

# **ODOT Specifications Manual**

January 2024

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Updates to 2.5.3 SSE Review to include review timing Updates to 3.7.6 Capitalization including examples
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## Introduction

This manual provides instructions for the preparation of the Oregon Department of Transportation's (ODOT) Standard Specifications, Boilerplate Special Provisions and Project Special Provisions. This manual serves as a source of information for writing specifications for ODOT highway construction contracts processed by the Project Controls Office. This manual includes how to prepare the Project Special Provisions and covers basic style, format and general writing information.

The intended audience is for designers and specification writers who prepare project documents for ODOT highway construction contracts and technical resources responsible for reviewing and maintaining assigned specification sections.

## **Chapter 1 - Background**

## **1.1 Purpose**

The purpose of this manual is to help specification writers and designers achieve consistency in ODOT contract language and to clearly identify the roles and responsibilities of the parties involved with writing contract specifications. This manual will explain the process used in developing contract specifications language and writing techniques to use in writing clear and concise language. The information included in this manual constitutes the department's approved guidelines for updating current specifications and creating project-specific language.

## **1.2 Acronyms**

Acronyms used within this document are:

DOJ – Department of Justice (State of Oregon) FHWA – Federal Highway Administration OPO – ODOT Procurement Office PCO – Project Controls Office POR – Professional of Record PS&E – Plans, specifications and estimate milestone SSE – State Specifications engineer SCRF – Specification Change Request form TPM/RECP – Transportation Project Manager/Resident Engineer Consultant Project

## **1.3 Definitions**

Specifications are:

- a description of the physical or functional characteristics of goods or services procured by a contracting agency.
- the language that is incorporated into a legally binding contract.
- a set of written instructions that include material requirements, construction details, acceptance, measurement and payment.
- the primary contract language used in highway and bridge construction contracts, including the general terms and conditions.

**Standard Specifications** – The Standard Specifications have been approved for use on all applicable projects by DOJ and FHWA. The Standard Specifications describe the contractual relationship and responsibilities between the Contractor and the Agency. They provide directions, provisions, and requirements necessary for performing highway public improvement projects. The Standard Specifications are a published document titled "Oregon Standard Specifications for Construction" and are typically updated every three years. The current edition of the Oregon Standard Specifications for Construction are available on <u>ODOT's Standard Specifications website</u>.

The Standard Specifications are organized into numbered parts, sections, and subsections. Part 00100 is the general requirements that define the solicitation process and contractual relationships, general and legal responsibilities, prosecution of the work, and measurement and payment for the work. Part 00200 through Part 03000 are the technical specifications that include material requirements, construction details, and specific measurement and payment requirements.

**Boilerplate Special Provisions** - Boilerplate Special Provisions modify the Standard Specifications by adding, replacing, or deleting language from the published Standard Specifications. Most sections of the Standard Specifications have a corresponding Boilerplate Special Provision. Some Boilerplate Special Provisions are stand-alone, which means that an entire section is in addition to the language in the Standard Specifications. The Boilerplate Special Provisions are selected and assembled to form the Project Special Provisions. The Boilerplate Special Provisions contain instructions that assist the specification writer in determining if the language is applicable to a project. All Boilerplate Special Provisions have been reviewed and approved for use by the SSE, DOJ, and FHWA.

Boilerplate Special Provisions are updated as needed. Updates are published monthly. Boilerplate Special Provisions go into effect three months after they are published. For example, a Boilerplate Special Provision published in January would be effective for projects bidding in April. The Boilerplate Special Provisions are published on <u>ODOT's Special Provisions website</u>.

**Project Special Provisions** – The Project Special Provisions are part of the advertisement package for the construction contract and become the contract special provisions part of the contract after the contract award. The Project Special Provisions consist of a set of assembled Boilerplate Special Provisions, including the Standard Specifications by reference and any approved modifications or additions to the Boilerplate Special Provisions. See <u>Chapter 2</u> for more information.

**Addendum** – An addendum is a part of the advertisement package for the construction contract and becomes part of the contract after the bid closes. When required, an addendum may include updates or corrections to the Project Special Provisions. Specifications within an addendum require the same review and approval as specifications within the Project Special Provisions. See <u>Section 2.8.2</u> for more information.

**Bid Booklet** – The bid booklet is the part of the advertising documents that the Contractors fill out and submit to the ODOT Procurement Office to bid on a project. The specification writer fills out the cover sheet (<u>SP00002 BB Cover</u>) and description of work sheet as part of compiling the Project Special Provisions. The bid booklet contains the description of work, certifications, DBE commitment requirements and utilization form, bid item schedule and other required documents. The ODOT Procurement Office compiles the bid booklet.

**Letter of Clarification** – A letter of clarification (LOC) is part of the advertisement package for the Construction Contract. LOCs are intended to be informational in nature and appropriate for situations where there are no changes to the plans, special provisions or bid items. A LOC is used to add reference documents to eBIDS (ODOT's online bidding website); to answer questions from contractors by referencing the existing bid documents; or provide other non-contractual information. A LOC does not modify the bidding documents and does not become part of the contract after contract award. See Section 2.8.3 for more information on LOCs.

## **1.4 Roles & Responsibilities**

**State Specifications Engineer** – The SSE is responsible for:

- Ownership of the Standard Specifications and Boilerplate Special Provisions.
- Ensuring the Standard Specifications and Boilerplate Special Provisions have been approved by DOJ and FHWA prior to use.
- Compliance to ODOT's DOJ exemption from legal sufficiency review and approval for highway construction contracts.
- Being the primary contact with DOJ regarding specifications for highway construction.
- Maintaining the Standard Specifications through regular updates of the Boilerplate Special Provisions.
- Preparing and publishing a new Standard Specifications book every three years with accompanying Boilerplate Special Provisions.
- Maintaining associated contract documents, e.g. bid item list, technical resource list, Civil Rights contract documents, addendum letter template, and other documents.
- Collect advice given to ODOT from DOJ prior to contract execution and providing the Contract Verification Form (HB2375 form) to OPO prior to contract execution.

**Specification Unit** – The Specifications unit consists of the SSE, two specifications engineers, and a specification specialist. The Specifications unit is responsible for:

- Updating and maintaining the Standard specifications.
- Publishing the Standard specifications book every 3 years.
- Maintaining boilerplate specifications through specifications change request process.
- Posting monthly boilerplate updates.
- Maintaining master email distribution list for sending out monthly boilerplate updates.
- Assisting in review non-standard project specific special provisions for basic formatting and language.

- Maintaining the technical resource list.
- Maintaining the bid item list.

Specification Writers – Specification writers are responsible for:

- Assembling the Project Special Provisions for individual region projects.
- Assisting designers with writing Project Special Provisions and ensuring compliance with FHWA requirements, state laws and ODOT's DOJ exemption requirements.
- Ensuring all project specific modifications are reviewed by all appropriate parties and acknowledge completion of this process in the special provision integrity certification.

Technical Resources – Technical resources are ODOT staff that are responsible for:

- Maintaining and requesting updates to the technical portions of the Standard Specifications and Boilerplate Special Provisions to which they are assigned.
- Reviewing Project Special Provisions that modify specifications assigned to them.

The list of technical resources can be found on the ODOT Specifications website.

**Contract Administration Engineer** – The Contract Administration Engineer or delegate is responsible for:

- Reviewing all modifications to measurement and payment specifications as a technical resource.
- Being the shared technical resource for portions of the Part 00100 general conditions with the SSE.

**Professional of Record** – The POR is responsible for:

- Sealing final professional work products as required by the conditions of their professional license.
- Sealing their, or their responsible charges', project specifications according to <u>TSB11-01(D)</u>.

## **1.5 DOJ Exemption – Review and Requirements**

Oregon statute requires that the DOJ review all state contracts for legal sufficiency. ODOT has received a conditional exemption from DOJ legal sufficiency review and approval for ODOT highway construction contracts, as long as certain terms are adhered to. Since the Standard Specifications and Boilerplate Special Provisions become part of a binding project construction contract, they must adhere to this requirement.

The exemption applies to the current Standard Specifications for highway construction and applies only to competitively bid highway public improvement contracts that are processed by PCO and procured by OPO.

As a condition of keeping the exemption, modifications to the Standard Specifications and approved Boilerplate Special Provisions (posted on the Specification website) are subject to the review and approval of the PCO Specifications unit, under the supervision of the PCO manager and by the SSE, before they are used. ODOT must obtain DOJ approval of all applicable specifications or revisions before use.

Other than the fill-in-the-blank portions of the approved Boilerplate Special Provisions, ODOT and its Contractors and consultants may not add to, delete from or otherwise modify the approved Boilerplate Special Provisions, without first obtaining approval through the SSE.

Any new or unapproved specification language must be sent to the SSE. The SSE will contact DOJ for any necessary approval.

## **1.6 FHWA – Review and Requirements**

The FHWA requirements for standard specifications are discussed in the <u>FHWA Contract</u> <u>Administration Core Curriculum (CACC)</u>, 23 CFR 630 Subpart B, and the <u>Stewardship and</u> <u>Oversight Agreement</u> between ODOT and FHWA. The use of approved Standard Specifications and Boilerplate Special Provisions takes the place of reviewing specifications for each individual project.

In approving the use of ODOT Standard Specifications and Boilerplate Special Provisions, FHWA has made stipulations on the use of several sections:

- **Warranties**: Only Subsection 00170.85(b)(1) should be used on Federal-aid projects. Subsection 00170.85(b)(2) shall not be used on Federal-aid projects. Warranties must be for specific products or features. Prior Federal Highway Administration approval is required for use of warranties on National Highway System (NHS) projects.
- Incidental Payment of Work Zone Traffic Control Devices: Subsection 00221.99, Method "C" – Incidental Basis, shall not be used on Federal-aid projects. In general payment should be made under subsection 00221.90 Method "A" – Unit Basis. Use of subsection 00221.98 Method "B" – Lump Sum Basis should be rare and reserved for only those small projects where the traffic control requirements are not complex and the number, type, and locations of the traffic control devices can be easily and readily identified from the project plans. The following Incidental Basis subsections related to the subsection 00221.99 shall not be used on Federal-aid projects unless they meet the criteria above for Lump Sum Basis: 00222.91, 00223.91, 00224.91, 00225.91, 00226.91, 00227.91, and 00228.91.
- Erosion and Sediment Control: Under Subsection 00280.90, exclusive use of pay item (a) Erosion Control in the contract's schedule of items does not include separate pay items for the erosion prevention, runoff control, and sediment control best management practices. In this instance no separate or additional payment will be made for modifications or additions to best management practices that become necessary for permit compliance during construction. It is FHWA's expectation that Federal-aid

contracts include pay items for all the erosion prevention, runoff control, and sediment control best management practices in the contract.

- Aggregate Base and Shoulders: Section 00640 allows for visual acceptance of aggregate materials by the Engineer. Use of this section should be limited to small quantities consistent with the Oregon Department of Transportation's Manual of Field Test Procedures. Otherwise Section 00641 should be used.
- **Commercial Asphalt Concrete Pavement**: Section 00740 allows for visual acceptance of asphalt concrete pavement by the Engineer. Use of this section should be limited to small quantities consistent with the Oregon Department of Transportation's Manual of Field Test Procedures. Otherwise Sections 00744 or 00745 should be used.

## **Chapter 2 – Project Special Provisions**

## **2.1 Project Special Provisions**

All designers and specification writers are expected to utilize the agency's Standard Specifications and Boilerplate Special Provisions unless special circumstances on a specific project warrant something different. The exemption from DOJ legal sufficiency review and approval for ODOT Highway Construction Contracts identifies the conditions under which ODOT is required to obtain DOJ review and approval for modifications made to the Standard Specifications and Boilerplate Special Provisions. All designers and specification writers are expected to follow a process to ensure that Project Special Provisions are properly reviewed and vetted before they are included in project contract documents prior to PS&E. Designers and specifications to the Boilerplate Special Provisions. See <u>Section 2.5</u> for more information about the review and approval of specifications.

## **2.2 Assembling Project Special Provisions**

Assembling accurate Project Special Provisions consists of several steps, as follows.

### **2.2.1 Create a Bid Item List**

The specifications establish the pay items for which work will be paid. Creating a bid item list first will provide the basis for assembling the Project Special Provisions. Contact the project specific disciplines to get a list of bid items. A list of available bid items is available on the <u>ODOT Specifications website</u> under "Bid Item List".

### **2.2.2 Fill out the Document Assembly Form**

Each project requires a new set of Boilerplate Special Provisions. The <u>document assembly</u> <u>form</u> (a.k.a. SPLIST) includes instructions and provides guidance in the process of assembling the Project Special Provisions.

When preparing a new set of Project Special Provisions, fill in the document assembly form by checking all of the sections needed for the project, based on the bid item list created in 2.2.1. Consider the following when filling out the document assembly form:

- All work items shown on the plans require specifications.
- All bid items require specifications either by Standard Specifications or special provision.
- A Boilerplate Special Provision for every section needing a bid item should be included in the Project Special Provisions, even if the Boilerplate Special Provision only says to comply with the Standard Specification.

- There are sections in the Standard Specifications where the work is incidental to other items. Only include the special provisions when a modification to the Standard Specification has been made. Examples include Sections 00440 Commercial Grade Concrete or 00960 Common Provisions for Electrical Systems, where there are no pay items but a modification to the Standard Specification may exist. These Sections would only be included if there was a modification to the Standard Specification.
- Material special provision sections (02000 and above) are only required when there is a modification to the Standard Specifications.
- The following boilerplate special provisions are required on all projects:
  - All Part 00100s (00110 00199)
  - o 00210 Mobilization
  - o 00220 Accommodations for Public Traffic
  - $\circ\quad 00221$  Common Provisions for Work Zone Traffic Control
  - o 00222 Temporary Traffic Control Signs
  - o 00290 Environmental Protection
- There are 13 sections in the Standard Specifications where there is an option of paying for the work as a bid item or, when the work is minor, not including a bid item. However, when a bid item is not included, the work needs to be identified on the plans (if not required under other specification sections) and the Boilerplate Special Provision still needs to be included in the Project Special Provisions if there are applicable modifications in the Boilerplate Special Provisions are:
  - o 00210.90 Mobilization
  - o 00310.90 Removal of Structures and Obstructions
  - o 00320.90 Clearing and Grubbing
  - o 00335.90 Blasting Methods and Protection of Excavation Backslopes
  - o 00340.90 Watering
  - o 00370.90 Finishing Roadbeds
  - o 00405.90 Trench Excavation, Bedding, and Backfill
  - o 00445.91 Sanitary, Storm, Culvert, Siphon, and Irrigation Pipe
  - o 00495.90 Trench Resurfacing
  - o 00510.90 Structure Excavation and Backfill
  - o 00585.90 Expansion Joints
  - o 00610.90 Reconditioning Existing Roadway
  - o 00706.90 Emulsified Asphalt Slurry Seal Surfacing

### **2.2.3 Review Technical Reports**

The technical discipline report for pavement design contains specific information needing to be included in the Project Special Provisions.

Other technical discipline reports such as the geotechnical report and bridge type, size, location (TS&L) report contain information pertinent to the special provisions. Review of these reports is recommended to ensure correct information is in the Project Special Provisions.

### **2.2.4 Acquire Boilerplate Special Provisions**

All of the current Boilerplate Special Provisions are available in a .zip file on the <u>ODOT</u> <u>Special Provisions website</u>. The .zip files are named by the month and year the project will be bid in (e.g. use 12-01-20.zip file for a project bidding in December 2020). Create an electronic project file folder in the computer in which the files will be downloaded. All of the Boilerplate Special Provision files should be saved into the local electronic file folder in order to run the <u>automated document assembly tool (a.k.a. SPLIST)</u>. For ODOT employees, the Boilerplate Special Provisions are also available on a share drive at <u>\\scdata\metspecs</u>.

When developing a project in ProjectWise, the special provisions document should be saved and developed under the "1\_Design/Specifications" folder according to ODOT's ProjectWise guidance. Assembly of the Project Special Provisions needs to be completed on a local drive and then uploaded to ProjectWise.

## **2.2.5 Create the Project Special Provisions Document**

There are two ways to assemble the Project Special Provisions within Microsoft Word, manually or with the document assembly macro as outlined below:

<u>Manually</u>: To begin a new Project Special Provisions document, open the bid booklet cover (<u>SP00002 BB Cover.docx</u>), save the file using the following ProjectWise naming convention.

```
SP_K#####_ConSP_##.docx
```

Where the first "#####" is the project key number and the second "##" is the version number. The first document created in MS Word is called the Consolidated Special Provisions. Then at each development milestone a .pdf is made called ADV (advanced), FIN (final), and PSnE (PS&E). The Consolidated Special Provisions MS Word document is submitted by the specifications writer at PS&E Submittal.

Assemble the remaining document using the "insert" command (DO NOT USE COPY AND PASTE). Using this method preserves the formatting. Assemble the Project Special Provisions with MS Word "track changes" feature turned off. Use the document assembly

form that was developed in 2.2.2 to select all of the required Boilerplate Special Provisions to add to the document.

Continue assembling the Project Special Provisions by placing the curser on the last page at the end of the file then begin inserting the Boilerplate Special Provisions in the order in which they are listed in the document assembly form.

To keep the integrity of the document and to preserve the document formatting, assemble it by:

- Using the insert command. Do not use copy and paste.
- Maintaining all blank pages. Do not delete the blank pages.
- Saving the file when finished assembling.

Begin each new specification part at the top of a new page. For example, start inserting the Part 00300 sections at the top of a new page after all the Part 00200 sections have been inserted.

<u>Document Assembly Macro</u>: The document assembly form (a.k.a. SPLIST) contains a macro that will assemble the base documents for you. Follow the instructions in the form and macro. You will need to save all the special provisions for the project (recommend copying the .zip folder) to your local hard drive for the macro to work. You must have write access to the folder the specification files are in for the macro to work. The filenames must retain the original Boilerplate Special Provision name (e.g. 21\_SP00110.docx) for the macro to work. To use the macro with designer modified special provisions from ProjectWise, you can rename the files to the appropriate associated macro-recognized filename in a local drive so the macro will work (example: change ProjectWise name "SP\_K12345\_SP00745\_01" to macro recognized name "21\_SP00745.docx").

## **2.2.6 Initial Edits**

After assembling the original Project Special Provisions document, turn on "Track Changes" before editing the document.

Some things to do when editing:

- Always use track changes, except for instances noted below.
- If additional Boilerplate Special Provision sections need to be added after the initial assembly, turn off track changes, "Insert" the document, then turn track changes back on.
- <u>Do not</u> delete any section breaks. Be careful removing any blank pages. Removing blank pages may corrupt the header and footer settings.

- Follow all orange italic instructions; if there are no instructions above a subsection, paragraph, sentence or bullet, then include it in the project.
- For Part 00100 sections, do not make any changes except as instructed. Any change, except as instructed, requires project specific approval from the SSE who may need to get additional approval from FHWA and DOJ.
- For Part 00200 through 03000 sections, modifications that add or delete language, except as instructed, requires project specific approval from the SSE who may need to get additional approval from FHWA and DOJ. Modifications to the Measurement and Payment sections need additional approval by the measurement and payment technical resource. Technical changes must be approved by the technical resource assigned to that section.
- Delete all orange italic instructional language from the Project Special Provisions with track changes turned on. Delete all orange italic parentheses or language within the parentheses that is not required.
- For standalone Boilerplate Special Provisions, only include the language that is pertinent to the work to be completed. Delete language not applicable to the project.

## **2.3 Additional Specific Information**

### 2.3.1 Class of Work

Bidders are required to be pre-qualified in the class of work they bid on; and once a contract is awarded, are required to perform 30% of work according to 00180.20(a). Because mobilization is assumed to be 10%, the trigger to include a class in the class of work is a minimum of 20%. Classes can be combined so the total of the classes is a minimum of 20%. The class of work may be as simple as a single class of work, or multiple classes of work combined to make up the percentage needed. A project may have two or more classes of work if the value of work will meet the 00180.20(a) requirements.

To determine the class of work use the class of work worksheet within the ODOT Fuel Index and Scheduling Program workbook. The <u>ODOT Fuel Index and Scheduling</u> <u>Program</u> is available on the <u>PCO website</u>. The completed class of work form may be used later by legal staff to justify ODOT's choice if a bidder files a protest. The class of work is listed on the bid booklet cover and the description of work pages in the bid booklet and the project special provisions booklet.

Classes of work available to use are:

- Earthwork and Drainage
- Bridges and Structures
- Painting
- Rock Production
- Aggregate Bases
- Asphalt Concrete Paving and Oiling
- Portland Cement Concrete Paving
- Pavement Markings
- Signing
- Electrical
- Landscaping
- Miscellaneous Highway Appurtenances
- Buildings

Some things to consider when determining the class of work:

- If the class of work is determined at the advance plans milestone, recalculate it again before PS&E submittal. Changes between the advance plans milestone and PS&E submittal may change the class of work.
- Class of work is a procurement function and determines who can bid on a project (bidders must be prequalified in the class of work of a project to bid on the project).
- Contact the SSE if there are questions regarding the class of work for a project.
- PCO reviews the class of work at the time of PS&E.
- Classes of work that require concurrence from the SSE are: Painting, Rock Production, Landscaping and Buildings. These classes of work are rare.
- Classes of work not used by ODOT but included in the calculation are Temporary Traffic Control and Other. These two classes of work are included on the ODOT Procurement Contractor Prequalification Application. "Other" is included as it may be used by local agencies that use ODOT's contractor prequalification list.

## **2.3.2 Project Title**

The plan title and date information listed in 00120.05 (under Bidding Requirements and Procedures) must match exactly the written text on the plan title sheet. This legally binds the documents together in the bidding package. The project title must match what is listed in the <u>STIP (Statewide Transportation Improvement Program)</u>.

## 2.3.3 Bid Date

Make sure the bid date matches what PCO has scheduled on the "<u>Bid Date Planning &</u> <u>Status Report</u>". Verify the correct bid date with the TPM/RECP. The bid date is listed on the bid booklet cover, special provisions cover, and the description of work pages.

## 2.3.4 Funding Type

Verify with the TPM/RECP if there are any federal funds on the project or if the project is 100% state funded. The following items are affected by funding type:

- Table of Contents
- FHWA Form 1273
- Office of Civil Rights requirements
- Project Wage Rates
- Buy America
- Build America Buy America
- 00120.70 Rejection of Nonresponsive Bids
- 00160.20 Preferences for Materials
- 00160.21 Cargo Preference Act Requirements
- 00170.06 Federal-Aid Participation
- 00170.65(e) Additional Requirements When Federal Funds are Involved

## **2.3.5 Table of Contents**

To create a table of contents (TOC) in the project special provisions, be sure you are in the table of contents page. Follow the instructions on the TOC page. The TOC is created using the specification section title and the style "Heading 1". Do not adjust the style assigned to the specification section title.

To update an existing project special provisions TOC, place the cursor anywhere inside the TOC. It should change to a gray color. Right click the mouse and select update field. In the update table of contents dialog box, select update entire table then select OK.

## **2.3.6 Office of Civil Rights Requirements**

The Office of Civil Rights determines on-the-job training (OJT), disadvantaged business enterprise (DBE), and aspirational target and diversity requirements for projects. Follow the instructions on the <u>Civil Rights Request for Goals</u> form #731-0663. Submit the form to <u>OCRGoalsRequest@odot.oregon.gov</u> at approximately 90% PS&E or within 3 months of PS&E. The goals are considered "stale" after 3 months or considerable (+/- 10%) changes have been made to the project estimate. The project estimate and schedule need to be included in the email request along with the form.

## 2.3.7 TERO

Federally funded projects that are within the TERO (Tribal Employment Rights Office/Ordinance) boundaries of the Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Grand Ronde Indian Reservation, or the Confederated Tribes of the Warm Springs Indian Reservation require TERO code information along with Indian preferences in employment, the memorandum of understanding, as well as goals and fees. See the memorandum of understanding (MOU) map for boundary locations in Regions 1, 2, 4, and 5.

For Region 1 and 2 projects, contact the TPM/RECP for the project to see if TERO is required. For Region 4 projects, contact the Area Manager for TERO requirements. For Region 5 projects, the TPM/RECP is responsible for coordinating with the Confederated Tribes of the Umatilla Indian Reservation to obtain TERO goals. Currently there is no TERO within Region 3.

Contact the region Civil Rights coordinator for questions about inclusion of these requirements in projects.

## 2.3.8 POR Signature Page

The POR signature page requires the professional of record (POR) seal and signature. The POR signature page is required at PS&E Submittal. If any changes to a specification occur after the original signature (for example due to PCO review or addendum), an updated POR signature page is needed to verify the POR is aware and approves the change.

The POR's are required to apply their seal to the specification sections that they are including for the construction of their designs. This requirement is described in ODOT's <u>Technical Services Directive TSB11-01(D</u>). Use the current version of the ODOT Specification Signature Sheet (SP00088 Sig) from the ODOT Special Provisions website. All technical specifications need to be signed by a POR according to TSB11-01(D).

The Part 00100 section of the Project Special Provisions should not be included on the POR certification. These are the charge of the ODOT SSE, and are covered under the Special Provision Integrity Certification. These sections are not sealed because they are legal in nature. Sections 00210 and 00290 also are not sealed because they do not constitute professional work as defined and governed by Oregon professional boards (OSBEELS, OSBGE, or OSLAB).

When a specification section is used by multiple PORs, the POR needs to state what the specification covers. For example, a project with multiple bridges and multiple PORs

may have Section 00540 for the multiple bridges signed by multiple PORs. The POR can show what they are responsible for by stating it is the 00540 for Bridge 12345 and then Bridge 67890. Another example is a curb ramp project with the same specification sections being signed by multiple PORs. The first POR would say they are responsible for curb ramps in City A and the second POR would say they are responsible for curb ramps in City B.

Refer to <u>TSB11-01(D)</u> – <u>Professional sealing of project special provisions</u>, and <u>TSB11-02(D)</u> – <u>Documents requiring the seal of licensed engineers</u>, <u>land surveyors</u>, <u>geologists</u>, <u>landscape architects and photogrammetrists</u> for information on what special provision sections require a professional seal. Part 00100s, Section 00210, and Section 00290 do not require a POR seal.

### **2.3.9 Work to be Done Page**

The Work to be Done page includes a brief list describing the primary work items, the reference to the applicable Standard Specifications, and the class of project (federal or state). The Work to be Done page also contains the header and footer metadata information for all the specifications following it.

The Work to be Done list is sent to FHWA as part of the request for construction funding authorization and obligation, and should match all the primary components of work in the project.

### 2.3.10 Mandatory Pre-Bid Meeting

Mandatory pre-bid meetings are included in subsection 00120.15 of the Boilerplate Special Provisions. For additional mandatory pre-bid information see the <u>PCO Phase</u> <u>Gate Delivery Manual Section 4.3.d and Operational Notice PD-07</u>. When a mandatory pre-bid meeting is included on a project, information regarding the mandatory pre-bid meeting time and location must be included in 00120.15 of the Project Special Provisions.

Mandatory pre-bid meetings should be scheduled with enough time after the advertisement begins such that contractors have time to plan to make it to the meeting. Do not schedule mandatory pre-bid meetings on Thursdays, so as to not conflict with a bid opening. Any addenda affecting the mandatory pre-bid meeting must be posted at least 48 hours in advanced of the meeting.

## 2.3.11 Utilities

The utility coordinator provides project specific utility information for inclusion in 00150.50. Language other than fill in the blank requires SSE approval and may require DOJ approval.

### 2.3.12 Buy America

Buy America provisions are discussed in subsection 00160.20(a). Buy America provisions apply to all federally funded projects that have \$500,000 or more in federal funds. It limits the amount of foreign steel and iron that can be permanently incorporated on the project (does not apply to temporary items). Foreign steel and iron can be used provided the costs of the material does not exceed one-tenth-of-one-percent of the total contract cost or \$2,500, whichever is greater. A federally funded project may contain a state funded contract where Buy America applies according to MAP-21. Follow the instructions of Boilerplate Special Provision 00160.20 closely.

For additional information, go to the <u>FHWA Contract Administration</u> website.

Oregon's Buy America HB3332 went into effect January 1, 2024. It covers contracts bid and awarded by ODOT and DAS over \$250,000. DOJ has determined according to ORS 279A.030 that the federal law (federal Buy America) governs where the two laws are in conflict. Therefore, when a project has \$500,000 or more federal funds, the federal Buy America applies. For projects with less than \$500,000 federal funds but greater than \$250,000 contract price, HB3332 applies.

### **2.3.13 Build America Buy America**

The Build America Buy America Act was passed in 2021 and went into effect for FHWA projects November 10, 2022. Build America Buy America provisions are discussed in subsection 00160.20(d). Build America Buy America (BABA) is included on all federally funded projects, including state funded projects where federal funds were used in project development and included a NEPA decision. For FHWA, BABA applies to construction materials consisting of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); fiber optic cable (including drop cable); optical fiber; lumber; drywall; or engineered wood. Manufactured items (called out in BABA) fall under a 1983 FHWA waiver. For FHWA funded projects manufactured items do not require a certificate of material origin.

In August 2023, FHWA issued a waiver and Office of Management and Budget (OMB) issued a final rule that have been incorporated into the boilerplate special provisions.

FHWA Waiver: (https://www.federalregister.gov/documents/2023/08/16/2023-17602/waiver-of-buy-america-requirements-for-de-minimis-costs-and-small-grants)

OMB Guidance: <u>https://www.federalregister.gov/documents/2023/08/23/2023-</u> <u>17724/guidance-for-grants-and-agreements</u>

## 2.3.14 Insurance

Insurance coverage requirements are listed in subsection 00170.70(a). The amount of coverage is obtained from the TPM/RECP by filling out an insurance risk assessment. The "OPO Insurance Risk Assessment for Traditional Highway Construction Contracts" is available on the ODOT intranet website: <u>Insurance Risk Assessment</u>. A version for consultants and local agencies is available on the <u>ODOT Procurement - Consultant</u> <u>Forms & Resources</u> page under "Miscellaneous Procurement Forms" drop down menu.

Concurrence from the ODOT Procurement Risk & Compliance analyst (<u>OPORiskManagement@odot.oregon.gov</u>) is required when additional pollution liability coverage including pollution, asbestos, and lead liability is necessary.

## 2.3.15 Additional Insureds and Indemnity

Additional insured is covered in subsection 00170.70(d). The Boilerplate Special Provision allows additional insureds when others (non-ODOT) will be performing project management or inspection duties. Similarly, subsection 00170.72 for indemnity/hold harmless, is also for when others (non-ODOT) will be performing project management or inspection duties on the project. These subsections of the Boilerplate Special Provisions should not be included just because a consultant performed design work or at the request of a city or county. Personnel from a consultant or city/county need to be performing project management or inspection duties to include these subsections.

## 2.3.16 Warranties

Warranties are discussed in Standard Specification subsection 00170.85(b). If warranties, other than those already covered in the Standard Specifications, are included in any projects, you must first obtain approval from the SSE who will contact DOJ and FHWA for approval. Federal requirements on warranties can only be for a specific construction product or feature and no warranties may place undue obligation on the contractor for items the contractor has no control of. See <u>Code of Federal Regulations (23 CFR 635.413)</u> and contact the SSE for additional information.

## 2.3.17 Completion Time

The project completion time, including all interim completion times, are based on a project construction schedule. The project completion time is included in Boilerplate Special Provision subsection 00180.50(h). All contract completion times in subsection 00180.50(h) must be approved by the SSE who will obtain additional approval from DOJ as needed. Project completion time can be stated as calendar dates or number of days.

When the project team wants to get a portion of the work completed by a certain date, you should consider interim completion dates. If the team wants to get work completed within a specific number of days, they should consider limited on site (calendar days).

## **2.3.18 Liquidated Damages**

Liquidated damages for late completion and for late lane openings are described in the Standard Specifications section 00180.85(b) and Boilerplate Special Provisions section 00180.85(c), respectively. Do not modify any of the liquidated damages amounts.

When a project has multiple contract times listed in 00180.50(h), include 00180.85(b)(2) in the project special provisions. Calculate the percentage of work done based on the engineer's estimate and the construction schedule. The percentage should be based on the work to be completed by the interim completion time listed in 00180.50(h).

### 2.3.19 Escalation Clauses

Asphalt, fuel, and steel index escalation / de-escalation clauses are found in 00195. Asphalt escalation in Boilerplate Special Provision 00195.10 is included when more than 150 tons of liquid asphalt cement is included on a project. Fuel escalation in Boilerplate Special Provision 00195.11 is included when indicated by the Fuel Escalation worksheet within the ODOT Fuel Index and Scheduling Program workbook. Steel escalation in 00195.12 is a Standard Specification, with qualified bid items included in the Boilerplate Special Provision 00195.12(d) when indicated by the steel escalation worksheet within the ODOT Fuel Index and Scheduling Program workbook. The <u>ODOT Fuel Index and Scheduling Program workbook</u>. The <u>ODOT Fuel Index and Scheduling Program</u> can be found on the <u>PCO website</u>.

When including the items in the Project Special Provisions, use the exact bid item names. Also, use the correct pay factors or cost basis percentage from the escalation worksheets.

## **2.3.20 Price Adjustment Specifications**

There are three types of price adjustments (a.k.a. bonuses) in the Oregon Standard Specifications for Construction: asphalt cement pavement (ACP) statistical price adjustment, ACP smoothness price adjustment, and Portland cement concrete (PCC) pavement smoothness price adjustment. When these items are included on a project, the bonus cost may be covered by an anticipated item. The need for an anticipated item is left to the discretion of the region and typically depends on the amount of the maximum bonus calculated.

The ACP statistical price adjustment is covered in 00745.95 Price Adjustments in the Standard Specification. The ACP statistical price adjustment includes the composite pay factor for the mix design constituents and compaction.

The ACP smoothness price adjustment is covered in the boilerplate special provision 00745.96. When the pavement design report calls for the smoothness sections to be included, Boilerplate Special Provision subsections 00745.02, 00745.70, 00745.72, 00745.73, 00745.75, and 00745.96 need to be included in the Project Special Provisions. The smoothness price adjustment is based on smoothness measurements in the travel lane.

The PCC smoothness price adjustment is covered in 00755.95 (reinforced concrete pavement) and 00756.95 (plain concrete pavement) of the standard specifications. The smoothness price adjustment is based on smoothness measurements in the travel lane.

### 2.3.21 Railroad information

When railroad involvement is included on a project, contact the Statewide Railroad Liaison (<u>UtilityandRailProgra@odot.oregon.gov</u>). Boilerplate Special Provision section 00170.01(e) needs to be included in the Project Special Provisions as well as the corresponding Railroad Contractor Requirements Boilerplate Special Provision Section SP00058 thru SP00068.

### 2.3.22 Coating System Warranty

On large structural coating (a.k.a. bridge painting) projects, a coating system warranty and performance bond may be required. Include this Boilerplate Special Provision (SP00084\_PAINT\_36.docx) only on projects specified by the bridge designer, as additional warranty information is also included in section 00594.75 of the Boilerplate Special Provision.

## 2.3.23 Pay Items

The specifications establish the pay items for which work will be paid. Pay items for the associated bid items in the estimate are either listed in the Standard Specifications or in the Project Special Provisions. Because the Standard Specifications are included in all project contracts, all pay items in the Standard Specifications are available for use in the project contract by reference. Project Special Provisions should only include pay items for the specific project. If a pay item listed in the Boilerplate Special Provisions is not needed on a project, it should be deleted. Only include pay items in the Project Special

Provisions that are included in the Bid Schedule for the project. A Boilerplate Special Provision for every section that has a bid item in the Bid Schedule should be included in the Project Special Provisions, even if the Boilerplate Special Provision only says to comply with the Standard Specification.

## **2.4 Final Edits**

Usually not all information is included in the advance plans milestone of the Project Special Provisions. All blank fields in the special provisions are completed during the preparation of the final version. Project specific specifications are sometimes added after the advance milestone. Incorporate project specific specifications in the final version after the necessary approvals have been obtained.

When the final version is completed, display the document in its final no markups form and look through it to be sure it looks correct. Check for and correct:

- Lead-in sentence at the bottom of a page and the corresponding paragraphs or bullets at the top of the next page.
- Section title at the bottom of a page and the remaining section beginning at the top of the next page.
- Spelling.
- Tables breaking across pages.
- Formatting errors including (See <u>Appendix A.3</u>):
  - Different fonts and incorrect size fonts.
  - Wrong justification.
  - Incorrect tabs and indents.
  - Incorrect styles.

The Specifications Unit is available to help format special provisions.

### **2.4.1 Boilerplate Updates**

Between the time the Project Special Provisions are created and preparing the final Project Special Provisions, revisions and updates to the Boilerplate Special Provisions may have occurred. All applicable revisions and updates, also known as boilerplate updates, must be incorporated into the Project Special Provisions. Boilerplate updates are posted three months before the bid date month they become effective. The effective date is the month that the project will go to bid. For example, a project with an April bid date will have boilerplate updates posted in January. To be notified of the Boilerplate Special Provisions updates by email, sign up by contacting the Specifications Unit at <u>ODOTSpecifications@odot.oregon.gov</u>

Working copies of the current Boilerplate Special Provisions are available on the <u>Boilerplate Special Provisions website</u>. Redline versions showing the track changes for any recent boilerplate updates are also available on the website in the downloadable .zip file. Use the redline versions to check if the recent updates have modified language on your project. If boilerplate update language applies to your project, you need to add it to the Project Special Provisions. The recommended method of applying the update is to replace the old boilerplate section with the new boilerplate section and apply the project specific changes. If the method of conforming the old boilerplate to the new language is used, take care to correctly apply all of the update. The exact language and punctuation of the boilerplate language has been approved by FHWA and DOJ. All modifications to the boilerplate outside what is described in the instructions need the SSE approval.

A good way to do a final quality control check on the Project Special Provisions is to use the automated document assembly tool that is available in the Document Assembly form (a.k.a. SPLIST) to create a comparison document with all of the current Boilerplate Special Provisions. The document assembly tool creates a new bid booklet and special provision booklet using the check box information for the specification sections that are included in the Project Special Provisions. Prior to assembling a comparison document, the tool will check all required specifications references, display a message for each unchecked specification that is required and include them in the final comparison document.

The comparison document uses the compare document tool in Microsoft Word to compare the assembled document against the PS&E version of the Project Special Provisions. Any specification language difference between the two documents is seen as a track change in the comparison document. The specification writer should make sure that the differences between the two documents are not a reflection of language from an outdated Boilerplate Special Provision.

## 2.5 Review of Project Special Provisions 2.5.1 General Review

Technical bulletin <u>TSB21-01(B)</u> <u>Project Specific Special Provisions Review</u> outlines the requirements for reviews of project special provisions.

The <u>special provisions change summary form</u> may be used to help facilitate reviews to modifications of specifications. This form is optional but highly recommended, in that it does not need to be submitted to PCO as part of PS&E; but some regions may require the form as part of their reviews. Check with the project's region to see if the special provisions change summary form is required.

For any Project Special Provisions that are modified or added from the current boilerplate language, use the following process to gain approval for any changes:

**Technical Resource Review:** The Project Special Provision must be discussed with the technical resource for the specific specification that is being changed. This discussion should focus on the technical reasons for the changes as well as any potential impact to industry and the bidding process that could result. If a new specification section does not have a technical resource assigned to the section, contact the SSE or discipline section manager.

The technical resource and the POR need to reach agreement on the proposed change. This approval should be documented with an email from the technical resource. If the technical resource and the POR are not in agreement with the proposed changes, the issue should be escalated to the SSE for resolution.

**Construction Resident Engineer Review:** The Project Special Provisions must be reviewed with the construction resident engineer for the project to assure they understand the language and can administer the specification in accordance with the intent of the POR and the specification writer. If the construction resident engineer and the POR are not in agreement with the proposed changes, the issue should be escalated to the region tech center manager for resolution.

### **2.5.2 Measurement and Payment Review**

All deletions, additions, or modifications to the measurement or payment requirements that do not follow the instructions in the current Boilerplate Special Provisions, must be submitted to the Measurement and Payment technical resource and SSE for review and concurrence prior to PS&E submittal. Allow 14 calendar days for this review.

Submit these requests directly to the Measurement and Payment email at: <u>ODOTMsrmntPaymt@odot.oregon.gov</u>.

If DOJ review and approval of the measurement or payment modification is required, the Measurement and Payment technical resource will discuss the modification with the SSE who will coordinate with DOJ for review and approval.

### 2.5.3 SSE Review

The SSE is responsible for coordinating DOJ legal sufficiency review on every project. In order to determine which modifications need to be reviewed by DOJ, the SSE reviews all modifications of the Project Special Provisions. Concurrence from the SSE is required prior to PS&E submittal for all Project Special Provision modifications or additions.

Submit the request for review in an email with a subject line that includes the key number for the project, the project title, and the section to be reviewed. It is recommended to include a copy of the project special provisions change summary form, when available. Submit requests for this review directly to the SSE at Daniel.A.Anderson@odot.oregon.gov. The project key number is essential in order to be able to sort through and respond to the review requests in an effective manner. The key number may be preceded by a K or KN if desired, for example: 20530, K20530 or KN20530.

The SSE reviews the modified project special provisions as requested within 3 months of the project bid opening. This timeframe is so that the boilerplates applicable to the project have been posted. For unique, non-boilerplate project special provisions that may need additional review time, contact the SSE directly (phone or meeting) to set up the additional review time.

The SSE reviews and makes comments on any Project Special Provision language that needs to be modified, and coordinates with DOJ for any required review and approval. Once the SSE receives DOJ approval of the modification, the SSE returns the approval to the specifications writer with a copy to the Measurement and Payment technical resource, if applicable. Allow 14 calendar days for the SSE review and concurrence, and an additional 21 calendar days for DOJ review and approval when required.

In general, any changes outside the modifications allowed by the Boilerplate Special Provision instructions need to have the applicable technical resource, Measurement and Payment technical resource and SSE approval along with any necessary approval from DOJ.

## 2.6 PS&E Submittal

Preparing the final Project Special Provisions includes:

- Incorporating all remaining information that was not complete at the advance plans milestone.
- Incorporating appropriate changes that were requested by those who reviewed the advance milestone specifications.
- Verifying that concurrence was obtained from the technical resources, the Measurement and Payment technical resource, and the SSE who may further obtain approval from DOJ. Concurrence is required any time the boilerplate language is altered beyond what the instructions allow. This concurrence is certified in the Special Provision Integrity Certification.
- Incorporating the latest Boilerplate Special Provision updates.
- Having final review and proofreading completed.

• Updating the footer name to identify it as the "Bidding" version with the current date:

"SPS(Key No.)\_(Project Name)\_Bidding\_(Date)"

In addition, each region may have additional criteria for preparing the final Project Special Provisions. Follow their guidance and criteria.

Final PS&E is submitted to the PCO for advertising and award. For details and additional information see the <u>Phase Gate Delivery Manual</u>. Follow the Phase Gate Delivery Manual for ProjectWise requirements associated with PS&E.

## 2.6.1 Special Provision Integrity Certification

The <u>special provision integrity certification</u> is a required PS&E submittal. This certification certifies that the specification writer has:

- Used applicable boilerplate special provisions for the project
- Received approval / concurrence to all modifications requiring review
- Complied with the Modified Exemption from DOJ Legal Sufficiency Review and Approval for ODOT Highway Construction Contracts (available from the SSE)
- Complied with technical bulletin TSB21-01(B)

The specification writer is responsible for signing the special provision integrity certification. If modifications and concurrences are completed after the special provision integrity certification is signed, an updated special provision integrity certification is needed.

## **2.7 QA Review Expectations**

When the final PS&E package is submitted to PCO, the Project Special Provisions receive a quality assurance (QA) review. The QA reviewer makes comments on any issues identified in the Project Special Provisions and provides these to the TPM/RECP. The TPM/RECP coordinates changes to the PS&E documents as needed to address the comments.

The QA reviewer creates a comparison document using the document assembly tool and uses this tool to compare the PS&E version of the Project Special Provisions to the current Boilerplate Special Provisions based on the bid date. The QA reviewer may ask the TPM/RECP to address any inconsistencies between these two documents.

The QA review focuses on the legal sufficiency requirements and that the DOJ exemption letter is being adhered to. The QA reviewer verifies modifications to Standard Specifications and Boilerplate Special Provisions have been reviewed by the SSE. Oversights, inconsistencies and other issues identified in the QA review must be resolved prior to advertisement. Specific items the QA reviewer looks for include:

- Subsection 00120.05 exactly matches plans title sheet
- Correct federal aid number on bid booklet cover
- Class of Work correct for the project
- All Sections included based on bid items, SPLIST, and Table of Contents
- POR Sheets cover all necessary Sections included in the Project Special Provisions
- DBE/MWESB/TERO match what was provided by Office of Civil Rights
- Insurance coverages match Insurance Risk Assessment
- Subsection 00180.50(h) has been approved by SSE
- Subsection 00220.40(e) has been approved by SSE
- Asphalt, fuel and steel escalation included appropriately and matches bid item name exactly
- Check Parts 00200-03000 for any added legal language that is not approved
- Measurement and Payment is covered for every bid item and that there is a bid item for specific items (9Z9 items) in the Special Provisions and Plans.
- Correct Boilerplate Special Provisions have been used.

## **2.8 During Advertisement**

## 2.8.1 General

Changes to the bid booklet, Project Special Provisions, and plans after the PS&E package is submitted to OPO are completed by addenda. The earlier an addendum is posted the more time Contractors will have to properly address the changes. Issuing multiple addenda is preferred over one large, last minute addendum. See the <u>Phase Gate</u> <u>Delivery Manual</u> for more information on timing.

## 2.8.2 Addendum

When needed, addenda are prepared by the PS&E provider and sent to the PCO for publishing. Use the <u>addenda template</u> that is on the PCO website. Follow the orange instructions in the addenda template. For additional addenda preparation see the <u>Phase Gate Delivery Manual</u>.

Digital signatures on the addenda should be as follows:

• "Prepared by" line can either be a third party certificate digital signature or self-certified signature (e.g. self-issued Adobe signature). The signature needs to read the signer's name, not "Digitally Signed".

• "Approved by" line shall be a third party certificate digital signature. The signature needs to read the signer's name, not "Digitally Signed". The Approver must be a licensed Professional Engineer in the State of Oregon.

When modifying specifications by addenda, remember the addenda is modifying the Project Special Provisions, which in turn modify the Standard Specifications. If you need to make a change to the Standard Specifications by addenda, you will need to modify the Project Special Provisions to modify the Standard Specifications. The language can't go straight from the addenda to the Standard Specifications; you also need the additional layer of the Project Special Provisions.

If addenda are issued that modify the Project Special Provisions, then an updated POR signature sheet is required when the final contract special provisions are submitted. If the updated POR sheet is not submitted with the addenda and the POR does not sign the addenda, then verification that the POR is in agreement with the addenda may be requested by the QA reviewer. The ProjectWise link to the new POR signature sheet must be sent to PCO. The new POR signature sheet will be incorporated into the contract.

If no addenda were issued related to the certified specification sections (POR signature sheet), then a new signature sheet is not required. For example, if only one Project Special Provision section was modified via addenda, the POR responsible for that section would submit a new signature sheet with the new date the sheet was sealed. Other signature sheets from the other PORs on the project would not have to be updated and submitted.

### **2.8.3 Letter of Clarification**

All letters of clarification that are required are prepared by the PS&E Provider and sent to the PCO for publishing. Use the <u>Letter of Clarification template</u> that is on the PCO website. For additional letter of clarification information see the <u>Phase Gate Delivery</u> <u>Manual, Operational Notice PD-07, and the Construction Manual - Chapter 6</u>.

A Letter of Clarification (LOC) is intended to be informational in nature and appropriate for situations where there are no changes to the bidding documents (i.e. plans, specifications, quantities or bid items). The LOC allows for a more equitable and transparent process for all bidders involved. A LOC is used for adding bid reference documents to eBIDS, to document agency responses to bidder questions, or to clarify agency intent or position.

A LOC cannot be used to change the bidding documents or postpone the project; these actions require an addendum. A LOC is not a contract document. A LOC cannot answer

a question by saying the plans, specifications, or bid schedule needs to change. When bidder questions result in the need to change or make corrections to plans, specifications, or bid items, an addendum is required instead of a LOC. All changes to the bidding documents must be through an addendum.

The earliest a LOC can be posted is the day the advertisement begins. The latest a LOC can be posted is 48 hours prior to the bid opening. You should not wait until the end of the LOC posting period to respond to bidder questions. Instead, responses to bidder questions should be posted as they are received, depending on the number and type of questions. By providing timely, periodic responses to questions through a LOC, it reduces the amount of questions generated during the bid process, especially when nearing the bid opening date.

To allow more flexibility when addressing bidder questions, you can post a LOC up to 48 hours prior to the bid opening (typically 9 a.m. the Tuesday before a Thursday bid opening). The PCO manager can make exceptions to this agreed upon timeframe. See Operational Notice PD-07 for more information.

ODOT has a longstanding agreement with industry that addenda must be posted the Friday before a Thursday bid opening. If a question results in a response that requires a change to the plans, specifications, or bid items, you need to decide whether to postpone the project if it is after the deadline for posting an addendum. An addendum that postpones the bid opening or cancels an advertisement may be posted after the deadline but before the bid opening. A LOC cannot be used to change the bidding documents or postpone the project.

The resident engineer (RE) is generally responsible for determining which bidder questions require a LOC and coordinates responses with designers and specifications writers. The PCO quality assurance personnel are available to assist and will determine if the question requires a LOC or if it requires an addendum.

Consider using a LOC for:

- Questions that may impact how all bidders bid a project.
- Questions raised by multiple bidders that are the same or similar.
- Responses to questions that could present an unfair advantage or favor if not provided to all bidders.
- Responses that do not require changes to the bidding documents.
- Responses to questions that point out additional bid reference documents.

Submit the LOC to the PCO QA reviewer. The PCO QA reviewer will evaluate the LOC to ensure that no response changes the bid documents. If needed, the QA reviewer will

ask the SSE to review the LOC. If there are adjustments to the LOC, the resident engineer's office will review prior to publishing.

PCO QA reviewers will not accept a LOC with responses similar to "bid it as you see it" to bidder questions. Responses should direct the bidder to the appropriate plan sheet, special provision, bid reference document, bid schedule, standard drawing, or standard specification or point the bidder to the applicable bidding document(s).

## **2.9 Preparing the Final Contract**

The Project Special Provisions are used to create the contract, thus all addenda must be incorporated into the Project Special Provisions. Even if there are no addenda impacting the Project Special Provisions, a contract set with the footer change is still required. By the close of business on bid opening day, submit to PCO an electronic copy of the Project Special Provisions updated with all the changes made by addenda.

Update the Project Special Provisions footer name to identify it as the "Contract" version with the current date:

"SPS(Key No.)\_(Project Name)\_Contract\_(Date)"

## **Chapter 3 – Writing Style Guidance**

## **3.1 Writing Style and Considerations**

ODOT specifications writing style generally follows plain language rules and the five C's (listed <u>below</u>). Information from Federal Register's writing guidelines, AASHTO Guide Specifications for Highway Construction, and the Chicago Manual of Style are also referred to when writing specifications for ODOT. When writing specifications for ODOT, first look at the current existing Standard Specifications and Boilerplate Special Provisions to get a feel for the writing style.

## **3.2 Conventions Used in ODOT Specifications 3.2.1 Indicative Mood Writing Style**

As stated in subsection 00110.05(a) of the Standard Specifications, Part 00100 – general provisions are written in the indicative mood, which means that the subject (i.e. Contractor, Engineer) of the sentence is included. When writing ODOT specifications in indicative mood, it is also important to remember that "shall" refers to action required of the Contractor, and "will" refers to decisions or actions of the Agency and the Engineer.

The following are two examples of the specification language written in the indicative mood style of writing:

The Contractor shall perform all work according to the contract documents.

The Engineer will respond to requests for approval.

### **3.2.2 Imperative Mood Writing Style**

As stated in subsection 00110.05(a) of the Standard Specifications, Part 00200 - 03000 – technical specifications are written in imperative mood. The imperative mood gives direction where the subject (i.e. Contractor, Engineer) of the sentence is implied, but not included, and the verb (i.e. provide, furnish, construct) expresses a command.

Example:

Indicative Mood: The Contractor shall furnish the following materials:

Imperative mood: Furnish the following materials:

Using the imperative mood results in specifications that are shorter and easier to understand.

## **3.3 The Five Cs of Specification Writing**

The five C's of specification writing are: clear, concise, correct, complete and consistent.

**Clear**: Use short words, phrases, sentences and paragraphs to reduce ambiguity.

**Concise**: Get to the point as quickly as possible, without skipping requirements.

**Correct**: Be both technically correct and grammatically correct. Fully research the item you are writing about. Check for correct references.

**Complete**: Use the ten division format (see 3.4 below) to aid in the completeness of the specification. The ten division format can be used as an outline to make sure all areas of the specification have been covered.

**Consistent**: Use the same words and phrases for the same meanings throughout the specifications.

Well-written specifications:

- Are clear, concise, and easily understood.
- Use simple words and short sentences.
- Provide complete and correct information.
- Do not include unnecessary information.
- Avoid including duplicate information.
- Are consistent with the style and format of the surrounding specifications.

Specifications need to:

- Provide clear, enforceable requirements that will be easily interpreted the same way by both the Engineer and the Contractor.
- Provide clear instructions.
- Provide specific directions, not suggestions, explanations, or reasons.

If a specification is silent on a point, the Contractor cannot be expected to reasonably interpret the requirement. If the specifics of a requirement are known but not specified, expect the Contractor to request additional compensation for completing the work to satisfy that unspecified requirement.

## **3.4 Specification Organization – Ten Division** Format

The layout of ODOT specifications is based on the AASHTO Guide Specifications format and are organized into ten divisions, as follows:

**Description (.00 - .09)** - This division includes a short statement of the work to be done; a general statement concerning compliance with plans and specifications; and abbreviations, definitions, and any other general statements to establish the relationship of the work items to

other work items or other phases of the construction sequences. If the agency is providing materials, they will be listed here. Submittals are also included in this division.

**Materials (.10 - .19)** - This division provides detailed specifications about the properties of each material and the required methods for testing the material. It also provides references to the appropriate material specifications in Parts 02000 and 03000. References are made to ODOT, AASHTO, ASTM and other nationally recognized documents.

**Equipment (.20 - .29)** - This division identifies unique equipment requirements necessary to accomplish the work. Specific equipment requirements should be kept to a minimum in order to avoid specifying the means and methods and to encourage contractors to use new and improved equipment or related technologies.

**Labor (.30 - .39)** - This division identifies unique labor requirements or qualifications required for the project. It also lists the certified technician requirements.

**Construction (.40 - .49)** - This division identifies the required sequence of construction operations and describes the final constructed product. While specification requirements should be sufficient to ensure satisfactory completion of the work, minimize specific requirements that pertain to construction methods in order to encourage contractors to apply new and advanced ideas in construction methods.

**Temporary (.50 - .59)** - This division identifies unique temporary measures that are required to accomplish the specified work. It is not meant to supplement work zone traffic control measures.

**Maintenance (.60 - .69)** - This division identifies maintenance, repair and avoidance measures that the contractor must follow.

**Finishing and Cleaning Up (.70 - .79)** - This division describes the required final site conditions and identifies site-specific restorations work that the contractor must accomplish before the work is accepted. It also may include approved language about warranties.

**Measurement (.80 - .89)** - This division identifies the components of the completed work items that are to be measured for payment. It defines the units of measurement, the methods and conditions of measurement and any other requirements necessary to establish a definitive measurement unit.

**Payment (.90 - .99)** - This division identifies the units for which payment will be made, the bid items for work to be paid and defines very explicitly the scope of the work covered by the payment. Incidental work or other work required but not paid separately, such as the installation of Agency furnished materials, is listed.

New specifications require at a minimum the Description, Materials, Construction, Measurement, and Payment division headings. Additional headings may be included as needed. The division headings are not normally used in existing Boilerplate Special Provisions unless they are replacing an entire section in the Standard Specifications or if they are complete, stand-alone specifications that are not a modification of the Standard Specifications.

## **3.5 Specification Numbering**

ODOT uses the following numbering style:

```
[Section#].[Subsection#]
```

```
00110.05
```

```
(a)
(1)
a.
```

1.

When a Boilerplate Special Provision is modifying a subparagraph, all numbering is written together. EXAMPLE: 00110.05(a)(1)(a).

## **3.6 Cross Referencing**

When referring to another section or subsection within a specification, use the following format:

Section 00440

00440.04

When referring to an entire section, use the word "Section". When referring to a subsection or subparagraph, do not use the word "Section" or "subsection" before the number.

# **3.7 Other Grammar and Style considerations**

### **3.7.1 Write Positively**

If you can accurately express an idea either positively or negatively, express negative ideas in a positive form. Say what can be done instead of what can't be done.

## 3.7.2 Words to Avoid

Write in the imperative mood to eliminate using the words "shall," "will," "must," "should" and "may".

## 3.7.3 Do Not Use "and/or"

The case will always be one or the other. If the contractor must do all of the items, it is "and." If the contractor can do one or more of the items, it is "or."

### **3.7.4 Use the Present Tense**

Write so the specification speaks as of the time it is applied, not as of the time it is drafted. Write as though the action is happening now, not in the future. When the specification is written in the present tense, the language is clear and unambiguous. Present tense is the simplest and strongest form of a verb.

### 3.7.5 Conventions

Section 00110.05 of the Standard Specifications discusses the conventions used throughout the specifications.

Of note:

- "as shown" means "as indicated in the plans"
- "as directed" means "as directed by the Engineer"
- "as specified" means "as specified in these specifications"

## **3.7.6 Capitalization**

Words defined in the Standard Specifications and Boilerplate Special Provisions are capitalized. See Standard Specification 00110.05(b) for additional information. See Standard Specification 00110.20 for defined terms applicable to all specification sections. ODOT is in the process of modifying 00110.05(b) to change to say that all defined terms are capitalized. First all the defined terms must be appropriately capitalized. This is currently planned for the 2027 Standard Specifications Book.

Major words in the titles of subsections are capitalized. Capitalization of words in a subsection title does not infer they should be capitalized in the text unless the word is defined in the specification section or 00110.20.

Capitalize the words *Agency, Contract, Contractor,* and *Engineer* if referring to contracts. Capitalize *Section* where used with a section number.

Words such as material and work are sometimes capitalized and sometimes not, depending on how they are used. The words in the Standard Specifications and Boilerplate Special Provisions have been scrutinized over whether or not to be capitalized. Minimize the use of the word "materials"; be specific to the kind of the material.

Examples:

"Unauthorized work" would not be capitalized, whereas "Work completed" would be capitalized.

"non-ferrous material" (not capitalized) versus "Materials incorporated into the Project" (capitalized).

"Dispose of waste materials" - not capitalized.

## **Chapter 4 – Boilerplate Update Process**

## **4.1 Boilerplate Change Request**

The PCO uses a specification change request process to provide a specification baseline to track why a change is required to specifications, who has requested specification changes and whether or not changes are made to the specifications based on the change requests. This process provides consistency in the agency's Standard Specifications and Boilerplate Special Provisions across the state, and provides guidance for local agencies that use the Standard Specifications.

The process ensures that internal and external stakeholders are given the opportunity to provide input, concurrence, and approvals, as required. The process tracks and reports on the progress on active change requests. This process is intended to be used for specifications that are published and approved for general use on all projects, not for unique situations that arise on a specific project.

## **4.2 Specification Change Request Form**

The submitter of the specification change request will complete and submit a <u>Specification</u> <u>Change Request form</u> that is used to document the issue or problem.

**Problem Statement** – What is the problem that requires a modification to an existing specification or with the development of a new specification? The statement must address constructability and financial implications and any known information or background on previous industry discussions, including prior or current industry groups engaged (AGC, OCAPA, APAO, APWA, ACEC, subcontractors, suppliers or other parties) and any known feedback from industry on known opposition or support.

**Proposed Solution** – What is the proposed solution that will correct the problem? What are the constructability, financial, precedent or political implications of the solution? Has industry been involved? Are there any opposing arguments that have, or could be made? If opposition exists, does both the construction engineer and discipline section manager, or the chief engineer, support the change?

**Examples** – Examples of instances where the same, or a similar solution was used to successfully correct the same, or a similar, problem.

## 4.3 Draft Proposal

The Specifications group is responsible for drafting the specification change, or new specification, based on the information provided on the specification change request form. Once

the draft is complete, the original submitter is given an opportunity to review the draft language to see if it meets the original intent of the change request. The Specifications group also coordinates the technical resource and measurement and payment technical resource review and concurrence to the draft.

## **4.4 Internal and External Stakeholders**

The Specifications group is also responsible for vetting the specification change, or new specification, with the appropriate internal and external stakeholders including DOJ, FHWA, AGC, APWA, and the agency technical resources.

## **4.5 Disagreement Resolution**

Known opposition from industry or opposition that develops during the review suspends the process until the construction engineer and the discipline section manager can agree if the change request moves forward or terminates. If they cannot agree, the chief engineer determines if the change request moves forward or terminates. The Specifications group and the submitter are responsible to work directly with the construction engineer, the discipline section manager, and the chief engineer to resolve opposition and issues raised by industry or others.

## 4.6 DOJ Review

All edits to the Boilerplate Special Provisions are required to be reviewed and granted approval by DOJ before they can be used on a project. The SSE coordinates with DOJ for review and approval of all proposed boilerplate modifications.

## **4.7 Specifications Change Request Process**

The Specifications group has developed a <u>Specification Change Request Process flowchart</u> and <u>step-by-step description of the process</u>. Parties interested in submitting a specification change request should begin by reviewing the Specification Change Request form and the Specification Change Request Process flowchart. If there is known opposition from industry, discuss the change request directly with the construction engineer and the discipline section manager before submitting a request. The Specifications group will not process requests that industry opposes without the support of the construction engineer and the discipline section manager. Contact the Specifications group if you have questions about the process or the form.

# **Appendix A - Page Setup and Basic Formatting**

## A.1 General

ODOT uses Microsoft Word software for creating and maintaining the Standard Specifications, Boilerplate Special Provisions and Project Special Provisions. For consistency and integrity use MS Word 2016 or newer.

## A.2 Do's, Don'ts and Other Considerations

Do:

- Use Microsoft Word 2016 or newer.
- Use "Track Changes" (Review  $\rightarrow$  Track Changes).
- Use "Comments" (Review  $\rightarrow$  Comment).
- Provide user information (File  $\rightarrow$  Options).
- Turn on "Final" mode and review prior to submitting PS&E.

#### Do not:

- Change or remove existing headers or footers.
- Change or modify existing page setup settings.
- Change or modify existing fonts.
- Change or modify existing styles.
- Use MS Word automatic number feature (always type numbers).

Be careful:

- When deleting, changing, or modifying section breaks.
- When deleting, changing, or modifying page breaks.
- When deleting, changing, or modifying page numbers.

#### A.3 Fonts, Margins and Tabs

Formatting in the Boilerplate Special Provisions and the Standard Specifications is done using styles in Microsoft Word. The styles should always be used over hard formatting (by hand). The style is noted below as: *[italics]*.

Boilerplate Special Provisions - Use the following settings for Boilerplate Special Provisions:

Normal style: Arial 11 point for all text, Arial 11 point for tables except use Arial 10 point for wide tables, full justification for all text. *[Normal]* 

Page setup:

Margins are set at 1 inch all around.

Header and footer margins are set at 0.4 inches.

Gutter is set at 0.3 inches.

"Mirror margins" under "Pages, Multiple pages" is selected.

Tabs are set at 0.20 inch increments.

All titles and title numbers are bold. Do not underline.

Page numbers are at bottom right.

Paragraph numbering and indent levels are:

Subsection numbers and titles are at left margin [Normal].

Paragraphs (a), (b), etc. are at 0.2" indent, (use indent, not tab) [Indent 1].

Paragraphs (1), (2), etc. are at 0.4" indent, (use indent, not tab) [Indent 2].

Paragraphs a., b., etc. are at 0.6" indent, (use indent, not tab) [Indent 3.]

Paragraphs 1., 2., etc. are at 0.8" indent, (use indent, not tab) [Indent 4].

Do not indent beyond four levels.

Always indent bulleted items 0.2" in from the previous paragraph [Bullet 1,2,3,or 4].

Other Styles in Boilerplate Special Provisions:

[Heading 1]: Section Title.

[Heading 2]: Ten Division Header, i.e. Description, Materials, Construction, Measurement.

[List materials]: Materials list in .10 subsections.

[*List payment*]: List of payment items in .90 subsections.

[List payment heading]: "Pay Item" and "Unit of Measurement" in formatted location in .90.

#### **A.4 Headers and Footers**

To add header and footer information select Header and Footer from the Insert menu. Be very careful when working in the header and footer. Unsuspected changes can occur. If you need to modify or delete headers or footers, always start at the last header or footer and work toward the beginning of the document.

## **Appendix B – Additional Style Considerations**

## **B.1 General**

### **B.1.1 Write Positively**

See 3.7.1 Write Positively.

#### **B.1.2 Use Action Verbs**

Say	Do Not Say
applies to	is applicable to
concerns	is concerned with
рау	make payment
recognize	give recognition to

### **B.1.3 Use Singular Nouns Rather Than the Plural** Nouns

Using singular nouns instead of plural nouns avoids confusion about whether the noun applies separately or jointly.

Say

The guard will issue a security badge to each employee who works in Building D and each employee

who works in Building E.

#### Do Not Say

The guard will issue security badges to the employees who work in Building D and Building E.

Exception: Use plural nouns for headings and titles.

### **B.1.4 Use Elliptical Clauses**

An elliptical clause is a clause in which some words have been left out.

Say

For delays not caused by weather, the department may pay your added costs.

If the engineer determines a claim is without merit, you may pursue the administrative claim procedure...

#### Do Not Say

For delays *that are* not caused by weather, the department may pay your added costs. If the engineer determines *that* a claim is without merit, you may pursue the administrative claim procedure ...

#### **B.1.5 Use Parallel Phrases**

Parallel phrases balance a sentence when a series of words, thoughts, or ideas appear in one sentence.

Say

The British Museum is a wonderful place where you can find ancient Egyptian art, explore African artifacts, and discover beautiful textiles from around the world.

#### **Do Not Say**

The British Museum is a wonderful place to see ancient Egyptian art, you can explore African artifacts, and beautiful fine textiles from around the world.

### **B.1.6 Avoid Prepositions**

Avoid prepositions but do not eliminate them if noun sandwiches or nonparallel phrases are created as a result.

Say

Engineer's authority falsework drawings

**Do Not Say** authority <u>of the</u> engineer drawings <u>for</u> falsework

### **B.1.7 Avoid Noun Sandwiches**

Noun sandwiches are strings of nouns grouped together.

Say

Development of procedures to protect human research subjects...

**Do Not Say** Human research subjects safety protection procedures development... C

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### **B.1.8 Avoid Split Infinitives**

An infinitive consists of the word *to* and the base form of a verb. A split infinitive occurs when another word is placed between "*to*" and the verb.

Say
Be sure <u>to reply</u> promptly to the
invitation.
or
Be sure <u>to reply</u> to the invitation
promptly.

#### Do Not Say

Be sure <u>to</u> promptly <u>reply</u> to the invitation.

## **B.1.9 Avoid Gender-Specific Terminology**

Say	Do Not Say
crew member	crewman
drafter	draftsman
hours worked	manhours
personnel, workforce	manpower
supervisor	foreman

The word *person* does not make a sentence gender neutral.

#### **B.1.10 Avoid Unnecessary Qualifiers**

Qualifiers do not add meaning to a sentence and will cause misinterpretations. Do not use them.

EXAMPLES: actual all (only use to differentiate between partial and whole quantities) any (only use to specify a choice) completely existing (with remove, reconstruct, salvage, abandon, or obliterate)

Do not use *respective* and *respectively*.

#### Say

Forms are listed under the names of their corresponding sections. Provide a blue hat. Provide a green scarf.

#### **Do Not Say**

Forms are listed under the names of their *respective* sections. The hat and the scarf shall be blue and green, *respectively*.

### **B.1.11 Avoid Unnecessary Phrases and Words**

**Examples**:

Attention is directed to... (Use direct references.) *in this section* or *specified herein* (Be specific and provide the section number.) *in the opinion* (Opinions are not used in specifications.)

#### **B.1.12 Avoid Use of Exceptions**

State a rule or category directly. Do not describe the rule or category by stating its exceptions.

Say

Each person under 18 years of age...

Do Not Say

All persons except those 18 years or older...

Use an exception only to avoid long and cumbersome lists or elaborate descriptions. State the rule or category first then state its exception.

Say

Do Not Say

Alabama, Alaska,... (listing 47 states) and Wyoming must ration...

Each state except Texas, New Mexico, and Arizona must ration ... (In this case the category "each state" is established first and then the exceptions are stated.)

Do not use general phrases such as "except as otherwise specified" or "except as otherwise shown". Be specific and state the particular items to which the specification does not apply.

### **B.1.13 Avoid Redundancies**

Do not use word pairs if the words have the same effect or where the meaning of one includes the other.

Examples of word pairs to avoid:

any and all	full and complete
authorize and direct	order and direct
cease and desist	means and includes
each and every	necessary and desirable

### **B.1.14 Write Short Sentences**

It is difficult to determine the intended meaning of a complex sentence. Readable sentences are simple, active, affirmative, and declarative. The more a sentence deviates from this structure, the harder the sentence is to understand. Follow these guides for writing sentences:

- State one thing and only one thing in each sentence.
- Divide long sentences into two or three short sentences.
- Remove all unnecessary words. Strive for a simple sentence with an implied subject and implied verb. Eliminate unnecessary modifiers.

Say

When the device is not in use during a work shift, turn it off.

**Do Not Say** 

When the device is not in use for less than one work shift, turn off the device.

### **B.1.15 Write Short Paragraphs**

Improve clarity of a specification by using short compact paragraphs. Each paragraph should deal with a single, unified topic. Present lengthy, complex, and technical discussions in a series of related paragraphs.

### **B.1.16 Be Consistent**

Use simple specific words. Do not use abstract, vague, or different words to say the same thing.

Say

Each *automobile* owner must register their *automobile* with the Department of Motor Vehicles.

#### **Do Not Say**

Each *motor vehicle* owner must register their *car* with the Department of Motor Vehicles.

### **B.1.17 Use Parallel Structure**

Arrange sentences so that parallel ideas look parallel. When using lists, the lead-in sentence along with each item in the list should read as though it is a stand- alone sentence.

#### **Parallel Structure (Yes):**

The duties of the Executive Secretary of the Administrative Committee are to:

- Take minutes of all meetings.
- Answer all correspondence.
- Write monthly reports.

#### Nonparallel Structure (No):

The duties of the executive secretary of the administrative committee are:

- To take minutes of all the meetings.
- The executive secretary answers all the correspondence.
- Writing of monthly reports.

#### **B.1.18 Use Preferred Expressions**

Say	Do Not Say
according to	in accordance with
	conformance with
	conforming to
	as determined by
after	subsequent to
agency	state
allow	permit
allowed	permitted
at no additional cost to the agency	at no additional compensation
	at no expense to the agency
	at no cost to the agency
	at no additional expense to the
	agency
	at contractor's expense
at the agency's expense	at no cost to the contractor
because	for the reason that
before	prior to
begin	commence
change	alter
	modify
	revise
do not	allow no
	perform no

Say	Do Not Say
	use no
end	terminate
enough	adequate number of
	sufficient number of
except	excluding
for	in the interest of
	with reference to
if	when
(except use <i>when</i> in reference to time	where
and <i>where</i> in reference to location)	subject to
	in case
	in the event that
indicating that	affirming that
instead of	in lieu of
is	deems
keep	retain
limits	parameters
meet the requirements of	shall conform to
no separate or additional payment	will be considered incidental
will be made for	
notify	inform
obtain	get
	procure
	secure
on	upon
possible	feasible
produce	fabricate
(except use <i>manufacture</i> to focus on a	
specific production part)	
quantity	amount
request	ask
start	begin
	commence
stop	cease
use	utilize
	employ
way	manner
when	at the time
while	during such time as
When choosing a word not in this list balan	0

When choosing a word not in this list, balance the following:

• Use the most basic word.

- If the most basic word has many definitions and if those definitions can cause confusion, use a more precise word.
- Use industry-standard words.

When a law is referenced, use the core words of the law. Do not use the legalese.

### **B.1.19 Omit Needless Words**

Say	Do Not Say
about	with regard to
at	located at
	at the following location
because	because of the fact that
by	by means of
do not	at no time
during	during the course of
	during the duration of
for	for the period of
how	in a manner that
	in a manner which
if	in the event of
	should it appear that
including	including, but not limited to
later	at a later date
monthly	on a monthly basis
near	close proximity
no	there will be no
of	related to
of, about	pertaining to
that	such that
to	so as to
	in order to
to, for	as a means of
	for the purpose of
until	until such time

### **B.1.20** Capitalization

See Section <u>3.7.6 Capitalization.</u>

### **B.1.21** Abbreviations and Acronyms

Limit the use of abbreviations and acronyms. Use them when they are:

• Listed in 00110.10 of the Standard Specifications.

- Listed in a reference standard.
- More familiar to the reader than its spelled-out form.
- Used in tables when space is limited.

Do not use abbreviations and acronyms:

- With a superscript.
- In headings.
- When only a few letters are eliminated.

If in doubt about the familiarity of the abbreviation to the reader, define the abbreviation.

When introducing new abbreviations and acronyms, define them at their first occurrence.

#### **B.1.22 Definitions**

Include defined terms when:

- They are not industry standard.
- A term has multiple meanings and could be interpreted multiple ways.

Do not define terms that:

- Are defined in 00110.20 of the Standard Specifications.
- Use the term being defined in the text of its own definition.

When defining terms:

- List them in alphabetical order.
- Capitalize the term.
- End each definition with a period.
- Use bold type for the word being defined.
- Use a nonbreaking space, a nonbreaking hyphen, and a nonbreaking space between the word being defined and the definition. (A nonbreaking hyphen is similar to a nonbreaking space. It keeps everything together on the same line. (*MS Word Hot Key for non-breaking hyphen: Ctrl + Shift + hyphen key*)

(*MS* Word Hot Key for non-breaking space: Ctrl + Shift + space bar)

Example:

Calendar Day - Any day shown on the calendar, beginning and ending at midnight.

### **B.1.23 Lists**

Lists convey a series of requirements.

Structure lists of two or more items in vertical bulleted lists. Do not use numerals or alpha characters. Indent each series of bullets.

Example:

The duties of the technician include:

- Providing tests.
- Preparing the following reports:
  - Morning test results.
  - Afternoon test results.
- Attending meetings.

List items by work sequence or most important to least important. If no logic, list alphabetically.

Capitalize the first word of each item in a list.

Use a period at the end of each item in a list if an item is a complete sentence.

Usually all items in a list apply therefore, avoid using "*the following*" when introducing inclusive lists.

SayDo Not SayMiscellaneous metal consists of:Miscellaneous metal consists of the<br/>following:

When a list is not inclusive, add "one of the following", "either of the following", "any of the following", or other phrase that specifies how the items apply when introducing the list.

Avoid beginning items in a list with articles (*a*, *an*, *the*). Lists without the articles are crisp and provide the same information.

Say

Bring:

- Pen
- Pencil
- Calculator

#### Do Not Say

- A pen
- A pencil
- A calculator
- Pencil Calculator

Bring a:

• Pen

### **B.1.24** Tables

Create tables as shown in Table 00320-1. Begin table numbers with its corresponding specification section number. When referencing a table, refer to it by its number; for example: *...shown in Table 00320-1*.

Table	00320-1
14010	000-0

Table Title			
Column Heading	Column Heading		Heading
		Column Subheading	Column Subheading
Row Heading Subheading			

#### **B.1.25** Numbers

Use numerals for quantities, sizes, measurements, and Calendar Days except:

- Use a word at the beginning of a sentence.
- When numbers are used to define both size and quantity, use a word for the quantity (three <sup>1</sup>/<sub>2</sub> inch holes; not 3 <sup>1</sup>/<sub>2</sub> inch holes).
- Use the words million and billion.

Use arabic numerals unless roman numerals are used in a referenced document or detail, in which case, match the document or detail.

Use commas in numerals containing four or more digits.

Do not use ordinal numerals.

Say	Do Not Say
first, second, tenth	1st, 2nd, 10th
Do not use fraction characters.	
	De Net Com
Say	Do Not Say
1/2", 1 1/2"	1⁄2", 11⁄2"
Use a zero in the unit place of a num	iber less than 1.
1	
Say	Do Not Say

Say	DU NUL S
0.1	.1

Do not write out numbers then follow with numerals in parenthesis.

Say	Do Not Say
four	four (4)
12	twelve (12)

Add a nonbreaking space between -, +, or  $\pm$  and its associated numeral when these signs are used to modify the numeral rather than combine two numerals. (*MS Word Hot Key: Ctrl* + *Shift* + *space bar*)

### **B.1.26 Dimensions**

Do not repeat measurement units.

Say	Do Not Say
2 by 4 inches	2 inches by 4 inches
5 to 10 feet	5 feet to 10 feet

Use the word *by* in dimensions.

Say 4 by 12 inches **Do Not Say** 4 x 12 inches

#### **B.1.27 Measurements**

Spell out measurement units except when used in tables.

Insert a nonbreaking space between the number and the unit. (*MS Word Hot Key: Ctrl* + *Shift* + *space bar*)

For temperatures, use the degree symbol in text and tables. Insert a nonbreaking space between the numeral and the degree symbol. (*MS Word Hot Key: Ctrl + Shift + space bar*)

Say	Do Not Say
72 °F	72° F
Use civilian time with lowercase and periods.	
Say	Do Not Say
7:00 a.m. to 8:30 a.m.	7:00 AM to 8:30 AM
midnight	12 p.m.
noon	12 a.m.

Use calendar days or days. Do not use business days or working days.

Do not specify time periods in weeks or months.

#### **B.1.28 Percentages**

Do not repeat percent in ranges and tolerances. Do not use the percent symbol except in tables.

Say	
2 to 4 percent	
$3 \pm 1$ percent	
5 percent	

**Do Not Say** 2 percent to 4 percent 3 percent ± 1 percent 5%

### **B.1.29 Equations**

Use the letter *x* for a multiplication sign.

Use the symbol ÷ for a division sign.

Use a nonbreaking space before and a nonbreaking space after a mathematical sign. (*MS Word Hot Key: Ctrl + Shift + space bar*)

Except for complicated equations, avoid using subscript and superscript fonts.

Simple equations may be used within text.

Display complicated equations on a separate line clear of text. If possible, use Microsoft Word's Equation Editor software.

To define the variables, use indent hanging style and introduce them with the word W*here* followed by a colon.

Here is an example of a formula with variables:

Use the following equation to calculate the air-dry weight:

 $W = (A \times 62.3) \div (B - C)$ 

Where:

W = air-dry weight (pound per cubic foot)

A = 90 day weight of the cylinder as dried (pound)

B = saturated, surface-dry weight of cylinder (pound)

C = suspended-immersed weight of cylinder (pound)

## **B.1.30 Slopes**

Show slopes with the vertical unit first followed by the horizontal unit. Include an uppercase V and uppercase H.

Example: 1V:5H

### **B.1.31** Parentheses

Avoid using parentheses.

Do not enclose in parentheses information that is essential to the specification.

Say

Provide loaders and trucks to load and haul the material.

**Do Not Say** Provide equipment (loaders and trucks) to load and haul the material.

### **B.1.32 Tolerances**

For tolerances, add a non-breaking space on each side of ± symbol. (*MS Word Hot Key: Ctrl* + *Shift* + *space bar*)

Example:  $4.2 \pm 0.1$  inches

### **B.1.33 Chemicals**

Use chemical names; avoid using chemical formulas.

### **B.1.34 Phone Numbers**

For Oregon phone numbers do not use parentheses around the area code. For all other states, use the parentheses. Do not use periods.

Examples:

Oregon phone numbers: 503-986-2345 Other states: (000) 352-4090

### **B.1.35 References**

When referencing other documents or forms use the specified spacing as determined by the referenced organization. For an AASHTO reference, add a space between the letter designation and the number. For an ASTM reference, keep the letter designation and the number. Do not include the number that indicates the year.

Do Not Say
ASTM A 706
AASHTO M314
AASHTO M 183-04

Refer to forms by form name and number.

#### **B.1.36 Emphasis**

Use bold type only for table titles, headings, and definitions.

Do not use bold, caps, underlining, quotation marks, or italics for emphasis.

### B.1.37 Commas

Use only technically necessary commas. Do not use a comma just to indicate a pause.

## **B.2 ODOT Specific B.2.1 Specification Duplication**

Do not include legal conditions in the technical specifications. Legal conditions are discussed in the General Conditions, Part 00100.

#### No need for

as shown on the plans satisfactory to the Engineer, as determined by the Engineer, and similar phrases and clauses specifying what happens if the Engineer fails to do something within a specified time unless otherwise permitted by the Engineer on approval of the Engineer if authorized by the Engineer unless otherwise specified in a project-specific specification

#### Reason

Discussed in 00110.05. Covered by authority of the Engineer in Part 00100 of the Standard Specifications (00150.00). Covered by unreasonable delay by the Agency in Part 00100 of the Standard Specifications (00195.40). Covered by grammar in Part 00100 of the Standard Specifications (00110.05).

Write the project-specific specification include wording to resolve conflicts.

Do not repeat a Standard Specification in the special provision.

### **B.2.2 Common Clauses and Phrases**

Use these common clauses and phrases:

#### To Say:

pay for work as extra work or force account work say the Agency does not pay for something say the Contractor does not pay for something direct the Contractor to dispose of materials submit documents to someone other

submit documents to someone other than the Engineer

#### Write:

...payment for additional work will be made according to Section 00196. ...at no additional cost to the Agency.

... at the Agency's expense.

Dispose of \_\_\_\_\_ according to 00290.20. Submit \_\_\_\_\_ to \_\_\_\_\_. Notify the Engineer of the submittal. Include in the notification the date and contents of the submittal.

#### To Say:

submit drawings and data that require a professional engineer license and seal to the Engineer submit drawings and data that do not require an engineering seal to the Engineer

submit lists and other submittals to the Engineer

Write: Submit stamped according to 00150.35.	
Submit unstamped according to 00150.35.	
Submit 00150.37.	according to

