## MASSILLON WEST ELEMENTARY PK-3

FLOOD HAZARD AREA:

PROJECT TYPE:

JURISDICTION: MASSILLON, BUILDING DEPARTMENT OWNER: MASSILLON CITY SCHOOL DISTRICT PROJECT ADRESS: 250 29TH STREET NW MASSILLON, OH 44646 CLIMATE ZONE:

NEW SCHOOL BUILDING

SCOPE OF WORK:

NEW BUILDING

FIRST FLOOR: SECOND FLOOR:

62,201 SQ. FT. 29,005 SQ. FT.

TOTAL:

CODE INFORMATION - CONSTRUCTION DRAWINGS

91,206 SQ. FT

AUTOMATIC SPRINKER SYSTEM / NFPA 13 ENTIRE BUILDING WILL BE COMPLIANT, FULLY SUPRESSED

PTER		CHAPTER		CHAPTER		CHAPTER	
CHAPTER 1	2017 OHIO BUILDING CODE 2017 OHIO MECHANICAL CODE 2017 OHIO PLUMBING CODE 2017 NATIONAL ELECTRICAL CODE NFPA 70-17 FIRE ALARM NFPA 72-16 2012 INTERNATIONAL ENERGY CONSERVATION CODE	ILO MUCHANICAL CODE  ILO PUMBRISO CALL CODE NEPA 70 17  ILO CALL CALL CALL CODE NEPA 70 17  ILO CALL CALL CALL CALL CALL CALL CALL CA	TYPE IIB. PRIMARY STRUCTURAL FRAME: 0 HOURS BEARING WALLS, INTERIOR AND EXTERIOR: 0 HOURS NON-BEARING WALLS AND PARTITIONS, EXTERIOR: SEE TABLE 602. PER TABLE 602, TYPE IIB AND USE GROUP E GREATER THAN 10 FEET 0 HOURS. NON-BEARING WALLS AND PARTITIONS, INTERIOR: 0 HOURS. FLOOR CONSTRUCTION AND SECONDARY MEMBERS: 0 HOURS. ROOF CONSTRUCTION AND SECONDARY MEMBERS: 0 HOURS.  OBC 603. COMBUSTIBLE MATERIALS IN TYPES I AND II CONSTRUCTION. MATERIALS SHALL COMPLY WITH OBC 603.1.  OBC 706 FIRE WALLS. OBC 706.1. PORTIONS OF A BUILDING SEPARATED BY FIREWALLS SHALL BE CONSIDERED A SEPARATE BUILDING. OBC 706.4. FIRE WALLS SHALL HAVE A RATING NOT LESS THAN TABLE 706.4. PER TABLE 706.4 NOTE A, GROUP E REQUIRES A 2 HOUR FIRE RESISTANCE RATING IN TYPE II CONSTRUCTION. FIRE WALLS ARE USED TO DEFINE BUILDING AREAS WITHIN THE		OBC TABLE 1004.1 DESIGN OCCUPANT LOAD DESIGN OCCUPANT LOADS ARE INDICATED ON THE CODE REVIEW PLAN USING THE FOLLOWING ALLOWANCES PER OCCUPANT UNDER OBC TABLE 1004.1.2: STORAGE, MECHANICAL, EQUIPMENT ROOMS: 1 PERSON PER 300 SF GROSS ASSEMBLY WITH FIXED SEATS (GYMNASIUM): BLEACHERS 1 PERSON PER 18" OF SEAT LENGTH PLUS PARTICIPANTS.	CHAPTER 11 ACCESSIBILITY	1101.2 BUILDING SHALL BE DESIGNED TO BE ACCESSIBLE IN ACCORDANCE WITH THE OBC AND ANSI A117.1 2009 AS AMENDED. BUILDING HAS BEEN DESIGNED TO COMPLY.
	OR ASHRAE 90.1-2010 STANDARDS FOR ACCESSIBLE DESIGN ICC A117.1-09 INTERNATIONAL FUEL GAS CODE IFGC-15 SPRINKLERS NFPA13-16  OBC 106				ASSEMBLY WITHOUT FIXED SEATS (CAFETERIA): TABLES AND CHAIRS 1 PERSON PER 15 SF NET*, CHAIRS ONLY 1 PERSON PER 7 SF NET*. BUSINESS AND ADMINISTRATION AREAS: 1 PERSON PER 100 SF GROSS. CLASSROOMS: 1 PERSON PER 20 SF NET*. KITCHEN: 1 PERSON PER 200 SF GROSS. LIBRARY: 1 PERSON PER 50 SF NET*. PLATFORMS: 1 PERSON PER 15 NET*.	CHAPTER 15 ROOF ASSEMBL	1505 ROOF ASSEMBLY MEETS CLASS "B" RATING  Y
CHAPTER 1 ADMINISTRATION	BUILDING "A" FIRST FLOOR: 36,679 SF BUILDING "B" FIRST FLOOR: 25,522 SF TOTAL FIRST FLOOR: 62,201SF BUILDING "A" SECOND FLOOR": 29,005 SF				EXERCISE: 1 PERSON PER 50 SF GROSS.  LOCKER ROOMS: 1 PERSON PER 50 SF GROSS.  *WHERE NET AREA IS USED, THE GROSS AREA MULTIPLIED BY .85 IS USED FOR OCCUPANT LOAD	CHAPTER 16,	CHAPTERS 16 STRUCTURAL DESIGN, CHAPTER 17 STRUCTURAL TESTS AND INSPECTIONS, AND CHAPTER 18 SOILS AND FOUNDATIONS, SEE STRUCTURAL DRAWINGS.
	GRAND TOTAL BUILDING: 91,206 SF  DESIGN OCCUPANT LOADS ARE SHOWN ON THE CODE REVIEW PLANS. SEE STRUCTURAL DRAWINGS FOR STRUCTURAL DESIGN LOADS, SEISMIC DESIGN CATEGORY, AND SITE CLASS.				THE OCCUPANT LOAD BASED ON MAXIMUM ENROLLMENT IS 1,129 (STUDENTS AND FACULTY) TO BE USED FOR THE CALCULATION OF TOTAL OCCUPANT LOAD AND PLUMBING FIXTURES PER OBC 1004.1.2 AND OBC 2902.1 IS 1,000 STUDENTS AND FACULTY. REQUEST TO USE 1,200 AS BASIS OF OCCUPANT LOAD, THIS WILL BE THE ENROLLMENT	17,18 STRUCTURAL DESIGN	
HAPTER 3 E AND CCUPANCY	OBC 305.1 GROUP E OCCUPANCY (SEE ALSO OBC 303.1.3 A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS ASSOCIATED WITH A GROUP E OCCUPANCY IS NOT CONSIDERED A SEPARATE OCCUPANCY).  OBC 311.1.1 ACCESSORY STORAGE SPACES LESS THAN 100 SF ARE CLASSIFIED AS PART OF MAIN OCCUPANCY.				PLUS SOME ROOM TO GROW. THE ACTUAL CALCULATED OCCUPANCY IS 2,313 PEOPLE. HE AREAS SUCH AS THE GYM AND CAFETERIA ARE ALREADY INCLUDED IN THE OCCUPANCY COUNT AND THOSE SPACES ARE USED BY STUDENTS FROM OTHER AREAS OF THE BUILDING. IF THOSE SPACES HOLD A PUBLIC EVENT IT WILL BE AFTER SCHOOL HOURS WHEN THE REST OF THE BUILDING WILL NOT BE OCCUPIED.	CHAPTER 27 ELECTRICAL  CHAPTER 28 MECHANICAL SYSTEMS  CHAPTER 29 PLUMBING SYSTEMS	SECTION 2701.1 ELECTRICAL COMPONENTS, EQUIPMENT AND SYSTEMS GENERAL - SCOPE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH NFPA 70.
CLASSIFICATION  CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY  CHAPTER 5 GENERAL BUIDING HEIGHTS AND AREAS					SECTION 1005 MEANS OF EGRESS SIZING OBC 1005.3.1 STAIRWAYS 0.2 INCH PER OCCUPANT SPRINKLED WITH EMERGENCY VOICE /ALARM COMMUNICATION SYSTEM. THIS WOULD PROVIDE FOR 220 OCCUPANTS PER 44" STAIRWAY. OBC 1005.3.2 OTHER EGRESS COMPONENTS 0.15 INCH PER OCCUPANT SPRINKLED WITH EMERGENCY VOICE /ALARM COMMUNICATION SYSTEM. THIS WOULD PROVIDE FOR 240 OCCUPANTS PER 36" DOOR LEAF STAIRWAY SERVED BY A		SECTION 2801.1 MECHANICAL APPLIANCES, EQUIPMENT AND SYSTEMS GENERAL - SCOPE SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MECHANICAL CODE AND THE INTERNATIONAL FUEL AND GAS CODE.
					CORRIDOR AT LEAST AS WIDE AS THE DOORS SERVED.  OBC 1005.7.1 DOOR ENCROACHMENT. DOORS WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED MEANS OF EGRESS WIDTH MORE THAN 7". DOORS IN ANY		
					POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN HALF.  SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS OBC 1006.2.1 TWO EXITS SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD EXCEEDS 49 OR THE COMMON PATH OF TRAVEL EXCEEDS 75' PER TABLE 1006.2.1. OBC 1006.2.1.1. THREE EXITS SHALL BE PROVIDED FOR ANY SPACE WITH AN OCCUPANT LOAD 501 TO 1,000. FOUR EXITS SHALL BE PROVIDED FOR ANY SPACE WITH AN OCCUPANT LOAD GREATER THAN 1,000.		OBC TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES  AN ALTERNATE BASIS FOR DETERMINING THE NUMBER OF OCCUPANTS WHICH ACCOUNTS FOR THE PROPOSED ENROLLMENT PLUS EXPANSION IS REQUESTED. THE PROPOSED PLUMBING OCCUPANT LOAD IS 1,000; 500 MALE, 500 FEMALE.  21 UNISEX/STAFF RESTROOMS ARE DIVIDED BETWEEN MALE AND FEMALE.
	SECTION 503 GENERAL BUILDING HEIGHT AND AREA LIMITATIONS. THE BUILDING HEIGHT AND AREA SHALL NOT EXCEED THE LIMITS SPECIFIED IN SECTIONS 504 AND 506 BASED ON THE TYPE OF CONSTRUCTION AND AS DETERMINED BY SECTION 602 AND OCCUPANCIES AS DETERMINED BY SECTION 302 EXCEPT AS MODIFIED HEREAFTER.				SECTION 1010 PANIC AND FIRE EXIT HARDWARE OBC 1010.1.10 DOORS SERVING ROOMS OR SPACES WITH AN OCCUPANT LOAD OF 50 OR MORE IN GROUP A OR E SHALL BE PROVIDED WITH A LATCH OR LOCK SHALL HAVE PANIC HARDWARE OR FIRE EXIT HARDWARE. MAIN EXITS OF GROUP A MAY COMPLY WITH OBC 1010.1.9.3 ITEM 2 (DISTINGUISHABLE DEVICE, POSTED SIGNAGE). ELECTRICAL EQUIPMENT WORKSPACES SHALL BE PROVIDED WITH PANIC HARDWARE		WATER CLOSETS REQUIRED PROVIDED  MALE 1 PER 50 = 20 12 PLUS 11 UNISEX (23 TOTAL)  URINALS MAY BE SUBSTITUTED FOR TWO THIRDS OF THE REQUIRED WATER CLOSETS FEMALE 1 PER 50 = 20 12 PLUS 11 UNISEX (23 TOTAL)  LAVATORIES REQUIRED PROVIDED
	E AND TYPE IIB CONSTRUCTION, FULLY SPRINKLED:  TABLE 504.3 E USE-SPRINKLED 75' ALLOWED. 33'-4" MAXIMUM PROVIDED. TABLE 504.4 E USE-TYPE IIB CONSTRUCTION 3 STORIES ALLOWED. MAXIMUM 2 STORIES PROPOSED.				OF FIRE EXIT HARDWARE PER NFPA 70.  SECTION 1009 ACCESSIBLE MEANS OF EGRESS.  OBC 1009.1. ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS ARE REQUIRED FROM ANY ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.		1 PER 50 = 40  DRINKING FOUNTAINS REQUIRED PROVIDED  1 PER 100 = 10  8 PLUS DRINKING FOUNTAIN ATTACHMENTS AT
	SECTION 506 BUILDING AREA. OBC TABLE 506.2 ALLOWABLE AREA:  OBC 506.2.3 SINGLE OCCUPANCY MULTI-STORY BUILDING: 43,500 SQ. FT.  BUILDING "A" AREA  PROVIDED:				OBC 1009.2 CONTINUITY AND COMPONENTS. EACH ACCESSIBLE MEANS OF EGRESS SHALL CONSIST OF ONE OR MORE OF THE NOTED COMPONENTS.  1. ACCESSIBLE ROUTES COMPLYING WITH SECTION 1104. ALL FIRST FLOOR MEANS OF EGRESS COMPLY WITH SECTION 1104.  2. INTERIOR EXIT STAIRWAYS COMPLYING WITH SECTIONS 1009.3 AND 1023. TWO INTERIOR EXIT		CLASSROOM LAVATORIES (38 TOTAL) AND WATER DISPENSERS ARE ALSO PROVIDED IN THE CAFETERIA PER OPC 410.4. 12 KR CR'S FOR TOTAL OCCUPANT LOAD OF 105 WITH 12 ATTACHMENTS
	FIRST FLOOR: 36,595 SQ. FT. SECOND FLOOR: 29,236 SQ. FT.  BUILDING "B" AREA PROVIDED:				STAIRWAYS COMPLY WITH 1009.3 AND 1023 AND TWO WAY COMMUNICATION IS PROVIDED AT THE ELEVATOR LANDING. THUS TWO ACCESSIBLE MEANS OF EGRESS ARE PROVIDED FOR THE SECOND FLOOR.  3. AN ELEVATOR COMPLYING WITH 1009.4. THE ELEVATOR WILL COMPLY WITH 1009.4		SERVICE SINKS  REQUIRED 1  PROVIDED 6  NOTE: CALCULATIONS REFLECT ALL AREAS OF THE BUILDING BEING OCCUPIED, WHEN IN REALITY THE GYM AND CAFETERIA WILL HAVE OCCUPANTS FROM OTHER PORTIONS OF THE BUILDING, NOT THEIR OWN. THE CAFETERIA NUMBERS REFLECT TABLES AND CHAIRS SINCE IT WILL MOSTLY BE USED IN THAT FUNCTION DURING "FULL OCCUPANCY." SPECIAL EVENTS IN THE CAFETERIA (PLAYS AND CONCERTS) AND IN THE MIDDLE SCHOOL GYM (SPORTING EVENTS) WILL BE AFTER NORMAL SCHOOL HOURS. (IN SCHOOL ASSEMBLIES WILL BE HELD IN THE MIDDLE SCHOOL GYM - STUDENTS AND FACULTY ALREADY ACCOUNTED FOR)
	OBC 509 INCIDENTAL USE AREAS OBC TABLE 509 FURNACE ROOMS WITH EQUIPMENT OVER 400,000 BTU, OR BOILERS OVER				SECTION 1017 EXIT ACCESS TRAVEL DISTANCE OBC 1017.2 TRAVEL DISTANCE TO AN EXIT SHALL NOT EXCEED 250 FEET WHEN SPRINKLED. EXIT ACCESS TRAVEL DISTANCE DOES NOT EXCEED 180'.		
	SPRINKLER SYSTEM PROVIDED.  GROUP E OCCUPANCIES LABORATORIES AND VOCATIONAL SHOPS: 1 HOUR OR AUTOMATIC SPRINKLER SYSTEM REQUIRED. AUTOMATIC SPRINKLER SYSTEM PROVIDED.  CHAPTER 9 FIRE PROTECTION SYSTEMS	FIRE PROTECTION	SECTION 903 AUTOMATIC SPRINKLER SYSTEMS OBC 903.2.3 AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT ALL GROUP E OCCUPANCIES GREATER THAN 20,000 S.F. AN AUTOMATIC SPRINKLER SYSTEM IS PROVIDED. OBC 904 ALTERNATIVE AUTOMATIC FIRE EXTINGUISHING SYSTEMS. OBC 904.2.2. SYSTEM WILL BE PROVIDED AT COMMERCIAL HOOD AND DUCT SYSTEMS FOR TYPE I HOODS IN THE OMC.		SECTION 1019 EXIT ACCESS STAIRWAYS AND RAMPS OBC 1019.3. FLOOR OPENINGS CONTAINING EXIT ACCESS STAIRWAYS THAT DO NOT COMPLY WITH THE LISTED CONDITIONS SHALL BE ENCLOSED WITH A SHAFT ENCLOSURE PER OBC 713. STAIRS MAY NOT REQUIRE AN ENCLOSURE IF THEY DO NOT CONNECT MORE THAN 2 STORIES, CAUSE A TRAVEL DISTANCE TO EXCEED ALLOWABLE OF 250', OR SERVE AS AN ACCESSIBLE MEANS OF EGRESS. SEE CODE REVIEW PLANS FOR ANY NOTED EXIT ACCESS STAIRS.		
		O I O I E I VIO	SECTION 906 PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN GROUP E OCCUPANCIES IN ACCORDANCE WITH NFPA 10.		SECTION 1020 CORRIDORS.  TABLE 1020.1 REQUIRED CORRIDOR FIRE RESISTANCE RATING IS 0 HOURS FOR GROUP E WITH SPRINKLERS.  OBC 1020.2 CORRIDOR WIDTH. CORRIDORS SHALL NOT BE LESS THAN 44 INCHES		
			SECTION 907 FIRE ALARM AND DETECTION SYSTEMS.  OBC 907.1.2 THE CONTRACTOR SHALL SUBMIT FIRE ALARM SHOP DRAWINGS AS REQUIRED UNDER THIS SECTION.  OBC 907.2.3 GROUP E. A MANUAL FIRE ALARM SYSTEM THAT ACTIVATES THE OCCUPANT NOTIFICATION SIGNAL UTILIZING AN EMERGENCY VOICE/ALARM		EXCEPT CORRIDORS SERVING A GROUP E WITH AN OCCUPANT LOAD OF 100 OR MORE SHALL BE 72 INCHES MINIMUM.  SECTION 1023 EXIT STAIRWAYS OBC 1023.2 EXIT ENCLOSURES SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS		
			COMMUNICATION SYSTEM MEETING THE REQUIREMENTS OF SECTION 907.6 WILL BE PROVIDED. AUTOMATIC SPRINKLER AND SMOKE DETECTOR SYSTEMS SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM. EXCEPTION 4. MANUAL FIRE ALARM BOXES SHALL NOT BE REQUIRED IN GROUP E OCCUPANCIES WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM WILL ACTIVATE ON SPRINKLER FLOW, AND MANUAL ACTIVATION IS PROVIDED FROM A NORMALLY OCCUPIED LOCATION SUCH AS THE SCHOOL OFFICE.  OBC 907.3.1 DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE BUILDING'S FIRE ALARM CONTROL UNIT.		THAN 1 HOUR WHEN CONNECTING LESS THAN FOUR STORIES. 1 HOUR FIRE RESISTANCE RATED ENCLOSURES ARE PROVIDED.  OBC 1023.3 EXIT ENCLOSURES SHALL TERMINATE AT AN EXIT DISCHARGE.  OBC 1023.4 OPENINGS IN EXIT ENCLOSURES SHALL BE LIMITED TO THOSE NECESSARY FOR EXIT ACCESS TO THE ENCLOSURE FROM NORMALLY OCCUPIED SPACES AND FOR EGRESS FRO THE ENCLOSURE.  OBC 1023.5 PENETRATIONS INTO AND OPENINGS THROUGH INTERIOR EXIT STAIRWAYS ARE PROHIBITED EXCEPT FOR REQUIRED DOORS, INDEPENDENT VENTILATION/PRESSURIATION, EQUIPMENT AND DUCTWORK, SPRINKLER PIPING, STANDPIPES, ELECTRICAL SERVING THE EXIT ENCLOSURE, AND SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 714.		
		OBC 907.5.2.3 VISIBLE ALARM NOTIFICATION APPLIANCES SHALL BE PROVIDED IN 907.5.2.3.1 PUBLIC AND COMMON AREAS  SECTION 912 FIRE DEPARTMENT CONNECTIONS OBC 912.2. FIRE DEPARTMENT CONNECTIONS TO BE PROVIDED WHERE APPROVED BY		SECTION 1026 HORIZONTAL EXITS.  OBC 1026.1 HORIZONTAL EXITS SHALL NOT SERVE AS THE ONLY EXIT FROM A BUILDING, NOT MORE THAN HALF OF THE MINIMUM CAPACITY OR REQUIRED WIDTH SHALL BE THROUGH HORIZONTAL EXITS.			
			THE BUILDING OFFICIAL WITH INPUT FROM THE FIRE CHIEF.  SECTION 915 CARBON MONOXIDE DETECTION  OBC 915.1.1 PROVIDE CO DETECTION IN CLASSROOMS WHERE CONDITIONS UNDER  OBC 915.1.2 THROUGH OBC 915.1.6 EXIST. CO DETECTION SHALL BE PROVIDED IN  CLASSROOMS PER OBC 915.2.3.		1026.2 SEPARATION BETWEEN AREAS IS PROVIDED BY A FIRE BARRIER COMPLYING WITH SECTION 707. THE MINIMUM FIRE RESISTANCE RATING SHALL BE 2 HOURS. OPENING PROTECTIVE SHALL COMPLY WITH SECTION 716. DUCT AND AIR TRANSFER OPENINGS SHALL COMPLY WITH SECTION 717. THE HORIZONTAL EXIT SEPARATION EXTENDS VERTICALLY THROUGH ALL LEVELS AND IS CONSTRUCTED AS A FIRE BARRIER.		
			SECTION 916 EMERGENCY RESPONDER RADIO COVERAGE OBC 916.1 PROVIDE EMERGENCY RESPONDER RADIO COVERAGE IN ACCORDANCE WITH SECTION 10 OF THE FIRE CODE.		OBC 1026.3 FIRE DOORS SHALL BE SELF CLOSING OR AUTOMATIC CLOSING WHEN ACTIVATED BY A SMOKE DETECTOR PER 715.4.8.3.		

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