

Significant Revisions for Construction Manual

The Construction Manual has been updated to include new or revised specifications and procedures. There are significant revisions in several Divisions of the manual.

Hard copies of the 2020 Construction Manual updates are not being distributed to manual holders.

Division 1: General Requirements

Section	Section Title	Summary of Revision
104-6	Eliminated Contract Items	For federally funded projects, costs should be approved by FHWA prior to payment of eliminated materials
104-12	Value Engineering Proposals	New - Requirements for Value Engineering Proposal submittals and review process
104-13	Recycled Materials & Solid Waste Materials	New - Requirements for using any recycled materials or products on projects
108-2	Progress Schedule	Contractor's detailed request and proposed schedule and Division Engineer's approval shall be uploaded into SharePoint

Division 2: Earthwork

Section	Section Title	Summary of Revision
220-4	Measurement and Payment	Revised measurement and payment requirements to reflect current specifications
235-3	Construction Methods	Revised embankment compaction requirements
240-4	Measurement and Payment	Revised measurement requirements to reflect current specifications

Division 3: Pipe Culverts

Section	Section Title	Summary of Revision
300-7	Bedding and Backfill	Added clarification on payment for backfill on comprehensive grading projects

Division 4: Major Structures

Section	Section Title	Summary of Revision
412	Unclassified Structure Excavation	New Section

420-14	Placing and Finishing Bridge Decks	Class AA concrete containing fly ash or slag allowed and encouraged in any division as long as included in approved mix design
425-2	Materials	New - reinforcing steel sample bar replacement chart requirement in structure plans
430-2	Materials	New - procedure for receiving prestressed concrete members at job site
440-2	Materials	Revised where of copies of transmittal letter and accepted drawings are sent
440-6	Field Erection	New methods added
450	Piles	Revised form for collecting pile driving data
Structures Forms		New Section

Division 5: Subgrades, Bases and Shoulders

Section	Section Title	Summary of Revision
520-6	Sampling, testing, and acceptance	Added modified sampling requirements for State Funded projects
520-9	Density Determination	Revised Density Determination Methods to include Conventional Method & Nuclear Method

Division 6: Asphalt Pavements

Section	Section Title	Summary of Revision
605-2	Materials	New Section
605-4	Surface Preparation	Revised requirements of good tack coat operation
607-4	Tolerance	Removed section
607-5	Measurement and Payment	New Section
609-1	Description	Revised QC/QA Asphalt Mix Acceptance Procedures
609-1(B)	Types of Certifications	Removed Section
609-1(C)	Renewal Certification	Removed Section
663	Hot In-Place Recycled Asphalt Concrete	Removed Section

Division 7: Concrete Pavements

Section	Section Title	Summary of Revision
700-2	Concrete Production Equipment	Removed checklist of items to be observed or checked relative to aggregate stockpiles
700-5	Placing Concrete	Updated section to match 2018 Standard Specifications

Division 8: Incidentals

Section	Section Title	Summary of Revision
801-2	Construction Methods	Added construction methods for installation of concrete monuments and for use of Automated Machine Guidance
816-2	Materials	Removed Section
836	Sluice Gate	New Section

Division 9: Signing

Section	Section Title	Summary of Revision
902	Foundations for Ground Mounted Signs	Removed Section
903	Ground Mounted Sign Supports	Added Article 903-3(B) Clearing for Sign Site Distance
906	Overhead Sign Structure	Added Article 906-3 to include construction methods for overhead sign structures

Division 10: Materials

Section	Section Title	Summary of Revision
1000-4 (I)&(J)	Portland Cement Concrete For Structures and Incidental Construction	Updated requirements for using fly ash or slag cement: Fly ash and other pozzolans shouldn't be eliminated from concrete mix without consulting Area Construction Engineer and Regional Bridge Construction Engineer or Construction Unit Staff.
1032-6	Concrete Culvert Pipe	RFID tags will be installed in each section of pipe produced.
1034	Sanitary Sewer Pipe and Fittings	RFID tags will be included on pipe to indicate that the pipe has been inspected and accepted by Materials and Tests
1070	Reinforcing Steel	Updated requirements for reinforcing steel:

		<ul style="list-style-type: none"> • Producer of reinforcing steel should supply replacement bars with bar size of minimum sample length plus minimum splice length • Resident Engineer should scan all paperwork and attach to MRR on SharePoint <p>Forms and Reports should be scanned and attached to MRR on SharePoint</p>
1072	Structural Steel	Updated requirements for structural steel: Structural members should be visually inspected for damage. Any damage should be reported to Area Construction Engineer
1077	Precast Concrete Units	M&T inspector should record inspection results on RFID tag
1084	Piles	Updated requirements for Piles: Resident Engineer should scan reports and attach to MRR report on SharePoint
Contact List for Division 10		Removed Section
Stockroom Procedures		Removed Section
Form M&T 100 Requisitions of Supplies		Removed Section
Soil and Stone Density Equipment Requisition Form		Removed Section
Report of Material Received (Example)		Removed Section
Report of Material Received		Removed Section

Division 11: Traffic Control

Section	Section Title	Summary of Revision
1105-5	Failure to Maintain Traffic Control	New Section

Division 12: Pavement Markings

Section	Section Title	Summary of Revision
1267	Flexible Delineators	Removed Retroreflector Calibration from Pre-installation inspection procedures

Division 14 Lighting

Section	Section Title	Summary of Revision
1400-3 (F)	Computations and Welding Procedures	Removed Section
1400-4 (F)	Wiring Methods	New - Conditions for using splices
1400-4 (K)	Foundations	New Section
1403	High Mount Luminaires	Removed Section
1406	Light Standard Luminaires	Remove Section

Division 15: Utilities

Section	Section Title	Summary of Revision
1500-7	Submittals and Records	Added explanation of what to include in submittal of As-Built plans for all installed utilities
1515-3	Construction Methods	Added new construction methods for Utility Controls

Division 16: Erosion Control and Roadside Development

N/A

Division 17 Signals and Intelligent Transportation Systems

Section	Section Title	Summary of Revision
1731-3(D)	Termination and Splicing within Splice Enclosure	Changed name of section from "Termination and Splicing within Aerial Splicing Enclosure" to "Termination and Splicing within Splice Enclosure"
Project Special Provisions		Added an introductory paragraph which includes that contracts with signal and ITS work will include project special provisions and that the guidance in this section is intended to help minimize the potential for construction scheduling delays and cost overruns

Appendix B	Minimum Utility Clearance Requirements	Updated Table 1 on page 3 to include Controlled Access Roadway Minimum Clearance is 24 FT.
Appendix E	Anchor Rod Tightening Requirements for Metal Poles	Revised Anchor Rod Nut Tightening Requirements for Metal Poles and updated Anchor Nut Diagram (removed the sketch of 4-bolt pattern).

Engineering Control

Section	Section Subtitle	Summary of Revision
General		Updated factors to consider before requesting the use of photogrammetry
Role of the Contractor		Updated information to provide to the Photogrammetry Unit
Utilizing Unmanned Aerial Systems for Construction Earthwork, Borrow Pits, and Stockpiles		New Section
Documentation		Updated documentation to be provided by the Photogrammetry Unit. <ul style="list-style-type: none"> • Aerial Survey • Earthwork Pay Quantity
Intermediate Terrain Data		New Section
Aerial Flight Panel Configuration		Removed Section
Paneling		Updated requirements for aerial panels
Structure Stakeout		Updated links to survey layout sketches: <ul style="list-style-type: none"> • Typical Reinforced Concrete Box Culvert • Typical Bridge – Tangent • Typical Bridge – Curve
Suggested Procedure for Grading Build-Ups on Continuous or Simple Span Bridges		Updated recommended procedures for grading overhangs, consistent with the revised construction elevations format.

Records and Reports

Section	Section Subtitle	Summary of Revision
12 Month Project Guarantees		Division Construction Engineer and Resident Engineer are responsible performing review with (as applicable) Area Construction Engineer, a representative from the County Maintenance Engineer's office and a representative from Division Bridge Maintenance
Uniform Filing System		Section renamed to "Electronic Filing System". Added new sub-sections Estimate Documentation, Materials, Other, Plans/Contracts, Inspector's Reports, Structures and Contract
Weekly Project Report		New - Procedure for completing weekly project report
Project Diary		Replaced section with "Weekly Project Report"
Engineer's Weekly Summary		Section removed
Materials Received Reporting		New - Method for completing Materials Received Report
Construction Quality Index Evaluation		Revised DCE responsibilities
Correspondence for Construction Conferences		Removed "Final Project Inspection" and "Final Inspection Common Punch List items" and added to new Final Inspection Section
Final Inspection		New – Section contains "Final Project Inspection" and "Final Inspection Common Punch List Items"
Value Engineering Proposals		New - Value Engineering Proposal Example Submissions
FEMA Certification		Email will be sent to project administrator outlining as-built requirements
Acceptance of Materials		Removed Independent Assurance Testing as this no longer applies
Distribution of Reports		Revised Distribution of Reports Table to reflect the most up to date procedure for preparing reports
Disadvantaged Business Enterprise/Minority Business Enterprise/ Women Business Enterprise		Replaced Truck Monitoring Report Form and Example
Inspector's Daily Report		Revised section to include instructions for completing report electronically

Section	Section Subtitle	Summary of Revision
Forms and Examples		New – Collection of links to all forms and examples from all Div 00 – 17 and Records and Reports sections
Force Account Work		Revised Force Account Form
Procedures for Recording Information Relating to Pay Items for A Contract		New – Effective January 2021, Electronic pay records in SharePoint should be used to document pay records for all newly awarded contracts.
Proof Rolling Daily Report		Revised section to include instructions for completing report electronically
Final Estimate Assembly Preparation Procedures	Project Diaries	New – Effective January 2021, electronic project diaries should be used on all new projects.
Design Build Contract Administration Guidelines		Updated section “Processing of Monthly Estimates” to include information on utilizing electronic Pay Record entry (Work Accomplished)
Design Build Contract Administration Guidelines		Added responsibilities of Resident Engineer for administration of contract, design reviews and plan development
Locally Administered Contracts		Added responsibility of Division Engineer to notify SMU of contract award for projects with structures
Pay Record Book, Estimate Work Book and Partial Payment Cross Reference Systems		Removed all pay record examples and revised section to include electronic pay records overview