

**Investigative Report**

**Building Name & Level Here**

**Project Name: Enter Project Name**

**RTN Enter RTN**

**Draft Report or Final Report**

**Original Issue: Enter Issue Date Here**

**Revision: NA**

**University of Michigan Hospitals and Health Centers**

**Facilities Planning & Development**

Investigative Report

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# [EXECUTIVE SUMMARY](#_TABLE_OF_CONTENTS_1)

***Note to Editor:*** *Text in italics throughout this template are notes to the editor and should be deleted after the note has been read and incorporated into the report*

## Problem Statement:

*(A/E to state the problem, including areas, departments, procedures, operations effected).*

*\*\*Executive Summary shall be no more than one page for all reports*

## Summary of Existing Conditions:

*(A/E to briefly summarize existing building conditions, referencing applicable engineering disciplines, within the area of work.)*

## Recommendations:

*(A/E to briefly summarize recommendations made in the investigative report to address the problem, referencing engineering disciplines applicable to the project, within the area of work. Highlight project constraints (i.e., “Elevated room temperatures are to be expected…”), infrastructure requirements (i.e., “Work based on the availability of 20 GPM from the UH chilled water loop…”), or possible code violations/operational difficulties, preferably in a bulleted format. A/E to make clear all assumptions and outstanding issues.)*

## Estimated Project Cost:

Construction costs are estimated at *Enter Costs HERE*. For total estimated project costs, which are more, please see Completed Planning Investigation Memorandum. *(A/E to briefly summarize construction costs associated with the project, referencing more complete construction cost opinion information contained elsewhere within the report.)*

## Executive Summary Table:

|  |  |
| --- | --- |
| Building Number |  |
| Floors |  |
| Other Floors Affected |  |
| Gross Area of Work |  |
| HFES Submittal Required? |  |
| BFS Submittal Required? |  |
| Certificate of Need Required? |  |
| Estimated Construction Cost (For total Project Cost, please refer to Completed Planning Investigation Memorandum) |  |
| Construction Cost/Gross SF |  |
| Use Group |  |
| Construction Type |  |
| Infection Control Class |  |
| Potential DTE Energy Rebates Available: |  |

##

# [EXISTING CONDITIONS SUMMARY](#_TABLE_OF_CONTENTS_1)

***Note to Editor****: AE to determine if each section listed under Existing Conditions Summary and Recommendations Summary is applicable. If subsection is not applicable AE shall delete subsection as required (I.E. if there are no Existing Environmental Issues, AE shall delete this subsection).*

## Environmental Issues:

*(A/E to summarize any environmental or hazmat abatement issues that the Owner has identified as being located in the area of work, including existing code violations and FCA (Facility Condition Assessment) deficiencies noted.)*

## General:

*(A/E to summarize any existing conditions within the area of work that are consistent throughout the area of work in the interest of brevity, including existing code violations and FCA deficiencies as noted.)*

## Civil/Site:

*(A/E to summarize existing civil/site utilities/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Architectural:

*(A/E to summarize existing architectural conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Mechanical:

*(A/E to summarize existing mechanical/HVAC systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Plumbing:

*(A/E to summarize existing plumbing systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Fire Protection:

*(A/E to summarize existing fire protection systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Electrical:

*(A/E to summarize existing electrical systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Data/Telecommunications:

*(A/E to summarize existing data/telecommunication systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Auxiliary Systems *(as Needed)*:

*(A/E to summarize existing auxiliary systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Major Medical Equipment *(as Needed)*:

*(A/E to summarize existing major medical equipment/systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

# [RECOMMENDATIONS SUMMARY](#_TABLE_OF_CONTENTS_1)

## Abatement Needed:

*(A/E to summarize any abatement/environmental issues that the Owner has identified as needing to be addressed by the Owner in the area of work, including existing code violations and FCA deficiencies as noted.)*

## General:

*(A/E to summarize any recommendations made within the area of work that are consistent throughout the area of work in the interest of brevity, including existing code violations and FCA deficiencies as noted.)*

## Civil/Site:

*(A/E to summarize recommendations made regarding civil/site/utilities in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Architectural:

*(A/E to summarize recommendations made regarding architectural conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Mechanical:

*(A/E to summarize recommendations made regarding mechanical/HVAC systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted. For projects requiring the reuse of existing airflow capacity, use the following table.)*

## Room Air Balance Schedule:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **EXISTING TAB ID** | **EXISTING ROOM** | **EXISTING CFM (1)** | **PROPOSED TAB ID** | **PROPOSED ROOM** | **PROPOSED CFM (2)** |
| SA | RA (EA) | SA | RA (EA) |
| AHU-? | (E) VAV-??Size ?” | F7537 - OB Patient Rm.(t-stat) |  |  | New VAV-??Size ?” | F7537 – Pre-Op/Recovery(t-stat) |  |  |
| F7539Z - Corridor |  |  |  |  |
| **Zone Total** |  |  |  |  |
| (E) VAV-??Size ?” | F7539 – OB Patient Rm.(t-stat) |  |  | F7539Z – Corridor |  |  |
| **Zone Total** |  |  | **Zone Total** |  |  |
| NA | F7537T - Toilet |  |  | NA | F7537T - Toilet |  |  |
| (E) VAV-??Size ?” | F7553 – Child and Family Life Rm.(t-stat) |  |  | (E) VAV-??Size ?” | F7553 – Treatment(t-stat) |  |  |
| **Zone Total** |  |  | **Zone Total** |  |  |
| NA | F7553T - Toilet |  |  | NA | F7553T – Soiled Holding |  |  |
| **AHU-? Total:** |  |  | **AHU-? Total:** |  |  |

## Plumbing:

*(A/E to summarize recommendations made regarding plumbing systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Fire Protection:

*(A/E to summarize recommendations made regarding fire protection systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Electrical:

*(A/E to summarize recommendations made regarding electrical systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Data/Telecommunications:

*(A/E to summarize recommendations made regarding data/telecommunication systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Auxilary Systems *(as Needed)*:

*(A/E to summarize recommendations made regarding auxiliary systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Major Medical Equipment *(as Needed)*:

*(A/E to summarize recommendations made/Owner decisions made regarding major medical equipment/systems/conditions in the area of work, including existing code violations and FCA deficiencies as noted.)*

## Work Outside Project Area:

*(A/E to identify work outside the immediate project area that will impact ongoing Owner operations in building areas separate from/adjacent to the area of work, including existing code violations and FCA deficiencies as noted.)*

## Facilities Condition Assessment (FCA) Work Included:

*(A/E to identify, with the Owner’s assistance, FCA work to take place concurrently with work included within the project scope, including existing code violations and FCA deficiencies as noted.)*

## Facilities Condition Assessment (FCA) Work Excluded:

*(A/E to identify, with the Owner’s assistance, FCA work relevant to the project scope that will not take place concurrently with work included within the project scope, including existing code violations and FCA deficiencies as noted.)*

## Coordination with Other Known Projects:

*(A/E to identify, with the Owner’s assistance, coordination with other known projects that are separate from the scope of the project that will take place nearby or concurrently with the work included within the project scope.)*

## Energy & Water Conservation:

*(A/E to provide a brief narrative on how project will comply with the requirements of UM Design Guideline Special Instructions to Designers SID-D. Narrative shall highlight compliance with ASHRAE 90.1 and provide a bullet list of Energy Conservation Measures [ECM’s] and Water Conservation Measures [WCM’s] that are proposed to be included in the project. The overall construction budget prepared by the A/E shall reflect the costs of these ECM’s and WCM’s. [These costs shall be part of the overall construction budget, and shall not be separately defined, and/or called out.]*

*In addition, for projects over $10 million construction cost, the A/E shall complete a “block load” energy analyses in accordance with SID-D and ASHRAE 90.1 Appendix G: Performance Rating Method to demonstrate compliance with the SID-D’s 30% below ASHRAE 90.1 baseline requirement.*

**PHASING SUMMARY**

Phasing construction is not required for this project.

\*\*\*\*\* or \*\*\*\*\*

## Project Sequencing:

*(A/E to identify, with the Owner’s assistance, the order/sequencing of individual project components to meet the needs of the users/stakeholders to minimize the impact of ongoing Owner operations.)*

## Construction Phasing:

*(A/E to identify, with the Owner’s assistance, construction phasing for the project that takes into account the order/sequencing of individual project components to meet the needs of the users/stakeholders to minimize the impact of ongoing Owner operations.)*

## Phase 1:

*(A/E to identify work to take place within each construction phase, including provisions for advance work by the Owner, temporary facilities/controls/utilities to be in place before the start of each phase of construction, user move-in/move-out, equipment installation, furniture installation, etc. for each phase of the project.)*

## Phase 2:

*(A/E to identify work to take place within each construction phase, including provisions for advance work by the Owner, temporary facilities/controls/utilities to be in place before the start of each phase of construction, user move-in/move-out, equipment installation, furniture installation, etc. for each phase of the project.)*

# [CONSTRUCTION COST ESTIMATE](#_TABLE_OF_CONTENTS_1)

Construction costs are estimated at *Enter Construction Cost Here*. Refer to the Construction Cost Estimate that follows this section for a summary of construction costs anticipated for this project. For total estimated project costs, which are more, please see Completed Planning Investigation Memorandum.

## Assumptions Summary:

The following assumptions have been made in preparing the Construction Cost Estimate for this project, as follows:

*(A/E shall supplement the list below as required by the project scope/conditions.)*

Construction will be competitively bid by pre-qualified General Contractors.

Construction costs are estimated for current year. Construction cost based on drawing and assumptions contained within this report.

See attached Cost Estimate Summary and Breakdown for premium time assumptions applied to the labor for the following trades and/or areas of the project listed.

## Items/Costs Not Included:

The following items have not been included within the Construction Cost Estimate for this project, as follows:

*(A/E shall edit and supplement the list below as required by the project scope/conditions.)*

Contingencies of any kind, including design contingency, construction contingency, or user contingency.

Owner furnished equipment, furniture, window coverings, artwork, signage, bulletin boards, marker boards, systems furniture, furnishings or Owner furnished and installed equipment.

Escalation.

Professional Fees and Reimbursable.

Utility Company Fees.

Testing.

Inspections.

Plan Review Fees.

Hazard Abatement.

Commissioning.

Moving Fees.

Telecommunications Devices, Networking and Cabling.

# [PROGRAM](#_TABLE_OF_CONTENTS_1)

*(A/E shall insert the space program for the project as developed during the investigation phase.)*

## DRAWINGS

## Drawings *(Required)*:

Sheet SD-1: Location Maps

Sheet SD-2: Building Keyplan

Sheet SD-3: Enlarged: Demolition Plan (*A/E note: with Room Numbers and Names)*

Sheet SD-4: Enlarged: New Work Plan *(A/E note; with Room Numbers and*

 *Names)*

## Drawings *(Optional/As Needed)*:

(A/E to determine which of the following drawings shall be needed to adequately illustrate the scope and complexity of the project as requested in CSA worksheet).

Phasing Plan

Reflected Ceiling Plan

Equipment Plans

Key Elevations

Mechanical Plans

Electrical Plans

Site Plans

# [DESIGN TEAM INFORMATION](#_TABLE_OF_CONTENTS_1)

## A/E DESIGN TEAM

## Project Manager:

Name, email, phone

## Architect:

Name, email, phone

## Mechanical:

Name, email, phone

## Electrical:

Name, email, phone

## UMHHC DESIGN TEAM

## Design Manager:

TBD, - - - -, - - - -

## Energy Conservation Engineer:

Colin Murphy, ctmurphy@umich.edu, (734) 615-2271

## Architectural Contact:

TBD, - - - -, - - - -

## Mechanical Contact:

TBD, - - - -, - - - -

## Electrical Contact:

TBD, - - - -, - - - -

## Interior Design Contact:

TBD, - - - -, - - - -

## Capital Equipment Contact:

TBD, - - - -, - - - -

## Building Manager:

TBD, - - - -, - - - -

## Departmental Representative:

TBD, - - -, - - -

# [APPENDICIES](#_TABLE_OF_CONTENTS_1)

*(A/E shall edit the list below, with Owner’s assistance, to suit the project scope, complexity and need.)*

## EXISTING AIR BALANCE

## ENGINEERING CALCULATIONS

## MAJOR EQUIPMENT CUT SHEETS

## COPY OF PDS-2 REQUEST

## EXISTING ELECTRICAL LOADS

## APPLICABLE CODES

*(A/E shall list code Authorities Having Jurisdiction (AHJ) over the project.)*

1. List current applicable codes enforced by Authorities Having Jurisdiction:

Michigan Department of Community Health Facilities Engineering Section

Michigan Department of Labor and Economic Growth Bureau of Construction Codes and Fire Safety

Michigan Building Code-Latest Edition

Factory Mutual

UM Inspection Agencies

UM Campus Fire Marshal

UM OSEH

## FCA SUMMARY SHEET

## COMMUNICATION DOCUMENTS

 Meeting Minutes

 E-mails

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2. Executive Summary Table

3. Room Air Balance Schedule