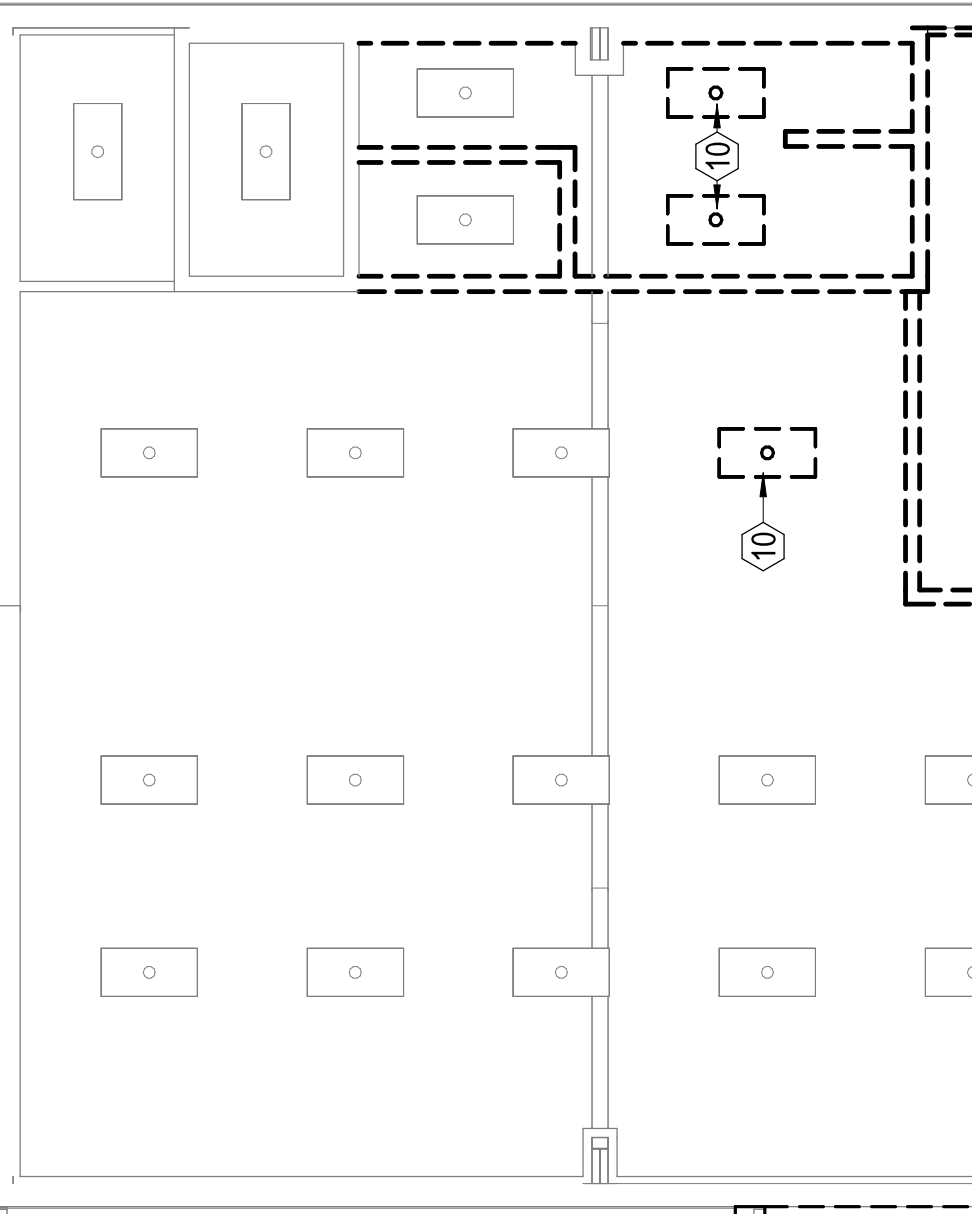


C

2900 South Quincy Street, Suite 710  
Arlington, VA 22206  
(703) 998-0101

1

1



10

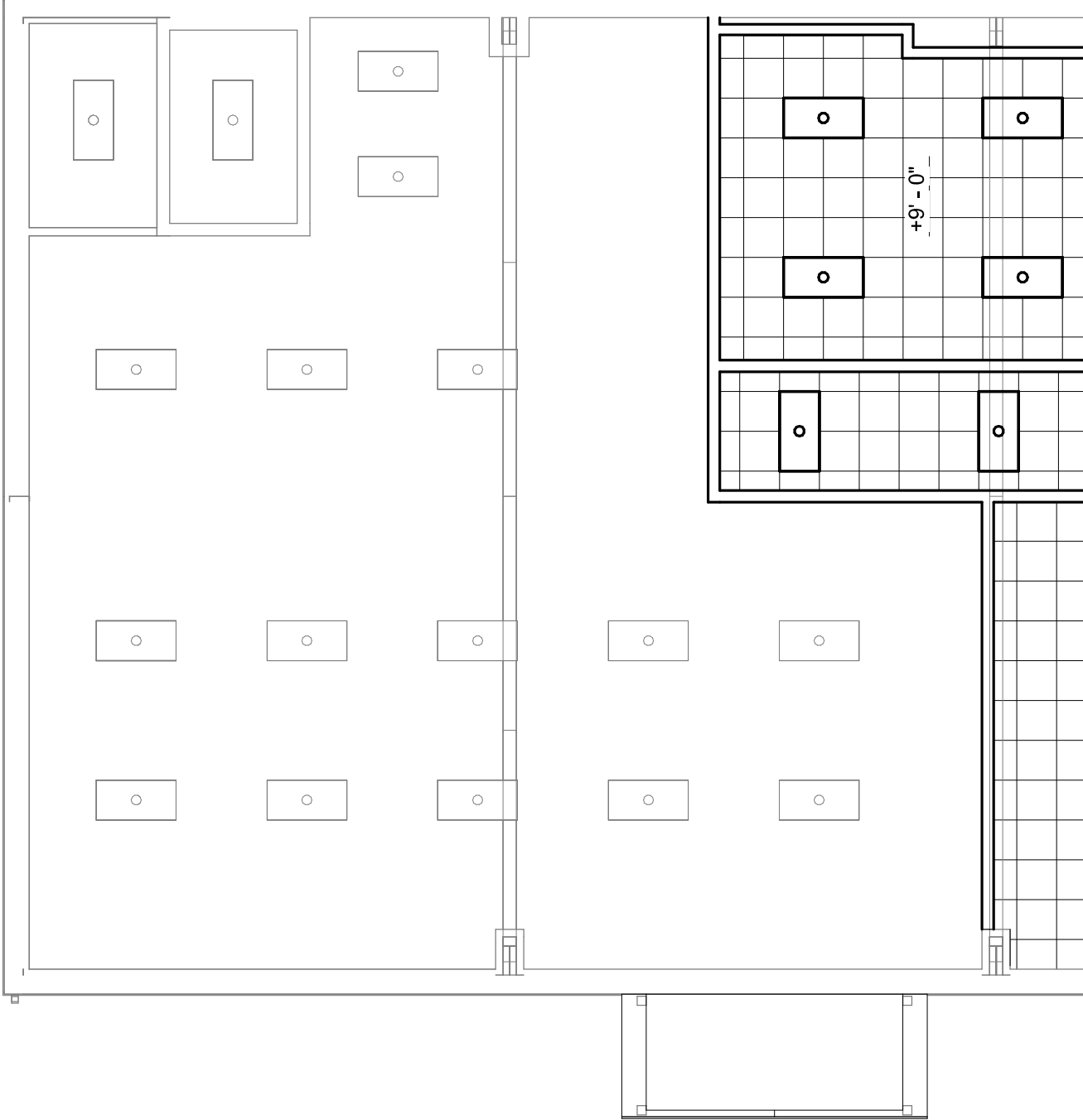
11

TYP

E

1

1

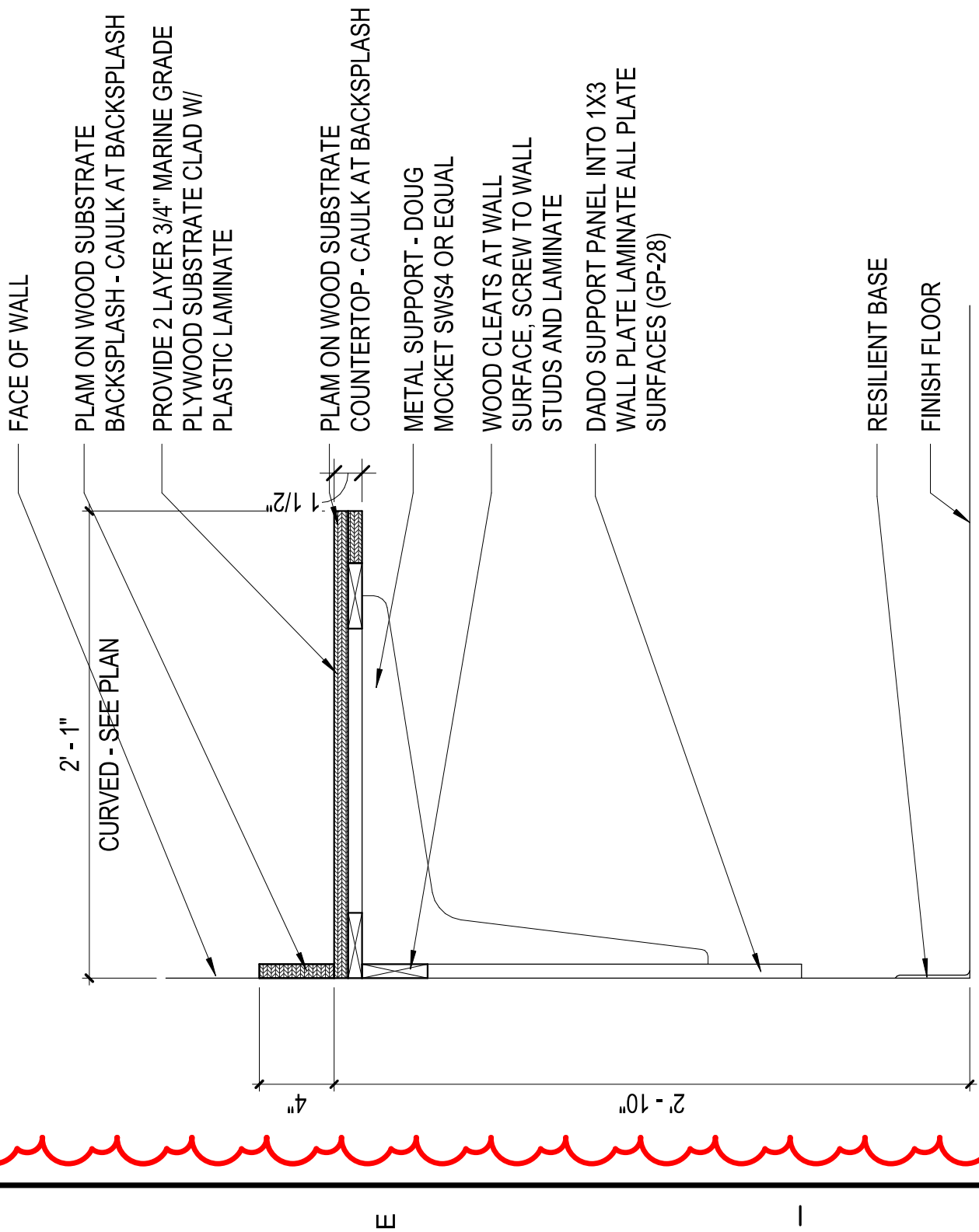


E

1

1

1



FACE OF WALL

2' - 1"  
CURVED - SEE PLAN

PLAM ON WOOD SUBSTRATE  
BACKSPASH - CAULK AT BACKSPASH

PROVIDE 2 LAYER 3/4" MARINE GRADE  
PLYWOOD SUBSTRATE CLAD W/  
PLASTIC LAMINATE

PLAM ON WOOD SUBSTRATE  
COUNTERTOP - CAULK AT BACKSPASH

METAL SUPPORT - DOUG  
MOCKET SWS4 OR EQUAL

WOOD CLEATS AT WALL  
SURFACE, SCREW TO WALL  
STUDS AND LAMINATE

DADO SUPPORT PANEL INTO 1X3  
WALL PLATE LAMINATE ALL PLATE  
SURFACES (GP-28)

RESILIENT BASE

FINISH FLOOR

1 1/2"

4"

2' - 10"

E

# CASEWORK SECTION

5

A-201

SCALE: 1 1/2" = 1'-0"

# GENERAL NOTES

## INTENT OF THE DRAWINGS

1. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND SHOW THE GENERAL LOCATION OF PIPING, AND EQUIPMENT. THE DRAWINGS DO NOT SHOW ALL NECESSARY OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES. THE COST OF ALL OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

## COORDINATION WITH OTHER TRADES

1. EXAMINE AND REVIEW THE CONTRACT DOCUMENTS OF ALL DIVISIONS OF THE SPECIFICATIONS IN ORDER TO COORDINATE THE INSTALLATION OF WORK.
2. USE DIMENSIONED ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS TO VERIFY THE SPACE NECESSARY FOR LOCATING PIPING, DUCTWORK, AND EQUIPMENT. USE FIELD MEASUREMENTS TO VERIFY DIMENSIONS WHERE AREAS ARE CONGESTED, AND EXACT LOCATION IS CRITICAL TO ASSURE PROPER INSTALLATION.
3. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, VERIFYING THE LOCATION AND SIZE OF OPENINGS IN FLOORS, WALLS, PARTITIONS, CEILINGS, AND ROOFS WITH THE INSTALLING TRADES; ALLOCATION OF SPACE WITH OTHER TRADES INSTALLING WORK IN CHASES, SHAFTS, CEILING INTERSTITIAL SPACES, AND EQUIPMENT SPACES; AND THE PHASING OF INSTALLATION WORK WITH THAT OF OTHER TRADES.







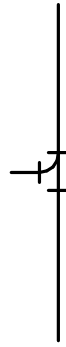


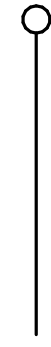




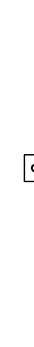
## WORKMANSHIP

1. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER THAT PROVIDES A PROFESSIONAL, COMPLETE INSTALLATION.

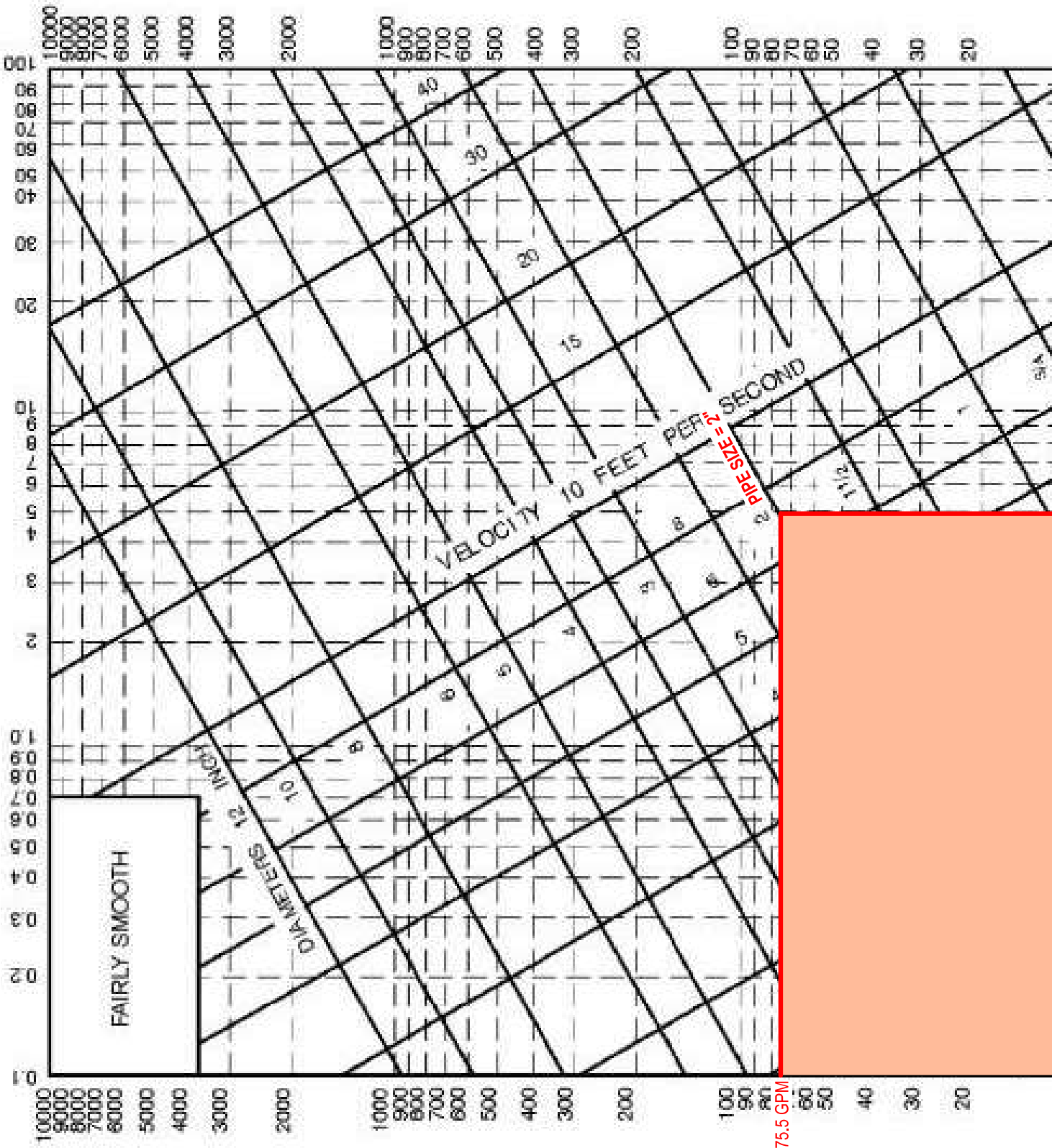
## EQUIPMENT

1. CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE SPECIFICATIONS, AND APPROVED SHOP DRAWINGS FOR EACH PIECE OF EQUIPMENT.

# LEGEND

DOMES	
DOMES	
DOMES	
SOIL CO	
VENT	
GAS PIP	
BRANC	
CAP	
PIPING	
PIPING	
POINT	
POINT	
EGRES	
1 HR R	
PLAN	

FRICION LOSS POUNDS PER SQUARE INCH HEAD PER 100 FEET LENGTH



FAIRLY SMOOTH

75.5 GPM

FLOW IN GALLONS PER MINUTE

FLOW IN GALLONS PER MINUTE

FIXTU

NEW WORK

EFD-1

IM-1

KS-1

LVA

UR-A

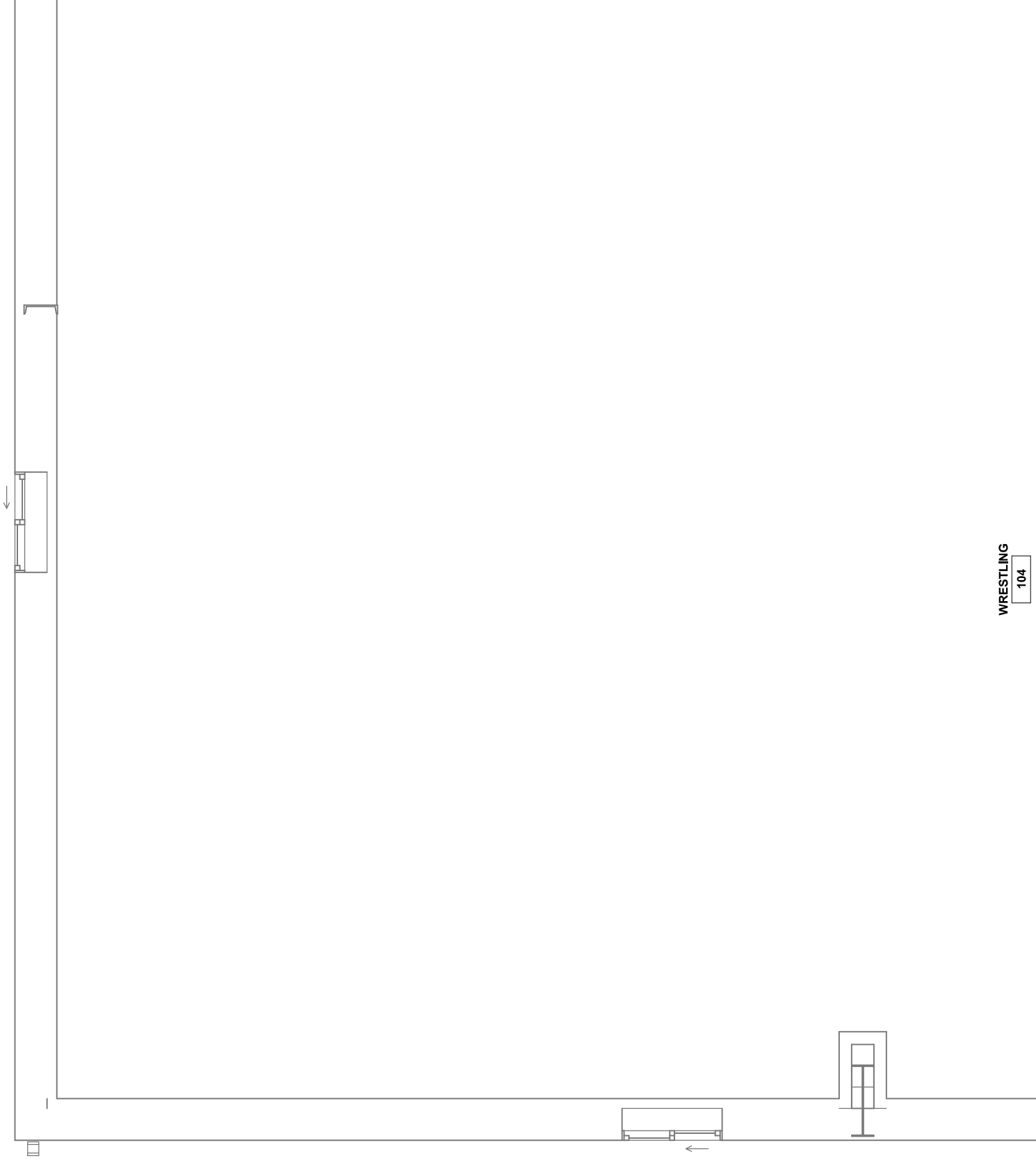
WC-1

WC-A

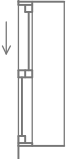
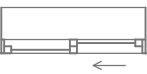
NEW WORK:

SYS

DOMESTIC V



WRESTLING  
104







# CODE DATA

## **MEP SPECIFIC CODES AND STANDARDS**

- 2015 INTERNATIONAL MECHANICAL CODE (IMC)
- 2009 INTERNATIONAL BUILDING CODE (IBC)
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VA USBC)

## MECHANICAL DRAWING INDEX

SHEET NUMBER	SHEET NAME
M0.01	LEGEND, NOTES, & ABBREVIATIONS
M0.02	SHEET SPECIFICATION
M0.03	MECHANICAL LOADS, EQUIPMENT AND ZONING
M1.01	LEVEL 1 - HVAC PLAN
M5.11	DETAILS & DIAGRAMS

# GENE

1. ALLI
2. DU
3. LO
4. ME
5. WH
6. ALLI
7. AB
8. ME
9. INS
10. UN
11. PEI
12. PR
13. CO
14. SU
15. OF
16. TU
17. PR
18. OF
19. IMM
20. CO
21. RE
22. CO
23. ME
24. ANI
25. PR
26. DE
27. VE
28. AR
29. LO

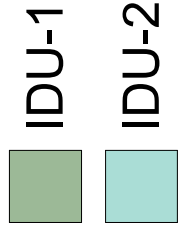
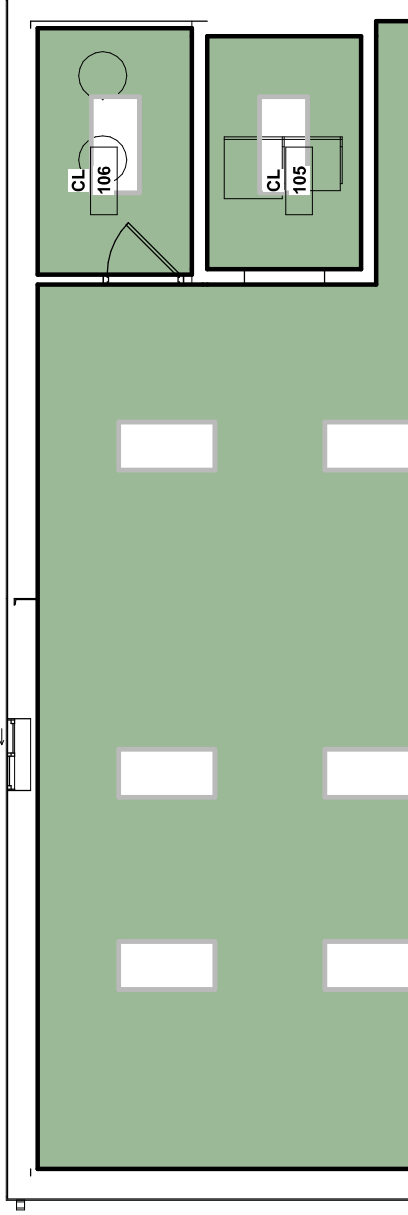
**23 05 53 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT**

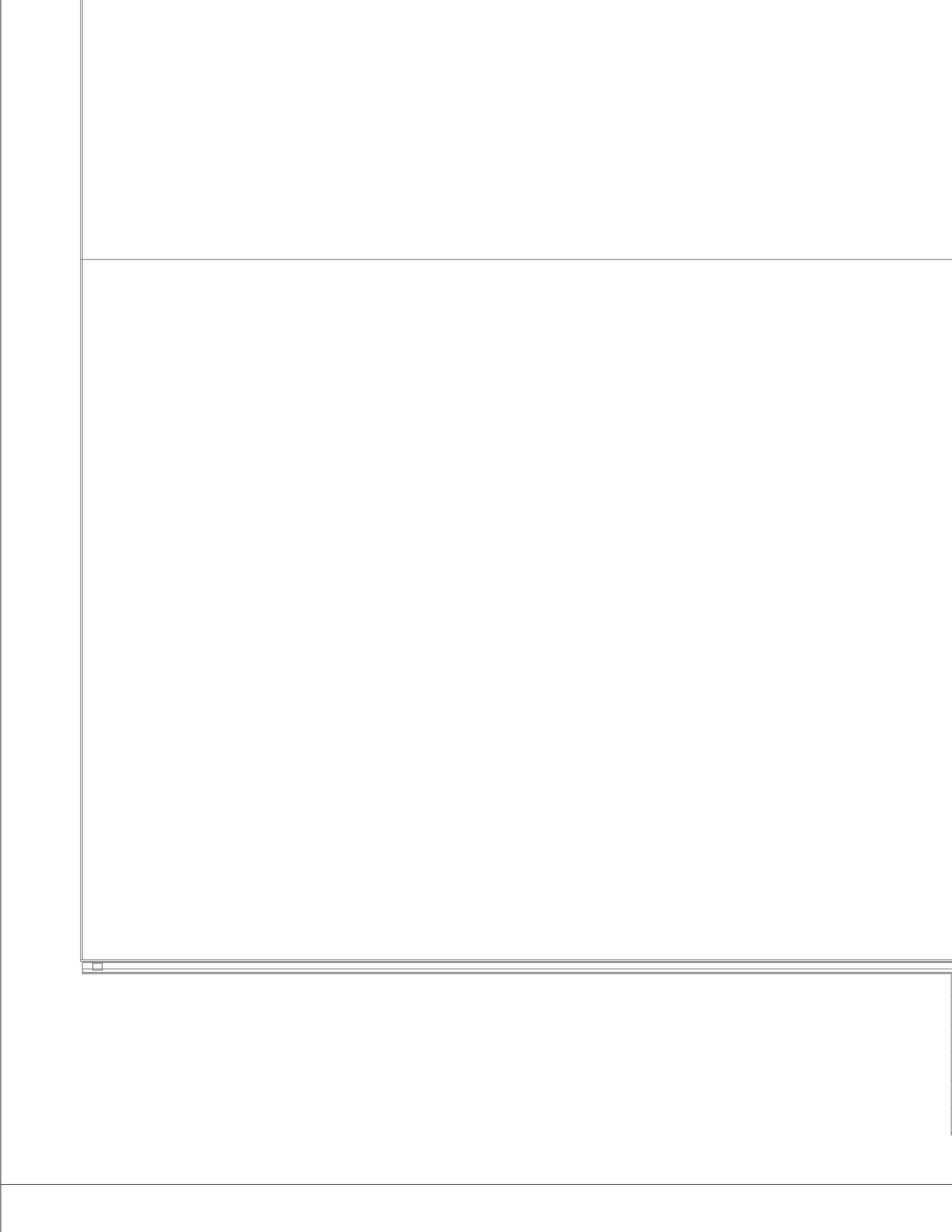
**23 05 93**

1. EQUIPMENT LABELS
  - A. MATERIAL AND THICKNESS: MULTILAYER, MULTICOLOR, PLASTIC LABELS FOR MECHANICAL ENGRAVING 1/8" THICK, AND HAVING PREDRILLED HOLES FOR ATTACHMENT HARDWARE.
  - B. COLOR: WHITE LETTERS WITH BLACK BACKGROUND.
  - C. ABLE TO WITHSTAND 160 DEG F. MINIMUM LETTER SIZE 1/2". PROVIDE WITH CONTACT-TYPE PERMANENT ADHESIVE, COMPATIBLE WITH LABEL AND WITH SUBSTRATE.
  - D. EQUIPMENT LABEL CONTENT: INCLUDE EQUIPMENT'S DRAWING DESIGNATION OR UNIQUE EQUIPMENT NUMBER, DRAWING NUMBERS WHERE EQUIPMENT IS INDICATED (PLANS, DETAILS, AND SCHEDULES).
2. PIPE LABELS
  - A. PREPRINTED, COLOR-CODED, WITH LETTERING INDICATING SERVICE, AND SHOWING FLOW DIRECTION ACCORDING TO ASME A13.1.
  - B. PRINTED PLASTIC WITH CONTACT-TYPE, PERMANENT-ADHESIVE BACKING. MINIMUM LETTER SIZE 1/2".
  - C. PIPE LABEL CONTENTS: INCLUDE IDENTIFICATION OF PIPING SERVICE; ALSO INCLUDE PIPE SIZE AND AN ARROW INDICATING FLOW DIRECTION.
3. DUCT LABELS
  - A. MULTILAYER, MULTICOLOR, PLASTIC LABELS FOR MECHANICAL ENGRAVING, 1/8" THICK, AND HAVING PREDRILLED HOLES FOR ATTACHMENT HARDWARE.
  - B. ABLE TO WITHSTAND 160 DEG F. MINIMUM LETTER SIZE 1/2". PROVIDE WITH CONTACT-TYPE PERMANENT ADHESIVE, COMPATIBLE WITH LABEL AND WITH SUBSTRATE.
  - C. DUCT LABEL CONTENTS: INCLUDE IDENTIFICATION OF DUCT SERVICE; ALSO INCLUDE DUCT SIZE AND AN ARROW INDICATING FLOW DIRECTION.
  - D. LOCATE LABELS NEAR POINTS WHERE DUCTS ENTER INTO AND EXIT FROM CONCEALED SPACES AND AT MAXIMUM INTERVALS OF 50 FEET IN EACH SPACE WHERE DUCTS ARE EXPOSED OR CONCEALED BY REMOVABLE CEILING SYSTEM.
  - E. LOCATE DUCT LABEL AT EACH DUCT ACCESS DOOR AS REQUIRED BY "AIR DUCT ACCESSORIES".
  - F. WHEN DUCT IS IN EXPOSED AND ARCHITECTURAL AREAS, LABELING SHALL BE LOCATED IN SUCH A WAY AS TO NOT BE EASILY RECOGNIZABLE FROM THE GENERAL PUBLIC.

6.

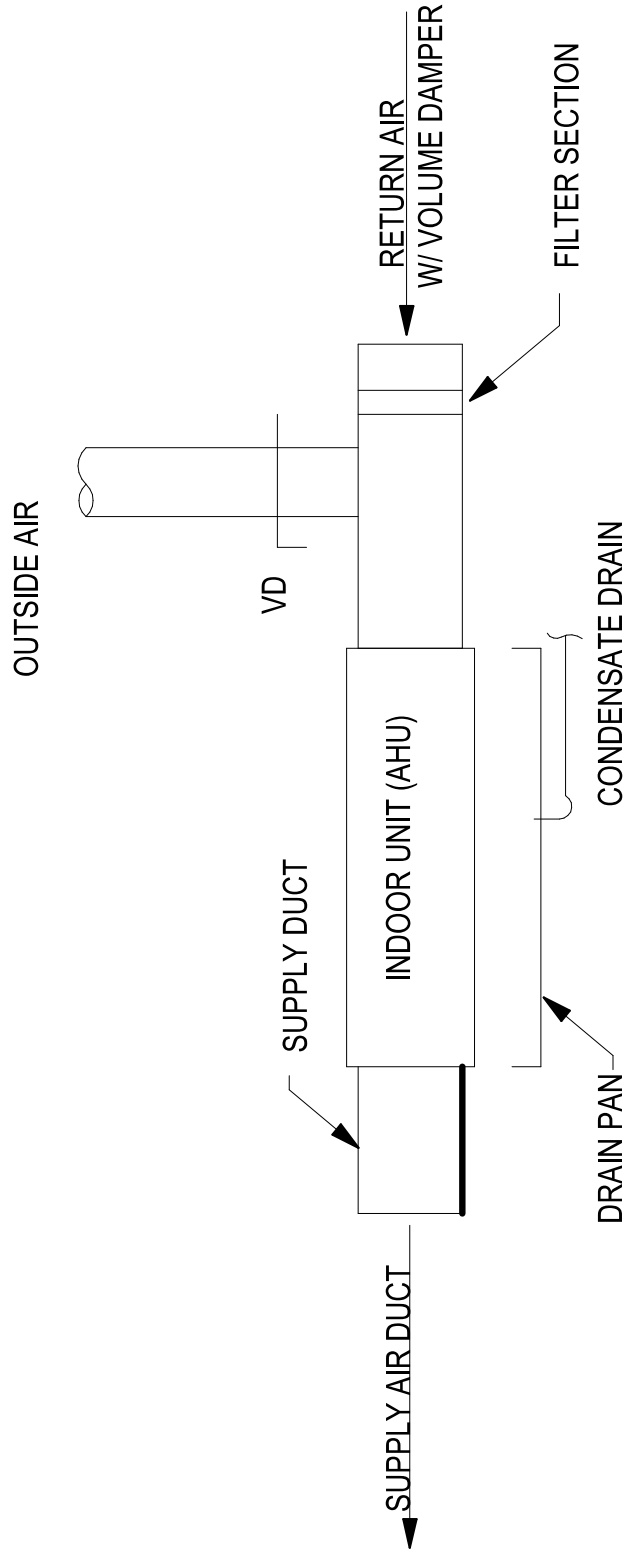
ROOM NUMBER	ROOM NAME	IMC SPACE CLASSIFICATION
104	WRESTLING	SPORTS AND AMUSEMENT - GYM, STADIUM, ARENA (PLAY AREA)
105	CL	UNOCCUPIED
106	CL	UNOCCUPIED
IDU-1		
100	CONCESSION	FOOD/BEVERAGE - KITCHEN(COOKING)
101	CORRIDOR	PUBLIC SPACES - CORRIDORS
102	MENS RESTROOM	PUBLIC SPACES - TOILET ROOMS - PUBLIC
103	WOMENS RESTROOM	PUBLIC SPACES - TOILET ROOMS - PUBLIC
IDU-2		
GRAND TOTAL		



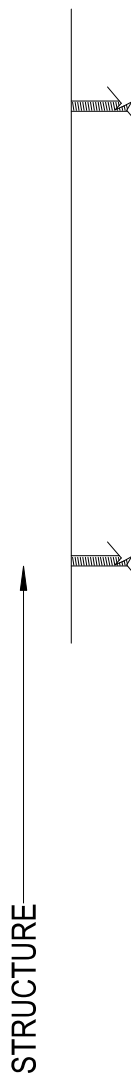


# **NOTI**

1. MOUN  
HORIZO  
NEEDED
2. PROVI  
AND WIRE
3. PROVI  
PLENUMS
4. PROVI  
OVERFLC  
SHUT DO  
ACTIVATE



## **INDOOR AHU-HORIZONTAL**



# GENERAL NOTES

1. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT. EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND PLUMBING DRAWINGS AND SPECIFICATIONS, AND BECOME FAMILIAR WITH, AND COORDINATE WITH, ALL CONDITIONS AFFECTING ELECTRICAL WORK.
2. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATIONS OF SWITCHES, PANELBOARDS, CONDUIT AND OTHER WORK. ALL ITEMS NOT SPECIFICALLY NOTED, BUT NECESSARY TO A COMPLETE WORKING INSTALLATION SHALL BE INCLUDED AT NO EXTRA COST. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE BUILDING OWNER, OR THE OWNER, OR THEIR AUTHORIZED REPRESENTATIVES.
4. COORDINATE ELECTRICAL EQUIPMENT LOCATION AND INSTALLATION WITH EQUIPMENT BEING SERVED.
5. GANG ALL MULTIPLE SWITCHES UNDER ONE COMMON COVERPLATE, AND MOUNT IN A MULTI-GANGED OUTLET BOX OF ADEQUATE SIZE. PROVIDE BARRIERS WHERE REQUIRED.
6. CONTRACTOR SHALL COORDINATE AND ADJUST RECEPTACLES AND/OR CIRCUITS WITH ACTUAL EQUIPMENT PURCHASED WHEN APPROVED EQUIPMENT DIFFERS FROM ORIGINAL CONTRACT DRAWINGS.
7. COORDINATE EXACT LOCATIONS OF MODULAR PARTITION CONNECTIONS WITH FURNITURE BEING PROVIDED.
8. OUTLETS ABOVE COUNTERTOPS SHALL BE 2" ABOVE BACKSPLASH TO BOTTOM OF WALLPLATE UNLESS NOTED OTHERWISE. COORDINATE WITH CASEWORK INSTALLER.
9. A NYLON PULL CORD SHALL BE INSTALLED IN ALL CONDUITS IN WHICH CONDUCTORS ARE NOT INSTALLED. A 10 INCH LENGTH OF THE CORD SHALL EXTEND PAST EACH END OF THE BOX/CONDUIT.
10. WHERE NEW CIRCUITS ARE SHOWN TO BE CONNECTED TO EXISTING PANELS, PROVIDE NEW CIRCUIT BREAKERS IN PANELS. NEW BREAKERS BE SHALL BE COMPATIBLE WITH, SAME MAKE AS, AND SHALL MEET OR EXCEED INTERRUPTING RATING OF EXISTING EQUIPMENT. MEASURE PANEL LOADS BEFORE AND AFTER MODIFYING PANEL. CORRECT ANY OVERLOADS. BRING ANY OVERLOADED CONDITIONS THAT CANNOT BE RESOLVED TO THE ATTENTION OF THE ENGINEER.
11. WHERE NEW LOADS ARE SHOWN TO BE CONNECTED TO EXISTING CIRCUITS, MEASURE CIRCUIT'S LOAD BEFORE AND AFTER MODIFICATION. CORRECT ANY OVERLOADS. BRING ANY OVERLOADED CIRCUITS THAT CANNOT BE RESOLVED TO THE ATTENTION OF THE ENGINEER.

# GENERAL

## EXECUTION:

1. COORDINATION
  - A. BEFORE ANY CABLING, BOXES, CONDUIT, LIGHTING FIXTURES, ETC. ARE LOCATED, SPACE REQUIREMENTS OF ALL TRADES THAT SPACE CONDITIONS WILL ALLOW WORK, AND WILL ALSO PERMIT ACCESS FOR REPAIR.
  - B. COORDINATION OF SPACE REQUIREMENTS PERFORMED SO THAT NO PIPING, DUCTS, DEDICATED EQUIPMENT OR WORKING SPACE PER ARTICLE 110-26 OF THE NEC.
  - C. LIGHTING SHALL NOT BE INSTALLED IN OBSTRUCTIONS.
2. PROTECTION OF MATERIAL
  - A. ALL CONDUIT AND OTHER OPENINGS TO PREVENT ENTRY OF FOREIGN MATTER FROM APPARATUS SHALL BE KEPT COVERED WITH WATER, CHEMICAL, AND MECHANICAL PROTECTION.
  - B. THE ORIGINAL FINISH, INCLUDING SHIMMING, APPARATUS OR EQUIPMENT THAT HAS BEEN RESTORED.
3. FIRESTOPPING
  - A. CONFORM TO ASTM E814, UL 1479 AND UL 1997.
  - B. ALL CORE DRILLS IN SLAB OR CUTTING EDGE SHALL BE RESTORED TO ORIGINAL FIRE RESISTANCE.
  - C. FIRESTOP ALL PENETRATIONS THROUGH ARCHITECTURAL DRAWINGS AND SPACES PROVIDE FIRE-PROOFING MATERIAL.
  - D. APPLICATION AND AS SHOWN IN THE DRAWINGS AND AS SHOWN IN THE FIRE RESISTANCE DIRECTORY.
  - E. DO NOT REDUCE THE FIRE RATING OF WALLS, CEILING, FLOORS, OR SMALL DEVICE BOXES ARE LOCATED BACK-TO-BACK. THEY SHALL BE A MINIMUM OF 24" AFFECTION. PUTTY PADS OF ADEQUATE FIRE RATING SHALL BE USED.



# COMcheck Software Version 4.1.1.1.0 Interior Lighting Compliance Certificate

## Project Information

Energy Code: 2015 IECC  
Project Title: ESSEX HIGH SCHOOL  
Project Type: New Construction

Construction Site:  
TAPPAHANNOCK

Owner/Agent:

Designer/Contractor:

## Additional Efficiency Package(s)

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

## Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Dining: Cafeteria/Fast Food	1790	0.90	1611
Total Allowed Watts =			1611

## Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Dining: Cafeteria/Fast Food				
LED 1: A: 2 X 4 RECESSED FIXTURE: Other:	1	12	32	384
LED 2: D: DOWNLIGHT: Other:	1	6	12	72
LED 4: A(E): 2 X 4 RECESSED FIXTURE: Other:	1	17	38	646
Total Proposed Watts =				1102

**Interior Lighting PASSES: Design 32% better than code**

## Interior Lighting Compliance Statement

*Compliance Statement:* The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date





A(E)



A(E)



A(E)



A(E)



A(E)



A(E)



A(E)

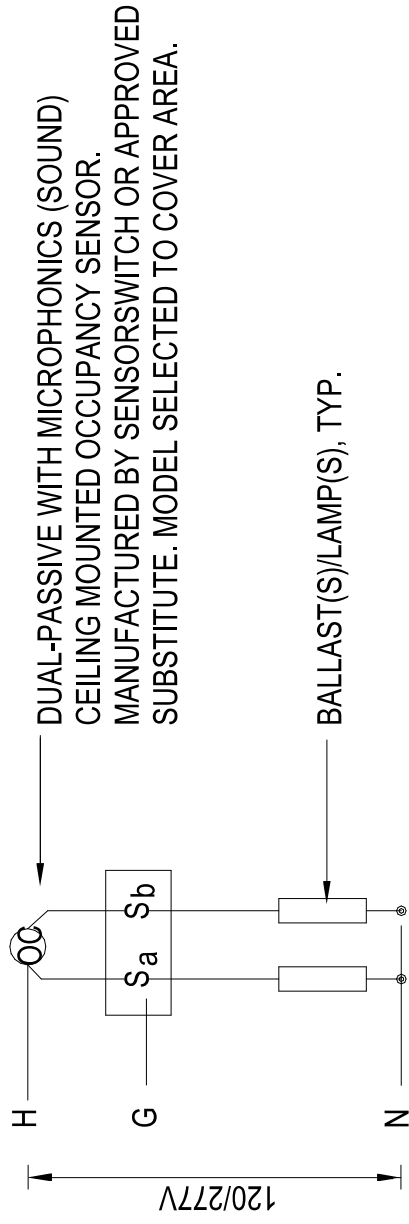


A(E)



A(E)





CEILING MOUNTED OCCUPANCY SENSOR (OC)

NOTES:

1. LINE VOLTAGE WIRING SHALL BE #12 MIN., INSTALLED IN CONDUIT.
2. CONTROL WIRING SHALL BE AS RECOMMENDED BY LIGHTING CONTROLLER MANUFACTURER, AND SHALL BE INSTALLED IN CONDUIT.
3. FOR AREAS WITH THREE-WAY SWITCHING OR DIMMING CONNECT CONTROLLER(S) TO LINE SIDE OF SWITCHES.
4. PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE INSTALLATION.
5. WIRE AS PER MANUFACTURER'S SPECIFICATIONS.

**TYPICAL OCC SENSOR SCHEMATIC WIRING DIAGRAM**

**26 00 00 - ELECTRICAL GENERAL PROVISIONS**

26 05 3

1. THE WORK TO BE PERFORMED UNDER THIS DIVISION CONSISTS OF FURNISHING, INSTALLING, AND PLACING INTO OPERATION ALL ELECTRICAL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION.
2. INSTALLATION OF ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE FOLLOWING REGULATIONS, CODES, ETC.:
  - A. VUSBC - VIRGINIA UNIFORM STATEWIDE BUILDING CODE - 2015, INCLUDING:
    - a. IBC/2015 - INTERNATIONAL BUILDING CODE, WITH VIRGINIA AMENDMENTS
    - b. NFPA 70/2014 - NATIONAL ELECTRICAL CODE
    - c. NFPA 72/2015 - NATIONAL FIRE ALARM CODE
  - B. ADAAG - AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
  - C. ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
  - D. ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
  - E. IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
  - F. IESNA - ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA
  - G. NECA - NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
  - H. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
  - I. NETA - INTERNATIONAL ELECTRICAL TESTING ASSOCIATION
  - J. NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
  - K. OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
  - L. UL - UNDERWRITERS LABORATORIES, INC.
  - M. 2012 IBC INTERNATIONAL ENERGY CONSERVATION CODE
  - N. LOCAL ELECTRICAL UTILITY COMPANY STANDARDS
  - O. NSI A17.1/ASME 17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS
  - P. ALL LOCAL JURISDICTION CODES AND ORDINANCES
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES, AND PAY ALL FEES AS REQUIRED FOR EXECUTION OF THE CONTRACT. ARRANGE FOR NECESSARY INSPECTIONS AND PRESENT CERTIFICATES OF APPROVAL TO THE OWNER.
4. DRAWINGS:
  - A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT. EXAMINE THE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS AND BECOME FAMILIAR WITH AND COORDINATE WITH ALL CONDITIONS AFFECTING ELECTRICAL WORK.
  - B. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES.
5. STANDARDS FOR MATERIALS AND WORKMANSHIP:
  - A. ALL MATERIAL SHALL BE NEW (UNLESS SPECIFICALLY INDICATED TO BE REUSED).
  - B.