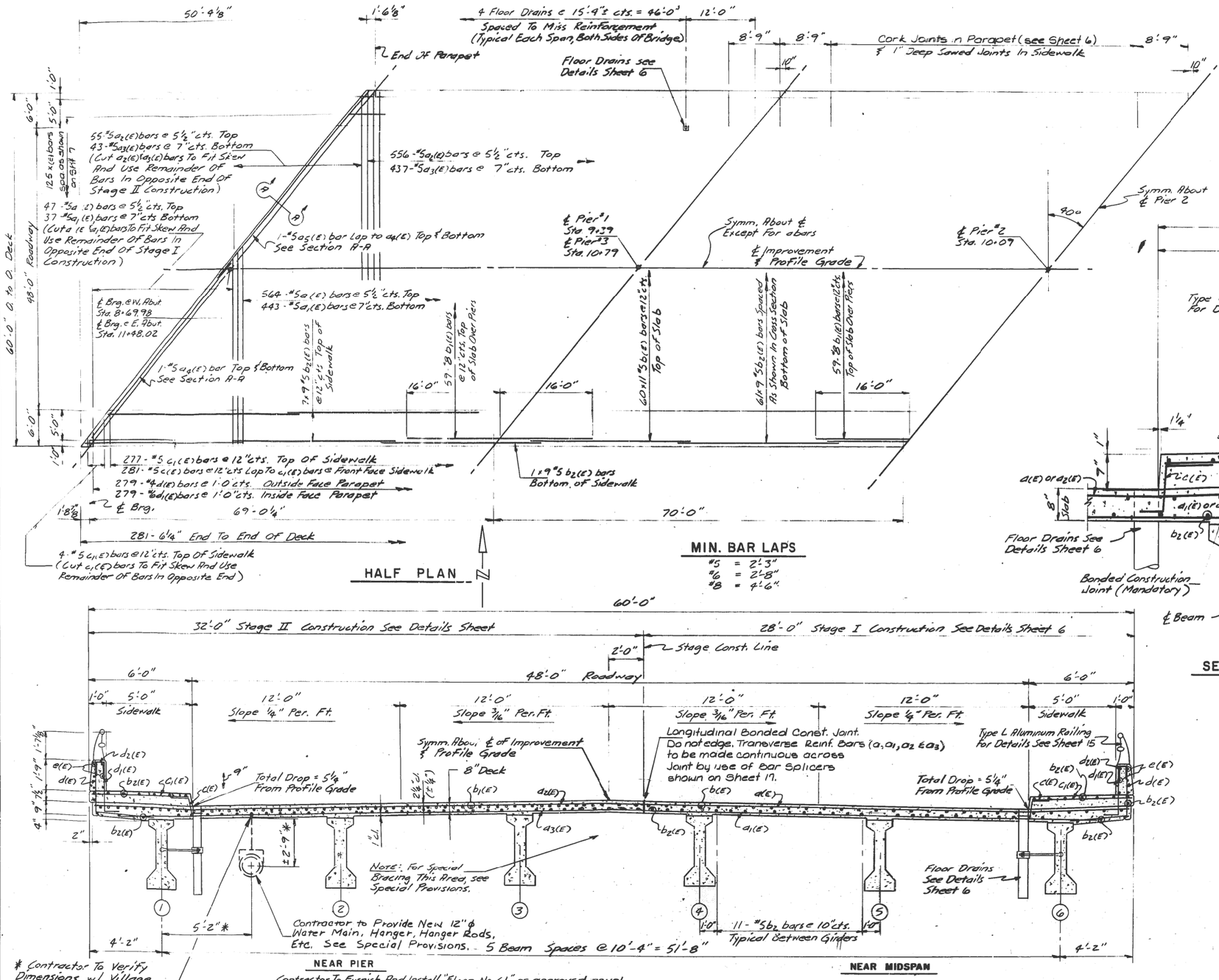
FOR INFORMATION ONLY

FAU RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1459	*	COOK	58	30
I.A.		TO STA.		
FED. AID PROJ. NO.	ILLINOIS			

Sheet 5
17 Sheets

*Sec. 0303-WRS & 1316 B-R (83)

NOTES:
See Sheet #6 For Superstructure Details And Bill Of Material.
All Reinforcement Bars In Concrete Deck And Parapets Shall Be Epoxy Coated.
Bars Indicated Thus 20x3 #5 Etc. Indicates 20 Lines Of Bars With 3 Lengths Per Line.
See Sheet #7 For Section A-A.



SUPERSTRUCTURE
FAU 1459 (26th STREET)
BRIDGE OVER DESPLAINES RIVER
SECTION 0303 - WRS & 1316 B-R (83)
COOK COUNTY
STATION 10+09

USER NAME = diazia	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1016

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	100
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RT. 378	*	COOK	58	18

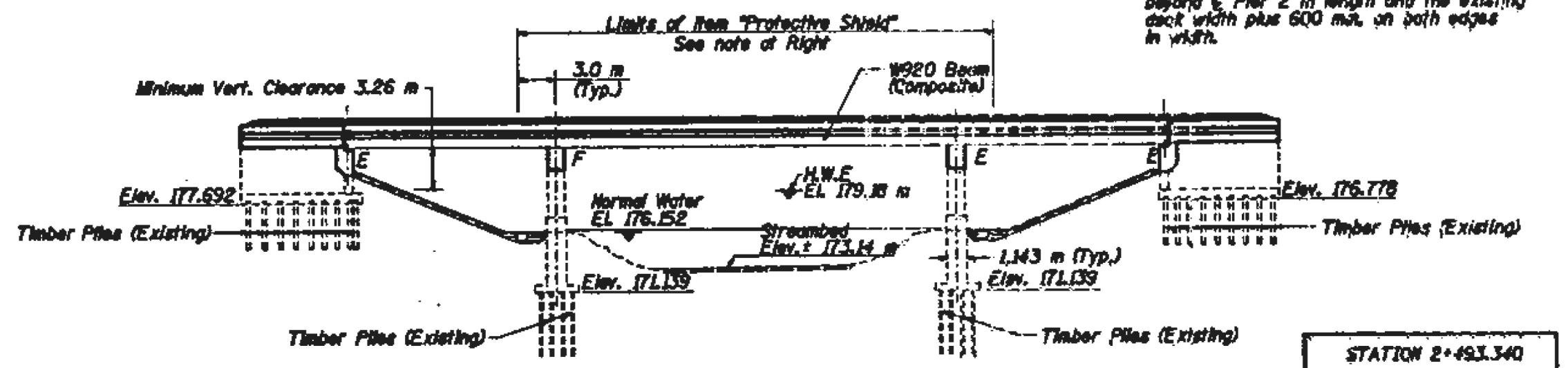
SHEET NO. 1 OF 31 SHEETS

* 0202-B-R-1

Bench Mark : Chiseled square cut on southeasterly corner of concrete sign foundation for Manufacturer's Bank; 16.1 m Left of Sta. 2+317.5 ℄ U.S. Route 41. Elev. 181.916

Existing Structure : SN 016-1054 built as Section 048-0202 by Cook County Department of Highways in 1935. Structure is a continuous three-span multi-beam bridge with a reinforced concrete deck topped with a bituminous overlay, 64.900 m Bk. - Bk. abutments and 23.4 m O. - O. deck on pile supported concrete abutments and piers. Traffic to be maintained utilizing stage construction. No salvage.

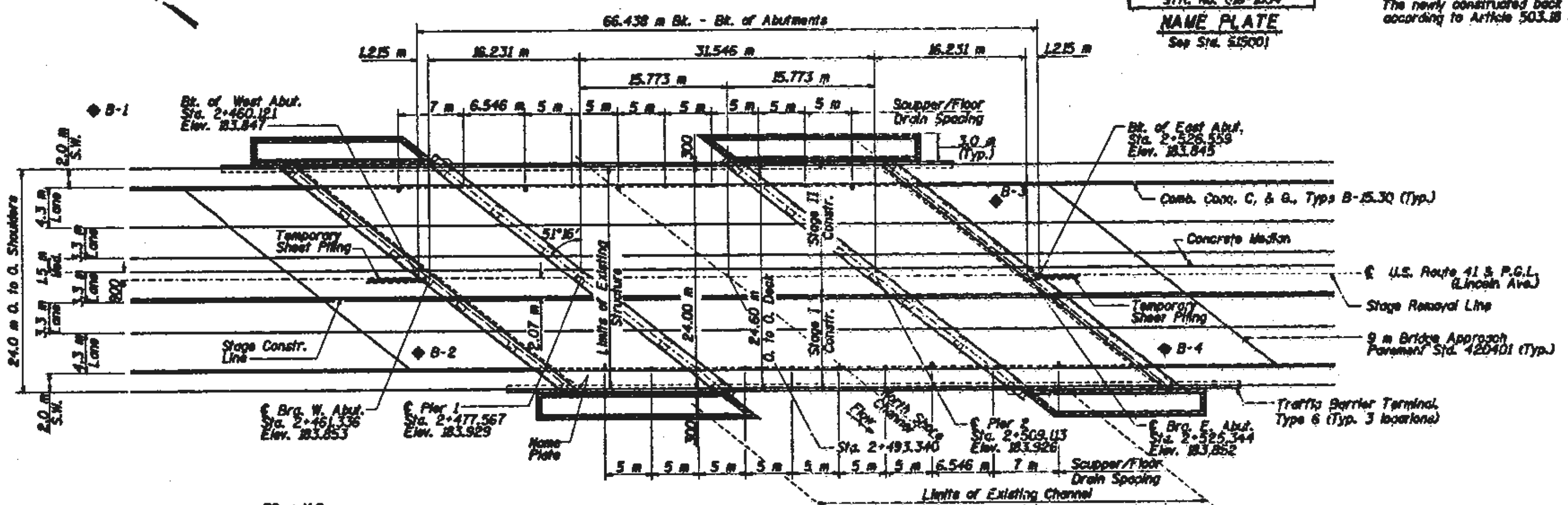
NOTE:
Limits of Item "Protective Shield" shall be from 3.0 m before ℄ of Pier 1 to 3.0 m beyond ℄ Pier 2 in length and the existing deck width plus 600 mm. on both edges in width.



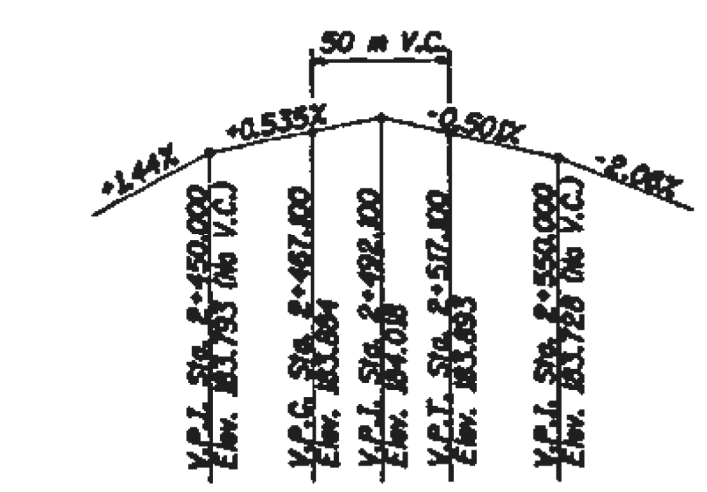
ELEVATION

STATION 2+493.340
REBUILT 20__ BY
STATE OF ILLINOIS
F.A. RT 41
F.A. PROJ. ACBHF-378(1)
LOADING HS20
STR. NO. 016-1054

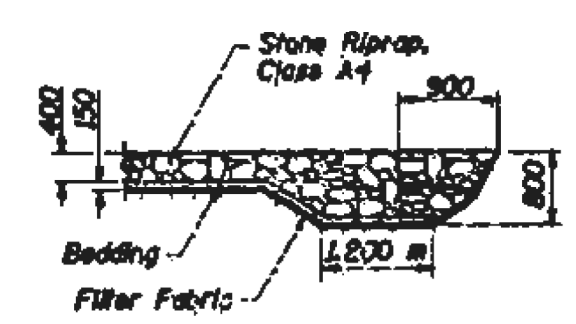
NAME PLATE
See Std. 515001



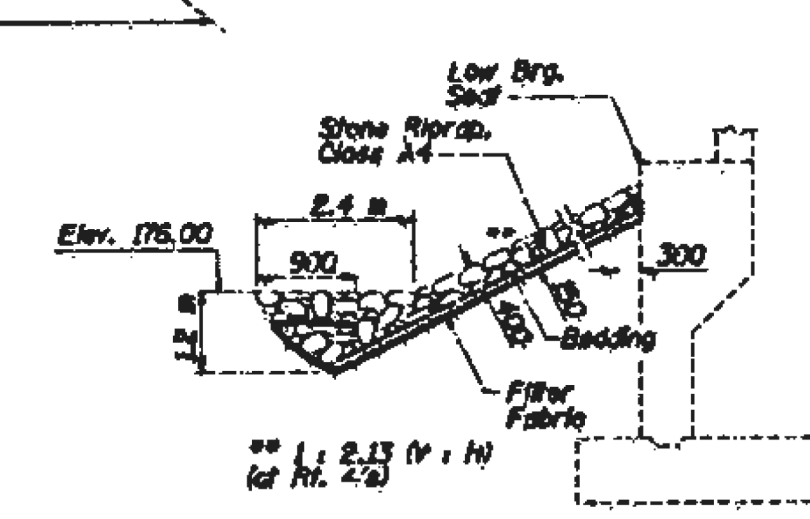
PLAN



PROFILE GRADE US 41
℄ U.S. Route 41



FLANK STONE RIPRAP TREATMENT



STONE RIPRAP TREATMENT

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts 22 mm dia., open holes 24 mm dia., unless otherwise noted.

Calculated mass of Structural Steel 224 240 Kg M 270M Grade 345.
Calculated mass of Structural Steel 22 750 Kg M 270M Grade 250.

The inorganic zinc rich primer/Acrylic/Acrylic Paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

The Structural Steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270M Grade 345.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31M, M 42M or M 53M Grade 400.

Layout of slope protection system maybe varied in the field to suit ground conditions as directed by the Engineer.

The newly constructed back face of closed Abutments shall be water proofed according to Article 503.18 of the Standard Specifications.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of work, however, the Contractor will be paid for the Quantity actually furnished at the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimension of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of the top plate shall be provided and placed as detailed.

The concrete for bridge floors finished in accordance with Article 503.17 of the Standard Specifications shall be placed and compacted parallel to the skew in uniform movements along centerline of bridge. The finishing machine, when required, shall be set parallel to the skew for striking off and screeding the concrete.

Bridge Seat Sealer shall be applied to the seat area of the west abutment and east abutment.

All dimensions are in millimeters (mm) except as noted.

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

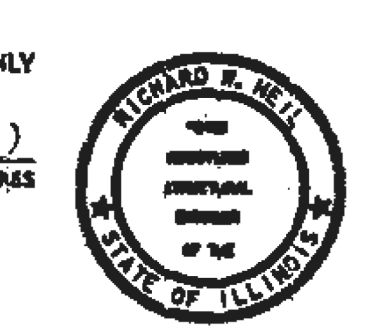
All exposed edges of concrete shall have standard 20 mm chamfers except as noted.

Existing name plates shall be cleaned and reinstalled adjacent to the new name plate. Cost shall be included with "Name Plates".

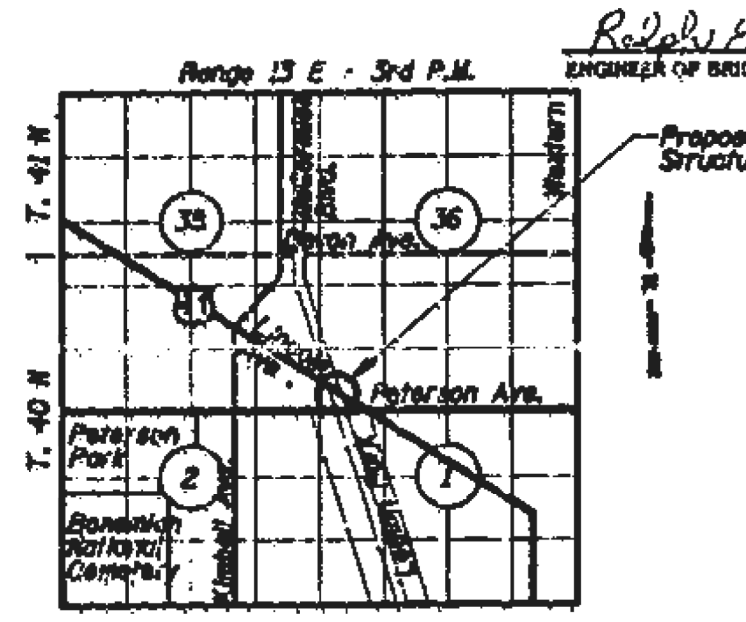
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	m^3	-	1464	1464
Stone Riprap, Class A4	m^2	-	1493	1493
Filter Fabric for Use with Riprap	m^2	-	1493	1493
Removal of Existing Superstructures	Each	1	-	1
Concrete Removal	m^3	-	331.1	331.1
Structure Excavation	m^3	-	1483	1483
Floor Drains	Each	8	-	8
Neoprene Expansion Joint 50 mm	m	79.6	-	79.6
Concrete Structures	m^3	-	391.6	391.6
Concrete Superstructure	m^3	504.0	-	504.0
Bridge Deck Grooving	m^2	1122	-	1122
Protective Coat	m^2	1705	-	1705
Elastomeric Bearing Assembly, Type I	Each	24	-	24
Elastomeric Bearing Assembly, Type II	Each	12	-	12
Furnishing and Erecting Structural Steel	Lump Sum	1	-	1
Stud Shear Connectors	Each	4504	-	4504
Reinforcement Bars, Epoxy Coated	kg	59 180	37 690	96 870
Aluminum Railing, Type L	m	161.1	-	161.1
Temporary Sheet Piling	m^2	-	167	167
Name Plates	Each	1	-	1
Bridge Seat Sealer	m^2	-	54	54
Conduit Embedded in Structure, 75mm Dia. PVC	m	319.1	-	319.1
Epoxy Crack Sealing	m	-	7	7
Bar Splicers	Each	737	-	737
Mechanical Splice	Each	-	140	140
Drainage Scuppers	Each	8	-	8
Formed Concrete Repair (Depth Equal to or less than 125 mm)	m^2	-	4	4
Protective Shield	m^2	940	-	940

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Richard W. Heil
Richard W. Heil
Illinois License No. 081-002455
Expiration Date: 11/30/00



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

WATERWAY INFORMATION

Drainage Area = (Unknown) km^2	Low Grade Elev. 183.80 m @ Sta. 2+533.5								
Flood	Freq. Yr.	Q cms	Opening Sq. m Exist.	Opening Sq. m Prop.	Nat. H.W.E. m	Head - m Exist.	Head - m Prop.	Headwater Elev. - m Exist.	Headwater Elev. - m Prop.
	10	91.2	111.9	111.9	178.42	0.01	0.01	178.43	178.43
Design	50	130.3	137.2	137.2	179.17	0.01	0.01	179.18	179.18
Base	100	146.7	148.3	148.3	179.48	0.01	0.01	179.49	179.49
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	186.9	174.7	174.7	180.19	0.01	0.01	180.20	180.20

DESIGN SPECIFICATIONS
1996 AASHTO with 1997 and 1998 Interims

LOADING MS 18
Allow 2.4 kN/m² For Future Wearing Surface

DESIGN STRESSES
f'c = 24 MPa
fy = 400 MPa (Reinforcement)
fy = 250 MPa (M 270M, Grade 250) (Struct.)
fy = 345 MPa (M 270M, Grade 345) (Struct.)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.034
Site Coefficient = 1.5

U.S. ROUTE 41 OVER NORTH SHORE CHANNEL
FAP 378/US 41
SECTION 0202-B-R-1
COOK COUNTY
STATION 2+493.340
STRUCTURE NUMBER 016-1054

DESIGNED	JMS
CHECKED	JMS
DRAWN	IT
CHECKED	JMS

Plans prepared by : Kudrna & Associates, Ltd.

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016–1054

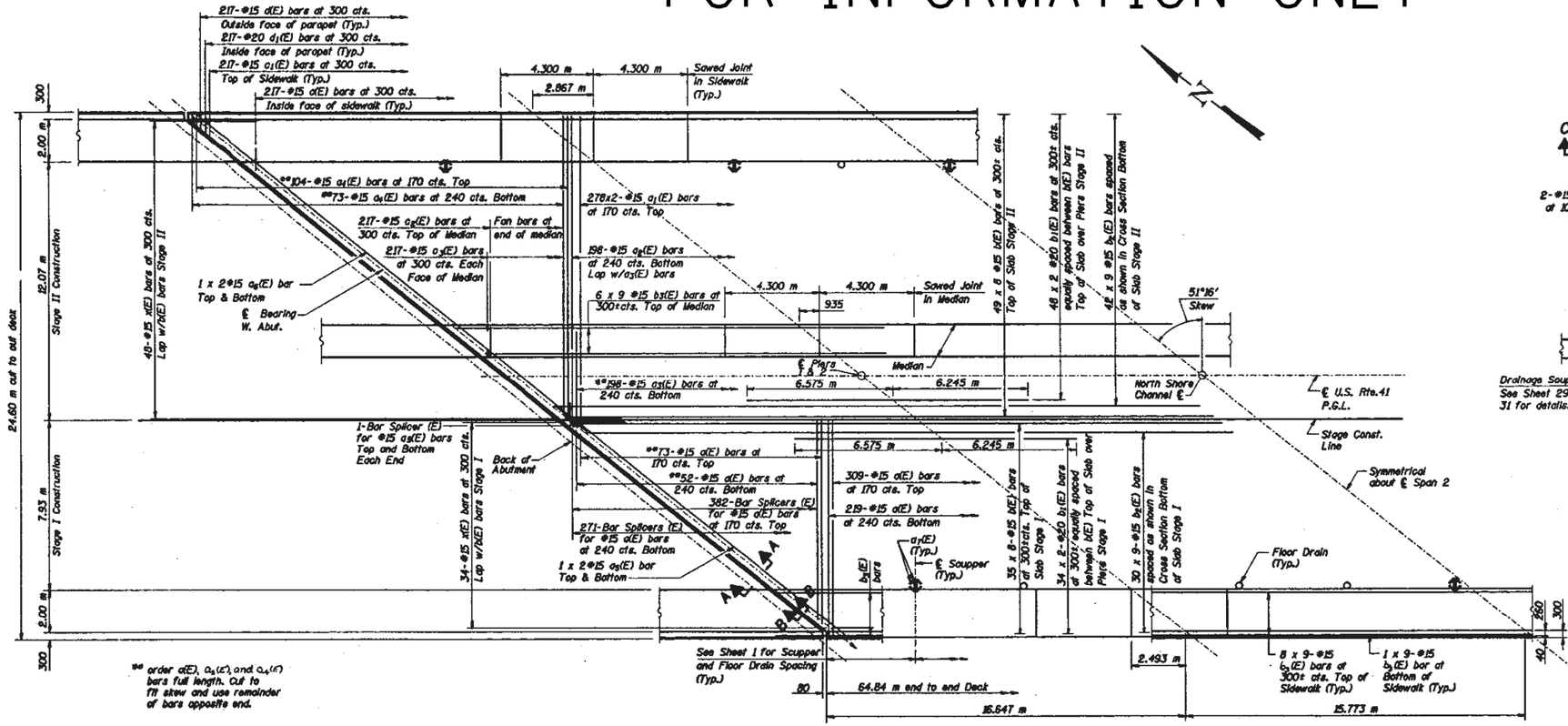
SCALE: | SHEET | OF | SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	101

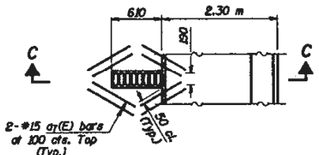
CONTRACT NO. 62H72

ILLINOIS | FED. AID PROJECT

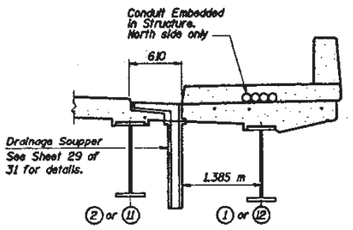
FOR INFORMATION ONLY



HALF PLAN



PLAN AT SCUPPER



SECTION C-C

Notes:

Deck foundation for Light Poles not shown on plan for clarity. See sheet 1 of 31 for Light Pole locations and details.

See Sheets 7 and 8 of 31 for superstructure details, Section A-A, Section B-B, Bill of Material and parapet reinforcement.

See Sheet 9 of 31 for Type L Aluminum Railing Details.

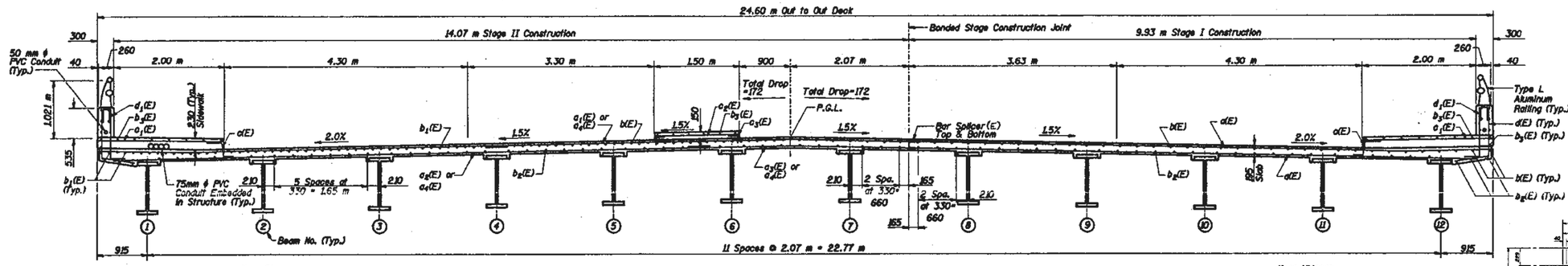
Cut longitudinal reinforcement to clear drainage scuppers.

All dimensions are in millimeters (mm) except as noted.

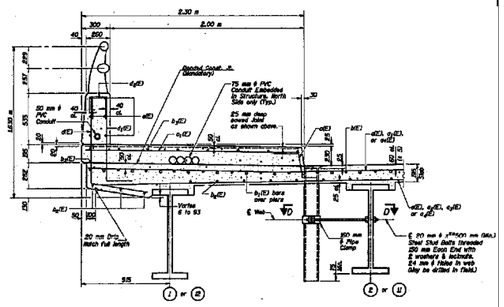
Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

Minimum lap length for #15 bars = 640 mm
Minimum lap length for #20 bars = 790 mm



CROSS SECTION
(Looking Southeast)



SECTION THRU SIDEWALK

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1054

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	102
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

Benchmark: "+" on pedestrian walk way bridge over northbound Cicero Avenue, north of Ogden Avenue, Elev. 9.336 m.

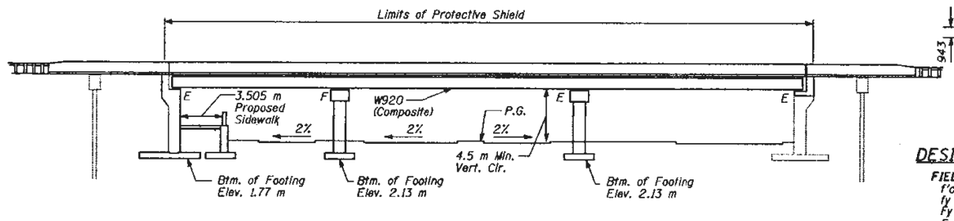
Existing Structure: Structure No. 016-1069 built as Interchange Roads 7 and 11, Section 9 (H-HB-SB) in 1962. A three-span structure 54.02 m long (66.21 m Bk. to Bk. of Approach Bents) and varying width from 10.36 m to 14.02 m. Reinforced concrete deck supported on steel wide flange beams. The superstructure shall be removed. The substructure shall be widened. A new continuous three-span steel wide flange beam superstructure shall be built. Traffic shall be detoured during rehabilitation of structure.

Notes: All dimensions are in millimeters (mm) except as noted.
All Elevations refer to the City of Chicago Datum (CCD).

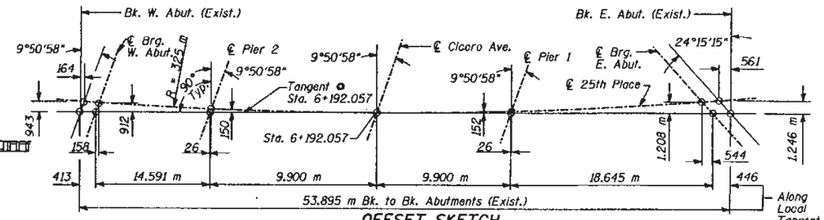
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A. U.	9(H-HB -SBR-1	COOK	426	321
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
24 SHEETS



ELEVATION



OFFSET SKETCH

DESIGN STRESSES

FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (Reinf.)
Fy = 345 MPa (M270M Grade 345) (Structural Steel)
Fy = 250 MPa (M270M Grade 250) (Structural Steel)

EXISTING SUBSTRUCTURE
fc = 7 MPa
fs = 138 MPa (Reinf.)

LOADING MS18

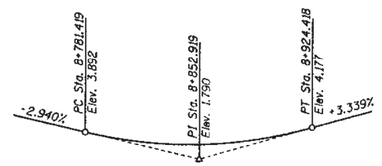
Allow 1.2 kN/m² Future Wearing Surface

SPECIFICATIONS

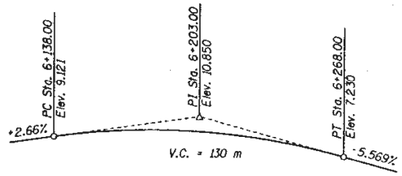
AASHTO 1996

SEISMIC DATA

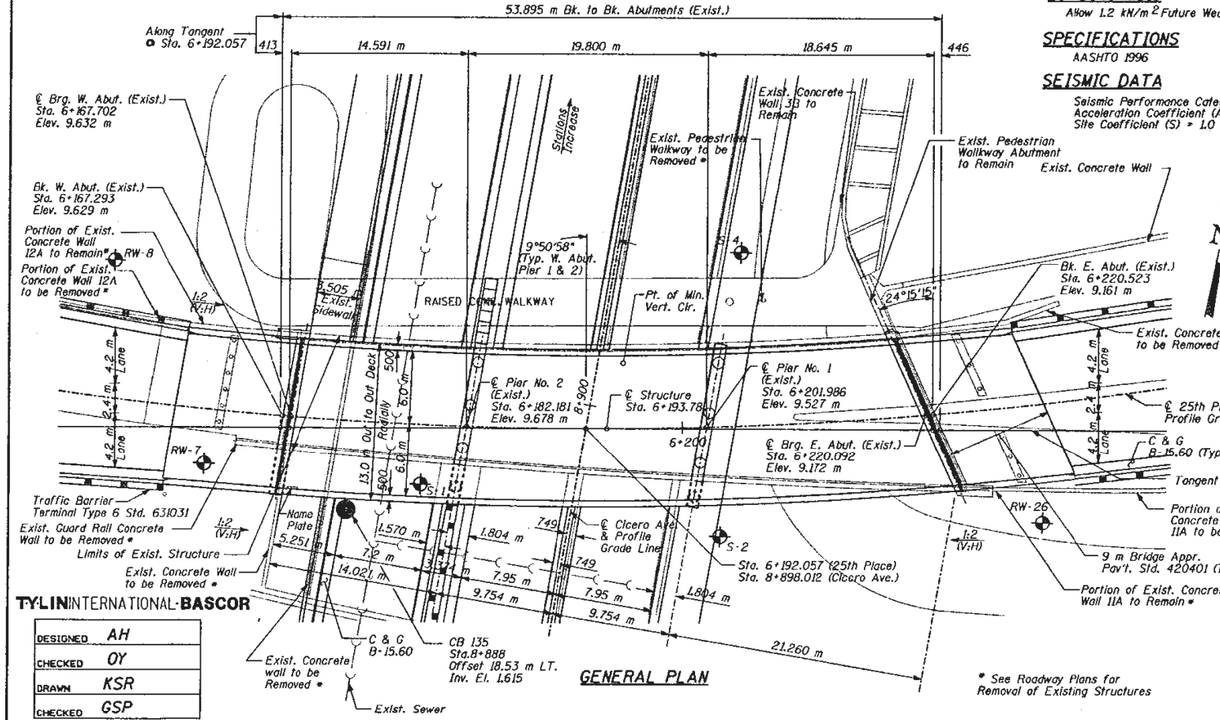
Seismic Performance Category (SPC) = A
Acceleration Coefficient (A) = .035 g
Site Coefficient (S) = 1.0



PROPOSED PROFILE GRADE
CICERO AVE.
(along ℄)



PROFILE GRADE
25th PLACE
(along ℄)

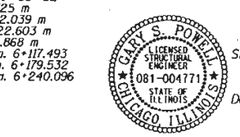


GENERAL PLAN

* See Roadway Plans for Removal of Existing Structures

CURVE DATA

25th PLACE
Δ = 21°-36'-52"
R = 325 m
T = 62.039 m
L = 122.603 m
E = 5.868 m
PC Sta. 6+117.493
PI Sta. 6+179.532
PT Sta. 6+240.096



Signed Gary S. Powell
Gary S. Powell, S.E. IL Lic. No. 081-004771
Expires 11-30-2000

Date 3-16-1999

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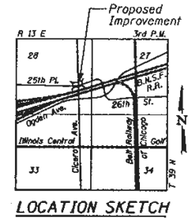
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

TY·LIN INTERNATIONAL-BASCOR

DESIGNED	AH
CHECKED	OY
DRAWN	KSR
CHECKED	GSP
DATE	12-22-97 Rev. 3-13-98

GENERAL PLAN & ELEVATION

FAU RTE 3542 SECTION 9(H-HB-SB)R-1
25TH PLACE OVER CICERO AVENUE
COOK COUNTY
STA. 6+193.78
S.N. 016-1069

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-1069

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	103
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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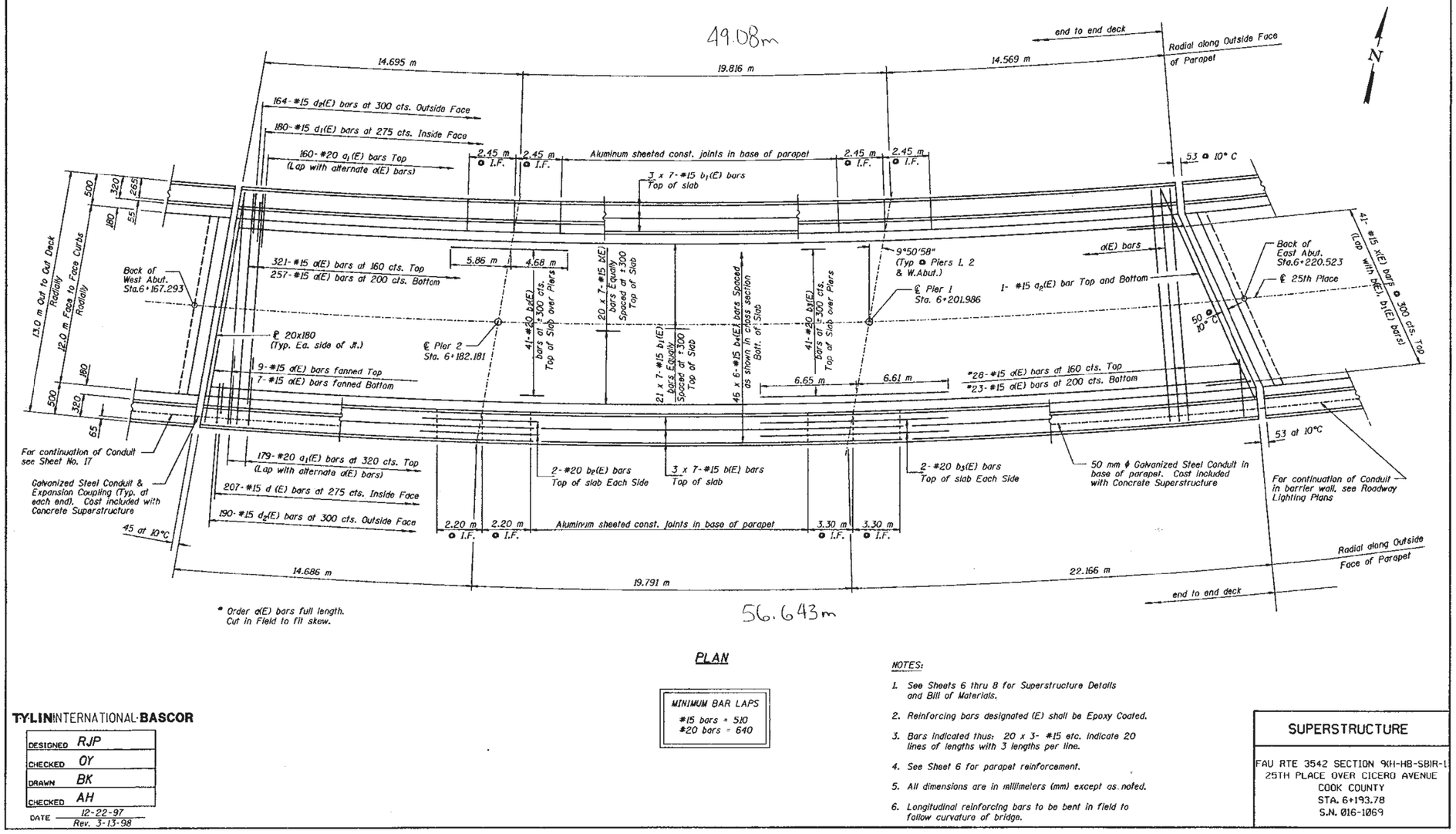
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A.U.	7944-HB -SBIR-1	COOK	426	325
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
24 SHEETS



* Order a(E) bars full length. Cut in Field to fit skew.

PLAN

MINIMUM BAR LAPS
#15 bars = 510
#20 bars = 640

NOTES:

1. See Sheets 6 thru 8 for Superstructure Details and Bill of Materials.
2. Reinforcing bars designated (E) shall be Epoxy Coated.
3. Bars indicated thus: 20 x 3- #15 etc. indicate 20 lines of lengths with 3 lengths per line.
4. See Sheet 6 for parapet reinforcement.
5. All dimensions are in millimeters (mm) except as noted.
6. Longitudinal reinforcing bars to be bent in field to follow curvature of bridge.

TYLININTERNATIONAL·BASCOR

DESIGNED	RJP
CHECKED	OY
DRAWN	BK
CHECKED	AH
DATE	12-22-97 Rev. 3-13-98

SUPERSTRUCTURE

FAU RTE 3542 SECTION 9(H-HB-SBIR-1
25TH PLACE OVER CICERO AVENUE
COOK COUNTY
STA. 6+193.78
S.N. 016-1069

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1069

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	104
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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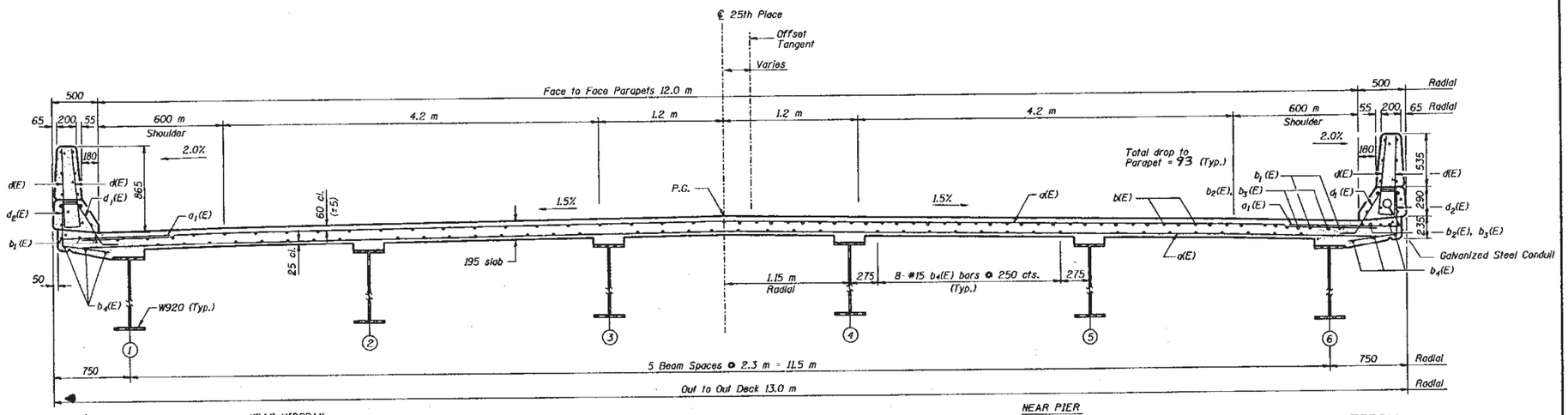
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 7
24 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

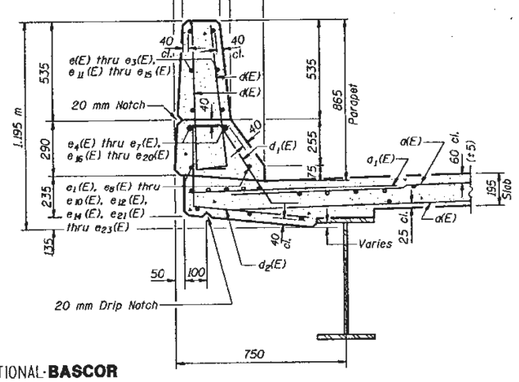


NEAR MIDSPAN

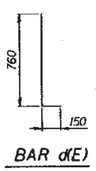
NEAR PIER

CROSS SECTION THRU SUPERSTRUCTURE

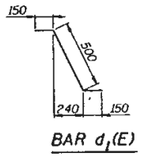
(Looking East)



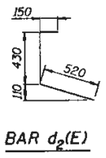
SECTION THRU PARAPET



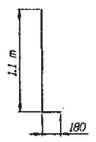
BAR d(E)



BAR $d_1(E)$



BAR $d_2(E)$



BAR x(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Length (m)	Size	Shape
a(E)	645	12.8	#15	
$a_1(E)$	339	1.20	#20	
$a_2(E)$	2	13.62	#15	
b(E)	161	8.67	#15	
$b_1(E)$	168	8.10	#15	
$b_2(E)$	45	10.54	#20	
$b_3(E)$	45	13.26	#20	
$b_4(E)$	276	10.00	#15	
d(E)	741	0.91	#15	
$d_1(E)$	387	0.80	#15	
$d_2(E)$	354	1.10	#15	
e(E)	18	4.00	#15	
$e_1(E)$	32	2.37	#15	
$e_2(E)$	18	4.89	#15	
$e_3(E)$	18	4.01	#15	
$e_4(E)$	2	12.17	#25	
$e_5(E)$	8	2.37	#25	
$e_6(E)$	2	14.84	#25	
$e_7(E)$	2	12.18	#25	
$e_8(E)$	2	12.17	#15	
$e_9(E)$	2	14.84	#15	
$e_{10}(E)$	2	12.18	#15	
$e_{11}(E)$	24	4.61	#15	
$e_{12}(E)$	16	3.18	#15	
$e_{13}(E)$	12	4.70	#15	
$e_{14}(E)$	12	2.12	#15	
$e_{15}(E)$	12	4.08	#15	
$e_{16}(E)$	4	10.36	#25	
$e_{17}(E)$	4	3.18	#25	
$e_{18}(E)$	2	14.25	#25	
$e_{19}(E)$	4	2.12	#25	
$e_{20}(E)$	2	12.41	#25	
$e_{21}(E)$	4	10.36	#15	
$e_{22}(E)$	2	14.25	#15	
$e_{23}(E)$	2	12.41	#15	
x(E)	41	1.28	#15	

Reinforcement Bars, Epoxy Coated	kg	29,410
Concrete Superstructure	m^3	183.1
Bridge Deck Grooving	m^2	600
64 mm Preformed Joint Seal	m	13
50 mm Neoprene Expansion Joint	m	14.5

NOTES:

1. See Sheet #6 for parapet reinforcement.
2. All dimensions are in millimeters (mm) except as noted.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Bars indicated thus: 2x3-#15 etc. indicate 2 lines of bars with 3 lengths per line.

TYLIN INTERNATIONAL-BASCOR

DESIGNED	RJP
CHECKED	AH
DRAWN	BK
CHECKED	GSP
DATE	12-22-97 Rev. 3-13-98

SUPERSTRUCTURE DETAILS 2

FAU RTE 3542 SECTION 9(H-HB-SB)R-1
25TH PLACE OVER CICERO AVENUE
COOK COUNTY
STA. 6+193.78
S.N. 016-1069

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	DRAWN -	REVISED -	
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PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1069

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	105
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

ch Mark: DH-100, chiseled square on the NE. corner of crosswalk at Pier 2, under Milwaukee Ave. bridge Westbound. Station 3+148.322 ℓ Ramp C, 15.719 m Rt. Elevation = 177.468

Existing Structure, S.N. 016-1094, three span continuous, riveted steel plate girders and one span R.C. ℓ Beams, 92.01 m back of ℍ Abut. to back of ℍ E. Blackwell, Built as F.A. Route 173, Sec. 0303-475HB, Hf. In 1960. Traffic to be maintained utilizing stage construction.

Notes: Bench Mark has been adjusted .066 m down to reflect field survey.

TRANS. SPLINE VERTICAL CURVE

PROFILE GRADE R/L RAMP F

PROPOSED PROFILE GRADE ℄ MILWAUKEE AVE.

Proposed Parapet and Pedestrian Railing to be Constructed on Retaining Walls (Typ.)

New Conc. Span

Min. Vert. Cl.

R/L Ramp F

R/L Ramp D

Slope Varies

R/L Ramp B

Top Existing Subway

1.07 m Web B.U. Girder Composite R/L Ramp A

Vert. Cl.

E L E V A T I O N

Sta. 4465.663 C/L Mil. Ave.
Sta. 0+548.867 R/L Ramp B
(171.02, 32)

Sta. 4628.760 C/L Mil. Ave.
Sta. 0+891.899 R/L Ramp D
(29+19.30)

Sta. 4466.092 C/L Mil. Ave.
Sta. 0+882.088 R/L Ramp A
(28+93.99)

Sta. 4626.647 C/L Mil. Ave.
Sta. 1+592.067 R/L Ramp C
(10+46.00)

℄ Brg. E. Abut. (E.xist.)
Sta. 4462.825
Elev. 181.082

End of 1st Span E. Approach Bent (E.xist.)
Sta. 4403.972
Elev. 180.858

End of SE. Ret. Wall

Limit of Protective Shield

℄ Pier 1 (E.xist.)
Sta. 4643.122
Elev. 182.201

℄ Pier 2 (E.xist.)
Sta. 4673.553
Elev. 182.995

Pt. of Min. Vert. Cl.

℄ Brg. W. Abut. (E.xist.)
Sta. 4693.899
Elev. 182.949

PG. & E. Milwaukee Ave.

Location of Name Plates

56°-03' 25" (Typ.)

Limit of Existing Structure

7.925m 22.45m to O.O.

Slope Construction

Slope Removal

Stage Constr. Line

Existing Subway

PCC. Sidewalk 150 mm (Typ.)

Concrete Curb and Gutter, See Civil Dwgs. Typ.

Bridge Approach Pavement See Civil Dwgs. (Typ.)

B.M.

Pt. of Min. Vert. Cl.

Pl 310-20.26 R/L Ramp F
+29+80.30 Rt 56° R/L Ramp A (30)

9.551 m

30.297 m

30.431 m

20.346 m

92.044 m Bk. of E. Approach Bent to Bk. of W. Abut. (E.xist.)

Back of W. Abut. (E.xist.
Sta. 4695.286
Elev. 182.980

P L A N

Sta. 4647.484 C/L Mil. Ave.
Sta. 9+446.020 R/L Ramp F
(309+90.88)

LEGEND

- Existing Light Pole
- Chain Link Fence
- Deck Drain with Enclosed Drainage System

TOTAL BILL OF MATERIAL

Class A (Bridge)	0.33	0.33
	39.2	39.2
	40.6	40.6

* Quantity Does Not Include Deck Surface

APPROVED

BHI-94-2(241)49

NAME PLATE

DESIGN SPECIFICATIONS

1992 AASHTO with 1993, 1994 & 1995 Interim specifications and Guide Specification for Steel Fatigue Evaluation of Existing Bridges, 1990

LOADING MS18

Allow 1.2 kN/m² for future wearing surface

DESIGN STRESSES

f'c = 24 MPa
fy = 400 MPa (Reinf.)
fs = 124 MPa (Existing Structural Steel)
fs = 138MPa (Proposed Structural Steel M270 Gr.250)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.09g
Site Coefficient (S) = 1.2

Hinge Det. Sht. No.

Proposed Rehabilitated Structure

LOCATION SKETCH

V.C. = 188.976 m
-4.15%
3.65%
Sta. 0+862.630
Elev. 176.326
P.V.I. Sta. 0+968.482 Elev. 172.605
P.V.C. Sta. 0+987.654 Elev. 176.094

PROFILE GRADE R/L RAMP D

V.C. = 152.400 m
-2.72%
3.20%
P.V.T. Sta. 3+555.797 Elev. 175.087
P.V.I. Sta. 3+479.597 Elev. 173.04
P.V.C. Sta. 3+403.397 Elev. 175.452

PROFILE GRADE R/L RAMP C

V.C. = 188.976 m
-4.45%
5.50%
P.V.T. Sta. 0+464.400 Elev. 176.196
P.V.I. Sta. 0+366.028 Elev. 172.854
P.V.C. Sta. 0+269.+40 Elev. 176.029

PROFILE GRADE R/L RAMP A

Trans. Cross Slope 2% Trans.
0+464.400 0+436.676

Cross Slope 2% Trans. S.E. = 4.70% S.E. = 3.3%
3+398.520 3+334.542

Trans. S.E. = 5.62%
0+960.120 0+786.384

DeLEUW CATHER

Rev. 11-7-96

KENNEDY RECONSTRUCTION PROJECT
ILLINOIS DEPARTMENT OF TRANSPORTATION
MILWAUKEE AVENUE OVER OHIO FEEDER

GENERAL PLAN

F.A.I. 90/94 SECTION 0303-475HB BR SN 016-1094 COOK COUNTY STA. 4+643.127

DE LEUW, CATHER & COMPANY
ENGINEERS AND PLANNERS

0-1

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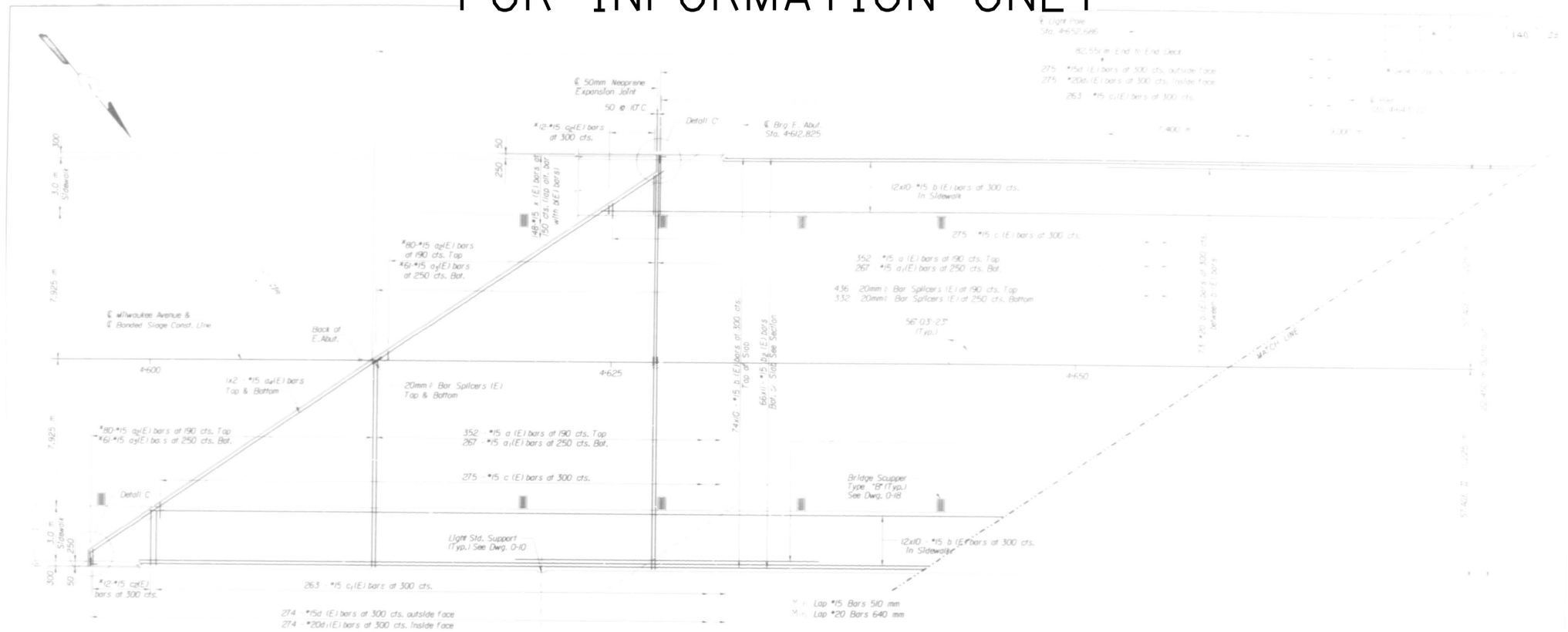
PLOT DATE = 1/30/2019	DATE -	REVISED -			

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	106
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

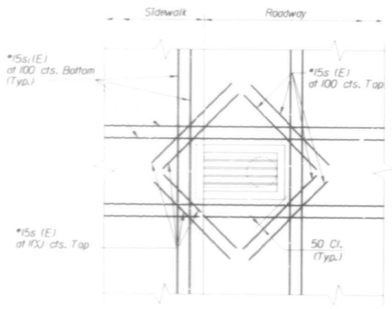
FOR INFORMATION ONLY



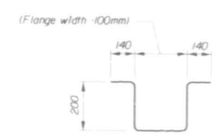
DECK PLAN

Notes:

1. For Deck Section and Details see Dwg. 0-8.
2. Work this Dwg. with Dwg. 0-7.
3. Bars indicated 12 x 10 - *15 etc. indicates 12 lines of bars with 10 lengths per line.
4. The reinforcing bars in the deck slab shall be cut to clear the scuppers and drains in the slab. For scupper spacings see Dwg. 0-18.
5. For Parapet elevations and details, see Dwg. 0-9 and 0-10.



SCUPPER REINFORCING DETAIL



"FILLET REINFORCEMENT"
(*15 (E) at 300mm Spacing)

When the fillet heights exceed, 130 mm, the Contractor shall provide "Fillet Reinforcement" as detailed above. The cost of this reinforcement including labor and other materials to perform this task shall be considered incidental to "Reinforment Bars, Epoxy Coated".

DeLEUW CATHER

KENNEDY RECONSTRUCTION PROJECT
ILLINOIS DEPARTMENT OF TRANSPORTATION

MILWAUKEE AVENUE OVER OHIO FEEDER

DECK SLAB PLAN

F.A.I. 90/94
SECTION 0303-475HB-BR SN 016-1094
COOK COUNTY
STA. 4+643.122

DE LEUW, CATHER & COMPANY
ENGINEERS AND PLANNERS

DRAWING NO. 0-6

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PLOT DATE = 1/30/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-1094

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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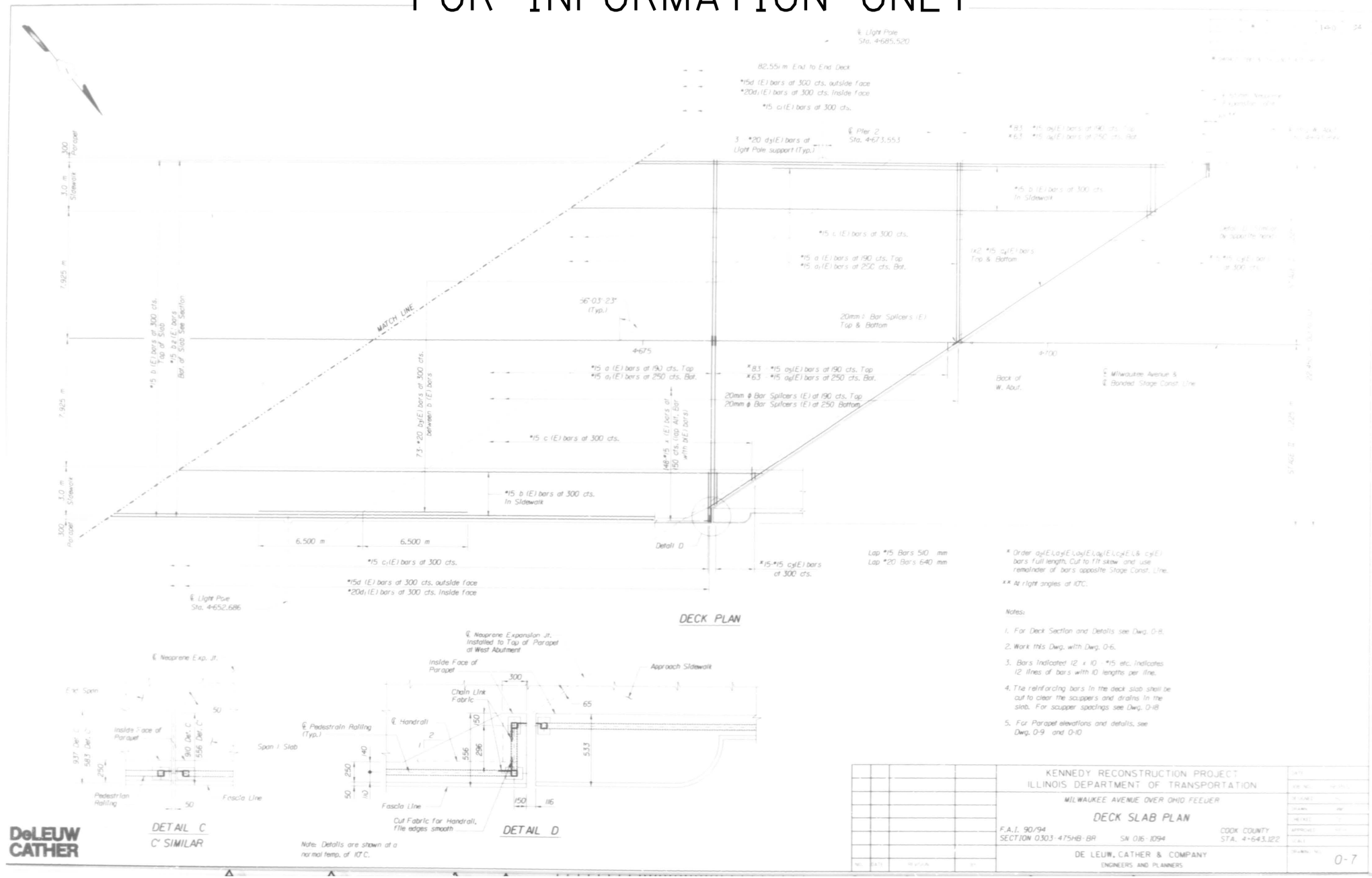
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY



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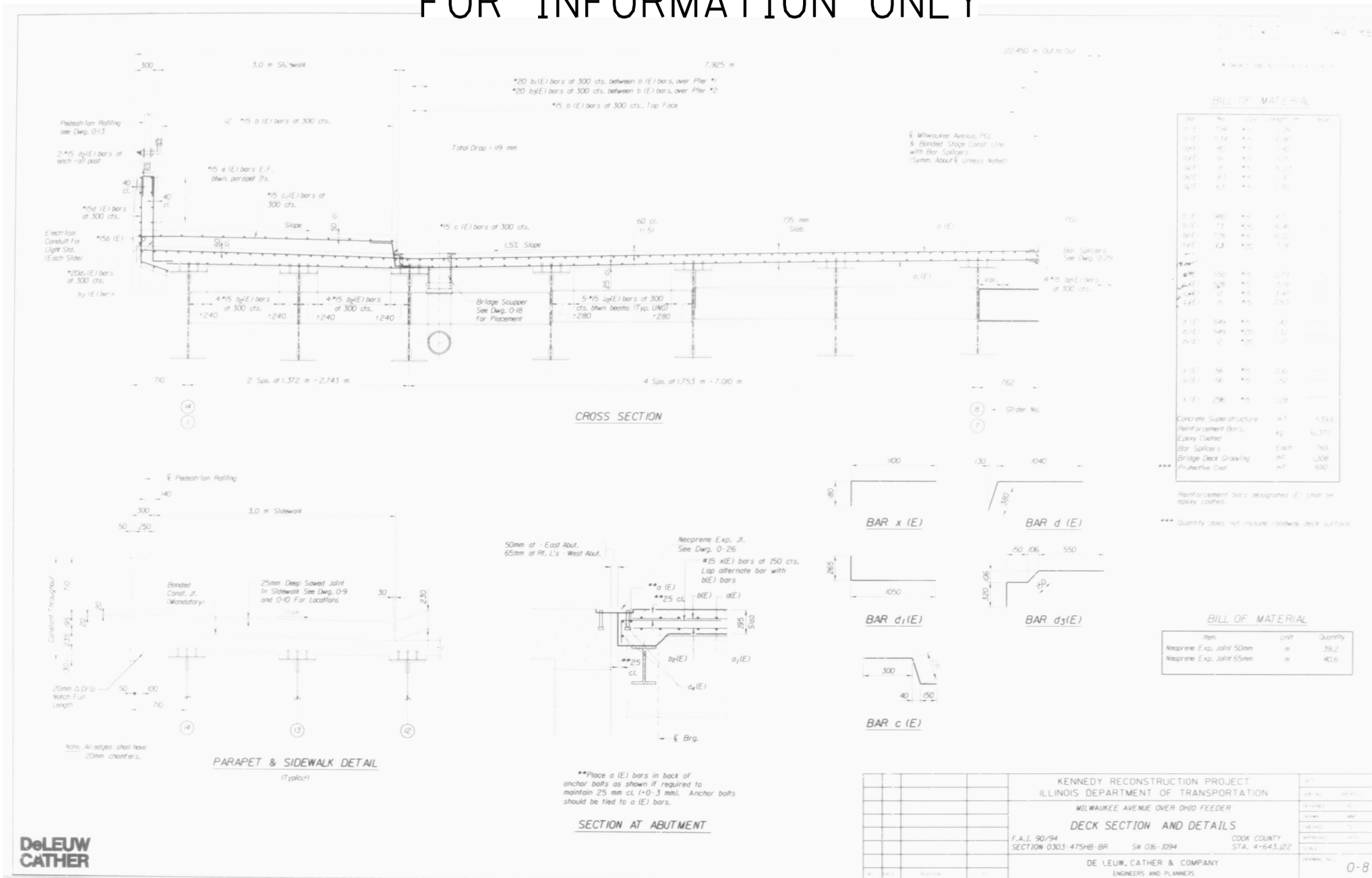
FOR INFORMATION ONLY



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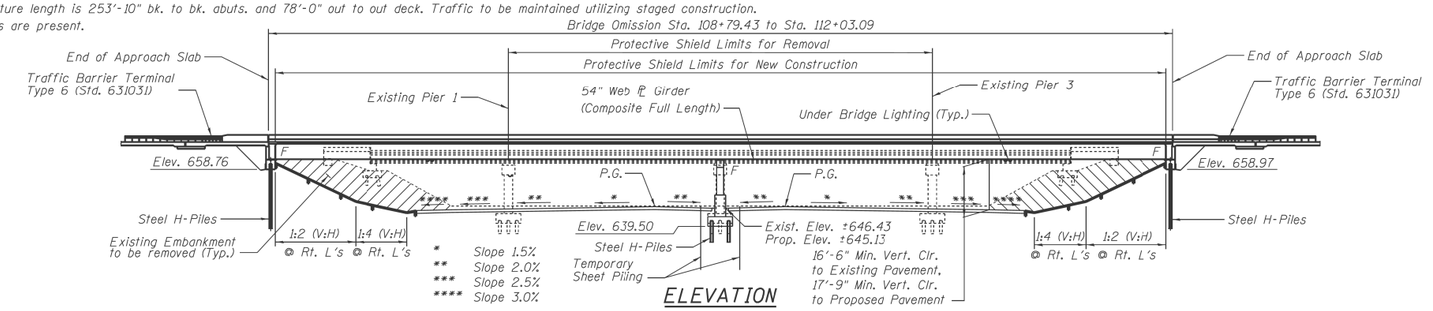
FOR INFORMATION ONLY

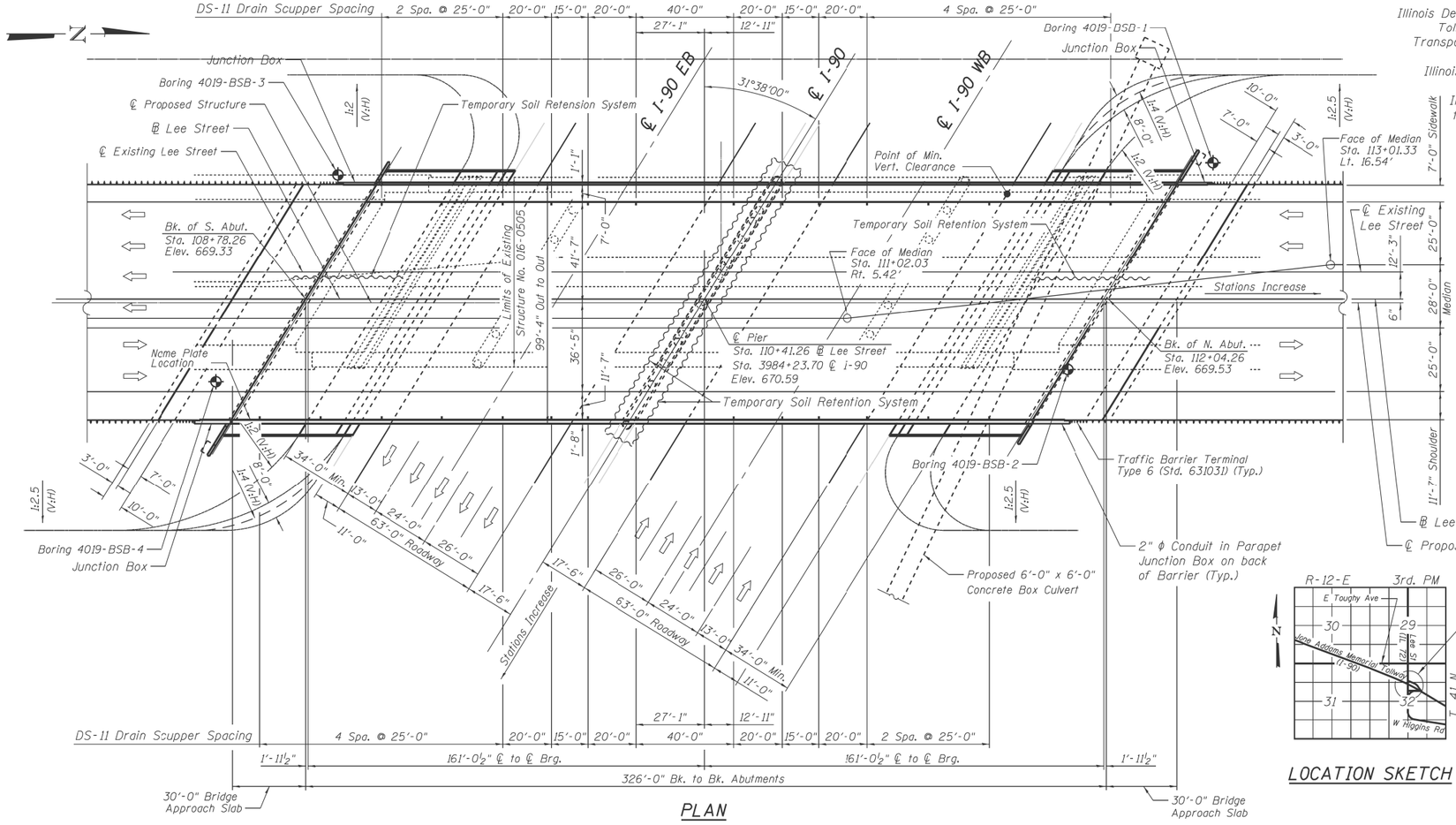
Bench Mark: BM12109 Chiseled Square on top of the NW corner of barrier wall under Lee Street E

Salvage: (None)

Existing Structure: S.N. 016-0505, Tollway Bridge No. 547 built in 1958 as Bridge N-7-10 Sta. 3200+58.29.
Existing structure is a 4-span reinforced concrete deck on P.P.C. I-beams supported by pile bent abutments and multi-column piers on piles.
The structure length is 253'-10" bk. to bk. abuts. and 78'-0" out to out deck. Traffic to be maintained utilizing staged construction.
No Utilities are present.



ELEVATION



PLAN

HIGHWAY CLASSIFICATION

F.A.U. Rte. 1350 - IL 72 (Lee St.)
Functional Class: Urban
ADT: 29,700 (2011); 30,591 (2032)
DHV: 3,059 (2032)
ADTT: 1782 (2011)
Design Speed: 45 mph
Posted Speed: 45 mph

F.A.I. Rte. 0090 - I-90
Functional Class: Interstate
ADT: 173,200 (2010); 169,126 (2032)
DHV: 2,120 (2032)
ADTT: 10,392 (2011)
Design Speed: 65 mph
Posted Speed: 65 mph

LOADING HL 93

Allow 50#/sq. ft. for Future Wearing Surface.
Deflection Criteria: Vehicular and pedestrian loads, Span/1000

LOAD RATING FACTORS

Inventory Rating Factor: 1.59
Operating Rating Factor: 2.06
Note: Future wearing surface weight excluded in Rating Factors

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition
Design Manual for Tollway Transportation Structures and Facilities, dated March 2012, revised October 2012
Illinois Department of Transportation Bridge Manual, dated January 2012

CONSTRUCTION SPECIFICATIONS

Illinois Department of Transportation Guide Bridge Special Provisions (GBSP's)
Tollway Supplemental Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Issued January 1, 2012
Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions Adopted January 1, 2012
Illinois Department of Transportation Standard Specifications for Road and Bridge Construction Adopted January 1, 2012.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M270, Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.069g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.110g
Soil Site Class = C

STATION 110+41.26
BUILT 201_ BY
STATE OF ILLINOIS
F.A.U. RTE. 1350
LOADING HL-93
STRUCTURE NO. 016-1509

NAME PLATE
See Std. 515001

LOCATION SKETCH

GENERAL PLAN
JANE ADDAMS MEMORIAL TOLLWAY
IL 72 (LEE STREET) OVER I-90
F.A.U. RTE. 1350 - SEC. N7-10
COOK COUNTY
STATION 3984+23.70
NEW STRUCTURE NO. 016-1509

SA-1 of 54

DRAWN BY SCS	DATE 9/17/2013	ABNA 9901 South Western Ave. Chicago, IL 60643 P: (773) 881-4788 F: (773) 239-3728 DESIGN FIRM REG. 184.002117	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY SEA	DATE 9/17/2013		

REVISIONS		
NO.	DATE	DESCRIPTION

LEE STREET OVER I-90
GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-1509

DRAWING NO. 164 OF 257

9/17/2013
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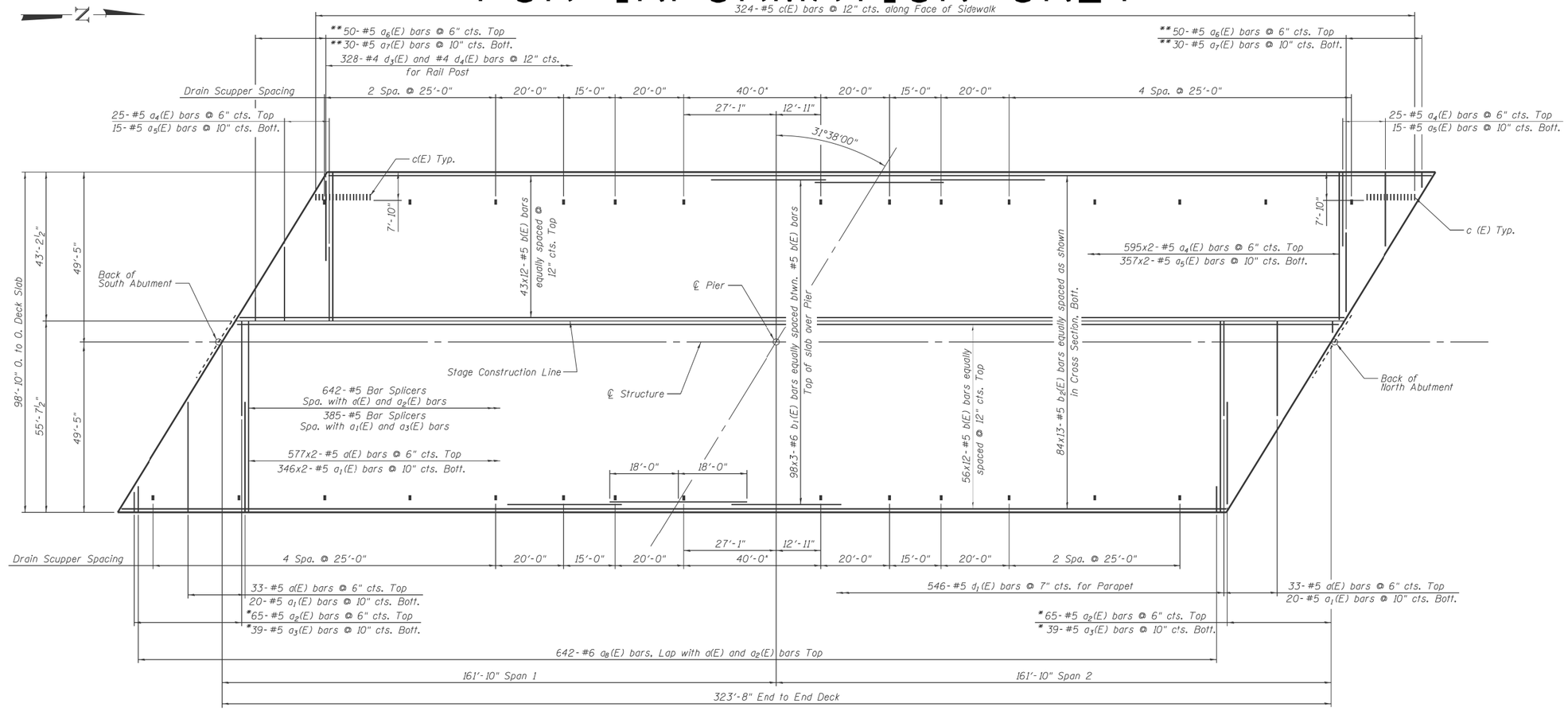
PLOT DATE = 1/30/2019	DATE -	REVISED -	

GENERAL PLAN
SN: 016-1509

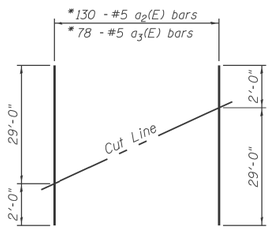
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	110
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY

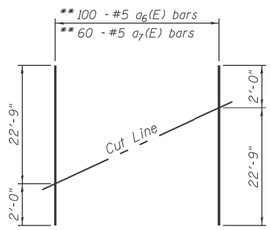


DECK PLAN



FIELD CUTTING DIAGRAM

Order a2(E) and a3(E) full length. Cut as shown and use remainder of bars in opposite face.



FIELD CUTTING DIAGRAM

Order a6(E) and a7(E) full length. Cut as shown and use remainder of bars in opposite face.

Notes:

For Deck Cross Section see Sheet No. SA-32.

For Sidewalk Plan see Sheet No. SA-33.

For Drainage System see Sheets No. SA-37 thru SA-40.

Minimum lap length #5 bars=2'-7" if spaced 6" or more
#6 bars=3'-1"

Reinforcement bars designated (E) shall be Epoxy coated.

Bars detailed thus 62x10-#5 etc. indicates 62 lines of bars with 10 lengths per line

SA-31 of 54

DRAWN BY	SCS	DATE	9/17/2013
CHECKED BY	SEA	DATE	9/17/2013

ABNA
9901 South Western Ave.
Chicago, IL 60643
P: (773) 881-4788
F: (773) 239-3728
DESIGN FIRM REG. 184.002117

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LEE STREET OVER I-90

DECK PLAN

DRAWING NO. 194 OF 257

9/17/2013
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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

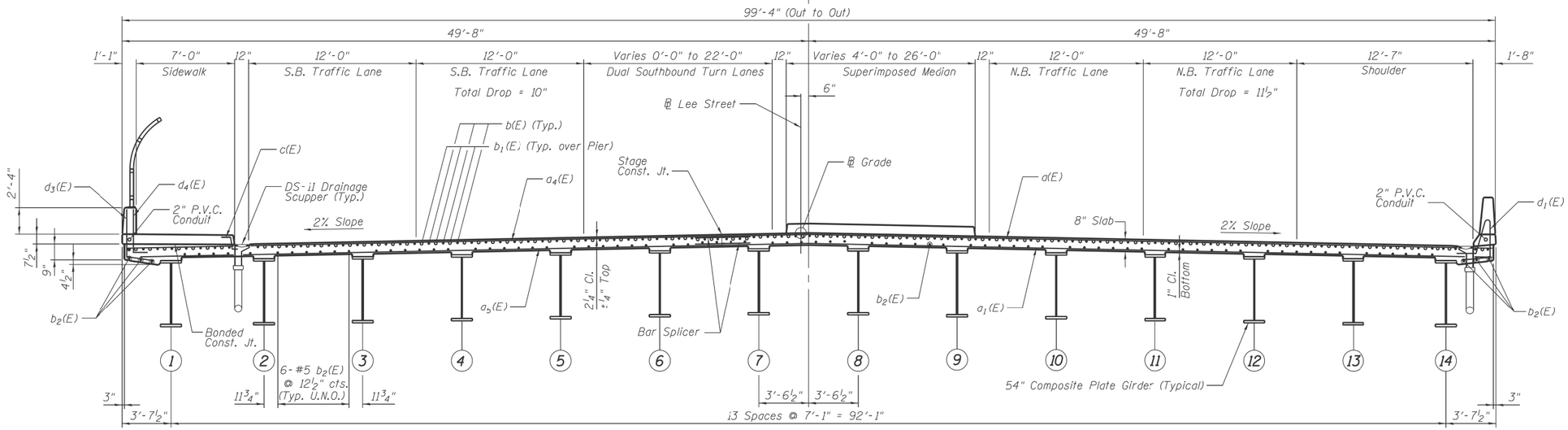
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-1509

SCALE: SHEET OF SHEETS STA. TO STA.

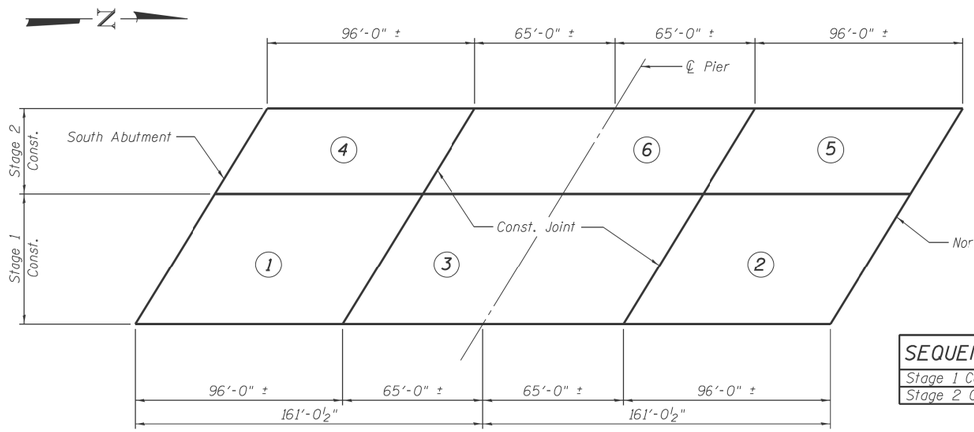
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	111
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY



CROSS SECTION (SHOWING DECK REINF. ONLY)

(Looking North)

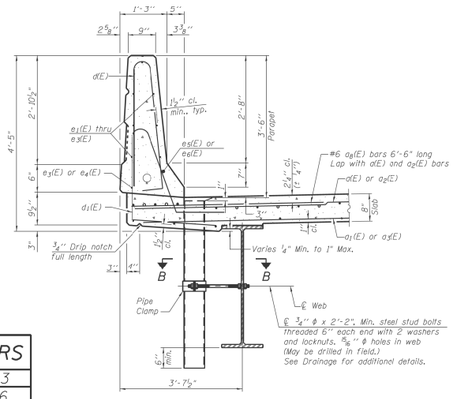


SEQUENCE OF POURS			
Stage 1 Const.	1	2	3
Stage 2 Const.	4	5	6

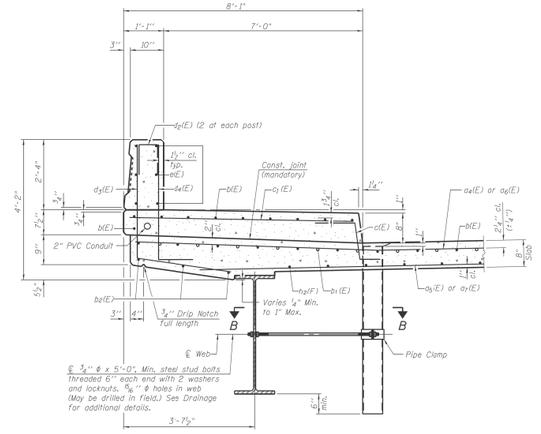
DECK POURING SEQUENCE

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1) At least 72 hours shall have elapsed from the end of the previous pour.
2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.



SECTION THRU PARAPET



SECTION THRU SIDEWALK

DRAWN BY	SCS	DATE	9/17/2013
CHECKED BY	SEA	DATE	9/17/2013

ABNA
9901 South Western Ave.
Chicago, IL 60643
P: (773) 881-4788
F: (773) 239-3728
DESIGN FIRM REG. 184.002117

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LEE STREET OVER I-90

DECK CROSS SECTION

DRAWING NO. 195 OF 257

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-1509

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	112
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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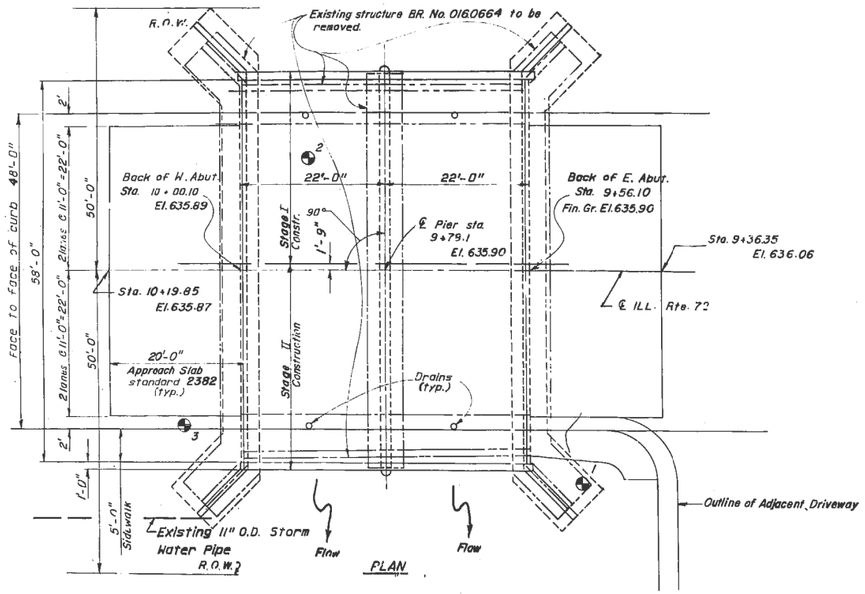
9/17/2013
J:\2012\k021\Cadd\Design\48195tructure\Sht\48195S2.dgn

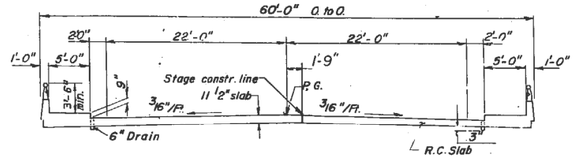
FOR INFORMATION ONLY

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1860 (IL 72)	0H18-R(8B)	COOK	17	6
STA		TO STA		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

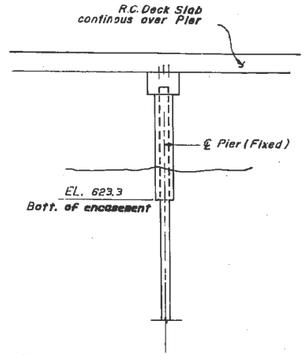
BM. No. 5 Elev. 632.77 - Arrowhead on Fire Hydrant on Southside of Higgins Road, 200'± West of Railroad Bridge over Higgins Road



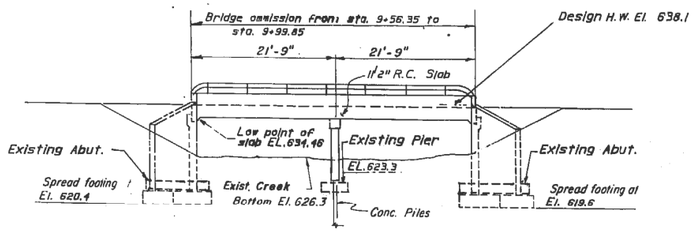
PLAN



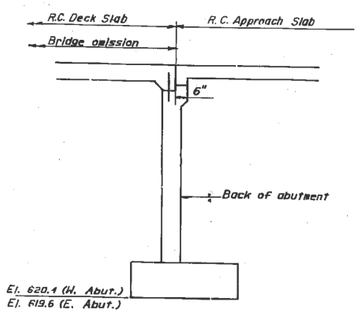
TYPICAL BRIDGE SECTION



PIER CROSS SECTION



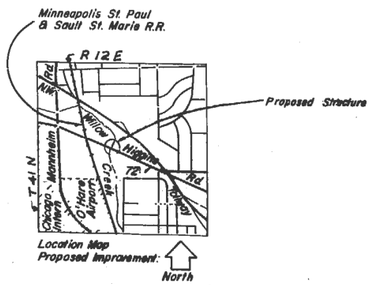
ELEVATION



ABUTMENT SECTION

Bridge No. 016-0664 consists of two simple reinforced concrete slab spans of 21'-0" each. The 11'2" thick slabs rest directly on reinforced concrete center pier and closed abutments. The pier consists of a 32" wide cap with a base tapering from 24" to 34" wide. The abutment walls are 12" thick. The bridge was built in 1923. In 1934 the bridge was widened from two to four lanes. The abutments and pier were extended 12' on both ends. At one time, a 6" wide x 37" high concrete shelf was added to the cap area of the west abutment. Overall dimensions of the bridge are 44'-0" back to back abutments, X56'-2", out to out. The bridge carries four 11' lanes and two 5' sidewalks.

Maintain two lane traffic at all times utilizing stage construction. No salvage.



LWR. NO. 3-1

Notes:

Specifications :

General :
The Standard Specifications for Road and Bridge Construction, adopted October 1, 1979 along with current supplemental specifications and special provisions.

Design :
1977 A.A.S.H.T.O. Standard Specifications for Highway Bridges, including interim specifications 1978 thru 1982.

Loading :
H.S.20-44, allow 25 Lbs. per sq. foot for future wearing surface.

Design stresses :
Concrete : F'c= 3500 p.s.i.

Fy= 60,000 p.s.i. (All Reinforcement)

* See Proposal for Boring Data.
* Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
* Backfill shall be placed behind the abutment after the superstructure has been poured and the falsework removed. See Article 502.11 of the Standard Specifications.
* The back face of Closed Abutments (or Retaining Walls) shall be waterproofed according to Article 503.11 of the Standard Specifications.
* The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.
* The contractor shall drive 1 Concrete test pile in a permanent location at Pier as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY SUB	QUANTITY SUPER	QUANTITY TOTAL
Removal of Existing Structure	Each			1
Cofferdam Excavation	Cu Yd	134.4		134.4
Floor Drains	Each		4	4
Class X Concrete	Cu Yd	203.6	115.2	318.8
Aluminum Railing	Lin Ft		83	83
Reinforcement Bars	Pound	20,409	13,716	34,125
Reinforcement Bars (Epoxy Coated)	Pound		11,508	11,508
Concrete Piles	Lin. Ft	219		219
Test Pile, Concrete	Each	1		1
Cofferdams	Each	3		3
Temporary Sheet Piling	Sq. Ft.	990		990
Relocate Temp. Concrete Barrier	Lin. Ft.		44	44
Temporary Bridge Rail	Lin. Ft		44	44
Protective Coat	Sq. Yd.	313		313
Name Plate	Each		1	1

Drainage Area 17 Sq Mi — Overtopping Elev. 634.7 — ℄ Sta.

Flood	Freq Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	880	246	246	638.1	0.06	0.06	638.16	638.16
Base	100	1010	246	246	638.6	0.06	0.06	638.66	638.66
Overtopping	<2	500	246	246	634.7	0	0	634.7	634.7
Max. Calc.	500								

WATERWAY INFORMATION

ROBERT M. BERGER 3766 REGISTERED PROFESSIONAL ENGINEER ILLINOIS

R. H. Berger 8/25/83

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

BYRD, TALLAMY, MACDONALD & LEWIS
CONSULTING ENGINEERS
A DIVISION OF WILBUR SMITH & ASSOCIATES
ROSELLE, IL

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
HIGGINS RD (ILL 72)

GENERAL PLAN

SCALE: VERT. HORIZ.
DATE
DRAWN BY TFW
CHECKED BY DWS

MODEL: Default
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2533

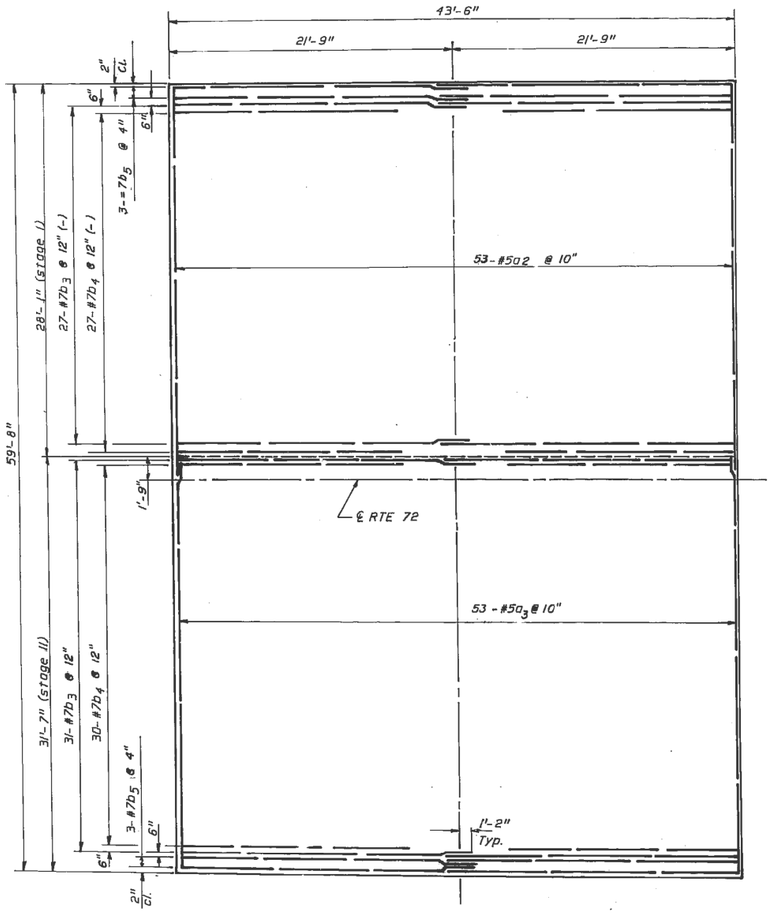
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	113
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

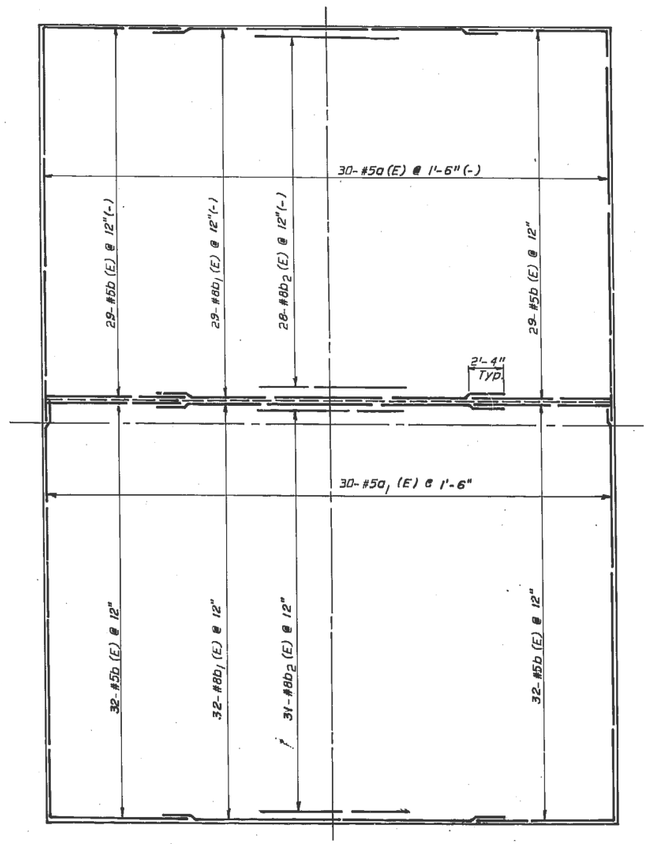
FOR INFORMATION ONLY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1350 (2018)	2018-RIBR	Cook	17	7
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	IX-5003 (172) FED. AID PROJECT		

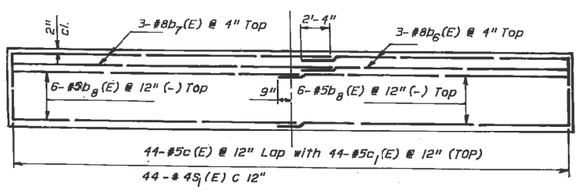
DWG. NO. S-2



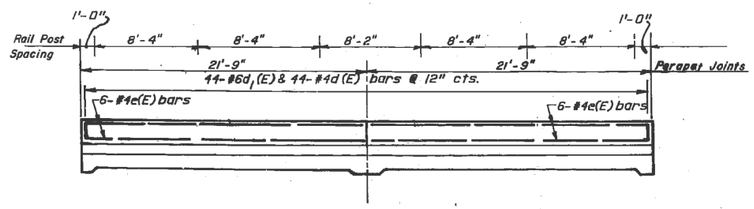
SLAB PLAN - BOTTOM REINFORCEMENT



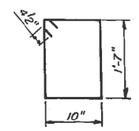
SLAB PLAN - TOP REINFORCEMENT



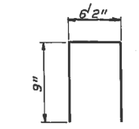
SIDEWALK PLAN



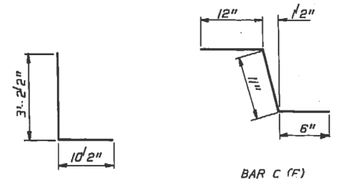
SIDE ELEVATION



BAR s_1 (E)



BAR d_2 (E)



BAR d(E) & d_1(E)

BAR C (E)

BAR LIST

BAR	NO	SIZE	LENGTH	SHAPE
a(E)	30	5	29'-9"	—
a_1(E)	30	5	31'-3"	—
a_2	53	5	29'-9"	—
a_3	53	5	31'-3"	—
b(E)	106	5	11'-0"	—
b_1(E)	53	8	25'-10"	—
b_{2}(E)	51	8	11'-0"	—
b_3	116	7	22'-9"	—
b_4	114	7	17'-9"	—
b_5	12	7	22'-9"	—
b_6(E)	6	8	17'-0"	—
b_7(E)	6	8	28'-8"	—
b_8(E)	24	5	22'-4"	—
c(E)	88	5	2'-5"	~
c_1(E)	88	5	5'-6"	—
d	88	4	4'-1"	L
d_1(E)	88	6	4'-1"	L
d_2	12	4	2'-0'2"	⊓
e(E)	24	4	21'-5"	—
s_1(E)	88	4	5'-9"	▭

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Class X Concrete	C.Y.	115.2
Reinforcement Bars	Lb.	13716
Reinforcement Bars (Epoxy Coated)	Lb.	11510
Railing	L.F.	83

BYRD, TALLAMY, MACDONALD & LEWIS
CONSULTING ENGINEERS
A DIVISION OF WILBUR SMITH & ASSOCIATES
ROSELLE, IL.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
HIGGINS RD (ILL 72)

SUPERSTRUCTURE

SCALE: VERT. HORIZ.
DATE

DRAWN BY C.H. & S.A.J.
CHECKED BY O.W.S.

ak. 8-24-83

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	DRAWN -	REVISED -
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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2533

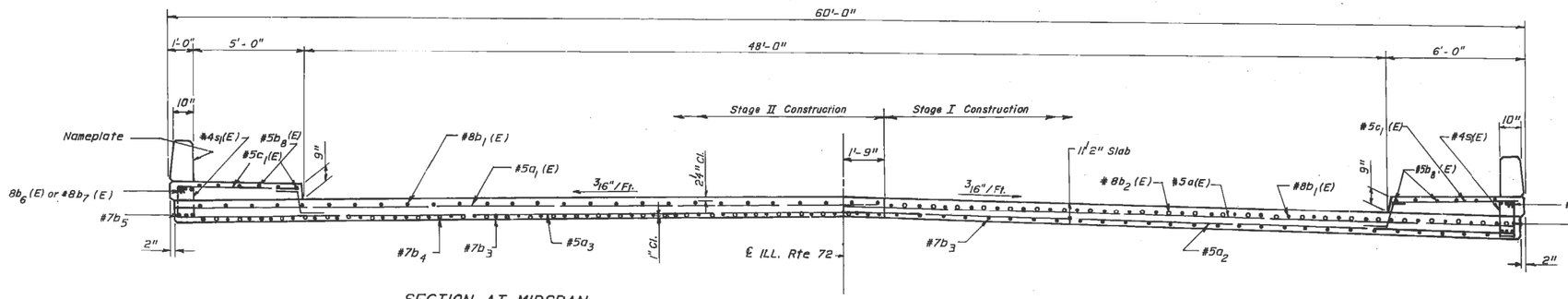
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	114
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1350 (Var. 172)	2018-140-BR (BZ)	Cook	17	8
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	I.M.-8008(172) FED. AID PROJECT		

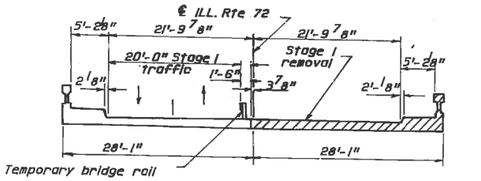
DWG. NO. S-3



SECTION AT MIDSPAN

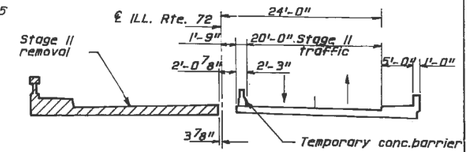
SECTION AT PIER

TYPICAL CROSS SECTION LOOKING AHEAD STATIONS



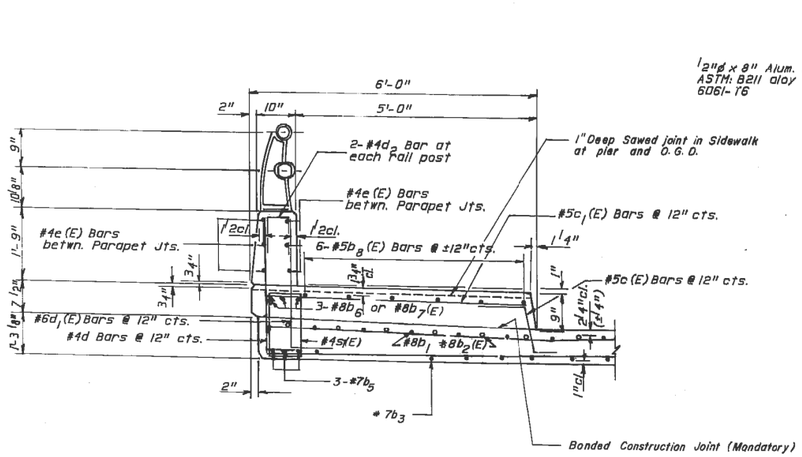
EXISTING BRIDGE STAGE I REMOVAL

Looking ahead stations

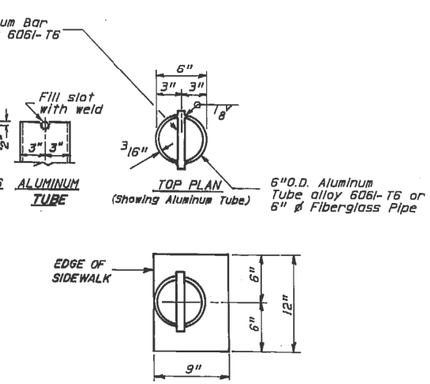


EXISTING BRIDGE STAGE II REMOVAL

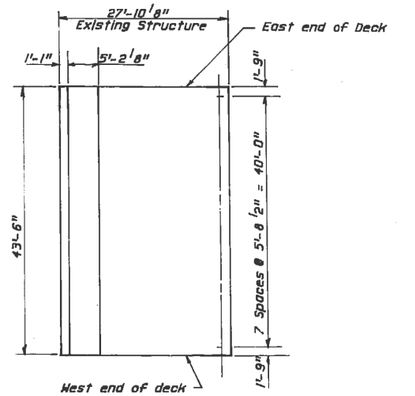
Looking ahead stations



SIDEWALK CROSS SECTION

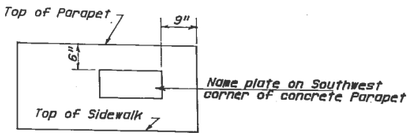


TOP PLAN



TEMPORARY BRIDGE RAIL POST SPACING

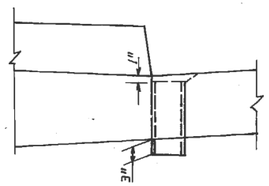
For Details of Temporary Bridge Rail, See Dwg. No. S-9



Notes :
For Details Refer to STD. 2113
Structure No. to be Supplied by District

Station 9 + 78.1
Willow Creek
Built 198
F.A.U. Rt. 1350 (ILL. 72) Sec. 101B-R-(82)
F.A. Proj. IX-6003 (227)
Loading HS 20
STR. No.

LETTERING FOR NAME PLATE



ELEVATION VIEW

FLOOR DRAIN

NOTE :
Fiberglass pipe shall conform to ASTM: D2996, Designation Code RTRP-11AE-5112. Pipes with Class C or F liner are acceptable.

REVISIONS	
NAME	DATE

BYRD, TALLAMY, MACDONALD & LEWIS
CONSULTING ENGINEERS
A DIVISION OF WILBUR SMITH & ASSOCIATES
ROSELLE, IL.

ILLINOIS DEPARTMENT OF TRANSPORTATION
HIGGINS RD (ILL 72)

TYPICAL DECK CROSS SECTION

SCALE: VERT.
HORIZ.
DATE

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CHECKED BY [illegible]

Revised
OK DWJ 8-24-17

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PLOT DATE = 1/30/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2533

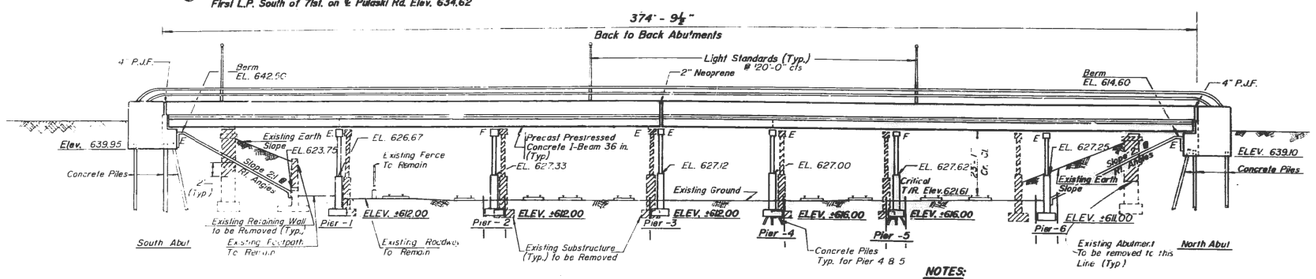
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	115
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A. RTE.	SECTION	COUNTY	SHEETS	SHEET NO.
2812	1919VB-R(84)	COOK	[illegible]	14
STA.		STA.		
FED. AID PROJECT			FED. AID PROJECT	

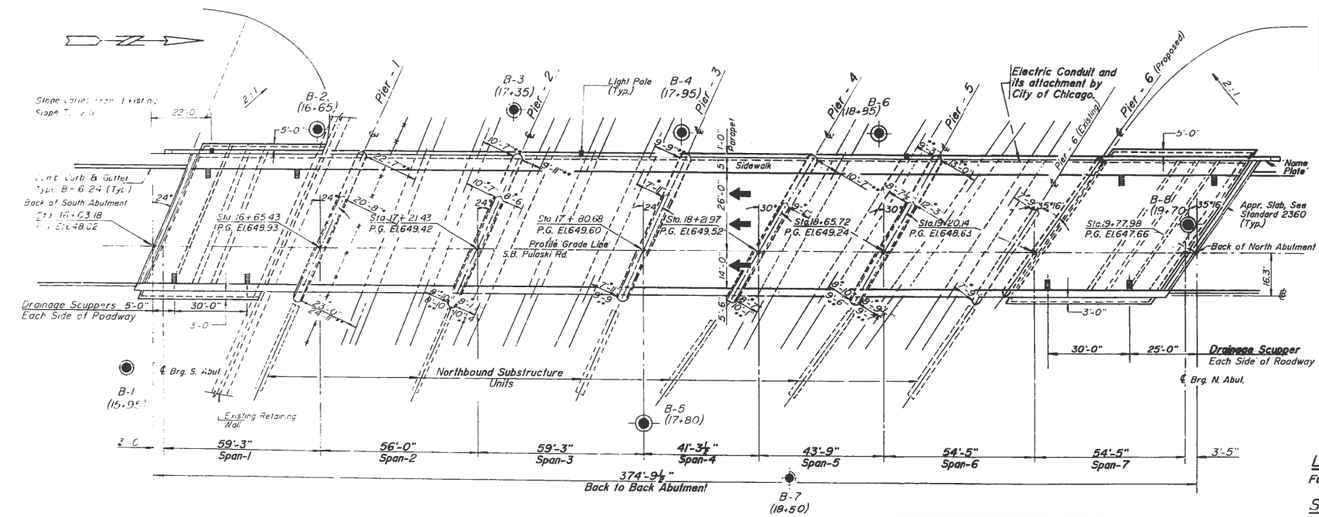
B.M. □ Cut on E. Side of L.P. Base.
First L.P. South of 71st. on ℄ Pulaski Rd. Elev. 634.62



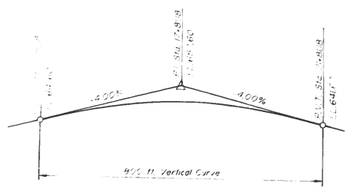
ELEVATION

NOTES:

1. Existing Structure - A seven span steel through girder Superstructure on concrete piers and abutments, 37'11, wide and 323 ft. long was constructed in 1915. Structure shall be removed. No salvage.
2. A detour will be provided during construction.
3. Beil Railroad mile 10.97 AAR-DOT INV. No. 843817.

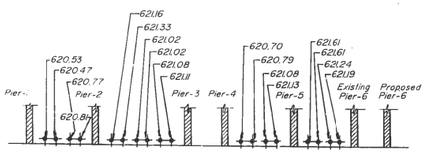


PLAN



PROFILE GRADE

S.B. Pulaski Road



R.R. TRACK PROFILE

@ Beam I

STATION 17 + 90.58
BUILT 198 BY
STATE OF ILLINOIS
F.A.U. RT. 2812 SEC. 1919 VB-R (84) ← FA PROJECT BRM-5000(756)
COOK COUNTY
LOADING HS 20
STR. NO. 016-2549

NAME PLATE

(See Standard 2113)

LEGEND

- Boring Location.
- * Clearance between ℄ track to face of existing piers.
- ** Clearance between ℄ track to face of proposed piers.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY.
James J. Raphael
Engineer of Bridges and Structures

GENERAL NOTES

See proposal for Boring Data.
All structural steel shall be shop painted with the Zinc-Silicate and vinyl paint system.
Reinforcement bars shall conform to the requirement of AASHTO M-31, M-42, or M-53 Grade 60.
Slope wall shall be reinforced with welded wire fabric, 6"x6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
The Contractor shall drive one concrete test pile in a permanent location at pier 4 & 5 and at each abutment as directed by the Engineer before ordering the remainder of the piles.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY		
		SUB STRUCTURE	SUPER STRUCTURE	TOTAL
REMOVAL OF EXISTING STRUCTURES	LUMP SUM			1
STRUCTURE EXCAVATION	CU. YD.	1,470		1,470
PREFORMED JOINT SEAL ½"	LIN. FT.		366	366
PREFORMED JOINT SEAL 4"	LIN. FT.		121	121
*PROTECTIVE COAT	SQ. YD.		123	123
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	70		70
DRAINAGE SCUPPERS	EACH		8	8
CLASS X-CONCRETE	CU. YD.	936		936
FURNISHING AND ERECTING PPC I-BEAMS, 36 IN.	LIN. FT.		2,581	2,581
FURNISHING AND ERECTING STRUCTURAL STEEL	LB.	836	1,360	5,196
ALUMINUM RAILING, TYPE L	LIN. FT.		399	399
REINFORCEMENT BARS	LB.	[illegible]40	2,796	174,430
REINFORCEMENT BARS, EPOXY COATED	LB.		143,180	143,180
FURNISHING CONCRETE PILES	LIN. FT.	2366		2366
DRIVING CONCRETE PILES	LIN. FT.	2366		2366
TEST PILE CONCRETE	EACH	4		4
PREFORMED JOINT SEAL 2½"	LIN. FT.		7	7
NAME PLATES	EACH		1	1
SLOPE WALL 4 IN.	SQ. YD.	693		693
NEOPRENE EXPANSION JOINT 2 IN.	LIN. FT.		57	57
CLASS X-CONCRETE SUPERSTRUCTURE	CU. YD.		657	657
TEMPORARY SHEET PILING	SQ. FT.	18,500		18,500
CONCRETE REMOVAL	CU. YD.		33	33

*Does not include deck surface; See Special Provisions

LOADING HS 20

Future Wearing Surface: 25 psf

SPECIFICATIONS

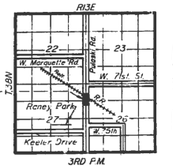
AASHTO 1983 & 1984, 1985, 1986 Interims

Standard Specification for Road and Bridge Construction adopted January, 1983 by the State of Illinois Department of Transportation and Supplements.

DESIGN STRESSES

A. Precast Prestressed Concrete I - Beams, All Spans
f'c = 6,000 psi, f'ci — See Beam Drawing
f's = 270,000 psi (½" ϕ Strands)
f'si = 189,000 psi

B. Superstructure, Substructure and Abutments:
Reinforcement Steel fy = 60,000 psi
Structural Steel, M183 fy = 36,000 psi
Ultimate Compression f'c = 3,500 psi
Horizontal Earth Pressure - Equiv. Fluid Pressure= 40p/cf.

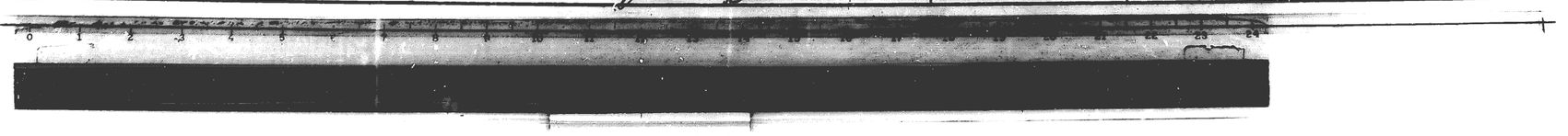


LOCATION MAP

REVISIONS	
NAME	DATE

JOSEPH APEA & ASSOCIATES, INC.
1313 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS 60605

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 2812 SEC. 1919VB-R(84)
PULASKI RD. OVER BELT RLWD
GENERAL PLAN AND ELEVATION
STRUCTURE NUMBER 016-2549
CITY OF CHICAGO
COUNTY COOK
SCALE: NONE
DRAWN BY A.O.A.
CHECKED BY R.P.G.
DATE: 12-87



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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

GENERAL PLAN
SN: 016-2549

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	116
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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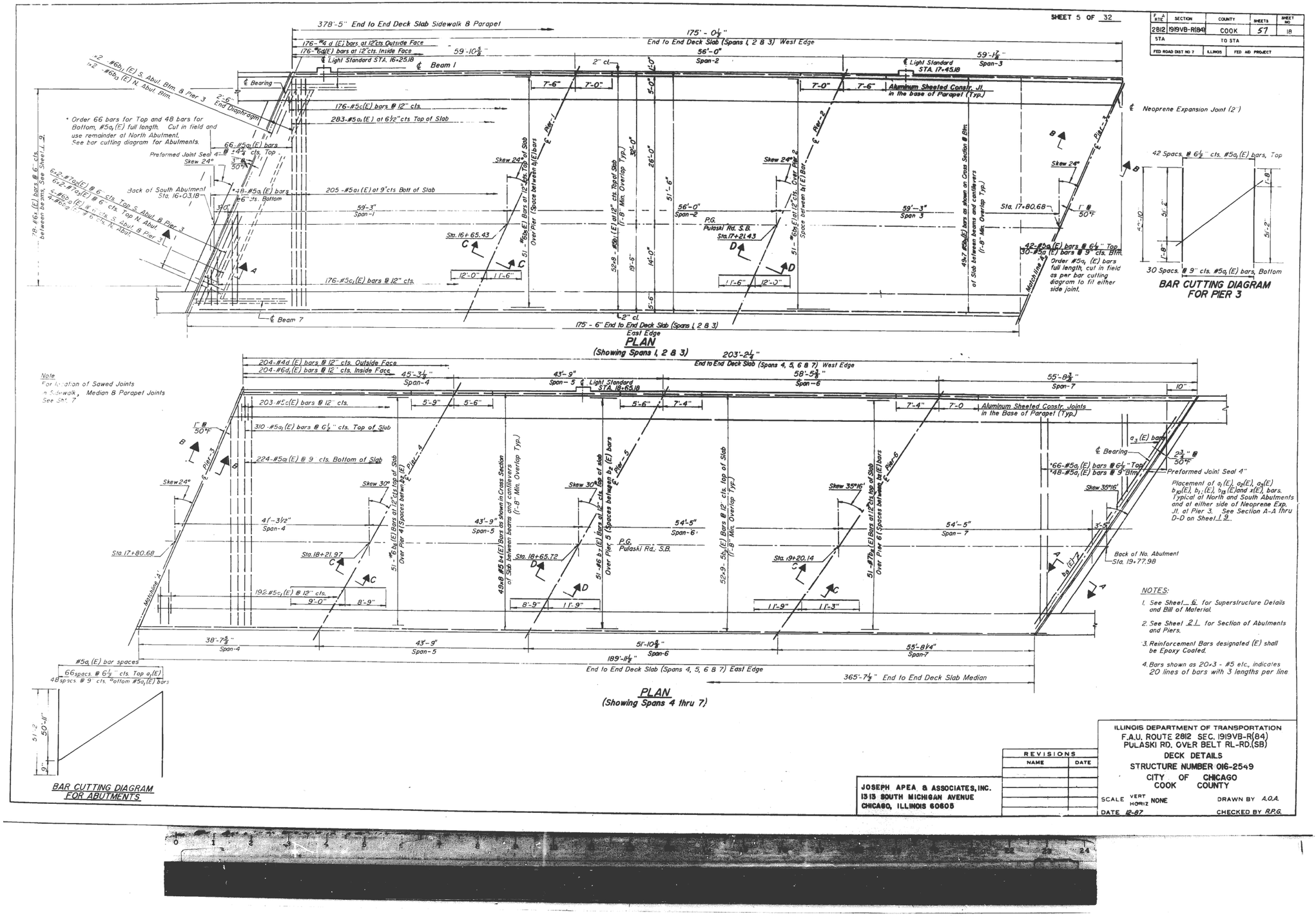
FOR INFORMATION ONLY

SHEET 5 OF 32

F.A. RTE.	SECTION	COUNTY	SHEETS	SHEET NO.
2812	1919VB-R(84)	COOK	57	18
STA	TO STA			
FED ROAD DIST NO 7	ILLINOIS	FED AID PROJECT		



REVISIONS	
NAME	DATE

JOSEPH APEA & ASSOCIATES, INC.
1313 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS 60605

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 2812 SEC. 1919VB-R(84)
PULASKI RD. OVER BELT RL-RD.(SB)
DECK DETAILS
STRUCTURE NUMBER 016-2549
CITY OF CHICAGO
COUNTY COOK
SCALE VERT NONE HORIZ
DRAWN BY A.O.A.
DATE 12-87
CHECKED BY R.P.G.

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2549

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	117
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

SECTION	COUNTY	SHEETS	SHEET NO.
2810 19SV8-R(84)	COOK	57	19
STA	TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

NOTES:

Existing #4D_1(E), #5D_2(E) and #5D_3(E) reinforcement bars in NB bridge deck beams to remain. Cut clean, and bend in field as required to be used in new pour.

Transverse joint in median on Northbound bridge shall be at the location of existing deck joints. Extend preformed joint seal 2½" from present location in existing parapet in NB. bridge up to the longitudinal preformed joint seal 1½".

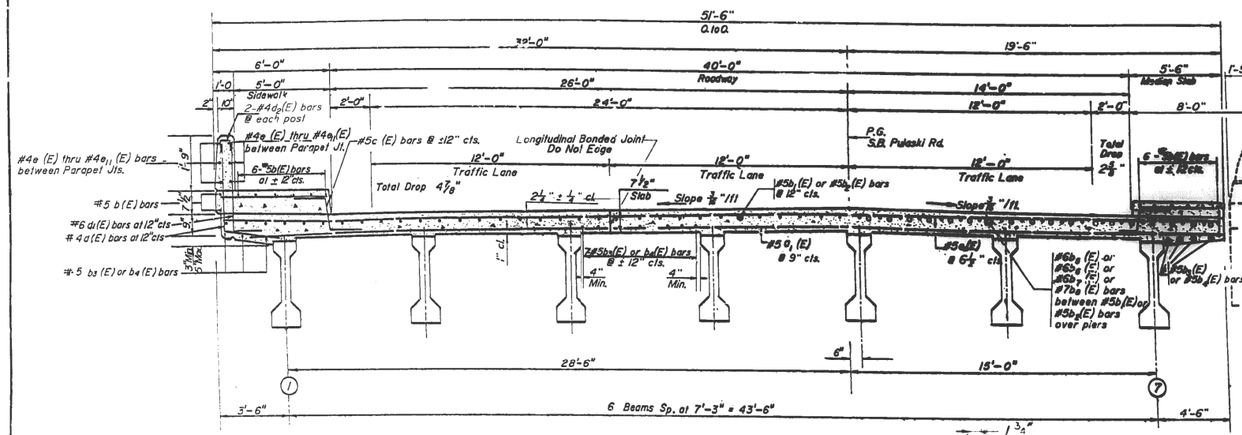
1" deep sawed joint in median on Northbound bridge shall be at the same location as that of the Southbound median joint.

Bars #5b_{18}(E) thru #5b_{22}(E) are for spans 1 thru 7 of the Northbound bridge.

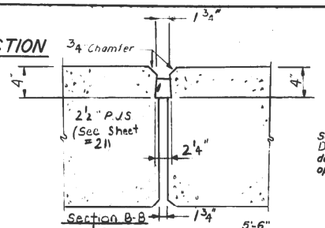
Minimum Bar lap lengths are:
- #5 bar - 1'-8"
- #6 bar - 2'-0"
- #7 bar - 2'-9"

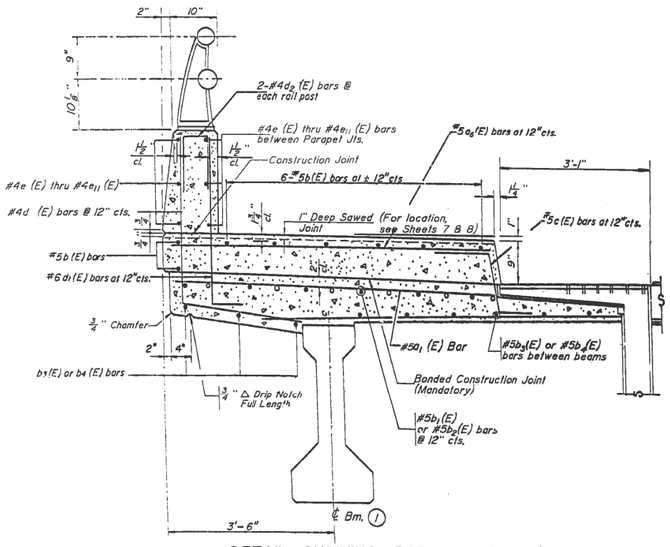
For details of 1½" Preformed Joint Seal, see sheet 21.

Reinforcement bars designated (E) shall be epoxy coated.



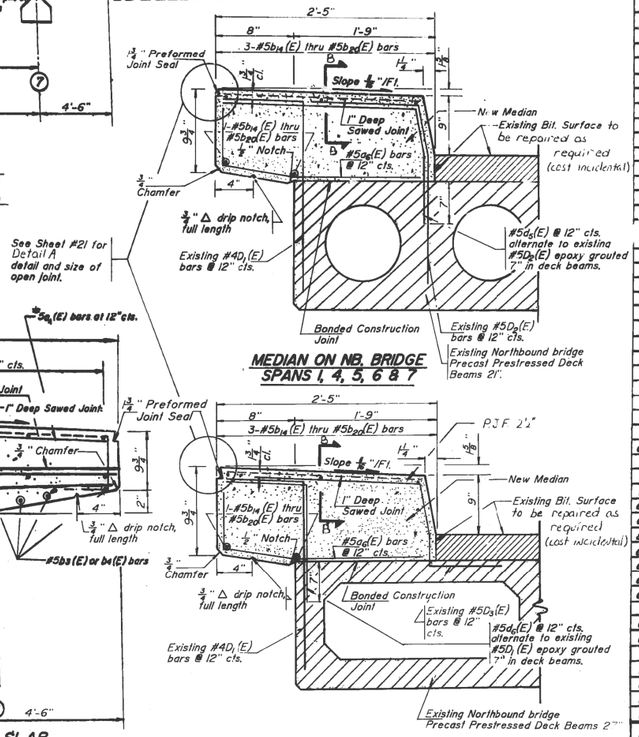
DECK CROSS SECTION





DETAIL SHOWING PARAPET & SIDEWALK

DETAIL SHOWING MEDIAN SLAB



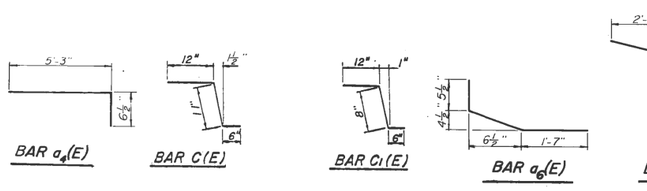
MEDIAN ON NB. BRIDGE SPANS 1, 4, 5, 6 & 7

MEDIAN ON NB. BRIDGE SPANS 2 & 3

See Sheet #21 for Detail A detail and size of open joint.

BILL OF MATERIAL (FOR ALL SPANS)

Bar	No.	Size	Length	Shape
a_1(E)	1208	#5	51'-8"	
a_8(E)	36	#7	29'-5"	
a_9(E)	12	#7	38'-9"	
a_4(E)	372	#5	5'-10"	
a_5(E)	384	#5	5'-6"	
a_6(E)	385	#5	2'-7"	
b(E)	210	#5	26'-9"	
b_1(E)	416	#5	23'-5"	
b_{21}(E)	468	#5	24'-1"	
b_3(E)	343	#5	23'-5"	
b_4(E)	392	#5	24'-1"	
b_{16}(E)	102	#6	23'-6"	
b_8(E)	51	#6	17'-9"	
b_7(E)	51	#6	20'-6"	
b_9(E)	51	#7	23'-0"	
b_5(E)	64	#5	2'-0"	
b_{10}(E)	72	#6	7'-3"	
b_{11}(E)	6	#6	25'-8"	
c_1(E)	24	#6	8'-0"	
a_{13}(E)	2	#6	28'-7"	
b_{14}(E)	5	#5	37'-7"	
b_{15}(E)	5	#5	55'-7"	
b_{16}(E)	5	#5	58'-10"	
b_{17}(E)	5	#5	37'-8"	
b_{18}(E)	5	#5	45'-6"	
b_{19}(E)	5	#5	41'-0"	
b_{20}(E)	5	#5	41'-3"	
c(E)	379	#5	2'-5"	
c_1(E)	368	#5	2'-2"	
d(E)	380	#4	5'-8"	
d_1(E)	380	#6	3'-9"	
d_2(E)	92	#4	2'-1"	
e(E)	12	#4	19'-6"	
e_1(E)	12	#4	5'-3"	
e_{12}(E)	12	#4	16'-2"	
e_3(E)	12	#4	7'-1"	
e_{13}(E)	18	#4	14'-4"	
e_{14}(E)	18	#4	16'-0"	
e_{15}(E)	18	#4	17'-3"	
e_7(E)	18	#4	13'-9"	
e_8(E)	18	#4	17'-0"	
e_9(E)	6	#4	5'-6"	
e_{10}(E)	18	#4	6'-9"	
e_{11}(E)	12	#4	7'-3"	
d_3(E)	9	#6	4'-5"	
d_4(E)	15	#6	8'-11"	
d_5(E)	208	#5	3'-6"	
d_6(E)	114	#5	2'-3"	
Reinforcement Bars, Epoxy Coated		Pound	139,190	
Class X-Concrete, Superstructure		Cu. Yd.	602	
Protective Coat		Sq. Yd.	123	
Concrete Removal		Cu. Yd.	33	
Preformed Joint Seal 2½"		Lin. Ft.	7	



REVISIONS	
NAME	DATE

JOSEPH APEA, & ASSOCIATES, INC.
1313 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS 60605

ILLINOIS DEPARTMENT OF TRANSPORTATION
F. A. U. ROUTE 2812 SEC 19(3V8-R(84)
PULASKI RD. OVER BELT RL-RD.(SB)
DECK CROSS SECTIONS
STRUCTURE NUMBER 016-2549
CITY OF CHICAGO, COOK COUNTY

SCALE: VERT NONE HORIZ
DRAWN BY A.O.A.
CHECKED BY R.P.G.
DATE 12-87



USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/30/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2549

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	118
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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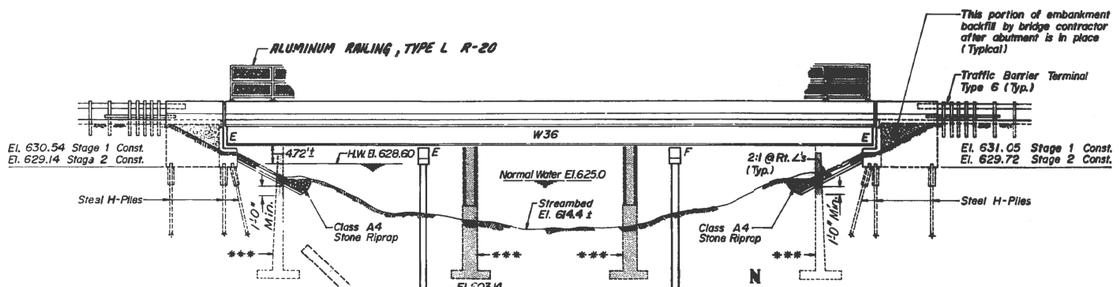
FOR INFORMATION ONLY

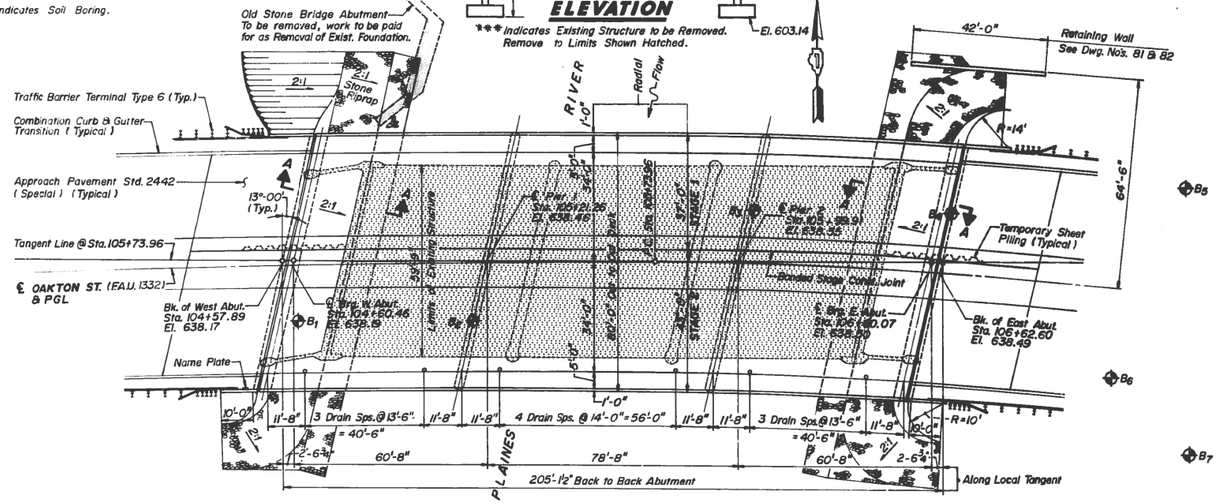
B.M. MSD #322 Located 75' South of the S.W. Corner of Existing Oakton Street Bridge. Elev. 634.83

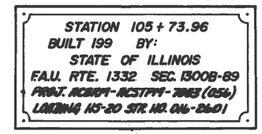
Existing Structure: 3 Simple Span Concrete T-Beam Bridge on Closed Abutments and Concrete Piers. Built in 1930. Structure No. 016-0554.

Traffic to be Maintained Utilizing Stage Construction.

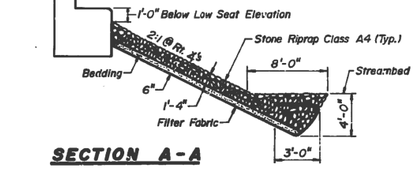
No Salvage.







NAME PLATE (STD. 2113)



SECTION A-A

GENERAL NOTES:

Fasteners shall be high strength bolts. Bolts 7/8"ø, open holes 15/16"ø, unless otherwise noted.

Calculated weight of Structural Steel = M270 GR.36 - 46760# M270 GR.50 - 334350#

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of structural steel except where otherwise noted. The color of the vinyl finish coat shall be Munsell No. 2.5 YR 3/4. Reddish brown for fascia beams and Munsell No. 10Y 7/1 Light grey for interior beams.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

The main load carrying member components subject to tensile stress shall conform to the supplemental requirements for Notch Toughness Zone 2. These components are the wide flange beams, diaphragms and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Bearing seat surface shall be constructed or adjusted to the elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type 1 Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.

The contractor shall drive one steel HP 10 x 42 test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of piles.

Unless specified or noted, all utilities that need to be relocated will be done by and at the expense of the utility companies. All utilities will have to reapply for attachment permits. No utilities are to be encased in the concrete of the structure.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.U. 1332	13008-89	COOK	128	79
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. S-1 OF 21 SHEETS

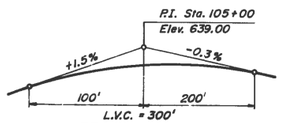
TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
	Floor Drains	Each	—	6	6
	Removal of Existing Structure	L. Sum	—	—	1
	Structure Excavation	Cu Yd.	268	—	268
	Preformed Jt. Seal 2 1/2"	Lin.Ft.	—	85	85
	Neoprene Expansion Jt. 2"	Lin.Ft.	—	85	85
	Class X Concrete Superstructure	Cu. Yd.	—	499.5	499.5
*	Protective Coat	Sq.Yd.	—	1877	1877
	Elastomeric Brg. Assembly Type I	Each	—	20	20
	Elastomeric Brg. Assembly Type II	Each	—	10	10
	Class X Concrete	Cu.Yd.	546.4	—	546.4
	F & E Structural Steel	L. Sum	—	1	1
	Stud Shear Connectors	Each	—	5940	5940
	Reinforcement Bars Epoxy Coated	Pound	47880	121480	169360
	Steel Piles HP10 x 42	Lin.Ft.	1728	—	1728
	Test Pile Steel HP10 x 42	Each	2	—	2
**	Temporary Sheet Piling	Sq. Ft.	1192	—	1192
	Cofferdam Excavation	Cu.Yd.	672	—	672
	Cofferdam Pier 1	Each	2	—	2
	Cofferdam Pier 2	Each	2	—	2
	Name Plates	Each	—	1	1
	Stone Riprap Class A4	Sq.Yd	802	—	802
**	Bridge Seat Sealer	Sq.Ft.	466	—	466
	Bridge Deck Grooving	Sq.Yd.	—	1478	1478
**	ALUMINUM RAILING, TYPE L	Lin.Ft.	—	398	398
	Filter Fabric For Use With Riprap	Sq. Yd.	802	—	802
**	Bar Splicers	Each	176	738	914
	Removal of Existing Foundation	Cu.Yd.	134.5	—	134.5

* Quantity includes Bridge Deck Surface.
** See Special Provisions.

HORIZONTAL CURVE DATA

P.C. Sta.	103+14.25	P.C. Sta.	105+73.96
P.I. Sta.	104+44.13	P.I. Sta.	108+26.39
P.T. Sta.	105+73.96	P.T. Sta.	110+73.20
Δ =	1°-41'-14.4"	Δ =	20°-52'-11"
D =	0°-38'-59"	D =	4°-10'-50"
R =	8819.63'	R =	1370.55'
L =	259.73'	L =	499.22'
E =	0.96'	E =	23.05'
T =	129.88	T =	252.41'
S.E. =	0.032 ⅛	S.E. =	0.032 ⅛
S.E. Transition =	Sta. 102+64 to Sta. 104+39	Full S.E. =	Sta. 105+73.96 to Sta. 110+50
Full S.E. =	Sta. 104+39 to Sta. 105+73.96	S.E. Transition =	Sta. 110+50 to Sta. 111+90.20



PROFILE GRADE
OAKTON STREET (FAU 1332)
(Along ℄ Roadway)

DESIGN SPECIFICATIONS

1989 AASHTO with 1990 Interim Specifications.
1983 Seismic Guide Specification with 1985 and 1988 Interims. 1980 Guide Specifications for Horizontally Curved Bridges with Interims thru 1990.

LOADING HS 20-44

Allow 25 #/sq.ft. for future wearing surface.

DESIGN STRESSES

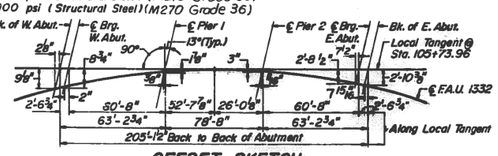
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Structural Steel) (M270 Grade 50)
36,000 psi (Structural Steel)(M270 Grade 36)

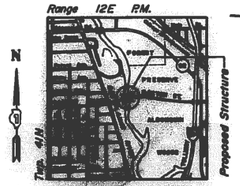
WATERWAY INFORMATION

Drainage Area = 405 Sq. Mi. Low Grade Elev. 631.36 @ Sta. 99+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	5040	1596	1687	628.60	0.08	0.0	628.68	628.60
Base	100	5525	1668	1771	629.10	0.12	0.02	629.22	629.12
Overtopping									
Max. Calc.	500	6480	1814	1943	630.09	0.20	0.08	630.29	630.17



OFFSET SKETCH



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
ERIEN M. MIRANDA
EXPIRES 11-30-94

Efren M. Miranda 10/16/92
EXP 11-30-94

GENERAL PLAN
ELEVATION & GENERAL NOTES
OAKTON STREET OVER DES PLAINES RIVER
F.A.U. RTE. 1332 SECTION 13008-89
COOK COUNTY
Sta. 105+73.96
STRUCTURE NUMBER 016-2601

REV.

DESIGNED	J S
CHECKED	R C E
DRAWN	RAA jr.
CHECKED	E M M

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

GENERAL PLAN
SN: 016-2601

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	119
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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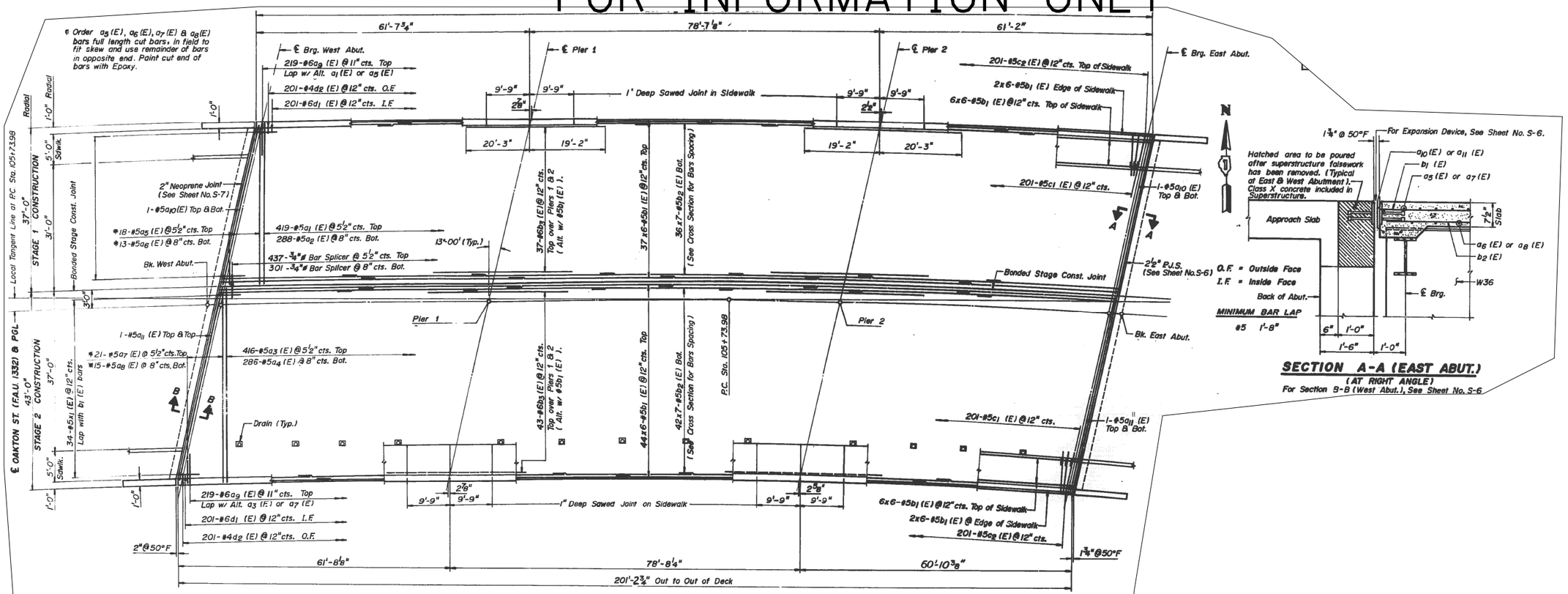
FOR INFORMATION ONLY

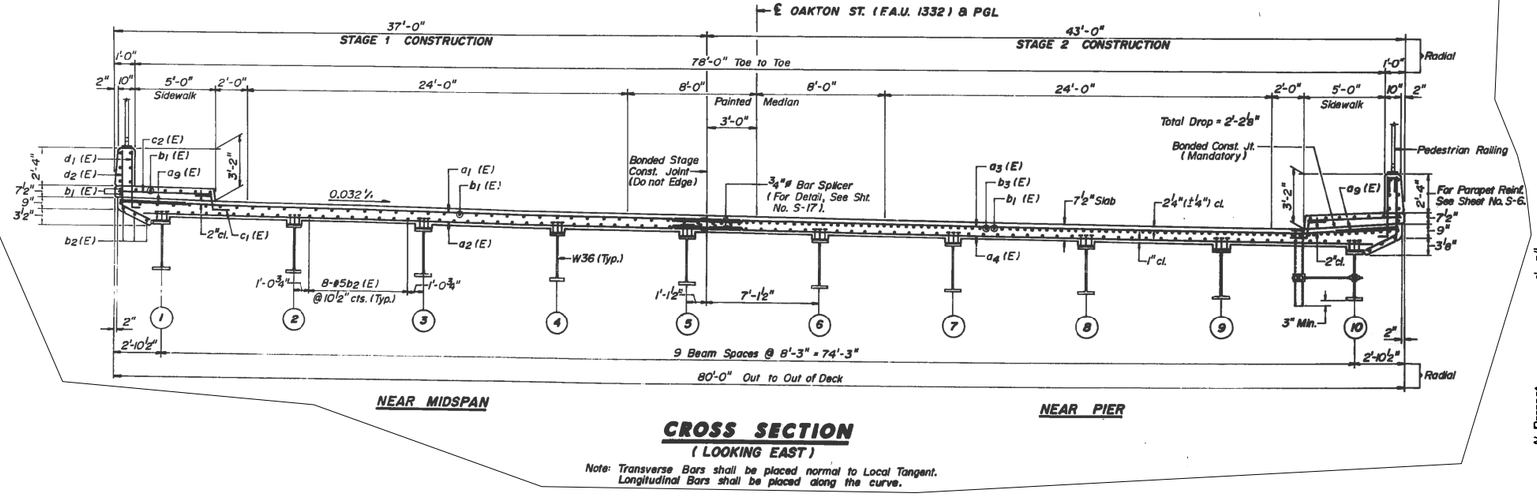


SECTION A-A (EAST ABUT.)

(AT RIGHT ANGLE)

For Section B-B (West Abut.), See Sheet No. S-6

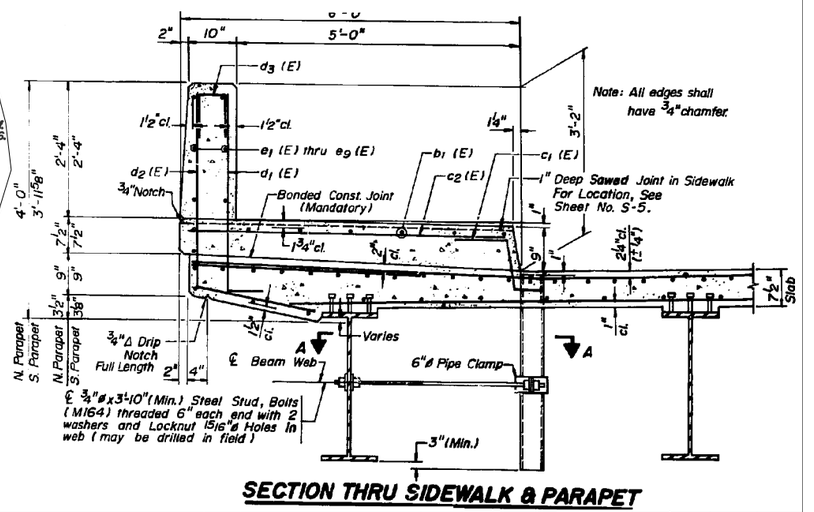
PLAN



CROSS SECTION

(LOOKING EAST)

Note: Transverse Bars shall be placed normal to Local Tangent. Longitudinal Bars shall be placed along the curve.



SECTION THRU SIDEWALK & PARAPET

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-2601

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	120
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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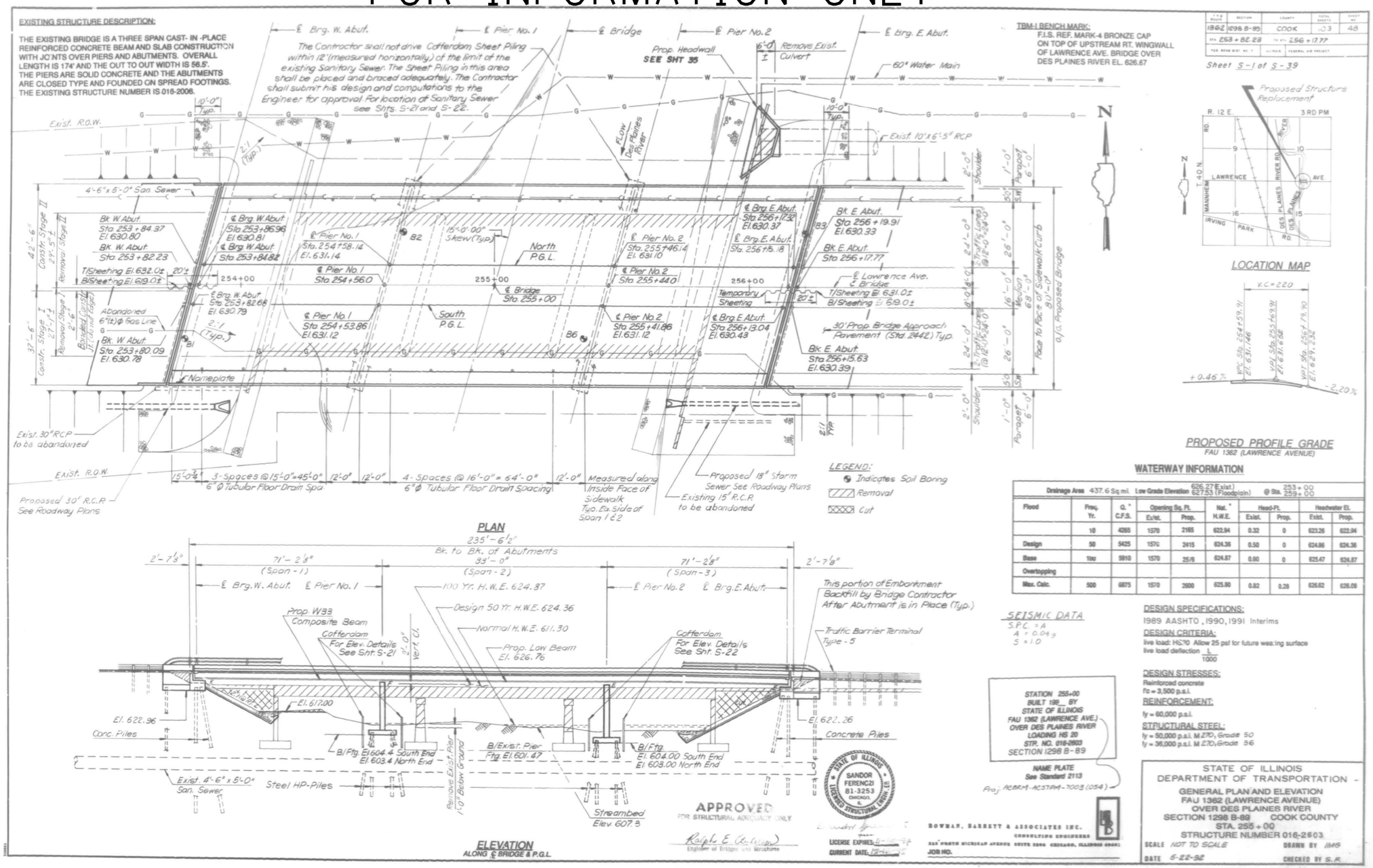
FOR INFORMATION ONLY

EXISTING STRUCTURE DESCRIPTION:

THE EXISTING BRIDGE IS A THREE SPAN CAST- IN -PLACE REINFORCED CONCRETE BEAM AND SLAB CONSTRUCTION WITH JOINTS OVER PIERS AND ABUTMENTS. OVERALL LENGTH IS 174' AND THE OUT TO OUT WIDTH IS 56.5'. THE PIERS ARE SOLID CONCRETE AND THE ABUTMENTS ARE CLOSED TYPE AND FOUNDED ON SPREAD FOOTINGS. THE EXISTING STRUCTURE NUMBER IS 016-2006.



TYPE ROAD	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1382	1298 B-89	COOK	103	48
STA. 253+82.28	TO STA. 256+13.77			
FED. ROAD DIST. NO. 1	ILLINOIS	FEDERAL AID PROJECT		

Sheet S-1 of S-39

Proposed Structure Replacement

LOCATION MAP

PROPOSED PROFILE GRADE
FAU 1362 (LAWRENCE AVENUE)

WATERWAY INFORMATION

Drainage Area 437.6 Sq. mi. Low Grade Elevation 626.27 E(xist.) 627.53 (Floodplain) @ Sta. 253+00 259+00

Flood	Freq. Yr.	Q, * C.F.S.	Opening Sq. Ft. Ex/ist.	Opening Sq. Ft. Prop.	Nat. * H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	4265	1570	2165	622.94	0.32	0	623.26	622.94
Design	50	5425	1570	2415	624.36	0.50	0	624.86	624.36
Base	100	5910	1570	2516	624.87	0.60	0	625.47	624.87
Overtopping									
Max. Calc.	500	6875	1570	2600	625.80	0.82	0.28	626.62	626.08

SEISMIC DATA
S.P.C. = A
A = 0.04 g
S = 1.0

DESIGN SPECIFICATIONS:
1989 AASHTO, 1990, 1991 Interims

DESIGN CRITERIA:
live load: HS 20 Allow 25 psf for future wearing surface
live load deflection $\frac{L}{1000}$

DESIGN STRESSES:
Reinforced concrete
f'c = 3,500 p.s.i.

REINFORCEMENT:
fy = 60,000 p.s.i.

STRUCTURAL STEEL:
fy = 50,000 p.s.i. M 270, Grade 50
fy = 36,000 p.s.i. M 270, Grade 36

STATION 255+00
BUILT 19__ BY
STATE OF ILLINOIS
FAU 1362 (LAWRENCE AVE.)
OVER DES PLAINES RIVER
LOADING HS 20
STR. NO. 016-2003
SECTION 1298 B-89

NAME PLATE
See Standard 2113

Proj. RBRM-ACSTPM-7003 (054)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

SANDOR FERENCZI 81-3253 CHICAGO, ILLINOIS LICENSED STRUCTURAL ENGINEER

LICENSE EXPIRES:
CURRENT DATE: 12-14-92

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
220 NORTH MICHIGAN AVENUE SUITE 2200 CHICAGO, ILLINOIS 60601
JOB NO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
FAU 1362 (LAWRENCE AVENUE)
OVER DES PLAINES RIVER
SECTION 1298 B-89 COOK COUNTY
STA. 255+00
STRUCTURE NUMBER 016-2603
SCALE NOT TO SCALE
DRAWN BY JMS
DATE 5-22-92
CHECKED BY S.R.

D C B A 0 A B C D

TAMERAN

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016–2603

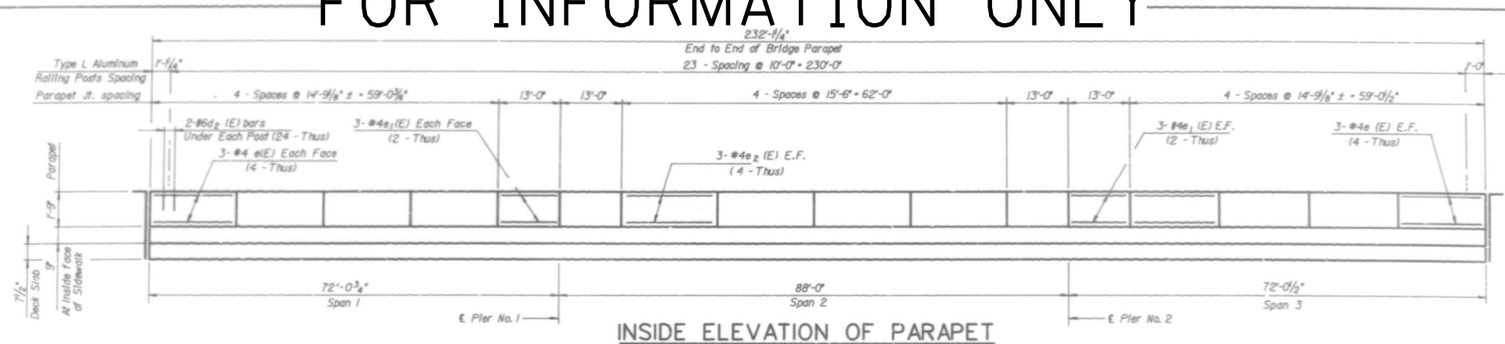
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	121
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

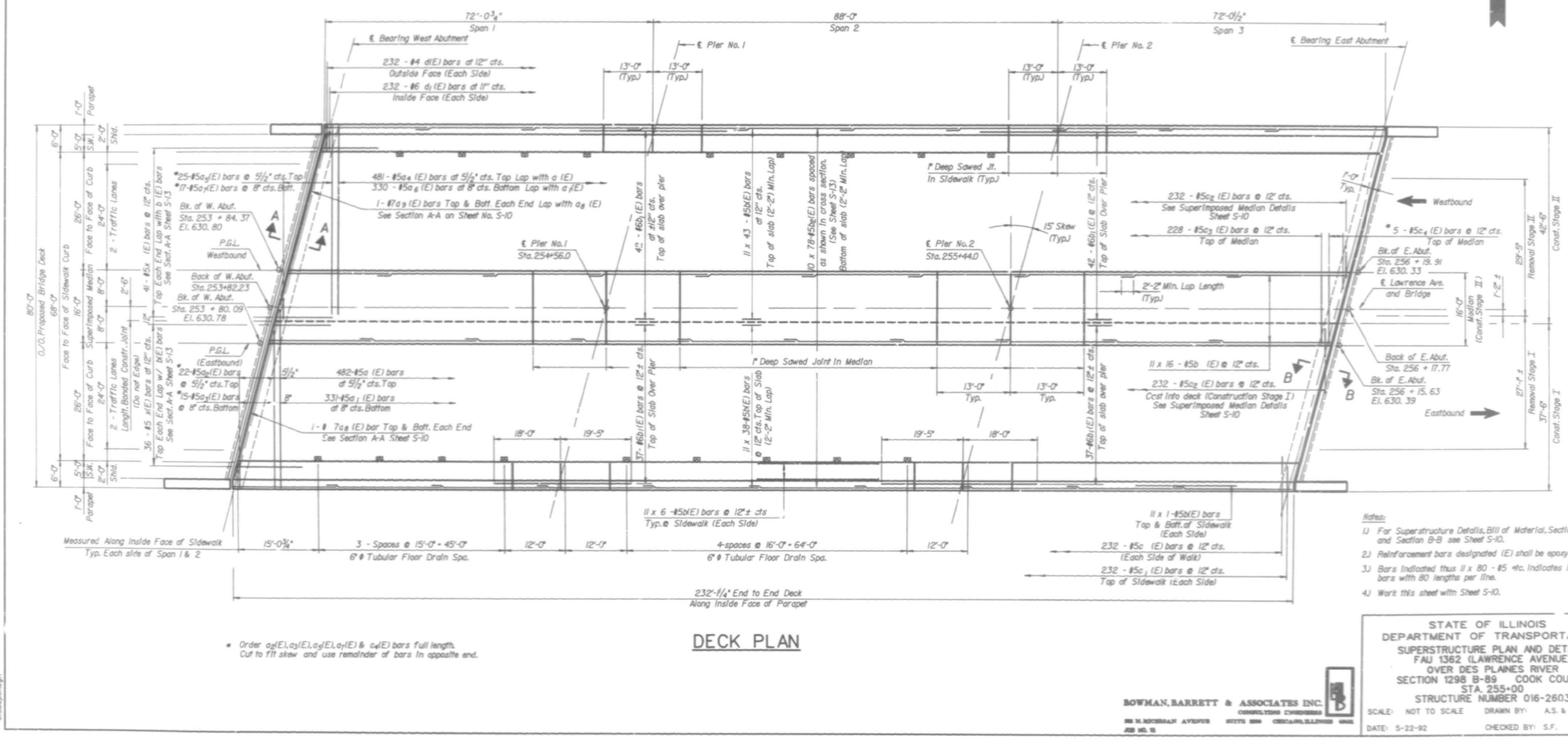
FOR INFORMATION ONLY

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1362	1298 B-BR	Cook	103	56
STA. 253+82.23		TO STA. 256+17.77		
FED. ROAD DIST. NO. 7	ILLINOIS	FEDERAL AID PROJECT		

SHEET S- 9 OF S- 39



INSIDE ELEVATION OF PARAPET
NORTH PARAPET SHOWN SOUTH PARAPET SIMILAR



DECK PLAN

* Order a9(E), a3(E), a4(E), a7(E) & c4(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:
1) For Superstructure Details, Bill of Material, Section A-A and Section B-B see Sheet S-10.
2) Reinforcement bars designated (E) shall be epoxy coated.
3) Bars indicated thus 11 x 80 - #5 etc. indicates 11 lines of bars with 80 lengths per line.
4) Work this sheet with Sheet S-10.

BOWMAN, BARRETT & ASSOCIATES INC.
111 W. MONROE AVENUE SUITE 1200 CHICAGO, ILLINOIS 60603
JOB NO. 15

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE PLAN AND DETAILS
FAU 1362 (LAWRENCE AVENUE)
OVER DES PLAINES RIVER
SECTION 1298 B-BR COOK COUNTY
STA. 255+00
STRUCTURE NUMBER 016-2603
SCALE: NOT TO SCALE DRAWN BY: A.S. & EBP
DATE: 5-22-92 CHECKED BY: S.F.

D C B A A B C D
0
TAMERAN

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–2603

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	122
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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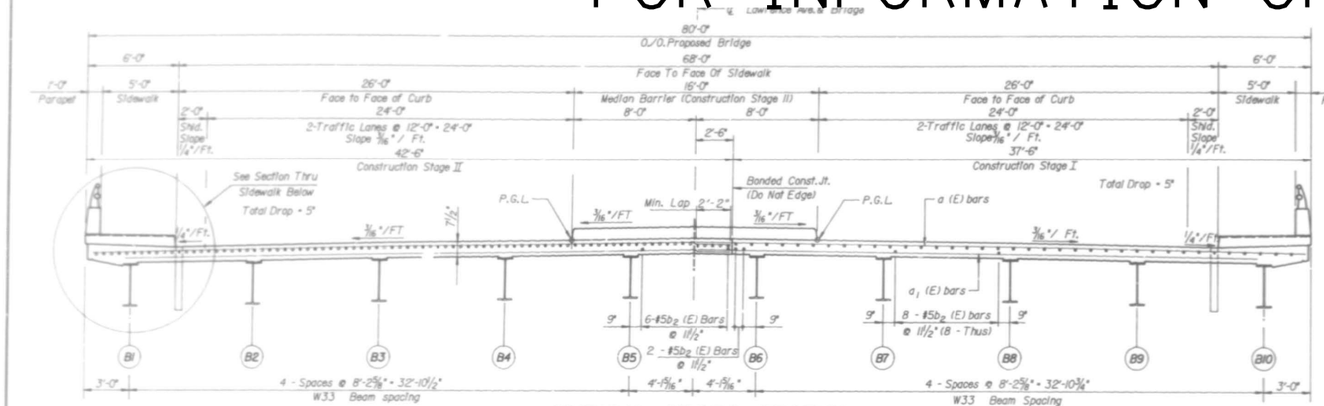
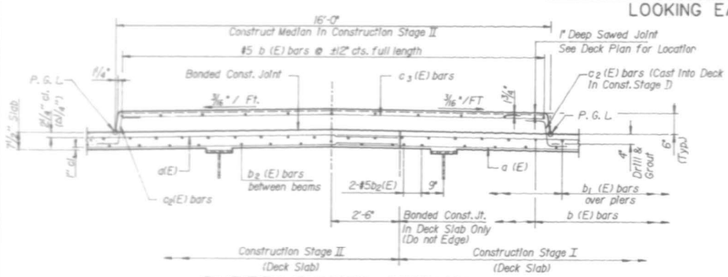
G05bp01.dgn

FOR INFORMATION ONLY

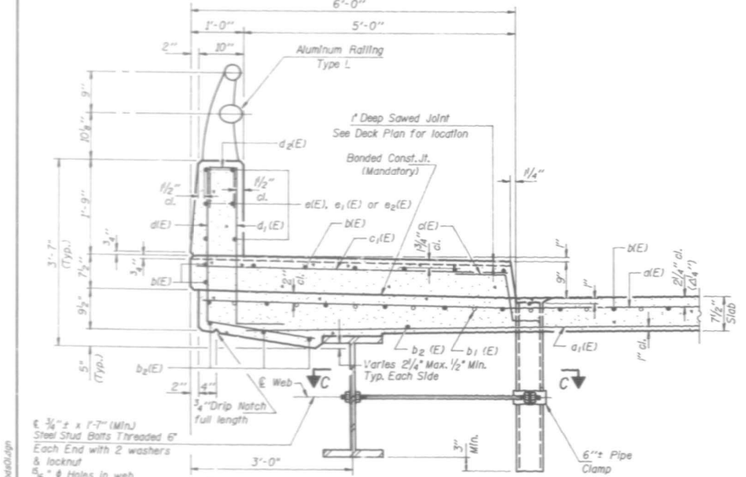


AT PIER — TYPICAL CROSS SECTION LOOKING EAST — NEAR MIDSPAN

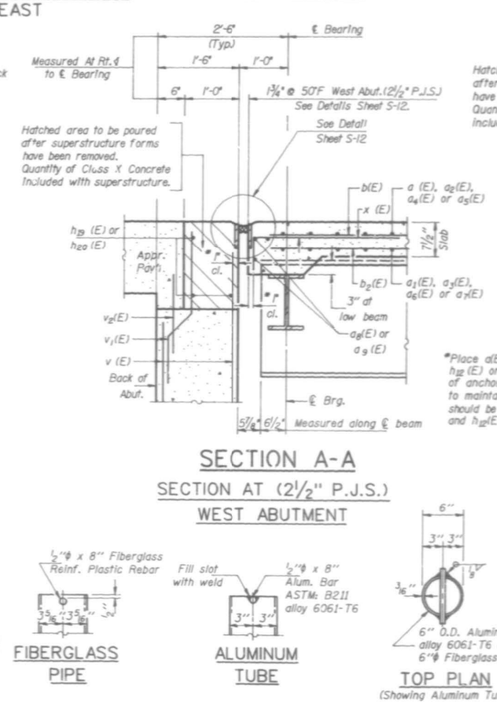


SUPERIMPOSED MEDIAN
LOOKING EAST

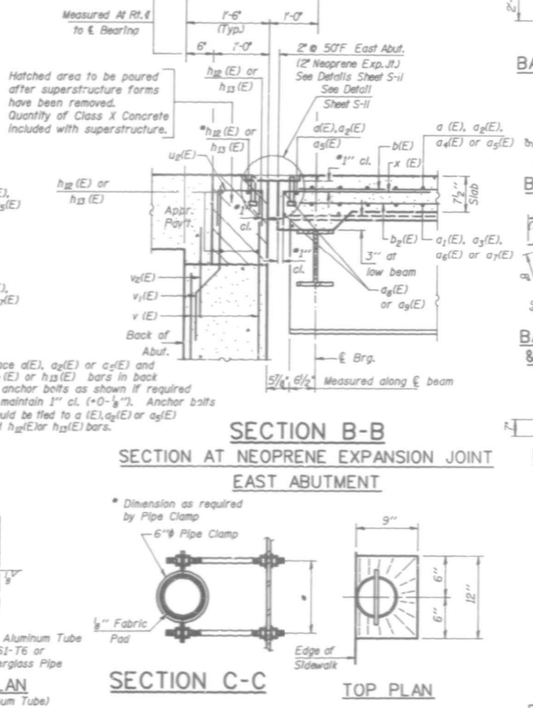
Note: All edges shall have 3/4" chamfer



SECTION THRU SIDEWALK



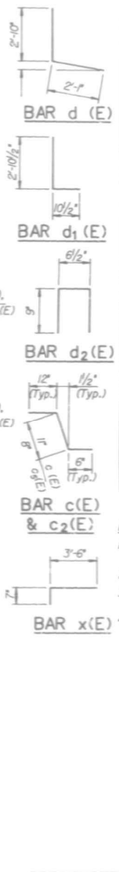
SECTION A-A
SECTION AT (2 1/2" P.J.S.)
WEST ABUTMENT



*Place d(E), d2(E) or c2(E) and h12 (E) or h13 (E) bars in back of anchor bolts as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to a (E), d2(E) or d3(E) and h12(E) or h13(E) bars.

SECTION B-B
SECTION AT NEOPRENE EXPANSION JOINT
EAST ABUTMENT

PARAPET JOINT DETAILS



BAR	No.	Size	Length	Shape
d(E)	482	#5	39'-8"	
d1(E)	331	#5	38'-4"	
d2(E)	22	#5	38'-1"	
d3(E)	15	#5	37'-1"	
d4(E)	481	#5	42'-0"	
d5(E)	25	#5	44'-1"	
d6(E)	330	#5	41'-0"	
d7(E)	17	#5	43'-1"	
d8(E)	4	#7	41'-0"	
d9(E)	4	#7	42'-7"	
b(E)	1243	#5	23'-3"	
b1(E)	170	#6	37'-5"	
b2(E)	780	#5	25'-3"	
c (E)	464	#5	2'-5"	
c1(E)	464	#5	5'-9"	
c2 (E)	464	#5	2'-2"	
c3 (E)	228	#5	15'-8"	
c4 (E)	5	#5	16'-3"	
d(E)	464	#4	4'-11"	
d1 (E)	464	#6	3'-9"	
d2 (E)	96	#4	2'-0 1/2"	
e(E)	96	#4	14'-4"	
e1(E)	48	#4	12'-6"	
e2(E)	48	#4	15'-1"	
x (E)	154	#5	4'-1"	

ITEM	UNIT	QTY.
Reinforcement Bars (Epoxy Coated)	Lbs.	148,190
Class X Concrete Superstructure	Cu.Yds.	635.00
Protective Coat	Sq. Yds.	2,307
Floor Drains (16" ϕ Tubular)	Each	18

Notes:
1) Reinforcement bars designated (E) shall be epoxy coated.
2) Work this sheet with Sheet S-9.
3) For 6" ϕ Floor Drain Location see Sheet S-9.
4) For Aluminum Railing, Type L see Sheet S-23.

Notes:
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structural Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting. Fiberglass to have prewash as per MIL-P-15328 prior to painting.
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
111 W. MICHIGAN AVENUE SUITE 2200 CHICAGO, ILLINOIS 60601
ADR NO. 10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE SECTION AND DETAILS
FAU 1362 (LAWRENCE AVENUE)
OVER DES PLAINES RIVER
SECTION 1298 B-89 COOK COUNTY
STA. 255+00
STRUCTURE NUMBER 016-2603
SCALE: NOT TO SCALE DRAWN BY: ESP & A.S.
DATE: 5-22-92 CHECKED BY: S.F.

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1362	1298 B-89	Cook	103	57
STA. 253+82.23		TO STA. 256+17.77		
FED. ROAD DIST. NO. 7	ILLINOIS	FED.-AID PROJECT		

SHEET S - 10 OF S - 39

SUPERSTRUCTURE BILL OF MATERIAL

D C B A 0 A B C D
TAMERAN

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2603

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	123
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

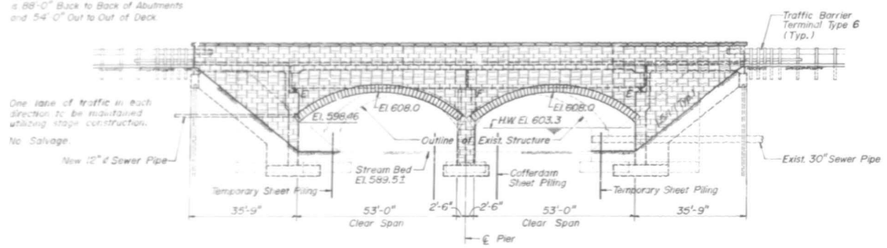
ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.U. 2798	*	COOK	26	11
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. S-1 OF 19 SHEETS

* 10108-89

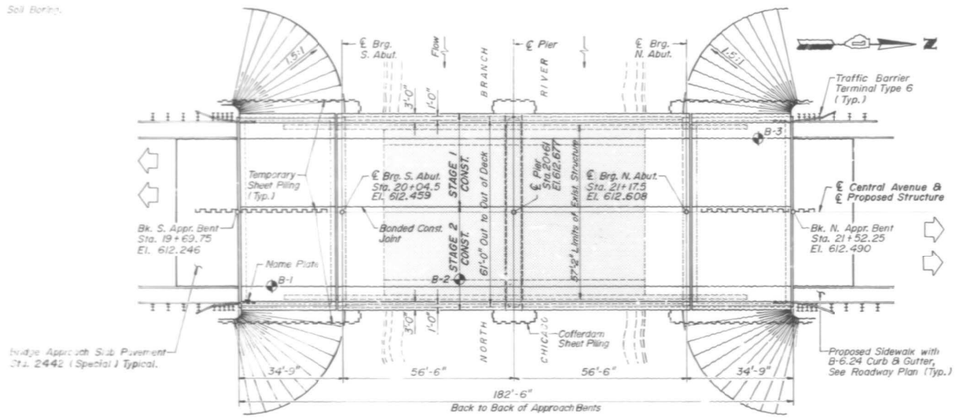
Bench Mark #7: Chiselled "a" on sidewalk 23' Right of Central Avenue Sta. 19+00 El. 612.37

Existing Structure: Two Span Concrete T-Beam Structure on Closed Abutments and Concrete Pier Built in 1932. Exist. Structure Number 016-0721 is 88'-0" Back to Back of Abutments and 54'-0" Out to Out of Deck.

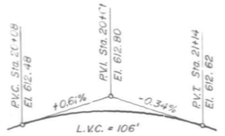


ELEVATION

◆ Indicates Soil Boring.



PLAN



PROFILE GRADE
CENTRAL AVENUE (FAU 2798)
(Along ℄ Roadway)

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
	Removal of Existing Structure	L. Sum	—	—	1
	Structure Excavation	C.Y.	3471	—	3471
	Cofferdam Excavation	C.Y.	192	—	192
	Cofferdam Pier 1	Ea.	2	—	2
	Preformed Joint Seal 2½"	L.F.	—	124	124
	Class X Concrete - Superstructure	C.Y.	—	519.4	519.4
	Protective Coat	S.Y.	—	1215	1215
	Elastomeric Bearing Assembly Type 1	Ea.	—	16	16
	Class X Concrete	C.Y.	959.8	—	959.8
	F & E PCC I-Beam 36"	L.F.	—	909	909
	F & E Structural Steel	Pound	—	5010	5010
	Sand Backfill	C.Y.	2180	—	2180
	Reinforcement Bars Epoxy Coated	Pound	101660	96120	197780
	Furnishing Concrete Piles	L.F.	731	—	731
	Drive Concrete Piles	L.F.	731	—	731
	Temporary Sheet Piling	S.F.	10500	—	10500
	Name Plate	Ea.	—	1	1
*	Remove & Relocate Water Main 12"	L.F.	128	—	128
*	Stone Veneer	S.F.	—	—	6164
	Bridge Seat Sealer	S.F.	233	—	233
*	Bridge Deck Grooving	S.Y.	—	934	934
	Test Pile Concrete	Ea.	1	—	1
	Water Main 12" Suspended	L.F.	128	—	128
	Water Main Hanger Assembly	Each	—	26	26
	Water Main Hanger Insert	Each	—	52	52

* See Special Provisions.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

WATERWAY INFORMATION

Drainage Area = 1.07 Sq. Mi. Low Grade Elev. 611.93 @ Sta. 23+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2495	615	955	600.6	0.2	0.1	600.9	600.8
Design	50	3580	740	1240	603.3	0.3	0.2	603.6	603.5
Base	100	4065	795	1430	605.1	0.2	0.3	605.4	605.3
Overtopping									
Max. Calc.	500	5330	820	1540	607.1	0.3	0.5	607.6	607.4

DESIGN SPECIFICATIONS

1989 AASHTO with 1990 Interims and 1983 Guide Specifications for Seismic Design of Highway Bridges with 1985 and 1988 Interim Specifications.

LOADING HS 20-44

Allow 25 #/sq.ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS

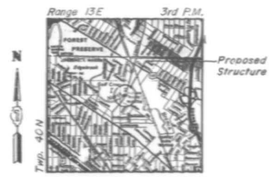
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 4,300 psi
f's = 270,000 psi (½"ø Strands)
f'si = 189,000 psi (½"ø Strands)

STATION 20+61
BUILT 1993 BY
STATE OF ILLINOIS
F.A.U. RT. 2798 SEC. 10108-89
LOADING HS20
STR. NO. 016-2605
PROJECT NO. BRM-STPM-5200(182)

NAME PLATE
(STD. 2113)



LOCATION SKETCH

STATE OF ILLINOIS
FRANK J. MIRABELLA
EXPIRES 11-30-92
ENGINEER

Exp. 11-30-92

DESIGNED	EMM
CHECKED	JMN
DRAWN	RAAJr.
CHECKED	EMM

Nakawatase, Wyns and Associates, Engineers Surveyors Architects 200 W. Madison St. Suite 2200 Chicago, IL 60606

GENERAL PLAN & ELEVATION
CENTRAL AVENUE OVER
THE NORTH BRANCH OF THE CHICAGO RIVER
F.A.U. 2798 SECTION 10108-89
COOK COUNTY
Sta. 20+61
STRUCTURE NUMBER 016-2605

D C B A 0 TAMERAN A B C D

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PLOT DATE = 1/31/2019	DATE -	REVISED -	

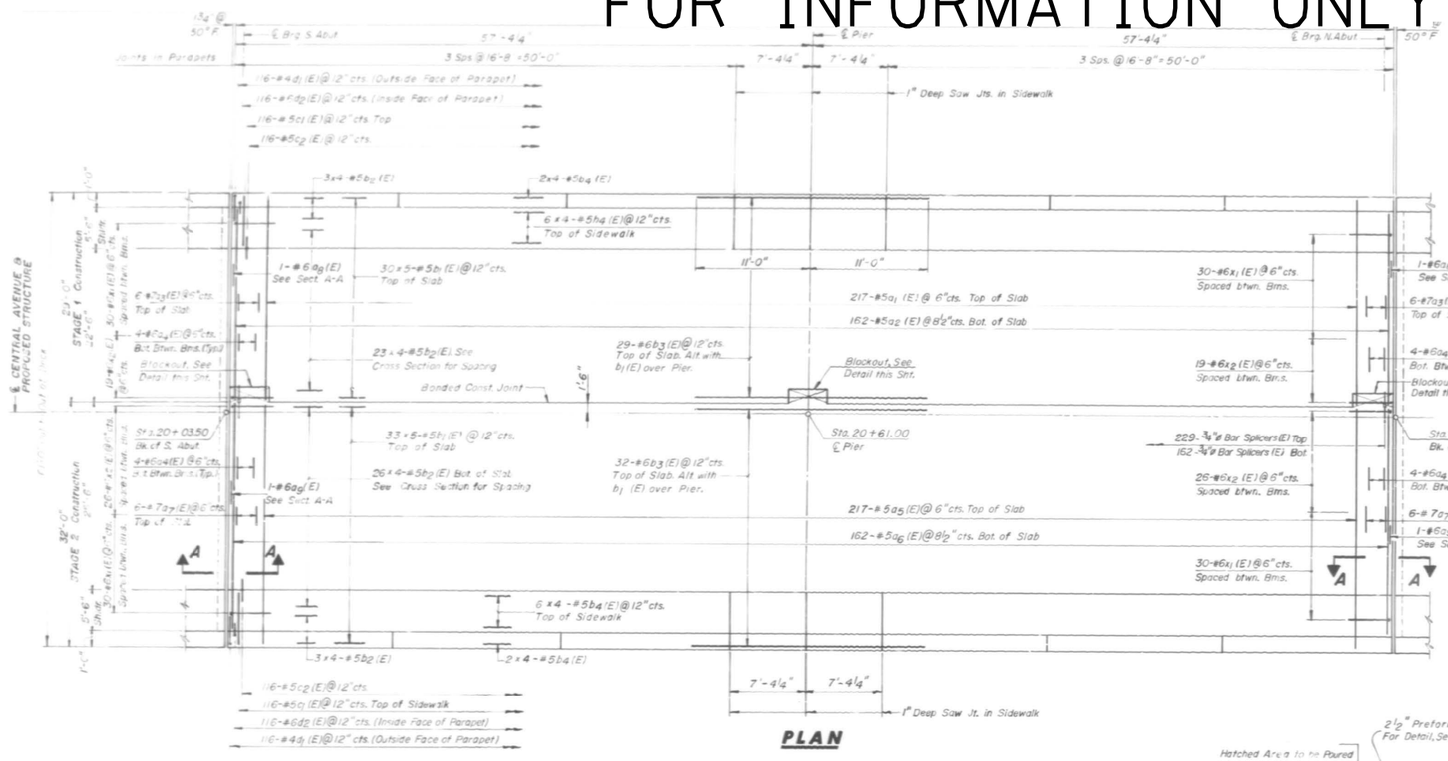
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

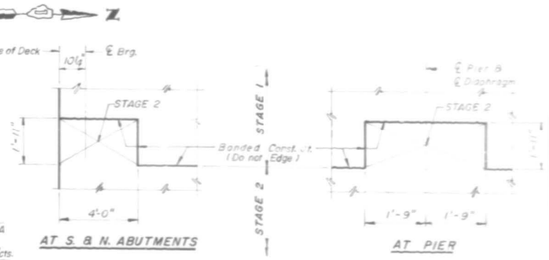
GENERAL PLAN
SN: 016-2605

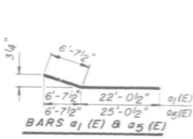
SCALE: | SHEET OF SHEETS | STA. | TO STA.

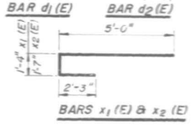
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	124
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

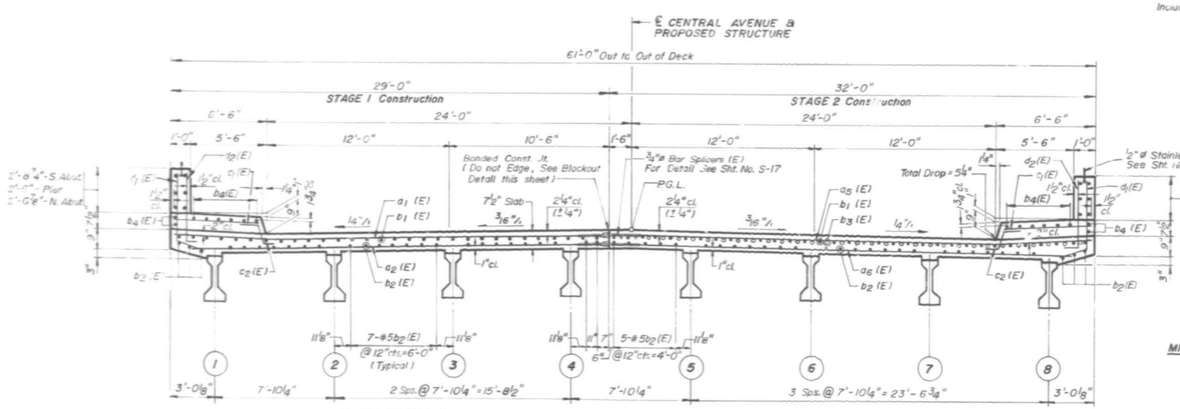
FOR INFORMATION ONLY



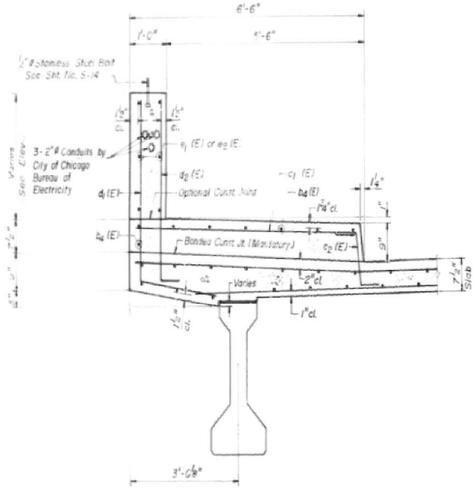








MINIMUM BAR LAP
#5 - 1'-8"



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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2605

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	125
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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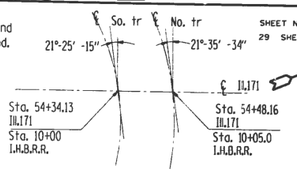
FOR INFORMATION ONLY

BENCHMARK: Elev. 615.37
Cross Cut on Head Block at the Easterly end on N.E. Corner of North P. & Archer Ave. Sta. 47+68.0

EXISTING STRUCTURE: Existing bridge Structure No. 016-0216, at Ill. Rte. 171 (Archer Ave.) was built in 1934 and rehabilitated in 1970. This is a three-span bridge. The two 49'-6⅛" long end spans consist of a concrete deck and nine (9) precast concrete I-beams. The 89'-5¾" long center span consists of a concrete deck and steel girders. The total length of bridge from back to back of abutments. Out to out width varies from 58' to 63'-0". The 44'-0" wide roadway has identical varying width sidewalks, and concrete and steel railings on each side of the roadway.
Along the five column bents is a crash wall. The piers, abutments, and wingwalls are supported on timber piles.

CONSTRUCTION STAGING
STAGE I - Existing piers will be temporarily extended west to provide support for the existing two girder center span that will be jacked laterally to maintain traffic while the east half of the existing bridge is removed and the new bridge constructed.
STAGE II - Traffic will be shifted to the newly constructed east half of the bridge. The existing west half of the bridge, relocated center span and temporary piers will be removed and the west half of the bridge constructed.

WORK TO BE PERFORMED
Removal and replacement of bridge deck, sidewalks, parapets, abutments, piers and retaining walls. The length of the three-span bridge structure will be shortened. Profile grade of Ill. Rte. 171 will be raised to increase the vertical clearance over the I.H.B.R.R. tracks from 19'-3" to 20'-7".
Reconstruction will be completed in two stages.
There will be no salvage of material.



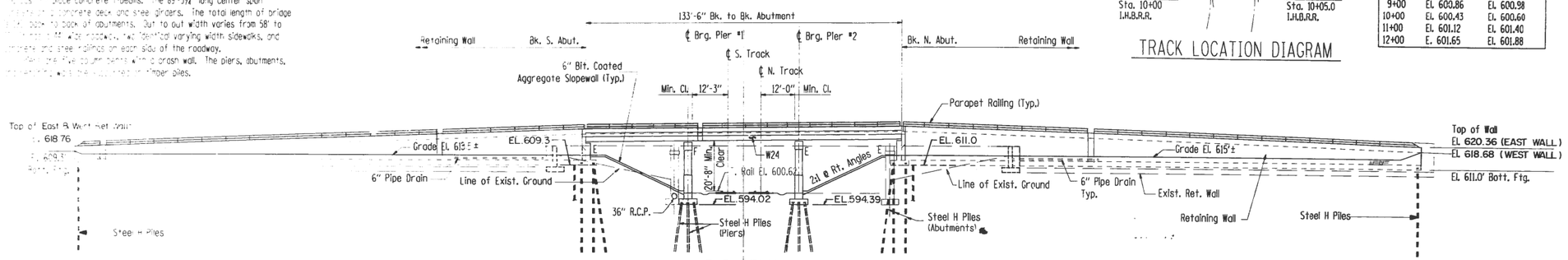
TRACK LOCATION DIAGRAM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3565	(46 VB-1) R(88)	COOK	64	19
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

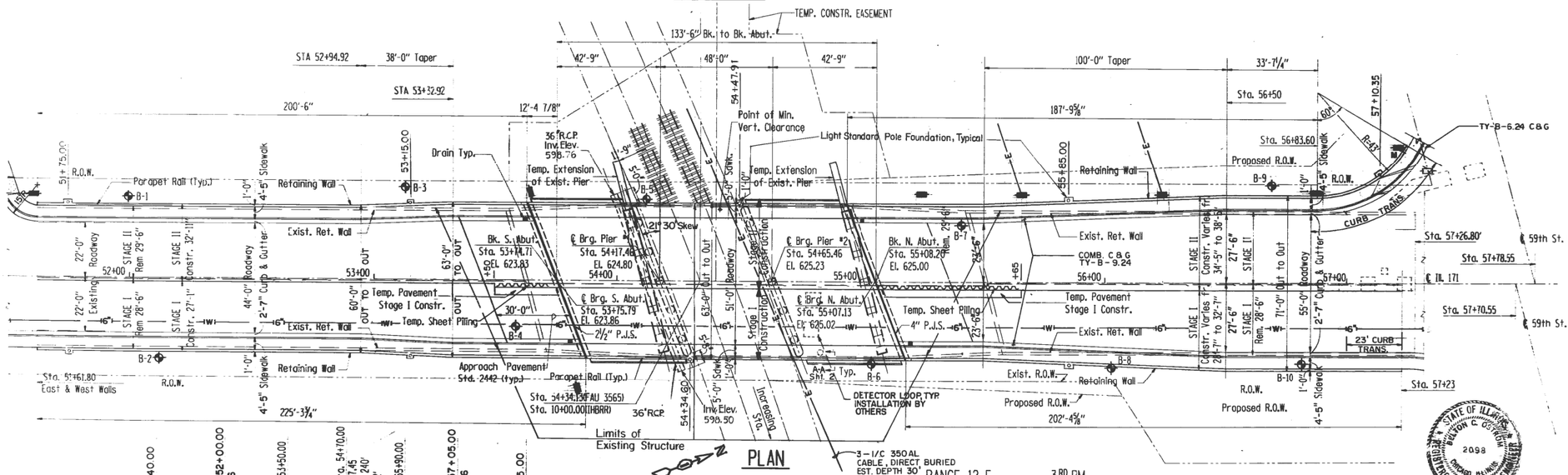
SHEET NO. 1 OF 29 SHEETS

TOP of TRACK ELEVATION

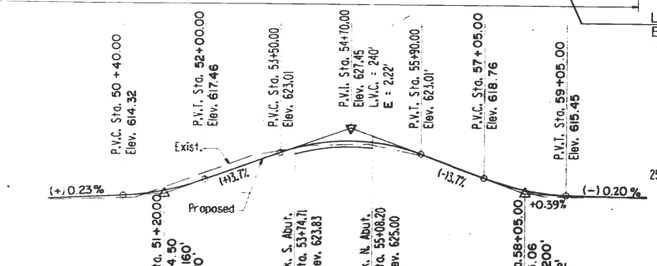
Station	South Track	North Track
8+00	EL. 600.84	EL. 601.02
9+00	EL. 600.86	EL. 600.98
10+00	EL. 600.43	EL. 600.60
11+00	EL. 601.12	EL. 601.40
12+00	E. 601.65	EL. 601.88



ELEVATION



PLAN



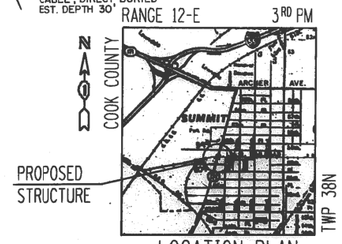
PROFILE GRADE
Along ℄ Ill. 171

DESIGN SPECIFICATIONS
1992 AASHTO and 1993 Interim

LOADING HS20-44
25 #/sq. ft. Allowance for future wearing surface

DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
Fy = 50,000 psi (Struct.) (M-270, Gr. 50)
Fy = 36,000 psi (Struct.) (M-270 Gr. 36)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Acceleration Coefficient (A) = 0.0389
Site Coefficient (S) = 1.0



LOCATION PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

REGISTERED STRUCTURAL ENGINEER — STATE OF ILLINOIS — 2098 — CHICAGO, ILLINOIS
Belton C. Ostrom
MY LICENSE EXPIRES
11-30-96

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS RTE. 171 (ARCHER AVE.)
OVER
I.H.B. RAILROAD
SECTION : (46 VB-1) R(88)
COOK COUNTY
STATION 54+41.46
STRUCTURE NO. 016-2607
SCALE: VERT. HORIZ.
DATE 12-5-94

DESIGNED BY T.D
CHECKED BY T.C.C
DRAWN BY P.B.
CHECKED BY K.E.H
NELSON OSTROM BASKIN BERMAN & ASSOC., INC.
CONSULTING ENGINEERS
PARK RIDGE, ILLINOIS

TAMERAN

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2607

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	126
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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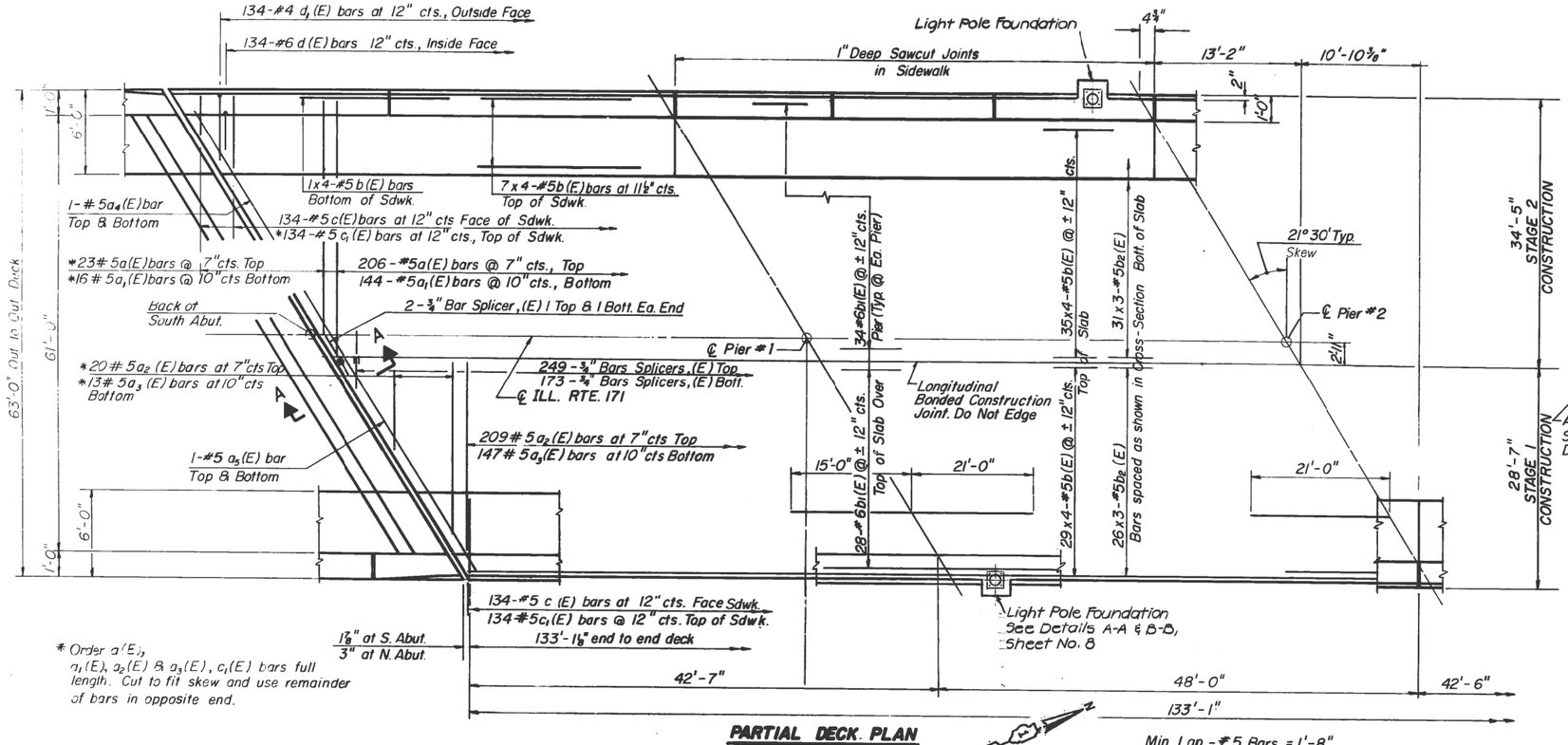
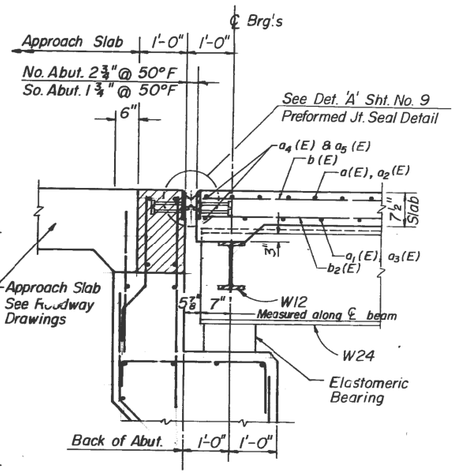
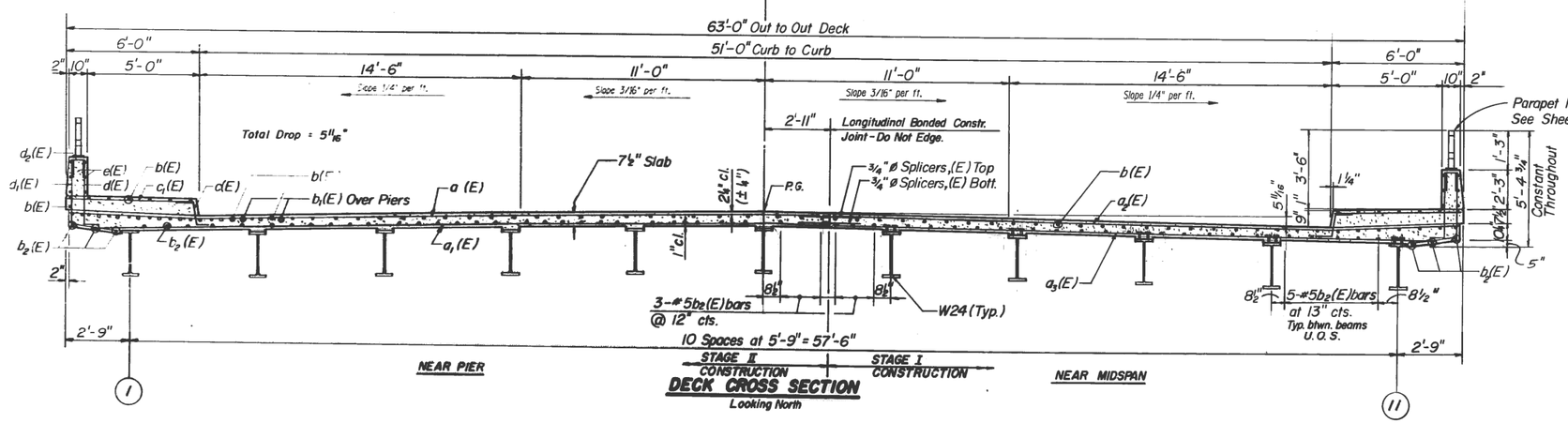
FOR INFORMATION ONLY



PARTIAL DECK. PLAN

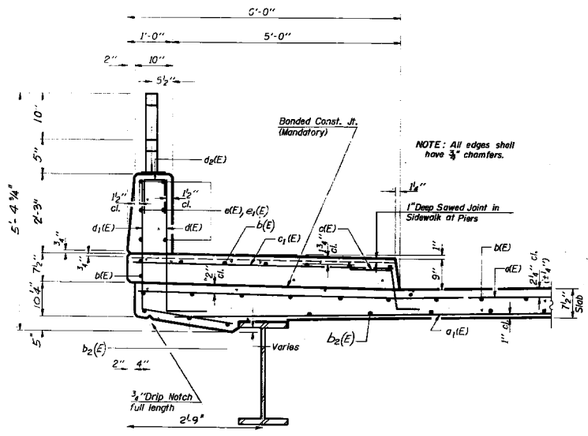


SECTION A-A



DECK CROSS SECTION
Looking North

U.O.S = Unless Otherwise Shown



SECTION THRU SIDEWALK

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2607

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	127
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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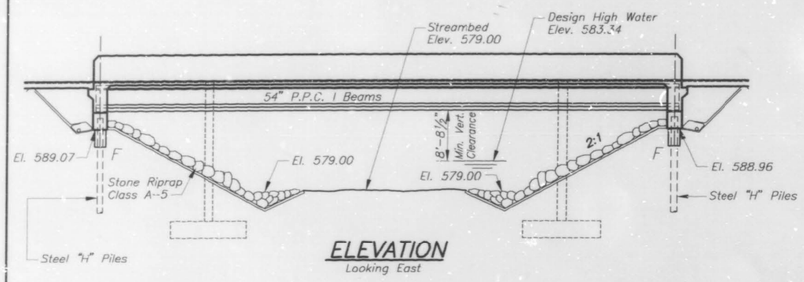
FOR INFORMATION ONLY

BENCH MARK

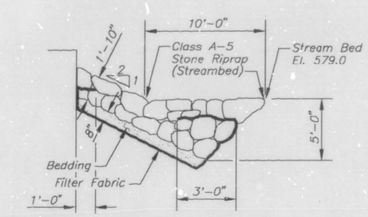
U.S.C.S. Disk Vertically In North Face Of Public School, West Corner 1.5' Northeast Of West Corner, 2.8' Above Existing Walk @ The Southeast Corner Of Archer & Spring Steets. Elevation 630.121.

EXISTING STRUCTURE

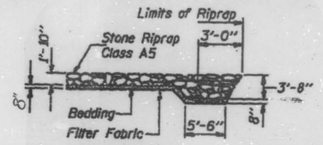
Sturcture Number 016-0541 built in 1924 is a single-span reinforced concrete T-beam structure that carries two lanes of opposing Old Willow Springs Road traffic over the I & M Canal. No known major rehabilitation work has occurred on the structure since the original construction. The substructure consists of 2 solid reinforced concrete abutments. There is no skew to the bridge.
The existing structure is to be removed and replaced with a single span P.P.C. I-Beam structure. Stage Construction is to be utilized maintaining one lane traffic. No salvage.



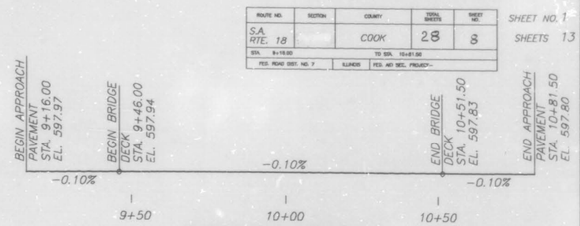
ELEVATION
Looking East



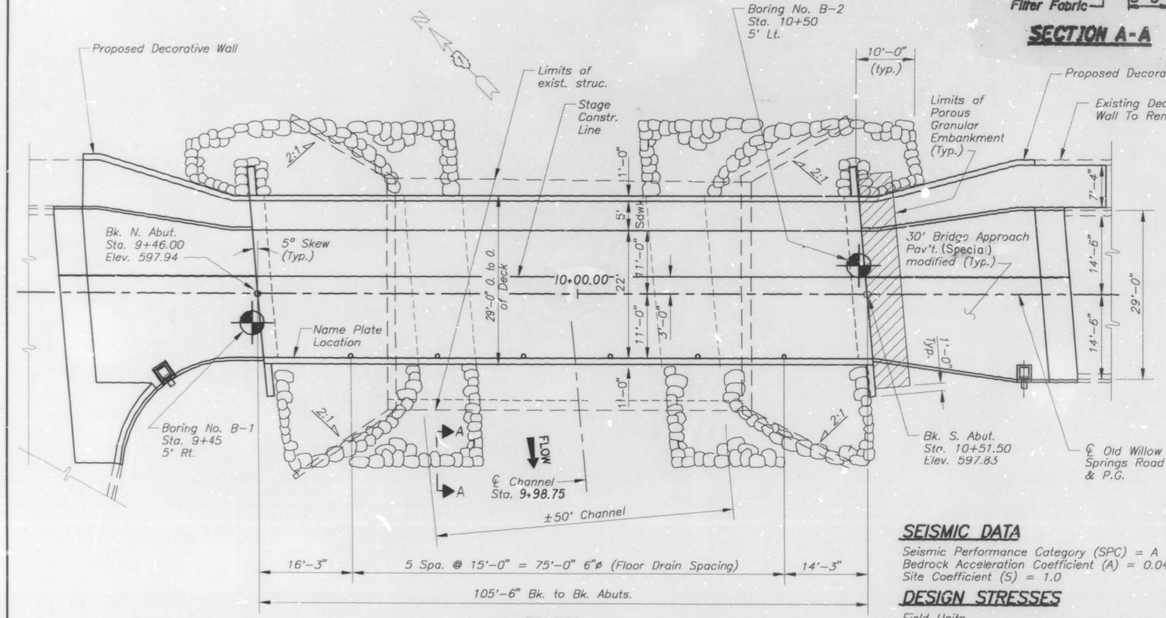
STONE RIPRAP ANCHOR DETAIL



SECTION A-A



PROFILE GRADE
Old Willow Springs Road



PLAN

WATERWAY INFORMATION

Drainage Area 8.65 SQ. MI. Low Grade Elev. 597.25 (Exist. & Prop.) @ Sta. 5+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	548	186	221	582.72	0	0	582.72	582.72
Design	50	791	223	263	583.34	0	0	583.34	583.34
Base	100	887	242	286	583.67	0	0	583.67	583.67
Overtopping									
Max. Calc.	500	1105	283	312	584.03	0	0	584.03	584.03

DESIGNED	T.A.Z.
CHECKED	R.M.
DRAWN	P.R.
CHECKED	T.A.Z.

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
	Removal of Existing Structure	Each	–	–	1
*	Protective Coat	Sq. Yd.	120	–	120
	Concrete Structures	Cu. Yd.	–	24	24
	Furnishing & Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	627	–	627
	Reinforcement Bars (Epoxy Coated)	Pound	24,550	3,830	28,380
	Furnishing Steel Piles (HP12x63)	Ft.	–	168	168
	Driving Steel Piles	Ft.	–	168	168
	Test Piles Steel (HP12x63)	Each	–	1	1
	Stone Riprap Class A-5	Sq. Yd.	–	550	550
	Concrete Superstructure	Cu. Yd.	100	–	100
	Name Plates	Each	1	–	1
	Structure Excavation	Cu. Yd.	–	180	180
	Filter Fabric For Use With Riprap	Sq. Yd.	–	550	550
	Temporary Sheet Piling	Sq. Ft.	–	1,470	1,470
	Bridge Deck Grooving	Sq. Yd.	260	–	260
	Porous Granular Embankment	Cu. Yd.	–	180	180
	Bar Splicers	Each	356	8	364
	Poor Drains	Each	6	–	6
	Metal Shoes	Each	–	12	12

* Quantity is for Top and Inside Surface of Parapet.

NAME PLATE LETTERING
See Std. 2113

STA. 9+98.75
BUILT 19 BY
STATE OF ILLINOIS
S.A. ROUTE 18 SEC. 142C-15D
LOADING HS 20
STRUCTURE NO. SN 016-2646

GENERAL NOTES

For pavement removal and excavation between existing abutments and new abutments, see Roadway Plans.

Layout of Stone Riprap may be varied in field to suit ground conditions as directed by the engineer.

Reinforced bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The contractor shall drive 1-steel HP 12x63 test pile at a permanent location at the north abutment, as directed by the engineer before ordering the remainder of the piles.

2 BACKFILL SHALL BE PLACED BEHIND THE ABUTMENTS AFTER THE SUPERSTRUCTURE IS IN PLACE.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0

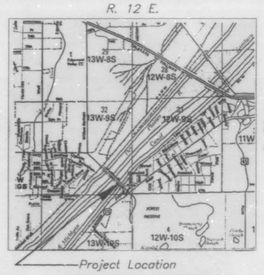
DESIGN STRESSES

Field Units
f'c = 3,500 P.S.I.
fy = 60,000 P.S.I. (Reinforcement)
Precast Prestressed Units
f'c = 6,000 P.S.I.
f'ci = 5,000 P.S.I.
f's = 270,000 P.S.I. (½" Dia. Low Relaxation Strands)
f'si = 201,960 P.S.I. (½" Dia. Low Relaxation Strands)

LOADING HS 20-44

Allow 25 lbs./Sq. Ft. for Future Wearing Surface

Design Specifications: 1992 A.A.S.H.T.O. & 1993 Interim



LOCATION SKETCH

2 Revised 6-27-95

STATE OF ILLINOIS
JAMES RICHARD LOY
81-2307
CHICAGO, ILL.
STRUCTURAL ENGINEER

FOR BARRIENTOS
Mar. 14, 1995
Date

BARRIENTOS
Engineers & Architects

GENERAL PLAN
S.A. ROUTE 18 (OLD WILLOW SPRINGS ROAD OVER ILLINOIS & MICHIGAN CANAL)
SECTION 142C-B-R COOK COUNTY
STA. 9+98.75
STRUCTURE NO. 016-2646

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.A. RTE. 18		COOK	28	8
STA. 9+16.00		TO STA. 10+81.50		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ.	

SHEET NO. 1
SHEETS 13

D C B A 0 A B C D
TAMERAN

1013BRFR

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2646

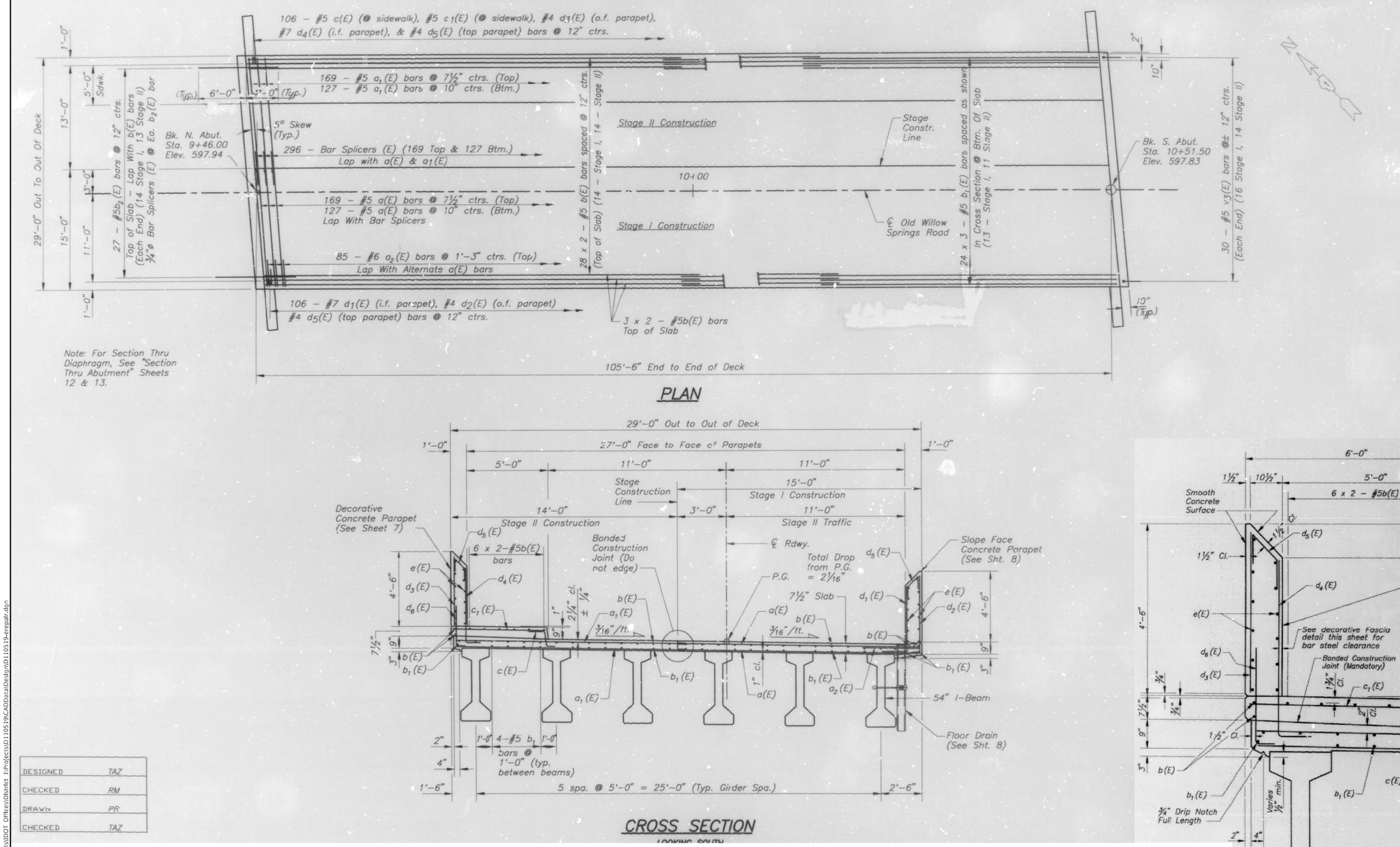
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	128
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

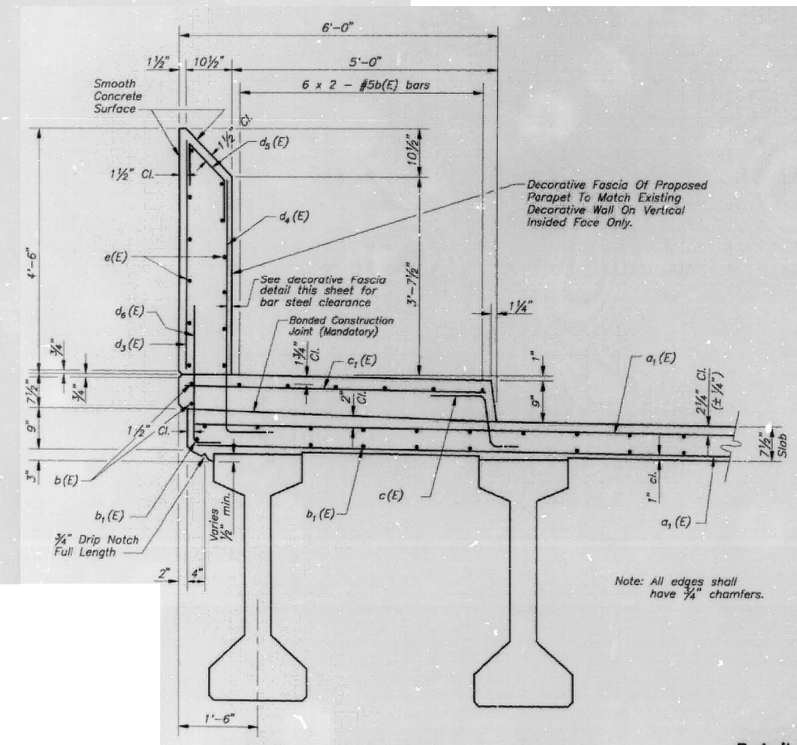
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. RTE. SA-18	140C-B-R	COOK	28	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
SHEETS 19



PLAN

CROSS SECTION



SECTION THRU PARAPET & SIDEWALK

Stage II Construction

Detail

DESIGNED	TAZ
CHECKED	RM
DRAWN	PR
CHECKED	TAZ

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016–2646

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	129
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

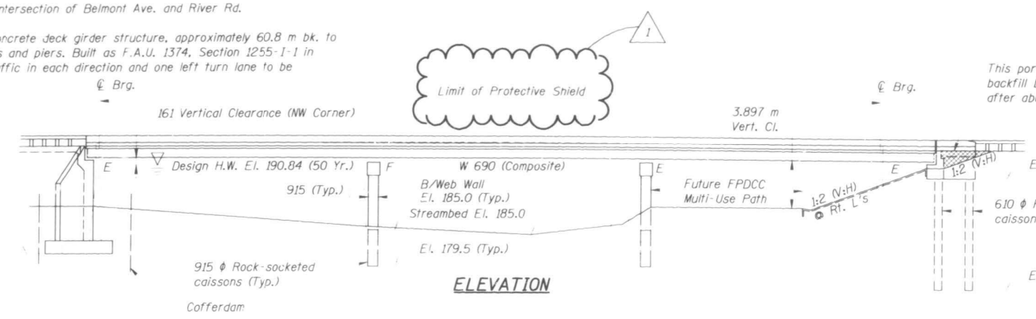
Bench Mark:
Bronze plaque labeled "MSD UDTR 199" in N.E. concrete island in intersection of Belmont Ave. and River Rd.
Elevation 191.6 m

Existing Structure: S.N. 016-0854, three simple span reinforced concrete deck girder structure, approximately 60.8 m bk. to bk. abutments and 16.0 m o. to o. supported on closed abutments and piers. Built as F.A.U. 1374, Section 1255-1-1 in 1926 and rehabilitated in 1974 and 1993. One lane of through traffic in each direction and one left turn lane to be maintained utilizing staged construction.

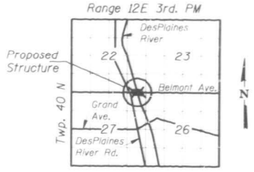
No Salvage.

					SHEET NO. 51
F.A.U. 1374	•	COOK			S.53 SHEETS

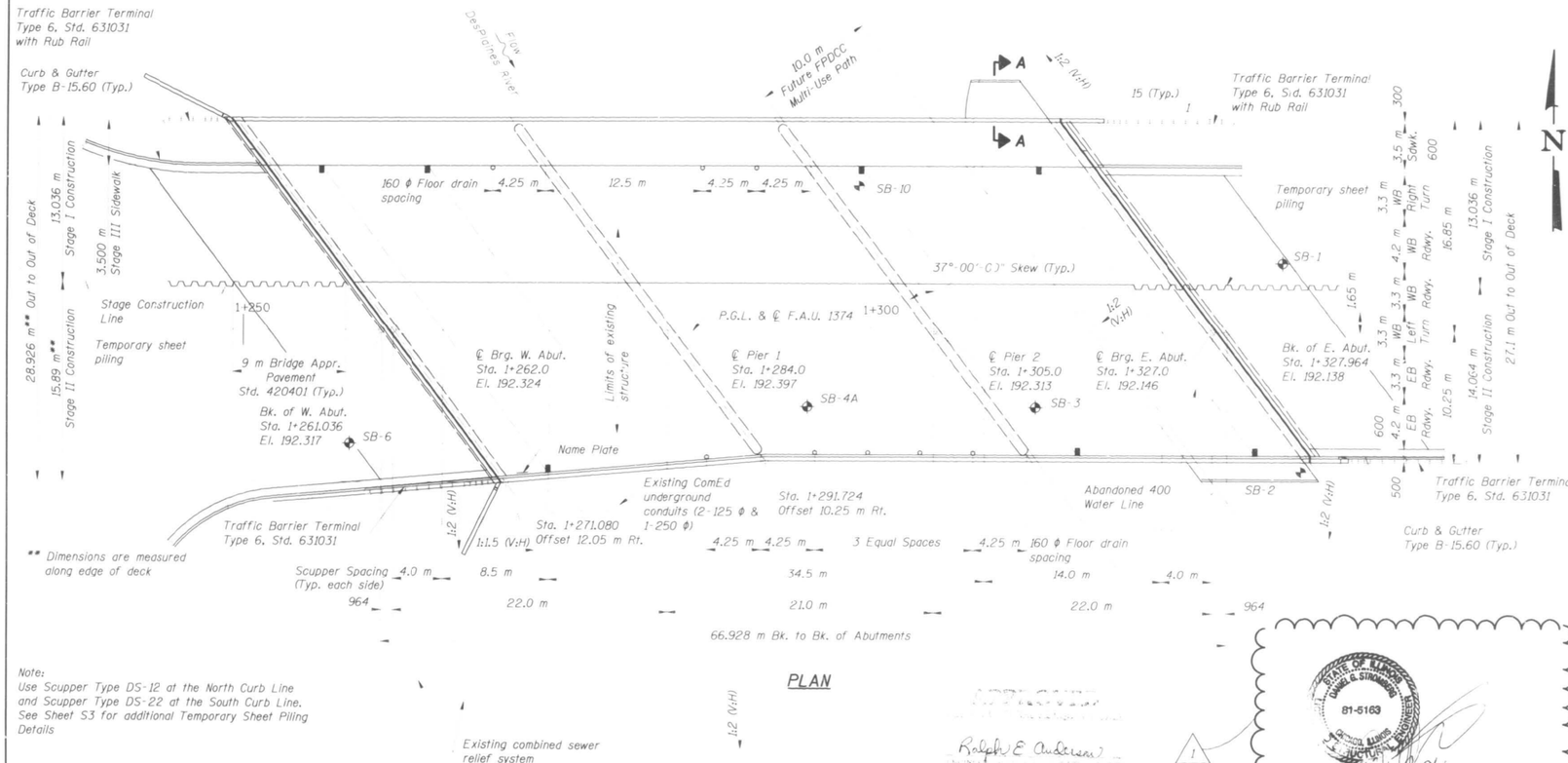
• 13204(C,D)RS & 12558



ELEVATION



LOCATION SKETCH



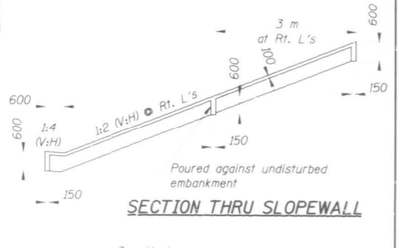
PLAN

P.V.C.	P.V.I.	P.V.T.
Sta. 1+255	Sta. 1+280	Sta. 1+305
El. 192.266	El. 192.503	El. 192.313

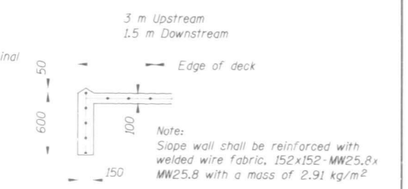
+0.95% -0.76%

V.C. = 50 m

PROFILE GRADE BELMONT AVENUE
(Along ℄ Structure)



SECTION THRU SLOPEWALL



SECTION A-A

DES PLAINES RIVER
STATION 1+294.500
BUILT 2001 BY
STATE OF ILLINOIS
F.A.U. RT. 1374 SEC (3204(C,D))RS & 12558
F.A. PROJECT
STR. NO. 016-2651 LOADING MS18

NAME PLATE
See Std. 515001

Note:
Use Scupper Type DS-12 at the North Curb Line and Scupper Type DS-22 at the South Curb Line. See Sheet S3 for additional Temporary Sheet Piling Details

DESIGN SPECIFICATIONS

1996 AASHTO Standard Specifications for Highway Bridges, including 1997 Interims

LOADING MS18

Allow 2.4 kN/m² for future wearing surface.

DESIGN STRESSES

f'c = 24 MPa
fy = 400 MPa (Reinf.)
fy = 345 MPa (M 270M Grade 345)
fy = 250 MPa (M 270M, Grade 250)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 1163.00 km² Low Grade Elev. 192.08 m ● Sta. 1+250

Flood	Freq. Yr.	Q m³/s	Opening m² Exist.	Opening m² Prop.	Nat. H.W.E.	Head - m Exist.	Head - m Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	172.7	154.1	261.5	190.84	0.04	0.00	190.88	190.84
Base	100	184.3	154.1	264.9	191.05	0.04	0.02	191.09	191.07
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	206.3	154.1	264.9	191.48	0.05	0.02	191.53	191.50

STATE OF ILLINOIS
DANIEL G. STRONG
81-5163
REGISTERED
PROFESSIONAL ENGINEER
9/1/00
Expires 11/30/00

Note:
All dimensions are in millimeters (mm) except as noted.

COLLINS ENGINEERS, INC.
211 W. WACKER DR., 8th FLR.
CHICAGO, IL. 60606
(312)704-9300
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000993

DEPARTMENT OF TRANSPORTATION

BELMONT AVE. OVER DES PLAINES RIVER
F.A.U. RTE. 1374 SEC (3204(C,D))RS & 12558
COOK COUNTY
STATION 1+294.500
STRUCTURE NO. 016-2651

GENERAL PLAN

DRAWN BY A.S. CHECKED BY A.MARINO DATE 08/xx/1999

23200010

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2651

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	130
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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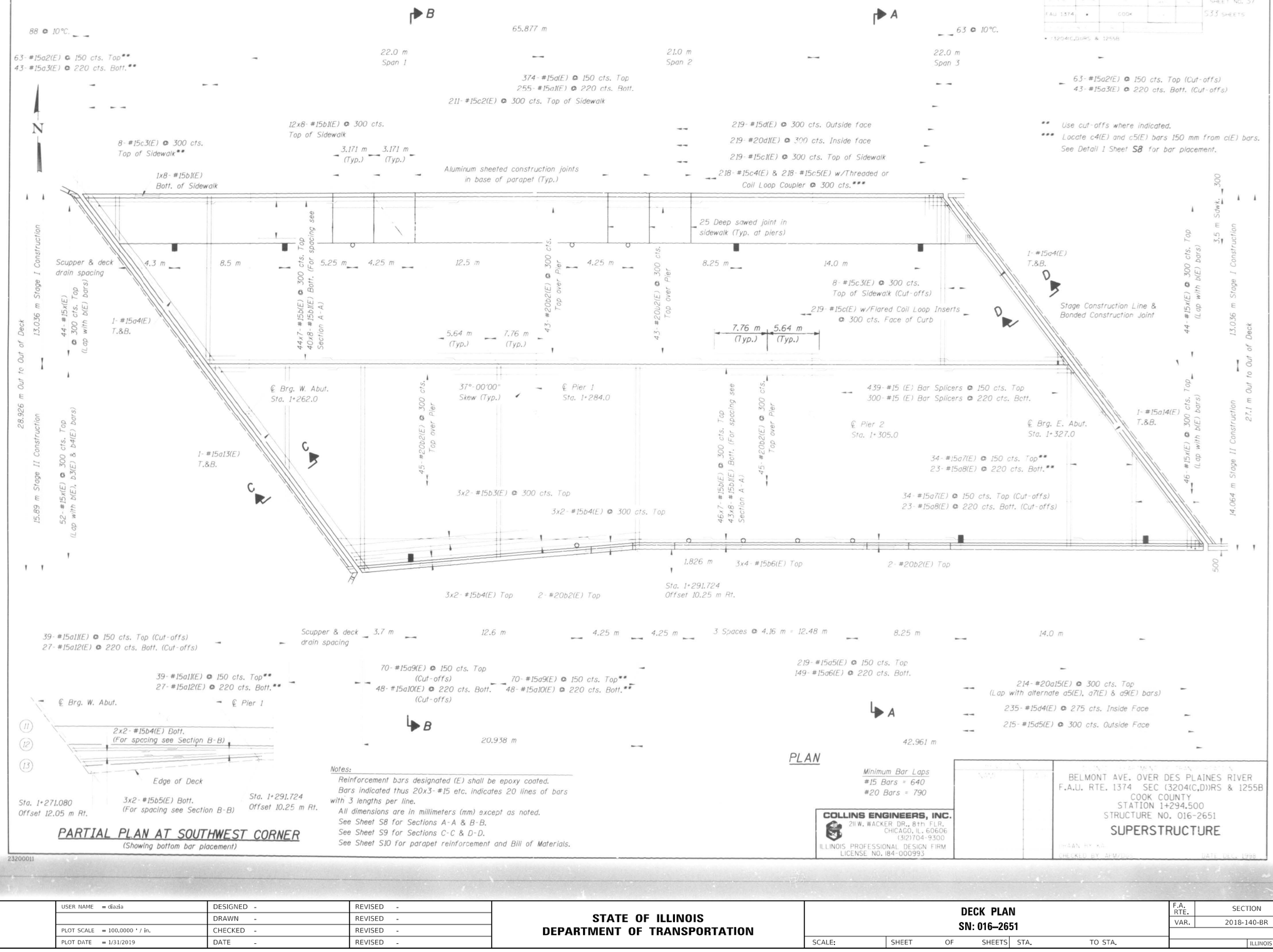
FOR INFORMATION ONLY



PARTIAL PLAN AT SOUTHWEST CORNER
(Showing bottom bar placement)

PLAN

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3- #15 etc. indicates 20 lines of bars with 3 lengths per line.
All dimensions are in millimeters (mm) except as noted.
See Sheet S8 for Sections A-A & B-B.
See Sheet S9 for Sections C-C & D-D.
See Sheet S10 for parapet reinforcement and Bill of Materials.

Minimum Bar Laps
#15 Bars = 640
#20 Bars = 790

COLLINS ENGINEERS, INC.
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CHICAGO, IL. 60606
(312)704-9300
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000993

BELMONT AVE. OVER DES PLAINES RIVER
F.A.U. RTE. 1374 SEC (3204(C,D))RS & 1255B
COOK COUNTY
STATION 1+294.500
STRUCTURE NO. 016-2651

SUPERSTRUCTURE

DRAWN BY
CHECKED BY
DATE

23200011

						SHEET NO. 57	
FAU 1374	•	COOK				533 SHEETS	
• (3204(C,D))RS & 1255B							

USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-2651

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	131
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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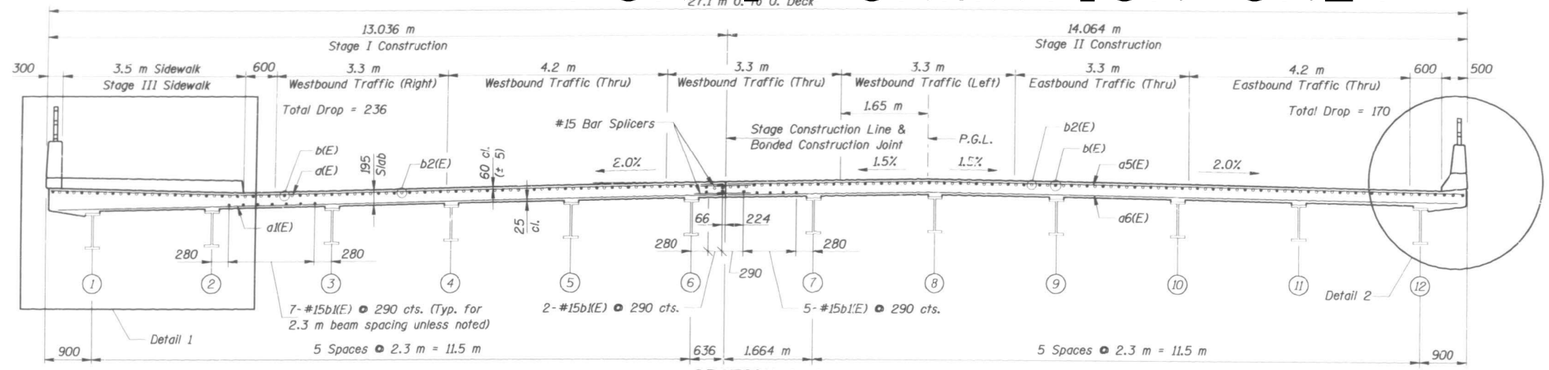
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1374	*	COOK	176	72
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 58
S33 SHEETS

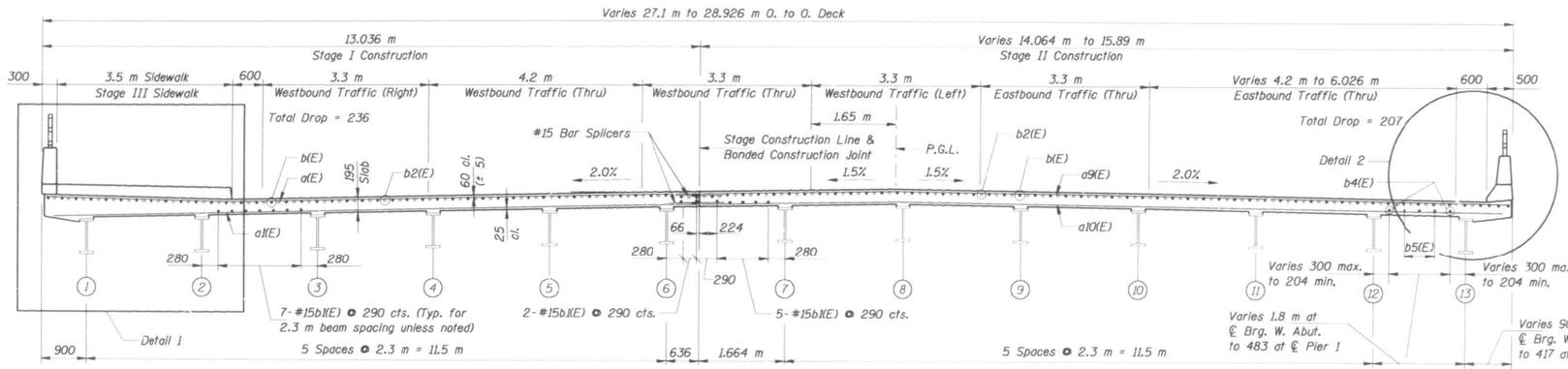
* (3204(C,D))RS & 1255B



SECTION A-A

(Dimensions are at right angles to ℄ of Roadway)

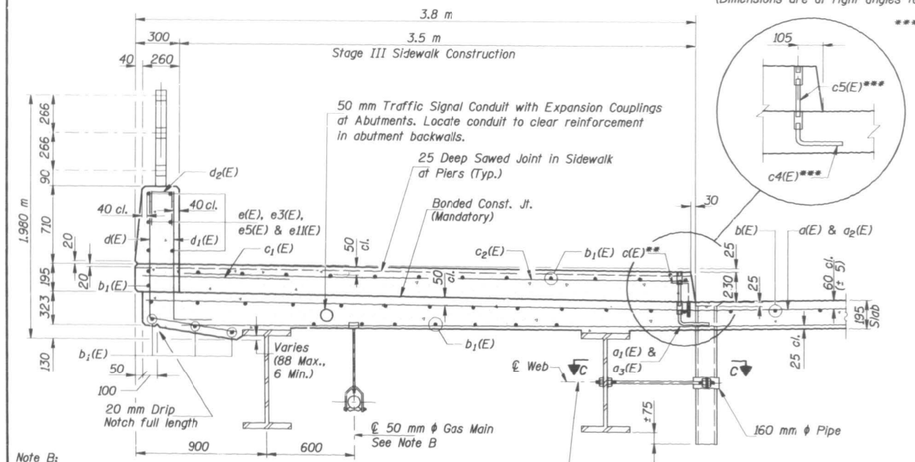
Varies 27.1 m to 28.926 m O. to O. Deck



SECTION B-B

(Dimensions are at right angles to ℄ of Roadway)

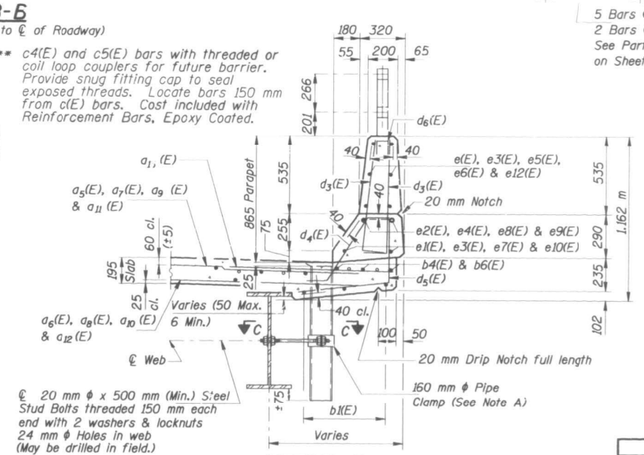
5 Bars @ 300 cts. max. (West End)
2 Bars @ 75 cts. min. (East End)
See Partial Plan at Southwest Corner on Sheet S7 for bar placement



DETAIL 1

Note B:
Provide roller type pipe hangers with threaded rods, nuts and concrete inserts spaced as required by manufacturer. Contractor shall verify size and location of Gas Main before ordering any materials. Gas Main shall be located to clear diaphragms, and shall not be set lower than bottom of Fascia beam.

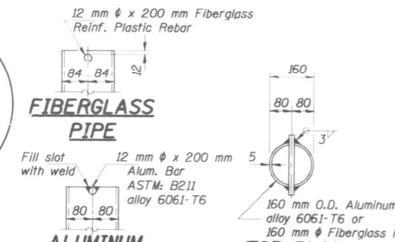
*** c4(E) and c5(E) bars with threaded or coil loop couplers for future barrier. Provide snug fitting cap to seal exposed threads. Locate bars 150 mm from c(E) bars. Cost included with Reinforcement Bars, Epoxy Coated.

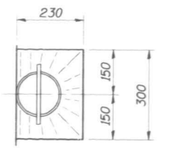


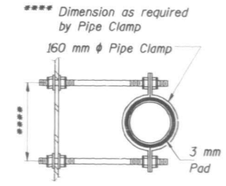
DETAIL 2

Note A:
Angle drain when necessary to clear bottom flange. See Detail 3, Sheet No. S9

** With 20 mm ϕ x 150 Flared Coil Loop Insert
Cost included with Reinforcement Bars, Epoxy Coated.







SECTION C-C

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drain shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 200 MPa minimum.

Drains shall be located clear of all diaphragms.
All dimensions are in millimeters (mm) except as noted.
Reinforcement bars designated (E) shall be epoxy coated.
See Sheet S10 for parapet reinforcement and Bill of Materials.

REVISIONS	
NAME	DATE

COLLINS ENGINEERS, INC.
211 W. WACKER DR., 8th FLR.
CHICAGO, IL. 60606
(312)704-9300
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000993

ILLINOIS DEPARTMENT OF TRANSPORTATION
BELMONT AVE. OVER DES PLAINES RIVER
F.A.U. RTE. 1374 SEC (3204(C,D))RS & 1255B
COOK COUNTY
STATION 1+294.500
STRUCTURE NO. 016-2651

SUPERSTRUCTURE DETAILS-I

DRAWN BY KAC
CHECKED BY APM/DGS
DATE DEC. 1998

23200012

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016–2651

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	132
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Route	Section	County	Sheets Total	Sheet No.
345	1293 - BR	Cook	84	59
Station	10+04.46			
FHWA Region	ILLINOIS	Proj.		

Bridge Sheet 1 of 22

D-91-067-95 &
D-91-116-95

Benchmark : Cut "□" on Southeast Wing-wall of Irving Park Road (IL. Rte. 19) Bridge over the Des Plaines River. El. = 630.06

Existing Structure S.N. 016-0327
The existing three span bridge was built in 1928 as S.A. Rte. 13 Section 1293-15d at Sta. 10+00 Ex. and is 189'-0" long bk. to bk. abut. The reinforced concrete deck is 56'-3½" o. to o. and is supported by concrete T-girders. The bridge will be replaced with a three span continuous 42" P.P.C. I-Beams on intergal abutments and pile bent piers.

Traffic : The bridge shall be built utilizing Stage Construction. One lane of traffic in each direction shall be maintained at all times.

Salvage : None

Backfill with uncompacted porousgranular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place

ELEVATION

2'-0" Min. Vertical Clearance
Parapet
Design H.W. El. = 623.86 (50 Yr.)
42" P.P.C. I Beam
Riprap
Steel H Piles
El. = 604.65
Streambed El. = ±608.65
Existing Box Culvert to be cut back to Riprap and new apron with wingwalls to be provided. Existing Box Culvert to be relocated as directed by the Engineer if it interferes with the proposed East Abutment.
Note : The use of this pier type is intended to eliminate the need for cofferdams.

PLAN

10'-0"
Ex. Power Pole to be relocated
Ex. Valve Vault to be removed
Railing
243'-10 13/16 bk. to bk. Abutment along ℄ of F.A.P. Rte. 345
Boring No. 4 Sta. 9+00 (Ex.) 40' Lt.
16" Watermain (Pr.)
Ex. R.O.W.
Boring No. 5 Sta. 9+50 (Ex.) 40' Lt.
℄ Ex. Bridge Sta. 10+00 (Ex.) El. = 629.75 30°-00'-00" Skew
Boring No. 6 Sta. 10+30 (Ex.) 40' Lt.
Parapet
Ex. Power Pole to be relocated
Ex. Valve Vault to be removed
Temporary Construction Easement
Ex. Aggregate Path
TBT Type 6 w/ end section
Boring No. 7 Sta. 11+30 (Ex.) 10' Lt.
Sidewalk / Future Multi-Use Trail
T.B.T. Type 5 with S.P.B.G.R.
Parapet with Railing
Limits of Porous Granular Embankment (Typ.)
Vault (Pr.)
F.B.G. (Pr.)
Curve 4
Bk. Pr. W. Abut. Sta. 8+82.49 El. = 630.66
Ex. ℄ F.A.P. Rte. 345 (IL. Rte. 19)
Curve 1
Joint in Sidewalk
℄ Pr. Pier 1 Sta. 9+62.96 El. = 630.98
P.T. Curve 1 Sta. 9+04.80 (Ex.)
P.T. Curve 4 Sta. 9+63.45
P.T. Curve 6 Sta. 9+63.45
Skew 29°-08'-43.87"
℄ Pr. Pier 2 Sta. 10+45.96 El. = 630.94
6" ø Floor Drain (Typ.)
Temporary Sheet Piling (Typ.)
Bk. Pr. E. Abut. Sta. 11+26.39 El. = 630.59
M.H. (Pr.)
Curve 6
Pr. ℄ F.A.P. Rte. 345 Curve 2
℄ Pr. Brg. W. Abut
P.T. Curve 2 Sta. 9+35.30
℄ Pr. Bridge Sta. 10+04.46 El. = 631.02
Pr. ℄ F.A.P. Rte. 345 (IL. Rte. 19)
Curve 7
Local Tangent Line at Sta. 9+35.30
P.T. Curve 7 Sta. 8+69.97
Preformed Plastic Median, varies from 0'-0" at Sta. 9+63.45 to 2'-7¾" at Sta. 8+82.49
79'-0" along ℄ Rdwy.
Noma-Flex Pipe
Stage Construction Line
83'-0"
79'-0"
℄ Pr. Brg. E. Abut.
Bridge Approach Pavement Std. 2442 (Modified) (Typ.)
Pr. Roadway
Vault (Pr.)
Ex. Power Pole to be relocated
B-6.24 Curb & Gutter
16" Watermain (Pr.)
Headwall and Apron to be added
F.B.G. (Pr.)
Fire Hydrant (Pr.)
F.B.G. (Pr.)
TBT Type 6 w/S.P.B.G.R.
Boring No. 8 Sta. 8+80 (Ex.) 15' Rt.
Boring No. 9 Sta. 9+80 (Ex.) 35' Rt
Parapet
Boring No. 10 Sta. 10+50 (Ex.) 35' Rt.
Boring No. 11 Sta. 11+10 (Ex.) 30' Rt.
Ex. R.O.W.
Ex. 2.9' x 3.3' Box Culvert to be Cutback.
TBT Type 6 w/end section
B-6.24 Curb & Gutter
Temporary Construction Easement

PROFILE GRADE

P.C. Sta. 7+90 El. = 630.01
+0.900%
120' V.C.
P.T. Sta. 9+10 El. = 630.79
P.C. Sta. 9+40 El. = 630.91
+0.400%
120' V.C.
P.I. Sta. 8+50 El. = 630.65
P.I. Sta. 10+00 El. = 631.15
-0.440%
-0.440%
P.T. Sta. 10+60 El. = 630.69
P.C. Sta. 11+40 El. = 630.53

CURVE DATA

Curve 1 (Ex.)	Curve 2 (Pr.)	Curve 4 (Pr.)	Curve 6 (Pr.)	Curve 7 (Pr.)
Δ = 17°-01'-59.67"	Δ = 17°-53'-15.80"	Δ = 17°-53'-15.80"	Δ = 17°-53'-15.80"	Δ = 17°-53'-15.80"
D = 4°-18'-59.71"	D = 4°-35'-1.18"	D = 4°-46'-28.73"	D = 4°-41'-13.28"	D = 5°-43'-46.48"
T = 198.77'	T = 196.73'	T = 186.86'	T = 192.32'	T = 157.38'
L = 394.60'	L = 390.25'	L = 374.64'	L = 381.51'	L = 312.20'
E = 14.80'	E = 15.39'	E = 14.77'	E = 15.04'	E = 122.31'
R = 1327.34'	R = 1250.00'	R = 1200.00'	R = 1222.00'	R = 1000.00'
P.I. = Sta. 7+08.97 (Ex.)	P.I. = Sta. 7+41.78	P.I. = 7+72.64	P.I. = 7+72.07	P.I. = 7+14.84

SEISMIC DATA

Seismic Performace Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.037g.
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

1992 AASHTO with 1993, 1994, and 1995 Interims

LOADING HS20-44

Allow 25 p.s.f. for future wearing surface.

DESIGN STRESSES

Precast Prestressed Units
f'c = 6,000 p.s.i. f'ci = 5,000 p.s.i.
fsi = 201,960 ("2" g Low Relaxation strands)
f's = 270,000 ("2" g Low Relaxation strands)

Field Stress
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinforcement)

APPROVED
Ralph E. Anderson

STATE OF ILLINOIS
RALPH L. ALLEN
2908
PROFESSIONAL ENGINEER
STRUCTURAL

WATERWAY INFORMATION

Drainage Area = 4.44 sq. mi Low Grade El. = 625.71 at Sta. 3+29

FLOOD	Freq Yr.	Q C.F.S.	Opening Exist.	Opening Prop.	Sq. Ft.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater-El. Exist.	Headwater-El. Prop.
	10	4235	1750	1795		622.36	0.07	0.06	622.43	622.42
DESIGN	50	5500	1979	2053		623.86	0.09	0.08	623.95	623.94
BASE	100	6000	2000	2145		624.38	0.20	0.10	624.58	624.48
Overtopping										
Max. Calc.	500	6950	2000	2289		625.29	0.29	0.02	625.59	625.31

LOCATION SKETCH

Range 12 E. 3rd P.M.
TWP 40 N
Des Plaines River
Rte. 19
Irving Park Rd.
Structure Replacement
16 15 14 21 22 23

ALLEN ENGINEERING CO.
VILLA PARK, IL 60181 (708) 834-0080

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE. 345 (IL. RTE. 19)

GENERAL PLAN
F.A.P. RTE. 345 (IL. RTE. 19)
OVER THE DES PLAINES RIVER
SECTION 1293-BR
COOK COUNTY
STA. 10+04.46
S.N. 016-2672

SCALE:
DATE 4-23-96
DRAWN BY: SMF
CHECKED BY: CB

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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2672

SCALE: | SHEET OF SHEETS | STA. | TO STA.

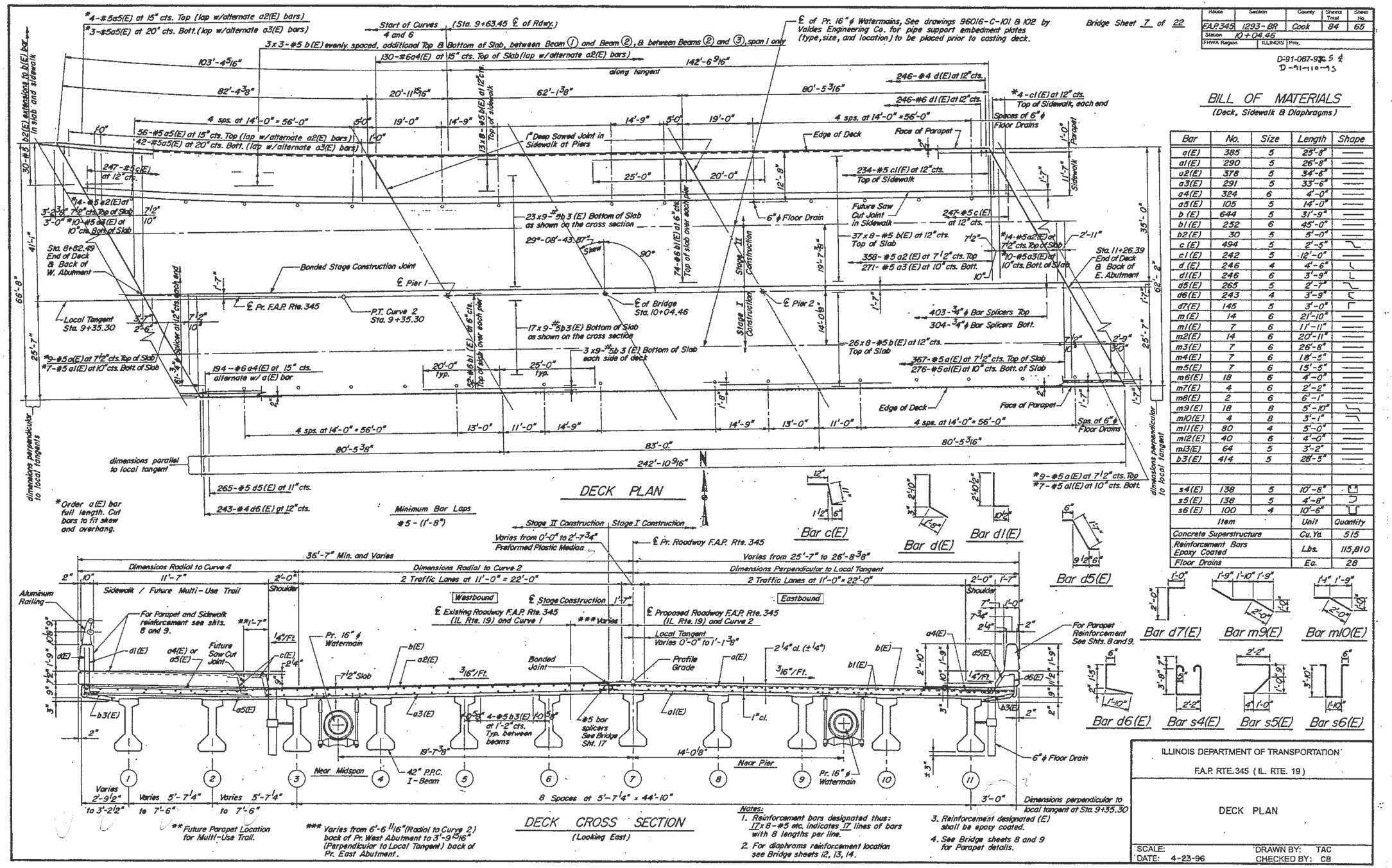
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	133
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

Route	Section	County	Sheets Total	Sheet No.
FAP 345	1293-BR	Cook	84	65
Station	10+04.46			
FHWA Region	ILLINOIS	Proj.		

D-91-067-92 & 5
D-91-110-93

Bridge Sheet 7 of 22



BILL OF MATERIALS
(Deck, Sidewalk & Diaphragms)

Bar	No.	Size	Length	Shape
a(E)	385	5	25'-8"	
a1(E)	290	5	26'-8"	
a2(E)	378	5	34'-6"	
a3(E)	291	5	33'-6"	
a4(E)	324	6	4'-0"	
a5(E)	105	5	14'-0"	
b(E)	644	5	31'-9"	
b1(E)	252	6	45'-0"	
b2(E)	30	5	5'-0"	
c(E)	494	5	2'-5"	
c1(E)	242	5	12'-0"	
d(E)	246	4	4'-6"	
d1(E)	246	6	3'-9"	
d5(E)	265	5	2'-7"	
d6(E)	243	4	3'-9"	
d7(E)	145	5	3'-0"	
m(E)	14	6	21'-10"	
m1(E)	7	6	11'-11"	
m2(E)	14	6	20'-11"	
m3(E)	7	6	26'-8"	
m4(E)	7	6	18'-5"	
m5(E)	7	6	15'-5"	
m6(E)	18	6	4'-0"	
m7(E)	4	6	2'-2"	
m8(E)	2	6	6'-1"	
m9(E)	18	8	5'-10"	
m10(E)	4	8	3'-1"	
m11(E)	80	4	5'-0"	
m12(E)	40	6	4'-0"	
m13(E)	64	5	3'-2"	
b3(E)	414	5	26'-5"	
s4(E)	138	5	10'-8"	
s5(E)	138	5	4'-8"	
s6(E)	100	4	10'-6"	

Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	515
Reinforcement Bars Epoxy Coated	Lbs.	115,810
Floor Drains	Ea.	28

Notes:
1. Reinforcement bars designated thus: 17 x 8 - #5 etc. indicates 17 lines of bars with 8 lengths per line.
2. For diaphrams reinforcement location see Bridge sheets 12, 13, 14.
3. Reinforcement designated (E) shall be epoxy coated.
4. See Bridge sheets 8 and 9 for Parapet details.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.P. RTE. 345 (IL. RTE. 19)
DECK PLAN
SCALE:
DATE: 4-23-96
DRAWN BY: TAC
CHECKED BY: CB

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2672

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	134
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. U. 2722	3068 B-R	COOK	93	26
FED. ROAD PROJ. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
32 SHEETS

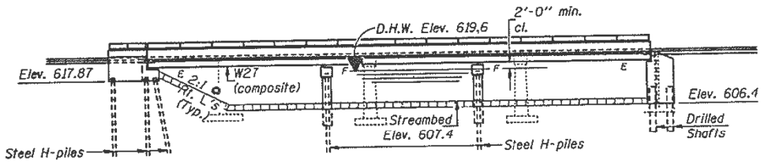
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: Chiseled "□" on northeast wingwall. Elev. 626.21

Existing Structure: S.N. 016-0695 built in 1927 as Route 49, Sec. 3061B-15D at Sta. 91+27. The structure was a 3-span RC T-beam superstructure on closed abutments and solid wall piers. The superstructure was partially removed in 1997 and replaced with P.P.C. deck beams. The open portion of the bridge is 28'-0" o.-o. deck and 144'-0" bk.-bk. abutments. The structure is to be removed as required and replaced with a 3-span wide flange bridge on pile bent piers and pile bent open abutment and drilled shaft abutment.

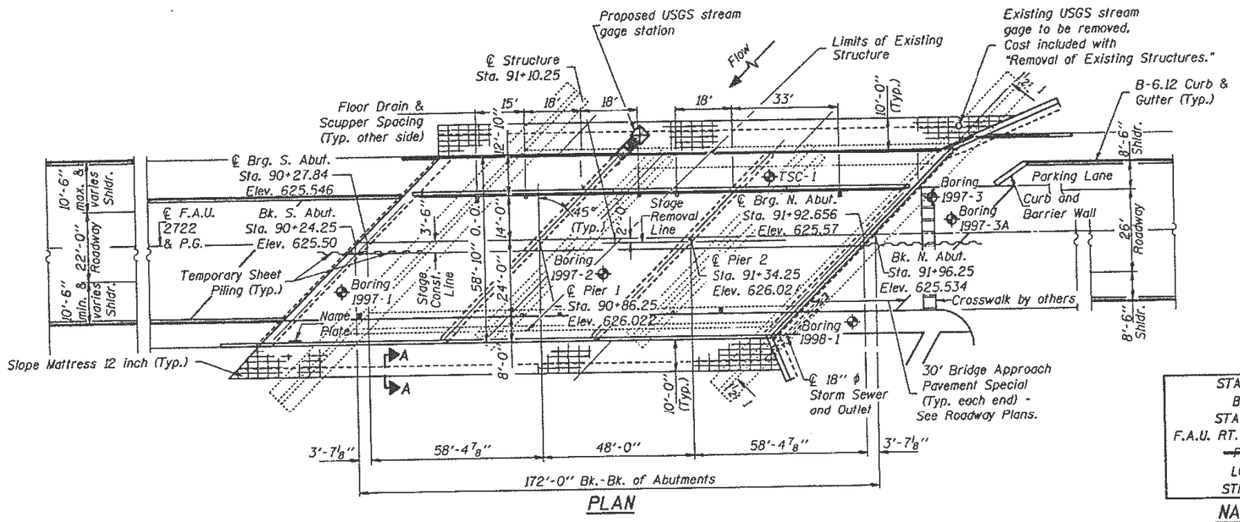
Stage construction to be used to maintain one-lane traffic in both directions.

No salvage

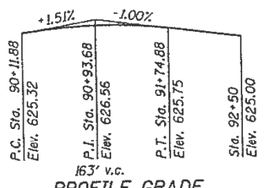


ELEVATION

Note: For Channel Excavation Quantity See Roadway Plans.



PLAN



PROFILE GRADE
(along ℄ F.A.U. 2722)

DESIGNED	Jayme F. Schaffer
CHECKED	Terry Hauth
DRAWN	Paul W. Sweet
CHECKED	JFS LSH

DECEMBER 30 1998
EXAMINED Suraj D. Kapoor
DIRECTOR OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

EXPIRES 11-30-2000

WATERWAY INFORMATION

Drainage Area = 148.0 sq. mi. Low Grade Elev. 621.4 ft. @ Sta. 82+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2850	830	1006	618.0	0.0	0.0	618.0	618.0
Design	50	4300	981	1180.5	619.6	0.0	0.0	619.6	619.6
Base	100	4936	1043	1253.7	620.3	0.1	0.0	620.4	620.3
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	6600	1080	1409.7	621.8	0.3	0.2	622.1	622.0

STATION 91+10.25
BUILT 19 BY
STATE OF ILLINOIS
F.A.U. RT. 2722 SEC. 3068B-R
~~F.A. PROJECT~~
LOADING HS20
STR. NO. 016-2719

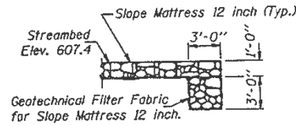
NAME PLATE
See Std. 515001

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

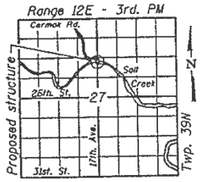
DESIGN SPECIFICATIONS
1996 AASHTO & 1997 Interim

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270, Gr. 50, structural steel)
f_y = 36,000 psi (M270, Gr. 36, structural steel)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.038g
Site Coefficient (S) = 1.0



SECTION A-A



LOCATION SKETCH

GENERAL PLAN
17th. AVENUE OVER
SALT CREEK
F.A.U. ROUTE 2722 - SEC. 3068B-R
COOK COUNTY
STATION 91+10.25
STRUCTURE NO. 016-2719

6.88 ft² × 1650 ~~ft~~

11352 ft² × 0.10
1136
12488

D-91-036-98

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	DRAWN -	REVISED -			
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PLOT DATE = 1/31/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	

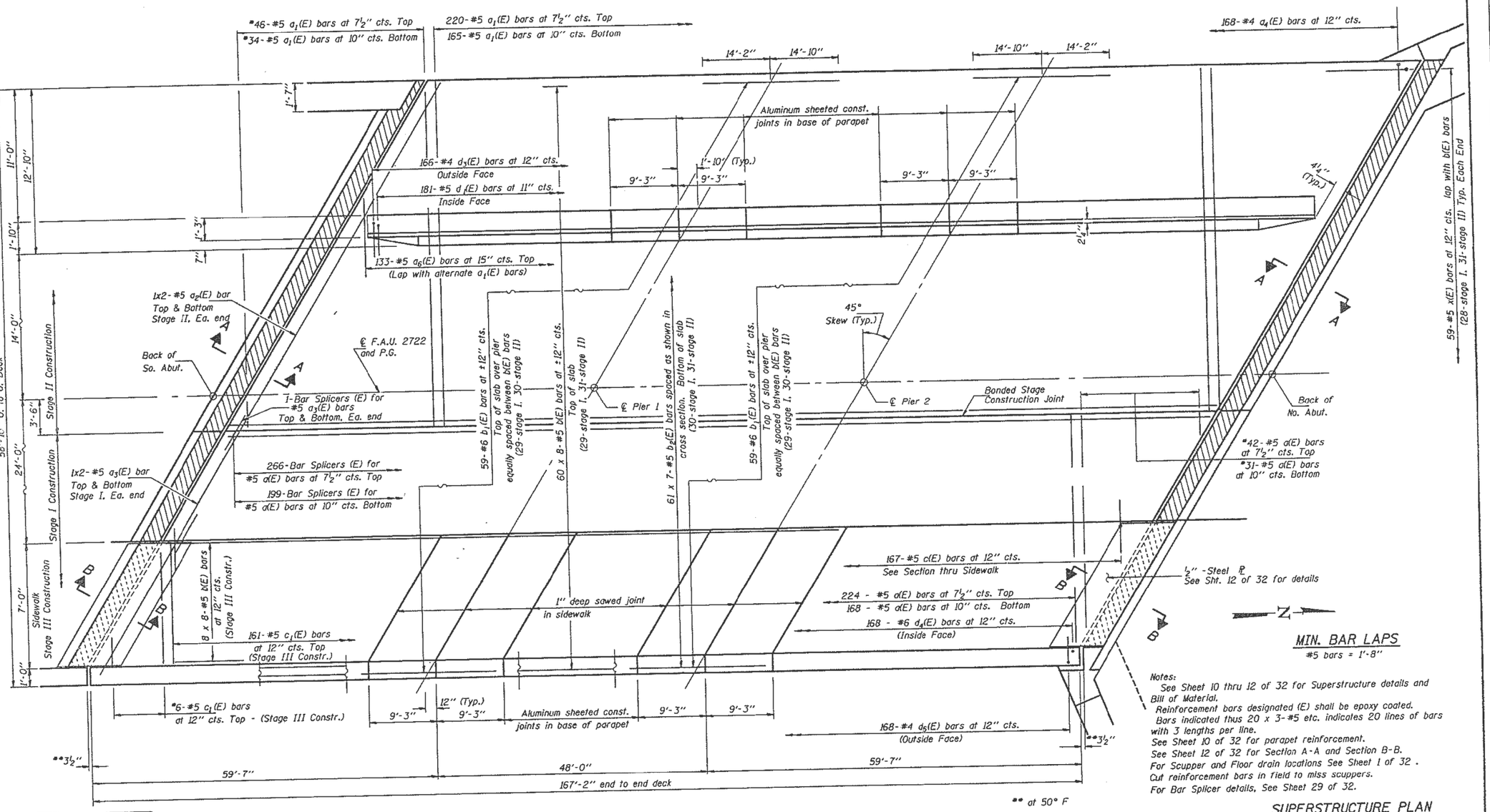
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	135
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. U. 2722	3068 B-R	COOK	93	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
32 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



MIN. BAR LAPS
#5 bars = 1'-8"

Notes:
See Sheet 10 thru 12 of 32 for Superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 10 of 32 for parapet reinforcement.
See Sheet 12 of 32 for Section A-A and Section B-B.
For Scupper and Floor drain locations See Sheet 1 of 32 .
Cut reinforcement bars in field to miss scuppers.
For Bar Splicer details, See Sheet 29 of 32.

PLAN

* Order a(E), a_1(E) & c_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

DESIGNED	JFS
CHECKED	LSH
DRAWN	Paul W. Sweet
CHECKED	JFS LSH

DECEMBER 30 19 98
EXAMINED Greg D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE PLAN
F.A.U. ROUTE 2722 - SEC. 3068B-R
COOK COUNTY
STATION 91+10.25

USER NAME = diazia	DESIGNED -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2719

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	136
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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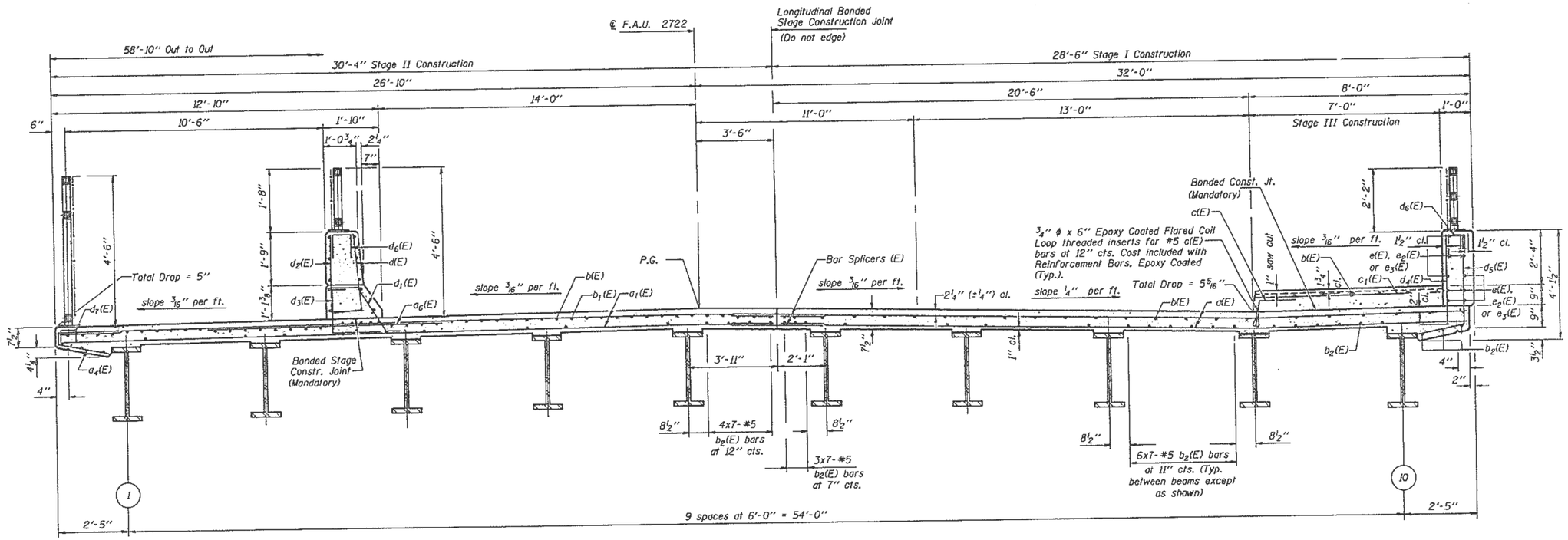
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. U. 2722	3068-B-R	COOK	93	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
32 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes: See Sheet 10 thru 12 of 32 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
See Sheet 11 of 32 for section thru sidewalk.
See Sheet 10 of 32 for parapet reinforcement.



CROSS SECTION
(Looking North)

SUPERSTRUCTURE CROSS SECTION
F.A.U. ROUTE 2722 - SEC. 3068B-R
COOK COUNTY
STATION 91+10.25

DESIGNED	JFS
CHECKED	LSH
DRAWN	Paul W. Sweet
CHECKED	JFS LSH

DECEMBER 30 1998
EXAMINED Jaj. D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016–2719

SCALE: | SHEET OF SHEETS | STA. | TO STA.

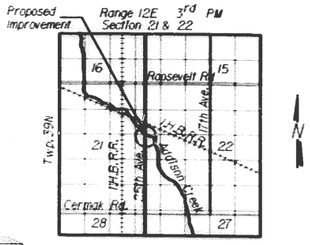
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	137
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

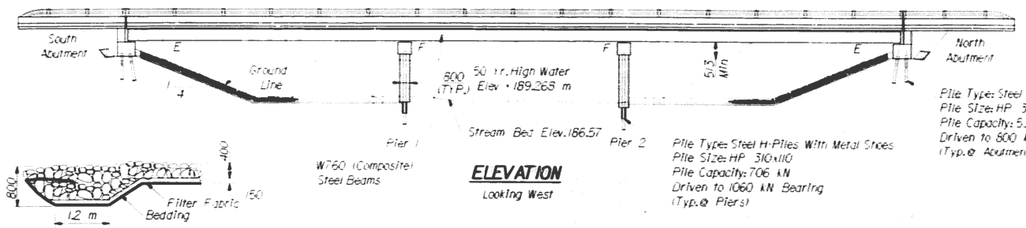
Bench Mark: Cut "+" On Light Pole Foundation @ West Line of 25th Avenue. Light Pole Located @ Southwest End of Addison Creek Bridge El. 191.490.

Existing Structure: S.N. 016-0688. Two Simple Spans Concrete Tee Beam Structure on Closed Abutments with 25.298 m Bk. to Bk Abutments. Built In 1952, IL Rte. F.A.U. 2714, Sec. 0606.1 BR-1 at Sta. 2+187. The Contractor shall remove the Existing Structure and Replace It with a Continuous Three Span Wide Flange Superstructure on an Open North Abutment and Open South Abutment. The Road Shall be Kept Open to One Lane of Traffic in Each Direction at all Times by Utilizing Stage Construction. All Dimensions Are In Millimeters Unless Otherwise Noted.

No Salvage

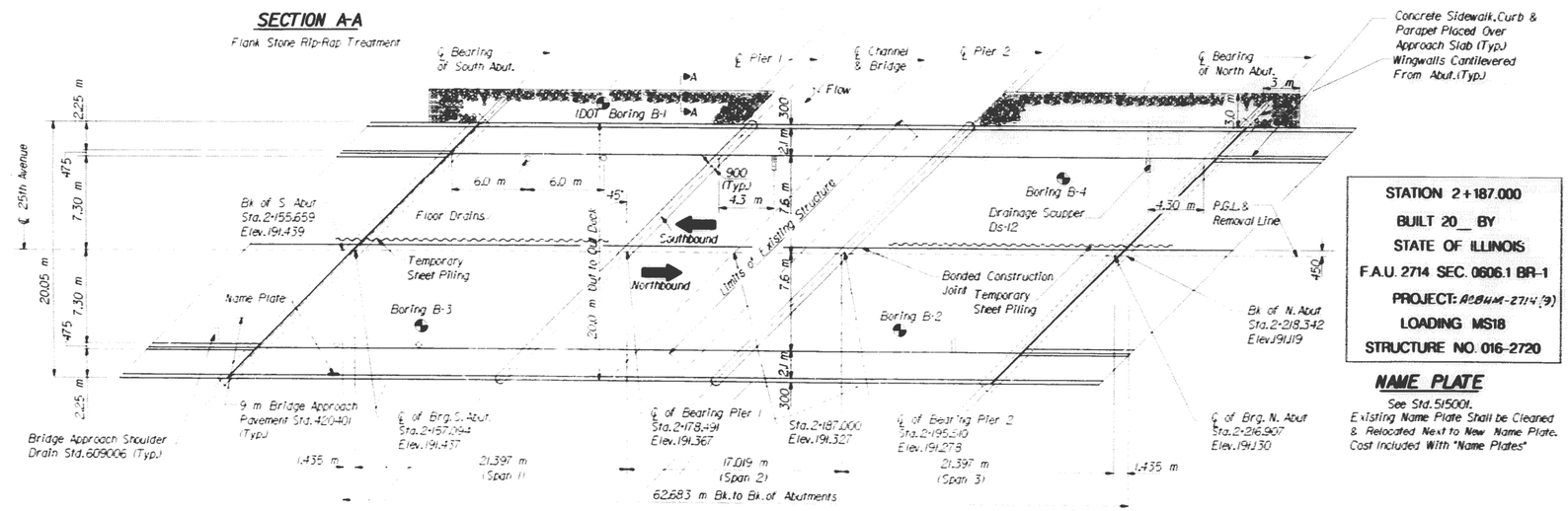


LOCATION SKETCH



ELEVATION
Looking West

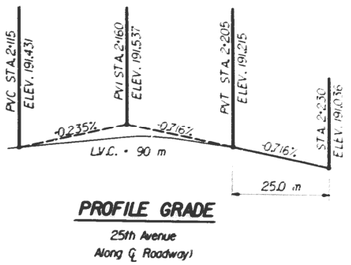
SECTION A-A
Flank Stone Rip-Rap Treatment



PLAN

STATION 2+187.000
BUILT 20__ BY
STATE OF ILLINOIS
F.A.U. 2714 SEC. 0606.1 BR-1
PROJECT: ACBHM-2714(3)
LOADING MS18
STRUCTURE NO. 016-2720

NAME PLATE
See Std. 515001.
Existing Name Plate Shall be Cleaned & Relocated Next to New Name Plate. Cost Included With "Name Plates"



PROFILE GRADE
25th Avenue
Along ℄ Roadway

WATERWAY INFORMATION
(Elevations Shown on This Table are According to F.J.S. Datum. To Convert to Highway Datum Subtract 34 mm)

Drainage Area = 51.0 Sq.km. Low Grade Elev. = 191.11 m At Station 2+179

Flood	Freq. Yr.	Q m³/s	Opening m² Exist.	Opening m² Prop.	Nat. H.W.E.	Head (mm) Exist.	Head (mm) Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	22.0	31.6	38.6	188.760	30	30	188.79	188.79
Design	50	34.0	39.4	51.4	189.340	30	30	189.34	189.34
Base	100	41.0	43.8	59.0	189.620	30	30	189.65	189.65
Overtopping	Occurs After 100 yr. & Before 500 yr at Low Grade							--	--
Max. Calc.	500	47.0	48.5	66.0	189.890	30	30	189.92	189.92

DESIGN SPECIFICATIONS
1996 AASHTO & 1997, 1998 & 1999 Interims

LOADING MS18
Allow 2.4 kN/sq.m. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 24 MPa
fy = 250 MPa (M 270M Grade 250)
fy = 345 MPa (M 270M Grade 345)
fy = 400 MPa (Reinf.)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04 g
Site Coefficient (S)=1.0

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PLOT DATE = 1/31/2019	DATE -	REVISED -	

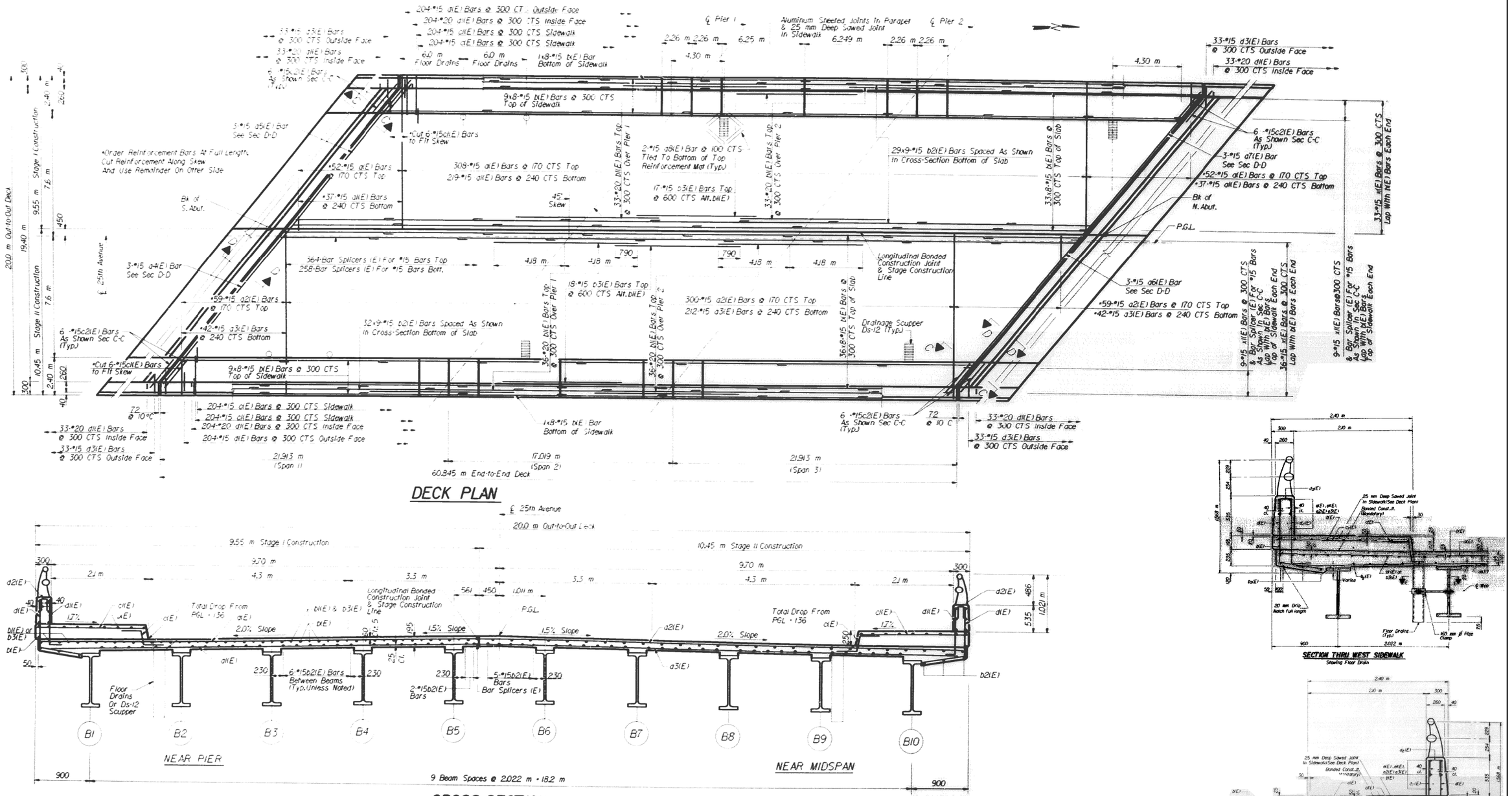
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2720

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	138
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY



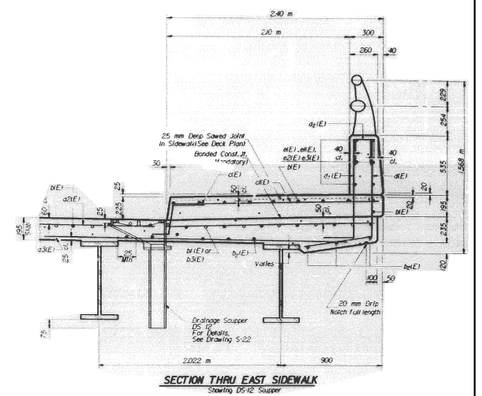
DECK PLAN

CROSS-SECTION

(Looking North)

SECTION THRU WEST SIDEWALK

Showing Floor Drain



SECTION THRU EAST SIDEWALK

Showing DS-12 Scupper

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	DRAWN -	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2720

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	139
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

F.AU. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1467	1288 (BR-)	COOK	58	17
FED.ROAD DIST.NO.7		ILLINOIS	FED.AID PROJECT-	

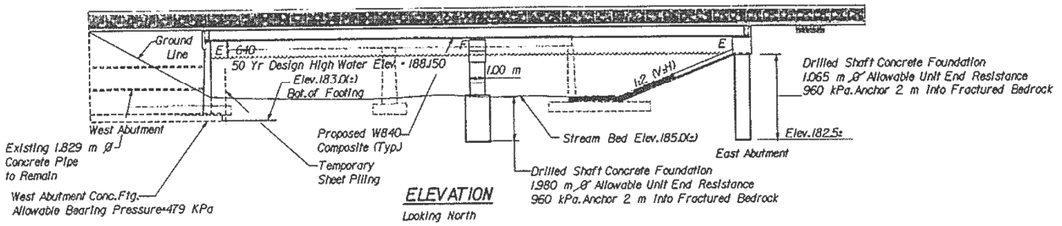
Sheets S-1 of S-25

Bench Mark: Southwest Bolt on Fire Hydrant. With Painted Arrow, at Northeast Corner of 31st Street and Vernon Ave. Elev.=189.308

Existing Structure: S.N. 016-0869. Two Simple Spans Concrete Tee Beam Structure on Closed Abutments with 29.259 m Bk. to Bk Abutments. Built in 1928. IL Rte. SA-80. Sec 1313-1SD at Sta 208+86 (English). The Contractor shall remove the Existing Structure and Replace it with a Two Span Wide Flange Superstructure on a Semi-Integral Open East Abutment and Semi-Integral Closed West Abutment. The Road Shall be kept Open to One Lane of Traffic In Each Direction at all Times by Utilizing Stage Construction.

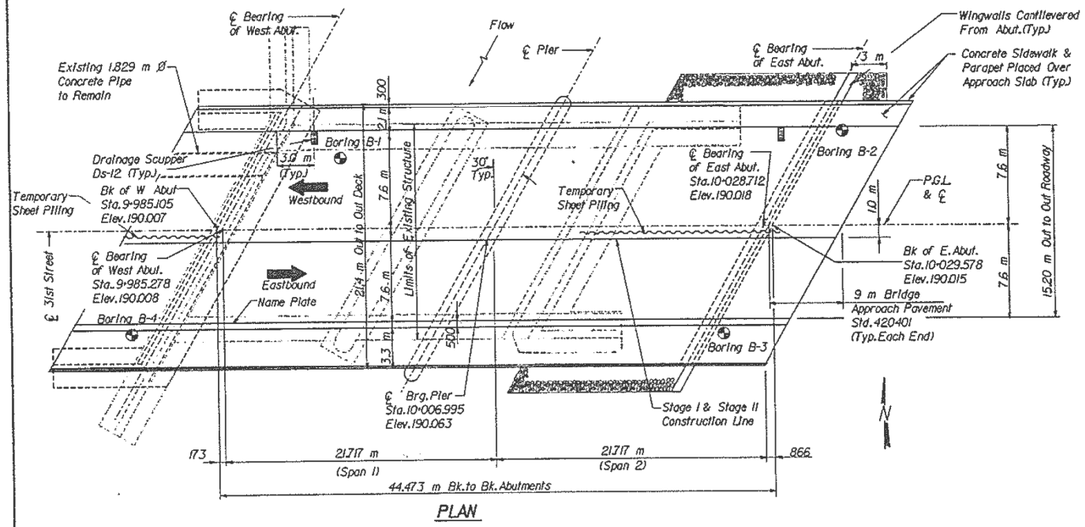
All Dimensions Are In Millimeters Unless Otherwise Noted.

No Salvage

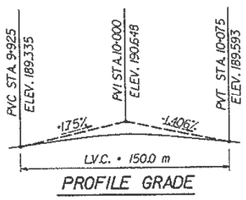


ELEVATION

Looking North



PLAN



PROFILE GRADE

31st Street (Along ℄ Roadway)

TOTAL BILL OF MATERIAL

ITEMS	UNITS	SUPER	SUB	TOTAL
Structure Excavation	m^3		3220	3220
Removal of Existing Structures	each	1		1
Concrete Superstructure	m^3	330		330
Concrete Structures	m^3		377	377
Protective Coat	m^2	1210		1210
Reinforcement Bars, Epoxy Coated	kg	36830	27170	64000
Reinforcement Bars	kg		3880	3880
Name Plates	each	1		1
Furnishing and Erecting Structural Steel	L sum	1		1
Stone Riprap Class A-4	m^2		510	510
Filter Fabric For Use with Riprap	m^2		510	510
Caisson Shafts, 1065 mm	m^3		36.4	36.4
Caisson Shafts, 1980 mm	m^3		37	37
Pedestrian Railing	m	62.6		62.6
Bicycle Railing	m	62.6		62.6
Drainage Scuppers, DS-12	each	2		2
Temporary Sheet Piling	m^2		100	100
Stud Shear Connectors	each	6960		6960
Elastomeric Bearing Assembly Type I	each	20		20
Porous Granular Embankment	m^3		150	150
Bar Splicers	each	1093	114	1207
Bridge Deck Grooving	m^2	680		680

STATION 10+006.995
BUILT BY
STATE OF ILLINOIS
F.A.U. 1467 SEC. 1288-BR1
F.A. PROJECT ~~B-91-434-90~~ BRM-7003 (967)
LOADING MS18
STRUCTURE NO. 016-2725

NAME PLATE

See Std. 515001.

WATERWAY INFORMATION

(Elevations Shown on THIS Table are According to F.I.S. Datum. To Convert to Highway Datum Subtract 34 mm)

Drainage Area = 353.96 Sq.km. Low Grade Elev. = 188.41 m At Station 1+146

Flood	Freq. Yr.	Q c.m.s.	Opening Sq.m. Exist.	Opening Sq.m. Prop.	Nat. H.W.E.	Head (mm) Exist.	Head (mm) Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	44.5	55.35	91.47	187.48	90	30	187.57	187.51
Design	50	78.7	70.61	116.81	188.15	180	120	188.34	188.28
Base	100	96.3	76.85	127.51	188.43	240	180	188.67	188.61
Overtopping	Occurs After 100 yr. & Before 500 yr at Low Grade							—	—
Max. Calc.	500	139.3	79.62	144.54	188.92	150	120	189.07	189.04

DESIGN SPECIFICATIONS

1996 AASHTO & 1997 & 1998 Interims

LOADING MS18

Allow 2.4 kN/sq.m. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 24 MPa
fy = 250 MPa (M 270M Grade 250)
fy = 345 MPa (M 270M Grade 345)
fy = 400 MPa (Reinf.)

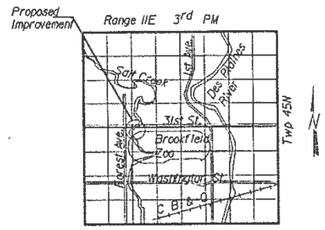
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04 g
Site Coefficient (S)=1.2

RUBINOS & MESIA ENGINEERS, INC.
208 South LaSalle Ave. Chicago, Illinois 60604 Phone (312) 663-5878 Fax (312) 663-1472

Teresa Maurice Palms
EXPIRATION DATE
11-30-2000
9/29/00

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & BILL OF MATERIAL

31ST STREET OVER
SALT CREEK
F.A.U. 1467 SECTION 1288-BRI
COOK COUNTY
STRUCTURE NUMBER 016-2725
STATION 10+006.995

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DATE: SEPTEMBER 21, 2000 — CHECKED BY: MF

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2725

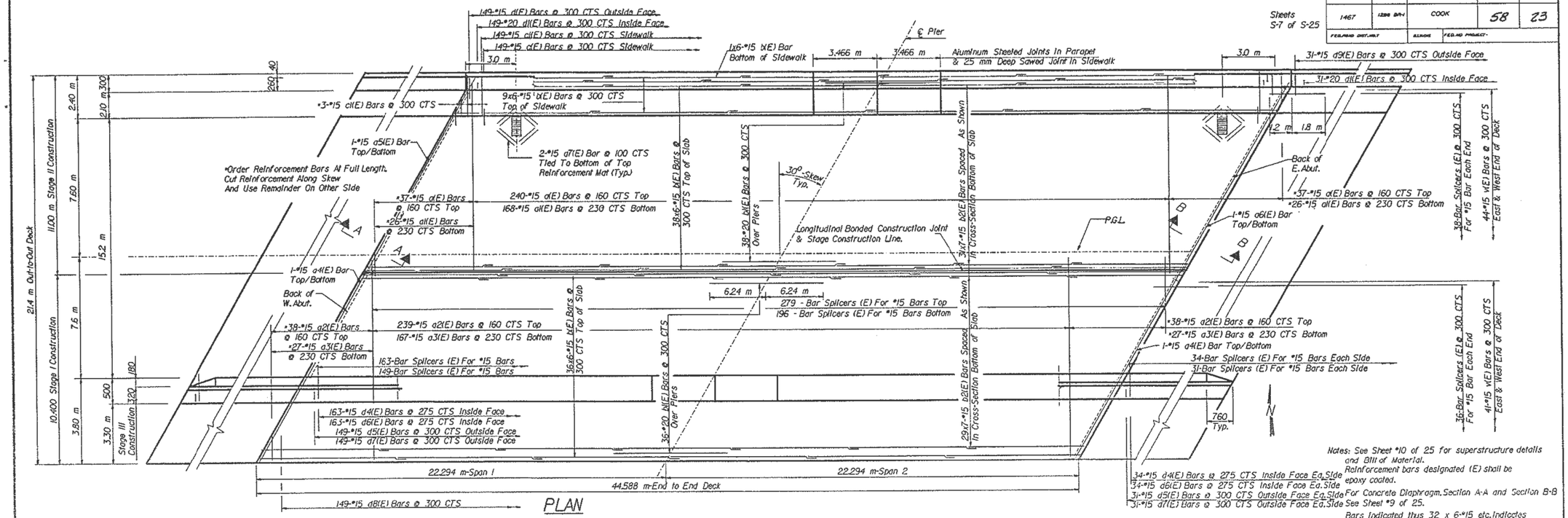
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	140
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

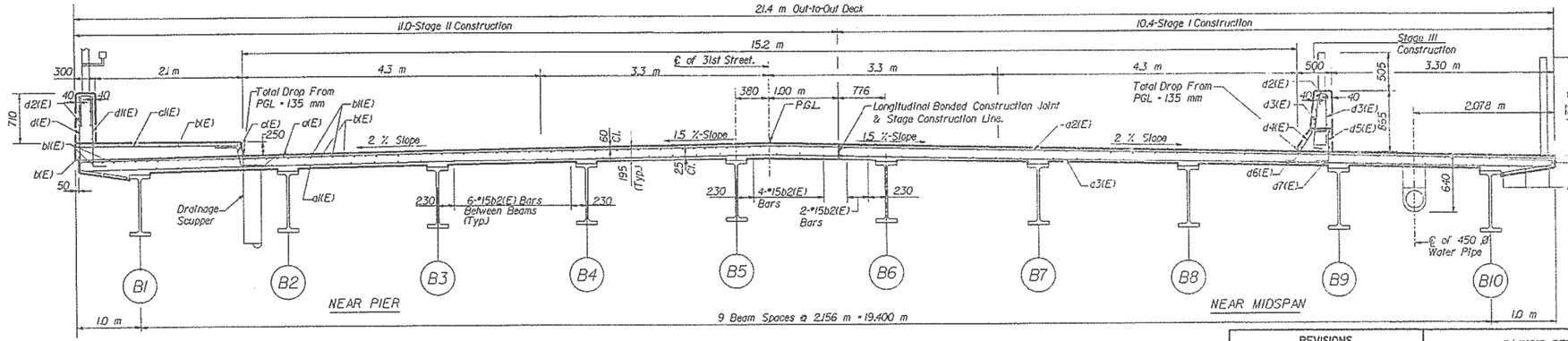
FOR INFORMATION ONLY

F.A.I. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1467	1288 BR-1	COOK	58	23
FEDERAL DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

Sheets S-7 of S-25



Notes: See Sheet #10 of 25 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
For Concrete Diaphragm, Section A-A and Section B-B See Sheet #9 of 25.
Bars Indicated thus 32 x 6-#15 etc. Indicates 32 lines of bars with 6 lengths per line.
See Sheet #8 of 25 for parapet reinforcement.
Space Reinforcement to Avoid Scuppers
All dimensions are in millimeters (mm) except as noted.
For Drainage Scuppers, See Sheet No.10 of 25.
For Drainage Scupper Details, See Sheets No.24 of 25.
Minimum Lap Length For #15 Bar = 640 mm.



CROSS-SECTION
(Looking East)

For location of pipe inserts for pipe hangers, see Roadway Plans.

Reinforcement and concrete for parapets over approach slab included with Superstructure Bill of Material.

REVISIONS	
NAME	DATE

RUBINOS & MESIA ENGINEERS, INC.
200 South Michigan Ave. Chicago, Illinois 60604 Phone (312) 663-5678 Fax (312) 663-1173

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK PLAN & CROSS-SECTION

31ST STREET OVER
SALT CREEK
F.A.U. 1467 SECTION 1288-BRI
COOK COUNTY
STRUCTURE NUMBER 016-2725
STATION 10+00.995

SCALE: NOT TO SCALE — DRAWN BY: TH
DATE: SEPTEMBER 21, 2000 — CHECKED BY: MF

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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2725

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	141
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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FOR INFORMATION ONLY

F.A.I. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1467	1288 BR-1	COOK	58	26
FED.ROAD DIST. NO.?	ILLINOIS	FED.AID PROJECT-		

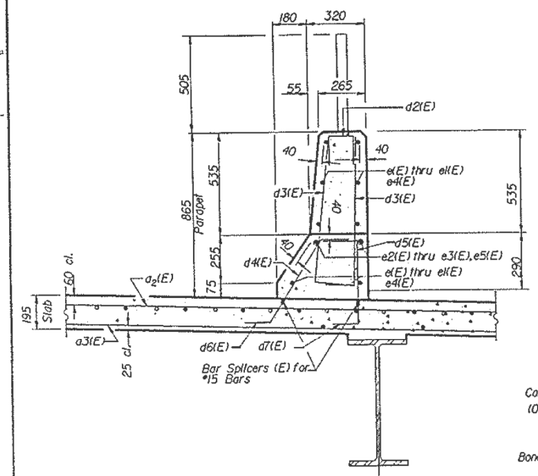
Sheets S-10 of S-25

SUPERSTRUCTURE BILL OF MATERIAL

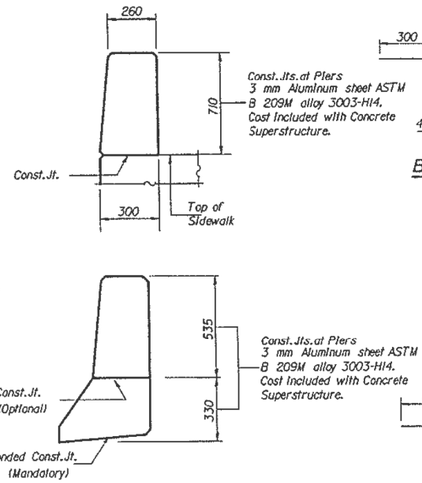
Bar	No. Stage I	No. Stage II	No. Stage III	Size	Length (m)	Shape
a(E)		277		#15	10.87	
a1(E)		194		#15	10.66	
a2(E)	277			#15	10.36	
a3(E)	194			#15	10.66	
a4(E)	4			#15	11.97	
a5(E)		2		#15	12.62	
a6(E)		2		#15	12.28	
a7(E)		16		#15	0.60	
b(E)	216	288		#15	7.95	
b1(E)	36	38		#20	12.48	
b2(E)	203	217		#15	6.91	
c(E)		149		#15	0.73	
c1(E)		149		#15	2.32	
d(E)		149		#15	1.80	
d1(E)		180		#20	1.32	
d2(E)		54	64	#15	0.61	
d3(E)			442	#15	0.91	
d4(E)			231	#15	0.51	
d5(E)			211	#15	0.44	
d6(E)	231			#15	0.25	
d7(E)	211			#15	0.25	
d8(E)	149			#15	1.40	
d9(E)		31		#15	0.95	
e(E)		48	36	#15	5.17	
e1(E)		16	14	#15	3.39	
e2(E)			8	#25	10.03	
e3(E)			4	#25	3.39	
e4(E)		8	16	#15	8.92	
e5(E)			4	#25	8.92	
m(E)	8	4		#15	1.07	
m1(E)	16	16		#15	2.29	
m2(E)	20			#15	11.93	
m3(E)	20			#15	2.90	
m4(E)		4		#15	1.49	
m5(E)		20		#15	12.82	
m6(E)		20		#15	3.04	
m7(E)	16			#15	0.64	
m8(E)	3			#15	1.20	
s(E)	84	90		#15	2.52	
s1(E)	58	82		#15	3.68	
s2(E)	12			#15	3.44	
u(E)	82	88		#15	1.52	
u1(E)	4			#15	3.00	
v(E)	82	88		#15	0.83	

		Stage I	Stage II	Stage III
Reinforcement Bars, Epoxy Coated	kg	15,820	18,890	2120
Concrete Superstructure	m^3	115	155	60
Bar Splicers	m	1017	76	

Reinforcement bars designated (E) shall be epoxy coated.

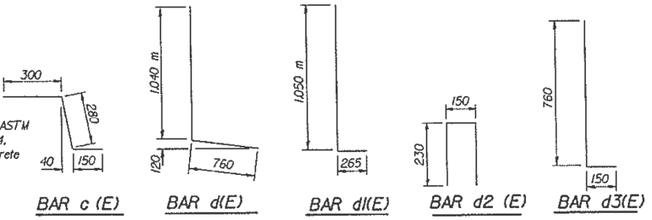


SECTION THRU PARAPET

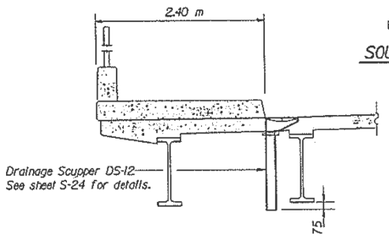


PARAPET JOINT DETAILS

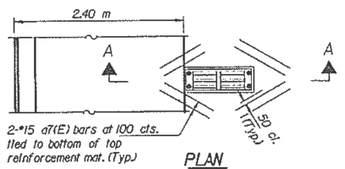
All dimensions are in millimeters (mm) except as noted.



SECTION THRU SIDEWALK



SECTION A-A



PLAN

REVISIONS	
NAME	DATE

RUBINOS & MESIA ENGINEERS, INC.
200 South Michigan Ave. Chicago, Illinois 60604 Phone (312) 663-5879 Fax (312) 663-1423

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK DETAILS

31ST STREET OVER
SALT CREEK
F.A.U. 1467 SECTION 1288-BRI
COOK COUNTY
STRUCTURE NUMBER 016-2725
STATION 10+006.995

SCALE: NOT TO SCALE — DRAWN BY: TH

DATE: SEPTEMBER 21, 2000 — CHECKED BY: MF

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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2725

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	142
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

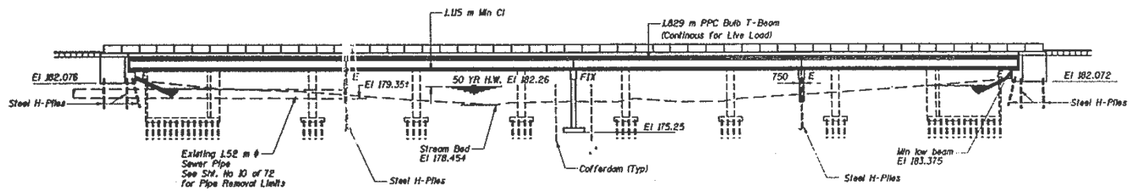
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 1488	0606BR-1	COOK	72	14
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

81 OF 832

Benchmark: Chiseled "□" on S.W. Corner of south concrete handrail of structure 016-0884 (Ex) El 186.365

Existing Structure:
S.N. 016-0884 built as S.A.R. 165, Section 165-0606-15D in 1932. Seven simple spans 123.9 m ℄ to ℄ Bk Abutments. 17.37 m 0 to 0 Reinforced Concrete T-Beam Bridge on Piers and Closed Abutments. The Contractor shall remove the Existing Structure as required and replace it with a Four Span PPC Bulb-T Girder Superstructure on Concrete Piers and Pile Bent Abutments. The road shall be kept open to traffic at all times by utilizing Staged Construction.

No salvage.

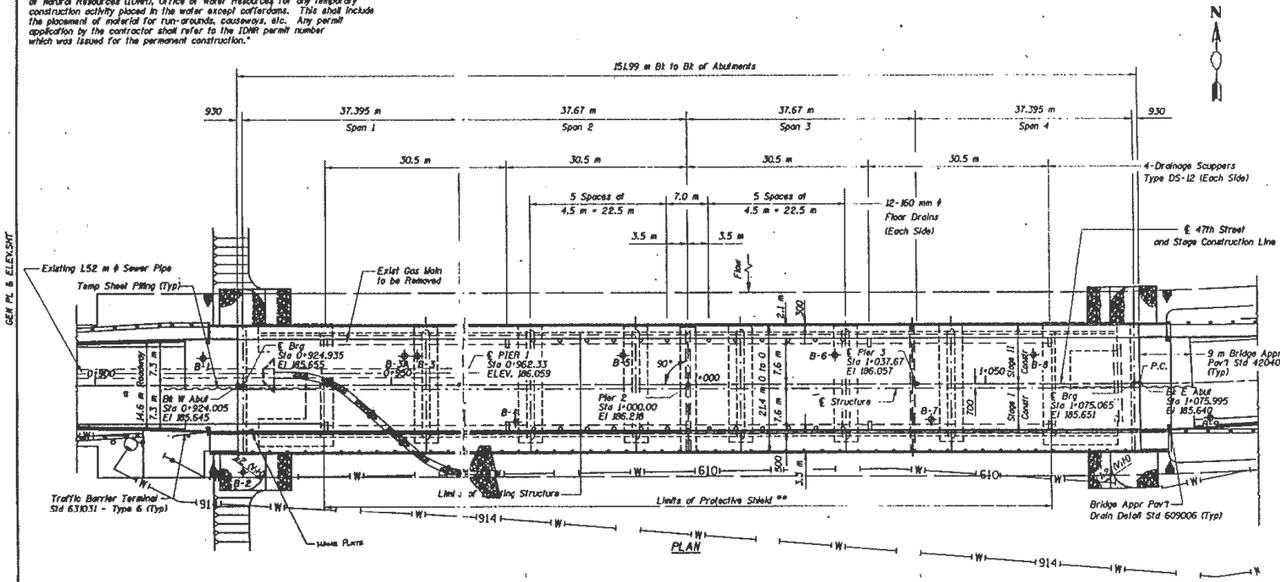


ELEVATION

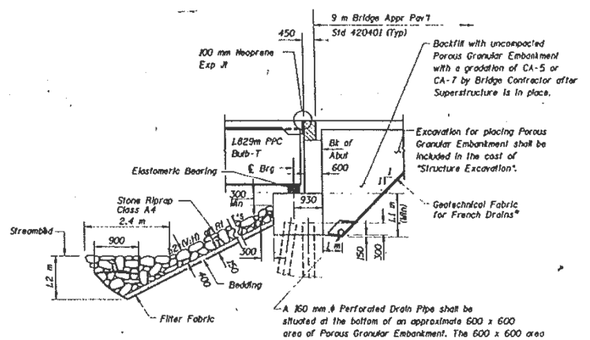
Notes:

All dimensions are in millimeters (mm) except as noted.

"The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the contractor shall refer to the IDNR permit number which was issued for the permanent construction."



PLAN



A 150 mm ϕ Perforated Drain Pipe shall be situated at the bottom of an approximate 600 x 600 area of Porous Granular Embankment. The 600 x 600 area shall be wrapped completely in Geotechnical Fabric for French Drains. Extend pipe parallel with the cap until intersecting with the side slopes." At each outlet provide a concrete headwall for pipe drains (Standard 601101).

*- Included in the cost of "Porous Granular Embankment"

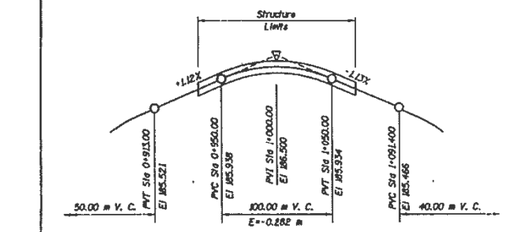
SECTION THRU ABUTMENT

STATION 1+000.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.U. RTE. 1488/SEC 0606BR-1
LOADING MS18
STR NO 016-2740

PROJECT - ACBNHM-1488(3)

NAME PLATE
See Std. 515001

** Protective shield shall extend from face to face of existing abutments and outside edge to outside edge of existing superstructure.



PROPOSED PROFILE GRADE
(47th Street)
Along ℄ of Roadway

CURVE DATA

Δ =10°-20'-28" (Lt)
R =410.032 m
T =37.103 m
L' =74.005 m
E =1.675 m
P.C. Sta =1+075.995
P.T. Sta =1+150.000
P.I. Sta 1+113.098
Begin SE Trans Sta 1+075.995
Match Ex SE Sta 1+150.000

WATERWAY INFORMATION

Drainage Area = 1636.25 km² Low Grade El 185.66 m at Sta 0+924.9

Flood	Freq Yr	Q m³/s	Opening m² Exist	Opening m² Prop	Nat H.W.E. m	Head - m Exist	Head - m Prop	Headwater El m Exist	Headwater El m Prop
	10	167.9	248.1	280.0	181.95	0.02	0.01	181.97	181.96
Design	50	206.7	281.8	321.0	182.25	0.02	0.01	182.27	182.26
Base	100	223.7	295.2	337.4	182.36	0.02	0.01	182.38	182.37
Overtopping									
Max Calc	500	254.9	323.3	371.9	182.60	0.02	0.02	182.62	182.62

DESIGN SPECIFICATIONS

1996 AASHTO "Standard Specifications for Highway Bridges" with 1997, 1998 & 1999 AASHTO Interims.

LOADING MS 18

Allow 2.4 kN/m² For Future Wearing Surface.

DESIGN STRESSES

FIELD UNITS

f'_c = 24 MPa
f_y = 400 MPa (Reinforcement)
f_y = 345 MPa (W270M Struct Steel)

PRECAST PRESTRESSED UNITS

f'_c = 42 MPa
f'_{ci} = 35 MPa
f'_s = 1860 MPa (12.7mm ϕ Low Relax Strands)
f_{si} = 1395 MPa (12.7mm ϕ Low Relax Strands)

SEISMIC DATA

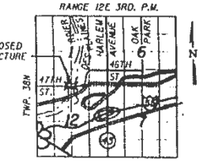
SPC = A
A = 0.04 g
S = LO

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS · ROBERT L. PETERS · 81-4697 · SCHAUMBURG, IL · LICENSED STRUCTURAL ENGINEER

Robert L. Peters 04/12/01
ROBERT L. PETERS, P.E., S.E.
NO. 081-04697
EXP. DATE 11/30/02



LOCATION SKETCH

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
47TH STREET OVER DES PLAINES RIVER
PUBLIC WATERS
F.A.U. ROUTE 1488 SECTION 0606BR-1
COOK COUNTY STRUCTURE NO. 016-2740
STATION 1+000.00

DATE: 6/22/01 DESIGNED BY: KS DRAWN BY: LLL CHECKED BY: SLD CHECKED BY: SLD

TRANSYSTEMS CORPORATION

USER NAME = diazla	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2740

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	143
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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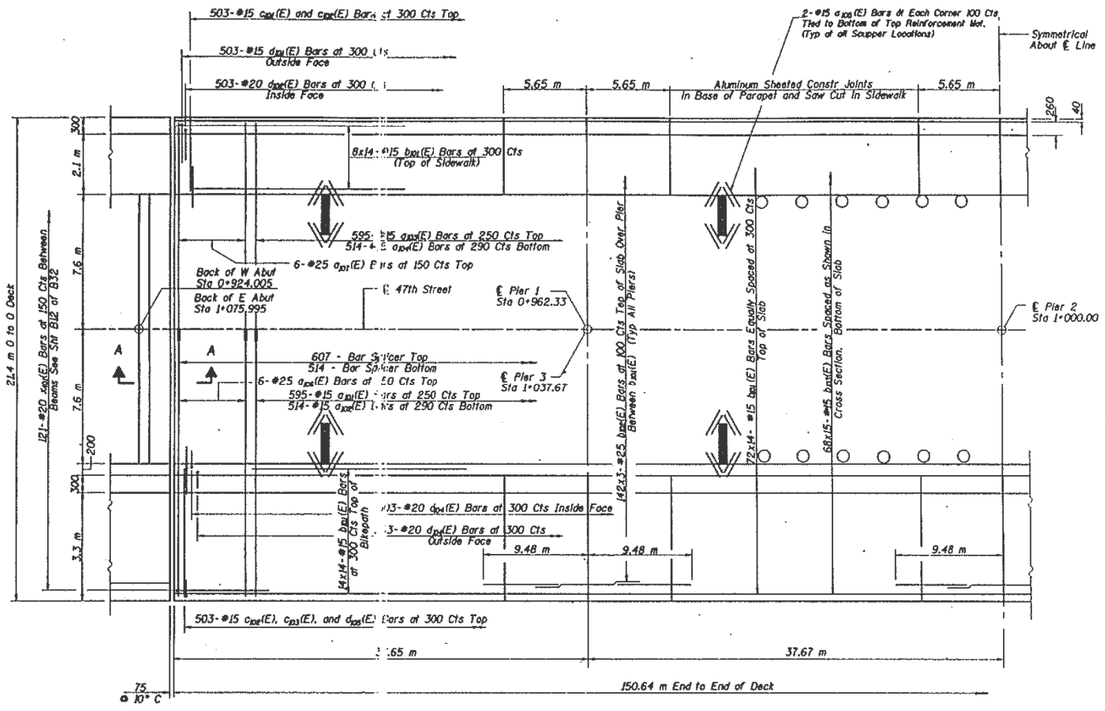
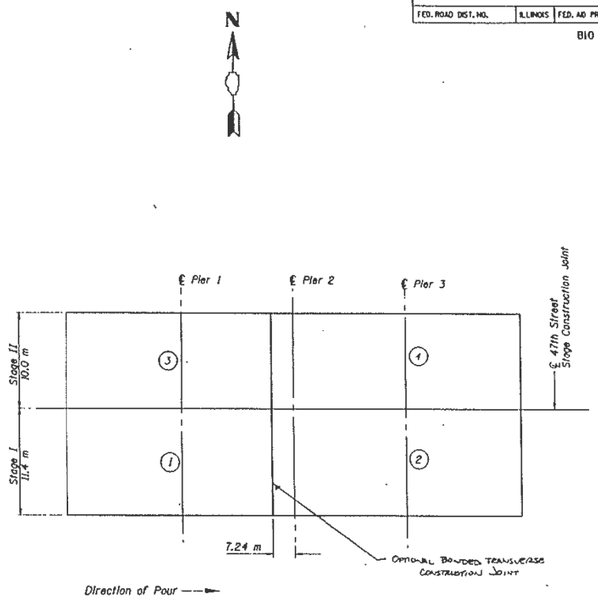
FOR INFORMATION ONLY

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 1488	0606BR-1	COOK	12	23
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

BIO OF B32

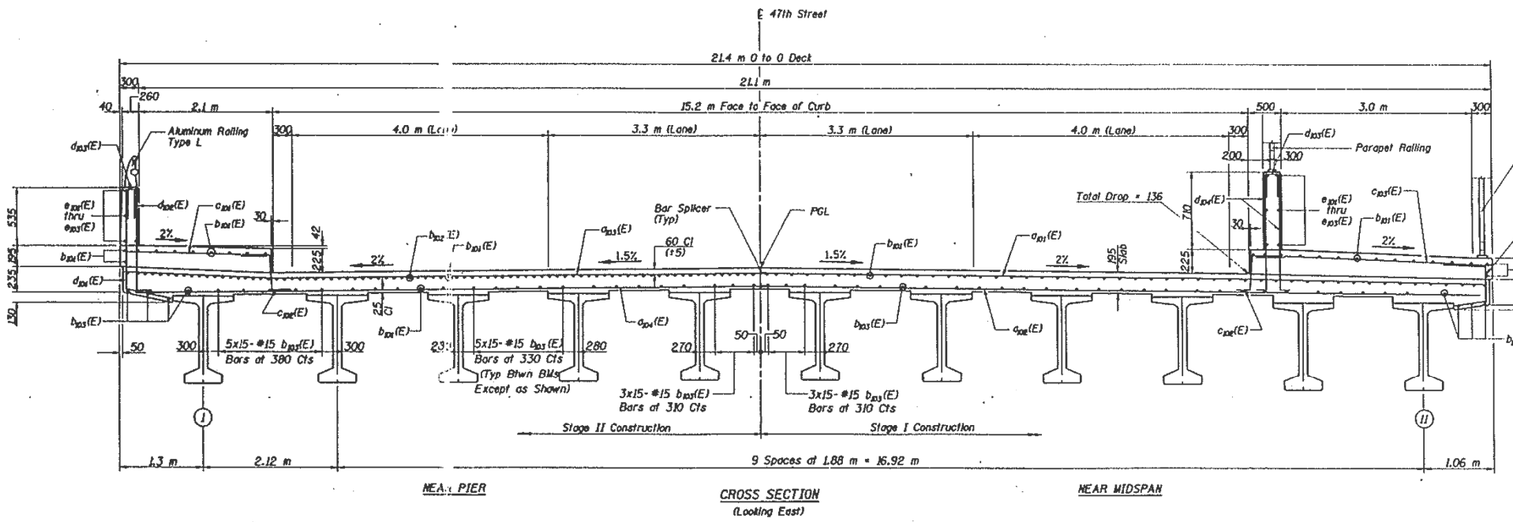


PARTIAL PLAN



DECK POURING SEQUENCE

See Sht B2 of B32 Note 6.



Notes:

See Sheet No B11 of B32 for Superstructure Details and Bill Of Material.

Reinforcement Bars Designated (E) shall be Epoxy Coated.

Bars indicated thus 20x3-#15 etc indicates 20 Lines of Bars with 3 Lengths per Line.

See Sheet No B11 of B32 for Parapet Reinforcement.

See Sheet No. B12 of B32 for Sections at Abutment and Piers.

All Dimensions are in Millimeters (mm) Except as Noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK PLAN & CROSS SECTION

47TH STREET OVER DES PLAINES RIVER PUBLIC WATER

F.A.U. ROUTE 1488 SECTION 0606BR-1

COOK COUNTY STRUCTURE NO. 016-2740

STATION 1+000.00

DATE: 6/22/01	DESIGNED BY: KS	DRAWN BY: LLL
	CHECKED BY: SLD	CHECKED BY: SLD

TRANSYSTEMS CORPORATION

DECK PL & X-SECT.SHT

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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2740

SCALE: | SHEET OF SHEETS | STA. | TO STA.

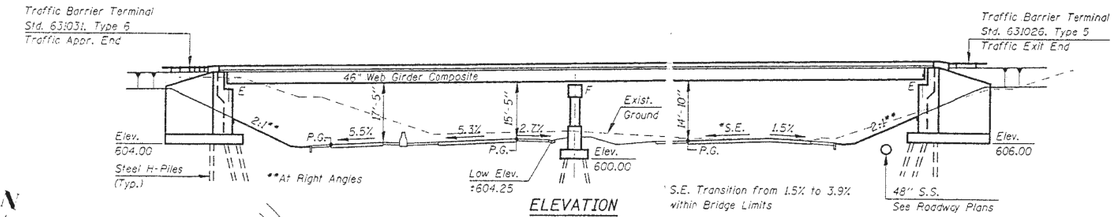
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	144
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

Bench Marks: 1: Set "+" in flag of curb & gutter, ±40' east of northeast end of existing wingwall. Sta. 83+36.82, 40.93' Left (℄ Archer Ave.) Elev. 629.92.
2: Set pipe in center of grass median, ±230' north of Archer Ave. and ±40' east of SB U.S. Rte 45, Sta. 273+99.35, 52.09' right (℄ SB U.S. Rte. 45) Elev. 605.71.

Existing Structure: SN 016-0208: Built as F.A. Route 5, Archer Avenue over LaGrange Road, Section BR-H-7 in 1957. The Existing Structure is a 4-Simple Span (39.33' x 63.00' x 63.00' x 52.33') with 222.00' Bk. to Bk. Abutments. The Existing Super-Structure consists of a 7½" R.C. Deck (deck was replaced in 1980) with 76.33' cut to cut supported on 14 of W33 Steel Beams. The Existing Abutments are Closed Cantilever Type, West Abutment on Spread Footings and East abutment on Concrete Piles. The Existing 3 Piers are Multi-Circular-Column Type on Spread Footings. The entire Existing Structure will be Removed in Stages. No Salvage.

Construction Stages: For Details, SEE DWG. SA-04.



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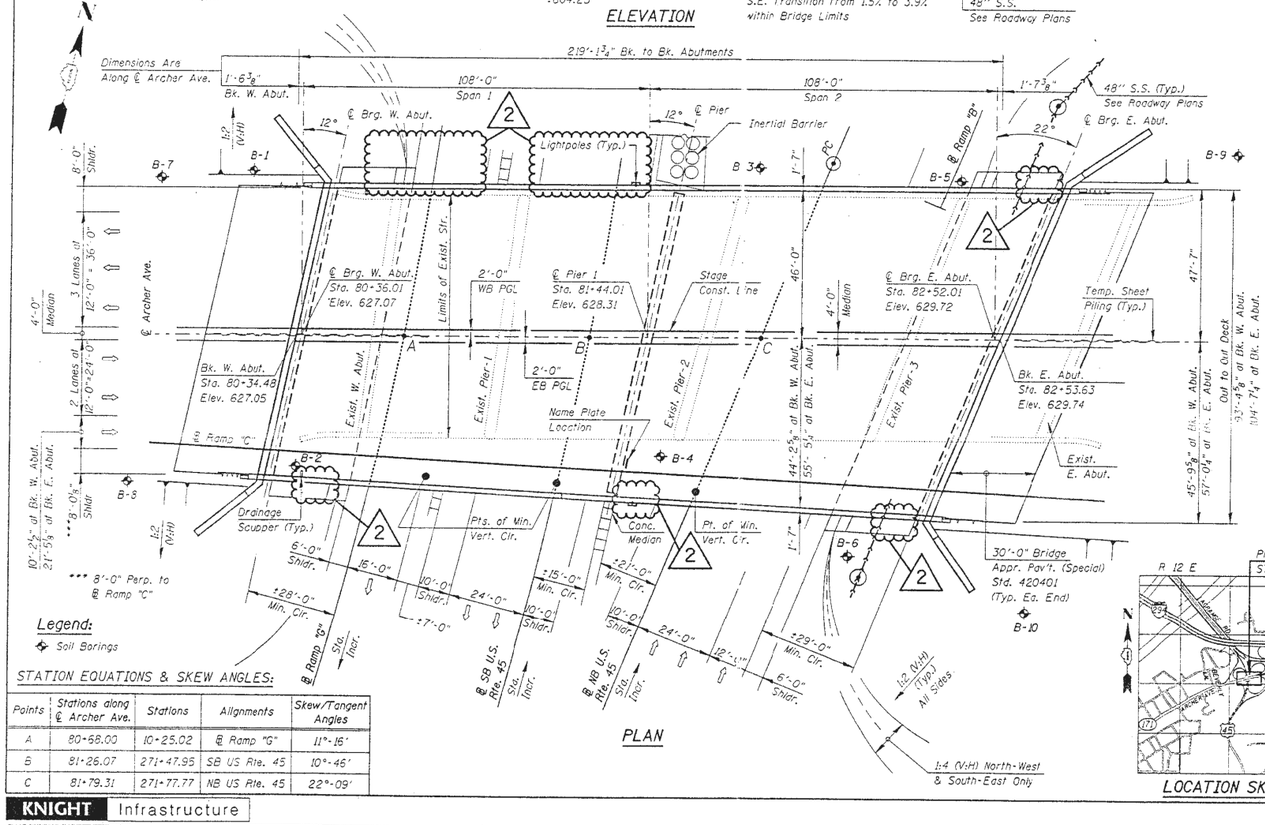

PLAN

STATION EQUATIONS & SKEW ANGLES:

Points	Stations along ℄ Archer Ave.	Stations	Alignments	Skew/Tangent Angles
A	80+68.00	10+25.02	℄ Ramp "G"	11°-16'
B	81+26.07	271+47.95	SB US Rte. 45	10°-46'
C	81+79.31	271+77.77	NB US Rte. 45	22°-09'

CURVE DATA

℄ NB U.S. Rte. 45
Curve NB45-2
Δ = 56° 52' 34" (LT)
D = 06° 43' 38"
R = 851.71'
T = 461.25'
L = 845.47'
E = 116.88'
SE = 5.7%
PC Sta. 272+40.63
PT Sta. 280+86.10
PI Sta. 277+01.57

℄ SB U.S. Rte. 45
Curve SB45-1
Δ = 72° 15' 04" (LT)
D = 04° 23' 56"
R = 1,302.49'
T = 950.68'
L = 1,642.47'
E = 310.05'
SE = 5.3%
PC Sta. 262+57.10
PT Sta. 278+99.56
PI Sta. 272+07.78

℄ RAMP "G"
Curve G-3
Δ = 46° 50' 22" (RT)
D = 04° 36' 01"
R = 1,245.49'
T = 539.48'
L = 1,018.19'
E = 111.82'
SE = 5.5%
PC Sta. 8+28.54
PT Sta. 18+46.73
PI Sta. 13+68.02

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, 1999 and 2000 Interims

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (Structural Steel) (M270 Grade 50)
f_y = 36,000 psi (Structural Steel) (M270 Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

INDEX OF DRAWINGS

DWG NO.	TITLE
SA-01	General Plan & Elevation
SA-02	Notes & Total Bill of Material
SA-03	Footing Layout & Misc. Details
SA-04	Staging Details
SA-05	Top of Slab Elevations
SA-06	Top of Slab Elevations
SA-07	Top of Slab Elevations
SA-08	Top of Slab Elevations
SA-09	Top of Slab Elevations
SA-10	Deck Plan
SA-11	Deck Cross Section & Details
SA-12	Parapet Details
SA-13	Deck Miscellaneous Details
SA-14	Drainage Scupper Details
SA-15	Deck Expansion Joint - PJS
SA-16	Deck Expansion Jt. - Strip Seal Alt.
SA-17	Framing Plan
SA-18	Girder Elevations
SA-19	Steel Beam Details
SA-20	Diaphragm Details
SA-21	Field Splice Details
SA-22	Bearing Details
SA-23	Anchor Bolt Details
SA-24	West Abutment Top Plan
SA-25	West Abutment Elev. & Footing Plan
SA-26	West Abutment Sections & Details
SA-27	West Abutment Wingwalls
SA-28	East Abutment Top Plan
SA-29	East Abutment Elev. & Footing Plan
SA-30	East Abutment Sections & Details
SA-31	East Abutment Wingwalls
SA-32	Abutment Misc. Details
SA-33	Pier Top Plan & Elevation
SA-34	Pier Footing Plan & Details
SA-35	Bar Splicer Assembly Details
SA-36	Temporary Concrete Barrier
SA-37	Boring Logs
to 46	

DWG. SA-01 of 46

STATE OF ILLINOIS
WILLIAM P. MURPHY
081-004491
CHICAGO
LICENSED STRUCTURAL ENGINEER
Exp. 11/30/02

REVISIONS	
NAME	DATE
Addendum 2	08/29/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
ARCHER AVE. OVER U.S. RTE. 45
FAU ROUTE 3565 SECTION BR-H7
COOK COUNTY
STATION 81+44.01
STRUCTURE NUMBER 016-2756

SCALE: NONE DESIGNED BY: WGB DRAWN BY: TB
DATE: 05/17/02 CHECKED BY: TB CHECKED BY: WGB

KNIGHT Infrastructure

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

GENERAL PLAN
SN: 016-2756

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	145
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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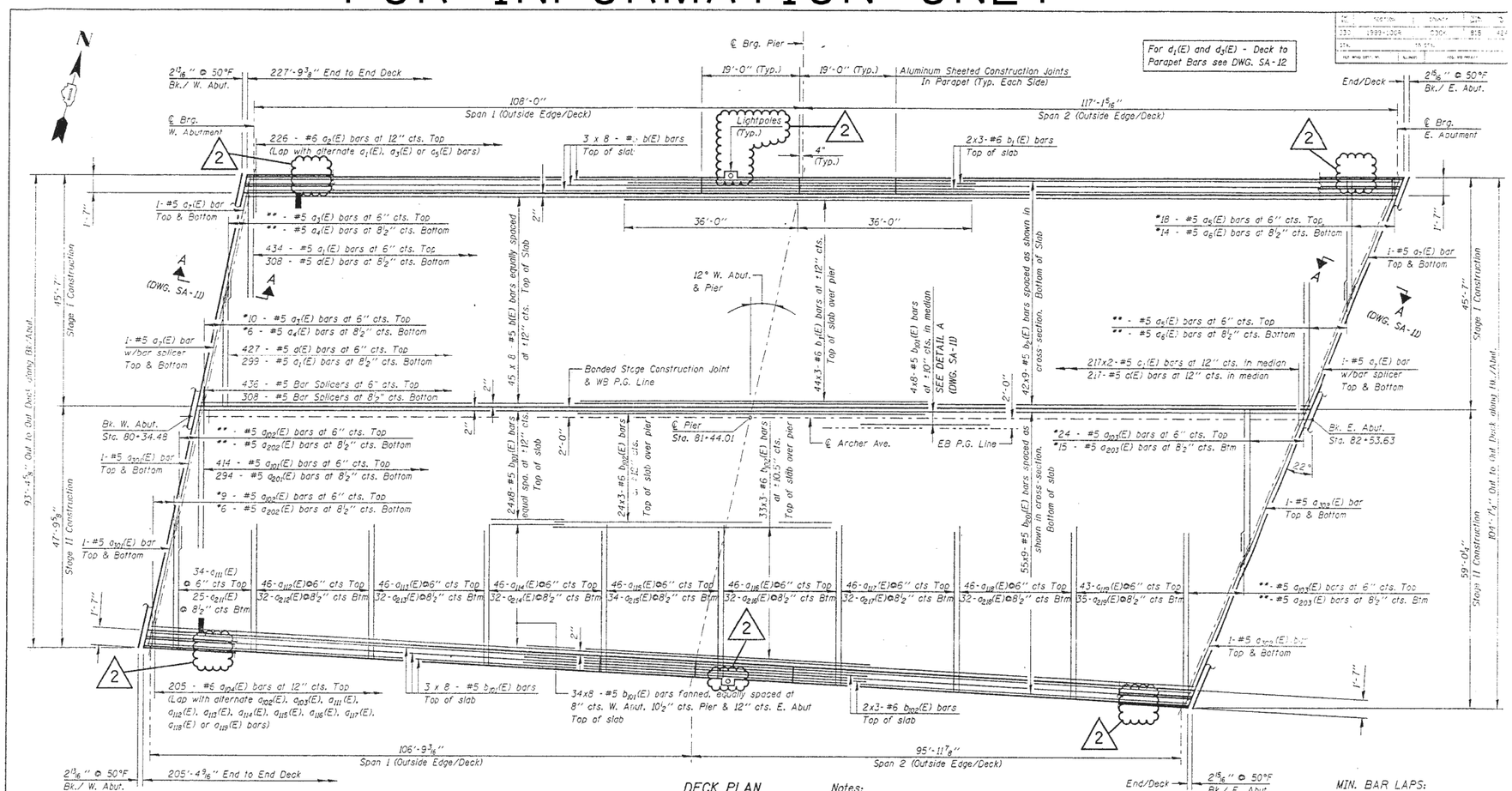
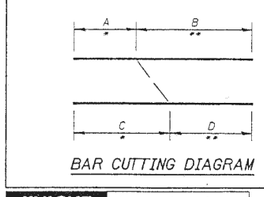


DECK PLAN



BAR CUTTING DIAGRAM

BAR	A (ft)	B (ft)	C (ft)	D (ft)
a_3(E)	2'-1"	25'-2"	23'-3"	4'-0"
a_4(E)	2'-3"	20'-0"	18'-11"	3'-4"
a_5(E)	0'-7"	24'-11"	21'-8"	3'-10"
a_6(E)	0'-10"	25'-8"	23'-7"	2'-11"
a_{202}(E)	2'-8"	23'-10"	21'-9"	4'-9"
a_{203}(E)	1'-1"	32'-2"	29'-7"	3'-8"
c_{202}(E)	3'-3"	23'-4"	20'-2"	5'-5"
a_{203}(E)	1'-1"	27'-11"	25'-8"	3'-3"

* Order bars full length and cut to fit according to Bar Cutting Diagram.

** Remainder of bars shown in Bar Cutting Diagram, to be placed as shown.

Notes:

Reinforcement Bars designated (E) shall be epoxy coated.

Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.

See DWG. SA-11 for Deck Cross Section Details.

See DWG. SA-12 for Parapet Details and Light Pole Locations.

See DWG. SA-12 & SA-14 for Scupper & Drainage Details.

See DWG. SA-13 for Deck Misc. Details, and Bill of Material.

Work this DWG. with DWGS. SA-11, SA-12 & SA-13.

MIN. BAR LAPS:
#5 = 1'-8"
#6 = 2'-0"

DWG. SA-10 of 46

REVISIONS	
NAME	DATE
Addendum 2	08/29/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK PLAN
ARCHER AVE. OVER U.S. RTE. 45
FAU ROUTE 3565 SECTION BR-H7
COOK COUNTY
STATION 81+44.01
STRUCTURE NUMBER 016-2756
SCALE: NONE DESIGNED BY: TB DRAWN BY: TB
DATE: 05/17/02 CHECKED BY: WGB CHECKED BY: WGB

KNIGHT Infrastructure

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2756

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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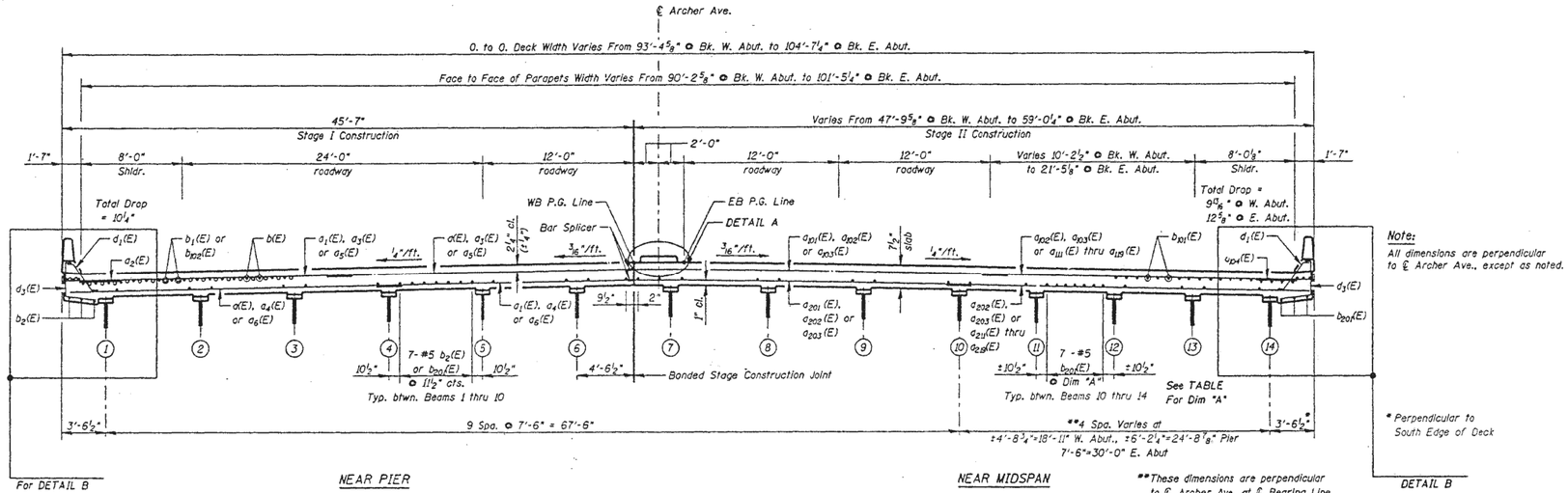
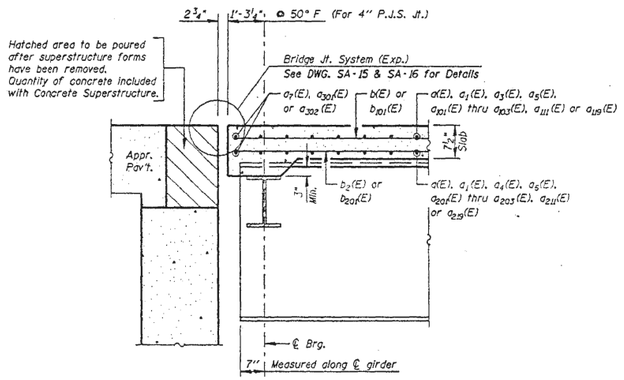
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

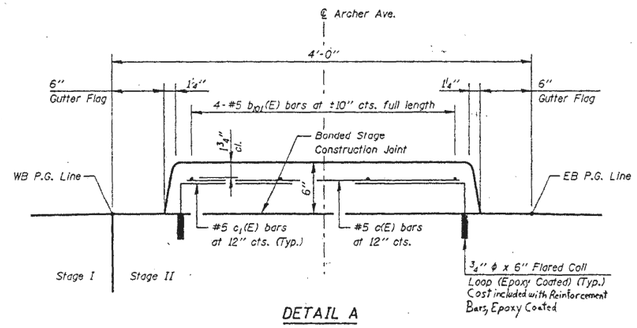
FOR INFORMATION ONLY



CROSS SECTION
(Looking East)



SECTION A-A
(From DWG. SA-10)

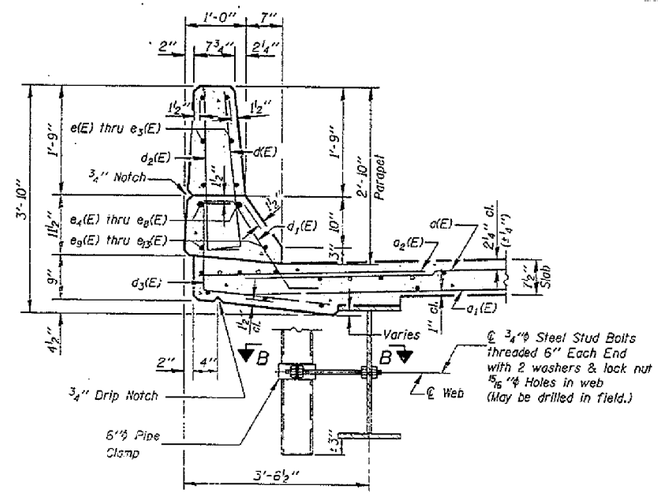


DETAIL A

BAR $b_{201}(E)$ SPACING

Location	Dim "A"
℄ Brg. W. Abut.	±6"
℄ Brg. Pier	±9"
℄ Brg. E. Abut	11½"

Dimensions Perpendicular to ℄ Archer Ave.



DETAIL B
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2756

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	147
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	57B-3I	COOK	62	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

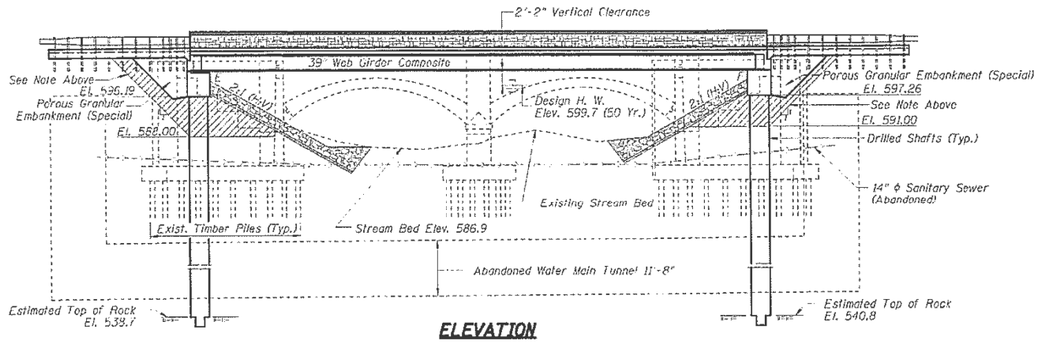
CONTRACT NO. 60440

Bench Mark:
Chisled square on top of the wingwall at the south east corner of the Cicero Avenue Bridge over the North Branch of the Chicago River. Elev. 605.37

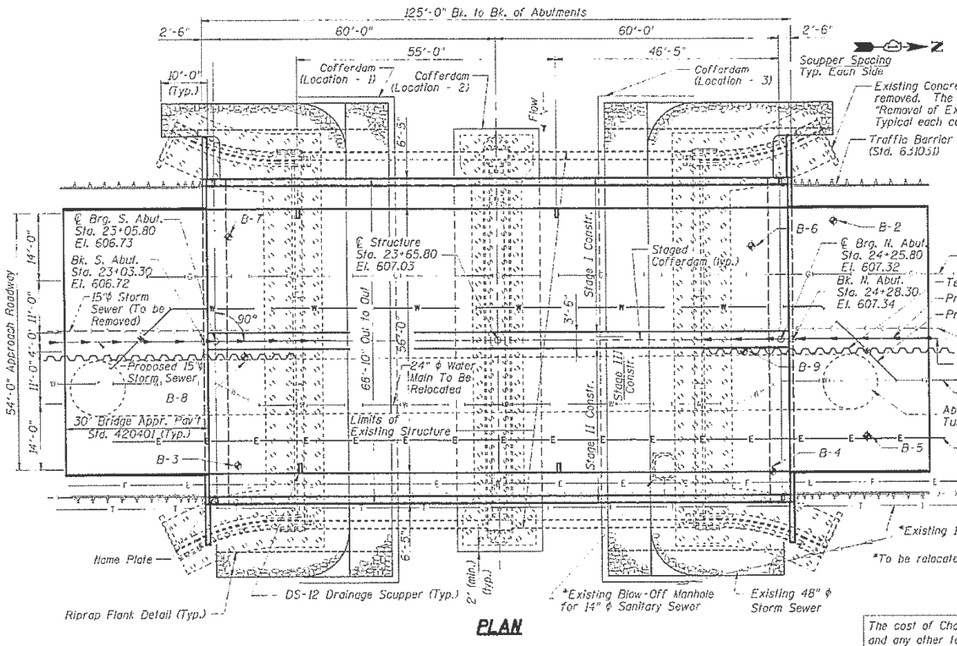
Existing Structure:
S.N. 016 0653 built as S.B.I Route 57 Sec. 57B-NRM3 in 1935. The existing bridge has two simple spans which consist of a PCC wearing surface and reinforced concrete tee beams. The existing deck is 76'-0" wide and 86'-0" long. The existing structure is to be removed and replaced. Traffic to be maintained utilizing stage construction.

No Salvage

Note:
Hatched area indicates unsuitable soils behind the existing abutments in the western half of the northwest and southwest quadrants. This material shall be removed and replaced with suitable embankment. The replacement material shall be porous granular embankment (Special) with a gradation of CA-5 or CA-7. Removal of unsuitable material shall be done after temporary sheet piling is in place.



ELEVATION



PLAN

The cost of Channel Diversion and In Stream Access, and any other temporary measures as required for the completion of work in or adjacent to the river not otherwise covered, shall be included in "Removal of Existing Structures". The design and details of each of the temporary systems required shall be submitted to the Engineer for Approval.

BRIDGE BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.		200	200
Porous Granular Embankment (Special)	Cu. Yd.		576	576
Stone Riprap, Class A5	Sq. Yd.		977	977
Filter Fabric	Sq. Yd.		1,008	1,008
Protective Coat	Sq. Yd.	1,067		1,067
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		596	596
Cofferdam (Location - 1)	Each		1	1
Cofferdam (Location - 2)	Each		1	1
Cofferdam (Location - 3)	Each		1	1
Concrete Structures	Cu. Yd.		146.7	146.7
Concrete Superstructure	Cu. Yd.	342.1		342.1
Bridge Deck Grooving	Sq. Yd.	740		740
Erecting Elastomeric Bearing Assembly, Type 1	Each	10		10
Stud Shear Connectors	Each	3,810		3,810
Erecting Structural Steel	L. Sum	1		1
Reinforcement Bars	Pound		32,440	32,440
Reinforcement Bars, Epoxy Coated	Pound	63,750	24,840	88,590
Temporary Sheet Piling	Sq. Ft.		3,206	3,206
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		168	168
Pipe Underdrains for Structures 4"	Foot		235	235
Drainage Scuppers, DS-12	Each	4		4
Bar Splicers	Each	984	70	1,054
Drilled Shaft in Soil 36"	Foot		114	114
Drilled Shaft in Soil 42"	Foot		229	229
Drilled Shaft in Soil 48"	Foot		114	114
Drilled Shaft in Rock 30"	Foot		4	4
Drilled Shaft in Rock 36"	Foot		8	8
Drilled Shaft in Rock 42"	Foot		4	4
Permanent Casing	Foot		176	176
Form Liner Textured Surface	Sq. Ft.	2,100		2,100

INDEX OF SHEETS

S1. GENERAL PLAN AND ELEVATION
S2. GENERAL NOTES & STAGING DETAILS
S3. SUBSTRUCTURE LAYOUT & DETAILS
S4. DECK ELEVATIONS I
S5. DECK ELEVATIONS II
S6. DECK PLAN & DETAILS
S7. DECK DETAILS
S8. DIAPHRAGM DETAILS
S9. FRAMING PLAN & DETAILS
S10. BEARING & DIAPHRAGM DETAILS
S11. NORTH ABUTMENT
S12. SOUTH ABUTMENT
S13. ANCHOR BOLTS
S14. BAR SPLICERS
S15. TEMPORARY CONCRETE BARRIER
S16. DRAINAGE SCUPPER DETAILS
S17. WATER MAIN DETAILS
S18. BORING LOGS I
S19. BORING LOGS II
S20. BORING LOGS III
S21. BORING LOGS IV

PATRICK ENGINEERING, INC.
PAUL M. LOPEZ, S.E.

STATE OF ILLINOIS — PAUL M. LOPEZ — 081-005231 — LICENSED STRUCTURAL ENGINEER

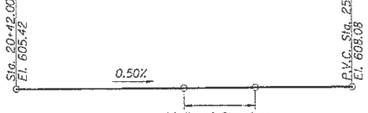
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Paul M. Lopez
PAUL M. LOPEZ, S.E.
* 081-005231

EXP 11-30-06

DATE 9-14-06

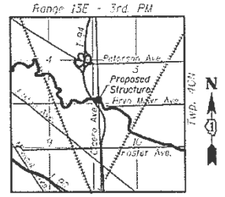
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



PROPOSED PROFILE GRADE
(Along PGL Roadway)

STATION 23+65.80
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P RT. 350 SEC. 57B-3I
LOADING HS20
STR. NO. 016-2782

NAME PLATE
See Standard 515001



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (M270 Grade 50W)

LOADING HS20-44
Allowance for Future Wearing Surface = 50 lb/ft²

DESIGN SPECIFICATIONS
1996 AASHTO Standard Specifications for Highway Bridges and 1997-2002 Interims

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035g
Site Coefficient (S) = 1.0

WATERWAY INFORMATION

DRAINAGE AREA = 112.3 Sq. Mi. PROPOSED LOW GRADE ELEV. = 605.4 @ Sta. 20+42

FLOOD	FREQ. YR.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Hal. H.W.E. Ft.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2318	620	908	597.7	0.3	0.2	598.0	597.9
DESIGN	50	3510	636	1131	599.7	0.9	0.4	600.6	600.1
BASE	100	4080	636	1257	600.8	1.3	0.5	602.1	601.3
OVERTOPPING	420	5180	636	-	603.4	2.1	-	605.5	-
MAX. CALC.	500	5460	-	1427	603.5	-	0.8	-	604.3

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
FAP 350 IL ROUTE 50 (CICERO AVE.) OVER
NORTH BRANCH OF THE CHICAGO RIVER
COOK COUNTY STATION 23+65.80
SECTION 57B-3I
STRUCTURE NO. 016-2782

SCALE: NONE DRAWN BY: M. Belton
DATE: AUGUST 18, 2006 CHECKED BY: R. Clinton

PATRICK ENGINEERING INC.
LISLE, ILLINOIS

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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2782

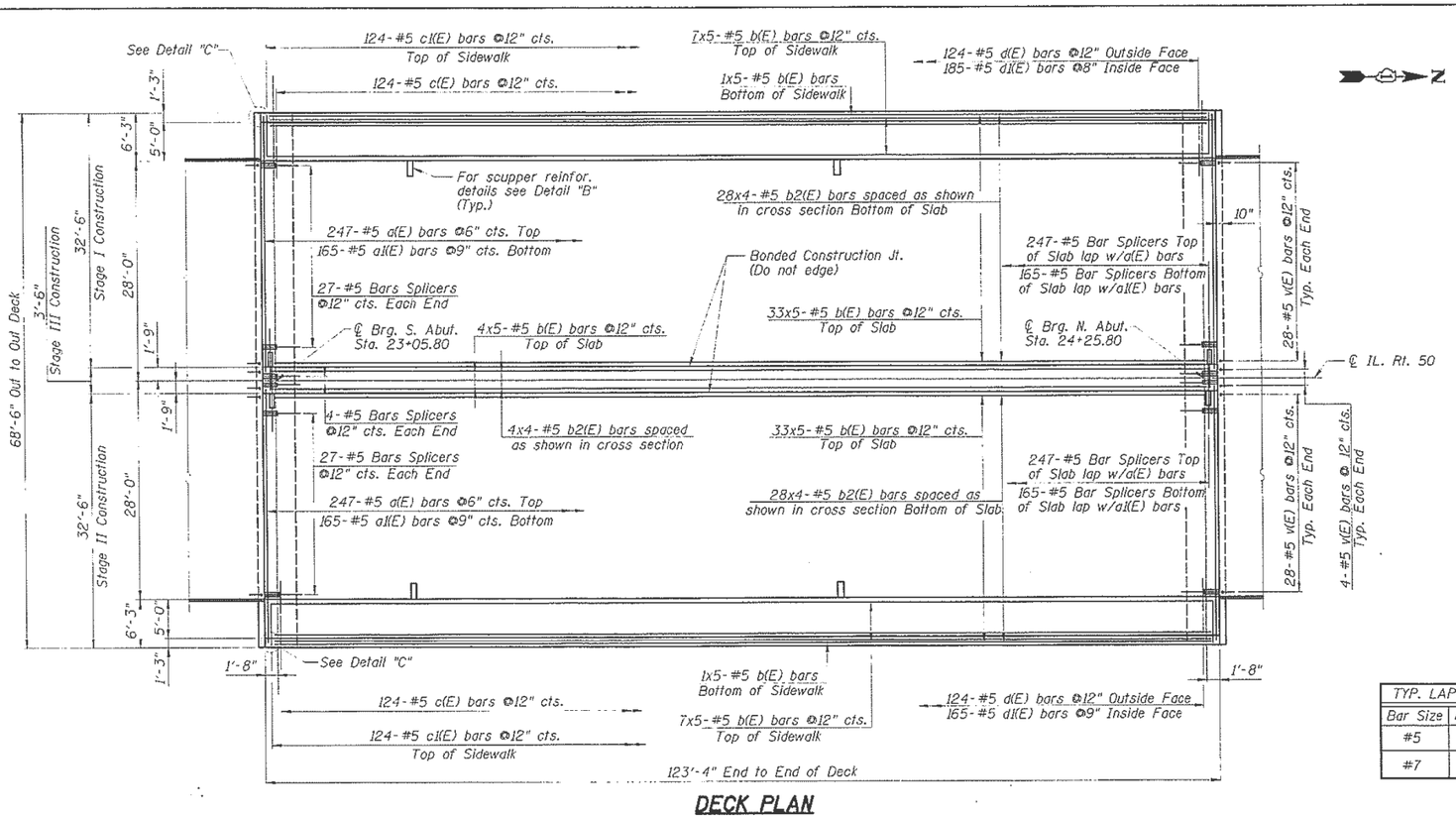
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	148
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

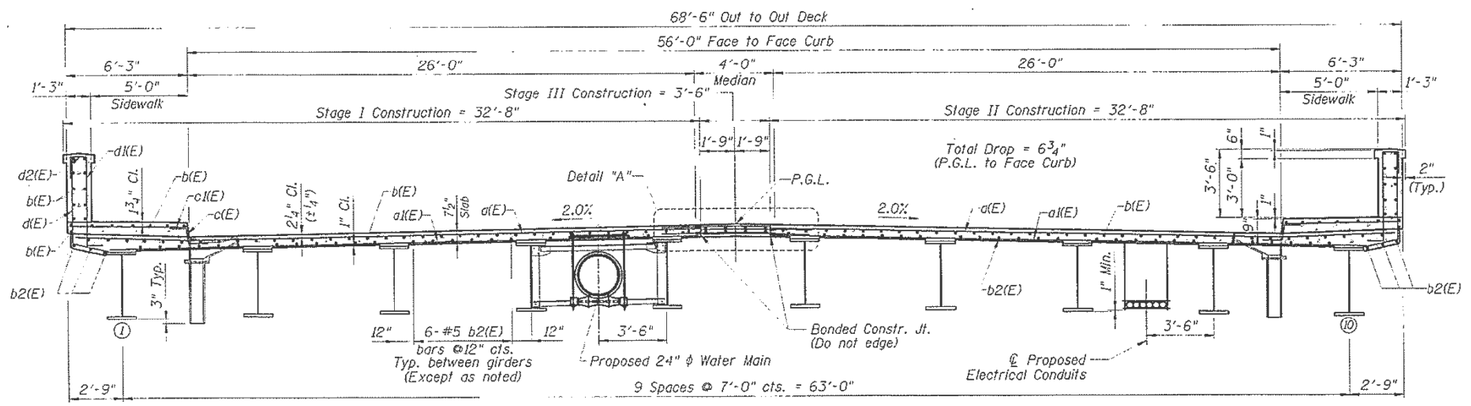
FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	57B-31	COOK	62	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60440

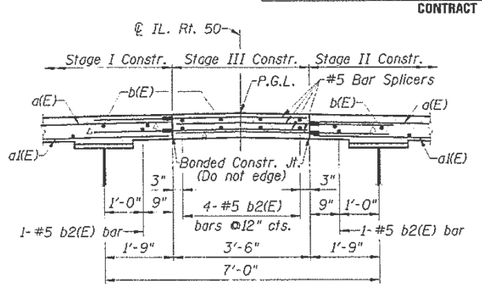


DECK PLAN

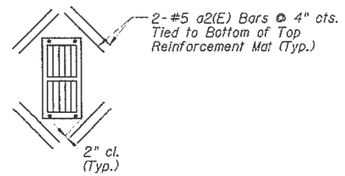


CROSS SECTION

(Looking North)



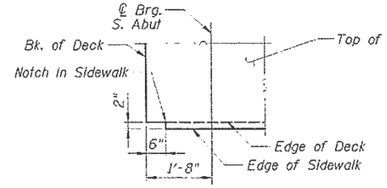
DETAIL "A"



DETAIL "B"

Cut longitudinal reinforcement to clear drainage scuppers.

TYP. LAP SPLICE	
Bar Size	Min. Lap
#5	2'-2"
#7	4'-10"



DETAIL "C"

(East edge shown)
(West edge similar)

Notes:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See Sheet S1 for Scupper Spacing.
4. See Sheet S7 for Parapet Details and Bill of Material.
5. See Sheet S14 for Bar Splicer Details.
6. See Sheet S16 for Scupper Details.
7. See Sheet S17 for Water Main Details.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK PLAN & DETAILS
FAP 350 IL ROUTE 50 (CICERO AVE.) OVER NORTH BRANCH OF THE CHICAGO RIVER
COOK COUNTY STATION 23+65.80
SECTION 57B-31
STRUCTURE NO. 016-2782

SCALE: NONE
DRAWN BY: M. Belton
DATE: AUGUST 18, 2006
CHECKED BY: R. Clinton

PATRICK ENGINEERING INC.
LISLE, ILLINOIS

USER NAME = diazla	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2782

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	149
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

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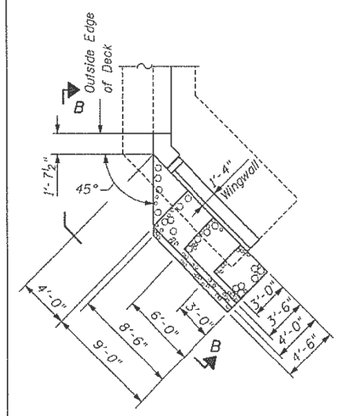
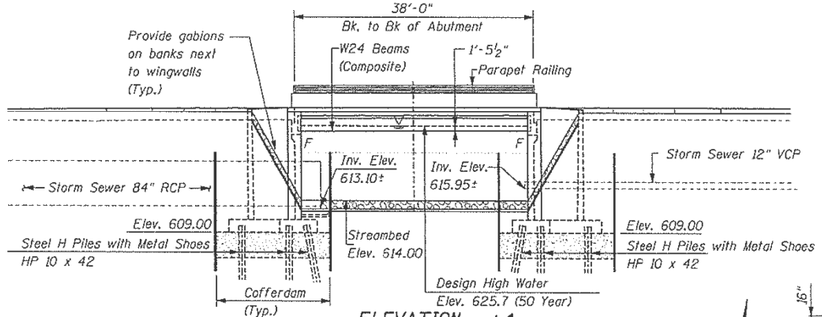
FOR INFORMATION ONLY

BENCH MARK:
"□" Cut on Top of Downstream East Side Wingwall of Bridge over Addison Creek on Roosevelt Road.
Elev. = 625.40

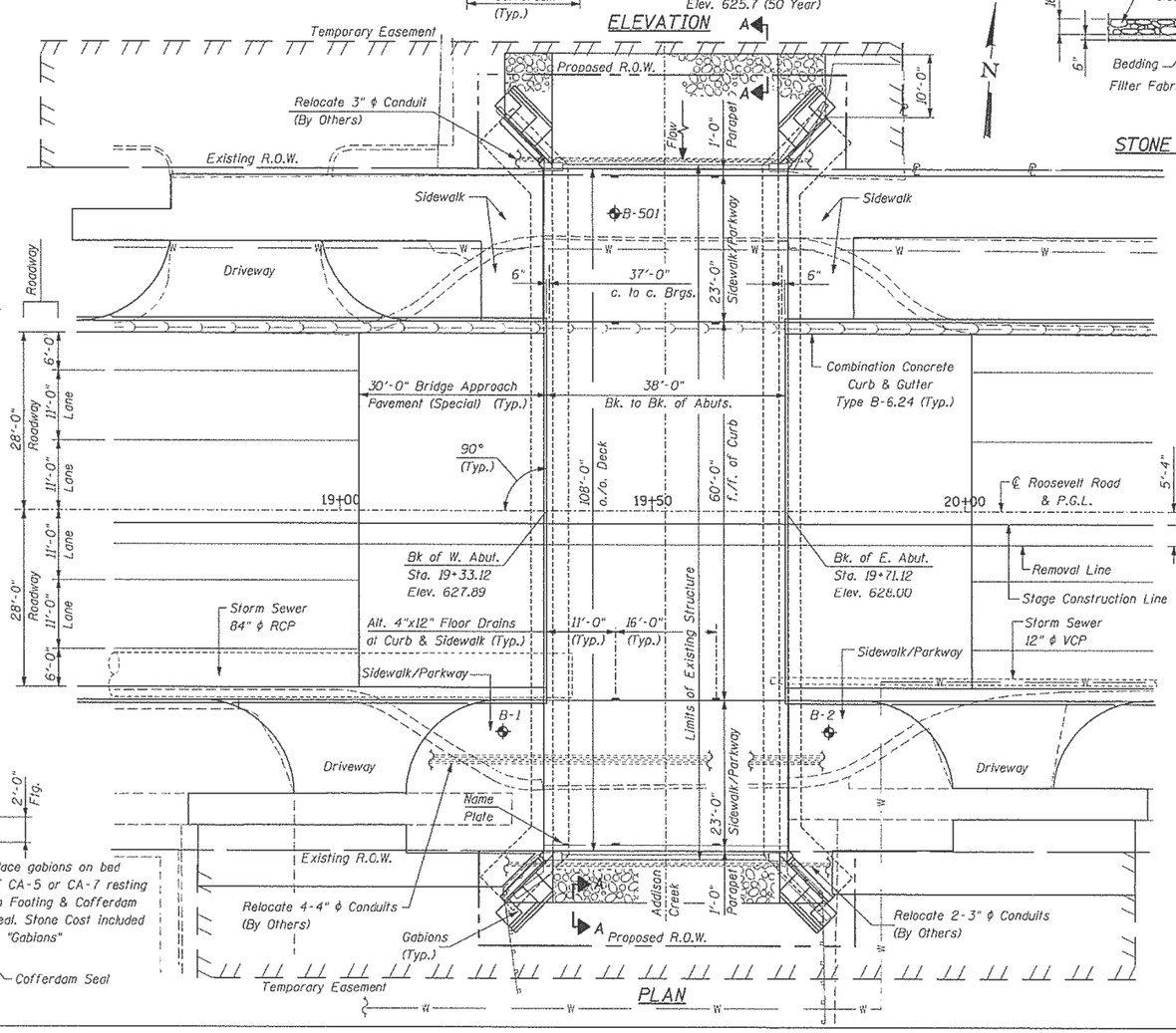
EXISTING STRUCTURE:
Structure No. 016-0471 Built as SB Rte. 15, Section F in 1927 with bituminous overlay placed in 1997.
A single span R.C. "T" beam superstructure on closed abutments, approx. 36' long and 108' out to out. Existing structure to be removed and replaced using stage construction, keeping one lane open in each direction during construction.
No Salvage.



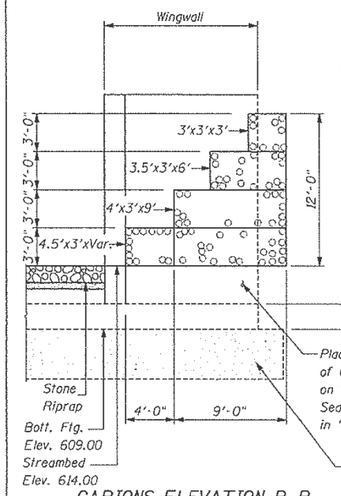
GABIONS PLAN-DETAIL



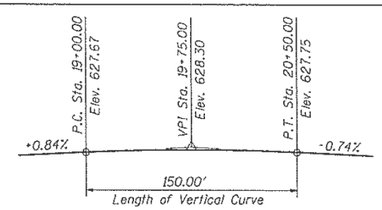
ELEVATION



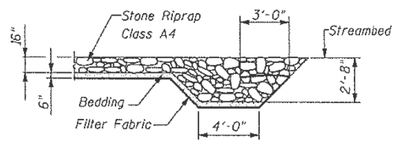
PLAN



GABIONS ELEVATION B-B



PROFILE GRADE LINE
℄ ROOSEVELT ROAD



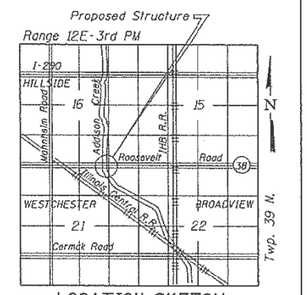
SECTION A-A
STONE RIPRAP ANCHOR DETAIL

STATION 19+52.12
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P RT. 347 SEC. F-B
F.A. PROJ.
LOADING HS20
STR. NO. 016-2789

NAME PLATE
See Std. 515001

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	F-B	COOK	67	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT *		

Sheet S-1 of S-25 * D-91-534-00



LOCATION SKETCH

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
1996 AASHTO with 1997 thru 2000 & 2002 Interims

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270 Grade 50)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04 g
Site Coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 18.2 Sq. Mi. Low Grade Elev. 624.0 @ Sta.									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Overtop	10	768	284		623.6	0.4		624.0	
	10	768	284	350	623.7	0.4	0.0	624.1	623.7
Overtop	10	768		353	623.8		0.2		624.0
Design	50	1132	284	360	625.7	0.7	0.2	626.4	625.9
Base	100	1320	284	360	626.4	0.5	0.2	626.9	626.6
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1660	284	360	627.9	0.2	0.1	628.1	628.0

Legend:
Soil Boring Location

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PHILIP D. FREY 004826 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS CHICAGO, ILL.
exp. 11/30/02

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
6001 NORTH CUMBERLAND AVENUE : CHICAGO, ILLINOIS 60656 : (773) 775-4000

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
ROOSEVELT ROAD OVER ADDISON CREEK
FAP ROUTE 347 SECTION F-B
COOK COUNTY
STA. 19 + 52.12
STRUCTURE NO. 016-2789
SCALE: VERT. NONE HORIZ.
DRAWN BY IMG
DATE AUGUST 2002
CHECKED BY PDF

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2789

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	150
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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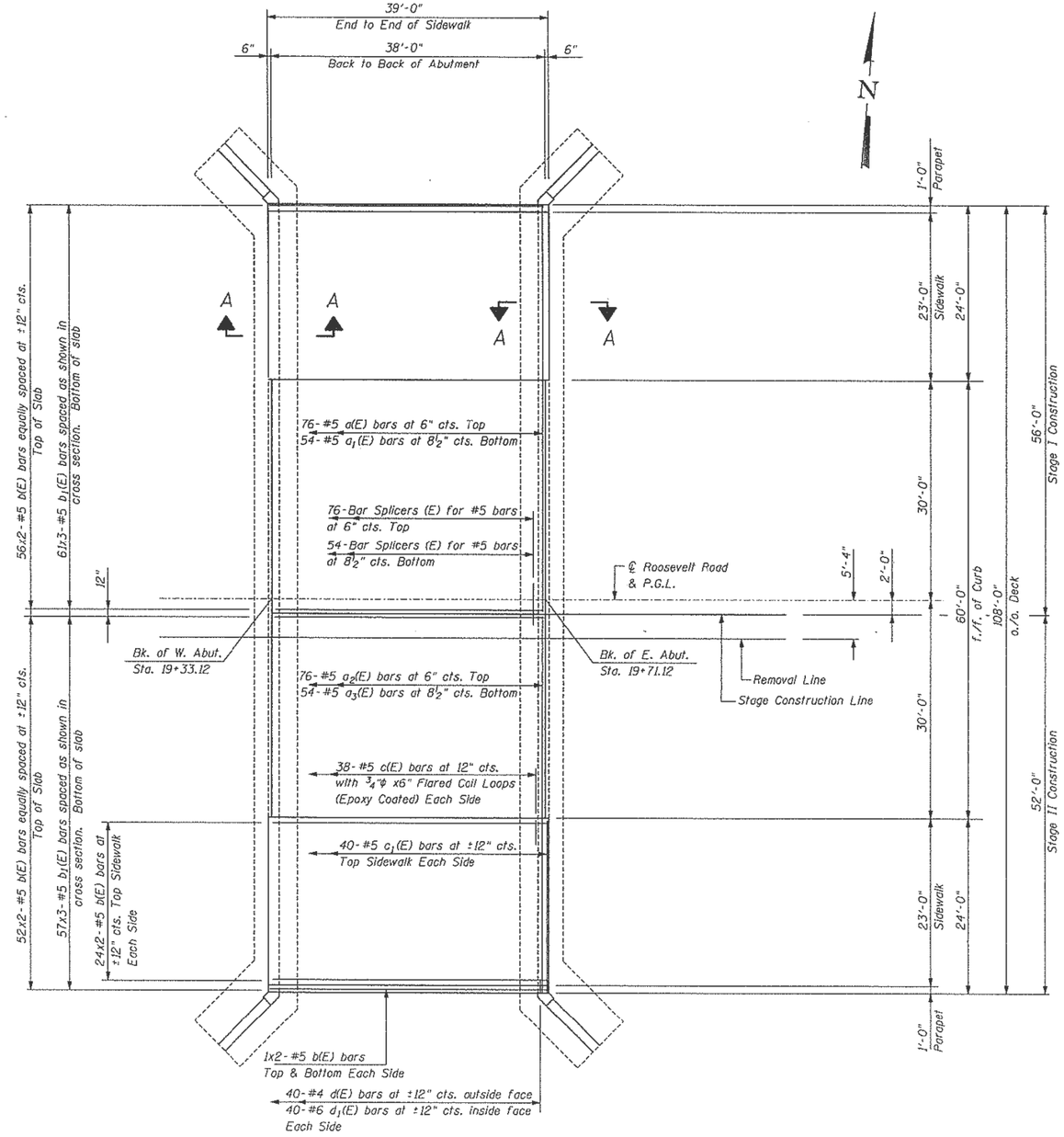
FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	F-B	COOK	67	32
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT *		

Sheet S-8 of S-25 * D-91-534-00



PLAN

Notes: See Sheet S-9 thru S-12 for cross section, superstructure details, and Bill of Material
See Sheet S-11 for Section A-A
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-11 for parapet reinforcement.
Minimum Bar Lap for #5 bars, 2'-2"

Clarke Group, Inc.
CONSULTING ENGINEERS
5917 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60656 • (773) 775-6000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK PLAN
ROOSEVELT ROAD OVER ADDISON CREEK
FAP ROUTE 347 SECTION F-B
COOK COUNTY
STA. 19 + 52.12
STRUCTURE NO. 016-2789

SCALE: VERT. NONE HORIZ. DRAWN BY IMG
DATE AUGUST 2002 CHECKED BY PDF

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-2789

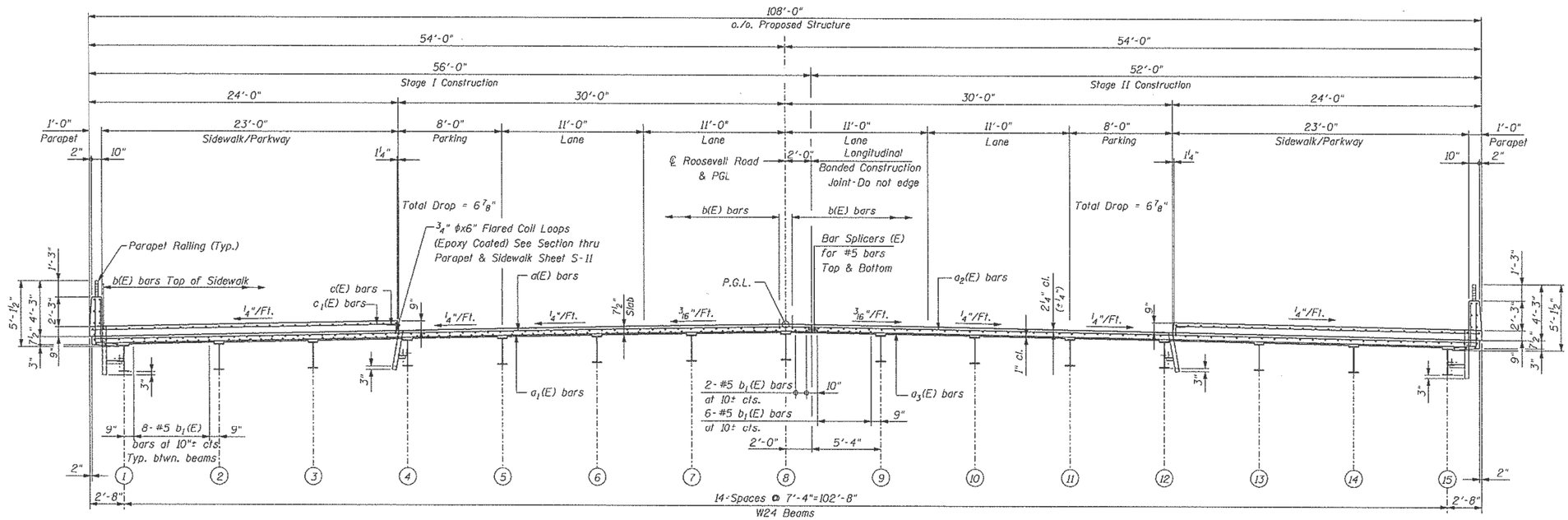
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	151
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	F-B	COOK	67	33
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT *		

Sheet S-9 of S-25 * D-91-534-00



CROSS SECTION
(LOOKING EAST)

Notes: See Sheet S-8 for Deck Plan
See Sheet S-10 thru S-12 for superstructure details & Bill of Material
Reinforcement bars designated (E) shall be epoxy coated.
See Sheet S-11 for parapet reinforcement.
Minimum Bar Lap for #5 bars, 2'-2".

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
1001 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60656 • (773) 775-6000

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK CROSS SECTION
ROOSEVELT ROAD OVER ADDISON CREEK
FAP ROUTE 347 SECTION F-B
COOK COUNTY
STA. 19 + 52.12
STRUCTURE NO. 016-2789

SCALE: VERT. NONE HORIZ.
DATE AUGUST 2002
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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-2789

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	152
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

Bench Mark:
Chiseled □ cut on Northwest Corner of Madison Street Bridge (on sidewalk) of S.N. 016-0866. Elevation 190.263.

Existing Structure: S.N. 016-0866 was built in 1912 and widened in 1948. The existing structure is a two-span earth spandrel arch bridge with a total length of 60.957 meters. The deck is comprised of a 76 mm asphalt wearing surface on top of a 254 mm concrete slab. The structure is 19.202 meters wide out-to-out and has a roadway width of 15.544 meters with 1.829 meter sidewalks on each side. The structure is founded on untreated timber piles.

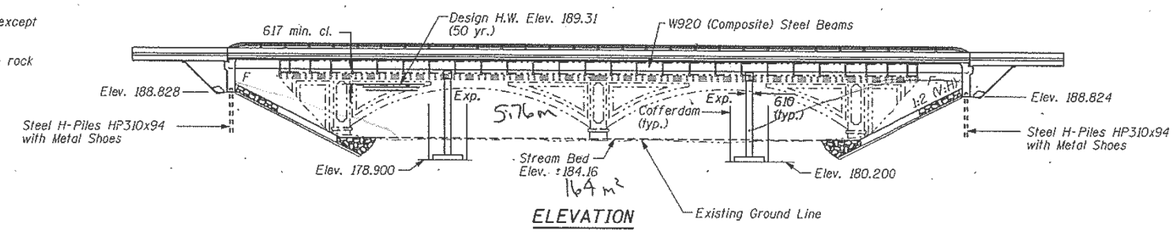
No Salvage.

Note:
All dimensions are in millimeters (mm) except as noted.

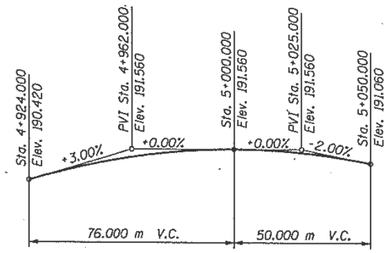
Footings to be poured against in-place rock and not formed.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. Route 1419	0202.38	COOK	76	29
FED. ROAD DIST. NO.1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. S-1 OF S-25



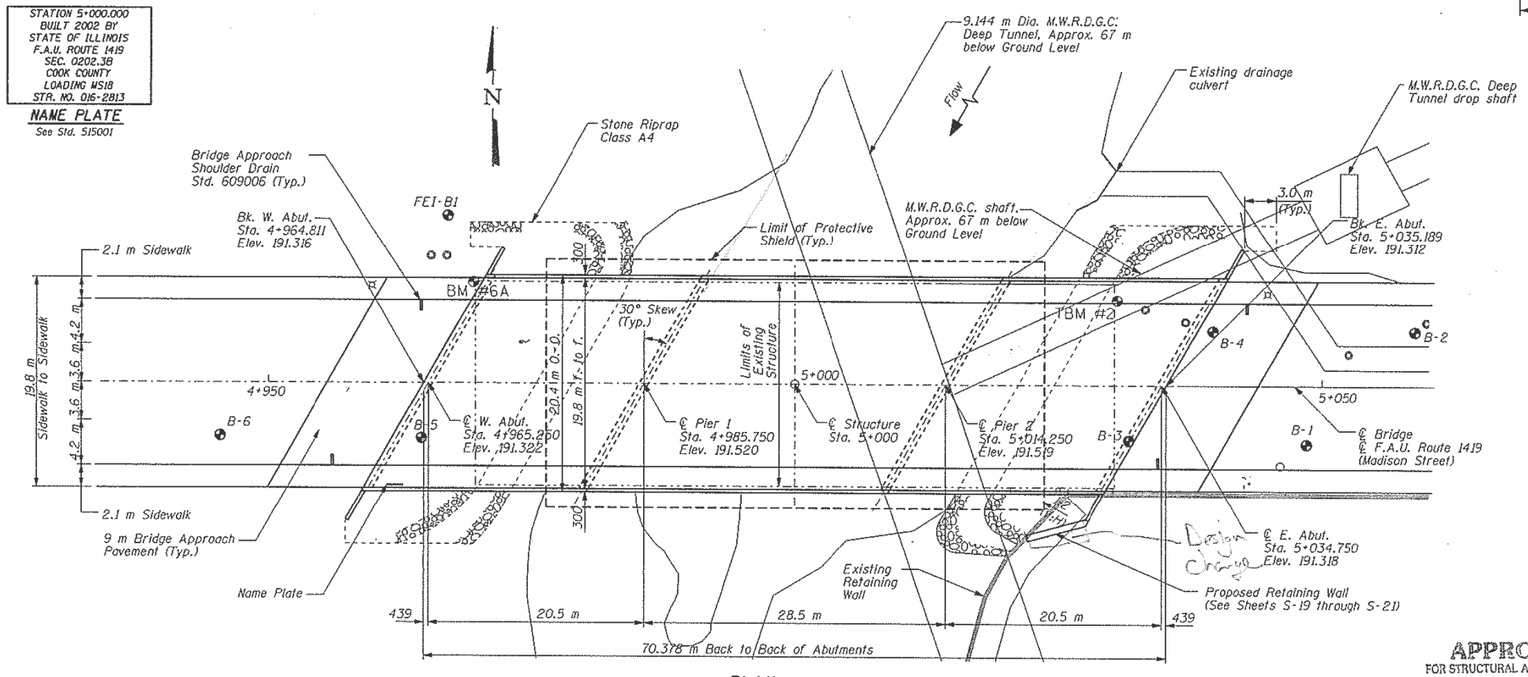
ELEVATION



PROFILE GRADE

STATION 5+000.000
BUILT 2002 BY
STATE OF ILLINOIS
F.A.U. ROUTE 1419
SEC. 0202.38
COOK COUNTY
LOADING MS18
STR. NO. 016-2813

NAME PLATE
See Std. 515001



PLAN

DESIGN SPECIFICATIONS

1996 AASHTO Standard Specifications for Highway Bridges (Including 1997, 1998, 1999 and 2000 Interims.)

LOADING MS18

Allow 2.4 kN/m² for future wearing surface

DESIGN STRESSES

f'c = 24 MPa
fy = 400 MPa (Reinforcement)
fy = 345 MPa (M270M Grade 345) (Structural)
fy = 250 MPa (M270M Grade 250)

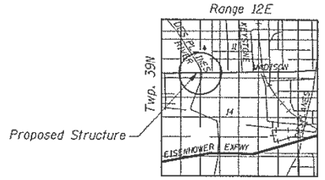
SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock Acceleration Coefficient (A)=0.04 g
Site Coefficient (S)=1.0

WATERWAY INFORMATION

Drainage Area = 1203.6 km² Prop. Low Grade Elev. 190.317 m @ Sta. 4+920.564

Flood	Freq. Yr.	Q c.m.s.	Opening sq. m Exist.	Opening sq. m Prop.	Nat. H.W.E.	Head - m Exist.	Head - m Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	145.52	120.96	218.23	188.85	0.06	0.0	188.92	188.85
Design	50	177.60	120.96	244.242	189.31	0.122	0.0	189.43	189.31
Base	100	189.50	120.96	254.369	189.49	0.122	0.0	189.62	189.49
Overtopping	±25	-	-	-	-	-	-	-	-
Max. Calc.	500	212.66	120.96	271.74	189.80	0.183	0.0	189.98	189.80



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
KENNETH E. WILSON III
081-005710
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER
Kenneth E. Wilson III
Expires 11/30/2002

REVISIONS NAME	DATE
	- -
	- -
	- -
	- -
	- -
	- -
	- -
	- -

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

MADISON STREET OVER DES PLAINES RIVER
F.A.U. ROUTE 1419, SECTION 0202.38
COOK COUNTY
STATION 5+000.000
STRUCTURE NO. 016-2813

DATE OCTOBER 2002

DRAWN BY CLM
CHECKED BY KEW

Baker
Baker Engineering, Inc.

282.08

USER NAME = diazia	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2813

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	153
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

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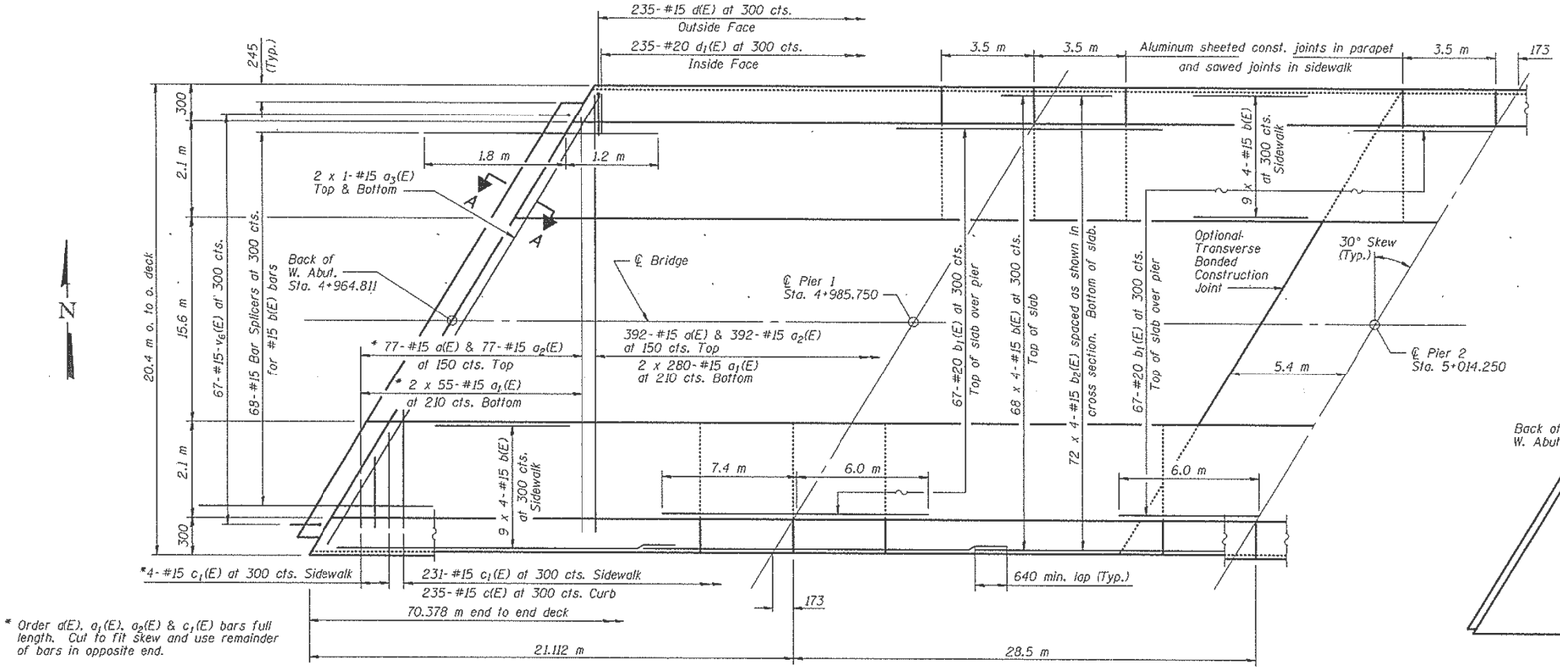
y*time$$

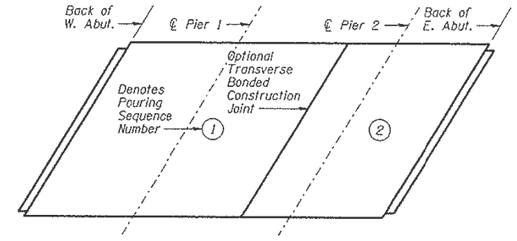
FOR INFORMATION ONLY



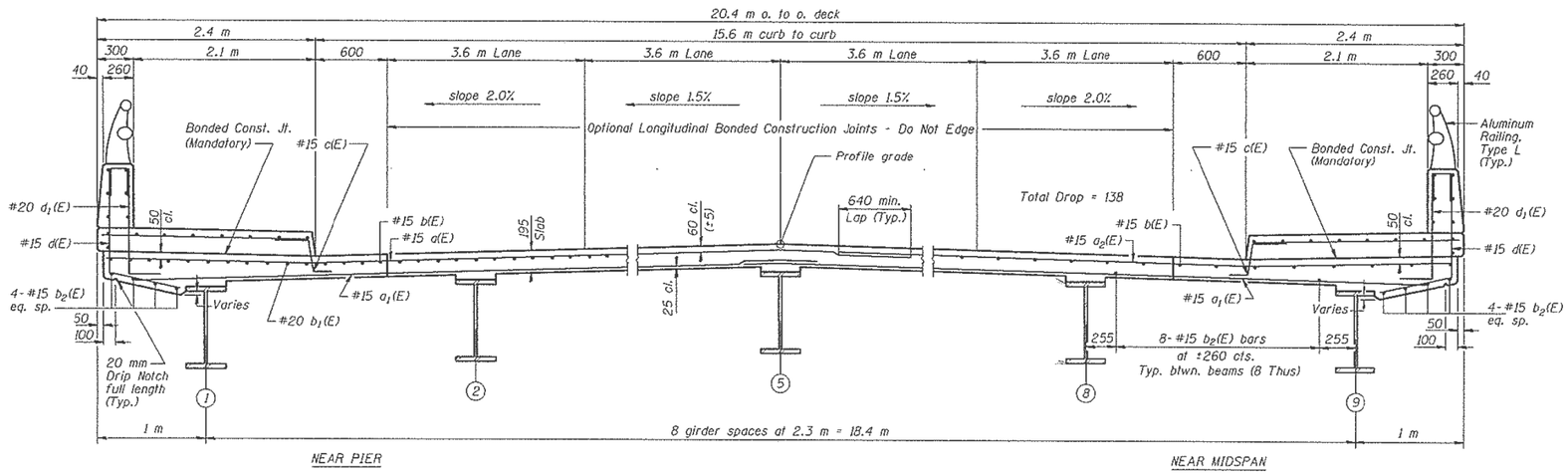
* Order d(E), a_1(E), a_2(E) & c_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PARTIAL PLAN

(Span 3 similar to Span 1)



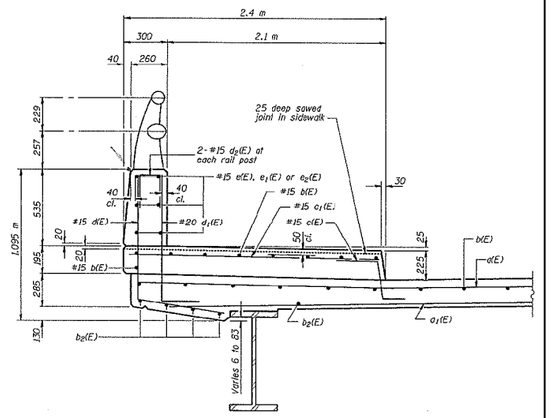
DECK POURING SEQUENCE PLAN



NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking East)



SECTION THRU SIDEWALK

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–2813

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	154
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY

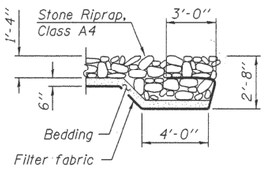
Benchmark: S.E. B-Bolt of fire hyd. at S.W. corner of 5th Ave. and Winston Dr.
Sta. 34+64.25, Offset 64.75', Elev. 625.561

Existing Structure: S.N. 016-0691 built in 1929 as FAU 2742 , Section F. Overlay was placed in 1999 and in 2010. A single span reinforced concrete bridge. Superstructure on closed abutments, 32' long and 56' out to out. Existing superstructure & portions of substructure to be removed and replaced using stage construction, keeping one lane open in the southbound direction during stage I and one lane in each direction during stage II.
Northbound traffic will be detoured during stage I.

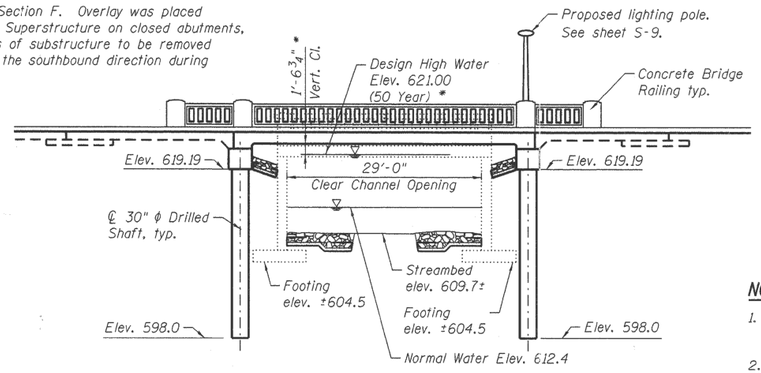
No Salvage.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	South Abut.	North Abut.
	604.5	604.5



SECTION B-B



ELEVATION

PLAN

NOTES:

1. Appr. Railing will be omitted on the NW corner of the bridge
2. For Section A-A see sheet S-2.
3. Existing Watermain and gas main in conflict with proposed drilled shaft to be relocated by others prior to drilling operations.

WATERWAY INFORMATION

Drainage Area = 9.0 Sq. Mi. Proposed Low Grade Elev. 624.43 @ Sta. 37+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	425	326	327	621.0	0.0	0.0	621.0	621.0
Design	50	645	326	327	621.0*	0.0	0.0	621.0	621.0
Base	100	770	326	330	621.1	0.0	0.0	621.1	621.1
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1010	326	333	621.2	0.0	0.0	621.2	621.2

All Elevations are based on FIS Datum -0.281' = Highway Datum

* The vertical clearance was determined using the 50 year HWE (622.9) of the Des Plaines River.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges 17th Edition

DESIGN STRESSES

FIELD UNITS

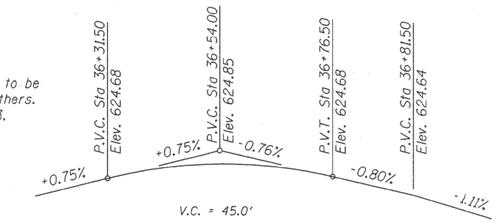
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HS 20-44

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) =A
Bedrock Acceleration Coefficient (A) =0.04g
Site Coefficient (S) =1.0



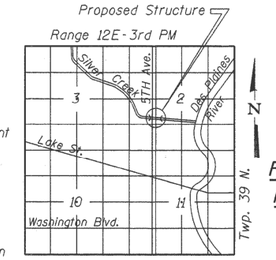
PROFILE

along ℄ 5th Avenue

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ENGINEER OF BRIDGES AND STRUCTURES

081-005930
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
SALVATORE C. DI BERNARDO

DATE: 10/25/2011
SEAL EXPIRES: 11/30/2012



LOCATION SKETCH

LEGEND:
Soil Boring Location
W Existing 12" Water Main
G Existing 4" Gas Main

GENERAL PLAN
FIFTH AVENUE OVER SILVER CREEK
F.A.U. RTE. 2742 SEC. 3222-W-BR
COOK COUNTY
STATION 36+54.00
STRUCTURE NO. 016-2818

N:\PROJ\000\3377.00\0003377.06\Design\Structure\CAD\016-2818 01 GPE.dgn

Clarke Group, Inc.
CONSULTING ENGINEERS
1801 North Cumberland Avenue
Suite 6FL Chicago, Illinois 60666
Tel. 773.775.4004
Fax. 773.775.4008
Email cclarke@clarke.com

USER NAME = rdanley	DESIGNED BWS	REVISED -	
	CHECKED DL	REVISED -	
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PLOT DATE = 10/25/2011	CHECKED SCD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. S-1 OF S-17 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2742	3222-W-BR	COOK	51	26
		CONTRACT NO. 62116		
		ILLINOIS FED. AID PROJECT		

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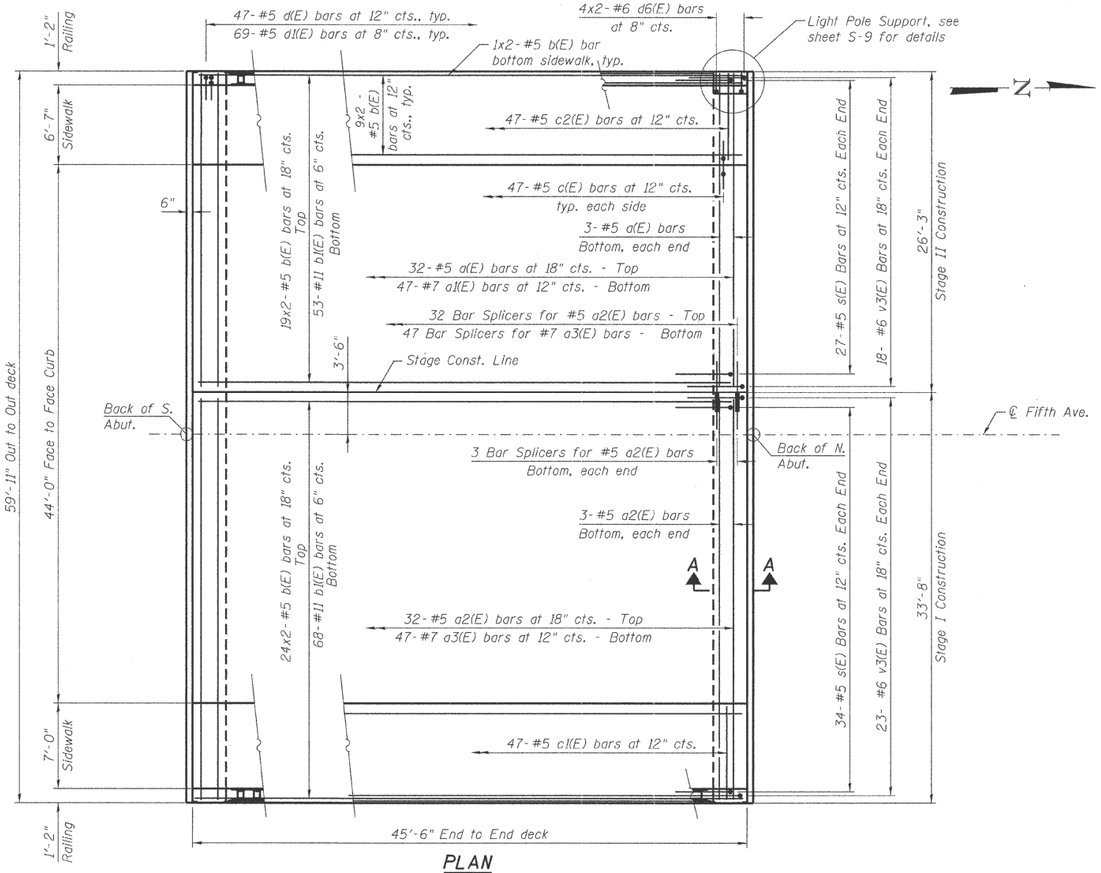
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2818

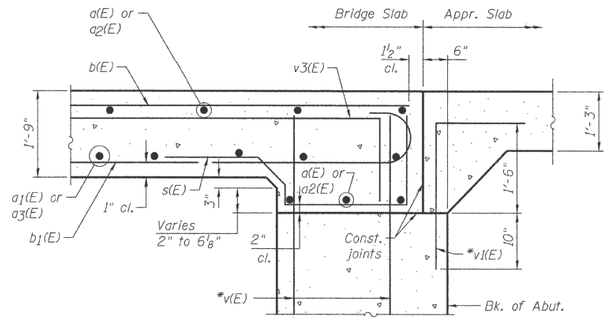
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	155
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY



PLAN



SECTION A-A

Pour bridge slab before pouring approach slab.

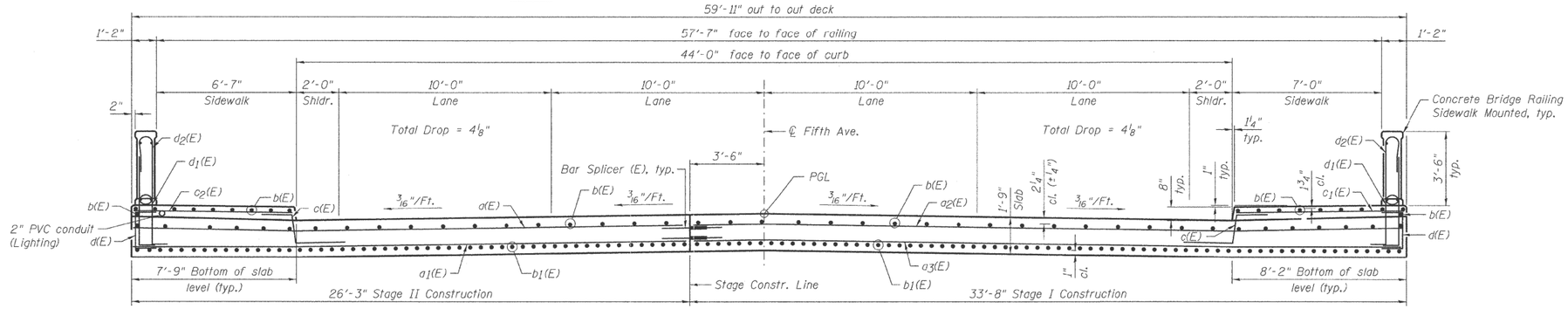
* v(E) and v1(E) bars included with the abutments on sheet S-13.

MINIMUM BAR LAP

#5 Bars = 2'-11"

NOTES:

1. See sheet S-10 for Superstructure details and Bill of Material.
2. Bars indicated thus 20x3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See sheet S-9 for sidewalk details and bridge rail reinforcement.



CROSS SECTION

(Looking North)

N:\PROJ\20033377.00\X0033377.06\Design\Structural\CAD\016-2818 00 Deck and Cross Section.dgn

Clorba Group, Inc. CONSULTING ENGINEERS 1997 North Cumberland Avenue, Suite 200 Chicago, Illinois 60656 Tel. 773.775.4998 Fax 773.775.4114 Email: chicago@clorba.com	USER NAME = bsauter	DESIGNED BWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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	PLOT DATE = 12/5/2011	CHECKED AMK	REVISED -	

SUPERSTRUCTURE PLAN AND CROSS SECTION
STRUCTURE NO. 016-2818
SHEET NO. S-8 OF S-17 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2742	3222-W-BR	COOK	51	33
		CONTRACT NO. 62116		
		ILLINOIS FED. AID PROJECT		

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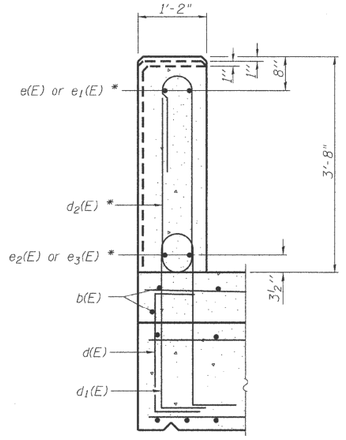
PLOT DATE = 1/31/2019	DATE -	REVISED -	

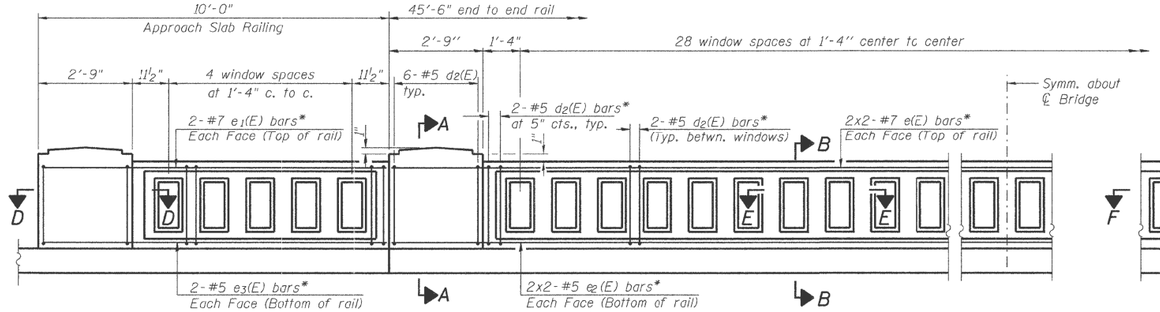
DECK PLAN
SN: 016-2818
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	156
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

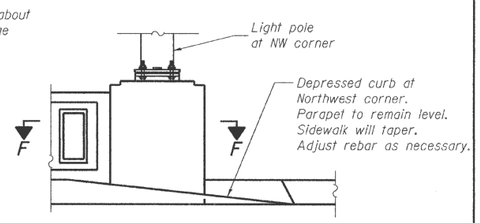


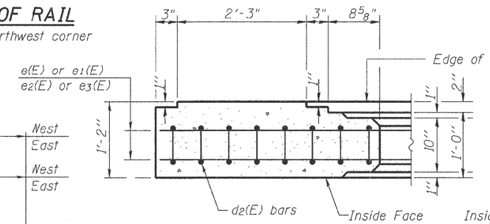
SECTION A-A



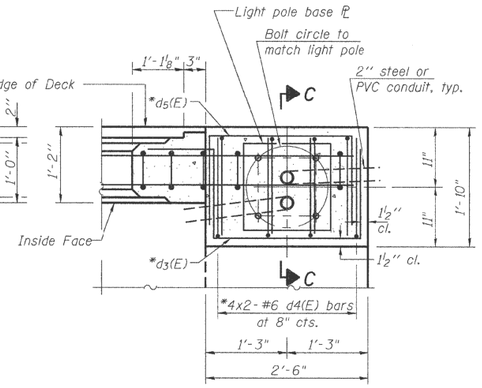
INSIDE ELEVATION OF RAIL

Omit Approach Slab Railing on Northwest corner

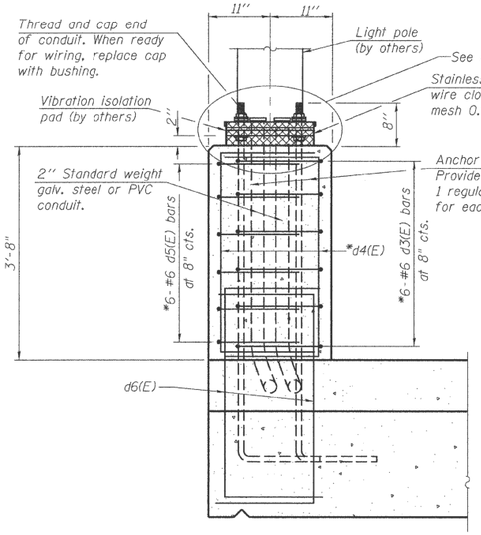




SECTION D-D

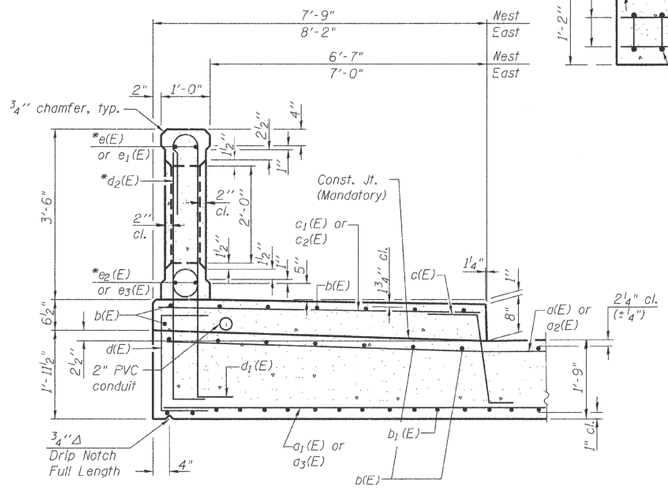


SECTION F-F



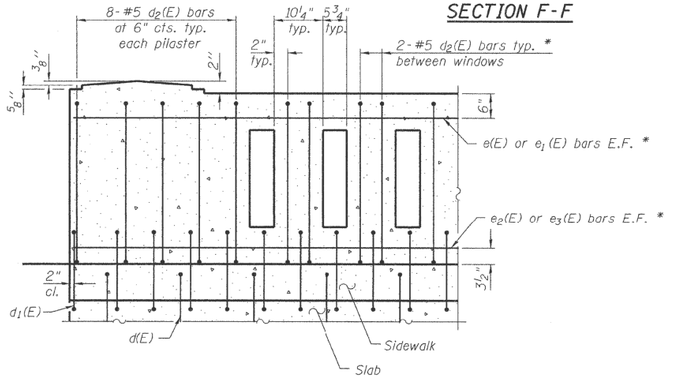
SECTION C-C

Rebars shown in Section A-A omitted for clarity



SECTION B-B

*Bars e(E) thru e3(E), d2(E), d3(E), d4(E), and d5(E) are included in the cost of Concrete Bridge Railing, Sidewalk Mounted.



TYPICAL REINFORCEMENT PLACEMENT

(Inside Face)

NOTES:

1. All concrete for railing wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of railing shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.
2. All parts of the railing including concrete and reinforcing will be paid for at the contract unit price per foot for Concrete Bridge Railing, Sidewalk Mounted.
3. Holes and recesses must be formed or cored. Drilling is not permitted.
4. Cost of anchor rods and conduit is included with Concrete Superstructure. See sheet S-10 for Anchor Rod details.
5. For Section E-E see sheet S-10.

MINIMUM BAR LAP

#5 Bars = 3'-3"
#7 Bars = 5'-10"

BAR LIST

For Information Only

Bar	No.	Size	Length	Shape
$d_2(E)$	198	# 5	8'-8"	
$d_3(E)$	6	# 6	5'-11"	
$d_4(E)$	8	# 6	6'-4"	
$d_5(E)$	6	# 6	5'-2"	
$e(E)$	8	# 7	25'-6"	
$e_1(E)$	6	# 7	9'-8"	
$e_2(E)$	8	# 5	24'-3"	
$e_3(E)$	6	# 5	9'-8"	

For bar details see sheet S-10.

\\sav-202\Public\PROJ\0002377.00\0002377.00\0002377.06\Design\Structural\CAD\016-2818 09 Bridge Railing Details.dgn

Cloriba Group, Inc. CONSULTING ENGINEERS 1807 North Cumberland Avenue, Suite 401, Chicago, Illinois 60656 Tel. 773.775.4002 Fax. 773.775.4003 Email chicago@cloriba.com	USER NAME = bsouter	DESIGNED BWS	REVISED -
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	PLOT DATE = 12/5/2011	CHECKED AMK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE RAILING SIDEWALK MOUNTED
STRUCTURE NO. 016-2818
SHEET NO. S-9 OF S-17 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2742	3222-W-BR	COOK	51	34
		CONTRACT NO. 62116		
		ILLINOIS FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016-2818
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	157
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

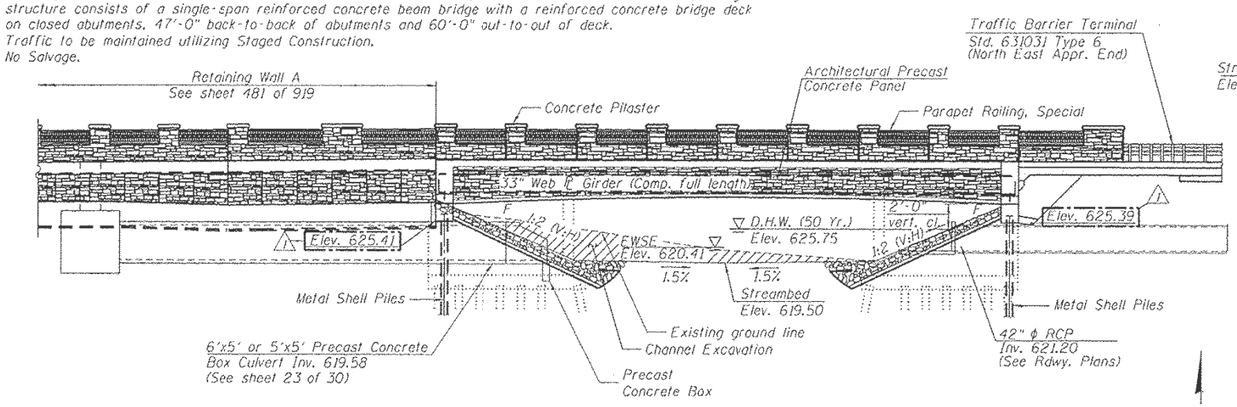
FOR INFORMATION ONLY

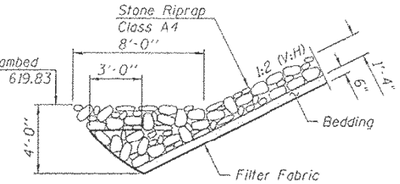
Bench Mark: Square cut on SE corner of handrail at NE corner of bridge over Middle Fork of the Chicago River At Willow Road. Elev. 633.16

Existing Structure: S.N. 016-0535, built in 1941 as S.A. Route 110, Section 110-1922.4-MFR. The existing structure consists of a single-span reinforced concrete beam bridge with a reinforced concrete bridge deck on closed abutments. 47'-0" back-to-back of abutments and 60'-0" out-to-out of deck.

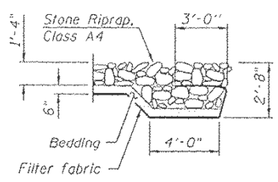
Traffic to be maintained utilizing Staged Construction.

No Salvage.

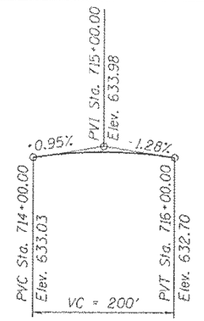




SECTION A-A



SECTION B-B



PROFILE GRADE
(Along RT & LT PGL)

WATERWAY INFORMATION

Drainage Area = 24.1 sq. mi. Low Grade Elev. 630.44 at Sta. 707+00 (Exist.) Low Grade Elev. 629.25 at Sta. 709+50 (Prop.)

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
	10	430	120	202	624.18	0.04	0.00	624.22	623.90
Design	50	814	186	300	625.75	0.08	0.00	625.83	625.61
Base	100	943	210	330	626.23	0.10	0.00	626.33	626.12
Max. Calc.	500	1388	258	387	627.34	0.18	0.02	627.52	627.36

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)	W. Abut.	E. Abut.
0100	625.41	625.39
0500	625.41	625.39

STATION 714+87.44
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 0305
SEC. (1920.01,1518, 2022&1922.4B)R
LOADING HL-93
STR. NO. 016-2844

NAME PLATE

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

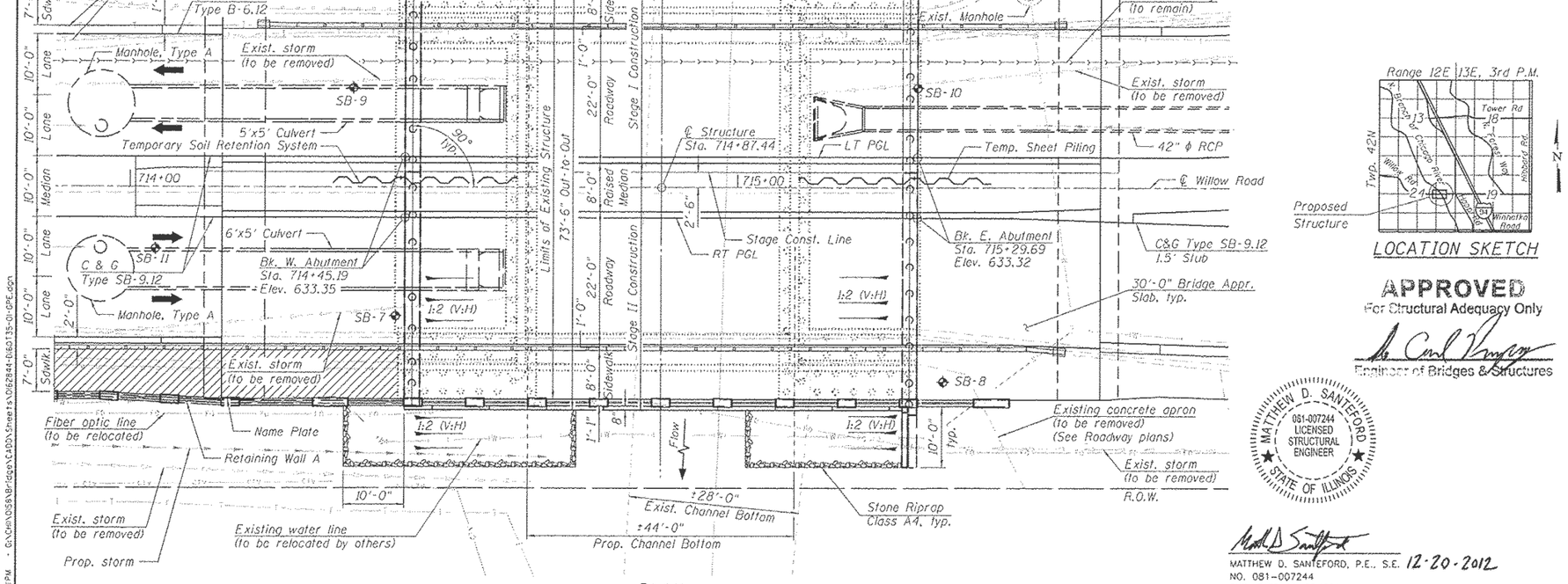
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

PRECAST UNITS

f'c = 4,500 psi (Precast Panel)
f'c = 5,000 psi (Precast Culvert)
fy = 65,000 psi (Welded Wire Fabric, Precast Culvert)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.058g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.102g
Soil Site Class = C



PLAN

N

LOCATION SKETCH

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures

MATTHEW D. SANTEFORD 081-007244 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

MATTHEW D. SANTEFORD, P.E., S.E. 12-20-2012
NO. 081-007244
EXP. DATE 11/30/2014

GENERAL PLAN AND ELEVATION
WILLOW ROAD OVER
MIDDLE FORK OF NORTH BRANCH
OF THE CHICAGO RIVER
F.A.P. RTE. 0305
SEC. (1920.01,1518,2022&1922.4B)R
COOK COUNTY
STATION 714+87.44
STRUCTURE NO. 016-2844

TranSystems

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PLOT DATE = 12/20/2012	CHECKED - MDS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0305	(1920.01,1518,2022&1922.4B)R	COOK	919	451
		CONTRACT NO. 60T35		
		ILLINOIS	FED. AID PROJECT	

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	DRAWN -	REVISED -
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PLOT DATE = 1/31/2019	DATE -	REVISED -

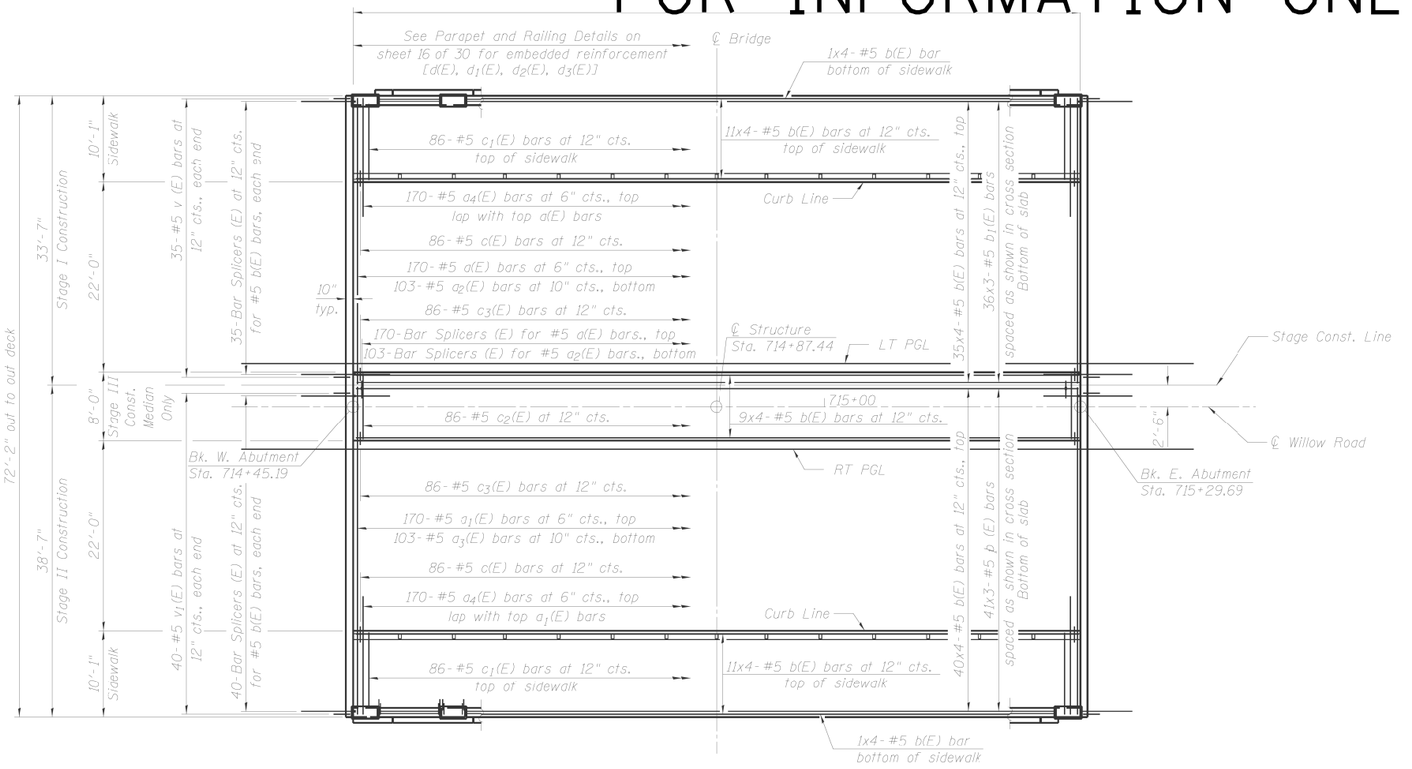
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-2844

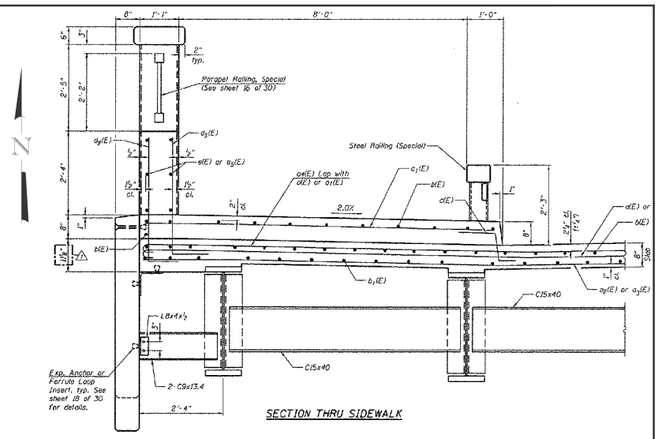
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	158
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY

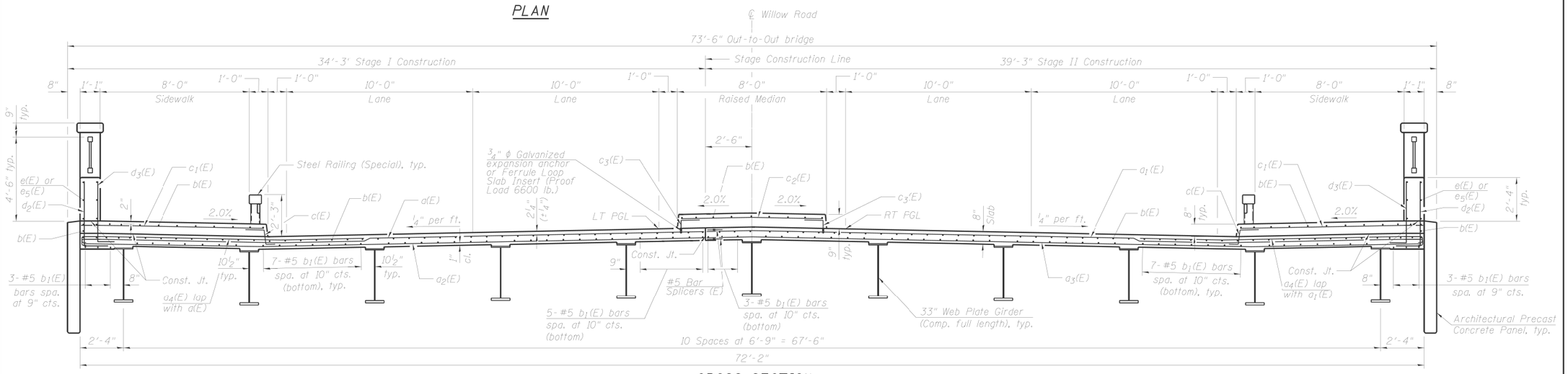


PLAN



SECTION THRU SIDEWALK

Note:
The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.
See Sheet 11 of 30 for superstructure details and Bill of Material.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



CROSS SECTION
(Looking East)

USER NAME = jrmickow	DESIGNED - JRM	REVISED -	**STATE OF ILLINOIS**
	CHECKED - MDS	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 16ø '1' / in.	DRAWN - DMG	REVISED -	
PLOT DATE = 12/5/2012	CHECKED - MDS	REVISED -	

DECK PLAN AND CROSS SECTION
STRUCTURE NO. 016-2844
SHEET NO. 10 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0305	(1920.01,1518,2022&1922.4B)R	COOK	919	460
		CONTRACT NO. 60T35		
		ILLINOIS FED. AID PROJECT		

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	DRAWN -	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016-2844
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	159
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

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12/5/2012 5:46:41 PM G:\CHI\1058\Bridges\CADD\Sheets\1062844-D160735-0-DPKS.dgn

FOR INFORMATION ONLY

Bench Mark: Cross cut at southeast corner of IL Route 64/Thatcher Avenue intersection. Sta. 100+28.1, 50.0' RT., Elev. 625.23

Existing Structure: S.N. 016-0501 built 1926, widened in 1956 as S.B.I Route 54, Section 541-Y-3. The existing three simple span superstructure consists of cast-in-place tee beams, with some tee beams replaced by ppc box beams in 1995. Superstructure supported on closed abutments and solid wall piers, all on spread footings. The structure is 159'-0" back to back of abutments and 101'-8" out to out of deck. The existing structure will be replaced. Stage construction will be utilized to maintain two lanes of traffic in each direction at all times on IL64. Portions of Thatcher Avenue will be alternately closed and traffic detoured during construction.

No salvage

WATERWAY INFORMATION

Drainage Area = 455 square miles Low Grade Elev. 622.64 @ Sta. 92+20.83

Flood	Freq. Yr.	Discharge (cfs)	Waterway Opening Sq. Ft. Exist.	Waterway Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	4,990	2,423	2,980	621.78	0.02	0.01	621.80	621.79
Overtop Existing	20	5,499	2,557	3,144	622.64	0.00	0.00	622.64	622.64
Overtop Proposed	20	5,499	2,557	3,144	622.64	0.00	0.00	622.64	622.64
Design	50	6,100	2,740	3,368	623.81	0.07	0.02	623.88	623.83
Base	100	6,508	2,846	3,499	624.49	0.08	0.02	624.57	624.51
Max. Calc.	500	7,286	3,046	3,746	625.78	0.05	0.03	625.83	625.81

10-year Velocity through Existing Bridge = 2.45 fps
10-year Velocity through Proposed Bridge = 2.45 fps

* Included in Removal of Existing Structures

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	621.0	601.3	601.3	601.3

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

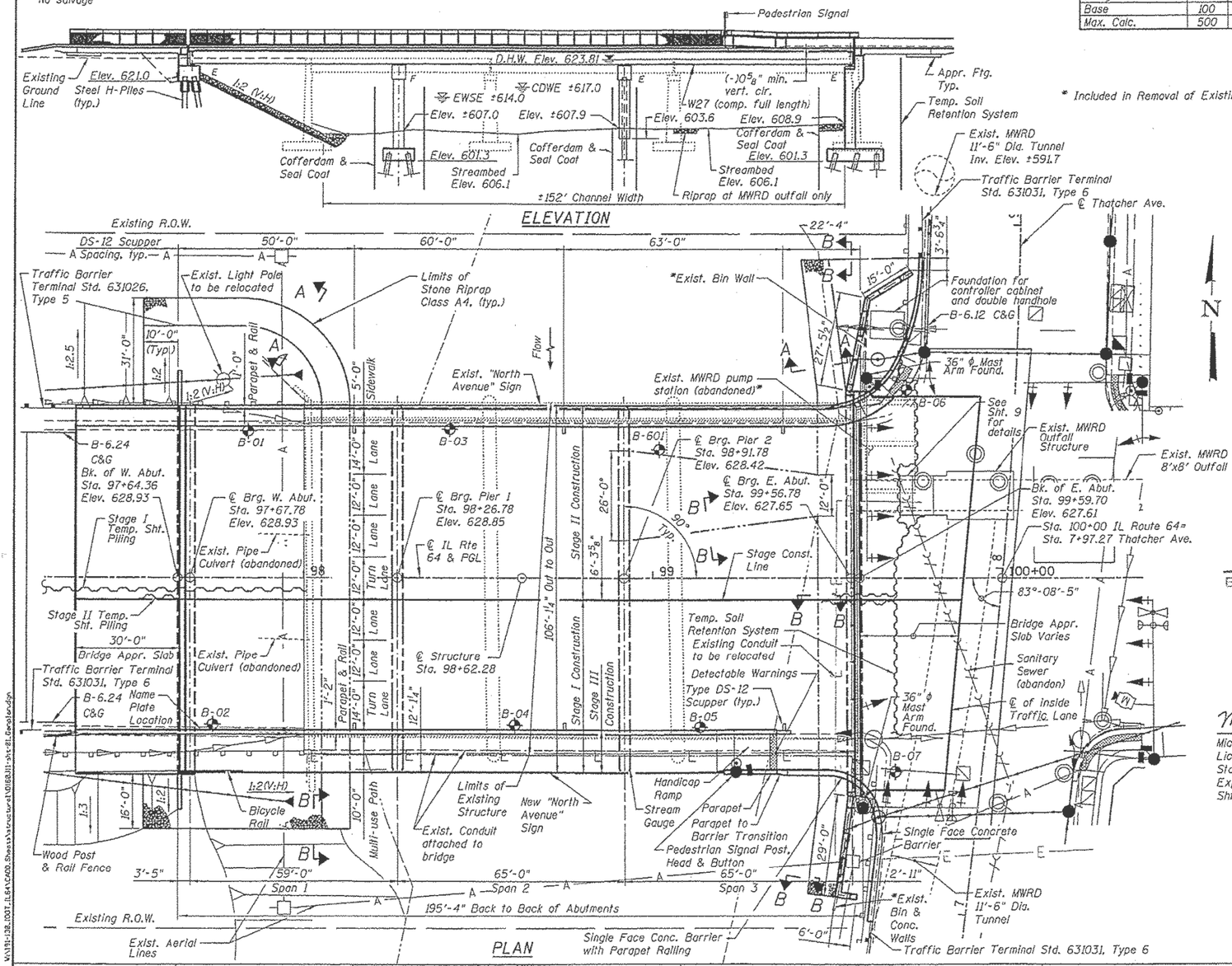
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.061
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.111
Soil Site Class = C

LOCATION SKETCH

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

Michael J. Haley 8-21-13
Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2014
Shts. 17-21 of 62

DATE SIGNED: 8-22-13
EXP. DATE: 11-30-2014
Shts. 1-16 & 22-62 of 62



GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 64 OVER DES PLAINES RIVER
F.A.P. RTE. 307 - SEC. 541Y-3-B
COOK COUNTY
STATION 98+62.28
STRUCTURE NO. 016-3035

Bollinger, Lach & Associates, Inc.	USER NAME =	DESIGNED - JJI	REVISED
ITASCA, ILLINOIS		CHECKED - JMT	REVISED
	PLOT SCALE =	DRAWN - GM	REVISED
	PLOT DATE =	CHECKED - JMT	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 62 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	541Y-3-B	COOK	143	62
		CONTRACT NO. 60J11		
	ILLINOIS	FED. AID PROJECT		

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PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/31/2019	DATE -	REVISED -

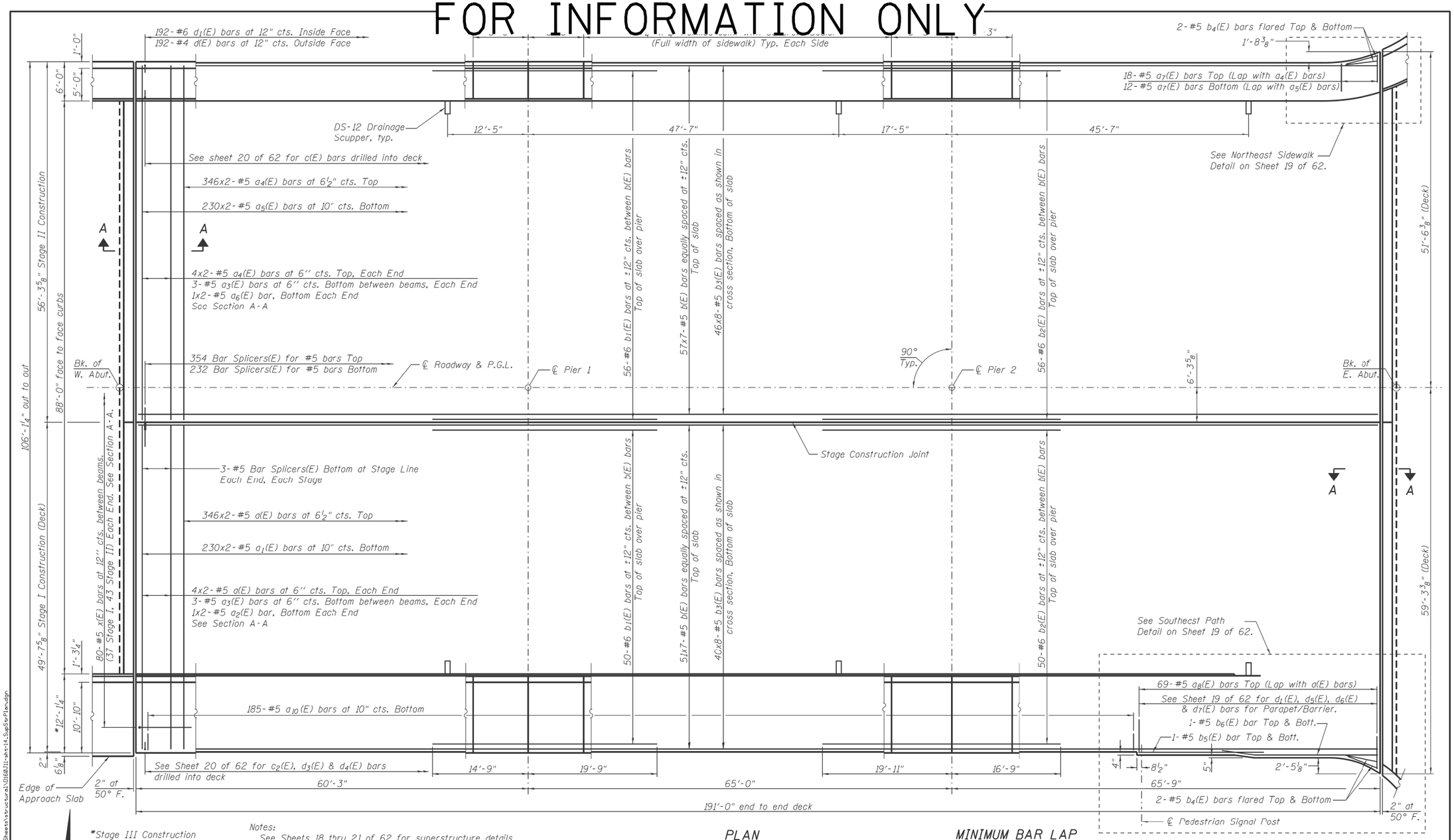
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-3035

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	160
		CONTRACT NO. 62H72		
	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



*Stage III Construction

Notes:
See Sheets 18 thru 21 of 62 for superstructure details.
Bars indicated thus 51 x 7-#5 etc. indicates 51 lines of bars with 7 lengths per line.
See Sheet 21 of 62 for Section A-A, parapet joint details, Bill of Material, and Reinforcement at Scuppers.
See Sheet 54 of 62 for Scupper details.
Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 30 of 62.

PLAN

MINIMUM BAR LAP
(Slab)
#5 bar = 2'-7"

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LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - HP	REVISED
	CHECKED - MTH	REVISED
PLOT SCALE =	DRAWN - AJF	REVISED
PLOT DATE = 8/15/2013	CHECKED - MTH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN
STRUCTURE NO. 016-3035
SHEET NO. 17 OF 62 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	541Y-3-B	COOK	143	78
		CONTRACT NO. 60J11		
	ILLINOIS FED. AID PROJECT			

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	DRAWN -	REVISED -
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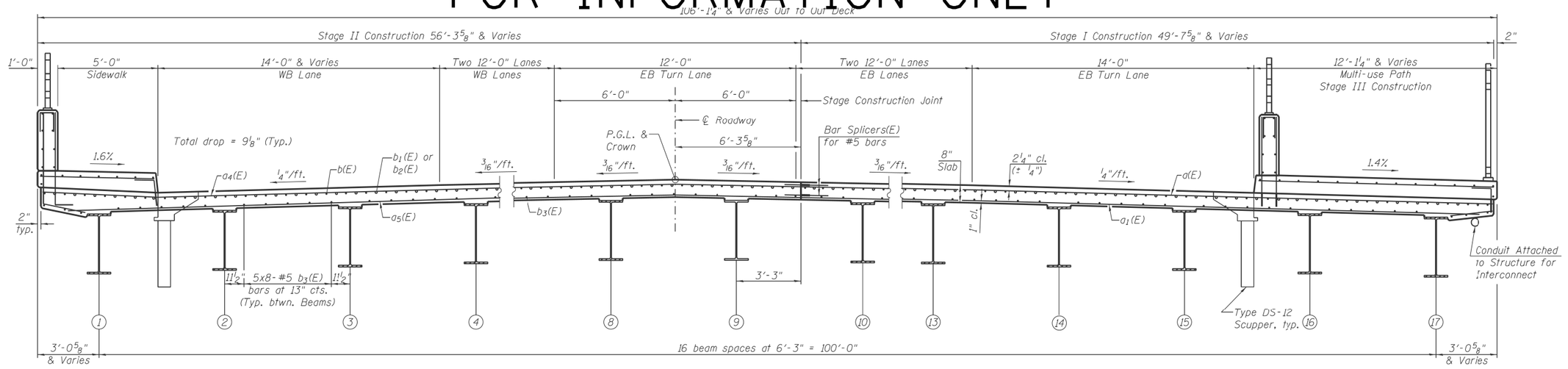
PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

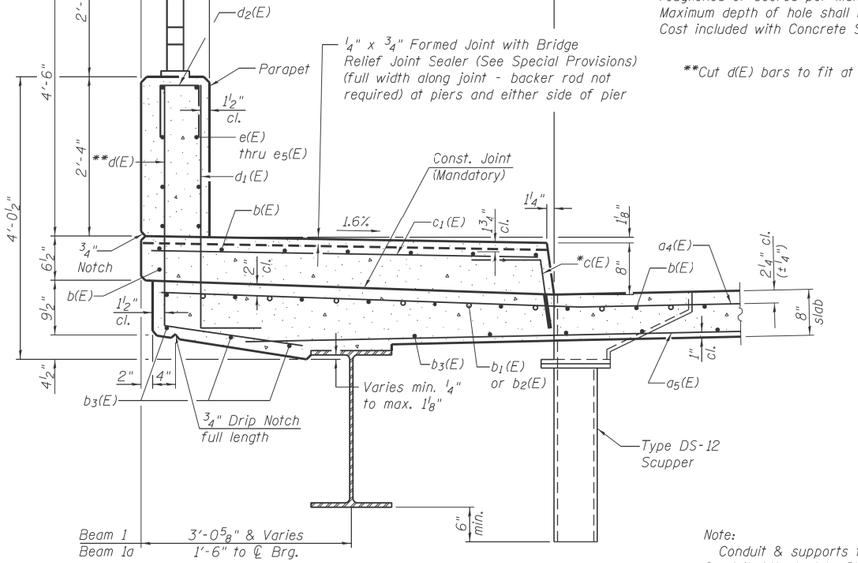
DECK PLAN
SN: 016-3035
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	161
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



CROSS SECTION
(Looking East)



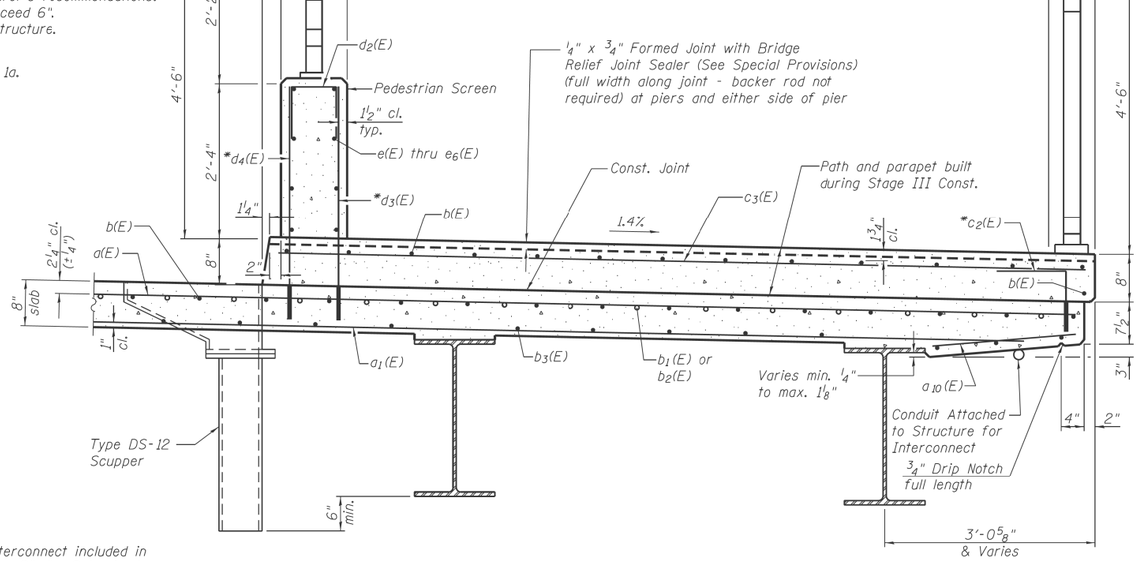
SECTION THRU NORTH SIDEWALK
(Looking East)

Note:
See Sheet 21 of 62 for bar details and Bill of Material.

*Drill and set bars according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". Cost included with Concrete Superstructure.

**Cut d(E) bars to fit at Beam 1a.

Note:
Conduit & supports for Interconnect included in Conduit Attached to Structure, 2" dia. Galvanized Steel. To be installed by Bridge Contractor.



SECTION THRU SOUTH PATH
(Looking East)

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		CHECKED - MTH	REVISED	
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	PLOT DATE = 8/15/2013	CHECKED - MTH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE CROSS SECTIONS
STRUCTURE NO. 016-3035
SHEET NO. 18 OF 62 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307	541Y-3-B	COOK	143	79
		CONTRACT NO. 60JJ1		
	ILLINOIS FED. AID PROJECT			

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION
SN: 016-3035
SCALE: SHEET OF SHEETS STA. TO STA.

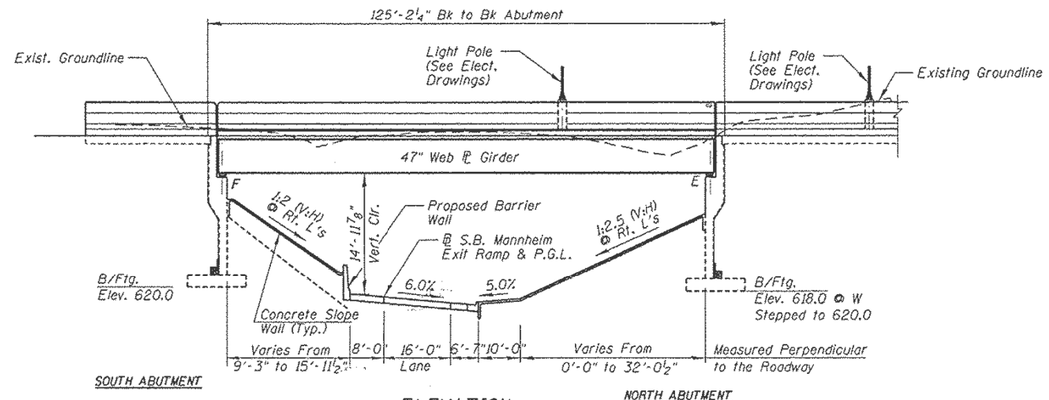
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	162
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY

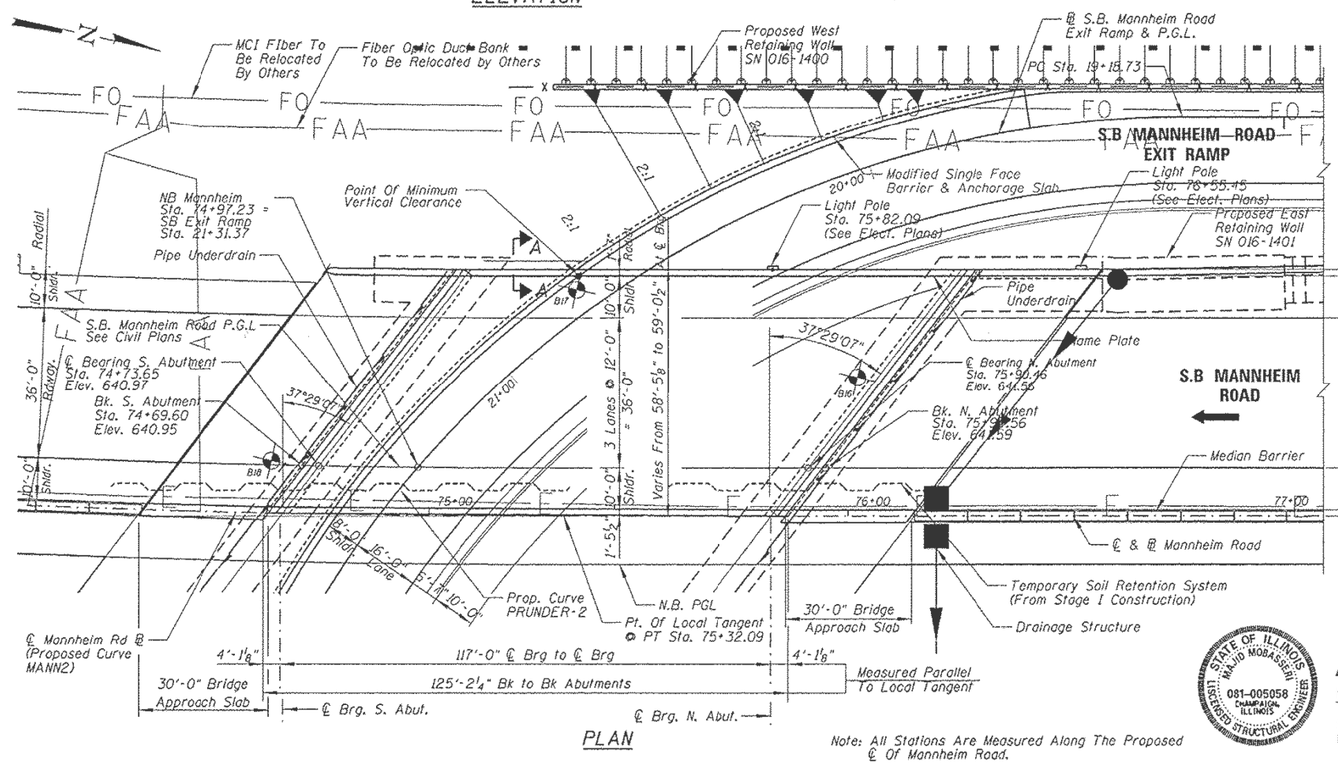
Bench Mark: MON 144 - Located East of Spine Road and West of Mannheim Road at the Southeasterly side of O'Hare Airport. Elev. 643.22

Existing Structure: None

During Stage II construction two-way traffic will be maintained on N.B. Mannheim Road.



ELEVATION



PLAN

Note: All Stations Are Measured Along The Proposed ℄ Of Mannheim Road.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

LOADING HL-93

Allow 50 #/sq. ft. for future wearing surface

CURVE DATA ALONG ℄ MANNHEIM ROAD

PROP. CURVE MANN2
PI STA. = 60+87.10
Δ = 55° 18' 45" (LT)
D = 1° 45' 00"
R = 3,274.04'
T = 1,715.72'
L = 3,160.72'
E = 422.32'
e = 3.20%
T.R. = 99'
S.E. Run = 154'
P.C. STA. = 43+71.38
P.T. STA. = 75+32.09
N.C. STA. = 79+09
FULL S.E. STA. = 76+60

CURVE DATA ALONG ℄ SB MANNHEIM EXIT RAMP

PROP. CURVE PRUNDER-2
PI STA. = 21+60.04
Δ = 89° 00' 23" (LT)
D = 23° 52' 24"
R = 240.00'
T = 235.87'
L = 372.83'
E = 96.51'
e = -6.0%
T.R. = 0'
S.E. Run = 97'
P.C. STA. = 19+24.17
P.T. STA. = 22+97.00

APPROVED
For Structural Adequacy Only
℄ Carl Ruegger
Engineer of Bridges & Structures

STATION 75+32.08
BUILT BY
STATE OF ILLINOIS
F.A.P. RT. 330 SEC. 0105 WRS&HB
LOADING HL-93
STRUCTURE NO. 016-7942

NAME PLATE
See Std. 515001

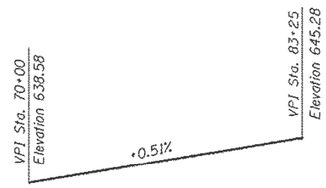
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (Sp_1) = 0.037g
Design Spectral Acceleration at 0.2 sec. (Sp_S) = 0.090g
Soil Site Class = C

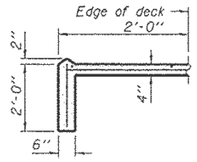
DESIGN STRESSES

FIELD UNITS

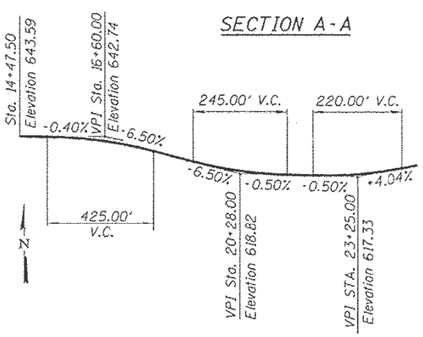
f'_c = 3,500 psi
f_y = 50,000 psi (structural steel) (M270 Grade 50)
f_y = 60,000 psi (Reinf.)



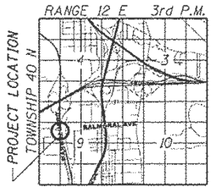
PROFILE GRADE- S.B. MANNHEIM ROAD



SECTION A-A



PROFILE GRADE - S.B. MANNHEIM ROAD EXIT RAMP



LOCATION SKETCH

STATE OF ILLINOIS
MAJID MOBASSERI
081-005058
CHAMPAIGN
ILLINOIS
REGISTERED STRUCTURAL ENGINEER

MAJID MOBASSERI
ILLINOIS REGISTRATION No. 081-005058
STRUCTURAL ENGINEER
EXPIRATION DATE: 11/30/14

10/18/12

GENERAL PLAN AND ELEVATION
S.B MANNHEIM ROAD BRIDGE OVER SOUTHBOUND EXIT RAMP
F.A.P. RTE. 330-SEC 0105 WRS&HB
COOK COUNTY
STATION 75+32.08
STRUCTURE NO. 016-7942

N:\ROSEMONT\128PW\CADD\Sheets\816794Z-GEB2337-001.DPE.dgn

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500	USER NAME =	DESIGNED - MM	REVISED
		CHECKED - JMB	REVISED
	PLOT SCALE =	DRAWN - PDR	REVISED
	PLOT DATE =	CHECKED - MM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SB MANNHEIM ROAD BRIDGE -- STRUCTURE NO. 016-7942
SHEET NO. S-1 OF S-27 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	363
		CONTRACT NO. 60G37		
	ILLINOIS FED. AID PROJECT			

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

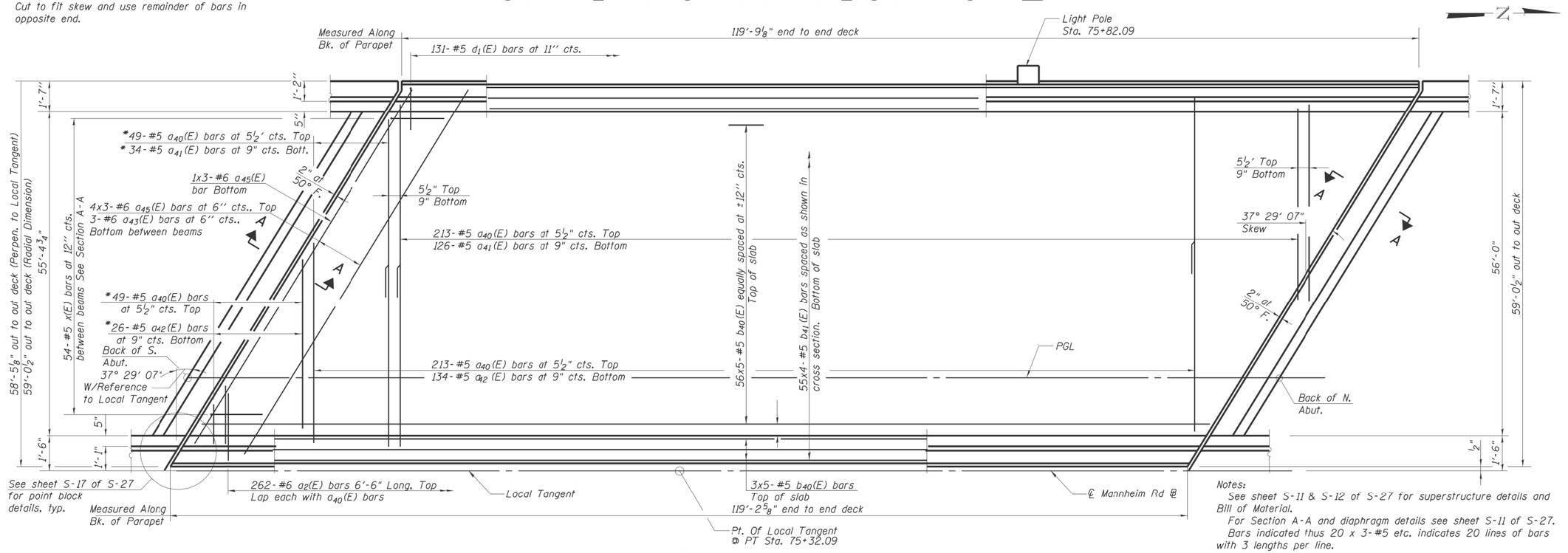
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-7942

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	163
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



PLAN

Notes:

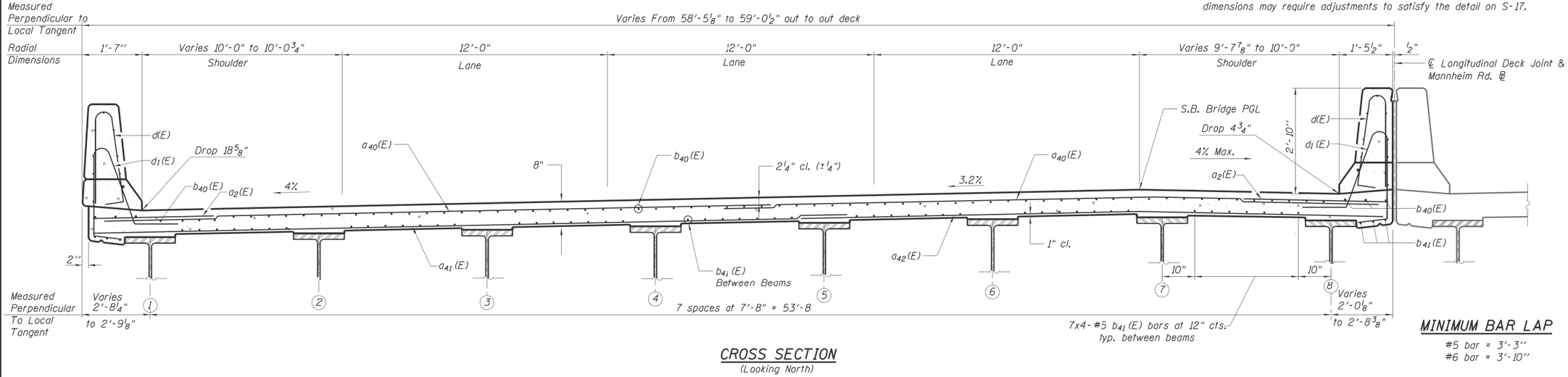
See sheet S-11 & S-12 of S-27 for superstructure details and Bill of Material.

For Section A-A and diaphragm details see sheet S-11 of S-27.

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

See sheet S-11 of S-27 for parapet reinforcement.

Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the detail on S-17.



CROSS SECTION
(Looking North)

MINIMUM BAR LAP

#5 bar = 3'-3''
#6 bar = 3'-10''

N:\ROSEMONT\1028(R)\CADD\Sheets\016f7942-016f0637-6l8-DECK.dgn

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 800 Rosemont, Illinois 60018 (847) 823-0500	USER NAME =	DESIGNED - MM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN AND CROSS SECTION SB MANNHEIM ROAD BRIDGE – STRUCTURE NO. 016–7942
		CHECKED - JMB	REVISED		
	PLOT SCALE =	DRAWN - PDR	REVISED		
	PLOT DATE =	CHECKED - MM	REVISED		SHEET NO. S-10 OF S-27 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	372
		CONTRACT NO. 60G37		
	ILLINOIS FED. AID PROJECT			

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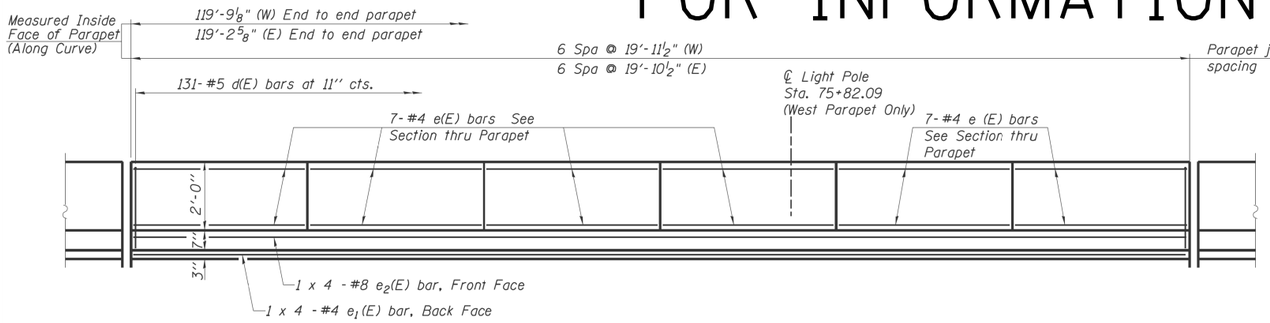
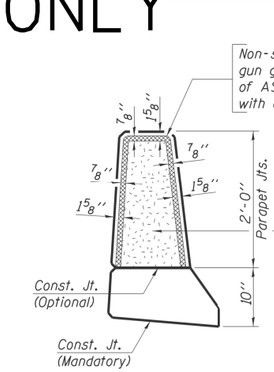
	DRAWN -	REVISED -			
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			
PLOT DATE = 1/31/2019	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	

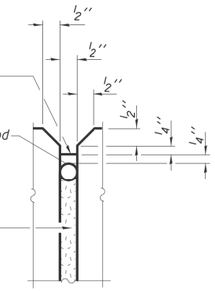
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	164
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



INSIDE ELEVATION OF PARAPET



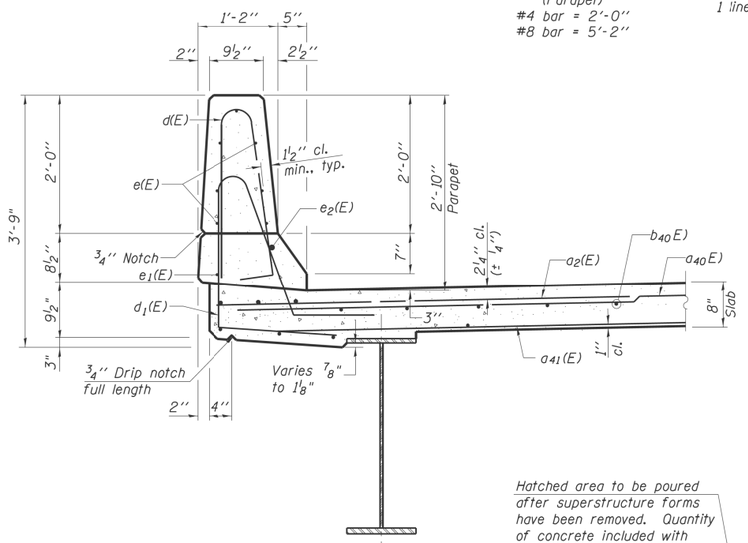


PARAPET JOINT DETAILS

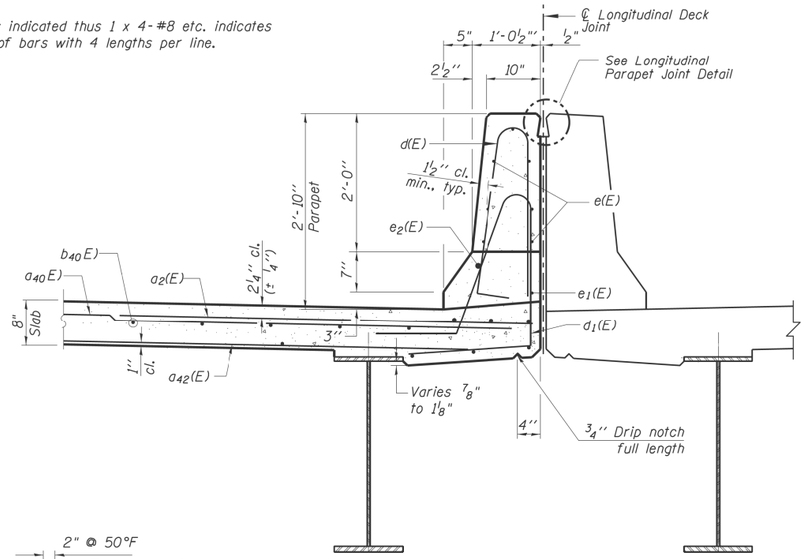
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

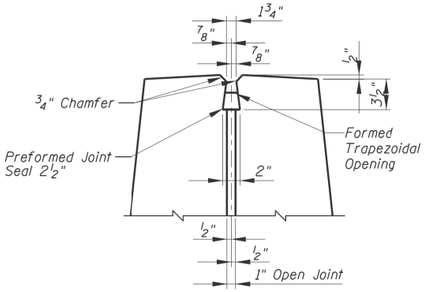
Note:
Bars indicated thus 1 x 4-#8 etc. indicates 1 line of bars with 4 lengths per line.



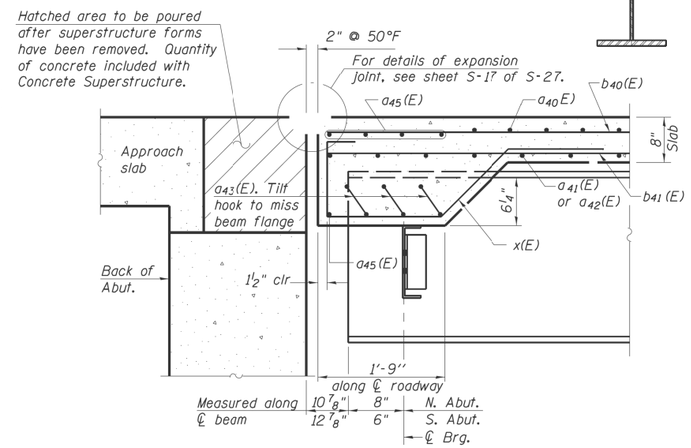
SECTION THRU WEST PARAPET



SECTION THRU MEDIAN PARAPET



LONGITUDINAL PARAPET JOINT DETAIL



SECTION A-A

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500	USER NAME =	DESIGNED - MM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS SB MANNHEIM ROAD BRIDGE – STRUCTURE NO. 016–7942
		CHECKED - JMB	REVISED		
	PLOT SCALE =	DRAWN - PDR	REVISED		SHEET NO. S-11 OF S-27 SHEETS
	PLOT DATE =	CHECKED - MM	REVISED		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	373
		CONTRACT NO. 60G37		
		ILLINOIS FED. AID PROJECT		

	USER NAME = diazia	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN SN: 016–7942
		DRAWN -	REVISED -		
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
	PLOT DATE = 1/31/2019	DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	165
		CONTRACT NO. 62H72		
		ILLINOIS FED. AID PROJECT		

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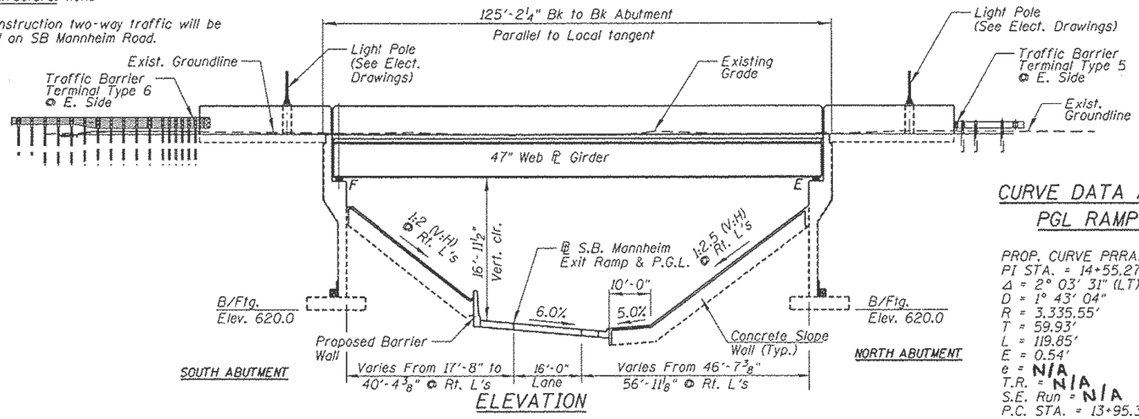
FOR INFORMATION ONLY

Bench Mark: MON 144 - Located East of Spine Road and West of Mannheim Road at the Southeasterly side of O'Hare Airport. Elev. 643.22

Existing Structure: None

During construction two-way traffic will be maintained on SB Mannheim Road.



ELEVATION

CURVE DATA ALONG PGL RAMP A

PROP. CURVE PRRAMPA-3
PI STA. = 14+55.27
Δ = 2° 03' 31" (LT)
D = 1° 43' 04"
R = 3,335.55'
T = 59.93'
L = 119.85'
E = 0.54'
e = N/A
T.R. = N/A
S.E. Run = N/A
P.C. STA. = 13+95.34
P.T. STA. = 15+15.18

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interim

LOADING HL-93

Allow 50 #/sq. ft. for future wearing surface

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (Sp_1) = 0.037g
Design Spectral Acceleration at 0.2 sec. (Sps) = 0.090g
Soil Site Class = C

CURVE DATA ALONG ℄ MANNHEIM ROAD

PROP. CURVE MANN2
PI STA. = 60+87.10
Δ = 55° 18' 45" (LT)
D = 1° 45' 00"
R = 3,274.04'
T = 1,715.72'
L = 3,160.72'
E = 422.32'
e = 3.20%
T.R. = 99'
S.E. Run = 154'
P.C. STA. = 43+71.38
P.T. STA. = 75+32.09
N.C. STA. = 79+09
FULL S.E. STA. = 76+60

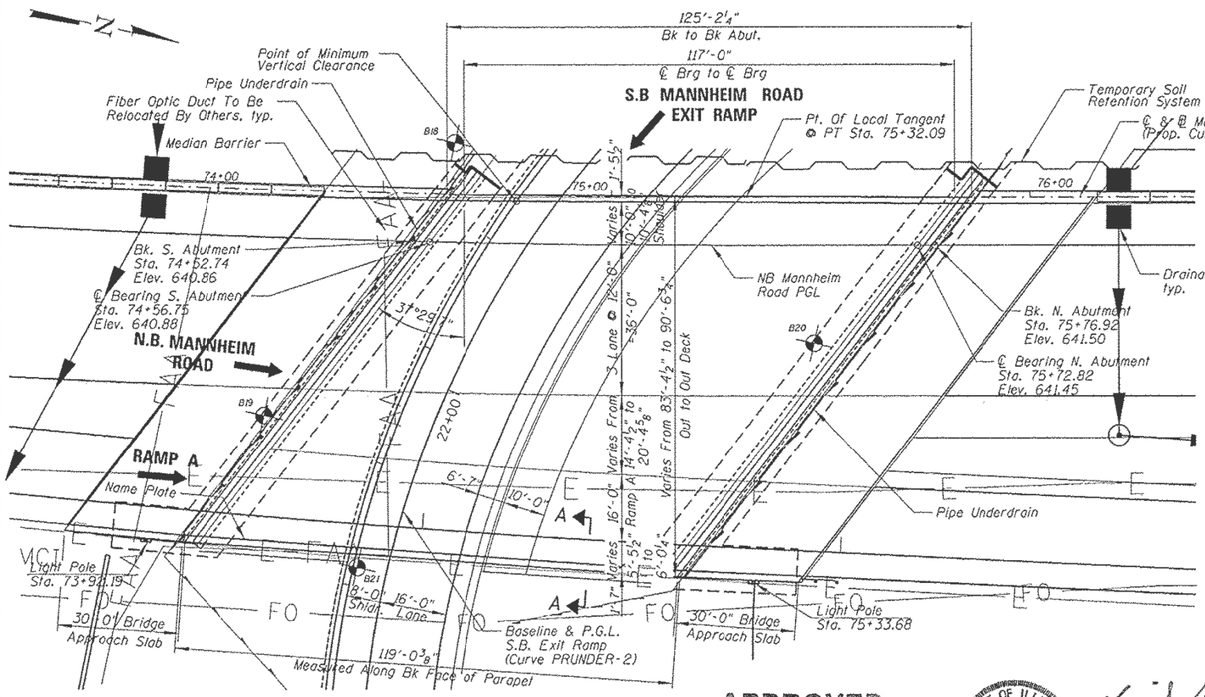
CURVE DATA ALONG ℄ SB MANNHEIM EXIT RAMP

PROP. CURVE PRUNDER-2
PI STA. = 21+60.04
Δ = 89° 00' 23" (LT)
D = 23° 52' 24"
R = 240.00'
T = 235.87'
L = 372.83'
E = 96.51'
e = -6.0%
T.R. = 0'
S.E. Run = 97'
P.C. STA. = 19+24.17
P.T. STA. = 22+97.00

DESIGN STRESSES

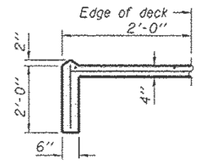
FIELD UNITS

f'_c = 3,500 psi
f_y = 50,000 psi (structural steel) (M270 Grade 50)
f_y = 60,000 psi (Reinf.)



PLAN

EDGE OF DECK

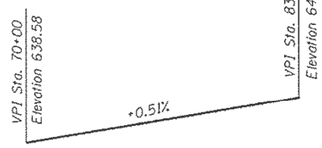


SECTION A-A

STATION 75+14.79
BUILT BY
STATE OF ILLINOIS
F.A.P. RT. 330 SEC. 0105 WRS&HB
LOADING HL-93
STRUCTURE NO. 016-7943

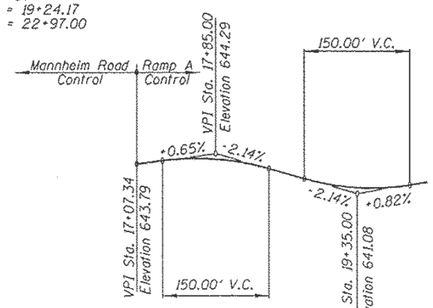
NAME PLATE

See Std. 515001

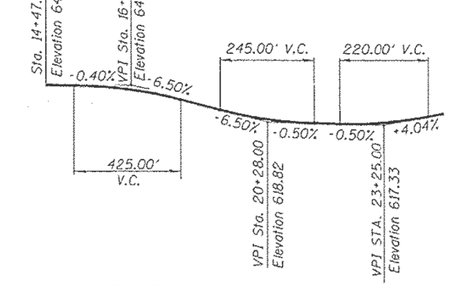


PROFILE GRADE-N.B. MANNHEIM ROAD BRIDGE

Bridge Elevations Are Controlled by Mannheim Road Profile



PROFILE GRADE-RAMP A



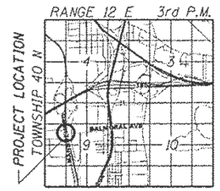
PROFILE GRADE-S.B. MANNHEIM ROAD EXIT RAMP

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

STATE OF ILLINOIS MAJID MOBASSERI 081-005058 CHAMPAIGN, ILLINOIS REGISTERED STRUCTURAL ENGINEER

10/18/12

MAJID MOBASSERI
ILLINOIS REGISTRATION No. 081-005058
STRUCTURAL ENGINEER
EXPIRATION DATE: 11/30/14



LOCATION SKETCH

GENERAL PLAN AND ELEVATION N.B. MANNHEIM ROAD BRIDGE OVER SOUTHBOUND EXIT RAMP F.A.P. RTE. 330-SEC 0105 WRS&HB COOK COUNTY STATION 75+14.79 STRUCTURE NO. 016-7943

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500	USER NAME =	DESIGNED - MM	REVISED
		CHECKED - JMB	REVISED
	PLOT SCALE =	DRAWN - PDR	REVISED
	PLOT DATE =	CHECKED - MM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
NB MANNHEIM ROAD BRIDGE – STRUCTURE NO. 016-7943
SHEET NO. S-1 OF S-26 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	337
		CONTRACT NO. 60G37		
		ILLINOIS	FED. AID PROJECT	

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PLOT DATE = 1/31/2019	DATE -	REVISED -	

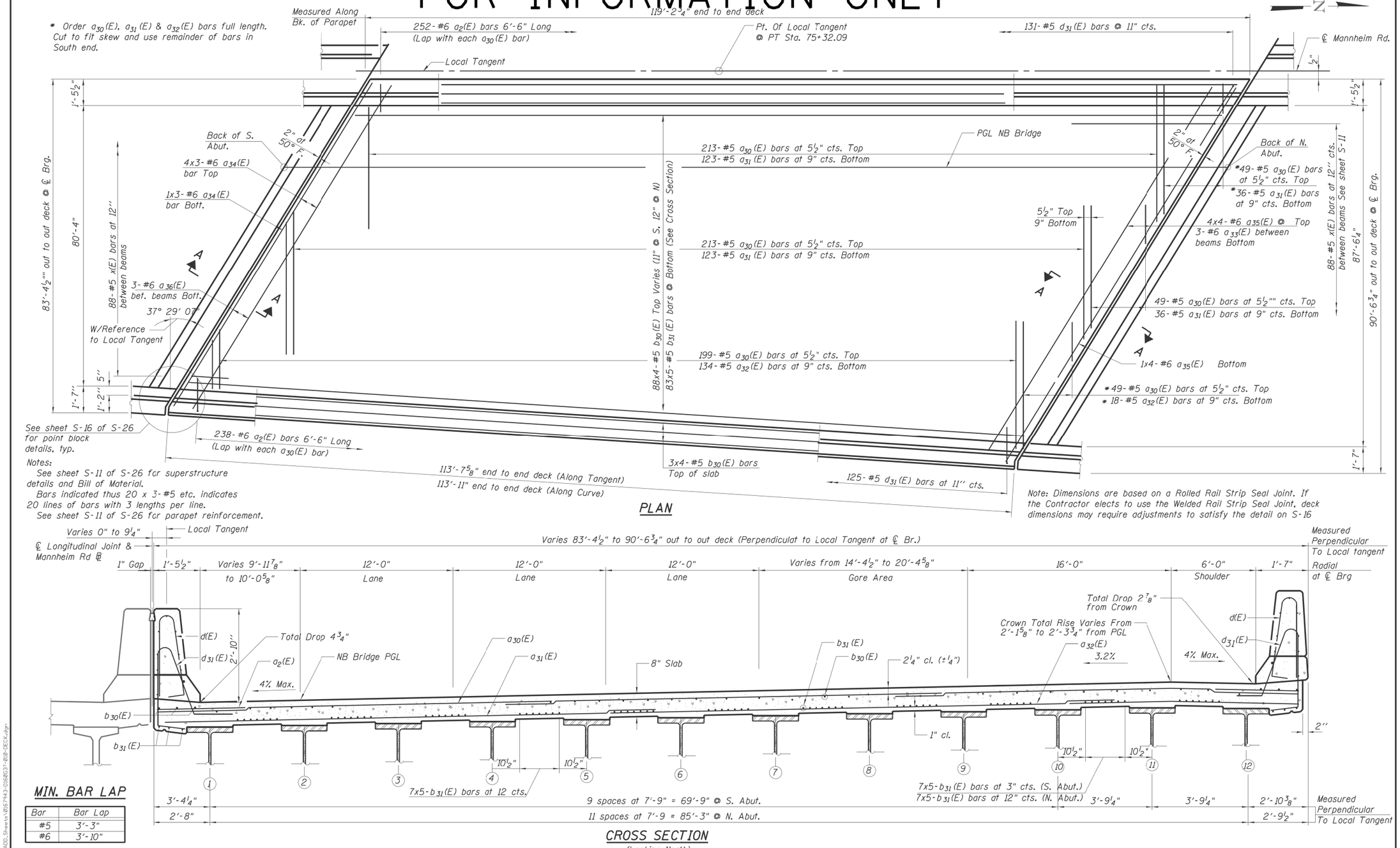
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN: 016-7943

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	166
		CONTRACT NO. 62H72		
		ILLINOIS	FED. AID PROJECT	

FOR INFORMATION ONLY



MIN. BAR LAP

Bar	Bar Lap
#5	3'-3"
#6	3'-10"

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

USER NAME =	DESIGNED - MM	REVISED	
	CHECKED - JMB	REVISED	
PLOT SCALE =	DRAWN - PDR	REVISED	
PLOT DATE =	CHECKED - MM	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN AND CROSS SECTION
NB MANNHEIM ROAD BRIDGE – STRUCTURE NO. 016–7943
SHEET NO. S-10 OF S-26 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	346
		CONTRACT NO. 60G37		
	ILLINOIS FED. AID PROJECT			

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	DRAWN -	REVISED -	
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PLOT DATE = 1/31/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN
SN: 016–7943
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	167
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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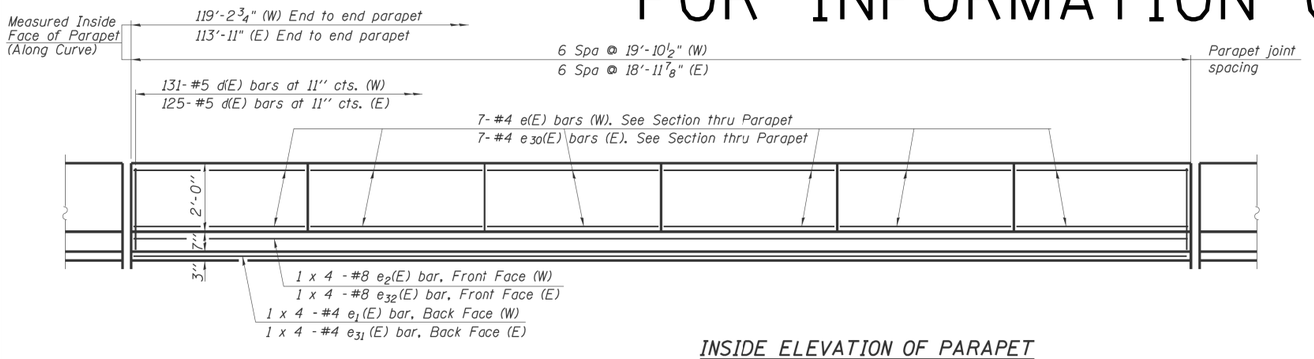
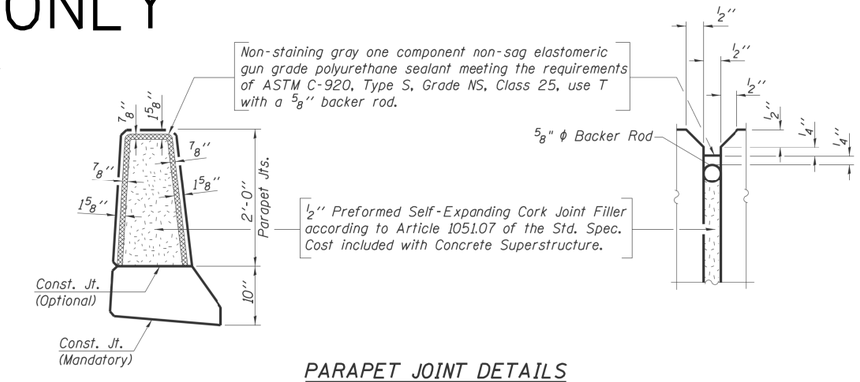
FOR INFORMATION ONLY



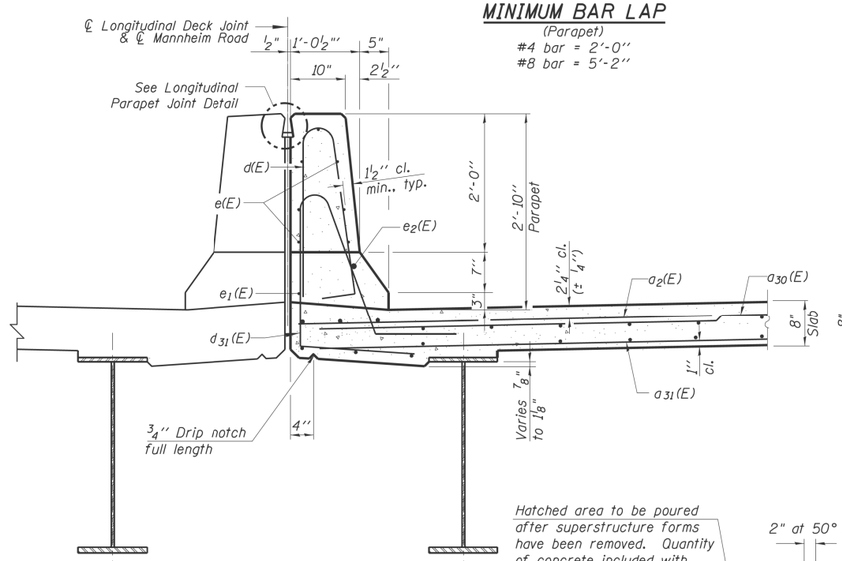
INSIDE ELEVATION OF PARAPET



PARAPET JOINT DETAILS

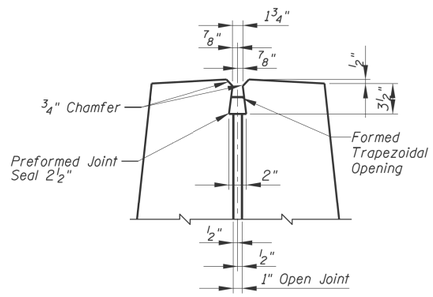
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



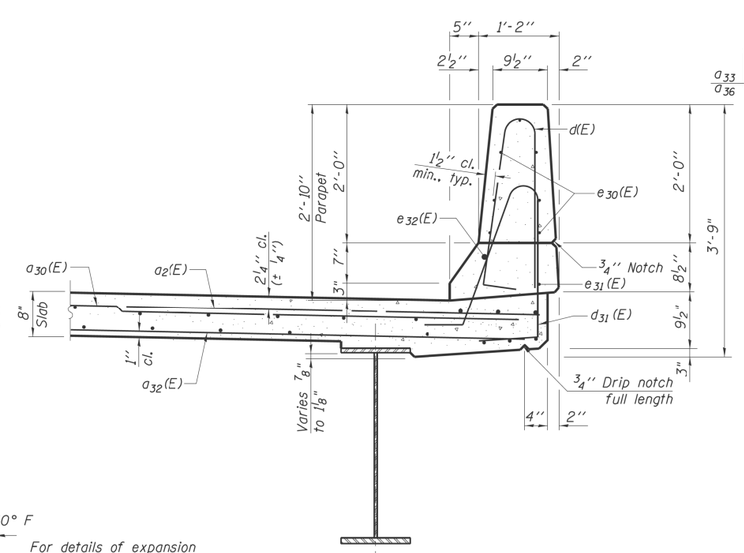
SECTION THRU W. PARAPET

(Looking North)



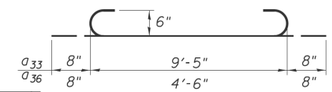
LONGITUDINAL PARAPET JOINT DETAIL

2 1/2" Preformed Joint Seal Shall Be Installed at Stage II Construction.

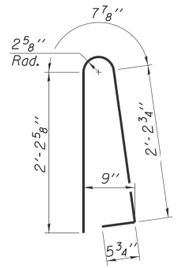


SECTION THRU EAST PARAPET

(Looking North)



a33(E) & a36(E) BAR

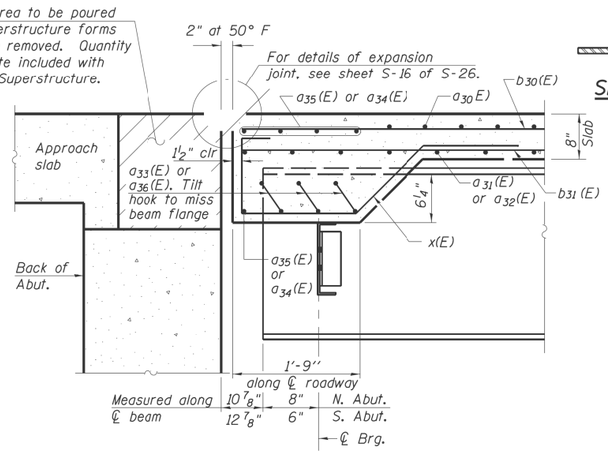


BAR d(E)

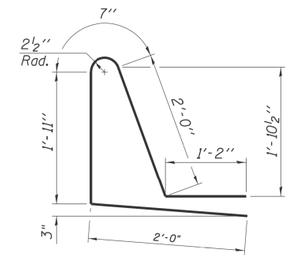
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_2(E)$	490	#6	6'-6"	
$a_{30}(E)$	695	#5	32'-0"	
$a_{31}(E)$	318	#5	37'-8"	
$a_{32}(E)$	152	#5	19'-6"	
$a_{33}(E)$	60	#6	10'-5"	
$a_{34}(E)$	16	#6	37'-6"	
$a_{35}(E)$	20	#6	31'-4"	
$a_{36}(E)$	6	#6	5'-10"	
$b_{30}(E)$	376	#5	32'-3"	
$b_{31}(E)$	415	#5	26'-9"	
d(E)	256	#5	5'-7"	
$d_{31}(E)$	256	#5	7'-8"	
e(E)	42	#4	19'-7"	
$e_1(E)$	4	#4	31'-6"	
$e_2(E)$	4	#8	33'-10"	
$e_{30}(E)$	42	#4	18'-8"	
$e_{31}(E)$	4	#4	30'-0"	
$e_{32}(E)$	4	#8	32'-5"	
x (E)	176	#5	6'-5"	
Reinforcement Bars, Epoxy Coated			Lbs.	77,290
Concrete Superstructure			Cu. Yds.	292.9

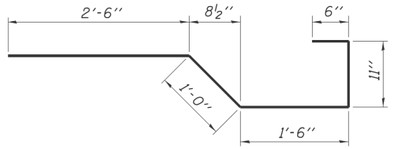
Bars indicated thus 1 x 4-#8 etc. indicates 1 lines of bars with 4 lengths per line.



SECTION A-A



BAR d31(E)



BAR x(E)

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 W. Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500	USER NAME =	DESIGNED - MM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - JMB	REVISED	
	PLOT SCALE =	DRAWN - PDR	REVISED	
	PLOT DATE =	CHECKED - MM	REVISED	

SUPERSTRUCTURE DETAILS
NB MANNHEIM ROAD BRIDGE – STRUCTURE NO. 016–7943
SHEET NO. S-11 OF S-26 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	347
		CONTRACT NO. 60G37		
	ILLINOIS FED. AID PROJECT			

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		DRAWN -	REVISED -	
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
	PLOT DATE = 1/31/2019	DATE -	REVISED -	

DECK PLAN
SN: 016–7943
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	168
		CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

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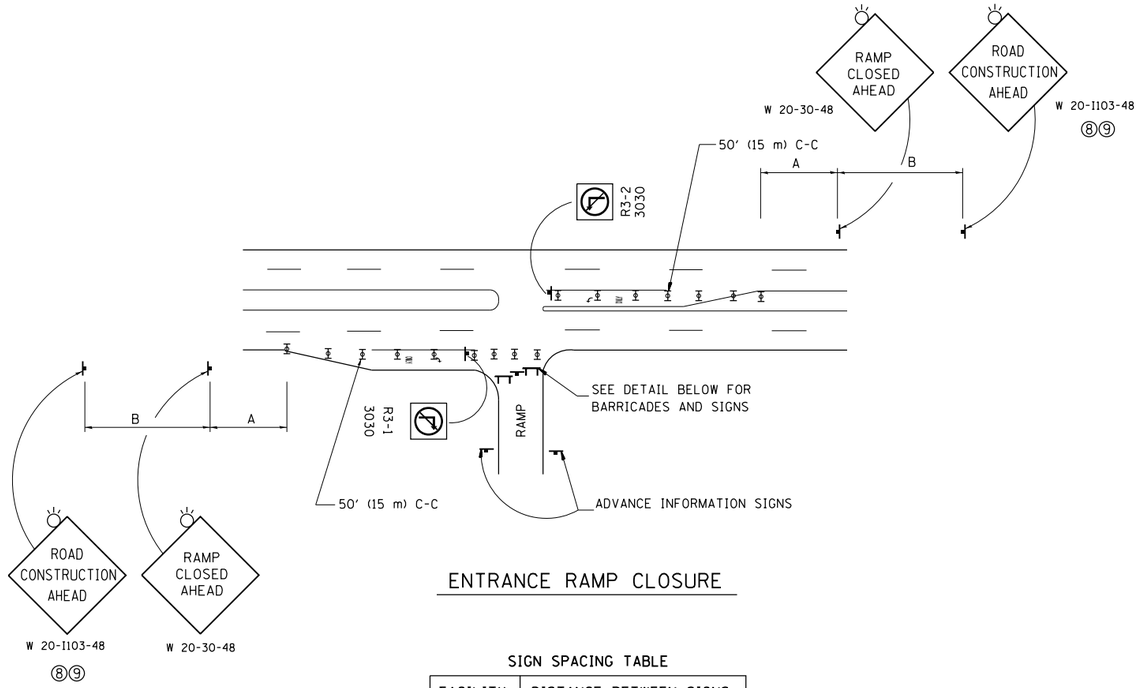
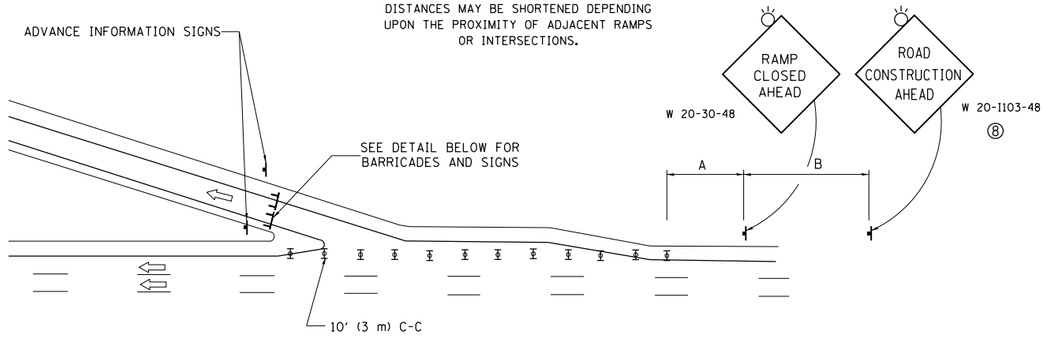


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

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

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

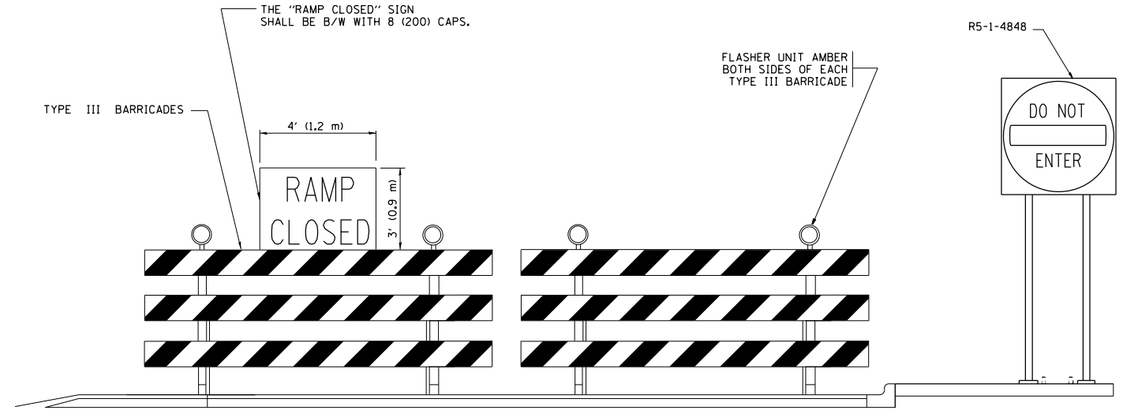


EXIT RAMP CLOSURE

SYMBOLS

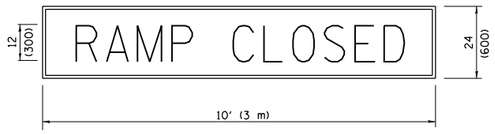
TYPE II BARRICADE OR DRUM

TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

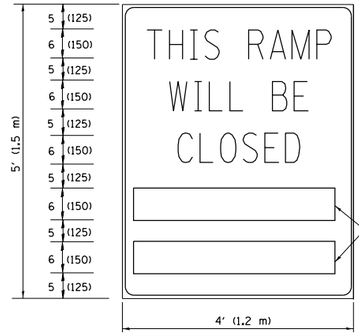
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



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

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

GENERAL NOTES:

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

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

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			REVISED - S.P.B. 12-09
Default	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - M.D. 06-13
	PLOT DATE = 1/31/2019	DATE - 02-83	REVISED - M.D. 01-18

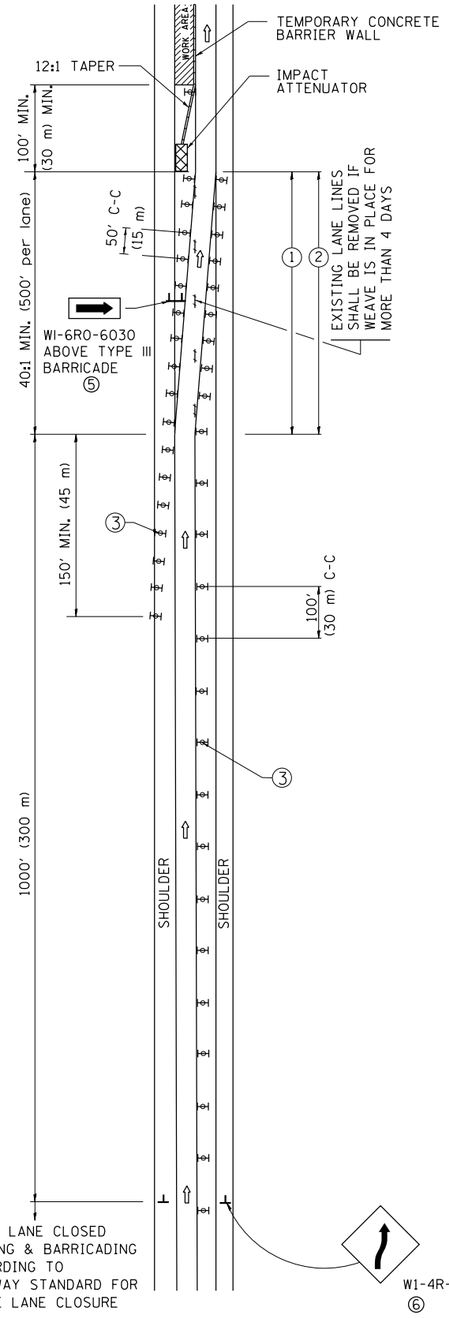
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE AND EXIT RAMP CLOSURE DETAILS

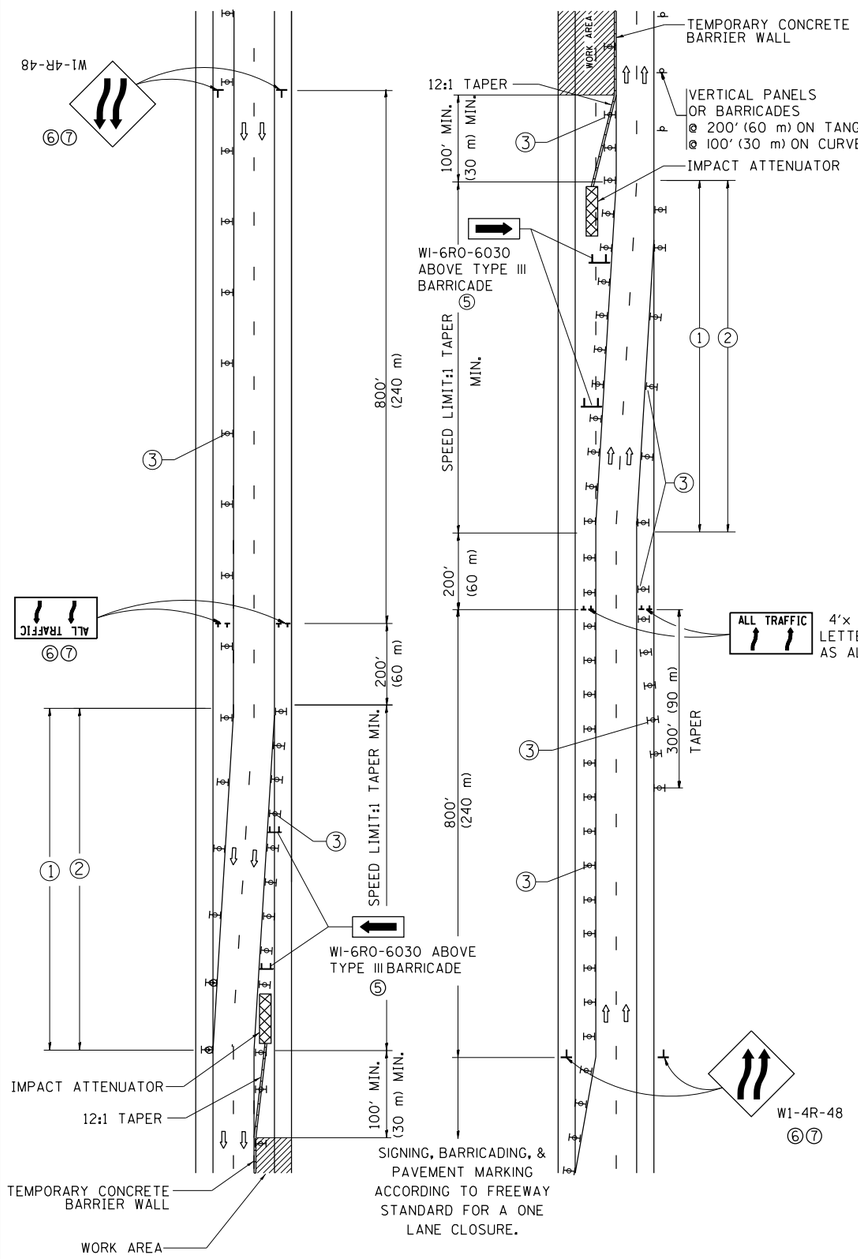
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	169
	TC-08	**CONTRACT NO. 62H72**		
	ILLINOIS FED. AID PROJECT			

SINGLE LANE WEAVE



MULTI-LANE WEAVE



ALL TRAFFIC ④ 4'x 8' (1.2 m x 2.4 m); 1 (25) BORDER; 10 (250) CAPITAL LETTERS BACKGROUND SHEETING SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS.

GENERAL NOTES

① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.

② CONTINOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.

③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.

④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.

⑤ TYPE III BARRICADES MAY BE OMMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.

⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.

⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR

W24-1-48 ⑦

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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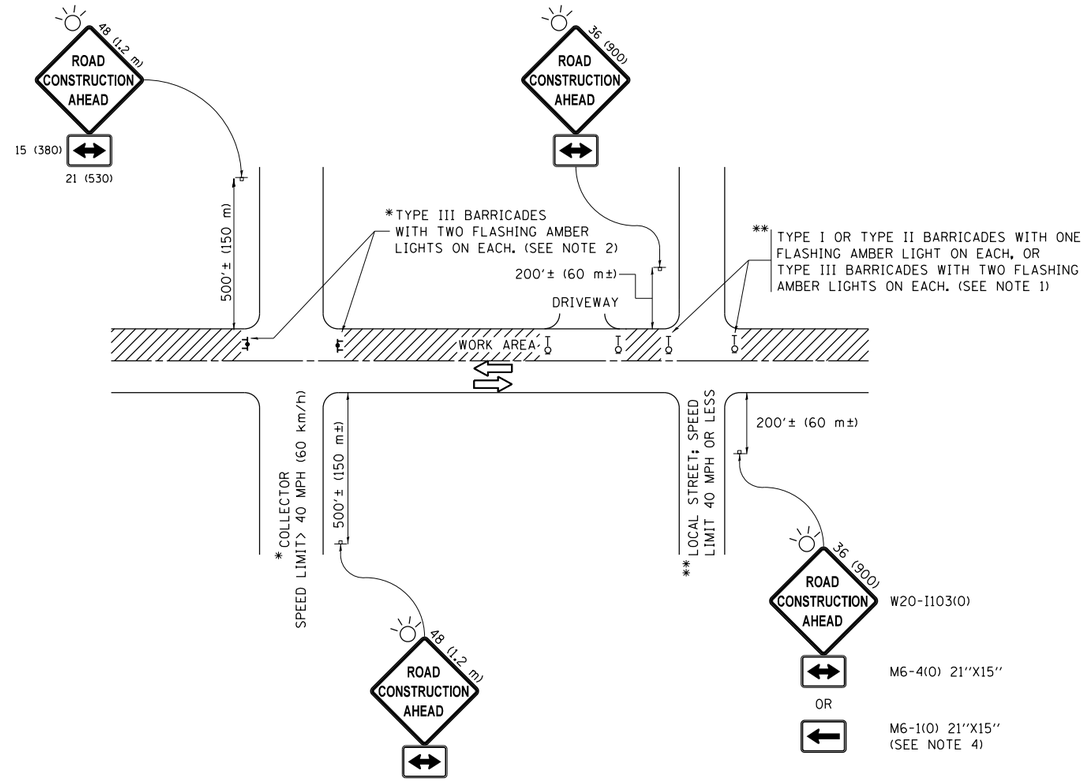
		DRAWN -	REVISED - SPB 01-07
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - SPB 12-09
	PLOT DATE = 3/6/2019	DATE - 02-87	REVISED - MD 06-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	169A	172
	TC-09	CONTRACT NO. 62H72		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

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

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

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		DRAWN -	REVISED - T. RAMMACHER 01-06-00
	PLOT SCALE = 100.0000 '/ in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
Default	PLOT DATE = 1/31/2019	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	170
	TC-10	CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

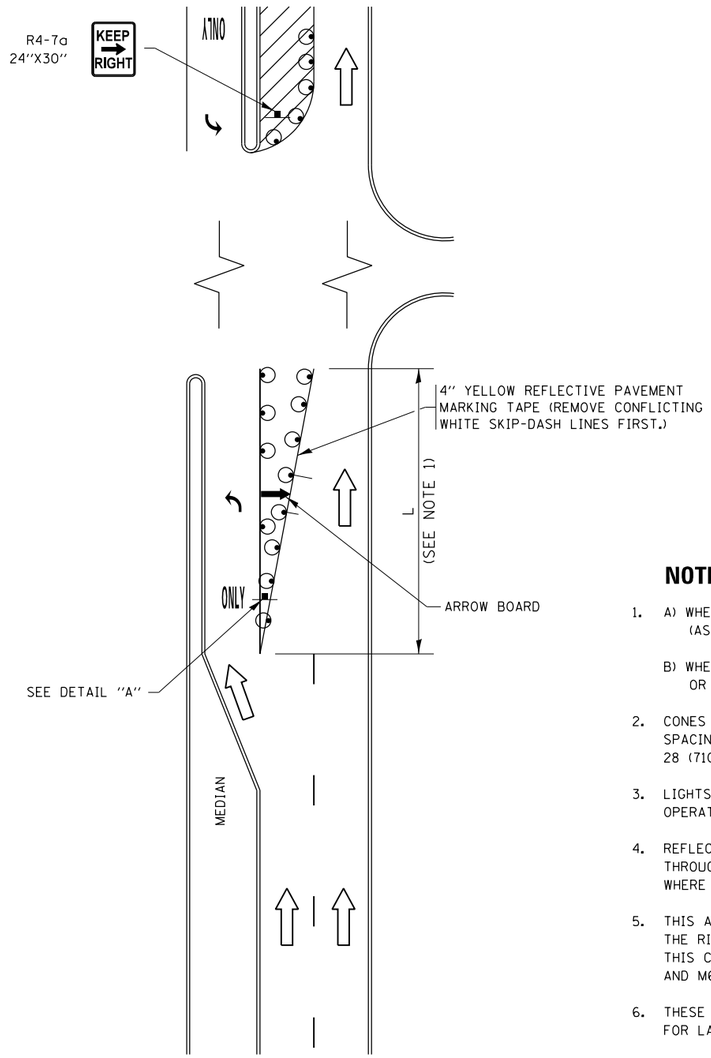


FIGURE 1

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

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

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

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

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

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

5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.

6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.

7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.

8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

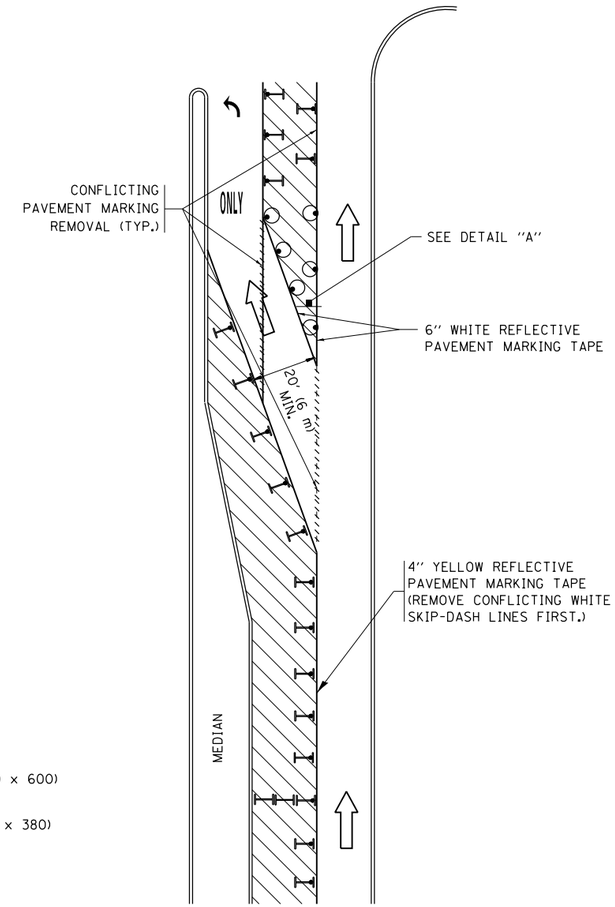
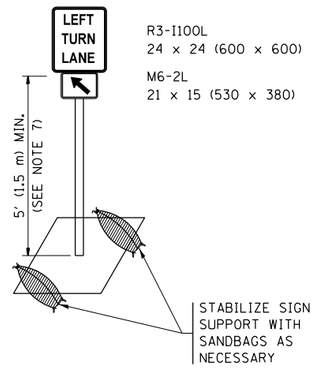


FIGURE 2



DETAIL A

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

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		REVISED - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13
	PLOT SCALE = 100.0000 ' / in.	REVISED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16
Default	PLOT DATE = 1/31/2019	REVISED -T. RAMMACHER 01-06-00	REVISED -

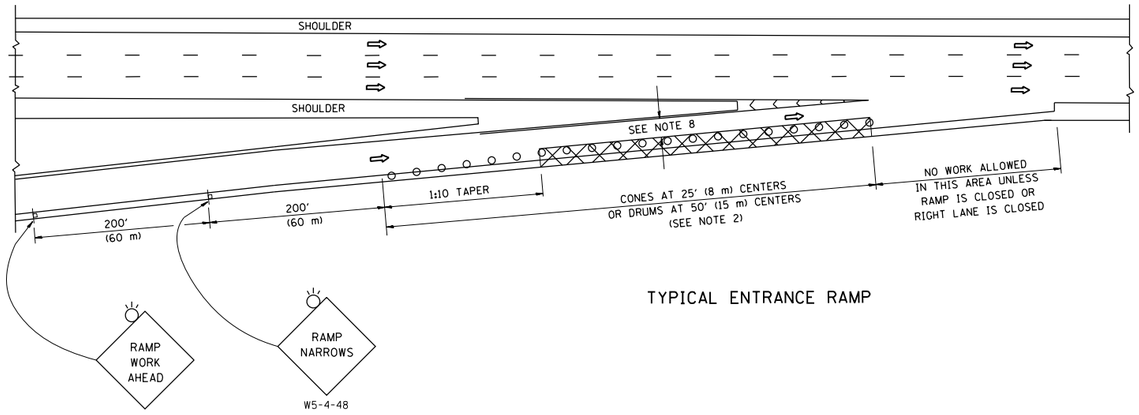
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

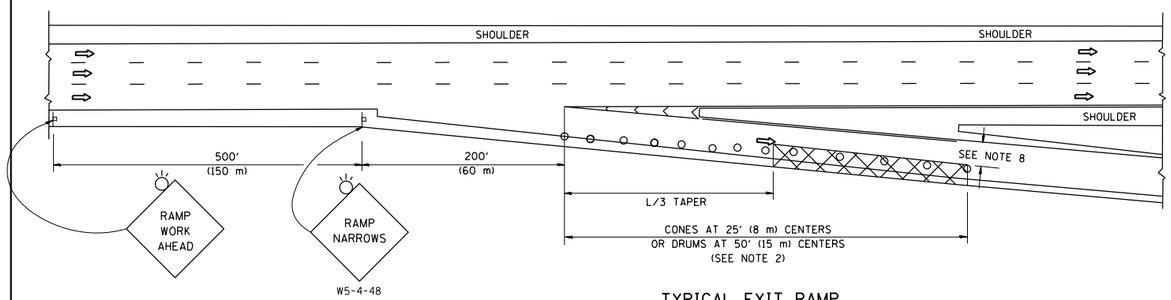
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	171
	TC-14	CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			

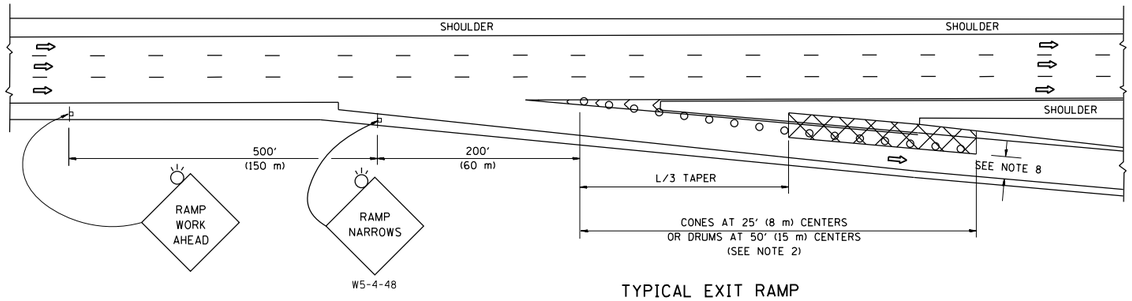
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP

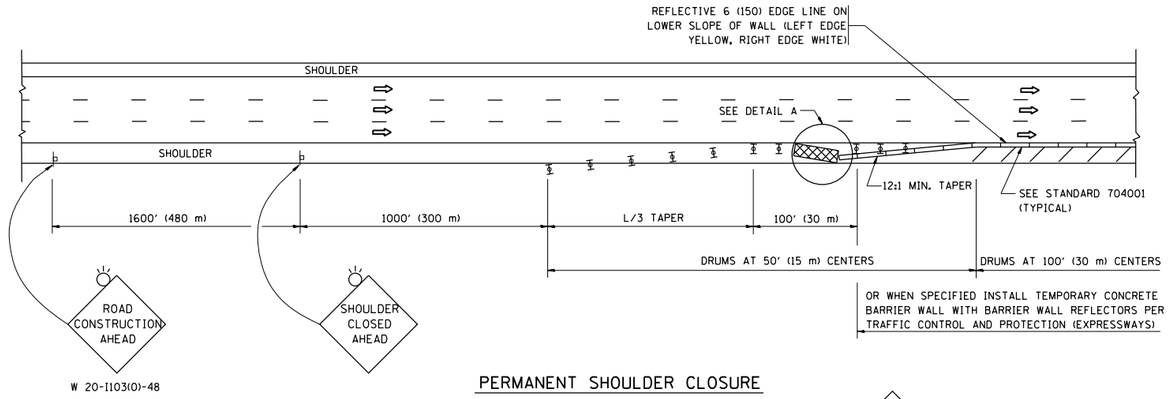


TYPICAL EXIT RAMP

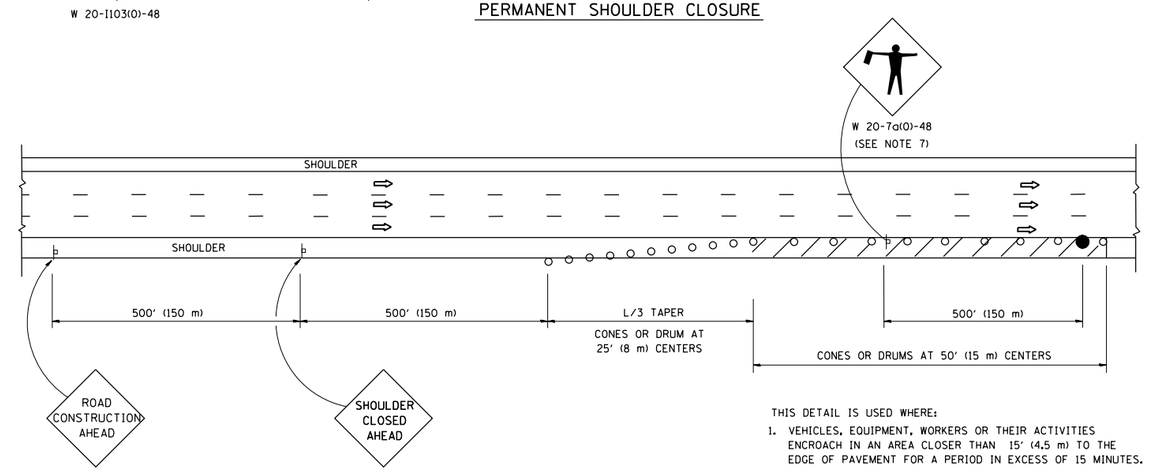


TYPICAL EXIT RAMP

SHOULDER CLOSURE DETAILS



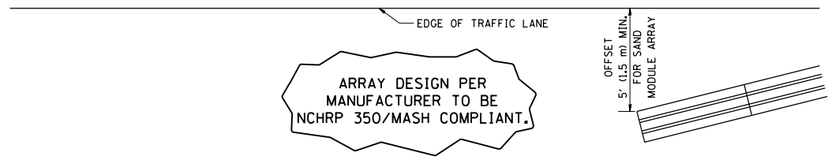
PERMANENT SHOULDER CLOSURE



THIS DETAIL IS USED WHERE:

1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

DAYTIME SHOULDER CLOSURE



DETAIL "A"
IMPACT ATTENTUATOR, TEMPORARY
(SEE NOTE 5)

SYMBOLS

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

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS	
45 mph (80 km/h) OR GREATER:	METRIC	ENGLISH
	L=0.65(W)(S)	L=(W)(S)

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)

2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTICLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENTUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
   a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
   b. THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.

   THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
   16' MIN. WIDTH CURVE SECTION.

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

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Default	PLOT DATE = 1/31/2019	DATE - 11-96	REVISED - M.D. 01-18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2018-140-BR	COOK	172	172
	TC-17	CONTRACT NO. 62H72		
	ILLINOIS FED. AID PROJECT			