

# **2024 Standard Specifications for Construction Book**

## **Summary of Revisions**

Please note the following summary of revisions was compiled by subject matter experts and includes content revisions that they chose to include as important to note. It does not encompass all revisions in the 2024 Standard Specifications for Construction book. To fully understand all revisions and additions, please view the official book.

**Division 100**

## General:

- Changed project to Contract where applicable.
- Updated references.

## Subsection 101.01:

- Acronym updates as needed.

## Subsection 101.02:

- Added definitions:
  - Some paving related definitions.
  - Administrative Submittals.
  - Day.
  - Night.
  - Some definitions that were removed from Division 700.
  - Major item – content moved from 109.04.
  - Off-Site Activity Area – moved from 105.25.
- Update definitions:
  - Position definitions if required.
  - Names and definitions of specification types.
  - Professional Engineer.
  - Review for Conformance.
  - Construction Season to be from April 1 to November 15.
- Moved Holidays to Subsection 105.14.
- Deleted definitions:
  - Definitions that were not referenced in the book or are commonly defined.
  - Removed General Special Provisions since those were eliminated as a specification type.

## Subsection 101.03:

- Minor formatting.

## Subsections 101.04:

- Moved from 105.05.

## Subsections 101.05:

- Moved from 105.05.
- Added Labeled Dimensions to precedence list.
- Added precedence level between Notice to Bidders and Special Specifications.
- Clarified precedence if there is a conflict between external documents.

Subsection 102.02:

- Clarification of providing boring logs to bidders.

Subsection 102.03:

- Rephrasing differing site conditions to reference 104.08 instead of repeating it.
- Updated to notify Contract Administration instead of the Chief of Contract Administration.

Subsection 102.04:

- General wording and correction updates.

Subsection 103.04:

- Full update to entire subsection to update to industry standard.

Subsection 104.01:

- Updated name of subsection.

Subsection 104.02:

- Minor rephrasing regarding the time adjustment.

Subsection 104.04:

- Consolidated Subsections 104.04A and 104.04B into 104.04.
- Added in Pedestrian Traffic.
- Rephrasing in some subparts.

Subsection 104.06:

- Updated title name.
- Minor sentence structure updates.

Subsection 104.07:

- Minor rephrasing updates.

Subsection 104.08:

- Corrections resulting from FHWA CAP report.

Subsection 105.01, 105.02, and 105.03:

- Subsections 105.10 and 105.11 were moved after 105.01 to become 105.02 and 105.03 because they are related. The content did not change.

Subsection 105.05:

- Old 105.05 moved to 101.04 and 101.05.
- Moved the content from the beginning of the new 105.06 to ensure certain subsection numbers like 105.20 did not get renumbered.

Subsection 105.06:

- Minor language corrections: PE requirements and pay item vs specification.

Subsection 105.08:

- Removed repetitive content.

Subsection 105.14:

- Minor rephrasing of some sentences.
- Moved Holidays from 101.02.
- Added subpart: Hourly Restrictions in relation to night work.
- Added other night work content.

Subsection 105.15:

- Changed project to Contract as noted above.

Subsection 105.17:

- Rephrased title.

Subsection 105.18:

- Rephrased title.

Subsection 105.20:

- Minor rephrasing like 'will' or 'must' to 'shall' and 'VTrans' to 'the Agency'.
- Added claim submission structure.
- Added timeframe for the appeal to the Chief Engineer to be consistent with 105.02.

Subsection 105.21:

- Minor corrections as needed.

Subsection 105.22:

- Minor corrections as needed.

Subsection 105.23:

- Minor clarification to a subpart title.

Subsection 105.24:

- Added sentence referencing the idling law in Vermont.
- Deleted some content that is covered elsewhere.

Subsection 105.25:

- Minor revisions to deal with moving OSA definition to 101.02.

Subsection 105.26:

- Minor revisions to deal with moving OSA definition to 101.02.

Subsection 105.27:

- List formatting.

Subsection 105.29:

- Minor rephrasing updates.

Subsection 106.03:

- Deleted unnecessary content.
- Removed content related to the new 101.04 subsection.

Subsection 106.04:

- List formatting.

Subsection 106.06:

- Minor title grammar correction.
- Added content due to new Railroad sections being added to the book.

Subsection 106.08:

- Simplified run-on sentence.

Subsection 106.09:

- Minor list formatting.
- Reordered some of content for clarity.

Subsection 107.01:

- Correction of language related to OSHA.
- Moved Fair Employee Practices Act with other labor laws.
- Simplified some content for clarity.
- Updated references as needed.

Subsection 107.04:

- Changed State of Vermont, Agency of Transportation to 'Agency'.

Subsection 107.07:

- Updated contact names.
- Changed references from 'trucks' to 'vehicles'.

Subsection 107.09:

- Rephrasing for clarity and accuracy.

Subsection 107.10:

- Most revisions based on blasting specification revisions.

Subsection 107.11:

- Minor list formatting.

Subsection 107.12:

- Removed telegraph.

Subsection 107.14:

- Minor change to pluralize a word.

Subsection 107.15:

- Minor rephrasing to correct missing word.
- Minor list formatting.

Subsection 107.16:

- Added railroad to requirements.
- Changed construction season dates.

Subsection 107.17:

- Changed 'soddings' to 'sod'.

Subsection 107.21:

- Added content from existing Notice to Bidders to comply with new Buy America requirements.

Subsection 107.22:

- Updated title to shorten it.
- Add a missing 'the' to one sentence.

Subsection 108.01:

- Correction to title.
- Changed 'must' to 'shall' for consistency.
- Minor list formatting.

Subsection 108.02:

- Updated to add pre-construction conference requirement.

Subsection 108.03:

- Minor wording addition to cover multiple progress schedules.

Subsection 108.05:

- Minor rephrasing for clarity.
- Name corrections.



Subsection 108.06:

- Updated 'project' to 'Contract'.

Subsection 108.07:

- Name corrections.

Subsection 108.09:

- Updates required from FHWA CAP report.

Subsection 108.10:

- New Subsection – includes general content from the Incentive/Disincentive Notice to Bidders. If Contracts use Incentive/Disincentive there will need to be a Notice to Bidders still included in the Special Provisions to state project specific information required.

Subsection 108.11:

- Changed construction season dates.

Subsection 108.12:

- Added subpart to include content for interim completion dates. This content has been used on Contracts in Notice to Bidders many times. If Contracts use interim completion dates, there will need to be a Notice to Bidders still included in the Special Provisions to state project specific information required.
- Changed construction season dates.

Subsection 108.13:

- Minor list formatting.

Subsection 108.14:

- Minor wording change from 'will' to 'shall'.
- Wording change from 'project' to 'Contract'.
- Removal of 'above' in case content gets shifted in future.

Subsection 108.15:

- Title grammar correction.

Subsection 108.16:

- Title rephrased for clarity.
- Some areas rephrased for clarity.
- Minor list formatting.

Subsection 109.01:

- Added Table of Pay Unit Abbreviations.
- Updates to content as needed.
- Some content deleted because it had general meaning.

Subsection 109.03:

- Minor list formatting.

Subsection 109.04:

- Corrections to match 23 CFR 635.109 verbatim.

Subsection 109.05:

- Changed term 'Supplemental Agreement' to 'Change Order'.

Subsection 109.06:

- Updated content to clarify requirements for force account work.
- Revised sentence structure in some areas.

Subsection 109.08:

- Changed 'will' to 'shall'.

Subsection 109.09:

- Broadened FPQ so it could be designated in a note or table on the plans instead of supplemental description.

Section 199:

- New section to provide pay items for claims and other administrative type items.

**Division 200**

#### Section 205:

- Complete revision of the existing specification. The section still consists of drilling and blasting of rock including drilling and blasting of solid rock subgrade and drilling and blasting using perimeter control. This specification is intended to be used when blasting for subgrade on projects or for blasting for rock slope construction. Revisions include an update to terminology and the incorporation of the Drilling and Blasting Special Provision used for rock slope construction into a specification.

#### Section 206:

- A new section that consists of excavating loose and dilated rock on slopes. This work includes high-angle construction to be completed via hand scaling using industrial rope access methods or machine scaling. This section incorporates the former Hand Scaling with Vegetation Removal, Machine Scaling, Ledge Waste Removal, and Ledge Salvage Removal Special Provisions. The Special Provision – Trim Blasting has been discontinued.

#### Section 209:

- A new section that houses Horizontal Directional Drilling that was allowed through the old Utility Sleeve specification (previously Section 625). This new specification closely resembles the previously used Special Provision (Horizontal Directional Drilling) that became so popular with signal and paving projects.
- The specification also provides a section for the Special Specifications for pipe liners (UV cured in place, spray on liners, jack and bore methods, etc.) to be used. The Special Specifications have not yet been developed and will need to go through the review and approval process when a project comes up for them the first time.
- This new item is only for the trenchless install, the actual sleeve/pipe/conduit or whatever is being installed will be paid for separately. Through that item, you will specify what is being installed. (Similar to trench excavation and the pipe, two separate items, one for the install method and one for the pipe being installed.)

#### Section 210:

- Section name updated to Milling. Also updated cutting head dimensions to align with industry standards and extended the cover period of fine milled surface.

#### Section 217:

- A new section to be used when a reinforced soil slope is included in the plan set. The reinforced soil slope shall be fully designed and detailed in the plans. The previously used Special Provision (Reinforced Soil Slope) was the basis of this specification with minor

changes to the materials section only. FHWA Geotechnical Engineering Circular No. 11 was used as the basis for the Special Provision originally.

#### Section 219:

- A new section to be used when a slope stabilization system is included in the plan set. The slope stabilization system shall be fully designed and detailed in the plans. This work shall consist of furnishing all materials, equipment, labor, and services necessary to install and test a slope stabilization system (SSS), including, but not limited to slope stabilization nails and a stabilizing facing. The previously used Special Provision (Slope Stabilization System) was the basis of this specification. FHWA Geotechnical Engineering Circular No. 7 was used as the basis for the Special Provision originally.
- The materials subsection of the specification was modified from the previously used Special Provision and abbreviated to align with other sections of the specifications book and generally directs readers to the 700 section. Centralizers for Hollow Bar requirements were added (mobile metal type centralizers). Maximum test loads and load schedule for performance testing and proof testing were revised to align with load schedule presented in FHWA GEC 007.

#### Section 221:

- This section consists of installing and testing various rock slope stabilization (RSS) items, including, but not limited to, rock dowels, shear keys, rock anchors, rock drains, rock nails, and shotcrete. It incorporates previously used Special Provisions: Rock Dowels, Rock Dowel Testing, Rock Anchors, Rock Anchor Testing, Shear Keys, Rock Drains, Shotcrete, and Shotcrete Rock Nails.

#### Section 225:

- A new specification based on previously used Special Provisions from various concrete retaining wall projects. It includes language for designing, detailing, fabricating, furnishing, and erecting cast-in-place or precast concrete retaining walls. Specifically, it combined both cast-in-place and precast retaining walls into one specification; removed specific language for acceptance and inspection that is covered in the Sections 501 and 540; added language about concrete finish and repairs to the front facing finish to be consistent with MSE wall specification; adjusted materials to reference Division 700 to be consistent with specifications in book vs Special Provisions; and adjusted method of measurement to be lump sum, from choice of exposed square footage/square yardage, to be consistent with MSE retaining walls.

#### Section 227:

- A new section based on previously used Special Provisions from various similar mechanically stabilized earth (MSE) projects. It includes language for designing, detailing, fabricating, furnishing, and erecting MSE retaining walls. The specific content in Section 540 related to MSE walls was moved into this new section. Adjustments were made to

backfill material test requirements to only apply when using an internal friction angle of greater than 34° based on industry standards. Reinforcing steel corrosion resistance was changed from level I to level II. Repetitive language for the contractor submittal subsection was removed. A manufacturer's representative is now required to be available during erection of first level of wall but not necessarily on site for a set amount of time. The associated Division 700 specifications were referenced. The method of measurement will be lump sum, from exposed wall square footage, to be consistent with non-MSE retaining walls.

#### Section 230:

- A new section that includes how to handle and pay for contaminated materials (soil and groundwater) on project sites, when they are known to exist & approved Soil Management Plans (or CAPs) are included in Contract. The intent for this section is that the Contract will already have had some review and pre-characterization of what contamination already exists.

#### Section 248:

- A new section that was developed using existing Special Provisions. It is to be used on a project that requires specialty monitoring of the subsurface conditions, particularly during construction. For example, this specification can be used when large settlements are anticipated, or the stability of a wall or slope needs to be monitoring during construction. The intent of this specification is to be very general in nature, and most likely a special specification would be developed to meet the specific project needs.

#### Section 250:

- A specification developed from Special Provision (Construction Vibration and Crack Monitoring) and included language from the Drilling and Blasting Specification to include pre and post condition surveys, a more robust submittal section for the vibration plan developed by the engineering consultant, and daily reporting of the results. It is to be used when construction activities are expected to be in close proximity to structures and there is a desire to establish monitoring to limit damage due to vibrations. The intended equipment for this purpose is seismographs and crack gauges. An engineering consultant will be pre-qualified to perform the work for the contractor as part of the specification.

**Division 300**

### Section 310:

- This specification was revised to include updates to the un-stabilized Full Depth Reclamation (FDR) treatment. It standardizes the format with the other FDR treatments, and specifically adds quality control requirements and details on how to conduct density testing and use control sections to continue work after tests indicate deviations outside the targets.

### Section 311:

- A new specification based on the previously used Special Provision for Calcium Chloride FDR treatment. It follows the same standard format created for FDR, includes all of the same details as 310, and adds to the specifics on inclusion of calcium chloride.

### Section 312:

- A new specification based on the previously used Special Provision for Emulsion FDR treatment. It follows the standard format created for FDR, includes all of the same detail as 310, and adds to that the specifics of inclusion of emulsion as a stabilizer, including: allowable materials, equipment requirements, mix design procedures, and curing requirements.



**Division 400**

#### Section 404:

- This section now contains all the pavement related applications that primarily consist of emulsions, including tack, fog seal, and seal coat with sand cover that were previously used Special Provisions. The allowable materials for each, and application details are provided in the specification.

#### Section 406:

- This section was completely revised. Marshall Mix pavement was removed, leaving only Superpave. The material requirements have been moved to Section 716 – Bituminous Concrete Mixtures material. Tack coat application has been moved to Section 404 – Bituminous Surface Treatment Materials. Plant and lab requirements and QC plan requirements have been moved to the Bituminous Concrete Policy Manual, available on the Agency’s website.
- Three available tiers were added for acceptance that change by quantity of mix type used. Quality Assurance (QA) with Percent Within Limits (PWL) was expanded in scope, method specification acceptance testing was removed, and this section includes incorporating the former Bituminous Concrete Small Quantity Special Provision. Acceptance limits and pay factor determination have been modified for Air Voids, Mat Density, Joint Density, and Pavement Roughness.
- The Extended-Season Paving plan requirement was revised to capture critical information needed for cold weather paving. New language was added about work adjacent to the pavement happening after the wearing course, the need for a pavement protection plan, and requirements of repair.
- Pay items were modified to detail each item by mix type and QA tier. The pay adjustment pay items that previously used Lump Unit as their pay unit changed to the Dollar pay unit. Intent is to eliminate the "lump unit" unit with the 2023 book and to only use the "Dollar" unit.

#### Section 407:

- This section was completely updated. Some things to note: Material requirements were moved to Section 716 – Bituminous Concrete Mixtures material; Tack coat application rates were moved to Section 404 – Bituminous Surface Treatment Materials; and Plant and lab requirements and QC plan requirements were moved to the Bituminous Concrete Policy Manual. Plant QC Plan requirements were added.
- Quality assurance with Percent Within Limits (PWL) and Pay Factors (PF) will be used to evaluate the mix on the whole project level, and does not include rejection based on test results; method specification testing for acceptance has been removed; and Quality control requirements were been added.

#### Section 413:

- A new specification that includes previously used Special Provision, Hot In-Place Recycling Treatment. The format was standardized with the other recycling treatments, and specifically included requirements for materials, quality control and QC plans, mix designs, curing, weather and seasonal limitations, and details on how to conduct density testing and use control sections to continue work after tests indicate deviations outside the targets. The recycling agent requirements previously used in the Special Provision have been moved to new Subsection 702.05 – Hot Recycling Agents.

#### Section 414:

- A new specification that includes previously used Special Provision Cold In-Place Recycling Treatment. The format was standardized with the other recycling treatments, and specifically included requirements for materials, quality control and QC plans, mix designs, curing, and details on how to conduct density testing and use control sections to continue work after tests indicate deviations outside the targets.
- The treatment was expanded to include foamed asphalt in addition to emulsion, with pay items for each. Pay items were revised to be differentiated by treatment depth.

#### Section 415:

- A new specification that includes previously used Special Provision Cold Central Plant Recycling Treatment. The format was standardized with the other recycling treatments, and specifically included requirements for materials, quality control and QC plans, mix designs, curing, and details on how to conduct density testing and use control sections to continue work after tests indicate deviations outside the targets.
- The treatment has been expanded to include foamed asphalt in addition to emulsion, with pay items for each. Pay items were revised to be differentiated by treatment depth.

**Division 500**

### Section 501:

- The entire section was replaced based on the latest Special Provision for Performance Based Concrete. There were general updates, clarifications, and corrections made.
- Subsection 501.03 included updates to the aggregate testing frequency and time period that results are valid for. Specifically in Subsection 501.03, Subpart 501.03(a) specified that the test reports need to be date traceable to qualification batches; Subpart 501.03(b) updated shrinkage fabrication method. A plan must be submitted for approval to make it at the facility to demonstrate how the Contractor will comply with the initial curing procedure in AASHTO T160 procedure 10; and ASR testing was updated in Subpart 501.03(c).
- Subpart 501.05(a)(1) added options to extend the time limit between concrete batching and placement beyond 1.5 hours.
- Subsection 501.06 was modified to only require trial pour/test slabs when requested by the Engineer, in which case it will be paid for by the cubic yard per the changes in Subsection 501.17.
- Subparts 501.07(b)(6) and (7) increased the maximum differential temperature between air and concrete temperature inside heated enclosures and added a requirement for temperature sensor placement.
- Subpart 501.08(g) clarified requirements for removal of forms for substructures.
- Subpart 501.09(c) added a requirement for a retarder schedule for deck pours.
- Subpart 501.10(a) changed to Class SCC with anti-washout admixture for concrete deposited under water.
- Subparts 501.14(a) through (c) added finishing requirements (similar finishing requirements existed under the 2011 spec but were inadvertently removed in the 2018 spec).
- Subpart 501.14(d)(4) added requirements for bridge deck screed orientation and support.
- Table 501.15A was modified to reduce the effective cure time from 10 days to 7 days for Superstructure components.

### Section 503:

- A new specification based on previously used Special Provision, drilled shafts. The new specification also added material specifications for steel casing for drilled shafts into Subsection 730.03. Previously the drilled shaft integrity testing was performed by the Agency, the new specification requires the Contractor to hire an integrity testing firm to complete the testing. Cross-Hole Sonic Log (CSL) or Thermal Integrity Profiling (TIP)

testing methods are allowed unless otherwise specified on the plans. The submittal requirements were reorganized and updated.

#### Section 506:

- This specification was revised to make general updates, clarifications, and corrections. Material specifications for powder coating systems were added in Subsection 708.02.
- Subsection 506.06(e) was added to include nondestructive testing requirements for overhead traffic sign structures, mast arms, and strain poles.
- Subsection 506.18(a) clarified that offloading and temporary storage conditions need to be included in the erection plan submittal.
- Subsection 506.19 updated bolting requirements including Direct Tension Indicator (DTI) pre-installation verification testing, DTI installation, Tables 506.19A and 506.19B, and acceptance of bolt tensioning.
- Subsection 506.20 was added to include a previously used Special Provision item, rivet removal and further clarify expectations for this work.
- Subsection 506.23 updated steel surfaces and coatings, including addition of requirements for powder coated steel and painting over galvanizing.

#### Section 507:

- This specification was revised to make general updates, clarifications, and corrections.
- Subsection 507.01: Added low-carbon chromium and hot-dipped galvanized reinforcing steel as options under Level II (these types were added to 713.01), removed stainless-clad reinforcing steel from 507.01/713.01
- Subsection 507.06: Clarified for placing dowels that epoxy or other adhesive materials is only allowed as a substitute to Mortar, Type IV if approved prior to use unless otherwise shown on the plans.

#### Section 509:

- A new section that incorporates a previously used Special Provision.
- Subsection 509.04(b): Added the requirement for a minimum of two passes of grinding equipment.
- Subsection 509.04(b)(1)a: Increased maximum depth of grinding from 1/2" to 3/4" (thickness of overpour specified in plans will be 3/4").

- Subsection 509.04(b)(1)b: Changed language for addressing depressions, to be submitted to Engineer for approval if issues arise rather than ahead of time in the grinding work plan.

#### Section 510:

- This specification was revised to make general updates, clarifications, and corrections.
- Subsection 510.12(b): Revisions include requirement for written permission from the Engineer for use of ready mixed mortar, more detail on the grouting procedure requirements, clarification on when post-tensioning may occur.

#### Section 525:

- Added provisions to the concrete materials requirements to require a shrinkage reducing admixtures.
- The subsection reference to aesthetic finishes on concrete rails was updated.
- Removed Painting from the installation requirements as they conflicted with the basis of payment.
- The basis of payment was modified to specify that payment was for the accepted quantity of existing removal and reset items.
- Powder coating was added to the list of work paid under the bridge rail items.
- Removed a redundant note from the basis of payment regarding removal and repair items.
- Bridge Railing Repair items were split up by beam type.
- A Remove and Reset Bridge Rail item was created.
- Renumbered all existing Bridge Rail items.
- Renamed items to better align with the work being performed.

#### Section 528:

- Revisions made to the roadway alignment requirements and providing additional width where truck turning movements may cross centerline.
- Revised the requirements for the Temporary Bridge Railing.
- Reorganization and minor improvements to the submittal requirements.

### Section 531:

- Deleted Pot bearings as an option under the HLMR category. Disc bearings are the common choice and provide a better service life. Other states have had issues with Pot bearings.

### Section 540:

- This specification was revised to make general updates, clarifications, and corrections.
- Removed all language related to MSE walls since there is a new section for MSE walls (Section 227).
- Subsection 540.04: Clarified requirements for load rating submittal.
- Subsection 540.05: Updated requirements for concrete removal and surface preparation.
- Subsection 540.08: Updated requirements for curing concrete.
- Subsection 540.11(b): Revisions include requirement for written permission from the Engineer for use of ready mixed mortar, more detail on the grouting procedure requirements, clarification on when post-tensioning may occur.

### Section 541:

- This specification was revised to make general updates, clarifications, and corrections.
- Several updates throughout are to align Section 541 with Section 501 where appropriate, much of which is reorganization/rewording of language for consistency between the two sections including some of the updates noted for Section 501.
- Subsection 541.03:
  - Added Concrete Classes HPAA, HPA, HPB, and SCC that were previously included in the 2011 Section 501 and the High Performance Concrete Special Provision, replaced 2018 Section 541 Class LW with 2011 Section 501 Class LW.
  - Flowable fill was divided into two types, purpose is to have a general Flowable Fill type with a higher limit on compressive strength providing more flexibility for the producer, and the Flowable Fill, Excavatable type with the lower limit of compressive strength would only be used where necessary.
  - Added option to use combined gradations.
- Subpart 541.04(a): Added requirements for batch weight tickets.



- Table 541.04A: Updates to concrete production tolerances.
- Subsection 541.05(a)(1): Added options to extend the time limit between concrete batching and placement beyond 1.5 hours.
- Subsection 541.09(c): Added requirement for retarder schedule for deck pours.
- Subsection 541.10: Deleted previous mix design requirements for under water concrete, replaced with requirement to use Class SCC with anti-washout admixture.
- Subsection 541.14: Replaced finishing requirements with updated language that is consistent with Section 501.
- Deleted Subsection 541.15 Patching since patching of form ties and minor defects is covered elsewhere in Section 541 and any patching beyond that would be handled by Section 580.
- Table 541.15A: Reduced effective cure time from 10 days to 7 days for Superstructure components.

#### Section 542:

- This specification was revised to make general updates, clarifications, and corrections.
- A new section based on the latest Rapid Set Concrete Special Provision that has been used on recent projects.
- Several updates are a result of reformatting the Special Provision to Standard Specification format.
- Other updates are to align Section 542 with Section 501 where appropriate.

#### Section 551:

- A new section based on the latest Public Protection for Bridge Projects Special Provision that has been used on recent projects.

#### Section 580:

- This specification was revised to make general updates, clarifications, and corrections.
- Subsection 580.03: A new subsection to better define repair classes and limits which were previously only defined in the method of measurement, added requirements for specific classes of concrete used for superstructure and substructure repairs and specific repair material used for overhead repairs unless otherwise specified on the plans.

- Removed the 580.19 Concrete, Class AA Overlay pay item.

Section 590:

- A new section based on the previously used Special Provision, Bus Shelter specification.
- This section now houses the Bus Shelter Spec. The Section has been named “Buildings” to allow for other potential uses down the road (pump houses, sheds, etc.).
- This is very similar to the former Special Provision, with the exception that some redundant or incorrect information was removed.

**Division 600**

#### Section 602:

- Added language for the inclusion of coring concrete, a previously used Special Provision.
- Coring concrete item is paid for by “EACH” occurrence with no distinction based on the size of the cored hole.

#### Section 608:

- Added new type of equipment, special purpose excavator. The only type (Type I) currently defined is for an excavator with a hydraulic hammer. This replaces the use of the Type II excavator with pneumatic hammer supplemental description.
- Added a requirement to the AWW/PV vehicle tying the changeable message sign requirements to the requirements for PCMS in 641, including requiring the contractor to have a spare unit available.
- Renumbered pay items to create a more logical numbering scheme.

#### Section 609:

- Eliminated all references to using calcium chloride for ice control.

#### Section 614:

- This is a new section based on previously used Special Provisions: Temporary Relocation of Stream and In-Water Sediment Isolation Measures.
- As a result of the introduction of this section, there were slight modifications also made to Section 208 – COFFERDAM and Section 649 - GEOTEXTILE FABRIC.
- This specification is intended to address control and protection of water during construction activities.

#### Section 616:

- Updated to reference Section 716 Bituminous Concrete Mixture.

#### Section 618:

- This section has been revised to include a previously used Special Provision Reinforced Portland Cement Concrete Sidewalk.
- Associated Materials section was updated for this item. Two existing materials were added (Reinforcing Steel and Woven Wire Reinforcing) – no new materials were created.

### Section 620:

- This section has been revised to include previously used Special Provisions: Pedestrian Hand Rail; Metal Hand Railing; Pedestrian Railing, Steel; Decorative Pedestrian Railing; Barbed Wire Fence; Split Rail Fence; and Square Steel Fence.
- There was previously used Hand Railing section however the associated material specification still existed in the book. This modification re-adds the pre-existing language back into the book in this section.
- The specification now references Section 506 requirements for galvanizing and powder coating.

### Section 621:

- Updated subsections references and names in the materials section.
- Added a subsection for Offset Blocks, Manufactured Terminal Sections, Energy Absorption Attenuators, Flat Sheet Aluminum and Retroreflective Sheeting.
- Broke the term rail down into its subcomponents as applicable. Clarifying the difference between rail beams and rail system.
- Language was added to clarify rail heights for the remove and reset item.
- Cable Rail items for new installations were removed in-line with the agency effort to eliminate cable guardrail in Vermont.
- Energy Absorption attenuators are required to meet MASH, references to NCHRP350 have been removed. References to their location on the APL list were changed to the new subsections as applicable.
- Simplified requirements for temporary barrier.
- The Temporary Traffic Protection Special Provision was made into a subsection.

### Section 625:

- Renamed section to Utility Systems.
- The revised section incorporated previously used Special Provisions: Concrete Encased Conduit;
- Concrete Encased Conduit Duct Bank (various sizes); Direct Buried Conduit Duct Bank (various sizes); GMP Phase 1, 2, and 3 Transformer; GMP 3 Phase Modular Terminating

Cabinet (various sizes); Buried Conduit Pedestal; Buried Conduit Pull Box; and Composite Vault.

Section 628:

- The revised section incorporated previously used Special Provisions: Sewer Cleanout, All-Inclusive; SDR 35 PVC Sewer Pipe, All-Inclusive; and Various All-Inclusive items.
- Even though the Sewer Manholes are in another section, the testing requirements for sewer manholes are here, along with the pipe segments. These requirements were clarified and explained more.
- All-inclusive pay items are now included, and the pipes are broken out by size.
- Transfer system item has language for temporary systems, pumping and bypassing.
- Specific municipal/owner requirements that used to be housed in the Special Provisions all need to be included in the plans now that the Special Provisions will not be available to use. Include as detail sheets.

Section 629:

- The revised section incorporated previously used Special Provisions: Various All-Inclusive items; Hydrant Assembly, All-Inclusive; Permanent Manual Air Release, All-Inclusive; Permanent Manual Air Release, All-Inclusive; and Temporary Water System.
- Materials updated to better match existing pay items/material names.
- Added language about submittal review and data sheets for system components that need to be submitted to ensure new components work with the existing water system.
- All-inclusive pay items are now included, and the components are broken out by size.
- Transfer system item has language added for temporary systems.
- Updated crushed stone bedding to a CY item (used to be TON)
- Added all-inclusive and size break outs.

Section 631:

- Field offices shall be cleaned and disinfected to the degree of cleanliness and frequency approved by the Engineer.
- Updated office equipment.

### Section 633:

- Replaced "lump unit" with "dollar". Intent is to eliminate the "lump unit" unit with the 2023 book and to only use the "dollar" unit.

### Section 641:

- Made some minor organizational changes.
- Added requirements for the Contractor to submit a request if they want to work at night and to submit a lighting plan for night work.
- Added requirements for what needs to be in a lighting plan.
- Added requirements and pay items for temporary traffic signals (both fixed and portable). These were moved from Section 678 (for fixed systems) and a Special Provision (for portable systems).
- This specification includes a previously used Special Provision item, Maintenance of Pedestrian Traffic. The intent of this addition is to allow various devices or features to be installed in a uniform manner to provide a consistent accessible route for pedestrians encountering Agency projects. Submitted site-specific plans require inclusion of a layout for each phase of construction showing existing sidewalks and shared use paths, existing traffic control devices (signs, signals, and pavement markings), driveways, ramps, highway intersections, and the location of all proposed temporary traffic control devices, pedestrian channelizing devices, and temporary curb ramps and will include all labor, tools, equipment, and incidentals necessary to complete the work.

### Section 651:

- The updates replace the need for Special Provisions for specific seed mixtures, which have been used in the past under names such as STEEP SLOPE MIX, WET AREA SEED MIX, etc.
- Subsection 651.05(a): Added the topsoil testing language previously in Section 755 and clarified the requirement for a topsoil analysis within one year of placing the topsoil.
- Subsection 651.06(a)(1) and 651.06(b)(1): Added language requiring the seed mix design be provided to the engineer and that the seed be labeled as described in section 755. Removed application rates for fertilizer and lime.
- Subsections 651.11 and 651.12: Adjusted the means of measuring and paying for turf establishment by introducing an area-based method. Instead of paying for individual components (seed, fertilizer, and lime) separately, the measurement and basis of payment will be on a square yard basis. We also adjusted the types of turf establishment to reflect

the use of specialty seed mixtures. Separate pay items for the different depths of grubbing material were added.

#### Section 653:

- Subsection 653.02: Added Tackifier to the material list.
- Subsection 653.03(a): Revised language to reflect the two previous contractor checklists being combined into one.
- Subsection 653.04(b)(1): Modified language to match the construction stormwater permit to require daily inspections only for areas that have not achieved final stabilization during the winter season.
- Subsection 653.07: Clarified stabilization measure are temporary, with the exception of RECP, Type II.
- Replaced "lump unit" with "dollar". Intent is to eliminate the "lump unit" unit with the 2023 book and to only use the "dollar" unit.

#### Section 654:

- A new section that incorporates previously used Special Provisions for commonly used stormwater treatment practices.
- The section includes information on the types of materials, soil mixtures, and tests that need to be followed, along with some basic construction information, when one of the practices is used on a project. When one of these practices is specified, additional information, particularly around sizing, will still need to be included in the plans.
- This new section will also provide a reference for any potential stormwater measures that require a special specification.

#### Section 655:

- A new section that consists of features that may be used on projects for the protection, preservation, restoration and management of wildlife habitat. Most of the specific items were based on previously used Special Provision items.

#### Section 656:

- Table 656.02A: Added to specify tree sizes. Instead of supplemental descriptions, landscape items will be listed in a plant schedule in the plans, including: key quantity, scientific name, common name, size, container, and spacing. Pay items for trees and shrubs changed to be specified by size grouping (small, medium, large).



- Subsection 656.04: Language previously in section 755 added to clarify inspection criteria of plant material delivered on site. Added inspection criteria for Live Fascines and Live Stakes. Specified the criteria for a plant substitution, and when a plant substitution can be made.
- Subsection 656.05: Clarified the acceptance of antidesiccant use.
- Subsection 656.09: Added language for the establishment and maintenance of live stakes and tubelings.
- Subsection 656.11: Added language specifying the requirements for tree protection.
- Subsection 656.12: Method of measurement updated to include live stakes and tubelings and reflect changes to the pay item names.
- Subsection 656.13: Basis of Payment updated to include live stakes and tubelings and reflect changes to the pay item names.

#### Section 662:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for railroad track construction. The Special Provisions include: Ballasted Track Construction for Turnouts and Grade Crossings; Continuous Welded Rail; Thermite Welding; Furnish and Install Jointed Rail; Gaging Track; Jointed Rail; Railroad Ballast; Raise, Align, and Surface Track; Removal and Replacement of Bridge Ties; Removal and Replacement of Cross Ties; Remove and Replace Railroad Tracks; Remove and Reset Railroad Tracks; Resurface Track Approaches; and Temporary Railroad Ballast.
- Option to pay for ballast by Cubic Yard is eliminated. Ballast is only paid per Ton.
- Item for CWR (rail installation only) is eliminated. Item 662.0360 is for new CWR track construction (rail and ties). Item 662.0400 is for removing jointed rail and replacing with CWR.
- Item 662.0200 Remove and Replace Jointed Rail replaces item 900.640 (Furnish and Install Jointed Rail) and item 900.640 Special Provision (Jointed Rail). The new and old items are essentially the same in terms for measurement and payment; they all include removal of the existing rail as well as furnishing and installing the new rail.
- Item 662.0120 Remove and Replace Cross Ties is now a single item and does not specify the tie size in the item name. Show the required tie size(s) on the plans.
- Item for Resurface Track Approaches is eliminated. Use item 662.0410 Raise, Align, and Surface Track.

- Item for Temporary Railroad Ballast is eliminated.
- Item for Thermite Welding is eliminated. It is incidental to CWR work.

#### Section 663:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for railroad-highway grade crossings. The Special Provisions include: Precast Concrete Panel Grade Crossing Repair; Precast Concrete Panel Grade Crossing Surface; Reconstruct Rail-Highway Crossing; and Rubber Rail Seal.

#### Section 664:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for railroad signals. The Special Provisions include: Rail-Highway Crossing Active Warning System and Railroad Signal Cabinet.
- Items for Preemption for Rail-Highway Crossing and Test Train Allowance (N.A.B.I) were eliminated from the specifications. The content was mostly related to highway traffic signals and the recommendation was not to add it to Railroad Signals.
- The item for Railroad Signal Cabinet has been eliminated.

#### Section 665:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for railroad turnout construction. The Special Provisions include: Raise, Align, and Surface Crossover; Raise, Align, and Surface Turnout; and Removal and Replacement of Turnout.
- Removal and Replacement of Turnout is no longer a Bid item. Instead, the work involves item 665.0200 Removal of Railroad Turnout and one of the items for installing a new turnout.
- For turnouts other than No. 8 and No. 10 turnouts, use item 665.0100 Railroad Turnout and indicated size of turnout on the plans.

#### Section 667:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for other track material. The Special Provisions include: Compromise Joints; Furnish and Install Joint Bars; Furnish and Install Tie Plates; Gaging Track; and Insulated Joints.
- Item 667.0010 specifically mentions both “Remove” and “Replace” while the previous item 900.620 Special Provision (Furnish and Install Joint Bars) did not specifically mention

removal in the Method of Measurement or Basis of Payment, but removal is mentioned in Construction Requirements. The new item improves the clarity that removal is part of the bid item.

- Item 667.0100 specifically mentions both “Remove” and “Replace” while the previous item 900.620 Special Provision (Furnish and Install Tie Plates) did not specifically mention removal in the Method of Measurement or Basis of Payment, but removal is mentioned in Construction Requirements. The new item improves the clarity that removal is part of the bid item.
- Item 667.0020: There is only one item for “Insulated Joints”. The item for “Bonded Insulated Joints” was eliminated. If a project only has Bonded Insulated Joints, they can be paid for under item 667.0020. If a project has both types of joints (which is very unlikely), a separate item could be added by a project-specific Special Specification.

#### Sections 678 and 752:

- The old specification contained many references to outdated traffic signal equipment such as strain poles, vehicle detection loops, etc. The revised version of the specification has been updated to reference the modern signal equipment which is currently being used on Agency projects.
- Language has been added at the request of the Agency Traffic Signal Operations that is intended to streamline the maintenance of state-owned signals.
- The payment schedule for the traffic signal items has been altered to provide the contractor with a larger percentage of payment earlier along in the construction process, in attempt to offset up-front costs.
- Some of the items which used to be covered under the old specification have now been moved to the revised 625 Utilities section. These items include junction box, pull box, electrical conduit, electrical conduit sleeve etc. The new specification references the relevant sections in 625 and expands on a few sections to include traffic signal specific information.
- The new specification breaks out the old lump sum 678.15 Traffic Signal System pay item into more detailed items for each individual piece of equipment that makes up the system.

#### Section 681:

- A new section that incorporates parts of previously used Special Provision items that is intended to be used for miscellaneous work. The Special Provisions include: Parking Meter, Parking Meter Post and Sleeve, Remove Parking Meter Post and Sleeve, Remove and Reset Parking Meter; Remove and Relocate Landscape items; Remove Landscape items, Bicycle Rack, Remove and Reset Boulder, Remove and Reset Walkway, and many others.

## Section 690:

- A revised section renamed Commodity Price Adjustment.
- Moved APA from Section 406 into Section 690.
- Created uniform general requirements for APA and FPA.
- Made items added by change order eligible for APA and FPA. The index price for items added by change order will be the price in the month they were added and will need to be specified in the change order which adds the item.
- Swapped “ $\leq$ ” with “ $<$ ” and “ $\geq$ ” with “ $>$ ” in the equations in order to simplify the boundary condition. Does not change results of calculations.
- Replaced "lump unit" with "dollar". Intent is to eliminate the "lump unit" unit with the 2023 book and to only use the "dollar" unit.

**Division 700**

There were many revisions and updates to all Sections within Division 700. The following are specific to individual sections but do not include all revisions in the division.

#### Section 702:

- Details the material requirements of Performance Graded Asphalt Binder, Emulsion, Warm Mix Technologies, Anti-Strip Additives, and Hot Recycling Agents.
- Asphalt Binder requires suppliers participate in the NTPEP Asphalt Binder Suppliers program, transitioning to MSCR binder grading, allowing low end binder modification, and adopting delta TC testing. All possible binder and emulsion grades used for Agency projects have also been listed.

#### Section 704:

- Subsection 704.03: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Aggregate for Railroad Ballast. This included previously used Special Provisions: Ballasted Track Construction for Turnouts and Grade Crossings; Railroad Ballast; Raise, Align, and Surface Turnout; and Temporary Railroad Ballast.
- Subsection 704.10: A revised subsection that details material requirements of Aggregates for Bituminous Concrete Mixtures, reformatted for ease of use. Recycled Asphalt Materials (RAM) has been moved to Subsection 704.22 – Recycled Asphalt Materials, and specific requirements/use of RAM in bituminous concrete mixtures have been moved to Section 716 – Bituminous Concrete Mixtures.
- Subsection 704.11: A new subsection that details the material requirements of Aggregates for Seal Coat with Sand Cover.
- Subsection 704.12(b): Added subpart for Aggregate Surface Course, Paths and Trails.
- Subsection 704.12(c): The gradation for Aggregate Shoulders was adjusted.
- Subsection 704.15: Added subsection detailing material requirements for Aggregate for Shotcrete.
- Subsection 704.22: A revised subsection to detail the material requirements of Recycled Asphalt Pavement (RAP) and Recycled Asphalt Shingles (RAS). RAS to be required to come from an approved source.

#### Section 709:

- Subsection 709.04: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Railroad Ties. This included previously used

Special Provisions: Removal and Replacement of Bridge Ties and Removal and Replacement of Cross Ties.

#### Section 715:

- Subsection 715.06: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Rail. This included previously used Special Provisions: Continuous Welded Rail; Furnish and Install Jointed Rail; Jointed Rail; Remove and Replace Railroad Tracks; and Remove and Reset Railroad Tracks.
- Subsection 715.07: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Railroad Turnouts. This included previously used Special Provision: Removal and Replacement of Turnout.
- Subsection 715.08: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Other Track Material (OTM). This included previously used parts of the following Special Provisions: Compromise Joints; Furnish and Install Joint Bars; Furnish and Install Tie Plates: Jointed Rail; Gaging Track; Insulated Joints; Raise, Align and Surface Track; Raise, Align and Surface Turnout; Reconstruct Rail-Highway Crossing; Removal and Replacement of Cross Ties; Remove and Replace Railroad Tracks; and Remove and Reset Railroad Tracks.

#### Section 716:

- A new section to cover the material requirements of Superpave and Bonded Wearing Course Mixtures, mix design requirements, and preparation of the material. This new section can be used in instances when only the material, and not the construction and quality assurance provisions of Section 406 are needed.

#### Section 728:

- The subsection on Manufactured Terminal Sections was expanded to differentiate between guardrail systems and Test Level.
- The subsection on Energy Absorption Attenuators was expanded to differentiate between type and Test Level.
- The Portable Roadside Barrier section was renamed to Temporary Traffic Barrier.

#### Subsection 729.04:

- A revised subsection that details the material requirements for Bituminous Concrete Curb. Updated to reference Section 716 – Bituminous Concrete Mixtures, Marshall mix has been removed, leaving only Superpave, specifics on binder grade and gyration have been added, and volumetrics other than air voids have been waived.

### Section 732:

- The Bolt, Nuts, and Washers section was revised to meet material properties of the bridge rail systems that the Agency currently uses.

### Section 752:

- This section was revised to align with associated changes in Section 678.

### Section 755:

- Subsection 755.01: Specified the requirements of the landscape backfill components.
- Subsection 755.02: Removed soil analysis language and moved it to section 651. Updated language to allow for the use of Manufactured Topsoil.
- Subsection 755.03: Added details to the acceptance requirements for sod.
- Subsection 755.04: Added details to the acceptance requirements for seed.
- Subsection 755.06: Removed fertilizer component percentages and referred to the plans for fertilizer composition.
- Subsection 755.08(b): Added a table for Agricultural Limestone gradation.
- Subsection 755.10: Removed language that was added to section 653.
- Subsection 755.12: Removed redundant language, and language that was added to section 653.
- Subsection 755.13: Removed, antidesiccant language added to section 656.

### Section 760:

- A new section that was intended to include the material requirements for specifications relating to slope stabilization including Sections 217, 219, 221, 227, 500, and 540.
- References to *ASTM* and *AASHTO* standards were revised and updated throughout as needed.
- References to the Agency's Approved Products List were added as needed.
- Subsection 706.01: Included for Slope Stabilization Nails. Solid and Hollow bars are specified as thread bars.



- Subsection 760.02: Included for Shotcrete. Language was simplified and directs reader to various subsections of Section 700 for material requirements of Wet Mix Shotcrete.
- Subsection 760.04: Included for Wire Mesh Facing. Details were simplified and state only minimum requirements; the system is approved in fabrication drawings as it's designed by the manufacturer.

#### Section 781:

- Subsection 781.01: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Precast Concrete Grade Crossing Systems. This included previously used Special Provisions: Precast Concrete Panel Grade Crossing Repair and Precast Concrete Panel Grade Crossing Surface.
- Subsection 781.02: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Rubber Rail Seal. This included previously used Special Provisions: Rubber Rail Seal.
- Subsection 781.03: A new subsection that incorporates parts of previously used Special Provision items that is intended to be used for Automatic Highway Crossing Warning System (AHCWS). This included previously used Special Provisions: Rail-Highway Crossing Active Warning System and Railroad Signal Cabinet.