Last revised on : 5/23/2016

GIRDER SCHEDULE

SPAN	GIRDER	GIRDER SERIES	PLAN LENGTH (ALONG GIRDER GRADE) (SEE GIRDER NOTE 1)	GIRDER END DETAILS							MIN. CONC. COMP. STRENGTH		NUMBER OF STRANDS (SEE GIRDER NOTE 2)			LOCATION OF C.G. STRANDS			STRAIGHT STRANDS TO EXTEND		"A" DIMENSION AT ℄ BEARINGS	DECK SCREED CAMBER C	MIDSPAN VERTICAL DEFLECTION D		REINFORCEMENT DETAILS							SHIPPING AND HANDLING DETAILS				
				END 1 TYPE	END 2 TYPE	L_d	θ_1	θ_2	P_1	P_2	@ 28-DAYS F'C (KSI)	@ RELEASE F'CI (KSI)	STRAIGHT	HARPED	TEMPORARY	E	F℄	Fo	END 1	END 2			LOWER BOUND @ 40 DAYS	UPPER BOUND @ 120 DAYS	V1	V2	V3	V4	V5	V6	H1	L	L_L	L_T	K_θ MINIMUM SHIPPING SUPPORT ROTATIONAL SPRING CONSTANT	W_{CC} MINIMUM SHIPPING SUPPORT CNTR.-TO-CNTR. WHEEL SPACING
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(?) TO (?)	(?) TO (?)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES TO DESIGNER:

1. TUB GIRDER DETAIL SHEETS 1 TO 3 ARE INTENDED TO BE USED AS IS WITHOUT NEED FOR MODIFICATION FOR MOST PROJECTS. PROJECT SPECIFIC GIRDER DETAILS ARE THEN LIMITED TO THE GIRDER SCHEDULE. TUB GIRDER DETAIL SHEET 3 MAY BE OMITTED IF TEMPORARY TOP STRANDS ARE NOT USED.
2. V1 SPA. @ V2 IS INTENDED TO BE THE SPLITTING RESISTANCE ZONE DEFINED BY BDM 5.6.2.F.
3. V3 SPA. @ V4 IS INTENDED TO BE THE CONFINEMENT REINFORCEMENT ZONE DEFINED BY BDM 5.6.2.G.
4. G1, G2, G8 AND G9 STIRRUP HEIGHT "H1" IS GENERALLY "H" + 3" + "A" DIMENSION. HOWEVER, DESIGNERS SHALL CHECK "H1" FOR THE EFFECT OF VERTICAL CURVE AND INCREASE AS NECESSARY.
5. DIMENSIONS IN THE GIRDER SCHEDULE SHALL BE SHOWN TO THE NEAREST ⅛TH INCH.
6. THE NUMBER OF HARPED STRANDS SHOULD NOT EXCEED HALF THE NUMBER OF STRAIGHT STRANDS UNLESS THE STRAIGHT STRAND PATTERN IS FULL.
7. TEMPORARY TOP STRANDS REQUIRE TOP FLANGES.
8. DELETE UNUSED ROWS IN THE GIRDER SERIES TABLE.

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"ø AASHTO M203 GRADE 270 LOW RELAXATION STRANDS, JACKED TO 202.5 KSI.
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 THE EXTERIOR WEB OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS PARALLEL TO SKEW. INSERTS SHALL BE 1"ø MEADOWBURKE MX-3 HI-TENSILE, 1"ø MEADOWBURKE FX-19 FERRULE INSERT, 1"ø x 5½" WILLIAMS F22 OPEN FERRULE INSERT, 1"ø x 4⅝" DAYTON-SUPERIOR F-62 FLARED THIN SLAB FERRULE INSERT OR APPROVED EQUAL.
10. DEFORMED WELDED WIRE REINFORCEMENT CONFORMING TO SECTION 9-07.7 WITH DEFORMED WIRE CONFORMING TO SECTION 9-07.8 MAY BE SUBSTITUTED FOR MILD STEEL REINFORCEMENT IF AASHTO LRFD BRIDGE DESIGN SPECIFICATION REQUIREMENTS (INCLUDING DEVELOPMENT AND ANCHORAGE) ARE MET. WELDED WIRE REINFORCEMENT SHALL HAVE THE SAME AREA AND SPACING AS THE MILD STEEL REINFORCEMENT THAT IT REPLACES AND THE YIELD STRENGTH SHALL BE GREATER THAN OR EQUAL TO 60 KSI. SHEAR STIRRUP LONGITUDINAL WIRES AND TACK WELDS SHALL BE EXCLUDED FROM GIRDER WEBS. LONGITUDINAL WIRES FOR ANCHORAGE OF WELDED WIRE REINFORCEMENT SHALL HAVE AN AREA OF 40% OR MORE OF THE AREA OF THE WIRE BEING ANCHORED BUT SHALL NOT BE LESS THAN D4.

Bridge Design Engr.	M:\STANDARDS\Girders\Trapezoidal Tubs\SCHEDULE AND NOTES.MAN				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO. / TOTAL SHEETS
Supervisor					10	WASH.		
Designed By					JOB NUMBER			
Checked By								
Detailed By								
Bridge Projects Engr.								
Prelim. Plan By								
Architect/Specialist	DATE	REVISION	BY	APP'D				

BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

STANDARD PRESTRESSED CONCRETE GIRDERS

TUB GIRDER SCHEDULE AND NOTES

BRIDGE SHEET NO.

SHEET OF SHEETS

DESIGN SHEET NO. 5.6-A9-1

Fri Jun 10 14:11:16 2016