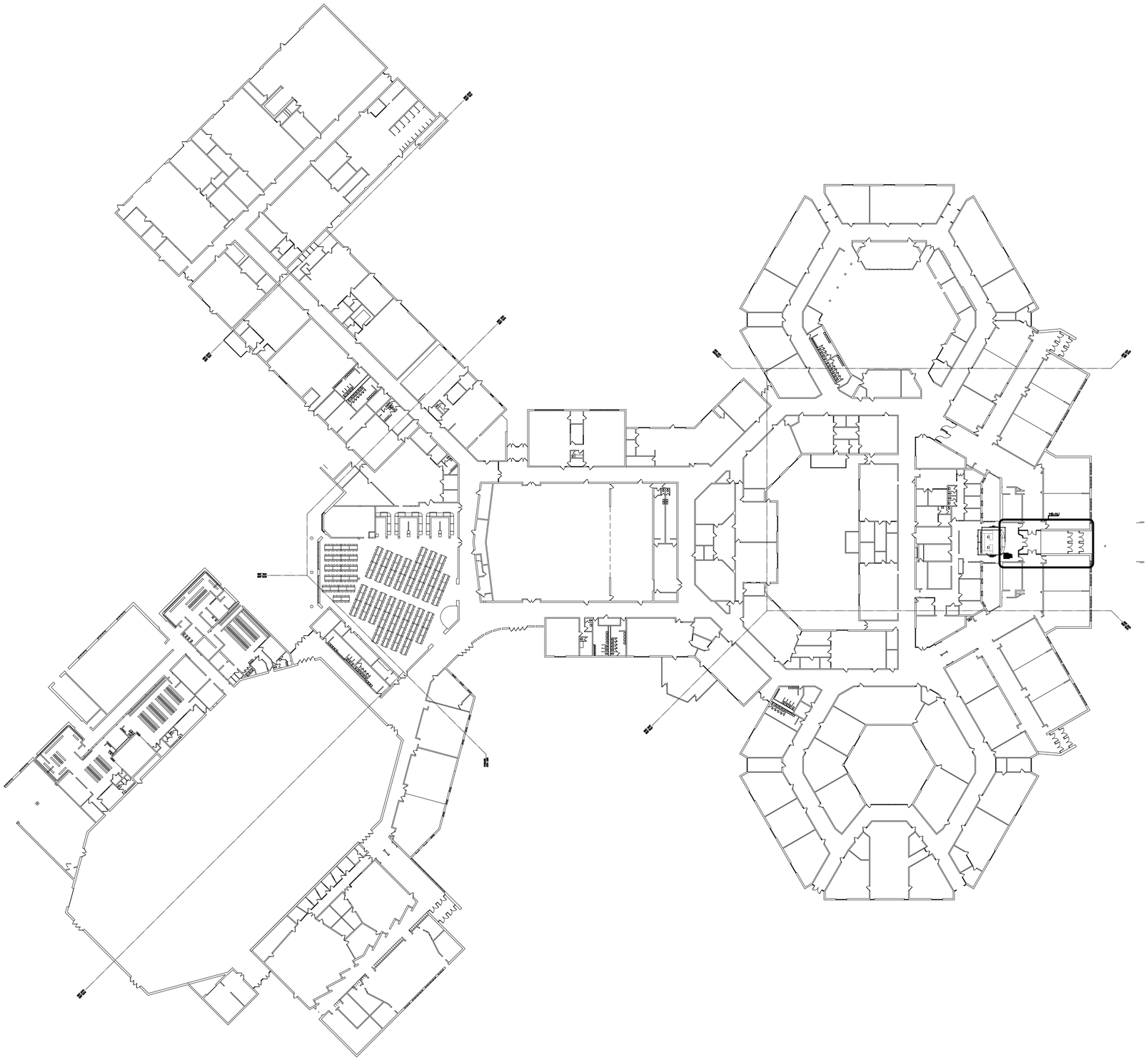

1 COMPOSITE PLAN
SCALE: 1/32" = 1'-0"

PROJECT DESCRIPTION

THE BUILDING WAS CONSTRUCTED AS MIDDLE SCHOOL IN 1964. THE SCOPE OF WORK INCLUDES REMODELING PORTIONS OF THE EXISTING BUILDING TO INCLUDE SECURE ENTRANCES, LIGHTING UPDATES FROM FLUORESCENT TO LED LIGHTFIXTURES, AND DETERIORATED FINISH REPLACEMENT. RENOVATION DOES NOT IMPACT ANY EMERGENCY EGRESS OR ACCESS TO EGRESS.

PROJECT DATA

FIRE SUPPRESSION:	EXISTING BUILDING IS NOT SPRINKLED
CODE REGULATION:	2012 MICHIGAN BUILDING CODE 1997 NFPA 101 LIFE SAFETY CODE
MECHANICAL CODE:	2012 MICHIGAN MECHANICAL CODE
PLUMBING CODE:	2012 MICHIGAN PLUMBING CODE
ELECTRICAL CODE:	2012 NATIONAL ELECTRICAL CODE
BARRIER FREE DESIGN:	MICHIGAN BUILDING CODE CHAPTER 11
OCCUPANCY:	(E) EDUCATIONAL
TYPE OF CONSTRUCTION:	EXISTING: MBC II-B
OCCUPANCY:	1,222

GENERAL NOTES

1. ALL CORRIDOR, JANITOR AND STORAGE ROOM WALLS AND PENETRATIONS ARE CONSIDERED TO HAVE A 1-HOUR RATING. ALL WORK IN THESE AREAS SHALL BE PERFORMED IN A MANNER TO MAINTAIN THIS RATING EVEN IF NOT SPECIFICALLY SHOWN ON THE DRAWINGS.
2. REFER TO MECHANICAL FOR REQUIRED DAMPER TYPES AND RATINGS.

AREA CALCULATIONS

EXISTING BUILDING SQUARE FOOTAGE:

EXISTING	69,220 SF
EXISTING (50%)	41,255 SF
SPACE ALTERATION REMODELING (LESS THAN 50%)	6645 SF

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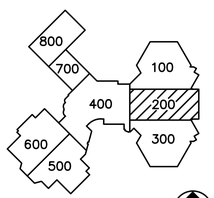
Barton Malow

Saline Area Schools
2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
CHECK SET	1/22/2016
50% CD REVIEW	2/22/2016
BIDS AND CONSTRUCTION	3/22/2016



JOB NO. 2900-02

NORTH

SHEET TITLE

COMPOSITE PLAN

SHEET NO.

XXAPLR

MS-A0.1

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COLOR LAY-OUT SYMBOL KEY

(A)	PAINT (P)
(A)	PAINT (P) / MATCH EXISTING ADJACENT COLOR
(B)	VINYL COMPOSITION TILE (VCT)
(E)	VINYL COMPOSITION TILE (VCT) / MATCH EXISTING ADJACENT TILE
WP	WORK POINT
BFST	BARRIER FREE STONE THRESHOLD
CPT-#	CARPET TILE
CPT-W	WALK-OFF CARPET TILE
EX.	EXISTING
RT	RESILIENT TRANSITION

GENERAL COLOR NOTES

1. SEE REFLECTED CEILING PLAN FOR, ACOUSTICAL PANEL TYPES.
2. IT IS THE RESPONSIBILITY OF ALL TRADES TO COORDINATE PREPARATION OF SURFACES TO RECEIVE FINISH PRODUCT. CONSULT WITH MANUFACTURER'S RECOMMENDED PRACTICES.
3. INSTALL RUBBER BASE AT ALL AREAS OF NEW FLOORING INSTALLATION.
4. SEAM SEAL NEW CARPET TO EXISITNG AT ALL LOCATIONS.
5. INSTALL 4" RUBBER COVE BASE AT CASEWORK TOE KICKS, INSIDE OF FLOORLESS CASEWORK, VERTICAL SUPPORTS AND OVER NEW FLOOR MATERIAL (U.N.O.).
6. ALL RUBBER REDUCERS COLORS TO BE COORDINATED WITH ADJACENT RUBBER BASE COLOR (U.N.O.)
6. INSTALL RESILIENT TRANSITIONS AT THE CENTER LINE OF DOORS IN THEIR CLOSED POSITION AT DOORWAYS.
7. PAINT ALL NEW HOLLOW METAL DOOR & WINDOW FRAMES, SEMI-GLOSS, PAINT COLOR, P-5 (NAVY).
8. PROVIDE TOUCH-UP PAINT AT AREAS AFFECTED BY MECHANICAL & ELECTRICAL UPGRADES. COLOR TO MATCH EXISTING, ADJACENT FINISHES.

GENERAL REFLECTED CEILING LEGEND

1. XX INDICATED CONSTRUCTION DOCUMENTS ROOM NUMBERS.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS LISTED AS MATCH EXISTING', 'EXISTING', OR PLUS OR MINUS (±).
3. REFER TO SHEET #12 FOR REFLECTED CEILING PLAN SYMBOLS LEGEND.
4. FILL/SEAL ALL PENETRATIONS, INCLUDING OPENINGS WHERE PIPING AND DUCTWORK WERE REMOVED, AND THROUGH WALLS AND VOIDS AT STRUCTURAL MEMBERS. USE FIRE RATED PATCHING MATERIALS IN RATED WALLS IDENTIFIED ON SHEETS A1.0. USE C.M.U. WHERE REQUIRED TO MATCH ADJACENT CONSTRUCTION.
5. ~~NEW~~ REFERS TO CEILING MATERIAL & MOUNTING HEIGHT ABOVE FINISH FLOOR. ALL A.F.C. CEILINGS SHALL BE AFC-1, U.N.O. CEILING ELEVATIONS ARE BASED ON EXIST. FINISH FLOOR ELEVATIONS. REFER TO FLOOR PLAN FOR DIFFERENT FLOOR ELEVATION LOCATIONS.
6. ALL GYP. BOARD CEILINGS/BULKHEADS SHALL BE PAINTED.

REFLECTED CEILING NOTES:

1. INSTALL NEW GYP BOARD BULKHEAD TO MATCH EXISTING BULKHEAD.

DEMOLITION KEYNOTES

1. FLOORS
   - A REMOVE AND DISPOSE OF CARPET FLOORING AND WALL BASE. PREP REMAINING FLOOR SUBSTRATE AND WALL TO RECEIVE NEW FLOOR FINISHES AND BASE.
   - B REMOVE AND DISPOSE OF TILE FLOORING AND WALL BASE. PREP REMAINING FLOOR SUBSTRATE AND WALL TO RECEIVE NEW FLOOR FINISHES AND BASE.
2. WALLS
   - A REMOVE AND DISPOSE OF EXISTING HOLLOW METAL WALL CONSTRUCTION AND ALL RELATED BRACING/SUPPORTS. PATCH AND REPAIR REMAINING FLOOR AND/OR WALL SURFACES TO MATCH EXISTING AND/OR TO RECEIVE NEW FINISH OR OTHER CONSTRUCTION. SUPPORT STRUCTURE ABOVE WALL AS REQUIRED. LEAVE SUPPORT IN PLACE UNTIL PERMANENT SUPPORT HAS BEEN INSTALLED..
3. CEILING
   - A ALTER EXISTING ACOUSTICAL CEILING AS REQUIRED BY GYP. BULKHEAD CONSTRUCTION.
4. DOOR/STOREFRONT
   - A REMOVE AND DISPOSE OF DOOR(S), INCLUDING FRAME, SIDELIGHTS TRANSOMS, AND ALL RELATED ANCHORS, SUPPORTS AND HARDWARE SAWCUT ALL FRAME ANCHORS. PRYING ANCHORS FROM SUBSTRATE IS IS UNACCEPTABLE.
7. CASEWORK
   - A REMOVE AND PROPERLY DISPOSE OF UPPER &/OR BASE CABINETS, SHELVING AND ALL RELATED ANCHORS AND SUPPORTS, UNLESS NOTED OTHERWISE. PREP REMAINING SURFACES TO RECEIVE NEW FINISHES AND/OR CONSTRUCTION. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

GENERAL DEMOLITION NOTES

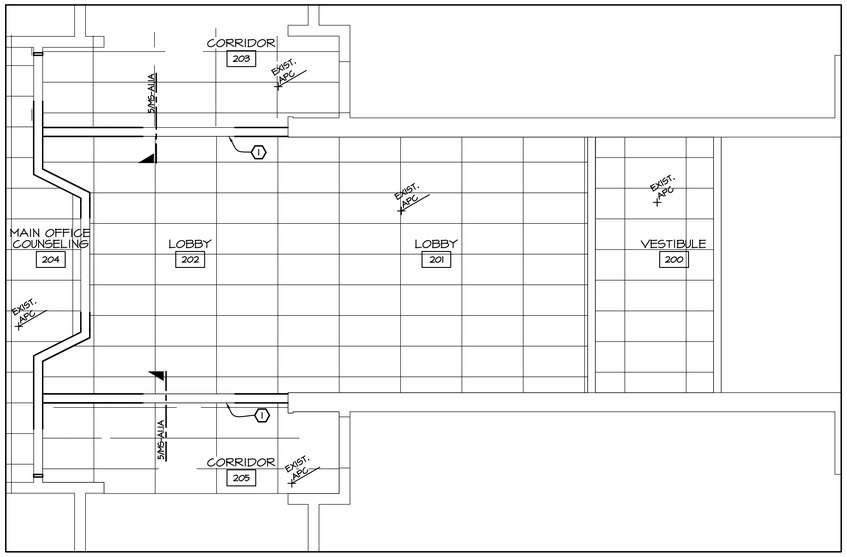
1. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FOR AREAS THAT WILL REQUIRE DEMOLITION NOT INDICATED ON THIS SHEET. ADDITIONAL DEMOLITION MAY ALSO BE SHOWN ON ELECTRICAL FLOOR PLANS.
2. THE DEMOLITION PLANS GENERALLY INDICATE AREAS OF EXTENSIVE REMOVALS AND DO NOT NECESSARILY INDICATE ALL THE DEMOLITION WORK. CONTRACTOR SHALL PERFORM ALL DEMOLITION NECESSARY FOR PROPER EXECUTION OF THE PROJECT, WHETHER OR NOT SAID DEMOLITION IS SPECIFICALLY INDICATED WITHIN THESE DOCUMENTS.
3. COORDINATE WITH ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION NOTES.
4. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL COORDINATE ALL ITEMS TO BE SALVAGED FOR REUSE ON THE PROJECT AND/OR RETURNED TO THE OWNER THRU THE CONSTRUCTION MANAGER. A FINAL LIST OF ITEMS SHALL BE COMPLETED BEFORE CONSTRUCTION BEGINS. ALL SUCH ITEMS SHALL BE REMOVED AND PROPERLY PACKED AND STORED TO MAINTAIN AS FOUND CONDITION.
5. ALL DEMOLITION WORK IS TO BE DONE WITH REASONABLE CARE AS TO MINIMIZE DAMAGE TO EXISTING REMAINING SURFACES. CONTRACTOR IS RESPONSIBLE TO PROPERLY DISPOSE OF ALL DEMOLISHED ITEMS NOT INDICATED TO BE RELOCATED OR TURNED OVER TO THE OWNER.
6. ALL CONTRACTORS, INCLUDING ELECTRICAL, ARE RESPONSIBLE FOR SELECT DEMOLITION WORK AS DESCRIBED IN OTHER AREAS OF THE DOCUMENTS.
7. COORDINATE DEMOLITION WORK FOR DOOR AND FRAMES W/ DOOR SCHEDULE
8. COORDINATE WITH COLOR PLANS. WHERE A NEW FINISH IS NOT INDICATED, MATCH EXISTING. PROVIDE SOUND AND PROPER SUBSTRATES TO RECEIVE NEW FINISHES.
9. SAW CUT EXISTING CONCRETE SLAB FOR NEW ELECTRICAL INSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS, PATCH FLOOR SLAB TO MATCH EXISTING CONC. SLAB. PREPARE FOR NEW FLOOR FINISH. COORDINATE WITH COLOR LAYOUT PLANS FOR NEW FLOOR FINISH.
11. THE CONTRACTOR PERFORMING DEMOLITION AND/OR REMOVAL IS RESPONSIBLE FOR PATCHING AND REPAIRING REMAINING ADJACENT SURFACES, AT AREAS OF REMOVAL AND/OR ALTERATION, TO MATCH EXISTING ADJACENT FINISHES. PATCH FLOORS AS REQUIRED TO CLOSE HOLES

GENERAL NOTES

1. ALL DOORS SHOWN WITH A DOOR NUMBER ARE NEW DOORS UNLESS NOTED OTHERWISE.
2. WHERE THE NOTE "PREP SURFACES" IS ENCOUNTERED, THE CONTRACTOR SHALL TAKE THIS TO MEAN ALL GLUES, RESIDUES, MASTICS, PRTRUSIONS, PITTING, AND MISSING SUBSTRATE MATERIAL SHALL BE REMOVED

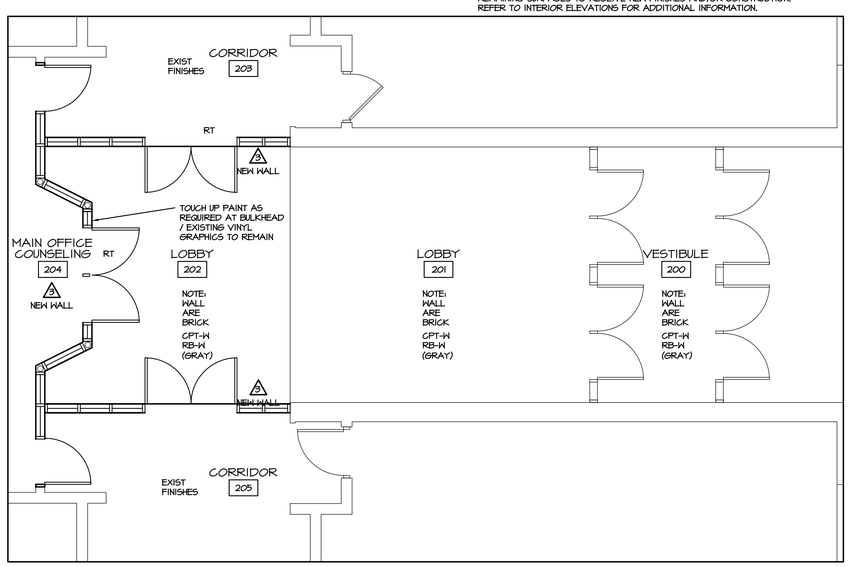
FLOOR PLAN NOTES

1. PROVIDE AND INSTALL NEW HOLLOW METAL, STOREFRONT, FRAME, AND OR BORROWED LIGHT SYSTEM. COLUMNS BETWEEN FRAME ARE TO BE PROVIDED BY THE H.M. FRAME CONTRACTOR.
2. PROVIDE AND INSTALL NEW DOORS.



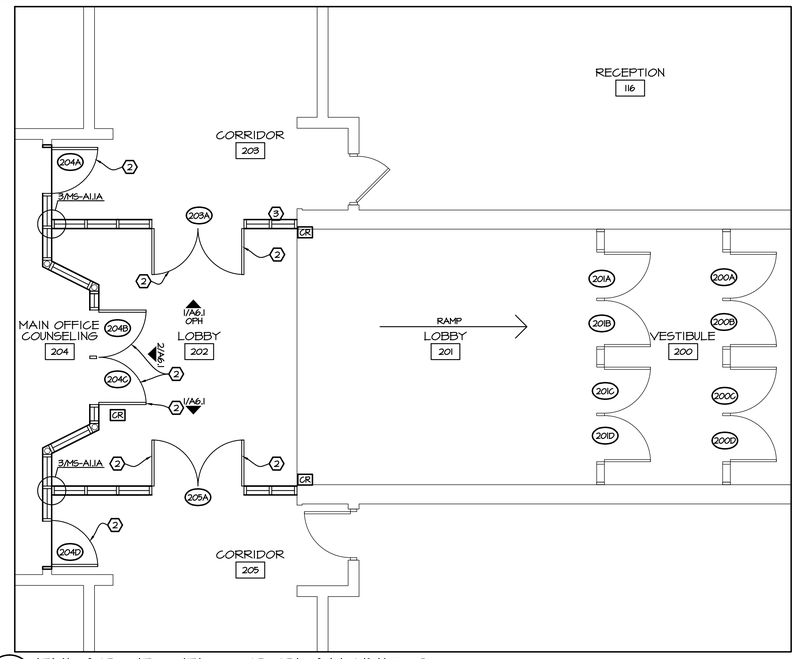
3 ENLARGED CELING PLAN UNIT 200

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



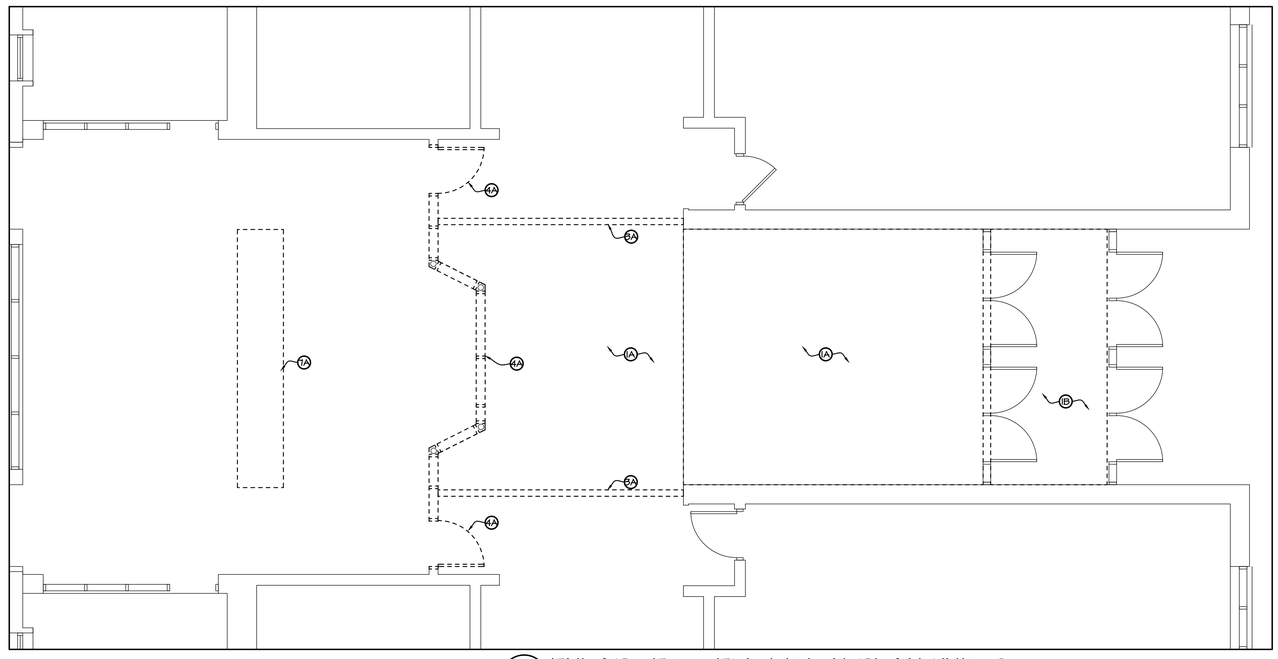
4 ENLARGED COLOR PLAN UNIT 200

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



2 ENLARGED FLOOR PLAN UNIT 200

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



1 ENLARGED DEMOLITION PLAN UNIT 200

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

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Barton Malow

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2016 Projects Phase 1
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THE PURSUIT OF EXCELLENCE

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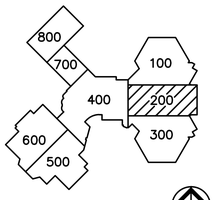

JOB NO. 2900-02 NORTH

SHEET TITLE

DEMO/FLOOR/CEILING PLANS

SHEET NO.

XXAPLR

MS-A1.1

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COLOR LAY-OUT SYMBOL KEY

A	PAINT (P)
A	PAINT (P) / MATCH EXISTING ADJACENT COLOR
B	VINYL COMPOSITION TILE (VCT)
E	VINYL COMPOSITION TILE (VCT) / MATCH EXISTING ADJACENT TILE
WP	WORK POINT
BFST	BARRIER FREE STONE THRESHOLD
CPT-#	CARPET TILE
CPT-W	WALK-OFF CARPET TILE
EX.	EXISTING
RT	RESILIENT TRANSITION

GENERAL COLOR NOTES

1. SEE REFLECTED CEILING PLAN FOR, ACOUSTICAL PANEL TYPES.
2. IT IS THE RESPONSIBILITY OF ALL TRADES TO COORDINATE PREPARATION OF SURFACES TO RECEIVE FINISH PRODUCT. CONSULT WITH MANUFACTURER'S RECOMMENDED PRACTICES.
3. INSTALL RUBBER BASE AT ALL AREAS OF NEW FLOORING INSTALLATION.
4. SEAM SEAL NEW CARPET TO EXISITNG AT ALL LOCATIONS.
5. INSTALL 4" RUBBER COVE BASE AT CASEWORK TOE KICKS, INSIDE OF FLOORLESS CASEWORK, VERTICAL SUPPORTS AND OVER NEW FLOOR MATERIAL (U.N.O.).
6. ALL RUBBER REDKERS COLORS TO BE COORDINATED WITH ADJACENT RUBBER BASE COLOR (U.N.O.)
6. INSTALL RESILIENT TRANSITIONS AT THE CENTER LINE OF DOORS IN THEIR CLOSED POSITION AT DOORWAYS.
7. PAINT ALL NEW HOLLOW METAL DOOR & WINDOW FRAMES, SEMI-GLOSS, PAINT COLOR, P-5 (NAVY).
8. PROVIDE TOUCH-UP PAINT AT AREAS AFFECTED BY MECHANICAL & ELECTRICAL UPGRADES. COLOR TO MATCH EXISTING, ADJACENT FINISHES.

GENERAL REFLECTED CEILING LEGEND

1. XX INDICATED CONSTRUCTION DOCUMENTS ROOM NUMBERS.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS LISTED AS 'MATCH EXISTING', 'EXISITNG', OR PLUS OR MINUS (±).
3. REFER TO SHEET #T2 FOR REFLECTED CEILING PLAN SYMBOLS LEGEND.
4. FILL/SEAL ALL PENETRATIONS, INCLUDING OPENINGS WHERE PIPING AND DUCTWORK WERE REMOVED, AND THROUGH WALLS AND VOIDS AT STRUCTURAL MEMBERS. USE FIRE RATED PATCHING MATERIALS IN RATED WALLS IDENTIFIED ON SHEETS A1.0. USE C.M.U. WHERE REQUIRED TO MATCH ADJACENT CONSTRUCTION.
5. ACP-01 REFERS TO CEILING MATERIAL & MOUNTING HEIGHT ABOVE FINISH FLOOR. ALL APC CEILINGS SHALL BE APC-1, U.N.O.
   CEILING ELEVATIONS ARE BASED ON EXIST. FINISH FLOOR ELEVATIONS. REFER TO FLOOR PLAN FOR DIFFERENT FLOOR ELEVATION LOCATIONS.
6. ALL GYP. BOARD CEILINGS/BULKHEADS SHALL BE PAINTED.

REFLECTED CEILING NOTES:

1. INSTALL NEW GYP BOARD BULKHEAD TO MATCH EXISTING BULKHEAD.

GENERAL DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER DRAWINGS AND SPECIFICATIONS FOR AREAS THAT WILL REQUIRE DEMOLITION NOT INDICATED ON THIS SHEET. ADDITIONAL DEMOLITION MAY ALSO BE SHOWN ON ELECTRICAL FLOOR PLANS.
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9. SAW CUT EXISTING CONCRETE SLAB FOR NEW ELECTRICAL INSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS, PATCH FLOOR SLAB TO MATCH EXISTING CONC. SLAB. PREPARE FOR NEW FLOOR FINISH. COORDINATE WITH COLOR LAYOUT PLANS FOR NEW FLOOR FINISH.
11. THE CONTRACTOR PERFORMING DEMOLITION AND/OR REMOVAL IS RESPONSIBLE FOR PATCHING AND REPAIRING REMAINING ADJACENT SURFACES, AT AREAS OF REMOVAL AND/OR ALTERATION, TO MATCH EXISTING ADJACENT FINISHES. PATCH FLOORS AS REQUIRED TO CLOSE HOLES

DEMOLITION KEYNOTES

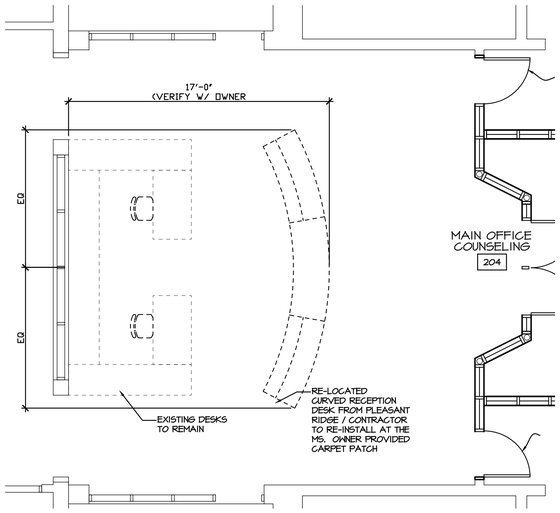
1. FLOORS
   - A REMOVE AND DISPOSE OF CARPET FLOORING AND WALL BASE. PREP REMAINING FLOOR SUBSTRATE AND WALL TO RECEIVE NEW FLOOR FINISHES AND BASE.
   - B REMOVE AND DISPOSE OF TILE FLOORING AND WALL BASE. PREP REMAINING FLOOR SUBSTRATE AND WALL TO RECEIVE NEW FLOOR FINISHES AND BASE.
2. WALLS
   - A REMOVE AND DISPOSE OF EXISTING HOLLOW METAL WALL CONSTRUCTION AND ALL RELATED BRACING/SUPPORTS. PATCH AND REPAIR REMAINING FLOOR AND/OR WALL SURFACES TO MATCH EXISTING AND/OR TO RECEIVE NEW FINISH OR OTHER CONSTRUCTION. SUPPORT STRUCTURE ABOVE WALL AS REQUIRED. LEAVE SUPPORT IN PLACE UNTIL PERMANENT SUPPORT HAS BEEN INSTALLED..
3. CEILING
   - A ALTER EXISTING ACOUSTICAL CEILING AS REQUIRED BY GYP. BULKHEAD CONSTRUCTION.
4. DOOR/STOREFRONT
   - A REMOVE AND DISPOSE OF DOOR(S), INCLUDING FRAME, SIDELIGHTS TRANSOMS, AND ALL RELATED ANCHORS, SUPPORTS AND HARDWARE SAWCUT ALL FRAME ANCHORS. PRYING ANCHORS FROM SUBSTRATE IS IS UNACCEPTABLE.
7. CASEWORK
   - A REMOVE AND PROPERLY DISPOSE OF UPPER &/OR BASE CABINETS, SHELVING AND ALL RELATED ANCHORS AND SUPPORTS, UNLESS NOTED OTHERWISE. PREP REMAINING SURFACES TO RECEIVE NEW FINISHES AND/OR CONSTRUCTION. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

GENERAL NOTES

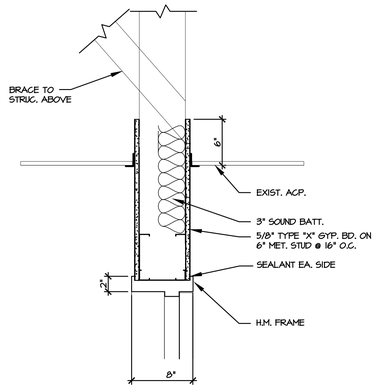
1. ALL DOORS SHOWN WITH A DOOR NUMBER ARE NEW DOORS UNLESS NOTED OTHERWISE.
2. WHERE THE NOTE "PREP SURFACES" IS ENCOUNTERED, THE CONTRACTOR SHALL TAKE THIS TO MEAN ALL GLUES, RESIDUES, MASTICS, PRTRUSIONS, PITTING, AND MISSING SUBSTRATE MATERIAL SHALL BE REMOVED

(X) FLOOR PLAN NOTES

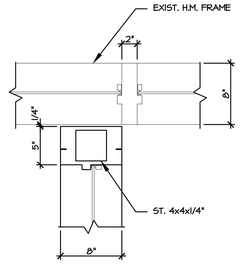
1. PROVIDE AND INSTALL NEW HOLLOW METAL. STOREFRONT, FRAME, AND OR BORROWED LIGHT SYSTEM. COLUMNS BETWEEN FRAME ARE TO BE PROVIDED BY THE H.M. FRAME CONTRACTOR.
2. PROVIDE AND INSTALL NEW DOORS.



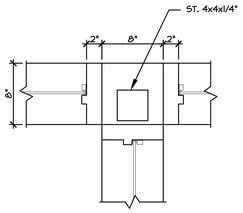
6 204 MAIN OFFICE - EQUIPMENT PLAN
SCALE: 1/8" = 1'-0"



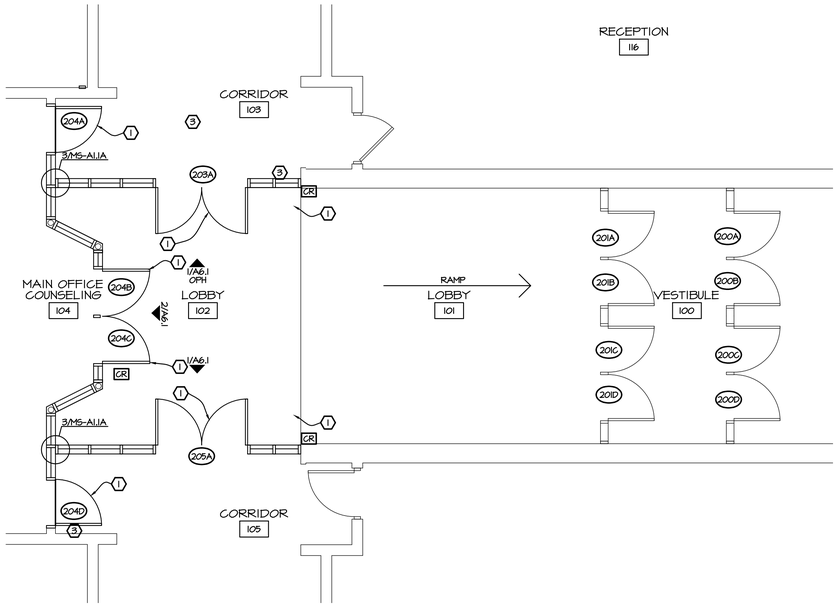
5 BULKHEAD
1 1/2"=1'-0"



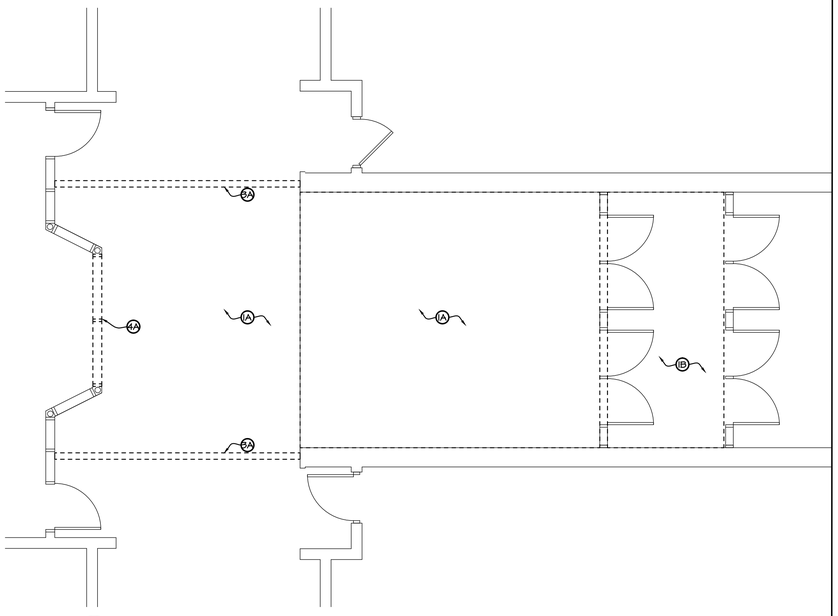
4 ALTERNATE #1
1 1/2"=1'-0"



3 BASE BID
1 1/2"=1'-0"



2 ALTERNATE ENLARGED FLOOR PLAN UNIT 200
SCALE: 1/8" = 1'-0"



1 ALTERNATE ENLARGED DEMOLITION PLAN UNIT 200
SCALE: 1/8" = 1'-0"

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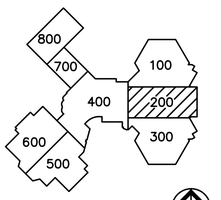
Barton Malow

Saline Area Schools
2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
CHECK SET	1/22/2016
50% CD REVIEW	2/22/2016
BIDS AND CONSTRUCTION	3/22/2016



JOB NO. 2900-02
NORTH

SHEET TITLE

DEMO/FLOOR/DETAILS

SHEET NO.
XXAPLR
MS-A1.1A

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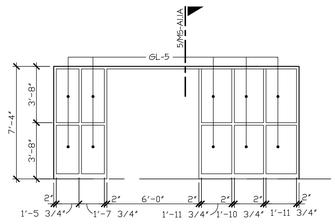
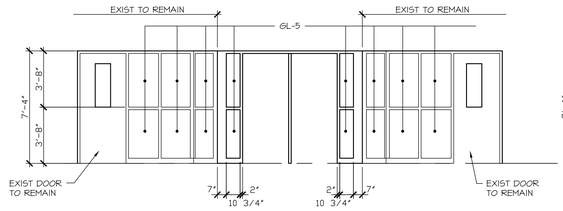


6 & 6A 20 MIN. RATED



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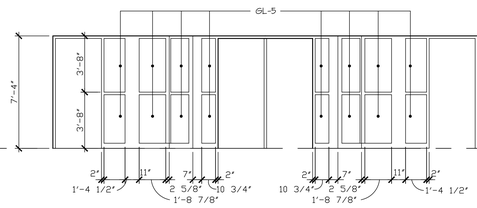

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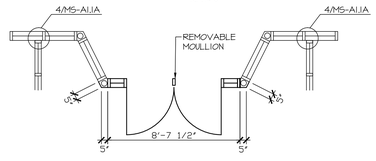

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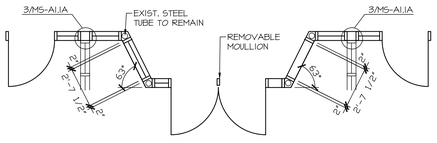

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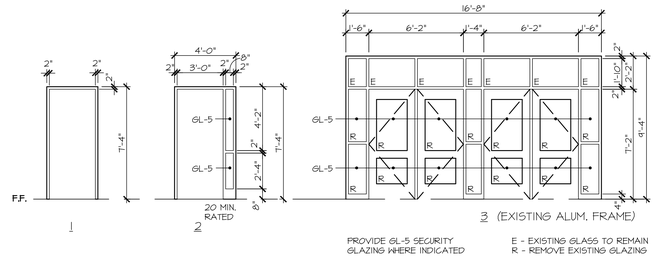


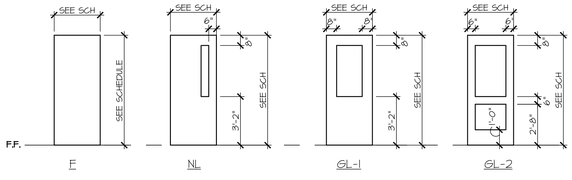
1 2 3 (EXISTING ALUM. FRAME)

PROVIDE GL-5 SECURITY GLAZING WHERE INDICATED

E - EXISTING GLASS TO REMAIN
R - REMOVE EXISTING GLAZING

FRAME TYPES:

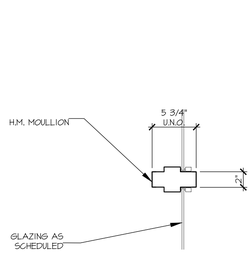
NOTE: CONTRACTOR SHALL VERIFY ALL ROUGH OPENINGS IN FIELD PRIOR TO MANUFACTURE OF FRAMES.



F NL GL-1 GL-2

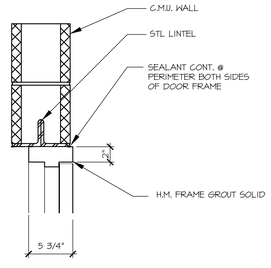
DOOR TYPES

NOTE: CONTRACTOR SHALL VERIFY ALL ROUGH OPENINGS IN FIELD PRIOR TO MANUFACTURE OF FRAMES.



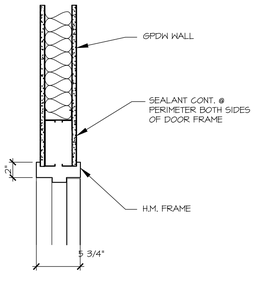
2 H.M. MOULLION DETAIL

1 1/2"=1'-0"



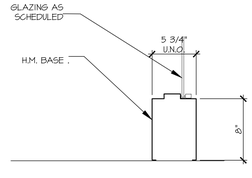
H1 H.M. FRAME HEAD

1 1/2"=1'-0"



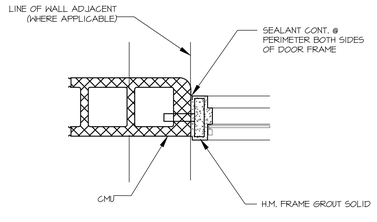
H2 H.M. FRAME HEAD

1 1/2"=1'-0"



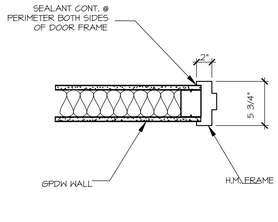
1 H.M. SILL DETAIL

1 1/2"=1'-0"



J1 H.M. FRAME JAMB

1 1/2"=1'-0"



J2 H.M. FRAME JAMB

1 1/2"=1'-0"

DOOR SCHEDULE

OPNG	DOOR SIZE	DOOR TYPE	DOOR MAT	DOOR GLASS	FRAME TYPE	FRAME MAT	FRAME GLASS	FRAME HEAD	FRAME JAMB	FRAME JAMB	FRAME SILL	LABEL	REMARKS
200A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6, 10, 9
200B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
200C	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
200D	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
201A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	
201B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	
201C	EXISTING	-	-	-	-	-	-	-	-	-	-	-	
201D	EXISTING	-	-	-	-	-	-	-	-	-	-	-	
203A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	1, 2, 3
203B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
204A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	7
204B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	1, 7
204C	EXISTING	-	-	-	-	-	-	-	-	-	-	-	7
204D	EXISTING	-	-	-	-	-	-	-	-	-	-	-	7
205A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	1, 2, 3
205B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
301	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
400A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
401A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
401B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
401C	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
401D	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
402	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
403	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
501	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
601A	EXISTING	-	-	-	-	-	-	-	-	-	-	-	1, 2
601B	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
601C	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
601D	EXISTING	-	-	-	-	-	-	-	-	-	-	-	2, 3
701	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6
801	EXISTING	-	-	-	-	-	-	-	-	-	-	-	6

DOOR SCHEDULE NOTES

1. REFER TO SPECIFICATIONS FOR HARDWARE SCHEDULE.
2. CONTRACTOR SHALL VERIFY IN FIELD ALL EXISTING OPENING SIZES PRIOR TO FABRICATION, TYP.
3. ALL DOORS IN CORRIDOR SHALL RESTRICT THE MOVEMENT OF SMOKE.

HARDWARE NOTES

1. PROVIDE NEW CARD READER
2. PROVIDE ELECTRIC STRIKE
3. ADD DOOR TO ACCESS CONTROL RELEASE
4. EXISTING MAGNETIC HOLD AND FIRE RELEASE
5. LOCK-DOWN AND ACCESS CONTROL
6. EXISTING CARD READER TO REMAIN
7. PANIC FUNCTION
8. INTERCOM
9. EXISTING ELECTRIC STRIKE TO REMAIN

GLAZING SCHEDULE

GL-1 1/4" VISION GLASS / TEMPERED SAFETY GLASS WHERE REQUIRED BY C
GL-2 20 MINUTES FIRE RATED GLAZING.
GL-3 45 MINUTES FIRE RATED GLAZING.
GL-4 90 MINUTES FIRE RATED GLAZING.
GL-5 LAMINATED SECURITY GLAZING.
GL-5A 20 MINUTES FIRE RATED LAMINATED SECURITY GLAZING.
GL-6 1" INSULATING GLASS UNITS.

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2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

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50% CD REVIEW	2/22/2016
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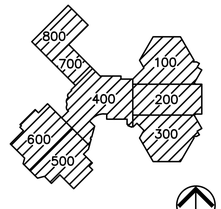

JOB NO. 2900-02

NORTH

SHEET TITLE

DOOR SCHEDULE/DETAILS

SHEET NO.

XXAFLR

MS-A6.1

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FIRE ALARM SYMBOL LIST

SYMBOL	DESCRIPTION
F	AUDIBLE DEVICE
F	COMBINATION AUDIBLE/VISUAL DEVICE
	CEILING MOUNTED AUDIBLE/VISUAL DEVICE
S	VISUAL DEVICE
	CEILING MOUNTED VISUAL DEVICE
FD	FIRE DEPARTMENT COMMUNICATION OUTLET
F	MANUAL PULL STATION
DH	DOOR HOLDER
S	SMOKE DETECTOR (ZONED AS INDICATED)
SP	PHOTOELECTRIC SMOKE DETECTOR (ZONED AS INDICATED)
H	HEAT DETECTOR (ZONED AS INDICATED)
TS	TAMPER SWITCH
FS	FLOW SWITCH
D	DUCT MOUNTED SMOKE DETECTOR
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL

ELECTRICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
AF	AMP FUSE
AFF	ABOVE FINISHED FLOOR
AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
G/GRD	GROUND
GFI	GROUND FAULT INTERRUPTER
HOA	HAND-OFF-AUTO
IG	ISOLATED GROUND
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON-FUSIBLE
NIC	NOT IN CONTRACT
P	POLE
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
RP	RECEPTACLE PANEL
TBB	TELEPHONE BACKBOARD
TYP.	TYPICAL
WG	WIRE GUARD
WP	WEATHERPROOF

POWER SYMBOL LIST

SYMBOL	DESCRIPTION
TC	TIME CLOCK
C	CONTACTOR
J	HARD WIRE CONNECTION BY ELECTRICAL CONTRACTOR
	SINGLE RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET MOUNTED 6" ABOVE FINISH COUNTER
C	CEILING MOUNTED DUPLEX RECEPTACLE OUTLET
	EMERGENCY DUPLEX RECEPTACLE OUTLET
	DEDICATED DUPLEX RECEPTACLE OUTLET
	QUAD RECEPTACLE OUTLET
	DEDICATED QUAD RECEPTACLE OUTLET
	FLOOR MOUNTED DUPLEX RECEPTACLE OUTLET
	NEMA RECEPTACLE OUTLET (CONFIGURATION AS NOTED)
	PLUG STRIP
J	JUNCTION BOX (C=CEILING MOUNTED)
	RECEPTACLE PANEL
	LIGHTING PANEL
	DISTRIBUTION/EQUIPMENT POWER PANEL
T	TRANSFORMER
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	CONDUIT DOWN
	CONDUIT UP
	GROUNDING ROD
	GROUND
	GROUNDING BAR
M	METER
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC MOTOR STARTER
	MOTOR RATED SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR

AUXILIARY SYST. SYMBOL LIST

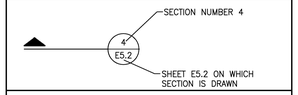
SYMBOL	DESCRIPTION
	TELEPHONE OUTLET
	FLOOR MOUNTED TELEPHONE OUTLET BOX (TYP.)
	TELEPHONE OUTLET MOUNTED 6" ABOVE FINISHED COUNTER
	DATA OUTLET
	COMBINATION OUTLET (VOICE, VIDEO, AND/OR DATA)
C	CEILING MOUNTED OUTLET BOX (TYP.)
	PUSH BUTTON
	BELL
CR	CARD READER
DH	MAGNETIC DOOR HOLD
TV	TELEVISION OUTLET
	WALL CLOCK
	DOUBLE SIDED WALL CLOCK
S	COMBINATION WALL CLOCK / SPEAKER
S	SPEAKER
	CAMERA

DRAWING INDEX

SHT NO	DESCRIPTION
MS-E0.0	ELECTRICAL GENERAL INFORMATION
MS-ED1.1	ELECTRICAL COMPOSITE DEMOLITION PLAN
MS-E1.1	ELECTRICAL COMPOSITE NEW WORK PLAN
MS-E5.0	ELECTRICAL DETAILS
MS-E6.0	ELECTRICAL SCHEDULES

DRAWING NOTATION

SYMBOL	DESCRIPTION
FA	LIGHTING FIXTURE TAG
1	CONSTRUCTION KEY NOTE NUMBER 1
1	DEMOLITION KEY NOTE NUMBER 1
EF-1	EQUIPMENT DESIGNATION, (I.E. EXHAUST FAN NUMBER 1)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	NEW OR MODIFIED UNDERGROUND WIRING
	EXISTING SYSTEM COMPONENT TO BE REMOVED



APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2014	MICHIGAN ELECTRICAL CODE RULES, PART 8
2014	NATIONAL ELECTRICAL CODE (NFPA 70)
2012	MICHIGAN BUILDING CODE
2012	MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
2009	MICHIGAN RESIDENTIAL CODE
2009	MICHIGAN UNIFORM ENERGY CODE
2010	NFPA 20
2010	NFPA 72
2012	NFPA 101
2010	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES

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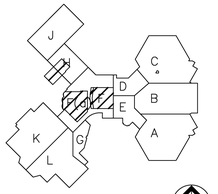

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SHEET TITLE
ELECTRICAL GENERAL INFORMATION

SHEET NO.
MS-E0.0

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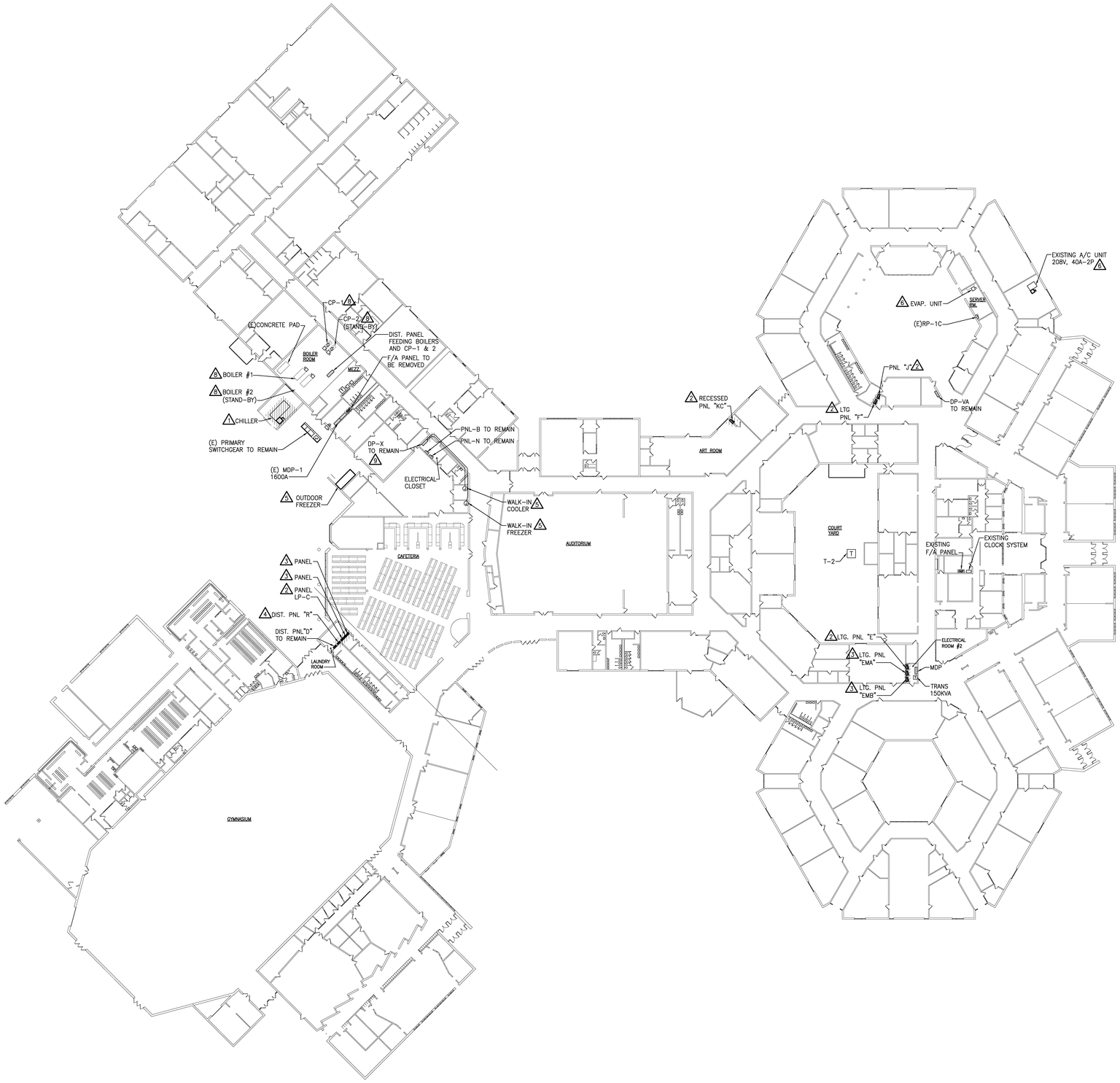

ELECTRICAL COMPOSITE DEMOLITION PLAN
SCALE: 1/32" = 1'-0"

GENERAL DEMOLITION NOTES

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES, BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES.
3. REMOVE LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON PLAN. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO THOSE DEVICES SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. COORDINATE ANY SHUTDOWN OF EXISTING SERVICES AND EQUIPMENT REMAINING IN USE WITH OWNERS' REPRESENTAITVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COST TO PERFORM THIS WORK DURING EVENINGS AND WEEKENDS. INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUTDOWNS OCCUR FOR PERIODS LONGER THAN THE ABOVE STATED HOURS.
6. COORDINATE THE SHUT DOWN OF ELECTRICAL EQUIPMENT WITH THE OWNERS' REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO SHUT DOWN.
7. REMOVE ALL CONDUIT AND WIRE BACK TO NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
8. WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM DEVICES TO REMAIN; EXTEND CONDUIT AND WIRE AS REQUIRED TO MAINTAIN ELECTRICAL SERVICE.
9. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, INCLUDING TCLP TESTING, PRIOR TO DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
10. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED AND WALL REMAINS INTACT. MARK ALL UNUSED CIRCUIT BREAKERS AS "SPARE".
11. CONTRACTOR TO TAG ALL CIRCUITS AT BOTH ENDS AFFECTED BY THIS ALTERATION.
12. CONTRACTOR SHALL PROVIDE UPDATED, TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
13. CONTRACTOR SHALL VERIFY ALL UNDERGROUND AND IN-SLAB UTILITIES LOCATIONS PRIOR TO SAW CUTTING OR PENETRATING ANY FLOOR SLABS.
14. REFER TO NEW WORK SHEETS FOR LIGHTING AND POWER CIRCUIT DESIGNATIONS.
15. EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED FOR ALL RELOCATED DEVICES.

DEMOLITION KEYED NOTES

1. DISCONNECT AND REMOVE POWER FROM MECHANICAL EQUIPMENT COMPLETE WITH STARTER, DISCONNECT SWITCH AND WIRING BACK TO SOURCE. RETAIN EXISTING CIRCUIT AND CONDUIT TO BE REUSED FOR NEW EQUIPMENT. REFER TO NEW WORK.
2. EXISTING ELECTRICAL PANEL TO BE REMOVED AND REPLACED WITH NEW PANEL IN PLACE. TRANSFER ALL EXISTING LOADS CURRENTLY IN SERVICE. REFER TO ONE-LINE DIAGRAM SHEET E5.0 FOR ADDITIONAL INFORMATION.
3. DISCONNECT AND REMOVE EXISTING PANEL COMPLETELY INCLUDING WIRING AND CONDUIT BACK TO SOURCE. REFER TO ONE-LINE DIAGRAM SHEET E5.0 AND PANEL SCHEDULES SHEET E6.0
4. REPLACE EXISTING OLD DISTRIBUTION PANEL WITH NEW. TRANSFER ALL EXISTING LOADS CURRENTLY IN SERVICE OVER TO NEW PANEL. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING LOADS FOR EACH SWITCH AND PROVIDE IDENTIFICATION LABELS PER SPECIFICATIONS. REFER TO ONE-LINE DIAGRAM SHEET E5.0.
5. EXISTING EQUIPMENT TO REMAIN. DISCONNECT AND REMOVE POWER FROM DISTRIBUTION PANEL DP-X LOCATED IN ELECTRICAL CLOSET. CAPTURE ALL WIRES IN NEW JUNCTION BOX MOUNTED ABOVE ACCESSIBLE CEILING AND EXTEND CONDUIT AND WIRING TO NEW EMERGENCY PANEL PP-EM2. PROVIDE NEW LABEL AT PANEL DP-X AS "SPARE". REFER TO NEW WORK.
6. EXISTING A/C UNIT AND EVAP UNIT ARE TO REMAIN. DISCONNECT AND REMOVE POWER FROM EXISTING PANEL. CAPTURE ALL WIRES IN NEW JUNCTION BOX MOUNTED ABOVE ACCESSIBLE CEILING AND EXTEND CONDUIT AND WIRING TO NEW EMERGENCY PANEL PP-EM3. REFER TO NEW WORK.
7. NOT USED.
8. EXISTING PUMP (CP-1 & CP-2) AND BOILERS (#1 & 2) ARE TO REMAIN. DISCONNECT AND REMOVE POWER FROM EXISTING DISTRIBUTION PANEL DP LOCATED IN THE ROOM. CAPTURE ALL WIRES IN NEW CEILING MOUNTED JUNCTION BOX AND EXTEND CONDUIT AND WIRING TO NEW EMERGENCY DISTRIBUTION PANEL DP-EM1. REFER TO NEW WORK.
9. EXISTING OUTDOOR FREEZER, WALK-IN FREEZER AND COOLER (30A-3P EACH) SHALL BE DISCONNECT FROM EXISTING DISTRIBUTION PANEL DP-X AND REFEED FROM NEW EMERGENCY PANEL. REFER TO NEW WORK AND ONE LINE DIAGRAM FOR MORE INFORMATION. RELABEL SWITCH AS SPARE.

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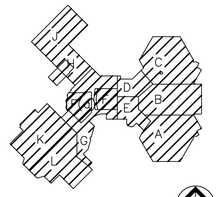
BIDS AND CONSTRUCTION	3/11/2016
ISSUED FOR BID	3/22/2016



JOB NO. 2900-02 NORTH

SHEET TITLE
ELECTRICAL COMPOSITE DEMOLITION PLAN

SHEET NO.
MS-ED1.1

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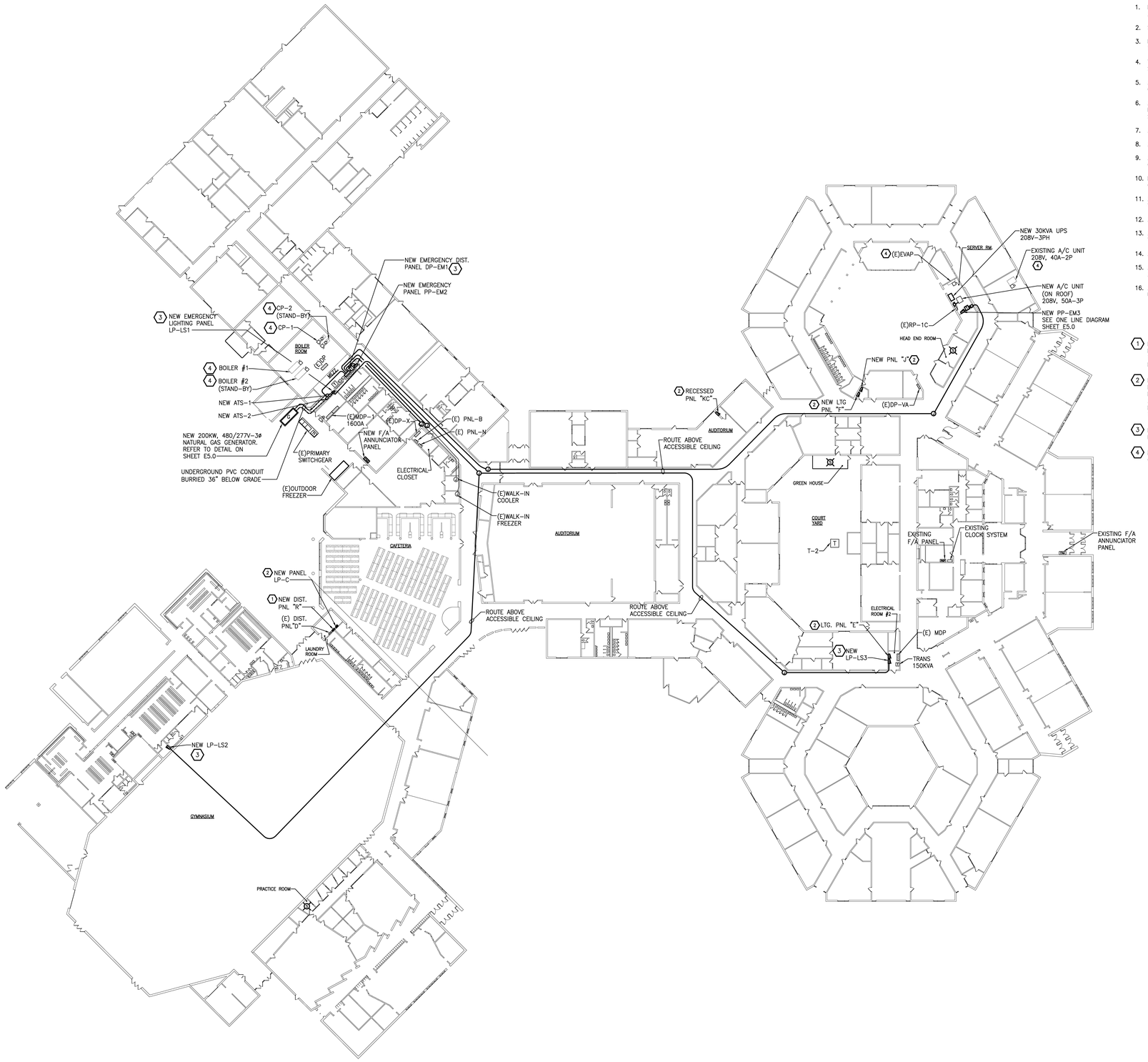

ELECTRICAL COMPOSITE NEW WORK PLAN
SCALE: 1/32" = 1'-0"

ELECTRICAL GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
2. SEE LUMINAIRE SCHEDULE ON ELECTRICAL GENERAL INFORMATION SHEET.
3. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
4. WHERE MORE THEN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.
5. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
6. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
7. ALL RECEPTACLES SHALL BE 20A. RATED.
8. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
9. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
10. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
11. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
12. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
13. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
14. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
15. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
16. ALL BRANCH CIRCUIT WIRING SHALL BE 2#12, 1#12GND IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

KEYED NOTES

1. PROVIDE NEW DISTRIBUTION IN PLACE OF EXISTING. EXISTING FEEDER TO BE RE-USED FOR NEW DISTRIBUTION PANEL, PROVIDE ALL REQUIRED FEEDER TERMINATIONS, AND RE-TERMINATE ALL EXISTING CIRCUITS TO REMAIN IN NEW PANEL. PROVIDE LAMICOID NAMEPLATES.
2. PROVIDE NEW PANEL IN PLACE OF EXISTING. REFER TO NEW PANEL SCHEDULE FOR MORE INFORMATION. LABEL PANEL AS INDICATED. EXISTING FEEDER TO BE RE-USED FOR NEW PANEL, PROVIDE ALL REQUIRED FEEDER TERMINATIONS, AND RE-TERMINATE ALL EXISTING CIRCUITS TO REMAIN IN NEW PANEL AND PROVIDE NEW UPDATED PANEL SCHEDULE TO INCLUDE EXISTING CIRCUITS AS TO WHAT THEY FEED.
3. PROVIDE NEW PANELBOARD TO SERVE EMERGENCY LOADS. REFER TO ONE LINE DIAGRAM SHEET E5.0 AND PANEL SCHEDULE ON SHEET E6.0.
4. MECHANICAL EQUIPMENT RECONNECT TO NEW EMERGENCY PANEL. REFER TO ONE LINE DIAGRAM SHEET E5.0 AND PANEL SCHEDULE ON SHEET E6.0

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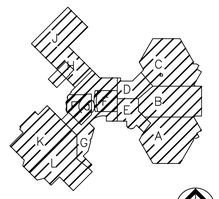
Barton Malow

Saline Area Schools 2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
CHECK SET	1/22/2016
50% CD REVIEW	2/22/2016
BIDS AND CONSTRUCTION	3/11/2016
ISSUED FOR BID	3/22/2016



JOB NO. 2900-02 NORTH

SHEET TITLE
ELECTRICAL COMPOSITE NEW WORK PLAN

SHEET NO.
MS-E1.1

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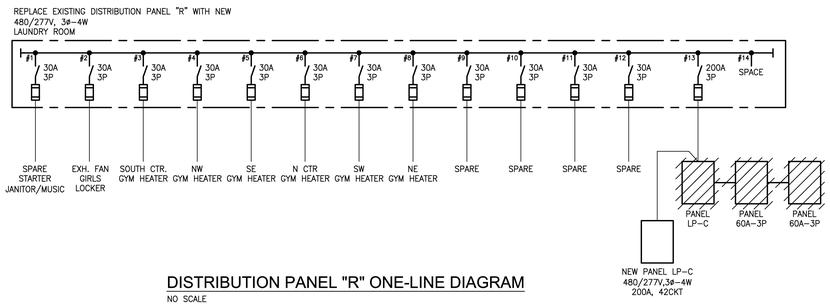
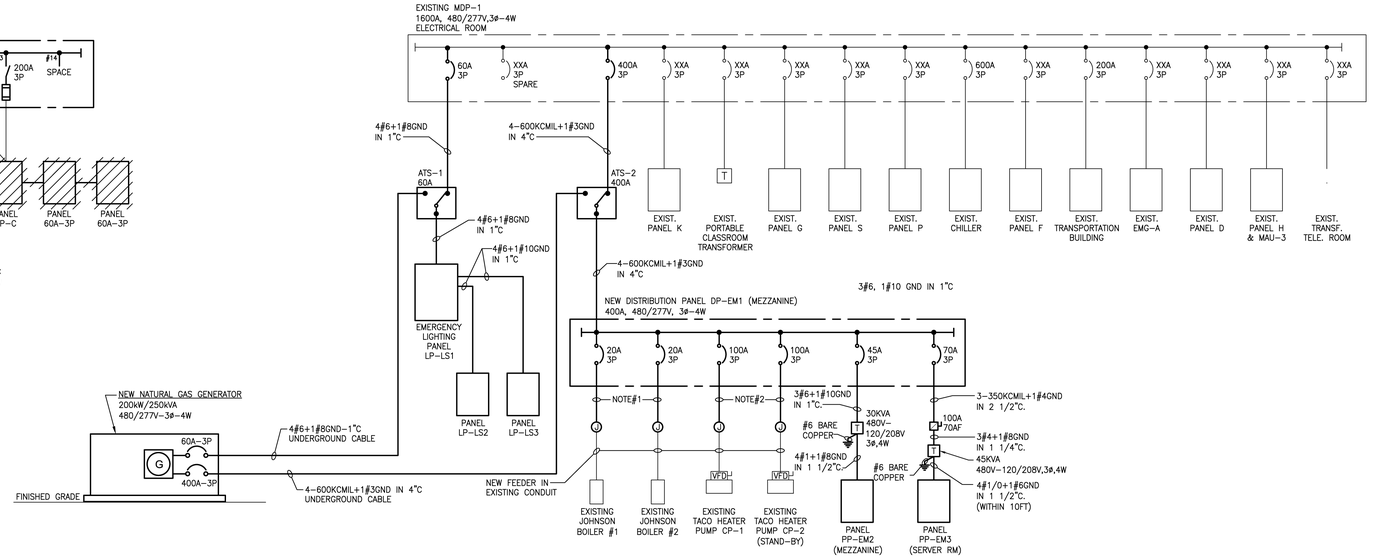


DISTRIBUTION PANEL "R" ONE-LINE DIAGRAM

NO SCALE

NOTES:

1. ELECTRICAL CONTRACTOR SHALL VERIFY EXISTING LOAD FOR EACH EACH SERVE AND PROVIDE IDENTIFICATION LABEL PER SPECIFICATIONS.

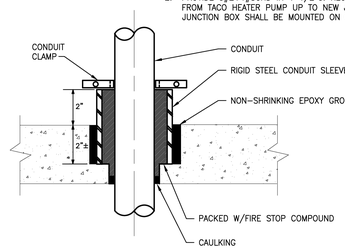


PARTIAL MDP-1 ONE-LINE DIAGRAM

NO SCALE

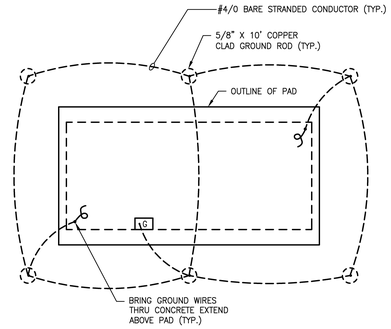
NOTE:

1. PROVIDE 3#12+1#12GND IN 3/4"C. REUSE EXISTING CONDUIT FROM BOILER UP TO NEW JUNCTION BOX. NEW JUNCTION BOX SHALL BE MOUNTED ON CEILING.
2. PROVIDE 3#2+1#8GND IN 1 1/2"C. REUSE EXISTING CONDUIT FROM TACO HEATER PUMP UP TO NEW JUNCTION BOX. NEW JUNCTION BOX SHALL BE MOUNTED ON CEILING.



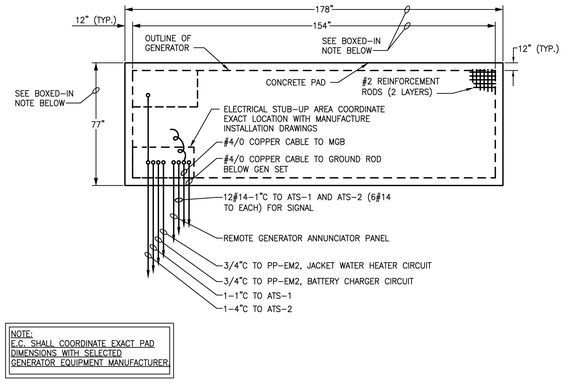
CONDUIT OPENING THROUGH EXISTING FLOOR SLAB

NO SCALE



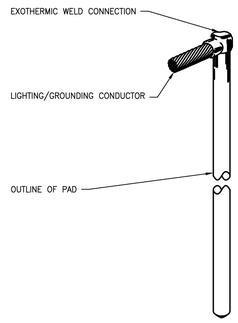
GENERATOR GROUND MAT PLAN

NO SCALE



TYPICAL GENERATOR CONDUIT AND WIRING PLAN

NO SCALE



GROUND ROD DETAIL

NO SCALE

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Barton Malow

Saline Area Schools
2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
CHECK SET	1/22/2016
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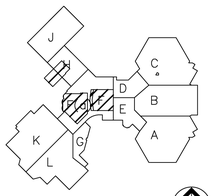

JOB NO. 2900-02 NORTH

SHEET TITLE
ELECTRICAL DETAILS

SHEET NO.
MS-E5.0

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Panel Designation: NEW LTG PNL "F"
Panel Location: ____________
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: XXX

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Existing Loads	800				20	1	X			2	20				800	Existing Loads
Existing Loads	800				20	3		X		4	20				800	Existing Loads
Existing Loads	800				20	5			X	6	20				800	Existing Loads
Existing Loads	800				20	7	X			8	20				800	Existing Loads
Existing Loads					20	9		X		10	20					Existing Loads
Existing Loads					20	11			X	12	20					Existing Loads
Existing Loads					20	13	X			14	20					Existing Loads
Existing Loads					20	15		X		16	20					Existing Loads
Existing Loads					20	17			X	18	20					Existing Loads
Existing Loads					20	19	X			20	20					Existing Loads
Existing Loads					20	21		X		22	20					Existing Loads
Existing Loads					20	23			X	24	20					Existing Loads
Existing Loads					20	25	X			26	20					Existing Loads
Existing Loads					20	27		X		28	20					Existing Loads
Existing Loads					20	29			X	30	20					Existing Loads
Existing Loads					20	31	X			32	20					Existing Loads
Spare					20	33		X		34	20					Spare
Spare					20	35			X	36	20					Spare
Spare					20	37	X			38	20					Spare
Spare					20	39		X		40	20					Spare
SPACE					--	41			X	42	--					SPACE
SPACE					--	43	X			44	--					SPACE
SPACE					--	45		X		46	--					SPACE
SPACE					--	47			X	48	--					SPACE
SPACE					--	49	X			50	--					SPACE
SPACE					--	51		X		52	--					SPACE
SPACE					--	53			X	54	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	3200	1600	1600	6400	1.00	3200	1600	1600	6400
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	3.20	1.60	1.60	6.40	125% of Light/Cont and Recept	3.20	1.60	1.60	6.40
Total Ampacity (Amps)	11.5	5.8	5.8	7.7	(<10kVA) load plus other load	11.5	5.8	5.8	7.7
Minimum Feeder Sizing (Amps)	14.4	7.2	7.2	9.6	<---- per NEC Article 215.2 ---->	14.4	7.2	7.2	9.6

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

NOTE: TRANSFER ALL EXISTING LOADS FROM EXISTING PANEL THAT REMAIN IN SERVE OVER TO THIS NEW PANELBOARD.

Panel Designation: Repl LTG PNL "J"
Panel Location: Janitor Closet
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: 10kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Existing Loads	800				20	1	X			2	20				800	Existing Loads
Existing Loads	800				20	3		X		4	20				800	Existing Loads
Existing Loads	800				20	5			X	6	20				800	Existing Loads
Existing Loads	800				20	7	X			8	20				800	Existing Loads
Existing Loads	800				20	9		X		10	20				800	Existing Loads
Existing Loads	800				20	11			X	12	20				800	Existing Loads
Existing Loads	800				20	13	X			14	20				800	Existing Loads
Existing Loads	800				20	15		X		16	20				800	Existing Loads
Existing Loads	800				20	17			X	18	20				800	Existing Loads
Existing Loads	800				20	19	X			20	20				800	Existing Loads
Existing Loads				1000	20	21		X		22	20	1000				Existing Loads
Existing Loads				1000	20	23			X	24	20	1000				Existing Loads
Existing Loads				1000	20	25	X			26	20	1000				Existing Loads
Existing Loads				2500	40	27		X		28		3000				
Spare					20	29			X	30	50	3000				Existing Loads
Spare					20	31	X			32		3000				
Spare					20	33		X		34	20					Spare
Spare					20	35			X	36	20					Spare
Spare					20	37	X			38	20					Spare
Spare					20	39		X		40	20					Spare
SPACE					--	41			X	42	--					SPACE
SPACE					--	43	X			44	--					SPACE
SPACE					--	45		X		46	--					SPACE
SPACE					--	47			X	48	--					SPACE
SPACE					--	49	X			50	--					SPACE
SPACE					--	51		X		52	--					SPACE
SPACE					--	53			X	54	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	6400	4800	4800	16000	1.00	6400	4800	4800	16000
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	5000	7500	5000	17500	1.00	5000	7500	5000	17500
Total Load (kVA)	11.40	12.30	9.80	33.50	125% of Light/Cont and Recept	11.40	12.30	9.80	33.50
Total Ampacity (Amps)	94.9	102.4	81.6	93.0	(<10kVA) load plus other load	94.9	102.4	81.6	93.0
Minimum Feeder Sizing (Amps)	108.3	112.4	91.6	104.1	<---- per NEC Article 215.2 ---->	108.3	112.4	91.6	104.1

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

NOTE: TRANSFER ALL EXISTING LOADS FROM EXISTING PANEL THAT REMAIN IN SERVE OVER TO THIS NEW PANELBOARD.

Panel Designation: Repl. LTG PNL "E"
Panel Location: Electrical room #2
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 14kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Existing Loads	800				20	1	X			2	20				800	Existing Loads
Existing Loads	800				20	3		X		4	20				800	Existing Loads
Existing Loads	800				20	5			X	6	20				800	Existing Loads
Existing Loads	800				20	7	X			8	20				800	Existing Loads
Existing Loads	800				20	9		X		10	20				800	Existing Loads
Existing Loads	800				20	11			X	12	20				800	Existing Loads
Spare					20	13	X			14	20					Spare
Spare					20	15		X		16	20					Spare
Spare					20	17			X	18	20					Spare
Spare					20	19	X			20	20					Spare
Spare					20	21		X		22	--					SPACE
SPACE					--	23			X	24	--					SPACE
SPACE					--	25	X			26	--					SPACE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE
SPACE					--	31	X			32	--					SPACE
SPACE					--	33		X		34	--					SPACE
SPACE					--	35			X	36	--					SPACE
SPACE					--	37	X			38	--					SPACE
SPACE					--	39		X		40	--					SPACE
SPACE					--	41			X	42	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	3200	3200	3200	9600	1.00	3200	3200	3200	9600
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	3.20	3.20	3.20	9.60	125% of Light/Cont and Recept	3.20	3.20	3.20	9.60
Total Ampacity (Amps)	11.5	11.5	11.5	11.5	(<10kVA) load plus other load	11.5	11.5	11.5	11.5
Minimum Feeder Sizing (Amps)	14.4	14.4	14.4	14.4	<---- per NEC Article 215.2 ---->	14.4	14.4	14.4	14.4

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

NOTE: TRANSFER ALL EXISTING LOADS FROM EXISTING PANEL THAT REMAIN IN SERVE OVER TO THIS NEW PANELBOARD.

Panel Designation: Repl. LP-C
Panel Location: LAUNDRY ROOM
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 14kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Future Gym Lighting					20	1	X			2	20					Future Gym Lighting
Future Gym Lighting					20	3		X		4	20					Future Gym Lighting
Future Gym Lighting					20	5			X	6	20					Future Gym Lighting
Future Gym Lighting					20	7	X			8	20					Future Gym Lighting
Future Gym Lighting					20	9		X		10	20					Future Gym Lighting
Future Gym Lighting					20	11			X	12	20					Future Gym Lighting
Future Gym Lighting					20	13	X			14	20					Future Gym Lighting
Future Gym Lighting					20	15		X		16	20					Future Gym Lighting
Future Gym Lighting					20	17			X	18	20					Future Gym Lighting
Future Gym Lighting					20	19	X			20	20					Future Gym Lighting
Future Gym Lighting					20	21		X		22	20					Future Gym Lighting
Future Gym Lighting					20	23			X	24	20					Future Gym Lighting
Future Gym Lighting					20	25	X			26	20					Future Gym Lighting
Future Gym Lighting					20	27		X		28	20					Future Gym Lighting
Future Gym Lighting					20	29			X	30	20					Future Gym Lighting
Spare					20	31	X			32	20					Spare
Spare					20	33		X		34	20					Spare
Spare					20	35			X	36	20					Spare
SPACE					--	37	X			38	--					SPACE
SPACE					--	39		X		40	--					SPACE
SPACE					--	41			X	42	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	0.00	0.00	0.00	0.00	125% of Light/Cont and Recept	0.00	0.00	0.00	0.00
Total Ampacity (Amps)	0.0	0.0	0.0	0.0	(<10kVA) load plus other load	0.0	0.0	0.0	0.0
Minimum Feeder Sizing (Amps)	0.0	0.0	0.0	0.0	<---- per NEC Article 215.2 ---->	0.0	0.0	0.0	0.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: Replace PNL "KC"
Panel Location: ART ROOM CLOSET
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
PROVIDE 4 POLES CONTACTORS
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: RECESSED
Neutral: 100%
P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: 10kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Existing Loads		540			20	1	X			2	20			540		Existing Loads
Existing Loads		540			20	3		X		4	20			540		Existing Loads
Existing Loads		540			20	5			X	6	20			540		Existing Loads
Existing Loads		540			20	7	X			8	20			540		Existing Loads
Existing Loads		540			20	9		X		10	20			540		Existing Loads
Existing Loads		540			20	11			X	12	20			540		Existing Loads
Existing Loads		540			20	13	X			14	20			540		Existing Loads
Existing Loads		540			20	15		X		16	20			540		Existing Loads
Existing Loads		540			20	17			X	18	70	3500				Existing Loads
Existing Kiln				2500	50	19	X			20		3500				
				2500		21		X		22	50	2500				Existing Kiln
Existing Loads					20	23			X	24		2500				
Existing Loads					20	25	X			26	20					Existing Loads
Spare					20	27		X		28	20					Existing Loads
Spare					20	29			X	30	20					Spare
Spare					20	31	X			32	20					Spare
Spare					20	33		X		34	20					Spare
Spare					20	35			X	36	20					Spare
Spare					20	37	X			38	20					Spare
Spare					20	39		X		40	20					Spare
SPACE					--	41			X	42	--					SPACE
SPACE					--	43	X			44	--					SPACE
SPACE					--	45		X		46	--					SPACE
SPACE					--	47			X	48	--					SPACE
SPACE					--	49	X			50	--					SPACE
SPACE					--	51		X		52	--					SPACE
SPACE					--	53			X	54	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	3240	3240	2700	9180	1.00 (First 10kVA)	3240	3240	2700	9180
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	6000	5000	6000	17000	1.00	6000	5000	6000	17000
Total Load (kVA)	9.24	8.24	8.70	26.18	125% of Light/Cont and Recept	9.24	8.24	8.70	26.18
Total Ampacity (Amps)	76.9	68.6	72.4	72.7	(<10kVA) load plus other load	76.9	68.6	72.4	72.7
Minimum Feeder Sizing (Amps)	83.7	75.4	78.1	79.0	<---- per NEC Article 215.2 ---->	83.7	75.4	78.1	79.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

NOTE: TRANSFER ALL EXISTING LOADS FROM EXISTING PANEL THAT REMAIN IN SERVE OVER TO THIS NEW PANELBOARD. PROVIDE 4 POLES CONTACTORS AT CENTER OF PANEL TO CONTROL EXISTING LOADS.

Panel Designation: NEW PP-EM3
Panel Location: Server room
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: 150A
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: 10kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
				3036		1	X			2		9300				
New A/C unit - Server				3036	50	3		X		4	110	9300				New UPS - Server
				3036		5			X	6		9300				
Existing A/C unit - Server				2080		7	X			8	20					Spare
				2080	40	9		X		10	20					Spare
Spare						11			X	12	20					Spare
Spare					20	13	X			14	20					Spare
Spare					20	15		X		16	20					Spare
SPACE					--	17			X	18	--					SPACE
SPACE					--	19	X			20	--					SPACE
SPACE					--	21		X		22	--					SPACE
SPACE					--	23			X	24	--					SPACE
SPACE					--	25	X			26	--					SPACE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	14416	14416	12336	41168	1.00	14416	14416	12336	41168
Total Load (kVA)	14.42	14.42	12.34	41.17	125% of Light/Cont and Recept	14.42	14.42	12.34	41.17
Total Ampacity (Amps)	120.0	120.0	102.7	114.3	(<10kVA) load plus other load	120.0	120.0	102.7	114.3
Minimum Feeder Sizing (Amps)	120.0	120.0	102.7	114.3	<---- per NEC Article 215.2 ---->	120.0	120.0	102.7	114.3

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: NEW LP-LS1
Panel Location: ____________
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: 100A BREAKER
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 10kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
						1	X			2						
New Panel LP-LS2					30	3		X		4	30					New Panel LP-LS3
						5			X	6						
Emergency Lighting					20	7	X			8	20					Emergency Lighting
Emergency Lighting					20	9		X		10	20					Emergency Lighting
Emergency Lighting					20	11			X	12	20					Emergency Lighting
Emergency Lighting					20	13	X			14	20					Emergency Lighting
Emergency Lighting					20	15		X		16	20					Emergency Lighting
Emergency Lighting					20	17			X	18	20					Emergency Lighting
Emergency Lighting					20	19	X			20	20					Emergency Lighting
Emergency Lighting					20	21		X		22	20					Emergency Lighting
Emergency Lighting					20	23			X	24	20					Emergency Lighting
Spare					20	25	X			26	20					Spare
Spare					20	27		X		28	20					Spare
Spare					20	29			X	30	20					Spare
SPACE					--	31	X			32	20					Spare
SPACE					--	33		X		34	--					SPACE
SPACE					--	35			X	36	--					SPACE
SPACE					--	37	X			38	--					SPACE
SPACE					--	39		X		40	--					SPACE
SPACE					--	41			X	42	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	0.00	0.00	0.00	0.00	125% of Light/Cont and Recept	0.00	0.00	0.00	0.00
Total Ampacity (Amps)	0.0	0.0	0.0	0.0	(<10kVA) load plus other load	0.0	0.0	0.0	0.0
Minimum Feeder Sizing (Amps)	0.0	0.0	0.0	0.0	<---- per NEC Article 215.2 ---->	0.0	0.0	0.0	0.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: NEW LP-LS2
Panel Location: Closet by Locker room
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: 30A BREAKER
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 14kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Emergency Lighting					20	1	X			2	20					Emergency Lighting
Emergency Lighting					20	3		X		4	20					Emergency Lighting
Emergency Lighting					20	5			X	6	20					Emergency Lighting
Emergency Lighting					20	7	X			8	20					Emergency Lighting
Emergency Lighting					20	9		X		10	20					Emergency Lighting
Emergency Lighting					20	11			X	12	20					Emergency Lighting
Emergency Lighting					20	13	X			14	20					Emergency Lighting
Emergency Lighting					20	15		X		16	20					Emergency Lighting
Emergency Lighting					20	17			X	18	20					Emergency Lighting
Emergency Lighting					20	19	X			20	20					Emergency Lighting
Spare					20	21		X		22	20					Spare
Spare					20	23			X	24	20					Spare
SPACE					--	25	X			26	--					SPACE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	0.00	0.00	0.00	0.00	125% of Light/Cont and Recept	0.00	0.00	0.00	0.00
Total Ampacity (Amps)	0.0	0.0	0.0	0.0	(<10kVA) load plus other load	0.0	0.0	0.0	0.0
Minimum Feeder Sizing (Amps)	0.0	0.0	0.0	0.0	<---- per NEC Article 215.2 ---->	0.0	0.0	0.0	0.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: NEW LP-LS3
Panel Location: ____________
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: 30A BREAKER
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 14kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
Emergency Lighting					20	1	X			2	20					Emergency Lighting
Emergency Lighting					20	3		X		4	20					Emergency Lighting
Emergency Lighting					20	5			X	6	20					Emergency Lighting
Emergency Lighting					20	7	X			8	20					Emergency Lighting
Emergency Lighting					20	9		X		10	20					Emergency Lighting
Emergency Lighting					20	11			X	12	20					Emergency Lighting
Emergency Lighting					20	13	X			14	20					Emergency Lighting
Emergency Lighting					20	15		X		16	20					Emergency Lighting
Emergency Lighting					20	17			X	18	20					Emergency Lighting
Emergency Lighting					20	19	X			20	20					Emergency Lighting
Spare					20	21		X		22	20					Spare
Spare					20	23			X	24	20					Spare
SPACE					--	25	X			26	--					SPACE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Total Load (kVA)	0.00	0.00	0.00	0.00	125% of Light/Cont and Recept	0.00	0.00	0.00	0.00
Total Ampacity (Amps)	0.0	0.0	0.0	0.0	(<10kVA) load plus other load	0.0	0.0	0.0	0.0
Minimum Feeder Sizing (Amps)	0.0	0.0	0.0	0.0	<---- per NEC Article 215.2 ---->	0.0	0.0	0.0	0.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: NEW PP-EM2
Panel Location: Mezzanine above Boiler Rm.
Fed From: See One Line Diagram
Feeder Size: See One Line Diagram
Main: MLO
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%
P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: 10kA

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
				936		1	X			2		936				
Existing Outdoor Freezer				936	15	3		X		4	15	936				Existing Indoor Cooler
				936		5			X	6		936				
				936		7	X			8	20	500				Jacket Water Heater
Existing Indoor Freezer				936	15	9		X		10	20	500				Battery Charger
				936		11			X	12	20					Spare
Spare					20	13	X			14	20					Spare
Spare					20	15		X		16	20					Spare
Spare					20	17			X	18	20					Spare
SPACE					--	19	X			20	--					SPACE
SPACE					--	21		X		22	--					SPACE
SPACE					--	23			X	24	--					SPACE
SPACE					--	25	X			26	--					SPACE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	3308	3308	2808	9424	1.00	3308	3308	2808	9424
Total Load (kVA)	3.31	3.31	2.81	9.42	125% of Light/Cont and Recept	3.31	3.31	2.81	9.42
Total Ampacity (Amps)	27.5	27.5	23.4	26.2	(<10kVA) load plus other load	27.5	27.5	23.4	26.2
Minimum Feeder Sizing (Amps)	27.5	27.5	23.4	26.2	<---- per NEC Article 215.2 ---->	27.5	27.5	23.4	26.2

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

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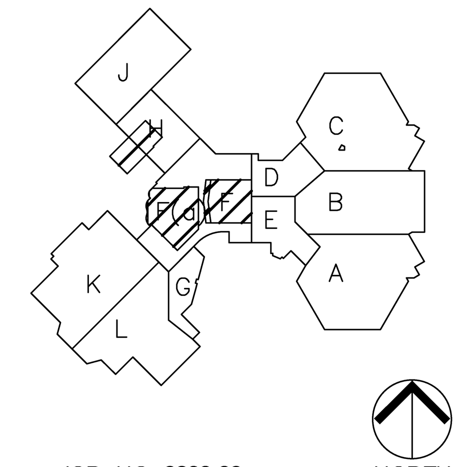
Barton Malow

Saline Area Schools 2016 Projects Phase 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
CHECK SET	1/22/2016
50% CD REVIEW	2/22/2016
BIDS AND CONSTRUCTION	3/11/2016
ISSUED FOR BID	3/22/2016



JOB NO. 2900-02

SHEET TITLE
ELECTRICAL SCHEDULES

SHEET NO.
MS-E6.0

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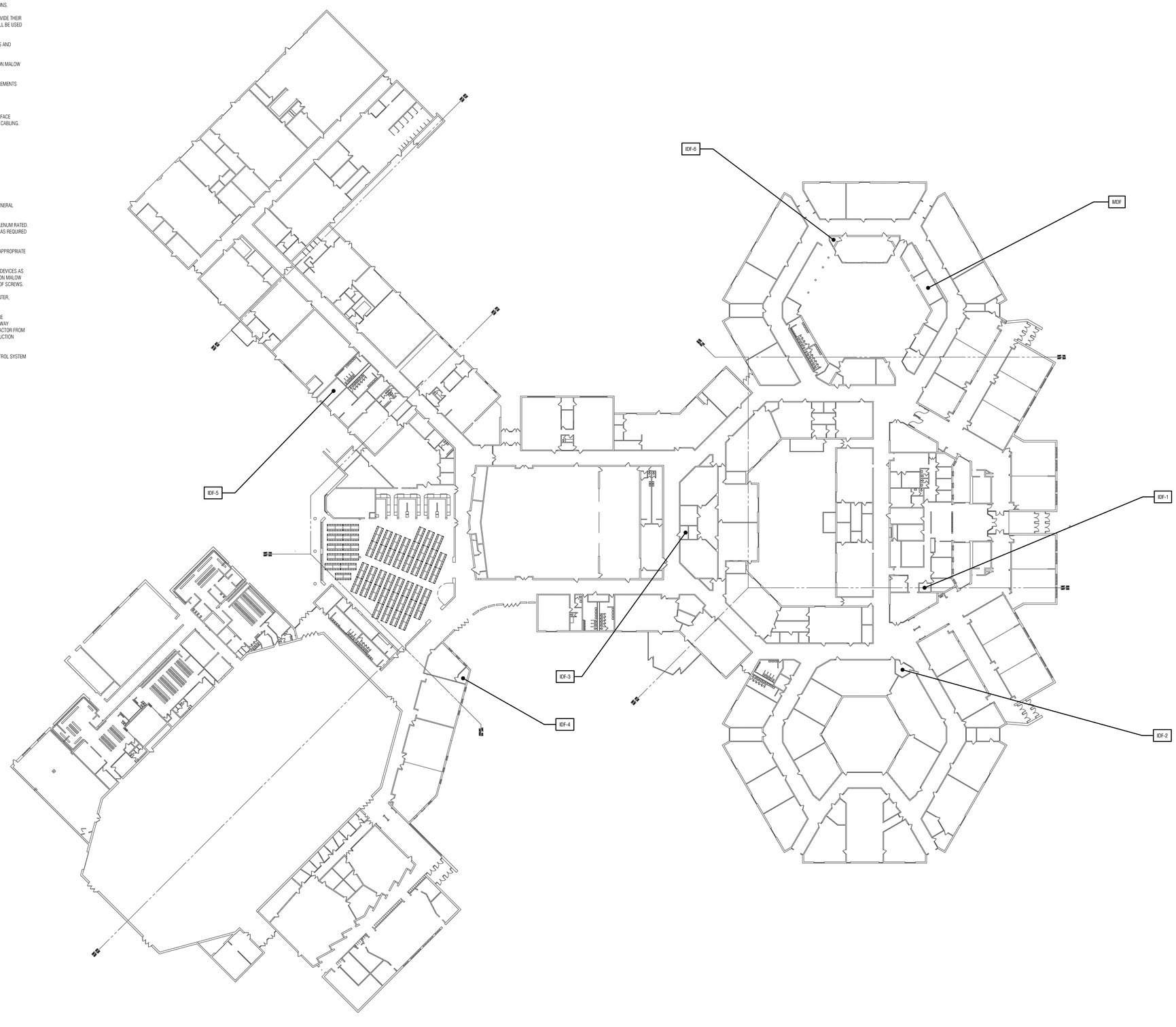
GENERAL TECHNOLOGY NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. CONTRACTORS SHALL PROVIDE ALL INCIDENTAL MATERIALS AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
2. FIELD VERIFY LOCATIONS, CONDITIONS AND LENGTHS PRIOR TO INSTALLATION.
3. INSTALL ALL EQUIPMENT AND ACCESSORIES ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. WHERE ADEQUATE PATHWAYS ARE NOT PROVIDED, EACH CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN PENETRATIONS, SLEEVES, AND CORES WITH FIRESTOPPING. SLEEVES AND CORES SHALL BE USED THROUGH ALL WALLS AND FLOORS AND SHALL HAVE NYLON BUSHINGS.
5. EACH CONTRACTOR SHALL PROVIDE FIRESTOPPING ON CONDUITS PASSING THROUGH WALLS AND FLOORS.
6. EACH CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.
7. EACH CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOCATIONS AND ROUGH-IN REQUIREMENTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATIONS.
8. EACH CONTRACTOR SHALL PROVIDE FACEPLATES AND INSERTS FOR THEIR DEVICES.
9. UNLESS NOTED OTHERWISE, LOW VOLTAGE CONTRACTOR TO PROVIDE AND INSTALL ALL SURFACE MOUNTED BOXES, SINGLE-CHANNEL RACEWAYS, FACEPLATES AND ACCESSORIES FOR DATA CABLING. ALL DUAL-CHANNEL RACEWAYS WILL BE PROVIDED BY ELECTRICAL CONTRACTOR.

GENERAL SECURITY NOTES:

1. LOCATIONS OF DEVICES SHOWN ON DRAWINGS ARE INTENDED TO SHOW QUANTITIES AND GENERAL LOCATIONS.
2. ALL ACCESS CONTROL COMPONENTS (MOUNTED ABOVE CEILING) AND CABLING SHALL BE PLENUM RATED. ALL CABLE IS TO BE LABELED AND TESTED WITH DOCUMENTED RESULTS. SUPPORT CABLES AS REQUIRED TO BUILDING STRUCTURE, PER BID SPECIFICATIONS.
3. OUTDOOR CARD READERS AND DEVICES SHALL BE RATED FOR INTENDED USE AND PROVIDE APPROPRIATE HOUSING TO PROTECT CAMERA FROM THE ELEMENTS WHERE APPLICABLE.
4. PROXIMITY CARD READERS SHALL BE INSTALLED AS PART OF THIS PROJECT. LOCATIONS OF DEVICES AS SHOWN ON DRAWINGS IS APPROXIMATE. COORDINATE FINAL LOCATION ON-SITE WITH BARTON MALOW AND THE OWNER. UNITS SHALL BE VANDAL RESISTANT AND INSTALLED USING TAMPER PROOF SCREWS.
5. FOR ACCESS CONTROLLED DOORS, COORDINATE INSTALLATIONS WITH ELECTRICIAN, CARPENTER, HARDWARE SUPPLIER/INSTALLER, AND ALL OTHER APPROPRIATE AND IMPACTED TRADES.
6. COORDINATE PATHWAYS WITH ALL IMPACTED TRADES (ELECTRICIAN, CARPENTER, HARDWARE SUPPLIER/INSTALLER, ETC.) AT THE ONSET OF THE PROJECT. FAILURE TO COORDINATE PATHWAY REQUIREMENTS IN NEW DOOR LOCATIONS DOES NOT RELIEVE THE ACCESS CONTROL CONTRACTOR FROM THE RESPONSIBILITY OF COMPLETING THE WORK WITHIN THE CONSTRAINTS OF THE CONSTRUCTION SCHEDULE.
7. CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS FOR ACCESS CONTROL SYSTEM WORK WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.



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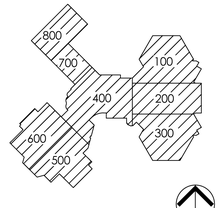
Barton Malow

Saline Public Schools 2015 Bond Project Series 1

Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
FOR INFORMATION ONLY	3/22/2016



JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - COMPOSITE

SHEET NO.

MS-T4.0

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GENERAL TECHNOLOGY NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. CONTRACTORS SHALL PROVIDE ALL INCIDENTAL MATERIALS AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
2. FIELD VERIFY LOCATIONS, CONDITIONS AND LENGTHS PRIOR TO INSTALLATION.
3. INSTALL ALL EQUIPMENT AND ACCESSORIES ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. WHERE ADEQUATE PATHWAYS ARE NOT PROVIDED, EACH CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN PENETRATIONS, SLEEVES, AND CORES WITH FIRESTOPPING. SLEEVES AND CORES SHALL BE USED THROUGH ALL WALLS AND FLOORS AND SHALL HAVE NYLON BUSHINGS.
5. EACH CONTRACTOR SHALL PROVIDE FIRESTOPPING ON CONDUITS PASSING THROUGH WALLS AND FLOORS.
6. EACH CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.
7. EACH CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOCATIONS AND ROUGH-IN REQUIREMENTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATIONS.
8. EACH CONTRACTOR SHALL PROVIDE FACEPLATES AND INSERTS FOR THEIR DEVICES.
9. UNLESS NOTED OTHERWISE, LOW VOLTAGE CONTRACTOR TO PROVIDE AND INSTALL ALL SURFACE MOUNTED BOXES, SINGLE-CHANNEL RACEWAYS, FACEPLATES AND ACCESSORIES FOR DATA CABLING. ALL DUAL-CHANNEL RACEWAYS WILL BE PROVIDED BY ELECTRICAL CONTRACTOR.

GENERAL SECURITY NOTES:

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2. ALL ACCESS CONTROL COMPONENTS (MOUNTED ABOVE CEILING) AND CABLING SHALL BE PLENUM RATED. ALL CABLE IS TO BE LABELED AND TESTED WITH DOCUMENTED RESULTS. SUPPORT CABLES AS REQUIRED TO BUILDING STRUCTURE, PER BID SPECIFICATIONS.
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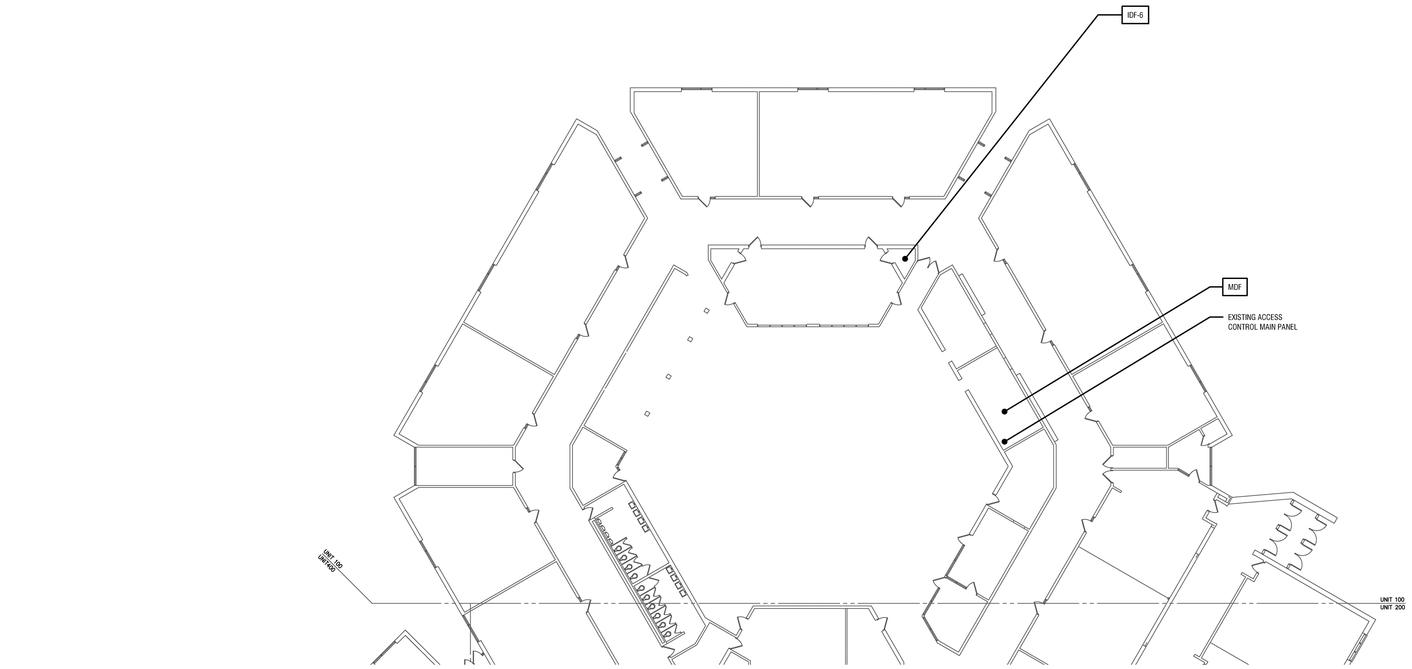
7. CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS FOR ACCESS CONTROL SYSTEM WORK WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.



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Barton Malow

Saline Public Schools
2015 Bond Project
Series 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
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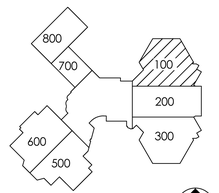

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 100

SHEET NO.

MS-T4.1

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GENERAL TECHNOLOGY NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. CONTRACTORS SHALL PROVIDE ALL INCIDENTAL MATERIALS AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
2. FIELD VERIFY LOCATIONS, CONDITIONS AND LENGTHS PRIOR TO INSTALLATION.
3. INSTALL ALL EQUIPMENT AND ACCESSORIES ACCORDING TO MANUFACTURERS SPECIFICATIONS.
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GENERAL SECURITY NOTES:

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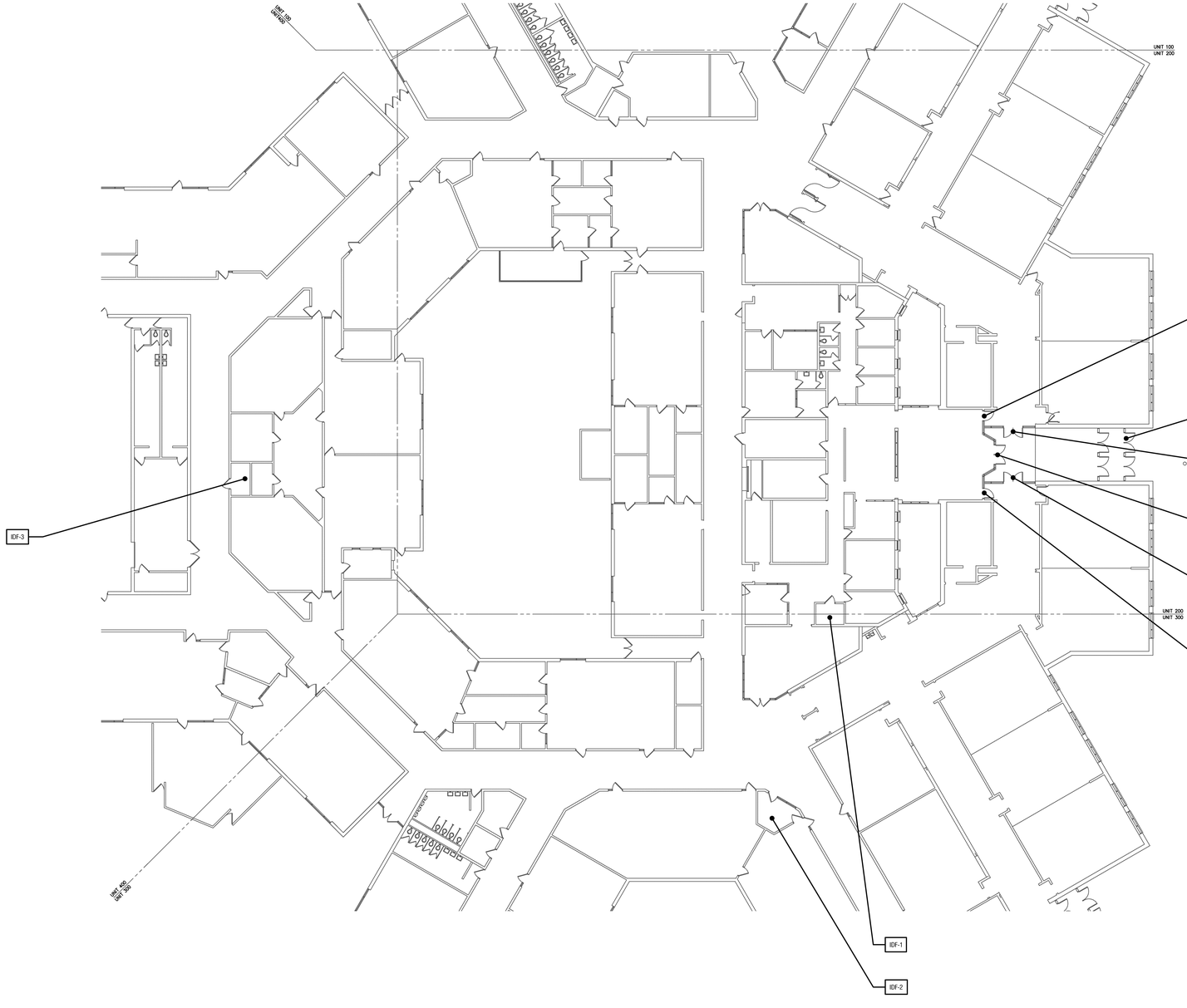

EXISTING DOOR XXX
- PROVIDE PANIC FUNCTIONALITY AS DESCRIBED IN THE SPECIFICATIONS.

EXISTING DOOR XXX
- EXISTING CARD READER AND ELECTRIC STRIKE OPERATES THE RIGHT LEAF.
- EXISTING AIPHONE VIDEO INTERCOM TO REMAIN
- PROVIDE NEW REX SENSOR AND DOOR CONTACTS ON ALL FOUR (4) LEAVES
- ADD AN ELECTRIC STRIKE TO THE THREE (3) LEFT LEAVES AND ADD TO ACCESS CONTROL SYSTEM FOR SCHEDULING

NEW DOOR XXX
- PROVIDE NEW CARD READER, TO FUNCTION ONLY THE RIGHT DOOR LEAF
- PROVIDE NEW REX SENSOR AND DOOR CONTACTS ON BOTH LEAVES
- PROVIDE ELECTRIC STRIKES TO BOTH LEAVES AND ADD TO ACCESS CONTROL SYSTEM FOR SCHEDULING

NEW DOOR XXX
- PROVIDE NEW CARD READER AND INTERCOM UNIT
- PROVIDE NEW REX SENSOR AND DOOR CONTACTS ON BOTH LEAVES
- PROVIDE PANIC FUNCTIONALITY AS DESCRIBED IN THE SPECIFICATIONS.
- DOOR TO BE PROGRAMMED LOCKED UNTIL RELEASED BY OFFICE STAFF

NEW DOOR XXX
- PROVIDE NEW CARD READER, TO FUNCTION ONLY THE RIGHT DOOR LEAF
- PROVIDE NEW REX SENSOR AND DOOR CONTACTS ON BOTH LEAVES
- PROVIDE ELECTRIC STRIKES TO BOTH LEAVES AND ADD TO ACCESS CONTROL SYSTEM FOR SCHEDULING

EXISTING DOOR XXX
- PROVIDE PANIC FUNCTIONALITY AS DESCRIBED IN THE SPECIFICATIONS.

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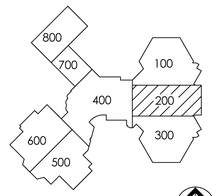

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 200

SHEET NO.

MS-T4.2

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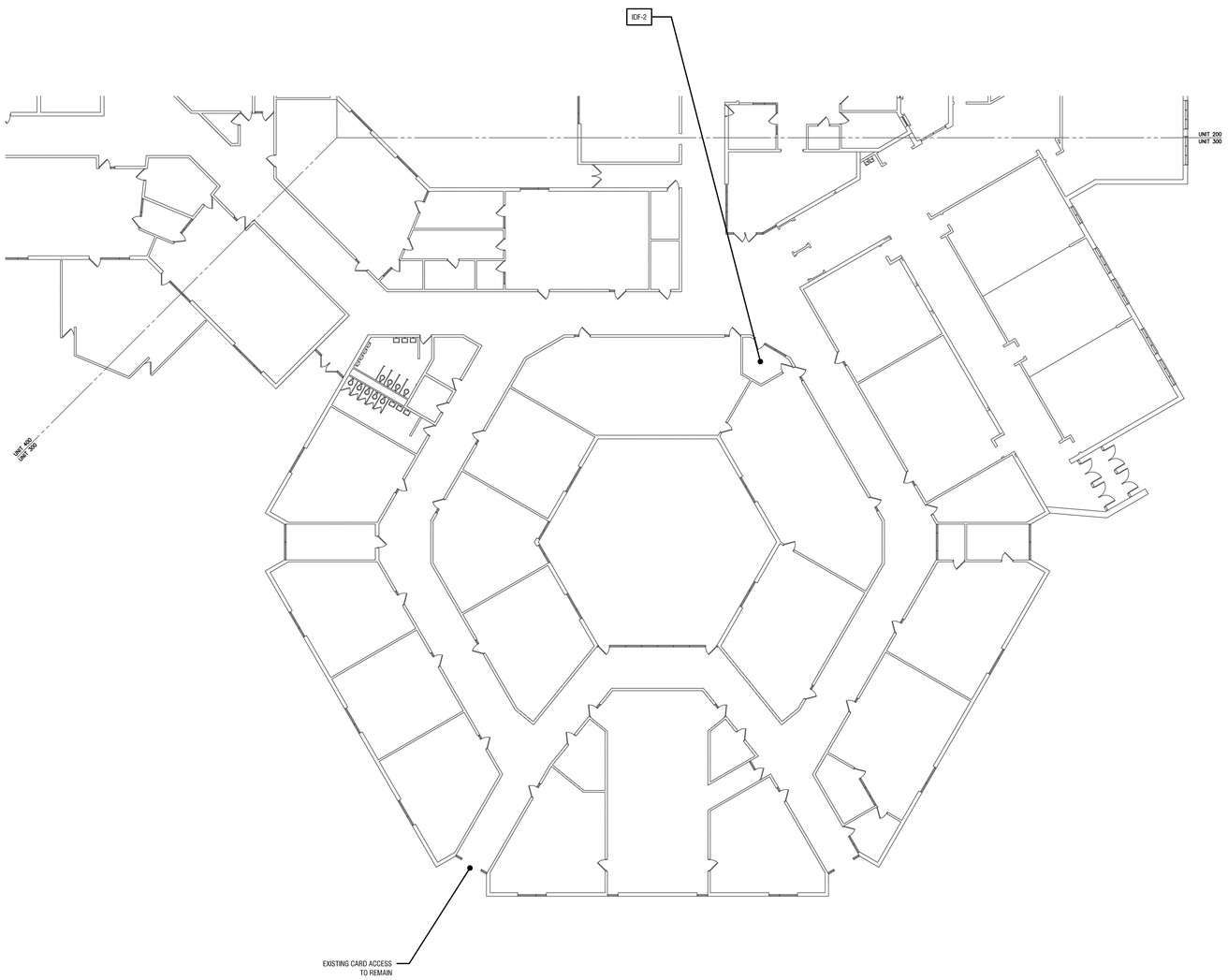

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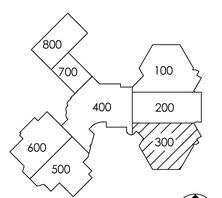

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 300

SHEET NO.

MS-T4.3

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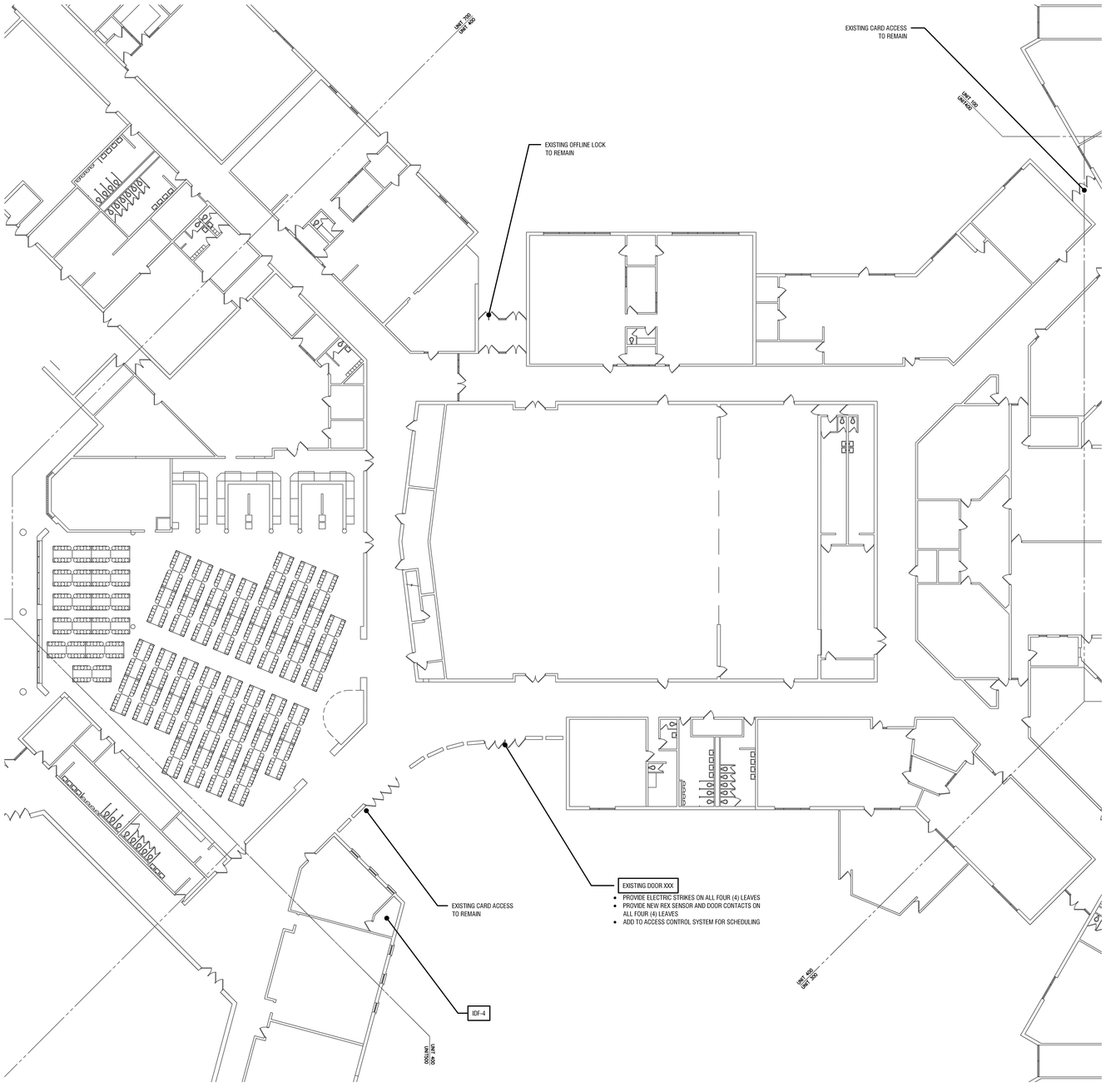

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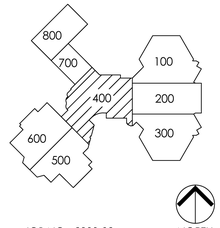

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 400

SHEET NO.

MS-T4.4

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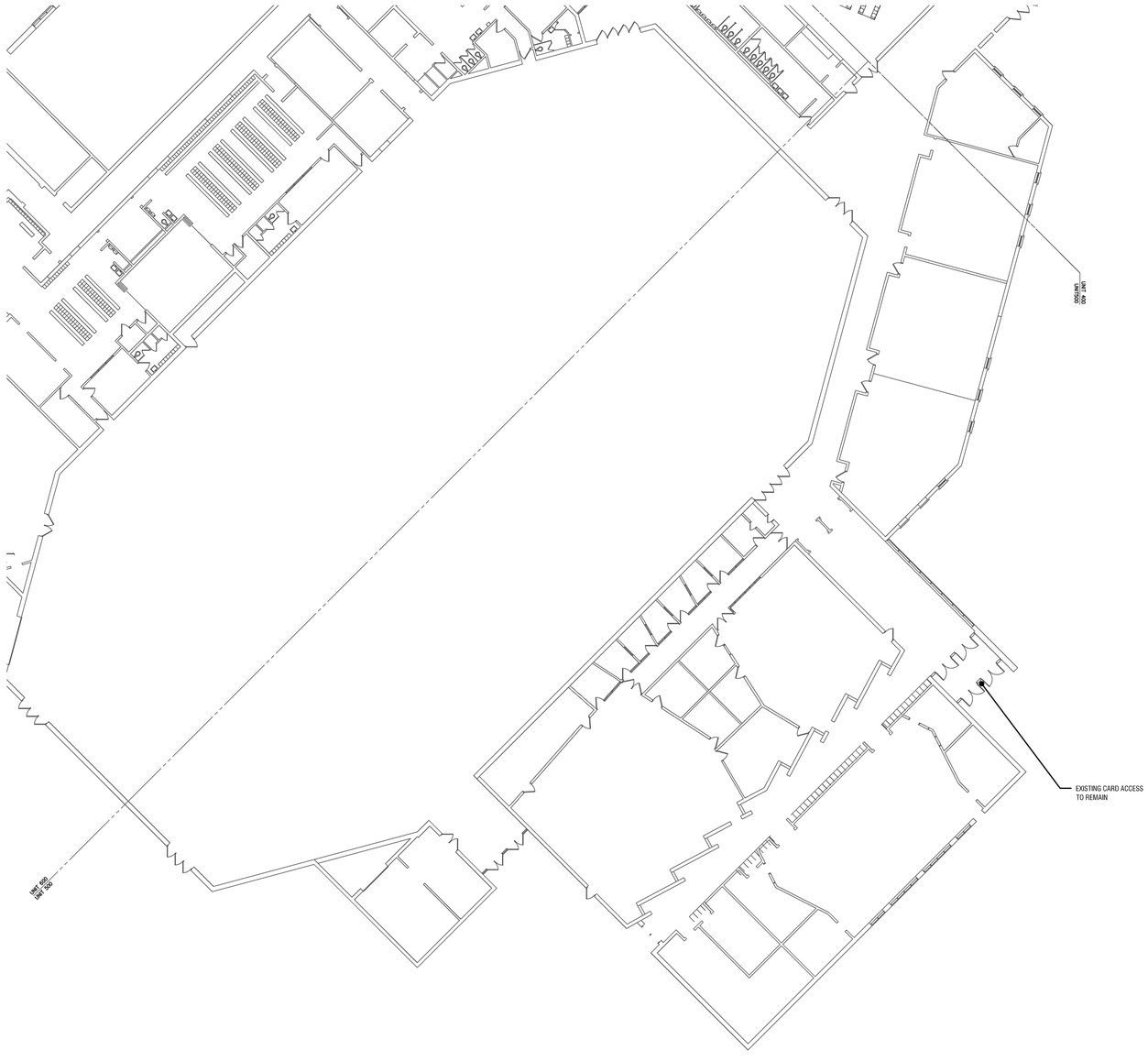

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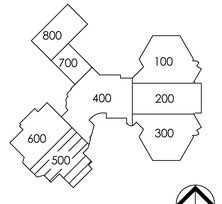

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 500

SHEET NO.

MS-T4.5

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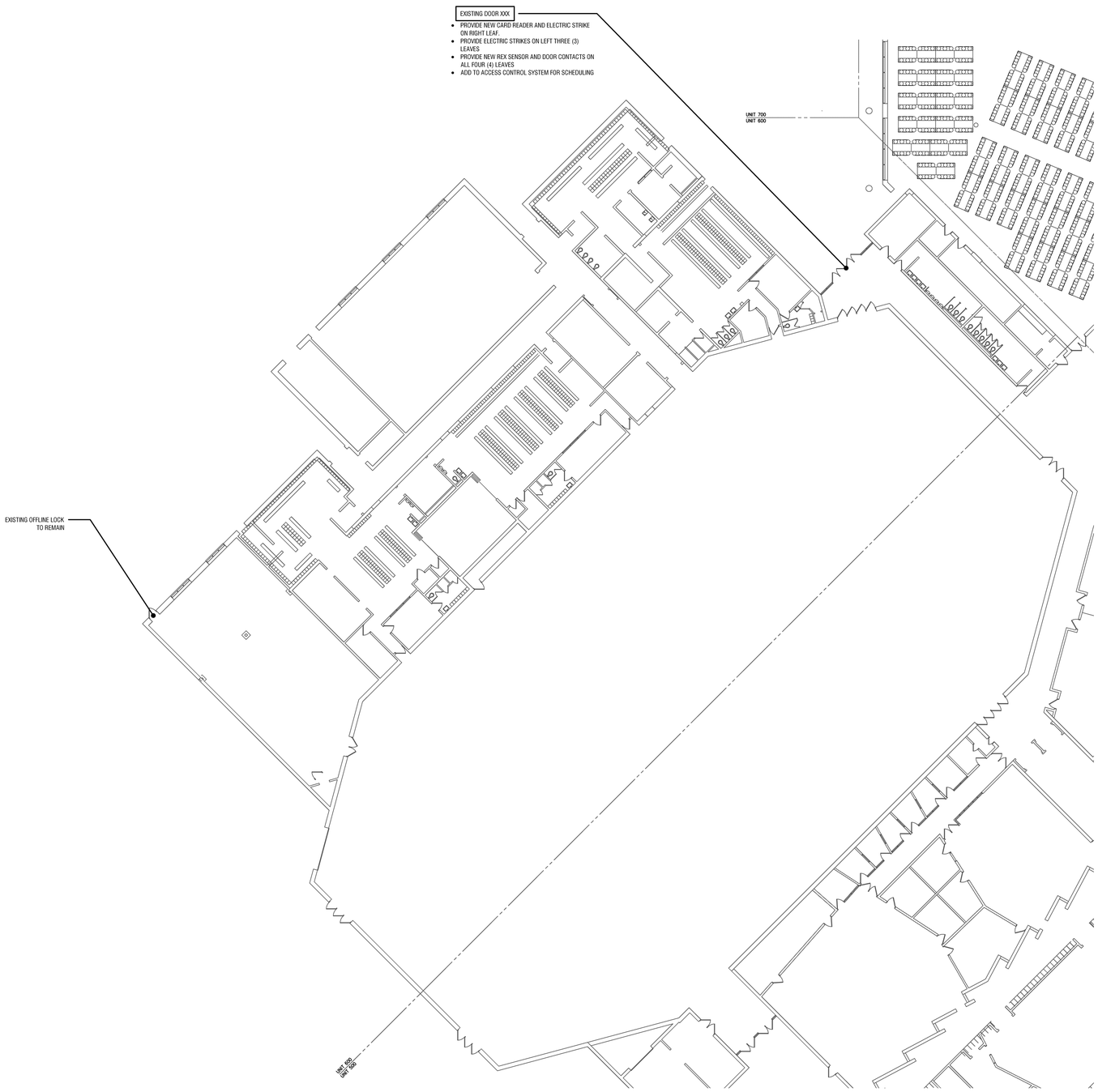
7. CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS FOR ACCESS CONTROL SYSTEM WORK WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.



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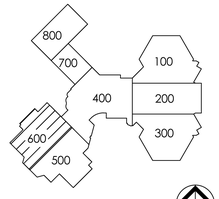
Barton Malow

Saline Public Schools 2015 Bond Project Series 1
Saline Middle School
Saline, Michigan

THE PURSUIT OF EXCELLENCE

REVISIONS/REVIEW	DATE
FOR INFORMATION ONLY	3/22/2016



JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 600

SHEET NO.

MS-T4.6

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GENERAL TECHNOLOGY NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. CONTRACTORS SHALL PROVIDE ALL INCIDENTAL MATERIALS AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
2. FIELD VERIFY LOCATIONS, CONDITIONS AND LENGTHS PRIOR TO INSTALLATION.
3. INSTALL ALL EQUIPMENT AND ACCESSORIES ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. WHERE ADEQUATE PATHWAYS ARE NOT PROVIDED, EACH CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN PENETRATIONS, SLEEVES, AND CORES WITH FIRESTOPPING. SLEEVES AND CORES SHALL BE USED THROUGH ALL WALLS AND FLOORS AND SHALL HAVE NYLON BUSHINGS.
5. EACH CONTRACTOR SHALL PROVIDE FIRESTOPPING ON CONDUITS PASSING THROUGH WALLS AND FLOORS.
6. EACH CONTRACTOR SHALL COORDINATE TELECOMMUNICATION ROOM LAYOUTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATION.
7. EACH CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOCATIONS AND ROUGH-IN REQUIREMENTS WITH BARTON MALOW AND ALL IMPACTED CONTRACTORS PRIOR TO INSTALLATIONS.
8. EACH CONTRACTOR SHALL PROVIDE FACEPLATES AND INSERTS FOR THEIR DEVICES.
9. UNLESS NOTED OTHERWISE, LOW VOLTAGE CONTRACTOR TO PROVIDE AND INSTALL ALL SURFACE MOUNTED BOXES, SINGLE-CHANNEL RACEWAYS, FACEPLATES AND ACCESSORIES FOR DATA CABLING. ALL DUAL-CHANNEL RACEWAYS WILL BE PROVIDED BY ELECTRICAL CONTRACTOR.

GENERAL SECURITY NOTES:

1. LOCATIONS OF DEVICES SHOWN ON DRAWINGS ARE INTENDED TO SHOW QUANTITIES AND GENERAL LOCATIONS.
2. ALL ACCESS CONTROL COMPONENTS (MOUNTED ABOVE CEILING) AND CABLING SHALL BE PLENUM RATED. ALL CABLE IS TO BE LABELED AND TESTED WITH DOCUMENTED RESULTS. SUPPORT CABLES AS REQUIRED TO BUILDING STRUCTURE, PER BID SPECIFICATIONS.
3. OUTDOOR CARD READERS AND DEVICES SHALL BE RATED FOR INTENDED USE AND PROVIDE APPROPRIATE HOUSING TO PROTECT CAMERA FROM THE ELEMENTS WHERE APPLICABLE.
4. PROXIMITY CARD READERS SHALL BE INSTALLED AS PART OF THIS PROJECT. LOCATIONS OF DEVICES AS SHOWN ON DRAWINGS IS APPROXIMATE. COORDINATE FINAL LOCATION ON-SITE WITH BARTON MALOW AND THE OWNER. UNITS SHALL BE VANDAL RESISTANT AND INSTALLED USING TAMPER PROOF SCREWS.
5. FOR ACCESS CONTROLLED DOORS, COORDINATE INSTALLATIONS WITH ELECTRICIAN, CARPENTER, HARDWARE SUPPLIER/INSTALLER, AND ALL OTHER APPROPRIATE AND IMPACTED TRADES.
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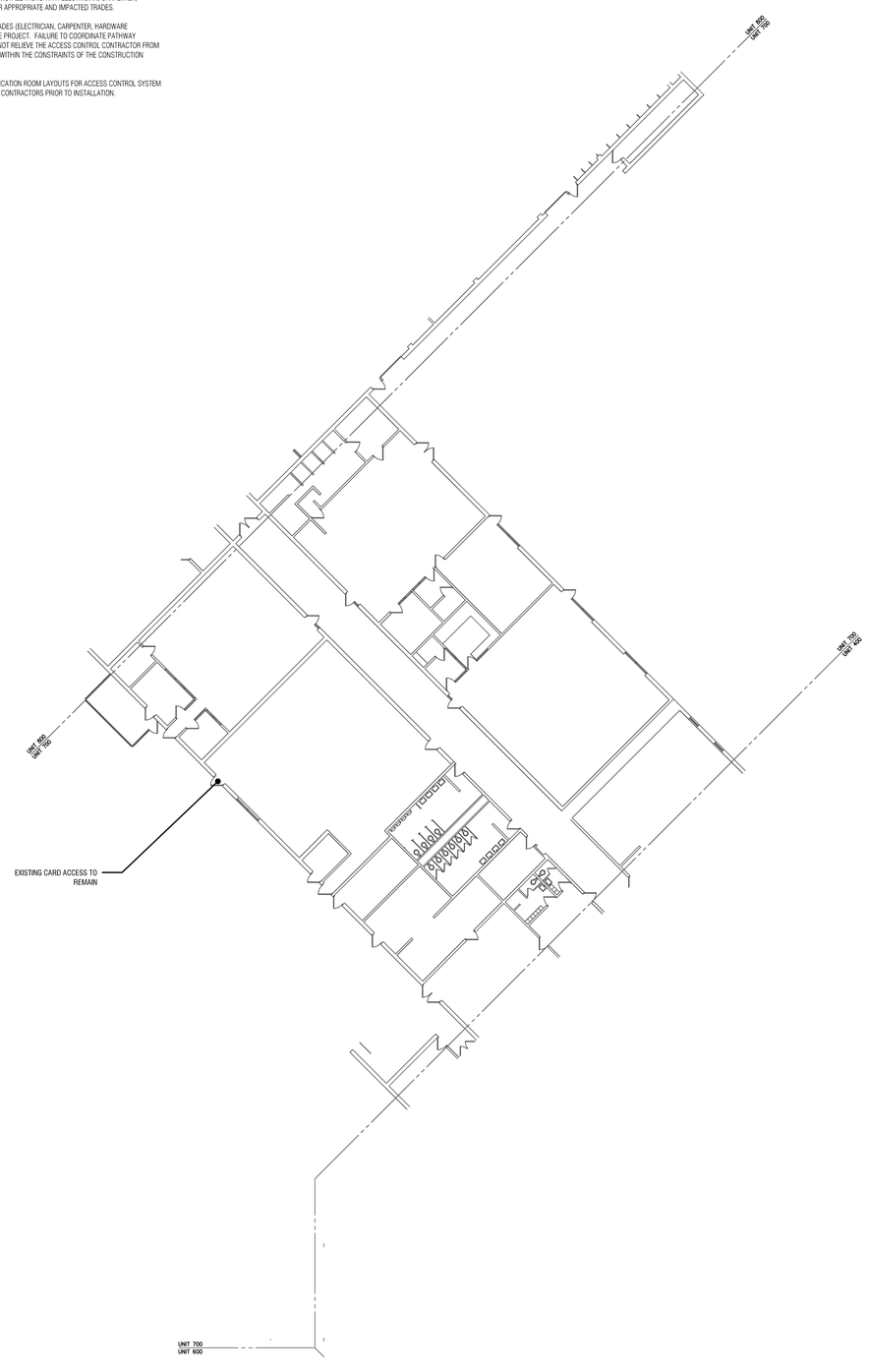

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Barton Malow

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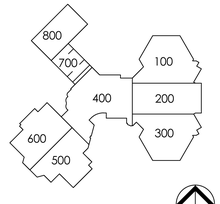

JOB NO. 2900-02 NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 700

SHEET NO.

HM-T4.7

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GENERAL TECHNOLOGY NOTES:

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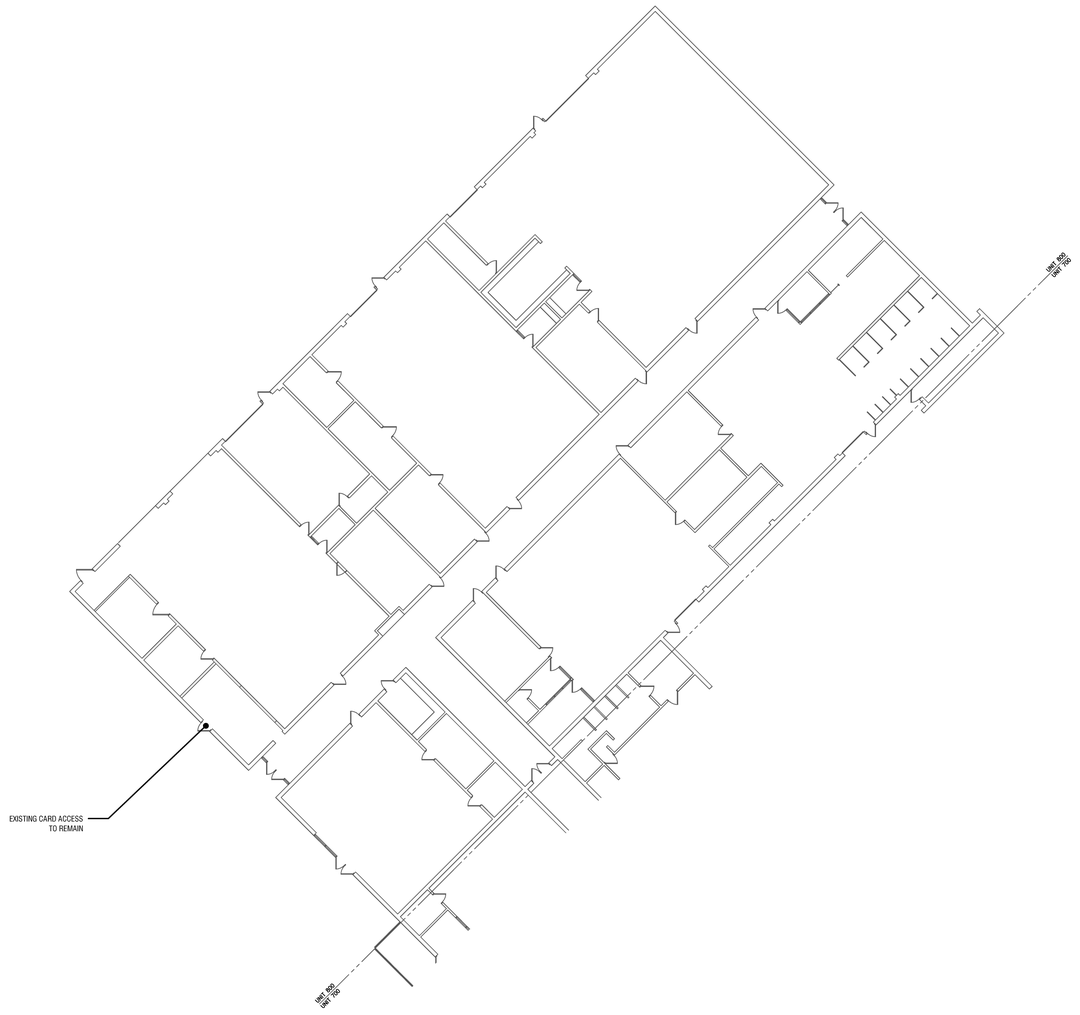

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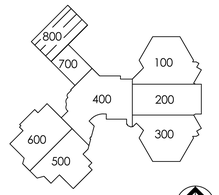

JOB NO. 2900-02 — NORTH

SHEET TITLE

ACCESS CONTROL PLAN - UNIT 800

SHEET NO.

MS-T4.8

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