TO:

Malcolm D. Graham
Chief Engineer
Bldg. 5, Rm. 401

SUPERSEDED BY EI 81-007
EFFECTIVE 1/8/81

ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: STANDARD DETAILS FOR HIGHWAY BRIDGES

Subject Code: 7.35-1

Sup 77-50

Distribution: ☐ Main Office ☐ Regions ☒ Special

Code: EI 74-113

Date: 1/2/75

Supersedes:

APPROVED:

R. N. Kamp

DEPUTY CHIEF ENGINEER (STRUCTURES)

The attached new (Added) pages are to be inserted under Guide Line Drawings in the manual. Revised pages are to replace present pages in the manual.

GLD-A1- Revised - Change in note on Abutment Elevation referring to bridge seats.
GLD-A4- Revised - Same as for GLD-A1.
GLD-A6- Revised - Removed note in Abutment Sections referring to double dimensioning.
GLD-A7- Revised - Tables for keyway dimensions revised. Expansion joint detail revised.

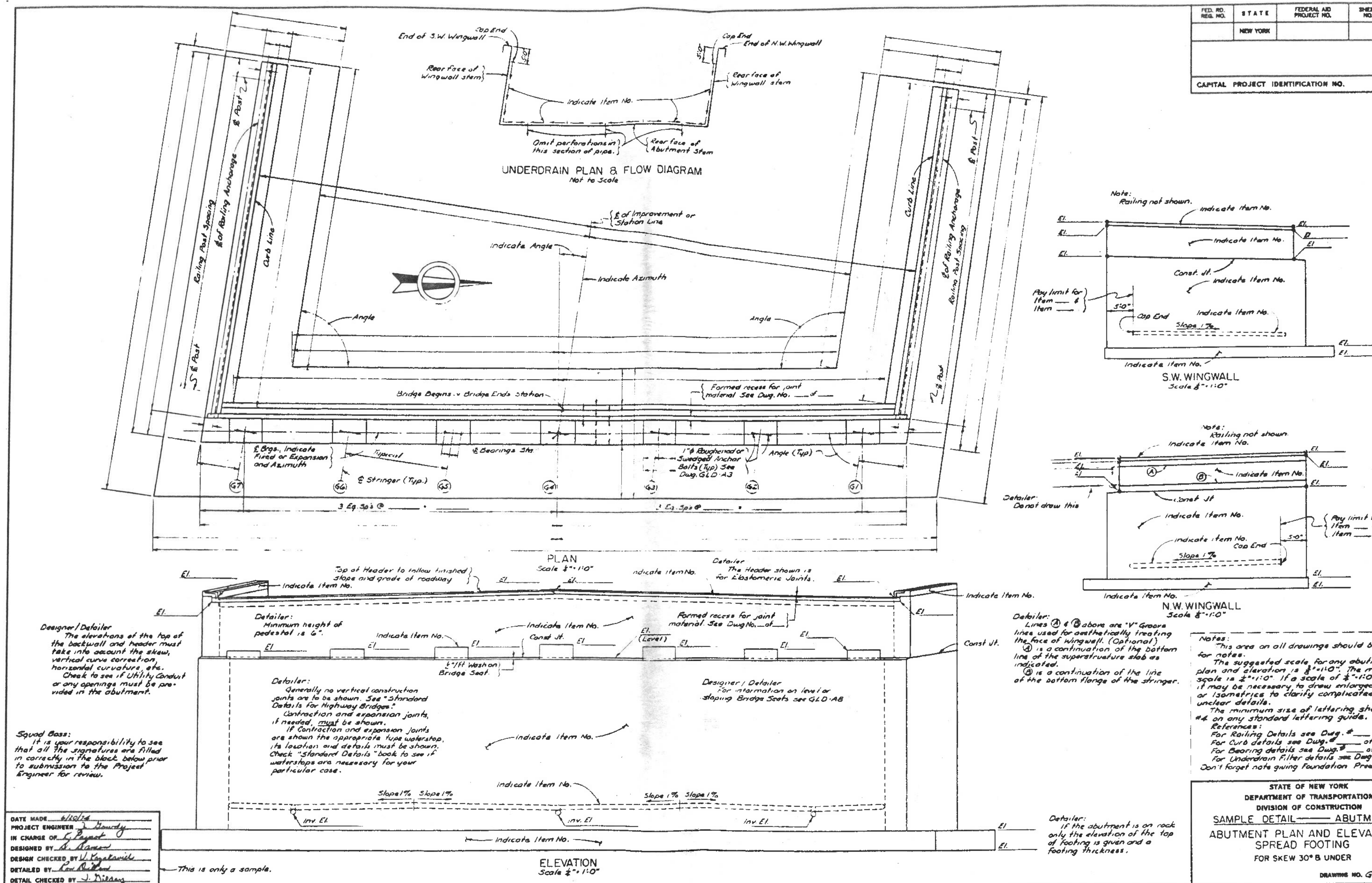
GLD-A8- Abutment Plan and Elevation (spread footing) - skews over 30°.- Added
GLD-A9- Abutment Sections -Reinforcement Details-Skews over 30°. - Added
GLD-G1- Welded Plate Girder Details & Tables. - Added
GLD-G2- Welded Plate Girder Tables. - Added
GLD-G4- Continuous Welded Plate Girder - Haunch Table. - Added
GLD-G5- Continuous Welded Plate Girder - Moment - Shear & Camber Tables. - Added
GLD-P1- Solid Pier on Piles. - Added
GLD-S1- Transverse Section - Framing Plan. - Added
GLD-S2- Slab Reinforcement - Simple Spans. - Added
GLD-MC1-Fascia and Haunch Details. - Added
GLD-MC2-Slab Corner Details. - Added
GLD-MS1-Miscellaneous Welded Plate Girder Details. - Added

These drawings shall be used as guides in the preparation of contract plans, effective immediately.

The Standard Details for Highway Bridges Manual will be revised to remove any conflicts between these Drawings and the Manual. Until official issuance of the revisions, the Guide Line Drawings take precedence.

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.



Designer/Detailer
The elevations of the top of the backwall and header must take into account the skew, vertical curve correction, horizontal curvature, etc.
Check to see if Utility Conduit or any openings must be provided in the abutment.

Squad Boss:
It is your responsibility to see that all the signatures are filled in correctly in the block below prior to submission to the Project Engineer for review.

Detailer:
Minimum height of pedestal is 6".

Detailer:
Generally no vertical construction joints are to be shown. See "Standard Details for Highway Bridges."
Contraction and expansion joints, if needed, must be shown.
If Contraction and expansion joints are shown the appropriate type waterstop, its location and details must be shown. Check "Standard Details" book to see if waterstops are necessary for your particular case.

Designer / Detailer
For information on level or sloping Bridge Seats see GLD-A8

Detailer:
Lines Ⓐ & Ⓑ above are "V" Groove lines used for aesthetically treating the face of wingwall. (Optional)
Ⓐ is a continuation of the bottom line of the superstructure slab as indicated.
Ⓑ is a continuation of the line of the bottom flange of the stringer.

Detailer:
If the abutment is on rock only the elevation of the top of footing is given and a footing thickness.

Notes:
This area on all drawings should be reserved for notes.
The suggested scale for any abutment plan and elevation is ⅛" = 1'-0". The minimum scale is ⅛" = 1'-0". If a scale of ⅛" = 1'-0" is used it may be necessary to draw enlarged portions or isometrics to clarify complicated or unclear details.
The minimum size of lettering shall be #4 on any standard lettering guide.
References:
For Railing Details see Dwg. # ___ of ___.
For Curb details see Dwg. # ___ of ___.
For Bearing details see Dwg. # ___ of ___.
For Underdrain Filter details see Dwg # ___ of ___.
Don't forget note giving Foundation Pressure.

This is only a sample.

DATE MADE 6/10/74
PROJECT ENGINEER J. Goudy
IN CHARGE OF C. Peyot
DESIGNED BY B. Romeo
DESIGN CHECKED BY V. Kozakevich
DETAILED BY Ron Duffen
DETAIL CHECKED BY J. Dilsey

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL — ABUTMENT

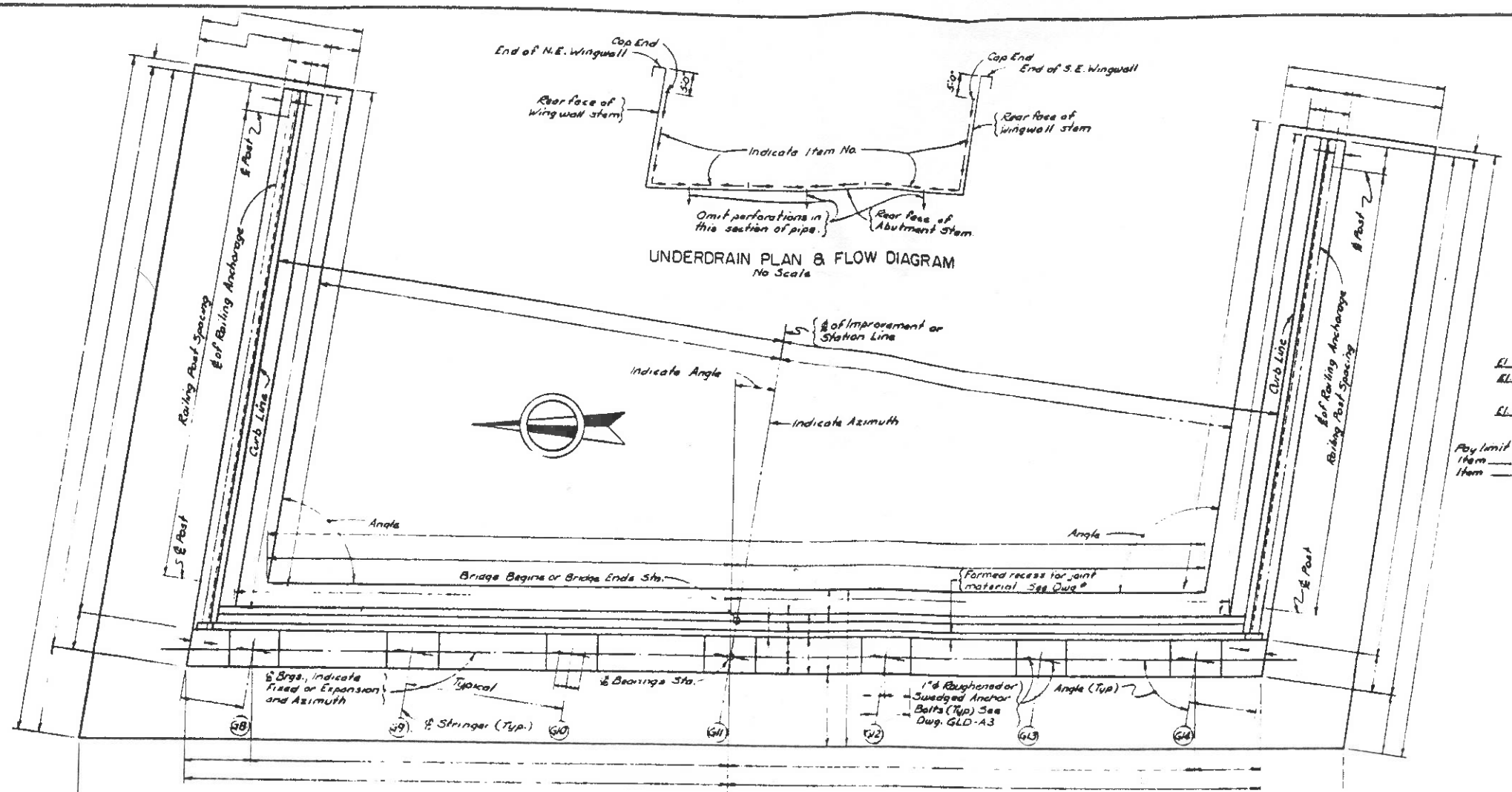
ABUTMENT PLAN AND ELEVATION
SPREAD FOOTING
FOR SKEW 30° B UNDER

DRAWING NO. GLD-A1

Revised Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.



DATE MADE 6/20/74
PROJECT ENGINEER
IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL——ABUTMENT

ABUTMENT PLAN AND ELEVATION ON PILES

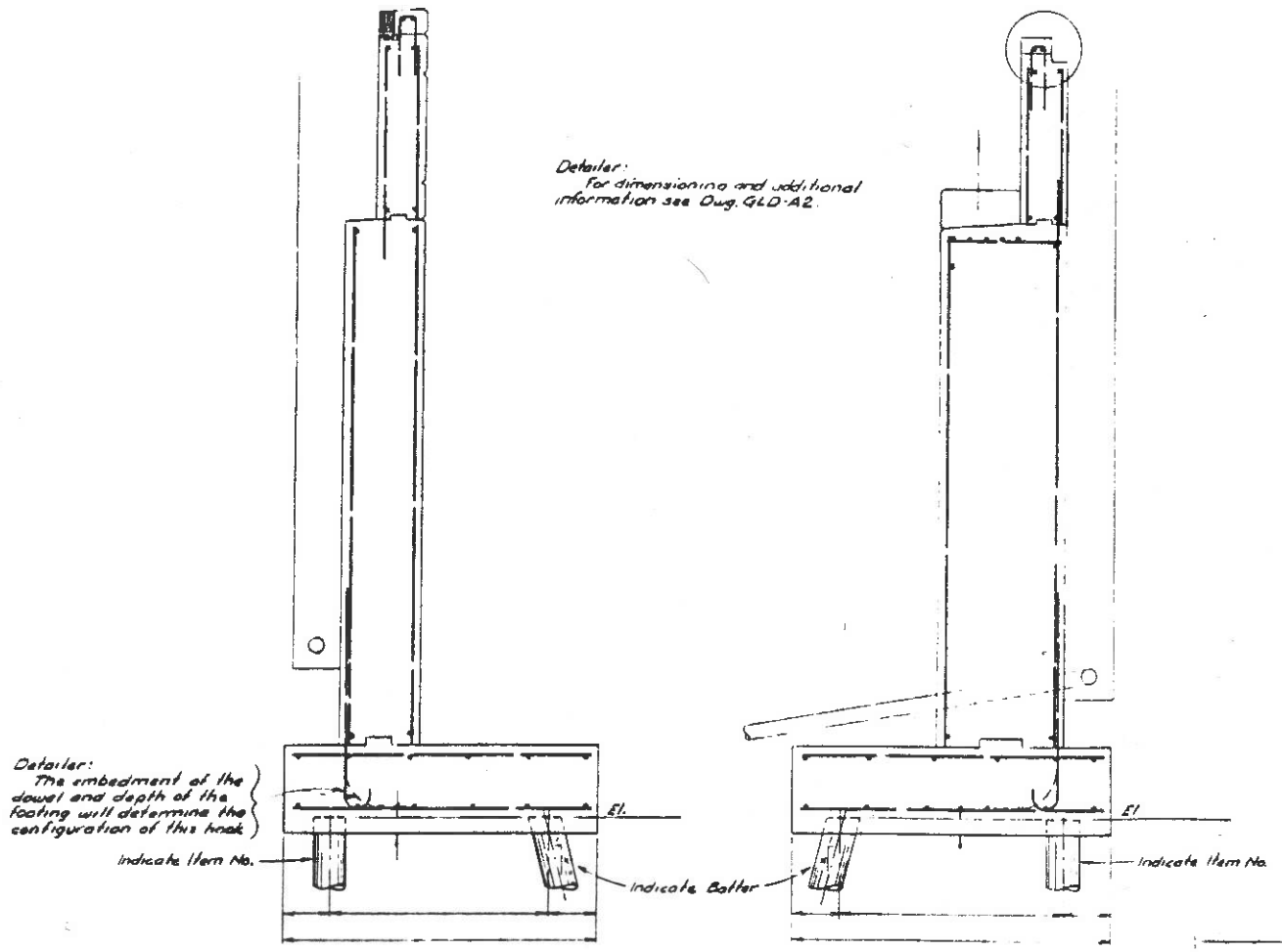
FOR SKEW 30° & UNDER

DRAWING NO. GLD-A4

Revised Jan 1975

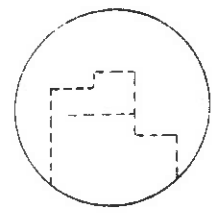
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

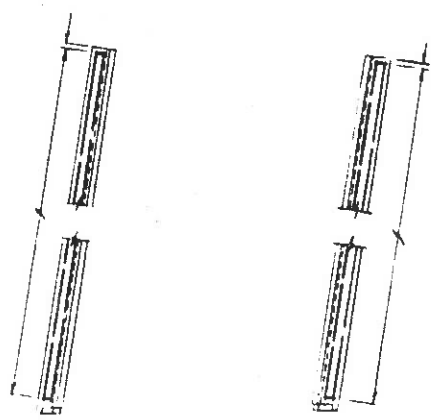


TYPICAL WINGWALL SECTION
Scale $\frac{3}{8}$"=1'-0"

TYPICAL ABUTMENT SECTION
Scale $\frac{3}{8}$"=1'-0"

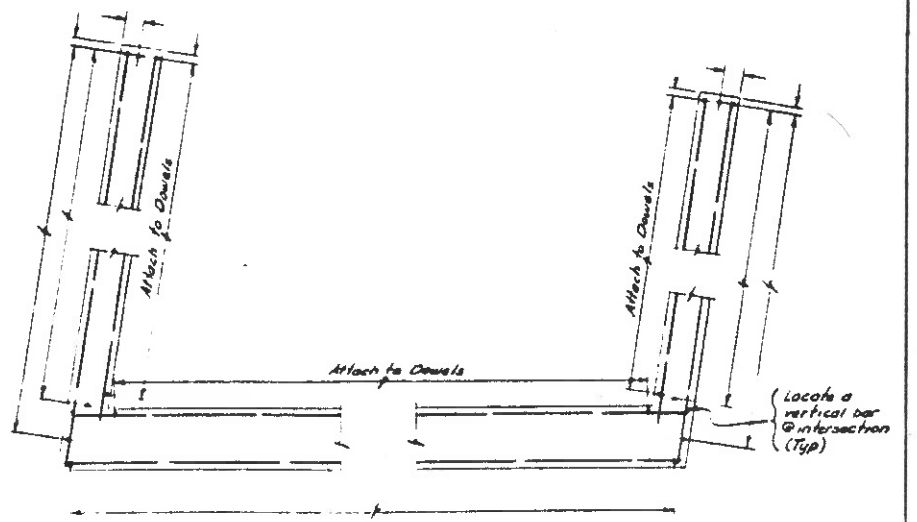


HEADER DETAIL
Scale 1"=1'-0"

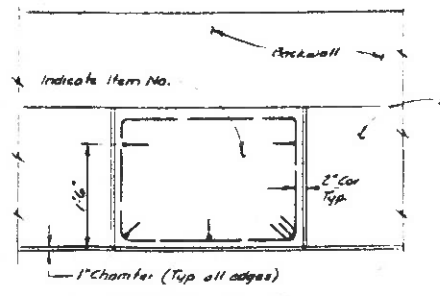


N.E. SAFETY WALK OVERLAY REINFORCEMENT
Scale $\frac{1}{2}$"=1'-0"

S.E. SAFETY WALK

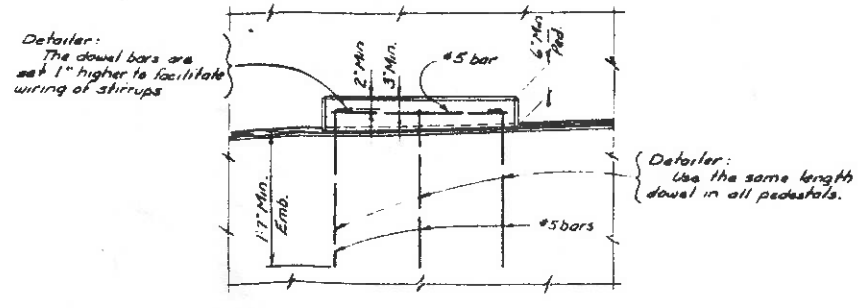


STEM REINFORCEMENT
Scale $\frac{1}{2}$"=1'-0"

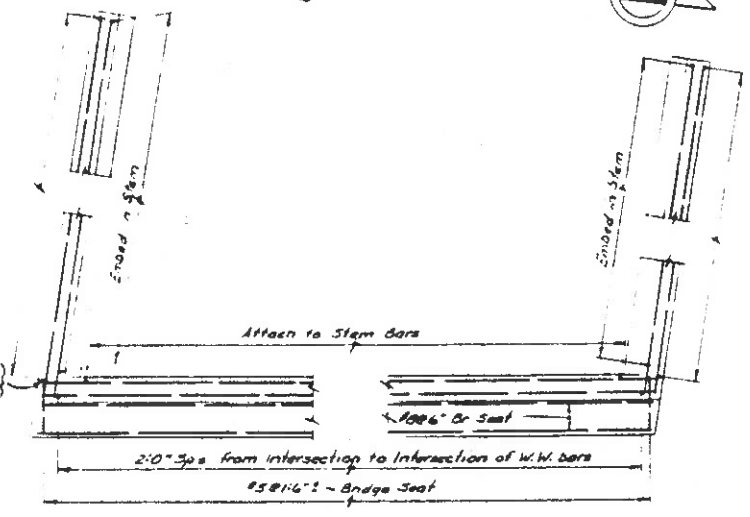


PEDESTAL PLAN
Scale $\frac{3}{8}$"=1'-0"

Detailer:
Show anchor bolt detail or refer to appropriate drawing where information is given.



PEDESTAL ELEVATION
Scale $\frac{3}{8}$"=1'-0"



BACKWALL & UPPER WINGWALL REINFORCEMENT
Scale $\frac{1}{2}$"=1'-0"

Detailer:
All reinforcement to be verified by designer.

Area reserved for notes

DATE MADE 4/20/14
PROJECT ENGINEER
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DETAILED BY
DETAIL CHECKED BY

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DIVISION OF CONSTRUCTION

SAMPLE DETAIL ——— ABUTMENT

ABUTMENT SECTIONS REINFORCEMENT DETAILS

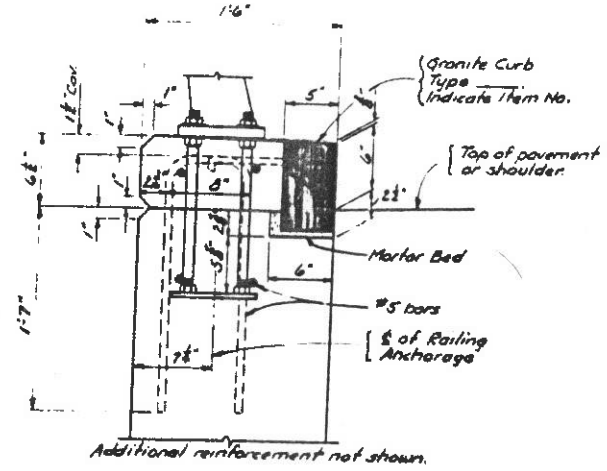
FOR SKEW 30° & UNDER

DRAWING NO. GLD-A6

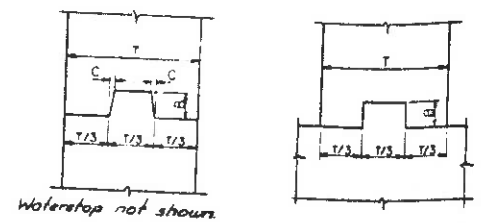
Revised Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.



TOP OF WINGWALL DETAIL
Scale 1"=1'-0"

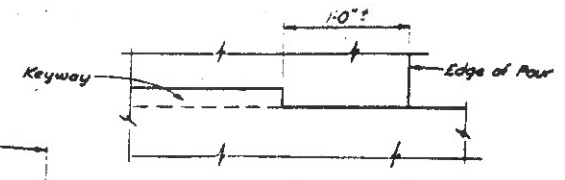


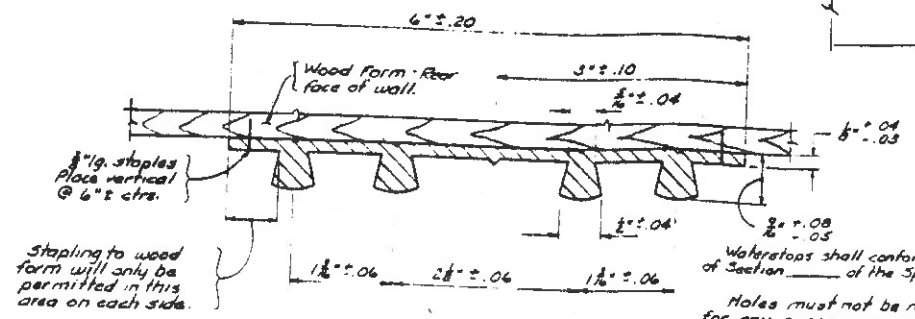
KEYWAY DETAILS
No Scale

CONSTRUCTION & CONTRACTION JOINTS		
-	B	T/3
1/4"	1 1/2"	to 6"
1/2"	3 1/2"	6" to 10"
3/4"	5 1/2"	over 10"

EXPANSION JOINTS		
C	B	T/3
1/2"	3 1/2"	to 10"
3/4"	5 1/2"	over 10"

Note:
All Keys should begin and end 1'-0"± from the edge of pour as indicated below.





TYPE D WATERSTOP
Full Scale

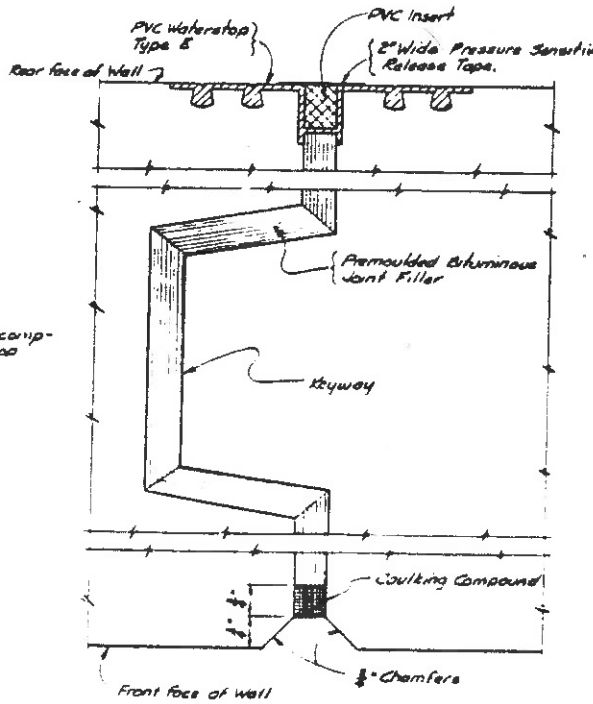
Waterstops shall conform to the requirements of Section ____ of the Specifications.

Holes must not be made in waterstop for any purpose except as required for stapling to forms.

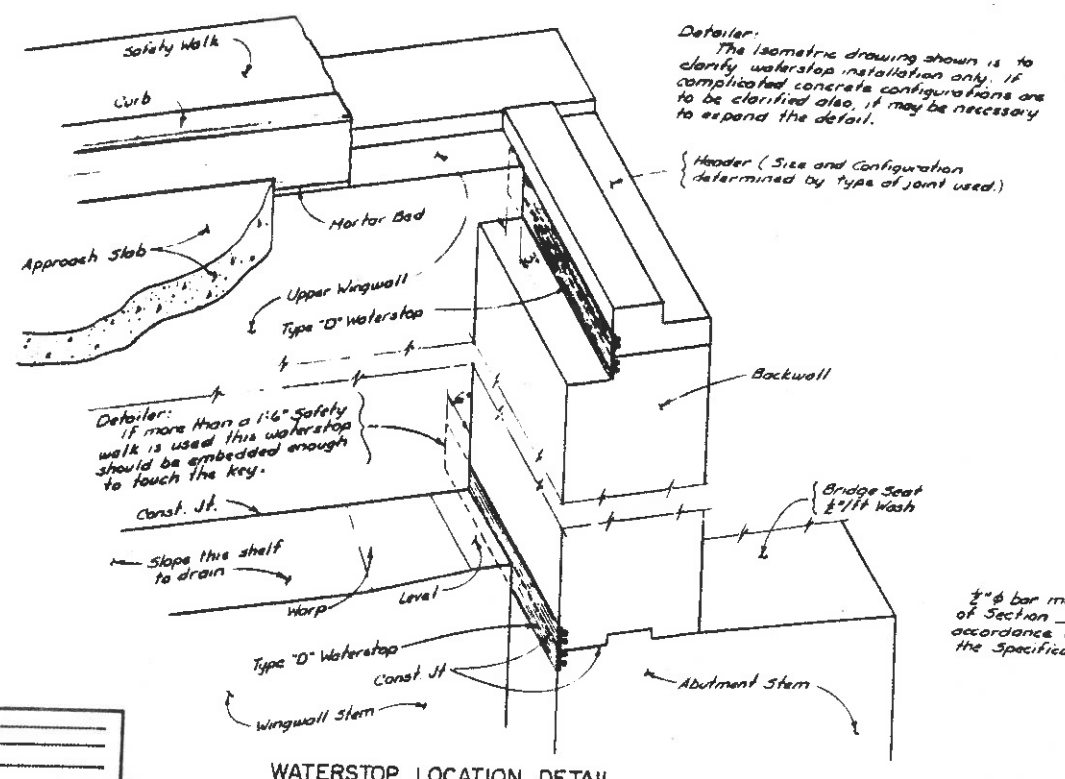
Type D Waterstop shall be light gray in color.

The cost of furnishing and placing waterstops shall be included in the unit price bid for the concrete items.

Detailer:
This detail must be accompanied by Type E waterstop Details as shown on the appropriate BDD Sheet.

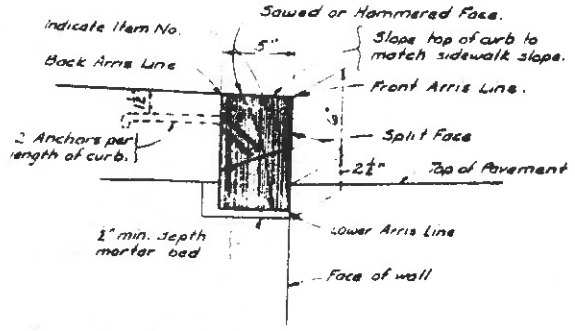


TYPICAL EXPANSION JOINT DETAIL
Scale 1"=1'-0"

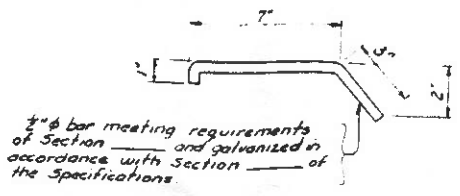


Detailer:
The isometric drawing shown is to clarify waterstop installation only. If complicated concrete configurations are to be clarified also, it may be necessary to expand the detail.

WATERSTOP LOCATION DETAIL



DETAIL OF GRANITE CURB-TYPE G_1
No Scale



1/2" ϕ bar meeting requirements of Section ____ and galvanized in accordance with Section ____ of the Specifications.

DETAIL OF ANCHOR BAR
No Scale

Area reserved for Notes

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SAMPLE DETAIL——ABUTMENT

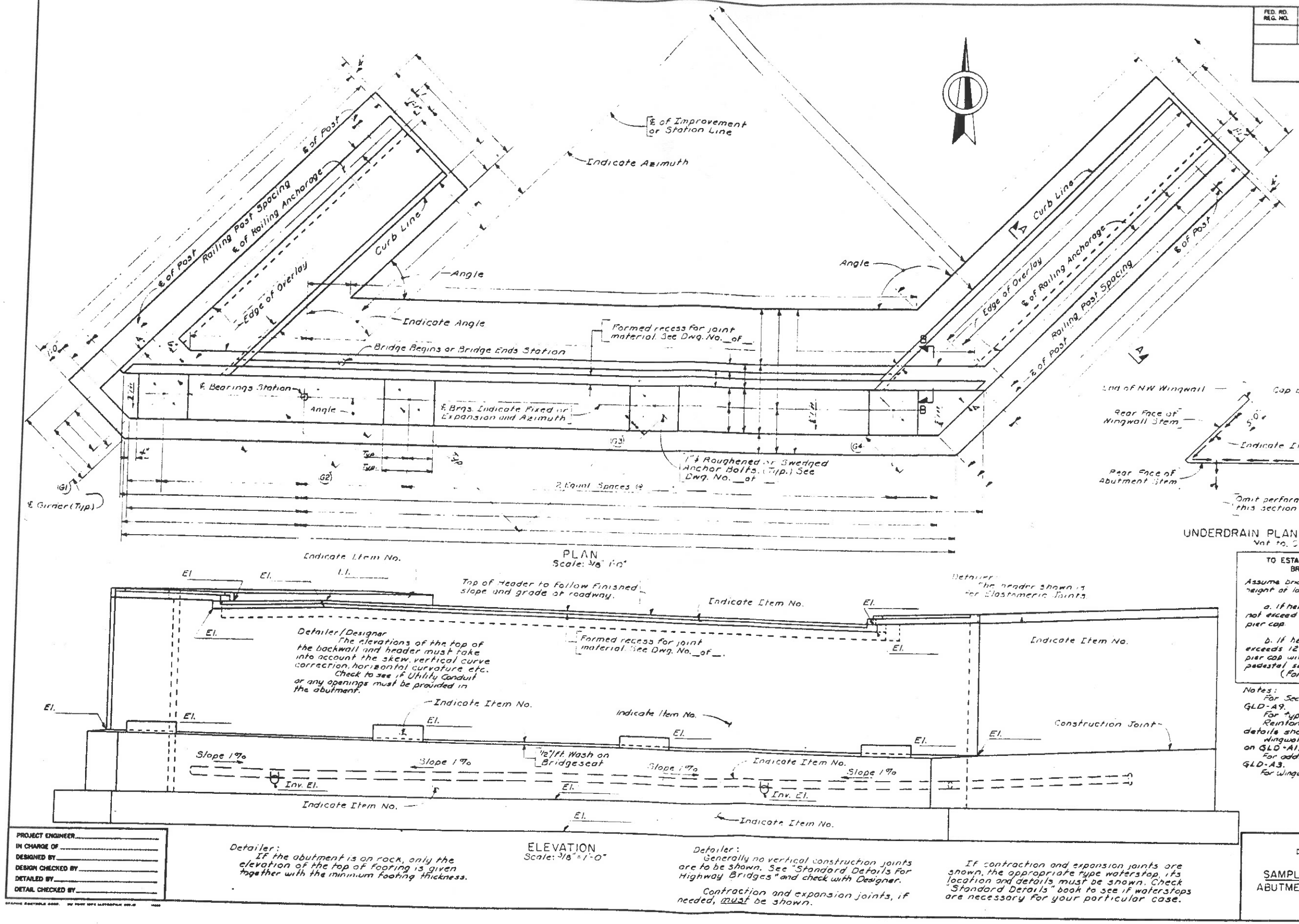
MISC. ABUTMENT DETAILS

FOR SKEW 30° & UNDER

DRAWING NO. GLD-A7

Revised Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			



PLAN
Scale: 3/16" 1'-0"

ELEVATION
Scale: 3/16" = 1'-0"

UNDERDRAIN PLAN & FLOW DIAGRAM
Not to Scale

TO ESTABLISH THE SLOPE OF ABUTMENT BRIDGESEAT OR PIER CAP

Assume bridge seat or pier cap will be level. Set height of lowest fascia pedestal at 6"

a. If height of highest fascia pedestal does not exceed 12" use the level bridge seat or pier cap.

b. If height of highest fascia pedestal exceeds 12", use a sloping bridge seat or pier cap with the height of each fascia pedestal set at 6"
(For Battered Solid Piers, see GLD-P1)

Notes:
For Section A-A and Section B-B see GLD-A9.
For typical sections see GLD-A9.
Reinforcement details similar to those details shown on GLD-A2 and GLD-A3.
Wingwall elevations similar to those shown on GLD-A1.
For additional anchor bolt details see GLD-A3.
For Wingwall Elevations see GLD-A9.

PROJECT ENGINEER
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DETAIL CHECKED BY

Detailer:
If the abutment is on rock, only the elevation of the top of footing is given together with the minimum footing thickness.

Detailer:
Generally no vertical construction joints are to be shown. See "Standard Details for Highway Bridges" and check with Designer.
Contraction and expansion joints, if needed, must be shown.

If contraction and expansion joints are shown, the appropriate type waterstop, its location and details must be shown. Check "Standard Details" book to see if waterstops are necessary for your particular case.

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL——ABUTMENT

ABUTMENT PLAN AND ELEVATION SPREAD FOOTING

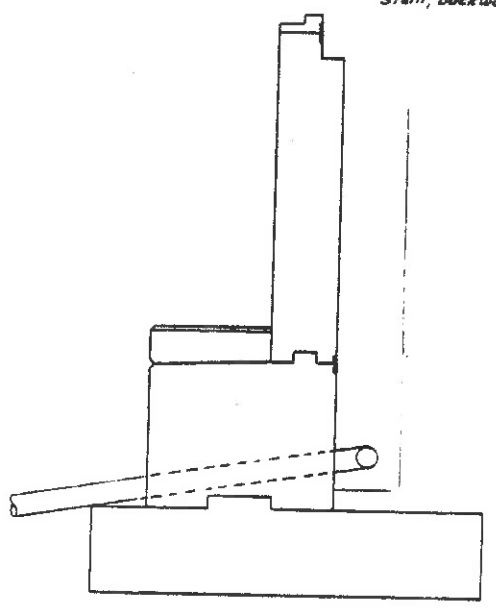
FOR SKEWS OVER 30°

DRAWING NO GLD-A8

Added Jan 1975

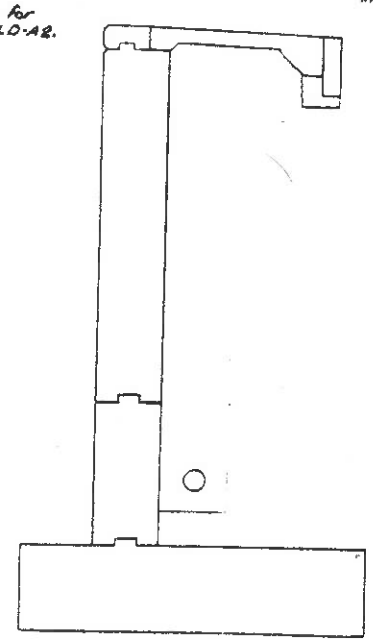
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			
CAPITAL PROJECT IDENTIFICATION NO.				

Detailer:
Sections shown here are of the type and number required for this abutment. For required type of reinforcing and necessary dimensions see GLD-A2.
For plan of reinforcement for stem, backwall & footing see GLD-A2.

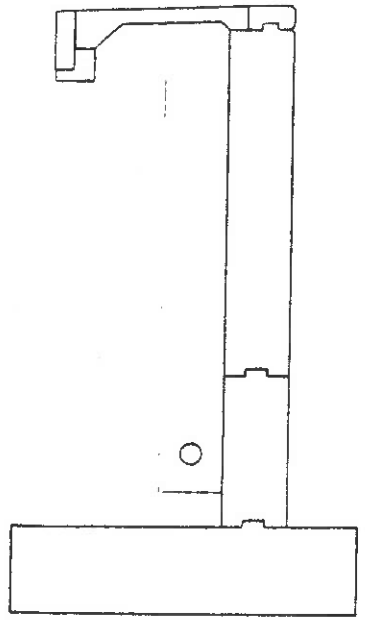


ABUTMENT SECTION
Scale $\frac{1}{2}$"=1'0"

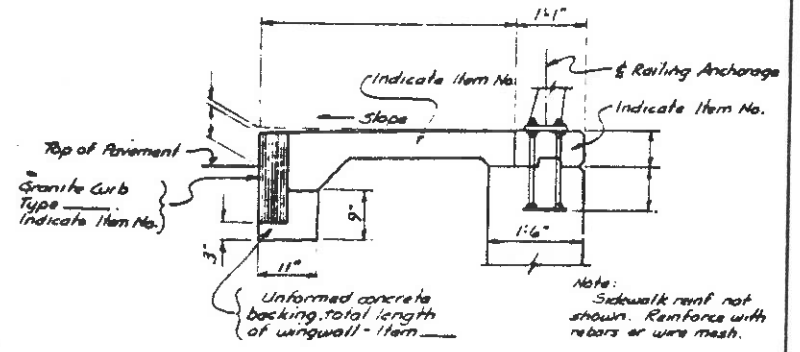
Note:
Railing anchorage shown in Section A-A.



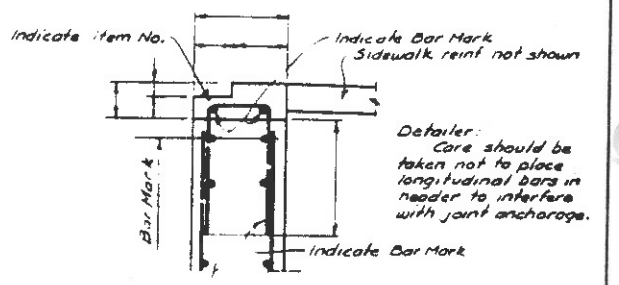
N.W. WINGWALL SECTION
Scale $\frac{1}{2}$"=1'0"



N.E. WINGWALL SECTION
Scale $\frac{1}{2}$"=1'0"



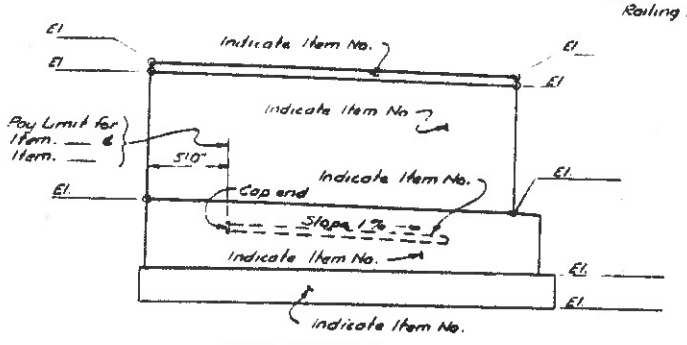
SECTION A-A
Scale $\frac{1}{2}$"=1'0"



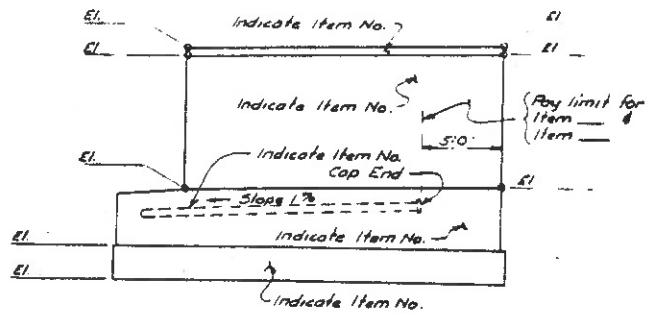
Detailer:
Care should be taken not to place longitudinal bars in header to interfere with joint anchorage.

SECTION B-B
Scale $\frac{1}{2}$"=1'0"

Note:
Railing not shown.



N.W. WINGWALL
Scale $\frac{1}{2}$"=1'0"



N.E. WINGWALL
Scale $\frac{1}{2}$"=1'0"

This area reserved for notes

DATE MADE	
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DESIGN CHECKED BY	
DETAILED BY	
DETAIL CHECKED BY	

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SAMPLE DETAIL — ABUTMENT

ABUTMENT SECTIONS
REINFORCEMENT DETAILS
FOR SKEWS OVER 30°

DRAWING NO. GLD-A9

Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

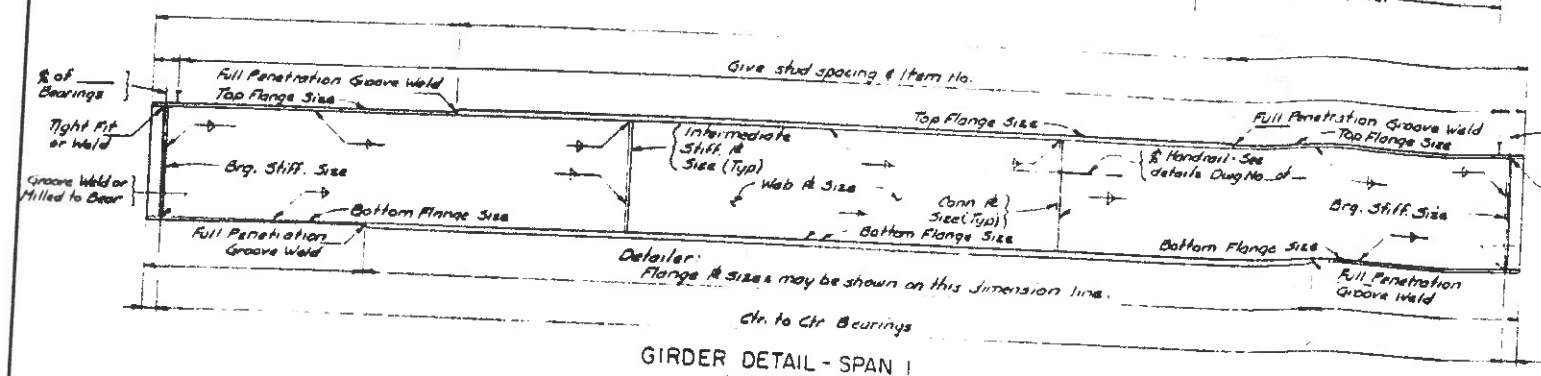
CAPITAL PROJECT IDENTIFICATION NO.

STUD SHEAR CONNECTOR SPACING - ITEM ____

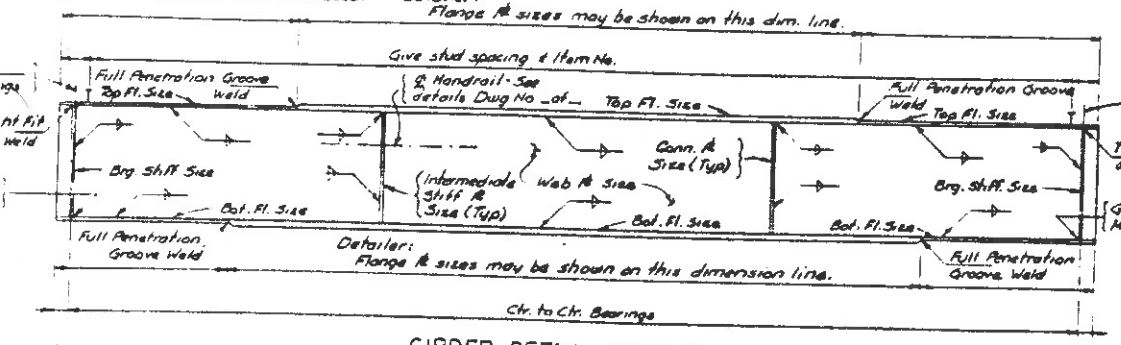
GIRDER	SPACING	TOTAL STUDS	GIRDER	SPACING	TOTAL STUDS
1	Show Spacing		8		
2			9		
3			10		
4			11		
5			12		
6			13		
7	End of Girder		14	End of Girder	

Detailer:
If the stud spacing is different for each girder a table such as the one shown here may be used.
If the stud spacing is similar for each girder the spacing may be shown as on the Girder Details below

Detailer:
Always indicate the size of fillet weld to be used.
Consult "New York State Steel Construction Manual" and "Standard Details for Highway Bridges" for weld size to plate thickness tables, types of welds and their appropriate location.
Always indicate type(s) of steel to be used.



GIRDER DETAIL - SPAN 1
Not to Scale



GIRDER DETAIL - SPAN 2
Not to Scale

Note:
The ends of all Girders and the Bearing Stiffeners shall be vertical. All Connection ℄'s and Intermediate Stiffeners may be perpendicular to the top flange.

HAUNCH TABLE — SPAN 1

		℄ BRG	MID PT	℄ BRG
Girder 1	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 2	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 3	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 4	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 5	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 6	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 7	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			

HAUNCH TABLE — SPAN 2

		℄ BRG	MID PT	℄ BRG
Girder 8	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 9	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 10	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 11	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 12	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 13	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			
Girder 14	(A) Req'd bottom of Slab Elevation			
	(B) Top of Steel El. (Field Meas.)			
	(C) = (A) − (B)			
	(D) Concrete + S.D.L. Deflection	—		—
	(E) Depth of Haunch required = (C) + (D) (Ht)			

Detailer:
Enter values for (A) at ℄ Brgs. and Mid. Pt.
Enter values for (D) (the sum of (M) + (N) from Camber Table) at Mid. Pt.

CAMBER TABLE — SPAN 1

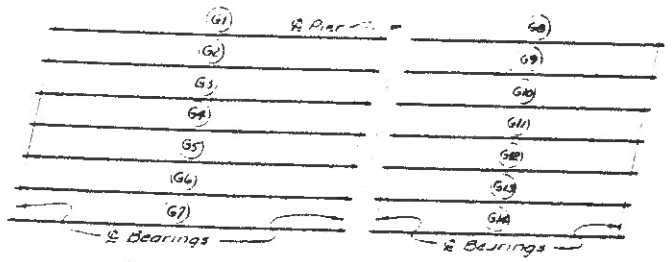
		℄ BRG	MID PT	℄ BRG
Typical Interior Girder	(J) Vertical Curve (Ht)			
	(K) Steel D.L. (Ft)			
	(L) Concrete D.L. (Ft)			
	(M) Superimposed D.L. (Ft)			
	Total (Ft)			
Typical Fascia Girder	(J) Vertical Curve (Ht)			
	(K) Steel D.L. (Ft)			
	(L) Concrete D.L. (Ft)			
	(M) Superimposed D.L. (Ft)			
	Total (Ft)			

SPAN 2

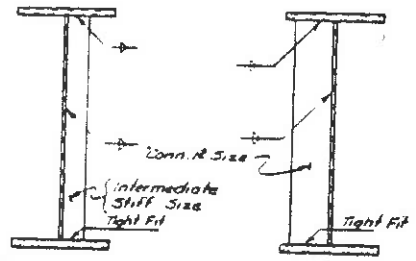
		℄ BRG	MID PT	℄ BRG
Typical Interior Girder	(J) Vertical Curve (Ht)			
	(K) Steel D.L. (Ft)			
	(L) Concrete D.L. (Ft)			
	(M) Superimposed D.L. (Ft)			
	Total (Ft)			
Typical Fascia Girder	(J) Vertical Curve (Ht)			
	(K) Steel D.L. (Ft)			
	(L) Concrete D.L. (Ft)			
	(M) Superimposed D.L. (Ft)			
	Total (Ft)			

Detailer:
A schematic girder layout (type shown below) shall be shown so the user will not have to refer to other drawings for location and orientation.

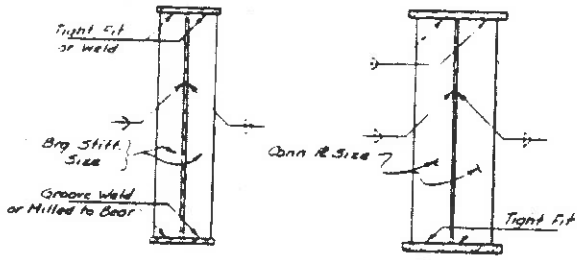
Designer/Detailer:
The Contract Plans shall show the design cambers for structural steel, concrete and superimposed dead load, vertical curve and total dead load plus vertical curve at the centerpoint of each stringer for spans under 125 feet and at quarter points for spans over 125 feet.



GIRDER LAYOUT
Not to Scale



INTERMEDIATE STIFFENER — CONN. ℄ - FASCIA GIR.



BRG. STIFF. — CONN. ℄ - INTERIOR GIR.

GIRDER SECTIONS
Scale ¾"=1'-0"

Notes:
For Handrail details ... -MS1.
For Stud Shear ... refer see GLD-MS1.

DATE MADE ____
PROJECT ENGINEER ____
IN CHARGE OF ____
DESIGNED BY ____
DESIGN CHECKED BY ____
DETAILED BY ____
DETAIL CHECKED BY ____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL - SIMPLE SPANS

WELDED ℄ GIRDER
DETAILS & TABLES

DRAWING NO. GLD-G1

Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

Designer/Detailer:
If different girder configurations are required by design because of geometry or utilities, additional tables may be required.

MOMENT & SHEAR TABLE			℄ BRGS ABUTMENT	MID SPAN	℄ BRGS PIER
Girders 1 thru 7	DL	MOMENT			
		SHEAR			
	SDL	MOMENT			
		SHEAR			
	LL(+)	MOMENT			
		SHEAR			
	LL(-)	MOMENT			
		SHEAR			
Girders 8 thru 14	DL	MOMENT			
		SHEAR			
	SDL	MOMENT			
		SHEAR			
	LL(+)	MOMENT			
		SHEAR			
	LL(-)	MOMENT			
		SHEAR			

LL MOMENTS AND SHEARS INCLUDE IMPACT
MOMENTS ARE EXPRESSFD AS FOOT KIPS
SHEARS ARE EXPRESSED AS KIPS

Designer/Detailer:
This table shall be given to the nearest one thousandth of a Kip.

DESIGN LOAD TABLE/GIRDER			
	UNIT	LOAD/FT	
DL	Slab	____ K/ft.	
	Haunch	____ K/ft.	
	Girder	____ K/ft.	
	S.I.P. Forms	____ K/ft.	← If applicable
	Diaphragms	____ K/ft.	
	Utilities	____ K/ft.	← If applicable
	Total	____ K/ft.	
SDL	Safety or Sidewalks	____ K/ft.	
	Railing or Parapet	____ K/ft.	
	Future W.S.	____ K/ft.	
	Total	____ K/ft.	

Assumed Live Load - (use applicable loading i.e. HS20-44)

DATE MADE
PROJECT ENGINEER
IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAILS - SIMPLE SPANS

WELDED ℝ GIRDER TABLES

DRAWING NO. GLD-G2

Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

Designer/Detailer:
Actual location of Inflection Points to be determined by design.

HAUNCH TABLE		℄ BRGS. ABUTMENT	0.1L_1	0.2L_1	0.3L_1	0.4L_1	0.5L_1	0.6L_1	DL INFL. POINT	0.7L_1	0.8L_1	0.9L_1	℄ BRGS. PIER	0.1L_2	0.2L_2	0.3L_2	DL. INFL. POINT	0.4L_2	0.5L_2	0.6L_2	0.7L_2	0.8L_2	0.9L_2	℄ BRGS ABUTMENT
Girder 1	(A) Req'd bottom of Slab Elevation																							
	(B) Top of Steel Elev. (Field Meas.)																							
	(C) = (A) − (B)																							
	(D) Concrete + S.D.L. Deflection																							
	(E) Depth of Haunch required = (C) + (D) (ft)																							
Girder 2	(A) Req'd bottom of Slab Elevation																							
	(B) Top of Steel Elev. (Field Meas.)																							
	(C) = (A) − (B)																							
	(D) Concrete + S.D.L. Deflection																							
	(E) Depth of Haunch required = (C) + (D) (ft)																							
Girder 3	(A) Req'd bottom of Slab Elevation																							
	(B) Top of Steel Elev. (Field Meas.)																							
	(C) = (A) − (B)																							
	(D) Concrete + S.D.L. Deflection																							
	(E) Depth of Haunch required = (C) + (D) (ft)																							
Girder 4	(A) Req'd bottom of Slab Elevation																							
	(B) Top of Steel Elev. (Field Meas.)																							
	(C) = (A) − (B)																							
	(D) Concrete + S.D.L. Deflection																							
	(E) Depth of Haunch required = (C) + (D) (ft)																							

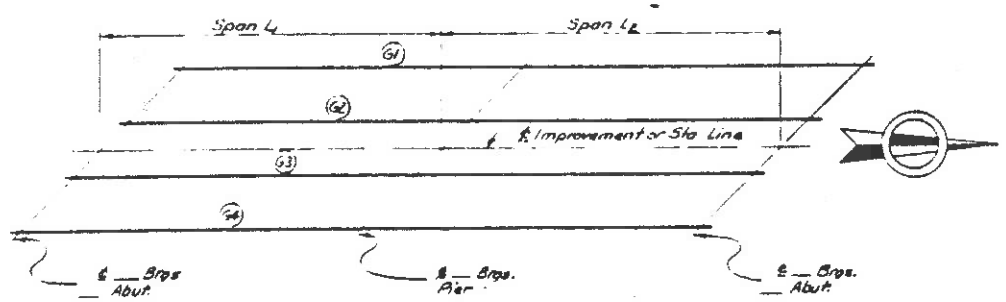
1" or $\frac{5}{8}$" Typ.

Designer:
The table above is shown for 2 span continuous girders. The table may be expanded for 3 span & 4 span continuous girders.

Designer/Detailer:
This table shall be given to the nearest one-thousandth of a Kip.

DESIGN LOAD TABLE / GIRDER			
	UNIT	LOAD/FT	
D.L.	Slab	____ K/ft	
	Haunch	____ K/ft	
	Girder	____ K/ft	
	S.I.P. Forms	____ K/ft	← if applicable
	Diaphragms	____ K/ft	
	Utilities	____ K/ft	← if applicable
	Total	____ K/ft	
S.D.L.	Safety or Sidewalks	____ K/ft	
	Railing or Parapet	____ K/ft	
	Future w.s.	____ K/ft	
	Total	____ K/ft	

Assumed Live Load = (use applicable loading, i.e. H320-44)



GIRDER LAYOUT PLAN
Not to Scale

Notes:
For additional tables see GLD-G5

DATE MADE
PROJECT ENGINEER
IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

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SAMPLE DETAIL - SUPERSTRUCTURE

HAUNCH TABLE
CONTINUOUS WELDED ℞ GIRDER

DRAWING NO. GLD-G4.

Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

MOMENT & SHEAR TABLE			℄ BRGS ABUTMENT	0.1L_1	0.2L_1	0.3L_1	0.4L_1	0.5L_1	0.6L_1	D.L. INFL POINT	0.7L_1	0.8L_1	0.9L_1	℄ BRGS PIER	0.1L_2	0.2L_2	0.3L_2	D.L. INFL POINT	0.4L_2	0.5L_2	0.6L_2	0.7L_2	0.8L_2	0.9L_2	℄ BRGS ABUTMENT
Girder 1	DL	MOMENT																							
		SHEAR																							
	SDL	MOMENT																							
		SHEAR																							
	LL(+)	MOMENT																							
		SHEAR																							
	LL(−)	MOMENT																							
		SHEAR																							
Girder 2	DL	MOMENT																							
		SHEAR																							
	SDL	MOMENT																							
		SHEAR																							
	LL(+)	MOMENT																							
		SHEAR																							
	LL(−)	MOMENT																							
		SHEAR																							
Girder 3	DL	MOMENT																							
		SHEAR																							
	SDL	MOMENT																							
		SHEAR																							
	LL(+)	MOMENT																							
		SHEAR																							
	LL(−)	MOMENT																							
		SHEAR																							
Girder 4	DL	MOMENT																							
		SHEAR																							
	SDL	MOMENT																							
		SHEAR																							
	LL(+)	MOMENT																							
		SHEAR																							
	LL(−)	MOMENT																							
		SHEAR																							

Designer/Detailer: Actual location of inflection points to be determined by design.

LL MOMENTS AND SHEARS INCLUDE IMPACT - BOTH SPANS.

MOMENTS ARE EXPRESSED AS FOOT KIPS

SHEARS ARE EXPRESSED AS KIPS

CAMBER TABLE		℄ BRGS. ABUTMENT	0.1L_1	0.2L_1	0.3L_1	0.4L_1	0.5L_1	0.6L_1	D.L. INFL. POINT	0.7L_1	0.8L_1	0.9L_1	℄ BRGS. PIER	0.1L_2	0.2L_2	0.3L_2	D.L. INFL. POINT	0.4L_2	0.5L_2	0.6L_2	0.7L_2	0.8L_2	0.9L_2	℄ BRGS. ABUTMENT
Girder 1	(I) Steel D.L. (Ft.)																							
	(II) Concrete D.L. (Ft.)																							
	(III) Superimposed D.L. (Ft.)																							
	(IV) Vertical Curve (Ft.)																							
	Total = (I) + (II) + (III) + (IV) (Ft.)																							
Girder 2	(I) Steel D.L. (Ft.)																							
	(II) Concrete D.L. (Ft.)																							
	(III) Superimposed D.L. (Ft.)																							
	(IV) Vertical Curve (Ft.)																							
	Total = (I) + (II) + (III) + (IV) (Ft.)																							
Girder 3	(I) Steel D.L. (Ft.)																							
	(II) Concrete D.L. (Ft.)																							
	(III) Superimposed D.L. (Ft.)																							
	(IV) Vertical Curve (Ft.)																							
	Total = (I) + (II) + (III) + (IV) (Ft.)																							
Girder 4	(I) Steel D.L. (Ft.)																							
	(II) Concrete D.L. (Ft.)																							
	(III) Superimposed D.L. (Ft.)																							
	(IV) Vertical Curve (Ft.)																							
	Total = (I) + (II) + (III) + (IV) (Ft.)																							

Designer/Detailer: Actual location of inflection points to be determined by design.

Designer:
Tables shown are for 2 span continuous girders, tables may be expanded for 3 span and 4 span continuous girders.

Designer/Detailer:
The Contract Plans shall show the design camber for structural steel, concrete and superimposed dead load, vertical curve and total dead load plus vertical curve at inflection points and at tenth points of spans.

Notes:
For "Girder Layout Plan" see GLD-G4

PROJECT ENGINEER_____
IN CHARGE OF_____
DESIGNED BY_____
DESIGN CHECKED BY_____
DETAILED BY_____
DETAIL CHECKED BY_____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL — SUPERSTRUCTURE

MOMENT-SHEAR & CAMBER TABLES CONTINUOUS WELDED PL GIRDER

DRAWING NO. GLD-G5

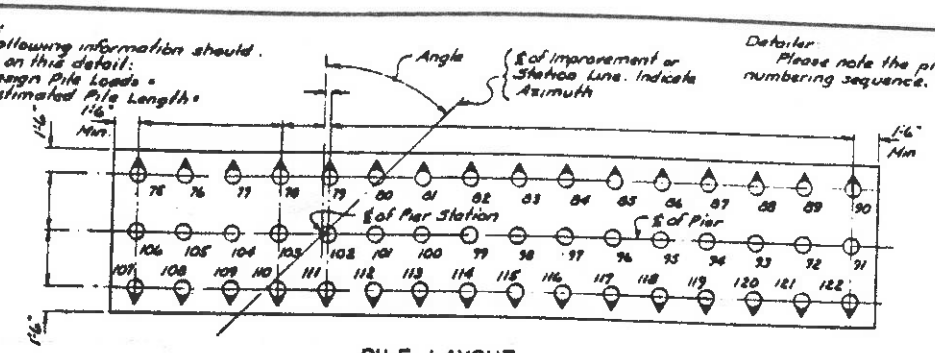
Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

Detailer:
The following information should be listed on this detail:
1. Design Pile Loads.
2. Estimated Pile Length.

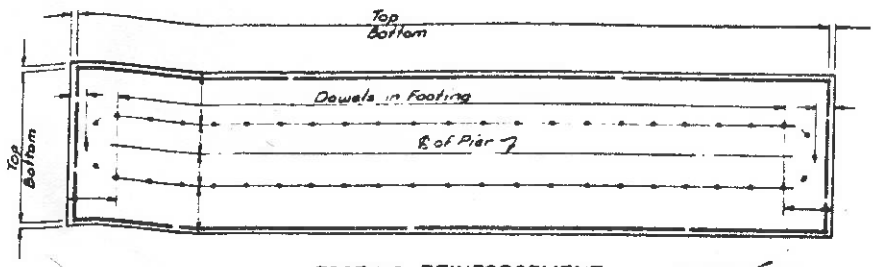
Detailer:
Please note the pile numbering sequence.



PILE LAYOUT
Scale 1/8"=1'-0"

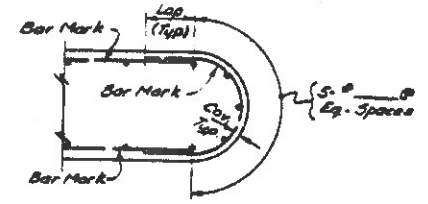
LEGEND
- Cast-in-Place Pile - Item No.
- Battered C.I.P. Pile - Indicate Batter

Detailer:
Use only appropriate symbols in legend.

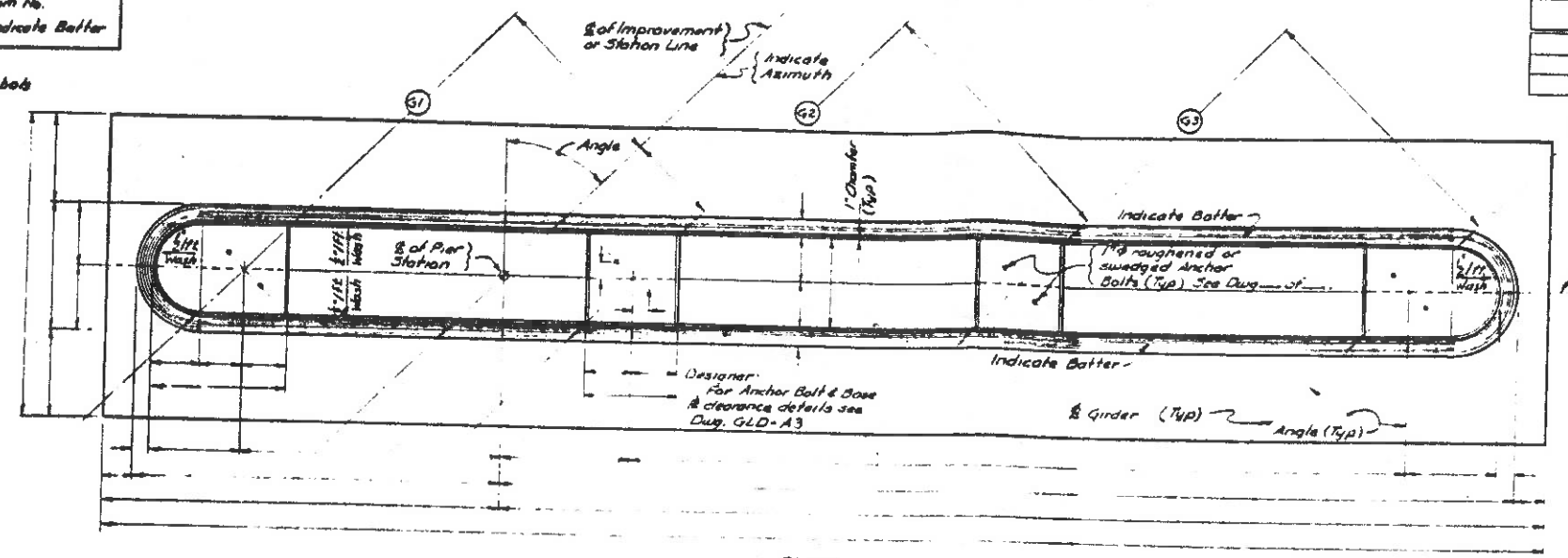


FOOTING REINFORCEMENT
Scale 1/8"=1'-0"

CONCRETE & REINFORCEMENT TABLE

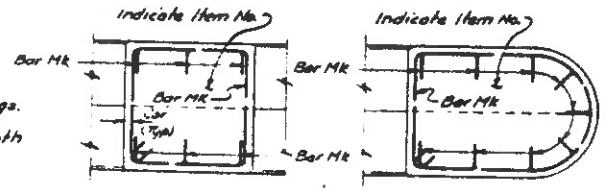


SECTION A-A
Scale 1/8"=1'-0"



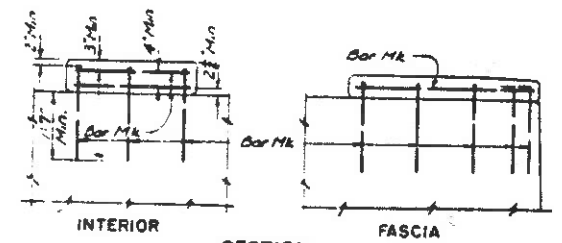
PLAN
Scale 1/8"=1'-0"

℄ of Pier ℄ Bearings. Indicate Fixed or Expansion & Azimuth



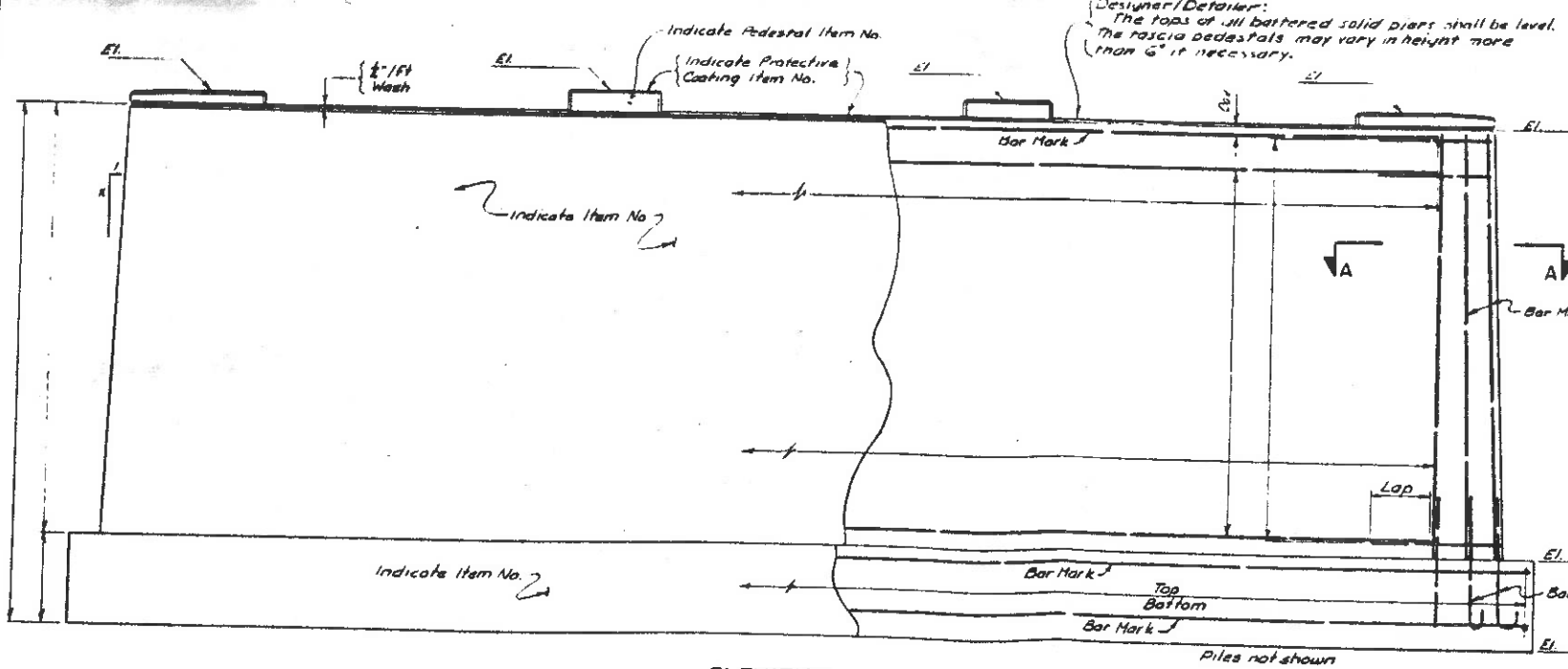
PLAN

Detailer
The Pier Pedestal reinforcement is the same size as that shown for the Abutment Pedestal, Dwg GLD-A3

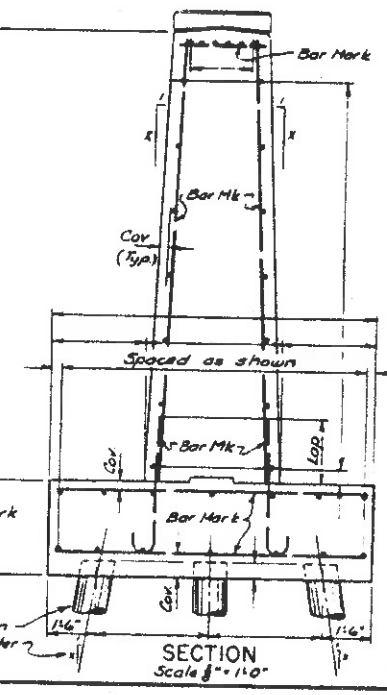


SECTION
PEDESTAL REINFORCEMENT
Scale 1/8"=1'-0"

Detailer:
All reinforcement to be verified by Designer.



ELEVATION
Scale 1/8"=1'-0"



SECTION
Scale 1/8"=1'-0"

Notes:
For Pile and Pile Reinforcement Details see Dwg. GLD-A5

PROJECT ENGINEER
IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL ——— PIERS

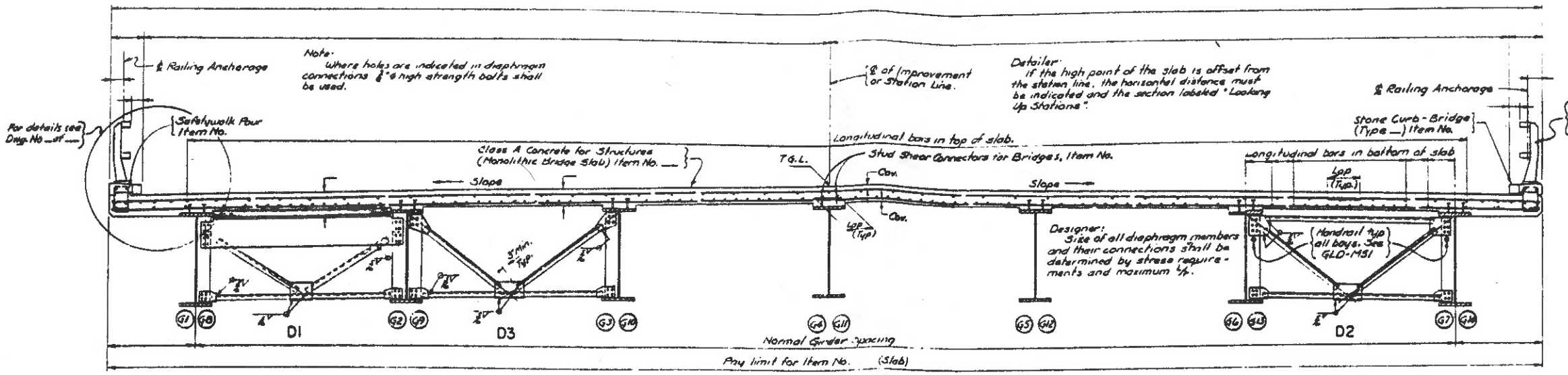
SOLID PIER
ON PILES

DRAWING NO. GLD-P1

Added Jan 1975

FED. NO. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

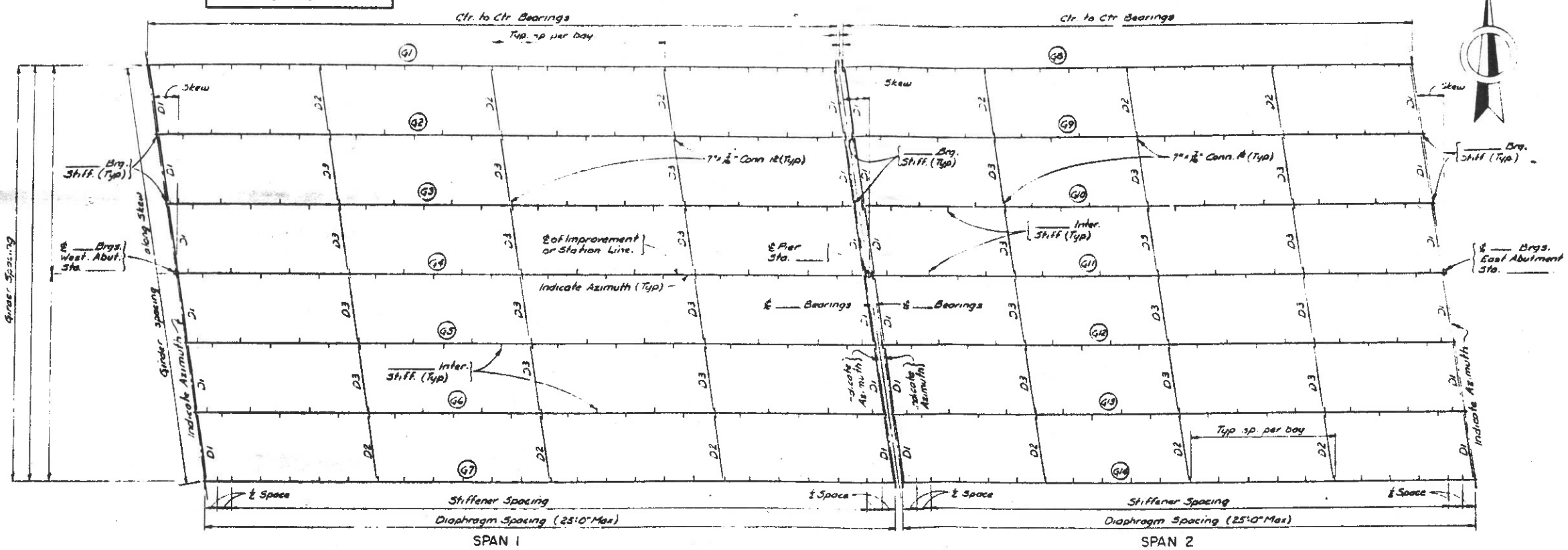
CAPITAL PROJECT IDENTIFICATION NO.



Designer/Detailer: For additional information on hooked transverse bars in top of slab see Note "A" on GLD-S2.

Detailer: All reinforcement to be verified by designer.

TRANSVERSE SECTION
Scale ½"=1'0"



FRAMING PLAN
Scale ½"=1'0"

Designer/Detailer: Please note that for Skews 30° or under the Diaphragms are placed parallel to the Skew.

Notes:
If any utilities are to be carried on the bridge they should be kept above the bottom flange of the Girder.
All curbs are to be Granite.
For curb details see GLD-MC1.
For information on Jacking Diaphragms consult "Standard Details for Highway Bridges."
For Bridge Lighting and conduit location details see GLD-MC3
For Girder Details see GLD-G1
For additional details of diaphragms see appropriate BDD Sheet.

If all azimuths of ℄ of bearings and skew angles are the same only show one angle and one azimuth, labeled "typical."

DATE MADE ...
PROJECT ENGINEER ...
IN CHARGE OF ...
DESIGNED BY ...
DESIGN CHECKED BY ...
DETAILED BY ...
DETAIL CHECKED BY ...

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL - SIMPLE SPANS

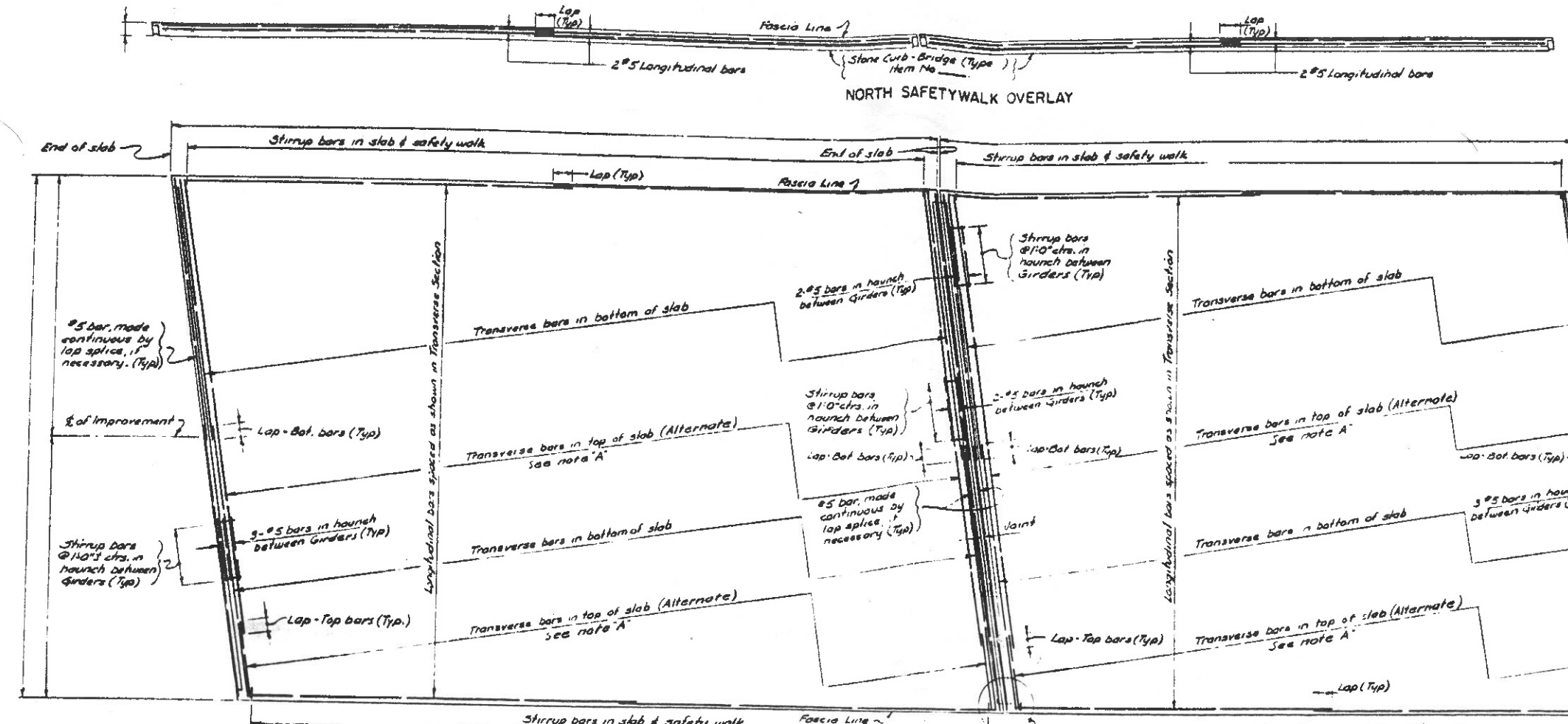
TRANSVERSE SECTION
FRAMING PLAN
FOR SKEW 30° & UNDER

DRAWING NO. GLD-S1

Added Jan 1975

FED. REG. REQ. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.



SLAB REINFORCEMENT PLAN
Scale ⅜"=1'0"

CONCRETE & REINFORCEMENT TABLE

Notes:
For additional details of Haunch Stirrups see GLD-MC1.

NOTE "A"

Bars for slab reinforcement:
1. Maximum length of bar with hook on each end shall be limited to 30'-0" including hooks.
2. Maximum length of bar with a hook on one end shall be limited to 60'-0" including hook.
3. When a length of bar having hooks at each end is greater than 30'-0" it shall be attained by lapping two bars with a hook on one end. Top bars shall be lapped midway between girders. Laps shall be alternated.

DATE MADE
PROJECT ENGINEER
IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
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SAMPLE DETAIL — SUPERSTRUCTURE

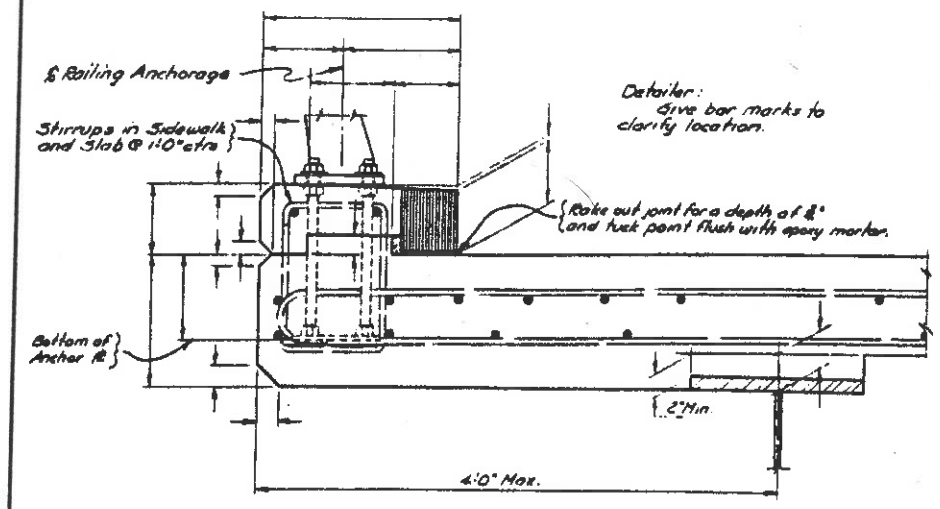
SLAB REINFORCEMENT
SIMPLE SPANS
FOR SKEW 30° & UNDER

DRAWING NO. GLD-32

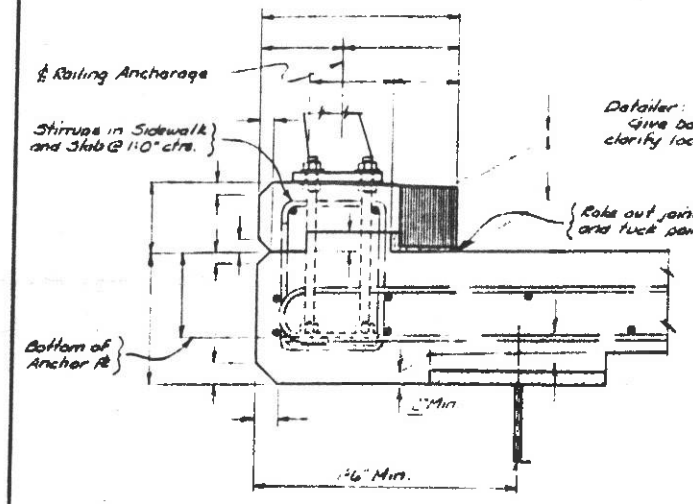
Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

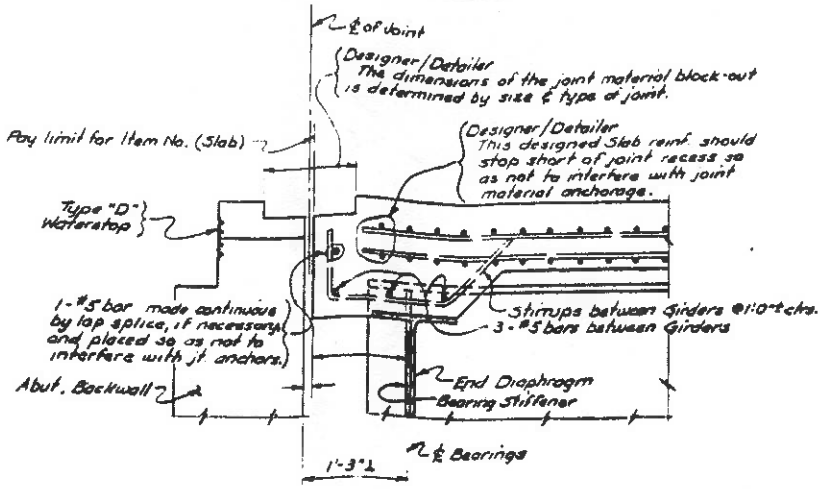
CAPITAL PROJECT IDENTIFICATION NO.



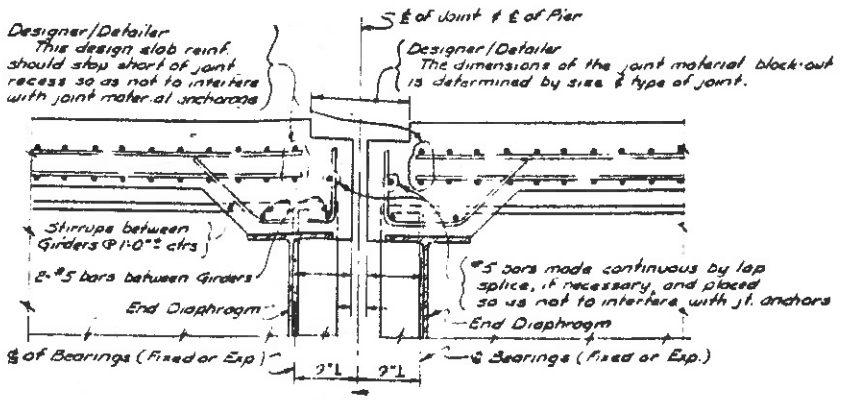
FASCIA DETAIL (LARGE OVERHANG)
Scale 1½"=1'-0"



FASCIA DETAIL (SMALL OVERHANG)
Scale 1½"=1'-0"

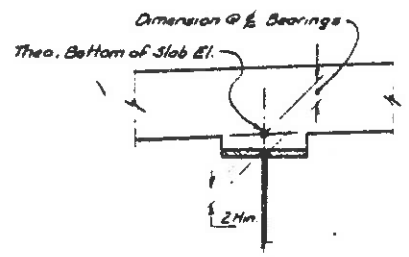


SLAB HAUNCH DETAIL (AT ABUTMENT)
Scale 1"=1'-0"

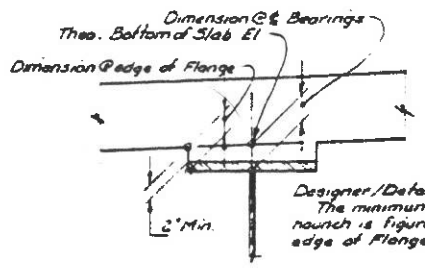


SLAB HAUNCH DETAIL (AT PIER)
Scale 1"=1'-0"

Designer/Detailer
The haunch dimension for rolled beams shall be from theoretical bottom of slab to top of top flange, all other haunches shall be shown as indicated here.

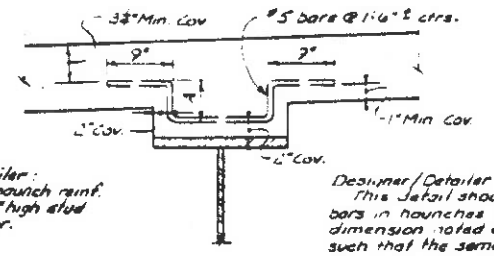


FLANGE UNDER 16"

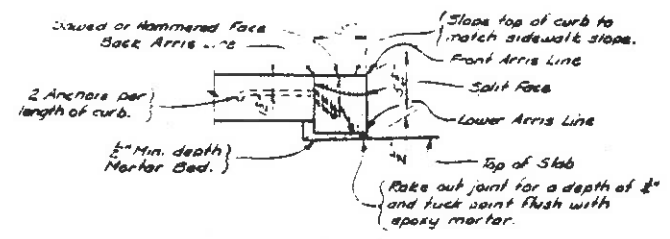


FLANGE 16" & OVER

GIRDER HAUNCH DETAIL
Scale 1"=1'-0"



REINFORCED GIRDER HAUNCH DETAIL
Scale 1"=1'-0"



DETAIL OF GRANITE CURB - TYPE FI
Not to Scale

Notes:
For Scupper details see appropriate BDD sheet.
For additional haunch information refer to "Standard Details for Highway Bridges."

DATE MADE
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DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION
SAMPLE DETAIL — SUPERSTRUCTURE

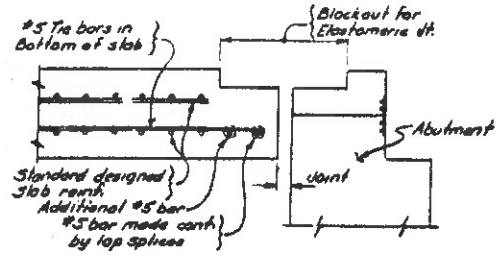
FASCIA AND HAUNCH DETAILS

DRAWING NO. GLD-MC1

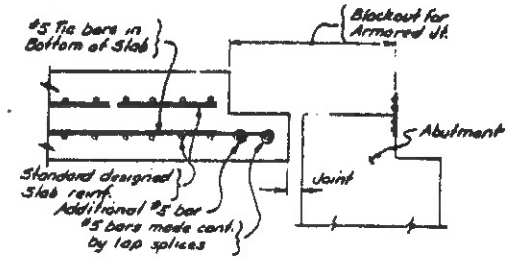
Added Jan 1975

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

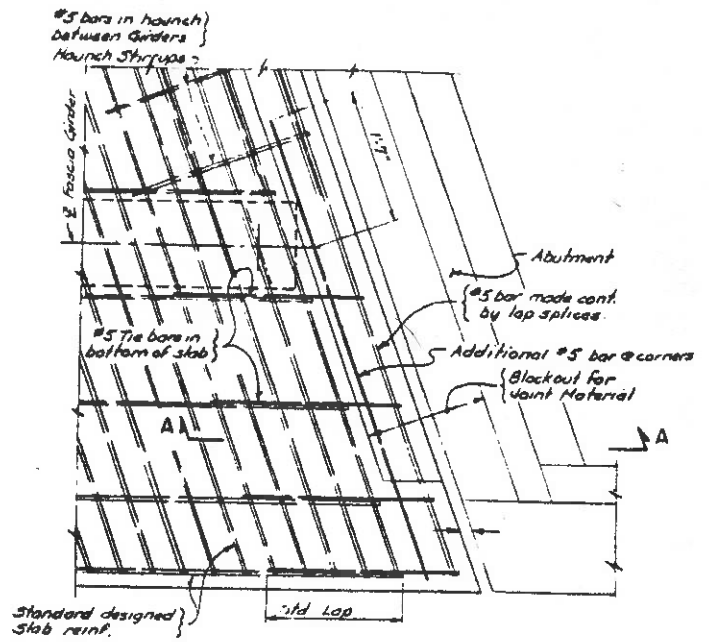
CAPITAL PROJECT IDENTIFICATION NO.



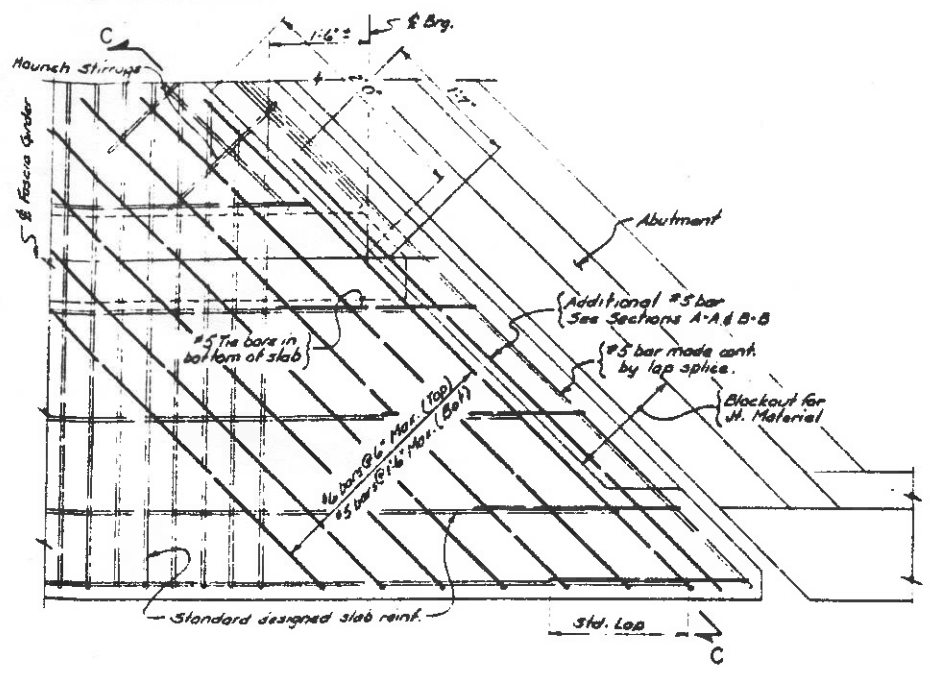
SECTION A-A
(ELASTOMERIC JT)
Scale 1"=1'0"



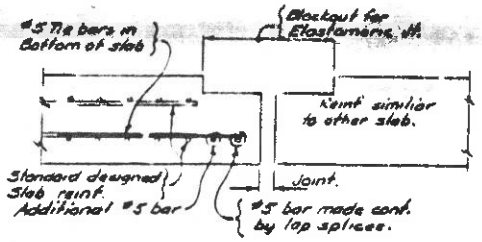
SECTION A-A
(ARMORED JT)
Scale 1"=1'0"



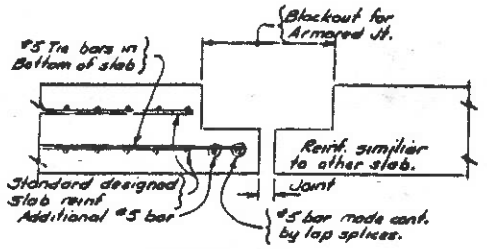
SLAB CORNER REINF. AT ABUTMENT
(SKEW 30° & UNDER)
Scale 1"=1'0"



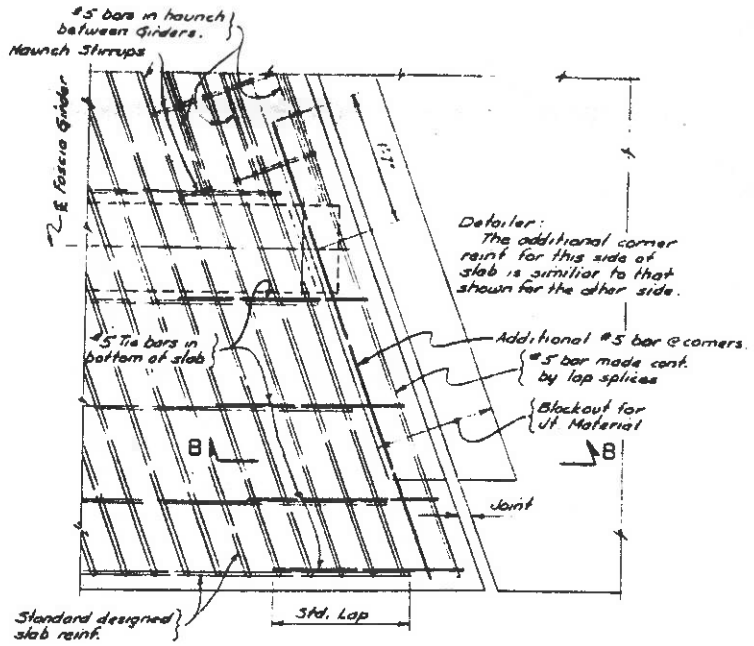
SLAB CORNER REINF. AT ABUTMENT
(SKEW OVER 30°)
Scale 1"=1'0"



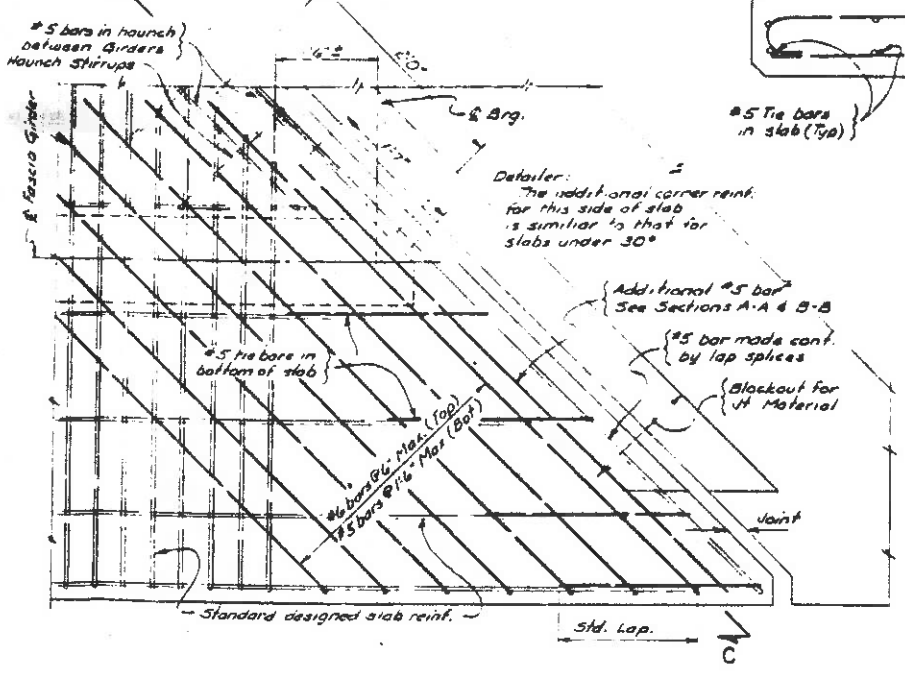
SECTION B-B
(ELASTOMERIC JT)
Scale 1"=1'0"



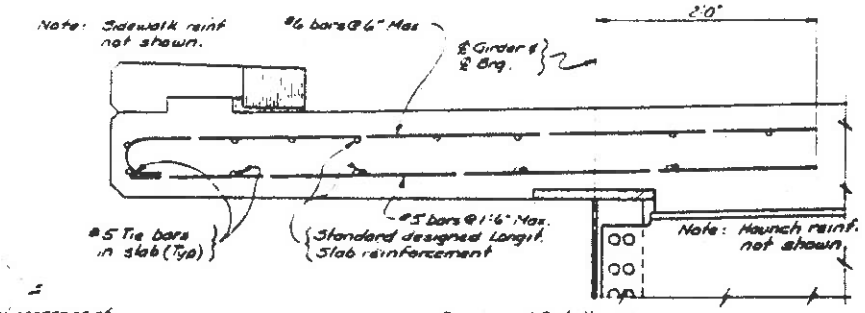
SECTION B-B
(ARMORED JT)
Scale 1"=1'0"



SLAB CORNER REINF. AT PIER
(SKEW 30° & UNDER)
Scale 1"=1'0"



SLAB CORNER REINF. AT PIER
(SKEW OVER 30°)
Scale 1"=1'0"



Designer / Detailer :
The #6 bars @ 6" Max. & #5 bars @ 1'-6" Max are designed for 45° Skew with a 2'-0" Max fascia overhang.
For lesser skew angles or smaller overhangs simply use the number of bars that fit, keeping the same area, spacing & embedment.
For greater skew angles or larger overhangs it will be necessary to design the corners for required steel area.

SECTION C-C
Scale 1"=1'-0"

This area reserved for notes

DATE MADE
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DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAILS – SUPERSTRUCTURE

SLAB CORNER DETAILS
SKEWS UP TO 45°

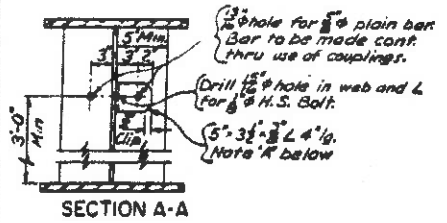
DRAWING NO. GLD-M-

Added Jan 1975

FED. AID RES. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK			

CAPITAL PROJECT IDENTIFICATION NO.

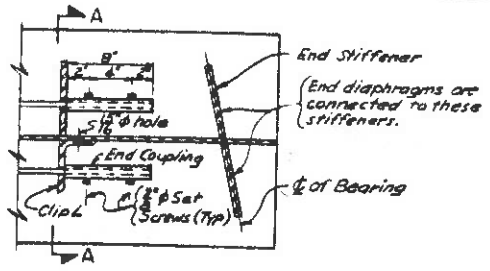
Handrail shall be placed thru stiffeners on both sides of interior Girders and thru stiffeners on inside face of Fascia Girders.
The cost of furnishing and placing the bar, couplings, set screws, H.S. bolts and Clip Angles shall be paid for under item ____.



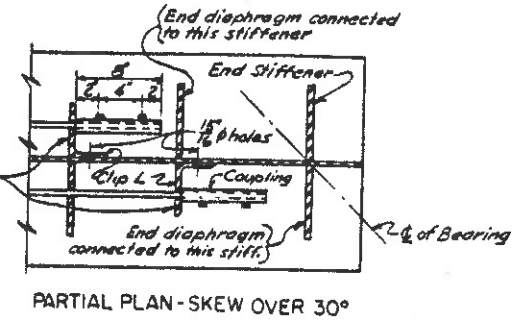
SECTION A-A

Note 'A' - Use clip angle midway between stiffeners if stiffener spacing is 8'-0" or greater.

When unpainted A588 steel is used in the superstructure, the hand rail shall be A588 and the couplings galvanized in accordance with specifications.



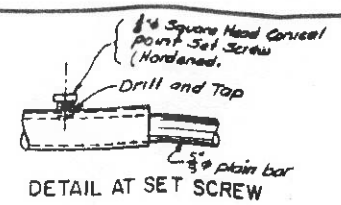
PARTIAL PLAN - SKEW UP TO 30°



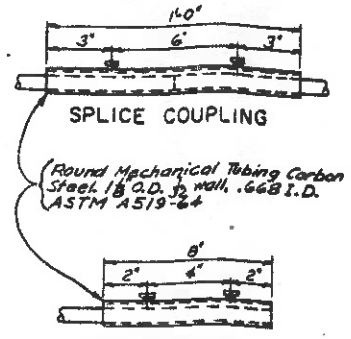
PARTIAL PLAN - SKEW OVER 30°

DETAILS FOR FIELD ERECTED SAFETY HANDRAIL
Not to Scale

Detailer:
Use handrail when web depth is 48" or greater.



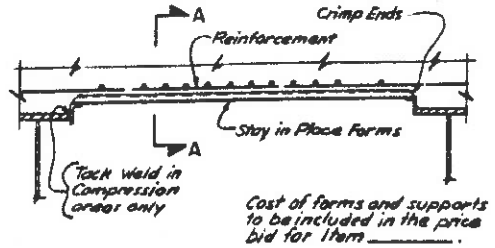
DETAIL AT SET SCREW



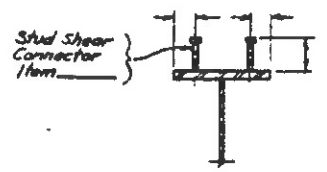
SPLICE COUPLING

END COUPLING

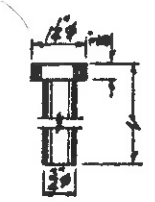
SECTION A-A



DETAILS OF STAY-IN-PLACE FORMS
Not to Scale

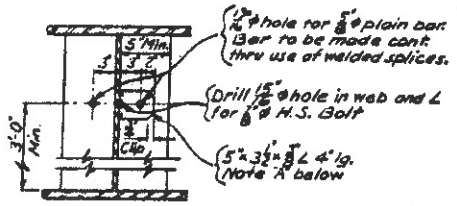


STUD SHEAR CONNECTOR DETAIL
Not to Scale



DETAIL OF STUD
Not to Scale

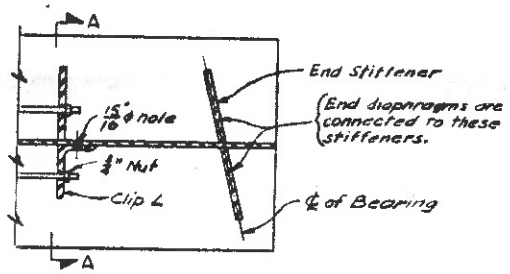
Handrail shall be placed thru stiffeners on both sides of interior Girders and thru stiffeners on inside face of Fascia Girders.
The cost of furnishing and placing the bar, bar splices, 5/8" nuts, H.S. Bolts and Clip Angles shall be paid for under item ____.



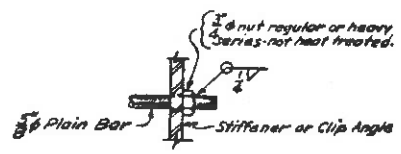
SECTION A-A

Note 'A' - Use clip angle midway between stiffeners if stiffener spacing is 8'-0" or greater.

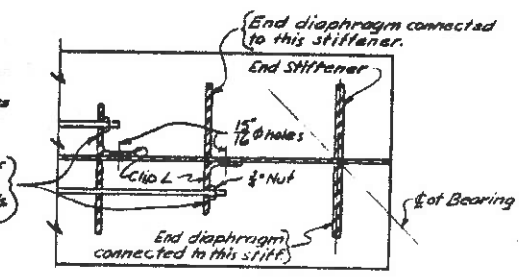
When unpainted A588 steel is used in the superstructure, the handrail shall be A588 and the couplings galvanized in accordance with specifications.



PARTIAL PLAN - SKEW UP TO 30°



END CONNECTION DETAIL

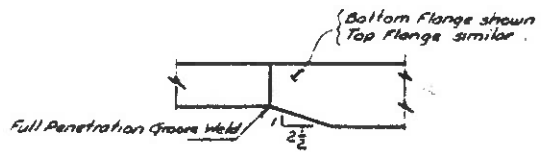


PARTIAL PLAN - SKEW OVER 30°

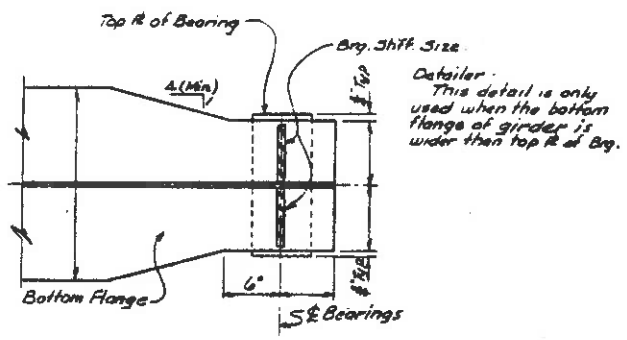
DETAILS FOR SHOP ERECTED SAFETY HANDRAIL
Not to Scale

Detailer:
Use handrail when web depth is 48" or greater.

WELDED SPLICE DETAIL



FLANGE THICKNESS TAPER
NO SCALE



BOTTOM FLANGE TAPER
Not to Scale

This area reserved for notes

DATE MADE ____
PROJECT ENGINEER ____
IN CHARGE OF ____
DESIGNED BY ____
DESIGN CHECKED BY ____
DETAILED BY ____
DETAIL CHECKED BY ____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

SAMPLE DETAIL - SUPERSTRUCTURE

MISCELLANEOUS WELDED PL. GIRDER DETAILS

DRAWING NO. GLD - M51

Added Jan 1975

Added January, 1975