GIRDER ELEVATION

END TYPE A

LIFTING LOOPS - ½"∅ STRANDS SEE NOTE 5.

PICKUP FORCE — 60° MIN. 90° MAX.

C.G. TOTAL HARPED STRANDS

¾" x 3½" x 7" SHEAR KEYS (OMIT AT EXTERIOR FACE OF EXTERIOR GIRDERS)

2 UNIT HOLD DOWN. 6" MIN., 1'-6" MAX.

℄ INTERMEDIATE DIAPHRAGM (SEE "FRAMING PLAN" FOR LOCATION)

INSERT ON THE INTERIOR FACE OF EXTERIOR GIRDER ②

MAX. SLOPE ③

℄ DIAPH.

APPLY APPROVED RETARDANT FOR ¼" ETCH TO SIDE FORMS OR ¼" ROUGHENED SURFACE TREATMENT BY APPROVED MECHANICAL METHOD.

C.G. TOTAL STRAIGHT STRANDS
0.4 GIRDER LENGTH ± 1'-0"

HARPING POINT

3"∅ OPEN HOLE. ADJUST HOLE LOCATION VERTICALLY TO MISS HARPED STRANDS ②

② 3"∅ OPEN HOLE

℄ BRG.

HARPED STRANDS SPLAYED   HARPED STRANDS BUNDLED BTWN. HARPING POINTS

END TYPE B

2'-4½"

TYPICAL END ELEVATION
END TYPE C SHOWN, OTHER END TYPES SIMILAR.

2 G2 #5, G3 #5 & 2 G7 #3   2 G1 #4, G3 #5 & 2 G7 #3

MEASURED ALONG ℄ GIRDER

4 SPA. @ 3½" = 1'-2"   12 SPA. @ 6" = 6'-0"   9"   6 SPA. @ 9" = 4'-6"   10 SPA.@ 1'-3" = 12'-6"   SPA. @ 1'-6" MAX.

2½" CLR.

G5 #7 - 5 EQUAL SPACES. EMBED 7'-6" TYP. INTO GIRDER. SPLAY TO CLEAR HARPED STRANDS. OMIT FOR END TYPE "B".

① EXTEND G4 #5

6 G4 #5 WITH 2'-0" MIN. SPLICE

SAWTEETH

1"∅ x 4⅝"

HARPED STRANDS

2 G8 #5

9" + B2

3" R.

EXTEND STRAIGHT STRANDS (3) THROUGH (6) UNLESS NOTED OTHERWISE ON STRAND EXTENSION DETAIL, GIRDER DETAILS 3 OF 3

G8 #5 EMBED 6'-0" INTO GIRDER. OMIT FOR END TYPE "B".

(stirrup spacing shall be determined by the designer)

VIEW B

3¼"   6"   ℄ GIRDER
3¼"
1½" + B1

G3 #5
G4 #5 (TYP.)
G2 #5
TEMPORARY STRANDS (TYP.)
G5 #7
3" + B1
G7 #3 (TYP.)

SAWTEETH SHOWN BY HATCHED AREA.

SECTION C

℄ GIRDER   2'-1"   3" MIN.
5"
2"
℄ FORM HANGERS
1" CLR. (TYP.)
G1 #4
4'-10"
9½"   6"
G7 #3 (TYP.)
3"
6"
1" CHAMFER   2'-1"

GIRDER NOTES

1. PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.

2. ALL PRETENSIONED AND TEMPORARY STRANDS SHALL BE 0.6"∅ LOW RELAXATION STRANDS (AASHTO M203 GRADE 270.)

3. FOR END TYPES A, C AND D CUT ALL STRANDS FLUSH WITH THE GIRDER ENDS AND PAINT WITH AN APPROVED EPOXY RESIN, EXCEPT FOR EXTENDED STRANDS AS SHOWN. FOR END TYPE B CUT ALL STRANDS 1" BELOW CONCRETE SURFACE AND GROUT WITH AN APPROVED EPOXY GROUT.

4. THE TOP SURFACE OF THE GIRDER FLANGE SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 6-02.3(25)H OF THE STANDARD SPECIFICATIONS.

5. LIFTING EMBEDMENTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6-02.3(25)L OF THE STANDARD SPECIFICATIONS.

6. CAUTION SHALL BE EXERCISED IN HANDLING AND PLACING GIRDERS. ALL GIRDERS SHALL BE CHECKED BY THE CONTRACTOR TO ENSURE THAT THEY ARE BRACED ADEQUATELY TO PREVENT TIPPING AND TO CONTROL LATERAL BENDING DURING SHIPPING. ONCE ERECTED, ALL GIRDERS SHALL BE BRACED LATERALLY TO PREVENT TIPPING UNTIL THE DIAPHRAGMS ARE CAST AND CURED.

7. FORMS FOR BEARING PAD RECESSES SHALL BE CONSTRUCTED AND FASTENED IN SUCH A MANNER AS TO NOT CAUSE DAMAGE TO THE GIRDER DURING THE STRAND RELEASE OPERATION.

8. TEMPORARY TOP STRANDS SHALL BE EITHER PRETENSIONED OR POST-TENSIONED IN ACCORDANCE WITH SECTION 6-02.3(25)L OF THE STANDARD SPECIFICATIONS AND THE GIRDER DETAILS SHEETS. THE LIFTING LOCATION "L" AND CONCRETE RELEASE STRENGTH ''F'CI'' SHOWN IN THE GIRDER SCHEDULE ASSUME THAT THE TEMPORARY TOP STRANDS ARE PRETENSIONED. ALTERNATIVELY, POST-TENSIONED TEMPORARY TOP STRANDS MAY BE USED IF THE LIFTING POINTS IN THE GIRDER SCHEDULE ARE MAINTAINED AND THE STRANDS ARE STRESSED PRIOR TO LIFTING THE GIRDER FROM THE FORM.

9. FOR DIAPHRAGMS, OMIT HOLES AND PLACE INSERTS ON THE INTERIOR FACE OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS PARALLEL TO SKEW. INSERTS SHALL BE 1"∅ MEADOWBURKE MX-3 HI-TENSILE, 1"∅ MEADOWBURKE FX-19 FERRULE INSERT, 1"∅ x 5½" WILLIAMS F22 OPEN FERRULE INSERT, 1"∅ x 4⅝" DAYTON-SUPERIOR F-62 FLARED THIN SLAB FERRULE INSERT OR APPROVED EQUAL.
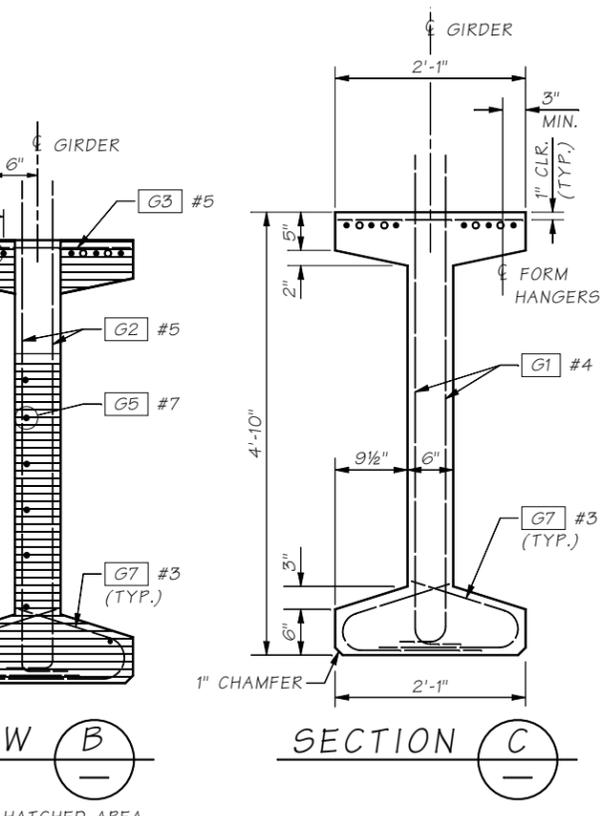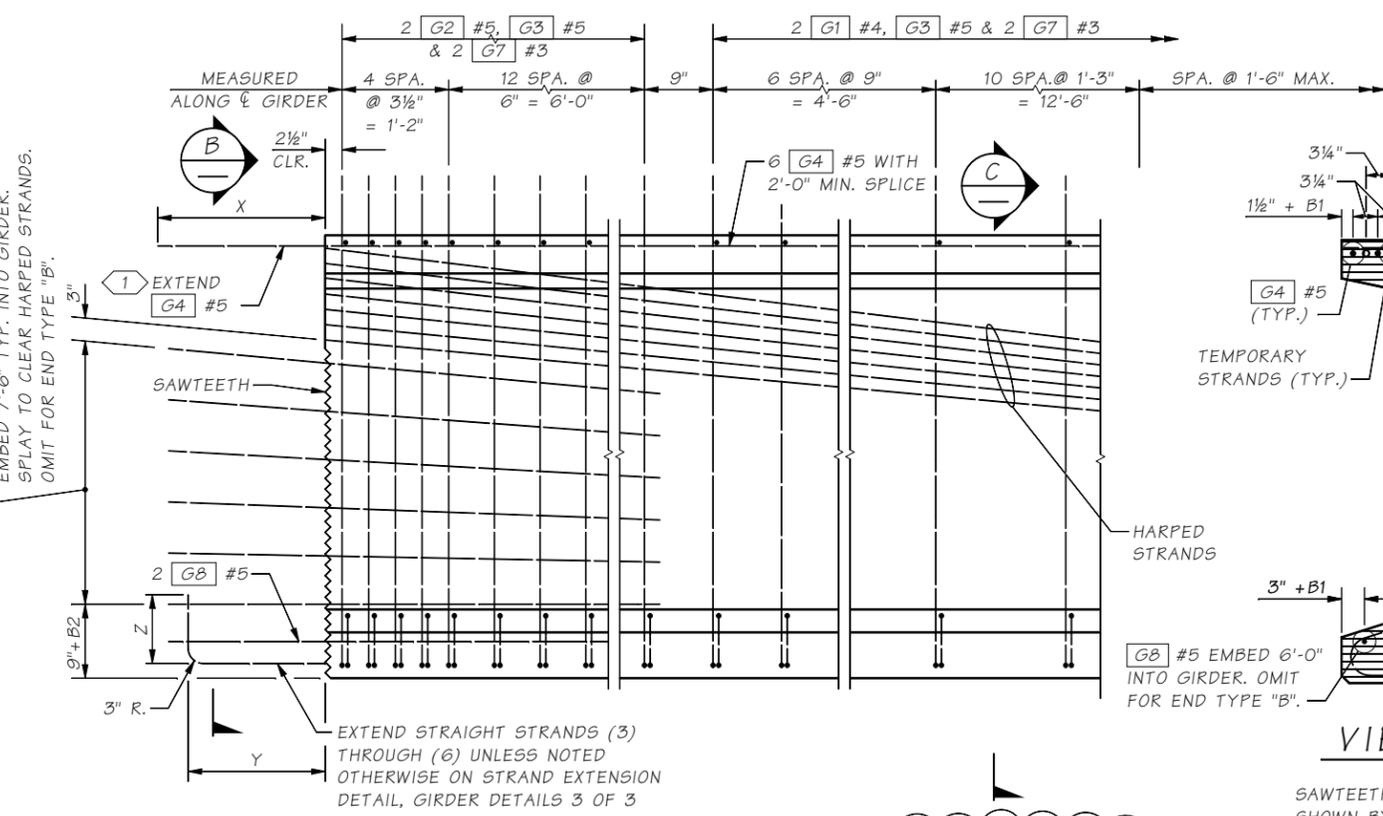
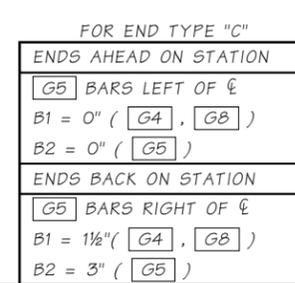# NOTES:

① FIELD BENDING REQUIRED TO OBTAIN 1½" CONCRETE COVER AT PAVEMENT SEAT.

② OMIT HOLES AND PLACE INSERTS ON THE INTERIOR FACE OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS PARALLEL TO SKEW. INSERTS SHALL BE 1"∅ BURKE HI-TENSILE, LANCASTER MALLEABLE, DAYTON-SUPERIOR F-62 FLARED THIN SLAB (1" x 4⅝") FERRULE OR APPROVED EQUAL. (TYP.)

③ MAXIMUM SLOPE FOR STRANDS: 6 : 1 FOR EACH ½"∅ STRAND OR 8 : 1 FOR EACH 0.6"∅ STRAND

④ VARIES FOR SKEWED ENDS.

⑤ PAIRS OF G7 BARS, OR G9 AND G10 BARS, MAY BE USED INTERCHANGEABLY AS BOTTOM FLANGE TIES.

⑥ SHALL BE CHECKED FOR EFFECT OF VERTICAL CURVE.

BENDING DIAGRAM / BAR LIST

MARK	NOTE	LOCATION	SIZE	
G1		GIRDER STIRRUPS	4	
G2		GIRDER END STIRRUPS	5	
G3		GIRDER TOP FLANGE	5	STR.
G4		GIRDER LONGIT. FULL LENGTH	5	STR.
G5		GIRDER BOT. LONGIT.	7	STR.
G7	⑤	GIRDER BOT. FLANGE TIES	3	
G8		GIRDER END LONGIT.	4	STR.
G9	⑤	GIRDER BOT. FLANGE TIES	3	
G10	⑤	GIRDER BOT. FLANGE TIES	3	

BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)
NOTE: FOR DIMENSION "A", SEE "GIRDER SCHEDULE"

R = 2½"

INTERMEDIATE DIAPHRAGM:
1/2 point of span for span lengths 40'-0" to 80'-0". No intermediate diaphragm for span lengths 40'-0" or less.

FOR END TYPE "C"

ENDS AHEAD ON STATION
G5 BARS LEFT OF ℄
B1 = 0" (G4 , G8)
B2 = 0" (G5)

ENDS BACK ON STATION
G5 BARS RIGHT OF ℄
B1 = 1½" (G4 , G8)
B2 = 3" (G5)

DIAPHRAGM TABLE

Diaphragm Type	END TYPE	BEARING RECESS	X	Y	Z	SAWTEETH
End Diaph. on Girder	A	YES	1'-10"	1'-6"	9"	YES
"L" Abutment	B	YES	0"	0"	0"	NO
Hinge Diaph. @ Intermediate Pier	C	NO	1'-10"	1'-6"	9"	YES
Fixed Diaph. @ Intermediate Pier	D	NO	1'-10"	ALT. 1 OR ALT. 2 STRAND EXTENSION		YES