

**Notice to Prospective Bidders**

**Bid Documents for:**

**FIRE ALARM PROJECT**

**FIRE AND RESCUE DEPARTMENT**

**MANCHESTER-BY-THE-SEA**

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*The attention of bidders submitting bids for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the bid submitted.*

**SECTION 1: GENERAL**

- 1.01 Please note the General Bid Opening date has changed. Sealed bids for the General Contract will be received at **Town of Manchester-By-The-Sea Town Hall, DPW Office - Room 6, 3<sup>RD</sup> Floor, 10 Central Street, Manchester-By-The-Sea, MA 01944**, prior to **11:00 AM** on **MARCH 20, 2024** after which time all bids will be opened and read aloud.
- 1.02 Attached is a list of attendees from the Pre-Bid Conference held on March 5, 2024.

**SECTION 2: QUESTIONS & CLARIFICATIONS**

- 1.03 **Clarification:** Water Treatment Facility is in Hamilton, so Hamilton permits will be required.
- 1.04 **Clarification:** Fire Department to be given priority over the Alternate Buildings due to grant period expiring. Final completion date will need to be July 15, 2024.
- 1.05 **Clarification:** Knox Boxes to be reused at all locations. Updated Drawings are included within this Addendum.



**BLW ENGINEERS, INC**  
311 Great Road, Post Office Box 1551  
Littleton, Massachusetts 01460  
Tel: 978.486.4301 Fax: 978.428.0067  
info@blwengineers.com

**Project: 23133 FIRE AND RESCUE DEPARTMENT - FIRE ALARM**

Date: 03/05/24 10:00 AM

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MANCHESTER-BY-THE-SEA  
FIRE AND RESCUE DEPARTMENT  
FIRE ALARM PROJECT

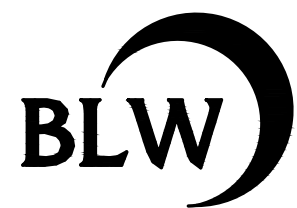
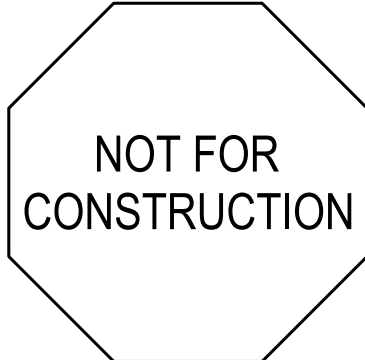
Manchester-by-the-Sea  
Fire and Rescue Department  
12 School Street  
Manchester-by-the-Sea, MA 01944



DRAWING INDEX:

TS	-	TITLE SHEET
FA001	-	FIRE ALARM LEGENDS, RISERS, NOTES
FA100	-	FIRE ALARM DEVICE LAYOUT

Seal:



BLW Engineers, Inc.  
311 Great Road, Post Office Box 1551  
Littleton, Massachusetts 01460  
T: 978.486.4301 F: 978.428.0067  
www.blwengineers.com  
HVAC \* Electrical \* Plumbing \* Fire Protection

Client:

MANCHESTER-BY-THE-SEA  
FIRE AND RESCUE  
DEPARTMENT  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

BID SET 02/26/24

Revision:

Project:

FIRE AND RESCUE DEPARTMENT  
FIRE ALARM PROJECT  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

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Project No.: 23133

Drawn By: RG

Checked By: CM

Scale: As Noted

Title:

TITLE SHEET

Drawing No.:

TS

1

2

3

4

5

6

7

8

9

10

11

SEQUENCE OF OPERATIONS INPUT / OUTPUT MATRIX

SYSTEM OUTPUTS	CONTROL UNIT ANNUNCIATION												REQUI RE LIFE SAFETY CONT ROL				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
FIRE ALARM SYSTEM OPERATION SCHEDULE																	
1	MANUAL FIRE ALARM BOXES	●	●				●					●	●	●	●	●	●
2	SMOKE DETECTORS	●	●				●					●	●	●	●	●	●
3	HEAT DETECTORS	●	●				●					●	●	●	●	●	●
4	FIRE ALARM AC POWER FAILURE					●							●	●	●	●	●
5	FIRE ALARM SYSTEM LOW BATTERY					●							●	●	●	●	●
6	OPEN CIRCUIT					●							●	●	●	●	●
7	GROUND FAULT					●							●	●	●	●	●
8	NOTIFICATION APPLIANCE SHORT CIRCUIT					●							●	●	●	●	●
9	SUPERVISORY			●	●								●	●	●	●	●
10	TROUBLE					●							●	●	●	●	●
11	GENERATOR RUNNING					●							●	●	●	●	●
12	COMBO SMOKE/CO DETECTOR	●	●					●	●	●	●	●	●	●	●	●	●

NOTES:  
1. ALL EVENTS SHALL BE RECORDED AT THE FIRE ALARM CONTROL PANEL AND SHALL INDICATE TIME AND DATE OF OCCURRENCE AND LIST DEVICE INITIATED.  
2. TROUBLE AND SUPERVISORY SIGNALS SHALL BE MONITORED IN ACCORDANCE WITH 780CMR 903.4.1.

CEILING MOUNTED SMOKE/HEAT DETECTOR

FIRE ALARM AUDIO/VISUAL DEVICE \*WHICHEVER IS LOWER

FIRE ALARM VISUAL DEVICE \*NOT GREATER THAN 96" NOT LESS THAN 80"

FIRE ALARM PULL STATION

MAGNETIC DOOR HOLDER

DOOR WIDTH LESS 3"

5'-0" MAX TO EXIT DOOR

3'-0" MINIMUM

6"

4'-0"

12" MAX TO TOP OF SENSOR

ACCEPTED HERE

NEVER HERE

A/C SUPPLY OR RETURN DIFFUSER

FINISHED CEILING

1

DEVICE MOUNTING HEIGHT DETAIL

ADDRESS/RM NUMBER

NOTES:  
1. AT A MINIMUM, ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED LABELS WITH PTOUCH MACHINE TO INDICATE ADDRESS OF FIRE ALARM DEVICE WITHIN ENCLOSED ROOM OR ROOM NUMBER IF SYSTEMS IS ZONED. LABELING SYSTEM SHALL BE APPLIED BUT NOT LIMITED TO THE FOLLOWING DEVICES: AUDIBLE/VISUAL DEVICE, VISUAL DEVICE, SMOKE DETECTOR, REMOTE TEST STATION, REMOTE ALARM INDICATOR, FLOW SWITCH, TAMPER SWITCH, ETC.

2

TYPICAL FIRE ALARM DEVICE LABELING DETAIL

N.T.S.

ROOF

7

8

KB

TO REGIONAL DISPATCH

FIRE/MS CONTROL PANEL WITH VOICE CONTROL

BATTERY BACKUP

CELL DACT

MAIN COMM EQUIPMENT MOUNTING BOARD

120V

1

5

1

TYP

TO OWNER'S WIRELESS ACCESS NODE:

CAT6

(2) 2" CONDUIT

FIRE ALARM REMOTE POWER

120V

8

5

2

9

4

9

NS

BT

BR

FIRST FLOOR

BASEMENT

FIRE ALARM RISER DIAGRAM

N.T.S.

1

FIRE ALARM RISER DIAGRAM NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT BREAKER HANDLE-LOCK ON ALL 120 VOLT FIRE ALARM POWER CIRCUITS. HANDLE LOCK SHALL ALLOW THE CIRCUIT BREAKER TO TRIP, BUT PREVENT SWITCHING OF THE CIRCUIT BREAKER TO THE "OFF" POSITION.  
2. PROVIDE SMOKE DETECTOR IN VICINITY (WITHIN 2'-0") OF FIRE ALARM CONTROL PANEL, AND ALL FIRE ALARM BOOSTER PANELS AND COMMUNICATORS.  
3. RISER DIAGRAM DOES NOT SHOW ENTIRE SYSTEM. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL SYSTEM DEVICES. PROVIDE UL LISTED FIRE ALARM CABLING FOR CONNECTION OF ALL ADDRESSABLE DEVICES. PROVIDE WIRING IN EMT IN EXPOSED SPACES, BASEMENT LEVEL, OR ANY AREA PRONE TO DAMAGE. CONDUIT SHALL BE RED OR HAVE RED BUSHINGS TO INDICATE FIRE ALARM SYSTEM.  
4. PROVIDE REMOTE ALARM INDICATOR OVER DOOR OF EACH LOCKED ROOM THAT CONTAINS A SMOKE OR HEAT DETECTOR WHETHER OR NOT SHOWN ON THE FLOOR PLANS, SUCH AS, ELEVATOR MACHINE ROOMS, ELECTRIC ROOMS, MECHANICAL ROOMS, IT ROOMS, ETC.  
5. PROVIDE A 20AMP, 120VOLT, 1 PHASE SURGE PROTECTOR EQUAL TO MOG SURGE PROTECTION MODEL NO. 415. SURGE PROTECTOR SHALL BE INSTALLED BETWEEN THE CIRCUIT BREAKER IN THE PANEL AND THE FIRE ALARM PANEL, AND IN ACCORDANCE WITH MANUFACTURER'S WIRING RECOMMENDATIONS.  
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED POWER SUPPLIES FOR A COMPLETE AND OPERABLE SYSTEM. POWER SUPPLY CALCULATIONS SHALL BE INCLUDED IN FIRE ALARM SHOP DRAWINGS.  
7. COORDINATE EXACT LOCATION OF EXTERIOR EQUIPMENT WITH EXISTING CONDITIONS AND FIRE DEPARTMENT PRIOR TO ROUGH IN.  
8. PROVIDE RECESSED KEY BOX. COORDINATE WITH FIRE DEPARTMENT.

GENERAL NOTES

1. LEGEND IS INTENDED TO SHOW DEPICTION OF SYMBOLS. IT DOES NOT IMPLY INTENT OF SCOPE. NOT ALL SYMBOLS SHOWN ON THIS LEGEND WILL BE USED ON THE DWGS.  
2. PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT TO MAKE INSTALLATION COMPLETE IN EVERY DETAIL UNDER THIS CONTRACT WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS.  
3. ALL EQUIPMENT AND WIRING ON DWGS IS SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN. ALL CONDUIT RUNS SHALL BE RIGIDLY SUPPORTED.

EXISTING EQUIPMENT DESIGNATIONS

X EXISTING TO BE REMOVED, REMOVE ALL ASSOCIATE CONDUIT AND CONDUCTORS  
XM EXISTING TO REMAIN  
XN EXISTING EQUIPMENT TO BE REPLACED WITH NEW, CONNECT NEW EQUIPMENT TO EXISTING CIRCUIT  
XR EXISTING EQUIPMENT TO BE RELOCATED, JUNCTION AND EXTEND EXISTING CONDUIT AND CONDUCTORS  
XC NEW EQUIPMENT TO BE CONNECTED TO NEAREST AVAILABLE BRANCH CIRCUIT, PROVIDE NEW BRANCH CIRCUITRY FROM NEAREST EXISTING DEVICE (TO REMAIN) TO NEW DEVICE AS REQUIRED  
XL NEW LOCATION OF EXISTING EQUIPMENT, JUNCTION AND EXTEND CONDUIT AND CONDUCTORS AS REQUIRED

FIRE ALARM

TYPICAL DEVICE ANNOTATION:  
\*15" INDICATES CANDELA RATING  
EK15 ADDRESSABLE AUDIO / VISUAL DEVICE  
"F" INDICATES HORN / VISUAL  
"S" INDICATES SPEAKER / VISUAL  
EL15 ADDRESSABLE VISUAL ONLY DEVICE  
"L" INDICATES WHITE LENS FOR FIRE  
"C" INDICATES AMBER LENS FOR CARBON MONOXIDE  
EM15 ADDRESSABLE CEILING MOUNTED AUDIO / VISUAL DEVICE  
"F" INDICATES HORN / VISUAL  
"S" INDICATES SPEAKER / VISUAL  
ES15 ADDRESSABLE CEILING MOUNTED VISUAL ONLY DEVICE  
E15 MANUAL PULL STATION  
SR SMOKE DETECTOR  
"D" INDICATES DUCT SMOKE DETECTOR  
"R" INDICATES ELEVATOR RECALL  
"NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP  
UF HEAT DETECTOR, 135° RATE-OF-RISE TYPE  
"F" INDICATES 180° FIXED TEMPERATURE  
"C" INDICATES MOUNTED ABOVE HUNG CEILING  
ENS COMBINATION SMOKE / CARBON MONOXIDE DETECTOR  
"NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP  
LF LOW FREQUENCY AUDIO DEVICE, 520HZ  
FRT FIRE FIGHTER'S TELEPHONE JACK  
FACP FIRE ALARM DEVICE  
"FACP" INDICATES FIRE ALARM CONTROL PANEL  
"FATC" INDICATES FIRE ALARM TERMINAL CABINET  
"FARP" INDICATES FIRE ALARM REMOTE POWER  
"AES" INDICATES AES MESH NETWORK COMMUNICATOR, COORDINATE TYPE WITH LOCAL FIRE DEPARTMENT  
"ANN" INDICATES FIRE ALARM ANNUNCIATOR PANEL  
"DACT" INDICATES DIGITAL ALARM COMMUNICATOR TRANSMITTER  
"CELL" INDICATES CELLULAR COMMUNICATOR  
"RADIO" INDICATES RADIO COMMUNICATOR  
"CM" INDICATES CONTROL MODULE  
"MM" INDICATES MONITOR MODULE  
"KB" INDICATES KEY BOX  
"RTS" INDICATES REMOTE TEST STATION  
"BT" INDICATES BEAM SMOKE DETECTOR TRANSCIEVER  
"BR" INDICATES BEAM SMOKE DETECTOR REFLECTOR  
E-H FIRE ALARM ANNUNCIATION DEVICE  
"B" INDICATES ALARM BELL, 120V HARDWIRED, EXTERIOR MOUNTED, WEATHERPROOF  
"R" INDICATES RED INDICATING BEACON, EXTERIOR MOUNTED, WEATHERPROOF  
"R" INDICATES REMOTE AREA LED INDICATOR

Seal:

NOT FOR CONSTRUCTION

BLW

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311 Great Road, Post Office Box 1551  
Littleton, Massachusetts 01460  
T: 978.486.4301 F: 978.428.0067  
www.blwengineers.com  
HVAC \* Electrical \* Plumbing \* Fire Protection

Client:

MANCHESTER-BY-THE-SEA  
FIRE AND RESCUE  
DEPARTMENT  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

BID SET 02/26/24

Revision:

Project:

FIRE AND RESCUE DEPARTMENT  
FIRE ALARM PROJECT  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

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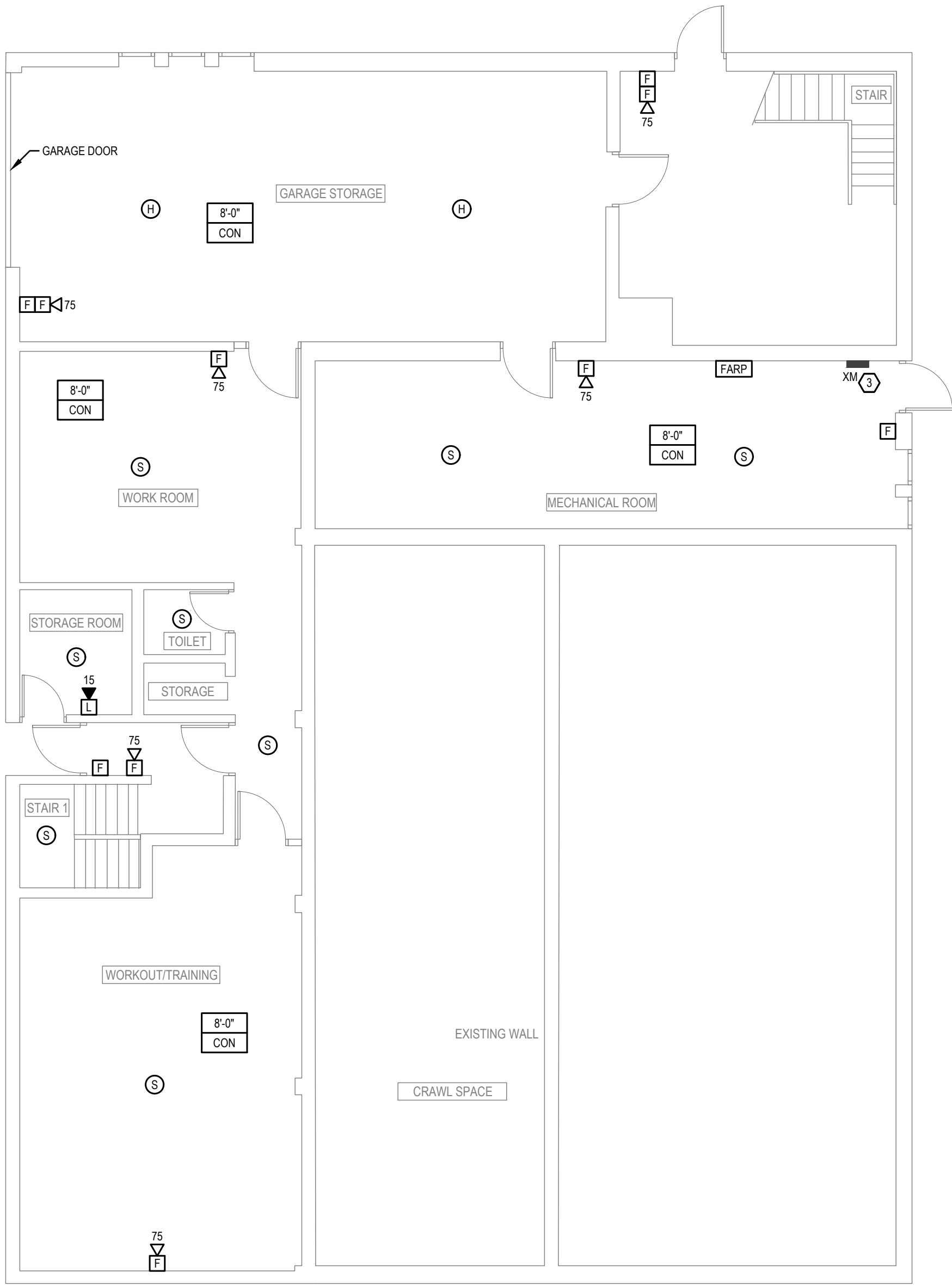
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Title:

FIRE ALARM LEGENDS, RISERS, NOTES

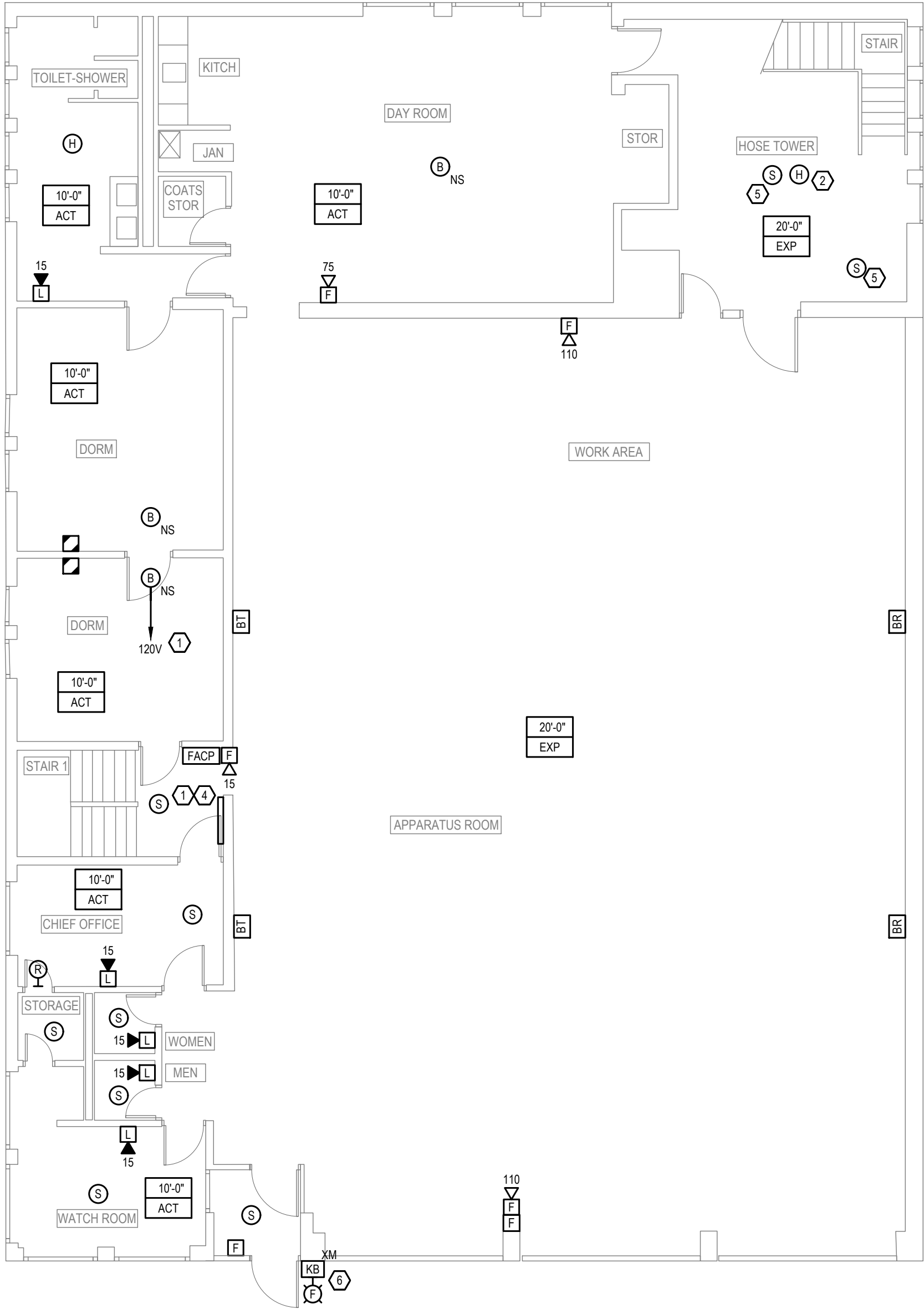
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FA001



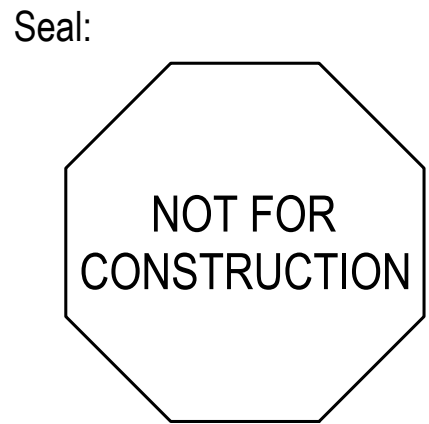
CEILING TYPE SYMBOLS	
8'-0" ACT	CEILING HEIGHT AND TYPE SYMBOL "ACT" INDICATES ACOUSTICAL CEILING TILE "GWB" INDICATES GYPSUM WALL BOARD "EXP" INDICATES EXPOSED TO DECK "CON" INDICATES CONCRETE "SPL" INDICATES SPLINE

1 Basement  
SCALE: 1/8"=1'-0"



2 First Floor  
SCALE: 1/8"=1'-0"

- NOTES:**
- PROVIDE CONNECTION FROM NEAREST 20A, 120V SPARE CIRCUIT.
  - MOUNT NEW HEAT DETECTOR AT TOP OF HOSE TOWER. COORDINATE WITH EXISTING CONDITIONS.
  - PROVIDE NEW CIRCUIT BREAKERS AND LOCK HANDLE DEVICES AS REQUIRED TO SERVE ALL NEW FIRE ALARM SYSTEM LOADS FROM EXISTING PANELBOARD. UPDATE EXISTING PANELBOARD DIRECTORY AT COMPLETION OF WORK.
  - COORDINATE EXACT LOCATION FOR NEW FIRE ALARM CONTROL PANEL, BATTERIES, POWER SUPPLIES, AND ANNUNCIATOR WITH EXISTING CONDITIONS. MAINTAIN A CLEAR PASSAGEWAY AT STAIRWELL AND HALLWAY. COORDINATE WITH EXISTING NETWORK PANELS IN THIS AREA.
  - ADDITIONAL SMOKE DETECTORS SHOWN TO COVER FUTURE STAIRWELL/OFFICE ADDITION/CONVERSION. DEVICES WILL NOT BE EMPLOYED IN STRUCTURE AS CURRENTLY BUILT.
  - COORDINATE EXACT LOCATION OF EXTERIOR EQUIPMENT WITH EXISTING CONDITIONS AND FIRE DEPARTMENT PRIOR TO ROUGH IN.



Client:  
**MANCHESTER-BY-THE-SEA  
FIRE AND RESCUE  
DEPARTMENT**  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:  
BID SET 02/26/24

Revision:

Project:  
**FIRE AND RESCUE DEPARTMENT  
FIRE ALARM PROJECT**  
12 SCHOOL ST  
MANCHESTER-BY-THE-SEA, MA 01944

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Project No.: 23133  
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Title:  
**FIRE ALARM  
DEVICE LAYOUT**

Drawing No.:  
**FA100**

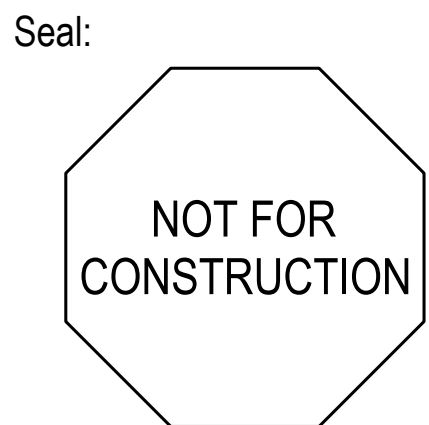
# MANCHESTER-BY-THE-SEA WASTEWATER TREATMENT PLANT FIRE ALARM PROJECT

Town of Manchester-by-the-Sea  
10 Central Street  
Manchester-by-the-Sea, MA 01944



**DRAWING INDEX:**

TS	-	TITLE SHEET
FA001	-	FIRE ALARM LEGENDS, RISERS, NOTES
FAD100	-	OPERATIONS BUILDING DEMOLITION PLAN
FAD101	-	HEADWORKS AND BIOFILTER FAN ROOM DEMOLITION PLAN
FA100	-	OPERATIONS BUILDING DEVICE LAYOUT
FA101	-	HEADWORKS AND BIOFILTER FAN ROOM DEVICE LAYOUT



Client:  
  
TOWN OF  
MANCHESTER-BY-THE-SEA  
10 CENTRAL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:  
BID SET 02/26/24

Revision:

Project:  
**WASTEWATER TREATMENT PLANT  
FIRE ALARM PROJECT**  
12 CHURCH ST  
MANCHESTER-BY-THE-SEA, MA 01944

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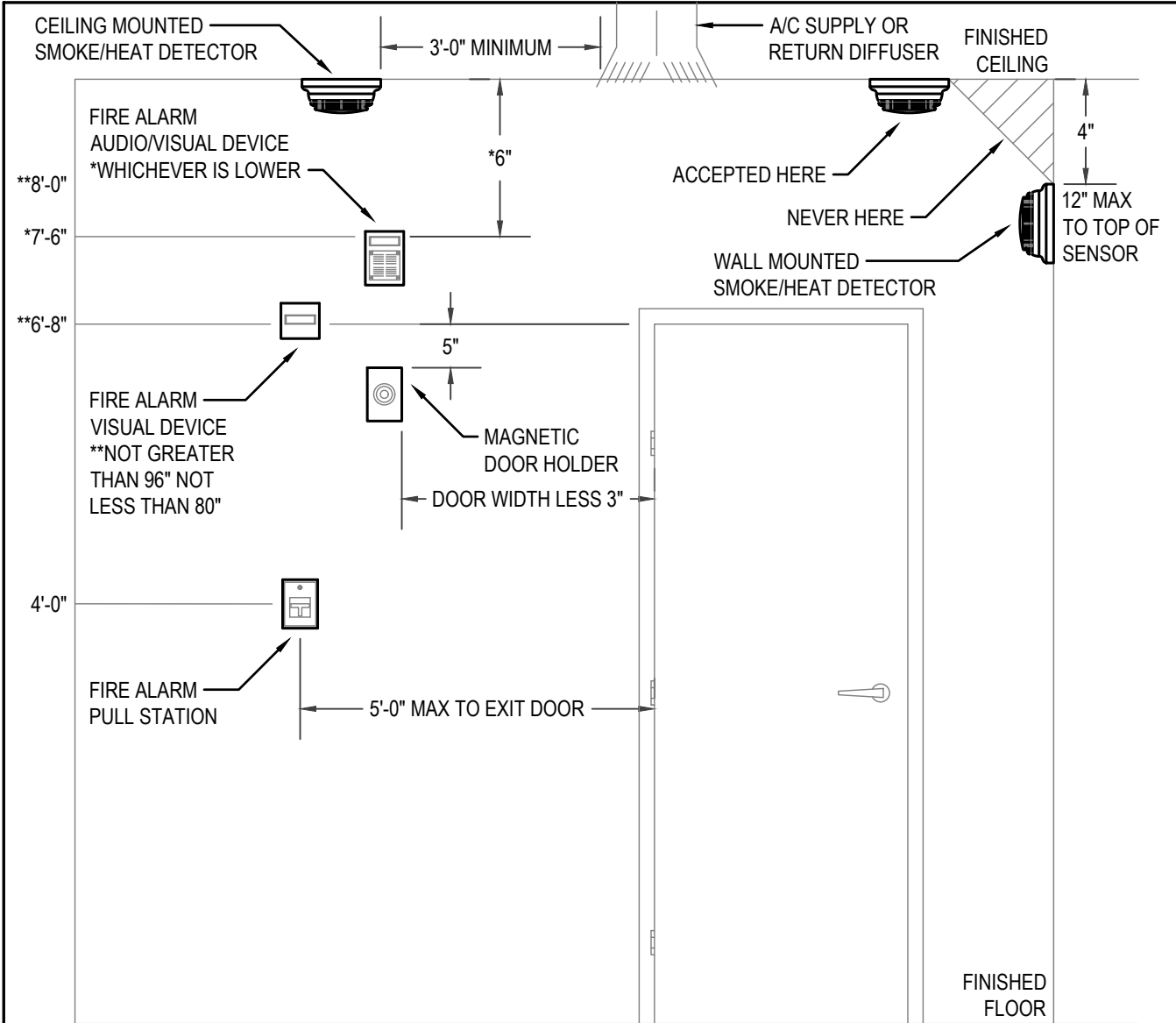
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TITLE SHEET

Drawing No.:  
  
TS



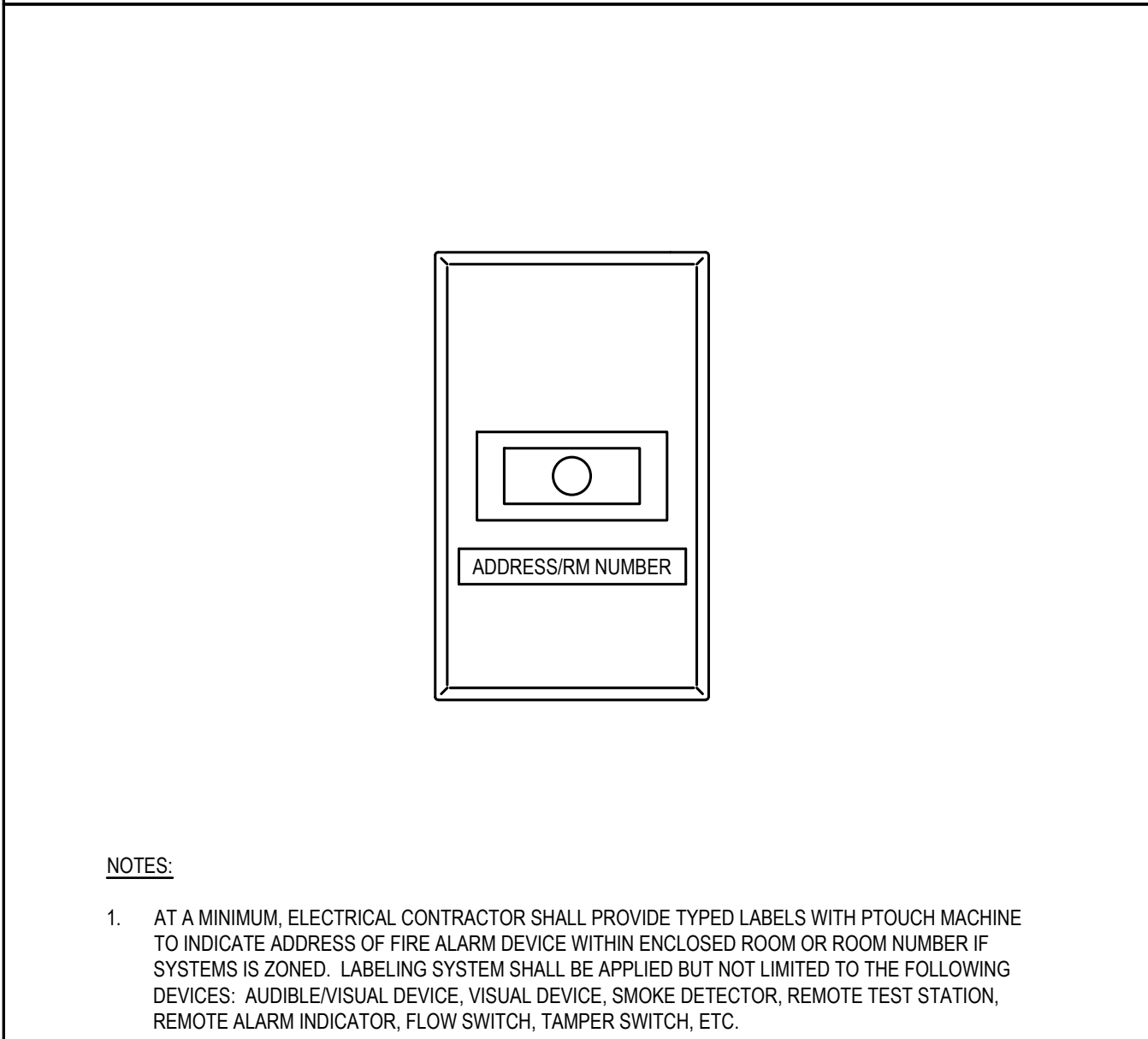
SEQUENCE OF OPERATIONS INPUT / OUTPUT MATRIX												
SYSTEM OUTPUTS		CONTROL UNIT ANNUNCIATION										
FIRE ALARM SYSTEM OPERATION SCHEDULE			ACTIVATE COMMON ALARM SIGNAL INDICATOR									
			ACTIVATE AUDIBLE ALARM SIGNAL									
			ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR									
			ACTIVATE AUDIBLE SUPERVISORY SIGNAL									
			ACTIVATE COMMON TROUBLE SIGNAL INDICATOR									
			ACTIVATE AUDIBLE COMMON TROUBLE SIGNAL									
			ACTIVATE FIRE FLOOR ALARM INDICATOR									
			DISPLAY PRINT CHANGE OF STATUS									
			TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION									
			TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION									
			TRANSMIT TROUBLE SIGNAL TO SUPERVISORY STATION									
SYSTEM INPUTS	A	B										
	C	D										
	E	F										
	G	H										
	I	J										
	K	L										
	M	N										
	O	P										
	1	2										
	3	4										
	5	6										
NOTES:	1	2										
	3	4										
	5	6										
	7	8										
	9	10										
	11	12										
	13	14										
	15	16										
	17	18										
	19	20										
	21	22										

1. ALL EVENTS SHALL BE RECORDED AT THE FIRE ALARM CONTROL PANEL AND SHALL INDICATE TIME AND DATE OF OCCURRENCE AND LIST DEVICE INITIATED.
2. TROUBLE AND SUPERVISORY SIGNALS SHALL BE MONITORED IN ACCORDANCE WITH 780CMR 903.4.1.



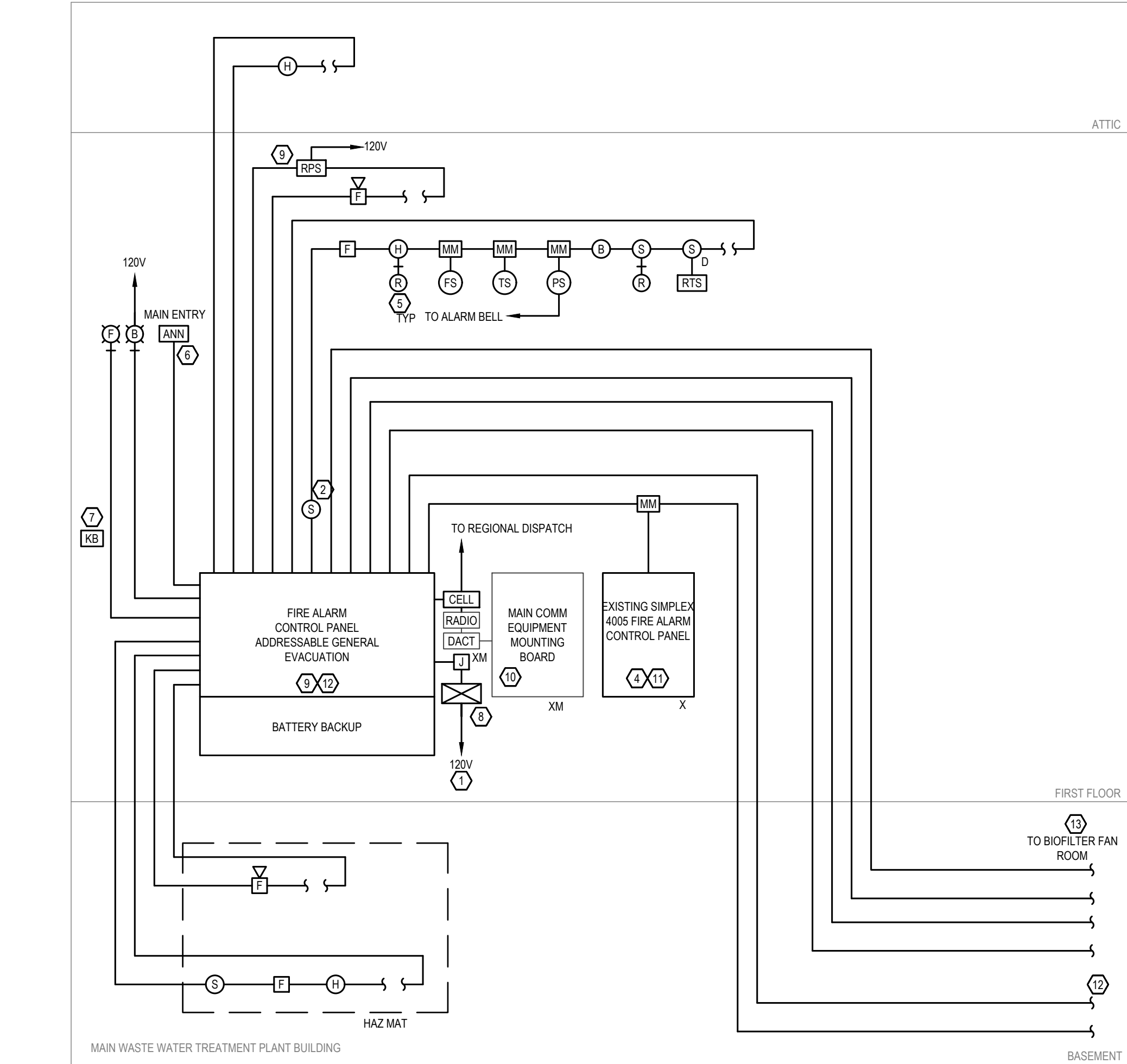
1 DEVICE MOUNTING HEIGHT DETAIL

N.T.S.



2 TYPICAL FIRE ALARM DEVICE LABELING DETAIL

N.T.S.



FIRE ALARM RISER DIAGRAM 3

N.T.S.

FIRE ALARM RISER DIAGRAM NOTES:

- ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT BREAKER HANDLE-LOOK ON ALL 120 VOLT FIRE ALARM POWER CIRCUITS. HANDLE LOOK SHALL ALLOW THE CIRCUIT BREAKER TO TRIP, BUT PREVENT SWITCHING OF THE CIRCUIT BREAKER TO THE "OFF" POSITION.
- PROVIDE SMOKE DETECTOR IN VICINITY (WITHIN 2'-0") OF FIRE ALARM CONTROL PANEL, AND ALL FIRE ALARM BOOSTER PANELS AND COMMUNICATORS.
- RISER DIAGRAM DOES NOT SHOW ENTIRE SYSTEM. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL SYSTEM DEVICES. PROVIDE UL LISTED FIRE ALARM CABLING FOR CONNECTION OF ALL ADDRESSABLE DEVICES. PROVIDE WIRING IN EMT IN EXPOSED SPACES, BASEMENT LEVEL, OR ANY AREA PRONE TO DAMAGE. CONDUIT SHALL BE RED OR HAVE RED BUSHINGS TO INDICATE FIRE ALARM SYSTEM.
- EXISTING FIRE ALARM CONTROL PANEL SHALL REMAIN UNTIL NEW FIRE ALARM CONTROL SYSTEM IS FULLY OPERATIONAL AND APPROVED BY THE AHJ.
- PROVIDE REMOTE ALARM INDICATOR OVER DOOR OF EACH LOCKED ROOM THAT CONTAINS A SMOKE OR HEAT DETECTOR WHETHER OR NOT SHOWN ON THE FLOOR PLANS. SUCH AS ELECTRIC ROOMS, MECHANICAL ROOMS, ETC.
- NEW FIRE ALARM ANNUNCIATOR PANELS. COORDINATE EXACT LOCATIONS WITH FIRE DEPARTMENT PRIOR TO ROUGH IN. PROVIDE GRAPHIC MAP IN A FRAME MOUNTED ABOVE ANNUNCIATOR IN ACCORDANCE WITH AHJ REQUIREMENTS.
- PROVIDE NEW KEY BOX. COORDINATE WITH FIRE DEPARTMENT.
- PROVIDE A 20AMP, 120VOLT, 1 PHASE SURGE PROTECTOR EQUAL TO MCG SURGE PROTECTION MODEL NO. 415. SURGE PROTECTOR SHALL BE INSTALLED BETWEEN THE CIRCUIT BREAKER IN THE PANEL AND THE FIRE ALARM PANEL, AND IN ACCORDANCE WITH MANUFACTURER'S WIRING RECOMMENDATIONS.

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED REMOTE POWER SUPPLIES FOR A COMPLETE AND OPERABLE SYSTEM. POWER SUPPLY CALCULATIONS SHALL BE INCLUDED IN FIRE ALARM SHOP DRAWINGS.
- EXISTING ADEMCO S ZONE DACT FIRE ALARM COMMUNICATOR TO REMAIN AND BE REUSED/REPROGRAMMED TO NEW FIRE ALARM SYSTEM. COORDINATE CUT OVER AND PROGRAMMING WITH FACILITIES MANAGER AND AHJ PRIOR TO WORK.
- ELECTRICAL CONTRACTOR SHALL CARRY ALL COSTS TO REPROGRAM EXISTING FIRE ALARM CONTROL PANEL TO COMPLY WITH PHASED CONSTRUCTION. EXISTING FIRE ALARM CONTROL PANEL SHALL BE TIED TO NEW SYSTEM UNTIL NEW FIRE ALARM SYSTEM FOR ALL BUILDINGS IS COMPLETED AND EXISTING SYSTEM CAN BE FULLY REMOVED IN ITS ENTIRETY. AT NO POINT SHALL EITHER BUILDING BE WITHOUT FIRE ALARM SYSTEM COVERAGE. COORDINATE PHASING OF DEMOLITION OF OLD FIRE ALARM SYSTEM WITH LOCAL AHJ.
- FA CABLES RUN FROM MAIN FACP TO SOUTH END OF OPERATIONS BUILDING. EXIT BUILDING AT EXISTING HANDHOLE AND RUN IN EXISTING 3" CONDUIT TO HEADWORKS BUILDING.
- FA CABLES RUN FROM MAIN FACP TO SOUTH END OF OPERATIONS BUILDING. EXIT BUILDING AT EXISTING HANDHOLE AND RUN IN EXISTING 1.5" CONDUIT TO BIOFILTER FAN ROOM.

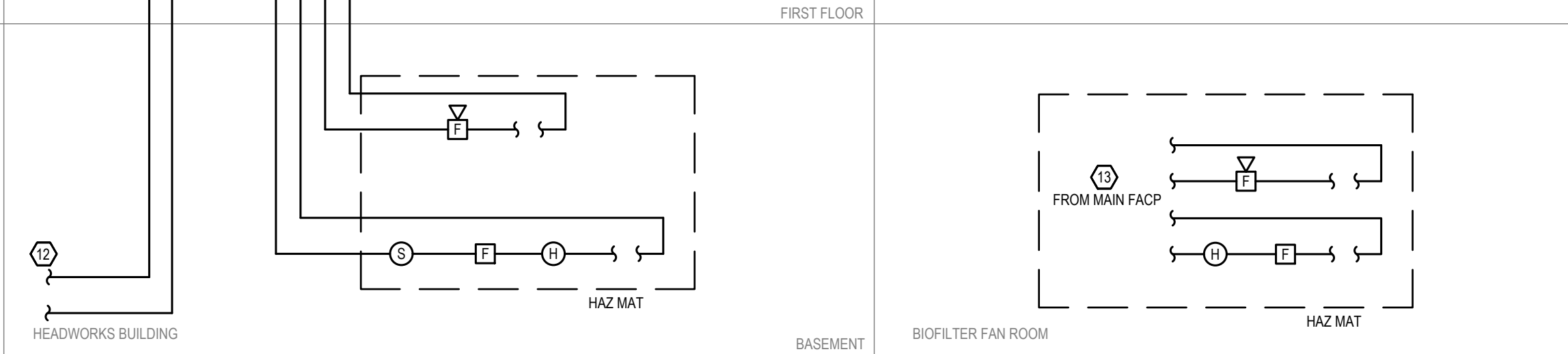
GENERAL NOTES

- LEGEND IS INTENDED TO SHOW DEPICTION OF SYMBOLS. IT DOES NOT IMPLY INTENT OF SCOPE. NOT ALL SYMBOLS SHOWN ON THIS LEGEND WILL BE USED ON THE DWGS.
- PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT TO MAKE INSTALLATION COMPLETE IN EVERY DETAIL UNDER THIS CONTRACT WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS.
- ALL EQUIPMENT AND WIRING ON DWGS IS SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN. ALL CONDUIT RUNS SHALL BE RIGIDLY SUPPORTED.

DEMOLITION NOTES

- THE ELECTRICAL DEMOLITION PLANS AND DETAILS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE SUBMISSION OF BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS TO BE REMOVED SHALL BE DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING THE EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE BUT NOT BE LIMITED TO DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
- THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED.
- THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS, FEEDERS AND SYSTEM COMPONENTS, WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE. THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE. EXISTING EQUIPMENT TO REMAIN SHALL BE LEFT IN A CODE COMPLIANT MANNER.
- THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
- THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILINGS, ETC.). TEMPORARILY SUPPORTED ITEMS SHALL BE PERMANENTLY SUPPORTED AND INSTALLED WHEN FINALIZED STRUCTURES ARE IN PLACE.
- ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.
- THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD. REUSE OF EXISTING FIRE ALARM SYSTEM RACEWAYS SHALL NOT BE ALLOWED. ALL REQUIRED SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE AND THE AUTHORITY HAVING JURISDICTION. DEMOLITION OF THE EXISTING SYSTEM SHALL NOT COMMENCE UNTIL THE NEW SYSTEM HAS BEEN COMPLETELY INSTALLED, TESTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.

CEILING TYPE SYMBOLS	
9'-0"	CEILING HEIGHT AND TYPE SYMBOL
ACT	"ACT" INDICATES ACOUSTICAL CEILING TILE "GWB" INDICATES GYPSUM WALL BOARD "EXP" INDICATES EXPOSED TO DECK "CON" INDICATES CONCRETE "SPL" INDICATES SPLINE



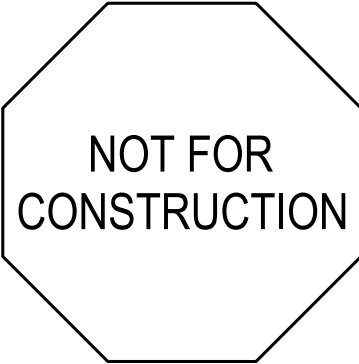
FIRE ALARM

- TYPICAL DEVICE ANNOTATION:  
\*15" INDICATES CANDELA RATING  
\*XP" INDICATES EXPLOSION-PROOF  
\*CR" INDICATES CORROSION-RESISTANT
- FACP** 15 AUDIO / VISUAL DEVICE  
\*F" INDICATES HORN / VISUAL  
\*S" INDICATES SPEAKER / VISUAL
- LS** 15 VISUAL ONLY DEVICE  
\*L" INDICATES WHITE LENS FOR FIRE  
\*C" INDICATES AMBER LENS FOR CARBON MONOXIDE
- MS** 15 CEILING MOUNTED AUDIO / VISUAL DEVICE  
\*F" INDICATES HORN / VISUAL  
\*S" INDICATES SPEAKER / VISUAL
- MS** 15 CEILING MOUNTED VISUAL ONLY DEVICE
- F** 15 MANUAL PULL STATION
- S** 15 SMOKE DETECTOR  
\*D" INDICATES DUCT SMOKE DETECTOR  
\*R" INDICATES ELEVATOR RECALL  
\*NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP
- H** 135 HEAT DETECTOR  
\*135" INDICATES 135° FIXED TEMPERATURE  
\*C" INDICATES MOUNTED ABOVE HUNG CEILING
- MS** CARBON MONOXIDE DETECTOR  
\*NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP
- MS** COMBINATION SMOKE / CARBON MONOXIDE DETECTOR  
\*NS" INDICATES NON-SYSTEM DEVICE, 120V HARDWIRED WITH BATTERY BACKUP
- FS** FIRE PROTECTION SYSTEM INTERFACE DEVICE  
\*FS" INDICATES FLOW SWITCH MONITOR MODULE  
\*TS" INDICATES TAMPER SWITCH MONITOR MODULE  
\*PS" INDICATES PRESSURE SWITCH MONITOR MODULE  
\*PIV" INDICATES POST INDICATOR VALVE MONITOR MODULE
- FACP** FIRE ALARM DEVICE  
\*FACP" INDICATES FIRE ALARM CONTROL PANEL  
\*FABP" INDICATES FIRE ALARM BOOSTER PANEL  
\*FATC" INDICATES FIRE ALARM TERMINAL CABINET  
\*FARP" INDICATES FIRE ALARM REMOTE POWER  
\*AES" INDICATES AES MESH NETWORK COMMUNICATOR, COORDINATE TYPE WITH LOCAL FIRE DEPARTMENT  
\*ANN" INDICATES FIRE ALARM ANNUNCIATOR PANEL  
\*DACT" INDICATES DIGITAL ALARM COMMUNICATOR TRANSMITTER  
\*CELL" INDICATES CELLULAR COMMUNICATOR  
\*RADIO" INDICATES RADIO COMMUNICATOR  
\*CM" INDICATES CONTROL MODULE  
\*MM" INDICATES MONITOR MODULE  
\*DH" INDICATES MAGNETIC DOOR HOLDER  
\*KB" INDICATES KEY BOX  
\*RTS" INDICATES REMOTE TEST STATION  
\*BDA" INDICATES BI-DIRECTIONAL AMPLIFIER
- CH** FIRE ALARM ANNUNCIATION DEVICE  
\*B" INDICATES ALARM BELL, 120V HARDWIRED, EXTERIOR MOUNTED, WEATHERPROOF  
\*R" INDICATES RED INDICATING BEACON, EXTERIOR MOUNTED, WEATHERPROOF  
\*R" INDICATES REMOTE AREA LED INDICATOR

EXISTING EQUIPMENT DESIGNATIONS

- |    |                                                                                                                                                                    |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X  | EXISTING TO BE REMOVED, REMOVE ALL ASSOCIATE CONDUIT AND CONDUCTORS                                                                                                |
| XM | EXISTING TO REMAIN                                                                                                                                                 |
| XN | EXISTING EQUIPMENT TO BE REPLACED WITH NEW, CONNECT NEW EQUIPMENT TO EXISTING CIRCUIT                                                                              |
| XR | EXISTING EQUIPMENT TO BE RELOCATED, JUNCTION AND EXTEND EXISTING CONDUIT AND CONDUCTORS                                                                            |
| XC | NEW EQUIPMENT TO BE CONNECTED TO NEAREST AVAILABLE BRANCH CIRCUIT, PROVIDE NEW BRANCH CIRCUITRY FROM NEAREST EXISTING DEVICE (TO REMAIN) TO NEW DEVICE AS REQUIRED |
| XL | NEW LOCATION OF EXISTING EQUIPMENT, JUNCTION AND EXTEND CONDUIT AND CONDUCTORS AS REQUIRED                                                                         |

Seal:



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www.blwengineers.com  
HVAC Electrical Plumbing Fire Protection

Client:

TOWN OF  
MANCHESTER-BY-THE-SEA  
10 CENTRAL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

BID SET 02/26/24

Revision:

Project:

WASTEWATER TREATMENT PLANT  
FIRE ALARM PROJECT  
12 CHURCH ST  
MANCHESTER-BY-THE-SEA, MA 01944

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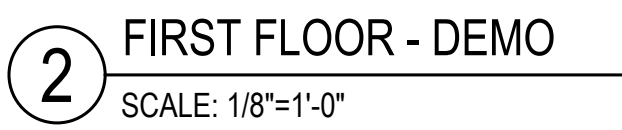
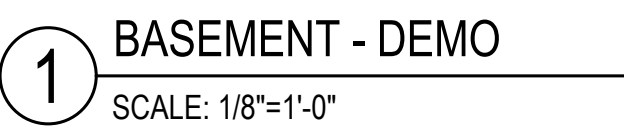
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Title:  
FIRE ALARM  
LEGENDS,  
RISER, NOTES

Drawing No.:

FA001



GENERAL NOTES:

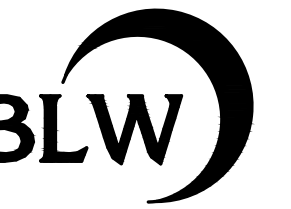
- WHERE POSSIBLE, ALL EXISTING CONDUIT AND WIRING TO BE MAINTAINED AND REUSED. EXISTING DEVICES TO BE REMOVED AND DIRECTLY REPLACED WITH NEW.

3 ATTIC - DEMO  
SCALE: 1/8"=1'-0"



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NOT FOR  
CONSTRUCTION



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Client:

TOWN OF  
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10 CENTRAL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

VID SET	02/26/24
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Revision:

Project: 

WASTEWATER TREATMENT PLANT  
FIRE ALARM PROJECT  
12 CHURCH ST  
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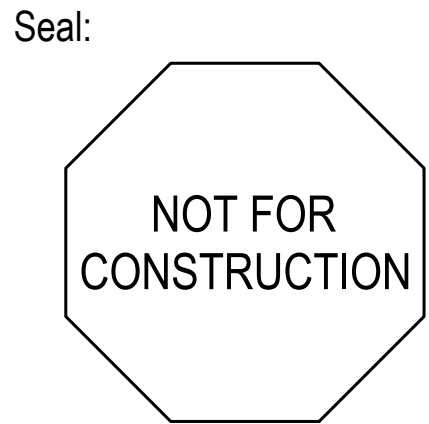
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BUILDING  
DEMOLITION  
PLAN

Drawing No.:

FAD100



- GENERAL NOTES:
- WHERE POSSIBLE, ALL EXISTING CONDUIT AND WIRING TO BE MAINTAINED AND REUSED. EXISTING DEVICES TO BE REMOVED AND DIRECTLY REPLACED WITH NEW.



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10 CENTRAL ST  
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Submission:

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Revision:

Project:

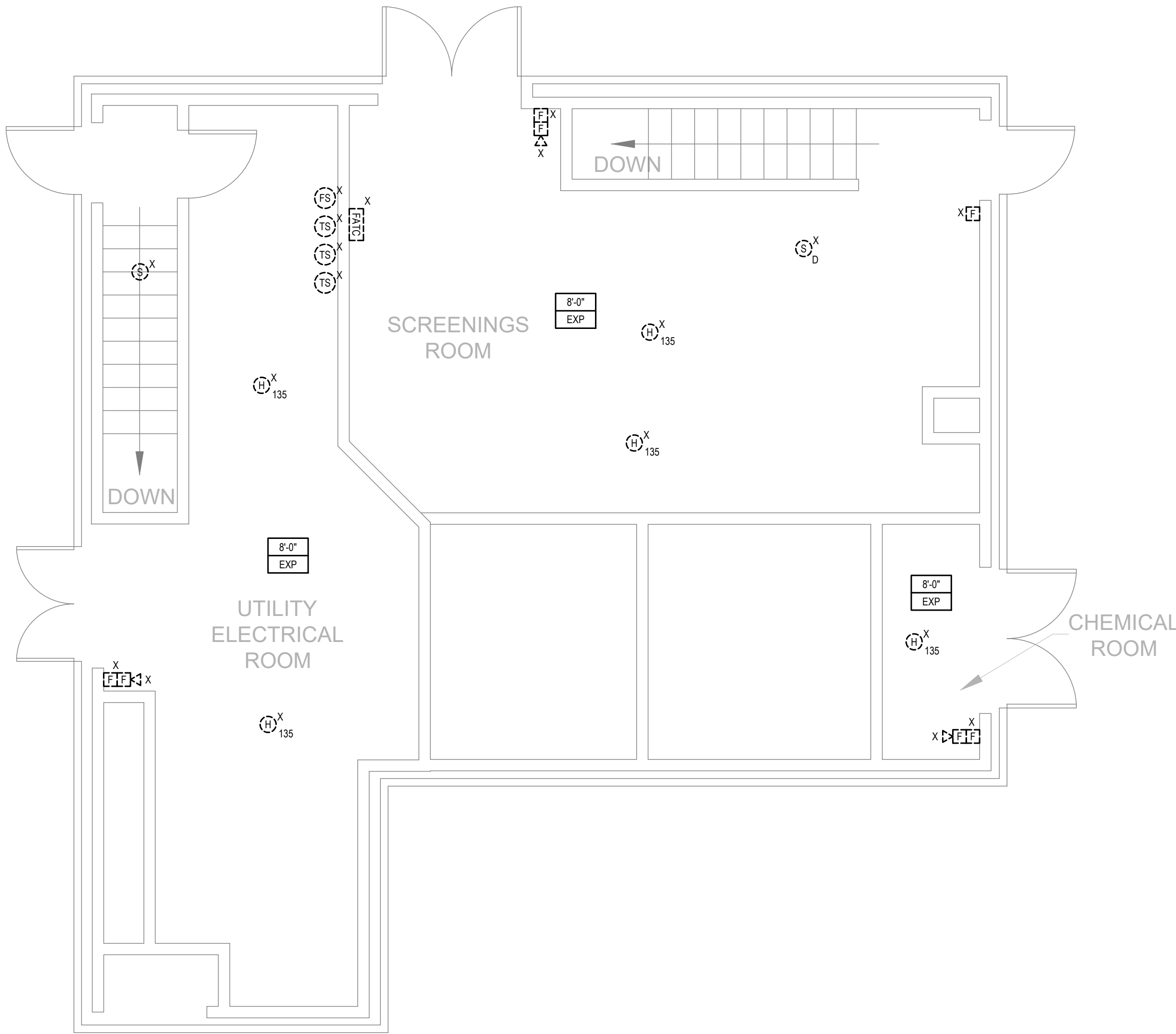
**WASTEWATER TREATMENT PLANT  
FIRE ALARM PROJECT**  
12 CHURCH ST  
MANCHESTER-BY-THE-SEA, MA 01944

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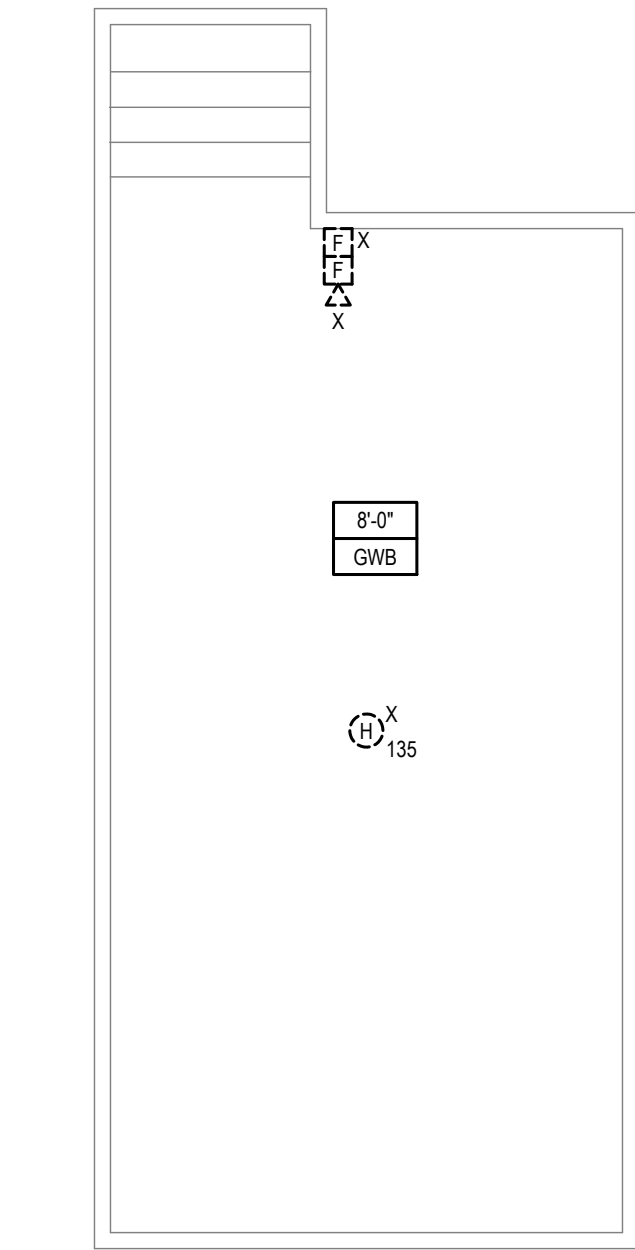
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Checked By: CM  
Scale: As Noted

Title:  
HEADWORKS AND  
BIOFILTER FAN  
ROOM DEMOLITION  
PLAN

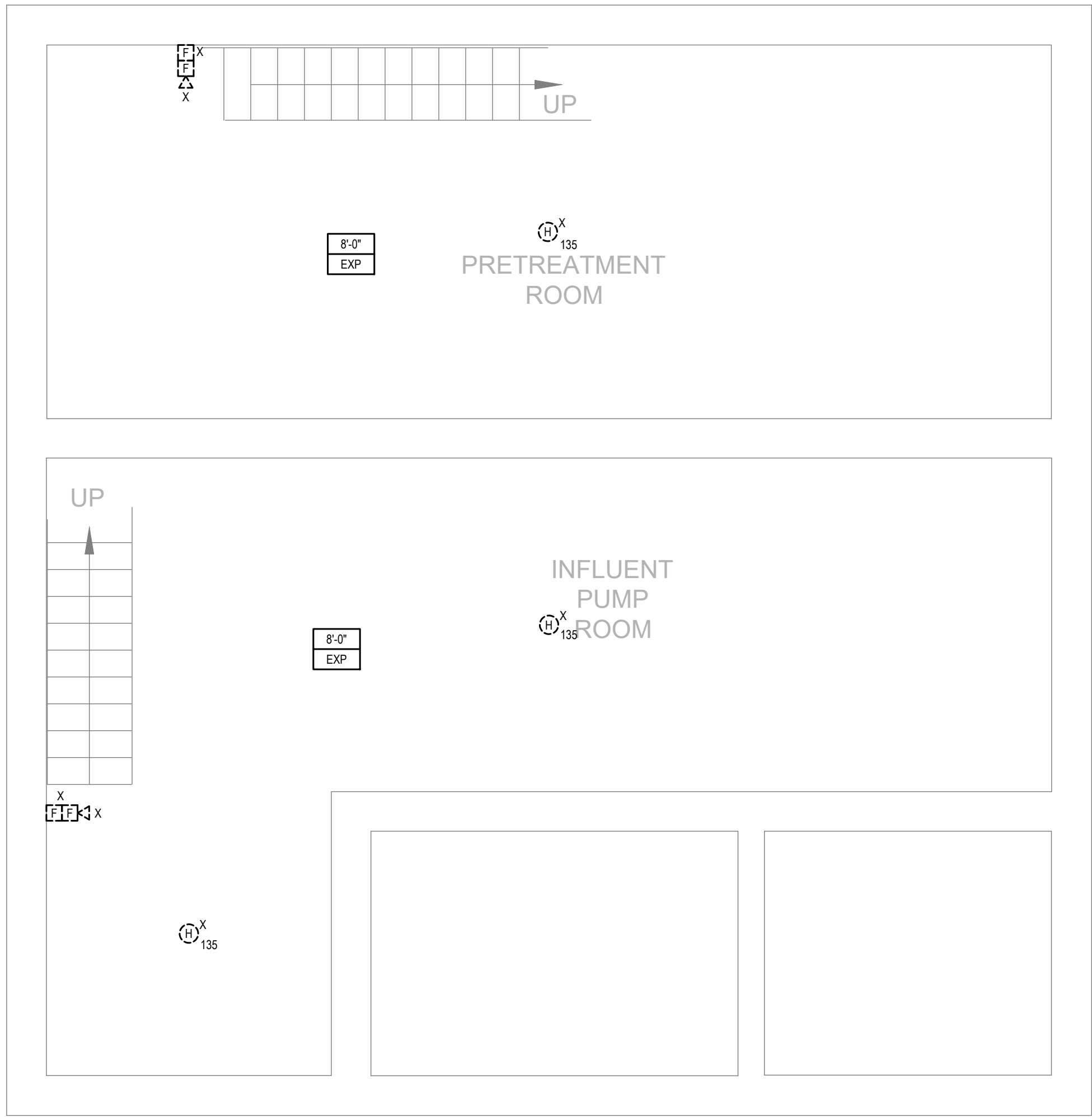
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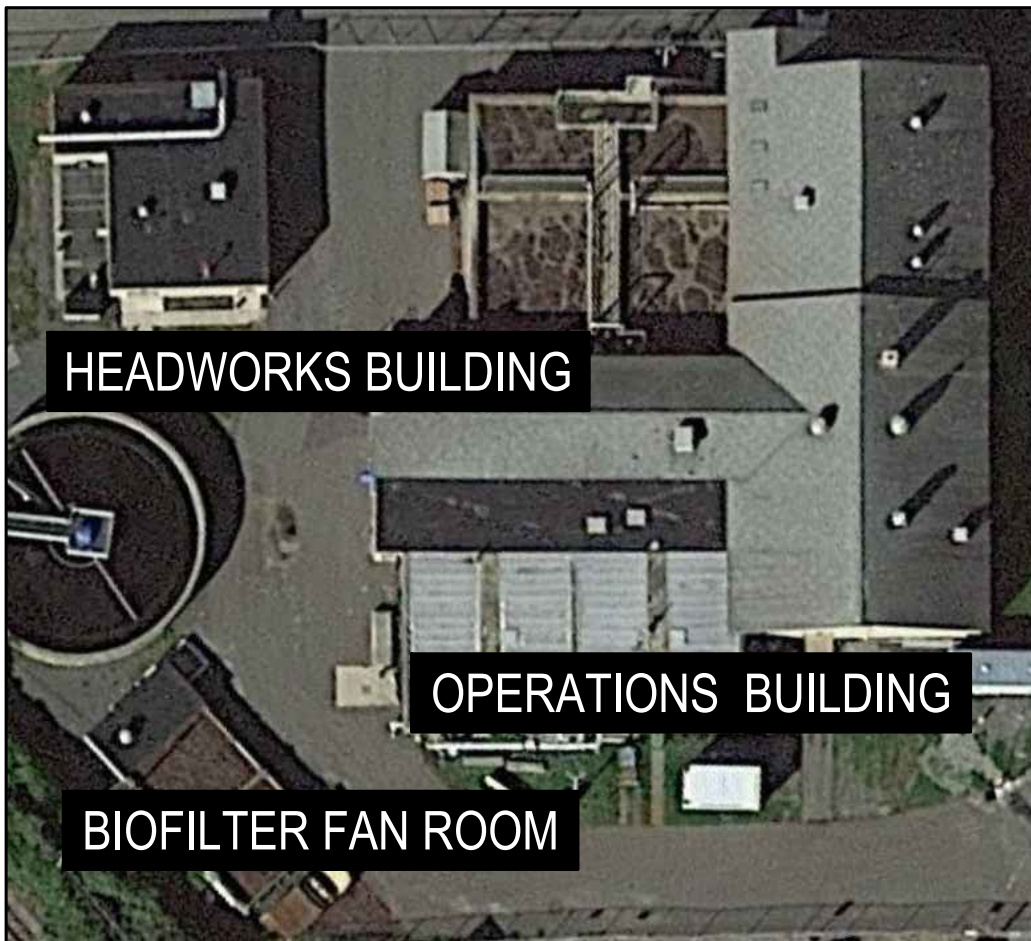
**2** HEADWORKS FIRST FLOOR  
SCALE: 1/4"=1'-0"



**1** BIOFILTER FAN ROOM - DEMO  
SCALE: 1/4"=1'-0"



**3** HEADWORKS BASEMENT  
SCALE: 1/4"=1'-0"

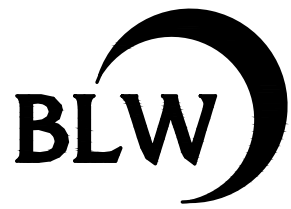
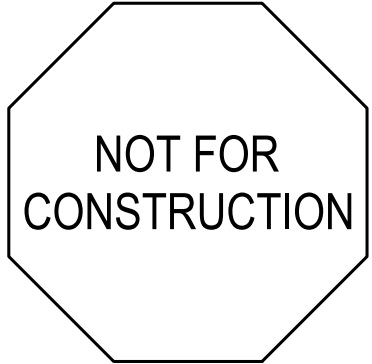






- GENERAL NOTES:
- ALL DEVICES NEED TO BE FULLY COORDINATED WITH EXISTING CONDITIONS. MANY AREAS ARE EXPOSED TO STRUCTURAL CEILING AND CONTAIN MANY OBSTRUCTIONS.
  - WHERE POSSIBLE, ALL EXISTING CONDUIT AND WIRING TO BE MAINTAINED AND REUSED. EXISTING DEVICES TO BE REMOVED AND DIRECTLY REPLACED WITH NEW.
- NOTES:
- PROVIDE 120V POWER FROM EXISTING POWER SOURCE. PROVIDE LOCK HANDLE DEVICE FOR CIRCUIT BREAKER AND UPDATE THE EXISTING PANELBOARD SCHEDULE TO INDICATE "FIRE ALARM PANEL". COORDINATE TIE IN WITH OWNER PRIOR TO WORK.

Seal:



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Client:

TOWN OF  
MANCHESTER-BY-THE-SEA  
10 CENTRAL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

BID SET 02/26/24

Revision:

Project:

WASTEWATER TREATMENT PLANT  
FIRE ALARM PROJECT  
12 CHURCH ST  
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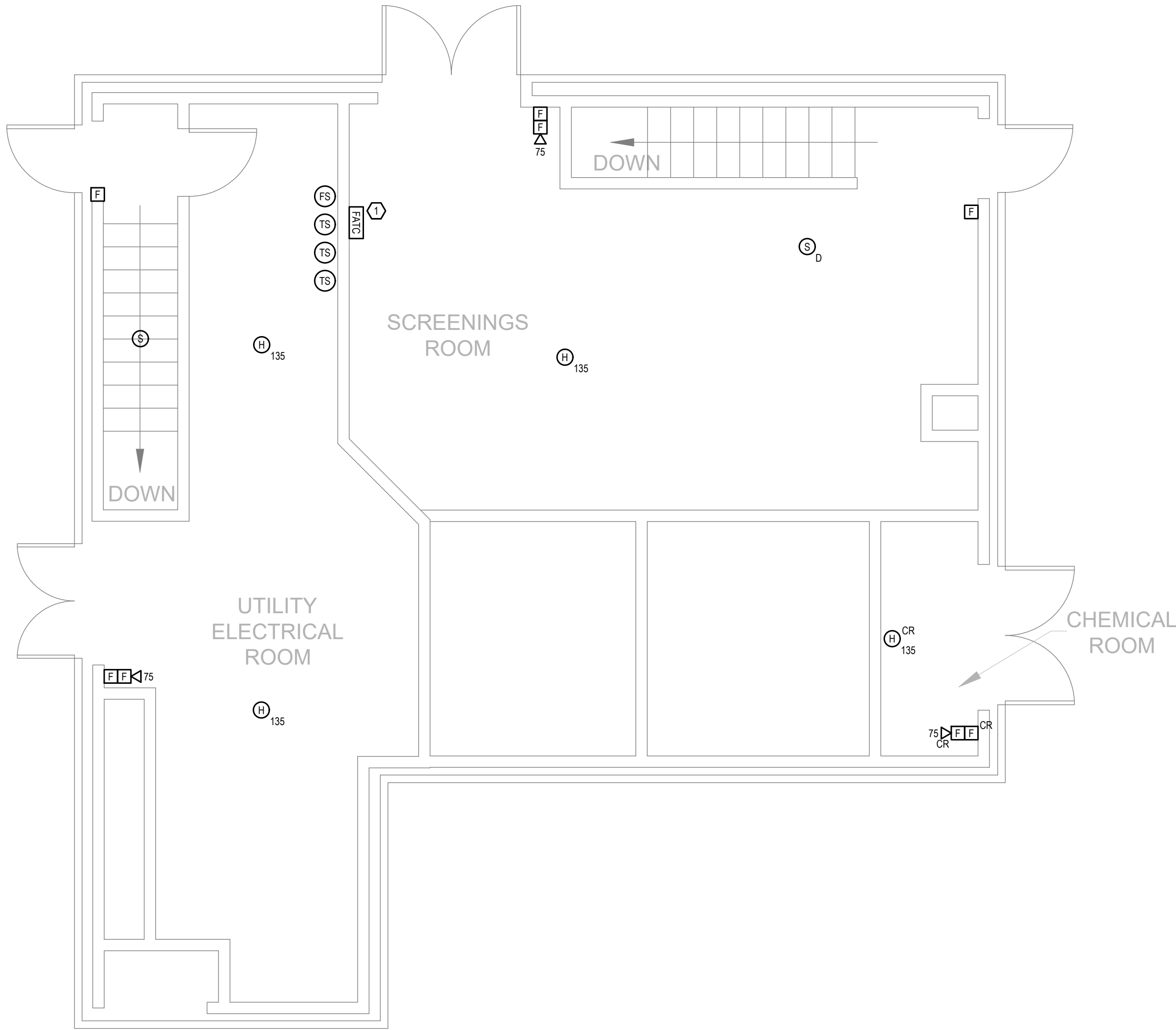
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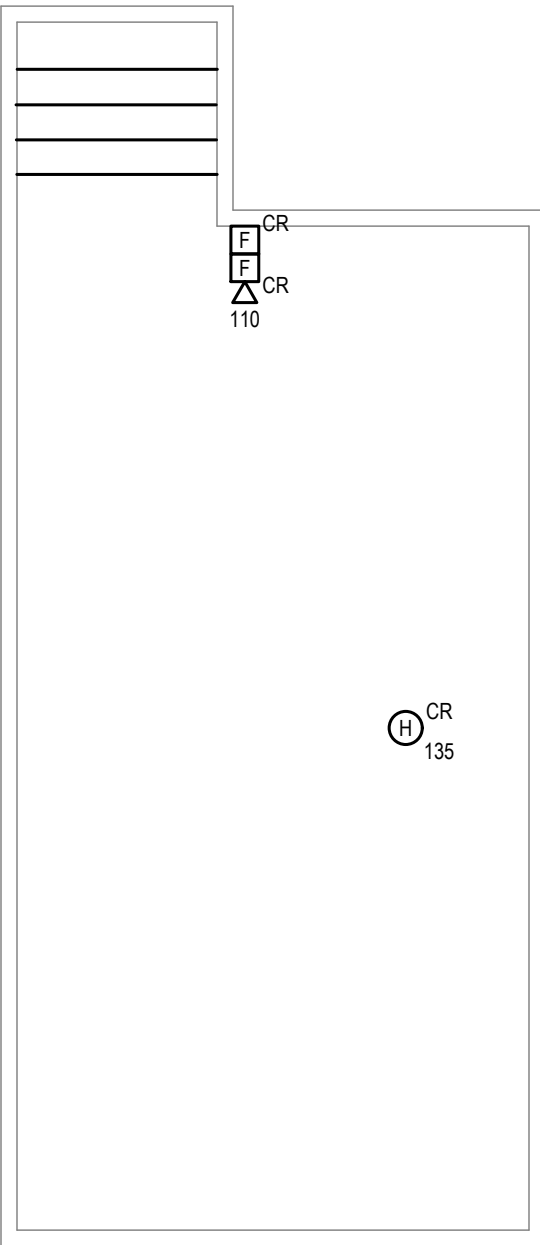
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HEADWORKS AND  
BIOFILTER FAN  
ROOM DEVICE  
LAYOUT

Drawing No.:

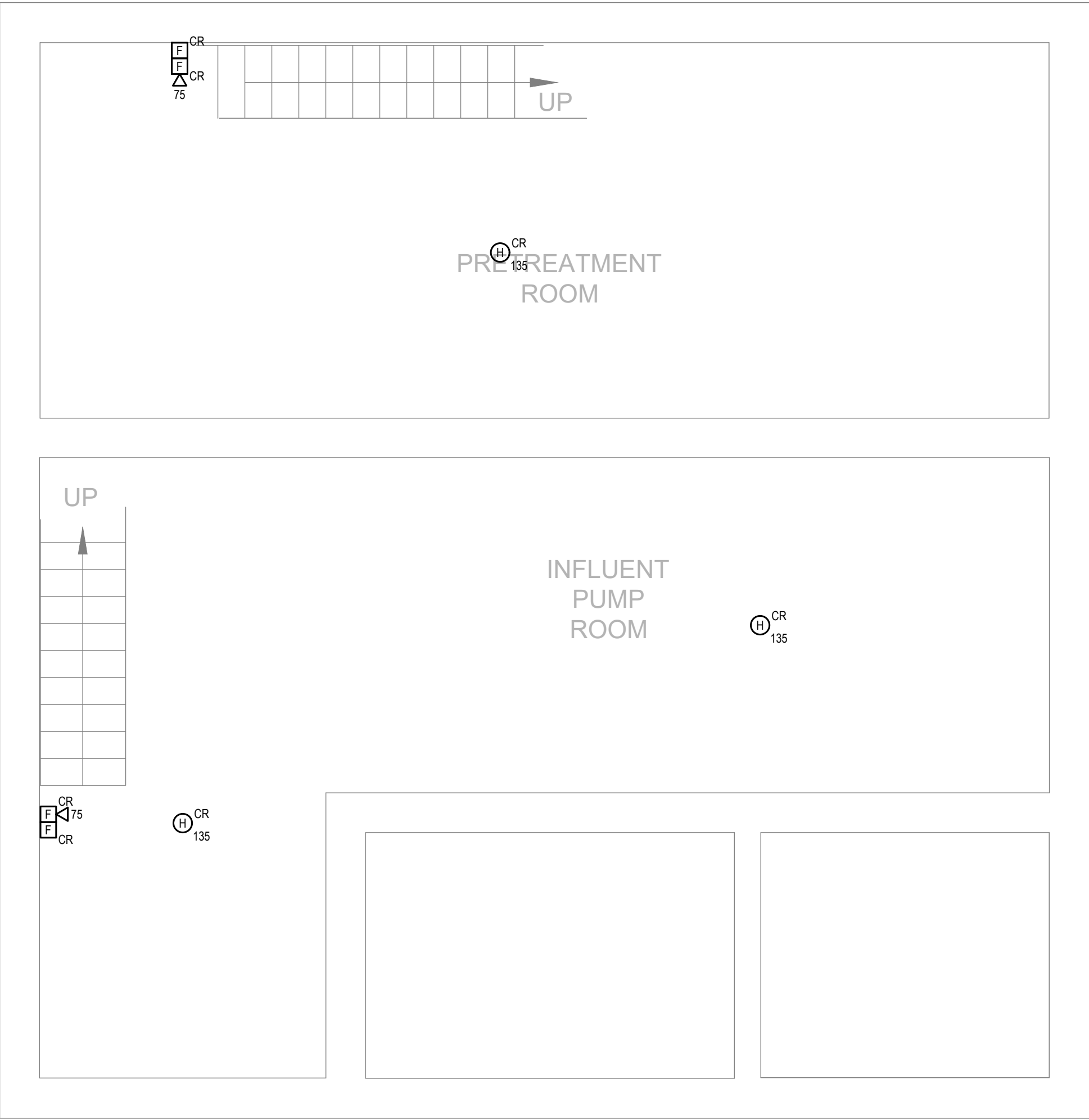
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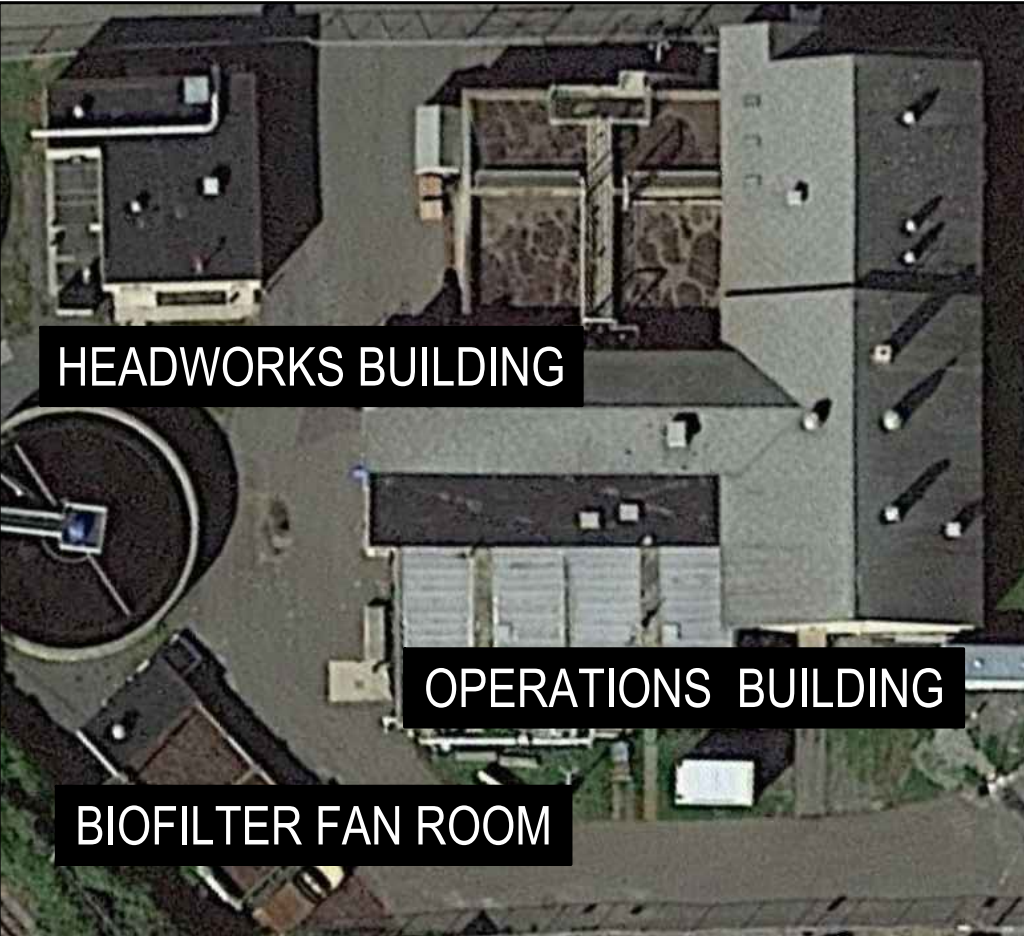
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SCALE: 1/4"=1'-0"



1 BIOFILTER FAN ROOM  
SCALE: 1/4"=1'-0"



3 HEADWORKS BASEMENT  
SCALE: 1/4"=1'-0"



# MANCHESTER-BY-THE-SEA WATER TREATMENT FACILITY FIRE ALARM PROJECT

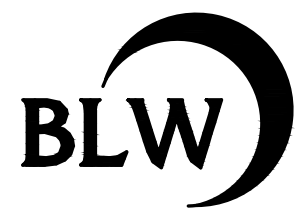
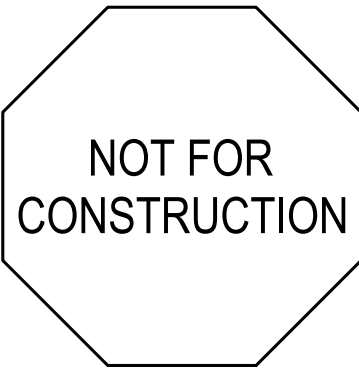
Town of Manchester-by-the-Sea  
10 Central Street  
Manchester-by-the-Sea, MA 01944



**DRAWING INDEX:**

TS	-	TITLE SHEET
FA001	-	FIRE ALARM LEGENDS, RISERS, NOTES
FAD100	-	FIRE ALARM DEMOLITION PLAN
FA100	-	FIRE ALARM DEVICE LAYOUT

Seal:



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TOWN OF  
MANCHESTER-BY-THE-SEA  
10 CENTRAL ST  
MANCHESTER-BY-THE-SEA, MA 01944

Submission:

BID SET 02/26/24

Revision:

Project:

WATER TREATMENT FACILITY  
FIRE ALARM PROJECT  
PINE ST  
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Title:

TITLE SHEET

Drawing No.:

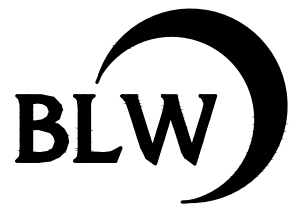
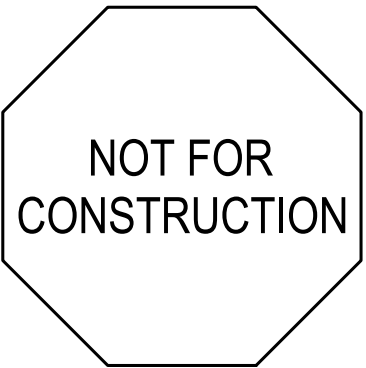
TS





- GENERAL NOTES:
- WHERE POSSIBLE, ALL EXISTING CONDUIT AND WIRING TO BE MAINTAINED AND REUSED. EXISTING DEVICES TO BE REMOVED AND DIRECTLY REPLACED WITH NEW.

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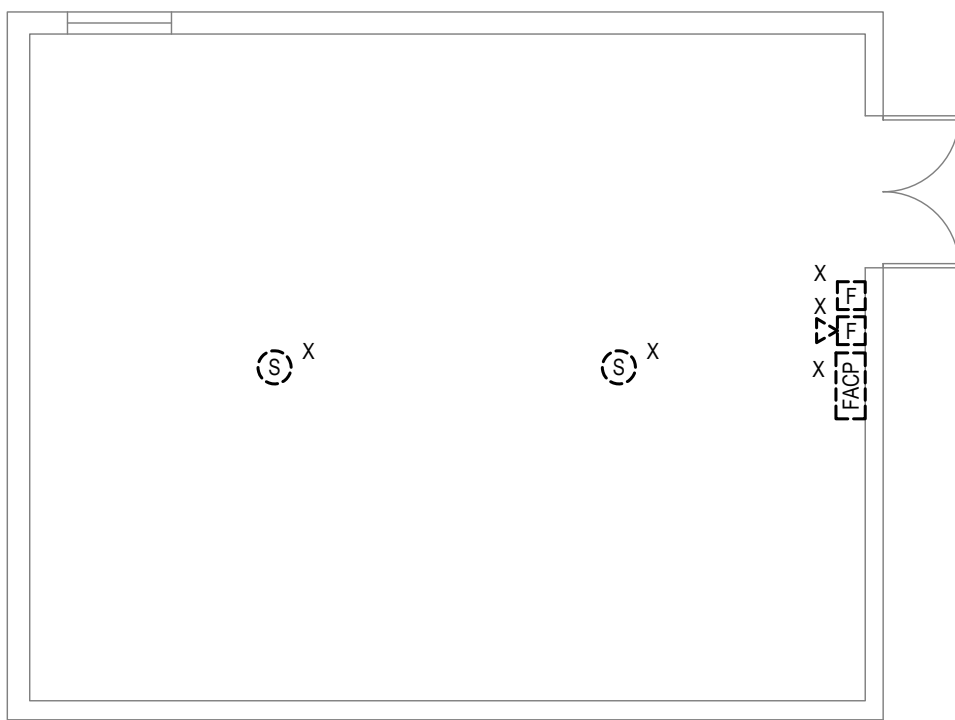
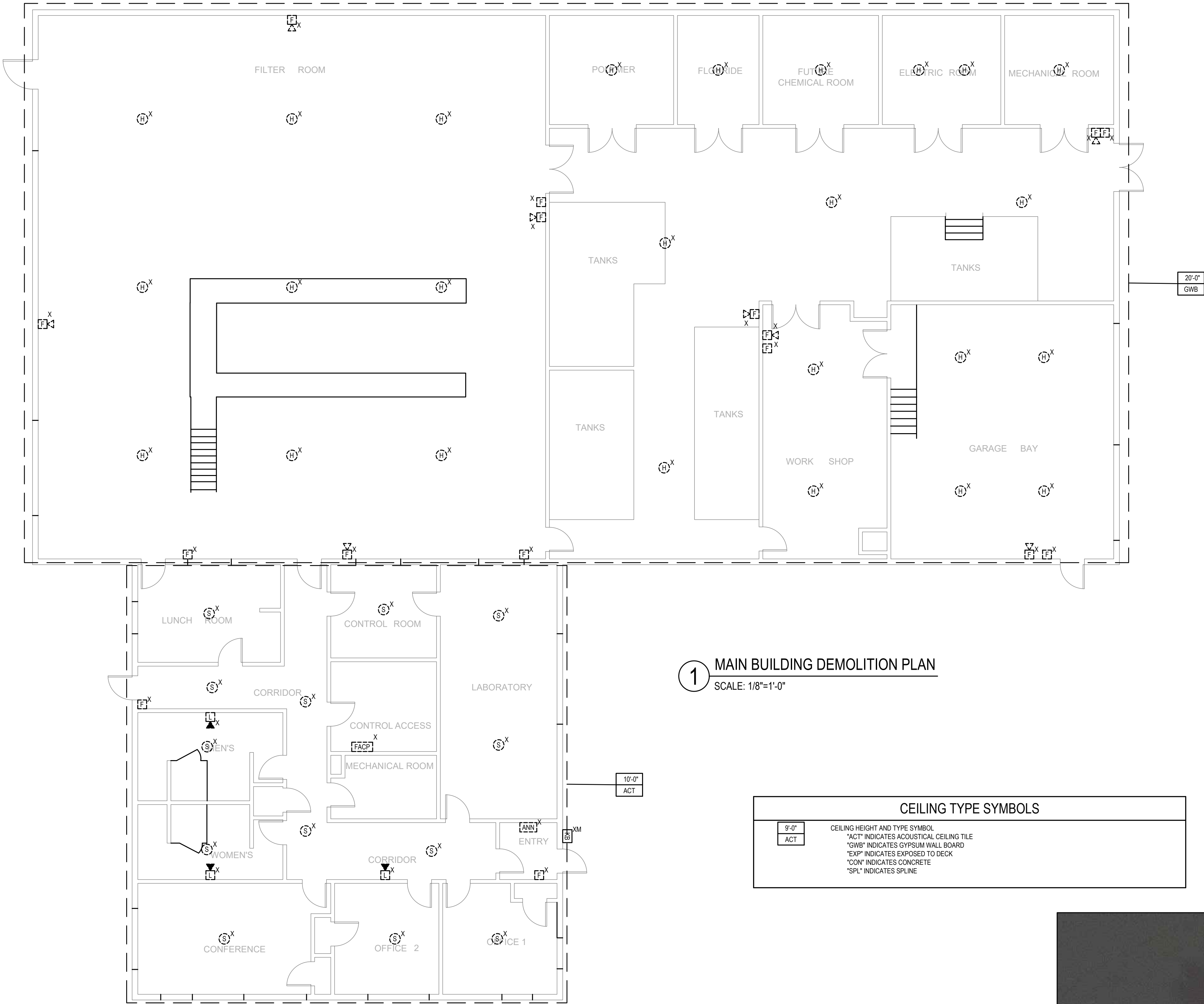
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Scale: As Noted

Title:  
FIRE ALARM  
DEMOLITION  
PLAN

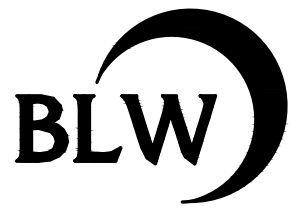
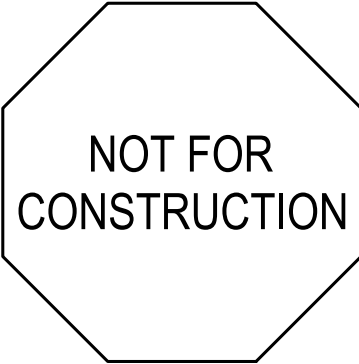
Drawing No.:

FAD100





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- NOTES:
- PROVIDE 120V POWER FROM EXISTING POWER SOURCE. PROVIDE LOCK HANDLE DEVICE FOR CIRCUIT BREAKER AND UPDATE THE EXISTING PANELBOARD SCHEDULE TO INDICATE 'FIRE ALARM PANEL'. COORDINATE TIE IN WITH OWNER PRIOR TO WORK.
  - ALL DEVICES IN FILTER AND CHEMICAL AREAS AND RAW WATER PUMP BUILDING MUST BE NEMA 4X RATED.



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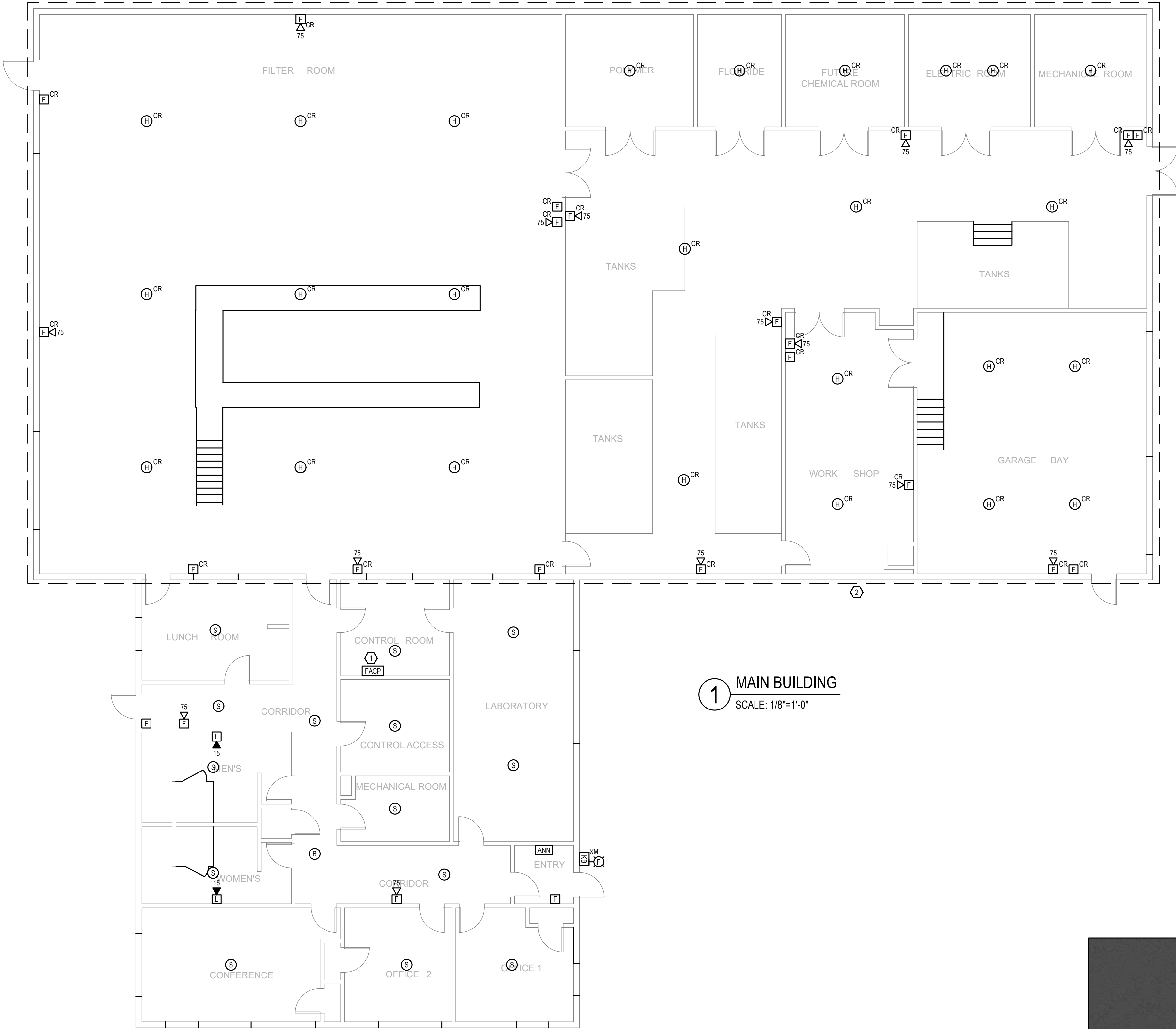
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FIRE ALARM PROJECT  
PINE ST  
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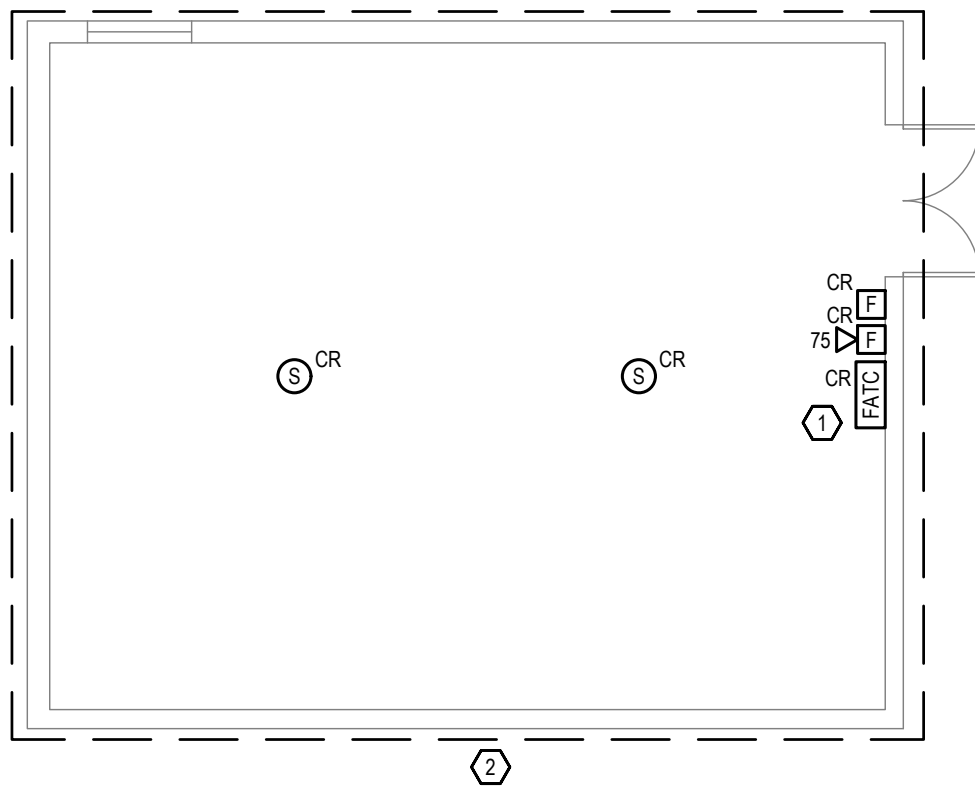
Project No.: 23406  
Drawn By: RG  
Checked By: CM  
Scale: As Noted

Title:  
FIRE ALARM  
DEVICE LAYOUT

Drawing No.:  
FA100



1 MAIN BUILDING  
SCALE: 1/8"=1'-0"



2 RAW WATER PUMP BUILDING  
SCALE: 1/8"=1'-0"

