

# Plan Review Report



## **ARCHITECT/ENGINEER:**

**Attn:** Bob Blizzard, AIA  
Klondike Design Group, LLC  
8501 Snow Drift Dr. Ste 300  
Glacier, MN 55199

**Date:** 6/9/2016

**Project Title:** Sammy's Submarine Sandwiches

**Location:** Glacier, MN

**Address:** 1234 Main Street

**Plan Review Number:** BLD1606-00052

**Date Received:** 6/1/2016

**Reviewer:** Jack Frost

**Phone:** 281-XXX-XXXX

Except as noted below, the construction documents for the project described above have been reviewed for substantial compliance with requirements of the Minnesota State Building Code.

The following comments shall be resolved before a building permit can be issued. The architect or engineer shall respond by a letter of verification and revised construction documents or addenda that clearly identify those corrections have been made as required by this plan review.

### **Submittals:**

#### 1. Special Inspections and Testing:

- a. Soils shall be verified by a licensed professional geotechnical engineer prior to placement of concrete footings or slabs. Submit the observation report to the Building Official and have copy available at the footing inspection.
- b. Statement of Special Inspections: Provide a Special Structural Testing and Inspections Program Summary Schedule prepared and signed by the registered design professional in responsible charge, the owner, contractor, design engineers of record, and the inspecting or testing agents. If you do not have a form, a link is below:  
<https://www.dli.mn.gov/sites/default/files/pdf/plan-review-special-summary.pdf>
- c. Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, special inspection of the fabricated items shall be required. Exception: the fabricator is registered and approved to perform such work without special inspection; provide documentation for review.
- d. EIFS: Special inspections required for Water Resistive Barrier behind EIFS where installed over sheathing. [IBC 1705.15] Note that exception 1 only applies if a flashing and drainage system is designed into the installation to drain moisture to the exterior.

2. All mechanical ventilation and/or hydronic systems shall be balanced in accordance with IMC Section 309. System balancing reports, Orsat testing results and start-up certifications must be provided to the Building Official upon completion, prior to permit closeout. [MR 1346.0309]

3. Copies of all required third party inspection reports and/or observation logs must be submitted to the Building Official as soon as they are completed for code review and

record purposes.

4. Shop Drawings for cold-formed metal framing must be submitted for required review and inspection purposes. Note that shop drawings must be certified by an engineer licensed in the State of Minnesota. Submit required cold formed metal framing shop drawings as soon as possible for proper and required plan review and permitting. [MSBC 1300.0130]

**General Building Design:**

1. Sheet A1.1 Floor Plan:
  - a. Vestibule 100- Sample note here for correction work. [IBC 10xx.xx]
2. Required Plan Review Documents:
  - a. Structural Calculations: Plan review submittals must include sample structural calculations that include wind loads on the primary system, wind loads on the elements and components, and a sample of each type of lateral load resisting element for code review purposes. [MSBC 1300.0130]
  - b. Geotechnical Data: Submit a copy of the geotechnical soils investigation report with soil bearing pressure recommendations for this project for code review. [MSBC 1300.0130 & IBC 1802]
  - c. Code Record: Provide Code Record documentation. Requirements and sample found at: [http://www.dli.mn.gov/CCLD/PDF/code\\_record.pdf](http://www.dli.mn.gov/CCLD/PDF/code_record.pdf)
  - d. Energy Code Compliance Documents:
    - i. Clearly Identified Compliance Path [MN 1323, Section 401.2]
    - ii. Building Envelope Analysis including supporting documentation.
    - iii. Building Mechanical Systems Analysis & Compliance Documents.
    - iv. Service Water Heating.
    - v. Electrical Power and Lighting Analysis and summary report.
    - vi. Additional Efficiency Package Options (if applicable by compliance path).
3. Demolition Notes: Add the following General Notes to the demolition plans:
  - a. Under demolition, where the removal or abandonment of a fixture, duct, conduit or other piece of equipment leaves an opening in a required fire-resistive or smoke resistive assembly, the opening shall be fire-stopped or sealed in accordance with IBC Chapter 7 for necessary rating protection.
4. Roof Drainage:

The roof plan does not indicate required overflow drainage as required by MR 1305.1503. Provide for secondary roof drainage per code and resubmit plans for review. [MR 1305.1503.4] Drainage water collected from a roof, awning, canopy or marquee, and condensate from mechanical equipment shall not flow over a public right of way. Confirm compliance with IBC, Section 3201.4.
5. Existing Construction Types: Existing Construction Types will be inspected to field verify compliance with that which has been represented in the permit documents. Existing construction components are required to comply with the code under which the component was constructed, or the current code. Repairs shall conform to the

requirements of the Minnesota Existing Building Conservation Code [MEBCC 404.1]. New work shall comply with Minnesota Rule 1305. [MEBCC 301.1] As an alternative, the design professional may apply for a new plan review with revised code analysis. If defects or deficiencies are found, the existing non-conforming construction is required to be repaired or improved as necessary prior to building occupancy. [Informational. No response required.]

6. Existing Fire walls and Area Separation Walls: Existing Fire walls and Area Separation Walls will be inspected to field verify compliance with that which has been represented in the permit documents. Existing construction components are required to comply with the code under which the component was constructed, or the current code. Firewalls and Area Separation Walls are required to be continuous from exterior wall to exterior wall. Repairs shall conform to the requirements of the Minnesota Existing Building Conservation Code. [MEBCC 404.1] New work shall comply with Minnesota Rule 1305. [MEBCC 301.1] As an alternative, the design professional may apply for a new plan review with revised code analysis. If defects or deficiencies are found, the existing non-conforming construction is required to be repaired or improved as necessary prior to building occupancy. [Informational. No response required.]
  
7. Add the following General Notes to the drawings:
  - a. Prior to installation of any of the fire-resistive “through” or “membrane” penetration fire-block systems and any fire-resistive “joint” systems, the Design Professional in Responsible Charge shall submit to the Building Official detailed testing and installation information on each of the specific listed assemblies intended for use. The specific assemblies shall be listed for each intended use (i.e. proper penetration size and rating condition and for the type of construction material that it is being used in/on). Upon Building Official approval, installation may proceed. Each trade person responsible for sealing said conditions must have this information available for the building inspector for review at time of inspection. [IBC 703, 712 and 713]
  - b. Throughout the construction process, the contractor is responsible to ensure that building occupants and construction workers are afforded a compliant exit access system. Coordinate temporary exiting plans with the Building Official or Field Inspector and the Fire Marshal if the building is partially occupied during construction. [IBC 3302, 3303 & IFC 1028, 1411]
  - c. All systems, devices or safeguards that were required by the code under which the building was constructed shall be maintained in conformance with the requirements of that code. The fire walls/area separation walls must be compliant with the code under which they were constructed. The contractor shall show the field inspector the conditions of the existing fire-walls/area separation walls to verify complete fire-resistive integrity as indicated on the code plan. Required fire-walls/area separation walls must comply with required fire-resistive ratings and provide complete building separation. Non-complying existing fire-walls/area separation walls or portions thereof, will be required and/or shall be upgraded to meet the fire resistance rating of the assembly. This work shall be completed prior to Temporary Certificate of Occupancy or Certificate of Occupancy issuance for this building. [MN Building Conservation Code 1311, Section 107]

**Fire Alarm and Detection Systems:**

- a. The main fire alarm control panel must be located near the main entrance of the building. Verify the proposed location of this device with the local Fire Chief or Fire Marshal as required by the Building and Fire Code. [IBC 907 & NFPA 72]
- b. This building may be required to be provided with a fire department key box for access to master keys for the facility. If necessary, the type of key box and the required installation location must be verified with the City Fire Marshal. Contact the City Fire Marshal for verification of this requirement and/or the type and location of required key box. If required, the key box must be installed for final inspection of this project. [IFC 506]
- c. Shop drawings for the fire alarm system must be submitted to the building department for separate review, construction authorization and subsequent inspection. Submit required fire alarm system plans and specifications as soon as possible (prior to installation) per code.
- d. Required fire alarm systems must be designed, constructed and tested per the building code and NFPA 72. [IBC Section 907.1.1 & 907.2]
- e. Required fire-alarm pull stations have not been designated on the plan. Please indicate proposed fire-alarm pull station locations for code review. [IFC 105.4]

**Accessibility:**

1. Sheet L3.4 Site Dimension Plan: Graphically demonstrate existing facility compliance with the following:
  - a. An accessible path of travel to the primary function areas added or modified including exterior and interior accessible routes from an accessible site access.
  - b. Accessible building entrance.
  - c. Accessible toilet facilities for both genders of students, and if there are separate faculty toilets, accessible toilets for faculty.
  - d. Accessible parking.
  - e. Accessible drinking fountains.
2. Stated permit valuation of the project is \$XXX,XXX. Demonstrate or provide accessibility upgrades in the priority listed above. New work need not exceed \$XX,XXX (20% of the cost of the alterations to the primary function areas.) [MN 1341, Section 1112.7]
3. Where two or more water closet compartments are provided in a toilet room or bathing room, at least one ambulatory-accessible water closet compartment in addition to the wheelchair-accessible compartment. [MSBC 1341, Section 1109.2.2]
4. Accessible routes within the site shall be provided from public transportation stops; accessible parking; accessible passenger loading zones; and public streets or sidewalks to the accessible building entrance served. [IBC Section 1104] Demonstrate compliance.
5. Provide accessible parking in compliance with IBC Table 1106.1. [IBC Section

1106] Accessible car and van parking spaces shall comply with Section 502. Demonstrate compliance

6. Door vision lights must be 43 inches maximum above the floor in compliance with A117.1 Section 404.2.10. Demonstrate compliance.
7. Verify that tactile signage (restrooms, common storage areas, laundry rooms, directories, room identification, etc.) will be designed and installed in compliance with MR 1341 Section 1110. All required tactile signage must be installed for final inspection and issuance of the Certificate of Occupancy.
8. In public/common use areas, equipment controls (or a portion thereof) such as electrical outlets, alarm pulls, switches, robe and coat hooks, coat racks and rods, shelving etc., must be installed within the required reach ranges of 15" – 48" AFF (15" minimum AFF for electrical outlets). Verify that said equipment and devices will be installed per code and or revise details as necessary. [MSBC 1341.0309 and 1341.0308]
9. The counter and pass-through window between rooms ( ) must be made so that a portion is completely accessible. The maximum height of an accessible pass through window is 36." It must also be not less than 36" in width. If there is cabinetry at the receiving side, it must also be designed with appropriate knee space at the underside. [MSBC 1341.0904]
10. When a drinking fountain is provided, either a combination "high-low" drinking fountain, or two separate drinking fountains (one mounted at the required accessible height and one mounted at a higher elevation) must be provided. Identify the accessible drinking fountain feature/condition you will be revising the plan to - to comply with code. [MSBC 1341.0602]
11. An accessible bench and mirror must be installed in each of the locker/changing room per the accessibility code. An accessible bench must be 42" in length (min.) and 20" wide (min.). Benches must also be fixed against a wall (or provided with an 18" high back support) and be provided with proper/accessible clear floor space for access to the bench. If mirrors are provided within the locker/changing rooms, an accessible full-length wall mirror must also be located near the accessible bench. Revise each locker/changing. [ANSI A117.1, Section 803 and 903]
12. Handicap parking facilities (stalls) must be relocated to provide for the most direct and shortest route of travel from the parking stall to the main accessible building entrance. Revise the HC parking locations. [IBC 1106.6]
13. Detailed plans and interior elevations of each of the restrooms must be provided indicating proper location and/or placement of required accessibility features. Grab bars, clear floor space, toilet paper dispensers, towel dispensers, mirrors, changing tables, etc., must be indicated for proper code compliance verification and installation inspection. Submit additional information on these areas for review. [MSBC 1300.0010 & MSBC 1341, ANSI A117.1, Chapter 6]
14. Please verify that a minimum of 48" of clear floor space has been provided in front of the water closet in room ( ) per code. Said clear floor space

- may not be encroached upon by “other” fixtures within the same room. Revise. [MSBC 1341.0604.3.2 and 1341.0604.3.3]
15. A clearance around a water closet 60 inches minimum, measured perpendicular from the side wall, and either 78 inches minimum, measured perpendicular from the rear wall, or 48 inches minimum plus the depth of the water closet fixture, measured perpendicular from the rear wall, shall be provided. [MR 1341.0604 Section 604.3.1]
  16. A 36” x 48” clear floor space for wheelchair access must be provided at each HC accessible transfer shower (in rooms ) per code. Note that the required clear floor space must be provided per the illustration shown in MSBC 1341.0458 on the seat side of the transfer chair. Revise transfer shower stall design(s). [ANSI A117.1, Section 608]
  17. Accessible shower controls and grab bars must be dimensioned on the plan for code verification purposes. Revise accessible shower stall. [ANSI A117.1, Section 608]
  18. Door(s) ( ) do not have the required 18” latch side clearance as part of a new installation. This exit access opening is part of a required accessible means of egress/access, so it must be installed with the required latch side clearance at the lever side of the door per code. As an option, an automatic door opener device may be installed at each referenced door. Revise latch side clearance. [ANSI A117.1, Section 404.2.3.2]
  19. Handrails at stairs ( ) must be revised with proper handrail extensions as part of a required accessible route. Please revise handrail details. [IBC 1012.6]
  20. Toilet paper dispensers must be revised so that they are installed at the correct location of 24” to 42” from the back wall, and 18” to 3” below the horizontal grab bar. Revise detail(s). [ANSI A117.1, Fixture 604.7 (a)]

**Mechanical:**

1. Specifications:

- a. Ducts shall be supported in compliance with IMC, Section 603.10. Demonstrate compliance.
- b. Ducts shall be sealed per MR 1346.0603.9 specific to joints, seams, and (duct) penetrations dependent on the water gauge column design static pressure.
- c. Hydronic piping materials must comply with IMC Section 1202. Demonstrate compliance.
- d. Hydronic piping must meet the code requirements for pipe support per IMC, Sections 1206.10 and 305.4 (referencing IMC, TABLE 305.4 or MSS SP-69). Please submit the hanger spacing per type (and in some cases size) per IMC 305.4 or state if piping support is in accordance with MSS SP-69.
- e. All mechanical system piping shall be supported in accordance with IMC, Section 305. Demonstrate compliance.

2. Sheet M1.1 Unit A First Floor Ventilation Plan:

- a. Staff Lounge A200 indicated as used for Staff dining does not have adequate outdoor/ventilation air. Revise. [IMC Table 403.3]
- b. Openings into or through required stair enclosures, stair extensions and/or exit

passageways are strictly limited to only those openings necessary for exiting from spaces that are normally occupied. Ductwork and miscellaneous piping is prohibited from being routed into or through any of these exit systems. Revise all mechanical and plumbing plans as necessary so that miscellaneous ductwork and piping is routed around – and not into or through – said exit systems. Revise mechanical/plumbing plans as required and resubmit revisions for review.

[IBC 1005]

3. Sheet M1.2 Reflected Ceiling Plan: A plenum ceiling is indicated on the plans. IMC 602.2.1 Materials exposed within plenums: Except as required by Sections 602.2.1.1 through 602.2.1.5, materials within plenums shall be noncombustible or shall have flame spread index of not more than 25 and a smoke-developed index of not more than 50. No response necessary. General comment for all subcontractors to be aware of.
4. Verify that new HVAC air handling equipment that is capable of moving in excess of 2000 CFM of air (for either supply or return) will be provided with required automatic smoke detection shutdown devices in the return air duct plenum - at each piece of equipment per IMC 606. [IMC 606]
5. Each of the bath fans ducts and laundry exhaust vents must be terminated a minimum of 3-feet from other openings in the building, including windows and other air intakes. Verify exhaust vent termination conditions and revise as required. [IMC 401.5.2]
6. HVAC equipment located within 10-ft. of a roof edge shall be provided with 42-inch high guards. [IMC 304.9]

**Electrical:**

1. Sheet E1.1 Electrical Site Plan:
  - a. Provide minimum 1 footcandle of lighting at the walking surface from each exit discharge location to the public way. Provide a photometric diagram illustrating compliance. [IBC 1006.1]
2. Sheet E2.1 Unit A First Floor Lighting Plan:
  - a. General note for Means of Egress Lighting: Means of egress lighting requires that the exit system is illuminated whenever spaces served by the egress system are occupied. [IBC 1006.1] Occupancy sensors on means of egress lighting in corridors and common circulation spaces do not comply with the requirement.
  - b. Provide exterior means of egress lighting at the following exterior doors: A100 (including the sidewalk and stairs all the way to the street), A111A, A118A, A123A, and A126A. [IBC 1006.3, Item 5]
  - c. Corridor A101: Provide means of egress lighting. [IBC 1006.1]
  - d. Corridor A101: Provide emergency power for illumination. [IBC 1006.3]
  - e. Provide Egress lighting on emergency power at the exterior landing for Door A100. [IBC 1006.3]

**Energy:**

1. State the energy compliance path for building envelope. Options:
  - IECC-CE Prescriptive Path
    - Insulation and Fenestration Criteria
    - IECC U-Factor Alternative
  - IECC Total Building Performance Method
  - ASHRAE 90.1-2010 Prescriptive Building Envelope
  - ASHRAE 90.1-2010 Building Envelope Trade-off
  - ASHRAE 90.1-2010 Energy Cost Budget Method
2. Provide supporting documentation for the compliance path selected.

Separate approvals and/or authorizations must be obtained for work covered by: CCLD/DLI Plumbing Division for compliance with the provisions of the Minnesota Plumbing Code, CCLD/DLI electrical unit for compliance with the State Electrical Code, the CCLD/DLI Elevator Safety Section for approval of elevators and related devices, and the City of Glacier for other requirements as authorized by law. Additions or remodeling work shall not cause the existing building to be in violation of the fire and life safety requirements enforced by the Municipal Fire Code Official or the State Fire Marshal.

Construction Documents dated: 5/15/2016

Addendum Nos.: 1, 2, 3

**Inspector assigned to the project:**

Jane Snow

Phone: 218-XXX-XXXX

Sincerely,  
CONSTRUCTION CODES & LICENSING DIVISION

Jack Frost  
Building Official- Limited

cc: May Frost, City Planner  
Inspector

File