**SECTION 03 20 00**

**CONCRETE REINFORCEMENT**

**PART 1 GENERAL**

1. SECTION INCLUDES
	1. Reinforcing steel bars, wire fabric and accessories for cast-in-place concrete
2. REFERENCES
	1. ACI 301 ‑ Structural Concrete for Buildings
	2. ACI 318 ‑ Building Code Requirements For Reinforced Concrete
	3. ACI SP‑66 ‑ American Concrete Institute ‑ Detailing Manual
	4. ASCE 7 - Minimum Design Loads of Buildings and Other Structures
	5. ASTM A82/A82M ‑ Standard Specification for Steel Wire, Plain, for Concrete Reinforcement
	6. ASTM A184/A184M ‑ Standard Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement
	7. ASTM A185/A185M ‑ Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete
	8. ASTM A496/A496M ‑ Standard Specification for Steel Wire Deformed for Concrete Reinforcement
	9. ASTM A497/A497M ‑ Standard Specification for Steel Welded Wire Reinforcement Deformed for Concrete
	10. ASTM A615/A615M ‑ Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
	11. ASTM A706/A706M ‑ Standard Specification for Low Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
	12. ASTM A767/A767M‑ Standard Specification for Zinc Coated (Galvanized) Steel Bars for Concrete Reinforcement
	13. ASTM A775/A775M‑ Standard Specification for Epoxy Coated Reinforcing Steel Bars
	14. ASTM D3963/D3963M ‑ Standard Specification for Fabrication and Jobsite Handling of Epoxy Coated Reinforcing Bars
	15. AWS D1.4 - Structural Welding Code-Reinforcing Steel
	16. CRSI ‑ Concrete Reinforcing Steel Institute - Manual of Standard Practice
	17. CRSI - Placing Reinforcing Bars
	18. FBC - Florida Building Code
3. SUBMITTALS FOR REVIEW
	1. Section 01 33 00 - Submittals Procedures
	2. Shop Drawings: Indicate bar sizes, spacing, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.
4. SUBMITTALS FOR INFORMATION
	1. Section 01 33 00 - Submittals Procedures
	2. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
	3. Submit certified copies of mill test report of reinforcement materials analysis.
5. DESIGN REQUIREMENTS
	1. Design shall comply with the FBC, ASCE 7 – Wind Loads, and ACI 318.
	2. Do not weld reinforcing steel.
6. QUALITY ASSURANCE
	1. Perform work in accordance with ACI 301. Maintain one copy of document on site.
	2. Design reinforcement under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Florida.
	3. Submit under provisions of Section 01 40 00 Manufacturer's Certificates, certifying welders employed to do the work, verifying AWS qualification within the previous 12 months.

**PART 2 PRODUCTS**

1. REINFORCEMENT
	1. Reinforcing Steel: ASTM A615/A615M, Grade 60; deformed carbon steel bars, unfinished
	2. Stirrup and Tie Steel: ASTM A615/A615M, Grade 40 or 60; deformed carbon steel bars, unfinished
	3. Welded Steel Wire Fabric: ASTM A185/A185M Plain Type; in flat sheets and rolls; unfinished
	4. Steel Wire: ASTM A82/A82M, plain, cold drawn, steel
2. ACCESSORIES
	1. Tie Wire: Minimum 16 gage annealed type or patented system.
	2. Chairs, Bolsters, Bar Supports, Spacers: Size and shape for strength and reinforcement support during concrete placement, include load bearing pad on bottom to prevent vapor barrier puncture.
	3. Special Chairs, Bolsters, Bar Supports, and Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic coated steel type; size and shape as required.
3. FABRICATION
	1. Fabricate concrete reinforcing in accordance with ACI 318.
	2. Weld reinforcement in accordance with AWS D1.4.
	3. Locate reinforcing splices not shown on plans, at point of minimum stress and review with A/E.

**PART 3 EXECUTION**

1. PLACEMENT
	1. Place support and secure reinforcement against displacement, without deviating from the required position.
	2. Do not displace or damage vapor barrier.
	3. Accommodate placement of formed openings.
	4. Conform to applicable code for concrete cover over reinforcement.
2. FIELD QUALITY CONTROL
	1. Architect, Owner, or Building Department may request field inspections per Section 01 40 00 1.7 Inspection Services.

END OF SECTION