

# CONSTRUCTION INDOOR AIR QUALITY PLAN

## UT Seay Building Addition

Prepared by,



3/27/2020

## OVERVIEW AND INSTRUCTIONS

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### PROJECT DETAILS

<b>PROJECT NAME</b>	<b>UT Seay Building Addition</b>
<b>LOCATION</b>	<b>The University of Texas at Austin Austin, Texas</b>
<b>GENERAL CONTRACTOR</b>	<b>SpawGlass</b>
<b>LEED CONSULTANT</b>	<b>Above Green, LLC</b>
<b>PROJECT DESCRIPTION</b>	<b>LEEDv4.1 BD+C</b>

- The Construction Indoor Air Quality Plan is a required document for LEEDv4 IEQ Credit 5 Construction Indoor Air Quality Management Plan and IEQ Credit 6 Indoor Air Quality Assessment.
- This document shall not replace or supersede OSHA regulations as to safe construction workplace practices.
- Development of and all updates to this document shall be made by the IAQ specialist and approved by the LEED Project Manager.

## Table of Content

OVERVIEW AND INSTRUCTIONS.....	ii
A. INTRODUCTION.....	4
B. HVAC PROTECTION .....	5
C. SOURCE CONTROL.....	6
D. PATHWAY INTERRUPTION .....	7
E. HOUSEKEEPING.....	8
F. SCHEDULING AND CONSTRUCTION ACTIVITY SEQUENCE.....	9
G. BEFORE OCCUPANCY .....	10

## A. INTRODUCTION

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This plan describes the measures to be taken to provide good indoor air quality (IAQ) during construction and after construction is complete and the occupants have moved into the building. This plan is based on the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, 2nd Edition 2007, ANSI/ SMACNA 008-2008 (Chapter 3) and the requirements of LEEDv4 BD+C.

It is not the intent of this document to replace or supersede OSHA regulations as to safe construction workplace practices. It remains the responsibility of the Construction Manager and the individual sub-contractors to maintain safe building and site operations. Additional precautions may be necessary when hazardous materials are present.

The plan will address construction IAQ by recommending procedures in six areas of concern, which in turn will allow the building to achieve two LEED program points:

- ◆ HVAC system protection
- ◆ Contaminant source control
- ◆ Pathway interruption
- ◆ Housekeeping
- ◆ Scheduling
- ◆ Before Occupancy

## CONTRACTOR REQUIREMENT

The Contractor will take a minimum of six photographs on three separate occasions throughout the construction process to show consistent adherence to each specified requirement. In the following sections, the plans shall describe the specific measures to be performed in each area of concern.

## B. HVAC Protection

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This section provides information about specific HVAC system protection measures and documentation methods in relation to indoor air quality during the construction phase of the project.

### GUIDELINES:

- ◆ During construction, provide MERV 8 filters for return air system openings when in use. Perform frequent maintenance when the HVAC system is being utilized and replace filters as they become loaded, prior to building flush-out/IAQ testing, and prior to occupancy.
- ◆ When performing construction activities that produce dust, such as drywall sanding, concrete cutting, masonry work, wood sawing or adding insulation, seal off the supply diffusers and return air system openings completely for the duration of the task.
- ◆ Shut down and seal off the supply diffusers and return air ducts during any demolition operations.
- ◆ Whenever the HVAC system is not used during construction, seal off the supply diffusers and return air system openings to prevent the accumulation of dust and debris in the duct system.
- ◆ Do not use the mechanical rooms to store construction or waste materials. Keep rooms clean and neat.
- ◆ Provide periodic duct inspections during construction; if the ducts become contaminated due to inadequate protection, clean the ducts professionally in accordance with NADCA (National Air Duct Cleaning Association) standards.

- ◆ The General Contractor shall take photographs showing measures in place.

## C. Source Control

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Provision of good IAQ requires coordination of many aspects of building design. The first pragmatic step is to mitigate the problems by selecting material with minimal emission of irritating or harmful compounds. This form of source control; is an effective means of preventing IAQ problems while reducing the need to dilute avoidable contaminant through expensive ventilation techniques.

The following source control tactics are needed to be implemented by GC to achieve the removal of harmful constituents in the indoor environment:

### GUIDELINES:

- ◆ Use low VOC products as indicated by the specification to reduce potential problems.
- ◆ Restrict traffic volume and prohibit idling of motor vehicles where emissions could be drawn into the building.
- ◆ Utilize electric or natural gas alternatives for gasoline and diesel equipment where possible and practical. Use low-sulfur diesel in lieu of regular diesel.
- ◆ Cycle equipment off when not being used or needed.
- ◆ If necessary, exhaust pollution sources to the outside with portable fan systems. Prevent exhaust from recirculating back into the building.
- ◆ Keep container of wet products closed as much as possible. Cover or seal containers of waste materials that can release odor or dust.
- ◆ Protect stored on-site or installed absorptive building materials from weather and moisture; wrap with plastic and seal tight to prevent moisture absorption.

- ◆ Prohibit smoking inside the building and within 25 feet of all building openings during construction. Smoking includes tobacco smoke, as well as smoke produced from the combustion of cannabis and controlled substances and the emissions produced by electronic smoking devices. Communicate the no-smoking policy to all trade contractors and visitors to the site. Have in place provisions for enforcement and/or no-smoking signage.
- ◆ The General Contractor shall take photographs showing measures in place.

## D. Pathway Interruption

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This strategy aims at interrupting/eliminating the pathways by which the contaminants enter the buildings. This may include physically isolating a section of the building with polyethylene sheeting or other barriers, as well as isolating the space from the general ventilation system by blocking return air grilles, or changing pollutant pathway relationships by running specialized use area under negative pressure relative to surrounding areas install local exhaust, adjust HVAC system to provide make-up air, and test to verify performance

### GUIDELINES:

- ◆ Provide dust curtain or temporary enclosures to prevent dust from migrating to other area when applicable.
- ◆ Locate pollutant sources as far away as possible from supply ducts and areas occupied by workers when feasible. Supply and exhaust systems may have to be shut down or isolated during such activity.
- ◆ During construction, isolate areas of work to prevent contamination of clean or occupied areas. Pressure differentials may be utilized to prevent contaminated air from entering clean areas.

- ◆ Depending on weather, ventilation using 100% outside air will be used to exhaust contaminated air directly to the outside during installation of high-VOC emitting materials.
- ◆ The General Contractor shall take photographs showing measures in place.

## E. Housekeeping

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A mitigation strategy will be most successful when it is institutionalized as part of normal building operations. Solutions that do not require exotic equipment are more likely to be successful in the long run than approaches that involve unfamiliar concepts or delicately maintained systems. If maintenance or housekeeping procedures or supplies must change as part of the mitigation, it may be necessary to plan for additional staff training, new inspection checklists, or modified purchasing practices.

### GUIDELINES:

- ◆ Provide regular cleaning concentrating on HVAC equipment and building spaces to remove contaminants from the building prior to occupancy.
- ◆ All coils, air filters, fans and ductwork shall remain clean during installation and, if required, will be cleaned prior to performing the testing, adjusting and balancing of the systems.
- ◆ Suppress and minimize dust with wetting agents or sweeping compounds. Utilize efficient and effective dust collecting methods such as a damp cloth, wet mop, or vacuum with particulate filters, or wet scrubber.

- ◆ Remove accumulations of water inside the building. Protect porous materials such as insulation and ceiling tile from exposure to moisture.
- ◆ Thoroughly clean all interior surfaces prior to replacing filters and running HVAC system for system balancing, commissioning and building Air Testing.
- ◆ Provide photographs of the above activities during construction to document compliance.

## F. Scheduling and Construction Activity Sequence

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Exposure control through scheduling and sequencing contaminant-producing activity is an administrative approach to mitigation. It may be the best way to limit complaints about activities (such as roofing or demolition) which unavoidably produce odors or dust.

### GUIDELINES

- ◆ Schedule high pollution activities that utilize high VOC level products (including paints, sealers, insulation, adhesives, caulking and cleaners) to take place prior to installing highly absorbent materials (such as ceiling tiles, gypsum wall board, fabric furnishings, carpet and insulation, for example). These materials will act as 'sinks' for VOCs, odors and other contaminants, and release them later after occupancy.
- ◆ Schedule installation of absorptive materials to limit the materials' exposure to moisture.
- ◆ Coordinate the movement of occupants to minimize their exposure to construction debris.
- ◆ The General Contractor shall take photographs showing measures in place.

## G. Before Occupancy

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This section targets LEED IEQ Credit 4: Indoor Air Quality Assessment. The intent of the credit is to reduce indoor air quality (IAQ) problems resulting from construction or renovation and promote the comfort and well-being of workers and occupants.

### GUIDELINES

- ◆ After construction ends and before occupancy, install new filtration media (minimum MERV 13).