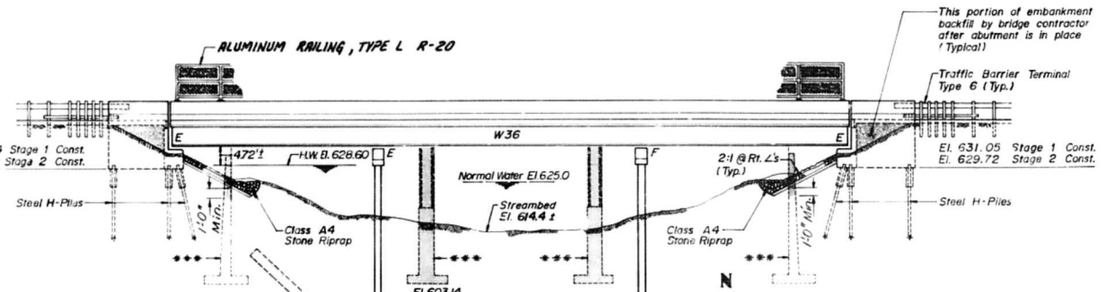
B.M. MSD #322 Located 75' South of the S.W. Corner of Existing Oakton Street Bridge. Elev. 634.83

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.

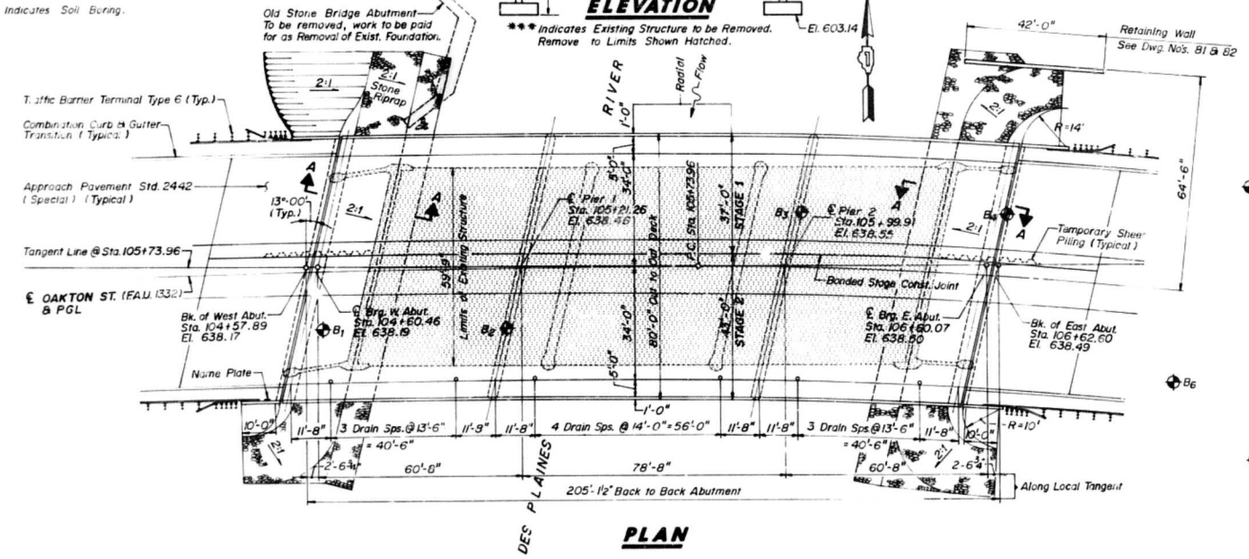
No Salvage.



ELEVATION

*** Indicates Existing Structure to be Removed. Remove to Limits Shown Hatched.

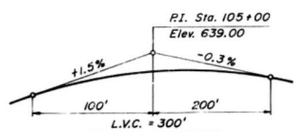
◆ Indicates Soil Boring.



PLAN

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 ft	S.E.	= 0.032 ft
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)

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	6460	1814	1943	630.09	0.20	0.09	630.29	630.17

DESIGNED	J S
CHECKED	R C E
DRAWN	RAAjr.
CHECKED	E M M

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.

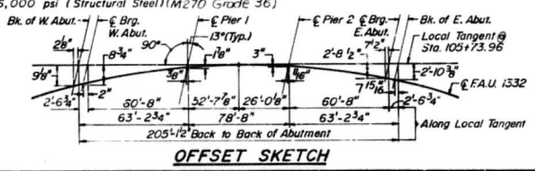
LOADING HS 20-44

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)



OFFSET SKETCH

GENERAL NOTES:

Fasteners shall be high strength bolts. Bolts "B", open holes "16", 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 gray 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.

This 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 ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" 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.

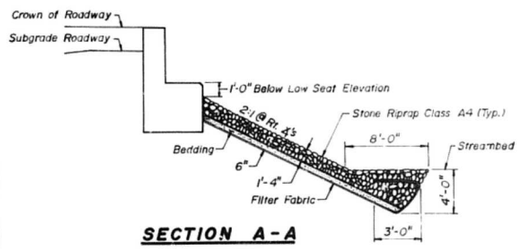
Unless specified or noted, all utilities that need to be relocated will be done by and at the expense of the utility companies. All utilities will have to reapply for attachment permits. No utilities are to be encased in the concrete of the structure. **

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. S-1
F.A.U. 1332	1300B-89	COOK	128	79	OF 21 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			

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 2½"	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.



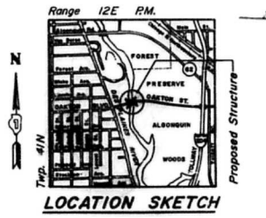
SECTION A-A

STATION 105 + 73.96
BUILT 199 BY:
STATE OF ILLINOIS
F.A.U. RTE. 1332 SEC. 1300B-89
PROJ. ACBRM-ACSTPM-2003(054)
LOADING HS-20 STR. NO. 016-2601

NAME PLATE
(STD. 2113)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridge & Structures

Glen M. Miranda 10/16/92
Exp 11-30-94



LOCATION SKETCH

Nakawatase, Wyns and Associates, Inc.

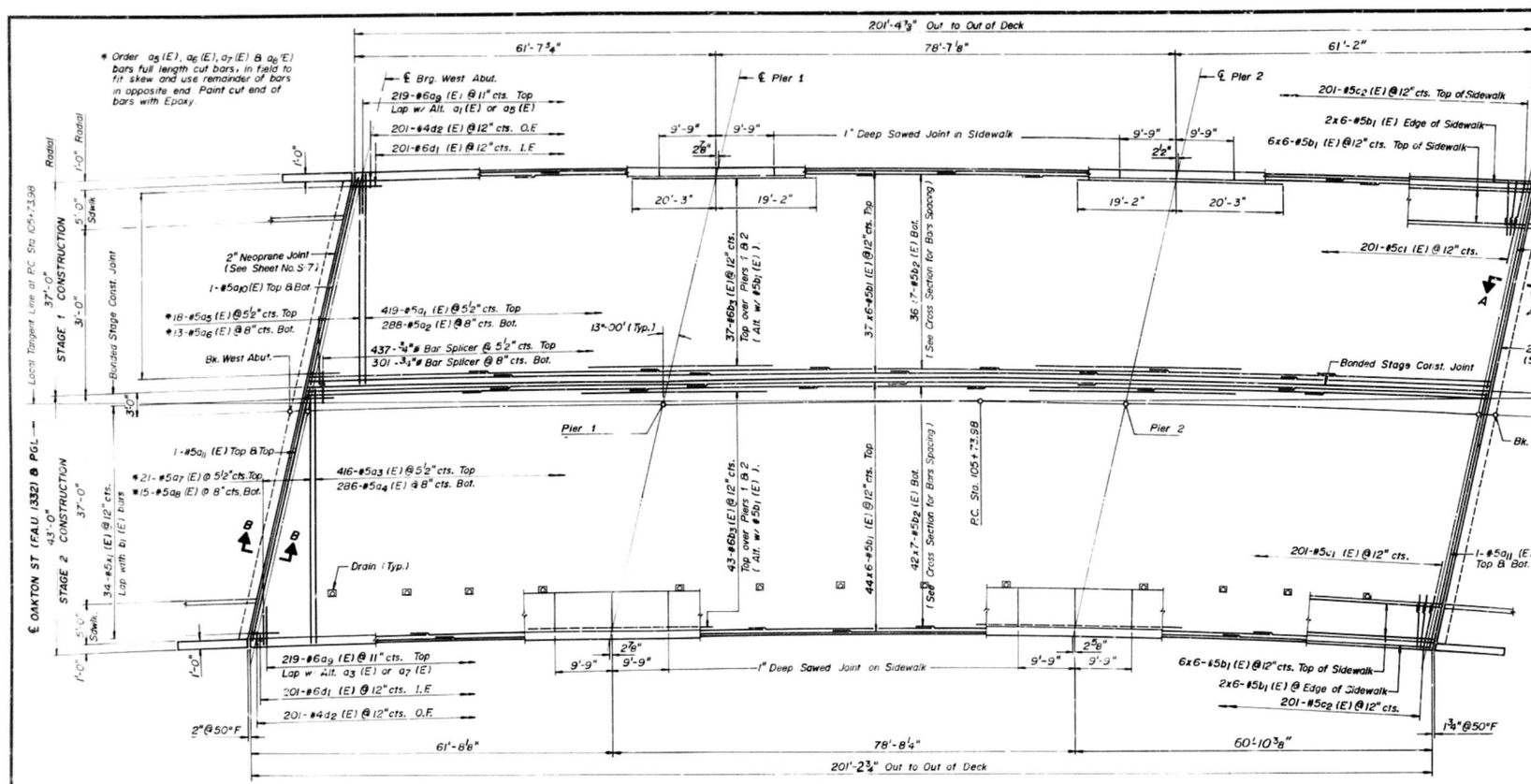
GENERAL PLAN
ELEVATION & GENERAL NOTES
OAKTON STREET OVER DES PLAINES RIVER
F.A.U. RTE. 1332 SECTION 1300B-89
COOK COUNTY
Sta. 105+73.96
STRUCTURE NUMBER 016-2601

REV.

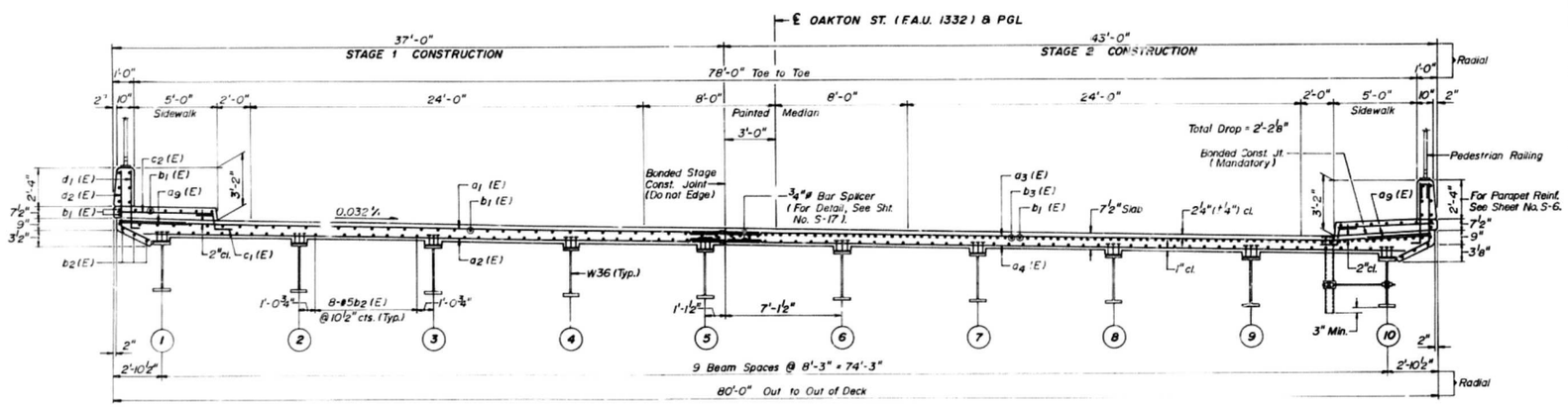
TAMERAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
FAU 1332	1300B-89	COOK	128	83
FED ROAD DIST. NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO. S-5 OF 21 SHEETS



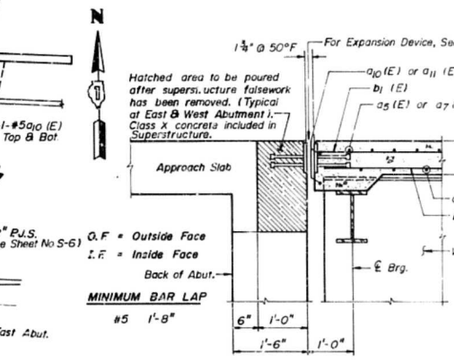
PLAN



CROSS SECTION

(LOOKING EAST)

Note: Transverse Bars shall be placed normal to Local Tangent. Longitudinal Bars shall be placed along the curve.



MINIMUM BAR LAP

#5	1'-8"

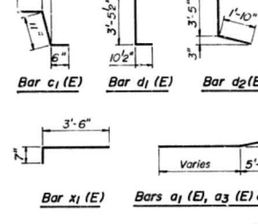
SECTION A-A (EAST ABUT.)

(AT RIGHT ANGLE)

For Section B-B (West Abut.), See Sheet No. S-6

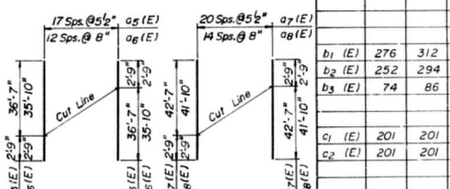
BILL OF MATERIAL

BAR	NO. OF BARS STAGE 1	NO. OF BARS STAGE 2	SIZE	LENGTH	SHAPE
a1 (E)	419	–	#5	36'-7"	——
a2 (E)	288	–	#5	35'-10"	——
a3 (E)	–	416	#5	42'-7"	——
a4 (E)	–	286	#5	41'-10"	——
a5 (E)	18	–	#5	39'-4"	——
a6 (E)	13	–	#5	38'-7"	——
a7 (E)	–	21	#5	45'-4"	——
a8 (E)	–	15	#5	44'-7"	——
a9 (E)	219	219	#6	4'-0"	——
a10 (E)	4	–	#5	37'-8"	——
a11 (E)	–	4	#5	43'-10"	——
b1 (E)	276	312	#5	35'-3"	——
b2 (E)	252	294	#5	30'-6"	——
b3 (E)	74	86	#6	39'-5"	——
c1 (E)	201	201	#5	2'-5"	
c2 (E)	201	201	#5	5'-6"	
d1 (E)	201	201	#6	4'-4"	
d2 (E)	201	201	#4	5'-3"	
x1 (E)	29	34	#5	4'-1"	



Bar c1 (E) Bar d1 (E) Bar d2 (E)

Bar x1 (E) Bars a1 (E), a3 (E) & a7 (E)



Bars a5 (E) & a6 (E) Bars a7 (E) & a8 (E)

ITEM	UNIT	TOTAL
Class X Concrete - Superstructure	Cu. Yd.	467.6
Reinforcement Bars - Epoxy Coated	Pound	119700
Protective Coat	Sq. Yd.	1735
Bar Splicers	Each	738

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. Reinforcement bars designated thus: 42 x 7 - #5 etc., indicates 42 lines of bars with 7 length per line.
3. See sheet no. S-1 for Drain location.
4. See sheet no. S-6 for Sidewalk and Drain Details.
5. All longitudinal dimensions are measured along curve.

DESIGNED	J S
CHECKED	R C E
DRAWN	RAA/r. / FQM
CHECKED	E M M

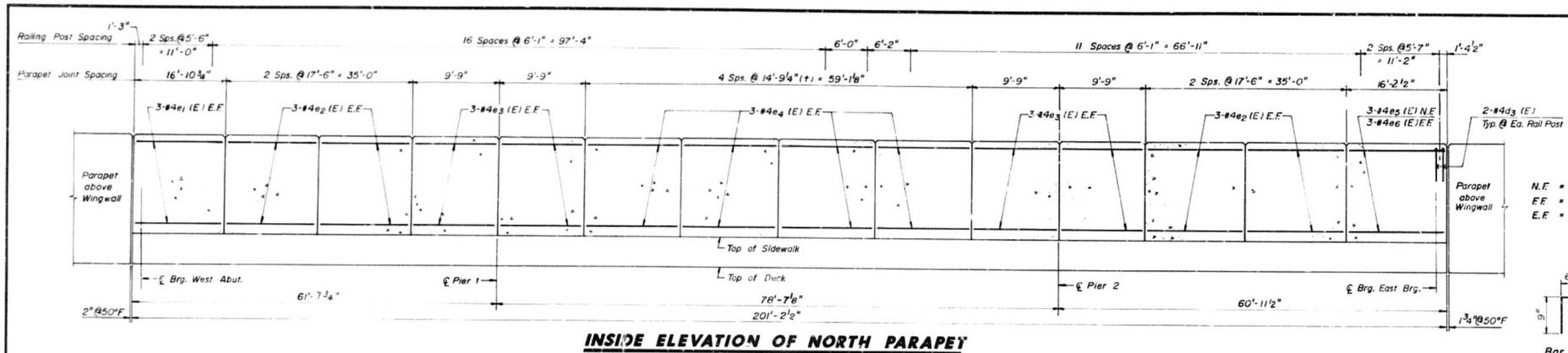
Nakawatase, Wyns and Associates, Inc.

DECK PLAN, CROSS SECTIONS & DETAILS
OAKTON STREET OVER DES PLAINES RIVER
F.A.U. RTE. 1332 SECTION 1300B-89
COOK COUNTY
Sta. 105 + 73.96
STRUCTURE NUMBER 016-2601

D C B A 0 A B C D
TAMERAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
FAU. 1332	13008-89	COOK	128	84
FED ROAD D. ST. NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO. S-6 OF 21 SHEETS



INSIDE ELEVATION OF NORTH PARAPET

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

Bar d_3 (E)

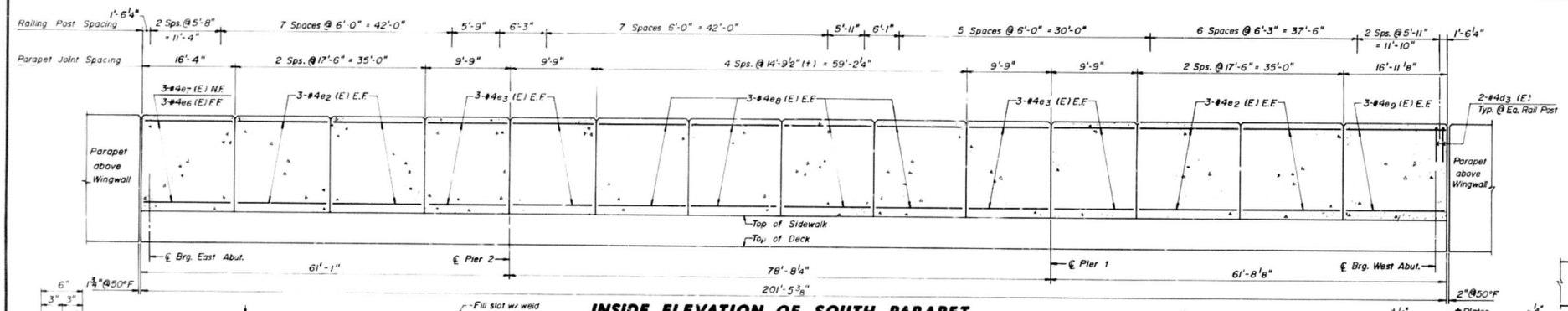
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d_3 (E)	136	#4	2'-1"	
e_1 (E)	6	#4	16'-9"	—
e_2 (E)	48	#4	17'-3"	—
e_3 (E)	48	#4	9'-6"	—
e_4 (E)	24	#4	14'-6"	—
e_5 (E)	3	#4	15'-11"	—
e_6 (E)	6	#4	16'-0"	—
e_7 (E)	3	#4	16'-1"	—
e_8 (E)	24	#4	14'-6"	—
e_9 (E)	6	#4	16'-8"	—

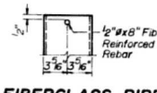
ITEM	UNIT	TOTAL
Class X Concrete - Superstructure	Cu. Yd.	31.9
Reinforcement Bars - Epoxy Coated	Pound	1780
Protective Coat	Sq. Yd.	142

NOTES:

1. Reinforcement bars designated (E) shall be Epoxy Coated.
2. For Details of Pedestrian Railing, See Sheet No. S-18.



INSIDE ELEVATION OF SOUTH PARAPET

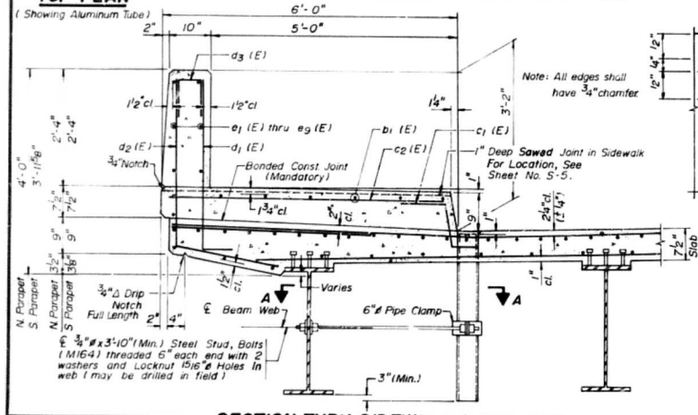


TOP PLAN

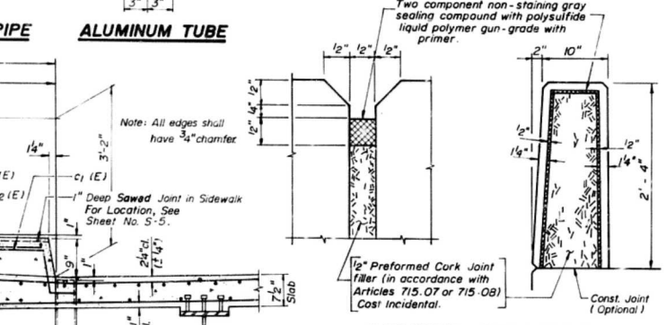
(Showing Aluminum Tube)

FIBERGLASS PIPE

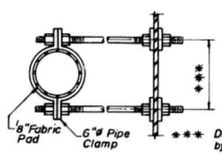
ALUMINUM TUBE



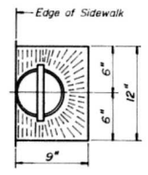
SECTION THRU SIDEWALK & PARAPET



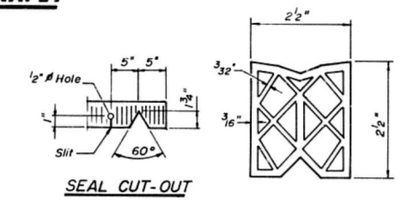
PARAPET JOINT DETAIL



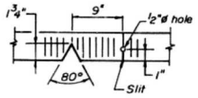
SECTION A - A



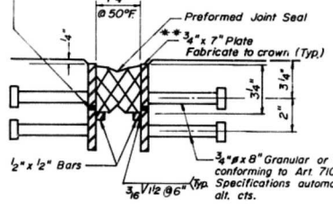
TOP PLAN



SEAL CUT-OUT



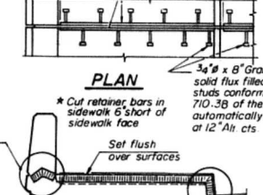
SEAL CUT-OUT AT CURB



2½" PREFORMED JOINT SEAL

(EAST ABUTMENT)

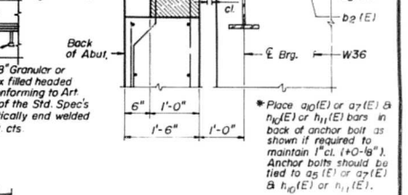
** Furnish in segments of 20 ft. max. length. Max. space between installed segments shall be ⅜". Seal space with silicon sealant suitable for structural steel.



PLAN

SECTION

END OF SEAL TREATMENT



* Place a_{10}(E) or a_7(E) & h_{10}(E) or h_{11}(E) bars in back of anchor bolt as shown if required to maintain 1"cl. (+0-1⅛"). Anchor bolts should be tied to a_5 (E) or a_7(E) & h_{10}(E) or h_{11}(E).

SECTION B-B (WEST ABUT.)

(AT RIGHT ANGLE)

Note: For Expansion Device, See Sheet No. S-7.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
2½"Preformed Joint Seal	Lin. Ft.	85

WT. OF M270 GR. 36 STRUCTURAL STEEL THIS SHEET = 3230 POUNDS

DESIGNED	J S
CHECKED	R C E
DRAWN	R A A Jr. / F Q M
CHECKED	E M M

Nakawatase, Wyns and Associates, Inc.

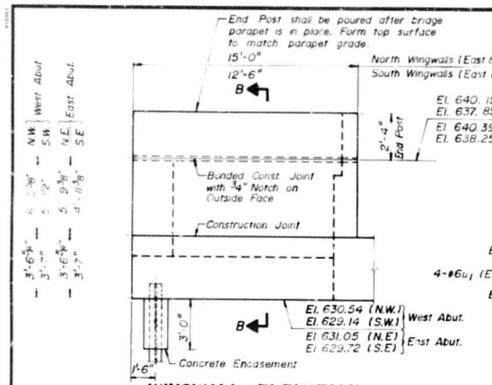
PARAPET ELEVATIONS & DETAILS
OAKTON STREET OVER DES PLAINES RIVER
F.A.U. RTE. 1332 SECTION 13008-89
COOK COUNTY
Sta. 105 + 73.96
STRUCTURE NUMBER 016-2601

18

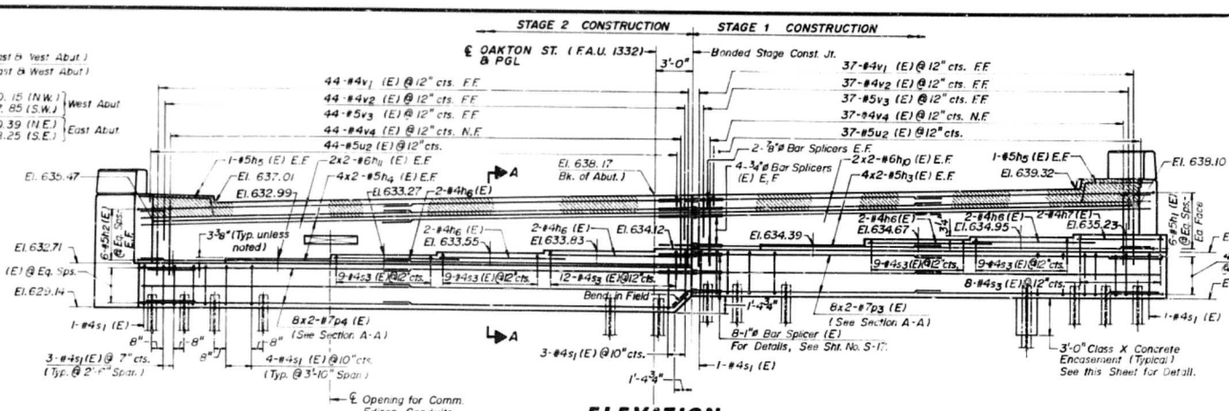
D C B A 0 A B C D

TAMERAN

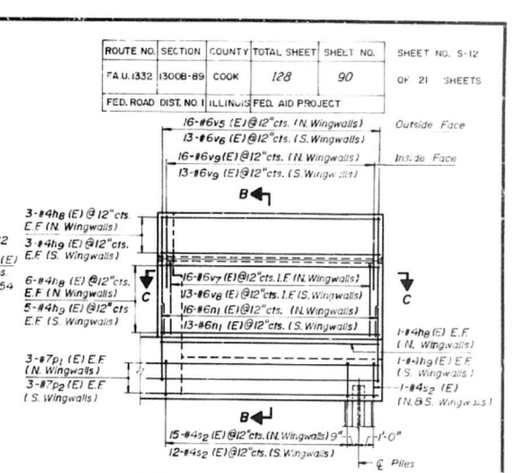
ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. S-12
F.A.U. 1332	13008-89	COOK	128	90	OF 21 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			



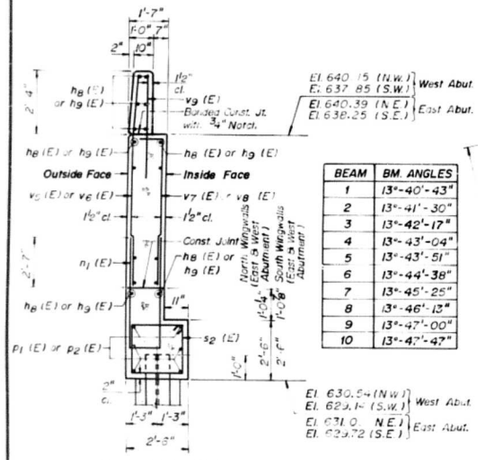
WINGWALL ELEVATION



ELEVATION

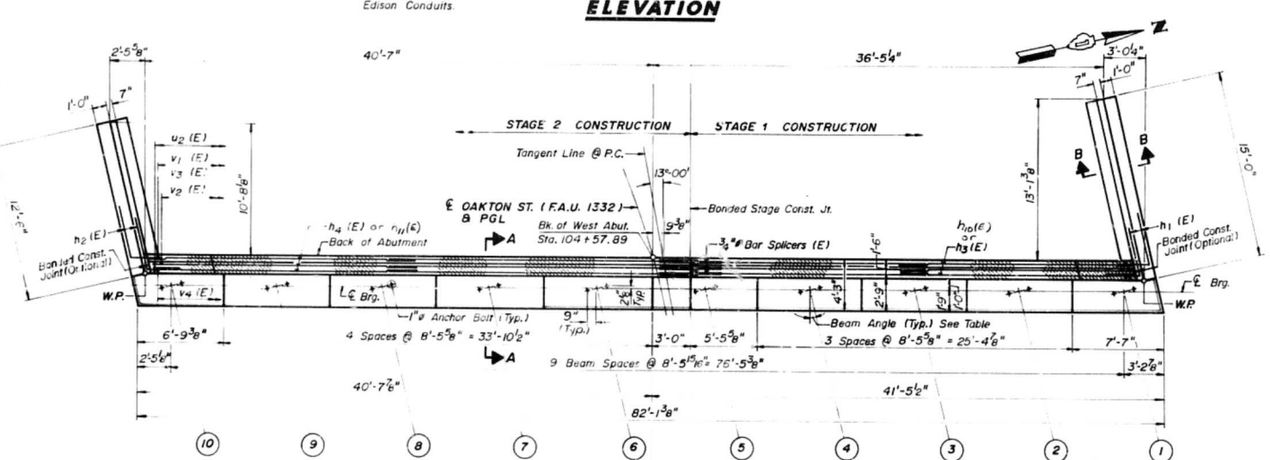


WINGWALL ELEVATION



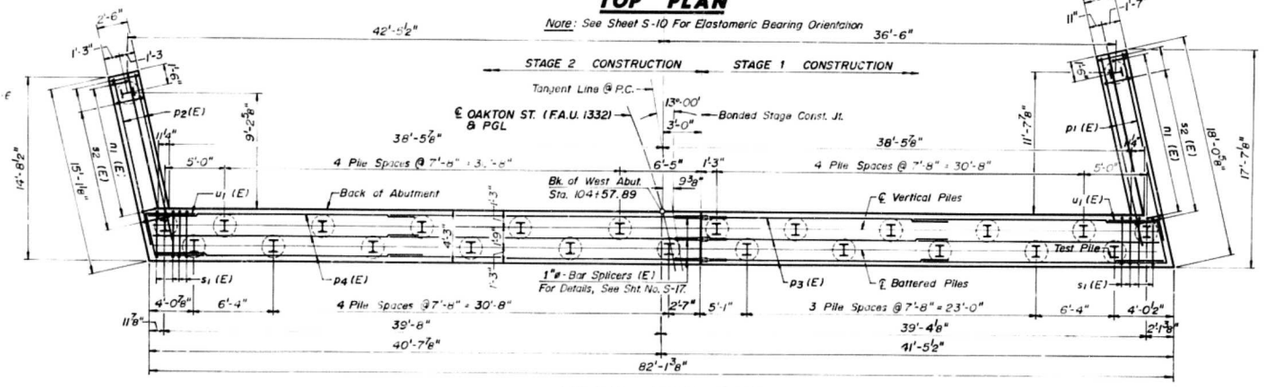
SECTION B-B

BEAM	BM. ANGLES
1	13°-40'-43"
2	13°-41'-30"
3	13°-42'-17"
4	13°-43'-04"
5	13°-43'-51"
6	13°-44'-38"
7	13°-45'-25"
8	13°-46'-13"
9	13°-47'-00"
10	13°-47'-47"

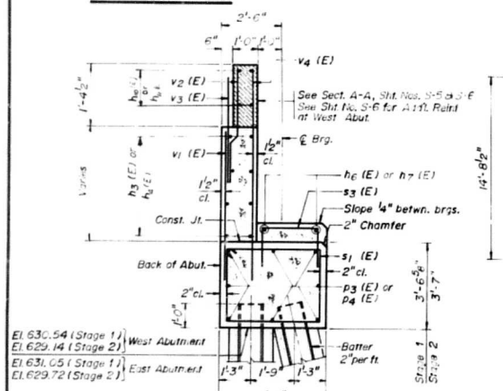


TOP PLAN

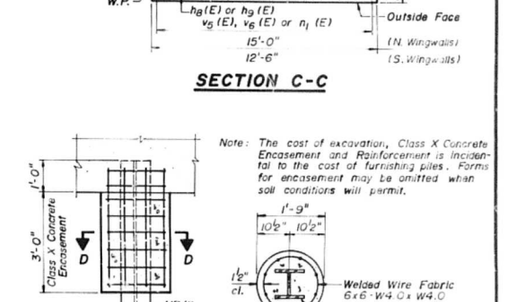
Note: See Sheet S-10 For Elastomeric Bearing Orientation



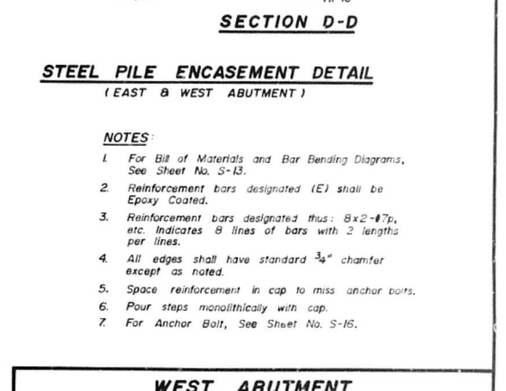
PLAN - PILE CAP



SECTION A-A



SECTION C-C



Note: The cost of excavation, Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. Forms for encasement may be omitted when soil conditions will permit.

SECTION D-D

STEEL PILE ENCASEMENT DETAIL

(EAST & WEST ABUTMENT)

NOTES:

1. For Bill of Materials and Bar Bending Diagrams, See Sheet No. S-13.
2. Reinforcement bars designated (E) shall be Epoxy Coated.
3. Reinforcement bars designated thus: 8x2-#7p, etc. Indicates 8 lines of bars with 2 lengths per lines.
4. All edges shall have standard ¾" chamfer except as noted.
5. Space reinforcement in cap to miss anchor bolts.
6. Pour steps monolithically with cap.
7. For Anchor Bolt, See Sheet No. S-16.

PILE DATA

Type:	HP10 x 42 Steel Piles
Design Capacity:	45 T Driven to 68T Bearing
Est. Length:	37 Ft.
No. Required:	25 (Includes 1 Test Piles)

MINIMUM BAR LAP

#5	2'-2"
#6	2'-7"
#7	3'-5"

Indicates area to be poured after superstructure forms have been removed. "Class X Concrete Superstructure" in hatched areas is billed with superstructure quantity on sheet No. S-5.

N.F. Near Face
F.F. For Face
I.F. Inside Face
O.F. Outside Face
E.F. Each Face

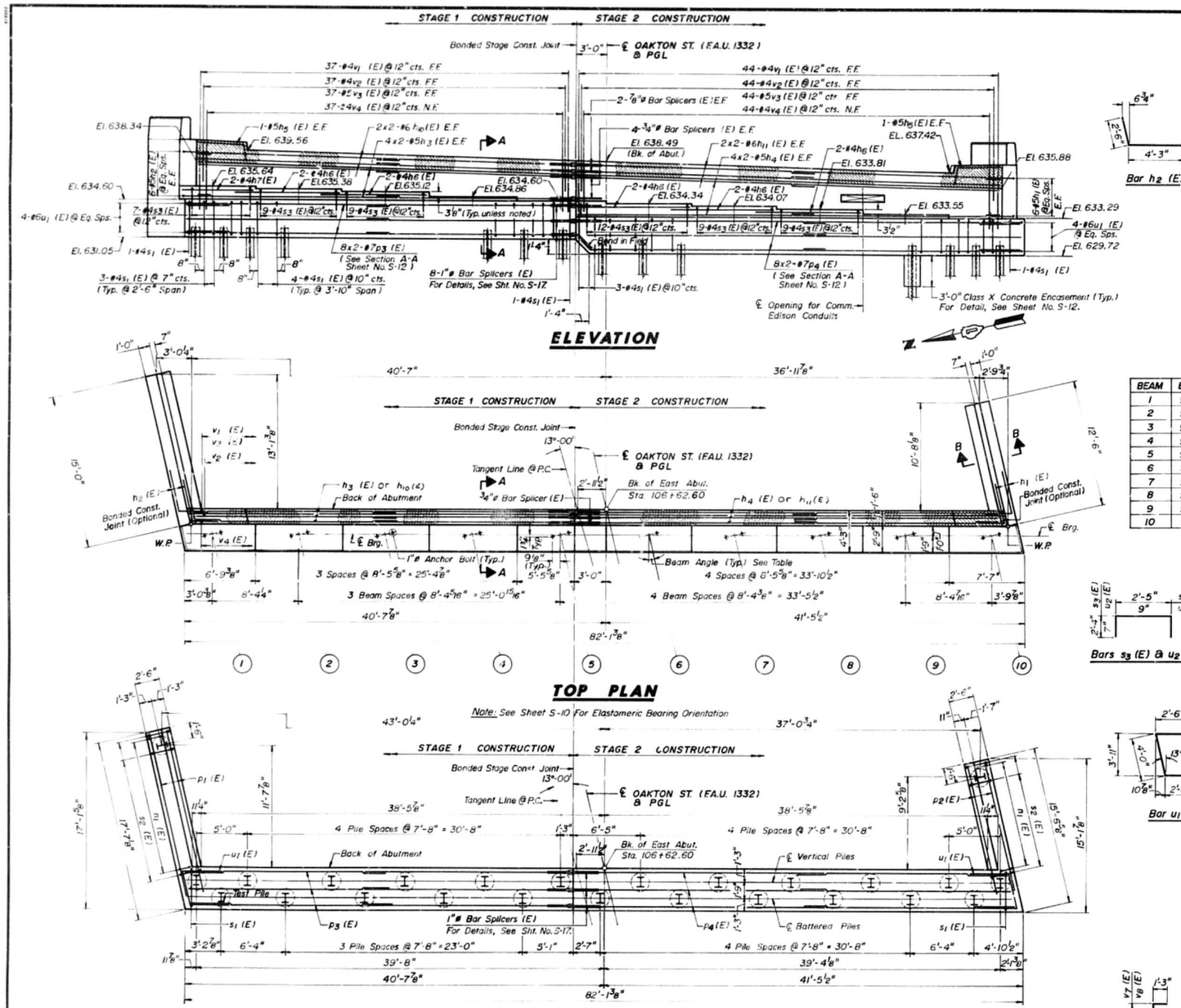
DESIGNED	J S
CHECKED	R C E
DRAWN	R A A Jr.
CHECKED	E M M

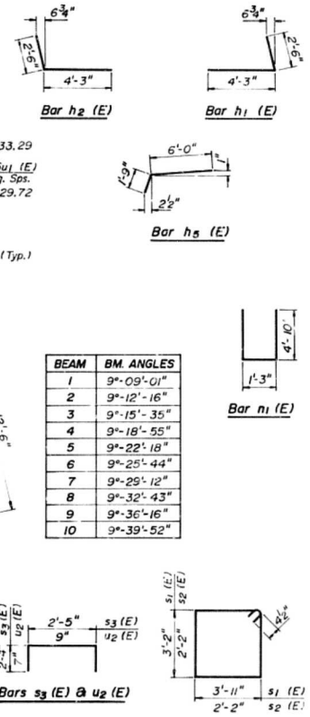
Nakawatase, Wyns and Associates, Inc.

WEST ABUTMENT
OAKTON STREET OVER DES PLAINES RIVER
F.A.U. RTE. 1332 SECTION 13008-89
COOK COUNTY
Sta. 105 + 73.96
STRUCTURE NUMBER 016-2601

D C B A 0 A B C D
TAMERAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. S-13
FA U.1332	1300B-89	COOK	128	91	OF 21 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			





BEAM	BM. ANGLES
1	9°-09'-01"
2	9°-12'-16"
3	9°-15'-35"
4	9°-18'-55"
5	9°-22'-18"
6	9°-25'-44"
7	9°-29'-12"
8	9°-32'-43"
9	9°-36'-16"
10	9°-39'-52"

BILL OF MATERIAL

WEST ABUTMENT

BAR	NO. OF BARS STAGE 1	NO. OF BARS STAGE 2	SIZE	LENGTH	SHAPE
h_1 (E)	12	–	#5	6'-9"	
h_2 (E)	–	12	#5	6'-9"	
h_3 (E)	16	–	#5	19'-0"	
h_4 (E)	–	16	#5	22'-1"	
h_5 (E)	2	2	#5	7'-9"	
h_6 (E)	4	6	#4	10'-2"	
h_7 (E)	2	–	#4	6'-7"	
h_8 (E)	20	–	#4	14'-9"	
h_9 (E)	–	18	#4	12'-3"	
h_{10} (E)	8	–	#6	19'-0"	
h_{11} (E)	–	8	#C	22'-1"	
n_1 (E)	16	13	#6	10'-11"	
p_1 (E)	6	–	#7	17'-2"	
p_2 (E)	–	6	#7	14'-8"	
p_3 (E)	16	–	#7	20'-3"	
p_4 (E)	–	16	#7	23'-9"	
s_1 (E)	36	44	#4	14'-11"	
s_2 (E)	16	13	#4	9'-5"	
s_3 (E)	26	30	#4	7'-1"	
u_1 (E)	4	4	#6	9'-0"	
u_2 (E)	37	44	#5	1'-11"	
v_1 (E)	37	44	#4	5'-1"	
v_2 (E)	37	44	#4	3'-10"	
v_3 (E)	37	44	#5	3'-0"	
v_4 (E)	37	44	#4	6'-7"	
v_5 (E)	16	–	#6	8'-2"	
v_6 (E)	–	13	#6	7'-3"	
v_7 (E)	16	–	#6	6'-10"	
v_8 (E)	–	13	#6	6'-0"	
v_9 (E)	16	13	#6	4'-11"	

ITEM	UNIT	TOTAL
Class X Concrete	Cu. Yds.	83.7
Reinforcement Bars - Epoxy Coated	Pounds	7540
Structure Excavation	Cu. Yds.	134
Steel Piles HP10 x 42	Lin. Ft.	888
Test Pile Steel (HP10 x 42)	Each	1
Bridge Seat Sealer	Sq. Ft.	233
Bar Splicer	Each	20

EAST ABUTMENT

BAR	NO. OF BARS STAGE 1	NO. OF BARS STAGE 2	SIZE	LENGTH	SHAPE
h_1 (E)	–	12	#5	6'-9"	
h_2 (E)	12	–	#5	6'-9"	
h_3 (E)	16	–	#5	19'-0"	
h_4 (E)	–	16	#5	22'-1"	
h_5 (E)	2	2	#5	7'-9"	
h_6 (E)	4	6	#4	10'-2"	
h_7 (E)	2	–	#4	6'-7"	
h_8 (E)	20	–	#4	14'-9"	
h_9 (E)	–	18	#4	12'-3"	
h_{10} (E)	8	–	#6	19'-0"	
h_{11} (E)	–	8	#6	22'-1"	
n_1 (E)	16	13	#6	10'-11"	
p_1 (E)	6	–	#7	17'-2"	
p_2 (E)	–	6	#7	14'-8"	
p_3 (E)	16	–	#7	20'-3"	
p_4 (E)	–	16	#7	23'-9"	
s_1 (E)	36	44	#4	14'-11"	
s_2 (E)	16	13	#4	9'-5"	
s_3 (E)	25	30	#4	7'-1"	
u_1 (E)	4	4	#6	9'-0"	
v_1 (E)	37	44	#4	5'-1"	
v_2 (E)	37	44	#4	3'-10"	
v_3 (E)	37	44	#5	3'-0"	
v_4 (E)	37	44	#4	6'-7"	
v_5 (E)	16	–	#6	8'-2"	
v_6 (E)	–	13	#6	7'-3"	
v_7 (E)	16	–	#6	6'-10"	
v_8 (E)	–	13	#6	6'-0"	
v_9 (E)	16	13	#6	4'-11"	

ITEM	UNIT	TOTAL
Class X Concrete	Cu. Yds.	82.2
Reinforcement Bars-Epoxy Coated	Pounds	7380
Structure Excavation	Cu. Yds.	134
Steel Piles HP10 x 42	Lin. Ft.	840
Test Pile Steel (HP10 x 42)	Each	1
Bridge Seat Sealer	Sq. Ft.	233
Bar Splicer	Each	20

PILE DATA

Type:	HP10 x 42 Steel Piles
Design Capacity:	45 T Driven to 68T Bearing
Est. Length:	35 Ft.
No. Required:	25 (Includes 1 Test Pile)

NOTES:

1. For Details & Reinforcement of Wingwalls, See Sheet No. S-12.
2. For Notes and Sections, See Sheet No. S-12.
3. For Steel Pile Encasement Detail, See Sheet No. S-12.

DESIGNED	J S
CHECKED	R C E
DRAWN	R A A Jr.
CHECKED	E M M

Nakawatase, Wyns and Associates, Inc.

EAST ABUTMENT

OAKTON STREET OVER DES PLAINES RIVER

F.A.U. RTE. 1332 SECTION 1300B-89

COOK COUNTY

Sta. 105+73.96

STRUCTURE NUMBER 016-2601