for info only

R-5 8-4 — 484

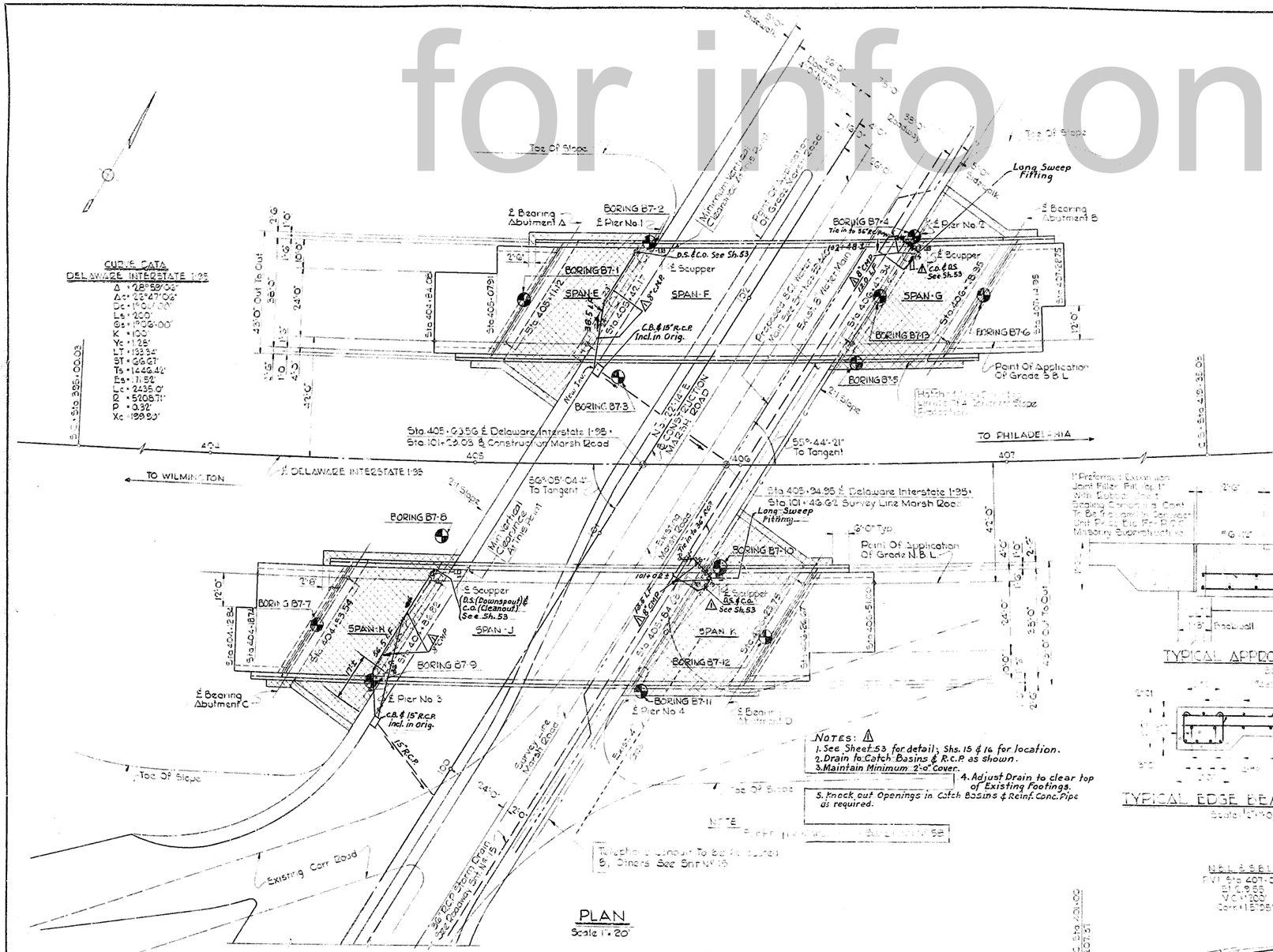
COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C	65-02-004	2	DEL	I-95-2(18)119		41	118

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
3A	Rock Excavation For Structures And Trenches	C.Y.	118
4	Excavation For Structures	C.Y.	1400
11	Hot-Mix Asphaltic Concrete	Tons	200
* 16	P.C.C. Masonry-Footings-Highway Bridges	C.Y.	356
* 16	P.C.C. Masonry-Above Footings-Highway Bridges	C.Y.	274
* 18	P.C.C. Masonry-Superstructures-Highway Bridges	C.Y.	475
* 19	P.C.C. Masonry-Approach Slabs	C.Y.	178
18	Subformation Concrete	C.Y.	20
* 20	Bar Reinforcement-Highway Bridges & Other Structures	Lbs.	249,000
41	Wire Mesh Reinforcement	Sq.	88
72	Structural Steel-Highway Bridges, 1963 Standard Metric Specs.	L.S.	Lump Sum
	Steel H Piles	L.F.	1800
	Steel H Test Piles	L.F.	110
	Metal Railing-Highway Bridges	L.F.	780
	Bridge Drainage System-Highway Bridges - I-95 Over And At Marsh Road	L.S.	Lump Sum
	Concrete Slope Protection	C.Y.	270
	Maintenance And Protection Of Traffic	L.S.	Lump Sum
	* Fixed Quantity Items		

CURVE DATA
DELAWARE INTERSTATE I-95

Δ = 28°59'06"
Δ = 28°47'06"
Dc = 19°01.00'
Ls = 200'
Rs = 1906.00'
K = 100'
Ys = 1.35'
LT = 193.34'
BT = Q6 GT
Ts = 1449.42'
Es = 1.152'
Rc = 2435.0'
D = 5°08.71'
P = 0.32'
Xc = 199.80'



for info only

COUNTY	CONTRACT	F. A. P. NO.	STATE	FED. AID PROJECT NO.	FINAL STATE	SHEET NO.	TOTAL SHEETS
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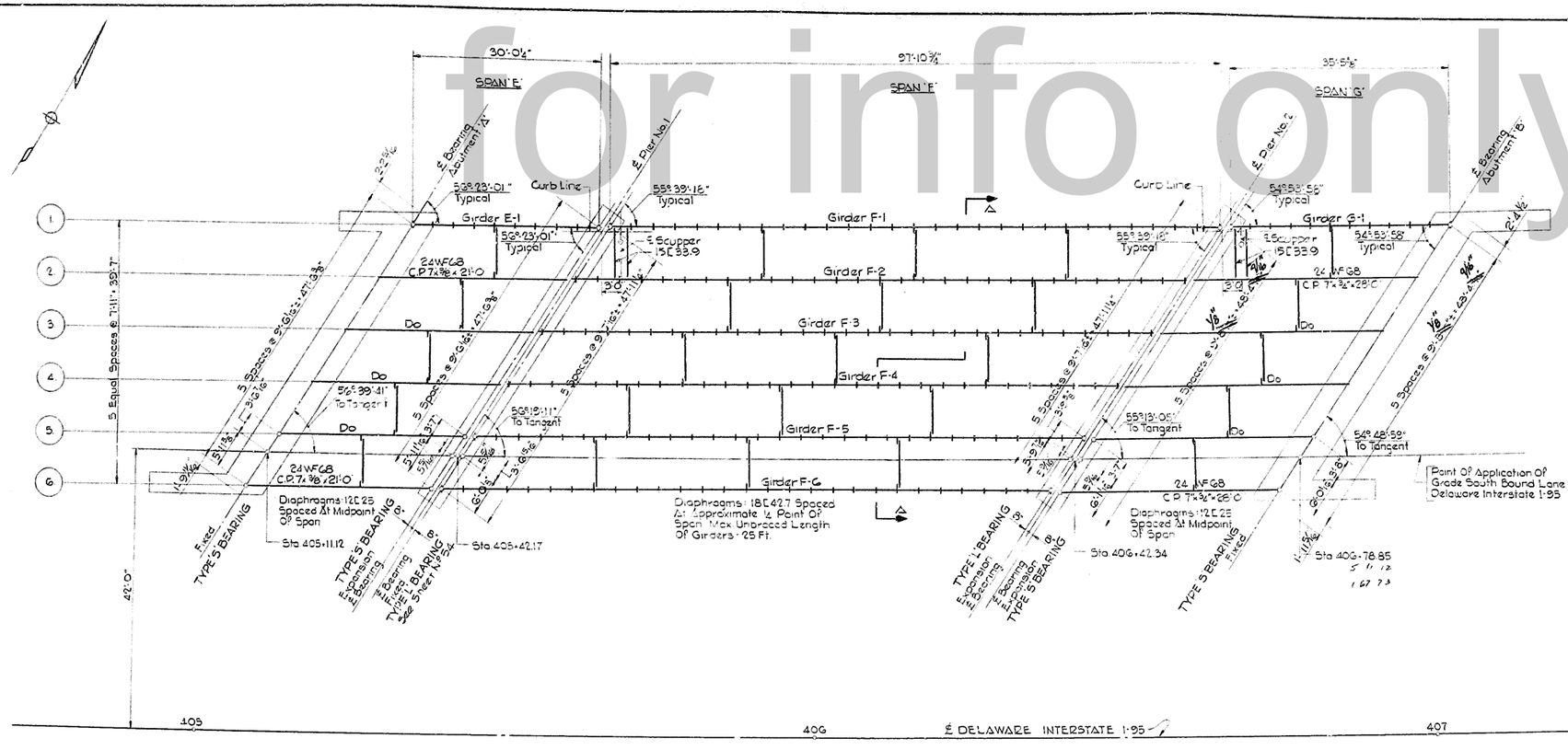
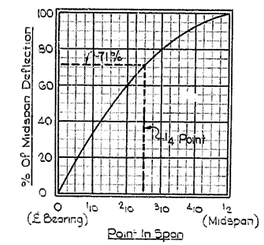


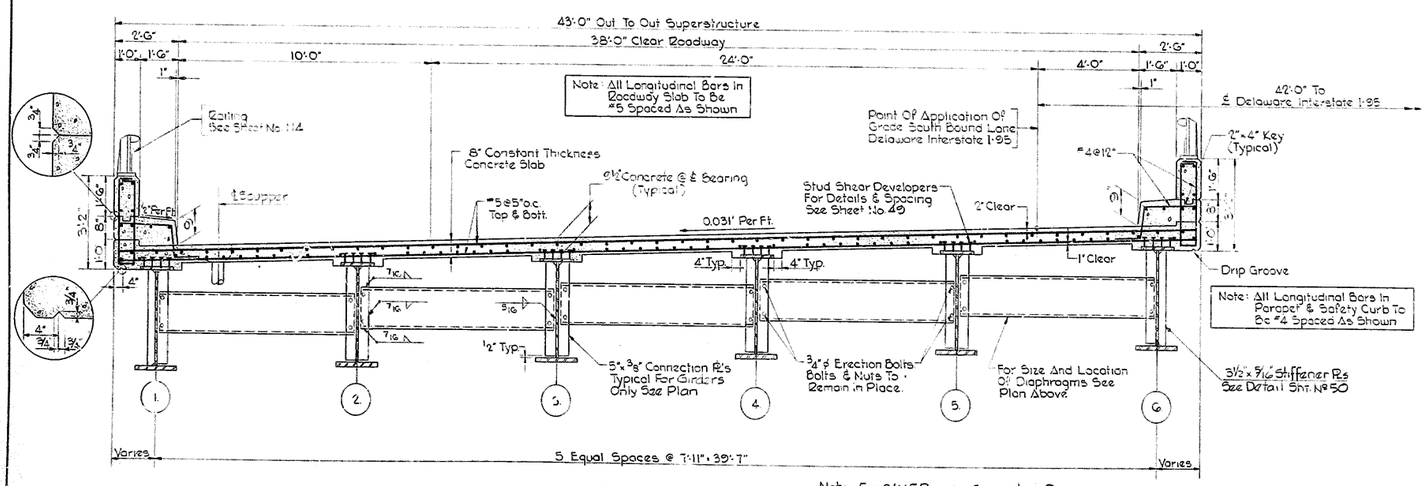
FRAMING PLAN
Scale: 1" = 10'

DEFLECTION SCHEDULE

SPAN	STRINGER NO.	Δ-1	Δ-2	Δ-3	CAMBER
E	1	0"	1/8"	1/16"	0"
	2 Thru 5	0"	3/16"	0"	0"
	6	0"	3/16"	0"	0"
F	1 & 6	5/8"	1 5/16"	9/16"	3 1/8"
	2 Thru 5	5/8"	1 7/8"	9/16"	3 11/16"
G	1	0"	1/8"	1/16"	0"
	2 Thru 5	1/16"	3/8"	1/16"	0"
	6	1/16"	1 5/16"	1/16"	0"
H	7	0"	3/16"	1/16"	0"
	8 Thru 11	0"	1/4"	1/16"	0"
	12	0"	1/8"	1/16"	0"
J	7 & 12	5/8"	1 5/16"	9/16"	3 1/8"
	8 Thru 11	5/8"	1 7/8"	9/16"	3 11/16"
K	7	1/16"	3/8"	1/16"	0"
	8 Thru 11	1/16"	7/16"	1/16"	0"
	12	0"	1/8"	1/16"	0"



NOTES:
1. Δ-1 Deflection At Midspan Due To Weight Of Stringers And Diaphragms.
2. Δ-2 Deflection At Midspan Due To Weight Of Concrete Roadway Slab And Haunch.
3. Δ-3 Deflection At Midspan Due To Weight Of Safety Curb, Parapet, Railing
4. Camber Not Required Where Total Dead Load Deflection Is Less Than ½".
5. Fabricate Beams With Mill Camber Up.
6. Percentage Of Deflection At Any Point In Span May Determined From Curve.



SECTION A-A
Scale: ⅜" = 1'-0"

Note: For 24 WF Beams Connection Pls And Stiffener Pls See Schedule Sheet No 55

NOTES:

Structural Steel

Unless Otherwise Provided For On The Plans Or In The Specifications, Details Of The Steel Work In General Shall Conform To The Requirements Of The 1961 Standard Specifications For Highway Bridges Of The AASHO.

To Avoid Oversight, Requirements Concerning Rivet Sizes, Bolt Sizes, Open Holes, Reaming, Punching, Shims, Painting, Etc. Shall Be Clearly Shown Or Noted On The Shop Drawings.

All Dimensions Shown On The Plans Are For The Structure At A Normal Temperature Of +68°F. The Temperature Range For Movement Is -10°F To +120°F

All Expansion Joints Are To Be Detailed To Provide For Vertical, Longitudinal, And Transverse Adjustment In Order To Obtain Proper Alignment And Openings Under Normal Temperature Conditions.

All Structural Shapes, Plates, And Bars Shall Be Of Steel Conforming To The Requirements Of A.S.T.M. Designation A 36.

All Welding Shall Be Done In Accordance With Requirements Of The Current "Standard Specifications For Welded Highway And Railway Bridges" Of The A.W.S. As Modified By The Special Provisions. Shop Drawings Shall Show Clearly The Nature, Dimensions, And Location Of Each Weld.

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE 95

OVERPASS AT MARSH ROAD

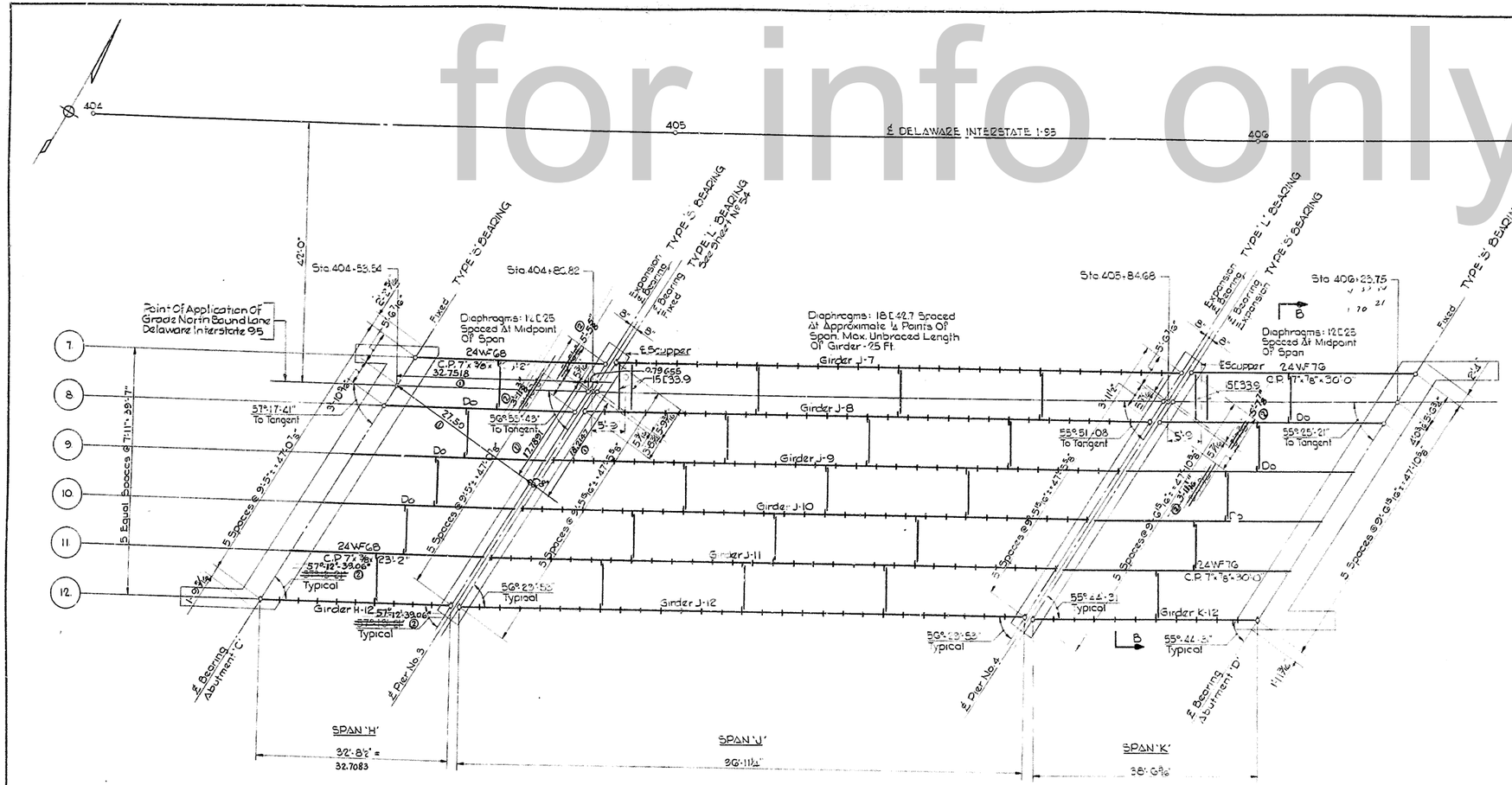
S.B.L. FRAMING PLAN

D. R.J.A.	SCALE	APPROVED BY:
T. R.J.A.	AS NOTED	Johnnie L. Pearson Jr.
C. H.B.H.		BRIDGE ENGINEER

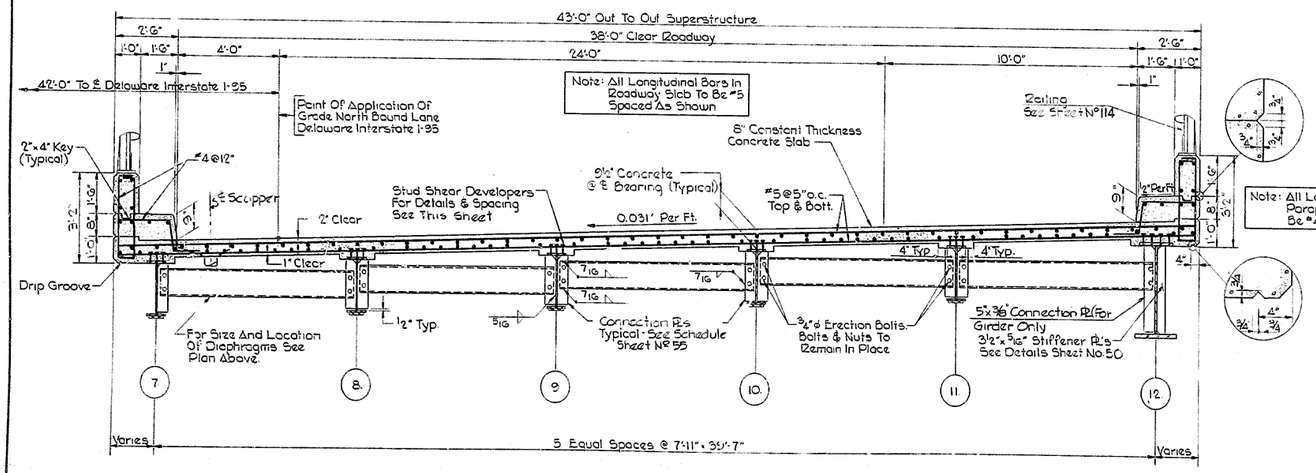
Corrected Pad Spacing 6-25-68 TAK

for info only

COUNTY	CONTRACT	PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.C.	35-02-0104		DEL.	I-95-2(18)15		49	149



FRAMING PLAN
Scale: 1" = 10'



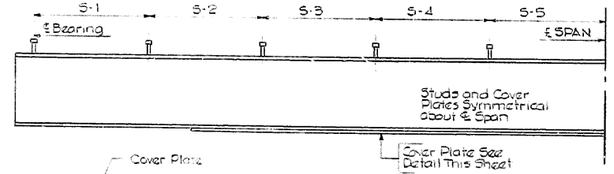
SECTION B-B
Scale: 3/8" = 1'-0"

NOTES:

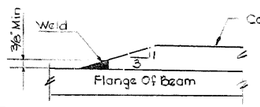
1. When Stud Spacing is interrupted by scuppers relocate studs by placing half of them on each side of scupper.
2. Cost of Stud Shear Connectors to be included in Contract Lump Sum Price Bid for "Structural Steel-Highway Bridges."
3. Shear Connector Spacing given below are for studs.
4. Although Stud Shear Connectors are shown, alternate types may be permitted, subject to the Engineers written approval.
5. If an alternate type is used the Contractor shall be required to submit detail drawings for approval. Drawings to indicate the size and type of material, spacing, welds and other necessary design and detail data.

SHEAR CONNECTOR SPACING

SPAN	STRINGER NUMBER	STUDS PER ROW	S-1	S-2	S-3	S-4	S-5
E	①	3	6@6"	5@7"	4@9	3@11"	2@15"
	②Thru⑤	3	11@3½"	9@4"	6@5½"	5@6½"	4@7½"
	⑥	3	10@3½	9@4"	6@5½"	5@6½"	4@8"
F	①and ⑥	4	14@8"	13@9"	10@11½"	7@15½"	5@20"
	②Thru⑤	4	16@7"	14@8"	12@9½"	10@11¼"	8@14"
G	①	3	7@6"	5@7"	4@9"	3@11"	2@15"
	②Thru⑤	3	12@3¼"	11@3¼"	8@5"	6@6½"	4@8½"
	⑥	3	11@3½"	10@4"	7@5½"	5@7"	4@9½"
H	⑦	3	11@3½"	9@4"	7@5½"	6@6½"	4@8"
	⑧Thru⑪	3	12@3¼"	9@4"	7@5½"	6@6½"	5@7½"
	⑫	3	6@6"	5@7"	4@9"	3@11"	2@15"
J	⑦and⑫	4	14@8"	12@9"	10@11½"	7@15"	5@20"
	⑧Thru⑪	4	16@7"	14@8"	12@9½"	10@11¼"	8@14"
K	⑦	3	13@3½"	11@4"	8@5½"	6@6¾"	5@9"
	⑧Thru⑪	3	15@3	12@3¾"	9@5"	7@6¼"	5@8½"
	⑫	3	7@6	6@7"	5@9"	4@11"	3@15"



STRINGER ELEVATION
No Scale



SECTION A-A
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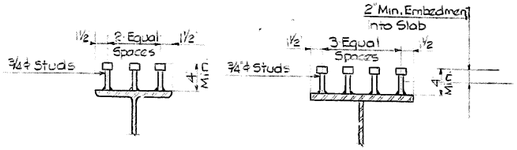
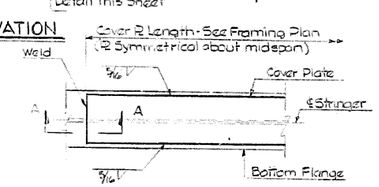


TYPICAL STUD DETAILS
No Scale



TYPICAL COVER PLATE DETAIL
No Scale

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE 95

OVERPASS AT MARSH ROAD

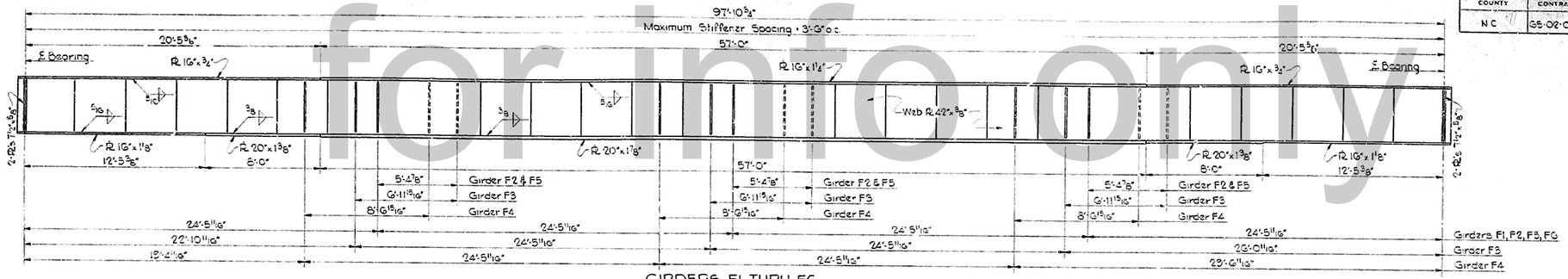
N.B.L. FRAMING PLAN

D. R.J.A.	SCALE AS NOTED	APPROVED BY: Samuel R. Lenaz
T. R.J.A.		BRIDGE ENGINEER
C. H.B.H.		

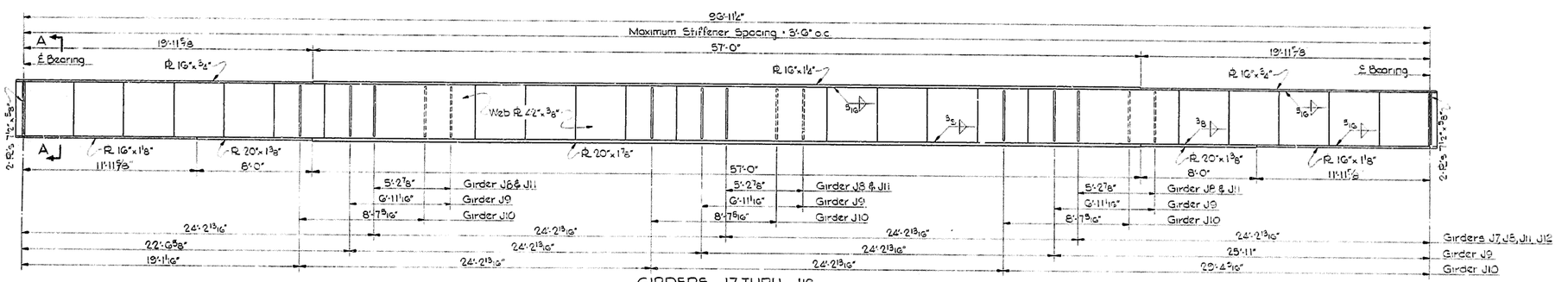
Dimensions added on framing plan 3-22-66 A.W.K.
Dimens. & Deflection & Revised 4-27-66 A.W.R.

for info only

COUNTY	CONTRACT	F.A.P. NO.	STATE	FED. AID PROJECT NO.	FINAL ITEM	SHEET NO.	TOTAL SHEETS
N.C.	95-02-004	2	DEL.	I-95-2(18)19		50	149

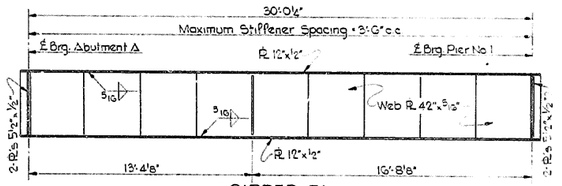


GIRDERS F1 THRU F6
Scale: 1/2"=1'-0"

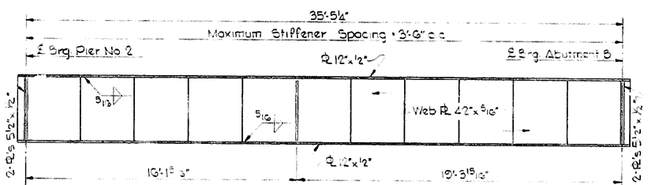


GIRDERS J7 THRU J12
Scale: 1/2"=1'-0"

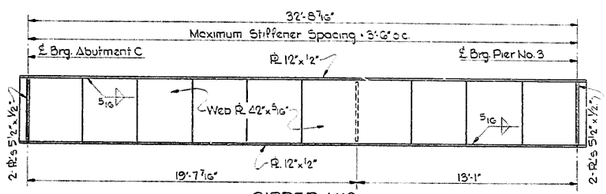
Note All intermediate stiffener plates to be 3 1/2" x 9/16"



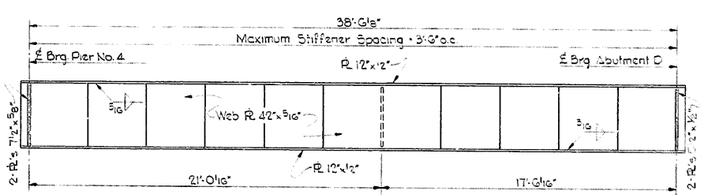
GIRDER E1
Scale: 1/2"=1'-0"



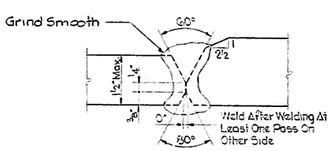
GIRDER G1
Scale: 1/2"=1'-0"

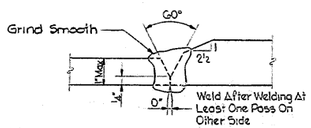


GIRDER H12
Scale: 1/2"=1'-0"

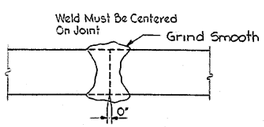


GIRDER K12
Scale: 1/4"=1'-0"





SHOP-FLANGE SPLICE DETAILS
No Scale



SHOP-WEB SPLICE DETAIL
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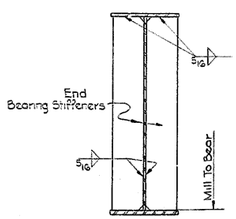
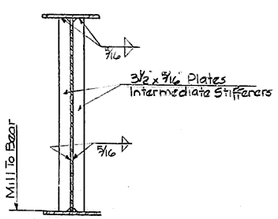


SECTION A-A
Scale: 1/2"=1'-0"



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

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE 95

OVERPASS AT MARSH ROAD

GIRDER DETAILS

D. R.J.A.	SCALE	APPROVED BY:
T. R.J.A.	AS NOTED	BRIDGE ENGINEER
C. H.B.H.		