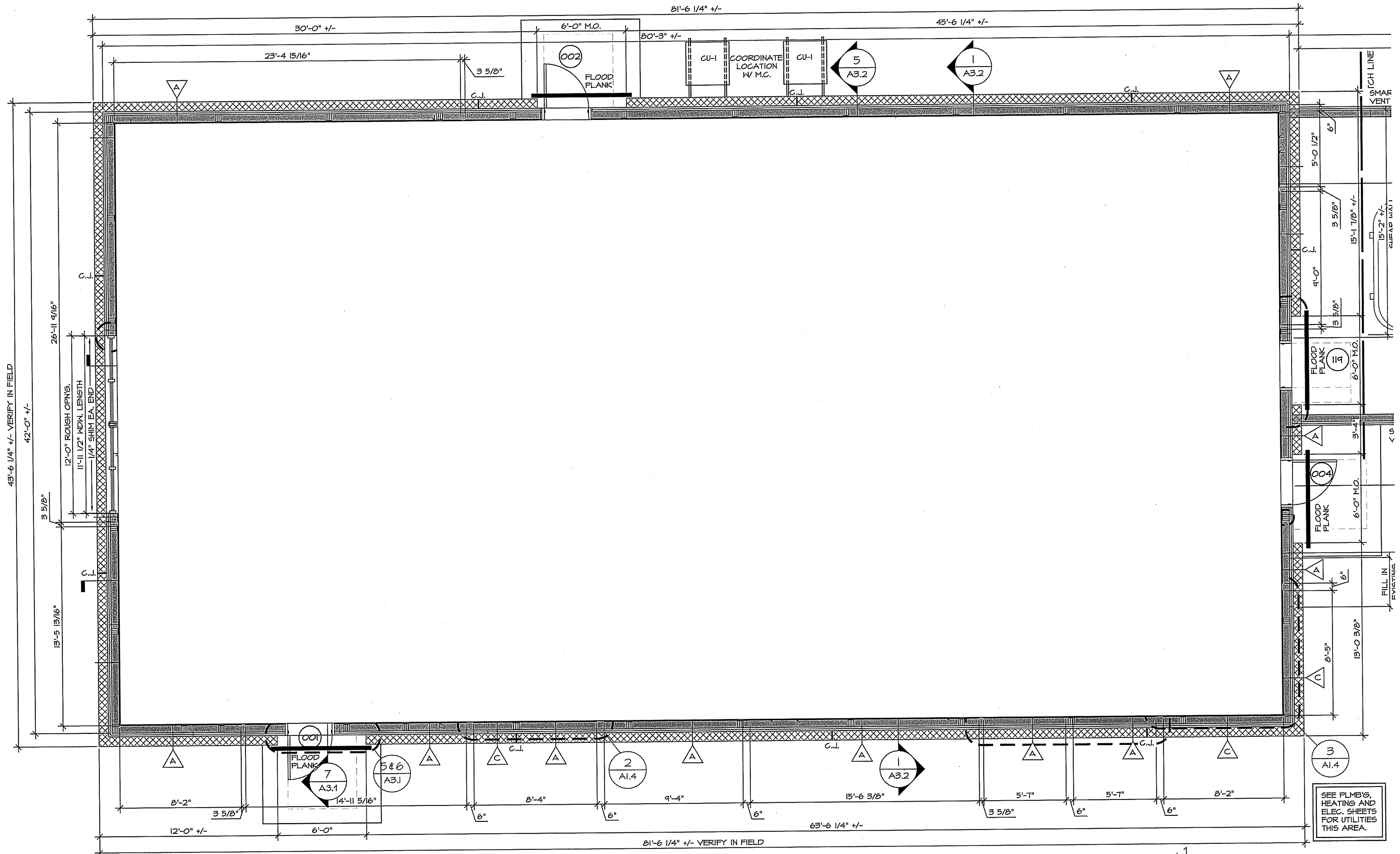
N:\PAA Company\Paul Albert Architect\DWGS\Lycoming County - Shore Auto\1A - Flood Wall Bid.dwg, 2/3/2021 10:38:52 AM, AutoCAD PDF (General Documentation).pc3



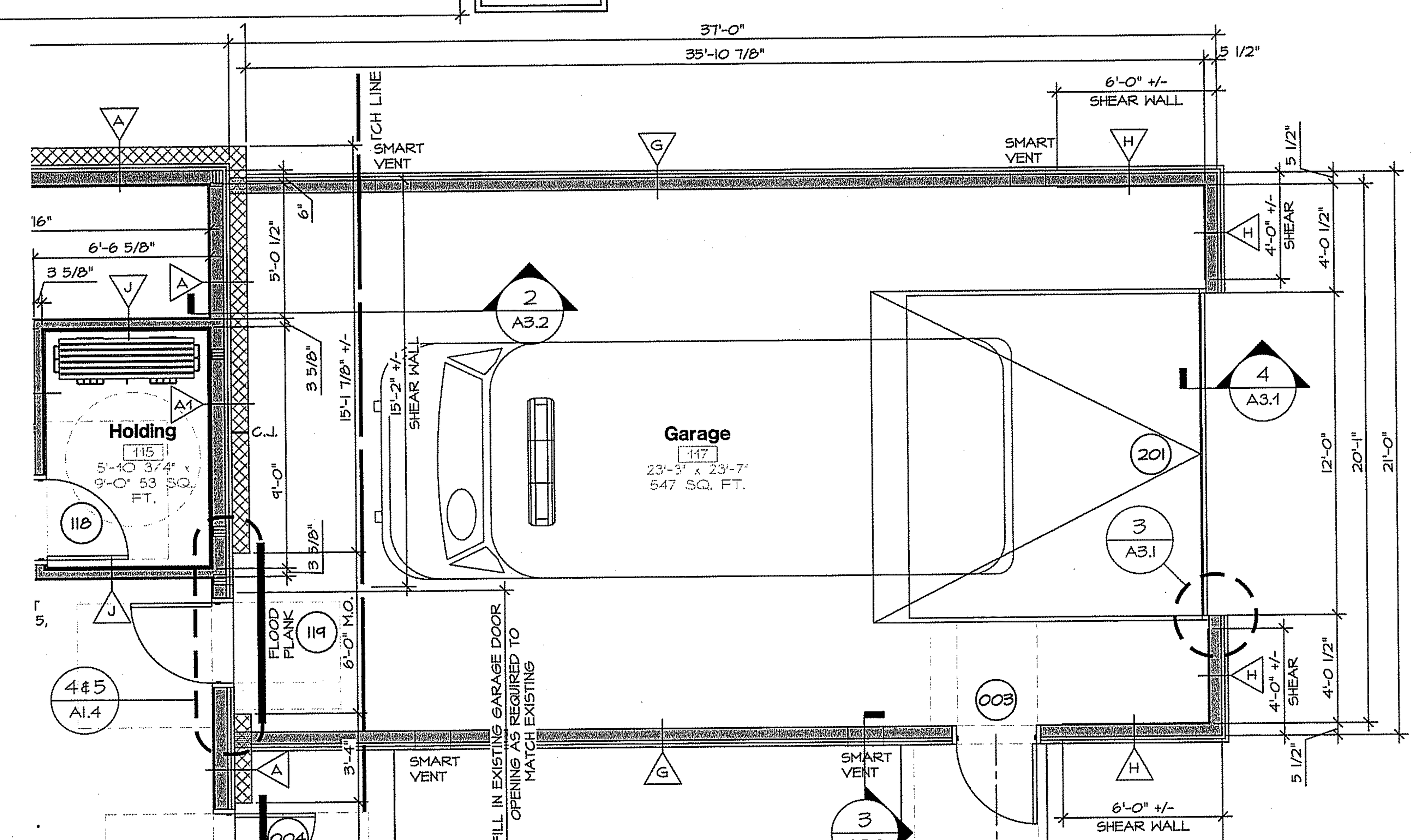
1	Proposed Floor Plan
A1.2	Scale: 1/4"=1'-0"

SEE CODE SHEET A0.1 FOR ADDITIONAL INFO SUCH AS FIRE EXTINGUISHERS, SIGNAGE, ETC.

SEE STRUCTURAL SHEET S1.1 FOR CONCRETE PADS AT MAN DOORS

SEE STRUCTURAL SHEET S1.1 FOR CONTROL JOINT LOCATIONS (C.J. —)

FLOOD PLANK INFO
HYDRODEFENSE FLOOD PLANK (FP-530)
TYPICAL AT 4 LOCATIONS (SEE SHT. A2.2 FOR ADD. INFO)



2	Garage Plan
A1.2	Scale: 1/4"=1'-0"

Architect:
PAUL ALBERT ARCHITECT, LLC.
ARCHITECTURE DESIGN BUILD
Paul Albert
Principal
2442 Lycoming Creek Road
Williamsport, PA 17701
Phone: 570.601.1600
Cell: 570.772.5647
Fax: 570.601.1601
paul@paulalbertarchitect.com

Consultants

Seal

Project Info:
Architectural Design and Drawings
for the
Lycoming County
Offices for DJ Solomon (29-3-04)
2107 Lycoming Creek Road
Lycoming County
Williamsport, Pa

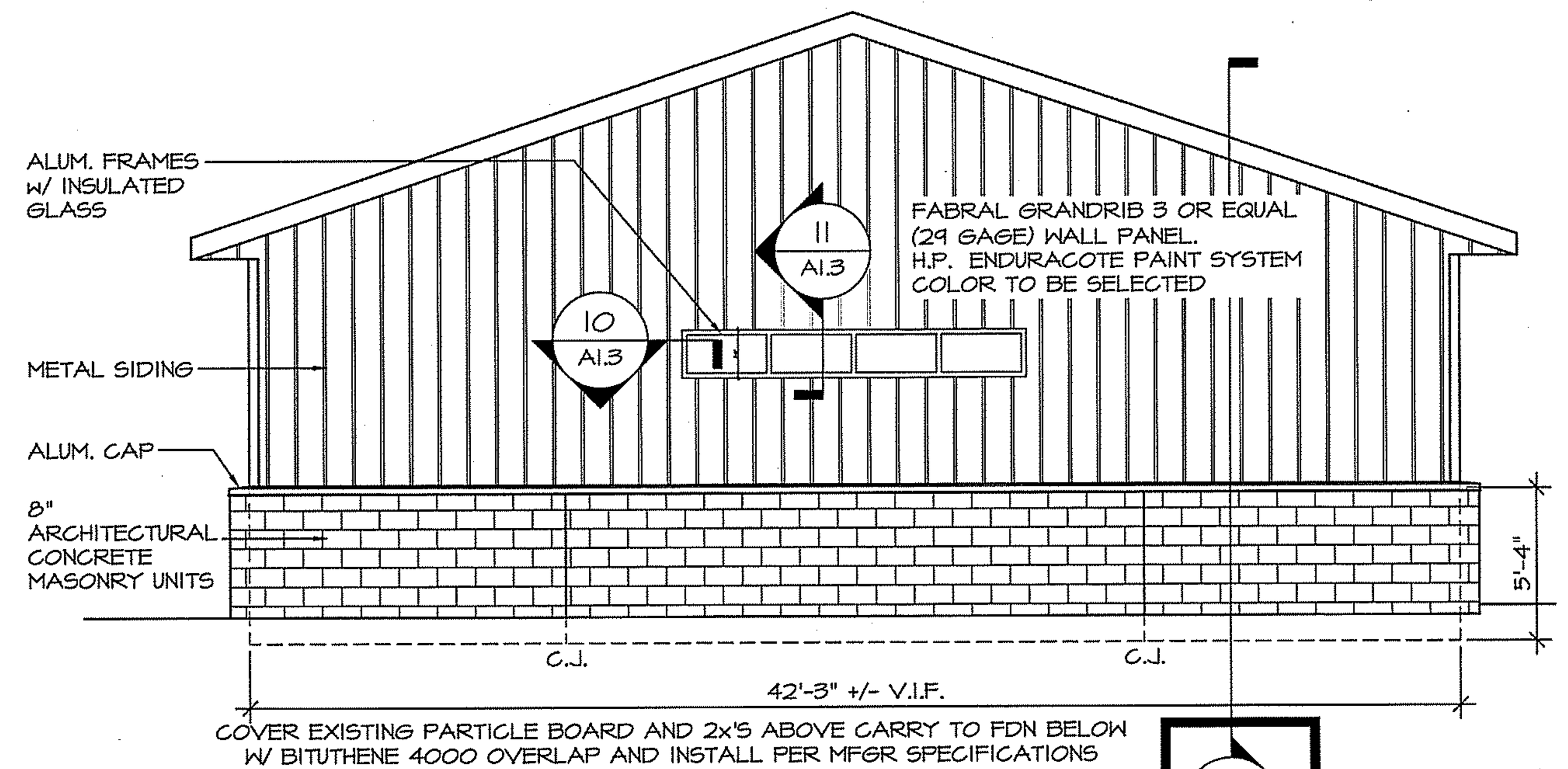
Revisions:

Date:	December 4, 2020
Drawn By:	BJE
Checked By:	PAA
Project No.:	20-109

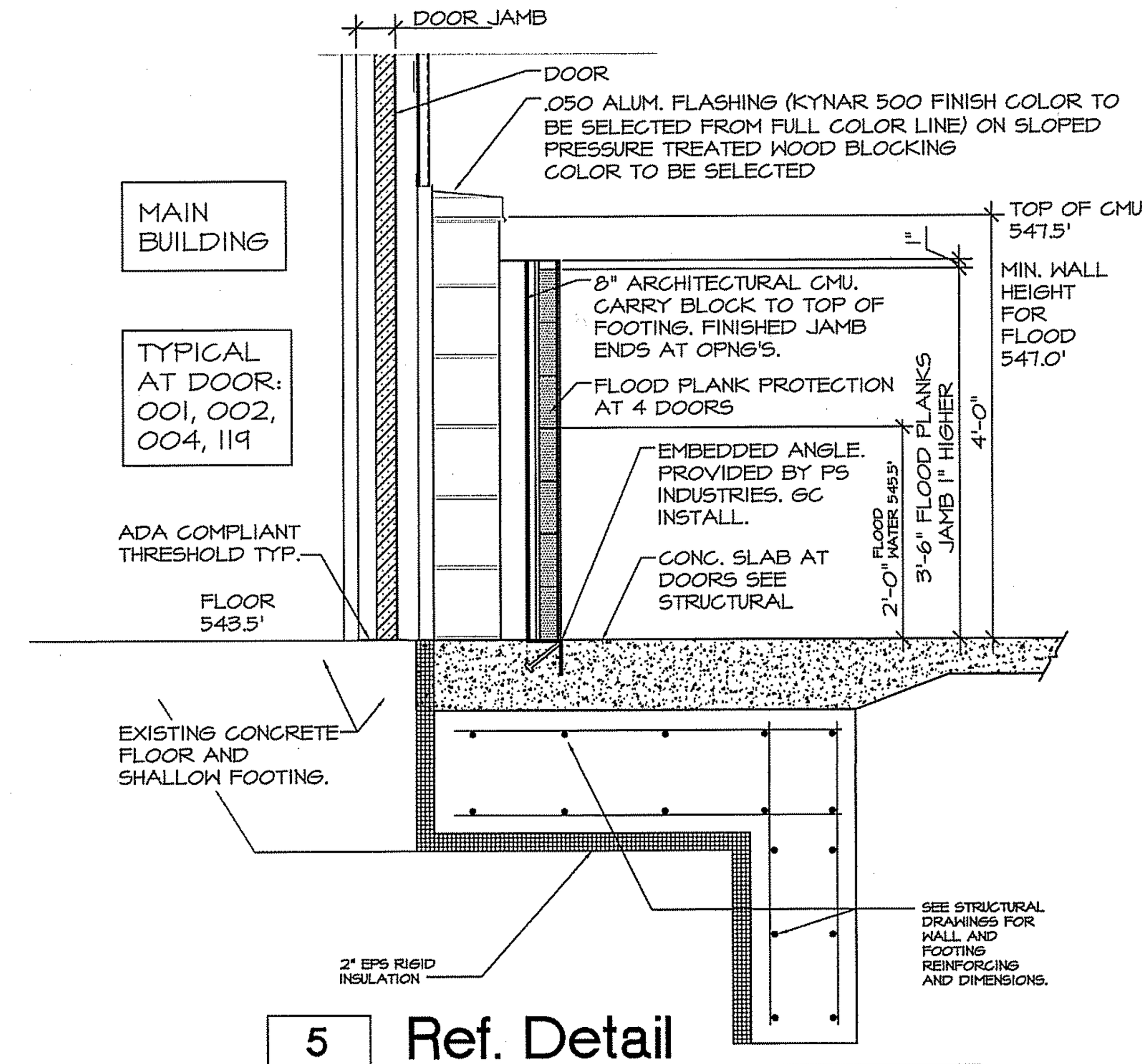
Sheet Title:
Proposed Floor Plan

Sheet:
A1.2 FW

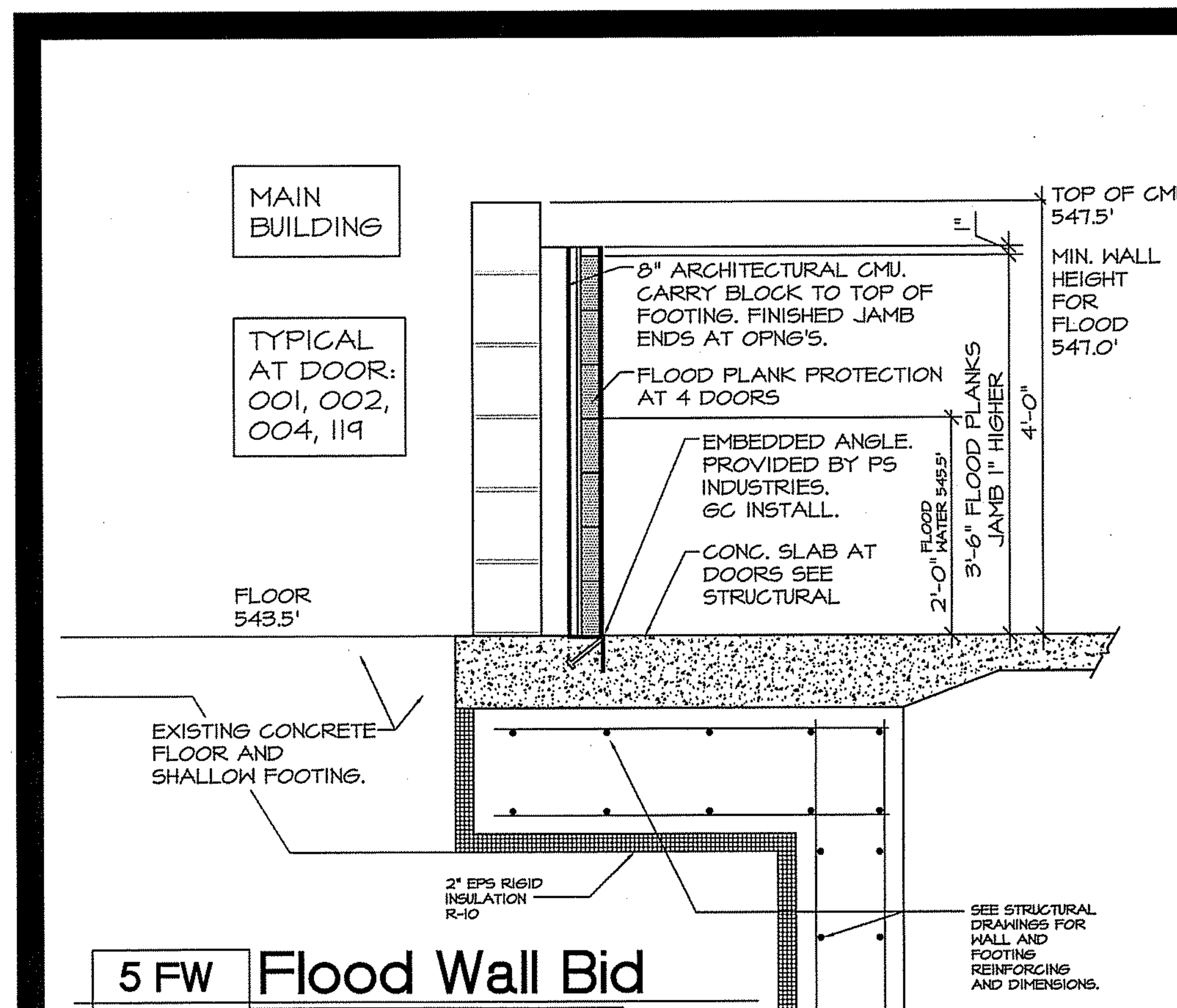
N:\PAA Company\Paul Albert Architect\DWGS\Lycoming County - Shore Auto\1A - Flood Wall Bid.dwg, 2/3/2021 10:38:57 AM, AutoCAD PDF (General Documentation).pc3



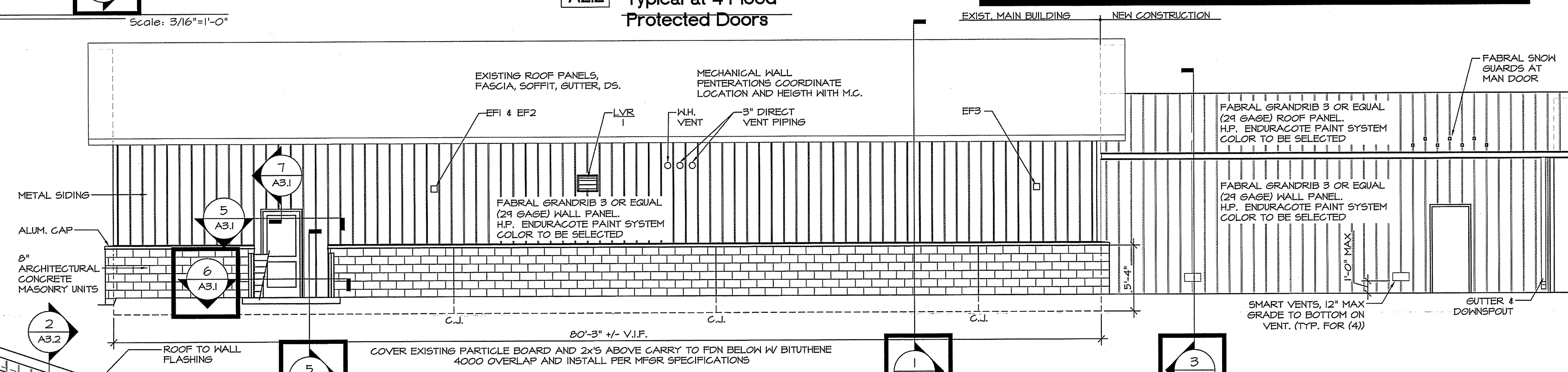
1 A2.2 Front Elevation
Scale: 3/16"=1'-0"



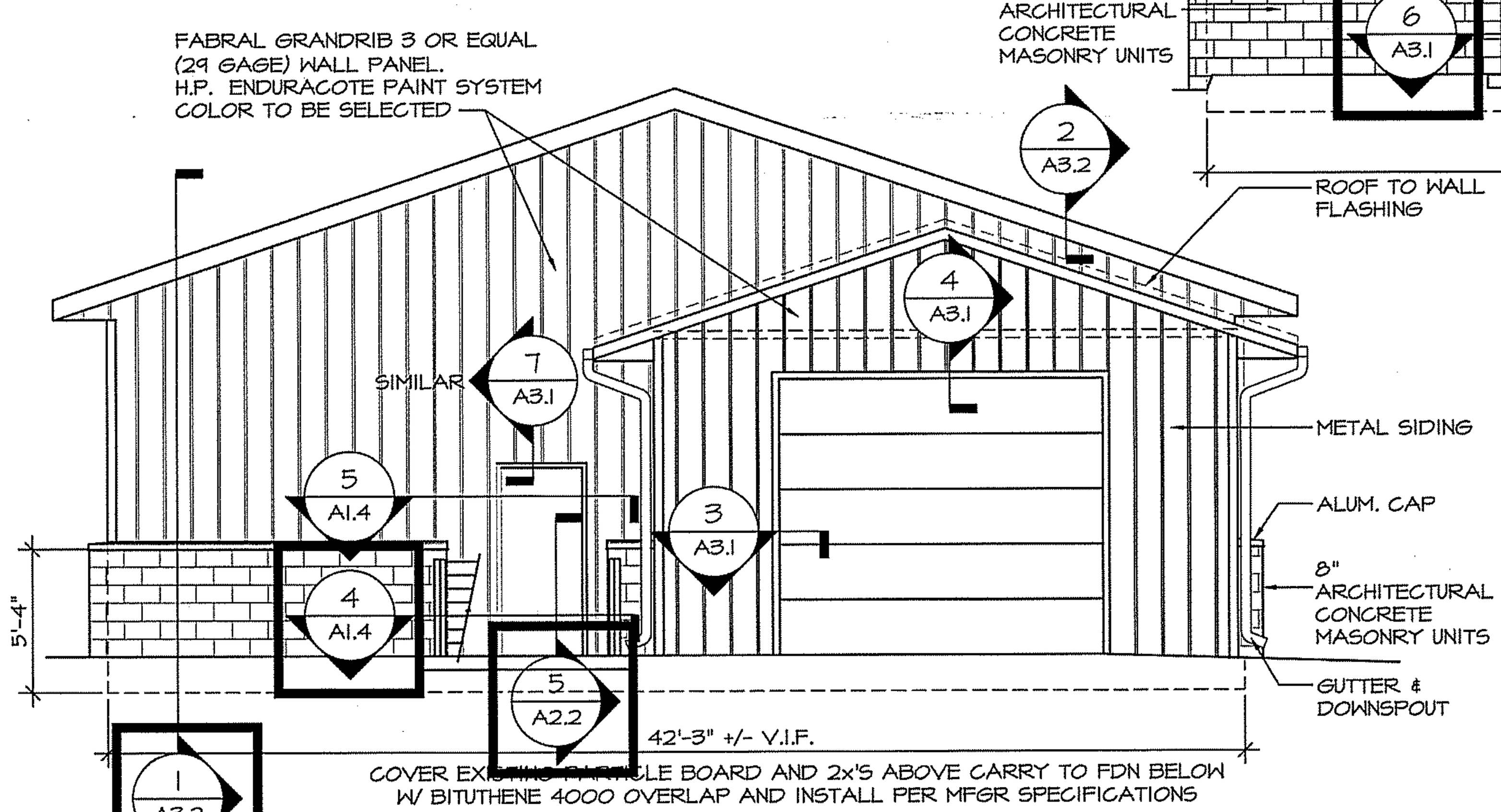
5 A2.2 Ref. Detail
Typical at 4 Flood Protected Doors
Scale: 3/4"=1'-0"



5 FW A2.2 FW Flood Wall Bid
Typical at 4 Flood Protected Doors
Scale: 3/4"=1'-0"

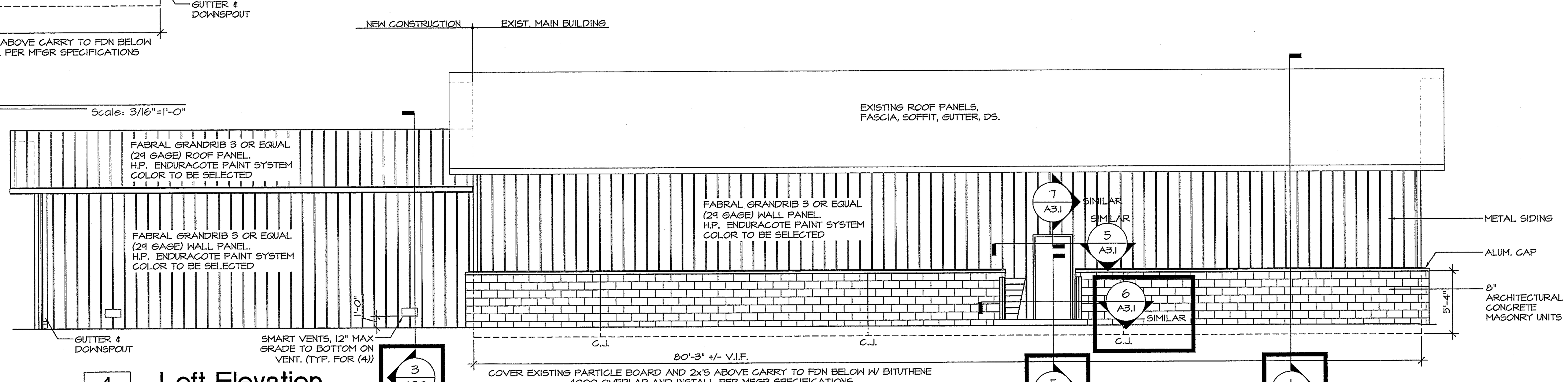


2 A2.2 Right Elevation
Scale: 3/16"=1'-0"



3 A2.2 Rear Elevation
Scale: 3/16"=1'-0"

CONTROL JOINTS:
FILL CONTROL JOINTS WITH SIKAFLEX - 2 C NS (OR EQUAL) FOLLOW MFGR. SPECIFICATIONS. COLOR TO BE SELECTED.



4 A2.2 Left Elevation
Scale: 3/16"=1'-0"

Architect:
PAUL ALBERT ARCHITECT, LLC.
ARCHITECTURE DESIGN BUILD
Paul Albert, Principal
2442 Lycoming Creek Road
Williamsport, PA 17701
Phone: 570.601.1600
Cell: 570.772.5047
Fax: 570.601.1601
Paul@paulalbertarchitect.com

Consultants:

Seal: Registered Architect, Pennsylvania, Paul Benson Albert, No. 10190

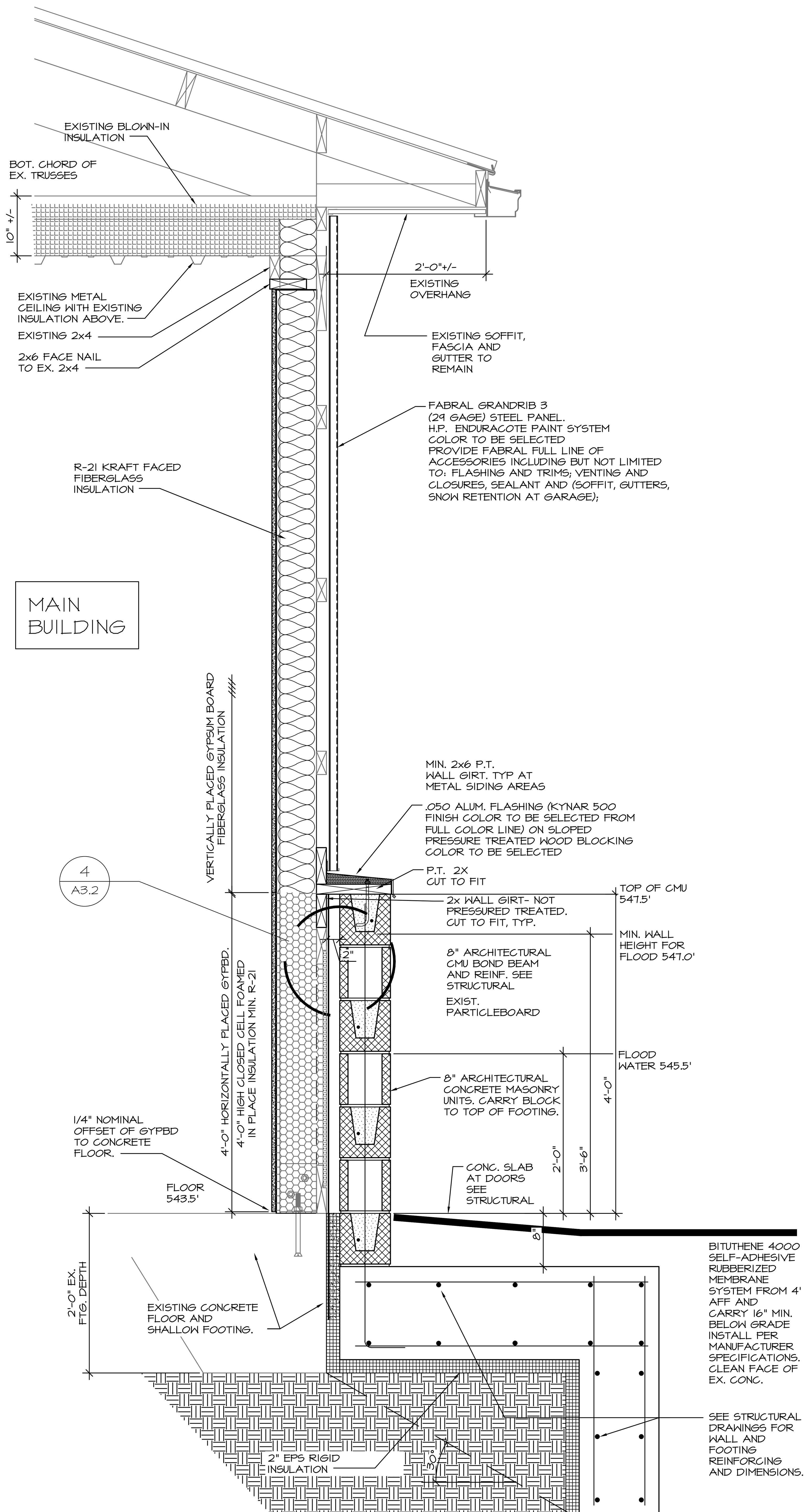
Project Info:
Architectural Design and Drawings for the
Lycoming County
Offices for DJ Solomon (29-3-04)
2107 Lycoming Creek Road, Lycoming County, Williamsport, Pa.

Revisions:

Date:	December 4, 2020
Drawn By:	BJE
Checked By:	PAA
Project No.:	20-109

Sheet Title: Exterior Elevations

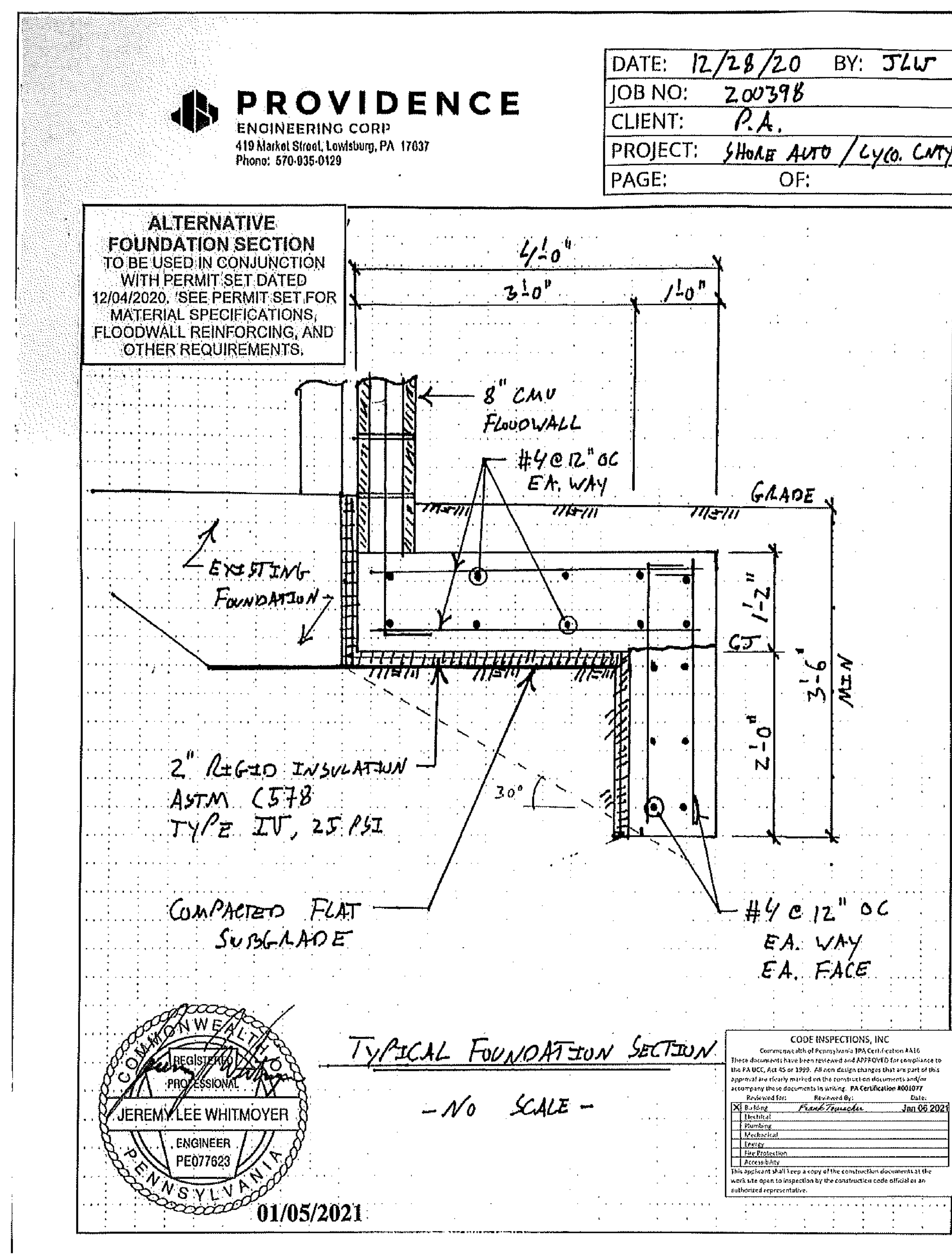
Sheet: A2.2 FW

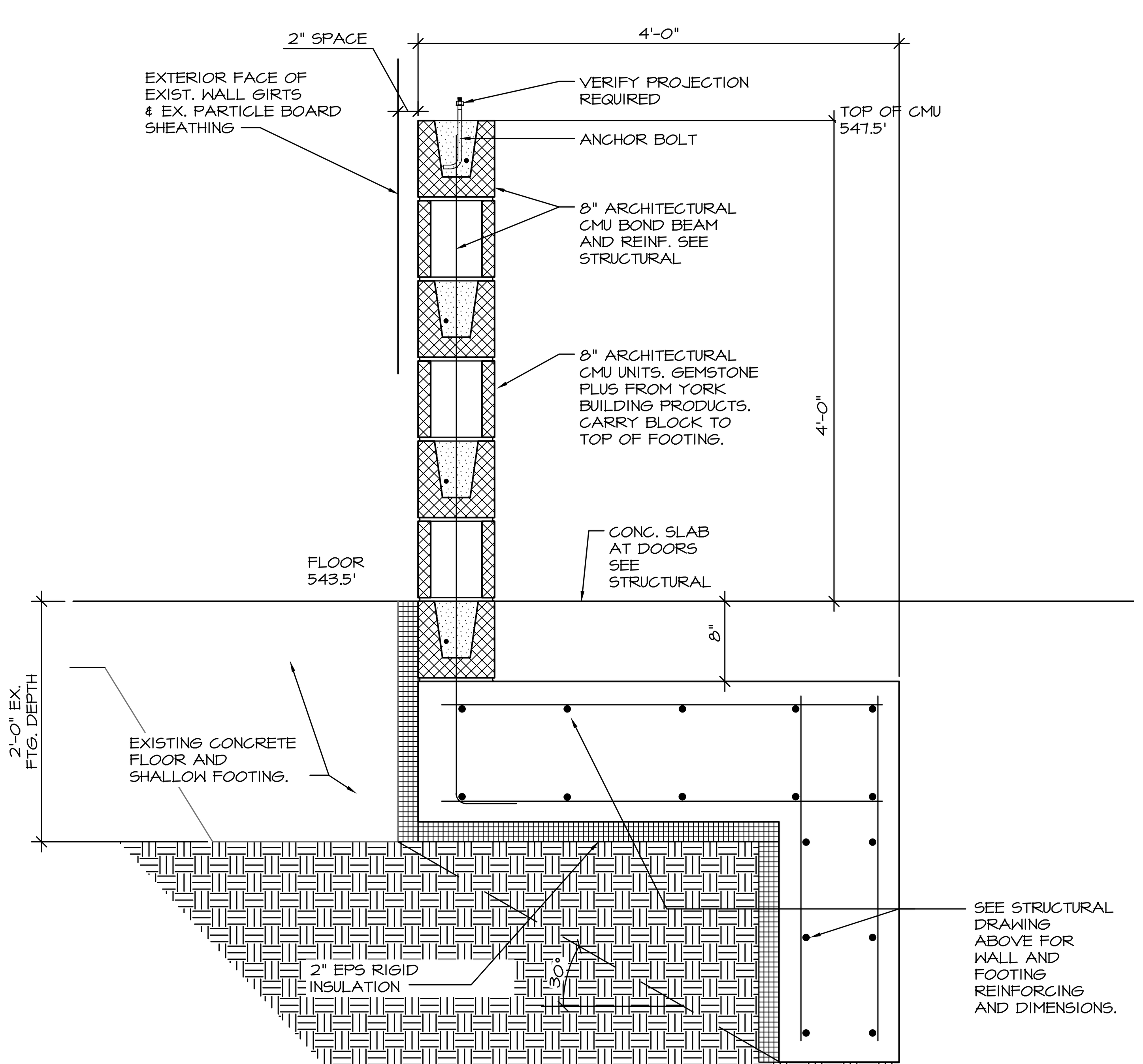

EXISTING BLOWN-IN INSULATION
BOT. CHORD OF EX. TRUSSES
10" +/-
2'-0"+/- EXISTING OVERHANG
EXISTING METAL CEILING WITH EXISTING INSULATION ABOVE.
EXISTING 2x4
2x6 FACE NAIL TO EX. 2x4
EXISTING SOFFIT, FASCIA AND GUTTER TO REMAIN
FABRAL GRANDRIB 3 (24 GAGE) STEEL PANEL. H.P. ENDURACOTE PAINT SYSTEM COLOR TO BE SELECTED PROVIDE FABRAL FULL LINE OF ACCESSORIES INCLUDING BUT NOT LIMITED TO: FLASHING AND TRIMS; VENTING AND CLOSURES, SEALANT AND (SOFFIT, GUTTERS, SNOW RETENTION AT GARAGE);
R-21 KRAFT FACED FIBERGLASS INSULATION
MAIN BUILDING
VERTICALLY PLACED GYPSUM BOARD FIBERGLASS INSULATION
MIN. 2x6 P.T. WALL GIRT. TYP AT METAL SIDING AREAS
.050 ALUM. FLASHING (KYNAR 500 FINISH COLOR TO BE SELECTED FROM FULL COLOR LINE) ON SLOPED PRESSURE TREATED WOOD BLOCKING COLOR TO BE SELECTED
P.T. 2X CUT TO FIT
4 A3.2
2x WALL GIRT- NOT PRESSURED TREATED. CUT TO FIT, TYP.
TOP OF CMU 547.5'
8" ARCHITECTURAL CMU BOND BEAM AND REINF. SEE STRUCTURAL
MIN. WALL HEIGHT FOR FLOOD 547.0'
EXIST. PARTICLEBOARD
4'-0" HORIZONTALLY PLACED GYPBD.
4'-0" HIGH CLOSED CELL FOAMED IN PLACE INSULATION MIN. R-21
FLOOD WATER 545.5'
8" ARCHITECTURAL CONCRETE MASONRY UNITS. CARRY BLOCK TO TOP OF FOOTING.
4'-0"
3'-6"
2'-0"
1/4" NOMINAL OFFSET OF GYPBD TO CONCRETE FLOOR.
CONC. SLAB AT DOORS SEE STRUCTURAL
FLOOR 543.5'
8"
2'-0" EX. FTG. DEPTH
EXISTING CONCRETE FLOOR AND SHALLOW FOOTING.
BITUTHENE 4000 SELF-ADHESIVE RUBBERIZED MEMBRANE SYSTEM FROM 4' AFF AND CARRY 16" MIN. BELOW GRADE INSTALL PER MANUFACTURER SPECIFICATIONS. CLEAN FACE OF EX. CONC.
SEE STRUCTURAL DRAWINGS FOR WALL AND FOOTING REINFORCING AND DIMENSIONS.
2" EPS RIGID INSULATION

See 1 FW/A3.2 FW Flood Wall Bid

1 A3.2 Ref. Wall Section

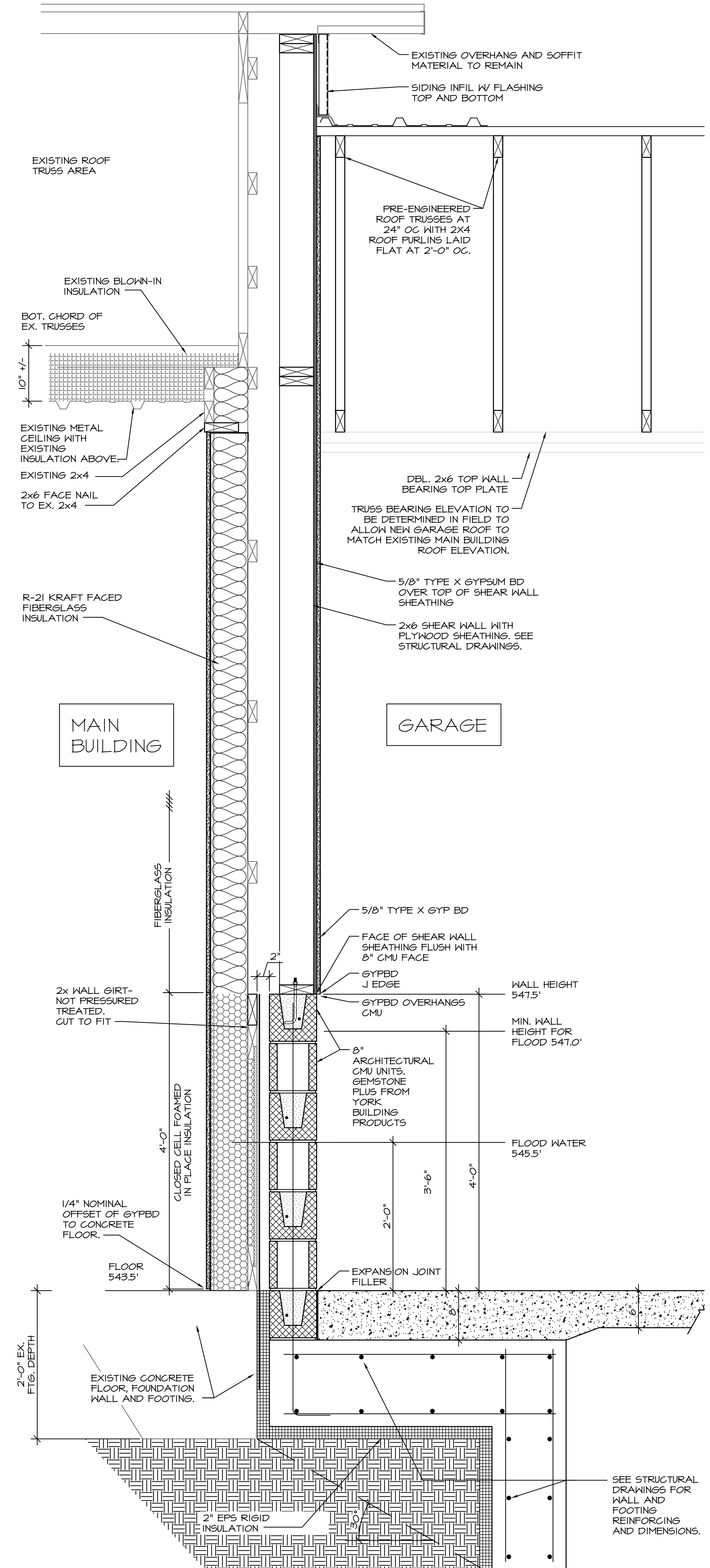
Scale: 1"=1'-0"


PROVIDENCE
ENGINEERING CORP
419 Market Street, Lewisburg, PA 17837
Phone: 570-935-0129
DATE: 12/28/20 BY: JLW
JOB NO: 200398
CLIENT: P.A.
PROJECT: Shore Auto / Lyco. Cnty
PAGE: OF:
ALTERNATIVE FOUNDATION SECTION
TO BE USED IN CONJUNCTION WITH PERMIT SET DATED 12/04/2020. SEE PERMIT SET FOR MATERIAL SPECIFICATIONS, FLOODWALL REINFORCING, AND OTHER REQUIREMENTS.
4'-0"
3'-0"
1'-0"
8" CMU FLOODWALL
#4 @ 12" OC EA. WAY
GRADE
EXISTING FOUNDATION
1'-2"
CJ
3'-6" MIN
2'-0"
2" RIGID INSULATION ASTM C578 TYPE IV, 25 PSI
30°
COMPACTED FLAT SUBGRADE
#4 @ 12" OC EA. WAY EA. FACE
TYPICAL FOUNDATION SECTION
- NO SCALE -
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
JEREMY LEE WHITMOYER
ENGINEER
PE077823
01/05/2021
CODE INSPECTIONS, INC


2" SPACE
4'-0"
EXTERIOR FACE OF EXIST. WALL GIRTS & EX. PARTICLE BOARD SHEATHING
VERIFY PROJECTION REQUIRED
ANCHOR BOLT
TOP OF CMU 547.5'
8" ARCHITECTURAL CMU BOND BEAM AND REINF. SEE STRUCTURAL
8" ARCHITECTURAL CMU UNITS. GEMSTONE PLUS FROM YORK BUILDING PRODUCTS. CARRY BLOCK TO TOP OF FOOTING.
4'-0"
CONC. SLAB AT DOORS SEE STRUCTURAL
FLOOR 543.5'
8"
2'-0" EX. FTG. DEPTH
EXISTING CONCRETE FLOOR AND SHALLOW FOOTING.
SEE STRUCTURAL DRAWING ABOVE FOR WALL AND FOOTING REINFORCING AND DIMENSIONS.
2" EPS RIGID INSULATION

1 FW A3.2 FW AND 2 FW A3.2 FW Flood Wall Bid

Scale: 1"=1'-0"


EXISTING OVERHANG AND SOFFIT MATERIAL TO REMAIN
SIDING INFIL W/ FLASHING TOP AND BOTTOM
EXISTING ROOF TRUSS AREA
PRE-ENGINEERED ROOF TRUSSES AT 24" OC WITH 2X4 ROOF PURLINS LAID FLAT AT 2'-0" OC.
EXISTING BLOWN-IN INSULATION
BOT. CHORD OF EX. TRUSSES
EXISTING METAL CEILING WITH EXISTING INSULATION ABOVE
EXISTING 2x4
2x6 FACE NAIL TO EX. 2x4
DBL. 2x6 TOP WALL BEARING TOP PLATE
TRUSS BEARING ELEVATION TO BE DETERMINED IN FIELD TO ALLOW NEW GARAGE ROOF TO MATCH EXISTING MAIN BUILDING ROOF ELEVATION.
5/8" TYPE X GYPSUM BD OVER TOP OF SHEAR WALL SHEATHING
2x6 SHEAR WALL WITH PLYWOOD SHEATHING. SEE STRUCTURAL DRAWINGS.
R-21 KRAFT FACED FIBERGLASS INSULATION
MAIN BUILDING
GARAGE
FIBERGLASS INSULATION
5/8" TYPE X GYP BD
FACE OF SHEAR WALL SHEATHING FLUSH WITH 8" CMU FACE
GYPBD J EDGE
GYPBD OVERHANGS CMU
WALL HEIGHT 547.5'
2x WALL GIRT- NOT PRESSURED TREATED. CUT TO FIT
MIN. WALL HEIGHT FOR FLOOD 547.0'
8" ARCHITECTURAL CMU UNITS. GEMSTONE PLUS FROM YORK BUILDING PRODUCTS
4'-0" CLOSED CELL FOAMED IN PLACE INSULATION
FLOOD WATER 545.5'
1/4" NOMINAL OFFSET OF GYPBD TO CONCRETE FLOOR.
FLOOR 543.5'
EXPANSION JOINT FILLER
2'-0" EX. FTG. DEPTH
EXISTING CONCRETE FLOOR, FOUNDATION WALL AND SHALLOW FOOTING.
SEE STRUCTURAL DRAWINGS FOR WALL AND FOOTING REINFORCING AND DIMENSIONS.
2" EPS RIGID INSULATION

See 2 FW/A3.2 FW Flood Wall Bid

2 A3.2 Ref. Wall Section

Scale: 1"=1'-0"

Architect:
PAUL ALBERT ARCHITECT, LLC.
ARCHITECTURE DESIGN BUILD
Paul Albert Principal
2442 Lycoming Creek Road Williamsport, PA 17701
Phone 570.601.6600
Cell 570.772.9047
Fax 570.601.6601
paul@paulalbertarchitect.com

Consultants

Seal:

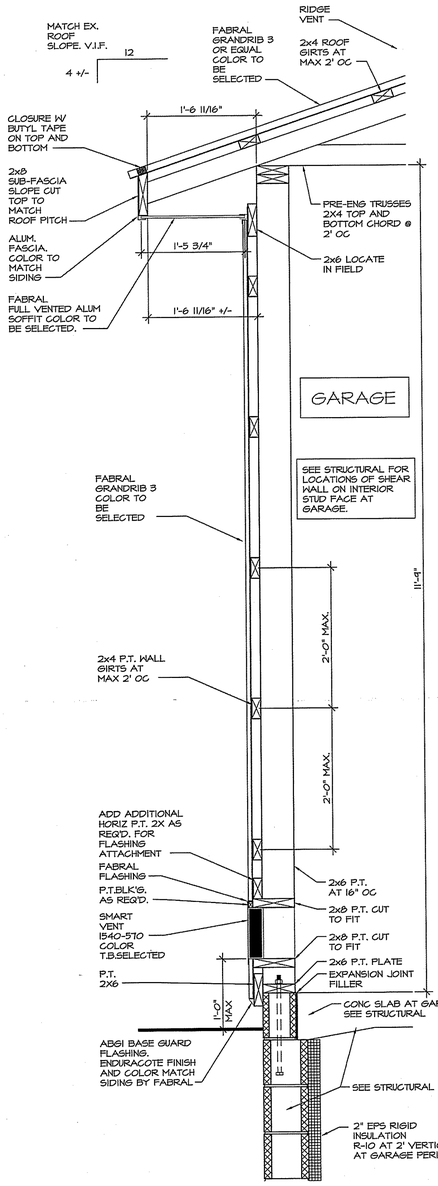
Project Info:
Architectural Design and Drawings for the
Lycoming County
Offices for DJ Solomon (29-3-04)
2107 Lycoming Creek Road Lycoming County Williamsport, Pa

Revisions:

Date:	December 4, 2020
Drawn By:	BJE
Checked By:	PAA
Project No.:	20-109

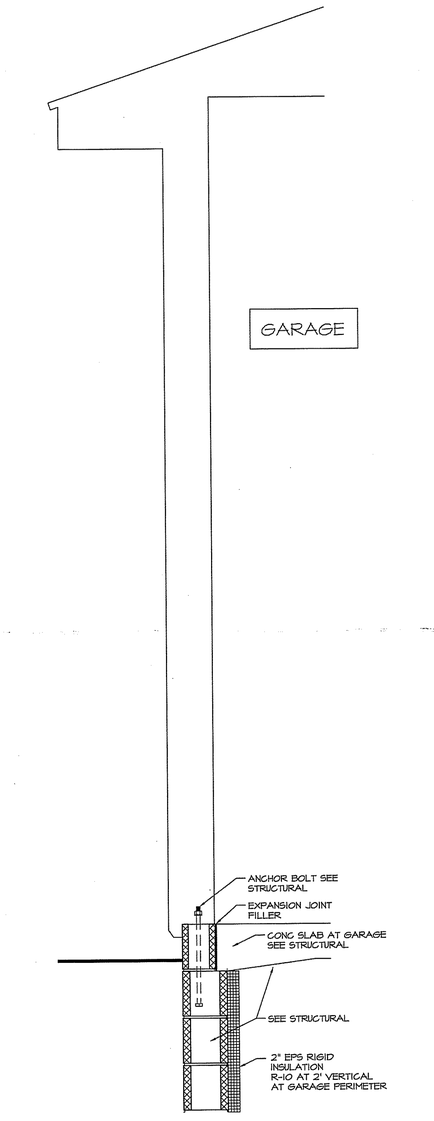
Sheet Title:
Sections Details

Sheet:
A3.2 FW



3 / A3.2 **Ref. Wall Section**

Scale: 1"=1'-0"



3 / A3.2 **Fdn and Ft'g. Bid**

Scale: 1"=1'-0"

Architect
PAUL ALBERT ARCHITECT, LLC.
ARCHITECTURE DESIGN BUILD
Paul Albert President
2445 Lycoming Creek Rd
Williamsport, PA 17701
Phone: 570.601.1600
Cell: 570.772.6647
Fax: 570.601.1601
Paul@paulalbertarchitect.com

Consultants

Seal

PAUL ALBERT REGISTERED ARCHITECT PENNSYLVANIA

Project Info:

Architectural Design and Drawings for the

Lycoming County

Offices for DJ Solomon (29-3-04)

2107 Lycoming Creek Road Lycoming County Williamsport, Pa

Revisions:

Date:	December 4, 2020
Drawn By:	BJE
Checked By:	PAA
Project No.:	20-109

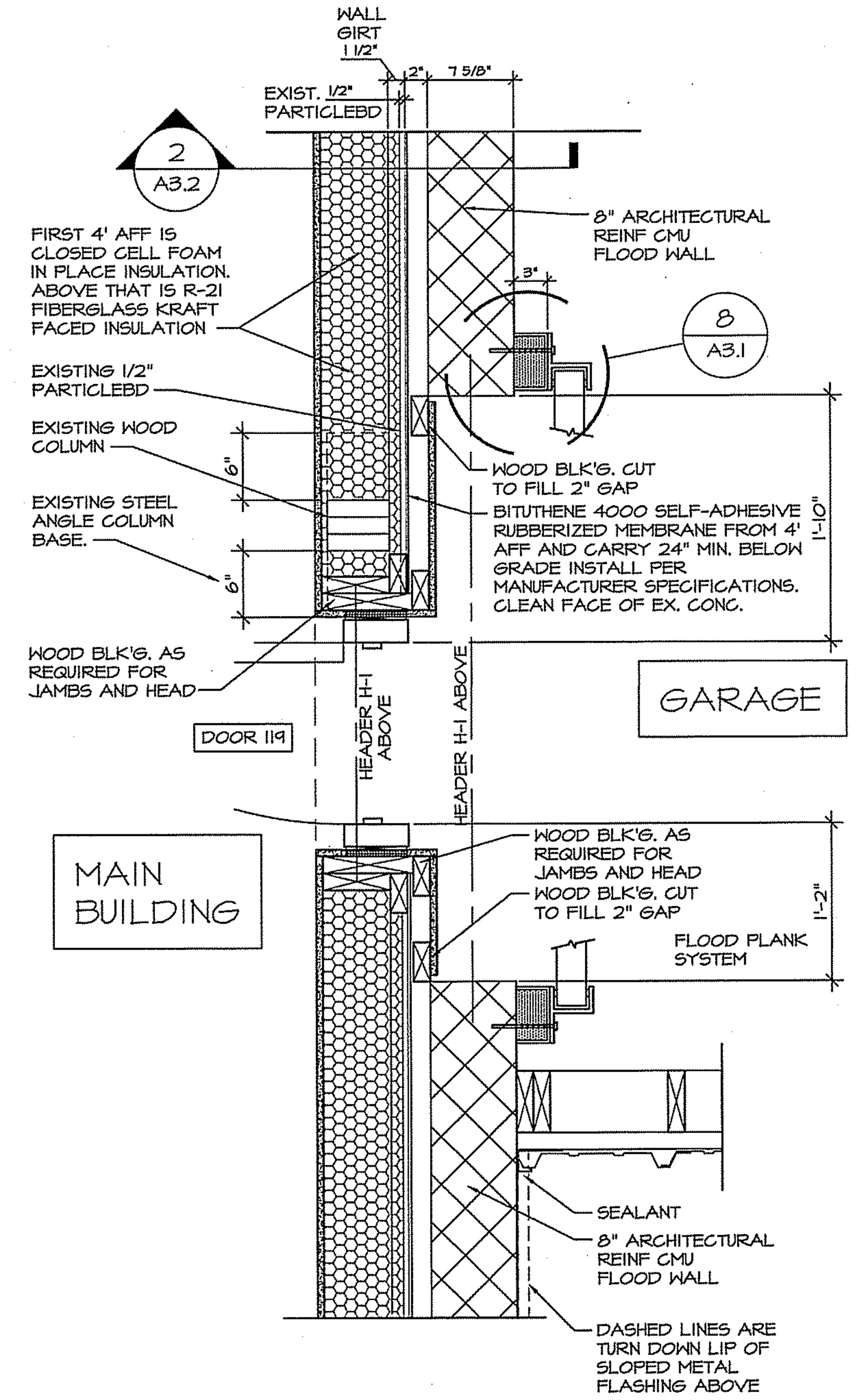
Sheet Title:

Sections Details

Sheet:

A3.3 FW

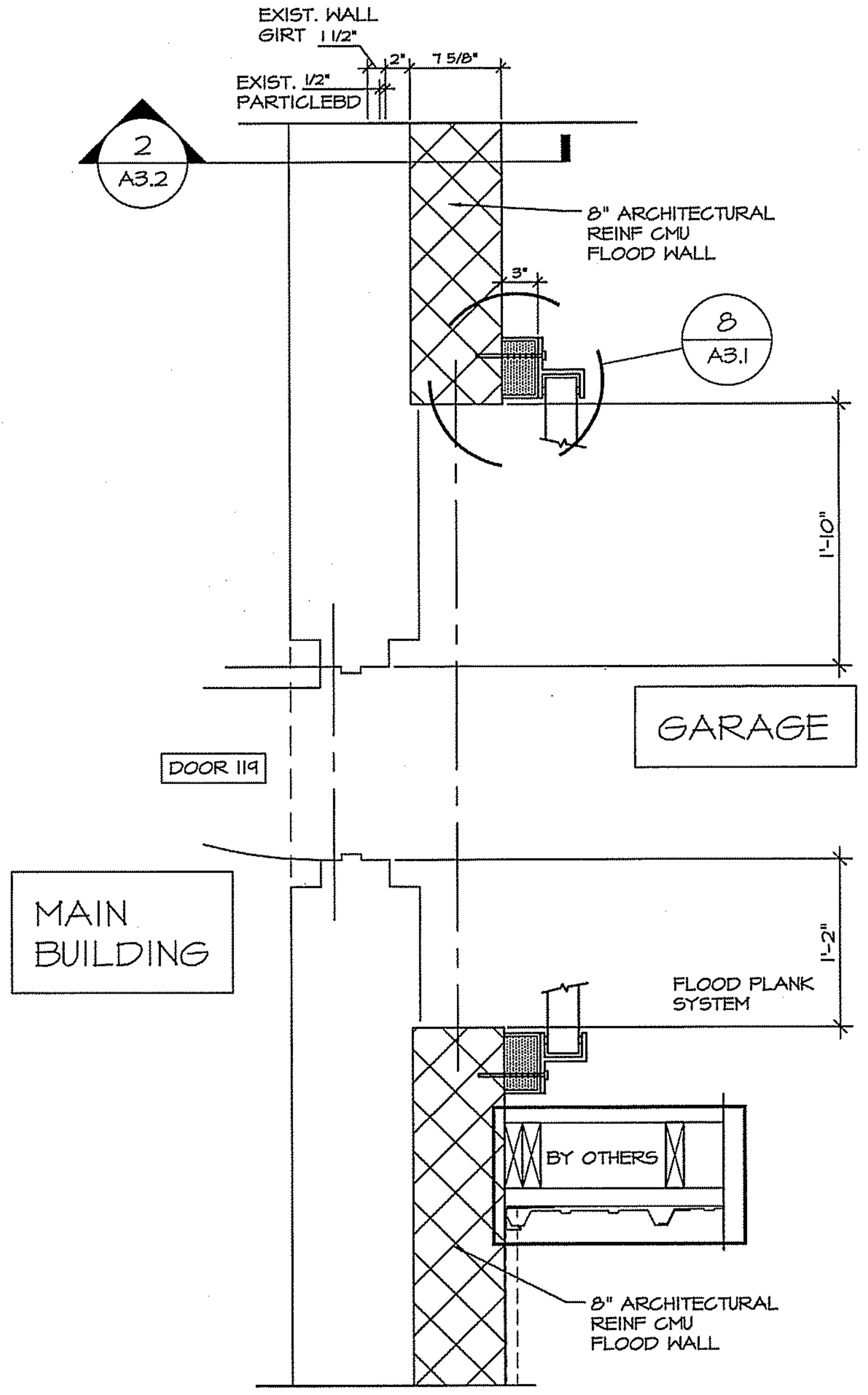
N:\PAA Company\Paul Albert Architect\DWGS\Lycoming County - Shore Auto\1A - Flood Wall Bid.dwg, 2/3/2021 10:39:25 AM, AutoCAD PDF (General Documentation).pc3



4 / A1.4 — **Ref. Detail**

Scale: 1"=1'-0"

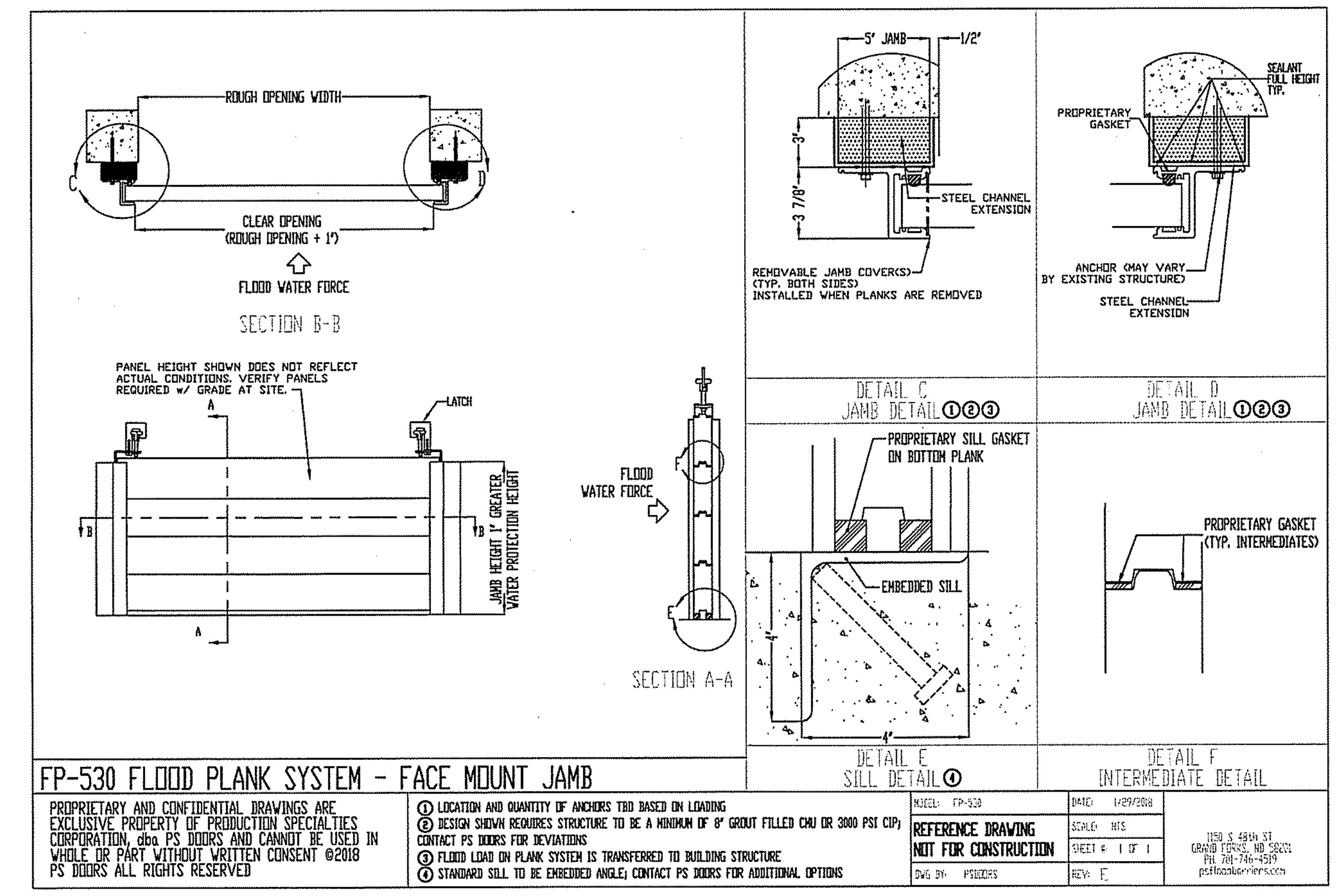
THRU FLOOD WALL



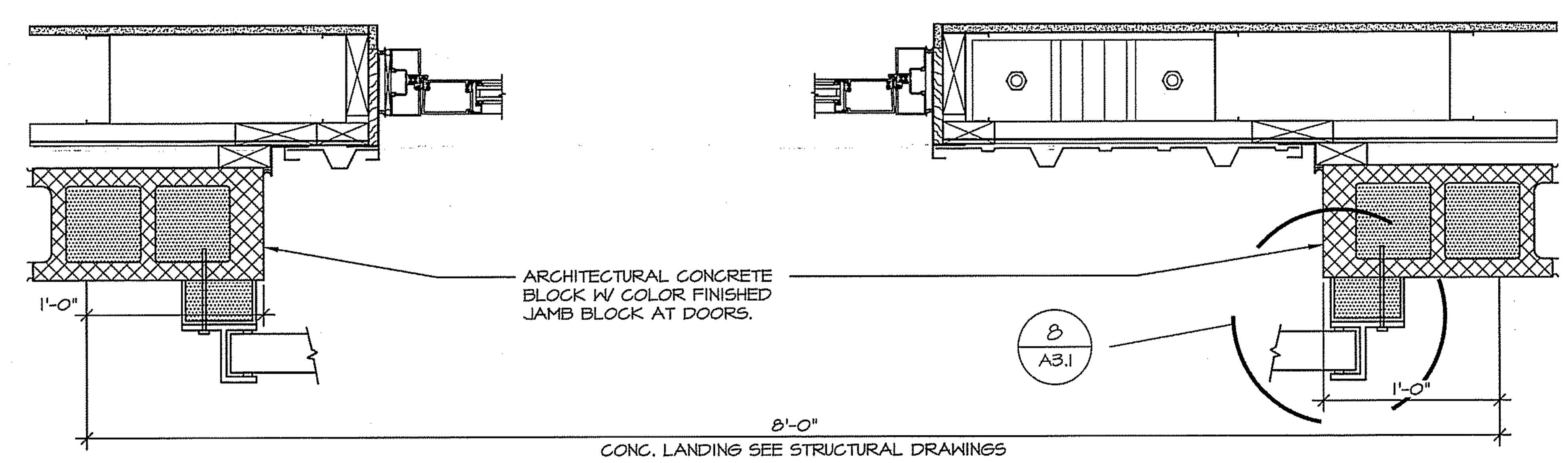
4 FW / A1.4 — **Flood Wall Bid**

Scale: 1"=1'-0"

THRU FLOOD WALL

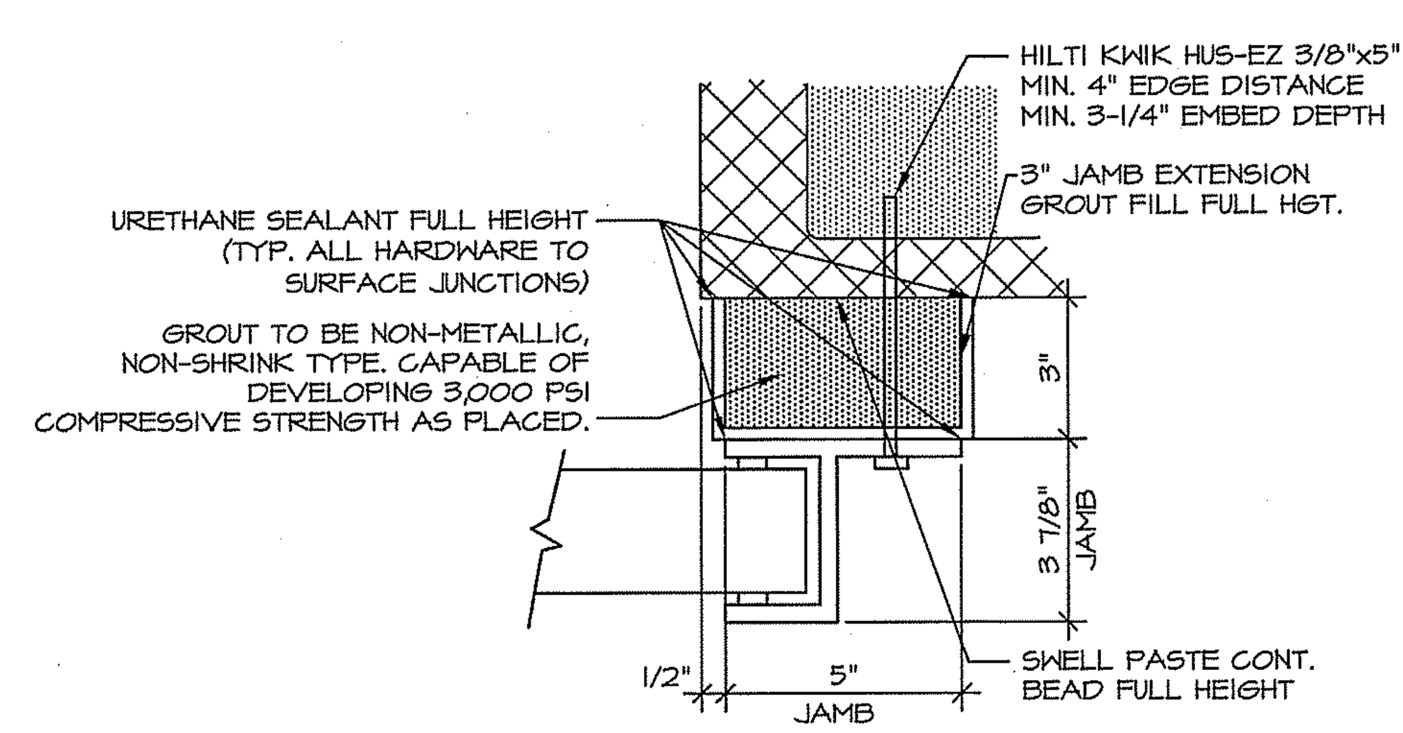


FLOOD PLANK INFO
HYDRODEFENSE FLOOD PLANK (FP-530) COMPLETE SYSTEM
TYPICAL AT 4 LOCATIONS
ASSUME 7 PLANKS AT DOOR 001, 002, 004 & 119
VERIFY ACTUAL PLANKS REQUIRED ON SITE W/ GRADES
www.psfloodbarriers.com
701.146.4514 / 877.446.1514
FOLLOW MFGR. SPECIFICATIONS FOR A COMPLETE INSTALLATION



6 FW / A3.1 — **Flood Wall Bid**

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

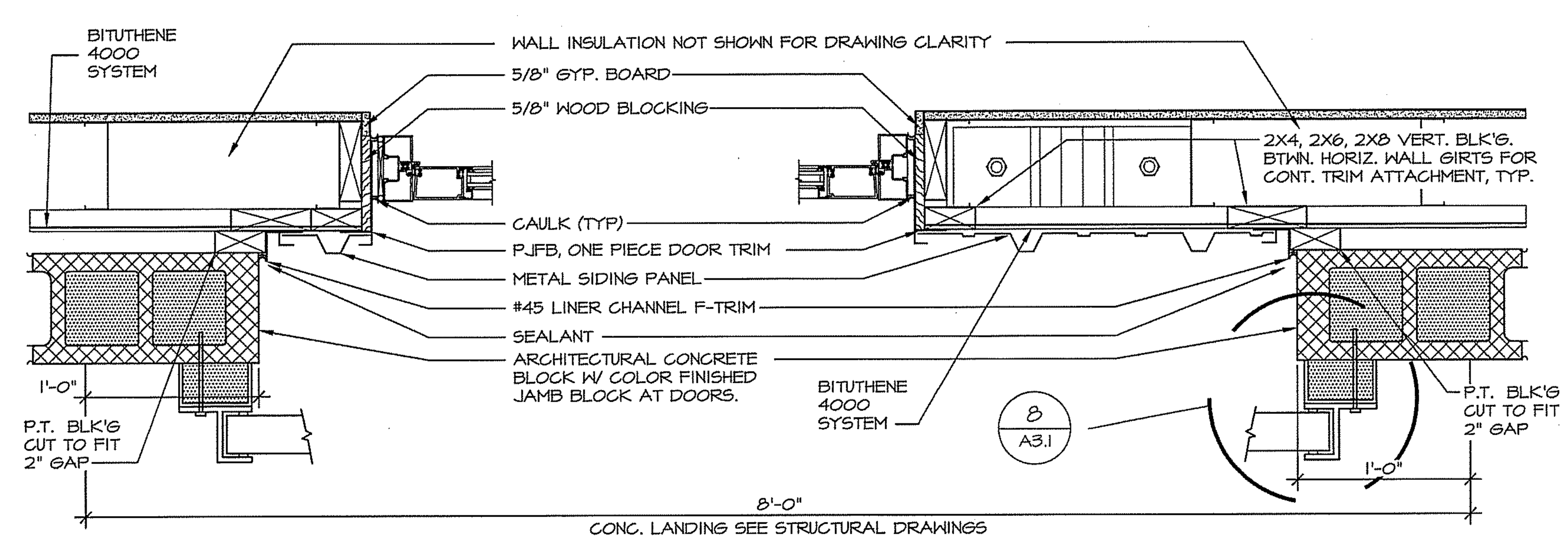


Flood Wall Bid

8 / A3.1 — **Ref. Flood Plank Jamb Dtl.**

Scale: 3"=1'-0"

BASE OF JAMB MUST BE SET IN A CONTINUOUS BED OF SEALANT TO CREATE A WATERTIGHT JOINT.



6 / A3.1 — **Ref. Door Jamb Detail**

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

Architect:
PAUL ALBERT ARCHITECT, LLC.
ARCHITECTURE DESIGN BUILD
Paul Albert, Principal
2442 Lycoming Creek Road
Williamsport, PA 17701
Phone: 570.601.1500
Cell: 570.772.9047
Fax: 570.601.1501
Paul@paulalbertarchitect.com

Consultants:

Seal:

Project Info:
Architectural Design and Drawings for the
Lycoming County
Offices for DJ Solomon (29-3-04)
2107 Lycoming Creek Road — Lycoming County — Williamsport, Pa

Revisions:

Date:	December 4, 2020
Drawn By:	BJE
Checked By:	PAA
Project No.:	20-109

Sheet Title:
Sections Details

Sheet:
A3.4 FW

GENERAL STRUCTURAL NOTES

A. BUILDING CODES AND STANDARDS

1. THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION AND QUALITY CONTROL OF ALL WORK PERFORMED ON THE PROJECT.
   a. "INTERNATIONAL BUILDING CODE - 2015" INTERNATIONAL CODE COUNCIL, INC.

   b. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", (ANSI/ASCE 7) AMERICAN SOCIETY OF CIVIL ENGINEERS.

2. ADDITIONAL DESIGN STANDARDS FOR MATERIALS SHALL BE FOUND IN THE APPROPRIATE SECTIONS THAT FOLLOW. SEE THOSE SECTIONS FOR THE APPLICABLE CODES.

B. DESIGN LOADS (2015 IBC)

1. GRAVITY - SUPERIMPOSED DEAD LOADS	
a. ROOF (WOOD FRAMED)	
METAL ROOFING	3 PSF
SHEATHING	2 PSF
TRUSSES	4 PSF
INSULATION	2 PSF
MECHANICAL/ELECTRICAL	2 PSF
CEILING	2 PSF
TOTAL	15 PSF

2. GRAVITY - FLOOR LIVE LOADS	
a. OFFICE/ASSEMBLY	100 PSF
b. LOBBIES/EXIT CORRIDORS	100 PSF
c. PASSENGER VEHICLE GARAGE	40 PSF

3. GRAVITY - ROOF LIVE LOADS	
a. LIVE LOAD	20 PSF (NOT REDUCIBLE)
b. SNOW LOAD (PLUS DRIFTING WHERE APPLICABLE)	
1) GROUND SNOW LOAD (Pg)	35 PSF
2) SNOW EXPOSURE FACTOR (Ce)	1.0
3) SNOW LOAD IMPORTANCE FACTOR (Is)	1.0
4) THERMAL FACTOR (Ct)	1.2 (UNHEATED GARAGE)
5) FLAT ROOF SNOW LOAD (Pf)	29.4 PSF

4. LATERAL LOADS - WIND	
a. ULTIMATE DESIGN WIND SPEED (3 SECOND GUST)	115 MPH
b. NOMINAL WIND SPEED	89.1 MPH
c. RISK CATEGORY	II
d. MAIN WIND-FORCE RESISTING SYSTEM	EXPOSURE B
e. INTERNAL PRESSURE COEFFICIENT	±0.18
f. COMPONENTS AND CLADDING	EXPOSURE B

DESIGN IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ASCE 7 CHAPTER 30 AND IBC SECTION 1609

g. NET WIND UPLIFT	
1) MAIN ROOF	8 PSF (MWFRS)

5. LATERAL LOADS - SEISMIC	
a. SEISMIC IMPORTANCE FACTOR (Ie)	1.0
b. RISK CATEGORY	II
c. SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIOD (Ss)	9.90%g
d. SPECTRAL RESPONSE ACCELERATION FOR 1-SECOND PERIOD (S1)	4.00%g
e. SPECTRAL RESPONSE COEFFICIENT (SDS)	0.106
f. SPECTRAL RESPONSE COEFFICIENT (SD1)	0.064
g. SITE CLASS	D (ASSUMED)
h. SEISMIC DESIGN CATEGORY	A
i. BASIC SEISMIC FORCE RESISTING SYSTEM(S)	LIGHT-FRAMED WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
j. RESPONSE MODIFICATION FACTOR(S) (R)	6.5
k. SEISMIC RESPONSE COEFFICIENT(S) (Cs)	0.016
l. ANALYSIS PROCEDURE	INDEX FORCE ANALYSIS
m. BASE SHEAR	0.01W KIPS

6. FLOOD LOADS	
a. HYDROSTATIC	
1) BASE FLOOD ELEVATION (100 YEAR)	545.5 FT
2) DESIGN FLOOD ELEVATION	546.5 FT
b. HYDRODYNAMIC	N/A
c. IMPACT	N/A

7. THE STRUCTURE HAS BEEN DESIGNED FOR THE DEAD, LIVE AND LATERAL LOADS INDICATED ABOVE. ANY INCREASE OF LOADS DUE TO CHANGE IN USAGE OR CONSTRUCTION MATERIALS, ETC. SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER. THE CONTRACTOR IS CAUTIONED AS TO NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATIONS WHICH WILL EXCEED THE DESIGN LIVE LOAD CAPACITIES NOTED.

8. WEIGHT OF EQUIPMENT SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN CONSIDERED IN THE FRAMING DESIGN. ANY ADDITIONAL EQUIPMENT NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXCEEDING 300 POUNDS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO INSTALLATION. COORDINATE ALL WORK WITH ARCHITECTURAL AND MEP DRAWINGS.

C. CONSTRUCTION

1. GENERAL
   a. THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE STRUCTURE DEAD LOADS AND FOR THE SUPERIMPOSED LIVE LOADS INDICATED IN THE DESIGN LOADS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, TEMPORARY BRACING, SHEETING AND SHORING, ETC.

   b. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE ROOF. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHODS OF CONSTRUCTION AND SHALL PROVIDE ALL GUYS, BRACING AND SHORING REQUIRED TO ACCOMMODATE ALL INTERIM LOADING CONDITIONS THROUGHOUT THE CONSTRUCTION PHASE.

   c. IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

   d. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS AND DRAWINGS, THE MOST RIGID REQUIREMENT SHALL GOVERN.

   e. THE ARCHITECTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS, SECTIONS AND DETAILS AS REQUIRED. REPORT DISCREPANCIES IMMEDIATELY TO THE ARCHITECT.

   f. THE CONTRACTOR SHALL CHECK AND VERIFY DIMENSIONS FOR ALL WORK BEFORE PROCEEDING WITH THE CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF ANY WORK.

   g. CONSULT ARCHITECTURAL AND MEP DRAWINGS FOR VERIFICATION OF LOCATION AND SIZE OF ALL OPENINGS, SLEEVES, REVEALS, DEPRESSIONS, INSERTS, CONCRETE HOUSEKEEPING PADS, HANDRAILS, GUARDRAILS, PARTITION SUPPORTS, LINTELS, ETC. REQUIRED FOR THE PROJECT. VERIFY REQUIREMENTS OF TRADES AFFECTING THE WORK AND NOTIFY THE ARCHITECT OF ANY CONFLICTS.

   h. SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION REQUIREMENTS (IF ANY).

   i. WORK NOT INCLUDED ON THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE DRAWINGS SHALL BE REPEATED.

   j. EXISTING BUILDING INFORMATION SHOWN IS BASED ON FIELD OBSERVATIONS AND/OR ARCHITECTURAL DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, FRAMING, ETC.) AND NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS, UNLESS INDICATED OTHERWISE. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.

   k. ALL COSTS OF INVESTIGATION AND/OR REDESIGN, DUE TO THE CONTRACTOR'S MIS-LOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

   l. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DETAILED INFORMATION REGARDING FINISHES, DAMPROOFING, WATERPROOFING, UL ASSEMBLY DESIGNATIONS AND FIREPROOFING REQUIREMENTS, ETC.

C. CONSTRUCTION (CONTINUED)

   m. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD-BEARING PARTITIONS, PROVIDE SLIP CONNECTIONS THAT ALLOW VERTICAL MOVEMENT AT THE HEADS OF ALL SUCH PARTITIONS. UNLESS SHOWN ON THE DRAWINGS, THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE TOP OF THE WALLS LATERALLY FOR THE CODE REQUIRED LATERAL LOAD. PROVIDE COMPRESSIBLE FIRESAFING AT THE TOP OF THE WALL AS REQUIRED BY THE ARCHITECTURAL DRAWINGS.

   n. ALL EXPANSION BOLTS AND ADHESIVE ANCHORS SHALL BE SET IN FULLY CURED CONCRETE OR 100% GROUT FILLED MASONRY.

   o. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS.

   p. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATORY EQUIPMENT. PLACE VIBRATORY EQUIPMENT ON VIBRATION ISOLATORS APPROPRIATE FOR EQUIPMENT AND USE OF SPACE. VIBRATION ISOLATION HAS NOT BEEN PROVIDED BY THE ENGINEER.

2. SHOP DRAWINGS
   a. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS, INCLUDING ALL CONCRETE AND GROUT MIX DESIGNS AND ADMIXTURES, MUST BE SUBMITTED BY THE GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP CERTIFYING HE HAS VERIFIED ALL CONSTRUCTION CRITERIA INCLUDING FIELD MEASUREMENTS, MATERIAL AND SIMILAR DATA AND HAS CHECKED THE SUBMITTAL FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.

   b. UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.

   c. IF THE CONTRACTOR OR OWNER FAILS TO OBTAIN THE ENGINEER'S REVIEW OF THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE GENERAL CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.

   d. CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS AT ALL LEVELS LOCATING FLOOR AND ROOF EDGES AND LOCATING ALL SLEEVES AND OPENINGS REQUIRED BY ALL TRADES FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.

   e. AT THE TIME OF SHOP DRAWING SUBMISSION, THE GENERAL CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS.

   f. THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE PROJECT'S JURISDICTION FOR THE FOLLOWING ASSEMBLIES. THIS REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE ENGINEER WHO HAS SIGNED AND SEALED THESE DRAWINGS AND CALCULATIONS.
      1) WOOD OR METAL ROOF TRUSSES: DESIGN SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS INCLUDING THE WEIGHT OF ANY SUPPORTED EQUIPMENT AND ALL LOAD COMBINATIONS REQUIRED BY APPLICABLE BUILDING CODES. CONNECTION TO THE MAIN BUILDING SHALL BE BY THE TRUSS DESIGNER AND SHALL BE AT LOCATIONS DESIGNATED BY THE STRUCTURAL ENGINEER OF RECORD TO SUPPORT THE TRUSSES. SUBMIT CALCULATIONS SHOWING A RATIONAL COMPLETE LOAD PATH, INCLUDING EFFECTS ON SUPPORTING MEMBERS. CALCULATIONS SHALL CLEARLY INDICATE ALL LOADS IMPOSED UPON THE SUPPORTING STRUCTURAL SYSTEM. REVIEW OF THE CALCULATIONS BY THE STRUCTURAL ENGINEER SHALL BE SOLELY FOR THE PURPOSE OF EVALUATING THE IMPACT OF THESE LOADS ON THE SUPPORTING STRUCTURAL SYSTEM.

D. FOUNDATION

1. DESIGN DATA
   a. ALL FOUNDATIONS HAVE BEEN DESIGNED FOR AN ASSUMED ALLOWABLE NET BEARING PRESSURE OF 1,500 PSF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND PAY FOR THE SERVICES OF A GEOTECHNICAL ENGINEER FOR FIELD VERIFICATION OF THE ASSUMED SOIL BEARING PRESSURES. BEARING CAPACITY OF THE SOIL SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. SHOULD THE SOIL BEARING PRESSURE BE FOUND TO BE LESS THAN 1,500 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER.

   b. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADE. IN CASE OF CONFLICT, NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT. FOOTINGS SHALL BEAR ON APPROVED UNDISTURBED MATERIAL OR STRUCTURAL FILL.

   c. NEW FOOTING BEARING ELEVATIONS ARE TO MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE APPLICABLE UNLESS NOTED OTHERWISE ON PLANS.

2. GENERAL
   a. ALL EXCAVATION, BACKFILLING AND STRUCTURAL FILL PLACEMENT OPERATIONS BENEATH THE BUILDING SLAB AND FOUNDATIONS, AND ALL COMPACTION TESTS AND INSPECTIONS SHALL BE DONE UNDER THE DIRECTION AND SUPERVISION OF A LICENSED PROFESSIONAL SOILS ENGINEER. ALL FILL MATERIAL, COMPACTION EQUIPMENT AND PROCEDURES SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PERFORMING ANY EARTHWORK OPERATIONS.

   b. CONCRETE FOR FOUNDATIONS SHALL BE PLACED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER. SHOULD THE SOIL BEARING PRESSURE BE FOUND TO BE LESS THAN THE ALLOWABLE BEARING PRESSURES LISTED ABOVE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE WORK.

   c. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK.

   d. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES, EXISTING STRUCTURES, ETC., WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS. SHOULD ANY DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.

   e. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL. STEP FOUNDATIONS AS REQUIRED WHERE UTILITIES ENTER OR EXIT THE BUILDING.

   f. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOUNDATIONS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL, UNLESS INDICATED OTHERWISE ON THE PLANS. MAINTAIN A 1:1 SLOPE FROM BOTTOM EDGE OF ANY EXCAVATION.

   g. FOLLOWING REQUIRED STRIPPING OPERATIONS, ANY PROOF ROLLING SHALL BE AS DIRECTED BY A QUALIFIED GEOTECHNICAL ENGINEER. THE PURPOSE FOR PROOF ROLLING WILL BE TO LOCATE ANY ISOLATED AREAS OF SOFT OR LOOSE SOILS REQUIRING IMPROVEMENT OR REPLACEMENT. SOFT AREAS SHALL BE UNDERCUT AND REPLACED BY PROPERLY COMPACTED MATERIALS AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

   h. SEE PLUMBING AND CIVIL DRAWINGS FOR UNDER SLAB AND PERIMETER DRAINAGE SYSTEMS (IF ANY).

3. SLAB BASE COURSE
   a. FILL MATERIAL TO BE USED AS BASE COURSE UNDER SLABS SHALL BE DENSE-GRADED AGGREGATE PENNDOT 2A.

   b. PRIOR TO INSTALLATION OF BASE COURSE, THE SUBGRADE SHALL BE GRADED TO PROPER ELEVATION. ELIMINATE UNEVEN AREAS AND FILL IN DEPRESSIONS.

   c. THOROUGHLY ROLL THE SUBGRADE SUCH THAT THE SUBGRADE SHALL BE COMPACTED SUFFICIENTLY TO DEVELOP AT LEAST 95% OF MAXIMUM DRY DENSITY TO A DEPTH OF AT LEAST 12". AS THE ROLLING OPERATION PROGRESSES, ANY DISCLOSED SOFT SPOTS OR IRREGULARITIES WITHIN THE SUBGRADE SHALL BE EXCAVATED TO FIRM MATERIAL AND THEN BACKFILLED WITH LAYERS OF APPROVED STONE FILL MATERIAL. FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY.

   d. NO FILL MATERIAL SHALL BE PLACED ON ANY POINT OF THE SURFACE OF THE FILL TO BE COMPACTED WHICH HAS FREE WATER STANDING ON IT OR WHICH IS EXCESSIVELY WET, NOR SHALL ANY FILL BE PLACED OR COMPACTED IN A FROZEN CONDITION OR ON TOP OF FROZEN MATERIAL. IF, PRIOR TO THE FIRST LIFT OF BASE COURSE FILL MATERIAL, THE WORK IS INTERRUPTED BY RAIN, THEN FILLING SHALL NOT COMMENCE UNTIL THE SUBGRADE IS ROLLED AND THE SOILS ENGINEER HAS APPROVED THE SUBGRADE CONDITIONS.

   e. THE BASE COURSE FILL MATERIAL SHALL BE PLACED IN CONTINUOUS LAYERS NOT EXCEEDING 6" LOOSE DEPTH AND SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL MATERIALS SO AS TO ATTAIN REQUIRED COMPACTION DENSITY. BASE COURSE SURFACE SHALL BE GRADED TO TOLERANCE SPECIFIED HEREIN.

D. FOUNDATION (CONTINUED)

   f. IF THERE IS A DELAY BETWEEN COMPLETION OF BASE COURSE INSTALLATION AND THE START OF THE FLOOR SLAB WORK, THE BASE COURSE SHALL BE RECOMPACTED AND REGRADED. IMMEDIATELY PRIOR TO START OF SLAB WORK, THE BASE COURSE SHALL BE ROLLED AND COMPACTED SUFFICIENTLY TO DEVELOP AT LEAST 95% OF MAXIMUM DENSITY TO A DEPTH OF AT LEAST 12". REGRADE BASE COURSE SUCH THAT SURFACE COMPLIES WITH THE TOLERANCE SPECIFIED HEREIN.

   g. FINISH SUBGRADE SURFACE UNDER SLABS SHALL BE SMOOTH AND EVEN. GRADING TOLERANCE SHALL BE +0"/-1/2" ABOVE/BELOW THE REQUIRED SUBGRADE ELEVATION, AND SHALL BE WITHIN A TOLERANCE OF 1/4" IN 10' AS DETERMINED BY A 10' STRAIGHTEDGE.

4. BACKFILL
   a. ALL BACKFILL OPERATIONS SHALL BE PERFORMED IN HORIZONTAL LIFTS USING STRUCTURAL FILL MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER, AT THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL AND PROVIDING THE MINIMUM COMPACTION LEVEL STIPULATED IN THE GEOTECHNICAL ENGINEERING REPORT.

   b. WHERE THE FINAL GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF A WALL, BACKFILL IN LIFTS TO MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES OF THE WALL AT ANY TIME.

E. CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ALL PROVISIONS OF THE FOLLOWING PUBLICATIONS:
   a. "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 301.

   b. "BUILDING CODE REQUIREMENTS FOR CONCRETE", ACI 318.

   c. "GUIDE TO HOT WEATHER CONCRETING", ACI 305.

   d. "GUIDE TO COLD WEATHER CONCRETING", ACI 306.

   e. "GUIDE TO FORMWORK FOR CONCRETE", ACI 347.

   f. "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION MATERIALS", ACI 117.

2. MATERIALS
   a. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

APPLICATION	f'c AT 28 DAYS	DRY UNIT WEIGHT PCF	MAX. W/CM RATIO	SLUMP (IN) (+/- 1")
SLABS-ON-GROUND (INTERIOR)	4,000	145		5
SLABS-ON-GROUND (EXTERIOR)	4,500	145	0.45	5
FOOTINGS	3,000	145		4*

(*SLUMP: CONCRETE CONTAINING HRWR ADMIXTURE SHALL HAVE A MAXIMUM SLUMP OF 7" AFTER ADDITION OF HRWR TO A VERIFIED WATER SLUMP OF 2" TO 3" MAXIMUM)

b. CEMENT	ASTM C150, TYPE I OR II
c. CEMENT SUBSTITUTES	ASTM C595, ASTM C989, ASTM C618 (CLASS C OR F) MAXIMUM PERCENT OF TOTAL IN ACCORDANCE WITH ACI 318
d. COARSE AGGREGATES	COARSE AGGREGATE SIZE SHALL BE 2" MAX. / 1 1/2" TOP SIZE FOR SLAB ON GROUND AND 1 1/2" MAX. / 1" TOP SIZE FOR ALL OTHER WORK. ASTM C33 (NORMAL WEIGHT)

   e. COMBINED AGGREGATE GRADING FOR SLABS SHALL BE WELL-GRADED FROM TOP SIZE TO NO. 100 SIEVE. FOR 2" MAX. / 1 1/2" TOP SIZE AGGREGATE, GRADATIONS SHALL BE 8-18% RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE SIZE. IDEAL RANGE FOR THE NO. 30 AND NO. 50 SIEVE IS 8-15% RETAINED ON EACH SIEVE. FOR THE TOP SIZE, 0-4% SHALL BE RETAINED ON THE 1 1/2" SIEVE. FOR THE 1 1/2" MAX. / 1" TOP SIZE AGGREGATE, GRADATIONS SHALL BE 8-22% RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE SIZE. IDEAL RANGE FOR THE NO. 30 AND NO. 50 SIEVE IS 8-15% RETAINED ON EACH SIEVE. FOR THE TOP SIZE, 0-4% SHALL BE RETAINED ON THE 1" SIEVE.

   f. THE PROPORTIONING OF THE CONCRETE MIX FOR SLABS-ON-GROUND IS EXTREMELY IMPORTANT. MINIMIZING SHRINKAGE OF THE CONCRETE IS KEY TO A SUCCESSFUL FLOOR SLAB. HIGH CEMENT AND HIGH WATER CONTENT ARE FACTORS THAT INCREASE CONCRETE SHRINKAGE. CEMENT CONTENT SHALL BE OPTIMIZED TO PRODUCE THE SPECIFIED STRENGTH BUT BALANCED TO MINIMIZE THE SHRINKAGE POTENTIAL. WATER CONTENT SHALL BE ADJUSTED AND COORDINATED WITH THE NECESSARY ADMIXTURES TO MINIMIZE SHRINKAGE POTENTIAL BUT STILL ACHIEVING THE DESIRED PLACEABILITY AND FINISHABILITY. LARGER COARSE AGGREGATE, ALONG WITH A LARGE QUANTITY (2000 LBS./CU.YD. MINIMUM), SHALL BE USED TO HELP MINIMIZE THE SHRINKAGE POTENTIAL. [THE CONCRETE FOR THE FLOOR SLABS SHALL BE PROPORTIONED FOR LOW SHRINKAGE SUCH THAT THE 28 DAY SHRINKAGE SHALL NOT EXCEED 0.035 PERCENT WHEN TESTED IN ACCORDANCE WITH ASTM C157 MODIFIED.]

   g. AIR: ALL CONCRETE EXPOSED TO WEATHER, EXCEPT CONCRETE TO RECEIVE A STEEL TROWEL FINISH, SHALL BE AIR-ENTRAINED 6% ± 1 1/2% BY VOLUME. ENTRAINING ADMIXTURES TO COMPLY WITH ASTM C260.

   h. REINFORCEMENT:

DEFORMED REINFORCING BARS	ASTM A615, GRADE 60
SMOOTH WELDED WIRE REINFORCEMENT (WWR)	ASTM A1064, GRADE 65

   i. ADMIXTURES: NO ADMIXTURE CONTAINING CALCIUM CHLORIDE OR OTHER CHLORIDE CONTAINING AGENTS SHALL BE PERMITTED. WATER-REDUCING ADMIXTURES SHALL COMPLY WITH ASTM C494. CONCRETE SHALL HAVE A WATER SLUMP OF 2" TO 3" PRIOR TO INTRODUCTION OF ADMIXTURE TO THE CONCRETE MIX.

   j. JOINT FILLER FOR SLAB-ON-GROUND JOINTS SHALL BE MM-80 BY METZGER-MCGUIRE. FILL JOINTS 60-90 DAYS FROM SLAB PLACEMENT, JOINTS SHALL NEVER BE FILLED WITHIN 30 DAYS OF SLAB PLACEMENT.

   k. ISOLATION JOINT FILLER STRIPS

INTERIOR	CERAMAR BY W.R. MEADOWS INC.
EXTERIOR	ASTM D1751, ASPHALT-SATURATED CELLULOSE FIBER

   l. SUBMIT CONCRETE DESIGN MIXES INCLUDING TEST RESULTS IN ACCORDANCE WITH ACI 318 TO VERIFY STRENGTH FOR ALL CLASSES OF CONCRETE TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO PLACING ANY CONCRETE.

   m. SUBMIT REINFORCING PLACEMENT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH THE WORK.

3. GENERAL
   a. REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS:
      CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"

CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
#6 BARS AND LARGER	2"
#5 BARS AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS AND JOISTS:	
#11 BARS AND SMALLER	1"

   b. UNLESS DETAILED OTHERWISE, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES. MINIMUM LAP TO BE 44 BAR DIAMETERS FOR #6 BARS AND SMALLER, 70 BAR DIAMETERS FOR #7 AND #8 BARS, OR 24 INCHES WHICHEVER IS GREATER. SEE DRAWINGS FOR LAP SPLICE REQUIREMENTS FOR #9 BARS AND LARGER. LAP BARS CONTINUOUS AROUND CORNERS. DOWEL INTERSECTING WALLS INTO CROSS WALLS.

   c. WELDED WIRE REINFORCEMENT SHALL BE SUPPLIED IN FLAT SHEETS. PLACE AND SUPPORT REINFORCEMENT BEFORE CONCRETE PLACEMENT TO MAINTAIN LOCATION, DURING CONCRETE PLACEMENT, WITHIN TOLERANCES INDICATED IN ACI 117. REINFORCEMENT SUPPORTS SHALL CONFORM TO CRSI RB4.1. WWR W4.0/D4.0 AND SMALLER SHALL HAVE CONTINUOUS SUPPORT. THE CONTINUOUS SUPPORT SPACING SHALL NOT EXCEED 12 INCHES PERPENDICULAR TO THE DIRECTION OF THE SPAN. LAP WELDED WIRE REINFORCEMENT PER GUIDELINES SET BY THE WIRE REINFORCEMENT INSTITUTE.

   d. NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER. WHERE WELDING OF REINFORCING STEEL IS REQUIRED, PROVIDE BARS CONFORMING TO ASTM A706. ALL WELDING PROCEDURES SHALL CONFORM WITH THE REQUIREMENTS OF AWS D1.4.

   e. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IS EXPOSED.

   f. IT IS THE INTENT OF THESE DOCUMENTS TO STATE ABSOLUTELY THAT THE WATER/CEMENT RATIO OF THE APPROVED CONCRETE MIX SHALL NOT BE EXCEEDED. THUS, NO WATER CAN BE ADDED TO ANY CONCRETE ON SITE UNLESS THERE IS A HOLD BACK OF WATER IN THE MIX FROM THE READY-MIX PLANT. THE DELIVERY TICKETS SHALL STATE THE QUANTITY OF WATER THAT HAS BEEN HELD BACK. IF WATER IS ADDED ON SITE, IT SHALL BE DOCUMENTED ON THE DELIVERY TICKETS AND SHALL NOT EXCEED THE QUANTITY IN THE APPROVED MIX.

E. CAST-IN-PLACE CONCRETE (CONTINUED)

   g. ALL FLOOR SLABS SHALL BE WET CURED FOR 7 DAYS USING PNA HYDRACURE CURING COVER, ALL OTHER CONCRETE SURFACES SHALL BE MOIST-CURED OR PROTECTED USING A LIQUID MEMBRANE CURING AGENT MEETING THE REQUIREMENTS OF ASTM C309 APPLIED AS SOON AS FORMS ARE REMOVED OR FINISHING IS COMPLETED TO PREVENT EARLY DRYING OF THE CONCRETE AND TO PROVIDE ADEQUATE CURING FOR A MINIMUM OF 7 DAYS.

   h. CONCRETE SLABS SHALL BE FINISHED FLAT AND LEVEL WITHIN TOLERANCES SET FORTH IN ACI 117 AND TO THE ELEVATIONS INDICATED ON THE DRAWINGS. SLABS-ON-GRADE SHALL HAVE A MINIMUM SPECIFIED OVERALL FLATNESS/LEVELNESS OF FF35/25 AND A MINIMUM LOCAL FLOOR FLATNESS/LEVELNESS OF FF25/17. SLOPED SURFACES SHALL HAVE A MINIMUM FLOOR FLATNESS OF FF25.

   i. FOR SLAB SURFACES NOT SCHEDULED TO RECEIVE FLOORING (SEE ARCHITECTURAL DRAWINGS), IMMEDIATELY AFTER 7 DAYS WET CURE, APPLY ONE COAT SEALHARD CHEMICAL HARDENER AS MANUFACTURED BY L&M CONSTRUCTION CHEMICALS OR APPROVED EQUAL. APPLICATION OF HARDENER TO CONFORM WITH THE MANUFACTURER'S RECOMMENDATIONS.

   j. CONSTRUCTION JOINTS AND CONTRACTION JOINTS IN SLABS-ON-GROUND SHALL BE ARRANGED TO LIMIT MAXIMUM LENGTH BETWEEN JOINTS IN ANY DIRECTION TO 24x THE SLAB THICKNESS WITH AN ASPECT RATIO NOT EXCEEDING 1.25, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. INSTALL JOINTS ON COLUMN CENTERLINES AND IN BOTH DIRECTIONS AT 90 DEGREES TO A REENTRANT CORNER. SEE PLANS AND DETAILS FOR SPECIFIC REQUIREMENTS.

   k, NO SLEEVES SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, APPROVED SLEEVING SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.

   l. CORE DRILLING OF FOUNDATIONS, BEAMS, JOISTS, SLABS OR COLUMNS SHALL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.

   m. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS.

   n. CHAMFER ALL EXPOSED CONCRETE CORNERS, 3/4"x3/4" MINIMUM, UNLESS NOTED OR DETAILED ON THE ARCHITECTURAL DRAWINGS.

4. INSPECTION AND TESTING
   a. THE OWNER WILL ENGAGE A TESTING AND INSPECTION AGENCY TO PROVIDE SERVICES AS INDICATED BELOW AND SUBMIT REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER.

   b. CAST-IN-PLACE CONCRETE
      1) THE AGENCY SHALL INSPECT THE FORMWORK AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENT FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.

      2) SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31. RECORD AIR AND CONCRETE TEMPERATURES, AIR CONTENT AND SLUMP.

      3) A MINIMUM OF FIVE TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS.

      4) THE AGENCY WILL MAKE ADDITIONAL TESTS OF IN-PLACE CONCRETE AT THE CONTRACTOR'S EXPENSE WHEN THE TEST RESULTS INDICATE SPECIFIED CONCRETE STRENGTHS HAVE NOT BEEN ATTAINED, AS DIRECTED BY THE STRUCTURAL ENGINEER.

      5) FLOOR SLAB FLATNESS AND LEVELNESS SHALL BE TESTED IN ACCORDANCE WITH ASTM E1155 AS THE WORK PROGRESSES. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE TESTING AGENCY.

      6) DELIVERY TICKETS SHALL BE PROVIDED WITH EVERY TRUCKLOAD OF CONCRETE. TICKETS SHALL INDICATE ALL MATERIALS AND THEIR WEIGHTS FOR THAT LOAD.

F. MASONRY

1. DESIGN CODES AND STANDARDS
   a. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530/ASCE 5" AND "SPECIFICATIONS FOR MASONRY STRUCTURES, ACI 530.1/ASCE 6".

2. MATERIALS

a. LOAD-BEARING CONCRETE HOLLOW AND SOLID CMU	ASTM C90 MINIMUM COMPRESSIVE STRENGTH ON NET AREA = 2,800 PSI

   b. ARCHITECTURAL CONCRETE MASONRY UNITS (ACMU)
      I. ASTM C90 AND C744, NORMAL WEIGHT
      II. BASIS OF DESIGN MANUFACTUER: YORK BUILDING PRODUCTS
      III. PROVIDE INTEGRAL WATER REPELLANT ADMIXTURE. DOSAGE RATE PER MANUFACTURER'S RECOMMENDATIONS.
      IV. PROVIDE INTEGRAL COLOR, ASTM C979 AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
      V. PATTERN: GEMSTONE PLUS (FILLED AND POLISHED) AS PER ASTM C744 OR APPROVED EQUAL.

c. MORTAR	ASTM C270 - TYPE S (HOLLOW AND SOLID CMU
d. GROUT	ASTM C476, MINIMUM COMPRESSIVE STRENGTH f'c AT 28 DAYS = 3,000 PSI
e. DEFORMED REINFORCING BARS	ASTM A615, GRADE 60
f. HORIZONTAL JOINT REINFORCING	ASTM A82, ASTM A951
g. ANCHORS AND TIES	ASTM A36, ASTM A82, ASTM A366, ASTM A1008
h. HOT-DIP GALVANIZED COATINGS	
JOINT REINFORCING, WIRE TIES AND ANCHORS	ASTM A153 (1.5 OZ/FT^2)
SHEET METAL, TIES AND ANCHORS, STEEL PLATES AND BARS	ASTM A153, CLASS B
i. PRISM STRENGTH	F'm = 2,000 PSI (HOLLOW AND SOLID CMU)

   j. MORTAR PIGMENTS:
      1. ASTM C979, MINERAL OXIDES, COMPOUNDED FOR USE IN MORTAR MIXES AT ACMU WALLS. USE ONLY PIGMENTS WITH A RECORD OF SATISFACTORY PERFORMANCE IN MASONRY MORTAR.
      2. COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

   k. ADMIXTURES
      1. INTEGRAL WATER REPELLANT ADMIXTURE FOR MORTAR AND GROUT AT ACMU WALLS. MANUFACTURER SHALL BE THE SAME AS THAT USED FOR ACMU INTEGRAL WATERPROOFING.

   l. SURFACE CONDITIONER
      1. PROVIDE GEMCOAT FIELD APPLIED SURFACE CONDITIONER, OR APPROVED EQUAL.

3. GENERAL
   a. PROVIDE STANDARD WEIGHT LADDER TYPE GALVANIZED HORIZONTAL JOINT REINFORCEMENT IN WALLS AND PARTITIONS AT 16" O.C. UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ONE PIECE PREFABRICATED UNITS AT 8" O.C. AT ALL WALL CORNERS AND INTERSECTIONS. PROVIDE ADDITIONAL JOINT REINFORCING ABOVE AND BELOW ALL OPENINGS. EXTEND A MINIMUM OF 24" BEYOND EDGE OF OPENING.

   b. PROVIDE MASONRY ANCHORS AND TIES ON COURSING BETWEEN MASONRY CONSTRUCTION AND THE BUILDING STRUCTURE AS DETAILED ON THE DRAWINGS.

   c. PROVIDE BOND BEAMS WITH (2) #5 HORIZONTAL REINFORCEMENT CONTINUOUS IN ALL MASONRY WALLS AT EACH FRAMING LEVEL.

   d. ALL PIERS AND PARTITIONS SHALL BE BONDED OR ANCHORED TO ADJACENT MASONRY WALLS.

   e. IN GROUTED AND/OR REINFORCED MASONRY WALLS, USE MASONRY UNITS WITH CORES THAT ALIGN VERTICALLY TO PROVIDE CONTINUOUS UNOBSTRUCTED CELLS FOR GROUTING AND REINFORCING STEEL PLACEMENT.

GENERAL STRUCTURAL NOTES CONTINUED ON S0.2

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

REVISION		DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW
△	-	-	-
△	-	-	-
△	-	-	-
△	-	-	-
△	-	-	-
△	-	-	-

PAUL ALBERT
ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

GENERAL STRUCTURAL NOTES
LYCOMING COUNTY OFFICES
FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

DRAWN BY:	DGP
CHECKED BY:	JLW/ZCK
DATE:	12/04/2020
SCALE:	AS NOTED
JOB NO.:	200398
SHEET:	S0.1
REVISION 0	

GENERAL STRUCTURAL NOTES

F. MASONRY (CONTINUED)

f. MAXIMUM GROUT LIFT SHALL BE 5'-0", UNLESS HIGH LIFT GROUTING PROCEDURES IN ACCORDANCE WITH ACI 530 ARE FOLLOWED.

g. LAP SPLICES FOR DEFORMED REINFORCING BARS USED IN MASONRY CONSTRUCTION SHALL BE 48 BAR DIAMETERS.

h. ALL WALL SECTIONS SHALL BE FULLY GROUTED.

i. SUBMIT GROUT MIX DESIGN AND MASONRY UNIT CERTIFICATIONS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH THE WORK.

j. ALL BLOCK CELLS BELOW SLAB ON GRADE, AT BEAM, LINTEL AND JOIST BEARING, AT BOND BEAMS, AT CHANGES IN WALL THICKNESS AND AT VERTICAL REINFORCING SHALL BE FILLED SOLID WITH GROUT.

k. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SUPPORT FOR ALL MASONRY WORK UNTIL PERMANENT CONSTRUCTION IS IN PLACE.

l. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF MASONRY WALL CONTROL JOINTS.

m. PROVIDE FULL BED AND HEAD JOINTS.

n. APPLY GEMCOAT MASONRY SEALER TO ACMU AFTER FINAL WAS-DOWN OF MASONRY WALL.

o. PROVIDE COLORED ACMU JAMB BLOCK ENDS AT FLOOD GATE OPENINGS.

4. INSPECTION AND TESTING
   a. THE OWNER WILL ENGAGE A TESTING AND INSPECTION AGENCY TO PROVIDE SERVICES AS INDICATED BELOW AND SUBMIT REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER.

   b. ALL MASONRY MUST BE INSPECTED AND TESTED IN ACCORDANCE WITH LEVEL 2 QUALITY ASSURANCE CRITERIA PROVIDED IN TABLE 1704.5.3 OF THE IBC CODE BY THE APPROVED AGENCY REFERENCED ABOVE.

   c. THE AGENCY SHALL MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF THE MORTAR AND GROUT; THE PLACEMENT OF MORTAR, GROUT AND MASONRY UNITS; AND THE PLACEMENT OF REINFORCING STEEL FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.

G. WOOD

1. DESIGN STANDARDS
   a. "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", ANSI/AF&PA NDS (INCLUDING SUPPLEMENT "DESIGN VALUES FOR WOOD CONSTRUCTION").

   b. "TIMBER CONSTRUCTION MANUAL" FIFTH EDITION, AITC.

   c. "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION", ANSI/TPI1, TRUSS PLATE INSTITUTE (TPI).

2. MATERIALS
   a. DIMENSION LUMBER
   ALL DIMENSION LUMBER SHALL BE VISUALLY GRADED DIMENSION LUMBER, KILN-DRIED WITH A 19% MAXIMUM MOISTURE CONTENT. LUMBER SHALL BE SPRUCE-PINE-FIR WITH THE FOLLOWING MINIMUM DESIGN VALUES (WITHOUT THE APPLICABLE SIZE FACTOR CF):

JOISTS/RAFTERS/HEADERS/BEAMS/STUDS:		NUMBER 2 OR BETTER
Fb = 875 PSI	Fc = 1,150 PSI	Fv = 135 PSI
Ft = 450 PSI	Fc (PERP) = 425 PSI	E = 1,400,000 PSI
NON-LOAD BEARING STUDS:		STUD
Fb = 675 PSI	Fc = 725 PSI	Fv = 135 PSI
Ft = 350 PSI	Fc (PERP) = 425 PSI	E = 1,200,000 PSI

   b. WOOD STRUCTURAL PANELS (PLYWOOD OR OSB)

ROOF SHEATHING	19/32" THICK, APA RATED SHEATHING 40/20, EXPOSURE 1
WALL SHEATHING	15/32" THICK, APA RATED SHEATHING 32/16, EXPOSURE 1

3. DIMENSION LUMBER/STRUCTURAL COMPOSITE LUMBER
   a. MEMBERS SHALL BE SET WITH CROWN SIDE UP AND HAVE A MINIMUM OF 2" BEARING.

   b. ALL JOISTS AND RAFTERS SHALL HAVE FULL DEPTH BLOCKING OR BRIDGING AT INTERVALS NOT EXCEEDING 8'-0".

   c. PROVIDE ONE JAMB STUD PLUS STANDARD STUD FOR HEADER SPANS 4'-6" OR LESS AND TWO JAMB STUDS PLUS STANDARD STUD FOR SPANS OVER 4'-6", UNLESS NOTED OTHERWISE.

   d. ALL WOOD SILL PLATES SHALL BE ANCHORED TO GROUT-FILLED CMU OR CONCRETE FOUNDATIONS WITH 1/2" DIA. ANCHORS AT 4'-0" O.C. MAXIMUM (MINIMUM 2 ANCHORS PER MEMBER) AND WITHIN 12" OF CORNERS AND SPLICES. ANCHOR BOLTS SHALL BE EMBEDDED A MINIMUM OF 15" INTO GROUTED CMU OR 8" INTO CAST-IN-PLACE CONCRETE FOUNDATIONS.

   e. ALL BOLTS AND LAG BOLTS SHALL BE FITTED WITH GALVANIZED, MALLEABLE IRON OR STEEL PLATE WASHERS.

   f. ALL FASTENERS, INCLUDING BUT NOT LIMITED TO BOLTS, NAILS, SCREWS, LAG SCREWS, ETC., USED IN CONJUNCTION WITH PRESERVATIVE TREATED OR FIRE RETARDANT TREATED LUMBER SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.

   g. CONNECTIONS FOR WOOD MEMBERS SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS OR, IF NO DETAIL IS SHOWN, PROVIDE THE NUMBER AND SIZE OF FASTENERS SET FORTH IN TABLE 2304.9.1 OF THE CODE.

   h. CONNECTION DETAILS SHOW ARRANGEMENT OF STRUCTURAL MEMBERS ONLY. FIT-UP OF MEMBERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

   i. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE TEMPORARY BRACING OF ALL BUILDING ELEMENTS. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL PERMANENT BRACING IS INSTALLED, ATTACHED, AND CAPABLE OF SUPPORTING LOADS.

   j. ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.

4. STRUCTURAL SHEATHING
   a. FACTORY-MARK EACH CONSTRUCTION PANEL WITH APA TRADEMARK EVIDENCING COMPLIANCE WITH VOLUNTARY PRODUCT STANDARD PS1, PS2, OR APA PRP-108.

   b. INSTALL PANELS WITH PANEL LONG DIMENSION PERPENDICULAR TO THE SUPPORTING MEMBERS, UNLESS SHOWN OTHERWISE.

   e. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ATTACH WALL AND ROOF SHEATHING TO FRAMING WITH 10d COMMON NAILS AT 6" O.C. ALONG EDGES AND 12" O.C. AT INTERMEDIATE SUPPORT LOCATIONS. PROVIDE FULL BLOCKING AT ALL HORIZONTAL WALL PANEL EDGES AND PROVIDE PANEL CLIPS AT ALL UNSUPPORTED ROOF SHEATHING EDGES.

5. WOOD PRESERVATIVE TREATMENT
   a. WHERE LUMBER OR PLYWOOD IS INDICATED AS "TREATED" OR "PT", COMPLY WITH APPLICABLE REQUIREMENTS OF AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1 AND WITH AWPA STANDARDS LISTED BELOW. MARK EACH TREATED ITEM WITH THE AWPA QUALITY MARK REQUIREMENTS.

   b. PRESSURE TREAT ABOVE-GROUND INTERIOR ITEMS WITH WATERBORNE PRESERVATIVES TO COMPLY WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) U1-UC2. AFTER TREATMENT, KILN-DRY LUMBER AND PLYWOOD TO A MAXIMUM MOISTURE CONTENT OF 10% AND 15%, RESPECTIVELY.

   c. PRESSURE TREAT ABOVE-GROUND EXTERIOR ITEMS WITH WATERBORNE PRESERVATIVES TO COMPLY WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) U1-UC3B. AFTER TREATMENT, KILN-DRY LUMBER AND PLYWOOD TO A MAXIMUM MOISTURE CONTENT OF 10% AND 15%, RESPECTIVELY.

   d. PRESSURE TREAT EXTERIOR ITEMS IN CONTACT WITH THE GROUND WITH WATERBORNE PRESERVATIVES TO COMPLY WITH AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) U1-UC4B. AFTER TREATMENT, KILN-DRY LUMBER AND PLYWOOD TO A MAXIMUM MOISTURE CONTENT OF 10% AND 15%, RESPECTIVELY.

6. WOOD TRUSSES
   a. DESIGN
      1) DESIGN OF TRUSSES, TRUSS BRACING AND DETAILING OF TRUSS CONNECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE BY THE FABRICATOR'S ENGINEER LICENSED IN THE PROJECT'S JURISDICTION. CALCULATIONS AND SHOP DRAWINGS CONSISTING OF TRUSS LAYOUT PLANS AND TRUSS DETAILS SHALL BE SUBMITTED BEARING THE SPECIALTY ENGINEER'S SEAL AND SIGNATURE.

      2) TRUSS LAYOUT AND TRUSS ELEVATIONS REPRESENT LAYOUT, PROFILE, CHORD GEOMETRY AND BEARING LOCATIONS SCHEMATICALLY. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OVERHANGS, ETC. FINAL TRUSS LAYOUT AND ACTUAL SIZES AND LOCATIONS OF THE TRUSS CHORDS AND WEBS IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER. TRUSS MANUFACTURER SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EQUIPMENT SIZES, WEIGHTS AND LOCATIONS AND DUCT RUNS.

      3) TEMPORARY AND PERMANENT BRACING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

G. WOOD (CONTINUED)

      4) TRUSS DESIGN SHALL INCLUDE CALCULATIONS FOR WIND UPLIFT AND IDENTIFY THE NET UPLIFT AT ALL TRUSS BEARING LOCATIONS.

   b. LOADING
      1) SEE GENERAL NOTES FOR LOADING REQUIREMENTS.

      2) ACCOUNT FOR SPECIAL CONDITIONS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL PLANS SUCH AS DORMERS, VALLEY TRUSSES, MECHANICAL EQUIPMENT, MECHANICAL PIPING RUNS, SPRINKLER MAINS, ETC.

      3) EACH MEMBER OF THE TRUSS SHALL BE DESIGNED TO RESIST THE LARGEST ANTICIPATED LOAD FROM THE APPLICABLE LOAD CASES SPECIFIED IN SECTION 1605 OF THE IBC.

      4) DESIGN TRUSSES FOR DRIFTED SNOW WHERE REQUIRED. SEE GENERAL NOTES FOR SNOW LOAD CRITERIA.

      5) TRUSS BEARING LENGTHS SHALL LIMIT THE BEARING STRESS ON SUPPORTING WOOD PLATES TO NOT GREATER THAN 425 PSI. PROVIDE MULTI-PLY TRUSSES AND/OR BEARING BLOCKS WHERE REQUIRED TO REDUCE STRESS. TRUSS BEARING LENGTHS SHALL BE PROVIDED ON THE SHOP DRAWINGS.

   c. CONSTRUCTION
      1) CONTRACTOR SHALL PROVIDE HOLD-DOWN ANCHORS AT ALL CONNECTIONS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

      2) SECURELY BRACE TRUSSES DURING ERECTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE STRUCTURAL BUILDING COMPONENTS ASSOCIATION / TRUSS PLATE INSTITUTE "BUILDING COMPONENT SAFETY INFORMATION (BCSI), GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES". ERECTION BRACING SHALL HOLD TRUSSES STRAIGHT AND PLUMB UNTIL DECKING AND PERMANENT BRACING ARE INSTALLED. INSTALL PERMANENT BRACING AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY TRUSS DESIGN. INSTALL ALL PERMANENT BRACING PRIOR TO APPLICATION OF LOAD.

      3) SECURE TRUSSES TO THE SUPPORTING STRUCTURE WITH GALVANIZED FRAMING ANCHORS AS SHOWN ON THE DRAWINGS AND SUFFICIENT TO TRANSFER REACTIONS SHOWN ON TRUSS SHOP DRAWINGS.

      4) FIELD CUTTING OR ALTERATIONS OF ANY TRUSS OR TRUSS MEMBERS IS NOT PERMITTED.

H. SPECIAL INSPECTION

1. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1704 OF THE 2015 INTERNATIONAL BUILDING CODE FOR THE FOLLOWING ITEMS:
   a. BUILDING PAD/EARTHWORK PREPARATION.

   b. INSTALLATION OF ANCHOR BOLTS IN CONCRETE AND GROUTED MASONRY.

   c. REINFORCED CONCRETE AND REINFORCING STEEL PLACEMENT, EXCLUDING SLAB-ON-GRADE CONSTRUCTION.

   d. MASONRY CONSTRUCTION INCLUDING BUT NOT LIMITED TO:
      1) REINFORCING STEEL PLACEMENT

      2) GROUT PLACEMENT

      3) HOT AND COLD WEATHER PROTECTION.

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

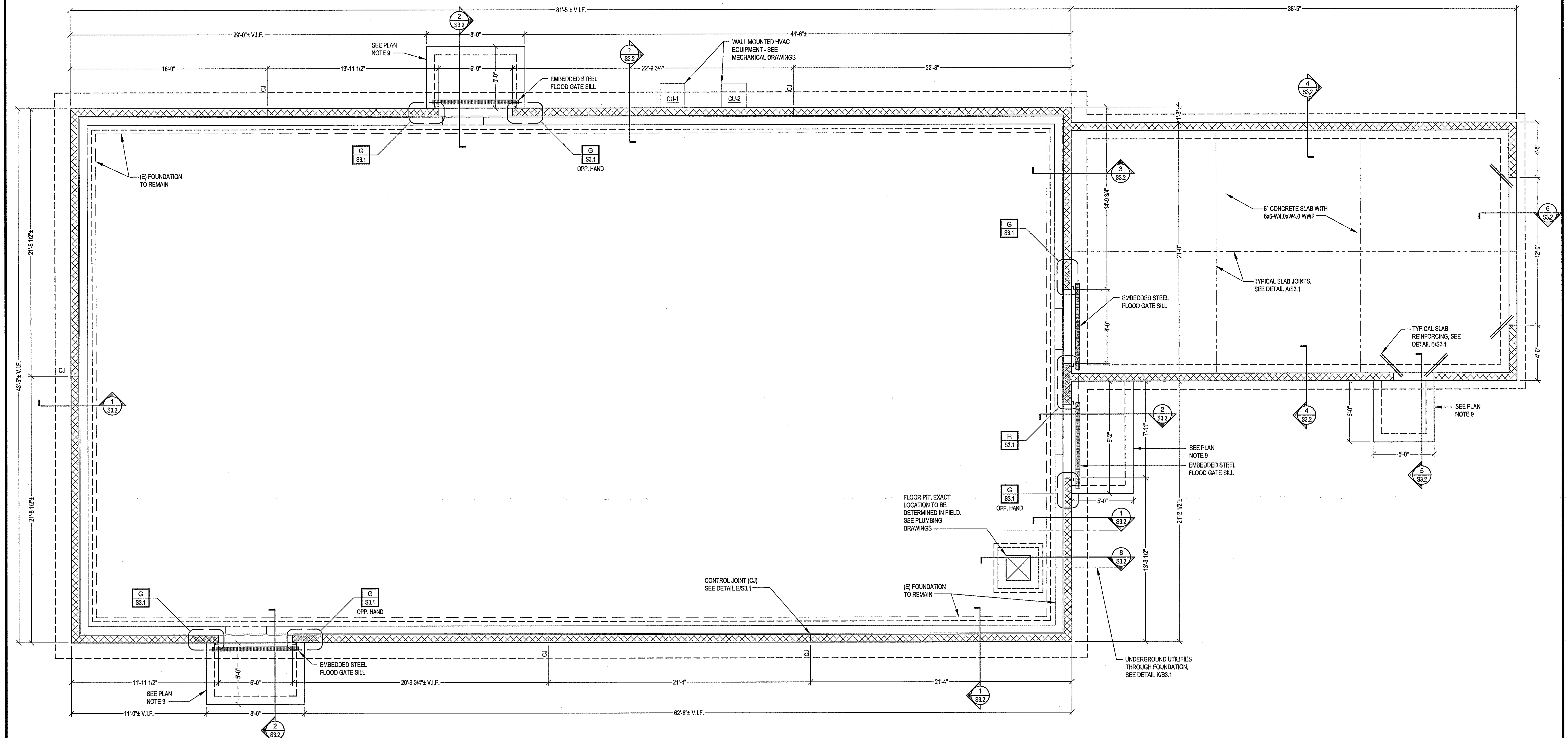
	REVISION	DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

PAUL ALBERT
ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

GENERAL STRUCTURAL NOTES
LYCOMING COUNTY OFFICES
FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

DRAWN BY:	DGP
CHECKED BY:	JLW/ZCK
DATE:	12/04/2020
SCALE:	AS NOTED
JOB NO.:	200398
SHEET:	S0.2

REVISION 0



FOUNDATION/SLAB PLAN

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

JOB NORTH

PLAN NOTES

1. TOP OF SLAB ELEVATION = (543.5') = REFERENCE ELEVATION (0'-0") UNLESS NOTED. SLAB ELEVATION TO MATCH EXISTING. CONTRACTOR FIELD VERIFY.
2. ALL ELEVATIONS INDICATED ON THE DRAWINGS ARE TAKEN FROM REFERENCE ELEVATION.
3. (-x'-x") INDICATES TOP OF FOOTING ELEVATION. BOTTOM OF NEW WALL FOOTING ELEVATIONS TO MATCH BOTTOM OF ADJACENT EXISTING FOOTING ELEVATIONS. CONTRACTOR TO VERIFY ALL EXISTING FOOTING ELEVATIONS IN THE FIELD. STEP FOOTING AS REQUIRED PER DETAIL C/S3.1.
4. TOP OF EXTERIOR FOOTING ELEVATION = (-2'-8") UNLESS NOTED.
5. SEE S0.1 AND S0.2 FOR GENERAL STRUCTURAL NOTES.
6. REFER TO ARCHITECTURAL DRAWINGS FOR HOUSEKEEPING PADS, FLOOR SLOPES, FLOOR RECESSES, SLAB INSERTS, ACCESS FLOOR LAYOUT AND DETAILS, ETC. SEE MECHANICAL DRAWINGS FOR FLOOR DRAIN AND CLEANOUT LOCATIONS.
7. REFER TO SITE AND MEP DRAWINGS FOR UNDERGROUND UTILITY LOCATIONS. COORDINATE FOUNDATION INSTALLATION WITH UTILITIES. STEP FOOTING AS REQUIRED. SEE DETAIL C/S3.1.
8. SEE SHEAR WALL PLAN ON SHEET S2.1 AND SCHEDULE FOR HOLDOWN ANCHOR INFORMATION.
9. CONCRETE SLABS AT EXTERIOR DOORS TO BE 6" THICK WITH 6x6-W4.0xW4.0 WWF WITH TURN-DOWN EDGES.

CONSTRUCTION NOTES

1. FLOOD WALL FOUNDATION TO BE CONSTRUCTED IN SECTIONS TO FACILITATE UNDERPINNING THE EXISTING SLAB FOUNDATION. SEE DETAIL J/S3.1 FOR TYPICAL UNDERPINNING SEQUENCE.
2. CMU FLOOD WALL TO BE CONSTRUCTED IN ONE CONTINUOUS OPERATION AFTER ALL FOUNDATIONS AND UNDERPINNING HAVE BEEN COMPLETED.

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

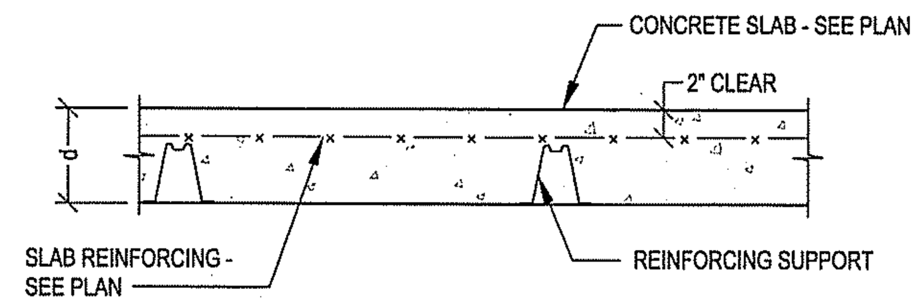
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

REVISION		DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW

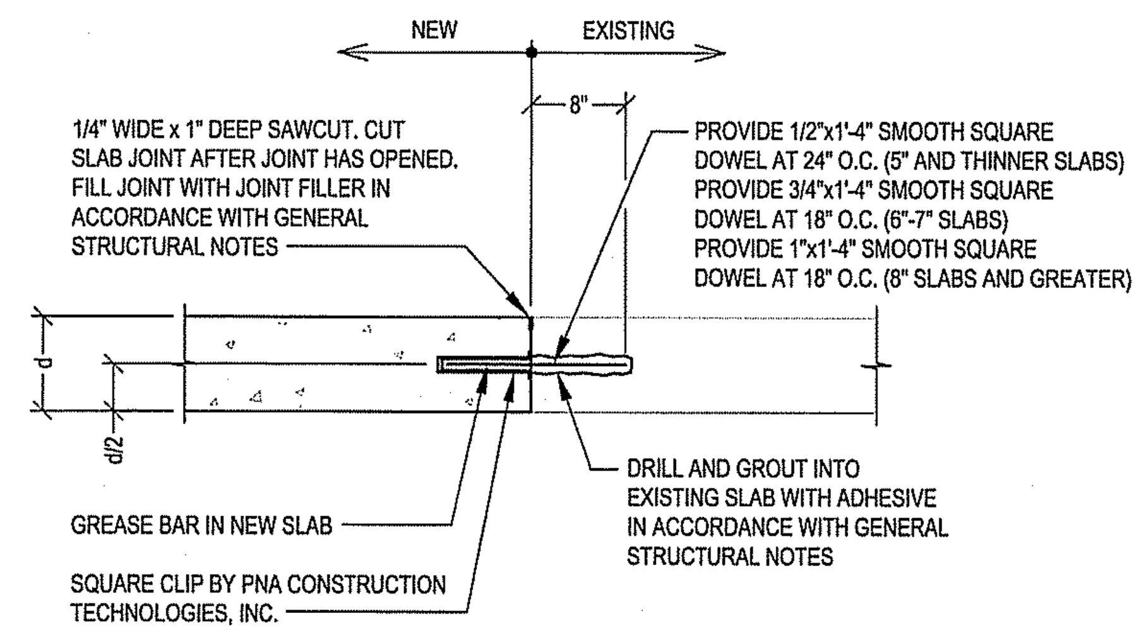
PAUL ALBERT ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

FOUNDATION/SLAB PLAN
LYCOMING COUNTY OFFICES FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

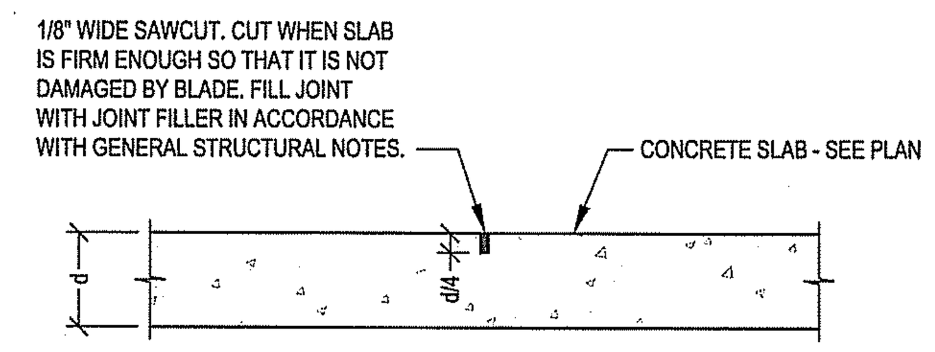
DRAWN BY:	DGP
CHECKED BY:	JLW/ZCK
DATE:	12/04/2020
SCALE:	AS NOTED
JOB NO.:	200398
SHEET:	S1.1
REVISION 0	



TYPICAL WWR REINFORCED SLAB SECTION



TYPICAL CONSTRUCTION JOINT (NEW TO EXISTING)

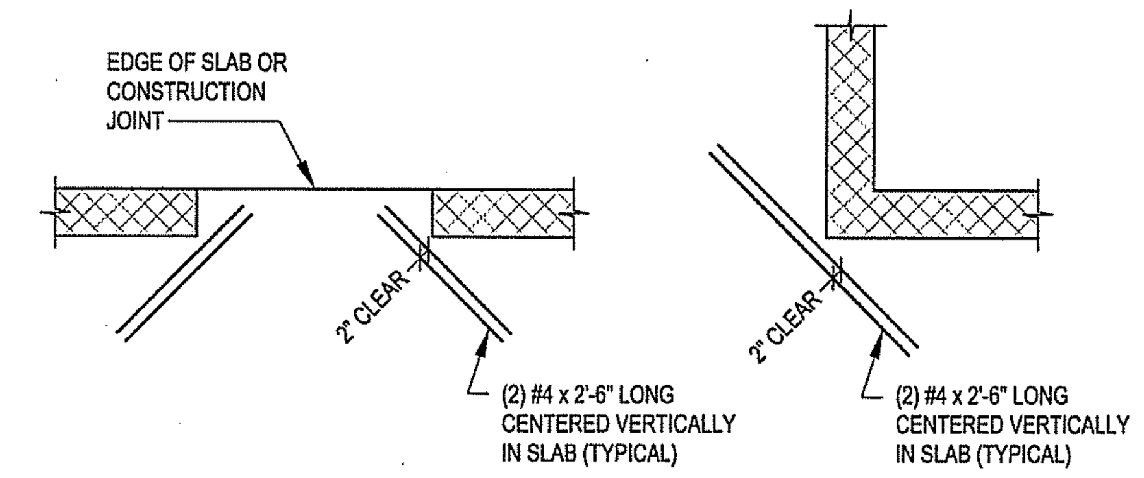


TYPICAL SAWCUT CONTRACTION JOINT

REINFORCEMENT NOTES:

1. REINFORCEMENT SHALL NOT CONTINUE THROUGH CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED.
2. PLACE AND SUPPORT REINFORCEMENT PRIOR TO CONCRETE PLACEMENT TO MAINTAIN LOCATION, DURING CONCRETE PLACEMENT, SHOWN ON THESE DETAILS AND WITHIN TOLERANCES INDICATED IN ACI 117. REINFORCEMENT SUPPORTS SHALL CONFORM TO CRSI RB4.1.
3. CONCRETE BRICKS ARE NOT ACCEPTABLE FOR REINFORCING SUPPORT IN SLABS.
4. WWR W4.0/D4.0 AND SMALLER SHALL HAVE CONTINUOUS SUPPORT. THE CONTINUOUS SUPPORT SPACING SHALL NOT EXCEED 12 INCHES PERPENDICULAR TO THE DIRECTION OF SPAN.
5. IF VAPOR RETARDER/BARRIER IS PRESENT, REINFORCEMENT SUPPORTS SHALL NOT DAMAGE VAPOR RETARDER/BARRIER. PROVIDE CONTINUOUS PLATES ON BOTTOM OF BOLSTERS AND PROVIDE PLATES ON INDIVIDUAL CHAIRS.

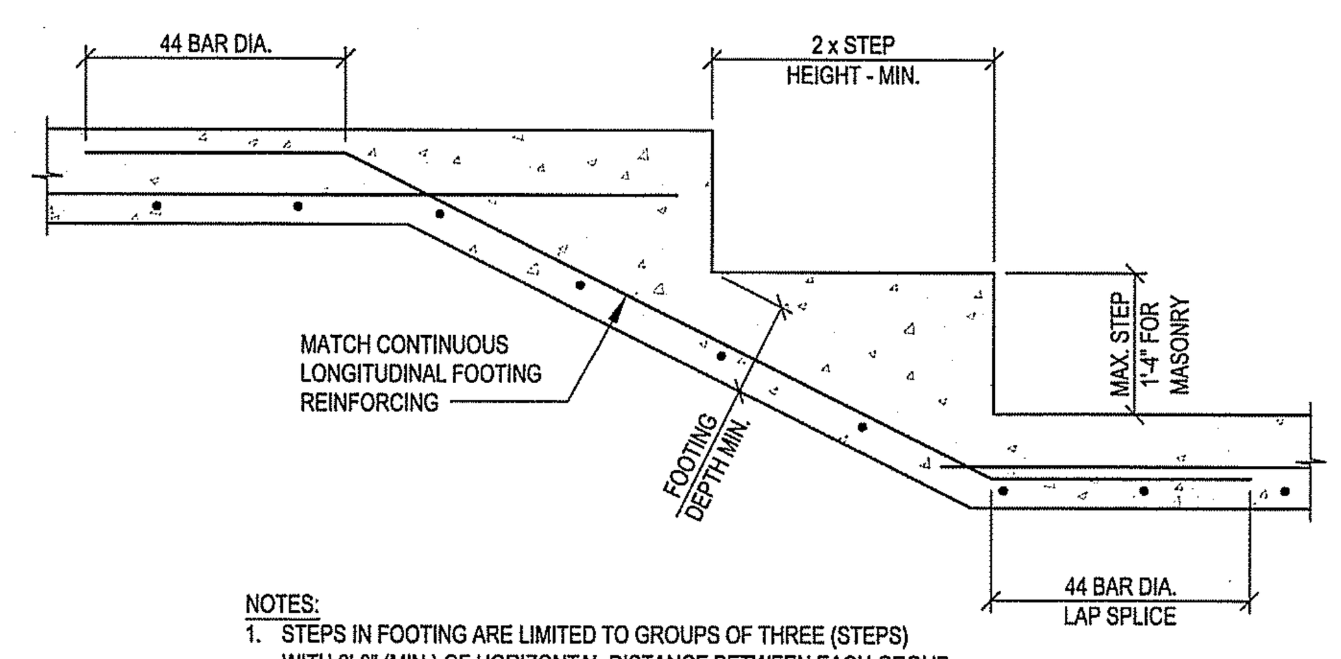
TYPICAL SLAB-ON-GROUND DETAILS
DETAIL A / S3.1
NO SCALE



TYPICAL SLAB DETAIL AT WALL OPENING

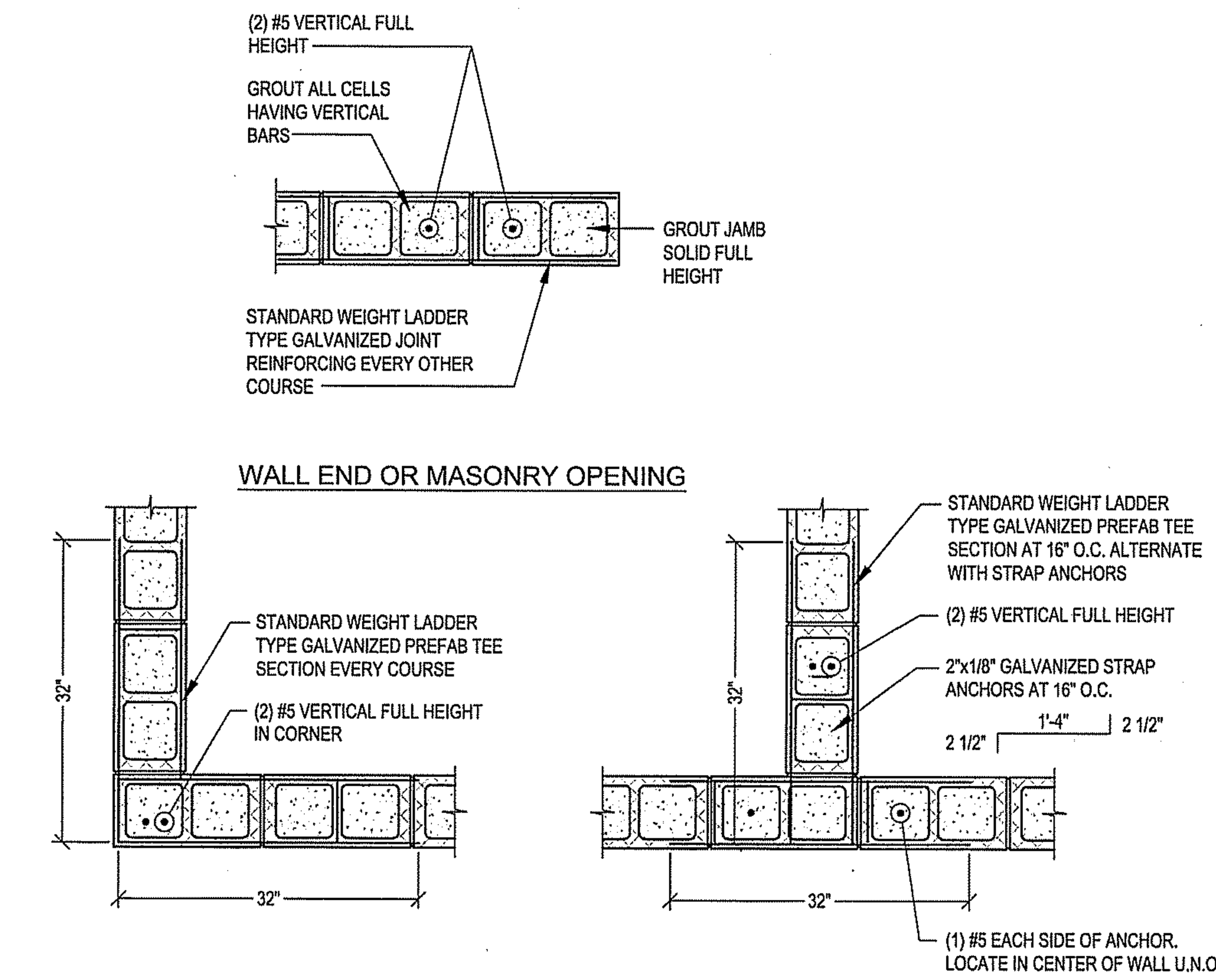
TYPICAL SLAB DETAIL AT RE-ENTRANT WALL CORNER

TYPICAL SLAB REINFORCING
DETAIL B / S3.1
NO SCALE



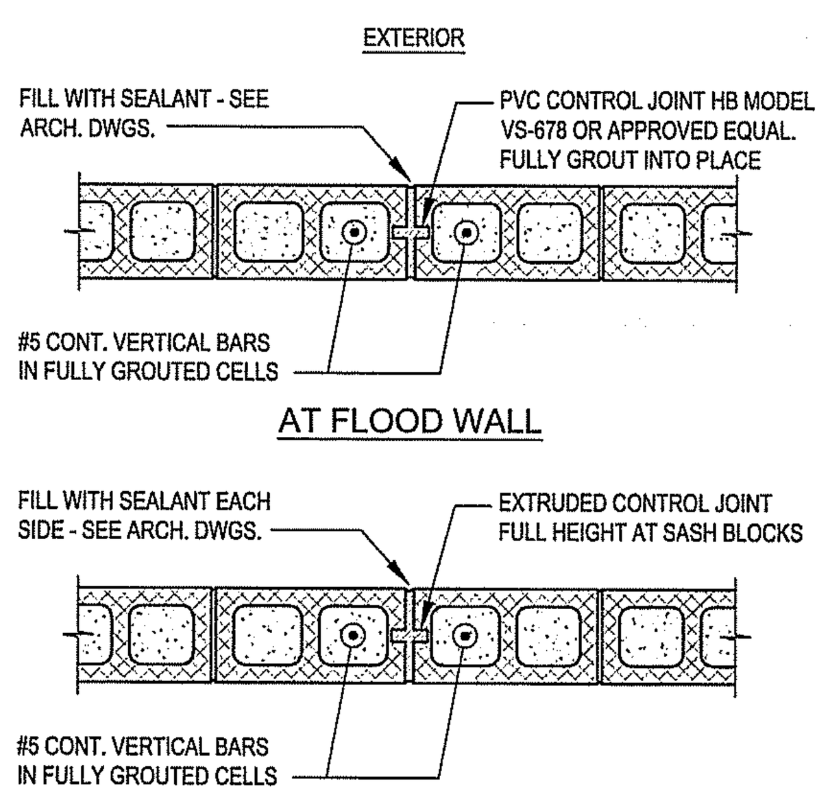
NOTES:
1. STEPS IN FOOTING ARE LIMITED TO GROUPS OF THREE (STEPS) WITH 8'-0" (MIN.) OF HORIZONTAL DISTANCE BETWEEN EACH GROUP.

TYPICAL STEPPED FOOTING
DETAIL C / S3.1
NO SCALE



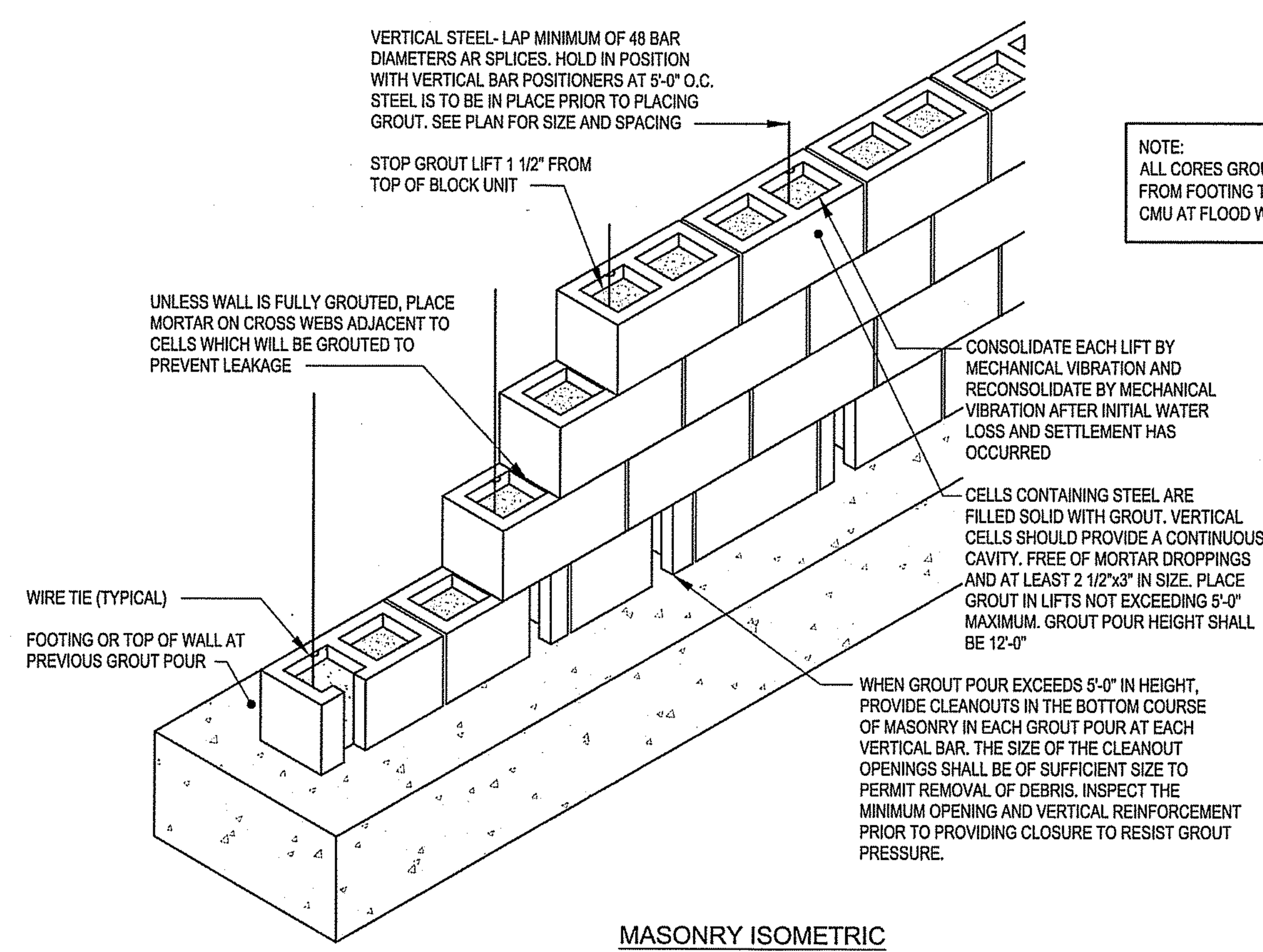
NOTES:
1. SEE PLANS AND SECTIONS FOR MASONRY BOND BEAM AND VERTICAL WALL REINFORCING REQUIREMENTS. PROVIDE BOND BEAMS WITH CORNER BARS AND DOWELS AT INTERSECTING WALLS. ALL BOND BEAM REINFORCING SHALL BE CONTINUOUS THRU CONTROL JOINTS.

TYPICAL MASONRY WALL REINFORCING
DETAIL D / S3.1
NO SCALE



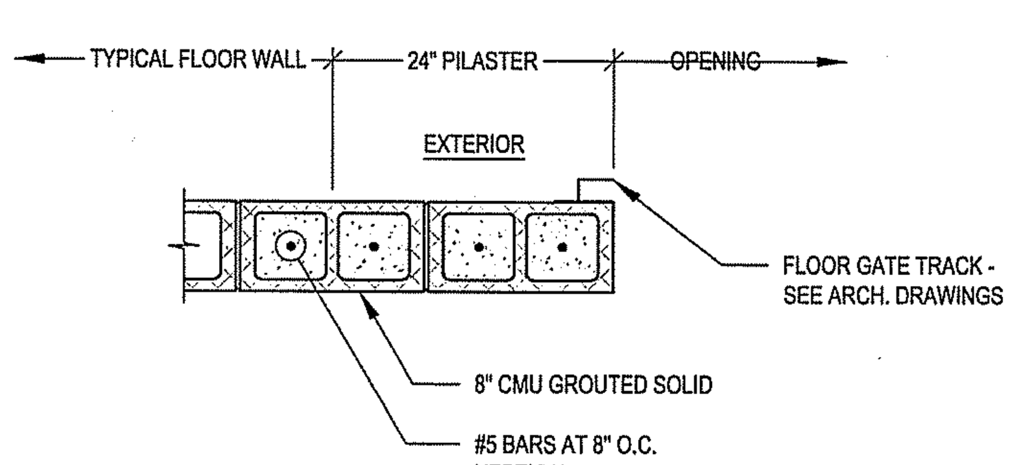
NOTES:
1. SEE S.1 FOR MASONRY WALL CONTROL JOINT LOCATIONS. IF NONE SHOWN, PROVIDE PROPOSED LOCATION LAYOUT FOR REVIEW. SPACE JOINTS AT 10'-0" O.C. UNLESS NOTED OTHERWISE.
2. HORIZONTAL WIRE JOINT REINFORCEMENT DOES NOT EXTEND THRU JOINT.
3. ALL HORIZONTAL BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THRU JOINT.

TYPICAL MASONRY WALL CONTROL JOINT
DETAIL E / S3.1
NO SCALE

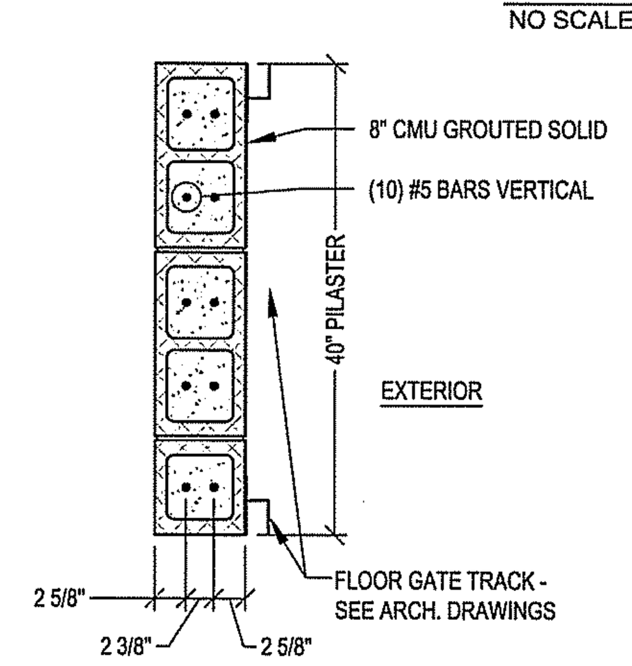


NOTE:
ALL CORES GROUTED SOLID FROM FOOTING TO TOP OF CMU AT FLOOD WALL

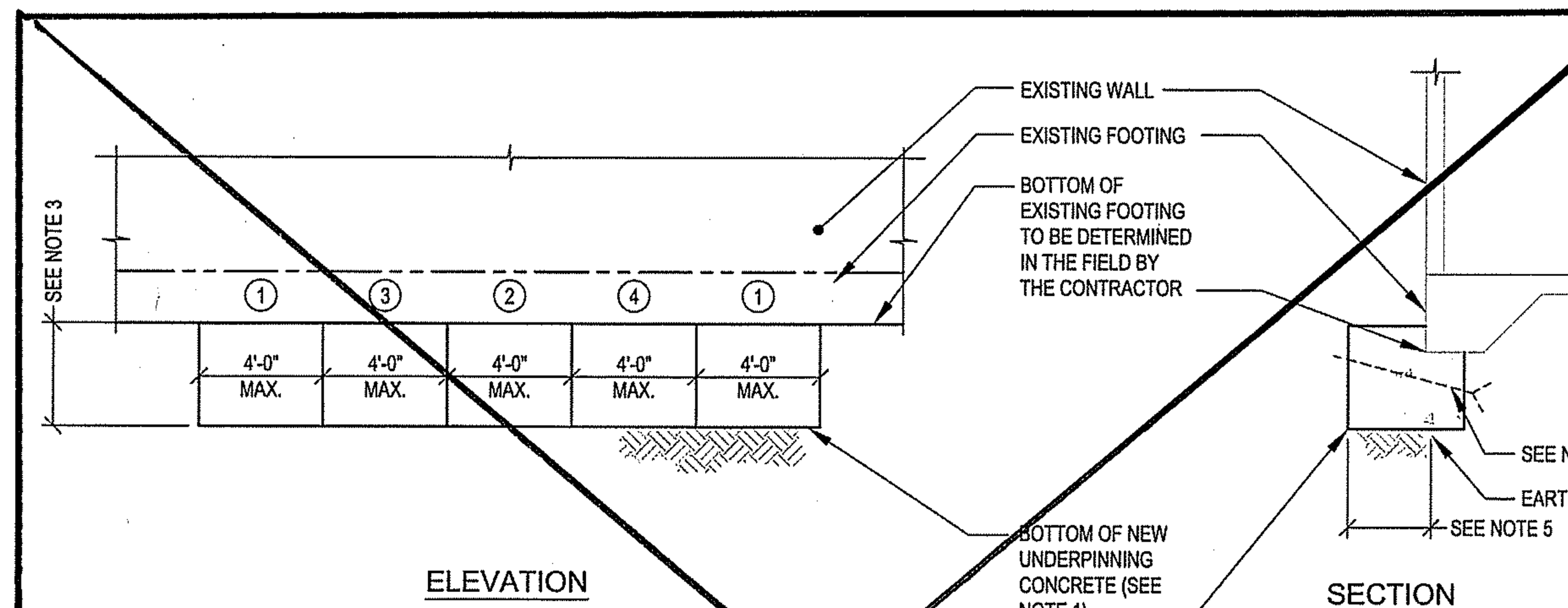
MASONRY ISOMETRIC
DETAIL F / S3.1
NO SCALE



PILASTER
DETAIL G / S3.1
NO SCALE

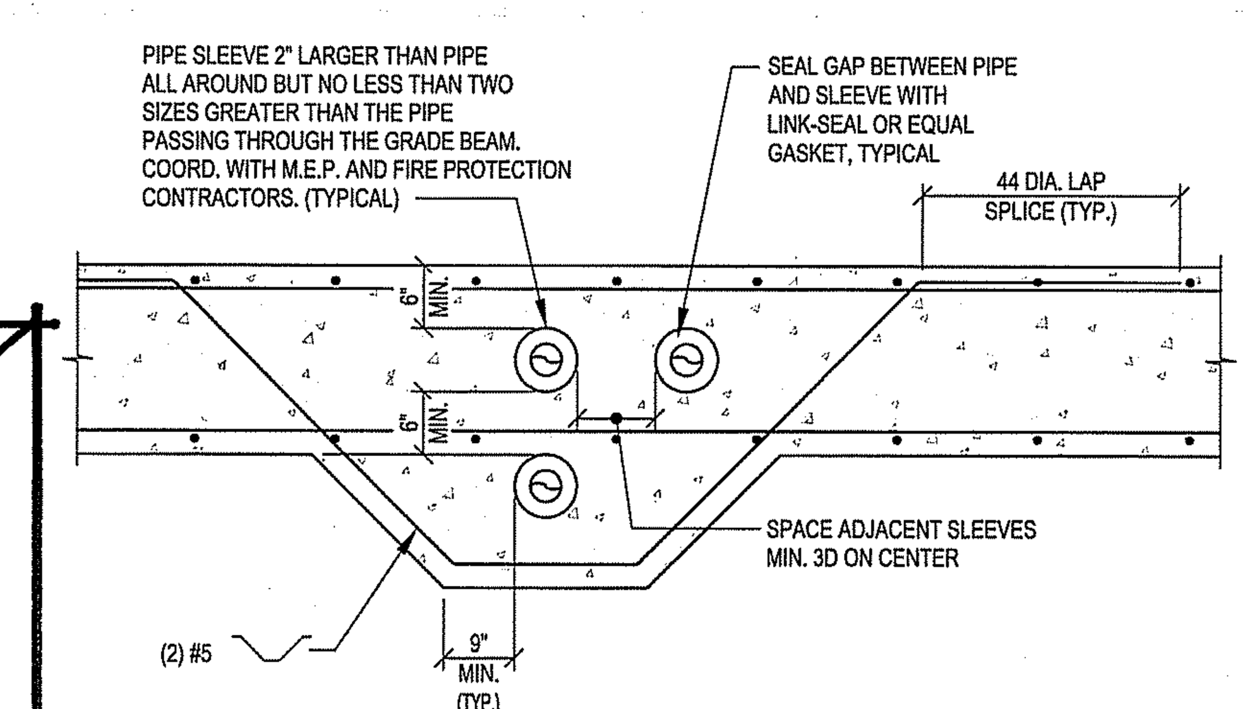


PILASTER
DETAIL H / S3.1
NO SCALE

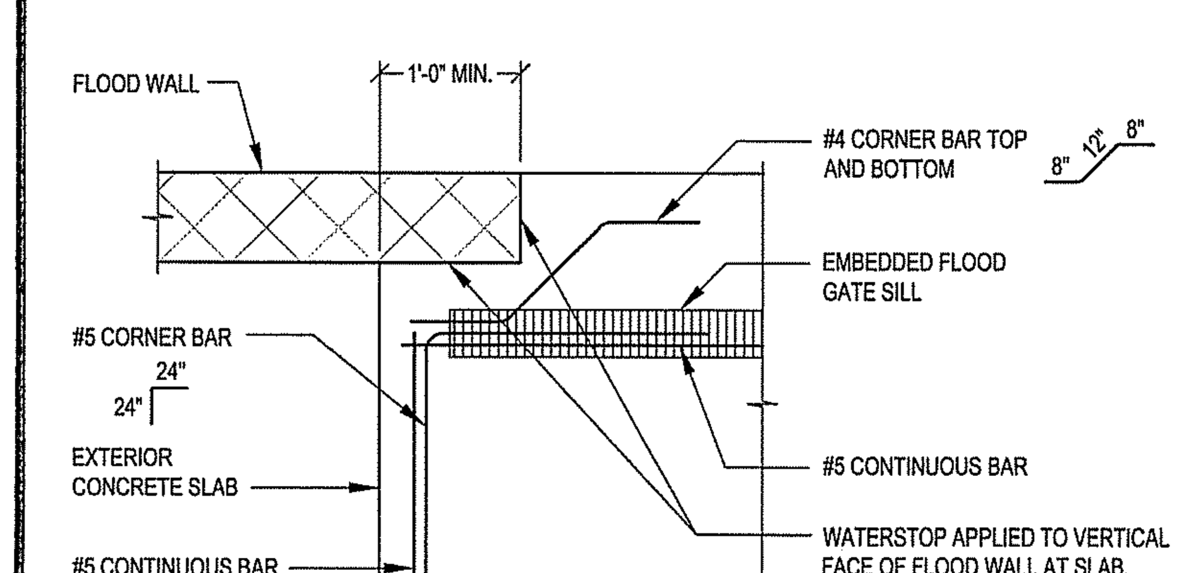


NOTES:
1. UNDERPINNING OF THE EXISTING ADJACENT BUILDING WALLS SHALL BE OF PLAIN CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. UNDERPINNING SHALL BE CONTINUOUS ALONG THE TIE WALLS AND BEAR ON UNDISTURBED EARTH APPROVED BY A LICENSED GEOTECHNICAL ENGINEER. EXISTING WALLS SHALL BE ADEQUATELY BRACED AND SUPPORTED UNTIL NEW FOUNDATION IS IN PLACE AND CURED.
2. ALTERNATE UNDERPINNING SECTIONS AS FOLLOWS: INSTALL ALL "1" UNITS BEFORE PROCEEDING WITH "2" UNITS. ADJACENT UNIT SHALL NOT BE PLACED WITHIN 4 DAYS OF EACH OTHER. ALLOW 24 HOURS CURING PRIOR TO PLACING DRY-PACK TO EXISTING WORK. PROVIDE MIN. 8'-0" BETWEEN OPEN SECTIONS.
3. FOR UNDERPINNING HEIGHTS GREATER THAN 4'-0" THE DESIGN MUST BE PERFORMED BY A SPECIALTY ENGINEER LICENSED IN THE PROJECT JURISDICTION. SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS SHOWING ALL DETAILS OF THE PROPOSED CONSTRUCTION PROCEDURE AND OTHER PERTINENT INFORMATION FOR ENGINEER'S REVIEW PRIOR TO PROCEEDING WITH THE WORK.
4. WHERE FINAL GRADE ELEVATIONS ON EACH SIDE OF THE UNDERPINNING VARY. PROVIDE TIE BACKS AS REQUIRED AND DESIGNED BY A SPECIALTY ENGINEER.
5. WIDTH OF UNDERPINNING TO BE AT LEAST AS WIDE AS THE EXISTING FOOTING. CONTRACTOR SHALL VERIFY ACTUAL FOOTING WIDTH IN THE FIELD.
6. ELEVATIONS OF EXISTING FOOTINGS ADJOINING THE NEW WORK ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. IF FOUND NECESSARY TO LOWER THE EXISTING FOOTINGS TO SUIT NEW CONSTRUCTION, UNDERPINNING SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS PROVIDED.

TYPICAL WALL UNDERPINNING
DETAIL J / S3.1
NO SCALE



PIPE PENETRATION THRU FLOOD WALL FOOTING
DETAIL K / S3.1
NO SCALE



TYPICAL SLAB REINFORCING DETAIL AT FLOOD WALL GATE
DETAIL - PLAN L / S3.1
NO SCALE

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

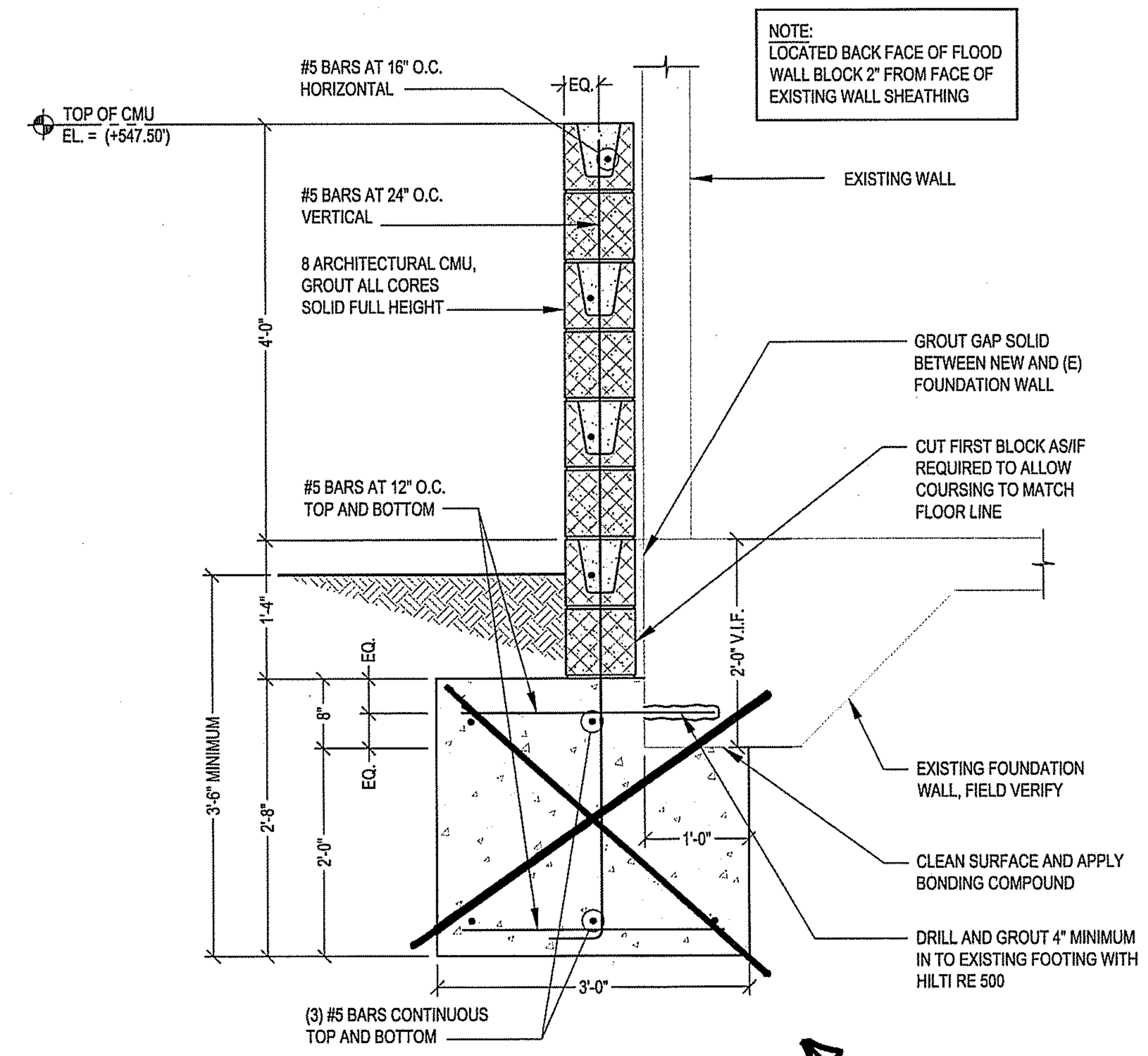
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

	REVISION	DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW

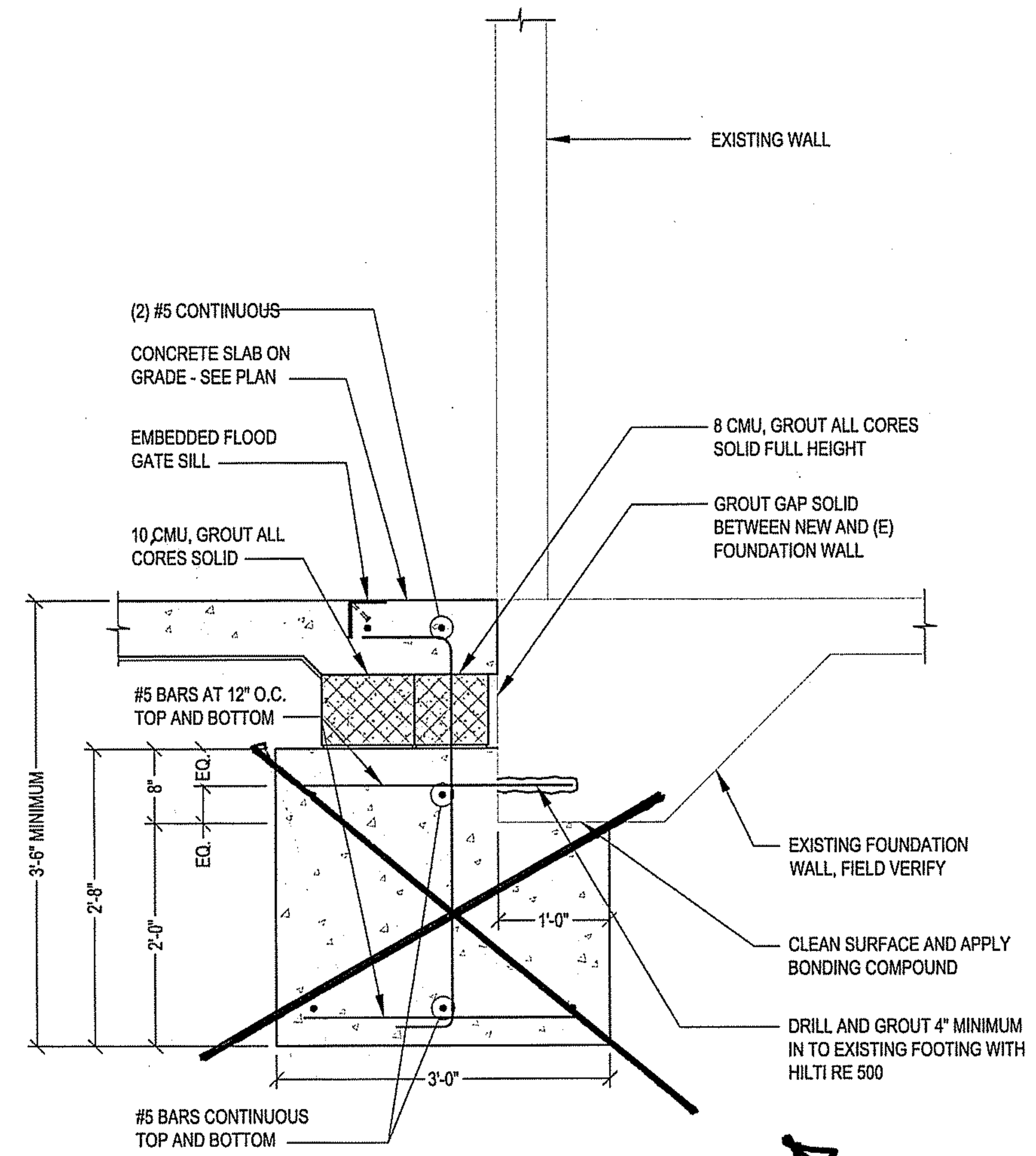
PAUL ALBERT ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

FOUNDATION DETAILS
LYCOMING COUNTY OFFICES FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

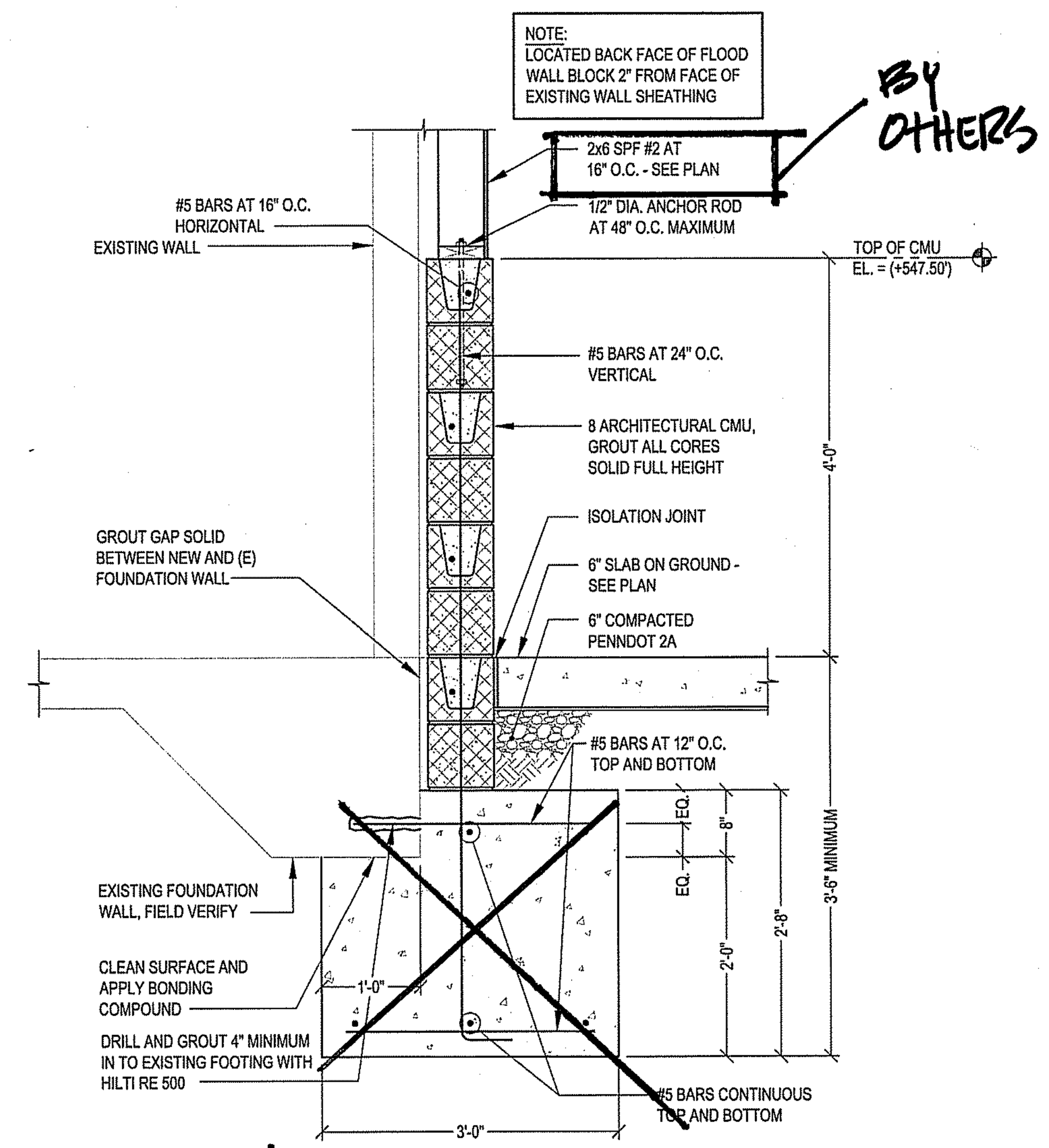
DRAWN BY:	DGP
CHECKED BY:	JLW/ZCK
DATE:	12/04/2020
SCALE:	AS NOTED
JOB NO.:	200398
SHEET:	S3.1
REVISION 0	



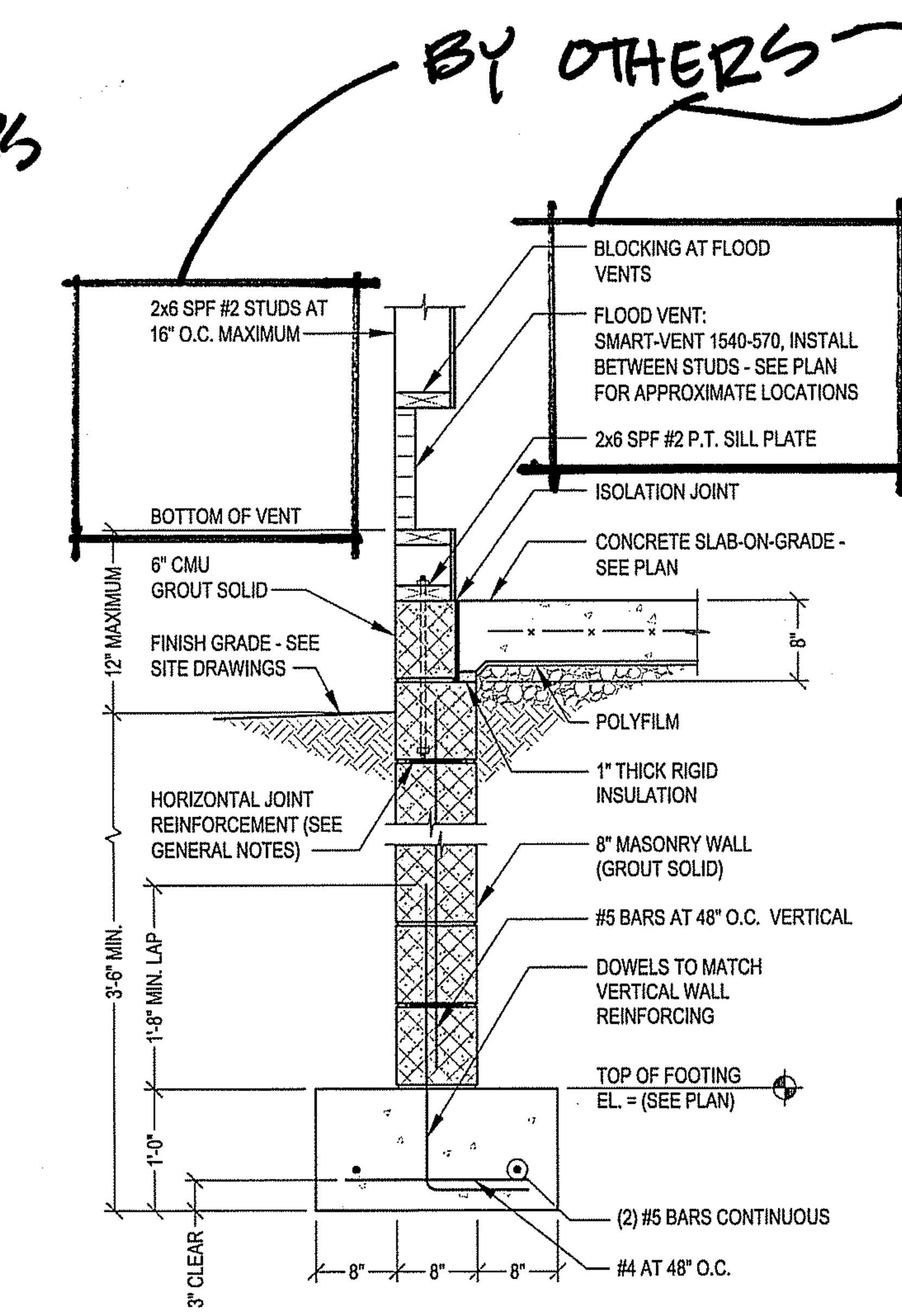
TYPICAL FLOOD WALL
SECTION 1 / S3.2
SCALE: 3/4"=1'-0"



TYPICAL FLOOD WALL AT DOOR
SECTION 2 / S3.2
SCALE: 3/4"=1'-0"

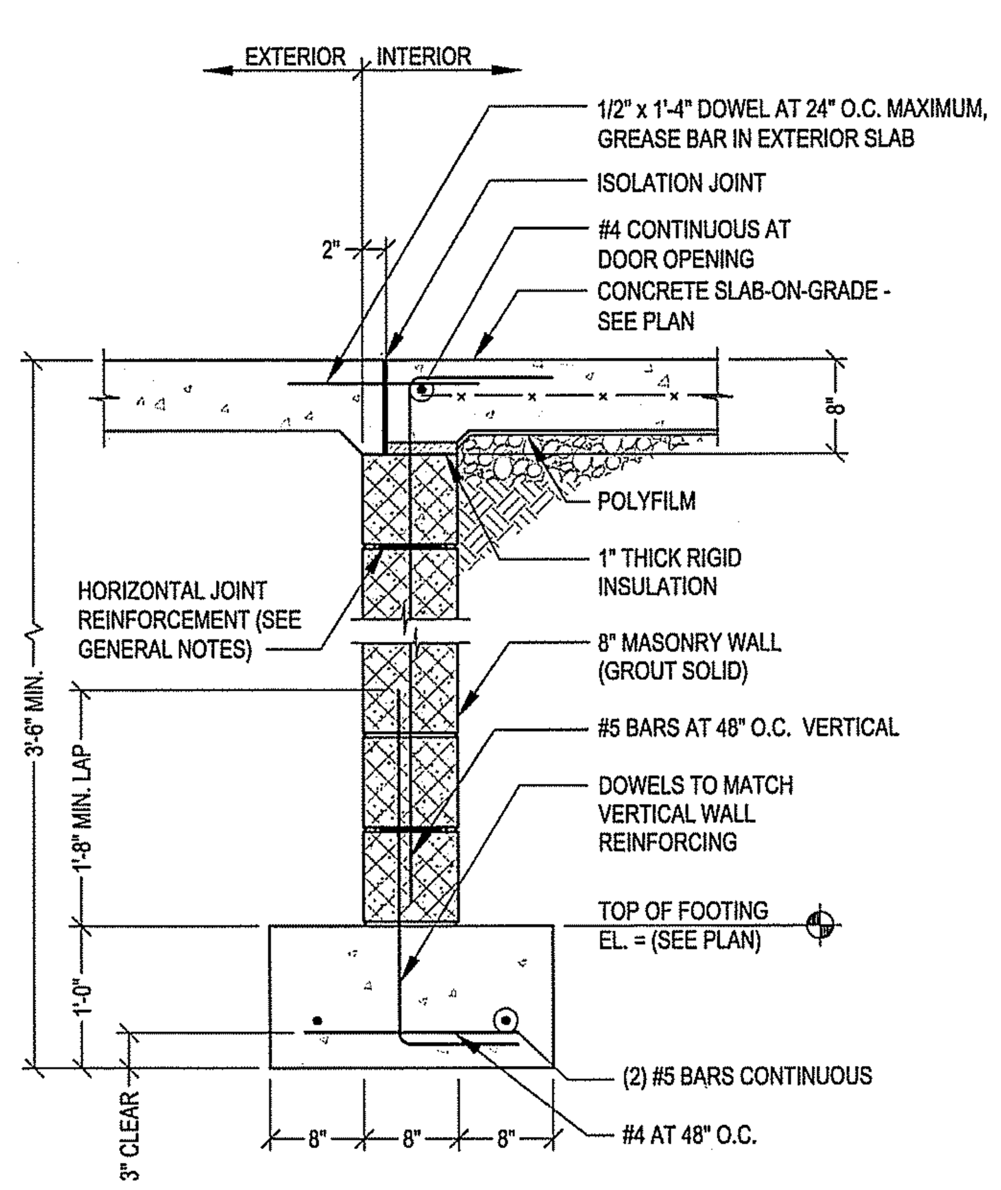


FLOOD WALL AT GARAGE
SECTION 3 / S3.2
SCALE: 3/4"=1'-0"

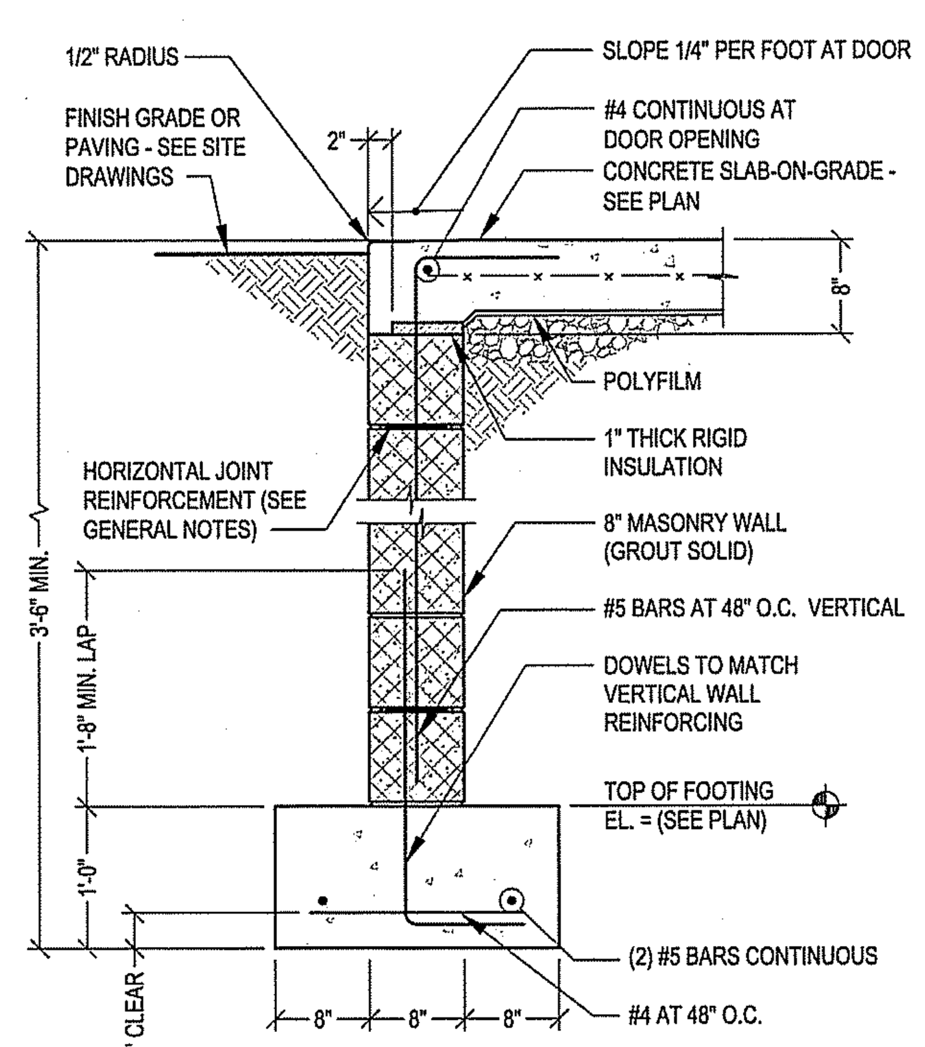


TYPICAL GARAGE FOUNDATION
SECTION 4 / S3.2
SCALE: 3/4"=1'-0"

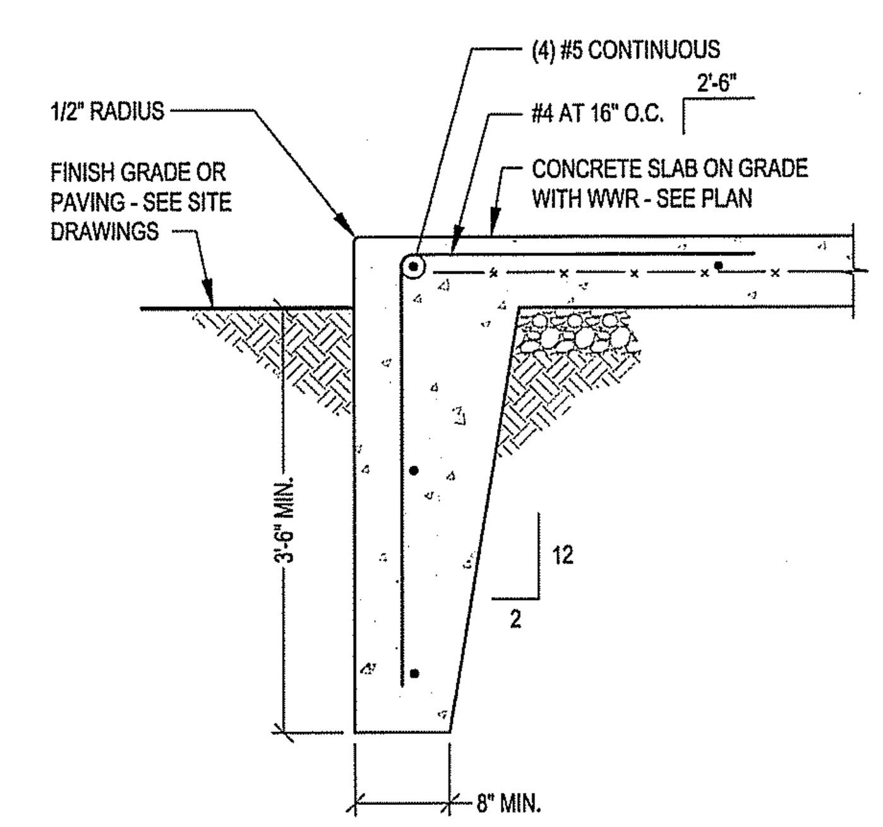
SEE REVISED FLOOD WALL FOOTING ON A3.2 FW



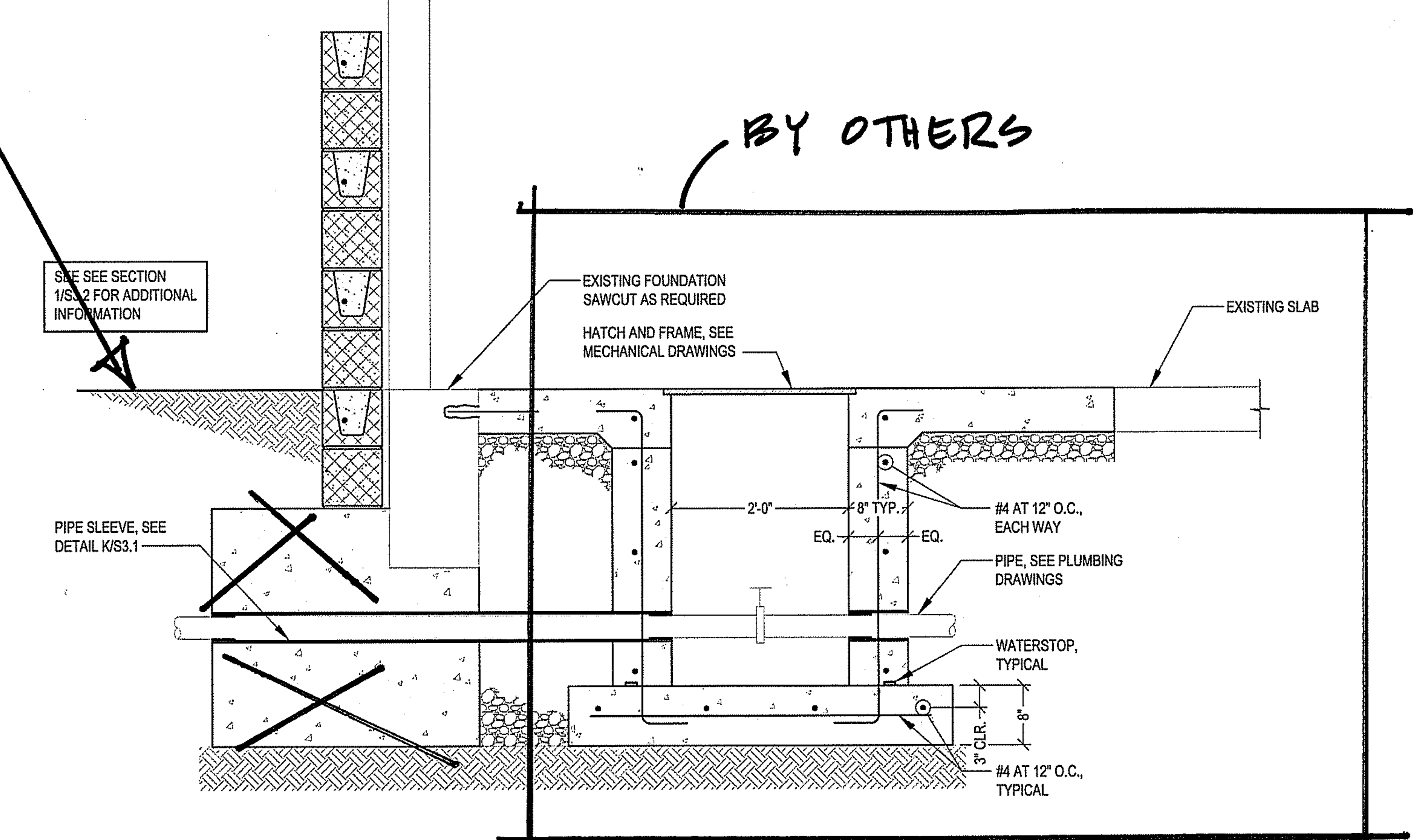
TYPICAL FOUNDATION SECTION AT MAN DOOR
SECTION 5 / S3.2
SCALE: 3/4"=1'-0"



SECTION 6 / S3.2
SCALE: 3/4"=1'-0"



EXTERIOR TURN DOWN SLAB EDGE
SECTION 7 / S3.2
SCALE: 3/4"=1'-0"



SECTION 8 / S3.2
SCALE: 3/4"=1'-0"

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

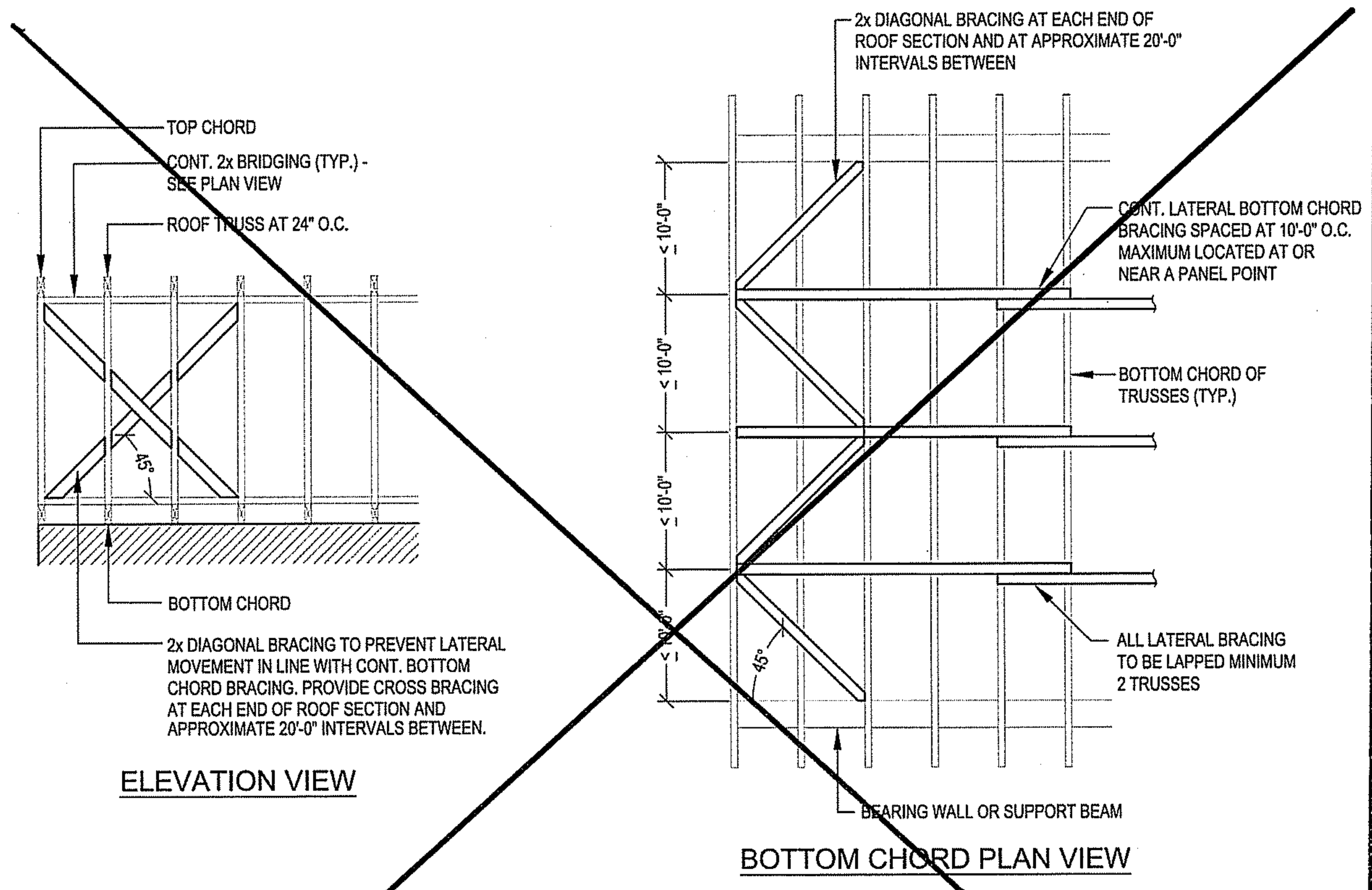
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

	REVISION	DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW

PAUL ALBERT
ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

FOUNDATION SECTIONS
LYCOMING COUNTY OFFICES
FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

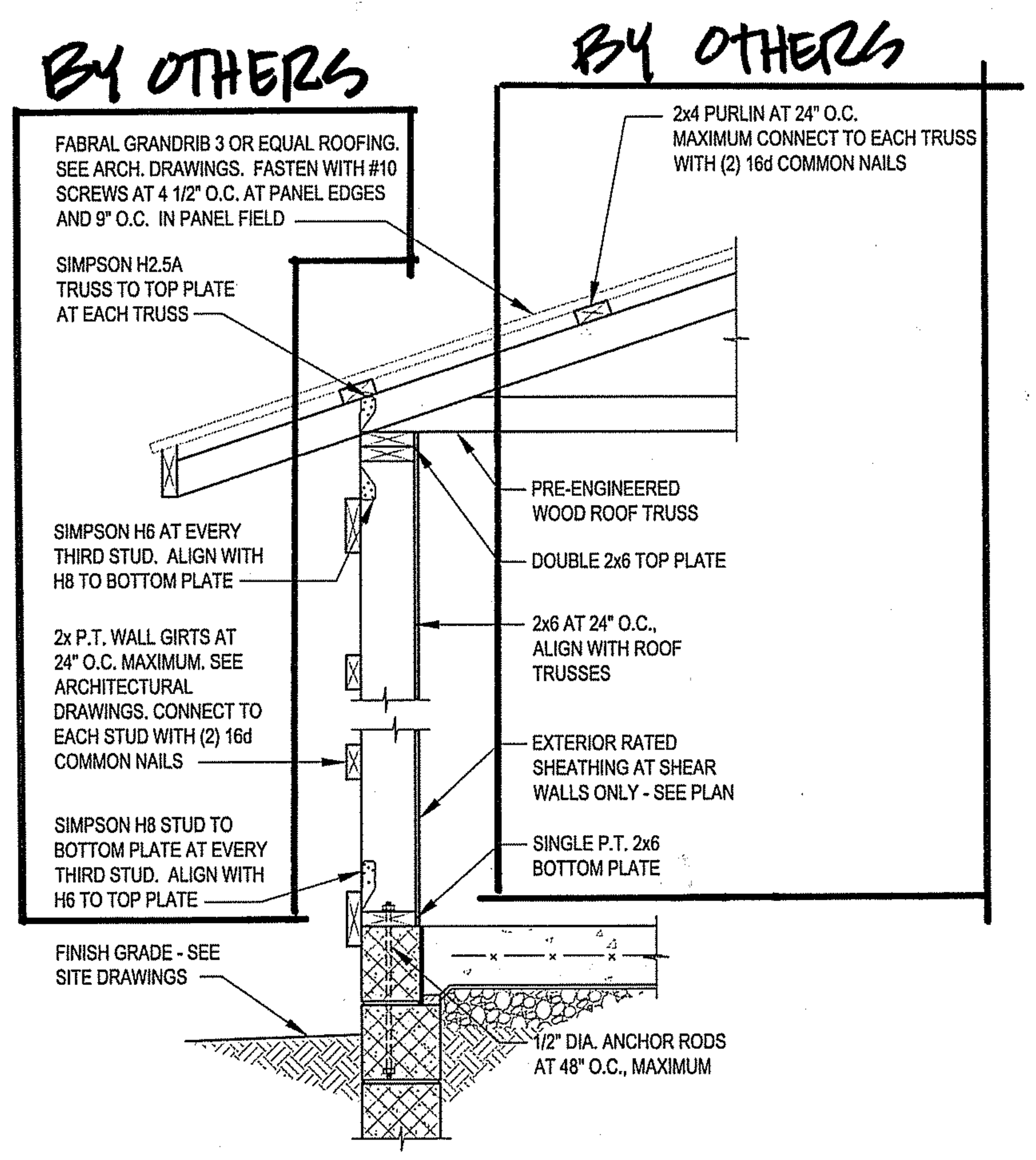
DRAWN BY:	DGP
CHECKED BY:	JLW/ZCK
DATE:	12/04/2020
SCALE:	AS NOTED
JOB NO.:	200398
SHEET:	S3.2
REVISION 0	



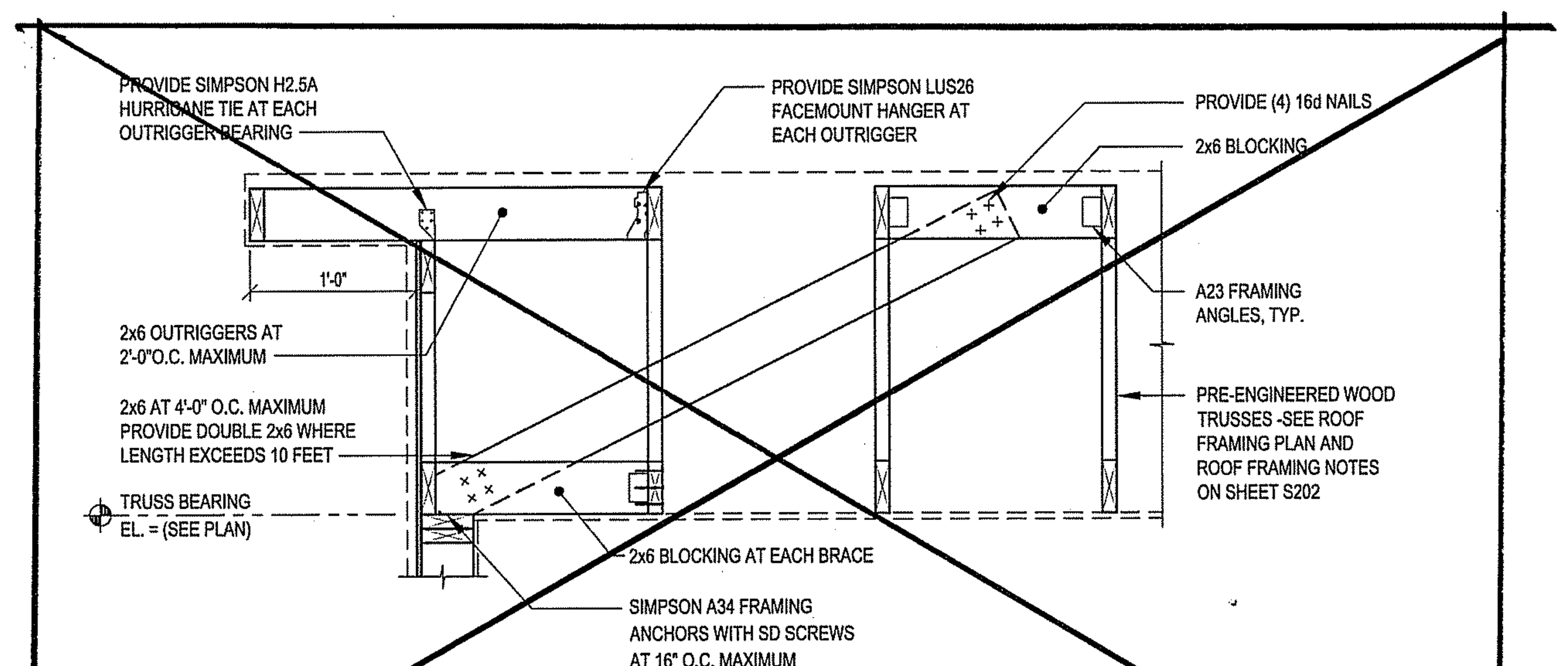
PERMANENT TRUSS CHORD BRACING

NOTES:
1. LATERAL BRACING IS TO BE MINIMUM 2x4 ATTACHED TO EACH TRUSS WITH (2) 16d COMMON NAILS.

PERMANENT TRUSS BRACING
DETAIL A / S4.1
NO SCALE



SECTION 1 / S4.1
SCALE: 3/4" = 1'-0"



SECTION 2 / S4.1
SCALE : 3/4" = 1'-0"

PROVIDENCE
ENGINEERING CORP
419 Market Street
Lewisburg, PA 17837
Phone: 570-935-0129
Certification Number: 3869

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEREMY LEE WHITMOYER
ENGINEER
PE077623
12/07/2020

	REVISION	DATE	BY
0	ISSUED FOR PERMIT	12/04/2020	JLW
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

PAUL ALBERT ARCHITECT, LLC
2442 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701
570-601-1600

FRAMING DETAILS AND SECTIONS

LYCOMING COUNTY OFFICES FOR DJ SOLOMON
2107 LYCOMING CREEK ROAD
WILLIAMSPORT, PA 17701

DRAWN BY: DGP
CHECKED BY: JLW/ZCK
DATE: 12/04/2020
SCALE: AS NOTED
JOB NO.: 200398
SHEET: S4.1
REVISION 0