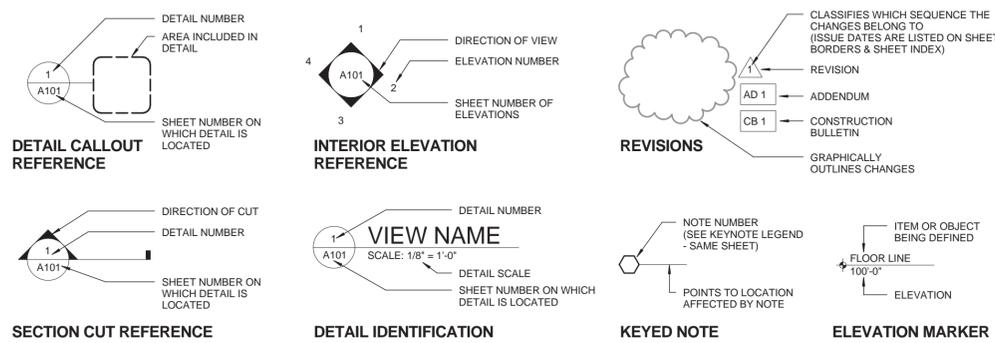


SYMBOLS LEGEND



LOCATION MAP

SHEET INDEX

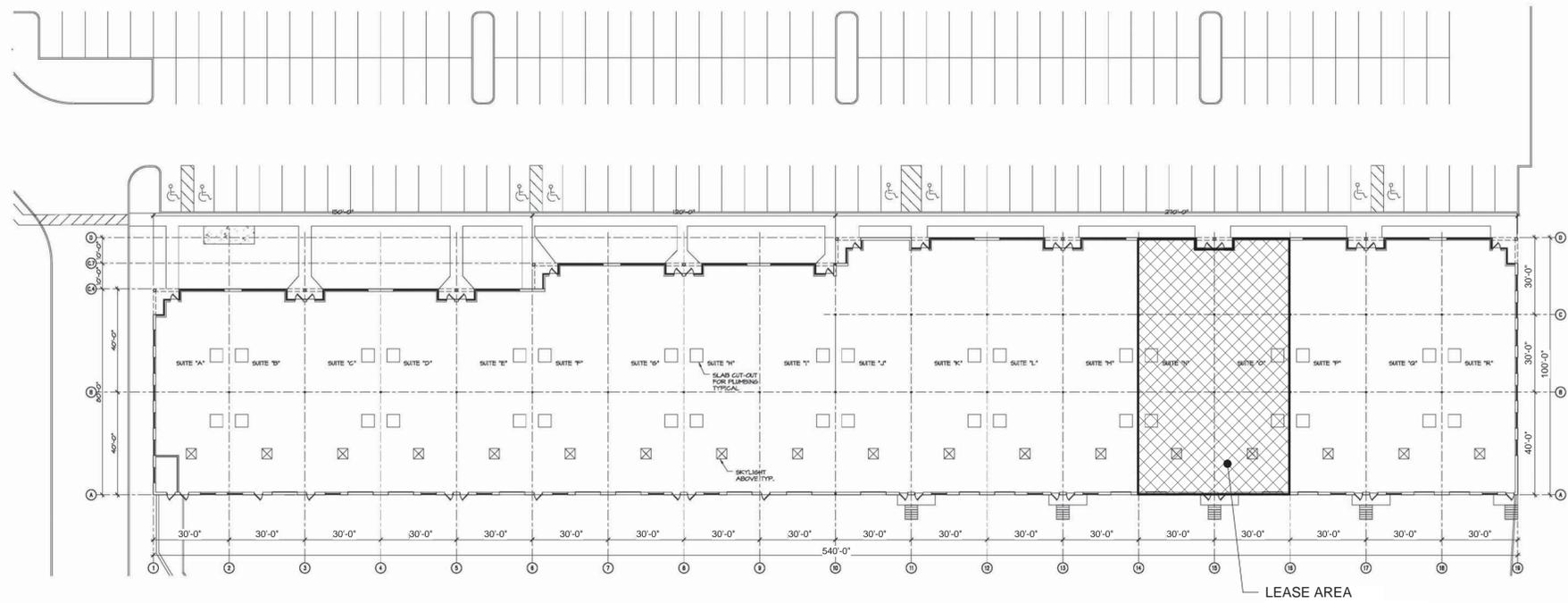
NUMBER	SHEET NAME / DESCRIPTION	SHEET ISSUE DATE	LATEST SHEET REVISION	
			NUMBER	DATE
GENERAL				
T1.0	TITLE SHEET	OCTOBER 15, 2015		
T2.0	GENERAL BUILDING SPECIFICATIONS	OCTOBER 15, 2015		
T2.1	GENERAL BUILDING SPECIFICATIONS	OCTOBER 15, 2015		
ARCHITECTURAL				
A1.1	FIRST FLOOR PLAN	OCTOBER 15, 2015		
A6.0	SCHEDULES	OCTOBER 15, 2015		
FIRE PROTECTION				
FP1.0	SCHEDULES, DETAILS, AND SPECIFICATIONS	OCTOBER 15, 2015		
FP1.1	FLOOR PLAN	OCTOBER 15, 2015		
PLUMBING				
P0.1	LEGEND AND GENERAL SCHEDULES	OCTOBER 15, 2015		
P0.2	SCHEDULES	OCTOBER 15, 2015		
P0.3	SPECIFICATION	OCTOBER 15, 2015		
P1.1	FLOOR PLAN	OCTOBER 15, 2015		
P2.0	ISOMETRICS	OCTOBER 15, 2015		
P3.0	DETAILS	OCTOBER 15, 2015		
HVAC				
H1.1	HVAC FLOOR PLAN	OCTOBER 15, 2015		
ELECTRICAL				
E0.1	ELECTRICAL SCHEDULE & LEGEND	OCTOBER 15, 2015		
E0.2	ELECTRICAL FLOOR PLAN	OCTOBER 15, 2015		

PROJECT INFORMATION

THIS PROJECT IS AN INTERIOR BUILD-OUT OF AN EXISTING TENANT FACILITY. TENTANT SPACE IS 5,760 S.F. OF THE 49,800 S.F. EXISTING BUILDING. THERE ARE NO CHANGES TO THE BUILDINGS EXISTING STRUCTURAL COMPONENTS AND NO ADDITIONAL LOADS HAVE BEEN ADDED TO ROOF FRAMING.

THE EXISTING FACILITY IS TYPE IIB CONSTRUCTION, 'B' MOST RESTRICTIVE OCCUPANCY, FULLY SPRINKLERED FACILITY WITH 1HR. TENANT SEPERATIONS.

ALL EGRESS COMPONENTS, SANITARY FACILITIES, AND BUILDING COMPONENTS ARE IN COMPLIANCE WITH CURRENT IBC CODES.



BUILDING LEASE PLAN
 SCALE: 1/8" = 1'-0"

GENERAL BUILDING SPECIFICATIONS

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

00 72 00 GENERAL CONDITIONS

- A. SEE MAAS BROTHERS' CONSTRUCTION INC. CONTRACT MANUAL FOR CONTRACT, INSURANCE, SAFETY, AND OWNER REQUIREMENTS.

DIVISION 01 GENERAL REQUIREMENTS

01 11 00 SUMMARY OF WORK

- A. THE PLANS AND SPECIFICATIONS ARE INTENDED TO GIVE A DESCRIPTION OF THE WORK. NO DEVIATION FROM THE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF EXCEL ENGINEERING, INC. THE CONTRACTOR IS TO CLARIFY ANY DISCREPANCIES WITH EXCEL ENGINEERING, INC. PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS AND ACCESS TO THE WORK AREA.

01 25 13 PRODUCT SUBSTITUTION PROCEDURES

- A. REFERENCE TO MATERIALS OR SYSTEMS HEREIN BY NAME, MAKE OR CATALOG NUMBER IS INTENDED TO ESTABLISH A QUALITY STANDARD, AND NOT TO LIMIT COMPETITION. THE WORDS "OR APPROVED EQUIVALENT" ARE IMPLIED FOLLOWING EACH BRAND NAME/MODEL NUMBER UNLESS STATED OTHERWISE. "OR APPROVED EQUIVALENT" MATERIALS SHALL BE APPROVED BY EXCEL ENGINEERING, INC. PRIOR TO BIDS BEING ACCEPTED AND ACCEPTANCE FOR USE. PROVIDE A LETTER FROM THE MANUFACTURER CERTIFYING THAT THE PRODUCT MEETS OR EXCEEDS THE SPECIFIED PRODUCT.

01 31 00 PROJECT MANAGEMENT AND COORDINATION

- A. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR AND SHALL HAVE CONTROL OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND SAFETY PRECAUTIONS AND PROCEDURES USED TO CONSTRUCT THE WORK.
- B. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL (INCLUDING TAXES) AND EQUIPMENT AS NECESSARY TO COMPLETE THE WORK. PERMITS SHALL BE OBTAINED AND PAID FOR BY THE RESPECTIVE CONTRACTOR, INCLUDING TEMPORARY OCCUPANCY PERMIT IF REQUIRED.
- D. ALL "REQUEST FOR INFORMATION" (RFI) SHALL BE MADE THROUGH THE GENERAL CONTRACTOR FOR LOGGING AND TRACKING PURPOSES. RFIS SHALL BE SUBMITTED TO THE EXCEL ENGINEERING PROJECT ASSISTANT. RFIS SHALL BE SUBMITTED ON AN ARCHITECT APPROVED FORM, NUMBER SEQUENCE AND INCLUDE THE FOLLOWING INFORMATION:
- EXCEL ENGINEERING PROJECT NAME
 - EXCEL ENGINEERING PROJECT NUMBER
 - DIVISION OF CONSTRUCTION REFERENCED
 - POTENTIAL SCHEDULE IMPACTS
 - POTENTIAL COST IMPACTS OF ANY SUGGESTED ALTERNATES FROM THE CONSTRUCTION DOCUMENTS

01 32 00 SCHEDULING OF WORK

- A. THE CONTRACTOR SHALL OBTAIN THE OWNER'S APPROVAL OF THE CONSTRUCTION SCHEDULE PRIOR TO PROCEEDING WITH THE WORK.
- 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. SUBMIT FOR APPROVAL ARCHITECTURAL, HVAC, PLUMBING, FIRE PROTECTION AND ELECTRICAL SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLES INDICATED IN THE CONSTRUCTION ADMINISTRATION SUBMITTAL LIST (CASL). SEE DISCIPLINE SPECIFICATIONS FOR DISCIPLINE SPECIFIC CASL.
- B. SHOP DRAWING SUBMITTALS SHALL BE MADE TO EXCEL ENGINEERING, INC. FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

- C. SUBMITTALS SHALL BE MADE BY ELECTRONIC SUBMISSION IN PORTABLE DOCUMENT FORMAT (PDF) UNLESS NOTED OTHERWISE. WHEN HARD COPY SUBMISSIONS ARE REQUIRED COORDINATE WITH EXCEL ENGINEERING, INC. PRIOR TO SUBMISSION.

- D. SUBMITTALS SHALL BE MADE TO THE EXCEL ENGINEERING, INC. PROJECT ASSISTANT: LISA DICKMANN AT LISA.D@EXCELENGINEER.COM. SUBMITTAL SHALL BE MADE USING APPROVED SUBMITTAL FORM CONTAINING AT MINIMUM THE FOLLOWING INFORMATION:
- EXCEL ENGINEERING PROJECT NAME
 - EXCEL ENGINEERING PROJECT NUMBER
 - SUBMITTAL DIVISION OF CONSTRUCTION
 - MATERIAL SUPPLIER / SUB CONTRACTOR
 - SUBMITTAL DESCRIPTION (i.e. CONCRETE MIX DESIGN)

- E. SUBMITTALS SHALL BE REVIEWED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMITTING FOR APPROVAL. CONTRACTOR SHALL COMPLETE ALL FIELD VERIFICATIONS PRIOR TO SUBMITTAL SUBMISSION.

- F. SUBMITTALS MUST BE 100% COMPLETE AND IN ONE (1) PACKAGE FOR THE ITEM BEING SUBMITTED. NON-COMPLETE SUBMITTALS WILL BE RETURNED TO THE CONTRACTOR WITHOUT COMMENT AND STAMPED "REJECTED-RESUBMIT." CONTRACTORS WHO KNOWINGLY WANT TO SUBMIT NON-COMPLETE SUBMITTALS OR BREAK SINGLE SYSTEM SUBMITTALS INTO MULTIPLE SUBMITTALS WILL BE RESPONSIBLE TO MAKE ARRANGEMENTS WITH EXCEL ENGINEERING, INC. PRIOR TO SUBMITTING THE SUBMITTAL(S), AND TO COMPENSATE EXCEL ENGINEERING FOR THE EXTRA WORK INVOLVED.

- G. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.

- H. FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.

- I. PHYSICAL SAMPLES FOR FINISHES ARE TO BE SUBMITTED TO EXCEL ENGINEERING, INC. FOR APPROVAL PRIOR TO INSTALLATION.

- J. BUILDING COMPONENTS REQUIRING SUBMISSION "FOR RECORD" TO THE AUTHORITY HAVING JURISDICTION REQUIRE SEALED AND SIGN HARD COPIES, PROVIDE THREE (3) HARD COPIES.

- K. TEST RESULTS SHALL BE SUBMITTED FOR REVIEW WITHIN 24 HOURS OF COMPLETION OF TEST.

- L. CONTRACTOR SHALL ALLOW 10 WORKING DAYS IN SCHEDULE FOR A/E TO REVIEW SUBMITTALS. IF SUBMITTALS REQUIRE AN EXPEDITED REVIEW PROCESS, CONTACT EXCEL ENGINEERING, INC. PRIOR TO SUBMITTING THE SUBMITTAL(S) TO MAKE THE APPROPRIATE ARRANGEMENT.

- M. SUBMITTALS REQUIRING RESUBMISSION SHALL HAVE CHANGES MADE TO A PREVIOUSLY REVIEWED SUBMITTALS DENOTED WITH REVISION CLOUDS AND TAGS IDENTIFYING CHANGES.

- N. ARCHITECTURAL CONSTRUCTION ADMINISTRATION SUBMITTAL LIST INSULATED MATERIAL PANELS SEALANTS

- STRUCTURAL AND ARCHITECTURAL PLANS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS. SHOP DRAWING DETAILERS AND SUPPLIERS ARE RESPONSIBLE FOR THE DETERMINATION OF ALL DIMENSIONS, PITCHES, ELEVATIONS, ETC., BEYOND THOSE NOTED AS NECESSARY TO THOROUGHLY DETAIL / FABRICATE THEIR WORK. CONTACT A/E WITH ANY DISCREPANCIES FOUND.

01 40 00 QUALITY REQUIREMENTS

- A. IN AS MUCH AS THE SPECIFICATIONS ARE BRIEF, THE CONTRACTOR SHALL PROVIDE WORKMANSHIP THAT IS NEAT, SECURE AND OF THE BEST QUALITY WITH THE BEST POSSIBLE APPEARANCE AND UTILITY MEETING ALL APPLICABLE STANDARDS. FAULTY WORK SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. INDUSTRY STANDARDS SHALL BE USED AS THE GUIDE FOR QUALITY OF MATERIALS AND WORKMANSHIP.

01 41 00 REGULATORY REQUIREMENTS

- A. ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS, INCLUDING THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT (A.D.A.) ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO WORK UNDER THIS CONTRACT.

01 45 00 QUALITY CONTROL

- A. NOTIFY ARCHITECT ONE WEEK IN ADVANCE TO SCHEDULE FINAL COMPLIANCE WALK-THRU. PRIOR TO THIS WALK THRU, PROVIDE THE ARCHITECT WITH THE FIRE PROTECTION SYSTEM TEST REPORT AND A COPY OF THE ELEVATOR INSPECTION REPORT AS APPLICABLE. ALL COMPONENT SUBMITTALS SHOULD BE FILED AND AVAILABLE FOR REVIEW AT THE WALK THRU. THE BUILDING SHALL BE COMPLETE AND ALL SYSTEMS OPERATIONAL AT THE TIME OF THE WALK THRU. IF THE ARCHITECT IS REQUIRED TO MAKE ADDITIONAL VISITS DUE TO NON-COMPLIANCE, THEY WILL BE CHARGED TO THE REQUESTING CONTRACTOR.

01 52 00 CONSTRUCTION FACILITIES

- A. THE CONTRACTOR SHALL FURNISH TEMPORARY OFFICE, TOILET FACILITIES, WORKING TELEPHONE, ELECTRICITY, HEAT, WATER AND FIRE EXTINGUISHERS AS REQUIRED FOR COMPLETION OF THE WORK UNLESS THE OWNER HAS AGREED IN WRITING TO FURNISH OR WAIVE ANY OF THE ABOVE ITEMS.

01 53 00 TEMPORARY CONSTRUCTION

- A. THE CONTRACTOR SHALL FURNISH TEMPORARY BRACING OF ALL BUILDING ELEMENTS DURING CONSTRUCTION. TEMPORARY BRACING SYSTEMS SHALL BE DESIGNED TO WITHSTAND CODE DESIGN LOADS. CONTRACTOR SHALL RETAIN SERVICES OF A PROFESSIONAL ENGINEER TO DESIGN AND SUPERVISE BRACING INSTALLATION IF THEY DO NOT HAVE THE EXPERTISE REQUIRED.

01 71 00 FIELD ENGINEERING

- A. THE CONTRACTOR SHALL PROVIDE ALL LAYOUT AS REQUIRED, COMPETENT ON SITE SUPERVISION, AND BROOM CLEANING OF CONSTRUCTION SITE INCLUDING DUMPSTERS FOR REFUSE DISPOSAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY ON SITE AND PROTECTION OF SITE PER LOCAL, STATE AND FEDERAL REQUIREMENTS.

01 78 00 CLOSEOUT SUBMITTALS

- A. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS REFLECTING ALL CHANGES DURING CONSTRUCTION. PROVIDE TWO (2) COPIES OF OPERATING AND MAINTENANCE MANUALS TO OWNER FOR ALL FURNISHED EQUIPMENT.

01 78 36 WARRANTIES

- A. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION OF THE PROJECT. FURNISH MANUFACTURER'S WRITTEN WARRANTIES FOR SPECIFIED EQUIPMENT STATING EFFECTIVE WARRANTY DATE.

DIVISION 03 CONCRETE

03 30 00 CAST-IN-PLACE CONCRETE

- A. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE AND CRSI MANUAL OF STANDARD PRACTICE.

- B. CONCRETE SLAB CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.

- C. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94.
- STRENGTH TO BE MIN. 3,500 PSI AT 28 DAYS FOR SLABS ON GRADE.
 - SLUMP SHALL NOT EXCEED 4".
 - MAXIMUM AGGREGATE SIZE FOR FOOTING TO BE 1 1/2" AND MAXIMUM AGGREGATE SIZE FOR ALL OTHER WORK TO BE 3/4"

- D. PLACE SLABS ON GRADE WITH CONSTRUCTION JOINT OR SAW JOINT AS INDICATED ON THE PLANS. SAW CUT TO BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. ALL INTERIOR SLABS TO HAVE A TROWEL FINISH UNLESS NOTED OTHERWISE. MAINTAIN FLOOR LEVEL AT WALLS AND PITCH SURFACES UNFORMALLY TO DRAINS. ALL CONCRETE IS TO BE CURED FOR 7 DAYS. FLOORS TO BE STAINED, TO RECEIVE AN ASHFORD SEALER, OR TO RECEIVE ANOTHER FINISH THAT IS NOT COMPATIBLE WITH CURING COMPOUNDS ARE TO BE WET CURED OR CURED WITH AN ARMORLON TRANSGUARD 4000 WET CURE COVER PER MANUFACTURER'S SPECIFICATION. EXTERIOR SLABS SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 1/2" FIBER EXPANSION JOINT AND/OR 1/4" FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS. INTERIOR SLABS SHALL BE SEPARATED FROM FOUNDATION WALLS AND PIERS WITH FORM RELEASE AGENT, 15 LB. FELT OR AS DETAILED ON PLANS.

- E. VERIFY INTERIOR EQUIPMENT CONCRETE PAD SIZES WITH RESPECTIVE CONTRACTORS. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/SQ. YD OR 6 X 6-W/1.4 X W/1.4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 3.5 INCHES THICK WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE AND SHALL BE PLACED AFTER PRECAST TOPPING HAS BEEN POURED.

- F. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION-CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS FOR SCREEDING AND BULL FLOATING, BUT BEFORE POWER FLOATING AND TROWELLING.

- G. LIMIT MAXIMUM WATER-CEMENTITIOUS RATIO OF CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING SALTS TO 0.45.

- H. APPLY TROWEL FINISH TO MONOLITHIC SLAB SURFACES TO BE EXPOSED TO VIEW AND SLAB SURFACES TO BE COVERED WITH RESILIENT FLOORING, CARPET, PAINT, OR OTHER THIN FILM-FINISH COATING SYSTEM. APPLY NONSLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS, AND ELSEWHERE AS INDICATED.

DIVISION 6 WOOD, PLASTICS AND COMPOSITES

06 20 23 INTERIOR FINISH CARPENTRY

- A. BEFORE INSTALLING INTERIOR FINISH CARPENTRY, CONDITION MATERIALS TO AVERAGE PREVAILING HUMIDITY IN INSTALLATION AREAS FOR A MINIMUM OF 24 HOURS.

- B. INSTALL INTERIOR FINISH CARPENTRY LEVEL, PLUMB, TRUE, AND ALIGNED WITH ADJACENT MATERIALS.

- C. INSTALL TRIM WITH MINIMUM NUMBER OF JOINTS PRACTICAL, USING FULL LENGTH PIECES FROM MAXIMUM LENGTHS OF LUMBER AVAILABLE. COPE AT RETURNS, MITER AT OUTSIDE CORNERS AND COPE AT INSIDE CORNERS TO PRODUCE TIGHT FITTING JOINTS. USE SCARF JOINTS FOR END TO END JOINTS.

- D. IN STEEL STUD CONSTRUCTION, ATTACH WITH FINISH SCREWS - PREDRILL AND COUNTERSINK FASTENERS, FILL SURFACE FLUSH WITH FINISH COMPATIBLE FILLER AND SAND SMOOTH - PROVIDE SAMPLE TO OWNER/ INTERIOR DESIGNER

- E. SEE PLANS FOR INTERIOR TRIM AND CARPENTRY MATERIAL TYPE AND LOCATION.

DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 41 13 INSULATED METAL PANELS:

- A. WALL PANELS:
- INSULATED PANELS SHALL BE CONSTRUCTED OF 26 GAGE (UNLESS NOTED OTHERWISE) GALVANIZED SHEET STEEL ON INTERIOR AND EXTERIOR FACES WITH A FOAMED-IN-PLACE URETHANE CORE. THICKNESS SHALL BE AS NOTED ON THE DRAWINGS.
 - PROVIDE SEALANT AS SPECIFIED IN PANEL TO PANEL, PANEL TO BASE CHANNEL, AND FACE JOINTS WHERE INDICATED OR RECOMMENDED BY INSULATED PANEL MANUFACTURER.
 - EXTERIOR PANEL FACES SHALL HAVE A "KYNAR 500" FINISH, IN COLOR AS SELECTED BY OWNER FROM MANUFACTURER'S STANDARD RANGE OF COLORS.
 - INTERIOR PANEL FACES SHALL HAVE SILICONIZED POLYESTER FINISH UNLESS NOTED OTHERWISE.
 - INTERIOR PANEL FACES SHALL HAVE "PLASTISOL" FINISHES WHERE NOTED.
 - INTERIOR PANEL FACES SHALL HAVE STAINLESS STEEL FACES WHERE NOTED.
 - PANEL MANUFACTURER SHALL PROVIDE FASTENING TYPE AND PATTERN AT TOP AND BOTTOM OF PANELS AS WELL AS AT GIRTS OCCURRING AT VERTICAL SPACING INDICATED.
 - PROVIDE METAL TRIM AS INDICATED WITH FINISH TO MATCH PANEL SURFACE TO WHICH IT IS INDICATED TO BE SECURED.
 - AT LOCATIONS WHERE INTERNAL OPERATING TEMPERATURE IS LOWER THAN 50 DEGREES F. SUCH AS PRODUCTION, COOLER OR FREEZER LOCATIONS, PROVIDE E.P.D.M. VAPOR TIE ON WARM SIDE OF ALL PANEL TO PANEL JOINTS AND SEAL TO PANEL FACES.
 - AT LOCATIONS WHERE OPERATING TEMPERATURE IS LOWER THAN 50 DEGREES F. SUCH AS PRODUCTION, COOLER OR FREEZER LOCATIONS, PROVIDE E.P.D.M. VAPOR TIE ON WARM SIDE OF ROOF MEMBRANE TO WALL PANELS AND SEAL TO PANEL FACES.

07 92 00 SEALANTS

- A. GENERAL: IT IS THE INTENTION OF THIS SPECIFICATION THAT ALL JOINTS ARE TO RECEIVE SEALANT. SEALANT SHALL BE APPLIED IN ALL LOCATIONS INDICATED ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING BUT NOT LIMITED TO: JOINT WIDTH, SURFACE PREPARATION, PRIMERS, APPLICATION TEMPERATURE, AND MATERIAL STORAGE. SEALANT IS TO BE APPLIED AFTER FINISH OPERATIONS ARE COMPLETE. UNLESS OTHERWISE NOTED IN THE MANUFACTURER'S INSTRUCTIONS, APPROPRIATE SIZED BACKER RODS AND BOND BREAK IS REQUIRED AT ALL JOINTS.

B. INTERIOR:

- SEAL ALL CMU CONTROL JOINTS, JOINTS IN PRE-CAST CONCRETE PANELS, AND JOINTS BETWEEN PRE-CAST COMPONENTS AND MASONRY OR OTHER PRE-CAST OR CAST-IN-PLACE CONCRETE, WITH SEALANT TYPE ES-4.
 - SEAL JOINTS IN EXPOSED CONCRETE SLABS IN WITH SEALANT TYPE ES-9.
 - SEAL JOINTS BETWEEN TOP OF CONCRETE CURBS AND INSULATED METAL PANELS WITH SEALANT TYPE ES-10.
 - SEAL COUNTERTOPS, BACKSPASH, PERIMETERS OF PLUMBING FIXTURES WITH SEALANT TYPE ES-12.
 - SEAL UNDER BASE TRACK FOR DRYWALL PARTITIONS, INTERIOR DOOR AND WINDOW FRAMES, AND WALL ANGLE AT SUSPENDED CEILINGS WITH SEALANT TYPE AS-1.
- C. SEALANT SCHEDULE: (SIMILAR PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL.)
- ES-4: TREMCO "MILKEM 116" ONE PART LOW MODULUS POLYURETHANE SEALANT.
 - ES-9: VERSA-FLEX "SL/85" TWO PART, SELF-LEVELING, POLYUREA SEALANT.
 - ES-10: SONNEBORN DEGUSSA "NP1"
 - ES-12: GE SILICONE II KITCHEN AND BATH SILICONE SEALANT.
 - AS-1: DAP "ALEX PLUS" PAINTABLE ACRYLIC-SILICONIZED SEALANT.

DIVISION 08 OPENINGS

08 11 13 HOLLOW METAL DOORS AND FRAMES

- A. HOLLOW METAL FRAMES: COMPLY WITH ANSI/SDF7A250.11.
- SET FRAMES ACCURATELY IN POSITION, PLUMBED, ALIGNED, AND BRACED SECURELY UNTIL PERMANENT ANCHORS ARE SET. AFTER WALL CONSTRUCTION IS COMPLETE, REMOVE TEMPORARY BRACES, LEAVING SURFACES SMOOTH AND UNDAMAGED.
 - AT FIRE-PROTECTION-RATED OPENINGS, INSTALL FRAMES ACCORDING TO NFPA80.
- B. HOLLOW METAL DOORS: FIT HOLLOW METAL DOORS ACCURATELY IN FRAMES, WITH CLEARANCES. SHIM AS NECESSARY.
- FIRE-RATED DOORS: INSTALL DOORS WITH CLEARANCES ACCORDING TO NFPA80.
 - SMOKE-CONTROL DOORS: INSTALL DOORS ACCORDING TO NFPA105.

- C. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL DOORS AND FRAMES AS INDICATED ON THE PLANS

08 39 23 IMPACT TRAFFIC DOORS

- A. INSTALL IMPACT TRAFFIC DOORS COMPLETE WITH NECESSARY SUPPORT FRAME, HARDWARE, ANCHORS, BUMPERS, INSERTS, HANGERS, AND EQUIPMENT SUPPORTS; ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND AS DRAWN AND SPECIFIED.
- B. ADJUST HARDWARE AND MOVING PARTS TO FUNCTION SMOOTHLY SO THAT DOORS OPERATE EASILY, FREE OF WARP, TWIST, OR DISTORTION. LUBRICATE BEARINGS AND SLIDING PARTS AS RECOMMENDED BY MANUFACTURER

- C. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL DOORS AS INDICATED ON THE PLANS

08 71 00 HARDWARE

- A. REQUIREMENTS
- ALL LOCKSETS SHALL BE LEVER TYPE AS REQUIRED TO MEET REQUIREMENTS OF A.D.A.
 - ALL OTHER HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF A.D.A.
 - ALL EXIT DOORS SHALL BE EQUIPPED WITH LEVER TYPE OR PANIC TYPE EXIT HARDWARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A LATCH, KEY OR BOLT.
 - CONTRACTOR TO COORDINATE KEYING SCHEDULE WITH OWNER.

- B. MOUNTING HEIGHTS: MOUNT DOOR HARDWARE UNITS AT HEIGHTS REQUIRED TO COMPLY WITH GOVERNING REGULATIONS

- C. INSTALL EACH DOOR HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS

- D. THRESHOLDS: SET THRESHOLDS FOR EXTERIOR AND ACOUSTICAL DOORS IN FULL BED OF SEALANT

- E. ADJUSTMENT: ADJUST AND CHECK EACH OPERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS

- F. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL HARDWARE AS INDICATED ON THE PLAN.

08 80 00 GLAZING

- A. COMPLY WITH COMBINED WRITTEN INSTRUCTIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED, INCLUDING THOSE IN REFERENCED GLAZING PUBLICATIONS.

- B. PROTECT GLASS EDGES FROM DAMAGE DURING HANDLING AND INSTALLATION. REMOVE DAMAGED GLASS FROM PROJECT SITE AND LEGALLY DISPOSE OF OFF PROJECT SITE. DAMAGED GLASS IS GLASS WITH EDGE DAMAGE OR OTHER IMPERFECTIONS THAT, WHEN INSTALLED, COULD WEAKEN GLASS AND IMPAIR PERFORMANCE AND APPEARANCE.

- C. PROVIDE SAFETY GLASS IN ALL GLAZING AS LISTED BELOW UNLESS NOTED OTHERWISE:
- WHERE REQUIRED BY FEDERAL, STATE AND LOCAL CODES.

- D. SAFETY GLASS REQUIREMENTS
- SAFETY GLASS SHALL BE, BUT NOT LIMITED TO

- SAFETY PLASTIC
- SAFETY INSULATING UNITS WHICH MEET THE TEST REQUIREMENTS OF ANSI Z97.1, AND WHICH ARE CONSTRUCTED, TREATED, OR COMBINED WITH OTHER MATERIALS SO AS TO MINIMIZE THE LIKELIHOOD OF CUTTING AND PIERCING INJURIES RESULTING FROM HUMAN IMPACT WITH THE GLAZING MATERIAL.
- ALL SAFETY GLAZING MATERIAL SHALL BE LABELED PER LOCAL, STATE, AND FEDERAL REQUIREMENTS.

- E. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL THE GLAZING AS INDICATED ON THE PLAN.

DIVISION 09 FINISHES

09 01 00 FINISHES

- A. REQUIREMENTS
- PROVIDE AND INSTALL ALL FINISHES AS INDICATED ON PLANS.
 - INSTALL ALL MATERIALS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
 - "FINISH" INSTALLER INSPECT SUBSURFACE AND PREPARE AS PER MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALLATION OF PRODUCT.
 - ALL FINISHES TO MEET ALL CODE REQUIREMENTS AND REGULATIONS INCLUDING FLAME SPREAD AND SMOKE DEVELOPMENT.
- B. EXTRA MATERIAL
- PROVIDE NEW, EXTRA MATERIAL OF EACH FINISH TYPE AND COLOR TO BE TURNED OVER TO OWNER AT JOB COMPLETION FOR THE FOLLOWING ITEMS:
- PAINT: PROVIDE 1 GALLON FOR FIELD COLORS AND 1 QUART FOR ACCENT COLORS APPLIED
 - ACOUSTICAL CEILING TILE: PROVIDE FULL-SIZE UNITS EQUAL TO 2% OF QUANTITY INSTALLED, BUT NOT LESS THAN 1 BOX
 - SHEET CARPET: PROVIDE FULL-WIDTH ROLLS EQUAL TO 5 PERCENT OF THE AMOUNT INSTALLED, BUT NOT LESS THAN 10 SQ. YD.

09 22 16 DRYWALL STUDS (INTERIOR NON-BEARING)

- A. REQUIREMENTS
- STUDS SHALL BE SECURED TO TOP AND BOTTOM TRACK WITH (1) #8ML SCREW IN EACH FLANGE (UNLESS A SLIP TRACK IS REQUIRED AT THE TOP OF THE WALL).
 - PROVIDE SLIP TRACK AT TOP OF FULL HEIGHT PARTITIONS.
 - STUDS SHALL BE INSTALLED PER "GYPSUM CONSTRUCTION HANDBOOK" AS PUBLISHED BY UNITED STATES GYPSUM COMPANY LATEST EDITION.
 - DRYWALL STUDS SHALL BE ACCORDING TO THE LIST BELOW OR AS INDICATED ON THE PLANS (THESE HEIGHTS ARE BASED ON THE STUDS HAVING (1) LAYER OF DRYWALL EACH FACE).
- STUD SIZE - GAUGE - LIMITING HEIGHT WITH STUD SPACING
- 3 5/8" - 25 GA. - 13'-6" AT 16" O.C. - 11'-9" AT 24" O.C.
- 3 5/8" - 22 GA. - 15'-3" AT 16" O.C. - 13'-4" AT 24" O.C.
- 3 5/8" - 20 GA. - 15'-11" AT 16" O.C. - 13'-11" AT 24" O.C.
- 6" - 25 GA. - 20'-0" AT 16" O.C. - 17'-6" AT 24" O.C.
- 6" - 22 GA. - 22'-9" AT 16" O.C. - 19'-11" AT 24" O.C.
- 6" - 20 GA. - 23'-9" AT 16" O.C. - 20'-9" AT 24" O.C.

09 29 00 GYPSUM BOARD (GYP)

- A. DRYWALL SHALL BE INSTALLED PER THE LATEST EDITIONS OF "RECOMMENDED SPECIFICATIONS FOR THE APPLICATION AND FINISHING OF GYPSUM BOARD" GA-216 AS PUBLISHED BY THE GYPSUM ASSOCIATION AND THE "GYPSUM CONSTRUCTION HANDBOOK" AS PUBLISHED BY UNITED STATES GYPSUM COMPANY.
- PROVIDE CONTROL JOINTS PER THESE REQUIREMENTS.

- B. COMPLY WITH ASTM C36 OR ASTM C 1396 AS APPLICABLE TO THE TYPE OF GYPSUM BOARD INDICATED.

- C. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURES OFFERING PRODUCTS THAT MAY BE INCORPORATED INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING.

- AMERICAN GYPSUM CO.
- G-P GYPSUM
- NATIONAL GYPSUM COMPANY
- USG CORPORATION

- D. AT ALL TOILET ROOMS OR OTHER DAMP/WET LOCATIONS PROVIDE 1. MOLD TOUGH GYPSUM BY USG CORPORATION OR EQUAL.

- E. DRYWALL FINISHES SHALL BE INSTALLED PER THE LATEST EDITION OF "RECOMMENDED LEVELS OF GYPSUM BOARD FINISH" GA-214 AS PUBLISHED BY THE AWCI. PAINTING AND DECORATING CONTRACTORS OF AMERICA, GYPSUM ASSOCIATION AND CISCA. PROVIDE A LEVEL 1 FINISH AT ALL CONCEALED AND ABOVE CEILING AREAS AND A LEVEL 4 FINISH ON ALL EXPOSED BELOW CEILING AREAS OR AS NOTED ON PLANS.

F. LEVELS OF FINISH:

- LEVEL 4 - JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT APPLIED OVER INTERIOR ANGLES; FASTENER HEADS AND ACCESSORIES ARE COVERED WITH THREE (3) SEPARATE COATS OF JOINT COMPOUND; NO TOOL MARKS OR RIDGES.

GENERAL BUILDING SPECIFICATIONS (CONT.)

09 51 13 ACOUSTICAL PANEL CEILINGS

- A. COMPLY WITH ASTM C636 (STANDARD PRACTICE FOR INSTALLATION OF METAL CEILING SUSPENSION SYSTEMS FOR ACOUSTICAL TILE AND LAY-IN PANELS), ASTM C635 (STANDARD SPECIFICATION FOR THE MANUFACTURE, PERFORMANCE AND TESTING OF METAL SUSPENSION SYSTEMS FOR ACOUSTICAL TILE AND LAY-IN PANEL CEILINGS) AND SEISMIC DESIGN REQUIREMENTS INDICATED, PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCA'S "CEILING SYSTEMS HANDBOOK."
- B. SUSPEND CEILING HANGERS FROM BUILDING'S STRUCTURAL MEMBERS, PLUMB AND FREE FROM CONTACT WITH INSULATION OR OTHER OBJECTS WITHIN CEILING PLENUM. SPLAY HANGERS ONLY WHERE REQUIRED?AND, IF PERMITTED WITH FIRE-RESISTANCE-RATED CEILINGS, TO MISS OBSTRUCTIONS; OFFSET RESULTING HORIZONTAL FORCES BY BRACING, COUNTERSPLAYING, OR OTHER EQUALLY EFFECTIVE MEANS, WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACINGS THAT INTERFERE WITH LOCATION OF HANGERS, USE TRAPEZES OR EQUIVALENT DEVICES. WHEN STEEL FRAMING DOES NOT PERMIT INSTALLATION OF HANGER WIRES AT SPACING REQUIRED, INSTALL CARRYING CHANNELS OR OTHER SUPPLEMENTAL SUPPORT FOR ATTACHMENT OF HANGER WIRES. WIRE HANGERS TO BE ZINC-COATED CARBON STEEL WIRE COMPLYING WITH ASTM A641 STANDARDS, SIZED TO WITHSTAND 5X THE HANGER DESIGN LOAD BUT NOT LESS THAN .106"
- C. INSTALL EDGE MOLDINGS AND TRIM AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS. SCREW ATTACH MOLDINGS TO SUBSTRATE, LEVELING WITH CEILING SUSPENSION SYSTEM. MITER CORNERS ACCURATELY AND CONNECT SECURELY
- D. INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS; SUSPENSION SYSTEMS REQUIRED FOR THE SPECIFIED TILE-INTERMEDIATE DUTY CLASSIFICATION. PROVIDE CORROSION RESISTANT GRID IN SHOWER AND EXTREME ENVIRONMENT AREAS.
- E. INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FIT ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.
- F. PROVIDE HOLD-DOWN CLIPS AT ENTRY VESTIBULE(S) AND FOR FIRST 12' OF CORRIDOR(S) IN FRONT OF EACH EXTERIOR DOOR.
- G. PROVIDE APPROVED FIRE RATED GRID SYSTEM FOR FIRE RATED CEILINGS
- H. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION

09 68 16 SHEET CARPET (SC)

- A. COMPLY WITH CRI 104 AND CARPET MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
- B. PREPARE FLOOR SURFACES RECEIVING NEW FLOORING AS REQUIRED FOR A SMOOTH AND LEVEL SURFACE PRIOR TO INSTALLING NEW FLOORING.
- C. COMPLY WITH CARPET MANUFACTURER'S WRITTEN RECOMMENDATIONS AND SHOP DRAWINGS FOR SEAM LOCATIONS AND DIRECTION OF CARPET; MAINTAIN UNIFORMITY OF CARPET DIRECTION AND LAY OF PILE. AT DOORWAYS, CENTER SEAMS UNDER THE DOOR IN CLOSED POSITION
- D. EXTEND CARPET INTO TOE SPACES, DOOR REVEALS, CLOSETS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS.
- E. INSTALL PATTERN PARALLEL TO WALLS AND BORDERS.
- F. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 91 00 PAINTING

- A. REMOVE AND/OR PROTECT ALL HARDWARE, HARDWARE ACCESSORIES, MACHINED SURFACES, PLATES, LIGHTING FIXTURES, SPRINKLER HEADS AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED, BUT REQUIRE PROTECTION FROM THE PAINTING PROCESS. RE-INSTALL SAME AFTER COMPLETION OF PAINTING. MASK OFF ALL NAMEPLATES, EQUIPMENT IDENTIFICATION AND SIMILAR ITEMS. REMOVAL AND REINSTALL OF ITEMS IS TO BE DONE BY CONTRACTOR SKILLED IN SUCH WORK.
- B. SEAL TOPS, BOTTOMS AND CUTOUTS OF UNPRIMED WOOD DOORS WITH A HEAVY COAT OF SEALER IMMEDIATELY UPON DELIVERY TO THE PROJECT.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER PREPARATION OF ALL SURFACES PRIOR TO THE PAINTING INSTALLATION
- D. THE FINISH PRODUCT SHALL HAVE A CONSISTENT, SMOOTH APPEARANCE OF THE SPECIFIED LUSTER.
- E. APPLY PAINT PER MANUFACTURER'S TEMPERATURE AND HUMIDITY REQUIREMENTS.
- F. COMPLETED WORK SHALL BE FREE FROM DEFECTS AND FLAWS.
- G. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SCAFFOLDING REQUIRED FOR COMPLETING SURFACE PREPARATION, PAINTING, FINISHING AND RELATED ITEMS.
- H. EXCESS MATERIALS, CONTAINERS AND OTHER ITEMS NECESSARY FOR THE COMPLETION OF THE WORK MUST BE DISPOSED OF IN A MANNER THAT MEETS OR EXCEEDS THE STRICTEST LAWS GOVERNING THE PROJECT'S MUNICIPALITY AND/OR STATE. THE PAINTING CONTRACTOR IS RESPONSIBLE FOR COMPLETE ADHERENCE TO ALL DISPOSAL REGULATIONS.
- I. PAINT ALL EXPOSED MISCELLANEOUS ITEMS, FINISHED OR UNFINISHED (EXCLUDING H.V.A.C. RETURN AIR GRILLES, CONDUIT, ETC.) TO MATCH ADJOINING WALL SURFACES.
- J. ALL EXPOSED MISCELLANEOUS ITEM IN FOOD PROCESS ROOMS SHALL REMAIN UNPAINTED UNLESS NOTED OTHERWISE. PROTECT ALL SUCH SYSTEM DURING THE PAINTING PROCESSES WITHIN THE ROOMS.
- K. CONTRACTOR TO VERIFY THAT PAINT IS COMPATIBLE WITH PRIMER OF SHOP PRIMED SURFACES. NOTIFY EXCEL ENGINEERING IF THERE ARE ANY COMPATIBILITY ISSUES.
- L. THE CONTRACTOR SHALL KEEP EMPTY CONTAINERS ON THE PROJECT SITE UNTIL ALL PRODUCTS ARE VERIFIED AS TO COLOR AND/OR SHEEN. THE CONTRACTOR SHALL LEAVE WITH THE OWNER ALL OPENED PAINT CONTAINERS.
- M. ALL PAINT COLORS, STAIN COLORS, AND VARNISH TO BE SELECTED BY ARCHITECT/OWNER FROM A FULL RANGE OF AVAILABE COLORS UNLESS NOTED OTHERWISE.
- N. ALL EXPOSED INTERIOR METAL SURFACES SHALL NOT BE PAINTED, U.N.O.

O. INTERIOR ITEMS:

1. GYPSUM DRYWALL FINISH: EG-SHEL
 - a.) 1 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER B28W2600 @ 1.2-1.5 MILS DFT.
 - b.) 2 COATS S-W PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL B20-2600 @ 1.6-2.2 MILS DFT/COAT.
- P. PROVIDE A YELLOW STRIPED AREA, 3' DEEP BY THE WIDTH OF THE ELECTRICAL PANELS, ON THE CONCRETE FLOOR IN FRONT OF THE ELECTRICAL PANELS AND SWITCHGEAR IN THE RECEIVING AREA. AT THE SWITCHGEAR, PAINT THE EXPOSED PORTION OF THE CONCRETE HOUSEKEEPING PAD YELLOW.

DIVISION 21 FIRE SUPPRESSION 21 10 00 FIRE PROTECTION WORK

- A. SEE FIRE PROTECTION PLANS FOR SPECIFICATIONS.
- ## DIVISION 22 PLUMBING 22 05 00 PLUMBING WORK

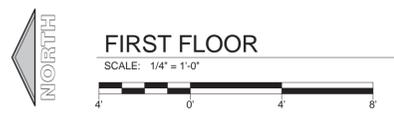
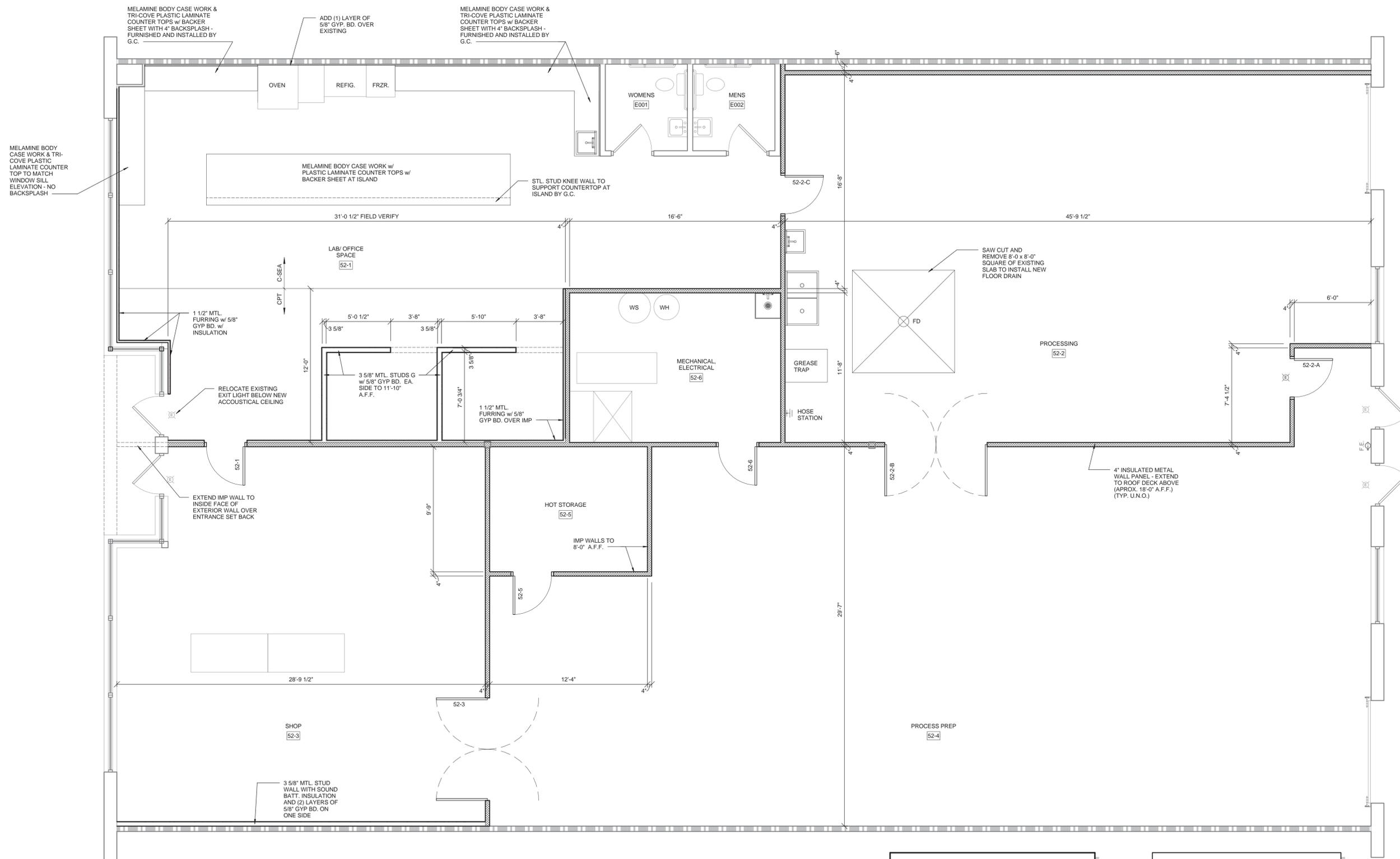
- A. SEE PLUMBING PLANS FOR SPECIFICATIONS

DIVISION 23 HEATING AND VENTILATING AND AIR CONDITIONING 23 05 00 HEATING AND VENTILATION WORK

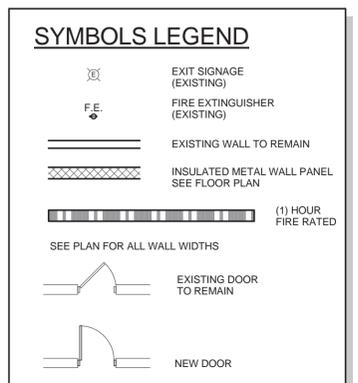
- A. SEE HVAC PLANS FOR SPECIFICATIONS.

DIVISION 26 ELECTRICAL 26 05 00 ELECTRICAL WORK

- A. SEE ELECTRICAL PLANS FOR SPECIFICATIONS.



- GENERAL NOTES**
- PROVIDE SEALANT AT ALL FLOOR JOINTS.
 - PROVIDE OPAQUE FILM TO ALL EXTERIOR GLASS.
 - ADD "GREEN HINGES" TO OVERHEAD DOORS.



DOOR SCHEDULE												
DOOR NO.	DOOR SIZE			DOOR TYPE	FRAME TYPE	DOOR HARDWARE						REMARKS
	WIDTH	HEIGHT	THICKNESS			HINGE	LOCKSET	STOPS	CLOSER	PUSH-PULL / KICK	W.S., SWEEP, THRESHOLD	
52-1	3'-0"	7'-0"	1 3/4"	MD3	HM1	H1	L9	-	C4	-	-	-
52-2-A	3'-0"	7'-0"	1 3/4"	MD3	HM1	H1	L9	S1	C1	-	-	-
52-2-B	8'-0"	8'-0"	1 3/4"	(2)ID1								
52-2-C	3'-0"	7'-0"	1 3/4"	EXISTING	HM1	EXIST.	-	-	EXIST.	EXIST.	-	PROVIDE DOOR FRAME TO FIT EXISTING DOOR
52-3	8'-0"	8'-0"	1 3/4"	(2)ID1								
52-5	3'-0"	7'-0"	1 3/4"	EXISTING	HM1	EXIST.	L9	-	-	-	-	PROVIDE DOOR FRAME TO FIT EXISTING DOOR
52-6	3'-0"	7'-0"	1 3/4"	MD1	HM1	H1	L9	-	-	-	-	-

DOOR HARDWARE KEY

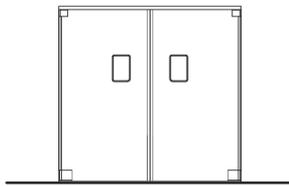
HINGES				
DESCRIPTION / FINISH	Ives	Hager	McKinney	Stanley
H1 STANDARD (626)	5BB1	BB1279	TA2714	FBB179
H2 HEAVY (626)	5BB1HW	BB1168	TA43786	FBB168
H3 STANDARD (630)	5BB1 SS	BB1191	TA2314	FBB191
H4 HEAVY (630)	5BB1HW SS	BB1199	TA43386	FBB199

CONTINUOUS HINGES				
DESCRIPTION / FINISH	Roton (Hager)	McKinney	Select	Pemko
H5 AL. GEAR TYPE (MATCH)	780-224HD	MCK-25HD	SL-24HD	CFMHD
H6 SS PIN/BARREL (630)	790-900	MCK-FM300	SL-300	SPDFM

LOCKSETS				
DESCRIPTION / FINISH	Schlage MD Series (RHO)	Sargent 10-Line (LL)	Best 93K (15D)	
L1 ENTRANCE (626)	ND53PD	10G05	93K AB	
L2 CLASSROOM (626)	ND70PD	10G37	95K R	
L3 PRIVACY (626)	ND40S	10U65	93K L	
L4 STOREROOM (626)	ND80PD	10G04	93K D	
L5 RIM CYLINDER (626)	20-022	34 SERIES	1E-72	
L6 INSTITUTION (626)	ND82PD	10G17	93K W	
L7 MORTISE CYLINDER (626)	20-001	40 SERIES	1E-74	
L8 DEADLOCK (626)	B660P	480 SERIES	83T SERIES	
L9 PASSAGE (626)	ND10S	10U15	93K N	
L10 EXIT ONLY (626)	ND25	10G13	93K Y	
L11 DUMMY TRIM (626)	ND170	10U93	93K 1DT	

STOPS				
DESCRIPTION / FINISH	Ives	Hager	Rockwood	
S1 FLOOR MTD. (626)	FS436	241F	441	
S2 WALL MTD. (626)	WS407CCV	236W	409	

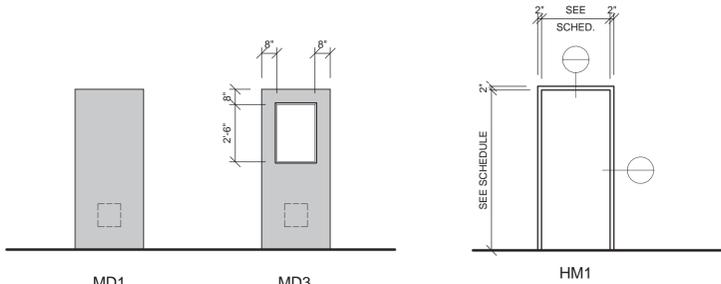
CLOSERS				
DESCRIPTION / FINISH	LCN	Sargent	Norton	
C1 PULL SIDE REG. (689)	4011	351 O	7501	
C2 PULL SIDE HOLD-OPEN (689)	4011 H	351 H	7501H	
C3 PUSH SIDE REG. (689)	4111 EDA	351 P10	PR7501	
C4 PUSH SIDE w/ STOP (689)	4111 CUSH PA	351 PS	CLP7501	
C5 PUSH SIDE HOLD-OPEN (689)	4111 H-CUSH	351 PSH	CLP7501H	
C6 PUSH SIDE EXT. DOORS (689)	4111 S-CUSH	351 CPS	UNI7501	
C7 DROP PLATE (689)	4110-18	351-D	7788	



ID1
LIGHT DUTY IMPACT DOOR

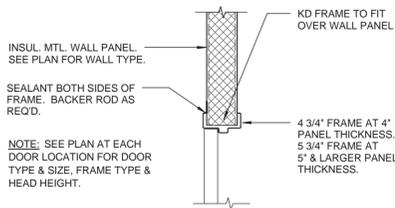
IMPACT DOOR ELEVATIONS

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

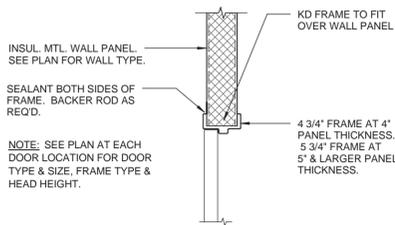


METAL DOOR ELEVATIONS

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



HEAD DETAIL



JAMB DETAIL

TYPICAL HM DOOR FRAME DETAIL

SCALE: 1" = 1'-0"

GENERAL DOOR AND FRAME NOTES:

- ALL DOORS SHALL MEET A.D.A. REQUIREMENTS
- ALL DOOR THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT
- VERIFY FRAME DEPTHS W/ WALL THICKNESS. PROVIDE WRAP AROUND FRAMES AT STUD WALLS
- PROVIDE SEALANT BOTH SIDES OF DOOR FRAMES, WHERE DIFFERENT MATERIALS MEET AND FOR WEATHER TIGHTNESS
- GENERAL CONTRACTOR TO VERIFY SIZE OF ALL EQUIPMENT (ELECTRICAL, MECHANICAL, KITCHEN, LAUNDRY, ETC.) SELECTED FOR THE PROJECT TO DETERMINE THAT ALL DOORS (INCLUDING PATH OF TRAVEL) ARE OF ADEQUATE SIZE TO ACCOMMODATE INSTALLATION AND REPLACEMENT
- VERIFY ALL ROUGH OPENING REQUIREMENTS WITH MANUFACTURERS DRAWINGS
- SEE SHEET T2.0 FOR GENERAL BUILDING SPECIFICATIONS
- DOOR, FRAME AND HARDWARE SCHEDULE TO BE PROVIDED BY HARDWARE SUPPLIER FOR A/E REVIEW - NUMBERING SYSTEM AND NOMENCLATURE SHALL MATCH THOSE FOUND IN CONSTRUCTION DOCUMENTS
- HARDWARE SUPPLIER IS RESPONSIBLE FOR COORDINATING KEYING REQUIREMENTS WITH OWNER
- CONTRACTOR TO PROVIDE PRODUCTS AND SYSTEMS COMPLETE WITH ALL ACCESSORIES, TRIM, FINISH FASTENERS AND OTHER ITEMS NEEDED FOR A COMPLETE INSTALLATION AND INTENDED USE AND EFFECT
- FERROUS METAL (PAINTED) - DOORS, FRAMES, HANDRAILS & MISC. METALS: (1) COAT S/W KEKIKROMIC UNIVERSAL METAL PRIMER, 650WZ SERIES (2) COATS PRO MAR 200 ALKYD ENAMEL EG-SHEL OR SEMI GLOSS B33 OR B34 SERIES
- PROVIDE URETHANE FOAM AT ALL DOOR FRAMES EXCEPT INTERIOR GENERAL OFFICE AREAS - SEE PLANS.

ROOM FINISH SCHEDULE										
ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING FINISH	CEILING HGT.	REMARKS
				NORTH	SOUTH	WEST	EAST			
52-1	LAB/ OFFICE SPACE	C-SEA/ CPT	VB	PT-GYP	PT-GYP	PT-GYP	PT-GYP	AT	11'-6"	
52-2	PROCESSING	C-SEA	-	IMP	EXISTING	IMP	IMP	EXP. EXISTING		
52-3	SHOP	C-SEA	-	EXISTING	IMP	PT-GYP	IMP	EXP. EXISTING		
52-4	PROCESS PREP	C-SEA	-	IMP	EXISTING	EXISTING	IMP	EXP. EXISTING		
52-5	HOT STORAGE	C-SEA	-	IMP	IMP	IMP	IMP	IMP-WK	8'-0"	
52-6	MECHANICAL ELECTRICAL	C-SEA	-	IMP	IMP	IMP	IMP	EXP. EXISTING		
E001	WOMENS	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		
E002	MENS	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		

BASE FINISHES

- VINYL COVE BASE (VB)
4" HIGH VINYL COVE BASE - COLOR BY OWNER.

WALL FINISHES

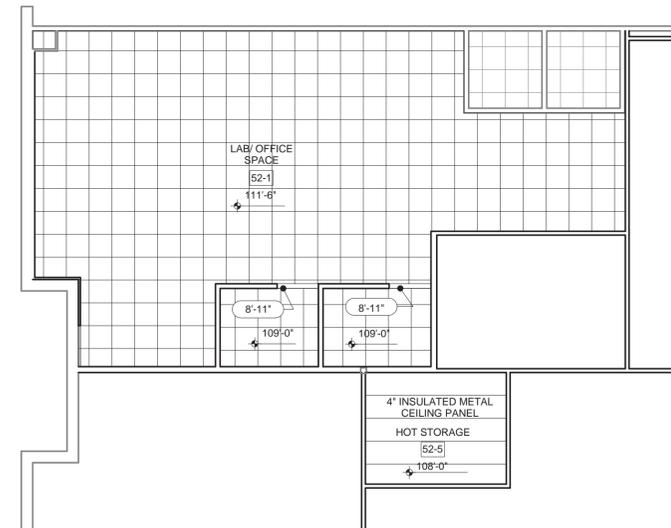
- EXPOSED CMU EPOXY PAINTED (CMU-EP.PTD.)**
1. EXISTING CMU WALL WITH (1) COAT OF BLOCK FILLER AND (1) COAT OF EPOXY PAINT (WHITE)
- INSULATED METAL PANEL (IMP)**
1. 26 GAUGE GALVANIZED STEEL INSULATED METAL PANEL W/ KYNAR 500 FINISH MANUFACTURED BY METL-SPAN & SHALL HAVE A "NC-0" RATING.
2. PROVIDE PLATISOL FINISH ON ALL INTERIOR WALL PANEL SURFACES.
3. SEE PLANS FOR PANEL THICKNESS
4. ALL EXPOSED FASTENERS TO MATCH PANEL FINISH
5. PROVIDE SILICONE CAULK AT ALL VERTICAL PANEL JOINTS ADJACENT TO WASH DOWN ROOMS (INTERIOR) AND AT HIGH / LOW ROOF CONDITIONS (EXTERIOR).
- PAINTED GYPSUM BOARD (PT-GYP)**
1. PROVIDE (2) COATS FINISH PAINT OVER 5/8" GYPSUM BOARD. SEE T2.0 FOR ADDITIONAL INFORMATION.

FLOOR FINISHES

- SEALED CONCRETE (C-SEA)**
1. INTERIOR EXPOSED CONCRETE TO RECEIVE (1) APPLICATION OF CURE & SEAL.
- CARPET ROLL (CPT)**
1. CARPET - MATERIAL ALLOWANCE \$20/ SQ. YD.

CEILING FINISHES

- VINYL COVERED GYPSUM BOARD (VCGB)**
1. 2x2 VINYL COVERED GYP. BOARD ON SUSPENDED GRID SYSTEM - USG INTERIORS INC. SHEET ROCK LAYIN CEILING TILE "CLIMAPLUS" WHITE VINYL.
- ACOUSTICAL TILE (AT)**
1. 2x2 ACOUSTICAL TILE ON SUSPENDED GRID SYSTEM USG INTERIORS INC. "F" FISSURED TILE W/ SHADOW LINE EDGE. COLOR SELECTION BY OWNER.
- WALK-ON INSULATED METAL PANEL (IMP-WK)**
1. 4" INSULATED WALK ON 26 GAUAGE G90 GALVANIZED STEEL METAL PANEL MANUFACTURED BY METL-SPAN
2. INTERIOR & EXTERIOR PROFILE IS LIGHT MESA WAVE PATTERN. STUCCO EMBOSSED
3. PROVIDE KYNAR 500 FINISH AT EXTERIOR AND PLATISOL FINISH ON ALL INTERIOR CEILING PANEL SURFACES.
4. WALK-ON PANEL SHALL HAVE A "NC-0" RATING.
- EXPOSED EXISTING (EXP. EXISTING)**
1. EXPOSED EXISTING STRUCTURE



FIRST FLOOR REFLECTED CEILING PLAN

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

HOLLOW METAL DOOR & FRAME SPECIFICATIONS:

- MANUFACTURER:** CURRIES (APPROVED EQUIVALENT: STEELCRAFT)
- CONSTRUCTION:** DOORS
- 707 N SERIES
- MIN. 18 ga. w. POLY STYRENE CORE @ INTERIOR DOORS, R VALUE = 7.25
- MIN. 16 ga. w. POLY STYRENE or POLYURETHANE CORE AND FLUSH TOP CAP @ EXTERIOR DOORS, R VALUE = 6.4 or 10
- FRAMES**
- "M" PROFILE - KD FRAMES
- MIN. 16 ga. @ INTERIOR FRAMES
- MIN. 14 ga. @ EXTERIOR FRAMES
- GERERAL REQ'S**
- ALL EXTERIOR DOORS AND FRAMES TO BE GALVANIZED
- ALL DOORS & FRAMES TO HAVE BAKED ON PRIMER FINISH
- ALL DOORS & FRAMES TO BE REINFORCED AND PREPARED FOR HARDWARE
- ALL REINFORCEMENT TO BE MIN. 12 ga.
- PROVIDE WELDED-IN BASE ANCHORS
- PROVIDE (3) SILENCERS PER JAMB @ ALL METAL DOOR FRAMES
- PROVIDE BITUMINOUS COATING ON INT. FACE OF FRAMES IN MASONRY WALLS
- PROVIDE METAL FRAME FOR LITES & GRILLES
- PAINT LITE FRAMES TO MATCH DOOR FRAMES

IMPACT DOOR SPECIFICATIONS:

- MANUFACTURER:** CHASE INDUSTRIES
- PRODUCT:** LIGHT DUTY IMPACT DOOR (SD2000)
- CONSTRUCTION:** DOORS
- .063" THICK TEMPERED ALUMINUM ALLOY, SATIN ANODIZED FINISH ON BOTH SIDES
- 8"x14" SHATTER PROOF ACRYLIC VISION PANELS SET IN BLACK RUBBER MOLDING
- TRIANGULAR FORMED LEADING EDGE AND BACK EDGE SPINE
- HARDWARE**
- ZINC PLATED CHASE 'E' SERIES ADJUSTABLE GRAVITY CLOSE HARDWARE WITH PANEL MOUNTED HINGE BODY AND ZINC PLATED JAMB MOUNTING BRACKET HINGE SHALL UTILIZE ALUMINUM COVERS.
- WARRANTY:** 2 YEARS

DESIGN CRITERIA					
DESIGNATION	SYSTEM TYPE	HAZARD/COMMODITY	MINIMUM DENSITY	REMOTE AREA	HOSE ALLOWANCE
LH	WET	LIGHT HAZARD (1)	0.10 GPM/S.F.	1,500 S.F. (2)	100 GPM
OG1	WET	ORDINARY GROUP 1 (1)	0.15 GPM/S.F.	1,500 S.F. (2)	250 GPM
OG2	WET	ORDINARY GROUP 2 (1)	0.20 GPM/S.F.	1,500 S.F. (2)	250 GPM

— CONTRACTOR SHALL VERIFY DESIGN CRITERIA.

(1) QUICK RESPONSE HEADS.

(2) REDUCE REMOTE AREA BY 2007 NFPA 13 FIG. 11.2.3.2.3.1 FOR AREAS WITH QUICK RESPONSE SPRINKLERS. SEE REFLECTED ARCH PLAN FOR CEILING HEIGHTS.

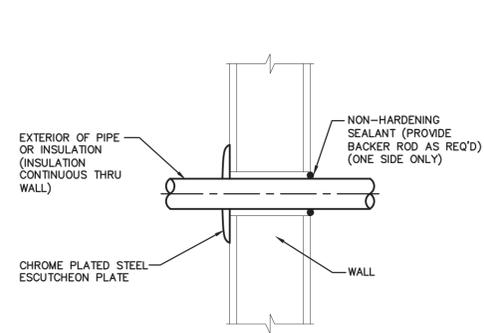
SPRINKLER REQUIREMENTS				
LOCATION	STYLE	TEMPERATURE CLASSIFICATION	FINISH	CENTER OF TILE (FOR LAY-IN CEILINGS)
A	SEMI-RECESSED W/ ESCUTCHEON	ORDINARY	CHROME	YES
B	UPRIGHT	ORDINARY	BRASS	N/A
C	PENDENT W/ ESCUTCHEON	INTERMEDIATE	(1)	N/A

— CENTER OF TILE LOCATION ESTABLISHED AFTER CEILING GRID IS INSTALLED.

— ALL TEMPERATURES AS LISTED UNLESS OTHERWISE REQUIRED BY NFPA.

— SIDEWALL HEADS ARE ACCEPTABLE IN LIEU OF PENDENT WHERE APPLICABLE.

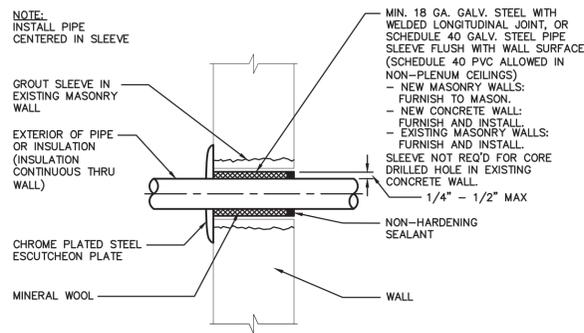
(1) PROVIDE WHITE POLYESTER SPRINKLER WITH STAINLESS STEEL ESCUTCHEON.



EXPOSED IN FINISHED ROOMS

CONCEALED IN UNFINISHED ROOMS OR OUTDOORS

STUD WALL



EXPOSED IN FINISHED ROOMS

CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM OR OUTDOORS

MASONRY OR CONCRETE WALL

NON-RATED WALL PIPE PENETRATION DETAIL

NO SCALE

DIVISION 21 FIRE PROTECTION

00 72 00 GENERAL CONDITIONS

A. SEE SHEET T2.0.

01 11 00 GENERAL REQUIREMENTS

A. SEE SHEET T2.0.

B. IN AS MUCH AS THE SPECIFICATIONS ARE BRIEF, THE CONTRACTOR SHALL PROVIDE WORKMANSHIP THAT IS OF THE BEST QUALITY WITH THE BEST POSSIBLE APPEARANCE AND UTILITY. FAULTY WORK SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. INDUSTRY STANDARDS SHALL BE USED AS THE GUIDE FOR QUALITY OF MATERIALS AND WORKMANSHIP.

C. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:

- SEE SPECIFICATIONS ON SHEET T2.0 FOR ADDITIONAL REQUIREMENTS AND SUBMISSION PROCEDURES.
- FIRE PROTECTION CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
 - ALL SCHEDULED EQUIPMENT
 - SPRINKLER SYSTEM/FIRE PROTECTION
 - HANGERS
 - PIPE IDENTIFICATION
- SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
- FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.

09 91 00 FINISH AND PAINTING

- PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
- COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. F.P.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
- IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
- WHERE THE F.P.C. IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.

21 05 00 BASIC FIRE PROTECTION REQUIREMENTS

- PROVIDE A COMPLETE DESIGN/BUILD FIRE PROTECTION SYSTEM FOR THE PROPOSED PROJECT.
- FIRE PROTECTION CONTRACTOR SHALL BE LICENSED BY THE STATE OF WISCONSIN TO FURNISH AND INSTALL FIRE PROTECTION SYSTEMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND SIZING THE DISTRIBUTION SYSTEMS BY HYDRAULIC CALCULATION, AND SHALL PROVIDE THE NECESSARY ENGINEERING DRAWINGS AND CALCULATIONS TO OBTAIN ACCEPTANCE OF ALL AUTHORITIES HAVING JURISDICTION.
- IF THE CONTRACTOR'S FIRE PROTECTION DESIGN REQUIRES ANY MODIFICATIONS OR ADDITIONS TO THE BUILDING IN ORDER TO MEET THE SPRINKLER SYSTEM REQUIREMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF MODIFICATIONS OR ADDITIONS OR SHALL SPECIFICALLY NOTE IN THE BID THE WORK REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR STATE OF WISCONSIN SUBMITTAL AND PLAN REVIEW FEES.
- DRAWINGS INDICATING NEW FIRE PROTECTION SYSTEMS TO BE INSTALLED WITH PIPE SIZES, ETC., AND COPY OF SYSTEMS HYDRAULIC CALCULATIONS SHALL BE SUBMITTED TO THE FOLLOWING FOR REVIEW:
 - EXCEL ENGINEERING
 - NUMBER OF PRINTS AS REQUIRED TO LOCAL FIRE DEPARTMENT AUTHORITY.
 - NUMBER OF PRINTS AS REQUIRED TO OWNER'S INSURING AUTHORITY.
- DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
- THE REQUIREMENTS OF MUNICIPAL AND STATE CODES, LAWS, ORDINANCES AND REGULATIONS, AND NFPA ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO THE WORK.
- COORDINATE WORK WITH OTHER CONTRACTORS AND MAKE ADJUSTMENTS TO THE FIRE PROTECTION SYSTEM INSTALLATION WHERE IT WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES. IF THE FPC INSTALLS WORK BEFORE COORDINATING IT WITH OTHER TRADES SO AS TO CAUSE INTERFERENCE WITH WORK OF OTHER TRADES, THE FPC SHALL MAKE NECESSARY CHANGES IN THE WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGES.
- PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR FIRE PROTECTION WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES.
- LEAVE SYSTEM IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
 - PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS. ALL OPERATING INSTRUCTIONS SHALL BE VIDEO TAPED BY CONTRACTOR AND A COPY OF THE TAPE TURNED OVER TO OWNER IN VHS FORMAT.
- AVAILABLE WATER FLOW DATA
 - FIRE FLOW TEST:
 - TEST TAKEN BY: CITY OF MADISON WATER UTILITY
 - DATE TAKEN: 4/14
 - HYDRANT LOCATION: CROSSING PLACE AND FELLAND ROAD
 - HYDRANT ELEVATION: 100'
 - BUILDING ELEVATION: 96'
 - WATER MAIN SIZE IN STREET: 10"
 - HYDRANT NOZZLE SIZE USED DURING TEST:
 - STATIC PRESSURE: 74
 - RESIDUAL PRESSURE: 40
 - GPM FLOWING: 3,466
 - WATER TEST DATA IS PRELIMINARY FOR BIDDING PURPOSES. FPC IS RESPONSIBLE TO VERIFY AND OBTAIN ANY ADDITIONAL TEST DATA REQUIRED FOR DESIGN. TESTS TO BE REPRESENTATIVE OF HIGH WATER USE PERIODS.
- TESTS AND INSPECTIONS
 - CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND CERTIFICATION OF SYSTEMS AND ORDERING INSPECTIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
 - ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF AND TO THE SATISFACTION OF THE OWNER OR AN AUTHORIZED REPRESENTATIVE.
 - INSPECTIONS SHALL BE MADE BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND INSPECTORS HAVING JURISDICTION.

- CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND CERTIFICATION OF SYSTEMS AND ORDERING INSPECTIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF AND TO THE SATISFACTION OF THE OWNER OR AN AUTHORIZED REPRESENTATIVE.
- INSPECTIONS SHALL BE MADE BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND INSPECTORS HAVING JURISDICTION.

21 05 13 ELECTRICAL WORK

21 05 29 SUPPORTS AND ANCHORS

- PROVIDE PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH NFPA 13.
- INTERIOR WALL AND FLOOR PIPE SLEEVES: 18 GAUGE GALVANIZED STEEL OR STEEL PIPE, 1" LARGER THAN OUTSIDE DIAMETER OF THE PIPE. CONDUIT, OR PIPE INSULATION, SUFFICIENT LENGTH TO PASS THRU WALL OR FLOOR. EXTEND SLEEVES IN MECHANICAL ROOM FLOORS 6" ABOVE FINISHED FLOOR.
- HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.
- ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:
 - MAXIMUM HANGER LOAD OF 50 LBS.
 - ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.
 - ANCHOR LENGTH SHALL EXCEED DECK DEPTH.
- NON-FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS
 - FURNISH AND INSTALL SLEEVES FOR NEW CONCRETE WALLS AND FLOORS. FURNISH SLEEVES TO THE MASON CONTRACTOR FOR INSTALLATION IN NEW MASONRY WALLS.
 - FILL VOID BETWEEN PIPE AND WALLS, FLOOR OR SLEEVE WITH MINERAL WOOL.
 - CAULK BOTH SIDES OF NON-RATED WALLS AND FLOORS WITH NON-HARDENING CAULK.
 - INSTALL CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS.

21 05 53 IDENTIFICATION

A. PROVIDE IDENTIFICATION PER NFPA 13.

21 13 13 PIPING

- DESIGN REQUIREMENTS: ALL SYSTEM COMPONENTS SHALL BE RATED FOR THE MAXIMUM WORKING PRESSURE TO WHICH THEY ARE EXPOSED BUT NOT LESS THAN 175 PSIG.
- PIPE AND FITTINGS: PROVIDE PER NFPA 13.
- INSTALL PIPE AND FITTINGS IN ACCORDANCE WITH NFPA 13, MANUFACTURERS INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES.
- INSTALL PIPING LEVEL, TAKING INTO ACCOUNT DRAINAGE REQUIREMENTS. PIPING SHALL NOT FOLLOW ROOF PITCH WHERE PITCH CHANGES.
- INSTALL PIPING PARALLEL TO WALLS AND CEILINGS AND AT HEIGHTS WHICH DO NOT OBSTRUCT WINDOWS, DOORWAYS, STAIRWAYS, OR PASSAGEWAYS. OFFSET OR REROUTE PIPING TO CLEAR INTERFERENCES WHICH DEVELOP IN THE FIELD.
- INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE. CONCEAL PIPING WITHIN WALLS AND CHASES OR ABOVE CEILINGS.
- COORDINATE LOCATIONS OF FIRE PROTECTION PIPING WITH PIPING, DUCTWORK, CONDUIT AND EQUIPMENT OF OTHER TRADES TO ALLOW SUFFICIENT CLEARANCES. CONSULT DRAWINGS FOR EXACT LOCATION OF PIPE SPACES, CEILING HEIGHTS, CEILING GRID LAYOUT, LIGHT FIXTURES AND GRILLES BEFORE INSTALLING PIPING. PIPING SHALL NOT OBSTRUCT ACCESS TO EQUIPMENT.
- PROVIDE PROTECTIVE SLEEVE COVERING WHERE COPPER OR STEEL PIPING IS EMBEDDED IN MASONRY OR CONCRETE.
 - PROVIDE CLEARANCE FOR ACCESS TO VALVES AND PIPING SPECIALTIES.
 - PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES NOT PREFINISHED, READY FOR FINISH PAINTING.
 - DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, OR SWITCHBOARDS, INCLUDING THE REQUIRED SERVICE SPACE FOR THIS EQUIPMENT.
 - MAINS SHALL BE ROUTED AROUND ELECTRICAL AND COMPUTER ROOMS. ONLY PIPING SERVING THESE ROOMS ALLOWED IN THE ROOMS.
 - PIPE SYSTEM LEAK TESTS
 - CONDUCT PRESSURE TEST WITH WATER. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST.
 - TEST PIPING IN SECTIONS OR ENTIRE SYSTEM AS REQUIRED BY SEQUENCE OF CONSTRUCTION. DO NOT CONCEAL PIPE UNTIL IT HAS BEEN SUCCESSFULLY TESTED. PROVIDE TEMPORARY RESTRAINTS AT FITTINGS OR EXPANSION JOINTS IF REQUIRED FOR THE ADDITIONAL PRESSURE LOAD UNDER TEST. ENTIRE TEST MUST BE WITNESSED BY THE DIVISION'S REPRESENTATIVE.
 - USE CLEAN WATER AND REMOVE AIR FROM THE PIPING BEING TESTED WHERE POSSIBLE. MEASURE AND RECORD TEST PRESSURE AT THE HIGH POINT IN THE SYSTEM.
 - TEST SYSTEM AT 175 PSI FOR 2 HOURS SHOWING NO LEAKAGE.
 - ALL PRESSURE TESTS ARE TO BE DOCUMENTED ON NFPA CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FORMS.

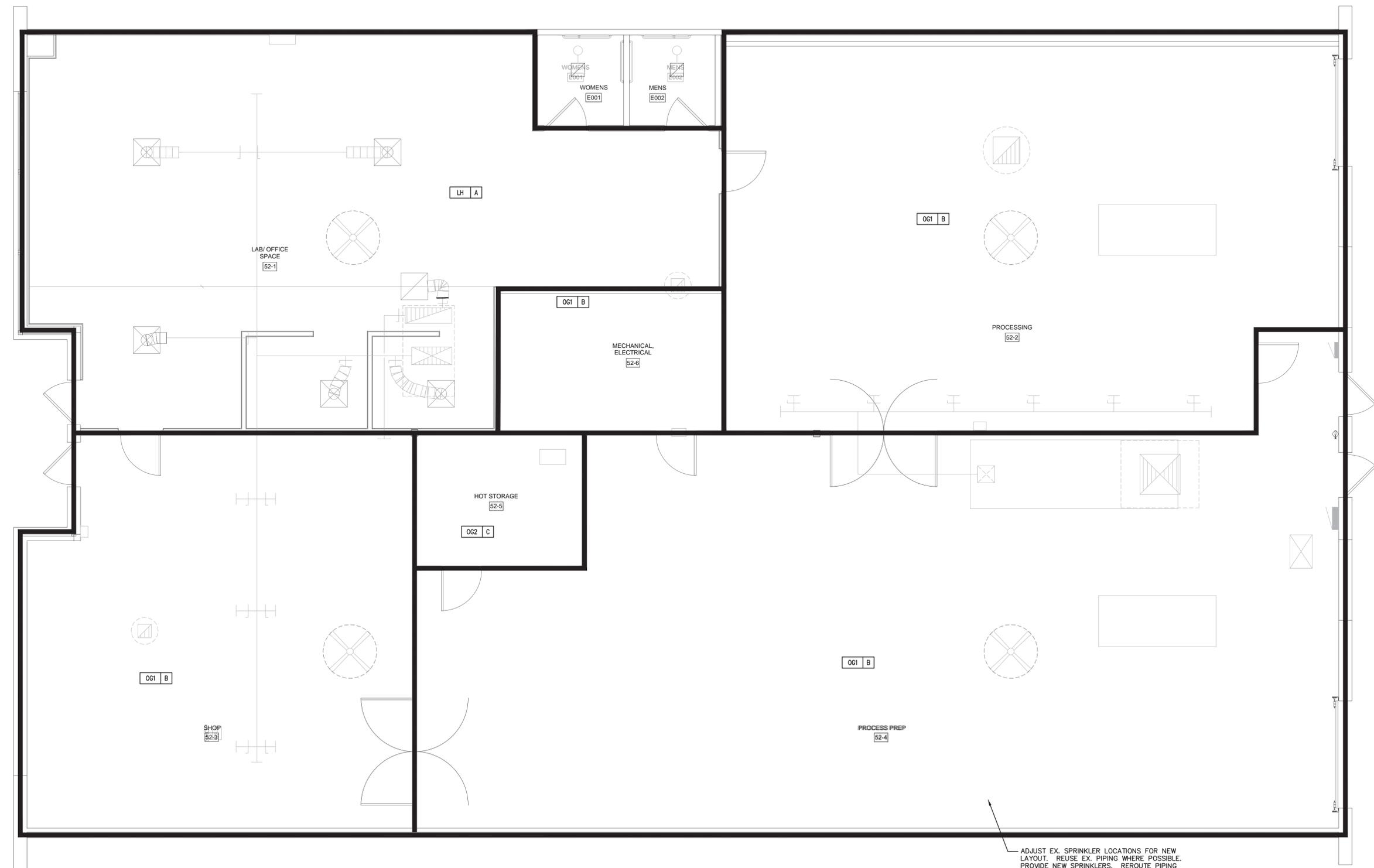
21 13 17 AUTOMATIC SPRINKLER SYSTEMS

- SYSTEM DESCRIPTION
 - PROVIDE AUTOMATIC SPRINKLER SYSTEM TO PROTECT BUILDING AREA INDICATED.
 - SYSTEM DESIGN SHALL CONFORM TO SYSTEM SCHEDULE ON THE DRAWINGS, AND COMPLY WITH NFPA 13 AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
 - UL LISTED AND LABELED SYSTEM COMPONENTS RATED FOR 175 PSIG MINIMUM OPERATING PRESSURE.
 - SIMILAR COMPONENT ITEMS SHALL BE BY THE SAME MANUFACTURER.
- SPRINKLERS
 - MANUFACTURERS: VIKING STAR SPRINKLER CORPORATION, CENTRAL, TYCO.
 - BRASS BODY AND BODY CAP, COPPER DEFLECTOR, STAINLESS STEEL DEFLECTOR PINS.
 - PENDENT (CEILING): VIKING MODEL M, BRASS CASTING FRAME AND DEFLECTOR, GLASS BULB WITH GLYCERIN SOLUTION, T-THREAD ON STYLE MODEL E-2.
 - UPRIGHT: VIKING MODEL M, BRASS CASTING FRAME AND DEFLECTOR, GLASS BULB WITH GLYCERIN SOLUTION.
- INSTALLATION
 - INSTALL SPRINKLER HEADS TO MISS ALL LIGHTS, GRILLES AND ANY OTHER CEILING OBSTRUCTIONS.
 - APPLY PAPER COVER OVER SPRINKLER HEADS WHERE CEILING IS TO BE PAINTED OR SPRAYED. REMOVE PROTECTIVE PAPER COVER AFTER PAINTING OR SPRAYING IS COMPLETED.
 - PROVIDE MOUNTABLE METAL BOX OF SPARE HEADS WITH PROPER WRENCH FOR HEAD REPLACEMENT.
 - PROVIDE WIRE GUARDS ON SPRINKLERS LOCATED BELOW 84 INCHES AFF.

— SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

— ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/ OWNER PRIOR TO INSTALLATION.

— VERIFY OVERHEAD DOOR AND EQUIPMENT/DUCTWORK LOCATIONS WITH ARCHITECTURAL AND HVAC PLANS. PROVIDE SPRINKLERS AT THESE LOCATIONS PER NFPA 13.



ADJUST EX. SPRINKLER LOCATIONS FOR NEW LAYOUT. REUSE EX. PIPING WHERE POSSIBLE. PROVIDE NEW SPRINKLERS. REROUTE PIPING WHERE IT INTERFERES WITH NEW DUCTWORK.

NORTH

FLOOR PLAN

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

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	ABBR.	IDENTIFICATION	SYM.	ABBR.	IDENTIFICATION
---	CW	COLD WATER PIPING			BALANCE VALVE
----	HW	HOT WATER PIPING			CHECK VALVE
-----	HWR	HOT WATER RETURN PIPING		WHA	WATER HAMMER ARRESTOR
LP---	LP CW	LOW PRESSURE COLD WATER SUPPLY			TEST CONNECTION
LP----	LP HW	LOW PRESSURE HOT WATER SUPPLY			PIPING CAP
LP-----	LP HWR	LOW PRESSURE HOT WATER RETURN			UNION
HP---	HP CW	HIGH PRESSURE COLD WATER SUPPLY			THERMOMETER
HP----	HP HW	HIGH PRESSURE HOT WATER SUPPLY			PRESSURE GAUGE
HP-----	HP HWR	HIGH PRESSURE HOT WATER RETURN		HB	HOSE BIBB
NP---	NP	NON-POTABLE WATER PIPING		RD	ROOF DRAIN
S---	SOFT	SOFT WATER PIPING		OF	OVERFLOW DRAIN
TW---	TW	TEMPERED WATER PIPING		FD	FLOOR DRAIN
SA---	W	WASTE PIPING		SD	SITE DRAIN
SA---	SA	SANITARY SEWER PIPING			H.O. HUB OUTLET
GW---	GW	GREASE WASTE PIPING		X	FIXTURE UNIT (WATER SUPPLY OR WASTE)
P---	P	PROCESS SEWER PIPING		IE	INVERT ELEVATION
ST---	ST	STORM PIPING		EL	ELEVATION
OF---	OF	OVERFLOW CONDUCTOR PIPING		RI	ROUGH IN
V---	V	VENT PIPING			EQUIPMENT BY OTHERS. PLUMBING CONNECTION BY PLUMBING CONTRACTOR
VTR	VTR	VENT THRU ROOF			CONNECT TO EXISTING PIPING
AW---	AW	ACID WASTE PIPING	----		REMOVE EXISTING
AV---	AV	ACID VENT PIPING	AFF		ABOVE FINISHED FLOOR
CLD---	CLD	CLEARWATER DRAIN PIPING	HC		HEATING CONTRACTOR
CLV---	CLV	CLEARWATER VENT PIPING	EC		ELECTRICAL CONTRACTOR
DT---	DT	DRAIN TILE	FPC		FIRE PROTECTION CONTRACTOR
G---	G	GAS PIPING	GC		GENERAL CONTRACTOR
A---	A	AIR PIPING	PC		PLUMBING CONTRACTOR
CO	CO	CLEAN OUT	NIC		NOT IN CONTRACT
WCO	WCO	WALL CLEAN OUT	BJ		BETWEEN JOISTS
FCO	FCO	FLOOR CLEAN OUT (FLUSH)	TJ		THRU JOISTS
BFP	BFP	BACKFLOW PREVENTER	TTS		TIGHT TO STRUCTURE
PRV	PRV	PRESSURE REDUCING VALVE	TYP.		TYPICAL
		SHUTOFF VALVE			

FIRE RATED WALLS

	FIRE - 1 HOUR
	FIRE - 2 HOUR
	FIRE - 3 HOUR
	FIRE - 4 HOUR

PIPE SIZE	STEEL			COPPER			PVC	CAST IRON (2)	CPVC	PEX	MIN. ROD
	WATER	VAPOR	MIN. ROD	WATER	VAPOR	MIN. ROD					
1/4" - 1/2"	7'	8'	3/8"	5'	6'	3/8"	4'	5'	3'	32"	3/8"
3/4"	7'	9'	3/8"	5'	7'	3/8"	4'	5'	3'	32"	3/8"
1"	7'	9'	3/8"	6'	8'	3/8"	4'	5'	3'	32"	3/8"
1 1/4"	7'	9'	3/8"	7'	9'	3/8"	4'	5'	4'	32"	3/8"
1 1/2"	9'	12'	3/8"	8'	10'	3/8"	4'	5'	4'	32"	3/8"
2"	10'	12'	3/8"	8'	11'	3/8"	4'	5'	4'	32"	3/8"
2 1/2"	11'	12'	3/8"	9'	12'	3/8"	4'	5'	4'	32"	3/8"
3"	12'	12'	3/8"	10'	12'	3/8"	4'	5'	4'	32"	3/8"
4"	12'	12'	3/8"	12'	12'	3/8"	4'	5'	4'	32"	3/8"
6"	12'	12'	3/8"	12'	12'	3/8"	4'	5'	4'	32"	3/8"
8"	12'	12'	1/2"	--	--	--	4'	5'	4'	32"	3/8"
10"	12'	12'	1/2"	--	--	--	4'	--	--	32"	3/8"
12"	12'	12'	5/8"	--	--	--	4'	--	--	32"	3/8"
14"	12'	12'	5/8"	--	--	--	4'	--	--	32"	3/8"
16"	12'	12'	3/4"	--	--	--	4'	--	--	32"	3/8"
MAX. VERT. (1)	15'	15'	--	10'	10'	--	10'	15'	10'	10'	--

(1) SUPPORT AT MINIMUM EVERY FLOOR LEVEL OR SPACING LISTED.
 (2) SPACING MAY BE INCREASED TO 10' FOR 10' PIPE LENGTHS.

PIPE SCHEDULE					
SERVICE	APPLICATION	PIPE MATERIAL	PIPE STANDARD	FITTINGS	JOINTS
WATER	ABOVE GROUND INSIDE BUILDING	CPVC	ASTM D2846 - SDR11 ASTM F441 - SCH. 80	ASTM D2846 - SDR11 ASTM F439 - SCH. 80	ASTM D2846 - SDR11 ASTM F656 PRIMER WITH ASTM F493 SOLVENT CEMENT - SCH. 80
SAN. SEWER, DRAIN, WASTE, AND VENT	ABOVE GROUND INSIDE BUILDING	PVC	ASTM D1785, D2665 DWV	PVC ASTM D2466, D2467, F409	ASTM F656 PRIMER WITH ASTM D2564 SOLVENT CEMENT
	UNDER GROUND INSIDE BUILDING	PVC	ASTM D1785, D2665 SCHEDULE 40	PVC ASTM D2466, D2467, F409	ASTM F656 PRIMER WITH ASTM D2564 SOLVENT CEMENT
WATER HEATER VENT AND EXHAUST	DIRECT VENT HEATER	PVC (1)	ASTM D-1785 SCHEDULE 40	PVC ASTM F-2665	ASTM F656 PRIMER WITH ASTM D2564 SOLVENT CEMENT
AIR	= <2"	POWDER COATED EXTR. ALUM. 6063 T5	ASTM B241, EN755.2, EN755.3	TRANSAIR- PLASTIC W/ S.S. GRIPPING TEETH, NITRILE IRHD50 SEALS	INSTANT TO CONNECT HALF TURN RELEASE NUT

- WHERE MULTIPLE PIPE MATERIALS ARE LISTED, CONTRACTOR MAY CHOOSE FROM THOSE LISTED, UNLESS DRAWINGS SPECIFICALLY INDICATE PIPE MATERIAL.
 (1) INSTALL IN ACCORDANCE WITH EQUIPMENT INSTALLATION INSTRUCTIONS. PITCH UP FROM EQUIPMENT.

INSULATION SCHEDULE			
SERVICE	LOCATION	INSULATION THICKNESS & TYPE	INSULATION JACKET
COLD WATER	GENERAL BUILDING	1/2" RIGID F.G. OR CLOSED CELL (1) (2)	NR
COLD WATER	IN WALLS	1/2" CLOSED CELL	NR
HOT WATER	GENERAL BUILDING	1" RIGID F.G. OR CLOSED CELL (2)	NR
HOT WATER BRANCH	IN WALLS	1/2" CLOSED CELL	NR
AIR	GENERAL BUILDING	NR	NR

NR = NOT REQUIRED

INSULATION NOTES

(1) INSULATE METERS, VALVES, BACKFLOW PREVENTERS AND ALL INLINE EQUIPMENT.
 (2) INSULATION NOT REQUIRED FOR EXPOSED FINAL PIPING CONNECTIONS TO FIXTURES.

THERMOSTATIC MIXING VALVE SCHEDULE (T.M.V.)									
NO.	SERVICE	INLETS	OUTLET	MAX. FLOW (GPM)	ACTUAL FLOW (GPM)	ACT. P.D. (PSI)	TEMP. SETTING (°F)	MODEL	REMARKS
1	S-2	1/2"	1/2"	14.0	2.0	4	105	LFMMV	"WATTS" (1)

- ACCEPTABLE MANUFACTURERS: SYMMONS, WATTS, POWERS.
- LEAD FREE BODY, REMOVABLE CARTRIDGE WITH STRAINER, STAINLESS STEEL SPRING, EPDM O-RINGS AND SOLID WAX THERMOSTAT ASSEMBLY.
- (1) POINT OF USE TMV SHALL COMPLY WITH ASSE 1017, 1069 AND 1070.

CLEANOUT SCHEDULE									
SYM.	LOCATION	SIZES	BODY MAT'L	PLUG MAT'L	ACCESS COVER		MISC.	FIGURE	REMARKS
					MAT'L	MISC.			
CO	ABV. CLGS & EXPOSED PIPE	2" - 6"	C.I.	PVC	-	-	-	Z-1440	"ZURN"
FCO	FINISHED ROOMS W/O CARPET (1)	2" - 6"	C.I.	PVC	N.B.	-	-	Z-1400	"ZURN"
WCO	WALL	2" - 6"	C.I.	PVC	S.S.	-	-	Z-1441	"ZURN"

- ACCEPTABLE MANUFACTURERS: J.R. SMITH, SCHIER, JOSAM, WADE, ZURN.
- RECESSED TAPER THREAD PLUG WITH SLOTTED RECESS.
- (1) FINISHED ROOMS ARE ROOMS WITH CARPET OR FLOOR TILE OR ROOMS ACCESSIBLE BY A DOOR LESS THAN 42" WIDE.

DRAIN SCHEDULE									
SYM.	TYPE	APPLICATION	OUTLET SIZE	BODY MAT'L	STRAINER/TOP		MISC.	MODEL	REMARKS
					MAT'L	SIZE			
FD-1	FLOOR	EQ. RM. / MED. DUTY	2"-4" (1)	CAST IRON	CAST IRON	7" DIA	-	Z-507	"ZURN" (10)
H.O.	HUB OUTLET	INDIRECT WASTE	(1)	-	-	-	STUB 2" A.F.F.	-	-

- ACCEPTABLE MANUFACTURERS: ZURN, J.R. SMITH, JOSAM, WADE, WATTS, SCHIER, KUSEL, SIOUX CHIEF.
- (1) AS NOTED ON DRAWINGS

ELECTRICAL/STARTER/DISCONNECT SCHEDULE													
SYM.	LOCATION	ELECTRICAL DATA				STARTER			DISCONNECT		REMARKS		
		HP	KW	AMPS	VOLT	PH.	TYPE	LOCATION	FURN. BY	ACCESS-ORIES		DIS-CONNECT	FURN. BY
RELOCATED EX. GWH	52-6	-	-	-	120	1	INTEG	INTEGRAL	EM	-	NR	-	REC. (1)
WATER SOFTENER	52-6	-	-	-	120	1	INTEG	INTEGRAL	EM	-	NR	-	REC. (1)

- STARTER TYPE:
INTEG.= INTEGRAL: PROVIDED INTEGRAL WITH EQUIPMENT.
RELAY= UL LISTED MOTOR RATED RELAY WITH SEPARATE ENTRANCES FOR INPUT AND OUTPUT CONTACTS, AND LED STATUS INDICATOR.

- | | | | |
|---|---|--|--|
| FURNISHED BY:
EM = EQUIPMENT MANUFACTURER
PC = PLUMBING CONTRACTOR
EC = ELECTRICAL CONTRACTOR
HC = HEATING CONTRACTOR | ACCESSORIES:
HOA = HAND-OFF-AUTO
PL = PILOT LIGHT
PB = PUSH BUTTON
2-SP = TWO SPEED
RV = REDUCED VOLTAGE | DISCONNECT:
NR = NOT REQUIRED
R = REQUIRED
WP = WEATHERPROOF
F = FUSED | REMARKS:
H.W. = HARD WIRED
REC. = RECEPTACLE |
|---|---|--|--|

- ACCEPTABLE MANUFACTURERS: ALLEN BRADLEY, CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.
- VERIFY VOLTAGE AND PHASE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
- (1) VERIFY REQUIREMENTS WITH OWNER FURNISHED EQUIPMENT.

BACKFLOW PREVENTER / VACUUM BREAKER SCHEDULE (B.F.P.)												
SYM.	LOC.	GPM	MAX. P.D. (PSI)	INDIRECT WASTE REQ'D	SIZE	TYPE	MAX. HAZ.	BFP/VB PRESS.	APPLICATION	ASSE STD.	MODEL	REMARKS
BFP-1	52-2	7.0	4.0	NO	3/4"	SPILL RESISTANT VB ASSEMBLY	HIGH	CONTIN.	HOSE STATION	1056	LFO0BPCQT	"WATTS" (1) (2)

- ACCEPTABLE MANUFACTURERS: WATTS, CONBRACO, AMES, ZURN/WILKINS.
- (1) LEAD FREE BODY.
- (2) INSTALL MINIMUM 12" ABOVE FLOOD LEVEL RIM OF FIXTURE SERVED.

INTERIOR GREASE INTERCEPTOR SCHEDULE (G.I.)											
NO.	LOC.	SIZE L x W x H	GPM	GREASE CAPACITY (LBS.)	LIQUID CAPACITY (GALLONS)	INLET & OUTLET SIZE	MAT'L	RECESS	EXTENSION	MODEL	REMARKS
1	PROCESSING 52-2	37" x 28" x 28.5"	50	249	52	4"	(1)	FULL	(2)	GB-50	"SCHIER"

- ACCEPTABLE MANUFACTURERS: J.R. SMITH, SCHIER, WATTS.
- FULLY RECESSED INTERCEPTORS TOPS FLUSH WITH FLOOR, AND ANCHOR FLANGE.
- (1) HIGH DENSITY POLYETHYLENE BODY. NON-CORROSIVE PEDESTRIAN COVER.
- (2) P.C. TO PROVIDE ACCESS COVER EXTENSION RISER AS REQUIRED.

HOSE STATION SCHEDULE (H.S.)										
NO.	TYPE	INLET WATER TEMP (DEG F)	SPRAY NOZZLE	HOSE			RACK	MODEL	REMARKS	
				DIA.	LENGTH (FT)	COLOR				
1	CW/HW MIX	50/120	N/A	-	-	-	-	WDS1	"DIXON VALVE"	

- MAX. TEMP 200 DEG F, MAX. PRESS. 150 PSIG, PROVIDE SWIVEL HOSE ADAPTER.
- ACCEPTABLE MANUFACTURERS: STRAHMAN, LAFFERTY, DIXON.

SERVICE SINK SCHEDULE (S.S.)									
NO.	MOUNTING	BASIN			MODEL	FAUCET			
		MAT'L	SIZE	RIM GUARD		PIPING EXPOSURE	BACKFLOW PREVENTER	GPM	MFR/MODEL
1	FLOOR	DURASTONE	24x24x10	(1)	MUSTEE 63M	CONCEALED	WATTS SERIES 8	5-7	CHICAGO 305

- ACCEPTABLE MANUFACTURERS:
-BASIN: MUSTEE, FIAT, KOHLER, WILLIAMS.
-FAUCET: CHICAGO, DELTA, KOHLER, AMERICAN STANDARD, SYMMONS, T&S BRASS.
-DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
- FLOOR SERVICE SINKS WITH 3" BRASS DRAIN, STAINLESS STEEL 3 MOP HOLDER HANGER, HEAVY DUTY 5/8" DIAMETER REINFORCED RUBBER HOSE, AND STAINLESS STEEL HOSE BRACKET.
- (1) BUMPER GUARDS ON EXPOSED RIMS.

SINK SCHEDULE (S.)												
NO.	SINK			MODEL	NO. HOLES	SPOUT		GPM	FAUCET			
	COMPARTMENT	DEPTH	OVERALL SIZE			REACH	HEIGHT		HANDLE	FINISH	SPRAY	MODEL
1	1	7.5"	19.5" x 19"	ELKAY LR-1919 (2)	3	5.5"	7"	2.2	WR. BLADE	CHROME	NO	ZURN Z-831B4-XL
2	1	5"	15.5" x 17.5"	ADVANCE TABCO 7-PS-51 (2)	1	5.5"	7"	2.2	SENSOR	CHROME	NO	ADVANCE TABCO K-175
3	(1)	(1)	(1)	(1)(2)	2	(1)	(1)	(1)	(1)	(1)	(1)	(1)

- ACCEPTABLE MANUFACTURERS:
-SINK: KOHLER, AMERICAN STANDARD, CRANE, ELKAY.
-FAUCETS: KOHLER, SYMMONS, CHICAGO, AMERICAN STANDARD, T&S BRASS, DELTA.
-STOPS AND SUPPLIES: KOHLER, BRASSCRAFT, DEARBORN, KEENEY, MCGUIRE.
-DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
- SELF-RIMMING 18 GA. 304 S.S. SINK, ANGLE SUPPLIES WITH HANDLE STOPS (BRASSCRAFT OCR1912AX C). PROVIDE EACH COMPARTMENT WITH STAINLESS STEEL STRAINER AND TAILPIECE (ELKAY LK-35B), AND 1-1/2" "P" TRAP (BRASSCRAFT 0030).
- VERIFY SINK CUTOUT SIZE WILL FIT IN COUNTERTOP WITH CABINET SHOP DRAWINGS PRIOR TO ORDERING.
- (1) FURNISHED BY OWNER AND INSTALLED BY P.C.
- (2) P.C. TO PROVIDE PERFORATED GRID STRAINER (ELKAY LK-18) AND 1 1/2" "P" TRAP (BRASSCRAFT 0030).

DIVISION 22 PLUMBING

00 72 00 GENERAL CONDITIONS

A. SEE SHEET T2.0.

01 11 00 GENERAL REQUIREMENTS

A. SEE SHEET T2.0.

B. SUBSTITUTIONS

1. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ENGINEER.

C. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:

1. SEE SPECIFICATIONS ON SHEET T2.0 FOR ADDITIONAL REQUIREMENTS AND SUBMISSION PROCEDURES.

2. PLUMBING CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:

A. ALL SCHEDULED EQUIPMENT

B. PIPING

C. FIXTURES

D. INSULATION

E. HANGERS

F. COMPRESSED AIR PIPING

G. COMPRESSED AIR COMPRESSOR

H. PIPE IDENTIFICATION

3. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.

4. FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.

09 91 00 FINISH AND PAINTING

A. PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.

B. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. P.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.

C. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.

D. WHERE THE PLUMBING CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.

22 05 00 BASIC PLUMBING REQUIREMENTS

A. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.

B. REGULATORY REQUIREMENTS

1. PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION INDICATING APPROVAL, BACKFLOW PREVENTION DEVICES INSTALLATION.

2. PERFORM WORK PER STATE OF WISCONSIN CHAPTER COMM 82, "DESIGN, CONSTRUCTION, INSTALLATION, SUPERVISION, AND INSPECTION OF PLUMBING", AND "STANDARD SPECIFICATION FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN".

C. COORDINATE INSTALLATION OF PLUMBING WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.

D. VERIFY CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.

E. CUTTING AND PATCHING

1. CUTTING AND PATCHING NECESSARY FOR PLUMBING WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES. CORE DRILL OR SAW-CUT OPENINGS THROUGH EXISTING CONCRETE.

2. P.C. SHALL PROVIDE SAWCUTTING, EXCAVATION, AND BACKFILL OF EXISTING FLOORS AS REQUIRED FOR INSTALLATION OF NEW UNDERGROUND PIPING. P.C. SHALL PROVIDE CONCRETE AND REINFORCING PER FLOOR SLAB SPECIFICATIONS IN REMOVED AREA OF THICKNESS TO MATCH EXISTING (FIELD VERIFY). PROVIDE DOWELS INTO EXISTING FLOOR SLAB. DOWEL DIAMETER SHALL BE MINIMUM ONE EIGHTH OF FLOOR SLAB THICKNESS. DOWEL LENGTH SHALL BE 12" FOR SLABS LESS THAN 6" THICK, 16" FOR SLABS 6-7" THICK, 18" FOR SLABS 8-9" THICK, AND 20" FOR SLABS GREATER THAN 9" THICK. DOWELS SHALL BE SPACED 12" O.C. AND PENETRATION IN EXISTING SLAB SHALL BE HALF THE LENGTH.

F. ESCUTCHEONS

1. INSTALL ONE-PIECE POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS.

2. ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.

3. ID TO CLOSELY FIT AROUND PIPE/INSULATION, OD THAT COMPLETELY COVERS THE OPENING.

4. ESCUTCHEONS REQUIRED IN CABINETS AND CASEWORK.

G. REMOVE PLUMBING EQUIPMENT, FIXTURES, PIPING, ETC. INDICATED BY THE DRAWINGS TO BE DEMOLISHED FROM THE JOB SITE, UNLESS INDICATED TO BE TURNED OVER TO THE OWNER.

H. PROJECT COMPLETION

1. CLEAN FIXTURES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.

2. REMOVE, CLEAN AND REPLACE AERATORS AFTER FLUSHING WATER PIPING.

3. PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS AND OBTAIN OWNER SIGNOFF THAT INSTRUCTIONS HAVE BEEN COMPLETED.

4. PROVIDE PLUMBING EQUIPMENT OPERATING AND MAINTENANCE MANUALS TO THE OWNER PER IMC 364.0313(3).

5. AS-BUILT DRAWINGS SHALL BE MARKED ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.

22 05 19 METERS AND GAUGES

A. PRESSURE GAUGES AND THERMOMETERS

1. MANUFACTURERS: TRERICE, U.S. GAUGE, ASHCROFT, MARSH, WEISS, WEKSLER.

B. PRESSURE GAUGES

1. GENERAL PURPOSE: TRERICE 620B STAINLESS STEEL CASE, PHOSPHOR BRONZE TUBE, BRASS SOCKET, 4-1/2" DIAMETER, ACRYLIC WINDOW, 0-100 PSIG SCALE RANGE, 1 PSIG MINIMUM INCREMENT, TRERICE 865/865-1 GAUGE COCK AND TRERICE 870-1 PULSATION DAMPER.

2. COMPRESSED AIR: TRERICE 600B CAST ALUMINUM CASE, PHOSPHOR BRONZE BOURDON TUBE, 4-1/2" DIAMETER, ACRYLIC WINDOW, 0-300 PSIG SCALE RANGE, 5 PSIG MINIMUM INCREMENT, TRERICE 865-1 GAUGE COCK AND TRERICE 870-1 PULSATION DAMPER.

C. STEM THERMOMETERS:

1. GENERAL PURPOSE: TRERICE 85X9, ASTM E1, ORGANIC SPIRIT LIQUID FILL, CAST ALUMINUM CASE WITH EPOXY FINISH, ACRYLIC WINDOW, CAST ALUMINUM ADJUSTABLE JOINT WITH POSITIVE LOCKING DEVICE, 9" SCALE, 3/4" NPT BRASS STEM, WITH EXTENSIONS AS REQUIRED FOR INSULATION.

D. EXTEND NIPPLES TO ALLOW INSULATION CLEARANCE.

E. INSTALL WHERE READ FROM NORMAL OPERATING LEVEL.

F. CALIBRATE FOR ACCURACY.

22 05 29 PIPE AND EQUIPMENT HANGERS AND SUPPORTS

A. MANUFACTURERS: B-LINE, EMPIRE INDUSTRIES, GLOBAL PIPE HANGER PRODUCTS, GRINNELL,

NATIONAL PIPE HANGER, UNI STRUT.

B. SEE SCHEDULE ON PLUMBING HANGER SPACING.

C. CONFORM TO ASME B31.9 AND MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) SP-58-2009.

D. ANGLES, CHANNELS, AND BEAMS: ASTM A36 AND A572 AS REQUIRED.

E. HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.

F. ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:

1. MAXIMUM HANGER LOAD OF 50 LBS.

2. ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.

3. ANCHOR LENGTH SHALL EXCEED DECK DEPTH.

G. PIPE HANGERS/SUPPORTS- MATERIALS

1. THREADED ROD: MILD STEEL BLACK OR ZINC PLATED FINISH

2. ADJUSTABLE SWIVEL RING MSS SP-58 TYPE 10, B-LINE FIGURE B3170

3. LIGHT DUTY CLEVIS: MSS SP-58 TYPE 1, B-LINE FIGURE B3104

4. STANDARD CLEVIS: MSS SP-58 TYPE 1, B-LINE FIGURE B3100

5. INSULATION PROTECTION SHIELDS: MSS SP-58 TYPE 40, B-LINE FIGURE B3151.

6. PRE-INSULATED SUPPORT:

A. B-LINE FIGURE B338* WATER-REPELLENT TREATED TYPE I CALCIUM SILICATE INSULATION WITH PRE-GALVANIZED STEEL JACKET, OR TYPE II CELLULAR GLASS, INSULATION THICKNESS SAME AS ADJACENT PIPE INSULATION.

B. COLD PIPING: INSERT WITH A VAPOR BARRIER, EXTEND INSERT 2" BEYOND STEEL JACKET.

C. INSERT AND SHIELD SHALL COVER ENTIRE CIRCUMFERENCE OF PIPE FOR TRAPEZE OR CLAMPED SYSTEMS.

D. INSERT AND SHIELD SHALL COVER LOWER 180 DEGREE OF PIPE FOR CLEVIS OR BAND HANGERS.

H. HANGERS FOR INSULATED PIPING

1. PROVIDE INSULATION PROTECTION SHIELDS OR PRE-INSULATED SUPPORT FOR OVERSIZED HANGERS.

I. HANGERS FOR PLASTIC PIPING SHALL BE FREE OF ROUGH OR SHARP EDGES THAT COULD DAMAGE PIPE.

J. INSTALL ADDITIONAL HANGER WITHIN 12" OF ELBOWS AND TEES.

K. INSTALL HANGERS AND SUPPORTS SO PIPING LIVE AND DEAD LOADS AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT. ADJUST HANGERS TO DISTRIBUTE LOADS EQUALLY ON ATTACHMENTS AND TO PROVIDE INDICATED PIPE SLOPES.

L. STRUT SYSTEM

1. COMPLY WITH THE LATEST REVISION OF MFMA STANDARDS PUBLICATION NUMBER MFMA-3, "METAL FRAMING STANDARDS PUBLICATION"

2. INSTALL STRUT IN ACCORDANCE WITH MFMA-102 "GUIDELINES FOR THE USE OF METAL FRAMING"; IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, AND WITH RECOGNIZED INDUSTRY PRACTICES.

3. COLD FORMED LOW CARBON STEEL METAL FRAMING CHANNEL STRUT: B-LINE TYPE B CHANNEL.

4. MANUFACTURER'S STANDARD FINISH OR PLAIN FINISH UNLESS INSTALLED OUTDOORS, OR IN WET LOCATIONS.

5. 1-5/8 INCHES WIDE IN VARYING HEIGHTS AND WELDED COMBINATIONS AS REQUIRED TO MEET LOAD CAPACITIES.

6. PIPE CLAMP: B-LINE B2000 SERIES. ALL PIPES SHALL BE CLAMPED TO THE STRUT.

7. INSULATION SHALL BE CONTINUOUS THRU STRUT PIPE CLAMPS. PROVIDE PRE-INSULATED SUPPORT OR INSULATION PROTECTION SHIELD AND PIPE CLAMP SIZED FOR INSULATION O.D..

22 05 53 MECHANICAL IDENTIFICATION

A. VALVE TAGS

1. MANUFACTURERS: V.H. BRADY, AND SETON NAME PLATE COMPANY.

2. METAL TAGS: 1-1/2" DIAMETER BRASS WITH STAMPED LETTERS.

3. TAGS SHALL USE THE MANUFACTURER STANDARD NOMENCLATURE

4. TYPEWRITTEN LETTER SIZE CHART.

5. ALL VALVES SHALL BE TAGGED EXCEPT DRAIN VALVES AND FIXTURE STOPS.

B. PIPE IDENTIFICATION

1. INDOOR SELF-ADHESIVE PIPE MARKERS

A. MANUFACTURERS: MARKING SERVICES MS-900, BRADY B-736, SETON OPTI-CODE.

B. FLEXIBLE PVC FILM WITH PRESSURE SENSITIVE ACRYLIC ADHESIVE BACKING WITH PRINTED MARKINGS

C. SECURE WITH 2" WIDE TAPE WITH ARROWS INDICATING FLOW

2. COLOR, OVERALL SIZE AND LETTER HEIGHT SHALL CONFORM TO ASME A13.1- 2007 "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS".

3. IDENTIFY PIPE SERVICE, FLOW DIRECTION, AND PRESSURE.

4. LOCATIONS

A. LOCATE TO FACE GREATEST POINT OF VISIBILITY. ALL ADJACENT LABELS TO BE INSTALLED NEATLY IN A ROW.

B. LOCATE IDENTIFICATION NOT-TO-EXCEED 50 FEET FOR EXPOSED PIPING.

C. LOCATE IDENTIFICATION NOT-TO-EXCEED 25 FEET FOR PIPING ABOVE CEILINGS.

D. MINIMUM ONE LOCATION PER ROOM.

E. INSTALL IDENTIFICATION AFTER PIPING AND INSULATION IS COMPLETE TO ENSURE MAXIMUM VISIBILITY OF THE IDENTIFICATION SYSTEM.

F. BEHIND ACCESS PANELS AND ALL OTHER ACCESSIBLE POINTS OF SERVICE

G. NEAR LOCATIONS WHERE PIPES PENETRATE WALLS, FLOORS OR CEILINGS.

H. NEAR EACH VALVE AND CONTROL DEVICE.

I. AT EACH MAJOR PIECE OF EQUIPMENT.

22 07 00 INSULATION

A. GENERAL

1. INSULATION, INSULATION SYSTEMS AND JACKETS SHALL MEET UL-723/ASTM E84 REQUIREMENTS OF MAX. FIRE HAZARD CLASSIFICATION OF 25, AND MAX. FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED OF 50 WHEN INSTALLED IN RETURN AIR PLENUMS.

2. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND MICA PUBLICATION "COMMERCIAL AND INDUSTRIAL STANDARDS", 1999 FIFTH EDITION.

3. INSULATE ENTIRE PIPING SYSTEM INCLUDING VALVES AND FITTINGS PER MICA INSULATION STANDARDS PLATES 12, 15, 18 OR INSULATION MANUFACTURER APPROVED DETAILS.

4. SEAL ALL INSULATION ENDS.

5. CONTINUE INSULATION WITHOUT INTERRUPTIONS THROUGH DRYWALL WALLS.

6. REPAIR INSULATION ON EXISTING PIPING WHICH IS DAMAGED DUE TO CONNECTING OF NEW PIPING. MAINTAIN EXISTING VAPOR BARRIER INTEGRITY.

B. FIBERGLASS (F. 5.) INSULATION

1. RIGID PIPING:

A. O.C. FIBERGLAS PIPE INSULATION, KNAUF EARTHWOOL PIPE INSULATION, JOHNS MANVILLE MICRO-LOK.

B. SINGLE OR DOUBLE ADHESIVE SELF-SEALING LAP SYSTEM FOR LONGITUDINAL JOINT, PRESSURE SENSITIVE BUTT STRIP SEALS, ALL SERVICE JACKET VAPOR BARRIER COVERING.

C. 3.5-5.5 LB./CU. FT., R-4.3 / NOMINAL INCH AT 75 DEG F.

D. MAX 850 DEG F, JACKET MAX 150 DEG F, 0.02 PERM.

E. COMPRESSIVE STRENGTH AT 10% DEFORMATION 125 LB./S.F.

F. VALVES, FITTINGS, AND FLANGE COVERS

1. ZESTON 2000/300 SERIES, CEELCO 300 SERIES, PRATO LOSMOKE PVC JACKET

2. HIGH IMPACT WHITE PVC WITH PRECUT FIBERGLASS INSERTS. MAX TEMP 150 DEG

3. INDOOR IN PROCESS ROOMS: 30 MIL

4. INDOOR NOT IN PROCESS ROOMS: 20 MIL

5. OUTDOORS: 30 MIL

C. CLOSED CELL INSULATION

1. MANUFACTURERS: ARMSTRONG, IMCOA, AND RUBATEX.

2. ELASTOMERIC MATERIAL, 'K' VALUE 0.27 AT 100 DEGREES F, 6 LB./CU. FT., MAXIMUM TEMPERATURE 180 DEG F. SYNTHETIC RUBBER BASE ADHESIVE WITH SYNTHETIC RESINS AND FILLERS.

3. PROVIDE MANUFACTURER PREFORMED INSULATION OVER VALVES AND FITTINGS.

22 10 00 EXCAVATION AND BACKFILL

A. P.C. SHALL EXCAVATE AND BACKFILL TRENCHES FOR PLUMBING WORK.

B. PROTECT TREES, PLANTS, LAWN, AND OTHER FEATURES REMAINING AS PORTION OF FINAL LANDSCAPING.

C. PROTECT BENCHMARKS, EXISTING STRUCTURES, FENCES, SIDEWALKS, PAVING, AND CURBS FROM EXCAVATING EQUIPMENT AND VEHICULAR TRAFFIC.

D. MAINTAIN, PROTECT, AND TEMPORARILY SUPPORT ABOVE AND BELOW GRADE UTILITIES WHICH ARE TO REMAIN.

E. PROVIDE AND MAINTAIN ALL FENCING, BARRICADES, SIGNS, WARNING LIGHTS, AND/OR OTHER EQUIPMENT NECESSARY TO KEEP ALL EXCAVATION PITS AND TRENCHES AND THE ENTIRE SUBGRADE AREA SAFE UNDER ALL CIRCUMSTANCES AND AT ALL TIMES. NO EXCAVATION SHALL BE LEFT UNATTENDED WITHOUT ADEQUATE PROTECTION.

F. ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE NECESSARY TO FIT FIELD CONDITIONS.

G. INSTALL LINES PASSING UNDER FOUNDATIONS WITH MINIMUM OF 1-1/2 INCH CLEARANCE TO CONCRETE AND INSURE THERE IS NO DISTURBANCE OF BEARING SOIL.

H. EXCAVATING

1. CUT TRENCHES SUFFICIENTLY WIDE TO ENABLE INSTALLATION AND ALLOW INSPECTION. REMOVE WATER OR MATERIALS THAT INTERFERE WITH WORK.

2. DO NOT INTERFERE WITHIN 45 DEGREE BEARING SPLAY OF FOUNDATIONS.

3. EXCAVATE MINIMUM 4' BELOW BOTTOM OF PIPE IF STONE GREATER THAN 1" OR BEDROCK IS ENCOUNTERED.

4. REMOVE UNSTABLE AREAS OF SUBGRADE BELOW PIPE TO MINIMUM 24" BELOW PIPE OR TO STABLE MATERIAL. BACKFILL WITH PEA GRAVEL, LIMESTONE SCREENINGS, OR EQUIVALENT AND COMPACT TO DENSITY EQUAL TO REQUIREMENTS FOR SUBSEQUENT BACKFILL MATERIAL.

5. STOCKPILE EXCAVATED MATERIAL IN AREA DESIGNATED ON SITE AND REMOVE EXCESS MATERIAL NOT BEING USED FROM SITE.

I. BEDDING AND BACKFILL:

1. MECHANICALLY COMPACT BEDDING AND BACKFILL TO PREVENT SETTLEMENT. THE INITIAL COMPACTED LIFT TO NOT EXCEED 24" COMPACTED TO 95% DENSITY PER MODIFIED PROCTOR TEST (ASTM D-1557), SUBSEQUENT LIFTS UNDER PAVEMENTS, CURBS, WALKS AND STRUCTURES ARE NOT TO EXCEED 12" AND BE COMPACTED TO 95% DENSITY PER MODIFIED PROCTOR TEST.

IN ALL OTHER AREAS WHERE CONSTRUCTION ABOVE THE EXCAVATION IS NOT ANTICIPATED WITHIN 2 YEARS, MECHANICALLY COMPACT BACKFILL IN LIFTS NOT EXCEEDING 24" TO 90% DENSITY PER MODIFIED PROCTOR TEST.

2. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.

3. BEDDING: WHERE OVEREXCAVATED, BRING BACK TO BOTTOM OF PIPE ELEVATION WITH DRY SAND, GRAVEL OR CRUSHED STONE PASSING A 3/4" SIEVE.

4. BACKFILL TO A DEPTH OF 12" OVER THE PIPE WITH SAND, CRUSHED STONE THAT PASSES A 1" SIEVE. PLACE IN WELL TAMPED MAXIMUM 6" LAYERS FOR LENGTH OF SEWER AND WIDTH OF TRENCH.

5. BACKFILL ABOVE 12" ABOVE THE PIPE:

A. UNDER EXISTING AND FUTURE UTILITIES, AND BUILDINGS: GRANULAR MATERIALS, PIT RUN SAND, GRAVEL, OR CRUSHED STONE, FREE FROM LARGE STONES, ORGANIC, AND FROZEN MATERIALS

6. DIRECT SURFACE WATER AWAY FROM STOCKPILE SITE TO PREVENT EROSION OR DETERIORATION OF MATERIALS. REMOVE STOCKPILE, LEAVE AREA IN A CLEAN AND NEAT CONDITION. GRADE SITE SURFACE TO PREVENT FREESTANDING SURFACE WATER.

22 11 00 WATER PIPING AND VALVES

A. PIPING INSTALLATION

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS. ROUTE ABOVE GROUND PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.

3. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.

4. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.

5. INSTALL DRAIN VALVES TO PROVIDE ABILITY TO DRAIN ALL WATER PIPING IF NOT DRAINABLE THRU FIXTURE.

6. INSTALL VALVE STEM BETWEEN THE VERTICAL (UPRIGHT) OR HORIZONTAL POSITION.

7. DO NOT SUPPORT WEIGHT OF PIPING ON VALVE.

B. WATER PIPING TESTING AND BALANCING

1. TEST WATER DISTRIBUTION SYSTEM WITH POTABLE WATER UNDER A WATER PRESSURE OF 100 PSIG OR THE WORKING PRESSURE OF THE SYSTEM (WHICHEVER IS GREATER) FOR A PERIOD OF (4) HOURS. IF LOCAL AUTHORITIES REQUIRE MORE STRINGENT TESTING, CONTRACTOR SHALL COMPLY WITH THOSE REQUIREMENTS.

2. VERIFY THAT SUFFICIENT WATER FLOW, PRESSURE AND TEMPERATURE ARE AVAILABLE AT EACH OUTLET AND EQUIPMENT CONNECTION.

C. FLUSH AND DISINFECT DOMESTIC WATER SUPPLY SYSTEM AS FOLLOWS:

1. FILL PIPING WITH POTABLE WATER AND ALLOW TO STAND FOR 24 HOURS.

2. FLUSH EACH OUTLET BEGINNING WITH OUTLET CLOSEST TO BUILDING CONTROL VALVE AND THEN EACH SUCCESSIVE OUTLET IN THE SYSTEM.

3. FLUSH EACH OUTLET MINIMUM 1 MINUTE AND UNTIL WATER APPEARS CLEAR AT THE OUTLET.

4. FILL SYSTEM WITH WATER/CHLORINE SOLUTION OF 50 PPM OF CHLORINE AND LET STAND FOR 24 HOURS, OR 200 PPM FOR 3 HOURS.

5. FLUSH WITH POTABLE WATER.

6. REPEAT DISINFECTION IF BACTERIOLOGICAL CONTAMINATION EXISTS.

7. PERFORM WATER QUALITY TEST IF REQUIRED BY LOCAL AUTHORITIES.

8. IF LOCAL AUTHORITIES REQUIRE MORE STRINGENT FLUSHING AND DISINFECTION, CONTRACTOR SHALL COMPLY WITH THOSE REQUIREMENTS.

D. WATER SYSTEM VALVES

1. MANUFACTURERS: NIBCO, APOLLO, HAMMOND, MILWAUKEE, CENTERLINE, DEZURIK, CRANE, MUELLER, POWELL, AND GRINNELL.

2. GENERAL SERVICE

A. BALL VALVES 2" AND SMALLER (CPVC): NIBCO CPVC CTS ONE PIECE MOLDED CPVC BODY, CPVC BALL FULL PORT, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE WITH VALVE EXTENSIONS FOR INSULATED PIPING, SOCKET ENDS, 150 PSI WORKING PRESSURE.

3. DRAIN VALVES: SHUTOFF VALVES WITH THREADED HOSE ADAPTER, CAP, AND CHAIN. NSF 61 LISTED.

4. SPRING LOADED CHECK VALVES 2" AND SMALLER: NIBCO MODEL 460-Y-LF, BRONZE BODY, TFE SEAT AND DISC, STAINLESS STEEL SPRING, THREADED ENDS, CLASS 125, NSF 61 ANNEX G LISTED LEAD FREE.

22 13 00 DRAIN PIPING

A. PIPING INSTALLATION

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2. FIELD VERIFY EXISTING AND PROPOSED SEWER ELEVATIONS AND SIZES AND NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY VARIATION OF THE ELEVATIONS BEFORE BEGINNING ANY SEWER AND BUILDING DRAIN WORK.

3. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS. ROUTE ABOVE GROUND PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.

4. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.

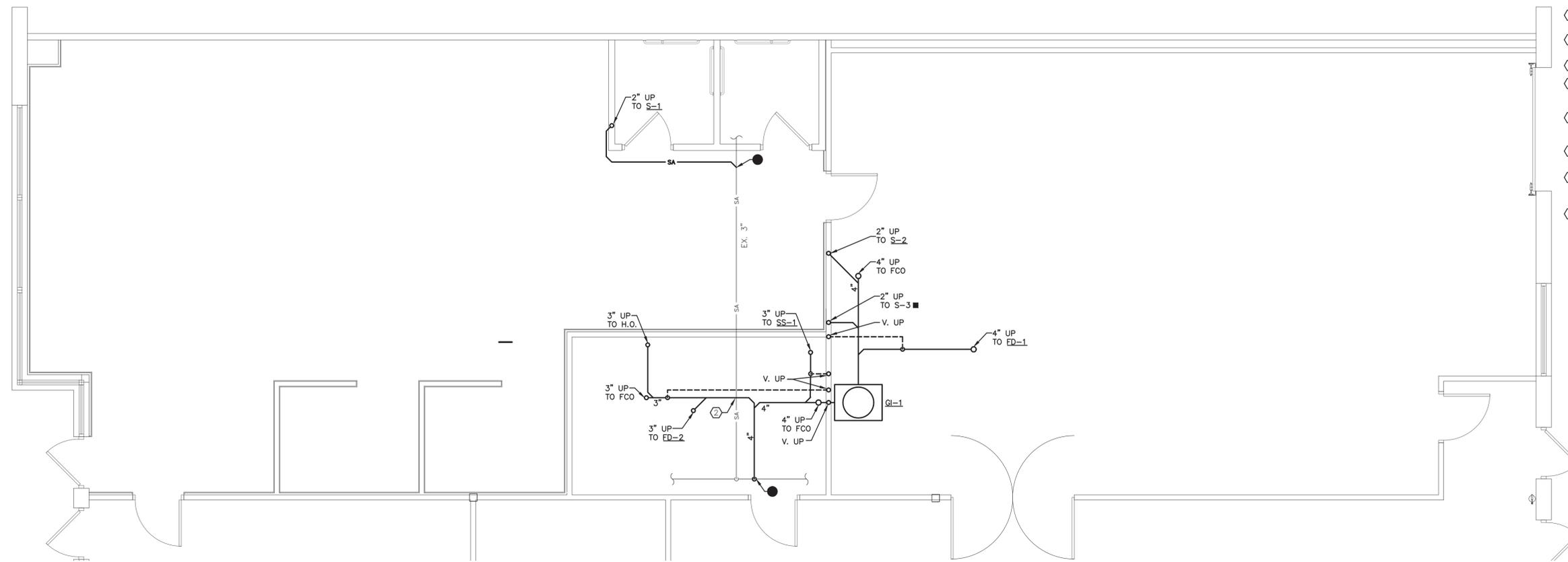
5. PROVIDE NO-HUB ADAPTER ON PVC PIPE WHERE USING NO-HUB COUPLINGS.

6. SLOPE SANITARY PIPE 2" AND SMALLER 1/4" PER FOOT; 3" AND LARGER PIPING 1/8" PER FOOT.

7. SLOPE GREASE WASTE LINES UPSTREAM OF GREASE INTERCEPTOR MINIMUM 1/4" PER FOOT.

B. SANITARY DRAIN PIPING TESTING: TEST DRAIN AND VENT PIPING PER CODE REQUIREMENTS.

22 15 00 COMPRESSED AIR PIPING

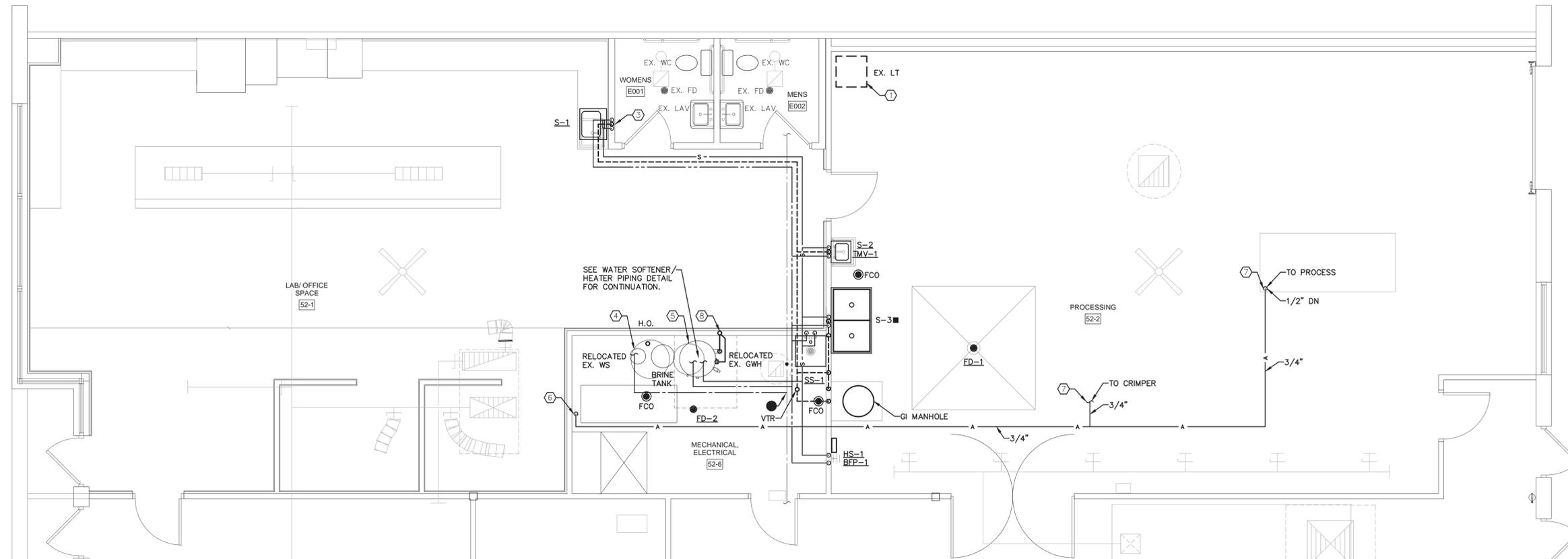


- KEY NOTES:**
- EX. LAUNDRY TRAY TO BE REMOVED. DRAIN, VENT AND WATER TO BE CAPPED.
 - VERIFY HEIGHT OF EXISTING PLUMBING DRAIN, REROUTE AS REQUIRED.
 - CUT AND PATCH EXISTING DRYWALL.
 - RELOCATED WATER SOFTENER FROM OWNERS EXISTING FACILITY, INSTALLED BY P.C. SEE EQUIPMENT RELOCATION & REPLACEMENT NOTES.
 - RELOCATED WATER HEATER FROM OWNERS EXISTING FACILITY, INSTALLED BY P.C. SEE EQUIPMENT RELOCATION & REPLACEMENT NOTES.
 - CONNECT TO AIR COMPRESSOR. AIR COMPRESSOR FURNISHED BY OWNER, INSTALLED BY P.C..
 - FIELD VERIFY LOCATION OF EQUIPMENT CONNECTION COORDINATE WITH OWNER AND G.C.. PROVIDE VALVE WITHIN 12" OF EQUIPMENT CONNECTION.
 - 3" INTAKE AND EXHAUST FLUES UP TO CONCENTRIC VENT THRU ROOF. INSTALL PER MANUFACTURER REQUIREMENTS.

EQUIPMENT RELOCATION & REPLACEMENT NOTES:

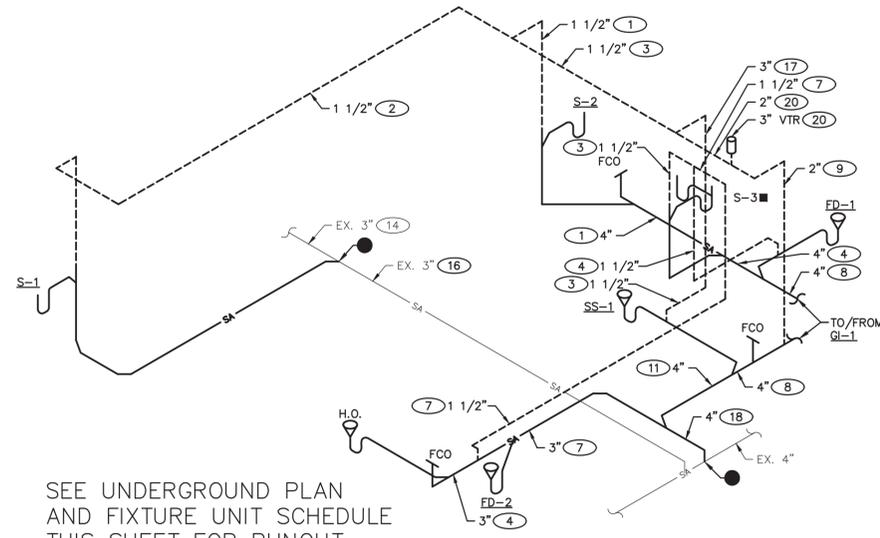
- REMOVE AND RELOCATE EXISTING WATER HEATER WATER SOFTENER FROM OWNER'S EXISTING FACILITY THIS LOCATION. COORDINATE WITH G.C..
- P.C. TO PROVIDE NEW PHOENIX PH199-119 WATER HEATER AT EXISTING FACILITY. REPOSITION EXISTING FACILITY AIR COMPRESSOR FOR SPACE ALLOWANCE FOR NEW WATER HEATER. COORDINATE WITH G.C.

UNDERGROUND PLAN
 SCALE: 1/4" = 1'-0"
 NORTH



FLOOR PLAN
 SCALE: 1/4" = 1'-0"
 NORTH

- NOTES:**
- FIELD VERIFY EXISTING UNDERGROUND PIPING LOCATION, DEPTH AND SIZE AT POINT OF NEW CONNECTION PRIOR TO INSTALLATION OF ANY UNDERGROUND PIPING.
 - FLOOR AND WALL CLEANOUT LOCATIONS NOT PERMITTED TO BE MOVED WITHOUT APPROVAL OF ARCHITECT/ENGINEER.



SEE UNDERGROUND PLAN AND FIXTURE UNIT SCHEDULE THIS SHEET FOR RUNOUT TRAP SIZE TO FIXTURE.

WASTE AND VENT ISOMETRIC

NO SCALE

WATER CALCULATIONS

WATER PRESSURE DATA

1	STATIC PRESSURE AT MAIN	74 PSIG
2	RESIDUAL PRESSURE AT MAIN	40 PSIG
3	RESIDUAL FLOW AT MAIN	3456 GPM
4	BUILDING TENANT FIXTURE UNITS	17.5 F.U.
5	PREDOMINATE FLUSH TYPE	TANK
6	CONTINUOUS FLOW GPM	0 GPM
7	BUILDING TENANT DEMAND	12.2 GPM
8	RESIDUAL PRESSURE AT BUILDING DEMAND	74.0 PSIG
9	SAFETY FACTOR	5 PSIG
10	PRESSURE AVAILABLE FOR DOMESTIC USE	69.0 PSIG

WATER SERVICE AND DISTRIBUTION SIZING DATA

11	ELEVATION OF RESIDUAL TEST HYDRANT	100.00 FEET
12	ELEVATION OF WATER METER	96.00 FEET
13	ELEVATION DIFFERENCE TEST HYDRANT TO METER	-4.00 FEET
14	WATER METER SIZE	1.5 INCHES
15	DEVELOPED LENGTH MAIN TO METER	200 FEET
16	WATER SERVICE SIZE	6 INCHES

—	DI	Cement Lined
x	PVC	
—	Copper	
—	HDPE	
140	Hazen Williams Coefficient	
6.065	Pipe ID	

PRESSURE AVAILABLE AFTER METER

17	PRESSURE DROP BETWEEN MAIN AND METER	0.00 PSIG/100'
18	FRICTION PRESSURE LOSS BETWEEN MAIN AND METER	0.0 PSIG
19	ELEVATION PRESSURE LOSS BETWEEN MAIN AND METER	-1.7 PSIG
20	METER PRESSURE LOSS	5 PSIG
21	PRESSURE AVAILABLE AFTER METER	65.7 PSIG

WATER DISTRIBUTION SIZING -- COLD WATER

A	PRESSURE AVAILABLE AFTER METER	65.7 PSIG
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	
C	DIST. PREVIOUS START POINT TO THIS START POINT	
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT	
E	PIPE PRESSURE DROP FROM METER TO START POINT	
F	CONTROLLING FIXTURE:	
	ROOM NAME & NO.:	PROCESSING 52-2
	PRESSURE REQUIRED	30 PSIG
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	2 FEET
H	PRESSURE LOSS DUE TO WATER SOFTENER	15 PSIG
I	PRESSURE LOSS DUE TO BACKFLOW PROTECTION	4 PSIG
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	15.9 PSIG
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	395 FEET
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	578 FEET
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	2.75 PSIG/100'

METER		WSFU	
HS-1	PIPE SIZE	FLUSH TANK	FLUSH VALVE
HS-1	1/2	1.5	NP
HS-1	3/4	4	NP
HS-1	1	10	NP
HS-1	1 1/4	19	4.5
HS-1	1 1/2	32	7
HS-1	2	100	33
HS-1	2 1/2	—	—
HS-1	3	617	527
HS-1	4	1094	1094

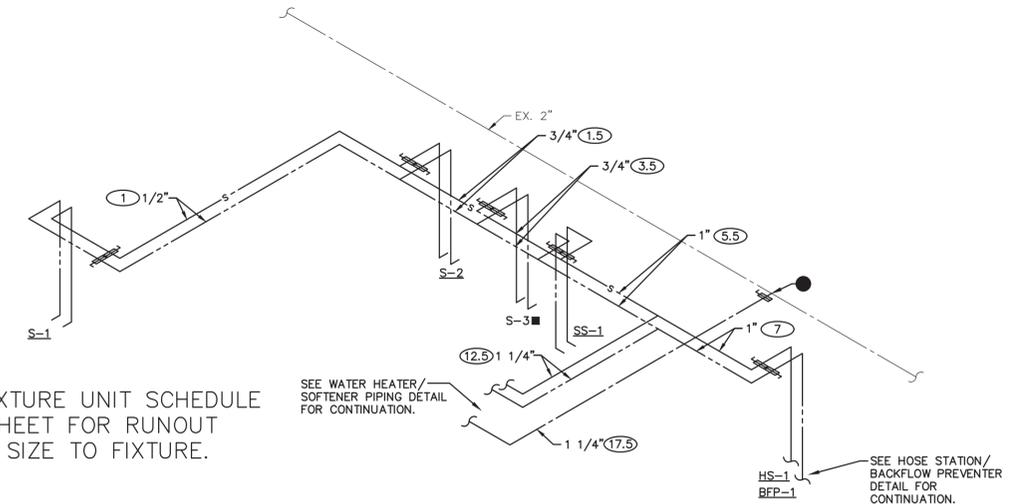
WATER DISTRIBUTION SIZING -- HOT WATER

A	PRESSURE AVAILABLE AFTER METER	65.7 PSIG
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	
C	DIST. PREVIOUS START POINT TO THIS START POINT	
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT	
E	PIPE PRESSURE DROP FROM METER TO START POINT	
F	CONTROLLING FIXTURE:	
	ROOM NAME & NO.:	PROCESSING 52-2
	PRESSURE REQUIRED	30 PSIG
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	2 FEET
H	PRESSURE LOSS DUE TO WATER SOFTENER	15 PSIG
I	PRESSURE LOSS DUE TO BACKFLOW PROTECTION	4 PSIG
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	15.9 PSIG
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	395 FEET
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	593 FEET
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	2.68 PSIG/100'

METER		WSFU	
HS-1	PIPE SIZE	FLUSH TANK	FLUSH VALVE
HS-1	1/2	1.5	NP
HS-1	3/4	4	NP
HS-1	1	10	NP
HS-1	1 1/4	19	4.5
HS-1	1 1/2	32	7
HS-1	2	100	33
HS-1	2 1/2	—	—
HS-1	3	617	527
HS-1	4	1094	1094

FIXTURE UNITS

NO.	FIXTURE	WASTE			COLD WATER			HOT WATER			TOTAL WATER	
		UNITS	TOTAL	TRAP SIZE	UNITS	TOTAL	BRANCH SIZE	UNITS	TOTAL	BRANCH SIZE	UNITS	TOTAL
1	HOSE STATION	—	—	—	7	7	3/4"	7	7	3/4"	9	9
1	FLOOR DRAIN— 3"	3	3	3"	—	—	—	—	—	—	—	—
1	FLOOR DRAIN— 4" & LARGER	4	4	4"	—	—	—	—	—	—	—	—
1	HUB OUTLET— 3"	4	4	3"	—	—	—	—	—	—	—	—
1	S-1 — LAB SINK & FAUCET	2	2	1 1/2"	1	1	1 1/2"	1	1	1 1/2"	1.5	1.5
1	S-2 — HAND SINK & FAUCET	1	2	1 1/2"	0.5	0.5	1 1/2"	0.5	0.5	1 1/2"	1	1
1	S-3 — 3 COMP. SINK & FAUCET	3	3	2"	2	2	1 1/2"	2	2	1 1/2"	3	3
1	SS-1 — SINK— SERVICE 3"	3	3	3"	2	2	1 1/2"	2	2	1 1/2"	3	3
8	TOTAL		22			12.5			12.5			17.5



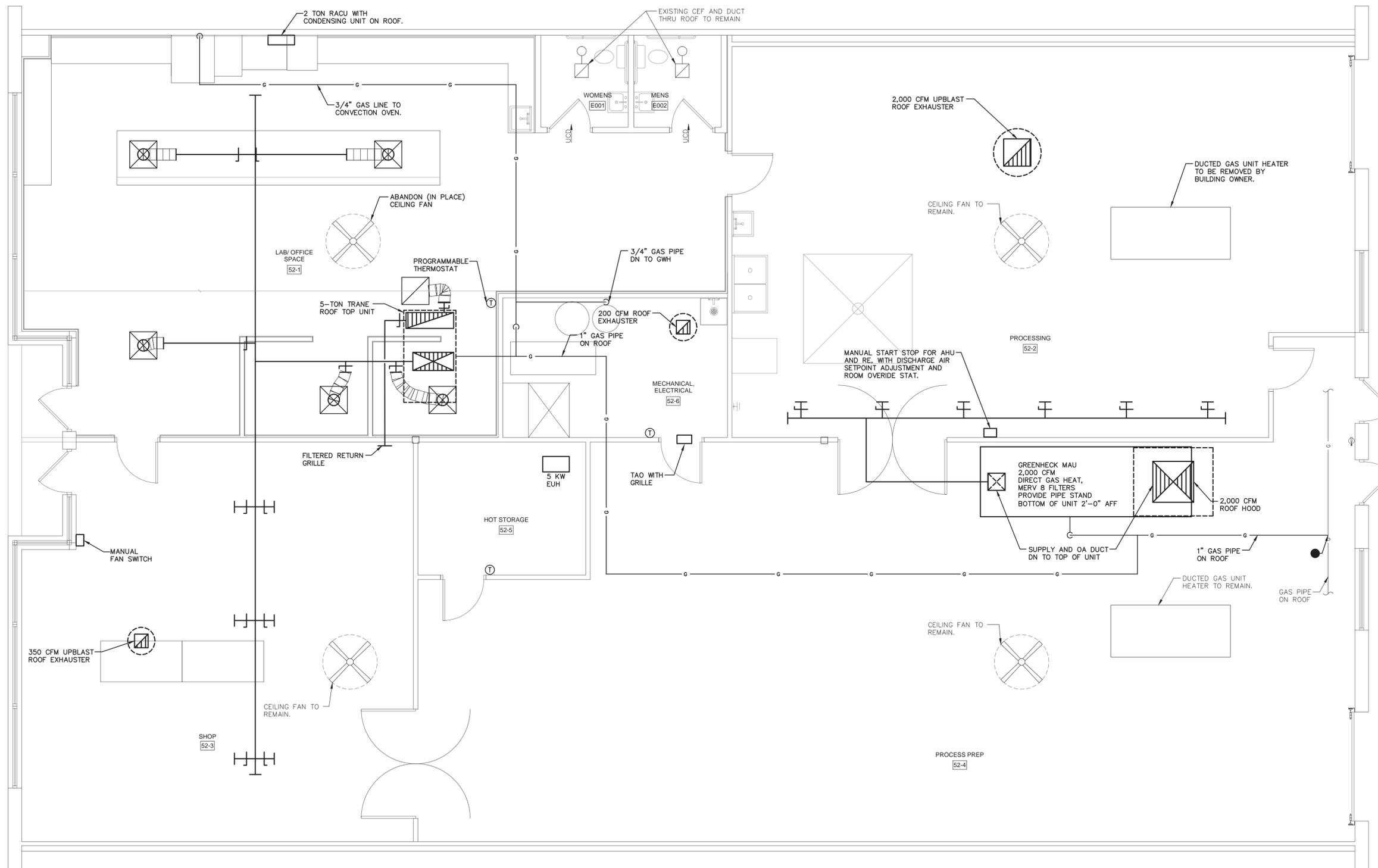
SEE FIXTURE UNIT SCHEDULE THIS SHEET FOR RUNOUT PIPING SIZE TO FIXTURE.

SEE WATER HEATER/ SOFTENER PIPING DETAIL FOR CONTINUATION.

SEE HOSE STATION/ BACKFLOW PREVENTER DETAIL FOR CONTINUATION.

WATER ISOMETRIC

NO SCALE



FLOOR PLAN

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



TYPE	DESCRIPTION	VOLT.	LAMP		MANUFACTURER / CATALOG NO.	REMARKS
			QTY.	TYPE		
LAY-IN TROFFERS						
A2	2X4 LAY-IN TROFFER - ACRYLIC LENS	120/277	2	F32T8	METALUX / 2GC8FA-232A125-PAF	(1)
A3	2X4 LAY-IN TROFFER - ACRYLIC LENS	120/277	3	F32T8	METALUX / 2GC8FA-332A125-PAF	(1)
INDUSTRIAL STRIPS						
D4	4' SURFACE MOUNTED WET LABEL FLUOR	120/277	2	F32T8	METALUX / VT2-232-DR-UNV-WL	(1)
D8	8' SURFACE MOUNTED WET LABEL FLUOR	120/277	4	F32T8	METALUX / 8TVT2-232-DR-UNV-WL	(1)
HIGH BAYS FLUORESCENT						
HBL	SURFACE MOUNTED ACRYLIC - HOSEDOWN	120/277	-	W/FIXTURE	ILP / HB-200WLED-UNIV-5000K-M	(1)
EXITS AND EMERGENCY						
EM1	WALL BATTERY EMERGENCY LIGHT WITH SELF-DIAGNOSTICS	120/277	-	W/FIXTURE	SURE-LITES / CC7NCSD	(1)(3)
EM4	INDUSTRIAL WALL BATT. EMERGENCY LIGHT - WASH DOWN	120/277	-	W/FIXTURE	SURE-LITES / UEL1-WH-SD	(1)
X1	ALUM. SINGLE FACE EXIT W/ BATTERY - GREEN LETTERS	120/277	-	W/FIXTURE	SURE-LITES / CX71WHSDG	(1)
X9	WASHDOWN SINGLE FACE EXIT W/BATTERY - GREEN LETTERS	120/277	-	W/FIXTURE	SURE-LITES / UX70GWH	(1)

REMARKS:

- (1) FIXTURES LISTED ARE FOR DESIGN INTENT ONLY. EQUIVALENTS MUST BE APPROVED BY OWNER.
- (3) PROVIDE MINIMUM 12W LAMPHEADS FOR EMERGENCY LIGHTS.
- (4) E.C. SHALL COORDINATE REMOTE HEAD VOLTAGE AND WATTAGE WITH BATTERY OUTPUT.

GENERAL NOTES

- FIXTURE MODEL NUMBER MAY NOT REFLECT ALL MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY MOUNTING EQUIPMENT, LENSES, STEMS, SAFETY CHAINS, END PLATES, AND ALL OTHER HARDWARE NECESSARY FOR A COMPLETE FIXTURE INSTALLATION. SEE MOUNTING DETAILS WHEN APPLICABLE.
- PROVIDE ALL FIXTURES WITH LAMPS PER MANUFACTURERS RECOMMENDATIONS.
- ALL FIXTURES SHALL BE UL or ETL LISTED.
- ALL FIXTURES IN DIRECT CONTACT WITH INSULATION SHALL BE IC RATED OR INSULATION SHALL BE KEPT A MINIMUM OF 3" FROM ALL SIDES OF FIXTURES.
- ALL LINEAR LAMP AND BALLAST COMBINATIONS SHALL BE FOCUS ON ENERGY COMPLIANT.

BALLAST REQUIREMENTS

- FLUORESCENT AND COMPACT FLUORESCENT LAMPS SHALL HAVE ELECTRONIC BALLASTS WITH A CLASS A NOISE RATING AND LESS THAN 10% TOTAL HARMONIC DISTORTION.
- ALL FLUORESCENT AND COMPACT FLUORESCENT LIGHT FIXTURES SHALL BE PROVIDED WITH FACTORY INSTALLED INTEGRAL BALLAST DISCONNECTING MEANS.
- PROVIDE PROGRAMMABLE BALLASTS THAT MEET MOTION SENSOR MANUFACTURER RECOMMENDATIONS FOR ALL FIXTURES CONTROLLED BY MOTION SENSORS. SEE PLANS FOR LOCATIONS
- PROVIDE TWO BALLASTS PER FIXTURE WHEN FIXTURES ARE WIRED FOR DUAL LEVEL SWITCHING OR FOR NIGHTLIGHTING. MASTER/SLAVE WIRING MAY BE USED FOR DUAL LEVEL SWITCHING. SEE PLANS FOR DUAL LEVEL SWITCHING AND NIGHT LIGHT LOCATIONS.
- LINE VOLTAGE BALLAST MAY BE SUBSTITUTED FOR "MULTI-TAP" BALLASTS.

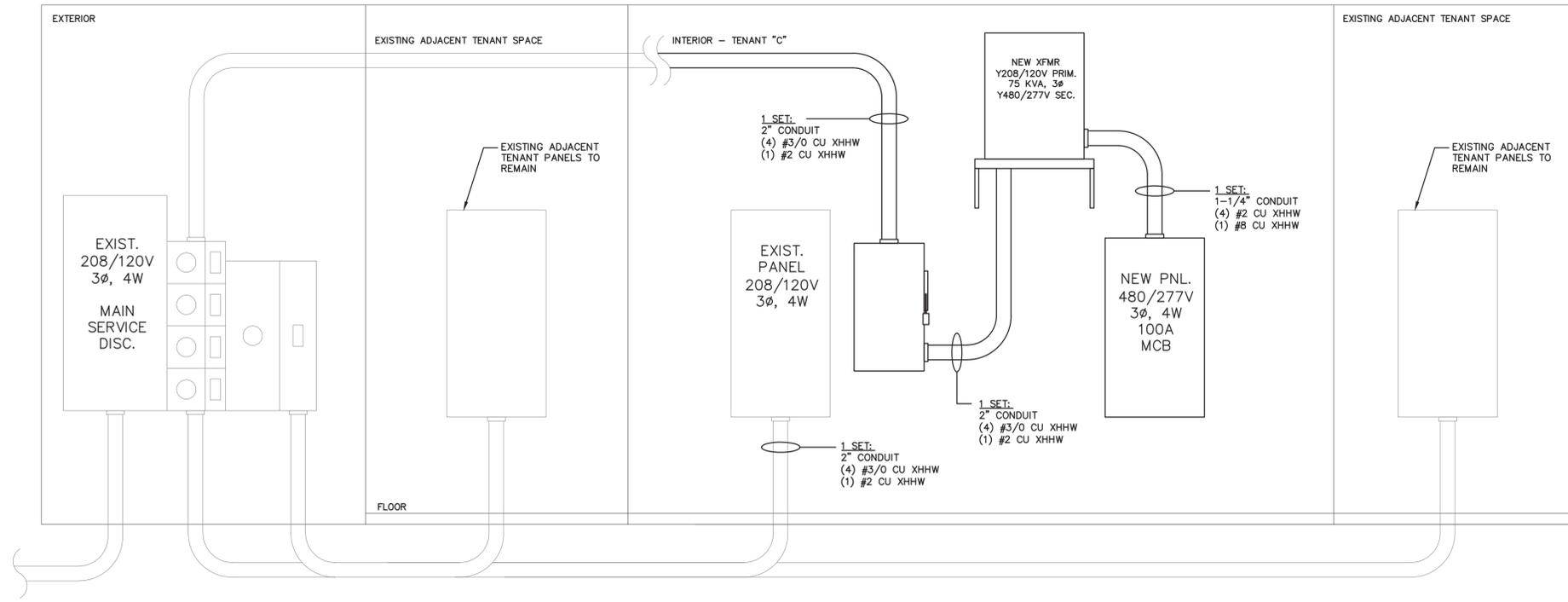
LAMP REQUIREMENTS

- ALL FLUORESCENT LAMPS SHALL BE 3500 DEGREE KELVIN, WITH A MINIMUM 82 PERCENT COLOR RENDERING INDEX, UNLESS NOTED OTHERWISE.
- ALL FLUORESCENT LAMPS SHALL BE FROM SAME MANUFACTURER.

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS. ALL MOUNTING HEIGHTS ARE TYPICAL UNLESS OTHERWISE NOTED.

SYM.	IDENTIFICATION	SYM.	IDENTIFICATION	SYM.	IDENTIFICATION
WIRING DEVICES		LIGHTING		ABBREVIATIONS	
S	SINGLE POLE SWITCH MOUNTED @ 46" AFF TO CENTER, 3=3 WAY, 4=4 WAY, P=PILOT, D=DIMMER, K=KEYED	○	RECESSED, SURFACE, OR PENDANT MOUNTED LIGHT FIXTURE	AC	ABOVE COUNTER
SS	DUAL LEVEL SWITCHING MOUNTED @ 46" AFF TO CENTER SEE DETAIL	○	WALL MOUNTED LIGHT FIXTURE MOUNTED @ 7'-0" AFF OR 8" ABOVE MIRROR	AFF	ABOVE FINISHED FLOOR
⊞	LOW VOLTAGE SWITCH MOUNT @ 46" AFF TO CENTER	□	FLUORESCENT FIXTURE	AFG	ABOVE FINISHED GRADE
⊕	DUPLEX RECEPTACLE MOUNTED @ 18" AFF TO CENTER	⏏	EMERGENCY LIGHT. 11'-0" AFF TO TOP OR 8" BELOW CEILING WHICHEVER IS LOWER	BRD	BOARD
⊕	DOUBLE DUPLEX RECEPTACLE MOUNTED @ 18" AFF TO CENTER	⏏	RECESSED EMERGENCY LIGHT	C	CONDUIT
⊕	DUPLEX RECEPTACLE MOUNTED VERTICALLY 6" ABOVE BACKSPASH TO CENTER. IF NO BACKSPASH MOUNT 6" ABOVE COUNTER.	⏏	EXIT LIGHT	C/T	CURRENT TRANSFORMER
⊕	DUPLEX RECEPTACLE MOUNTED IN CEILING/SOFFIT.	⊙	OCCUPANCY SENSOR	DISC	DISCONNECT
⊕	DUPLEX RECEPTACLE MOUNTED IN CABINET BEHIND MICROWAVE. FIELD VERIFY HEIGHT.	⊙	WALL MOUNTED OCCUPANCY SENSOR WITH SWITCH	DSHWASH	DISHWASHER
⊕	POWER RECEPTACLE MTD @ 18" AFF TO CENTER	⊙	DUAL LEVEL/CIRCUIT OCCUPANCY SENSOR WITH SWITCH	EC	ELECTRICAL CONTRACTOR
⊕	SWITCH BOTTOM HALF OF RECEPTACLE. TOP HALF UNSWITCHED.	⊙	PHOTO CONTROL	ELEV	ELEVATION
⊕	SPECIAL OUTLET	⊙	EXTERIOR WALL MOUNTED FIXTURE OR INTERIOR WALL WASH FIXTURE	EM	EMERGENCY
⊕	JUNCTION BOX	⊙	FLUORESCENT STRIP	ETR	EXISTING TO REMAIN
⊕	IN-FLOOR RECEPTACLE	⊙	2-LAMP FIXTURE CONNECTED TO NIGHT LIGHT CIRCUIT. 3 AND 4 LAMP FIXTURE CENTER LAMP(S) CONNECTED TO NIGHT LIGHT CIRCUIT	EWC	ELECTRIC WATER COOLER
⊕	COMBINATION FLOOR OUTLET/BLANK JUNCTION BOX - WIREMOLD - RESOURCE RFB / SERIES OR EQUIVALENT. PROVIDE 1" CONDUIT STUB TO NEAREST ACCESSIBLE SPACE.	⊙	4 FOOT WALL MOUNTED LIGHT FIXTURE MOUNTED @ 7'-6" AFF OR 8" ABOVE MIRROR	FBO	FURNISHED BY OTHERS
⊕	BLANK BOX 4" EXTRA DEEP BOX, SINGLE GANG RING, BLANKPLATE, 1" C. STUBBED INTO ACCESSIBLE SPACE. MOUNTED @ 18" AFF TO CENTER	⊙	SINGLE HEAD POLE	FLA	FULL LOAD AMPS
⊕	ABOVE COUNTER BLANK BOX 4" EXTRA DEEP BOX, SINGLE GANG RING, BLANKPLATE, 1" C. STUBBED INTO ACCESSIBLE SPACE. MTD 6" ABOVE BACKSPASH TO CENTER	⊙	TWIN HEAD POLE MOUNTED FIXTURE	FPC	FIRE PROTECTION CONTRACTOR
COMMUNICATION		FIRE RATED WALLS		MOTOR CONTROL	
▶	TELEPHONE OUTLET WITH 1" C. STUBBED INTO AN ACCESSIBLE SPACE. MOUNTED 18" AFF TO CENTER. W = WALL MOUNTED @ 52" AFF TO CENTER	▬	FIRE - 1 HOUR	□	DISCONNECT FURNISHED BY E.C. F=FUSIBLE
▶	DATA OUTLET WITH 1" C. STUBBED INTO AN ACCESSIBLE SPACE. MOUNTED 18" AFF TO CENTER. X = NUMBER OF DATA DROPS PER BOX.	▬	FIRE - 2 HOUR	⊠	NON-COMBINATION STARTER
▶	COMBINATION TELEPHONE/DATA WITH 1" C. STUBBED INTO AN ACCESSIBLE SPACE. MOUNTED @ 18" AFF TO CENTER.	▬	FIRE - 3 HOUR	⊠	COMBINATION STARTER
⊙	CEILING MOUNTED SPEAKER	▬	FIRE - 4 HOUR	MS	MANUAL STARTER
⊙	TELEVISION OUTLET MOUNTED @ 18" AFF TO CENTER	EQUIPMENT		⊕	MOTOR CONNECTION
FIRE RATED WALLS		SURFACE MOUNTED PANELBOARD		MISC	
▬ FIRE - 1 HOUR		RECESSED PANELBOARD		⊕	CONDUIT STUB THROUGH WALL BUSHED EACH END
▬ FIRE - 2 HOUR		EQUIPMENT CONNECTION		⊕	CONDUIT WITH BUSHING ON END.
▬ FIRE - 3 HOUR		SURFACE MOUNTED RACEWAY		⊕	REFERS TO NOTE WITH NUMBER "X"
▬ FIRE - 4 HOUR				⊕	ELECTRICAL HOMERUN, CIRCUIT AS SHOWN
				⊕	SHARED ELECTRICAL HOMERUN, CIRCUIT AS SHOWN
				⊕	CONNECTED TO CIRCUIT BUT NOT SWITCHED WITH CIRCUIT.
				⊕	ITEMS AND/OR DEVICES SWITCHED, CONTROLLED OR CONNECTED TOGETHER
				⊕	PUSHBUTTON PROVIDE JUNCTION BOX AND CONDUIT. MOUNT AT SWITCH HEIGHT.

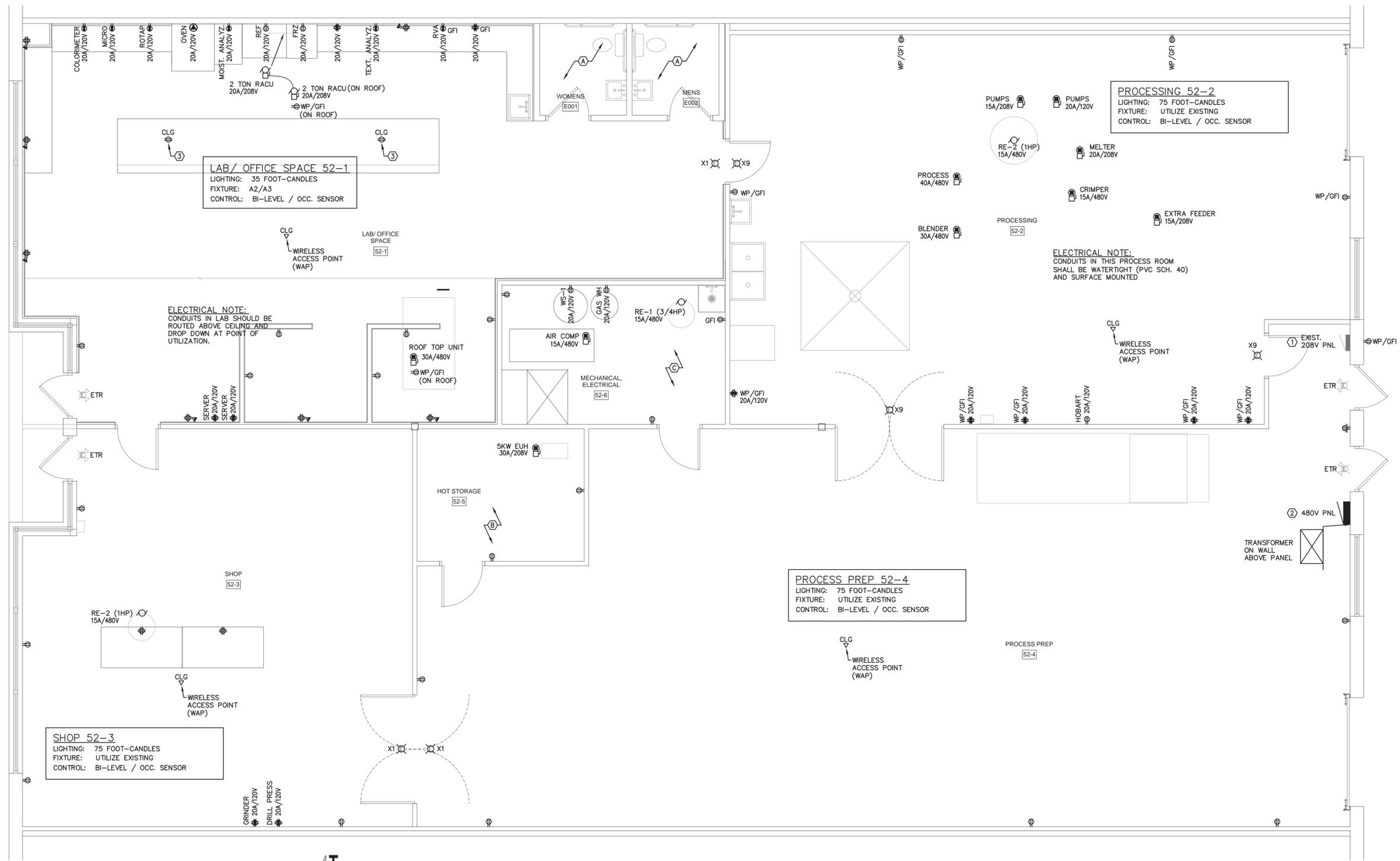


ONE LINE DIAGRAM

NO SCALE

ONELINE LEGEND

- = EXISTING TO REMAIN
- = NEW
- /// = DEMOLISHED



FLOOR PLAN — ELECTRICAL
 SCALE: 1/4" = 1'-0"

LIGHTING NOTES:

- THE ELECTRICAL CONTRACTOR SHALL SELECT LIGHT FIXTURE QUANTITIES AND LOCATIONS AS APPROPRIATE FOR THE FACILITY TO ACHIEVE THE MINIMUM FOOT-CANDLES SHOWN IN THESE DOCUMENTS.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL EQUIPMENT ROOMS WITH OTHER CONTRACTORS PRIOR TO ROUGH IN.
- PROVIDE TYPE "EM1" LIGHT FIXTURES ALONG THE PATH OF EGRESS TO ILLUMINATE THE PATH OF EGRESS TO A MINIMUM AVERAGE OF 1 FOOT CANDLE. WIRE EMERGENCY LIGHTS UNSWITCHED TO LIGHTING CIRCUIT SERVING SAME ROOM, OR TO "NIGHT LIGHT" CIRCUIT WHEN AVAILABLE.

⊗ LIGHTING KEYED NOTES:

- EXISTING LIGHTING TO REMAIN. PROVIDE NEW BRANCH CIRCUIT FROM RE-LOCATED ELECTRICAL PANEL LOCATION.
- HOT STORAGE 52-5:
 LIGHTING: 35 FOOT-CANDLES
 FIXTURE: D4/D8
 CONTROL: BI-LEVEL / OCC. SENSOR
- MECHANICAL/ELECTRICAL 52-6 & 52-7:
 LIGHTING: 75 FOOT-CANDLES
 FIXTURE: D4/D8
 CONTROL: BI-LEVEL / OCC. SENSOR

POWER NOTES:

- VERIFY OUTLET LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
- PROVIDE GFCI PROTECTION FOR ALL SINGLE PHASE RECEPTACLES LOCATED IN THE FOLLOWING LOCATIONS: BATHROOMS, KITCHENS, ROOFS, LOCKER ROOMS & SHOWERING FACILITIES, SERVING WATER COOLERS & VENDING MACHINES, GARAGES & SERVICE BAYS, WHERE WITHIN 6'-0" OF A SINK, AND ALL OTHER WET LOCATIONS.

⊗ POWER KEYED NOTES:

- EXISTING 200A, 208/120V TENANT PANEL TO REMAIN. PROVIDE ADDITIONAL BRANCH CIRCUIT BREAKERS AS REQUIRED.
- PROVIDE NEW 75KVA, STEP UP TRANSFORMER FROM 208V, 3Ø TO 480/277V, 3Ø, AND PROVIDE NEW 100A, 480/277V, 3Ø, 4W PANELBOARD FOR ALL NEW 480V LOADS.
- PROVIDE TWIST LOCK 20A/120V CEILING MOUNTED RECEPTACLE WITH CORD DROP AND PENDANT RECEPTACLE. PROVIDE ALL STRAIN RELIEF AS REQUIRED. COORDINATE FINAL LOCATION WITH OWNER.

COORDINATE LOCATION OF ALL EXPOSED CONDUIT WITH OWNER PRIOR TO INSTALLATION.