

11.1 APPLICABLE CODES AND STANDARDS

The latest edition of the following codes and standards shall be used, except where a specific version is listed. Where a deviation or conflict occurs, the more stringent code or standard shall be applied.

- International Building Code (IBC)
Life Safety Code, NFPA 101 - Chapter 12 New Assembly Occupancies and Chapter 14 New Educational Occupancies
UFC 1-200-01, General Building Requirements
UFC 3-600-01, Design: Fire Protection Engineering for Facilities
NFPA Fire Codes as Referenced by UFC 3-600-01.
UFC 3-600-10N, Draft:Design: Fire Protection Engineering
UFC-4-021-01, Design and O&M: Mass Notification Systems
ABA Accessibility standards, as adopted by the DOD in Policy Memorandum of October 31, 2008
Quantico Fire and Emergency Services Facility Design and Construction Requirements QF & ES Fire Protection requirements, May 2013.

The Authorities Having Jurisdiction are the NAVFAC Fire Protection Engineer, and the Chief, Quantico Fire and Emergency Services, or their designated representatives. No waivers will be granted for this project.

11.2 FIRE PROTECTION AND WATER SUPPLY

The project site is currently served by a water loop connected to the municipal supply. A hydrant flow test was performed on August 5th 2014. Test location: John H. Russell Elementary School; 3301 Purvis Road. The test was performed by Rick Alpert, PE, of Clark Nexsen Architects, and witnessed by Corina Vijeu-Pias, PE of EwingCole (the FPDOR for this project). The flow test results were as follows:

- Static Pressure: 49 psi
Residual Pressure: 36 psi
Flow: 919 gpm

The available flow and pressure were not sufficient to satisfying the sprinkler system preliminarily calculated demand of 775 gpm at 56 psi. An electric driven horizontal centrifugal Fire Pump was incorporated in the design. The pump capacity is 750 gpm at a pressure rating of 50 psi.

The fire service, sized as 8", will be provided with a Wall Indicator Valve (WIV) on the exterior wall of the Building and with a Double Check Backflow Preventer inside the building for cross-contamination concerns.

Two remote Fire Department Connections will be provided in accordance with requirements in UFC 3-600-10N for buildings with a footprint greater than 50,000 SF. The Fire Department Connection threads will be 4" x 2 1/2" x 2 1/2" National Standard Thread NST type.

11.3 FIRE DEPARTMENT VEHICLE ACCESS

Fire department vehicle all weather ground access will be provided for three sides of the building. A 20' wide access capable of supporting a minimum vehicle weight of 35 tons, with a minimum of 12' of this access being load bearing concrete will be provided. All fire lanes will run parallel to the building, and will extend at least 100% of the building length. All fire lanes will be designed to accommodate the Quantico Emergency vehicle turning radius. There will be no dead-end fire department fire lanes/access roads in excess of 150 feet in length.

Knox boxes with tamper switches monitored at the Fire Alarm System will be installed as follows:

- At the Fire Department entrance (main entrance into the building)
At the powered vehicle access gate at the service drive; a Knox lock with bypass/override switch keyed for the Quantico Fire Department will be provided.
At the north gate entry to the fire lane; a Knox lock with bypass/override switch keyed for the Quantico Fire Department will be provided

11.4 BUILDING CONSTRUCTION, SIZE, AND SEPARATION CRITERIA

The new Middle/High School will be a mixed use non-separated Group E, A-3 (gymnasium), A-1 (auditorium), and B (offices), with accessory Group S-1 (storage/mechanical) spaces. Construction type of the facility will be based on Table 503 of the IBC. As indicated below, the building exceeds the allowable size for IIB or IIA construction based on Group A which is the most limiting Group relative to height / area limits. Therefore, a noncombustible and protected structure Construction Type IB is required.

The allowable building area based on occupancy type and construction type per IBC Table 503 and increases due to sprinklers and open frontage are shown in Table 1.

Sprinkler increase per Section 506.3 is 200% for a multi-story building. Frontage increases assume complete building open perimeter and a minimum clear width of 30 feet, which would allow a total increase of 75% of the base building area.

Table 1 Allowable Building Areas
Construction Type, Base Area, sf, Sprinkler Increase, sf, Frontage Increase, sf, TOTAL ALLOWABLE AREA, sf per floor, Actual Area = 1st (Largest Floor Area): 79,800 sf

The following fire ratings are required for building elements in Type IB construction:

- Floors: 2-hour
Interior Non-Bearing Walls: 2-hour
Structural Frame (Gravity Loads): 2-hour
Roof: 1-hour

The fire ratings for the floor/ceiling and roof/ceiling assemblies will be obtained without the underside of the deck having spray-applied fire proofing. Only columns, beams and trusses are permitted to be spray fire-proofed.

The following fire rating separations for interior space enclosures are required:

- Staircases: 2-hr (2-hours for penetrating a 2-hour floor)
Elevator shaft and elevator machine room: 2-hr (2-hours for penetrating a 2-hour floor)
Communicating Space separation: Smoke Partition (per NFPA 101 8.6.9.1)
Main Electrical Room: 1-hour (NFPA 70)
Laundry Room: 1-hour
Kiln Room: 1-hour

All fire barrier walls will be provided with a permanent label indicating that the wall is fire rated and the hourly rating. Listed fire stopping for all penetrations in fire rated barriers will be provided. Fire stopping required to be red in color.

A Communicating Space as permitted in LSC Section 8.6.6 is provided in the 2-story "canyon" area as shown on Life Safety drawings. The (8) conditions stipulated in 8.6.6 are met as follows (see comments in italics):

8.6.6 Communicating Space. Unless prohibited by Chapters 11 through 43, unenclosed floor openings forming a communicating space between floor levels shall be permitted, provided that the following conditions are met:

- The communicating space does not connect more than three contiguous stories.
The opening connects the first and second stories.
The lowest or next-to-lowest story within the communicating space is a street floor.
The lowest story is the 1st floor which is a street floor.
The entire floor area of the communicating space is open and unobstructed, such that a fire in any part of the space will be readily obvious to the occupants of the space prior to the time it becomes an occupant hazard.
Some of the areas included in the Communicating Space are not entirely open to this space and do not have an unobstructed view into all areas of this space. Through the use of the equivalency concept addressed in Section 1.4 and as explained in the Life Safety Code Handbook commentary, we propose to provide complete, total coverage automatic smoke detection with fire alarm voice notification throughout the communicating space and all spaces that are adjacent to and opening into the communicating space. This will represent a substitute for the openness and unobstructedness required for awareness and early warning purposes.
The communicating space is separated from the remainder of the building by fire barriers with not less than a 1-hour fire resistance rating, unless one of the following is met:
(a) In buildings protected throughout by an approved automatic sprinkler system in accordance with Section 9.7, a smoke barrier in accordance with Section 8.5 shall be permitted to serve as the separation required by 8.6.6(4).
A non-fire-rated smoke barrier will be provided to separate the communicating space from the remainder of the building (fully sprinklered building).

(5) The communicating space has ordinary hazard contents protected throughout by an approved automatic sprinkler system in accordance with Section 9.7 or has only low hazard contents. (See 6.2.2.)

- The communicating space has ordinary hazard contents protected throughout by an approved automatic sprinkler system.
(6) Egress capacity is sufficient to allow all the occupants of all levels within the communicating space to simultaneously egress the communicating space by considering it as a single floor area in determining the required egress capacity.
The means of egress for the communicating space are sized to accommodate the combined occupant load for all spaces on all levels of the communicating space. Refer to Life Safety Drawings for details.

(7) Each occupant within the communicating space has access to not less than one exit without having to traverse another story within the communicating space.

- Refer to Life Safety drawings which indicate compliance with this requirement.
(8) Each occupant not in the communicating space has access to not less than one exit without having to enter the communicating space.
Refer to Life Safety drawings which indicate compliance with this requirement.

11.5 BUILDING OCCUPANCY AND EGRESS

Occupant loading will be based on NFPA 101 Table 7.3.1.2. Occupant loading for the entire building is provided on the life safety plans. All means of egress will comply with the most stringent requirements of NFPA 101, Chapter 12 & 14. The building will be fully sprinklered therefore the limits allowed for such buildings will be used as follows:

Table with 4 columns: OCCUPANCY TYPE, Max. Common Path (ft), Max. Dead End (ft), Max. Travel Distance (ft). Rows include BUSINESS, EDUCATIONAL*, ASSEMBLY, STORAGE (ORDINARY HAZARD), and NR: No Requirement.

*Exit access corridors shall be a minimum of 6 feet wide (NFPA 101 Section 14.2.3.2 - requirement for Educational Occupancies).

**For common path serving more than 50 persons, 20 ft. For common path serving less than 50 persons, 75 ft.

11.6 FIRE SUPPRESSION SYSTEM

The building will be sprinkler protected in accordance with UFC 3-600-01 and UFC 3-600-10N. Systems shall be automatic wet-pipe type. The sprinkler system demands will be based on Light and Ordinary Hazard Group 1. Design basis will follow the requirements of UFC 3-600-01, which references the design basis in accordance with FM Global Loss Prevention Data Sheet 3-26.

Design Bases are as follows:

Table with 2 columns: Hazard Class, Design Basis. Rows include HC-1, HC-2, and HC-1 (ceilings >30 ft).

Installation requirements shall be in accordance with NFPA 13. No area reduction shall be permitted for quick response sprinklers. Extended coverage sprinklers are not permitted.

There are no UFC 3-600-01 or UFC-3-600-10N requirements for a standpipe system in the building. However based on Quantico QF & ES FP requirements, multi-story buildings or single story buildings greater than 15,000 sq. ft. requiring sprinkler systems per UFC 3-600-01 or NFPA 101 must be equipped with 2.5-inch FD hose connections attached to the Wet-pipe sprinkler risers on entrances, stairway landings, and in corridors with spacing between hose valves not to exceed 150'.

Sprinkler system piping will be minimum Schedule 40 steel piping for sizes less than 2 inches and Schedule 10 steel piping for sizes 2-inches and larger. The Corrosion Resistance Ratio (CRR) for all fitting methods shall be 0.95 or greater. Plain-end fittings will not be permitted. Steel piping will wall thickness less than schedule 40 must not be threaded. Sprinkler piping must be painted with one coat of red alkyd gloss enamel.

Fire extinguishers shall be provided in accordance with UFC 3-600-01, UFC-3-600-10N, and NFPA 101. As a note, UFC 3-600-01 section 4-9, and Life Safety Code NFPA 101 section 14.3.5 allow omission of extinguishers in educational areas. Fire Extinguishers have been provided throughout the entire building due to the fact that they are required in an Assembly occupancy, which is not separated from the Educational Occupancy.

11.7 FIRE DETECTION AND ALARM SYSTEM; MASS NOTIFICATION SYSTEM

The building will be provided throughout with an addressable fire alarm system in accordance with NFPA 72, UFC-3-600-01, and UFC 3-600-10N.

NFPA 101 requires a manual fire alarm system in educational occupancies. In accordance with NFPA 101 manual pull stations may be omitted when the building is fully sprinklered and a central point to manually activate the fire alarm is provided. However Quantico and NAVFAC Washington do not allow the deletion of manual pull stations. Pull stations will be installed within 5 ft. of all required exits.

Fire alarm notification appliances will consist of speakers and strobes. These devices will be located throughout the entire building. In general, every classroom will have a speaker/clear strobe combination device for fire alarm and mass notification.

A Mass Notification System (MNS) will be provided in accordance with requirements for new buildings in UFC 4-010-01 Anti-Terrorism Force Protection. The system will be designed in accordance with UFC 4-021-01 and NFPA 72, and will provide capability for real-time information to building occupants or personnel in the immediate vicinity of the building during emergency situations.

Per UFC 4-021-01 and Quantico QF & ES Fire Protection requirements, the Mass Notification system shares the speakers and strobes with the Fire Alarm System. The MNS autonomous control unit (ACU) and fire alarm control panel (FACP) will be a single unit that performs both functions.

Per DoDEA's directions, the MNS system is designed as follows: The FACP/ACU panel will be capable to accept an exterior RS232/line level audio from the base Space and Naval Warfare System Command (SPAWAR) Transceiver unit.

In an emergency event that requires mass notification from outside the building (the base-wide MNS via SPAWAR), the speakers in the administrative areas will broadcast the signal originating from the SPAWAR system. Subsequently, a different message or live voice will be broadcast through the speakers in the classrooms and other areas of the building, directing the occupants for appropriate actions. The MNS will have eight pre-recorded messages and will also have live voice capability via Local Operating Consoles (LOC's).

Signaling line circuits and Notification appliance circuits will be Class A. All circuits will be run in conduit. Metal Clad Cabling cannot be used.

A King Fisher Radio Frequency (RF) transmitter will be required to report alarm, supervisory, and trouble signals to the Marine Corps Base Quantico Fire & Emergency Services. The RF transmitter shall be FM (factory mutual) listed and compatible for use with the existing Quantico Fire & Emergency RF Receiver/Console manufactured by King-Fisher Company.

The following signals must be transmitted at a minimum:

- a. Area Smoke Detectors
b. Duct Smoke Detectors
c. Sprinkler Flow
d. Sprinkler Tamper
f. Fire Pump running
g. Manual Stations
h. Shunt Trip Power Monitors
j. Kitchen Hood Suppression System
k. Trouble

D

C

B

A

Professional Certificate, hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 36810. Expiration Date: 01-15-2017



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Philadelphia, PA 19106-1500
Tel: 215-923-2020 Fax: 215-574-0952

AE INFO

FOR COMMANDER NAVFAC ACTIVITY

SATISFACTORY TO DATE 06/03/14

Designer Author Checker

PM/DM

BRANCH MANAGER

CHIEF ENGR ARCH

FIRE PROTECTION

NAVFAC WASHINGTON

REPLACE QUANTICO M/H SCHOOL

QUANTICO, VA

DRAWING NOTES

- 1 COMMUNICATING SPACE PER NFPA 101 8.6.6. REFER TO CODE STUDY SHEET FOR DETAILS ON COMPLIANCE WITH LSC 8.6.6.
- 2 PATH OF EGRESS TO MUSTERING AREA SHALL BE KEPT FREE OF OBSTRUCTIONS AND SHALL BE PROVIDED WITH ADEQUATE EMERGENCY LIGHTING.
- 3 OCCUPANTS USING EXIT ACCESS STAIR ON LEVEL 2 THAT EXIT ON LEVEL 1. SEE LEVEL 2 PLAN FOR ADDITIONAL INFORMATION.

LIFE SAFETY GENERAL NOTES:

- 1. REFER TO SHEET FL-001 FOR A DETAILED EGRESS, ACCESSIBILITY, AND CODE SUMMARY.
- 2. THE PROVIDED SHEET NOTES AND GRAPHIC TRAVEL DISTANCE DEPICTIONS ARE NOT ALL INCLUSIVE AND ARE TO BE USED AS A GUIDE IN DETERMINING CODE COMPLIANCE. DRAWING NOTES ARE PROVIDED FOR ITEMS THAT ARE AN EXCEPTION OR MAY NOT APPEAR CLEAR WITHIN PLANS.
- 3. FIRE RESISTANCE RATINGS ARE SHOWN GRAPHICALLY. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR SPECIFIC UL ASSEMBLIES FOR FIRE RESISTIVE CONSTRUCTION.

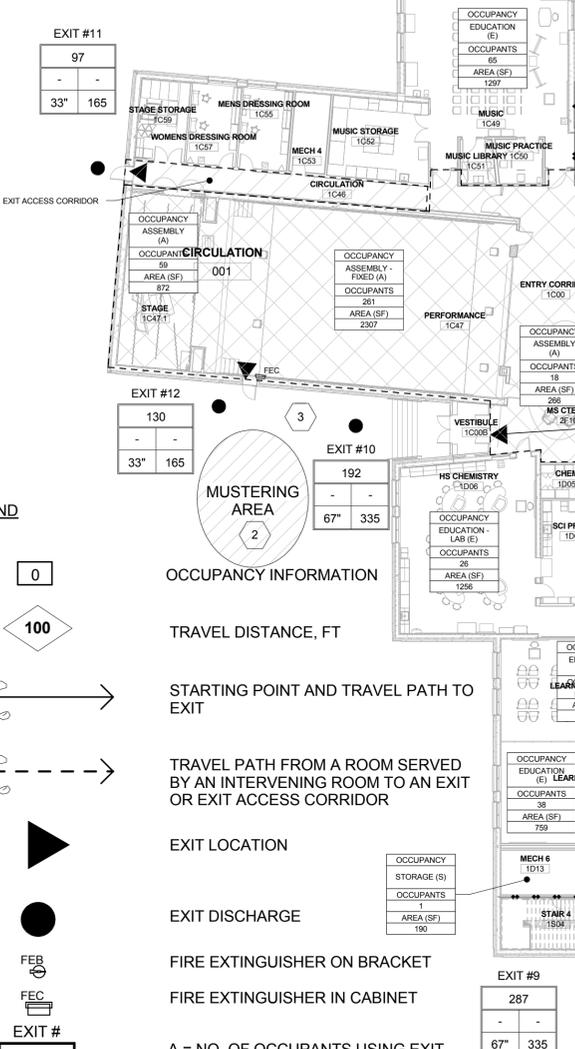
D

LEGEND

C

B

A



OCCUPANCY INFORMATION

TRAVEL DISTANCE, FT

STARTING POINT AND TRAVEL PATH TO EXIT

TRAVEL PATH FROM A ROOM SERVED BY AN INTERVENING ROOM TO AN EXIT OR EXIT ACCESS CORRIDOR

EXIT LOCATION

EXIT DISCHARGE

FIRE EXTINGUISHER ON BRACKET

FIRE EXTINGUISHER IN CABINET

A = NO. OF OCCUPANTS USING EXIT
 B = ACTUAL STAIR/RAMP WIDTH, IN
 C = STAR/RAMP CAPACITY
 D = ACTUAL DOOR CLEAR WIDTH, IN
 E = DOOR CAPACITY

2 HOUR FIRE BARRIER

1 HOUR FIRE BARRIER

SMOKE PARTITION

EXIT ACCESS CORRIDOR

COMMUNICATING SPACE (LSC 8.6.6)

FIRE DEPARTMENT CONNECTION

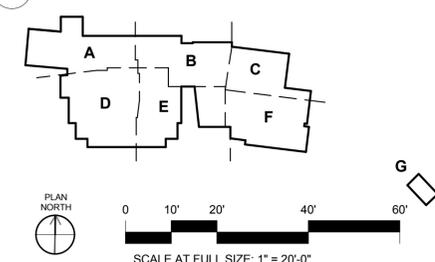
LS - LEVEL 1 - OCCUPANT LOAD

OCCUPANCY TYPE	AREA (SF)	OCCUPANT LOAD FACTOR (SF / OCC)	OCCUPANTS
*LEVEL 2	5200	50	104
ASSEMBLY (A)	5607	15	378
ASSEMBLY - FIXED (A)	2307	1	261
ASSEMBLY - HUB (A)	1651	15	111
BUSINESS (B)	8490	100	91
BUSINESS - FH (B)	902	100	10
EDUCATION (E)	10307	20	521
EDUCATION - LAB (E)	7625	50	156
GYM (A)	6806	15	454
GYM - SEATING (A)	1195	18	343
GYM - W/ WEIGHTS (A)	1415	50	29
KITCHEN (A)	3069	100	31
LOCKER ROOM (A)	2546	50	52
STORAGE (S)	6496	500	13
	63616		2554

1 LEVEL 1 - LIFE SAFETY PLAN
SCALE: 1" = 20'-0"

LS - LEVEL 1 - EXIT ELEMENTS									
WT	DOOR CLEAR WIDTH (IN)	STAIR CLEAR WIDTH (IN)	DOOR EGRESS WIDTH FACTOR (IN / OCC)	STAIR EGRESS WIDTH FACTOR (IN / OCC)	DOOR CAPACITY (OCCUPANTS)	STAIR CAPACITY (OCCUPANTS)	LIMITING CAPACITY (OCCUPANTS)	OCCUPANTS USING EXIT	SPARE EXIT CAPACITY
EXIT #1	134"	0"	0.2	0.3	670	0	670	327	343
EXIT #2	67"	0"	0.2	0.3	335	0	335	282	53
EXIT #3	67"	0"	0.2	0.3	335	0	335	282	53
EXIT #4	67"	0"	0.2	0.3	335	0	335	152	183
EXIT #5	67"	0"	0.2	0.3	335	0	335	105	230
EXIT #6	134"	0"	0.2	0.3	670	0	670	169	501
EXIT #7	33"	0"	0.2	0.3	165	0	165	1	164
EXIT #8	67"	0"	0.2	0.3	335	0	335	317	18
EXIT #9	67"	0"	0.2	0.3	335	0	335	287	48
EXIT #10	67"	0"	0.2	0.3	335	0	335	192	143
EXIT #11	33"	0"	0.2	0.3	165	0	165	97	68
EXIT #12	33"	0"	0.2	0.3	165	0	165	130	35
EXIT #13	67"	0"	0.2	0.3	335	0	335	148	187
EXIT #14	33"	0"	0.2	0.3	165	0	165	28	137
EXIT #15	33"	0"	0.2	0.3	165	0	165	25	140
EXIT A	33"	0"	0.2	0.3	165	0	165	2	163
EXIT B	33"	0"	0.2	0.3	165	0	165	8	163
EXIT C	33"	0"	0.2	0.3	165	0	165	157	
							5340	2554	2786

2 FIELD HOUSE / CONCESSION STAND - LIFE SAFETY PLAN
SCALE: 1" = 20'-0"



RTA SUBMISSION - 10/13/2016

Professional Certificate, hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the No. 36810. Expiration Date: 01-15-2017

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APPROVED: _____
 FOR COMMANDER NAVFAC ACTIVITY

SATISFACTORY TO: _____ DATE: 06/27/08
 Designer: _____ Author: _____
 PM/DM: _____ Branch Manager: _____
 Chief Eng/Arch: _____ Fire Protection: _____

NAVAL FACILITIES ENGINEERING COMMAND
 NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
 DODEA
 MARINE CORPS BASE QUANTICO, VIRGINIA
REPLACE QUANTICO M/H SCHOOL
 QUANTICO, VA

SCALE: As Indicated
 PROJECT NO.: P-021
 CONSTR. CONTR. NO.: W91236-15-C-0023
 NAVFAC DRAWING NO.: 13090766
 SHEET 12 OF 789
FL-101

LIFE SAFETY PLAN - LEVEL 1

DRAWING NOTES

- 1 TRAVEL DISTANCE CALCULATED TO EXIT ON LEVEL 1.0. FULL TRAVEL PATH NOT SHOWN. EXIT ACCESS STAIR DISCHARGES ON LEVEL 1.
- 2 COMMUNICATING SPACE PER NFPA 101 8.6.6. REFER TO CODE STUDY SHEET FOR DETAILS ON COMPLIANCE WITH LSC 8.6.6.

LIFE SAFETY GENERAL NOTES:

- 1. REFER TO SHEET FL-001 FOR A DETAILED EGRESS, ACCESSIBILITY, AND CODE SUMMARY.
- 2. THE PROVIDED SHEET NOTES AND GRAPHIC TRAVEL DISTANCE DEPICTIONS ARE NOT ALL INCLUSIVE AND ARE TO BE USED AS A GUIDE IN DETERMINING CODE COMPLIANCE. DRAWING NOTES ARE PROVIDED FOR ITEMS THAT ARE AN EXCEPTION OR MAY NOT APPEAR CLEAR WITHIN PLANS.
- 3. FIRE RESISTANCE RATINGS ARE SHOWN GRAPHICALLY. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR SPECIFIC UL ASSEMBLIES FOR FIRE RESISTIVE CONSTRUCTION.

LEGEND

OCCUPANCY INFORMATION

TRAVEL DISTANCE, FT

STARTING POINT AND TRAVEL PATH TO EXIT

TRAVEL PATH FROM A ROOM SERVED BY AN INTERVENING ROOM TO AN EXIT OR EXIT ACCESS CORRIDOR

EXIT LOCATION

EXIT DISCHARGE

FIRE EXTINGUISHER ON BRACKET

FIRE EXTINGUISHER IN CABINET

EXIT #

A = NO. OF OCCUPANTS USING EXIT
B = ACTUAL STAIR/RAMP WIDTH, IN
C = STAR/RAMP CAPACITY
D = ACTUAL DOOR CLEAR WIDTH, IN
E = DOOR CAPACITY

2 HOUR FIRE BARRIER

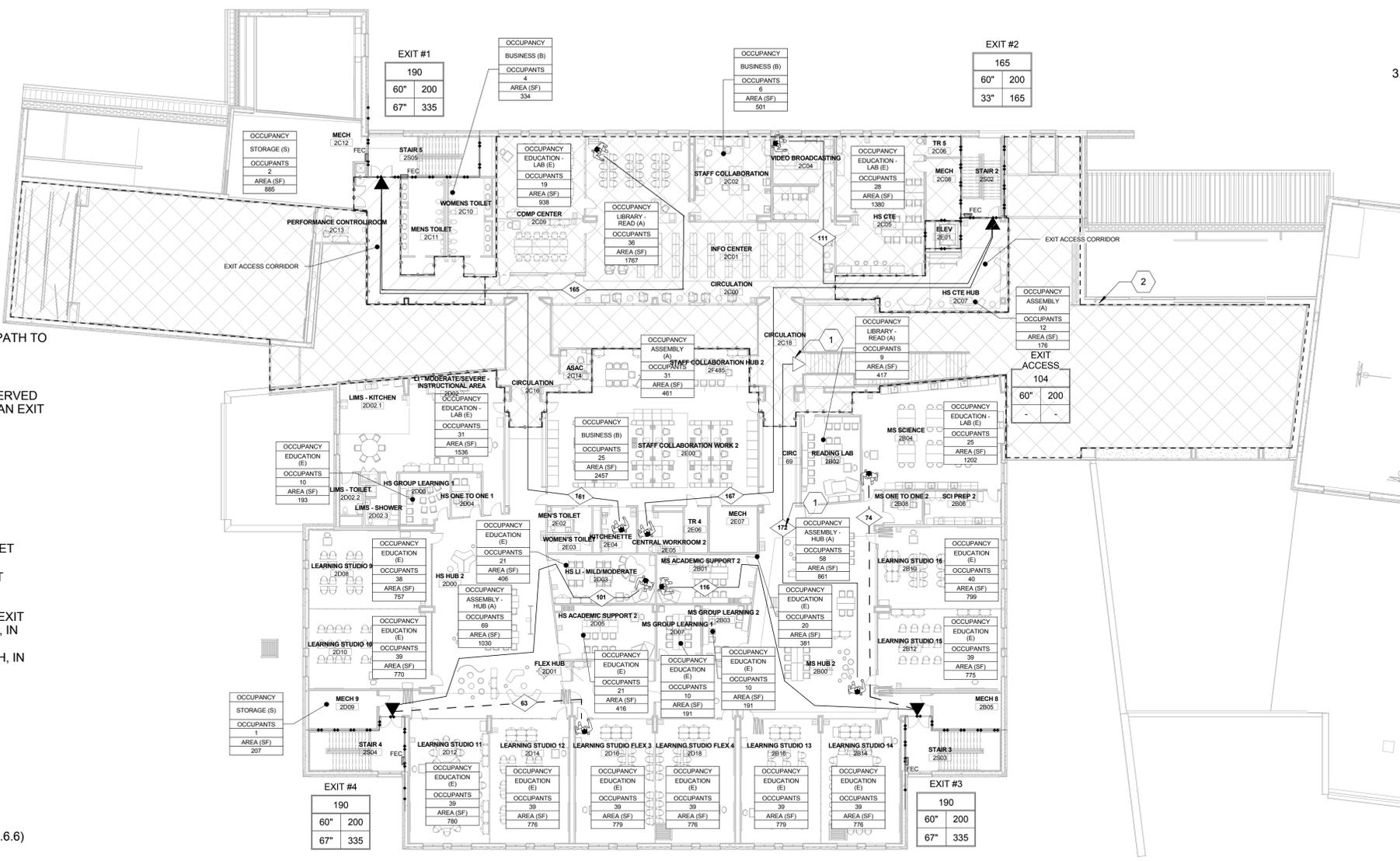
1 HOUR FIRE BARRIER

SMOKE PARTITION

EXIT ACCESS CORRIDOR

COMMUNICATING SPACE (LSC 8.6.6)

FIRE DEPARTMENT CONNECTION



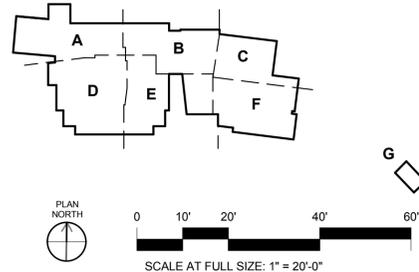
1 LEVEL 2 - LIFE SAFETY PLAN
SCALE: 1" = 20'-0"

LS - LEVEL 2 - OCCUPANT LOAD

OCCUPANCY TYPE	AREA (SF)	OCCUPANT LOAD FACTOR (SF / OCC)	OCCUPANTS
ASSEMBLY (A)	637	15	43
ASSEMBLY - HUB (A)	1891	15	127
BUSINESS (B)	3292	100	35
EDUCATION (E)	9545	20	482
EDUCATION - LAB (E)	5056	50	103
LIBRARY - READ (A)	2184	50	45
STORAGE (S)	1623	500	4
TOTAL	24228		839

LS - LEVEL 2 - EXIT ELEMENTS

EXIT #	DOOR CLEAR WIDTH (IN)	STAIR CLEAR WIDTH (IN)	DOOR EGRESS WIDTH FACTOR (IN / OCC)	STAIR EGRESS WIDTH FACTOR (IN / OCC)	DOOR CAPACITY (OCCUPANTS)	STAIR CAPACITY (OCCUPANTS)	LIMITING CAPACITY (OCCUPANTS)	OCCUPANTS USING EXIT	SPARE EXIT CAPACITY
EXIT #1	67"	60"	0.2	0.3	335	200	200	190	10
EXIT #2	33"	60"	0.2	0.3	165	200	165	165	0
EXIT #3	67"	60"	0.2	0.3	335	200	200	190	10
EXIT #4	67"	60"	0.2	0.3	335	200	200	190	10
EXIT ACCESS	0"	60"	0.2	0.3	0	200	200	104	96
TOTAL							965	839	126



Professional Certificate, hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. No. 36810, Expiration Date: 01-15-2017

NAVFAC

STATE OF MARYLAND
CORPUS N. VA. 11
PROFESSIONAL ENGINEER
No. 36810

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APPROVED

FOR COMMANDER NAVFAC ACTIVITY

SATISFACTORY TO DATE 06/27/08
Designer Author Checker

PM/DM
BRANCH MANAGER
CHIEF ENGR ARCH
FIRE PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC WASHINGTON
MARINE CORPS BASE QUANTICO, VIRGINIA
DDEA
MARINE CORPS BASE QUANTICO
QUANTICO, VA

REPLACE QUANTICO M/H SCHOOL

LIFE SAFETY PLAN - LEVEL 2

SCALE: As indicated
PROJECT NO.: P-021
CONSTR CONTR NO.
W91236-15-C-0023
NAVFAC DRAWING NO. 13090767
SHEET 13 OF 789
FL-102

DRAWN/FORM REVISION: 10 MARCH 2009