

# **Acoustical Material and Installation Specifications for the City Council Chambers Mount Pleasant, Michigan**

## **PART 1 GENERAL**

### **1.1 DESCRIPTION**

A. These specifications and the associated sketches describe the acoustical work to be furnished and installed for the City Council Chambers, Mount Pleasant, Michigan.

B. In general terms, the acoustical work will consist of fabric wrapped baffles to be suspended from the ceiling and custom Whisper Walls or approved equal acoustical treatment on three walls of the Council Chambers.

C. The Contractor shall furnish all material, mounts, supplies and equipment required to effect the complete installation of this acoustical work except where specifically designated as by others, whether or not such material is described in this specification.

D. The Contractor shall provide four complete sets of the following data upon completion of the project: manufacturer supplied data, acoustical test reports, flame spread and smoke test results, as-built drawings, complete maintenance instructions.

E. The acoustical materials and installation shall be guaranteed for a period of one year from the date of acceptance against defective materials, design, workmanship, and improper installation. The Contractor will honor any manufacturer's warranties that exceed one year. Any defective material shall be replaced at no expense to the Owner, provided it does not show abuse.

F. All materials shall be held firmly in place. Fastenings and supports shall be adequate to support their loads with a safety factor of at least three.

### **1.2 CITY OF MT. PLEASANT**

A. The City operates under a Council-Manager form of government; has a 2000 census of 25,946; is home to Central Michigan University; is 7.9 square miles, and provides a full range of municipal services including airport, water and sewer. The General Fund budget is \$11.9 million and the budget across all funds is \$32.7 million.

### 1.3 ORDINANCE AND CODES

A. The Contractor shall comply with all applicable national and local codes, ordinances, and obtain all required permits. The Contractor shall be held responsible for any violations of the law within the scope of his work.

### 1.4 MATERIALS AND WORKMANSHIP

A. The Contractor shall verify with the Owner and the Consultant, in writing, regarding the selection of colors. Include this communication as part of the submittals after bid is awarded.

B. Care shall be taken in installation so as to avoid damage to the materials. All installation work shall be executed in accordance with standard industry practices.

C. Shop drawings, including elevations of the wall treatment, and drawings of the suspended baffles, and all furnished materials, mounts, devices or assemblies shall be provided to the Consultant for review and approval prior to their installation.

D. All materials shall be new and in new condition. All workmanship shall be of the finest quality by experienced installation technicians.

E. All materials, mounting devices etc., shall be mounted so as to fit as inconspicuously as possible into the decor of the space.

F. Any damage to walls, ceiling, floor, or other furniture or equipment in the space caused by negligence on the part of the contractor shall be the responsibility of the contractor to cover the cost of repair.

### 1.5 CONTRACTOR QUALIFICATIONS

A. Work in this section shall be performed by a Contractor who has at least five (5) years of verifiable direct experience with the systems of the type and scope specified herein, and who is licensed to perform work of this type in the project jurisdiction.

B. The Contractor shall use sufficient numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section. These personnel shall have at least three (3) years direct experience in similar work, evidence of which shall be verified in writing with appropriate references.

C. The Contractor shall appoint a designated supervisor who shall have at least five (5) years direct experience in similar work. The supervisor shall be present and in responsible charge of all work in the fabrication shop and on the project site during all phases of the installation of the acoustical materials.

D. The Owner may request a prospective Contractor to provide additional information as desired for review by the Consultant and Owner to make a determination of the Contractor's acceptability.

## 1.6 DEFINITIONS

A. Owner – City of Mount Pleasant

B. Consultant - Simoni Systems Inc.

C. Contractor - Individual or company who contracts for the supply and installation of the acoustical systems specified herein.

## 1.7 SUBSTITUTIONS

A. The project shall be bid based on the materials listed in these specifications and on the drawings.

B. Information regarding substitution of materials shall be presented in writing with the bid documents to the Owner and Consultant for review. This written request shall contain copies of complete manufacturer's literature and testing results for the proposed substitute item(s), specifications, and drawings as appropriate or requested.

C. Submission of substitute products may be required for evaluation by the Consultant, at his discretion, prior to acceptance. The Contractor shall be responsible for the substituted equipment and all related shipping costs, and will be required to replace same if an unforeseen defect appears.

## 1.8 ADD ALTERNATES

A. Provide two ADD ALTERNATES as described herein and in the sketches.

1. ADD ALTERNATE #1 shall include removing and replacing the existing fabric wrapped tackboard located on portions of two walls with 1" thick fiberglass wrapped panels. Fabric wrap and fiberglass core density shall be as specified for the Whisper Wall or approved equal system, but these panels may be fabricated off site. Submit sketches showing the layout and fabric color. Provide a lump sum for this alternate.

2. ADD ALTERNATE #2 shall include approximately 250-300 square feet of Whisper Wall or approved equal material on the west wall. Fabric wrap and fiberglass core density shall be as specified herein for the Whisper Wall or approved equal system. Submit sketches showing the layout and fabric color. Provide a lump sum for this alternate.

## 1.9 PRE-PROPOSAL MEETING

- A. There will be an on-site pre-proposal meeting (pre-registration requested) for bidders to see the room and get more detailed information. This meeting is not mandatory, but it is highly recommended that potential bidders attend. It is a historic 100 year old building and offers unique challenges. The pre-proposal meeting will take place on July 15, 2009 at 1:00 p.m. and pre-registration can be sent to Jeremy Howard via email at [jhoward@mt-pleasant.org](mailto:jhoward@mt-pleasant.org) by July 14, 2009 at 4:30 p.m. During the pre-proposal meeting key city personnel as well as the consultant will be able to give feedback on what is expected in the room as far as performance, capabilities, sound quality, and appearance. Any clarifications as to functionality expected as a result of the pre-proposal meeting will be shared with all bidders.

## 1.10 BID DOCUMENT

The following items will be submitted as part of the bid:

- A. A breakdown by major categories is required in order to allow for modification of the total fee, if necessary, to fit within the available funding. Subtotals are required prior to alternates. Pricing must include delivery to project location. The city is also tax exempt.

Please submit a sheet similar to the following for ease of comparison:

Whisper walls (or approved equal) – material	\$ _____
Baffles – material	\$ _____
Installation of Whisper walls – labor	\$ _____
Installation of baffles – labor	\$ _____
Subtotal	\$ _____
Add Alternate #1 – material	\$ _____
Add Alternate #1 – labor	\$ _____
Add Alternate #2 – material	\$ _____
Add Alternate #2 – labor	\$ _____
Grand Total	\$ _____

- B. Detailed information on any substitutions (See section 1.7 SUBSTITUTIONS)

- C. Detailed information on add alternates (See section 1.8 ADD ALTERNATES)

- D. At least three clients with names and telephone numbers you have provided similar services to within the last three years so that they can be contacted for references.

E. A detailed implementation timeline for the final design decisions, purchase, and installation.

F. Payment terms. The City expects to withhold 10% of requested payments as a contractor retainage until such time as the work is completed satisfactorily according to the City.

G. A security deposit equal to 5% of the proposal price OR a bid bond for the completion of the work.

H. Information about the experience and background of your firm which you believe qualifies you to be the selected contractor for this project.

I. A listing of any sub-contractors that might be used on this project and their relevant experience in similar projects.

J. Signature of an authorized representative of the firm.

K. Proof of liability insurance of at least \$250,000 and worker's compensation insurance coverage for workers.

#### 1.10 SUBMITTALS

A. The Contractor shall submit complete lists, quantity of four, including one copy to be retained by the Consultant, of all materials intended for the project. The material lists shall be submitted and reviewed before any material is purchased. All shop drawings required shall be included as a separate submittal.

B. A progress schedule shall be included with the submittals which will include duration and milestones for at least the following: completion of materials buy-out, completion of shop fabrication, site installation, readiness for punch list inspection.

C. Submittals shall comply with the overall project schedule. Failure to make timely, complete submittals is considered to be a lack of substantial progress of the work in the section. Incomplete or uncoordinated submittals will be returned with no review action.

D. Prior to installation, the Contractor shall submit the following:

1. All samples as listed elsewhere in these specifications.
2. Shop drawings as listed elsewhere in these specifications.
3. Laboratory test results as listed elsewhere in these specifications.

G. Notebooks that include copies of all reviewed submittals shall be kept at the project site during the construction of the project.

### 1.11 PROTECTION OF WORK

A. The Contractor shall protect all work and materials from damage by any cause. He shall provide for the safety and new condition of the materials until final acceptance by the Owner. The Contractor will replace all defective materials as directed by the Owner or Consultant.

B. Owner's equipment, furnishings, and building shall be kept covered and protected from airborne contaminants. The Contractor shall clean all debris from the Council Chamber prior to the punch list inspection.

C. Council Chamber must be cleaned up each day in order to facilitate use of the room as scheduled. Contractor will need to work around currently scheduled events.

### 1.12 TIME OF COMPLETION

Contractor selection may be based in part on ability to meet timely schedule. The tentative schedule is as follows:

Bid packets made available	July 6
Registration deadline for pre-proposal meeting	July 14
Pre-proposal meeting	July 15 at 1:00 p.m.
Bids due	July 28 at 1:30 p.m.
Review and follow-up by staff	by August 5
Recommendation to City Commission for award	August 10
Installation complete	by ?

### 1.13 BASIS OF SELECTION

The City of Mt. Pleasant reserves the right to accept or reject any proposal. The City also reserves the right to negotiate final terms with the selected vendor. The City will select the proposal that it considers most advantageous to the city. The following items will be considered:

1. Firm qualifications and experience in similar projects.
2. Qualifications of key personnel assigned to the project.
3. Qualifications of any proposed sub-contractor.
4. Acceptability of equivalent materials if proposed.
5. Schedule for completion of the work.
6. References from clients.
7. Cost of the services provided.

### 1.14 BID SUBMITTAL

Sealed bid responses to this request must be submitted to:

Jeremy Howard  
City Clerk/Information Technology Manager  
320 West Broadway Street  
Mt. Pleasant, MI 48858

The sealed bid must be clearly marked "ACOUSTICAL MATERIAL AND INSTALLATION BID" and must be received by 1:30 p.m. on July 28, 2009. Four (4) complete copies of the bid are required. LATE BIDS WILL NOT BE ACCEPTED.

Questions concerning the bid should be addressed to Jeremy Howard, at (989) 779-5374 or via email at [jhoward@mt-pleasant.org](mailto:jhoward@mt-pleasant.org).

#### 1.15 MOUNTING LOCATIONS

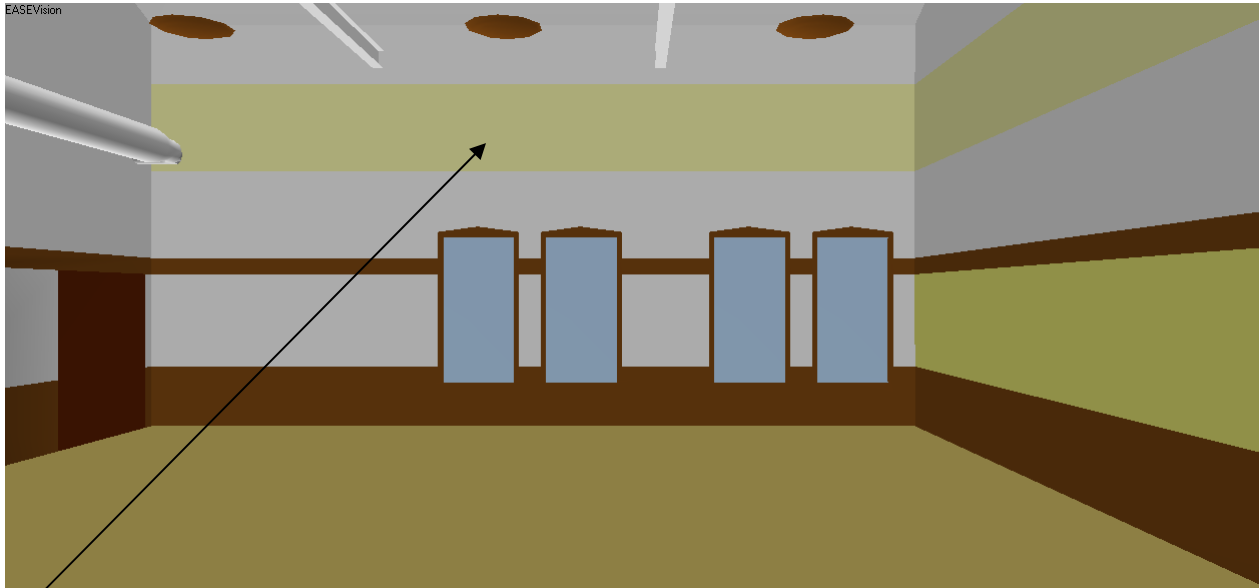
A. In general, mount the acoustical materials as shown in the following sketches.

City of Mount Pleasant Michigan

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## Council Chambers Acoustical Treatment Sketches

### Interior View of North Wall Showing Whisper Walls or Approved Equal Treatment



Whisper Walls or approved equal on north wall between 11'9" and 15'9" elevation. (Shown in pale yellow, refer to specifications for exact colors.)

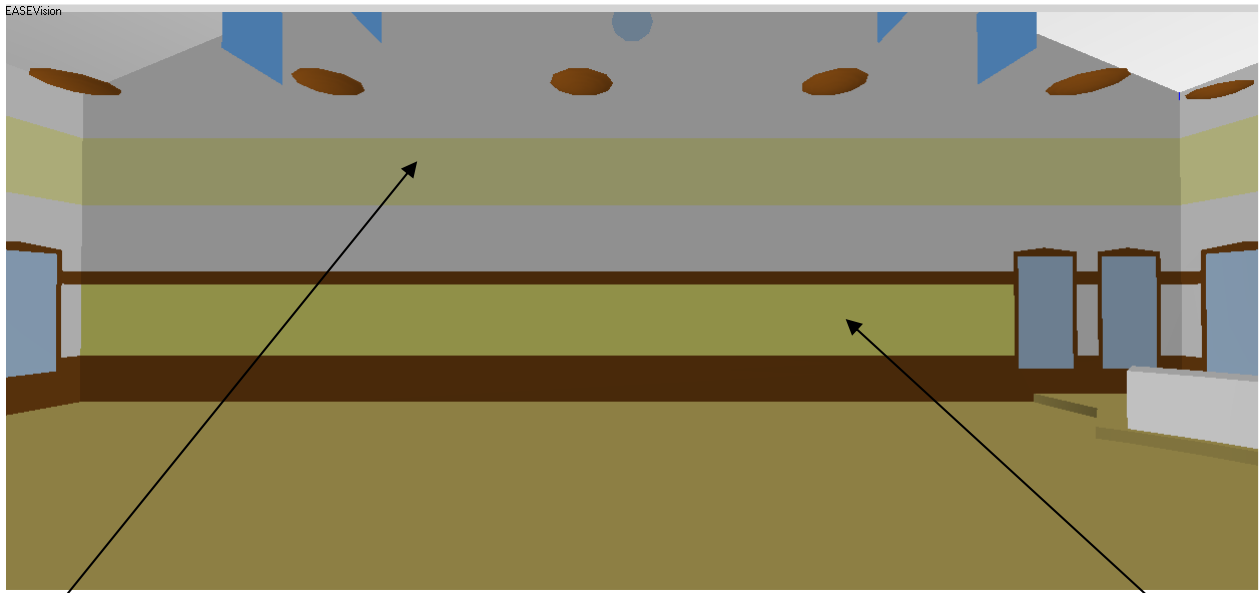
Guilford of Maine FR701 or approved equal fabric over 2" thick fiberglass, approximately 6 lb. per cubic foot density. Approximately 140 square foot total Whisper Walls or approved equal on the north wall.

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City of Mount Pleasant Michigan

# Council Chambers Acoustical Treatment Sketches

## Interior View of East Wall Showing Whisper Walls or Approved Equal Treatment



Whisper Walls or approved equal on east wall between 11'9" and 15'9" elevation. (Shown in pale yellow, refer to specifications for exact colors.)

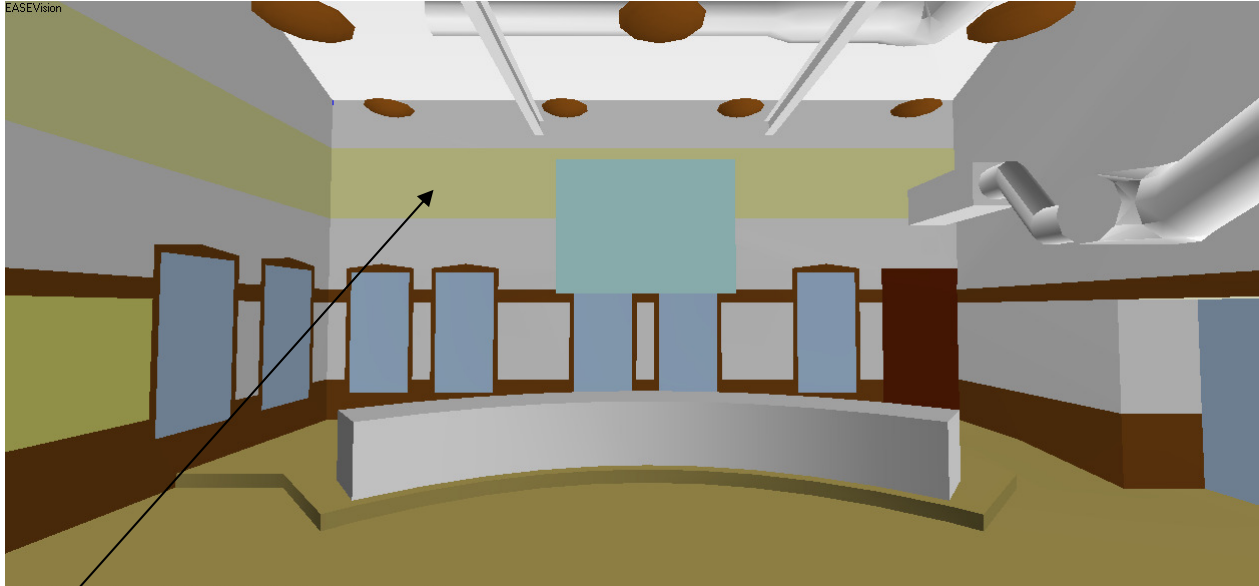
Guilford of Maine FR701 or approved equal fabric over 2" thick fiberglass, approximately 6 lb. per cubic foot density. Approximately 262 square foot total Whisper Walls or approved equal on the east wall.

Portions of this area from 3' to 7' elevation include five existing fabric wrapped tackboard panels. ADD ALTERNATE 1 replaces these with 1" fabric wrapped fiberglass panels.

City of Mount Pleasant Michigan

## Council Chambers Acoustical Treatment Sketches

### Interior View of South Wall Showing Whisper Walls or Approved Equal Treatment



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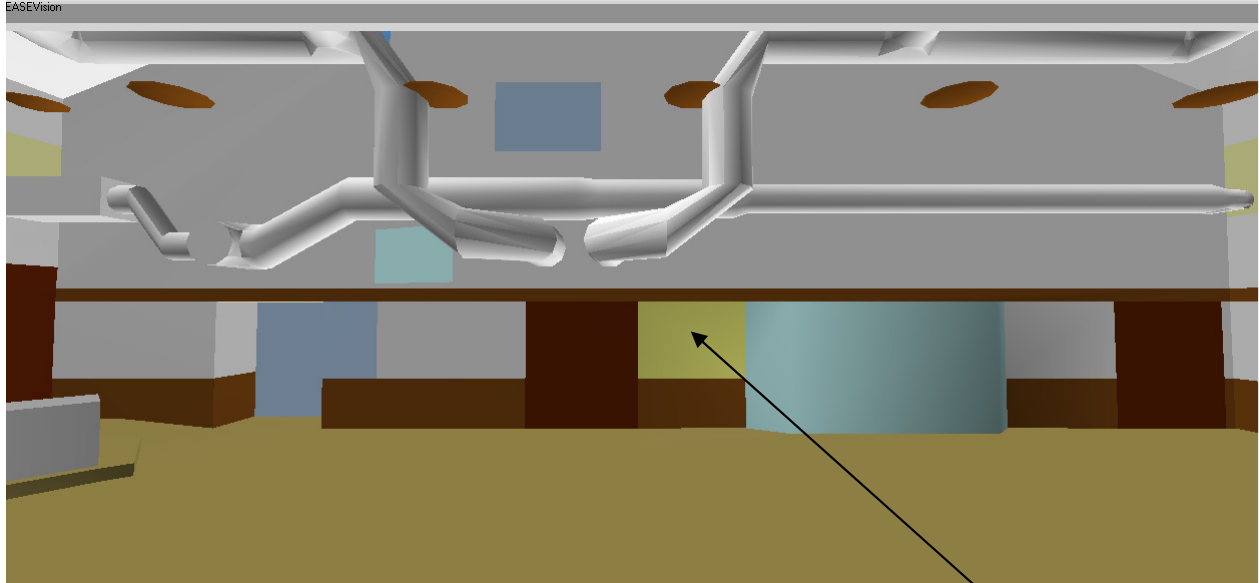
Whisper Walls or approved equal on south wall between 11'9" and 15'9" elevation. (Shown in pale yellow, refer to specifications for exact colors.)

Guilford of Maine FR701 or approved equal fabric over 2" thick fiberglass, approximately 6 lb. per cubic foot density. Approximately 141 square foot total Whisper Walls or approved equal on the south wall.

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# Council Chambers Acoustical Treatment Sketches

## Interior View of West Wall



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This area from 3' to 7' elevation includes an existing fabric wrapped tackboard panel. ADD ALTERNATE 1 replaces this with a 1" fabric wrapped fiberglass panel.

ADD ALTERNATE 2 is a voluntary alternate. Provide 250 to 300 square feet of Whisper Walls or approved equal treatment consisting of Guilford of Maine FR701 or approved equal fabric over 2" thick fiberglass, approximately 6 lb. per cubic foot density.

Locate the treatment in an aesthetically pleasing layout on the upper wall. Submit sketches of the proposed layout.

# City of Mount Pleasant Michigan Acoustical Baffle Sketches

2" thick baffles to be provided and installed in two sizes.

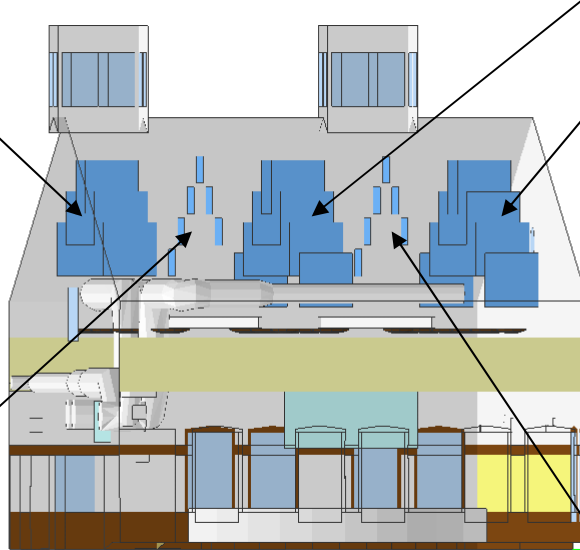
Six 4' x 4' baffles on 5' 6" centers oriented E-W following the ceiling line

Eight 4' x 4' baffles on 5' 6" centers oriented E-W following the ceiling line

Eight 4' x 4' baffles on 5' 6" centers oriented E-W following the ceiling line

Ver: 0" Hor: 173°

Project: show treatment for bid  
Dye: Material Colors  
Freq: 1000 Hz



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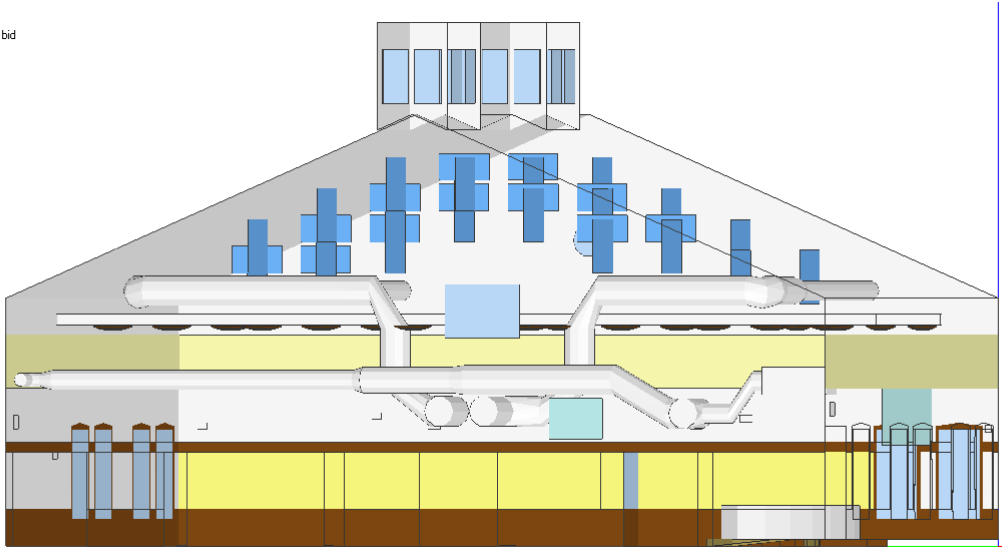
Six 4'W x 2'H baffles on 5' 6" centers oriented N-S following the ceiling line

Six 4'W x 2'H baffles on 5' 6" centers oriented N-S following the ceiling line

# City of Mount Pleasant Michigan Acoustical Baffle Sketches

Ver: 0" Hor: 112"

Project: show treatment for bid  
Dye: Material Colors  
Freq: 1000 Hz



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Baffles are constructed of 2.5 # density fiberglass, wrapped with Guilford FR701 or approved equal, supplied in manufacturer's standard color as selected by the Owner.

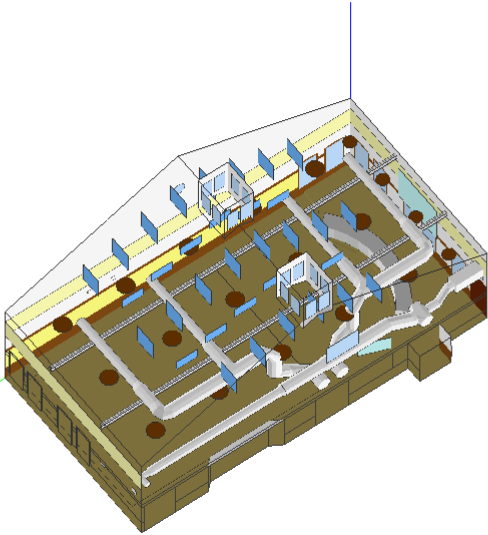
Baffles to be supplied with grommets, and be suspended with aircraft cable from the existing structure.

Contractor to field verify all dimensions and provide drawings showing exact locations prior to installing any materials.

Contractor to submit shop drawings showing method of attaching baffle aircraft cable to the structure.

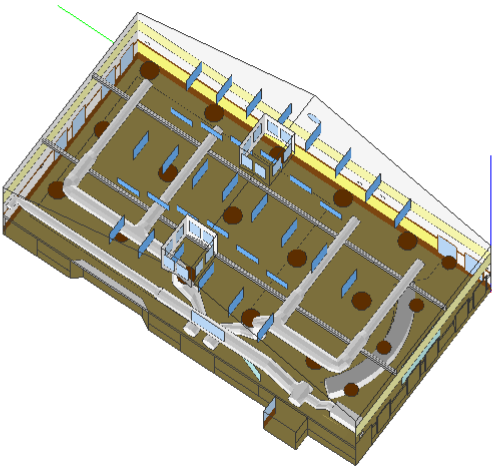
# City of Mount Pleasant Michigan Acoustical Baffle Sketches

Ver: 57' Hor: 54'  
Project: show treatment for bid  
Dye: Material Colors  
Freq: 1000 Hz



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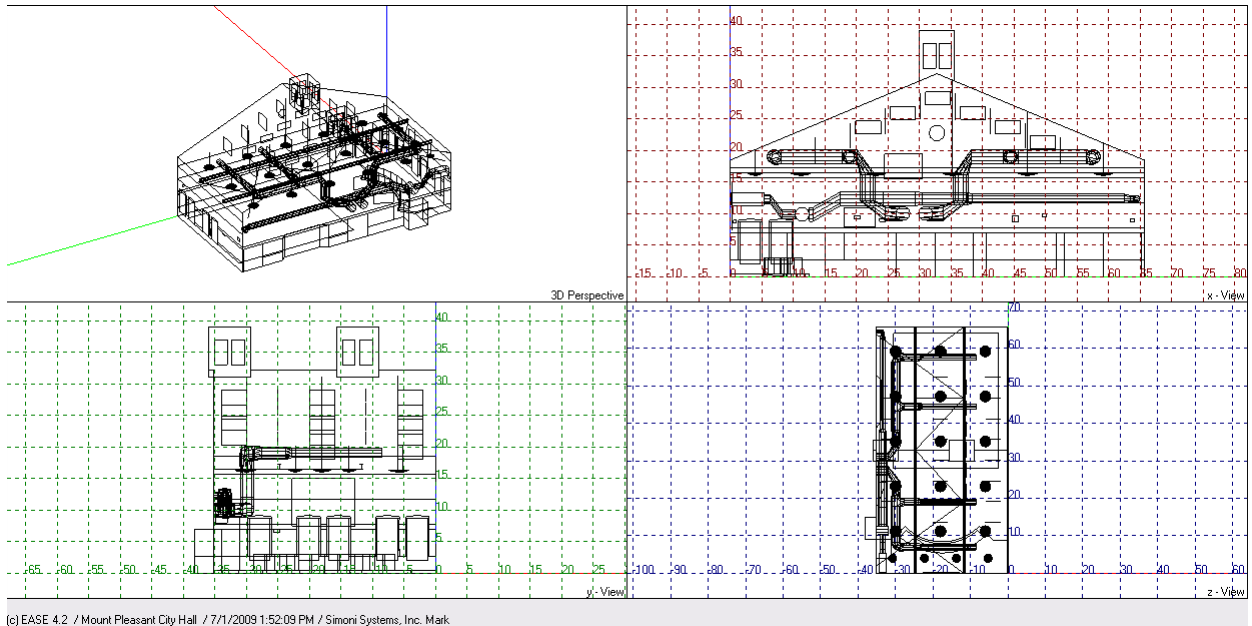
Ver: 68' Hor: 126'  
Project: show treatment for bid  
Dye: Material Colors  
Freq: 1000 Hz



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## City of Mount Pleasant Michigan

# Sketches with Scale



## PART II - MATERIALS

### A. Suspended Baffle Specifications

#### General

##### 1.1 Work Included:

The work consists of furnishing all labor, materials, accessories and equipment necessary to install suspended baffles as shown on the drawings and specified herein.

##### 1.2 Delivery and Storage:

Store products in a cool, dry place out of direct UV sunlight. Protect from the elements and from damage. Store in a temperature controlled environment of not less than 50 degrees F prior to, during, and after installation. Maintain uniform humidity of 20% to 40% in a controlled environment prior to, during, and after installation.

#### Part II: Product

##### 2.1 Product and Manufacturer:

MBI Cloud-Lite® acoustical Baffles as manufactured by MBI Products Company, Inc., 801 Bond Street, Elyria, Ohio 44035-3318, or approved equal.

##### 2.1.1 Geometric Shape: rectangular

##### 2.1.2 Size & Thickness: 2" thick, 4' x 4' and 2' x 4'.

##### 2.1.3 Core: 2.5# fiberglass

##### 2.1.4 Surface Finish: polyester fabric

##### 2.1.5 Color: To be selected by Owner from manufacturer's standard selection

##### 2.1.6 Edge Shape: Natural

##### 2.1.7 Edge Construction: sewn

##### 2.1.8 Acoustical Performance: 1.41 N.R.C.

##### 2.1.9 Incombustibility: Class "A" per ASTM E84 25/0/50

##### 2.1.10 Suspension Provision: Standard nickel plated grommets

#### Part III: Execution

##### 3.1 Installation

3.1.1 MBI acoustical baffles shall be located and spaced as detailed on reflected ceiling plans and/or detailed on the interior elevation drawings and as indicated on room finish schedule.

3.1.2. Suspend Panels From: Existing construction, using eyehooks and aircraft cable.

3.1.3 Attachment Method: Plastic tie.

3.1.4 Workmanship

The acoustical system shall be installed only by an approved contractor.

All work shall be completed in a workman like manner. All baffles shall be properly installed and left in a clean, sanitary condition. Contractor shall remove and dispose of shipping containers and debris.

## B. ACOUSTICAL WALL SYSTEMS

### GENERAL

#### 1.1 Work Included:

The work consists of furnishing all labor, materials, accessories and equipment necessary to install suspended baffles as shown on the drawings and specified herein.

#### 1.2 Delivery and Storage:

Store products in a cool, dry place out of direct UV sunlight. Protect from the elements and from damage. Store in a temperature controlled environment of not less than 50 degrees F prior to, during, and after installation. Maintain uniform humidity of 20% to 40% in a controlled environment prior to, during, and after installation.

#### 1.3 SUMMARY:

##### A. Section Includes:

A site-fabricated acoustical fabric wall system consisting of fabric stretched over an acoustical core by means of rigid polymer extrusions of varying profiles and sizes, as shown on the drawings and as manufactured by Whisper Walls (800) 527-7817 and known as Whisper Walls®, or approved equal.

#### 1.4 SUBMITTALS:

##### A. Product Data:

Submit manufacturer's product specifications including certified laboratory test reports and other data as required to show compliance with the application.

##### B. Samples:

Provide 12" x 12" samples of fabrics, core, and representative samples of rigid polymer mounting devices.

##### C. Certified Test Reports:

Submit test data from an independent testing agency, acceptable to authorities having jurisdiction, evidencing that the systems components comply with requirements indicated for fire and toxicity performance characteristics.

#### 1.5 QUALITY ASSURANCE:

##### A. Fire hazard Classification:

All fabrics, cores and mounting devices shall pass ASTM E84,  
Class A for flame spread and smoke.  
Smoke developed Index: 5  
Flame spread Index: 10 "Class 0-25" (Class A)

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B. Minimum Noise Reduction Coefficient (NRC) of 0.95 with a 2" system, and 3 lb. per cubic foot density fiberglass.

C. Installer Qualifications: Installation shall be performed by an authorized entity licensed and trained for Whisper Walls® or approved equal.

D. Prefabricated panels are not acceptable for this specification.

#### 1.6 DELIVERY, STORAGE AND HANDLING:

A. Protect system components from excessive moisture in shipment, storage, and handling. Deliver in unopened bundles and store in a dry area with adequate air circulation

#### 1.7 MAINTENANCE:

A. Extra Stock: As an option, matching replacement stock of fabric of amounts requested by the Owner may be required.

#### 1.8 PRODUCT DRAWINGS:

A. Installation company shall submit a finish schedule, typical elevations, and details to the Consultant and the Owner, as required.

### Section 2 PRODUCTS

#### 2.01 SYSTEM DESCRIPTION:

A. Provide a complete stretched fabric acoustical or tackable fabric system including anchoring as manufactured by Whisper Walls or approved equal and consisting of fabrics field applied over core material and mounted securely by continuous one-piece perimeter, midwall, inside corner, and outside corner polymer extrusions, while still allowing for fabric removal and replacement without the removal of the means of attachment or disturbing adjacent panels.

B. Include required accessories as detailed or specified.

#### 2.02 MATERIALS:

A. Fabrics:

1. Guilford of Maine FR 701 or approved equal, color as selected by the owner from the manufacturer's standard colors.

B. Core Material:

1. Standard system consisting of 2" fiberglass core with 3 lb. per cubic foot density.

2. Facing fabric is not to be adhesive-applied to acoustical/tackable core. Acceptable systems will stretch facing fabric over acoustical/tackable core material, leaving fabric independent from core surface to permit tack holes to close when tacks are removed.

C. Fabric Mounting System: Standard 2" thickness

1. One-piece perimeter extrusions with edges selectively covered to create a welting in bevel, square and radius conditions.

2. One-piece midwall extrusions in bevel, square, radius, or integral reveal with condition installed vertically, horizontally, diagonally or using free-form curves.

3. Corners: 90° one-piece inside  
90° one-piece outside creating a seamed or no seam corner

4. Anchoring System:

a. Whisper Walls® or approved equal stapler that has the ability to mechanically diverge staples for securely attaching extrusions to drywall with 18 gage wire size.

b. Standard fasteners recommended by the manufacturer to securely fasten extrusions to substrates other than drywall.

## PART 3 EXECUTION

### 3.01 DELIVERY STORAGE AND EXAMINATION:

A. Examine the condition of the substrate and the conditions under which the work of this Section is to be performed. Notify the Consultant in writing of any unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner satisfactory to the Installer.

B. Field measure each wall area which is to receive the stretched fabric system to establish correct layout.

### 3.02 INSTALLATION:

A. Install materials in accordance with the manufacturer's instructions and complying with governing regulations, fire resistance rating requirements indicated and industry standards applicable to the work.

B. Fasten the rigid polymer extrusions to the surfaces which are to receive the treatment. Secure with Whisper Walls® or approved equal mechanical diverging stapler using 1 inch 18 gage staples spaced on 2 inch centers.

C. Install rigid polymer extrusions plumb and straight, flush, and in proper alignment.

D. Install the core material required, continuous and flush, to the shoulder of the track and secure in place with recommended fasteners.

E. Cut the fabric from each roll maintaining sequence of drops and matching direction of weave for sequential and uniform installation.

F. Stretch the fabric and secure into the locking jaws of the extrusions so that it will be smooth, free of wrinkles and the weave straight and parallel to perimeter anchors, plumb, and aligned horizontally and vertically. Gluing or stapling of fabric will not be acceptable for this work.

G. Examine fabric as it is installed for damage, imperfections, poor color match, or other deficiencies. Replace with acceptable material as directed by the Architect.

### 3.03 CLEANING AND PROTECTION:

A. Clean exposed surfaces of acoustical wall system, comply with manufacturer's instructions for cleaning and repair of minor finish damage. Remove and replace work which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

B. The Installer shall advise the Contractor of required protection for the Whisper Walls® or approved equal, including temperature, humidity limitations, and dust control, so that the work will be without damage and deterioration at the time of acceptance by the Owner.