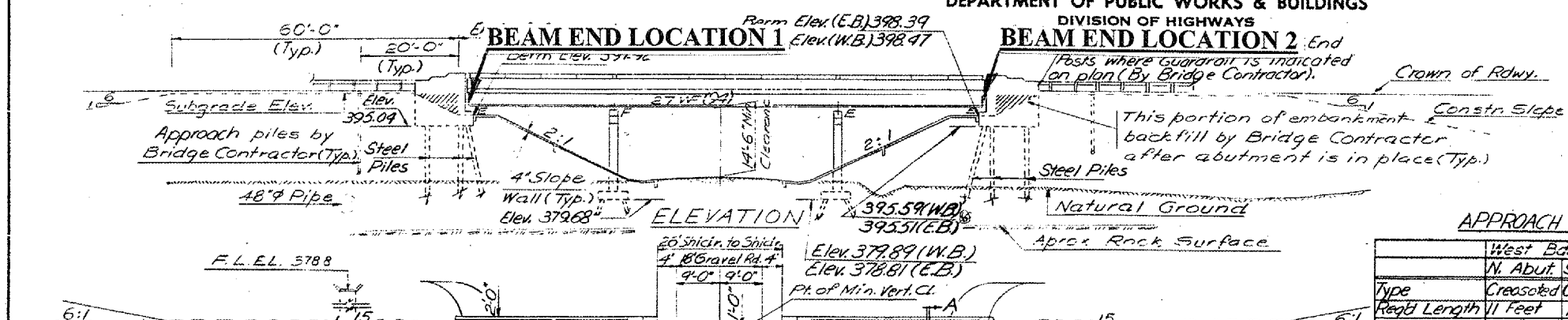
B.M.: Spike in 30" Oak 249' Rt. Sta. 406+00
℄ Med. F.A.I.-24 Elev. 361.12

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE FAI 24
SECT. D9 BRIDGE PAINTING FY 08-1
F.A.I. JOHNSON & WILLIAMSON COUNTIES
FED. CONTRACT 78020
SHEET 11 OF 35

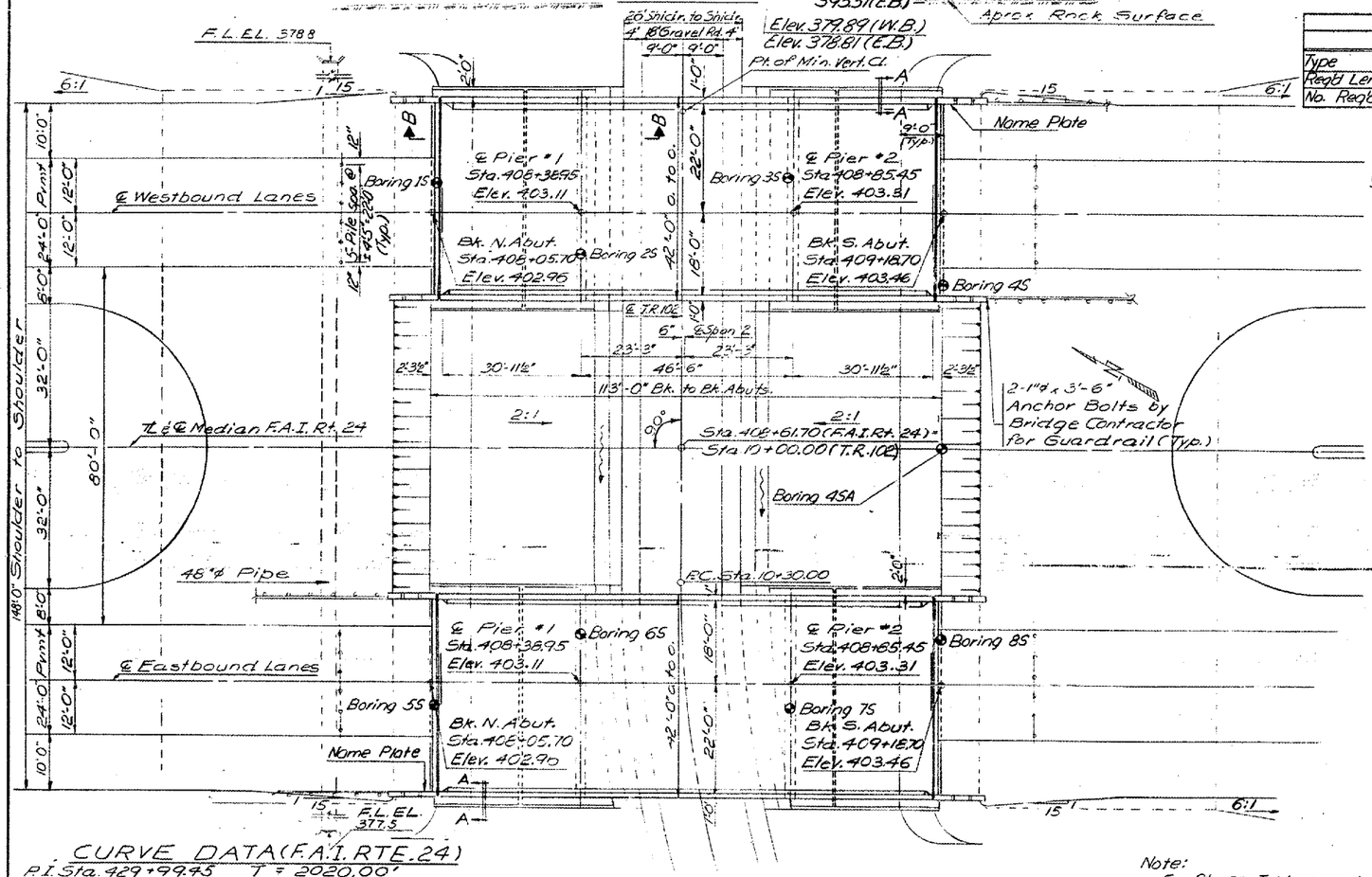
BEAM END LOCATION 1

BEAM END LOCATION 2



APPROACH PILE DATA

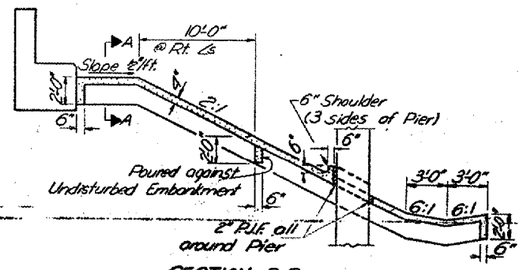
	West Bd. Lanes		East Bd. Lanes	
	N. Abut.	S. Abut.	N. Abut	S. Abut.
Type	Creosoted	Creosoted	Creosoted	Creosoted
Reqd Length	11 Feet	18 Feet	22 Feet	19 Feet
No. Reqd	6	6	6	6



CURVE DATA (TR-102)

Δ = 90°-00'-00"
D = 22°-55'-06"
R = 250.00
L = 392.70
T = 250.00
E = 103.55
S.E. 0.06'/ft.
S.E. ATTAINED: STA. 9+58.00 TO STA. 10+66.00
STA. 13+86.70 TO STA. 14+94.70

The Contractor shall drive 1 steel test pile (8 BP 36) of North Abutment Westbound lanes and Pier #2 Eastbound lanes respectively as directed by the Engineer before ordering the remainder of piles.



SECTION B-B

SECTION A-A

All reinforcement shown.

Fasteners shall be high strength bolts. Bolts ⅞"ϕ; open holes 15/16"ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 161,170 Lbs

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

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.

Slope wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 sq. ft.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

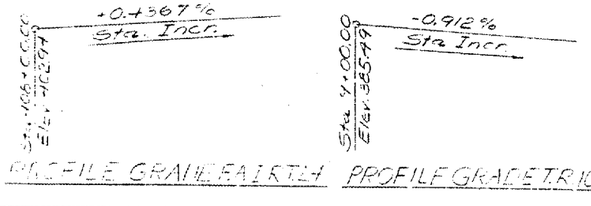
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

CURVE DATA (F.A.I. RTE. 24)

P.I. Sta. 429+99.45
Δ = 19°-59'-40"
D = 0°-30'-00"
R = 11459.16'
T = 2020.00'
L = 3998.92'
E = 176.68'
S.E. = 0.015 Ft/Ft
S.E. Attained
Sta. 408+46.12 To Sta. 410+46.12
Sta. 451+11.70 To Sta. 449+11.70

PLAN

DESIGNED	J. M. Patel	EXAMINED	August 21 1970
CHECKED	Nathan V. Chandrasekhar	PASSED	
DRAWN	R. Doty	APPROVED	
CHECKED	Nathan V. Chandrasekhar		



PROFILE GRADE F.A.I. RTE. 24 PROFILE GRADE T.R. 102

STATION 408+61.70
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 24 SEC. 44-5HB-2
F.A. PROJ. I-IG-24-1(18)
LOADING HS 20 ALT.

See Std. 2113-1
NAME PLATE
(2 Required)

Note:
For Stress Table see sheet #3.

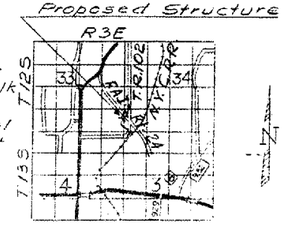
DESIGN STRESSES

fc = 1,200 psi Slab
fc = 1,400 psi Parapet, Sidewalk & Substructure
fs = 20,000 psi Structural Steel
fs = 20,000 psi Reinforcement
n = 10

Loading HS 20 Alt

Note: Allow 25 #/s.f. for fut. Wearing Surf.

Proposed Structure



LOCATION SKETCH

TOTAL BILL OF MATERIALS

Item		Super	Sub.	Total
Protective Coat	Sq. Yds.	1152		1152
Structure Excavation	Cu. Yds.		153	153
Class X Concrete	Cu. Yds.	281.8	399.0	680.8
Structural Steel	Lump Sum.	L.S.		L.S.
Aluminum Railing	Lin. Ft.	439		439
Reinforcement Bars	Lbs.	66,600	32,860	99,460
Creosoted Piles (Up to 20')	Lin. Ft.		288	288
Creosoted Piles (20.1' to 38')	Lin. Ft.		132	132
Test Piles Steel (8 BP 36)	Ea.		2	2
Steel Piles (8 BP 36)	Lin. Ft.		1912	1912
Slope Wall 4"	Sq. Yd.		1030	1030
Name Plates	Ea.	2		2
Preformed Joint Sealer	Lin. Ft.	168		168

℄ BRIDGE NO. 2
S.N. 044-0042
℄ FOR INFORMATION ONLY

STA. 408+61.70 (F.A.I. RT. 24)
STA. 10+00.00 (T.R. 102)