Galaxy Integrated Technologies, Inc.
100 Leo M. Birmingham Parkway
Brighton, MA 02135
t. (617) 202-6388 f. (617) 202-6389
www.GalaxyIntegrated.com

William Yates III
Maine Turnpike Authority
430 Riverside St.
Portland, ME 04103

May 1, 2009

Gentlemen,

Galaxy Integrated Technologies, Inc. has integrated the access control system with the dry contact closure provided by the building's fire alarm company to: a) drop power to the magnetic door locks; and, b) release power to the door holder functions of the doors in accordance with current state and local codes.

Greg Doucette

Project Manager
Galaxy Integrated Technologies, Inc.
100 Leo M Birmingham Parkway
Brighton, MA 02135

933 A004

Maine Turnpike Authority

additional info

WR

Wright-Ryan Construction Inc

REQUEST FOR INFORMATION

No.: 00448
Date: 5/1/2009

10 Danforth Street
Portland, ME 04101

Phone: 207-773-3625
Fax: 207-773-5173

TO: Attn: Scott Benson
SMRT
144 Fore Street
Portland, ME 04101
Phone: 207 772-3846 Fax: 207 772-1070

PROJECT: MTA Administration Building
JOB: 0721

Subject: Fire Department Requirements C of O

1. REQUEST:

During the certificate of occupancy walk through yesterday 4/30/09 the fire department is requesting a letter of compliance stating which standards were used in the design of the fire alarm systems that would state how it was determined where the strobes, horns, and horn/strobes were placed and why there were rooms without devices. Issues that brought this up included the following items.

- Room 346 does not have any fire alarm device in it
- Office 344 has limitied visibilty to the strobe in the hallway
- Office 317 (new office created by SI #96) only has a strobe in it.
- Rooms 318, 320, and 321 and the gang bathrooms they would like audibility tests done to make sure those rooms will hear the proper level required for the horn outside these rooms.

Please review and respond as soon as possible as we only have a conditional Certificate of Occupancy at theis time and will need this to finalize this with the city.

Information Requested By: Craig Hill

Clarification/Action: Please respond by or before **5/4/2009** in order to minimize delay or interference with the ability to proceed with the work.

2. ANSWER:

Applicable standards are those identified in the contract drawings on sheet AE001.

- Room 346 is a private office not presently subject to occupancy by a hearing impaired person, not a public area, and not required to be equipped with visual notification per NFPA101/9.6.4.5.2.
- Room 344 is an office and subject to the same provisions as apply to room 346.
- The visible device in room 317 may be swapped with the audible device in corridor 313.
- Please coordinate with the City, and perform the audibility test requested.

Answered By: SMRT **Date:** 5.4.09

Signed: Scott Benson
Scott Benson

CODES AND STANDARDS APPLICABLE TO SCOPE OF PROFESSIONAL SERVICES REQUESTED:

LIFE SAFETY CODE:
A. NFPA, INCLUDING:
101 LIFE SAFETY CODE, 2003 EDITION.
AUTHORITY HAVING JURISDICTION:
MAINE STATE DEPARTMENT OF PUBLIC SAFETY, STEVEN DODGE
PHONE: 207-624-8737
FAX: 207-624-8767

BUILDING CODE:
A. THE INTERNATIONAL BUILDING CODE, 2003 EDITION
AUTHORITY HAVING JURISDICTION: MIKE NUGENT
CITY OF PORTLAND BUILDING DEPARTMENT
PHONE: 207-XXX-XXXX
FAX: 207-XXX-XXXX

HANDICAPPED ACCESSIBILITY STANDARD:
A. AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
AUTHORITY HAVING JURISDICTION:
MAINE STATE DEPARTMENT OF PUBLIC SAFETY, STEPHEN DODGE
PHONE: 207-624-8737
FAX: 207-624-8767

OTHER REFERENCES:

NONE

BASIC LIFE SAFETY AND BUILDING CODE CRITERIA:

DESCRIPTION OF BUILDING PORTIONS:
NEW, MULTI-STORY, COMMERCIAL OFFICE BUILDING DESIGNED TO ACCOMMODATE A SINGLE TENANT. THE WORK OF THIS CONTRACT WILL INCLUDE BOTH SHELL AND CORE, AND FIT-UP FOR ALL THREE FLOORS.

OCCUPANT CLASSIFICATION(S):
NFPA 101:
NEW BUSINESS

USE GROUP CLASSIFICATION(S):
THE INTERNATIONAL BUILDING CODE:
BUSINESS

INCIDENTAL USE AREAS AND SPECIAL HAZARD PROTECTION AREAS:
THE INTERNATIONAL BUILDING CODE: TABLE 302.1.1

DESCRIPTION:	SEPARATION:
SHIP/RECEIVE	SPRINKLERS + SMOKE PARTITIONS
MECHANICAL RM.	SPRINKLERS + SMOKE PARTITIONS
ELECTRICAL ENTRANCE RM. (NFPA 70)	SPRINKLERS + 1 HOUR
ELEVATOR MACHINE ROOM	SPRINKLERS + 1 HOUR
SALLYPORT (ENCLOSED PARKING GARAGE)	SPRINKLERS + 1 HOUR
ARMORY	SPRINKLERS + 1 HOUR
SECURE EVIDENCE	SPRINKLERS + SMOKE PARTITIONS
TRANSPONDERS & FULFILLMENT	SPRINKLERS + SMOKE PARTITIONS
STORAGE RMS. > 100 SF.	SPRINKLERS + SMOKE PARTITIONS

SPECIAL USE AND OCCUPANCY:
NONE IDENTIFIED

OTHER PORTIONS OF THE BUILDING TO RECEIVE FIRE SEPARATION/PROTECTION MEASURES:

DESCRIPTION:	SEPARATION:
TEL/DATA ROOMS	SPRINKLERS + SMOKE PARTITIONS
SECONDARY ELECTRICAL ROOMS	SPRINKLERS + SMOKE PARTITIONS
COMPUTER SERVER ROOMS (NFPA75)	CLEAN AGENT FIRE PROT. + 1 HOUR

ACCESSORY USE AREAS:
THE INTERNATIONAL BUILDING CODE: 302.2
ASSEMBLY: (LESS THAN 10% OF THE AREA OF EACH STORY - NON-SEPARATED)
BREAKROOM
CONFERENCE ROOMS
AUTHORITY ROOM

COMMUNICATING SPACE(S):
NFPA 101: 8.6.6
THE INTERNATIONAL BUILDING CODE: 707.2, EXCEPTION 7

DESCRIPTION:	SEPARATION:
HALL	SPRINKLERS + SMOKE PARTITIONS
GALLERY	SPRINKLERS + SMOKE PARTITIONS

TYPE OF CONSTRUCTION:
CAST-IN-PLACE CONCRETE FOUNDATION AND SLAB-ON-GRADE. STRUCTURAL STEEL FRAME, METAL DECK, AND CONCRETE TOPPING AT ALL FLOORS WITH STEEL JOISTS, AND METAL DECK ROOF. BRICK MASONRY OVER METAL STUD BACK-UP WITH ALUMINUM STOREFRONT AND WINDOW SYSTEMS IN MASONRY OPENINGS AT LOWER PORTION OF EXTERIOR WALLS, AND COMPOSITE ALUMINUM PANELS WITH ALUMINUM WINDOW SYSTEMS AT UPPER PORTION OF EXTERIOR WALLS.
NFPA: NO REQUIREMENTS.
THE INTERNATIONAL BUILDING CODE: TYPE 2B

BUILDING WILL BE PROTECTED THROUGHOUT BY AUTOMATIC FIRE SPRINKLERS IN CONFORMANCE WITH NFPA 13, WITH THE EXCEPTION OF THOSE AREAS BEING PROTECTED BY CLEAN AGENT FIRE PROTECTION SYSTEMS IN CONFORMANCE WITH NFPA 2001 AND IBC, SECTION 904.

MINIMUM FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS:
(THE INTERNATIONAL BUILDING CODE, TABLE 602 & NFPA 220, TABLE 3-1)
ELEMENT 2B/K(000)

STRUCTURAL FRAME	
COL., GIRDERS & TRUSSES	0 HR.
LOADBEARING EXTERIOR WALLS	0 HR.
LOADBEARING INTERIOR WALLS	0 HR.
NONBEARING EXTERIOR WALLS/PARTITIONS	0 HR.
NONBEARING INTERIOR WALLS/PARTITIONS	0 HR.
FIRE SEPARATION ASSEMBLIES:	
EXIT ENCLOSURES	1 HR.
SHAFTS & ELEV. HOISTWAYS	1 HR.
MIXED USE SEPARATIONS	(NA)
EXIT ACCESS CORRIDORS	0 HR. TABLE 1011.4
TENANT SPACES SEPARATION (MTA/S.P.)	1 HR. (NOT REQUIRED BY CODE))
SMOKE BARRIERS	0 HR.
FLOOR CONSTRUCTION INCLUDING BEAMS	0 HR.
ROOF/CEILING:	0 HR.

BUILDING HEIGHT:
ALLOWABLE: (THE INTERNATIONAL BUILDING CODE, TABLE 503)

TABLE 503	4 STORIES, 55 FEET
WITH SPRINKLER MODIFICATION	5 STORIES, 75 FEET

ACTUAL:
3 STORIES, 41 FEET+/-

BUILDING AREA:
ALLOWABLE: (THE BOCA, TABLE 503)

TABLE 503	23,000 SF
STREET FRONTAGE INCREASE	12,650 SF
SPRINKLER MODIFICATION	46,000 SF
MAX. ALLOWABLE AREA (FLOOR)	81,650 SF
MAX. BLDG. AREA	244,950 SF

ACTUAL:

FLOOR	18,340 SF
BUILDING	54,716 SF

9 10 11 12

MEANS OF EGRESS:

OCCUPANT LOAD:

FIRST FLOOR:	284
SECOND FLOOR:	338
THIRD FLOOR:	340
	962

MINIMUM NUMBER: TWO, INCLUDING ALL ROOMS AND AREAS WITH OVER 50 OCCUPANTS.

CAPACITY:

EXIT ACCESS: ALLOWABLE MINIMUM WIDTH	44 IN.
DOORS: ALLOWABLE MINIMUM WIDTH	36 IN.

ARRANGEMENT:

MAX. ALLOWABLE DEAD-END CORRIDOR:	50 FT.
MAX. ALLOWABLE TRAVEL DISTANCE:	300 FT.
MAX. ALLOWABLE COMMON PATH OF TRAVEL	100 FT.

ILLUMINATION OF MEANS OF EGRESS:

EGRESS WILL BE ILLUMINATED BY LIGHT FIXTURES ON A CIRCUIT POWERED BY AN EMERGENCY GENERATOR CONFORMING WITH NFPA 110.

PROTECTION FROM HAZARDS:

WATER BASED AUTOMATIC FIRE PROTECTION SYSTEM CONFORMING WITH NFPA 13, TYPICAL THROUGHOUT THE BUILDING UNLESS NOTED OTHERWISE.

CLEAN AGENT AUTOMATIC FIRE PROTECTION SYSTEM CONFORMING WITH NFPA 2001 IN LIMITED AREAS AS DESCRIBED ON THE DRAWINGS.

SPECIAL HAZARD PROTECTION AREAS WILL BE FIRE OR SMOKE SEPARATED AS IDENTIFIED ABOVE.

PROTECTION OF VERTICAL OPENINGS:

VERTICAL OPENINGS WILL BE PROTECTED TO MAINTAIN THE INTEGRITY OF AREA SEPARATIONS. REFERENCE MINIMUM FIRE RESISTANCE RATINGS OF STRUCTURAL ELEMENTS ABOVE.

INTERIOR FINISH:

WALL AND CEILING FINISHES:

USE GROUP	EXITS	CORRIDORS	ROOMS
A			
FLAME SPREAD*:	0-25	0-25 TYP. 0-75 LOBBIES	0-75 CONF. & AUTH. RMS. 0-200 TYP.
SMOKE DEVELOPMENT**	0-450	0-450	0-450

*ASTM E84
**NFPA 255

FLOOR FINISHES:

USE GROUP	EXITS	CORRIDORS	ROOMS
CRITICAL RADIANT FLUX*	NO REQUIREMENTS		
ASTM E648**	CLASS II (0.22 WATTS/CM2)		

*NFPA 253
**IBC

DETECTION, ALARM AND COMMUNICATION SYSTEMS:

A FIRE ALARM SYSTEM WILL BE REQUIRED IN ACCORDANCE WITH NFPA 101, 9.6.

EXTINGUISHMENT:

PORTABLE EXTINGUISHERS IN ACCORDANCE WITH NFPA 101, 9.7.4.1.

END OF CODE COMPLIANCE STRATEGY REPORT

Rick Paulison

From: Scott Benson [SBenson@SMRTInc.com]
Sent: Wednesday, April 29, 2009 7:27 PM
To: Craig Hill
Cc: Charlie Myers; Laurie Warhol; Rick Paulison; Scott Warchol
Subject: RE: MTA - Preliminary Certificate of Occupancy Walk Through


4-29-09 MTA - Structural Final...


0351_001.pdf (348 KB)


0350_001.pdf (66 KB)

Hi Craig:

Please find attached below certifications from SMRT and Price Engineering concerning compliance of the work with contract documents.

You have received by prior e-mail, SMRT's responses to RFI's pertaining to exit signs and fire alarm notification devices.

Regarding aisle width in areas with open office furnishings, Mr. Collins has misapplied building corridor width requirements to office furnishings layout. Minimum aisle width is controlled by IBC, and is typically 36 inches unless serving nonpublic areas with fewer than 50 people where the minimum is reduced to 28 inches. Applicable excerpts from both IBC and NFPA 101 are also attached below.

Contact me if you need additional support.

Regards,

Scott L. Benson AIA
Principal

www.smrtinc.com <http:\\www.smrtinc.com>
144 Fore Street, PO Box 618 Portland, Maine 04104 p 207.772.3846 f 207.772.1070

-----Original Message-----
From: Craig Hill [mailto:chill@wright-ryan.com]
Sent: Wednesday, April 22, 2009 1:08 PM
To: Scott Benson
Cc: Charlie Myers; Laurie Warhol; Rick Paulison; Scott Warchol; Paul Danforth
Subject: MTA - Preliminary Certificate of Occupancy Walk Through

Good Afternoon Scott,

Rick and I conducted a preliminary walk through with the building inspector and fire department this morning. Below are a few items that will be needed for the final C of O walk through next Thursday 4/30 at 9:00. Let me know what I can do to help out with any of these items.

- Structural Compliance Letter (Final Inspection Report)
- HVAC Compliance Letter stating the building meets code requirements
- Fire Stopping Special Inspections Letter (Charlie's Punch Lists) noting we have completed required fire stopping

Also items that came up in the walk through are as noted. I have put RFI in parenthesis for the ones that I will need more info on.

- (RFI) Exit signs partially obstructed by a drywall soffit will need to be relocated
- (RFI) Fire Alarm Device at Boiler Room Needs to be relocated
- (RFI) Backflow preventers at the mop sinks in Janitors closets required
- Set of floor plans required at the FACP by the fire department. We will have some 11x17 copies of the floor plans laminated and hung from the FACP door at this time. MTA may want to change this at a later date.
- Fire department radios do not work in portions of the 1st floor. They may require adding a repeater of some type at a later date this will be discussed at a later date with the fire department

- The biggest concern right now is that the cubicles appear too close to the exterior walls (at column enclosures) in a few locations. Mike Collins noted that we need a clearance of 44" and we have approx 38" in areas. This could require some moving of the furniture systems or possibly some new panels at a shorter length to avoid the column enclosures.

Overall Mike Collins was happy with the building, and with the issues noted above he will still give us our C of O and need to come back to check the few remaining items as long as we have a game plan to have them fixed prior to his arrival on Thursday 4/30. I will send out these RFI's as soon as I can this afternoon.

Thanks,
Craig Hill LEED AP
Project Manager
Wright-Ryan Construction, Inc.
Cell: 207-650-8089
Ph: 207-773-3625
Fx: 207-773-5173

Section 1024. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1024.

The required width of aisles shall be unobstructed.

Exception: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side.

1013.4.1 Groups B and M. In Group B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

Exception: Nonpublic aisles serving less than 50 people, and not required to be accessible by Chapter 11 need not exceed 28 inches (711 mm) in width.

1013.4.2 Seating at tables. Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisle or aisle accessways, the clear width shall be measured to walls, edges of seating and tread edges, except that handrail projections are permitted.

Exception: Where tables or counters are served by fixed seats, the width of the aisle accessway shall be measured from the back of the seat.

1013.4.2.1 Aisle accessway for tables and seating. Aisle accessways serving arrangements of seating at tables or counters shall have sufficient clear width to conform to the capacity requirements of Section 1005.1 but shall not have less than the appropriate minimum clear width specified in Section 1013.4.1.

1013.4.2.2 Table and seating accessway width. Aisle accessways shall provide a minimum of 12 inches (305 mm) of width plus 0.5 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length measured from the center of the seat farthest from an aisle.

Exception: Portions of an aisle accessway having a length not exceeding 6 feet (1829 mm) and used by a total of not more than four persons.

1013.4.2.3 Table and seating aisle accessway length. The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) from any seat to the point where a person has a choice of two or more paths of egress travel to separate exits.

1013.5 Egress balconies. Balconies used for egress purposes shall conform to the same requirements as corridors for width, headroom, dead ends and projections. Exterior balconies shall be designed to minimize accumulation of snow or ice that impedes the means of egress.

Exception: Exterior balconies and concourses in outdoor stadiums shall be exempt from the design requirement to protect against the accumulation of snow or ice.

1013.5.1 Wall separation. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.

Exception: Separation is not required where the exterior egress balcony is served by at least two stairs and a dead-end travel condition does not require travel past an unprotected opening to reach a stair.

1013.5.2 Openness. The long side of an egress balcony shall be at least 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

SECTION 1014
EXIT AND EXIT ACCESS DOORWAYS

1014.1 Exit or exit access doorways required. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds the values in Table 1014.1.
2. The common path of egress travel exceeds the limitations of Section 1013.3.
3. Where required by Sections 1014.3, 1014.4 and 1014.5.

Exception: Group I-2 occupancies shall comply with Section 1013.2.2.

TABLE 1014.1
SPACES WITH ONE MEANS OF EGRESS

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	50
H-1, H-2, H-3	3
H-4, H-5, I-1, I-3, I-4, R	10
S	30

1014.1.1 Three or more exits. Access to three or more exits shall be provided from a floor area where required by Section 1018.1.

1014.2 Exit or exit access doorway arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exit and exit access doorways shall be arranged in accordance with Sections 1014.2.1 and 1014.2.2.

1014.2.1 Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in

38.2.3 Capacity of Means of Egress.

38.2.3.1 The capacity of means of egress shall be in accordance with Section 7.3.

38.2.3.2* The clear width of any corridor or passageway serving an occupant load of 50 or more shall be not less than 44 in. (1120 mm).

38.2.3.3 Street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of stairs and ramps discharging through the street floor.

38.2.4 Number of Exits.

38.2.4.1 Exits shall comply with the following, except as otherwise permitted by 38.2.4.2 through 38.2.4.6:

(1) The number of means of egress shall be in accordance with Section 7.4.
(2) Not less than two separate exits shall be provided on every story.
(3) Not less than two separate exits shall be accessible from every part of every story.

38.2.4.2 Exit access, as required by 38.2.4.1(3), shall be permitted to include a single exit access path for the distances permitted as common paths of travel by 38.2.5.3.

38.2.4.3 A single exit shall be permitted for a room or area with a total occupant load of fewer than 100 persons, provided that the following criteria are met:

(1) The exit shall discharge directly to the outside at the level of exit discharge for the building.
(2) The total distance of travel from any point, including travel within the exit, shall not exceed 100 ft (30 m).
(3) The total distance of travel specified in 38.2.4.3(2) shall be on the same floor level or, if traversing of stairs is necessary, such stairs shall not exceed 15 ft (4570 mm) in height, and the stairs shall be provided with complete enclosures to separate them from any other part of the building, with no door openings therein.
(4) A single outside stair in accordance with 7.2.2 shall be permitted to serve all floors permitted within the 15 ft (4570 mm) vertical travel limitation.

38.2.4.4 Any business occupancy not exceeding three stories, and not exceeding an occupant load of 30 people per floor, shall be permitted a single separate exit to each floor, provided that the following criteria are met:

(1) This arrangement shall be permitted only where the total travel distance to the outside of the building does not exceed 100 ft (30 m) and where the exit is enclosed in accordance with 7.1.3.2, serves no other levels, and discharges directly to the outside.
(2) A single outside stair in accordance with 7.2.2 shall be permitted to serve all floors.

38.2.4.5 A single means of egress shall be permitted from a mezzanine within a business occupancy, provided that the common path of travel does not exceed 75 ft (23 m), or 100 ft (30 m) if protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

38.2.4.6 A single exit shall be permitted for a maximum two-story, single-tenant space/building that is protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1) and where the total travel to the outside does not exceed 100 ft (30 m).

38.2.5 Arrangement of Means of Egress.

38.2.5.1 Means of egress shall be arranged in accordance with Section 7.5.

38.2.5.2 Dead-end corridors shall be permitted in accordance with 38.2.5.2.1 or 38.2.5.2.2.

38.2.5.2.1 In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), dead-end corridors shall not exceed 50 ft (15 m).

38.2.5.2.2 In buildings other than those complying with 38.2.5.2.1, dead-end corridors shall not exceed 20 ft (6100 mm).

38.2.5.3 Limitations on common path of travel shall be in accordance with 38.2.5.3.1, 38.2.5.3.2, and 38.2.5.3.3.

38.2.5.3.1 Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

38.2.5.3.2 Common path of travel shall not exceed 100 ft (30 m) within a single tenant space having an occupant load not exceeding 30 persons.

38.2.5.3.3 In buildings other than those complying with 38.2.5.3.1 or 38.2.5.3.2, common path of travel shall not exceed 75 ft (23 m).

38.2.6 Travel Distance to Exits.

38.2.6.1 In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), the travel distance shall not exceed 300 ft (91 m).

38.2.6.2 In buildings other than those complying with 38.2.6.1, the travel distance, measured in accordance with Section 7.6, shall not exceed 200 ft (61 m).

38.2.7 Discharge from Exits. Exit discharge shall comply with Section 7.7.

38.2.8 Illumination of Means of Egress. Means of egress shall be illuminated in accordance with Section 7.8.

38.2.9 Emergency Lighting.

38.2.9.1 Emergency lighting shall be provided in accordance with Section 7.9 in any building where any one of the following conditions exists:

(1) The building is two or more stories in height above the level of exit discharge.
(2) The occupancy is subject to 50 or more occupants above or below the level of exit discharge.
(3) The occupancy is subject to 300 or more total occupants.

38.2.9.2 Emergency lighting in accordance with Section 7.9 shall be provided for all underground and limited access structures, as defined in 3.3.240.3 and 3.3.240.11.

38.2.10 Marking of Means of Egress. Means of egress shall have signs in accordance with Section 7.10.

38.2.11 Special Means of Egress Features.

38.2.11.1 Reserved.

38.2.11.2 Lockups. Lockups in business occupancies shall comply with the requirements of 22.4.5.

It is recognized that dead ends exceeding the permitted limits exist and, in some cases, are impractical to eliminate. The authority having jurisdiction might permit such dead ends to continue to exist, taking into consideration any or all of the following:

(1) Tenant arrangement
(2) Automatic sprinkler protection
(3) Smoke detection
(4) Exit remoteness

A.37.2.5.3 It is recognized that common paths of travel exceeding the permitted limits exist and, in some cases, are impractical to eliminate. The authority having jurisdiction might permit such paths of travel to continue to exist, taking into consideration any or all of the following:

(1) Tenant arrangement
(2) Automatic sprinkler protection
(3) Smoke detection
(4) Exit remoteness

A.37.2.5.10 To eliminate the obstruction to the means of egress of the interior exit access and the exterior exit discharge, it is the intent to provide adequate area for transit and parking of wheeled carts or buggies used by customers. This area includes corral areas adjacent to exits that are constructed to restrict the movement of wheeled carts or buggies therefrom.

A.37.2.7.2 The basis for the exemption to the general rule on complete enclosure of exits up to their point of discharge to the outside of the building is that, with the specified safeguards, reasonable safety is maintained.

A stairway is not considered to discharge through the street floor area if it leads to the street through a fire resistance–rated enclosure (exit passageway) separating it from the main area, even though there are doors between the first floor stairway landing and the main area.

The provisions of 37.2.7.2 should not be confused with those for open stairways, as permitted by 37.3.1(1) and (2).

A.37.3.2.1 It is the intent to permit a suspended natural gas–fired unit heater that complies with the requirements of 9.2.2 to be installed and used in a mercantile occupancy without classifying the area in which it is located as hazardous.

A.37.3.2.1.1 These areas can include, but are not limited to, areas used for general storage, boiler or furnace rooms, and maintenance shops that include woodworking and painting areas.

A.37.3.2.2 The requirement for separating high hazard contents areas from other parts of the building is intended to isolate the hazard, and 8.2.3.3 is applicable.

A.37.4.4.2.2(3) The minimum requirement for terminating mall exit access in not less than 66 in. (1675 mm) of egress width relates to the minimum requirement for not less than one aisle in Class A mercantile occupancies with 30,000 ft^2 (2800 m^2) or greater sales area to be 60 in. (1525 mm) in width.

A.37.4.4.2.2(6) Fire experience in mall shopping centers indicates that the most likely place of fire origin is in the tenant space, where the combustible fire load is far greater than in the mall proper.

Furthermore, any fires resulting from the comparatively low fire load in the covered mall proper are more likely to be detected and extinguished in their incipient stages. Early detection is likely due to the nature of the covered mall proper as a high-traffic pedestrian way. Such fires produce less smoke development in a greater volume of space than in the more confined adjacent tenant space.

Smoke control systems that address fire experience in covered malls are necessary in order to achieve the following:

(1) Ensure the integrity of the covered mall as a pedestrian way by maintaining it reasonably free of the products of combustion for a duration not less than that required to evacuate the building
(2) Confine the products of combustion to the area of fire origin
(3) Remove the products of combustion with a minimum of migration of such products of combustion from one tenant to another

Systems, or combinations of systems, that can be engineered to address fires in covered malls include the following:

(1) Separate or mechanical exhaust or control systems
(2) Mechanical exhaust or control systems in conjunction with heating, ventilating, and air-conditioning systems
(3) Automatically or manually released gravity roof vent devices, such as skylights, relief dampers, or smoke vents
(4) Combinations of items (1), (2), and (3) in this list, or any other engineered system designed to accomplish the purpose of this section

A.37.4.4.3.5 It is not the intent of 37.4.4.3.5 to require that large tenant spaces be considered anchor stores. A tenant space not considered in determining the occupant load of the mall is required to be arranged so that all of its means of egress will be independent of the covered mall.

A.37.4.4.6.2 Rooms opening onto the exit passageway are intended to include building service elevators, elevator machine rooms, electrical rooms, telephone rooms, janitor closets, restrooms, and similar normally unoccupied spaces not requiring hazardous area protection in accordance with Section 8.7.

A.38.1.2.2.2(4) Means to prevent spilled fuel from accumulating and entering the business occupancy building can be by curbs, scuppers, special drainage systems, sloping the floor away from the door openings, or elevation differences not less than 4 in. (100 mm).

A.38.2.2.2.2 The words "principal entrance/exit doors" describe doors that the authority having jurisdiction can reasonably expect to be unlocked in order for the facility to do business.

A.38.2.3.2 It is not the intent that this provision apply to noncorridor or nonpassageway areas of exit access, such as the spaces between rows of desks created by office layout or low-height partitions.

A.38.3.2.1 It is not the intent of this provision that rooms inside individual tenant spaces that are used to store routine office supplies for that tenant be required to be either separated or sprinklered.

A.38.3.2.2 The requirement for separating high hazard contents areas from other parts of the building is intended to isolate the hazard, and 8.2.3.3 is applicable.

A.38.3.6.1 The intent of 38.3.6(1) through (3) is to permit spaces to be open to the exit access corridor without separation.

A.38.3.6.1(1) Where exits are available from an open floor area, such as open plan buildings, corridors are not required to be separated. An example of an open plan building is a building in which the work spaces and accesses to exits are

GENERATOR

Cummins Power Generation
Cummins Northeast, Inc.

Sales/Service Record

INITIAL START-UP, SYSTEM CHECKOUT AND TEST RECORD

Date: 2-2-09

Sold To: Corey Electric

Owner's Name: Maine Tpk Auth. W/O# 77960

Address: 2360 Congress St.

City, State ZIP: Portland, Me. 04102

Generator Model: 300DQHAB SPA

Serial No.: H080203339

Transfer Switch Model: ① 400 ATPCC SPA E080182923 LVL 1 / ② 1500TPCB SPA E080182922

Serial No.: _____ Serial No.: _____

Engine Model: QSM11-G4 NR3

Serial No.: 35237291

Initial Start-Up Date: 2/2/09

Type Fuel: 600GAL Diesel Subbase Tank
(Natural Gas, LPG Vapor, LPG Liquid, Diesel)

Type of Installation: OUTDOOR
(Indoor/Outdoor)

Type of Cooling: Radiator Housed Unit
(Radiator, City Water Heat Exchanger, City Water Standpipe, City Water Direct, Remote Radiator)

Portland, Me.

Maine Turnpike Auth. Cust# 46651

Oil System

- [x] Check level

Fuel System

N/A

- [ ] LPG gas
- [ ] Manual shut off valve
- [ ] Primary gas pressure regulator
- [ ] Dry fuel strainer
- [ ] Gas solenoid valve
- [ ] Flexible fuel connection
- [ ] Gas available
- [x] Diesel TANK FULL 6000 GAL
- [x] Flexible fuel connections (*Supply & Return*)
- [ ] Day tank
- [ ] Fuel transfer pump
- [ ] Day tank float switch wired to fuel transfer pump (A.C. or D.C.)
- [ ] Diesel fuel solenoid valve (*if required*)
- [ ] Diesel fuel available
- [ ] Bleed diesel

Exhaust System

- [ ] Seamless tubing
- [ ] Exhaust condensation trap
- [ ] Muffler
- [ ] Correct exhaust piping size
- [ ] Long-radius exhaust elbows
- [ ] Exhaust thimble

housed

Cooling System

- [x] Radiator cooling
- [x] Check level
- [x] Proper exhaust ventilation duct & opening
- [x] Proper inlet ventilation opening
- [ ] City water cooling: _____Standpipe _____Heat exchanger _____Direct
- [ ] Flexible water lines
- [ ] Water solenoid valve
- [ ] Water Available

» REPLACED FLAPPER WAS MISSING when ordered on 8/16

Mounting

- [x] Secured to level surface
- [ ] Vibration isolators installed correctly

Engine

- [x] Inspect belt, fan, alternator & governor

Battery

- [x] Proper battery size — 8D's (2)
- [x] Electrolyte
- [x] Correct polarity
- [x] Isolated from floor

Electrical

- [x] Engine water jacket heater wired to normal source — 208
- [x] Fuel solenoid valve wired to ignition system
- [ ] Operation selector switch to proper position
- [x] Proper generator A.C. wiring connections (UR, YD, YB)
- [x] Is plant grounded? YES Where? COMMON

Automatic Load Transfer Switch

- [x] Remote start wiring to engine/generator — FLOAT ok
- [x] Trickle charger operation & adjustment — in housing
- [x] Proper A.C. load, A.C. generator & A.C. normal wiring
- [x] Adjust time delay relays — Run Cust Tuesdays 0800 - N.L 0820.
- [x] Adjust clock exerciser
- [x] Visual check main contractors
- [ ] Check annunicator – if applicable — P.C.C. not

General Inspection

- [x] Wiring
- [x] Hoses
- [x] Clearances
- [x] Supports

Recommendations or Modifications before Plant is started first time.

Cust had Frost in gen set. to Set up 2. 2500 W Batt. heaters in housing and Plugged Conduit enclosure to days later all very dry and no Sign of any Problem

- [x] Modifications completed — Date: _____
- [x] OK for start-up

Start and Warm-Up period (No load) — OIL Temp 154 OIL Pres

- [x] Start engine (*Selector switch in "Run" position*)
- [ ] Oil pressure 43 lbs.
- [ ] Water temperature 128 / 95 °F under Load
- [ ] Battery charge rate 28.7
- [ ] Unusual noises/vibrations
- [ ] Check phase rotation CW
- [ ] Voltage 480
- [ ] Hertz 60
- [ ] Unusual noises/vibrations

FLOAT CHARGE 27.1 VDC

Warm-Up Period (Add Load)

- [ ] Selector switch in "Run" position
- [ ] Add load by simulating power failure (*Main breaker or test switch in the automatic transfer switch*)

Charge Rate 28.7 VDC

Engine/Generator

- [x] ~~Carburetor adjustments~~
- [x] Governor adjustments
- [x] Check for Overload
- [ ] Load per Leg: _____ AMPS _____ AMPS _____ AMPS
- [ ] Voltage 480
- [ ] Hertz 60
- [ ] Oil pressure _____ lbs.
- [ ] Water temperature _____ °F
- [ ] Check low oil pressure safety switch
- [ ] Check high water temperature safety switch
- [ ] Check engine overspeed safety switch
- [ ] Unusual noises/vibrations

Cust has only Shop Loads. not able to Read on PCC

PCC 2100

Also Installed Muffler

Automatic Load Transfer Switch

- ☑ Transfer to emergency OK
- ☑ Time delays timed out OK
- ☑ Remove load (*Main breaker or test switch in the automatic load transfer switch*)
- ☑ Retransfer to normal OK
- ☑ Shut down plant (*Selector switch in "Stop" position*)

ONAN Warranty Initiation

Engine/Generator Date: 2-2-09

Automatic Load Transfer Switch Date: 2-2-09

Checkout & Initial Start-Up

Performed by: Mark

Performed by: _____

Witnessed by: _____

Company: Casey Electric

Owner/End User: _____

Contact: _____

Phone Number: _____

Personnel present for operational maintenance instructions:

only elec. no End users onsite

Final Installation Recommendations:

(1) Found Louvers not working, Troubleshot, found B+ & B- not wired Correctly from factory Trace out wiring & repair

(2) Reset 150A Brk to 1000 Amps Per W/O

(3) no Damage due to Front intake. There are no Signs of any Problems. Unit Slowly cycled for 6 Days

From: Craig Hill <chill@wright-ryan.com>
To: "Michael Collins " <MC@portlandmaine.gov>
Date: 6/29/2009 3:21:48 PM
Subject: Maine Turnpike Authority

Mike,

I have heard that our temporary C of O runs out in early August for the above mentioned project. I believe we have everything completed to your satisfaction and was curious how we need to proceed with documentation? Could you let me know and i will provide what is necessary.

Thanks,
Craig Hill LEED AP
Project Manager
Wright-Ryan Construction, Inc.
Cell: 207-650-8089
Ph: 207-773-3625
Fx: 207-773-5173