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**SMSD LOCKER ROOMS
 RENOVATION**

STAFFORD MUNICIPAL SCHOOL DISTRICT

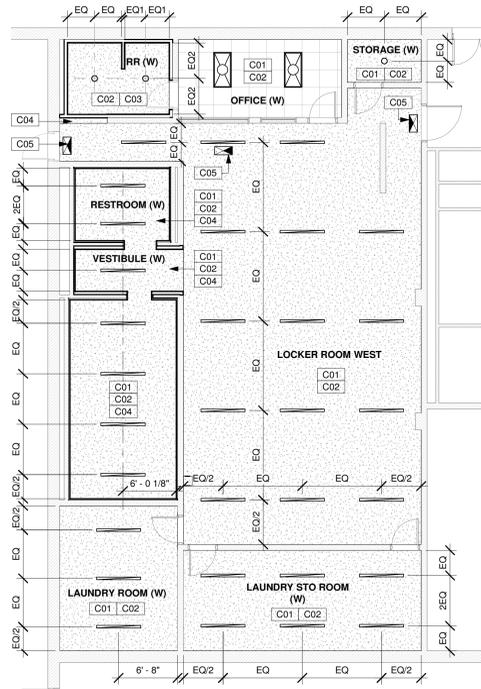
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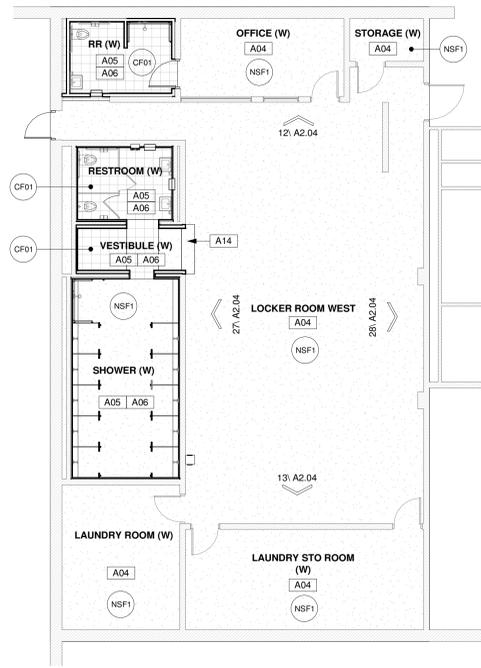
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Issued For: BID 09/25/2020

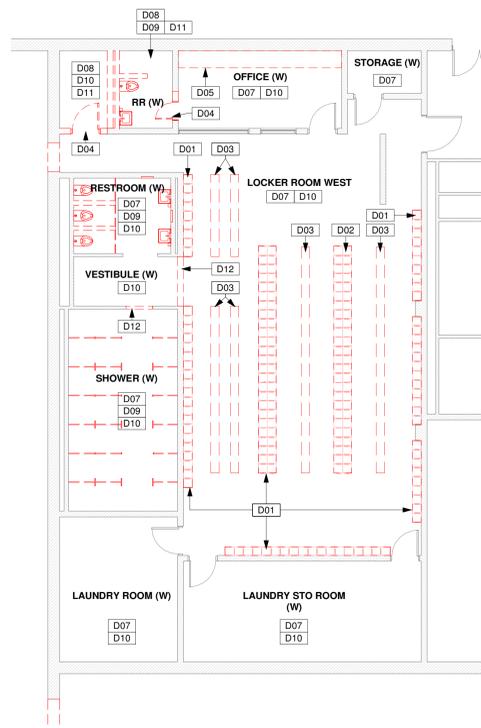


24 REFLECTED CEILING PLAN - LOCKER ROOM WEST
Scale: 1/8" = 1'-0"

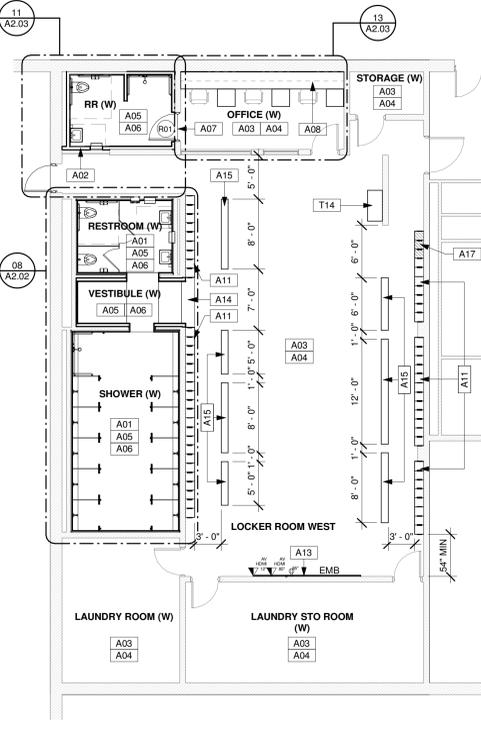


NOTE: FOR FINISH SCHEDULE SEE SHEET A2.03

29 FINISHES PLAN - LOCKER ROOM WEST
Scale: 1/8" = 1'-0"



27 DEMOLITION PLAN - LOCKER ROOM WEST
Scale: 1/8" = 1'-0"



22 CONSTRUCTION PLAN - LOCKER ROOM WEST
Scale: 1/8" = 1'-0"

- C01 Rehab ceiling where light fixtures were removed & paint all ceiling. Re: finish schedule, MEP. (FIXW, HANDLE 2)
- C02 Provide new led light fixtures to replace existing ones, connect to existing circuit. Re: MEP dwgs. (FIXW, HANDLE 2)
- C03 Provide new 1/2" gyp ceiling @ adjacent ceiling's height, paint. Re: finish schedule.
- C04 Patch ceiling in area affected by demolition & construction, match & align with adjacent ceiling, paint.
- C05 Emergency exit light, ceiling mounted. Re: MEP dwgs.

10 CEILING KEYNOTES

- A01 Provide new toilet & shower partition, see T05 for toilet partition, T20 for shower partition. 1" solid phenolic with SST bracket. Re: Specs
- A02 Provide new partition as specified. Re: partition types & finish schedule. (FIXW, HANDLE 2)
- A03 Rehab & paint all existing walls, patches holes where construction were removed. Provide new rubber base. Re: Partition types & finish schedule. (FIXW, HANDLE 2)
- A04 Provide new anti-slip duraquartz flooring. Re: finish schedule & specs. (FIXW, HANDLE 2)
- A05 Provide new 12"x12" ceramic tile flooring. Rehab & slope toward existing drains. Re: finish schedule & specs. (FIXW, HANDLE 2)
- A06 Provide new 4"x12" ceramic tile on turred walls, full height. Re: Wall types, Finish schedule & Specs. (FIXW, HANDLE 2)
- A07 Provide new doors/frame/HW per door schedule, provide structure support as needed. (FIXW, ENSURE 2)
- A08 Provide new casework with wood blocking as needed. Re: MEP for outlets. (FIXW, HANDLE 2)
- A11 Provide metal lockers, one tier-full height, to match existing. Rehab and reuse relocated lockers when possible. Attach to walls as needed. Re: Specs. (HANDLE 2; FIXW; FIX 1)
- A13 Provide new wall mounted short through projector and markerboard screen. Re: Specs.
- A14 Provide ramp with slope of 1/2' / 1'-0", finish to match specified locker room floor. (LEVEL 1)
- A15 Provide new locker bench as specified. Bolt to floor as needed. Re: Specs & DWGS
- A17 Provide ADA compliant accessible metal lockers to match adjacent lockers. Attach to walls as needed. Re: Specs. (HANDLE 2; FIXW; FIX 1)

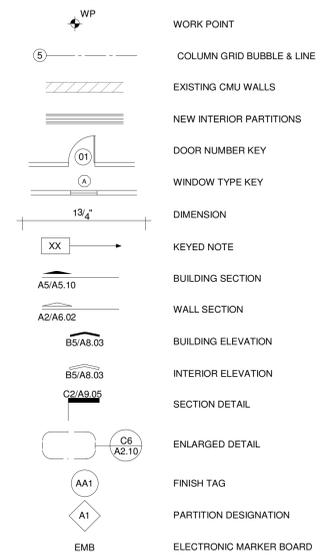
08 CONSTRUCTION KEYNOTES

- D01 Remove metal lockers & block base, rehab & repair area to receive new construction. Re: new construction plan, interior elevations. (FIXW, HANDLE 2)
- D02 Remove metal lockers & metal base, rehab & repair area to receive new construction. Rehab lockers & base for relocation. Re: new construction plan, interior elevations. (FIXW, HANDLE 2; HANDLE 3)
- D03 Remove existing benches & repair area to receive new construction. Re: new construction plans. (FIXW, HANDLE 2)
- D04 Remove existing Doors & Frames & prepare area to receive new construction. Re: new construction plans. (FIXW, HANDLE 2)
- D05 Remove all furniture, furniture systems, shelves & millwork in this area, repair wall as needed. (HANDLE 2; FIXW)
- D07 Remove existing light fixtures & assembly, fix holes & repair area to receive new construction. Re: new RCP & MEP drawings. (FIXW, HANDLE 2)
- D08 Remove existing ceiling, light fixtures & assembly to allow for new construction in this area. Re: new RCP & MEP drawings. (FIXW, HANDLE 2, DISCONNECT 1)
- D09 Remove existing plumbing fixtures & assembly at this room, fix holes & repair area to receive new construction. Re: new construction plan, elevations, MEP drawings. (DISCONNECT 1, FIXW, HANDLE 2)
- D10 Remove existing floor finishes and prepare the area to receive new construction. Re: new construction plans. (FIXW, HANDLE 2)
- D11 Remove existing wall finishes and prepare the area to receive new construction. Re: new construction plans. (FIXW, HANDLE 2)
- D12 Remove existing floor bump and prepare area to receive new construction. Re: new construction plans. (FIXW, HANDLE 2)

07 DEMOLITION KEYNOTES

- Dimension & Alignment Support Notes:**
- (ALIGN 1) Align face of new construction w/face of existing.
 - (ALIGN 2) Align Centerline of new construction w/Centerline of existing.
 - (ALIGN 3) Align gridline/join grid w/existing grid.
 - (LEVEL 1) Ensure top of new construction is level w/existing surface.
 - (LEVEL 2) Level floor & surface to receive new construction.
 - (LEVEL 3) Ensure the top of grade is level w/surrounding ground.
- Construction & Condition Support Notes:**
- (HANDLE 1) Handle item w/care, and store for owner review.
 - (HANDLE 2) Handle remaining building, pavement, fence, or item w/care.
 - (HANDLE 3) Handle re-located items w/care. DISCONNECT 1, FIXW.
 - (FIXW) Fix floor/wall/ceiling/item where construction was removed and prepare the area to receive new construction. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm system away from building.
 - (FIX1) Fix floor/wall/ceiling/item where construction was removed and prepare the area to an acceptable condition for owner's use. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm system away from building.
 - (INFO1) Inform Architect prior to the start of this work.
 - (CONNECT1) Connect new construction to existing, ensure continuity and structural integrity. Ensure the top of new construction is level w/existing surface.
 - (CONNECT2) Connect remaining item to the new structure, and ensure structural integrity while meeting local Codes. Handle remaining buildings, pavement, fences, and other items w/care.
 - (CONNECT3) Connect new plumbing fixture to existing plumbing pipes/ system, adjust pipes & blocking as needed for new location. Re: MEP DWGS.
 - (DISCONNECT1) Disconnect and conceal all pipes, electrical cables, data cables, and conduits where construction is removed.
 - (ENGINEER1) Professional engineering supervision is required for this work.
 - (SHOP1) Provide shop drawings for this work.
 - (REFERENCE) Refer to photo # for the existing condition at this location.
 - (SLOPE1) Maintain positive slope towards drains, gutters, and storm systems and away from the building. Ensure maximum slope in all directions of 1:48 (2%) within accessible clearances, maximum 1:48 (2%) cross slope at sidewalks, maximum 1:20 (5%) running slope at sidewalks.
 - (PROTECT1) Protect item(s) to remain, including any buildings, furniture, sidewalks, roofs, utilities, and other items during the Demolition and Construction phases.
 - (EGRESS) Maintain safe and unrestricted egress routes from areas adjacent to the Demolition site. Comply with all Applicable Codes.
 - (OPERATE) Ensure all routes and utilities required for owner's use of and operations on site are protected. Owner's use of site shall not be interrupted.
 - (ENSURE1) Ensure all slopes to drain as intended, and that downspouts indicated to remain are protected to maintain normal flow at all times during demolition and construction. Protect items to remain including any buildings, furniture, sidewalks, roofs, utilities, and other items during demolition and construction.
 - (ENSURE2) Ensure system is water-tight. Provide additional flashing & sealants as needed.
 - (ENSURE3) Ensure the slope of the new roof matches the slope and slope direction of the existing roof.

06 SUPPORT NOTES
Scale: NTS



09 PLAN LEGEND

- WP WORK POINT
- 5 COLUMN GRID BUBBLE & LINE
- EXISTING CMU WALLS
- NEW INTERIOR PARTITIONS
- 01 DOOR NUMBER KEY
- A WINDOW TYPE KEY
- 13/4 DIMENSION
- XX KEYED NOTE
- A5/A5.10 BUILDING SECTION
- A2/A6.02 WALL SECTION
- B5/A8.03 BUILDING ELEVATION
- B5/A8.03 INTERIOR ELEVATION
- C2/A9.05 SECTION DETAIL
- CR A2.10 ENLARGED DETAIL
- AA1 FINISH TAG
- A1 PARTITION DESIGNATION
- EMB ELECTRONIC MARKER BOARD
- GWB ON METAL STUD DOWNLIGHT RECESSED CAN
- 2'x2' ACOUSTIC CEILING TILES SYSTEM
- 2x4 TROFFER LIGHT FIXTURE
- CEILING MOUNTED EXIT LIGHT
- SURFACE MOUNTED LINEAR LIGHT FIXTURE (CEILING MOUNTED)

05 CEILING LEGEND

- 1. Extend duct & all return air through the new ceiling/ wall to be remain fully functional.
- 2. Adjust/relocate all hvac ducts, diffusers, cables, security devices, and it devices that conflicts w/ new ceiling/ wall construction.
- 3. All gypsum ceilings to be 9' - 0" a.f.f. unless indicated otherwise.
- 4. All restroom gypsum ceilings to be 9' - 0" a.f.f. unless indicated otherwise.
- 5. All acoustical lay-in ceilings to be 9' - 0" a.f.f. and centered within each room unless indicated otherwise.
- 6. All light fixtures installed in gyp. Bd. Ceilings are to be centered within the room or wall unless indicated otherwise.
- 7. All light fixtures and other equipment that is installed in acoustical ceiling tile, shall be centered on a ceiling tile.
- 8. All light fixtures at mech/elec room are indicate for quantity only, locations shall be coordinated w/ equipment by gc in field.
- 9. Rcp indicate architectural lighting only. Re: meplfire drawings for emergency lighting, strobes, etc.
- 10. Extend/adjust fire sprinklers heads & pipes to accommodate the new ceiling & construction. Fire sprinklers to remain fully functional.
- 11. Refer to specifications for ceiling tile materials and equipment types.

04 GENERAL CEILING NOTES

- 1. Refer to signage plans for acoustical panels, tackboards, and markerboard locations.
- 2. Floor material changes between rooms to occur under door; center on door leaf.

03 GENERAL FINISH NOTES

- 1. Handle structure of existing building with care. No work should have any effect on the structural integrity of the building. Report to the architect any indications of structural damage.
- 2. Protect throughout construction all items indicated to remain including building, utilities, etc.
- 3. Field verify all conditions prior of starting construction.
- 4. Report to the architect any unforeseen conditions that could affect the construction of the project or operations.
- 5. Maintain safe and unrestricted access and egress routes for areas adjacent to work area in accordance with applicable codes.
- 6. All dimensions to walls are to finish-face of wall.
- 7. Provide wood blocking inside the walls required for equipment, fixture, millwork, and accessories installation.
- 8. Field verify all door and window openings prior to order or fabrication.
- 9. Refer to door and window details for dimensions & conditions.
- 10. Field-verify conditions prior to construction. Report to the architect any discrepancy.
- 11. Plans indicate horizontal dimensions only. Refer to elevations & sections for vertical dimensions.
- 12. Make new penetration at construction/ existing area watertight join to existing waterproofing as needed. (ENSURE 2)

02 GENERAL CONSTRUCTION NOTES

- 1. Handle the building with care. No work should have any effect on the structural integrity of the building or disturb other systems that should remain or required for future operation. Report to the architect any indication of damage or possible disruption.
- 2. During demolition and construction protect items to remain including structure Sys. architecture, MEP Sys. and others.
- 3. Maintain safe & unrestricted egress route for the duration of the demolition & construction. Comply with all applicable codes.
- 4. Report to architect any un-seen discovered conditions that may have structural, MEP, or architectural complications affecting the project schedule/construction/cost/operation.
- 5. Remove excess cable, systems, Light Fixture. (FIXW)

01 GENERAL DEMOLITION NOTES
Scale: NTS

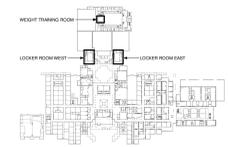
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CONSULTANTS:
MEP ENGINEERS
INFRASTRUCTURE ASSOCIATES
713-622-0120

PROFESSIONAL SEAL:

A PROJECT FOR:
SMSD LOCKER ROOMS RENOVATION
100 Spartan Drive,
Stafford, TX 77477

#	Date	ISSUED FOR
	07/17/2020	ISSUED FOR PERMIT
	09/25/2020	ISSUED FOR BID



Project Number	19006-A
Drawn By	SB
Checked By	AW/BA
Approved By	MS

Drawing Title
WEST LOCKER ROOM PLANS

Drawing Number
A2.00



STAFFORD MUNICIPAL SCHOOL DISTRICT

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CONSULTANTS:

MEP ENGINEERS
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713-622-0120

PROFESSIONAL SEAL:



A PROJECT FOR:

SMSD
LOCKER ROOMS
RENOVATION

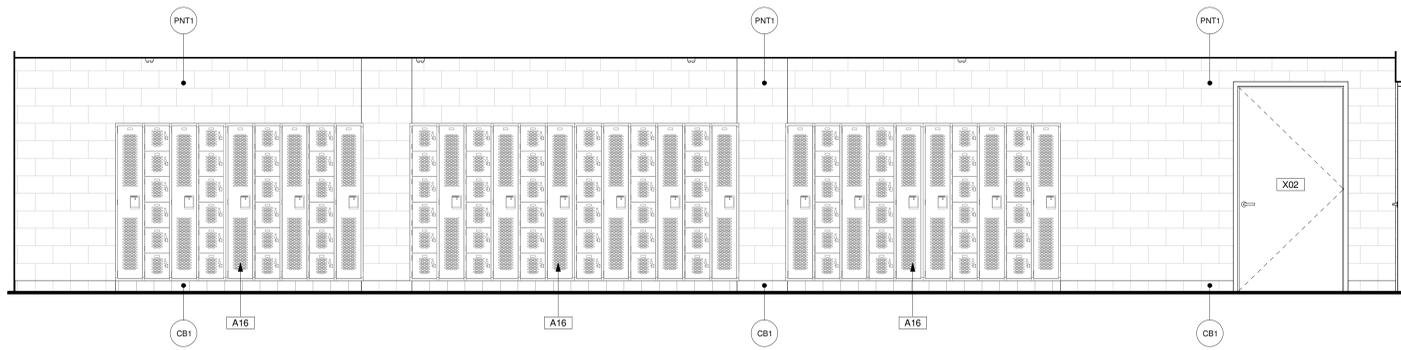
100 Spartan Drive,
Stafford, TX 77477

#	Date	ISSUED FOR
07/17/2020	07/17/2020	ISSUED FOR PERMIT
09/25/2020	09/25/2020	ISSUED FOR BID

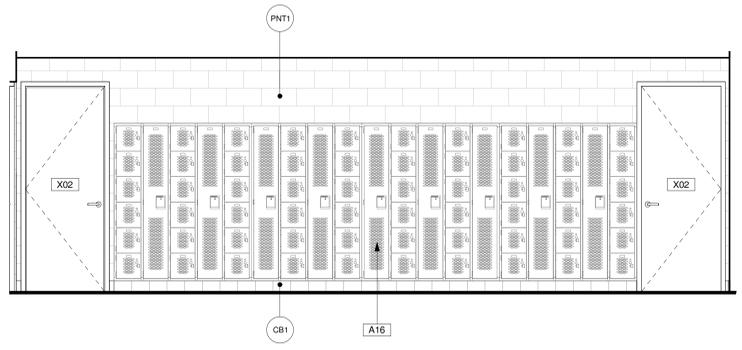


Project Number	19006-A
Drawn By	SB
Checked By	AW/BA
Approved By	MS
Drawing Title	INTERIOR ELEVATIONS

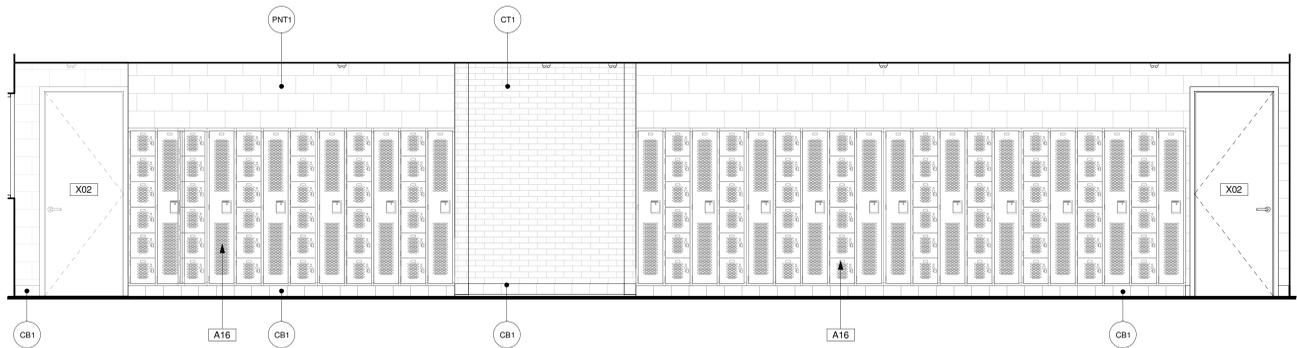
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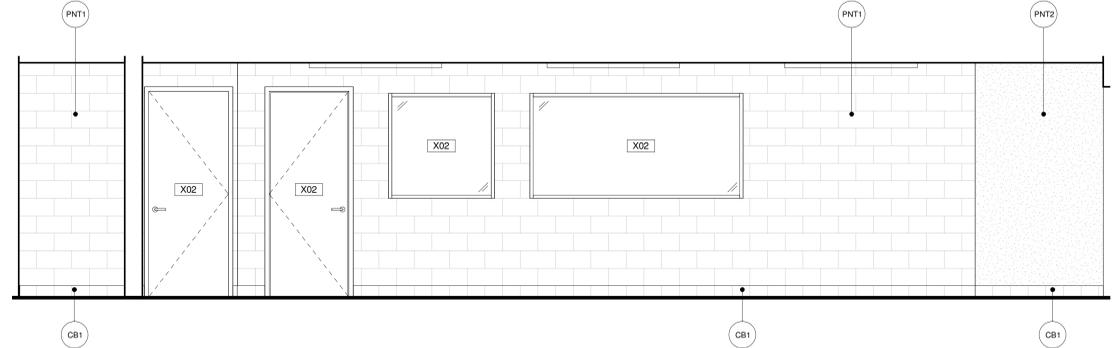
10 INTERIOR ELEVATION - LOCKER ROOM EAST
Scale: 3/8" = 1'-0"



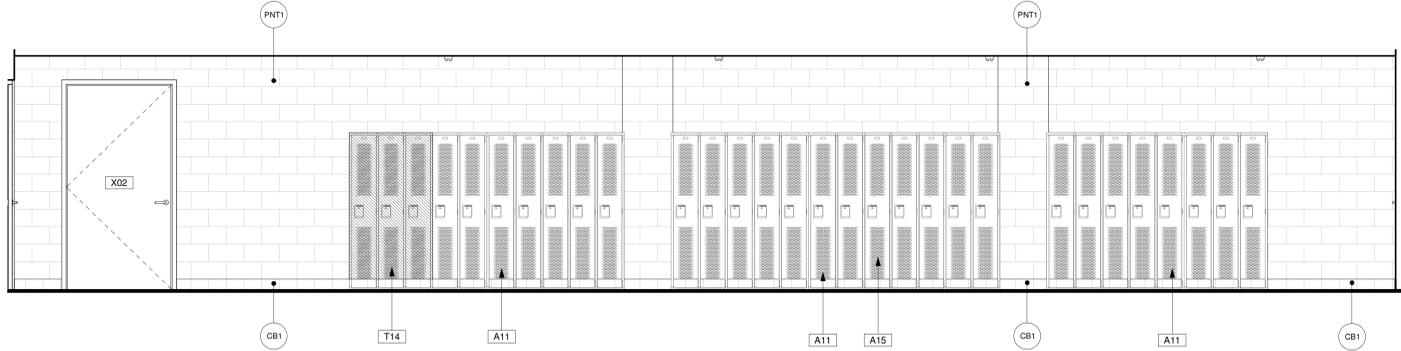
15 INTERIOR ELEVATION - LOCKER ROOM EAST
Scale: 3/8" = 1'-0"



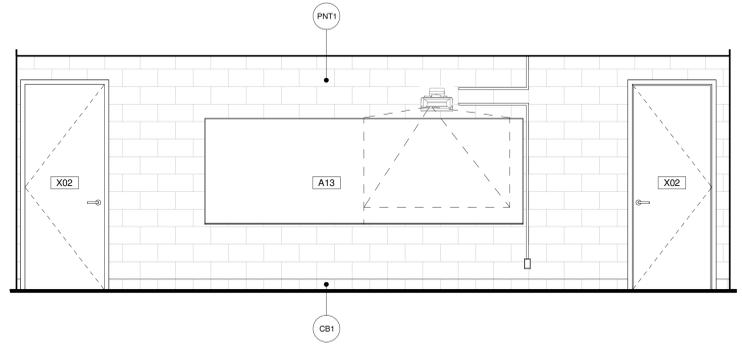
29 INTERIOR ELEVATION - LOCKER ROOM EAST
Scale: 3/8" = 1'-0"



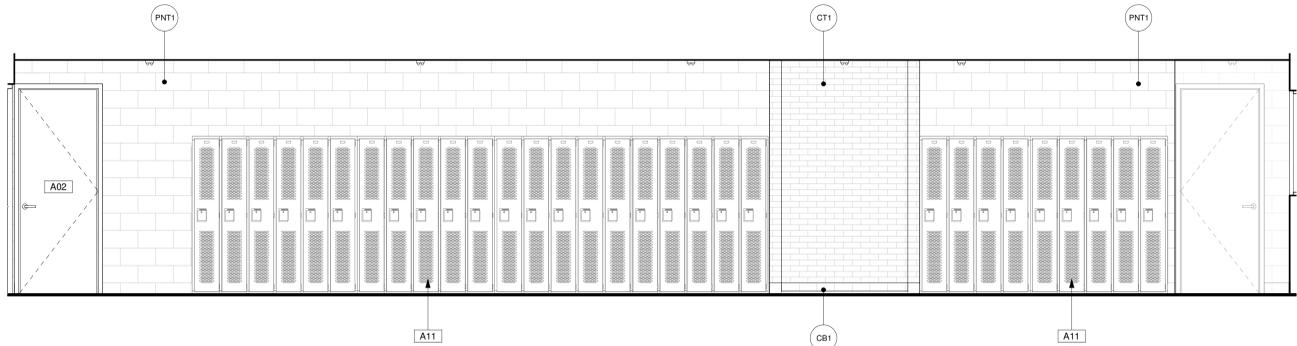
14 INTERIOR ELEVATION - LOCKER ROOM EAST
Scale: 3/8" = 1'-0"



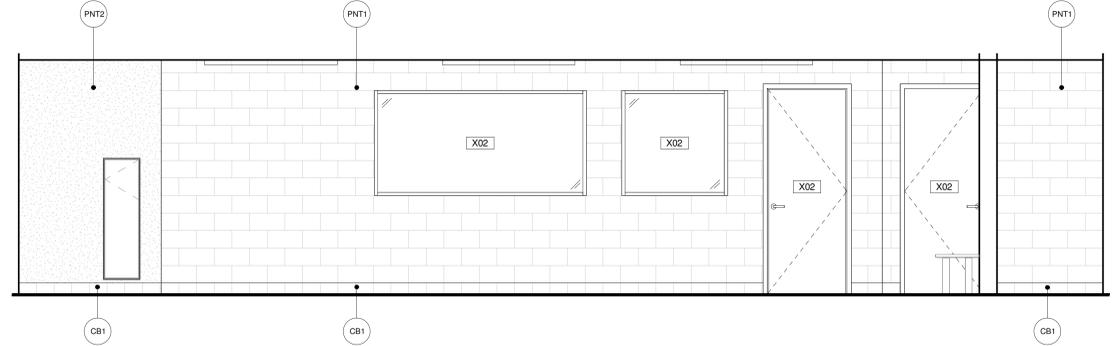
28 INTERIOR ELEVATION - LOCKER ROOM WEST
Scale: 3/8" = 1'-0"



13 INTERIOR ELEVATION - LOCKER ROOM WEST
Scale: 3/8" = 1'-0"



27 INTERIOR ELEVATION - LOCKER ROOM WEST
Scale: 3/8" = 1'-0"



12 INTERIOR ELEVATION - LOCKER ROOM WEST
Scale: 3/8" = 1'-0"

MARK	MATERIAL	COLOR	MANUF.	REMARKS
WALL				
GT1	Ceramic tile	White	Dal-Tile	-
PNT1	Paint (field)	White	Sherwin Williams	Paint over CMU walls
PNT2	Paint (field)	White	Sherwin Williams	-
WALL BASE				
CB1	Porcelain Tile Base	White	Dal-tile	-
FLOOR				
CF01	Ceramic tile	White	Dal-Tile	-
NSF1	Non-Slip Dur-A-Quartz Flooring	STANDARD - TBD	Dur-A-Flex	-



21 FINISH SCHEDULE
Scale: NTS

- A02 Provide new partition as specified. Re: partition types & finish schedule. (FIXW, HANDLE 2)
- A11 Provide metal lockers, one tier-full height, to match existing. Rehab and reuse relocated lockers when possible. Attach to walls as needed. Re: Specs. (HANDLE 2; FIXW; FIX 1)
- A13 Provide new wall mounted short through projector and markerboard screen. Re: Specs.
- A15 Provide new locker bench as specified. Bolt to floor as needed. Re: Specs & DWGs
- A16 Rehab existing lockers, locker bases and benches. Re: finish schedule, construction plan. (HANDLE 2; FIXW; FIX 1)
- X02 Existing door/window to remain in place. (PROTECT 1; HANDLE 2)

11 CONSTRUCTION KEYNOTES
Scale: NTS

- Dimension & Alignment Support Notes:**
- (ALIGN 1).....Align face of new construction w/face of existing.
 - (ALIGN 2).....Align centerline of new construction w/centerline of existing.
 - (ALIGN 3).....Align gridline/join grid w/existing grid.
 - (LEVEL 1).....Ensure top of new construction is level w/existing surface.
 - (LEVEL 2).....Level floor & surface to receive new construction.
 - (LEVEL 3).....Ensure the top of grade is level w/surrounding ground.
- Construction & Condition Support Notes:**
- (HANDLE 1).....Handle item w/care, and store for owner review.
 - (HANDLE 2).....Handle remaining building, pavement, fence, or item w/care.
 - (HANDLE 3).....Handle re-located items with care. DISCONNECT 1, FIXW, (FIXW).....Fix floor/wall/ceiling/item where construction was removed and prepare the area to receive new construction. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm system away from building.
 - (FIX1).....Fix floor/wall/ceiling/item where construction was removed and prepare the area to an acceptable condition for owner's use. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm system away from building.
 - (INFO1).....Inform Architect prior to the start of this work.
 - (CONNECT1).....Connect new construction to existing, ensure continuity and structural integrity. Ensure the top of new construction is level w/existing surface.
 - (CONNECT2).....Connect remaining item to the new structure, and ensure structural integrity while meeting local Codes. Handle remaining buildings, pavement, fences, and other items w/care.
 - (CONNECT3).....Connect new plumbing fixture to existing plumbing pipes' system, adjust pipes & blocking as needed for new location. Re: MEP DWGs.

06 SUPPORT NOTES
Scale: NTS

- Construction & Condition Support Notes Cont'd:**
- (DISCONNECT1) Disconnect and conceal all pipes, electrical cables, data cables, and conduits where construction is removed.
 - (ENGINEER1).....Professional engineering supervision is required for this work.
 - (SHOP1).....Provide shop drawings for this work.
 - (REFERENCE).....Refer to photo # for the existing condition at this location.
 - (SLOPE1).....Maintain positive slope towards drains, gutters, and storm systems and away from the building. Ensure maximum slope in all directions of 1:48 (2% within accessible clearances; maximum 1:48 (2%) cross slope at sidewalks; maximum 1:20 (5%) running slope at sidewalks.
 - (PROTECT1).....Protect item(s) to remain, including any buildings, furniture, sidewalks, roofs, utilities, and other items during the Demolition and Construction phases. Maintain safe and unrestricted egress routes from areas adjacent to the Demolition site. Comply with all Applicable Codes.
 - (EGRESS).....
 - (OPERATE).....Ensure all routes and utilities required for owner's use of and operations on site are protected. Owner's use of site shall not be interrupted.
 - (ENSURE1).....Ensure all slopes to drain as intended, and that downspouts indicated to remain are protected to maintain normal flow at all times during demolition and construction. Protect items to remain including any buildings, furniture, sidewalks, roofs, utilities, and other items during demolition and construction.
 - (ENSURE2).....Ensure system is water-tight. Provide additional flashing & sealants as needed.
 - (ENSURE3).....Ensure the slope of the new roof matches the slope and slope direction of the existing roof.



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PROFESSIONAL SEAL:



A PROJECT FOR:

**SMSD
LOCKER
ROOMS
RENOVATION**

1625 Staffordshire Rd,
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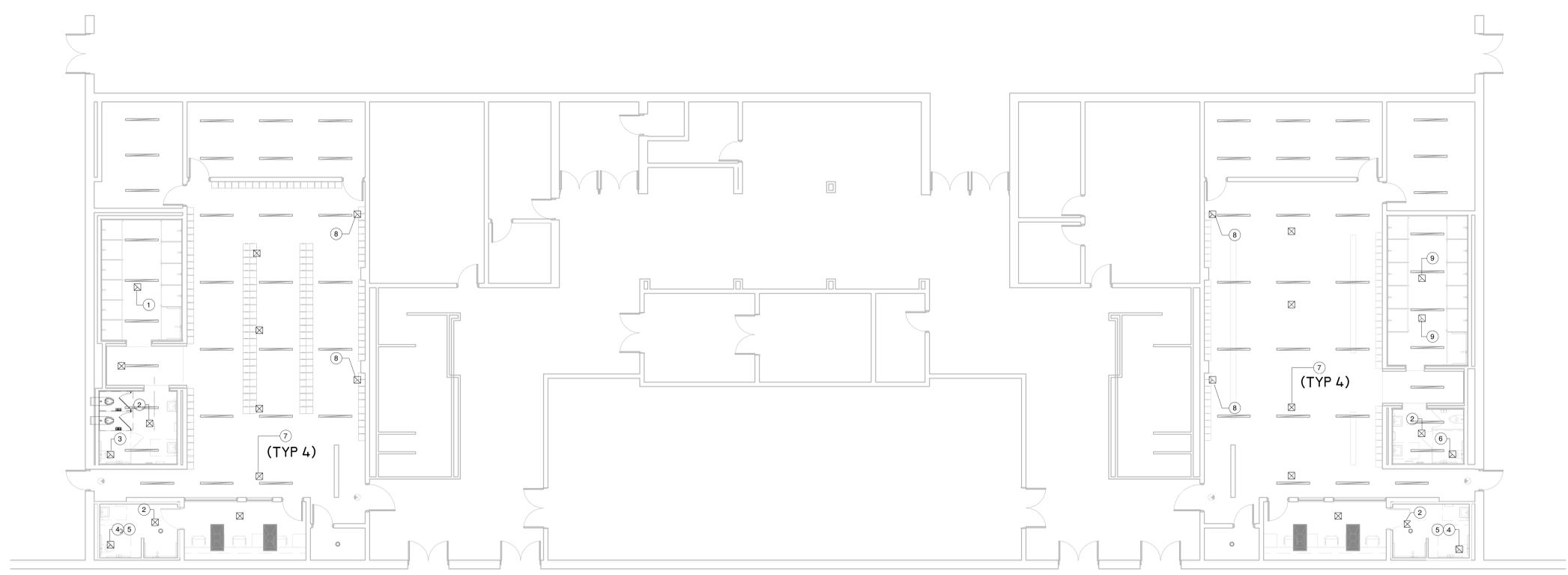
#	Date	ISSUED FOR
1	2020/07/14	ISSUED FOR BID, PERMIT AND CONSTRUCTION
2	2020/07/17	ISSUED FOR BID



Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	FLOOR PLAN - HVAC - PROPOSED

Drawing Number **M2.02**

KEYNOTE LEGEND	
1	ADJUST AIRFLOW RATE TO 220 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSISTUOUSLY WHEN SPACE IS OCCUPIED.
2	ADJUST AIRFLOW RATE TO 50 CFM.
3	ADJUST AIRFLOW RATE TO 150 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSISTUOUSLY WHEN SPACE IS OCCUPIED.
4	ADJUST AIRFLOW RATE TO 100 CFM.
5	RELOCATE EXISTING GRILLE AS SHOWN. MODIFY DUCTWORK AS REQUIRED.
6	ADJUST AIRFLOW RATE TO 100 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSISTUOUSLY WHEN SPACE IS OCCUPIED.
7	EXISTING SUPPLY DIFFUSER TO REMAIN.
8	EXISTING EXHAUST GRILLE TO REMAIN.
9	ADJUST AIRFLOW RATE TO 110 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSISTUOUSLY WHEN SPACE IS OCCUPIED.



1 FLOOR PLAN - PROPSOED - HVAC
Scale: 1/8" = 1'-0"

ELECTRICAL GENERAL NOTES AND SPECIFICATIONS

(BOOKS SPECIFICATIONS SUPERCEDE ANY NOTES BELOW)

- SCOPE: THIS DIVISION SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED FOR COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM. PROJECT INCLUDES INSTALLATION OF NEW ELECTRICAL DISTRIBUTION SYSTEM, HVAC SYSTEM CONNECTIONS, NEW LIGHTING SYSTEM, NEW RECEPTACLES AND OUTLETS, FIRE ALARM AND NOTIFICATION SYSTEM, AND OTHER ELECTRICAL WORK AS INDICATED ON THE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS, CONDUCTORS FOR POWER, CONTROLS, AND LIGHTING, LIGHTING CONTACTOR AND CONTACT CLOSURES, AND ALL REQUIRED APPARATUS REQUIRED FOR FULL OPERATION OF THE ELECTRICAL SYSTEM.
- SITE VISIT AND FAMILIARIZATION: CONTRACTORS PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK, AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF. CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS AS RELATED TO THE SITE CONDITIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- NOTICE: CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL SHALL CONVEY FULL AGREEMENT TO ALL ITEMS AND CONDITIONS SPECIFIED, INDICATED ON THE DRAWINGS, AND/OR REQUIRED BY NATURE OF THE SITE.
- DISCREPANCIES: SHOULD CONTRACTOR FIND DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OR BE IN DOUBT AS TO THE INTENT THEREOF, HE SHALL IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE SUBMITTING PROPOSAL FOR WORK IN THIS DIVISION.
- DEMOLITION: ALL ELECTRICAL COMPONENTS OF THE EXISTING SYSTEM WHICH ARE NOT UTILIZED FOR NEW CONFIGURATION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. REFER TO DEMOLITION NOTES AND DRAWINGS FOR EXTENT OF WORK.
- TIMELY PLACING OF MATERIALS AND EQUIPMENT: ALL ELECTRICAL APPARATUS SHALL BE INSTALLED AT THE PROPER TIME DURING PROGRESS OF CONSTRUCTION. COORDINATE WORK OPERATIONS WITH OTHER CRAFTS.
- SPACE REQUIREMENTS: CONTRACTOR SHALL ADVISE THIS DIVISION SHALL BE FULLY RESPONSIBLE FOR DETERMINING IN ADVANCE OF PURCHASE THAT EQUIPMENT AND MATERIALS PROPOSED FOR INSTALLATION SHALL FIT INTO THE CONFINES INDICATED.
- MANUFACTURERS' LITERATURE: DELIVER ALL PRINTED TAGS, INSTRUCTIONS, CERTIFIED DRAWINGS, PARTS LISTED, CERTIFICATES, ETC., SUPPLIED WITH EQUIPMENT ITEMS, TO THE OWNER.
- CODES, PERMITS, AND FEES: WORK UNDER THIS DIVISION SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH PERTINENT PROVISIONS OF CITY AND STATE BUILDING CODES.
 - ALL WORK SHALL COMPLY WITH THE 2017 EDITION OF NATIONAL ELECTRIC CODE (NEC).
 - OBTAIN ALL REQUIRED PERMITS. PAY ALL LEGAL FEES FOR PERMITS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.
 - ALL WORK SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- CUTTING AND PATCHING:
 - CONTRACTOR FOR THIS DIVISION SHALL LAYOUT TO DIMENSION AND LOCATIONS, CUT AND PATCH ALL OPENINGS ON SURFACES TO BE FORMED, FRAMED, OR CUT.
 - SHOULD CONTRACTOR FOR THIS DIVISION FAIL TO ADHERE WITH THIS REQUIREMENT, AS WORK PROGRESSES, ANY OPENINGS SHALL BE CUT AND PATCHED BY GENERAL CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR FOR THIS DIVISION.
- PROTECTION OF APPARATUS: TAKE ALL PRECAUTIONS NECESSARY FOR PROPER PROTECTION OF NEW EQUIPMENT, APPARATUS, AND MATERIALS FROM DAMAGE. FAILURE TO DO SO WILL BE CAUSE FOR REJECTION OF ANY ITEM COMING UNDER QUESTION.
- SHOP DRAWINGS: CONTRACTOR FOR THIS DIVISION SHALL SUBMIT SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS AND OTHER MATERIAL REQUESTED BY ARCHITECT/ENGINEER. SUBMIT PROJECT DATA FOR SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, WIRES, CABLE, SUPPORTING DEVICES, IDENTIFICATION COMPONENTS, LIGHT FIXTURES, FIRE ALARM SYSTEM AND COMPONENTS, WIRING DEVICES, MULTI-OUTLET REACKWAYS, CABINETS, AND BOXES. SUBMIT SIX COPIES WITHIN THIRTY (30) DAYS AFTER CONTRACT AWARD, AND IN NO MORE THAN TWO GROUPS OF SUBMITTALS. SUBMITTALS SHALL CONSIST OF LAYOUTS, WORKING DRAWINGS, CUTS, AND OPERATING AND PERFORMANCE DATA. ALLOW FOUR (4) WEEKS FOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS BY ENGINEER.
- MATERIALS AND WORKMANSHIP: ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OF BEST GRADE OF STANDARD MANUFACTURE, APPROVED BY UL, AND BE SO LABELED, FOR WIRE AND CABLE, MARKED AS REQUIRED BY ART. 310-2, NEC. INSTALLED BY SKILLED ELECTRICAL WORKMEN UNDER THE DIRECT SUPERVISION OF COMPETENT EXPERIENCED FOREMAN AND/OR SUPERINTENDENT. PRODUCTS SHALL BE INSTALLED IN A THOROUGH WORKMANLIKE MANNER, PRESENTING A NEAT, CLEAN-CUT APPEARANCE WHEN COMPLETED. ANY PART OR PARTS NOT MEETING THIS REQUIREMENT SHALL BE REPLACED OR REBUILT WITHOUT EXTRA EXPENSE TO OWNER.
- PROTECTION OF EXISTING: PLENUM CABLE SHALL BE PROPERLY SECURED ABOVE CEILING PER APPLICABLE CODES.
- WIRING METHODS: THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE LOCATIONS OF EQUIPMENT AND ARRANGEMENT OF CIRCUITS ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY ACTUAL MEASUREMENT AT THE SITE. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL RISES, DROPS, OFFSETS, ETC., NECESSARY TO AVOID CONFLICT WITH STRUCTURAL MEMBERS, AND SIMILAR ITEMS, WHEN INSTALLING ELECTRICAL CONDUITS. INSTALL EXPOSED CONDUIT AS SHOWN OR NOTED, PARALLEL TO HORIZONTAL AND VERTICAL LINES OF STRUCTURES. MAKE BENDS WITH 90 DEGREE TURN ONLY, OR WITH APPROVED FITTINGS.
- CONDUIT: FURNISH A COMPLETE RACKWAY SYSTEM FOR BUT NOT LIMITED TO FEEDER, BRANCH CIRCUITS, CONTROL WIRING, AND AUXILIARY SYSTEM WIRING.
 - USE LIQUID TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR ALL MOTORIZED CONNECTIONS, WHERE EQUIPMENT IS SUBJECT TO MOVEMENT, OR LOCATED OUTDOOR.
 - WHERE ENTERING PANELS, PULL BOXES, J-BOXES, OR OUTLET BOXES, SECURED IN PLACE WITH WITH LOCK-NUTS INSIDE AND OUTSIDE, AND INSULATED BUSHING INSIDE.
 - BENDS AND OFFSETS MADE WITH APPROVED TOOLS ONLY. BENDS OR OFFSETS IN WHICH THE PIPE IS CRUSHED OR DEFORMED SHALL NOT BE INSTALLED.
 - USE EMT FOR INTERIOR DRY LOCATIONS, PVC FOR UNDERGROUND INSTALLATION, AND RIGID GALVANIZED STEEL FOR EXPOSED LOCATIONS SUBJECT TO DAMAGE.
- OUTLET AND JUNCTION BOXES: FURNISH AND INSTALL ALL JUNCTION BOXES REQUIRED TO FACILITATE INSTALLATION OF THE VARIOUS CONDUIT SYSTEMS. JUNCTION BOXES SHALL BE SUITABLE FOR ENVIRONMENT AND APPLICATION USED FOR.
- WIRE AND CABLE: ALL WIRE AND CABLE SHALL:
 - BE NEW AND OF SOFT DRAWN, ANNEALED, COPPER HAVING A CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER, EACH WIRE CONTINUOUS WITHOUT WELD, SPLICE OR JOINT THROUGHOUT ITS LENGTH, UNIFORM IN CROSS SECTION AND FREE FROM FLAWS, SCALES, AND OTHER IMPERFECTIONS.
 - UNLESS OTHERWISE SPECIFIED OR NOTED, WIRES SHALL BE #12 AWG (FOR PHASE, NEUTRAL, AND GROUND CONDUCTORS) TYPE THW, THWN, THHN, AS MANUFACTURED BY TRIANGLE GENERAL ELECTRIC, OKONITE, OR ANACONDA.
 - ALL WIRE #8 AND LARGER SHALL BE STRANDED.
 - NOT BE DRAWN INTO A CONDUIT UNTIL ALL WORK WHICH MAY CAUSE INJURY TO INSULATION IS COMPLETE, WHERE TWO OR MORE CIRCUITS RUN TO A SINGLE OUTLET BOX, TAG EACH CIRCUIT AS A GUIDE.
 - HAVE ALL STRANDED CONDUCTORS FURNISHED WITH COPPER CONNECTING LAINS, DRILLED, OR REAMED THE FULL DIAMETER OF THE BARE CONDUCTORS. MAINS AND FEEDERS SHALL BE RUN THEIR ENTIRE LENGTH IN CONTINUOUS PIECES WITHOUT JOINTS OR SPLICES.
- IDENTIFICATION OF CONDUCTORS AND PANELBOARD ELEMENTS:
 - EACH AND EVERY MAIN AND FEEDER CONDUCTOR SHALL BE IDENTIFIED AT EACH OUTLET POINT WHERE SUCH CONDUCTOR TERMINATES. FEEDER BUNDLES PASSING THROUGH A JUNCTION OR SUPPORT BOX SHALL ALSO BE IDENTIFIED WITHIN SUCH ENCLOSURE, BUT MAY BE IDENTIFIED IN SUCH LOCATIONS AS A GROUP.
 - IDENTIFY BY USE OF PERMANENT TYPE BANDS, BRADY, OR T AND B. A DEFINITE NUMBER AND/OR LETTER CODE SHALL BE EMPLOYED AND BE UNIFORM THROUGHOUT EACH CONDUCTOR.
 - IDENTIFY EACH SWITCH, INCLUDING MAIN DISCONNECT AND MOTOR STARTER WITH WHITE-ON-BLACK NAMEPLATE, EACH HAVING 1/4" HIGH LETTERS, NEATLY AND SECURELY ADHERE NAMEPLATES TO THE UNIT.
- SWITCHES: FURNISH AND INSTALL ALL FUSIBLE AND NON-FUSIBLE SWITCHES AS REQUIRED BY CODES, WHETHER OR NOT SHOWN AND/OR NOTED. SWITCHES SHALL BE:
 - HEAVY DUTY WITH NEMA-1 OR 3R ENCLOSURE, AS REQUIRED, AND BE PROVIDED WITH PAD-LOCKING FEATURE.
 - PROVIDED AT EACH MOTOR THAT IS OUT OF SIGHT OF THE SWITCH OR PANEL FROM WHICH FED, AND BE NON-FUSIBLE DISCONNECT FOR SUCH USE.
 - SWITCH MANUFACTURER SHALL BE GE, WESTINGHOUSE, OR SQUARE D.
 - DISCONNECT SWITCHES INSTALLED OUTSIDE THE BUILDING SHALL BE IN NEMA-3 ENCLOSURES.
 - FUSIBLE SWITCH-STARTER UNITS: EACH UNIT SHALL BE TOTALLY ENCLOSED AND EFFECTIVELY BARRIRED, MANUALLY OPERATED QUICK-MAKE, QUICK-BREAK, HORSEPOWER RATED STARTER. PROVIDE CLASS R TYPE REJECTION FUSE CLIPS.
 - IDENTIFY EACH DEVICE WITH NAMEPLATE SHOWING THE LOAD SERVED, MATCHING THE EXISTING NAMEPLATES.
- WIRING DEVICES: FURNISH AND INSTALL ALL WIRING DEVICES AS INDICATED ON THE DRAWINGS. DEVICES SHALL IN ALL CASES BE SUITABLE FOR THE USE INTENDED AND SHALL HAVE VOLTAGE AND CURRENT RATINGS ADEQUATE FOR THE LOADS TO BE SERVED.
 - MOUNTING: HEIGHTS OF ALL DEVICES ARE FROM FINISH FLOOR TO CENTERLINE OF DEVICE. DEVICES SHOWN ON THE DRAWINGS IN GROUPS OF TWO OR MORE SHALL BE LOCATED HORIZONTALLY IN SUCH A MANNER AS TO BE CLOSE AS POSSIBLE FROM THE CENTERLINE OF THE FIRST DEVICE TO THE CENTERLINE OF THE NEXT DEVICE UNLESS OTHERWISE NOTED. "KEYED" SWITCHES IN LOCATIONS INDICATED.
 - CONVENIENCE OUTLETS: SHALL BE GRONDING TYPE, 20 AMP, 125 VOLT, LEVITON, WHITE COLOR, WEATHERPROOF DUPLEX OUTLETS SHALL BE LEVITON 532 WITH SIERRA NO. WPD-8 PLATE, MOUNT AT 18" A.F.F. UNLESS OTHERWISE NOTED. PROVIDE NEMA 3-20R DEVICES UNLESS OTHERWISE INDICATED. PROVIDE SPECIFICATION (SPEC) GRADE HEAVY DUTY STRAIGHT BLADE DEVICES UNLESS OTHERWISE NOTED. PROVIDE HOSPITAL GRADE DEVICES WHERE INDICATED, OR AS REQUIRED BY CODES.
 - ACCEPTABLE ALTERNATE MANUFACTURERS: SHALL BE LSI, H.E. WILLIAMS, HUBBELL, P&S AND BRYANT. PROVIDED THEIR DEVICES ARE OF THE SAME TYPE AND QUALITY AND THAT ONLY ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK.
 - PLATES: SHALL BE MATCHING TYPE FOR FINISHED AREAS AND GALVANIZED STEEL FOR AREAS WITH EXPOSED CONDUIT. PROVIDE STAINLESS STEEL PLATES FOR FLUSH MOUNTED DEVICES. PROVIDE CAST ALUMINUM WET LOCATION TYPE COVER PLATES WITH HINGED COVERS FOR DEVICES LOCATED OUTSIDE. GANG OUTLETS GROUPED TOGETHER UNDER A SINGLE WALL PLATE.
 - INCANDESCENT DIMMERS: 120V SLIDE TO OFF, DECORA STYLE SIMILAR TO SWITCHES, WITH WATTAGE AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. POWER FAILURE MEMORY, RFI SUPPRESSION, WHERE SWITCHES ARE SHOWN NEXT TO DIMMERS, PROVIDE MULTI-GANG COVER PLATES. PROVIDE DIMMERS WITH IVORY FINISH, SAME AS SWITCHES UNLESS OTHERWISE DIRECTED.
 - INSTALL WIRING DEVICES AND ACCESSORIES PLUMB AND LEVEL, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS. TIGHTEN CONNECTORS AND TERMINAL LOCATION TYPE COVER PLATES WITH HINGED COVERS WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE VALUES FOR WIRING DEVICES.
 - COORDINATE WITH OTHER WORK, INCLUDING PAINTING, ELECTRICAL BOXES AND WIRING INSTALLATIONS, AS NECESSARY TO INTERFACE INSTALLATION OF WIRING DEVICES WITH OTHER WORK.
 - INSTALL WIRING DEVICES AFTER WIRING IS COMPLETED. INSTALL ONLY IN ELECTRICAL BOXES THAT ARE CLEAN, FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS.
 - INSTALL WALL PLATES AFTER PAINTING WORK IS COMPLETED.
 - NO RECEPTACLE OR SWITCH OUTLET SHALL BE MOUNTED BACK TO BACK, A MINIMUM OF ONE (1) STUD MUST BE BETWEEN OUTLETS.
 - INSTALL RECEPTACLES WITH GROUND PIN UP. INSTALL SWITCHES WITH THE "ON" POSITION UP.
 - ALL EXTERIOR DEVICES TO BE WEATHER PROOF AND EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE.
 - ALL 120-VOLT RECEPTACLES OUTLETS LOCATED WITHIN SIX FEET OF SINKS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION. GROUND FAULT OUTLETS SHALL BE CONNECTED ON DEDICATED NEUTRAL WIRE SERVING ONLY THE INDIVIDUAL OUTLET WITH THE GROUND FAULT PROTECTION.
 - USE JUMBO SIZE WALL PLATES FOR OUTLETS INSTALLED IN MASONRY WALLS. DO NOT SHARE NEUTRAL CONDUCTORS ON THE SAME CIRCUIT.
 - PANELBOARD: PANELBOARDS SHALL BE GE TYPE AL, AQ, OR AE OR APPROVED EQUAL. REFER TO CONSTRUCTION DOCUMENTS FOR THE TYPE AND NUMBER OF BRANCH CIRCUIT BREAKERS. ALL PANELBOARD BUSING SHALL BE COPPER. PANELBOARDS SHALL BE IN OUTDOOR ENCLOSURE WHERE INSTALLED OUTDOOR. MINIMUM INTERRUPTER RATING FOR PANELS SHALL BE AS INDICATED ON DRAWINGS.
 - TRANSFORMERS: DRY TYPE, TWO-WINDING OF THE SIZE AND ELECTRICAL CHARACTERISTICS SHOWN AND SCHEDULED ON DRAWINGS. TRANSFORMERS SHALL BE EQUIPPED WITH 2-1/2% TAPS ABOVE AND BELOW RATING. TRANSFORMERS SHALL HAVE A BONDING JUMPER INSTALLED BETWEEN THE SECONDARY NEUTRAL TERMINAL AND METAL CASE, AND SHALL INCLUDE A GROUND TERMINAL OF PROPER SIZE TO RECEIVE GROUND CONDUCTOR. TRANSFORMERS SHALL BE RATED AT FULL LOAD IN A 40°C AMBIENT WITH 50°C ULTIMATE HOT SPOT TEMPERATURE RISE ALLOWANCE, WITH CLASS F INSULATION HAVING A UL 185°C RATING LIMITING SYSTEM TEMPERATURE TO 155°C ON UNITS SMALLER THAN IS KVA AND CLASS H INSULATION HAVING UL 220°C RATING LIMIT SYSTEM TEMPERATURE TO 150°C ON IS KVA AND LARGER UNITS. PROVIDE COPPER WINDINGS.
 - FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).
 - GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.
 - OTHER MATERIALS: FURNISH AND INSTALL ALL OTHER MATERIALS SUCH AS HARDWARE, TAPE, CLAMPS, CONNECTORS, FITTINGS, SUPPORTS, AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE THE WORK TO THE FULL INTENT OF THE CONTRACT. TERMINAL LUGS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
 - ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR STUB-UPS FOR THE MECHANICAL HVAC SYSTEM. REFER TO MECHANICAL PRINTS FOR SENSOR QUANTITY AND LOCATIONS.
 - ELECTRICAL CONTRACTOR WILL CONNECT ALL LOW VOLTAGE PLUMBING CONTRACTOR SUPPLIED TRANSFORMERS (FOR AUTOMATIC FLUSH) TO THE NEAREST 120V CIRCUIT (OR IF INDICATED ON PLANS WITH A CIRCUIT NUMBER). CONTRACTOR TO ASSUME ONE TRANSFORMER PER BATHROOM. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO THE FIXTURES. SWITCHGEAR AND DISTRIBUTION PANELS: SHALL BE FIELD LOCATED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT. NEC 101.6.
 - ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL LTD'S (GENERATOR TRANSFER DEVICES), LIGHTING CONTROL EQUIPMENT, LOW VOLTAGE TRANSFORMERS AND OTHER ELECTRICAL ITEMS WHICH ARE ABOVE CEILING. THESE DEVICES SIMILAR TO ELECTRICAL JUNCTION BOXES ARE NOT ALLOWED BY NEC TO BE ABOVE HARD CEILING. THE ARCHITECT/OWNER WILL NOT ALLOW THE INSTALLATION OF ACCESS PANELS IN THE CEILING. BE AWARE THAT EQUIPMENT IN THOSE AREAS OF HARD CEILINGS WILL HAVE TO BE REMOTELY LOCATED TO THE NEAREST ACUSTICAL LAY-IN CEILING AREAS.
 - ELECTRICAL MATERIAL AND EQUIPMENT: NO ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE. THE LAWS OF THE STATE OF TEXAS AND ANY APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THE STATE STATUTES, THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL, SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.
 - ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT ROUTINGS TO ANY MECHANICAL ROOF TOP EQUIPMENT AND ROUTE THE CONDUIT THRU THE EQUIPMENT CURB SO THERE IS NOT A SEPARATE ROOF PENETRATION.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ABBREVIATION DEFINITIONS
	HOME RUN TO PANEL HA, CIRCUITS 1, 3, 5		LIGHTING CLASS PANEL	ZSIW TWO-SPEED, ONE-WINDING MOTOR
	ROUND LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE		DISTRIBUTION CLASS PANEL	(A) TWO-SPEED, TWO-WINDING MOTOR
	ROUND WALL-MOUNTED LUMINAIRE SUSPENDED FROM SIDE ARM		WEATHER HEAD FOR CONNECTING OVER HEAD CONDUCTORS	(A) ABANDONED TO REMOVE
	EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, 1 OR 2 FACE, UNIVERSAL MOUNT		FIRE ALARM MANUAL PULL STATION WITH TAMPER COVER	(A) PHASE "A" IN THREE-PHASE SYSTEM
	EMERGENCY EGRESS ONLY LUMINAIRE SURFACE MOUNTED FROM BACK		FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED	(A) AMPERES
	MOTOR, SINGLE OR THREE PHASE HP = HORSE POWER		FIRE ALARM HEAT DETECTOR, CEILING MOUNTED	(A) ARC FAULT CIRCUIT INTERRUPTER
	NEMA 5-20R DUPLEX RECEPTACLE, MOUNTED 18" AFF (UON)		FIRE ALARM DUCT-MOUNTED SMOKE DETECTOR	(A) ABOVE FINISHED FLOOR
	JUNCTION BOX		FIRE ALARM SUPERVISORY SHUTDOWN RELAY	(A) AMPERE TRIP SETTING
	CEILING OR WALL MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL WITH PASSIVE INFRARED AND ULTRASOUND DUAL TECHNOLOGY, 20 A RATED		FLUSH FLOOR BOX WITH WIRING DEVICES AS INDICATED ON PLANS	(A) PHASE "B" IN THREE-PHASE SYSTEM
	TV OUTLET 1-GANG BACKBOX, 4x2" AFF (UON), SS-302 COVER 1" C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR		FIRE ALARM FIRE-WATER TAMPERS SWITCH	(A) BELOW FINISHED CEILING
	WALL TELEPHONE OUTLET 1-GANG BACKBOX, 4x2" AFF (UON), SS-302 COVER 1" C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR		FIRE ALARM AUDIO/VISUAL HORN/STROBE	(A) BELOW FINISHED FLOOR
	DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR. XX - DENOTES NUMBER OF CABLES		FIRE ALARM VISUAL STROBE	(A) AMPERE TRIP DELAY
	EMERGENCY POWER OFF, MUSHROOM HEAD, MAINTAINED CONTACT PUSH BUTTON		FIRE ALARM SPEAKER	(A) PHASE "C" IN THREE-PHASE SYSTEM
	PHOTOELECTRIC SENSOR AIMED NORTH		FIRE ALARM CONTROL PANEL	(A) CONDUIT
	TIME CLOCK, ASTRONOMIC/MULTI-POLE CONTACTOR		FIRE ALARM REMOTE ANNUNCIATOR PANEL	(A) CIRCUIT BREAKER
	POWER COMPANY POWER METER		PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED WALL-MOUNTED VOLUME CONTROL ADJACENT TO LIGHT SWITCH (UON)	(A) CONSTANT HORSE POWER (ZSIW MOTOR)
	LIGHTING CONTACTOR		PUBLIC ADDRESS INTERCOM CALL BUTTON, WALL-MOUNTED 42" AFF	(A) CIRCUIT
	CIRCUIT BREAKER, MOLDED-CASE, THERMO-MAGNETIC (UON)		INTRUSION ALARM MOTION DETECTOR	(A) COMBINATION STARTER (MOTOR STARTER / DISCONNECT)
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		INTRUSION ALARM NUMERIC KEY-PAD	(A) CURRENT TRANSFORMER
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		INTRUSION ALARM DOOR CONTACTOR	(A) EXISTING TO BE DEMOLISHED OR REMOVED
	DISCONNECT SWITCH		ACCESS CONTROL CARD READER	(A) DISCONNECT SWITCH
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		ACCESS CONTROL MAGNETIC DOOR LOCK	(A) EXISTING TO REMAIN
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		ACCESS CONTROL DOOR HOLD-OPEN	(A) ELECTRICAL METALLIC TUBING
	DISCONNECT SWITCH		TRANSFORMER + TLA TRANSFORMER NAME TYPE + TRANSFORMER TYPE (E.G. DRY-TYPE, HARMONIC-MITIGATING...)	(A) ELECTRONIC POWER METER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS, VFCI	(A) FIRE ALARM ANNUNCIATOR PANEL
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS, VFCI	(A) FIRE ALARM ANNUNCIATOR PANEL
	DISCONNECT SWITCH		WEATHER PROOF AMERICAN WIRE GAGE	(A) FULL VOLTAGE NON-REVERSING GROUND
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		POWER FACTOR CORRECTION CAPACITOR	(A) GROUND
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		POTENTIAL TRANSFORMER	(A) GROUND FAULT CIRCUIT INTERRUPTER
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) HARMONIC-MITIGATING TRANSFORMER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) HAND / OFF / AUTO SWITCH (FOR FVNR CONTACTOR)
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) HIGH / LOW / OFF / AUTO (FOR ZSIW OR ZSEM CONTACTOR)
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) ISOLATED GROUND
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) JAMMING RATIO
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) KILO AMPERE INTERRUPTING CAPACITY
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) KILO CIRCULAR MILS
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) KILO VOLT AMPERES COMPLEX OR APPARENT POWER
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) KILO VOLT AMPERES REACTIVE POWER
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) KILOWATT REAL POWER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) LEG 1 IN SINGLE-PHASE SYSTEM < 250 VAC
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) LEG 2 IN SINGLE-PHASE SYSTEM < 250 VAC
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) LONG TERM, SHORT TERM, INSTANTANEOUS, AND GROUND-FAULT MAIN CIRCUIT BREAKER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) MOTOR CONTROL CENTER MAIN LUGS ONLY
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) NEW
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) NEUTRAL
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) NATIONAL ELECTRICAL CODE (NFPA 70)
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) NON-FUSIBLE
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) NATIONAL FIRE PROTECTION ASSOCIATION
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) NON-SWITCHED HOT LEG
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) OWNER FURNISHED, CONTRACTOR INSTALLED
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) OCCUPANCY SENSOR
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) P
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) POWER FACTOR
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) POWER FACTOR CORRECTION CAPACITOR
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) POLY VINYL CHLORIDE
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) POTENTIAL TRANSFORMER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) RIGID ALUMINUM
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) RIGID GALVANIZED STEEL
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) SECTION OF LIGHTING-CLASS PANEL
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS UNLESS OTHERWISE SPECIFIED, SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSHING TYPE FWH-R (200V), AND FHS-R (600V).		RIGID GALVANIZED STEEL	(A) SURGE PROTECTION DEVICE
	GROUNDING: ALL CONDUIT WORK, MOTOR STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250.		RIGID GALVANIZED STEEL	(A) STAINLESS STEEL, "XXX" = AUSTENITIC ALLOY TYPE (E.G. 304)
	DISCONNECT SWITCH		RIGID GALVANIZED STEEL	(A) SHUNT-TRIP FOR CIRCUIT BREAKER
	FUSES: FUSES IN MAIN FEEDER, AND BRANCH			

