

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (9th Edition | 2020) QUICK REFERENCE: WELDED WIRE REINFORCEMENT

| | APPLICATION | AASHTO | WIRE REINFORCEMENT INSTITUTE REMARKS |
|--------------|--|---------------------------|---|
| MATERIAL | PLAIN WWR AND DEFORMED WWR PERMITTED | 5.1, 5.4.3.1 | |
| | YIELD STRENGTH - GENERAL | 5.4.3.1 | 75 KSI TO 100 KSI |
| | YIELD STRENGTH – BURIED STRUCTURES/TUNNEL LINERS | 12.4.2.7 | 80 KSI MAXIMUM |
| | YIELD STRENGTH – THREE-SIDED PRECAST STRUCTURES | 12.14.2.2 | 65 KSI MATERIAL MAY BE USED |
| DESIGN | DESIGN METHODOLOGY – B-REGION FLEXURE/AXIAL | 5.5.1.2 5.6.1 → 5.6.6 | CONVENTIONAL BEAM THEORY |
| | DESIGN METHODOLOGY – B-REGION SHEAR/TORSION | 5.5.1.2, 5.7 | CONVENTIONAL BEAM THEORY WITH TRUSS ANALOGY |
| | DESIGN METHODOLOGY – D-REGION | 5.5.1.2, 5.8 | STRUT-AND-TIE METHOD |
| | STRENGTH LIMIT STATE AND RESISTANCE FACTORS, ф | 5.5.4 | |
| | FATIGUE OF REINFORCEMENT | 5.5.3.2 | |
| | TRANSVERSE REINFORCEMENT TO RESIST SHEAR | 5.7.2.4 | WWR IN THIS APPLICATION MUST SATISFY MINIMUM ELONGATION OF 4% OVER GAUGE LENGTH OF 4" INCLUDING CROSSWIRE. |
| | MSE WALL FACING | 11.5, 11.10 | |
| | SOIL NAIL WALL FACING | 11.12.6.2.2 | |
| PRESCRIPTIVE | DISTRIBUTION OF NON-PRESTRESSED TENSION STEEL | 5.6.7 | |
| | MINIMUM SPACING OF REINFORCEMENT | 5.10.3.1.1, 5.10.3.1.2 | FOR CAST-IN-PLACE AND PRECAST CONCRETE, PARALLEL WIRES IN A LAYER |
| | MAXIMUM SPACING OF REINFORCEMENT: WALLS/SLABS | 5.10.3.2 | |
| | MAXIMUM SPACING OF REINFORCEMENT: TIES | 5.10.4.3 | FOR COMPRESSION MEMBERS |
| | WWR USAGE FOR TIE/STIRRUP IN FLEXURAL MEMBER | 5.10.5 | |
| | CONCRETE COVER | 5.10.1 | |
| | SHRINKAGE AND TEMPERATURE REINFORCEMENT | 5.10.6 | |
| | WWR TENSION DEVELOPMENT LENGTH | 5.10.8.2.5 | PLAIN AND DEFORMED WWR IN CONCRETE \leq 10 KSI. MODIFY BY 12.10.4.4.2 FOR BURIED STRUCTURES / TUNNEL LINERS, AS APPLICABLE. |
| | STIRRUP REINFORCEMENT FOR SHEAR | 5.10.8.2.6 | PLAIN WWR FOR U-STIRRUP, PLAIN OR DEFORMED WWR FOR SINGLE LEG STIRRUP |
| | WWR TENSION LAP SPLICE | 5.10.8.5 | |
| | INTERFACE SHEAR REINFORCEMENT | 5.7.4 | WWR IS PERMITTED FOR USE. |
| | MAXIMUM SPACING FOR THREE-SIDED PRECAST STRUCTURES | 12.14.2.2 | |
| | MINIMUM BEND DIAMETER – HOOKS FOR TENSION | TABLE 5.10.2.3.1 | RULES FOR BARS ADOPTED BY WIRE INDUSTRY (6.0d _b) |
| | MINIMUM BEND DIAMETER – STIRRUPS AND TIES | 5.10.2.3 | INSIDE BEND DIAMETERS FOR WWR STIRRUPS AND TIES |
| | WWR COMPARED TO FIELD-TIED REBAR | C5.7.2.7 | COMMENTARY ON IMPROVED QUALITY CONTROL AND PERFORMANCE THROUGH USE OF WWR COMPARED TO FIELD-TIED REBAR. |