

**MICHIGAN DESIGN MANUAL  
ROAD DESIGN**

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# MICHIGAN DESIGN MANUAL ROAD DESIGN

## CHAPTER 11

### SPECIFICATIONS AND SPECIAL PROVISIONS

#### 11.01

#### GENERAL INFORMATION

11.01.01 (revised 11-26-2018)

#### References

- A. Michigan Manual of Uniform Traffic Control Devices, Current Edition
- B. Standard Specifications for Construction, Current Edition
- C. 23 CFR 635
- D. FHWA Technical Advisory HAIM-20 March 20, 2010
- E. US Government Printing Office Style Manual

11.01.02 (revised 10-17-2022)

#### Overview

Specifications are documents that detail directions, provisions, and requirements for the work to be performed. Specifications provide a description of the work, construction methods, materials, and the method used to measure and pay for work items.

Federal law requires permanently incorporated steel or iron materials and/or products, and manufactured products (containing 90 percent or more steel or iron) meet the requirements of 23 CFR 635.410. Federal law also requires any permanently incorporated construction materials meet the requirements of the 2021 Infrastructure Investment and Jobs Act (IIJA). See section [11.01.07](#) Buy America Requirements.

A designer's first choice should be to utilize the Standard Specifications and pay items already established.

If a standard specification and pay item does not exist to cover the necessary item of work, the designer should look for a special provision of the types listed herein that fit the situation or require only slight modification.

If none of these sources covers the specific work, one could possibly be a starting point in developing a new special provision. As a last resort, the designer may need to write a new special provision to cover the necessary item of work.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.01.02 (continued)

The Quality Assurance Section maintains the Errata version of the Standard Specifications for Construction, Supplemental Specifications, and Frequently Used, Recommended, Template, Previously Approved, and Real Estate Special Provisions on the Previously Approved Special Provision list. The Innovative Contracting Section maintains the Innovative Contracting Special Provisions on the Previously Approved Special Provision list. The ITS Programming Area maintains the ITS Special Provisions on the Previously Approved Special Provision list. These documents can be found at the MDOT web site links:

[Standard Specifications for Construction](#)  
[Supplemental Specifications](#)  
[Frequently Used Special Provisions](#)  
[Previously Approved Special Provisions](#) - A drop down box allows you to select the following groupings:

- Recommended
- Templates
- Previously Approved
- Real Estate Demolition
- Innovative Contracting
- ITS

### 11.01.03

#### Definitions

The following definitions are provided:

- A. Standard Specifications for Construction - The book of specifications approved for general application and repetitive use.
- B. Supplemental Specifications - Detailed specifications that add to or supersede the Standard Specifications for Construction.
- C. Special Provisions - Revisions and additions to the Standard and Supplemental Specifications which are applicable to an individual project and are shown on the web in the groupings listed herein.
- D. Pay Item - Term used to describe an item of work in the contract.
- E. Method of Measurement - The method used to measure material used or work done on a project. Measurement can be by the unit or lump sum, or included in the measurement for other items.

### 11.01.04

#### Order of Precedence

See subsection 104.06 of the [Standard Specifications for Construction](#) for the order of precedence if plan/proposal information differs or conflicts.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

**11.01.05** (revised 11-26-2018)

### **Roles and Responsibilities**

The following definitions are provided to clarify the roles and responsibilities in relation to Special Provisions:

- A. Project Manager - MDOT person responsible for the design phase of the project, including the development and review of special provisions for compliance with the special provision guidelines prior to submitting to Quality Assurance Section for review.
- B. Special Provision Author - Designer (MDOT or consultant) as determined by the Project Manager who drafts a special provision for a project. The Project Manager is the "author" of record for special provisions drafted by consultants.
- C. Special Provision Reviewer - A person(s) assigned by the Quality Assurance Section to review and provide feedback on special provisions. Assignments are based on their technical knowledge.
- D. Quality Assurance Section - Oversees the special provision review and approval process. Often performs the second review with an emphasis on conflicts with the Standard Specifications for Construction; use of appropriate pay items and general organization of the information. Also oversees determination of which special provisions will be placed on the various maintained lists.

**11.01.06** (revised 11-26-2018)

### **Location of Additional Information**

Additional information regarding supplemental specifications and, special provisions is available on the Design Division Plan Development web site including:

- Frequently Asked Questions
  - ProjectWise Unique SP Search
  - Special Provision Technical Reviewers Listing
  - Special Provision Training
  - Special Provision Formatting Instructions
  - Special Provisions using "Modified" or "Special"
  - Tracking Changes Using ProjectWise and Microsoft Word for Special Provisions
- Special Provision Identification Codes and Names of Users under each Code

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.01.07 (added 10-17-2022)

#### Buy America Requirements

Federal law requires compliance with Buy America requirements for any project that uses federal dollars in any phase of the project. There are three key elements to Buy America compliance.

- A. All steel or iron products and manufacturing processes must meet CFR 635.410. This includes all processes such as cutting, bending, coating, etc. Items falling into this category included but are not limited to, guardrail, reinforcing steel, mast arms, steel beams, etc.
- B. All manufactured products equal to or greater than 90 percent steel or iron must meet CFR 635.410.
- C. Construction materials permanently incorporated into a project must have the final manufacturing process and the immediately preceding manufacturing stage occur within the United States. Construction materials are defined as follows.

### 11.01.07 (continued)

1. Non-ferrous metals;
2. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables).
3. Glass (including optic glass);
4. Lumber; or
5. Drywall.

Therefore, if specific manufactured products or construction materials are called out in a special provision, a document stating whether at least one of the listed manufactured products and/or construction materials can meet these requirements must be included in the supporting documents folder in ProjectWise.

If a project has no federal funds in any phase of the project, and will not use any federal dollars in construction, the owner (MDOT or local agency) must document there is no federal funding in any phase of the project including construction, and the FUSPs 105A and 105B may be removed from the proposal. The supporting documentation is to be placed in the supporting document folder in ProjectWise.



# MICHIGAN DESIGN MANUAL

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### 11.02

#### SPECIAL PROVISIONS

**11.02.01** (revised 11-26-2018)

##### Types of Special Provisions

Special provisions provide revisions and additions to the Standard and Supplemental Specifications which are applicable to individual projects. Use a special provision when work is required that is not covered by the Standard or Supplemental Specifications and a new pay item is needed and/or the construction method, the materials, and/or the basis of payment is revised.

The following sections describe a variety of Special Provision categories.

##### A. Frequently Used Special Provisions (FUSP)

Special provision used on a regular basis with stable requirements applicable to a number of projects. All FUSP's are reviewed and approved by MDOT and the FHWA.

##### B. Unique Special Provisions

Special provision written specifically to cover work not covered in the Standard or Supplemental Specifications for a specific project.

### 11.02.01 (continued)

#### C. Template Special Provisions

An approved special provision with stable requirements but with project specific information left out to be added later by the Project Manager.

These special provisions have been standardized to cover an item of work but must be modified to fit a specific project. Some of these may be used without further review and some require review using the regular special provision review and approval process. To create a template special provision, an electronic copy must be sent to the Quality Assurance Section. Designers should follow the instructions listed at the top of the template document and proceed accordingly.

#### D. Recommended Special Provisions

An approved special provision containing requirements thought to provide the best results for a specific type of work or construction practice.

The majority of these have been developed by reviewing duplicate special provisions approved for use over several years and selecting the best practices and incorporating them into a single special provision which is posted to the website as a portable document format (pdf) file. In order to provide continuity in the specifications for similar work and to make more efficient use of the review and approval process, designers are asked to use the recommended special provisions whenever possible. Recommended special provisions are intended to be used without revision and no further review and approval is required.

## **MICHIGAN DESIGN MANUAL ROAD DESIGN**

### **11.02.01 (continued)**

#### **Types of Special Provisions**

##### **E. Previously Approved Special Provisions**

Unique project specific special provision that has been reviewed and approved for use in one project yet may be used on other projects without change or as a starting point for a new special provision.

Use these documents whenever possible to reduce the variation in descriptions of work, construction and measurement and payment for similar items of work.

##### **F. ITS Approved Special Provisions**

These are special provisions developed and approved for use on Intelligent Transportation System projects. These special provisions are written and reviewed by the ITS Program Area and only reviewed for format as part of the regular review process. These special provisions are added to or removed from the list by the ITS Program Area.

### **11.02.01 (continued)**

##### **G. Real Estate Demolition Special Provisions**

Occasionally it is necessary to place the demolition of certain buildings or features on parcels into trunkline projects. These special provisions have been developed to make it easier for the real estate section to develop the correct special provisions and add them to the trunkline projects.

##### **H. Innovative Contracting Special Provisions**

Due to the use of innovative contracting methods which are different from our standard process certain special provisions are developed to allow designers to create the necessary special provisions or use already approved special provisions in their projects depending on the type of innovative contracting method being used. These special provisions are added to or removed from the list by the Innovative Contracting Section.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

**11.02.02** (revised 6-26-2023)

### Special Provision Development

Designers are asked to always check for a template, recommended and/or previously approved special provision to use first. If you are not able to find one suitable on the web site, send an email to;

[MDOT-SpecialProvision@michigan.gov](mailto:MDOT-SpecialProvision@michigan.gov)

to request a search for a suitable special provision.

Many approved provisions are posted to the web in Microsoft Word (rtf) format and may be reused or revised (and in some instances **must** be revised) to include project specific details. Already approved special provisions must be reviewed carefully to make sure all requirements are applicable to the project.

If no changes are required, simply insert the approved special provision in the proposal package. Do not change the [source code](#), [approval code](#), or [identification code](#).

If any change is required then the special provision must be resubmitted for review and approval. Use the track changes feature of Microsoft Word to make any revisions being sure to leave the source code, approval code and the identification code for the previously approved version, to allow the reviewer to check the original version.

It is **unacceptable** to make any changes to a document without resubmitting for review and approval.

**11.02.02 (continued)**

### A. Exempt Special Provisions

Due to the nature of certain special provisions, review and approval by Lansing central office staff engineers is not always a value added process. These documents are instead reviewed and approved at the Region/TSC level or as identified in the listing below. The approved format and organization of content, as described herein, **must** still be followed and the appropriate source code and approval code and approval date is required. At this time only, the following types of special provisions are exempt from the Lansing central office review and approval process:

- Maintaining Traffic, except as modified in [Section 11.06.01](#)
- Maintaining Waterways
- Intelligent Transportation System are reviewed by the ITS Program Area but should be submitted like any other special provision
- Municipal Water or Sewer System (when developed with input from the Municipal Utilities Unit of the Design Division), submit like all other Special Provisions and the Municipal Utilities Unit will ensure they have been approved
- Railroad Insurance, will be approved by the Office of Rail
- Rest Area Buildings, Pump House Buildings, and Operator House Buildings on Bascule bridges and Lift bridges will be reviewed by an as needed consultant. Submit all special provisions through ProjectWise for the project and they will be assigned to the Project Manager of the as needed consultant.

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### 11.02.03 (revised 3-23-2020)

#### Page Layout

##### A. Document Format

The following guidelines must be followed when developing a special provision to give a uniform appearance to proposals. Special provisions submitted for review and approval that do not follow the approved document format will be returned to the submitter for reformatting before the approval process begins.

1. Margins – Use 1 inch margins.
2. Fonts - All headers use Arial 12 point, special provision text uses Arial 11 point and tables and figures use Arial 10 point.
3. Tabs and Indents - Use 0.25 inch intervals. Automated numbering or labeling of subsections must **not** be used.
4. Bold Face - The use of bold face font is limited to the special provision title, section labels and names, table and figure titles and pay items in the measurement and payment section only.

### 11.02.03 (continued)

#### B. Title Block, Headers, and Footers

1. Document Headers/Footers - On the first page the document header must contain the Identification Code (see below). Right justify the Identification Code.

On any remaining pages the document header contains the secondary header.

All headers and footers should begin 0.5 inches from the edge of the page.

2. Identification Code - The Identification Code naming convention shown below must be applied to all special provisions, with the exception of Special Provisions for Maintaining Traffic.

When using a special provision that has been approved and assigned an Identification Code, the file must **not** be revised unless the special provision is resubmitted for re-approval.

The Identification Code must be defined by the Project Manager prior to submittal for approval, to the extent possible. However, the last four digits within the parentheses are assigned by the Specification Engineer upon approval. A sample Identification code is as follows:

12DS819(A055)

Digits 1 and 2 designate the year of the Standard Specifications for Construction book that the special provision has been written against.

Letters 3 and 4 designate the code for the type or origin for the special provision. Type codes are presented on the next page.

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.02.03 (continued)

#### Page Layout

Digits 5, 6 and 7 designate the section of the Standard Specifications for Construction book in which the work in the special provision is covered. If it can be attributed to more than one section use the one that is most closely related to the work in the special provision.

Within the parentheses is a four digit alpha-numeric code assigned by the Specification Engineer to identify the special provision as a unique document for tracking purposes.

The first digit is an Arabic letter followed by the number 005 for the first special provision by that area and increasing by 5 for each successive special provision approved for that area. These will be assigned as the Quality Assurance Section approves the special provision.

3. Title Block - The Department name and the special provision title are included in the Title Block at the top of the first page of document, but not actually in the document header as defined by Microsoft Word. Center this information on the page.

Make the special provision title short enough to fit on one line if possible and provide a clear idea of the content and the subsection of the standard specifications being altered. If possible, make the title match the pay item affected or established by the special provision in the title. Do not use any abbreviations in the title.

### 11.02.03 (continued)

4. Approval Header - Locate below the Title Block only on the first page. Includes the source code, page number, and approval code.
5. Page Numbers - The page number must appear at the center of the page in the approval header on the first page. The total number of pages in the special provision includes any graphics, appendices or forms which are part of the document. The word "Page" should not be included when setting up page numbers.
6. Approval Code - The approval code indicates that the special provision has been reviewed and approved for use. It consists of the abbreviation APPR, the reviewer's initials, and the date of approval.

#### Type Codes for 3rd and 4th letters of Identification Code

BR - used on special provisions from Bridge Design

CB - used on special provisions from Crash Barrier/Geometrics

CF - used on special provisions from Construction Field Services

CO - used on special provisions from Construction Operations

DS - used on special provisions from Design units not included in other SP ID Codes

EN - used on special provisions from Environmental

FN - used on special provisions from Contract Services Division

GT - used on special provisions from Geotechnical

IC - used on special provisions from Innovative Contracting

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.02.03 (continued)

#### Page Layout

- IT - used on special provisions from ITS
- MU - used on special provisions from Municipal Utilities
- OF - used on special provisions from Operation Field Services
- OR - used on special provisions from Office of Rail
- PL - used on special provisions from Planning
- PM - used on special provisions from Pavement Markings
- RC - used on approved recommended special provisions added to the PASP list
- RD - use on special provisions from Road Design in the Regions or TSCs
- RE - used on special provisions from Real Estate
- RL – use on special provisions from Roadside Development
- SG - used on special provisions from Traffic Signals
- SI - used on special provisions from Traffic Signing
- SM - used on special provisions from Structures Management
- SP - used on FUSPs with FHWA approval
- ST – used on special provisions from Structures Technical
- TM - used on approved template special provisions

### 11.02.03 (continued)

7. Secondary Header - The Secondary Header appears on every page except the first page. It includes the Identification Code, source code, page numbers and the approval date. See [Section 11.02.03 B 11](#) for example.
8. Approval Date - Added by the Quality Assurance Section. Do not show the date the special provision was written. Only the date approved is shown in the secondary header, not the reviewers' initials.
9. Source Code - This two-part code identifies the [author's](#) location and their initials. The Project Manager is the "author" of record for special provisions drafted by consultants. There are three types of Location Codes: Business Area, Region, and Transportation Service Center (TSC). (ex: UTL:SJU). Location codes are shown on the next page.
10. Contract Numbers - Contract numbers (control section, project/job numbers, trunkline etc.) should not be shown on special provisions. The same is true for document file names and consultant firm names. In order to facilitate the re-use of the special provision in subsequent proposals, these items must not be included.

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.02.03 (continued)

#### Page Layout

#### LOCATION CODES for SOURCE CODE

<u>Business Area</u>	<u>Region</u>	<u>TSC</u>
BRG Bridge Design	BAY Bay	ALP Alpena
CFS Construction Field Services	GR Grand	BCY Bay City
COS Construction Operations Services	MET Metro	BRI Brighton
CSD Contract Services Division	NOR North	CAD Cadillac
DES Design Units	SWR Southwest	COL Coloma
ENV Environmental	SUP Superior	CRF Crystal Falls
GCB Geometrics/Crash Barriers	UNIV University	DAV Davison
GEO Geotechnical Section		DET Detroit
HYD Hydraulics		ESC Escanaba
ICS Innovative Contracting Section		GND Grand Rapids
ITS Intelligent Transportation Systems		GLD Gaylord
OFS Operations Field Services		ISH Ishpeming
PMK Pavement Markings		JAK Jackson
PPD Project Planning		KZO Kalamazoo
RAL Office of Rail		LAN Lansing
RED Real Estate		MAR Marshall
RSD Roadside Development		MAC Macomb
SGN Traffic Signs		MTP Mt. Pleasant
SIG Traffic Signals		MUS Muskegon
STM Structures Management		NEW Newberry
STR Structures Technical		OAK Oakland
UTL Municipal Utilities		TAY Taylor
		TRV Traverse City

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**11.02.03 (continued)**

**Page Layout**

11. Examples - The following are examples of what the first page of a special provision should look like and what the second page should look like when the proper information has been placed in the correct location as they are submitted for review.

First page example:

---

12DS404()  
*Identification Code*

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**UNDERDRAIN AND UNDERDRAIN OUTLET VIDEO**

(Location: <a href="#">Author</a> ) <i>Source Code</i>	1 of # <i>Page</i>	APPR:XXX:YYY:00-00-00 <i>Approval Code</i>
---	-----------------------	---

---

Second page example:

---

12DS404()  
*Identification Code*

(Location: <a href="#">Author</a> ) <i>Source Code</i>	2 of # <i>Page</i>	00-00-00 <i>Approval Date</i>
---	-----------------------	----------------------------------

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# MICHIGAN DESIGN MANUAL ROAD DESIGN

## 11.02.04

### Tables and Figures

Minimize the use of tables and especially figures (graphics) in a special provision. Include figures only if they are absolutely necessary to present information not conveyed in the text. All figures must be in Microsoft Word compatible format, preferably jpeg. Examples are shown on the next page.

Reference all tables or figures in the text. Follow the table format in the standard specifications. All tables must have a table

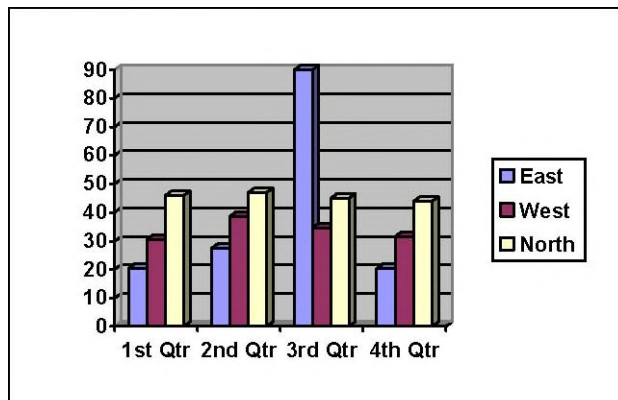
## 11.02.04 (continued)

number and a title which clearly describes the content, placed above the table. All graphics must have a figure number placed below the graphic. Figures may be enclosed by a single line border.

Center tables and figures horizontally on the page and separate them from the text by several lines. (See the examples on the next page) In the case of large tables or multiple tables it is advisable to place the table(s) at the end of the document. Figures are generally placed at the end of the document.

### Number and Title all Tables (Example: Table 1: Sample Table)

Use a Header Row that Will Continue on Subsequent Page(s) for Multiple Page Tables	Use Initial Caps in Column Headers	Indicate Units for Table Values, °F
Use Initial Caps in Row Labels		
Use only single line borders		
Use lower case letters for all footnotes. (a) Use parentheses around each footnote letter in the body of the table. (b)(c)		Do not separate with comma. (d)(e)
Do not use tables if the information can be presented in text format.		
<p>a. Include all footnotes in the last row of the table not outside the table. Do not use parentheses around footnote letters here. Use hard left indent to wrap text to indent point.</p> <p>b. Refer to standard specifications for examples of table footnote format.</p>		



**Figure 1: Traffic Count by Direction**

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### 11.02.05 (revised 11-26-2018)

#### Special Provision Naming Convention

The following file naming convention must be used for all unique special provisions submitted for review. Special provisions not using the file naming convention will be returned to the Project Manager for correction and resubmittal.

The only exception to this naming convention will be for template and recommended special provisions since they use a separate a naming convention that is similar but includes additional information.

Each file name must begin with the exact title of the special provision in Title Case (Initial capitalization and lower case for prepositions, articles, and conjunctions) followed by a dash, and then the Identification Code (less the four digits after the hyphen).

The Specification Engineer will enter the remaining four digits within the parentheses, but the Project Manager should enter the first seven digits.

For example: if the special provision is titled "Water Main, Ductile Iron, \_\_ Inch, Trench Detail \_\_, Special" and is being turned in by the municipal utilities design unit, the special provision file name would be "Water Main, Ductile Iron, \_\_ Inch, Trench Detail \_\_, Special-12DS823().docx".

### 11.02.05 (continued)

Note that abbreviations are not to be used in special provision titles, even the standard abbreviations that we use in the pay items cannot be used when developing the special provision title.

If a special provision is returned unapproved for use after being submitted for review, the filename must be revised to include "rev1" or as appropriate "rev2", etc. The following is an example of a special provision filename for a document that was resubmitted. The revised file name would be "Water Main, Ductile Iron, \_\_ Inch, Trench Detail \_\_, Special-12DS823()rev1.docx".

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.03

#### SPECIAL PROVISION WRITING STYLE

##### 11.03.01

###### General

A successful specification is clear and brief. Information that is not essential to the directions and commitments that will be a part of the contract only increases the potential for differing interpretation of the specification in the field. The author's intent should not be left open to interpretation.

Use short sentences with simple, direct language. Continuous restatements that the "Contractor shall ....." and "the work shall consist of..." do not provide needed information. Avoid repetition. If the original statement of the requirements seems vague or unclear, restating the requirement will likely worsen the problem. Instead, rethink the requirement and reword the sentence or subsection.

The primary goal is clear communication of what is required of the Contractor and how the completed results will be measured and accepted by the Department. Do not include a requirement if it cannot be verified. All terminology should be defined, particularly terms that are part of the required work responsibility of the Contractor or those that have a bearing on the quality of the work or its measurement.

##### 11.03.02

###### Active Voice

Use active voice by putting the verb first in sentences, when possible. Active voice is preferred to directly state directions and procedures and matches the active voice used in the Standard Specifications for Construction.

Often a much shorter sentence results from using active voice. The word "shall" is passive and is replaced with the active word "must". The following examples illustrate how the usual (passive voice) language of past specifications can be changed by using active voice grammar and minor editing.

###### Passive:

The gravel shall be placed and shaped by power equipment to the specified lines, grades, cross-sections, and depths, without segregation. (21 words)

###### Active:

Place and shape gravel to the specified dimensions without segregation, using power equipment. (13 words)

###### Passive:

A mechanical broom or sweeper shall be provided which is adjustable to uniform contact with the surface and designed to thoroughly clean without cutting into the surface being swept. (29 words)

###### Active:

Provide a mechanical broom or sweeper that can be adjusted to uniform surface contact and does not cut into the surface. (21 words)

###### Passive:

Concrete shall be thoroughly consolidated against the faces of all forms and joints, including concrete in a previously constructed lane of pavement, by means of vibrators inserted in the concrete. (30 words)

###### Active:

Consolidate fresh concrete against all form faces, joints, and previously constructed pavement using insertion type vibrators. (16 words)

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.03.03

#### Abbreviations, Units, Acronyms and Capitalization

The US Government Printing Office Style Manual is generally followed for rules of capitalization and compounding.

Abbreviations - Do not use abbreviations except in the pay items. Then only use those abbreviations that are shown in the Pay Item Code Book.

Units - Spell out primary units such as inch or foot in the body of the text. In the text, the use of acronyms for long compound units, such as "pounds per square inch" (psi), is permitted. Abbreviations, acronyms or symbols are acceptable in tables and figures.

Acronyms - The Standard Specifications for Construction book provides a list of acronyms in section 101.02 that may be used throughout a special provision with the exception of the title and the pay item description. Other acronyms may be used if necessary, but the author must write out the full wording first then then show the acronym following it in parentheses. Thereafter just the acronym may be used.

Capitalization - Minimize the use of capital letters. Capitalize Engineer, Contractor and Department whenever they appear in the document. Capitalize Standard Specifications for Construction only if you cite a section number. Use standard specifications when not citing a section number.

### 11.03.04

#### Common Phrases

Several common phrases have been adopted for use in MDOT SPs as a result of the move to the active voice writing style.

##### **Passive:**

The Contractor shall [details of work] at no additional cost to the Department.

##### **Active:**

[Details of work]. All costs associated with this work will be borne by the Contractor.

##### **Passive:**

Materials shall be in accordance with...

##### **Active:**

Provide materials in accordance with ...

##### **Passive:**

Payment for [Item Name] shall be considered to include...

##### **Active:**

[Item Name] includes

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

**11.03.05** (revised 11-26-2018)

### Citing Specifications and Standards

MDOT Standard Specifications for Construction - Do not capitalize “section” and “subsection”, when used in references to the Standard Specifications for Construction book. When the reference to the Standard Specifications for Construction book is not specific to a section, subsection, table, etc., the reference should simply be to “the standard specifications” (all lower case). Example: “Use materials in accordance with the standard specifications”.

MDOT Standard Plans and Special Details - To ensure that the most current version is applied, do not include the letter designation of standard plans. For example, refer to Standard Plan R-128 Series. The term “series” includes any subsequent interim special details for the named standard. All other special details not in the standard plan series are included in and considered part of the project plans.

MDOT Frequently Used Special Provisions – To minimize the reapproval of special provisions when referring to a FUSP call out the identification and the title without including the revision number. For example, 12SP105A - Source of Steel and Iron (Buy America).

AASHTO, ASTM and Michigan Test Methods - If it is not covered by section 101.02, the full title of the specification should be listed.

Michigan Public Acts - Cite by the <YEAR>PA<Act No.> followed by section/part number and name if necessary. Example: 1994 PA 451, Part 91, Soil Erosion and Sedimentation Control.

Code of Federal Regulations - Cite using the title, part and section number. Example: 23 CFR 623.1 refers to title 23, part 623, section 1.

Italics - Use italics for names of publications other than MDOT's standard specifications. For example, Standard Specifications for Construction is not shown in italics but *AWS Bridge Welding Code* is italicized.

**11.04**

### ORGANIZING THE SPECIAL PROVISION

**11.04.01** (revised 5-26-2015)

#### Four-Part Document Outline

Use the standard four-part outline to establish a uniform approach to providing needed information, describing the work to be performed and identifying the responsibilities of the Contractor and the Department. Provide an organized logical progression of instructions. Each section should progress from general administrative information to specific technical instructions.

Divide the subsections for clarity using the outlining convention shown below. Only use bullets as shown below or when listing a group of items, as included in a plan submittal or similar listing.

**a. Description.**

**b. Materials.**

**c. Construction.**

1. Arabic number followed by a period

A. Uppercase letter followed by a period

(1) Arabic number in parentheses - no period

(a) Lowercase letter in parentheses - no period

(i) Lowercase Roman numeral in parentheses - no period

1) Arabic number with single parentheses - no period

a) Lowercase letter with single parentheses - no period

• Bullet - solid dot only

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.04.01 (continued)

#### Four-Part Document Outline

##### d. Measurement and Payment.

Use subheadings only when their use adds to the clarity of the text. When listing only one or two items or clauses in text that does not include complex subheadings, it is appropriate to use bullets or indents in place of subheadings. Remember that contractual requirements are interpreted based on subsection numbering and indentation.

Although the materials and construction sections might not always apply, do not omit them. The special provision should show all four parts and state "None specified." when appropriate. For example, a special provision for Clearing, Modified would have information for the description, construction, and measurement and payment part. If there are no materials requirements, state:

##### b. Materials. None specified.

Special provision content will dictate when this standard four-part outline needs to be modified. For example, test methods and basis of acceptance may be subheadings in Materials and equipment may be a subheading of Construction.

### 11.04.02 (revised 3-23-2020)

#### The Description Section

Make a concise statement of the work to be done and a general statement concerning compliance with plans and standard specifications. Establish the relationship of this special provision to the contract, items of work or other construction phases. For complex specifications, include definitions or terminology in this section as appropriate.

Completely describe the scope of work covered. For example, do not wait until the measurement and payment section to state that furnishing, placing and compacting backfill is included in the work of removing a culvert. However, do not elaborate on materials and construction methods in this section.

Do not cite the current standard specification year. This is covered by the proposal cover and the title sheet of the plans, both of which state the specification year under which the project is to be constructed. It is also in the Identification Code.

Likewise, manuals, test methods or standard specifications published by AASHTO, ASTM, etc. which are included by reference in the standard specifications or in the special provision, should also not include the publication edition year. Subsection 101.01 of the Standard Specifications for Construction also indicates that these references refer to the most current edition of the referenced publication (including interim publications) as of the advertised date. For example, a proper citation would be; "... in accordance with the ASTM D1784 ..." or "... in accordance with ASTM D1754/D1754M ..." The reference should be listed exactly as shown on the ASTM portal without the year.

Standard or specifications that have been discontinued by the organization who created them cannot be cited in MDOT special provisions.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.04.03 (revised 11-26-2018)

#### The Material Section

List all materials that are used in the work specified. If listing specific products or manufacturers in this section, a minimum of two products or manufacturers must be listed and must include the phrase "or approved equal". If three or more products or manufacturers are listed, the phrase "or approved equal" is not required. If there are no materials, then state "None specified". Define materials with a reference to the standard specifications when possible. State all changes, additions or deletions to material requirements covered by the standard specifications.

If the materials required are covered by the standard specifications, either state that all materials must be in accordance with the standard specifications or list the pertinent material name and section of the book. When standard materials are used in non-standard applications, list any changes from the standard basis of acceptance.

When specifying non-standard materials, state the underlying material specification (AASHTO, ASTM, MTM, etc.) and basis of acceptance for all materials not covered by the Standard Specifications for Construction. AASHTO specifications should be used instead of ASTM standards whenever possible.

State the sampling, testing requirements, and basis of acceptance for all materials not covered by the standard specifications. State if the materials must be tested, certified, or otherwise accepted, and the documentation required as well as the responsible party.

Standard or specifications that have been discontinued by the organization who created them cannot be cited in MDOT special provisions.

See [Section 11.08](#) for further information if the material is proprietary.

### 11.04.04

#### The Construction Section

This section will usually be the most detailed and may need subsections such as: General Requirements, Documentation Required, and Equipment.

Avoid writing method specifications. Concentrate instead on the required end product. Detail the sequence of events to be followed in completing the item of work or fulfilling the special provision requirements. If no actual construction work is added as in the case of a materials SP, include a general statement to this effect.

Avoid ambiguous phrases such as "to the fullest extent possible." If the requirement cannot be measured or is not measured against a standard, the use of adjectives and other word modifiers will not change the meaning. For instance, what is the difference between "thorough consolidation" and "consolidation" of concrete? The judgment made would be whether or not the concrete has been consolidated.

If the cost for repairing, removing, replacing or otherwise making whole an item, will be borne by the Contractor, state it in this section.

This section should include such things as a discussion of tolerances if a component needs to be fabricated. A discussion of unique issues such as cure time and limitations. If the contractor is responsible for design work, it should be described in this section. Discuss such things as: needs to be accounted for, required design codes, design criteria, who to submit the design to, if working drawings are required, whether Engineer approval is required for plans or drawings, and if the design needs to be sealed by a Professional Engineer.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.04.05 (revised 2-22-2022)

#### The Measurement and Payment Section

This section is used to establish any new pay items that will be used to pay for the work required, and state how the work required will be paid for.

Explain how each pay item will be measured if it is not apparent from the description of work and the pay unit. For example, "...along the centerline shown on the plans, from the top of the wall to the top of the footing..."

List pay items using the exact AASHTO Preconstruction wording and using the established abbreviations (see Pay Item Code Book). Follow the standard specification format of noun, adjective, modifier for all new pay items. See example at the bottom of this page. See [Section 11.05](#) for further discussion on pay items names and the use of *Modified* and *Special* with existing pay items.

If no new pay items were created and existing pay items will be used, it is not necessary to include a listing of pay items and pay units. Include a general statement such as "This work will be measured and paid for as specified in subsection ###.04 of the Standard Specifications for Construction."

Exceptions to this rule include instances when Department or a third party will furnish equipment, labor or materials to be used or installed by the contractor or if a unique piece of equipment or specific skilled labor (example: licensed electrician, certified pesticide applicator) is required to complete the work.

### 11.04.05 (continued)

Include the statement that "The completed work, as described, will be measured and paid for at the contract unit price using the following pay item(s)". When all significant aspects of the work have been included in the description section, and all acceptance requirements have been explained in the materials and construction sections, this statement eliminates the need to restate what is included in each pay item in the measurement and payment section. If a detailed pay item description is needed, include it after the list of pay items.

Do not state that "Payment for [item] includes all labor, equipment and materials required to complete the work as described." This fact is covered by every Proposal cover sheet: "The undersigned hereby proposes to furnish all necessary machinery, tools, apparatus, and other means of construction, do all the work, furnish all the materials except as otherwise specified and... to complete the work ... in strict conformity with the requirements of the [year] Standard Specifications for Construction..." and by the definition of "work" in subsection 101.03 of the Standard Specifications for Construction: "Work. The furnishing of all labor, materials, equipment, and other items necessary to complete the project in accordance with the contract. This includes all alterations, amendments or extensions thereto, made by work order or other written orders of the Engineer."

If the special provision has more than one pay item, ensure the document outline from subsection [11.04.01](#) is used.

#### Pay Items

#### Pay Unit

1 <sup>st</sup> pay item name .....	1 <sup>st</sup> pay unit
2 <sup>nd</sup> pay item name .....	2 <sup>nd</sup> pay unit
Conc, Reinf, 12 inch .....	Square Yard
Conc, Nonreinf, 12 inch, Spec.....	Square Yard



## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.04.06

#### **Appendices**

If a special provision includes an appendix, the page numbering continues through to the end of the appendix. Do not number the appendix separately. Section numbers in the appendix may be changed to A.1, A.2; B.1, B.2, etc.

# MICHIGAN DESIGN MANUAL ROAD DESIGN

11.04.07 (revised 3-28-2022)

## Sample Special Provision

			SP Identification Code	20RD403(B510)
		MICHIGAN DEPARTMENT OF TRANSPORTATION		
	Special Provision Title Block	SPECIAL PROVISION FOR POLYURETHANE FOAM, DRAINAGE STRUCTURES	Approval Code	
Approval Header	Source Code	Page Number		
	CFS:DMG	{ 1 of 3	APPR:ARB:RWS:02-25-22	
	<b>a. Description.</b> This work consists of furnishing, surface preparation and installing a spray applied rigid closed-cell polyurethane foam (SPF) to rehabilitate drainage structures or catch basins at the locations shown on the plans or as directed by the Engineer.			
Section Title	<b>b. Materials.</b>			
	1. References. Ensure the work is in accordance with the following Standard Test Methods:			
	<ul style="list-style-type: none"><li>● <i>ASTM C273/C273M</i>. Shear Properties of Sandwich Core Materials</li><li>● <i>ASTM D1621</i>. Compressive Properties of Rigid Cellular Plastics</li><li>● <i>ASTM D1622</i>. Apparent Density of Rigid Cellular Plastics</li><li>● <i>ASTM D1623</i>. Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics</li><li>● <i>ASTM D2842</i>. Water Absorption of Rigid Cellular Plastics</li></ul>			
	2. Geotechnical Polyurethane Systems are hydro-insensitive two component isocyanate (A) and polyol (B), closed cell, rigid polyurethane foam designed for concrete raising/lifting/leveling, surface rehabilitation, void filling, and cavity filling. Ensure the SPF is in accordance with the following physical requirements:			
Subsections	<ul style="list-style-type: none"><li>● <i>ASTM D1622</i>. Core Density, 6 to 8 pcf</li><li>● <i>ASTM D6226</i>. Closed Cell Content, ≥ 94 percent</li><li>● <i>ASTM D1623</i>. Tensile Strength, 400 psi, minimum</li><li>● <i>ASTM D1621</i>. Compressive Strength, 130 to 180 psi</li><li>● <i>ASTM D2842</i>. Water Absorption, ≤ 0.03 psf</li><li>● Maximum Service Temperature. 180 °F</li></ul>			
	3. Furnish substrate primer as recommended by the SPF manufacturer.			
	4. Quality Assurance. The Contractor must have completed repairs on at least 50 drainage structures using SPF with no failure of the system for at least 3 years. The Contractor must provide contact information from past projects upon request by the Engineer.			
	5. Delivery, storage, and handling.			
	A. Deliver materials in manufacturer's original containers clearly labelled with manufacturer's name, product identification, safety information, net weight of contents and expiration date.			
	B. Store the materials in accordance with the manufacturer's guidelines and in a manner that will not damage or otherwise impact the performance of the SPF.			
				1 inch border around text

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.04.07 (continued)

#### Sample Special Provision

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Header { CFS:DMG

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- C. Remove empty containers from the site daily and dispose of properly.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with federal, state, and local requirements.
- 6. Manufacturers. Furnish materials from one of the following manufacturers or an approved equal:
  - A. NCFI Polyurethanes, Mount Airy, NC, 27030, [www.ncfi.com](http://www.ncfi.com) (800) 346-8229
  - B. SWD Urethane, Mesa, AZ, 85210, [www.swdurethane.com](http://www.swdurethane.com) (800) 828-1394
- c. Construction.**
  - 1. Submittals. Submit manufacturer's data sheets on each product to be used, including the following:
    - A. Technical data sheets and samples as required.
    - B. General certification in accordance with the *MQAP Manual*.
    - C. Preparation instructions and recommendations.
    - D. Storage and handling requirements and recommendations.
    - E. Installation methods.
  - 2. Project Conditions.
    - A. Protect adjacent surfaces, equipment, and site areas from damage of overspray. Refer to *Alliance for the Polyurethanes Industry (API) Bulletin AX-119, MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal*.
    - B. Refer to appropriate Material Safety Data Sheets (MSDS) for safety information.
    - C. Protect workers in accordance with *OSHA 29 CFR Part 1926 Safety and Health Regulations for Construction* and the manufacturer's recommendations.
    - D. Ensure proper disposal of waste materials and containers is conducted in accordance with manufacturer's guidelines and federal, state, and local requirements.
  - 3. Preparation.
    - A. Properly prepare substrates prior to installation. Process the SPF components isocyanate (A) and polyol (B) in accordance with the manufacturer's instructions. Notify the Engineer of any unsatisfactory preparation.
    - B. Prepare surfaces as recommended by the manufacturer.
    - C. Maintain appropriate environmental conditions (temperature, humidity, ventilation,

**MICHIGAN DESIGN MANUAL  
ROAD DESIGN**

**11.04.07 (continued)**

**Sample Special Provision**

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etc.) within limits recommended by manufacturer.

4. Application.

A. Verify to the Engineer on a daily basis using calibrated certified flow meters that each pumping unit is accurately measuring and recording the amount of SPF being used.

B. Ensure the SPF covers the entire internal circumference of the drainage structure or catch basin from the top of the chimney to a depth of 3 feet. Additional depth if necessary, will be paid for separately as detailed herein.

C. Apply the SPF in at least 1/2 inch thick passes with the overall final thickness to be at least 1 inch. Complete the application of the full thickness of SPF within any given area within 1 work day or less.

D. Ensure coverage is uniform to the specified depth.

E. Ensure the filling of voids on the outside of the drainage structure is approved by the Engineer and will be paid for separately as detailed herein.

F. For void filling operations protect installed SPF until the area has been covered with backfill material.

G. Install drainage structure covers upon completion of the SPF application before moving to the next location.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

<b>Pay Item</b>	<b>Pay Unit</b>
Polyurethane Foam, Dr Structures .....	Each
Polyurethane Foam, Dr Structures, Add Depth .....	Foot
Polyurethane Foam, External Void Fill .....	Pound

1. **Polyurethane Foam, Dr Structures** includes preparation of the surface of a structure, furnishing and applying polyurethane foam for the depth of 3 feet below final pavement grade as described.

2. **Polyurethane Foam, Dr Structures, Add Depth** includes preparation of the surface of a structure, furnishing and applying polyurethane foam the additional depth beyond 3 feet below final pavement grade. Measurement for payment will be made to the nearest 6 inches.

3. **Polyurethane Foam, External Void Fill** includes preparation of the surface, furnishing and applying polyurethane foam to completely fill voids around the exterior of the structure and/or under the adjacent concrete slab.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

**11.05**

**11.05.02** (revised 6-29-2020)

### PAY ITEM NAMES

### Pay Item Modifiers

**11.05.01** (revised 8-23-2021)

#### A. Modified Pay Items

#### General

The pay item code book contains a list of all "standard" pay items. These are pay items that have been given a specific pay item number and usually receive frequent use in projects. All pay items covered by the Standard Specifications for Construction book in the measurement and payment subsections will be given standard pay item numbers. Many of these contain blanks that cover many pay items that have similar names and only differ in one or more dimension/requirement. The subject matter experts for each of these subsections must fill out Form 2797 to provide a list of items to be given standard numbers when the pay item contains a blank. Other similar items not normally used often are not given a standard pay item number. For example, the pay item Bearing, Elastomeric, 5/8 inch does not have a standard pay item number. A 7000 number should be used for this pay item, but a special provision is not required because the pay item in the Standard Specifications for Construction has the item listed as Bearing, Elastomeric, \_\_\_ inch. As long as all requirements of the standard specifications still apply, and the pay item is not "Modified" or "Spec", no special provision is required. Also, Frequently Used Special Provision (FUSP) pay items will be given a standard pay item. If the FUSP pay item contains a blank the author must fill out Form 2797 to provide a list of pay items that need a standard pay item created. The Form 2797 needs to be sent to the [Preconstruction-Admin@Michigan.gov](mailto:Preconstruction-Admin@Michigan.gov) resource so standard pay item numbers can be added to the list.

If the special provision is needed to cover a standard pay item whose dimensions have been changed to match existing conditions (example: curb and gutter) the pay item is ", Modified".

If the special provision is to require or allow an alternate material for a standard pay item (example: Aggregate Base with a non-standard gradation) the pay item title is ", Modified".

#### B. Special Pay Items

If the special provision changes the basis of payment of a standard pay item (example: square yard instead of cubic yard or lump sum instead of each) the pay item is ", Spec".

If the special provision requires or allows an alternate construction method (example: adjusting drainage structures by breaking down the existing structure and then rebuilding it) the pay item is ", Spec".

Note: If the special provision is both modified and special, add *Spec* to the pay item. MDOT uses ", Spec" because Special has a standard abbreviation in the Pay Item Code Book.

#### C. Other Pay Item Modifiers

No other pay item modifiers can be used in pay items unless approved by the Quality Assurance Section prior to being used.

**11.05.03** (revised 6-29-2020)

### New Pay Item

If the special provision is needed to cover an item of work that is not even remotely covered in the standard specs (example: lane rental) use a new pay item.

New pay items in unique special provisions that have no direct connection to a standard pay item do not need to use the pay item modifiers "Modified" or "Spec".

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

### 11.06

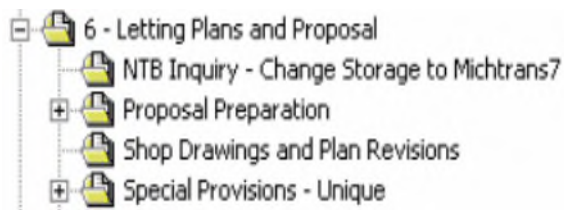
#### SPECIAL PROVISION APPROVAL PROCEDURE

##### 11.06.01 (revised 12-27-2022)

###### Overview

All unique special provisions, except those listed as being exempt previously in [Section 11.02.02A](#), that are part of the proposal must have approval of the Quality Assurance Section. The Project Manager is required to submit all unique special provisions, even those written by consultants, to the Quality Assurance Section at least 6 weeks prior to the plan completion date. Drafts of unique special provisions must be available for review and discussion at the Plan Review meeting.

The approval process is electronic and uses ProjectWise to route files, reviewers' comments and approvals. Special provisions must be in Microsoft Word format and must be located in ProjectWise in the "Special Provisions - Unique" folder under the "6-Letting Plans and Proposal" folder for the project it applies to. For more details or assistance with using ProjectWise, contact appropriate support staff for your office.



An overview of the approval procedure is shown on the next page.

The Quality Assurance Section will return special provisions not meeting the defined voice, outline, format or Buy America. Returned special provisions will be sent to the Project Manager for revisions. These documents will need to be resubmitted before the review and approval process can begin. See [Section 11.02.05](#) for how to rename a special provision file name when it is resubmitted.

### 11.06.01 (continued)

Project Managers are encouraged to use special provisions available on the [Previously Approved Special Provisions \(PASP\)](#) web page whenever possible. If any changes are made to the approved document, it must be saved with a new filename. When submitting a revised (previously approved) special provision the track changes features of Microsoft Word must be used to delineate the changes made to the original document. This will substantially expedite the approval process.

If there are special circumstances such as tight project deadlines, or related special provisions that should be reviewed together, provide this information as a comment within the Word document when submitting the documents for review. Be sure to include the name of the individual that has provided preliminary reviews if it is appropriate to have this person assigned to review the final special provision.

Unique special provisions must be approved prior to advertisement. When a project is submitted to the Specifications and Estimates Unit for advertisement with unapproved unique special provisions, the Project Manager must complete [Form 2908 Special Provision - Exception Risk Analysis](#), including approval by the appropriate Region Engineer. Although minimal use is encouraged, this form does allow for exceptions for multiple unique special provisions. Unique special provisions for Liquidated Damages for Other Department Costs, Incentives, Lane Rental, Calendar Days of Contract Time for Opening to Traffic, special provisions rejected during review and special provisions that have not met the Buy America (CFR 635.410) and the Buy America Build America (BABA) certification requirements are not eligible for the use of [Form 2908 Special Provision - Exception Risk Analysis](#).

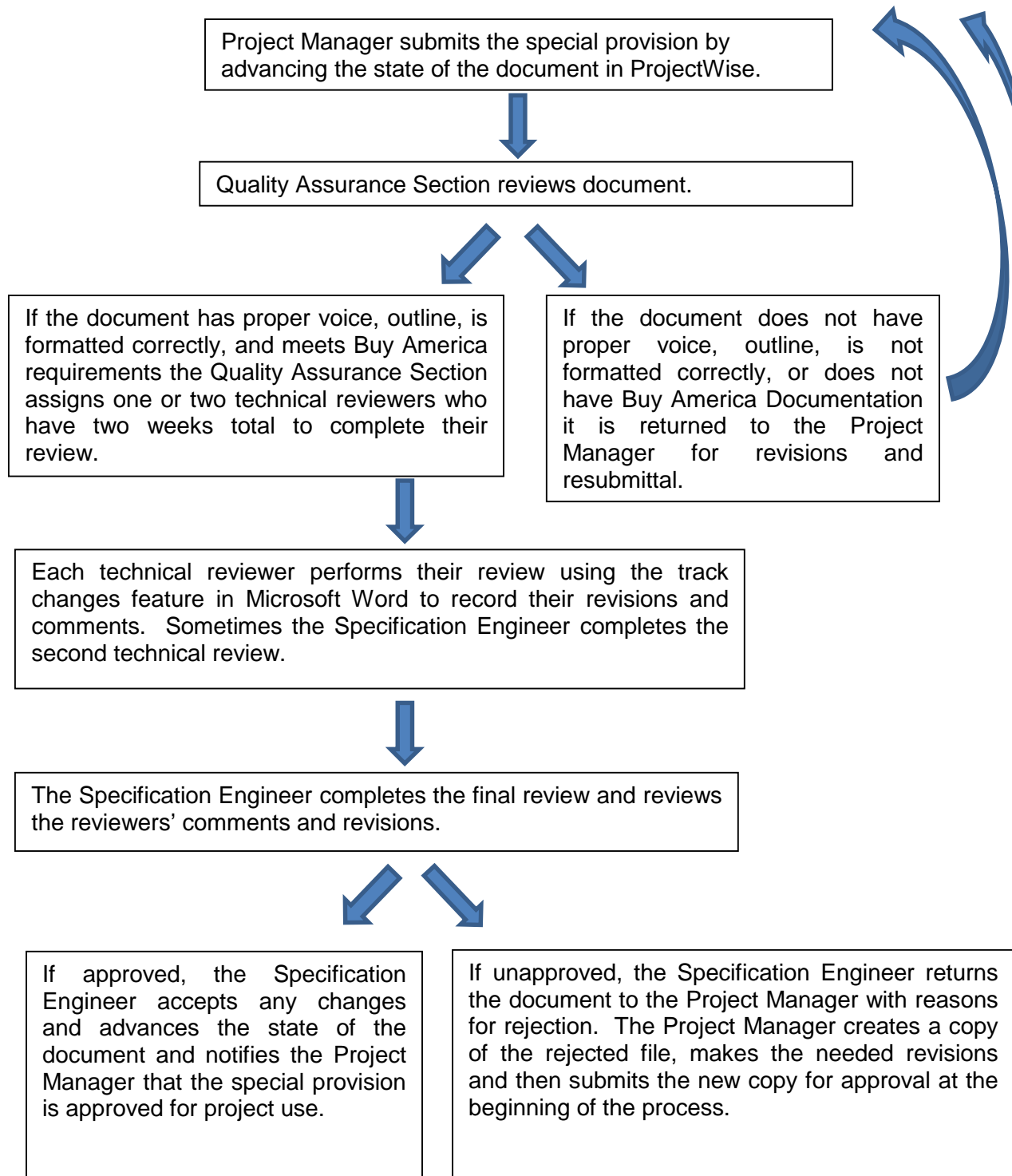
Unique special provisions for Liquidated Damages for Other Department Costs, Incentives, Lane Rental, and Calendar Days of Contract Time for Opening to Traffic also require the submittal of the final version of the Progress Clause and the Special Provision for Maintaining Traffic to be used for information required to approve the listed special provisions.

# MICHIGAN DESIGN MANUAL ROAD DESIGN

## 11.06.01 (continued)

### Overview

#### UNIQUE SPECIAL PROVISION APPROVAL PROCEDURE



## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.06.01 (continued)

#### Overview

All Frequently Used Special Provisions (FUSPs) and all non-job related special provisions must be approved prior to being placed in a proposal just like all unique special provisions. All FUSPs must meet the requirements contained in [Sections 11.02.01A](#), [11.09.03](#), and [11.10](#) as well as the formatting, voice and outlining requirements for unique special provisions. All non-job related special provisions must meet the formatting, voice and outlining requirements for unique special provisions.

All Frequently Used Special Provisions and all non-job related special provisions should be sent by e-mail to the [MDOT-DesignFUSP@Michigan.gov](mailto:MDOT-DesignFUSP@Michigan.gov) mail box. This e-mail should include two attachments for each special provision. The Microsoft Word file using Microsoft Word version 2016 (.docx) and the appropriate MDOT Form ([Form 0372](#) – FUSP Request Form or [Form 0373](#) – Non-Job Related SP Request Form) filled out by the requestor. If this information is not submitted or complete the entire package will be returned without being placed into the review process. Proper justification will be needed for FUSPs to be processed outside the annual review period as specified in [Section 11.10](#).

### 11.06.01 (continued)

Once a properly completed FUSP request is received it will be placed into ProjectWise where it will be reviewed and approved following the procedure outlined on the next page.

Once a properly completed non-job related special provision request is received it will be placed into ProjectWise where it will be reviewed and approved following the same procedure used to review unique special provisions found on the previous page.

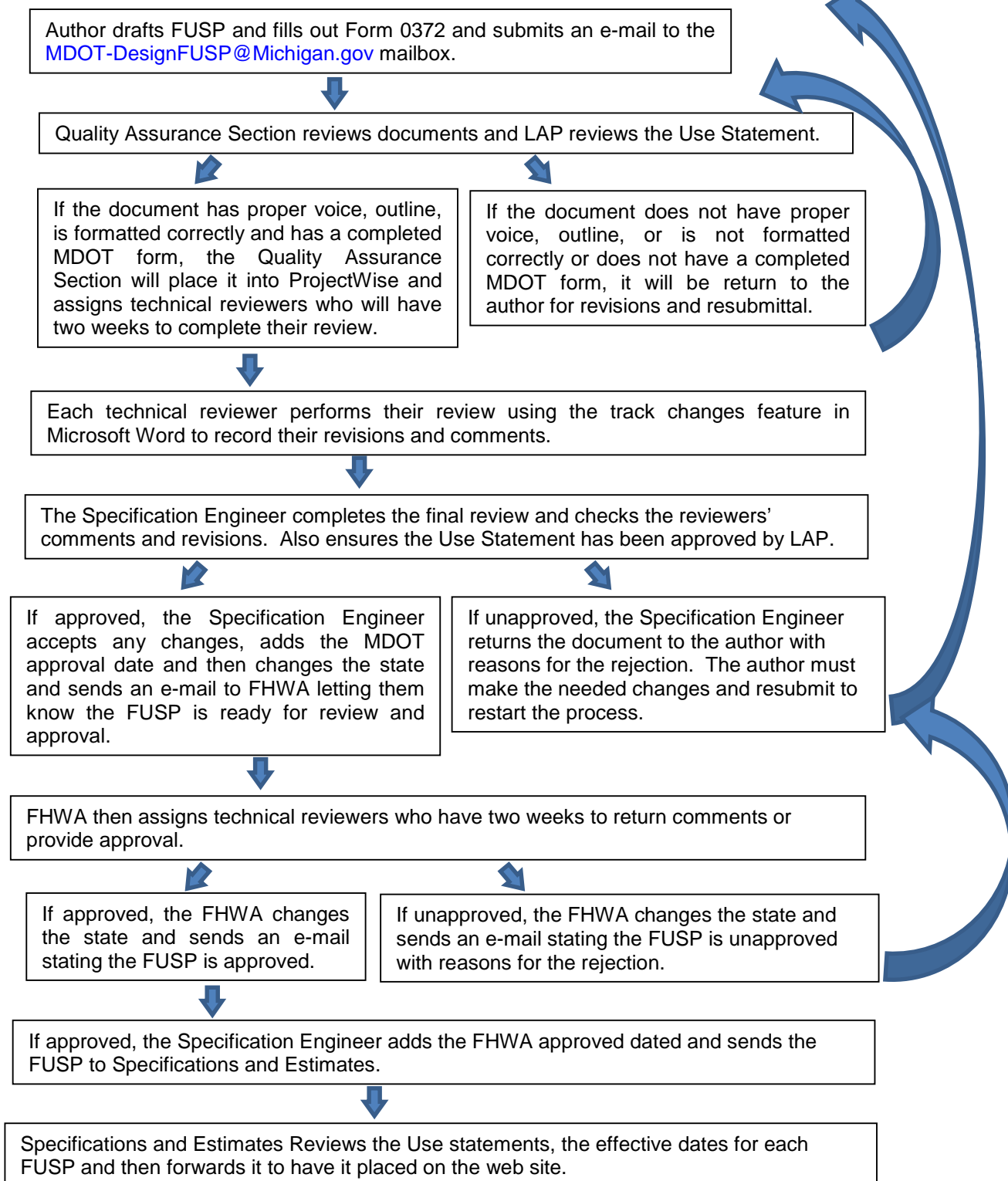


# MICHIGAN DESIGN MANUAL ROAD DESIGN

## 11.06.01 (continued)

### Overview

#### FREQUENTLY USED SPECIAL PROVISION APPROVAL PROCEDURE



## **MICHIGAN DESIGN MANUAL ROAD DESIGN**

### **11.06.02** (revised 11-26-2018)

#### **Assigning Reviewers**

The Quality Assurance Section assigns one, two or more technical reviewers and assigns a due date giving the reviewers two weeks total to complete their review. The reviewers are assigned by advancing the ProjectWise state of the document which sends an email to the technical reviewers notifying them there is a special provision for them to review and giving them the location in ProjectWise.

The second technical review is sometimes completed by the Specification Engineer with an emphasis on conflicts with the Standard Specifications for Construction; use of appropriate pay items and general organization of the information.

### **11.06.03** (revised 6-29-2020)

#### **Reviewing the Document**

Special provisions are reviewed for technical content, organization, and conflict with other specifications. The technical review is assigned to the staff person in that specialty area or to the Engineer with region responsibility for where the project is located.

Technical reviews ensure statewide alignment as well as validate technical content. They focus on constructability issues and clarity of the description of work, construction requirements and method of payment. All references to other testing or standard sources should also be checked. All revisions or comments will be made in the document using the Track Changes feature of Microsoft Word.

### **11.06.03 (continued)**

If the technical reviewer has questions or comments, they must place these in the ProjectWise file. Technical reviewers should then change the state when their review is completed. The QA/QC Program Analyst will follow up with the Project Manager/Author to ensure all technical comments have been addressed. The QA/QC Program Analyst will then obtain final approval from each technical reviewer after comments have been addressed.

Both technical reviews must occur within the allotted two-week time period. Each reviewer indicates approval or rejection of the special provision and advances the state of the document which generates an automated email to the Quality Assurance Section that their review is complete.

### **11.06.04** (revised 11-26-2018)

#### **Preserving the Track Changes**

Once both technical reviews are complete, the Specification Engineer will convert the reviewed document to portable document format (pdf) with the Track Changes information preserved and place the portable document format (pdf) file in the Changes subfolder of the Special Provisions – Unique folder. Project Managers are encouraged to share this information with consultants who may have prepared the document on behalf of MDOT to keep them informed.

## **MICHIGAN DESIGN MANUAL ROAD DESIGN**

**11.06.05** (revised 11-23-2020)

### **Document Rejection**

If the special provision does not have Buy America Documentation or if one or both of the reviewers or the Quality Assurance Section recommend rejection of the special provision, the Quality Assurance Section will return the document to the Project Manager with revisions and comments shown using Track Changes. An email to the Project Manager is generated advising of the need to revise and resubmit the document. The Project Manager must make a copy and revise the document as necessary and then resubmit it following the normal procedure.

The original submitted document showing changes and comments is retained for reference with the state reflected as SP Draft – Rejected - RESUBMIT.

Special Provisions that are in the state SP Draft – Rejected – RESUBMIT are not allowed to be placed in a proposal using Form 2908 Special Provision - Exception Risk Analysis.

Special provisions will be placed into the SP Draft - Rejected - RESUBMIT state when an already reviewed and approved special provision assigned a SP ID Code is modified prior to advertisement. The approved special provision will be updated to have a REJECTED watermark added to the text and the file name is modified to include the word Rejected at the end of the file name. The ProjectWise state is then changed to SP Draft - Rejected - RESUBMIT. If this rejected special provision needs to be used it must be copied out and revised using track changes and submitted for review and approval following the normal special provision process.

**11.06.06**

### **Document Approval**

When the reviewers and the Specification Engineer have approved the special provision, the Specification Engineer reviews any comments and accepts changes in the document. The Specification Engineer then finishes the Identification Code, adds the approval code and returns the document to the ProjectWise “Special Provision - Unique” folder. Advancing the document state in ProjectWise will generate an email to the Project Manager advising that the special provision is approved for project use.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

**11.07** (revised 11-26-2018)

### SPECIAL PROVISION REVIEW CHECKLIST

Prior to submitting a special provision to the Quality Assurance Section for review and approval, the MDOT Project Manager must review it. The following checklist has been developed to assist the MDOT Project Manager in their review. It is also recommended for use by the document's authors and reviewers. Emphasis is placed on using the correct format and the appropriateness of the special provision for the specific project.

### OVERALL CHECKLIST

YES	NO	N/A	Question/Item (Road Design Manual section)
			Do sections/subsections in the Standard Specifications for Construction exist that cover the work fully, or approximately needing minor modifications?
			Is there an existing special provision that covers this work or one that would need minor editing? Use an existing document when available.
			Are the margins correct? Use 1 inch margins. ( <a href="#">Section 11.02.03 A 1</a> )
			Are the fonts and text sizes correct? All headers use Arial 12 point, special provision text uses Arial 11 point, and table and figures use Arial 10 point? ( <a href="#">Section 11.02.03 A 2</a> )
			Are the tabs and indents correct? Use 0.25 inch intervals. Automated number or labeling should not be used. ( <a href="#">Section 11.02.03 A 3</a> )
			Is use of bold face correct? Limit to the special provision title, section labels & names, table & figure titles and pay items. ( <a href="#">Section 11.02.03 A 4</a> )
			Are the headers and the title block correct? ( <a href="#">Section 11.02.03 B</a> )
			Are digits 1 thru 7 of the Identification code entered correctly? Quality Assurance Section will enter the 4 digits in parenthesis. ( <a href="#">Section 11.02.03 B 2</a> )
			Is page numbering correct? ( <a href="#">Section 11.02.03 B 5</a> )
			Are tables and figures, if needed, formatted correctly? ( <a href="#">Section 11.02.04</a> )
			Is active voice used? ( <a href="#">Section 11.03.02</a> and <a href="#">11.03.04</a> )
			Are words such as: may, could, and should used properly in the special provision? "Weak" words should be eliminated.
			Are proper abbreviations, acronyms and capitalization used? ( <a href="#">Section 11.03.03</a> )
			Are publications other than the Standard Specifications for Construction cited correctly and italicized? ( <a href="#">Section 11.03.05</a> )
			Is the basic 4 part outline used, with more complex special provisions including subheadings such as Design, Fabrication, Submittals, or Equipment? ( <a href="#">Section 11.04</a> )
			Does the text go from general to specific in a logical manner? ( <a href="#">Section 11.04.01</a> )
			Is verbiage directly from the Standard Specifications for Construction repeated in the special provision? <b>If yes, it needs to be eliminated.</b>

## MICHIGAN DESIGN MANUAL ROAD DESIGN

			Are the details and text in the special provision enforceable and reasonable for the contractor to satisfy?
			Is there enough information for a Contractor to formulate a reasonable bid?
			Is the text written in a manner that provides strict direction to the Contractor, not the Engineer?
			Did supporting documentation accompany the more complex special provision such as plans, industry specifications, etc. that are needed for a review to be performed in a reasonable amount of time?

### DESCRIPTION SECTION CHECKLIST

YES	NO	N/A	Question/Item (Road Design Manual section)
			Is a clear, concise description of the scope of work to be done by the Contractor given? ( <a href="#">Section 11.04.02</a> )
			Is a general statement concerning compliance with plans and standard specifications given? ( <a href="#">Section 11.04.02</a> )
			Is the current "spec book" year cited? <b>It should not be.</b> Subsection 101.01 of the Standard Specifications for Construction states that the most recent version is intended unless otherwise specified. Likewise for other MDOT, AASHTO, ASTM, etc. publications. ( <a href="#">Section 11.04.02</a> )
			If definitions for terminology are needed, are they provided in this section? ( <a href="#">Section 11.04.02</a> )

### MATERIALS SECTION CHECKLIST

YES	NO	N/A	Question/Item (Road Design Manual section)
			Are all materials that are used in the work specified? If there are no materials, is "None specified." stated? ( <a href="#">Section 11.04.03</a> )
			Are materials defined with a reference to the Standard Specifications for Construction where possible? ( <a href="#">Section 11.04.03</a> )
			Are references to the Standard Specifications for Construction, AASHTO, ASTMs, and other standards referenced correctly? ( <a href="#">Section 11.04.03</a> )
			Are AASHTO specifications referenced instead of ASTM standards whenever possible? ( <a href="#">Section 11.04.03</a> )
			Is the basis of acceptance for all materials included, if not using materials covered by the Standard Specifications for Construction? ( <a href="#">Section 11.04.03</a> )
			Is it clear who is responsible for sampling and testing "non-spec book" materials if the basis of acceptance is a test? ( <a href="#">Section 11.04.03</a> )
			Is the material Proprietary? Has public interest certification or finding approval been obtained? ( <a href="#">Section 11.08</a> )

**MICHIGAN DESIGN MANUAL  
ROAD DESIGN**

**CONSTRUCTION SECTION CHECKLIST**

YES	NO	N/A	Question/Item (Road Design Manual section)
			Is this section written with a focus on the end product versus being written as a method specification? ( <a href="#">Section 11.04.04</a> )
			Does the text follow the actual sequence of events? ( <a href="#">Section 11.04.04</a> )
			Is this section of the special provision the most detailed part? Are there subheadings such as General Requirements, Equipment, etc. used as necessary? ( <a href="#">Section 11.04.04</a> )
			If components need to be fabricated, is there discussion of tolerances?
			Are any unique issues (cure times, limitations, etc.) discussed?
			If the cost for repairing, removing, replacing or otherwise making whole an item will be borne by the Contractor, is it stated? ( <a href="#">Section 11.04.04</a> )
			If the Contractor is responsible for performing a design, is there adequate discussion of:
			A. what needs to be accounted for in the design?
			B. the design codes that are required to be satisfied?
			C. design criteria, such as allowable stresses and deflections?
			D. when and to whom the design must be submitted? “...to the Engineer for review and approval __ calendar days/work days prior to construction. And if “days” are used, are they “work days” or calendar days”?
			E. Are working drawings also required? If so, are the requirements for the working drawings fully described?
			F. Does the design need to be sealed by a Professional Engineer, licensed in the State of Michigan, and is this stated?

**MEASUREMENT AND PAYMENT SECTION**

YES	NO	N/A	Question/Item (Road Design Manual section)
			Is the statement: “The completed work, as described, will be measured and paid for at the contract unit price using the following pay item(s)” included? ( <a href="#">Section 11.04.05</a> )
			Do not state that “Payment for [item] includes all labor, equipment and materials required to complete the work as described.” ( <a href="#">Section 11.04.05</a> )
			Does the text define how the work will be measured “... along the centerline shown on the plans, from the top of the wall to the top of the footing...”? ( <a href="#">Section 11.04.05</a> )
			Does the text define what is and is not included in the pay items? ( <a href="#">Section 11.04.05</a> )
			Are pay items listed using exact Preconstruction wording? Or do new pay items use MDOT nomenclature and abbreviations? ( <a href="#">Section 11.04.05</a> )
			Are “Modified” and “Special” on pay items used properly? ( <a href="#">Section 11.05</a> )

# MICHIGAN DESIGN MANUAL

## ROAD DESIGN

**11.08** (revised 6-29-2020)

### PROPRIETARY ITEMS

Materials and processes included in the Standard Specifications for Construction are selected to provide both quality and competitive bidding for construction projects. Designers are cautioned against writing special provisions that are tailored to fit products or processes that are exclusive to single source suppliers or manufacturers, whether the exclusive product or source is specifically named in the special provision or not, except as permitted herein. The restraint of free competition is prohibited by both federal and state regulations.

Use of patented or proprietary material, specifications, or processes in plans and specifications for projects is permitted only under the conditions described in this section. Otherwise, materials and processes identified in the Standard Specifications for Constructions must be used.

#### A. Competitive Bidding

Proprietary items may be purchased through competitive bidding with at least one equally suitable unpatented item or when two or more proprietary products are bid against each other and the specification or special provision includes the phrase "or approved equal". The phrase would not be required when three or more proprietary items are competitively bid.

#### B. Proprietary Item Certification (PIC)

Proprietary items can also be permitted by certification ([Form 0304](#)) that the patented or proprietary product is essential for synchronization with the existing highway facility or that no equally suitable alternate exists.

**11.08 (continued)**

Synchronization is based on;

- Function – The product is necessary for satisfactory operation of the existing facility, or
- Aesthetics – The product is necessary to match the visual appearance of the existing facility, or
- Logistics – The product is interchangeable with maintenance inventory, or
- Any combination of the above.

#### C. Experimental Application

Patented or proprietary items may be approved for research purposes or for a distinctive type of construction for experimental purposes. In addition to [Form 0304](#), requests for experimental use require a work plan outlining objectives, measurements and evaluations. Experimental status justifications should be subsequent to a recommendation for pilot implementation via the Evaluation of New Materials and Products process ([MDOT Guidance Document 10031](#)). All submittals from manufacturers seeking evaluations will be processed through the [New Products Evaluation](#) webpage to allow a single source submittal process. The Project Manager should consult with the appropriate subject matter experts for guidance on the suitability of the product or process for pilot use. Resource contacts can be found either in the Special Provision Technical Reviewers Listing in the [Plan Development](#) SharePoint site or the Employee Contact – Area of Responsibilities list on the [Construction Field Services](#) site.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

### 11.08 (continued)

#### PROPRIETARY ITEMS

##### D. Public Interest Finding (PIF)

A specific material or product may be specified even when other acceptable materials or products are available if the specific choice is approved as being in the public interest. [Form 0304](#) is required to document that use of the proprietary product would be in the public's best interest despite the availability of equally suitable products. Public interest findings include limited situations other than those previously listed. Examples include; timeliness of product availability, engineering or economic analysis findings, project logistical concerns, unique safety performance as well as other justifiable situations.

##### E. MDOT Supplied Products

When the Department purchases proprietary products under separate contract and subsequently supplies them to a contractor for project use, competitive bidding or a proprietary item request is required. Examples include items obtained by blanket purchase order, purchase of steel beams or other specialized materials requiring separate advanced purchase. Although uncommon, these purchases may be required for synchronization, project timeliness, logistics, etc.

### 11.08 (continued)

##### F. Blanket Proprietary Approval

Certification and Public Interest Findings for use in multiple projects (Corridor, region-wide, statewide) must include a sunset date at which time it may be resubmitted for extension.

##### G. Procedure

Proprietary Item Certification (PIC) and Public Interest Finding (PIF) are both requested by using MDOT [Form 0304](#).

Examples of supporting justification include;

- Description of how the product will benefit the public.
- Unique needs that result in the absence of equally suitable alternatives.
- Safety locations that would justify higher standards.
- Evaluation of potential products and reasons why alternatives do not meet the project needs.
- Estimate of additional costs incurred as a result of the proprietary product.

The approval authority for requests to specify proprietary items is listed below.

<b>Proprietary Product Approval Authority</b>		
<b>Basis for Request</b>	<b>Project Application</b>	<b>Approval</b>
<b>Synchronization or No Equally Suitable Alternative</b>	Proprietary Item Certification (PIC) MDOT and Local Agency	Retain Certification for Project File Only with Project Manager signature.
<b>Experimental</b> <i>Justification must include an experimental work plan.</i>	MDOT	MDOT Engineer of Design
	Local Agency	MDOT LAP Engineer
<b>Public Interest Finding (PIF)</b>	MDOT	MDOT Engineer of Design
	Local Agency	MDOT LAP Engineer



## **MICHIGAN DESIGN MANUAL ROAD DESIGN**

### **11.09**

#### **GUIDELINES FOR FHWA APPROVAL OF SPECIFICATIONS**

##### **11.09.01**

###### **Standard Specifications**

The Federal Highway Administration (FHWA) will be represented on committees established to review and revise the Standard Specifications for Construction. New versions are sent in their entirety to FHWA for approval prior to publishing.

##### **11.09.02**

###### **Supplemental Specifications**

Supplemental Specifications are issued by the Specification Engineer. These specifications require a rigid review procedure which includes reviews by MDOT experts and experts from the industry. After this thorough review, FHWA approval is requested. After receiving FHWA approval, the Supplemental Specification can be used in all applicable projects. When a supplemental specification is developed or when a frequently used specification is proposed to be elevated to supplemental status, MDOT, industry associations and FHWA are provided a 60-day review and comment period. All comments returned from reviewers are considered by the composer and Specification Engineer prior to implementation of the supplemental specification.

##### **11.09.03**

###### **Frequently Used Special Provisions (FUSP)**

The FUSP process includes a 10 business day FHWA review period with follow up, and approval is required prior to inclusion on the FUSP list. This list is maintained through the Design Supplemental Specifications and Special Provisions Package Creation System. The use statement which provides guidance on when the FUSP is to be used will also be reviewed by FHWA. Reviewers may work directly with the specification composer to resolve questions or concerns or may coordinate these comments through the Specification Engineer.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

**11.09.04** (revised 11-26-2018)

### Developmental Special Provisions

Most routine or project specific special provisions developed for a specific project will not require FHWA approval. However, there are certain specifications for which approval has not been delegated to MDOT.

These special provisions are generally developed by committees with input from industry and FHWA representatives. This FHWA input will form the basis for eventual approval of the special provisions as either project specific or FUSPs and the Quality Assurance Section will be notified of this approval.

If FHWA has not participated in the development of these special provisions, they will go through the same review and approval process as described for FUSPs prior to being used on NHS projects. If required, this review will be coordinated through the Specification Engineer.

Developmental specifications are used to implement unique, innovative or experimental contracting or construction methods and have included warranty specifications and acceptance (QA) specifications.

**11.10** (revised 11-26-2018)

### ANNUAL REVIEW OF FREQUENTLY USED SPECIAL PROVISIONS

Any special provisions recommended for frequently used status will be submitted to the [MDOT-DesignFUSP@Michigan.gov](mailto:MDOT-DesignFUSP@Michigan.gov) mailbox. A completed Form 0372 recommending adoption as a FUSP and criteria for use must accompany the new special provision. The Specification Engineer will discuss the recommendations with the appropriate technical reviewers and Quality Assurance Section managers. If approved, the special provision will be added to the FUSP list. FUSPs should be established or revised prior to July of each year in order to be incorporated into projects for the following construction season. The Design Division's Quality Assurance Section will coordinate all requests for additions or revisions to the FUSP list.

Only those changes necessitated by Department policy changes, health and safety issues, regulatory changes or documented materials or construction defects will be made to FUSP during the first two quarters of the fiscal year. Under no circumstances will addendums be issued to projects after advertising in order to insert a revised FUSP for any but these reasons.

**NOTE:** Contact the FUSP author and provide justification for the modification to receive approval to modify a FUSP and create a unique special provision to be used in lieu of using the FUSP. Notify the Specification Engineer that approval for the revision has been received from the author before submitting a project specific special provision in lieu for the FUSP.

## MICHIGAN DESIGN MANUAL ROAD DESIGN

11.11 (revised 11-26-2018)

### CHANGES TO SUPPLEMENTAL SPECIFICATIONS

Changes to supplemental specifications are sometimes required to fit specific project conditions. If this is necessary, the supplemental specification should be rewritten as a project specific special provision. This procedure will maintain the integrity of the supplemental specification.

For any modification that changes the status of the specification from a supplemental to a special provision, remove the source code, approval code and the supplemental specification identification code and add source code of the composer responsible for the changes.

In the case of a modification to a supplemental specification, the Specification Engineer and originating composer must confer to establish an understanding of the modification.

When submitting a modified supplemental specification for review and approval, the document must be transmitted electronically in Microsoft Word format with the changes clearly identified. All changes must be made using the track changes feature of Microsoft Word. Once the changes are completed it must be submitted using the normal procedure for review and approval of unique special provisions.

11.11 (continued)

Any major change in a standard contract item or a work feature, method, or practice should be sent out for industry notification well in advance of implementation. This should be accomplished by transmitting a notification of change along with the new special provision and signature by the Bureau of Development Director. This will alert the industry of the change and our reasons for the change before they are actually asked to bid on the new item. In the past, contractors have faced major changes in a letting with no prior information. This often resulted in material or construction problems.

The only exception to this notification procedure is for specifications developed jointly with industry, such as is often done in their regular joint MDOT/Industry meetings.