**NOTES TO ARCHITECT/ENGINEER (A/E) & DAS/CS PROJECT MANAGER:**

This version of the Division 01 General Requirements is for **ALL** CT Department of Administrative Services (DAS) Construction Services (CS) **Design-Bid-Build (DBB) AND Construction Manager at Risk (CMR) Capital Construction Projects.**

IMPORTANT NOTE: Section 01 57 30 Indoor Environmental Control includes requirements for indoor air quality management during construction. Coordinate with requirements of other sections and verify that products and installation methods specified in other sections are environmentally appropriate. Edit to suit location and project.

**EDITING:** To Show the Editing Notes in this MS Word document the show/hide symbol (¶) button must be must turned on in the MS Word Toolbar. To print this document show/hide symbol (¶) must be turned off in the MS Word Toolbar, this will enable the document to indicate the correct number of total pages.

**TEXT:** The below **blue text** are project specific information that must be completed by the A/E as applicable to the specific project. When complete change **blue text** to **black text.** The ***bold and italicized text*** is for example purposes only and must be modified and edited by the A/E to make it project specific. For **text boxes**, left click on **Insert** and then insert project specific information over the word **Insert** in the underlined space.

**TABLES:** To view the Table Grid in this MS Word document, click inside any table, then go to the **Table Tools > Layout** tab, **Table** group, and click **View Gridlines.**

**HEADERS: The header** for each page of the Project Manual shall match the format, font (Arial), size (9 pt), font style (BOLD & CAPITALIZED) and line borders, of the header shown herein. The header of each page shall contain the Section Number, the Section Title, and the page number & number of pages as shown herein.

**FOOTERS: The footer** for each page of the Project Manual shall match the format, font (Arial), size (9 pt), font style (BOLD & CAPITALIZED) and line borders, of the footer shown herein. The footer shall contain the project number in the right hand side as shown herein. The revision date in the left side of the footer is to remain as it is for Department informational purposes only and should not be altered by the Architect/Engineer.

**SECTIONS AND PARAGRAPHS:** If a **Section** is not part of the project scope, **do not use** the Section in the General Requirements. Check “**NOT USED**” in the Table of Contents. **DO NOT delete** the Section title from the Table of Contents.

If a **Paragraph** is not applicable to the project, **delete the contents** of the Paragraph and renumber the subsequent Paragraphs. Edit **Paragraphs** carefully to reflect specific project requirements. DO NOT include Paragraphs or parts of Paragraphs in the project manual, which have no applicability to the specific project. KEEP IN NUMERICAL SEQUENCE and re-number as necessary.

**GENERAL CONDITIONS:** Please review the General Conditions carefully and coordinate the requirements of those Articles including the Definitions.

**DIVISION 01 SECTIONS** are the organizational key of the Project Manual. All revisions to this Division are the responsibility of the A/E. Division 01 must be closely coordinated with Division 00, Divisions 02 through 49, Division 50 (Project-Specific Available Information), the Drawings, and the Department’s Consultant Bid Data Statement (Form 6005, to be filled out by the A/E for bidding).

**IMPORTANT NOTE REGARDING “HIDDEN TEXT”:**

Each document contains Editing Notes in the form of “hidden text”. The Editing Notes assist the Architect in modifying and editing the document to make it project-specific. In order to show the “hidden text”, click the **Home** tab, and in the **Paragraph** group, click the **Show/Hide** symbol (¶). **Turn off** the Show/Hide symbol (¶) **before printing the document** in order to indicate the correct number of pages. **DELETE THIS NOTE.**

**IMPORTANT NOTE REGARDING FORMATTING:**

Insert a blank page at the end of all *odd numbered* specification sections that states “THIS PAGE INTENTIONALLY LEFT BLANK”. **DELETE THIS NOTE.**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

#### **A.** Construction Documents and general provisions of the Contract, including General Conditions of the Contract for Construction and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

#### **A.** This Section includes the following:

##### **1.** Microbial and fungal contamination control.

##### **2.** Indoor air quality and pollution control.

##### **3.** Heating, ventilating, and air conditioning.

#### **B. Related Sections:** The following Sections contain requirements that relate to this Section:

##### 1. Division 01 Section 01 45 23.13 "Testing for Indoor Air Quality (IAQ), Baseline IAQ, & Materials" for building flush out requirements.

##### 2. Division 01 Section 01 57 40 "Construction IAQ Management Plan" for a description of the IAQ management plan.

## 1.3 REFERENCES

#### **1. ASTM International (ASTM):**

##### **a.** ASTM D5116-2006, Standard Guide for Small-Scale Environmental Chamber Determination of Organic Emissions From Indoor Materials/Products.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

## 3.1 MICROBIAL AND FUNGAL CONTAMINATION CONTROL

#### **A.** Perform, schedule, and sequence Work as required to limit conditions supporting formations of microbes, molds, and fungi.

##### **1.** Control water penetration, dampness, and humidity to prevent products not treated for exterior use from becoming soaked or damp.

##### **2.** Enclose building prior to installing interior materials and finishes.

##### **3.** Do not install interior products subject to moisture absorption until building is enclosed and wet work generating moisture and humidity is complete.

#### **B.** When visible formations are observed and when formations cannot be completely removed by non-abrasive surface cleaning:

##### **1.** Remove and replace materials identified as food sources for microbes, molds, and fungi.

##### **2.** Correct conditions supporting microbial, mold, and fungal growth.

#### **C.** Remove interior products and finishes, identified as food sources that have absorbed sufficient moisture to become damp whether or not microbial, mold, or fungal growth is observed. Include:

##### **1.** Gypsum board cores.

##### **2.** Organic materials composed of cellulose fiber or paper.

##### **3.** Materials containing sucrose or other binders identified as supporting microbial growth.

#### **D.** Remove fibrous insulation materials subject to retaining moisture such as duct liner, insulation, and other materials that are made wet or damp and cannot immediately be made dry.

#### **E.** Repair or replace ductwork, pans, and other conditions subject to moisture condensation, water penetration, or other water source not drained and made dry.

##### **1.** Remove conditions that have become an environment for microbes, molds, or fungi.

##### **2.** Do not permit conditions leading to standing water.

#### **F.** Install wet work and allow time needed to dry and cure prior to installing materials such as carpet, acoustical material, textiles, and other material of type that may attract and retain moisture.

## 3.2 INDOOR AIR QUALITY AND POLLUTION CONTROL

#### **A. Product Emission Rate Standards:** Test to ASTM D5116 for maximum indoor air concentration levels.

##### **1. Formaldehyde:**

###### **a.** 0.03 parts per million where no other requirements are specified.

###### **b.** 0.005 parts per million where products are specified as formaldehyde free.

##### **2. Total VOC Emissions for Carpet Tile, Adhesives, and Sealers:** 0.05 mg/m2 per hour.

##### **3. 4 Phenyl Cyclohexene (4-PC) Particulate Emissions for Carpet:** One (1) part per billion.

##### **4. Total Particulate Emission Rate Levels:** 50 ug/m3.

##### **5. Primary and Secondary Regulated Pollutants:** Conform to USEPA, Code of Federal Regulations, Title 40, Part 50 National Air Ambient Air Quality Standard. Refer to EPA Web Site http://www.epa.gov/epahome/rules.html#codified.

##### **6. Other Pollutants Not Listed:** Not greater than 1/10 of Threshold Limit Value - Time Weighted Average (TLV-TWA) industrial workplace standard.

#### **B. Architectural Coatings - Volatile Organic Compound (VOC) Content Limits:** Conform to US Environmental Protection Agency (EPA) Federal Register 48886/Vol. 63, No.176 Friday, September 11, 1998/ Rules and Regulations. Refer to EPA Web Site: http://www.epa.gov/ttn/atw/eparules.html.

#### **C.** Do not use products in combination with or in contact with other products that can be identified as combining to form toxic fumes or sustained odors.

#### **D.** Do not use solvents within interior areas that may penetrate and be retained in absorptive materials such as concrete, gypsum board, wood, cellulose products, fibrous material, and textiles.

#### **E.** Protect construction materials from contamination and pollution from contact with construction dust, debris, fumes, solvents, and other environmentally polluting materials.

#### **F.** Allow furnishings and materials such as carpet, floor tile, acoustical tile, textiles, office furniture, and casework, to air out in clean environment prior to installation.

## 3.3 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

#### **A.** Do not run permanent HVAC system during course of construction. Seal ductwork intake and exhaust vents.

#### **B.** Heat, dehumidify, and ventilate building during course of Work as necessary to maintain environmental conditions suitable for drying and curing materials and for prevention of conditions suitable for mold and mildew growth.

##### **1.** Ventilate building to remove moisture, dust, fumes, and odors.

##### **2.** Temper and dehumidify air as needed to remove excess moisture.

##### **3.** Do not use propane heaters and other moisture generating heating systems.

#### **C. Flush out building prior to commissioning.** Refer to Section 01 45 23.13 "Testing for IAQ, Baseline IAQ, & Materials" for procedure.

#### **D.** Inspect ductwork for refuse, contaminants, moisture and other foreign contamination prior to commissioning. Notify Commissioning Agent (CxA) of satisfactory inspection prior to beginning of Commissioning.

#### **E.** Clean underfloor plenum at access flooring acting as supply air duct, prior to occupancy.

## 3.4 REMEDIAL ACTION

#### **A.** Promptly take action as necessary to inspect and remediate conditions suspected of supporting microbial, fungal or mold conditions and where contaminated by indoor air pollution.

#### **B.** Notify and consult with Architect prior to beginning remedial action where contamination by hazardous chemicals, microbes, and fungi is suspected.

END OF SECTION 01 57 30