

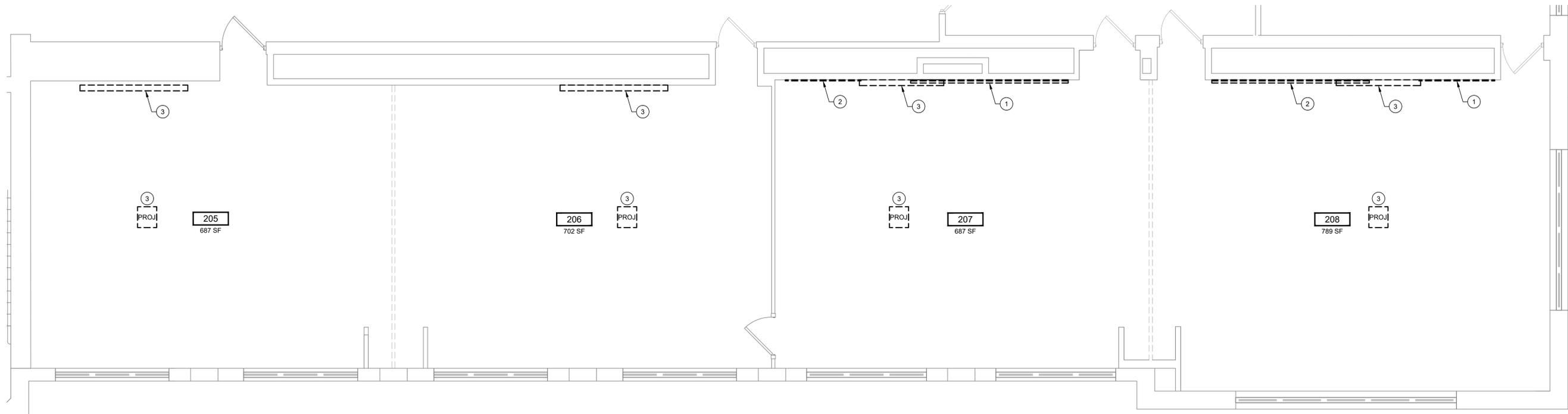
MSU PROJ. NO.  
CP23084

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INT. DES.	WHITBECK
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ARCHITECTURAL  
PLANS

A-1

1 OF 4



ARCHITECTURAL DEMOLITION PLAN

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



**ARCHITECTURAL GENERAL NOTES:**

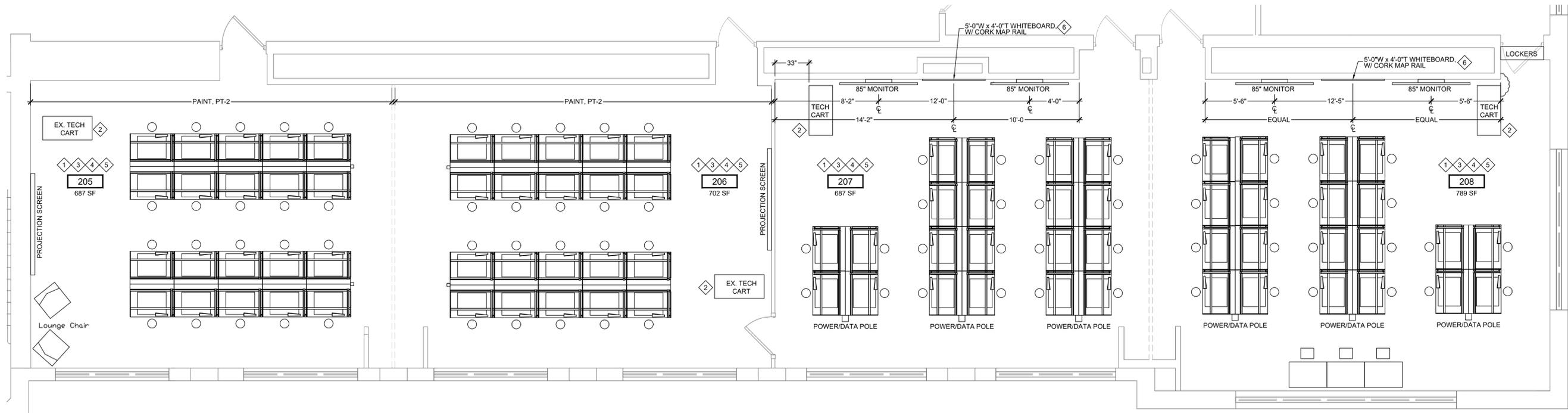
- PER MSU EHS, HAZARDOUS MATERIALS WERE FOUND IN ALL GYPSUM WALLS AND GYPSUM CEILINGS. ANY PENETRATIONS OR REWORK OF THESE ITEMS SHALL BE BY A MSU QUALIFIED ABATEMENT CONTRACTOR.
- EXISTING CHALKBOARDS AND WHITEBOARDS TO REMAIN IN PLACE, UNLESS NOTED TO BE REMOVED AND BE PAINTED AROUND.
- FURNITURE LAYOUT SHOWN FOR REPRESENTATION ONLY.
- MONITORS, BY OTHERS.

**ARCHITECTURAL DEMOLITION PLAN NOTES:**

- REMOVE CHALKBOARD AND ASSOCIATED MOUNTING HARDWARE. RETURN TO DEPT.
- REMOVE WHITEBOARD AND ASSOCIATED MOUNTING HARDWARE. RETURN TO DEPT.
- REMOVE CEILING PROJECTOR. MOUNT AND WALL MOUNTED PROJECTOR SCREEN. SAVE FOR RE-USE. PROJECTORS FROM ROOM 207 & 208, SEND TO MSU SURPLUS.

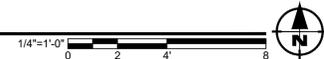
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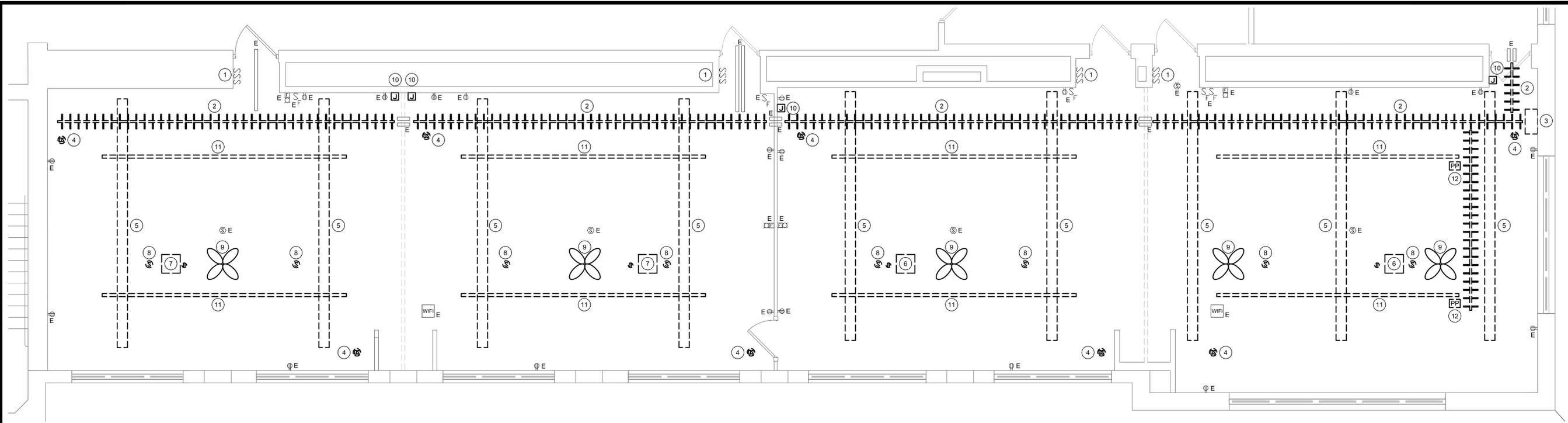
- PATCH, PREP AND PAINT ALL WALLS AND WALL MOUNTED SURFACE MOUNTED CONDUIT OR RACEWAY. ALL WALLS TO BE PT-1 UNLESS OTHERWISE NOTED ON PLAN. PAINT EX. FIRE ALARM JUNCTION BOXES, RED. SPOT PAINT CEILING AS REQUIRED FOR RELOCATION OR REMOVAL OF EQUIPMENT.  
PT-1: SHERWIN WILLIAMS, EIDER WHITE - SW7014.  
PT-2: SHERWIN WILLIAMS, RETREAT - SW6207.
- NEW TECH CART LOCATION. COORDINATE EXACT LOCATION WITH DEPT. IN FIELD.
- CLEAN GLAZING ON WINDOWS, INSIDE AND OUT.
- REMOVE WINDOW SHADES, CLEAN, AND REINSTALL. (MAURER'S).
- BY MSU CUSTODIAL SERVICES, CLEAN AND WAX FLOORS.
- PROVIDE NEW WHITEBOARD. SEE PLAN FOR DIMENSION & DETAILS.



ARCHITECTURAL PLAN

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





**ELECTRICAL DEMOLITION PLAN**

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



**ALTERNATE PRICE:**

PROVIDE ALTERNATE PRICE FOR ALL LIGHTING AND LIGHTING CONTROLS DEMOLITION.

**ELECTRICAL DEMOLITION GENERAL NOTES:**

1. ELECTRICIAN IS RESPONSIBLE FOR COMPLIANCE WITH MSU TECHNICAL STANDARDS AND ALL APPLICABLE CODES.
2. REMOVE ALL UNUSED SURFACE RACEWAY.
3. REMOVE ALL UNUSED SUPPORT EQUIPMENT ON THE CEILING.

**# ELECTRICAL DEMOLITION PLAN NOTES:**

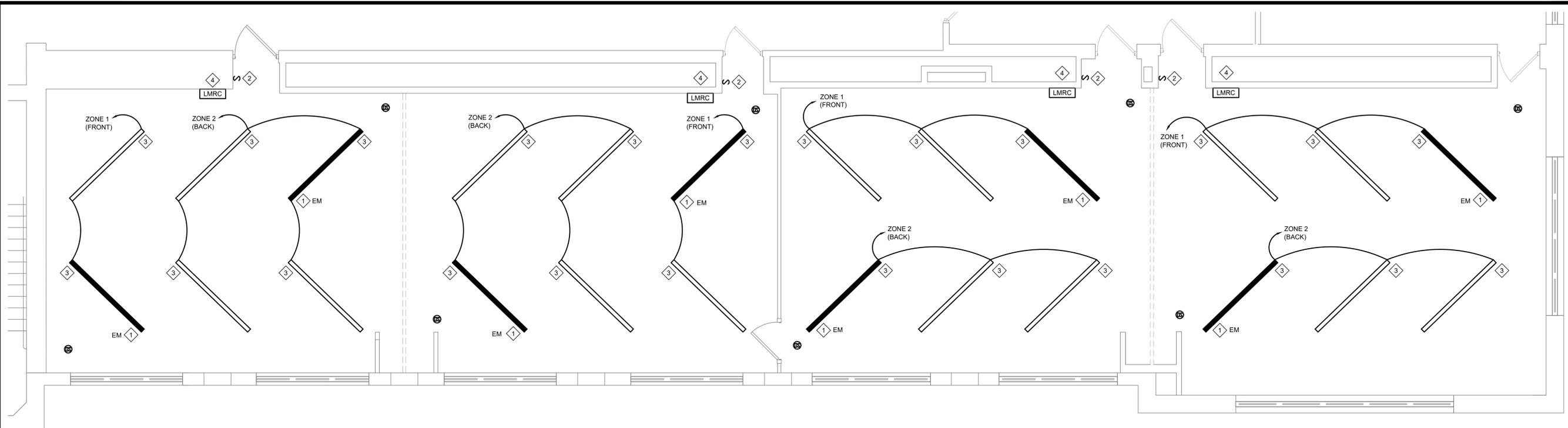
1. DISCONNECT AND REMOVE LIGHT SWITCHES AND ASSOCIATED WIRING. LEAVE BOX AND CONDUIT IN PLACE FOR NEW LOW VOLTAGE LIGHT SWITCHES.
2. DISCONNECT AND REMOVE ALL CABLE TRAY FOR RELOCATION. REMOVE ALL WIRING IN THE TRAY. COORDINATE WITH MSU AND DEPARTMENT IT SERVICES.
3. DISCONNECT AND REMOVE NETWORK SWITCH CABINET. REMOVE ALL ASSOCIATED CONDUIT, RACEWAY AND WIRE. COORDINATE WITH MSU IT SERVICES.
4. DISCONNECT AND REMOVE OCCUPANCY SENSORS, ASSOCIATED POWER PACKS AND ALL ASSOCIATED WIRING.
5. DISCONNECT AND REMOVE LIGHT FIXTURES. LEAVE CIRCUIT IN PLACE FOR CONNECTION TO NEW LIGHT FIXTURES.
6. DISCONNECT AND REMOVE PROJECTOR, RECEPTACLE AND ALL OTHER CONDUIT, WIRING AND ACCESSORIES. RE-USE 120V CIRCUIT FOR NEW TELEVISIONS. TURN PROJECTOR OVER TO DEPARTMENT.
7. DISCONNECT AND REMOVE PROJECTOR, ASSOCIATED RECEPTACLE AND ALL OTHER CONDUIT, WIRING AND ACCESSORIES. EQUIPMENT WILL BE RELOCATED. CIRCUIT WILL BE RE-USED.
8. DISCONNECT AND REMOVE SPEAKER FOR RELOCATION.
9. DISCONNECT AND REMOVE CEILING FAN FOR RELOCATION.
10. REMOVE TECH CART JUNCTION BOX, RACEWAY, AND WIRING. PROVIDE BLANK COVER PLATE FOR RECESSED BOXES. SAVE SURFACE MOUNTED BOX FOR RELOCATION. RE-ROUTE WIRING TO NEW TECH CART LOCATION IF POSSIBLE.
11. DISCONNECT AND REMOVE BUS, BUS PLUGS, CORD DROPS AND ALL ASSOCIATED CONDUIT AND WIRE. 120V CIRCUITS WILL BE RE-USED FOR POWER TO DRAFTING TABLES.
12. DISCONNECT AND REMOVE EXISTING POWER POLE AND ALL ASSOCIATED CONDUIT AND WIRE.

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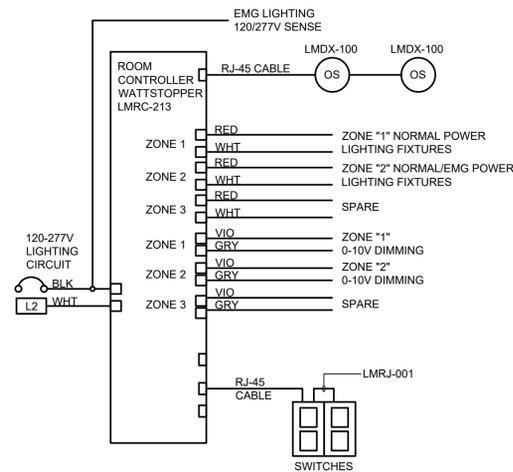
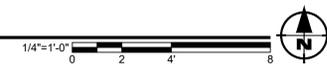
ELECTRICAL  
DEMOLITION PLAN

**E-1**

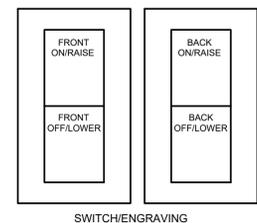


**LIGHTING PLAN**

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



OCCUPANCY SENSOR SETTINGS	
<b>SETTINGS</b>	
1. TIME DELAY = 20 MINS	
2. PIR = 90	
3. ULTRASONIC - CHANGE FROM 70 TO 90	
4. WALKTHRU = OFF	
5. TRIGGER - CHANGE TO EITHER PIR OR US	
6. RE-TRIGGER = EITHER PIR OR US	
<b>NOTES:</b>	
1. USE HANDHELD PROGRAMMER LMCT-100	
2. LMRC-213 24VDC, 250MA	
3. LMDX/DC-100 = 20MA, LMRL-100 = 7MA	



- NOTES:**
- DIAGRAM SHOWN IS A CLASSROOM WITH 2 ZONES, 1 DOOR, AND EMG BATTERY PACK LIGHTING.
  - CONTROL IS MANUAL ON/AUTO OFF.

- CABLING**
- PROVIDE FACTORY RJ-45 CABLES OR MAKEUP AS REQD IN FIELD. TEST/VERIFY ANY CUSTOM CABLES. PRE-MADE CABLE OPTIONS INCLUDE 3'-LMRJ-P03, 10'-LMRJ-P10, 25'-LMRJ-25, 50'-LMRJ-50.
  - PROVIDE 6" FACTORY CABLE LMRJ-001 BETWEEN THE LIGHT SWITCHES.

- SWITCHES/ENGRAVINGS**
- PROVIDE (2) BUTTON SWITCHES WITH ENGRAVINGS AS SHOWN. P/N: WATTSTOPPER LMSW-102

- OCCUP SENSORS**
- P/N: WATTSTOPPER LMDX-100 WALL/CORNER MOUNT (OS-C)

- HVAC AUXILIARY CONTACT WHEN REQUIRED**
- P/N: WATTSTOPPER LMRL-100.

- EMERGENCY LIGHTING:**
- PROVIDE EMERGENCY BATTERY PACK AS REQUIRED.

- LIGHTING SERVICES REP SETTINGS:**
- OCCUPANCY CONTROL:**  
SET FOR OCCUPANCY SENSORS SHALL BE CAPABLE OF CONTROLLING ONE OR MULTIPLE LIGHTING ZONES.  
SET OCCUP SENSORS TO THE LIGHTING CONTROL ZONES.
  - LIGHTING CONTROL MODE:**  
SET LIGHTING CONTROL TO MANUAL ON/AUTO OFF.
  - LIGHTING MAINTAINED ON CONTROL:**  
SET SO ANY MOVEMENT IN ANY ZONE WILL KEEP ALL LIGHTING ON IN ALL ZONES.

- COMMISSIONING NOTES:**
- USE THE FOLLOWING PROCEDURE FOR CHECKOUT. VERIFY WITH THE LATEST MFG LITERATURE.
    - USE THE WATTSTOPPER LMCT-100 HANDHELD PROGRAMMER TO INITIATE THE TEST MODE. THE OCCUPANCY SENSOR WILL BE IN TEST MODE WITH A 5 SECOND TIMEOUT FOR 10 MINUTES.
    - LEAVE THE ROOM AND CLOSE THE DOOR. WAIT 5 SECONDS AND VERIFY THE LIGHTING IS OFF.
    - ENTER THE ROOM, VERIFY THE 50% AUTO ON/AUTO OFF ZONE TURNS ON IF THIS IS USED.
    - TURN ON THE LIGHT SWITCHES AND VERIFY ALL THE LIGHTING TURNS ON.
    - WALK AROUND THE PERIMETER OF ROOM FOR APPROX. 60 SEC. TO VERIFY THE LIGHTING STAYS ON. ADJUST THE INFRARED SETTING HIGHER IF OCCUPANCY IS NOT DETECTED WHEN WALKING INTO THE ROOM. ADJUST THE ULTRASONIC HIGHER IF THE LIGHTING IS NOT STAYING ON WHEN WALKING AROUND THE ROOM.
- RED LED LIGHT = INFRARED DETECTION  
GREEN LED LIGHT = ULTRASONIC DETECTION

**LIGHTING CONTROL DIAGRAM**

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

**ALTERNATE PRICE:**

PROVIDE ALTERNATE PRICE FOR ALL LIGHTING AND LIGHTING CONTROLS.

**LIGHTING GENERAL NOTES:**

- ELECTRICIAN IS RESPONSIBLE FOR COMPLIANCE WITH MSU TECHNICAL STANDARDS AND ALL APPLICABLE CODES.
- CONNECT ALL NEW LIGHT FIXTURES TO EXISTING LIGHTING CIRCUIT.
- COORDINATE EXACT HEIGHT AND LOCATION OF OCCUPANCY SENSORS IN THE FIELD. PROVIDE ADDITIONAL MOUNTING EQUIPMENT AS REQUIRED.

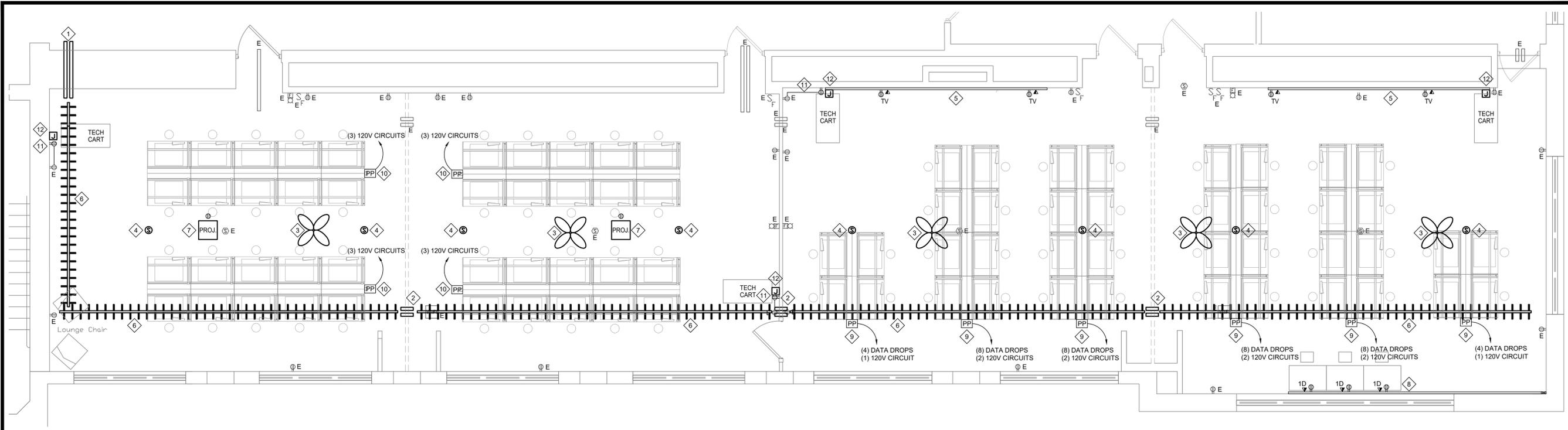
**LIGHTING PLAN NOTES:**

- CONNECT EMERGENCY DRIVERS TO LIGHTING CIRCUIT OF SURROUNDING AREA AHEAD OF ANY SWITCHING/CONTROLS (PROVIDE AN UN-SWITCHED HOT). EMERGENCY (EM) FIXTURES ARE INTENDED TO OPERATE IN THE SAME FASHION AS THE FIXTURES OF THE SURROUNDING AREA. THEY ARE NOT NIGHT LIGHTS.
- INSTALL NEW LIGHT SWITCHES IN EXISTING BOXES. PROVIDE BLANK COVER PLATES WHERE NEEDED.
- NEW LINEAR LED LIGHT FIXTURES. PROVIDE AIRCRAFT CABLE MOUNTING, WHITE FINISH, WHITE CORD, WHITE CANOPY AND PROVIDE "EM" OPTION FOR EMERGENCY FIXTURES. PROVIDE ADDITIONAL UNISTRUT AND ALL OTHER COMPONENTS REQUIRED TO MOUNT FIXTURES TO EXISTING CEILING. NEW CONDUIT SHOULD ALL BE EMT (NO FLEXIBLE CONDUIT). ENSURE FIXTURES/SUPPORTS ARE SECURED TO STRUCTURE - FIELD VERIFY REQUIREMENTS. THE ELECTRICIAN WILL BE REQUIRED TO COORDINATE FIXTURE INSTALLATION WITH EXISTING CABLE TRAY, UNISTRUT, SPEAKERS, PROJECTORS, FOLDING PARTITION WALLS, ETC. THE INTENT IS TO MOUNT THE FIXTURES BELOW EXISTING EQUIPMENT AT APPROXIMATELY 10'-0". ONCE THE FINAL LAYOUT AND HEIGHT HAS BEEN DETERMINED, CONTACT MSU PROJECT MANAGER FOR APPROVAL BEFORE PROCEEDING WITH INSTALLATION. FOCAL POINT PART NO. FSM2LS-BW-750-40X-1C-UNV-L11-C48-WH-8.
- INSTALL ROOM CONTROLLER ON WALL AT APPROXIMATELY 11'-0" A.F.F.

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**POWER PLAN**  
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**POWER GENERAL NOTES:**

- ELECTRICIAN IS RESPONSIBLE FOR COMPLIANCE WITH MSU TECHNICAL STANDARDS AND ALL APPLICABLE CODES.
- ALL LOW VOLTAGE WIRING SHALL BE ROUTED IN THE CABLE TRAY OR IN CONDUIT. NO EXPOSED WIRING TO BE ROUTED ACROSS THE CEILING.
- ALL LOW VOLTAGE WIRING TO BE IN CONDUIT. COORDINATE REQUIREMENTS WITH MSU IT AND AV.
- EACH CORD DROP BUS DUCT THAT WAS REMOVED FROM EACH ROOM HAD (6) 120V CIRCUITS. THOSE CIRCUITS ARE TO BE USED FOR POWER TO THE DESKS/WORKSTATIONS. (6) CIRCUITS PER ROOM ARE AVAILABLE FOR USE. ANY UNUSED CIRCUITS SHOULD BE REMOVED.
- PROVIDE FIRE CALK/FIRE STOPPING WHERE REQUIRED.
- PROVIDE SUPPORT FOR ALL NEW DATA CABLES THAT WILL BE ROUTED ABOVE THE CORRIDOR CEILING TO THE IT CLOSET. PROVIDE J-HOOKS AND CONDUIT SLEEVES AS REQUIRED. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH MSU IT SERVICES.

**# POWER PLAN NOTES:**

- (2) 3" CONDUIT SLEEVES. INSTALL JUST BELOW CEILING. PROVIDE FIRE CALK WHERE REQUIRED.
- (2) 2" CONDUIT SLEEVES. INSTALL JUST BELOW CEILING. PROVIDE FIRE CALK WHERE REQUIRED.
- RE-LOCATED CEILING FAN. EXTEND EXISTING CONDUIT AND WIRE TO NEW LOCATION. PROVIDE NEW SUPPORT AS REQUIRED. MAINTAIN A MINIMUM DISTANCE OF 3'-0" BETWEEN FANS AND SMOKE DETECTORS.
- RE-LOCATED SPEAKERS. EXTEND EXISTING CONDUIT AND WIRE TO NEW LOCATION. PROVIDE NEW SUPPORT AS REQUIRED. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH MSU AV.
- PROVIDE 2-COMPARTMENT SURFACE RACEWAY WITH GRAY FINISH FOR TELEVISIONS AND TECH CART JUNCTION BOX. ROUTE THE WIREWAY HORIZONTALLY ON THE WALL UP NEAR THE CEILING AND DROP DOWN VERTICALLY TO EACH TELEVISION AND TECH CART. ROUTE EMT FROM WIREWAY TO CABLE TRAY AS REQUIRED. EXTEND EXISTING PROJECTOR 120V CIRCUIT AND 3/4" EMT CONDUIT TO WIREWAY FOR POWER TO TELEVISIONS. COORDINATE EXACT REQUIREMENTS AND LOCATIONS WITH MSU AV AND IT SERVICES.
- RE-LOCATED CABLE TRAY. INSTALL AT SAME HEIGHT AS EXISTING. ENSURE CABLE TRAY IS SUPPORTED BY STRUCTURE.
- RE-LOCATED PROJECTOR. EXTEND EXISTING CONDUIT AND LOW VOLTAGE WIRE TO NEW LOCATION. PROVIDE NEW SUPPORT AS REQUIRED. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH MSU AV. RELOCATE EXISTING PROJECTOR RECEPTACLE TO THIS LOCATION.
- PROVIDE WIREMOLD 4000 2-COMPARTMENT SURFACE RACEWAY WITH GRAY FINISH FOR POWER AND DATA TO WORK STATIONS. INSTALL RACEWAY BELOW WINDOW/ABOVE HEATER. ROUTE RACEWAY HORIZONTALLY TO THE CORNER AND UP TO THE CEILING. TRANSITION TO CONDUIT AT THE CEILING. ROUTE (1) 3/4" CONDUIT TO CABLE TRAY AND ROUTE (3) DATA CABLE TO DESKS (1 PER DESK). PROVIDE (1) 3/4" CONDUIT FOR (1) 120V CIRCUIT TO NEW DESK RECEPTACLES (THIS IS ONE OF THE CIRCUITS LEFT FROM REMOVAL OF THE BUS DUCT).
- POWER POLE. LEGRAND SMALL VISTA ARCHITECTURAL COLUMN WITH ROUND END CHANNELS, ANODIZED ALUMINUM FINISH, (2) DUPLEX RECEPTACLES, (8) DATA JACKS. PROVIDE COLUMN EXTENSION. PROVIDE (1) DEDICATED 120V CIRCUIT FOR EVERY (4) DESKS. PROVIDE (1) DATA DROP PER DESK. PROVIDE DATA CABLE FROM EACH DATA JACK AT THE POWER POLE TO EACH WORK STATION. FURNITURE IS PROVIDED WITH U.L. LISTED SINGLE CIRCUIT MODULAR ELECTRIC CORD AND PLUG SYSTEM. SECURE POWER POLE AT THE FLOOR AND CEILING. RECEPTACLES AND DATA JACKS SHOULD FACE THE TABLES. LEGRAND POWER POLE PART NUMBER: VFS662345CMGYP-VE66234524-VSCM.
- POWER POLE. LEGRAND 25DPT SERIES POWER POLE WITH DARK GRAY FINISH, (2) DUPLEX RECEPTACLES AND NO DATA JACKS. PROVIDE (1) DEDICATED 120V CIRCUIT FOR EVERY (4) DESKS. FURNITURE IS PROVIDED WITH U.L. LISTED SINGLE CIRCUIT MODULAR ELECTRIC CORD AND PLUG SYSTEM. SECURE POWER POLE AT THE FLOOR AND CEILING. RECEPTACLES SHOULD FACE THE TABLES. LEGRAND POWER POLE PART NUMBER: 25DTP-412DG.
- PROVIDE A DUPLEX RECEPTACLE FOR TECH CART. PROVIDE AN EXTENSION RING AT NEAREST EXISTING RECEPTACLE AND ROUTE SURFACE RACEWAY TO A NEW SURFACE MOUNTED RECEPTACLE. IT IS ESSENTIAL TO HAVE THE RECEPTACLE BEHIND THE TECH CART TO KEEP CORDS AS SHORT AS POSSIBLE TO PREVENT TRIP HAZARDS.
- RELOCATED TECH CART JUNCTION BOXES IN ROOMS 205, 206 AND 208. PROVIDE A NEW BOX TO MATCH EXISTING IN ROOM 207. ALL WIRING TO BE RE-ROUTED TO JUNCTION BOXES BY MSU AV AND IT SERVICES. PROVIDE (2) DATA DROPS PER CART. COORDINATE BOX REQUIREMENTS WITH MSU AV AND IT SERVICES. UMBILICAL SHOULD BE LONG ENOUGH TO ALLOW FOR MINOR ADJUSTMENTS IN CART POSITION BUT AT THE SAME TIME SHORT ENOUGH TO NOT CREATE A TRIP HAZARD. COORDINATE EXACT LENGTH IN THE FIELD.

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