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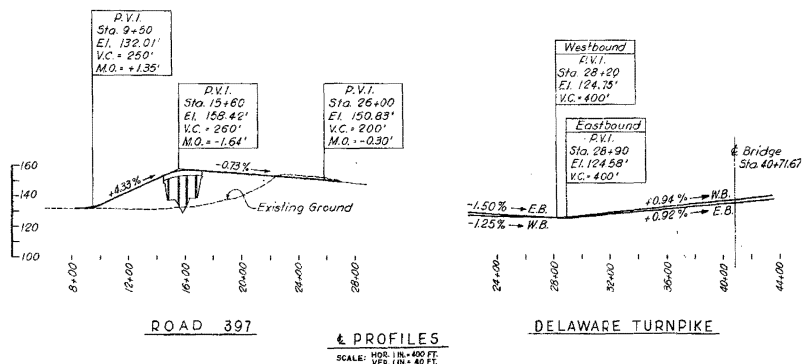
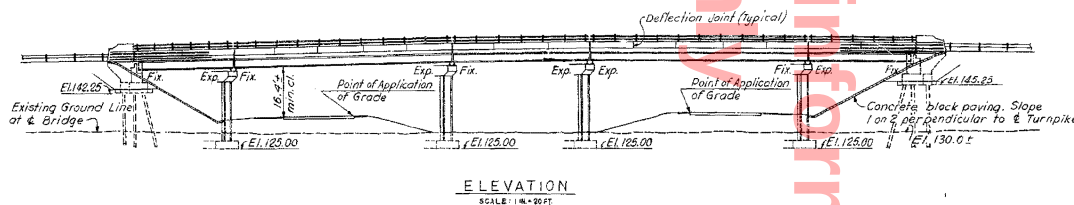
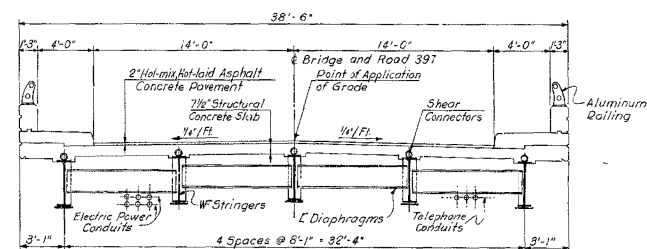
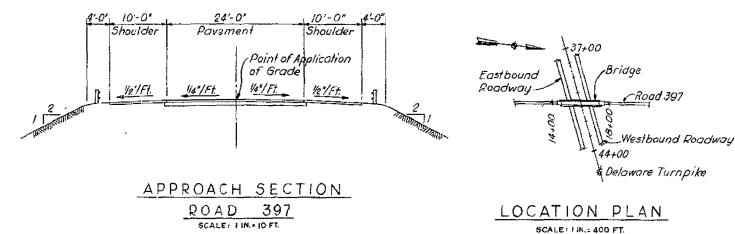
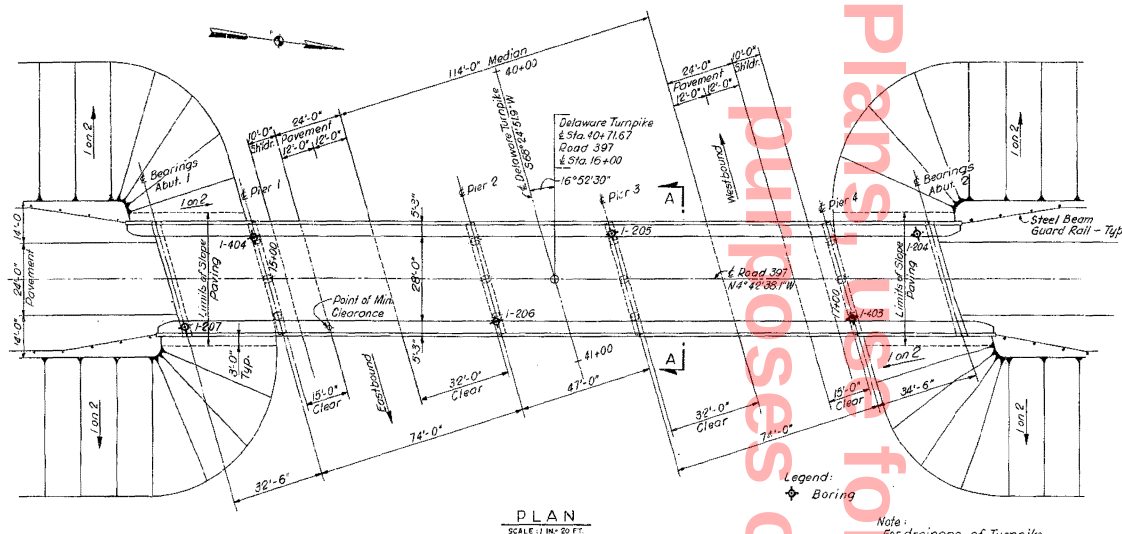


TABLE OF QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
4	Excavation For Structures	C.Y.	447
7	Reinforced Concrete Grade 24"	C.Y.	350
11	Reinforced Concrete Asphalt Conc. Pavement	Sq. Yd.	11.0
	ACI Asphalt Tack Coat	Gal.	180
*	Portland Cement Concrete Masonry		
16	Footings	C.Y.	258
	Substructure	C.Y.	203
	Superstructure	C.Y.	408
19	Superficial Waterproofing	S.Y.	74
20*	Bor Reinforcement	LBS.	146,400
22	Structural Steel (Approx. Wt. 363,000 lbs.)	LBS.	
26	6" Perforated Cor. Metal Pipe Underdrain	L.F.	90
35	Cash-in-place Concrete Piles	L.F.	1720
	Steel Shell Test Piles	L.F.	190
	Aluminum Lagging - Double Rail	L.F.	550
	Steel Shoring	S.Y.	418
	Coat For Epoxy Underseal	S.Y.	815
	Protective Coating On Concrete	S.F.	889

* indicates Fixed Quantity Item - See Proposal

GENERAL NOTES:
Design Specifications-A.A.S.H.O. 1957; and Standard Specifications for Welded Highway and Railway Bridges of the American Welding Society-1957.
Material and Fabrication Specifications-State of Delaware, State Highway Department, Standard Specifications, July, 1966; and given in the Special Provisions.
Design Loads-A.A.S.H.O. H-20, HS-20 and H-15.
Design Stress Structural and Reinforcing Steel-16,000psi. Reinforced Concrete-1,500psi.
Design of Composite Construction based on no temporary intermediate supports to be used during construction.
Fill of Abutments shall be placed in an elevation one foot above bottom of concrete footing before storing filling excavation and pile driving.
Backfill behind abutments to be placed only after bridge deck slab has been completed.
Minimum Working Space Below loads are permitted on the bridge, after completion of the bridge deck slab; 10 days for loads of 2 tons to 10 tons, and 25 days for loads of 10 tons to the legal limit.
Test Piles shall be in accordance with Standard Specifications and Special Provisions.
Quantities shown shall not relieve the Contractor of the responsibility of checking them in preparing his bid.
For Concrete Notes, see Drawing 1-6.
For Steel Notes, see Drawing 1-7.
For Boring Logs, see Sheet 208.

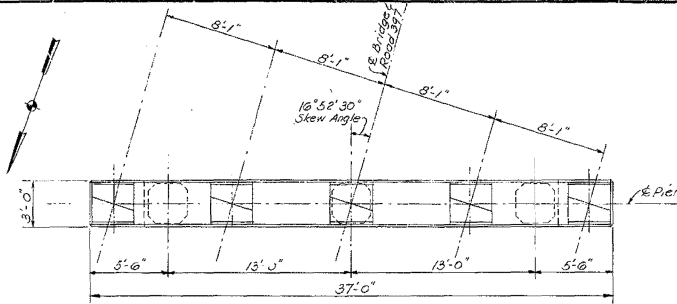
DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE

ROAD 397 BRIDGE OVER TURNPIKE

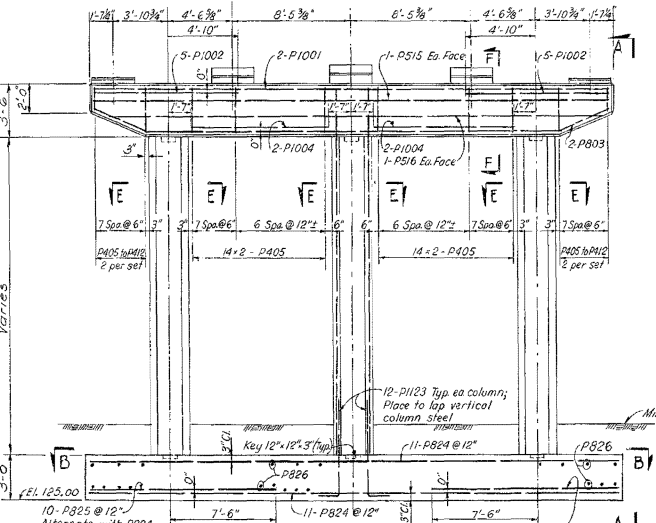
GENERAL ARRANGEMENT

DRAWN: E.A.N.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG: 1-1
TRACED:	TIPPETTS-ABBETT-Mc CARTHY-STRATTON		CONTRACT 7002
CHECKED: F.J.F.	ENGINEERS AND ARCHITECTS		SHEET 125 OF 224
CHARGE OF			

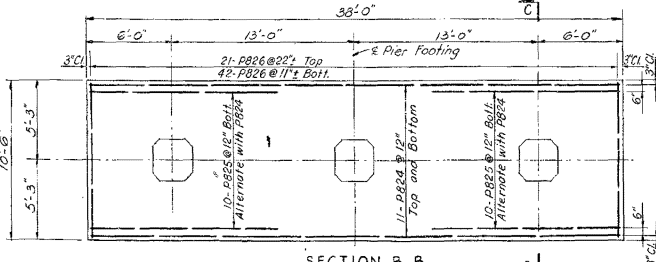
Archive Plans, use for informational purposes only



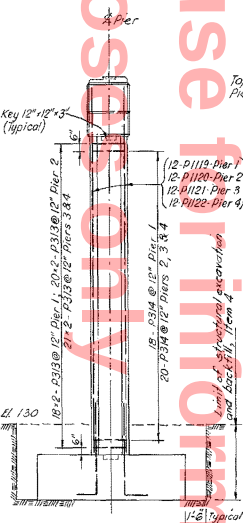
PIER PLAN
SCALE 1/2" = 1'-0"



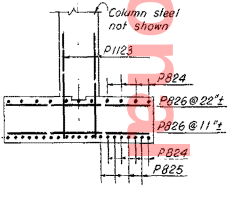
PIER ELEVATION
SCALE 1/2" = 1'-0"



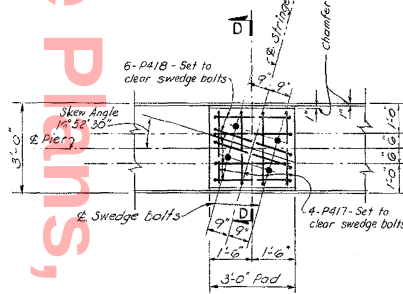
SECTION B-B
SCALE 1/2" = 1'-0"



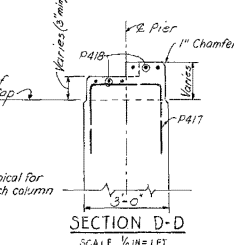
ELEVATION A-A
SCALE 1/2" = 1'-0"



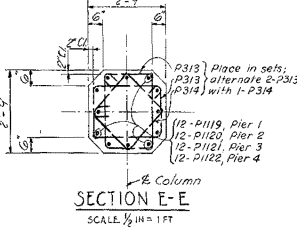
SECTION C-C
SCALE 1/4" = 1'-0"



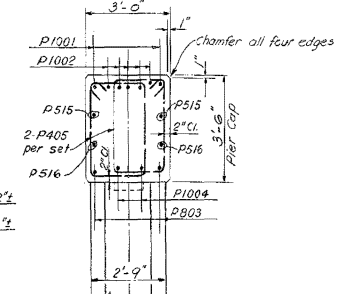
PLAN OF TYPICAL PIER PAD
SCALE 1/2" = 1'-0"



SECTION D-D
SCALE 1/2" = 1'-0"



SECTION E-E
SCALE 1/2" = 1'-0"



SECTION F-F
SCALE 1/2" = 1'-0"

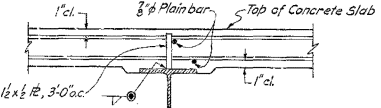
COUNTY	CONTRACT	S.P.A. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.		126	224

Station	Top of Cap El.	Station	Top of Cap El.	Station	Top of Cap El.	Station	Top of Cap El.	Station	Top of Cap El.
S1 150.534	150.349	S2 151.007	150.423	S3 151.470	150.496	S4 151.933	150.570	S5 152.396	150.694
S6 152.859	150.818	S7 153.322	150.892	S8 153.785	150.966	S9 154.248	151.040	S10 154.711	151.114
S11 155.174	151.188	S12 155.637	151.262	S13 156.100	151.336	S14 156.563	151.410	S15 157.026	151.484
S16 157.489	151.558	S17 157.952	151.632	S18 158.415	151.706	S19 158.878	151.780	S20 159.341	151.854
S21 159.804	151.928	S22 160.267	152.002	S23 160.730	152.076	S24 161.193	152.150	S25 161.656	152.224

Top of Cap El. 150.099 Top of Cap El. 151.938 Top of Cap El. 152.817 Top of Cap El. 152.897

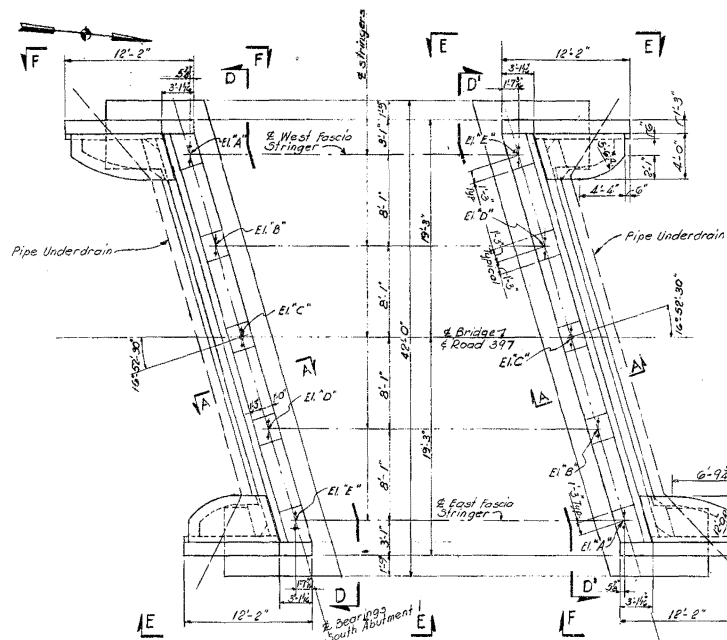
PIER PAD ELEVATIONS
NO SCALE

- NOTES AND DETAILS APPLICABLE TO BRIDGE NO'S 1, 2, 3, 4, 5 & 7:
1. The tops of piers and abutment bridge seats, including tops and sides of bearing pads, shall be painted with an epoxy protective coating for concrete. See Special Provisions.
 2. A seal for spiky waterproofing membrane shall be placed on top of the bridge decks, prior to the placement of the asphaltic wearing surface. See Special Provisions.
 3. The Contractor shall provide the detail shown below on the top flange of each steel stringer to insure proper placement of deck reinforcing bars:



- NOTES:
- All concrete to be placed in the d.y.
 - For details of anchor balls for shoes, see Dwg. I-7.
 - For General Notes, see Dwg. I-1.
 - For Concrete Notes, see Dwg. I-6.
 - Maximum allowable soil pressure: 2 tons/sq. ft.

DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE			
ROAD 397 BRIDGE OVER TURNPIKE			
PIERS			
DRAWN: SLT-AT	SCALE: AS NOTED	DATE: MAY 9, 1982	DWG: I-2
TRACED:	CHECKED: ELP-ST	TIPPLETT-ABBETT-MCCARTHY-STRATTON	CONTRACT 7002
CHARGE OF:	ENGINEERS AND ARCHITECTS	SHEET 126 OF 224	



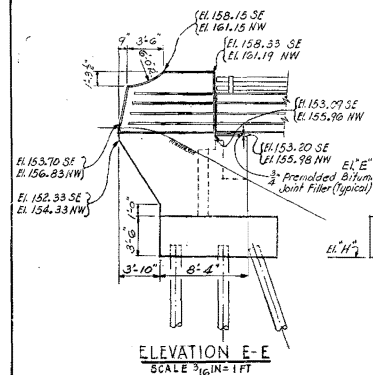
ABUTMENT ELEVATIONS		
Point	South Abutment	North Abutment
A	149.218	152.332
B	149.207	152.749
C	149.968	152.934
D	149.887	152.764
E	149.878	152.404
F	148.97	152.08
G	152.33	155.42
H	142.25	145.23
J	151.60	154.80

PLAN
SCALE 1/8"=1 FT

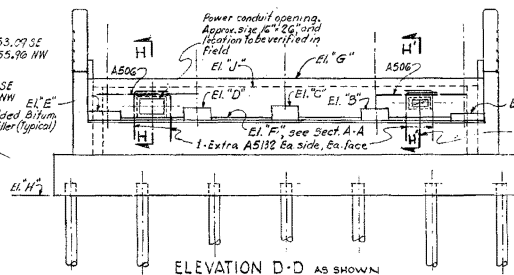
If utilities are to be placed later, plugholes with plain concrete or patching surfaces with tar or asphalt to prevent bond.

Cut abutment reinforcing bars in field to suit final location of opening.

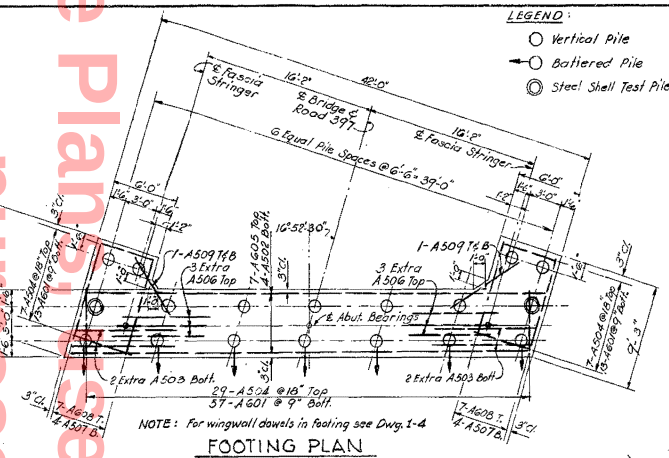
SECTION H-H AS SHOWN
SECTION H-H' SIMILAR
SCALE 3/16"=1 FT



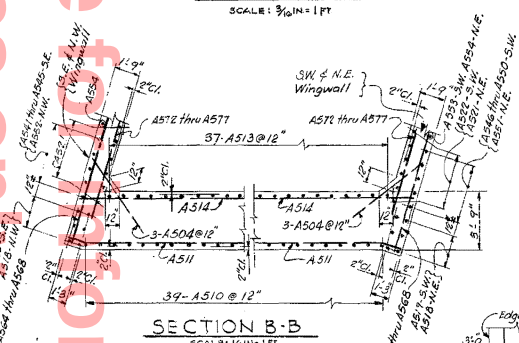
ELEVATION E-E
SCALE 3/16"=1 FT



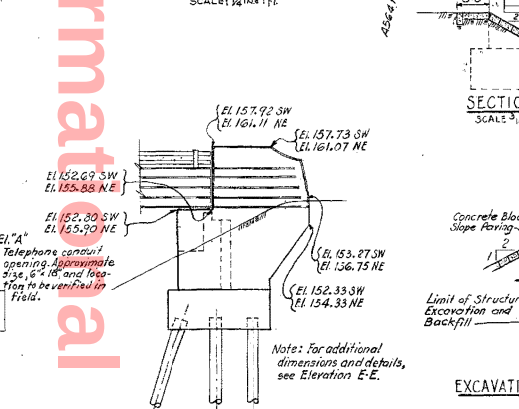
ELEVATION D-D AS SHOWN
ELEVATION D-D' SIMILAR
SCALE 3/16"=1 FT



NOTE: For wingwall dowels in footing see Dwg. 1-4
FOOTING PLAN
SCALE: 3/16"=1 FT



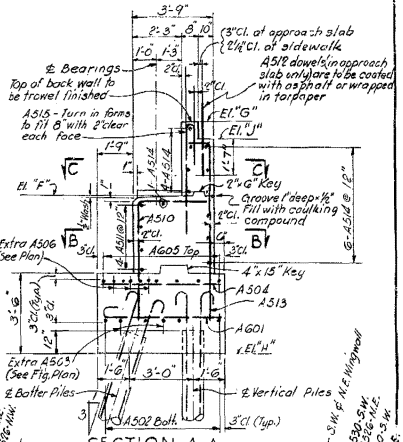
SECTION B-B
SCALE: 3/16"=1 FT



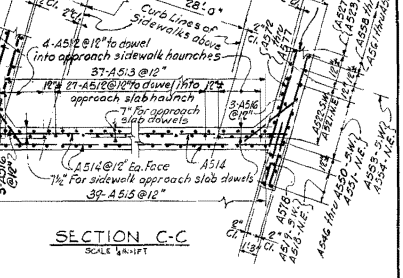
ELEVATION F-F
SCALE 3/16"=1 FT

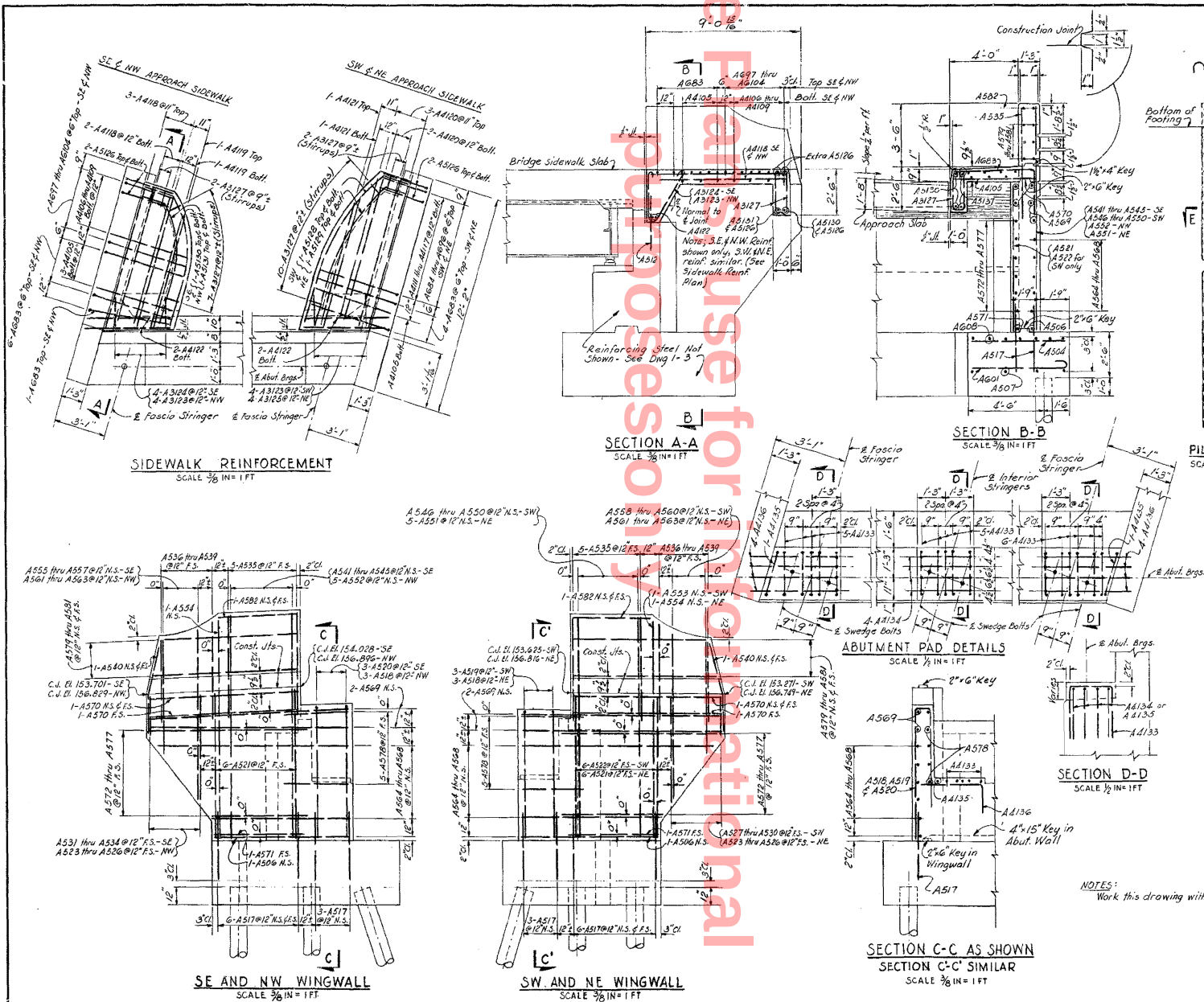
LEGEND:
○ Vertical Pile
○ Battered Pile
○ Steel Shell Test Pile

COUNTY	CONTRACT	F.R. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	3	DEL.			127	224



SECTION A-A
SCALE 1/4"=1 FT





PILE NOTES:

Approved Metal Spacers shall be attached to the top and bottom coils to insure that the minimum required clear distance to the shell will be obtained.

Pile Capacity shall be 50 tons.

Estimated Pile Lengths: 55' at Abutment 1; 40' at Abutment 2. Actual pile lengths shall be determined by test piles. For location of test piles see Dwg. 1-3.

Pile Reinforcement: Cast to be included in Cast-in-place concrete-filled Piles, Item 35.

Preboring of piles through embankment fill will be permissible.

LOCATION	NUMBER BY FOOTING				
	PILES		REINFORCING BARS		
	ESTIMATED LENGTH	# LONGIT. BARS	1" SPIRAL	1" SPIRAL	1" SPIRAL
ABUTMENT 1	18	108	18		
ABUTMENT 2	18	108	18		
TOTAL NUMBER	18	108	108	18	18

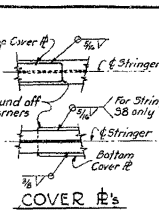
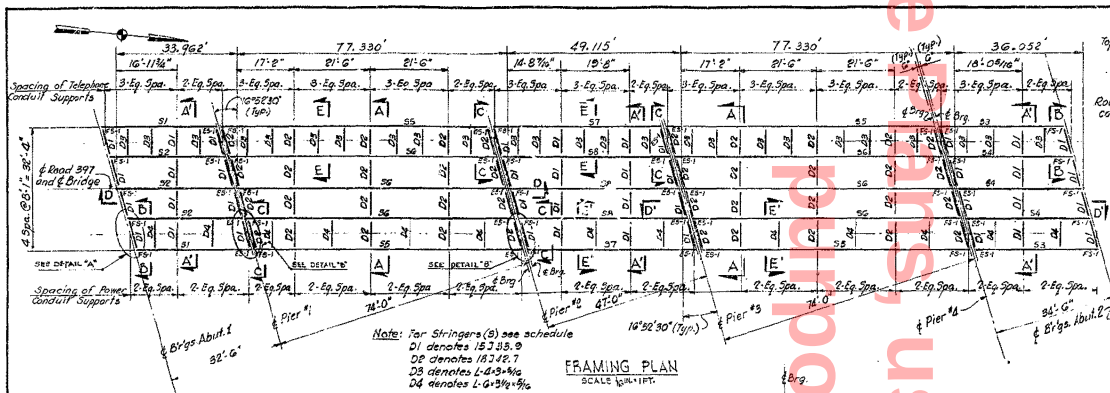
DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE

ROAD 397 BRIDGE OVER TURNPIKE

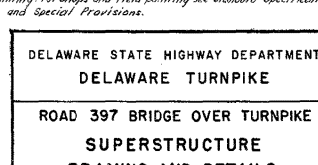
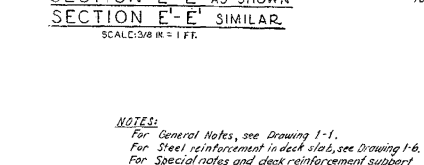
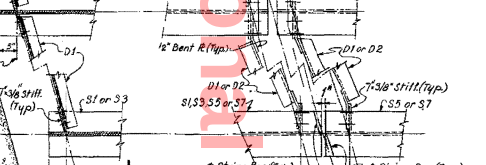
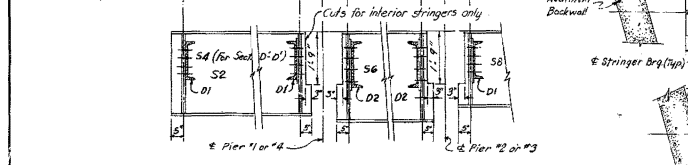
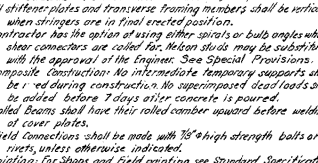
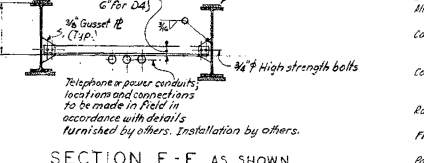
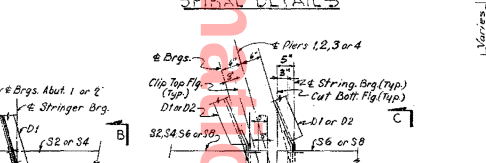
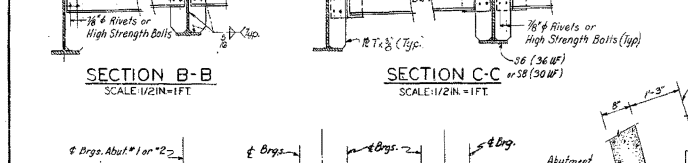
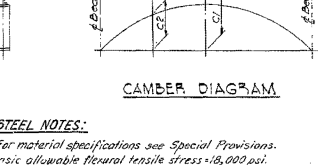
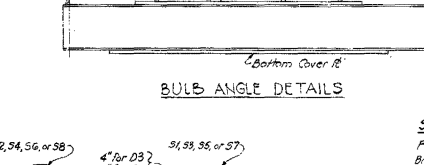
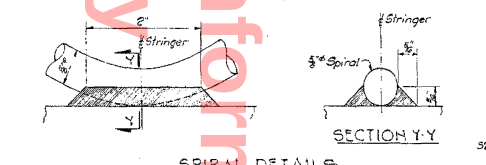
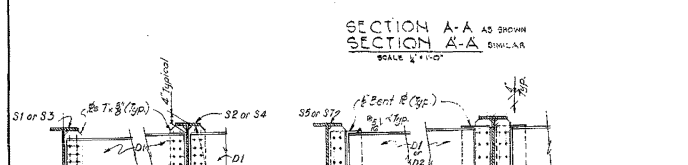
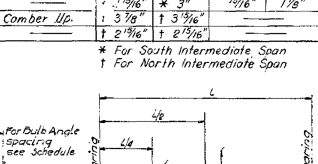
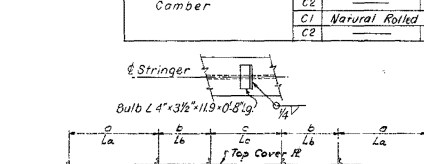
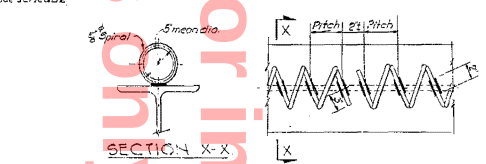
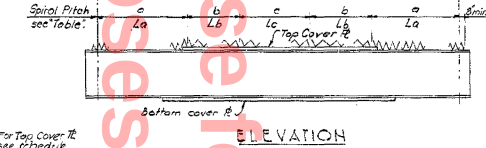
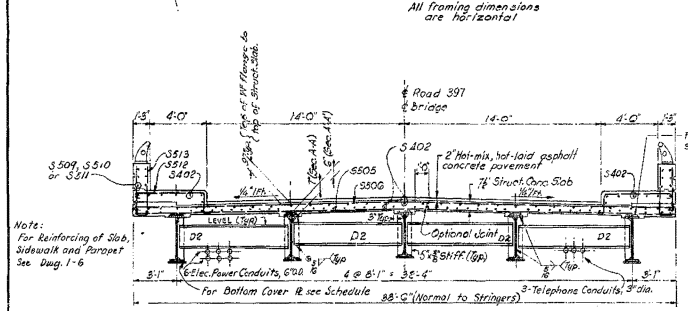
ABUTMENTS
SECTIONS, DETAILS AND PILE DETAILS

DESIGNED: S.L.T. SCALE: AS NOTED DATE: MAY 9, 1962 DWG: 1-4
TRACED: CHECKED: E.J.E. TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS CONTRACT 7002
CHARGE OF: SHEET 128 OF 224

COUNTY	CONTRACT	SPR. NO.	STATE	FOR HW PROJECT NO.	TICKET NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			129	224



SPAN	END SPANS								INTERIOR SPANS			
	SOUTH				NORTH				OVER TRP, ROADWAYS OVER TURNPIKE MALL			
	STRINGER MARK	S1	S2	S3	S4	S5	S6	S7	S8			
Max. Shear (Kips)	D.L. I	27.2	26.3	28.8	27.9	45.9	40.2	25.6	22.4			
	D.L. II	—	—	—	—	25.3	25.3	16.2	16.2			
	L.L.	34.8	38.1	35.6	39.0	42.3	46.4	38.9	42.6			
	I.	10.4	11.4	10.7	11.7	10.7	11.5	11.2	12.3			
	S.W. L.L.	5.7	—	6.0	—	13.0	—	8.2	—			
Moments (K-ft)	D.L. I	227	220	256	245	909	795	371	273			
	D.L. II	—	—	—	—	500	500	198	198			
	L.L.	224	246	249	272	736	807	397	435			
	I.	67	74	75	82	183	201	115	126			
	S.W. L.L.	48	—	54	—	248	—	98	—			
Structural Shape	Top Cover Plate	None	None	None	None	10" x 3/8"	10" x 3/8"	None	None			
	Bottom Cover Plate	None	None	None	None	14" x 2"	14" x 1 1/2"	None	13" x 1 1/2"			
	Unit (ksi)	Steel	Bottom	13.5	16.0	15.1	17.8	17.94	17.88	17.90	17.71	
Shear Connector	Spiral Pitch	a/b	—	—	—	4" 12" 0"	4" 12" 0"	4" 8" 0"	3" 6" 0"			
	Bulb Angle Spacing	a/b	—	—	—	6" 14" 0"	6" 14" 0"	6" 8" 0"	5" 10" 0"			
	Unit (ksi)	Steel	Top	13.5	16.0	15.1	17.8	17.40	17.66	17.90	17.71	
Camber	D1	Natural Rolled Camber Up	—	—	—	1/4"	1/4"	1/4"	1/4"			
	D2	Natural Rolled Camber Up	—	—	—	3/8"	3/8"	3/8"	3/8"			
	D3	Natural Rolled Camber Up	—	—	—	1/2"	1/2"	1/2"	1/2"			

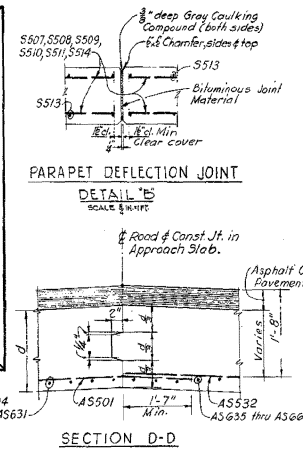
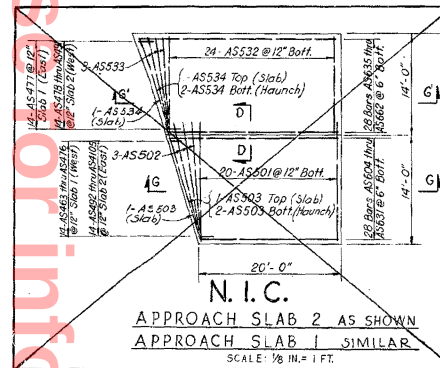
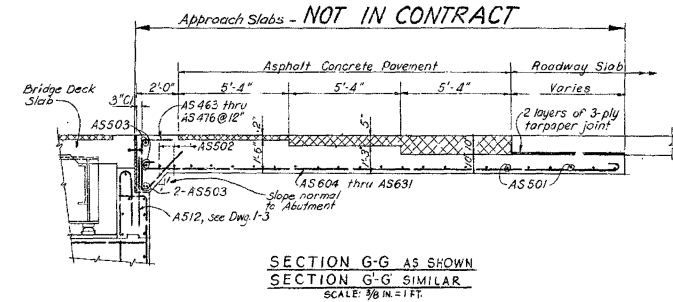
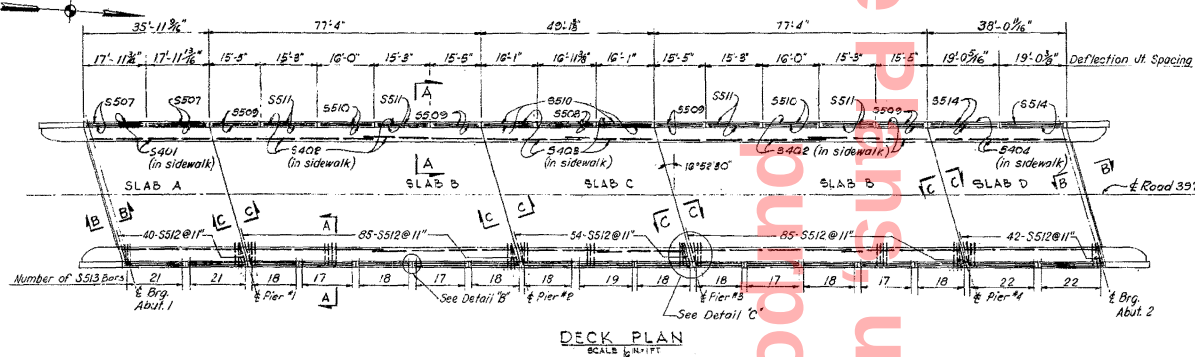


STEEL NOTES:
For material specifications see Special Provisions.
Basis allowable flexural tensile stress = 18,000 psi.
All stiffener plates and transverse framing members shall be vertical when stringers are in final erected position.
Contractor has the option of using either spirals or bulb angles where shear connectors are required for Nelson struts may be substituted with the approval of the Engineer. See Special Provisions.
Composite Construction: No intermediate temporary supports shall be used during construction. No superimposed dead loads shall be added before 7 days after concrete is poured.
Rolled beams shall have their rolled camber upward before welding of cover plates.
Field connections shall be made with 7/8" high strength bolts or rivets, unless otherwise indicated.
Painting: For Shop and Field painting see Standard Specifications and Special Provisions.

**DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE
ROAD 397 BRIDGE OVER TURNPIKE
SUPERSTRUCTURE
FRAMING AND DETAILS**

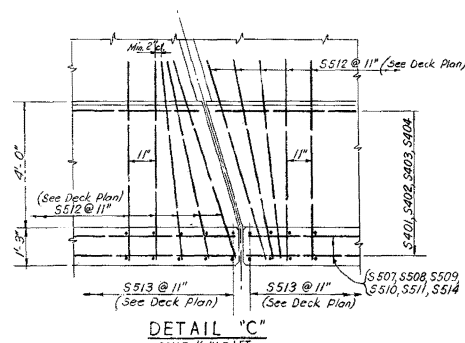
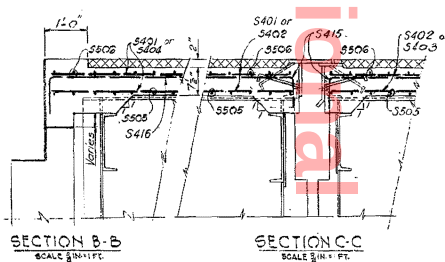
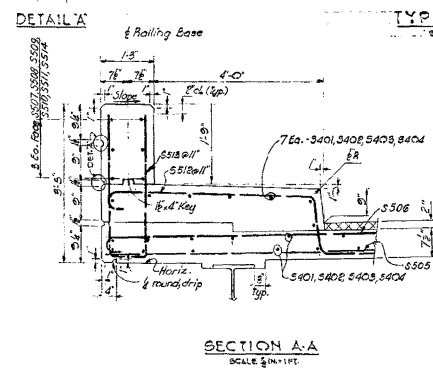
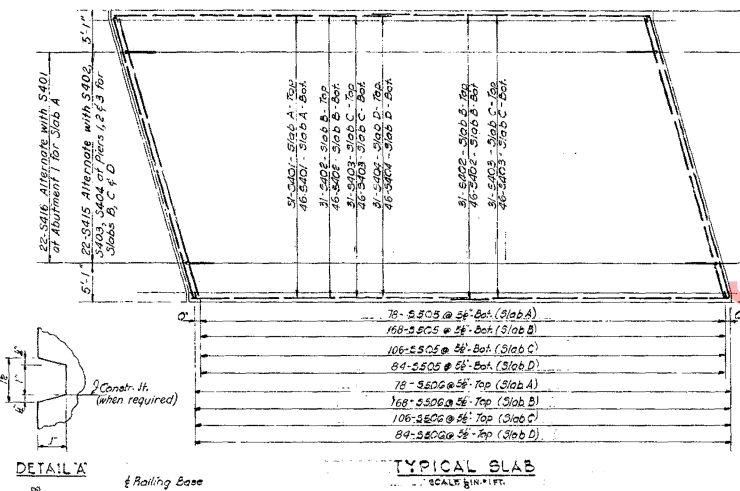
DRAWN: BM-A-T
CHECKED: F.J.F.
DATE: MAY 9, 1962
TIPPLETT-ABBETT-MCCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
CONTRACT 7002
SHEET 129 OF 224

COUNTY	CONTRACT	R.S. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			130	224



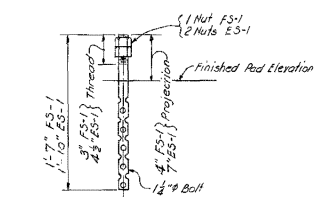
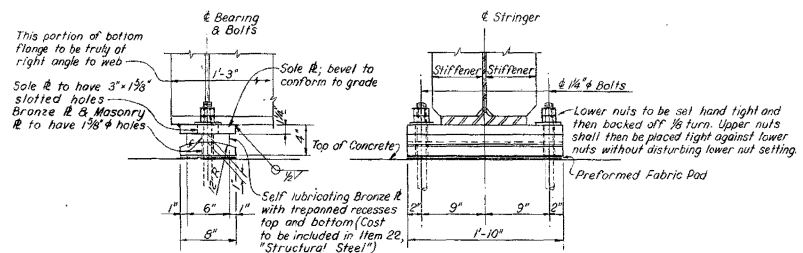
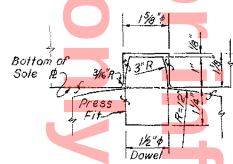
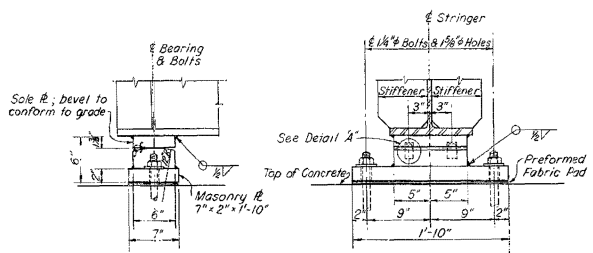
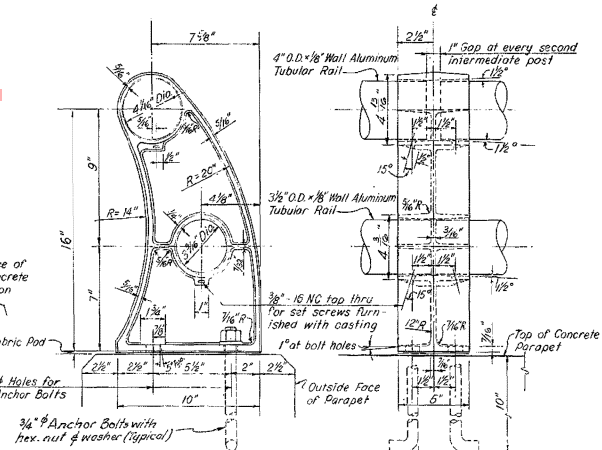
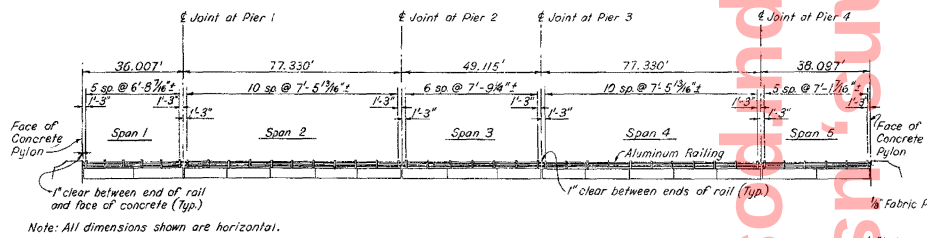
CONCRETE NOTES:
Concrete Water-reducing Retarder Admixture shall be added to all superstructure concrete (See Special Provisions). Splices for stress bars shall be a minimum of 30 diameters; all other splices a minimum of 20 diameters. Construction joints other than those shown will not be permitted without written approval of the Engineer. Exposed Concrete Edges shall be beveled 1 in. by 1 in., unless otherwise noted. Concrete Cover as per A.A.S.H.O., or as noted.
Cost of furnishing and placing all bituminous joint materials, joint seal, caulking compound, for paper, etc., and concrete water-reducing retarder admixture will be included in Item 13, "Portland Cement Concrete Masonry."

NOTES:
For transverse section through deck slab, see Dwg. I-5.
All parapet joints shall be perpendicular to fascia line.
For joint details, see Dwg. I-6.
For General Notes, see Dwg. I-1.



DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE	
ROAD 397 BRIDGE OVER TURNPIKE	
SUPERSTRUCTURE	
CONCRETE DECK AND APPROACH SLABS	
DRAWN: H.P.-AT SCALE: AS NOTED DATE: MAY 9, 1962 DWG. 1-6	CONTRACT 7002 ENGINEERS AND ARCHITECTS SHEET 130 OF 224

COUNTY	CONTRACT	F.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			131	224



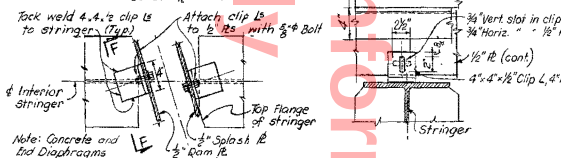
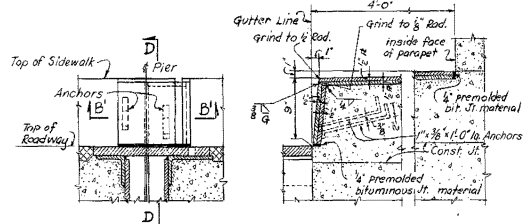
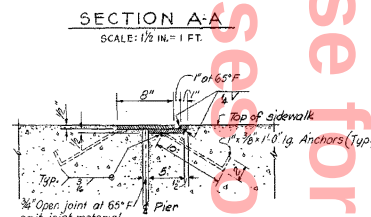
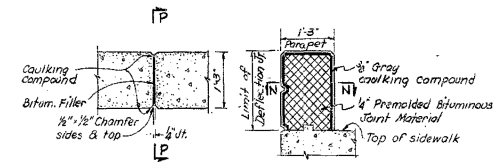
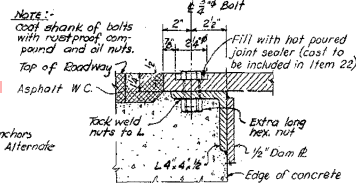
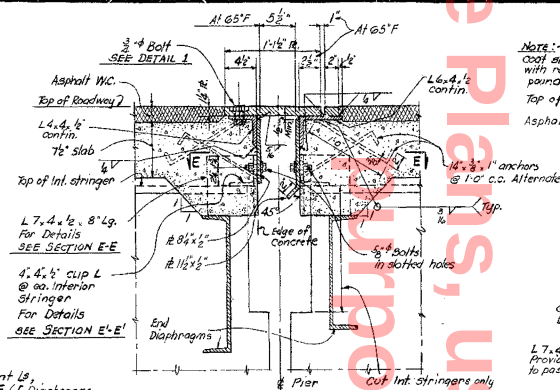
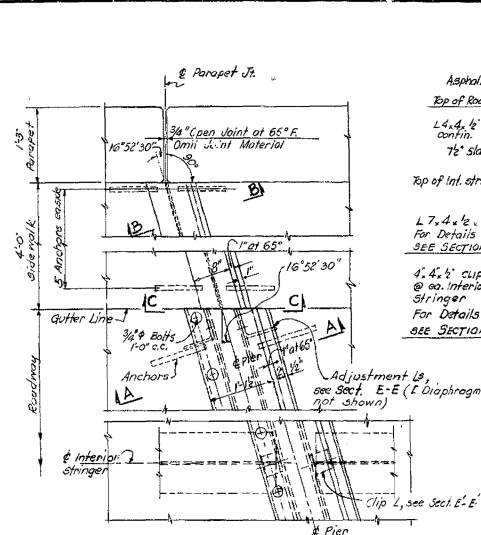
RAILING NOTES:
 Railing Posts shall be erected normal to grade and rails shall be parallel to established grade.
 Anchor Bolts shall be of aluminum alloy meeting the requirement of ASTM B241 alloy 2024-T4.
 Finished aluminum alloy bolts, nuts and washers shall be given an anodic coating of at least 0.0002 in. thick and a chromate seal.
 Anchor Bolts shall be set accurately by means of a template.
 After Nuts have been placed and tightened to the satisfaction of the Engineer, bolts shall be cut off 1/8" above nuts and peened.
 Tubular Rails shall be closed at all piers and abutments with welded aluminum plug.
 Rails shall be continuous at all end posts.
 Preformed Fabric Pads shall be 1/8" thick.

NOTES:
 Shoes to have vertical and horizontal &s mutually perpendicular at 65° F.
 For Steel Notes, see Drawing 1-5.

DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE			
ROAD 397 BRIDGE OVER TURNPIKE SUPERSTRUCTURE RAILING AND SHOE DETAILS			
DRAWN: A.T.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG: 1-7
TRACED:			CONTRACT 7002
CHECKED: E.L.E.	F. P. PLETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS		SHEET 131 OF 224
CHARGE OF:			

Archive Plans, use for informational purposes only

COUNTY	CONTRACT	D.A.D. REV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			132	224

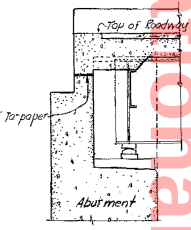
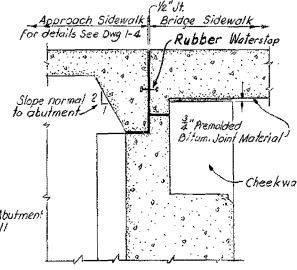
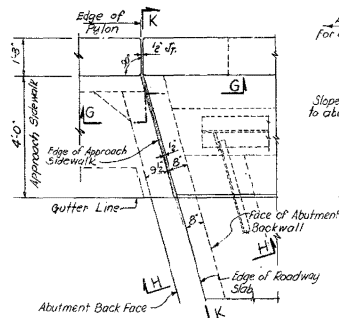


SECTION C-C
SCALE: 1 1/2 IN. = 1 FT.

SECTION D-D
SCALE: 1 1/2 IN. = 1 FT.

SECTION E-E
SCALE: 1 1/2 IN. = 1 FT.

SECTION F-F
SCALE: 1 1/2 IN. = 1 FT.



SECTION G-G
SCALE: 1/2 IN. = 1 FT.

SECTION H-H
SCALE: 1/2 IN. = 1 FT.

PLAN AT ABUTMENT JOINT
SCALE: 1/2 IN. = 1 FT.

NOTES:
Top of Expansion Joint detail to conform to roadway cross section.
For location of Parapet Deflection Joints, see Drawing I-6.
For General Notes, see Drawing I-1.
For Concrete Notes, see Drawing I-6.
For Steel Notes, see Drawing I-5.
Cost of furnishing & placing joint details at Piers shall be included in Item 22, "Structural Steel."
Cost of furnishing & placing joint details at abutments including water stops, shall be included in Item 18, "Portland Cement Concrete Masonry."

DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE			
ROAD 397 BRIDGE OVER TURNPIKE SUPERSTRUCTURE JOINT DETAILS			
DRAWN: W.K.A.	SCALE: AS NOTED	DATE: MAY 3, 1962	DWG.: I-8
TRACED:	TIPPETS-ABBETT-MCCARTHY-STRATTON ENGINEERS AND ARCHITECTS		CONTRACT 7002
CHECKED: F.J.F.			SHEET 132 OF 224
CHARGE OF			

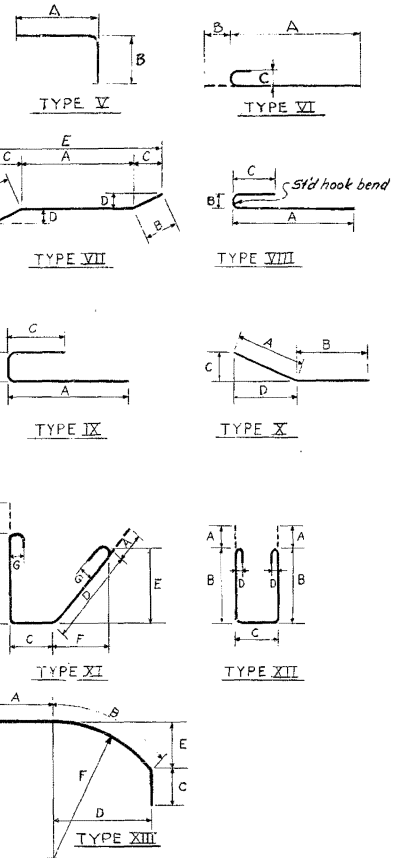
Archive
For informational purposes only

REINFORCING BAR SCHEDULE

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
A 601	6	166	6'-2"	VI	5'-6"	0'-8"	0'-6"					Footings
A 502	5	8	4'-3-5"	Str.								
A 503	5	3	9'-6"	Str.								
A 504	5	98	5'-6"	Str.								
A 605	6	14	4'-3-5"	Str.								
A 506	5	28	8'-0"	Str.								
A 507	5	16	8'-9"	Str.								
A 608	6	28	8'-9"	Str.								
A 509	5	8	7'-0"	Str.								
A 510	5	70	8'-9"	Str.	5'-4"	3'-5"						
A 511	5	8	40'-3"	Str.	3'-7"	1'-4"	1'-3/4"	0'-4"	4'-0"			
A 512	5	74	3'-2"	Str.								
A 513	5	74	9'-2"	Str.	8'-0"	1'-2"						
A 514	5	22	10'-0"	Str.								
A 515	5	78	7'-4"	Str.	4'-10"	0'-5"	2'-4"					
A 516	5	12	4'-0"	Str.								
A 517	5	60	3'-10"	Str.	7'-0"	10'-10"	5'-2"					
A 518	5	6	13'-0"	Str.	7'-0"	10'-10"	5'-2"					
A 519	5	3	12'-8"	Str.	6'-9"	0'-10"	5'-1"					
A 520	5	3	13'-6"	Str.	7'-2"	0'-10"	5'-6"					
A 521	5	18	7'-10"	Str.								
A 522	5	6	7'-4"	Str.								
A 523	5	2	2'-2" thru 5'-11"	Str.								
A 524	5	2	Δ=1'-3-2"	Str.								
A 525	5	1	1'-9" thru 5'-6"	Str.								
A 526	5	1	Δ=1'-3-2"	Str.								
A 527	5	1	2'-2" thru 5'-11"	Str.								
A 528	5	1	Δ=1'-3-2"	Str.								
A 529	5	20	5'-9"	Str.								
A 530	5	4	4'-6" thru 5'-6"	Str.								
A 531	5	8	Δ=4"	Str.								
A 532	5	8	4'-11"	Str.	3'-0"	1'-11"	0'-8"	2'-11"				
A 533	5	1	12'-2" thru 12'-4"	Str.								
A 534	5	1	Δ=1/2"	Str.								
A 535	5	1	11'-10" thru 12'-0"	Str.								
A 536	5	1	Δ=1/2"	Str.								
A 537	5	5	12'-2"	Str.								
A 538	5	5	12'-3"	Str.								
A 539	5	1	11'-9"	Str.								
A 540	5	3	12'-1"	Str.								
A 541	5	1	6'-7" thru 9'-7"	Str.								
A 542	5	1	Δ=18"	Str.								
A 543	5	1	6'-1" thru 9'-1"	Str.								
A 544	5	1	Δ=18"	Str.								
A 545	5	2	6'-5" thru 9'-5"	Str.								
A 546	5	2	Δ=18"	Str.								
A 547	5	4	8'-0" thru 11'-4"	Str.								
A 548	5	4	Δ=10"	Str.								
A 549	5	6	11'-10"	Str.								
A 550	5	12	8'-9"	Str.								
A 551	5	4	5'-3"	Str.								
A 552	5	4	5'-8" thru 9'-5"	Str.								
A 553	5	4	Δ=9"	Str.								
A 554	5	20	4'-0"	Str.								
A 555	5	4	8'-0" thru 8'-5"	Str.								
A 556	5	4	Δ=2 1/2"	Str.								
A 557	5	4	4'-7"	Str.								
A 558	5	16	5'-2"	Str.								
A 559	5	16	3'-7" 1'-7"	Str.								
A 4133	4	52	6'-8"	IX	2'-5"	1'-10"	2'-5"					
A 4134	4	24	6'-10"	IX	2'-4"	2'-2"	2'-4"					
A 4135	4	4	6'-9"	IX	2'-5"	1'-11"	2'-5"					
A 4136	4	16	6'-3"	IX	3'-11"	2'-4"						

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
A 683	6	22	7'-5"	Str.	4'-10"	2'-7"						All Approach Sidewalks
A 684	6	2	7'-5" thru 5'-6"	Str.	4'-10"	2'-7"						
A 696	6	2 Ea.	*Δ Cut bar to fit Sidewalk Radius	Str.	2'-11"	2'-7"						
A 697	6	2 Ea.	7'-5" thru 5'-6"	Str.	4'-10"	2'-7"						S.E. & N.W. Approach Sidewalks
A 6104	6	2 Ea.	*Δ Cut bar to fit Sidewalk Radius	Str.	2'-11"	2'-7"						
A 4105	4	8	4'-10"	Str.								All Approach Sidewalks
A 4106	4	2 Ea.	4'-10" thru 2'-11"	Str.								All Approach Sidewalks
A 4109	4	2 Ea.	Δ= 7/4" ±	Str.								
A 4110	4	2 Ea.	4'-10" thru 2'-11"	Str.								All Approach Sidewalks
A 4111	4	2 Ea.	Δ= 3 3/8" ±	Str.								
A 4117	4	10	7'-9"	Str.								S.E. & N.W. App. Sidewalks
A 4118	4	4	6'-6"	Str.								S.E. & N.W. App. Sidewalks
A 4119	4	10	8'-3"	Str.								S.W. & N.E. App. Sidewalks
A 4120	4	4	7'-0"	Str.								S.W. & N.E. App. Sidewalks
A 4121	4	8	5'-2"	Str.								All Approach Sidewalks
A 4122	4	8	6'-4"	Str.	0'-5"	12'-5"	0'-6"	2'-7"	2'-5"	1'-1/8"	0'-3"	S.W. & N.W. App. Sidewalks
A 3123	3	4	7'-1"	Str.	0'-5"	12'-9"	0'-6"	3'-0"	2'-9"	1'-5/8"	0'-3"	S.E. Approach Sidewalks
A 3124	3	4	6'-3"	Str.	0'-5"	12'-1/2"	0'-6"	2'-6"	2'-4"	1'-1"	0'-3"	S.E. Approach Sidewalks
A 3125	3	15	4'-0"	Str.	2'-9"	1'-5"						All Approach Sidewalks
A 3126	3	42	5'-8"	Str.	0'-5"	2'-1"	0'-8"	0'-3"				All Approach Sidewalks
A 5128	5	4	10'-10"	Str.	2'-6"	7'-3"	1'-1"	6'-7"	2'-1"	1'-9/8"		S.W. & N.E. Sidewalks
A 5129	5	4	9'-0"	Str.	2'-6"	6'-0"	0'-6"	5'-3"	1'-7"	1'-2"		S.W. & N.E. Sidewalks
A 5130	5	4	8'-9"	Str.	2'-9"	4'-11"	1'-1"	4'-2"	2'-1"	5'-3/8"		S.E. & N.W. Sidewalks
A 5131	5	4	7'-4"	Str.	2'-9"	4'-1"	0'-6"	3'-4"	1'-7"	4'-8"		S.E. & N.W. Sidewalks

COUNTY	CONTRACT	P.A. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			135	224



NOTES:
For additional bar types, see Dwg. I-11.
All bar dimensions are out to out.
For Concrete Notes, see Dwg. I-G.

DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE
ROAD 397 BRIDGE OVER TURNPIKE
REINFORCING BAR SCHEDULE
ABUTMENTS

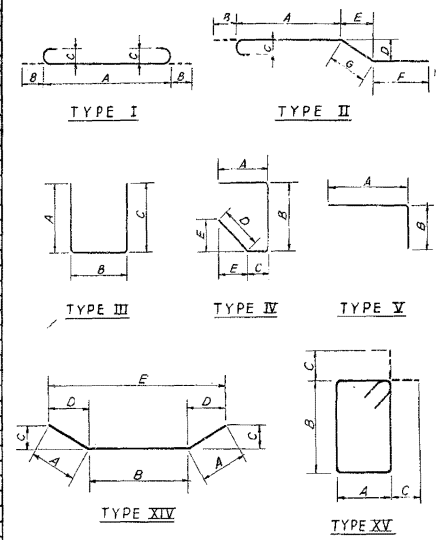
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Plans, use for informational purposes only

COUNTY	CONTRACT	SHEET NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			134	224

REINFORCING BAR SCHEDULE

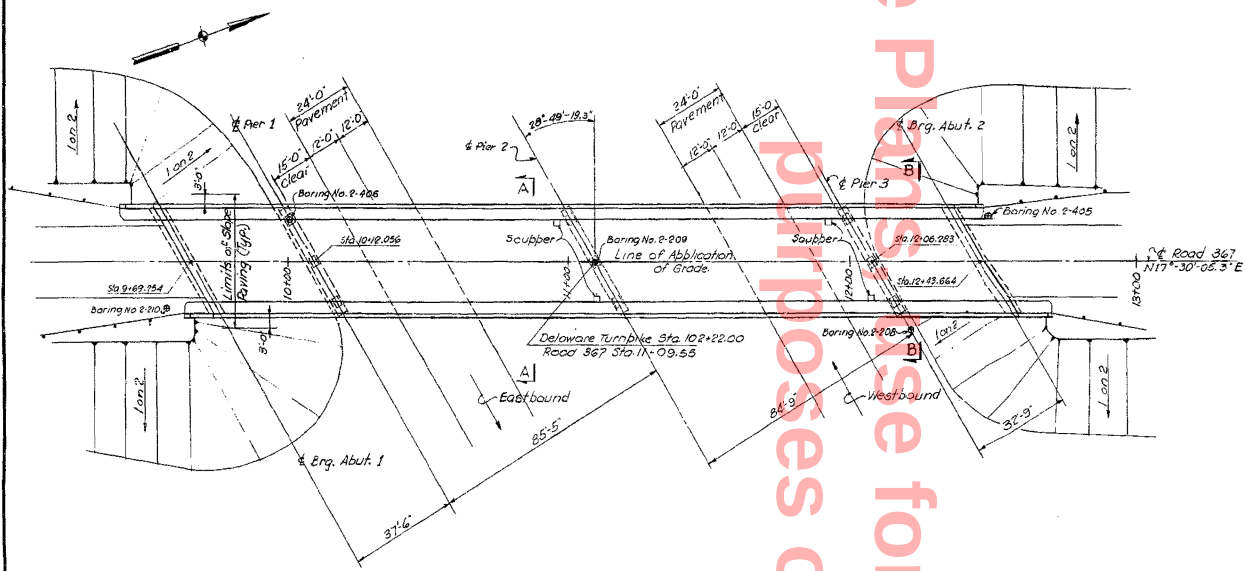
MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S 401	4	91	35'-4 1/2"	Straight								
S 402	1	364	39'-0"									
S 403	1	182	24'-9"									
S 404	4	91	37'-5 1/2"									
S 505	5	604	39'-6"	Straight								
S 506	1	604	40'-8"									
S 507	1	24	17'-6 1/2"	Straight								
S 508	12	12	16'-6 1/2"									
S 509	48	48	15'-0"									
S 510	48	48	15'-7"									
S 511	48	48	14'-10"									
S 512	612	612	8'-13 3/4"	Straight								
S 513	1	634	7'-1"									
S 514	5	24	18'-7 1/4"									
S 415	4	176	5'-8 1/2"									
S 416	4	44	7'-10"									
AS-501	5	40	15'-5"	Straight								
AS-502	5	6	12'-8"									
AS-503	5	8	16'-1"									
AS-604	6	2 Ea	22'-0" thru 26'-3"									
AS-631	6	2 Ea	22'-0" thru 26'-3"									
AS-532	5	48	12'-8"	Straight								
AS-533	5	6	7'-5"									
AS-534	5	9	14'-3 1/2"									
AS-635	6	2 Ea	26'-2 1/2" thru 30'-5 1/2"									
AS-632	6	2 Ea	26'-2 1/2" thru 30'-5 1/2"									
AS-463	4	1 Ea	5'-7" thru 6'-7"									
AS-476	4	1 Ea	5'-7" thru 6'-7"									
AS-477	4	1 Ea	5'-7" thru 6'-7"									
AS-478	4	1 Ea	5'-7" thru 6'-7"									
AS-491	4	1 Ea	5'-7" thru 6'-7"									
AS-492	4	1 Ea	5'-7" thru 6'-7"									
AS-495	4	1 Ea	5'-7" thru 6'-7"									
P 1001	10	8	36'-8"	Straight								
P 1002	10	40	10'-2"	Straight								
P 803	8	8	37'-3"									
P 1004	10	16	9'-10"	Straight								
P 405	4	240	11'-1"									
P 406	16	16	10'-8"									
P 407	16	16	10'-3"									
P 408	16	16	9'-10"									
P 409	16	16	9'-5"									
P 410	16	16	9'-0"									
P 411	16	16	8'-7"									
P 412	16	16	8'-2"									
P 313	3	480	6'-11"									
P 314	3	234	7'-10"									
P 515	5	8	36'-8"	Straight								
P 516	5	8	34'-2"	Straight								
P 417	4	80	7'-0"									
P 418	4	120	8'-2"									
P 1119	11	36	21'-10"	Straight								
P 1120	11	36	23'-8"									
P 1121	11	36	24'-4"									
P 1122	11	36	24'-1"	Straight								
P 1123	11	144	7'-6"									
P 824	8	88	37'-6"	Straight								
P 825	8	80	13'-3"	Straight								
P 826	8	256	10'-0"	Straight								



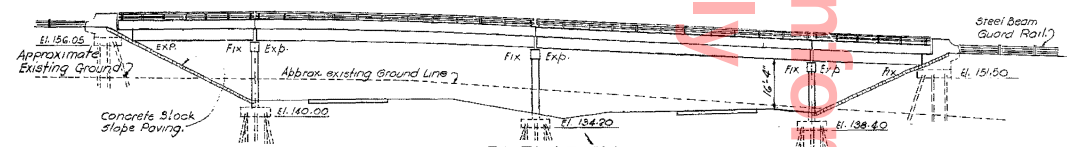
NOTES:
For additional bar types, see Dwg. I-10.
All bar dimensions are out to out.
For Concrete Notes, see Dwg. I-6.

DELAWARE STATE HIGHWAY DEPARTMENT	
DELAWARE TURNPIKE	
ROAD 397 BRIDGE OVER TURNPIKE	
REINFORCING BAR SCHEDULE	
DECK AND APPROACH SLABS - PIERS	
DRAWN: R.P.	SCALE: 1"=1'-0"
TRACED: A.T.	DATE: MAY 5, 1982
CHECKED: E.J.E.	DWG.: I-11
CHARGE OF:	CONTRACT 7002
	TIPPLETT-ABBETT-McCARTHY-STRATTON
	ENGINEERS AND ARCHITECTS
	SHEET 134 OF 224

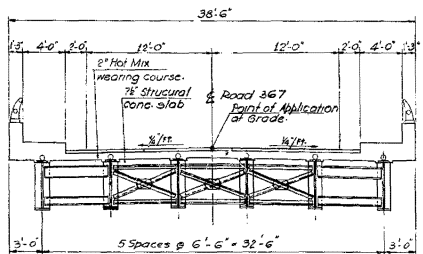
COUNTY	CONTRACT	P.A. NO.	STATE	PER. AIR PROJECT NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.		135	224



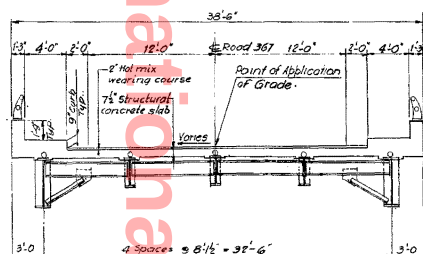
PLAN
SCALE 1" = 20'-0"



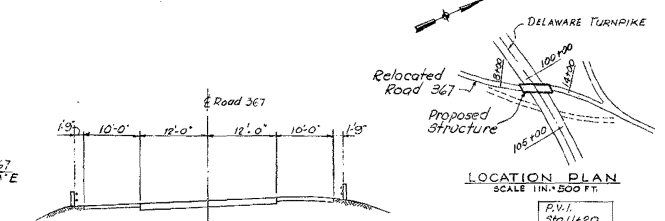
ELEVATION
SCALE 1" = 20'-0"



SECTION A-A
SCALE 1/2" = 1'-0"

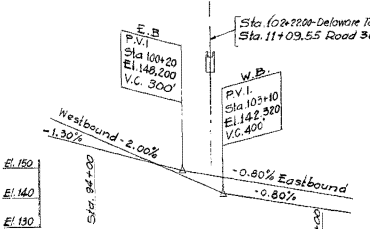


SECTION B-B
SCALE 1/2" = 1'-0"



LOCATION PLAN
SCALE 1" = 500 FT.

APPROACH SECTION
SCALE 1" = 10'-0"



DELAWARE TURNPIKE
SCALE 1" = 40'-0"

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
6	Excavator for Structures	C.Y.	800
7	Select Borrow - Grade "A"	C.Y.	550
11	Hotmix, Hot-laid Asphaltic Conc. Pvm.	Tons	92
11	R-1 Asphalt Tack Coat	Gal.	184
* Portland Cement Concrete Masonry			
18	Footings	C.Y.	207
	Substructure	C.Y.	228
	Superstructure	C.Y.	440
19	Superficial Waterproofing	S.Y.	115
20	Bar Reinforcement	Lbs.	143,500
22	Structural Steel (Approx. Wt. 319,000 lbs.)	Lbs.	
31	6" perforated Cor. Metal Pipe Underdrain	L.F.	130
	Steel Bearing Piles, 12 BP53	L.F.	2,140
	Steel Pile Load Test	Each	One
	Aluminum Railing - Double Rail	L.F.	558
	Bridge Catch Basins	L.S.	
	Bridge Drainage	L.S.	
	Slope Paving	S.Y.	460
	Coal Tar Epoxy Underseal	S.F.	875
	Protective Coating for Concrete	S.F.	947

* indicates Fixed Quantity Item, see Proposal.

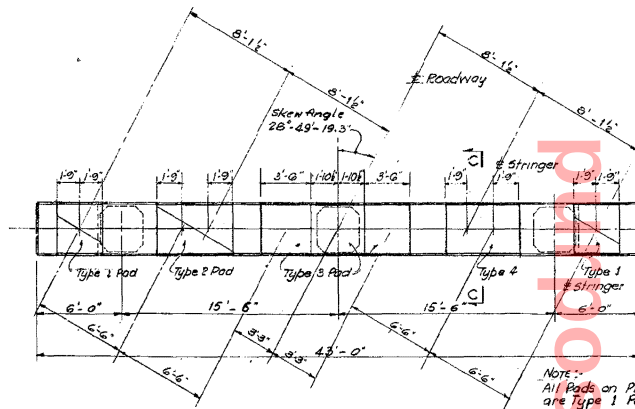
GENERAL NOTES

Design Specifications: A.A.S.H.O. 1957, and Standard Specifications for Welded Highway and Railway Bridges of the American Welding Society.
Material and Fabrication Specifications: State of Delaware, State Highway Department Standard Specifications, July 1, 1960 and as given in the Special Provisions.
Loading: A.A.S.H.O. H-20-S-16-44.
Design Stresses: Structural and Reinf. Steel: 18,000 psi.
Reinforced Conc.: 4,000 psi.
Composite Construction: No intermediate temporary supports shall be used during construction.
Fill at abutment shall be placed to an elevation one foot above bottom of concrete footing before starting footing excavation and pile driving.
Backfill behind abutments to be placed only after bridge deck slab has been completed.
Minimum waiting period before loads are permitted on the bridge after completion of the bridge deck slab: 10 days for loads of 5 tons to 10 tons, and 28 days for loads of 2 tons to the legal load limit.
For steel Notes see Dwg. No. 2-5
For Concrete Notes see Dwg. No. 2-7
For Pile Notes see Dwg. No. 2-3
For Boring Logs see Sheet 208

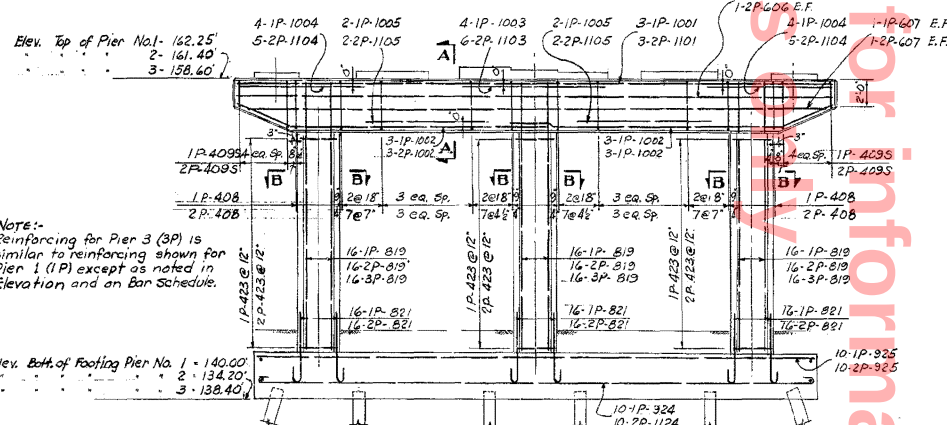
DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE ROAD 367 BRIDGE OVER TURNPIKE GENERAL ARRANGEMENT

DRAWN: W.K.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG. 2-1
TRACED:			
CHECKED: B.S.	TIPPETTS-ABBETT-McCARTHY-STRATTON	CONTRACT	7002
CHARGE OF:	ENGINEERS AND ARCHITECTS		SHEET 135 OF 224

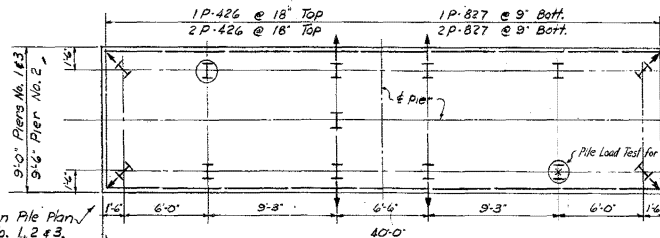
COUNTY	CONTRACT	P.A.A. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			136	224



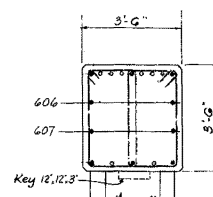
PLAN
SCALE: 1/4" = 1 FT.



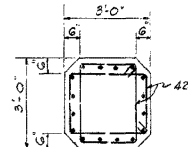
ELEVATION
SCALE: 1/4" = 1 FT.



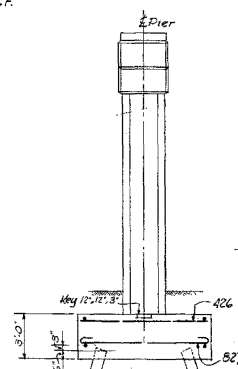
PILE PLAN PIERS NO. 1 & 3
SCALE: 1/4" = 1 FT.



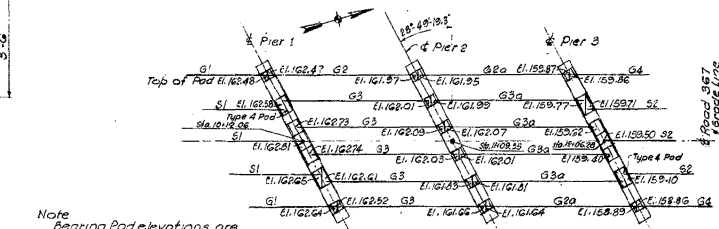
SECTION A-A
SCALE: 1/2" = 1 FT.



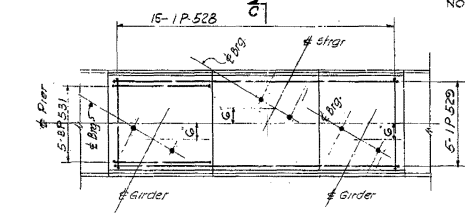
SECTION B-B
SCALE: 1/2" = 1 FT.



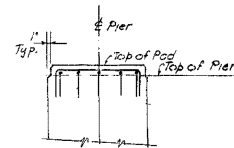
END VIEW
SCALE: 1/4" = 1 FT.



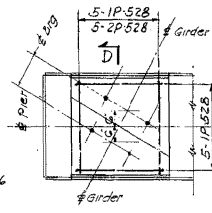
KEY PLAN
NO SCALE



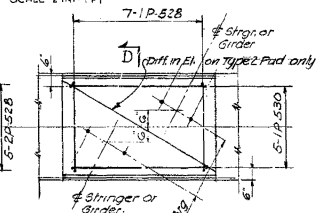
TYPE 3 PAD
SCALE: 1/2" = 1 FT.



SECTION C-C
SCALE: 1/2" = 1 FT.

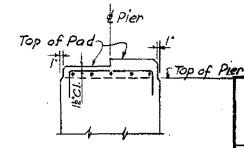


TYPE 1 PAD
SCALE: 1/2" = 1 FT.

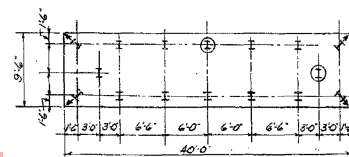


TYPE 2 PAD
SCALE: 1/2" = 1 FT.

NOTES:
For General Notes see Div. No. 2-1
For Concrete Notes see Div. No. 2-7
For Pile Schedule, Pile Notes and Pile Details see Div. No. 2-8
For Anchor Bolts see Div. No. 2-5
For Reinforcing Bar Schedule see Div. No. 2-11 to 2-13



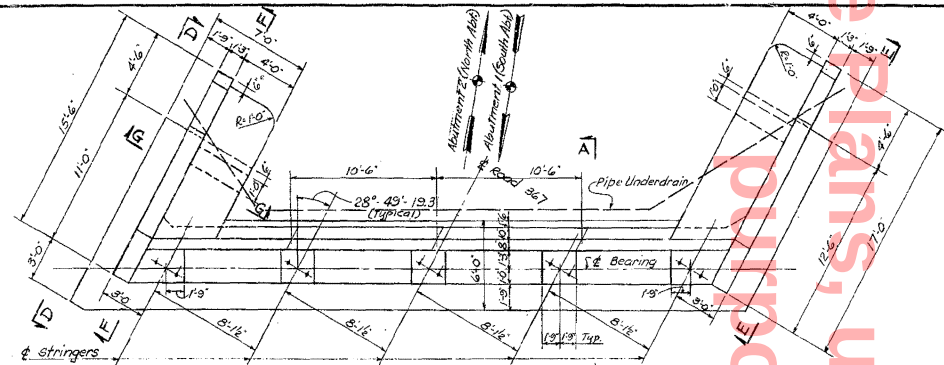
SECTION D-D
SCALE: 1/2" = 1 FT.



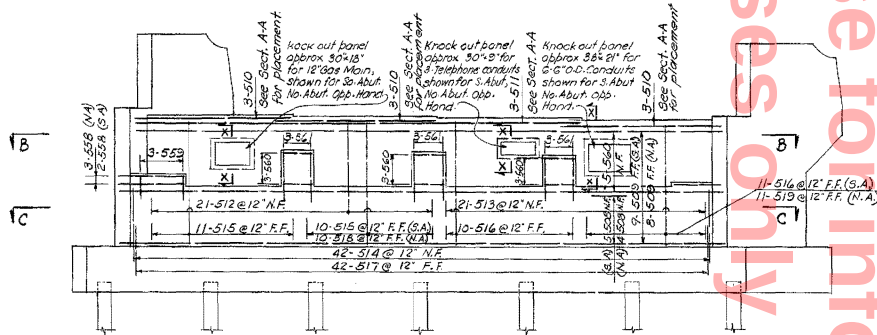
PILE PLAN - PIER NO. 2
SCALE: 1/8" = 1 FT.

DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE
ROAD 367 BRIDGE OVER TURNPIKE
PIERS

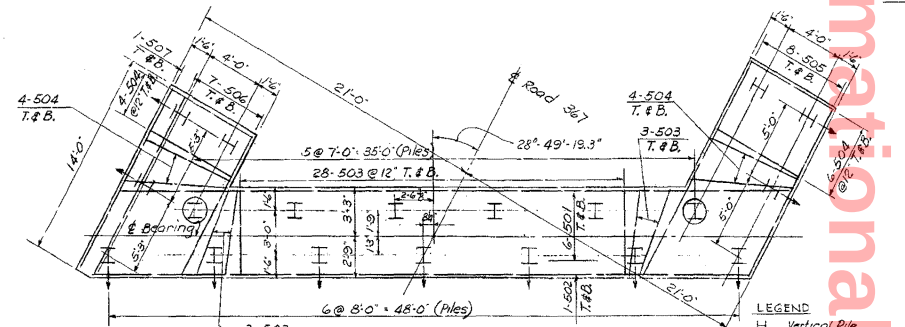
DRAWN: W.K.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG. NO.: 2-2
CHECKED: T.K.	TIPPITS-ABBETT-McCARTHY-STRATTON	ENGINEERS AND ARCHITECTS	CONTRACT 7002
CHARGE OF:			SHEET 136 OF 224



PLAN
SCALE 4" IN. = 1 FT.

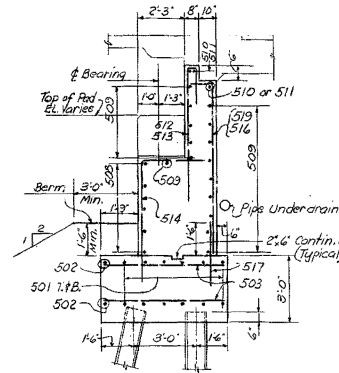


ELEVATION
SCALE 4" IN. = 1 FT.

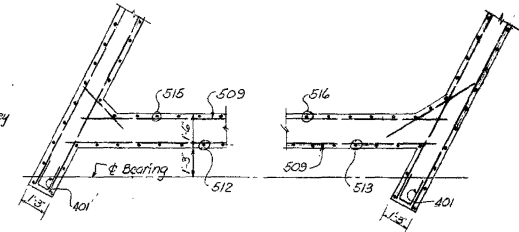


FOOTING PLAN
SCALE 1/2" IN. = 1 FT.

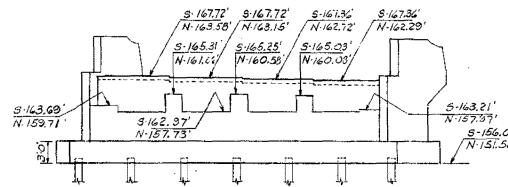
LEGEND
 V Vertical Pile
 B Battered Pile (tan 4)
 T Test Pile
 L Pile Load Test



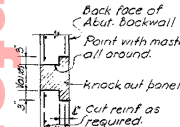
SECTION A-A
SCALE 3/8" IN. = 1 FT.



SECTION B-B
SCALE 3/8" IN. = 1 FT.



ABUTMENT ELEVATIONS



SECTION X-X

5' indicates South Abmt.
 N' North
 SCALE 1/2" IN. = 1 FT.
 Note: Bearing Pile L's are given to top of concrete. Pile to be poured 1/2" higher and then bush-hammered to elevation shown.

PILE SCHEDULE		
LOCATION	CAPACITY IN TONS	ESTIM. LENGTH
Abut. 1	35*	30'
Abut. 2	35*	40'
Pier 1	50	25'
Pier 2	50	10'
Pier 3	50	25'

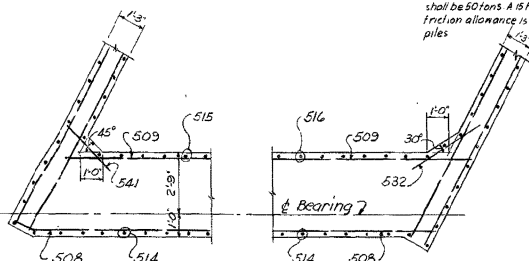
NOTE: All piles 12 P 85 S.
 * The total capacity of all piles shall be 50 tons. A 10 ton negative skin friction allowance is made for Abut. piles.

H PILE DETAILS

PILE NOTES

Pile Driving: Single-acting Pile Driver with adjustable head; 13000 ft-lb minimum driving energy. Actual pile lengths to be determined by test piles. Pile load tests shall be at a test pile location as shown on the plans. All obstructions within 15 feet below original ground surface of the abutments and 15 feet below the bottom of the pile cap of the piers shall be overcome by methods approved by the engineer to allow advancing the piles beyond such obstruction.

For General Notes See Dwg. No. 2-1
 For Concrete Notes See Dwg. No. 2-7
 For Anchor Bolts see Dwg. No. 2-6
 For Reinf. Bar Schedule see Dwg. Nos. 2-11 to 2-13
 Work this drawing with Dwg. No. 2-4



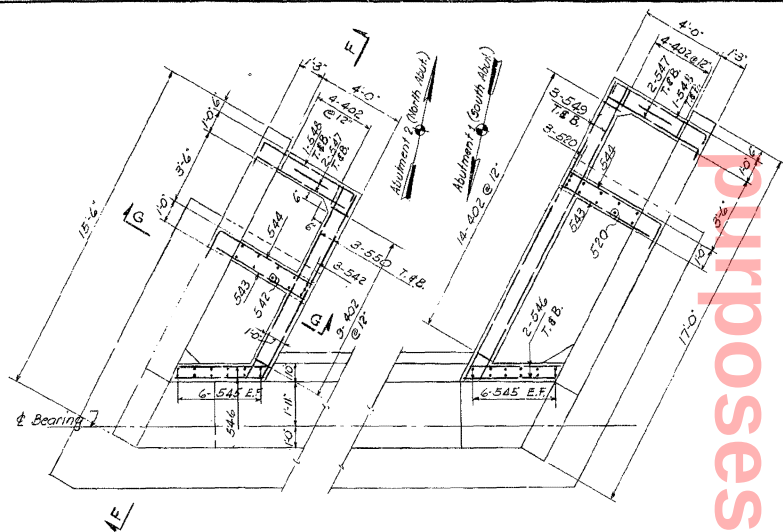
SECTION C-C
SCALE 3/8" IN. = 1 FT.

DELAWARE STATE HIGHWAY DEPARTMENT
 DELAWARE TURNPIKE
 ROAD 367 BRIDGE OVER TURNPIKE
 ABUTMENTS

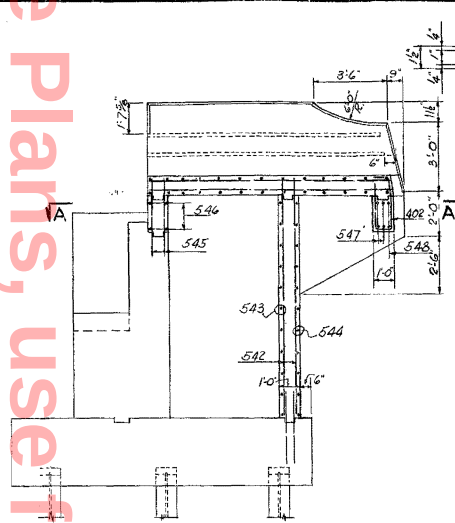
DRAWN: W.K.
 TRACED:
 CHECKED: B.S.
 SCALE AS NOTED
 DATE: MAY 9, 1962
 DWG: 2-3
 CONTRACT 7002
 SHEET 137 OF 224

Archive Plans, use for informational purposes only

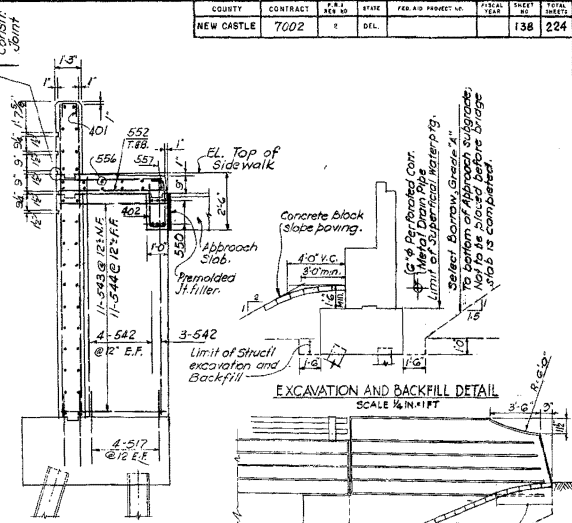
COUNTY	CONTRACT	F.S. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			138	224



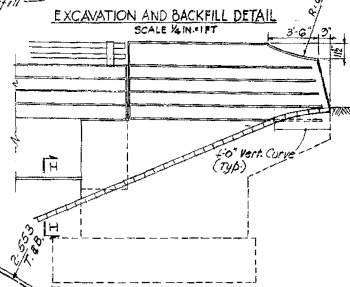
PLAN
SIDEWALK FRAMING
SCALE 3/8 IN. = 1 FT.



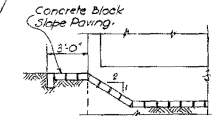
SECTION F-F
SCALE 3/8 IN. = 1 FT.



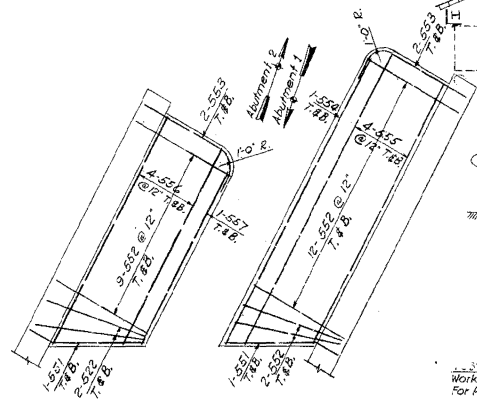
SECTION G-G
SCALE 3/8 IN. = 1 FT.



WINGWALL ELEVATION
SCALE 1/4 in. = 1 ft.



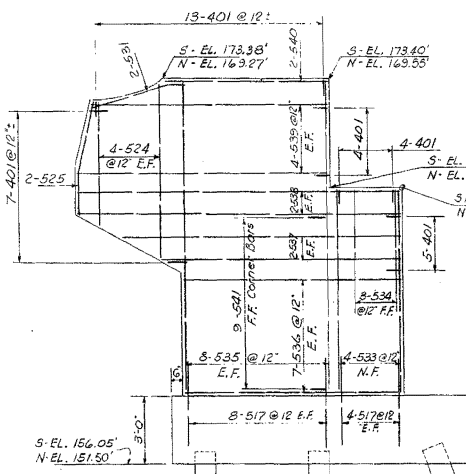
SECTION H-H
NO SCALE



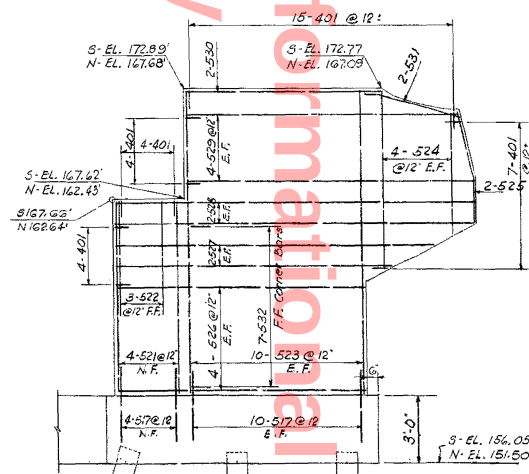
PLAN
SIDEWALK REINFORCING
SCALE 3/8 IN. = 1 FT.

Work this drawing with Dwg. No. 2-3
For Reinf. Bar Schedule see Dwg. Nos. 2-11 to 2-13

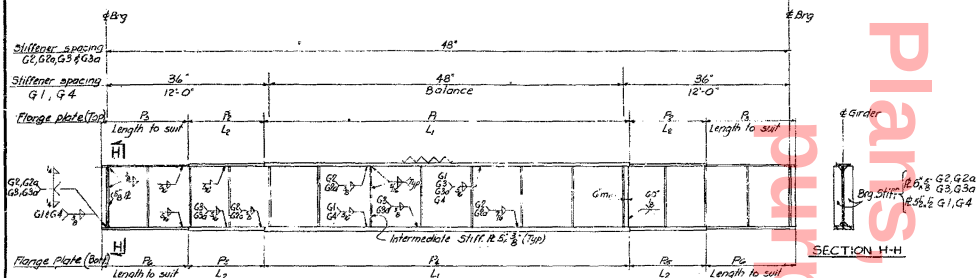
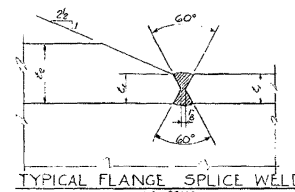
DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE ROAD 367 BRIDGE OVER TURNPIKE ABUTMENT DETAILS			
DRAWN: W.J.K.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG. 2-4
TRACED:			
CHECKED: B.S.	TIPPETTS-ABBETT-MCCARTHY-STRATTON ENGINEERS AND ARCHITECTS		CONTRACT 7002
CHARGE OF:			SHEET 138 OF 224



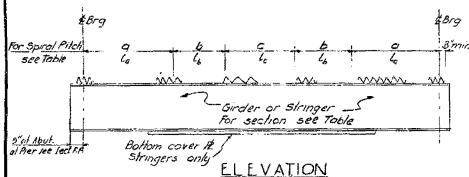
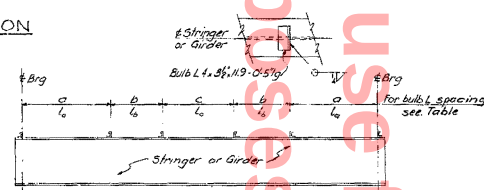
ELEVATION D-D
SCALE 3/8 IN. = 1 FT.



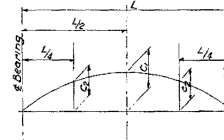
ELEVATION E-E
SCALE 3/8 IN. = 1 FT.

GIRDER ELEVATION

TYPICAL FLANGE SPLICE WELD

ELEVATION

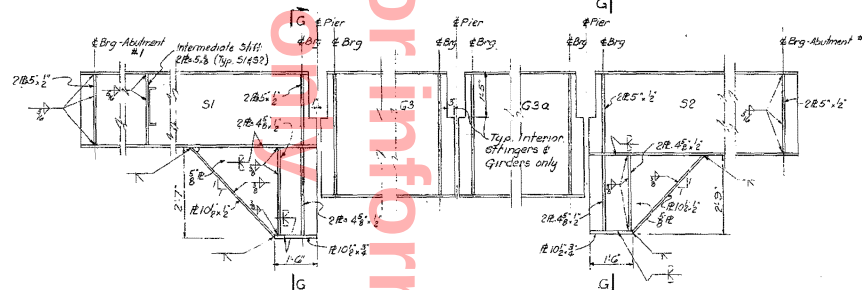
BULB ANGLE DETAILS



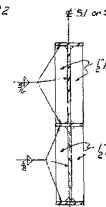
CAMBER DIAGRAM

STRINGER SCHEDULE								
		S1	S2	G1	G2	G3	G4	
REACTION I/O'S	DL - I	190	16.8	22.0	49.9	45.6	19.8	
	DL - E	11.3	9	17.4	22.9	25	12.4	
	LL	41.4	39.7	37.6	37.8	38.4	39.0	
	I	12.4	11.9	11.2	8.4	8.2	10.8	
	SW-LL				16.5		6.3	
	DL - I	206	15.8	22.9	190.0	103.0	17.4	
MOVEMENT I/O'S	DL - E	11.9	9	17.9	55.4	55.5	9.0	
	LL	36	29.0	32.8	84.6	86.8	26.3	
	I	10.8	8.7	5.8	19.0	19.5	7.9	
	SW-LL			7.5	40.0		.57	
	SHAPE	30W10B	30W10B					
	BOTTOM COVER #	1F, 2F, 30S		SEE TABLE BELOW				
SPREADSHEET KEY	STEEL - BOTTOM	1.7	1.7	15.0	18.0	18.0	11.6	
	STEEL - TOP	1.7	1.7	7.5	12.7	17.6	5.7	
	SPIRAL	OK	4' 10"	4' 9"	7' 11"	10' 0"	6' 12"	7' 10"
	PITCH	BL	5' 10"	7' 6"	11' 4"	11' 14"	11' 14"	12' 3"
	C/L	11' bearing	11' bearing	16' bearing	16' bearing	16' bearing	16' bearing	
	BULB	OK	9' 16"	11' 9"	17' 11"	13' 22"	15' 22"	17' 10"
SHARP CORNER C/C	ANGLE	BL	12' 10"	17' 10"	26' 4"	18' 14"	29' 15"	
	SPACING	C/L	26' bearing	26' bearing	23' bearing	28' bearing	28' bearing	38' bearing
	CAMBER	C ₁	%	%	%	%	%	%
		C ₂	%	%	%	%	%	%
		C ₃	%	%	%	%	%	%
		C ₄	%	%	%	%	%	%

GIRDER MARK	WEB PLATE	FLANGE PLATES							
		P	L	P	P	L	P	P	P
G1	48. $\frac{9}{16}$	12. $\frac{1}{2}$	Full Length	12. $\frac{3}{4}$					
G2G2a	48. $\frac{9}{16}$	12. $\frac{1}{2}$	52.0	16. $\frac{25}{32}$	12. $\frac{1}{2}$	11.0	16. $\frac{17}{32}$	12. $\frac{1}{2}$	16. $\frac{1}{2}$
G2G2a	48. $\frac{9}{16}$	12. $\frac{1}{2}$	52.0	16. $\frac{25}{32}$	12. $\frac{3}{8}$	10.0	16. $\frac{1}{4}$	12. $\frac{1}{4}$	16. $\frac{3}{8}$
G4	48. $\frac{9}{16}$	12. $\frac{1}{2}$	Full Length	12. $\frac{3}{4}$					

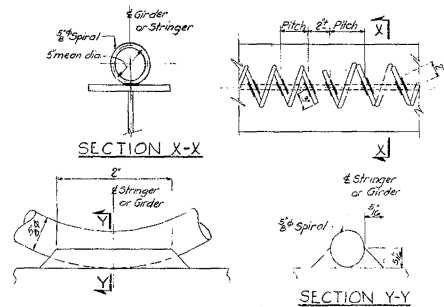


SECTION F-F

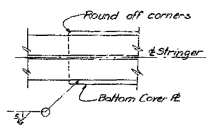


SECTION G-G

DL-I Weight of beam and deck slab.
DL-II Weight of wearing surface, curb, parapet and railing.



SPIRAL DETAILS



COVER Φ

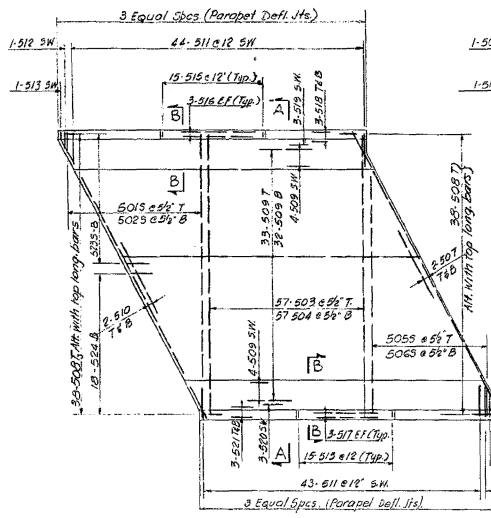
NOTES

For General Notes see Dwg. No. 2-1
All stiffener plates to be vertical when stringers are in final erected position.
All shear connectors to be 3/4" x 6" spirals or 1/2" x 6" angles at the crown of the beam.
Contractor Nelson-Stevens may be substituted with the approval of the Engineer. See Special Provisions.
Rolled beams shall have their rolled camber upward before welding of bottom cover plates.
For additional steel notes see Dwg. No. 2-5
Work this drawing with Dwg. No. 2-5

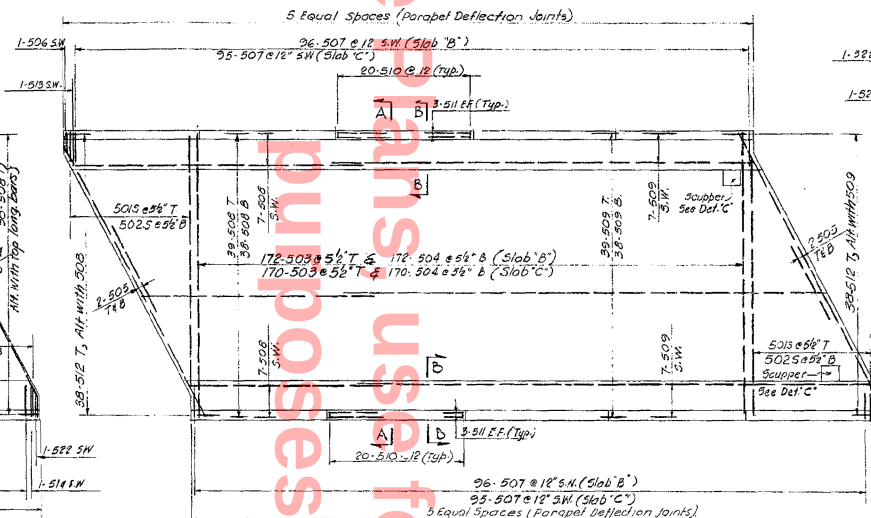
DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE

ROAD 367 BRIDGE OVER TURNPIKE
SUPERSTRUCTURE
STRINGERS

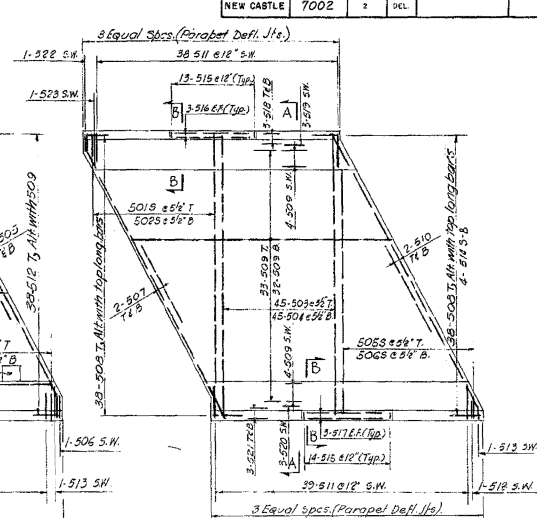
DRAWN: W. K. TRACED: CHECKED: B. S. CHARGE OF	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG: 2-6
	TIPPLETT-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS		CONTRACT 7002 SHEET 140 OF 224



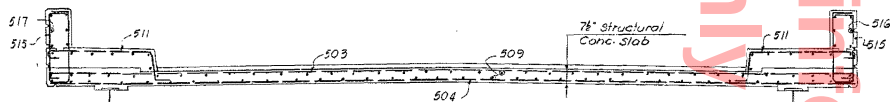
SLAB "A"



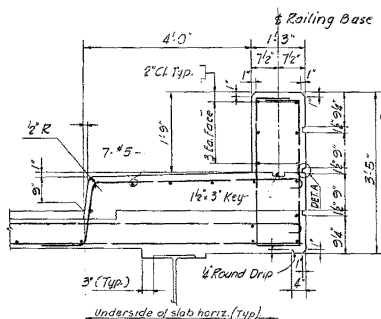
SLAB "B" & "C"



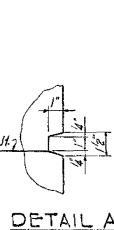
SLAB "D"



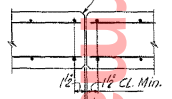
SECTION A-A
SCALE 3/8 IN. = 1 FT.



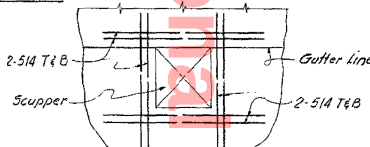
SECTION B-B
SCALE: 3/4 IN. = 1 FT.



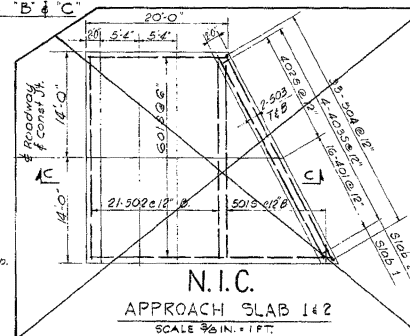
DETAIL A



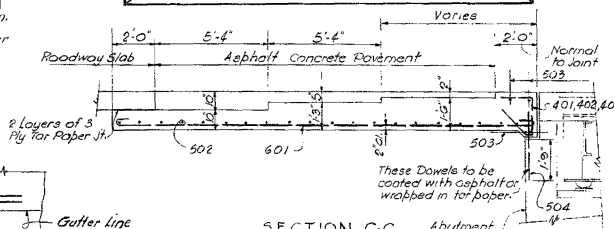
DETAIL B
SCALE: 3/4 IN. = 1 FT.



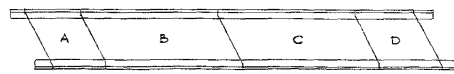
DETAIL C
NO SCALE



N.I.C.
APPROACH SLAB 1 & 2
SCALE 3/8 IN. = 1 FT.



SECTION C-C
SCALE 3/8 IN. = 1 FT.



KEY PLAN
SCALE 1 IN. = 40 FT.

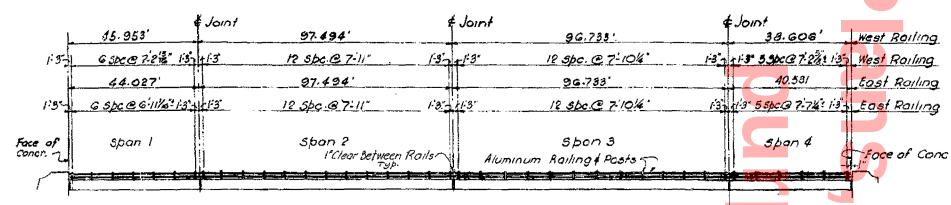
NOTES:

CONCRETE NOTES:
Concrete Water-reducing Retarder Admixture shall be added to all superstructure concrete (see Special Provisions).
Splices for stress bars shall be a minimum of 30 diameters, all other splices a minimum of 20 diameters.
Construction joints other than those shown will not be permitted without written approval by the Engineer.
Exposed Concrete Edges shall be chamfered 1" unless otherwise noted.
Concrete cover for reinforcement as per AASHTO or as noted.

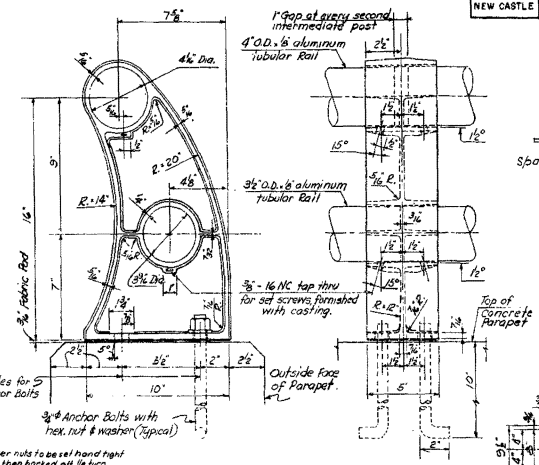
For Railing Posts see Dwg. No. 2-B
For Joint Details see Dwg. No. 2-B
For Reinforcing Bar Schedule see Dwg. Nos. 2-11 to 2-13

DELAWARE STATE HIGHWAY DEPARTMENT			
DELAWARE TURNPIKE			
ROAD 367 BRIDGE OVER TURNPIKE			
SUPERSTRUCTURE			
DECK AND APPROACH SLABS			
DRAWN: S.V.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG. 2-7
TRACED:			
CHECKED: A.Z.E.			
CHARGE OF:			
TIPPLETT-ABBETT-McCARTHY-STRATTON			CONTRACT
ENGINEERS AND ARCHITECTS			7002
			SHEET 141 OF 224

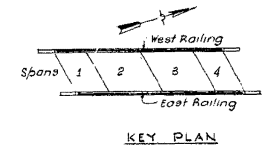
COUNTY	CONTRACT	SHEET NO.	STATE	FED. AID PROJECT NO.	TOTAL SHEETS	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.		142	224	



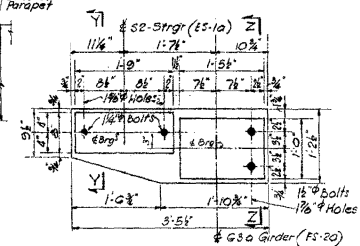
RAILING ELEVATION



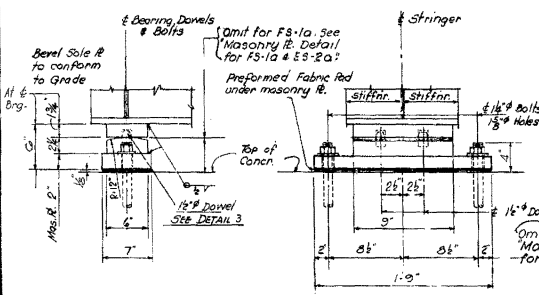
RAILING DETAILS
Scale 3" = 1'-0"



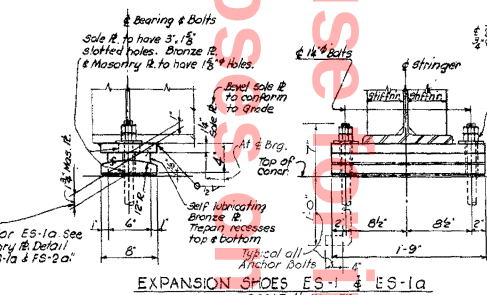
KEY PLAN



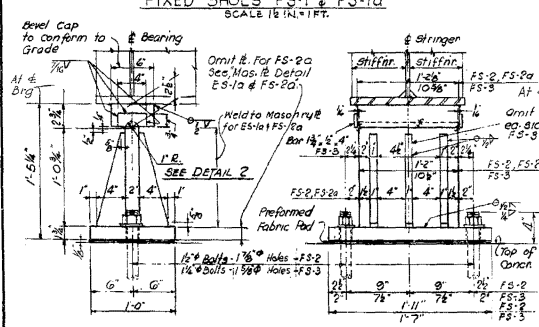
MASONRY PLATE FOR ES-1a & FS-2a
SCALE 1/4" = 1'-0"



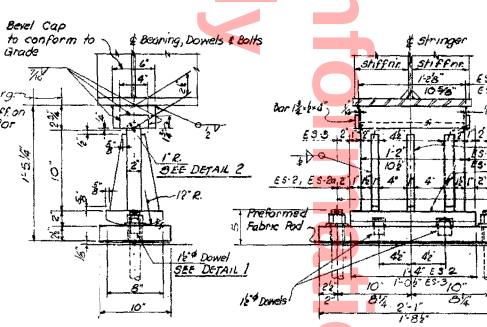
FIXED SHOES FS-1 & FS-1a
SCALE 1/2" = 1'-0"



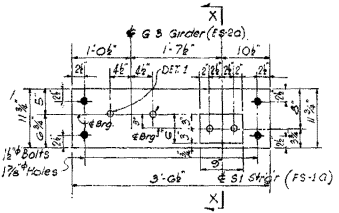
EXPANSION SHOES ES-1 & ES-1a
SCALE 1/2" = 1'-0"



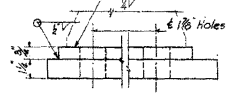
FIXED SHOES FS-2, FS-2a & FS-3
SCALE 1/2" = 1'-0"



EXPANSION SHOES ES-2, ES-2a & ES-3
SCALE 1/2" = 1'-0"



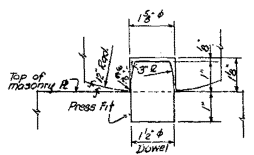
MASONRY PLATE FOR FS-1a & ES-2a
SCALE 1/4" = 1'-0"



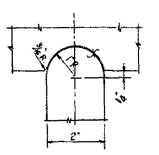
SECTION Z-Z
SCALE 3/4" = 1'-0"

RAILING NOTES
Railing Posts shall be erected normal to grade and shall be parallel to established grade. Anchor bolts for railing posts shall be aluminum alloy meeting the requirements of ASTM-B811 alloy 2024-T4. Finished aluminum alloy bolts, nuts and washers shall be given an anodic coating of at least 0.0002 in. thick and a chromate seal. Anchor bolts shall be set accurately by means of template after nuts have been placed and tightened to the satisfaction of the Engineer. Bolts shall be cut off 1/2" above nuts and beveled. Tubular Rails shall be closed at all piers and abutments with welded aluminum plug. Rails shall be continuous at all end bolts.

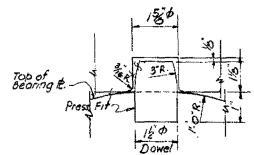
NOTES
Shoes to have vertical and horizontal $\pm$ s mutually perpendicular of $\pm 5^\circ$. For location of shoes see Dwg No. 2-5. For steel notes see Dwg No. 2-5.



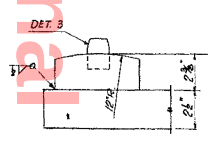
DETAIL 1
Scale 6" = 1'-0"



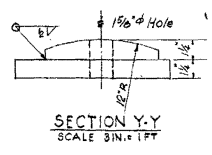
DETAIL 2
Scale 6" = 1'-0"



DETAIL 3
Scale 6" = 1'-0"

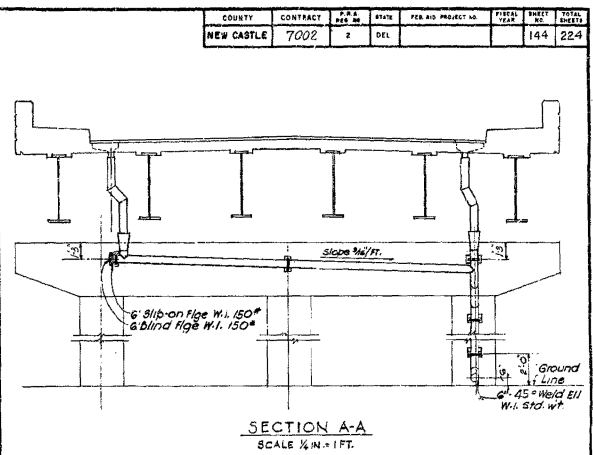
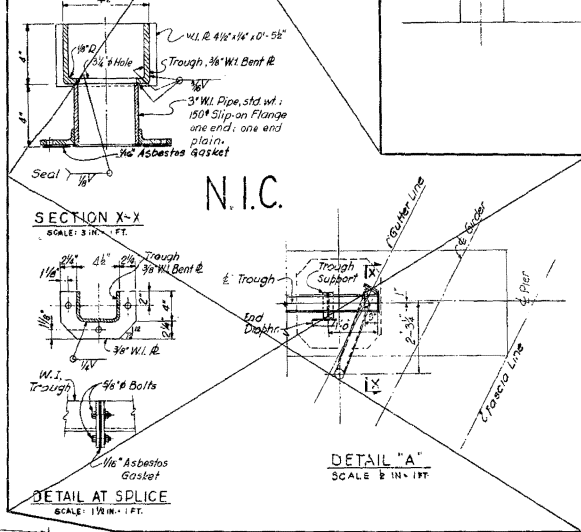
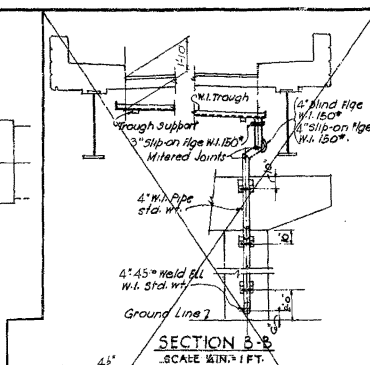
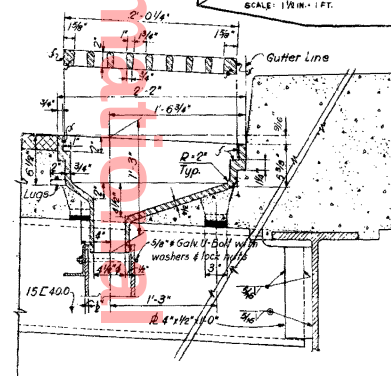
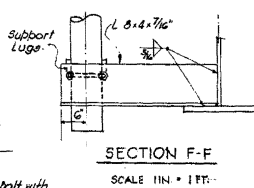
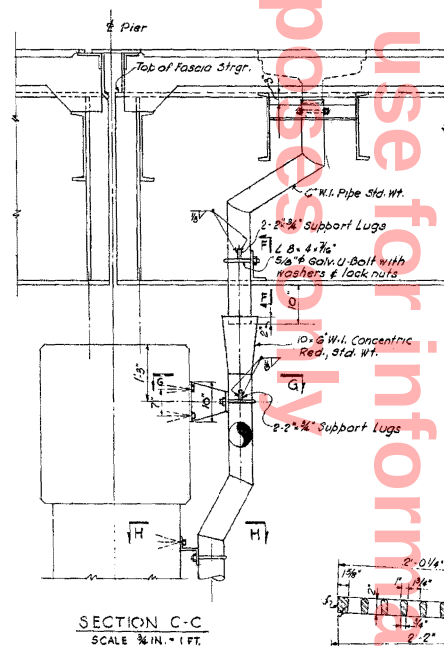
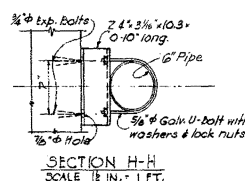
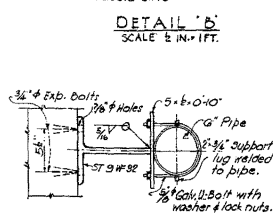
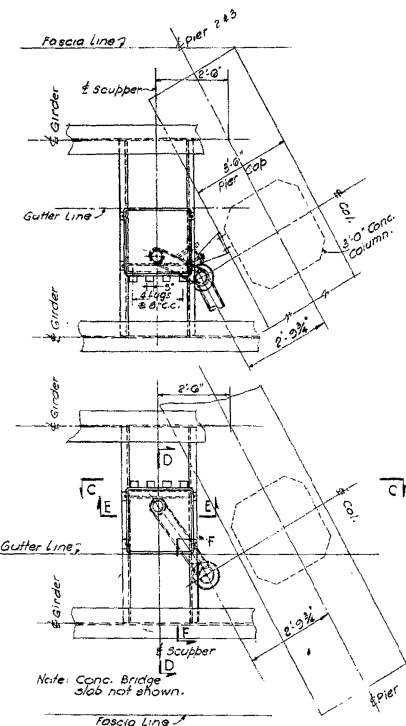
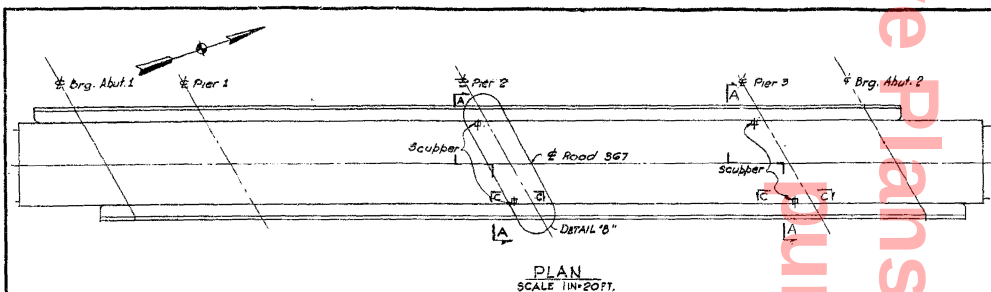


SECTION X-X
Scale 3/4" = 1'-0"



SECTION Y-Y
Scale 3/4" = 1'-0"

DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE			
ROAD 367 BRIDGE OVER TURNPIKE SUPERSTRUCTURE RAILING AND SHOE DETAILS			
DRAWN: H.R.P.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG. 2-8
TRACED: M.K.	TIPPETTS-ABBETT-MCCARTHY-STRATTON	ENGINEERS AND ARCHITECTS	CONTRACT 7002
CHECKED: M.K.			SHEET 142 OF 224



NOTES:
 W.I. Pipes shall be Standard Black Wrought Iron, galvanized.
 Cost of furnishing and placing all W.I. pipes and their supports and connections shall be included in Item "Bridge Drainage".
 All Frames and gratings shall be cast steel in accordance with A.S.T.M. APT-20 Grade 65-35.

DELAWARE STATE HIGHWAY DEPARTMENT			
DELAWARE TURNPIKE			
ROAD 367 BRIDGE OVER TURNPIKE			
SUPERSTRUCTURE			
DRAINAGE DETAILS			
DRAWN: H.R.E.	SCALE: AS NOTED	DATE: MAY 9, 1962	DWG.: 2-10
TRACED:			
CHECKED: M.K.	TIPPETTS-ABBETT-McCARTHY-STRATTON	ENGINEERS AND ARCHITECTS	CONTRACT 7002
CHARGE OF:			SHEET 140 OF 224

NORTH: ABUTMENT

Figure 10 displays eleven types of irregular shapes, each with its dimensions labeled for calculation using the midline rule. The shapes are arranged in a grid-like fashion, with their type numbers labeled below them.

- TYPE I:** A stepped L-shape with horizontal dimensions A and C, and vertical dimensions B and D.
- TYPE II:** A shape with a horizontal base of length B, a vertical left side of height A, and a slanted top of length C.
- TYPE III:** A rectangular shape with horizontal dimensions A and B, and vertical dimensions C and D.
- TYPE IV:** A shape with a horizontal base of length A, a vertical right side of height C, and a curved top of radius R.
- TYPE V:** A shape with horizontal dimensions A, B, and C, and a vertical dimension D.
- TYPE VI:** A shape with horizontal dimensions A and E, and vertical dimensions B and D.
- TYPE VII:** A shape with horizontal dimensions E and C, and vertical dimensions B and D.
- TYPE VIII:** A shape with horizontal dimensions A, C, and E, and vertical dimensions B and D.
- TYPE IX:** A shape with horizontal dimensions D and C, and vertical dimensions E and B.
- TYPE X:** A shape with horizontal dimensions B and C, and vertical dimensions A and D.
- TYPE XI:** A shape with horizontal dimensions B and C, and vertical dimensions A and D.

NOTES:
All dimensions are out to out of bar.

DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE

ROAD 367 BRIDGE OVER TURNPIKE

REINFORCING BAR SCHEDULE

DRAWN: S.V.	SCALE: NONE	DATE: MAY 9, 1962	DWG 2-11
	TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS		CONTRACT 7002
CHECKED: BS-AZE			SHEET 145 OF 22
CHARGE OF			

Archive

COUNTY	CONTRACT	SHEET NO.	DATE	PER AND PROJECT NO.	PIECE NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	7002	2	DEL.			146	224

REINFORCING BAR SCHEDULE

MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
NA 549	5	25ch43	14'5" To 14'9"	STR.								Δ+2" NORTH ABUTMENT
NA 550	5	25ch43	9'2" To 9'6"	STR.								Δ+2"
NA 551	4	4	5'5"	I	0	4'6"	1'4"	0'7"				
NA 552	5	50	4'11"	STR.								
NA 553	4	4	6'6"	IX	4'11"	1'4"	1'1"	0'10"				
NA 554	4	2	14'2"	STR.								
NA 555	5	25ch44	18'10" To 14'7"									Δ+7"
NA 556	5	25ch44	9'6" To 11'5"									Δ+7"
NA 557	5	2	8'3"	STR.								
NA 558	5	3	8'0"	I	3'2"	5'7"	1'1"	0'6"				
NA 559	5	3	6'11"	I	3'2"	2'11"	0					
NA 560	5	9	9'5"	I	3'2"	2'8"	3'2"					
NA 561	5	9	7'5"	I	3'2"	4'9"	0					
NA 401	4	69	2'5"	I	0'10"	0'11"	0'10"					NORTH ABUTMENT
NA 402	4	31	5'5"	II	2'0"	0'8"	2'4"	0'10"				
SA 501	5	12	41'7"	STR.								SOUTH ABUTMENT
SA 502	5	2	44'8"									
SA 503	5	68	5'5"									
SA 504	5	36	6'6"									
SA 505	5	25ch45	12'6" To 16'4"									Δ+6"
SA 506	5	25ch47	10'6" To 15'8"									
SA 507	5	2	13'8"	STR.								
SA 508	5	8	43'5"	II	0	42'4"	1'1"	0'6"				
SA 509	5	15	43'6"	STR.								
SA 510	5	3	11'4"									
SA 511	5	3	11'5"	STR.								
SA 512	5	21	7'11"	I	6'2"	0'4"	1'5"					
SA 513	5	21	7'7"	I	5'10"	0'4"	1'5"					
SA 514	5	42	8'6"	I	8'2"	5'2"	0					
SA 515	5	21	9'2"	I	8'0"	1'2"	0					
SA 516	5	11	8'10"	I	7'5"	1'2"	0					
SA 517	5	102	3'1"	STR.								
SA 518	5	5										
SA 519	5	5										
SA 520	5	11	10'0"	STR.								
SA 521	5	4	8'5"									
SA 522	5	5	8'10"									
SA 523	5	20	13'2"									
SA 524	5	45ch46	5'0" To 7'9"	STR.								Δ+11"
SA 525	5	4	4'10"	II	0	1'11"	2'11"	0'9"				
SA 526	5	8	11'5"	STR.								
SA 527	5	25ch48	17'8" To 14'6"									Δ+2'0"
SA 528	5	4	16'8"									
SA 529	5	25ch44	18'7" To 13'4"									Δ+2'
SA 530	5	2	9'3"	STR.								
SA 531	5	4	5'11"	II	0	1'12"	4'0"	1'8"				
SA 532	5	7	4'5"	STR.								
SA 533	5	4	3'11"									
SA 534	5	3	15'10"									
SA 535	5	16	14'3"									
SA 536	5	14	10'2"									
SA 537	5	25ch47	10'2" To 19'2"									Δ+2'0"
SA 538	5	2	15'2"									
SA 539	5	25ch44	11'1" To 11'10"									Δ+3"
SA 540	5	2	7'10"									
SA 541	5	9	3'3"									
SA 542	5	11	10'7"									
SA 543	5	22	4'11"	STR.								SOUTH ABUTMENT

For info purposes only

PIER NO. 1

MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SA 544	5	22	6'6"	I	4'11"	1'7"	0					SOUTH ABUTMENT
SA 545	5	24	3'9"	STR.								
SA 546	5	8	4'3"	STR.								
SA 547	5	8	5'10"	I	1'1"	4'9"	0					
SA 548	5	4	6'11"	I	1'1"	4'9"	1'1"					
SA 549	5	25ch43	14'5" To 14'9"	STR.								Δ+2'
SA 550	5	25ch43	9'2" To 9'6"	STR.								Δ+2'
SA 551	5	4	5'5"	II	0	4'4"	1'1"	0'7"				
SA 552	5	50	4'11"	STR.								
SA 553	5	4	6'6"	IX	4'11"	1'4"	1'1"	0'10"				
SA 554	5	2	14'2"	STR.								
SA 555	5	25ch44	18'10" To 14'7"									Δ+7"
SA 556	5	25ch44	9'6" To 11'5"									Δ+7"
SA 557	5	2	8'3"	STR.								
SA 558	5	3	8'0"	I	3'2"	5'7"	1'1"	0'6"				
SA 559	5	3	6'11"	I	3'2"	2'11"	0					
SA 560	5	9	9'5"	I	3'2"	2'8"	3'2"					
SA 561	5	9	7'5"	I	3'2"	4'9"	0					
SA 562	5	2	8'3"	STR.								
SA 563	5	2	8'0"	II	3'2"	5'9"	1'1"	0'6"				
SA 564	5	3	4'10"	I	3'2"	1'8"	0					
SA 565	5	9	9'10"	I	3'2"	2'8"	3'2"					
SA 566	5	9	6'5"	I	3'2"	2'13"	0					
SA 401	4	69	2'5"	I	0'10"	0'11"	0'10"					SOUTH ABUTMENT
SA 402	4	31	5'5"	II	2'0"	0'8"	2'4"	0'10"				
PI 1001	10	3	42'8"	STR.								PIER NO. 1
PI 1002	10	6	22'1"	I	1'6"	4'11"	18'0"					
PI 1003	10	2	12'0"	STR.								
PI 1004	10	8	13'5"	Y	1'5"	12'0"						
PI 1005	10	4	8'0"									
PI 1006	10	2	42'8"									
PI 1007	10	2	42'0"	STR.								
PI 1008	10	36	10'6"	II	0'5"	1'8"	3'2"	1'8"	3'2"	0'5"		
PI 1009	10	45ch45	10'2" To 7'10"	II	0'5"	1'8"	3'2"	1'8"	3'2"	0'5"		Δ+3'4" FOR B.D.
PI 1010	10	48	12'10"	STR.								
PI 1011	10	48	5'10"	Y	1'1"	4'9"						
PI 1012	10	56	10'2"	IX	0'5"	2'8"	2'0"	2'8"	2'0"	0'5"		
PI 1013	10	10	42'0"	Y	1'3"	39'6"	1'3"					
PI 1014	10	10	39'6"	STR.								
PI 1015	10	28	8'6"	STR.								
PI 1016	10	54	10'8"	Y	1'1"	8'6"	1'1"					
PI 1017	10	49	6'10"	I	1'6"	3'0"	1'6"					
PI 1018	10	5	13'6"	II	1'6"	10'6"	1'6"					
PI 1019	10	5	8'12"	II	1'6"	5'2"	1'6"					

PIER NO. 1

Note
For Bar bending details see Dwg. 2-11

DRAWN: S.V.		SCALE: NONE	DATE: MAY 9, 1982	DWG. 2-12
TRACED:		TIPPLETT-ABBETT-MCCARTHY-STRATTON		CONTRACT 7002
CHECKED: TW-225		ENGINEERS AND ARCHITECTS		SHEET 146 OF 224
CHARGE OF:				

DELAWARE STATE HIGHWAY DEPARTMENT
DELAWARE TURNPIKE
ROAD 367 BRIDGE OVER TURNPIKE
REINFORCING BAR SCHEDULE

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DELAWARE STATE HIGHWAY DEPARTMENT			
DELAWARE TURNPIKE			
ROAD 367 BRIDGE OVER TURNPIKE			
REINFORCING BAR SCHEDULE			
DRAWN: S.V.	SCALE: NONE	DATE: MAY 9, 1962	DWG. 2-13
CHECKED: T.K.	TIPPETS-ABBETT-Mc CARTHY-STRATTON		CONTRACT 7002
CHARGE OF	ENGINEERS AND ARCHITECTS		SHEET 147 OF 226