



State of Utah

Division of Facilities Construction & Management

Gary R. Herbert
Governor
Kimberly K. Hood
Executive Director
Gregg Buxton
Director

Department of Administrative Services
4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

I.B.C. PLAN CORRECTION SHEET

DATE: September 13, 2010

DFCM No: 10029510

PROJECT NAME: GSL Marina Maintenance Building

OCCUPANCY: B, S-I

TYPE OF CONSTR: II-B

(B is non-separated accessory per Section 508.2)

DESIGN OCCUPANT LOAD: 12

SPRINKLED: No

REVIEWED BY: Fred Christensen
Phone: (801) 608-4833

fchristensen@utah.gov

Plans submitted for the proposed structure at the above listed location have been checked. The following items require correction, clarification, or additional details before they can be approved.

Please provide revised plans and calculations **along with a written response** for each of the items listed below to facilitate a shorter back-check time. **Please cloud or in the response letter describe the location of all changes on the drawings.** In addition to the hard copy it is also helpful if you email a copy of the response back in the word format so I can respond to your comment if needed.

1. Plans are required to be submitted to the State Fire Marshall for review and approval.
Revised plans will be submitted to the State Fire Marshall
2. General Note: Construction of new State buildings and remodeling of existing buildings shall comply with all the requirements of the DFCM Standards. The DFCM Standards can be found at the following web site: www.dfc.utah.gov. This requirement also includes the enhanced accessibility standards. Please provide a statement that the drawings meet the DFCM standards.

(We have reviewed the documents and find them to be in compliance with the DFCM Standards. We have added a second restroom for Women and ADA door operator at the Main Entrance to meet enhanced accessibility.)

3. Provide a code analysis for the project. The code analysis needs to be on the standard DFCM code analysis form. The approved form can be found at <http://dfcm.utah.gov/BldgOHP/index.html>.

Code analysis on the DFCM Form has been completed and is Shown on Sheet G0.01

4. The drawings are required to include a section listing all special inspections that will be required for the project for both structural and non structural. This list is to be prepared by the registered design professional of record for the project. The submittal shall include all fields as referenced in IBC Section 1704.1.1 including any approved fabricator requirement for structural steel, pre-engineered wood and steel trusses, precast concrete and prefabricated metal buildings. The standard special inspection check list which is required to be used can be found on the DFCM web site at <http://dfcm.utah.gov/BldgOHP/index.html>. This checklist needs to be incorporated into the drawings. In the column labeled Detailed Instructions and Frequencies provide a basic explanation of what needs to be provided to satisfy the requirement of the IBC and any additional needs for special inspection that the owner and architect feel should be done for verification on this project. This explanation should not be code references and needs to be understood by lay individuals.
5. The title sheet shall list all deferred submittals with the approximate date that they will be submitted for review. The drawings shall indicate that the submittals shall be submitted to the Building Official for review with an accompanied letter from the architect stating that the drawings are in conformance with his design. Submittals for fire alarms and suppression shall be submitted to the state fire marshal for there approval. The drawings need to also indicate that the work related to the deferred submittals is not to commence until the Building official has approved the submittal. Deferred submittals can include such things as trusses, signage, fire alarms, seismic restraint provisions of IBC 1613.1 for the electrical, plumbing, and mechanical systems, details and engineering calculations for all nonstructural components that are permanently attached to structures and their supports and attachments, and upon prior approval additional bid packages.
6. Submit an energy analysis showing compliance with the 2009 International Energy Conservation Code for the envelope, mechanical and electrical systems. Provide the compliance certificate, requirements description, and work sheet for each discipline. The DFCM standards require that the buildings perform at 10% better than code for the envelope and electrical systems. The analysis forms shall be signed and dated and show the percentage better than code. The DFCM code inspector will field check to assure compliance with the energy code requirements shown on the energy analysis. Make sure that the windows, doors and skylights have the NFRC label that lists the U-factor and the solar heat gain coefficient (SHGC) of the product. If the glazing does not have the proper labels, the COMcheck shall use the default factors listed in Tables 102.1.3(1) and 102.1.3(2).

(COMcheck forms are submitted and bound into the specifications in the Appendix.)

7. Provide an occupant load and exiting plan. This plan needs to identify each occupancy and its respective areas, any separation walls and there rating, the area of each room or area, the occupant load for each room or area, and the occupant load for all of the components of the means of egress, and travel distances for the applicable area of the

building or for the full building as applicable. Show that the exit width is in compliance with IBC 1005.1. Identify the use and occupant load of the mezzanine.

8. Provide the details and engineering calculations for all nonstructural components that are permanently attached to structures and their supports and attachments. These shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-05. Reference IBC Section 1613.1. This includes suspended ceilings, electrical systems, mechanical systems, plumbing systems, and decorative architectural components and can be a deferred submittal.

(These will be included on the list of deferred submittals.)

9. Provide a minimum of one (1) restroom for male and one (1) for female. Each needs to have a minimum of one (1) water closet and one (1) lavatory per IBC 2902.1 and both are to be accessible IBC 1109.

(A second restroom has been added – see Revised Plan.)

10. Provide an accessible route to the building. Provide full details of parking, curb ramps, ramps, stairs, landings, signage, and hand rails as applicable. Provide the slope and cross slope for all ramps, landings, and walking surfaces. See IBC 1104. Provide a cut section for door thresholds in compliance with IBC 1008.1.5 and 1008.1.6.

(This is included on the Civil drawings revised – see Sheet.)

11. Provide evidence that the slope of the accessible parking stall and aisle will not slope more than 1 in 48.

(This is included on the Civil drawings revised – see Sheet.)

12. Each exit is required to be provided with a landing in compliance with IBC 1008.1.4 and 1008.1.5. Provide details showing the size, slope, and elevation of the landings.

(This is included on the Civil drawings revised – see Sheet.)

13. Provide copies of all evaluation reports and listings for all fire rated assemblies and rated materials to be used for the penetrations through these walls. These reports need to be incorporated into the drawings.

(No fire rated assemblies are required per Table 601.)

14. Submit two (2) sets of the ICC research reports for the stucco system or list it as a deferred submittal.

(These are included in the appendix in the revised specifications. All three (3) proposed manufacturers' reports are included in the appendix, one (1) for each supplier listed.)

15. Provide signage in accordance with IBC 1110 and ANSI A117-1. Provide details for all signs in compliance with ANSI 703.

(Per Section 1110 the only accessible signs required for this project are shown on Sheet A5.06.)

SHEET A1.01

16. Explain what the symbol 10 is in Office #2.

(This was revised and is not on Revised Plans.)

17. The occupancy classification for Office #1 is B not S-1. Please resolve.

(Per Section 508.1 this is an accessory use area and does not require separation.)

18. Provide a shower for both male and female.

(This is included – see Revised Plans Sheet.)

19. Show that the under stair storage will be in compliance with IBC 1009.6.3.

(Storage under the stair has been removed and door eliminated.)

SHEET A4.01

20. Provide evidences that steps comply with ANSI 504.5 for step nosing.

(See detail 5/A4.01 for nosing)

SHEET A6.04

21. Provide complete drawings and details of all of the showers. Indicate the type of stall. Show compliance with grab bars per ANSI 608.3, seat per 608.4, controls per ANSI 608.5, thresholds per 608.6, grab bars per ANSI 609 and seats per ANSI 610.

(Sheet A6.04 now has details and dimensions showing compliance with the above referenced Sections – see revised Sheet A6.04.)

SHEET PE501

22. Provide details of the heat traps for the water lines connected to the water heater as required by IECC 504.4.

(See updated plumbing plan Detail 2 Sheet PE501)

23. Provide a complete gas line isometric and calculations.

(See added detail # on Sheet PL101)

Note: The Structural Review Comments will be submitted as soon as they are completed. All structural comments need to be resolved with Chris Kimball before resubmitting the drawings for re-review.



State of Utah

Division of Facilities Construction & Management

Gary R. Herbert
Governor
Kimberly K. Hood
Executive Director
Gregg Buxton
Director

Department of Administrative Services
4110 State Office Building
Salt Lake City, Utah 84114
Phone (801) 538-3018
Fax (801) 538-3267

I.B.C. PLAN CORRECTION SHEET

DATE: December 14, 2010

DFCM No: 10029510

PROJECT NAME: GSL Marina Maintenance Building

OCCUPANCY: B, S-I

TYPE OF CONSTR: II-B

DESIGN OCCUPANT LOAD: 14

SPRINKLED: No

REVIEWED BY: Fred Christensen
Phone: (801) 608-4833

fchristensen@utah.gov

Review #2

Plans submitted for the proposed structure at the above listed location have been checked. The following items require correction, clarification, or additional details before they can be approved.

Please provide revised plans and calculations **along with a written response** for each of the items listed below to facilitate a shorter back-check time. **Please cloud or in the response letter describe the location of all changes on the drawings.** In addition to the hard copy it is also helpful if you email a copy of the response back in the word format so I can respond to your comment if needed.

1. An electronic copy of the response to the comment list was not submitted. Please resolve.

See attached Disk with current and previous responses electronically.

2. Submit an energy analysis showing compliance with the 2009 International Energy Conservation Code for the envelope, mechanical and electrical systems. Provide the compliance certificate, requirements description, and work sheet for each discipline. The DFCM standards require that the buildings perform at 10% better than code for the envelope and electrical systems. The analysis forms shall be signed and dated and show the percentage better than code. The DFCM code inspector will field check to assure compliance with the energy code requirements shown on the energy analysis. Make sure

that the windows, doors and skylights have the NFRC label that lists the U-factor and the solar heat gain coefficient (SHGC) of the product. If the glazing does not have the proper labels, the COMcheck shall use the default factors listed in Tables 102.1.3(1) and 102.1.3(2).

Re-Comment: The envelope calculations do not show the minimum 10% better than code. Please resolve.

See attached COMcheck showing the 10% minimum better than code envelope.

3. Provide the details and engineering calculations for all nonstructural components that are permanently attached to structures and their supports and attachments. These shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-05. Reference IBC Section 1613.1. This includes suspended ceilings, electrical systems, mechanical systems, plumbing systems, and decorative architectural components and can be a deferred submittal.

Re-Comment: The deferred submittals do not indicate this requirement as a deferred submittal. Please resolve.

Spec section 15242 indicates that all mechanical equipment, plumbing equipment, ductwork, and piping must be seismically braced for this site. A professional engineer must sign and stamp that the submitted products are acceptable for this installation.

See Attached DFCM Check List on Sheet A0.01 Life Safety Plan in documents.

4. Differed submittal list is to be located on the title page and contain an approximate day of submittal. Please resolve.

The only deferred submittal will be the bracing for HVAC equipment, duct and overhead radiant heat system. This is shown on the cover sheet.

5. Provide a minimum of 1 restroom for male and one for female. Each needs to have a minimum of one water closet and one lavatory per IBC 2902.1 and both are to be accessible IBC 1109.

Re-Comment: The code analysis needs to be updated to reflect the requirements of two restrooms.

The code analysis has been revised to show two restrooms to match the plans.

6. Each exit is required to be provided with a landing in compliance with IBC 1008.1.4 and 1008.1.5. Provide details showing the size, slope, and elevation of the landings.

Re-Comment: Provide the locations of the details. I am notable to find them.

The civil drawings CG101 show 2% slope at entry doors on the man doors on the north south and east sides of the building. There is a slightly steeper slope at the overhead doors. Note Code (Section 1804) requires imperious materials slope away from the building at a minimum of 2% . We have noted the landings on the floor plans as well.

SHEET A6.04

7. Provide complete drawings and details of all of the showers. Indicate the type of stall. Show compliance with grab bars per ANSI 608.3, seat per 608.4, controls per ANSI 608.5, thresholds per 608.6, grab bars per ANSI 609 and seats per ANSI 610.

Re-Comment: The drawings need to show that the shower is 36" in all dimensions and the details need to include the seat. Please resolve.

The shower stalls and dimensions are shown on sheet A6.04. Dimensions have been added to sheet A1.02 as well. Grab bars, mounting heights, seats and controls are shown on sheet A6.04

Note: The structural review comments will be submitted as soon as they are completed. All structural comments need to be resolved with Chris Kimball before resubmitting the drawings for re-review.

See attached Structural review comments and responses..



COMcheck Software Version 3.8.0
Envelope Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**

Project Title : Great Salt Lake Marina Maintenance Building

Construction Site:

13312 West 1075 South
Magna, UT 84044

Owner/Agent:

Dan Clark
Division of Facilities Construction and
Management
801.538.7311
danclark@utah.gov

Designer/Contractor:

Robert Paul
Spectrum Engineers
324 S State Street
Suite 400
Salt Lake City, UT 84111
801.328.5151
rob@spectrum-engineers.com

Section 2: General Information

Building Location (for weather data): **Magna, Utah**
Climate Zone: **5b**
Vertical Glazing / Wall Area Pct.: **1%**
Skylight Glazing / Roof Area Pct.: **1%**

Activity Type(s)	Floor Area
Garage Bays (Automotive Facility)	3250
Office Space (Office)	750

Section 3: Requirements Checklist

Envelope **PASSES**. Design 20% better than code.

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ^(a)
Roof 1: Insulation Entirely Above Deck	4000	---	29.2	0.033	0.048
Skylight 1: Metal Frame with Thermal Break:Single Pane, Clear, SHGC 0.24	20	---	---	0.540	0.600
Exterior Wall 1: Other Mass Wall, Heat capacity 1.0 (b)	6200	---	---	0.046	0.064
Window 1: Metal Frame Curtain Wall/Storefront:Double Pane with Low-E, Clear, SHGC 0.49, PF 0.03	55	---	---	0.440	0.450
Door 1: Insulated Metal, Swinging	100	---	---	0.250	0.700
Door 2: Insulated Metal, Non-Swinging	900	---	---	0.071	0.500
Floor 1: Slab-On-Grade:Unheated	265	---	---	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(b) 'Other' components require supporting documentation for proposed U-factors.

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- 2. Windows, doors, and skylights certified as meeting leakage requirements.
- 3. Component R-values & U-factors labeled as certified.
- 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.

From: "Chris Kimball" <chris@kimballeng.com>
To: <bruce.barnes@mhtn.com>
CC: "'Fred Christensen'" <fchristensen@utah.gov>, "'Enzo Calfa'" <ecalfa@utah.gov>, "'Chris Hofheins'" <chris.hofheins@bhbenigneers.com>
Date: 12/15/2010 9:09 AM
Subject: FW: Great Salt Lake Marina - Maintenance Building (DFCM# 10029510)
Attachments: 210-501-063, GSL Marina Maintenance Building.pdf

Mr. Barnes:

Yesterday I received the revised plans and written responses you provided to DFCM for the above mentioned project. The items were provided in response to plan review comments made by Fred Christensen of DFCM and structural plan review comments made by our office dated 09/23/2010. While most of our structural comments have been addressed there are still a few items that require further resolution. It appears that each of these unresolved items will need to be responded to by the architect. Those items are as follows:

Comment #2:

A response by the architect has not been provided. Please address.

Non Structural component checklist is included with this submittal. HVAC equipment, ductwork and Overhead radiant heat system bracing will be part of deferred submittal.

Comment #6:

Note #2 on sheet A3.01 still lists joists sizes and spacing that differ from the structural sheets. Please coordinate.

This has been corrected as is shown on the revised plan Sheet A3.01 corrected.

Comment #8:

Detail 8/A5.06 still specifies the 30-inch frost requirement from the interior slab to the bottom of the footing while the exterior grade appears to be lower than the interior slab level. In addition, the structural fill thickness has still not been resolved.

Detail has been corrected and minimum 30 inch cover from grade is shown. Structural fill will comply with soils report for testing and removal and Re-compaction as required this is now noted on the detail as well as on the cover sheet. Contractor will need to do soils testing after preliminary excavation.

Please see the attached PDF file for a copy of the original structural plan review comments. In order to expedite our review of this project it would be best if you emailed PDF's of the revisions so that we can confirm that they have been appropriately addressed. Once everything has been resolved sealed hard copies of any revised sheets will need to be inserted into the sets previously submitted to DFCM. Please feel free to call me should you have any questions or concerns regarding this review.

Sincerely,

Chris Kimball, P.E., S.E.

Utah Regional Manager

Kimball Engineering/WC³

207 E. Gordon Ave, Suite #4

Layton, UT 84041

Office: (801) 547-8133

From: Chris Kimball [mailto:chris@kimballeng.com]
Sent: Thursday, September 23, 2010 8:13 PM
To: 'bruce.barnes@mhtn.com'
Cc: 'Fred Christensen'; 'Enzo Calfa'; 'Chris Hofheins'
Subject: Great Salt Lake Marina - Maintenance Building (DFCM# 10029510)

Mr. Barnes:

Please see the attached PDF file for structural review comments concerning the above mentioned project. I have copied both the structural engineer and the building official on this email. In order to expedite the review, feel free to email written responses and revisions directly to me. Once all of my comments have been addressed, sealed hard copies of any changes will need to be inserted into the sets originally submitted to DFCM. Please call me should you have any questions or concerns.

Sincerely,

Chris Kimball, P.E., S.E.

Utah Regional Manager

KimballLogo