

BEYOND

SMART CITIES

LEED®IMPLEMENTATION GUIDE

FOR CONSTRUCTION PROFESSIONALS

KRISHNAJI PAWAR,LEED AP BD+C,GSAS CGP,ISO 14001:2015,GCP

SUSTAINABILITY SPECIALIST ONLINE CURRICULUM COURSE

GREEN BUILDING SPECIALIST

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CONSTRUCTION INDOOR AIR QUALITY

MANAGEMENT PLAN

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LEARNING OBJECTIVES

Details and Descriptions - Construction IEQ Management Plan

Contractor Overview - Construction IEQ Management Plan

Contractor Requirements - Construction IEQ Management Plan

Contractor Best Practices - Construction IEQ Management Plan

Construction IEQ Management Plan - Sample

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**INDOOR ENVIRONMENTAL QUALITY (2PR/9C/16P)**

MINIMUM INDOOR AIR QUALITY PERFORMANCE

ENVIRONMENTAL TOBACCO SMOKE CONTROL

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CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

INDOOR AIR QUALITY ASSESSMENT

THERMAL COMFORT

INTERIOR LIGHTING

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ACOUSTIC PERFORMANCE



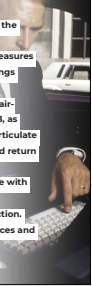
PRE-REQUISITE : MINIMUM INDOOR AIR QUALITY PERFORMANCE
ENVIRONMENTAL TOBACCO SMOKE CONTROL

CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

Intent:
To promote the well-being of construction workers and building occupants by minimizing indoor air quality problems associated with construction and renovation.

Requirements :

- Develop and implement an indoor air quality (IAQ) management plan for the construction and preoccupancy phases of the building.
- The plan must address all of the following. During construction, meet or exceed all applicable recommended control measures of 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.
- Protect absorptive materials stored on-site and installed from moisture damage. Do not operate permanently installed air-handling equipment during construction unless filtration media with a minimum efficiency reporting value (MERV) of 8, as determined by ASHRAE 52.2-2017, with errata (or media with ISOcoarse 90% or higher, as defined by ISO 16890-2016, Particulate Air Filters for General Ventilation, Determination of the Filtration Performance), are installed at each return air grille and return or transfer duct inlet opening such that there is no bypass around the filtration media.
- Immediately before occupancy, replace all filtration media with the final design filtration media, installed in accordance with the manufacturer's recommendations.
- Prohibit the use of smoking inside the building and within 25 feet (7.5 meters) of the 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.



Intent
Reduce indoor air quality problems resulting from construction/renovation and promote the comfort and well-being of construction workers and building occupants.

Potential Technologies & Strategies

- Adopt an IAQ management plan to protect the HVAC system during construction.
- If possible, avoid using permanently installed air handlers for temporary heating/cooling during construction.

Construction IAQ Management Plan : During Construction (EQ 3.1)

Requirements
Use a minimum of MERV 8 filter of each return air grille as determined by ASHRAE 52.2-1999.





IAQ

Intent

Reduce indoor air quality problems resulting from construction/renovation to promote the comfort and well-being of construction workers and building occupants.

Potential Technologies & Strategies

- Prior to occupancy, perform a building flush-out or test the air contaminant levels in the building.
- Coordinate with IEQ Credits 3.1 and 5 to determine the appropriate specifications and schedules for filtration media.

Construction IAQ Management Plan : Before Occupancy (EQ 3.2)

Requirements

Develop an IAQ Management Plan and implement after installation of all finishes, before start of building cleaning, and before occupancy.

OPTION 1 — Flush-Out

- Path 1 & 2: Perform complete flush out of the building.

Note: Path 1 & 2: Perform complete flush out of the building.

OPTION 2 — Air Testing

- Conduct air testing for contaminants.

Install MERV 13 or higher filters.

CONTAMINANT	MAXIMUM CONCENTRATION
Formaldehyde	parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cubic meter
*4-Phenylcyclohexene(4-PCH)	6.5 micrograms per cubic meter
Carbon Monoxide (CO)	9 part per million and no greater than 2 parts per million above outdoor levels



CONTRACTOR -OVERVIEW

☒ The contractor is directly responsible for attaining this credit. Meeting the SMACNA IAQ guidelines, protecting absorptive materials, and conducting air-testing or flush outs are some of the requirements that contractors must perform.

☒ The IAQ plan is prepared by the Contractor and submitted to the architect. It includes IAQ management practices implemented during construction and pre-occupancy phases, which describe how each requirement in the guidelines and credit requirements will be addressed and managed on the job site

☒ Like waste management planning, Contractors have sole responsibility for control over the "During Construction" IAQ Management.



CONTRACTOR - BEST PRACTICES

☒ Make sure quality control in place so that materials are being stored properly and safety measures are being kept up with.

☒ Manage source control to eliminate and/or control the source of pollutants before they get to the site and cause problems.

☒ Make IAQ Management part of the regular project progress meetings. Discuss current deliveries and future activities that might require exhaust, pathway interruption, or special conditions.

☒ Make IAQ Management a subject at safety meetings, both at pre-employment and then every quarter. It is easier to have many eyes looking out for issues.

☒ Require the mechanical or sheet metal contractor shrink-wrap the ends of all ductwork prior to shipping.

☒ Include the IAQ management plan requirements in contract agreements with subcontractors. As subcontractors are selected and deployed on-site, familiarize them with the plan and how it will affect their daily activities.