

**Oregon
Department of
Transportation**

Technical Services

**Office of
Project Letting**

**Specification
Unit**

Specification and Writing Style Manual

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PREFACE

This manual provides instructions for the preparation of the Oregon Department of Transportation's standard specifications, boiler plate special provisions, and project special provisions, and is designed to achieve simpler specifications and to meet the Plain Language requirements of ORS 183.750.

CHAPTER 1 - SPECIFICATIONS

1.1 Definitions

Specifications are a standard set of procedures used to execute and manage a legally binding contract and consist of the following:

- **Standard Specifications** - The *standard specifications* describe the contractual relationships and responsibilities between the contractor and the agency. It provides directions, provisions, and requirements necessary for performing highway and bridge work. It is applicable to all highway and bridge construction projects within the State. The standard specifications is a hard bound book and is replaced every five to six years.
- **Supplemental Specifications** - Supplemental specifications are specifications that are not in the standard specifications, new specifications, or rewritten specifications that are stand-alone specifications inserted into contract documents.
- **Boiler Plate Special Provisions** - *Boiler plate special provisions* modify the standard specifications and supplemental specifications by adding, replacing, and deleting information from them. Each section of the standard and supplemental specifications has a boiler plate special provision. Some boiler plate special provisions are also stand-alone specifications. The boiler plate special provisions are selected and assembled to form the project special provisions.
- **Project Special Provisions** - Project special provisions is a single document consisting of a set of assembled boiler plate special provisions specific to an individual project.

1.2 Specification Organization

Standard specifications and special provisions 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.

1.2.1 Ten Division Format

Each section of the standard specifications is organized by divisions. There are 10 divisions:

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

- **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 encourage contractors to use new and improved equipment.
- **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 sequence of construction operations and the end product to be obtained. While specification requirements should be sufficient to insure satisfactory completion of the work, specific requirements pertaining to construction methods should be held to a minimum in order to encourage contractors to apply new and advanced ideas in construction methods.
- **Temporary (.50 - .59)** - This division identifies unique temporary measures to be done in order to accomplish the work. It is not meant to supplement work zone traffic control measures.
- **Maintenance (.60 - .69)** - This division identifies maintenance, repair, and avoidance measures the contractor must follow.
- **Finishing and Cleaning Up (.70 - .79)** - This division identifies site specific conditions, restorations, and any other related information the contractor must accomplish before the work is accepted. It also identifies DOJ approved 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.

New, stand-alone specifications require at least the Description, Materials, Construction, Measurement, and Payment division headings. More may be used as needed. The division headings are not used in existing boiler plate special provisions unless they are complete, stand-alone specifications.

1.3 Revision and Update Process

THE REVISION AND UPDATE PROCESS IS UNDER REVIEW.

IT WILL BE ADDED TO THIS MANUAL WHEN COMPLETE.

CHAPTER 2 - WRITING SPECIFICATIONS

2.1 Writing Style and Considerations

A good specification is clear, concise, and easily understood. Simple words and short sentences are used. Duplication is avoided. Specifications need to:

- Provide clear, enforceable requirements that will be easily interpreted the same way by both the Engineer and the Contractor. If more than one meaning can be interpreted, the Contractor will make an interpretation that is most favorable to him.
- Provide clear instructions. If a specification is silent on a point, the Contractor cannot be expected to meet respective requirement without extra compensation.
- Provide specific directions, not suggestions, explanations, or reasons.
- Include only what is needed to obtain the desired end result.

2.2 Grammar and Sentence Structure

2.2.1 Use Imperative Mood Writing Style

The imperative mood gives direction where the subject (contractor) is implied and the verb (provide), (furnish), (construct) expresses command.

Here is an example of the traditional indicative mood style of writing where the subject is expressed:

The Contractor shall FURNISH the following materials:

Here is an example of the same sentence but written in the imperative mood style:

Furnish the following materials:

In this example, the subject is implied and the *VERB EXPRESSES COMMAND*.

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

However, when converting indicative mood to imperative mood some mistakes can occur. For example, when selecting appropriate verbs to use in imperative statements, a natural process might be turned into a Contractor action. Here are a couple of examples:

(1) Original: Any resultant rutting of the surface shall not exceed [] inches.

Incorrect Conversion: *Rut the surface a maximum of [] inches.* (The incorrect conversion requires the Contractor to actually place ruts in the roadway.)

Correct Conversion: *Do not rut surfaces more than [] inches deep.*

(2) Original: The material shall be suitably stored and protected before oxidization can occur.

Incorrect Conversion: *Before oxidizing the material, make sure to store and protect it properly.* (The incorrect conversion requires the Contactor to actively work to oxidize the material.)

Correct Conversion: *Store and protect the material to prevent oxidation.*

2.2.2 Be Direct

Talk directly to the readers. In the Agency's specifications, you are talking to the Contractor.

2.2.3 Use the Present Tense

Write so the specification speaks as of the time it is applied, not as of the time it is drafted.

Say	Do Not Say
Name the new directory.	You will need to name the new directory.

2.2.4 Write Positively

Express negative ideas in positive form.

Say	Do Not Say
Changes will be made to the Department of Transportation's regulations only if the administrator reviews them and concludes they are lacking important information.	No changes will be made to the Department of Transportation's regulations unless the administrator reviews them and concludes that they are not lacking any important information.

2.2.5 Use Action Verbs

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

2.2.6 Use Singular Nouns Rather Than the Plural Nouns

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

Say	Do Not Say
The guard will issue a security badge to each employee who works in Building D and each employee who works in Building E.	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.

2.2.7 Use Elliptical Clauses

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

Say	Do Not Say
For excusable delays not caused by weather, the Department pays your added costs.	For excusable delays <u>that are</u> not caused by weather, the Department pays your added costs.
If the Engineer determines a claim is without merit, you may pursue the administrative claim procedure...	If the Engineer determines <u>that</u> a claim is without merit, you may pursue the administrative claim procedure ...

2.2.8 Use Parallel Phrases

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

Say	Do Not 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.	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.

2.2.9 Avoid Prepositions

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

Say	Do Not Say
Engineer's authority	authority <i>of the</i> Engineer
falsework drawings	drawings <i>for</i> falsework

2.2.10 Avoid Noun Sandwiches

Noun sandwiches are strings of nouns grouped together.

Say	Do Not Say
Development of procedures to protect human research subjects...	Human research subjects safety protection procedures development...

2.2.11 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	Do Not Say
Be sure <i>to reply</i> promptly to the invitation. or Be sure <i>to reply</i> to the invitation promptly.	Be sure <i>to</i> promptly <i>reply</i> to the invitation.

2.2.12 Avoid Gender-Specific Terminology

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

Exception: Use gender-specific terminology if required to match industry-standard terminology or the law.

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

2.3 Writing Techniques

2.3.1 Avoid Using the Words "shall", "will", "must", "should", and "may"

Write in the imperative mood to eliminate them.

2.3.2 Avoid Using the Term "and/or"

The use of the combined words *and/or* indicates that items joined by it can be taken either together or as alternatives. It makes the meaning of a document unclear. Select the correct word to fit the meaning.

2.3.3 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	Do Not Say
Forms are listed under the names of their corresponding sections.	Forms are listed under the names of their <i>respective</i> sections.
The hat shall be blue. The scarf shall be green.	The hat and the scarf shall be blue and green, <i>respectively</i> .

2.3.4 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.)
- such as...* (Do not give examples.)
- immediately* (This word can be interpreted differently.)

2.3.5 Avoid Use of Exceptions

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

Say	Do Not Say
Each person under 18 years of age...	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
Each state except Texas, New Mexico, and Arizona must ration... <i>(In this case the category "each State" is established first and then the exceptions are stated.)</i>	Alabama, Alaska,... <i>(listing 47 states)</i> and Wyoming must ration...

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.

2.3.6 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

2.3.7 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	Do Not Say
When the device is not in use during a work shift, turn it off.	When the device is not in use for less than one work shift, turn off the device.

2.3.8 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.

2.3.9 Be Consistent

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

Say	Do Not Say
Each <u>automobile</u> owner must register their <u>automobile</u> with the Department of Motor Vehicles.	Each <u>motor vehicle</u> owner must register their <u>car</u> with the Department of Motor Vehicles.

2.3.10 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

2.3.11 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 allowed	permit 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... use no...
end	terminate
enough	adequate number of sufficient number of
except	excluding
for	in the interest of with reference to
if (except use <i>when</i> in reference to time and <i>where</i> in reference to location)	when where subject to in case in the event that
indicating that	affirming that
instead of	in lieu of
is	deems
keep	retain

Say	Do Not Say
limits	parameters
meet the requirements of	shall conform to
no separate or additional payment will be made for	will be considered incidental
notify	inform
obtain	get procure secure
on	upon
possible	feasible
produce (except use <i>manufacture</i> to focus on a specific production part)	fabricate
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, 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.

2.3.12 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

2.4 Formatting and Punctuation

2.4.1 Capitalization

Capitalization of terms is discussed in 00110.05 of the Standard Specifications. Capitalize the words *Agency*, *Contract*, *Contractor*, and *Engineer*.

Capitalize *Section* where used with a number.

Capitalize the terms *Type*, *Class*, and *Grade* when used in reference.

Capitalize each main word in tables.

2.4.2 Punctuation

Use the "outside method" of punctuation for placement of the comma and the period with respect to quotation marks. Only punctuation that is part of the quoted matter is placed within quotation marks.

EXAMPLE: *The accepted quantities of wearing surface drains will be paid for at the Contract unit price per each for the item "Wearing Surface Drains".*

The period is not part of the bid item name, therefore the period is outside of the quotation mark.

2.4.3 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.

2.4.4 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: Ctrl/Shift/hyphen key)*)

EXAMPLE:

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

2.4.5 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.

Say	Do Not Say
Miscellaneous metal consists of:	Miscellaneous metal consists of <u>the following</u> :

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	Do Not Say
Bring: <ul style="list-style-type: none"> • Pen • Pencil • Calculator 	Bring: <i>or</i> Bring a: <ul style="list-style-type: none"> • A pen • Pen • A pencil • Pencil • A calculator • Calculator

2.4.6 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

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

2.4.7 Numbers

Use numerals for quantities, sizes, measurements, and similar entities 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 1/2 inch holes*; not *3 1/2-inch holes*).
- Use the words *million* and *billion*.
- Spell out numbers up to and including nine; use figures for 10 and above.

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 4 or more digits.

Do not use ordinal numerals.

Say	Do Not Say
first, second, tenth	1st, 2nd, 10th

Do not use fraction characters.

Say	Do Not Say
1/2", 1 1/2"	½", 1½"

Use a zero in the unit place of a number less than 1.

Say	Do Not Say
0.1	.1

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

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

Add a nonbreaking space between -, +, or ± and its associated numeral when these signs are used to modify the numeral rather than combine 2 numerals. (*MS Word Hot Key: Ctrl/Shift/space bar*)

2.4.8 Dimensions

Do not repeat measurement units.

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

Use the word *by* in dimensions.

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

2.4.9 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.

Do not specify time periods in weeks or months.

2.4.10 Percentages

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

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

2.4.11 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 *Where* 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)

2.4.12 Slopes

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

Example: 1V:5H

2.4.13 Parentheses

Avoid using parentheses.

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

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

2.4.14 Tolerances

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

Example: 4.2 ± 0.1 inches

2.4.15 Chemicals

Use chemical names; avoid using chemical formulas.

2.4.16 Phone Numbers

For Oregon phone number 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: (xxx) 352-4090

2.4.17 References

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

Say	Do Not Say
ASTM A 706	ASTM A706
AASHTO M 314	AASHTO M314
AASHTO M 183	AASHTO M 183-04

Refer to forms by form name and number.

2.4.18 Emphasis

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

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

2.4.19 Commas

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

2.4.20 Spaces

Use two nonbreaking spaces after each period and colon. (A nonbreaking space is a space that is used to prevent words from breaking across two lines if it is the intent to keep the words on the same line. It also provides a uniform spacing at the end of each sentence. *(MS Word Hot Key: Ctrl/Shift/space bar)*)

Use two nonbreaking spaces between a heading number and name. *(MS Word Hot Key: Ctrl/Shift/space bar)*

2.5 ODOT Specific

2.5.1 Specification Duplication

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

No need for	Reason
as shown on the plans	Discussed in 00110.05.
satisfactory to the Engineer, as determined by the Engineer, and similar phrases and clauses	Covered by Authority of the Engineer in Part 00100 of the Standard Specifications (00150.00).
specifying what happens if the Engineer fails to do something within a specified time	Covered by Unreasonable Delay by the Agency in Part 00100 of the Standard Specifications (00195.40).
unless otherwise permitted by the Engineer on approval of the Engineer if authorized by the Engineer	Covered by Grammar in Part 00100 of the Standard Specifications (00110.05).
unless otherwise specified in a project-specific specification	Write the project-specific specification include wording to resolve conflicts.

Do not repeat a standard specification in the special provision.

2.5.2 Law Citation

Do not cite OAR, ORS, federal, local agency or other laws in the technical specifications Parts 00200 through 03000. All law citations are legal requirements and are discussed in Part 00100 General Conditions.

2.5.3 Proprietary Items

When conditions are met and proprietary items are specified, only list the product's name and company's name. Do not provide company addresses, phone numbers, or web addresses because they may change.

2.5.4 Common Clauses and Phrases

Use these common clauses and phrases:

To	Write
pay for work as extra work or force account work	...payment for additional work will be made according to Section 00196.

To	Write
say the Agency does not pay for something	...at no additional cost to the Agency.
say the Contractor does not pay for something	...at the Agency's expense.
direct the Contractor to dispose of materials	Dispose of ____ according to 00290.20.
submit documents to someone other than the Engineer	Submit ____ to _____. Notify the Engineer of the submittal. Include in the notification the date and contents of the submittal.
submit drawings and data that require a professional engineer license and seal to the Engineer	Submit stamped _____ according to 00150.35.
submit drawings and data that do not require an engineering seal to the Engineer	Submit unstamped _____ according to 00150.35.
submit lists and other submittals to the Engineer	Submit _____ according to 00150.37.

2.5.5 Measurement and Payment Clauses

Use these measurement and payment clauses:

To	Write
define measurement for measured items	The quantities of _____ will be measured on the <u>(unit, length, area, weight, volume, or time)</u> basis. (Measurement will be from ____ to ____.) <i>(NOTE: Do not include the phrase "to the nearest". It is defined in 00190.10)</i>
define measurement for lump sum items	No measurement of quantities will be made for work performed under this Section.
define payment for measured items	The accepted quantities of _____ will be paid for at the Contract unit price, per <u>(each, foot, mile, square foot, square yard, acre, pound, ton, cubic yard, gallon, FBM, MFBM, hour, day)</u> , for the item "_____".

To	Write
define payment for lump sum items	The accepted quantities of _____ will be paid for at the Contract Lump Sum amount for the item "_____".
include a general payment clause to define the work that is paid for	Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.
identify additional work described under payment that is not part of the general payment clause.	No separate or additional payment will be made for _____. <i>(CAUTION-This should only be used when there is something specific that needs to be addressed. Normally "incidentals" cover everything.)</i>

2.6 Page Setup

2.6.1 General

ODOT uses Microsoft WORD software for creating and maintaining boiler plates and project special provisions. For consistency and integrity use MS WORD 2003 or newer.

2.6.2 Do's, Don'ts, and Other Considerations

Do:

- Use Microsoft Word 2003 or newer
- Turn off "Define Styles..."
- Use "Track Changes"
- Use "Hidden Comments"
- Provide user information

Do not:

- Change, modify, or remove existing Table of Contents hidden field codes
- Change, modify, or remove existing Headers or Footers
- Change or modify existing Page setup settings
- Change or modify existing Fonts

Be Careful:

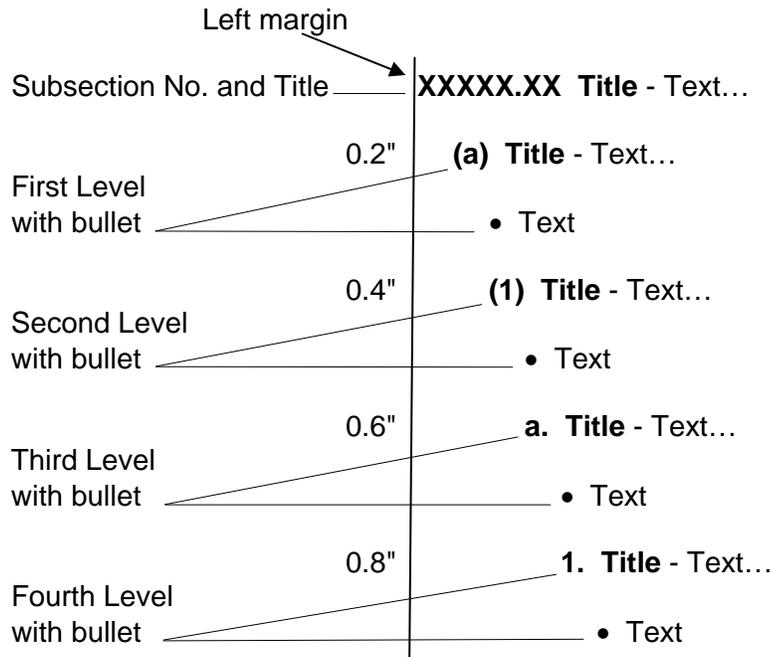
- When deleting, changing, or modifying Section breaks
- When deleting, changing, or modifying Page breaks
- When deleting, changing, or modifying Page numbers

2.6.3 Fonts, Margins, and Tabs

Boiler Plate Special Provisions - Use the following settings for boiler plate 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
- 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
 - Paragraphs (a), (b), etc. are at 0.2" indent, (use indent, not tab)
 - Paragraphs (1), (2), etc. are at 0.4" indent, (use indent, not tab)
 - Paragraphs a., b., etc. are at 0.6" indent, (use indent, not tab)
 - Paragraphs 1., 2., etc. are at 0.8" indent, (use indent, not tab)
 - Do not indent beyond four levels
 - Always indent bulleted items 0.2" in from the previous paragraph

EXAMPLE:



Standard Specifications - Use the following settings for Standard Specifications:

- Normal style
- Arial 9 point for all text including tables
- Full justification for all text
- Page setup:
 - Page size is 6.75" width; 9" height
 - Margins are set at 0.5" all around
 - Header set at 0.25" and Footer set at 0.2"
 - Gutter set at 0"
 - "Normal" under "Pages/Multiple pages" is selected
 - Tabs are set at 0.15 inch increments
- All titles and title numbers are Bold. Do not underline.
- Page numbers are at bottom center
- Paragraph numbering and Indent levels are:
 - Subsection numbers and titles are at left margin
 - Paragraphs (a), (b), etc. are at 0.15" indent, (use indent, not tab)
 - Paragraphs (1), (2), etc. are at 0.3" indent, (use indent, not tab)
 - Paragraphs a., b., etc. are at 0.45" indent, (use indent, not tab)

- Paragraphs 1., 2., etc. are at 0.6" indent, (use indent, not tab)
- Do not indent beyond four levels
- Always indent bulleted items 0.15" in from the previous paragraph

2.6.4 Table of Contents Fields

Table of Contents (TOC) fields are built in and are hidden from view. When a TOC is created, Word searches for the specified heading fields, sorts them by heading level, and displays the them on the Table of Contents page.

A TOC is created by:

- Highlighting the Section Heading for which you want a TOC
- Pressing the Shift, Alt, and O (oh) keys simultaneously
(A "Mark Table of Contents Entry" dialog box appears. Be sure the "Table identifier" shows "C" and the "Level" is "1". Select "Mark then select "Close")
- Highlighting the new Table of Contents text and remove the Bold

To create a Table of Contents in a project special provision, be sure you are in the Table of Contents page. Place the cursor in the appropriate area of the page and do the following:

- Select Insert / Reference / Index and Tables
- Select the Table of Contents Tab
- Select Options...
- In the Table of Contents dialog box, uncheck Styles and Outline levels
- Select Table entry fields then select OK and OK again

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.

2.6.5 Headers and Footers

To add header and footer information select Header and Footer from the View 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.

2.6.6 Page Break/Section Break

Page breaks ensure new sections start at the top of a new page and allow tables or other text to not break across pages. To create a page break at a specific location in the document, select "Insert/Break.../Break types/Page break". Headers and footers remain the same throughout the page breaks.

Section breaks allows different formatting between sections. For example, to have a different header and footer between special provision sections, a section break is inserted. To create a section break at a specific location in the document, select "Insert/Break.../Section break types/Next Page". You can then edit the header or footer as appropriate.

CHAPTER 3 - PROJECT SPECIAL PROVISIONS

3.1 Assembling Project Special Provisions

Assembling an accurate project special provisions booklet consists of several steps.

3.1.1 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. For additional bid item information see the [Estimating](#) web site.

3.1.2 Fill Out the Document Assembly Form (SPLIST)

Each new project requires a new set of boiler plate special provisions. The document assembly form includes instructions and provides guidance in the process of assembling the project special provisions booklet. Check all the applicable specifications and sections that are needed for the project then begin downloading the files from the web.

Consider the following when filling out the document assembly form:

- All work items shown on the plans require special provisions.
- All bid items require specifications either by standard specifications or special provision.
- There are 10 sections in the standard specifications where there is an option of paying for work as a lump sum bid item or, when the work is minor, not paying for it at all. When it is not paid for however, a boiler plate special provision still needs to be included in the project special provisions. These 10 sections are:

[00210.90](#) - Mobilization
[00310.90](#) - Removal of Structures and Obstructions
[00320.90](#) - Clearing and Grubbing
[00335.90](#) - Blasting Methods and Protection of Excavation Backslopes
[00340.90](#) - Watering
[00370.90](#) - Finishing Roadbeds and Slopes
[00445.91](#) - Sanitary, Storm, Culvert, Siphon, and Irrigation Pipe
[00495.90](#) - Trench Resurfacing
[00610.90](#) - Reconditioning Existing Roadway
[00706.90](#) - Emulsified Asphalt Slurry Seal Surfacing

3.1.3 Acquire Boiler Plate Special Provisions From the Web

First, create an electronic project file folder in the computer in which the files will be downloaded.

Next, using the document assembly form, select and save each required file one at a time into the electronic project file folder.

3.1.4 Create the Project Special Provisions Document

Begin the project special provisions assembly by beginning with the Bid Booklet Cover (BB_Cov). Open this file first then immediately rename and save the file with the appropriate project name. Name the project the same as file name in the footer of the assembled document. It's on page 1 of the document.

SPS(Key No.)_(Project Name)_Section_Advance_(Date)

Assemble the project special provisions with MS Word "Track Changes" feature turned off.

Continue assembling the project special provisions by placing the cursor on the last page at the end of this file then begin inserting the boiler plate special provisions in the order in which they are listed in the document assembly.

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.

3.2 Initial Edits (Advanced Plan Stage)

Make all edits to the assembled project special provisions with MS Word "Track Changes" feature turned on.

Some things to do when editing them:

- Except for instances listed below, always use "Track Changes".
- If boiler plate special provision sections need to be added after the initial assembly, turn off "Track Changes", "Insert" them, then turn "Track Changes" back on.
- If inserting completed boiler plate special provisions from other disciplines, turn off "Track Changes", "Insert" the edited version into the document, then turn "Track Changes" back on. All original edits will show up. All boiler plate special provisions received from other disciplines are required to be done with "Track Changes".

- Follow all orange italic instructions when editing them:
 - For Part 00100 sections, do not make any changes except as instructed.
 - For Part 00200 through 03000 sections, if there are no instructions above a subsection, paragraph, sentence, or bullet, then include them in the project but make necessary modifications to only include project specific specifications.

Helpful information for various sections and subsections:

00120.05 Bidding Requirements and Procedures - The plan title and date information listed in 00120.05 must match exactly the written text on the plan title sheet. This legally binds the documents together into a complete bidding package.

00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered - Mandatory pre-bid meetings are discussed in this subsection. For additional mandatory pre-bid information see the [PS&E Delivery Manual](#) Also see PD-07.

00160.20(a) Buy America - Buy America provisions apply to all Federal Funded projects. It limits the amount of foreign steel and iron that can be used. 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.

For additional information, go to the [FHWA Contract Administration](#) web site and see [ODOT's Technical Advisory](#).

00170.70 Insurance Coverages - Insurance coverage requirements are listed in this subsection. The amount of coverage is obtained by filling out a PDWP Risk Assessment. It is available on the Project Delivery Unit [Tool Box](#) web site. This is an internal ODOT only website. Consultants need to contact ODOT's Consultant Project Manager and local agencies need to contact ODOT's Local Agency Liaison for this information.

Concurrence from the ODOT Procurement Risk Manager, Ronda Hollis [503-986-2825] is required when additional pollution liability coverage including pollution, asbestos, and lead liability is necessary.

00170.85(b-1) Warranties - Warranties are discussed in subsection [00170.85\(b\)](#). If warranties, other than those already captured in the standard specifications, are to be included in any projects, approvals must first be obtained from the Department of Justice (DOJ) and Federal Highway Administration (FHWA). See [Code of Federal Regulations \(23 CFR 635.413\)](#) for additional information. This criteria applies to both State and Federal funded projects.

00170.82(c) and 00180.85 Liquidated Damages - Do not modify the dollar values of the liquidated damages discussed in [subsections 00185.85](#), [00185.85\(b\)](#), and [00185.85\(c\)](#).

00180.50 Completion Time - The project completion time, including all interim completion times are based on a project construction schedule and appears in three separate places within the bidding documents; the bid booklet Description of Work page, the project special

provisions booklet Description of Work page, and special provision subsection 00180.50(h). The completion times must match exactly in all three places.

Pay Item Specifications - Do not make existing measurable work items incidental to other items. Pay for them under the individual established pay items.

Avoid creating Lump Sum items. Do not make existing measurable items into Lump Sum items. Lump Sum items are difficult to bid and difficult to establish costs during construction when changes occur.

If, because of the nature of the work, it is necessary to add bid items, use the appropriate specifications including the type of materials needed, how they are to be constructed, and how they will be measured and paid for.

OJT and DBE - Contact the Office of Civil Rights for OJT and DBE.

OJT Contact	DBE Contact
Betty Huskey <i>ODOT Office of Civil Rights</i> Ph: 503-986-3299 Fax: 503-986-6382 betty.g.huskey@odot.state.or.us	Jill Miller <i>ODOT Office of Civil Rights</i> Ph: 503-986-4355 Fax: 503-986-6382 c.jill.miller@odot.state.or.us

Provide the following information when requesting the numbers:

- Completed "DBE/OJT Civil Rights Sheet" (yellow sheet)
- A copy of the project cost estimate
- A copy of the project construction schedule, if available

Send the information by FAX or by e-mail. If sent by FAX mark the cover sheet "CONFIDENTIAL". Follow up with an email indicating a Fax has been sent requesting DBE / OJT numbers. If sent by email mark the email "CONFIDENTIAL".

TERO - Federal funded projects that are on or within 60 miles of the Umatilla Indian Reservation require TERO specifications. Contact the Region 5 Civil Rights office for TERO requirements, employment goals, and compliance fees.

Class of Work - Bidders are required to be pre-qualified in the work in which they bid and once a contract is awarded are required to perform 30% of that work. To determine the class of work, which is listed on the Description of Work pages in the bid booklet and the project special provisions booklet, complete the Class of Work form. The [Class of Work Form](#) and [Instructions](#) are available on the Specifications web site. This completed form may be used later by legal staff to justify ODOT's choice if a bidder files a protest.

Some things to consider when determining the Class of Work:

- If the Class of Work is determined at the advance stage, recalculate it again before PS&E submittal. Changes between the advance stage and PS&E submittal may change the Class of Work.

- How Classes of Work are combined may cause procurement problems.
- Contact the QA Engineer or Specifications Engineer if there are questions regarding the Class of Work for a project.

Department of Justice Review - Oregon State Statute requires that the Department of Justice (DOJ) review all State contracts for legal sufficiency. Since standard specifications and boiler plate special provisions become part of a binding project construction contract, they must adhere to this requirement. Because of the volume of projects, ODOT has been given an exemption provided the following requirements are met:

- "Other than the fill-in-the-blank portions of the Part 00100 series of Specifications, ODOT and its contractors shall not add to, delete from, or otherwise modify Part 00100 preprinted Specifications relating to general legal requirements without first obtaining DOJ approval."
- "...ODOT shall not add any general legal requirements to the Part 00200 and forward series of Specifications (including warranties, surety bonds, liquidated damages, penalties, bonuses, incentives, disincentives or general legal requirements of the type addressed in the Part 00100 series of Specifications) without first obtaining DOJ Approval."

A copy of the [DOJ Exemption Letter](#) is available at ODOT's Specifications web site.

To obtain DOJ approval for changes, all communication is done through the Project Leader and the Specifications Engineer. Only the Specifications Engineer makes contact with DOJ. In addition to the required "Special Provision Integrity Certification" form, documentation validating DOJ concurrence is required.

Signature Page

THE SIGNATURE PAGE INFORMATION IS UNDER REVIEW.

IT WILL BE ADDED TO THIS MANUAL WHEN COMPLETE.

3.3 Final Edits (Final Copy)

Preparing the final project special provisions includes:

- Incorporating all remaining information that was not done at the advance stage
- Incorporating appropriate changes that were requested by those who reviewed them
- Incorporating the latest boiler plate special provision updates
- Having final review and proofreading done
- Updating the footer name to identify it as the "(Bidding)" version with date:

"SPS(Key No.)_(Project Name)_Section_(Bidding)_(Date)"



In addition, each Region has their own criteria for preparing the final project special provisions. Follow their guidance and criteria.

3.3.1 Incorporating Remaining Information and Changes

Usually not all information is included in the advance stage preparation 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 stage. Incorporate them in the final version.

3.3.2 Boiler Plate Updates

Between the time the project special provisions were created and the preparation of the final copy, revisions and updates to the boiler plate special provisions may have been made. All applicable revisions and updates, also known as "boiler plate updates" must be incorporated into the project special provisions. The updates can be viewed at the [Special Provision Update](#) web site with working copies available on the [Boiler Plate Special Provisions](#) web site.

3.3.3 Final Review and Proof

When the final version is finished, display the document in it's "final" form and look through it to be sure it looks correct. Check for and correct:

- Widow and orphan lines - A widow is the last line of a paragraph printed by itself at the top of a page. An orphan is the first line of a paragraph printed by itself at the bottom of a page.
- 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
- Formatting errors including:
 - Different fonts and incorrect size fonts
 - Wrong justification
 - Incorrect tabs and indents

CHAPTER 4 - PS&E SUBMITTAL

4.1 General

Final Plans, Specifications, and Estimate (PS&E) are submitted to the Office of Project Letting for advertising and printing. For details and additional information see the [PS&E Delivery Manual](#).

CHAPTER 5 - ADDENDA

5.1 General

Changes to the bid booklet, project special provisions, and plans after the PS&E package is submitted are done by addenda.

5.1.1 During Advertisement

All addenda that are required are prepared by the local agency, consultant, or Region and sent to the Office of Project Letting for publishing. Use the addenda template that is on the [Specifications Forms](#) web site. For additional addenda preparation see the [PS&E Delivery Manual](#).

5.1.2 After Bid Opening

The project special provisions are used to create the contract, thus all addenda must be incorporated into the project special provisions. By the close of business on bid opening day submit, by e-mail, ftp, or CD, an electronic copy of the originally submitted project special provisions, updated with all the changes made by the addenda to the Office of Project Letting.

Update the project special provisions footer name to identify it as the "(Contract)" version with date:

"SPS(*Key No.*)_(*Project Name*)_Section_(Contract)_(Date)"

