

# Chagrin Falls Admin. Police & Fire Dept.

## Additions & Renovation

21 West Washington Street, Chagrin Falls, OH - PPN: 932-03-006 & 932-03-028



**RSA ARCHITECTS, LLC**  
10 NORTH MAIN STREET  
CHAGRIN FALLS, OHIO 44022  
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### SCOPE OF PROJECT:

THE SCOPE OF THIS PROJECT IS THE RENOVATION OF AN EXISTING MUNICIPAL COMPLEX INCLUDING 1) ADDITION OF TWO SEPARATE VEHICLE BAYS 2) RENOVATION OF EXISTING POLICE DEPARTMENT FOR ADDITIONAL LOCKER ROOMS, ACCESSIBLE BATHROOMS & A MORE SECURE EVIDENCE ROOM, 3) A RESIDENTIAL ADDITION ON THE 2ND FLOOR ABOVE THE POLICE DEPT FOR THE FIRE DEPARTMENT, AND 4) UNDERGROUND/ GRADING CIVIL WORK RELATED TO THE ADDITIONS & RENOVATIONS

BIDS ARE TO BE SEPARATED INTO (2) PARTS

PART #1 IS FOR WORK RELATED TO THE POLICE DEPARTMENT RENOVATION, 2ND FLOOR FIRE DEPARTMENT ADDITION, & CIVIL WORK IN THE ALLEY.  
THIS BID SHOULD BE FURTHER SPLIT TO SHOW WORK AS IT RELATES TO THE 1) POLICE DEPARTMENT 2) THE FIRE DEPARTMENT & 3) ALLEY CIVIL WORK. REFER TO THE BID DOCUMENT FOR ADDITIONAL INFORMATION

PART #2 IS FOR WORK RELATED TO THE FIRE DEPARTMENT'S APPARATUS ROOM ADDITION AND UPDATES TO THEIR EXISTING DRIVEWAY.

### OWNER:

"Village of Chagrin Falls"  
Mayor William Tomko  
21 West Washington St.  
Chagrin Falls, Ohio 44022  
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Project Contacts:  
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### ARCHITECT:

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### STRUCTURAL ENGINEER:

"A. Lewin and Associates"  
4110 Mayfield Road, Suite B  
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Isaac Lewin, PE - Principal  
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### CIVIL ENGINEER:

"CT Consultants"  
8150 Sterling Court  
Mentor, OH 44060  
Phone: 440-951-9000  
Fax: 440-951-7487  
Tim Lannon, PE - Village Engineer  
Email: TLannon@ctconsultants.com  
John Liliash  
Email: J.Liliash@ctconsultants.com

### MECH/PLUMB/ELEC ENGINEER:

"M&H ENGINEERING LLC"  
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Stow, OH 44224  
Phone: 330-325-3065  
Thomas Manuszak, PE - mech/plumb  
thomasj.engineering@gmail.com  
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jhird@gmail.com

### DESIGN PROFESSIONAL'S RESPONSIBILITY:

WHERE MY STAMP AND SIGNATURE ARE AFFIXED, TO THE BEST OF MY KNOWLEDGE AND UNDERSTANDING, THE EXISTING CONDITIONS PORTRAYED WITHIN THE CONSTRUCTION DOCUMENTS ARE TRUE AND ACCURATE AS BEST AS CAN BE EXPLORED, INVESTIGATED, AND RESEARCHED WITHIN THE CAPACITIES OF A DESIGN PROFESSIONAL ALLOWED BY THE STATE OF OHIO.

21 West Washington Street



### SITE LOCATION PLAN

NO SCALE

PER CUYAHOGA COUNTY G.I.S. WEBSITE

### GENERAL NOTES:

#### DOCUMENT OWNERSHIP:

ALL DRAWINGS AND SPECIFICATIONS PREPARED AS PART OF THIS COMMISSION ARE THE PROPERTY OF RSA | ARCHITECTS, LLC AND WILL NOT BE TRANSFERRED OR USED ON ANY OTHER PROJECT WITHOUT WRITTEN AGREEMENT.

#### GENERAL REQUIREMENTS:

WORK PERFORMED SHALL COMPLY WITH THE FOLLOWING:  
(1) PACKAGE CONTAINING BOTH SPECIFICATIONS AND DRAWINGS.  
(2) APPLICABLE STATE CODES AND THE RULES AND REGULATIONS OF GOVERNMENTAL AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION OVER THE WORK.

#### INTENT OF CONTRACT DOCUMENTS:

THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR AND SUBCONTRACTOR.

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT'S BASIC SERVICES DO NOT INCLUDE CIVIL, STRUCTURE, MECHANICAL, PLUMBING OR ELECTRICAL ENGINEERING OR DESIGN AND THAT SUCH SERVICES IS PROVIDED FOR BY OTHERS.

#### WORKMANSHIP:

ALL WORKMANSHIP SHALL CONFORM TO ALL APPLICABLE BUILDING CODES, ORDINANCES, AND ACCEPTABLE BUILDING STANDARDS. THE CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES.

#### ON-SITE & EXISTING CONDITIONS VERIFICATION:

THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID TO REVIEW THE PROJECT WITH THE OWNER AND TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING THE WORK. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

#### COORDINATION OF THE WORK:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE WORK AND METHODS OF CONSTRUCTION.

#### INTERPRETATION OF CONTRACT DOCUMENTS:

SHOULD DISCREPANCIES OR AMBIGUITIES IN, OR OMISSIONS FROM THE DRAWINGS OR SPECIFICATIONS BE FOUND, OR INQUIRIES RELATIVE TO THE MEANING OR INTENT OF THE CONTRACT DOCUMENTS ARISE, THEY SHALL BE SUBMITTED TO THE ARCHITECT AND WILL BE ANSWERED BY ADDENDA. SUCH INSTRUCTIONS AND OTHER ADDENDA ISSUED PRIOR TO DATE OF THE SIGNING OF THE AGREEMENT WILL BE CONSIDERED AS PART OF THE CONTRACT DOCUMENTS AND BE BINDING TO THE CONTRACTOR AND SUBCONTRACTOR.

#### MANUFACTURER'S PRODUCTS AND FABRICATIONS:

ALL MANUFACTURER'S AND FABRICATOR'S PRINTED WARNING FOR HANDLING OF THEIR PRODUCTS MUST BE STRICTLY OBSERVED. ALSO AS PER LOCAL CODES AND OTHER REQUIREMENTS.

ALL PRODUCTS AND MATERIALS MUST BE PROVIDED AND INSTALLED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. IN THE EVENT OF CONFLICT BETWEEN THE DRAWINGS OR THE SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS, NOTIFY THE ARCHITECT AND OBTAIN CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

#### GUARANTEE:

THE CONTRACTOR SHALL GUARANTEE THAT ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FOLLOWING COMPLETION OF ALL WORK AND THAT ALL DEFECTS ARISING WITHIN THIS PERIOD OF TIME SHALL BE CORRECTED, REPAIRED OR REPLACED WITHIN 30 DAYS OF NOTIFICATION OF SUCH DEFECTS BY OWNER OR ARCHITECT.

#### LIABILITY INSURANCE:

THE CONTRACTOR SHALL CARRY FOR THIS PROJECT CONTRACTOR'S PUBLIC LIABILITY INSURANCE (INCLUDING PRODUCT AND COMPLETED OPERATIONS) IN THE AMOUNT OF NOT LESS THAN \$1,000,000.00 PER OCCURRENCE OF BODILY INJURY AND THE SAME AMOUNT FOR PROPERTY DAMAGE. REFER TO BID DOCUMENT FOR ADDITIONAL INFORMATION

#### CONSTRUCTION MATERIALS:

ALL MATERIALS SHALL BE STORED ON THE SITE AS DIRECTED BY THE OWNER.

#### CONSTRUCTION DEBRIS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXCESS DIRT AND DEBRIS FROM THE EXCAVATION, DEMOLITION AND CONSTRUCTION AS REQUIRED.

#### MISCELLANEOUS NOTES:

THE BUILDING IS NOT STRUCTURALLY STABLE UNTIL ALL CONNECTIONS, FRAMING, SHEAR WALLS, 'X' BRACING, AND EXTERIOR LOAD BEARING WALLS ARE COMPLETE AND HAVE ACHIEVED DESIGN STRENGTH. THE CONTRACTOR IS SOLELY RESPONSIBLE TO MAINTAIN STRUCTURAL STABILITY DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SYSTEMS ARE NOT TO BE REMOVED UNTIL STRUCTURAL WORK IS COMPLETE.

ALL ANGLED WALLS ON THE FLOOR PLANS ARE AT A 45 DEGREE ANGLE, UNLESS OTHERWISE NOTED.

IF USED, TRUSS MANUFACTURER AND CONTRACTOR TO COORDINATE ALL DIMENSIONAL RELATIONSHIPS. ALL ROOF AND FLOOR TRUSSES AND GIRDERS TO BE ENGINEERED BY TRUSS SUPPLIER AND MANUFACTURER. SEND TRUSS SHOP DRAWINGS TO ARCHITECT FOR REVIEW OF ARCHITECTURAL CONFIGURATION. ALL TRUSSES TO BE ENGINEERED BY TRUSS MANUFACTURER ACCORDING TO THE LOADING AS INDICATED IN THESE SPECIFICATIONS.

NOTE: ADJUST OVERHANGS TO PROVIDE CLEARANCE FOR WINDOWS TO OPEN, IF REQUIRED. ADJUST OVERHANGS TO MAINTAIN CONSTANT LEVEL WHEN THE PLANS CALL FOR (2) DIFFERENT PITCHES AT A HIP.

FINISHED SQUARE FOOTAGES ARE MEASURED TO THE OUTSIDE OF ALL WALLS. THEY INCLUDE INTERIOR FIREPLACES AND EVERY LOCATION IN WHICH THE FLOOR JOISTS PROJECT FROM THE FOUNDATION.

NOT INCLUDED IN SQUARE FOOTAGES: WINDOW BOXES WHERE THE FLOOR JOISTS DO NOT PROJECT FROM THE FOUNDATION, 2-STORY ENTRIES, GARAGE, DECKS, PORCHES, UNFINISHED STORAGE AREAS, BASEMENTS OR ANY OTHER UNFINISHED AREAS.

#### BETTERMENT

IF, DUE TO DESIGN PROFESSIONAL'S ERROR, ANY REQUIRED ITEM OR COMPONENT OF THE PROJECT IS OMITTED FROM DESIGN PROFESSIONAL'S CONSTRUCTION DOCUMENTS, DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR PAYING THE COST TO ADD SUCH ITEM OR COMPONENT TO THE EXTENT THAT SUCH ITEM OR COMPONENT WOULD HAVE BEEN OTHERWISE NECESSARY TO THE PROJECT OR OTHERWISE ADDS VALUE OR BETTERMENT TO THE PROJECT. IN NO EVENT WILL DESIGN PROFESSIONAL BE RESPONSIBLE FOR ANY COST OR EXPENSE THAT PROVIDES BETTERMENT, UPGRADE OR ENHANCEMENT OF THE PROJECT.

#### PROPERTY PROTECTION:

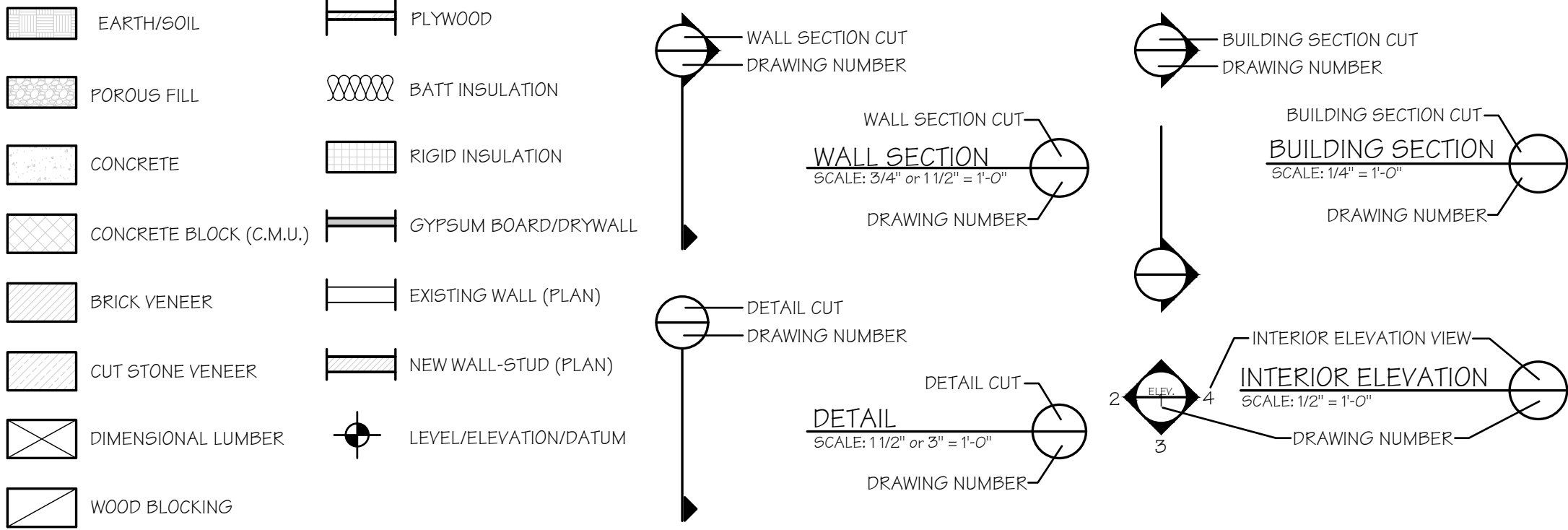
PRECAUTIONS SHALL BE TAKEN TO PROTECT THE GROUNDS, PLANTINGS, DRIVE, ETC. FROM ANY DAMAGE. DAMAGE INCURRED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST PROOF BARRIERS AT AREAS WHICH ARE UNDER CONSTRUCTION.

#### POST CONSTRUCTION NOTES:

AT THE COMPLETION OF THE PROJECT AND DURING THE PROJECT AS NECESSARY, CONTRACTOR SHALL THOROUGHLY CLEAN ALL WORK, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

- REMOVAL OF MORTAR SPLATTERS OR STAINS FROM ALL INTERIOR AND EXTERIOR FINISHES
- REMOVAL OF MASONRY WATERPROOFING ABOVE FINISH GRADE
- REMOVAL OF ANY SPLATTERS OR STAINS FROM EXTERIOR SIDING, ROOFING, OR OTHER EXTERIOR MATERIALS
- REMOVAL OF ALL STAINS FROM ALL EXPOSED CONCRETE WORK, WITH EXCEPTION OF CRAWL SPACE CONCRETE.
- REMOVAL OF STAINS AND CLEANING OF ALL INTERIOR FINISHES (COUNTERTOPS, PLUMBING FIXTURES, FLOORING, ETC.)
- THOROUGH CLEANING OF FAUCET SCREENS AND PLUMBING TRAPS
- VACUUMING OF ALL FLOORS, FOLLOWED BY WET MOPPING OF ALL HARD SURFACE FLOORS
- DUSTING OF ALL WALLS, CEILINGS, TRIMS, DOORS, WINDOWS, CABINETS, ETC., INCLUDING THE INTERIOR SURFACES OF ALL CABINETS
- REMOVAL OF ALL WINDOW AND DOOR STICKERS, INCLUDING GLUE RESIDUE, PAINT OR STAIN OVERLAPPING ON GLASS AND OTHER GLASS SPATTERS
- POLISHING OF ALL WINDOWS, MIRRORS OR SURFACES WITH REFLECTIVE OR TRANSPARENT QUALITIES.
- ADDITIONALLY, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, INCLUDING VACUUMING, OF ALL CONSTRUCTION, OR OTHER DEBRIS, FROM JOIST, RAFTER, STUD, OR OTHER CAVITIES, PRIOR TO GYPSUM BOARD, INSULATION, FINISH FLOORING OR SURFACING

### KEY TO SYMBOLS:



### DRAWING INDEX:

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### PROJECT DATA:

APPLICABLE CODES:  
2017 OHIO BUILDING CODE  
2017 OHIO PLUMBING CODE  
2017 OHIO MECHANICAL CODE  
2017 NATIONAL ELECTRIC CODE - (NFPA 70-17)  
2015 INTERNATIONAL FUEL GAS CODE  
2012 INTERNATIONAL ENERGY CONSERVATION CODE  
ASHRAE 90.1-2010 W/ 2013 APPENDIX  
2017 OHIO FIRE CODE  
NATIONAL FIRE ALARM CODE (NFPA 72-16)  
INSTALLATION OF SPRINKLER SYSTEM (NFPA 13D-16)  
ACCESSIBILITY - CHAP. 11 OBC & ICC/ANSI A117.1-2009

\* REFER TO SHEETS A-031, A-101 & A-102 FOR CODE ANALYSIS



VILLAGE OF CHAGRIN FALLS  
POLICE & FIRE STATION RENOVATION

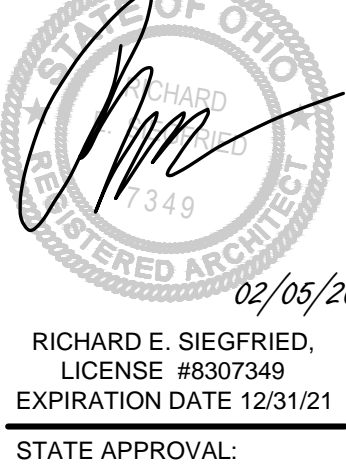
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SEAL:



PG.	ISSUANCE	DATE
ADDENDUM #1		04/16/18
ADDENDUM #2		09/05/18

DATE	SET/ISSUANCE
03-19-18	ISSUED FOR BID
03-28-18	ISSUED FOR BID # PERMIT
05-08-18	ISSUED PER STATE # OWNER COMMENTS
01-13-19	ISSUED PER STATE # OWNER COMMENTS
07-22-20	ISSUED PER STATE # OWNER COMMENTS
02-04-21	ISSUED PER STATE # OWNER COMMENTS

PROJECT #: 17121

COVER SHEET

SHEET NUMBER:

A-001



SECTION 007020 - GENERAL CONDITIONS

1. GENERAL CONDITIONS: AIA DOCUMENT A201-2007, GENERAL CONDITIONS, UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE VILLAGE.

END OF SECTION

SECTION 007300 - SUPPLEMENTARY CONDITIONS

THE FOLLOWING SUPPLEMENTS MODIFY AIA DOCUMENT A201-2007, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, WHERE A PORTION OF THE GENERAL CONDITIONS IS MODIFIED OR DELETED BY THESE SUPPLEMENTARY CONDITIONS, THE UNALTERED PORTIONS OF THE GENERAL CONDITIONS SHALL REMAIN IN EFFECT.

ARTICLE 1 - GENERAL CONDITIONS

ADD THE FOLLOWING PARAGRAPH:

1.7

DOCUMENTS REQUIRED PRIOR TO SIGNING OF CONTRACT

A. IMMEDIATELY UPON THE AWARD OF, AND PRIOR TO THE SIGNING OF THE CONTRACT, THE SUCCESSFUL BIDDER SHALL FURNISH TO THE ARCHITECT:

1. SCHEDULE OF VALUES PER PARAGRAPH 8.2.

2. A CURRENT WORKERS' COMPENSATION CERTIFICATE FOR THE STATE OF OHIO

3. IF THE SUCCESSFUL BIDDER SHOULD BE A CORPORATION NOT INCORPORATED UNDER THE LAWS OF THE STATE OF OHIO, THERE SHALL ALSO BE FURNISHED:

A. CERTIFICATE FROM THE SECRETARY OF STATE, SHOWING THE RIGHT OF THE SUCCESSFUL BIDDER TO DO BUSINESS IN THE STATE OF OHIO

ARTICLE 3 - CONTRACTOR

3.5 WARRANTY: ADD THE FOLLOWING PARAGRAPH

3.5.1 THE CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR, OR FOR A LONGER PERIOD SPECIFIED IN THE CONTRACT DOCUMENTS, FROM THE DATE OF ACCEPTANCE BY THE OWNER, AND SHALL LEAVE THE WORK IN PERFECT ORDER. AT COMPLETION, UPON WRITTEN NOTICE, HE SHALL REMEDY ANY DEFECTS DUE THEREO AND PAY ALL COSTS FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM.

3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS: ADD THE FOLLOWING TO PARAGRAPH 3.7.1

CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED BUILDING AND ALL OTHER REQUIRED PERMITS FROM THE CITY OF CLEVELAND, CUYAHOGA COUNTY, OHIO, AND ANY AGENCIES SPECIFICALLY EXEMPTED FROM SECURING CERTAIN PERMITS BY THE CONTRACT DOCUMENTS.

3.9 SUPERINTENDENT: ADD THE FOLLOWING PARAGRAPH

3.9.4 ONCE THE PROJECT HAS BEGUN, THE GENERAL CONTRACTOR AGREES THAT NO WORK OF ANY SUBCONTRACTOR SHALL PROCEED UNLESS THE GENERAL CONTRACTOR SUPERINTENDENT IS PRESENT AT THE JOB SITE AND ALL NECESSARY ARRANGEMENTS ARE MADE WITH THE ARCHITECT.

3.15 CLEAN-UP: ADD THE FOLLOWING PARAGRAPH

3.15.5 THE PREMISES MUST BE CLEANED AFTER EACH DAY'S WORK, AND DEBRIS REMOVED FROM THE SITE EACH WEEK, AND DISPOSED OF IN AN AREA DIRECTED AND APPROVED BY THE LOCAL GOVERNMENT AGENCY. EXISTING TRASH DISPOSAL SYSTEMS (DUMPSTERS, ETC.) SHALL NOT BE USED.

ARTICLE 7 - CHANGES IN THE WORK

7.2 CHANGE ORDERS: SUPPLEMENT THE FOLLOWING

7.2.1 CHANGE ORDERS SHALL BE ISSUED ON AIA DOCUMENT 0701 - CHANGE ORDER

ARTICLE 8 - TIME

8.2 PROGRESS AND COMPLETION: ADD THE FOLLOWING PARAGRAPH

8.2.4 IT IS HEREBY UNDERSTOOD AND MUTUALLY AGREED, BY AND BETWEEN THE CONTRACTOR AND THE OWNER, THE TIME FOR COMPLETION AS SPECIFIED IN THE CONTRACT OF THE WORK TO BE DONE HEREUNDER IS AN ESSENTIAL CONDITION OF THIS CONTRACT, AND IT IS FURTHER MUTUALLY UNDERSTOOD AND AGREED THAT THE WORK EMPRACED IN THIS CONTRACT SHALL BE COMPLETED ON A DATE SPECIFIED IN THE LETTER OF INTENT AND CONTRACT. THE CONTRACTOR AGREES THAT SAID WORK SHALL BE PROSECUTED REGULARLY, DILIGENTLY, AND UNINTERRUPTEDLY AT SUCH RATE OF PROGRESS AS WILL ENSURE FULL COMPLETION THEREOF WITHIN THE TIME SPECIFIED. IT IS EXPRESSLY UNDERSTOOD AND AGREED, BY AND BETWEEN THE CONTRACTOR AND THE OWNER, THAT THE TIME FOR THE COMPLETION AS STATED IN THE CONTRACT DOCUMENTS IS A REASONABLE TIME FOR THE COMPLETION OF SAME, TAKING INTO CONSIDERATION THE AVERAGE CLIMATIC RANGE AND USUAL INDUSTRIAL CONDITIONS PREVAILING IN THIS LOCATION.

ARTICLE 9 - PAYMENTS AND COMPLETION

9.3.1 SUPPLEMENT THE FOLLOWING

9.3.1.1 CONTRACTOR SHALL SUBMIT PAY APPLICATION ON AIA 0702 AND 0703. APPLICATION FOR PAYMENT SHALL BE MADE NO LATER THAN THE 26TH DAY OF EACH MONTH. AFTER RECEIPT OF CONTRACTORS PAY APPLICATION, OWNER WILL MAKE SUCH PAYMENT TO THE CONTRACTOR WITHIN 30 DAYS OR AS SOON AS PRACTICAL, THEREAFTER.

9.3.2 SUPPLEMENT THE FOLLOWING

9.3.2.1 WITH EACH PAY APPLICATION, CONTRACTOR SHALL SUBMIT A PARTIAL WAIVER OF LIEN FOR THE WORK DONE, SUBMITTING A WAIVER OF LIEN FORMAT FOR OWNER APPROVAL PRIOR TO FIRST APPLICATION FOR PAYMENT.

ARTICLE 11 - INSURANCE

11.1 CONTRACTOR'S LIABILITY INSURANCE: SUPPLEMENT THE FOLLOWING

11.1.1 THE CONTRACTOR SHALL PURCHASE INSURANCE IN FROM A COMPANY LICENSED TO DO BUSINESS IN THE STATE OF OHIO AND IN SUCH FORM AS ACCEPTABLE TO THE OWNER AND COORDINATED BETWEEN THE OWNER AND CONTRACTOR.

11.1.2 THE INSURANCE REQUIRED BY SUBPARAGRAPH 11.1.1 SHALL BE IN TYPES AND AMOUNTS AS COORDINATED BETWEEN THE OWNER AND CONTRACTOR.

11.1.3 SUPPLEMENT THE FOLLOWING

11.1.3.1 THE CONTRACTOR SHALL SUBMIT ONE COPY OF WORKERS' COMPENSATION CERTIFICATE TO THE OWNER AND ONE COPY TO THE ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK.

11.1.3.2 THE CONTRACTOR SHALL SUBMIT CERTIFICATES OF CONTRACTOR'S LIABILITY INSURANCE TO THE OWNER FOR APPROVAL AND OBTAIN APPROVAL PRIOR TO THE COMMENCEMENT OF THE WORK. THE OWNER SHALL BE AN ADDITIONAL NAMED INSURED ON THE REQUIRED POLICIES OF PUBLIC LIABILITY INSURANCE.

11.1.3.3 THE CONTRACTOR SHALL SUBMIT COPIES OF CERTIFICATES OF CONTRACTOR'S LIABILITY INSURANCE THAT HAVE BEEN APPROVED BY THE OWNER, TO THE ARCHITECT FOR HIS FILES TOGETHER WITH A WRITTEN STATEMENT BY THE CONTRACTOR THAT THE INSURANCE HAVE BEEN APPROVED BY AND ARE ACCEPTABLE TO THE OWNER. CERTIFICATES OF INSURANCE SHALL BE SUBMITTED ON AIA DOCUMENT 0705 - CERTIFICATE OF INSURANCE ACCEPTANCE.

11.1.3.4 UNLESS OTHERWISE DIRECTED BY THE OWNER IN WRITING, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE AGENCY OF THE INSURANCE CARRIED BY EACH OF HIS SUBCONTRACTORS AND SHALL, IF REQUESTED, FILE COPIES OF ALL SUBCONTRACTORS' INSURANCE CERTIFICATES WITH THE OWNER AND THE ARCHITECT PRIOR TO THE RESPECTIVE SUBCONTRACTORS PARTICIPATION IN THE WORK.

11.1.3.5 THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR CHECKING AND/OR APPROVING THE CONTRACTOR AND SUBCONTRACTORS' LIABILITY INSURANCE CERTIFICATES. OWNERS' INSURANCE COUNSEL SHALL CHECK THE INSURANCE CERTIFICATES TO DETERMINE ADEQUACY IN COMPLYING WITH THE CONTRACT DOCUMENTS. IT IS THE OWNER'S RESPONSIBILITY TO DETERMINE IF THE INFORMATION CONTAINED IN THE CERTIFICATES OF INSURANCE IS ADEQUATE AND ACCEPTABLE.

11.1.3.6 THE CONTRACTOR AND ALL SUBCONTRACTORS AGREE TO INDEMNIFY AND HOLD HARMLESS THE OWNER AND ARCHITECT FROM ANY LIABILITY, DAMAGES, PENALTIES OR EXPENSES ARISING OUT OF OR IN CONNECTION WITH THE VIOLATION OF OR NON-COMPLIANCE WITH THE FEDERAL CONSTRUCTION SAFETY ACT AND THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ANY OTHER APPLICABLE FEDERAL OR OHIO LAWS.

11.3 PROPERTY INSURANCE: MODIFY AND SUPPLEMENT THE FOLLOWING

GENERAL. THE CONTRACTOR IS REQUIRED TO PROVIDE THE BUILDER'S RISK POLICY, WHERE NECESSARY, SUBSTITUTE THE TERM "CONTRACTOR" FOR "OWNER" TO REFLECT THIS INTENT.

GENERAL. PROPERTY INSURANCE SHALL INCLUDE COVERAGE OF MACHINERY, TOOLS AND EQUIPMENT OWNED OR RENTED BY THE CONTRACTOR THAT ARE UTILIZED IN THE PERFORMANCE OF THE WORK, BUT NOT INCORPORATED INTO THE PERMANENT IMPROVEMENTS.

11.3.1 SUPPLEMENT THE FOLLOWING

11.3.1.1 IF THE OWNER IS DAMAGED BY THE FAILURE OF THE CONTRACTOR TO PURCHASE AND MAINTAIN SUFFICIENT INSURANCE COVERAGE, THE CONTRACTOR SHALL SAVE, HOLD HARMLESS, AND INDEMNIFY OWNER FOR ANY SUCH DAMAGE.

11.3.1.2 DELETE THIS PARAGRAPH IN ITS ENTIRETY

END OF SECTION

SECTION 010000 - SUMMARY

1. PROJECT

A. PROJECT NAME: CHAGRIN FALLS ADMIN. PLUMB AND FIRE RET. ADDITIONS & RENOVATION

B. WORK GENERALLY INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

1.8.1. SELECTIVE DEMOLITION OF ITEMS INDICATED ON THE DRAWINGS, INCLUDING STRUCTURAL, ROOF, CEILING, AND FLOOR FINISHES.

1.8.2. PATCHING OF EXISTING FINISHES AFTER SELECTIVE DEMOLITION TO MATCH EXISTING ADJACENT FINISHES.

1.8.3. INSTALLATION OF NEW WALLS.

1.8.4. INSTALLATION OF NEW CABINETS, APPLIANCES, & FURNITURE

1.8.5. MECHANICAL WORK, INCLUDING WALLS, CEILING FINISHES

1.8.6. PLUMBING WORK

1.8.7. ELECTRICAL WORK

1.8.8. EXTERIOR SITE WORK

2. CONTRACT DESCRIPTION

2.A. CONTRACT TYPE: AIA DOCUMENT A101-2007 OWNER/CONTRACTOR AGREEMENT - STIPULATED SUM

3. CONTRACTOR USE OF SITE AND PREMISES

3.A. CONSTRUCTION OPERATIONS LIMITED TO AREAS NOTED ON DRAWINGS.

3.B. PROVIDE ACCESS TO AND FROM SITE AS REQUIRED BY LAW AND BY OWNER.

3.B.A. PROVIDE EMERGENCY ACCESS THROUGH WORK AREAS AT ALL TIMES.

3.B.C. EMERGENCY BUILDING CONSTRUCTION KEEP ALL EGRESS REQUIRED BY CODE OPEN DURING CONSTRUCTION PERIOD; PROVIDE TEMPORARY EXIT SIGNS IF EXIT ROUTES ARE TEMPORARILY ALTERED.

3.C. DO NOT OBSTRUCT ROADWAYS, SIDEWALKS, OR OTHER PUBLIC WAYS WITHOUT PERMIT.

3.D. UTILITY OUTAGES AND SHUTDOWNS

3.D.A. PREVENT ACCIDENTAL DISRUPTION OF UTILITY SERVICES TO OTHER FACILITIES.

4. TIME RESTRICTIONS

4.A. CONTRACTOR SHALL COMPLY WITH VILLAGE OF CHAGRIN FALLS WORK HOUR RESTRICTIONS, UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE VILLAGE.

5. CONSTRUCTION COMPLETENESS

5.A. COMPLETENESS OF WORK: CONTRACTOR SHALL PROVIDE ALL ITEMS, MATERIALS, LABOR AND EQUIPMENT NOT SPECIFICALLY MENTIONED HEREIN OR INDICATED ON DRAWINGS, BUT REQUIRED FOR COMPLETE INSTALLATIONS AND PROPER OPERATION OF ALL WORK AS IF CALLED FOR IN DETAIL BY SPECIFICATIONS OR DRAWINGS.

6. VISITING THE SITE

6.A. BIDDERS SHALL VISIT THE SITE AND TAKE SUCH OTHER STEPS AS MAY BE NECESSARY TO ASCERTAIN THE NATURE AND LOCATION OF THE WORK, AND THE GENERAL AND LOCAL CONDITIONS WHICH CAN AFFECT THE WORK OR DOCUMENTS IN RELATION TO THE SITE, THE EXISTING STRUCTURES AND CONDITIONS OF THE GROUND, THE OBSTACLES WHICH MAY BE ENCOUNTERED AND ALL OTHER CONDITIONS HAVING A BEARING UPON THE PERFORMANCE OF THE WORK. COMPLETION AND ALL OTHER RELEVANT MATTERS. FAILURE TO TAKE SUCH STEPS SHALL NOT RELIEVE BIDDERS FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK. THE OWNER SHALL ASSURE NO RESPONSIBILITY FOR ANY UNDERSTANDING OR REPRESENTATIONS CONCERNING CONDITIONS MADE BY AND OF ITS AGENTS, REPRESENTATIVES OR EMPLOYEES PRIOR TO THE EXECUTION OF THE CONTRACT, UNLESS INCLUDED IN THE CONTRACT DOCUMENTS.

6.B. THE SUBMISSION OF A BID SHALL BE TAKEN AS PRIMA FACIE EVIDENCE OF COMPLIANCE WITH THE ABOVE PARAGRAPH.

7. RETENTION, IF, DUE TO DESIGN PROFESSIONAL'S ERROR, ANY REQUIRED ITEM OR COMPONENT OF THE PROJECT IS OMITTED FROM DESIGN PROFESSIONAL'S CONSTRUCTION DOCUMENTS, DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR PAYING THE COST TO ADD SUCH ITEM OR COMPONENT TO THE EXTENT THAT SUCH ITEM OR COMPONENT WOULD HAVE BEEN OTHERWISE NECESSARY TO THE PROJECT OR OTHERWISE ADDS VALUE OR BETTERMENT TO THE PROJECT. IN NO EVENT WILL DESIGN PROFESSIONAL BE RESPONSIBLE FOR ANY COST OR EXPENSE THAT PROVIDES RETENTION, UPGRADE OR ENHANCEMENT TO THE PROJECT.

END OF SECTION

SECTION 010300 - ADMINISTRATIVE REQUIREMENTS

1. SUBMITTALS FOR REVIEW

1.1. FOR ALL SPECIFIED PRODUCTS AND MATERIALS, SUBMIT THE FOLLOWING ITEMS FOR REVIEW

1.1.1. PRODUCT DATA

1.1.2. SHOP DRAWINGS

1.1.3. SAMPLES FOR SELECTION

1.1.4. SAMPLES FOR VERIFICATION

1.1.5. SUBMIT TO ARCHITECT FOR REVIEW FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.

1.1.6. SAMPLES WILL BE REVIEWED ONLY FOR AESTHETIC, COLOR, OR FINISH SELECTION.

AFTER REVIEW, PROVIDE COPIES AND DISTRIBUTE IN ACCORDANCE WITH SUBMITTAL PROCEDURES ARTICLE BELOW.

2. SUBMITTALS FOR INFORMATION

2.1. FOR ALL SPECIFIED PRODUCTS AND MATERIALS, SUBMIT THE FOLLOWING ITEMS FOR INFORMATION

2.1.1. DESIGN DATA

2.1.2. CERTIFICATES

2.1.3. TEST REPORTS

2.1.4. INSPECTION REPORTS

2.1.5. MANUFACTURERS' INSTRUCTIONS

2.1.6. MANUFACTURER'S WARRANTY

2.1.7. OTHER TYPES INDICATED

2.2. SUBMIT FOR ARCHITECTS KNOWLEDGE AS CONTRACT ADMINISTRATOR OR FOR OWNER. NO ACTION WILL BE TAKEN.

3. SUBMITTALS FOR PROJECT CLOSEOUT

3.1. WHEN THE FOLLOWING ARE SPECIFIED IN INDIVIDUAL SECTIONS, SUBMIT THEM AT PROJECT CLOSEOUT:

3.1.1. PROJECT RECORD DOCUMENTS

3.1.2. OPERATION AND MAINTENANCE DATA

3.1.3. WARRANTIES

3.1.4. BONDS

3.1.5. OTHER TYPES AS INDICATED

3.2. SUBMIT FOR OWNER'S BENEFIT DURING AND AFTER PROJECT COMPLETION.

4. NUMBER OF COPIES OF SUBMITTALS

4.1. DOCUMENTS FOR REVIEW

4.1.1. SMALL SIZE SHEETS, NOT LARGER THAN 8-1/2 X 11 INCHES: SUBMIT THE NUMBER OF COPIES THAT CONTRACTOR REQUIRES, PLUS TWO COPIES THAT WILL BE RETAINED BY ARCHITECT.

4.1.2. LARGER SHEETS, NOT LARGER THAN 30 X 42 INCHES: SUBMIT ONE REPRODUCIBLE TRANSPARENT AND ONE OPAQUE REPRODUCTION.

4.1.3. DOCUMENTS FOR INFORMATION SUBMIT TWO COPIES.

4.1.4. SAMPLES: SUBMIT THE NUMBER SPECIFIED IN INDIVIDUAL SPECIFICATION SECTIONS; ONE OF WHICH WILL BE RETAINED BY ARCHITECT.

4.1.5. AFTER REVIEW, PRODUCE DUPLICATES.

4.1.6. RETAINED SAMPLES WILL NOT BE RETURNED TO CONTRACTOR UNLESS SPECIFICALLY SO STATED.

5. SUBMITTAL PROCEDURES

5.1. TRANSMIT EACH SUBMITTAL, WITH APPROVED FORM

5.2. SEQUENTIALLY NUMBER THE TRANSMITTAL FORM. REVERSE SUBMITTALS WITH ORIGINAL NUMBER AND A SEQUENTIAL ALPHABETIC SUFFIX

5.3. IDENTIFY PROJECT, CONTRACTOR, SUBCONTRACTOR OR SUPPLIER, PERMIT DRAWING AND DETAIL NUMBER, AND SPECIFICATION SECTION NUMBER, AS APPROPRIATE, ON EACH COPY.

5.4. APPLY CONTRACTORS' STAMP, SIGNED OR INITIALED CERTIFYING THAT REVIEW, APPROVAL, REPRODUCTION OF PRODUCTS AND MATERIALS, AND COORDINATION OF INFORMATION IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS.

5.4.1. ANY SUBMITTAL WITHOUT CONTRACTOR'S STAMP AS NOTED ABOVE SHALL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW.

5.5. SCHEDULE SUBMITTALS TO EXPEDITE THE PROJECT, AND COORDINATE SUBMISSION OF RELATED ITEMS.

5.6. FOR EACH SUBMITTAL FOR REVIEW, ALLOW 10 DAYS EXCLUDING DELIVERY TIME TO AND FROM THE CONTRACTOR.

5.7. IDENTIFY VARIATIONS FROM CONTRACT DOCUMENTS AND PRODUCT OR SYSTEM LIMITATIONS THAT MAY BE DETRIMENTAL TO CONSTRUCTION, PERFORMANCE OF THE COMPLETED WORK.

5.8. PROVIDE SPACE FOR CONTRACTOR AND ARCHITECT REVIEW STAMPS.

5.9. WHEN REVISED FOR RESUBMISSION, IDENTIFY ALL CHANGES MADE SINCE PREVIOUS SUBMISSION.

5.10. DISTRIBUTE REVIEWED SUBMITTALS AS APPROPRIATE. INSTRUCT PARTIES TO PROMPTLY REPLY ANY INABILITY TO COMPLY WITH SPECIFICATIONS.

5.11. SUBMITTALS NOT REQUESTED WILL NOT BE RECOGNIZED OR PROCESSED.

SECTION 014000 - QUALITY REQUIREMENTS

1. SUBMITTALS

1.1. DESIGN DATA: SUBMIT FOR ARCHITECTS KNOWLEDGE AS CONTRACT ADMINISTRATOR FOR THE LIMITED PURPOSE OF ASSESSING CONFORMITY WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS, OR FOR OWNERS' INFORMATION.

1.2. CERTIFICATES: WHEN SPECIFIED IN INDIVIDUAL SPECIFICATION SECTIONS, SUBMIT CERTIFICATION BY THE MANUFACTURER AND CONTRACTOR TO ARCHITECT, IN QUANTITIES SPECIFIED FOR PRODUCT DATA.

1.2.1. INDICATE MATERIAL OR PRODUCT CONFORMS TO OR EXCEEDS SPECIFIED REQUIREMENTS, SUBMIT SUPPORTING REFERENCE DATA, AFFIDAVITS, AND CERTIFICATIONS AS APPROPRIATE.

1.2.2. MANUFACTURERS' INSTRUCTIONS: WHEN SPECIFIED IN INDIVIDUAL SPECIFICATION SECTIONS, SUBMIT PRINTED INSTRUCTIONS FOR DELIVERY, STORAGE, ASSEMBLY, INSTALLATION, ADJUSTING, AND FINISHING, FOR THE OWNER'S INFORMATION. INDICATE SPECIAL PROCEDURES, PERMITTER CONDITIONS REQUIRING SPECIAL ATTENTION, AND SPECIAL ENVIRONMENTAL CRITERIA REQUIRED FOR APPLICATION OR INSTALLATION.

2. REFERENCES AND STANDARDS

2.1. FOR PRODUCTS AND WORKMANSHIP SPECIFIED BY REFERENCE TO A DOCUMENT OR DOCUMENTS NOT INCLUDED IN THE PROJECT MANUAL, ALSO REFERRED TO AS REFERENCE STANDARDS, COMPLY WITH REQUIREMENTS OF THE STANDARD, EXCEPT WHERE MORE RIGID REQUIREMENTS ARE SPECIFIED OR ARE REQUIRED BY APPLICABLE CODES.

2.2. CONFORM TO REFERENCE STANDARD OF DATE OF ISSUE CURRENT ON DATE OF CONTRACT DOCUMENTS, EXCEPT WHERE A SPECIFIC DATE IS ESTABLISHED BY APPLICABLE CODE.

2.3. OBTAIN COPIES OF STANDARDS WHERE REQUIRED BY PRODUCT SPECIFICATION SECTIONS.

2.4. MAINTAIN COPY AT PROJECT SITE DURING SUBMITTALS, PLANNING, AND PROGRESS OF THE SPECIFIC WORK, UNTIL SUBSTANTIAL COMPLETION.

2.5. SHOULD SPECIFIED REFERENCE STANDARDS CONFLICT WITH CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.

2.6. NEITHER THE CONTRACTUAL RELATIONSHIPS, DUTIES, OR RESPONSIBILITIES OF THE PARTIES IN CONTRACT NOR THOSE OF ARCHITECT SHALL BE ALTERED FROM THE CONTRACT DOCUMENTS BY MENTION OR INFERENCE THEREOF IN ANY REFERENCE DOCUMENT.

END OF SECTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

1. SAFETY

1.1. GIVE STRICT ATTENTION TO AND FULLY COMPLY WITH THE WILLIAMS-STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1970, U.S. DEPARTMENT OF LABOR.

2. TEMPORARY UTILITIES - GENERAL

2.1. MAINTAIN ALL TEMPORARY UTILITIES IN GOOD OPERATING CONDITION.

3. TEMPORARY WATER SUPPLY

3.1. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR DISPENSING DRINKING WATER FOR HIS CONSTRUCTION PERSONNEL ON SITE. ON SITE DOMESTIC WATER PROCURED FROM EXISTING DOMESTIC WATER SUPPLY MAY BE USED FOR THIS PURPOSE.

4. TEMPORARY HEAT/COOLING

4.A. PROVIDE CONTRACTOR SHALL PROVIDE ALL TEMPORARY HEAT AND COOLING UNTIL WEATHER TIGHT ENCLOSURE OF BUILDING, AS DETERMINED BY THE ARCHITECT. MEP CONTRACTOR SHALL PROVIDE ALL TEMPORARY HEAT AND COOLING AFTER WEATHER TIGHT ENCLOSURE OF THE BUILDING. IF USE OF NEW EQUIPMENT IS PERMITTED FOR TEMPORARY HEAT AND COOLING, THE MEP CONTRACTOR SHALL PROVIDE A COMPLETE CLEANING OF THE SYSTEM AND EQUIPMENT, INCLUDING NEW FILTERS AT PROJECT COMPLETION. THE SPECIFIED WARRANTY FOR EQUIPMENT WILL COMMENCE AT THAT TIME.

4.1. AS ASSIGNED, PROVIDE TEMPORARY HEATING AND COOLING REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS, OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF LOW TEMPERATURES OR HIGH HUMIDITY. SELECT EQUIPMENT THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED.

5. TEMPORARY LIGHT AND POWER

5.A. MEP CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, SUPERVISION TO PROVIDE, CONNECT, DISTRIBUTE, DISCONNECT AND MAINTAIN ALL MEANS OF PROVIDING TEMPORARY LIGHTING AND POWER FOR THE WORK. MEP CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR, AND PROVIDE REQUIRED CAPACITY, DISTRIBUTION AND CONNECTION POINTS.

5.B. OWNER WILL PAY FOR THE TEMPORARY ELECTRICAL POWER USED DURING THE WORK.

6. TEMPORARY SANITARY FACILITIES

6.1. PROVIDE AND MAINTAIN TEMPORARY TOILETS, WASH FACILITIES, AND DRINKING WATER FOR USE OF CONSTRUCTION PERSONNEL. COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION FOR TYPE, NUMBER, LOCATION, OPERATION AND MAINTENANCE OF TOILETS AND FACILITIES.

7. BARRIERS

7.1. PROVIDE BARRIERS TO PREVENT UNAUTHORIZED ENTRY TO CONSTRUCTION AREAS, TO PREVENT ACCESS TO AREAS THAT COULD BE HAZARDOUS TO WORKERS OR THE PUBLIC, TO ALLOW FOR CONFINING OF SURROUNDING AREAS TO PROTECT EXISTING FACILITIES AND ADJACENT PROPERTIES FROM DAMAGE FROM CONSTRUCTION OPERATIONS.

7.2. PROVIDE NON-OWNED VEHICULAR TRAFFIC, STORED MATERIALS, SITE, AND STRUCTURES FROM DAMAGE.

8. EXTERIOR ENCLOSURES

8.1. PROVIDE TEMPORARY INSULATED WORKING TIGHT ENCLOSURE OF EXTERIOR OPENINGS TO ACCOMMODATE ACCEPTABLE WEATHER CONDITIONS AND PROTECTION FOR OPERATIONS, TO ALLOW FOR TEMPERATURE CONTROL AND MAINTENANCE OF THE CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. PROVIDE ACCESS DOORS WITH SELF-CLOSING HARDWARE AND LOCKS.

9. INTERIOR ENCLOSURES

9.1. PROVIDE TEMPORARY PARTITIONS AS INDICATED TO SEPARATE WORK AREAS FROM OWNER OCCUPIED AREAS, TO PREVENT PENETRATION OF DUST AND MOISTURE INTO OWNER OCCUPIED AREAS, AND TO PREVENT DAMAGE TO EXISTING MATERIALS AND EQUIPMENT.

9.2. CONSTRUCTION FRAMING AND GYPSUM BOARD SHEET MATERIALS WITH CLOSED JOINTS AND SEALED EDGES AT INTERSECTIONS TO PREVENT PENETRATION OF DUST AND MOISTURE.

9.2.1. PROVIDE GYPSUM BOARD OVER FRAMING TO 8 FEET ABOVE CEILING, WITH REINFORCED POLYETHYLENE FROM TOP OF GYPSUM BOARD TO CEILING OR DECK.

9.2.2. PROVIDE LOCK-ABLE DOOR ACCESS TO CONSTRUCTION AREA.

9.2.3. PROVIDE WALK-OFF MATS AT EACH ENTRANCE THROUGH TEMPORARY PARTITION.

10. ISOLATION OF WORK AREAS IN OCCUPIED FACILITIES

10.1. PREVENT DUST, FUMES AND ODORS FROM ENTERING OCCUPIED AREAS. PRIOR TO COMMENCING WORK, ISOLATE THE HVAC SYSTEM IN AREA WHERE WORK IS TO BE PERFORMED.

10.1.1. DISCONNECT SUPPLY AND RETURN DUCTWORK IN WORK AREA FROM HVAC SYSTEMS SERVING OCCUPIED AREAS.

10.1.2. MAINTAIN NEGATIVE AIR PRESSURE WITHIN WORK AREA, STARTING WITH COMMENCEMENT OF TEMPORARY PARTITION CONSTRUCTION, AND CONTINUING UNTIL REMOVAL OF TEMPORARY PARTITIONS IS COMPLETE.

10.2. MAINTAIN DUST PARTITIONS DURING THE WORK, USE VACUUM COLLECTION ATTACHMENTS ON WORKMANSHIP, ISOLATE LIMITED WORK WITHIN OCCUPIED AREAS USING PORTABLE DUST-CONTAINMENT DEVICES.

10.3. PERFORM DAILY CONSTRUCTION CLEANUP AND FINAL CLEANUP USING VACUUM EQUIPMENT.

11. VENTILATION AND HUMIDITY CONTROL

11.1. PROVIDE TEMPORARY VENTILATION REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF HIGH HUMIDITY. SELECT EQUIPMENT THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED. COORDINATE VENTILATION REQUIREMENTS FOR INSTALLING, CONNECTING TO, AND PLACING IN SERVICE. SUCH EQUIPMENT.

12. SECURITY AND PROTECTION

12.1. PROTECT EXISTING VEGETATION, EQUIPMENT, STRUCTURES, UTILITIES, AND OTHER IMPROVEMENTS AT SITE AND ON ADJACENT PROPERTIES. REPAIR DAMAGE TO EXISTING FACILITIES.

12.2. TEMPORARY FIRE PROTECTION: INSTALL AND MAINTAIN TEMPORARY FIRE-PROTECTION FACILITIES OF TYPES NEEDED TO PREVENT PENETRATION OF DUST AND MOISTURE INTO OWNER OCCUPABLE FIRE LOSSES. COMPLY WITH NFPA 248; MAINTAIN FIRE PREVENTION PROGRAM.

12.3. TEMPORARY FIRE PROTECTION: INSTALL AND MAINTAIN TEMPORARY FIRE-PROTECTION FACILITIES OF TYPES NEEDED TO PREVENT PENETRATION OF DUST AND MOISTURE INTO OWNER OCCUPABLE FIRE LOSSES. COMPLY WITH NFPA 248; MAINTAIN FIRE PREVENTION PROGRAM.

12.4. SITE ENCLOSURE FENCE IN A MANNER THAT WILL PREVENT PEOPLE FROM EASILY ENTERING SITE EXCEPT BY ENTRANCE GATES.

12.5. TEMPORARY EGRESS: MAINTAIN TEMPORARY EGRESS FROM EXISTING OCCUPIED FACILITIES.

13. VEHICULAR ACCESS AND PARKING

13.1. COMPLY WITH REGULATIONS RELATING TO USE OF STREETS AND SIDEWALKS, ACCESS TO EMERGENCY FACILITIES, AND ACCESS FOR EMERGENCY VEHICLES.

13.2. COORDINATE ACCESS AND HAUL ROUTES WITH GOVERNING AUTHORITIES AND OWNER.

13.3. PREVENT SPREAD OF SOIL AND DEBRIS FROM CONSTRUCTION SITE TO PUBLIC WAY.

13.4. PROVIDE AND MAINTAIN ACCESS TO FIRE HYDRANTS, FREE OF OBSTRUCTIONS.

13.5. PARKING: COMPLY WITH OWNER'S PARKING REQUIREMENTS.

10. TEMPORARY USE OF PERMANENT ROADS AND PAVED AREAS

10.1. LOCATE TEMPORARY ROADS AND PAVED ARE



## SECTION 042000 - UNIT MASONRY

1. SUBMITTALS
  - 1.A. PRODUCT DATA
    - 1.A.A. CONCRETE MASONRY UNITS
    - 1.A.B. BRICK UNITS
    - 1.A.C. REINFORCEMENT AND ANCHORAGE
    - 1.A.D. MORTAR
    - 1.A.E. ACCESSORIES
    - 1.A.F. FLASHING
  - 1.B. SAMPLES
    - 1.B.A. BRICK

2. QUALITY ASSURANCE
  - 2.A. SUBMIT WITH PROVISIONS OF ACI 530/530.1/VERTA, EXCEPT WHERE EXCEEDED BY REQUIREMENTS OF THE CONTRACT DOCUMENTS
  - 2.B. PROTECTION OF MASONRY DURING ERECTION, COVER TOPS OF WALLS, PROJECTIONS AND SILLS WITH WATERPROOF SHEETING AT END OF EACH DAYS WORK. COVER PARTIALLY COMPLETED MASONRY WHEN CONSTRUCTION IS NOT IN PROGRESS.

3. CONCRETE MASONRY UNITS
  - 3.A. SPECIAL SHAFER: PROVIDE BULLDOGE BLOCK AT ALL EXTERIOR CORNERS, MASONRY OPENINGS, AND WHERE INDICATED ON DRAWINGS.
  - 3.B. LOAD-BEARING UNITS: ASTM C90, NORMAL WEIGHT
  - 3.C. NON-LOAD-BEARING UNITS: ASTM C129

4. BRICK UNITS
  - 4.A. FACING BRICK: ASTM C652, TYPE HSA
  - 4.B. PRODUCT: GENERAL, SHALE BRICK, BUCKINGHAM TUDOR MODULAR

5. MORTAR AND GROUT MATERIALS
  - 5.A. MASONRY CEMENT: ASTM C91, TYPE 9
  - 5.B. PORTLAND CEMENT: ASTM C150, TYPE I
  - 5.C. HYDRATED LIME: ASTM C207, TYPE S
  - 5.D. MORTAR AGGREGATE: ASTM C44
  - 5.E. GROUT AGGREGATE: ASTM C44
  - 5.F. WATER: CLEAN AND POTABLE
  - 5.G. MORTAR MIXTURES: COMPOUNDED FOR USE IN MORTAR MIXES AND COMPLYING WITH ASTM C979.
  - 5.H. COLORED CEMENT PRODUCT: PACKAGED BLEND MADE FROM PORTLAND CEMENT AND HYDRATED LIME AND MORTAR MIXTURES, ALL COMPLYING WITH SPECIFIED REQUIREMENTS AND CONTAINING NO OTHER INGREDIENTS.

6. REINFORCEMENT AND ANCHORAGE
  - 6.A. SINGLE WIRE JOINT REINFORCEMENT: LADDER TYPE: ASTM A82 STEEL WIRE, HOT DIP GALVANIZED AFTER FABRICATION TO ASTM A82, CLASS B
  - 6.B. LATH TYPE WIRE, JOINT REINFORCEMENT: LADDER TYPE: FRAMEWORK WITH MOISTURE DRIP, ASTM A82 STEEL WIRE, HOT DIP GALVANIZED AFTER FABRICATION TO ASTM A82, CLASS B
  - 6.C. TWO-PIECE WALL TIE: FORMED STEEL WIRE, ADJUSTABLE, EYE AND PIVOT TYPE, HOT DIP GALVANIZED TO ASTM A82, CLASS B

7. FLASHINGS
  - 7.A. CORRUGATED PAPER FLASHING: 3/32x36 SHEET COPPER BONDED TO FIBER REINFORCED ASPHALT TREATED KRAFT PAPER

8. ACCESSORIES
  - 8.A. PERFORMED CONTROL JOINTS: POLYVINYL CHLORIDE MATERIAL; PROVIDE WITH CORNER AND TEE ACCESSORIES, FUSED JOINTS
  - 8.B. JOINT FILLER: CLOSED CELL NEOPRENE, OVERSIZED 50 PERCENT OF JOINT WIDTH; SELF EXPANDING; MAXIMUM LENGTH AVAILABLE
  - 8.C. CAVITY MORTAR CONTROL: SEMI-RIGID POLYETHYLENE OR POLYESTER MESH PANELS, SIZED TO THICKNESS OF WALL CAVITY, AND DESIGNED TO PREVENT MORTAR DROPPINGS FROM CLOSING WEEDS AND CAVITY VENTS AND TO ALLOW PROPER CAVITY DRAINAGE
  - 8.D. WEEDS: ROUNDED PLASTIC WITH COTTON WOE AND STAINLESS SCREEN INSERT
  - 8.E. THERMOPLASTIC DAMPROOFING: ENCASED IN ASPHALT; ASTM D1225, WITH FIBER REINFORCEMENT TYPE I
  - 8.F. PRIMER: ASTM D4, COMPATIBLE WITH SUBSTRATE
  - 8.G. SEALING MASTIC: ASPHALT ROOF CEMENT, ASTM D2822, TYPE I
  - 8.H. CLEANING SOLUTION: NON-ACIDIC, NOT HARMFUL TO MASONRY WORK OR ADJACENT MATERIALS

9. MORTAR AND GROUT MIXES
  - 9.A. MORTAR FOR UNIT MASONRY: ASTM C270 USING THE PROPERTY SPECIFICATION
  - 9.B. EXTERIOR, LOAD-BEARING MASONRY: TYPE S
  - 9.C. EXTERIOR, NON-LOAD-BEARING MASONRY: TYPE N
  - 9.D. INTERIOR, LOAD-BEARING MASONRY: TYPE N
  - 9.E. INTERIOR, NON-LOAD-BEARING MASONRY: TYPE N
  - 9.F. POINTED MORTAR: USE CO-COURED CEMENT PRODUCT OR SELECT AND PROPORTION FLEMENTS WITH OTHER INGREDIENTS TO PRODUCE COLOR REQUIRED. DO NOT ADD PIGMENTS TO COLORED CEMENT PRODUCTS
  - 9.G.A. USE PIGMENTED MORTAR FOR EXPOSED MORTAR JOINTS UNLESS OTHERWISE NOTED. GROUT: ASTM C476, CONSISTENCY REQUIRED TO FILL COMPLETELY VOLUMES INDICATED FOR GROUTING FINE GROUT FOR SPACES WITH SMALLEST HORIZONTAL DIMENSION OF 3 INCHES OR LESS; COARSE GROUT FOR SPACES WITH SMALLEST HORIZONTAL DIMENSION GREATER THAN 2 INCHES

10. EXAMINATION
  - 10.A. VERIFY THAT FIELD CONDITIONS ARE ACCEPTABLE AND ARE READY TO RECEIVE WORK.
  - 10.B. VERIFY THAT BUILT-IN ITEMS ARE IN PROPER LOCATION, AND READY FOR ROUGHING INTO MASONRY WORK.

11. PREPARATION
  - 11.A. PROVIDE TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT BRACING.
  - 11.B. HOT AND COLD WEATHER REQUIREMENTS: COMPLY WITH REQUIREMENTS OF ACI 530/530.1/VERTA OR APPLICABLE BUILDING CODE, WHICHEVER IS MORE STRINGENT.

12. COURSE
  - 12.A. ESTABLISH LINES, LEVELS AND COURSING INDICATED. PROTECT FROM DISPLACEMENT
  - 12.B. MAINTAIN MASONRY COURSED TO UNIFORM DIMENSION. FORM VERTICAL AND HORIZONTAL JOINTS OF UNIFORM THICKNESS.

13. PLACING AND BONDING
  - 13.A. LAY SOLID MASONRY UNITS IN FULL BED OF MORTAR, WITH FULL HEAD JOINTS, UNIFORMLY JOINTED WITH OTHER WORK.
  - 13.B. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS.
  - 13.C. REMOVE EXCESS MORTAR AND MORTAR SMEARS AS WORK PROGRESSES.
  - 13.D. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
  - 13.E. MAINT MORTAR JOINTS FULL WHERE WALL TIE IS SCHEDULED OR RESILIENT BASE IS SCHEDULED
  - 13.F. ISOLATE MASONRY PARTITIONS FROM VERTICAL STRUCTURAL FRAMING MEMBERS WITH A CONTROL JOINT.
  - 13.G. ISOLATE TOP JOINT OF MASONRY PARTITIONS FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER.

14. WEAPENICARY VENTS
  - 14.A. INSTALL WEEDS IN VENER AND CAVITY WALLS AT 24 INCHES ON CENTER HORIZONTALLY ABOVE THROUGH-WALL FLASHING, ABOVE SHIELD ANGLES AND UNITS, AND AT BOTTOM OF WALLS.

15. CAVITY MORTAR CONTROL
  - 15.A. DO NOT PERMIT MORTAR TO DROP OR ACCUMULATE INTO CAVITY AIR SPACE OR TO PLUG WEAPENICARY VENTS.
  - 15.B. INSTALL CAVITY MORTAR NET AT BASE OF CAVITY AND AT OTHER FLASHING LOCATIONS AS RECOMMENDED BY MANUFACTURER.

16. REINFORCEMENT AND ANCHORAGE
  - 16.A. UNLESS OTHERWISE INDICATED ON DRAWINGS OR SPECIFIED UNDER SPECIFIC WALL TYPE, INSTALL HORIZONTAL JOINT REINFORCEMENT 16 INCHES ON CENTER
  - 16.B. PLACE MASONRY JOINT REINFORCEMENT IN FIRST AND SECOND HORIZONTAL JOINTS ABOVE AND BELOW OPENINGS. EXTEND MINIMUM 16 INCHES EACH SIDE OF OPENING
  - 16.C. PLACE CONTINUOUS JOINT REINFORCEMENT IN FIRST AND SECOND JOINT BELOW TOP OF WALLS. LAP JOINT REINFORCEMENT ENDS MINIMUM 6 INCHES.

17. MASONRY FLASHINGS
  - 17.A. WHETHER OR NOT SPECIFICALLY INDICATED, INSTALL MASONRY FLASHING TO DIVERT WATER TO EXTERIOR AT ALL LOCATIONS WHERE DOWNWARD FLOW OF WATER WILL BE INTERRUPTED
  - 17.A.A. EXTEND FLASHINGS FULL WIDTH AT SUCH INTERRUPTIONS AND AT LEAST 4 INCHES INTO ADJACENT MASONRY OR TURN UP AT LEAST 4 INCHES TO FORM WATER-TIGHT PAN AT NON-MASONRY CONSTRUCTION
  - 17.A.B. REMOVE OR COVER PROTRUSIONS OR SHARP EDGES THAT COULD PUNCTURE FLASHINGS
  - 17.A.C. SEAL LAPPED ENDS AND PENETRATIONS OF FLASHING BEFORE COVERING WITH MORTAR.

18. LIMITS
  - 18.A. INSTALL LIMITS UNLESS OPENINGS. SIZE AS INDICATED ON DRAWINGS. MAINTAIN MINIMUM 6 INCH BEARING ON EACH SIDE OF OPENING.

19. GROUTED COMPONENTS
  - 19.A. SUPPORT AND SECURE REINFORCING BARS FROM DISPLACEMENT. MAINTAIN POSITION WITHIN 1/2 INCH OF DIMENSIONED POSITION
  - 19.B. PLACE AND CONSOLIDATE GROUT FULL WITHOUT DISPLACING REINFORCING.
  - 19.C. AT BEARING LOCATIONS, FILL MASONRY CORES WITH GROUT FOR A MINIMUM 12 INCHES EITHER SIDE OF OPENING.
  - 19.D. IN ADDITION TO STRUCTURAL LOCATIONS, PROVIDE FULLY GROUTED MASONRY CORES AT THE FOLLOWING:

- 19.D.A. ATTACHMENT OF WALL-MOUNTED ITEMS IN TOILET ROOMS
- 19.D.B. MASONRY BELOW GRADE
- 19.D.C. MASONRY CORES WHERE REINFORCING OCCURS
- 19.D.D. OTHER LOCATIONS AS INDICATED ON DRAWINGS

20. CONTROL AND EXPANSION JOINTS
  - 20.A. DO NOT CONTINUE HORIZONTAL JOINT REINFORCEMENT THROUGH CONTROL AND EXPANSION JOINTS.
  - 20.B. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND AS INDICATED ON DRAWINGS

21. BUILT-IN WORK
  - 21.A. AS WORK PROGRESSES, INSTALL BUILT-IN METAL DOOR FRAMES AND OTHER ITEMS TO BE BUILT INTO THE WORK AND FURNISHED UNDER OTHER SECTIONS. INSTALL BUILT-IN ITEMS PLUMB, LEVEL AND TRUE TO LINE.
  - 21.B. BED ANCHORS OF METAL DOOR AND GLAZED FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDER SOLID WITH GROUT.
  - 21.B.A. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 12 INCHES FROM FRAMED OPENINGS.

22. PARKING
  - 22.A. DAMPEN MASONRY WALLS PRIOR TO PARKING.
  - 22.B. SCABRY EACH PARKING GOAT TO DISBURSE FULL BOND TO SUBSEQUENT COAT.
  - 22.C. PARKING MASONRY WALLS IN TWO UNIFORM COATS OF MORTAR TO A TOTAL THICKNESS OF 3/4 INCH.
  - 22.D. STEEL, TROWEL SURFACE SMOOTH AND FLAT WITH A MAXIMUM SURFACE VARIATION OF 1/8 INCH PER FOOT.
  - 22.E. STRIKE TOP EDGE OF PARKING AT 45 DEGREES.

23. DAMPROOFING
  - 23.A. PRIME SURFACES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - 23.B. APPLY BITUMEN BY TROWEL.
  - 23.C. APPLY BITUMEN IN ONE COAT, CONTINUOUS AND UNIFORM, AT A RATE OF 125.50 GAL PER GALLON AT 1/8 INCH WET FILM THICKNESS.
  - 23.D. APPLY FROM 2 INCHES BELOW FINISH GRADE ELEVATION DOWN TO TOP OF FOOTINGS.
  - 23.E. SEAL ITEMS PROJECTIONS THROUGH DAMPROOFING SURFACE WITH MASTIC.

24. CLEANING
  - 24.A. REMOVE EXCESS MORTAR AND MORTAR DROPPINGS.
  - 24.B. REPLACE DEFECTIVE MORTAR. MATCH ADJACENT WORK.
  - 24.C. CLEAN SOLED SURFACES WITH CLEANING SOLUTION.

## SECTION 044300 - STONE MASONRY

1. SUBMITTALS
  - 1.A. PRODUCT DATA
    - 1.A.A. EACH TYPE OF STONE, STONE ACCESSORY, AND MANUFACTURED PRODUCT
    - 1.A.B. SHOP DRAWINGS
    - 1.A.C. INDICATE PROPOSED LAYOUT AND LENGTHS OF ALL CAPS
    - 1.A.D. SAMPLES
    - 1.A.E. LIMESTONE
2. QUALITY ASSURANCE
  - 2.A. COMPLY WITH PROVISIONS OF ACI 530/530.1/VERTA, EXCEPT WHERE EXCEEDED BY REQUIREMENTS OF THE CONTRACT DOCUMENTS
  - 2.B. PROTECTION OF MASONRY DURING ERECTION, COVER TOPS OF WALLS, PROJECTIONS AND SILLS WITH WATERPROOF SHEETING AT END OF EACH DAYS WORK. COVER PARTIALLY COMPLETED MASONRY WHEN CONSTRUCTION IS NOT IN PROGRESS.

3. LIMESTONE WALL CAPS
  - 3.A. FINISH MATCH EXISTING WALL CAP COLOR AND FINISH
  - 3.B. CAP SIZE AS INDICATED ON DRAWINGS
4. MORTAR AND GROUT MATERIALS
  - 4.A. MASONRY CEMENT: ASTM C91
  - 4.B. PORTLAND CEMENT: ASTM C150, TYPE I
  - 4.C. MORTAR AGGREGATE: ASTM C44
  - 4.D. WATER: CLEAN AND POTABLE
  - 4.E. MORTAR MIXTURES: COMPOUNDED FOR USE IN MORTAR MIXES AND COMPLYING WITH ASTM C979. USE ONLY FLEMENTS WITH A RECORD OF SATISFACTORY PERFORMANCE IN MASONRY MORTAR.

5. ANCHORAGE: FABRICATED WITH TABS OR DOWELS DESIGNED TO ENGAGE KERFS OR HOLES IN STONE UNITS AND HOLES FOR FASTENERS OR POSTINSTALLED ANCHOR BOLTS FOR FASTENING TO SUBSTRATES OR FRAMING AS INDICATED.
  - 5.A. MATERIAL: CONCRETE, STAINLESS STEEL, ASTM A276
  - 5.B.A. ANCHORS: STAINLESS STEEL, ASTM A276

6. FLASHINGS
  - 6.A. COPPER-LAMINATED FLASHINGS: 5/32x36 SHEET COPPER BONDED WITH ASPHALT BETWEEN TWO LAYERS OF GLASS-FIBER CLOTH

7. ACCESSORIES
  - 7.A. COMPRESSIBLE FILLER: PREMIXED FILLER STRIPS, ASTM D1056; NEOPRENE, URETHANE OR PVC CEMENTITIOUS DAMPROOFING FORMULATION RECOMMENDED BY INDIANA LIMESTONE INSTITUTE AND NONSTAINING TO STONE, COMPATIBLE WITH JOINT SEALANTS, AND NONCORROSIVE TO ANCHORS AND ATTACHMENTS.
  - 7.B. MASONRY CLEANER: APPROVED FOR INTENDED USE BY CLEANER MANUFACTURER AND STONE PRODUCER.
8. MORTAR AND GROUT MIXES
  - 8.A. MORTAR FOR SETTING STONE: TYPE N
  - 8.B. MORTAR FOR POINTING STONE: TYPE O
  - 8.C. PIGMENTED MORTAR: USE COLORED CEMENT PRODUCT OR SELECT AND PROPORTION FLEMENTS WITH OTHER INGREDIENTS TO PRODUCE COLOR REQUIRED. DO NOT ADD PIGMENTS TO COLORED CEMENT PRODUCTS

9. EXAMINATION
  - 9.A. VERIFY THAT FIELD CONDITIONS ARE ACCEPTABLE AND ARE READY TO RECEIVE WORK.
10. INSTALLATION - GENERAL
  - 10.A. PREPARE, SET, ADJUST AND CLEAN STONE IN ACCORDANCE WITH RECOMMENDATIONS OF INDIANA LIMESTONE HANDBOOK.

11. PREPARATION
  - 11.A. HOT AND COLD WEATHER REQUIREMENTS: COMPLY WITH REQUIREMENTS OF ACI 530/530.1/VERTA
  - 11.B. CLEAN DIRTY OR STAINED STONE SURFACES BEFORE SETTING.

12. SETTING
  - 12.A. PERFORM NECESSARY FIELD CUTTING AND TRIMMING AS STONE IS SET.
  - 12.B. SET STONE TO COMPLY WITH REQUIREMENTS INDICATED ON DRAWINGS. INSTALL SUPPORTS, FASTENERS AND OTHER ATTACHMENTS INDICATED OR NECESSARY TO SECURE STONE IN PLACE. SET STONE ACCURATELY IN LOCATIONS INDICATED WITH EDGES AND FACES ALIGNED ACCORDING TO CORNER, JOINT RELATIONSHIPS AND INDICATED TOLERANCES.
  - 12.C. MAINTAIN UNIFORM JOINT WIDTHS.
  - 12.D. PROVIDE SEALANT JOINTS OF WIDTHS AND AT LOCATIONS INDICATED.

13. ADJUSTING AND CLEANING
  - 13.A. REMOVE AND REPLACE BROKEN, CHIPPED, STAINED OR OTHERWISE DAMAGED STONE.
  - 13.B. PROVIDE IN-PROGRESS CLEANING AND FINAL CLEANING OF STONE SURFACES.

END OF SECTION

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## SECTION 055000 - METAL FABRICATIONS

1. SUBMITTALS
  - 1.A. SHOP DRAWINGS
    - 1.A.A. PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS WHERE APPLICABLE.
2. MATERIALS - STEEL
  - 2.A. STEEL SECTIONS: ASTM A36
  - 2.B. STEEL TUBING: ASTM A500, GRADE B COLD-FORMED STRUCTURAL TUBING
  - 2.C. PLATES: ASTM A283
  - 2.D. PIPE: ASTM A53
  - 2.E. BOLTS, NUTS AND WASHERS: ASTM A325, TYPE 1, GALVANIZED TO ASTM A193 WHERE APPLICABLE
  - 2.F. WELDING MATERIALS: AWS D11, TYPE REQUIRED FOR MATERIALS BEING WELDED
  - 2.G. SHOP AND TOUCH-UP PRIMER: 595C-PANT IS, COMPLYING WITH VOC LIMITATIONS OF AUTHORITIES HAVING JURISDICTION
  - 2.H. TOUCH-UP PRIMER FOR GALVANIZED SURFACES: 595C-PANT 20, TYPE 1 INORGANIC, COMPLYING WITH VOC LIMITATIONS OF AUTHORITIES HAVING JURISDICTION

3. MATERIALS - OTHER
  - 3.A. GROUT: 59C-121 AND ASTM C1077. CEMENT BASED, NON SHRINK, NON-STAINING AND NON-METALLIC
4. FABRICATED ITEMS
  - 4.A. LADDERS: STEEL, IN COMPLIANCE WITH ANSI/AIA-3, WITH MOUNTING BRACKETS AND ATTACHMENTS: PRIME PAINT FINISH
  - 4.A.A. SIDE RAILS: 1/2 X 2 INCHES MEMBERS SPACED AT 20 INCHES
  - 4.A.B. RUNGS: 3/4 INCH DIAMETER SOLID ROUND BAR SPACED 12 INCHES ON CENTER; NON-SLIP FINISH. FLUSH WELD AND GRIND SMOOTH.
  - 4.A.C. SPACE RUNGS: 7 1/2 INCHES FROM WALL SURFACE
  - 4.A.D. SUPPORT LADDERS AT TOP AND BOTTOM AND NOT MORE THAN 60 INCHES O.C. WITH WELDED OR BOLTED STEEL BRACKETS. SIZE BRACKETS TO SUPPORT DESIGN LOADS SPECIFIED IN ANSI A4.3.
  - 4.A.E. DEFLECTION: 1/4 INCH
  - 4.B. SOLID ROUS: STEEL, TYPE, CONCRETE FILLER, CRONNEY CAP, AS DETAILED; GALVANIZED FINISH
  - 4.C. UNITS: AS DETAILED; PRIME PAINT FINISH, GALVANIZED FINISH AT EXTERIOR
  - 4.C.A. LOCATION: ALL NEW OPENINGS IN EXISTING AND NEW MASONRY WALLS
  - 4.C.B. UNLESS OTHERWISE INDICATED, PROVIDE 1/4 INCH MINIMUM NOMINAL DIAMETER; PROVIDE (1) 4-2-1/2x2-0/8 STEEL ANGLE LVL
  - 4.C.C. UNIFORM BEARING 6 INCH EACH END
  - 4.C.D. HANDRAILS AND GUARDRAILS: STEEL TYPE, MANUFACTURE TO DETAILS AND DIMENSIONS INDICATED; GRIND BENDS AND WELDS SMOOTH AND FLUSH
  - 4.D. PIPE: UNLESS OTHERWISE INDICATED, PROVIDE 1/4 INCH MINIMUM NOMINAL DIAMETER; 1/66 O.D.
  - 4.D.B. CLOSE TYPE ENDS WITH 5/8 INCH CONTINUOUSLY WELDED STEEL PLATE
  - 4.D.C. VERTICAL SURFACES: GALVANNEAL, GALVANNEAL AND BRACKETS SHALL BE HOT-DIPPED GALVANIZED.
  - 4.E. COUNTERTOPS: STAINLESS STEEL. COORDINATE REQUIREMENTS WITH POLICE DEPARTMENT.

5. FINISHED - STEEL
  - 5.A. PRIME PAINT ALL STEEL ITEMS
  - 5.B.A. EXCEPTIONS: GALVANNEAL ALL EXTERIOR STEEL FABRICATIONS AND ACCESSORIES
  - 5.B.B. PRIME PAINT SHALL BE PRIME IN ACCORDANCE WITH 595C-121
  - 5.C. PRIME PAINTING: ONE COAT
  - 5.C.A. GALVANNEAL: GALVANNEAL AFTER FABRICATION TO ASTM A102 REQUIREMENTS.
6. EXAMINATION
  - 6.A. VERIFY THAT FIELD CONDITIONS ARE ACCEPTABLE AND ARE READY TO RECEIVE WORK.
7. PREPARATION
  - 7.A. CLEAN AND STRIP PRIME STEEL ITEMS TO BARE METAL WHERE SITE WELDING IS REQUIRED.
8. INSTALLATION
  - 8.A. INSTALL ITEMS PLUMB AND LEVEL, ACCURATELY FITTED, FREE FROM DISTORTION OR DEFECTS.
  - 8.B. FIELD WELDING: CONSIDERED FROM NEW BUT LOCATED WITHIN EXTERIOR ENCLOSURE: F50, A-D OR BETTER
  - 8.C. AFTER ERECTION, PLUMB LEVELS, ABRASSIONS AND BRACKETS SHALL BE HOT-DIPPED GALVANIZED.
  - 8.D. GALVANNEAL: GALVANNEAL AFTER FABRICATION TO ASTM A102 REQUIREMENTS.

9. HARDWARE: BHMA A583, TYPES AS SPECIFIED FOR QUALITY GRADE SPECIFIED
  - 9.A. ADJUSTABLE SELF-SUPPORTS: STAND-AND-SIDE-MOUNTED SYSTEM USING MULTIPLE HOLES FOR PIN SUPPORTS AND COORDINATE TO SELF-RESEALING, POLISHED CHROME FINISH, FOR NOMINAL 1 INCH SPACING ADJUSTMENTS
  - 9.B. DOOR AND DRAWER PULLS: U-SHAPED WIRE PULL, 5/8 INCH DIAMETER MINIMUM, 4 INCH LONG
  - 9.C. CABINET LOCKS: KEVED CLOSURE, TWO KEYS PER LOCK, MASTER KEYS, STEEL WITH CHROME FINISH
  - 9.D. CATCHES: GRADE 1, MAGNETIC, HEAVY-DUTY
  - 9.E. DRAWER SLIDES: GRADE 1, FULL EXTENSION
  - 9.E.B. BOX DRAWER SLIDES: GRADE 1: 10-100
  - 9.E.C. FULL DRAWER SLIDES: GRADE 1: 10-100
  - 9.E.D. PENCIL DRAWER SLIDES: GRADE 1
  - 9.E.E. MOUNTING: SIDE MOUNT
  - 9.E.F. STOPS: INTEGRAL TYPE
  - 9.E.G. FEATURES: PROVIDE SELF-CLOSING, STAY CLOSED TYPE
  - 9.F. HINGES: GRADE 1, EUROPEAN STYLE CONCEALED TYPE, STEEL WITH SATIN FINISH
  - 9.F.A. OPENING ANGLE: 120 DEGREES
  - 9.F.B. QUANTITY: PER MANUFACTURER'S RECOMMENDATIONS FOR WEIGHT OF DOOR

10. ACCESSORIES
  - 10.A. ADHESIVE: TYPE RECOMMENDED BY FABRICATOR TO SUIT APPLICATION
  - 10.B. FASTENERS: SIZE AND TYPE TO SUIT APPLICATION
  - 10.C. BOLTS, NUTS, WASHERS, LAGS, PINS AND SCREWS: SIZE AND TYPE TO SUIT APPLICATION
  - 10.D. GALVANNEAL OR CHROME-PLATED FINISH IN CONCEALED LOCATIONS; STAINLESS STEEL OR CHROME-PLATED FINISH IN EXPOSED LOCATIONS
  - 10.E. GROMMETS: HIGH-IMPACT ABS CABLE HOLE COVER, 3 INCH INSIDE DIAMETER, WITH CLOSURE ON TOP; COLOR AS SELECTED

11. FABRICATION
  - 11.A. EDGING: FIT SHELVES, DOORS AND EXPOSED EDGES WITH SPECIFIED EDGING. DO NOT USE MORE THAN ONE PIECE FOR ANY SINGLE LENGTH
  - 11.A.A. PLASTIC LAMINATE SELF-EDGE: TYPICAL UNLESS OTHERWISE NOTED
12. EXAMINATION
  - 12.A. VERIFY ADEQUACY OF BACKING AND SUPPORT FRAMING.
13. INSTALLATION
  - 13.A. INSTALL WORK IN ACCORDANCE WITH AMI STANDARDS FOR CUSTOM GRADE.
  - 13.B. SET AND SECURE MATERIALS AND COMPONENTS IN PLACE, PLUMB AND LEVEL.
  - 13.C. USE FUTURE ATTACHMENTS IN CONCEALED LOCATIONS FOR WALL MOUNTED COMPONENTS.
  - 13.D. CAREFULLY SCORPE CASEWORK, ADJUSTING OTHER COMPONENTS, WITH MAXIMUM GAPS OF 1/32 INCH. DO NOT ADD UNUSUAL OVERLAY TIME FOR THIS PURPOSE.
  - 13.E. SECURE CABINETS TO FLOOR USING APPROPRIATE ANGLES AND ANCHORAGES.

14. ACCESSORIES
  - 14.A. FASTENERS AND ANCHORS
  - 14.A.A. METAL AND FINISH: HOT-DIPPED GALVANIZED STEEL PER ASTM A193 FOR HIGH HUMIDITY AND PRESERVATIVE TREATMENT FOR WALL LOCATIONS UNLESS STEEL ELEMENTS ARE ANCHORS: TOGGLE BOLT TYPE FOR ANCHORAGE TO HOLLOW MASONRY
15. FACTORY WORK TREATMENT - GENERAL
  - 15.A. COMPLY WITH REQUIREMENTS OF AWWA U1, USE CATEGORY SYSTEM FOR WOOD TREATMENTS DETERMINED BY USE CATEGORIES, EXPECTED SERVICE CONDITIONS, AND SPECIFIC APPLICATIONS.

16. FIRE RETARDANT TREATMENT
  - 16.A. KILN DRY WOOD AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT FOR LUMBER AND 15 PERCENT FOR PANELS
  - 16.B. CAPABLE OF PROVIDING A MAXIMUM FLAME SPREAD RATING OF 25 WHEN TESTED IN ACCORDANCE WITH ASTM E84, WITH NO EVIDENCE OF SIGNIFICANT COMBUSTION WHEN TEST IS EXTENDED FOR AN ADDITIONAL 20 MINUTES, AND WITH THE FLAME FRONT NOT EXTENDING MORE THAN 105 FEET BEYOND THE CENTERLINE OF THE BURNERS AT ANY TIME DURING THE TEST, BOTH BEFORE AND AFTER ACCELERATED WEATHERING TEST PERFORMED IN ACCORDANCE WITH ASTM D2898.
  - 16.C. EXTERIOR TYPE: AWWA U1, CATEGORY UC3, COMMODITY SPECIFICATION H
  - 16.C.A. TREAT ALL ROUGH CARPENTRY ITEMS AND BLOCKING UNLESS OTHERWISE NOTED
  - 16.C.B. DO NOT USE TREATED WOOD IN DIRECT CONTACT WITH THE GROUND
  - 16.C.C. USE TREATMENT THAT DOES NOT PROMOTE CORROSION OF METAL FASTENERS
  - 16.D. INTERIOR TYPE: A AWWA U1, USE CATEGORY UC4, COMMODITY SPECIFICATION H
  - 16.D.A. TREAT ALL ROUGH CARPENTRY ITEMS AND BLOCKING UNLESS OTHERWISE NOTED
  - 16.D.B. DO NOT USE FIRE RETARDANT TREATED WOOD IN APPLICATIONS EXPOSED TO WEATHER OR WHERE THE WOOD MAY BECOME WET.
  - 16.D.C. USE TREATMENT THAT DOES NOT PROMOTE CORROSION OF METAL FASTENERS

17. PRESERVATIVE TREATMENT
  - 17.A. USE AWWA U1, USE CATEGORY UC2 FOR INTERIOR CONSTRUCTION NOT IN CONTACT WITH THE GROUND; USE CATEGORY UC3 FOR EXTERIOR CONSTRUCTION NOT IN CONTACT WITH THE GROUND, AND USE CATEGORY UC4 FOR ITEMS IN CONTACT WITH THE GROUND.
  - 17.B. PRESERVATIVE CHEMICALS: ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND CONTAINING NO ARSENIC OR CHROMIUM. DO NOT USE INORGANIC ARSENIC (SBA) FOR SILL PLATES.
18. PREPARATION
  - 18.A. COORDINATE INSTALLATION OF ROUGH CARPENTRY MEMBERS SPECIFIED IN OTHER SECTIONS.

19. INSTALLATION
  - 19.A. PROVIDE FRAMING AND BLOCKING MEMBERS AS INDICATED AND AS REQUIRED TO SUPPORT FINISHES, FIXTURES, SPECIALTY ITEMS AND TRIM.
  - 19.B. IN WALLS, PROVIDE SOLID WOOD BLOCKING ATTACHED TO STUDS AS BACKING AND SUPPORT FOR ALL WALL-MOUNTED AND WALL-ANCHORED ITEMS, UNLESS OTHER METHOD OF SUPPORT IS EXPLICITLY INDICATED.
  - 19.C. WHERE CEILING MOUNTING IS INDICATED, PROVIDE SOLID WOOD BLOCKING AND SUPPLEMENTARY SUPPORTS ABOVE CEILING, UNLESS OTHER METHOD OF SUPPORT IS EXPLICITLY INDICATED.

END OF SECTION

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SECTION 081416 - FLUSH WOOD DOORS

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. DOOR CORE MATERIALS AND CONSTRUCTION
- 1.A.B. VENEER SPECIES, TYPE AND CHARACTERISTICS
- 1.B. SHOP DRAWINGS
- 1.B.A. DOORS AND FRAMES, ELEVATIONS, SIZES, TYPES, SWINGS, UNDERCUTS, BEVELING, BLOCKING FOR HARDWARE, FACTORY MACHINING, FACTORY FINISHING, CUTOUTS FOR GLAZING AND OTHER DETAILS
- 1.C. SAMPLES
- 1.C.A. DOOR CONSTRUCTION
- 1.C.B. VENEER-ILLUSTRATING WOOD GRAIN, STAIN COLOR AND SHEEN
2. WOOD DOORS: 5-PLY, WOOD VENEER FACES, CUSTOM GRADE, HEAVY DUTY PERFORMANCE IN ACCORDANCE WITH NOMA 1A-1
- 2.A. CORE
- 2.A.A. NON-RATED AND 20-MINUTE RATED DOORS: PARTICLEBOARD CORE; ANSI A208.1
- 2.A.B. FIRE RATED DOORS: MINERAL CORE WITH BLOCKING REQUIRED FOR ANCHORAGE OF HARDWARE
- 2.B. THICKNESS: 1-3/4 INCH
- 2.C. FIRE RATED DOORS: TESTED TO RATINGS INDICATED ON DRAWINGS; UL OR NH LABELED
- 2.C.A. FACE: RED OAK, GRADE A, PLAN SLEED, BOOK VENEER MATCH, RUNNING ASSEMBLY MATCH
- 2.C.B. VERTICAL EDGES: SAME SPECIES AS FACE VENEER
- 2.C. FINISH: NOMA TR-6 CATALYZED POLYURETHANE
3. EXAMINATION
- 3.A. VERIFY THAT OPENINGS FOR WOOD DOORS ARE CORRECTLY SIZED AND WITHIN TOLERANCE.
4. INSTALLATION
- 4.A. INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFIED QUALITY STANDARD
- 4.B. INSTALL FIRE-RATED DOORS IN ACCORDANCE WITH NFPA 80 REQUIREMENTS
- 4.C. ADJUST DOORS FOR SMOOTH OPERATION AFTER INSTALLATION

END OF SECTION

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. MANUFACTURER'S PRODUCT DATA
- 1.B. SHOP DRAWINGS
- 1.B.A. DETAILED PLANS, ELEVATIONS, SECTIONS, HARDWARE, ACCESSORIES AND OPERATIONAL CLEARANCES
- 1.B.B. DETAILS OF INSTALLATION INCLUDING ANCHORAGE, FLASHINGS AND SEALANTS
- 1.C. SAMPLES
- 1.C.A. FACTORY FINISHED FRAME COLORS
2. HORIZONTAL SLIDING WALL: THERMALLY BROKEN
- 2.A. DESIGN CRITERIA
- 2.A.A. COMPLY WITH RECOMMENDATIONS OF THE CANA GLAZING MANUAL
- 2.A.B. THERMAL MOVEMENT: ALLOW FOR THERMAL MOVEMENT OF MATERIALS BASED ON 120 DEGREES F AMBIENT AND SURFACE TEMPERATURE OR 50 DEGREES F
- 2.B. PERFORMANCE FACTOR
- 2.B.A. CONDENSATION RESISTANCE FACTOR (CRF) AAMA 1503/NFRC 500 NOT LESS THAN 45
- 2.B.B. THERMAL RESISTANCE (U-FACTOR) AAMA 1503/ASTM A181 E4263
- 2.B.C. SOLAR HEAT GAIN COEFFICIENT (SHGC) NFRC 200
- 2.C. CONFIGURATIONS: AS INDICATED ON DRAWINGS
- 2.D. PANEL WEIGHT: 8 LBS/S.F.
- 2.E. COMPONENTS
- 2.E.A. TRACK: TRACKLESS
- 2.E.B. HARDWARE
- 2.E.B.A. WHEEL CARTRIDGE: SYNTHETIC NYLON COVERED WHEELS WITH ENCASED STAINLESS STEEL BALL BEARINGS AND DOUBLE SLIDING ROLLERS
- 2.E.B.B. OPERATING MECHANISM: PIN LOCKING SYSTEM
- 2.E.B.C. HANDLES: MANUFACTURER'S STANDARD
- 2.E.B.D. WEATHERSTRIPPING: EPDM, DOUBLE GASKET AND DENSE FELT BRUSHES AROUND ENTIRE SYSTEM
- 2.F. MATERIALS
- 2.F.A. EXTRUDED ALUMINUM: ASTM B221, 6063-T5
- 2.F.B. GLASS: COMPLY WITH SAFETY GLAZING REQUIREMENTS OF ANSI Z97.1 AND CPSC 1609.1201 AND INSULATING GLASS UNIT REQUIREMENTS OF ASTM E2803; FACTORY GLAZED
- 2.F.B.A. LOW-E COATED, CLEAR INSULATING GLASS UNIT
- 2.F.B.A.A. OVERALL THICKNESS: 1 INCH
- 2.F.B.A.B. THICKNESS OF EACH GLASS LITE: 6 MM
- 2.F.B.A.C. OUTDOOR LITE: FULLY TEMPERED FLOAT GLASS
- 2.F.B.A.D. INTERSPACE CONTENT: AIR
- 2.F.B.A.E. INDOOR LITE: FULLY TEMPERED FLOAT GLASS
- 2.G. FINISH: POWDER COAT AAMA 2604; COLOR: SELECTED FROM MANUFACTURER'S STANDARDS
3. EXAMINATION
- 3.A. VERIFY THAT CONDITIONS OF SUBSTRATES ARE ACCEPTABLE FOR PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS PRIOR TO HORIZONTAL SLIDING WALL INSTALLATION
4. PREPARATION
- 4.A. ENSURE STRUCTURE OF SUBSTRATE IS ADEQUATE TO SUPPORT HORIZONTAL SLIDING WALL INSTALLATION
5. INSTALLATION
- 5.A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL PLUMB AND LEVEL; ACCURATELY FIT, ALIGN, SECURELY FASTEN AND INSTALL FREE FROM DISTORTION OR DEFECTS

END OF SECTION

SECTION 08572 - FIBERGLASS DOUBLE HUNG - WINDOWS

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.1. SUBMIT MANUFACTURER'S PRODUCT DATA, INCLUDING INSTALLATION INSTRUCTIONS.
- 1.B. SHOP DRAWINGS
- 1.B.1. SUBMIT MANUFACTURER'S SHOP DRAWINGS, INDICATING DIMENSIONS, CONSTRUCTION, COMPONENT ANCHORING METHODS AND LOCATIONS, HARDWARE LOCATIONS, AND INSTALLATION DETAILS.
- 1.C. SAMPLES
- 1.C.1. SUBMIT FINISH SAMPLES FOR OWNER SELECTION
2. FIBERGLASS WINDOWS
- 2.1. PRODUCT: PELLA IMPERIVA SERIES
- 2.2. FRAME
- 2.2.1. EXTERIOR: EXTERIOR FRAME: PULTRUDED, FIBERGLASS COMPOSITE W/ FOAM INSERTS
- 2.2.2. EXTERIOR SURFACES: COLOR TO MATCH EXISTING WINDOWS
- 2.2.3. OVERALL FRAME DEPTH: 3 INCHES
- 2.2.4. NORMAL WALL THICKNESS: 0-207mm
- 2.3. SASH - UPPER & LOWER
- 2.3.1. INTERIOR: EXTERIOR FRAME: PULTRUDED, FIBERGLASS COMPOSITE W/ FOAM INSERTS.
- 2.3.2. LOWER & UPPER SASHES W/ VENTS & TILTS FOR
- 2.3.3. EXTERIOR SURFACES: COLOR TO MATCH EXISTING WINDOWS
- 2.3.4. CORNERS: MITERED - ROUTED AND SEALED W/ BURETTED THERMOSEAL POLYURETHANE ADHESIVE
- 2.3.5. OPERABLE SASH TILT TO INTERIOR FOR CLEANING OR REMOVAL
- 2.3.6. PROVIDE EMERGENCY WINDOW EGRESS OPTION WHERE APPLICABLE
- 2.4. WEATHERSTRIPPING
- 2.4.1. VENT UPPER SASH: FIN-TYPE FILE ON JAMBS, TOP RAIL AND STYLE
- 2.4.2. VENT LOWER SASH: VINYL-WRAPPED FOAM AT SILL ON FRAME AND BOTTOM RAIL
- 2.4.3. GLAZING
- 2.4.3.1. FLOAT GLASS: ASTM D2028, QUALITY 1
- 2.4.3.2. TEMPERED GLASS: ASTM C1024
- 2.4.3.3. TYPE: TAPE GLAZED INSULATING GLASS, SILICONE GLAZED LOW-E COATED WITH ARGON
- 2.4.3.4. FINISH
- 2.4.3.4.1. EXTERIOR & INTERIOR DUKACAST FINISH: AAMA 622; COLOR TO MATCH EXISTING WINDOWS
- 2.4.3.4.2. INTERIOR FINISH: DUAL COLOR - SELECTION BY OWNER
3. HARDWARE
- 3.1. LOCK: SELF-ALIGNING CAM ACTION LOCK
- 3.1.1. WINDOWS 57IN OR GREATER: 2 LOCKS
- 3.1.2. FINISH: SELECTION BY OWNER
- 3.2. TILT LATCHES: GLASS-REINFORCED NYLON 6
- 3.2.1. INTEGRATED INTO SASH CORNER
- 3.2.2. FINISH: SELECTION BY OWNER
4. INSTALLATION ACCESSORIES
- 4.1. FLASHING/SEALANT TAPE: PELLA SMARTFLASH
- 4.2. INTERIOR INSULATING FOAM SEALANT: LOW PRESSION, LOW PRESSURE POLYURETHANE INSULATING WINDOW AND DOOR FOAM SEALANT
- 4.3. EXTERIOR PERIMETER SEALANT: SEE SECTION 073005 JOINT SEALERS
5. EXAMINATION
- 5.1. EXAMINE AREAS TO RECEIVE WINDOWS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.
6. INSTALLATION
- 6.1. INSTALL WINDOWS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS
- 6.2. INSTALL WINDOWS TO BE WEATHERIGHT AND FREELY OPERATING
- 6.3. MAINTAIN ALIGNMENT WITH ADJACENT WORK
- 6.4. SECURE ASSEMBLY TO FRAMED OPENINGS, PLUMB AND SQUARE, WITHOUT DISTORTION
- 6.5. INTEGRATE WINDOW SYSTEM INSTALLATION WITH EXTERIOR WEATHER RESISTANT BARRIER
- 6.6. PLACE INTERIOR SEAL AROUND WINDOW PERIMETER TO MAINTAIN CONTINUITY OF BUILDING THERMAL AND AIR BARRIER USING INSULATING FOAM SEALANT
- 6.7. SEAL WINDOW TO EXTERIOR WALL CLADDING WITH SEALANT AND RELATED BACKING MATERIALS AT PERIMETER OF ASSEMBLY

END OF SECTION

SECTION 087100 - DOOR HARDWARE

1. SUBMITTALS
- 1.A. DOOR HARDWARE SCHEDULE
- 1.A.A. DOOR HARDWARE SCHEDULE SHALL BE PREPARED BY OR UNDER SUPERVISION OF A DHI CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC)
- 1.B. SHOP DRAWINGS
- 1.B.A. COMPLY WITH DHI SEQUENCE AND FORMAT FOR THE HARDWARE SCHEDULE, VERTICAL FORMAT
- 1.C. SCHEDULE SHALL INCLUDE THE FOLLOWING INFORMATION:
- 1.C.A. TYPES, STYLE, FUNCTION, SIZE AND FINISH OF EACH HARDWARE ITEM
- 1.C.B. NAME AND MANUFACTURER OF EACH ITEM
- 1.C.C. FASTENINGS AND OTHER PERTINENT INFORMATION
- 1.C.D. LOCATION OF EACH HARDWARE SET CROSS REFERENCED TO INDICATIONS ON DRAWINGS
- 1.C.E. EXPLANATION OF ALL ABBREVIATIONS, SYMBOLS AND CODES CONTAINED IN THE SCHEDULE
- 1.C.F. MOUNTING LOCATIONS FOR HARDWARE
- 1.C.G. DOOR AND FRAME SIZES AND MATERIALS
- 1.D. PRODUCT DATA
- 1.D.A. MANUFACTURER'S TECHNICAL PRODUCT SHEETS DESCRIBING EACH ITEM OF HARDWARE TO BE PROVIDED, INCLUDING MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES
- 1.E. MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 1.F. INDICATE SPECIAL PROCEDURES, PERIMETER CONDITIONS REQUIRING SPECIAL ATTENTION
- 1.G. MAINTENANCE DATA
- 1.G.A. INCLUDE DATA ON OPERATING HARDWARE, LUBRICATION REQUIREMENTS, AND INSPECTION PROCEDURES RELATED TO PREVENTATIVE MAINTENANCE
- 1.H. WARRANTY
- 1.H.A. SUBMIT MANUFACTURER'S WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER
- 1.I. SHOP DRAWINGS
- 1.I.A. SUBMIT FOR FABRICATION AND INSTALLATION OF HARDWARE. INCLUDE DETAILS, ELEVATIONS AND INSTALLATION REQUIREMENTS OF FINISH HARDWARE.
2. WARRANTY
- 2.A. CLOSURES: MECHANICAL, 10 YEARS
- 2.B. EXIT DEVICES: MECHANICAL, 3 YEARS; ELECTRIFIED, 1 YEAR
- 2.C. LOCKSETS: MECHANICAL, 3 YEARS; ELECTRIFIED, 1 YEAR
- 2.D. CONTINUOUS HINGES: 10 YEAR LIFETIME
- 2.E. KEY BLANKS: LIFETIME
- 2.F. ALL OTHER HARDWARE: ONE YEAR
3. GENERAL REQUIREMENTS FOR ALL DOOR HARDWARE PRODUCTS
- 3.A. DOOR HARDWARE MANUFACTURERS AND PRODUCTS ARE IDENTIFIED ON DRAWINGS. LISTED PRODUCTS FORM THE BASIS OF DESIGN
- 3.B. PROVIDE PRODUCTS THAT COMPLY WITH THE FOLLOWING
- 3.A.A. APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL CODES
- 3.A.B. ANSI/ICC A171, AMERICAN NATIONAL STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
- 3.A.C. APPLICABLE PROVISIONS OF NFPA 101, LIFE SAFETY CODE
- 3.B. ELECTRICALLY OPERATED AND/OR CONTROLLED HARDWARE: PROVIDE ALL POWER SUPPLIES, POWER TRANSFER HINGES, RELAYS AND INTERFACES REQUIRED FOR PROPER OPERATION. PROVIDE WIRING BETWEEN HARDWARE AND CONTROL COMPONENTS AND TO BUILDING POWER CONNECTION.
4. EXAMINATION
- 4.A. VERIFY THAT DOORS AND FRAMES ARE READY TO RECEIVE WORK, AND DIMENSIONS ARE AS INDICATED ON SHOP DRAWINGS
5. INSTALLATION
- 5.A. INSTALL HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE CODES
- 5.B. MOUNTING HEIGHTS FOR HARDWARE FROM FINISHED FLOOR TO CENTER LINE OF HARDWARE ITEM
- 5.B.A. FOR STEEL FRAMES: 1-1/8 INCH TYPE 'S' BRIDGE HEAD
- 5.B.B. FOR WOOD DOORS: COMPLY WITH DHI RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR WOOD FLUSH DOORS
6. ADJUSTING
- 6.A. ADJUST WORK FOR SMOOTH OPERATION
7. HARDWARE SETS - AS INDICATED ON DRAWINGS

END OF SECTION

SECTION 088000 - GLAZING

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. GLASS TYPES AND GLASS UNITS: PROVIDE STRUCTURAL, PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING OR INSTALLATION REQUIREMENTS
- 1.B. SAMPLES
- 1.B.A. 12 INCH SQUARE SAMPLE OF EACH GLASS TYPES AND GLASS UNIT
2. GLASS MATERIALS - FLOAT GLASS
- 2.A. ANNEALED: ASTM C1036, TYPE 1; TRANSPARENT FLAT, GLASS 1 CLEAR, QUALITY 25 (GLAZING SELECT)
- 2.B. TINT: STRENGTHENED AND FULLY TEMPERED: ASTM C1036
- 2.C. THICKNESS: AS INDICATED FOR EXTERIOR GLAZING COMPLY WITH SPECIFIED REQUIREMENTS FOR WIND LOAD DESIGN REGARDLESS OF SPECIFIED THICKNESS
3. SINGLE SAFETY GLAZING: NON-FIRE-RATED
- 3.A. APPLICATION: PROVIDE IN THE FOLLOWING LOCATIONS:
- 3.A.A. GLAZED LITES IN DOORS, EXCEPT FIRE DOORS
- 3.A.B. GLAZED SIGHTLIGHTS TO DOORS, EXCEPT IN FIRE-RATED WALLS AND PARTITIONS
- 3.A.C. OTHER LOCATIONS REQUIRED BY APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS
- 3.A.D. OTHER LOCATIONS INDICATED ON DRAWINGS
- 3.B. TYPE: FULLY TEMPERED FLOAT GLASS
- 3.C. TINT: CLEAR
- 3.D. THICKNESS: 1/4 INCH
4. FIRE-PROTECTIVE GLAZING
- 4.A. APPLICATION: PROVIDE IN THE FOLLOWING LOCATIONS:
- 4.A.A. ALL GLAZING IN FIRE-RATED WALLS AND PARTITIONS
- 4.A.B. OTHER LOCATIONS REQUIRED BY APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS
- 4.A.C. OTHER LOCATIONS INDICATED ON DRAWINGS
- 4.A.D. TYPE: FIRE-PROTECTIVE GLAZING
- 4.C. THICKNESS:
- 4.C.A. 3/8 INCH TYPICAL
- 4.C.B. 5/16 INCH WHERE SAFETY GLAZING IS REQUIRED
- 4.C. FIRE RATINGS AS INDICATED ON DRAWINGS
- 4.E. SURFACE FINISH: STANDARD
- 4.F. PRODUCT
- 4.F.A. TECHNICAL GLASS PRODUCTS FIRELITE
- 4.F.B. TECHNICAL GLASS PRODUCTS FIRELITE PLUS WHERE SAFETY GLAZING IS REQUIRED
5. EXAMINATION
- 5.A. VERIFY THAT OPENINGS FOR GLAZING ARE CORRECTLY SIZED AND WITHIN TOLERANCE.
6. PREPARATION
- 6.A. SHOP FABRICATE AND CUT GLASS WITH SMOOTH, STRAIGHT EDGES OF FULL SIZE REQUIRED BY OPENINGS TO PROVIDE CANA RECOMMENDED EDGE CLEARANCES
7. INSTALLATION
- 7.A. INSTALL IN ACCORDANCE WITH CANA-G1 GLAZING MANUAL AND CANA-G2 SEALANT MANUAL UNLESS SPECIFIED OTHERWISE
- 7.B. GLAZE IN ACCORDANCE WITH RECOMMENDATIONS OF GLAZING AND FRAMING MANUFACTURERS.

END OF SECTION

SECTION 092116 - GYPSUM BOARD ASSEMBLIES

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. METAL FRAMING, GYPSUM BOARD, ACCESSORIES, JOINT FINISHING SYSTEM
2. GYPSUM PANELS: ASTM D3896, TAPEDED EDGES; ENDS SQUARE CUT.
- 2.A. REGULAR BOARDS
- 2.A.A. THICKNESS: 5/8 INCH
- 2.A.B. LOCATION: TYPICAL WALLS AND CEILINGS UNLESS OTHERWISE NOTED
- 2.B. FIRE RATED BOARD: TYPE X
- 2.B.A. THICKNESS: 5/8 INCH
- 2.B.B. LOCATION: FIRE RATED ASSEMBLIES AND WHERE NOTED
- 2.C. MOLD RESISTANT BOARD: MIN. SCORE OF 10 WHEN TESTED IN ACCORDANCE WITH ASTM D2925.
- 2.C.A. THICKNESS: 5/8 INCH
- 2.C.B. LOCATION: EXPOSED GYPSUM BOARD WALLS AND CEILINGS AT TOILET ROOMS, JANITOR CLOSETS AND WHERE NOTED
- 2.D. TILE BACKER BOARD
- 2.D.A. THICKNESS: 5/8 INCH
- 2.D.B. LOCATION: SURFACES BEHIND TILE INCLUDING TILE BACKER AT ALL AREAS AND WHERE NOTED.
- 2.D.C. PRODUCT: GEORGIA PACIFIC DENS-SHIELD TILE BACKER.
3. METAL FRAMING MATERIALS
- 3.A. NON-LABORING FRAMING SYSTEM COMPONENTS: ASTM C645; GALVANIZED SHEET STEEL OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 FOR SPACING INDICATED, WITH MAXIMUM DEFLECTION OF WALL FRAMING OF 1/240 AT 5 PSF
- 3.A.A. MANUAL DEFLECTION AT TIE FINISHES: 1/260 OR LESS
- 3.A.B. MINIMUM BASE METAL THICKNESS: 20 GA.
- 3.A.C. PROTECTIVE COATING AT INTERIOR APPLICATIONS: ASTM A653, G40 HOT-DIP GALVANIZED.
4. GYPSUM BOARD CEILING SUSPENSION SYSTEM
- 4.A. GENERAL: COMMERCIAL QUALITY, COLD-ROLLED STEEL, HOT-DIPPED GALVANIZED FINISH
- 4.A.A. MAIN TEES: FIRE RATED HEAVY DUTY: 1-1/2 INCH HIGH X 1-1/2 INCH FACE
- 4.C. CROSS MEMBERS: FIRE RATED MEMBERS: 1-1/2 INCH HIGH X 1-1/2 INCH FACE
- 4.D. CROSS TEES: FIRE RATED MEMBERS: 1-1/2 INCH HIGH X 1-1/2 INCH FACE
- 4.E. WALL MOLDINGS: 1-1/2 X 1 INCH
- 4.E.A. ACCESSORIES: HANGERS, SPLICE CLIPS AND OTHER ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION
- 4.F. PRODUCT: USG DRYWALL SUSPENSION SYSTEM
5. ACCESSORIES: ASTM C1047
- 5.A. ACOUSTIC INSULATION: ASTM C665; MINERAL WOOL BATTIS WITHOUT MEMBRANE
- 5.A.A. THICKNESS: 2 INCH MIN.
- 5.A.B. PRODUCT: THERMAKOR SAPP 2.5 PCF
- 5.B. CORNER BEADS: USG SHEETROCK #103 DUR-A-BEAD
- 5.C. CONTROL JOINTS: USG SHEETROCK ZINC #095
- 5.D. EDGE TRIM: USG SHEETROCK #220
- 5.E. REVEAL: EXTRUDED ALUMINUM, WITH CONTIGUOUS TAPEDED FIN; FACTORY PRIMED; REVEAL 1/2 INCH WIDE X 5/8 INCH DEPTH, WITH PREMANUFACTURED CORNERS AND INTERSECTIONS; PITTCO SWR SERIES
- 5.F. FASTENERS: SCREWS: ASTM C1002
- 5.F.A. WOOD FRAMING: 1-1/4 INCH TYPE W BUGLE HEAD
- 5.F.B. STEEL FRAMING: 1-1/8 INCH TYPE 'S' BRIDGE HEAD
- 5.F.C. STEEL TO STEEL FRAMING CONNECTIONS: 5/8 INCH TYPE 'S'-12" PAN (OR LOW PROFILE) HEAD
- 5.G. JOINT TREATMENT MATERIALS: ASTM C475
- 5.G.A. JOINT TYPE: MESHED-REINFORCING TAPE
- 5.G.B. JOINT COMPOUND: CHEMICAL HARDENING TYPE FOR BEDDING AND FILLING, AND READY-MIXED VINYL TYPE FOR TOPPING
6. ADJUSTING
- 6.A. ADJUST WORK FOR SMOOTH OPERATION

END OF SECTION

SECTION 093000 - TILING

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. DATA SHEETS ON TILE, MORTAR, GROUT AND ACCESSORIES; INSTRUCTIONS FOR USING GROUTS AND ADHESIVES
- 1.B. SHOP DRAWINGS
- 1.B.A. TILE LAYOUT, PATTERNS, COLOR ARRANGEMENT, PERIMETER CONDITIONS, JUNCTIONS WITH DISSIMILAR MATERIALS, CONTROL AND EXPANSION JOINTS, THRESHOLDS AND SETTING DETAILS
- 1.C. SAMPLES
- 1.C.A. SAMPLE OF EACH TYPE OF TILE FOR EACH COLOR AND TEXTURE REQUIRED; FULL-SIZE SAMPLE OF EACH TYPE OF TRIM
2. FLOOR TILE: SEE INTERIOR DESIGN DRAWINGS FOR SELECTION
3. TILE BASE: SEE INTERIOR DESIGN DRAWINGS FOR SELECTION
4. WALL TILE: SEE INTERIOR DESIGN DRAWINGS FOR SELECTION
5. MORTAR AND GROUT MATERIALS
- 5.A. MORTAR, THIN-SET; LATEX-PORTLAND CEMENT TYPE: ANSI A118.4
- 5.A. GROUT: ANSI A118.6
- 5.B.A. SEE INTERIOR DESIGN DRAWINGS FOR SELECTION
6. EXAMINATION
- 6.A. VERIFY THAT SUB-FLOOR AND WALL SURFACES ARE SMOOTH AND FLAT WITHIN THE TOLERANCES SPECIFIED, AND ARE READY TO RECEIVE TILE.
- 6.B. VERIFY THAT SUB-FLOOR SURFACES ARE FREE OF SUBSTRATES THAT COULD IMPAIR BONDING OF SETTING MATERIALS.
7. PREPARATION
- 7.A. MECHANICALLY SCARIFY EXISTING CONCRETE SURFACES TO REMOVE BOND BREAKERS AND CONTAMINANTS
- 7.B. SEAL SUBSTRATE SURFACE CRACKS WITH FILLER. LEVEL EXISTING SUBSTRATE SURFACES TO ACCEPTABLE FLATNESS TOLERANCES.
8. INSTALLATION - GENERAL
- 8.A. STARTING INSTALLATION CONSTITUTES ACCEPTANCE OF SUBSURFACE CONDITIONS.
- 8.B. INSTALL TILE AND GROUT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF ANSI A108.1
- 8.C. SEAL TILE AND GROUT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. INSTALLATION AT FLOORS - THIN-SET METHOD
- 9.A. INTERIOR FLOORS OVER CONCRETE: TONA F113-13
- 9.A.A. LOCATION: FLOOR TILE UNLESS OTHERWISE NOTED
10. INSTALLATION AT WALLS
- 10.A. INTERIOR WALLS OVER GYPSUM WALLBOARD/TILE BACKER ON METAL STUDS: TONA W243-13
- 10.A.A. LOCATION: WALL TILE AT METAL FRAMING UNLESS OTHERWISE NOTED

END OF SECTION

SECTION 095100 - ACOUSTICAL CEILINGS

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. DATA ON SUSPENSION SYSTEM COMPONENTS AND ACOUSTICAL UNITS
- 1.B. SAMPLES
- 1.B.A. ACOUSTICAL UNITS
2. ACOUSTICAL UNITS: MATCH EXISTING
3. SUSPENSION SYSTEMS: MATCH EXISTING
4. PERIMETER MOLDINGS: SAME MATERIAL AND FINISH AS GRID
5. SUPPORT CHANNELS AND HANGERS: GALVANIZED STEEL; SIZE AND TYPE TO SUIT APPLICATION
6. INSTALLATION - SUSPENSION SYSTEM
- 6.A. INSTALL IN ACCORDANCE WITH ASTM C626 AND MANUFACTURER'S INSTRUCTIONS.
- 6.B. RIGIDLY SECURE SYSTEM FOR MAXIMUM DEFLECTION OF 1/60.
- 6.C. HANG SUSPENSION SYSTEM INDEPENDENT OF WALLS, COLUMNS, DUCTS, PIPES AND CONDUIT.
- 6.D. SUPPORT FUTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN 6 INCHES OF EACH CORNER, OR SUPPORT COMPONENTS INDEPENDENTLY.
7. INSTALLATION - ACOUSTICAL UNITS
- 7.A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

END OF SECTION

SECTION 097200 - WALL COVERINGS

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. EACH TYPE OF WALL COVERING, ADHESIVE AND PRIMER/SEALER
- 1.B. SAMPLES
- 1.B.A. EACH TYPE, PATTERN AND COLOR SPECIFIED
2. VINYL-COATED FABRIC WALL COVERING
- 2.1. WEIGHT: TYPE II, 20 OZ PER LINEAL YARD
- 2.2. BACKING: DOWBARB
- 2.3. FIRE CLASSIFICATION: CLASS A
3. ACCESSORIES
- 3.A. ADHESIVE, PRIMER/SEALER: TYPE RECOMMENDED BY WALL COVERING MANUFACTURER TO SUIT APPLICATION. PROVIDE MATERIALS WHICH ARE MILDEW RESISTANT AND NON-STAINING TO THE WALL COVERING.
4. EXAMINATION
- 4.A. EXAMINE SURFACES TO RECEIVE WALL COVERING FOR DEFECTS THAT WILL ADVERSELY AFFECT THE DURATION AND QUALITY OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.
5. PREPARATION
- 5.A. PRIOR TO PREPARE PREPARATIONS AND WALL COVERING APPLICATION. REMOVE SWITCH PLATES, WALL PLATES, SURFACE-MOUNTED FIXTURES AND ALL OTHER SIMILAR ITEMS.
- 5.B. PERFORM PREPARATION AND CLEANING PROCEDURES IN ACCORDANCE WITH WALL COVERING MANUFACTURER'S INSTRUCTIONS AND AS SPECIFIED
- 5.C. REMOVE DIRT, GREASE, OLD ADHESIVE, LOOSE PAINT AND PLASTER FROM WALL. FILL CRACKS, CRACKS AND HOLES, AND SAND ROUGH SPOTS SMOOTH.
6. INSTALLATION
- 6.A. HANDLE AND APPLY WALL COVERING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

END OF SECTION

SECTION 099000 - PAINTING AND COATING

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. DATA ON ALL FINISHING PRODUCTS, INCLUDING VOC CONTENT
- 1.B. SAMPLES
- 1.B.A. STANDARD COLOR RANGE FOR EACH PAINT SYSTEM REQUIRED
2. SCOPE
- 2.A. FINISH ALL NEW AND EXISTING INTERIOR AND EXTERIOR SURFACES EXPOSED TO VIEW, UNLESS FULLY FACTORY-FINISHED OR OTHERWISE INDICATED. WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
- 2.A.A. CONCRETE BLOCK
- 2.A.B. GYPSUM BOARD
- 2.A.C. STEEL
- 2.A.D. ALUMINUM
- 2.A.E. MECHANICAL AND ELECTRICAL ITEMS: PIPING, INSULATION, SUPPORTS, CONDUIT, BOXES, PANELS
3. PAINT MATERIALS - GENERAL
- 3.A. COMPATIBILITY: PROVIDE BLOCK FILLERS, PRIMERS, AND FINISH COAT MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH THE SUBSTRATES INDICATED UNDER CONDITIONS OF SERVICE AND APPLICATION.
- 3.B. COMPLY WITH VOC LIMITS FOR STATE OF OHIO.
- 3.C. COLORS AND SHEENS: AS SELECTED BY OWNER.
4. EXTERIOR PAINT SYSTEMS
- 4.A. CONCRETE UNIT MASONRY: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER EXTERIOR CONCRETE UNIT MASONRY:
- 4.A.A. ACRYLIC FINISH: TWO FINISH COATS OVER A BLOCK FILLER.
- 4.A.A.A. BLOCK FILLER: PPG-6-15 SPEEDHIDE INTERIOR/EXTERIOR ACRYLIC MASONRY BLOCK FILLER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 7.2 MILS (0.185 MM).
- 4.A.A.B. EXTERIOR LOW-LUSTER ACRYLIC ENAMEL FINISH: PPG-6-2040B SERIES SPEEDHIDE EXTERIOR HOUSE AND TRIM SATIN ACRYLIC LATEX. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.0 MIL (0.025 MM).
- 4.B. UNPAINTED BRICK
- 4.B.A. ACRYLIC FINISH: TWO FINISH COATS OVER A MASONRY PRIMER
- 4.B.A.A. PRIMER: PPG-PAINTS 4-809 MASONRY SEALER
- 4.B.A.B. FINISH: PPG-PAINTS 6-2045 X1 SPEEDHIDE EXTERIOR ACRYLIC SATIN
- 4.C. PAINTED STUCCO
- 4.C.A. ACRYLIC FINISH: TWO FINISH COATS OVER A MASONRY SEALER
- 4.C.A.A. PRIMER: PPG-PAINTS 4-809 MASONRY SEALER
- 4.C.A.B. FINISH: 6-2045 X1 SPEEDHIDE EXTERIOR ACRYLIC SATIN
- 4.D. ALUMINUM
- 4.D.A. ACRYLIC FINISH: TWO FINISH COATS OVER A DTM METAL PRIMER
- 4.D.A.A. PRIMER: PPG-PAINTS 30-792 FIT-TITE TECH DTM METAL PRIMER
- 4.D.A.B. FINISH: PPG-PAINTS 6-800 X1 SPEEDHIDE EXTERIOR ACRYLIC SEMI-GLOSS
- 4.E. FERROUS METAL: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER EXTERIOR FERROUS METAL. PRIMER IS REQUIRED ON SHOP-PRIMED ITEMS.
- 4.E.A. ACRYLIC-ENAMEL FINISH: TWO FINISH COATS OVER A RUST-INHIBITIVE PRIMER
- 4.E.A.A. PRIMER: PPG-6-208 SPEEDHIDE ALKYL METAL PRIMER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 2.3 MILS (0.059 MM).
- 4.E.A.B. EXTERIOR FULL-GLOSS ACRYLIC ENAMEL FINISH FOR STEEL ROLLARDS IN SAFETY YELLOW: PPG-30-374 SERIES FIT-TECH INTERIOR/EXTERIOR HIGH GLOSS DTM INDUSTRIAL ENAMELS. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 3.0 MILS (0.076 MM).
- 4.E.B. ALKYL-ENAMEL FINISH: TWO FINISH COATS OVER A RUST-INHIBITIVE PRIMER (PRIMER REQUIRED FOR ITEMS NOT SHOP-PRIMED).
- 4.E.B.A. PRIMER: PPG-6-208 SPEEDHIDE ALKYL METAL PRIMER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 2.3 MILS (0.059 MM).
- 4.E.B.B. EXTERIOR SEMI-GLOSS ALKYL ENAMEL FINISH FOR STEEL DOORS: PPG SPEEDHIDE 6-180 SEMI-GLOSS ALKYL WB INTERIOR/EXTERIOR ENAMEL. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.8 MILS (PT).
5. INTERIOR PAINT SYSTEMS
- 5.A. GYPSUM BOARD: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER INTERIOR GYPSUM BOARD SURFACES:
- 5.A.A. ACRYLIC FINISH: TWO EGGSHELL FINISH COATS OVER A PRIMER
- 5.A.A.A. PRIMER: PPG-6-2 SPEEDHIDE INTERIOR QUICK-DRYING LATEX SEALER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.0 MIL (0.025 MM).
- 5.A.A.B. INTERIOR LOW-LUSTER ACRYLIC ENAMEL FINISH: PPG-6-811 SERIES SPEEDHIDE EGGSHELL ACRYLIC LATEX ENAMEL. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.25 MILS (0.032 MM).
- 5.B. FERROUS METAL: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER FERROUS METAL:
- 5.B.A. ALKYL DRY FILL FINISH: TWO FINISH COATS OVER A PRIMER, FOR OVERHEAD STEEL, DECKING AND OVERHEAD SUPPORT STRUCTURES.
- 5.B.A.A. PRIMER: PPG-6-208 SPEEDHIDE ALKYL METAL PRIMER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 2.3 MILS (0.059 MM).
- 5.B.A.B. INTERIOR ALKYL DRY FILL FINISH: SPEEDHIDE ALKYL DRY FILL SEMI-GLOSS
- 5.B.B. ALKYL WB ENAMEL FINISH: TWO FINISH COATS OVER A PRIMER FOR STEEL SURFACES, DOORS AND OTHER FERROUS METAL NOT INCLUDED IN OTHER SECTIONS.
- 5.B.B.A. PRIMER: PPG-6-208 SPEEDHIDE ALKYL METAL PRIMER. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 2.3 MILS (0.059 MM).
- 5.B.B.B. INTERIOR SEMI-GLOSS ALKYL ENAMEL FINISH: PPG-6-180 SERIES SPEEDHIDE ALKYL WB INTERIOR FULL-GLOSS ACRYLIC ENAMEL. PPG-6-180 SERIES PPG SPEEDHIDE ALKYL WB INTERIOR ENAMEL SEMI-GLOSS. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.8 MILS.
- 5.B.B.C. INTERIOR FULL-GLOSS ACRYLIC ENAMEL: PPG-6-180 SERIES PPG SPEEDHIDE ALKYL WB INTERIOR ENAMEL SEMI-GLOSS. APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 1.8 MILS.

END OF SECTION

6. INTERIOR STAIN AND NATURAL FINISH WOODWORK SYSTEMS

- 6.A. STAINED WOODWORK: PROVIDE THE FOLLOWING STAINED FINISHES OVER NEW INTERIOR WOODWORK:
- 6.A.A. WATERBORNE SATIN-VARISH FINISH OVER STAIN: TWO FINISH COATS OF WATERBORNE CLEAR SATIN VARNISH OVER A SEALER COAT AND INTERIOR WOOD STAIN. WIFE WOOD FILLER BEFORE APPLYING STAIN.
- 6.A.A.A. FILLER COAT: OPEN-GRAIN WOOD FILLER.
- 6.A.A.B. STAIN COAT: OLYMPIC 44500 LOW VOC INTERIOR WOOD STAIN OIL BASED.
- 6.A.A.C. SEALER COAT: OLYMPIC 4400 INTERIOR WATER BASED SANDING SEALER.
- 6.A.A.D. FINISH COATS: OLYMPIC 42786 INTERIOR WATER BASED SATIN POLYURETHANE.
7. INTERIOR CONCRETE FLOORS
- 7.A. CONCRETE FLOORS: PROVIDE THE FOLLOWING FLOOR FINISH AT EXPOSED CONCRETE FLOORS, BOTH NEW AND EXISTING.
- 7.A.A. PENETRATING EPOXY PRIMER SEALER: TWO FINISH COATS OVER CONCRETE SUBSTRATE.
- 7.A.A.A. FINISH COATS: PPG AMERLOCK SEALER
8. EXAMINATION
- 8.A. DO NOT BEGIN APPLICATION OF COATINGS UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED.
9. PREPARATION
- 9.A. PREPARE NEW AND EXISTING SURFACES USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULT FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS. DO NOT BEGIN APPLICATION OF COATINGS UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED.
- 9.B. CLEAN NEW AND EXISTING SURFACES THOROUGHLY AND CORRECT DEFECTS PRIOR TO COATING APPLICATION.
- 9.C. PREPARATION AND CLEANING TECHNIQUES MAY INCLUDE BUT ARE NOT LIMITED TO APPLICATION OF EMULSIFYING DETEGERS, ABRASIVE BLAST CLEANING, SCRAPING, POWER GRINDING, WIRE BRUSHING, IMPACT TOOLS, AND ACID ETCHING.
- 9.D. VERIFY SURFACES ARE READY TO RECEIVE WORK AS INSTRUCTED BY THE PRODUCT MANUFACTURER.
10. INSTALLATION - GENERAL
- 10.A. ENSURE SURFACE TEMPERATURES AND THE SURROUNDING AIR TEMPERATURE ARE ABOVE 50 DEGREES F BEFORE APPLYING PAINT MATERIALS.
- 10.B. PROVIDE ADEQUATE CONTINUOUS VENTILATION AND SUFFICIENT HEATING FACILITIES TO MAINTAIN TEMPERATURE ABOVE 40 DEGREES F FOR 24 HOURS BEFORE, DURING AND 48 HOURS AFTER APPLICATION OF PAINT AND MATERIALS.
- 10.C. PROVIDE MINIMUM 25-FOOT CANDLES OF LIGHTING ON SURFACES TO BE PAINTED.
- 10.D. REMOVE HARDWARE AND ACCESSORIES, FITTINGS, AND FASTENINGS, ELECTRICAL PLATES, LIGHTING FIXTURES AND SIMILAR ITEMS. REINSTALL REMOVED ITEMS AFTER COMPLETION OF PAINTING.
- 10.E. DO NOT PAINT OVER DIRT, DUST, STAINS, RUST, SCALE, OLD GREASE, MOISTURE, SUFFRUP SURFACES, OR OTHER CONTAMINATION OR CONDITIONS PREJUDICIAL TO FORMATION OF A DURABLE PAINT FILM.
- 10.F. APPLY PAINT IN ACCORDANCE WITH PAINT MANUFACTURER'S INSTRUCTIONS AND AS HEREIN SPECIFIED.
- 10.G. APPLY EACH COAT OF PAINT AT NO LESS THAN SPREADING RATE INDICATED IN MANUFACTURER'S INSTRUCTIONS.
- 10.H. SAND LIGHTLY BETWEEN ENAMEL COATS.
- 10.I. COMPLETELY COVER TENDRILLS/SURFACES SCHEDULED TO BE PAINTED, TO PROVIDE A SMOOTH SURFACE OF UNIFORM FINISH AND APPEARANCE AND PAINT MATERIAL COVERAGE FREE FROM CLOUDBINES, SPOTTING, HOLLOWAYS, LAPS, BRUSH MARKS, RUNS, STREAKS, SAGS, ROUGHNESS AND OTHER SURFACE IMPERFECTIONS.
- 10.J. TENTATIVE PAINT LIST: WHERE ANY PARTICULAR APPLICATION IS NOT MENTIONED IN THIS LIST, CONTRACTOR SHALL FIGURE ON APPLICATION OF MANUFACTURER'S SPECIFICATION FOR APPLICATION WHICH IS CONSISTENT WITH TYPES AND QUALITIES LISTED HEREIN.

END OF SECTION

SECTION 102800 - TOILET ACCESSORIES

1. SUBMITTALS
- 1.A. PRODUCT DATA
- 1.A.A. DATA ON ACCESSORIES DESCRIBING SIZE, FINISH, DETAILS OF FUNCTION, ATTACHMENT METHODS
2. TOILET ACCESSORIES - BOOKING TOILET ROOM (VERIFY FINAL SELECTIONS & LOCATIONS w/ ARCHITECT & OWNER)
- 2.1. TOILET PAPER DISPENSER: BRADLEY 5107-502; SINGLE ROLL, SURFACE-MOUNTED, SATIN STAINLESS STEEL, HINGED HOOD, ANTI-THEFT SPINDLE
- 2.2. PAPER TOWEL DISPENSER: BRADLEY 244H-H, C-FOLD/MULTI-FOLD TOWELS, SURFACE-MOUNTED, SATIN STAINLESS
- 2.3. SOAP DISPENSER: BRADLEY 6662; VERTICAL, SURFACE-MOUNTED, SATIN STAINLESS STEEL
- 2.4. SANITARY NAPKIN DISPOSAL: BRADLEY 472H-15; SURFACE-MOUNTED, SATIN STAINLESS STEEL
- 2.5. MIRROR: BRADLEY 742; FRAMELESS WITH CLIP FASTENERS, SIZE TO BE SELECTED
- 2.6. GRAB BARS: BRADLEY 812-1/2 INCH O.D. HEAVY-DUTY, CONCEALED MOUNTING, SIZE AND CONFIGURATION AS INDICATED ON DRAWINGS
2. TOILET ACCESSORIES - STAFF TOILET ROOMS (VERIFY FINAL SELECTIONS & LOCATIONS w/ ARCHITECT & OWNER)
- 2.1. TOILET PAPER DISPENSER: BRADLEY 5103; SINGLE ROLL, SURFACE-MOUNTED, BRIGHT STAINLESS STEEL, HINGED HOOD (WOMEN'S REST





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02/05/20

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EXPIRATION DATE 12/31/21

STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1		04/16/18
ADDENDUM #2		09/05/18

DATE	ISSUANCE
03-19-18	ISSUED FOR BID
03-20-18	ISSUED FOR BID & PERMIT
05-08-18	ISSUED PER STATE & OWNER COMMENTS
07-11-18	ISSUED PER STATE & OWNER COMMENTS
07-26-18	ISSUED PER STATE & OWNER COMMENTS
09-04-18	ISSUED PER STATE & OWNER COMMENTS

PROJECT #: 17121

SPECIFI-  
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SHEET NUMBER:

A-014

SECTION 104400 - FIRE PROTECTION SPECIALTIES

- SUBMITTALS
  - PRODUCT DATA
    - EXTINGUISHER OPERATIONAL FEATURES
  - SHOP DRAWINGS
    - CABINET PHYSICAL DIMENSIONS, ROUGH-IN MEASUREMENTS FOR RECESSED CABINETS, WALL BRACKET MOUNTED MEASUREMENTS, AND LOCATION
- FIRE EXTINGUISHERS
  - COMPLY WITH PRODUCT REQUIREMENTS OF NFPA 10 AND APPLICABLE CODES, WHICHEVER IS MORE STRINGENT
  - DRY CHEMICAL TYPE FIRE EXTINGUISHERS: STEEL TANK, WITH PRESSURE GAGE
    - CLASS: ABC
    - SIZE: 10 POUND
  - FINISH: BAKED ENAMEL, RED COLOR
  - WET CHEMICAL TYPE FIRE EXTINGUISHERS
    - CLASS: K
    - SIZE: 2-1/2 GAL
    - FINISH: SS
- FIRE EXTINGUISHER CABINETS: SAME MANUFACTURER AS FIRE EXTINGUISHER
  - PROVIDE FIRE RATED CABINET WHERE CABINET OCCURS WITHIN RATED PARTITION.
  - CABINET STYLE: SEMI-RECESSED
  - METAL BOX/TUB: COLD ROLLED STEEL
  - METAL DOOR AND TRIM: STEEL, WITH RECESSED DOOR HANDLE
  - CABINET CONFIGURATION: SEMI-RECESSED, SIZED TO ACCOMMODATE ACCESSORIES; 2-1/2 INCH ROLLED EDGE TRIM
  - DOOR GLAZING: TEMPERED GLASS, CLEAR
  - FINISH OF CABINET EXTERIOR TRIM AND DOOR: BAKED ENAMEL, COLOR AS SELECTED
  - FINISH OF CABINET INTERIOR: WHITE ENAMEL
  - PRODUCT: LARSEN'S ARCHITECTURAL SERIES WITH VERTICAL DUO DOOR
- PREPARATION
  - PROVIDE ROUGH OPENINGS IN NEW AND EXISTING WALLS AS REQUIRED FOR RECESSED INSTALLATIONS
- INSTALLATION
  - INSTALL FIRE PROTECTION SPECIALTIES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL PLUMB, LEVEL AND SECURELY AND RIGIDLY ANCHORED TO SUBSTRATE.
  - INSTALL WITH NON-CORROSIVE ANCHORS AS REQUIRED BY WALL CONDITIONS.
  - FIRE EXTINGUISHER LOCATIONS SHALL BE AS DIRECTED BY LOCAL FIRE MARSHAL.
  - MOUNTING HEIGHTS AND LOCATIONS AS REQUIRED BY ACCESSIBILITY REGULATIONS AND AS INDICATED ON DRAWINGS.

END OF SECTION

SECTION 105116 - WOOD LOCKERS

- SUBMITTALS
  - PRODUCT DATA
    - LOCKER DATA SPECIFIC TO MATERIALS USED IN CONSTRUCTION OF LOCKER
  - SHOP DRAWINGS
    - LOCKER PLAN LAYOUT, COMPONENT PROFILES, ELEVATIONS, FINISH SCHEDULE, NUMBERING PLAN AND ACCESSORIES
- WOOD LOCKERS
  - FRAME (TOPS, SIDES AND BACK): 5/8 INCH HIGH DENSITY THERMO-FUSED MELAMINE.
  - VISIBLE EDGES: 15 MM PVC EDGE BANDING TO MATCH LOCKER DOORS
  - LOCKER DOORS
    - TYPE: RAISED PANEL
    - EDGES: WOOD EDGE BANDING TO MATCH DOOR FACE
    - STILES AND RAILS: A-1 PLAIN SLICED VENEER ON 3/4 INCH MDF CORE, JOINTS DOWELED AND GLUED
  - CENTER PANELS: A-1 PLAIN SLICED VENEER ON PROFILE PANELS ON MDF CORE
  - DOOR VENEER FINISH: 100 PERCENT SOLID UV CURE SEALER OVER STAIN
  - HARDWARE
    - NUMBER DSK
    - COAT ROD: 1 INCH DIAMETER
    - COAT HOOKS
    - HINGES: NICKEL FINISHED, CONCEALED, HEAVY DUTY EUROPEAN STEEL ALLOWING 110 DEGREE DOOR OPENING WITH LIFETIME WARRANTY. QUANTITY OF HINGES PER DOOR PER MANUFACTURER'S RECOMMENDATIONS.
    - PULL KNOB
    - NAMEPLATE
- EXAMINATION
  - DO NOT BEGIN INSTALLATION UNTIL ADJACENT SUBSTRATES HAVE BEEN PROPERLY PREPARED.
  - VERIFY PREPARED BASES ARE IN CORRECT POSITION AND CONFIGURATION.
- PREPARATION
  - PREPARE SURFACES USING METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULT FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS.
  - VERIFY ADEQUACY OF BONDING AND SUPPORT FRAMING.
- INSTALLATION
  - INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - SET AND SECURE LOCKERS IN PLACE, RIGID, PLUMB AND LEVEL.
  - USE CONCEALED JOINT FASTENERS TO ALIGN AND SECURE ADJOINING CABINET UNITS.
  - CONCEAL SCREW HEADS TO MATCH LOCKER INTERIOR.
  - SECURE LOCKERS WITH ANCHOR DEVICES TO SUIT SUBSTRATE MATERIALS, MINIMUM PULLOUT FORCE OF 100 LB.
  - INSTALL END PANELS, FILLER PANELS, TOPS, BASES AND ACCESSORIES AS INDICATED ON THE APPROVED SHOP DRAWINGS.

END OF SECTION

SECTION 123262 - QUARTZ SURFACING COUNTERTOPS

- NOTE: QUARTZ SURFACING COUNTERTOPS TO BE PROVIDED AT FIRE STATION ONLY.
- SUBMITTALS
  - SHOP DRAWINGS
    - INCLUDE LAYOUT, DIMENSIONS, MATERIALS, FINISHES, CUTOUTS, EDGE PROFILES AND ATTACHMENTS.
  - PRODUCT DATA
    - DATA ON QUARTZ SURFACING COUNTERTOP
  - SAMPLES
    - QUARTZ SURFACING
- QUARTZ SURFACING COUNTERTOP
  - COMPOSITION: QUARTZ AGGREGATE, POLYESTER RESIN AND COLOR PIGMENTS FORMED INTO FLAT SLABS
  - COLOR: AS INDICATED ON DRAWINGS
  - SURFACE FINISH: POLISHED
  - THICKNESS: AS INDICATED ON DRAWINGS
  - PRODUCT: QUARTZ
    - LOCATION: REFER TO DRAWING FINISH LEGEND
- ACCESSORIES
  - ADHESIVE: AS RECOMMENDED BY QUARTZ SURFACING MANUFACTURER
  - JOINT SEALER: TILE AND JOINT SEALER AS RECOMMENDED BY MANUFACTURER
- PREPARATION
  - CLEAN SURFACES TO RECEIVE FABRICATIONS; REMOVE LOOSE AND FOREIGN MATTER THAT COULD INTERFERE WITH ADHESION.
- INSTALLATION
  - INSTALL FABRICATIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS.
  - ADHERE FABRICATIONS WITH CONTINUOUS BEADS OF ADHESIVE.
  - SET PLUMB AND LEVEL; ALIGN ADJACENT PIECES IN SAME PLANE
  - INSTALL WITH MARLINE JOINTS
  - FILL JOINTS BETWEEN FABRICATIONS AND ADJACENT CONSTRUCTION WITH JOINT SEALER; FINISH SMOOTH AND FLUSH.
  - AFTER INSTALLATION, CLEAN FABRICATIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - PROTECT INSTALLED FABRICATIONS WITH NONSTAINING SHEET COVERINGS.

END OF SECTION

SECTION 123600 - COUNTERTOPS

- QUARTZ SURFACING COUNTERTOPS
  - SEE SECTION 123262 "QUARTZ SURFACING COUNTERTOPS"
- PLASTIC-LAMINATE COUNTERTOPS
  - SEE SECTION 064100 "ARCHITECTURAL WOOD CASEWORK"
- STAINLESS STEEL
  - SEE SECTION 055500 "METAL FABRICATIONS"

END OF SECTION

SECTION 312200 - GRADING

- MATERIALS
  - TOPSOIL: FRIABLE LOAM; IMPORTED BORROW. GRADED, FREE OF ROOTS, ROCKS LARGER THAN 1/2 INCH, SUBSOIL, DEBRIS, LARGE WEEDS AND FOREIGN MATTER.
- EXAMINATION
  - VERIFY THAT SURVEY BENCH MARKS AND INTENDED ELEVATIONS FOR THE WORK ARE AS INDICATED.
- PREPARATION
  - IDENTIFY REQUIRED LINES, LEVELS, CONTOURS AND DATUM.
  - STAKE AND FLAG LOCATIONS OF KNOWN UTILITIES.
  - LOCATE, IDENTIFY AND PROTECT FROM DAMAGE ABOVE- AND BELOW-GRADE UTILITIES TO REMAIN. PROTECT SITE FEATURES TO REMAIN, INCLUDING BUT NOT LIMITED TO EXISTING STRUCTURES, FENCES, SIDEWALKS, PAVING AND CURBS FROM DAMAGE BY GRADING EQUIPMENT AND VEHICULAR TRAFFIC.
  - PROTECT TREES TO REMAIN BY PROVIDING SUBSTANTIAL FENCING AROUND ENTIRE TREE AT THE OUTER TIPS OF ITS BRANCHES; NO GRADING IS TO BE PERFORMED INSIDE THIS LINE.
  - PROTECT PLANTS AND LAWNS TO REMAIN AS A PORTION OF FINAL LANDSCAPING.
- ROUGH GRADING
  - REMOVE SUBSOIL FROM AREAS TO BE FURTHER EXCAVATED, RE-LANDSCAPED, OR RE-GRADED. DO NOT REMOVE WET SUBSOIL, UNLESS IT IS SUBSEQUENTLY PROCESSED TO OBTAIN OPTIMUM MOISTURE CONTENT.
  - WHEN EXCAVATING THROUGH ROOTS, PERFORM WORK BY HAND AND CUT ROOTS WITH SHARP AXE.
  - STABILITY: REPLACE DAMAGED OR DISPLACED SUBSOIL TO SAME REQUIREMENTS AS FOR SPECIFIED FILL.
- FINISH GRADING
  - BEFORE FINISH GRADING:
    - VERIFY BUILDING AND TRENCH BACKFILLING HAVE BEEN INSPECTED.
    - VERIFY SUBGRADE HAS BEEN CONTOURED AND COMPACTED.
  - REMOVE DEBRIS, ROOTS, BRANCHES, STONES, IN EXCESS OF 1/2 INCH IN SIZE. REMOVE SOIL CONTAMINATED WITH PETROLEUM PRODUCTS.
  - IN AREAS WHERE VEHICLES OR EQUIPMENT HAVE COMPACTED SOIL, SCARIFY SURFACE TO DEPTH OF 3 INCHES.
  - PLACE TOPSOIL IN AREAS WHERE SEEDING AND PLANTING ARE INDICATED.
  - PLACE TOPSOIL DURING DRY WEATHER.
  - REMOVE ROOTS, WEEDS, ROCKS, AND FOREIGN MATERIAL WHILE SPREADING.
  - NEAR PLANTS SPREAD TOPSOIL MANUALLY TO PREVENT DAMAGE.
  - FINE GRADE TOPSOIL TO ELIMINATE UNEVEN AREAS AND LOW SPOTS, MAINTAIN PROFILES AND CONTOUR OF SUBGRADE.
  - LIGHTLY COMPACT PLACED TOPSOIL.
- REPAIR AND RESTORATION
  - EXISTING FACILITIES, UTILITIES, AND SITE FEATURES TO REMAIN: IF DAMAGED DUE TO THIS WORK, REPAIR OR REPLACE TO ORIGINAL CONDITION.
  - TREES TO REMAIN: IF DAMAGED DUE TO THIS WORK, TRIM BROKEN BRANCHES AND REPAIR BARK WOUNDS; IF ROOT DAMAGE HAS OCCURRED, OBTAIN INSTRUCTIONS FROM ARCHITECT AS TO REMEDY.
  - OTHER EXISTING VEGETATION TO REMAIN: IF DAMAGED DUE TO THIS WORK, REPLACE WITH VEGETATION OF EQUIVALENT SPECIES AND SIZE.
- CLEANING
  - LEAVE SITE CLEAN AND RAKED, READY TO RECEIVE LANDSCAPING.

END OF SECTION

SECTION 312316 - EXCAVATION

- CONTRACTOR RESPONSIBILITY
  - CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL UNSUITABLE AND SURPLUS EXCAVATED MATERIAL. IN THE EVENT THE CONTRACTOR DISPOSES OF TOO MUCH EXCAVATED MATERIAL, HE SHALL REPLACE THIS MATERIAL AS NECESSARY AND AT NO ADDITIONAL COST.
  - BEFORE EXCAVATION AND GRADING, CONTRACTOR SHALL ESTABLISH THE LOCATION AND EXTENT OF UNDERGROUND UTILITIES IN THE WORK AREA. EXERCISE CARE TO PROTECT EXISTING UTILITIES DURING EARTHWORK OPERATIONS. PERFORM EXCAVATION WORK NEAR UTILITIES BY HAND AND PROVIDE NECESSARY SHORING, SHEETING AND SUPPORTS AS THE WORK PROGRESSES.
- EXCAVATING
  - EXCAVATE TO ACCOMMODATE NEW STRUCTURES AND CONSTRUCTION OPERATIONS.
  - NOTIFY ARCHITECT OF UNEXPECTED SUBSURFACE CONDITIONS AND DISCONTINUE AFFECTED WORK IN AREA UNTIL NOTIFIED TO RESUME WORK.
  - SLOPE BANKS OF EXCAVATIONS DEEPER THAN 4 FEET TO ANGLE OF REPOSE OR LESS UNTIL SHORED.
  - DO NOT INTERFERE WITH 45 DEGREE BEARING SPLAY OF FOUNDATIONS.
  - CUT UTILITY TRENCHES WIDE ENOUGH TO ALLOW INSPECTION OF INSTALLED UTILITIES.
  - HAND TRIM EXCAVATIONS. REMOVE LOOSE MATTER.
  - CORRECT AREAS THAT ARE OVER-EXCAVATED AND LOAD-BEARING SURFACES THAT ARE DISTURBED.
  - GRADE TOP PERIMETER OF EXCAVATION TO PREVENT SURFACE WATER FROM DRAINING INTO EXCAVATION.
  - REMOVE EXCAVATED MATERIAL THAT IS UNSUITABLE FOR RE-USE FROM SITE.
  - REMOVE EXCESS EXCAVATED MATERIAL FROM SITE.
- DEWATERING
  - ALL EXCAVATION, CONSTRUCTION, AND BACKFILL OF PIPES, OR OTHER FACILITIES TO BE CONSTRUCTED UNDER THIS CONTRACT SHALL BE CONSTRUCTED UNDER DRY CONDITIONS. CONSTANTLY MAINTAIN ALL EXCAVATIONS IN A DE-WATERED, WORKABLE CONDITION, AND INSTALL, OPERATE, MAINTAIN, AND REMOVE SUCH DE-WATERING SYSTEMS AS REQUIRED.
- PROTECTION
  - PREVENT DISPLACEMENT OF BANKS AND KEEP LOOSE SOIL FROM FALLING INTO EXCAVATION; MAINTAIN SOIL STABILITY.
  - PROTECT BOTTOM OF EXCAVATIONS AND SOIL ADJACENT TO AND BENEATH FOUNDATION FROM FREEZING.

END OF SECTION

SECTION 312325 - FILL

- FILL MATERIALS
    - GENERAL FILL: IMPORTED BORROW.
    - LOCATION: TYPICAL UNLESS OTHERWISE NOTED.
    - GRADED.
    - FREE OF LUMPS LARGER THAN 2 INCHES, ROCKS LARGER THAN 2 INCHES, AND DEBRIS.
    - CONFORMING TO ASTM D2497 GROUP SYMBOL GW, GP, GM, SW, SP AND SM OR A COMBINATION OF THESE GROUPS.
  - SUBBASE COURSE - PAVING NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2840; WITH AT LEAST 90 PERCENT PASSING A 1-1/2 INCH SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE.
    - LOCATION: BASE COURSE AT ASPHALT PAVING AND CONCRETE PAVING.
  - SUBBASE COURSE - INTERIOR.
    - LOCATION: BASE COURSE AT INTERIOR SLAB-ON-GRADE.
    - COMPOSITION: #10 STONE OVER 3 INCH #10, #57 OR #447 STONE.
  - THICKNESS: AS INDICATED ON DRAWINGS.
  - SUBBASE COURSE - UNIT PAVING.
    - LOCATION: BASE COURSE AT PRECAST CONCRETE UNIT PAVING.
    - COMPOSITION: #8 OR #9 STONE OVER #57 STONE; OVER #1 STONE.
  - THICKNESS: AS INDICATED ON DRAWINGS.
  - SAND: NATURAL RIVER OR BANK SAND, WASHED, FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS, AND ORGANIC MATTER.
- FILLING
    - GENERAL:
      - BACKFILL AS SOON AS PERMANENT WORK HAS BEEN COMPLETED.
      - BACKFILLING SHALL BE DONE WITH ACCEPTABLE MATERIALS AND DONE PROMPTLY 50 AS TO PROTECT THE UTILITY FROM FROST.
    - BACKFILLING MATERIALS SHALL BE FREE FROM TRASH, LUMBER, OTHER FOREIGN MATERIALS, OR FROZEN MATERIALS. PLACE BACKFILL IN 6 INCH LAYERS; COMPACT USING MECHANICAL COMPACTOR TO THE REQUIRED DENSITY BEFORE PLACING SUCCEEDING LAYERS. WHEN SHEETING, BRACING, SHORING IS REMOVED, FILL VOIDS.
    - COMPACT FILL AS INDICATED ABOVE UNDER COMPACTION REQUIREMENTS.
    - PLACE A POROUS FILL (FREE DRAINING AGGREGATE) OVER COMPACTED FILL AND COMPACT FILL TO 95 PERCENT OPTIMUM DENSITY UNLESS OTHERWISE INDICATED. POROUS FILL SHALL BE FINISHED TO THE FINISH FLOOR ELEVATION MINUS 3/4" AS THICKNESS.
    - ANY TRENCHES OR EMBLEMENTS CAUSED BY OTHER TRADES SHALL BE RESTORED BY THOSE TRADES TO THE LEVEL AND STATE OF COMPACTION SPECIFIED HEREIN.
  - FILL TO CONTOURS AND ELEVATIONS INDICATED USING UNFROZEN MATERIALS.
  - EMPLOY A PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE OTHER WORK.
  - SYSTEMATICALLY FILL TO ALLOW MAXIMUM TIME FOR NATURAL SETTLEMENT. DO NOT FILL OVER POROUS, WET, FROZEN OR SPONDY SUBGRADE SURFACES.
  - MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
  - SLOPE GRADE AWAY FROM BUILDING MINIMUM 2 INCHES IN 10 FT, UNLESS NOTED OTHERWISE. MAKE GRADUAL GRADE CHANGES. BLEND SLOPE INTO LEVEL AREAS.
  - CORRECT AREAS THAT ARE OVER-EXCAVATED.
  - OTHER AREAS: USE GENERAL FILL FLUSH TO REQUIRED ELEVATION, COMPACTED TO MINIMUM 97 PERCENT OF MAXIMUM DRY DENSITY.
- RESHAPE AND RE-COMPACT FILLS SUBJECTED TO VEHICULAR TRAFFIC.
- PLACEMENT AND COMPACTION OF TRENCH BACKFILL: THE PLACEMENT AND COMPACTION OF ALL TRENCH BACKFILL SHALL CONFORM TO THE FOLLOWING METHOD: MECHANICALLY COMPACTED BACKFILL.
  - MECHANICALLY COMPACT BACKFILL BY MEANS OF TAMPING ROLLERS, SHEEPSFOOT ROLLERS, PNEUMATIC TIRE ROLLERS, VIBRATING ROLLERS, OR OTHER MECHANICAL TAMPERS TO 95 PERCENT RELATIVE COMPACTION.
  - ALL SUCH EQUIPMENT SHALL BE OF SIZE AND TYPE APPROVED BY THE CONSTRUCTION MANAGER. IMPACT-TYPE PAVEMENT BREAKERS (STOMPERS) WILL NOT BE PERMITTED OVER CLAY, CAST IRON, OR NON-REINFORCED CONCRETE PIPE.
  - PERMISSION TO USE SPECIFIC COMPACTION EQUIPMENT SHALL NOT BE CONSTRUED AS GUARANTEES OR IMPLYING THAT THE USE OF SUCH EQUIPMENT WILL NOT RESULT IN DAMAGE TO ADJACENT GROUND, EXISTING IMPROVEMENTS, OR IMPROVEMENTS INSTALLED UNDER THE CONTRACT. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION IN THIS REGARD.
- COMPACTION REQUIREMENTS:
  - PAVED PEDESTRIAN WALKS AND COURTS: TOP 1 FOOT OF SUBGRADE SHALL BE COMPACTED TO 100 PERCENT OF MAXIMUM DRY DENSITY.
  - FOUNDATION BACKFILL UNDER PAVEMENTS: 100 PERCENT.
  - PLANTING BEDS AND SOD ADJACENT TO BUILDING:
    - UPPER 2 FEET OF SOIL BELOW FINISH GRADE - 90 PERCENT MAXIMUM
    - REMAINDER - 95 PERCENT TO 10 FEET OF DEPTH, 100 PERCENT BEYOND 10 FEET OF DEPTH.
  - PLANTING BEDS AND SOD IN OPEN AREAS:
    - UPPER 1 FOOT OF SOIL BELOW FINISH GRADE - 90 PERCENT MAXIMUM
    - REMAINDER - 95 PERCENT.

END OF SECTION

SECTION 312300 - CONCRETE WALKS

- SUBMITTALS
  - PRODUCT DATA
    - CONCRETE DESIGN MIX
    - INFORMATION ON PORTLAND CEMENT, AIR-ENTRAINING ADMIXTURE, CURING AND ANTI-SPALLING COMPOUND, WATER-REDUCING ADMIXTURE, HIGH-RANGE WATER-REDUCING ADMIXTURES
- MATERIALS
  - CAST-IN-PLACE CONCRETE: NORMAL WEIGHT, AIR ENTRAINED CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI
  - DESIGN AIR CONTENT: ASTM C260, 6 PERCENT BY VOLUME PLUS OR MINUS 1.5 PERCENT
  - CEMENT: ASTM C150 TYPE I OR II PORTLAND CEMENT
  - WATER: POTABLE
  - SUMP: MAXIMUM 4 INCHES; MINIMUM 2 INCHES BEFORE THE ADDITION OF ANY WATER-REDUCING ADMIXTURES OR HIGH-RANGE WATER-REDUCING ADMIXTURES AT THE SITE
  - WATER-REDUCING ADMIXTURE: ASTM C494, TYPE A
  - HIGH-RANGE WATER-REDUCING ADMIXTURE: ASTM C494, TYPE F
  - RETARDING ADMIXTURE: ASTM C494, TYPE D
  - CURING AND ANTI-SPALLING COMPOUND: ASTM C309, TYPE 10, CLASS B
  - TYPE I EXPANSION JOINT FILLER: PREPARED, RESILIENT, NONEXTRUDING CORK UNITS COMPLYING WITH ASTM D1752, TYPE II
- PREPARATION
  - DO NOT USE ITEMS OF ALUMINUM FOR MIXING, CHUTING, CONVEYING, FORMING OR FINISHING CONCRETE.
  - SET FORMS TRUE TO LINE AND GRADE AND ANCHOR RIGIDLY IN POSITION.
- PLACING CONCRETE
  - CONSOLIDATE CONCRETE BY SPADING, RODDING, FLOPPING OR USING AN APPROVED VIBRATOR ELIMINATING ALL AIR POCKETS, STONE POCKETS AND HONEYCOMBS. WORK AND FLOAT CONCRETE SURFACE TO PRODUCE UNIFORM TEXTURE.
  - LOCATE CONSTRUCTION JOINTS, IF ANY, AT EXPANSION JOINTS.
- FINISHING AND CURING
  - KEEP SURFACE DAMP BUT NOT WET BETWEEN INITIAL STRIKES OFF AND FINAL FINISH.
  - USE MINIMAL WORKING OF THE SURFACE DURING FINISHING.
  - FINISH EDGES OF WALK AND EXPANSION AND CONTROL JOINTS WITH 1/4 INCH RADIUS EDGING TOOL.
  - PROVIDE BROOM FINISH FOR WALK SURFACES.
  - APPLY CURING AND ANTI-SPALLING COMPOUND IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
  - HOT WEATHER CONCRETING: COMPLY WITH AC 305R.
  - PROVIDE TOOLED CONTROL JOINTS ONE INCH DEEP. SPACE CONTROL JOINTS EQUALLY BETWEEN EXPANSION JOINTS APPROXIMATELY 5 FEET ON CENTER, EXCEPT WHERE A DIFFERENT SPACING IS INDICATED ON DRAWINGS.

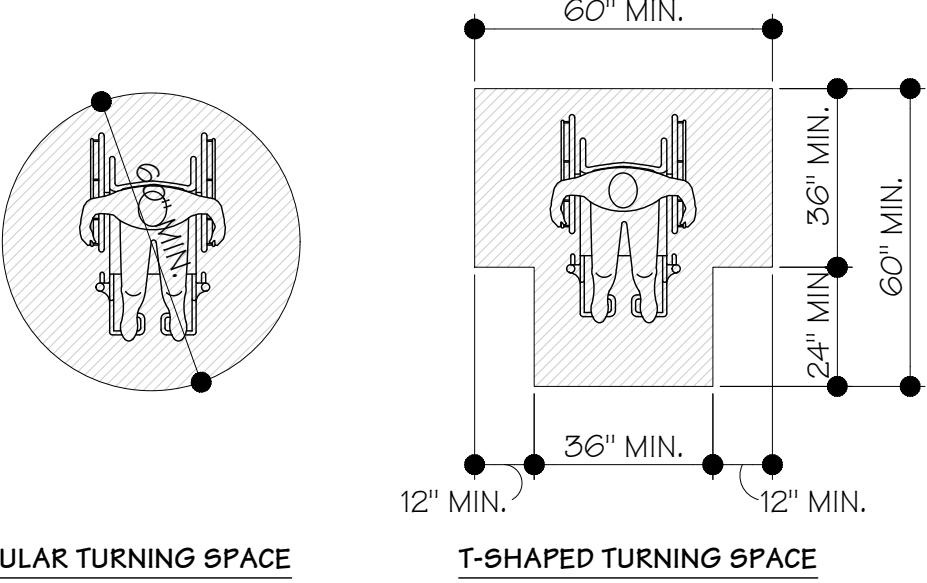
END OF SECTION



2009 ANSI ACCESSIBLE BUILDING STANDARDS

FLOOR & GROUND SURFACES

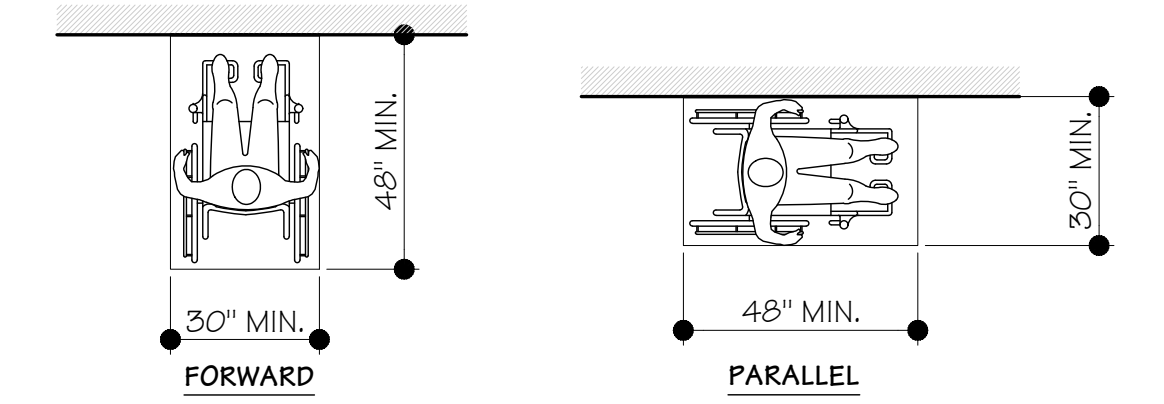
- FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT
- CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/UNTUNED PILE TEXTURE. PILE HEIGHT SHALL BE 1/8 INCH (3 MM) MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE.
- OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/8 INCH (3 MM) DIAMETER. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
- CHANGES IN LEVEL OF 1/4 INCH (6.4 MM) HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL.
- CHANGES IN LEVEL BETWEEN 1/4 INCH (6.4 MM) HIGH MINIMUM AND 1/2 INCH (13 MM) HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2
- FLOOR SURFACES OF A TURNING SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48
- CIRCULAR TURNING SPACE: TURNING SPACE SHALL BE A SPACE OF 60 INCHES (1525 MM) DIAMETER MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE  
T-SHAPED TURNING SPACE: THE TURNING SPACE SHALL BE A T-SHAPED SPACE WITHIN A 60 INCH (1525 MM) SQUARE MINIMUM WITH ARMS AND BASE 36 INCHES (915 MM) WIDE MINIMUM. EACH ARM OF THE T SHALL BE CLEAR OF OBSTRUCTIONS 12 INCHES (305 MM) MINIMUM IN EACH DIRECTION AND THE BASE SHALL BE CLEAR OF OBSTRUCTIONS 24 INCHES (610 MM) MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE ONLY @ THE END OF EITHER THE BASE OR ONE ARM.



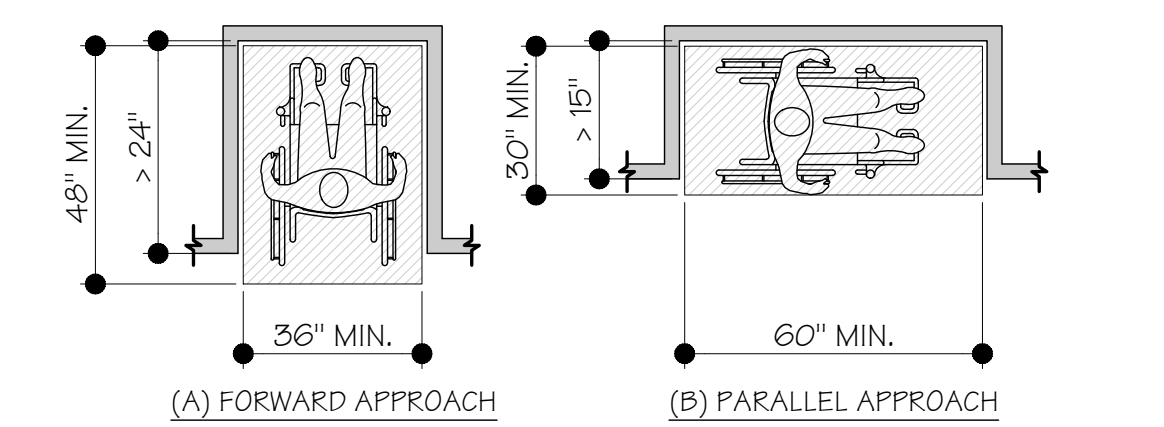
- UNLESS OTHERWISE SPECIFIED, DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES.
- UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR SPACES, CLEARANCES AT FIXTURES, MANEUVERING CLEARANCES AT DOORS, AND TURNING SPACES SHALL BE PERMITTED TO OVERLAP

CLEAR FLOOR SPACE

- FLOOR SURFACES OF A CLEAR FLOOR SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48.
- THE CLEAR FLOOR SPACE SHALL BE 48 INCHES MINIMUM IN LENGTH & 30 INCHES MINIMUM IN WIDTH.

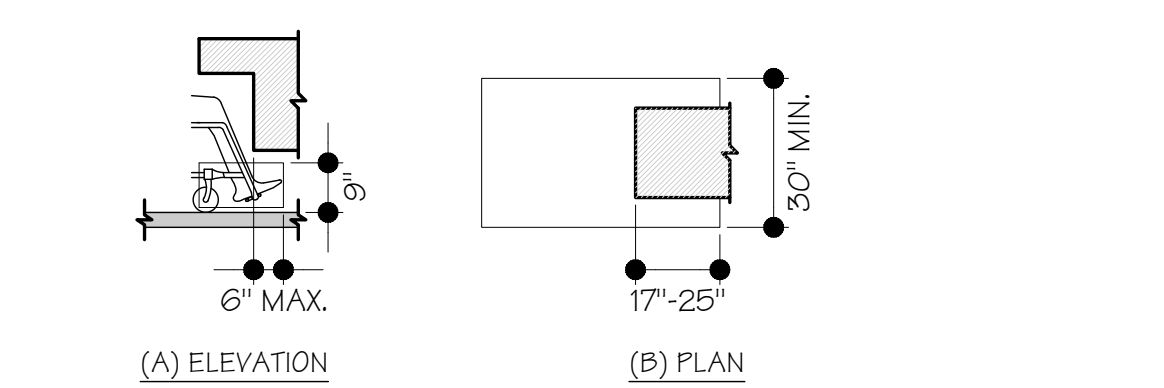


- UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE.
- UNLESS OTHERWISE SPECIFIED, THE CLEAR FLOOR SPACE SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN ELEMENT.
- ONE FULL, UNOBSTRUCTED SIDE OF THE CLEAR FLOOR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR SPACE.
- IF A CLEAR SPACE IS IN AN ALCOVE OR OTHERWISE CONFINED ON ALL OR PART OF THREE SIDES, ADDITIONAL MANEUVERING CLEARANCES SHALL BE PROVIDED, AS APPLICABLE.
- FORWARD APPROACH: WHERE THE CLEAR FLOOR SPACE IS POSITIONED FOR A FORWARD APPROACH, THE ALCOVE SHALL BE 36 INCHES MINIMUM IN WIDTH WHERE THE DEPTH EXCEED 24 INCHES.  
PARALLEL: WHERE THE CLEAR SPACE IS POSITIONED FOR A PARALLEL APPROACH, THE ALCOVE SHALL BE 60 INCHES MINIMUM IN WIDTH WHERE THE DEPTH EXCEED 15 INCHES.



TOE CLEARANCE

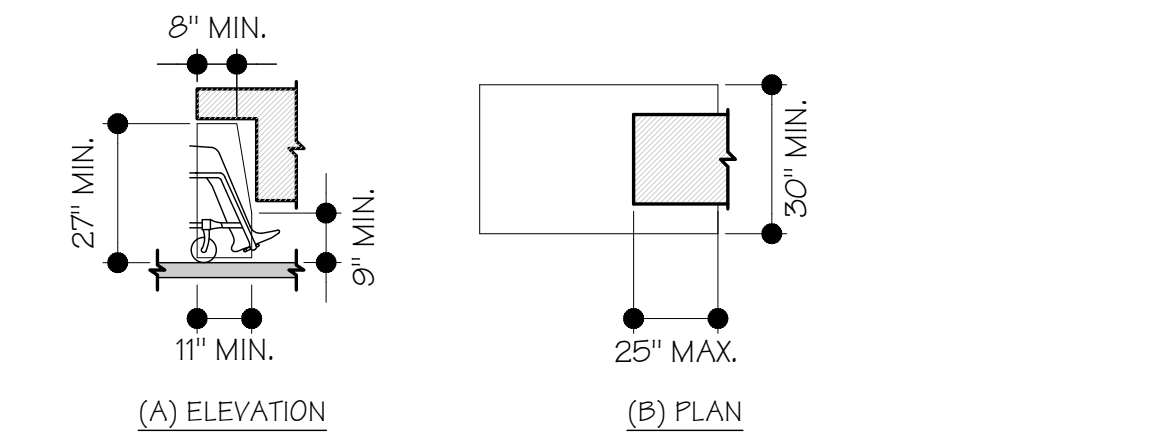
- SPACE UNDER AN ELEMENT BETWEEN THE FINISH FLOOR OR GROUND AND 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED TOE CLEARANCE.
- TOE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT.
- WHERE TOE CLEARANCE IS REQUIRED AT AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE TOE CLEARANCE SHALL EXTEND 17 INCHES (430 MM) MINIMUM UNDER THE ELEMENT.
- SPACE EXTENDING GREATER THAN 6 INCHES (150 MM) BEYOND THE AVAILABLE KNEE CLEARANCE AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT BE CONSIDERED TOE CLEARANCE.
- TOE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.



2009 ANSI ACCESSIBLE BUILDING STANDARDS

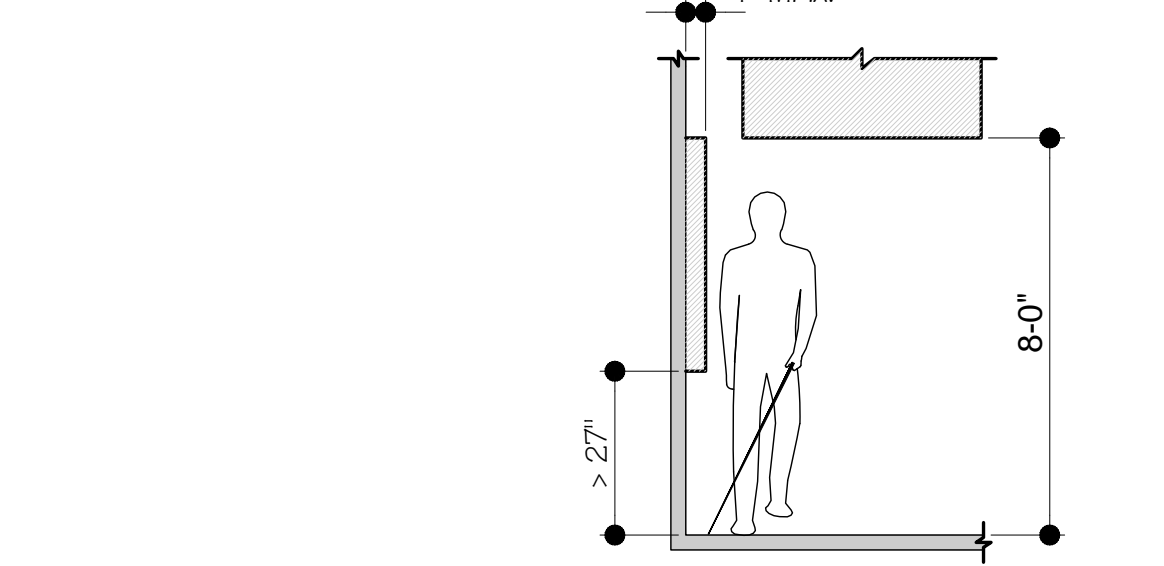
KNEE CLEARANCE

- SPACE UNDER AN ELEMENT BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED KNEE CLEARANCE
- KNEE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND.
- WHERE KNEE CLEARANCE IS REQUIRED UNDER AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE KNEE CLEARANCE SHALL BE 11 INCHES (280 MM) DEEP MINIMUM AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND, AND 8 INCHES (205 MM) DEEP MINIMUM AT 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND.
- BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND, THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1 INCH (25 MM) IN DEPTH FOR EACH 6 INCHES (150 MM) IN HEIGHT.
- KNEE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.

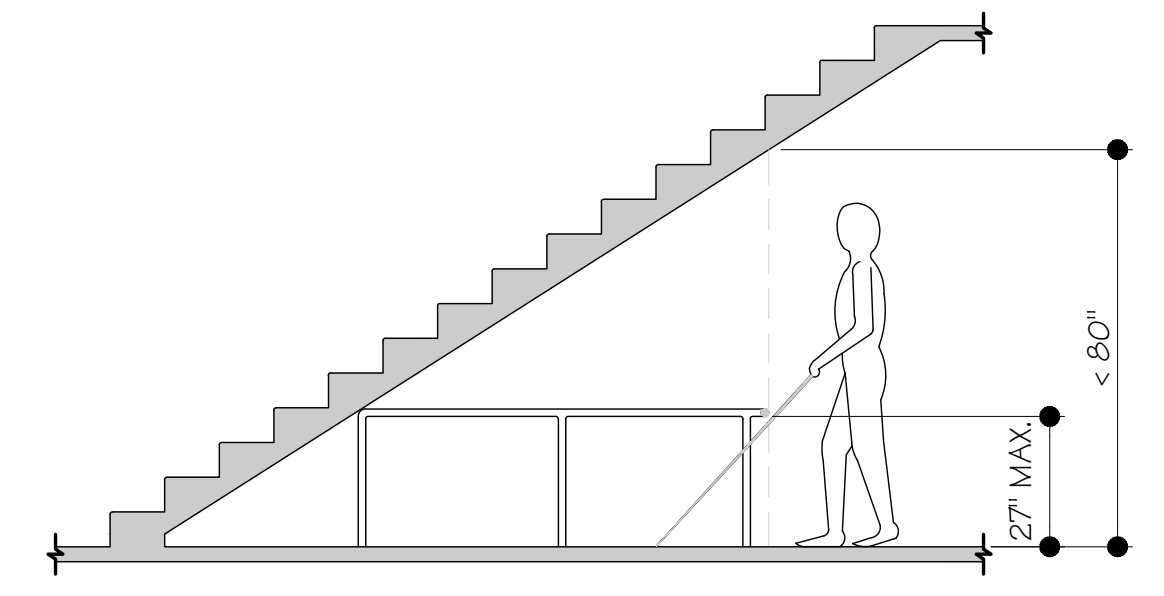


PROTRUDING OBJECTS

- OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES (685 MM) AND NOT MORE THAN 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE 4 INCHES (100 MM) MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH.  
EXCEPTIONS:  
1. HANDRAILS SHALL BE PERMITTED TO PROTRUDE 4 1/2 INCHES MAXIMUM  
2. DOOR CLOSERS & DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES MINIMUM ABOVE THE FLOOR



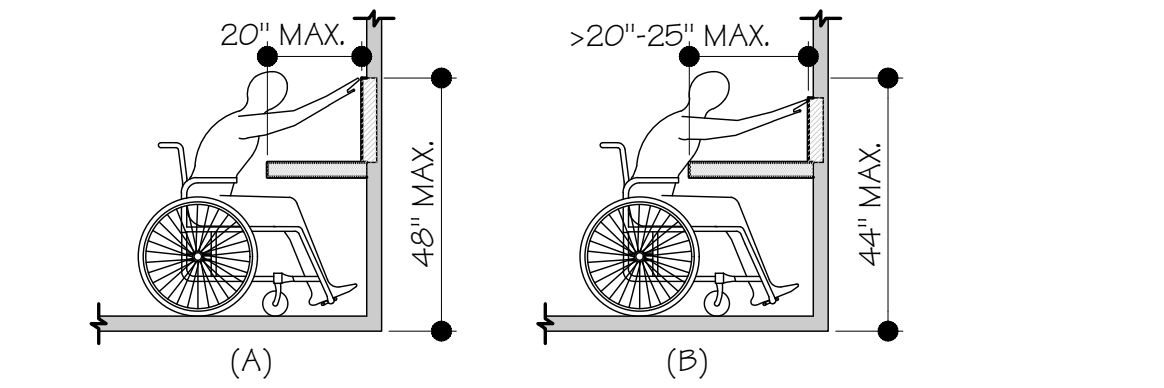
- GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE OBJECT CLEARANCE IS LESS THAN 80 INCHES ABOVE THE FLOOR. THE LEADING EDGE OF THE GUARDRAIL SHALL BE 27 INCHES MAXIMUM ABOVE THE FLOOR.



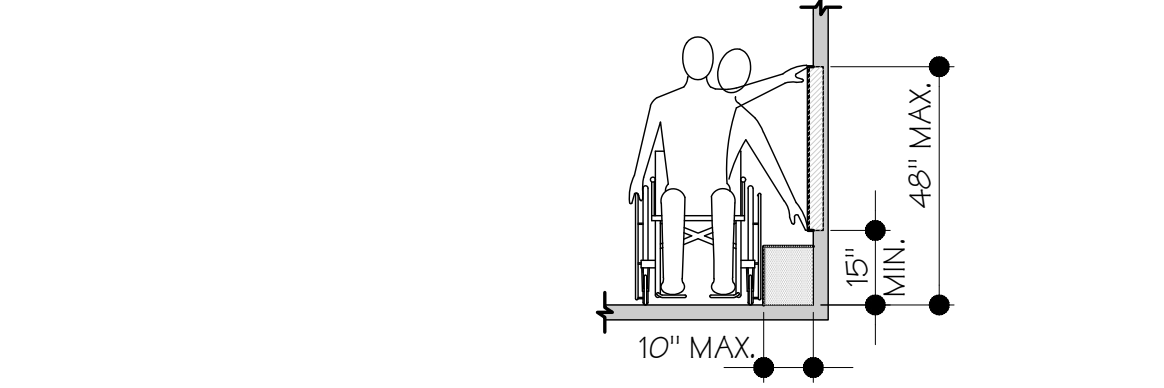
- PROTRUDING OBJECT SHALL NOT REDUCE THE CLEAR WIDTH FOR ACCESSIBLE ROUTES.

REACH RANGES

- WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.  
EXCEPTION: WHERE THE CLEAR WIDTH AT THE TURN IS 60 INCHES (1525 MM) MINIMUM COMPLIANCE SHALL NOT BE REQUIRED.
- AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60 INCHES (1525 MM) SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET (61 M) MAXIMUM. PASSING SPACES SHALL BE EITHER: A SPACE 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM; OR, AN INTERSECTION OF TWO WALKING SURFACES PROVIDING A T-SHAPED SPACE WHERE THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48 INCHES (1220 MM) MINIMUM BEYOND THE INTERSECTION.
- DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES (815 MM) MINIMUM. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS, DOORS & DOORWAYS MORE THAN 24 INCHES (610 MM) DEEP SHALL PROVIDE A CLEAR OPENING OF 36 INCHES (915 MM) MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWER THAN 34 1/2 INCHES (865 MM) ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES (865 MM) AND 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT EXCEED 4 INCHES (100 MM).

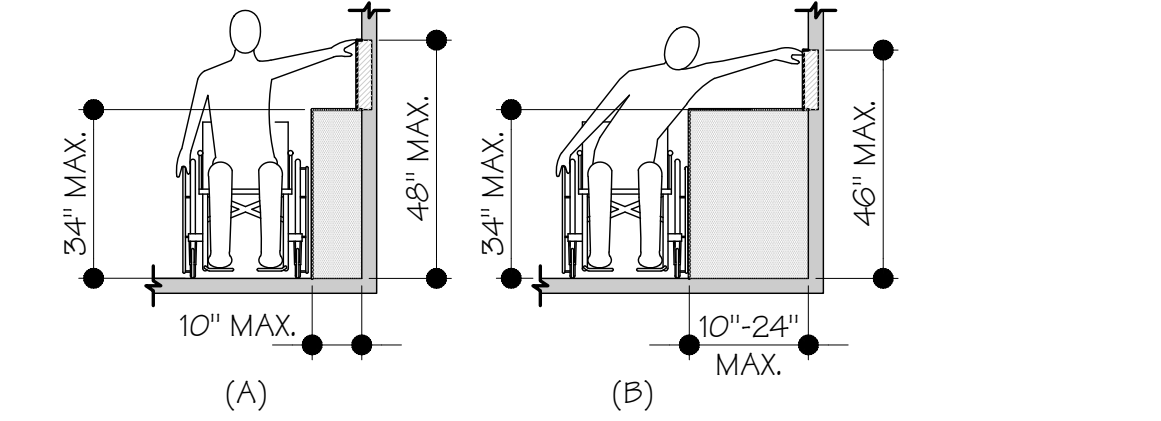


- IN ALTERATIONS, A PROJECTION OF 5/8 INCH (16 MM) MAXIMUM INTO THE REQUIRED CLEAR WIDTH SHALL BE PERMITTED FOR THE LATCH SIDE STOP.
- DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES (1980 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.



2009 ANSI ACCESSIBLE BUILDING STANDARDS

- WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34 INCHES (865 MM) MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES (610 MM) MAXIMUM. THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM FOR A REACH DEPTH OF 10 INCHES (255 MM) MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10 INCHES (255 MM), THE HIGH SIDE REACH SHALL BE 46 INCHES (1170 MM) MAXIMUM FOR A REACH DEPTH OF 24 INCHES (610 MM) MAXIMUM.  
EXCEPTION: EXISTING ELEMENTS UNALTERED SHALL BE PERMITTED AT 54 INCHES MAXIMUM ABOVE THE FLOOR



EXCEPTION: WASHING AND DRYING MACHINES ARE ALLOWED 36" MAX.

OPERABLE PARTS

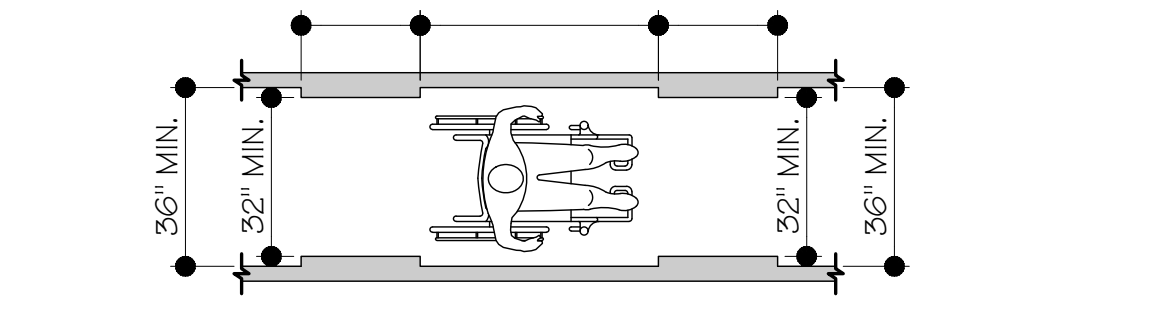
- A CLEAR FLOOR SPACE SHALL BE PROVIDED
- OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGES SPECIFIED (REACH RANGES LISTED ABOVE).
- OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 LBS. MAXIMUM.

ACCESSIBLE ROUTES

- THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
- THE CLEAR WIDTH OF WALKING SURFACES SHALL COMPLY W/ THE FOLLOWING TABLE:

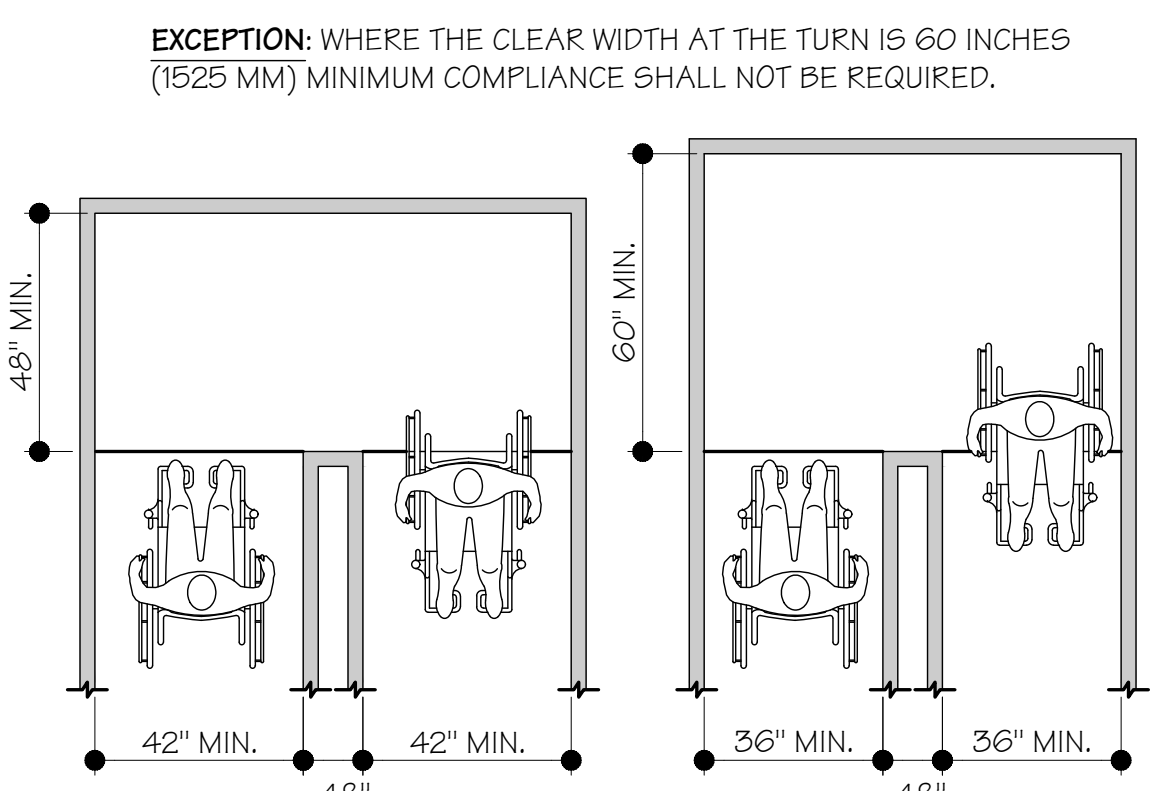
SEGMENT LENGTH	MINIMUM SEGMENT WIDTH
< OR = 24 INCHES	32 INCHES <sup>1</sup>
> 24 INCHES	36 INCHES

- CONSECUTIVE SEGMENTS OF 32 INCHES IN WIDTH MUST BE SEPARATED BY A ROUTE SEGMENT 48 INCHES MINIMUM IN LENGTH AND 36 INCHES MINIMUM IN WIDTH



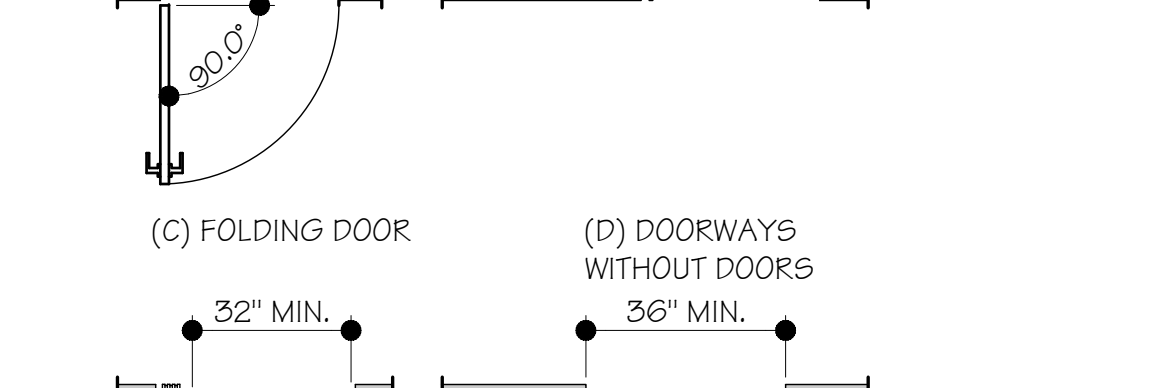
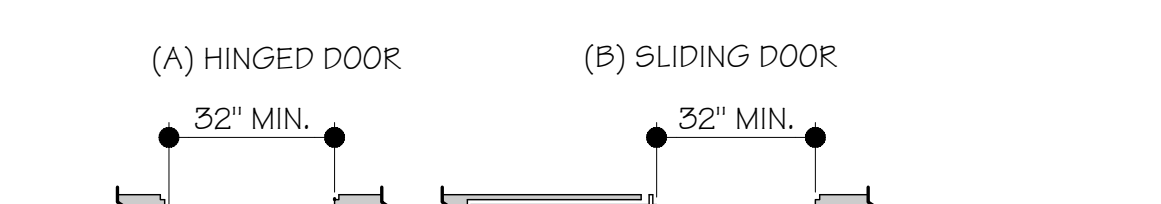
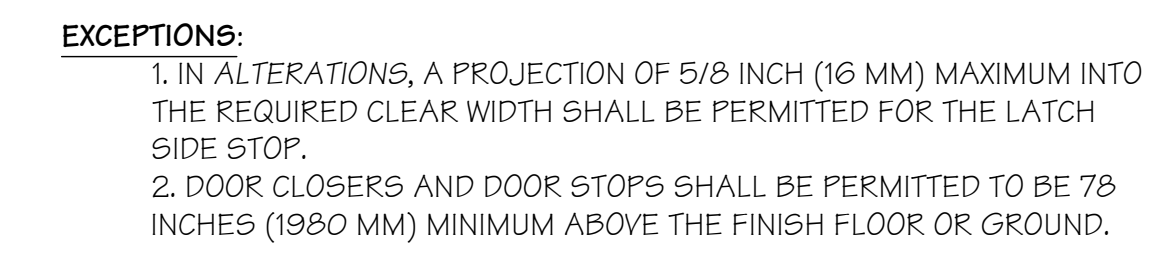
ACCESSIBLE ROUTES (CONTINUED)

- WHERE THE ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN ELEMENT WHICH IS LESS THAN 48 INCHES (1220 MM) WIDE, CLEAR WIDTH SHALL BE 42 INCHES (1065 MM) MINIMUM APPROACHING THE TURN, 48 INCHES (1220 MM) MINIMUM AT THE TURN AND 42 INCHES (1065 MM) MINIMUM LEAVING THE TURN.  
EXCEPTION: WHERE THE CLEAR WIDTH AT THE TURN IS 60 INCHES (1525 MM) MINIMUM COMPLIANCE SHALL NOT BE REQUIRED.



(A) 180 DEGREE TURN (B) 180 DEGREE TURN (EXCEPTION)

- AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60 INCHES (1525 MM) SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET (61 M) MAXIMUM. PASSING SPACES SHALL BE EITHER: A SPACE 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM; OR, AN INTERSECTION OF TWO WALKING SURFACES PROVIDING A T-SHAPED SPACE WHERE THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48 INCHES (1220 MM) MINIMUM BEYOND THE INTERSECTION.
- DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES (815 MM) MINIMUM. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS, DOORS & DOORWAYS MORE THAN 24 INCHES (610 MM) DEEP SHALL PROVIDE A CLEAR OPENING OF 36 INCHES (915 MM) MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWER THAN 34 1/2 INCHES (865 MM) ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES (865 MM) AND 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT EXCEED 4 INCHES (100 MM).

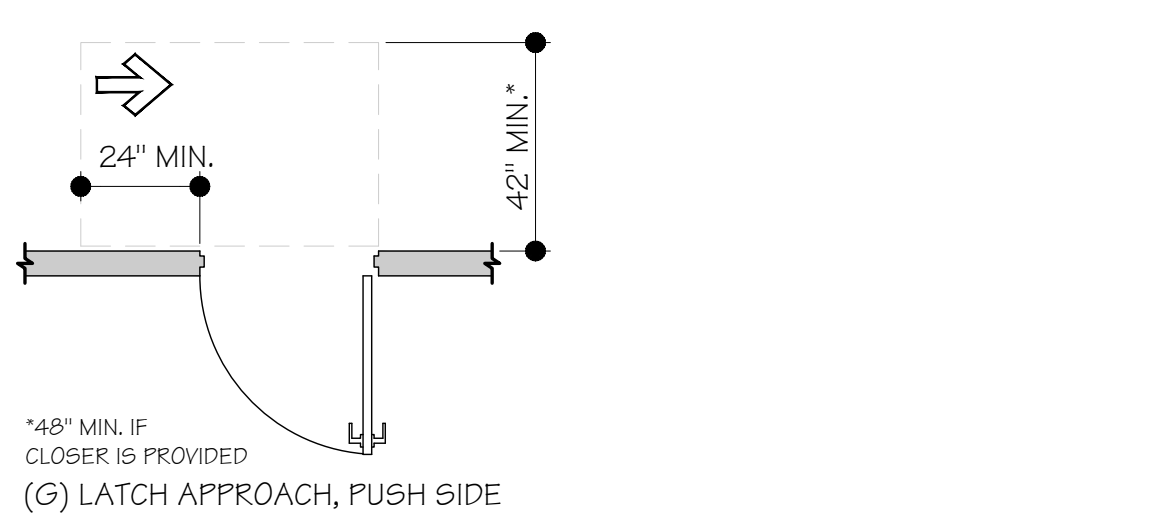
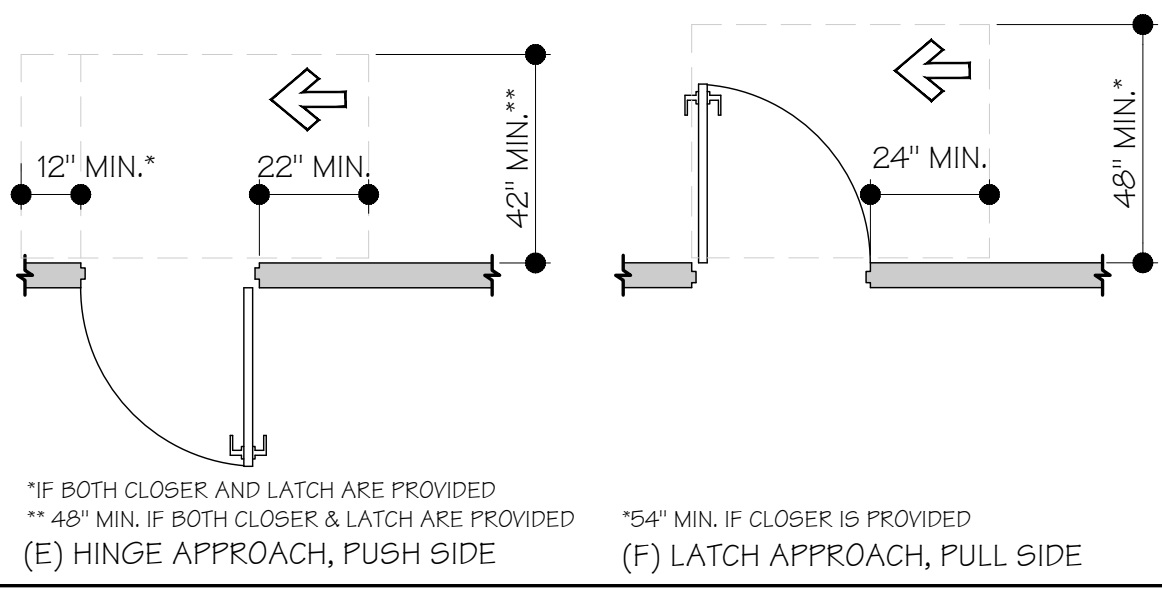
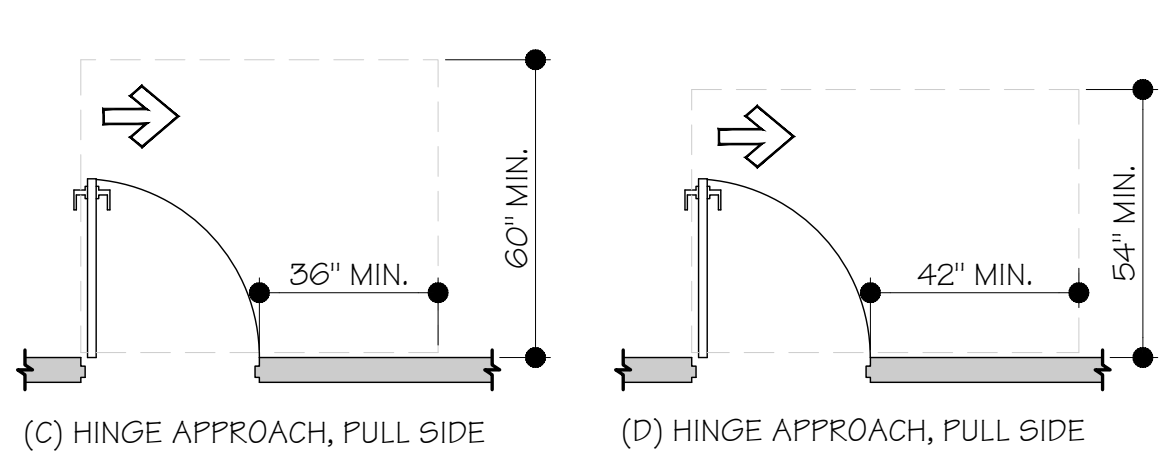
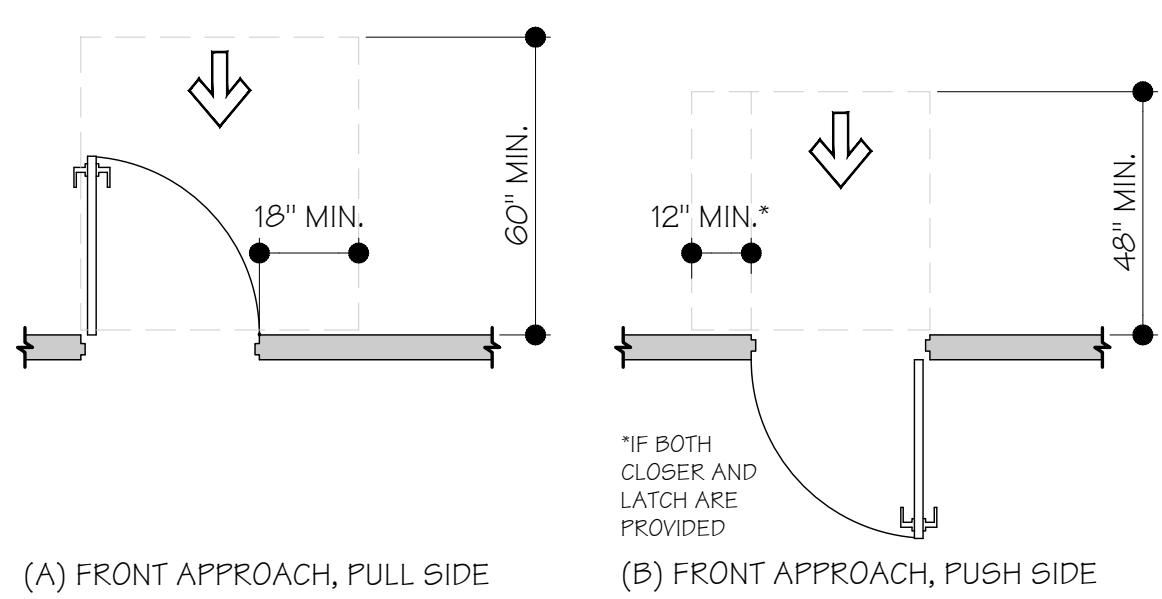


2009 ANSI ACCESSIBLE BUILDING STANDARDS

- SWINGING DOOR MANEUVERING CLEARANCES SHALL EXTEND THE FULL CLEAR OPENING WIDTH OF THE DOORWAY, COMPLYING WITH THE FOLLOWING TABLE:

MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES			
TYPE OF USE	APPROACH DIRECTION	MINIMUM MANEUVERING CLEARANCE	
		PERPENDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND LATCH SIDE UNLESS NOTED)
FROM FRONT	PULL	60"	18"
FROM FRONT	PUSH	48"	0" <sup>3</sup>
FROM HINGE SIDE	PULL	60"	36"
FROM HINGE SIDE	PULL	54"	42"
FROM HINGE SIDE	PUSH	42" <sup>1</sup>	22" <sup>3, 4</sup>
FROM LATCH SIDE	PULL	48" <sup>2</sup>	24"
FROM LATCH SIDE	PUSH	42" <sup>2</sup>	24"

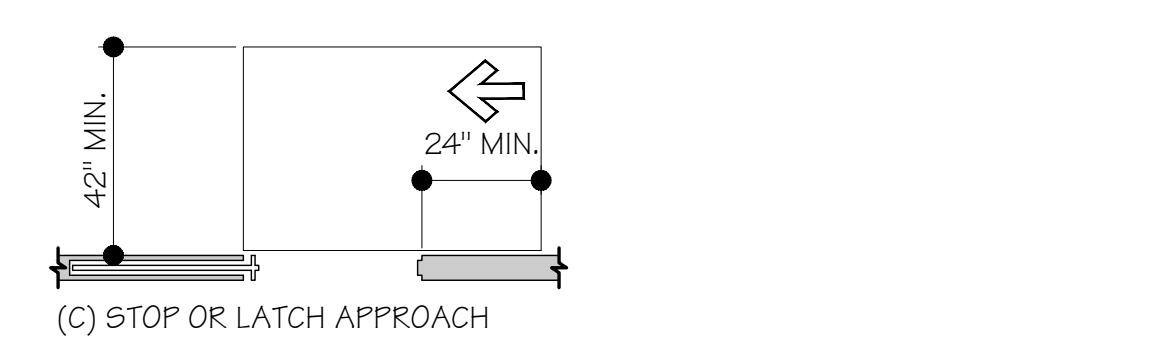
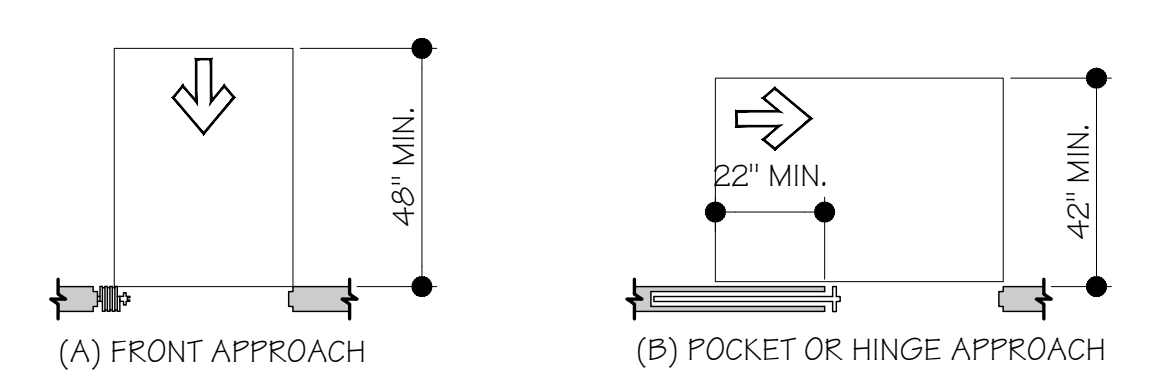
- ADD 6" IF CLOSER & LATCH PROVIDED
- ADD 6" IF CLOSER PROVIDED
- ADD 12" BEYOND LATCH IF CLOSER & LATCH PROVIDED
- BEYOND HINGE SIDE



- SLIDING DOORS & FOLDING DOORS SHALL HAVE MANEUVERING CLEARANCES, COMPLYING WITH THE FOLLOWING TABLE:

MANEUVERING CLEARANCES AT SLIDING & FOLDING DOORS			
APPROACH DIRECTION	TYPE OF USE	MINIMUM MANEUVERING CLEARANCE	
		PERPENDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND STOP/LATCH SIDE UNLESS NOTED)
FROM FRONT		48"	0"
FROM NON-LATCH SIDE		42"	22" <sup>1</sup>
FROM LATCH SIDE		42"	24"

- BEYOND POCKET OR HINGE SIDE



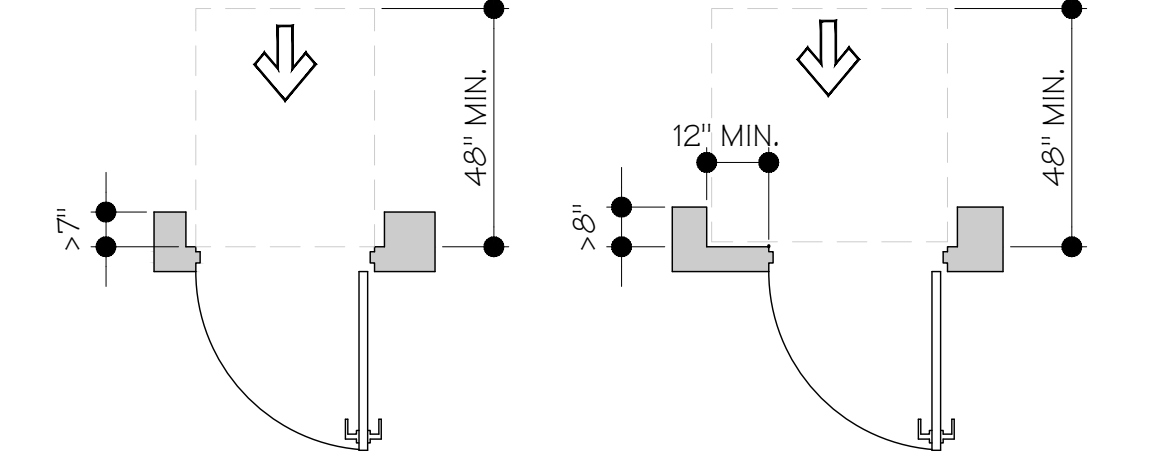
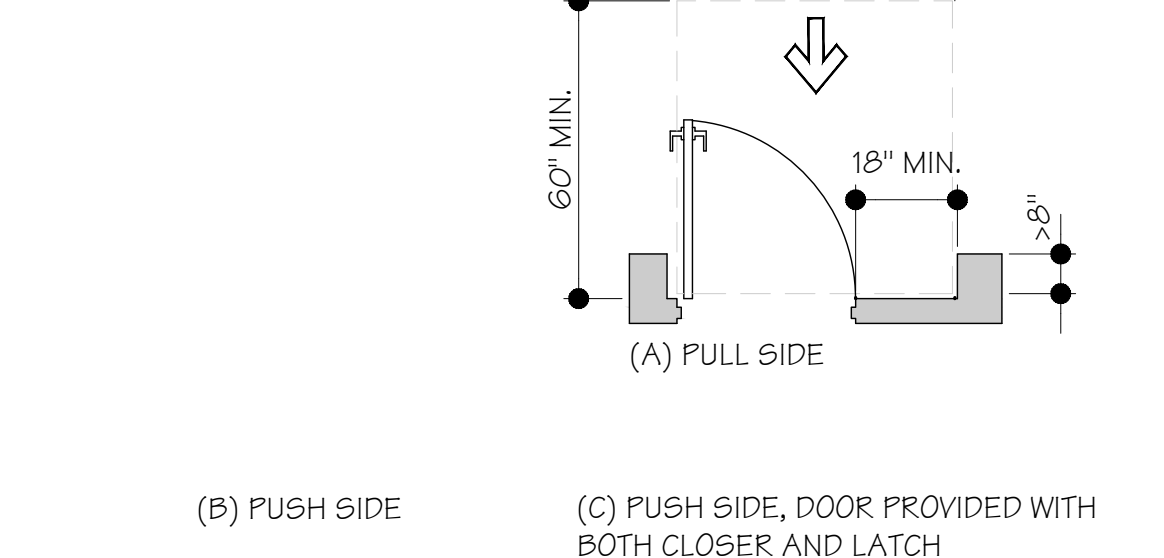
- DOORWAYS WITHOUT DOORS THAT ARE LESS THAN 36 INCHES IN WIDTH SHALL HAVE MANEUVERING CLEARANCES, COMPLYING WITH THE FOLLOWING TABLE:

MANEUVERING CLEARANCES FOR DOORWAYS WITHOUT DOORS	
APPROACH DIRECTION	MINIMUM MANEUVERING CLEARANCE PERPENDICULAR TO DOORWAY
FROM FRONT	48"
FROM SIDE	42"

THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION.

2009 ANSI ACCESSIBLE BUILDING STANDARDS

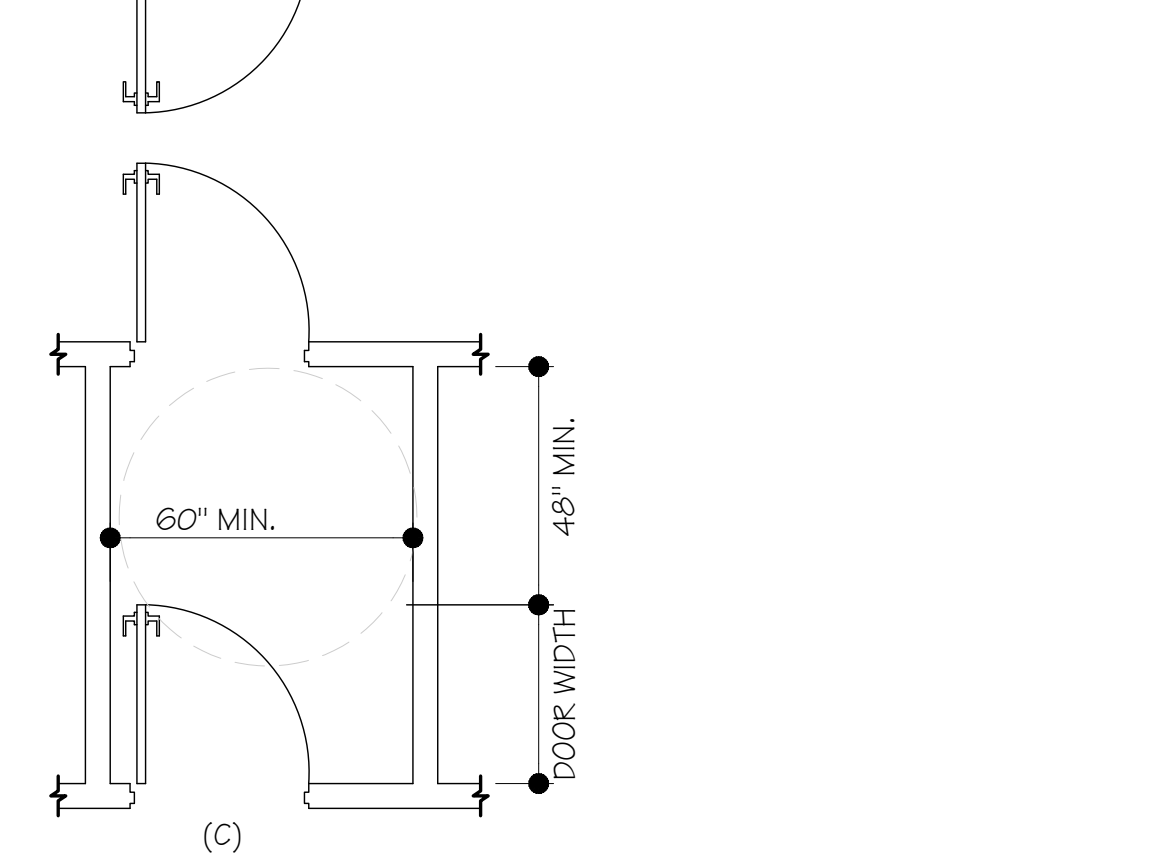
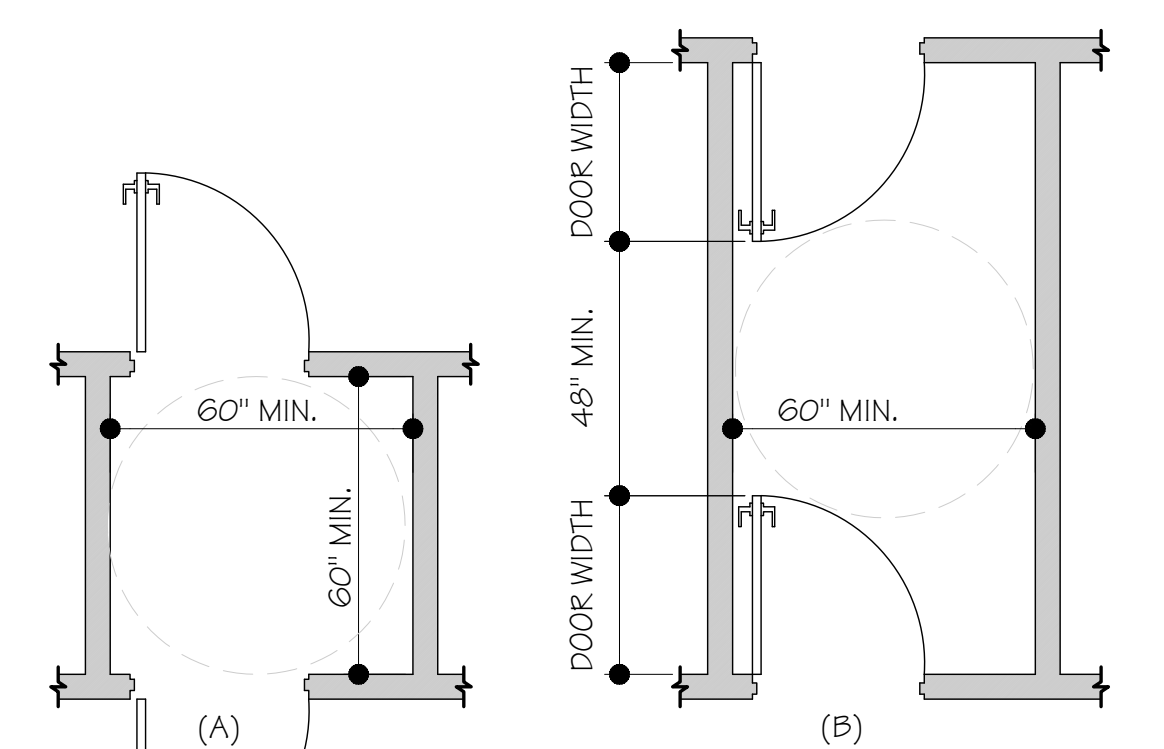
- WHERE ANY OBSTRUCTION WITHIN 18 INCHES OF THE LATCH SIDE OF A DOORWAY PROJECTS MORE THAN 8 INCHES BEYOND THE FACE OF THE DOOR, MEASURED PERPENDICULAR TO THE FACE OF THE DOOR, MANEUVERING CLEARANCES FOR A FORWARD APPROACH SHALL BE PROVIDED



- FLOOR SURFACE WITHIN THE MANEUVERING CLEARANCES SHALL HAVE A SLOPE NOT STEEPER THAN 1:48

- IF PROVIDED, THRESHOLDS @ DOORWAYS SHALL BE 1/2" MAXIMUM IN HEIGHT. RAISED THRESHOLDS AND CHANGES IN LEVEL @ DOORWAYS SHALL COMPLY WITH FLOOR SURFACES AND CHANGE IN LEVEL REQUIREMENTS.  
EXCEPTION: EXISTING OR ALTERED THRESHOLDS 3/4" MAXIMUM IN HEIGHT THAT HAVE A BEVELED EDGE ON EACH SIDE W/ A MINIMUM SLOPE OF 1:2 FOR THE HEIGHT EXCEEDING 1/4".

- DISTANCE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES SHALL BE 48 INCHES MINIMUM PLUS THE WIDTH OF ANY DOOR SWINGING INTO THE SPACE. THE SPACE BETWEEN THE DOORS SHALL PROVIDE AN ACCESSIBLE TURNING SPACE.



- HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOORS. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.  
EXCEPTION: 1. LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATION ARE PERMITTED IN ANY LOCATION.

- DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
- DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.

- FIRE DOORS SHALL HAVE A MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS:  
1. INTERIOR HINGED DOORS AND GATES: 5 POUNDS (22.2 N) MAXIMUM.  
2. SLIDING OR FOLDING DOORS: 5 POUNDS (22.2 N) MAXIMUM.

THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION.

ACCESSIBLE ROUTES (CONTINUED)

- SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES (255 MM) OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH (1.6 MM) OF THE SAME PLANE AS THE OTHER. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED.  
EXCEPTIONS:  
1. SLIDING DOORS SHALL NOT BE REQUIRED TO COMPLY.  
2. TEMPERED GLASS DOORS WITHOUT STILES AND HAVING A BOTTOM RAIL OR SHOE WITH THE TOP LEADING EDGE TAPERED AT 60 DEGREES MINIMUM FROM THE HORIZONTAL SHALL NOT BE REQUIRED TO MEET THE 10 INCH (255 MM) BOTTOM RAIL HEIGHT REQUIREMENT.  
3. DOORS THAT DO NOT EXTEND TO WITHIN 10 INCHES (255 MM) OF THE FLOOR SHALL NOT BE REQUIRED TO COMPLY.
- DOORS AND SIDE LIGHTS ADJACENT TO DOORS, CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE PANEL, ON EITHER THE DOOR OR AN ADJACENT SIDELIGHT, 43 INCHES (1090 MM) MAXIMUM ABOVE THE FLOOR.  
EXCEPTION: VISION LIGHTS WITH THE LOWEST PART MORE THAN 66 INCHES (1675 MM) FROM THE FINISH FLOOR OR GROUND SHALL NOT BE REQUIRED TO COMPLY
- FULL-POWERED AUTOMATIC DOORS SHALL COMPLY WITH ANSI/BHMA A156.10.  
LOW-ENERGY AND POWER-ASSISTED DOORS SHALL COMPLY WITH ANSI/BHMA A156.19 (1997 OR 2002 EDITION).
- DOORWAYS SHALL PROVIDE A CLEAR OPENING OF 32 INCHES (815 MM) MINIMUM IN POWER-ON AND POWER-OFF MODE. THE MINIMUM CLEAR OPENING WIDTH FOR AUTOMATIC DOOR SYSTEMS SHALL BE BASED ON THE CLEAR OPENING PROVIDED WITH ALL LEAVES IN THE OPEN POSITION.

BUILT-IN FURNISHINGS AND EQUIPMENT

BUILT-IN FURNISHINGS AND EQUIPMENT REQUIRED TO BE ACCESSIBLE BY THE SCOPING PROVISIONS ADOPTED BY THE ADMINISTRATIVE AUTHORITY SHALL COMPLY WITH THE APPLICABLE PROVISIONS AS FOLLOWS.

DINING SURFACES AND WORK SURFACES

- A CLEAR FLOOR SPACE, POSITIONED FOR A FORWARD APPROACH, SHALL BE PROVIDED. KNEE AND TOE CLEARANCE SHALL BE PROVIDED.
- THE TOPS OF DINING SURFACES AND WORK SURFACES SHALL BE 28 INCHES (710 MM) MINIMUM AND 34 INCHES (865 MM) MAXIMUM IN HEIGHT ABOVE THE FLOOR.

BENCHES / BOOTHS

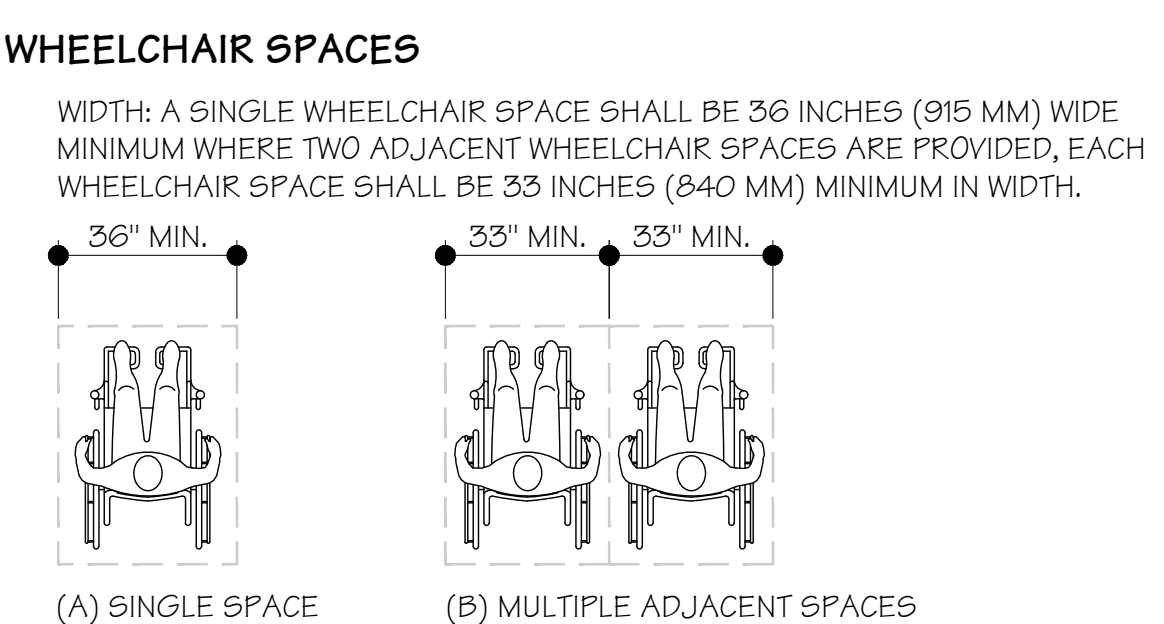
- A CLEAR FLOOR SPACE, POSITIONED FOR PARALLEL APPROACH TO AN END OF THE BENCH SEAT, SHALL BE PROVIDED.
- BENCHES SHALL HAVE SEATS 42 INCHES (1065 MM) MINIMUM IN LENGTH, AND 20 INCHES (510 MM) MINIMUM AND 24 INCHES (610 MM) MAXIMUM IN DEPTH.
- THE BENCH SHALL PROVIDE FOR BACK SUPPORT OR SHALL BE AFFIXED TO A WALL. BACK SUPPORT SHALL BE 42 INCHES (1065 MM) MINIMUM IN LENGTH AND SHALL EXTEND FROM A POINT 2 INCHES (51 MM) MAXIMUM ABOVE THE SEAT SURFACE TO A POINT 18 INCHES (455 MM) MINIMUM ABOVE THE SEAT SURFACE. BACK SUPPORT SHALL BE 21/2 INCHES (64 MM) MAXIMUM FROM THE REAR EDGE OF THE SEAT MEASURED HORIZONTALLY.
- THE TOP OF THE BENCH SEAT SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE FLOOR, MEASURED TO THE TOP OF THE SEAT.
- ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHERE A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT ANY POINT ON THE SEAT, FASTENER MOUNTING DEVICE, OR SUPPORTING STRUCTURE.
- WHERE PROVIDED IN WET LOCATIONS THE SURFACE OF THE SEAT SHALL BE SLIP RESISTANT AND SHALL NOT ACCUMULATE WATER.

SALES AND SERVICE COUNTERS

- ALL PORTIONS OF COUNTERS REQUIRED TO BE ACCESSIBLE SHALL BE LOCATED ADJACENT TO AN ACCESSIBLE WALKING SURFACE.
- THE ACCESSIBLE PORTION OF THE COUNTERTOP SHALL EXTEND THE SAME DEPTH AS THE SALES AND SERVICE COUNTERTOP AND MEET ONE OF THE FOLLOWING:  
3. A PORTION OF THE COUNTER SURFACE 36 INCHES (915 MM) MINIMUM IN LENGTH AND 36 INCHES (915 MM) MAXIMUM IN HEIGHT ABOVE THE FLOOR SHALL BE PROVIDED. WHERE THE COUNTER SURFACE IS LESS THAN 36 INCHES (915 MM) IN LENGTH, THE ENTIRE COUNTER SURFACE SHALL BE 36 INCHES (915 MM) MAXIMUM IN HEIGHT ABOVE THE FLOOR. A CLEAR FLOOR SPACE (30" X 42") POSITIONED FOR A PARALLEL APPROACH ADJACENT TO THE ACCESSIBLE COUNTER, SHALL BE PROVIDED.

WHEELCHAIR SPACES

- WIDTH: A SINGLE WHEELCHAIR SPACE SHALL BE 36 INCHES (915 MM) WIDE MINIMUM WHERE TWO ADJACENT WHEELCHAIR SPACES ARE PROVIDED, EACH WHEELCHAIR SPACE SHALL BE 33 INCHES (840 MM) MINIMUM IN WIDTH.



DEPTH: WHERE A WHEELCHAIR SPACE CAN BE ENTERED FROM THE FRONT OR REAR, THE WHEELCHAIR SPACE SHALL BE 48 INCHES (1220 MM) MINIMUM IN DEPTH. WHERE A WHEELCHAIR SPACE CAN BE ENTERED ONLY FROM THE SIDE, THE WHEELCHAIR SPACE SHALL BE 60 INCHES (1525 MM) MINIMUM IN DEPTH.



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RICHARD E. SIEGRIST  
LICENSE #8907548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1	04/16/18	
ADDENDUM #2	09/05/18	

DATE	SET	ISSUANCE	FOR
03-19-19	ISSUED	FOR BID	PERMIT
03-26-19	ISSUED	FOR BID # 4	PERMIT
05-08-19	ISSUED	FOR STATE # 4	OWNER COMMENTS
01-13-19	ISSUED	FOR STATE # 4	OWNER COMMENTS
07-22-20	ISSUED	FOR STATE # 4	OWNER COMMENTS
02-04-20	ISSUED	FOR STATE # 4	OWNER COMMENTS

PROJECT #: 17121

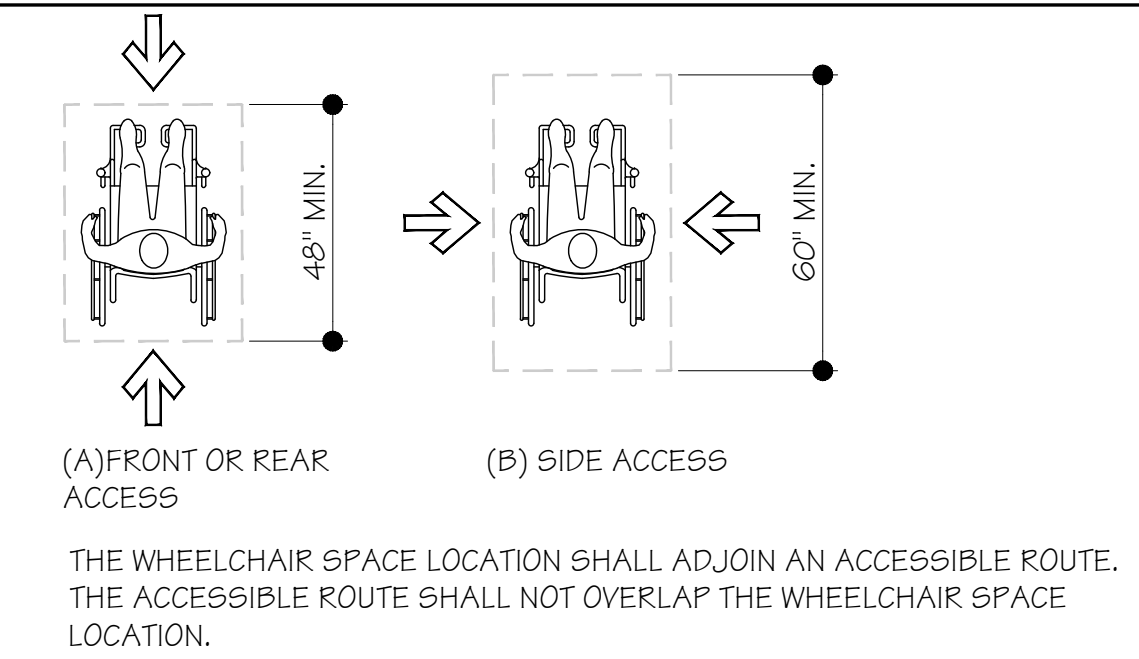
Accessibility  
(ANSI 117.1:  
2009)

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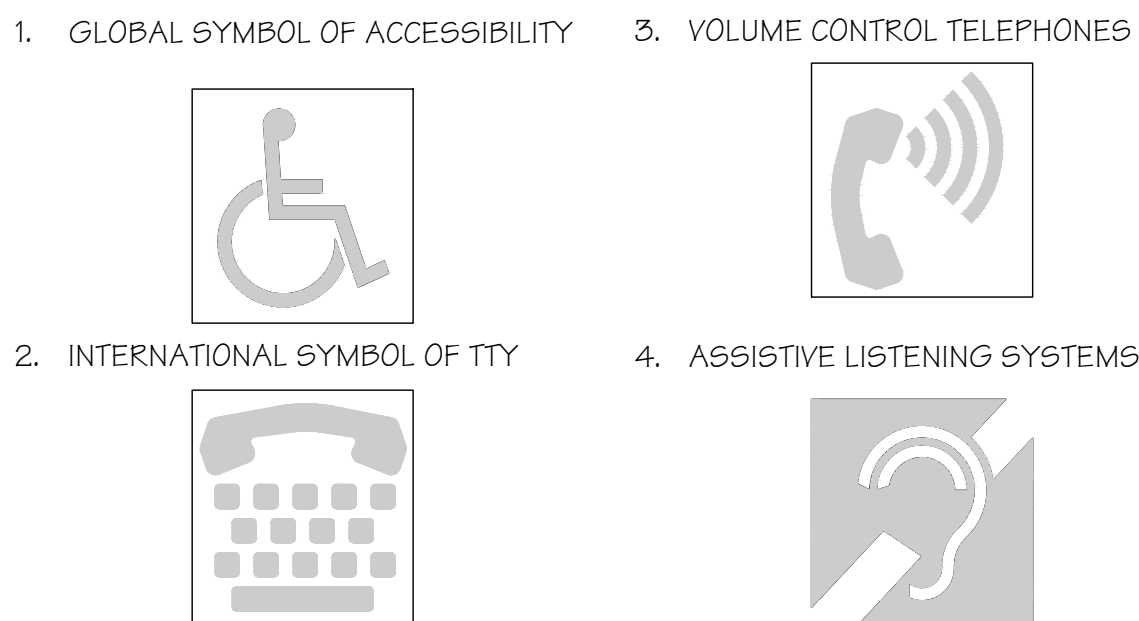
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## 2009 ANSI ACCESSIBLE BUILDING STANDARDS



### SYMBOLS

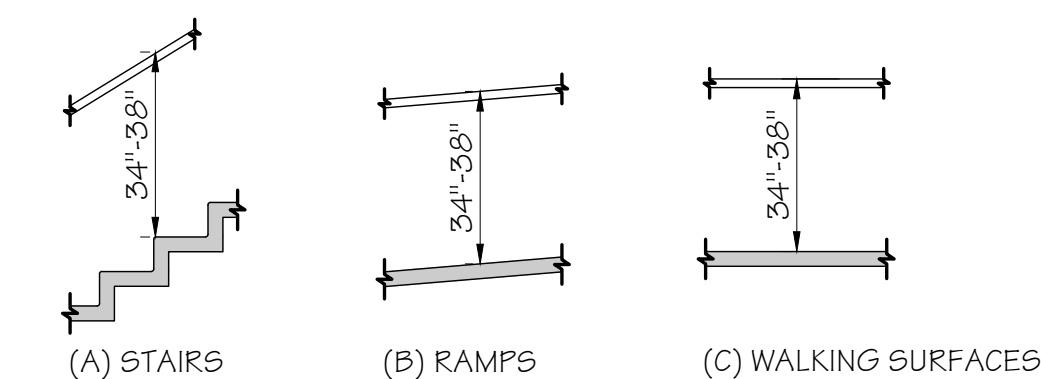


### HANDRAILS

- HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS.
- HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS AND RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS.

**EXCEPTION:** HANDRAIL IN AISLES SERVING SEATING.

- TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34 INCHES (865 MM) MINIMUM AND 38 INCHES (965 MM) MAXIMUM VERTICALLY ABOVE STAIR NOSINGS, RAMP SURFACES & WALKING SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE STAIR NOSINGS, RAMP SURFACES & WALKING SURFACES.



- CLEARANCE BETWEEN HANDRAIL GRIPPING SURFACES AND ADJACENT SURFACES SHALL BE 1/2 INCHES (38 MM) MINIMUM.

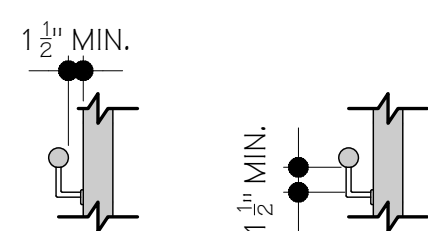
- HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS WITHOUT INTERRUPTION BY NEWEL POSTS, OTHER CONSTRUCTION ELEMENTS, OR OBSTRUCTIONS.

### EXCEPTIONS:

1. HANDRAIL BRACKETS OR BALUSTERS ATTACHED TO THE BOTTOM SURFACE OF THE HANDRAIL SHALL NOT BE CONSIDERED OBSTRUCTIONS, PROVIDED THEY COMPLY WITH THE FOLLOWING CRITERIA:

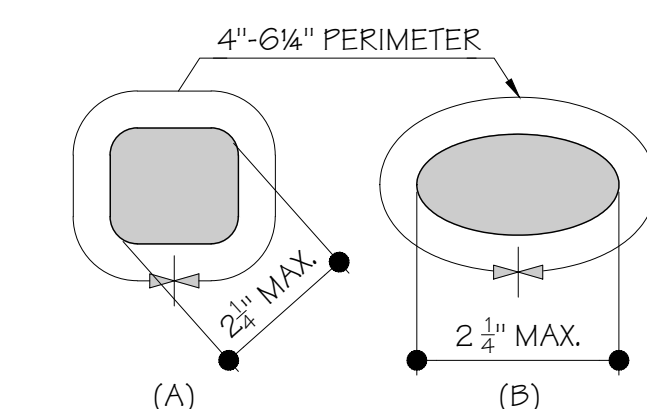
- NOT MORE THAN 20 PERCENT OF THE HAND RAIL LENGTH IS OBSTRUCTED.
- HORIZONTAL PROJECTIONS BEYOND THE SIDES OF THE HANDRAIL OCCUR 1 1/2 INCHES MINIMUM BELOW THE BOTTOM OF THE HANDRAIL, AND PROVIDED THAT FOR EACH INCH OF ADDITIONAL HANDRAIL PERIMETER DIMENSION ABOVE 4 INCHES, THE VERTICAL CLEARANCE DIMENSION OF 1/2 INCH CAN BE REDUCED BY 1/8 INCH AND C. EDGES SHALL BE ROUNDED

- WHERE HANDRAILS ARE PROVIDED ALONG WALKING SURFACES WITH SLOPES NOT STEEPER THAN 1:20, THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL BE PERMITTED TO BE OBSTRUCTED ALONG THEIR ENTIRE LENGTH WHERE THEY ARE INTEGRAL TO CRASH RAILS OR BUMPER GUARDS.



- HANDRAIL GRIPPING SURFACES WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/2 INCHES (38 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM.

- HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 6 1/4 INCHES (160 MM) MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2 1/4 INCHES (57 MM) MAXIMUM.



- HANDRAILS AND ANY WALL OR OTHER SURFACES ADJACENT TO THEM, SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS, EDGES SHALL BE ROUNDED.
- HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

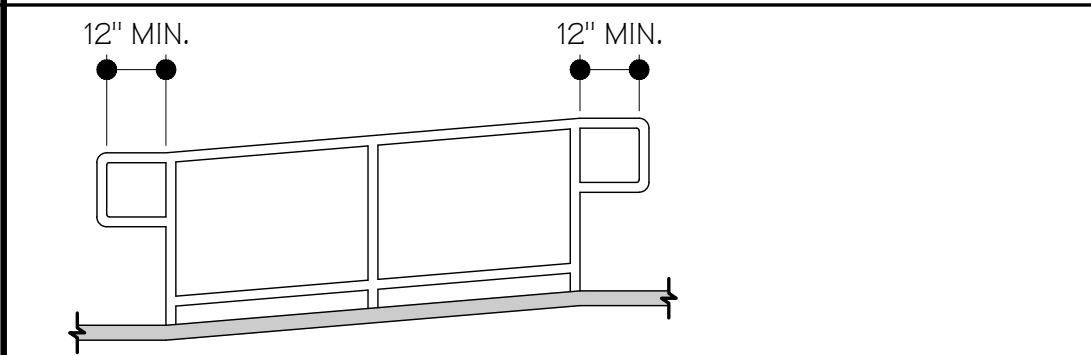
- HANDRAIL GRIPPING SURFACES SHALL EXTEND BEYOND AND IN THE SAME DIRECTION OF STAIR FLIGHTS AND RAMP RUNS.

### EXCEPTIONS:

- CONTINUOUS HANDRAILS @ THE INSIDE TURN OF STAIRS & RAMP RUNS
- EXTENSIONS ARE NOT REQUIRED IN AISLES SERVING SEATING WHERE THE HANDRAILS ARE DISCONTINUOUS TO PROVIDE ACCESS TO SEATING AND TO PERMIT CROSSOVERS WITHIN AISLE.
- IN ALTERATIONS, FULL EXTENSIONS OF HANDRAILS SHALL NOT BE REQUIRED WHERE SUCH EXTENSIONS WOULD BE HAZARDOUS DUE TO PLAN CONFIGURATION.

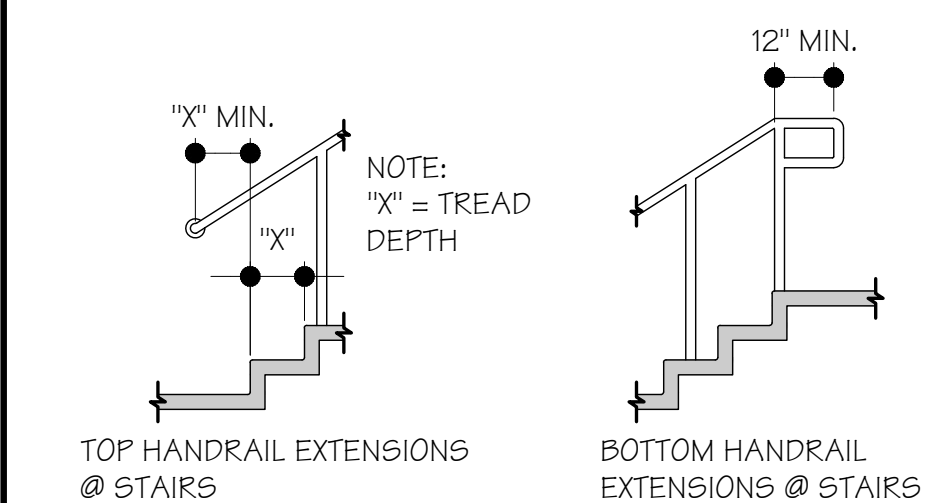
- RAMP HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12 INCHES (305 MM) MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR FLOOR, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN.

## 2009 ANSI ACCESSIBLE BUILDING STANDARDS



- AT THE TOP OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305 MM) MINIMUM BEGINNING DIRECTLY ABOVE THE LANDING NOSING. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.

- AT THE BOTTOM OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE EQUAL TO ONE TREAD DEPTH BEYOND THE BOTTOM TREAD NOSING. EXTENSION SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.



### DRINKING FOUNTAINS

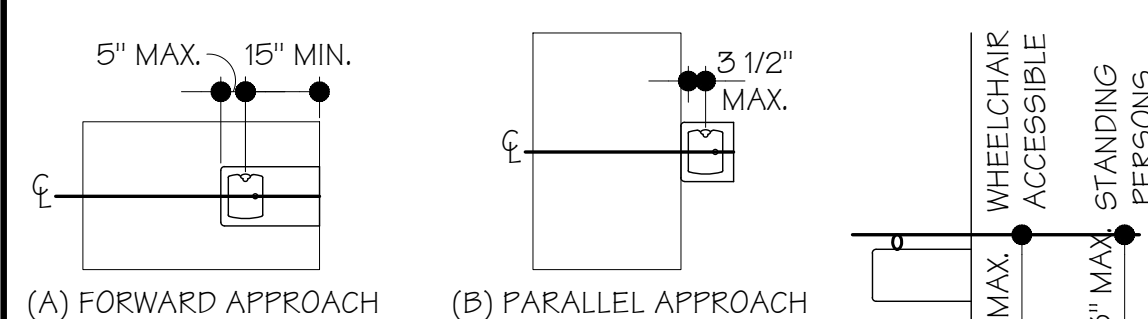
- A CLEAR FLOOR SPACE POSITIONED FOR A FORWARD APPROACH TO THE DRINKING FOUNTAIN SHALL BE PROVIDED. KNEE AND TOE SPACE SHALL BE PROVIDED. THE CLEAR FLOOR SPACE SHALL BE CENTERED ON THE DRINKING FOUNTAIN.

### EXCEPTIONS:

- DRINKING FOUNTAINS FOR STANDING PERSONS ONLY.
- DRINKING FOUNTAINS FOR CHILDREN'S USE SHALL BE PERMITTED WHERE THE SPOUT IS 30 INCHES MAX. ABOVE THE FLOOR, AND A PARALLEL APPROACH, CENTERED ON THE DRINKING FOUNTAIN, IS PROVIDED.
- IN EXISTING BUILDINGS, EXISTING DRINKING FOUNTAINS PROVIDING A PARALLEL APPROACH, CENTERED ON THE DRINKING FOUNTAIN, SHALL BE PERMITTED.
- WHERE SPECIFICALLY PERMITTED BY THE ADMINISTRATIVE AUTHORITY, A PARALLEL APPROACH CENTERED ON THE DRINKING FOUNTAIN, SHALL BE PERMITTED FOR DRINKING FOUNTAINS THAT REPLACE EXISTING DRINKING FOUNTAINS WITH A PARALLEL APPROACH.

- SPOUT OUTLETS OF WHEELCHAIR ACCESSIBLE DRINKING FOUNTAINS SHALL BE 38 INCHES (915 MM) MAXIMUM ABOVE THE FLOOR. SPOUT OUTLETS OF DRINKING FOUNTAINS FOR STANDING PERSONS SHALL BE 38 INCHES MINIMUM AND 43 INCHES MAXIMUM ABOVE THE FLOOR.

- THE SPOUT SHALL BE LOCATED 15 INCHES (380 MM) MINIMUM FROM THE VERTICAL SUPPORT AND 5 INCHES (125 MM) MAXIMUM FROM THE FRONT EDGE OF THE DRINKING FOUNTAIN, INCLUDING BUMPERS. WHERE ONLY A PARALLEL APPROACH IS PROVIDED, THE SPOUT SHALL BE LOCATED 3 1/2\"/>



- THE SPOUT SHALL PROVIDE A FLOW OF WATER 4\"/>

### TOILET & BATHING ROOMS

- TURNING SPACE SHALL BE PROVIDED WITHIN THE ROOM.
- CLEAR FLOOR SPACES, CLEARANCE AT FIXTURES, AND TURNING SPACE SHALL BE PERMITTED TO OVERLAP.
- DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE.

### EXCEPTION:

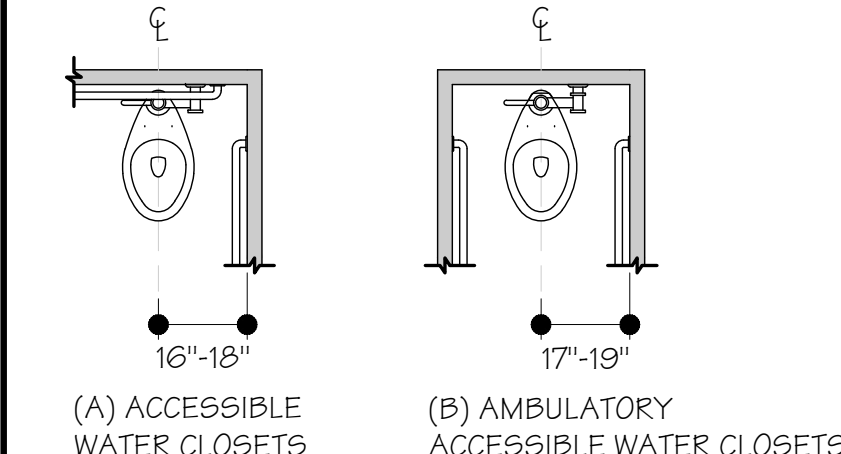
- WHERE THE ROOM IS FOR INDIVIDUAL USE AND A CLEAR FLOOR SPACE IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING.

- MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES (1015 MM) MAXIMUM ABOVE THE FLOOR. MIRRORS NOT LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FLOOR.

- COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES. SHELVES SHALL BE LOCATED 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FLOOR.

### WATER CLOSETS & TOILET COMPARTMENTS

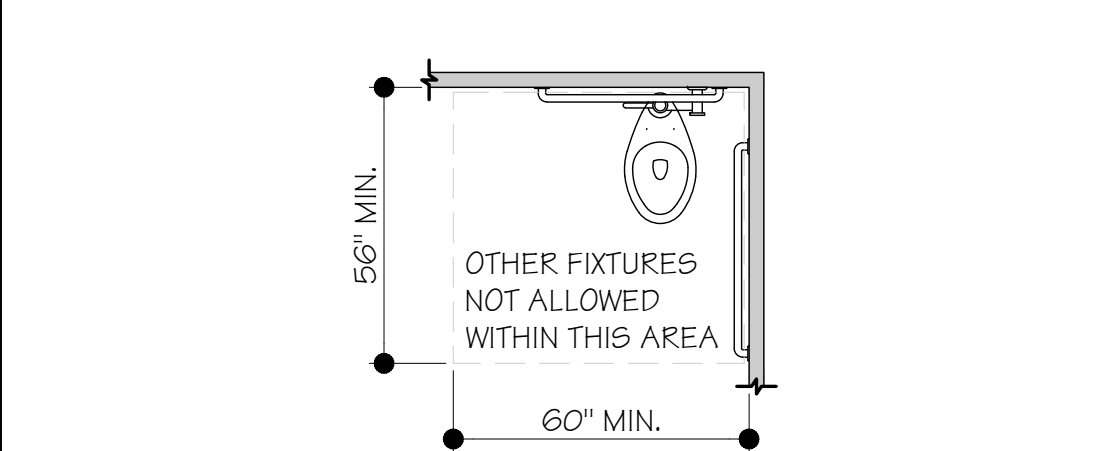
- THE WATER CLOSET SHALL BE LOCATED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES (405 MM) MINIMUM TO 18 INCHES (455 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION. WATER CLOSETS LOCATED IN AMBULATORY ACCESSIBLE COMPARTMENTS SHALL HAVE THE CENTERLINE OF THE WATER CLOSET 17 INCHES MINIMUM TO 19 INCHES MAXIMUM FROM THE SIDE WALL OR PARTITION.



- CLEARANCE AROUND A WATER CLOSET SHALL BE 60 INCHES (1525 MM) MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56 INCHES (1420 MM) MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL.

## 2009 ANSI ACCESSIBLE BUILDING STANDARDS

### WATER CLOSETS & TOILET COMPARTMENTS (CONTINUED)



- THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

- THE HEIGHT OF WATER CLOSET SEATS SHALL BE 17 INCHES MINIMUM AND 19 INCHES MAXIMUM ABOVE THE FLOOR, MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.

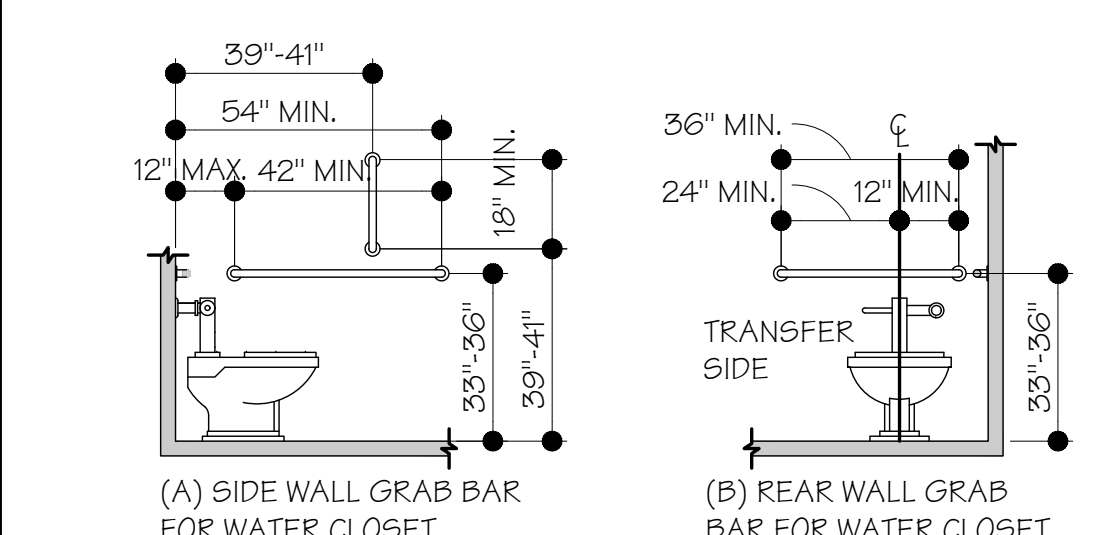
- GRAB BARS FOR WATER CLOSETS SHALL BE PROVIDED ON THE REAR WALL AND THE SIDE WALL CLOSEST TO THE WATER CLOSET.

- FIXED, SIDE WALL GRAB BAR SHALL BE 42 INCHES (1065 MM) IN LENGTH MINIMUM, LOCATED 12 INCHES (305 MM) MAXIMUM FROM THE REAR WALL AND EXTENDING 54 INCHES (1370 MM) MINIMUM FROM THE REAR WALL. IN ADDITION, A VERTICAL GRAB BAR 18 INCHES MINIMUM IN LENGTH SHALL BE MOUNTED WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39 INCHES AND 41 INCHES ABOVE THE FLOOR, AND WITH THE CENTER LINE OF THE BAR LOCATED BETWEEN 39 INCHES AND 41 INCHES FROM THE REAR WALL.

- THE REAR WALL GRAB BAR SHALL BE 36 INCHES (915 MM) MINIMUM IN LENGTH AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12 INCHES (305 MM) MINIMUM ON THE SIDE CLOSEST TO THE WALL, AND 24 INCHES (610 MM) MINIMUM ON THE TRANSFER SIDE.

### EXCEPTIONS:

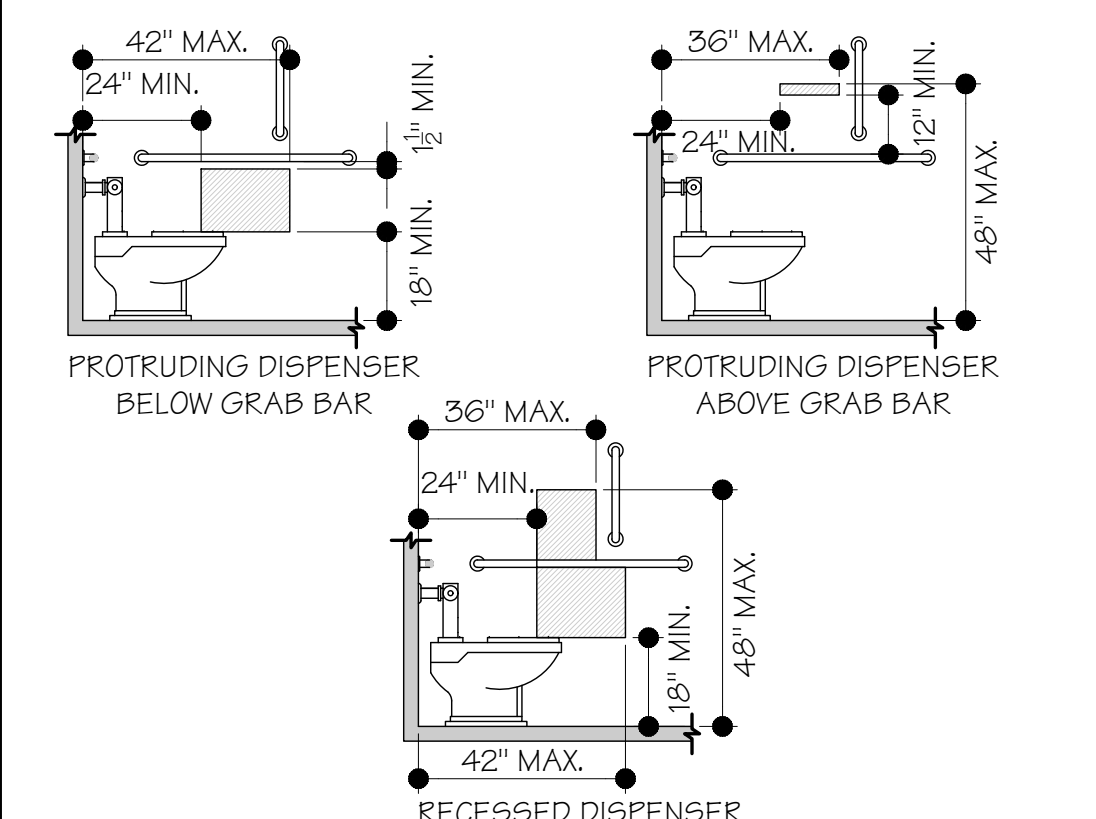
- THE REAR GRAB BAR SHALL BE PERMITTED TO BE 24 INCHES (610 MM) MINIMUM IN LENGTH, CENTERED ON THE WATER CLOSET, WHERE WALL SPACE DOES NOT PERMIT A LENGTH OF 36 INCHES (915 MM) MINIMUM DUE TO THE LOCATION OF A RECESSED FIXTURE ADJACENT TO THE WATER CLOSET.
- WHERE AN ADMINISTRATIVE AUTHORITY REQUIRES FLUSH CONTROLS FOR FLUSH VALVES TO BE LOCATED IN A POSITION THAT CONFLICTS WITH THE LOCATION OF THE REAR GRAB BAR, THEN THE REAR GRAB BAR SHALL BE PERMITTED TO BE SPLIT OR SHIFTED TO THE OPEN SIDE OF THE TOILET AREA.



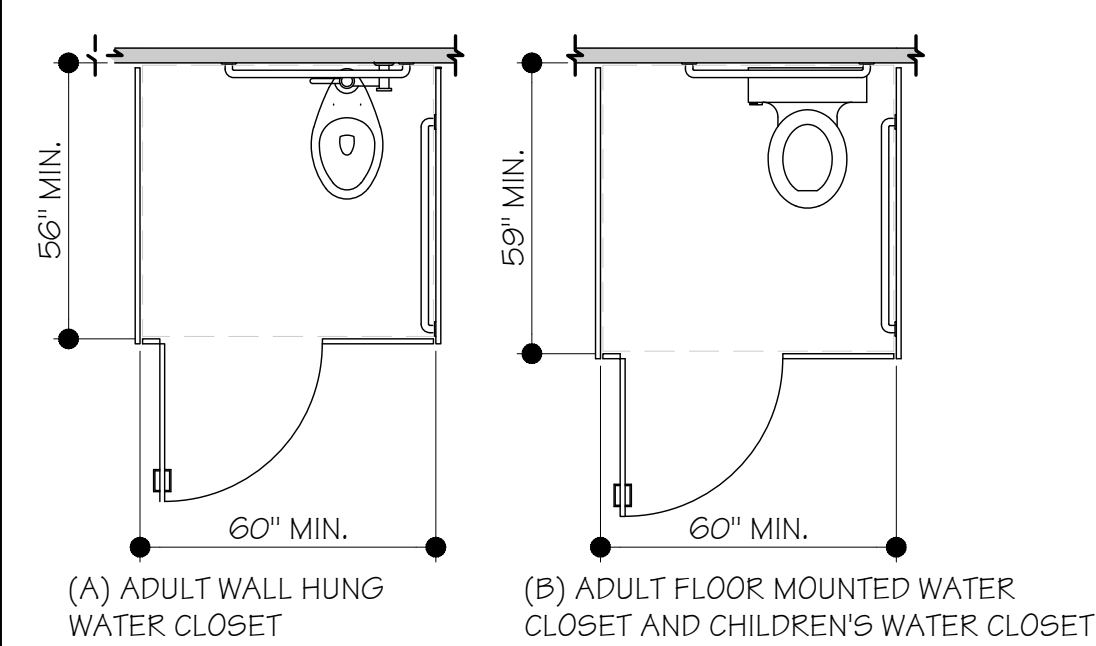
- WHERE SWING-UP GRAB BARS ARE INSTALLED, A CLEARANCE OF 18 INCHES MINIMUM FROM THE CENTERLINE OF THE WATER CLOSET TO ANY SIDE WALL OR OBSTRUCTION SHALL BE PROVIDED. A SWING-UP GRAB BAR SHALL BE INSTALLED WITH THE CENTERLINE OF THE GRAB BAR 15 3/4\"/>

- FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET. **EXCEPTION:** IN AMBULATORY ACCESSIBLE COMPARTMENTS, FLUSH CONTROLS SHALL BE PERMITTED TO BE LOCATED ON EITHER SIDE OF THE WATER CLOSET.

- TOILET PAPER DISPENSERS SHALL BE 7 INCHES (180 MM) MINIMUM AND 9 INCHES (230 MM) MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 15 INCHES (380 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR AND SHALL NOT BE LOCATED BEHIND GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW.

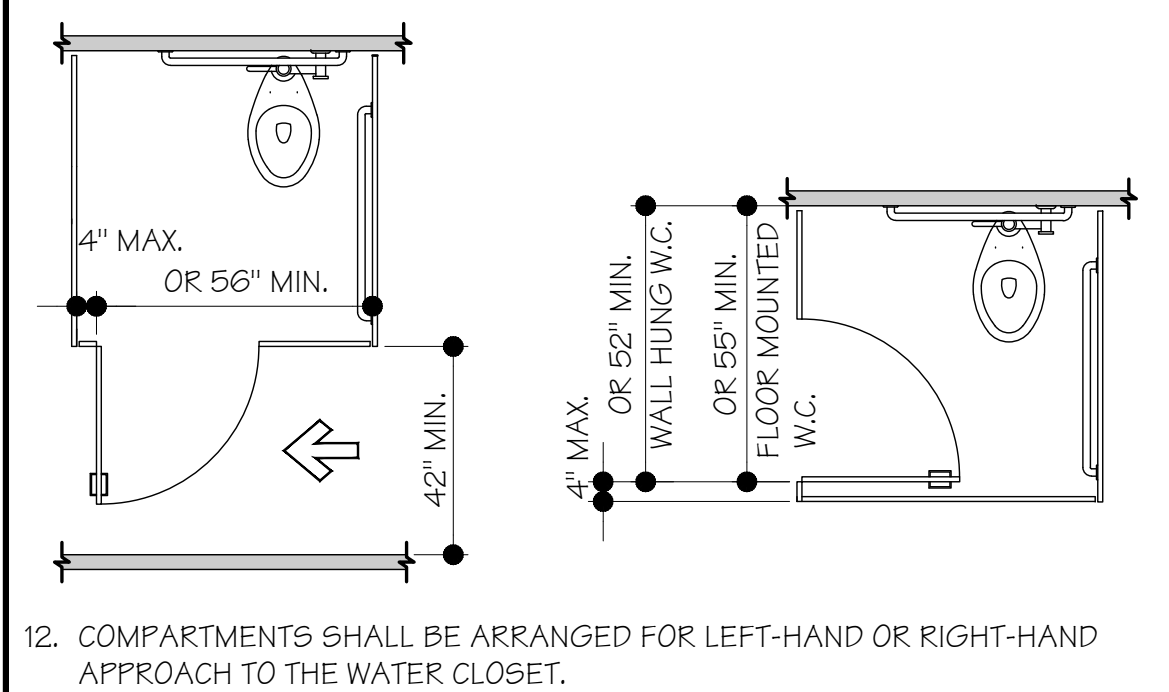


- WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 56 INCHES (1420 MM) DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 59 INCHES (1500 MM) DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 59 INCHES (1500 MM) DEEP MINIMUM FOR WALL HUNG AND FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL.



## 2009 ANSI ACCESSIBLE BUILDING STANDARDS

- TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH DOORS, DOORWAYS & GATEWAYS REQUIREMENTS, EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES (1065 MM) MINIMUM. DOORS SHALL BE LOCATED IN THE FRONT PARTITION OR IN THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE SIDE WALL OR PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE FRONT PARTITION. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.



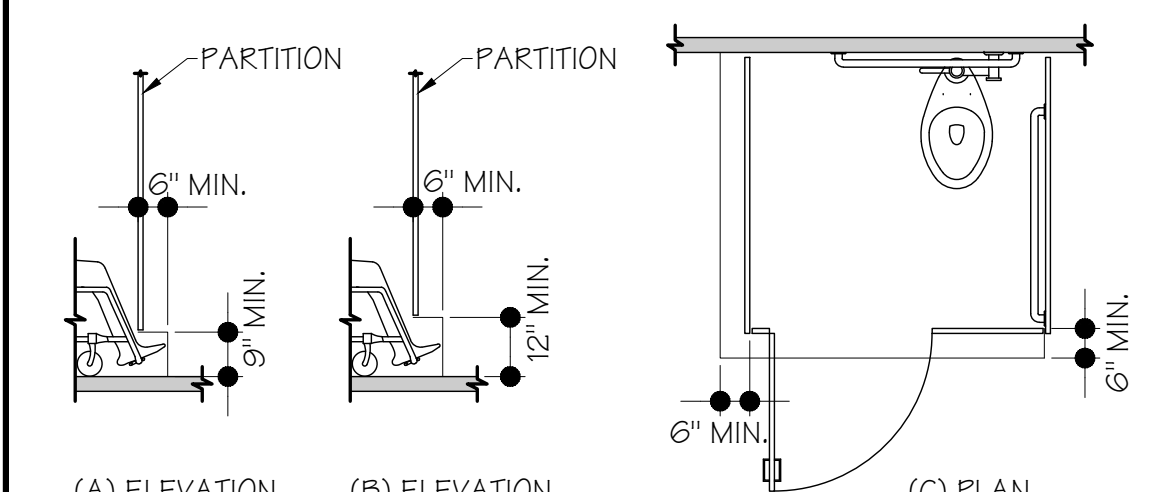
- COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET.

DOOR OPENING LOCATION	MEASURED FROM	DIMENSION
FRONT WALL OR PARTITION	FROM THE SIDE WALL OR PARTITION CLOSEST TO THE WATER CLOSET	56 INCHES MINIMUM
	OR	
SIDE WALL OR PARTITION WALL-HUNG WATER CLOSET	FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET	4 INCHES MAXIMUM
	OR	
SIDE WALL OR PARTITION FLOOR - HUNG WATER CLOSET	FROM THE REAR WALL	52 INCHES MINIMUM
	OR	
SIDE WALL OR PARTITION FLOOR - HUNG WATER CLOSET	FROM THE REAR WALL	55 INCHES MINIMUM
	OR	
SIDE WALL OR PARTITION FLOOR - HUNG WATER CLOSET	FROM THE FRONT WALL OR PARTITION	4 INCHES MAXIMUM
	OR	

- THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9 INCHES (230 MM) MINIMUM ABOVE THE FLOOR AND 15 INCHES (380 MM) DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. COMPARTMENTS FOR CHILDREN'S USE SHALL PROVIDE A TOE CLEARANCE OF 12 INCHES (305 MM) MINIMUM ABOVE THE FLOOR AND EXTENDING 6 INCHES BEYOND THE COMPARTMENT SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS.

- TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 62 INCHES (1575 MM) DEEP WITH A WALL-HUNG WATER CLOSET OR GREATER THAN 65 INCHES (1650 MM) IN DEPTH WITH A FLOOR-MOUNTED WATER CLOSET. IN A COMPARTMENT GREATER THAN 65 INCHES IN DEPTH, TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED.

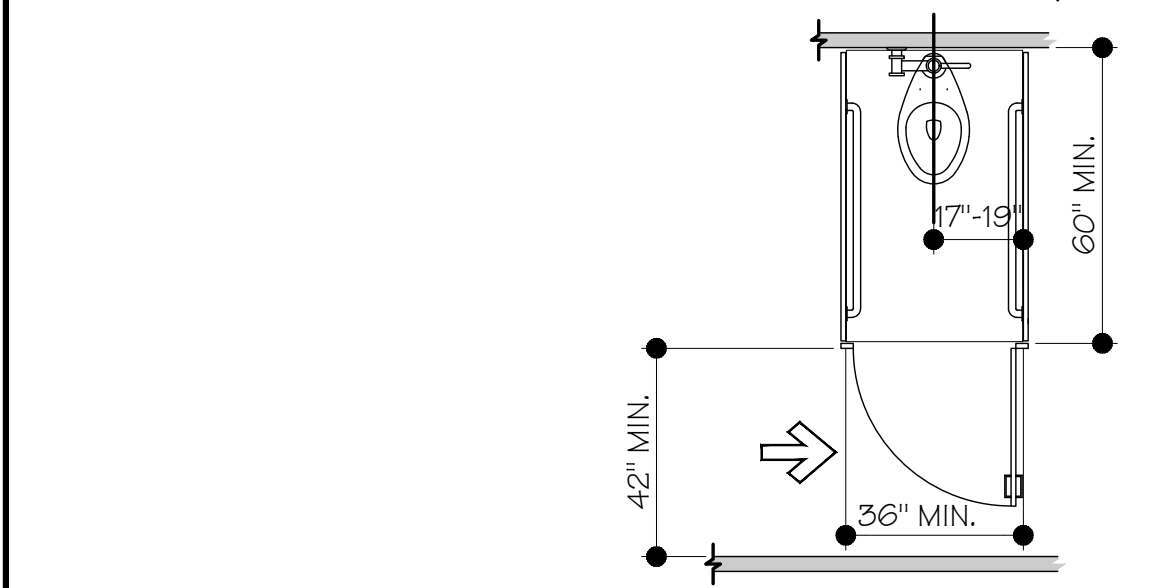
- TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66 INCHES (1675 MM) IN WIDTH.



- A SIDE-WALL GRAB BAR SHALL BE PROVIDED AND SHALL BE LOCATED ON THE WALL CLOSEST TO THE WATER CLOSET. IN ADDITION, A REAR-WALL GRAB BAR SHALL BE PROVIDED.

- AMBULATORY ACCESSIBLE COMPARTMENTS SHALL BE 60 INCHES (1525 MM) MINIMUM IN DEPTH AND 36 INCHES (890 MM) MINIMUM IN WIDTH.

- TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH ANSI REQUIREMENTS, EXCEPT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES MINIMUM. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. COMPARTMENT DOORS SHALL NOT SWING INTO THE REQUIRED MINIMUM AREA OF THE COMPARTMENT.



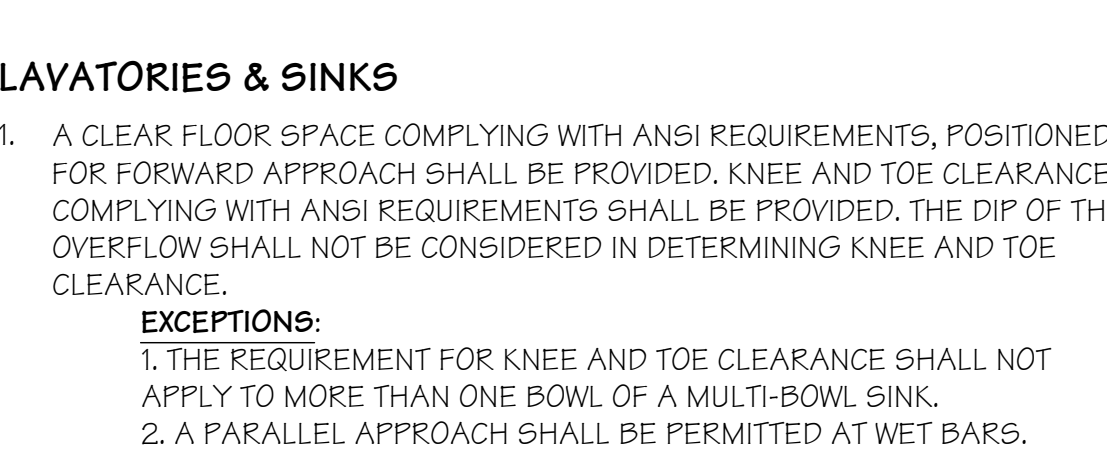
- WHERE MIRRORS ARE LOCATED ABOVE LAVATORIES, A MIRROR SHALL BE LOCATED OVER THE ACCESSIBLE LAVATORY AND SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES (1015 MM) MAXIMUM ABOVE THE FLOOR. WHERE MIRRORS ARE LOCATED ABOVE COUNTERS THAT DO NOT CONTAIN LAVATORIES, THE MIRROR SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FLOOR.

- EXCEPTION: OTHER THAN WITHIN ACCESSIBLE DWELLING OR SLEEPING UNITS, MIRRORS ARE NOT REQUIRED OVER THE LAVATORIES OR COUNTERS IF A MIRROR IS LOCATED WITHIN THE SAME TOILET OR BATHING ROOM AND MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FLOOR.

## 2009 ANSI ACCESSIBLE BUILDING STANDARDS

### URINALS

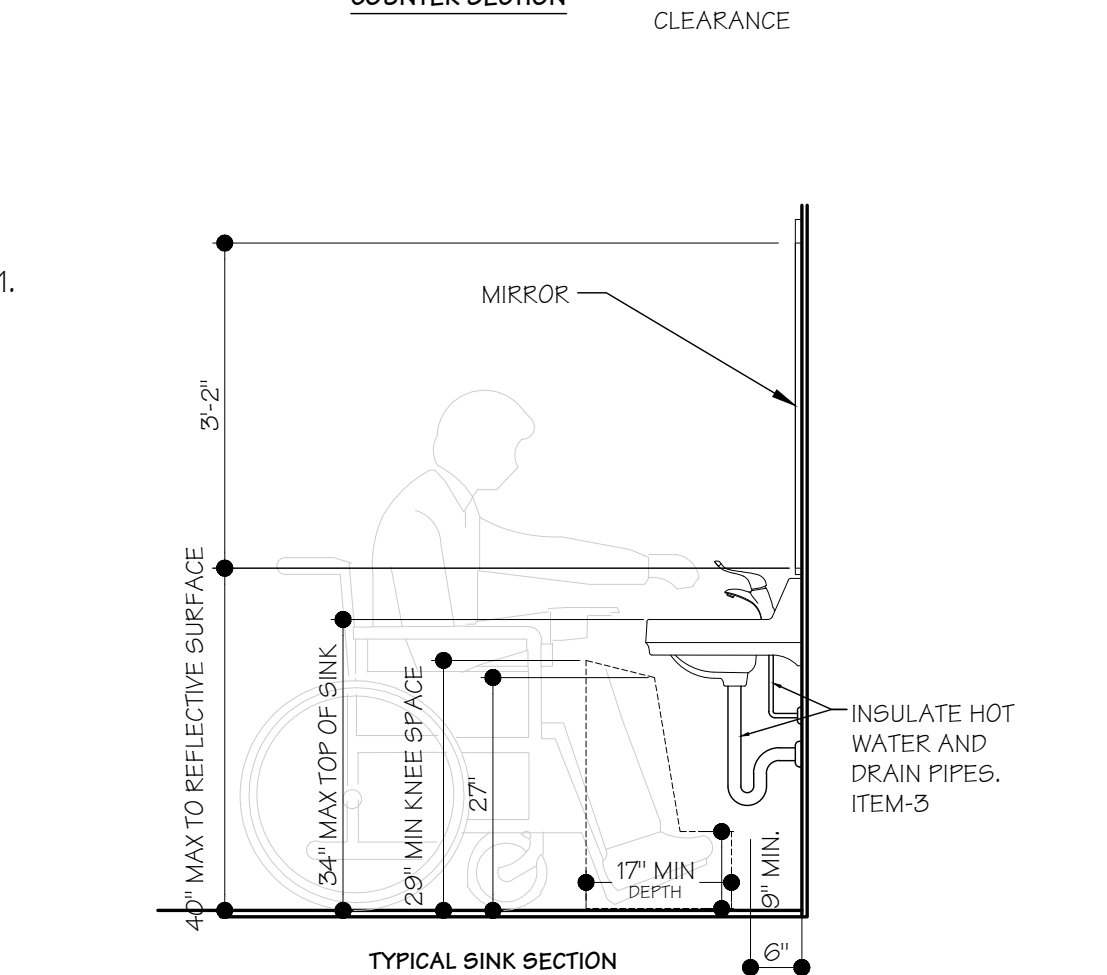
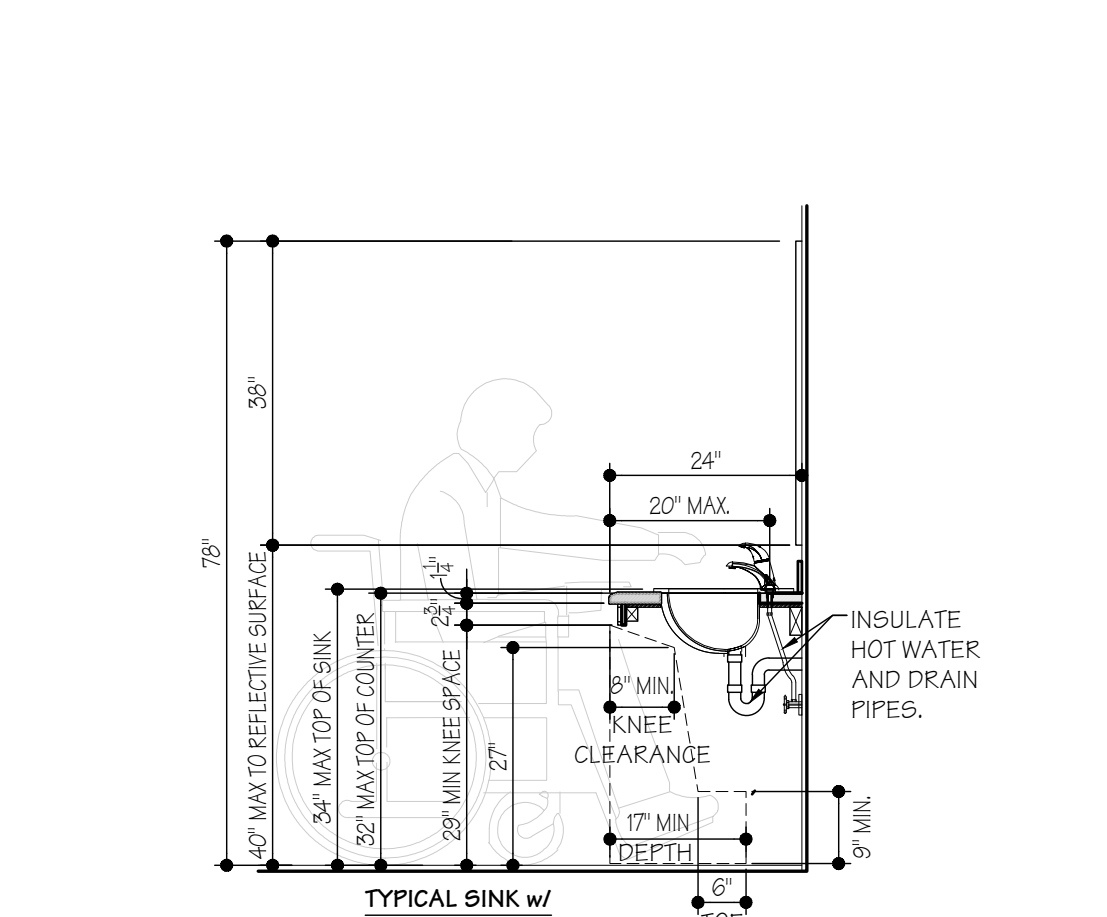
- URINALS SHALL BE THE STALL-TYPE OR THE WALL-HUNG TYPE WITH THE RIM 17 INCHES (430 MM) MAXIMUM ABOVE THE FLOOR.



### LAVATORIES & SINKS

- A CLEAR FLOOR SPACE COMPLYING WITH ANSI REQUIREMENTS, POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED. KNEE AND TOE CLEARANCE COMPLYING WITH ANSI REQUIREMENTS SHALL BE PROVIDED. THE TOP OF THE OVERFLOW SHALL NOT BE CONSIDERED IN DETERMINING KNEE AND TOE CLEARANCE. **EXCEPTIONS:** 1. THE REQUIREMENT FOR KNEE AND TOE CLEARANCE SHALL NOT APPLY TO MORE THAN ONE BOWL OF A MULTI-BOWL SINK. 2. A PARALLEL APPROACH SHALL BE PERMITTED AT VET BARS.
- THE FRONT OF LAVATORIES AND SINKS SHALL BE 34 INCHES (865 MM) MAXIMUM ABOVE THE FLOOR, MEASURED TO THE HIGHER OF THE RIM OR COUNTER SURFACE.
- FAUCETS SHALL COMPLY WITH ANSI "OPERABLE PARTS" REQUIREMENTS. HAND-OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.
- WHERE ENHANCED REACH RANGE IS REQUIRED AT LAVATORIES, FAUCETS AND SOAP DISPENSER CONTROLS SHALL HAVE A REACH DEPTH OF 11 INCHES MAXIMUM OR, IF AUTOMATIC, SHALL BE ACTIVATED WITHIN A REACH DEPTH OF 11 INCHES MAXIMUM. WATER AND SOAP FLOW SHALL BE PROVIDED WITH A REACH DEPTH OF 11 INCHES MAXIMUM.
- WATER SUPPLY AND DRAINPIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS.
- OPERABLE PARTS ON TOWEL DISPENSERS AND HAND DRYERS SHALL COMPLY WITH THE FOLLOWING TABLE:

MAXIMUM REACH DEPTH AND HEIGHT FOR TOWEL DISPENSERS AND HAND DRYERS	1 INCH	2 INCHES	5 INCHES	6 INCHES	9 INCHES	11 INCHES
MAXIMUM REACH DEPTH	48 INCHES	46 INCHES	42 INCHES	40 INCHES	36 INCHES	34 INCHES
MAXIMUM REACH HEIGHT	48 INCHES	46 INCHES	42 INCHES	40 INCHES	36 INCHES	34 INCHES



### MIRRORS:

- WHERE MIRRORS ARE LOCATED ABOVE LAVATORIES, A MIRROR SHALL BE LOCATED OVER THE ACCESSIBLE LAVATORY AND SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES (1015 MM) MAXIMUM ABOVE THE FLOOR. WHERE MIRRORS ARE LOCATED ABOVE COUNTERS THAT DO NOT CONTAIN LAVATORIES, THE MIRROR SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FLOOR.

- EXCEPTION: OTHER THAN WITHIN ACCESSIBLE DWELLING OR SLEEPING UNITS, MIRRORS ARE NOT REQUIRED OVER THE LAVATORIES OR COUNTERS IF A MIRROR IS LOCATED WITHIN THE SAME TOILET OR BATHING ROOM AND MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FLOOR.

## 2009 ANSI ACCESSIBLE BUILDING STANDARDS

### SIGNS

- CHARACTERS SHALL BE UPPERCASE, LOWERCASE, OR A COMBINATION OF BOTH.
- CHARACTERS SHALL BE CONVENTIONAL IN FORM. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
- THE UPPERCASE LETTER "T" SHALL BE USED TO DETERMINE THE ALLOWABLE HEIGHT OF CHARACTERS OF A FONT. THE UPPERCASE LETTER "T" SHALL HAVE A MINIMUM HEIGHT COMPLYING WITH THE FOLLOWING TABLE. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN.
- THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55% MINIMUM AND 100% MAXIMUM OF THE HEIGHT OF THE UPPERCASE "T" OF THE FONT.
- THE UPPERCASE LETTER "I" SHALL BE USED TO DETERMINE THE ALLOWABLE STROKE WIDTH OF ALL CHARACTERS OF A FONT. THE STROKE WIDTH SHALL BE 10% MINIMUM AND 30% MAXIMUM OF THE HEIGHT OF THE UPPERCASE "T" OF THE FONT.
- SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT CHARACTERS WITHIN A MESSAGE SPACES. SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 10% MINIMUM AND 35% MAXIMUM OF THE CHARACTER HEIGHT.
- SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135% MINIMUM TO 170% MAXIMUM OF THE CHARACTER HEIGHT.
- VISUAL CHARACTERS SHALL BE 40 INCHES MINIMUM ABOVE THE FLOOR OF THE VIEWING POSITION, MEASURED TO THE BASELINE OF THE CHARACTER. HEIGHTS SHALL COMPLY WITH THE FOLLOWING TABLE, BASED ON THE SIZE AND CHARACTERS ON THE SIGN.
- CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND, WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND, OR DARK CHARACTERS ON A LIGHT BACKGROUND.

### VISUAL CHARACTER HEIGHT

HEIGHT ABOVE FLOOR TO BASELINE OF CHARACTER	HORIZONTAL VIEWING DISTANCE	MINIMUM CHARACTER HEIGHT
40 INCHES TO LESS THAN OR EQUAL TO 70 INCHES	LESS THAN 6 FEET 6 FEET AND GREATER	5/8 INCH 5/8 INCH, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 6 FEET
GREATER THAN 70 INCHES TO LESS THAN OR EQUAL TO 120 INCHES	LESS THAN 15 FEET 15 FEET AND GREATER	2 INCHES 2 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 15 FEET
GREATER THAN 120 INCHES	LESS THAN 21 FEET 21 FEET AND GREATER	3 INCHES 3 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 21 FEET

### TACTILE CHARACTERS:

- TACTILE CHARACTERS SHALL BE RAISED 1/32 INCH MINIMUM ABOVE THEIR BACKGROUND
- CHARACTERS SHALL BE UPPERCASE
- CHARACTERS SHALL BE SAN SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
- THE UPPERCASE LETTER "T" SHALL BE USED TO DETERMINE THE ALLOWABLE HEIGHT OF ALL CHARACTERS OF A FONT. THE HEIGHT OF THE UPPERCASE LETTER "T" OF THE FONT, MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM. **EXCEPTION:** WHERE SEPARATE TACTILE AND VISUAL CHARACTERS WITH THE SAME INFORMATION ARE PROVIDED, THE HEIGHT OF THE TACTILE UPPERCASE "T" SHALL BE PERMITTED TO BE 1/2 INCH MINIMUM

- THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55% MINIMUM AND 100% MAXIMUM OF THE HEIGHT OF THE UPPERCASE "T" OF THE FONT.

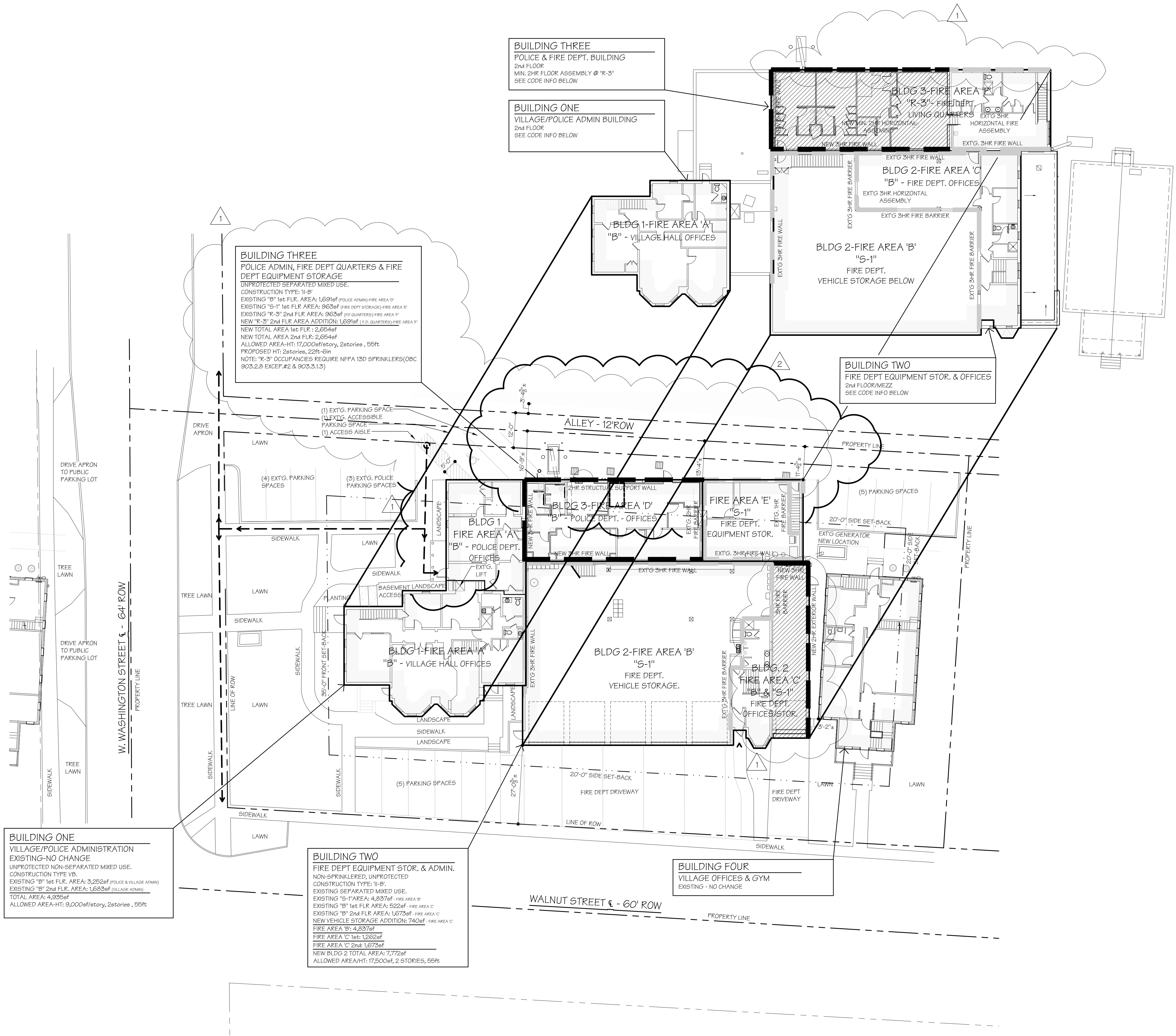
- THE UPPERCASE LETTER "I" OF THE FONT SHALL BE USED TO DETERMINE THE ALLOWABLE STROKE WIDTH OF ALL CHARACTERS OF A FONT

- THE STROKE WIDTH SHALL BE 15% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I" MEASURED AT THE BASE OF THE CHARACTER.

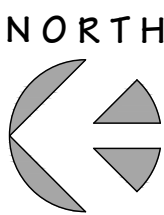
- WHEN CHARACTERS ARE BOTH VISUAL AND TACTILE, THE STROKE WIDTH SHALL BE 10% MINIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I"

- CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT TACTILE CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES.
- SPACING BETWEEN INDIVIDUAL TACTILE CHARACTER SHALL BE 1/8 INCH MINIMUM MEASURED AT THE TOP SURFACE OF THE CHARACTERS,





BUILDING SEPARATION LEGEND	
	3 HR - EXISTING WALL
	3 HR - NEW WALL
	2 HR - EXISTING WALL
	2 HR - NEW WALL
	1 HR - EXISTING WALL
	1 HR - NEW WALL
BUILDING AREA LEGEND	
	BUILDING PERIMETER
	BUILDING ADDITION
	ACCESSIBLE SITE PATHWAY FROM PARKING/STREET TO BUILDING ENTRANCE, DOES NOT CONTAIN RAMPS OR SLOPES GREATER THAN EQUAL TO 1:20.



SITE PLAN AND BUILDING IDENTIFICATION

1/16" = 1'-0" 1



VILLAGE OF CHAGRIN FALLS  
POLICE & FIRE STATION RENOVATION  
21 WEST WASHINGTON STREET  
CHAGRIN FALLS, OHIO 44022

RSA ARCHITECTS, LLC  
10 NORTH MAIN STREET  
CHAGRIN FALLS, OHIO 44022  
TELEPHONE: (440) 247-3900  
FAX (440) 247-3255  
www.rsaarchitects.com



SEAL:  
  
RICHARD E. SIEGFRIED,  
LICENSE #6307548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1		04/16/18
ADDENDUM #2		09/05/18

DATE	SET	ISSUANCE	FOR	BY
03-11-18	18	ISSUED FOR BID	4	PERMIT
03-26-18	18	ISSUED FOR BID	4	PERMIT
05-08-18	18	ISSUED FOR STATE	4	OWNER COMMENTS
07-13-18	18	ISSUED FOR STATE	4	OWNER COMMENTS
07-26-18	18	ISSUED FOR STATE	4	OWNER COMMENTS
08-04-18	18	ISSUED FOR STATE	4	OWNER COMMENTS

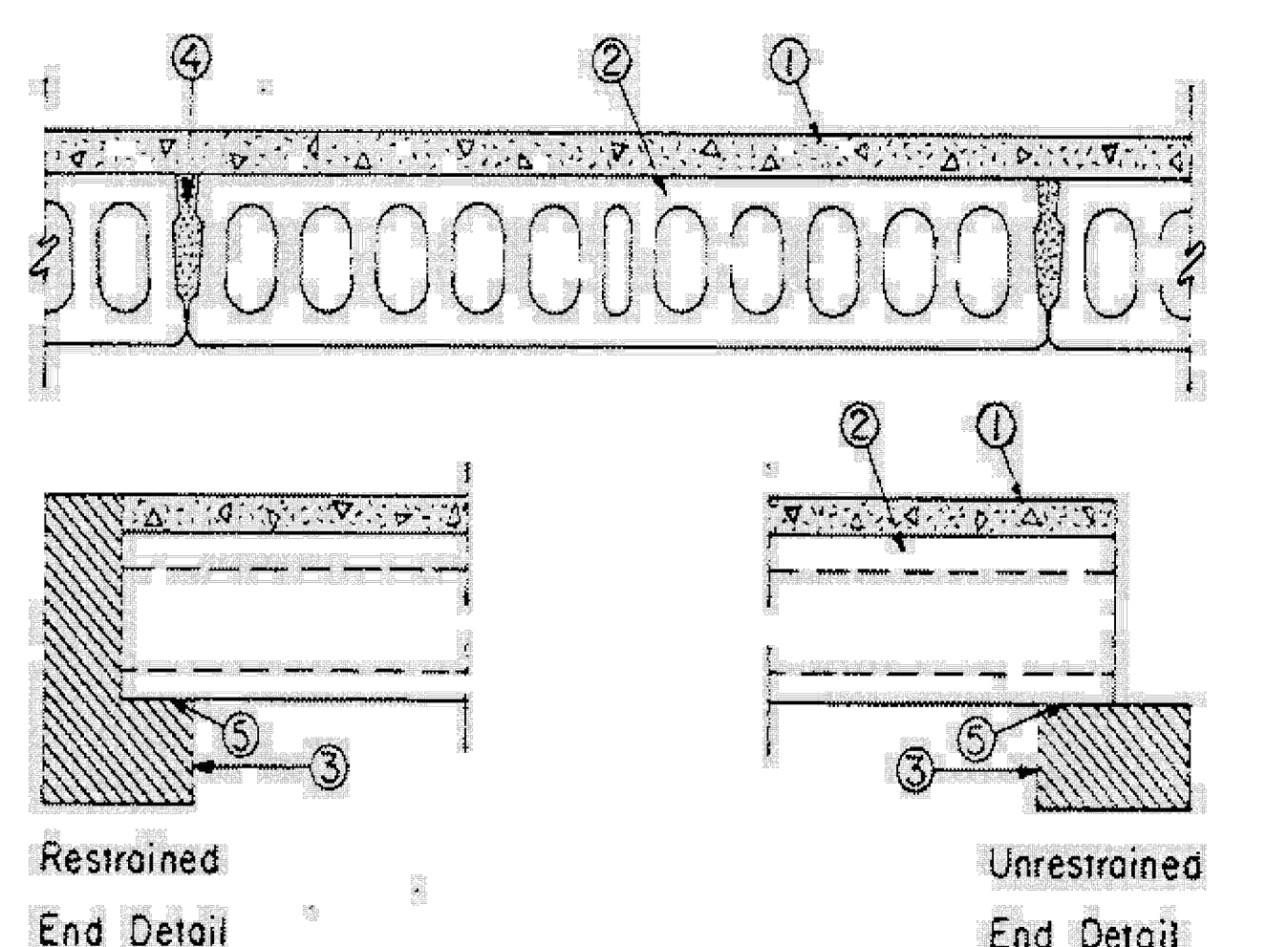
PROJECT #: 17121

SITE PLAN

SHEET NUMBER:

A-031



	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div>Quickly find, specify, or verify UL Certified products for your projects.</div><div><div>1. HOW DO YOU WANT TO SEARCH?</div><div>2. RESULTS</div></div><div><div>FIRE-RESISTANCE DESIGN</div><div>Assembly Usage Disclaimer</div><div><div><div>BXUV - Fire Resistance Ratings - ANSI/UL 263</div><div>BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada</div><div>See General Information for Fire-resistance Ratings - ANSI/UL 263</div><div>See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada</div></div><div><div>Design No. J924</div><div>September 29, 2017</div></div><div><div>Restrained Assembly Ratings — 2, 3 and 4 Hr.</div><div>(See item 1 and 2)</div><div>Unrestrained Assembly Rating — 1 Hr.</div></div><div><div>This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide <b>BXUV</b> or <b>BXUV7</b></div><div>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</div></div></div></div><div>1 of 9</div><div>11/2/2017, 9:26 AM</div></div>	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div><div>1. Concrete Topping — Normal-Weight aggregate, 3000 psi compressive strength, 110 to 155 pcf unit weight. Concrete topping is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1</td></tr><tr><td>4</td><td>8</td><td>1-1/2</td></tr><tr><td>2</td><td>10</td><td>0</td></tr><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1</td></tr></table><div>1A. Floor Topping Mixture* — Alternate to Item 1 - Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. Floor Topping Mixture is required for the following units only:</div></div></div></div> <div>2 of 9</div> <div>11/2/2017, 9:26 AM</div>	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1	4	8	1-1/2	2	10	0	3	10	0	4	10	1	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><table><tr><th></th><th>Unit</th><th>Topping</th></tr><tr><td></td><td></td><td></td></tr></table><div><div>HACKER INDUSTRIES INC Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Gyp-Span Radiant</div><div>Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 3/4 in. (19 mm).</div><div>HACKER INDUSTRIES INC FIRM-FILL SCM 125</div><div>Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1 in. (25 mm).</div><div>HACKER INDUSTRIES INC Type FIRM-FILL SCM 250</div><div>Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)</div><div>HACKER INDUSTRIES INC FIRM-FILL SCM 400</div><div>Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).</div><div>HACKER INDUSTRIES INC Type FIRM-FILL SCM 750</div><div>Metal Lath (Optional) — For use with 3/8 in. (10 mm), or greater, floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1 in. (25 mm) over the floor mat.</div></div></div></div> <div>3 of 9</div> <div>11/2/2017, 9:26 AM</div>		Unit	Topping				<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div>1B. Floor Topping Mixture* — Alternate to Items 1 and 1A - Floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. Thickness per table.</div><div>HACKER INDUSTRIES INC Firm-Fill Gypsum Concrete, Firm-Fill High Strength, Gyp-Span Radiant</div><div>Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.</div><div>ECORE INTERNATIONAL INC — Type QTscu 4002</div><div>HACKER INDUSTRIES INC — Type Hacker Sound-Mat</div><div>Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.</div><div>ECORE INTERNATIONAL INC — Type QTrbm 3006-3</div><div>HACKER INDUSTRIES INC — Type Hacker Sound-Mat II</div><div>Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.</div><div>1C. Alternate Finish Flooring — Floor Topping Mixture* — Min. 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. Floor Topping Mixture is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1/2</td></tr><tr><td>4</td><td>8</td><td>3/4</td></tr><tr><td>2</td><td>10</td><td>0</td></tr></table></div></div> <div>4 of 9</div> <div>11/2/2017, 9:26 AM</div>	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1/2	4	8	3/4	2	10	0																																															
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<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><table><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1/2</td></tr></table><div>MAXXON CORP — Type D-C, GC, GC 2000, L-R, T-F, CT, SS</div><div>RAPID FLOOR SYSTEMS — Types RF, RFP, RFU, RFR, Ortelcrete</div><div>Floor Mat Materials* (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.</div><div>MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat 3, Acousti-Mat 3 HP, Acousti-Mat LP, Acousti-Mat LP-R, Acousti-Mat SD.</div><div>Floor Mat Reinforcement(Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping over each floor mat material, primers, and use of crack suppression reinforcement.</div><div>MAXXON CORP — Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)</div><div>Metal Lath(For use with or as alternate to Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.</div><div>1D. Alternate Floor Topping Mixture* — Compressive strength to be 1800 psi minimum. Refer to manufacturer's instructions accompanying the material for specific mix design. Floor Topping Mixture is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1/2</td></tr><tr><td>4</td><td>8</td><td>3/4</td></tr><tr><td>2</td><td>10</td><td>0</td></tr><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1/2</td></tr></table></div></div> <div>5 of 9</div> <div>11/2/2017, 9:26 AM</div>	3	10	0	4	10	1/2	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1/2	4	8	3/4	2	10	0	3	10	0	4	10	1/2	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div>UNITED STATES GYPSUM CO — Type CSD, LRK, HRLRK</div><div>USG MEXICO S A DE C V — Types LRK, HSLRK, CSD</div><div>Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material. UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25</div><div>Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 3/4 in. over the floor mat. GRASSWORX L L C — Type SC50</div></div></div> <div>6 of 9</div> <div>11/2/2017, 9:26 AM</div>	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div>1E. Alternate Floor Topping Mixture* — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design. Floor Topping Mixture is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1/2</td></tr><tr><td>4</td><td>8</td><td>3/4</td></tr><tr><td>2</td><td>10</td><td>0</td></tr><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1/2</td></tr></table><div>ALLIED CUSTOM GYPSUM — Accu-Crete, AccuRadiant, AccuLevel G40, AccuLevel SD30, and AccuLevel G50.</div><div>Alternate Floor Mat Material* - (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.</div><div>ALLIED CUSTOM GYPSUM — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, Type AccuQuiet D-18, Type AccuQuiet D25 and Type AccuQuiet DX38.</div><div>1F. Alternate Floor Topping Mixture* — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design. Floor Topping Mixture is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1/2</td></tr><tr><td>4</td><td>8</td><td>3/4</td></tr><tr><td>2</td><td>10</td><td>0</td></tr><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1/2</td></tr></table></div></div> <div>7 of 9</div> <div>11/2/2017, 9:26 AM</div>	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1/2	4	8	3/4	2	10	0	3	10	0	4	10	1/2	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1/2	4	8	3/4	2	10	0	3	10	0	4	10	1/2	<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div>FORMULATED MATERIALS LLC — Types FR-25, FR-30, SiteMix, and SiteMix SL</div><div>Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.</div><div>FORMULATED MATERIALS LLC — Types M1, M2, M3, R1, and R2</div><div>1G. Alternate Floor Topping Mixture* — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design. Floor Topping Mixture is required for the following units only:</div><table><tr><th>Rating Hr</th><th>Unit Thk In.</th><th>Topping Thkns In.</th></tr><tr><td>2</td><td>8</td><td>0</td></tr><tr><td>3</td><td>8</td><td>1/2</td></tr><tr><td>4</td><td>8</td><td>5/8</td></tr><tr><td>2</td><td>10</td><td>0</td></tr><tr><td>3</td><td>10</td><td>0</td></tr><tr><td>4</td><td>10</td><td>1/2</td></tr></table><div>2. Precast Concrete Units* — 8, 10 and 12 in. thick units. Normal weight aggregate. Cross-section similar to the above illustration. For 12 in. units, the Rating is 4 hrs with or without a topping. When units are made without core holes, the Rating is 4 hrs with or without a topping. CONEWAGO BUILDING SYSTEMS L L C</div><div>KERKSTRA PRECAST INC</div><div>SPANCRETE INDUSTRIES INC</div><div>SPANCRETE NORTHEAST INC</div><div>3. End Details — Restrained and unrestrained.</div><div>4. Grout — Sand cement type, 3500 psi compressive strength.</div><div>5. Min Bearing — 1-1/2 in. for assembly rating of 3 hr or less and 3 in. for assembly rating of 4 hr.</div><div>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as</div></div></div> <div>8 of 9</div> <div>11/2/2017, 9:26 AM</div>	Rating Hr	Unit Thk In.	Topping Thkns In.	2	8	0	3	8	1/2	4	8	5/8	2	10	0	3	10	0	4	10	1/2
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<div><div>UL Product Spec</div><div>http://productspec.ul.com/document.php?id=BXUVJ924</div><div><div>Canada), respectively.</div><div>Last Updated on 2017-09-29</div><div>Design/System/Construction/Assembly Usage Disclaimer</div><div><div>• Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.</div><div>• Authorities Having Jurisdiction should be consulted before construction.</div><div>• Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.</div><div>• When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.</div><div>• Only products which bear UL's Mark are considered Certified.</div></div></div></div> <div>9 of 9</div> <div>11/2/2017, 9:26 AM</div>	<div><div>The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.</div><div>UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2017 UL LLC".</div><div><div>Print</div><div>New Search</div><div>Other helpful UL resources</div><div>Request a Field Evaluation</div></div><div>UL and the UL logo are trademarks of UL LLC © 2017 All Rights Reserved. Online Policies. About Cookies.</div></div> <div>9 of 9</div> <div>11/2/2017, 9:26 AM</div>	<div><div>NOTE: THIS LISTED ASSEMBLY HAS BEEN REPRINTED FROM THE ONLINE CERTIFICATIONS DIRECTORY WITH PERMISSION FROM UL. © 2017 UL LLC</div></div>																																																																																											

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POLICE & FIRE STATION RENOVATION

21 WEST WASHINGTON STREET

CHAGRIN FALLS, OHIO 44022

RS&A ARCHITECTS, LLC

10 NORTH MAIN STREET

CHAGRIN FALLS, OHIO 44022

TELEPHONE: (440) 347-3900

FAX: (440) 347-3285

www.rsarchitects.com

PG. ISSUANCE

DATE

ADDENDUM #1

04/16/18

ADDENDUM #2

09/05/18

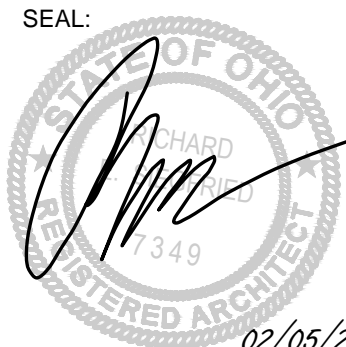
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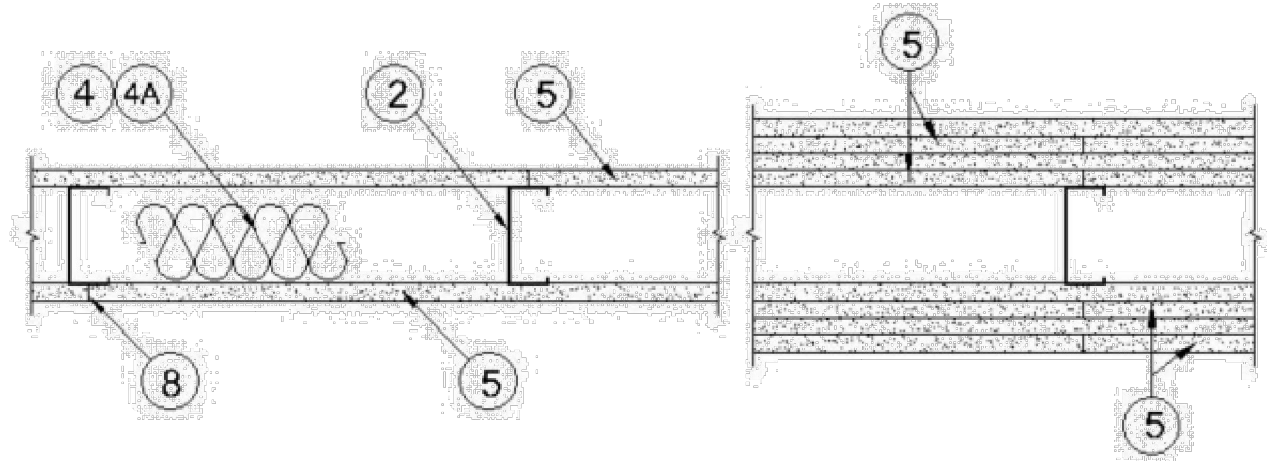


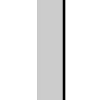
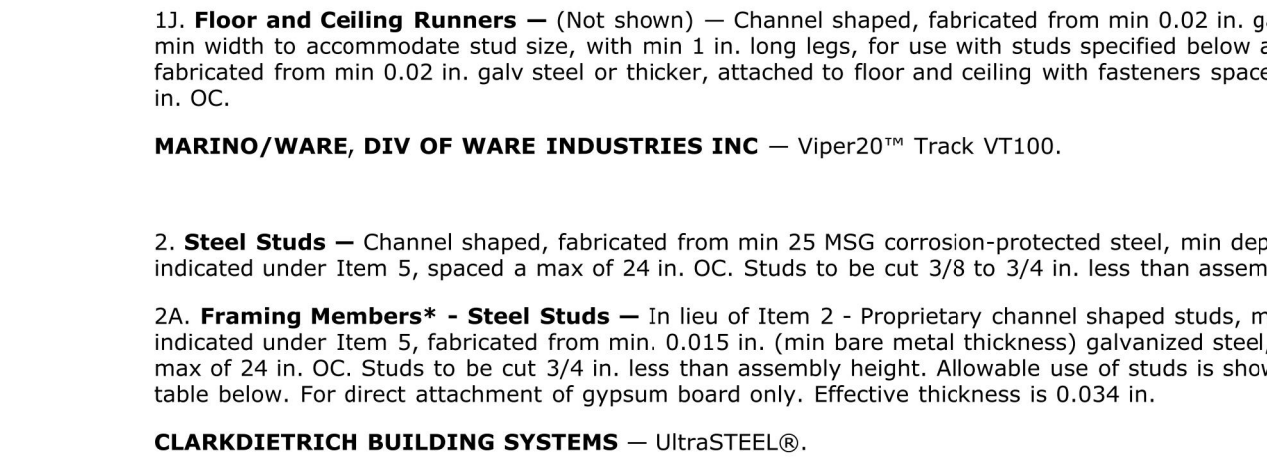
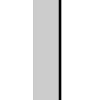


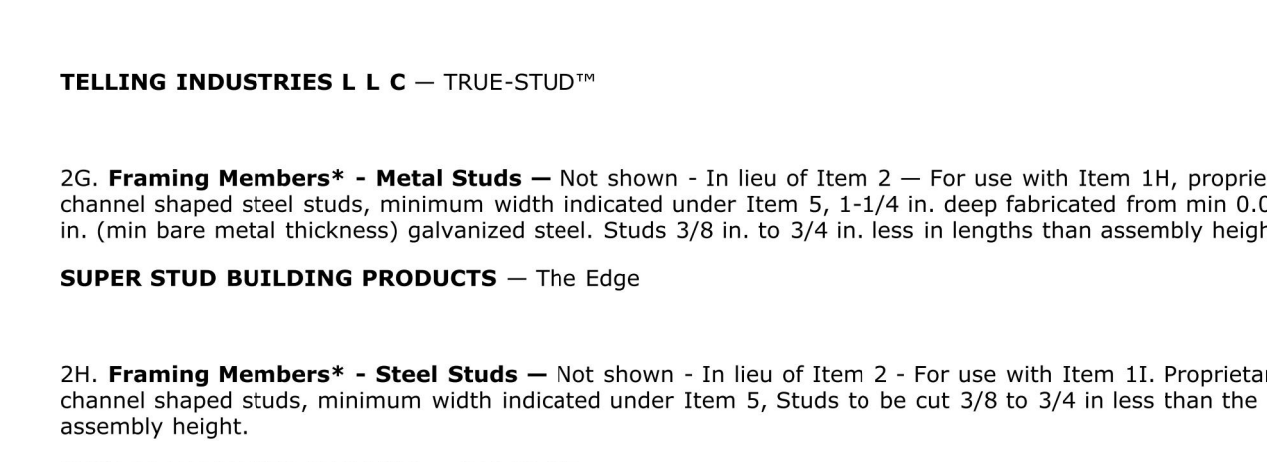

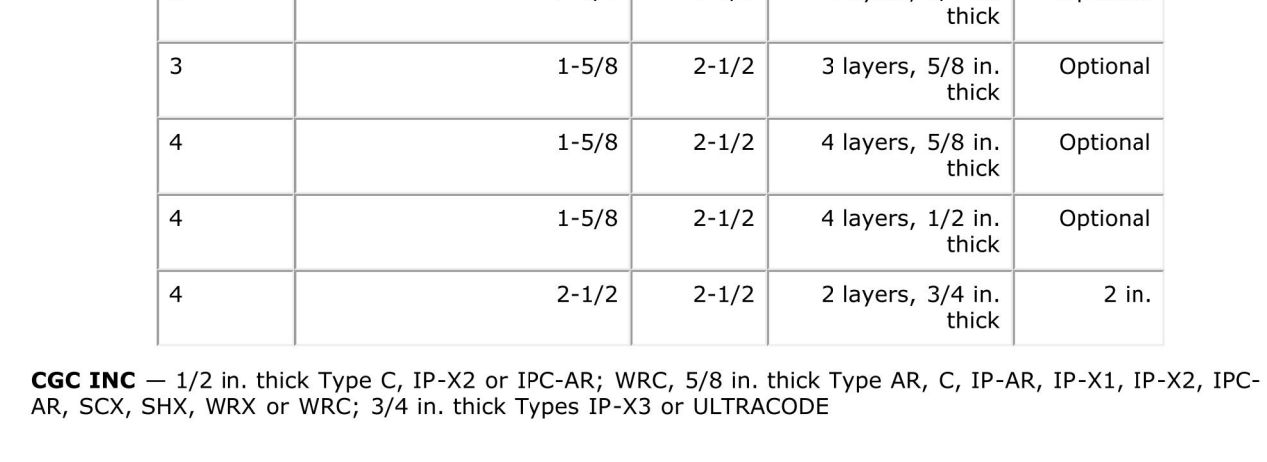
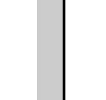
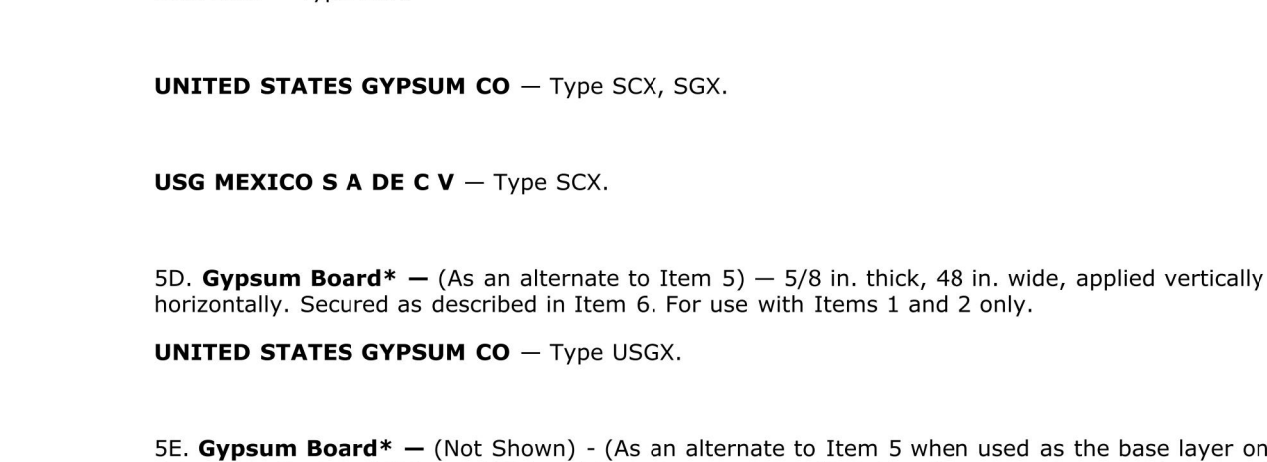
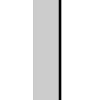
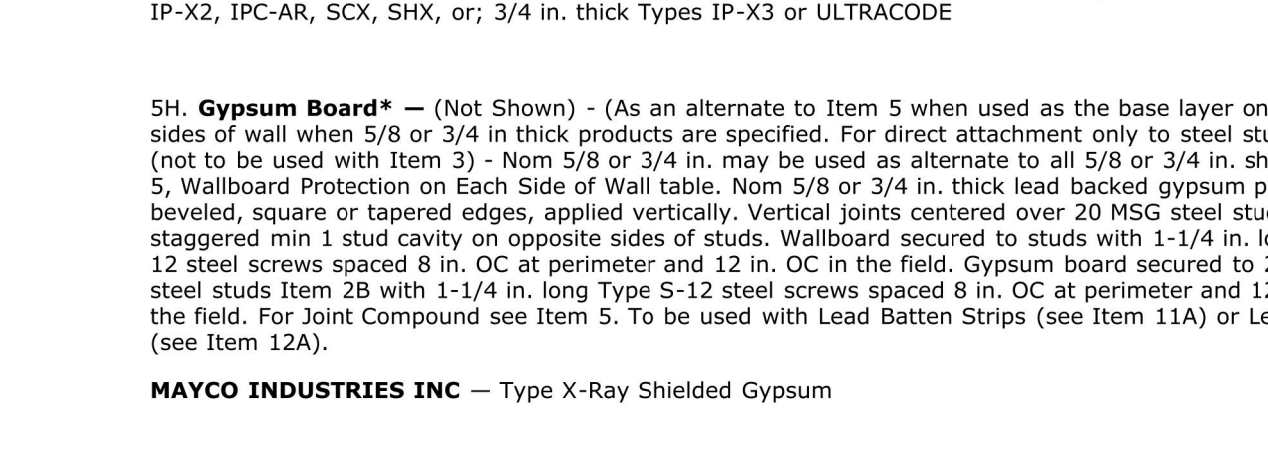
SEAL:  
  
02/06/20  
RICHARD E. SIEGFRIED,  
LICENSE #8907548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1	04/16/18	
ADDENDUM #2	09/05/18	

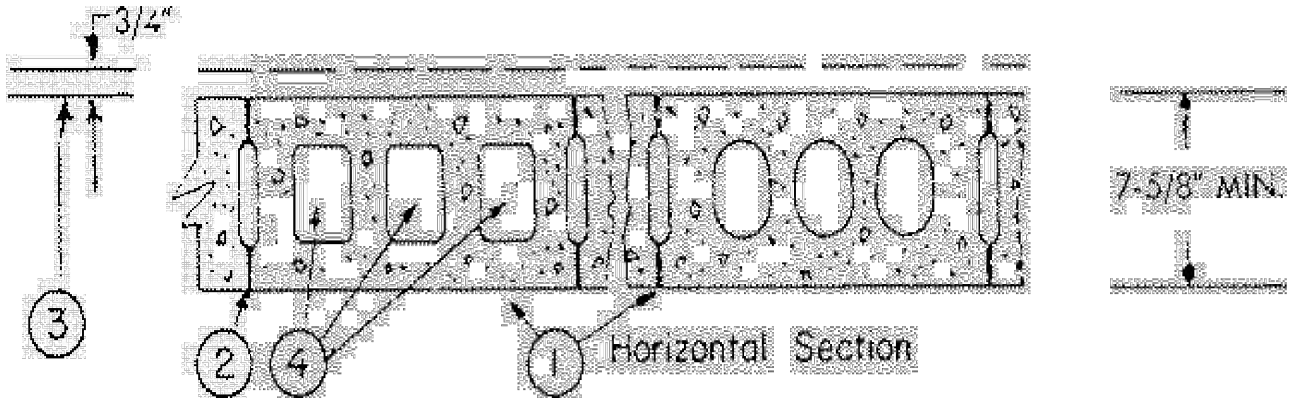
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03-26-18	ISSUED FOR BID	PERMIT
03-06-18	ISSUED PER STATE	OWNER COMMENTS
01-13-18	ISSUED PER STATE	OWNER COMMENTS
07-26-18	ISSUED PER STATE	OWNER COMMENTS
02-04-20	ISSUED PER STATE	OWNER COMMENTS

PROJECT #: 17121  
LISTED WALL  
ASSEMBLY  
J-924 3HR  
Horizontal  
Rated Design  
SHEET NUMBER:  
A-041



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(min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>1B. <b>Framing Members* - Floor and Ceiling Runners</b> — (Not shown - In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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(min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>1B. <b>Framing Members* - Floor and Ceiling Runners</b> — (Not shown - In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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OC.</p> <p><b>MARINO/WARE, DIV OF WARE INDUSTRIES INC</b> — Viper25™</p> <p>2. <b>Steel Studs</b> — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.</p> <p>2A. <b>Framing Members* - Steel Studs</b> — In lieu of Item 2 - Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>2B. <b>Steel Studs</b> — (As an alternate to Item 2, For use with Items 5B &amp; 5E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.</p> <p>2C. <b>Framing Members* - Steel Studs</b> — (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.</p> <p><b>CALIFORNIA EXPANDED METAL PRODUCTS CO</b> — Viper25™</p> <p><b>CRACO MFG INC</b> — SmartTrack™</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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Studs to be cut 3/8 to 3/4 in. less than assembly height.</p> <p>2A. <b>Framing Members* - Steel Studs</b> — In lieu of Item 2 - Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>2B. <b>Steel Studs</b> — (As an alternate to Item 2, For use with Items 5B &amp; 5E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.</p> <p>2C. <b>Framing Members* - Steel Studs</b> — (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.</p> <p><b>CALIFORNIA EXPANDED METAL PRODUCTS CO</b> — Viper25™</p> <p><b>CRACO MFG INC</b> — SmartTrack™</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>																												
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(min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>1B. <b>Framing Members* - Floor and Ceiling Runners</b> — (Not shown - In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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OC.</p> <p><b>MARINO/WARE, DIV OF WARE INDUSTRIES INC</b> — Viper20™</p> <p>2. <b>Steel Studs</b> — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.</p> <p>2A. <b>Framing Members* - Steel Studs</b> — In lieu of Item 2 - Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.</p> <p><b>CLARKDIETRICH BUILDING SYSTEMS</b> — UltraSTEEL®.</p> <p>2B. <b>Steel Studs</b> — (As an alternate to Item 2, For use with Items 5B &amp; 5E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.</p> <p>2C. <b>Framing Members* - Steel Studs</b> — (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.</p> <p><b>CALIFORNIA EXPANDED METAL PRODUCTS CO</b> — Viper20™</p> <p><b>CRACO MFG INC</b> — SmartTrack™</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.</p> <p><b>CGC INC</b> — Type SCX.</p> <p><b>UNITED STATES GYPSUM CO</b> — Type SCX, SGX.</p> <p><b>USG MEXICO S A DE C V</b> — Type SCX.</p> <p>5D. <b>Gypsum Board*</b> — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.</p> <p><b>UNITED STATES GYPSUM CO</b> — Type USGX.</p> <p>5E. <b>Gypsum Board*</b> — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2B, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 (or No. 6) in. 1-1/4 in. long bugle head fine filler) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.</p> <p><b>NEW ENGLAND LEAD BURNING CO INC, DBA NELCO</b> — Nelco</p> <p>5F. <b>Gypsum Board*</b> — (As an alternate to Item 5) — For use with Items 1G and 2F and limited to 1 Hour Rating only. Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type 5 screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.</p> <p><b>UNITED STATES GYPSUM CO</b> — 5/8 in. thick Type SCX, SGX.</p> <p>5G. <b>Gypsum Board*</b> — (As an alternate to Item 5) — For use with Items 1G and 2F only. Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:</p> <table border="1"> <thead> <tr> <th>Rating, Hr</th> <th>Min Stud Depth, Item 2F</th> <th>No. of Layers &amp; Thickness of Panel</th> <th>Min Thkns of Insulation (Item 4)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1-5/8</td> <td>2 layers, 1/2 in. thick</td> <td>Optional</td> </tr> <tr> <td>2</td> <td>1-5/8</td> <td>2 layers, 5/8 in. thick</td> <td>Optional</td> </tr> <tr> <td>3</td> <td>1-5/8</td> <td>3 layers, 1/2 in. thick</td> <td>Optional</td> </tr> <tr> <td>3</td> <td>1-5/8</td> <td>3 layers, 5/8 in. thick</td> <td>Optional</td> </tr> <tr> <td>4</td> <td>1-5/8</td> <td>4 layers, 5/8 in. thick</td> <td>Optional</td> </tr> <tr> <td>4</td> <td>1-5/8</td> <td>4 layers, 1/2 in. thick</td> <td>Optional</td> </tr> </tbody> </table> <p><b>CGC INC</b> — 1/2 in. thick Type C, IP-X2 or IPC-AR; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE</p> <p><b>UNITED STATES GYPSUM CO</b> — Type FRX-G, SHX.</p> <p><b>USG MEXICO S A DE C V</b> — Type SHX.</p> <p>5B. <b>Gypsum Board*</b> — (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2B, not to be used with Item 3) - Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).</p> <p><b>RAY-BAR ENGINEERING CORP</b> — Type RB-LBG</p> <p>5C. <b>Gypsum Board*</b> — (For Use With Item 2C) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide. Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type 5 coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type 5 coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum</p> </div> <div> <a href="http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/.../ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a> [6/25/2012 2:42:18 PM] </div>	Rating, Hr	Min Stud Depth, Item 2F	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)	2	1-5/8	2 layers, 1/2 in. thick	Optional	2	1-5/8	2 layers, 5/8 in. thick	Optional	3	1-5/8	3 layers, 1/2 in. thick	Optional	3	1-5/8	3 layers, 5/8 in. thick	Optional	4	1-5/8	4 layers, 5/8 in. thick	Optional	4	1-5/8	4 layers, 1/2 in. thick	Optional	<div> <div>  <b>ONLINE CERTIFICATIONS DIRECTORY</b> <a href="#">Home</a> <a href="#">Quick Guide</a> <a href="#">Contact Us</a> <a href="#">UL.com</a> </div> <div> <b>Design No. U419</b>  <b>BXUV U419</b>  <b>Fire Resistance Ratings - ANSI/UL 263</b> </div> <div> <a href="#">Page Bottom</a> </div> </div> <div> <b>Design/System/Construction/Assembly Usage Disclaimer</b> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. 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For direct attachment only to steel studs Item 2B, not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).</p> <p><b>MAYCO INDUSTRIES INC</b> — Type X-Ray Shielded Gypsum</p> <p>5I. <b>Gypsum Board*</b> — (As an alternate to Item 5) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.</p> <p><b>CGC INC</b> — Type ULX</p> <p><b>UNITED STATES GYPSUM CO</b> — Type ULX</p> <p><b>USG MEXICO S A DE C V</b> — Type ULX</p> <p>5J. <b>Gypsum Board*</b> — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2B, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 in long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type 5-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-C-201H, Grade 1-C.</p> <p><b>RADIATION PROTECTION PRODUCTS INC</b> — Type RPP-LBG</p> <p>6. <b>Fasteners</b> — (Not shown) — For use with Items 2 and 2F - Type 5 or 5-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). <b>Single layer systems:</b> 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. <b>Two layer systems:</b> First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 3/4 in. thick panels, spaced 16 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.</p> <p>6A. <b>Fasteners</b> — (Not shown) —For use with Item 2A - Type 5 or 5-12 steel screws used to attach panels to studs (Item 2A). <b>Single layer systems:</b> 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC with additional screws 1 in. and 2-1/2 in. from edges of the board when panels are horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. <b>Two layer systems applied vertically:</b> First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8</p> </div> <div> </div>
Rating, Hr	Min Stud Depth, Item 2F	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)																												
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4	1-5/8	4 layers, 5/8 in. thick	Optional																												
4	1-5/8	4 layers, 1/2 in. thick	Optional																												



		<div><div>BXUV U419 - Fire Resistance Ratings - ANSI/UL 263</div><div><p>in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. <b>Two layer systems applied horizontally:</b> First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board with screws offset 8 in. from first layer. <b>Three-layer systems:</b> First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board. <b>Four-layer systems:</b> First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board.</p><p><b>7. Furring Channels</b> – (Optional, not shown, for single or double layer systems) – Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E.</p><p><b>7A. Framing Members*</b> – (Not Shown) – (Optional on one or both sides, not shown, for single or double layer systems) – As an alternate to Item 7, furring channels and Steel Framing Members as described below:</p><p>a. <b>Furring Channels</b> – Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.</p><p>b. <b>Steel Framing Members*</b> – Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.</p><p><b>PAC INTERNATIONAL INC</b> – Types RSIC-1, RSIC-V.</p><p><b>7B. Framing Members*</b> – (Optional, Not Shown) – As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:</p><p>a. <b>Furring Channels</b> – Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A and 5E.</p><p>b. <b>Steel Framing Members*</b> – Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC, and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.</p><p><b>KINETICS NOISE CONTROL INC</b> – Type Isomax</p><p><b>7C. Framing Members*</b> – Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S-12 steel screws through the center hole of the clip and the resilient channel flange.</p><p><b>KEENE BUILDING PRODUCTS CO INC</b> – Type RC Assurance.</p><p><b>7D. Framing Members*</b> – (Not Shown) – (Optional on one or both sides, not shown, for single or double layer systems) – As an alternate to Item 7, furring channels and Steel Framing Members as described below:</p><p>a. <b>Furring Channels</b> – Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.</p><p>b. <b>Steel Framing Members*</b> – Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.</p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>	<div><div>UL Product Spec</div><div><a href="http://productspec.ul.com/document.php?id=BXUV.U904">http://productspec.ul.com/document.php?id=BXUV.U904</a></div><div><p><b>1. Concrete Blocks*</b> – Various designs. Classification C-3 (3 hr). See <b>Concrete Blocks</b> category for list of eligible manufacturers.</p><p><b>2. Mortar</b> – Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.</p><p><b>3. Portland Cement Stucco or Gypsum Plaster</b> – Add 1/2 hr to Classification if used. Attached to concrete bolcks (Item 1).</p><p><b>4. Loose Masonry Fill</b> – If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellent vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 1 hr to Classification.</p><p><b>5. Foamed Plastic*</b> – (Optional-Not Shown) – 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1)</p><p><b>ATLAS ROOFING CORP</b> – "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation."</p><p><b>CARLISLE COATINGS &amp; WATERPROOFING INC</b> – Type R2+ Sheath</p><p><b>FIRESTONE BUILDING PRODUCTS CO L L C</b> – "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"</p><p><b>HUNTER PANELS</b> – Type Xci-Class A, Xci 286</p><p><b>RMAX OPERATING L L C</b> – "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"</p><p><b>THE DOW CHEMICAL CO</b> – Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation,</p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>
	<div><div>UL Product Spec</div><div><a href="http://productspec.ul.com/document.php?id=BXUV.U904">http://productspec.ul.com/document.php?id=BXUV.U904</a></div><div><p>Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP) and TUFF-R™ ci Insulation</p><p><b>5A. Building Units</b> – As an alternate to Item 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.</p><p><b>RMAX OPERATING L L C</b> – "Thermasheath-SI", "ECOBASeci", "ThermaBase-CI"</p><p><b>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</b></p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>	<div><div>UL Product Spec</div><div><a href="http://productspec.ul.com/document.php?id=BXUV.U904">http://productspec.ul.com/document.php?id=BXUV.U904</a></div><div><p>notice in the following format: "© 2017 UL LLC".</p><p><b>Print</b></p><p><b>New Search</b></p><p>Other helpful UL resources</p><p>Request a Field Evaluation</p><p>UL and the UL logo are trademarks of UL LLC © 2017 All Rights Reserved. Online Policies. About Cookies.</p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>	
	<div><div>UL Product Spec</div><div><a href="http://productspec.ul.com/document.php?id=BXUV.U904">http://productspec.ul.com/document.php?id=BXUV.U904</a></div><div><p>notice in the following format: "© 2017 UL LLC".</p><p><b>Print</b></p><p><b>New Search</b></p><p>Other helpful UL resources</p><p>Request a Field Evaluation</p><p>UL and the UL logo are trademarks of UL LLC © 2017 All Rights Reserved. Online Policies. About Cookies.</p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>	<div><div>UL Product Spec</div><div><a href="http://productspec.ul.com/document.php?id=BXUV.U904">http://productspec.ul.com/document.php?id=BXUV.U904</a></div><div><p>notice in the following format: "© 2017 UL LLC".</p><p><b>Print</b></p><p><b>New Search</b></p><p>Other helpful UL resources</p><p>Request a Field Evaluation</p><p>UL and the UL logo are trademarks of UL LLC © 2017 All Rights Reserved. Online Policies. About Cookies.</p></div><div><a href="http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1">http://database.ul.com/...ANSI/UL+263&amp;objid=1074330521&amp;cfigid=1073741824&amp;version=versionless&amp;parent_id=1073984818&amp;sequence=1</a>[6/25/2012 2:42:18 PM]</div></div>	

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3 of 4

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FIRE-RESISTANCE DESIGN

Assembly Usage Disclaimer

    BXUV - Fire Resistance Ratings - ANSI/UL 263

    BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U904

March 11, 2016

Bearing Wall Rating — 3 HR.

Nonbearing Wall Rating — 3 HR.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

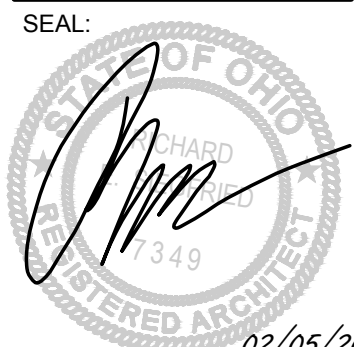
\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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FAX (440) 247-3285  
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SEAL:  
  
RICHARD E. SIEGFRIED,  
LICENSE #8307348  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1	04/16/18	
ADDENDUM #2	09/05/18	

DATE	SET	ISSUANCE	FOR	BID	#	PERMIT
03-19-18	18	ISSUED	FOR	BID	4	PERMIT
03-26-18	18	ISSUED	FOR	STATE	4	OWNER COMMENTS
05-08-18	18	ISSUED	FOR	STATE	4	OWNER COMMENTS
01-13-19	19	ISSUED	FOR	STATE	4	OWNER COMMENTS
07-22-20	20	ISSUED	FOR	STATE	4	OWNER COMMENTS
02-04-21	21	ISSUED	FOR	STATE	4	OWNER COMMENTS

PROJECT #:

17121

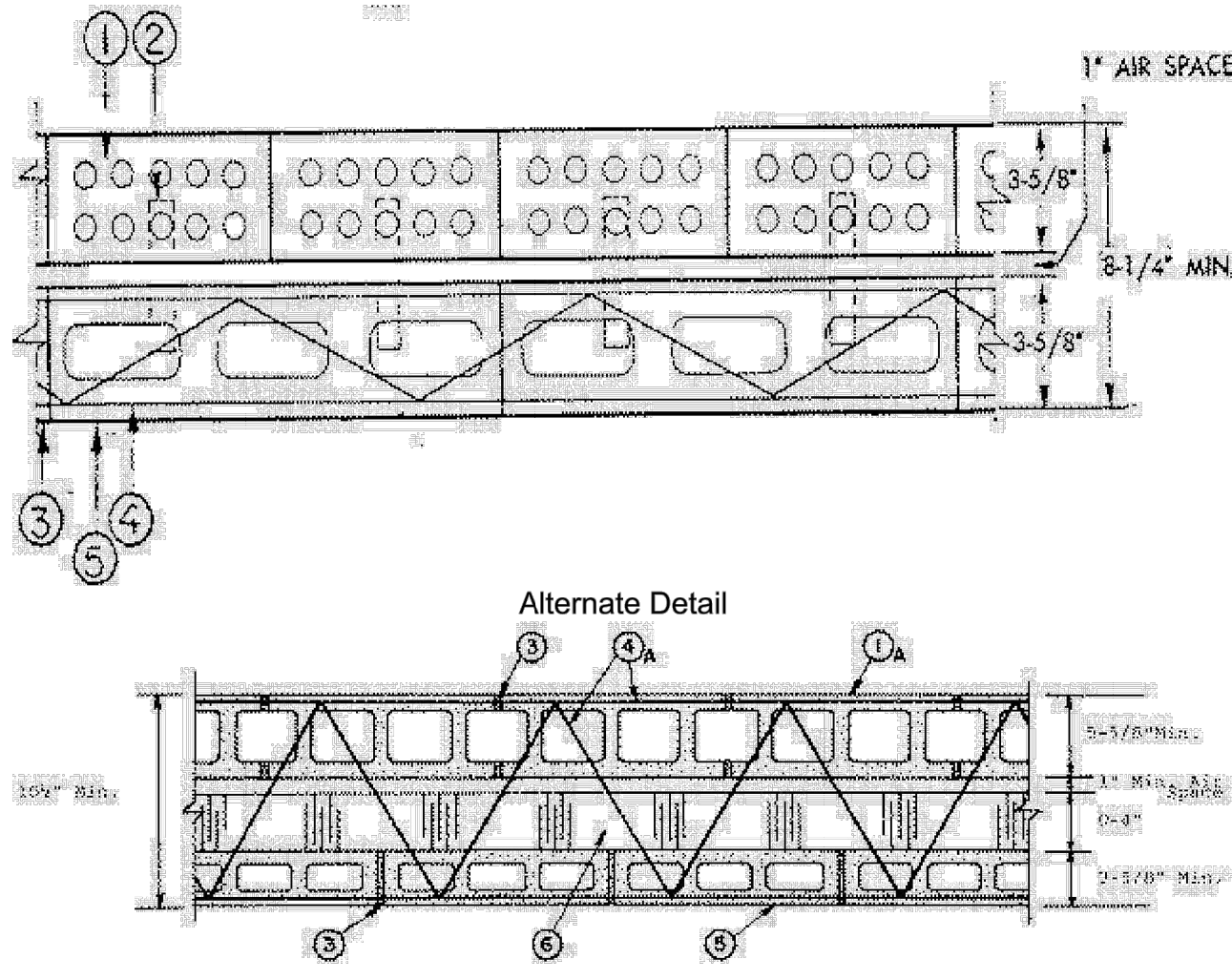
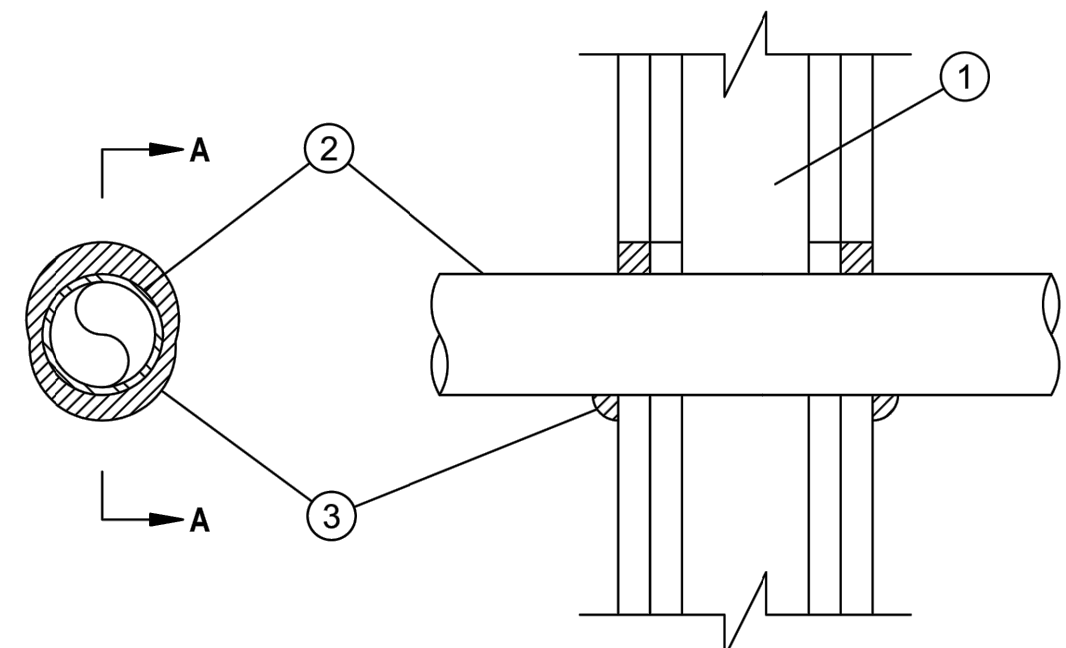
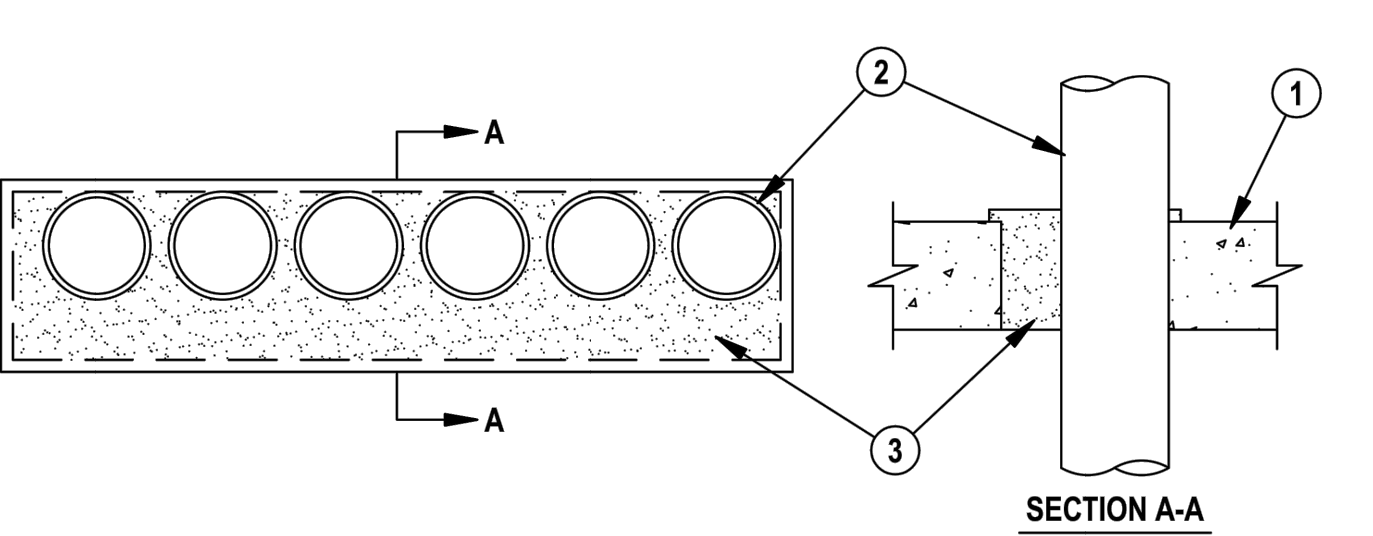
LISTED WALL  
ASSEMBLIES  
U-419 (cont.)  
/U-904

SHEET NUMBER:

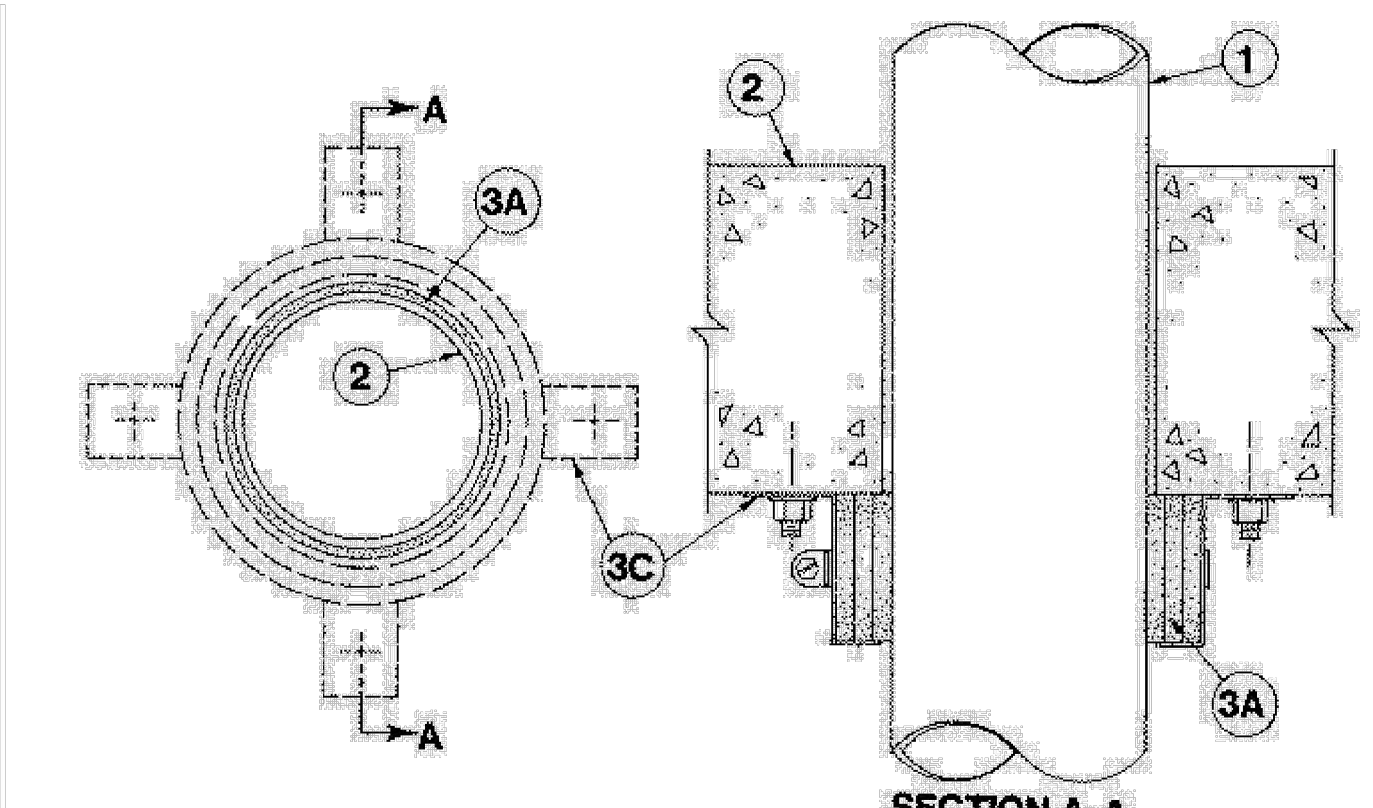
A-043

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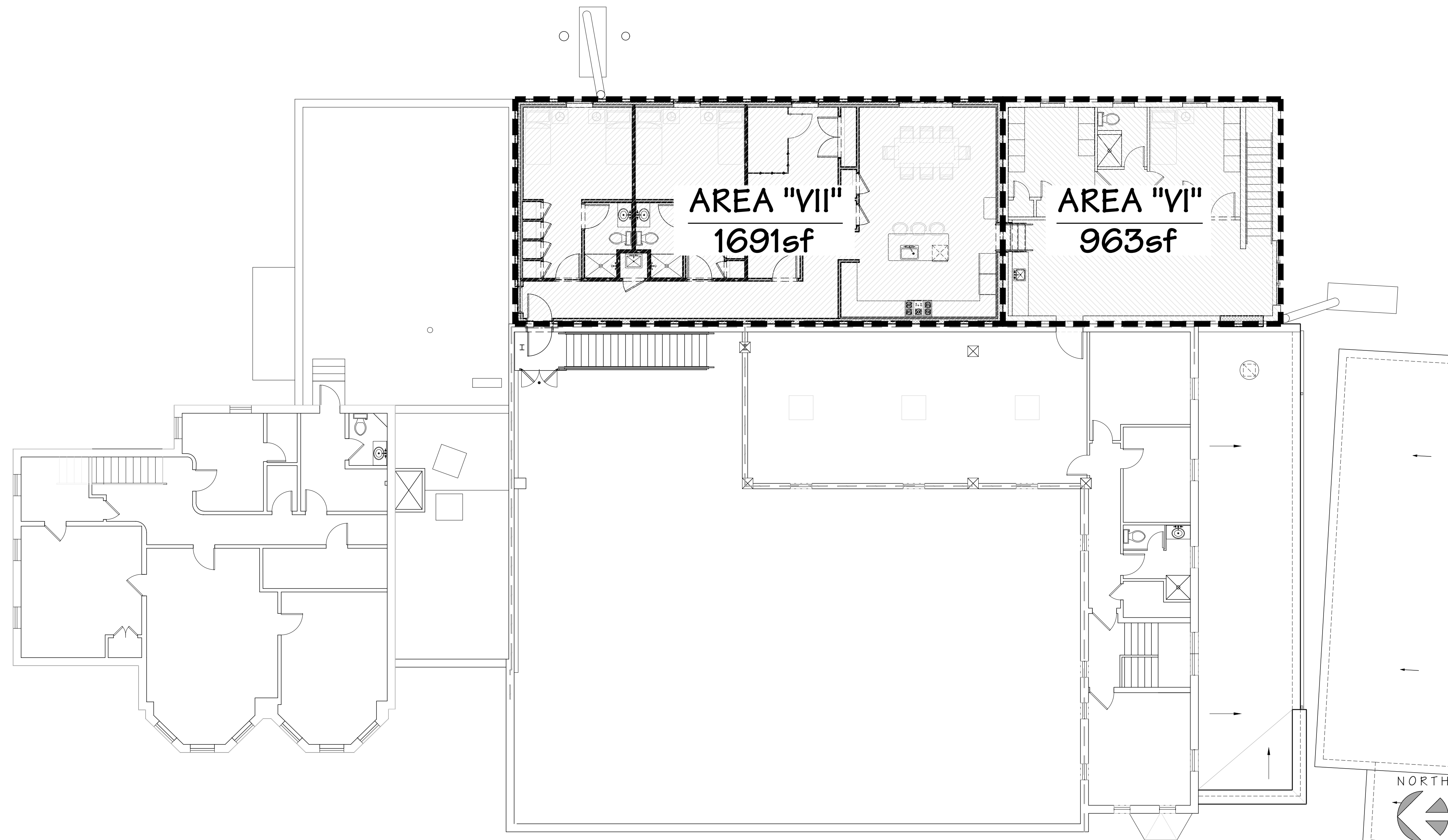


<div> <div>U902 - BXUV/U902 - UL Product Spec</div> <div>http://productspec.ul.com/document.php?id=BXUV/U902</div> </div> <div> <div>Quickly find, specify, or verify UL Certified products for your projects.</div> <div> <div>1. HOW DO YOU WANT TO SEARCH?</div> <div>2. RESULTS</div> </div> <div> <div>FIRE-RESISTANCE DESIGN</div> <div>Assembly Usage Disclaimer</div> <div> <div>BXUV - Fire Resistance Ratings - ANSI/UL 263</div> <div>BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada</div> <div>See General Information for Fire-resistance Ratings - ANSI/UL 263</div> <div>See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada</div> </div> <div> <div>Design No. U902</div> <div>June 22, 2017</div> </div> <div>Bearing Wall Rating — 4 HR.</div> <div> <div>This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7</div> <div>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</div> </div> </div> <div> <div>1 of 5</div> <div>3/16/2018, 4:31 PM</div> </div> </div>	<div> <div>U902 - BXUV/U902 - UL Product Spec</div> <div>http://productspec.ul.com/document.php?id=BXUV/U902</div> </div> <div>  <div> <div>1. Clay Face Brick — 3-5/8 in. wide by 2-1/4 in. high by 8 in. long.</div> <div>1A. Concrete Blocks* — Various designs, Classification D-2 (2 h). See Concrete Blocks category for list of eligible manufacturers.</div> <div>2. Brick Ties — 3/4 in. wide, 7 in. long corrugated 26 MSG galv steel. Spaced one to each brick in every second course of blocks.</div> <div>3. Mortar — Bricks and blocks laid in full bed of mortar nom. 3/8 in. thick of not less than 2-1/4 and not more than 3-1/2 parts clean sharp sand to 1 part Portland cement (proportioned by vol) and not more than 50 percent hydrated lime (by cement vol). Vertical joints staggered.</div> <div>4. Reinforcement — Parallel and diagonal rods, 0.150 in. min diam with welded joints a max 16 in. OC. Placed the width of concrete block wall in every second course of blocks alternately with brick ties.</div> <div>4A. Masonry Reinforcement — Prefabricated steel reinforcement, truss or ladder type, used for embedment in every second horizontal mortar joint. Placed the full width of wall assembly. Side and cross rods No. 9 (0.150 in.) min diam with welded joints a max 16 in. OC.</div> <div>5. Concrete Blocks* — Various designs Classification D-2 (2 h). See Concrete Blocks category for list of eligible manufacturers.</div> </div> <div> <div>2 of 5</div> <div>3/16/2018, 4:31 PM</div> </div> </div>	<div> <div>U902 - BXUV/U902 - UL Product Spec</div> <div>http://productspec.ul.com/document.php?id=BXUV/U902</div> </div> <div> <div>6. Foamed Plastic* — (Optional — Not shown with clay face brick detail) Rigid polystyrene insulation for use between brick and/or concrete blocks. One or more layers of rigid extruded polystyrene insulation, 4 in. thick max having 1 in. min air space with face brick or blocks.</div> <div>ATLAS EPS, DIV OF ATLAS ROOFING CORP — Type ThermalStar</div> <div>OC CELFORTEC LP</div> <div>OWENS CORNING SCIENCE AND TECHNOLOGY, LLC — Types 150 or 250</div> <div>DOW CHEMICAL CO</div> <div>6A. Foamed Plastic* — (Optional-Not shown with clay face brick detail). Rigid polyisocyanurate insulation for use between brick and/or concrete blocks. One or more layers of rigid extruded polystyrene insulation, 4 in. thick max having 1 in. min air space with face brick or blocks.</div> <div>ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation."</div> <div>CARLISLE COATINGS &amp; WATERPROOFING INC — Type R2+ Sheath</div> <div>FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"</div> <div>HUNTER PANELS — Type Xci-Class A, Xci 286, "Xci CG", "Xci Foil"</div> <div>RMX OPERATING L L C — "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"</div> <div>THE DOW CHEMICAL CO — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP) and TUFF-R™ ci Insulation</div> <div>6B. Foamed Plastic* — (Optional-Not shown with clay face brick detail). Two-component foamed plastic formed from NCFI 11-001, NCFI 11-002, NCFI 11-015, NCFI 11-016 or NCFI11-017 spray applied between brick and/or concrete blocks at a nominal density of 2.1 pcf, 4 in. thick max,</div> <div> <div>3 of 5</div> <div>3/16/2018, 4:31 PM</div> </div> </div>	<div> <div>U902 - BXUV/U902 - UL Product Spec</div> <div>http://productspec.ul.com/document.php?id=BXUV/U902</div> </div> <div> <div>having a 1 in. min air space with face brick or blocks.</div> <div>NCFI POLYURETHANES</div> <div>6C. Foamed Plastic* — (Optional-Not shown with clay face brick detail). Spray applied, foamed plastic insulation spray applied between brick and/or concrete blocks, having a 1 in. min air space with face brick or blocks.</div> <div>BASF CORP — Enerlite® NM, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, FE137®, FE158®, Spraytite® 158, Spraytite® SP and Spraytite® 81205.</div> <div>6D. Building Unit* — (Optional-Not shown with clay face brick detail). Rigid polyisocyanurate composite insulation for use between brick and/or concrete blocks.</div> <div>HUNTER PANELS — Type "Xci NB" and "Xci Ply"</div> <div>RMX OPERATING L L C — "Thermasheath-SI", "ECOBASeci", "ThermaBase-CI"</div> <div>7. Wall and Partition Facing and Accessories — (Not Shown) Installed in accordance with the manufacturers installation instructions. Min. 0.25 in. (6 mm) thick panel fastened to the exterior surface.</div> <div>KEENE BUILDING PRODUCTS CO INC — Types Driwall Rainscreen 020, Driwall Rainscreen 10 and CAV-AIR-ATOR</div> <div>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</div> <div>Last Updated on 2017-06-22</div> <div>Design/System/Construction/Assembly Usage Disclaimer</div> <div> <div>• Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.</div> <div>• Authorities Having Jurisdiction should be consulted before construction.</div> <div>• Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.</div> <div>• When field issues arise, it is recommended the first contact for assistance be the</div> </div> <div> <div>4 of 5</div> <div>3/16/2018, 4:31 PM</div> </div> </div>
<div> <div>U902 - BXUV/U902 - UL Product Spec</div> <div>http://productspec.ul.com/document.php?id=BXUV/U902</div> </div> <div> <div>technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.</div> <div>• Only products which bear UL's Mark are considered Certified.</div> <div>The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. 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About Cookies.</div> </div> <div> <div>5 of 5</div> <div>3/16/2018, 4:31 PM</div> </div> </div>		<div> <div>System No. W-L-2244</div> <div>F Ratings – 1 and 2 Hr (See Item 1)</div> <div>T Ratings – 1 and 2 Hr (See Item 1)</div> <div>L Rating at Ambient - Less Than 1 CFM/sq ft</div> <div>L Rating at 600 F - 2 CFM/sq ft</div>  <div>SECTION A-A</div> <div> <div>1. Wall Assembly — The 1 and 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:</div> <div>A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.</div> <div>B. Gypsum Board* — The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3 in. (76 mm).</div> <div>The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.</div> <div>2. Through Penetrant — One nonmetallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min of 0 in. (point contact) to a max 5/8 in. (16 mm). Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:</div> <div>A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) cellular or solid core Schedule 40 (or heavier) pipe for use in closed (process or supply) piping systems.</div> <div>B. Chlorinated Polyvinyl Chloride (CPVC) — Nom 2 in. (51 mm) diam (or smaller) SDR 15.5 CPVC pipe for use in closed (process or supply) piping systems.</div> <div>3. Fill, Void or Condy Material* — Section — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall. At point contact location, a min 1/2 in. (13 mm) diam bead of fill material shall be applied to the wall/penetrant interface on both surfaces of the wall.</div> <div>HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant</div> <div>*Bearing the UL Classification Mark</div> </div> </div>	<div> <div>System No. C-AJ-1388</div> <div>F RATING = 2-HR</div> <div>T RATING = 0-HR</div>  <div>SECTION A-A</div> <div> <div>1. Floor or Wall Assembly Min 4-1/2 in. thick reinforced lightweight or normal weight (100–150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening 224 sq in. with max dimension of 32 in.</div> <div>See Concrete Blocks (CAZT) in the Fire Resistance Directory for names of manufacturers.</div> <div>2. Conduit One or more nom 4 in diam (or smaller) steel electrical metallic tubing or steel conduit to be installed either concentrically or eccentrically within the firestop system. The space between conduits or tubes shall be min 0 in. (point contact) to max 1/2 in. The annular space between the conduit or tube and periphery of opening shall be min 0 in. (point contact) to max 2-3/4 in. Conduit or tube to be rigidly supported on both sides of floor or wall assembly.</div> <div>Conduit — Nom 4 in. diam (or smaller) steel electrical metallic conduit or steel conduit.</div></div></div>

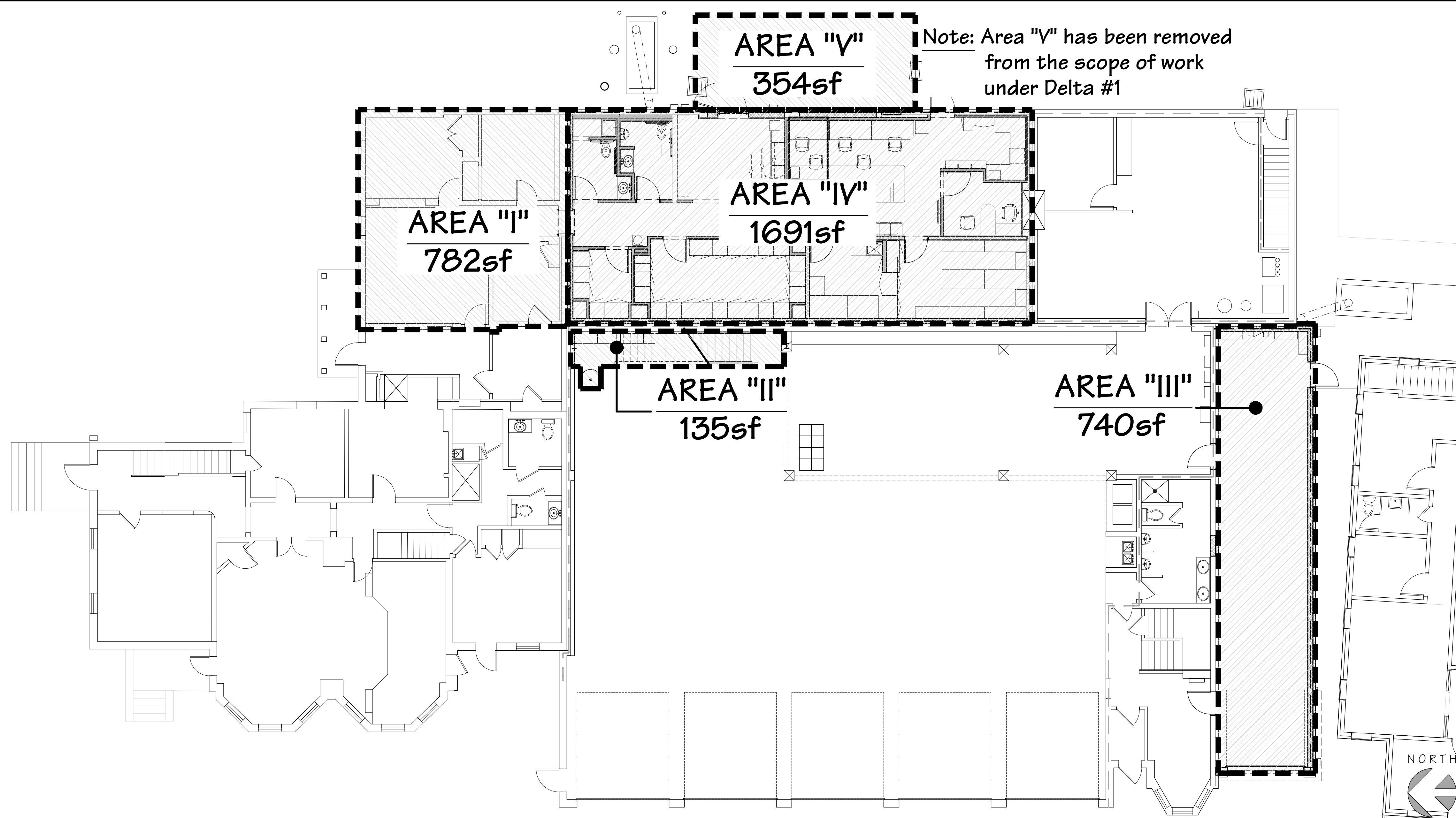


	<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p> <p>Quickly find, specify, or verify UL Certified products for your projects.</p> <p><b>1. HOW DO YOU WANT TO SEARCH?</b> <b>2. RESULTS</b></p> <p><b>THROUGH-PENETRATION FIRESTOP SYSTEM</b></p> <p>Assembly Usage Disclaimer</p> <p><b>Search Parameters</b></p> <p>Assembly type: Concrete or masonry walls &gt; 8 in. thick</p> <p>Penetrating item: Nonmetallic pipe, conduit or tubing</p> <p>Rating: F and T Rating ≥ 2 hr and &lt; 3 hr</p> <p><b>XHEZ - Through-penetration Firestop Systems</b></p> <p>See General Information for Through-penetration Firestop Systems</p> <p><b>System No. C-AJ-2001</b></p> <p>May 18, 2005</p> <p><b>F Rating — 2 Hr</b></p> <p><b>T Ratings — 0, 1-1/2 and 2 Hr (See Item 3)</b></p> <p><b>L Rating at Ambient — 7 CFM/sq ft (See Item 3B)</b></p> <p><b>L Rating at 400 F — 1 CFM/sq ft (See Item 3B)</b></p> <p>1 of 8</p> <p>5/1/2018, 2:22 PM</p>	<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p>  <p><b>1. Floor or Wall Assembly</b> — Lightweight or normal weight (100-150 pcf or 1600 - 2400 kg/m<sup>3</sup>) concrete. Except as footnoted for floor assembly in table under Item 3, min thickness of solid concrete floor or wall assembly is 4-1/2 in. (114 mm). Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow core <b>Precast Concrete Units*</b>. Wall may also be constructed of any UL Classified <b>Concrete Blocks*</b>. Diam of opening through floor or wall to be 0 to 1/4 in. (0 to 6 mm) larger than the outside diam of nom 2 in. (51 mm) diam and smaller pipes or conduits. Diam of opening to be 0 to 1/2 in. (0 to 13 mm) larger than the outside diam of nom 2-1/2 in. (64 mm) diam and larger pipes or conduits. Max diam of opening is 7 in. (178 mm). See <b>Concrete Blocks</b> (CAZT) and <b>Precast Concrete Units</b> (CFTV) categories in Fire Resistance Directory for names of manufacturers.</p> <p><b>2. Through Penetrants</b> — One nonmetallic pipe or conduit to be centered in the through opening. Pipe or conduit to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:</p> <p><b>A. Polyvinyl Chloride (PVC) Pipe</b> — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.</p> <p><b>B. Cellular — Core Polyvinyl Chloride (ccPVC) Pipe</b> — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or</p> <p>2 of 8</p> <p>5/1/2018, 2:22 PM</p>	<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p> <p>vented (drain, waste or vent) piping system.</p> <p><b>C. Chlorinated Polyvinyl Chloride (CPVC) Pipe</b> — Nom 6 in. (152 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.</p> <p><b>D. Acrylonitrile Butadiene Styrene (ABS) Pipe</b> — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.</p> <p><b>E. Cellular Core Acrylonitrile Butadiene Styrene (ccABS) Pipe</b> — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.</p> <p><b>F. Polybutylene (PB) Pipe</b> — Nom 3 in. (76 mm) diam (or smaller) SDR11 (or heavier) PB pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.</p> <p><b>G. Rigid Nonmetallic Conduit++</b> — Nom 4 in. (102 mm) diam (or smaller) (Schedule 40 or 80) PVC conduit installed in accordance with Article 347 of the National Electric Code (NFPA No. 70).</p> <p><b>H. Flame Retardant Polypropylene (FRPP) Pipe</b> — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 (or heavier) FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. See <b>Rigid Nonmetallic Conduit</b> (DZKT) category in UL Electrical Construction Materials Directory for names of manufacturers.</p> <p><b>3. Firestop System</b> — The details of the firestop system shall be as follows:</p> <p><b>A. Fill, Void or Cavity Materials* — Wrap Strip</b> — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 1 and 2 in. (25 and 51 mm) wide strips. Strips tightly wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the underside of the concrete floor or both sides of wall surface. Sufficient layers of wrap strip shall be installed to lap a min of 3/16 in. (5 mm) on the concrete around the entire perimeter of the through opening. The min wrap strip width and the min number of layers of wrap required is dependent upon the pipe type, the nom pipe diam, the wall of floor thickness and the hourly T Rating required, as shown in the following table.</p> <table border="1"> <thead> <tr> <th>ABS, ccABS or FRPP(a)</th> <th>4 (102)</th> <th>4-1/2 (114)</th> <th>PPD 400</th> </tr> </thead> <tbody> <tr> <td>PVC</td> <td>6 (152)</td> <td>4-1/2 (114)</td> <td>PPD 6</td> </tr> </tbody> </table> <p>(a) — Requires use of aluminum tape detailed in Item 3E.</p> <p>(b) — Requires use of pipe covering detailed in Item 3D.</p> <p><b>3M COMPANY</b></p> <p>++Bearing the UL Listing Mark</p> <p>*Bearing the UL Classification Mark</p> <p>Last Updated on 2005-05-18</p> <p><b>Design/System/Construction/Assembly Usage Disclaimer</b></p> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.</li> <li>When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.</li> <li>Only products which bear UL's Mark are considered Certified.</li> </ul> <p>The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.</p> <p>UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2018 UL LLC".</p> <p>3 of 8</p> <p>5/1/2018, 2:22 PM</p>	ABS, ccABS or FRPP(a)	4 (102)	4-1/2 (114)	PPD 400	PVC	6 (152)	4-1/2 (114)	PPD 6	<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p> <table border="1"> <thead> <tr> <th></th> <th>Nom</th> <th>Min</th> <th>Wrap</th> <th>Min</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(a) — Requires use of aluminum tape detailed in Item 3E.</p> <p>(b) — Requires use of pipe covering detailed in Item 3D.</p> <p>(c) — For nom 6 in. (152 mm) diam pipe, 1 in. and 2 in., (25 and 51 mm) wide wrap strips are "Stacked" to attain nom 3 in. (76 mm) wrap strip width.</p> <p>Each layer of wrap strip to be installed with butted seam with butted seams in successive layers staggered. Wrap strip layers temporarily held in position using aluminum foil tape, steel wire tie, or equivalent. In wall assemblies, the wrap strip is to be installed in the same manner used for floor assemblies, but it shall be installed symmetrically on both sides of the wall assembly.</p> <p><b>3M COMPANY — FS-195+</b></p> <p><b>B. Fill, Void or Cavity Materials* — Caulk, Sealant or Putty</b> — (Not Shown) — Generous bead of caulk or putty to be applied to outer perimeter of wrap strip at its interface with floor or wall surface(s).</p> <p><b>3M COMPANY</b> — CP 25WB+ caulk; FB-3000 WT sealant; Type MP+ Stix putty or IC 15WB+ caulk (Note: L Ratings apply only when Type CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.)</p> <p><b>C. Steel Collar</b> — Nom 1, 2 or 3 in. (25, 51 or 76 mm) deep collar, dependent upon wrap strip width, with 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs and min 1/2 in. (13 mm) long tabs to retain wrap strip layers. Coils of precut 0.016 in. (0.41 mm) thick (28 gauge) galv sheet steel available from wrap strip manufacturer. As an alternate, collar may be field-fabricated from min 0.016 in. (0.41 mm) thick (28 gauge) galv sheet steel in accordance with instruction sheet supplied by wrap strip manufacturer. Steel collar, with anchor tabs bent outward 90 deg, wrapped tightly around wrap strip layers with min 1 in. (25</p> <p>4 of 8</p> <p>5/1/2018, 2:22 PM</p>		Nom	Min	Wrap	Min						<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p> <p><b>Print</b> <b>New Search</b></p> <p>Other helpful UL resources</p> <p>Request a Field Evaluation</p> <p>UL and the UL logo are trademarks of UL LLC © 2018 All Rights Reserved. Online Policies. About Cookies.</p> <p>Last Updated on 2005-05-18</p> <p><b>Design/System/Construction/Assembly Usage Disclaimer</b></p> <ul style="list-style-type: none"> <li>Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.</li> <li>Authorities Having Jurisdiction should be consulted before construction.</li> <li>Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.</li> <li>When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. 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ABS, ccABS or FRPP(a)	4 (102)	4-1/2 (114)	PPD 400																				
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	<p>Through-penetration Firestop Systems: XHEZ-C-AJ-2001 - UL Product Spec</p> <p>http://productspec.ul.com/document.php?id=XHEZ-C-AJ-2001</p> <p>mm) overlap at seam. Anchor tabs to be pressed tightly against floor or wall surface(s), and collar to be compressed around wrap strip layers using a</p>																						






OVERALL 2nd FLOOR SCOPE AREA CALCULATION PLAN 1/8" = 1'-0" 2




OVERALL 1st FLOOR SCOPE AREA CALCULATION PLAN 1/8" = 1'-0" 1


AREA OF WORK - FOR FEE CALCULATION					
AREA DESIGNATION	AREA DESCRIPTION	AREA CALCULATIONS PER DISCIPLINE			
		BUILDING	MECHANICAL	ELECTRICAL	SPRINKLER
AREA "I"	BLDG 1-POLICE-EXTG		782		
AREA "II"	BLDG 2-FIRE-STAIR	135			
AREA "III"	BLDG 2-FIRE-ADD.	740	740	740	
AREA "IV"	BLDG 3-POLICE-EXTG	1691	1691	1691	
AREA "V"	BLDG 3-POLICE-ADD	354	354	354	
AREA "VI"	BLDG 3-FIRE-EXTG	963		963	
AREA "VII"	BLDG 3-FIRE-ADD	1691	1691	1691	
TOTAL		5574	5258	5439	



VILLAGE OF CHAGRIN FALLS  
POLICE & FIRE STATION RENOVATION  
21 WEST WASHINGTON STREET  
CHAGRIN FALLS, OHIO 44022

RSA ARCHITECTS, LLC  
10 NORTH MAIN STREET  
CHAGRIN FALLS, OHIO 44022  
TELEPHONE: (440) 247-3900  
FAX (440) 247-3285  
www.rsaarchitects.com



SEAL:  
  
02/06/20  
RICHARD E. SIEGFRIED  
LICENSE #0307548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG. ISSUANCE	DATE
ADDENDUM #1	04/16/18
ADDENDUM #2	09/05/18

DATE / SET ISSUANCE	FOR BID #	PERMIT
03-19-18	ISSUED FOR BID #	PERMIT
03-26-18	ISSUED FOR STATE #	OWNER COMMENTS
05-06-18	ISSUED FOR STATE #	OWNER COMMENTS
07-13-18	ISSUED FOR STATE #	OWNER COMMENTS
07-26-18	ISSUED FOR STATE #	OWNER COMMENTS
02-04-20	ISSUED FOR STATE #	OWNER COMMENTS

PROJECT #: 17121

BUILDING FEE CALCULATION

SHEET NUMBER:  
**A-051**

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VILLAGE OF CHAGRIN FALLS

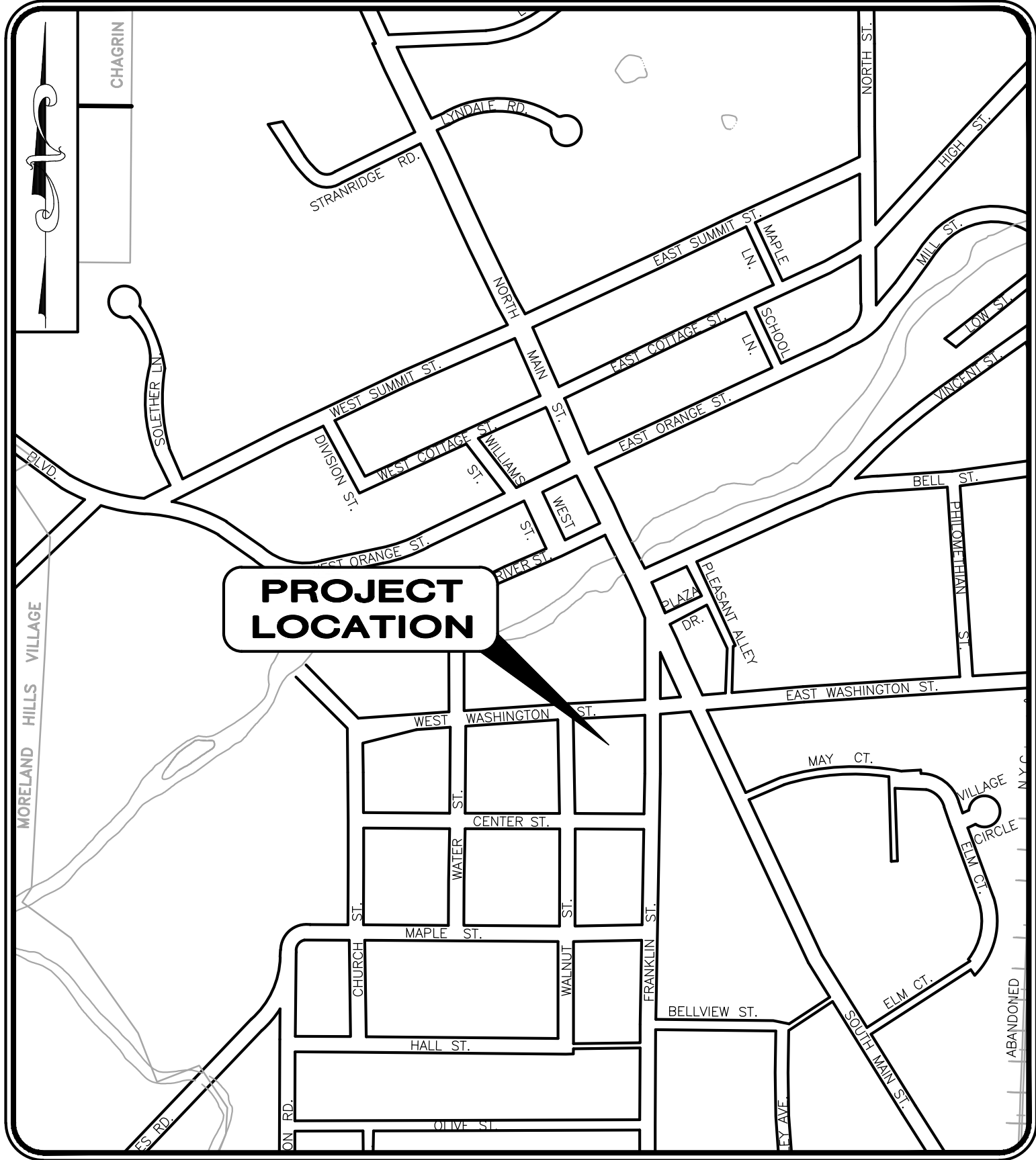
POLICE AND FIRE

IMPROVEMENTS

CUYAHOGA COUNTY, OHIO

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UTILITY PROFILE	6
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BASEMENT PLUMBING PLAN	10-11

MARCH, 2018



LOCATION MAP  
1" = 500'

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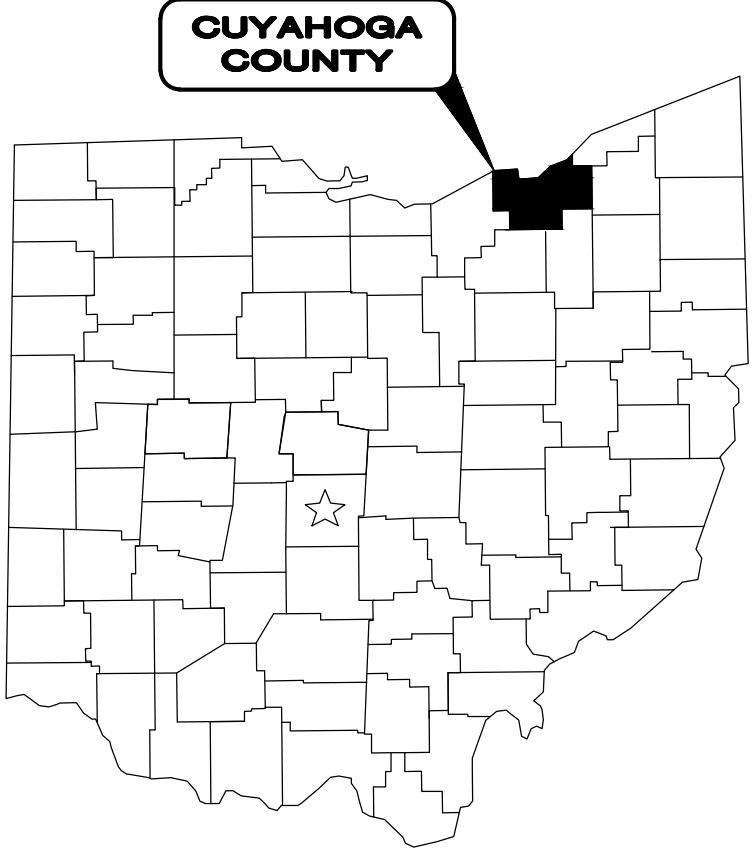
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CALL TWO WORKING DAYS  
**BEFORE YOU DIG**

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OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: 1-800-925-0988



1. THE SURVEY SHOWN ON THESE PLANS WAS OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR ANY OTHER PURPOSE.

2. UNDERGROUND BUILDING SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE TO BUILDINGS.

3. THE CONTRACTOR IS RESPONSIBLE TO CALL OHIO UTILITIES PROTECTION SERVICE @ 1-800-362-2764, THREE WORKING DAYS PRIOR TO CONSTRUCTION.





GENERAL

A PRE-CONSTRUCTION CONFERENCE SCHEDULED BY THE ENGINEER SHALL BE HELD PRIOR TO ANY WORK STARTING. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE TO THE ENGINEER, WATER SUPERINTENDENT, THE SANITARY SEWER DEPARTMENT AND THE VILLAGE ENGINEER PRIOR TO BEGINNING WORK TO ARRANGE FOR INSPECTION.

THE STANDARD SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION, LATEST EDITION, INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS AND STANDARD DRAWINGS, SHALL GOVERN ALL WORK NOT COVERED BY THE SPECIFICATIONS. ALL WORK CONTEMPLATED SHALL BE GOVERNED BY THE RULES, REGULATIONS AND SPECIFICATIONS OF THE VILLAGE OF CHAGRIN FALLS.

ALL WORK COMPLETED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

ANY DEFECT IN MATERIAL OR WORKMANSHIP REVEALED BY INSPECTION MUST BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE VILLAGE AND TO THE FULL SATISFACTION OF THE VILLAGE AND ENGINEER BEFORE ACCEPTANCE OF THE WORK AND RELEASE OF FINAL ESTIMATE AND PAYMENT THEREOF.

THE CONTRACTOR SHALL PROVIDE A PRE-CONSTRUCTION VIDEO TAPE SURVEY OF THE ENTIRE PROJECT AREA. ANY DAMAGE DEEMED TO BE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT HIS OWN EXPENSE. ALL COSTS ASSOCIATED FOR THIS WORK, INCLUDING THE VIDEO TAPE SURVEY, SHALL BE INCLUDED IN THE UNIT PRICES STIPULATED FOR THE VARIOUS ITEMS IN THE BID PROPOSAL.

MANHOLES, CATCH BASINS, MONUMENT BOXES, WATER VALVE BOXES AND OTHER CASTINGS WILL BE RAISED OR LOWERED FLUSH WITH THE NEW SURFACE. ANY METER OR VALVE BOX ENCOUNTERED WITHIN THE WORK SITE SHALL BE EXPOSED. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS OF WORK EXCEPT WHEN BID AS A SEPARATE ITEM.

BEFORE THE VILLAGE WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTY RETAINER, THE CONTRACTOR SHALL FURNISH THE VILLAGE A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTER HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ALONG WITH APPROVAL FROM THE ENGINEER TO REMOVE AND REPLACE EXISTING FENCE LINES WHICH WILL INTERFERE WITH THE PROGRESS OF CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPLACE THE EXISTING FENCE TO THE ORIGINAL CONDITION. IF THE FENCE IS DAMAGED DURING REMOVAL, CONSTRUCTION OR REPLACEMENT, THE FENCE SHALL BE REPLACED IN- KIND AND NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK.

MATERIAL SPECIFICATIONS CALLED FOR ON THE PLANS REPRESENT THE MINIMUM REQUIRED FOR EACH APPLICATION. THE OWNER MAY REQUEST OR THE CONTRACTOR MAY DESIRE TO SUBSTITUTE ALTERNATE MATERIALS. ANY SUCH SUBSTITUTIONS MUST BE EQUIVALENT IN QUALITY TO THE MATERIAL CALLED FOR AND MUST BE APPROVED IN WRITING BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE AND REPLACE ALL MAILBOXES, TRAFFIC SIGNS, ETC. AS REQUIRED FOR CONSTRUCTION.

SEWER CONSTRUCTION

SANITARY/STORM SEWER SHALL BE PVC SDR 35 – ASTM 3034 WITH ASTM D3212, F477 WATER-TIGHT, FLEXIBLE GASKET JOINTS. SEWER PIPE BEDDING SHALL BE AS PER THE TRENCHING, EMBEDMENT, AND BACKFILL DETAIL. PVC SEWER DEFLECTION TESTING SHALL NOT EXCEED 5% ACCORDING TO PLAN SPECIFICATIONS.

MANHOLE SECTION JOINTS MUST MEET ASTM C-443.

BACKFILL SHALL BE AS PER THE TRENCHING, EMBEDMENT, AND BACKFILL DETAIL.

WHEN A SEWER AND WATERLINE CROSS AND IT IS NOT POSSIBLE TO MAINTAIN AN 18 INCH VERTICAL CLEARANCE BY WATERMAIN LOWERING, EITHER THE WATERMAIN OR THE SEWER SHALL BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATERMAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE O.E.P.A. FOR USE IN WATERMAIN CONSTRUCTION.

STORM SEWER PIPE SHALL BE PVC SDR 35 WITH PREMIUM GASKET JOINTS.

EXCAVATION, BACKFILL, AND SEWER REPLACEMENT

NO SLAG PRODUCTS WILL BE PERMITTED FOR BEDDING OR BACKFILL MATERIAL. BACKFILL FOR ALL UNDERGROUND UTILITIES INSTALLED UNDER PAVEMENT, SIDEWALK, AND STRUCTURES OR WITHIN A 1:1 ZONE OF INFLUENCE PARALLEL OR TRANSVERSE TO PAVEMENT, SIDEWALK OR STRUCTURES SHALL BE "COMPACTED GRANULAR BACKFILL" AS DESCRIBED IN SPECIFICATION SECTION 02235 AND IN ACCORDANCE WITH THE PLANS. BACKFILL IN OTHER AREAS SHALL BE AS DESCRIBED IN SPECIFICATION SECTION 02234 – "COMPACTED BACKFILL" OR SECTION 02235 – "COMPACTED GRANULAR BACKFILL".

BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 9" IN DEPTH. BACKFILL MATERIAL SHALL BE PLACED WITH 2% OF THE OPTIMUM MOISTURE. THE ENGINEER MAY ORDER THE REMOVAL, REFILLING, RE-COMPACTION AND RETESTING OF ALL BACKFILL NOT MEETING THE REQUIREMENTS OF THE CONTRACT.

BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED USING MACHINE MOUNTED COMPACTION EQUIPMENT IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT ODOT 203.

NO BACKFILLING OF ANY TRENCHES OR EXCAVATIONS WILL BE PERMITTED WITHOUT TAMPING EQUIPMENT BEING USED. FLOODING, JETTING OR PUDDLING OF BACKFILL WILL NOT BE PERMITTED.

ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION. THE OWNER AND THE ENGINEER DO NOT GUARANTEE THE SUITABILITY OR SUGGEST THAT THE EXISTING EXCAVATED MATERIAL IN ITS PRESENT STATE WILL CONSIST OF THE PROPER MOISTURE CONTENT TO ACHIEVE THE REQUIRED COMPACTION WITHOUT DRYING OR ADDING WATER TO THE MATERIAL. UPON REQUEST, THE OWNER WILL PROVIDE ACCESS TO THE SITE FOR THE CONTRACTOR TO CONDUCT SUCH INVESTIGATIONS AND TESTS DEEMED NECESSARY TO MAKE HIS DETERMINATION.

THE CONTRACTOR SHALL REPLACE ANY PAVEMENT MARKINGS, SUCH AS CROSS WALKS, STOP LINES, EDGE LINES, CENTER LINES, ETC. ANY PAVEMENT REMOVED CONTAINING BRICKS SHALL BE TRUCKED TO THE VILLAGE SERVICE DEPARTMENT.

SERVICE CONNECTIONS

ALL SANITARY AND WATER SERVICE CONNECTIONS SHOWN ON THE PLAN WERE DERIVED FROM VILLAGE RECORDS. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL CONNECTIONS PRIOR TO REPLACEMENT. SANITARY LATERAL REPLACEMENT AND WATER SERVICE CONNECTION REPLACEMENT SHALL DISTURB NO MORE THAN 50 S.F. OF SIDEWALK AND 10 L.F. OF CURB PER LATERAL OR CONNECTION REPLACED. ALL ACTIVE CONNECTIONS AND HOUSE LATERALS ENCOUNTERED SHALL BE RECONNECTED TO EXISTING FACILITIES OR CONNECTED TO THE NEW FACILITIES, EVEN IF NOT SHOWN ON THE PLANS.

ALL EXISTING UTILITY SERVICE CONNECTIONS (SANITARY, STORM, WATER, GAS, ELECTRIC, TELEPHONE, ETC.) WHICH ARE DAMAGED DURING THE INSTALLATION OF PIPE SHALL BE REPAIRED WITH LIKE MATERIALS OR REPLACED, AS REQUIRED. THE COST OF UTILITY SERVICE CONNECTION REPAIR/REPLACEMENT SHALL BE INCLUDED IN THE UNIT PRICES FOR ALL ITEMS IN THE PROPOSAL.

ALL UTILITY LINES CROSSING THE NEW TRENCH SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS; OR REMOVED, REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. IF ANY OF THESE LINES ARE DAMAGED DURING CONSTRUCTION, THEY SHALL BE REPLACED IN-KIND.

THE CONTRACTOR SHALL BE REQUIRED TO BYPASS AND MAINTAIN THE FLOW TO/FROM ALL HOUSE UTILITY CONNECTIONS DURING CONSTRUCTION.

THE CONTRACTOR SHALL EXPECT ONE UNDERGROUND GAS AND WATER CONNECTION FOR EACH LOT (INCLUDING VACANT LOTS) ON BOTH SIDES OF THE STREET FOR THE ENTIRE PROJECT LENGTH.

THE CONTRACTOR SHALL SUPPLY ALL PIPE AND ADAPTERS TO CONNECT TO EXISTING PIPING. THE ADAPTERS MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE VILLAGE OF CHAGRIN FALLS DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

BEFORE ANY WORK IS STARTED THAT WILL INTERFERE WITH THE EXISTING UTILITIES, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE" AT 1-800-362-2764, FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE VILLAGE OF CHAGRIN FALLS, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING THE ENTIRE PROJECT. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL COST TO THE VILLAGE, INCLUDING ANY INSPECTION OR MAINTENANCE FEES.

WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME THAT WORK IS GOING ON ADJACENT TO THE POLE(S).

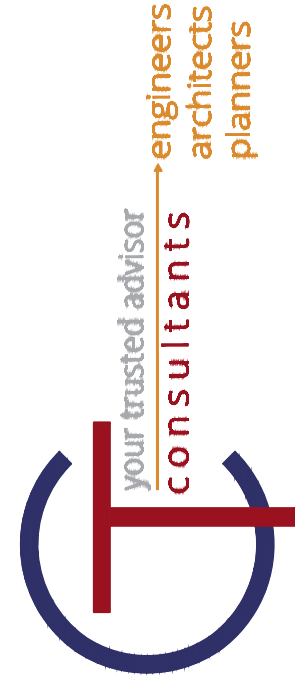
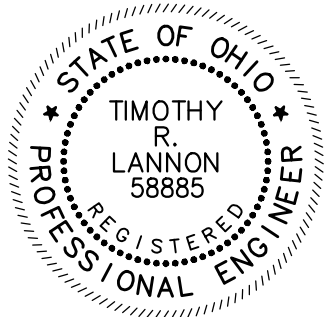
THE COST AND COORDINATION FOR ANY REQUIRED PROTECTION, SUPPORT OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DELAYS TO THE CONTRACTOR AS A RESULT OF TIMING OF POLE RELOCATION, SUPPORT OR PROTECTION SHALL NOT BE CONSIDERED COMPENSABLE DELAYS, AS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS WORK IN CONFORMANCE TO THE UTILITY COMPANY'S SCHEDULE.

THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES AFFECTED BY THE PROPOSED CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF THE EXISTING UTILITY OWNERS LISTED BELOW AND THE UTILITY PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE AND OUTLINED IN PROJECT SPECIFICATIONS. THE UTILITY OWNERSHIPS ARE AS FOLLOWS:

VILLAGE OF CHAGRIN FALLS 21 W. WASHINGTON STREET CHAGRIN FALLS, OHIO 44022 (440) 247-5051	DOMINION EAST OHIO 320 SPRINGSIDE DRIVE, STE. 320 AKRON, OH 44333 ATTN.: BRIAN D. DAYTON (330) 664-2409	AT&T 13630 LORAIN AVE., 2ND FLOOR CLEVELAND, OH 44111 ATTN.: SCOTT KLEBE (216) 476-6057
THE ILLUMINATING COMPANY 7755 AUBURN RD. PAINESVILLE, OH 44077 ATTN.: TIM DENZLER (440) 358-4991	CHARTER COMMUNICATIONS 7 SEVERANCE CIRCLE CLEVELAND HEIGHTS, OH 44118 ATTN.: PAT SANTOEMMO (216) 575-8016	



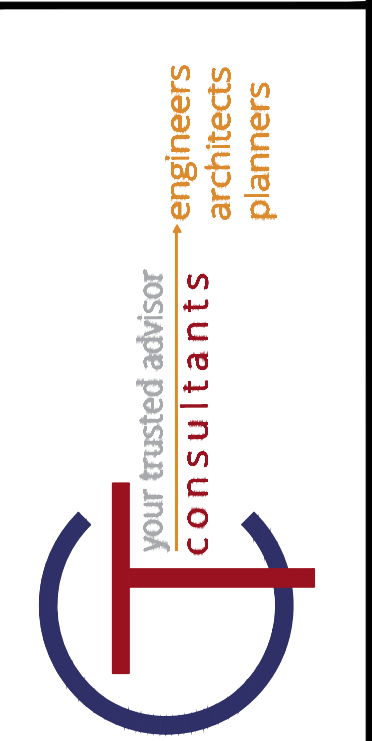
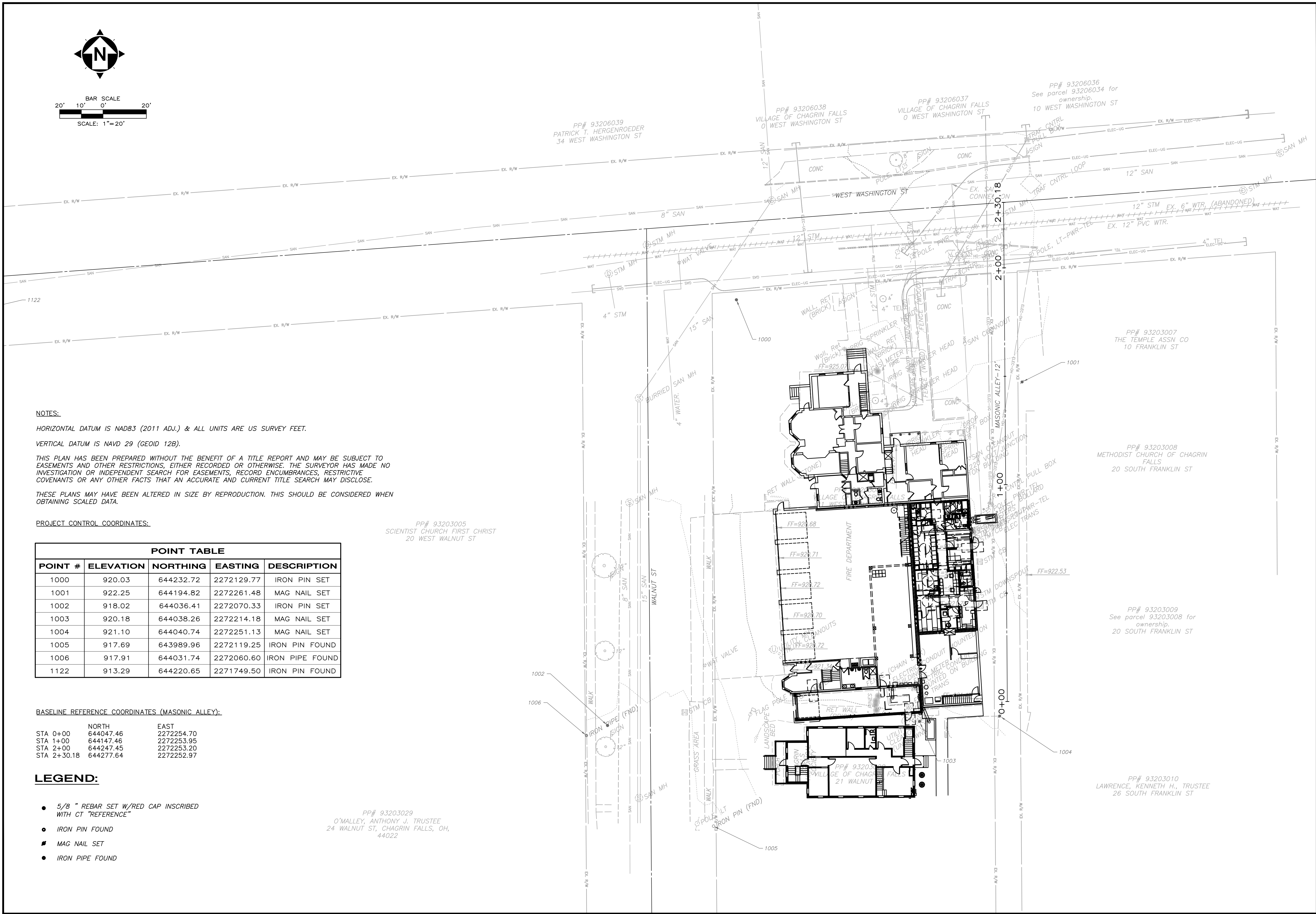
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DATE:	05/01/2018	01	REMOVAL OF SALLY PORT	
DESIGNED BY:	TRL			
DRAWN BY:	JPL			
CHECKED BY:	TRL			

POLICE AND FIRE BUILDING  
SITE PLAN  
VILLAGE OF CHAGRIN FALLS, OHIO

GENERAL NOTES

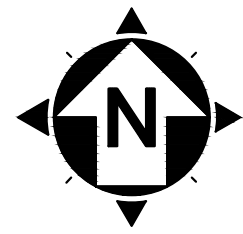
PROJECT NO:	
17000602	
DRAWING NAME	
GN-01	
SHEET	OF
2	11





<p><b>POLICE AND FIRE BUILDING</b></p> <p><b>SITE PLAN</b></p> <p><b>VILLAGE OF CHAGRIN FALLS, OHIO</b></p>		<p><b>EXISTING CONDITIONS</b></p>
PROJECT NO:		
17000602		
DRAWING NAME		
EX. COND.		
SHEET	OF	
3	11	





20' 10' 0' 20'  
BAR SCALE  
SCALE: 1"=20'

#### DEMOLITION LEGEND

- 1 REMOVE EX. CATCH BASIN
- 2 REMOVE AND RELOCATED EX. FLAG POLE. RELOCATION DETERMINED BY VILLAGE.

PP# 93203029  
O'MALLEY, ANTHONY J. TRUSTEE  
24 WALNUT ST, CHAGRIN FALLS, OH,  
44022

PP# 93203005  
SCIENTIST CHURCH FIRST CHRIST  
20 WEST WALNUT ST

PP# 93206039  
PATRICK T. HERGENROEDER  
34 WEST WASHINGTON ST

PP# 93206038  
VILLAGE OF CHAGRIN FALLS  
0 WEST WASHINGTON ST

PP# 93206037  
VILLAGE OF CHAGRIN FALLS  
0 WEST WASHINGTON ST

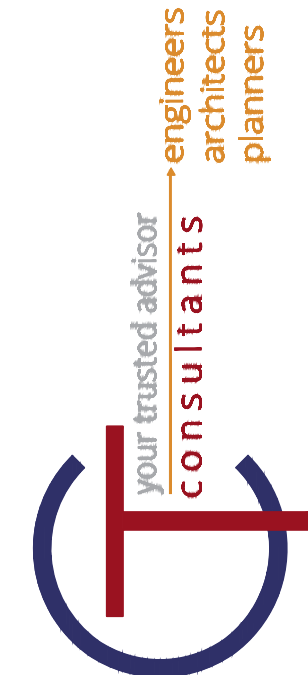
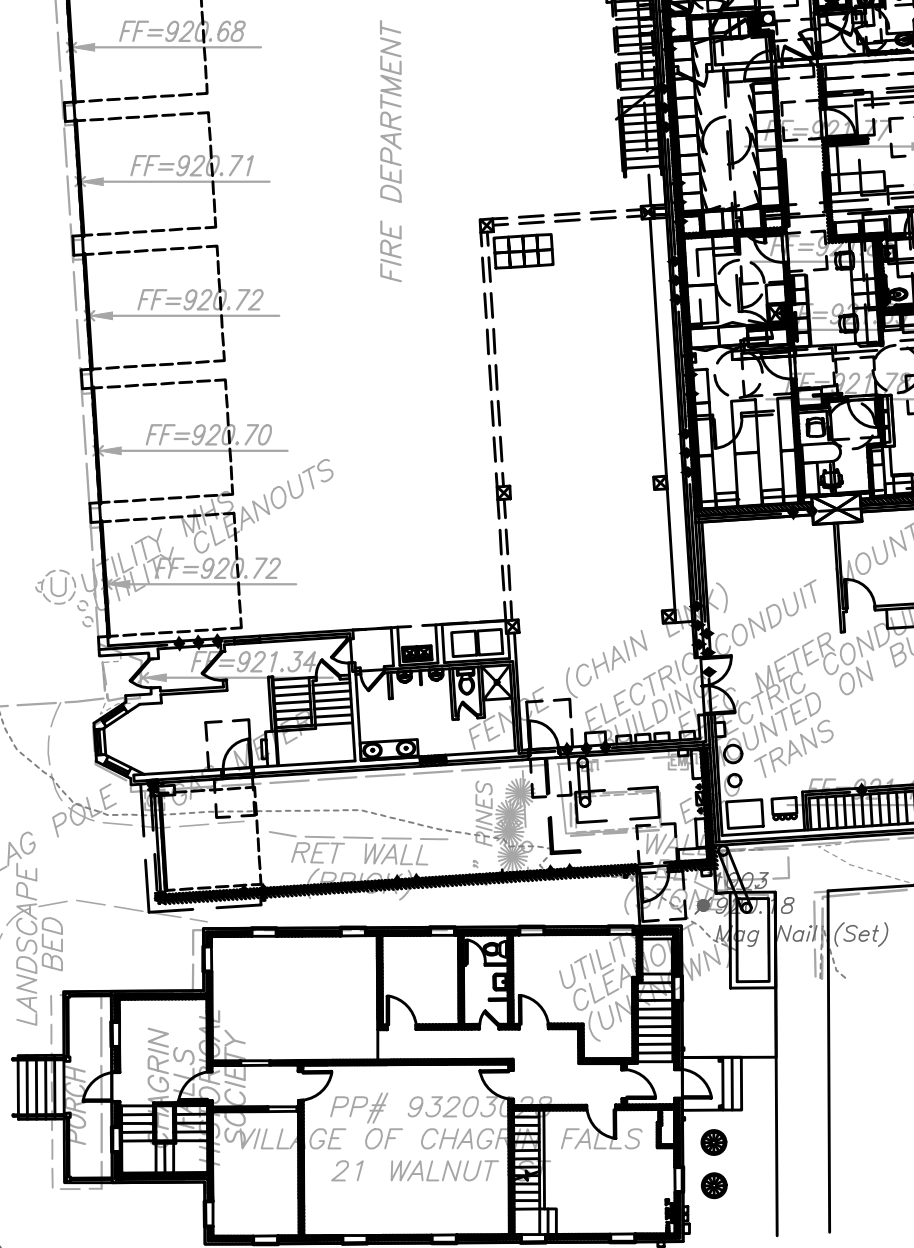
PP# 93206036  
See parcel 93206034 for  
ownership.  
10 WEST WASHINGTON ST

PP# 93203007  
THE TEMPLE ASSN CO  
10 FRANKLIN ST

PP# 93203008  
METHODIST CHURCH OF CHAGRIN  
FALLS  
20 SOUTH FRANKLIN ST

PP# 93203009  
See parcel 93203008 for  
ownership.  
20 SOUTH FRANKLIN ST

PP# 93203010  
LAWRENCE, KENNETH H., TRUSTEE  
26 SOUTH FRANKLIN ST



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DATE:	05/01/2018	01	REMOVAL OF SALLY PORT	.
DESIGNED BY:	TRL			.
DRAWN BY:	JPL			.
CHECKED BY:	TRL			.

## POLICE AND FIRE BUILDING SITE PLAN VILLAGE OF CHAGRIN FALLS, OHIO DEMOLITION PLAN

PROJECT NO:	
17000602	
DRAWING NAME	
DEMO-01	
SHEET	OF
4	11



NOTES

- 1) SEE EXISTING CONDITION PLAN SHEET 02 FOR SURVEY CONTROL COORDINATES AND BENCH MARKS.
- 2) EXISTING CONDITIONS ARE GRAPHICALLY SHOWN IN LIGHT GRAY ON THIS SHEET FOR CLARITY PURPOSES.
- 3) CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY CONNECTIONS AND CROSSINGS PRIOR TO START OF CONSTRUCTION.

LEGEND

SITE BID PART 1

- 1) CONNECT NEW SANITARY LATERAL TO EXISTING CLEANOUT
- 2) CONNECT NEW 10" STORM SEWER TO EXISTING MANHOLE IN WEST WASHINGTON STREET.
- 3) ABANDON SANITARY LEAD TO BUILDING
- 4) NEW SANITARY CLEANOUT
- 5) REPLACE 4" SIDEWALK AFTER SANITARY LATERAL INSTALLATION.
- 6) NEW CATCH BASIN
- 7) PROVIDE SANITARY LATERAL LEAD TO BUILDING
- 8) REPLACE CURB AFTER SANITARY LATERAL INSTALLATION.
- 9) RE-CONNECT DOWNSPOUT CONNECTIONS TO PROPOSED CATCH BASIN
- 10) SANITARY CONNECTION BY OTHERS.
- 11) 6" SIDEWALK REPLACEMENT

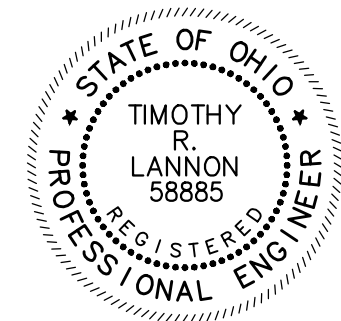
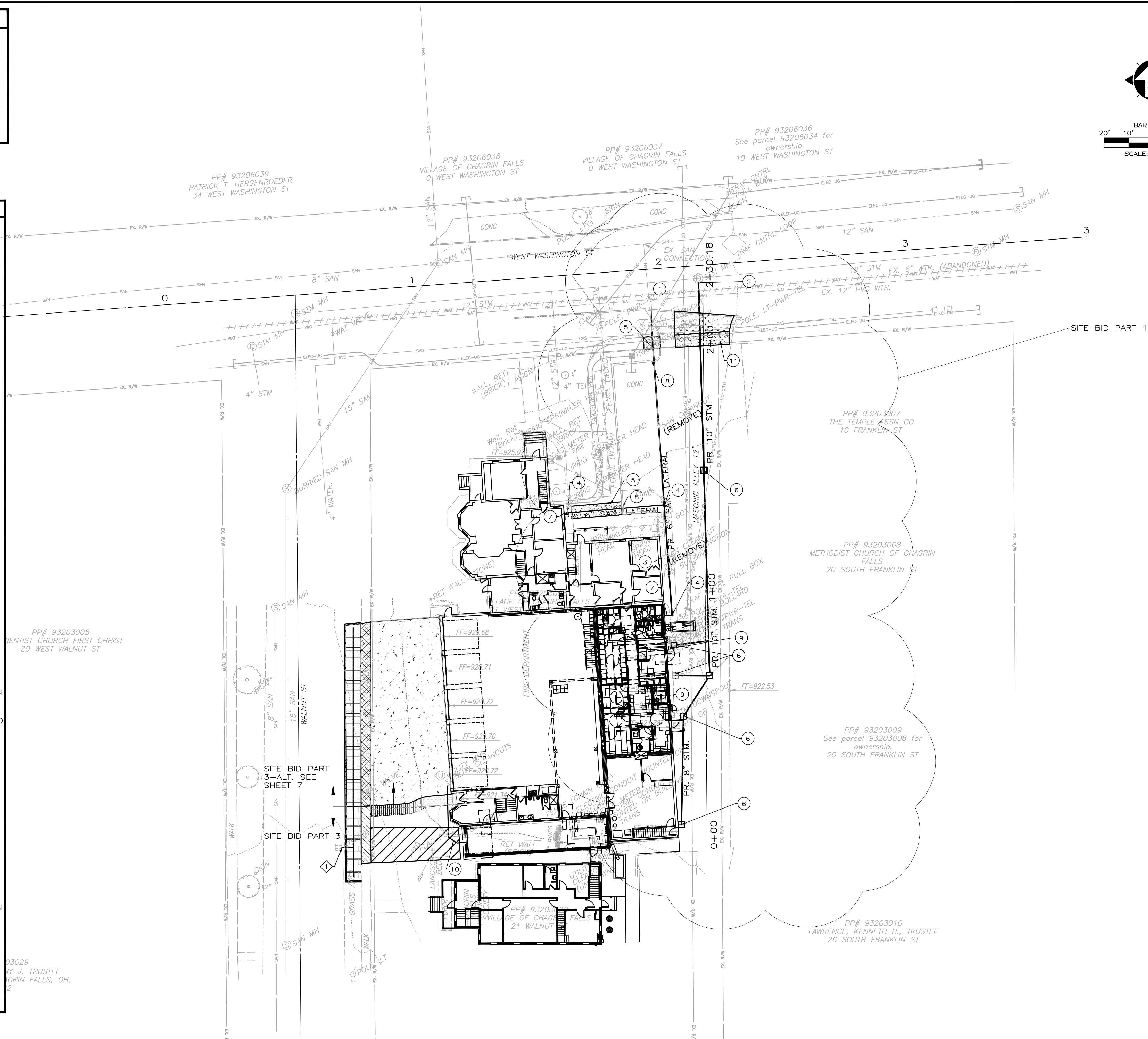
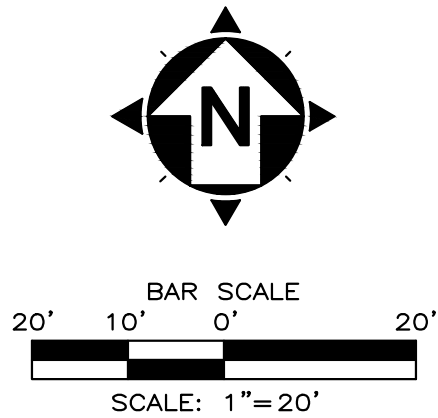
6" CONCRETE APRON REPLACEMENT

SITE BID PART 3

- PROPOSED 8" CONCRETE WALK AS A PART OF SITE BID PART 3
- PROPOSED PERMEABLE PAVERS W/ UNDERDRAIN AS A PART OF SITE BID PART 3
- PROPOSED BRICK WALK AS A PART OF SITE BID PART 3
- PROPOSED 8" CONCRETE DRIVE AS A PART OF SITE BID PART 3
- CONNECT PROPOSED UNDERDRAIN TO EXISTING CATCH BASIN

SITE BID PART 3-ALTERNATES

- PROPOSED 8" CONCRETE DRIVE REPLACEMENT AS A PART OF SITE BID PART 3-ALTERNATE.
- PROPOSED PERMEABLE PAVERS W/ UNDERDRAIN AS A PART OF SITE BID PART 3-ALTERNATE.
- PROPOSED 8" CONCRETE WALK REPLACEMENT AS A PART OF SITE BID PART 3-ALTERNATE.



NO	REVISION	DATE
01	REMOVAL OF SALLY PORT	

SCALE:	AS SHOWN
DATE:	05/01/2018
DESIGNED BY:	TRL
DRAWN BY:	JPL
CHECKED BY:	TRL

POLICE AND FIRE BUILDING

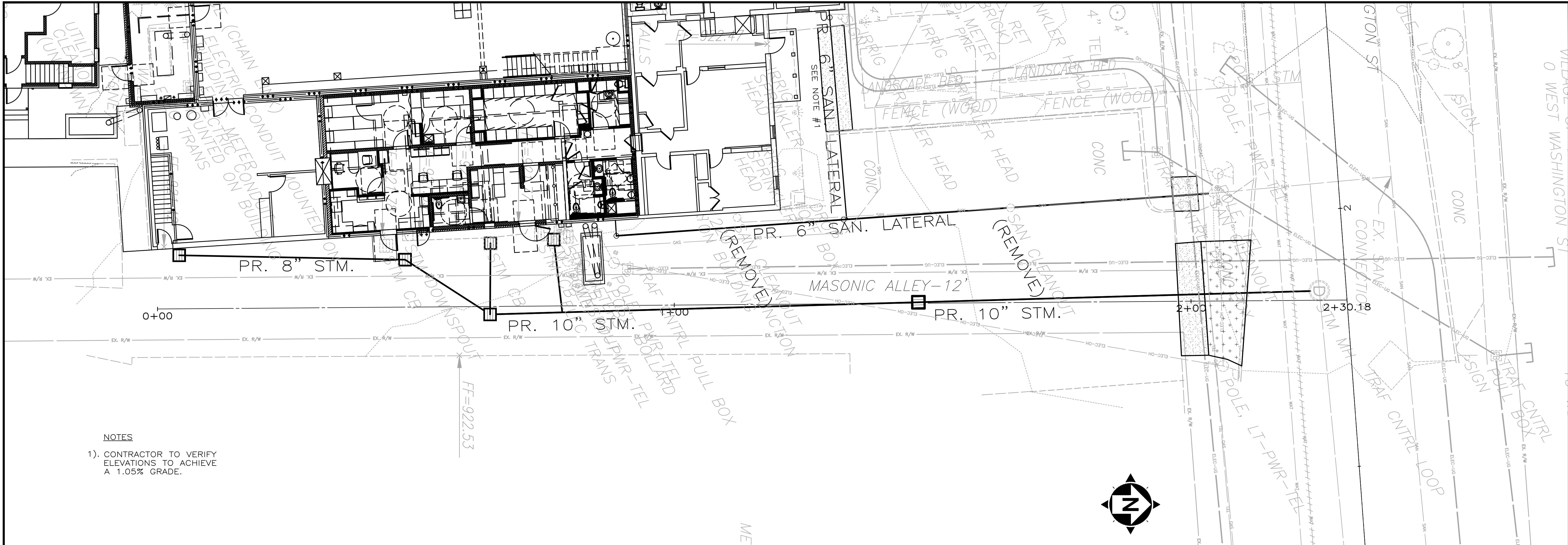
SITE PLAN

VILLAGE OF CHAGRIN FALLS, OHIO

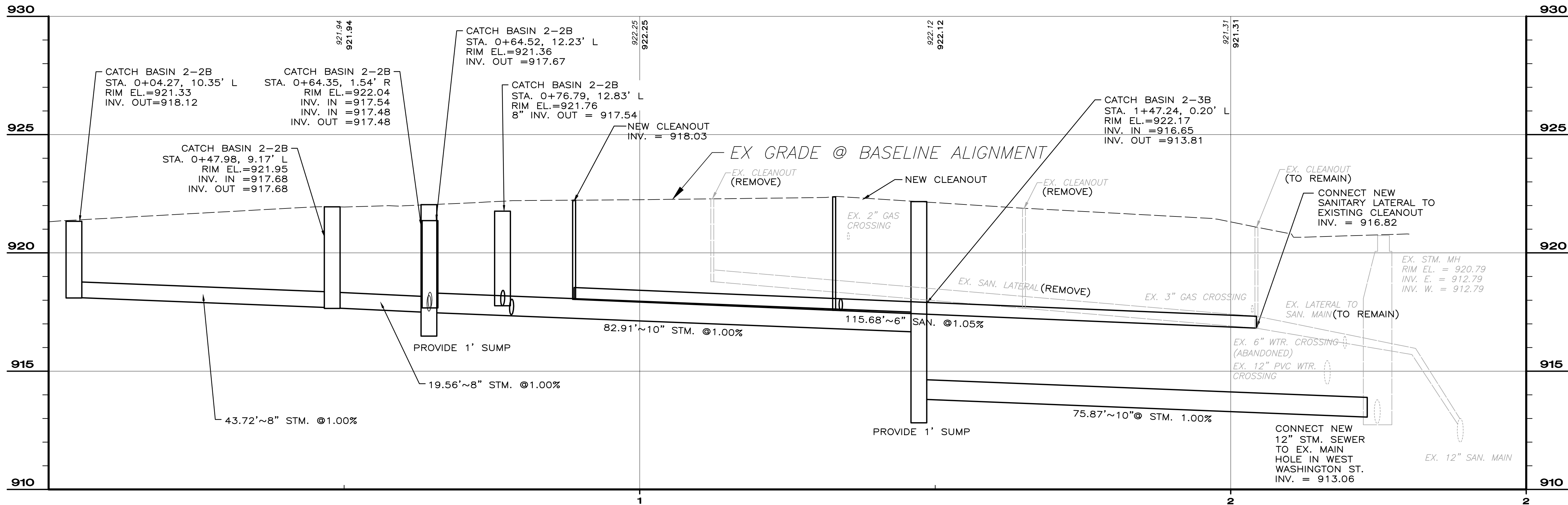
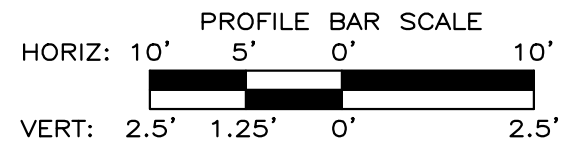
SITE IMPROVEMENTS

PROJECT NO:	
17000602	
DRAWING NAME	
SITE-1	
SHEET	OF
5	11





- NOTES
- 1). CONTRACTOR TO VERIFY ELEVATIONS TO ACHIEVE A 1.05% GRADE.



STATE OF OHIO  
TIMOTHY R. LANNON  
58885  
REGISTERED PROFESSIONAL ENGINEER

your trusted advisor

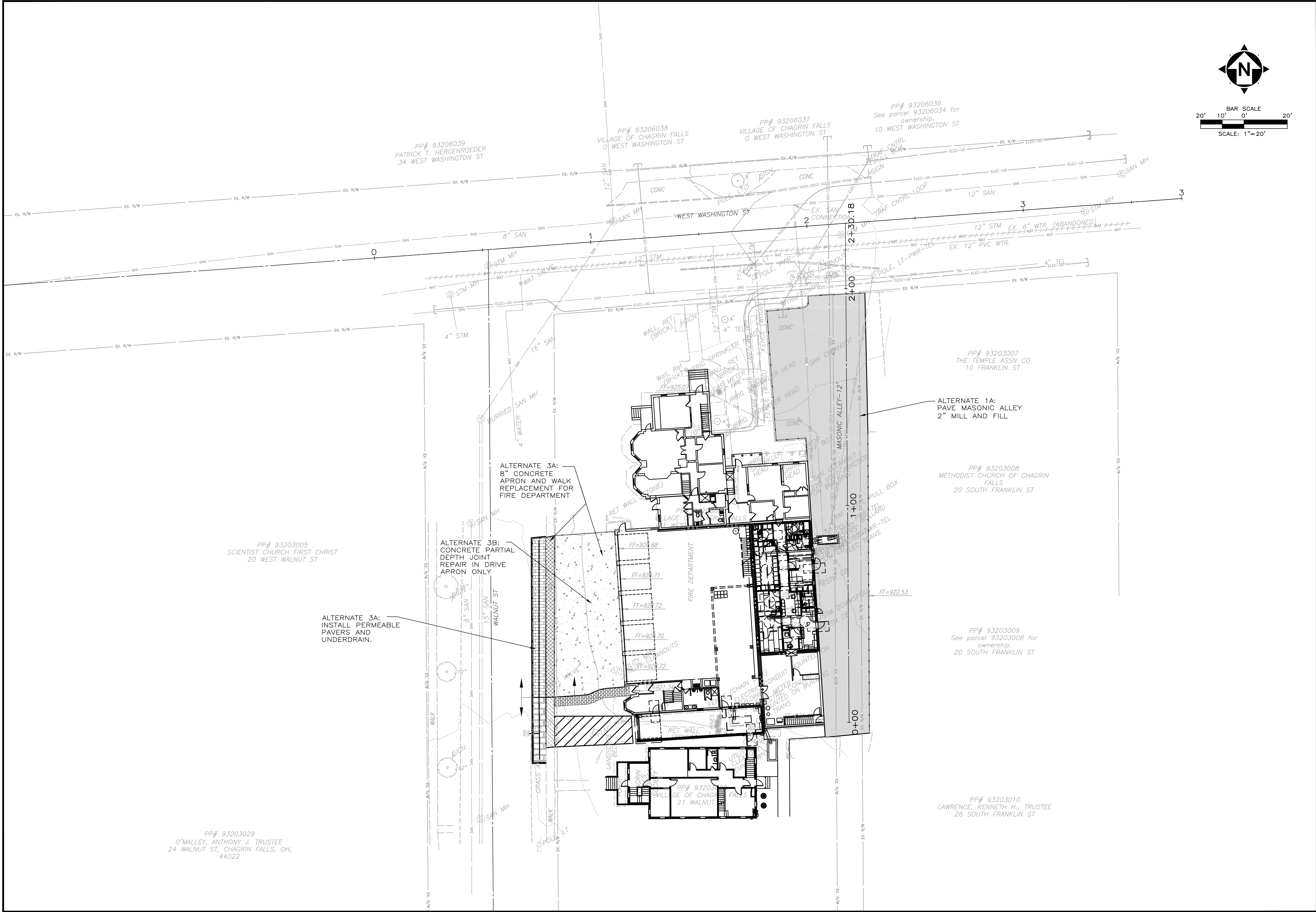
consultants

engineers  
architects  
planners

NO	DATE	REVISION
01		REMOVAL OF SALLY PORT

SCALE: AS SHOWN	DATE: 05/01/2018	DESIGNED BY: TRL	DRAWN BY: JPL	CHECKED BY: TRL
<b>POLICE AND FIRE BUILDING</b> <b>SITE PLAN</b> <b>VILLAGE OF CHAGRIN FALLS, OHIO</b>				
<b>PLAN AND PROFILE</b>				
PROJECT NO: <b>17000602</b>				
DRAWING NAME <b>P&amp;P-1</b>				
SHEET <b>6</b>	OF <b>11</b>			





STATE OF OHIO

TIMOTHY R. LANNON

58885

REGISTERED PROFESSIONAL ENGINEER

your trusted advisor

engineers

architects

planners

consultants

SCALE: AS SHOWN

DATE: 05/01/2018

DESIGNED BY: TRL

DRAWN BY: JPL

CHECKED BY: TRL

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REVISION

DATE

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REMOVAL OF SALLY PORT

PROJECT NO:

17000602

DRAWING NAME

ALT.

SHEET

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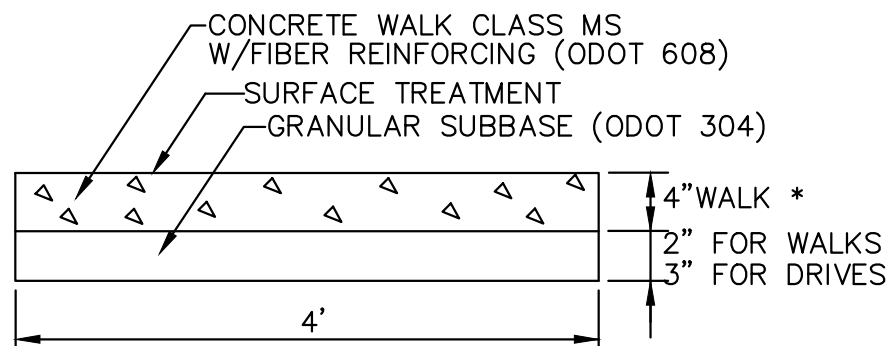
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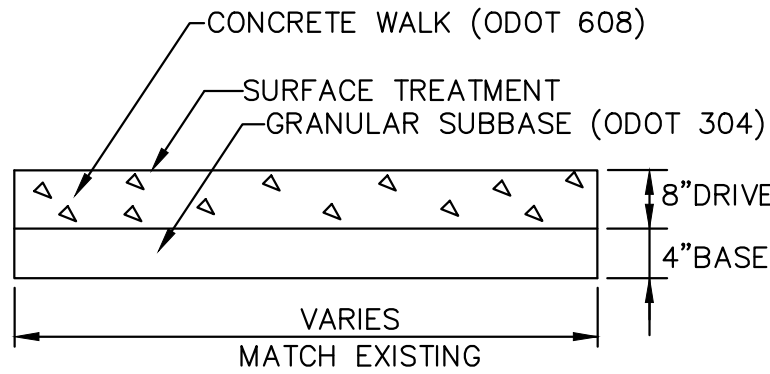




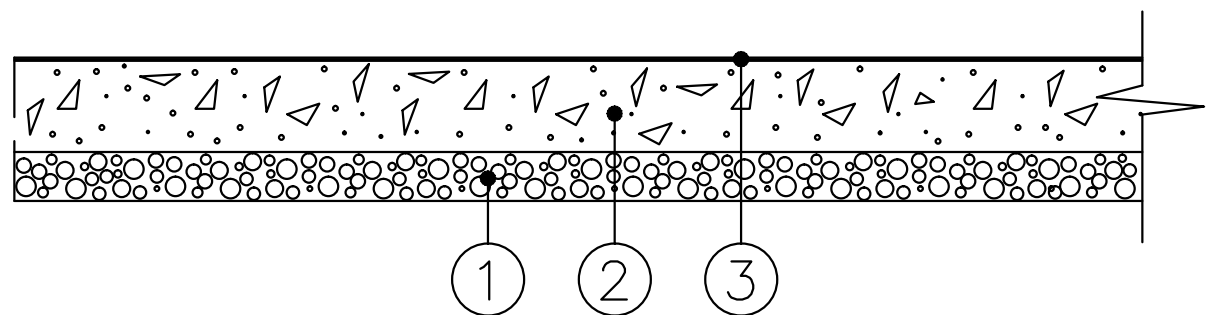


\*WALK WITHIN DRIVE APRON LIMITS SHALL BE THE SAME THICKNESS AS THE DRIVE APRON (6" MIN.) AND PAID FOR SEPARATELY.  
- 8" FOR COMMERCIAL DRIVES  
- 6" FOR RESIDENTIAL DRIVES

### CONCRETE WALK DETAIL



### CONCRETE DRIVE DETAIL



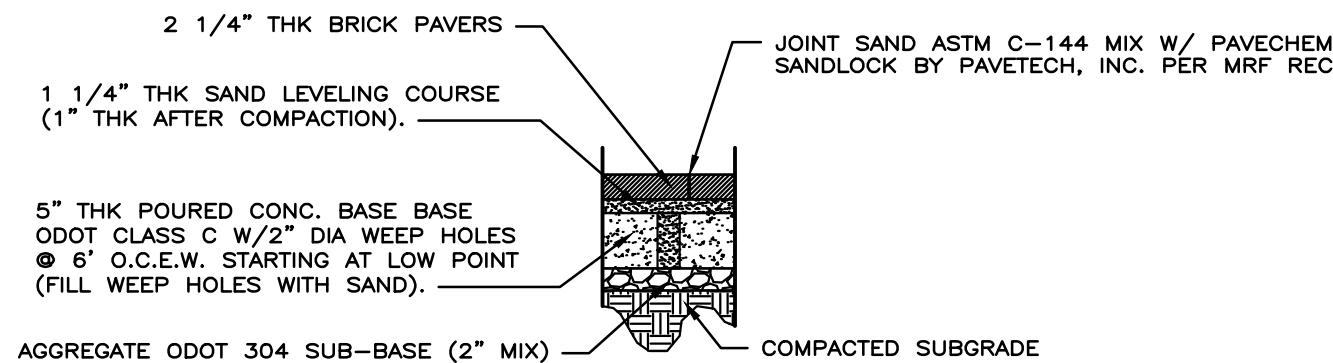
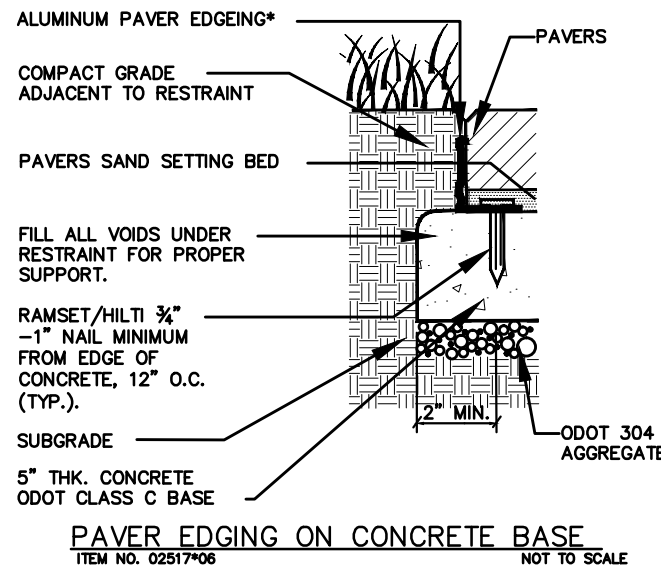
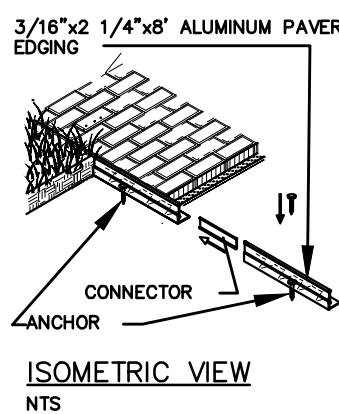
- 3" ODOT ITEM 304 COMPACTED LIMESTONE AGGREGATE BASE
- 9" MIN. OR MATCH EXISTING ODOT ITEM 255 INCLUDING HOOK BOLT INSTALLATION
- CONCRETE SURFACE TREATMENT

### JOINT/SLAB REPLACEMENT DETAIL

(FULL DEPTH CONCRETE REPAIR)

#### NOTES:

- INSTALL PER MANUFACTURER'S "INSTALLATION GUIDELINES"
- CONNECTION BETWEEN SECTIONS TO UTILIZE SLIDING CONNECTOR SYSTEM
- CORNERS: NOTCH BASE ONLY AND FORM A CONTINUOUS CORNER.



NOTE:  
1) PAVERS SHALL BE PLACED IN BASKET WEAVING PATTERN WITH SOLDIER COURSE BORDER AS INDICATED ON THE DRAWINGS, WITH HAND TIGHT JOINTS NOT TO EXCEED 1/8" WIDE (MIN 1/16"). CONTRACTOR IS REQUIRED TO SAW CUT PAVERS AS NEEDED TO MAINTAIN ABOVE JOINT TOLERANCES

2) SWEEP JOINTS WITH SAND MIXED WITH JOINT STABILIZER.  
N.T.S.

### BRICK PAVER WALK

#### NOTE:

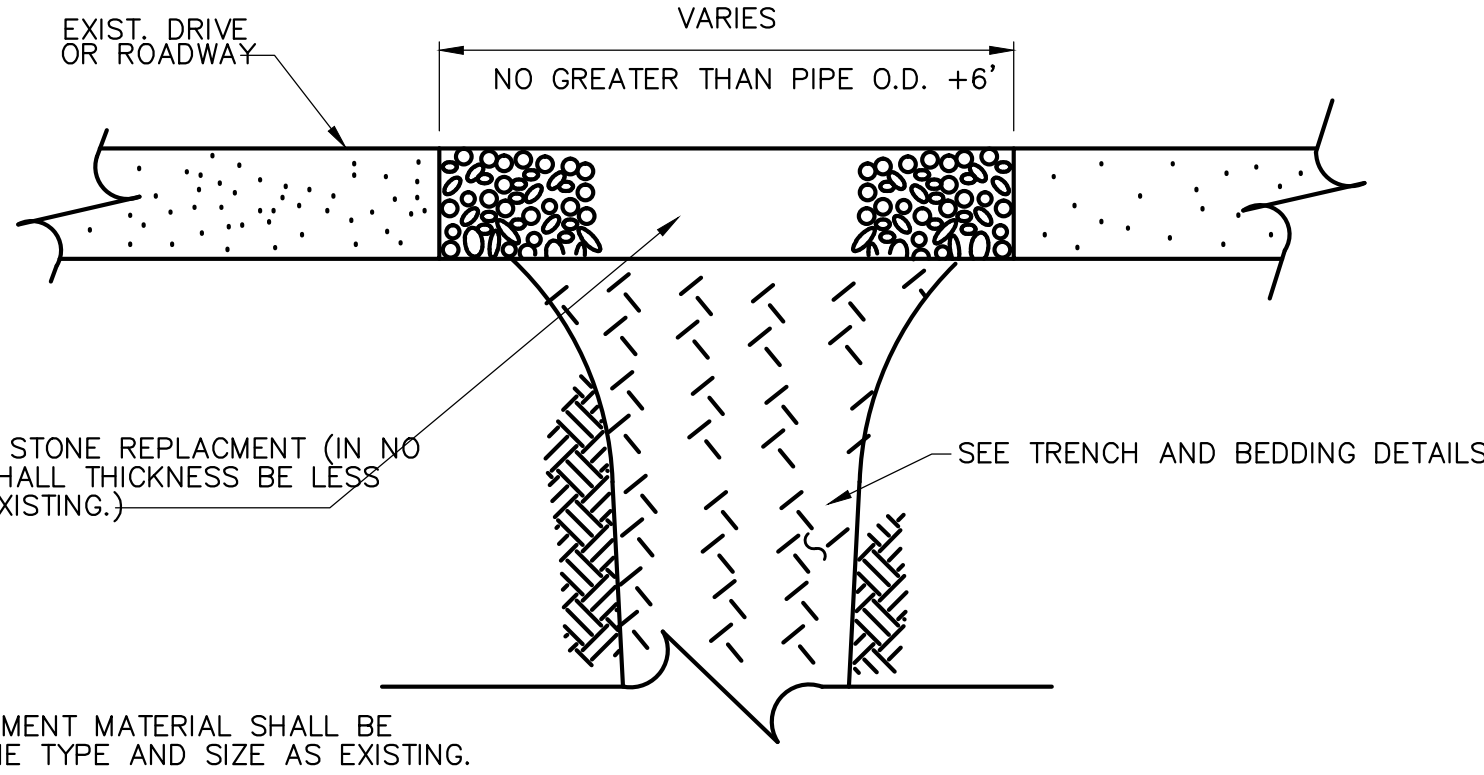
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHERE TWO PIPES (SEWER & WATER) CROSS EACH OTHER, A CONCRETE PAD AND CRADLE SEPARATOR SHALL BE PLACED BETWEEN THEM AS INDICATED ABOVE. WHERE PERMISSION IS GRANTED TO OMIT THE CONCRETE PADS, GRANULAR BACKFILL SHALL BE TAMPED IN 6" LAYERS AROUND BOTH PIPES. SUCH TAMPED BACKFILL SHALL BE CONTINUOUS FROM THE CRADLE OF THE LOWER PIPE TO THE TOP OF THE UPPER PIPE AND AT THE BOTTOM SHALL EXTEND IN BOTH DIRECTIONS, FOR THE FULL WIDTH OF THE TRENCH.

### PIPE CROSSING DETAIL

11/88 SD-2-16

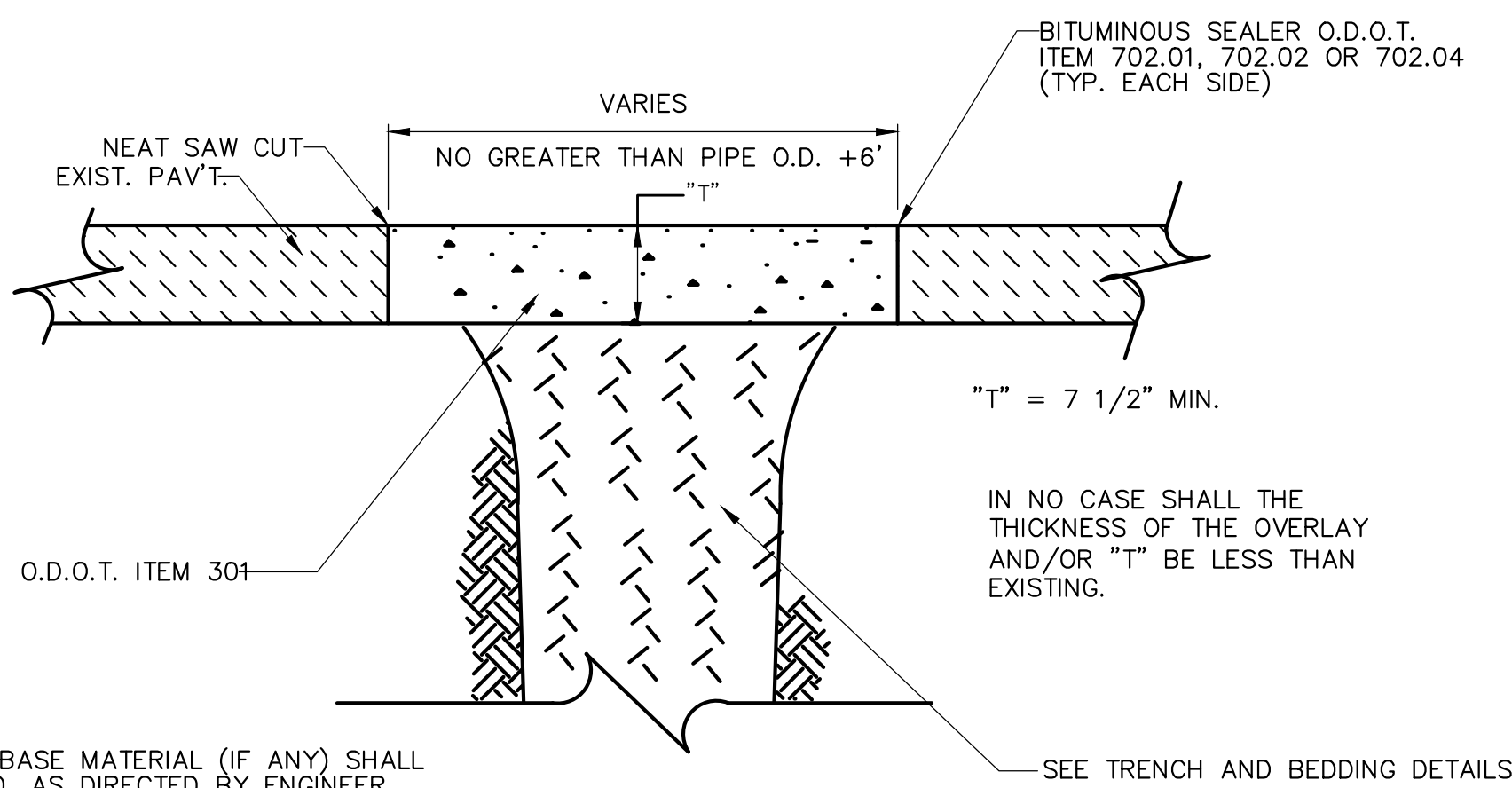
#### NOTES:

- EXCAVATION AND REMOVAL OF PAVEMENT, BASE AND SUBGRADE PREPARATION SHALL BE INCLUDED IN THE UNIT PRICE OF ITEM 255.
- FOR ALL PAVEMENT REPAIRS, ASPHALT AND/OR CONCRETE PAVEMENT SHALL BE FULL DEPTH SAWCUT.
- ALL JOINTS SHALL BE SEALED WITH HOT APPLIED SEALER - ASTM D3405.
- IN NO CASE SHALL THE THICKNESS OF THE CONCRETE PAVEMENT REPLACEMENT BE LESS THAN EXISTING.



### TYPE F PAVEMENT REPLACEMENT

(STONE)  
10/10 SD-5-6

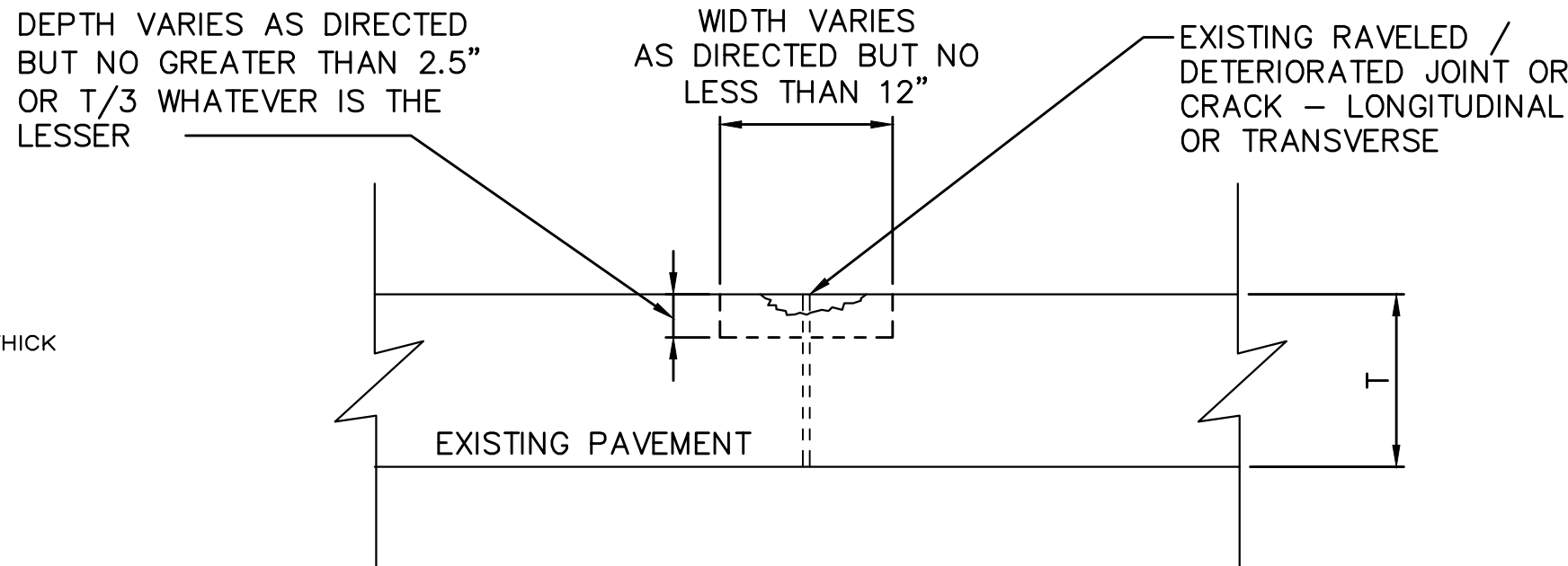


### TYPE C PAVEMENT REPLACEMENT

(ASPHALT)  
10/10 SD-5-3

#### NOTE:

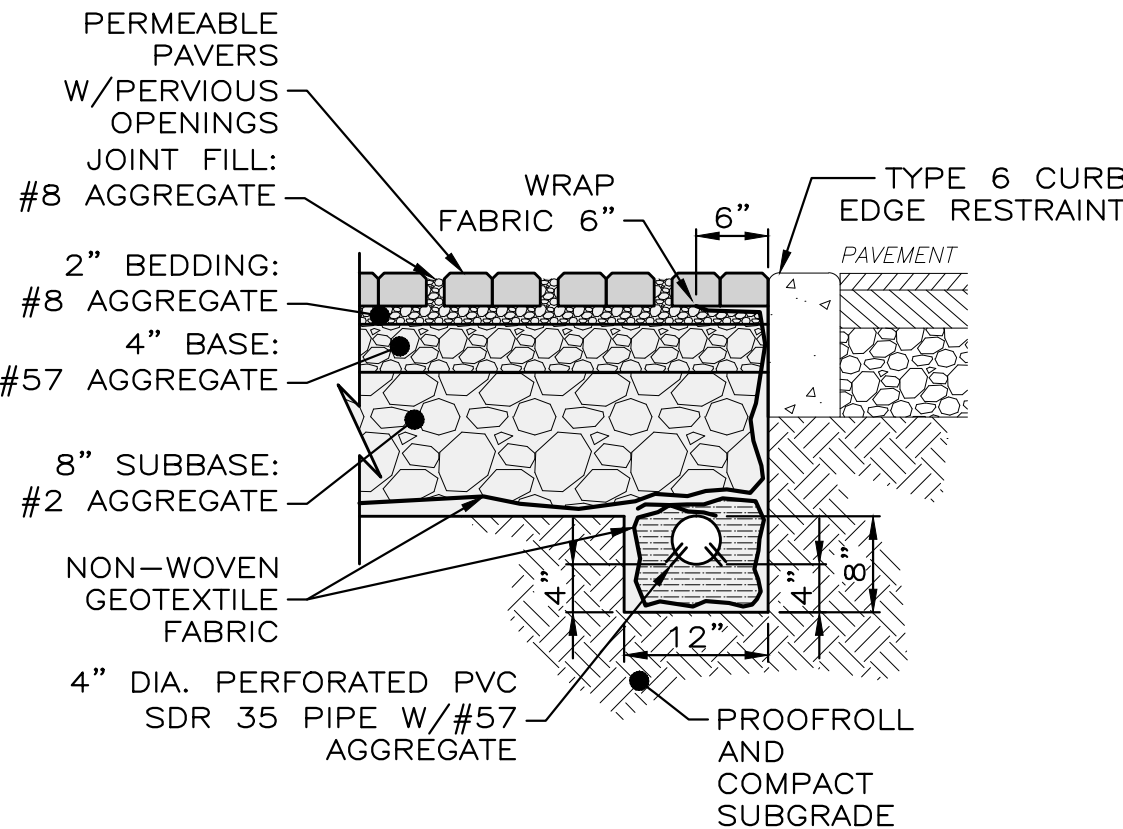
- EXISTING SUBBASE MATERIAL (IF ANY) SHALL BE REPLACED, AS DIRECTED BY ENGINEER.



NOTE:  
ALL LOOSE AND DETERIORATED MATERIAL SHALL BE MILLED OUT UNTIL STABLE PAVEMENT IS FOUND. THE RESULTING EDGE SHALL BE REASONABLY VERTICAL AND SQUARE TO THE BOTTOM AND SHALL BE TACK COATED PRIOR TO THE PLACEMENT AND COMPACTION OF ODOT 448-1 ASPHALT CONCRETE.

### 251 PARTIAL DEPTH JOINT REPAIR

N.T.S.

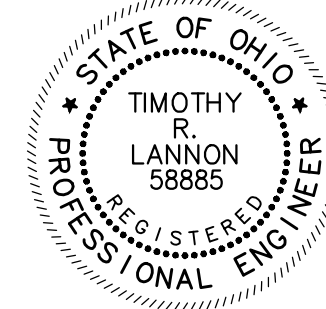


#### NOTES:

- PERMEABLE PAVERS TO BE ECO-OPTILOC
- ALL AGGREGATE UNDER PERMEABLE PAVERS SHALL BE WASHED, COURSE, INTERLOCKING.
- SUBGRADE MUST SLOPE TOWARDS THE PERFORATED PIPE. SEE UTILITY PLAN FOR PIPE LOCATIONS AND ELEVATIONS.
- PAVERS SHALL BE PLACED IN PATTERNS SHOWN ON THE LAYOUT PLAN.
- DO NOT USE SEALER ON THE PERMEABLE PAVERS.

### PERMEABLE PAVER DETAIL

SCALE: NONE



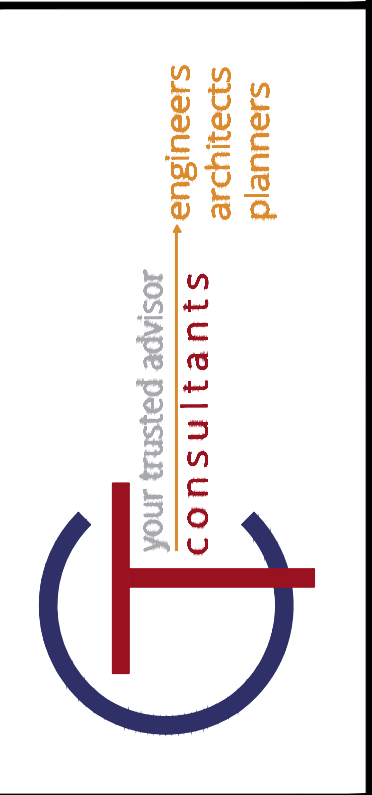
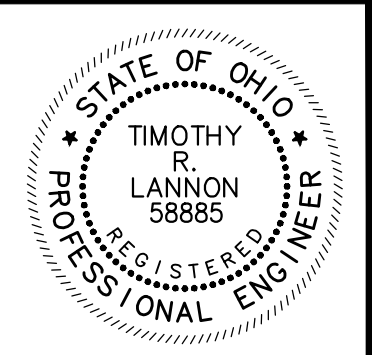
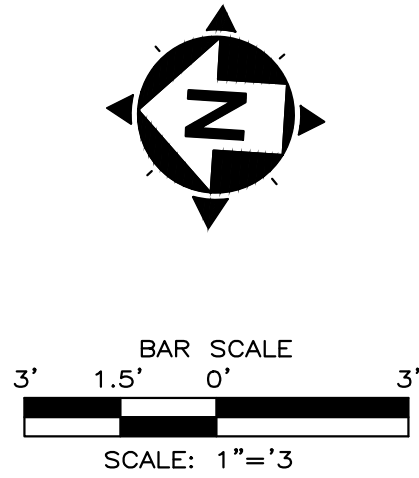
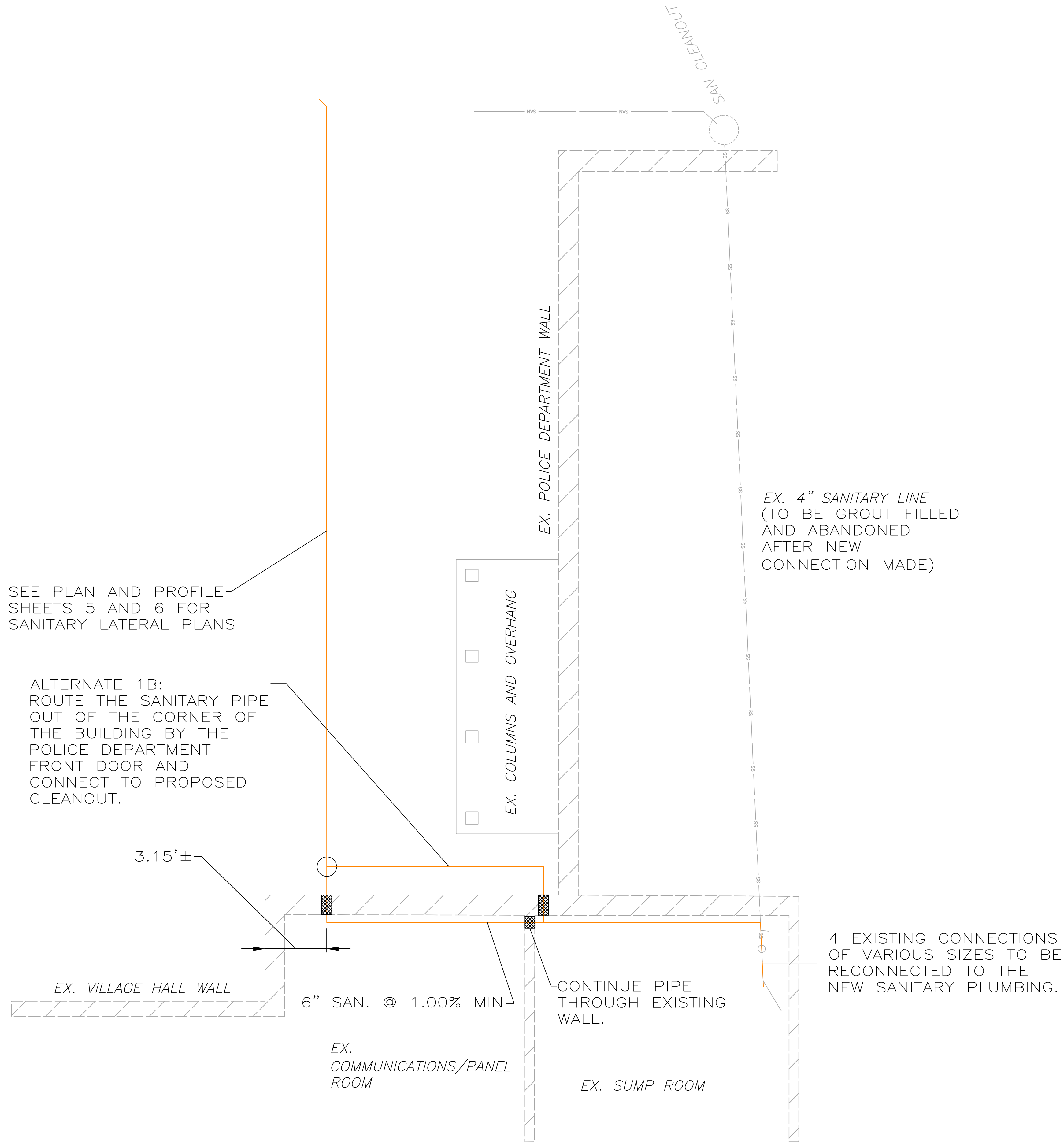
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REVISION	DATE	NO	01	REMOVAL OF SALLY PORT					

POLICE AND FIRE BUILDING  
SITE PLAN  
VILLAGE OF CHAGRIN FALLS, OHIO

### DETAILS

PROJECT NO:	17000602
DRAWING NAME	DET-2
SHEET	9
OF	11



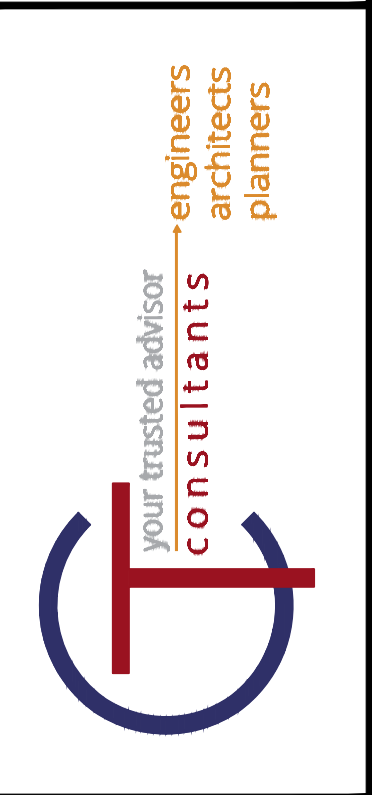
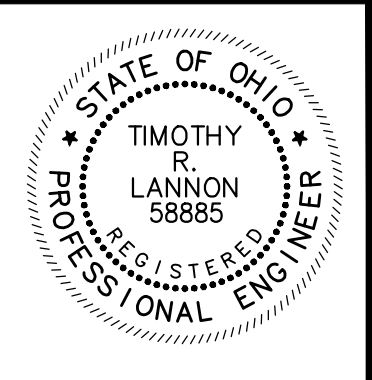
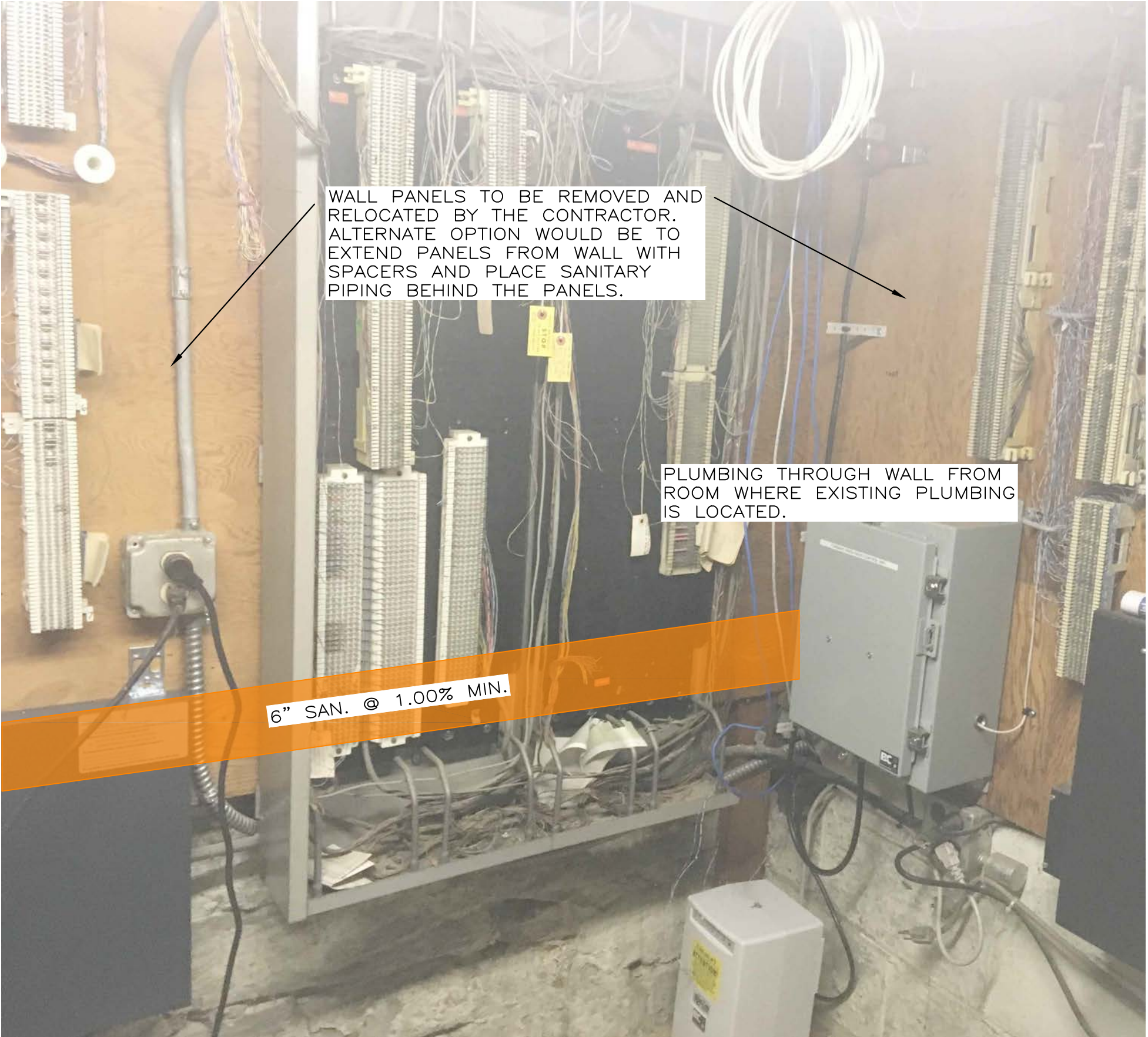
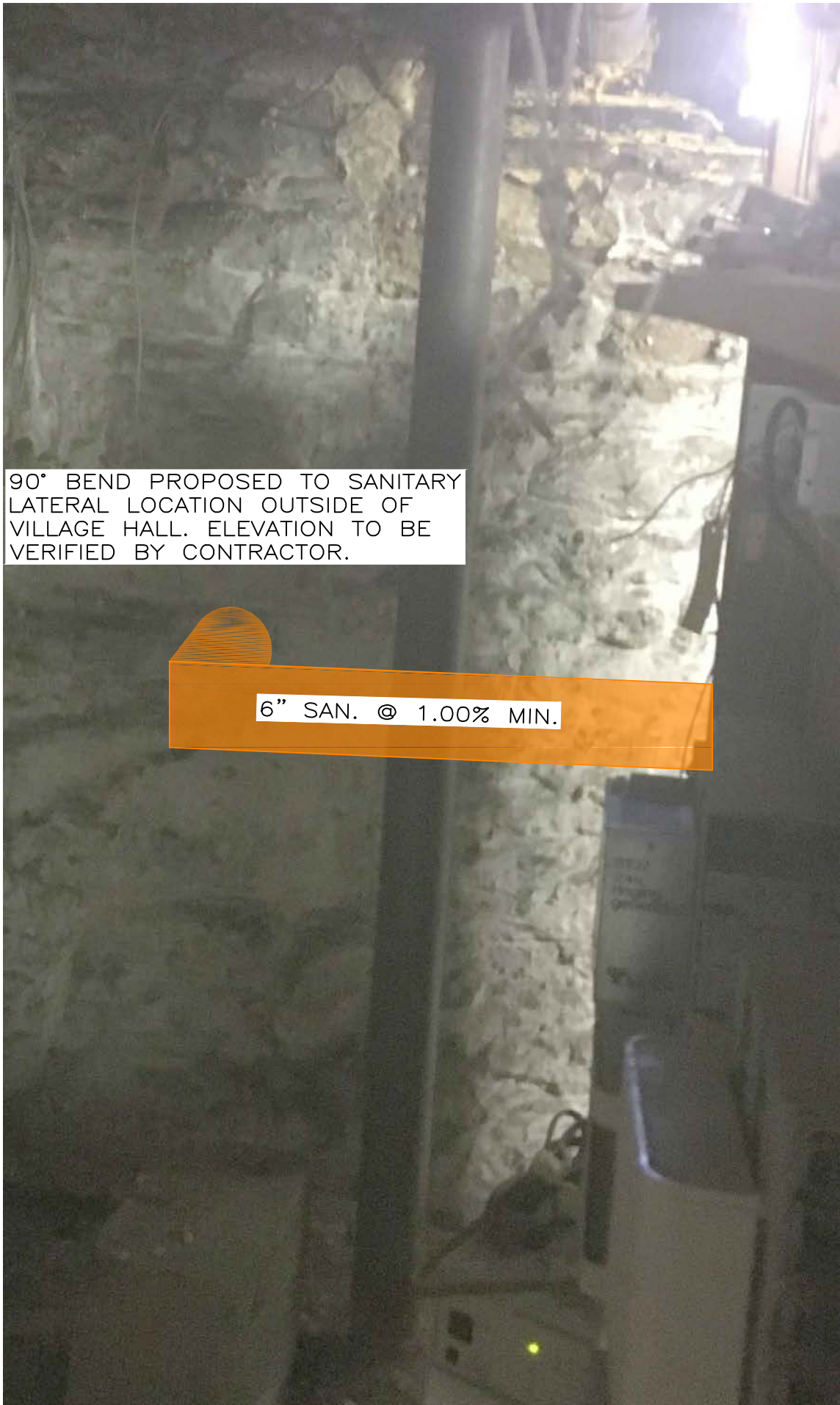
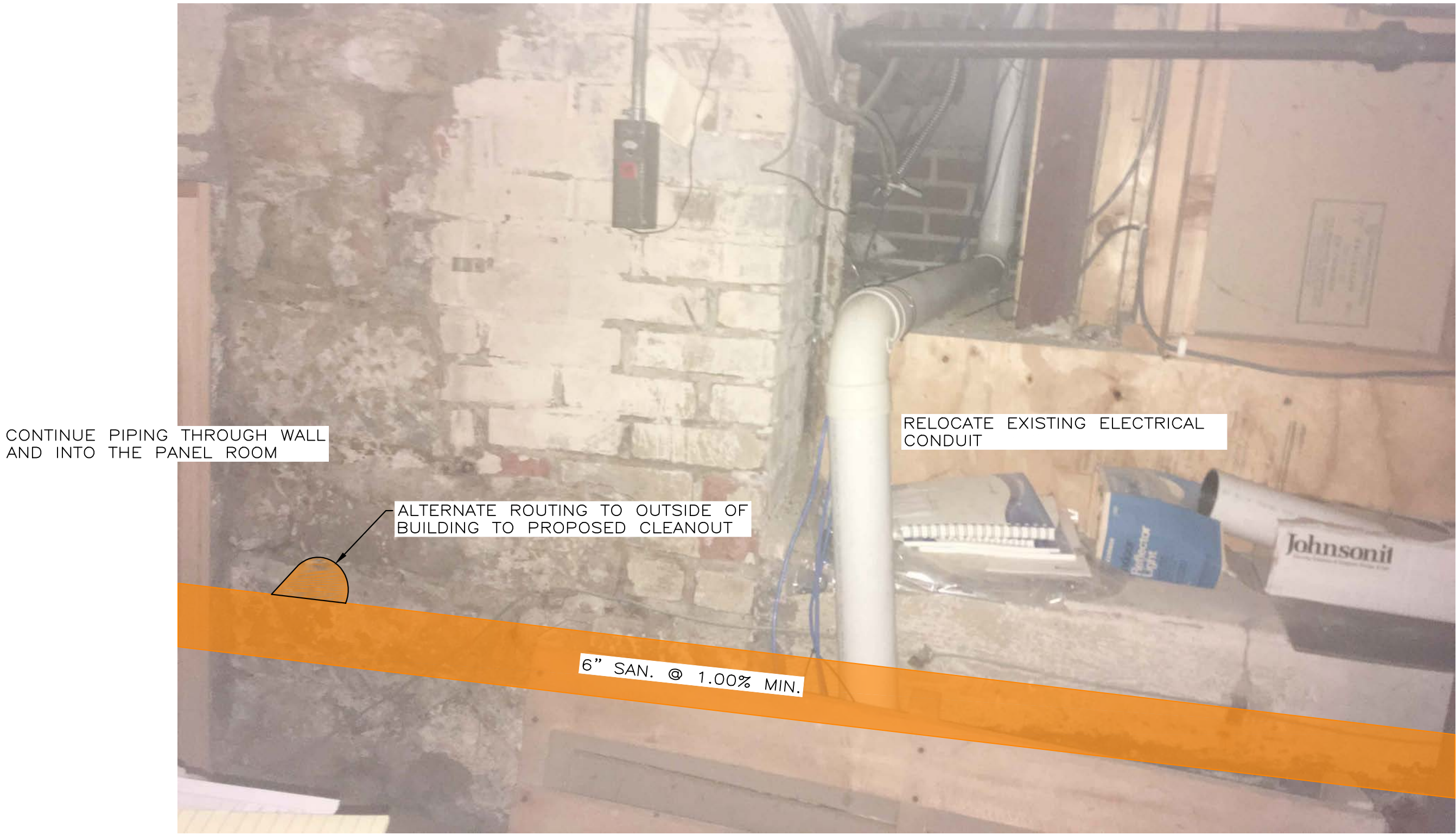


NO	REVISION	DATE
01	REMOVAL OF SALLY PORT	.
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SCALE: AS SHOWN	DATE: 05/01/2018
DESIGNED BY: TRL	DRAWN BY: JPL
CHECKED BY: TRL	

POLICE AND FIRE BUILDING SITE PLAN VILLAGE OF CHAGRIN FALLS, OHIO	
BASEMENT PLUMBING PLAN	
PROJECT NO: 17000602	
DRAWING NAME PLUMB-01	
SHEET 10	OF 11





NO	REVISION	DATE
01	REMOVAL OF SALLY PORT	.
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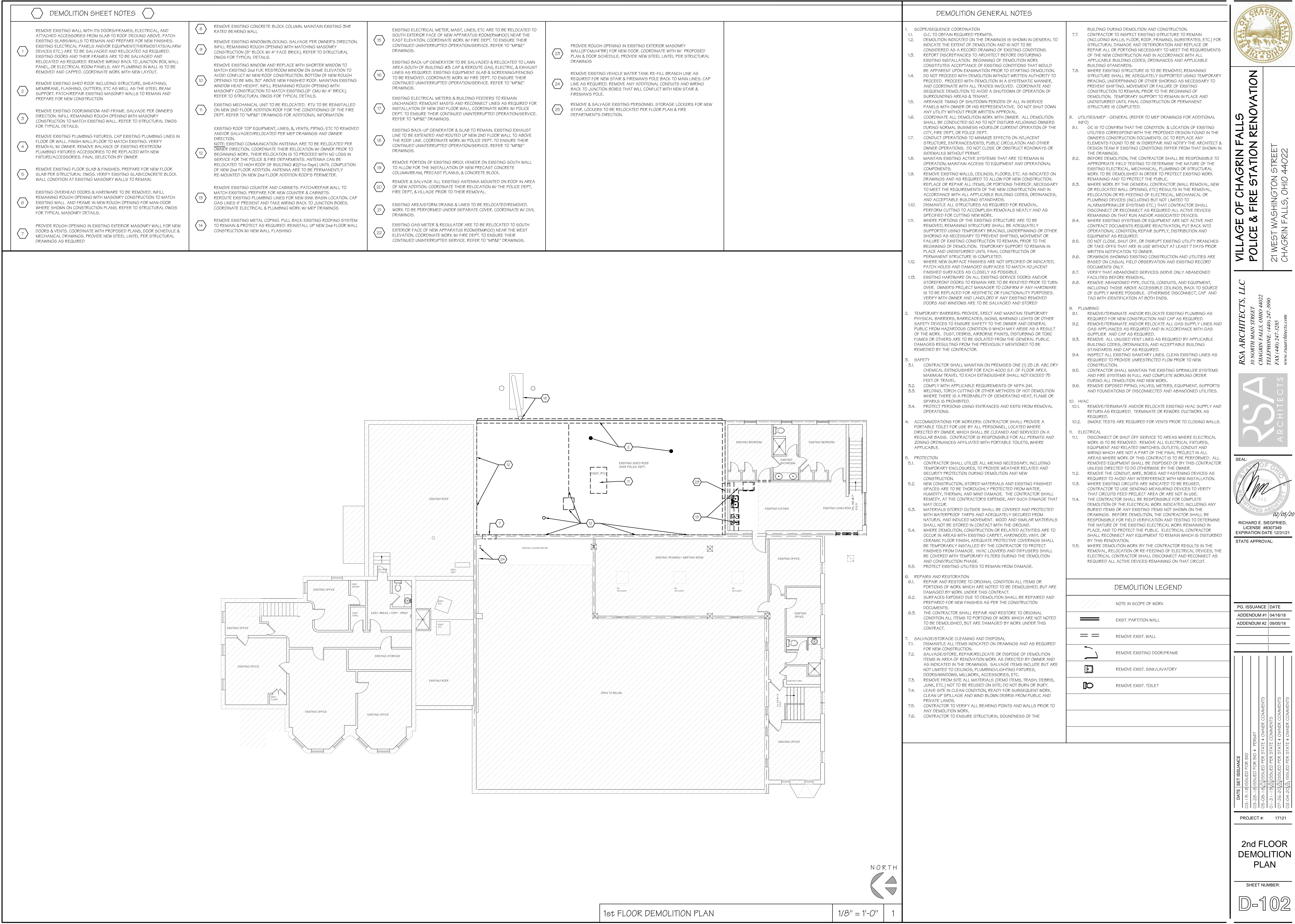
SCALE: AS SHOWN	DATE: 05/01/2018	DESIGNED BY: TRL	DRAWN BY: JPL	CHECKED BY: TRL
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POLICE AND FIRE BUILDING SITE PLAN VILLAGE OF CHAGRIN FALLS, OHIO	
BASEMENT PLUMBING PLAN	
PROJECT NO: 17000602	
DRAWING NAME PLUMB-02	
SHEET 11	OF 11











[illegible]



BUILDING 3 POLICE DEPARTMENT	OCCUPANT LOAD FOR FIRE AREA 'D' - FIRE AREA 'D'				# USED
	OCCUPANCY TYPE	TABLE 1004.1.2	AREA	TOTAL	
BUSINESS (FLOOR 1)	1 PER 100 S.F. GROSS	788 S.F.	8	8	
LOCKERS (FLOOR 1)	1 PER 50 S.F. GROSS	341 S.F.	7	7	
STORAGE/MECH (FLOOR 1)	1 PER 300 S.F. GROSS	397 S.F.	2	2	
TOTAL TENANT OCCUPANCY					17

**EGRESS REQUIREMENTS**

- REQUIRED WIDTH, PER OCCUPANT (SECT 1005.3.2): 0.2 INCH
- 17 OCCUPANTS X 0.2 INCH = 3.4 INCHES < 36" REQUIRED MIN.
- PROVIDED: EXIT CAPACITY: (1) 36 INCH EXIT
- MINIMUM NUMBER OF BUILDING EXITS REQUIRED FOR LESS THAN 30 OCCUPANTS (PER TABLE 1006.2.1): 1 EXIT
- EXIT ACCESS TRAVEL DISTANCE (COMMON PATH OF TRAVEL) FOR LESS THAN 30 OCCUPANTS (PER TABLE 1006.2.1): 100 FEET w/o SPRINKLER
- PROVIDED: 2 EXITS W/ 47H MAX TRAVEL DISTANCE - SEE SHEET "A-101"

**PLUMBING FACILITIES** (PER OBC TABLE 2902.1 AND PLUMBING CODE TABLE 403.1)

- WATER CLOSETS: 17 OCCUPANTS / 50 = 3 = 1 WATER CLOSET
- PROVIDED: (2) NEW SINGLE USE RESTROOMS
- LAVATORIES: 17 OCCUPANTS / 80 = 2 = 2 LAVATORIES
- PROVIDED: (2) LAVATORIES (1 per single use restroom)
- DRINKING FOUNTAIN: WATER COOLER TO BE PROVIDED IN LIEU OF A DRINKING FOUNTAIN PER OBC 410.1
- SERVICE SINK: 1 REQUIRED
- 1 PROVIDED

BUILDING 3 POLICE DEPARTMENT	OCCUPANT LOAD FOR FIRE AREA 'E' - DWELLING UNIT				# USED
	OCCUPANCY TYPE	TABLE 1004.1.2	AREA	TOTAL	
RESIDENTIAL (NEW) (FLOOR 2)	1 PER 200 S.F. GROSS	1,691 S.F.	9	9	
RESIDENTIAL (EXTS) (FLOOR 2)	1 PER 200 S.F. GROSS	893 S.F.	5	5	
TOTAL TENANT OCCUPANCY					14

**EGRESS REQUIREMENTS**

- REQUIRED WIDTH, PER OCCUPANT (SECT 1005.3.2): 0.2 INCH
- 14 OCCUPANTS X 0.2 INCH = 2.8 INCHES < 36" REQUIRED MIN.
- PROVIDED: EXIT CAPACITY: (2) 36 INCH EXITS - EXISTING NO CHANGE
- REQUIRED STAIR WIDTH, PER OCCUPANT (SECT 1005.3.1): 0.3 INCH
- 14 OCCUPANTS X 0.3 INCH = 4.2 INCHES < 36" REQUIRED MIN FOR UNDER 50 OCCUPANTS (OBC 1011.2 exception #1)
- PROVIDED: EXIT CAPACITY: (2) 36 INCH EXITS
- MINIMUM NUMBER OF BUILDING EXITS REQUIRED (PER TABLE 1006.2.1): 2 EXITS
- FIRE AREA 'E' REFUGE AREA IS PROVIDED W/ (1) EXIT LEADING DIRECTLY TO THE EXTERIOR (EXIT #1)
- EXISTING "EXIT #1" IS THE SECOND EXIT. IT IS AN OPEN EXIT ACCESS STAIR IN COMPLIANCE W/ OBC 1012.3.1 item #3
- EXIT ACCESS TRAVEL DISTANCE (PER SECT 1006.2.2.6): 125 FEET, w/ NFPA 130 SPRINKLER SYSTEM
- PROVIDED: 79H - SEE SHEET "A-102"

**PLUMBING FACILITIES** (PER OBC TABLE 2902.1 AND PLUMBING CODE TABLE 403.1)

- WATER CLOSETS: 14 OCCUPANTS / 10 = 1.4 = 2 WATER CLOSETS
- PROVIDED: (2) NEW WATERCLOSETS & (1) EXISTING
- LAVATORIES: 14 OCCUPANTS / 10 = 1.4 = 2 LAVATORIES
- PROVIDED: (2) NEW LAVATORIES & (2) EXISTING
- BATHUBS / SHOWER: 14 OCCUPANTS / 8 = 1.75 = 2 SHOWERS
- PROVIDED: (2) NEW SHOWERS & (1) EXISTING
- DRINKING FOUNTAIN: BOTTLED WATER TO BE PROVIDED IN LIEU OF A DRINKING FOUNTAIN PER OBC 410.1
- SERVICE SINK: 1 REQUIRED
- 1 PROVIDED

BUILDING 2 FIRE DEPARTMENT	OCCUPANT LOAD FOR FIRE AREA 'C' - APPARATUS RM				# USED
	OCCUPANCY TYPE	TABLE 1004.1.2	AREA	TOTAL	
STORAGE (GARAGE-FLOOR 1)	1 PER 300 S.F. GROSS	4,769 S.F.	16	16	
RESIDENTIAL (BLDG 3'S FIRE AREA 'F')	N/A	N/A	N/A	N/A	14
TOTAL TENANT OCCUPANCY					30

**EGRESS REQUIREMENTS**

- REQUIRED WIDTH, PER OCCUPANT (SECT 1005.3.2): 0.2 INCH
- 30 OCCUPANTS X 0.2 INCH = 6 INCHES < 36" REQUIRED MIN.
- PROVIDED: EXIT CAPACITY: (1) 36 INCH EXIT
- CHANGE
- REQUIRED STAIR WIDTH, PER OCCUPANT (SECT 1005.3.1): 0.3 INCH
- 14 OCCUPANTS X 0.3 INCH = 4.2 INCHES < 36" REQUIRED MIN FOR UNDER 50 OCCUPANTS (OBC 1011.2 exception #1)
- MINIMUM NUMBER OF BUILDING EXITS REQUIRED (PER TABLE 1006.2.1): 2 EXITS
- FIRE AREA 'F' REFUGE AREA IS PROVIDED W/ (1) EXIT LEADING DIRECTLY TO THE EXTERIOR (EXIT #8)
- THE OPEN EXIT ACCESS STAIR FOR OCCUPANTS FROM FIRE AREA 'F' IS IN COMPLIANCE W/ OBC 1012.3.1 item #1 AND DOES NOT HAVE AN AREA OF REFUGE IN COMPLIANCE W/ 1009.3 exception #9
- EXIT ACCESS TRAVEL DISTANCE (PER SECT 1017.2): 200 FEET, w/o SPRINKLER SYSTEM
- PROVIDED: MAX TRAVEL DISTANCE-134H - SEE SHEET "A-101"

**PLUMBING FACILITIES** - SEE FIRE AREA 'C'

BUILDING 2 FIRE DEPARTMENT	OCCUPANT LOAD FOR FIRE AREA 'C' - NEW APPARATUS RM				# USED
	OCCUPANCY TYPE	TABLE 1004.1.2	AREA	TOTAL	
STORAGE/MECH (FLOOR 1)	1 PER 300 S.F. GROSS	5,575 S.F.	19	19	
BUSINESS (FLOOR 1 & 2)	1 PER 100 S.F. GROSS	1,873 S.F.	19	19	
TOTAL TENANT OCCUPANCY					38

**EGRESS REQUIREMENTS (FOR FIRE AREA 'C' APPARATUS RM)**

- REQUIRED WIDTH, PER OCCUPANT (SECT 1005.3.2): 0.2 INCH
- 19 OCCUPANTS X 0.2 INCH = 3.8 INCHES < 36" REQUIRED MIN.
- PROVIDED: EXIT CAPACITY: (1) 36 INCH EXIT
- CHANGE
- MINIMUM NUMBER OF BUILDING EXITS REQUIRED FOR LESS THAN 30 OCCUPANTS (PER TABLE 1006.2.1): 1 EXIT (EXIT #10)
- G.G. IS TO LOCATE FIRE EXTINGUISHERS SO AS TO NOT HAVE MORE THAN 75H TRAVEL DISTANCE BETWEEN THEM
- G.O. TO HAVE ALL INSTALLED FIRE EXTINGUISHERS CURRENTLY TAGGED BY A LICENSED FIRE EQUIPMENT COMPANY
- PROVIDED: 65H MAX TRAVEL DISTANCE - SEE SHEET "A-101"

**PLUMBING FACILITIES FOR BUILDING 2 OCCUPANTS - FIRE AREA 'B' & 'C'** (PER OBC TABLE 2902.1 AND PLUMBING CODE TABLE 403.1)

- WATER CLOSETS: 68 OCCUPANTS / 50 = 1.4 = 2 WATER CLOSETS
- PROVIDED: (1) MENS WATERCLOSET (EXTG-NO CHANGE)
- (2) MENS URINAL (EXTG-NO CHANGE)
- (1) WOMENS WATERCLOSET (EXTG-NO CHANGE)
- LAVATORIES: 68 OCCUPANTS / 80 = 0.9 = 1 LAVATORY
- PROVIDED: (1) MENS LAVATORY (EXTG-NO CHANGE)
- (1) WOMENS LAVATORY (EXTG-NO CHANGE)
- BATHUBS / SHOWER: NOT REQUIRED
- PROVIDED: (1) SHOWER (EXTG-NO CHANGE)
- DRINKING FOUNTAIN: BOTTLED WATER IS PROVIDED IN LIEU OF A DRINKING FOUNTAIN PER OBC 410.1
- SERVICE SINK: 1 REQUIRED
- 2 PROVIDED

**LIFE SAFETY GENERAL NOTES**

- SIGNAGE**
  - G.G. TO PROVIDE AND INSTALL BUILDING OCCUPANT LOAD SIGNS IN CONSPICUOUS LOCATIONS NEAR MAIN ENTRANCES
  - OCCUPANT LOAD SIGNS TO READ "MAXIMUM OCCUPANT LOAD XXXX PEOPLE" FOR EACH SPACE WITH AN OCCUPANT LOAD OF 50 OR GREATER. CONFIRM WITH FIRE MARSHAL.
  - POSTED OCCUPANT SIGNS ARE TO BE AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT. OCCUPANT LOAD SIGNS SHALL BE PRINTED WITH LETTERS AT LEAST 3/4" HIGH ON A CONTRASTING BACKGROUND.
- FIRE EXTINGUISHERS**
  - G.G. TO PROVIDE & INSTALL FIRE EXTINGUISHERS MOUNTED AT 48" AFF TO TOP OF HANDLE, TYPE EXCEPT FOR TYPE "K" FIRE EXTINGUISHERS. CONFIRM FINAL LOCATIONS WITH FIRE MARSHAL & OWNER'S PROJECT MANAGER.
  - G.G. IS TO LOCATE FIRE EXTINGUISHERS SO AS TO NOT HAVE MORE THAN 75H TRAVEL DISTANCE BETWEEN THEM
  - G.O. TO HAVE ALL INSTALLED FIRE EXTINGUISHERS CURRENTLY TAGGED BY A LICENSED FIRE EQUIPMENT COMPANY
- G.G. IS TO PROVIDE & INSTALL A FLUSH MOUNTED 4400 SERIES KNOX BOX FOR ACCESS TO FIRE ALARM PANEL. IT IS TO BE MOUNTED 5 FEET A.F.F. NEXT TO THE MAIN ENTRANCE. COORDINATE FINAL LOCATION WITH OWNER'S PROJECT MANAGER AND FIRE MARSHAL.
- ACCESSIBILITY**
  - PROVIDE KNEE AND TOE CLEARANCE (SEE ACCESSIBILITY SHEET FOR REQUIREMENTS)
  - DIMENSIONED AISLE WIDTHS AS SHOWN ON PLAN ARE TO BE MAINTAINED AS MINIMUM CLEARANCES. ALL AISLES ARE MIN. 36" WIDE WHERE NOT DIMENSIONED.
  - ACCESSIBLE ROUTES AND EXITS HAVE BEEN PROVIDED FOR ALL EGRESS AND CIRCULATION.
  - ALL PUBLIC TOILET ROOMS SHALL PROVIDE ACCESSIBLE CLEARANCE TO AND AT EACH FIXTURE IN ACCORDANCE WITH [ACCESSIBILITY - CHAPTER 11 OBC WITH CURRENT AMENDMENTS & ICC/ANSI A117.1]. PARKING, UNLOADING ACCESSIBILITY AND SITE ACCESSIBILITY [15 EXISTING TO REMAIN] IN ACCORDANCE WITH [ACCESSIBILITY - CHAPTER 11 OBC WITH CURRENT AMENDMENTS & ICC/ANSI A117.1].
- FIRE SPRINKLER SYSTEM:** A CERTIFIED CONTRACTOR IS TO SUBMIT FOR A SEPARATE PERMIT OF THE NFPA 130 FIRE SPRINKLER SYSTEM - BLDG #3 AND IS TO SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR PERMIT REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- FIRE ALARM SYSTEM:** A CERTIFIED CONTRACTOR IS TO SUBMIT FOR A SEPARATE PERMIT OF THE FIRE ALARM SYSTEM AND/OR SMOKE DETECTION SYSTEM AND IS TO SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION & PERMIT SUBMITTAL. ARCHITECT/ENGINEER APPROVED SHOP DRAWINGS WILL BE SUBMITTED BY THE ARCHITECT FOR PERMIT REVIEW & APPROVAL AT THE STATE PRIOR TO INSTALLATION. NOTE: A VOICE EVACUATION SYSTEM IS TO BE MONITORED BY FIRE ALARM SYSTEM
- HOOD SUPPRESSION SYSTEM:** A CERTIFIED CONTRACTOR IS TO SUBMIT FOR A SEPARATE PERMIT OF THE HOOD SUPPRESSION SYSTEM AND IS TO SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION & PERMIT SUBMITTAL. ARCHITECT/ENGINEER APPROVED SHOP DRAWINGS WILL BE SUBMITTED BY THE ARCHITECT FOR PERMIT REVIEW & APPROVAL AT THE STATE PRIOR TO INSTALLATION.
- TYPE 1 GREASE HOOD:** A CERTIFIED CONTRACTOR IS TO SUBMIT FOR A SEPARATE PERMIT OF THE TYPE 1 HOOD AND IS TO SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION & PERMIT SUBMITTAL. ARCHITECT/ENGINEER APPROVED SHOP DRAWINGS WILL BE SUBMITTED BY THE ARCHITECT FOR PERMIT REVIEW & APPROVAL AT THE STATE PRIOR TO INSTALLATION.

**LIFE SAFETY GENERAL NOTES**

- EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, OR SPECIAL KNOWLEDGE OR EFFORT, UNLESS SPECIFICALLY OTHERWISE NOTED AND APPROVED.
- ALL REQUIRED EXITS, EXIT ACCESS, AND EXIT DISCHARGE AREAS SHALL BE CONTINUOUSLY MAINTAINED CLEAR AND UNOBSTRUCTED FOR INSTANT USE IN THE EVENT OF A FIRE OR OTHER EMERGENCY.
- THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE, SHALL BE ILLUMINATED AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED.
- NORMAL LIGHTING SHALL BE PROVIDED TO CONTINUOUSLY ILLUMINATE EGRESS ROUTES TO AT LEAST 10 FOOT-CANDLE AT THE FLOOR. DURING ALL PERIODS OF OCCUPANCY.
- THE POWER SUPPLY FOR MEANS OF EGRESS ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES' ELECTRICAL SUPPLY. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR. IN THE EVENT OF POWER SUPPLY FAILURE, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE THE FOLLOWING AREAS:
  - A) AISLES AND UNENCLOSED EGRESS STAIRWAYS IN ROOMS AND SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS.
  - B) CORRIDORS, EXIT ENCLOSURES AND EXIT PASSAGEWAYS IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
  - C) EXTERIOR EGRESS COMPONENTS AT OTHER THAN THE LEVEL OF EXIT DISCHARGE UNTIL EXIT DISCHARGE IS ACCOMPLISHED FOR BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
  - D) INTERIOR EXIT DISCHARGE ELEMENTS IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
  - E) EXTERIOR LANDINGS FOR EXIT DISCHARGE DOORWAYS IN BUILDINGS REQUIRED TO HAVE TWO OR MORE EXITS.
  - F) PUBLIC UTILIZATION TOILET ROOMS IN OCCUPANCY GROUPS A, B, E, F, AND M, WITH TWO OR MORE WATER CLOSETS OR ONE WATER CLOSET AND ONE OR MORE URINALS INSTALLED AS REQUIRED.
- EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. ACCESS TO EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN A CORRIDOR IS MORE THAN 100 FEET (30.48 M) OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN. AISLES AND UNENCLOSED EGRESS STAIRWAYS IN ROOMS AND SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS.
  - A) EXIT SIGNS ARE NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS.
  - B) MAIN EXTERIOR EXIT DOORS OR GATES THAT ARE OBVIOUSLY AND CLEARLY IDENTIFIABLE AS EXITS NEED NOT HAVE EXIT SIGNS WHERE APPROVED BY THE CODE ENFORCEMENT OFFICIAL.
  - C) REFER TO ELECTRICAL DRAWINGS FOR EXIT SIGN LOCATIONS.
  - D) EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED. EXCEPTION: TACTILE SIGNS NEED NOT BE PROVIDED WITH ILLUMINATION.
- NEW CONSTRUCTION, ALTERATIONS, ADDITIONS TO, OR A CHANGE OF USE OF BUILDINGS AND FACILITIES SHALL COMPLY WITH THE OBC BUILDING CODE, CH. 11 AND ICC/ANSI A117.1 AND ALL FEDERAL ACCESSIBILITY REGULATIONS. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES)
- LOCATIONS FOR MANUAL FIRE ALARM BELL AND SMOKE DETECTORS AS SHOWN ARE FOR COORDINATION PURPOSES. THE FIRE ALARM CONTRACTOR IS TO VERIFY THEIR LAYOUT AND DESIGN. INSTALLATION OF THE BELL AND OTHER FIRE ALARM DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH NFPA 72 AS WELL AS 2009 ANSI REQUIREMENTS.

**MAINTENANCE OF THE MEANS OF EGRESS**

GENERAL. THE MEANS OF EGRESS FOR BUILDINGS OR PORTIONS THEREOF SHALL BE MAINTAINED IN ACCORDANCE WITH THIS SECTION. RELIABILITY. REQUIRED EXIT ACCESS, EXITS OR EXIT DISCHARGES SHALL BE CONTINUOUSLY MAINTAINED FREE FROM OBSTRUCTIONS OR IMPEDIMENTS TO FULL INSTANT USE IN THE CASE OF FIRE OR OTHER EMERGENCY WHEN THE AREAS SERVED BY SUCH EXITS ARE OCCUPIED. SECURITY DEVICES AFFECTING MEANS OF EGRESS SHALL BE SUBJECT TO APPROVAL OF THE CODE ENFORCEMENT OFFICIAL.

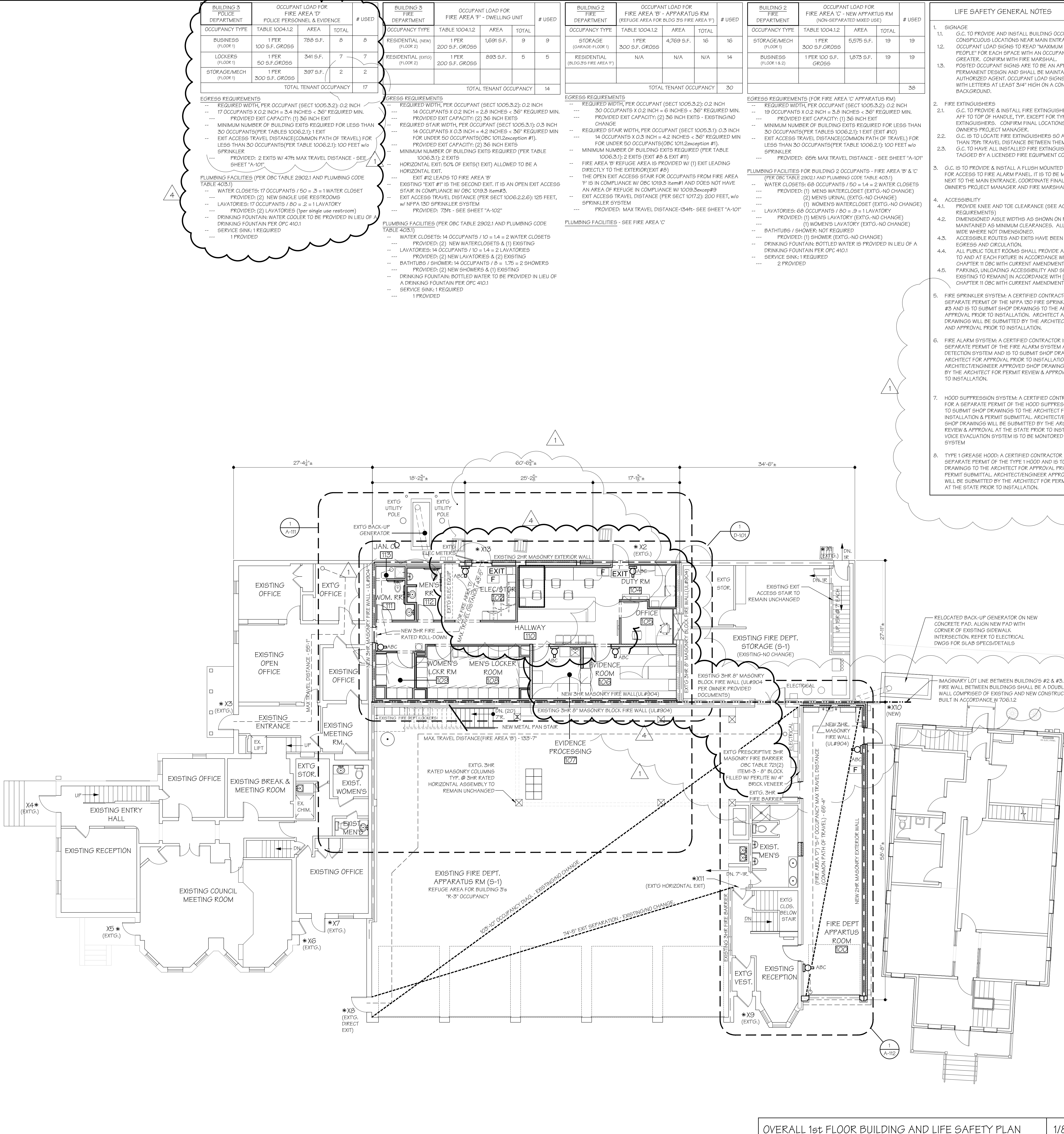
OBSTRUCTIONS. A MEANS OF EGRESS SHALL BE FREE FROM OBSTRUCTIONS THAT WOULD PREVENT ITS USE, INCLUDING THE ACCUMULATION OF SNOW AND ICE.

EXIT SIGNS. EXIT SIGNS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 101, DECORATIONS, FURNISHINGS, EQUIPMENT OR ADJACENT SIGNAGE THAT IMPAIRS THE VISIBILITY OF EXIT SIGNS, CREATED CONFUSION OR PREVENTS IDENTIFICATION OF THE EXIT SHALL NOT BE ALLOWED.

FURNISHINGS AND DECORATIONS. FURNISHINGS, DECORATIONS OR OTHER OBJECTS SHALL NOT BE PLACED SO AS TO OBSTRUCT EXITS, ACCESS THEREOF, EGRESS THEREFROM OR VISIBILITY THEREOF. HANGINGS AND DRAPERIES SHALL NOT BE PLACED OVER EXIT DOORS OR OTHERWISE BE LOCATED TO CONCEAL OR OBSTRUCT AN EXIT. MIRRORS SHALL NOT BE PLACED ON EXIT DOORS. MIRRORS SHALL NOT BE PLACED IN OR ADJACENT TO ANY EXIT IN SUCH A MANNER AS TO CONFUSE THE DIRECTION OF EXIT

PROVIDE TACTILE EXIT SIGNS AT EXIT DOORS PER OBC SECTION 1011.3. SEE SHEET "A-101" FOR ADDITIONAL INFORMATION.

LIFE SAFETY LEGEND	
* (Asterisk)	BUILDING EXIT DISCHARGE
● (Solid Circle)	POINT OF EXIT OPTION
○ (Open Circle)	POINT OF TRAVEL ORIGIN
--- (Dashed Line)	BUILDING DIAGONAL AND EXIT SEPARATION
- - - (Long Dash)	COMMON PATH OF TRAVEL
☼ (Light Bulb)	FIRE EXTINGUISHER - TYPE ABC - SURFACE MOUNT
EXIT (Text)	TACTILE EXIT SIGN
F (Text)	MANUAL FIRE ALARM
S (Text)	SMOKE ALARM (WALL MOUNTED UN.0) - COMPLYING W/ UL207 & INSTALLED PER NFPA72 - SMOKE ALARM IN DWELLING UNIT SHALL BE INTERCONNECTED PER OBC 907.2.11.5
WALL LEGEND	
— (Solid Line)	3 HR - EXISTING WALL
— (Dashed Line)	3 HR - NEW WALL
— (Dotted Line)	2 HR - EXISTING WALL
— (Dash-dot Line)	2 HR - NEW WALL
— (Thin Solid Line)	1 HR - EXISTING WALL
— (Thin Dashed Line)	1 HR - NEW WALL
— (Thick Solid Line)	EXISTING WALL TO REMAIN
— (Thick Dashed Line)	NEW METAL STUD WALL - FULL HEIGHT
— (Thick Dotted Line)	NEW CMU BLOCK WALL
— (Thick Dash-dot Line)	NEW BRICK VENEER



OVERALL 1st FLOOR BUILDING AND LIFE SAFETY PLAN

1/8" = 1'-0"

1



**VILLAGE OF CHAGRIN FALLS**  
**POLICE & FIRE STATION RENOVATION**  
 21 WEST WASHINGTON STREET  
 CHAGRIN FALLS, OHIO 44022

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 www.rsarchitects.com



SEAL:  
  
 RICHARD E. SIEGFRED  
 LICENSE #8907548  
 EXPIRATION DATE 12/31/21  
 STATE APPROVAL:

PG. ISSUANCE	DATE
ADDENDUM #1	04/16/18
ADDENDUM #2	09/05/18
DATE SET ISSUANCE	
03-19-18 ISSUED FOR BID	
03-26-18 ISSUED FOR BID # PERMIT	
05-08-18 ISSUED FOR STATE & OWNER COMMENTS	
01-13-19 ISSUED FOR STATE & OWNER COMMENTS	
07-22-20 ISSUED FOR STATE & OWNER COMMENTS	
02-04-20 ISSUED FOR STATE & OWNER COMMENTS	
PROJECT #:	17121

**OVERALL**  
**1st FLOOR &**  
**LIFE SAFETY**  
**PLAN**

SHEET NUMBER:

**A-101**







NOTE 1: INSTALL MECHANICAL UNIT AND TOP OF CURB LEVEL  
NOTE 2: FASTENER AND/OR ROOF SHEATHING PENETRATIONS TO BE SEALED.

GASKET AND SEALANT

PATE SELF LEVELING HVAC CURB (PC-2P-SL) OR APPROVED EQUAL. SECURE FASTEN LEVELING FRAME TO STRUCTURAL SUPPORT FRAME @ 12" O.C. CURB HEIGHT TO BE 16" MIN.

ROOF DECKING - REFER TO STRUCTURAL DWGS

STRUCTURAL SUPPORT FRAME FOR UNIT AND DECKING AT FULL PERIMETER OF ROOF OPENING. SECURE FRAME TO ROOF STRUCTURE. REFER TO STRUCTURAL DWGS

MECH. UNIT. SEE MECH. DRAWINGS

FIRE RETARDANT WOOD NAILER

ROOF FLASHING W/ DRIP EDGE

1-1/2" RIGID INSULATION

PROVIDE GASKET/SEALANT AROUND PERIMETER OF CURB

2x FIRE RETARDANT WOOD BLOCKING

INSTALL ROOF SYSTEM & INSULATION PER MANUFACTURER'S SPECIFICATIONS. WRAP UP SIDE OF CURB

PROVIDE GASKET/SEALANT AROUND PERIMETER OF CURB

ROOF CURB DETAIL

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

3

DOUBLE FIRE WALL ASSEMBLY

BLDG #2 EXTG. 3HR FIRE WALL

BLDG #3 NEW 3HR FIRE WALL

PROVIDE NON-COMBUSTIBLE BRACING & SUPPORT OF GREASE DUCT SECURELY ATTACHED TO STRUCTURE. MECHANICAL FASTENERS SHALL NOT PENETRATE THE DUCT WALLS

INSTALL FLASHING, GUTTER, & ROOF MEMBRANE PER ROOF MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE FIRE RETARDANT 2x BLOCKING AS REQUIRED

ALUMINUM GUTTER

3-5/8" MTL STUD FURROUT & 5" SHEATHING - PROVIDE STAINLESS STEEL PANEL FINISH OVER CEMENT BD OVER STUDS WITHIN 18" OF HOOD

PROVIDE SINGLE MEMBRANE EXPANSION JOINT PER ROOFING MANUFACTURER'S GUIDELINES & REQUIREMENTS

EXISTING ROOFING SYSTEM W/ BAR JOIST, METAL DECKING, RIGID INSULATION, & SINGLE-PLY BALLASTED MEMBRANE TO REMAIN UNCHANGED.

EXISTING 3HR MASONRY BLOCK FIRE WALL TO REMAIN UNCHANGED.

NEW 3HR MASONRY BLOCK & BRICK FIRE WALL CONSTRUCTED IN ACCORDANCE W/ UL# U902 & U904

NOTE: INSTALLATION OF TYPE 1 GREASE HOOD, GREASE DUCT, AND GREASE FAN ASSEMBLY ARE TO COMPLY WITH THE OHIO MECHANICAL CODE SECTION 506 AND NFPA

GREASE EXHAUST FAN - REFER TO MECHANICAL DRAWINGS FOR SELECTION

DUCT TO EXHAUST FAN CONNECTION SHALL BE FLANGED AN GASKETED AT BASE OF THE FAN. GASKET AND SEALING MATERIALS SHALL BE RATED FOR CONTINUOUS DUTY AT TEMP. OF NOT LESS THAN 1500F

PROVIDE SELF LEVELING ROOF CURB OR APPROVED EQUAL

WRAP GREASE DUCT WITH MIN. (2) LAYERS 3M 615+ GREASE DUCT WRAP FOR 0' CLEARANCE TO COMBUSTIBLES AND 2HR RATING. EXTEND FROM HOOD TO EXHAUST FAN

PROVIDE ROOF OPENING STEEL REINFORCEMENT PER STRUCTURAL DRAWINGS

SINGLE PLY MEMBRANE ROOF OVER RIGID INSULATION ON METAL DECKING SUPPORTED BY BAR JOISTS. REFER TO ROOF PLAN & STRUCTURAL DRAWINGS. PROVIDE ADDITIONAL LAYER OF GREASE PROTECTION AROUND FAN PER MANUFACTURER'S RECOMMENDATIONS

7" MASONRY BLOCK +22'-4" JOIST BRG. (LOW END) 21'-10.75"±

4'-5" BETWEEN FIRE WALL & ROOF PENETRATIONS

4'-0" MIN. CLEAR

THREADED ROD SUPPORTS AT EACH CORNER OF HOOD. SECURE TO UNISTRUTS FASTENED TO THE TOP CHORDS OF THE BAR JOISTS

PROVIDE UL LISTED GREASE DUCT OR INSTALL IN ACCORDANCE WITH THE OHIO MECHANICAL CODE. REFER TO MECHANICAL DRAWINGS & MECHANICAL SPECIFICATIONS. PROVIDE CLEAN-OUTS IN DUCT AT EACH CHANGE IN DIRECTION. MAINTAIN MAXIMUM POSSIBLE SLOPE

NON-COMBUSTIBLE LAY-IN CEILING TILE & GRID - USG - CLIMAFLEX 3270 W/ FIRECODE PANELS OR APPROVED EQUAL WITHIN 18" OF HOOD (ACT-2)

DUCT TO HOOD CONNECTION SHALL BE MADE WITH A CONTINUOUS LIQUID -TIGHT WELDED OR BRAZED JOINT. ALT: UL LISTED & LABELED HOOD TO DUCT COLLAR CONNECTION

LISTED TYPE 1 GREASE HOOD INSTALLED IN ACCORDANCE WITH NFPA 96 REGULATIONS & OMC 507. CONTRACTOR TO COORDINATE FINAL SELECTION W/ ARCHITECT & ENGINEER. PROVIDE MIN. 6'-8" HEAD HT CLEARANCE TO FINISHED FLOOR BELOW.

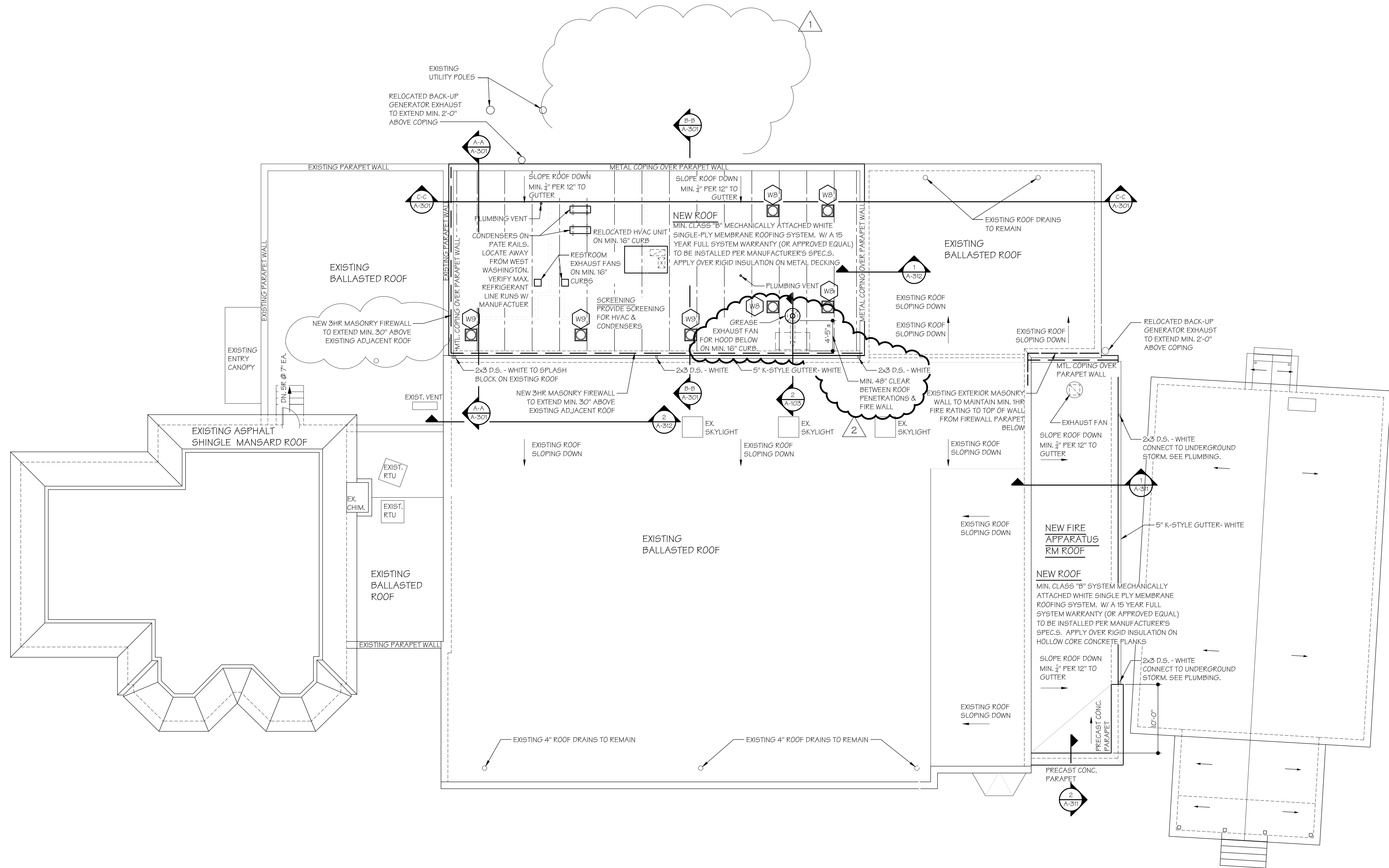
STAINLESS STEEL PANELS OVER CEMENT BOTILE BACKER BD OVER METAL STUD FURRING OVER CONCRETE BLOCK

6'-8" CLEAR

TYPE 1 KITCHEN HOOD AND GREASE DUCT DETAIL

3/4" = 1'-0"

2



OVERALL BUILDING ROOF PLAN

1/8" = 1'-0"

1



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LICENSE #8307548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG. ISSUANCE DATE  
ADDENDUM #1 04/16/18  
ADDENDUM #2 09/05/18

DATE	SET ISSUANCE
03-11-19	ISSUED FOR BID
03-26-19	ISSUED FOR BID # PERMIT
05-06-19	ISSUED PER STATE # OWNER COMMENTS
01-13-19	ISSUED PER STATE # OWNER COMMENTS
07-26-20	ISSUED PER STATE # OWNER COMMENTS
02-04-20	ISSUED PER STATE # OWNER COMMENTS


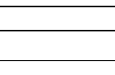

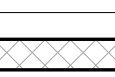

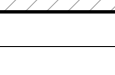
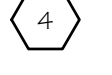



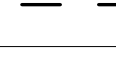
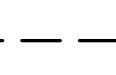


PROJECT #: 17121

OVERALL  
ROOF PLAN

SHEET NUMBER:
















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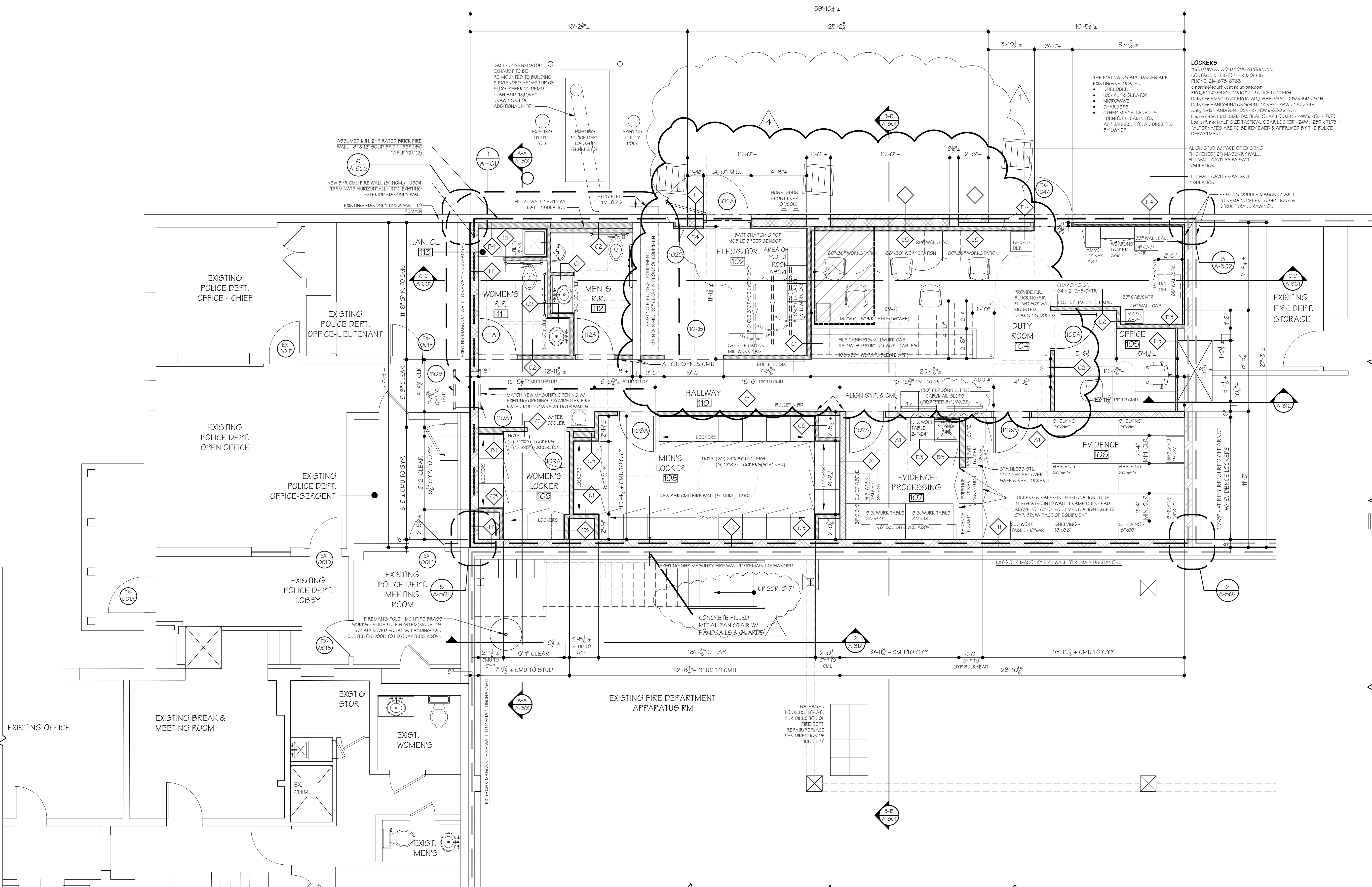


TAG LEGEND		WALL LEGEND	
	DOOR TAG - SEE DOOR SCHEDULE		EXISTING WALL TO REMAIN
	WINDOW TAG - SEE WINDOW SCHEDULE		NEW METAL STUD WALL - FULL HEIGHT
	WALL TAG - SEE WALL TYPES BELOW		NEW CMU BLOCK WALL
	NOTE TAG - SEE SHEET NOTES LIST ON THIS PAGE		NEW BRICK VENEER
			3 HR - EXISTING WALL
			3 HR - NEW WALL
			2 HR - EXISTING WALL
			2 HR - NEW WALL
			1 HR - EXISTING WALL
			1 HR - NEW WALL

BUILDING NOTES
BUILDING CONSTRUCTION TYPES - BLDG 1: 1B UNPROTECTED CONSTRUCTION (EXISTING/NO CHANGE) BLDG 2: 1B UNPROTECTED CONSTRUCTION BLDG 3: 1B UNPROTECTED CONSTRUCTION
EXTERIOR WALLS AND ROOF TO MEET CRITERIA FOR 2 HR FIRE WALL CONSTRUCTION AS PER OBC TABLE 602 FOR BUILDING DISTANCES LESS THAN 5 FT FROM EACH OTHER ON THE SAME LOT. THE WALL AND ROOF SHALL MEET THE CRITERIA FOR 1 HR WALL WHEN THOSE DISTANCES ARE BETWEEN 5 FT AND 10 FT.
TRIM AND WOOD BLOCKING IN FIRE RATED ASSEMBLIES TO BE FIRE RETARDANT TREATED.

- GENERAL NOTES
- ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD(BLOCK) TO FACE OF STUD(BLOCK) FOR NEW CONSTRUCTION UNLESS NOTED OTHERWISE.
  - GC TO INSTALL BLOCKING IN WALL AS REQUIRED FOR EQUIPMENT, COUNTERS, CABINETS, ACCESSORIES, SIGNAGE, GRABBARS, ARTWORK, CURTAINS, DRAPERY, MIRRORS, ETC. GC TO COORDINATE WITH PROJECT MANAGER AND VENDORS FOR THEIR BLOCKING REQUIREMENTS.
  - GC TO VERIFY REQUIRED ROUGH OPENINGS FOR ALL DOORS, WINDOWS AND SIDEWALLS.
  - GC TO INSTALL SOUND ATTENUATION IN RESTROOM, OFFICE, & LOCKER ROOM WALLS.
  - GC TO VERIFY CONDUIT, BLOCKING, UTILITIES, ETC. ARE INSTALLED PRIOR TO INSTALLING INSULATION.
  - SLOPE SHOWER FLOORS TO DRAINS 1/4 INCH PER FOOT MIN. IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
  - BRACE TOPS OF WALLS TO STRUCTURE.
  - PROVIDE FIRESTOPPING AS REQUIRED.
  - REFER TO PLUMBING DRAWINGS FOR ALL FLOOR DRAIN AND CLEANOUT LOCATIONS. DRAINS ON PLAN ARE FOR REFERENCE ONLY.
  - OWNER TO PROVIDE WATER COOLER - GC TO VERIFY LOCATION AND PROVIDE ELECTRICAL AS REQUIRED.
  - VERIFY FRAMING AT SHOWER WITH SELECTED SHOWER UNIT.
  - MILLWORK CABINETS TO BE 24" DEEP UNO.
  - WALL TYPES
    - REFER TO FINISH SCHEDULE FOR GYPSUM BOARD AND CEMENT BOARD FINISH LEVEL REQUIREMENTS.
    - GC TO COORDINATE THE FRAMING DESIGN WITH MECHANICAL, PLUMBING AND ELECTRICAL WORK, INCLUDING DUCT LAYOUT PRIOR TO THE INSTALLATION OF FRAMING OR DUCTWORK.
    - FRAMED WALLS TO RECEIVE SHEATHING/SUBSTRATE SUITABLE FOR THEIR SPECIFIED FINISHES. REFER TO INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR WALL FINISHES.
      - NO FINISH: 5/8" GYPSUM BOARD
      - PAIN: 5/8" GYPSUM BOARD
      - WALL AND BASE TILE: 5/8" TILE BACKER BOARD/DUROCK BD
      - FRF: 5/8" GYPSUM BD
      - HOOD: 5/8" CEMENT BD/DUROCK BD - EXTEND MIN. 18" BEYOND HOOD IN ALL DIRECTIONS
    - 1HR SLEEPING UNIT FIRE SEPARATION WALLS TO COMPLY W/ UL DESIGN #1419. SEE SHEETS A-041, A-042, & A-043
    - 2HR HORIZONTAL ASSEMBLY BETWEEN FIRE AREAS 7' AND 1' TO COMPLY W/ UL DESIGN #1533. SEE SHEETS A-041, A-042, & A-043
    - FURNITURE PIECES INCLUDING SEATS, CHAIRS, FREE STANDING DESKS, BEDS, SOFAS, AND DINING ROOM TABLES ARE TO BE PROVIDED BY OWNER
    - POLICE APPLIANCES ARE EXISTING TO BE RELOCATE
    - FIRE DEPARTMENT APPLIANCES ARE TO BE PROVIDED BY CONTRACTOR
    - ACCESSORIES(RESTROOM & LOCKERS) TO BE PROVIDED BY CONTRACTOR
    - MILLWORK, CABINETS, COUNTERS, WALL CABINETS TO BE PROVIDED BY CONTRACTOR. FIRE DEPT. CABINETS TO BE OF SOLID WOOD CONSTRUCTION. POLICE TO BE STANDARD PLASTIC LAMINATE COVERED CABINETS UNO. COORDINATE FINISH SELECTIONS W/ ARCHITECT & OWNER

WALL TYPES	
	INTERIOR NON-BEARING RE-INFORCED MASONRY WALL - 6" CMU - TO DECK ABOVE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - TO DECK ABOVE w/ BATT INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - SUSPENDED FRONT DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES.
	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE w/ BATT INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE w/ BATT INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING. INSTALL MIN. 1/2" RIGID INSULATION BETWEEN STUDS AND MASONRY WALL
	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 1625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 1625125-33 - TO DECK ABOVE w/ 1-1/2" RIGID INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	1HR NON-BEARING STUD WALL ASSEMBLY - UL 1419: 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES TO DECKING ABOVE AND ACOUSTICAL INSULATION FOR MIN. 5TC OF 50. SEE SHEET A-041
	NEW MASONRY INFILL WALL - MATCH THICKNESS & CONSTRUCTION OF EXISTING WALL - REFER TO STRUCTURAL DWGS
	3HR MASONRY BEARING FIRE WALL - UL#1904 - 8" RE-INFORCED CMU(C-3) WALL. FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	MASONRY WALL - 8" RE-INFORCED CMU WALL. FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	3HR MASONRY EXTERIOR WALL - UL#1902: 4" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER. FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	1HR MASONRY EXTERIOR WALL - UL#1902: 4" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER. FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	2HR MASONRY BEARING EXTERIOR WALL - UL#1902: 8" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER. FILL VOID W/ PERLITE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	2HR MASONRY INFILL BEARING WALL - UL#1902: 4" (OR 8") RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER TO MATCH ADJACENT WALL CONSTRUCTION. FILL VOIDS W/ PERLITE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT



1st FLOOR POLICE DEPARTMENT ADDITION & RENOVATION CONSTRUCTION PLAN

1/4" = 1'-0"



VILLAGE OF CHAGRIN FALLS  
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EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG. ISSUANCE DATE  
ADDENDUM #1 04/16/18  
ADDENDUM #2 09/05/18

DATE SET ISSUANCE	ISSUED FOR
03-19-18	ISSUED FOR BID
03-26-18	ISSUED FOR BID # PERMIT
05-08-18	ISSUED FOR STATE # OWNER COMMENTS
07-11-18	ISSUED FOR STATE COMMENTS
07-26-18	ISSUED FOR STATE # OWNER COMMENTS
02-04-20	ISSUED FOR STATE # OWNER COMMENTS



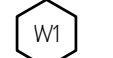



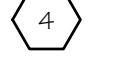







PROJECT #: 17121

1st FLOOR  
ADDITION &  
RENOVATION  
PLAN

SHEET NUMBER:





















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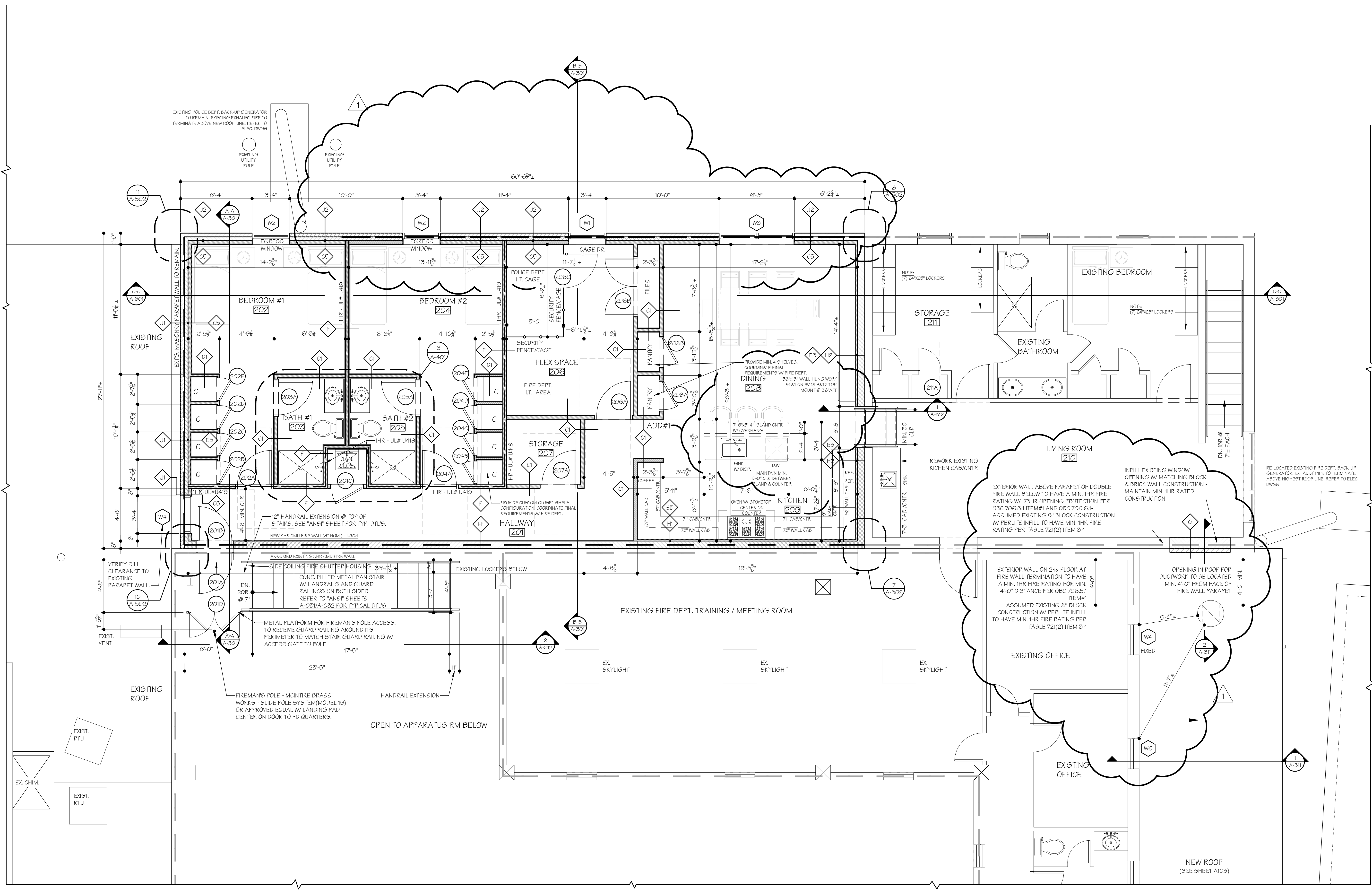


TAG LEGEND		WALL LEGEND	
	DOOR TAG - SEE DOOR SCHEDULE		EXISTING WALL TO REMAIN
	WINDOW TAG - SEE WINDOW SCHEDULE		NEW METAL STUD WALL - FULL HEIGHT
	WALL TAG - SEE WALL TYPES BELOW		NEW CMU BLOCK WALL
	NOTE TAG - SEE SHEET NOTES LIST ON THIS PAGE		NEW BRICK VENEER
			3 HR - EXISTING WALL
			3 HR - NEW WALL
			2 HR - EXISTING WALL
			2 HR - NEW WALL
			1 HR - EXISTING WALL
			1 HR - NEW WALL

BUILDING NOTES
BUILDING CONSTRUCTION TYPES - BLDG 1: 1B UNPROTECTED CONSTRUCTION (EXISTING/NO CHANGE) BLDG 2: 1B UNPROTECTED CONSTRUCTION BLDG 3: 1B UNPROTECTED CONSTRUCTION
EXTERIOR WALLS AND ROOF TO MEET CRITERIA FOR 2 HR FIRE WALL CONSTRUCTION AS PER OBC TABLE 602 FOR BUILDING DISTANCES LESS THAN 5 FT FROM EACH OTHER ON THE SAME LOT. THE WALL AND ROOF SHALL MEET THE CRITERIA FOR 1 HR WALL WHEN THOSE DISTANCES ARE BETWEEN 5 FT AND 10 FT.
TRIM AND WOOD BLOCKING IN FIRE RATED ASSEMBLIES TO BE FIRE RETARDANT TREATED.

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  - GC TO VERIFY CONDUIT, BLOCKING, UTILITIES, ETC. ARE INSTALLED PRIOR TO INSTALLING INSULATION.
  - SLOPE SHOWER FLOORS TO DRAINS 1/4 INCH PER FOOT MIN. IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
  - BRACE TOPS OF WALLS TO STRUCTURE.
  - PROVIDE FIRESTOPPING AS REQUIRED.
  - REFER TO PLUMBING DRAWINGS FOR ALL FLOOR DRAIN AND CLEANOUT LOCATIONS. DRAINS ON PLAN ARE FOR REFERENCE ONLY.
  - OWNER TO PROVIDE WATER COOLER - GC TO VERIFY LOCATION AND PROVIDE ELECTRICAL AS REQUIRED.
  - VERIFY FRAMING AT SHOWER WITH SELECTED SHOWER UNIT.
  - MILLWORK CABINETS TO BE 24" DEEP UNO.
  - WALL TYPES
  - REFER TO FINISH SCHEDULE FOR GYPSUM BOARD AND CEMENT BOARD FINISH LEVEL REQUIREMENTS.
  - GC TO COORDINATE THE FRAMING DESIGN WITH MECHANICAL, PLUMBING AND ELECTRICAL WORK, INCLUDING DUCT LAYOUT PRIOR TO THE INSTALLATION OF FRAMING OR DUCTWORK.
  - FRAMED WALLS TO RECEIVE SHEATHING/SUBSTRATE SUITABLE FOR THEIR SPECIFIED FINISHES. REFER TO INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR WALL FINISHES.
  - NO FINISH: 5/8" GYPSUM BOARD
  - PAIN: 5/8" GYPSUM BOARD
  - WALL AND BASE TILE: 5/8" TILE BACKER BOARD/DUROCK BD
  - FRP: 5/8" GYPSUM BD
  - HOOD: 5/8" CEMENT BD/DUROCK BD - EXTEND MIN. 18" BEYOND HOOD IN ALL DIRECTIONS
  - 1HR SLEEPING UNIT FIRE SEPARATION WALLS TO COMPLY W/ UL DESIGN #1419. SEE SHEETS A-041, A-042, & A-043
  - 2HR HORIZONTAL ASSEMBLY BETWEEN FIRE AREAS 1' AND 1' TO COMPLY W/ UL DESIGN #1533. SEE SHEETS A-041, A-042, & A-043
  - FURNITURE PIECES INCLUDING SEATS, CHAIRS, FREE STANDING DESKS, BEDS, SOFAS, AND DINING ROOM TABLES ARE TO BE PROVIDED BY OWNER
  - POLICE APPLIANCES ARE EXISTING TO BE RELOCATE
  - FIRE DEPARTMENT APPLIANCES ARE TO BE PROVIDED BY CONTRACTOR
  - ACCESSORIES(RESTROOM & LOCKERS) TO BE PROVIDED BY CONTRACTOR
  - MILLWORK, CABINETS, COUNTERS, WALL CABINETS TO BE PROVIDED BY CONTRACTOR. FIRE DEPT. CABINETS TO BE OF SOLID WOOD CONSTRUCTION. POLICE TO BE STANDARD PLASTIC LAMINATE COVERED CABINETS UNO. COORDINATE FINISH SELECTIONS W/ ARCHITECT & OWNER

WALL TYPES	
	INTERIOR NON-BEARING RE-INFORCED MASONRY WALL - 6" CMU - TO DECK ABOVE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - TO DECK ABOVE w/ BATT INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
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2nd FLOOR FIRE DEPARTMENT ADDITION & RENOVATION CONSTRUCTION PLAN

1/4" = 1'-0"

1



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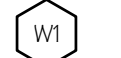



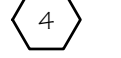




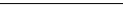


PROJECT #: 17121

2nd FLOOR  
ADDITIONS &  
RENOVATION  
PLAN

SHEET NUMBER:

A-112

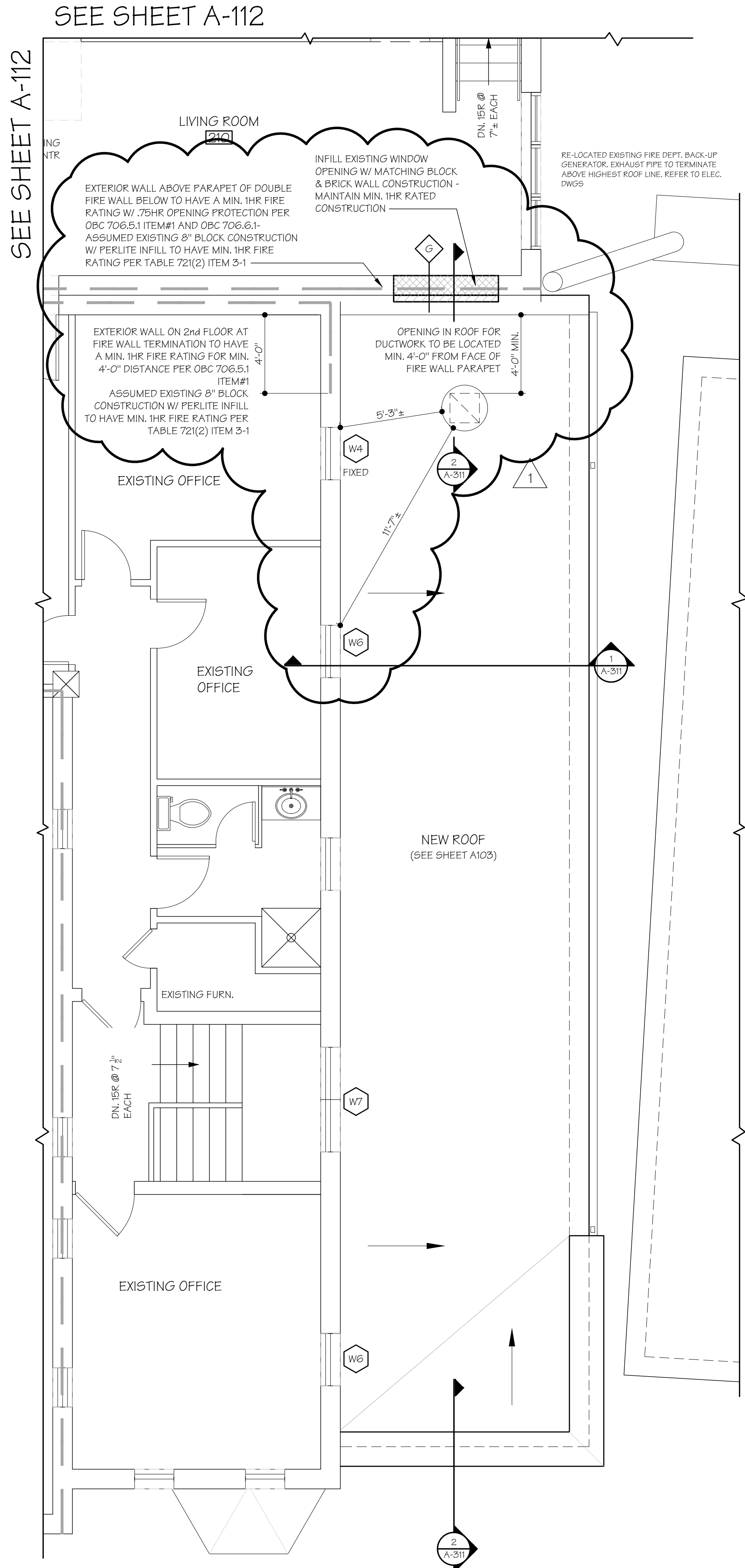


TAG LEGEND		WALL LEGEND	
	DOOR TAG - SEE DOOR SCHEDULE		EXISTING WALL TO REMAIN
	WINDOW TAG - SEE WINDOW SCHEDULE		NEW METAL STUD WALL - FULL HEIGHT
	WALL TAG - SEE WALL TYPES BELOW		NEW CMU BLOCK WALL
	NOTE TAG - SEE SHEET NOTES LIST ON THIS PAGE		NEW BRICK VENEER
			3 HR - EXISTING WALL
			3 HR - NEW WALL
			2 HR - EXISTING WALL
			2 HR - NEW WALL
			1 HR - EXISTING WALL
			1 HR - NEW WALL

BUILDING NOTES
BUILDING CONSTRUCTION TYPES - BLDG 1: VB UNPROTECTED CONSTRUCTION (EXISTING/NO CHANGE) BLDG 2: IB UNPROTECTED CONSTRUCTION BLDG 3: IB UNPROTECTED CONSTRUCTION
EXTERIOR WALLS AND ROOF TO MEET CRITERIA FOR 2 HR FIRE WALL CONSTRUCTION AS PER OBC TABLE 602 FOR BUILDING DISTANCES LESS THAN 5 FT FROM EACH OTHER ON THE SAME LOT. THE WALL AND ROOF SHALL MEET THE CRITERIA FOR 1 HR WALL WHEN THOSE DISTANCES ARE BETWEEN 5 FT AND 10 FT.
TRIM AND WOOD BLOCKING IN FIRE RATED ASSEMBLIES TO BE FIRE RETARDANT TREATED.

GENERAL NOTES
1. ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD(BLOCK) TO FACE OF STUD(BLOCK) FOR NEW CONSTRUCTION UNLESS NOTED OTHERWISE.
2. GC TO INSTALL BLOCKING IN WALL AS REQUIRED FOR EQUIPMENT, COUNTERS, CABINETS, ACCESSORIES, SIGNAGE, GRABBARS, ARTWORK, CURTAINS, DRAPERY, MIRRORS, ETC. GC TO COORDINATE WITH PROJECT MANAGER AND VENDORS FOR THEIR BLOCKING REQUIREMENTS.
3. GC TO VERIFY REQUIRED ROUGH OPENINGS FOR ALL DOORS, WINDOWS AND SIDELIGHTS.
4. GC TO INSTALL SOUND ATTENUATION IN RESTROOM, OFFICE, & LOCKER ROOM WALLS.
5. GC TO VERIFY CONDUIT, BLOCKING, UTILITIES, ETC. ARE INSTALLED PRIOR TO INSTALLING INSULATION.
6. SLOPE SHOWER FLOORS TO DRAINS 1/4 INCH PER FOOT MIN. IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
7. BRACE TOPS OF WALLS TO STRUCTURE.
8. PROVIDE FIRESTOPPING AS REQUIRED.
9. REFER TO PLUMBING DRAWINGS FOR ALL FLOOR DRAIN AND CLEANOUT LOCATIONS. DRAINS ON PLAN ARE FOR REFERENCE ONLY.
10. OWNER TO PROVIDE WATER COOLER - GC TO VERIFY LOCATION AND PROVIDE ELECTRICAL AS REQUIRED.
11. VERIFY FRAMING AT SHOWER WITH SELECTED SHOWER UNIT.
12. MILLWORK CABINETS TO BE 24" DEEP U.N.O.
13. WALL TYPES
13.1. REFER TO FINISH SCHEDULE FOR GYPSUM BOARD AND CEMENT BOARD FINISH LEVEL REQUIREMENTS.
13.2. GC TO COORDINATE THE FRAMING DESIGN WITH MECHANICAL, PLUMBING AND ELECTRICAL WORK, INCLUDING DUCT LAYOUT PRIOR TO THE INSTALLATION OF FRAMING OR DUCTWORK.
13.3. FRAMED WALLS TO RECEIVE SHEATHING/SUBSTRATE SUITABLE FOR THEIR SPECIFIED FINISHES. REFER TO INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR WALL FINISHES.
13.3.1. NO FINISH: 5/8" GYPSUM BOARD
13.3.2. PAINT: 5/8" GYPSUM BOARD
13.3.3. WALL AND BASE TILE: 5/8" TILE BACKER BOARD/DUROCK BD
13.3.4. FRP: 5/8" GYPSUM BD
13.3.5. HOOD: 5/8" CEMENT BD/DUROCK BD - EXTEND MIN. 18" BEYOND HOOD IN ALL DIRECTIONS
14. 1HR SLEEPING UNIT FIRE SEPARATION WALLS TO COMPLY W/ UL DESIGN #1419. SEE SHEETS A-041, A-042, & A-043
15. 2HR HORIZONTAL ASSEMBLY BETWEEN FIRE AREAS 'D' AND 'F' TO COMPLY W/ UL DESIGN #1533. SEE SHEETS A-041, A-042, & A-043
16. FURNITURE PIECES INCLUDING SEATS, CHAIRS, FREE STANDING DESKS, BEDS, SOFAS, AND DINING ROOM TABLES ARE TO BE PROVIDED BY OWNER
17. POLICE APPLIANCES ARE EXISTING TO BE RELOCATE
18. FIRE DEPARTMENT APPLIANCES ARE TO BE PROVIDED BY CONTRACTOR
19. ACCESSORIES(RESTROOM & LOCKERS) TO BE PROVIDED BY CONTRACTOR
20. MILLWORK, CABINETS, COUNTERS, WALL CABINETS TO BE PROVIDED BY CONTRACTOR. FIRE DEPT. CABINETS TO BE OF SOLID WOOD CONSTRUCTION. POLICE TO BE STANDARD PLASTIC LAMINATE COVERED CABINETS U.N.O. COORDINATE FINISH SELECTIONS W/ ARCHITECT & OWNER

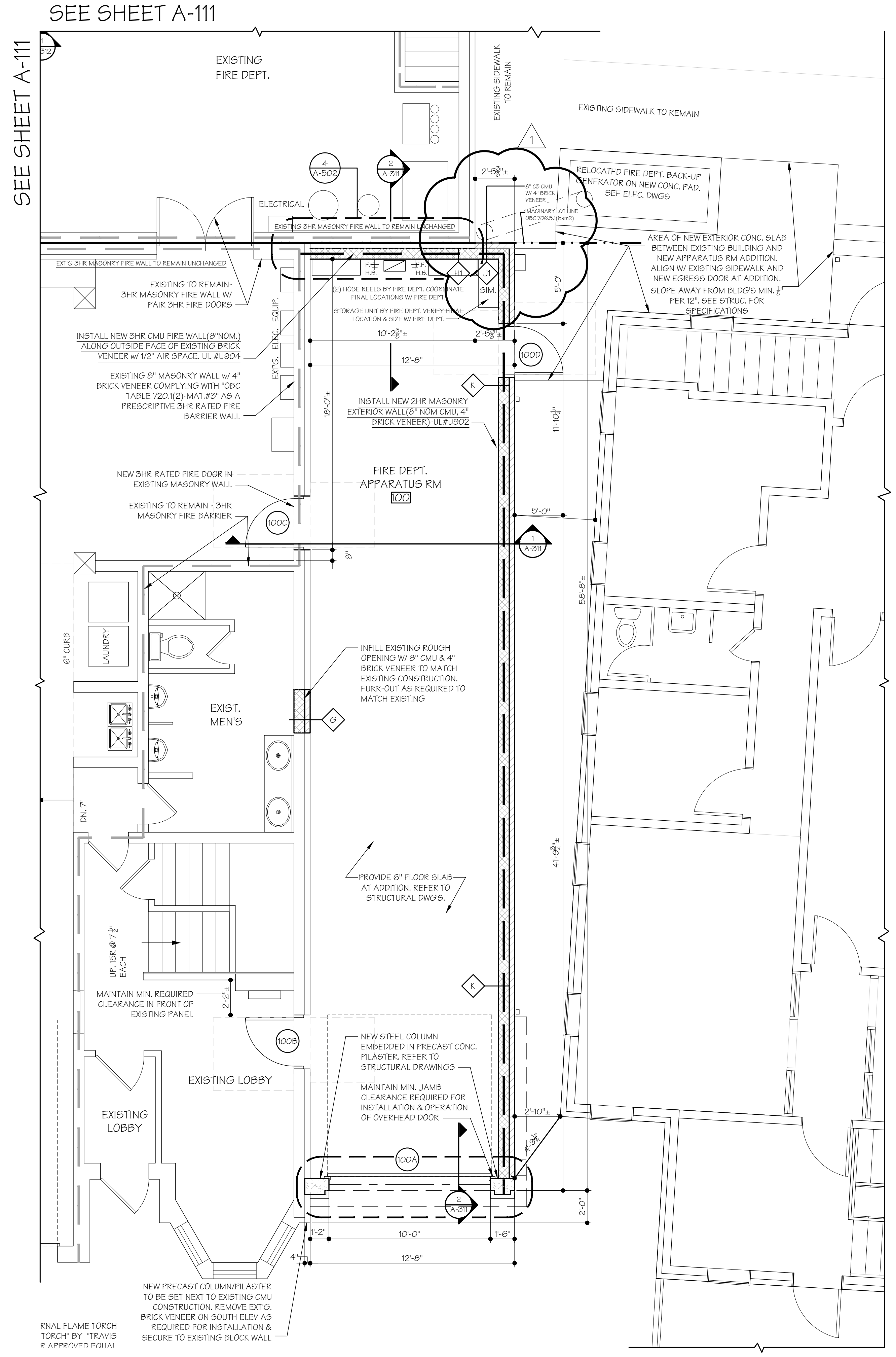
WALL TYPES	
	INTERIOR NON-BEARING RE-INFORCED MASONRY WALL - 6" CMU - TO DECK ABOVE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	INTERIOR NON-BEARING METAL STUD WALL - 6009125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
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	INTERIOR NON-BEARING METAL STUD WALL - 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 1625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	INTERIOR NON-BEARING METAL STUD WALL - 1625125-33 - TO DECK ABOVE w/ 1-1/2" RIGID INSULATION. TO RECEIVE SHEATHING/SUBSTRATE ON ONE SIDE. EXTEND SHEATHING/SUBSTRATE TO DECKING.
	1HR NON-BEARING STUD WALL ASSEMBLY - UL 1419, 3625125-33 - TO DECK ABOVE. TO RECEIVE SHEATHING/SUBSTRATE ON BOTH SIDES TO DECKING ABOVE AND ACoustICAL INSULATION FOR MIN. STC OF 50. SEE SHEET A-041
	NEW MASONRY INFILL WALL - MATCH THICKNESS & CONSTRUCTION OF EXISTING WALL - REFER TO STRUCTURAL DWGS
	2HR MASONRY BEARING FIRE WALL - UL#902, 4" RE-INFORCED CMU(C-3) WALL, FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	MASONRY WALL - 8" RE-INFORCED CMU WALL, FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	2HR MASONRY EXTERIOR WALL - UL#902, 4" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER, FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	1HR MASONRY EXTERIOR WALL - UL#902, 4" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER, FILL VOIDS W/ PERLITE AT EXTERIOR WALL LOCATIONS. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	2HR MASONRY BEARING EXTERIOR WALL - UL#902, 8" RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER, FILL VOID W/ PERLITE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT
	2HR MASONRY INFILL BEARING WALL - UL#902, 4"(OR 8") RE-INFORCED CMU(D-2) WALL W/ 4" BRICK VENEER TO MATCH ADJACENT WALL CONSTRUCTION, FILL VOIDS W/ PERLITE. REFER TO STRUCTURAL DWGS FOR RE-INFORCEMENT



ROOF PLAN FIRE DEPT. ADDITION CONSTR. PLAN

1/4" = 1'-0"

2



1st FLOOR FIRE DEPT. ADDITION CONSTR. PLAN

1/4" = 1'-0"

1



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RICHARD E. SIEGFRIED  
LICENSE #6907548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

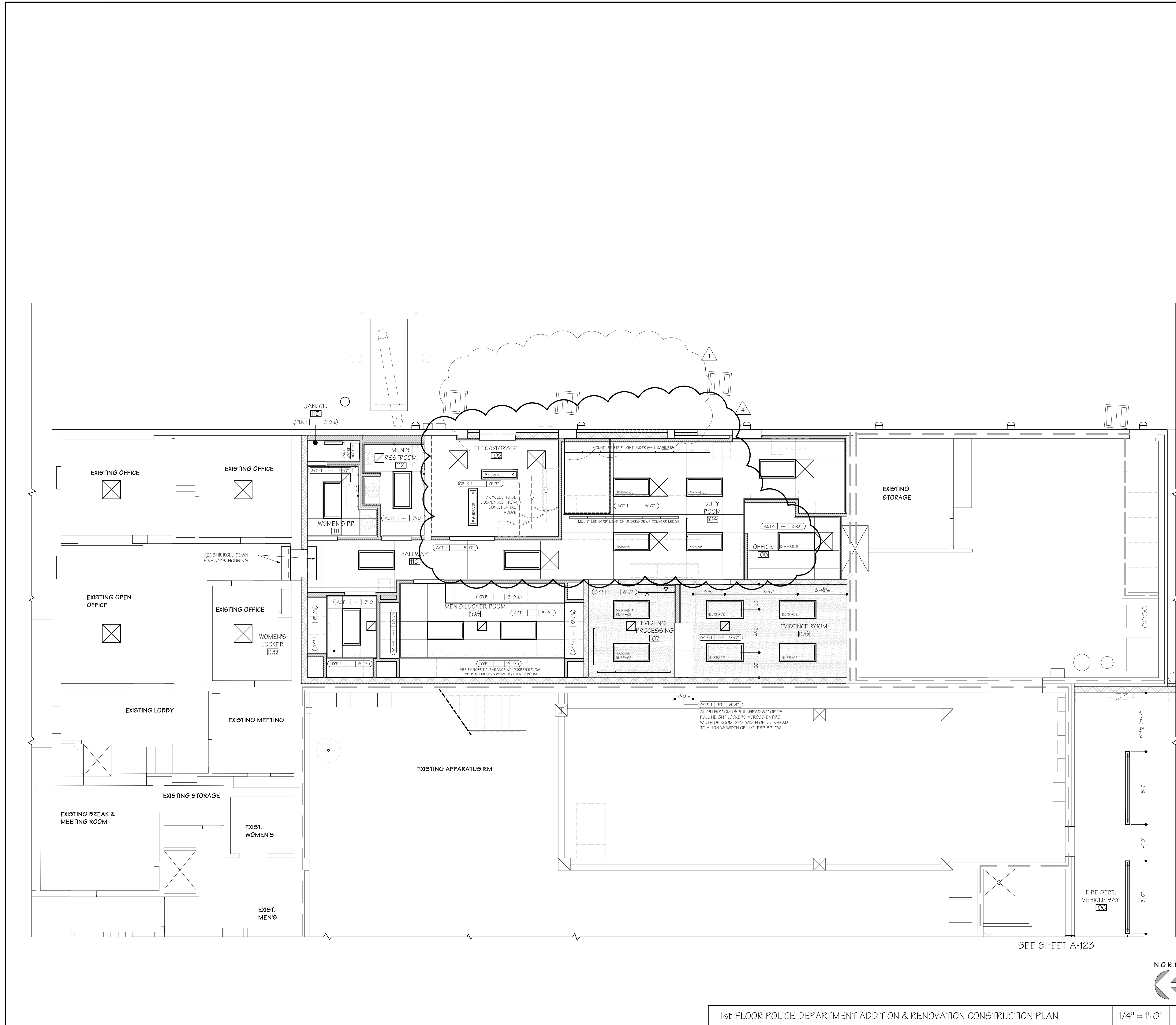
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PROJECT #: 17121  
1st FLOOR  
ADDITION &  
RENOVATION  
PLAN &  
DETAILS  
SHEET NUMBER:


A-113






- GENERAL NOTES
1. CEILING HEIGHTS INDICATED ON TAGS ARE TO MAIN FINISH FLOOR LEVEL 0'-0".
  2. FURNISH AND INSTALL ALL NECESSARY ITEMS INCLUDING BUT NOT LIMITED TO HANGERS, SUPPORTS, FRAMING, BLOCKING, AND FITTINGS TO SUPPORT FIXTURES AND FIXTURE OUTLETS. ALL SUPPORTS SHALL BE SECURELY ANCHORED TO THE CEILING AND/OR BUILDING CONSTRUCTION ABOVE AND SHALL BE CAPABLE OF SUPPORTING TWICE THE WEIGHT OF THE FIXTURE.
  3. SUPPORTS FOR CEILING GRID, LIGHTS, HVAC, ETC. ARE NOT PERMITTED TO BE ATTACHED TO ELECTRICAL, PLUMBING, SPRINKLER LINE, PIPING, MECHANICAL EQUIPMENT OR UNDERSIDE OF DECK ABOVE.
  4. WHERE LUMINAIRE WEIGHS MORE THAN 50 POUNDS, SUPPORT LUMINAIRE INDEPENDENTLY OF CEILING OUTLET BOX OR PROVIDE LISTED AND MARKED OUTLET BOX DESIGNED TO SUPPORT INCREASED LOAD.
  5. SUPPORTS CARRYING HEAVY LOADS (STRUCTURAL, HVAC, ETC.) TO BE ATTACHED ONLY TO TOP CHORD OF ROOF JOISTS. ATTACHMENTS OF LIGHTWEIGHT LOADS TO BOTTOM CHORDS MUST BE VERIFIED AND COORDINATED WITH ARCHITECT.
  6. IN GENERAL, THE MANUFACTURER AND CATALOG NUMBER OF A GIVEN FIXTURE TYPE IS IDENTIFIED IN THE ELECTRICAL PACKAGE; HOWEVER, THE G.C. SHALL VERIFY THE CEILING SUSPENSION SYSTEM TO BE INSTALLED AND SHALL PROVIDE THE PROPER FIXTURE SUSPENSION STRAPS, RETAINING CLIPS, SUPPORTING HOOKS, ETC., AS REQUIRED TO PROPERLY SUPPORT THE FIXTURE. FLANGE TYPE, SNAP-IN OR LAY-IN FIXTURE TRIMS SHALL BE FURNISHED, AS REQUIRED, FOR THE CEILING SYSTEM INSTALLED.
  7. FLUSH TYPE PENDANT FIXTURES SHALL BE SECURELY FASTENED TO THE CEILING FRAMEWORK, AND SUPPLIED WITH FINISHED METAL TRIM FOR CEILING TYPE GYF/ACT.
  8. SUSPENDED FIXTURES SHALL BE CONSTRUCTED WITH SWIVEL DEVICE AS REQUIRED THAT WILL NEATLY FIT SLOPE OF CEILINGS AND FIXTURES. HANG PLUMB, FLEXIBLE CONDUIT OR CORD CONNECTIONS WILL NOT BE APPROVED FOR FEEDING SUSPENDED FIXTURES, UNLESS SPECIFICALLY INDICATED IN THE LUMINAIRE SCHEDULE.
  9. INSTALL ACCESS PANELS IN GYPSUM BOARD CEILINGS. DETERMINE THE LOCATIONS, NUMBER, AND SIZES OF THE PANELS TO PROVIDE ACCESS TO ALL UTILITIES AND EQUIPMENT AS REQUIRED.
  10. COMBUSTIBLE MATERIALS ARE NOT PERMITTED ABOVE CEILING.
  11. WOOD BLOCKING AND SHEATHING TO BE FIRE RETARDANT TREATED (FRT).
  12. SOFFIT LOCATION DIMENSIONS MEASURE FROM FINISHED EDGE TO FINISHED EDGE UNLESS NOTED OTHERWISE.
  13. LIGHTING LOCATION DIMENSIONS MEASURE TO FINISHED EDGE/ CENTERLINES UNLESS OTHERWISE NOTED.
  14. REFER TO THE ELECTRICAL DRAWINGS FOR LIGHTING DETAILS AND FIXTURE SPECIFICATIONS.
  15. REFER TO MECHANICAL PLAN FOR SUPPLY AND RETURN DIFFUSER LOCATIONS.
  16. REFER TO FINISH SCHEDULE FOR CEILING FINISH SPECIFICATIONS.
  17. REFER TO BUILDING SECTIONS AND INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
  18. REFER TO PLANS, EXTERIOR ELEVATIONS AND ELECTRICAL DRAWINGS FOR ADDITIONAL EXTERIOR LIGHTING INFORMATION.
  19. CEILING TILES IN FOOD PREP AREAS TO BE SCRUBBABLE.
  20. MATERIALS WITHIN A PLENUM SHALL BE NON-COMBUSTIBLE AND SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84 OR UL 723.

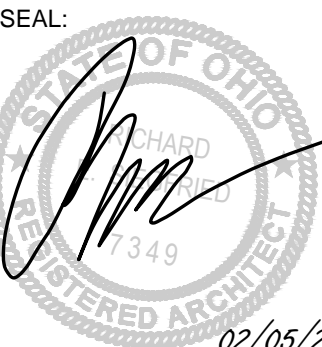
FOR REFERENCE ONLY. ALSO REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS	
	CEILING TYPE SEE FIN. SCHED.
	CEILING HEIGHT A.F.F.
	CEILING FINISH SEE FIN. SCHED.
	2x4 LED LIGHTING - FIXTURE - RECESSED U.N.O.
	1x4 LED LIGHTING - FIXTURE - RECESSED U.N.O.
	LED STRIP LIGHT - SURFACE MOUNT U.N.O.
	RECESSED DOWN LIGHTING FIXTURE
	CEILING MOUNTED FIXTURE & EXHAUST FAN
	VELLUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT
	VELLUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT AND INTEGRATED LIGHT FIXTURE
	WALL SCONCE
	WALL PACK
	UNDER CABINET LED LIGHTING - TO BE MOUNTED ON UNDERSIDE OF WALL CABINETS ABOVE COUNTERS
	CEILING TYPE: SUSPENDED ACOUSTIC CEILING TILE AND GRID (ACT-1)
	CEILING TYPE: WALL/COLLAGE BOARD (GYF-1, GYP-2)
	SUPPLY AIR DIFFUSER
	RETURN OR EXHAUST AIR GRILLE
	SMOKE DETECTOR



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05-06-19 (ISSUED PER STATE & OWNER COMMENTS)	ADDENDUM #2	08/05/18
07-13-19 (ISSUED PER STATE & OWNER COMMENTS)		
07-26-20 (ISSUED PER STATE & OWNER COMMENTS)		
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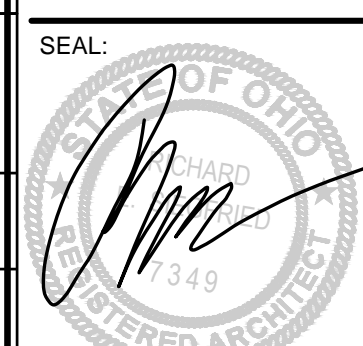
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02/06/20  
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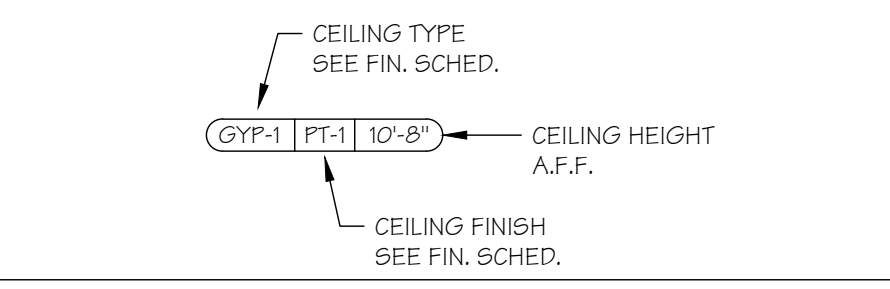
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- WHERE LUMINAIRE WEIGHS MORE THAN 50 POUNDS, SUPPORT LUMINAIRE INDEPENDENTLY OF CEILING OUTLET BOX OR PROVIDE LISTED AND MARKED OUTLET BOX DESIGNED TO SUPPORT INCREASED LOAD.
- SUPPORTS CARRYING HEAVY LOADS (STRUCTURAL, HVAC, ETC.) TO BE ATTACHED ONLY TO TOP CHORD OF ROOF JOISTS. ATTACHMENTS OF LIGHTWEIGHT LOADS TO BOTTOM CHORDS MUST BE VERIFIED AND COORDINATED WITH ARCHITECT.
- IN GENERAL, THE MANUFACTURER AND CATALOG NUMBER OF A GIVEN FIXTURE TYPE IS IDENTIFIED IN THE ELECTRICAL PACKAGE; HOWEVER, THE G.C. SHALL VERIFY THE CEILING SUSPENSION SYSTEM TO BE INSTALLED AND SHALL PROVIDE THE PROPER FIXTURE SUSPENSION STRAPS, RETAINING CLIPS, SUPPORTING HOOKS, ETC., AS REQUIRED TO PROPERLY SUPPORT THE FIXTURE. FLANGE TYPE, SNAP-IN OR LAY-IN FIXTURE TRIMS SHALL BE FURNISHED, AS REQUIRED, FOR THE CEILING SYSTEM INSTALLED.
- FLUSH TYPE PENDANT FIXTURES SHALL BE SECURELY FASTENED TO THE CEILING FRAMEWORK, AND SUPPLIED WITH FINISHED METAL TRIM FOR CEILING TYPE GYF/ACT.
- SUSPENDED FIXTURES SHALL BE CONSTRUCTED WITH SWIVEL DEVICE AS REQUIRED THAT WILL NEATLY FIT SLOPE OF CEILINGS AND FIXTURES HANG PLUMB. FLEXIBLE CONDUIT OR CORD CONNECTIONS WILL NOT BE APPROVED FOR FEEDING SUSPENDED FIXTURES, UNLESS SPECIFICALLY INDICATED IN THE LUMINAIRE SCHEDULE.
- INSTALL ACCESS PANELS IN GYPSUM BOARD CEILINGS. DETERMINE THE LOCATIONS, NUMBER, AND SIZES OF THE PANELS TO PROVIDE ACCESS TO ALL UTILITIES AND EQUIPMENT AS REQUIRED.
- COMBUSTIBLE MATERIALS ARE NOT PERMITTED ABOVE CEILING.
- WOOD BLOCKING AND SHEATHING TO BE FIRE RETARDANT TREATED (FRT).
- SOFFIT LOCATION DIMENSIONS MEASURE FROM FINISHED EDGE TO FINISHED EDGE UNLESS NOTED OTHERWISE.
- LIGHTING LOCATION DIMENSIONS MEASURE TO FINISHED EDGE/ CENTERLINES UNLESS OTHERWISE NOTED.
- REFER TO THE ELECTRICAL DRAWINGS FOR LIGHTING DETAILS AND FIXTURE SPECIFICATIONS.
- REFER TO MECHANICAL PLAN FOR SUPPLY AND RETURN DIFFUSER LOCATIONS.
- REFER TO FINISH SCHEDULE FOR CEILING FINISH SPECIFICATIONS.
- REFER TO PLANS, EXTERIOR ELEVATIONS AND ELECTRICAL DRAWINGS FOR ADDITIONAL EXTERIOR LIGHTING INFORMATION.
- CEILING TILES IN FOOD PREP AREAS TO BE SCRUBBABLE.
- MATERIALS WITHIN A PLENUM SHALL BE NON-COMBUSTIBLE AND SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84 OR UL 723.

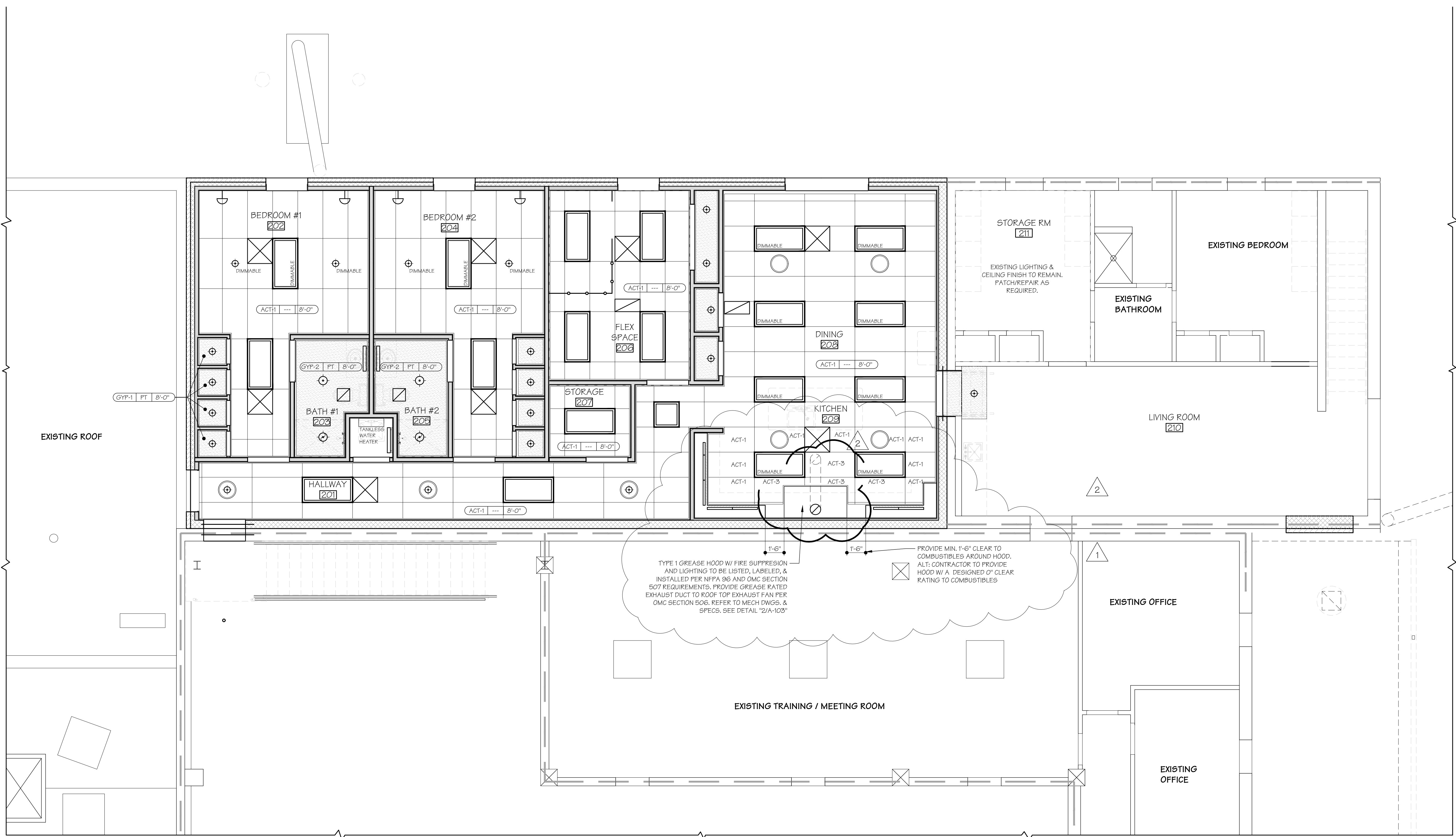
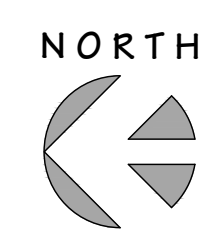
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## REFLECTED CEILING PLAN LEGEND

FOR REFERENCE ONLY. ALSO REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS

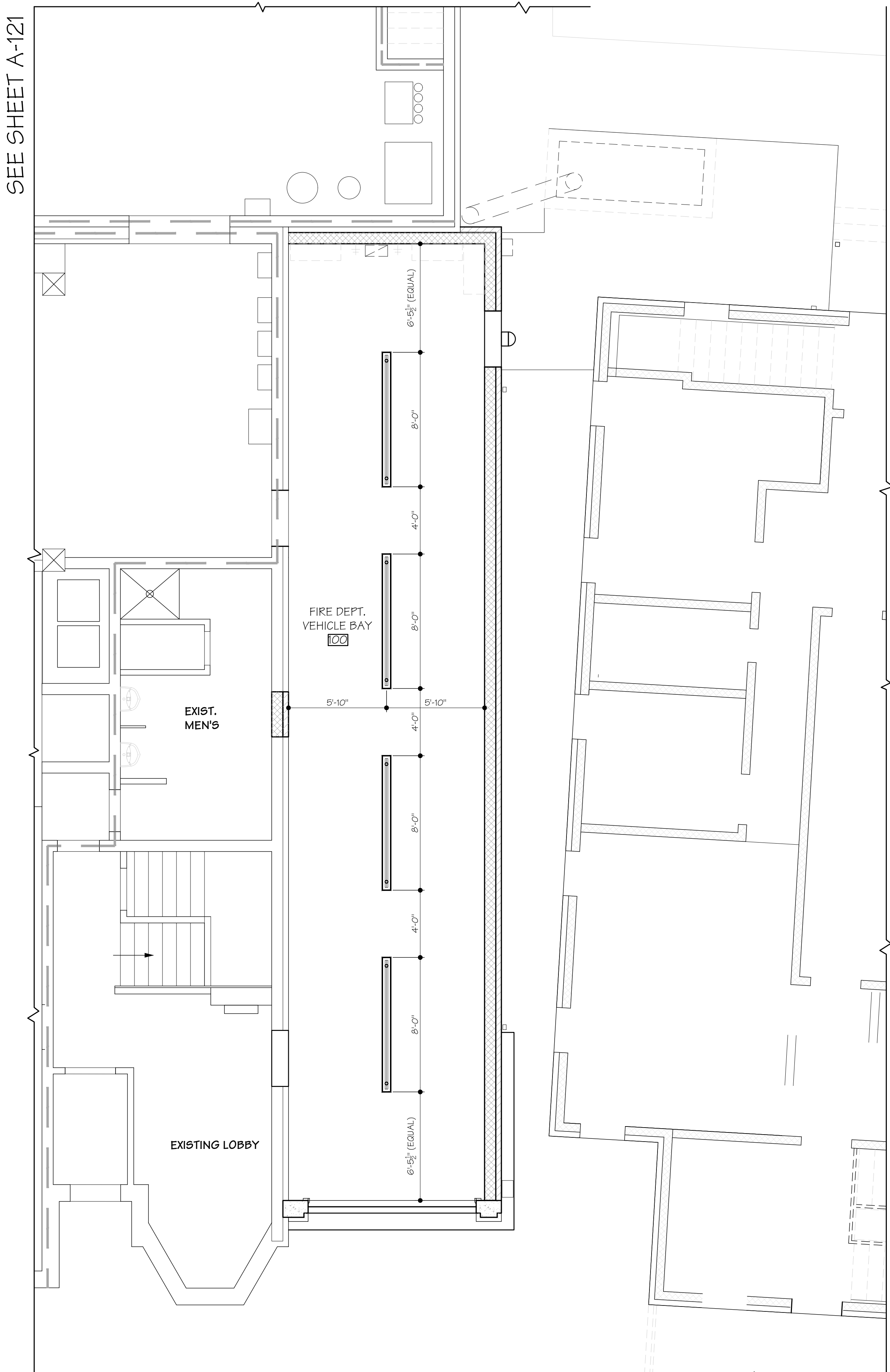


- 2x4' LED LIGHTING - FIXTURE - RECESSED U.N.O.
- 1x4' LED LIGHTING - FIXTURE - RECESSED U.N.O.
- LED STRIP LIGHT - SURFACE MOUNT U.N.O.
- RECESSED DOWN LIGHTING FIXTURE
- CEILING MOUNTED FIXTURE & EXHAUST FAN
- VELUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT
- VELUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT AND INTEGRATED LIGHT FIXTURE
- WALL SCONCE
- WALL PACK
- UNDER CABINET LED LIGHTING - TO BE MOUNTED ON UNDERSIDE OF WALL CABINETS ABOVE COUNTERS





SEE SHEET A-121



GENERAL NOTES

1. CEILING HEIGHTS INDICATED ON TAGS ARE TO MAIN FINISH FLOOR LEVEL 0'-0"
2. FURNISH AND INSTALL ALL NECESSARY ITEMS INCLUDING BUT NOT LIMITED TO HANGERS, SUPPORTS, FRAMING, BLOCKING, AND FITTINGS TO SUPPORT FIXTURES AND FIXTURE OUTLETS. ALL SUPPORTS SHALL BE SECURELY ANCHORED TO THE CEILING AND/OR BUILDING CONSTRUCTION ABOVE AND SHALL BE CAPABLE OF SUPPORTING TWICE THE WEIGHT OF THE FIXTURE.
3. SUPPORTS FOR CEILING GRID, LIGHTS, HVAC, ETC. ARE NOT PERMITTED TO BE ATTACHED TO ELECTRICAL, PLUMBING, SPRINKLER LINE, PIPING, MECHANICAL EQUIPMENT OR UNDERSIDE OF DECK ABOVE.
4. WHERE LUMINAIRE WEIGHS MORE THAN 50 POUNDS, SUPPORT LUMINAIRE INDEPENDENTLY OF CEILING OUTLET BOX OR PROVIDE LISTED AND MARKED OUTLET BOX DESIGNED TO SUPPORT INCREASED LOAD.
5. SUPPORTS CARRYING HEAVY LOADS (STRUCTURAL, HVAC, ETC.) TO BE ATTACHED ONLY TO TOP CHORD OF ROOF JOISTS. ATTACHMENTS OF LIGHTWEIGHT LOADS TO BOTTOM CHORDS MUST BE VERIFIED AND COORDINATED WITH ARCHITECT.
6. IN GENERAL, THE MANUFACTURER AND CATALOG NUMBER OF A GIVEN FIXTURE TYPE IS IDENTIFIED IN THE ELECTRICAL PACKAGE; HOWEVER, THE G.C. SHALL VERIFY THE CEILING SUSPENSION SYSTEM TO BE INSTALLED AND SHALL PROVIDE THE PROPER FIXTURE SUSPENSION STRAPS, RETAINING CLIPS, SUPPORTING HOOKS, ETC., AS REQUIRED TO PROPERLY SUPPORT THE FIXTURE. FLANGE TYPE, SNAP-IN OR LAY-IN FIXTURE TRIMS SHALL BE FURNISHED, AS REQUIRED, FOR THE CEILING SYSTEM INSTALLED.
7. FLUSH TYPE PENDANT FIXTURES SHALL BE SECURELY FASTENED TO THE CEILING FRAMEWORK, AND SUPPLIED WITH FINISHED METAL TRIM FOR CEILING TYPE GYF/ACT.
8. SUSPENDED FIXTURES SHALL BE CONSTRUCTED WITH SWIVEL DEVICE AS REQUIRED THAT WILL NEATLY FIT SLOPE OF CEILINGS AND FIXTURES HANG PLUMB. FLEXIBLE CONDUIT OR CORD CONNECTIONS WILL NOT BE APPROVED FOR FEEDING SUSPENDED FIXTURES, UNLESS SPECIFICALLY INDICATED IN THE LUMINAIRE SCHEDULE.
9. INSTALL ACCESS PANELS IN GYPSUM BOARD CEILINGS. DETERMINE THE LOCATIONS, NUMBER, AND SIZES OF THE PANELS TO PROVIDE ACCESS TO ALL UTILITIES AND EQUIPMENT AS REQUIRED.
10. COMBUSTIBLE MATERIALS ARE NOT PERMITTED ABOVE CEILING.
11. WOOD BLOCKING AND SHEATHING TO BE FIRE RETARDANT TREATED (FRT).
12. SOFFIT LOCATION DIMENSIONS MEASURE FROM FINISHED EDGE TO FINISHED EDGE UNLESS NOTED OTHERWISE.
13. LIGHTING LOCATION DIMENSIONS MEASURE TO FINISHED EDGE/ CENTERLINES UNLESS OTHERWISE NOTED.
14. REFER TO THE ELECTRICAL DRAWINGS FOR LIGHTING DETAILS AND FIXTURE SPECIFICATIONS.
15. REFER TO MECHANICAL PLAN FOR SUPPLY AND RETURN DIFFUSER LOCATIONS.
16. REFER TO FINISH SCHEDULE FOR CEILING FINISH SPECIFICATIONS.
17. REFER TO BUILDING SECTIONS AND INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
18. REFER TO PLANS, EXTERIOR ELEVATIONS AND ELECTRICAL DRAWINGS FOR ADDITIONAL EXTERIOR LIGHTING INFORMATION.
19. CEILING TILES IN FOOD PREP AREAS TO BE SCRUBBABLE.
24. MATERIALS WITHIN A PLENUM SHALL BE NON-COMBUSTIBLE AND SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84 OR UL 723.

REFLECTED CEILING PLAN LEGEND

FOR REFERENCE ONLY. ALSO REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS

CEILING TYPE  
SEE FIN. SCHED.

CEILING HEIGHT  
A.F.F.

CEILING FINISH  
SEE FIN. SCHED.

GYP-1 | PT-1 | 10'-8"

2x4 LED LIGHTING FIXTURE - RECESSED U.N.O.

1x4 LED LIGHTING FIXTURE - RECESSED U.N.O.

LED STRIP LIGHT - SURFACE MOUNT U.N.O.

RECESSED DOWN LIGHTING FIXTURE

CEILING MOUNTED FIXTURE & EXHAUST FAN

VELUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT

VELUX 16" SUN TUNNEL (OR APPROVED EQUAL) NATURAL LIGHTING W/ RIGID DUCT AND INTEGRATED LIGHT FIXTURE

WALL SCÖNCE

WALL PACK

UNDER CABINET LED LIGHTING - TO BE MOUNTED ON UNDERSIDE OF WALL CABINETS ABOVE COUNTERS



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SEAL:  
RICHARD E. SIEGFRIED,  
LICENSE #8907548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1		04/16/18
ADDENDUM #2		09/05/18

DATE	SET	ISSUANCE
03-19-18	ISSUED FOR BID	PERMIT
03-26-18	ISSUED FOR STATE & OWNER COMMENTS	
05-08-18	ISSUED FOR STATE & OWNER COMMENTS	
07-26-18	ISSUED FOR STATE & OWNER COMMENTS	
02-04-20	ISSUED FOR STATE & OWNER COMMENTS	

PROJECT #: 17121

1st FLOOR  
ADDITION  
RCP

SHEET NUMBER:

A-123





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PROJECT #: 17121

EXTERIOR  
ELEVATIONS

SHEET NUMBER:

A-201

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## GENERAL NOTES

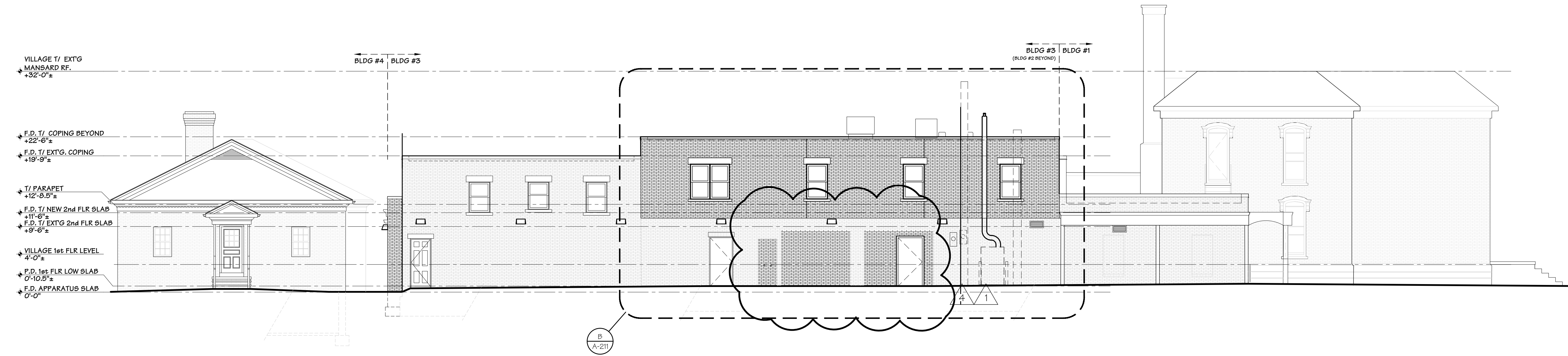
- ALL OPERABLE WINDOWS TO BE PROVIDED WITH INSECT SCREENS.
- SOME WINDOWS MAY REQUIRE TEMPERING. SEE WINDOW SCHEDULE, A-600 SERIES, FOR ADDITIONAL INFORMATION.
- PROVIDE CONTROL JOINTS IN NEW MASONRY CONSTRUCTION AS REQUIRED (MIN. 20'-0" O.C. TO MAX. 25'-0" O.C.).
- PROVIDE EXPANSION JOINTS AT DISSIMILAR MATERIAL TRANSITIONS INCLUDING, BUT NOT LIMITED TO, EXISTING AND NEW MASONRY CONSTRUCTION.
- PROVIDE FLASHING AROUND ALL EXTERIOR FENESTRATION, ROOF TO WALL INTERSECTIONS AND AT FINISH CHANGES AS REQUIRED BY THE MANUFACTURER. SEE SECTION SHEETS, A-300 SERIES, FOR ADDITIONAL INFORMATION.
- ALL MATERIALS, FINISHES, SYSTEMS, WINDOWS, DOORS, ETC. TO BE INSTALLED STRICTLY PER MANUFACTURER'S SPECIFICATIONS.
- ALL WINDOWS AND DOORS TO RECEIVE CAULKING, GASKETING, ADHESIVE FLASHING TAPE, FOAM SEALANT OR WEATHERSTRIPPING AS REQUIRED TO FORM A COMPLETE AIR BARRIER. SEE SECTION SHEETS, A-300 SERIES, FOR ADDITIONAL INFORMATION.
- SEE SPECIFICATIONS SHEETS, A-010 SERIES, FOR ADDITIONAL INFORMATION.
- REFER TO FINISH SCHEDULE, THIS SHEET, FOR FINISH TAG REFERENCES.
- REFER TO DOOR & WINDOW SCHEDULE, A-600 SERIES, FOR DOOR AND WINDOW TAG REFERENCES.

## SYMBOL LEGEND

- 115 DOOR TAG - SEE DOOR SCHEDULE
- A WINDOW TAG - SEE WINDOW SCHEDULE
- PT-1 FINISH TAG - SEE EXTERIOR FINISH SCHEDULE BELOW

## EXTERIOR FINISH SCHEDULE

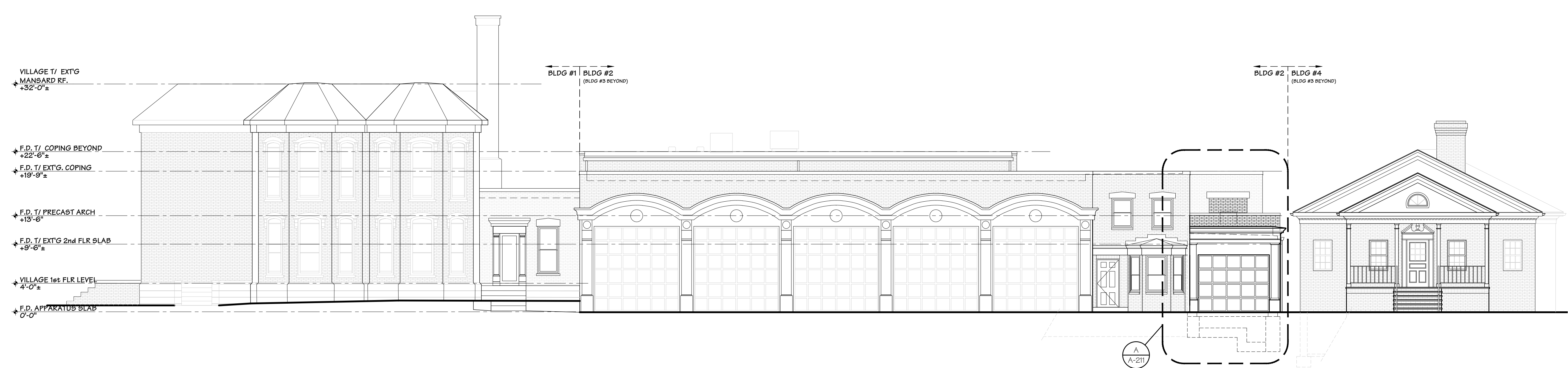
- PT-11 RED PAINT TO MATCH EXISTING (TO BE SELECTED)
- PT-12 WHITE PAINT TO MATCH EXISTING (TO BE SELECTED)
- PR-1 WHITE TO MATCH EXISTING (PREFINISHED)
- PR-2 WHITE TO MATCH EXISTING (PREFINISHED) w/ GLAZING
- BR-1 BRICK TO MATCH EXISTING (TO BE SELECTED)
- S-1 STONE TO MATCH EXISTING (TO BE SELECTED)
- C-1 PRECAST CONCRETE TO MATCH EXISTING. SEE STRUCTURAL DRAWINGS FOR DETAILS



EAST OVERALL ELEVATION

1/8" = 1'-0"

B



WEST OVERALL ELEVATION

1/8" = 1'-0"

A









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ADDENDUM #2 09/05/18

DATE	SET	ISSUANCE
03-19-18	ISSUED FOR BID	
03-29-18	ISSUED FOR BID # PERMIT	
05-08-18	ISSUED FOR STATE # OWNER COMMENTS	
07-11-18	ISSUED FOR STATE # OWNER COMMENTS	
07-26-18	ISSUED FOR STATE # OWNER COMMENTS	
02-04-20	ISSUED FOR STATE # OWNER COMMENTS	

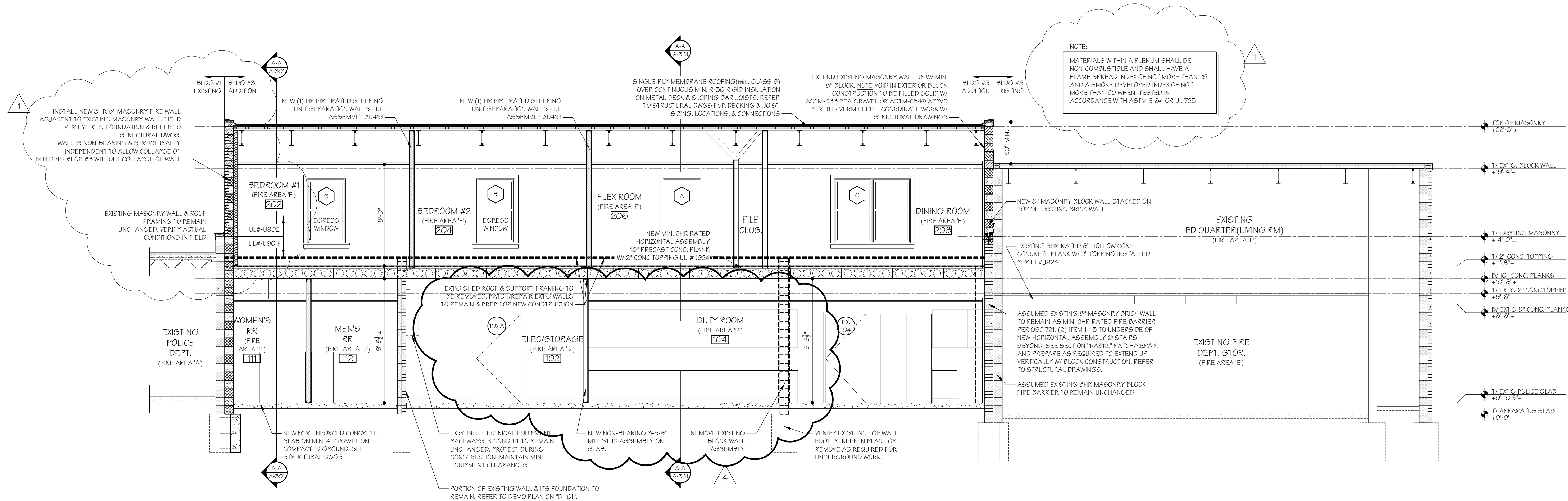
PROJECT #: 17121

BUILDING  
SECTIONS

SHEET NUMBER:

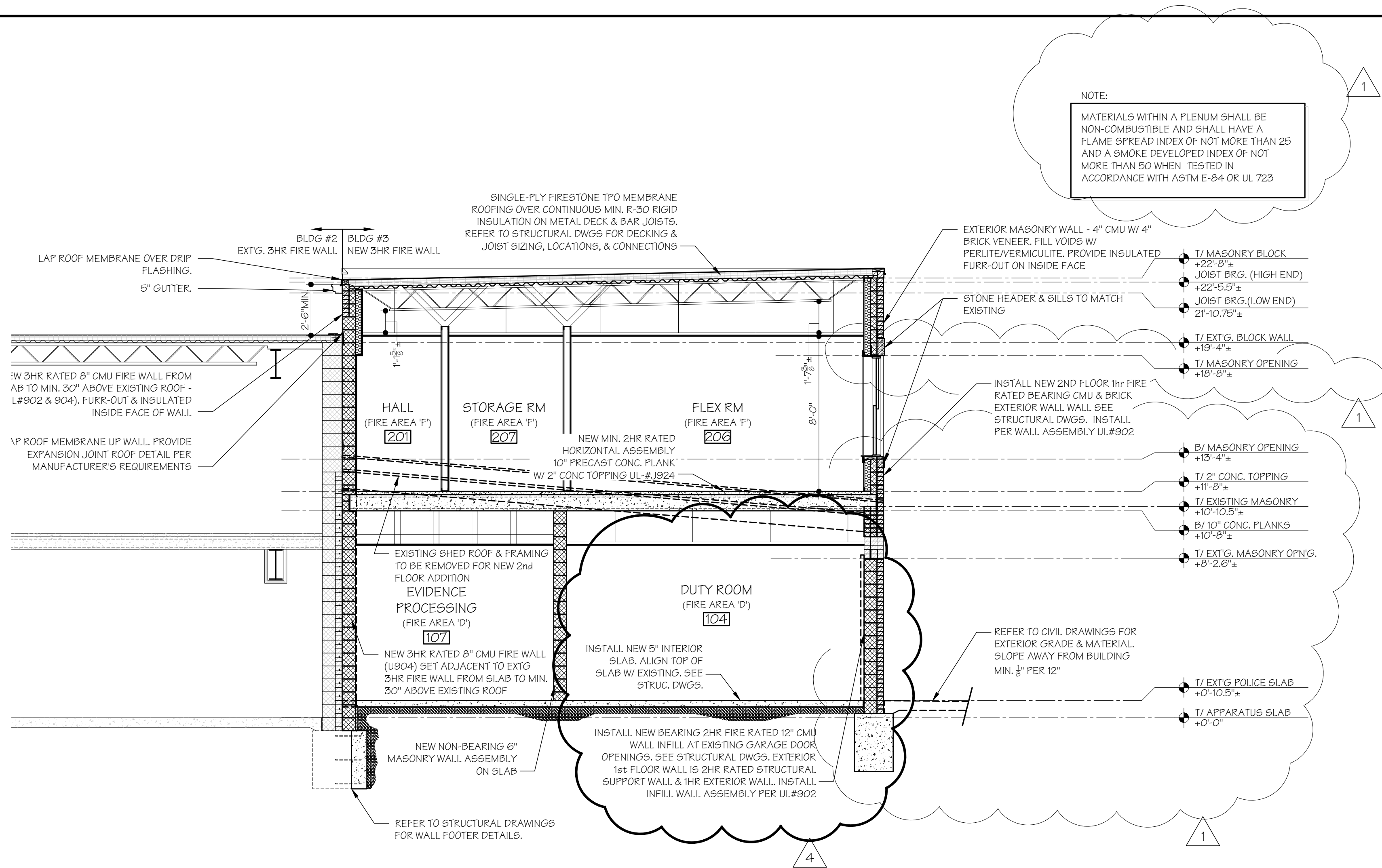
A-301

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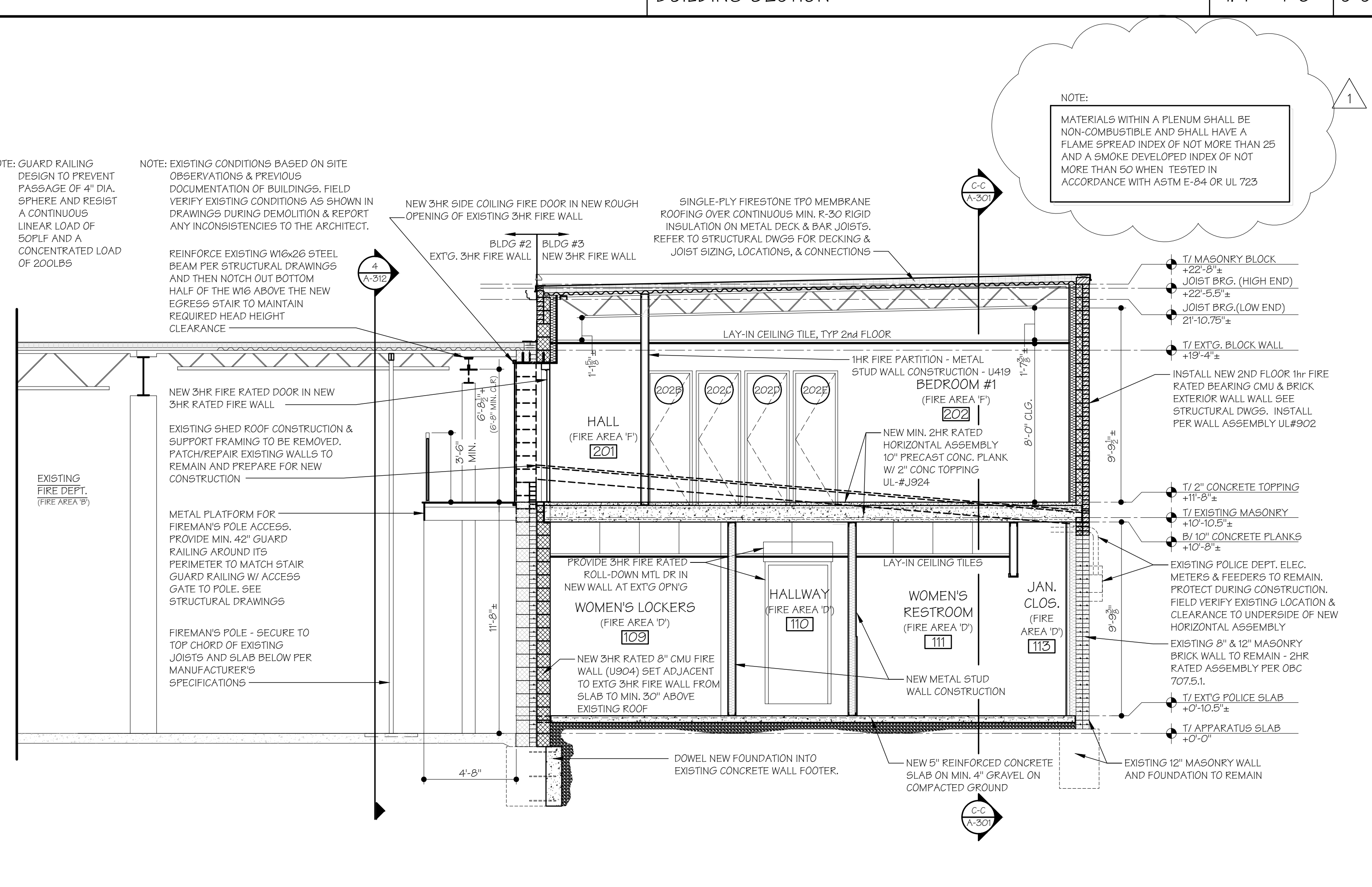
BUILDING SECTION

1/4" = 1'-0" C-C



BUILDING SECTION

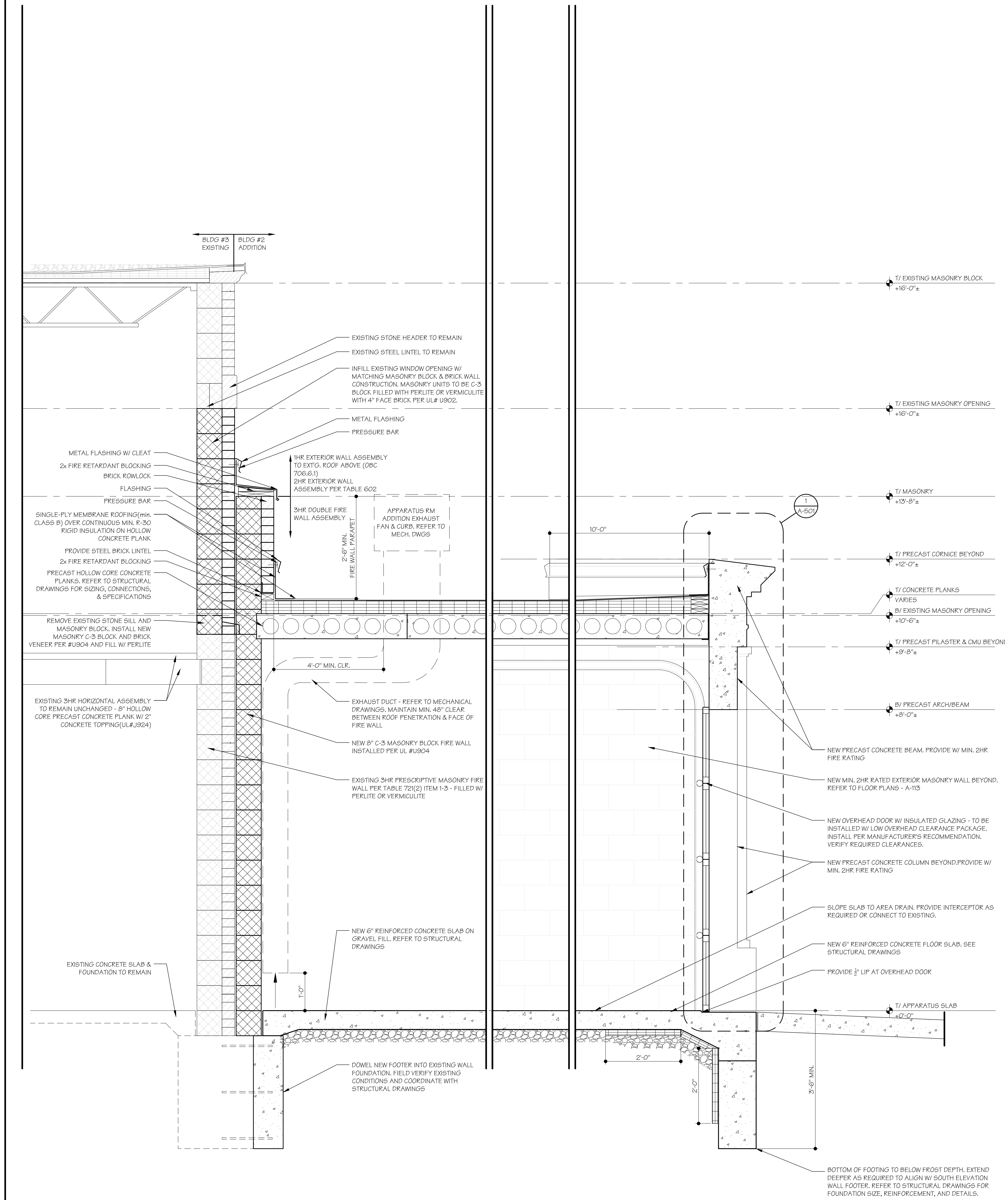
1/4" = 1'-0" B-B



BUILDING SECTION

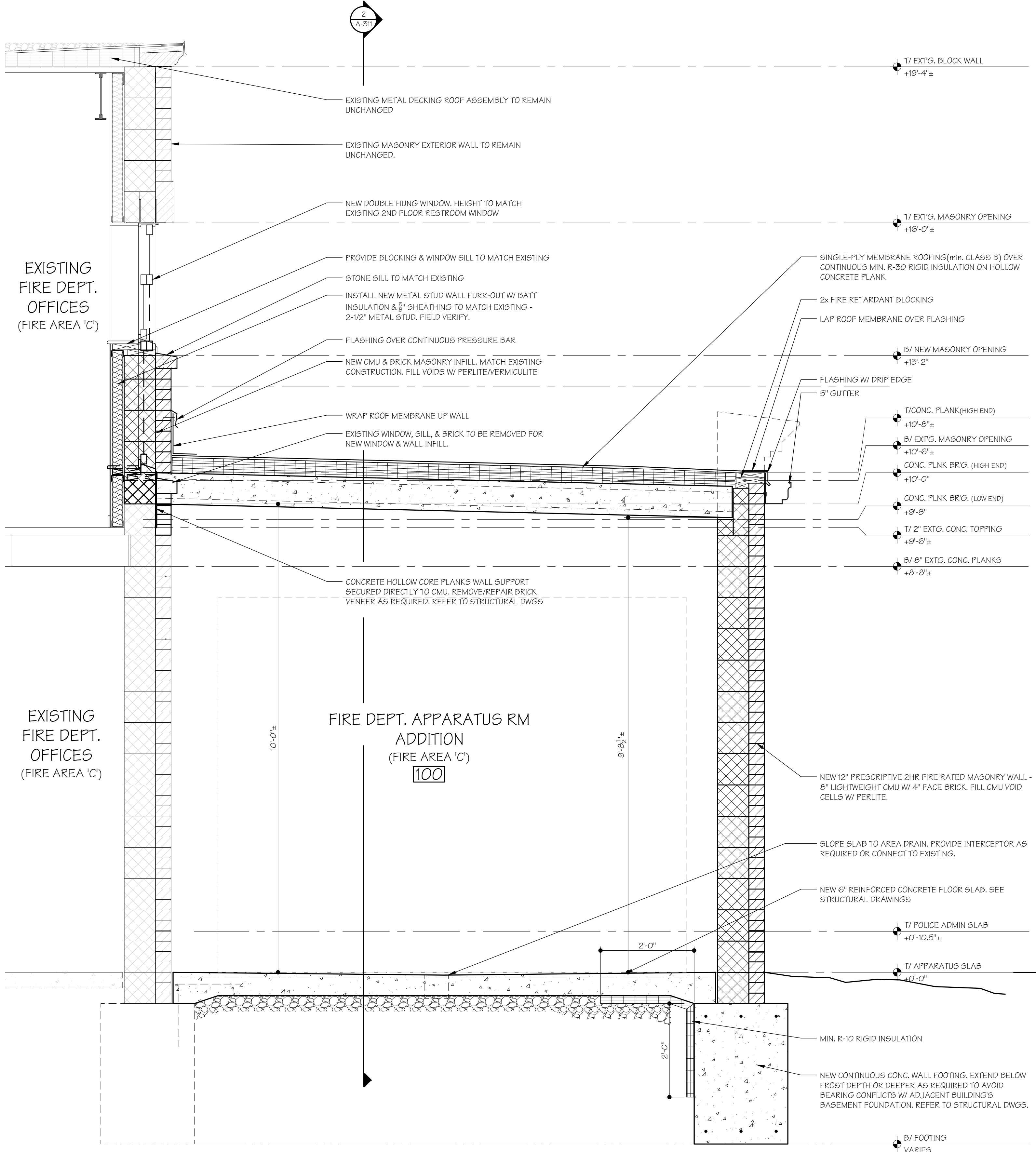
1/4" = 1'-0" A-A





WALL SECTION

3/4" = 1'-0" 2



WALL SECTION

3/4" = 1'-0" 1



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ADDENDUM #2		09/05/18

DATE	SET	ISSUANCE	FOR	BY
03-19-18	ISSUED	FOR	BID #	PERMIT
03-26-18	ISSUED	FOR	BID #	PERMIT
05-08-18	ISSUED	FOR	STATE #	OWNER COMMENTS
01-13-19	ISSUED	FOR	STATE #	OWNER COMMENTS
07-22-20	ISSUED	FOR	STATE #	OWNER COMMENTS
02-04-21	ISSUED	FOR	STATE #	OWNER COMMENTS

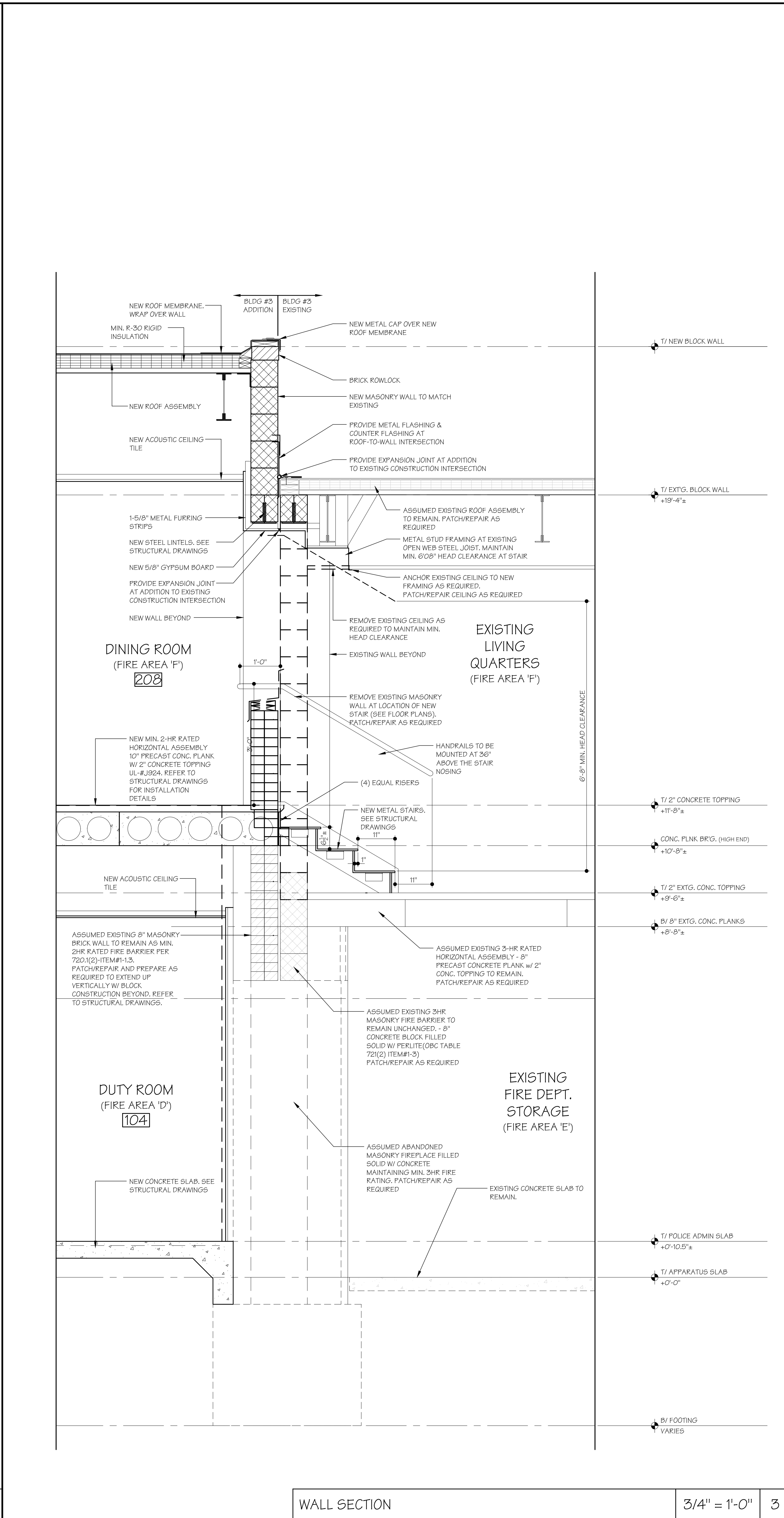
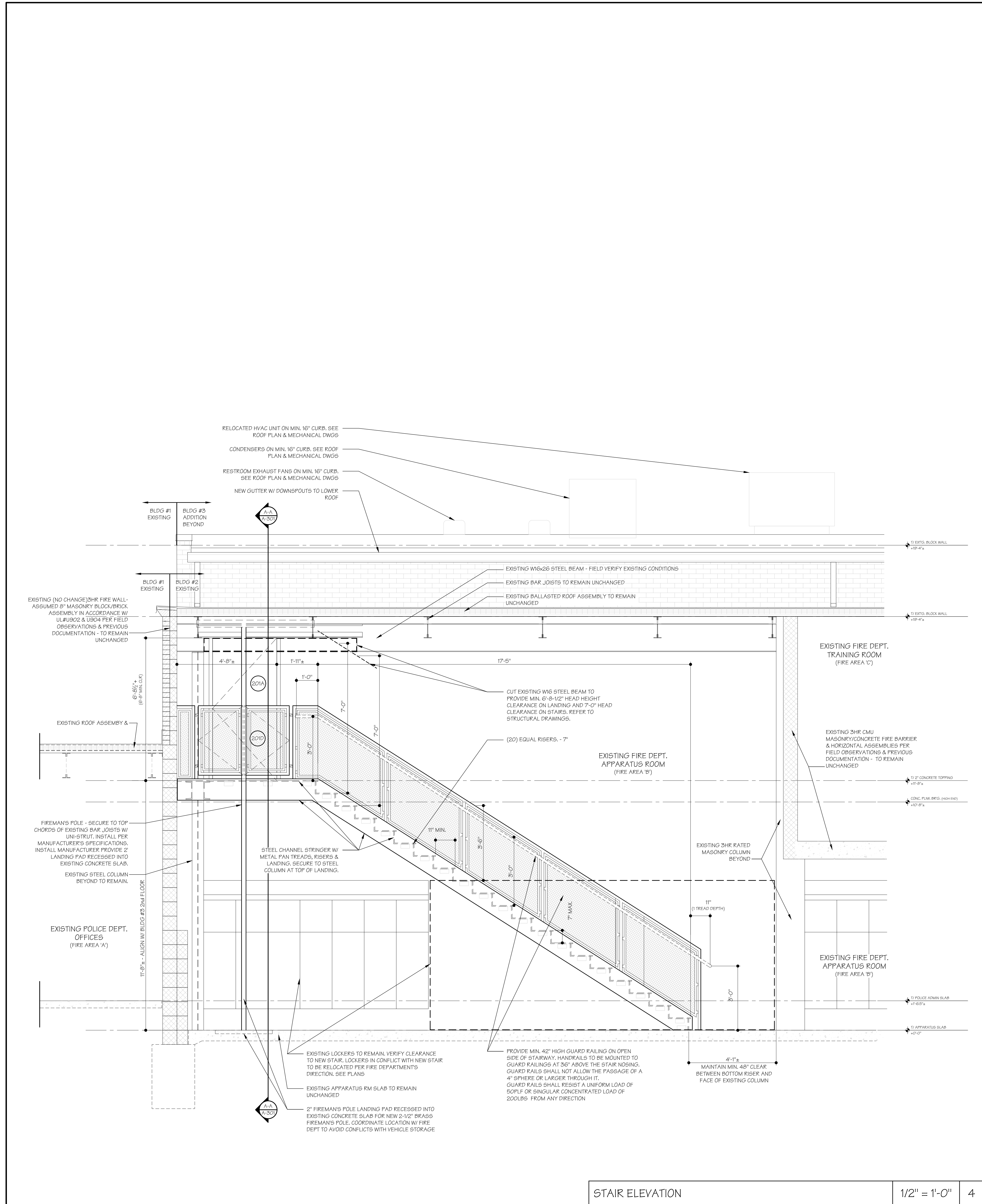
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**WALL SECTIONS**

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**A-311**

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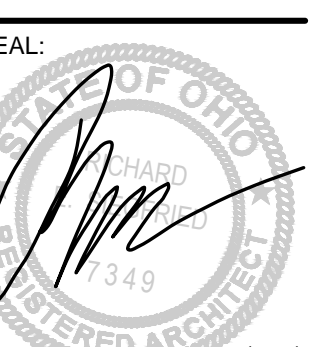




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PG.	ISSUANCE	DATE
ADDENDUM #1	04/16/18	
ADDENDUM #2	09/05/18	

DATE	SET	ISSUANCE	FOR	BY	REMARKS
03-15-18	18	ISSUED FOR BID	PERMIT		
03-26-18	18	ISSUED FOR STATE & OWNER COMMENTS			
05-08-18	18	ISSUED FOR STATE & OWNER COMMENTS			
07-13-18	18	ISSUED FOR STATE & OWNER COMMENTS			
07-26-18	18	ISSUED FOR STATE & OWNER COMMENTS			
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PROJECT #: 17121

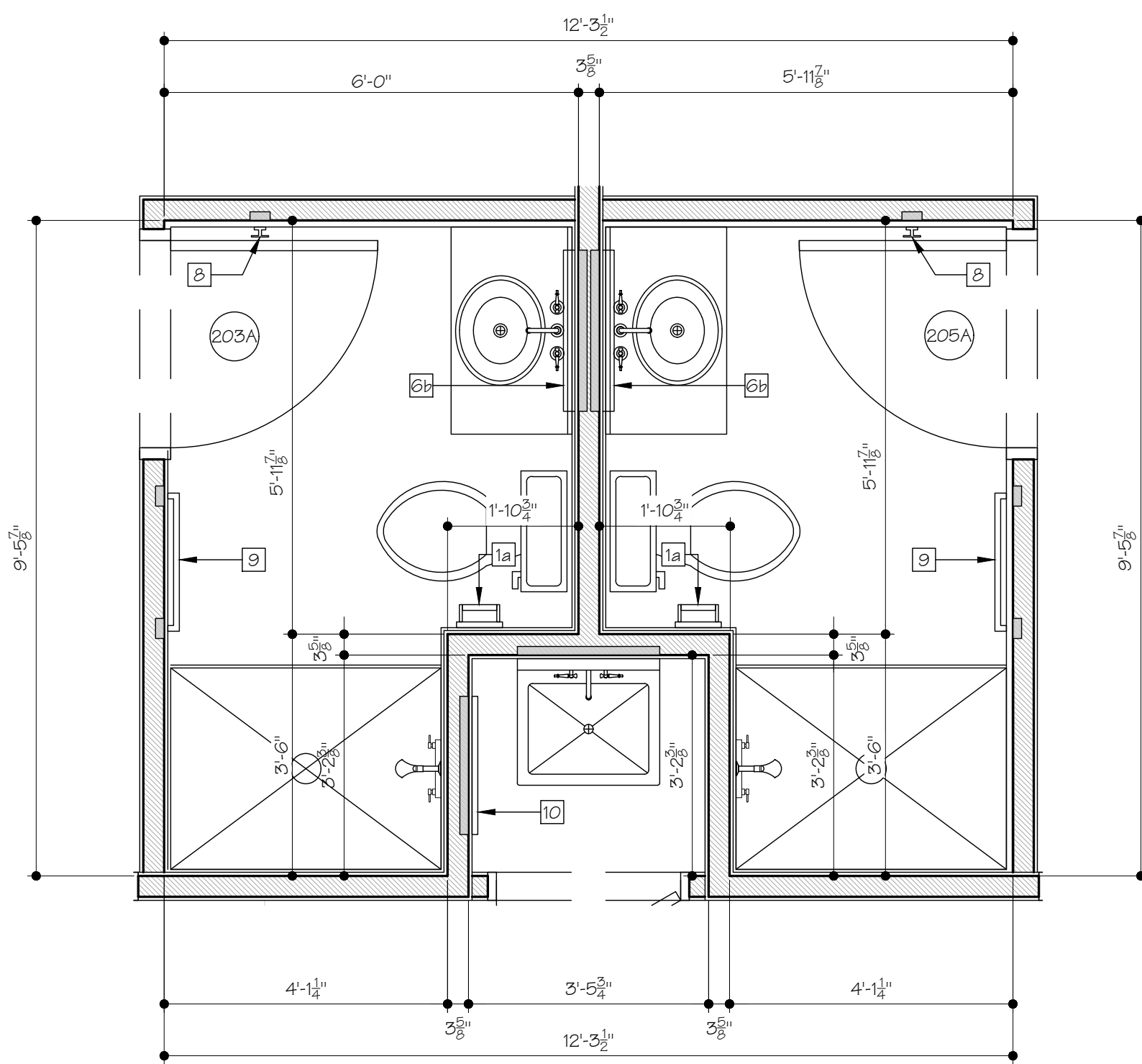
WALL SECTIONS

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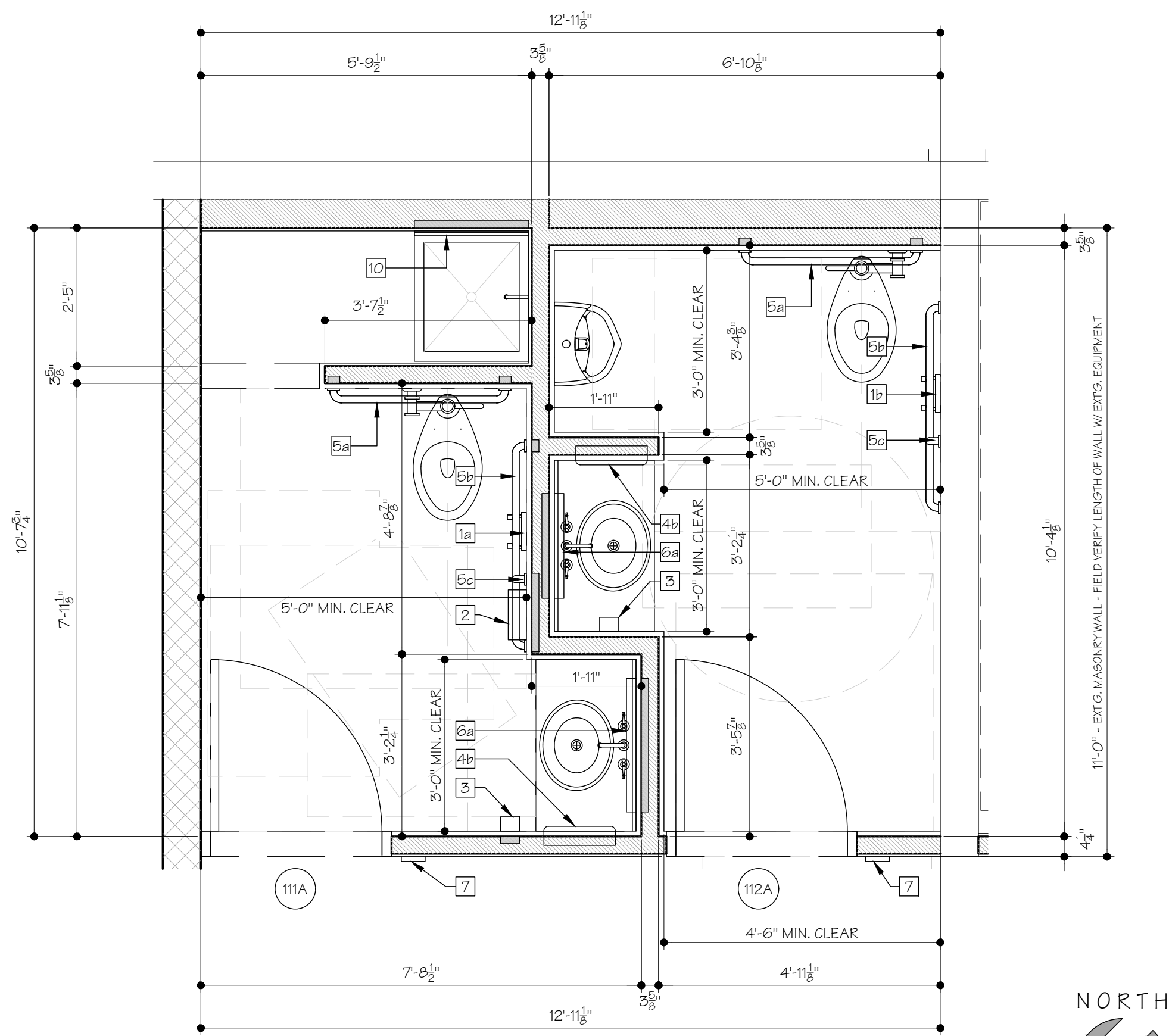
ENLARGED RESTROOM PLAN

1/2" = 1'-0"

3

NOT USED

2



ENLARGED RESTROOM PLAN

1/2" = 1'-0"

1

RESTROOM ACCESSORY SCHEDULE

TAG	ITEM
1a	TOILET PAPER HOLDER (RECESSED)
1b	TOILET PAPER HOLDER (SURFACE-MOUNTED)
2	SANITARY NAPKIN DISPOSAL
3	SOAP DISPENSER (SURFACE-MOUNTED)
4a	PAPER TOWEL DISPENSER (SURFACE-MOUNTED)
4b	PAPER TOWEL DISPENSER (RECESSED)
5a	36" GRAB BAR
5b	42" GRAB BAR
5c	18" GRAB BAR
6a	MIRROR
6b	VANITY MIRROR - COORDINATE w/ VANITY LIGHTING
7	SIGNAGE
8	ROBE HOOK
9	TOWEL BAR
10	MOP AND BROOM HOLDER

- RESTROOM ACCESSORY SCHEDULE NOTES
- REFER TO ANSI SHEETS A-021 & A-022 FOR MOUNTING HEIGHTS AND ADDITIONAL ACCESSIBILITY INFORMATION.
  - COORDINATE AND VERIFY ALL ACCESSORIES WITH OWNER.
  - RESTROOM SIGNAGE TO COMPLY WITH ICC/ANSI A117.1-2009 REGULATIONS.
  - REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE INFORMATION.
  - REFER TO SPECIFICATIONS SHEET A-013 FOR RESTROOM ACCESSORY MANUFACTURER'S AND MODEL NUMBERS NOT LISTED IN THIS SCHEDULE, AND FOR ADDITIONAL NOTES.
  - PROVIDE SOLID BLOCKING AS INDICATED ON THE PLAN AND/OR AS REQUIRED FOR INSTALLATION PER ACCESSORY MANUFACTURER'S SPECIFICATIONS.

SYMBOL LEGEND

TYPICAL WALL BLOCKING LOCATIONS



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PG. ISSUANCE DATE  
ADDENDUM #1 04/16/18  
ADDENDUM #2 08/05/18

DATE SET ISSUANCE  
03-15-18 ISSUED FOR BID  
03-26-18 ISSUED FOR BID & PERMIT  
05-06-18 ISSUED FOR STATE & OWNER COMMENTS  
01-13-19 ISSUED FOR STATE & OWNER COMMENTS  
07-26-20 ISSUED FOR STATE & OWNER COMMENTS  
02-04-21 ISSUED FOR STATE & OWNER COMMENTS

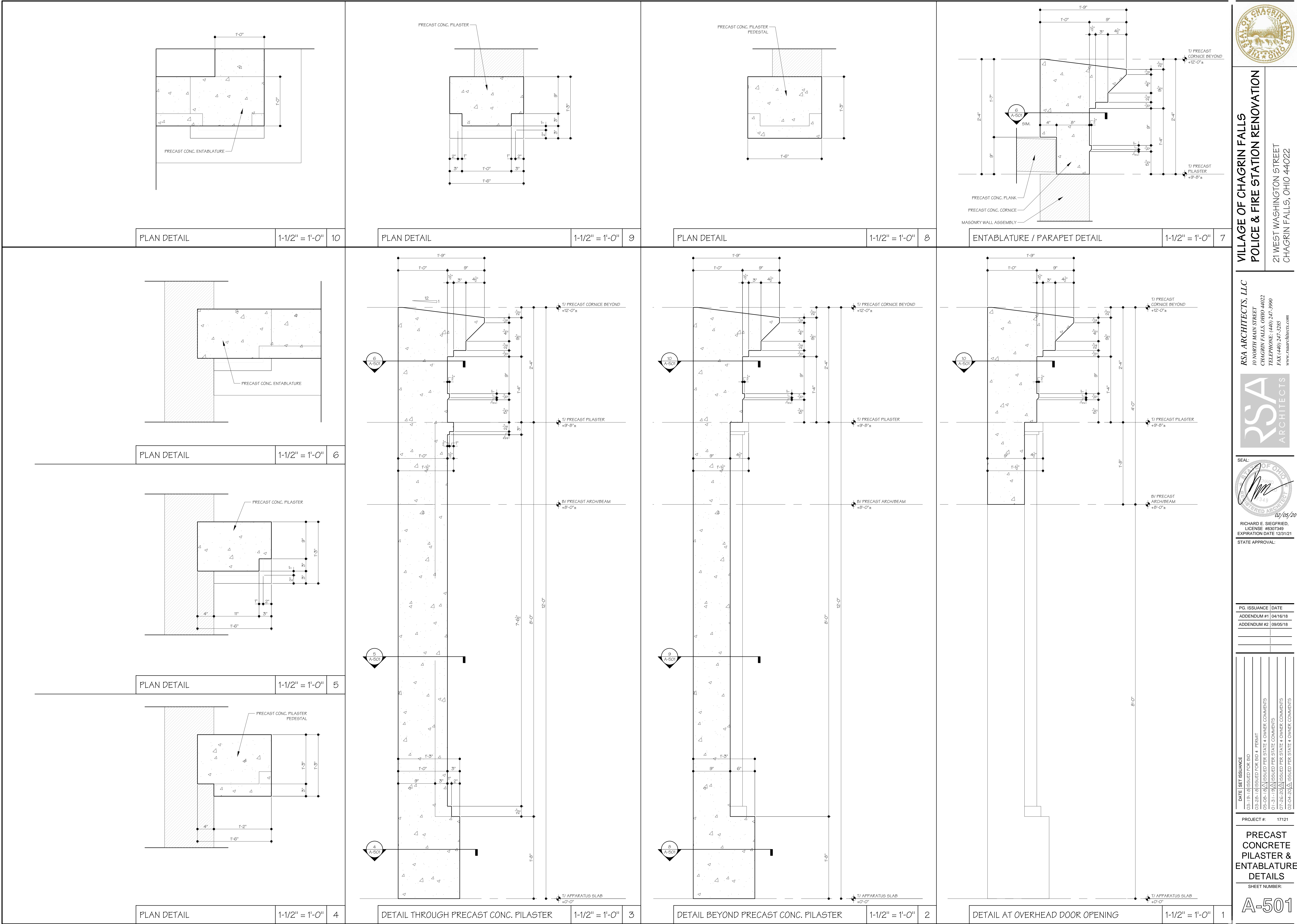
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ENLARGED  
RESTROOM &  
STAIR DETAILS

SHEET NUMBER:

A-401








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STATE APPROVAL:

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07-13-18	ISSUED FOR STATE COMMENTS
07-26-18	ISSUED FOR STATE # OWNER COMMENTS
02-04-20	ISSUED FOR STATE # OWNER COMMENTS

PROJECT #: 17121

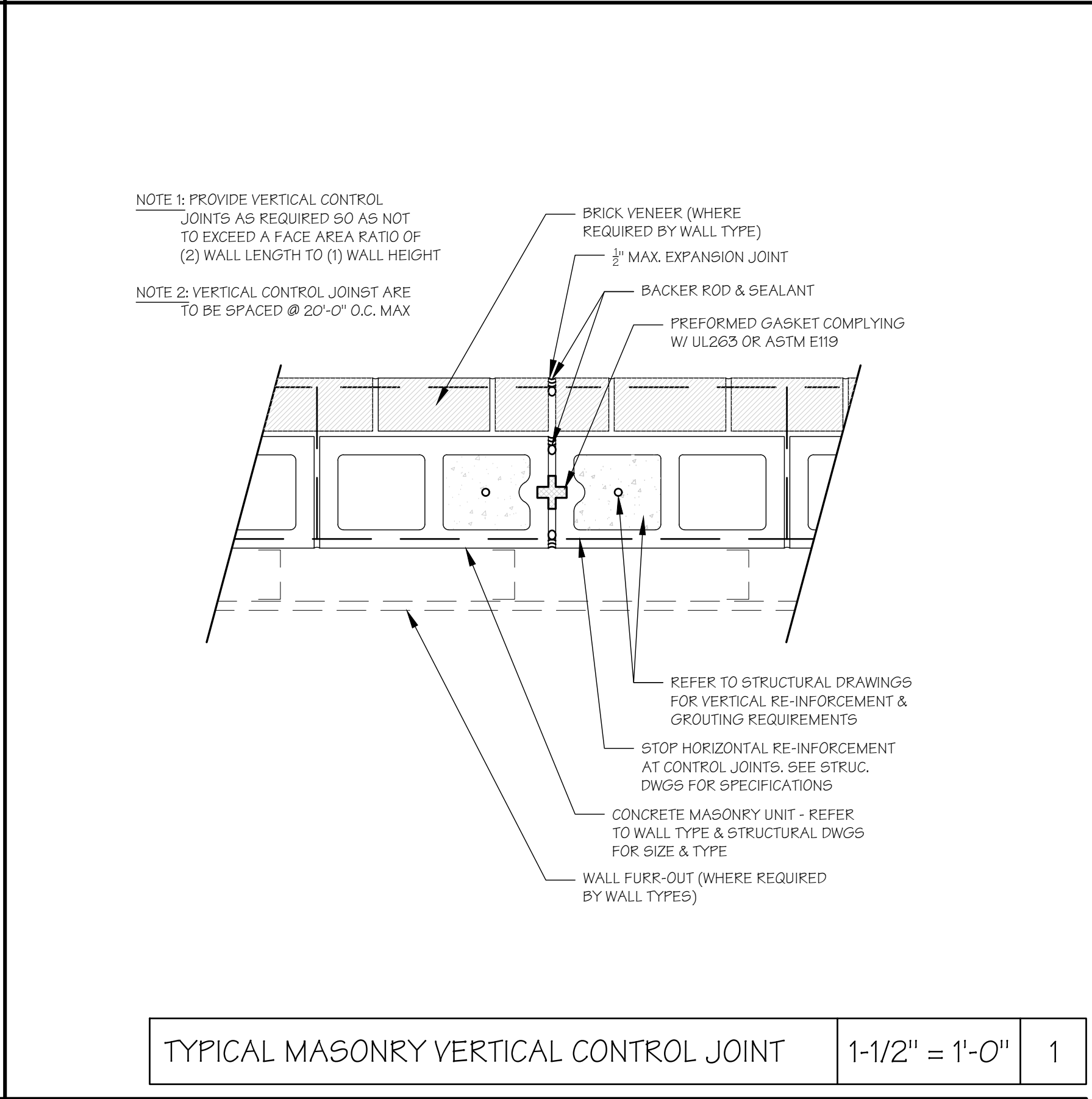
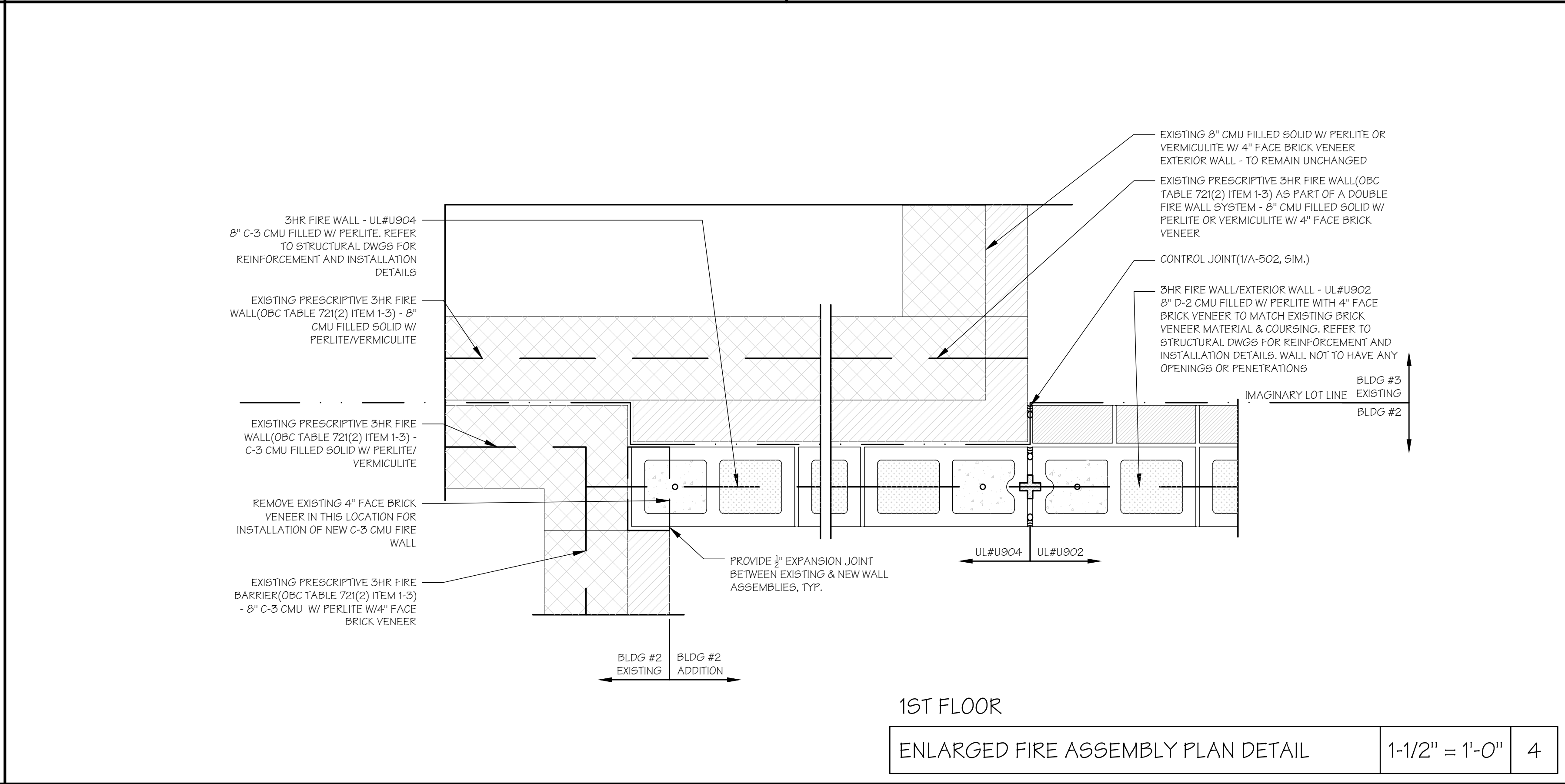
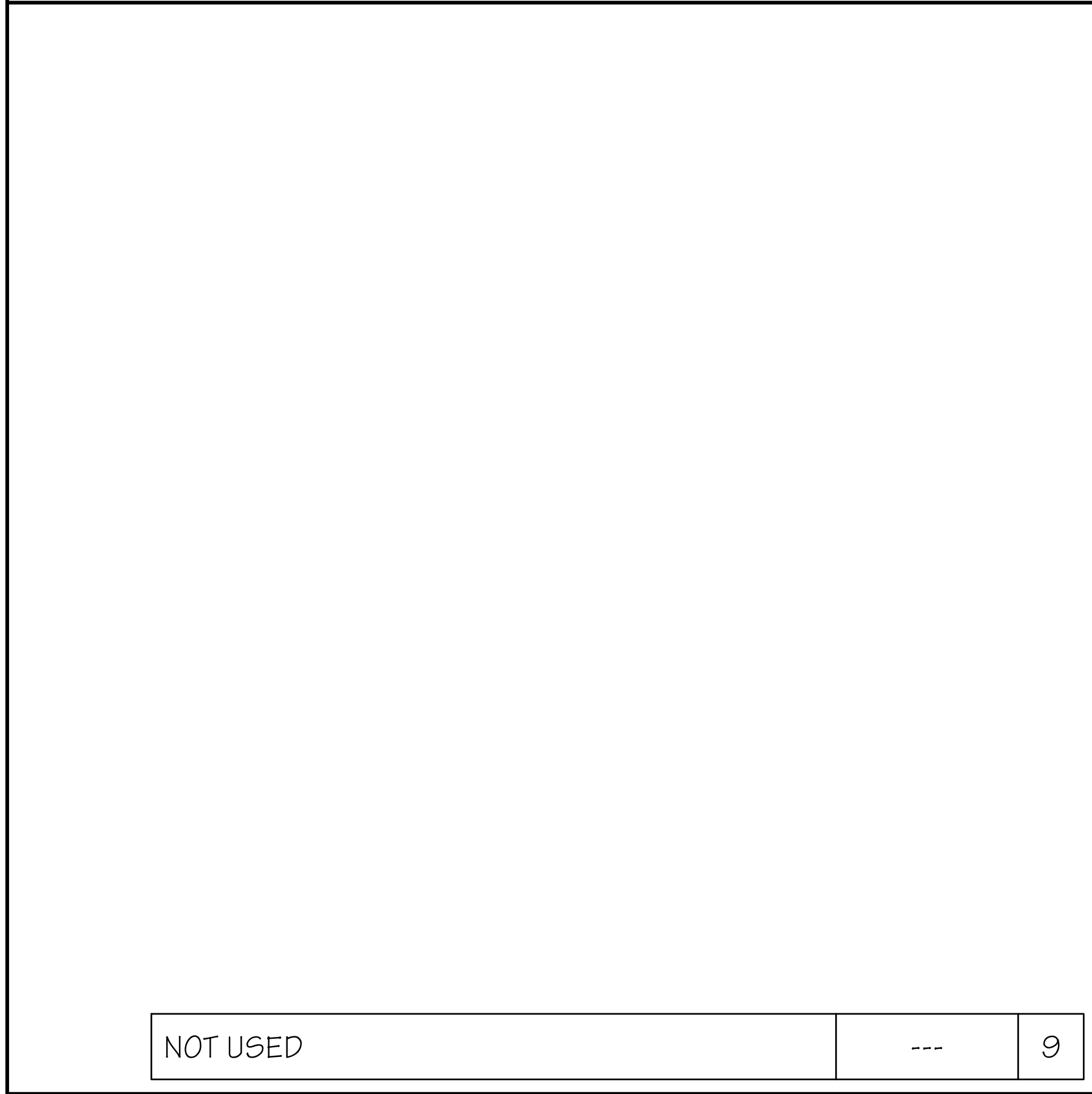
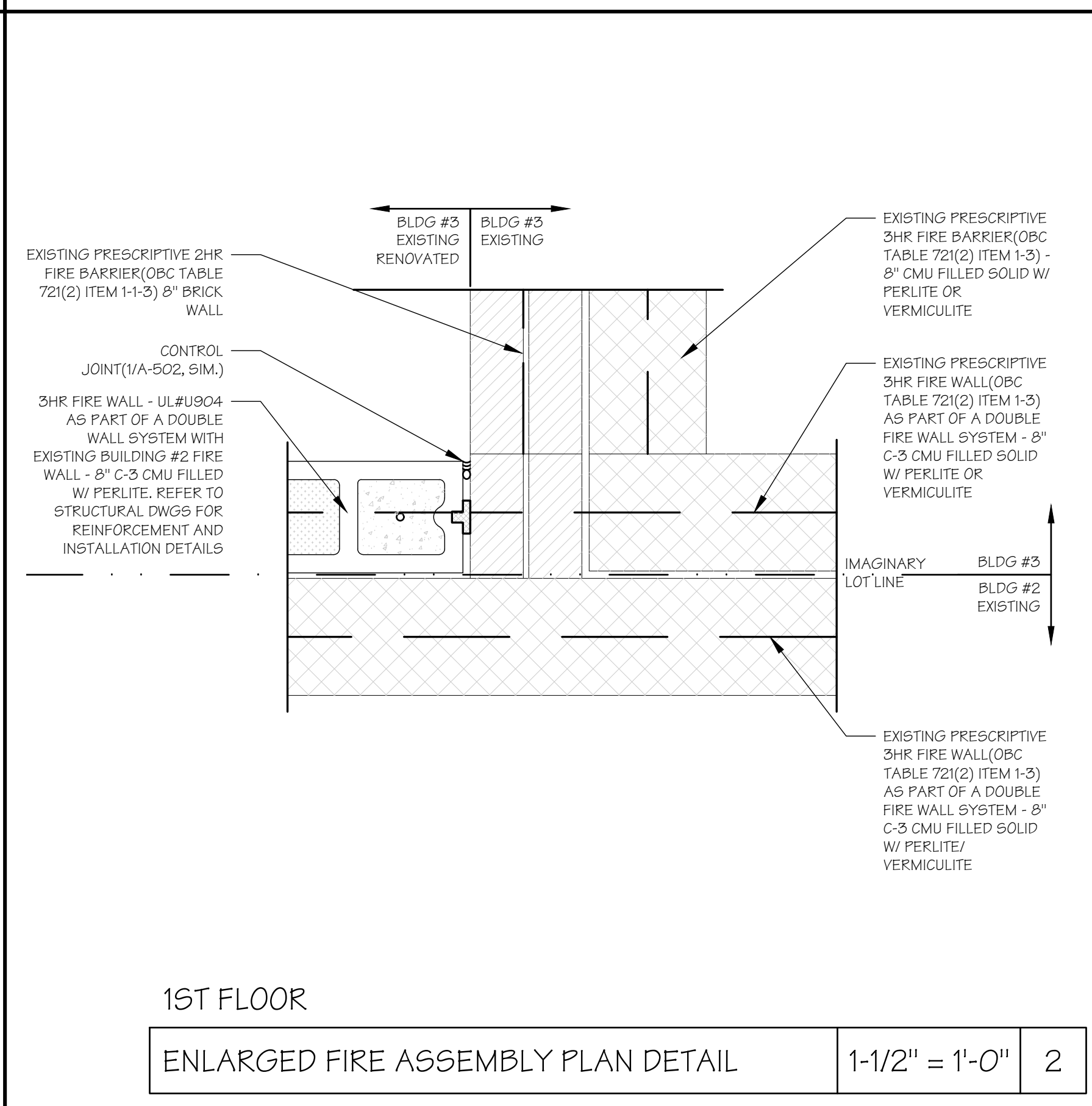
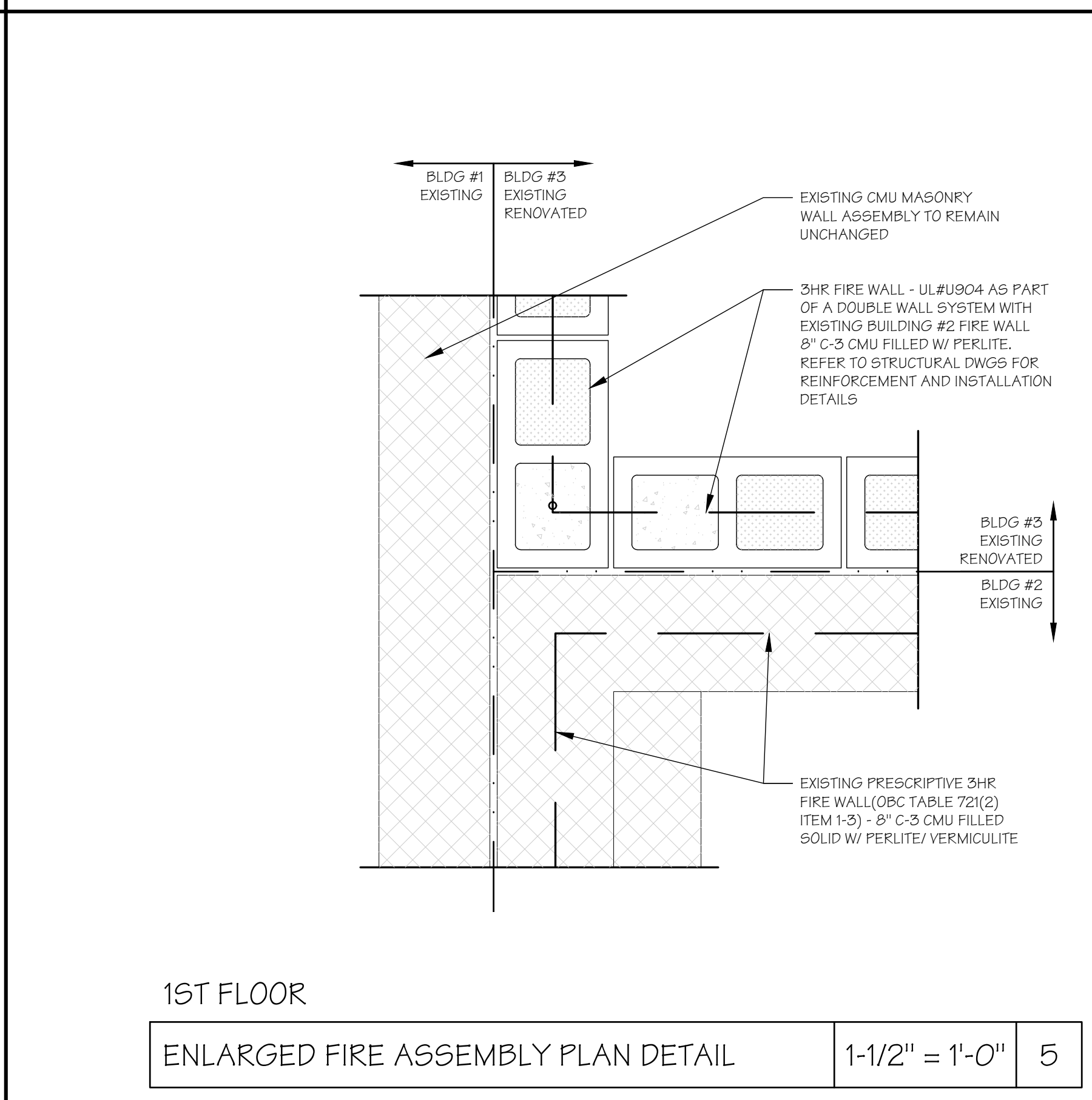
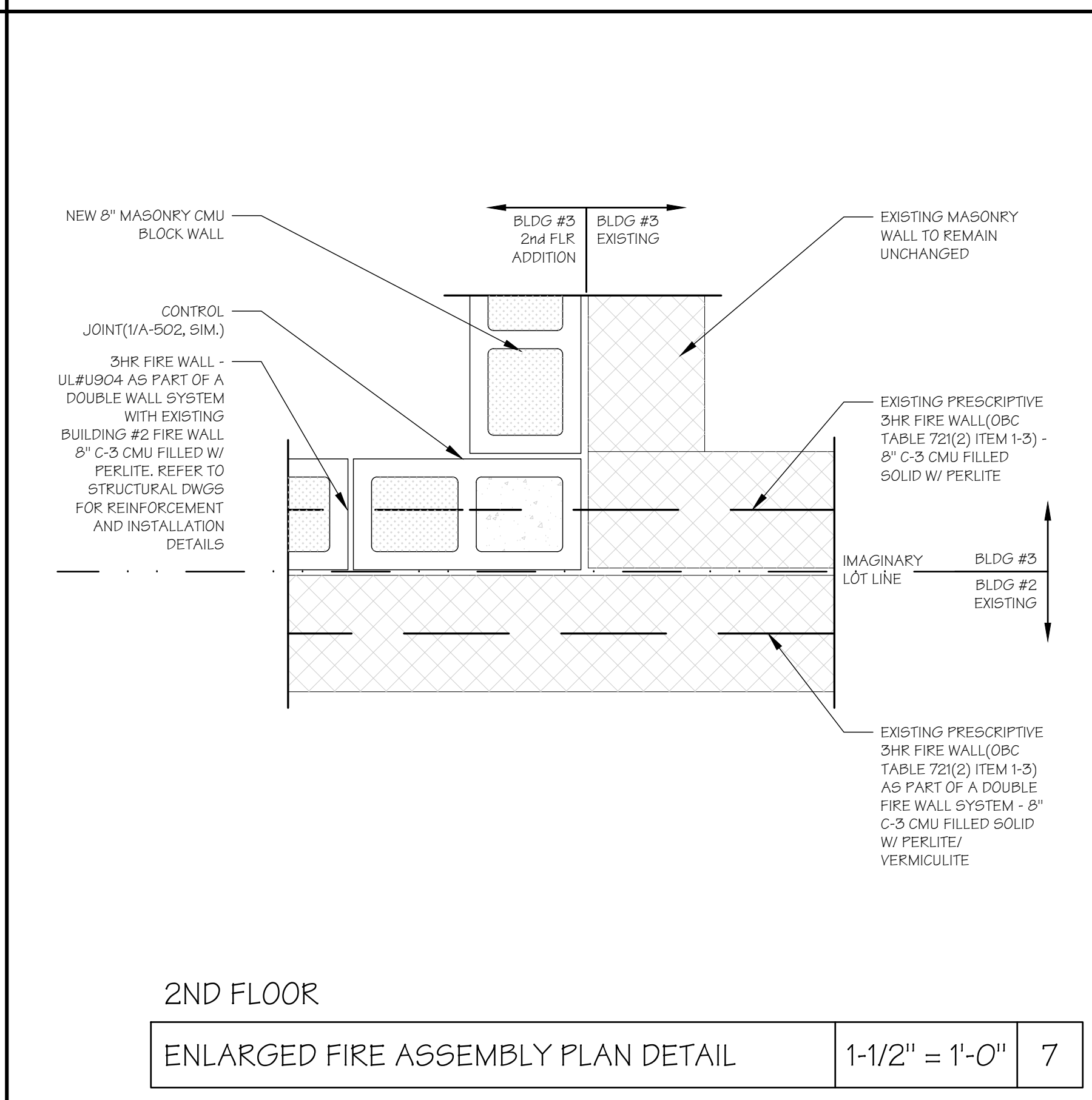
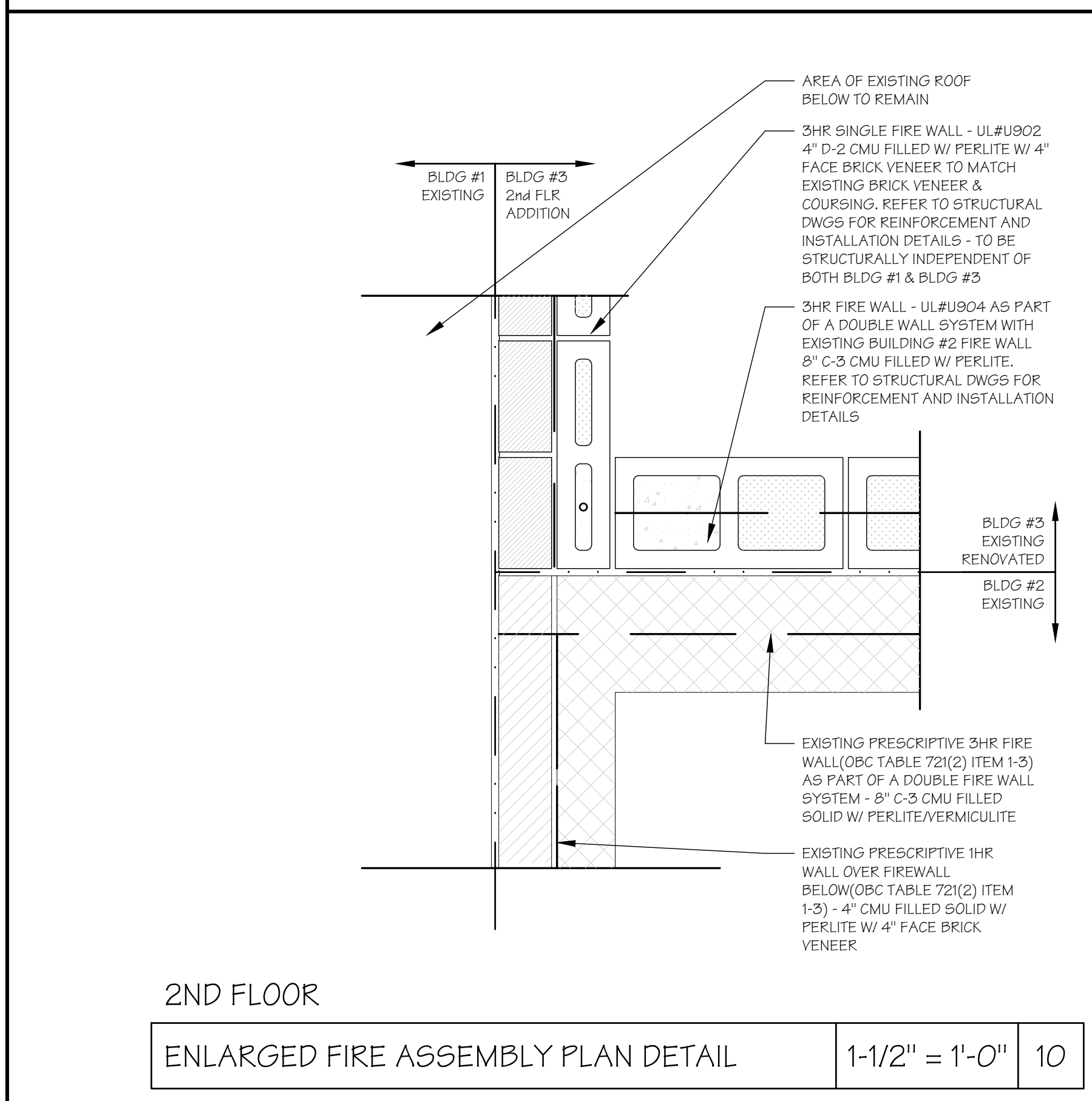
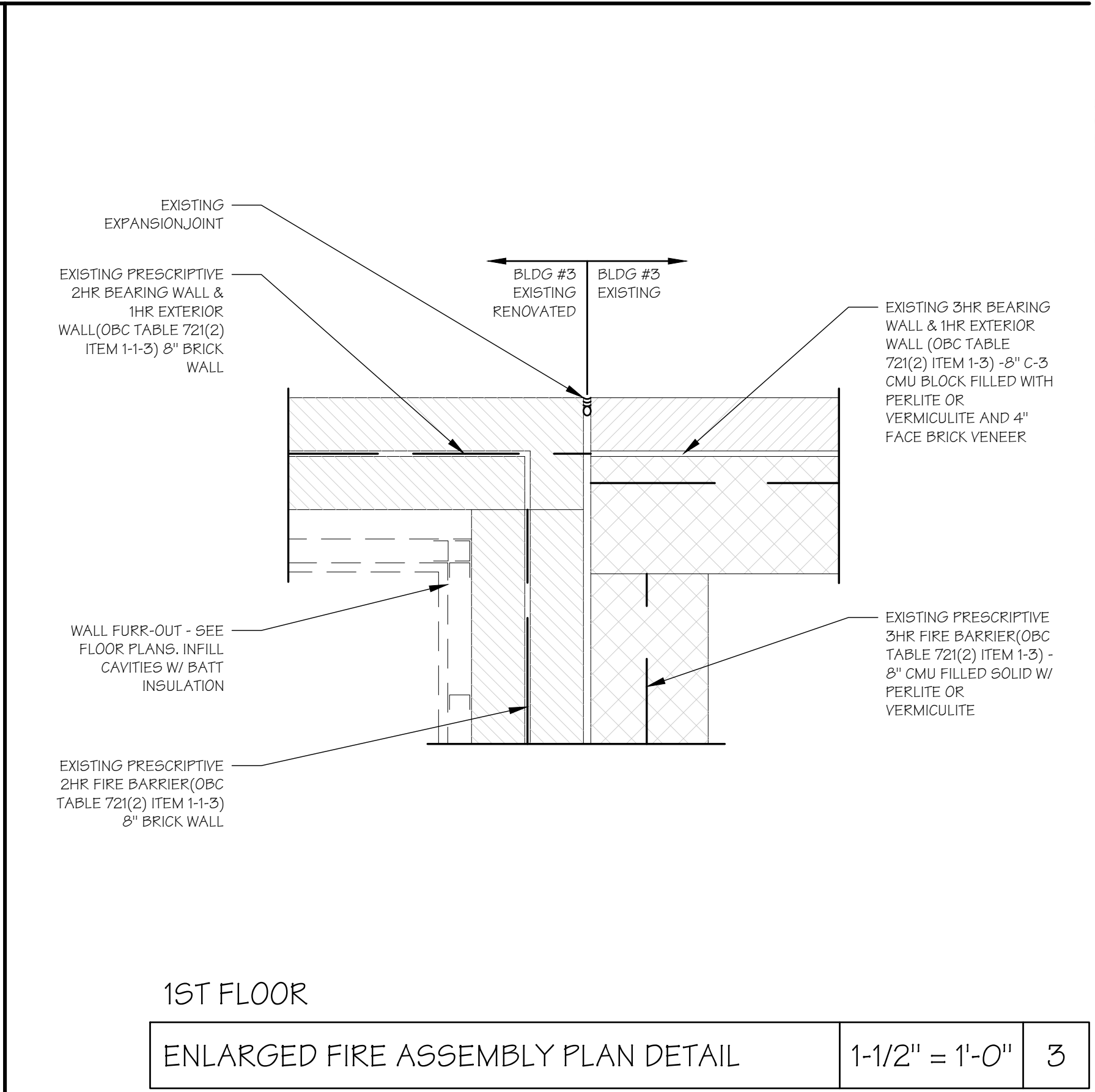
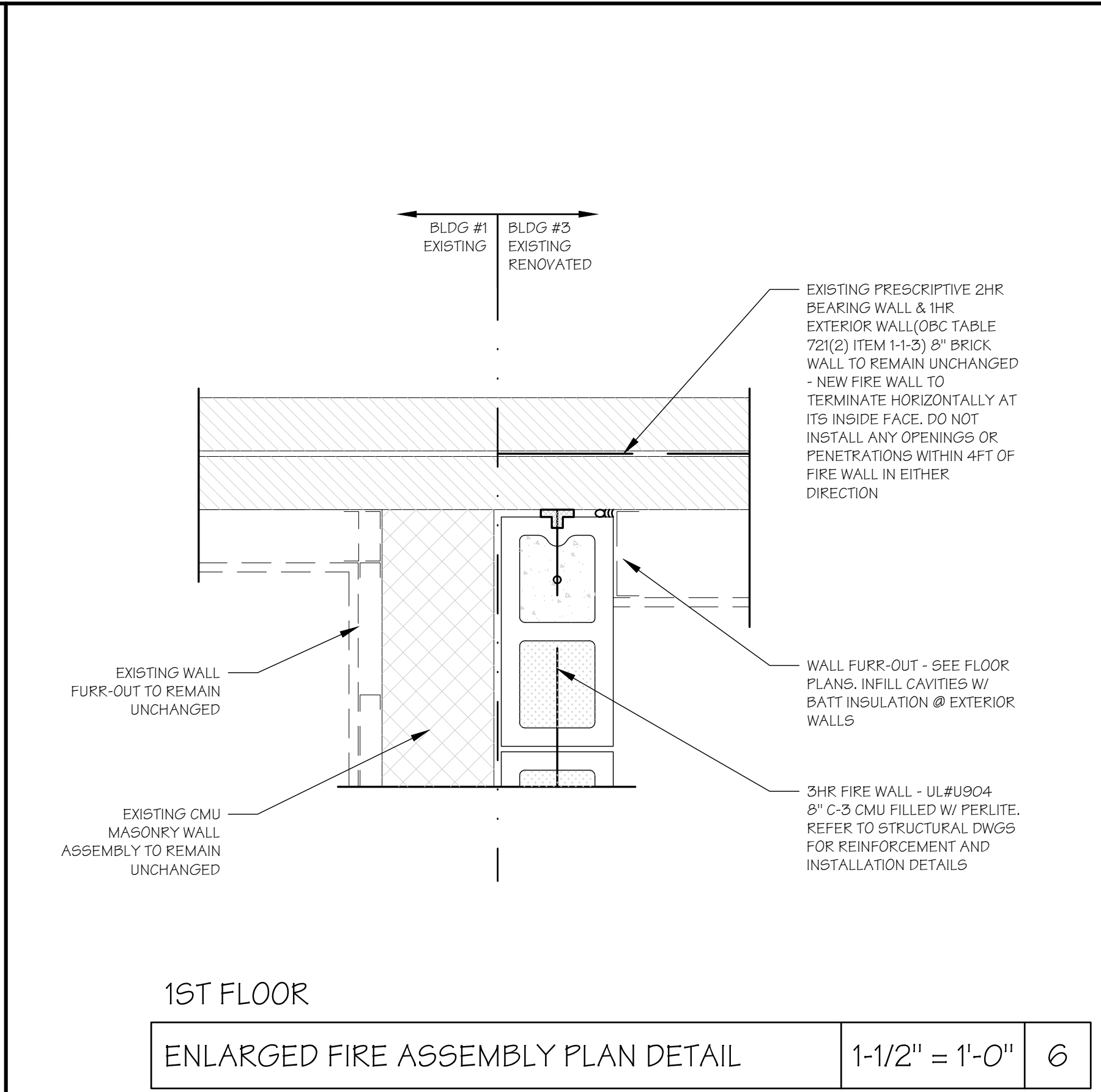
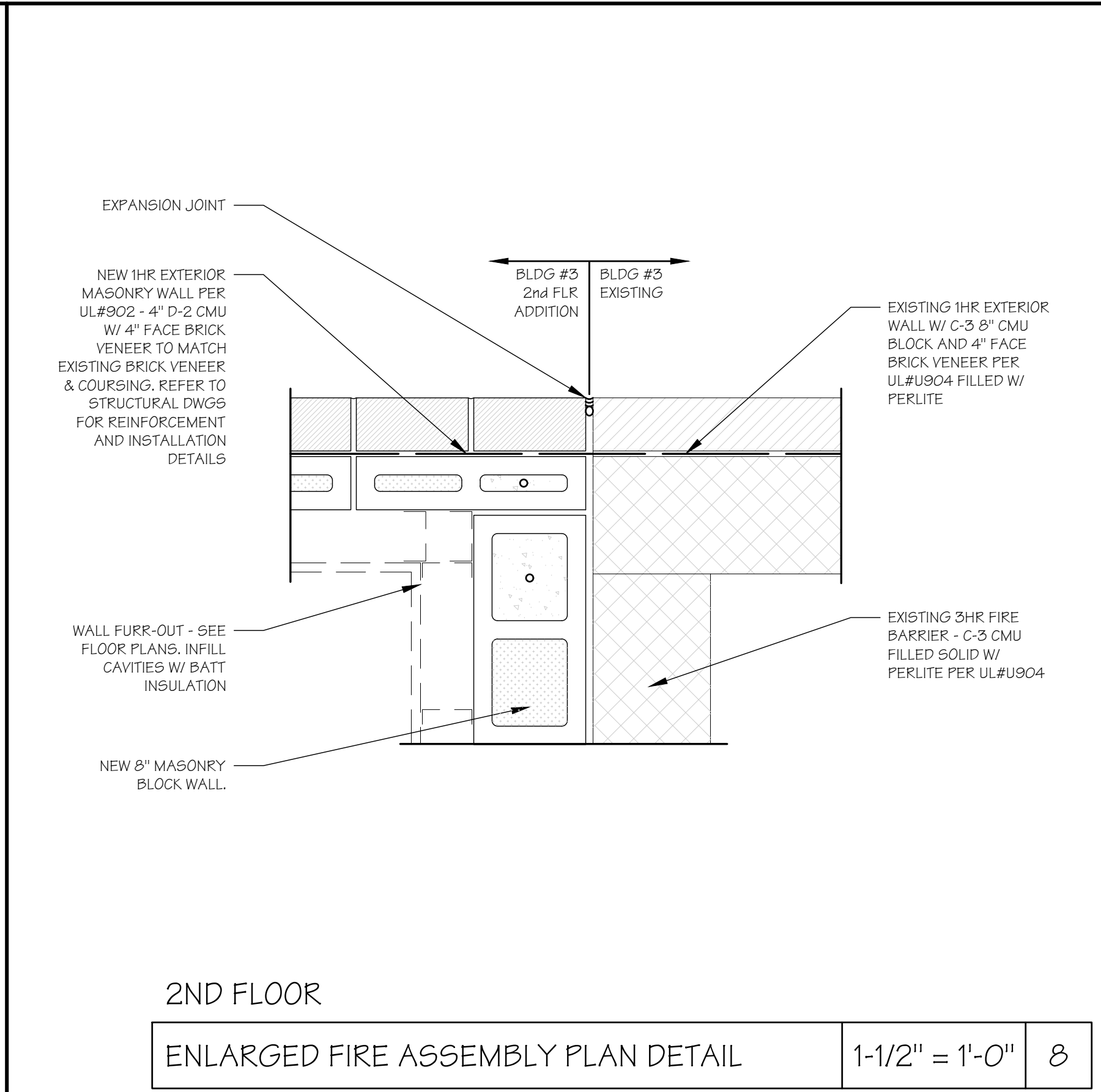
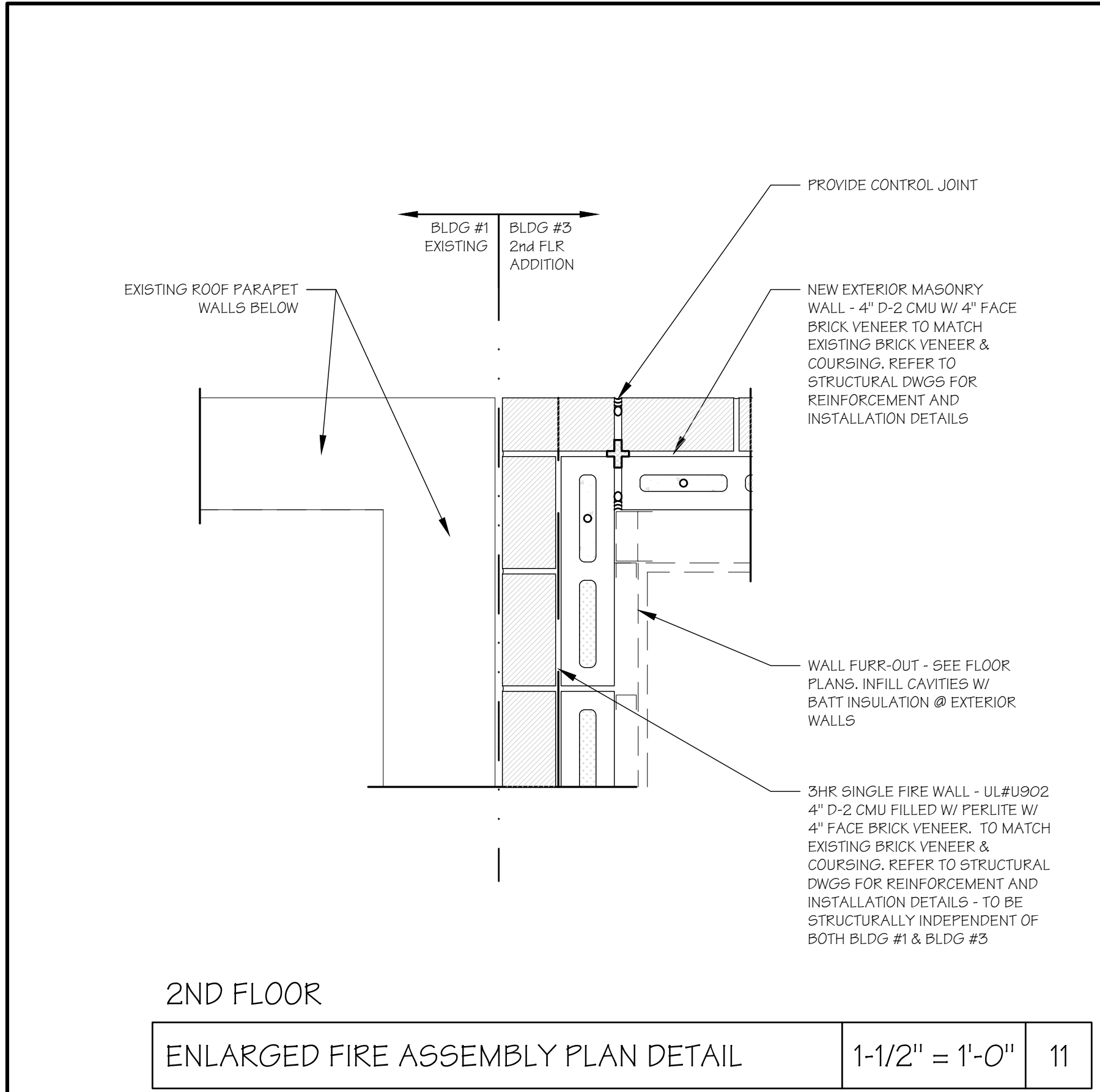
PRECAST  
CONCRETE  
PILASTER &  
ENTABLATURE  
DETAILS

SHEET NUMBER:

A-501

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SEAL:  
RICHARD E. SIEGFRIED  
LICENSE #8907548  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

PG.	ISSUANCE	DATE
ADDENDUM #1	04/16/18	
ADDENDUM #2	09/05/18	

DATE	SET	ISSUANCE	FOR	BY
03-15-18	ISSUED	FOR	BD	PERMIT
03-26-18	ISSUED	FOR	STATE	OWNER COMMENTS
05-08-18	ISSUED	FOR	STATE	OWNER COMMENTS
01-13-19	ISSUED	FOR	STATE	OWNER COMMENTS
07-22-20	ISSUED	FOR	STATE	OWNER COMMENTS
02-04-21	ISSUED	FOR	STATE	OWNER COMMENTS

PROJECT #: 17121

PRECAST  
CONCRETE  
PILASTER &  
ENTABLATURE  
DETAILS

SHEET NUMBER:

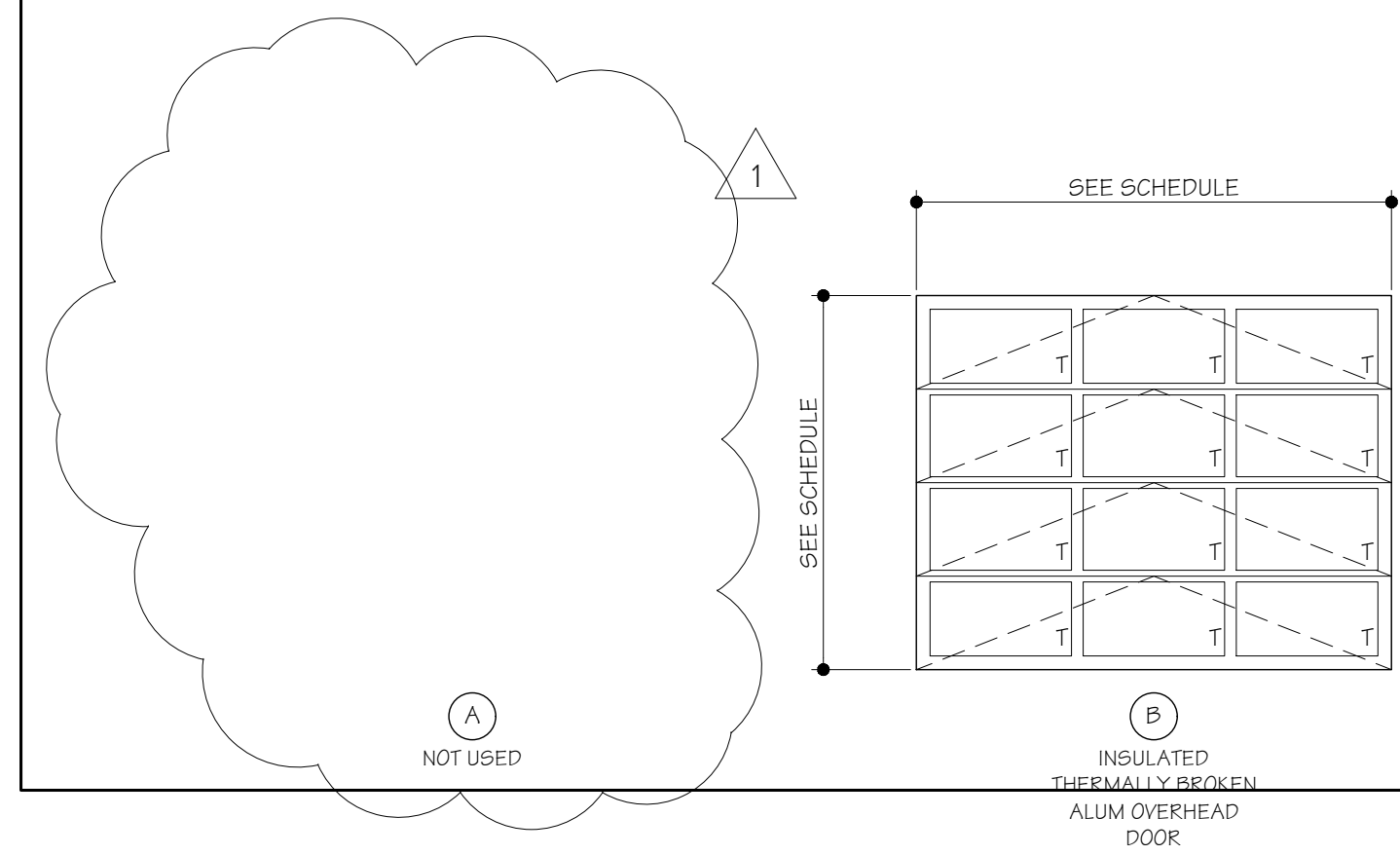
A-502



DOOR SCHEDULE -- POLICE DEPARTMENT											
DOORS			FRAMES			REMARKS					
DOOR # (SEE FLP PLANS)	EXIT # (SEE LIFE SAFETY PLANS)	PANEL SIZE	ROOM LOCATION	DR/FRAME RATING	TYPE	CONSTRUCTION TYPE	FINISH	MATERIAL	FINISH	HARDWARE PACKAGE	COORDINATE WITH FLOOR PLAN FOR DOOR LOCATIONS AND HANDING. REFER TO INTERIOR DESIGN PACKAGE FOR FINISH INFORMATION AND COORDINATION.
---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---
102A	*13	3'-0" x 7'-0" x 1 3/4"	102 ELEC STORAGE	45min	H	RE-INFORED HOLLOW METAL	PAINT	REINFORCED HOLLOW METAL	PAINT	4	NEW EXTERIOR FIRE RATED SECURITY EGRESS DOOR W/ FIRE RATED PANIC HARDWARE IN NEW MASONRY OPENING
104A	*12	3'-0" x 7'-0" x 1 3/4"	104 DUTY ROOM	45MIN.	H	RE-INFORED HOLLOW METAL	PAINT	RE-INFORED HOLLOW METAL	PAINT	4	NEW EXTERIOR FIRE RATED SECURITY EGRESS DOOR W/ FIRE RATED PANIC HARDWARE IN EXISTING MASONRY DOOR OPENING
105A	---	3'-0" x 7'-0" x 1 3/4"	105 OFFICE	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	5	PROVIDE MIN. STC RATING OF 41
106A	---	3'-0" x 7'-0" x 1 3/4"	106 EVIDENCE ROOM	---	H	REINFORCED HOLLOW METAL	PAINT	REINFORCED HOLLOW METAL	PAINT	6	---
107A	---	3'-0" x 7'-0" x 1 3/4"	107 EVIDENCE PROCESSING	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	7	---
108A	---	3'-0" x 7'-0" x 1 3/4"	108 MENS LOCKER ROOM	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	3	---
109A	---	3'-0" x 7'-0" x 1 3/4"	109 WOMENS LOCKER ROOM	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	3	---
110A	---	ROLL-UP - 3'-0" x 7'-0" ±	110 HALL	3HR	D	STEEL	PREFINISHED	STEEL	PREFINISHED	1	ROLL-DOWN FIRE SHUTTER W/ FUSIBLE LINK IN NEW MASONRY OPENING TO MATCH OPENING IN EXISTING MASONRY WALL - EXTEND TO LOW SLAB AT STEP - SHUTTER TO COMPLY W/ NFPA 252 OR UL 10B
110B	---	ROLL-UP - 3'-0" x 7'-0" ±	EXISTING POLICE HALL	3HR	D	STEEL	PREFINISHED	STEEL	PREFINISHED	1	ROLL-DOWN FIRE SHUTTER W/ FUSIBLE LINK IN EXISTING OPENING - SHUTTER TO COMPLY W/ NFPA 252 OR UL 10B
111A	---	PAIR 3'-0" x 7'-0" x 1 3/4"	112 WOMENS RESTROOM	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	13	---
112A	---	PAIR 3'-0" x 7'-0" x 1 3/4"	113 MENS RESTROOM	---	H	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	13	---

DOOR SCHEDULE -- FIRE DEPARTMENT 2nd FLOOR ADDITION											
DOORS			FRAMES			REMARKS					
DOOR # (SEE FLP PLANS)	EXIT # (SEE LIFE SAFETY PLANS)	PANEL SIZE	ROOM LOCATION	DR/FRAME RATING	TYPE	CONSTRUCTION TYPE	FINISH	MATERIAL	FINISH	HARDWARE PACKAGE	COORDINATE WITH FLOOR PLAN FOR DOOR LOCATIONS AND HANDING. REFER TO INTERIOR DESIGN PACKAGE FOR FINISH INFORMATION AND COORDINATION.
201A	*12	3'-0" x 6'-8" x 1 3/4"	FIRE DEPT. APPARATUS RM	3HR	H	HOLLOW METAL	PAINTED	HOLLOW METAL	PAINT	9	3HR FIRE RATED HORIZONTAL EXIT SWING DOOR
201B	*12	3'-0" x 6'-8" x 1 3/4"	201 HALLWAY	3HR	H	HOLLOW METAL	PAINTED	HOLLOW METAL	PAINT	9	3HR FIRE RATED HORIZONTAL EXIT SWING DOOR
201C	---	2'-8" x 7'-0" x 1 3/4"	201 HALLWAY	---	H	SOLID CORE WOOD	STAIN	SOLID CORE WOOD	STAIN	10	---
201D	---	PAIR 2'-3" x 3'-6" GATES	201 HALLWAY	---	G	STEEL	PAINT	STEEL	PAINT	1	NEW SWING GATES W/ LATCH FOR ACCESS TO NEW FIREMAN'S POLE TO MEET REQUIREMENTS FOR GUARD RAIL - MIN. 42" HIGH, DOES NOT ALLOW PASSAGE OF 4" SPHERE, RESIST 200 LBS CONCENTRATED LOAD AND 50 LBS LOAD IN ANY DIRECTION
202A	---	3'-0" x 7'-0" x 1 3/4"	202 BEDROOM	45MIN	H	SOLID CORE WOOD	STAIN	WOOD	STAIN	11	ADD #1
202B	---	2'-0" x 6'-8" x 1 3/4"	202 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	12	---
202C	---	2'-0" x 6'-8" x 1 3/4"	202 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
202D	---	2'-0" x 6'-8" x 1 3/4"	202 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
202E	---	2'-0" x 6'-8" x 1 3/4"	202 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
203A	---	3'-0" x 7'-0" x 1 3/4"	203 BATHROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	13	---
204A	---	3'-0" x 7'-0" x 1 3/4"	204 BEDROOM	45MIN	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	11	ADD #1
204B	---	2'-0" x 6'-8" x 1 3/4"	204 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	12	---
204C	---	2'-0" x 6'-8" x 1 3/4"	204 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
204D	---	2'-0" x 6'-8" x 1 3/4"	204 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
204E	---	2'-0" x 6'-8" x 1 3/4"	204 BEDROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	17	---
205A	---	3'-0" x 7'-0" x 1 3/4"	205 BATHROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	13	---
206A	---	3'-0" x 7'-0" x 1 3/4"	206 FLEX ROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	7	---
206B	---	PAIR 2'-6" x 6'-8" x 1 3/4"	206 FLEX ROOM	---	J	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	15	---
206C	---	3'-0" x 7'-0"	206 FLEX ROOM	---	D	METAL SECURITY GATE	BLACK	STEEL	BLACK	8	ACCESS TO POLICE LT. SHALL ONLY BE GRANTED TO THE POLICE DEPT. - TO RECEIVE KEYPAD W/ KEY BACK-UP
207A	---	3'-0" x 7'-0" x 1 3/4"	207 STORAGE	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	10	---
208A	---	2'-6" x 7'-0" x 1 3/4"	208 DINING ROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	12	---
208B	---	2'-6" x 7'-0" x 1 3/4"	208 DINING ROOM	---	H	SOLID CORE WOOD	STAIN	HOLLOW METAL	STAIN	12	---

DOOR SCHEDULE -- FIRE DEPARTMENT 1st FLOOR APPARATUS RM ADDITION											
DOORS			FRAMES			REMARKS					
DOOR # (SEE FLP PLANS)	EXIT # (SEE LIFE SAFETY PLANS)	PANEL SIZE	ROOM LOCATION	DR/FRAME RATING	TYPE	CONSTRUCTION TYPE	FINISH	MATERIAL	FINISH	HARDWARE PACKAGE	COORDINATE WITH FLOOR PLAN FOR DOOR LOCATIONS AND HANDING. REFER TO INTERIOR DESIGN PACKAGE FOR FINISH INFORMATION AND COORDINATION.
100A	---	O.H. - 10'-2"x8'-2"x2"	100 APPARATUS RM	---	B	ALUM-INSULATED	BLACK	STEEL	PREFINISHED	1	WAYNE DALTON 452 ALUMINUM FULL VIEW THERMALLY BROKEN INSULATED SECTIONAL OVERHEAD DOOR W/ 1/2" GRAY INSULATED GLAZING - LOW HEADROOM MOTOR OPERATED
100B	---	3'-0" x 6'-8" x 1 3/4"	100 APPARATUS RM	---	J	HOLLOW METAL	PAINTED	HOLLOW METAL	PAINT	14	---
100C	---	3'-0" x 7'-0" x 1 3/4"	100 APPARATUS RM	3HR	J	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	9	NEW 3HR FIRE RATED SWING DOOR IN EXISTING FIRE BARRIER
100D	*10	3'-0" x 7'-0" x 1 3/4"	100 APPARATUS RM	1-1/2HR	K	HOLLOW METAL	PAINT	HOLLOW METAL	PAINT	16	1-1/2HR EXIT SWING DOOR IN NEW 2HR FIRE RATED EXTERIOR WALL



WINDOW SCHEDULE											
WINDOWS			REMARKS								
WINDOW# (SEE FLP PLANS)	WINDOW SIZE	FIRE RATING	MAX. U-VALUE	MAX. SHGC	TYPE	CONSTRUCTION TYPE	FINISH				
W1	1DH - 3'-0"x5'-2"	---	---	---	AA	FIBERGLASS	BLACK	PELLA IMPERVIA DOUBLE HUNG WINDOWS W/ ADVANCED COMFORT LOW-E INSULATED GLAZING			
W2	1DH - 3'-0"x5'-2" - EGRESS	---	---	---	AA	FIBERGLASS	BLACK	PELLA IMPERVIA DOUBLE HUNG WINDOWS W/ ADVANCED COMFORT LOW-E INSULATED GLAZING - SECONDARY BEDROOM EGRESS			
W3	(2)DH - 3'-0"x5'-2"	---	---	---	BB	FIBERGLASS	BLACK	TWO MULLED PELLA IMPERVIA DOUBLE HUNG WINDOWS W/ ADVANCED COMFORT LOW-E INSULATED GLAZING			
W4	3'-0" x 2'-8"	---	.9	.68	CC	FIBERGLASS	BLACK	FIXED WINDOW WITH TEMPERED LOW-E INSULATED GLAZING; MATCH EXISTING RESTROOM WINDOW HEIGHT ALONG SAME BUILDING FACADE(SOUTH)			
W5	---	---	---	---	---	---	---	NOT USED			
W6	1DH - 3'-0" x 2'-8" ±	---	.9	.68	AA	FIBERGLASS	BLACK	DOUBLE HUNG WINDOW WITH TEMPERED LOW-E INSULATED GLAZING; MATCH EXISTING RESTROOM WINDOW HEIGHT ALONG SAME BUILDING FACADE(SOUTH)			
W7	(2)DH - 3'-0" x 2'-8" ±	---	.9	.68	AA	FIBERGLASS	BLACK	TWO MULLED PELLA IMPERVIA DOUBLE HUNG WINDOWS W/ ADVANCED COMFORT LOW-E INSULATED GLAZING - MATCH EXISTING RESTROOM WINDOW HEIGHT ALONG SAME BUILDING FACADE(SOUTH)			
W8	14" SKYLIGHT	---	---	---	---	---	---	VELUX "SUN TUNNEL" W/ RIGID PIVOTING TUNNELING SYSTEM, TCR CURB FLASHING, & POLYCARBONATE DOME.			
W9	14" SKYLIGHT	---	---	---	---	---	---	VELUX "SUN TUNNEL" W/ RIGID PIVOTING TUNNELING SYSTEM, TCR CURB FLASHING, & POLYCARBONATE DOME. TO RECEIVE INTEGRATED LIGHT FIXTURE (SEE ELEC. DWGS).			

HARDWARE SCHEDULE				
HW SET	QTY	UNIT	ITEM	
01	---	---	DOOR MANUFACTURER PROVIDED HARDWARE	SEE DOOR COMMENTS
02	---	---	NOT USED	---
03	---	---	INTERIOR SINGLE DOOR (LOCKERS & RR)	---
04	---	---	EXT. SINGLE EXIT SECURITY DR - 45min FIRE RATE	---
05	---	---	INT. SINGLE DOOR (OFFICE)	---
06	---	---	INTERIOR SINGLE SECURITY DOOR (EVIDENCE)	---
07	---	---	INTERIOR SINGLE DOOR (EVIDENCE PROCESSING)	---
08	---	---	SECURITY GATE/FENCE MANUFACTURER TO PROVIDE HARDWARE AND INCORPORATE KEYPAD LOCKSET INTO THE GATE.	---

HARDWARE SCHEDULE				
HW SET	QTY	UNIT	ITEM	
09	---	---	INTERIOR SINGLE DOOR - 3HR FIRE RATED	---
10	---	---	INTERIOR SINGLE DOORS (UTILITY CLOSET)	---
11	---	---	INTERIOR SINGLE DOOR (BEDROOM) 45MIN. FIRE RATED HARDWARE	---
12	---	---	INTERIOR SINGLE DOOR (CLOSETS)	---
13	---	---	INTERIOR SINGLE DOORS (SINGLE-USE RR)	---
14	---	---	INTERIOR SINGLE DOOR (PASSAGE DOOR)	---
15	---	---	INTERIOR PAIR OF DOORS (FILE CLOSET)	---
16	---	---	EXT. SINGLE EXIT DOOR - 1-1/2HR FIRE RATED	---

HARDWARE SCHEDULE				
HW SET	QTY	UNIT	ITEM	
17	---	---	INTERIOR DOOR - CLOSET	---
18	---	---	NOT USED	---

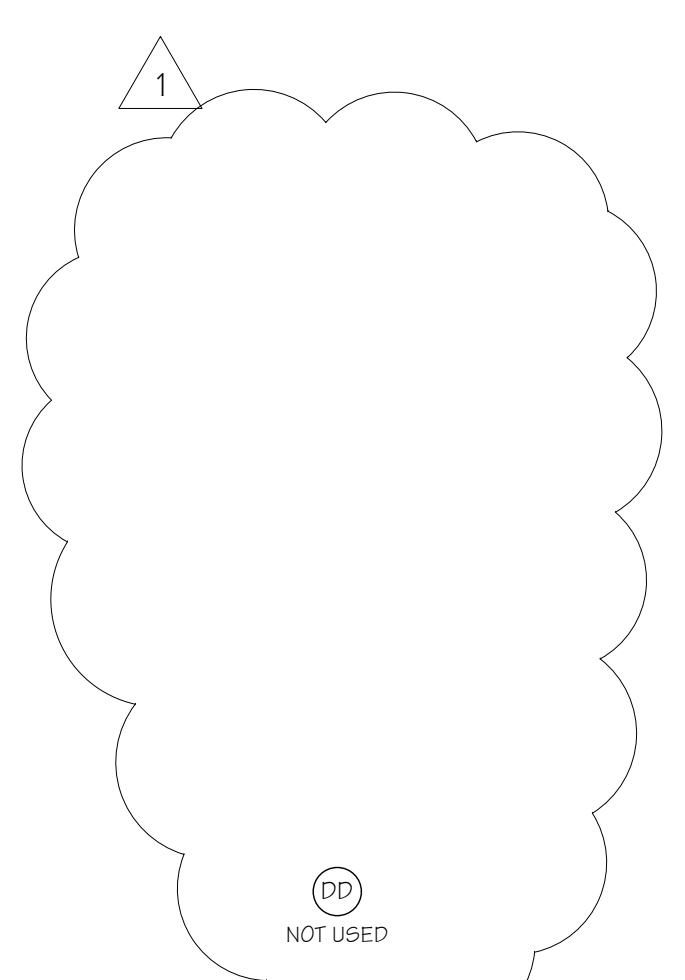
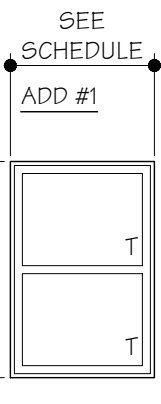
EXISTING OFFICE DOORS IN THE POLICE DEPARTMENT OFFICE AREA ARE TO RECEIVE KEYPAD LOCKSETS W/ KEY BACK-UP ON ENTRANCE SIDE ONLY WITH EGRESS SIDE HANDLE RETRACTING LATCH AT ALL TIMES. THOSE EXISTING DOORS INCLUDE:

- POLICE CHIEF OFFICE DOOR (#EX-001E)
- LIEUTENANT OFFICE DOOR (#EX-001F)
- MEETING ROOM - TWO DOORS (#EX-001B & C)
- POLICY ENTRY DOOR (#EX-001D)

POLICE EXTERIOR LOBBY DOOR TO RECEIVE KEYPAD LOCKSET W/ KEY BACK-UP AND TIMERS (EX-001A)

KEYPAD LOCKSETS ARE TO LOG ALL ENTRIES ONTO THE POLICE DEPARTMENT SERVER SYSTEM

KEYPAD LOCKSETS TO HAVE LEVER ON EGRESS SIDE OF DOOR THAT IS ALWAYS OPERABLE FOR EGRESS FROM ROOM



- ### DOOR SCHEDULE NOTES
- DOOR AND HARDWARE SCHEDULE IS NOT COMPREHENSIVE. FINAL SCHEDULE MUST BE PREPARED BY A CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC) AND SUPPLY SCHEDULE TO ARCHITECT & OWNER FOR REVIEW AND APPROVAL.
  - ALL EXTERIOR DOORS TO BE INSULATED, ALL GLASS TO BE INSULATED.
  - ALL DOORS AND ADJACENT SIDE LITES TO BE SAFETY GLAZING (TEMPERED OR APPROVED EQUAL.)
  - REFER TO FLOOR PLANS AND EXTERIOR ELEVATIONS FOR DOOR SWING HANDING & DIRECTION.
  - QUALITY ASSURANCE: MANUFACTURERS QUALIFICATIONS: ENGAGE QUALIFIED MANUFACTURERS WITH A MINIMUM (5) YEARS OF DOCUMENTED EXPERIENCE IN PRODUCING HARDWARE AND EQUIPMENT SIMILAR TO THAT INDICATED FOR THIS PROJECT AND THAT HAVE A PROVEN RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
  - INSTALLER QUALIFICATIONS: INSTALLERS, TRAINED BY THE PRIMARY PRODUCT MANUFACTURERS WITH A MINIMUM (2) YEARS DOCUMENTED EXPERIENCE INSTALLING BOTH STANDARD AND ELECTRIFIED BUILDERS HARDWARE SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
  - DOOR HARDWARE SUPPLIER QUALIFICATIONS: EXPERIENCED COMMERCIAL DOOR HARDWARE DISTRIBUTORS WITH A MINIMUM (5) YEARS DOCUMENTED EXPERIENCE SUPPLYING BOTH MECHANICAL AND ELECTROMECHANICAL HARDWARE INSTALLATIONS COMPARABLE IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT. SUPPLIER RECOGNIZED AS A FACTORY DIRECT DISTRIBUTOR IN GOOD STANDING BY THE MANUFACTURERS OF THE PRIMARY MATERIALS WITH A WAREHOUSING FACILITY IN PROJECT'S VICINITY. SUPPLIER TO HAVE ON STAFF A CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC) AVAILABLE DURING THE COURSE OF THE WORK TO CONSULT WITH CONTRACTOR, ARCHITECT, AND OWNER CONCERNING BOTH STANDARD AND ELECTROMECHANICAL DOOR HARDWARE AND KEYING.
  - SOURCE LIMITATIONS: OBTAIN EACH TYPE AND VARIETY OF DOOR HARDWARE SPECIFIED IN THE RELATED SECTIONS FROM A SINGLE SOURCE, QUALIFIED SUPPLIER UNLESS OTHERWISE INDICATED.
  - REGULATORY REQUIREMENTS: COMPLY WITH NFPA 70, NFPA 80, NFPA 101 AND ANSI A117.1 REQUIREMENTS AND GUIDELINES AS DIRECTED IN THE APPLICABLE MODEL BUILDING CODE.
  - PRE-SUBMITTAL CONFERENCE: CONDUCT COORDINATION CONFERENCE IN COMPLIANCE WITH REQUIREMENTS IN DIVISION 01 SECTION "PROJECT MEETINGS" WITH ATTENDANCE BY REPRESENTATIVES OF SUPPLIER(S), INSTALLER(S), AND CONTRACTOR(S) TO REVIEW PROPER METHODS AND THE PROCEDURES FOR RECEIVING, HANDLING, AND INSTALLING DOOR HARDWARE.
  - GC TO COORDINATE ALL CORES/KEYING PRIOR TO TURNOVER TO OWNER.
  - DOOR HARDWARE SHALL HAVE A SHAPE THAT IS EASY TO GRASP W/ ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
  - ALL EGRESS DOORS TO BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF KEYS OR SPECIAL KNOWLEDGE PER STATE AND LOCAL CODES.
  - ALL EGRESS DOORS SHALL BE EQUIPPED W/ APPROVED PANIC HARDWARE UNLESS SUCH HARDWARE SHALL CAUSE THE DOOR TO RELEASE AND THE LEAF TO OPEN WHEN A FORCE OF 5 POUNDS IS APPLIED IN THE DIRECTION OF EGRESS PER STATE AND LOCAL CODES.
  - CLOSERS SHALL BE ADJUSTED TO HAVE A SWEEP PERIOD SO THAT FROM AN OPEN POSITION OF 70 DEGREES THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 9" FROM THE LATCH MEASURED TO THE LEADING EDGE OF THE DOOR.
  - HINGES SHALL BE FULL MORTISE
  - HARDWARE EXPOSED TO EXTERIOR CONDITIONS ARE TO BE RATED FOR SUCH CONDITIONS AND COMPOSED OF MATERIALS THAT MINIMIZE RUST
  - FIELD VERIFY EXISTING DOOR HARDWARE FUNCTION (EGRESS - PANIC EXIT DEVICE) & OPERATION - REPLACE AS REQUIRED
  - SAFETY GLAZING REQUIRED AT DOORS AND WINDOWS. TEMPERED GLAZING IS TO BE USED IN ALL EXTERIOR STOREFRONT SYSTEMS, AND INTERIOR DOORS AND ARCHITECTURAL GLASS.
  - GLASS GLAZING INSTALLED AT 15" MIN. FROM VERTICAL IS TO BE LAMINATED, INCLUDING BUT NOT LIMITED TO SKYLIGHTS.
  - COORDINATE TINTING OF ALL EXTERIOR GLAZING - TYPE, COLOR, OPACITY - WITH OWNER

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**PG. ISSUANCE DATE**  
ADDENDUM #1 04/16/18  
ADDENDUM #2 09/05/18

**DATE SET ISSUANCE**  
03-19-18 ISSUED FOR BID  
03-28-18 ISSUED FOR BID # PERMIT  
05-08-18 ISSUED PER STATE & OWNER COMMENTS  
01-13-19 ISSUED PER STATE & OWNER COMMENTS  
07-26-20 ISSUED PER STATE & OWNER COMMENTS  
02-04-2021 ISSUED PER STATE & OWNER COMMENTS

**PROJECT #:** 17121

**DOOR SCHEDULE, ELEVATIONS, & DETAILS**

**SHEET NUMBER:**

**A-601**

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## MATERIAL FINISH LEGEND

### CEILING TILES (ACT)

**ACT-1** MANF.: USG  
PRODUCT: ACOUSTIC CEILING TILE  
SIZE: 54" x 48" x 1/2"  
STYLE: MARS CLIMA PLUS - VERIFY WITH OWNER  
EDGE: 50  
PRODUCT #: 89195  
COLOR: WHITE  
GRID: DX/DXL 1/4" GRID TO MATCH TILE (WHITE)  
ASTM E84 SURFACE BURNING CHARACTERISTICS:  
CLASS RATING: A  
FLAME SPREAD: 25  
SMOKE DEVELOPED: 50

**ACT-2** MATCH EXISTING  
SIZE: 48" x 48"  
COLOR: WHITE  
GRID: DX/DXL 1/4" GRID TO MATCH TILE (WHITE)  
NOTES: G.C. TO PROVIDE SPEC FOR REVIEW AND APPROVAL

### LUXURY VINYL TILE (LVT)

**LVT-1** MANF.: EXPANCO  
PRODUCT: CORX CORE  
COLOR: DRIFTWOOD  
SIZE: 48" x 48" x 5/16"  
OVERALL THICKNESS: 6MM  
PATTERN: ASHLAR / RUNNING BOND  
LOCATION: POLICE DEPARTMENT & FIRE DEPARTMENT

### CARPET (CPT):

CONTACT: JEFF KRELICI  
PH: 440-725-2240 CELL  
JEFFKRELICI@outlook.com

**CPT-1** MANF.: INTERFACE  
COLLECTION: DRIFTWOOD & SHIVER ME TIMBERS  
PRODUCT: 126940AKOO  
COLOR: 104950 CHESTNUT  
INSTALLATION: ASHLAR  
LEAD TIME: 6-8 WEEKS  
LOCATION: FIRE DEPARTMENT BEDROOMS

### METAL (MT):

**MT-1** PRODUCT: STAINLESS STEEL WRAPPED COUNTER  
EDGE PROFILE: BULLNOSE - VERIFY WITH OWNER  
COUNTER THICKNESS: 1 1/2" THICK ON MARINE GRADE  
PLYWOOD UNDERLAYMENT  
LOCATION: FIRE DEPARTMENT KITCHEN

### TILE (T)

DISTRIBUTOR: VIRGINIA TILE COMPANY  
CONTACT: NATASHA CATLIN  
PH: 216-276-0177 CELL  
CATLIN@virgintile.com

**T-1** MANUF.: CROSSVILLE  
PRODUCT: BASALT AV293  
COLOR: BEDROCK  
SIZE: 12 x 24  
PATTERN: 1/2" OFFSET RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #540 TRUFFLE  
LOCATION: RESTROOM FLOORS

**T-2** MANUF.: CROSSVILLE  
PRODUCT: COLOR BY NUMBERS  
COLOR: 1812 OVERTURE  
SIZE: 4 x 8 FIELD TILE  
PATTERN: 1/2" OFFSET RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #543 DRIFTWOOD  
LOCATION: POLICE DEPARTMENT RESTROOM WALLS

**T-3** MANUF.: CROSSVILLE  
PRODUCT: COLOR BY NUMBERS  
COLOR: 1812 OVERTURE  
SIZE: 2 x 8 SINGLE BULLNOSE & 2 x 2 BULLNOSE CORNERS  
PATTERN: 1/2" OFFSET RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #543 DRIFTWOOD  
LOCATION: POLICE DEPARTMENT RESTROOM WALLS

**T-4** MANUF.: CROSSVILLE  
PRODUCT: COLOR BY NUMBERS  
COLOR: THREE HOUR TOUR W103  
SHEEN: GLOSS  
SIZE: 4 x 8  
PATTERN: 1/2" OFFSET RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #233 ALABASTER  
LOCATION: FIRE DEPARTMENT KITCHEN BACKSPLASH & RESTROOM WALLS

**T-5** MANUF.: CROSSVILLE  
PRODUCT: COLOR BY NUMBERS  
COLOR: THREE HOUR TOUR W103  
SHEEN: GLOSSY  
SIZE: 2 x 8 SINGLE BULLNOSE & 2 x 2 BULLNOSE CORNERS  
PATTERN: 1/2" OFFSET RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #233 ALABASTER  
LOCATION: FIRE DEPARTMENT KITCHEN BACKSPLASH & RESTROOM WALLS

### TILE BASE (TB)

DISTRIBUTOR: VIRGINIA TILE COMPANY  
CONTACT: NATASHA CATLIN  
PH: 216-276-0177 CELL  
CATLIN@virgintile.com

**TB-1** MANUF.: CROSSVILLE  
PRODUCT: COLOR BY NUMBER - COVE BASE  
COLOR: 1812 OVERTURE  
SHEEN: SATIN  
SIZE: 4 x 8 COVE BASE + CORNERS  
PATTERN: RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE EPOXY GROUT  
COLOR: #543 DRIFTWOOD  
LOCATION: POLICE DEPARTMENT RESTROOMS

**TB-2** MANUF.: CROSSVILLE  
PRODUCT: BASALT - COVE BASE  
COLOR: BEDROCK  
SIZE: 6 X 12 COVE  
PATTERN: RUNNING BOND  
GROUT: CUSTOM BUILDING PRODUCTS  
CEG-LITE COMMERCIAL EPOXY GROUT  
COLOR: #540 TRUFFLE  
LOCATION: FIRE DEPARTMENT RESTROOMS

### SOLID SURFACE (SF)

**SF-1** MANF.: CORIAN  
COLOR: CANVAS  
SIZE: 6mm THICK WITH BULLNOISE EDGE  
PROFILE on 1/2" BIRCH PLY WOOD  
UNDERLAYMENT  
LOCATION: POLICE DEPT. RESTROOM  
COUNTERS AND DUTY ROOM COUNTERS

**SF-2** MANF.: CORIAN  
COLOR: PEARL GRAY  
SIZE: 6mm THICK WITH BULLNOISE EDGE  
PROFILE on 1/2" BIRCH PLY WOOD  
UNDERLAYMENT  
LOCATION: FIRE DEPARTMENT RESTROOM  
VANITY

### QUARTZ - (Q)

**Q-1** MANF.: DUPONT  
PRODUCT: CORIAN QUARTZ (FORMALLY ZODIAC)  
COLOR: INDUS RED  
SIZE: 2 CM  
EDGE PROFILE: WITH BULLNOISE EDGE PROFILE on 1/2" BIRCH PLY WOOD UNDERLAYMENT - VERIFY EDGE PROFILE  
WITH OWNER PRIOR TO FABRICATION  
LOCATION: FIRE DEPARTMENT KITCHEN COUNTER & DESK

### LAMINATE (L)

**L-1** MANF.: WILSONART  
COLOR: BLACK RIFTWOOD 6414-NG  
FINISH: NATURAL GRAY  
LOCATION: FIRE DEPARTMENT RESTROOM  
CABINETS & POLICE DEPARTMENT RESTROOM  
VANITY SHROUD

**L-2** MANF.: FORMICA DECO METAL COLLECTION  
COLOR: BRUSHED BRONETONED ALUMINUM  
LOCATION: POLICE DEPARTMENT BASE AND  
WALL CABINET FRONTS

### WALL BASE (WB):

**WB-1** MANF.: JOHNSONITE  
COLOR: 25 MOON ROCK WG  
SIZE: 4" COVE BASE  
LOCATION: FIRE DEPARTMENT LVT AND  
CARPETED AREAS

**WB-3** MANF.: JOHNSONITE  
PRODUCT: TRADITIONAL WALL BASE  
COLOR: TA2 SADDLEBROOK  
SIZE: 4" COVE BASE  
LOCATION: POLICE DEPARTMENT

### WOOD (WD):

**WD-1** SPECIES: RED OAK  
COLOR: ST-1  
APPLICATION: KITCHEN CABINETS

**WD-2** SPECIES: RED OAK  
COLOR: ST-2  
APPLICATION: KITCHEN CABINETS

### PAINT (PT)

**PT-1** MANF.: SHERWIN WILLIAMS  
COLOR: 7005 PURE WHITE  
FINISH: EGG-SHELL  
LOCATION: FIRE DEPARTMENT CEILING (DRY AREAS)

**PT-2** MANF.: SHERWIN WILLIAMS  
COLOR: 7005 PURE WHITE  
FINISH: SEMI-GLOSS  
LOCATION: FIRE DEPARTMENT RESTROOM CEILING

**PT-3** MANF.: SHERWIN WILLIAMS  
COLOR: 9165 GOSAMER VEIL  
FINISH: SEMI-GLOSS  
LOCATION: FIRE DEPARTMENT RESTROOM WALLS

**PT-4** MANF.: SHERWIN WILLIAMS  
COLOR: 7019 GAUNLET GRAY  
FINISH: GLOSSY  
LOCATION: FIRE DEPARTMENT ACCENT PAINT  
- VARIES REFER TO FINISH SCHEDULE

**PT-5** MANF.: SHERWIN WILLIAMS  
COLOR: 7005 PURE WHITE  
FINISH: GLOSS  
LOCATION: FIRE DEPARTMENT RESTROOM  
WALLS

**PT-6** MANF.: SHERWIN WILLIAMS  
COLOR: SW 7023 WHITETAIL  
FINISH: SEMI-GLOSS  
LOCATION: POLICE DEPARTMENT PAINTED CEILING

**PT-7** MANF.: SHERWIN WILLIAMS  
COLOR: 9165 GOSAMER VEIL  
FINISH: SEMI-GLOSS  
LOCATION: POLICE DEPARTMENT WALLS

**PT-8** MANF.: SHERWIN WILLIAMS  
COLOR: 7044 AMAZING GRAY  
FINISH: GLOSS - VERIFY SHEEN WITH OWNER  
LOCATION: POLICE DEPARTMENT DOORS AND  
DOOR FRAMES

**PT-9** MANF.: SHERWIN WILLIAMS  
COLOR: 7016 REFUGE GRAY  
FINISH: SEMI-GLOSS  
LOCATION: POLICE DEPARTMENT RESTROOM  
PAINT

**PT-10** MANF.: SHERWIN WILLIAMS  
COLOR: 7016 MINDFUL GRAY - VERIFY WITH OWNER  
FINISH: EXTERIOR GRADE SEMI-GLOSS  
LOCATION: SALLY PORT, BOOKING RESTROOM, FIRE  
DEPARTMENT APPARATUS

### STAIN ST-1

**ST-1** MANF.: SHERWIN WILLIAMS  
COLOR: PECAN SW 3024-K WITH CLEAR POLYURETHANE  
TOP COAT VERIFY SHEEN WITH OWNER  
LOCATION: KITCHEN CABINETS, DOORS & FRAMES

**ST-2** MANF.: SHERWIN WILLIAMS  
COLOR: GLEAM GLOSS POLYURETHANE  
FINISH:  
LOCATION: KITCHEN CABINETS, DOORS & FRAMES

### FINISH ACCESSORIES (FA):

**FA-1** MANF.: SCHULTER  
PRODUCT: RONDEC  
COLOR: ANODIZED ALUMINUM - NICKEL  
LOCATION: OUTSIDE VERTICAL TILE CORNERS  
IN RESTROOMS.

## INTERIOR FINISH SCHEDULE

RM. #	NAME	FLOORS	BASE	WALLS				CEILING	REMARKS
				NORTH	EAST	SOUTH	WEST		
100	FIRE DEPT. APPARATUS ROOM	SEALED CONCRETE	--	PT-10	PT-10	PT-10	PT-10	ADD #2	
101	NOT USED	SEALED CONCRETE	ADD #2 --	PT-10	PT-10	PT-10	PT-10	CONCRETE FLANK (PT-6)	4
102	STORAGE/ELEC	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	CONCRETE FLANK (PT-6)	
103	NOT USED	LVT-1	WB-3	PT-10	PT-10	PT-10	PT-10	CONCRETE FLANK (PT-6)	ADD #2
104	DUTY ROOM	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	ACT-1	COUNTERTOPS TO BE SF-1 WITH L-2 BASE & WALL CABINETS
105	OFFICE	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	ACT-1	
106	EVIDENCE	T-1	TB-1 COVE	PT-7	PT-7	PT-7	PT-7	GYP-BD (PT-6)	
107	EVIDENCE PROCESSING	T-1	TB-1 COVE	PT-7	PT-7	PT-7	PT-7	GYP-BD (PT-6)	
108	MEN'S LOCKER ROOM	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	ACT-1 / GYP-BD (PT-6)	2 - INSTALL FA-1 ON ALL TILED EXTERIOR CORNERS.
109	WOMEN'S LOCKER ROOM	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	ACT-1 / GYP-BD (PT-6)	1/2 - INSTALL FA-1 ON ALL TILED EXTERIOR CORNERS
110	HALLWAY	LVT-1	WB-3	PT-7	PT-7	PT-7	PT-7	ACT-1	ADD #2
111	WOMEN'S RESTROOM	T-1	TB-1 COVE	T-2, T-3 & PT-9	T-2, T-3 & PT-9	T-2, T-3 & PT-9	T-2, T-3 & PT-9	ACT-1	1 - TILE @ 48" HIGH WITH PT-9 ABOVE
112	MEN'S RESTROOM	T-1	TB-1 COVE	T-2, T-3 & PT-9	T-2, T-3 & PT-9	T-2, T-3 & PT-9	T-2, T-3 & PT-9	ACT-1	1 - TILE @ 48" HIGH WITH PT-9 ABOVE
113	JANITORS CLOSET	T-1	TB-1 COVE	PT-9	PT-9	PT-9	PT-9	CONCRETE FLANK (PT-6)	ADD #2
201	HALLWAY	LVT-1	WB-1	PT-3	PT-3	PT-3	PT-3	ADD #2 ACT-1	
202	BEDROOM #1	CPT-1	WB-1	PT-3	PT-4	PT-3	PT-3	ACT-1 / GYP, BD, (PT-1)	1/2
203	BATHROOM #1	T-1	TB-2 COVE	T-4, T-5 & PT-5	T-4, T-5 & PT-5	T-4, T-5 & PT-5	PT-5	GYP-BD (PT-2)	1 - TILE @ 48" HIGH WITH PT-5 ABOVE. VANITY TOPS TO BE SF-2 AND BASE CABINETS L-1.
204	BEDROOM #2	CPT-1	WB-1	PT-3	PT-4	PT-3	PT-3	ACT-1 / GYP, BD (PT-1)	1/2
205	BATHROOM #2	T-1	TB-2 COVE	T-4, T-5 & PT-5	T-4, T-5 & PT-5	T-4, T-5 & PT-5	PT-5	GYP-BD (PT-2)	1 - TILE @ 48" HIGH WITH PT-5 ABOVE. VANITY TOPS TO BE SF-2 AND BASE CABINETS L-1.
206	FLEX SPACE	LVT-1	WB-1	PT-3	PT-3	PT-3	PT-3	ACT-1	
207	STORAGE	LVT-1	WB-1	PT-3	PT-3	PT-3	PT-3	ADD #2 ACT-1	ADD #2
208	DINING	LVT-1	WB-1	PT-3 / PT-4 (STRIPE)	PT-3 / PT-4 (STRIPE)	PT-3 / PT-4 (STRIPE)	PT-3 / PT-4 (STRIPE)	ACT-1	SEE NOTES #24B & #25 IN ROOM FINISH NOTES FOR ADDITIONAL INFORMATION FOR PT-4 STRIPE, AND DESK FINISH INFORMATION.
209	KITCHEN	LVT-1	WB-1	PT-3	PT-3	PT-3	PT-3	ACT-1	SEE NOTE #24, 24A & 26 UNDER ROOM FINISH NOTES FOR ADDITIONAL FINISH INFORMATION REGARDING THE COUNTERS AND CABINETS AND WALL FINISHES THIS ROOM.
210	LIVING ROOM	LVT MATCH EXISTING ALT. LVT-1	MATCH EXISING	SEE NOTE	SEE NOTE	SEE NOTE	SEE NOTE	EXISTING TO REMAIN PATCH AND REPAIR AS REQUIRED (ACT-2)	PATCH TO MATCH EXISTING PAINT AND WALLBASE. PROVIDE ALTERNATE BID TO PATCH FLOORING TO MATCH THE EXISTING FLOOR.
211	STORAGE ROOM	LVT-1	WB-1	PT-3	PT-3	PT-3	PT-3	EXISTING TO REMAIN PATCH AND REPAIR AS REQUIRED	ADD #2
--	JANITORS CLOSET	SEALED CONCRETE	WB-1	PT-3	PT-3	PT-3	PT-3	OPEN TO STRUCTURE - PT-5	
--	EXISTING BATHROOM (FIRE DEPARTMENT SECOND FLOOR)	EXISTING TO REMAIN PATCH AND REPAIR AS REQUIRED	EXISTING PATCH AND REPAIR AS REQUIRED	PT-6	PT-6	PT-6	PT-6	EXISTING TO REMAIN PATCH AND REPAIR AS REQUIRED. NEW PAINT (PT-1)	
--	EXISTING BEDROOM (FIRE DEPARTMENT SECOND FLOOR)	CPT-1	WB-1	PT-3	PT-3	PT-5	PT-3	EXISTING TO REMAIN PATCH AND REPAIR AS REQUIRED. NEW PAINT (PT-1)	1

ROOM FINISH SCHEDULE KEY NOTES	MATERIAL FINISH CLASS RATINGS - TABLE 803.11 - ONLY AREAS OF THE BUILDING RECEIVING NEW FINISHES ARE LISTED BELOW.		
1. MULTIPLE WALL FINISHES LOCATED IN THIS AREA.	WALL AND CEILING FINISH REQUIREMENTS: BUILDING #3 OCCUPANCY: B, S-1 NONSPRINKLERED POLICE DEPARTMENT	WALL AND CEILING FINISH REQUIREMENTS: BUILDING #3 OCCUPANCY: R-3 - NONSPRINKLERED FIRE DEPARTMENT QUARTERS	WALL AND CEILING FINISH REQUIREMENTS: BUILDING #3 OCCUPANCY: S-1 - NONSPRINKLERED FIRE DEPARTMENT STORAGE
2. MULTIPLE CEILING FINISHES LOCATED IN THIS AREA.	EXIT ENCLOSURES & PASSAGEWAYS - CLASS A	EXIT ENCLOSURES & PASSAGEWAYS - CLASS C	EXIT ENCLOSURES & PASSAGEWAYS - CLASS B
3. MULTIPLE FLOOR FINISHES LOCATED IN THIS AREA.	CORRIDORS - CLASS B	CORRIDORS - CLASS C	CORRIDORS - CLASS B
DEFINITIONS	ROOMS AND ENCLOSED SPACES - CLASS C	ROOMS AND ENCLOSED SPACES - CLASS C	ROOMS AND ENCLOSED SPACES - CLASS C
CLASS A: FLAME SPREAD INDEX 0-25; SMOKE DEVELOPED INDEX 0-450	ACOUSTICAL CEILING TILE - CLASS A	ACOUSTICAL CEILING TILE - CLASS A	ACOUSTICAL CEILING TILE - CLASS A
CLASS B: FLAME SPREAD INDEX 26-75; SMOKE DEVELOPED INDEX 0-450			
CLASS C: FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0-450			

### ROOM FINISH SCHEDULE KEY NOTES

- INTERIOR FINISHES TO COMPLY WITH THE OHIO BUILDING CODE (OBC) CHAPTER 8 - SEE ADDITIONAL NOTES BELOW
- ALL FINISHES TO COMPLY WITH OBC SECTIONS 803 AND 804. NOTE: BUILDING IS NOT EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM.
- INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS IN EXIT ENCLOSURES, EXIT PASSAGEWAYS AND CORRIDORS SHALL NOT BE LESS THAN CLASS II IN ALL AREAS. FLOOR COVERING MATERIALS SHALL COMPLY WITH THE DOC FF-1 "PILL TEST" (CPSC 16 CFR, PART 1630 OR ASTM D 2895).
- WALL AND CEILING FINISHES TO COMPLY WITH SECTION 804 FOR FIRE PERFORMANCE & SMOKE DEVELOPMENT.
- FINISH CLASS RATINGS PER TABLE 803.11
- FLOOR FINISHES TO COMPLY WITH SECTION 804
- CARPET SUPPLIER SHALL SUBMIT CERTIFICATION VERIFYING CLASS I FLAME SPREAD RATING AND DOC-FF-1 "PILL TEST".
- DECORATIVE MATERIALS AND TRIM TO COMPLY WITH OBC SECTION 806.
- COMBUSTIBLE DECORATIVE MATERIALS & TRIM (PER SECTION 806.3) MEETING FLAME PROPAGATION PERFORMANCE CRITERIA OF NFPA 701 SHALL NOT EXCEED 10 PERCENT OF THE SPECIFIC WALL OR CEILING AREA TO WHICH IT IS ATTACHED. (THE PERMISSIBLE AMOUNT OF NONCOMBUSTIBLE DECORATIVE MATERIAL SHALL NOT BE LIMITED).
- INTERIOR TRIM (PER SECTION 806.7) MATERIAL OTHER THAN FOAM PLASTIC USED AS INTERIOR TRIM SHALL HAVE A MINIMUM CLASS "C" FLAME SPREAD AND SMOKE DEVELOPED INDEX WHEN TESTED IN ACCORDANCE W/ ASTM E 84
- ACOUSTIC CEILING TILE CEILING TO COMPLY WITH OBC SECTION 808.
- CERTIFICATION OF "FIRE-RATING" SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR CARPETING AND OTHER INTERIOR FINISH MATERIALS REQUIRED BY OBC PRIOR TO ISSUANCE OF OCCUPANCY PERMIT.
- INTERIOR PARTITION SOUND BATT'S SHALL BE MIN. 2" THICK SEMI-RIGID MINERAL FIBER SOUND ATTENUATION BLANKET INSULATION WITHOUT MEMBRANE; CLASS A FLAMESPREAD(25 OR LESS) TO COMPLY WITH ASTM C 665.
- ALL FLOORS TO BE LEVELED (EXCEPT AT FLOOR DRAIN LOCATIONS) PRIOR TO RECEIVING FINISH MATERIAL. PROVIDE A SELF-LEVELING COMPOUND AS NECESSARY TO ACHIEVE A TRUE AND LEVEL FLOOR AS REQUIRED TO RECEIVE FLOOR FINISH.
- FLOORING MUST SLOPE TO DRAINS, TOP OF DRAINS TO BE RECESSED MIN. 1/4" BELOW TOP OF SLAB/SUBSTRATE AND FLOORING SLOPED MIN. 1% TO DRAINS. CONTRACTOR TO PERFORM A WATER TEST AFTER INSTALLATION TO CONFIRM POSITIVE DRAINAGE.
- COVE WALL BASE TO BE PROVIDED IN ALL WET AREAS.
- A WATERPROOFING MEMBRANE ("NOBLE SEAL", "SCHULTER", OR APPROVED EQUAL) IS TO BE USED IN ALL WET LOCATIONS INCLUDING BUT NOT LIMITED TO THE RESTROOMS, EMBALMING ROOM AND DRESSING ROOM. THE MEMBRANE IS TO BE INSTALLED A MIN. OF 12" HORIZONTALLY AND 12" VERTICALLY AT ALL WALLS OF THE SPACES LOCATED ON SLAB CONSTRUCTION. MEMBRANE TO EXTEND HORIZONTALLY ACROSS ENTIRE WET AREA FLOORING SUBSTRATE AND 12" VERTICALLY FOR ALL OTHER FRAMED FLOOR SYSTEMS
- INTERIOR GYPSUM BD FINISH LEVELS  
CEILING/SOFFITS: LEVEL 5  
TILE FINISHED WALL: LEVEL 2  
PAINTED WALLS: LEVEL 5  
FRP WALLS: LEVEL 1
- TYPICAL TILE INSTALLATION TO USE CUSTOM BUILDING PRODUCTS CEG-LITE COMMERCIAL EPOXY GROUT.
- APPLY SEALANTS AS REQUIRED AND RECOMMENDED BY MANUFACTURER(S) TO PREVENT WATER INFILTRATION. SUBMIT CAULKING AND SEALANT COLOR SAMPLE TO ARCHITECT FOR APPROVAL.
- ALL MATERIAL COLOR SELECTIONS TO BE SUBMITTED TO ARCHITECT AND OWNER FOR APPROVAL, UNLESS NOTED OTHERWISE.
- ALL CEILING DEVICES TO BE PAINTED TO MATCH CEILING (DIFFUSERS, EXIT SIGNS-BODY ONLY NOT LENS, ETC) UNLESS NOTED OTHERWISE. VERIFY WITH OWNER. EXTERIOR EMERGENCY LIGHTS AND WALL PACKS TO BE PAINTED TO MATCH ADJACENT SURFACE UNLESS NOTED OTHERWISE. VERIFY WITH OWNER.
- COORDINATE PLANS, DETAILS, WORK BY OTHER TRADES, AND SPECIFICATIONS BEFORE EXECUTING THIS WORK. SHOULD ANY DISCREPANCIES OCCUR, NOTIFY THE ARCHITECT AT ONCE
- DETAILS SHOWN ARE TYPICAL AND MAY VARY PER SURFACE FINISH MATERIALS. PROVIDE SURFACE FINISH MANUFACTURER'S/ENDOR'S RECOMMENDED TERMINATION AND TRIM DETAILS (FRP, STAINLESS STEEL, ETC.) WHERE ABUTTING DOOR/WINDOW FRAMES, AT FINISH MATERIAL CHANGES, AT CORNERS AND JOINTS ETC. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL
- RETOUCH OR REFINISH SURFACES DAMAGED BY SUBSEQUENT WORK AS DIRECTED BY GENERAL CONTRACTOR. THE COST OF SUCH RESTORATION WORK SHALL BE BORNE BY THE CONTRACTOR
- AT COMPLETION OF INSTALLATION OF FINISHES, SPOTS AND LABELS SHALL BE REMOVED AND ALL AREAS THOROUGHLY CLEANED. ANY DIRT OR DEBRIS CAUSED BY WORK OF THIS CONTRACTOR IS RESPONSIBLE FOR KEEPING AREA CLEAN AS WORK PROGRESSES
- KITCHEN TO HAVE SOLID RED OAK CABINETS (WD-1) AND DOORS (WD-1) STAINED ST-1 AND STAINLESS STEEL COUNTERS (MT-1) WITH INTEGRATED 4" HIGH BACKSLASH WALL ABOVE STAINLESS BACKSLASH TO BE T-4 AND WITH T-5 BULLNOISE SUBWAY TILE. VERIFY CABINET DOOR STYLE AND TOP COAT SHEENS WITH OWNER.
- 24A: KITCHEN ISLAND TO HAVE SOLID RED OAK CABINETS (WD-2) AND DOORS STAINED ST-2 WITH QUARTZ COUNTER (Q-1).
- 24B: DESK IN DINING ROOM TO BE MATCHING QUARTZ COUNTER (Q-1)
- DECORATIVE PAINTED STRIPE DESCRIPTION FOR DINING ROOM 208 - PAINTED WALL (PT-3) TO HAVE A HORIZONTAL STRIPE PAINTED (PT-4) THAT IS 9'-4" ABOVE FINISH FLOOR TO TOP OF STRIPE WITH OF STRIPE TO BE 10" VERIFY WIDTH OF STRIPE AND HEIGHT ON WALL WITH OWNER PRIOR TO APPLICATION. STRIPE TO END AT PANTRY DOOR FRAME (DOOR NUMBER 2208B). SECTION OF WALL FROM CORNER OF HALLWAY 201 TO DOOR #208B TO BE PAINTED PT-5 (LOCATION OF STRIPE). SEE FLOORPLAN SHEET A-112
- PROVIDE STAINLESS STEEL PANEL FINISH OVER CEMENT BD SHEATHING OVER METAL STUD FURRING OVER CONCRETE BLOCK WALL ASSEMBLY AT TYPE 1 GREASE HOOD. STAINLESS STEEL PANELS & CEMENT BD SHEATHING TO EXTEND A MIN. 18" BEYOND THE HOOD IN ALL DIRECTIONS IN ACCORDANCE WITH OMC 507.2.6 EXCEPTION.



**VILLAGE OF CHAGRIN FALLS  
POLICE & FIRE STATION RENOVATION**  
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SEAL:



**RICHARD E. SIEGFRIED**  
LICENSE #830748  
EXPIRATION DATE 12/31/21  
STATE APPROVAL:

**PG. ISSUANCE DATE**  
ADDENDUM #1 04/16/18  
ADDENDUM #2 09/05/18

DATE	SET/ISSUANCE
03-19-18	ISSUED FOR BID
03-28-18	ISSUED FOR BID & PERMIT
05-06-18	ISSUED PER STATE & OWNER COMMENTS
01-13-19	ISSUED PER STATE & OWNER COMMENTS
07-26-20	ISSUED PER STATE & OWNER COMMENTS
02-04-20	ISSUED PER STATE & OWNER COMMENTS

**PROJECT #:** 17121

**FINISH  
SCHEDULE,  
NOTES, &  
DETAILS**

**SHEET NUMBER:**

**A-602**







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SPECIAL INSPECTIONS

Statement of Special Inspections (Section 1704 Ohio Building Code)			
Application No.:			
Project name:	VILLAGE OF CHAGRIN FALLS POLICE AND FIRE STATION		
Project location:	21 WEST WASHINGTON STREET, CHAGRIN FALLS, OHIO 44022		
<p>Per section 1704.2 of the Ohio Building Code, where application is made to the building official for construction as specified in section 105, the owner or the owner's representative, shall employ one or more special inspectors to provide special inspections and tests during construction on the types of work specified in section 1705 and identify the approved agencies to the building official. These special inspections and tests are in addition to the inspections by the building official that are identified in section 105.</p> <p>Per section 1704.2.3 of the Ohio Building Code, the applicant shall submit a statement of special inspections as a condition for the issuance of a plan approval. This statement shall be in accordance with section 1704.3. The statement of special inspections shall identify the following per OBC 1704.3.1:</p> <p>1. The materials, systems, components and work required to have special inspections or tests by the registered design professional responsible for each portion of the work. 2. The type and extent of each special inspection. 3. The type and extent of each test. 4. Additional requirements for special inspections or tests for seismic or wind resistance as specified in sections 1705.11, 1705.12 and 1705.13. 5. For each type of inspection, identification as to whether it will be continuous special inspection, periodic special inspection or performed in accordance with the notation used in the referenced standard where the inspections are defined.</p> <p><b>Contractor responsibility - OBC 1704.4:</b> Each contractor responsible for the construction of a main wind or seismic force-resisting system, designated seismic system or a wind or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner or the owner's representative prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspections.</p> <p><b>Special inspector qualifications - OBC 1704.2.1:</b> Prior to the start of the construction, the special inspectors shall provide written documentation to the building official demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction. Experience or training shall be considered relevant where the documented experience or training is related in complexity to the same type of special inspection or testing activities for projects of similar complexity and material qualities. These qualifications are in addition to qualifications specified in other sections of this code.</p> <p>The registered design professionals involved in the design of the project are permitted to act as special inspectors and their personnel are permitted to act as special inspectors for the work designed by them, provided they qualify as special inspectors.</p> <p><b>Access for special inspection - OBC 1704.2.2:</b> The construction or work for which special inspection or testing is required shall remain accessible and exposed for special inspection or testing purposes until completion of the required special inspections or tests.</p>			

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SCHEDULE OF SPECIAL INSPECTIONS			
ITEM	Required	Continuous Inspection	Periodic Inspection
Fabricated Items (OBC 1704.2.5, 1705.10)	X		
• Structural load-bearing members/assemblies		X	
• Structural lateral load-resisting members/assemblies			
Structural Steel - Inspection Prior to Welding (OBC 1705.2/AISC 360 Table N5.4-1)	X		
• Welding procedure specifications (WPSs) available		X	
• Manufacturer certifications for welding consumables available		X	
• Material identification (type/grade)			X
• Welder identification system			X
• Fit-up of groove welds (including joint geometry)			X
• Configuration and finish of access holes			X
• Fit-up of fillet welds			X
• Check welding equipment	-	-	-
Structural Steel - Inspection During Welding (OBC 1705.2/AISC 360 Table N5.4-2)	X		
• Use of qualified welders			X
• Control and handling of welding consumables			X
• No welding over cracked tack welds			X
• Environmental conditions			X
• WPS followed			X
• Welding techniques			X
Structural Steel - Inspection After Welding (OBC 1705.2/AISC 360 Table N5.4-3)	X		

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• Welds cleaned			X
• Size, length and location of welds		X	
• Welds meet visual acceptance criteria		X	
• Arc strikes		X	
• k-area		X	
• Backing removed and weld tabs removed		X	
• Repair activities		X	
• Document acceptance or rejection of welded joint/member		X	
Structural Steel - NDT of Welded Joints (OBC 1705.2/AISC 360 N5.5b, N5.5c)		X	
• CJP groove welds - Risk Categories III and IV			X
• CJP groove welds - Risk Category II			
• Access holes thermally cut		X	
Structural Steel - Welded Joints Subjected to Fatigue (OBC 1705.2/AISC 360 N5.5d)			
• Radiographic or ultrasonic testing - App. 3, Table A-3.1			
Structural Steel - Inspection Prior to Bolting (OBC 1705.2/AISC 360 Table N5.6-1)		X	
• Manufacturer's certifications available for fastener materials		X	
• Fasteners marked in accordance with ASTM requirements			X
• Proper fastener selection for the joint detail			X
• Proper bolting procedure selected for joint detail			X
• Connecting elements			X
• Pre-installation verification testing			X
• Proper storage			X

Page 3 of 12

Structural Steel - Inspection During Bolting (OBC 1705.2/AISC 360 Table N5.6-2)		X	
• Fastener assemblies			X
• Joint brought to snug-tight before pretensioning			X
• Fastener component rotation prevention			X
• Fastener pretensioning			X
Structural Steel - Inspection After Bolting (OBC 1705.2/AISC 360 Table N5.6-3)		X	
• Document acceptance/rejection of bolted connections			X
Structural Steel - Other Inspections (OBC 1705.2/AISC 360 N5.7)		X	
• Anchor bolt installation/verification			X
• Compliance of fabricated steel & erected steel frame			
Structural Steel for Composite Construction (OBC 1705.2/AISC 360 Table N6.1)			
• Placement and installation of steel deck			
• Placement and installation of steel headed stud anchors			
• Document acceptance/rejection of steel elements			
Steel Deck (OBC 1705.2.2 - ANSI/SI QA/QC-2017)		X	
• Verify compliance of deck and accessories with construction documents			X
• Document acceptance/rejection of deck and accessories			X
• Verify compliance of deck and accessory installation			X
• Verify deck materials with mill certifications			X
• Document acceptance/rejection of installation of deck and accessories			X
• Welding procedure specifications (WPS) available		X	

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• Manufacturer certifications for welding consumables available			X
• Material identification (type/grade)			X
• Check welding equipment			X
• Use of qualified welders			X
• Control and handling of welding consumables			X
• Environmental conditions			X
• WPS followed			X
• Verify size and location of welds		X	
• Welds meet visual acceptance criteria		X	
• Verify repair activities of welds			X
• Document acceptance/rejection of welds		X	
• Manufacturer installation instructions for mechanical fasteners available			X
• Proper tools			X
• Proper storage of mechanical fasteners			X
• Fastener position			X
• Fastener installation in accordance with manufacturer's instructions			X
• Spacing, type, and installation of support fasteners		X	
• Spacing, type, and installation of sidelap fasteners		X	
• Spacing, type, and installation of perimeter fasteners		X	
• Verify repair activities for mechanical fasteners		X	
• Document acceptance/rejection of mechanical fasteners		X	
Open-Web Steel Joists and Joist Girders (OBC 1705.2.3)		X	
• End connections - welding and bolted			X
• Standard bridging			X
• Bridging that differs from SJI specifications			X

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Cold-Formed Steel Trusses (OBC 1705.2.4)			
• For spans of 60 feet or more, verify restraint/bracing			
Concrete Construction (OBC 1705.3)		X	
• Reinforcing steel inspection and placement			X
• Reinforcing steel welding			
• Cast-in-place anchors			X
• Post-installed anchors - mechanical and adhesive		X	
• Required mix design			X
• On-site concrete testing		X	
• Concrete and shotcrete application techniques		X	
• Maintenance of curing temperature and techniques			X
• Prestressed concrete - application forces			
• Prestressed concrete - grouting of tendons			
• Precast concrete members			X
• Post-tensioned concrete - in-situ strength prior to stressing and removal of shores and forms			
• Concrete formwork			X
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level A - Risk Categories I, II, III - Prescriptive Design			
• Verify certificates of compliance			
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level B - Risk Categories I, II, III - Engineered Design; Risk Category IV - Prescriptive Design			
• Compliance with approved submittals			
• Proportions of mortar & construction of mortar joints			

Page 6 of 12

• Grade and size of prestressing tendons, anchorages, & prestressing techniques			
• Location and placement of reinforcement, anchorage, and prestressing tendons			
• Grout space & proportions of site-prepared grout and prestressing grout			
• Size and location of structural elements			
• Type, size, and location of anchors			
• Reinforcement welding			
• Cold weather & hot weather techniques			
• Application and measurement of prestressing force			
• Grout placement			
• Preparation of grout specimens, mortar specimens, prisms			
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level C - Risk Category IV - Engineered Design		X	
• Compliance with approved submittals			X
• Proportions of mortar, grout, & prestressing grout			X
• Grade, type, and size of reinforcement, anchor bolts			X
• Placement of masonry units and construction of mortar joints			X
• Reinforcement/anchorage/placement		X	
• Grout space & placement of grout		X	
• Size and location of structural elements			X
• Type, size, and location of anchors			X
• Reinforcement welding			
• Cold weather & hot weather techniques			X
• Application and measurement of prestressing force			

Page 7 of 12

• Preparation of grout specimens, mortar specimens, prisms			X
Wood Construction (OBC 1705.5)			
• Prefabricated structural elements and assemblies			
• Site-built assemblies			
• High-load diaphragms			
• Metal-plate-connected wood trusses spanning 60 feet or greater			
Soils (OBC 1705.6)		X	
• Bearing capacity of soils			X
• Excavations			X
• Compacted fill materials - classification and testing			X
• Verify use of compacted fill materials, densities and lift thicknesses		X	
• Subgrade and site preparation			X
Driven Deep Foundations (OBC 1705.7)			
• Verify element materials, sizes and lengths			
• Capacities of test elements & additional load tests			
• Driving operations and records			
• Placement and plumbness, hammers, record #'s of blows per foot, required penetrations, tip and butt elevations, document damage			
• Steel elements - refer to 1705.2			
• Concrete elements - refer to 1705.3			
Cast-In-Place Deep Foundations (OBC 1705.8)			
• Drilling operations and records			

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• Placement and plumbness, confirm diameters, bell diameters, lengths, embedment into bedrock, end-bearing strata capacity, record concrete/grout volumes			
• Concrete elements - refer to 1705.3			
Helical Pile Foundations (OBC 1705.9)			
• Record installation equipment, pile dimensions, tip elevations, final depth, final installation torque			
Wind Resistance (OBC 1705.11) - Exp B + Vasd=120mph or more; Exp C or D + Vasd = 110mph or more			
• Structural wood			
• Cold-formed steel light frame construction			
Seismic Resistance (OBC 1705.12, 1705.13)		X	
• Structural steel force-resisting systems & elements - excludes SDC's B and C with R<3 or less, except for cantilever column systems			
• Structural wood - SDC's of C, D, E or F			
• Cold-formed steel light frame construction - SDC's of C, D, E or F			
• Designated seismic systems - SDC's of C, D, E or F			X
• Architectural components - SDC's of D, E or F			
• Plumbing, mechanical and electrical components - SDC's of C, D, E or F			X
• Storage racks - SDC's of D, E or F			
• Seismic isolation systems - SDC's of B, C, D, E or F			X
• Cold-formed steel special bolted moment frames - SDC's of D, E or F			
Sprayed Fire-Resistant Materials (OBC 1705.14)			

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Mastic and Intumescent Fire-Resistant Coatings (OBC 1705.15)			
Exterior Insulation and Finish Systems EIFS (OBC 1705.16)			
Fire-Resistant Penetrations and Joints (OBC 1705.17)			
Smoke Control (OBC 1706.18)			

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Final Report of Special Inspections and Tests		
Application No.:		
Project name:	VILLAGE OF CHAGRIN FALLS POLICE AND FIRE STATION	
Project location:	21 WEST WASHINGTON STREET, CHAGRIN FALLS, OHIO 44022	
<p>Pursuant to section 1704.2.4 of the Ohio Building Code, special inspectors shall keep records of special inspections and tests. The special inspectors shall submit reports of special inspections and tests to the building official and to the registered design professional in responsible charge. Reports shall indicate that work inspected or tested was or was not completed in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests, shall be submitted at a point in time agreed upon prior to the start of work by the owner or the owner's representative to the building official prior to the issuance of the certificate of occupancy.</p>		
FINAL REPORT OF SPECIAL INSPECTIONS AND TESTS		
ITEM	Date	Corrections
Fabricated Items (OBC 1704.2.5, 1705.10)		
Structural Steel - Inspection Prior to Welding (OBC 1705.2/AISC 360 Table N5.4-1)		
Structural Steel - Inspection During Welding (OBC 1705.2/AISC 360 Table N5.4-2)		
Structural Steel - Inspection After Welding (OBC 1705.2/AISC 360 Table N5.4-3)		
Structural Steel - NDT of Welded Joints (OBC 1705.2/AISC 360 N5.5b, N5.5c)		
Structural Steel - Welded Joints Subjected to Fatigue (OBC 1705.2/AISC 360 N5.5d)		
Structural Steel - Inspection Prior to Bolting (OBC 1705.2/AISC 360 Table N5.6-1)		
Structural Steel - Inspection During Bolting (OBC 1705.2/AISC 360 Table N5.6-2)		
Structural Steel - Inspection After Bolting (OBC 1705.2/AISC 360 Table N5.6-3)		
Structural Steel - Other Inspections (OBC 1705.2/AISC 360 N5.7)		

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Structural Steel for Composite Construction (OBC 1705.2/AISC 360 Table N6.1)		
Steel Deck (OBC 1705.2.2 - ANSI/SI QA/QC-2017)		
Open-Web Steel Joists and Joist Girders (OBC 1705.2.3)		
Concrete Construction (OBC 1705.3)		
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level A - Risk Categories I, II, III - Prescriptive Design		
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level B - Risk Categories I, II, III - Engineered Design; Risk Category IV - Prescriptive Design		
Masonry Construction (OBC 1705.4/TMS 402/ACI 530/ASCE 5) - Level C - Risk Category IV - Engineered Design		
Wood Construction (OBC 1705.5)		
Soils (OBC 1705.6)		
Driven Deep Foundations (OBC 1705.7)		
Cast-In-Place Deep Foundations (OBC 1705.8)		
Helical Pile Foundations (OBC 1705.9)		
Wind Resistance (OBC 1705.11) - Exp B + Vasd=120mph or more; Exp C or D + Vasd = 110mph or more		
Seismic Resistance (OBC 1705.12, 1705.13)		
Sprayed Fire-Resistant Materials (OBC 1705.14)		
Mastic and Intumescent Fire-Resistant Coatings (OBC 1705.15)		
Exterior Insulation and Finish Systems EIFS (OBC 1705.16)		
Fire-Resistant Penetrations and Joints (OBC 1705.17)		
Smoke Control (OBC 1706.18)		

Page 12 of 12



VILLAGE OF CHAGRIN FALLS  
POLICE & FIRE STATION RENOVATION  
21 WEST WASHINGTON STREET  
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SEAL:



5/8/2018

STATE APPROVAL

PG.	ISSUANCE	DATE

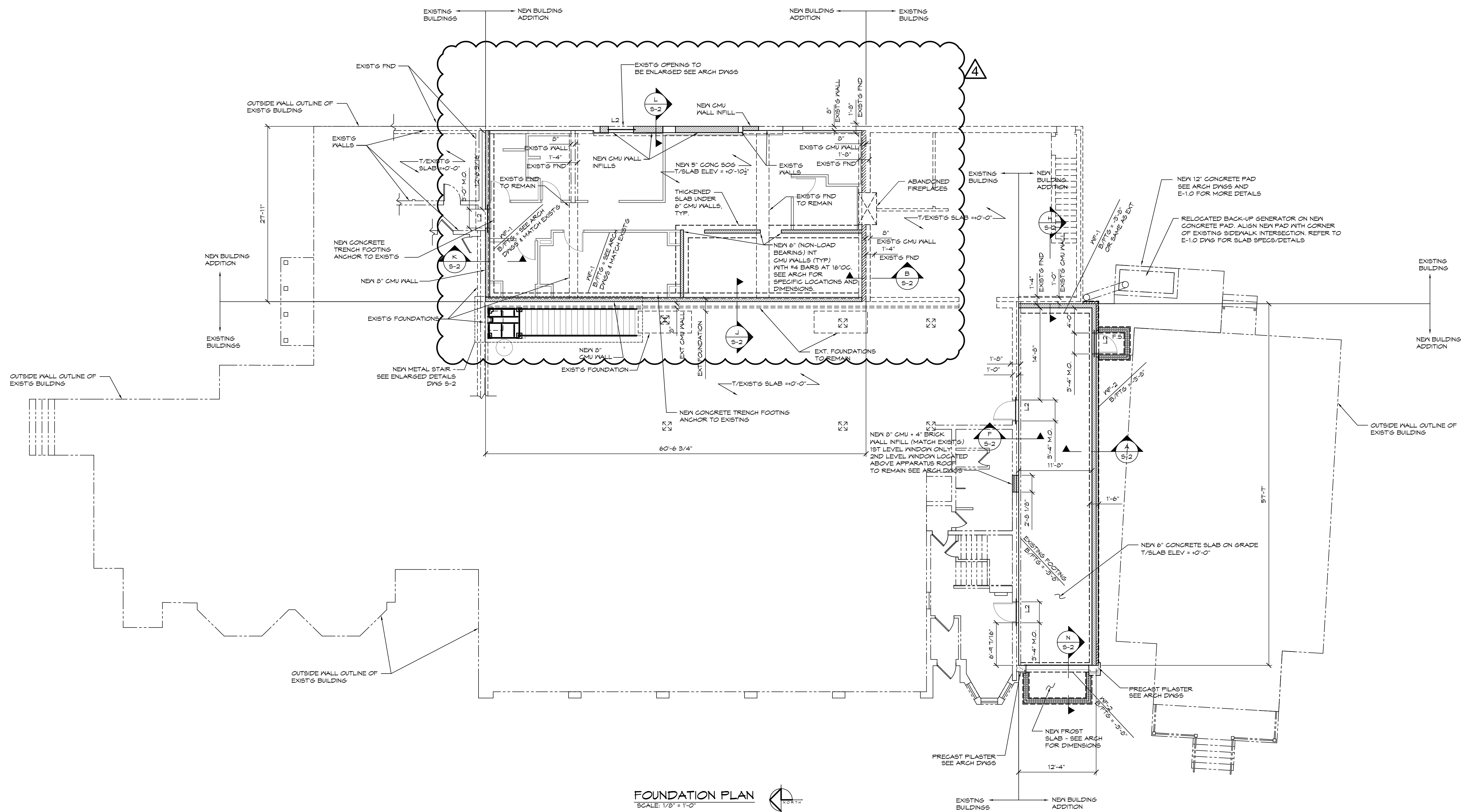
DATE SET/ISSUANCE	
03-19-18-181818 FOR BIDS	
03-28-18-181818 FOR BID & PERMIT	
05-08-18-181818 ISSUED FOR STATE & OWNER COMMENTS	
PROJECT #:	17121

SPECIAL  
INSPECTIONS

SHEET NUMBER:

S-02





**NOTES:**

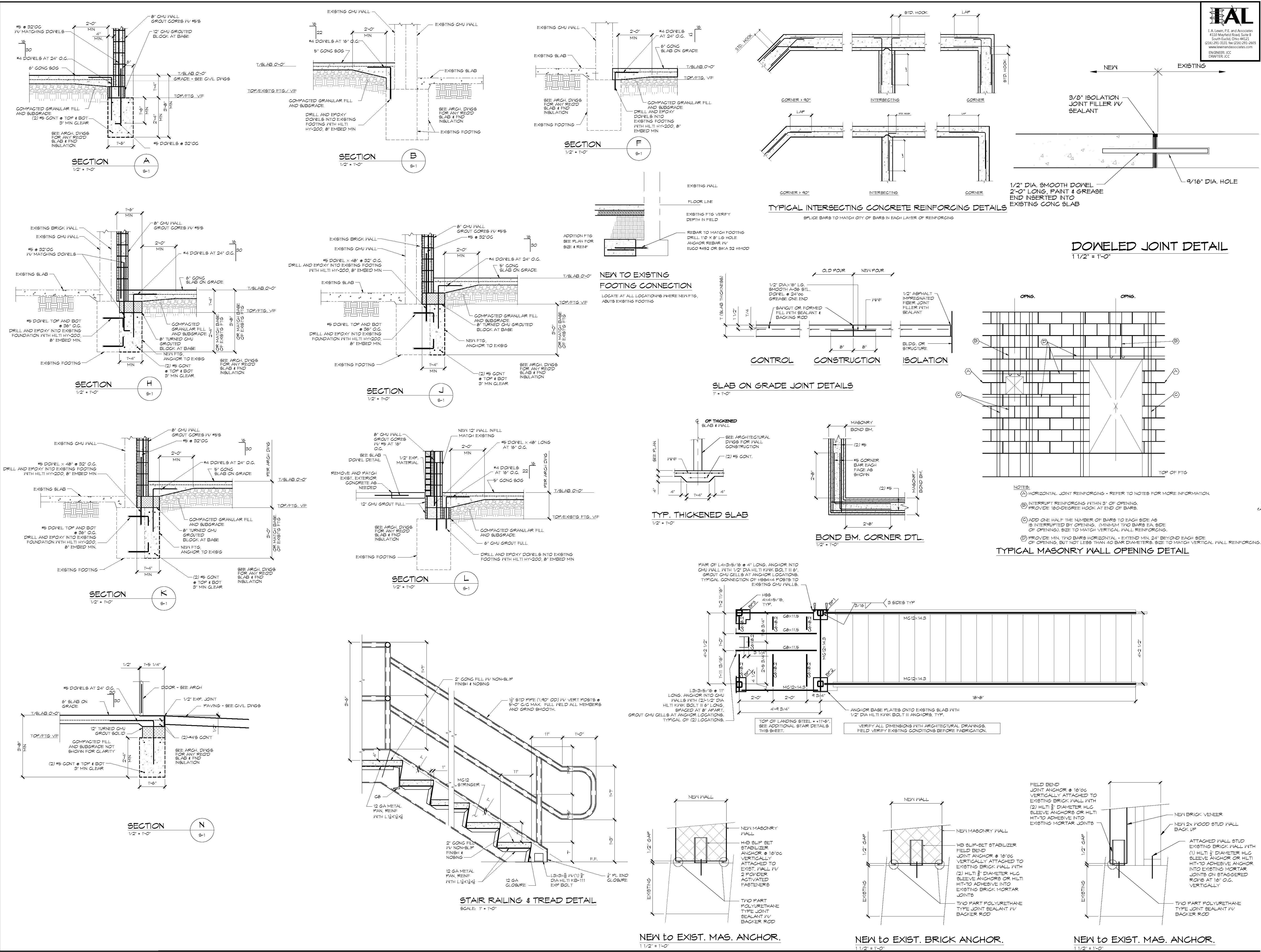
- SEE ARCHITECTURAL DEMOLITION PLANS FOR ALL FOUNDATIONS, SEWERS, ETC. TO BE REMOVED.
- FILL ALL EXCAVATIONS WITH ENGINEER TESTED COMPACTED FILL PER FOUNDATION NOTES ON DRAWING S-01.
- ELEVATIONS ARE REFERENCED FROM TOP OF EXISTING FINISH FLOOR ELEV. + 0'-0".
- BOTTOM OF ALL PERIMETER FOOTINGS TO BE MIN. 3'-0" BELOW ADJACENT FINISH GRADE.
- BOTTOM OF PERIMETER FOOTINGS INDICATED ARE BASED UPON AN ASSUMED FINISH GRADE ELEVATION 6" BELOW FINISH 1ST FLR. CONTRACTOR SHALL COORDINATE WITH SITE GRADING AS REQUIRED.
- FOR FROST SLAB (IF S.I. LOCATION) D.V.S. SEE THIS DRAWING AND COORDINATE W/ARCH.
- G.C. TO VERIFY DEPTH OF EXISTING FOUNDATIONS. S.C. TO COORDINATE W/ GEOTECH. REFER TO FOUNDATION SECTION ON GENERAL NOTES SHEET S-01.
- SEE DETAILS ON S-2 FOR ALL FOOTINGS. SECTIONS REFERENCED ON THIS PLAN.
- SEE ARCH. D.V.S.'S FOR ALL DIMENSIONS NOT SHOWN ON PLAN.
- SEE ARCHITECTURAL DRAWINGS FOR EXTENT AND FINISH OF SLAB ON GRADE AND ANY FLOOR DEPRESSIONS.
- SEE SHEET S-01 FOR GENERAL NOTES.
- SEE SHEET S-02 FOR SPECIAL INSPECTIONS.
- SEE MECH. D.V.S.'S & ARCH. FOR F.P., S.D., ETC. OPENING SIZE AND LOCATION.

- INTERIOR SLAB ON GRADE CONSTRUCTION**
- 4"-4000 PSI CONCRETE
  - HIGH RANGE WATER REDUCING ADMIXTURE
  - 6X6 IN. X 2.9 IN. MATS (MATS ONLY)
  - STEGO INDUSTRIES 'STEGO WRAP 10', ASTM E-1745 CLASS A OR EQUAL
  - 6" COMPACTED ODOT 304
  - COMPACTED AND PROOF ROLLED SUBGRADE
  - REFERENCE FIN FLOOR ELEV. + 0'-0"
  - CUT CONTROL JOINTS IN SQUARE PATTERN NO MORE THAN 12' FEET ON CENTER WITHIN 8 HOURS AFTER PLACING CONCRETE.
  - CURE CONCRETE WITH A DISPENSING CURING AGENT THAT DOES NOT ADVERSELY AFFECT FLOOR FINISH ADHESIVES.
  - SLOPE CONCRETE WITH SELECT AREAS TO DRAINS AT 1/12" SLOPE. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.

- FOOTING SCHEDULE**
- MF-1 SEE DETAILS
- MF-2 1'-6" X 2'-0", IV/2 #5
- F-1 3'-4" X 4'-0" X 18", IV/8 TOP & BOT



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**2SA ARCHITECTS**

**SEAL:**  
STATE OF OHIO  
PROFESSIONAL ENGINEER  
ISAAC A. LEWIN  
E-0446897  
5/8/2018  
STATE APPROVAL

PG.	ISSUANCE	DATE
03-19-18	ISSUE FOR BIDS	
03-28-18	ISSUED FOR BID & PERMIT	
05-08-18	ISSUED PER STATE & OWNER COMMENTS	

**PROJECT#:** 17121

**FOUNDATION DETAILS**

**SHEET NUMBER:** S-2

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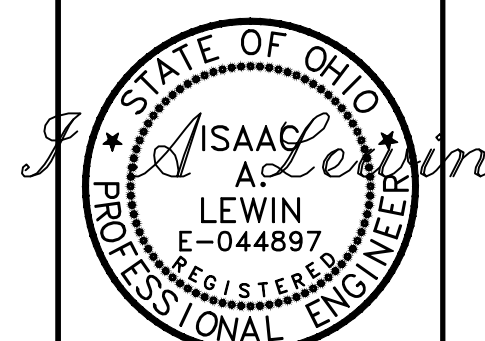


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SEAL:



5/8/2018

STATE APPROVAL

PG.	ISSUANCE	DATE

DATE	SET/ISSUANCE
03-19-19	ISSUED FOR BIDS
03-28-19	ISSUED FOR BID & PERMIT
05-08-19	ISSUED PER STATE & OWNER COMMENTS

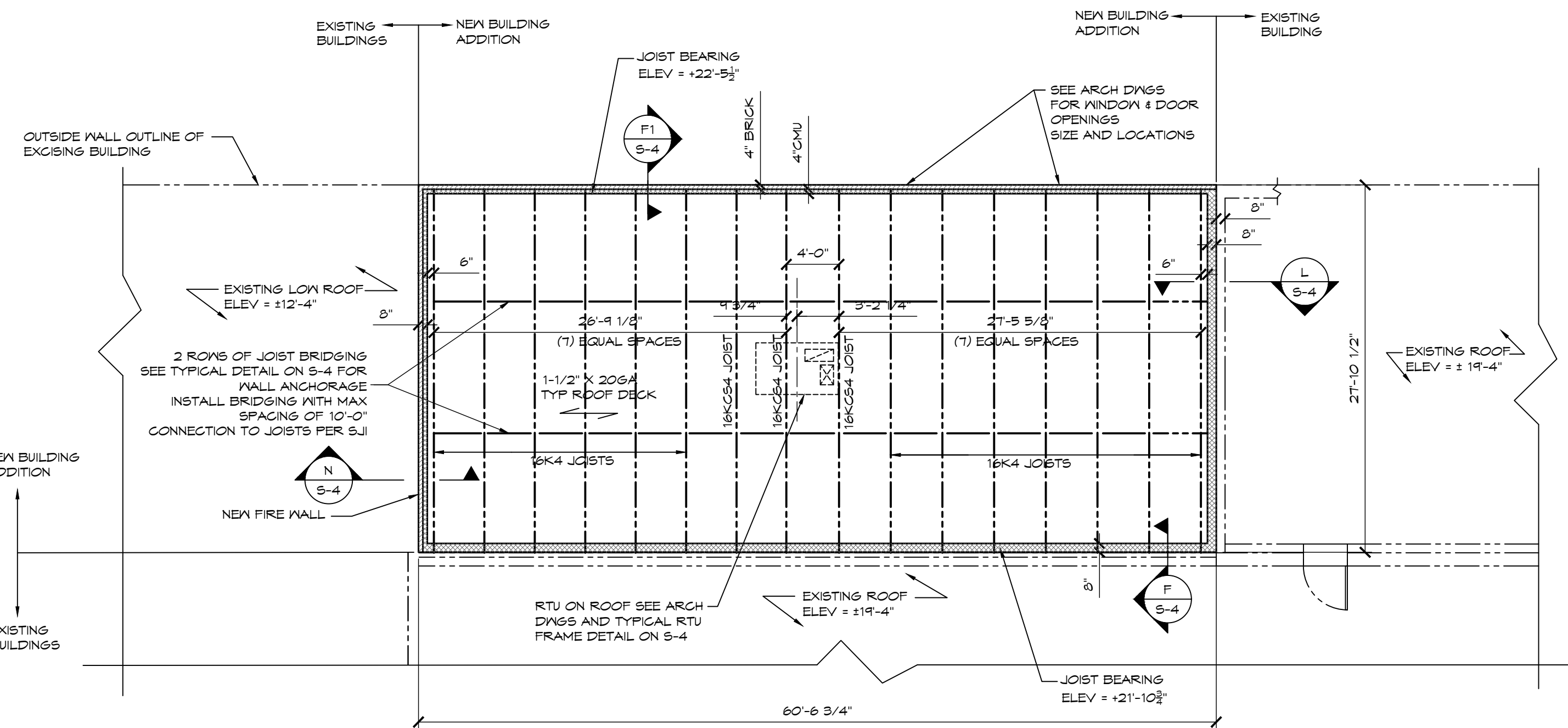
PROJECT #: 17121

2ND FLOOR  
AND ROOF  
PLANS

SHEET NUMBER:

S-3

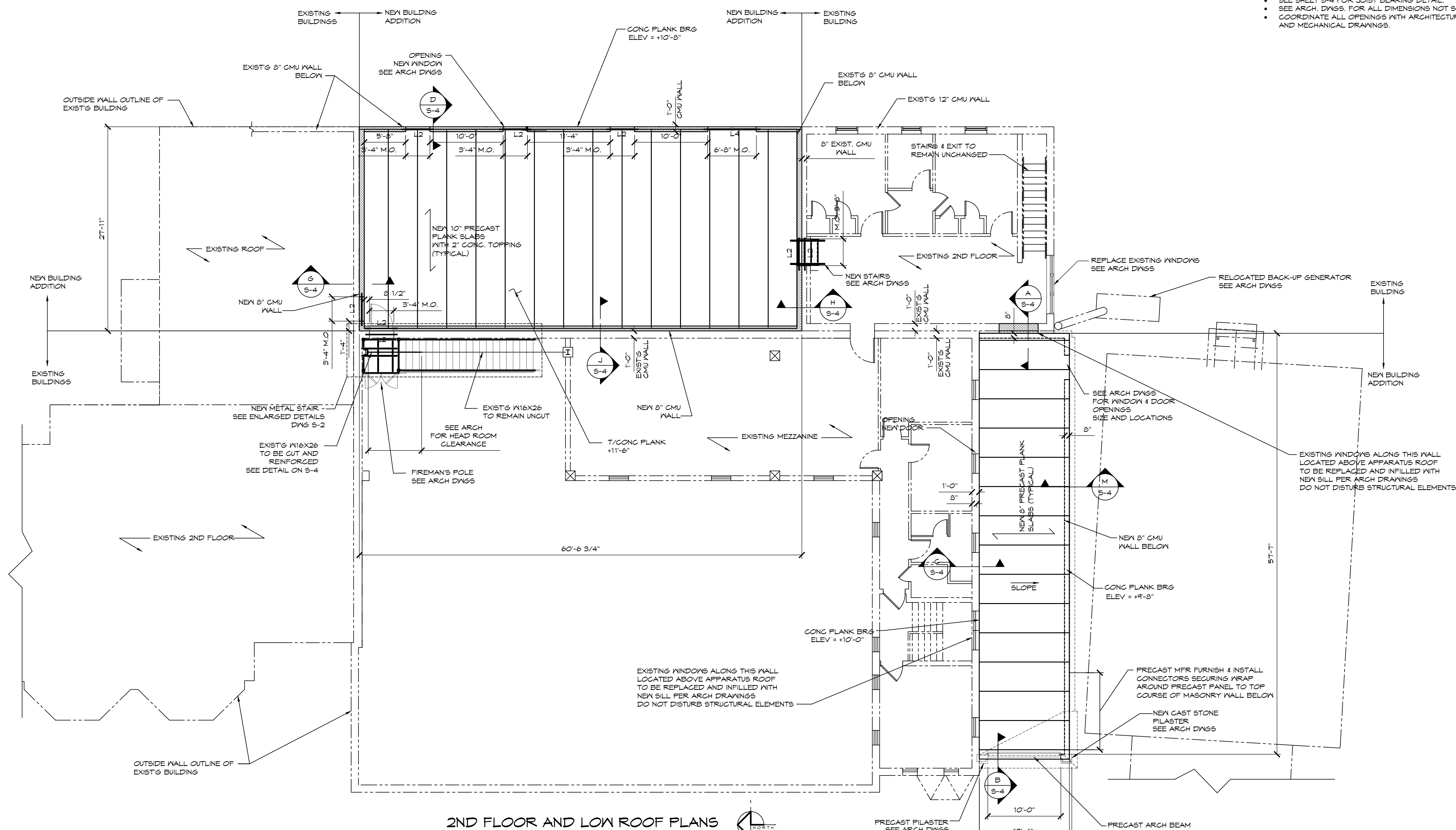
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HIGH ROOF PLAN  
SCALE: 1/8" = 1'-0"

- NOTES:
- JOISTS SLOPE - REFER TO PLAN FOR JOIST BEARING ELEVATIONS.
  - ALL BRG. ELEVATIONS NOTED ARE REFERENCED FROM TOP OF FIRST FLOOR ELEV. 0'-0".
  - SEE SHEET S-01 FOR GENERAL NOTES.
  - SEE SHEET S-02 FOR SPECIAL INSPECTIONS.
  - SEE SHEET S-4 FOR TYPICAL DETAILS FOR ALL LINTELS.
  - SEE SHEET S-4 FOR JOIST BEARING DETAIL.
  - SEE ARCH. DWGS. FOR ALL DIMENSIONS NOT SHOWN ON PLAN.
  - COORDINATE ALL OPENINGS WITH ARCHITECTURAL, PLUMBING AND MECHANICAL DRAWINGS.

TYPICAL ROOF DECK CONSTRUCTION  
1 1/2"X32 GA. TYPE B PTD. MTL. DECK  
(MINIMUM (3) SPAN CONDITION U.I.2.)  
WELDED TO SUPPORTS @ 6"OC  
WITH 5/8" R PULLED WELDS  
PROVIDE SCREENED SIDE LAPS  
AT THIRD POINTS  
SPAN OF DECK VARIES, SPAN DIRECTION  
OF DECK INDICATED THIS:  
D.S.



2ND FLOOR AND LOW ROOF PLANS  
SCALE: 1/8" = 1'-0"

- NOTES:
- PROVIDE 2" BONDED CONCRETE TOPPING FOR 2ND FLOOR ONLY.
  - BOTTOM OF PLANK TO HAVE ARCH SMOOTH FINISH.
  - FOR TOP OF 2ND FLOOR CONCRETE PLANK ELEVATION SEE PLAN.
  - PLANK SLOPES AT LOW ROOF. SEE PLAN FOR CONCRETE PLANK BEARING ELEVATIONS.
  - SEE SHEET S-01 FOR GENERAL NOTES.
  - SEE SHEET S-02 FOR SPECIAL INSPECTIONS.
  - SEE SHEET S-4 FOR TYPICAL DETAILS FOR ALL LINTELS.
  - SEE SHEET S-4 FOR PLANK BEARING DETAILS.
  - SEE ARCH. DWGS. FOR ALL DIMENSIONS NOT SHOWN ON PLAN.
  - COORDINATE ALL OPENINGS WITH ARCHITECTURAL, PLUMBING AND MECHANICAL DRAWINGS.

LINTEL SCHEDULE

L1 - L5	X 3 1/4" X 1/2" PER 4" WYTHE
PV6"	BRG HDG. LLV
L2 - L3	SEE SCHEDULE ON S-01
L4 - L5	SEE SCHEDULE ON S-01

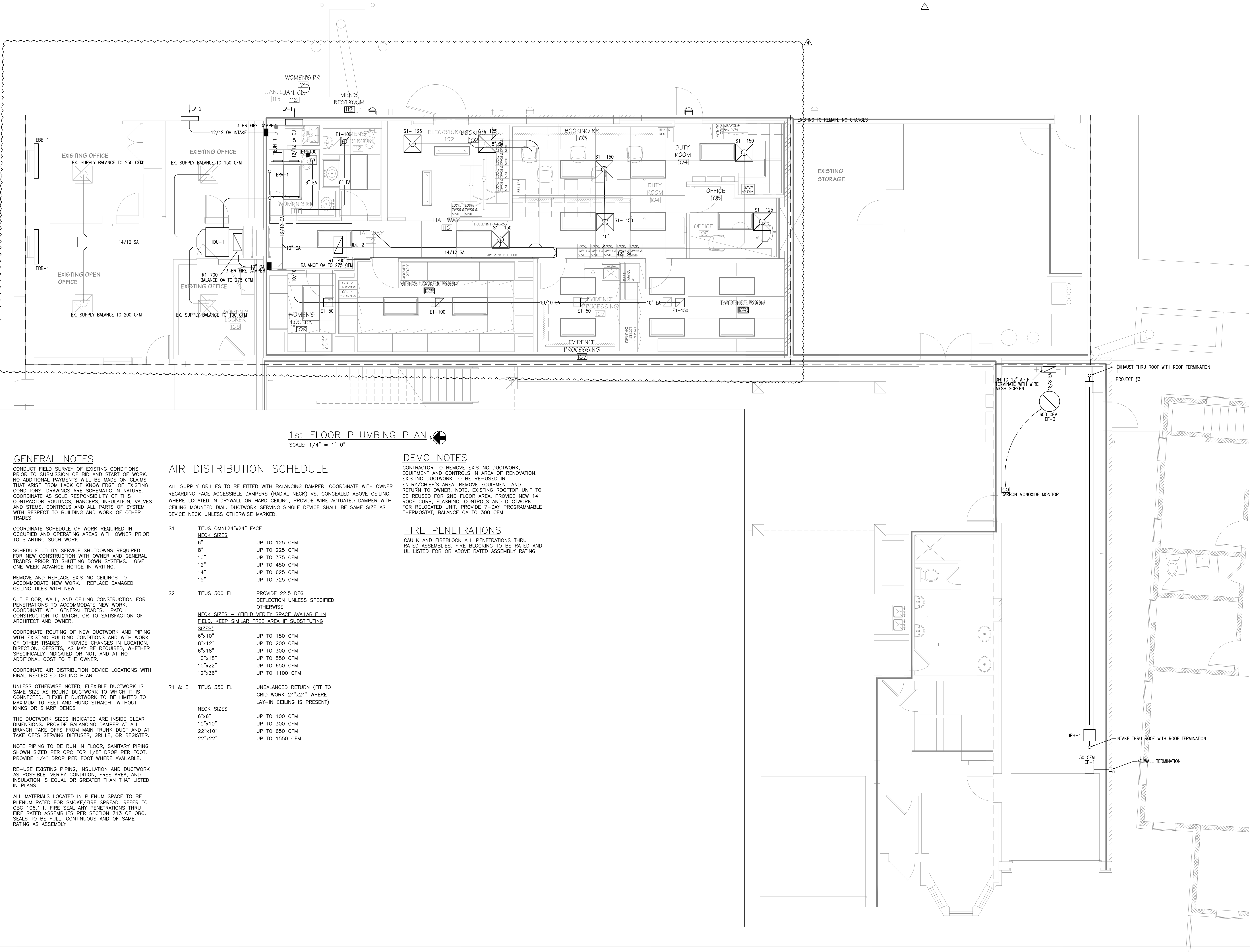




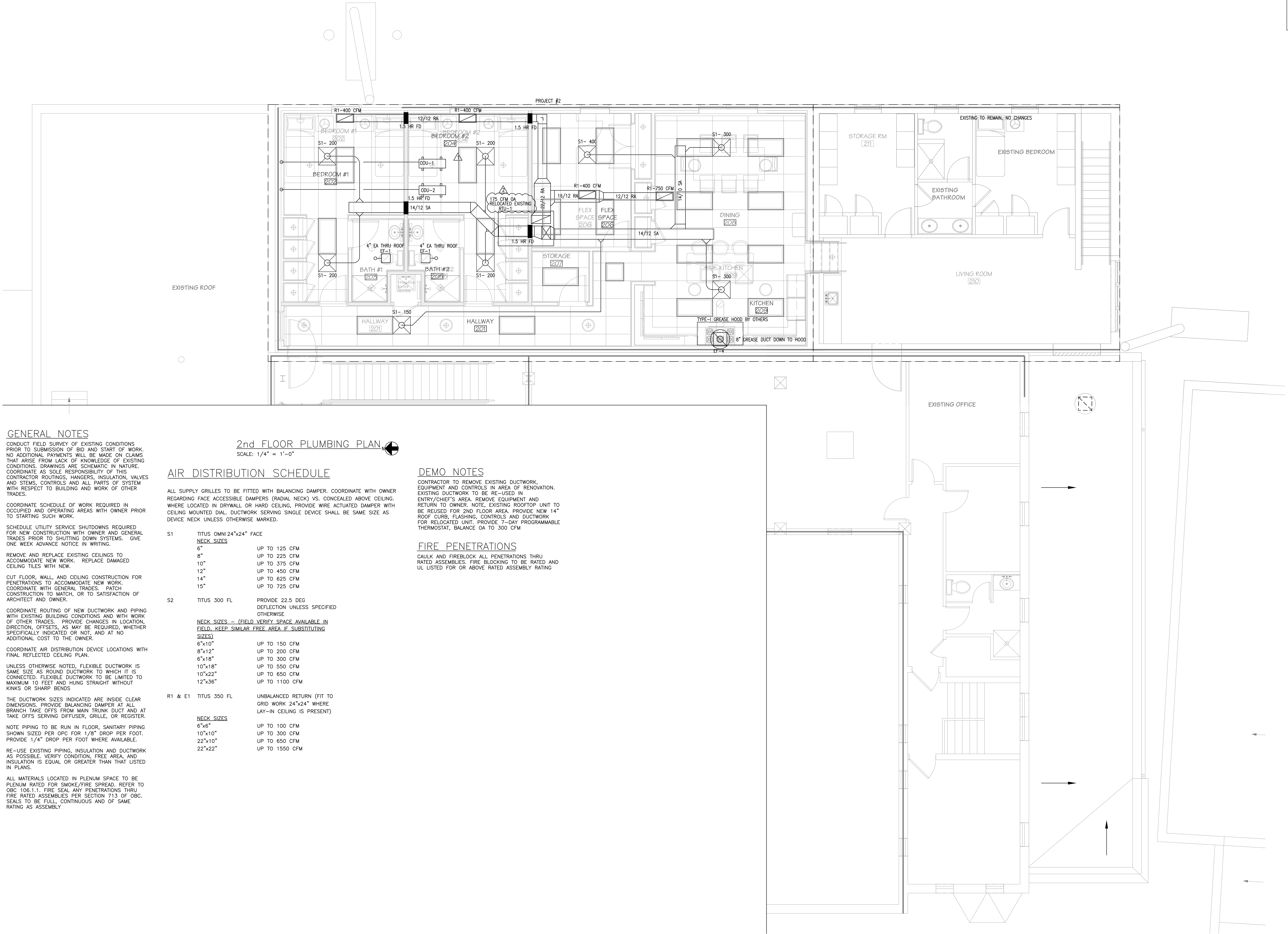




DATE	ISSUANCE
03-19-14	ISSUED FOR BID
03-28-14	ISSUED FOR BID & PERMIT
05-07-14	ISSUED PER STATE & OWNER COMMENTS
02-04-20	ISSUED PER STATE & OWNER COMMENTS







GENERAL NOTES

CONDUCT FIELD SURVEY OF EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID AND START OF WORK. NO ADDITIONAL PAYMENTS WILL BE MADE ON CLAIMS THAT ARISE FROM LACK OF KNOWLEDGE OF EXISTING CONDITIONS. DRAWINGS ARE SCHEMATIC IN NATURE. COORDINATE AS SOLE RESPONSIBILITY OF THIS CONTRACTOR ROUTINGS, HANGERS, INSULATION, VALVES AND STEMS, CONTROLS AND ALL PARTS OF SYSTEM WITH RESPECT TO BUILDING AND WORK OF OTHER TRADES.

COORDINATE SCHEDULE OF WORK REQUIRED IN OCCUPIED AND OPERATING AREAS WITH OWNER PRIOR TO STARTING SUCH WORK.

SCHEDULE UTILITY SERVICE SHUTDOWNS REQUIRED FOR NEW CONSTRUCTION WITH OWNER AND GENERAL TRADES PRIOR TO SHUTTING DOWN SYSTEMS. GIVE ONE WEEK ADVANCE NOTICE IN WRITING.

REMOVE AND REPLACE EXISTING CEILINGS TO ACCOMMODATE NEW WORK. REPLACE DAMAGED CEILING TILES WITH NEW.

CUT FLOOR, WALL, AND CEILING CONSTRUCTION FOR PENETRATIONS TO ACCOMMODATE NEW WORK. COORDINATE WITH GENERAL TRADES. PATCH CONSTRUCTION TO MATCH, OR TO SATISFACTION OF ARCHITECT AND OWNER.

COORDINATE ROUTING OF NEW DUCTWORK AND PIPING WITH EXISTING BUILDING CONDITIONS AND WITH WORK OF OTHER TRADES. PROVIDE CHANGES IN LOCATION, DIRECTION, OFFSETS, AS MAY BE REQUIRED, WHETHER SPECIFICALLY INDICATED OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER.

COORDINATE AIR DISTRIBUTION DEVICE LOCATIONS WITH FINAL REFLECTED CEILING PLAN.

UNLESS OTHERWISE NOTED, FLEXIBLE DUCTWORK IS SAME SIZE AS ROUND DUCTWORK TO WHICH IT IS CONNECTED. FLEXIBLE DUCTWORK TO BE LIMITED TO MAXIMUM 10 FEET AND HUNG STRAIGHT WITHOUT KINKS OR SHARP BENDS

THE DUCTWORK SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. PROVIDE BALANCING DAMPER AT ALL BRANCH TAKE OFFS FROM MAIN TRUNK DUCT AND AT TAKE OFFS SERVING DIFFUSER, GRILLE, OR REGISTER.

NOTE PIPING TO BE RUN IN FLOOR, SANITARY PIPING SHOWN SIZED PER OPC FOR 1/8" DROP PER FOOT. PROVIDE 1/4" DROP PER FOOT WHERE AVAILABLE.

RE-USE EXISTING PIPING, INSULATION AND DUCTWORK AS POSSIBLE. VERIFY CONDITION, FREE AREA, AND INSULATION IS EQUAL OR GREATER THAN THAT LISTED IN PLANS.

ALL MATERIALS LOCATED IN PLENUM SPACE TO BE PLENUM RATED FOR SMOKE/FIRE SPREAD. REFER TO OBC 106.1.1. FIRE SEAL ANY PENETRATIONS THRU FIRE RATED ASSEMBLIES PER SECTION 713 OF OBC. SEALS TO BE FULL, CONTINUOUS AND OF SAME RATING AS ASSEMBLY

2nd FLOOR PLUMBING PLAN

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

AIR DISTRIBUTION SCHEDULE

ALL SUPPLY GRILLES TO BE FITTED WITH BALANCING DAMPER. COORDINATE WITH OWNER REGARDING FACE ACCESSIBLE DAMPERS (RADIAL NECK) VS. CONCEALED ABOVE CEILING. WHERE LOCATED IN DRYWALL OR HARD CEILING, PROVIDE WIRE ACTUATED DAMPER WITH CEILING MOUNTED DIAL. DUCTWORK SERVING SINGLE DEVICE SHALL BE SAME SIZE AS DEVICE NECK UNLESS OTHERWISE MARKED.

S1	TITUS OMNI 24"x24" FACE	NECK SIZES	
		6"	UP TO 125 CFM
		8"	UP TO 225 CFM
		10"	UP TO 375 CFM
		12"	UP TO 450 CFM
S2	TITUS 300 FL	14"	UP TO 625 CFM
		15"	UP TO 725 CFM
		PROVIDE 22.5 DEG DEFLECTION UNLESS SPECIFIED OTHERWISE	
		NECK SIZES - (FIELD VERIFY SPACE AVAILABLE IN FIELD, KEEP SIMILAR FREE AREA IF SUBSTITUTING SIZES)	
		6"x10"	UP TO 150 CFM
R1 & E1	TITUS 350 FL	8"x12"	UP TO 200 CFM
		6"x18"	UP TO 300 CFM
		10"x18"	UP TO 550 CFM
		10"x22"	UP TO 650 CFM
		12"x36"	UP TO 1100 CFM
		UNBALANCED RETURN (FIT TO GRID WORK 24"x24" WHERE LAY-IN CEILING IS PRESENT)	
		NECK SIZES	
		6"x6"	UP TO 100 CFM
		10"x10"	UP TO 300 CFM
		22"x10"	UP TO 650 CFM
		22"x22"	UP TO 1550 CFM

DEMO NOTES

CONTRACTOR TO REMOVE EXISTING DUCTWORK, EQUIPMENT AND CONTROLS IN AREA OF RENOVATION. EXISTING DUCTWORK TO BE RE-USED IN ENTRY/CHIEF'S AREA. REMOVE EQUIPMENT AND RETURN TO OWNER. NOTE, EXISTING ROOFTOP UNIT TO BE RE-USED FOR 2ND FLOOR AREA. PROVIDE NEW 14" ROOF CURB, FLASHING, CONTROLS AND DUCTWORK FOR RELOCATED UNIT. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT, BALANCE OA TO 300 CFM

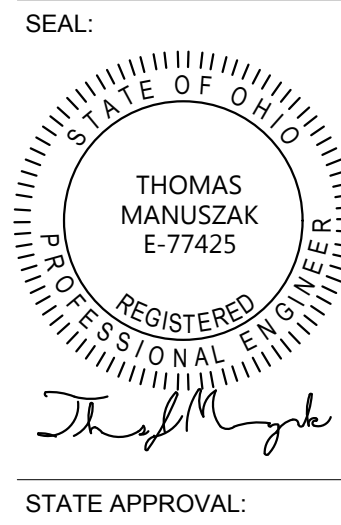
FIRE PENETRATIONS

CAULK AND FIREBLOCK ALL PENETRATIONS THRU RATED ASSEMBLIES. FIRE BLOCKING TO BE RATED AND UL LISTED FOR OR ABOVE RATED ASSEMBLY RATING



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POLICE & FIRE STATION RENOVATION  
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STATE APPROVAL:

PG.	ISSUANCE	DATE

DATE	SET	ISSUANCE	REVISION
03-19-19			
03-29-19			
05-07-19			
02-04-20			

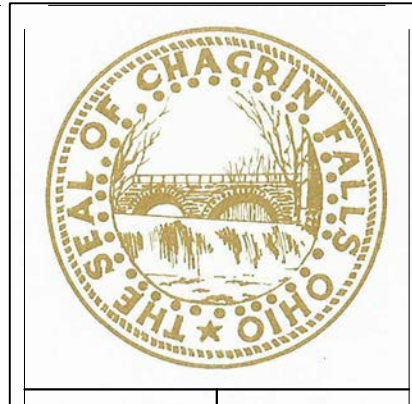
PROJECT #: 17121

2ND FLOOR  
MECHANICAL  
PLAN

SHEET NUMBER:

M-2





VILLAGE OF CHAGRIN FALLS  
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SEAL:

PROFESSIONAL ENGINEER  
REGISTERED  
STATE OF OHIO  
THOMAS MANUSZAK  
E-77425

PG.	ISSUANCE	DATE

DATE	SET	ISSUANCE
03-19-18		ISSUED FOR BID
03-28-18		ISSUED FOR BID # PERMIT
05-07-18		ISSUED PER STATE & OWNER COMMENTS
02-04-20		ISSUED PER STATE & OWNER COMMENTS

PROJECT # 17121



FAN SCHEDULE						
MARK	MODEL	MFG.	AIRFLOW	F.S.P.	VOLTAGE-PH	POWER
EF-1	GN-148	COOK	100 CFM	0.5 INCH	115V-1PH	43 WATTS
EF-3	101C150	COOK	600 CFM	0.3 INCH	115V-1PH	1/10 HP
EF-4	100AL36	COOK	700 CFM	0.5 INCH	115V-1PH	1/8 HP

ACCESSORIES AND NOTES:

- 1) INTEGRAL THERMOSTAT
- 2) RECESSED MOUNTING KIT
- 3) NON-FUSED DISCONNECT
- 4) EF-1,2 TO RUN CONTINUOUSLY
- 5) EF-3 TO BE PROVIDED WITH CARBON MONOXIDE MONITORING CONTROLS (BY HVAC CONTRACTOR), FAN TO ACTIVATE ON HIGH CO LIMIT ALARM
- 6) EF-4 TO BE INTERLOCKED WITH EXHAUST HOOD

LOUVER SCHEDULE							
MARK	MODEL	MFG.	AIRFLOW	AIR SPEED	FREE AREA	DIMENSIONS	ACCESSORIES
LV-1	EME2200D-24/12	RUSKIN	550 CFM	860 FPM	0.64	24"x12"	SPRING BDD
LV-2	EME2200D-24/12	RUSKIN	550 CFM	860 FPM	0.64	24"x12"	SPRING BDD

ACCESSORIES AND NOTES:

- 1) INTEGRAL BACKDRAFT DAMPER
- 2) PROVIDE WITH FRAME, COORDINATE CUTTING AND PATCHING WITH G.C.

INFRARED HEATER SCHEDULE								
MARK	MODEL	MFG.	GAS INPUT	VOLTAGE-PH	MCA	MOCP	WEIGHT	LENGTH
IRH-1	IPT-75-40	MODINE	75 CFH	115V-1PH	1A	15	175 LBS.	40 FT

ACCESSORIES AND NOTES:

- 1) 7-DAY PROGRAMMABLE REMOTE THERMOSTAT
- 2) FLUE AND INTAKE AIR THRU ROOF, SEALED COMBUSTION
- 3) NON-FUSED DISCONNECT
- 4) MTD. @ MAX HEIGHT BELOW DECK, PER MFG. CLEARANCES

SPLIT SYSTEM SCHEDULE													
MARK	MODEL	MFG.	SUPPLY AIR	MIN. VENT. AIR	NOMINAL TONS	COOLING (TOTAL)	COOLING (SENS.)	SEER	HEATING SOURCE	HEATING OUTPUT	ELECTRICAL		
											VOLTAGE-PH	MCA	MOCP
IDU-1	LUU247HV	LG	700	275 (THRU ERV)	2 TONS				HP		208V-1PH	N/A	N/A
ODU-1	LHN247HV	LG				22.0	17.6	20.0	HEAT PUMP	27.6 @ 47	208V-1PH	19.0	25.0
IDU-2	LUU247HV	LG	700	275 (THRU ERV)	2 TONS				HP		208V-1PH	N/A	N/A
ODU-2	LHN247HV	LG				22.0	17.6	20.0	HEAT PUMP	27.6 @ 47	208V-1PH	19.0	25.0

ACCESSORIES AND NOTES:

- 1) NON-FUSED DISCONNECT
- 2) PROVIDE VENTILATION AIR TO KNOCK OUT, REFER TO INSTALLATION MANUAL FOR FINAL CONNECTION SIZE. PROVIDE TRANSITION
- 3) EXTEND REFRIGERANT PIPING TO HEAT PUMP
- 4) PROVIDE REMOTE THERMOSTATS (FINAL LOCATION BY OWNER)
- 5) WASH FILTERS AT CONCLUSION OF CONSTRUCTION.
- 6) CONDENSATE WASTE TO LOCAL DRAIN \*\*\*\*OR/AND\*\*\*\* PROVIDE LITTLE GIANT CONDENSATE WASTE PUMP VCC-20 SERIES LOW PROFILE, DISCHARGE TO LOCAL DRAIN

ENERGY RECOVERY VENTILATOR SCHEDULE							
MARK	MODEL	MFG.	AIRFLOW	F.S.P.	VOLT-PH-A	MOCP	WEIGHT
ERV-1	MINICORE-5	GREENHECK	550 CFM	0.5 INCH	115V-1PH-17.6A	25A	63 LBS

ACCESSORIES AND NOTES:

- 1) FREEZE CONTROL SYSTEM
- 2) CEILING MOUNTING HANGERS
- 3) NON-FUSED DISCONNECT
- 4) BALANCE AT CONCLUSION OF CONSTRUCTION

VENTILATION SCHEDULE - OMC 403.3							
SPACE	AREA	POPULATION	CLASSIFICATION	VENTILATION REQUIRED	REQUIRED WITH DELIVERY FACTOR	UNIT SERVED	AMOUNT PROVIDED
EXISTING OFFICE AREA	689	9	OFFICE	87	108.75	IDU-1	275
NEW POLICE OFFICES	937	9	OFFICE	109	127.5	IDU-2	275
LOCKER ROOMS	285	0	LOCKERS - CHANGING	0.25/SF	89.0625	ERV-1	150
EVIDENCE ROOMS	289	0	STORAGE	35	43.75	ERV-1	150
FIRE DEPT. DOCK	1550	14	DORMITORY	133	166.25	RTU-1	175
FIRE DEPT. GARAGE	679	0	GARAGE	EXHAUST THRU SYSTEM (PER 403.75 AND 0.05 INTERMITTENT/CONTINUOUS)			



SECTION 23 00 00 --HVAC GENERAL CONDITIONS	
1 -- CODE COMPLIANCE STATEMENT	ALL WORK COMPLETED BY THIS CONTRACTOR, FOR PURPOSES OF PROVIDING A COMPLETE AND WORKING SYSTEM, TO BE PROVIDED IN COMPLIANCE WITH: OHIO MECHANICAL CODE OHIO PLUMBING CODE OHIO BUILDING CODE OHIO RESIDENTIAL CODE (IF APPLICABLE) INTERNATIONAL FUEL GAS CODE INTERNATIONAL ENERGY CONSERVATION CODE ALL LOCAL CITY ORDINANCES APPLICABLE ALL PROFESSIONAL BEST PRACTICES INCLUDING ASHRAE, ASPE, AND NEC REQUIREMENTS. GREEN BUILDING, LEED, OR OTHER SIMILAR GREEN RATINGS AS APPLICABLE AND REQUIRED BY OWNER. CONTRACTOR SHALL HAVE KNOWLEDGE AND UNDERSTANDING OF THE BASICS OF THE APPLICABLE CODES PRIOR TO BID OF PROJECT. NO ADDITIONAL PAYMENT IS TO BE RENDERED DUE TO A LACK OF KNOWLEDGE OF THE APPLICABLE CODES OR RATINGS. COORDINATE ANY REQUIREMENTS FOR GREEN TECHNOLOGIES PRIOR TO BID.
2 --QUALITY ASSURANCE	PROVIDE ALL LABOR, MATERIALS, ACCESSORIES, CONTROLS (PER CONTRACT), FLASHING, OPENINGS, CLEANING AND PATCHING, BALANCING AND TESTING, AND EQUIPMENT INDICATED ON DRAWINGS, REQUIRED FOR A PROPER WORKING AND BALANCED SYSTEM, AND AS REASONABLY IMPLIED. ALL WORK TO BE TESTED, CLEANED AND READY FOR USE BY OWNER AT CONCLUSION OF CONSTRUCTION. ALL WORK TO BE PURCHASED, INSTALLED, COMMISSIONED, AND STARTED IN ACCORDANCE WITH AND COMPLIANCE WITH ALL LOCAL, CITY, STATE, FEDERAL, AND INDUSTRY CODES AND STANDARDS APPLICABLE. PROTECT ALL EQUIPMENT, PIPING AND DUCTWORK DURING CONSTRUCTION FROM DAMAGE AND DEBRIS.
3 --CONTRACTOR LIABILITY STATEMENT	PROVIDE LABOR AND MATERIAL WARRANTY ON ALL ITEMS IN SCOPE FOR A PERIOD NOT LESS THAN 1 YEAR FROM START UP DATE (OR AGREED UPON DATE BY OWNER, G.C. AND CONTRACTOR). PROTECT ALL INSTALLED EQUIPMENT FROM CONSTRUCTION DAMAGE DURING DURATION OF CONSTRUCTION. REPLACE OR REPAIR DAMAGED ITEMS AT NO COST TO OWNER AS NEEDED DUE TO NEGLECT TO PROTECT ITEMS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ACCURATE AND CODE COMPLIANT INSTALLATION INCLUDING BUT NOT LIMITED TO VENTILATION RATES, GAS PRESSURE, ELECTRICAL, REQUIREMENTS AND BALANCING.
4 --CONTRACT DOCUMENT STATEMENT	REFER TO ALL DRAWINGS INCLUDING ARCHITECTURAL, SITE, CIVIL, ELECTRICAL, PLUMBING, AND STRUCTURAL FOR SCOPE OF PROJECT. COORDINATE MECHANICAL WORK WITH WORK OF ALL OTHER TRADES. NO ADDITIONAL FEES WILL BE PAID FOR CHANGES DUE TO LACK OF KNOWLEDGE OF PROJECT OR SPACE REQUIREMENTS. SHOULD DISCREPANCIES BE FOUND BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, OR SCOPE OF TRADES, THEY ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING PRIOR TO BID. MECHANICAL SCOPE OF WORK INCLUDES BUT IS NOT LIMITED TO: MECHANICAL DUCTWORK, SERVICE PIPING, AIR DISTRIBUTION, EQUIPMENT, TESTING AND BALANCING, FANS, ROOF CURBS AND PENETRATIONS, MECHANICAL DUCTWORK AND PIPING INSULATION, HANGERS AND VIBRATION CONTROL, CONTROLS (PER CONTRACT), AND GENERAL TRADES ITEMS PERTAINING TO THE INSTALLATION OF MECHANICAL EQUIPMENT (PER CONTRACT).
5 --SCOPE OF WORK STATEMENT	THE SCOPE OF WORK OF THE CONTRACTOR FOR THESE PLANS (UNLESS OTHERWISE AGREED UPON BY CONTRACTOR, G.C. AND OWNER) INCLUDES EQUIPMENT, DUCTWORK, MECHANICAL PIPING (NON-SEWER, NON-INDUSTRIAL, NON-PRESS-URIZED), FLUES AND INTAKES, LOUVERS, CUTTING AND PATCHING FOR MECHANICAL ITEMS, HANGERS, INSULATION, BALANCING AND TESTING, START-UP AND TRAINING FOR EQUIPMENT IN SCOPE, CONTROLS AND CONTROL WIRING, LOW-VOLTAGE WIRING FOR MECHANICAL ITEMS, SMOKE DETECTORS FOR ITEMS ABOVE, 2000 CFM OR COMMON RETURNS ABOVE 2000 CFM), AND ALL ITEMS REQUIRED FOR A FULL, OPERATIONAL, BALANCED AND USEABLE SYSTEM.
6 --COORDINATION OF TRADES STATEMENT	COORDINATE ALL WORK WITH GENERAL TRADES CONTRACTOR, ELECTRICAL CONTRACTOR, STRUCTURAL CONTRACTOR, PLUMBING CONTRACTOR, SPRINKLER CONTRACTOR, G.C. AND OWNER) CONTRACTOR, ARCHITECT AND ENGINEER, AND OWNER. ANY INTERFERENCES BETWEEN TRADES ARE TO BE BASED TO G.C. AND ARCHITECT AS SOON AS POSSIBLE. IN WRITING, FIELD COORDINATION OF INTERFERING ITEMS IS APPROPRIATE WHERE ACCEPTABLE TO G.C. AND SIMILAR ITEMS CAN BE INSTALLED IN NEW LOCATION (I.E. DUCTWORK HAS SAME FREE AREA AND SIMILAR STATIC PRESSURE, PIPING COMPLIES WITH MANUFACTURER'S INSTRUCTIONS, ETC.). CONTRACTOR TO PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS: EQUIPMENT OF THIS CONTRACTOR'S SCOPE PIPING AND DUCTWORK MATERIALS AS APPLICABLE TO THE PROJECT INSULATION AND JACKETS AS APPLICABLE TO THE PROJECT TESTING AND BALANCING REPORT --AIR, WATER, STEAM AND REFRIGERANT CHARGE AS APPLICABLE START-UP SHEETS INCLUDING DATE, TIME AND CONTRACTOR DOING START-UP
7 --SUBMITTALS	
8 --RED--LINE AND AS-BUILT DRAWINGS	CONTRACTOR TO PROVIDE ANY CHANGES, UPDATES, AND FIELD COORDINATION ITEMS THRU A RED-LINE DRAWING (AS-BUILT DRAWING) PROVIDED AT NO SMALLER THAN 1/8TH INCH TO 1 FOOT SCALE. CHANGES PROPOSED PRIOR TO CONSTRUCTION TO BE REVIEWED BY ARCHITECT AND ENGINEER. CHANGES DUE TO FIELD COORDINATION ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR (FOR THE SCOPE OF THIS CONTRACTOR'S WORK). ALL CHANGES TO SYSTEMS TO BE COORDINATED WITH ALL OTHER TRADES AS APPLICABLE, INCLUDING BUT NOT LIMITED TO G.C., STRUCTURAL CONTRACTOR, ELECTRICAL CONTRACTOR AND PLUMBING CONTRACTOR. CHANGES INITIATED BY THIS CONTRACTOR SHALL BE THE FINANCIAL RESPONSIBILITY OF THIS CONTRACTOR UNLESS OTHERWISE AGREED UPON BY G.C., OWNER AND ALL INVOLVED PARTIES.
9 --FIELD CHANGE STATEMENT	
10 --PERMITS	CONTRACTOR TO SECURE, PAY AND MAINTAIN ALL PERMITS RELATED TO SCOPE OF WORK. COORDINATE PERMIT REQUIREMENTS WITH G.C., ENGINEER AND OWNER. CONTRACTOR SHALL SECURE, PAY AND COORDINATE ALL INSPECTIONS RELATED TO SCOPE OF WORK. COORDINATE INSPECTIONS OF THIS SCOPE AND SCOPE OF OTHERS WITH RESPECT TO CONSTRUCTION ACTIVITIES OF ALL PARTIES ON SITE.
11 --START-UP, TESTING AND CLEAN UP	CONTRACTOR SHALL PROVIDE INDUSTRY STANDARD TESTING (NEBB OR ABE CERTIFIED FOR AIRFLOW) FOR AIRFLOW, WATER FLOW, STEAM, REFRIGERANT CHARGE, AND ANY OTHER ITEMS REQUIRED IN SCOPE. PROVIDE TESTING AND BALANCE REPORT TO G.C., OWNER, ARCHITECT AND ENGINEER. PROVIDE MANUFACTURER'S RECOMMENDED START-UP FOR ALL EQUIPMENT. PROVIDE START UP REPORT TO G.C., OWNER, ARCHITECT AND ENGINEER. CLEAN UP ALL MATERIALS AND DEBRIS RELATED TO SCOPE OF WORK. COORDINATE DISPOSAL OF DEBRIS AND EXCESS MATERIAL WITH G.C./OWNER. IF NO DUMPSTER IS PROVIDED, CONTRACTOR SHALL SECURE AND PAY FOR REMOVAL OF REFUSE FROM CONSTRUCTION ACTIVITIES OF THIS SCOPE. PROVIDE OWNER OR OWNER'S REP A STARTUP, OPERATIONS AND MAINTENANCE MANUAL, INCLUDING IOM MANUAL, FOR EACH PIECE OF EQUIPMENT UNDER SCOPE. PROVIDE 1-HR (OR ADDITIONAL AS REQUIRED UNDER CONTRACT) TRAINING TO OWNER OR REP, REGARDING THE OPERATION OF EQUIPMENT IN SCOPE.
12 --DRAWINGS	DRAWINGS ARE TO BE CONSIDERED SCHEMATIC IN NATURE. INTENT AND SCOPE MAY INCLUDE ITEMS IN ARCHITECTURAL, ELECTRICAL AND PLUMBING PLANS. FINAL INSTALLED ITEMS MAY REQUIRE OFFSETS, ELBOWS, AND CHANGES. CONTRACTOR SHALL ACCOUNT FOR THESE CHANGES AS BEST AS POSSIBLE IN BID. DRAWINGS ARE TO SHOW CODE COMPLIANCE AND INTENT OF SYSTEMS.

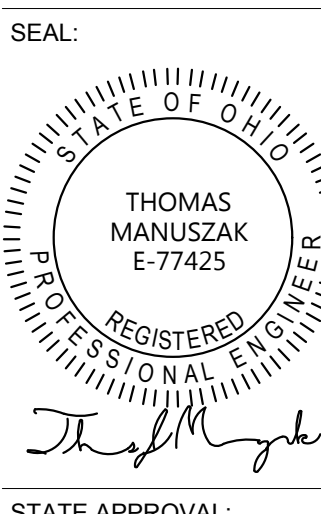
SECTION 23 10 00 -- HVAC MATERIALS AND INSULATION					
	TYPE/LOCATION	MATERIAL	INSULATION	NOTES	
1 -- DUCTWORK	IN PLENUM SPACE				
	SUPPLY	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	MINIMUM R-3.5 FIBERGLASS INSULATION WITH VAPOR BARRIER JACKET. PLENUM RATED MATERIALS	UP TO 16" TO BE 22 GA. UP TO 30" TO BE 16 GA. BEYOND 30" TO BE 22 GA. WITH REINFORCING.	
	RETURN	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	TRANSFER	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	EXHAUST	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	IN ATTIC SPACE -- ABOVE INSULATION LAYER	SUPPLY	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	R-6 FIBERGLASS INSULATION WITH VAPOR BARRIER JACKET AND FOIL FACE	UP TO 16" TO BE 22 GA. UP TO 30" TO BE 16 GA. BEYOND 30" TO BE 22 GA. WITH REINFORCING.
	RETURN	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	TRANSFER	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	EXHAUST	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	IN ATTIC/CEILING SPACE -- BELOW INSULATION LAYER	SUPPLY	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	MINIMUM R-3.5 FIBERGLASS INSULATION WITH VAPOR BARRIER JACKET.	UP TO 16" TO BE 22 GA. UP TO 30" TO BE 16 GA. BEYOND 30" TO BE 22 GA. WITH REINFORCING.
2 -- STANDARD AND SUBSTITUTIONS	RETURN	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	TRANSFER	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	EXHAUST	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	BELOW GRADE/BELOW SLAB	SUPPLY	HDPE CONFORMING TO ASTM-D2412, UL 181B, AND BSS 7239088	MINIMUM R-3.5 FIBERGLASS LINER WITH FOIL FACE. --OR-- R-5 EXTERIOR INSULATION WITH HDPE JACKET	PITCH AND DRAIN ALL PIPING MINIMUM 1/4" PER FOOT TO DRAIN LINE. COORDINATE WORK WITH CIVIL AND STRUCTURAL ENGINEERS. CONSTRUCT PER SMACNA +10" W.G. STANDARDS.
	RETURN	HDPE CONFORMING TO ASTM-D2412, UL 181B, AND BSS 7239088			
	TRANSFER	HDPE CONFORMING TO ASTM-D2412, UL 181B, AND BSS 7239088			
	EXHAUST	HDPE CONFORMING TO ASTM-D2412, UL 181B, AND BSS 7239088			
	THRU RATED ASSEMBLY	SIMILAR TO ADJACENT	SIMILAR TO ADJACENT	PROVIDE WITH FIRE DAMPER OR SLEEVE AS REQUIRED BY OHIO BUILDING CODE TO MAINTAIN FIRE RATING	
	EXPOSED IN SPACE	SUPPLY	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	INTERNALLY LINED WITH R-6.5 DUCT LINER FOIL FACED. NOTE: DUCTWORK TO BE SIZED FOR TOTAL FREE AREA WITH LINER PER DRAWINGS.	UP TO 16" TO BE 22 GA. UP TO 30" TO BE 16 GA. BEYOND 30" TO BE 22 GA. WITH REINFORCING. SPIRAL WHERE POSSIBLE. RECTANGULAR IN SHAFT ENCLOSURES.
	RETURN	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
3 -- DUCTWORK INSTALLATION STATEMENT	TRANSFER	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	EXHAUST	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	NO INSULATION		
	EXPOSED TO ELEMENTS	SUPPLY	G-60 GALVANIZED STEEL PER ASTM A653 AND A924	R-6 INSULATION WITH WEATHER PROOF JACKET SIMILAR TO VENTURE CLAD. ANY DUCTWORK EXPOSED TO FOOT TRAFFIC TO BE PROVIDED WITH STAIRWAY AND PLATFORM TO PREVENT WALKING ON DUCT	UP TO 16" TO BE 22 GA. UP TO 30" TO BE 16 GA. BEYOND 30" TO BE 22 GA. WITH REINFORCING.
	RETURN	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	TRANSFER	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	EXHAUST	G-60 GALVANIZED STEEL PER ASTM A653 AND A924			
	GREASE EXHAUST	STAINLESS STEEL FULLY WELDED GREASE DUCT 0.036 OR 0.047 THICK. NFPA-96 RATED	2 LAYERS OF 3M 615+ GREASE WRAP INSTALLED FOR ZERO INCH CLEARANCE TO COMBUSTIBLES.	ALL TRANSITIONS OVER 45 DEG AND HORIZONTAL RUNS LONGER THAN 10 FT TO BE PROVIDED WITH CLEANOUT HOOD AND HINGED FAN TO BE COUNTED AS CLEANOUT AS NEEDED.	
	CORROSIVE EXHAUST	MATERIAL TO BE SPECIFIC TO CORROSIVE MATERIALS.	NO INSULATION	COORDINATE FINAL REQUIREMENTS WITH OWNER PER MATERIALS AND CHEMICALS HANDLED.	
	CONTRACTOR TO INSTALL AND FABRICATE ALL DUCTWORK PER SMACNA, NFPA, AND ASME STANDARDS APPLICABLE. SUBSTITUTION OF ALUMINUM DUCTWORK FOR GALVANIZED STEEL IS ACCEPTABLE AS LONG AS SIMILAR INTEGRITY, LEAKAGE, ETC. IS MAINTAINED. PROVIDE CONTINUOUS TRANSITIONS AND ELBOWS OVER 45 DEGREES IN SQUARE/RECTANGULAR DUCTWORK TO BE PROVIDED WITH TURNING VANES. WHERE REQUIRED BY OWNER, PROVIDE SOUND LINING IN RETURN, TRANSFER AND EXHAUST DUCTWORK (FOR SOUND SENSITIVE AREAS). DRAWINGS AND SCHEMATIC, PROVIDE TRANSITIONS, HANGERS, ELBOWS AND ACCESSORIES AS NEEDED FOR A COMPLETE AND BALANCED SYSTEM. NOTE: BALANCE DAMPERS MAY NOT BE SHOWN ON PLANS, PROVIDE MEANS OF BALANCE AT ALL AIR DISTRIBUTION DEVICES. (AND RETURNS IF LABELED TO BE BALANCED)				
	INSTALL ALL DUCTWORK IN A NEAT AND PROFESSIONAL MANNER. PROVIDE HANGERS AS REQUIRED BY CODE. HANGERS TO BE SECURED TO STRUCTURE DIRECTLY. FLEXIBLE DUCTWORK TO BE MAXIMUM 10 FT IN LENGTH. INSTALLED TIGHT WITH NO HARSH BENDS OR OBSTRUCTIONS, AND TO BE INSULATED SIMILAR TO DUCTWORK SERVED.				
4 -- DUCTWORK CONSTRUCTION	CONSTRUCT DUCTWORK PER ASME, SMACNA, OBC, OMC AND NFPA STANDARDS. PROVIDE CONNECTIONS (SLIP AND DRIVE, LONGITUDINAL SEAMS, ETC) PER STANDARDS.				
5-- INSULATION INSTALLATION STATEMENT	PROVIDE INSULATION CONTINUOUS FROM EQUIPMENT TO OUTLET. INSULATION TO BE PROVIDED WITH VAPOR BARRIER CONTINUOUSLY TO PREVENT CONDENSATE SWEATING. PROVIDE ADHESIVES RATED FOR APPLICATION INCLUDING PLENUM RATING, WEATHER PROOF, ETC. AS REQUIRED BY APPLICATION.				
6 -- STANDARDS OF CARE	PROTECT ALL MATERIALS ON SITE FROM CONSTRUCTION DAMAGE. ALL MATERIALS TO BE NEW AN FREE FROM DEFECT. SEAL ALL UN-USED HOLES PRIOR TO INSTALLATION OF INSULATION. PROVIDE AIR TIGHT MASTIC CAPABLE OF PRESSURE DEVELOPED IN DUCTWORK.				
7 -- MECHANICAL PIPING	TYPE/LOCATION	MATERIAL	INSULATION	NOTES	
	CHILLED WATER	BLACK IRON, PVC OR CPVC PIPING CONFORMING TO STANDARDS REQUIRED AND CAPABLE OF TEMPERATURES DEVELOPED IN CHILLED WATER APPLICATION.	PLENUM RATED (AS REQUIRED) FIBER GLASS INSULATION WITH VAPOR BARRIER JACKET. K--0.26 OR LOWER VALUE, 1" THICK (1.5" THICK ABOVE 8 INCH PIPING)	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	HEATING WATER UP TO 200F	BLACK IRON, PVC OR CPVC PIPING CONFORMING TO STANDARDS REQUIRED AND CAPABLE OF TEMPERATURES DEVELOPED IN APPLICATION.	PLENUM RATED (AS REQUIRED) FIBER GLASS INSULATION WITH VAPOR BARRIER JACKET. K--0.27OR LOWER VALUE, 2" THICK	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	CONDENSER LOOP WATER (WATER SOURCE HEAT PUMP)	BLACK IRON, PVC OR CPVC PIPING CONFORMING TO STANDARDS REQUIRED AND CAPABLE OF TEMPERATURES DEVELOPED IN APPLICATION.	PLENUM RATED (AS REQUIRED) FIBER GLASS INSULATION WITH VAPOR BARRIER JACKET. K--0.27 OR LOWER VALUE, 1" THICK	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	CONDENSATE WASTE PIPING	BLACK IRON, PVC OR CPVC PIPING CONFORMING TO STANDARDS REQUIRED AND CAPABLE OF TEMPERATURES DEVELOPED IN APPLICATION.	PLENUM RATED (AS REQUIRED) FIBER GLASS INSULATION WITH VAPOR BARRIER JACKET. K--0.27 OR LOWER VALUE, 1" THICK	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	REFRIGERANT PIPING	PRE INSULATED LINESETS WHERE AVAILABLE. TYPE-K COPPER PIPING IF FIELD BUILT. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SIZING AND APPLICATION.	PLENUM RATED (AS REQUIRED) CLOSED CELL INSULATION WITH VAPOR BARRIER JACKET. K--0.27 OR LOWER VALUE, 1" THICK	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	STEAM PIPING UP TO 350F	BLACK IRON PIPING CAPABLE OF TEMPERATURES DEVELOPED IN APPLICATION	PLENUM RATED (AS REQUIRED) FIBER GLASS INSULATION WITH VAPOR BARRIER JACKET. K--0.34 OR LOWER VALUE, 5" THICK	PROVIDE HANGERS, FIRE CAULKING AND ACCESSORIES REQUIRED FOR A FULL CODE COMPLIANT AND BALANCED SYSTEM.	
	PERFORM ALL WORK IN ACCORDANCE WITH ASME, ASPE, AND WELDING STANDARDS. ALL MATERIAL TO BE NEW AND FREE OF DEFECTS. PROVIDE ALL PIPING AND MATERIALS IN FIELD FROM CONSTRUCTION DAMAGE. PROVIDE END CAPS ON EACH LENGTH OF PIPING TO PREVENT DEBRIS FROM ENTERING. PROVIDE VALVES, PORTS, FITTINGS, AND ACCESSORIES FOR A COMPLETE, WORKING AND BALANCED SYSTEM. PROVIDE ALL RIGGING AND HANDLING FOR MATERIALS AND ACCESSORIES. PROVIDE HANGERS PER OBC, OMC, OBC AND ALL APPLICABLE STANDARDS, WHERE 3 OR MORE PIPING IS RUN TOGETHER AND WHERE APPROPRIATE TRAPEZE HANGERS MAY BE USED. PROVIDE EXPANSION JOINTS, THRUST BLOCKS, FLEXIBLE CONNECTIONS AND UNIONS FOR A COMPLETE INSTALLATION. COORDINATE THRUST BLOCK LOCATIONS WITH ARCHITECT AND STRUCTURAL ENGINEER. COORDINATE ROUTING AND HANGERS WITH ALL TRADES. PROVIDE BALANCE VALVES, FLOW CONTROL DEVICES, SHUTOFF VALVES AND RELIEVE FOR A COMPLETE AND CODE COMPLIANT INSTALLATION REGARDLESS OF DETAILS OR DRAWINGS.				
				PER OBC, REFER TO TABLE 308.5 (SHOWN BELOW) FOR HANGER SPACING.	
	HANGER SPACING			MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)
9 -- HANGER SPACING	PIPING MATERIAL				
	ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE			4	10B
	ALUMINUM TUBING			10	15
	BRASS PIPE			10	10
	CAST--IRON PIPE			5A	15
	CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND TUBING, 1 INCH AND SMALLER			3	10B
	CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND TUBING, 1 1/2 INCHES AND LARGER			4	10B
	COPPER OR COPPER--ALLOY PIPE			4	12
	COPPER OR COPPER--ALLOY TUBING, 1 1/2--INCH DIAMETER AND SMALLER			6	10
	COPPER OR COPPER--ALLOY TUBING, 1 1/2--INCH DIAMETER AND LARGER			10	10
10 -- PERMITS	CROSS--LINKED POLYETHYLENE (PEX) PIPE			2.67 (32 INCHES)	10B
	CROSS--LINKED POLYETHYLENE/ ALUMINUM/CROSS--LINKED POLYETHYLENE (PEX--ALPEX) PIPE			2.67 (32 INCHES)	4
	LEAD PIPE			4	4
	POLYETHYLENE/ALUMINUM/ POLYETHYLENE (PE--AL--PE) PIPE			2.67 (32 INCHES)	4
	POLYETHYLENE OF RAISED TEMPERATURE (PE--RT) PIPE			2.67 (32 INCHES)	10B
	POLYPROPYLENE (PP) PIPE OR TUBING, 1 INCH AND SMALLER			2.67 (32 INCHES)	10B
	POLYPROPYLENE (PP) PIPE OR TUBING, 1 1/2 INCHES AND LARGER			4	10B
	POLYVINYL CHLORIDE (PVC) PIPE			4	10B
	STAINLESS STEEL DRAINAGE SYSTEMS			10	10B
	STEEL PIPE			12	15
11 --START-UP, TESTING AND CLEAN UP	FOR SE: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM.				
	A. THE MAXIMUM HORIZONTAL SPACING OF CAST--IRON PIPE HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10-FOOT LENGTHS OF PIPE ARE INSTALLED.				
	B. FOR SIZES 2 INCHES AND SMALLER, A GUIDE SHALL BE INSTALLED MIDWAY BETWEEN REQUIRED VERTICAL SUPPORTS. SUCH GUIDES SHALL PREVENT PIPE MOVEMENT IN A DIRECTION PERPENDICULAR TO THE AXIS OF THE PIPE.				

SECTION 23 10 00 -- HVAC EQUIPMENT		
1 -- GENERAL NOTE	CONTRACTOR TO PROVIDE EQUIPMENT, CONTROLS, VALVES, FITTINGS, TRANSITIONS, FILTERS AND BOX, GAS TRAIN AND DIRT LEG, INSULATION AND BALANCING ITEMS FOR A COMPLETE, CODE COMPLIANT, ENERGY COMPLIANT, AND USEABLE INSTALLATION. DRAWINGS ARE SCHEMATIC. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE A FULL AND WORKING SYSTEM AND AN ACCURATE PRICE FOR S&D SYSTEM.	
NOTE: SYSTEMS LISTED BELOW ARE THE COMMON SYSTEMS AND MAY NOT COVER ALL POSSIBILITIES. PROVIDE ALL QUESTIONS IN WRITING TO ARCHITECT AND ENGINEER PRIOR TO BID.		
	SYSTEM TYPE	ENERGY REQUIREMENTS
	PACKAGED ROOF MOUNTED UNIT	IECC 2015 COMPLIANT SEER VALUE (14 SEER), INSULATED CABINET AND HOUSING, MINIMUM 80% EFFICIENT GAS TRAIN, SINGLE ENTHALPY ECONOMIZER (AIR SIDE)
	SPLIT SYSTEM (FURNACE AND CONDENSING UNIT)	IECC 2015 COMPLIANT SEER VALUE (14 SEER), INSULATED CABINET AND HOUSING, MINIMUM 80% EFFICIENT GAS TRAIN, SINGLE ENTHALPY ECONOMIZER (AIR SIDE)
	WATER SOURCE HEAT PUMP	IECC 2015 COMPLIANT COP MINIMUM 3.02, EER MINIMUM 11.9, VFD OR ECM DRIVEN PUMPING SYSTEM
	VARIABLE REFRIGERANT FLOW (VRF)	IECC 2015 COMPLIANT COP MINIMUM 3.02, EER MINIMUM 11.9.
2 -- COMMON SYSTEMS AND ACCESSORIES	FAN COIL -- HYDRONIC/STEAM	IECC 2015 COMPLIANT COP MINIMUM 3.02, EER MINIMUM 11.9, --OR-- 80% MINIMUM EFFICIENT BOILER
	GAS FIRED MAKE-UP AIR UNIT	IECC 2015 COMPLIANT SEER VALUE (14 SEER), INSULATED CABINET AND HOUSING, MINIMUM 80% EFFICIENT GAS TRAIN, SINGLE ENTHALPY ECONOMIZER (AIR SIDE)
	EXHAUST, SUPPLY AND TRANSFER FANS	IECC 2015 MAXIMUM HORSE POWER ALLOWANCE
	UNIT HEATER/INFRARED TUBE HEATERS	IECC 2015 80% EFFICIENT MINIMUM
	CABINET HEATERS, ELECTRIC UNIT HEATERS	IECC 2015 ELECTRICAL EFFICIENCIES
	GREASE EXHAUST FAN AND HOOD	IECC 2015 MAXIMUM HORSE POWER ALLOWANCE
3 -- COORDINATION	CONTRACTOR TO COORDINATE SETTING, LOCATION, UTILITIES, PIPING AND INSTALLATION OF EQUIPMENT WITH GENERAL TRADES, OWNER, ARCHITECT, AND OTHER TRADES. PROVIDE TRANSITIONS, FLEXIBLE CONNECTIONS AND ALTERATIONS AS NEEDED FOR A COMPLETE INSTALLATION.	



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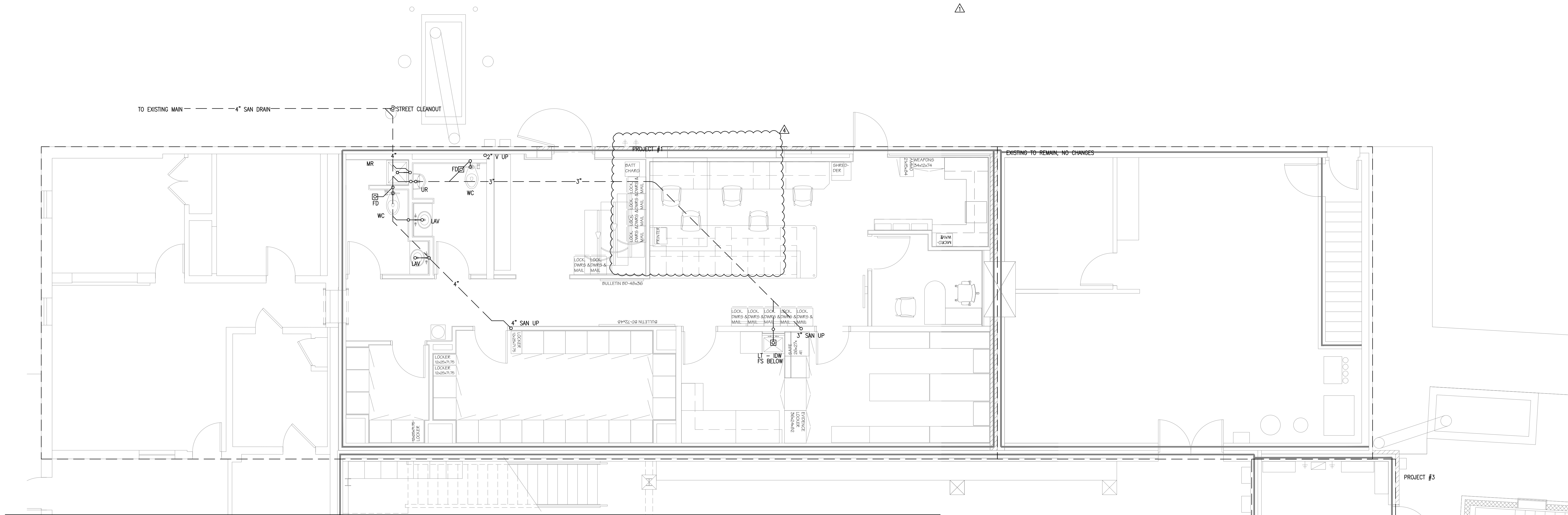
PROJECT #: 17121

MECHANICAL  
SPECS.

SHEET NUMBER:

M-4





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

GENERAL NOTES

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COORDINATE SCHEDULE OF WORK REQUIRED IN OCCUPIED AND OPERATING AREAS WITH OWNER PRIOR TO STARTING SUCH WORK.

SCHEDULE UTILITY SERVICE SHUTDOWNS REQUIRED FOR NEW CONSTRUCTION WITH OWNER AND GENERAL TRADES PRIOR TO SHUTTING DOWN SYSTEMS. GIVE ONE WEEK ADVANCE NOTICE IN WRITING.

REMOVE AND REPLACE EXISTING CEILINGS TO ACCOMMODATE NEW WORK. REPLACE DAMAGED CEILING TILES WITH NEW.

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COORDINATE ROUTING OF NEW DUCTWORK AND PIPING WITH EXISTING BUILDING CONDITIONS AND WITH WORK OF OTHER TRADES. PROVIDE CHANGES IN LOCATION, DIRECTION, OFFSETS, AS MAY BE REQUIRED, WHETHER SPECIFICALLY INDICATED OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER.

COORDINATE AIR DISTRIBUTION DEVICE LOCATIONS WITH FINAL REFLECTED CEILING PLAN.

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NOTE PIPING TO BE RUN IN FLOOR, SANITARY PIPING SHOWN SIZED PER OPC FOR 1/8" DROP PER FOOT. PROVIDE 1/4" DROP PER FOOT WHERE AVAILABLE.

RE-USE EXISTING PIPING, INSULATION AND DUCTWORK AS POSSIBLE. VERIFY CONDITION, FREE AREA, AND INSULATION IS EQUAL OR GREATER THAN THAT LISTED IN PLANS.

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DEMO NOTES

CONTRACTOR TO REMOVE EXISTING PIPING, FIXTURES, AND ACCESSORIES IN AREA OF WORK. REMOVE ALL MATERIALS FROM SITE. MAINTAIN EXISTING WATER METER AND BACKFLOW PREVENTER. VERIFY SIZE.

REMOVE SANITARY AND VENT PIPING BACK TO SANITARY MAINS. SCOPE SANITARY MAIN AND REPAIR AS NEEDED. MAINTAIN MAIN WHERE IT SERVES FIXTURES IN ADJACENT VILLAGE HALL SPACE.

FIRE PENETRATIONS

CAULK AND FIREBLOCK ALL PENETRATIONS THRU RATED ASSEMBLIES. FIRE BLOCKING TO BE RATED AND UL LISTED FOR OR ABOVE RATED ASSEMBLY RATING



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REGISTERED PROFESSIONAL ARCHITECT  
STATE OF OHIO  
STATE APPROVAL:

PG.	ISSUANCE	DATE

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03-19-18	ISSUED FOR BID
03-26-18	ISSUED FOR BID # PERMIT
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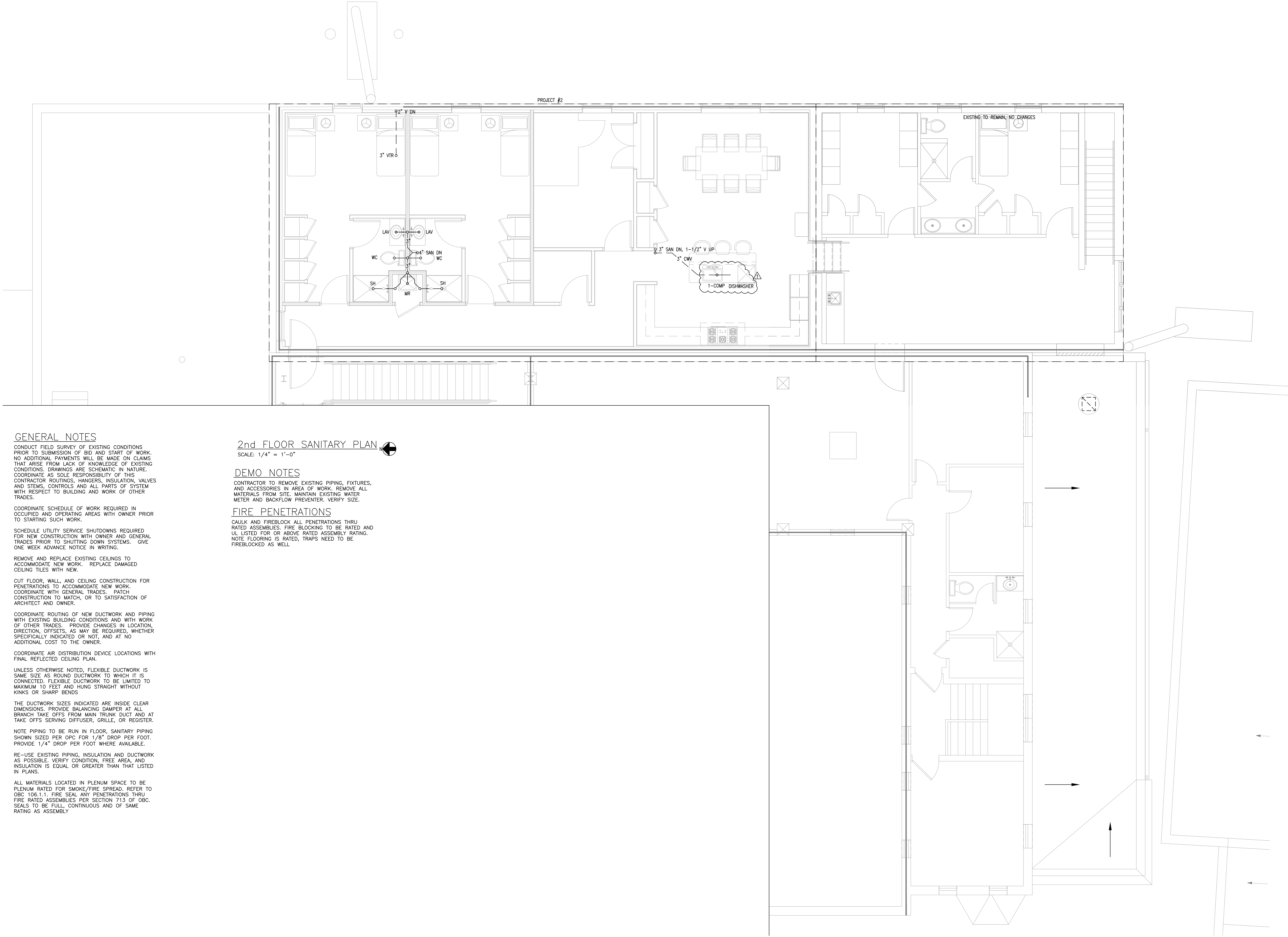
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1ST FLOOR  
SANITARY PLAN

SHEET NUMBER:

P-1





GENERAL NOTES

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2nd FLOOR SANITARY PLAN

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

DEMO NOTES

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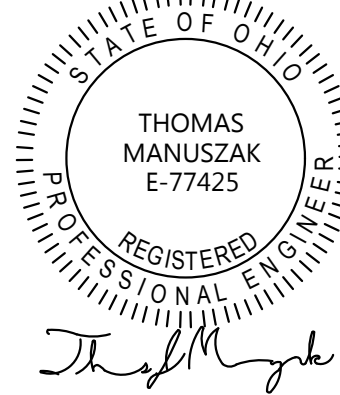
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2ND FLOOR  
SANITARY PLAN

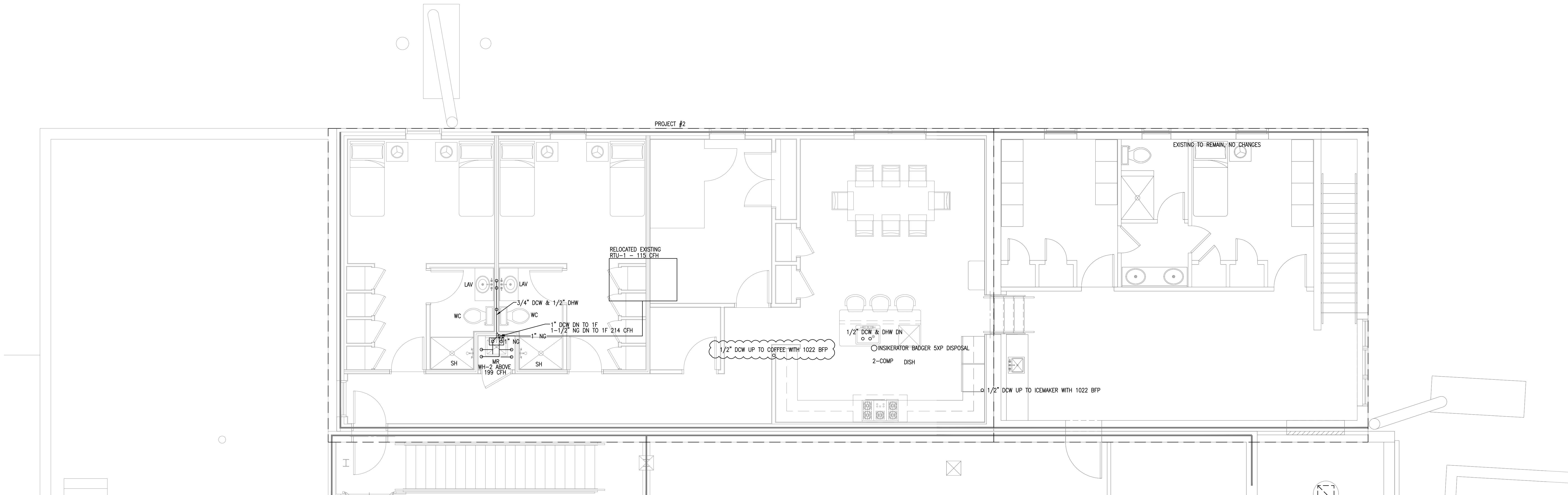
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2nd FLOOR PLUMBING PLAN

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GAS WATER HEATER SCHEDULE							
WORK	MODEL	MFG.	GPM RISE/80F	CAPACITY	VOLT-PH	GAS INPUT	EFF.
WH-1	ATI-110U	A.O. SMITH	2.5 GPM	TANKLESS	115V-1PH-24	140 CFH	96.00%
WH-2	ATI-510U	A.O. SMITH	3.75 GPM	TANKLESS	115V-1PH-24	199 CFH	96.00%

NOTES AND ACCESSORIES:

- 1) PIPE SAFETIES AND OVERFLOW TO ABOVE LOCAL MOP SINK
- 2) PROVIDE GAS TRAIN WITH SHUT OFF AND DIRTLEG
- 3) PROVIDE NON-COMBUSTIBLE BASE
- 4) PROVIDE MIXING VALVE FOR MAXIMUM 140F DISTRIBUTION. PROVIDE TEMPERING VALVES AT ALL HANDWASHING FACILITIES FOR 110F MAX.
- 5) PROVIDE TACO I-0013 RECIRCULATION PUMP (EACH HEATER)



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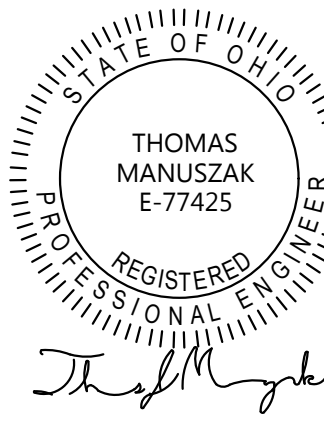
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2ND FLOOR  
PLUMBING  
PLAN

SHEET NUMBER:

P-4



SECTION 22 00 00 ? PLUMBING GENERAL CONDITIONS	ALL WORK COMPLETED BY THIS CONTRACTOR, FOR PURPOSES OF PROVIDING A COMPLETE AND WORKING SYSTEM, TO BE PROVIDED IN COMPLIANCE WITH: OHIO MECHANICAL CODE OHIO PLUMBING CODE OHIO BUILDING CODE OHIO RESIDENTIAL CODE (IF APPLICABLE) INTERNATIONAL FUEL GAS CODE INTERNATIONAL ENERGY CONSERVATION CODE ALL LOCAL CITY ORDINANCES APPLICABLE ALL PROFESSIONAL BEST PRACTICES INCLUDING ASHRAE, ASPE, AND NEC REQUIREMENTS GREEN BUILDING, LEED, OR OTHER SIMILAR GREEN RATINGS AS APPLICABLE AND REQUIRED BY OWNER CONTRACTOR SHALL HAVE KNOWLEDGE AND UNDERSTANDING OF THE BASICS OF THE APPLICABLE CODES PRIOR TO BID OF PROJECT. NO ADDITIONAL PAYMENT IS TO BE RENDERED DUE TO A LACK OF KNOWLEDGE OF THE APPLICABLE CODES OR RATINGS. COORDINATE ANY REQUIREMENTS FOR GREEN TECHNOLOGIES PRIOR TO BID.
1 - CODE COMPLIANCE STATEMENT	
2 ? QUALITY ASSURANCE	PROVIDE ALL LABOR, MATERIALS, ACCESSORIES, CONTROLS (PER CONTRACT), FLASHING, OPENINGS, CLEANING AND PATCHING, BALANCING AND TESTING, AND EQUIPMENT INDICATED ON DRAWINGS, REQUIRED FOR A PROPER WORKING AND BALANCED SYSTEM, AND AS REASONABLY IMPLIED. ALL WORK TO BE TESTED, CLEANED AND READY FOR USE BY OWNER AT CONCLUSION OF CONSTRUCTION. ALL WORK TO BE PURCHASED, INSTALLED, COMMISSIONED, AND STARTED IN ACCORDANCE WITH AND COMPLIANCE WITH ALL LOCAL, CITY, STATE, FEDERAL AND INDUSTRY CODES AND STANDARDS APPLICABLE. PROTECT ALL EQUIPMENT, PIPING AND DUCTWORK DURING CONSTRUCTION FROM DAMAGE AND DEBRIS.  PROVIDE LABOR AND MATERIAL WARRANTY ON ALL ITEMS IN SCOPE FOR A PERIOD NOT LESS THAN 1 YEAR FROM START UP DATE (OR AGREED UPON DATE BY OWNER, G.C. AND CONTRACTOR). PROTECT ALL INSTALLED EQUIPMENT FROM CONSTRUCTION DAMAGE DURING DUCTWORK CONSTRUCTION. REPLACE OR REPAIR DAMAGED ITEMS AT NO COST TO OWNER AS NEEDED DUE TO NEGLECT TO PROTECT ITEMS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ACCURATE AND COMPLIANT INSTALLATION INCLUDING BUT NOT LIMITED TO VENTILATION RATES, GAS PRESSURE, ELECTRICAL REQUIREMENTS AND BALANCING.
3 ? CONTRACTOR LIABILITY STATEMENT	
4 ? CONTRACT DOCUMENT STATEMENT	REFER TO ALL DRAWINGS INCLUDING ARCHITECTURAL, SITE, CIVIL, ELECTRICAL, PLUMBING, AND STRUCTURAL FOR SCOPE OF PROJECT. COORDINATE MECHANICAL WORK WITH WORK OF ALL OTHER TRADES. NO ADDITIONAL FEES WILL BE PAID FOR CHANGES DUE TO LACK OF KNOWLEDGE OF PROJECT OR SPACE REQUIREMENTS. SHOULD DISCREPANCIES BE FOUND BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, OR SCOPE OF TRADES, THEY ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING PRIOR TO BID. MECHANICAL SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO: MECHANICAL DUCTWORK, SERVICE PIPING, AIR DISTRIBUTION, EQUIPMENT, TESTING AND BALANCING, FANS, ROOF CURBS AND PENETRATIONS, MECHANICAL DUCTWORK AND PIPING INSULATION, HANGERS AND VIBRATION CONTROL, CONTROLS (PER CONTRACT), AND GENERAL TRADES ITEMS PERTAINING TO THE INSTALLATION OF MECHANICAL EQUIPMENT (PER CONTRACT).
5 ? SCOPE OF WORK STATEMENT	THE SCOPE OF WORK OF THE CONTRACTOR OF THESE PLANS (UNLESS OTHERWISE AGREED UPON BY CONTRACTOR, G.C. AND OWNER) INCLUDES EQUIPMENT, DUCTWORK, MECHANICAL PIPING (NON-SEWER, NON-DOMESTIC, NON-GAS), FLUES AND INTAKES, LOUVERS, CUTTING AND PATCHING FOR MECHANICAL ITEMS, HANGERS, INSULATION, BALANCING AND TESTING, START-UP AND TRAINING FOR EQUIPMENT IN SCOPE, CONTROLS AND CONTROL WIRING, LOW-VOLTAGE WIRING FOR MECHANICAL ITEMS, SMOKE DETECTORS FOR ITEMS ABOVE 2000 CFM (OR COMMON RETURNS ABOVE 2000 CFM), AND ALL ITEMS REQUIRED FOR A FULL, OPERATIONAL, BALANCED AND USABLE SYSTEM.
6 ? COORDINATION OF TRADES STATEMENT	COORDINATE ALL WORK WITH GENERAL TRADES CONTRACTOR, ELECTRICAL CONTRACTOR, STRUCTURAL CONTRACTOR, PLUMBING CONTRACTOR, SPRINKLER CONTRACTOR, FIRE ALARM CONTRACTOR, ARCHITECT AND ENGINEER, AND OWNER. ANY INTERFERENCES BETWEEN TRADES ARE TO BE RAISED TO G.C. AND ARCHITECT AS SOON AS POSSIBLE, IN WRITING. FIELD COORDINATION OF INTERFERING ITEMS IS APPROPRIATE WHERE ACCEPTABLE TO G.C. AND SIMILAR ITEMS CAN BE INSTALLED IN NEW LOCATION (I.E. DUCTWORK HAS SAME FREE AREA AND SIMILAR STATIC PRESSURE, PIPING COMPLIES WITH MANUFACTURER'S INSTRUCTIONS, ETC.)
7 ? SUBMITTALS	CONTRACTOR TO PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS: EQUIPMENT OF THIS CONTRACTOR'S SCOPE PIPING AND MATERIALS AS APPLICABLE TO THE PROJECT INSULATION AND JACKETS AS APPLICABLE TO THE PROJECT TESTING AND BALANCING REPORT ? AIR, WATER, STEAM AND REFRIGERANT CHARGE AS APPLICABLE START-UP SHEETS INCLUDING DATE, TIME AND CONTRACTOR DOING START-UP
8 ? RED-LINE AND AS-BUILT DRAWINGS	CONTRACTOR TO PROVIDE ANY CHANGES, UPDATES, AND FIELD COORDINATION ITEMS THRU A RED-LINE DRAWING (AS-BUILT DRAWING) PROVIDED AT NO SMALLER THAN 1/8TH INCH TO 1 FOOT SCALE. CHANGES PROPOSED PRIOR TO CONSTRUCTION TO BE REVIEWED BY ARCHITECT AND ENGINEER.
9 ? FIELD CHANGE STATEMENT	CHANGES DUE TO FIELD COORDINATION ARE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR (FOR THE SCOPE OF THIS CONTRACTOR'S WORK). ALL CHANGES TO SYSTEMS TO BE COORDINATED WITH ALL OTHER TRADES AS APPLICABLE, INCLUDING BUT NOT LIMITED TO G.C., STRUCTURAL CONTRACTOR, ELECTRICAL CONTRACTOR AND PLUMBING CONTRACTOR. CHANGES INITIATED BY THIS CONTRACTOR SHALL BE THE FINANCIAL RESPONSIBILITY OF THIS CONTRACTOR UNLESS OTHERWISE AGREED UPON BY G.C. OWNER AND ALL INVOLVED PARTIES.
10 ? PERMITS	CONTRACTOR TO SECURE, PAY AND MAINTAIN ALL PERMITS RELATED TO SCOPE OF WORK. COORDINATE PERMIT REQUIREMENTS WITH G.C., ENGINEER AND OWNER. CONTRACTOR SHALL SECURE, PAY AND COORDINATE ALL INSPECTIONS RELATED TO SCOPE OF WORK. COORDINATE INSPECTIONS OF THIS SCOPE AND SCOPE OF OTHERS WITH RESPECT TO CONSTRUCTION ACTIVITIES OF ALL PARTIES ON SITE.
11 ? START-UP, TESTING AND CLEAN UP	CONTRACTOR SHALL PROVIDE INDUSTRY STANDARD TESTING WATER FLOW, STEAM, REFRIGERANT CHARGE, AND ANY OTHER ITEMS REQUIRED IN SCOPE. PROVIDE TESTING AND BALANCE REPORT TO G.C., OWNER, ARCHITECT AND ENGINEER. PROVIDE MANUFACTURER'S RECOMMENDED START-UP FOR ALL EQUIPMENT. PROVIDE START UP REPORT TO G.C. OWNER, ARCHITECT AND ENGINEER. CLEAN UP ALL MATERIALS AND DEBRIS RELATED TO SCOPE OF WORK. COORDINATE DISPOSAL OF DEBRIS AND EXCESS MATERIAL WITH G.C./OWNER. IF NO DUMPSTER IS PROVIDED, CONTRACTOR SHALL SECURE AND PAY FOR REMOVAL OF REFUSE FROM CONSTRUCTION ACTIVITIES OF THIS SCOPE. PROVIDE OWNER OR OWNER'S REP A STARTUP, OPERATIONS AND MAINTENANCE MANUAL INCLUDING IOM MANUAL FOR EACH PIECE OF EQUIPMENT UNDER SCOPE. PROVIDE 1-HR (OR ADDITIONAL AS REQUIRED UNDER CONTRACT) TRAINING TO OWNER OR REP. REGARDING THE OPERATION OF EQUIPMENT IN SCOPE.
12 ? DRAWINGS	DRAWINGS ARE TO BE CONSIDERED SCHEMATIC IN NATURE. INTENT AND SCOPE MAY INCLUDE ITEMS IN ARCHITECTURAL, ELECTRICAL AND PLUMBING PLANS. FINAL INSTALLED ITEMS MAY REQUIRE OFFSETS, ELBOWS, AND CHANGES. CONTRACTOR SHALL ACCOUNT FOR THESE CHANGES AS BEST AS POSSIBLE IN BID. DRAWINGS ARE TO SHOW CODE COMPLIANCE AND INTENT OF SYSTEMS.

SECTION 22 15 00 - PLUMBING PIPINGAND INSULATION

PART 1 - GENERAL

1. QUALITY ASSURANCE
- 1.1. PERFORM ALL WORK IN ACCORDANCE WITH ASME AND WELDING STANDARDS. ALL MATERIAL TO BE NEW AND FREE OF DEFECT.
- 1.2. PROVIDE END CAPS ON EACH LENGTH OF PIPING AND PREVENT DAMAGE TO PIPING DURING STORAGE AND INSTALLATION.
- 1.3. PROVIDE VALVES AND FITTINGS FOR A COMPLETE SYSTEM, ENSURE VALVES ARE CLEAN, DRY AND FREE OF DEBRIS.
- 1.4. RIG ALL LARGER PIPING WITH APPROPRIATE HANGERS TO PREVENT DAMAGE.
- 1.5. PROVIDE HANGERS ON PIPING PER OPC, OMC, AND OBC.
- 1.6. PROVIDE EXPANSION JOINTS AND THRUST BEARINGS AS REQUIRED TO PREVENT DAMAGE TO PIPING OR BUILDING.
2. PROVIDE FLEXIBLE CONNECTIONS WHERE PIPING CONNECTS TO MOTOR DRIVEN EQUIPMENT. (EXCEPTION - REFRIGERANT PIPING)
3. PROVIDE BALANCE VALVES, FLOW CONTROL DEVICES, SHUT OFF VALVES AND RELIEF VALVES AS REQUIRED BY CODE, PER MANUFACTURER'S INSTRUCTIONS, AND REFER TO MANUFACTURER'S INSTRUCTIONS FOR ADDITIONAL MATERIAL REQUIREMENTS.
4. COORDINATE ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
5. SUBMIT PIPING MATERIALS, HANGERS, VALVES, AND INSULATION.

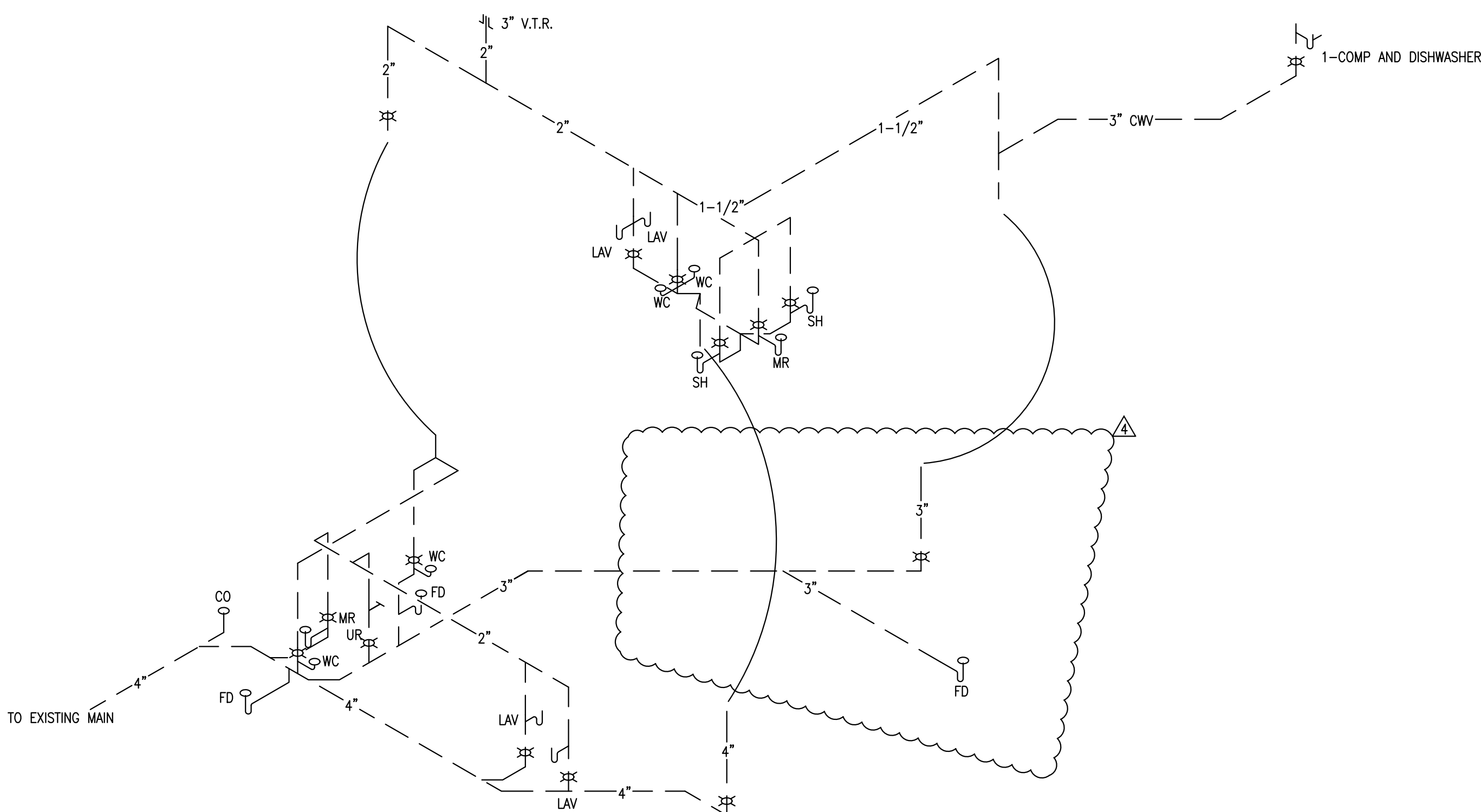
PART 2 - MATERIALS AND APPLICATION

1. THE OUTLINE BELOW DESCRIBES PIPING MATERIALS ACCEPTABLE TO APPLICATIONS. NOT ALL APPLICATIONS MAY APPLY. PROVIDE ALTERNATE PRICING WHEN REQUESTED (PER CONTRACT) WHERE MULTIPLE MATERIALS ARE LISTED.

	MATERIAL	MATERIAL, INSULATION AND APPROVAL SCHEDULE	INSULATION	NOTES
SANITARY PIPING - ABOVE GRADE				
BASE	CAST-IRON PIPE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE IN IPS DIAMETERS, INCLUDING SCHEDULE 40, DR 22 (PS 200), AND DR 24 (PS 140), WITH A SOLID, CELLULAR CORE OR COMPOSITE WALL	ASTM A 74; ASTM A 888; CSPI 301	N/A	PROVIDE CATHODIC PROTECTION AS NEEDED
ALT #1	CAST-IRON PIPE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE IN IPS DIAMETERS, INCLUDING SCHEDULE 40, DR 22 (PS 200), AND DR 24 (PS 140), WITH A SOLID, CELLULAR CORE, OR COMPOSITE WALL	ASTM D 2665; ASTM F 891; ASTM F 1488; CSA B 181.2	N/A	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
SANITARY PIPING - BELOW				
BASE	CAST-IRON PIPE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE IN IPS DIAMETERS, INCLUDING SCHEDULE 40, DR 22 (PS 200), AND DR 24 (PS 140), WITH A SOLID, CELLULAR CORE, OR COMPOSITE WALL	ASTM A 74; ASTM A 888; CSPI 301	N/A	PROVIDE CATHODIC PROTECTION AS NEEDED
ALT #1	CROSS-IRON PIPE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE IN IPS DIAMETERS, INCLUDING SCHEDULE 40, DR 22 (PS 200), AND DR 24 (PS 140), WITH A SOLID, CELLULAR CORE, OR COMPOSITE WALL	ASTM D 2665; ASTM F 891; ASTM F 1488; CSA B 181.2	N/A	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
WATER SERVICE				
BASE	CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6	N/A	
ALT #1	COPPER OR COPPER-ALLOY PIPE	ASTM B 42; ASTM B 302	N/A	
ALT #2	POLYVINYL CHLORIDE (PVC) PLASTIC PIPE	ASTM D 1785; ASTM D 2241; ASTM D 2672; CSA B137.3	N/A	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
WATER DISTRIBUTION - COLD				
BASE	CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE AND TUBING	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6	0.5 INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
ALT #1	COPPER OR COPPER-ALLOY TUBING (TYPE K, WK, L, WL, M OR WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447	0.5 INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	
ALT #2	CROSS-LINKED POLYETHYLENE (PEX) PLASTIC TUBING	ASTM F 876; ASTM F 877; CSA B 137.5	0.5 INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
WATER DISTRIBUTION - HOT <140F				
BASE	CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE AND TUBING	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6	1 (1.5 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
ALT #1	COPPER OR COPPER-ALLOY TUBING (TYPE K, WK, L, WL, M OR WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447	1 (1.5 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	
ALT #2	CROSS-LINKED POLYETHYLENE (PEX) PLASTIC TUBING	ASTM F 876; ASTM F 877; CSA B 137.5	1 (1.5 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
WATER DISTRIBUTION - HOT >140F				
BASE	CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE AND TUBING	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6	1.5 (2 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
ALT #1	COPPER OR COPPER-ALLOY TUBING (TYPE K, WK, L, WL, M OR WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447	1.5 (2 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	
ALT #2	CROSS-LINKED POLYETHYLENE (PEX) PLASTIC TUBING	ASTM F 876; ASTM F 877; CSA B 137.5	1.5 (2 INCH FOR 2" AND LARGER) INCH MAXIMUM 0.27 BTU*IN/(H*FT^2*H) RATED, WITH VAOPR BARRIER	NOT ALLOWABLE IN RETURN AIR PLENUMS (UNLESS RATED AND LISTED)
NATURAL GAS				
BASE	STEEL AND WROUGHT IRON (UNDERGROUND SERVICE PIPING ONLY) CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE AND TUBING	ASME B 36.10,10M ASTM A 53/A52, ASTM A106		PAINT EXTERIOR PIPING WITH UV RESISTANT PAINT. EXTERIOR PIPING ON MINIMUM 6" BLOCKS ON ROOF
SERVICE PIPING		ASTM D 2513		EXTERIOR PIPING ON MINIMUM 6" BLOCKS ON ROOF
FIRE STOPPING	3M FIRE BARRIER 1003SL OR APPROVED EQUAL.	ASTM E 1966 OR UL 2079 ASTM E 814 OR UL 1479 (3 HR)		INSTALL PER OBC-713

PLUMBING FIXTURE SCHEDULE							
MARK	FIXTURE	SAN	VENT	105 DHW	140 DHW	DCW	MANUFACTURER, MODEL NUMBER, AND DESCRIPTION
WC	FLR. MTD. TANK WC	3"	1-1/2"	---	---	1/2"	AMERICAN STANDARD CADET 2467.016 ADA COMPLIANT ELONGATED SEAT
LAV	LAVATORY	1-1/2"	1-1/4"	1/2"	---	1/2"	AMERICAN STANDARD 9482.000.020 UNDERMOUNT BOWL 4" O.C. AMERICAN STANDARD 7385.000 SATIN NICKEL SINGLE LEVER FAUCET WITH GRID STRAINER. PROVIDE WITH ASSE 1070 MIXING VALVE
FD	ROUND FLOOR DRAIN	3"	CWV	---	---	---	WATTS FD-100-A OR APPROVED EQUAL. PROVIDE TRAP PRIMER AS REQUIRED. WHERE APPROVED PROVIDE A WATERLESS TRAP SEAL AND BACKWATER VALVE IN LIEU OF PRIMER
1-COMP	1-COMP SINK	1-1/2"	1-1/4"	3/4"	---	3/4"	AMERICAN STANDARD 2058.332211C.075.075 SINGLE BOWL RALEIGH SINK KINGSTON BRASS KB72AL GOOSENECK FAUCET CENTER SET 4" O.C. GRID STRAINER. PROVIDE WITH ASSE 1070 MIXING VALVE
MR	SERVICE SINK	3"	1-1/2"	1/2"	---	1/2"	MUSTEE 63M 24"x24" MOP BASIN AND 63.600A FAUCET WALL MOUNTED
LT	LAUNDRY TRAY	3"	1-1/2"	1/2"	---	1/2"	MUSTEE 17W 23"x24" UTILITY TUB AND 63.600A FAUCET FLOOR MOUNTED
TP-1	TRAP PRIMER (FIXTURE DOWNSTREAM)	---	---	---	---	1/2"	WATTS LFTP300 OR APPROVED EQUAL
TP-2	TRAP PRIMER (TIMER W/O FIXTURES)	---	---	---	---	1/2"	PRECISION PLUMBING PRODUCTS MP-500-24V OR APPROVED EQUAL. PROVIDE ALL CONTROL AND POWER WIRING.
UR-1	WALL MTD. URINAL	2"	1-1/4"	---	---	3/4"	AMERICAN STANDARD 6501.610 WASHBROOK 1.0 GPF URINAL. MOUNTED PER ADA REQUIREMENTS. PROVIDE WITH SELECTRONIC FLUSHVALVE
FPHB	TRAP PRIMER	---	---	---	---	3/4"	WOODFORD MFG. MODEL RB-65 6" DIAMETER HOLE WITH FLUSH MOUNTED BOX.
FPHB-2	FROST PROOF HOSE BIBB	---	---	---	---	3/4"	WOODFORD MFG. MODEL 22 HOT AND COLD HOSE BIBB
SH	SHOWER AND ENCLOSURE	2"	1-1/2"	1/2"	---	1/2"	72201016-18 STERLING SHOWER ENCLOSURE 35 1/4" X 48 1/2" X 80 1/2" H. 1/2" SHOWER HEAD. PROVIDE WITH ASSE 1016 VALVE. COORDINATE GRAB BARS WITH ARCHITECTURAL PLANS

MODELS FOR PRICING ONLY, FINAL SELECTION TO BE BY OWNER PRIOR TO CONSTRUCTION



SANITARY ISOMETRIC PLAN

NO SCALE

VENT AND SANITARY PIPING IN PLUMBING ISOMETRIC IS SCHEMATIC ONLY. SANITARY PIPING SIZED BASED ON TABLE 710.1 FOR 1/8" PER FOOT DROP (PROVIDE 1/4" PER FOOT WHERE POSSIBLE).

VENT PIPING SHOWN PROVIDES SINGLE FIXTURE VENTS. CONTRACTOR MAY SUBMIT MARKUPS FOR USE OF COMMON VENTS, GROUP VENTS, COMBINATION VENT/SANITARY, ETC. ENGINEER WILL REVIEW AND APPROVE OR DENY CHANGES. CUT ALL VENT PIPING THRU ROOF AND PROVIDE FLASHING AND COUNTER FLASHING. VENTS TO BE TERMINATED IN CODE COMPLIANT LOCATION/HEIGHT. VERIFY EXISTING CONDITIONS PRIOR TO INSTALLATION.



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E-77425  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF OHIO  
THOMAS MANUSZAK  
E-77425

STATE APPROVAL:

PG.	ISSUANCE	DATE

DATE SET ISSUANCE	DATE SET ISSUANCE	DATE SET ISSUANCE	DATE SET ISSUANCE	DATE SET ISSUANCE
03-19-14	03-19-14	03-19-14	03-19-14	03-19-14
03-26-14	03-26-14	03-26-14	03-26-14	03-26-14
05-07-14	05-07-14	05-07-14	05-07-14	05-07-14
02-24-20	02-24-20	02-24-20	02-24-20	02-24-20

PROJECT # 17121

PLUMBING  
SPECS.

SHEET NUMBER:

P-5



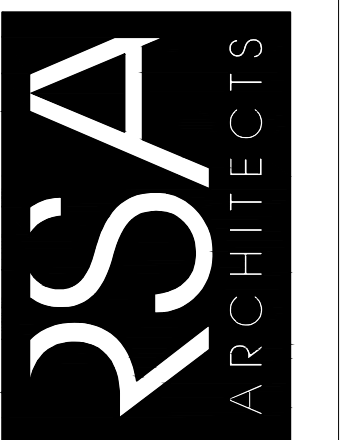


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SEAL:



STATE APPROVAL:

BULLETIN	DATE
#1	03-12-18

DATE	ISSUED FOR	ISSUED FOR NO. & PERMIT	ISSUED FOR NO. & PERMIT
02-19-18	ISSUED FOR NO. & PERMIT	02-19-18	ISSUED FOR NO. & PERMIT
02-23-18	ISSUED FOR NO. & PERMIT	02-23-18	ISSUED FOR NO. & PERMIT
02-27-18	ISSUED FOR NO. & PERMIT	02-27-18	ISSUED FOR NO. & PERMIT
02-28-18	ISSUED FOR NO. & PERMIT	02-28-18	ISSUED FOR NO. & PERMIT

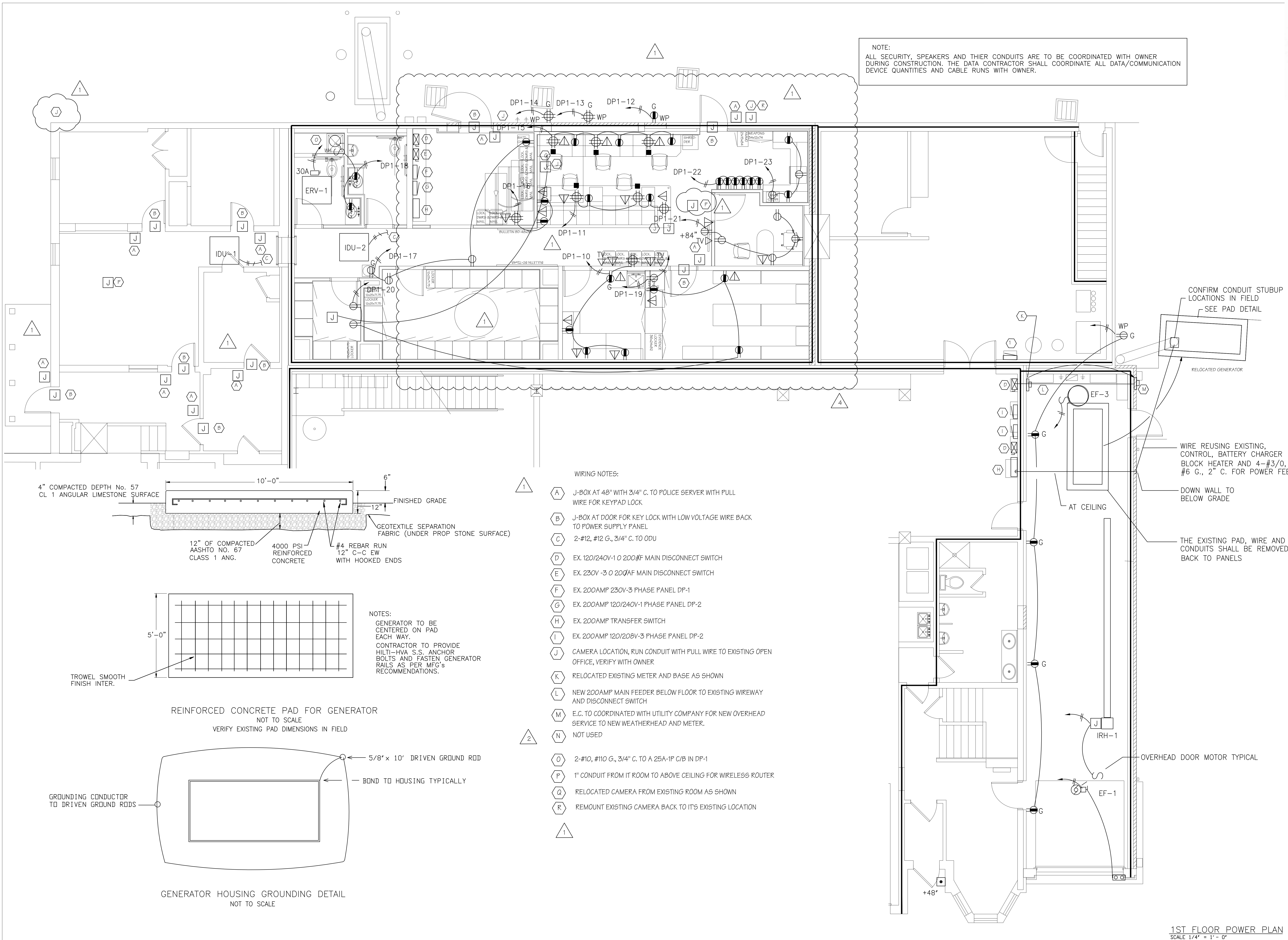
PROJECT #: 17121

1ST FLOOR  
POWER PLAN

SHEET NUMBER:

E-1.0

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STATE APPROVAL:

BULLETIN	DATE
#1	03-12-18

DATE	SET	ISSUANCE
02-18-18	ISSUED FOR R.O.	
02-20-18	ISSUED FOR R.O. & PERMIT	
03-07-18	ISSUED PER STATE & OWNER COMMENTS	
02-04-22	ISSUED PER STATE & OWNER COMMENTS	

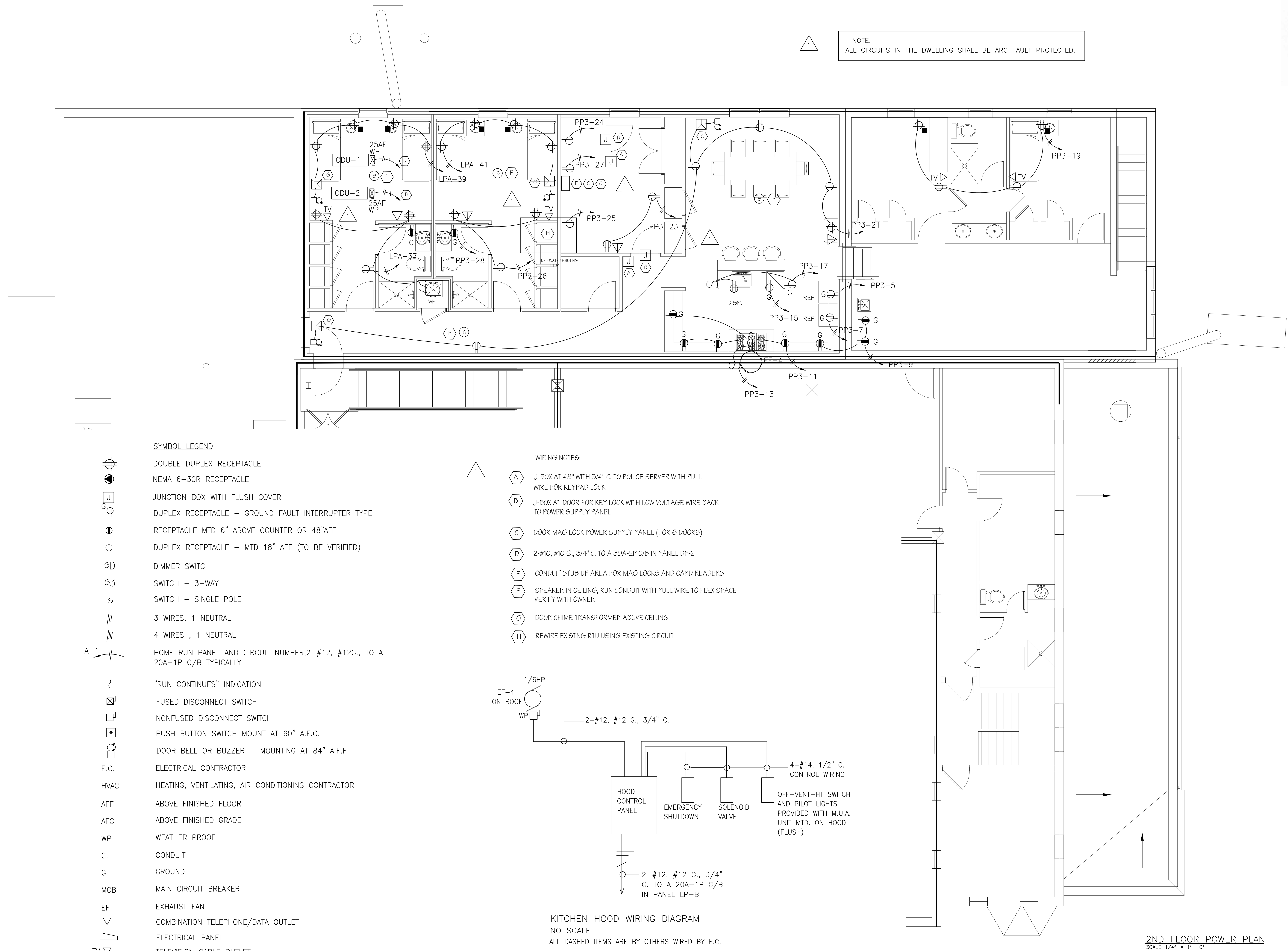
PROJECT #: 17121

2ND FLOOR  
POWER PLAN

SHEET NUMBER:

E-2.0

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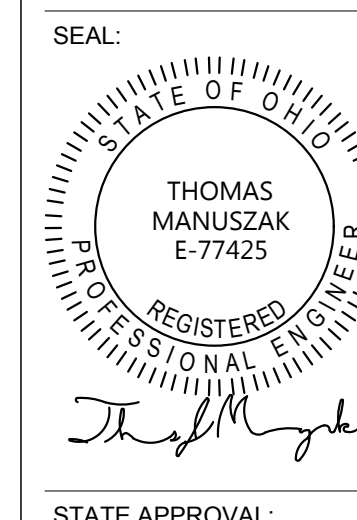






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STATE APPROVAL:

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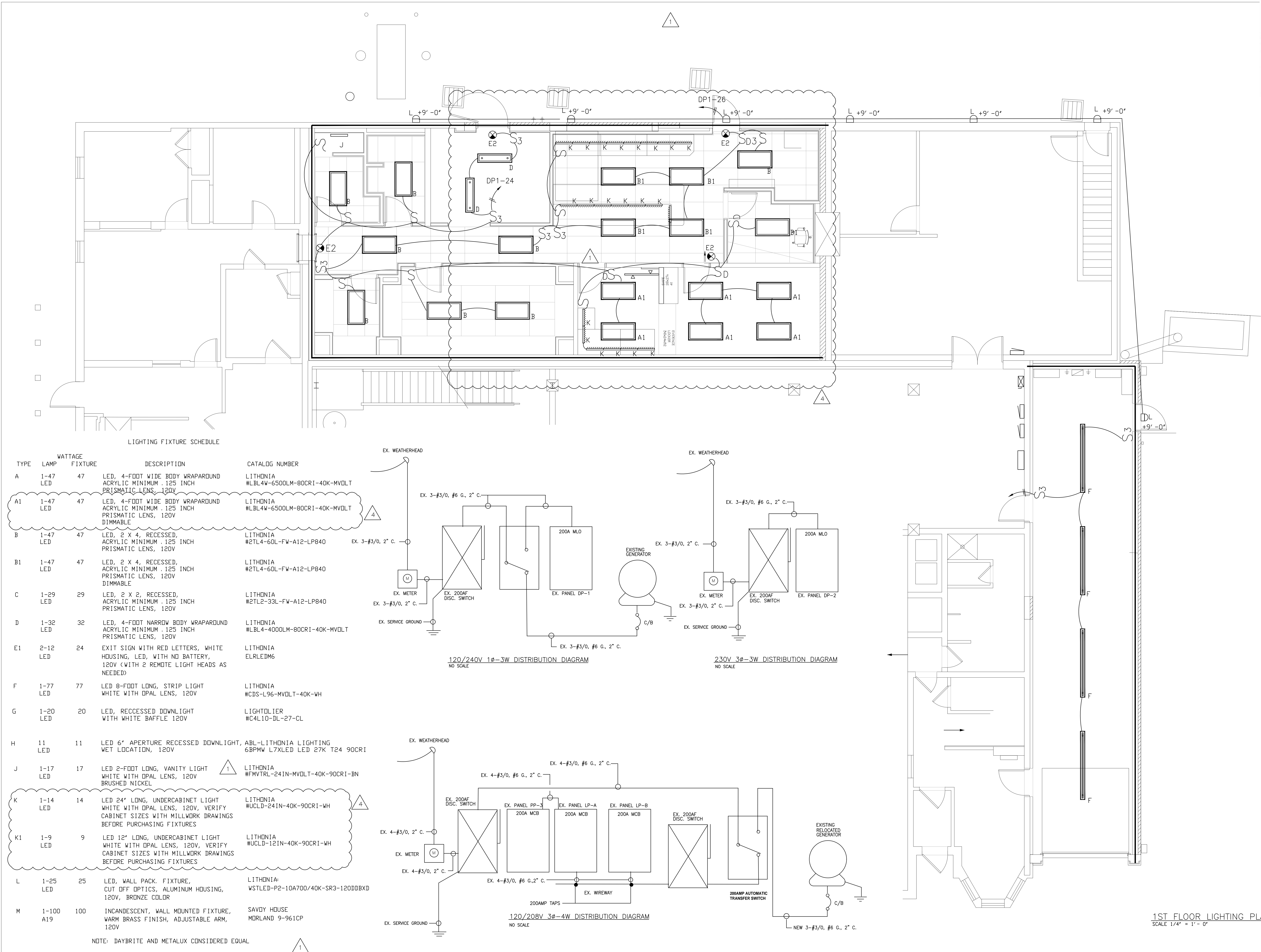
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03-19-18	ISSUED FOR BID
03-29-18	ISSUED FOR BID & PERMIT
04-02-18	ISSUED FOR STATE & OWNER COMMENTS
05-04-18	ISSUED FOR STATE & OWNER COMMENTS

PROJECT #: 17121

1ST FLOOR  
LIGHTING  
PLAN

SHEET NUMBER:

E-3.0







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STATE APPROVAL:

BULLETIN | DATE  
#1 03-12-18

DATE SET ISSUANCE  
02-19-18 ISSUED FOR BID  
02-28-18 ISSUED FOR BID & PERMIT  
02-07-18 ISSUED PER STATE & OWNER COMMENTS  
02-04-20 ISSUED PER STATE & OWNER COMMENTS

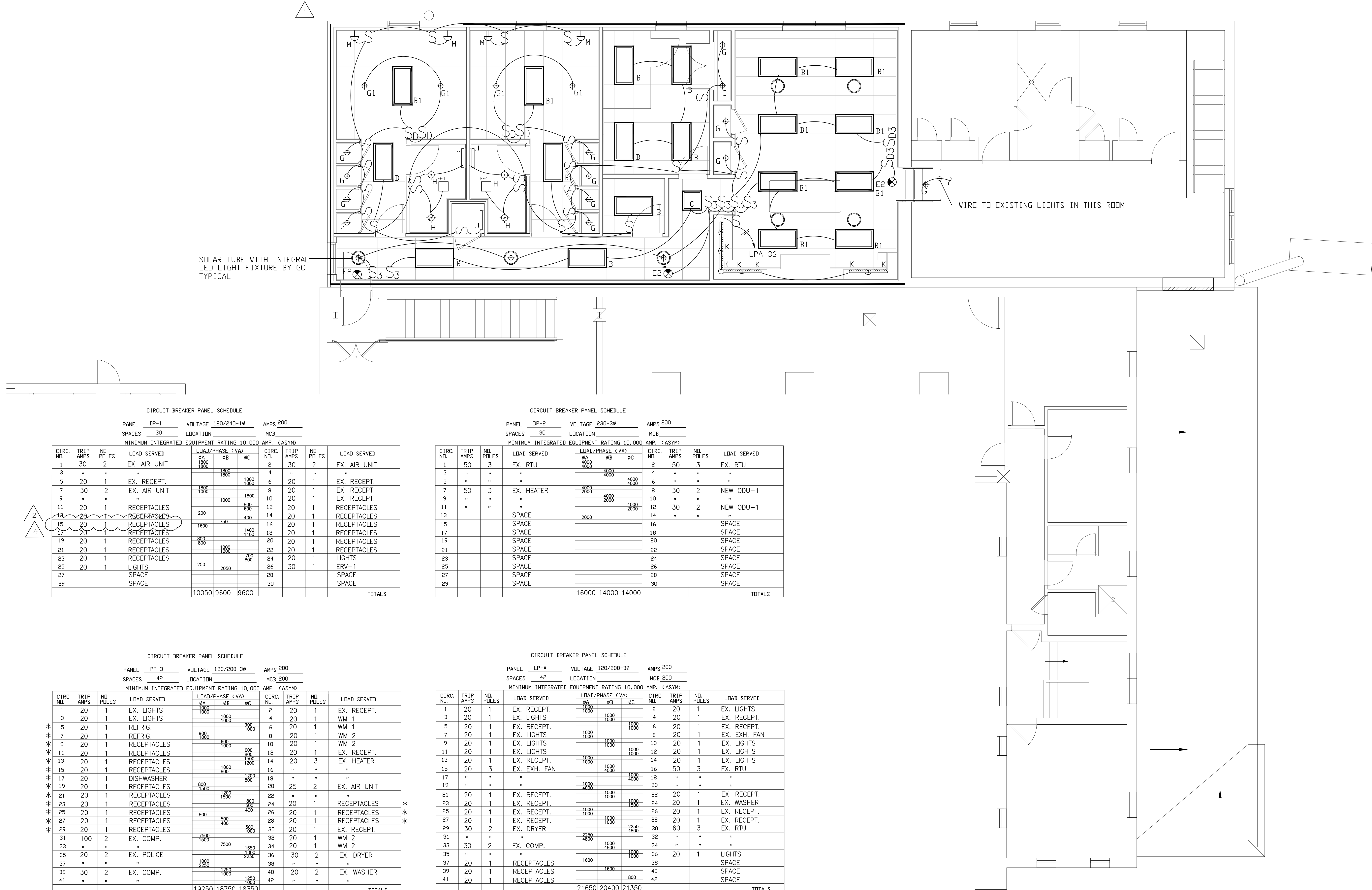
PROJECT #: 17121

DRAWING  
TITLE

SHEET NUMBER:

E-4.0

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SOLAR TUBE WITH INTEGRAL  
LED LIGHT FIXTURE BY GC  
TYPICAL

WIRE TO EXISTING LIGHTS IN THIS ROOM

CIRCUIT BREAKER PANEL SCHEDULE

PANEL DP-1 VOLTAGE 120/240-1Ø AMP 200  
SPACES 30 LOCATION MCB

MINIMUM INTEGRATED EQUIPMENT RATING 10,000 AMP. (ASYM)										
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD/PHASE (VA)			CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED
1	30	2	EX. AIR UNIT	1800	ØB	ØC	2	30	2	EX. AIR UNIT
3	"	"	"	1800			4	"	"	"
5	20	1	EX. RECEPT.		1000		6	20	1	EX. RECEPT.
7	30	2	EX. AIR UNIT	1800			8	20	1	EX. RECEPT.
9	"	"	"		1000	1800	10	20	1	EX. RECEPT.
11	20	1	RECEPTACLES		800		12	20	1	RECEPTACLES
13	20	1	RECEPTACLES	200		400	14	20	1	RECEPTACLES
15	20	1	RECEPTACLES	1600	750		16	20	1	RECEPTACLES
17	20	1	RECEPTACLES		1400		18	20	1	RECEPTACLES
19	20	1	RECEPTACLES	800	800		20	20	1	RECEPTACLES
21	20	1	RECEPTACLES		1000		22	20	1	RECEPTACLES
23	20	1	RECEPTACLES		750	800	24	20	1	LIGHTS
25	20	1	LIGHTS	250	2050		26	30	1	ERV-1
27			SPACE				28			SPACE
29			SPACE				30			SPACE
				10050	9600	9600				
										TOTALS

CIRCUIT BREAKER PANEL SCHEDULE

PANEL DP-2 VOLTAGE 230-3Ø AMP 200  
SPACES 30 LOCATION MCB

MINIMUM INTEGRATED EQUIPMENT RATING 10,000 AMP. (ASYM)										
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD/PHASE (VA)			CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED
1	50	3	EX. RTU	ØA 4000	ØB 4000	ØC 4000	2	50	3	EX. RTU
3	"	"	"		4000		4	"	"	"
5	"	"	"		4000	4000	6	"	"	"
7	50	3	EX. HEATER	5000	4000	4000	8	30	2	NEW ODU-1
9	"	"	"	2000	4000		10	"	"	"
11	"	"	"		2000	4000	12	30	2	NEW ODU-1
13			SPACE	2000			14	"	"	"
15			SPACE				16			SPACE
17			SPACE				18			SPACE
19			SPACE				20			SPACE
21			SPACE				22			SPACE
23			SPACE				24			SPACE
25			SPACE				26			SPACE
27			SPACE				28			SPACE
29			SPACE				30			SPACE
				16000	14000	14000				
										TOTALS

CIRCUIT BREAKER PANEL SCHEDULE

PANEL PP-3 VOLTAGE 120/208-3Ø AMP 200  
SPACES 42 LOCATION MCB 200

MINIMUM INTEGRATED EQUIPMENT RATING 10,000 AMP. (ASYM)					MINIMUM INTEGRATED EQUIPMENT RATING 10,000 AMP. (ASYM)				
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD/PHASE (VA) ØA ØB ØC	CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD/PHASE (VA) ØA ØB ØC
1	20	1	EX. LIGHTS	1000	2	20	1	EX. RECEPT.	1000
3	20	1	EX. LIGHTS	1000	4	20	1	WM 1	1000
5	20	1	REFRIG.	900	6	20	1	WM 1	900
7	20	1	REFRIG.	900	8	20	1	WM 2	900
9	20	1	RECEPTACLES	600	10	20	1	WM 2	600
11	20	1	RECEPTACLES	800	12	20	1	EX. RECEPT.	800
13	20	1	RECEPTACLES	1200	14	20	3	EX. HEATER	1200
15	20	1	RECEPTACLES	1000	16	"	"	"	1000
17	20	1	DISHWASHER	1200	18	"	"	"	1200
19	20	1	RECEPTACLES	800	20	25	2	EX. AIR UNIT	800
21	20	1	RECEPTACLES	1500	22	"	"	"	1500
23	20	1	RECEPTACLES	800	24	20	1	RECEPTACLES	800
25	20	1	RECEPTACLES	400	26	20	1	RECEPTACLES	400
27	20	1	RECEPTACLES	800	28	20	1	RECEPTACLES	800
29	20	1	RECEPTACLES	500	30	20	1	EX. RECEPT.	500
31	100	2	EX. COMP.	7500	32	20	1	WM 2	7500
33	"	"	"	1500	34	20	1	WM 2	1500
35	20	2	EX. POLICE	2250	36	30	2	EX. DRYER	2250
37	"	"	"	1000	38	"	"	"	1000
39	30	2	EX. COMP.	1200	40	20	2	EX. WASHER	1200
41	"	"	"	1000	42	"	"	"	1000
TOTALS				19250 18750 18350	TOTALS				19250 18750 18350

CIRCUIT BREAKER PANEL SCHEDULE

PANEL LP-A VOLTAGE 120/208-3Ø AMP 200  
SPACES 42 LOCATION MCB 200

MINIMUM INTEGRATED EQUIPMENT RATING 10,000 AMP. (ASYM)										
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD/PHASE (VA)			CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED
				ØA	ØB	ØC				
1	20	1	EX. RECEPT.	1000			2	20	1	EX. LIGHTS
3	20	1	EX. LIGHTS		1000		4	20	1	EX. RECEPT.
5	20	1	EX. RECEPT.			1000	6	20	1	EX. RECEPT.
7	20	1	EX. LIGHTS	1000			8	20	1	EX. EXH. FAN
9	20	1	EX. LIGHTS	1000	1000		10	20	1	EX. LIGHTS
11	20	1	EX. LIGHTS			1000	12	20	1	EX. LIGHTS
13	20	1	EX. RECEPT.	1000			14	20	1	EX. LIGHTS
15	20	3	EX. EXH. FAN		2000		16	50	3	EX. RTU
17	"	"	"			1000	18	"	"	"
19	"	"	"	1000			20	"	"	"
21	20	1	EX. RECEPT.	4000	1000		22	20	1	EX. RECEPT.
23	20	1	EX. RECEPT.		1000		24	20	1	EX. WASHER
25	20	1	EX. RECEPT.			1000	26	20	1	EX. RECEPT.
27	20	1	EX. RECEPT.	1000			28	20	1	EX. RECEPT.
29	30	2	EX. DRYER		1000		30	60	3	EX. RTU
31	"	"	"	2250		2250	32	"	"	"
				4800			32	"	"	"
33	30	2	EX. COMP.		1000		34	"	"	"
					4800					
35	"	"	"			1000	36	20	1	LIGHTS
				1600						
37	20	1	RECEPTACLES				38			SPACE
39	20	1	RECEPTACLES		1600		40			SPACE
						800				
41	20	1	RECEPTACLES				42			SPACE
				21650	20400	21350				
										TOTALS

\* EXISTING CIRCUIT TO BE REPLACED WITH NEW

2ND FLOOR LIGHTING PLAN  
SCALE 1/4" = 1' - 0"



PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. REFER TO DIVISION 0, "BIDDING AND CONTRACT REQUIREMENTS", DIVISION 1, "GENERAL REQUIREMENTS", AND ALL ADDENDA WHICH ARE HEREBY MADE A PART OF THIS SPECIFICATION.
- B. THIS CONTRACTOR IS TO READ ALL SPECIFICATIONS OF ALL PARTS OF THE WORK AND INCLUDING WIRING FOR THEIR EQUIPMENT UNLESS SPECIFICALLY EXCEPTED HEREIN.
- C. THE WORK REQUIRED UNDER DIVISION 16 OF THE SPECIFICATIONS INCLUDES ALL REQUIREMENTS OF ALL SECTIONS OF THIS DIVISION. IN GENERAL, THE WORK CONSISTS OF FURNISHING AND INSTALLING THE EQUIPMENT, SERVICE AND ALL OTHER MATERIALS NECESSARY TO PROVIDE THE COMPLETE ELECTRICAL SYSTEM AND ALL WORK IN CONNECTION WITH SUCH SYSTEMS INCLUDING LABOR, TRANSPORTATION, ETC., COMPLETE IN EVERY RESPECT AS SHOWN ON THE PLANS, HEREIN SPECIFIED, OR REASONABLE IMPLIED AS READY FOR USE UNLESS OTHERWISE SPECIFIED.
- D. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL ELECTRICAL WORK AS HEREIN DESCRIBED OR AS INDICATED ON THE DRAWINGS. MATERIAL AND/OR LABOR WHICH IS NOT INDICATED ON THE DRAWINGS OR SPECIFICATIONS, BUT NECESSARY TO COMPLETE THE WORK (AND USUALLY INCLUDED IN SIMILAR WORK), SHALL BE PROVIDED.

1.2 DESCRIPTION OF WORK

- A. PROVIDE A COMPLETE WORKING ELECTRICAL SYSTEM READY FOR USE.
- B. ELECTRICAL SYSTEM INCLUDES THE DISTRIBUTION, LIGHTING, POWER OUTLETS, AND RACEWAYS
- C. PROVIDE ALL COORDINATION AND ADMINISTRATION NECESSARY TO INSTALL ELECTRICAL SYSTEM AND UTILITY SERVICES.

1.3 WORK INCLUDED

- A. WIRE, RACEWAYS AND BOXES.
- B. SWITCHES AND PANELBOARDS.
- C. MAINTAIN EXISTING ELECTRIC SERVICE
- D. ELECTRICAL DISTRIBUTION.
- E. LIGHTING.
- F. GROUNDING AND BONDING.
- G. POWER WIRING.
- H. CONNECTIONS TO ELECTRICAL EQUIPMENT.

1.4 GENERAL

- A. IT IS THE PURPOSE OF THE DRAWINGS TO INDICATE THE APPROXIMATE LOCATIONS OF ALL EQUIPMENT, OUTLETS, ETC. THE EXACT LOCATION OF APPARATUS AND OUTLETS MAY BE GIVEN AS THE WORK PROGRESSES.
- B. THIS CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY FOR THIS WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR ACCURACY. DO NOT SCALE DRAWINGS. ANY INTERFERENCES OR FIELD PROBLEMS SHALL BE REPORTED TO THE OWNER FOR RESOLUTION.
- C. THE WORK COVERED BY THIS SPECIFICATION CONSISTS OF PROVIDING ALL LABOR, EQUIPMENT, SUPPLIES, MATERIALS, PERMITS, AND SERVICES REQUIRED FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK, READY FOR USE.
- D. THE DESIGN DESCRIBED HEREIN IS INTENDED TO COMPLY WITH APPLICABLE CODES AND STANDARDS, AND WITH SAFEGUARDS IN EXCESS OF CODE REQUIREMENTS WHERE NECESSARY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THESE STANDARDS FOR ACHIEVING A COMPLETE AND SAFE INSTALLATION AND TO OBSERVE AND REPORT TO THE OWNER ANY ITEMS WHICH, IN HIS OPINION, DO NOT CONFORM TO THE CODES AND STANDARDS, OR WHICH WOULD IMPROVE THE SAFETY AND/OR SERVICEABILITY OF THE INSTALLATION.

1.5 EQUIPMENT MANUFACTURER'S DIRECTIONS, DIAGRAMS, AND MANUALS

- A. EXCEPT WHERE SPECIFICALLY PERMITTED OTHERWISE, ALL MATERIALS, EQUIPMENT, AND DEVICES FURNISHED BY THE CONTRACTOR SHALL BE NEW AND SHALL CONFORM TO NECA, NEMA, IEEE, ANSI, AND UNDERWRITERS' LABORATORIES STANDARDS AND SHALL BEAR THE U.L. LISTING OR LABEL MARK.
- B. ALL MANUFACTURED ARTICLES AND ALL OTHER MATERIALS AND EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL BE APPLIED, CONNECTED, ERECTED, USED, CLEANED, AND CONDITIONED AS DIRECTED IN THE MANUFACTURER'S LATEST PRINTED INSTRUCTIONS.
- C. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSULT THE MANUFACTURER'S DRAWINGS, INSTALLATION MANUALS, AND INSTRUCTIONS FOR ALL EQUIPMENT. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THESE MANUALS AND INSTRUCTIONS.

1.6 INSPECTION

- A. THE OWNER AND HIS AUTHORIZED REPRESENTATIVES SHALL HAVE ACCESS TO AND THE PRIVILEGE OF INSPECTING ALL WORK AND MATERIALS AS THE WORK PROGRESSES. THESE REPRESENTATIVES WILL HAVE AUTHORITY TO APPROVE OR REJECT ANY WORK OR MATERIALS, WITH THE DRAWINGS, SPECIFICATIONS, CODES, AND GOOD ENGINEERING PRACTICES AS A BASIS FOR ANY ACTION TAKEN.
- B. ANY WORK FOUND NOT IN COMPLIANCE WITH THE DRAWINGS, SPECIFICATIONS, OR APPLICABLE STANDARDS AS LISTED HEREIN SHALL BE REPAIRED OR REPLACED AS DEEMED NECESSARY BY THE OWNER OR HIS REPRESENTATIVES. ANY SUCH ADDITIONAL WORK BY THE CONTRACTOR AS CONSIDERED NECESSARY BY THE OWNER FOR THE CONTRACTOR'S WORK TO COMPLY WITH THE CONTRACT DOCUMENTS AS DESCRIBED HEREIN SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION BY THE CONTRACTOR.

1.7 COORDINATION OF WORK

- A. THIS CONTRACTOR SHALL BE IN A POSITION TO MEET ALL COMPLETION DATES SET BY THE OWNER, AND SHALL BE ABLE TO FURNISH ALL LABOR OF VARIOUS CLASSES REQUIRED TO MEET SCHEDULES AND COMPLETION DATES. THIS CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE VARIOUS MANUFACTURERS ON DELIVERY AND ARRANGE FOR DELIVERY OF EQUIPMENT AND MATERIALS SO AS NOT TO HINDER OR DELAY ANY COMPLETION DATES FOR ELECTRICAL WORK OR OTHER TRADES WHICH ARE AFFECTED BY THE ELECTRICAL WORK.

1.8 SAFETY AND CLEAN-UP

- A. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CLEAN, SAFE WORK PLACE WHILE PERFORMING HIS WORK AND UPON LEAVING EACH EVENING. LIVE ELECTRICAL PARTS OF FIXTURES, DEVICES, AND EQUIPMENT SHALL BE COMPLETELY PROTECTED TO PREVENT ACCIDENTAL INJURY TO OTHERS IN THE BUILDING. ALL STAIRWAYS, HALLS, AND EXITS SHALL BE LEFT WITH FREE ACCESS. TOOLS, TOOL BOXES, LADDERS, MATERIALS, ETC., SHALL BE KEPT IN A CONFINED AREA AWAY FROM NORMALLY OCCUPIED AREAS WHEN NOT IN USE.
- B. THIS CONTRACTOR WILL BE HELD RESPONSIBLE FOR DAMAGE TO OTHER WORK CAUSED BY HIS WORK OR THROUGH THE NEGLIGENCE OF HIS WORKMEN. ALL PATCHING OR REPAIRING OF DAMAGED WORK SHALL BE DONE BY PERSONS OR CONTRACTORS NORMALLY EXPERIENCED IN THE WORK TO BE PERFORMED. SUCH CONTRACTORS OR SUBCONTRACTORS SHALL BE SUBJECT TO PRIOR APPROVAL OF THE OWNER. THE COST OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.

1.9 INTERFERENCES, CUTTING AND PATCHING

- A. THE CONTRACTOR SHALL PREDETERMINE THE LOCATION, SIZE, ETC., OF ALL CHASES AND OPENINGS NECESSARY IN NEW AND EXISTING CONSTRUCTION FOR THE INSTALLATION OF HIS WORK AND SHALL BE RESPONSIBLE TO PROVIDE ALL SUCH OPENINGS. HE SHALL SET ALL SLEEVES, INSERTS, LINTELS AND HANGERS AND BE RESPONSIBLE FOR THEIR PROPER LOCATION AND FOR FINAL PATCHING. CUTTING AND PATCHING SHALL SATISFY DIVISIONS 4, 5, 6, 7 AND 9. SHOULD HE FAIL TO COMPLY WITH THIS CLAUSE AND CUTTING OF NEW CONSTRUCTION IS REQUIRED BECAUSE THE OTHER TRADES WERE NOT PROPERLY NOTIFIED AND INSTRUCTED, THIS CONTRACTOR SHALL, AT HIS OWN EXPENSE, HAVE ANY NECESSARY CUTTING AND PATCHING DONE BY THE CONTRACTOR WHO FIRST INSTALLED THE WORK.
- B. ALL PENETRATIONS SHALL BE FINISHED BY THE ELECTRICAL CONTRACTOR WITH APPROPRIATE AND ACCEPTABLE TRIMS.

1.10 RECEIPT OF PORTABLE OR DETACHABLE PARTS

- A. THE CONTRACTOR SHALL RETAIN IN HIS POSSESSION AND SHALL BE RESPONSIBLE FOR ALL PORTABLE OR DETACHABLE PORTIONS OF THE INSTALLATION SUCH AS FUSES, KEYS, LOCKS, ETC., UNTIL THE COMPLETION OF THE WORK, AND SHALL TURN THEM OVER TO THE OWNER AND OBTAIN AN ITEMIZED RECEIPT. THIS RECEIPT, TOGETHER WITH A CERTIFICATE OF APPROVAL, SHALL BE ATTACHED TO THE CONTRACTOR'S REQUEST FOR FINAL PAYMENT.

1.11 CODES, PERMITS AND INSPECTIONS

- A. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND THE STATE CODE, IN ADDITION TO ANY LOCAL, CITY OR COUNTY CODES IN EFFECT AT THE TIME OF CONSTRUCTION.
- B. AT ALL TIMES DURING WHICH THE CONTRACTOR OR ANY SUBCONTRACTOR ARE ENGAGED IN WORK COVERED BY THESE DOCUMENTS, ALL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT SHALL BE OBSERVED.
- C. THE INSTALLATION COVERED BY THESE DOCUMENTS SHALL COMPLY WITH ALL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- D. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS FROM ALL AGENCIES AND OBTAIN ALL INSPECTIONS REQUIRED FOR THE PROSECUTION OF THE ELECTRICAL WORK. ALL PERMITS AND CERTIFICATES OF INSPECTION AND APPROVAL SIGNED BY THE BUILDING DEPARTMENT SHALL BE FURNISHED IN DUPLICATE TO THE OWNER AND SHALL BECOME THE PROPERTY OF THE OWNER.

- E. ALL ELECTRICAL WORK SHALL BE INSPECTED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.

1.12 WORKMANSHIP

- A. ALL ELECTRICAL WORK SHALL BE INSTALLED UNDER THE DIRECTION OF A SKILLED ELECTRICAL FOREMAN ACCEPTABLE TO THE OWNER. ALL WORK SHALL BE TESTED, INSPECTED AND CERTIFIED APPROVED AS TO MATERIALS AND WORKMANSHIP BY THE PROPER AUTHORITY PRIOR TO ACCEPTANCE.
- B. ALL TESTS SHALL BE MADE BEFORE ANY CIRCUIT OR MAIN SWITCH IS MADE HOT. CIRCUITS SHALL BE PHASED OUT AND CONNECTED TO THE PANEL OR MAIN SWITCH IN A PROPER MANNER. LOADS SHALL BE DISTRIBUTED AS EVENLY AS POSSIBLE ON ALL PHASES. ALL WIRES SHALL BE ENTIRELY FREE FROM GROUNDS AND SHORT CIRCUITS. ALL PANELBOARDS SHALL HAVE LOADS DISTRIBUTED BETWEEN THE VARIOUS PHASES SO THAT MAXIMUM VARIATION IN CURRENT READINGS OF THE DIFFERENT PHASES SHALL NOT EXCEED 5% WHEN ALL THE LOAD IS IN OPERATION.
- C. AFTER COMPLETION OF THE WORK, THE ENTIRE ELECTRICAL SYSTEM, BOTH POWER AND LIGHTING, SHALL BE THOROUGHLY TESTED FOR THEIR PROPER FUNCTIONING. THE TESTING OF ALL ELECTRICAL EQUIPMENT AND CIRCUITS SHALL BE SCHEDULED AND PERFORMED TO THE SATISFACTION OF THE OWNER AND A RECORD OF ALL TEST RESULTS SHALL BE SUPPLIED IN TRIPPLICATE AND SUBMITTED TO THE OWNER PRIOR TO REQUEST FOR FINAL PAYMENT.
- D. THE WORKMANSHIP OF ALL INSTALLED ELECTRICAL EQUIPMENT SHALL BE SUBJECT TO FINAL APPROVAL OF THE OWNER. ANY WORK WHICH DOES NOT MEET RECOGNIZED STANDARDS OF PROPER INSTALLATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE OWNER'S DISCRETION. THE COST OF ANY REPAIR AND/OR REPLACEMENTS NECESSARY DUE TO FAULTY WORKMANSHIP SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION BY THE CONTRACTOR.

1.13 GUARANTEE

- A. THIS CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE AND LEAVE HIS WORK IN PERFECT ORDER AT COMPLETION. SHOULD ANY DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THIS CONTRACTOR SHALL, UPON NOTICE OF SAME, REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE DEFECTS OR THE WORK OF CORRECTING SAME, REPAIRED AND/OR REPLACED AT HIS EXPENSE, TO THE CONDITION BEFORE SUCH DAMAGE. THE DATE OF FINAL ACCEPTANCE IS DEFINED AS THE DATE OF SIGNATURE OF THE OWNER ON THE FINAL PAYMENT OF THE CONTRACT.
- B. THIS GUARANTEE SHALL BE SUPPLIED IN WRITING AND SHALL BE ATTACHED TO THE CONTRACTOR'S REQUEST FOR FINAL PAYMENT.

PART 2 – PRODUCTS AND SYSTEMS

2.1 MATERIALS

- A. ELECTRICAL MATERIALS SHALL BE NEW, SHALL MEET N.E.C. STANDARDS, SHALL BEAR THE U.L. LABEL, AND SHALL BE PROTECTED FROM INJURY UNTIL FINAL ACCEPTANCE.
- B. INTERIOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING OR P.V.C. (WHERE ACCEOTABLE BY CODE) UNDER THE GROUND FLOOR. BURIED EXTERIOR CONDUITS SHALL BE SCHEDULE 40 P.V.C. RUN A GROUND CONDUCTOR IN EACH PVC CONDUIT.
- C. WIRE AND CABLE SHALL BE COPPER WITH 600 VOLT TYPE "THW", "THWN", OR "THHN" INSULATION. WIRE SMALLER THAN #12 AWG SHALL NOT BE USED. 150 DEGREES C TYPE "AF" WIRING IS REQUIRED FOR INCANDESCENT FIXTURE WIRING. HOMERUNS SHALL BE #10 AWG AND ABOVE 150 FEET SHALL BE #8 AWG.
- D. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS AND CAST ALLOY WITH THREADED HUBS IN WET AND DAMP LOCATIONS.
- E. PANELBOARDS SHALL HAVE A HINGED DOOR WITH TYPEWRITTEN PANEL LEGEND INDICATING ALL CIRCUITS SUPPLIED INCLUDING SPARES.

2.2 LIGHTING SYSTEMS

- A. PROVIDE ALL LIGHTING FIXTURES AND LAMPS AS SHOWN IN THE FIXTURE SCHEDULE AND/OR DESCRIBED IN THESE SPECIFICATIONS. COORDINATE WITH ALL OTHER TRADES IN THE LOCATING OF LIGHTING OUTLETS.
1. INCANDESCENT LAMPS: 130 VOLTS
2. LAMPS SHALL BE OF THE SAME MANUFACTURER THROUGHOUT THE PROJECT AND SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, PHILIPS, OR SYLVANIA.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE N.E.C., ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND THE OWNER'S DESIGN CRITERIA. DURING CONSTRUCTION, OBSERVE ALL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- B. THIS DESIGN IS ADDRESSED TO A CONTRACTOR WHICH IS LICENSED IN HIS WORK AND UNDERSTANDS THE NATIONAL, STATE, AND LOCAL CODES. IT IS NOT POSSIBLE TO REPRODUCE THE ENTIRE CODE WITHIN THESE DRAWINGS AND SPECIFICATIONS; THEREFORE, IT IS THE RESPONSIBILITY OF THE INSTALLER TO USE APPROVED MATERIALS, METHODS, AND LOCATIONS ACCEPTABLE TO THE FEDERAL, STATE, AND LOCAL CODES AND AUTHORITIES.
- C. EXTERIOR OUTLETS SHALL BE GFI (GROUND FAULT INTERRUPTED). PROVIDE OUTDOOR OUTLET COVER
- D. PROVIDE A COMPLETE GROUNDING SYSTEM PER N.E.C. PROVIDE SEPARATE GROUND CONDUCTOR FOR ALL POWER CIRCUITS.
- E. CODE REQUIREMENTS SHALL BE INCLUDED AN INSTALLED EVEN IF NOT SHOWN. DRAWINGS ARE SCHEMATIC AND MAY NOT SHOW CODE REQUIREMENTS.
- F. MOUNT ALL RECEPTACLES VERTICALLY UNLESS OTHERWISE NOTED.
- G. PERMANENTLY MARK BACK OF DEVICE PLATES WITH PANEL AND CIRCUIT NUMBER. PROVIDE NAMEPLATES FOR ALL EQUIPMENT.
- H. ALL WIRING SHALL BE INSTALLED IN CONDUIT.
- I. SURFACE-MOUNTED FIXTURES, FLUORESCENT AND INCANDESCENT, SHALL BE MOUNTED SECURELY TO THE CEILING. PROVIDE AIR GAP TO CEILING IF REQUIRED.
- J. EXTERIOR EQUIPMENT SHALL BE NEMA 3R
- K. LIGHT FIXTURES SHALL BE SUPPORTED FROM BUILDING STRUCTURE.
- L. CLEAN LAMPS AFTER CONSTRUCTION IS FINISHED.
- M. PROVIDE ALL CUTTING, PATCHING, AND OPENINGS IN FLOORS
- N. WIRING DEVICES SHALL BE INSTALLED IN OUTLET BOXES. BOXES SHALL BE 4-INCH SQUARE MINIMUM WITH DEVICE COVERS TO SUIT.



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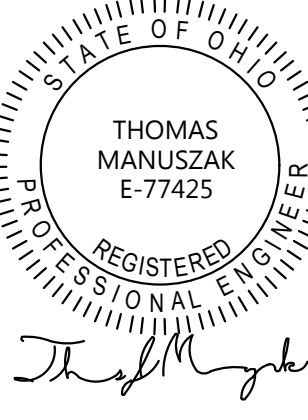
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SEAL:



STATE APPROVAL:

BULLETIN #	DATE
#1	03-12-18

DATE	ISSUANCE
03-19-18	ISSUED FOR BIDD
03-29-18	ISSUED FOR BID & PERMIT
04-07-18	ISSUED PER STATE & OWNER COMMENTS
02-04-20	ISSUED PER STATE & OWNER COMMENTS

PROJECT #: 17121

ELECTRICAL  
SPECIFICATION

SHEET NUMBER:

E-5.0