

# 2015 Construction Contract Standards Webcast

May 18, 2016

1. Have your 2015 Standard Specifications ready to follow along
2. Turn on your speakers
3. Questions may be submitted during the presentation at:

**[2015.standards@dot.ca.gov](mailto:2015.standards@dot.ca.gov)**

# Welcome to the 2015 Construction Contract Standards Webcast May 18, 2016

Office of Construction Contract Standards  
Office Engineer  
and

Office of Construction Engineering  
Division of Construction

The following are instructions on  
participating in the Webcast

# Audio

This Webcast requires attendees use computer speakers.

- ✓ Connect Headphones or Earbuds, if available
- ✓ Adjust Volume

# Q & A

We encourage you to participate by asking questions during the presentation

- ✓ Submit your questions to the Presenters during the Webcast by sending an email to:

**2015.standards@dot.ca.gov**

# Recorded Webcast

The webcast and list of Questions and Answers will be posted at:

<http://www.dot.ca.gov/hq/construc/training.htm>

This concludes the pre-webcast instructions.

Thank you.

# 2015 Construction Contract Standards



# Construction Contract Standards Presentation

- How do the construction contract standards work?
- Payment – how is work paid for?
- Changes in 2015 Standards – where did that specification go?



# How do the Construction Contract Standards work?

## Navigating the contract parts



# The Construction Contract Standards

- Standard Specifications
- Standard Special Provisions
- Standard Plans



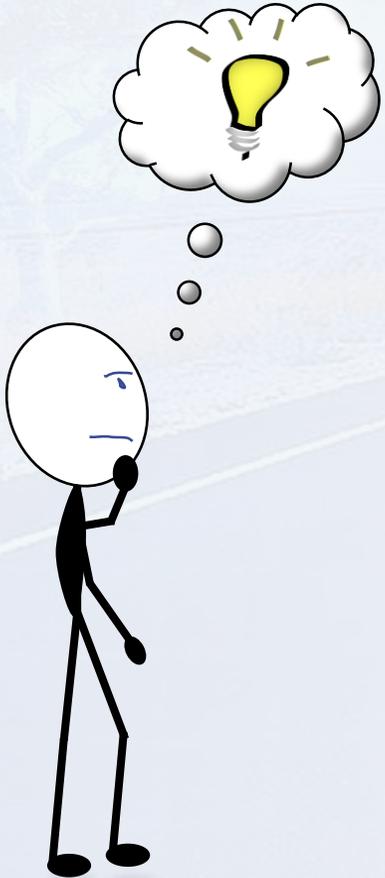
## Other Contract Documents

- Bid Items
- Bid Book
- Notice to Bidders



# Revised Construction Standards

- Revised Standard Specifications (RSS)
  - Included with the Special Provisions
- Revised Standard Plans (RSP)
  - Included with the Contract Plans



# What are the Contract Parts?

- Section 5-1.02 shows how to deal with discrepancies in contract parts.

If a discrepancy exists:

1. Governing ranking of Contract parts in descending order is:

- 
- 1.1. Special provisions
  - 1.2. Project plans
  - 1.3. Revised standard specifications
  - 1.4. Standard specifications
  - 1.5. Revised standard plans
  - 1.6. Standard plans
  - 1.7. Supplemental project information

2. Written numbers and notes on a drawing govern over graphics

3. Detail drawing governs over a general drawing

4. Specific specification governs over a general specification

5. Specification in a section governs over a specification referenced by that section

If a discrepancy is found or confusion arises, submit an RFI.

# Bid Item List



Bid  
Item  
List

➤ Section 1-1.01 (Page 1)

*The bid items set forth the construction specifications that apply.  
The first 2 digits of a bid item code correspond to the specification  
section number with the same 2 first digits...*

- Applicable specification section based on bid item
- Example: Bid Item 190101 ROADWAY EXCAVATION  
Section 19 EARTHWORK applies

# Bid Item List - Exceptions

- Exception in section 1-1.01 of the Standard Specifications
  - Bid Item code # 999990 MOBILIZATION corresponds to Section 9.
- Bid Items and Applicable Sections (aka Transfer Table) in Section 1-1.01 of Special Provisions:

## DIVISION I GENERAL PROVISIONS 1 GENERAL

Add to section 1-1.01:

### Bid Items and Applicable Sections

Item code	Item description	Applicable section
027332	SALVAGE PREFABRICATED RESTROOM	15
027333	RECONSTRUCT SIDEWALK	15
027334	RELOCATE MONUMENT PLAQUE	15
027335	TREE GRATE	20
027336	FAUCET ASSEMBLY	99
027337	BUBBLER SPRINKLER ASSEMBLY	20
027338	PRECAST DRAINAGE INLET	51
027339	8" PLASTIC PIPE	64
027340	INFILTRATION TRENCH	68
027341	MASONRY BLOCK WALL (PLANTER AND SCREEN WALL)	78
027342	FLAGPOLE	78

# The Contract Specifications

## Understanding navigation through the specifications



# Contract Parts - Specifications

1. Governing ranking of Contract parts in descending order is:
  - 1.1. Special provisions
  - 1.2. Project plans
  - 1.3. Revised standard specifications
  - 1.4. Standard specifications
  - 1.5. Revised standard plans
  - 1.6. Standard plans
  - 1.7. Supplemental project information

# Contract Parts - Specifications

- Foundation for all of the specifications is the Standard Specifications
- Special Provisions and Revised Standard Specifications revise the Standard Specifications for a particular contract by using R-A-D:
  - Replace portions or all of a section
  - Add to a section
  - Delete portions or all of a section

**Replace the 2nd sentence in the 3rd paragraph of section 39-2.01A(4)(b) with:**

Submit 3 parts and keep 1 part.

01-15-16

**Add after the 2nd paragraph of section 39-2.01B(11):**

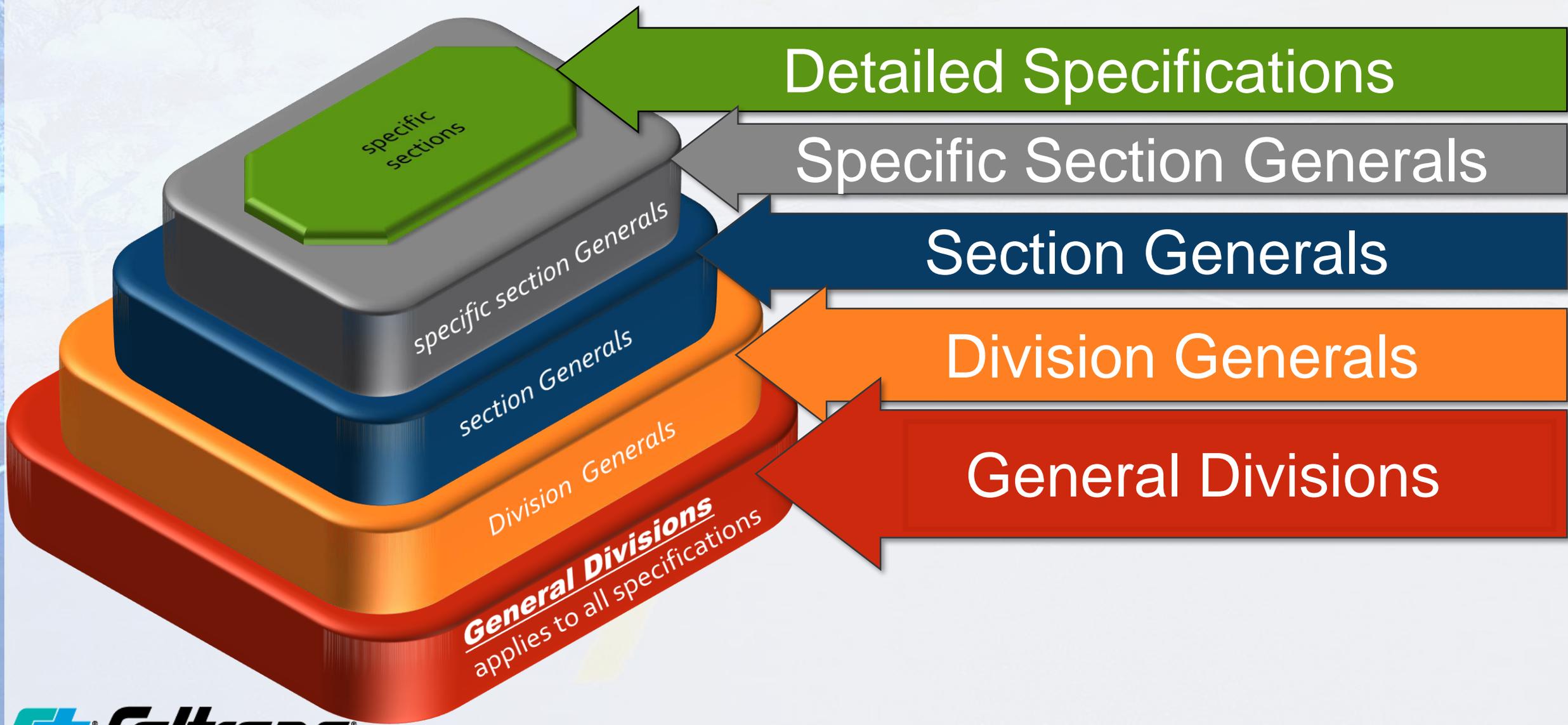
For miscellaneous areas and dikes:

04-15-16

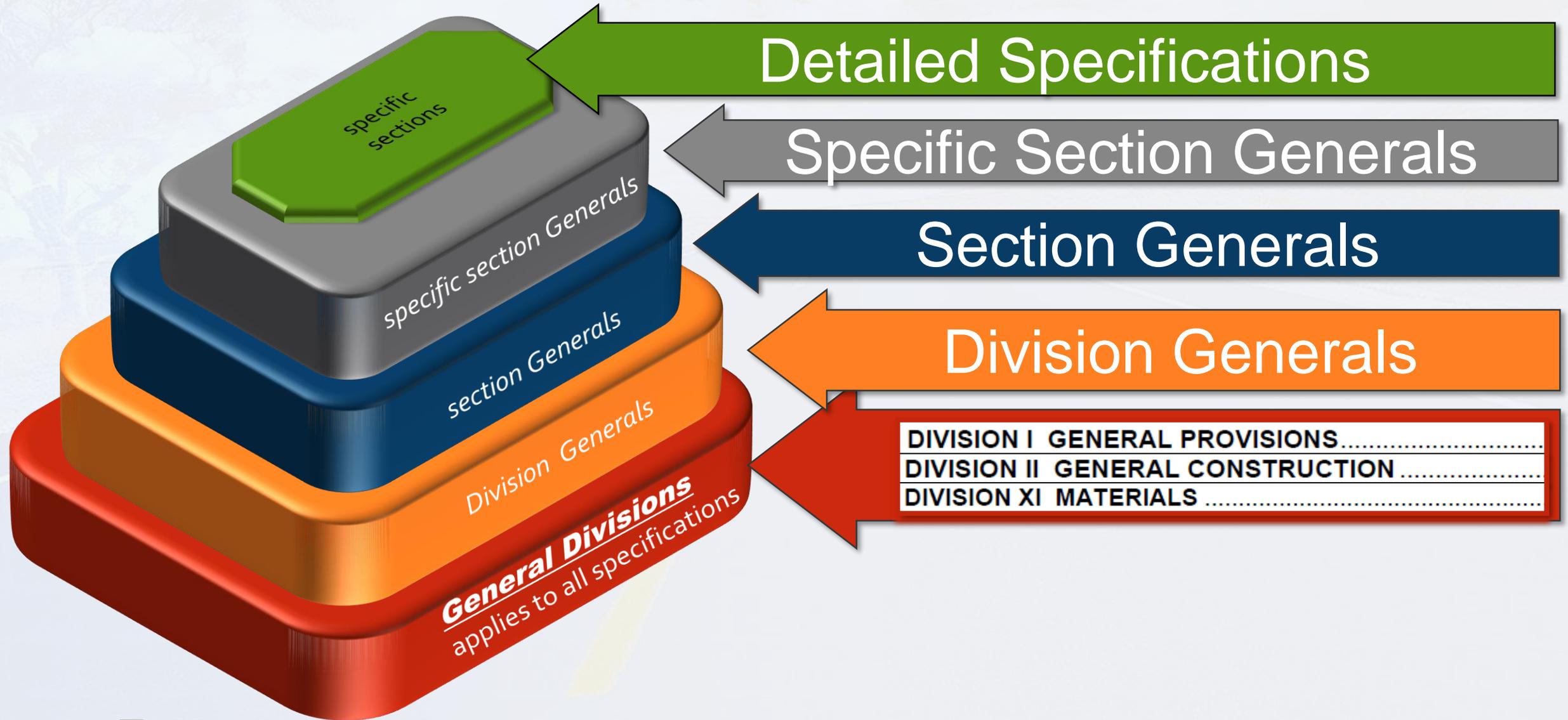
**Delete the 1st paragraph of section 39-2.01B(11).**

04-15-16

# Contract Parts - Standard Specifications



# Contract Parts - Standard Specifications



# Contract Parts - Standard Specifications

## 5-1.02 CONTRACT COMPONENTS

A component in one Contract part applies as if appearing in each. The parts are complementary and describe and provide for a complete work.

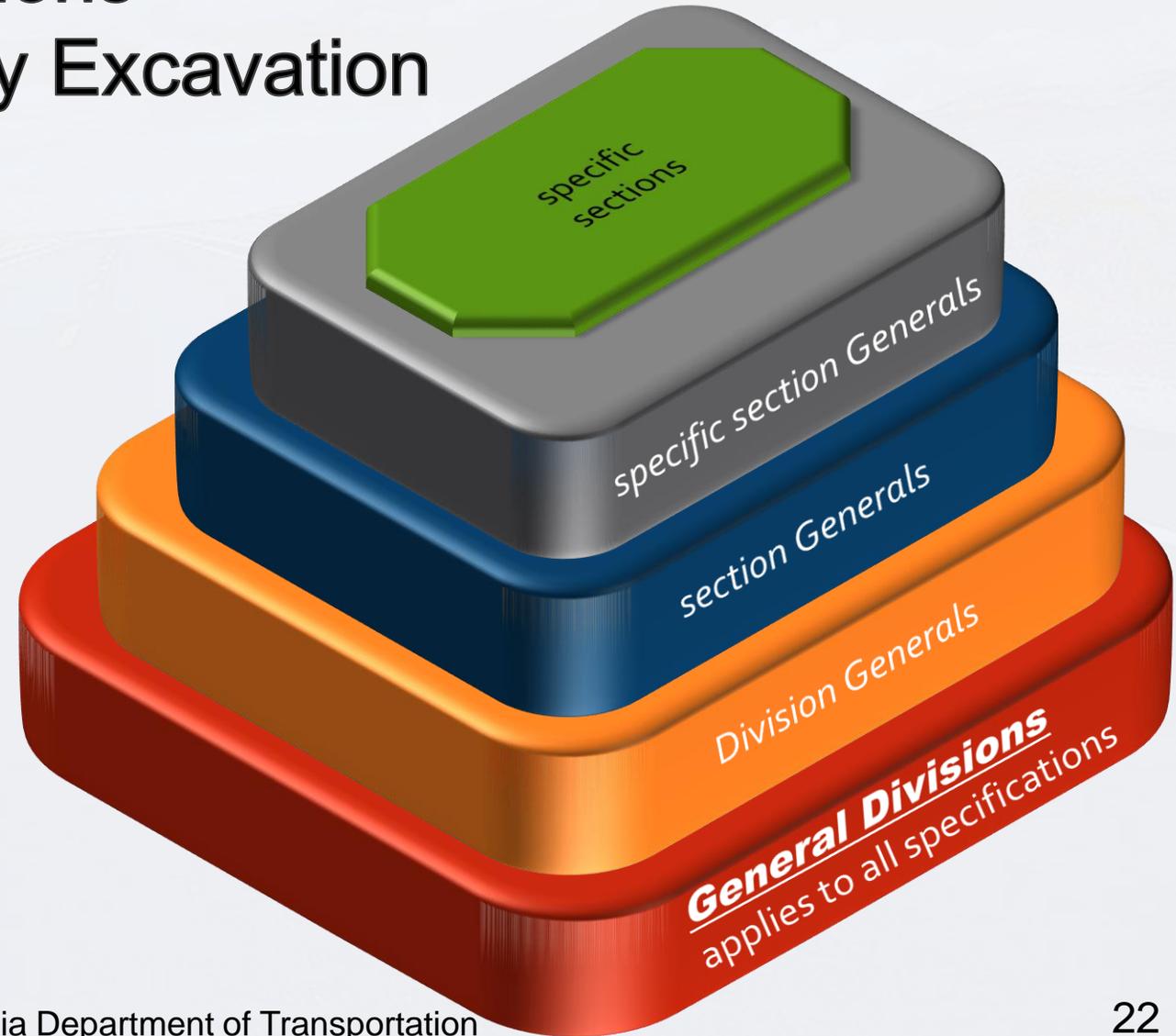
If a discrepancy exists:

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2. Written numbers and notes on a drawing govern over graphics
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5. Specification in a section governs over a specification referenced by that section

If a discrepancy is found or confusion arises, submit an RFI

# Contract Parts - Standard Specifications Example

- A walk through the specifications  
Bid Item: 190101 Roadway Excavation



# Contract Parts - Standard Specifications Example

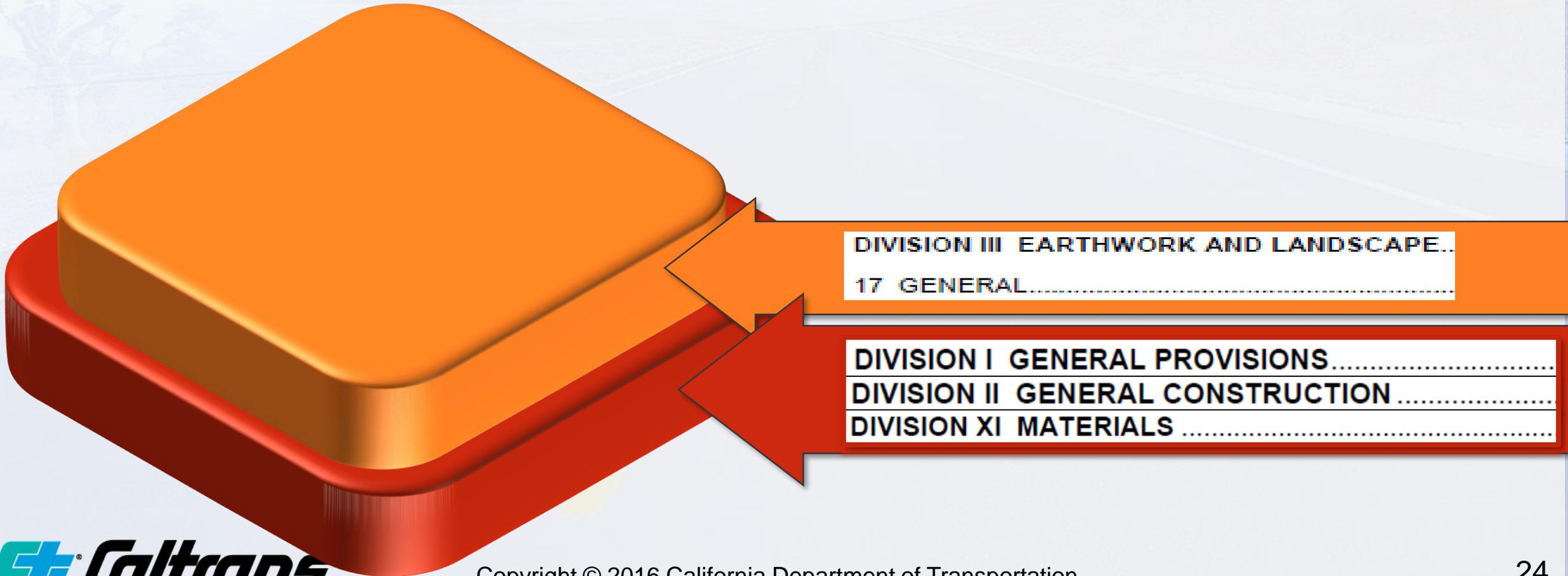
➤ Item 190101 Roadway Excavation



DIVISION I GENERAL PROVISIONS .....
DIVISION II GENERAL CONSTRUCTION .....
DIVISION XI MATERIALS .....

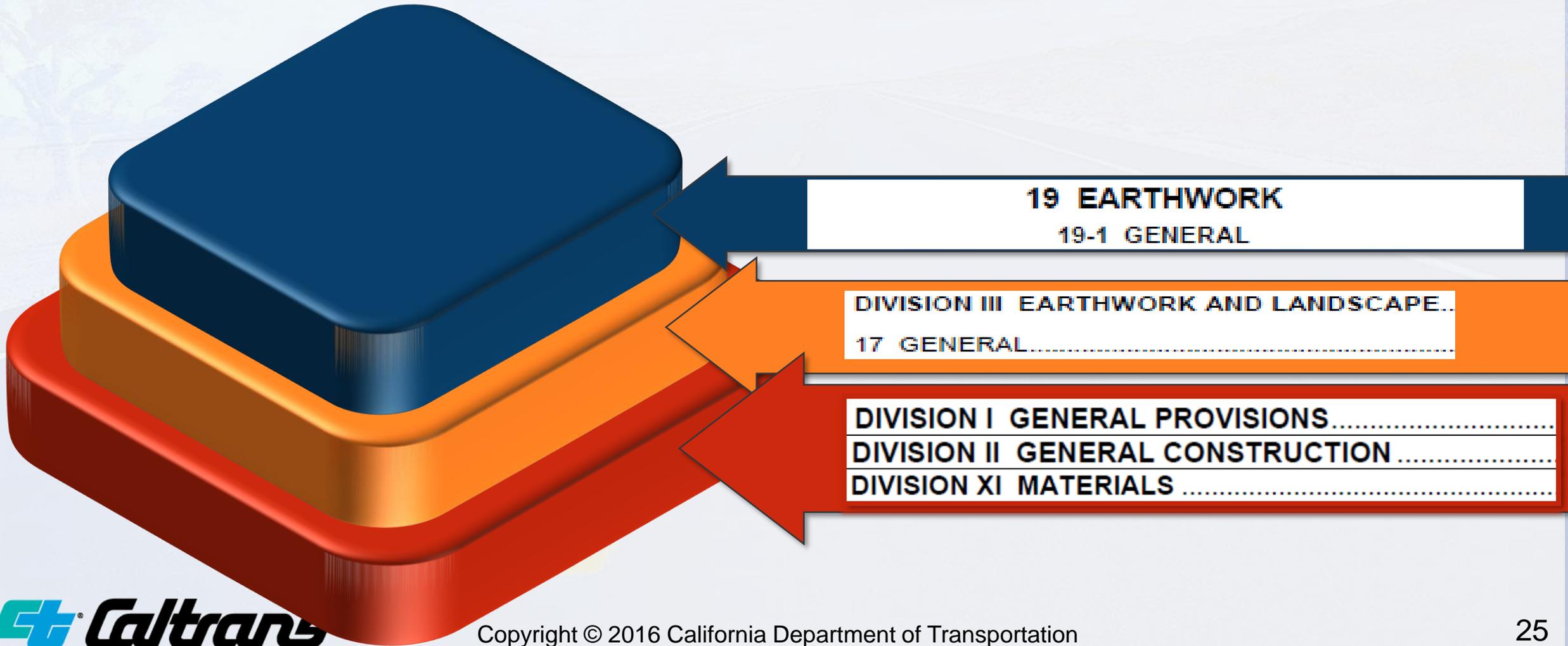
# Contract Parts - Standard Specifications Example

➤ Bid Item 190101 Roadway Excavation



# Contract Parts - Standard Specifications Example

➤ Bid Item 190101 Roadway Excavation



# Contract Parts - Standard Specifications Example

## ➤ Bid Item 190101 Roadway Excavation

### 19 EARTHWORK

#### 19-1 GENERAL

##### 19-1.01 GENERAL

###### 19-1.01A Summary

Section 19-1 includes general specifications for performing earthwork activities.

Performing earthwork activities includes removal of unsuitable material or a buried man-made object if the removal is described.

Complete work specified in section 20-10.02C(2) before starting earthwork activities.

##### 19-1.03

Excavate  
embank

Notify th

1. Ren
2. You

###### 19-1.01B Definitions

Reserved

###### 19-1.01C Submittals

Reserved

###### 19-1.01D Quality Assurance

Reserved

##### 19-1.02 MATERIALS

Not Used

##### 19-1.03 CONSTRUCTION

###### 19-1.03A General

Unless the material resulting from the excavation is hazardous, construct embankments and dikes or backfill structures with it. If the quantity of excavated material is not sufficient to construct embankments, obtain the material under section 19-7.

###### 19-1.03B Unsuitable Material

Excavate and dispose of unsuitable material encountered below the natural ground surface in embankment areas or below the grading plane in excavation areas as ordered.

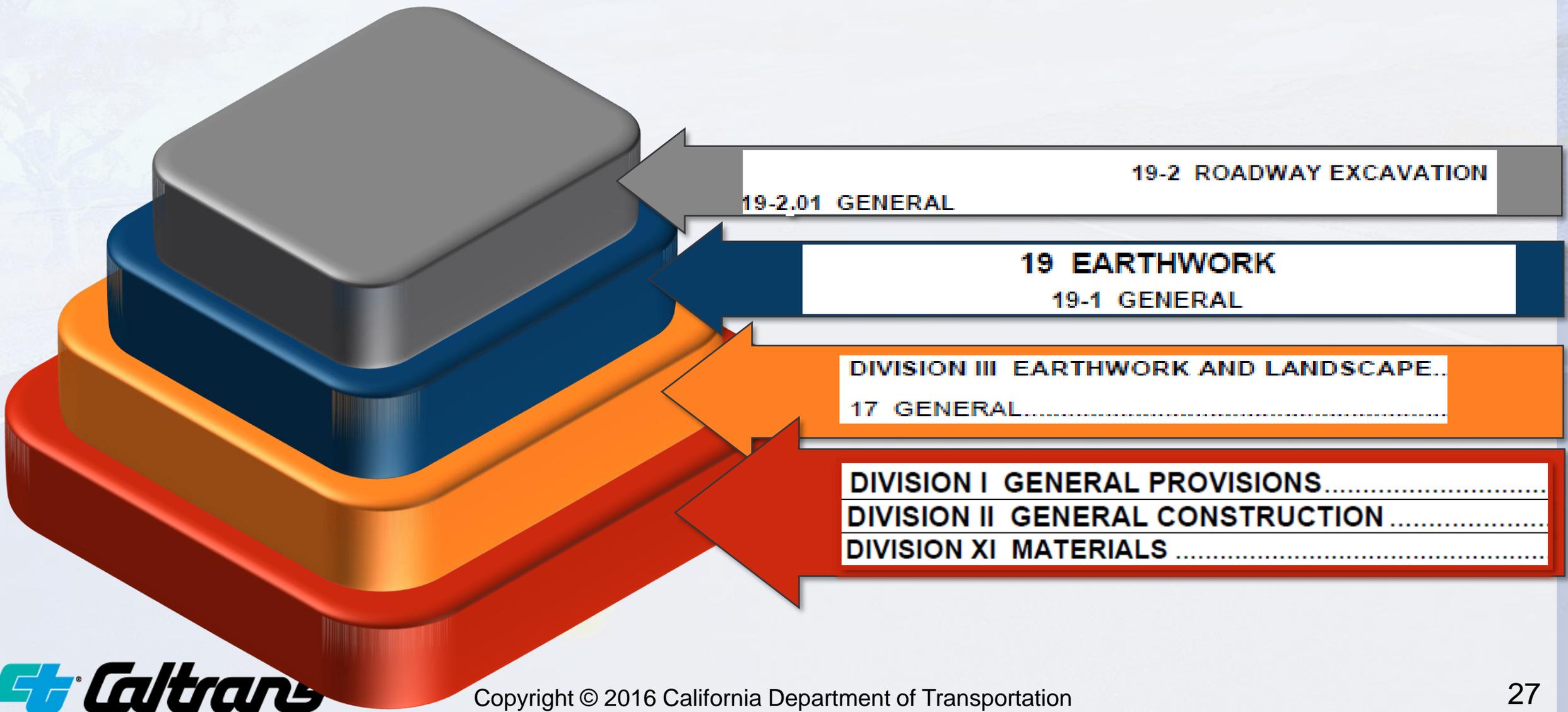
Notify the Engineer before removing the unsuitable material if:

1. Removal is not otherwise described
2. You request payment for removal as change order work

surface in

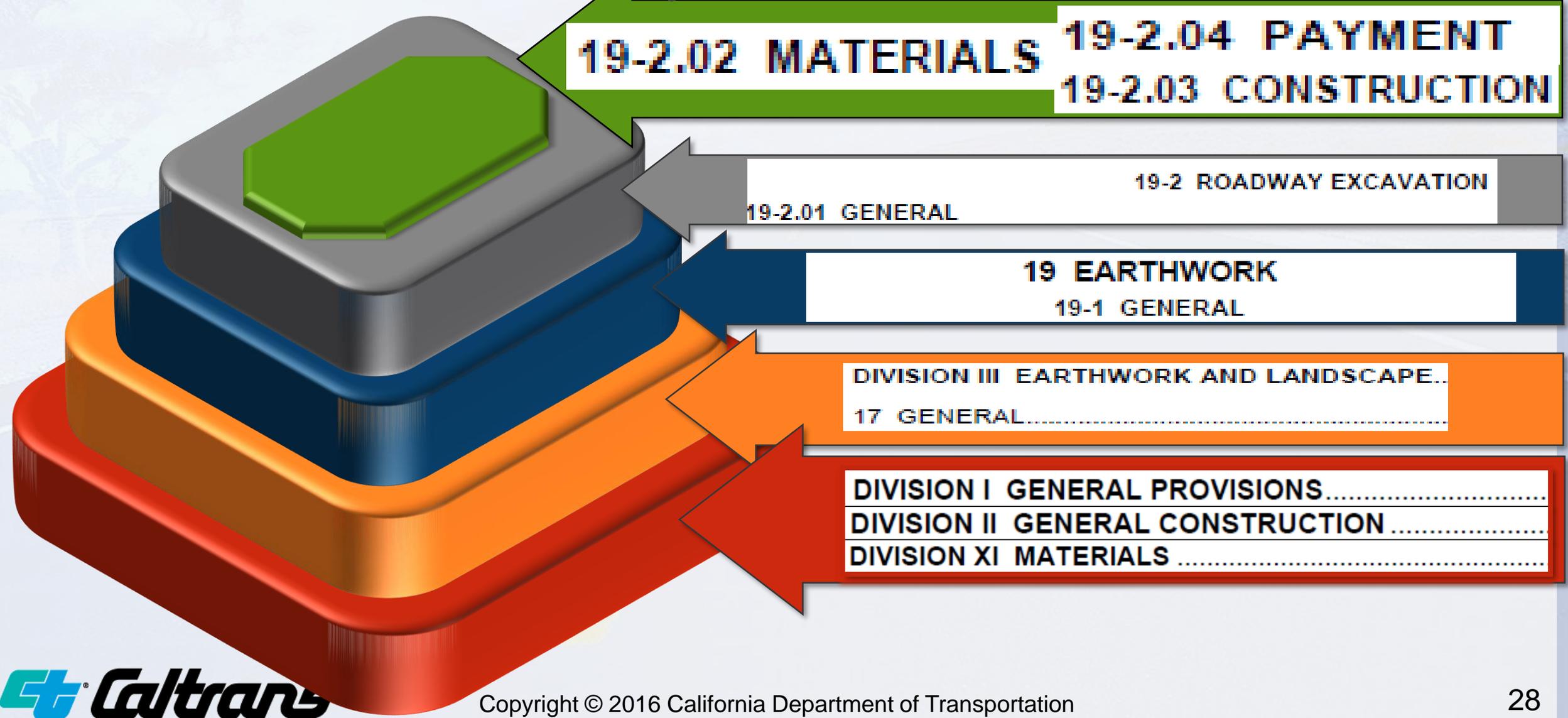
# Contract Parts - Standard Specifications Example

➤ Bid Item 190101 Roadway Excavation



# Contract Parts - Standard Specifications Example

## ➤ Bid Item 190101 Roadway Excavation



# Contract Parts - Standard Specifications Example

## ➤ Bid Item 190101 Roadway Excavation

### 19-2.03 CONSTRUCTION

#### 19-2.03A General

Excavate to the described or authorized grade. If you overexcavate, backfill with an authorized material and compact it.

#### Remove 19-2.03B Surplus Material

39 and 4 If a quantity of surplus material is shown, the quantity is approximate.

1 section

Compact Ensure enough material is available to complete the embankments before placing the material at other locations on the job site or disposing of it.

#### Constru

19-2.03 Obtain authorization before disposing of surplus material or using it for any of the following:

- If a quantity of surplus material is shown, the quantity is approximate.
- Ensure that surplus material is used or disposed of in the following manner:
1. Widening embankments uniformly
  2. Flattening slopes
  3. Placing along the roadway or at other locations

at other

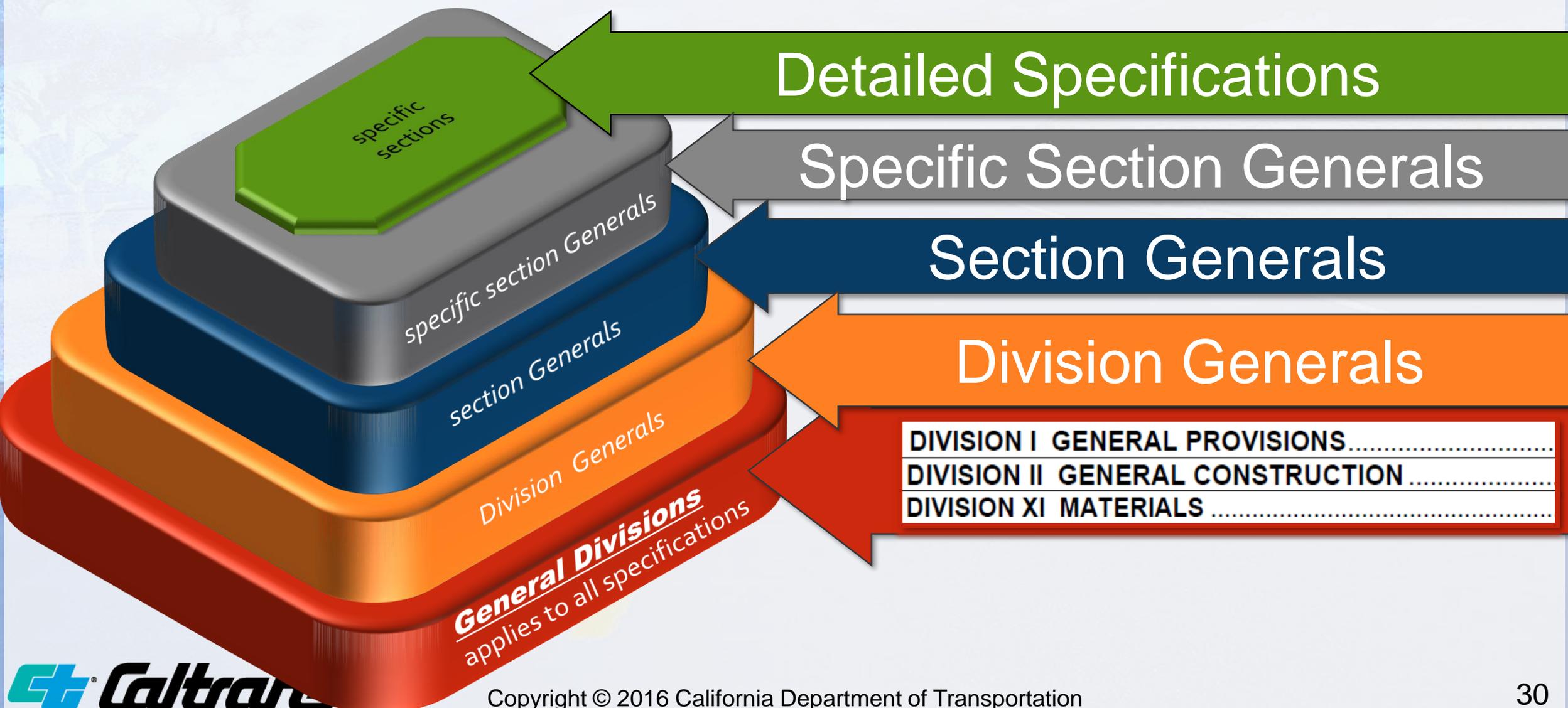
248

Obtain authorization before disposing of surplus material or using it for any of the following:

1. Widening embankments uniformly
2. Flattening slopes
3. Placing along the roadway or at other locations

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# Contract Parts - Standard Specifications Summary



# Contract Parts – Revised Standard Specifications (RSS)

- Updates the standard specifications
- Follows the Replace-Add-Delete (RAD) method
- Published quarterly
- Included with the special provisions

# Contract Parts – Revised Standard Specifications (RSS)

- The date that the RSS was published is in the heading

## REVISED STANDARD SPECIFICATIONS DATED

04-22-16

## ORGANIZATION

Revised standard specifications are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*. A date under a main-section heading is the date of the latest revision to the section.

Each revision to the *Standard Specifications* begins with a revision clause that describes or introduces a revision to the *Standard Specifications*. For a revision clause that describes a revision, the date on the right above the clause is the publication date of the revision. For a revision clause that introduces a revision, the date on the right above a revised term, phrase, clause, paragraph, or section is the publication date of the revised term, phrase, clause, paragraph, or section. For a multiple-paragraph or multiple-section revision, the date on the right above a paragraph or section is the publication date of the paragraphs or sections that follow.

# Contract Parts – Revised Standard Specifications (RSS)

## ➤ Example of a Revised Standard Specification

**Add before the 1st paragraph of section 39-2.03A(4)(e)(ii)(C):**

04-15-16

CRM used must be on the Authorized Materials List for Crumb Rubber Modifier.

CRM must be a ground or granulated combination of scrap tire crumb rubber and high natural scrap tire crumb rubber, CRM must be  $75.0 \pm 2.0$  percent scrap tire crumb rubber and  $25.0 \pm 2.0$  percent high natural scrap tire crumb rubber by total weight of CRM. Scrap tire crumb rubber and high natural scrap tire crumb rubber must be derived from waste tires described in Pub Res Code § 42703.

Replace the row for *Hamburg wheel track* in the table in section 39-2.03B(2) with:

01-15-16

Hamburg wheel track (min, number of passes at the inflection point)	AASHTO T 324 (Modified) <sup>d</sup>	
Binder grade:		
PG 58		10,000
PG 64		12,500
PG 70		15,000

# Contract Parts – Special Provisions

- Project specific specifications
- Specifications that Replace-Add-Delete (RAD) those in the standard specifications and the revised standard specifications

**Replace the 2nd, 3rd, and 4th paragraphs of section 19-2.03B with:**

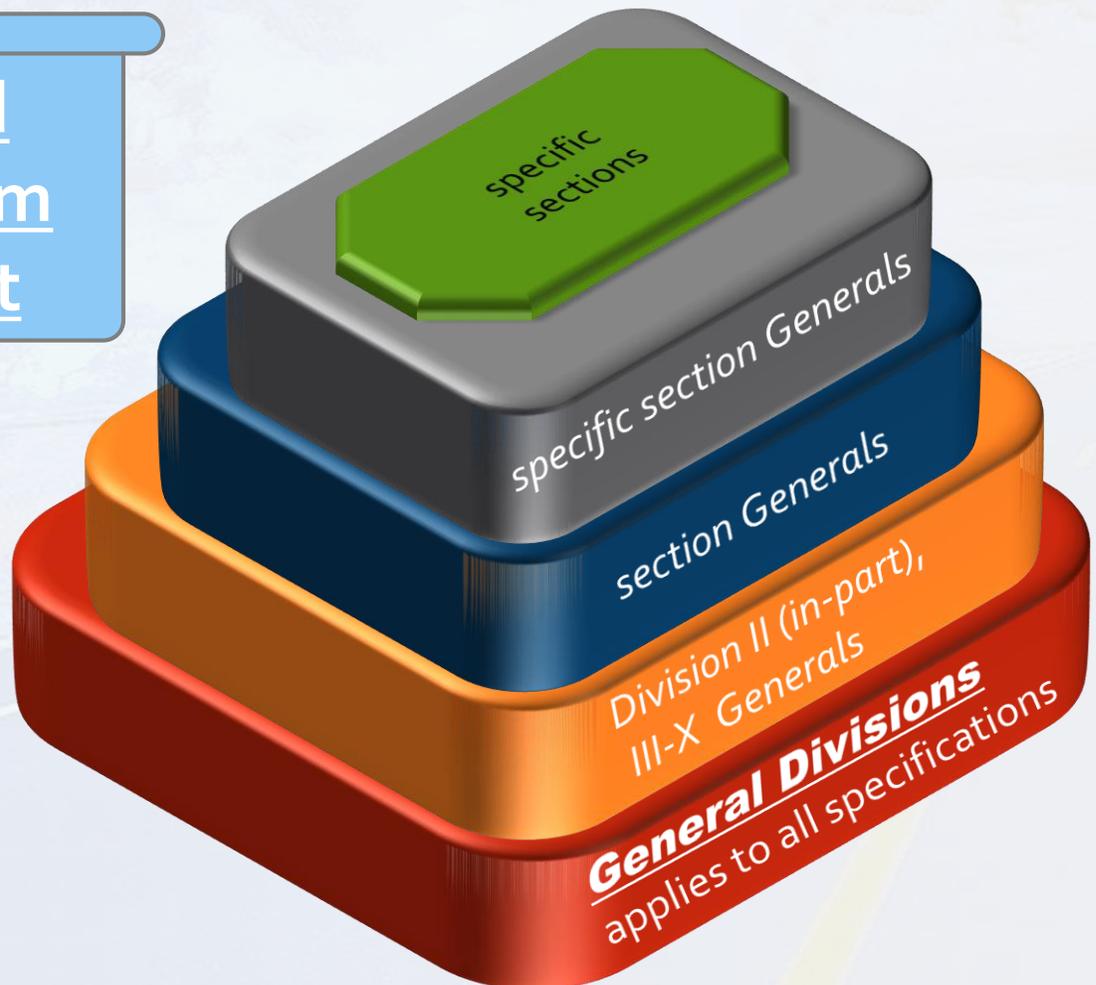
Dispose of surplus material. Ensure enough material is available to complete the embankments before disposing of it.

**Replace the 1st sentence of the 1st paragraph of section 86-1.02F(2)(d)(v) of the RSS for section 86 with:**

A signal interconnect cable must be a 3-pair type with stranded, tinned, copper no. 20 conductors.

# Contract Parts – Contract Specifications

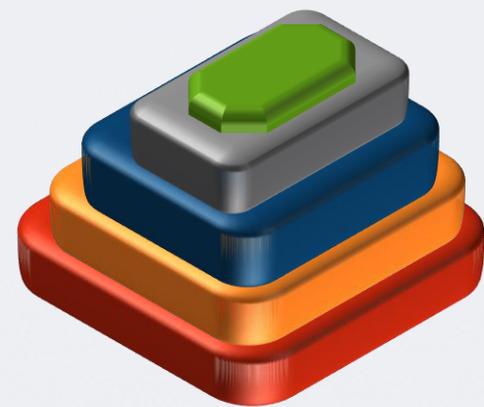
Bid  
Item  
List



**Standard Specifications**



**Special Provisions**



**Revised Standard Specifications**

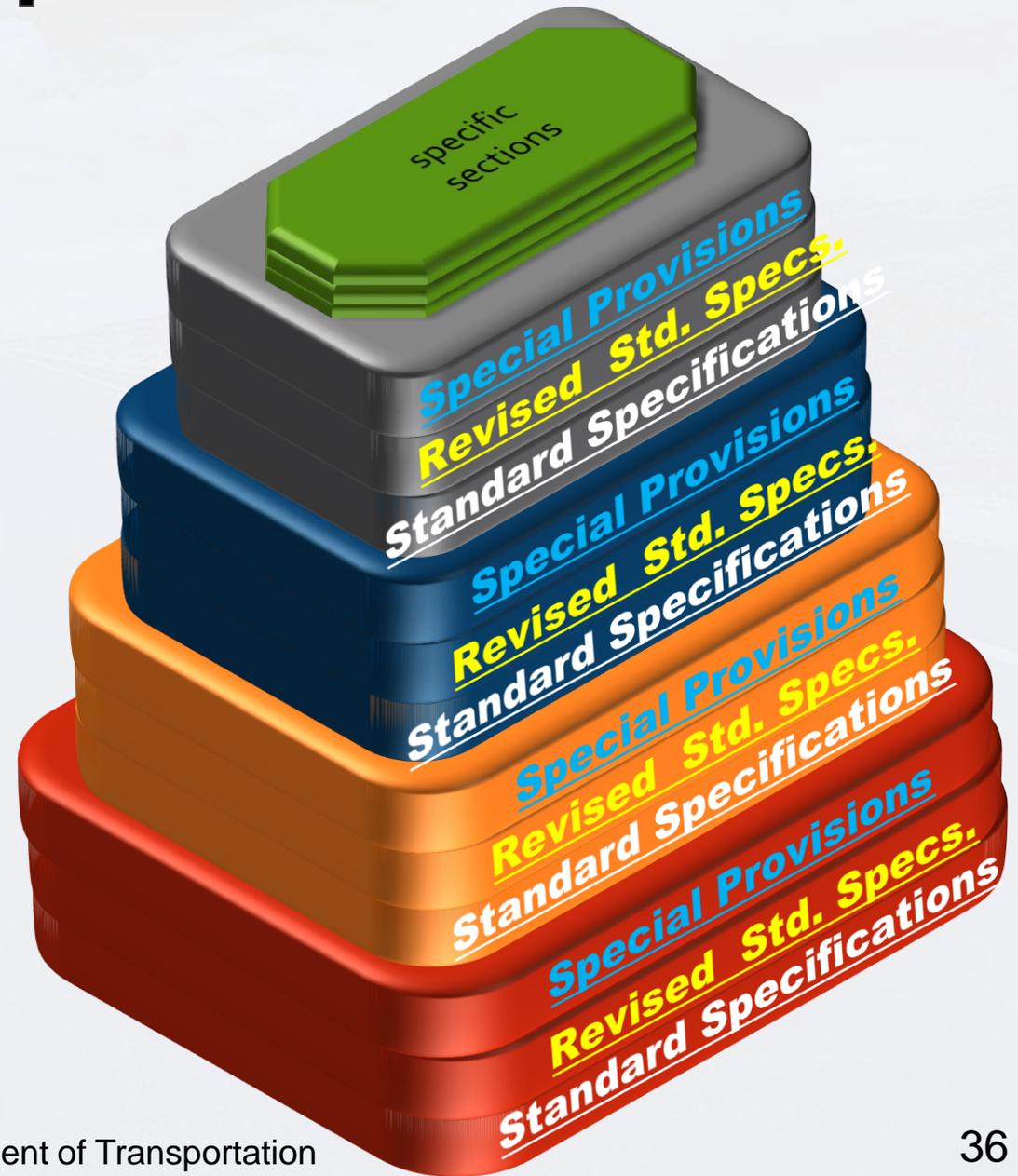
# Contract Parts – Contract Specifications

➤ The procedure for each bid item:

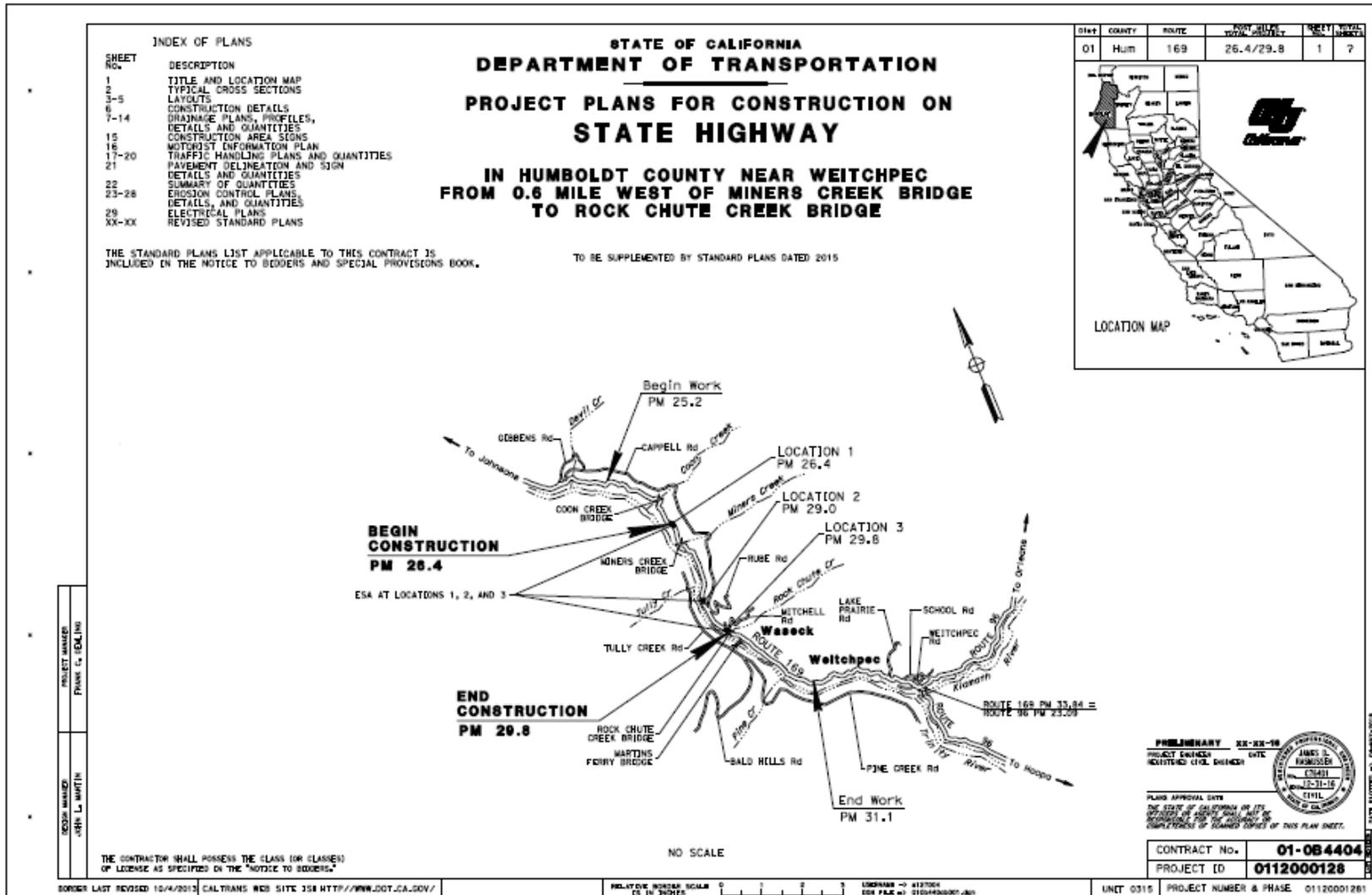
1. Start with the Bid Item

2. Read the applicable:

- Standard Specifications
- Revised Standard Specifications
- Special Provisions



# Contract Parts – Plans



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## STANDARD PLANS 2015



# Contract Parts – Plans

1. Governing ranking of Contract parts in descending order is:
  - 1.1. Special provisions
  - 1.2. Project plans
  - 1.3. Revised standard specifications
  - 1.4. Standard specifications
  - 1.5. Revised standard plans
  - 1.6. Standard plans
  - 1.7. Supplemental project information

# Contract Parts – Project & Revised Standard Plans

- Project specific plans and details
- Revised Standard Plans (RSPs)

**INDEX OF PLANS**

SHEET No.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2 - 4	TYPICAL CROSS SECTIONS
5 - 11	CONSTRUCTION DETAILS
12	TEMPORARY WATER POLLUTION CONTROL
13 - 35	CONSTRUCTION AREA SIGNS
36 - 43	PAVEMENT DELINEATION PLAN AND QUANTITIES
44 - 49	SUMMARY OF QUANTITIES
50 - 62	ELECTRICAL PLANS
63 - 99	REVISED STANDARD PLANS

**STRUCTURE PLANS**

100 - 101	CAÑADA Rd UC, Br No. 35-0231L/R
102 - 103	ROUTE 280/92 Sep, Br No. 35-0243
104 - 108	N290-N92 CONNECTOR OC, Br No. 35-0244G
109 - 111	EDGEWOOD Rd UC, Br No. 35-0250L/R
112 - 114	CAÑADA Rd UC, Br No. 35-0231L/R
115 - 116	SERVICE Rd UC, Br No. 35-0277L/R

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

**DEP**  
**DDO I**

**NOTES:**

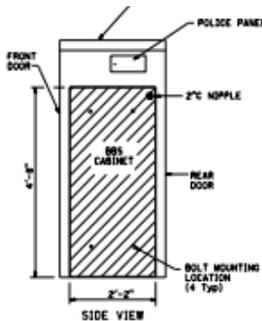
1. Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
2. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
3. Where telephone interconnect is required, a minimum of 6" clear vertical space shall be provided inside the cabinet for the equipment.
4. Telephone interconnect conductors shall be enclosed in a 3/4" or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.



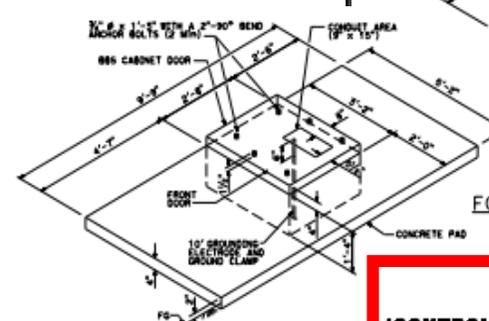
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(CONTROLLER CABINET FOUNDATION AND PAD DETAILS)**  
NO SCALE

RSP ES-9C DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-9C DATED OCTOBER 30, 2015 - PAGE 430 OF THE STANDARD PLANS BOOK DATED 2015.

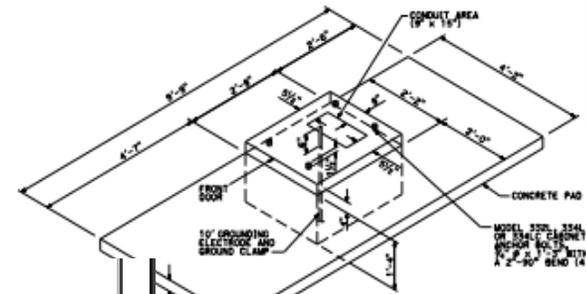
**REVISED STANDARD PLAN RSP ES-9C**



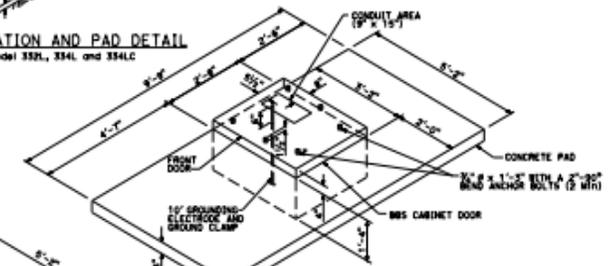
RBS CABINET MOUNTED TO THE MODEL 332L CABINET



LEFT SIDE INSTALLATION DETAIL A



FOUNDATION AND PAD DETAIL MODEL 332L, 334L AND 334LC



RIGHT SIDE INSTALLATION DETAIL B  
MODIFIED MODEL 332L CABINET  
FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(CONTROLLER CABINET FOUNDATION AND PAD DETAILS)**  
NO SCALE  
RSP ES-9C DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-9C DATED OCTOBER 30, 2015 - PAGE 430 OF THE STANDARD PLANS BOOK DATED 2015.  
**REVISED STANDARD PLAN RSP ES-9C**

2015 REVISED STANDARD PLAN RSP ES-9C

# Contract Parts – Standard Plans

## ➤ Standards plans list

Contract No. 04-2J0804

i

### STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. The applicable revised standard plans (RSPs) listed below are included in the project plans.

A10A	Abbreviations (Sheet 1 of 2)
RSP A10B	Abbreviations (Sheet 2 of 2)
A10C	Lines and Symbols (Sheet 1 of 3)
A10D	Lines and Symbols (Sheet 2 of 3)
A10E	Lines and Symbols (Sheet 3 of 3)
A20A	Pavement Markers and Traffic Lines, Typical Details
A20B	Pavement Markers and Traffic Lines, Typical Details
RSP A20C	Pavement Markers and Traffic Lines, Typical Details
A20D	Pavement Markers and Traffic Lines, Typical Details

# Contract Parts – Standard Plans

➤ Included by reference on the contract plans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Tr	299	12.3/12.9	96	149

REGISTERED CIVIL ENGINEER DATE 1-6-14  
 PLANS APPROVAL DATE 03-26-14  
 REGISTERED PROFESSIONAL ENGINEER  
 K. SELVENTHIRAN  
 CIVIL  
 STATE OF CALIFORNIA

**GENERAL NOTES (LOAD AND RESISTANCE FACTOR DESIGN)**

DESIGN: AASHTO LRFD Bridge Design Specifications, Fourth Edition and the California Amendments preface dated September 2010.

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.6, November 2010.

DEAD LOAD: Includes 35 psf for wearing surface.

LIVE LOADING: HL-93 and P-15 Permit Design Load.

SEISMIC LOADING: FAULT: BIG LAGOON-BALD MOUNTAIN I.D.: 9  
 SOIL PROFILE: Vs30 = 760 m/s  
 MOMENT OF MAGNITUDE: Mmax = 7.5  
 PEAK GROUND ACCELERATION: 0.34g

**ACCELERATION RESPONSE**

**STANDARD PLANS 2010**

A10A ABBREVIATIONS (SHEET 1 OF 2)  
 RSP A10B ABBREVIATIONS (SHEET 2 OF 2)  
 A10C LINE AND SYMBOLS  
 A10D LINE AND SYMBOLS  
 A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE

B0-1 BRIDGE DETAILS  
 B0-3 BRIDGE DETAILS  
 B0-13 BRIDGE DETAILS  
 B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")  
 RSP B11-56 CONCRETE BARRIER TYPE 736

SUPPORT LOCATION	PILE TYPE							
Abut 1	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	440	0	1246.7	1246.0	1224.0 (a), 1230.1 (b)	1224.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	430	0	1272.7	1260.0	1240.0 (a), 1250.7 (b)	1240.0 (a)
BENT 2	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	236	0	1250.8	1250.0	1230.0 (a), 1233.4 (b)	1230.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	280	0	1271.2	1259.0	1244.0 (a), 1249.4 (b)	1244.0 (a)
BENT 3	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	440	0	1246.7	1246.0	1224.0 (a), 1230.1 (b)	1224.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	430	0	1272.7	1260.0	1240.0 (a), 1250.7 (b)	1240.0 (a)
BENT 4	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	236	0	1250.8	1250.0	1230.0 (a), 1233.4 (b)	1230.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	280	0	1271.2	1259.0	1244.0 (a), 1249.4 (b)	1244.0 (a)
BENT 5	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	440	0	1246.7	1246.0	1224.0 (a), 1230.1 (b)	1224.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	430	0	1272.7	1260.0	1240.0 (a), 1250.7 (b)	1240.0 (a)
BENT 6	LEFT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	236	0	1250.8	1250.0	1230.0 (a), 1233.4 (b)	1230.0 (a)
	RIGHT	2'-0" Ø CIDH Conc PILING WITH 2'-0" ROCK SOCKET	280	0	1271.2	1259.0	1244.0 (a), 1249.4 (b)	1244.0 (a)

**INDEX TO PLANS**

1. GENERAL PLAN
2. INDEX TO PLANS
3. DECK CONTOURS
4. FOUNDATION PLAN
5. ABUTMENT 1 DETAILS
6. ABUTMENT 7 DETAILS
7. BENT 2 DETAILS
8. BENT 3 DETAILS
9. BENT 4 DETAILS
10. BENT 5 DETAILS
11. BENT 6 DETAILS
12. TYPICAL SECTION
13. TOP DECK REINFORCEMENT
14. BOTTOM DECK REINFORCEMENT
15. PIPE PIN DETAILS
16. ARCHITECTURAL TREATMENT
17. TUBULAR BICYCLE RAILING DETAILS
18. LOG OF TEST BORINGS 1 OF 9
19. LOG OF TEST BORINGS 2 OF 9
20. LOG OF TEST BORINGS 3 OF 9
21. LOG OF TEST BORINGS 4 OF 9
22. LOG OF TEST BORINGS 5 OF 9
23. LOG OF TEST BORINGS 6 OF 9
24. LOG OF TEST BORINGS 7 OF 9
25. LOG OF TEST BORINGS 8 OF 9
26. LOG OF TEST BORINGS 9 OF 9

**STANDARD PLANS 2010**

A10A ABBREVIATIONS (SHEET 1 OF 2)  
 RSP A10B ABBREVIATIONS (SHEET 2 OF 2)  
 A10C LINE AND SYMBOLS  
 A10D LINE AND SYMBOLS  
 A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE

B0-1 BRIDGE DETAILS  
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 B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")  
 RSP B11-56 CONCRETE BARRIER TYPE 736

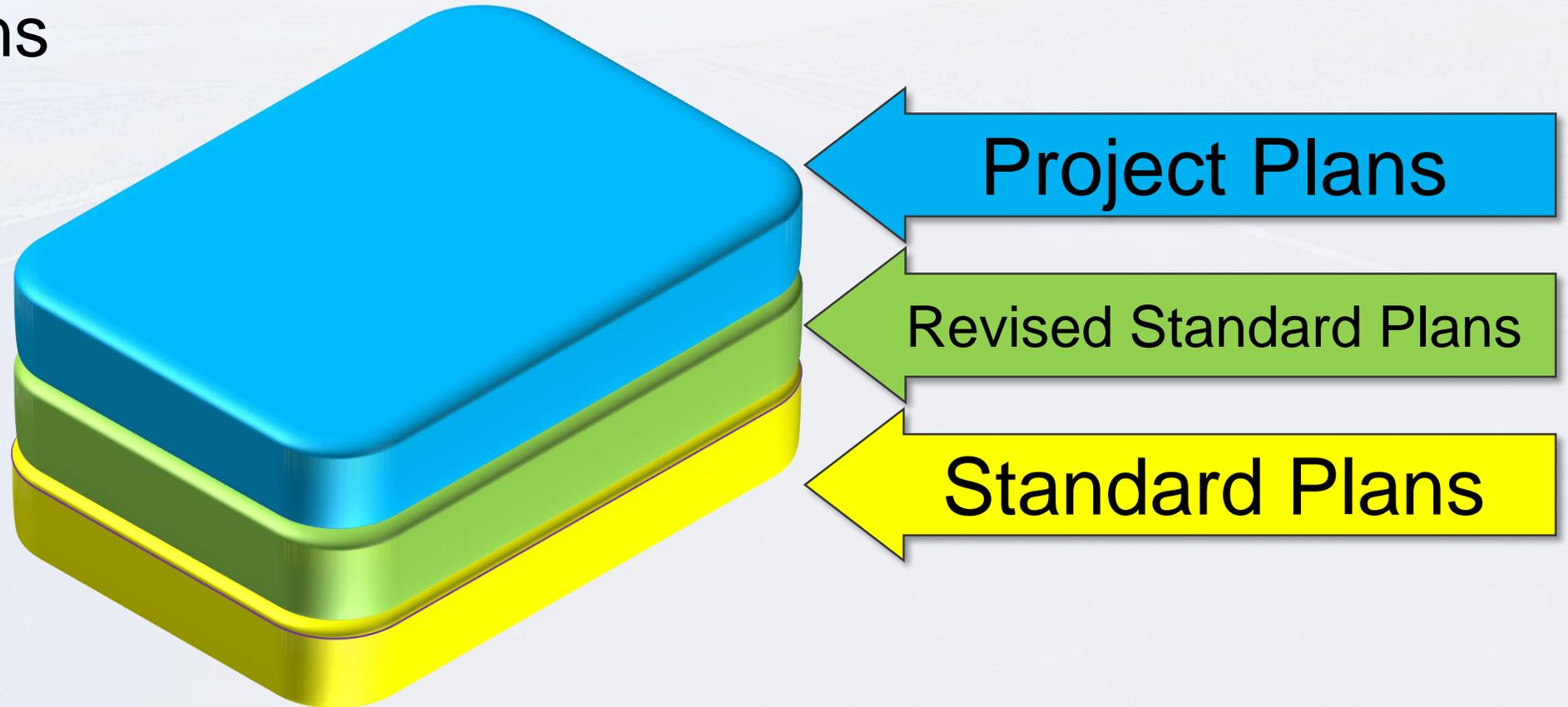
NOTES:

1. DESIGN TIP ELEVATIONS ARE CONTROLLED BY: (a) COMPRESSION, AND (b) LATERAL LOADS, RESPECTIVELY.

DESIGN BY G. SLOCUM	CHECKED BY K. SELVENTHIRAN	<b>STATE OF CALIFORNIA</b>	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 05-0091	<b>COLLINS BAR SIDEHILL VIADUCT No. 1</b>
DETAILS BY C. FIGUERRA	CHECKED BY K. SELVENTHIRAN	DEPARTMENT OF TRANSPORTATION	DESIGN BRANCH 2	POST MILE 12.53	<b>INDEX TO PLANS</b>
QUANTITIES BY G. SLOCUM	CHECKED BY K. SELVENTHIRAN	UNITS: 3577 PROJECT NUMBER & PHASE: 0200020151		CONTRACT NO.: 02-3E7904	SHEET 96 OF 149

# Contract Parts – Plan Summary

- Standard Plans
- Revised Standard Plans
- Project Plans



# Contract Parts – Supplemental Project Information

1. Governing ranking of Contract parts in descending order is:
  - 1.1. Special provisions
  - 1.2. Project plans
  - 1.3. Revised standard specifications
  - 1.4. Standard specifications
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  - 1.7. Supplemental project information

# Contract Parts – Supplemental Project Information

## ➤ 2-1.06B Supplemental Project Information (page 19)

### 2-1.06B Supplemental Project Information

The Department makes supplemental information available as specified in the special provisions.

## ➤ And Special Provision 2-1.06B

Add to section 2-1.06B:

The Department makes the following supplemental project information available:

### Supplemental Project Information

Means	Description
Included in the <i>Information Handout</i>	Department of Fish and Wildlife Streambed Alteration Permit
Available as specified in the <i>Standard Specifications</i>	Cross Sections
Available for inspection at the Transportation Laboratory	Rock Cores

# Contract Parts – Supplemental Project Information

- Includes other information that may be referenced by and described in the Contract such as:
  - Applicable permits, licenses, agreements & certifications (PLACs)
  - Cross-sections if there is earthwork
  - Applicable design reports
  - Log of test borings (these may be included in the plans, or geotechnical report)
  - Electronic data
  - Railroad information
  - Tunnel classification (tunnel safety orders)
  - Water availability

# Contract Parts - Example

- The sum of the parts equals the whole



# Contract Parts - The sum of the parts equals the whole

## Roadway Excavation

- Contract Bid Item – 190101 Roadway Excavation

## Contract Specifications

- Standard Specifications
  - General divisions
  - Division general, Section 17
  - Section general 19-1
  - Specific sections 19-2.02 Materials, 19-2.03 Construction, and 19-2.04 Payment
- Revised Standard Specifications (RSS)
  - As of May 18, 2016 there are no RSS
- Contract Special Provisions
  - May or may not have 19-2.03B

Example

# Contract Parts - The sum of the parts equals the whole

## Roadway Excavation

### Plans

- Contract Plans
  - Earthwork is shown on the typical cross sections, layouts, profiles, superelevation, and summary of quantities sheets
- Standard Plans
  - A62A
- Revised Standard Plans (RSPs)
  - As of May 18, 2016 there are no RSPs for earthwork
- Supplemental Project Information
  - Cross sections
  - Electronic earthwork data (e.g., 3D models, etc.)

Example

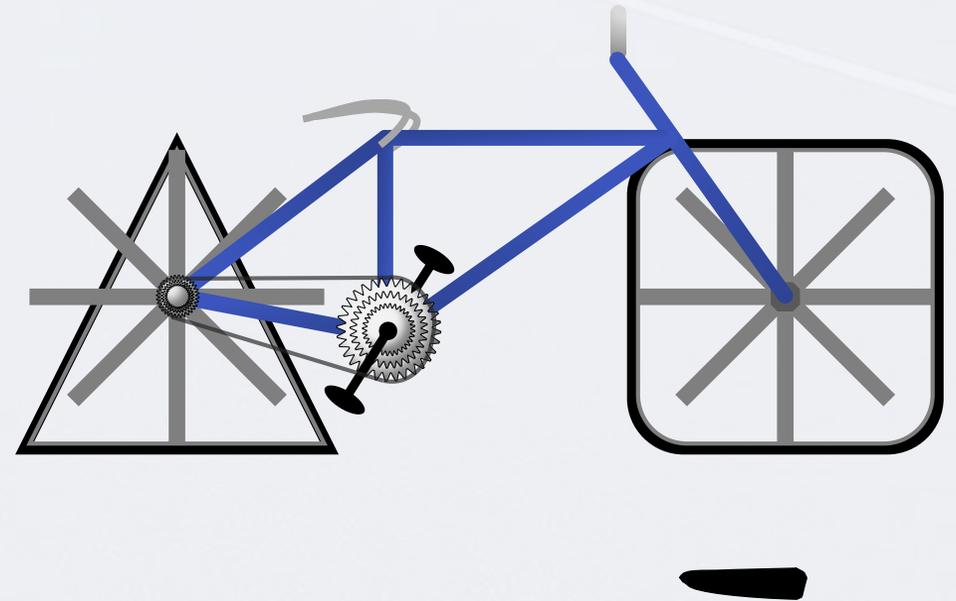
# Contract Parts

If you know how the parts fit

You will get this...



Instead of this...



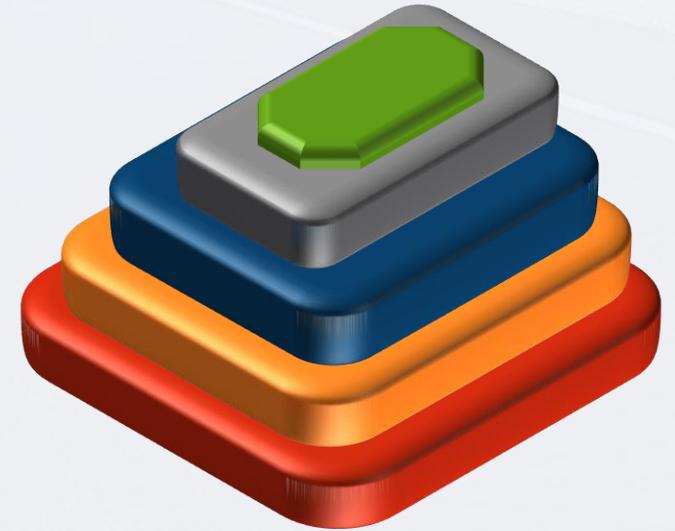
# Payment

How is work paid for?



# Payment – How is Work Paid for?

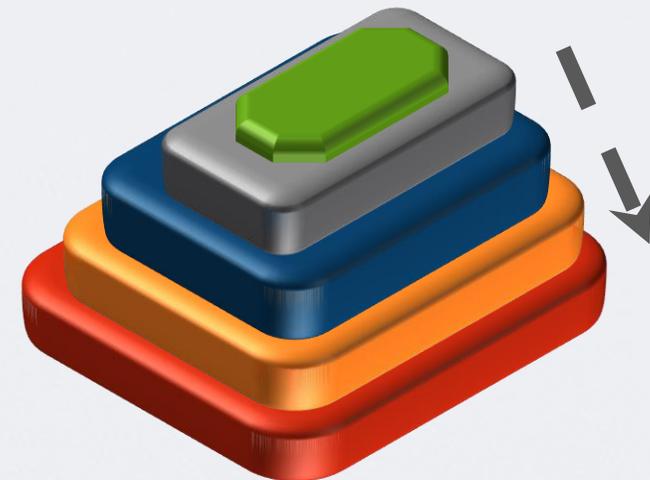
- The procedure for payment:
  1. Start with the Bid Item
  2. Read the applicable payment clauses:
    - Standard Specifications
    - Revised Standard Specifications
    - Special Provisions



# Payment – How is Work Paid for?

## ➤ Navigating the Payment Specifications

- Moving down the pyramid, is moving from the specific specifications to the more general specifications
  - The specific specifications govern over the general
  - The specific payment clauses modify the general payment clauses



# Payment – How is Work Paid for?

## DIVISION I GENERAL PROVISIONS

### 9 PAYMENT

#### 9-1.03 PAYMENT SCOPE

Payment is:

1. Full compensation for all work involved in each bid item shown on the Bid Item List by the unit of measure shown for that bid item
2. For the price bid for each bid item shown on the Bid Item List or as changed by change order with a specified price adjustment

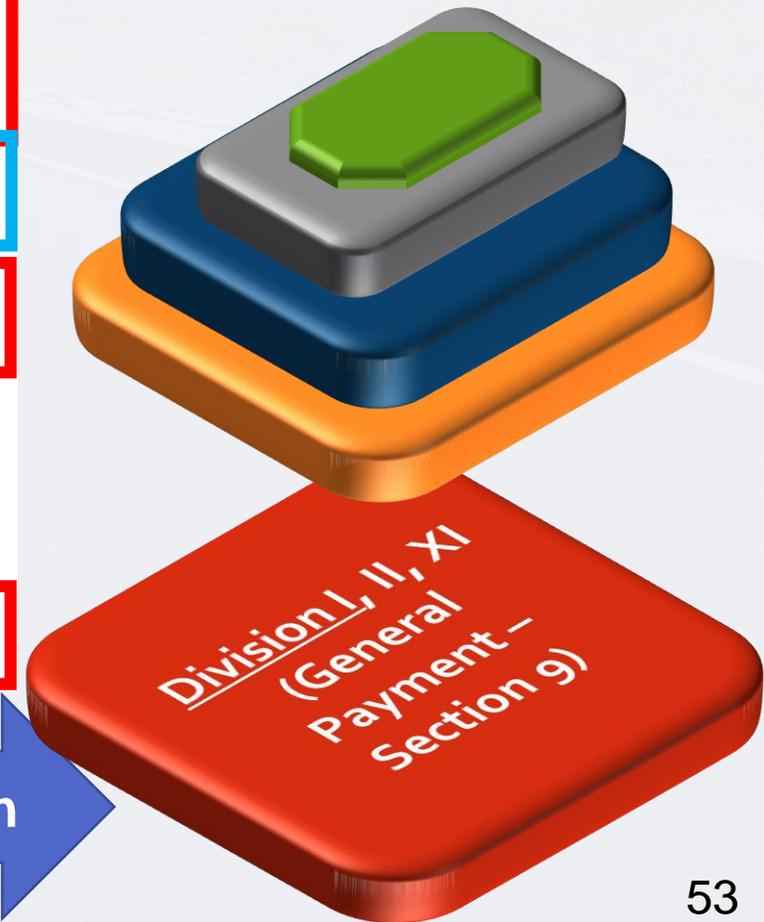
Full compensation for work specified in divisions I, II, and XI is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

Work paid for under one bid item is not paid for under any other bid item.

Payment for a bid item includes payment for work in sections referenced by the section set forth by that bid item.

General Division



# Payment – How is Work Paid for?

## DIVISION I GENERAL PROVISIONS

### 9 PAYMENT

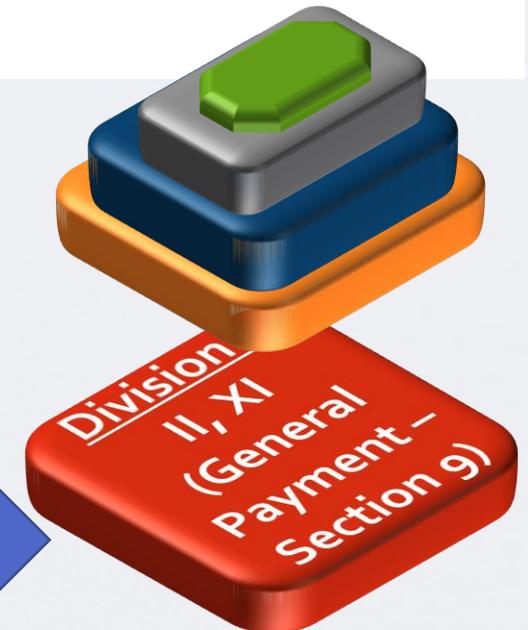
#### 9-1.03 PAYMENT SCOPE

Full compensation for work specified in divisions I, II, and XI is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

- No intention to not have bid items for Divisions I, II and XI.
- Submit a bid inquiry if you don't see a bid item for required work.

General Division



# Payment – How is Work Paid for?

## DIVISION I GENERAL PROVISIONS

### 9 PAYMENT

#### 9-1.03 PAYMENT SCOPE

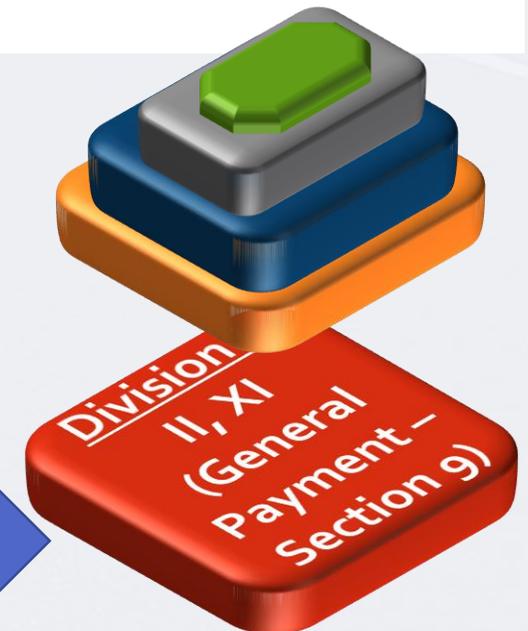
Full compensation for work specified in divisions I, II, and XI is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

What do you do when there is work shown on the plans but there is no bid item in the bid item list for Divisions III, IV, V, VI, VII, VIII, IX, X, & XII ?

The Resident Engineer should first ensure that the work shown on the plans is not referenced by another bid item section before writing the change order.

General Division



# Payment – How is Work Paid for?

## DIVISION I GENERAL PROVISIONS

### 9 PAYMENT

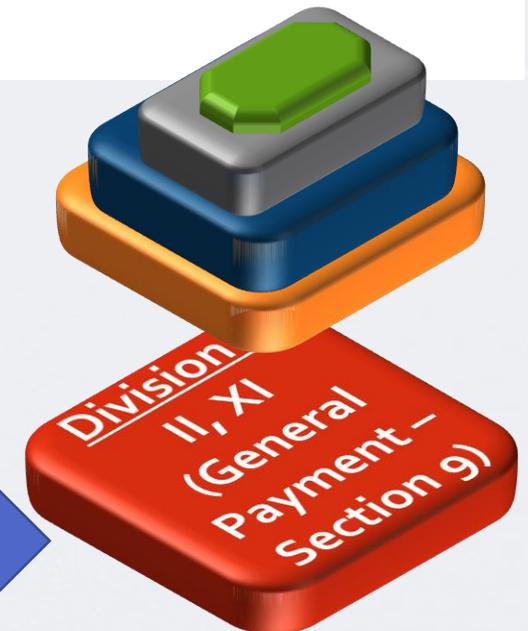
#### 9-1.03 PAYMENT SCOPE

Full compensation for work specified in divisions I, II, and XI is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

- Applies only when there is a contract bid item
  - 5-1.20E Water Supply
  - 7-1.02K(6)(j)(ii) Lead Compliance Plan
  - 13-1.01C(4)(d) Water Quality Annual Reports
  - 14-6.03D(1) Contractor Supplied Biologist

General Division



# Payment – How is Work Paid for?

## DIVISION I GENERAL PROVISIONS

### 9 PAYMENT

#### 9-1.03 PAYMENT SCOPE

Payment for a bid item includes payment for work in sections referenced by the section set forth by that bid item.

#### 86-1.02 MATERIALS

##### 86-1.02A General

Anchor bolts, anchor bars or studs, and nuts and washers must comply with section 75-1.02.

##### 86-1.02J Standards, Poles, Pedestals, and Posts

Standards for signals, lighting, and flashing beacons, poles for closed circuit television, pedestals for cabinets, posts for extinguishable message sign and posts for pedestrian push button assemblies must comply with section 56-3.

# Payment – How is Work Paid for?

## Example Division General Payment Sections

### 17 GENERAL

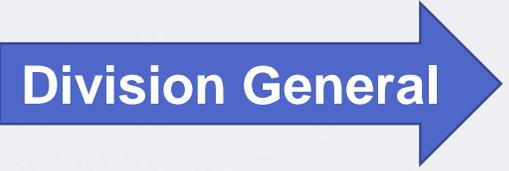
**17-1.04 PAYMENT**  
Not Used

**17-2.04 PAYMENT**  
Not Used

### 36 GENERAL

**36-1.04 PAYMENT**  
Not Used

**36-2.04 PAYMENT**  
The payment quantity for base bond breaker does not include the quantity used for overlaps.



# Payment – How is Work Paid for?

## Example Section General Payment Sections

19 EARTHWORK

19-1 GENERAL

19-1.04 PAYMENT

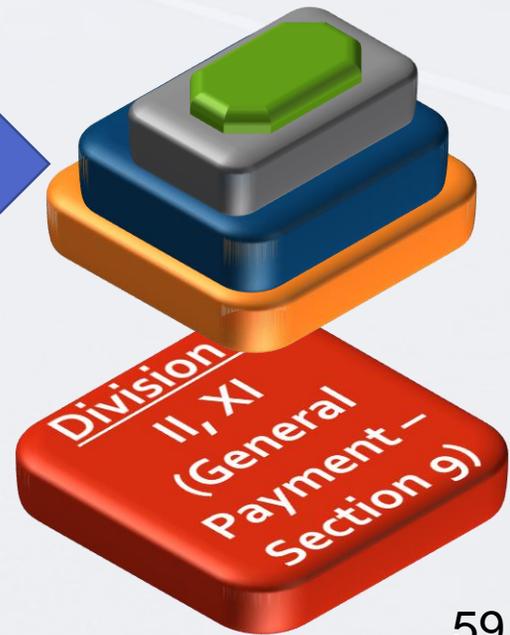
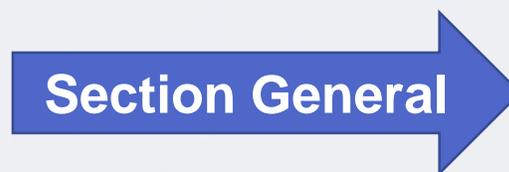
Not Used

39 ASPHALT CONCRETE

39-1 GENERAL

39-1.04 PAYMENT

Not Used



# Payment – How is Work Paid for?

## Specific Specification Payment Sections

### 19-2.04 PAYMENT

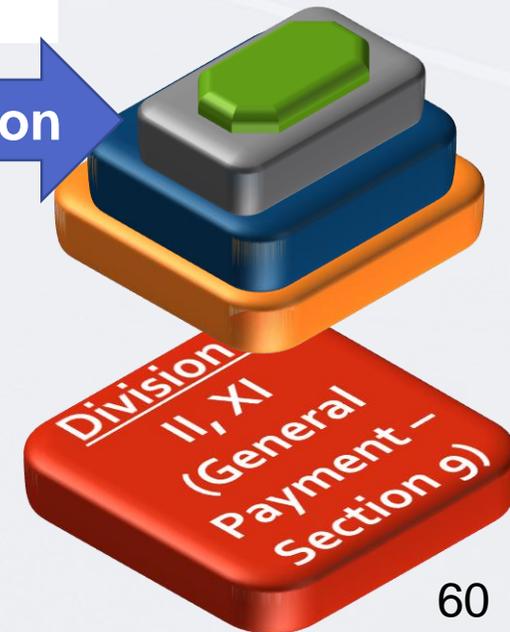
The payment quantity for roadway excavation is the volume of roadway excavation material, including volume of material involved in:

1. Embankment construction unless a separate bid item for constructing embankments is shown on the Bid Item List
2. Ditch or channel excavation if the bottom width of the ditch or channel is 12 feet or more
3. Local borrow excavation

The volume of material for roadway excavation is determined from the average end areas and the distances between them.

- Contain specifications about how to measure an item of work.
- Deductions for out of specification materials are no longer in the payment sections.

Specific Section



# Payment – What does Item Work Cover?

- Payment for an item covers all work in the General, Materials, and Construction sections of the specification for the bid item, unless it has been stated otherwise.
- Examples of where it is stated otherwise:

## 39-2.01A(3)(I) Data Cores

Section 39-2.01A(3)(I) applies if a bid item for a data core is shown on the Bid Item List.

## 39-2.01C(3)(d) Prepaving Inertial Profiler

Section 39-2.01C(3)(d) applies to existing asphalt concrete surfaces receiving an HMA overlay if a bid item for prepaving inertial profiler is shown on the Bid Item List.

## 39-2.01D Payment

The payment quantity for geosynthetic pavement interlayer is the area measured from the actual pavement covered.

Except for tack coat used in minor HMA, payment for tack coat is not included in the payment for hot mix asphalt.

# Payment – How is Work Paid for?

## Review – Start With Bid Items

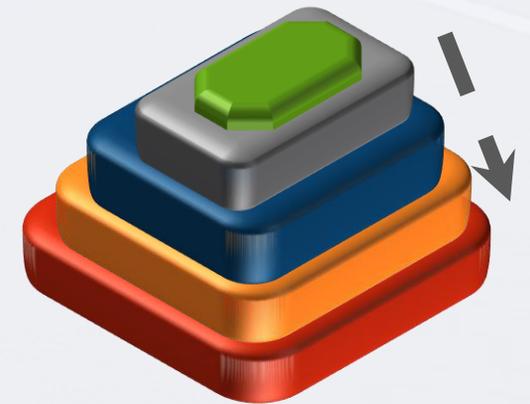
- Item Code(e.g., 190101)
  - First 2-digits of Item Code show the section of the contract specifications that apply
  - Check section 1-1.01 for exceptions
- Item Description
  - Shown on Bid Item List
  - Look for the description within the section identified by the item code
- Unit
  - How the work is measured
- Quantity
  - Estimated amount of work
- Price
  - Bid price



# Payment – How is Work Paid for?

## Review – Stepping Down the Pyramid

- Item on Bid Item List
  - Points to the specification section needed
  - Possible specific sections
  - General specifications are always included
  
- If a specific payment section is *not* found, go down the pyramid, the general sections still apply for any item in that section
  - If no specific or general section modifies the measurement or payment of the item, then the item is paid for as specified in section 9-1.03 Payment Scope.



# Payment – How is Work Paid for?

## 19-2.04 PAYMENT

The payment quantity for roadway excavation is the volume of roadway excavation material, including volume of material involved in:

1. Embankment construction unless a separate bid item for constructing embankments is shown on the Bid Item List
2. Ditch or channel excavation if the bottom width of the ditch or channel is 12 feet or more
3. Local borrow excavation

The volume of material for roadway excavation is determined from the average end areas and the distances between them.

If changed conditions or nature of a particular operation make determining the quantities of roadway excavation based on average end areas impractical, the payment quantity is the volume determined using a method best suited to obtain an accurate quantity.

## SECTION 19

## EARTHWORK

If the quantities of roadway excavation are determined from average end areas and centerline distances, a correction for curvature is not applied to quantities within the roadway prism. In determining the quantity of material outside the original roadway prism, where the roadway centerline is used as a base, a correction is made for curvature if the centerline radius is 1,000 feet or less.

The volume of material removed from a stockpile is determined from measurements of the stockpile before removal.

If the bottom of a ditch or channel is less than 12 feet wide, the payment quantity for ditch excavation is the volume determined from average areas and the distances between them.

19-1.04 PAYMENT  
Not Used

17-2.04 PAYMENT  
Not Used

17-1.04 PAYMENT  
Not Used

DIVISION II GENERAL CONSTRUCTION

DIVISION I GENERAL PROVISIONS

9 PAYMENT

9-1.03 PAYMENT SCOPE

Payment - Example

# Payment – How is Work Paid for?

## General Payment Specification

### 9-1.03 PAYMENT SCOPE

The Department pays you for furnishing the resources and activities required to complete the work. The Department's payment is full compensation for furnishing the resources and activities, including:

1. Risk, loss, damage repair, or cost of whatever character arising from or relating to the work and performance of the work
2. PLACs and taxes
3. Any royalties and costs arising from patents, trademarks, and copyrights involved in the work

The Department does not pay for your loss, damage, repair, or extra costs of whatever character arising from or relating to the work that is a direct or indirect result of your choice of construction methods

Payment is:

1. Full compensation for all work involved in each bid item shown on the Bid Item List by the unit of measure shown for that bid item
2. For the price bid for each bid item shown on the Bid Item List or as changed by change order with a specified price adjustment

Full compensation for work specified in divisions I, II, and XI is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

Work paid for under one bid item is not paid for under any other bid item.

Payment for a bid item includes payment for work in sections referenced by the section set forth by that bid item.

If an alternative is described in the Contract, the Department pays based on the bid items for the details and specifications not described as an alternative unless the bid item is described as an alternative, in which case, the Department pays based on the details and specifications for that alternative.

# Changes in 2015 Standards

Where did that specification go?



# Changes in 2015 Standards

- New Divisions and Division Name Changes
- New General Sections
- New Sections and Section Name Changes
- Changes Made to All Technical Sections
  - Quality Assurance
  - Table Format
- Section Changes – A Closer Look
  - Definitions and Submittals
  - Where did the content of Section 15 EXISTING FACILITIES go?
- Changes in Standard Plans



# New Divisions and Division Name Changes

2010	2015
DIVISION I GENERAL PROVISIONS	DIVISION I GENERAL PROVISIONS
DIVISION II GENERAL CONSTRUCTION	DIVISION II GENERAL CONSTRUCTION
DIVISION III GRADING	DIVISION III EARTHWORK AND LANDSCAPE
DIVISION IV SUBBASES AND BASES	DIVISION IV SUBBASES AND BASES
DIVISION V SURFACINGS AND PAVEMENTS	DIVISION V SURFACINGS AND PAVEMENTS
DIVISION VI STRUCTURES	DIVISION VI STRUCTURES

 Title Changed

 New Division

# New Divisions and Division Name Changes

2010	2015
DIVISION VII DRAINAGE	DIVISION VII DRAINAGE FACILITIES
DIVISION VIII MISCELLANEOUS CONSTRUCTION	DIVISION VIII MISCELLANEOUS CONSTRUCTION
DIVISION IX TRAFFIC CONTROL FACILITIES	DIVISION IX TRAFFIC CONTROL DEVICES
DIVISION X MATERIALS	DIVISION X ELECTRICAL WORK
DIVISION XI BUILDING CONSTRUCTION	DIVISION XI MATERIALS
	DIVISION XII BUILDING CONSTRUCTION

 Title Changed

 New Division

# New General Sections

## **DIVISION III EARTHWORK AND LANDSCAPE**

17 GENERAL

## **DIVISION IV SUBBASES AND BASES**

23 GENERAL

## **DIVISION V SURFACINGS AND PAVEMENTS**

36 GENERAL

## **DIVISION VI STRUCTURES**

45 GENERAL

## **DIVISION VII DRAINAGE FACILITIES**

61 GENERAL

# New Sections and Section Name Changes

Division	2010	2015
II	GENERAL CONSTRUCTION	
	11 QUALITY CONTROL AND ASSURANCE	11 WELDING
		16 TEMPORARY FACILITIES
III	GRADING	
	16 CLEARING AND GRUBBING	17 GENERAL
	17 WATERING	
IV	SUBBASES AND BASES	
	30-36 RESERVED	30 RECLAIMED PAVEMENT



Section Content Changed



Section Title Changed

# New Sections and Section Name Changes

Division	2010	2015
V	SURFACING AND PAVEMENTS	SURFACINGS AND PAVEMENTS
	39 HOT MIX ASPHALT	39 ASPHALT CONCRETE
	41 CONCRETE PAVEMENT REPAIR	41 EXISTING CONCRETE PAVEMENT
VI	STRUCTURES	
	56 SIGNS	56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES
	59 PAINTING	59 STRUCTURAL STEEL COATINGS
	60 RESERVED	60 EXISTING STRUCTURES
VII	DRAINAGE	DRAINAGE FACILITIES
	61 CULVERT AND DRAINAGE PIPE JOINTS	61 GENERAL
	62 ALTERNATIVE CULVERTS	
	71 RESERVED	71 EXISTING DRAINAGE FACILITIES



Section Content Changed



Section Title Changed

# New Sections and Section Name Changes

Division	2010	2015
VIII	MISCELLANEOUS CONSTRUCTION	
	78-79 RESERVED	78 INCIDENTAL CONSTRUCTION
	81 MONUMENTS	
IX	TRAFFIC CONTROL FACILITIES	TRAFFIC CONTROL DEVICES
		81 MISCELLANEOUS TRAFFIC CONTROL DEVICES
	82 MARKERS AND DELINEATORS	82 SIGNS AND MARKERS
	84 TRAFFIC STRIPES AND PAVEMENT MARKINGS	84 MARKINGS
	85 PAVEMENT MARKERS	85 RESERVED
	86 ELECTRICAL SYSTEMS	DIVISION X ELECTRICAL WORK
		86-88 RESERVED

 Section Content Changed

 Section Title Changed

# New Sections and Section Name Changes

Division	2010	2015
X/XI	DIVISION X MATERIALS	DIVISION XI MATERIALS
	87 MATERIALS - GENERAL	
	89 RESERVED	89 AGGREGATE
	92 ASPHALTS	92 ASPHALT BINDERS
	93 LIQUID ASPHALTS	93 RESERVED
	96 RESERVED	96 GEOSYNTHETICS
XI/XII	DIVISION XI BUILDING CONSTRUCTION	DIVISION XII BUILDING CONSTRUCTION
	99 BUILDING CONSTRUCTION	99 BUILDING CONSTRUCTION

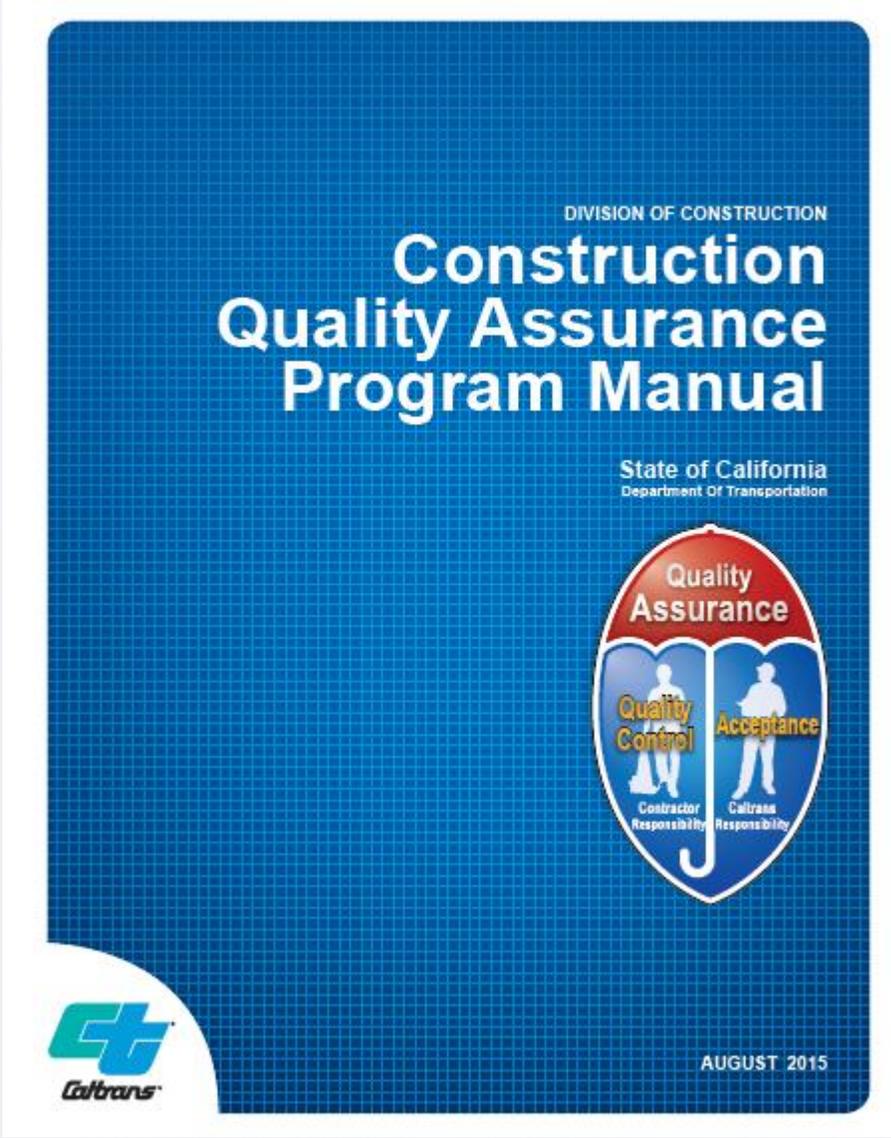


Section Content Changed



Section Title Changed

# Changes Made to All Technical Sections



# Changes – Quality Assurance

- Renamed to Quality Assurance from “Quality Control and Quality Assurance”
- Clarifies the distinction between the contractor’s and the department’s responsibilities
  - Quality Control - performed by the Contractor
  - Department Acceptance
    - Verification



# Changes – Quality Assurance

## ➤ Example

### 41-2.01D Quality Assurance

#### 41-2.01D(1) General

Reserved

#### 41-2.01D(2) Quality Control

Test grout compressive strength under California Test 551, Part 1 at 7-days with 12 seconds efflux time. Follow the procedures for moist cure. The 7-day compressive strength must be at least 750 psi.

#### 41-2.01D(3) Department Acceptance

For Department acceptance, the final pavement elevation must be within 0.01 foot of the required grade.

# Changes – Quality Assurance

- Quality Characteristic replaces other terms such as property, test, measurement, requirement etc.
- Typical Quality Characteristics for Quality Control and Acceptance

**Table 2.2.6. Typical Quality Characteristics for Quality Control and Acceptance**

<b>Material Type</b>	<b>Quality Characteristics Typically Measured for Quality Control</b>	<b>Quality Characteristics Typically Measured for Acceptance</b>
Soils and embankment	Moisture content and compaction	Moisture content and compaction
Aggregate base and subbase	Gradation, compaction, and moisture content	Gradation and compaction
Hot mix asphalt	Asphalt content, gradation, compaction, and smoothness	Asphalt content, gradation, compaction, and smoothness
Concrete pavement	Air content, gradation, slump, and smoothness	Air content, thickness, modulus of rupture, and smoothness
Concrete structures	Gradation, slump, air content, and compressive strength	Gradation, slump, air content, and compressive strength

# Changes – Table Format

- Tables now have standard format

**FDR—Cement Quality Characteristic Sampling Locations and Testing Frequencies**

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling location
Gradation	California Test 202	Test strip and 1 per lot	Loose mix after pulverizing and mixing
Moisture content	California Test 226	Test strip and 2 per day <sup>a</sup>	Loose mix after pulverizing and mixing <sup>b</sup>
Unconfined compressive strength	ASTM D1633	Test strip and 1 per 2 lots	Loose mix after pulverizing and mixing <sup>b</sup>
Laboratory maximum wet density	California Test 216	Test strip and 2 per day	Same location as a California Test 231 test
Relative compaction <sup>c</sup>	California Test 231	Test strip and 1 per lot	Compacted mix

# Changes – Table Format

- Tables now have standard format

Aggregate Quality		
Quality characteristic	Test method	Requirement
Aggregate gradation <sup>a</sup>	AASHTO T 27	JMF ± Tolerance
Percent of crushed particles	AASHTO T 335	95
Coarse aggregate (min, %)		
One-fractured face		
Two-fractured faces	AASHTO T 335	90
Fine aggregate (min, %)		
(Passing No. 4 sieve and retained on No. 8 sieve.)		
One-fractured face		70
Los Angeles Rattler (max, %)	AASHTO T 96	12
Loss at 100 Rev.		
Loss at 500 Rev.		
Sand equivalent (min.) <sup>b, c</sup>	AASHTO T 176	47
Flat and elongated particles (max, % by weight at 5:1)	ASTM D4791	10
Fine aggregate angularity (min, %) <sup>d</sup>	AASHTO T 304, Method A	45

# Changes in 2015 Standards – A Closer Look



# Changes in 2015 Standards – A Closer Look

## DIVISION I GENERAL PROVISIONS

### Section 1 GENERAL

- Sections 1-1.06 and 1-1.07 contain new ABBREVIATIONS and DEFINITIONS
- Action verbs for work to existing facilities such as adjust, modify, abandon, remove, and relocate are now defined in this section
- Examples of new abbreviations:
  - *MPQP* – *Material Plant Quality Program* published by the Department
  - SDS – safety data sheet (replaces MSDS, Section 1-1.06, footnote: Interpret a reference to MSDS as a reference to SDS under 29 CFR 1910.1200)
  - TRO – time-related overhead

# Changes in 2015 Standards – A Closer Look

## DIVISION I GENERAL PROVISIONS

### Section 5 CONTROL OF WORK

- Action submittal – Deleted the list of action submittals from Section 5-1.23B(1) because any submittal not listed or designated as an informational submittal is an action submittal

#### **5-1.23C Informational Submittals**

Informational submittals include:

1. Assignments
2. Certificates of compliance
3. Manufacturer's instructions not associated with drawing submittals
4. Notifications
5. PLACs
6. Subcontracts
7. QC test data, QC test results, and QC evaluation reports

# Changes in 2015 Standards – A Closer Look

## DIVISION I GENERAL PROVISIONS

### Section 5 CONTROL OF WORK

- Designation as an informational submittal will be in the specific specification section

#### **30-1.01C(2) Asphaltic Emulsion**

For each dilution of asphaltic emulsion used on the finished reclaimed pavement surface submit as an informational submittal:

1. Asphaltic emulsion type
2. Weight ratio of water to bituminous material in the original asphaltic emulsion
3. Weight of asphaltic emulsion before diluting
4. Weight of added water
5. Final dilution weight ratio of water to asphaltic emulsion

# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 10 GENERAL

- 10-1.02 Work Sequencing
  - 10-1.02B Traffic Elements
  - 10-1.02C Landscaping and Irrigation Facilities
  - 10-1.02D Traffic Stripes, Pavement Markings, and Pavement Markers
  - 10-1.02E Excavation
- 10-4 Water Usage
- 10-5 Dust Control
- 10-6 Watering
- Sustainability (LEED)



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 11 WELDING

- Now General Specifications for Welding
- 2010 Section 11-1.02 Quality Control Manager moved to Section 6-2 Quality Assurance
- 2010 Section 11-2 Precast Concrete Member requirements moved to 2015 Section 90-4 Precast Concrete



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 13 WATER POLLUTION CONTROL

- Residue Collection from grooving and grinding moved to Sections 13-4.03D(3) and 13-4.03E(7) from Section 42



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 14 ENVIRONMENTAL STEWARDSHIP

- Special provisions added into standards:
  - Species Protection
  - Contractor-Supplied Biologist
  - Wetland Protection
  - Hazardous Material
- Most of Dust Control moved from 14-9 to 10-5
  - Exception: 14-11.08E Dust Control for hazardous waste concentrations of ADL



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 14 ENVIRONMENTAL STEWARDSHIP

- Trash pickup requirements were consolidated into Section 14-10 Solid Waste Disposal and Recycling
- Hazardous Waste and Contamination are in Section 14-11



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 15 EXISTING FACILITIES

- General Construction Specifications
- Specifications that apply to multiple divisions
- Reduced to 2-pages from 36-pages by moving content to other related technical sections, for example:
  - Remove Pavement moved to Section 39-3 Existing Asphalt Concrete
  - Concrete Removal moved to Section 41 Existing Concrete Pavement
  - Bridge Removal moved to Section 60 Existing Structures



# Changes in 2015 Standards – A Closer Look

## DIVISION II GENERAL CONSTRUCTION

### Section 16 TEMPORARY FACILITIES

- New section for constructing temporary facilities
- It includes facilities such as:
  - Temporary Pedestrian Facilities
  - High-Visibility Fences (temporary fence type ESA)
  - Temporary Construction Mats
  - Job Site Water Control



# Changes in 2015 Standards – A Closer Look

## DIVISION III EARTHWORK AND LANDSCAPE

### Section 17 GENERAL

- Division III is now called Earthwork and Landscape
- Section 17 GENERAL is now the general section for this division
  - Section 17 now applies to Sections 18, 19, 20, 21, and 22
  - Clearing and Grubbing is in Section 17-2



# Changes in 2015 Standards – A Closer Look

## DIVISION IV SUBBASES AND BASES

### Section 30 RECLAIMED PAVEMENT

- Pulverized Roadbed
- Full Depth Reclamation
- Crack and Seal



# Changes in 2015 Standards – A Closer Look

## DIVISION V SURFACINGS AND PAVEMENTS

### Section 36 GENERAL

#### ➤ New Section 36 GENERAL

- Applies to all sections in the division
- Now includes:
  - Preconstruction Meetings
  - Base Bond Breaker
  - Residue Containing Lead from Paint and Thermoplastic
  - Pavement Smoothness

**Before Start of Work**



# Changes in 2015 Standards – A Closer Look

## DIVISION V SURFACINGS AND PAVEMENTS

### Section 36 GENERAL

#### ➤ Pavement Smoothness

#### 36-3 PAVEMENT SMOOTHNESS

##### 36-3.01 GENERAL

##### 36-3.01A Summary

Section 36-3 includes specification

#### SECTION 39

##### 36-3.01B Definitions

Reserved

##### 36-3.01C Submittals

##### 36-3.01C(1) General

Reserved

##### 36-3.01C(2) Inertial Profiler Certi

At least 5 business days before sta

1. Inertial profiler certification issued by the Department
2. Operator certification for the inertial profiler issued by the Department
3. Manufacturer's instructions and test procedures for calibration and verification of the inertial profiler

Within 2 business days after cross-correlation testing, submit a ProVAL profiler certification analysis report for the test results to the Engineer and to the electronic mailbox address [smoothness@dot.ca.gov](mailto:smoothness@dot.ca.gov).

##### 36-3.01C(3) Inertial Profiler Data

#### 39-2.01A(4)(i)(iii) Pavement Smoothness

For a pavement surface determined using an inertial profiler, the pavement surface must:

ASPHALT CONCRETE  
Mean Roughness Index greater than 160 in/mi following table for a 0.1 mile

#### HMA Pavement Smoothness Acceptance Criteria

HMA thickness	Mean Roughness Index requirement
> 0.20 foot	60 in/mi or less
≤ 0.20 foot	75 in/mi or less

Note: These requirements do not apply to the OGFC surface. Smoothness requirements for OGFC are specified in section 39-2.04A(4)(c)(iii).

#### SECTION 39

#### ASPHALT CONCRETE

#### HMA Pavement Smoothness Acceptance Criteria

HMA thickness	Mean Roughness Index requirement
> 0.20 foot	60 in/mi or less
≤ 0.20 foot	75 in/mi or less

Note: These requirements do not apply to the OGFC surface. Smoothness requirements for OGFC are specified in section 39-2.04A(4)(c)(iii).

# Changes in 2015 Standards – A Closer Look

## DIVISION V SURFACINGS AND PAVEMENTS

### Section 39 ASPHALT CONCRETE

- 39-2.01C(5) Pavement Edge Treatment
  - Safety Edge is now Tapered Edge
  - Not a separate bid item



# Changes in 2015 Standards – A Closer Look

## DIVISION VI STRUCTURES

### Section 56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES

- Overhead Sign Structures
- Standards and Poles



# Changes in 2015 Standards – A Closer Look

## DIVISION VI STRUCTURES

### Section 59 STRUCTURAL STEEL COATINGS

- Was about painting various materials
- Now only includes specifications for coating steel
- Painting and staining timber and concrete moved to section 78 Incidental Construction



# Changes in 2015 Standards – A Closer Look

## DIVISION VI STRUCTURES

### Section 60 EXISTING STRUCTURES

- 60-2 Structure Removal
- 60-3 Structure Rehabilitation
  - Bridge Deck Treatments
  - Deck Overlays
- 60-4 Modifying Structures
  - Refinishing Bridge Decks
  - Access Openings
  - Coring Concrete
  - Steel Column Casings
  - Bridge Joint Restrainers



# Changes in 2015 Standards – A Closer Look

## DIVISION VI DRAINAGE FACILITIES

### Section 61 GENERAL

- Combined previous Sections 61 and 62
- Now includes
  - Joints
  - Alternative Culverts
  - Concrete Backfill
  - Temporary Culverts



# Changes in 2015 Standards – A Closer Look

## DIVISION VI DRAINAGE FACILITIES

### Section 71 EXISTING DRAINAGE FACILITIES

- 71-2 Remove Drainage Facilities
- 71-3 Rehabilitate Drainage Structures
  - Full Culvert Voids
  - Contact Grouting
  - Invert Paving
  - Welded Steel Pipeliners
  - Cured-in-Place Pipeliners
- 71-4 Modifying Drainage Structures
  - Pipes
  - Inlets, Manholes, and Risers
- 71-5 Adjust Drainage Structures



# Changes in 2015 Standards – A Closer Look

## DIVISION VIII MISCELLANEOUS CONSTRUCTION

### Section 78 INCIDENTAL CONSTRUCTION

- Survey monuments
- Miscellaneous coatings
  - Painting timber, concrete, electrical material
  - Staining concrete, shotcrete, galvanized surfaces, textured concrete, rock
  - Anti-graffiti coatings
- Parking bumpers
- Resetting and relocating mailboxes
- Obliterating roads and detours



# Changes in 2015 Standards – A Closer Look

## DIVISION IX TRAFFIC CONTROL DEVICES

### Section 81 MISCELLANEOUS TRAFFIC CONTROL DEVICES

- Now Includes
  - Delineators
  - Pavement markers
  - Existing pavement markers and delineators



#### **81-8.03B Remove Pavement Markers**

Remove pavement markers and the underlying adhesive by methods that cause the least possible damage to the pavement or surfacing.

When removing ceramic-type pavement markers, use screens or other protective devices to contain fragments.

Remove fragments from the removal work before opening the lanes to traffic.

# Changes in 2015 Standards – A Closer Look

## DIVISION IX TRAFFIC CONTROL DEVICES

### Section 82 SIGNS AND MARKERS

- Signs were moved here, Delineators moved out
- Includes:
  - Sign panels
  - Roadside signs
  - Sign overlays
  - Markers
  - Existing roadside signs and markers



# Changes in 2015 Standards – A Closer Look

## DIVISION IX TRAFFIC CONTROL DEVICES

### Section 84 MARKINGS

- Traffic Stripes and Pavement Markings
- Now Includes
  - 84-3 Contrast Treatments
  - 84-8 Rumble strips
  - 84-9 Existing Markings
    - Remove Traffic Stripes and Pavement Markings
    - Remove Contrast Treatment



# Changes in 2015 Standards – A Closer Look

## DIVISION X ELECTRICAL WORK

### Sections 86 GENERAL, 87 ELECTRICAL SYSTEMS, 88 RESERVED

- Electrical Work is now a division
- New sections include:
  - 86 GENERAL specifications for equipment and material requirements
  - 87 ELECTRICAL SYSTEMS general construction, and specific requirements for electrical systems
  - 88 Reserved for future expansion
- 5 Standard Special Provisions for the new electrical standard specifications



# Changes in 2015 Standards – A Closer Look

## DIVISION X ELECTRICAL WORK

### Sections 86 GENERAL, 87 ELECTRICAL SYSTEMS, 88 RESERVED

- Some Electrical work has been moved to sections:
  - 10-1.02B Traffic Elements
  - 12-3.33 Temporary Signal Systems
  - 12-3.34 Temporary Flashing Beacon System
  - 48-2.03E Falsework lighting
  - 56-3.02 Steel Standard, Poles, Pedestals, and Posts
  - 56-3.05 High Mast Lighting Assembly Poles
  - 77-4 Emergency Vehicle Detector
  - 78-4.08 Painting Electrical Material



# Changes in 2015 Standards – A Closer Look

## DIVISION XI MATERIALS

### Section 89 AGGREGATE

#### DIVISION XI MATERIALS

##### 89 AGGREGATE

##### 89-1 GENERAL

###### 89-1.01 GENERAL

Section 89 includes general specifications for furnishing aggregate.

###### 89-1.02 MATERIALS

Not Used

###### 89-1.03 CONSTRUCTION

Not Used

###### 89-1.04 PAYMENT

Not Used

89-2–89-4 RESERVED



# Changes in 2015 Standards – A Closer Look

## DIVISION XI MATERIALS

### Section 93 RESERVED

- What Happened to 2010 Section 93 Liquid Asphalts?

### 93 LIQUID ASPHALTS

#### 93-1.01 GENERAL

##### 93-1.01A Summary

Section 93 includes specifications for mixing and applying liquid asphalt.

##### 93-1.01B Submittals

Submit manufacturer's materials data for any materials shipment. Data must show results from tests.

If liquid asphalt is used before sampling and testing submit a certificate of compliance for each shipment to the job site. Certificates of compliance must include:

1. Shipment number and shipment date
2. Source refinery, consignee, and destination
3. Type and description of material with specific gravity and quantity
4. Contract or purchase order number
5. Signature by the manufacturer of the material and a statement that the material complies with the Contract

# Changes in 2015 Standards – A Closer Look

## DIVISION XII BUILDING CONSTRUCTION

### Section 99 BUILDING CONSTRUCTION

- Building specifications are now nonstandard special provisions
- The 2010 building specs were canceled when the 2015 Standards were posted



# Changes in Standard Plans

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

STANDARD  
PLANS  
2015



# Changes in Standard Plans

- The abbreviations have been consolidated and moved to the front of the *Standard Plans*
  - Landscape, Structures, Electrical, and Roadway are all contained in sheets A3A – A3C
  - Symbols are not included in this consolidation
    - General symbols are on sheets A10A – A10H
    - Landscape symbols - sheet H1
    - Electrical symbols - sheets ES-1A – ES-1C
- Electrical standard plans updated
  - Battery Backup Systems assembly connection details are now included in the standard plan sheets ES-3I – ES-3L
- Pavement structure drainage sheets moved from D99 series to P50 – P53

# Changes in 2015 Standards

- New Divisions and Division Name Changes
- New General Sections
- New Sections and Section Name Changes
- Changes Made to All Technical Sections
- Section Changes – A Closer Look
- Changes in Standard Plans



# Questions?

**2015.standards@dot.ca.gov**

