



HISTORIC PRESERVATION COMMISSION

Marc Elrich
County Executive

Robert K. Sutton
Chairman

Date: March 25, 2022

MEMORANDUM

TO: Mitra Pedoeem
Department of Permitting Services

FROM: Dan Bruechert
Historic Preservation Section
Maryland-National Capital Park & Planning Commission

SUBJECT: Historic Area Work Permit #897942 - Building Addition

The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **Approved** at the November 18, 2020 HPC meeting with changes approved at the March 23, 2021 HPC meeting.

The HPC staff has reviewed and stamped the attached construction drawings.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: Meredith Sharp
Address: 3944 Baltimore St., Kensington

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete the applicant will contact Dan Bruechert at 301.563.3400 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.



Sharp Residence

3944 Baltimore St
 Kensington, MD 20895

ZONING INFORMATION	
ZONE	R-60
MINIMUM LOT SIZE	6,000 sf
LEGAL	
SUBDIVISION	Kensington Park 7603/502
LOT	17
BLOCK	11
PLAT	
MINIMUM SETBACKS	
FRONT	25 ft
SIDE STREET (if applicable)	0 ft
SUM OF BOTH SIDES	18 ft
ONE SIDE	8 ft
REAR	20 ft
MAXIMUM BUILDING HEIGHT	
TO PEAK	35 ft
TO MEAN HEIGHT BETWEEN EAVES	30 ft
LOT AREA, EXISTING	11,685 sf
LOT COVERAGE	
MAX. ALLOWED (COVERAGE/AREA) X 100	35%
	4,090 sf
PROPOSED COVERAGE	19%
	2,225 sf
HIGHLIGHT THE CORRECT ONE BELOW	
<= 30% MAX Standard Method Development Standards	0.19 %
> 30% MAX Int'l Development Standards	0.19 %

CONSULTANTS

STRUCTURAL ENGINEER:
 CONSULTING ENGINEERS, CORP.
 PRATT SINHA
 11480 SUNSET HILLS RD, SUITE 100E
 RESTON, VA 20190
 703.481.2100

MEP ENGINEER:
 MEPTech CONSULTING ENGINEERS
 SHARI SHARAFI
 4803 WESTWAY DR.
 BETHESDA, MD 20816
 301.996.3677

SURVEYOR:
 SNIDER & ASSOCIATES SURVEYORS
 ED SNIDER
 20270 GOLDENROD LANE, SUITE 110
 GERMANTOWN, MD 20876
 301.948.5100

CIVIL ENGINEER:
 SITE SOLUTIONS, INC.
 MIKE DEVINE
 PO BOX 1783
 CLARKSBURG, MD 20871
 301.540.7990 x 22

APPLICABLE CODES

BUILDING CODE
 - 2018 ICC International Residential Code (IRC) w/ amendments per Executive Regulation No. 31-19
 - MBRC Maryland Building Rehabilitation Code

ELECTRICAL CODE
 - NFPA 70 National Electrical Code (NEC) 2017

PLUMBING CODE
 - WSSC Plumbing & Fuel Gas Code

MECHANICAL CODE
 - 2018 ICC International Mechanical Code (IMC)

FIRE & LIFE SAFETY CODE
 - 2015 NFPA 1 & 101 (National Fire Protection Association)

FIRE ALARM CODE
 - NFPA 72/2013
 - COMAR NFPA 72/2013

ENERGY CONSERVATION CODE
 - 2018 ICC International Energy Conservation Code (IECC)

LAND DISTURBANCE CALCULATIONS	
VOLUME OF EXCAVATION	
SURFACE AREA 1 (Areaway)	112 sf
PROPOSED DEPTH	6.00 ft
CUBIC FEET (AREA X DEPTH)	672 cu.ft.
SURFACE AREA 2 (Addition)	370 sf
PROPOSED DEPTH	5.00 ft
CUBIC FEET (AREA X DEPTH)	1,850 cu.ft.
SURFACE AREA 3 (Piers)	45 sf
PROPOSED DEPTH	2.50 ft
CUBIC FEET (AREA X DEPTH)	113 cu.ft.
TOTAL (cu.ft/27)	97.57 cu.yds
DISTURBED SURFACE AREA	1,517 sf

BUILDING AREA CALCULATIONS	
EXISTING BUILDING AREA	
BASEMENT	940 sf
FIRST FLOOR	1,249 sf
SECOND FLOOR	1,162 sf
THIRD FLOOR	734 sf
TOTAL	4,085 sf
ALTERED/RENOVATED FLOOR AREA	
BASEMENT	174 sf
FIRST FLOOR	313 sf
SECOND FLOOR	154 sf
THIRD FLOOR	322 sf
TOTAL	963 sf
NEW FLOOR AREA	
BASEMENT	76 sf
FIRST FLOOR	517 sf
SECOND FLOOR	74 sf
THIRD FLOOR	0 sf
TOTAL	667 sf
DEMOLISHED FLOOR AREA	
BASEMENT	0 sf
FIRST FLOOR	0 sf
SECOND FLOOR	0 sf
THIRD FLOOR	0 sf
TOTAL	0 sf
ACCESSORY BUILDING - GARAGE	
EXISTING FLOOR AREA	459 sf
DEMOLISHED FLOOR AREA	0 sf
NEW FLOOR AREA	0 sf
TOTAL	459 sf
EXTERIOR SPACES	
FRONT PORCH	734 sf
DECK + EXTERIOR STAIRS	378 sf
HARDSCAPE	500 sf
TOTAL	1,612 sf

INFILL LOT CALCULATIONS	
EXISTING FLOOR AREA	4,085 sf
50% of EXISTING FLOOR AREA	2,043 sf
NEW FLOOR AREA MAIN STRUCTURE	517 sf
NEW FLOOR AREA ACCESSORY BLDG	0 sf
IF NEW FOOTPRINT IS LESS THAN 50% OF EXISTING, BUILDING IS NOT INFILL LOT	

ADDITIONS, ALTERATIONS AND REPAIRS ON EXISTING STRUCTURES SHALL COMPLY WITH IRC 2018 SECTION R-102.7.1



SCOPE OF WORK:

BASEMENT:
 -DIG OUT EXISTING CRAWL SPACE TO CREATE NEW STORAGE ROOM
 -NEW AREAWAY STAIRS
 -NEW CONDITIONED CRAWL SPACES BELOW PROPOSED ADDITION
 -REPLACE MECHANICAL ROOM DOOR

FIRST FLOOR:
 - NEW KITCHEN, MUDROOM & PANTRY ADDITION
 -NEW REAR DECK
 -NEW SCREENED SIDE PORCH AND STAIRS TO GRADE
 -REPLACE FIXTURES, FINISHES IN POWDER ROOM
 -NEW CELLULOSE INSULATION IN EXISTING EXTERIOR WALLS

SECOND:
 -NEW BATHROOM ADDITION
 -REPLACE FIXTURES, FINISHES AND ACCESSORIES IN EXISTING BATHROOMS
 -NEW CELLULOSE INSULATION IN EXISTING EXTERIOR WALLS

ATTIC:
 -RECONFIGURE BATHROOM
 -LEVEL FLOOR BETWEEN BEDROOM AND BATHROOM
 -NEW CUSTOM BUILT IN CLOSETS
 -REPLACE FIXTURES, FINISHES AND ACCESSORIES IN BATHROOM
 -REMOVE EXISTING HVAC SYSTEM AND REPLACE WITH NEW SYSTEM, ENLARGE ACCESS PANEL

GENERAL:
 -REDO HVAC, ELECTRICAL AND PLUMBING AS REQUIRED BY WORK

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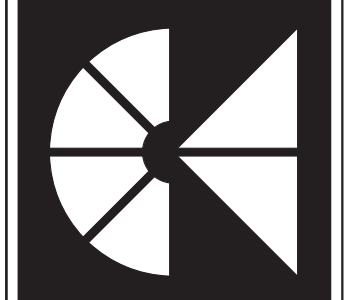
ABBREVIATIONS:

ADA = AMERICANS WITH DISABILITIES ACT
 A.F.F. = ABOVE FINISHED FLOOR
 B.I. = BUILT IN
 C.H. = CEILING HEIGHT
 CONC. = CONCRETE
 COORD. = COORDINATE
 DIA. = DIAMETER
 EA. = EACH
 EQ = EQUAL
 ETR = EXISTING TO REMAIN
 E.W. = EACH WAY
 EXG. = EXISTING
 FR = FIRE RATED
 FRP = FIBERGLASS REINFORCED PLASTIC
 FTG. = FOOTING
 GPF = GALLONS PER FLUSH
 GYP. BD= GYPSUM BOARD
 HR. = HOUR
 MIN. = MINIMUM
 MAX. = MAXIMUM
 MTL = METAL
 N.I.C. = NOT IN CONTRACT
 O.C. = ON CENTER
 O.F.C.I. = OWNER FURNISHED, CONTRACTOR INSTALLED
 P.F.E. = PORTABLE FIRE EXTINGUISHER
 PTD. = PAINTED
 REQ'D = REQUIRED
 SIM. = SIMILAR
 S.S. = STAINLESS STEEL
 TYP. = TYPICAL
 U.O.N. = UNLESS OTHERWISE NOTED
 V.I.F. = VERIFY IN FIELD
 W/ = WITH
 W.R. = WATER RESISTANT

APPROVED
 Montgomery County
 Historic Preservation Commission

Robert A. Norman

REVIEWED
 By Dan.Bruechert at 2:13 pm, Mar 25, 2022



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionassociates.com
 ISSUE DATE: 04/30/21
 PROJECT PHASE: Permit/Bid Set
 DRAWN BY: VGL, LMV
 CHECKED BY: TM



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT IN THE STATE OF MARYLAND.
 LICENSE NO. 3727-R
 EXPIRATION DATE: 08/08/2022

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 Kensington, MD 20895
 General Information

DO NOT SCALE DRAWINGS
 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and shall modify its office or any variations from the dimensions and conditions as shown.

001

GENERAL NOTES

- ALL WORK IS TO BE DONE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
- CONTRACTOR SHALL CONFORM TO ALL O.S.H.A. REQUIREMENTS.
- ALL WORK TO BE IN COMPLIANCE WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE.
- APPROVAL OF THESE DRAWINGS BY GOVERNING AUTHORITIES DOES NOT RELEASE THE CONTRACTOR FROM COMPLYING WITH ALL APPLICABLE CODES AND STANDARDS.
- THE GENERAL CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND COSTS FOR THE FOLLOWING:
 - PERMITS, LICENSES, INSPECTIONS AND FEES (ALL IMPACT FEES).
 - TEMPORARY POWER AND UTILITIES.
 - TRASH REMOVAL.
 - LIABILITY AND WORKMEN'S COMPENSATION INSURANCE, ETC.
 - AND OTHER ITEMS INDICATED IN SPECIFICATIONS.
- CONTRACTOR TO VISIT SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS PRIOR TO EXECUTION OF ANY CONSTRUCTION, CONTACT ARCHITECT PRIOR TO EXECUTING ANY WORK IN QUESTION.
- CHECK ALL DIMENSIONS ON JOB AND FULLY VERIFY PRIOR TO EXECUTION. ALL ELEVATIONS GIVEN ARE APPROXIMATE AND ARE GIVEN FOR RELATIONAL PURPOSES. CONTRACTOR SHALL ESTABLISH EXACT LEVELS PRIOR TO START OF WORK AND NOTIFY ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES.
- CONTRACTOR SHALL NOT SCALE DRAWINGS AND DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS SHALL BE REPORTED TO ARCHITECT FOR CLARIFICATION PRIOR TO COMMENCEMENT OF WORK.
- THE ARCHITECT WILL NOT BE RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE ARCHITECT WILL NOT BE RESPONSIBLE FOR THE FAILURE OF THE CLIENT OR HIS CONTRACTORS, SUBCONTRACTORS, OR ANYONE PERFORMING ANY OF THE WORK, TO CARRY OUT THE WORK IN ACCORDANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED.
- IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- THE ARCHITECT AND OWNER WILL CONSIDER FORMAL REQUESTS FROM THE CONTRACTOR FOR SUBSTITUTION OF PRODUCTS, MATERIALS OR MANUFACTURERS. THESE REQUESTS SHALL ACCOMPANY BUT NOT BE INCLUDED IN THE BASE BID ON THE SPECIFIED BID DUE DATE. SUBMIT TWO COPIES OF REQUEST FOR SUBSTITUTION.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/VENDOR DATA SUBMITTAL SCHEDULE TO ARCHITECT FOR REVIEW AND APPROVAL WITHIN THIRTY (30) DAYS FROM COMMENCEMENT OF WORK. SUBMIT TWO (2) COPIES TO ARCHITECT.
- DEMOLITION TO BE PROVIDED BY CONTRACTOR AS REQUIRED. COMPLETELY REMOVE ALL TRASH FROM SITE.
- WHERE NEW WORK IS TO BE DONE, CARE SHALL BE TAKEN TO PROTECT ALL EXISTING ADJACENT SURFACES AND AREAS FROM DAMAGE. ANY AREAS DAMAGED DURING CONSTRUCTION OR DEMOLITION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST. THIS APPLIES PARTICULARLY TO ADJACENT SPACES, ROOF, AND OTHER EXTERIOR AREAS AND SURFACES.
- THE CONTRACTOR IN THE FIELD SHALL ASSESS AND DETERMINE THE METHOD FOR EXCAVATION, SHORING, AND FORMING NEW FOOTINGS AND FOUNDATION WALLS.
- THE EXCAVATION CONTRACTOR WILL USE ALL NECESSARY PRECAUTIONS WHEN EXCAVATING AT OR NEAR EXISTING BUILDING FOUNDATIONS, TREES, ETC.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AGAINST THE DEPOSIT OF SOIL, GRAVEL, OR OTHER MATERIAL ON ANY PUBLIC PROPERTY OR OTHER NEIGHBORING PREMISES PER LOCAL/STATE CODE REQUIREMENTS.
- ALL CONCRETE DETAILS AND CONSTRUCTION ARE TO COMPLY WITH LATEST A.C.I. CODE AND LOCAL CODES.
- ALL WOOD FRAMING EXPOSED TO THE WEATHER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWP.
- ONLY NEW, FIRST CLASS MATERIALS WILL BE USED (EXCEPT AS NOTED). ALL WORK AND EQUIPMENT SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE EXCEPT FOR MANUFACTURER'S GUARANTEES WHICH MAY BE LONGER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE INCLUSION OF ALL WORK NECESSARY FOR A COMPLETE INSTALLATION WHETHER SUCH WORK IS OR IS NOT INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
- ALL MANUFACTURED ITEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- WARRANTIES, GUARANTEES AND MANUFACTURER'S INSTRUCTIONS ON EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GIVEN TO THE OWNER.
- ALL GYPSUM BOARD SHALL BE TAPED, SPACKLED AND SANDED SMOOTH PRIOR TO FINISHING. METAL BEADING SHALL BE USED ON ALL OUTSIDE CORNERS WHERE APPLICABLE.
- ALL PENETRATIONS THROUGH EXISTING ROOF SHALL BE SEALED IN PITCH POCKETS AT PIPING, CONDUIT, ETC.; FLASH DUCTS AND CURBS.
- CONTRACTOR SHALL PROVIDE PROTECTION ON A DAILY BASIS FOR ALL WORK THAT PENETRATES THE EXISTING ROOF MATERIAL. CONTRACTOR TO COVER ALL WORK UNTIL WATER/WEATHER PROOF THROUGH COMPLETION OF CONSTRUCTION.
- UTILITIES TO BE COORDINATED AND PROVIDED AS PER DRAWINGS.
- REMOVAL, DISPOSAL, ALTERATION AND RELOCATION OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, CONDUITS, PIPES AND DUCTS ARE INCLUDED IN THE WORK.
- ALL NOTES ON THIS DRAWING APPLY FOR THE ENTIRE PROJECT WHETHER OR NOT REPEATED ON OTHER DRAWINGS.

INSULATION NOTES

- GENERAL -**
 A CONTINUOUS AIR BARRIER SHALL BE INSTALLED IN THE BUILDING ENVELOPE. THE EXTERIOR THERMAL ENVELOPE CONTAINS A CONTINUOUS AIR BARRIER. ALL BREAKS IN THE BARRIER SHALL BE SEALED. AIR PERMEABLE INSULATION SHALL NOT BE USED AS A SEALING MATERIAL.
- CEILING/ATTIC -**
 THE AIR BARRIER IN ANY DROPPED CEILING/SOFFIT SHALL BE ALIGNED WITH THE INSULATION AND ANY GAPS IN THE AIR BARRIER SHALL BE SEALED. ACCESS OPENINGS, DROP DOWN STAIRS OR KNEE WALL DOORS TO UNCONDITIONED ATTIC SPACES SHALL BE SEALED.

 THE INSULATION IN ANY DROPPED CEILING/SOFFIT SHALL BE ALIGNED WITH THE AIR BARRIER.
- WALLS -**
 THE JUNCTION OF THE FOUNDATION AND SILL PLATE SHALL BE SEALED. THE JUNCTION OF THE TOP PLATE AND THE TOP OF EXTERIOR WALLS SHALL BE SEALED. KNEE WALLS SHALL BE SEALED.

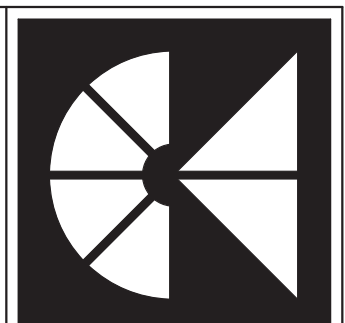
 CAVITIES WITHIN CORNERS AND HEADERS OF FRAME WALLS SHALL BE INSULATED BY COMPLETELY FILLING THE CAVITY WITH A MATERIAL HAVING A THERMAL RESISTANCE OF R-3 PER INCH MINIMUM.

 EXTERIOR THERMAL ENVELOPE INSULATION FOR FRAMED WALLS SHALL BE INSTALLED IN SUBSTANTIAL CONTACT AND CONTINUOUS ALIGNMENT WITH THE AIR BARRIER.
- WINDOWS, SKYLIGHTS, & DOORS -**
 THE SPACE BETWEEN WINDOW / DOOR JAMBS AND FRAMING, AND SKYLIGHTS AND FRAMING SHALL BE SEALED.
- RIM JOISTS -**
 RIM JOISTS SHALL INCLUDE THE AIR BARRIER AND BE INSULATED.
- FLOORS (INCLUDING ABOVE GARAGE AND CANTILEVERS) -**
 THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSULATION.

 FLOOR FRAMING CAVITY INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF SUBFLOOR DECKING, OR FLOOR FRAMING CAVITY INSULATION SHALL BE PERMITTED TO BE IN CONTACT WITH THE TOP SIDE OF SHEATHING, OR CONTINUOUS INSULATION INSTALLED ON THE UNDERSIDE OF FLOOR FRAMING AND EXTENDS FROM THE BOTTOM TO THE TOP OF ALL PERIMETER FLOOR FRAMING MEMBERS.
- CRAWL SPACE WALLS -**
 EXPOSED EARTH IN UNVENTED CRAWL SPACES SHALL BE COVERED WITH A "CLASS I" VAPOR RETARDER WITH OVERLAPPING JOINTS TAPED.

 WHERE PROVIDED INSTEAD OF FLOOR INSULATION, INSULATION SHALL BE PERMANENTLY ATTACHED TO THE CRAWLSPACE WALLS.
- SHAFTS, PENETRATIONS -**
 DUCT SHAFTS, UTILITY PENETRATIONS, AND FLUE SHAFTS OPENING TO EXTERIOR OR UNCONDITIONED SPACE SHALL BE SEALED.
- NARROW CAVITIES -**
 BATTIS IN NARROW CAVITIES SHALL BE CUT TO FIT, OR NARROW CAVITIES SHALL BE FILLED BY INSULATION THAT ON INSTALLATION READILY CONFORMS TO THE AVAILABLE CAVITY SPACE.
- GARAGE SEPARATION -**
 AIR SEALING SHALL BE PROVIDED BETWEEN THE GARAGE AND CONDITIONED SPACES.
- RECESSED LIGHTING -**
 RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE DRYWALL.

 RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE AIR TIGHT AND "IC" RATED.
- PLUMBING AND WIRING -**
 BATT INSULATION SHALL BE CUT NEATLY TO FIT AROUND WIRING AND PLUMBING IN EXTERIOR WALLS, OR INSULATION THAT ON INSTALLATION READILY CONFORMS TO AVAILABLE SPACE SHALL EXTEND BEHIND PIPING AND WIRING.
- HOSE BIBS -**
 HOSE BIBS SUBJECT TO FREEZING (EXTERIOR USE) SHALL BE FROST PROOF WITH AN ACCESSIBLE STOP AND WASTE TYPE VALVE INSIDE THE THERMAL ENVELOPE. PROVIDE SEPARATE WATER SUB-METER FROM MAIN METER FOR ALL NOSE BIBS.
- SHOWER/TUB ON EXTERIOR WALL -**
 THE AIR BARRIER INSTALLED AT EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL SEPARATE THEM FROM THE SHOWERS AND TUBS. EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL BE INSULATED.
- ELECTRICAL/PHONE BOX ON EXTERIOR WALLS -**
 THE AIR BARRIER SHALL BE INSTALLED BEHIND ELECTRICAL OR COMMUNICATION BOXES OR AIR-SEALED BOXES SHALL BE INSTALLED.
- HVAC REGISTER BOOTS -**
 HVAC REGISTER BOOTS THAT PENETRATE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE SUBFLOOR OR DRYWALL.
- CONCEALED SPRINKLERS -**
 WHEN REQUIRED TO BE SEALED, CONCEALED FIRE SPRINKLERS SHALL ONLY BE SEALED IN A MANNER THAT IS RECOMMENDED BY THE MANUFACTURER. CAULKING OR OTHER ADHESIVE SEALANTS SHALL NOT BE USED TO FILL VOIDES BETWEEN FIRE SPRINKLER COVER PLATES AND WALLS OR CEILING.



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionandassociates.com

PROJECT PHASE: Permit/Bid Set
 DRAWN BY: VGL, LMQ
 CHECKED BY: TM

ISSUE DATE: 04/30/21
 REVISIONS:



PROFESSIONAL CERTIFICATION
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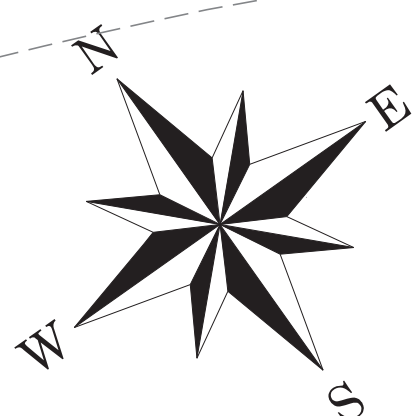
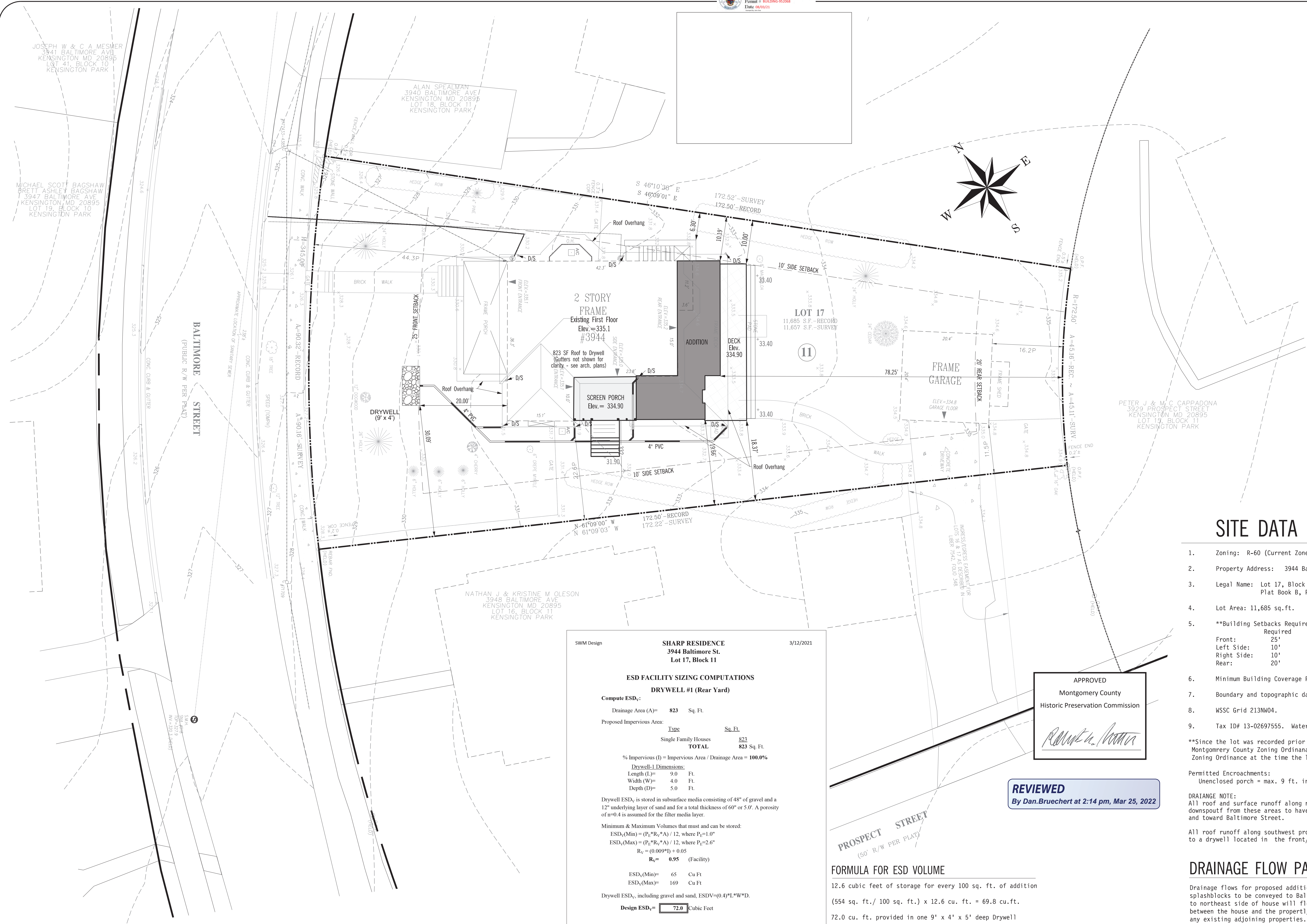
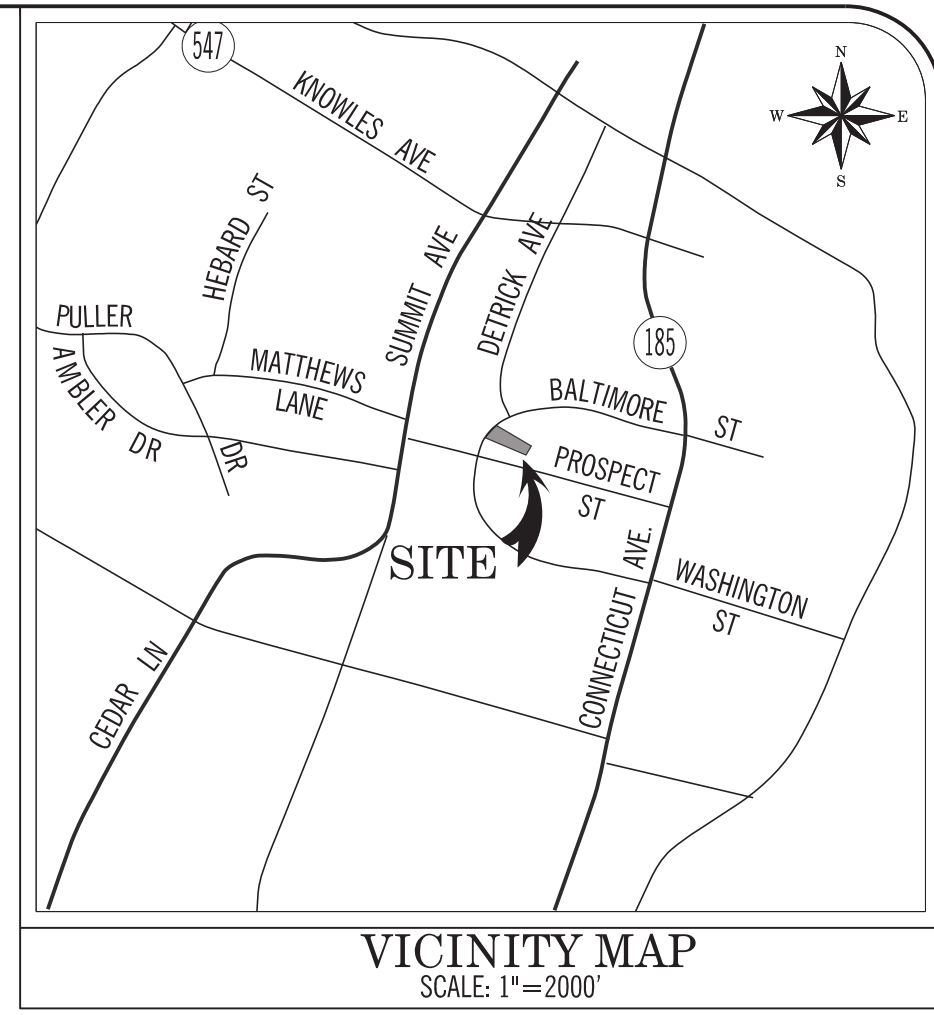
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APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:14 pm, Mar 25, 2022



SITE DATA

- Zoning: R-60 (Current Zone)
- Property Address: 3944 Baltimore Stree, Kensington, MD 20895
- Legal Name: Lot 17, Block 11, Kensington Park
Plat Book B, Plat No. 4
- Lot Area: 11,685 sq.ft.
- **Building Setbacks Required:
 Front: 25'
 Left Side: 10'
 Right Side: 10'
 Rear: 20'
- Minimum Building Coverage Permitted: 35% (4,090), Proposed = 14.8% (1,732 sq.ft.)
- Boundary and topographic data from a survey prepared by Snider & Assoc., January 2021.
- WSSC Grid 213NW04.
- Tax ID# 13-02697555. Water & Sewer category: W-1 & S-1.

**Since the lot was recorded prior to June 1, 1958, based on Section 59-7.7.1.D.2.c of the Montgomery County Zoning Ordinance, the side and rear setbacks are pursuant to the Zoning Ordinance at the time the lot was created, which would be the 1950 Zoning Ordinance.

Permitted Encroachments:
 Unenclosed porch = max. 9 ft. into front or rear yard, max. 3 ft. into side yard

DRAINAGE NOTE:
 All roof and surface runoff along northeast property line flows toward Baltimore Street. All downspout from these areas to have splash blocks to direct water away from house foundation and toward Baltimore Street.

All roof runoff along southwest property line will be collected in downspouts and conveyed to a drywell located in the front/right side yard and will satisfy the ESD volume requirements.

DRAINAGE FLOW PATTERN

Drainage flows for proposed addition roof to be collected by gutters to downspouts and splashblocks to be conveyed to Baltimore Street. Field inspection shows that all run-off to northeast side of house will flow down-slope to Baltimore Street due to existing grade between the house and the property line, therefore no new run-off is directed toward any existing adjoining properties.

SWM Design **SHARP RESIDENCE** 3/12/2021
 3944 Baltimore St.
 Lot 17, Block 11

ESD FACILITY SIZING COMPUTATIONS
DRYWELL #1 (Rear Yard)

Compute ESD_v:
 Drainage Area (A)= 823 Sq. Ft.
 Proposed Impervious Area:

Type	Sq. Ft.
Single Family Houses	823
TOTAL	823 Sq. Ft.

% Impervious (I) = Impervious Area / Drainage Area = 100.0%

Drywell-1 Dimensions:
 Length (L)= 9.0 Ft.
 Width (W)= 4.0 Ft.
 Depth (D)= 5.0 Ft.

Drywell ESD_v is stored in subsurface media consisting of 48" of gravel and a 12" underlying layer of sand and for a total thickness of 60" or 5.0'. A porosity of 0.4 is assumed for the filter media layer.

Minimum & Maximum Volumes that must and can be stored:
 ESD_v(Min) = (P_i*R_v*A) / 12, where P_i=1.0"
 ESD_v(Max) = (P_i*R_v*A) / 12, where P_i=2.6"
 R_v = (0.009*I) + 0.05
R_v = 0.95 (Facility)

ESD_v(Min)= 65 Cu Ft
 ESD_v(Max)= 169 Cu Ft

Drywell ESD_v, including gravel and sand, ESDV=(0.4)*L*W*D.
Design ESD_v = 72.0 Cubic Feet

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:14 pm, Mar 25, 2022

PROSPECT STREET
 (50' R/W PER PLAT)

FORMULA FOR ESD VOLUME
 12.6 cubic feet of storage for every 100 sq. ft. of addition
 (554 sq. ft. / 100 sq. ft.) x 12.6 cu. ft. = 69.8 cu.ft.
 72.0 cu. ft. provided in one 9' x 4' x 5' deep Drywell

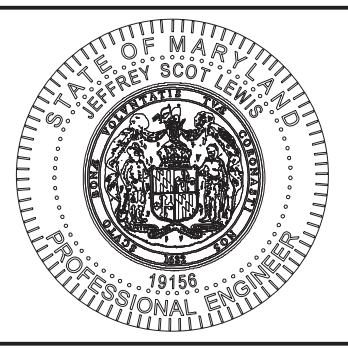
SITE SOLUTIONS, INC.
 PO Box 1783
 Clarksburg, Maryland 20871
 (301) 540-7990 www.ssimaryland.com
 Planning • Landscape Architecture • Engineering

OWNER:
JESS & MEREDITH SHARP
 3944 BALTIMORE STREET
 KENSINGTON, MD 20895
 PHONE
 EMAIL:

NO	REVISION	DATE

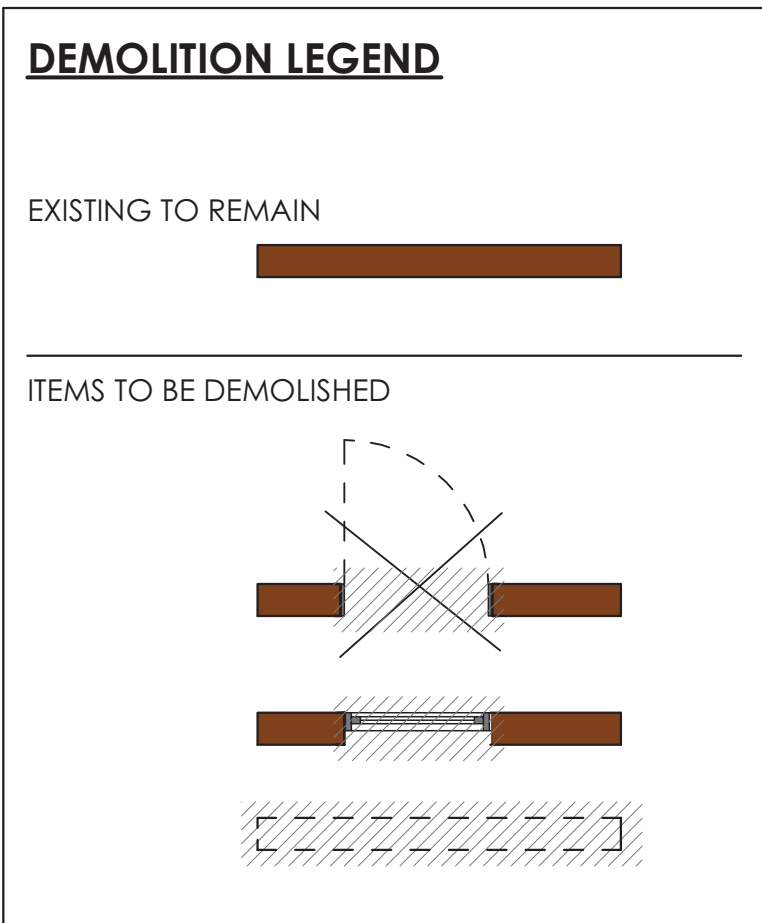
NOTICE:
 Plans not containing an agency approval are considered unapproved and should not be used for construction. Construction initiated prior to approval or information obtained from unapproved plans cannot be guaranteed by SSI and is the sole responsibility of the user.

Professional Certification, I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 19156, Expiration 06-02-2021



SITE AND DRAINAGE PLAN
SHARP RESIDENCE
 3944 BALTIMORE STREET, KENSINGTON, MD 20895
 LOT 17 / BLOCK 11 / KENSINGTON PARK
 SILVER SPRING ELECTION DISTRICT #13
 MONTGOMERY COUNTY, MARYLAND

M/D	1" = 10'
DESIGN SCALE	
JSL	1 of 1
CHECKED	
4/25/2021	2237-21
PLOT DATE	PROJ. No.



GENERAL DEMOLITION NOTES

WALLS:
 REMOVE ALL EXISTING paneled walls, plaster and drywall as noted on plans. PROVIDE ALL NECESSARY TEMPORARY AND PERMANENT SUPPORTS FOR FLOOR JOISTS, ROOF RAFTERS, BEARING WALLS, ETC. PRIOR TO DEMOLITION.

FLOORS:
 PULL UP ANY AREAS OF FLOORING DAMAGED OR TO BE REPLACED. SEE FINISH SCHEDULE FOR FLOOR FINISHES. REMOVE AND REPLACE ANY DETRIORATED SUB-FLOORING. BUILD OVER EXPOSED OPENINGS IN FLOOR. RESTRUCTURE AS NECESSARY.

CEILING:
 REMOVE CEILING IN ROOMS TO BE RENOVATED. EXPOSE JOISTS. INSPECT, AND MARK ALL JOISTS REQUIRING STRUCTURAL REINFORCEMENT. COORDINATE WITH ARCHITECT AS REQUIRED.

WINDOWS AND DOORS:
 REMOVE EXISTING WINDOWS AND DOORS AS NOTED ON PLANS- SAVE FOR POSSIBLE REUSE. STRIP OPENINGS OF ALL TRIM, COUNTERWEIGHTS, SILLS, HINGES, ETC. LINTELS AND STRUCTURAL FRAMING TO REMAIN UNLESS NOTED OTHERWISE.

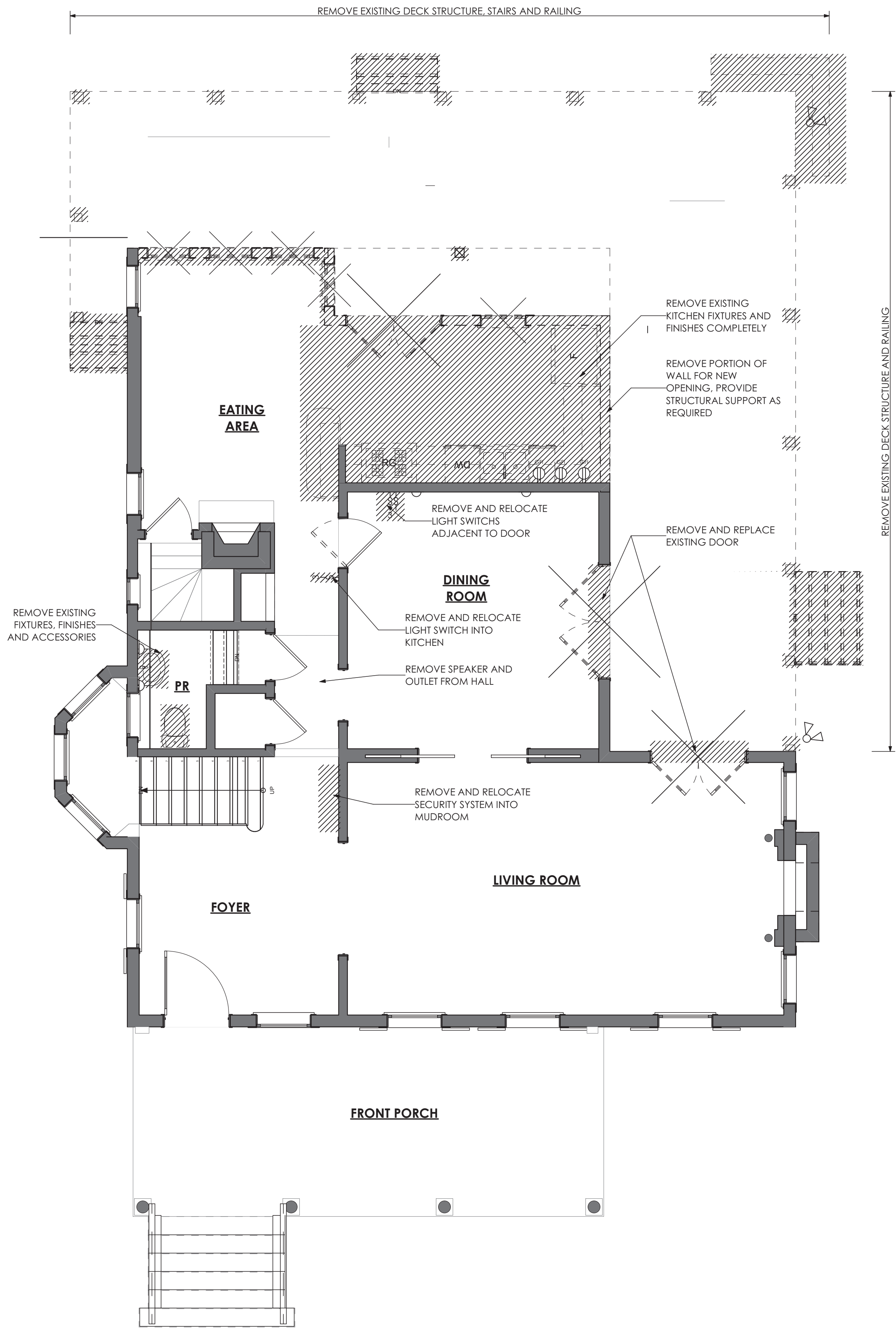
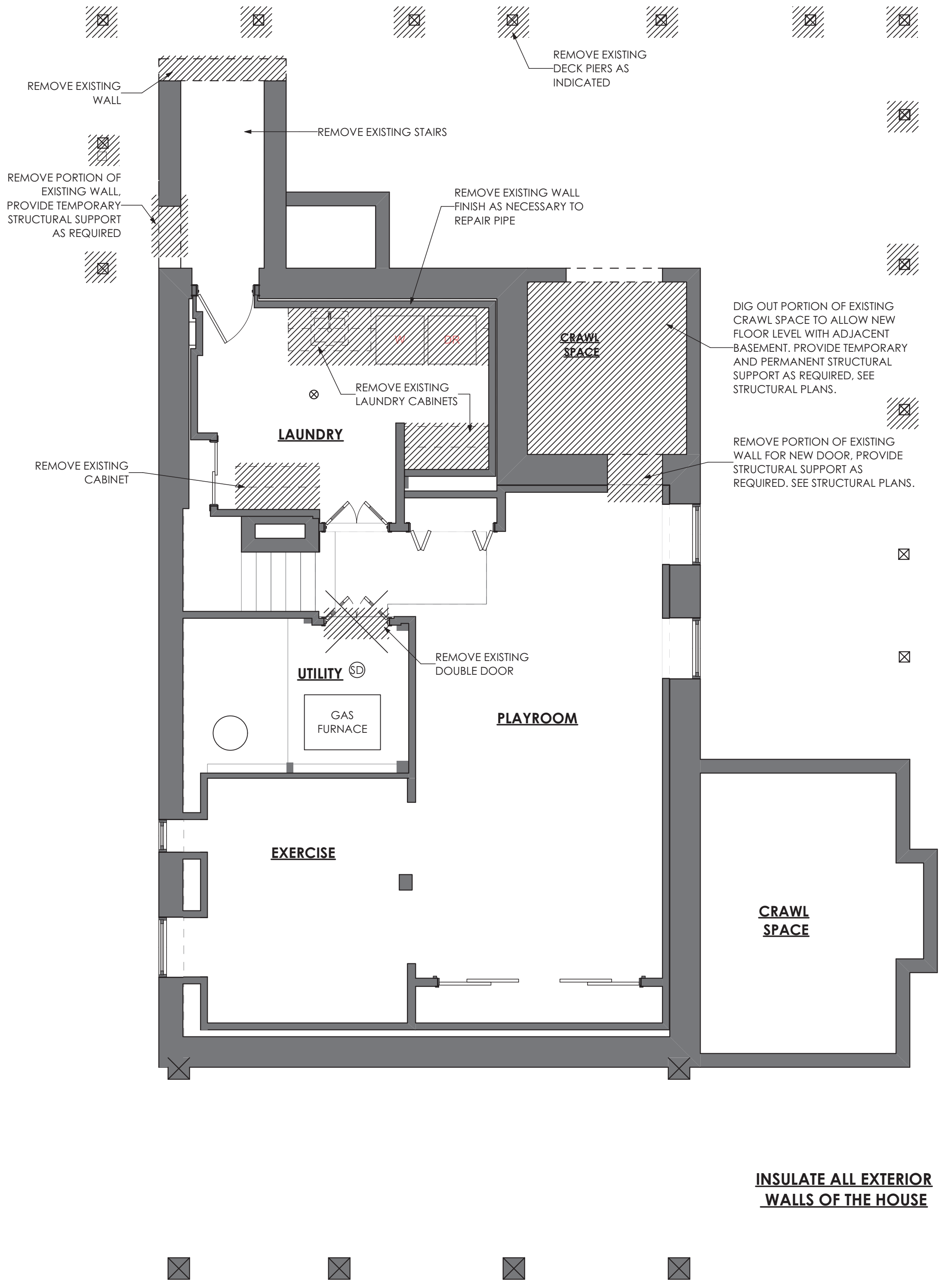
ELECTRICAL:
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PLUMBING:
 DISCONNECT EXISTING SUPPLY AND DRAIN LINES IN AREAS TO BE RENOVATED. REUSE AND RECONNECT TO NEW LINES AND LOCATIONS AS POSSIBLE. CHECK CONDITION OF EXISTING SUPPLIES, VENTS, STACKS, AND DRAINS. CLEAN OUT AND REPAIR AS NECESSARY.

HVAC:
 DUCTS TO REMAIN. RELOCATE LINES IF REQUIRED BY NEW WORK. UPGRADE HVAC SYSTEM IF NEED BE. TO MEET NEW HEATING AND AIR CONDITIONING REQUIREMENTS.

SAVE:
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ADDITIONS, ALTERATIONS AND REPAIRS ON EXISTING STRUCTURES SHALL COMPLY WITH IRC 2018 SECTION R-102.7.1

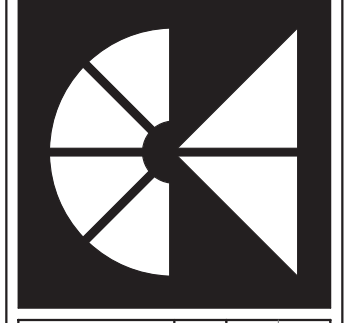


APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:14 pm, Mar 25, 2022

1 **Basement Floor Demo**
 SCALE: 1/4" = 1'-0"

2 **First Floor Demo**
 SCALE: 1/4" = 1'-0"



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionandassociates.com
 PROJECT PHASE: Permit/Bid Set
 ISSUE DATE: 04/30/21
 DRAWN BY: VGL, LMV
 CHECKED BY: TM

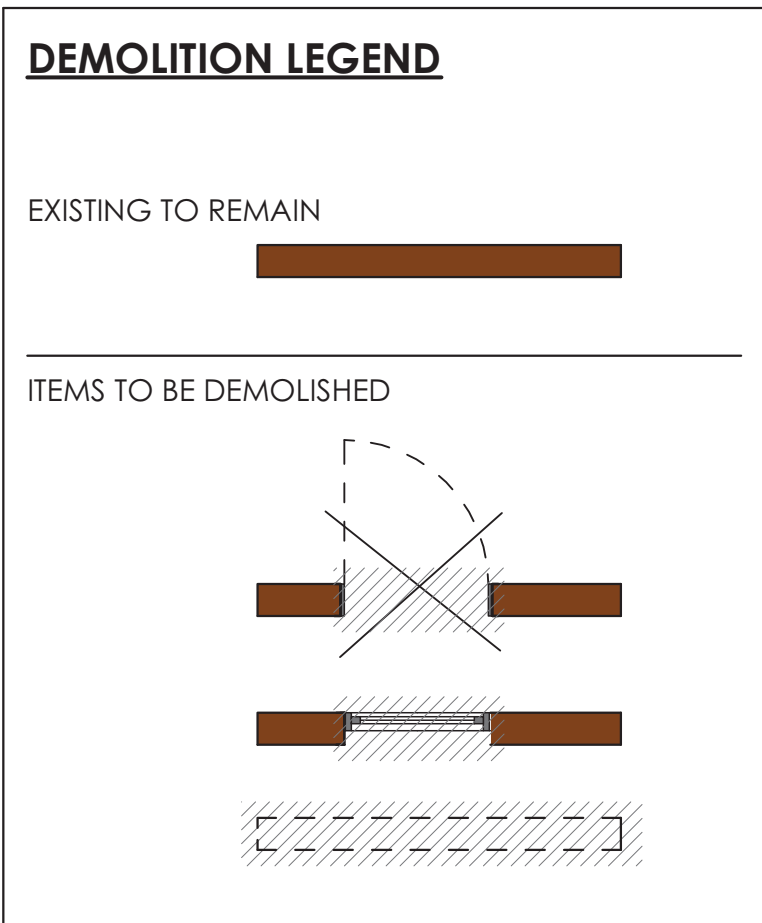


PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DRAWINGS OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT OF THE STATE OF MARYLAND.
 LICENSE NO. 3727-R
 EXPIRATION DATE: 08/08/2022

Sharp Residence
 3944 Baltimore St
 Kensington, MD 20895
 Demo Plans

DO NOT SCALE DRAWINGS
 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and shall notify its office of any variations from the dimensions and conditions shown.





GENERAL DEMOLITION NOTES

WALLS:
 REMOVE ALL EXISTING PANELED WALLS, PLASTER AND DRYWALL AS NOTED ON PLANS. PROVIDE ALL NECESSARY TEMPORARY AND PERMANENT SUPPORTS FOR FLOOR JOISTS, ROOF RAFTERS, BEARING WALLS, ETC. PRIOR TO DEMOLITION.

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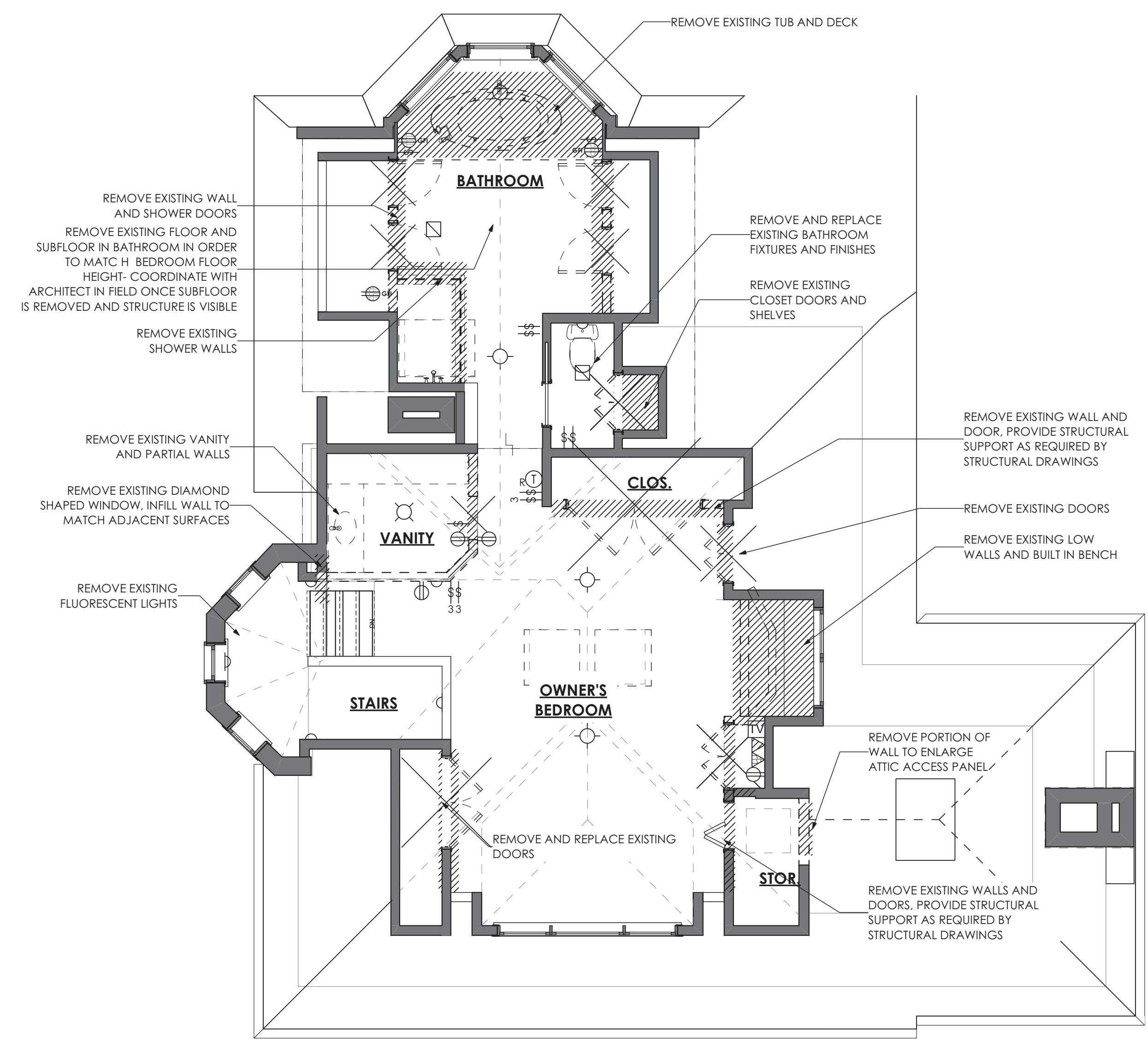
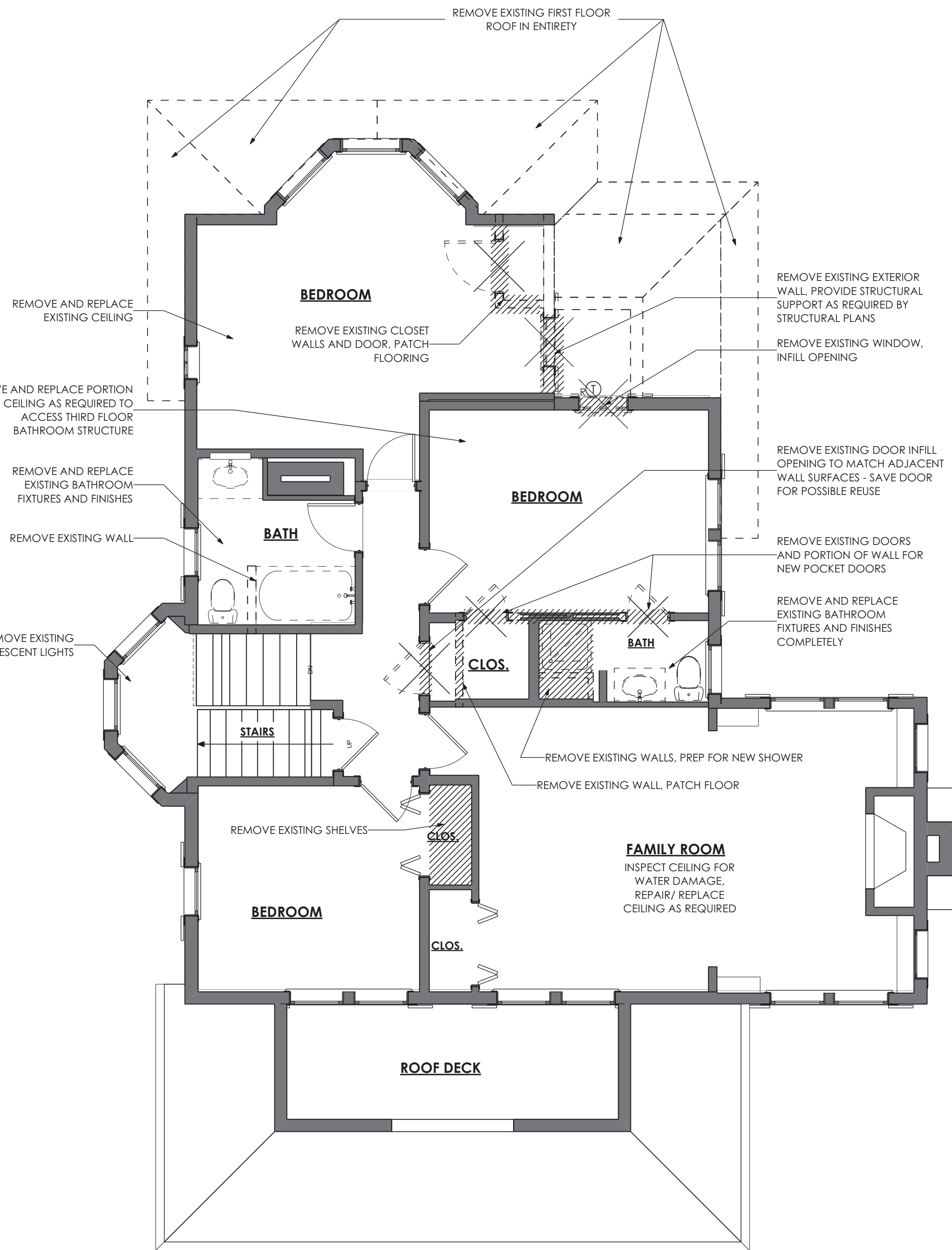
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APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:14 pm, Mar 25, 2022

1 Second Floor Demo
 SCALE: 1/4" = 1'-0"

2 Third Floor Demo
 SCALE: 1/4" = 1'-0"

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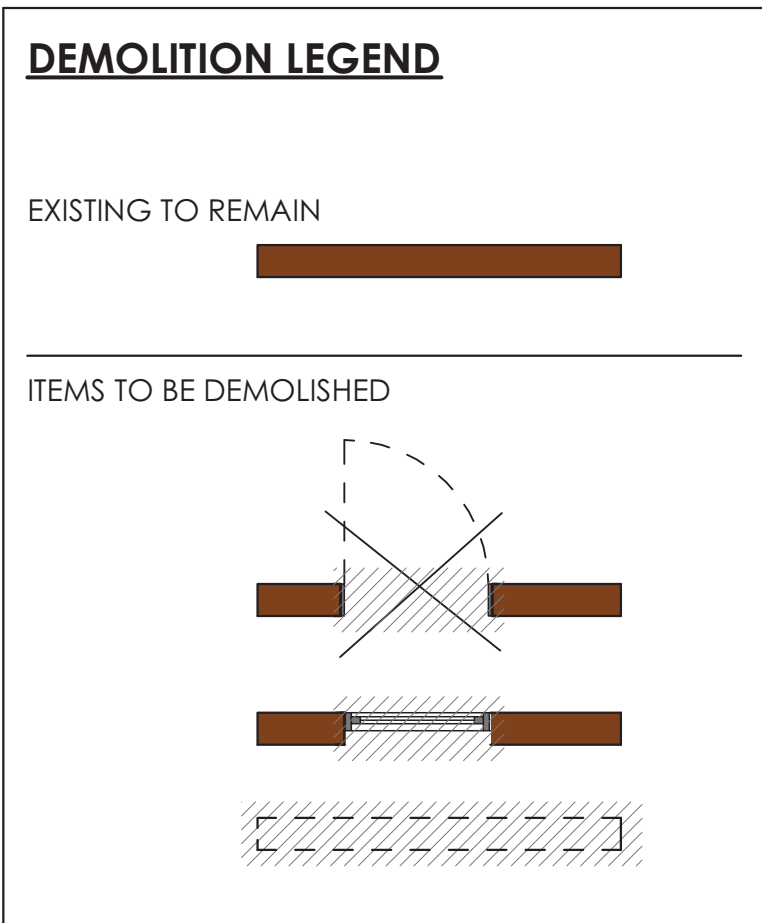


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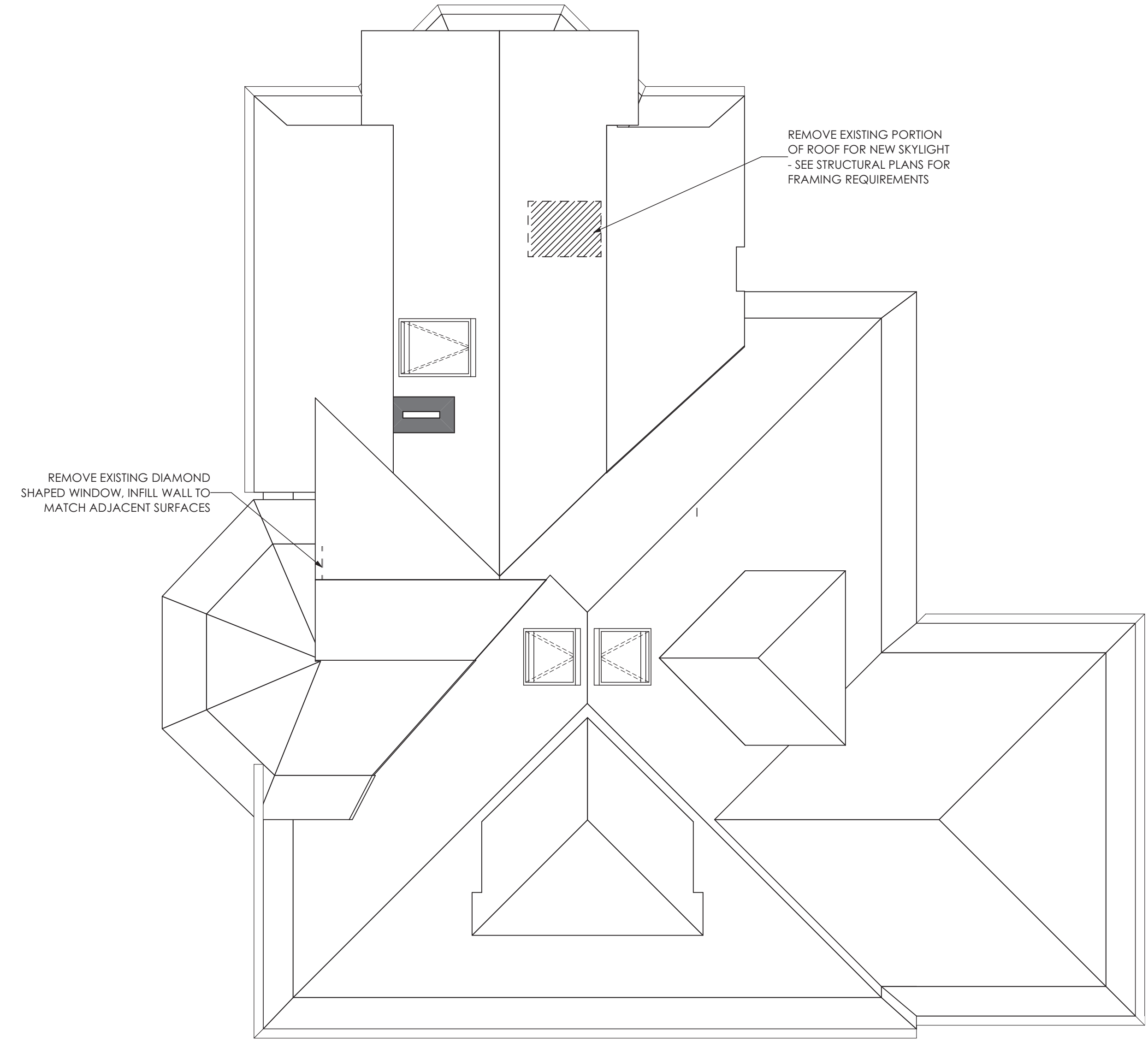
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APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:15 pm, Mar 25, 2022



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STRUCTURAL DESIGN PACKAGE

CLIENT :- MANION+ASSOCIATES ARCHITECTS
PROJECT :- SHARP RESIDENCE
ADDRESS :- 3944 BALTIMORE ST.
KENSINGTON, MD 20895

STRUCTURAL NOTES

GENERAL STRUCTURAL:

BUILDING CODES:

INTERNATIONAL RESIDENTIAL CODE (IRC)-2018 EDITION STATE AND/OR LOCAL COUNTY CODE AMENDMENTS AND/OR ORDINANCES.
 ANY REVISION INITIATED BY THE OWNER, GENERAL CONTRACTOR AND/OR THE SUBCONTRACTOR THAT DIRECTLY INFLUENCES OR CHANGES STRUCTURAL ELEMENTS INCLUDING, BUT NOT LIMITED TO FLOOR JOIST, BEAM OR HEADER SPANS; WALL HEIGHTS; BEAM OR HEADER SIZES; RELOCATION OF BEARING WALLS, FOOTING SIZES, ETC. AS INDICATED ON THESE DRAWINGS. CONSULTING ENGINEERS, CORP. (CEC) SHALL BE NOTIFIED IN WRITING INDICATING THE PROPOSED CHANGES FOR CEC'S REVIEW. ANY REQUIRED REVIEW, CALCULATION, AND/OR DRAWING MODIFICATION NECESSARY TO ACCURATELY REPRESENT THE PROPOSED CHANGES SHALL BE CHARGED AS AN ADDITIONAL SERVICE.
 THESE DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES. DIMENSIONS NOTED TAKE PRECEDENCE OVER SCALE.

NO INSPECTION(S) WILL BE MADE BY CONSULTING ENGINEERS, CORP. (CEC) UNLESS A COUNTY APPROVED SET OF PLANS IS PRESENT AT THE JOB SITE WHERE REQUIRED BY LOCAL AUTHORITIES.

ALL DIMENSIONS SHOWN ARE TO FACE OF STUD (F.O.S.), UNLESS OTHERWISE NOTED. DIMENSIONAL ADJUSTMENTS MAY INCLUDE, BUT ARE NOT LIMITED TO: CENTER LINE (CL), FACE OF CONCRETE (F.O.C.) AND FACE OF MASONRY (F.O.M.)

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE A KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONTRACTORS' DOCUMENTS WHICH COULD AFFECT THEIR WORK.

DESIGN LOADS

GRAVITY LOAD

GROUND SNOW LOAD = 40 PSF
 ROOF LIVE LOAD = 30.5 PSF (DESIGN SNOW LOAD PER ASCE 7-16, CHAPTER 7)
 ROOF DEAD LOAD = 17 PSF
 FLOOR DEAD LOAD = 12 PSF (UPTO 14" DEEP I-JOISTS)
 FLOOR LIVE LOAD = 40 PSF
 ALLOWABLE DEFLECTION FACTOR FOR FLOORS & DECKS:

LIVE LOAD = L/360
 TOTAL LOAD = L/240
ROOF
 LIVE LOAD = L/360
 TOTAL LOAD = L/240
 BEAM SUPPORTING BRICK/MASONRY = L/600 OR 5/16" WHICHEVER IS LESS

WIND LOAD

BASIC WIND SPEED = 115 MPH
 EXPOSURE = B
 ENCLOSURE CLASSIFICATION = ENCLOSED

SEISMIC LOAD
 SEISMIC DESIGN CATEGORY PER THE PROVISION OF R301.2

CONCRETE

ALL CONCRETE FOR FOOTINGS, FOUNDATION WALLS, RETAINING WALLS, AND FLOOR SLABS ON GRADE SHALL ATTAIN A MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTH AS FOLLOWS:
 FOOTINGS : 3,000 PSI
 BASEMENT SLABS : 3,000 PSI SLAB EXPOSED TO WEATHER : 3,500 PSI

ALL CONCRETE EXPOSED TO THE WEATHER AND SUBJECT TO FREEZING AND THAWING DURING CONSTRUCTION SHALL BE AIR ENTRAINED, THE TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 5 PERCENT (5%) OR MORE THAN 7 PERCENT (7%)

ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED AND KEYS PROVIDED WHERE REQUIRED OR INDICATED ON THE DRAWINGS. CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, MAY BE PROPOSED BY THE CONTRACTOR. HOWEVER, THE LOCATIONS ARE SUBJECT TO REVIEW BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER. ALL VERTICAL CONSTRUCTION, CONTROL AND CONTRACTION JOINTS SHALL LIE IN TRUE VERTICAL PLANE. ALL FORMWORK AND PLACING OF CONCRETE SHALL BE PLUMB, LEVEL, AND SQUARE. THE STRUCTURAL ENGINEER SHALL REVIEW AND APPROVE ANY PROPOSED FORMWORK DESIGN DIFFERENT FROM INDUSTRY STANDARD PRACTICES.

EXTERIOR SLAB AREAS SHALL BE BROOM FINISHED, UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. THE STROKES SHALL MAINTAIN THE SAME DIRECTION AT ADJACENT SURFACES. NO RIPPLES, BUMPS, OR ANY OTHER IRREGULARITIES WILL BE ACCEPTABLE

FOUNDATIONS & FOUNDATION WALLS

STRUCTURAL CONCRETE FOOTINGS ARE DESIGNED FOR SPECIFIC ALLOWABLE SOIL BEARING PRESSURES AS INDICATED ON THE DRAWINGS. CONCRETE FOOTINGS SHALL NOT BE POURED UNTIL THE ALLOWABLE SOIL BEARING PRESSURES ARE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER OR BUILDING INSPECTOR.

MINIMUM SOIL BEARING SHALL BE 1500 PSF; OR AS SPECIFIED IN THE GEOTECHNICAL REPORT (IF ANY) WITH A MINIMUM 30" FROST DEPTH OR TO BEARING SOIL WHICHEVER IS GREATER

PROVIDE A FOUNDATION DRAIN TILE ON THE EXTERIOR SIDE OF FOUNDATION WALL AND DISCHARGE TO DAYLIGHT; OR PROVIDE 2" DIAMETER PVC BLEEDER LINES THROUGH THE FOOTINGS AT 8'-0" O.C. AND DISCHARGE TO A SUMP PIT AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

SPREAD FOOTINGS SHALL EXTEND MINIMUM 1'-0" INTO UNDISTURBED SOIL, OR SHALL BE FOUNDED IN GRANULAR FILL. FOOTINGS SHALL EXTEND MINIMUM 30" FROST DEPTH (OR 24" WHERE ALLOWED /APPLICABLE PER COUNTY /CITY REQUIREMENTS) BELOW THE EXTERIOR FINISH GRADE. FINAL FOOTING ELEVATIONS TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER. ELEVATIONS AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN THOSE INDICATED ON THE CIVIL, ARCHITECTURAL OR STRUCTURAL DRAWINGS.

SLAB ON GRADE, (NON-STRUCTURAL) SHALL BE MINIMUM 4" THICK CONCRETE SLAB REINFORCED W/ 6"x6" - W1.4xW1.4 WELDED WIRE FABRIC (W.W.F.) OVER 6 MIL VAPOR BARRIER, OVER 4" CRUSHED STONE OR WASHED GRAVEL CONCRETE SLABS ON EARTH FILL SHALL BE PLACED ONLY ON FILL COMPACTED IN 6" LAYERS TO ATLEAST 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D- 698, STANDARD PROCTOR

FOUNDATION DRAINS SHALL BE INSTALLED BY THE CONCRETE CONTRACTOR, BUT LOCATED AT THE BUILDERS DISCRETION ACCORDING TO LOCAL SITE CONDITIONS DRAIN DISCHARGE TO CONFIRM WITH AN APPROVED SITE PLAN.

PROVIDE BITUMINOUS WATER PROOFING COVERED WITH 6 MIL VISOQUEEN WITH POURED INPLACE CONCRETE BASEMENT WALLS OR AS DIRECTED /NOTED ON THE ARCHITECTURAL DRAWINGS.

SUMP PIT AND SUMP PUMP(S) SHALL BE INSTALLED BY THE CONCRETE SUBCONTRACTOR AND LOCATED AT THE BUILDER'S DISCRETION ON THE ARCHITECTURAL DRAWINGS.

CONCRETE MASONRY UNIT

A. ALL CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF IRC 2018 AND ACI 530/530.1-05
 B. MASONRY UNIT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C-140, "METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNIT" (f'm =1500 PSI)
 C. MORTAR FOR MASONRY SHALL BE IN ACCORDANCE WITH ASTM C-270, TYPE "M" OR "S"
 D. GROUT FOR MASONRY SHALL BE IN ACCORDANCE WITH ASTM C-476 FOR COARSE GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN ABOUT 5 MINUTES LATER. MAXIMUM GROUT LIFT WITHOUT CLEANOUTS 5'-0". STAY EACH END OF EACH VERTICAL REBAR USING SINGLE WIRE AND LOOP TYPE TIES.
 E. REINFORCING STEEL SHALL BE CONFIRM TO ASTM A-615 GRADE 60.
 F. PROVIDE VERTICAL EXPANSION JOINT IN ALL MASONRY WALLS AT 30'-0" O.C.
 G. BRICK VENEER INSTALLATION TO COMPLY W/ BRICK INDUSTRY ASSOCIATION (B.I.A.) LATEST TECHNICAL REPORT

BRICK VENEER

BRICK VENEER INSTALLATION TO COMPLY WITH BRICK INDUSTRY ASSOCIATION (B.I.A.) LATEST TECHNICAL REPORT

REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60. ALL REINFORCING BAR DIMENSIONS SHOWN ON THE DRAWINGS ARE TO THE CENTER LINE OF BARS, UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING STEEL SHALL BE FURNISHED, FABRICATED AND ERRECTED IN ACCORDANCE WITH ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE STRUCTURES, (ACI 318-15). REINFORCED STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).
 UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE CLEAR CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE:

A. CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH :3"
 B. EXPOSED TO EARTH OR WEATHER #6 THROUGH #18 BARS: 2"
 #5 BARS AND SMALLER: 1.5"
 C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND (SLABS AND WALLS): 0.75"
 D. BEAMS, GIRDERS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS: 1.5"

STEEL REINFORCING REQUIREMENTS IN CONCRETE FLOOR SLABS SHALL BE AS REQUIRED BY CODE AND/OR LOCAL JURISDICTIONS, OR PER SITE CONDITIONS.

CONCRETE PORCH SLABS AND EXTERIOR CONCRETE WORK EXPOSED TO WEATHER SHALL BE MINIMUM 3,500 PSI. AIR ENTRAINED, 4" THICK WITH #4 BARS AT 12" O.C. EACH WAY WITH 6" x 6" - W1.4 x W1.4 WELDED WIRE FABRIC (W.W.F.), UNLESS OTHERWISE NOTED OR DIRECTED BY THE STRUCTURAL ENGINEER BASED ON SITE CONDITIONS.

STRUCTURAL STEEL

ALL STEEL SHALL BE ASTM, A-441 MINIMUM. Fy=50 KSI UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP AND FIELD FASTENERS SHALL BE ASTM A-325 HSB (HIGH STRENGTH BOLTS). IN FRICTION TYPE CONNECTIONS USE "TURN-OF-NUT" METHOD IN TIGHTENING ALL BOLTS.
 HOLES SHALL NOT BE CUT THROUGH BEAMS UNLESS INDICATED OR APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE STANDARD ANGLE WALL ANCHORS FOR BEAMS RESTING ON MASONRY.

STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST AISC MANUAL. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:-
 W8 AND SMALLER BEAMS : A36 (Fy = 36 KSI)
 OTHER BEAM AND COLUMNS : A572-GR50 (Fy = 50 KSI)
 STEEL PLATE, CHANNELS AND ANGLES : A36 (Fy = 36 KSI)
 STRUCTURAL PIPES AND TUBES : A500-GRADE "B" (Fy = 46 KSI)
 ANCHOR BOLTS : A307
 HIGH STRENGTH BOLTS : A325

BOLTED CONNECTIONS TO USE A32.5-TYPE N, HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS TIGHTENED TO A "SNUG TIGHT" CONDITION IN ACCORDANCE WITH RCSC SPECIFICATIONS.
 BOLTS IN MOMENT CONNECTIONS AND WHO RESISTING FRAMES SHALL BE ASTM A325-TYPE SC (SLIP CRITICAL). SLIP CRITICAL CONNECTIONS SHALL HAVE CONTACT SURFACES MEETING CLASS A SURFACE CONDITIONS BOLTS SHALL BE TENSIONED.

SHOP CONNECTIONS TO BE WELDED OR BOLTED, FIELD CONNECTIONS TO BE BOLTED UNLESS OTHERWISE SHOWN. BOLT HOLES TO BE STANDARD ROUND HOLES (d+1/16") UNLESS OTHERWISE NOTED. SHORT SLOTS SHALL BE PERMITTED NORMAL TO THE LOAD DIRECTION IN SLIP CRITICAL AND BEARING TYPE CONNECTIONS AS PER AISI REQUIREMENTS.

ALL WELDING WORK SHALL BE PERFORMED PER SPECIFICATIONS AND GUIDELINES OF AMERICAN WELDING SOCIETY.

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STRUCTURAL LUMBER

STRUCTURAL LUMBER SHALL BE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) 2015 EDITION, PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION. ALL STRUCTURAL FRAME MEMBERS SHALL BE ONE OF THE FOLLOWING MINIMUM VALUES. UNLESS OTHERWISE NOTED:
SPF #1/#2

Fb BENDING : 875 psi
 Ft TENSION (parallel to grain) : 450 psi
 Fv SHEAR (parallel to grain) : 135 psi
 Fc_c COMPRESSION (perpendicular to grain) : 425 psi
 Fc_{||} COMPRESSION (parallel to grain) : 1,150 psi
 E MODULUS OF ELASTICITY : 1,400,000 psi
 Emin. MODULUS OF ELASTICITY : 510,000 psi
SPF STUD GRADE

Fb BENDING : 675 psi
 Ft TENSION (parallel to grain) : 350 psi
 Fv SHEAR (parallel to grain) : 135 psi
 Fc_c COMPRESSION (perpendicular to grain) : 425 psi
 Fc_{||} COMPRESSION (parallel to grain) : 725 psi
 E MODULUS OF ELASTICITY : 1,200,000 psi
 Emin. MODULUS OF ELASTICITY : 440,000 psi

SOUTHERN PINE #2 (SIZE CLASSIFICATIONS 2" TO 4" WIDE)
 Fb BENDING : 1,500 psi
 Ft TENSION (parallel to grain) : 825 psi
 Fv SHEAR (parallel to grain) : 175 psi
 Fc_c COMPRESSION (perpendicular to grain) : 565 psi
 Fc_{||} COMPRESSION (parallel to grain) : 1,650 psi
 E MODULUS OF ELASTICITY : 1,600,000 psi
 Emin. MODULUS OF ELASTICITY : 580,000 psi

SOUTHERN PINE #2 (SIZE CLASSIFICATION 5" TO 6" WIDE)
 Fb BENDING : 1,250 psi
 Ft TENSION (parallel to grain) : 725 psi
 Fv SHEAR (parallel to grain) : 175 psi
 Fc_c COMPRESSION (perpendicular to grain) : 565 psi
 Fc_{||} COMPRESSION (parallel to grain) : 1,600 psi
 E MODULUS OF ELASTICITY : 1,600,000 psi
 Emin. MODULUS OF ELASTICITY : 580,000 psi

DESIGN PROPERTIES FOR: MICROLAM LVL (BEAM)

GRADE = 1.9E
 Fb BENDING : 2,600 psi
 Fv SHEAR (parallel to grain) : 285 psi
 Fc_c COMPRESSION (perpendicular to grain) : 750 psi
 Fc_{||} COMPRESSION (parallel to grain) : 2510 psi
 E MODULUS OF ELASTICITY : 1,900,000 psi
PARALLAM PSL (POST)

GRADE = 1.8E
 Fb BENDING : 2,900 psi
 Fv SHEAR (parallel to grain) : 290 psi
 Fc_c COMPRESSION (perpendicular to grain) : 750 psi
 Fc_{||} COMPRESSION (parallel to grain) : 2,900 psi
 E MODULUS OF ELASTICITY : 2,000,000 psi

WHERE INDICATED ON THE DRAWINGS ENGINEERED FLOOR "I" JOISTS SHALL BE MANUFACTURED BY WEYERHAEUSER TRUSS JOISTS. PRIOR TO ORDERING THE GENERAL CONTRACTOR SHALL ACQUIRE SHOP DRAWINGS FROM THE FLOOR JOIST MANUFACTURER AND SUBMIT THEM TO CONSULTING ENGINEERS, CORP. (CEC) IN A TIMELY MANNER FOR REVIEW PRIOR TO ORDERING. IN THE EVENT THE GENERAL CONTRACTOR FAILS TO SUBMIT SHOP DRAWINGS TO CEC THE GENERAL CONTRACTOR AND THE FLOOR JOIST MANUFACTURER SHALL BEAR ALL DESIGN, PERFORMANCE AND LEGAL RESPONSIBILITIES OF THE FLOOR SYSTEM(S) AND HOLD CEC HARMLESS.

PROVIDE 3/4" TONGUE AND GROOVE PLYWOOD (APA RATED STRUD-I-FLOOR) GLUED AND NAILED TO THE FLOOR JOISTS TO MEET THE AMERICAN PLYWOOD ASSOCIATION (APA) APPROVED GLUED FLOOR SYSTEM, UNLESS OTHERWISE SPECIFIED.

LUMBER EXPOSED TO THE ELEMENTS, INCLUDING BUT NOT LIMITED TO: POSTS, BEAMS, DECKING, DECK, FRAMING LEDGERS, ETC. SHALL BE PRESSURE TREATED PER IRC SECTION R317. ALL FASTENERS SHALL BE PER IRC SECTION R317.3.

REQUIRED POST SIZES FROM POINT LOADS AT GIRDER TRUSS BEAM AND/OR HEADER END LOCATIONS SHALL BE CONTINUOUS, BEARING ONTO BEAMS OR CONTINUOUS TO FOOTINGS AS INDICATED. PROVIDE SQUASH BLOCKS BETWEEN FLOOR FRAMING AS NECESSARY OR REQUIRED. STRUCTURAL CONNECTORS INDICATED ON THESE DOCUMENTS SHALL BE PROVIDED BY SIMPSON STRONG-TIE COMPANY, INC., PROVIDE JOIST HANGERS AT EACH END OF ALL FLOOR JOISTS, GIRDER TRUSSES, AND/OR BEAMS FLUSH WITH ADJACENT BEAMS, TRUSSES AND/OR HEADERS. PROVIDE COLUMN CAPS AND POST BASES AT ALL STRUCTURAL LOAD BEARING WOOD BEAMS, INCLUDING EXTERIOR DECKS.

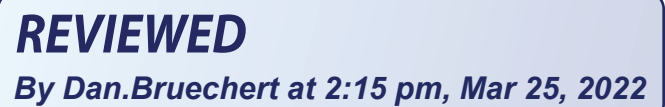
STRUCTURAL MEMBERS INDICATED ARE REQUIRED MINIMUM SIZES AND MAY BE INCREASED TO ALIGN WITH ADJACENT FRAMING MEMBERS AS NECESSARY OR REQUIRED WITHOUT ADDITIONAL STRUCTURAL ENGINEERING AT THE GENERAL CONTRACTOR/OWNER'S DISCRETION.

FLUSH BEAMS INDICATED MAY BE DROPPED AT THE GENERAL CONTRACTOR/OWNER'S DISCRETION. VERIFY AND COORDINATE WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR COMPATIBILITY PRIOR TO INSTALLATION.

LAMINATED VENEER LUMBER (LVL) AND PARALLEL STRAND LUMBER (PSL) LEVEL BY WEYERHAEUSER. IF THE SPECIFIED MATERIAL IS SUBSTITUTED WITH ANOTHER PRODUCT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SUBSTITUTED PRODUCT STRUCTURALLY MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED PRODUCT.

NOTCHES IN THE TOP AND BOTTOM OF DIMENSIONAL LUMBER JOISTS SHALL NOT EXCEED 1/6 OF THE DEPTH OF THE JOIST, AND SHALL NOT BE LOCATED IN THE MIDDLE ONE THIRD (1/3) OF THE SPAN. NOTCHES AT THE JOIST ENDS SHALL NOT EXCEED 1/4 OF THE JOIST DEPTH. HOLES THROUGH THE JOISTS SHALL NOT BE WITHIN 2" OF THE TOP AND BOTTOM OF THE JOIST. THE HOLE DIAMETER SHALL NOT EXCEED 1/3 OF THE JOIST DEPTH.

INSTALL CROSS-BRIDGING OR SOLID BLOCKING BETWEEN FLOOR JOISTS @ 8'-0" O.C. MAXIMUM AS REQUIRED BY CODE OR THE FLOOR JOIST MANUFACTURER. ALL WOOD SHALL BE MINIMUM 8" ABOVE FINISH GRADE, OR SHALL BE PRESSURE TREATED.



STUD WALL

- FIRST FLOOR LEVEL:
 ALL EXTERIOR BEARING WALLS ARE 2x6 (SPF STUD GRADE) @ 16" O.C.
SECOND FLOOR LEVEL:
 ALL EXTERIOR BEARING WALL ARE 2x6 (SPF STUD GRADE) @ 16" O.C.
- ALL INTERIOR BEARING WALL SHALL BE MINIMUM 2x4 (SPF STUD GRADE) @ 16" O.C. U.O.N.

NAILING SCHEDULE

REFER IRC 2018, TABLE R602.3(1) FOR FASTENER SCHEDULE

STEEL LINTEL LEGEND

0'-0" TO 6'-0"	5" x 3 1/2" x 5/16" THK. STEEL ANGLE (LLV) (W/ BRICK VENEER)
6'-0" TO 8'-6"	6" x 4" x 5/16" THK. STEEL ANGLE (LLV) (W/ BRICK VENEER)

NOTE: PROVIDE 8" MIN. BEARING TO SUPPORT STEEL ANGLE @ ENDS

DRAWING INDEX

SHEET NO.	DESCRIPTION
S001	STRUCTURAL NOTES & INDEX
S002	FOUNDATION PLAN
S003	FIRST FLOOR FRAMING PLAN
S004	SECOND FLOOR FRAMING PLAN
S005	ROOF FRAMING PLAN
S006	FIRST FLOOR SHEARWALL PLAN
S007	SECTION DETAILS
S008	SECTION DETAILS

DRAWING LEGEND:-

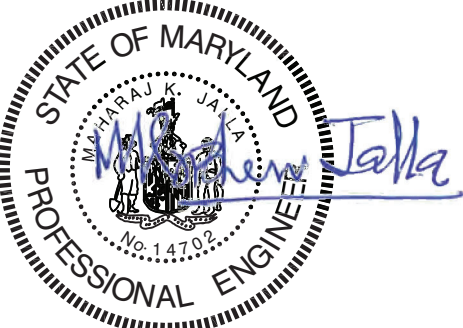
{	}- WALL ABOVE/BELOW
▨	- BEARING WALL
▤	- BRICK/STONE VENEER
▥	- FOOTING
—	- BEAM
—	- HEADER
—	- SHEARWALL
●	- STEEL COLUMN
■	- WOODEN POST
-	- SIMPSON HANGER

ABBREVIATIONS:-

PFA	- POST FROM ABOVE
DBL	- DOUBLE
G.T.	- GIRDER TRUSS
LLV	- LONG LEG VERTICAL
LLH	- LONG LEG HORIZONTAL
CONT.	- CONTINUOUS
CONC.	- CONCRETE
FTG.	- FOOTINGS
FDN.	- FOUNDATION

Maharaj
 Jalla

Digitally signed by
 Maharaj Jalla
 Date: 2021.04.28
 17:19:27 -04'00'



APR. 28, 2021

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REVISIONS	BY

CONSULTING ENGINEERS, CORP.
 11480 SUNSET HILLS ROAD SUITE 100 E RESTON, VA 20190-5208 PHONE : (703) 481-2100
 FAX : (703) 491-3200

PROJECT :
 SHARP RESIDENCE
 3944 BALTIMORE ST
 KENSINGTON, MD 20895

CLIENT :
 MANION+ASSOCIATES ARCHITECTS
 7807 MACARTHUR BLVD., STE.216,
 BETHESDA, MARYLAND 20816

STRUCTURAL NOTES AND DRAWING INDEX

DATE :	APR. 28, 2021
SCALE :	AS NOTED
DRAWN :	DS
JOB :	#21013
SHEET :	

S001

CONDITIONED CRAWL SPACE PER IECC 2018 SECTION R-402.2.11

PROVIDE PASSIVE RADON GAS CONTROLS PER IRC 2018 APPENDIX. F

CONTINUOUS LOAD PATH PER IRC 2018 SECTIONS R-301.1; R-401.2; R-501.2; R-601.2; R-801.2

- FOUNDATION NOTES :**
1. PROVIDE 1/2" ANCHOR BOLTS WITH PLATE WASHERS @ 48" O.C. (MAX.) U.O. WITH MINIMUM BOLT EMBEDMENT OF 7". WITH A MINIMUM OF TWO ANCHOR BOLTS PER SECTION OF SILL PLATE AND SHALL BE PLACED WITHIN 12" FROM END OF EACH SILL PLATE SECTION PER IRC-2018 SECTION 403.1.6 (OR) INSTALL EQUIVALENT MUD SILL ANCHORS PER MANUFACTURER TO MEET ANCHOR BOLT SCHEDULE.
 2. PROVIDE PNEUMATIC NAILS @ 16" O.C. TO CONNECT SILL PLATE TO THICKENED SLAB @ INTERIOR NON BEARING WALLS U.O.N.
 3. 16" MIN. SPlicing LENGTH TO BE PROVIDED FOR REBAR UNLESS OTHERWISE NOTED

- NOTES :**
1. CEC SCOPE OF WORK TO DESIGN UNDERPINNING FOR THE EXISTING FOOTING ONLY.

LEGEND:
 [Pattern] - EXTENT OF UNDERPINNING

ANCHOR BOLT SCHEDULE

WALL	ANCHOR BOLTS	CAPACITY (PLF)
1	1/2" ANCHOR BOLT @ 48" O.C.	272
2	(2) 5/8" ANCHOR BOLTS APPLICABLE ONLY W/ CS-PF	

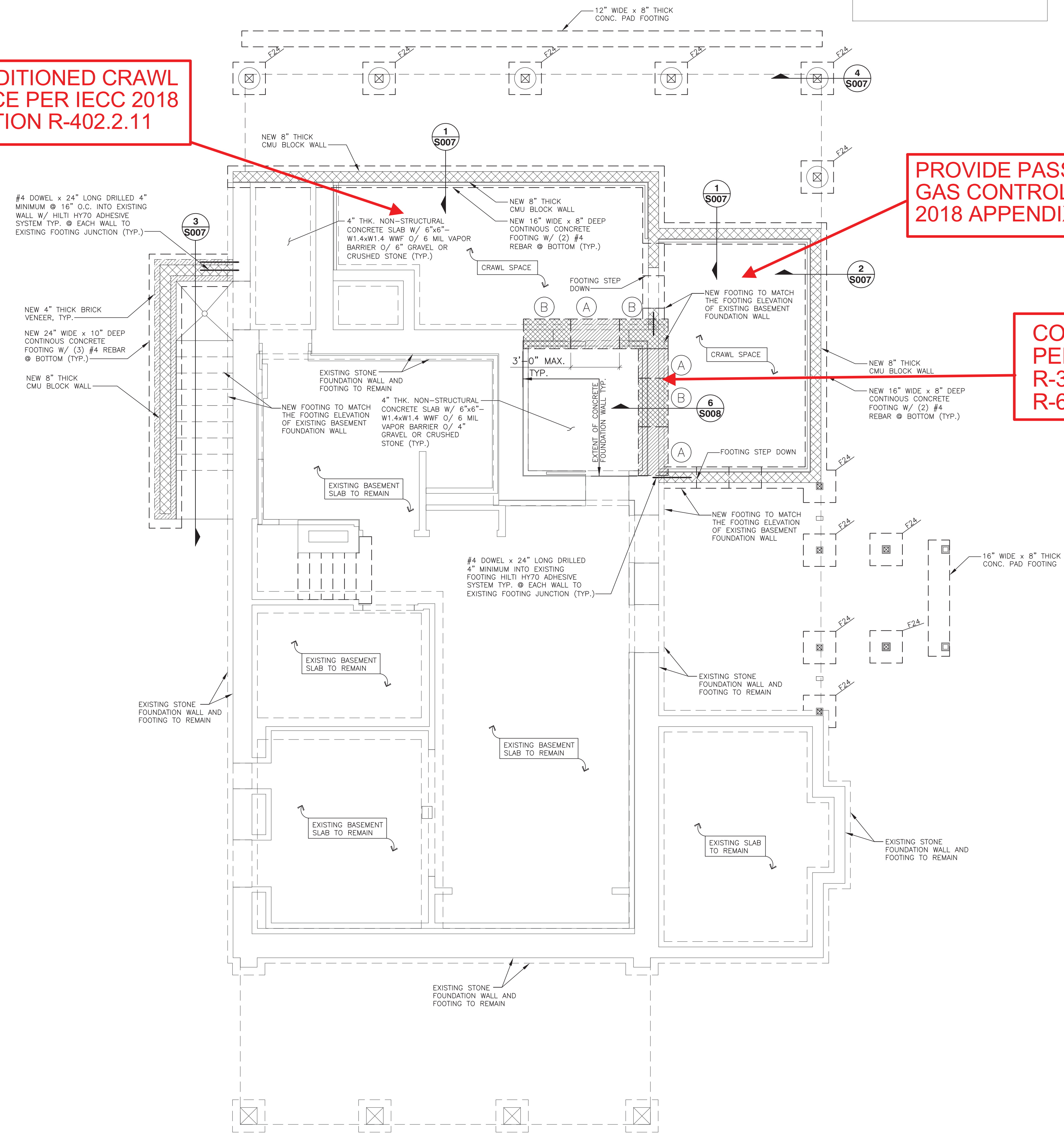
REFERENCE:- ALLOWABLE DESIGN VALUES ARE BASED ON NDS 2015, TABLE 12E FOR SOUTHERN PINE W/ FOOTNOTE "1"
 NOTE:- ANCHOR BOLT SPACING SHOWN IS BASED ON LATERAL LOADS ONLY.

FOOTING LEGEND:-

FOOTING SCHEDULE:-	
F24	24"x24"x12" CONCRETE FOOTING W/ (3) # 4 REBAR EACH WAY

- UNDERPINNING NOTES**
1. EXTREME CARE MUST BE EXERCISED WHILE PERFORMING UNDERPINNING OF THE EXISTING FOUNDATION
 2. UNDERPINNING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SEQUENCING SHOWN ON THE PLANS.
 3. CONCRETE FOR UNDERPINNING TO ATTAIN A MINIMUM 28 DAYS STRENGTH OF 3000 PSI.
 4. SEQUENCE & SPACING OF EXCAVATION AREAS SHALL BE VERIFIED & DETERMINED BY SOIL ENGINEER BASED ON FIELD CONDITIONS DURING UNDERPINNING PROCESS

- CONSTRUCTION SEQUENCE**
1. EXCAVATE UNDER THE EXISTING WALL IN ALL PORTIONS MARKED (A)
 2. INSTALL REBAR PER DETAIL W/ MINIMUM 6" LAP EACH END (EXPOSED)
 3. POUR CONCRETE IN ALL PORTIONS MARKED AS (A)
 4. PACK SOLID THE GAP BETWEEN EXISTING FOOTING & NEW CONCRETE W/ DRY PACK AFTER ATLEAST 6 HOURS FROM POURING OF NEW CONCRETE
 5. ALLOW CONCRETE TO CURE PROPERLY FOR ATLEAST 3 DAYS
 6. REPEAT STEP 3 TO 4 FOR ALL PORTIONS MARKED AS (B)



APPROVED
 Montgomery County
 Historic Preservation Commission

[Signature]

REVIEWED
 By Dan.Bruechert at 2:15 pm, Mar 25, 2022

Maharaj Jalla
 Digitally signed by Maharaj Jalla
 Date: 2021.04.28 17:20:25 -04'00'



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

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REVISIONS	BY

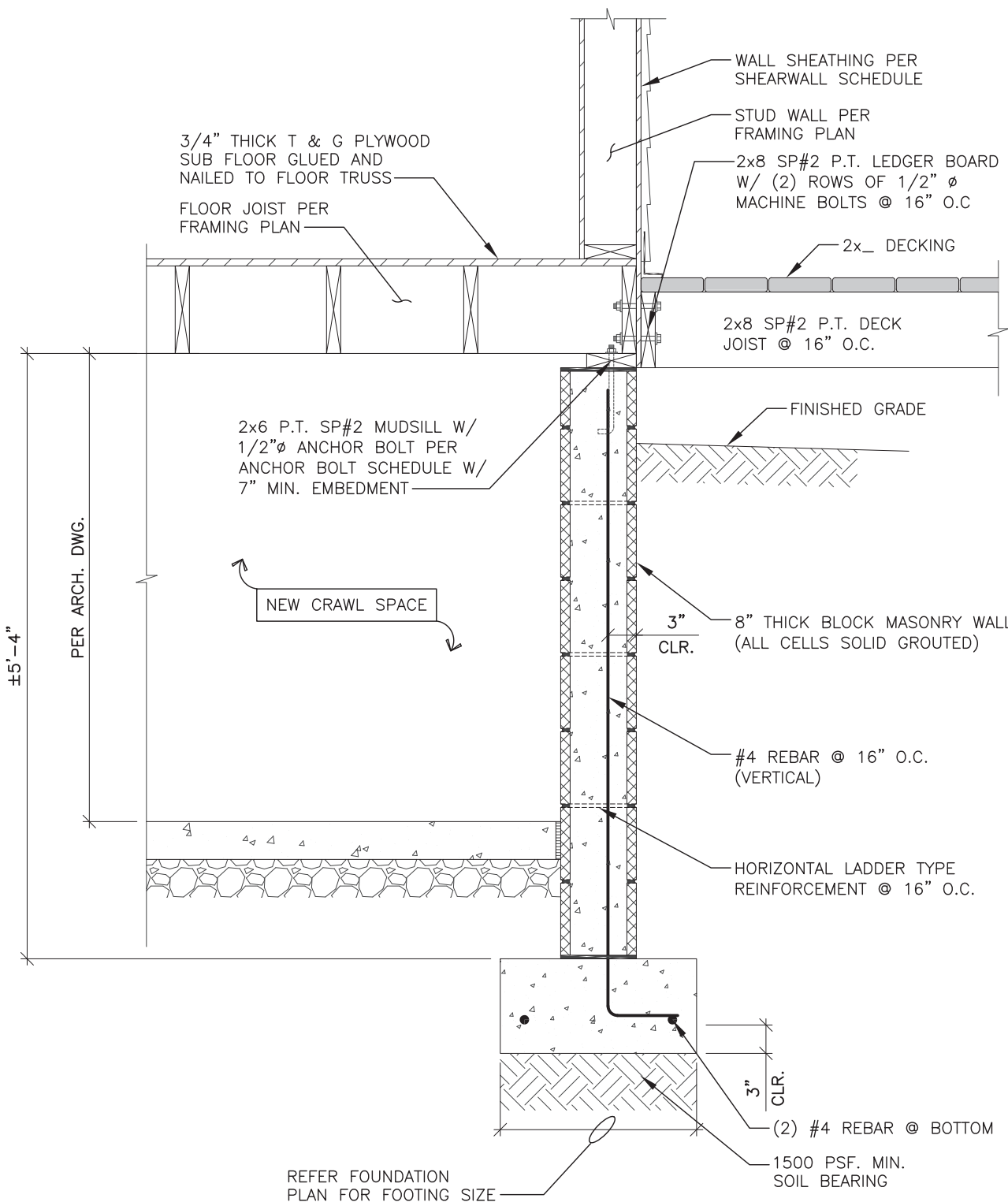
CONSULTING ENGINEERS, CORP.
 11480 SUNSET HILLS ROAD SUITE 100 E RESTON, VA 20190-5208 PHONE : (703) 481-2100 FAX : (703) 481-3200

PROJECT :
 SHARP RESIDENCE
 3944 BALTIMORE ST
 KENSINGTON, MD 20885

CLIENT :
 MANION + ASSOCIATES ARCHITECTS
 7807 MACARTHUR BLVD, STE.216,
 BETHESDA, MARYLAND 20816

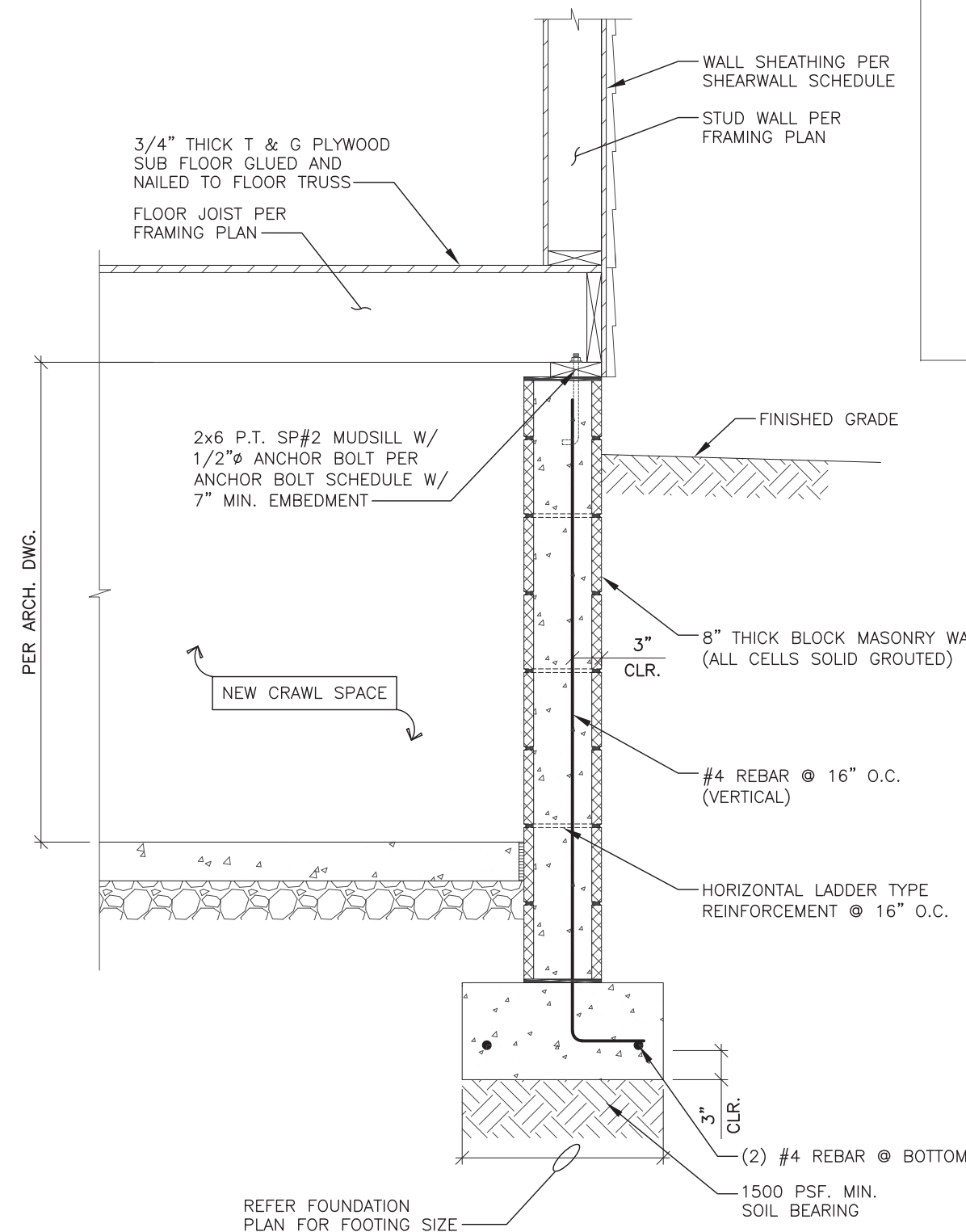
FOUNDATION PLAN

DATE :	APR. 28, 2021
SCALE :	AS NOTED
DRAWN :	DS
JOB :	#21013
SHEET :	S002



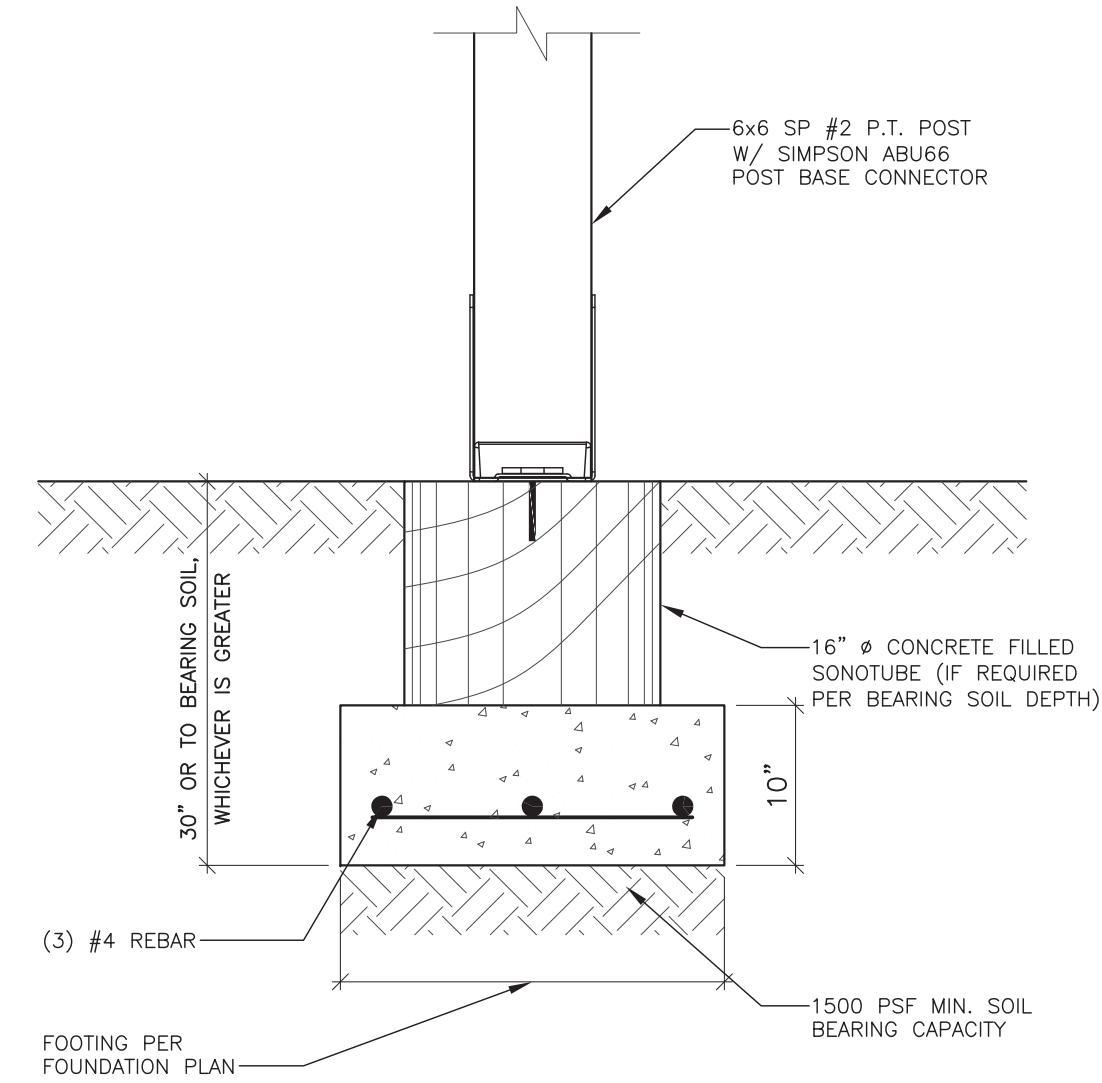
BACKFILL NOTES:
 1. BACKFILL MATERIAL SHALL BE "SM OR BETTER ONLY"
 2. DO NOT BACKFILL PRIOR TO CONSTRUCTION OF BASEMENT SLAB AND FIRST FLOOR DECK.

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

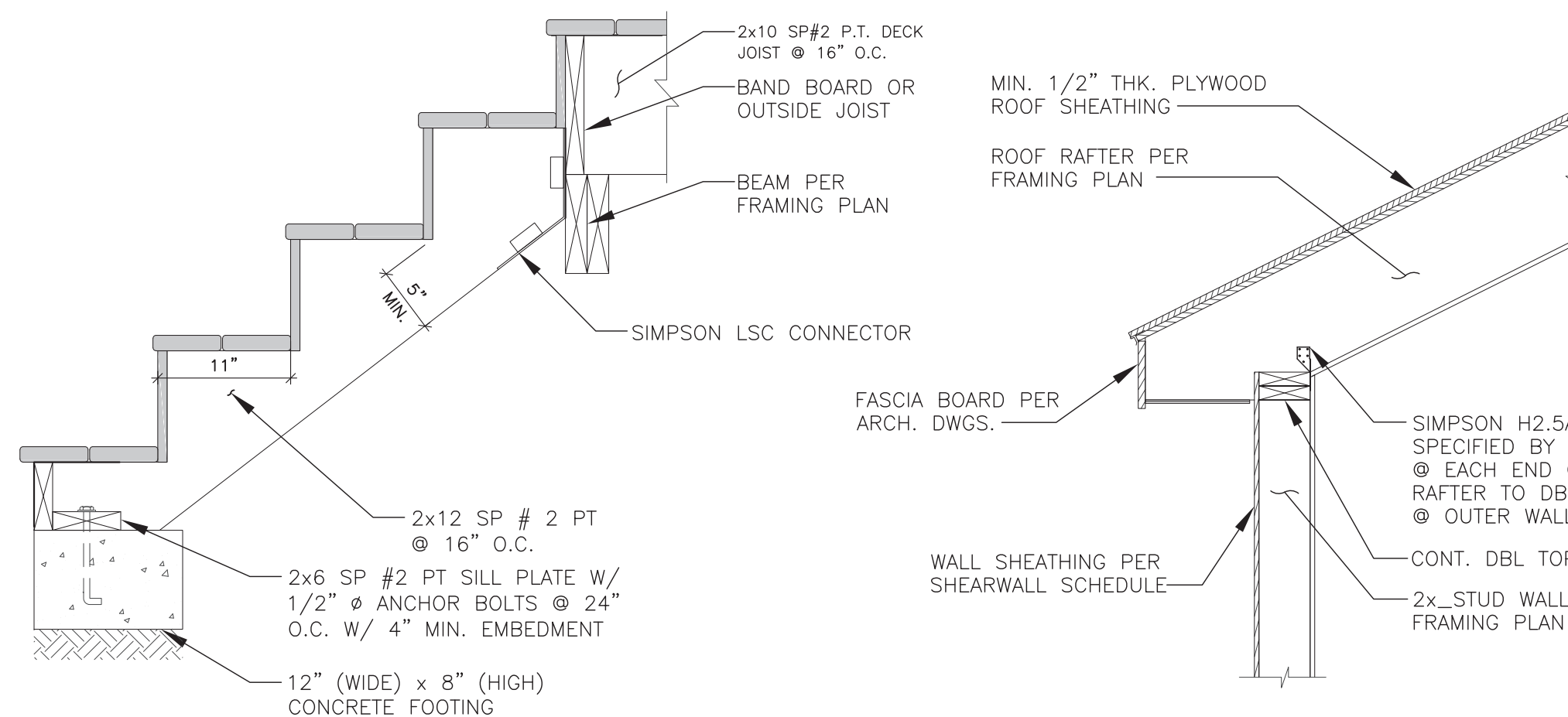


BACKFILL NOTES:
 1. BACKFILL MATERIAL SHALL BE "SM OR BETTER ONLY"
 2. DO NOT BACKFILL PRIOR TO CONSTRUCTION OF BASEMENT SLAB AND FIRST FLOOR DECK.

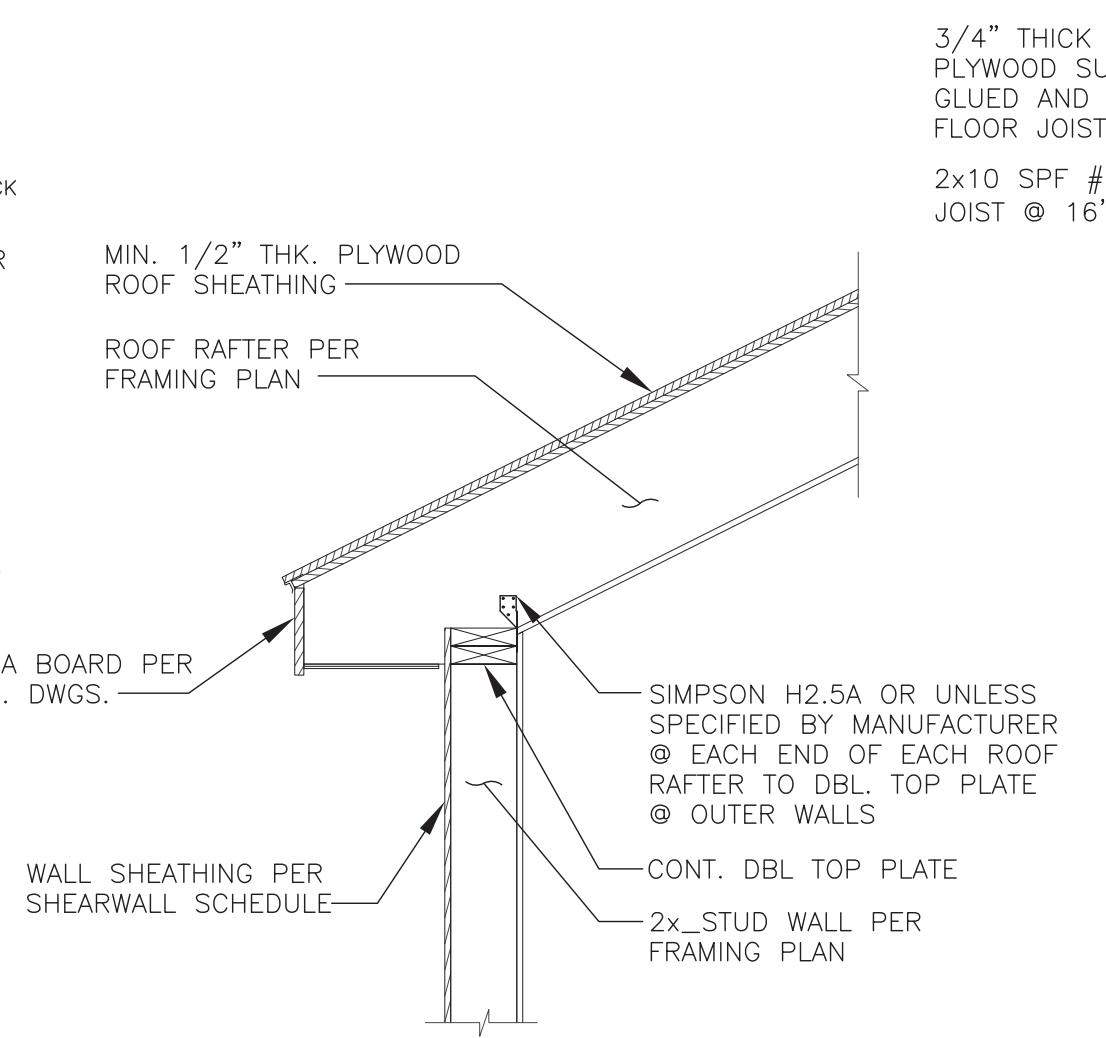
2 WALL SECTION
 SCALE: 3/4" = 1'-0"



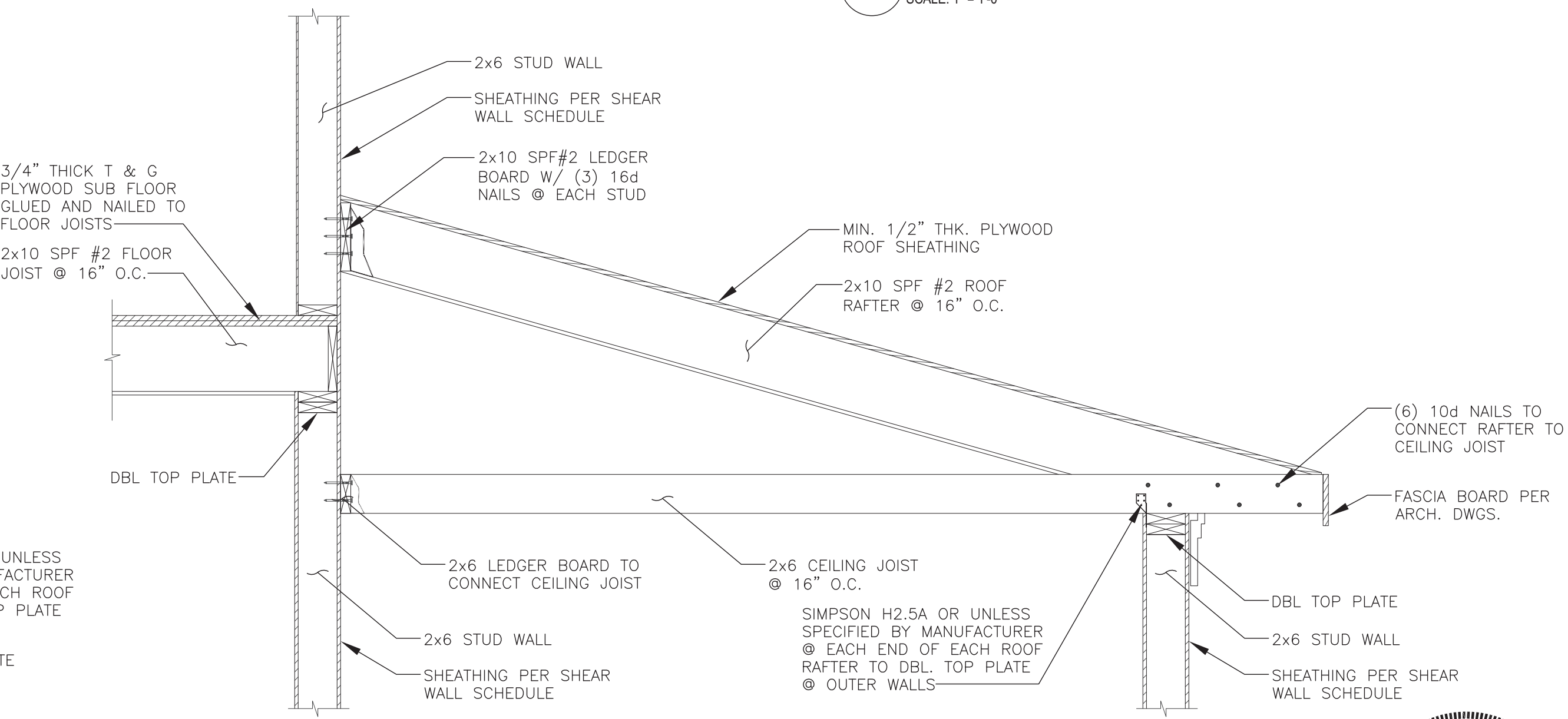
4 PIER FOOTING DETAIL
 SCALE: 1" = 1'-0"



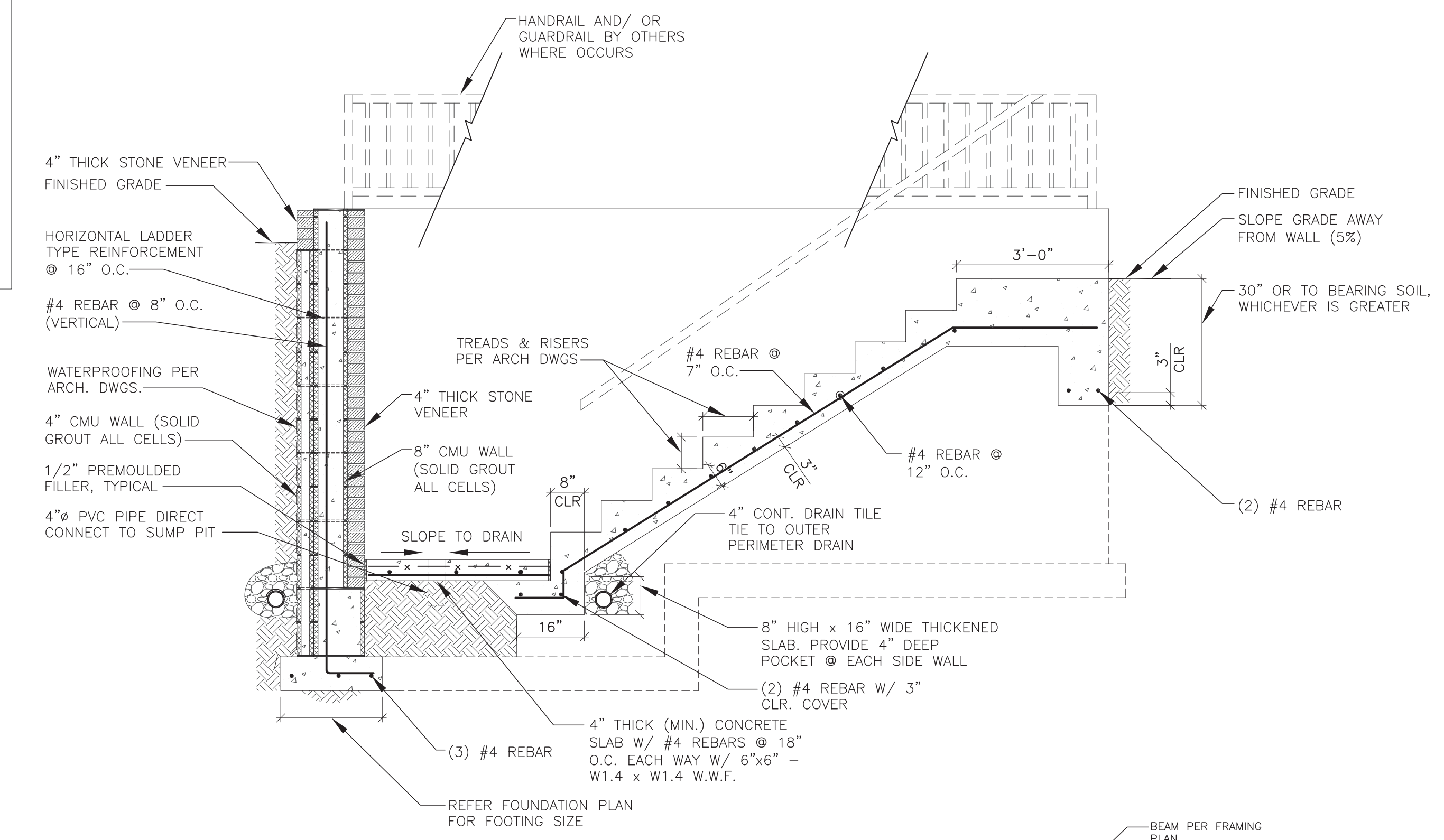
5 STAIR STEPS DETAIL
 SCALE: 1" = 1'-0"



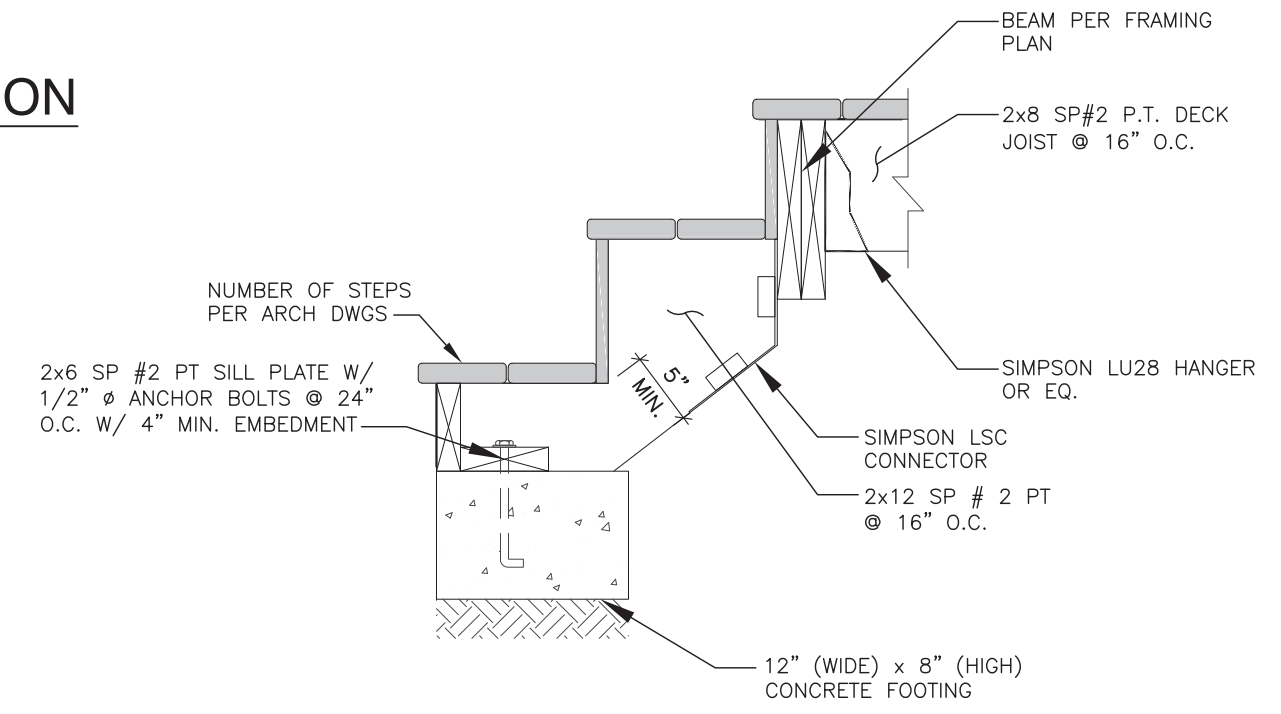
6 RAFTER TO STUD WALL CONNECTION
 SCALE: 3/4" = 1'-0"



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



3 AREAWAY SECTION
 SCALE: 1/2" = 1'-0"



8 STAIR STEPS DETAIL
 SCALE: 1" = 1'-0"

APPROVED
 Montgomery County
 Historic Preservation Commission
[Signature]

REVIEWED
 By Dan.Bruechert at 2:17 pm, Mar 25, 2022

Maharaj Jalla

Digitally signed by
 Maharaj Jalla
 Date: 2021.04.28
 17:26:18 -04'00'



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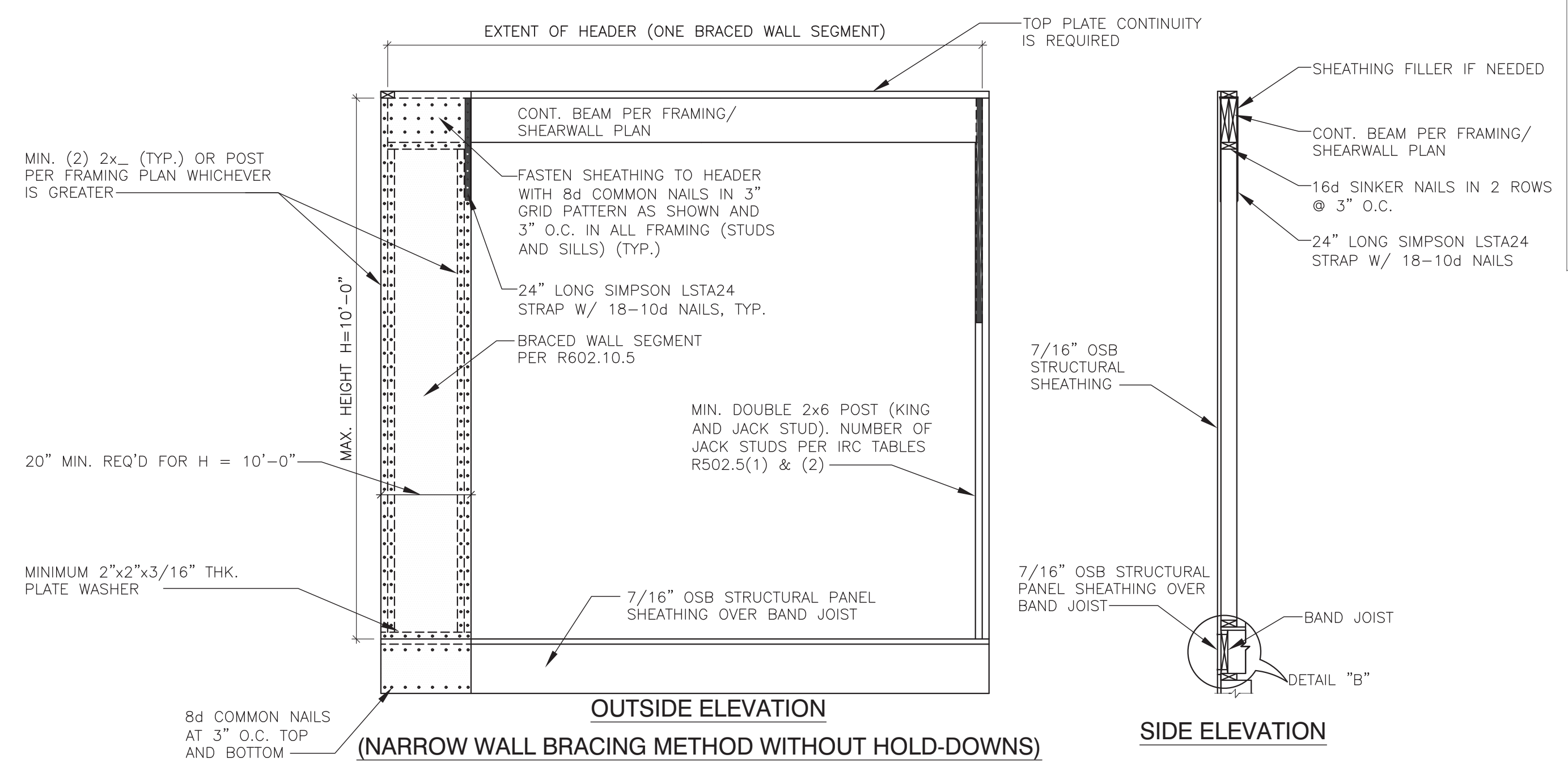
REVISIONS	BY

CONSULTING ENGINEERS, CORP.
 11480 SUNSET HILLS ROAD SUITE 100 LE RESTON, VA 20190-5208
 PHONE: (703) 481-2100
 FAX: (703) 481-3200

SHARP RESIDENCE
 3944 BALTIMORE ST
 KENSINGTON, MD 20885

MANION + ASSOCIATES ARCHITECTS
 7807 MACARTHUR BLVD, STE. 216,
 BETHESDA, MARYLAND 20816

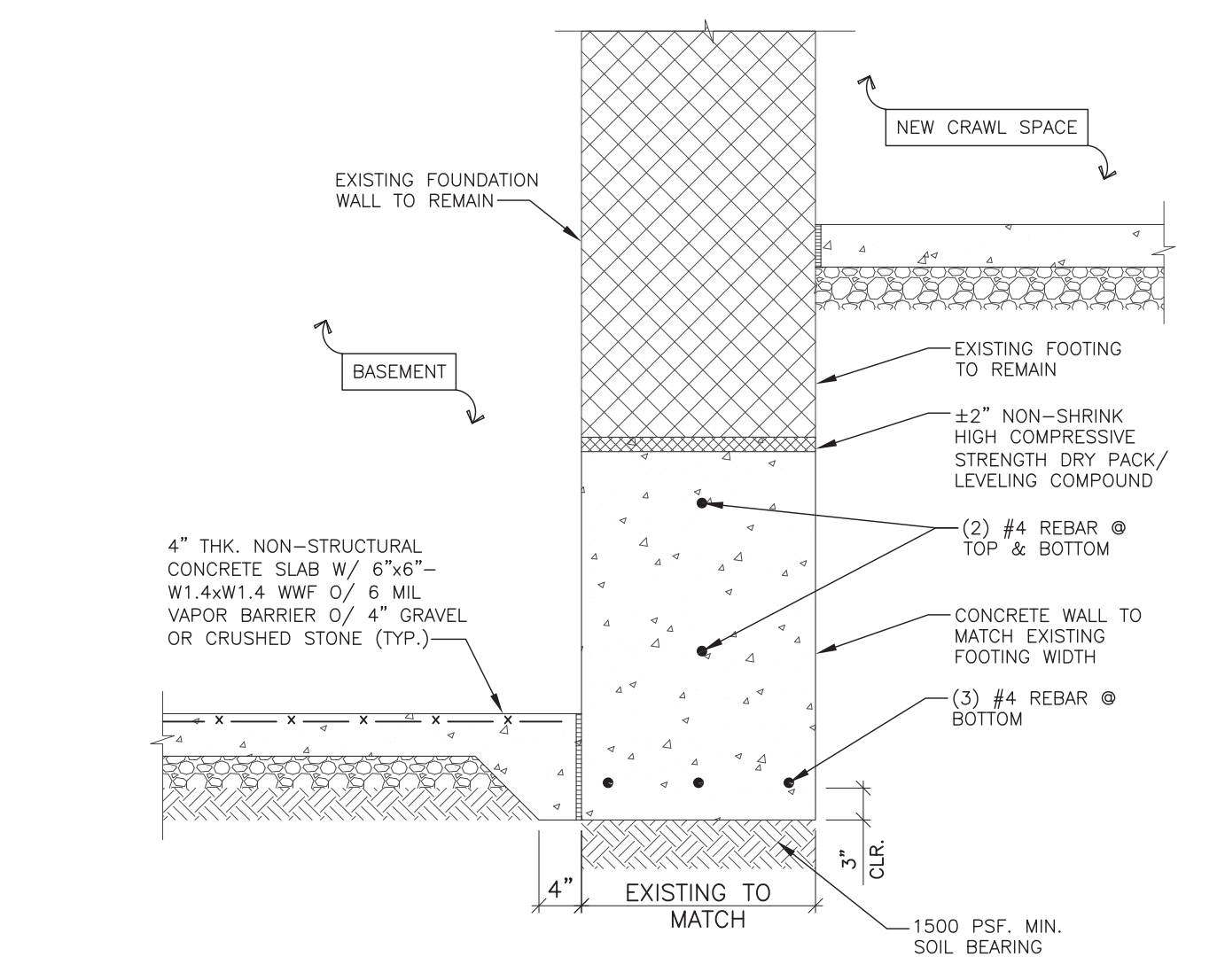
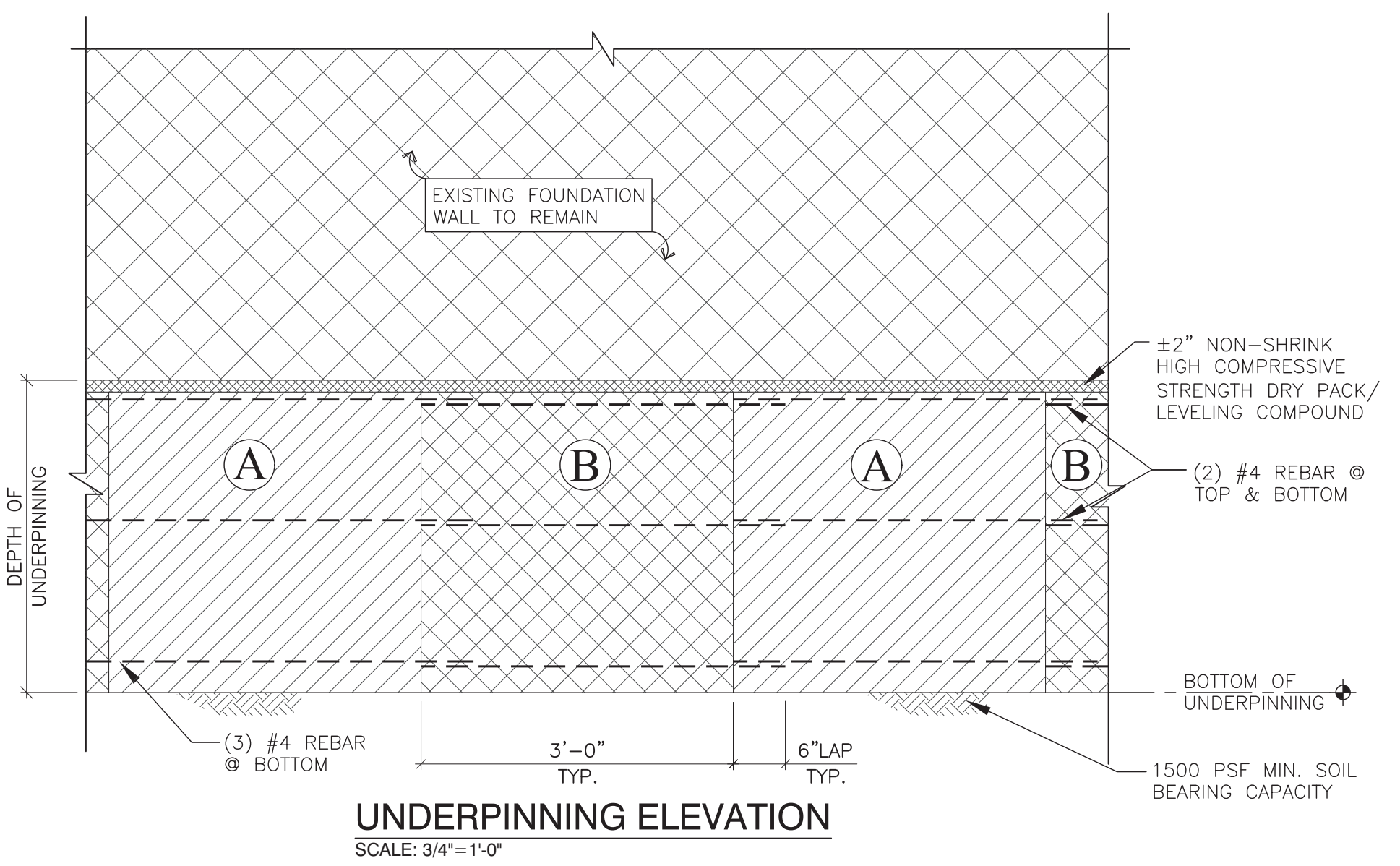
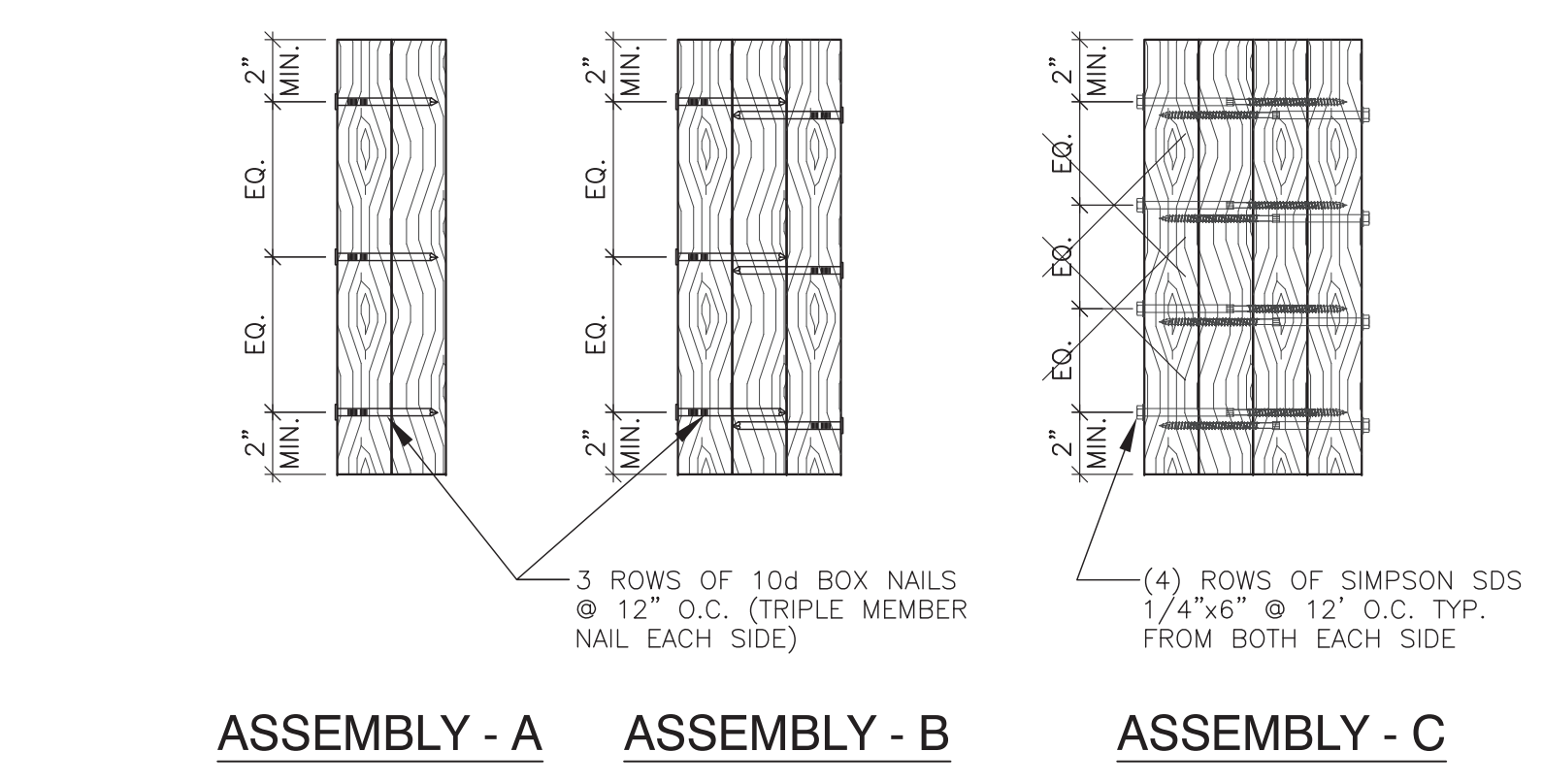
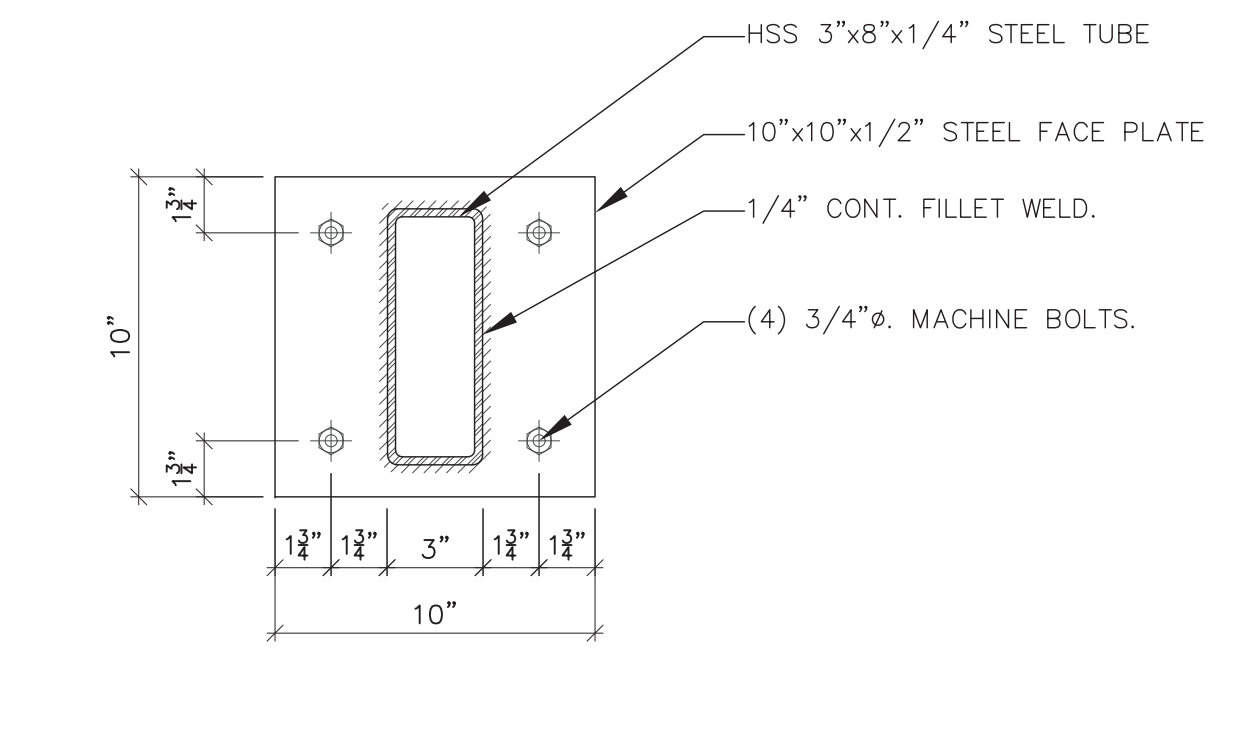
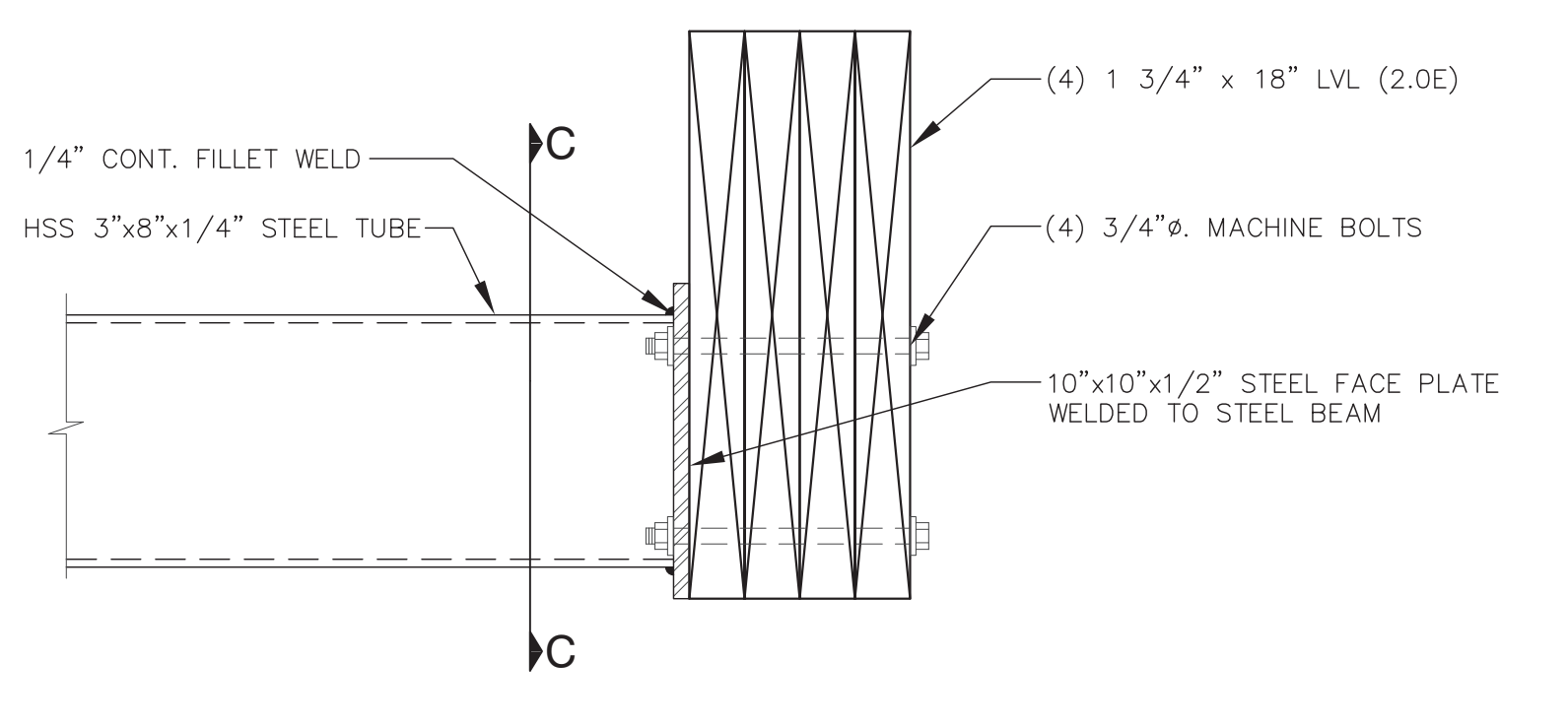
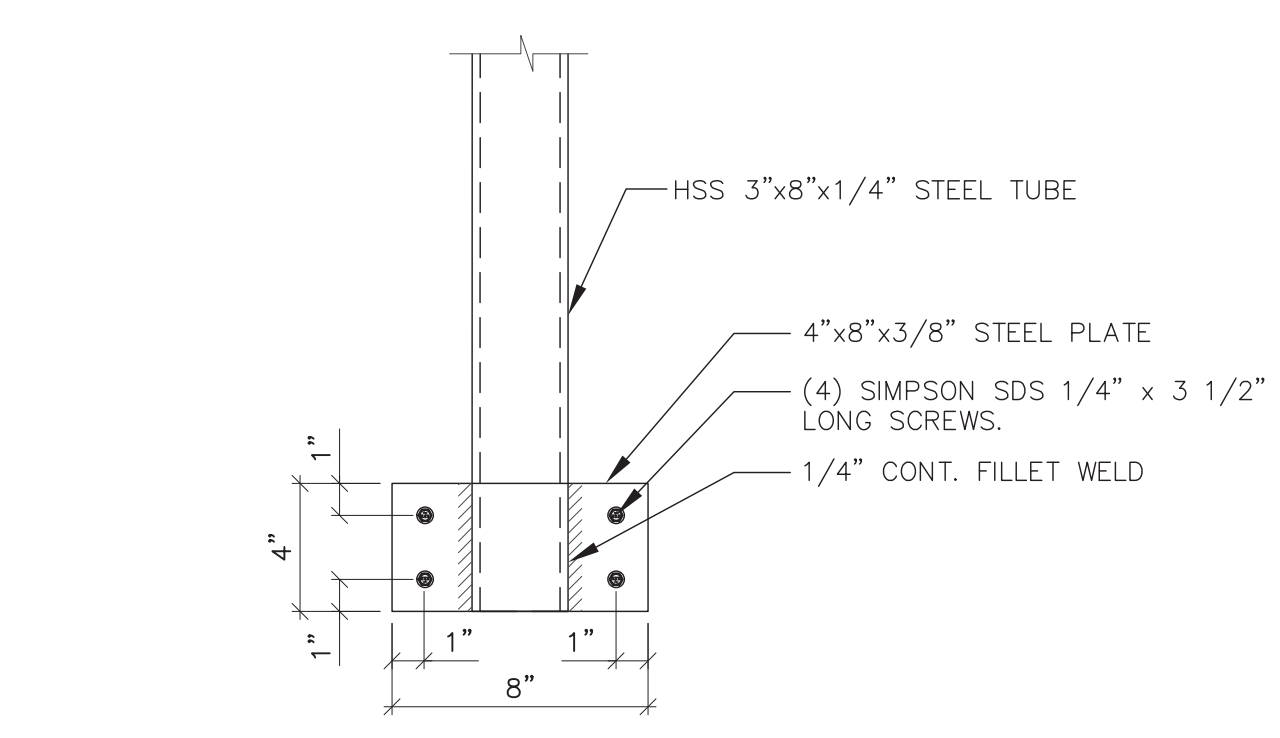
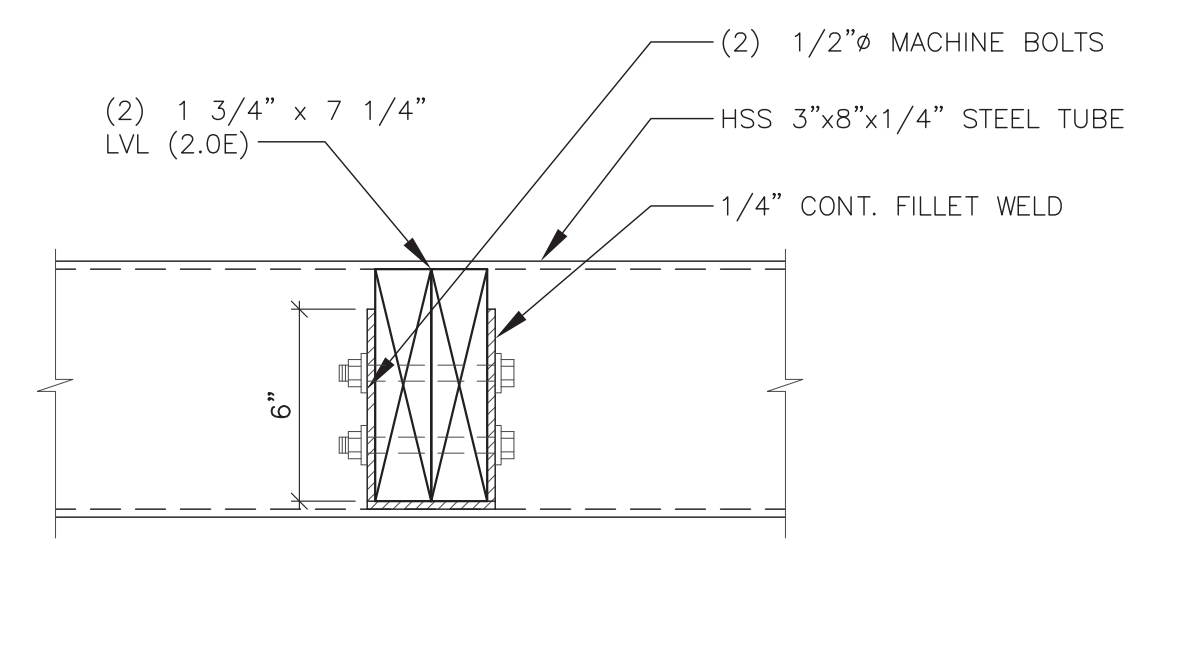
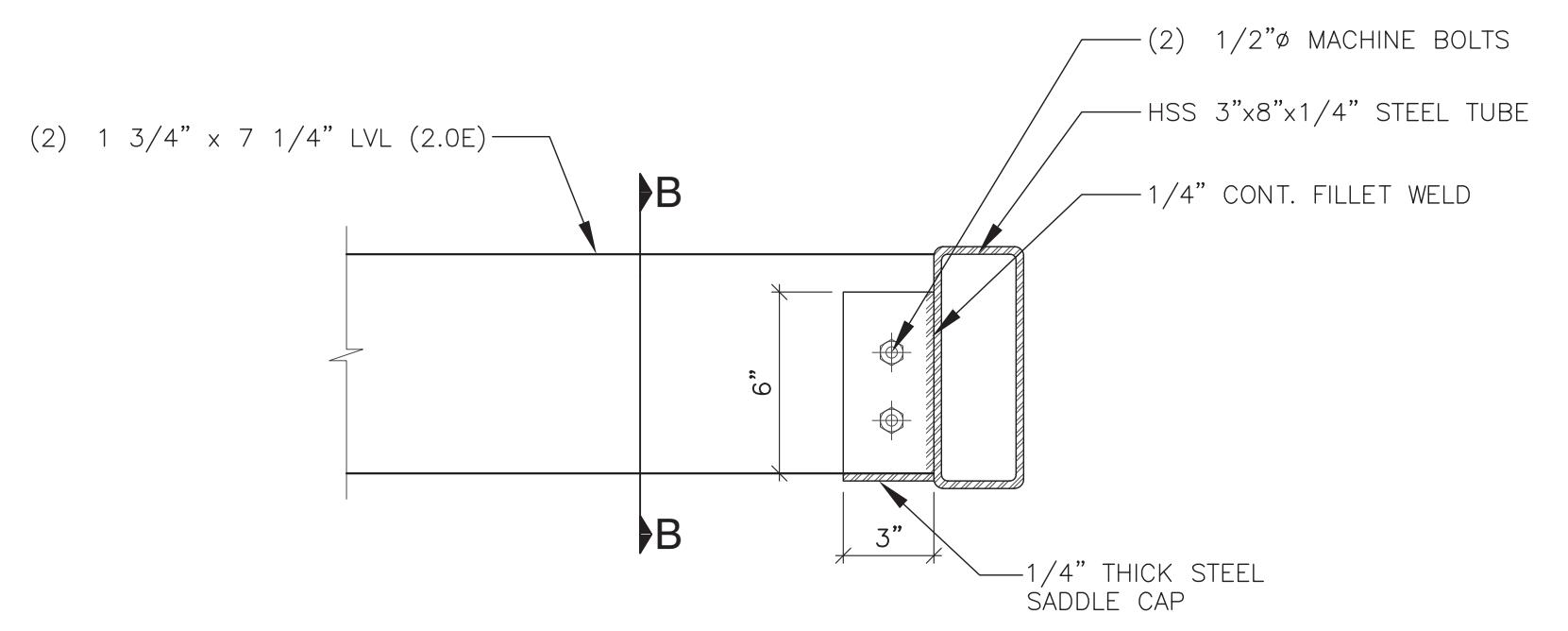
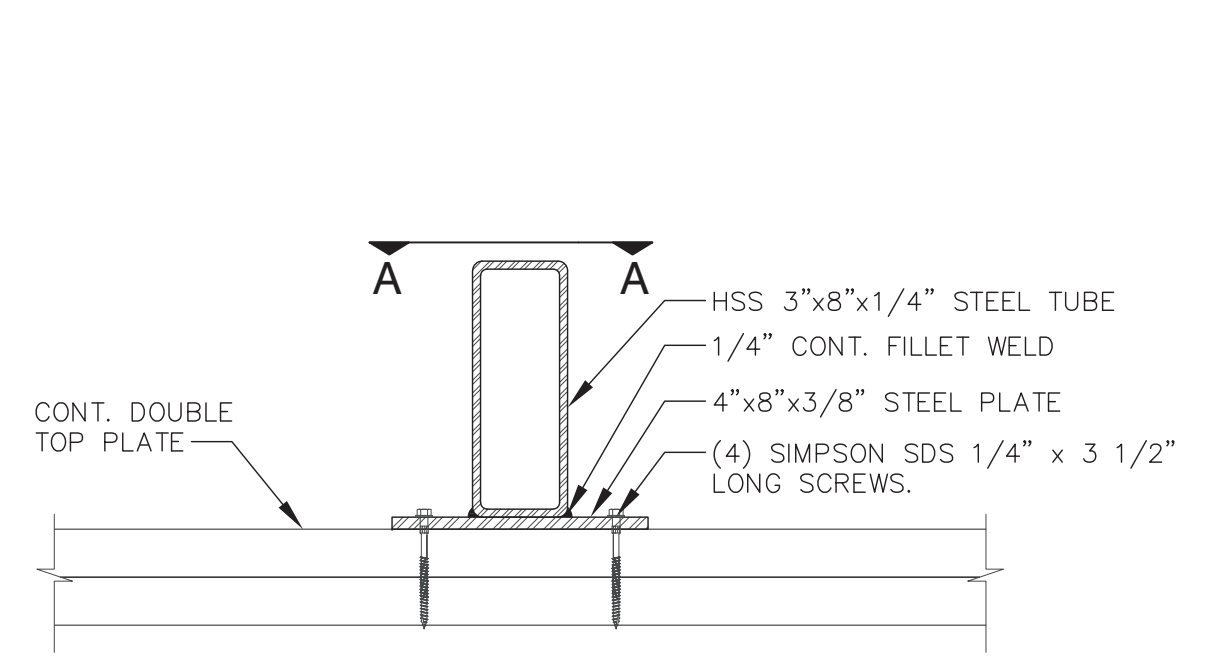
DATE : APR. 28, 2021
 SCALE : AS NOTED
 DRAWN : DS
 JOB : #21013
 SHEET : **S007**



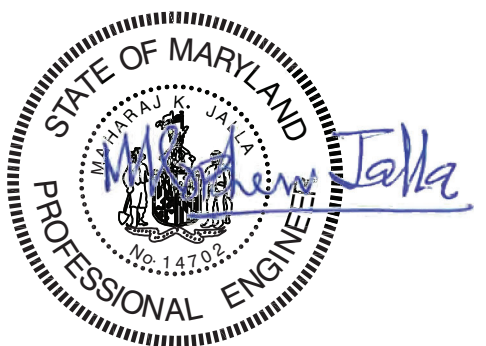
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 Montgomery County
 Historic Preservation Commission

Robert A. ...

REVIEWED
 By Dan.Bruechert at 2:17 pm, Mar 25, 2022



Maharaj Jalla
 Digitally signed by Maharaj Jalla
 Date: 2021.04.28 17:26:45 -04'00'



APR. 28, 2021
 PROFESSIONAL CERTIFICATION:
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REVISIONS	BY

CONSULTING ENGINEERS, CORP.
 11480 SUNSET HILLS ROAD SUITE 100 E RESTON, VA 20190-5208
 PHONE: (703) 481-2100
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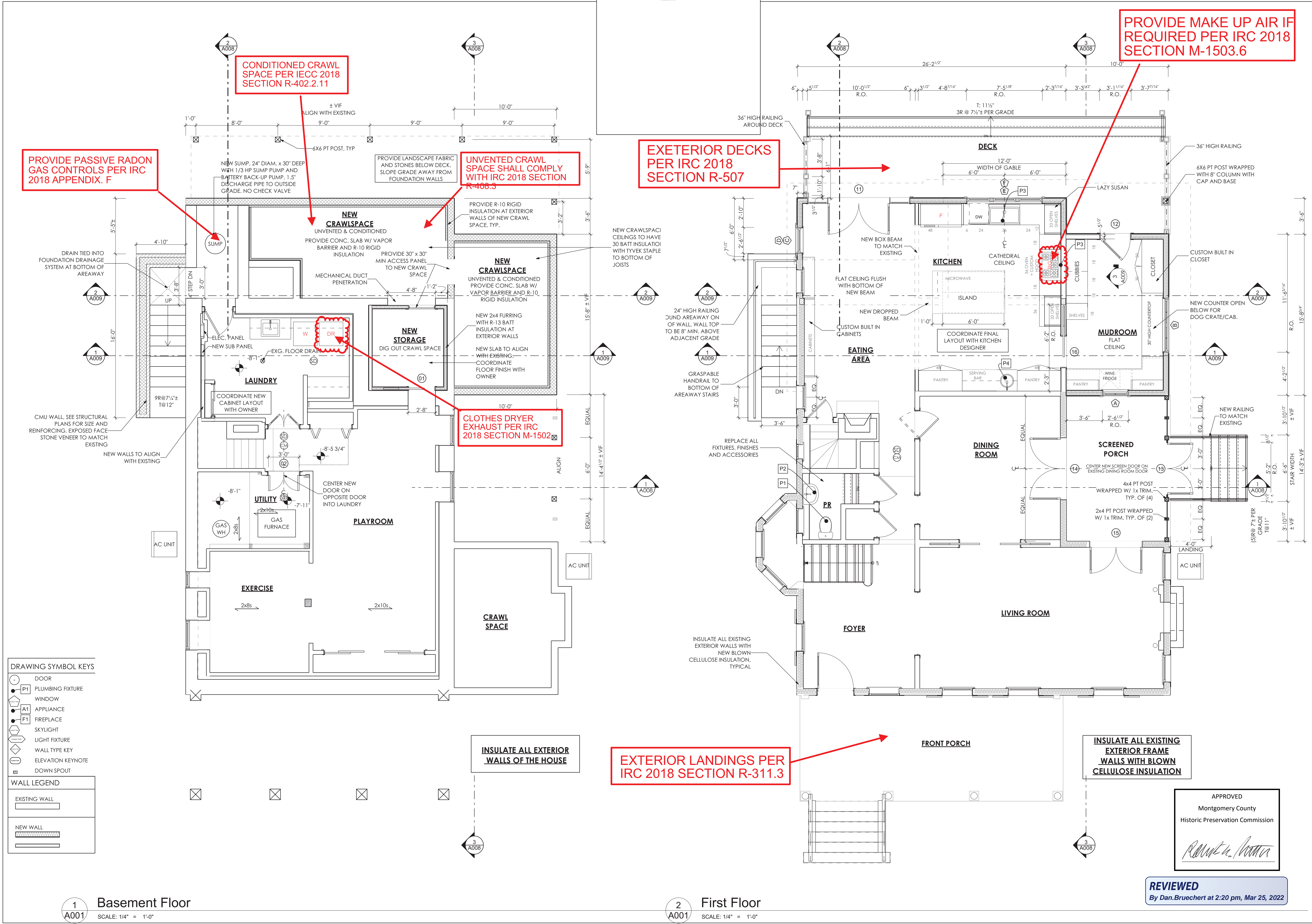
PROJECT: SHARP RESIDENCE
 3944 BALTIMORE ST
 KENSINGTON, MD 20885

CLIENT: MANION + ASSOCIATES ARCHITECTS
 7807 MACARTHUR BLVD, STE. 216
 BETHESDA, MARYLAND 20816

DATE: APR. 28, 2021
 SCALE: AS NOTED
 DRAWN: DS
 JOB: #21013
 SHEET: S008

SECTION DETAILS

C:\Users\Quand\Work\Sharp\Sharp CDs\Sharp Permit Set\Sharp_21_04-30_CD.pln



PROVIDE MAKE UP AIR IF REQUIRED PER IRC 2018 SECTION M-1503.6

PROVIDE PASSIVE RADON GAS CONTROLS PER IRC 2018 APPENDIX F

CONDITIONED CRAWL SPACE PER IECC 2018 SECTION R-402.2.11

UNVENTED CRAWL SPACE SHALL COMPLY WITH IRC 2018 SECTION R-406.3

EXTERIOR DECKS PER IRC 2018 SECTION R-507

CLOTHES DRYER EXHAUST PER IRC 2018 SECTION M-1502

EXTERIOR LANDINGS PER IRC 2018 SECTION R-311.3

INSULATE ALL EXTERIOR WALLS OF THE HOUSE

INSULATE ALL EXISTING EXTERIOR FRAME WALLS WITH BLOWN CELLULOSE INSULATION

DRAWING SYMBOL KEYS

- DOOR
- P1 PLUMBING FIXTURE
- WINDOW
- A1 APPLIANCE
- F1 FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWN SPOUT

WALL LEGEND

- EXISTING WALL
- NEW WALL

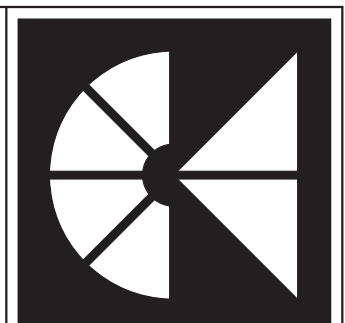
1 A001 **Basement Floor**
 SCALE: 1/4" = 1'-0"

2 A001 **First Floor**
 SCALE: 1/4" = 1'-0"

APPROVED
 Montgomery County
 Historic Preservation Commission

Robert A. ...

REVIEWED
 By Dan.Bruechert at 2:20 pm, Mar 25, 2022



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionassociates.com
 PROJECT PHASE: Permit/Bid Set
 DRAWN BY: VGL, LMV
 CHECKED BY: TM



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DRAWINGS OR ANY PART THEREOF OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT OF THE STATE OF MARYLAND.
 LICENSE NO. 3727-R
 EXPIRATION DATE: 05/06/2022

Sharp Residence
 3944 Baltimore St
 Kensington, MD 20895
 B - 1 Floor Plans

DO NOT SCALE DRAWINGS
 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and shall notify the office of any variances from the dimensions and conditions shown.

A001



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionandassociates.com
 PROJECT PHASE: Permit/Bid Set
 ISSUE DATE: 04/30/21
 DRAWN BY: VGL, LMW
 CHECKED BY: TM

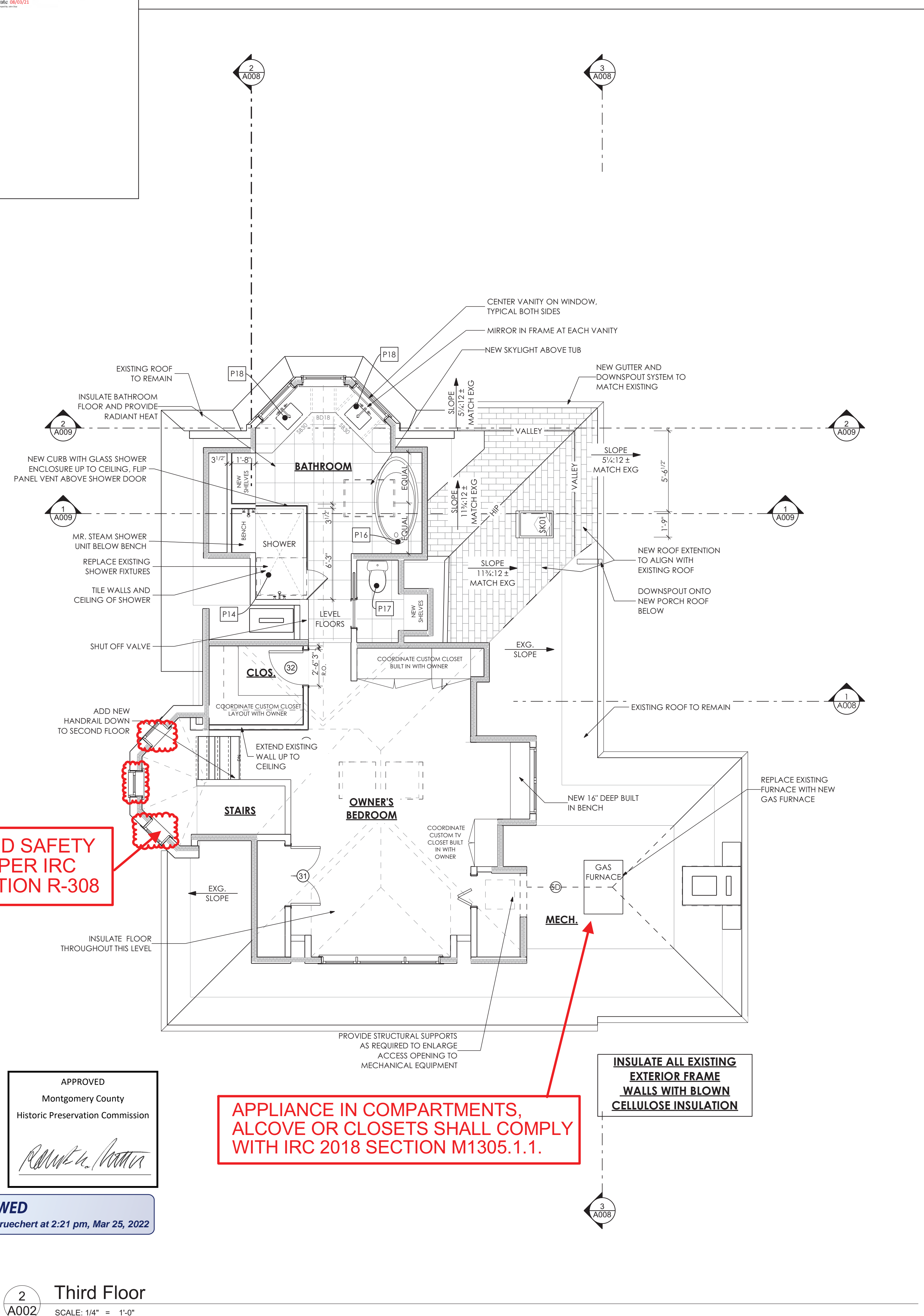
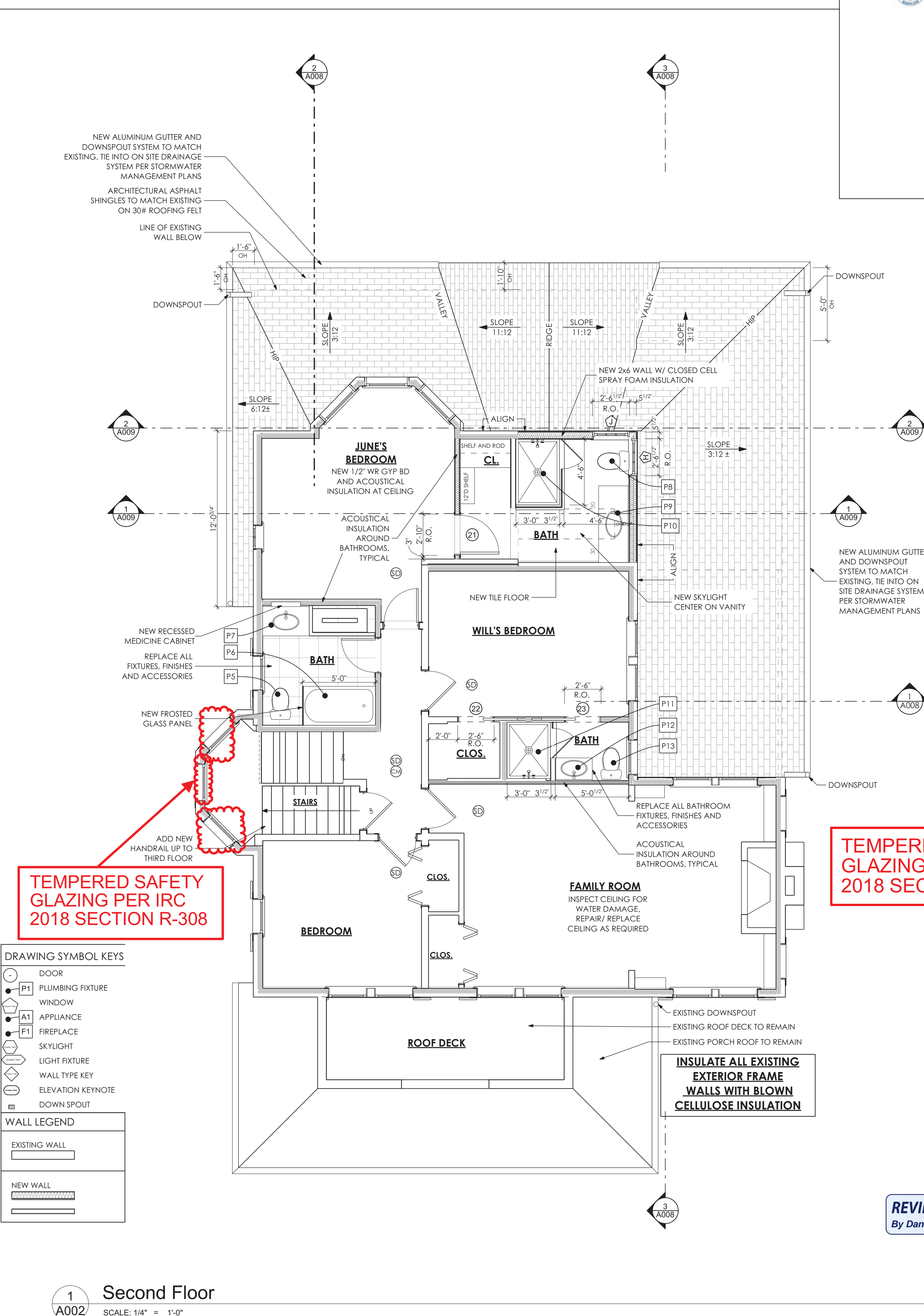


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 LICENSE NO. 3727-R
 EXPIRATION DATE: 05/06/2022

Sharp Residence
 3944 Baltimore St
 Kensington, MD 20895
 2 - 3 Floor Plans

DO NOT SCALE DRAWINGS
 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and shall notify the office of any variances from the dimensions and conditions shown.

A002



TEMPERED SAFETY GLAZING PER IRC 2018 SECTION R-308

TEMPERED SAFETY GLAZING PER IRC 2018 SECTION R-308

APPLIANCE IN COMPARTMENTS, ALCOVE OR CLOSETS SHALL COMPLY WITH IRC 2018 SECTION M1305.1.1.

INSULATE ALL EXISTING EXTERIOR FRAME WALLS WITH BLOWN CELLULOSE INSULATION

INSULATE ALL EXISTING EXTERIOR FRAME WALLS WITH BLOWN CELLULOSE INSULATION

APPROVED
 Montgomery County
 Historic Preservation Commission
[Signature]

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022

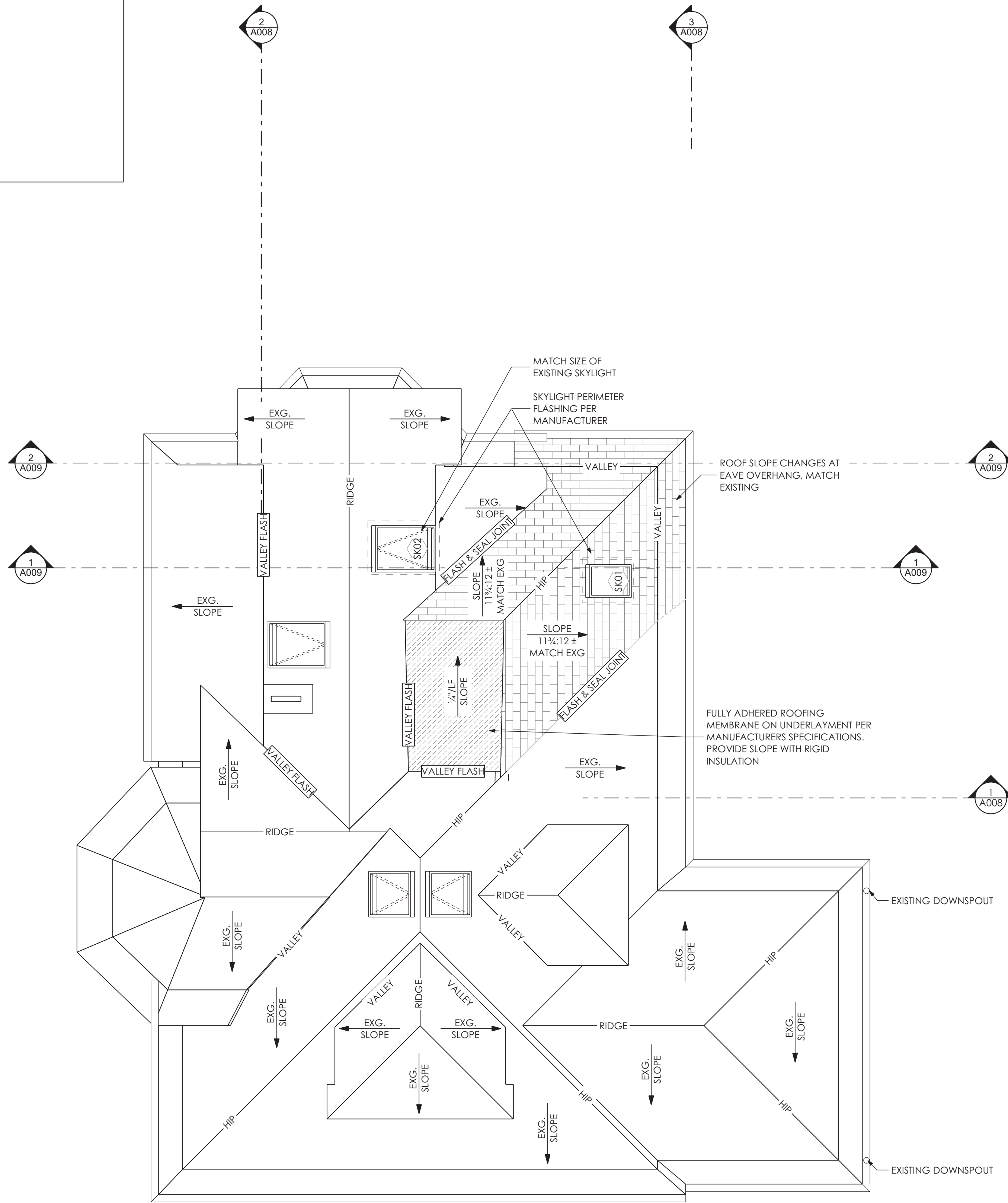
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DRAWING SYMBOL KEYS

- DOOR
- PLUMBING FIXTURE
- WINDOW
- APPLIANCE
- FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWN SPOUT

WALL LEGEND

- EXISTING WALL
- NEW WALL

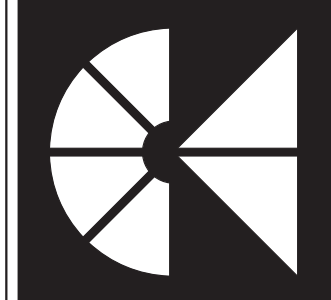


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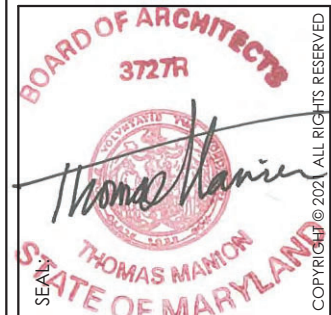
[Signature]

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022

1
 A003
 Roof
 SCALE: 1/4" = 1'-0"



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
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 DRAWN BY: VGL, LMG
 ISSUE DATE: 04/30/21
 REVISIONS



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT IN THE STATE OF MARYLAND.
 LICENSE NO.: 3727-R
 EXPIRATION DATE: 05/09/2022

Sharp Residence
 3944 Baltimore St
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Roof Plan

DO NOT SCALE DRAWINGS
 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and not rely on the office or any variations from the dimensions and conditions shown.

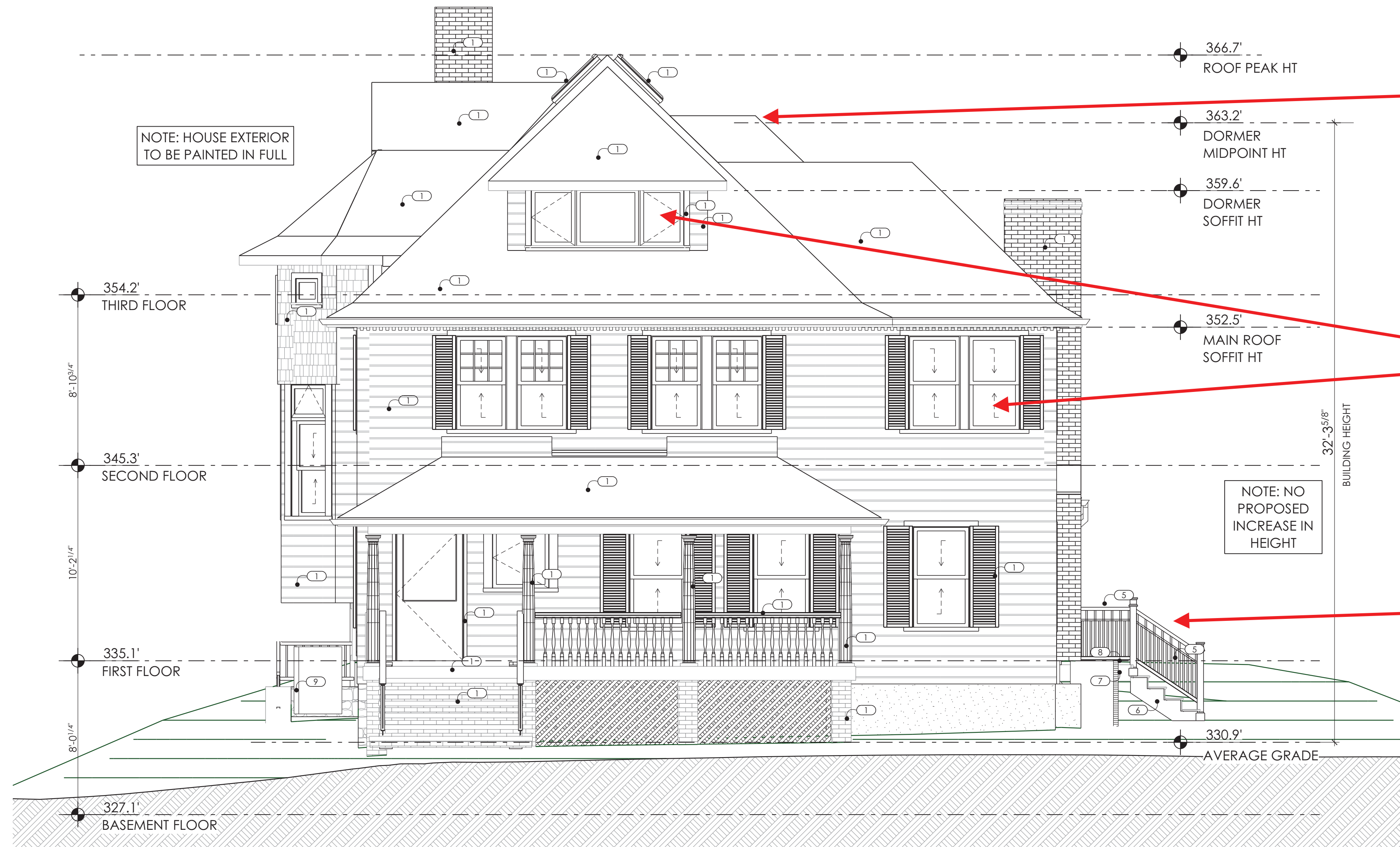
A003

DRAWING SYMBOL KEYS

- DOOR
- PLUMBING FIXTURE
- WINDOW
- APPLIANCE
- FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWNSPOUT

ELEVATION KEY NOTES

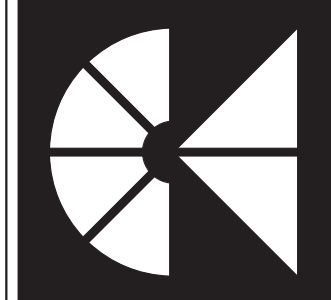
- 1) EXISTING TO REMAIN.
- 2) EXISTING - REPAIR OR REPLACE.
- 3) NEW ARCHITECTURAL ASPHALT SHINGLE ROOF TO MATCH EXISTING ON 30# ROOFING FELT.
- 4) NEW ALUMINUM DOWNSPOUT AND GUTTER SYSTEM TO MATCH EXISTING. TIE INTO BELOW GRADE DRAINAGE SYSTEM AS SHOWN ON DRAINAGE PLAN.
- 5) NEW RAILING. SEE ELEVATIONS FOR DESIGN
- 6) NEW EXTERIOR DECK STAIRS, TREADS TO MATCH DECK BOARDS, RISERS AND STRINGERS TO BE COVERED WITH SMOOTH TRIM.
- 7) PT DECK STRUCTURE WITH 5/4 x 12 BAND BOARD TRIM WRAPPING PERIMETER.
- 8) DECK BOARDS STYLE AND COLOR SELECTED BY OWNER.
- 9) NEW PARGED CMU AREAWAY WALL, MAINTAIN MINIMUM 8" ABOVE ADJACENT GRADE. SEE STRUCTURAL DRAWINGS FOR SIZE AND REINFORCING.
- 10) 6x6 PT COLUMN WRAPPED IN 8" SQUARE COLUMN WRAP WITH 5/4 BASE AND CAP TRIM.
- 11) HEAD TRIM - SEE DETAIL
- 12) 5/4 x 6 CORNER BOARD
- 13) NEW SIDING TO MATCH EXISTING EXPOSURE.
- 14) PAINTED BRACKET.
- 15) 5/4 x 4 WINDOW CASING.
- 16) MATCH EXISTING HISTORIC SILL.
- 17) 5/4 x 8 TRIM
- 18) 5/4 x 12 BAND BOARD TRIM
- 19) NEW DENTILS TO MATCH EXISTING
- 20) 4 x 4 PT POST, WRAPPED W/ 1x TRIM
- 21) 2 x 4 PT POST, WRAPPED W/ 1x TRIM
- 22) 1 x 4 TRIM
- 23) INSECT SCREEN
- 24) FLASH AT ROOF TO WALL CONNECTION
- 25) PERIMETER FLASH AROUND SKYLIGHT
- 26) FULLY ADHERED ROOFING MEMBRANE ON UNDERLAYMENT ON SLOPING RIGID INSULATION.
- 27) SMOOTH PANEL TRIM
- 28) UNVENTED RIDGE.
- 29) SOFFIT TO MATCH EXISTING.
- 30) GABLE TRIM



1 Front Elevation
 A004 SCALE: 1/4" = 1'-0"

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 Front Elevation

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A004

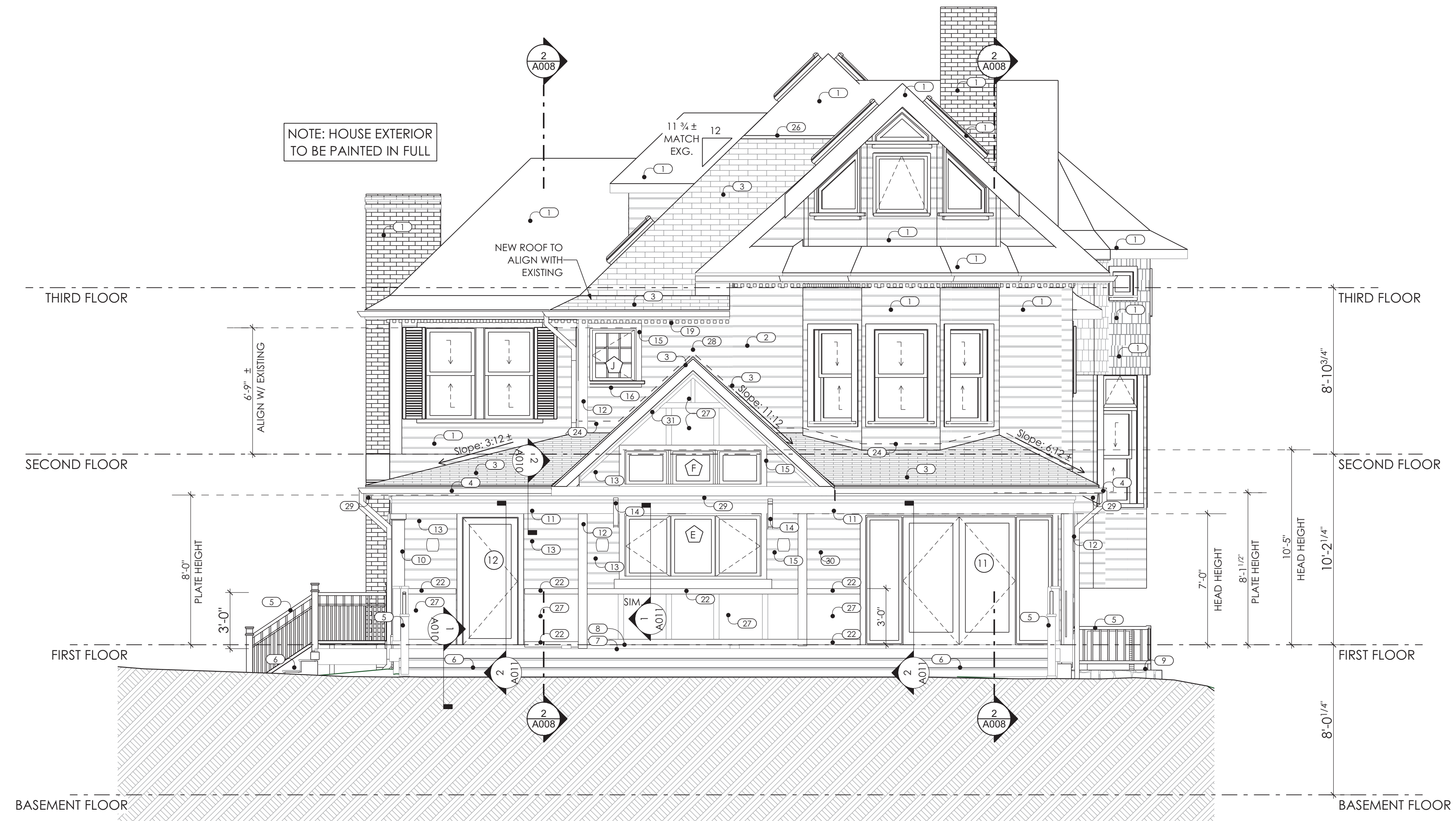
DRAWING SYMBOL KEYS

- DOOR
- PLUMBING FIXTURE
- WINDOW
- APPLIANCE
- FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWN SPOUT

ELEVATION KEY NOTES

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- 28) UNVENTED RIDGE.

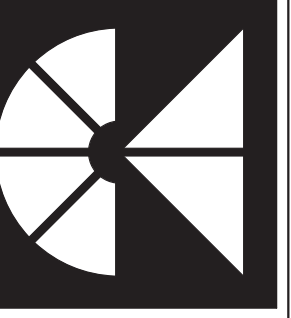
NOTE: COORDINATE ALL EXTERIOR TRIM AND RAILING DETAILS ON SITE WITH ARCHITECT/ OWNER. PROVIDE FULL SCALE MOCK UPS PRIOR TO INSTALLATION.



1
A005 Rear Elevation
 SCALE: 1/4" = 1'-0"

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 Rear Elevation

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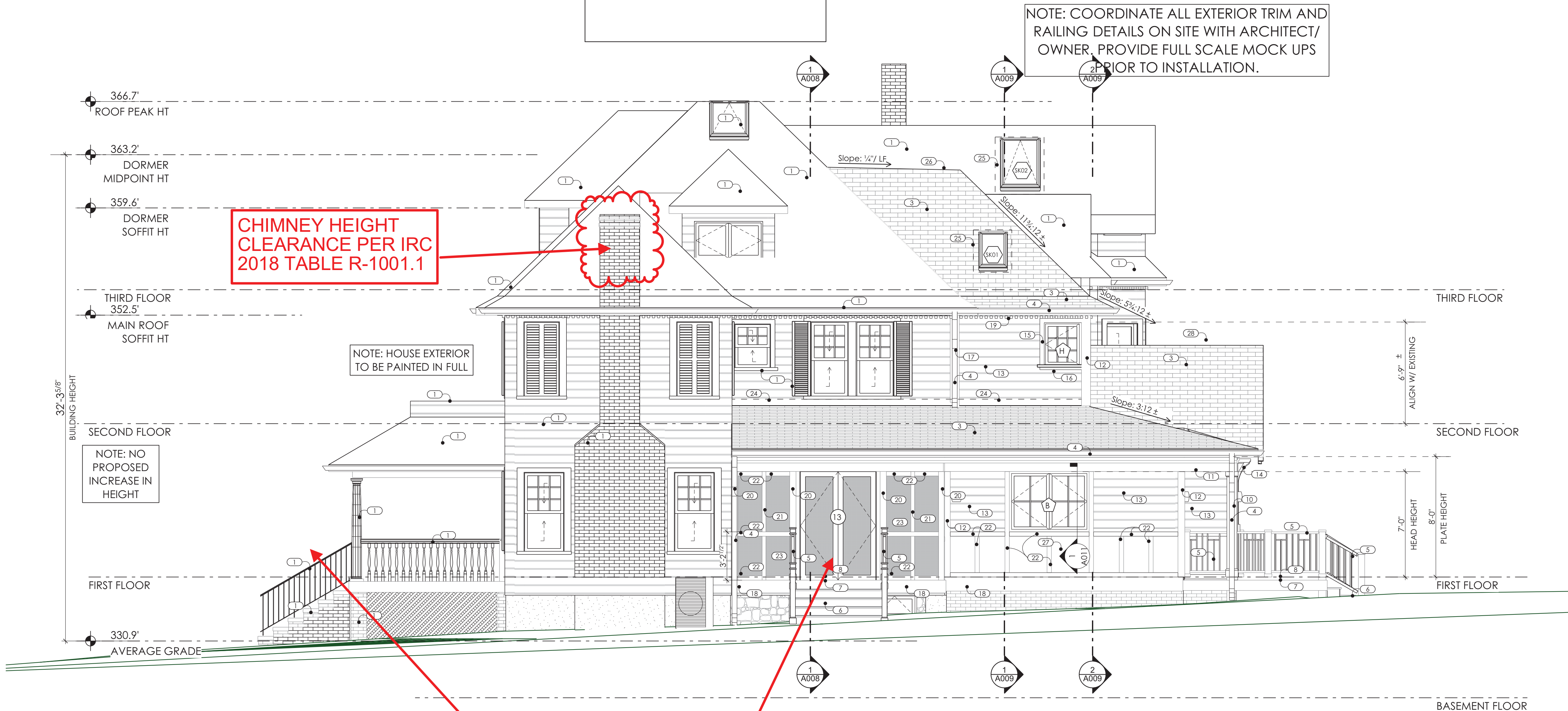
A005

DRAWING SYMBOL KEYS

- DOOR
- PLUMBING FIXTURE
- WINDOW
- APPLIANCE
- FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWN SPOUT

ELEVATION KEY NOTES

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- 30) GABLE TRIM

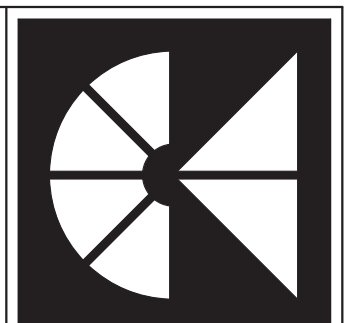


1
 A006 Right Elevation
 SCALE: 1/4" = 1'-0"

APPROVED
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 Historic Preservation Commission

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 By Dan.Bruechert at 2:21 pm, Mar 25, 2022



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 Right Elevation

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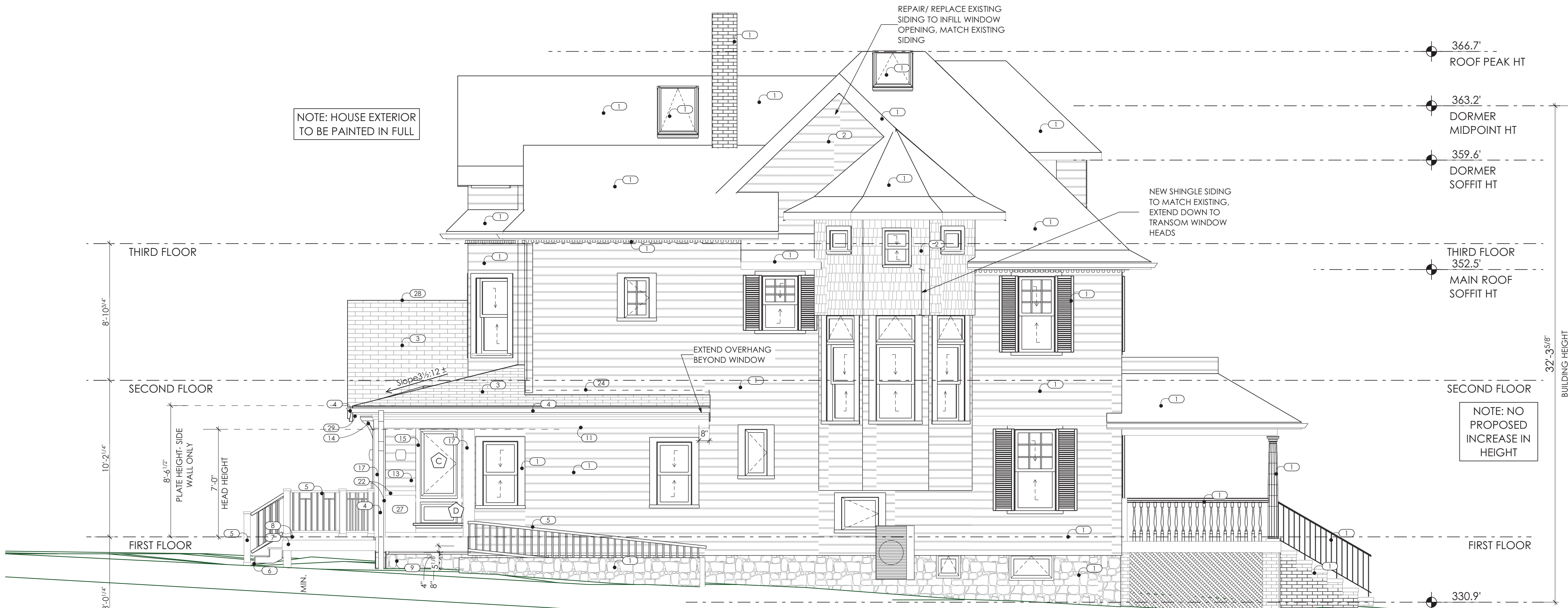
A006

DRAWING SYMBOL KEYS

- DOOR
- PLUMBING FIXTURE
- WINDOW
- APPLIANCE
- FIREPLACE
- SKYLIGHT
- LIGHT FIXTURE
- WALL TYPE KEY
- ELEVATION KEYNOTE
- DOWN SPOUT

ELEVATION KEY NOTES

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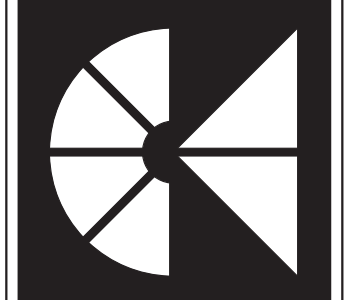


NOTE: COORDINATE ALL EXTERIOR TRIM AND RAILING DETAILS ON SITE WITH ARCHITECT/ OWNER. PROVIDE FULL SCALE MOCK UPS PRIOR TO INSTALLATION.

1
 A007
 Left Elevation
 SCALE: 1/4" = 1'-0"

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022



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 REVISIONS

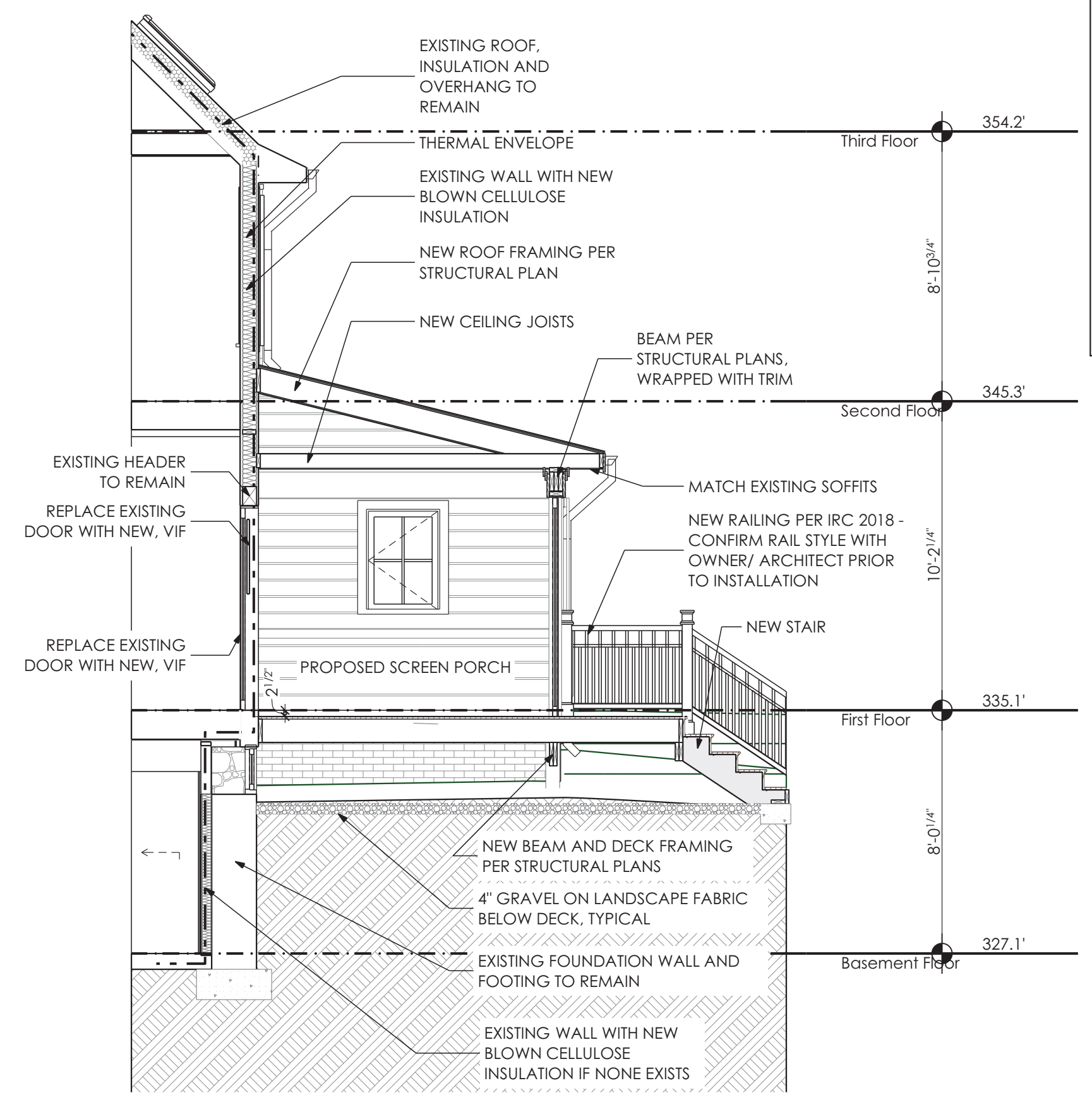


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 LICENSE NO.: 3727-R
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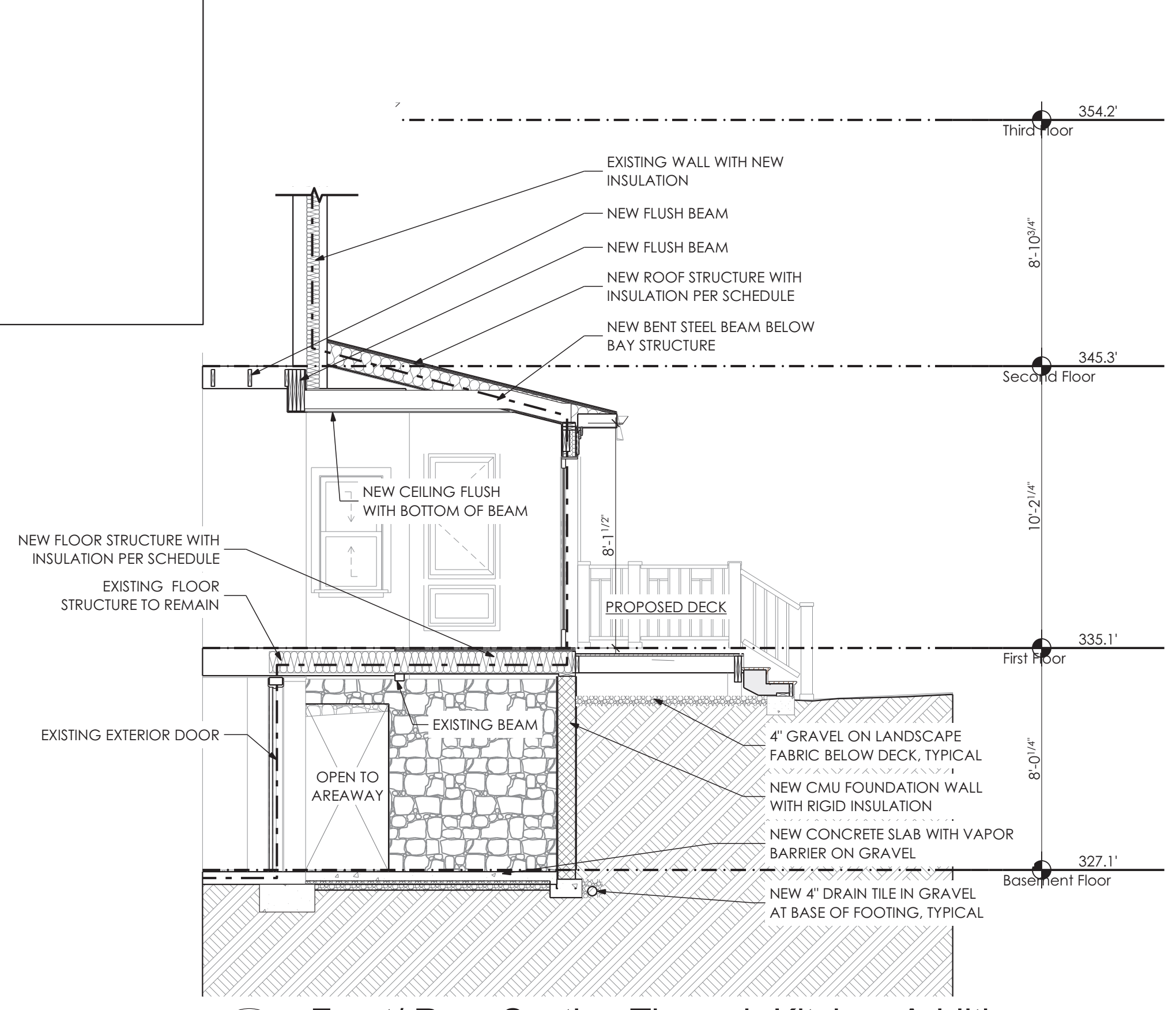
Sharp Residence
 3944 Baltimore St
 Kensington, MD 20895
 Left Elevation

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A007



1 Left/Right Section Through Screen Porch
 SCALE: 1/4" = 1'-0"



2 Front/ Rear Section Through Kitchen Addition
 SCALE: 1/4" = 1'-0"

INSULATION GENERAL NOTES

- - - - - THERMAL ENVELOPE
- [Symbol] - THERMAL INSULATION (FLASH AND BATT)
- [Symbol] - THERMAL INSULATION (SPRAY FOAM)
- [Symbol] - THERMAL INSULATION (RIGID)
- [Symbol] - THERMAL OR ACOUSTICAL INSULATION (BATT)

DESIGNED TO MEET OR EXCEED THE 2018 IECC REQUIREMENTS

INSULATION MINIMUM R-VALUES:

ROOF: **R-49**
 ROOF WITH ATTIC SPACE: **R-38 UNCOMPRESSED** (PER IECC R402.2.1) EXTEND FULL HEIGHT OVER TOP PLATE
 ROOF WITHOUT ATTIC SPACE: **R-30 UNCOMPRESSED** (PER IECC R402.2.2) EXTEND FULL HEIGHT OVER TOP PLATE
 EXTERIOR FRAMED WALLS: **R-20**
 -EXISTING WALLS: FILL CAVITY WITH BLOWN CELLULOSE
 -NEW WALLS: 2" CLOSED CELL FOAM, 3.5" MINERAL WOOL BATT INSULATION
 BASEMENT FURRED WALLS: **R-13**
 FLOORS OVER UNCONDITIONED SPACE: **R-30**
 INTERIOR SLABS (RIGID FOAM BOARD): **R-10, 2FT**
 CRAWLSPACE WALL: **R-10**

INSULATION U-VALUES:

.35 - WINDOWS/DOORS (DOUBLE PANE / ARGON / LOW-E)
 .55 - SKYLIGHTS (DOUBLE PANE / ARGON / LOW-E)
 .4 - SOLAR HEAT GAIN COEFFICIENT

AIR SEALING:

CONTINUOUS SHEATHING AND LOW-EXPANSION SPRAY FOAM AT PERIMETERS OF ALL EXTERIOR DOORS, WINDOWS AND SKYLIGHTS

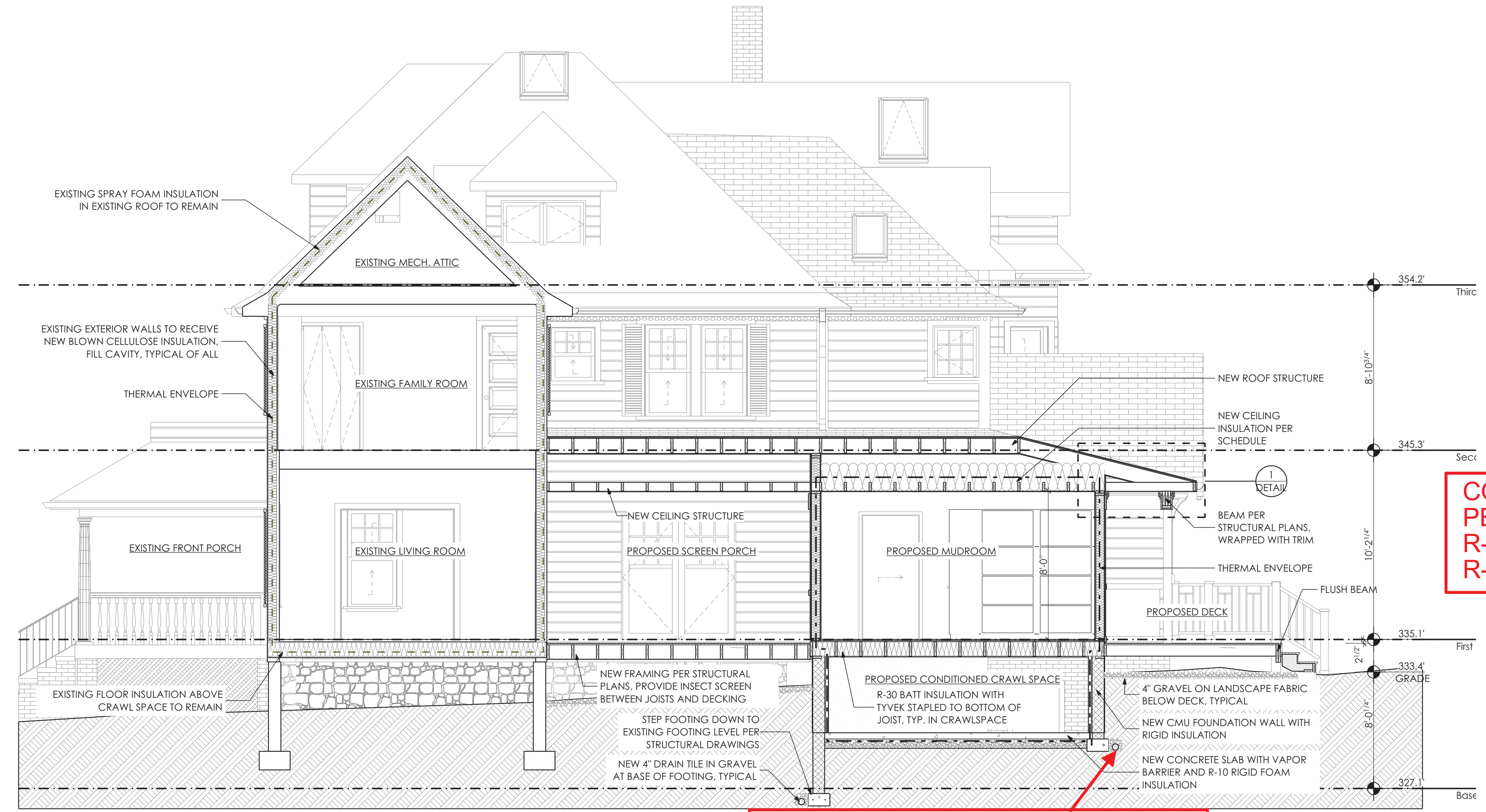
ACCESS DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE SHALL BE WEATHERSTRIPPED AND INSULATED TO EQUIVALENT VALUE OF ADJACENT WALL OR CEILING

DUCT SHAFTS, UTILITY PENETRATIONS AND FLUE SHAFTS OPENING TO EXTERIOR OR UNCONDITIONED SPACE SHALL BE SEALED

RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE AIR TIGHT, IC RATED AND SEALED TO THE DRYWALL

EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL BE INSULATED AND THE AIR BARRIER INSTALLED SEPARATING THEM FROM THE SHOWERS AND TUBS

THE AIR BARRIER SHALL BE INSTALLED BEHIND ELECTRICAL OR COMMUNICATION BOXES OR AIR SEALED BOXES SHALL BE INSTALLED



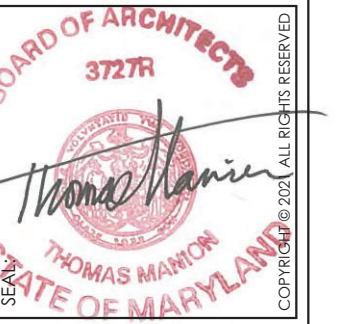
3 Front/ Rear Section Through Addition
 SCALE: 1/4" = 1'-0"

CONTINUOUS LOAD PATH PER IRC 2018 SECTIONS R-301.1; R-401.2; R-501.2; R-601.2; R-801.2

FOUNDATION AND SURFACE DRAINAGE CONTROLS PER IRC 2018 SECTIONS R-401.3; R-405 AND M.C.EX. ORD 26-05



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 PROJECT PHASE: Permit/Bid Set
 DRAWN BY: VGL, LMW
 CHECKED BY: TM



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 LICENSE NO.: 3727R
 EXPIRATION DATE: 05/09/2023

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A008

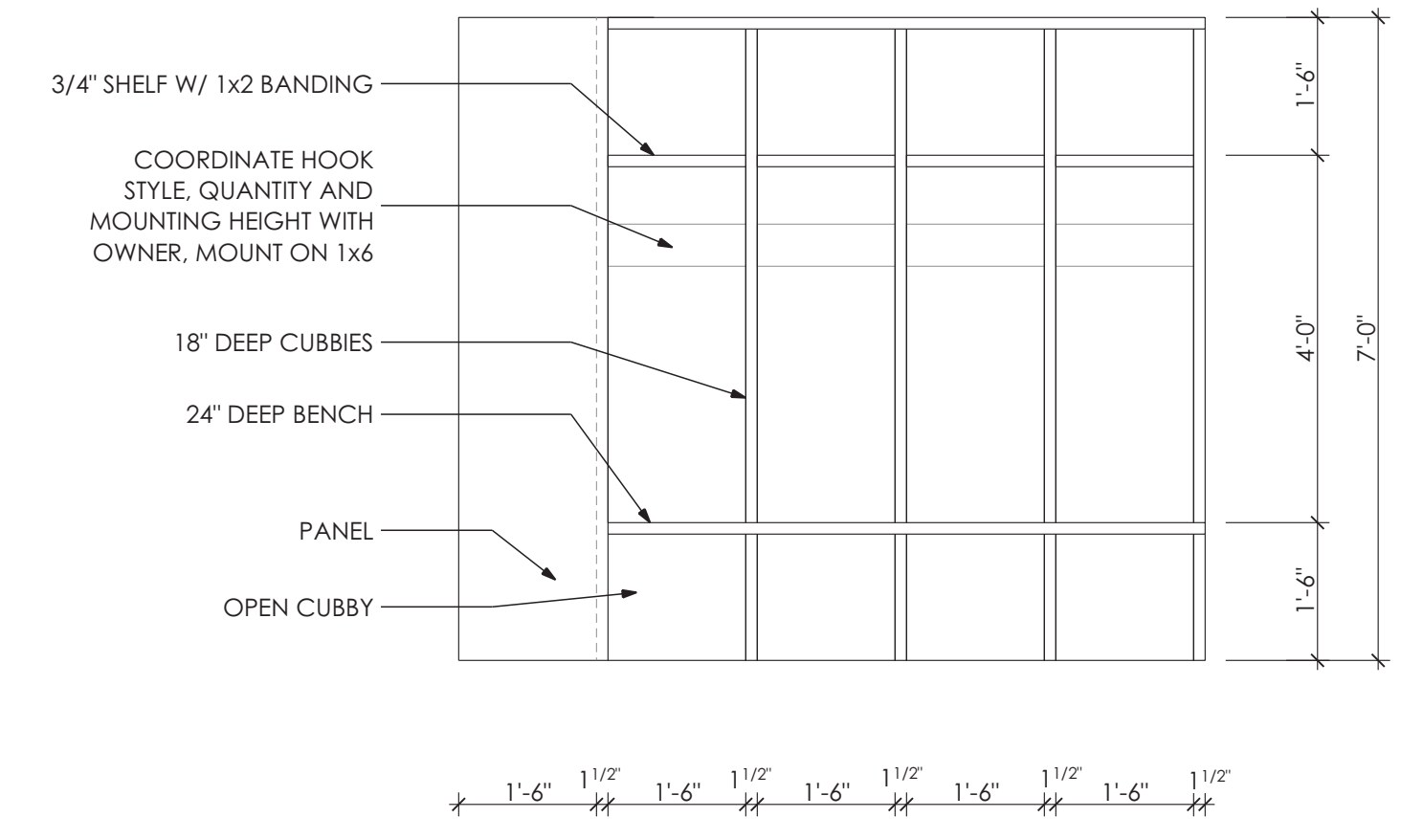
C:\Lisa Quandt\Work\Sharp CDs\Sharp Permit Set\Sharp_21_04-30_CD.pln

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022



3
A009 Mudroom Cubbies
 SCALE: 1/2" = 1'-0"

INSULATION GENERAL NOTES

- THERMAL ENVELOPE
- [Pattern] - THERMAL INSULATION (FLASH AND BATT)
- [Pattern] - THERMAL INSULATION (SPRAY FOAM)
- [Pattern] - THERMAL INSULATION (RIGID)
- [Pattern] - THERMAL OR ACOUSTICAL INSULATION (BATT)

DESIGNED TO MEET OR EXCEED THE 2018 IECC REQUIREMENTS

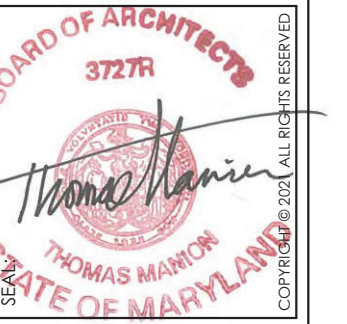
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INSULATION U-VALUES:
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AIR SEALING:
 CONTINUOUS SHEATHING AND LOW-EXPANSION SPRAY FOAM AT PERIMETERS OF ALL EXTERIOR DOORS, WINDOWS AND SKYLIGHTS
 ACCESS DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE SHALL BE WEATHERSTRIPPED AND INSULATED TO EQUIVALENT VALUE OF ADJACENT WALL OR CEILING
 DUCT SHAFTS, UTILITY PENETRATIONS AND FLUE SHAFTS OPENING TO EXTERIOR OR UNCONDITIONED SPACE SHALL BE SEALED
 RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE AIR TIGHT, IC RATED AND SEALED TO THE DRYWALL
 EXTERIOR WALLS ADJACENT TO SHOWERS AND TUBS SHALL BE INSULATED AND THE AIR BARRIER INSTALLED SEPARATING THEM FROM THE SHOWERS AND TUBS
 THE AIR BARRIER SHALL BE INSTALLED BEHIND ELECTRICAL OR COMMUNICATION BOXES OR AIR SEALED BOXES SHALL BE INSTALLED

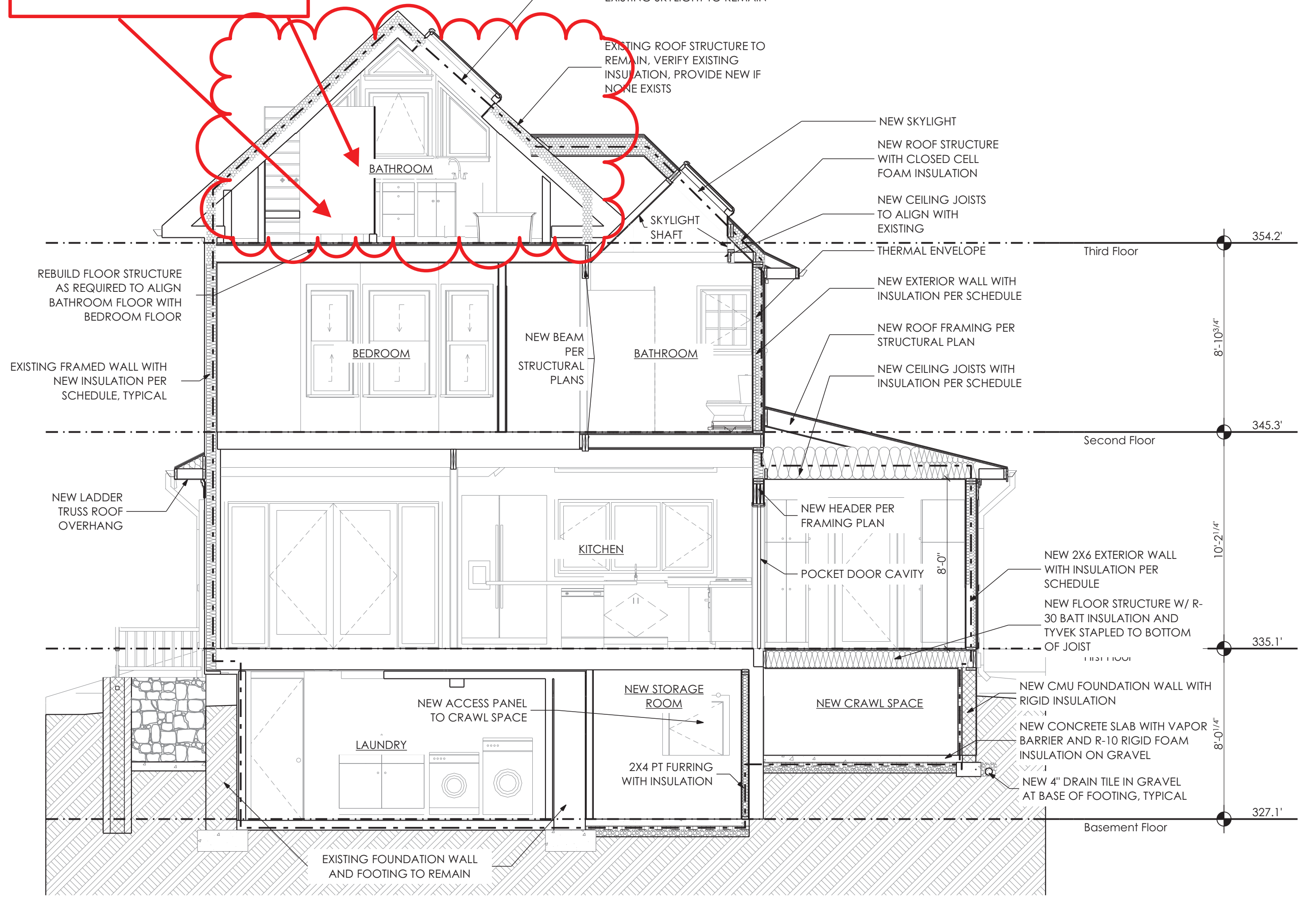


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 CHECKED BY: TM



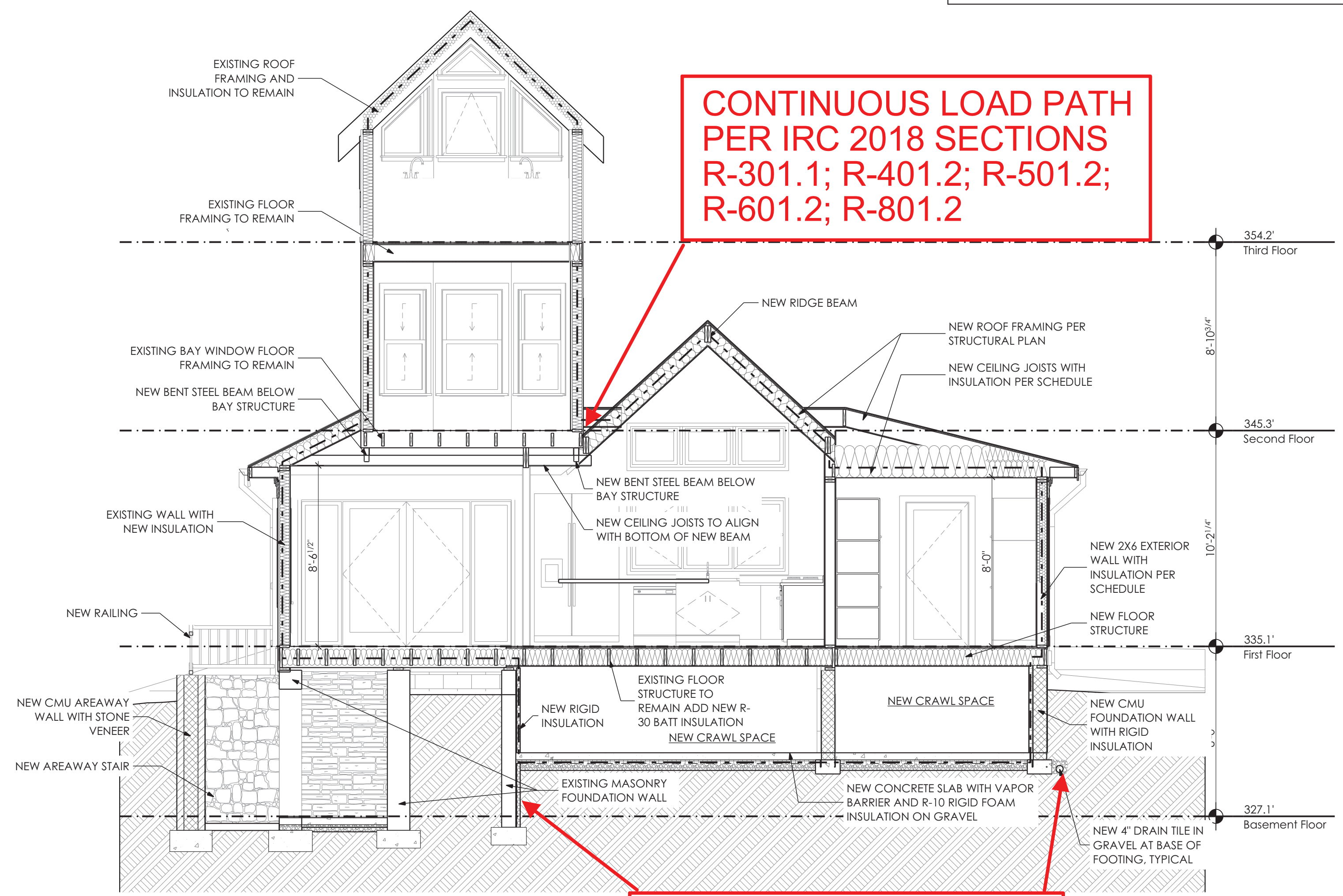
PROFESSIONAL CERTIFICATION
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 LICENSE NO.: 3727-R
 EXPIRATION DATE: 08/08/2022

HABITABLE ATTIC AREA SHALL COMPLY WITH IRC 2018 SECTION R-305.1 EXCEPTION 1.



1
A009 Left/Right Section Through Kitchen & Mudroom
 SCALE: 1/4" = 1'-0"

CONTINUOUS LOAD PATH PER IRC 2018 SECTIONS R-301.1; R-401.2; R-501.2; R-601.2; R-801.2



FOUNDATION AND SURFACE DRAINAGE CONTROLS PER IRC 2018 SECTIONS R-401.3; R-405 AND M.C.EX. ORD 26-05

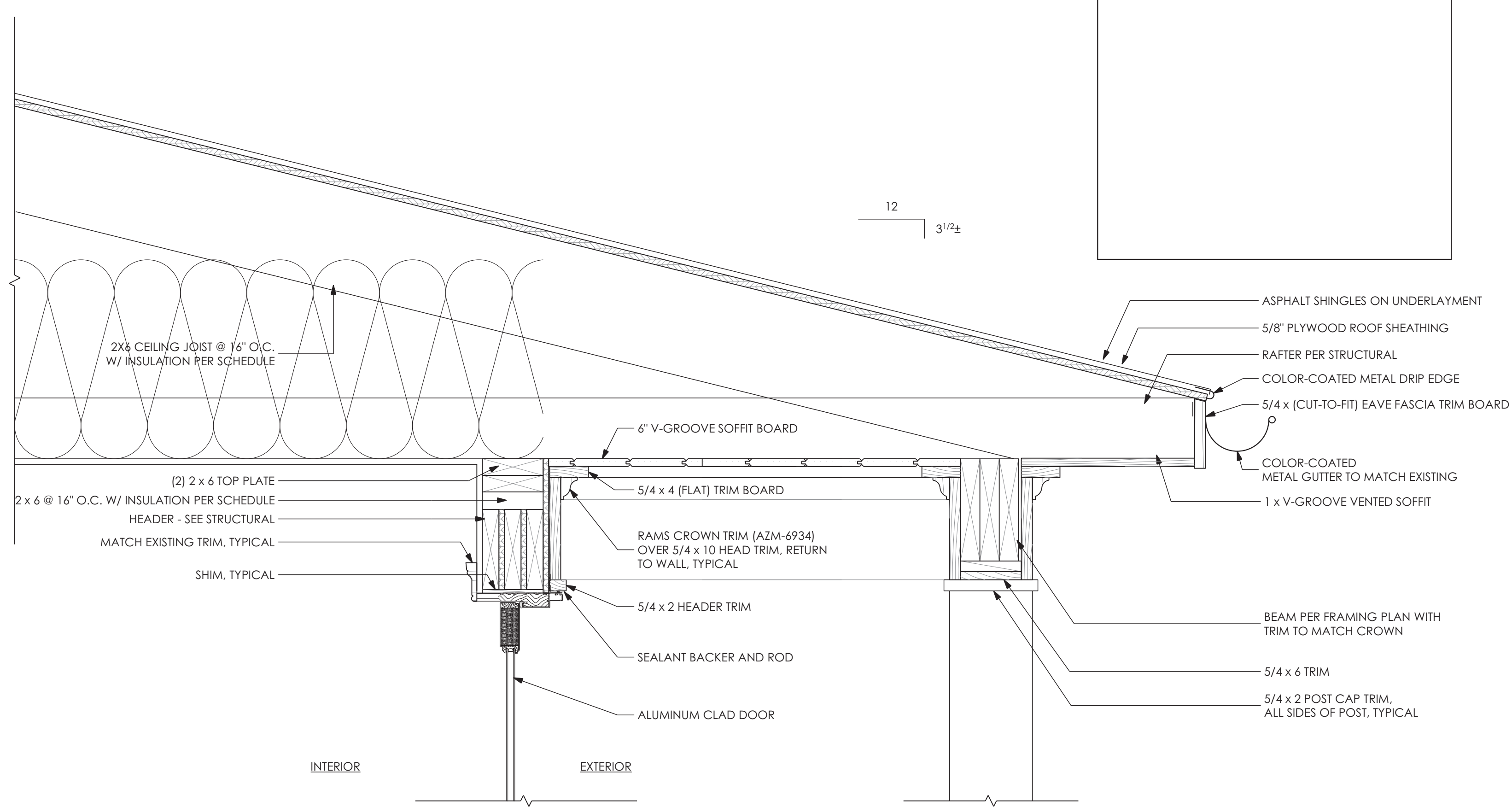
2
A009 Left/Right Section Through Rear Addition
 SCALE: 1/4" = 1'-0"

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Section

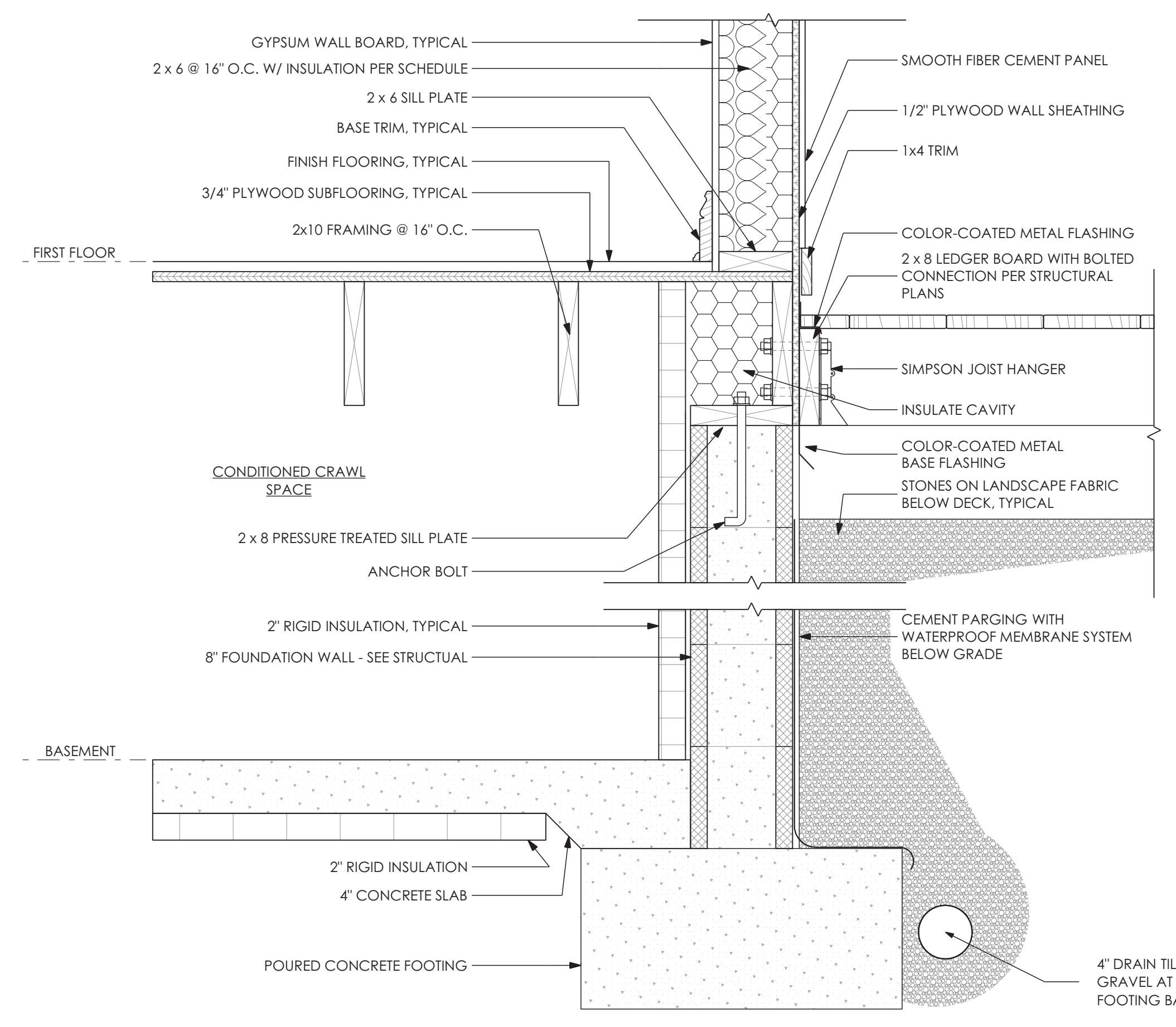
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 Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and shall notify the office of any variations from the dimensions and conditions shown.

A009



NOTE: COORDINATE ALL EXTERIOR TRIM AND RAILING DETAILS ON SITE WITH ARCHITECT/ OWNER. PROVIDE FULL SCALE MOCK UPS PRIOR TO INSTALLATION.

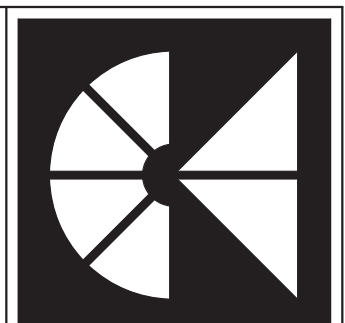
2
 A010 Roof Overhang Detail
 SCALE: 1 1/2" = 1'-0"



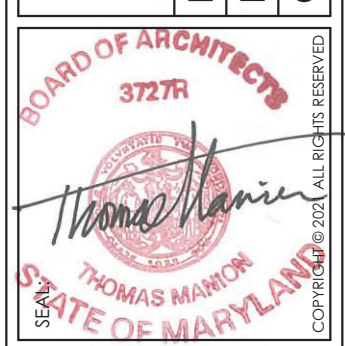
1
 A010 Typical Deck At Crawspace Detail
 SCALE: 1 1/2" = 1'-0"

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022



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 T:301.229.7000 F:301.229.7171 www.manionassociates.com
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 EXPIRATION DATE: 05/09/2022

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 Construction Details

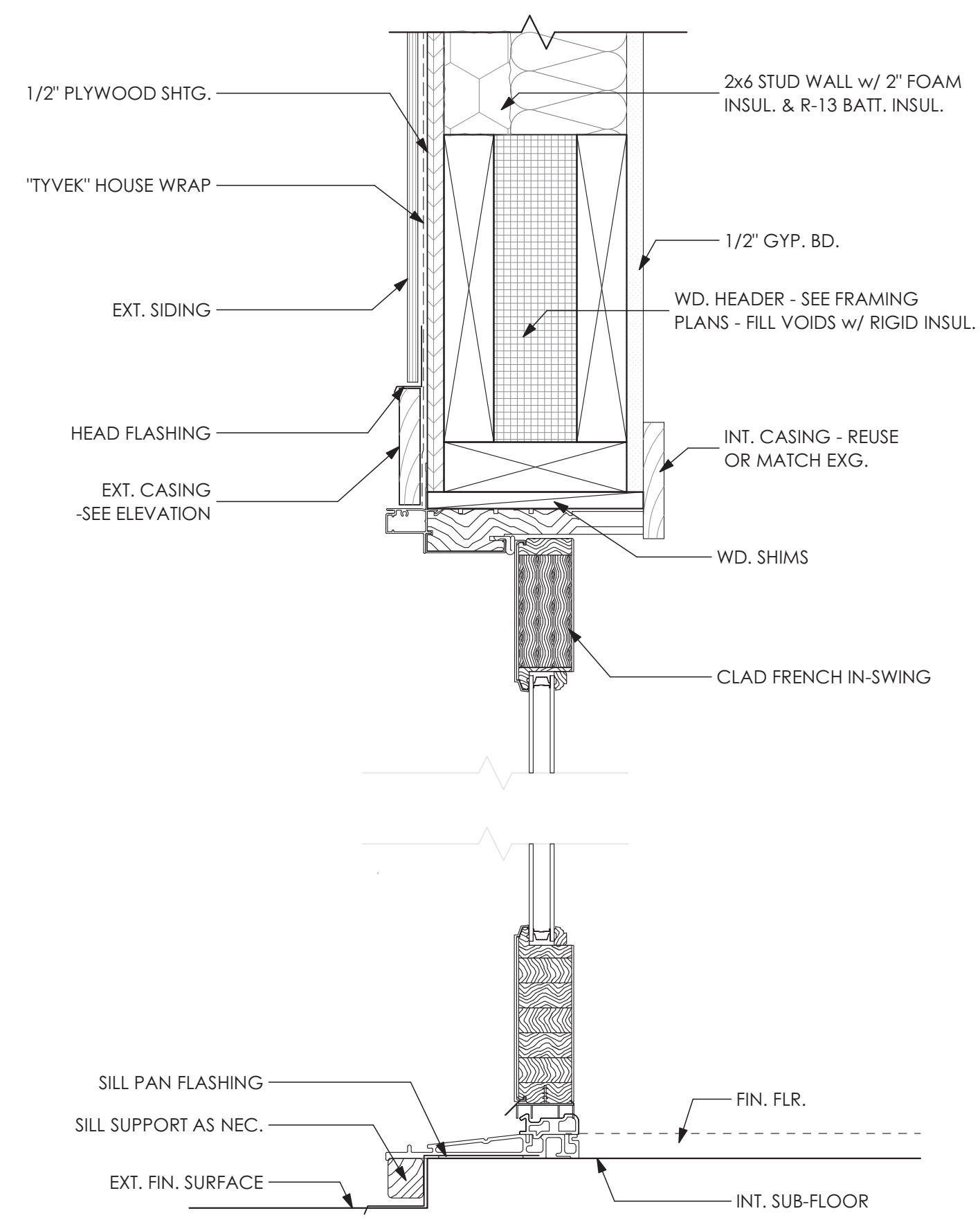
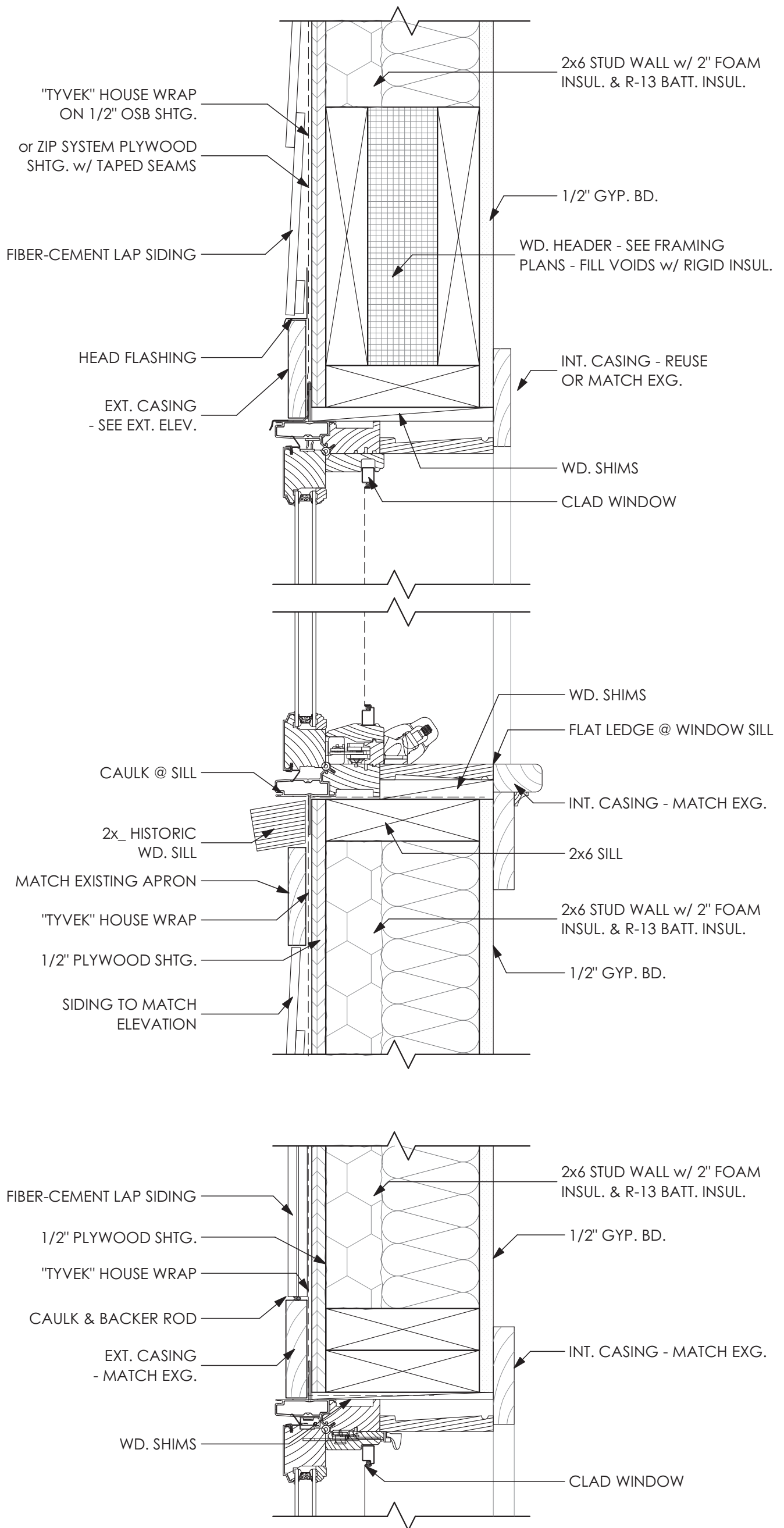
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A010

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REVIEWED
 By Dan.Bruechert at 2:21 pm, Mar 25, 2022

Plumbing Equipment Schedule			
Floor	Element ID	Fixture	Notes
First Floor	P1	Toilet	
	P2	Pedestal Sink	
	P3	Kitchen Sink	
	P4	Bar Sink	
Second Floor	P5	Toilet	
	P6	Tub	
	P7	Sink	
	P8	Toilet	
	P9	Sink	
	P10	Shower	
	P11	Shower	
	P12	Sink	
	P13	Toilet	
Third Floor	OBJECT-30		
	P16	Freestanding Tub	
	P17	Toilet	
	P18	Sink	



DOOR SCHEDULE					
LEVEL	DOOR NUMBER	DIMENSION		Model	REMARKS
		WIDTH	HEIGHT		
Basement Floor	01	2'-6"	6'-8"		
	02	3'-0"	6'-8"		
First Floor	11	6'-0"	6'-10"	2-60610 WITH CUSTOM SIDELIGHTS	EXTERIOR INSWING DOOR WITH 24" SIDELIGHTS EACH SIDE
	12	3'-0 5/16"	6'-10"	1-31610	EXTERIOR INSWING DOOR
	13	5'-0"	7'-2 1/2"		DOUBLE SCREEN PORCH DOOR
	14	6'-0"	6'-8"	CUSTOM - VIF	EXTERIOR INSWING DOOR - VERIFY SIZE OF EXISTING OPENING IN FIELD
	15	5'-1"	6'-8"	CUSTOM - VIF	EXTERIOR INSWING DOOR - VERIFY SIZE OF EXISTING OPENING IN FIELD
	16	3'-0"	6'-8"		POCKET DOOR
Second Floor	21	2'-8"	6'-8"		POCKET DOOR
	22	2'-4"	6'-8"		POCKET DOOR
	23	2'-4"	6'-8"		POCKET DOOR
Third Floor	31	4'-0 1/2"	4'-5 1/2"		VERIFY SIZE IN FIELD

- DOOR GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL ROUGH OPENINGS WITH DOOR SCHEDULE, PLANS AND ELEVATIONS PRIOR TO ORDERING DOORS. IF DISCREPANCIES ARE FOUND, CONTACT THE ARCHITECT IMMEDIATELY.
 - CHECK DRAWINGS FOR SWING DIRECTIONS AND LOCATIONS.
 - PROVIDE ALL NECESSARY HARDWARE, WEATHER STRIPPING, TRIM PIECES, ETC.
 - EXTERIOR FRENCH DOORS ARE WEATHERSHIELD, COLOR TO MATCH EXISTING OR BE SELECTED BY OWNER, SIGNATURE SERIES, ALUMINUM CLAD WOOD HINGED PATIO DOORS- INSWING. SEE ELEVATIONS FOR GRILLE PATTERNS, 7/8" SDL PUTTY GRILLES
 - HARDWARE: SELECTED BY OWNER PRIOR TO ORDERING
 - INTERIOR DOORS TO BE LEMIEUX, REEB OR SIMPSON TO MATCH EXISTING DOORS UNLESS SHOWN OTHERWISE.
 - APPLY SEALANT AROUND EXTERIOR PERIMETER BEHIND DOOR TRIM/ FLANGE AND SET INTO OPENING.
 - APPLY FOAM BACKER ROD & SEALANT TO EXTERIOR PERIMETER OF TRIM AT SIDING JOINT.
 - BEDROOM, BATHROOM AND ENTRY DOORS TO BE SOLID.
 - GLASS TO BE 20-9 SHIELD 5 TEMPERED GLASS.
 - ALL DOORS IN WALLS OTHER THAN 2x4 WALLS TO HAVE JAMB EXTENDERS AS NECESSARY.
 - FIELD VERIFY EXISTING DOOR OPENING SIZES AND COORDINATE AS REQUIRED.
 - EXTERIOR DOORS NOTED TO HAVE RETRACTABLE SCREENS SHOULD BE SITE MEASURED AND THE SCREENS CUSTOM SIZED FOR EACH DOOR LISTED. MANUFACTURER TO BE LIBERTY SCREENS, PHANTOM SCREENS OR ARCHITECT/OWNER APPROVED ALTERNATE. COLOR TO MATCH DOORS.

Window Sched.								
Home Story Name	ID	TYPE	WINDOW SIZE		MODEL	U-VALUE	TEMPER	REMARKS
			WIDTH	HEIGHT				
First Floor	A	Casement	2'-6"	3'-6"	2636	.3	<input type="checkbox"/>	
	B	Casement	5'-3 1/16"	4'-0"	CS2-2840	.3	<input type="checkbox"/>	
	C	Casement	2'-6"	4'-6"	2646	.3	<input checked="" type="checkbox"/>	TIGHT MULL ABOVE WINDOW D
	D	Fixed	2'-6"	1'-6"	2616	.28	<input checked="" type="checkbox"/>	TIGHT MULL BELOW WINDOW C
	E	Casement	7'-4 5/8"	3'-6"	CS3-2636	.3	<input type="checkbox"/>	
	F	Fixed	7'-4 5/8"	2'-0"	CS2-2620	.28	<input type="checkbox"/>	
Second Floor	H	Casement	2'-6"	3'-0"	2630	.3	<input checked="" type="checkbox"/>	INSTALL TIGHT TO CORNER
	J	Casement	2'-6"	3'-0"	2630	.3	<input checked="" type="checkbox"/>	INSTALL TIGHT TO CORNER

- WINDOW GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL ROUGH OPENINGS WITH WINDOW SCHEDULE, PLANS AND ELEVATIONS PRIOR TO ORDERING WINDOWS. IF DISCREPANCIES ARE FOUND, CONTACT THE ARCHITECT IMMEDIATELY.
 - WINDOWS SPECIFIED ARE BY WEATHERSHIELD, SIGNATURE SERIES.
 - WINDOWS ARE ALUMINUM CLAD WOOD, FRAME & SASH COLOR TO MATCH EXISTING OR AS SELECTED BY OWNER, INSULATED LOW E WITH ARGON GLASS, WITH 7/8" SDL PUTTY GRILLES. CASING TO BE FIELD APPLIED UNLESS NOTED OTHERWISE. SEE ELEVATIONS FOR GRILLE PATTERNS AND OPENING DIRECTIONS.
 - PROVIDE ALL NECESSARY HARDWARE - HARDWARE FINISH SELECTED BY OWNER. WEATHER STRIPPING, TRIM PIECES, ETC./
 - PROVIDE INSECT SCREENS FOR ALL OPERABLE WINDOWS (UNLESS NOTED OTHERWISE) COLOR TO BE SELECTED BY OWNER.
 - REFER TO PLANS AND ELEVATIONS FOR WINDOW LOCATIONS, VERIFY SIZES AND QUANTITIES PRIOR TO ORDERING.
 - APPLY SEALANT AROUND EXTERIOR PERIMETER BEHIND WINDOW TRIM AND SET INTO OPENING.
 - APPLY FOAM BACKER ROD AND SEALANT TO EXTERIOR PERIMETER OF TRIM AT SIDING JOINT.
 - APPLY LOW EXPANSION SPRAY FOAM AROUND ALL WINDOW JAMBS.
 - WINDOWS LISTED AS TEMPERED ARE FOR REFERENCE ONLY. COORDINATE WITH WINDOW SUPPLIER AND APPLICABLE CODES TO VERIFY REQUIRED LOCATIONS/ WINDOW TO BE TEMPERED PRIOR TO BIDDING/ PURCHASING.
 - ALL WINDOWS TO HAVE JAMB EXTENDERS AS NECESSARY FOR 4'-9 1/4" & 6'-9-1/4" JAMBS. COORDINATE REQUIRED DEPTHS WITH PLAN.
 - FIELD VERIFY WINDOW HEIGHTS AND CLEARANCES PRIOR TO PURCHASING.
 - WINDOWS TO HAVE ADHESIVE FLASHING & SILL PANS- INSTALL PER MFR'S RECOMMENDATIONS

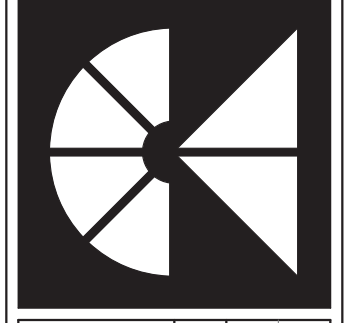
SKYLIGHT SCHEDULE					
ID	TYPE	SIZE		MODEL	REMARKS
		WIDTH	HEIGHT		
SK01	FIXED	1'-9"	3'-1 7/8"	C04	
SK02	VENTING	2'-6 1/16"	4'-6 7/16"	M08	VERIFY SIZE IN FIELD TO MATCH AS CLOSELY AS AVAILABLE STANDARD SIZE T...

- SKYLIGHT GENERAL NOTES:**
- CONTRACTOR TO COORDINATE ALL ROUGH OPENINGS WITH WINDOW SCHEDULE PRIOR TO ORDERING WINDOWS. IF DISCREPANCIES ARE FOUND, CONTACT THE ARCHITECT IMMEDIATELY.
 - SKYLIGHTS SPECIFIED ARE BY VELUX.
 - DECK MOUNTED INSTALLATION.
 - TYPE EDL FLASHING.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

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1 Window Detail
 A011 SCALE: 3" = 1'-0"

2 French Door Detail
 A011 SCALE: 3" = 1'-0"



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 LICENSE NO.: 3727-R
 EXPIRATION DATE: 06/06/2022

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A011

Filename: MANION - SHARP RESIDENCE 02-2021.rvt

SUMMARY ELECTRICAL LOAD CALCULATION

Optional	Line	Neutral
Lighting/Receptacle	18,000	8,250
Range/Oven	0	0
Dryer	4,500	3,500
Heat/Cool	14,400	2,880
Fixed Appliances	0	0
Other Appliances	26,200	7,800
Max Motor Neutral	0	0
Optional Total	39,880	22,430
Maximum Amperage	166	93

Service Voltage = 240, Service Phase = 1

DETAILED CALCULATIONS

Lighting and Small Appliance/Laundry Circuits

Floor Area	SmAppNo	LaundNo	Line	Neutral
4500	2	1	18,000	8,250

Ranges & Ovens

Range No.	No?	Nameplate	Line	Neutral
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0

Dryers

Dryer No.	No?	Nameplate	Line	Neutral
1	1	4500		
2	0			
3	0			

Heating and Cooling: Actual Number = 1

Name	M?	Ph	No	Amps	Volts	VA	HP	Line	Neutral
1	M	1	2	23.0	240			5,520	0
1	M	1	2	1.0	240			240	0
1	M	1	2	12.0	120			1,440	1,440

Fixed Appliances: Actual Number = 0

Name	M?	Ph	No	Amps	Volts	VA	HP	Line	Neutral
1	M	1	10	1.0	120			1,200	1,200
2	M	1	10	1.0	120			1,200	1,200
3	M	1	5	1.0	120			600	600

Other Appliances: Actual Number = 8

Name	M?	Ph	No	Amps	Volts	VA	HP	Line	Neutral
MW			1	10	120			1,200	1,200
frig			1	10	120			2,400	2,400
dw			1	10	120			1,200	1,200
gd			1	2	5	120		1,200	1,200
tesla			1	1	35	240		8,400	0
sump pump			1	1	5	120		600	600

25% of Max Motor:

Line	Std Only	Neutral for Both	Maximum	Phase	Amps	Volts
1	1	23	240	1	23	240

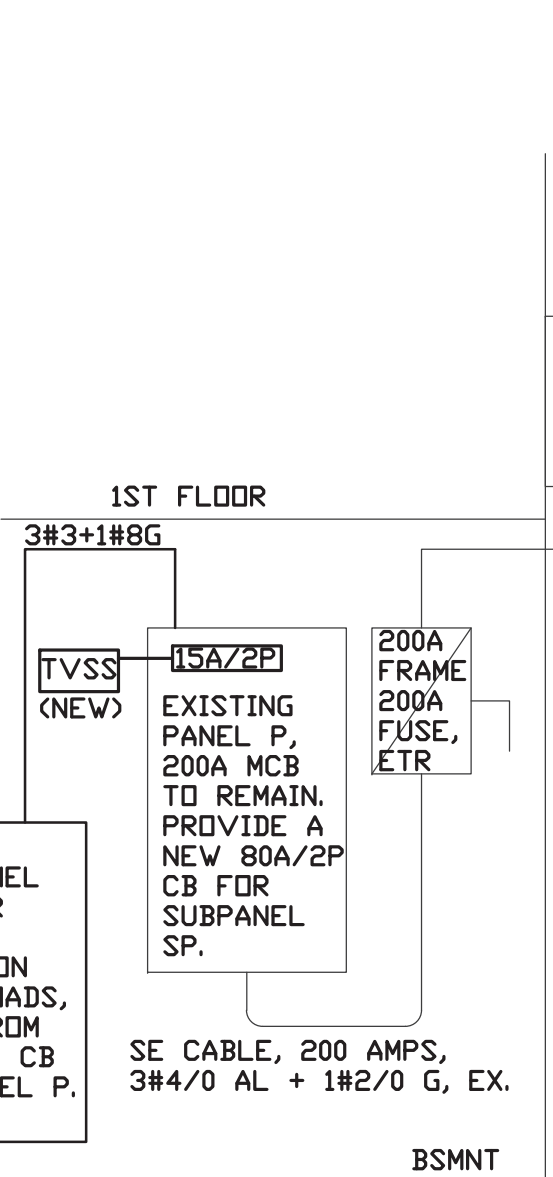
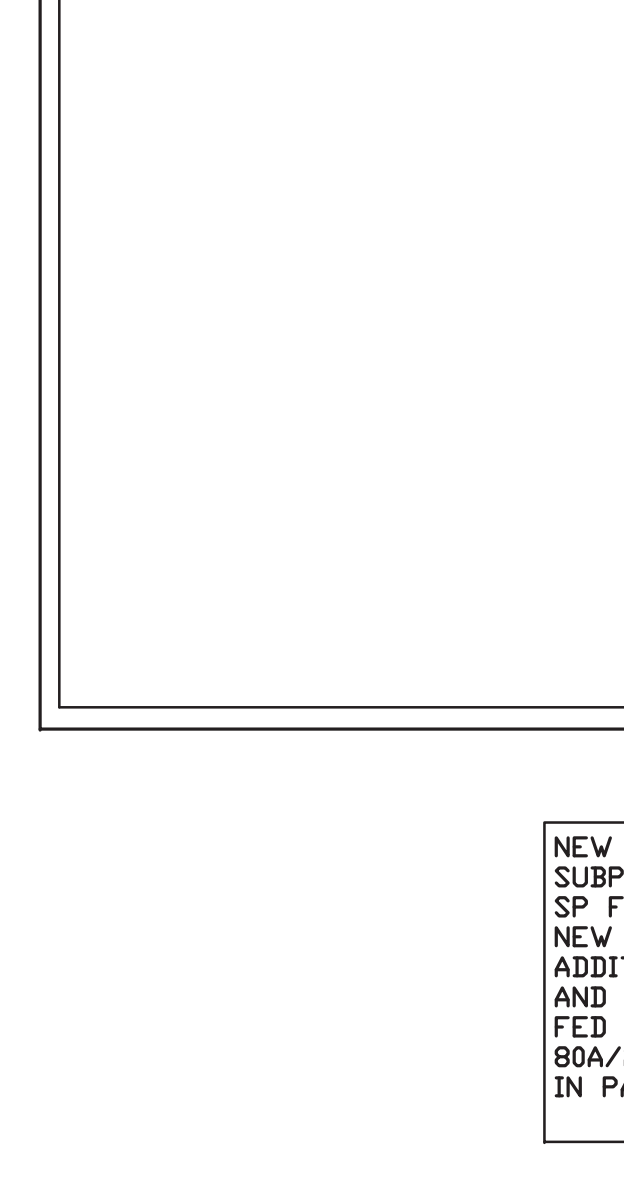
Max Motor Summary

Standard Only	1,380	0
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SUMMARY

Optional	Line	Neutral
Total Total	39,880	22,430
Maximum Amperage	166	93
Service Voltage	240	Service Phase = 1

- ELECTRICAL GENERAL NOTES:
- 'HVAC CIRCUIT BREAKERS SHALL BE 'HACR' TYPE WHERE REQUIRED BY EQUIPMENT NAMEPLATE PER N.E.C.
 - THE NEW ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT AIC RATING OF THE MAIN BUILDING'S DISTRIBUTION EQUIPMENT, FURNISH AND INSTALL THE NEW SYSTEM TO MATCH.
 - ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANELS AND ELECTRICAL EQUIPMENT TO +/-10% BETWEEN PHASES: A/B B/C, A/C REGARDLESS OF CIRCUITING INDICATED.
 - PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER N.E.C. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN ELECTRICAL ROOM/AREA PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.
 - ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS FOR A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.
 - THE CONTRACTOR FOR THIS WORK IS REQUIRED TO READ THE SPECIFICATIONS AND REVIEW DRAWINGS OF ALL DIVISIONS OF WORK AND IS RESPONSIBLE FOR THE COORDINATION OF THIS WORK AND THE WORK OF ALL SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.
 - SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION AND QUANTITY OF LIGHTING FIXTURES.
 - ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR A FULLY COMPLETE AND OPERABLE SYSTEM.
 - PROVIDE NECESSARY GFI AND AFCI TYPE RECEPTACLES AND CIRCUIT BREAKERS AS NECESSARY BY NEC AND LOCAL CODE.
 - ELECTRICAL CONTRACTOR SHALL SIZE ALL GUTTERS, WIREWAYS, AND RACEWAYS AS PER NEC.
 - PROVIDE NEMA 3R ENCLOSURE FOR ALL OUTDOOR PANELS AND DISCONNECT SWITCHES.
 - PROVIDE WEATHERPROOF (WP) ENCLOSURES FOR ALL OUTDOOR RECEPTACLES.
 - ELECTRICAL CONTRACTOR SHALL CLEARLY MARK ALL PANELS WITH CIRCUIT NUMBERS AND FILL PANEL DATA SHEETS TO IDENTIFY ALL CIRCUITS THROUGHOUT, INCLUDING EXISTING CIRCUIT BREAKERS.
 - PROVIDE COMBINATION TYPE AFCI CIRCUIT BREAKERS ON ALL BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS.
 - TAMPER RESISTANT RECEPTACLES ARE REQUIRED IN DWELLING UNITS AT ALL LOCATIONS EXCEPT WHERE THEY ARE MOUNTED HIGHER THAN 5-1/2 FEET ABOVE THE FLOOR OR IN A SPACE DEDICATED TO A SPECIFIC APPLIANCE.



EXISTING PANEL P SCHEDULE (AS IS CONDITION)

PANEL P (EXISTING PANEL TO REMAIN)
 INDOOR NEMA 1, SURFACE MOUNTED, LOCATED IN THE BASEMENT
 42 SPACES, 200A MCB, 120/240V, 1PH, 3W, 225A BUS,
 FED FROM THE OUTDOOR EXISTING PEPCO METER SOCKET

No.	Desc.	No.	Desc.
1	15A LOAD (REM)	2	15A LOAD (REM)
3	15A LOAD (REM)	4	20A KITCHEN CTK#1 (REUSE)
5	15A LOAD (REM)	6	20A FRIG (REUSE)
7	15A LOAD (REM)	8	20A COMPACTOR (REUSE)
9	15A LOAD (REM)	10	20A KITCHEN CTK#2 (REUSE)
11	15A GFU-1	12	15A 1ST FL. LTS. (REM)
13	15A LOAD (REM)	14	15A KITCHEN LTS. (REM)
15	15A LOAD (REM)	16	15A DISPOSAL (REUSE)
17	20A LOAD (REM)	18	15A LOAD (REM)
19	15A/15A LOAD/LOAD (REM)	20	15A LOAD (REM)
21	15A LTS. (REM)	22	20A WASH MACHINE (ETR)
23	20A*G' GD (REUSE)	24	20A LOAD (REM)
25	20A LOAD (REM)	26	20A MICROWAVE (REUSE)
27	20A*G' LOAD (REM)	28	20A DISHWASHER (REUSE)
29	30A/2P SPARE (REM)	30	30A/2P 2ND FL. AC
31	30A/2P SPARE (REM)	32	30A/2P SPARE (REM)
33	50A/2P SPARE (REM)	34	20A/2P 1ST FL. AC
35	30A/2P SPARE (REM)	36	30A/2P DRYER (ETR)
37	50A/2P SPARE (REM)	38	30A/2P DRYER (ETR)
39	30A/2P SPARE (REM)	40	30A/2P DRYER (ETR)

EXISTING PANEL P SCHEDULE (MODIFIED CONDITION)

PANEL P (EXISTING PANEL TO REMAIN)
 INDOOR NEMA 1, SURFACE MOUNTED, LOCATED IN THE BASEMENT
 42 SPACES, 200A MCB, 120/240V, 1PH, 3W, 225A BUS,
 FED FROM THE OUTDOOR EXISTING PEPCO METER SOCKET

No.	Desc.	No.	Desc.
1	15A/2P TVSS SURGE PROT.	2	15A* LOAD
3	15A/2P TVSS SURGE PROT.	4	20A KITCHEN CTK#1 (REUSE)
5	15A* LOAD	6	20A FRIG (REUSE)
7	15A* LOAD	8	20A COMPACTOR (REUSE)
9	15A* LOAD	10	20A KITCHEN CTK#2 (REUSE)
11	15A* GFU-1	12	15A* 1ST FL. LTS.
13	15A* LOAD	14	15A* KITCHEN LTS.
15	15A* LOAD	16	15A* DISPOSAL (REUSE)
17	20A* LOAD	18	15A* LOAD
19	15A* LOAD (NEW)	20	15A* LOAD
21	15A* LTS	22	20A WASH MACHINE (ETR)
23	20A*G' GD (REUSE)	24	15A* LOAD
25	20A*G' LOAD	26	20A MICROWAVE (REUSE)
27	20A*G' LOAD	28	20A DISHWASHER (REUSE)
29	30A/2P SUBPANEL SP	30	30A/2P 2ND FL. AC
31	30A/2P SPARE (NEW)	32	30A/2P SPARE (NEW)
33	50A/2P SPARE (NEW)	34	20A/2P 1ST FL. AC
35	30A/2P SPARE (NEW)	36	30A/2P DRYER (ETR)
37	50A/2P SPARE (NEW)	38	30A/2P DRYER (ETR)
39	30A/2P SPARE (NEW)	40	30A/2P DRYER (ETR)

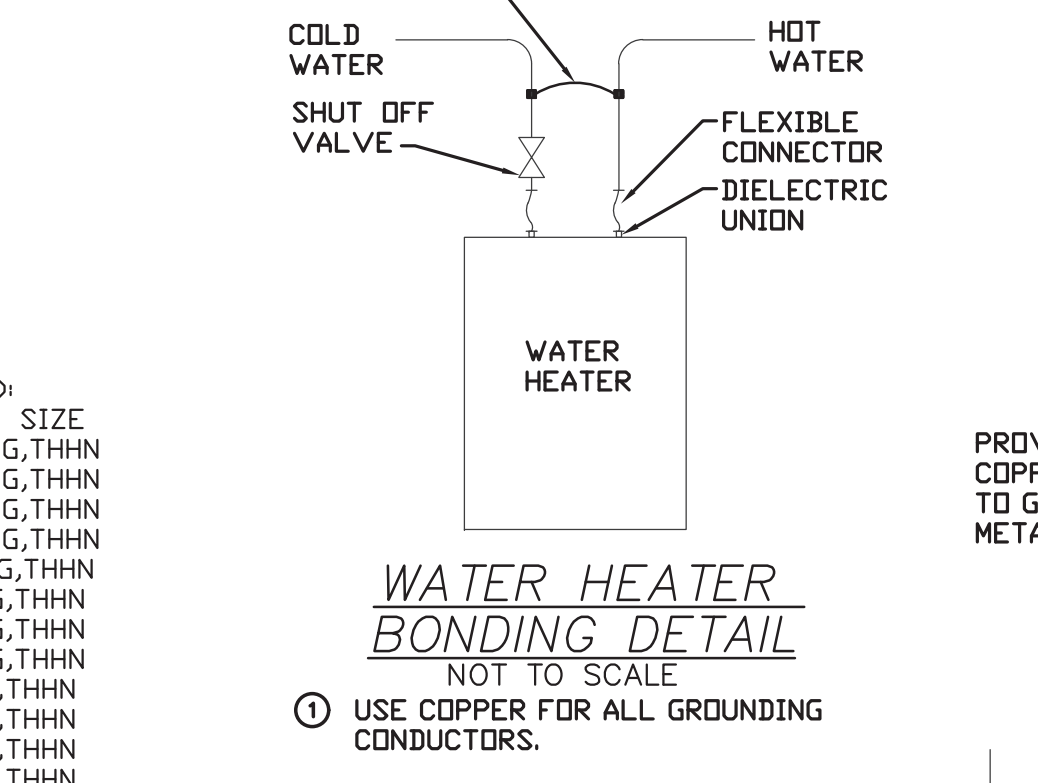
NEW PANEL SP SCHEDULE

PANEL SP (NEW)
 INDOOR NEMA 1, SURFACE MOUNTED, LOCATED IN THE BASEMENT
 16 SPACES, MAIN LUG ONLY, 120/240V, 1PH, 3W, 100A BUS,
 FED FROM 80A/2P CKT BKR IN THE PANEL P (CIRCUITS #29-31).

No.	Desc.	No.	Desc.
1	15A*NEW LTS.	2	20A*NEW OUTLETS
3	15A*NEW LTS	4	20A*NEW OUTLETS
5	15A*ADDITION FAN/LTS	6	20A 1ST FL. BATH GFI
7	15A LOAD (OLD BKR#1)	8	20A 2ND FL. BATH GFI
9	15A LOAD (OLD BKR#3)	10	20A 2ND FL. BATH GFI
11	SPACE	12	20A 3RD FL. BATH GFI
13	SPACE	14	20A 2ND FL. BATH FL. RADIANT HTG.
15	SPACE	16	SPACE

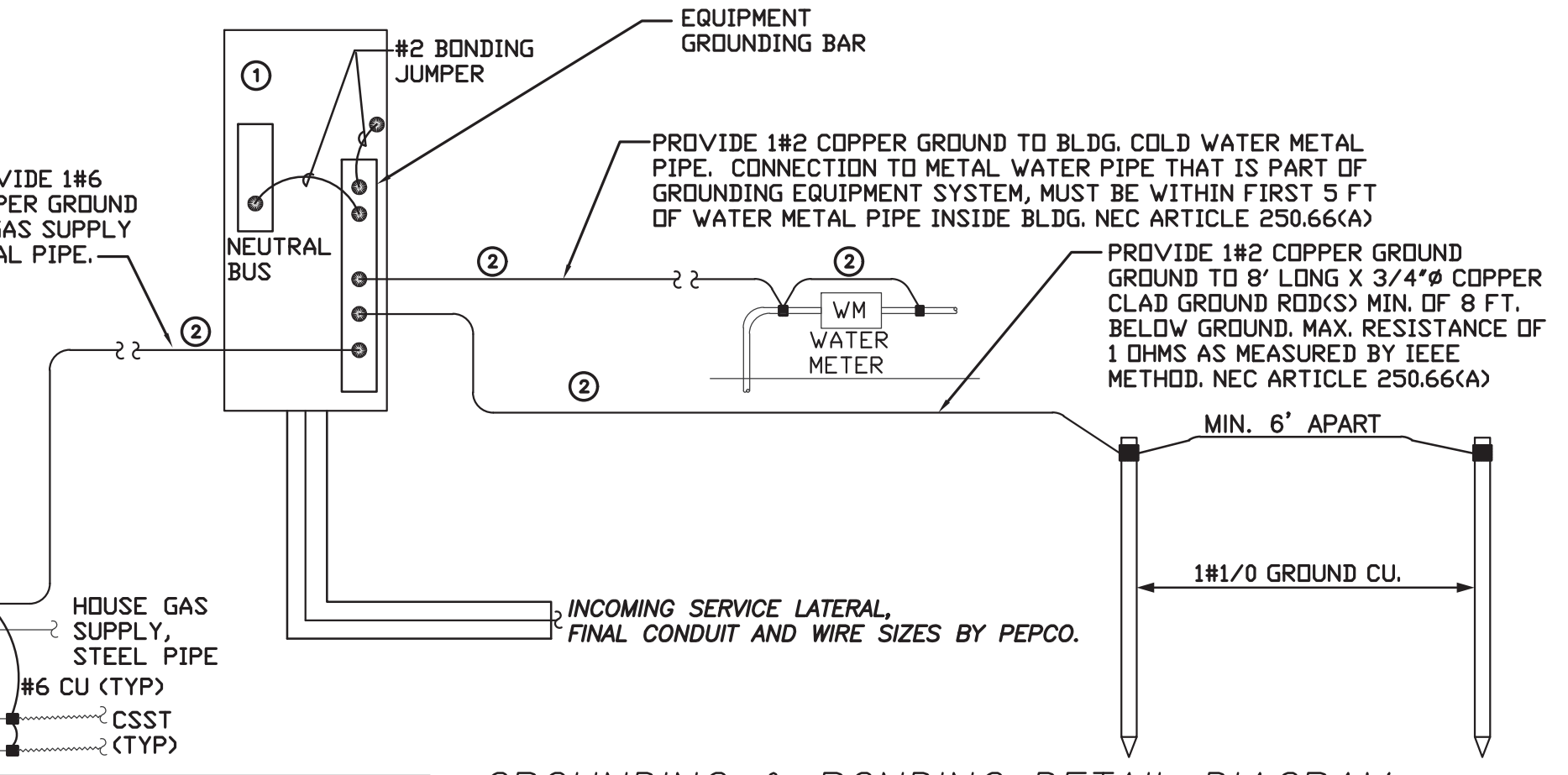
- LIGHTING GENERAL NOTE:
- SUBMIT SHOP DRAWINGS TO PROJECT ARCHITECT FOR APPROVAL BEFORE ORDERING ANY LIGHTING PRODUCTS.
 - ALL LIGHTING SHALL BE SUITABLE FOR 120V/1PH/60.
 - ALL LIGHTING PRODUCTS SHALL MEET OR EXCEED THE MINIMUM LIGHTING EFFICACY (LUMENS/WATTS) OF LOCAL ENERGY CODE.
 - MINIMUM 75% OF THE LAMPS SHALL EXCEED 75% HIGH EFFICACY (LUMENS/WATTS) AS PER DC ENERGY CODE.
- HIGH EFFICACY LAMPS:
 WATTAGE MIN. LUMENS/WATTS:
 LAMPS>40W, 60 LUMENS/WATTS
 LAMPS>15W,=40W, 50 LUMENS/WATTS
 LAMPS<15W, 40 LUMENS/WATTS

PROVIDE #6 COPPER BONDING JUMPER WITH GROUNDING CLAMPS BETWEEN THE COLD AND HOT WATER COPPER PIPES.



RECOMMENDED CIRCUIT LENGTHS FOR VOLTAGE DROP, 110 VOLT, SINGLE PHASE, MAX. 3% VOLTAGE DROP

WIRE SIZE	RATING OF CIRCUIT BREAKER OR FUSE IN AMPERS	15A	20A	30A	40A	50A	60A	70A	80A	90A	100A
#14	#50										
#12	#65										
#10	#105										
#8	#160										
#6	#200										
#4	#410										
#2	#665										



- GROUNDING & BONDING DETAIL DIAGRAM NOT TO SCALE
- SERVICE PANEL ENCLOSURE FROM UTILITY TO HOUSE.
 - USE COPPER FOR ALL GROUNDING CONDUCTORS.
 - ALL WORK SHALL BE DONE BY QUALIFIED PERSONNEL.

ARC FAULT CIRCUIT-INTERRUPTER

- BRANCH CIRCUITS THAT SUPPLY 120-VOLT, 1 PH, 15- AND 20- AMPERE OUTLETS INSTALLED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUN-ROOMS, RECREATIONS ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED AFCI CIRCUIT INTERRUPTER IN METHODS APPROVED BY IRC 2015, CHAPTER 39, SECTION E3902, PARAGRAPH E3902.16.
- CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND REPLACE BREAKERS WITH NEW AFCI IF ANY OF THE ABOVE MENTIONED AREAS ARE SERVED FROM THAT BREAKER.

CONCLUSION:
 EXISTING 200 AMP SERVICE IS ADEQUATE AND TO REMAIN.

CALCULATIONS NOTE:
 AS A SAFETY MEASURE, THE ABOVE CALCULATIONS HAVE INCLUDED THE FOLLOWING LOADS THAT HOWEVER ARE NOT IN THE NEW DESIGN:
 200A MCB, 120/240V

APPROVED
 Montgomery County
 Historic Preservation Commission

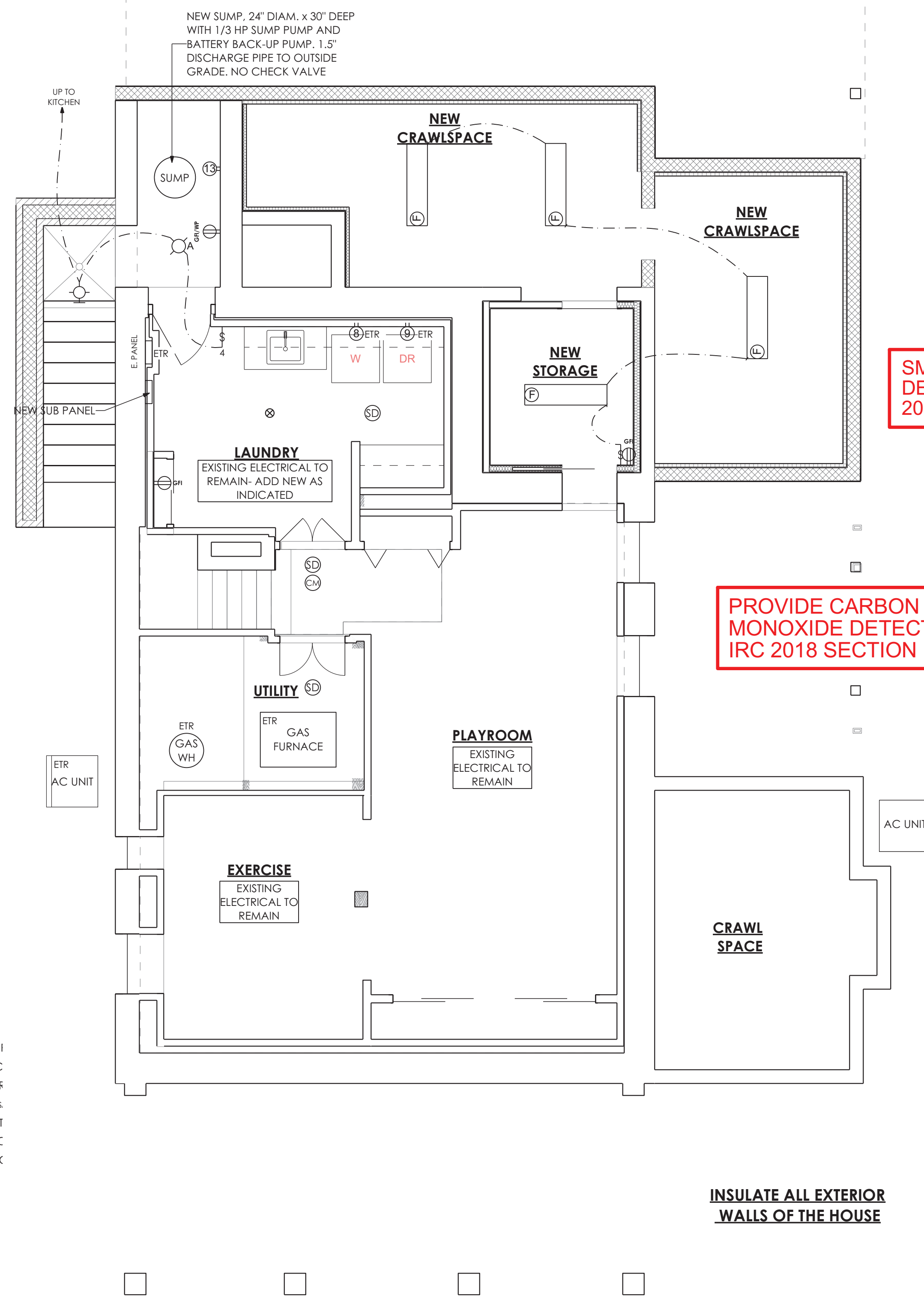
REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022



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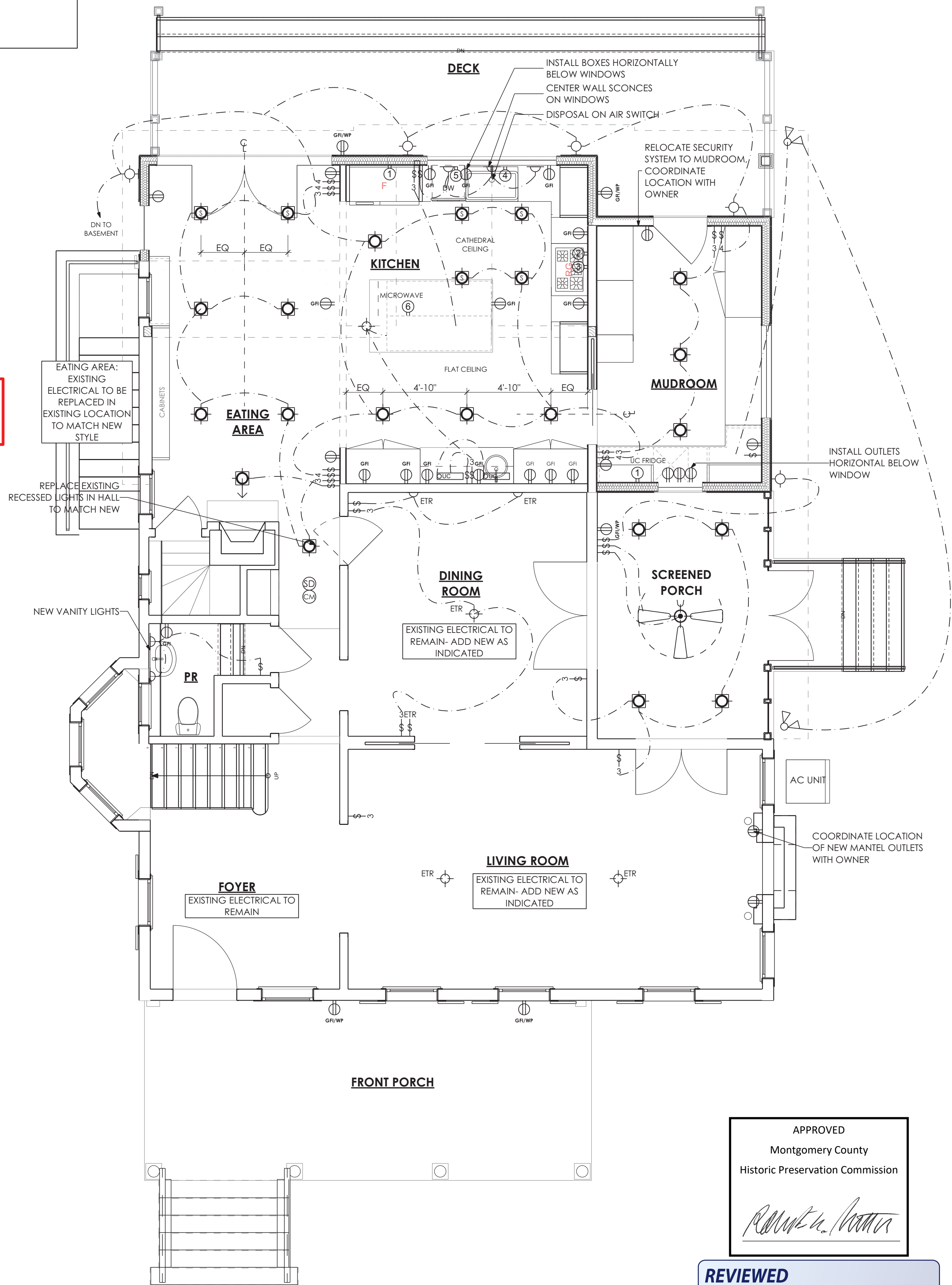
ELECTRICAL SYMBOLS

- ETR EXIST. SWITCH/FIXTURE TO REMAIN
- FLOOD LIGHTS w/ MOTION SENSOR
- FLOOD LIGHTS
- WALL WASHER
- OVERHEAD RECESSED LIGHT
- SLOPED OVERHEAD RECESSED LIGHT
- SURFACE CEILING LIGHT
- PULL-CORD CEILING LIGHT
- PENDANT LIGHT
- WALL SCONCE
- EXTERIOR WALL MOUNTED LIGHT
- TRACK LIGHT
- FLOURESCENT LIGHT
- VANITY LIGHT
- UNDER CABINET LIGHT
- COVE LIGHTING
- CEILING FAN
- CEILING FAN w/ LIGHT
- CONCEALED WIRING
- SWITCH
- 3 WAY SWITCH
- 3 OR MORE SWITCH LOCATIONS
- DIMMER SWITCH
- SWITCH w/ DUPLEX OUTLETS
- DUPLEX RECEPTACLE OUTLET
- QUAD RECEPTACLE OUTLET
- EXTERIOR WEATHERPROOF OUTLET
- GFI/GFCI DUPLEX RECEPTACLE
- FLOOR MOUNT DUPLEX RECEPTACLE
- COMPUTER/DATA OUTLET
- TELEPHONE OUTLET
- CABLE/TV OUTLET
- POWER/DATA/VOICE/TV COMBINATION OUTLET
- DOOR BELL
- DOOR BELL CHIME
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR
- SPEAKER
- GARAGE DOOR OPENER
- ELECTRICAL PANEL
- ELECTRICAL METER
- GAS METER
- REFRIGERATOR (20/1 AMP DEDICATED CIR)
- GAS RANGE (20/1 AMP DEDICATED CIR)
- RANGE HOOD (20/1 AMP DEDICATED CIR)
- NOTE: GAS RANGE AND RANGE HOOD ON S.
- DISPOSAL (15/1 AMP DEDICATED CIR)
- DISHWASHER (15/1 AMP DEDICATED CIR)
- MICROWAVE (15/1 AMP DEDICATED CIR)
- WALL OVEN/DOUBLE OVEN
- WASHER (20/1 AMP DEDICATED CIR)
- DRYER (30/2 AMP DEDICATED CIR)
- GAS FIREPLACE INSERT
- GAS FURNACE
- GAS HOT WATER HEATER
- SUMP PUMP
- THERMOSTAT
- THERMOSTAT, RADIANT FLOOR
- ELECTRIC RADIANT FLOOR HEATING MAT



SMOKE ALARM DETECTORS PER IRC 2018 SECTION R-314

PROVIDE CARBON MONOXIDE DETECTOR PER IRC 2018 SECTION R-315

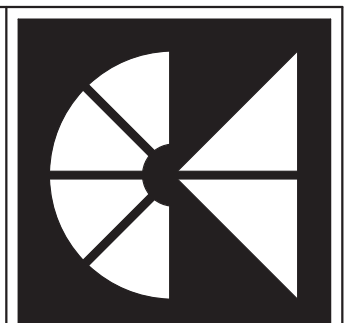


APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022

2
E002
 Basement Floor Electrical Plan
 SCALE: 1/4" = 1'-0"

3
E002
 First Floor Electrical Plan
 SCALE: 1/4" = 1'-0"



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
 T:301.229.7000 F:301.229.7171 www.manionandassociates.com
 PROJECT PHASE: Permit/Bid Set
 DRAWN BY: VGL, LMG
 CHECKED BY: TM
 ISSUE DATE: 04/30/21



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT OF THE STATE OF MARYLAND.
 LICENSE NO.: 3727-R
 EXPIRATION DATE: 05/06/2022

Sharp Residence
 3944 Baltimore St
 Kensington, MD 20895
 Electrical Plan B - 1

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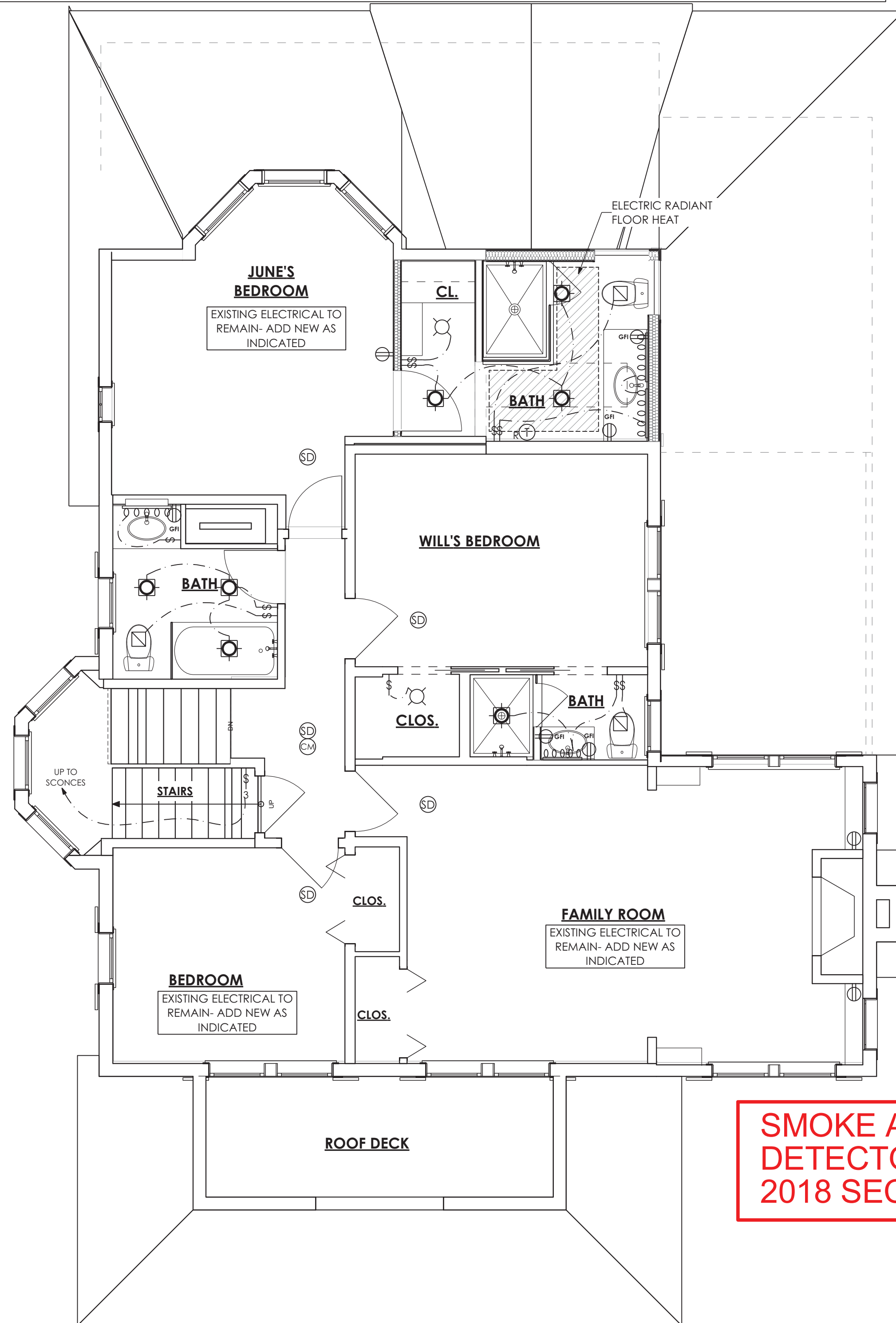
E002

ELECTRICAL SYMBOLS

- ETR EXIST. SWITCH/FIXTURE TO REMAIN
- FLOOD LIGHTS w/ MOTION SENSOR
- FLOOD LIGHTS
- WALL WASHER
- OVERHEAD RECESSED LIGHT
- SLOPED OVERHEAD RECESSED LIGHT
- SURFACE CEILING LIGHT
- PULL-CORD CEILING LIGHT
- PENDANT LIGHT
- WALL SCONCE
- EXTERIOR WALL MOUNTED LIGHT
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- SWITCH w/ DUPLEX OUTLETE
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- QUAD RECEPTACLE OUTLET
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- GFI/GFCI DUPLEX RECEPTACLE
- FLOOR MOUNT DUPLEX RECEPTACLE
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- TELEPHONE OUTLET
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- DOOR BELL CHIME
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- CD CARBON MONOXIDE DETECTOR
- S SPEAKER
- GDO GARAGE DOOR OPENER
- EP ELECTRICAL PANEL
- EM ELECTRICAL METER
- GM GAS METER
- REFRIGERATOR (20/1 AMP DEDICATED CIR
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- WASHER (20/1 AMP DEDICATED CIRCUIT)
- DRYER (30/2 AMP DEDICATED CIRCUIT)
- GAS FIREPLACE INSERT
- GAS FURNACE
- GAS HOT WATER HEATER
- SUMP PUMP
- THERMOSTAT
- TR THERMOSTAT, RADIANT FLOOR
- ERM ELECTRIC RADIANT FLOOR HEATING MAT

ELECTRICAL NOTES:

1. All electrical work shall comply with the edition of the Electrical Code relevant to the project jurisdiction.
2. Thermal insulation shall not be installed above a recessed luminaire or within 3" of the recessed luminaire's enclosure, wiring compartment, or ballast unless it is identified for contact with insulation, Type IC.
3. Coordinate final mounting locations of all fixtures, switches, outlets, etc with Owner/Architect prior to installation during electrical walk through.
4. Provide wall receptacles at 12" on center maximum. All wall receptacles to be tamper proof. Provide necessary GFI and AFCI type receptacles and circuit breakers as necessary by NEC and local code.
5. All plugs, switches, telephone and television jacks to be Leviton by Decora unless otherwise noted in the specifications. Replace all cover plates, plugs, switches, telephone and television jacks throughout all areas with any work.
6. Provide a three-way switch to all outside flood lights. Switches to be located in the Kitchen and the Master Bedroom. Coordinate final locations with Owner/Architect.
7. Provide dimmer switches at all living spaces and bedrooms. Coordinate final locations with Owner/Architect.
8. Provide catalog cut sheets and submit to Owner and Architect for approval prior to purchasing.
9. Refer to Electrical plans for quantity of fixtures listed in lighting schedule. Lighting schedule is for reference only and some listed fixtures may not be used in this project.
10. Lighting levels to comply with NEC lighting load calculation requirements.
11. IECC 402.4.1.1 Building Thermal Envelope Compliance: Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between the conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm when tested in accordance with ASTM E 283 at a 1.57 psf pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

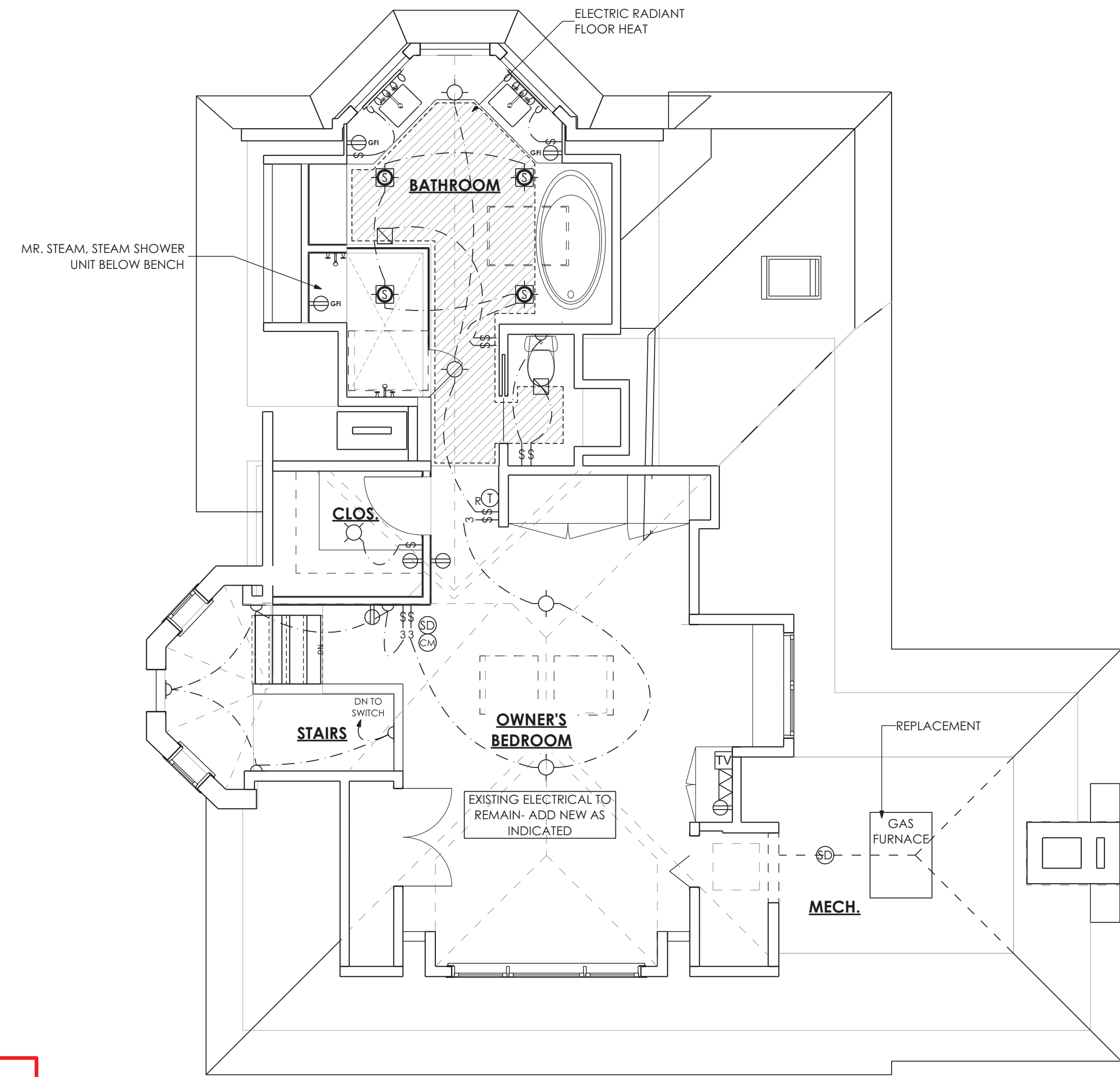


SMOKE ALARM DETECTORS PER IRC 2018 SECTION R-314

ELECTRICAL NOTES CONTINUED:

12. Wiring: Bath insulation shall be cut neatly to fit around wiring in exterior walls, or insulation that readily conforms to available space shall extend behind wiring.
13. Electrical/ phone box on exterior walls: The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
14. All lighting shall be suitable for 120V/1ph/60.
15. All lighting products shall meet or exceed the minimum lighting efficacy (lumens/watts) of local energy code.
16. Minimum 75% of the lamps shall exceed 75% high efficacy (lumens/watts):

High efficiency	Min. Lumens/Watts
Lamps > 40w	60 lumens/watts
Lamps 15w -40w	50 lumens/watts
Lamps < 15w	40 lumens/watts
17. Provide a Smoke Detector in each of the following locations: in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, on each floor (not including crawl spaces and uninhabitable attics). Unless it would prevent placement of a smoke alarm, do not install alarms in the following locations: within 3'-0" of a bathroom with a tub or shower, within 20'-0" of a permanently installed cooking appliance, within 10'-0" of a permanently installed cooking appliance if alarm has silencing switch, or within 6'-0" of a permanently installed cooking appliance if alarm is photo electrically triggered.
18. Provide a Carbon Monoxide alarm in accordance with UL2034, or combination Carbon Monoxide and Smoke alarms per UL217. Units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms.
19. All existing light fixtures, outlets and switches are omitted from the plans for clarity. They shall remain existing and functional unless indicated on the Demolition Plan as being removed.



PROVIDE CARBON MONOXIDE DETECTOR PER IRC 2018 SECTION R-315

APPROVED
 Montgomery County
 Historic Preservation Commission

Robert H. Norton

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022



MANION + ASSOCIATES ARCHITECTS
 7307 MacArthur Blvd, Ste. 216, Bethesda, Maryland 20816
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 REVISIONS



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Sharp Residence
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 Electrical Plan 2 -3

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E003

BASIC MECHANICAL AND PLUMBING REQUIREMENTS:

- A. THE WORK OF EACH OF THE MECHANICAL SECTIONS INCLUDES FURNISHING AND INSTALLING THE MATERIAL, EQUIPMENT, AND SYSTEMS COMPLETE AS SPECIFIED AND/OR INDICATED ON THE DRAWINGS. THE MECHANICAL INSTALLATIONS, WHEN FINISHED, SHALL BE COMPLETE AND COORDINATED, READY FOR SATISFACTORY SERVICE. THE TERM MECHANICAL USED IN THIS SECTION SHALL INCLUDE THE WORK OF PLUMBING, AS WELL AS HEATING, AIR CONDITIONING AND VENTILATION CONTRACTORS.
- B. CODE COMPLIANCE: ALL WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE, COUNTY, NFPA AND BOCA CODES THAT GOVERN EACH PARTICULAR TRADE.
- C. PERMIT FEES: THE CONTRACTOR SHALL MAKE APPLICATIONS AND PAY ALL CHARGES FOR ALL NECESSARY PERMITS, LICENSES AND INSPECTIONS AS REQUIRED UNDER THE ABOVE CODES. UPON COMPLETION OF THE WORK, THE CUSTOMARY CERTIFICATIONS OF APPROVAL SHALL BE FURNISHED.
- D. MATERIAL APPROVALS: NO MATERIALS OR EQUIPMENT SHALL BE USED IN THE WORK UNTIL APPROVED. BEFORE SUBMISSION OF THE SHOP DRAWINGS, AND NOT MORE THAN THIRTY (30) DAYS AFTER AWARD OF THE CONTRACT, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A COMPLETE LIST OF MATERIALS AND EQUIPMENT WHICH HE INTENDS TO FURNISH, GIVING MANUFACTURER AND CATALOG NUMBERS.
- E. DOCUMENT EXAMINATIONS: THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SPECIFICATIONS FOR CORRECTNESS AND CODE COMPLIANCE. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE INTENT OF THE CONTRACT DOCUMENTS.
- F. DOCUMENT INTENTIONS: THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE MECHANICAL INSTALLATIONS. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. REWORKING OF COMPLETED ITEMS DUE TO IMPROPER FIELD COORDINATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- G. ACCESS AND CLEARANCES: PROVIDE SUFFICIENT ACCESS AND CLEARANCE FOR ALL ITEMS OF EQUIPMENT REQUIRING SERVICING AND MAINTENANCE, SUCH AS VALVES, DAMPERS, CONTROLS, DRIVES, DRAINS, VENTS, SWITCHES, FILTERS, TRAPS, AND MAJOR ITEMS OF EQUIPMENT.
- H. CUTTING AND PATCHING: THE CONTRACTOR SHALL PERFORM ALL NECESSARY CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE INSTALLATION OF THE MECHANICAL WORK. PATCHING OF WALLS, FLOORS, CEILING, ROOF, ETC. SHALL MATCH THE ADJACENT SURFACES. CUTTING OF WALLS AND FLOORS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER TO AVOID CUTTING OF REBARS, CONDUIT, ETC. EMBEDDED IN WALLS AND FLOORS.
- I. INFORMATION BOOKS: AS BUILTS: THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A RECORD (AS BUILT) AND INFORMATION BOOKLET. THE BOOKLET SHALL BE BOUND IN A THREE-RING LOOSE-LEAF BINDER. PROVIDE THE FOLLOWING DATA IN THE BOOKLET:
 1. CATALOG DATA ON EACH PIECE OF EQUIPMENT FURNISHED.
 2. APPROVED SHOP DRAWINGS ON EACH PIECE OF EQUIPMENT FURNISHED.
 3. MAINTENANCE, OPERATION AND LUBRICATION INSTRUCTION ON EACH PIECE OF EQUIPMENT FURNISHED.
 4. SIMPLIFIED TEMPERATURE CONTROL DIAGRAM.
 5. MANUFACTURER'S AND CONTRACTOR'S WARRANTIES.
 6. AIR BALANCING REPORTS.
 7. COMMISSIONING REPORTS.
 8. SCHEDULE/DESCRIPTION OF ALL SERVICE WORK/MAINTENANCE INSPECTIONS REQUIRED BY PARAGRAPHS O, P, AND Q OF THIS SECTION.
- J. TESTING OF PLUMBING: THE ENTIRE NEW PLUMBING SYSTEM SHALL BE TESTED HYDROSTATICALLY BEFORE INSULATION COVERING IS APPLIED AND PROVED TIGHT UNDER THE FOLLOWING GAUGE PRESSURES:
 - SANITARY PIPING AS SPECIFIED BELOW
 - DOMESTIC WATER 100 PSIG
 - REFRIGERATION, LIQUID AND SUCTION PIPING 225 PSIG/400 PSIG
- K. ALL SOIL, WASTE, AND VENT PIPING SHALL BE TESTED BY THE CONTRACTOR. THE ENTIRE NEW DRAINAGE SYSTEM AND VENTING SYSTEMS SHALL HAVE ALL NECESSARY OPENINGS PLUGGED AND FILLED WITH WATER TO THE LEVEL OF TEN (10) FEET ABOVE THE MAIN OR BRANCH BEING TESTED. THE SYSTEM SHALL HOLD THIS WATER FOR THIRTY (30) MINUTES WITHOUT SHOWING A DROP GREATER THAN FOUR (4) INCHES.
- L. TESTING AND BALANCING OF HVAC: ALL PARTS OF THE HEATING, VENTILATING, AIR CONDITIONING AND EXHAUST SYSTEMS SHALL BE ADJUSTED, CHECKED, BALANCED, AND TESTED BY AN INDEPENDENT AMERICAN AIR BALANCING COUNCIL (A.A.B.C.) CERTIFIED TESTING AND BALANCING CONTRACTOR APPROVED BY THE OWNER. THE CONTRACTOR SHALL PUT ALL SYSTEMS AND EQUIPMENT INTO FULL OPERATION, AND SHALL TEST AND BALANCE ALL DEVICES TO WITHIN FIVE PERCENT (5%) OF CAPACITIES INDICATED ON THE DRAWINGS. SUBMIT COPIES OF THE BALANCING REPORTS TO THE OWNER FOR REVIEW. PERMANENTLY MARK THE POSITION OF EACH BALANCING DAMPER.
- M. AS-BUILTS AND REDLINES: UPON COMPLETION OF THE MECHANICAL AND PLUMBING INSTALLATIONS, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS OF THE MECHANICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES AND DEPARTURES OF THE INSTALLATION AS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD AS-BUILT DRAWINGS. CONTRACTOR SHALL PREPARE RECORD AS-BUILT DRAWINGS TO REFLECT CHANGES PERMANENTLY AND RETURN THREE (3) COPIES TO THE OWNER.
- N. IDENTIFICATION AND MARKINGS: ALL PIPING AND VALVE SYSTEMS SHALL BE IDENTIFIED WITH PERMANENTLY MARKED AND/OR ETCHED LABELS. MATERIALS SHALL BE AS MANUFACTURED BY SETON NAMEPLATE CORPORATION.
- O. BASIC WARRANTY: ALL NEW MECHANICAL INSTALLATIONS, INCLUDING ALL MATERIALS AND LABOR, SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF OWNER ACCEPTANCE. THE ABOVE SHALL NOT IN ANY WAY VOID OR ABROGATE EQUIPMENT MANUFACTURER'S GUARANTEE OR WARRANTY. CERTIFICATES OF GUARANTEE SHALL BE DELIVERED TO THE OWNER.

MECHANICAL GENERAL SPECIFICATION:

1. INSTALLATION: INSTALLATION OF DUCTWORK, PIPING, EQUIPMENT, FIXTURES, WIRING, ETC., SHALL BE DONE IN NEAT AND WORKMANLIKE MANNER, AND SHALL CONFORM TO THE LATEST TRADE PRACTICES.
2. DUCTWORK: CONSTRUCTION SHALL BE GALVANIZED STEEL AND SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF "SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION" RECOMMENDATIONS. ALL NEW DUCTWORK SHALL BE INSTALLED AS FAR AS POSSIBLE. DUCTWORK DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. ALL NEW AND EXISTING DUCTWORK SHALL BE SEALED PER SMACNA. FINAL LOCATION OF DUCTWORK AS DIRECTED BY OWNER'S REPRESENTATIVE. ENSURE PROPER ACCESS TO FIRE DAMPERS, AND DEVICES REQUIRING SERVICE. INSTALLATION PER SMACNA RECOMMENDATIONS. FLEXIBLE DUCT: SHALL BE CLASS 1, UL LABELED. FLEXIBLE DUCT CONNECTIONS TO DIFFUSERS AND SIMILAR DEVICES SHALL NOT EXCEED 5 FT. IN LENGTH WITH NO MORE THAN ONE 90 DEGREE SOFT BEND. METHOD OF SUPPORT FOR FLEXIBLE DUCT SHALL BE SUCH THAT DUCTS CAN NOT BE DAMAGED BY VIBRATION AND OTHER MOTION. DUCTS SHALL NOT LAY ACROSS LIGHT FIXTURES OR ANY OTHER SURFACES. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS REQUIRED, DUCTWORK SIZES MUST BE ADJUSTED FOR THICKNESS OF THE INSULATION AND SOUND LINING.
3. PIPING: ALL PIPING SHALL BE NEW, COMPLY WITH ASME B31.9 AND SHALL BE CUT TO EXACT LENGTHS TO SUIT THE FIELD CONDITIONS. CONNECTIONS OF DISSIMILAR PIPING MATERIALS SHALL BE MADE BY MEANS OF DIELECTRIC FITTINGS. PROVIDE ALL SHUT OFF VALVES, STRAINERS, RELIEF VALVES, BALANCING VALVES AND FITTINGS REQUIRED FOR BALANCING AND REPLACEMENT / ISOLATION OF EQUIPMENT AND COMPONENTS.
4. PROVIDE PIPE SUPPORTS AND HANGERS FOR ALL NEW PIPING AND INSTALL SLEEVES FOR PIPES PENETRATING THROUGH FLOORS, WALLS AND CEILING AND SEAL WITH APPROVED FIRE STOPPING MATERIAL.
5. CONDENSATE DRAIN PIPE, FROM EQUIPMENT SHALL BE PVC SCH. 40, WITH SOLVENT CEMENT FITTINGS OR COPPER TUBE EQUAL TO TYPE 'L' WITH SOLDERED FITTINGS. ALL PIPING SHALL BE INSULATED WITH 1" FIBERGLASS INSULATION. PIPE SHALL BE EXTENDED AS INDICATED ON DRAWINGS.
6. REFRIGERATION PIPING COPPER ACR TYPE L NITROGEN CHARGED. COMPLY WITH ASHRAE 15, ASME B31.5 AND UL207.
7. PIPING SHALL BE INSTALLED WITH EXPANSION FITTINGS AND LOOPS AS REQUIRED FOR SAFE OPERATION.
8. CONDENSATE DRAIN PIPE, FROM EQUIPMENT SHALL BE PVC SCH. 40, WITH SOLVENT CEMENT FITTINGS OR COPPER TUBE EQUAL TO TYPE 'L' WITH SOLDERED FITTINGS. ALL PIPING SHALL BE INSULATED WITH 1" FIBERGLASS INSULATION. PIPE SHALL BE EXTENDED AS INDICATED ON DRAWINGS.
9. GRILLES AND REGISTERS: SHALL BE SIMILAR TO MODELS BY TITUS PRODUCTS. RETURNS PERFORATED STEEL, MODEL PR, REGISTERS MODEL T60, DOUBLE DEFLECTION, STEEL, REGISTERS FOR CEILING SERIES A40-4, RETURN/EXHAUST REGISTERS T70, STEEL. PRIME COATED SUITABLE FOR FINISH PAINTING. AS SELECTED BY ARCHITECT.
10. INSULATION:
 - A. INSULATE CONDENSATE PIPING WITH 1" FIBERGLASS WITH VAPOR BARRIER AND ASJ. ALTERNATE METHOD MAY SUBSTITUTE 1/2" CLOSED CELL WITH SELF SEALING LAP. MINIMUM R-3
 - B. INSULATE ALL SUPPLY AND RETURN DUCTWORK ACCORDING TO FOLLOWING WITH KNAUF "FRIENDLY FEEL DUCT WRAP": EXPOSED DUCTWORK IN CONDITIONED SPACES: NONE REQUIRED, CONCEALED DUCTWORK IN CONDITIONED SPACES: 0.75 PCF, 2.5" THICK, R-7 (MIN. R-6). OUTSIDE AND ATTIC SPACES (UNCONDITIONED) SPACES: 0.75 PCF, 3" THICK, R-8.4 (MIN. R-8). OUTER LAYER SHALL BE OF FSK FACING.
 - C. NOT USED
11. SEALING: ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH IMC CODE. TAPE AND MASTIC USED TO SEAL METALLIC AND FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181 B-FX" FOR PRESSURE SENSITIVE TAPE OR "181 BM" FOR MASTIC.

12. TESTING: ALL NEW DUCTWORK SHALL BE TESTED DURING "ROUGH-IN TEST" INCLUDING AIR HANDLER ENCLOSURE. TAPE ALL REGISTERS AND OPENINGS FOR THE TEST. TEST SHALL BE PERFORMED WITH 0.1" WG (25 Pa). SYSTEM SHALL BE TESTED POST-CONSTRUCTION WITH 0.1" W.C. (25 Pa) (IRC N1103.3). PROVIDE TEST RESULTS REPORT TO OWNER AND PROJECT ARCHITECT. THE TOTAL LEAKAGE SHALL BE LESS THAN OR EQUAL TO 4 CFM PER 100 SF OF FLOOR AREA WHERE THE AIR HANDLER IS INSTALLED AT THE TIME OF THE TEST. IF AIR HANDLER IS NOT INSTALLED AT THE TIME OF THE TEST, THE AIR LEAKAGE SHALL BE LESS THAN OR EQUAL TO 3 CFM PER 100 SF OF CONDITIONED FLOOR AREA. POST-CONSTRUCTION TEST LEAKAGE SHALL BE LESS THAN OR EQUAL TO 4 CFM PER 100 SF OF FLOOR AREA WHERE THE AIR HANDLER IS INSTALLED AT THE TIME OF THE TEST.
13. FOLLOWING CONSTRUCTION, PERFORM A BUILDING LEAKAGE TEST (FAN DOOR TEST) OF THE ADDITION, TO DEMONSTRATE THE BUILDING AIR LEAKAGE RATE OF NOT TO EXCEED 5 AIR CHANGES PER HOUR. (IECC 402.4.1.2)
14. HVAC LINE SET: INSULATE 1/2" CLOSED CELL WITH SELF SEALING LAP. MINIMUM R-3. OUTSIDE LINE-SET EXPOSED TO ELEMENTS SHALL BE PROTECTED FROM ELEMENTS AND SUN DAMAGE BY WRAPPING THE PRODUCT WITH UV RATED PVC JACKET MATERIAL.
15. SOUNDLINING (WHERE INDICATED) MINIMUM 1" THICK ADHERED TO ALL SURFACES OF DUCT (COATED SIDE OF LINER FACES AIR STREAM) U.L. LABELED. DIMENSIONS INDICATED ON SOUND LINING DUCTWORK ARE CLEAR INSIDE DIMENSIONS. SOUND LINED DUCTS DO NOT REQUIRE INSULATION. DO NOT INSULATE EXPOSED DUCT IN FINISHED AREA USE SOUNDLINING.
16. CONTROLS: PROVIDE ELECTRIC/ELECTRONIC PROGRAMMABLE COMPATIBLE HEATING/COOLING CONTROL PANEL WITH THERMOSTAT AND ALL REQUIRED CONTROL DEVICES AND ALL NECESSARY DEVICES FOR A COMPLETE AND FUNCTIONAL SYSTEM. ALL AUTOMATIC CONTROLS TO BE INSTALLED BY AUTOMATIC TEMPERATURE CONTROL SPECIALTY CONTRACTOR WITH 5 YEARS MIN. RELATED SPECIALTY CONTRACTOR WITH 5 YEARS MIN. RELATED EXPERIENCE. SUBMIT COMPLETE SHOP DWGS. ON CONTROLS INDICATING SEQUENCE, WIRING, ALL COMPONENTS, FLOW DIAGRAMS AND ALL INTERLOCKING. PRIOR TO INSTALLATION OBTAIN APPROVAL FROM ARCHITECT.
17. BUILDING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.
18. AUTO./GRAVITY DAMPERS SHALL BE INSTALLED ON ALL INTAKES/EXHAUSTS.
19. SEALING: ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH IMC CODE. TAPE AND MASTIC USED TO SEAL METALLIC AND FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181 B-FX" FOR PRESSURE SENSITIVE TAPE OR "181 BM" FOR MASTIC.
20. THIS PROJECT IS REQUIRED TO SUBMIT AT FINAL INSPECTION A VEHICLE-BUILDING BLOWER DOOR TEST SHOWING A PASSING RATING OF <= 5 AIR CHANGES PER HOUR AT A PRESSURE OF 50 PASCAL. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CDDE OFFICIAL.
21. THIS PROJECT IS REQUIRED TO SUBMIT AT FINAL INSPECTION A DUCT LEAKAGE TEST SHOWING A PASSING RATING OF <= 8 CFM PER 100 SQUARE FEET CONDITIONED FLOOR AREA AT A PRESSURE OF 25 PASCAL. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CDDE OFFICIAL.

1. 0
2. 0

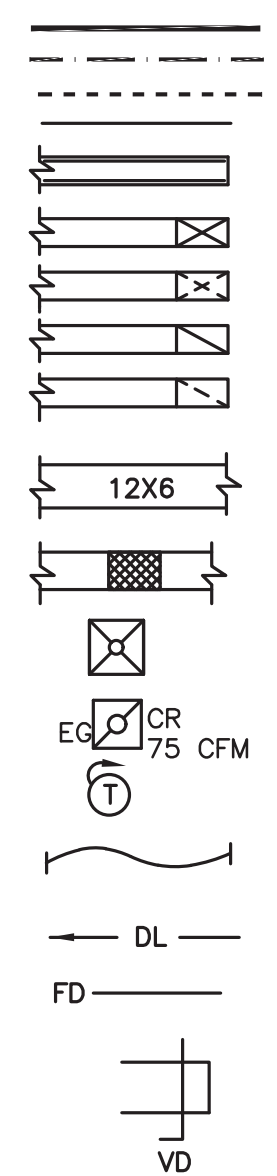
7. PIPE SLEEVES: PIPE SLEEVES AND PIPING INSTALLED IN FIRE SEPARATIONS SHALL BE SEALED WITH APPROVED FIRE STOPPING MATERIAL.
8. DIFFUSERS: ROUND SUPPLY DIFFUSER: ROUND LOVER FACE, WHITE POWDER COATED STEEL, PROTOTYPE: TITUS TMR. SQUARE SUPPLY DIFFUSER: 24"SQ., 4-WAY LOUVERED FACE DIFFUSER, STEEL, WHITE POWDER COATED. PROTOTYPE: TITUS TMS.
9. GRILLES AND REGISTERS: SHALL BE SIMILAR TO MODELS BY TITUS PRODUCTS. RETURNS PERFORATED STEEL, MODEL PR, REGISTERS MODEL T60, DOUBLE DEFLECTION, STEEL, REGISTERS FOR CEILING SERIES A40-4, RETURN/EXHAUST REGISTERS T70, STEEL. PRIME COATED SUITABLE FOR FINISH PAINTING. AS SELECTED BY ARCHITECT.
10. INSULATION:
 - A. INSULATE CONDENSATE PIPING WITH 1" FIBERGLASS WITH VAPOR BARRIER AND ASJ. ALTERNATE METHOD MAY SUBSTITUTE 1/2" CLOSED CELL WITH SELF SEALING LAP. MINIMUM R-3
 - B. INSULATE ALL SUPPLY AND RETURN DUCTWORK ACCORDING TO FOLLOWING WITH KNAUF "FRIENDLY FEEL DUCT WRAP": EXPOSED DUCTWORK IN CONDITIONED SPACES: NONE REQUIRED, CONCEALED DUCTWORK IN CONDITIONED SPACES: 0.75 PCF, 2.5" THICK, R-7 (MIN. R-6). OUTSIDE AND ATTIC SPACES (UNCONDITIONED) SPACES: 0.75 PCF, 3" THICK, R-8.4 (MIN. R-8). OUTER LAYER SHALL BE OF FSK FACING.
 - C. NOT USED

11. SEALING: ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH IMC CODE. TAPE AND MASTIC USED TO SEAL METALLIC AND FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181 B-FX" FOR PRESSURE SENSITIVE TAPE OR "181 BM" FOR MASTIC.

GENERAL NOTES

1. THE PLANS DO NOT NECESSARILY INDICATE EVERY FITTINGS ELBOWS OFFSETS, VALVES, ETC. WHICH IS REQUIRED TO ACCOMPLISH THE NEW EQUIPMENT INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND WORK TO ACCOMMODATE THE NEW INSTALLATION, FINISHED, TESTED AND READY.
2. CONTRACTOR SHALL CONSIDER THE DRAWINGS AS BEING DIAGRAMMATIC AND THESE DRAWINGS SHALL NOT BE USED AS ERECTION DRAWINGS.
3. ALL MECHANICAL PLANS ARE DIAGRAMMATIC IN FORM. THE MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MECHANICAL SYSTEMS FOR APPROVAL BEFORE INSTALLATION.
4. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS REQUIRED. DUCTWORK SIZES MUST BE ADJUSTED FOR THICKNESS OF THE INSULATION AND SOUND LINING.
5. ALL NEW EQUIPMENT, ASSOCIATED CONTROLS, AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. REFRIGERANT PIPE SIZES AND INSTALLATION FOR THE AIR COOLED CONDENSING UNITS SHALL BE IN ACCORDANCE WITH THE UNIT'S MANUFACTURER'S RECOMMENDATIONS.
7. ALL WORK IS NEW AND SHALL UTILIZE NEW PRODUCTS, UNLESS NOTED OTHERWISE.
8. NO FLEX DUCT SHALL BE USED ON THIS PROJECT.
9. NO PIPING SHALL BE PLACED IN OUTSIDE WALLS. ALL PLUMBING AND HVAC PIPING SHALL BE PLACED IN INSIDE PARTITIONS.
10. ALL WALL PENETRATIONS MUST BE THOROUGHLY SEALED AGAINST AIR INFILTRATION.
11. ALL CONDENSATE DRAIN PIPES SHALL USE COPPER TYPE M WITH SOLDERED FITTINGS INSULATED W/ 1/2" SSL FOAM INSULATION.

MECHANICAL GENERAL SPECIFICATION (CONTINUE):



DESIGN CONDITIONS (BASED ON ASHRAE 99.0%):
 SUMMER OUTSIDE: 91°F DB / 76°F WB
 SUMMER INSIDE: 75°F DB / 50% RH
 WINTER OUTSIDE: 17°F DB
 WINTER INSIDE: 70°F DB

COMMISSIONING: CONTRACTOR SHALL PERFORM AIR BALANCE OF ALL REGISTERS AND GRILLES BEFORE CLOSING WALLS AND CEILING. VERIFY AIR FLOWS ARE AS INDICATED AND ARE ADEQUATE FOR ALL ROOMS.

NOISE CRITERIA: IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM PROPER BALANCING OF ALL BRANCH DUCTS AND REGISTERS TO ASSURE SYSTEM NOISE IS WITHIN AN ACCEPTABLE LIMIT FOR THE HOME OWNER. VERIFY NOISE LEVEL, ACCEPTANCE OF THE INSTALLED SYSTEM WITH OWNER AND PROJECT ARCHITECT PRIOR TO CLOSING WALLS AND CEILINGS.

UNITS GFU-1 AND ACC-1 SERVE THE BASEMENT AND 1ST FLOOR AND SHALL REMAIN AS THEY ARE.

INDOOR UNIT:
 GFU-2 (HORIZONTAL UNIT), ENERGY STAR RATED INFINITY SERIES, TWO-STAGE, VARIABLE SPEED (ECM MOTOR)
 AIR FLOW:
 HEAT HIGH SPEED: 1,075 CFM
 HEAT LOW SPEED: 855 CFM
 COOLING: 1,335 CFM
 MOTOR: 1/2 HP
 NATURAL GAS HEATING SYSTEM: 96% AFUE EFFICIENCY.
 HI HEAT (INPUT/OUTPUT): 60,000 / 58,000 BTUH.
 LOW HEAT (INPUT/OUTPUT): 39,000 / 38,000 BTUH.
 WEIGHT: 140 LBS
 CARRIER INFINITY SERIES; 59T6A-060-14
 ELECT: 115-1-60, MCA 11.5, MOCP 15.
 PROVIDE UNIT WITH A 3 TON DX COIL.
 AIR HANDLER SHALL HAVE A MANUFACTURER'S DESIGNATION FOR AN AIR LEAKAGE ON NO MORE THAN 2% OF THE DESIGN AIR FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASHRAE 193.
 PROVIDE AN AUXILIARY DRAIN PAN. DRAIN PAN SHALL EXTEND A MINIMUM OF 3" BEYOND AL LAIR HANDLING UNIT PARTS. PROVIDE A 3/4" AUXILIARY DRAIN TO OUTSIDE.
 PROVIDE UNIT WITH 3/4" DRAIN W/ P-TRAP TO OUTSIDE.

OUTDOOR UNIT: CU-2 (3 TON)
 VARIABLE SPEED COMPRESSOR, ENERGY STAR RATED
 16 SEER, NOISE (LOW/HI STAGES): 69 dBA,
 ELECT: 208-230-1-60, MCA 18.2, MOCP 30.
 REFRIGERANT LINES: 3/8" LIQUID LINE, 7/8" VAPOR LINE.
 WEIGHT: 325 LBS
 CARRIER MODEL: 24ANB6-36

REFRIGERANT R-410A, CLASSIFICATION A1 EQUIPMENT
 PER MECHANICAL CODE SECTION 1102

THERMOSTATS: "CARRIER" PROGRAMMABLE, WITH DEHUMIDIFICATION FEATURES.

SHEET	DWG	TITLE
1	M001	HVAC COVER SHEET
2	M002	BASEMENT AND 1ST FLOORS - HVAC DEMO
3	M003	2ND AND 3RD FLOORS - HVAC DEMO
4	M004	BASEMENT AND 1ST FLOORS - HVAC NEW WORK
5	M005	2ND AND 3RD FLOORS - HVAC NEW WORK
6	M006	HVAC DETAILS

SYMBOL	DESCRIPTION
DL	DOOR LOUVER
FD	FIRE DAMPER
VD	VOLUME DAMPER

SYMBOLS

- SUPPLY DUCTWORK
- EXHAUST DUCTWORK
- RETURN DUCTWORK
- WORK TO BE PERFORMED
- DUCT WITH SOUND LINING
- DUCT GOING UP/UNDER POSITIVE PRESSURE
- DUCT GOING DN/UNDER POSITIVE PRESSURE
- DUCT TURNING UP/UNDER NEGATIVE PRESSURE
- DUCT TURNING DN/UNDER NEGATIVE PRESSURE
- DUCT SIZE, SECOND NUMBER INDICATES DEPTH
- FLEXIBLE CONNECTION
- ROUND NECK CEILING DIFFUSER
- EXHAUST- RETURN GRILLE
- THERMOSTAT
- FLEXIBLE DUCTWORK
- DOOR LOUVER
- FIRE DAMPER
- VOLUME DAMPER

ABBREVIATIONS

- NOTE: NOT ALL SYMBOLS AND ABBREV. APPLY TO THIS PROJECT.
- AFUE ANNUAL FUEL UTILIZATION EFFICIENCY
 - AFF ABOVE FINISHED FLOOR
 - AMPS AMPERES
 - BDD BACKDRAFT DAMPER
 - BBH BASEBOARD HEATER
 - BR BOILER
 - BS BIRD SCREEN, 1/2" WMS
 - CA COMBUSTION AIR
 - CD CONDENSATE DRAIN
 - CFM CUBIC FEET PER MINUTE
 - CEG CEILING EXHAUST GRILLE
 - CRG CEILING RETURN GRILLE
 - CSO CEILING SUPPLY OUTLET
 - CSR CEILING SUPPLY REGISTER
 - DB DRY BULB
 - DEMO DEMOLITION
 - DIAM DIAMETER
 - DN DOWN
 - DL DOOR LOUVER
 - DWG DRAWING
 - EA EXHAUST AIR
 - EAD EXHAUST AIR DUCT
 - EAT ENTERING AIR TEMPERATURE
 - EAF EXHAUST FAN
 - ERV ENERGY RECOVERY VENTILATOR
 - ETR EXISTING TO REMAIN
 - ESP EXTERNAL STATIC PRESSURE
 - F DEGREE FAHRENHEIT
 - FA FRESH AIR
 - FROM FROM
 - F/A FROM ABOVE
 - F/B FROM BELOW
 - FCU FAN COIL UNIT
 - FFM FEET PER MINUTE
 - FSR FLOOR SUPPLY REGISTER
 - GFU GAS FURNACE UNIT
 - H HEIGHT
 - HP HORSE POWER/ HEAT PUMP
 - HZ FREQUENCY (HERTZ)
 - H2O WATER
 - HWRG HIGH WALL RETURN GRILLE
 - HWSR HIGH WALL SUPPLY REGISTER
 - HVAC HEATING, VENTILATING, & AIR-CONDITIONING
 - IBH IN BULK HEAD
 - IBJ IN BETWEEN JOISTS
 - KH KITCHEN HOOD
 - KS KILL SWITCH (WATER FLOAT SWITCH)
 - LAT LEAVING AIR TEMPERATURE
 - LBS POUNDS
 - LWEG LOW WALL EXHAUST GRILLE
 - LWRG LOW WALL RETURN GRILLE
 - LWSR LOW WALL SUPPLY REGISTER
 - MBH THOUSAND BTU PER HOUR
 - MCA MIN CIRCUIT AMPACITY
 - MFA MAX FUSE AMP
 - MLRG MID-LEVEL RETURN GRILLE
 - MOCP MAX OVERCURRENT PROTECTION
 - NIC NOT IN CONTRACT
 - OA OUTSIDE AIR
 - O.C. ON CENTER
 - OED OPEN ENDED DUCT
 - PH PHASE
 - RA RETURN AIR
 - RAD RETURN AIR DUCT
 - RB REGISTER BOOT & RETURN BOOT
 - RG RETURN GRILLE
 - RLA RATED LOAD AMPERES
 - RPM REVOLUTION PER MINUTES
 - SA SUPPLY AIR
 - SAD SUPPLY AIR DUCT
 - SL SOUND LINING
 - SP STATIC PRESSURE
 - STR SALVAGE TO RE-INSTALL
 - TEL TOTAL EQUIVALENT LENGTH
 - TSR TOE-KICK SUPPLY REGISTER
 - TYP TYPICAL
 - UC UNDERCUT
 - V VOLTS
 - VRF VARIABLE REFRIGERANT FLOW
 - VTR VENT THRU ROOF
 - WB WET BULB
 - WC WATER COLUMN / WATER CLOSET
 - WH WATER HEATER
 - WMS WIRE MESH SCREEN
 - W/ WITH



REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022



Professional Certification. I SHARIYAR SHARAF I hereby certify that documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 16452, Expiration Date 04-19-2021

3944 Baltimore St. Kensington, MD 20895

Sharp Residence

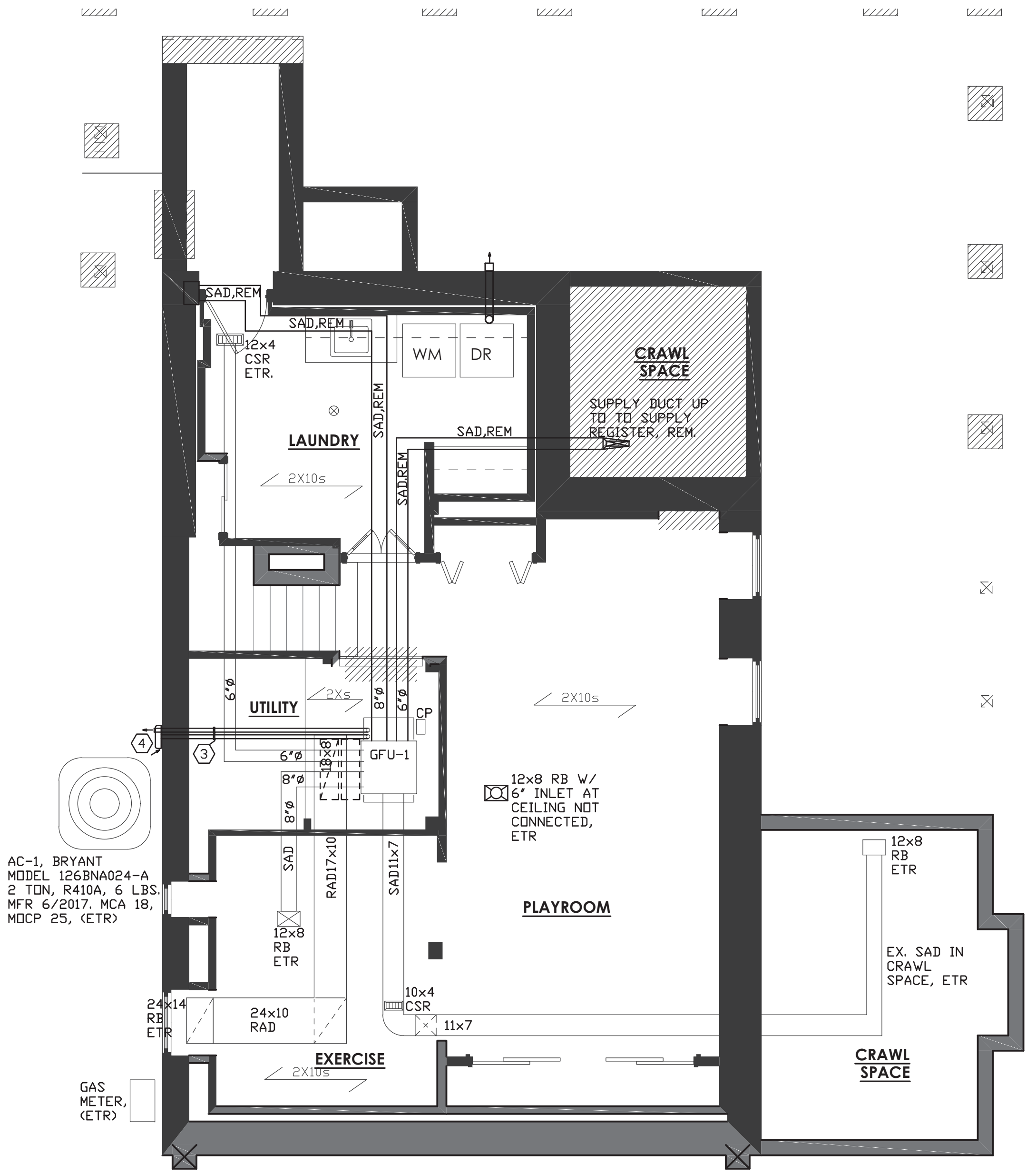
HVAC COVER SHEET

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Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job from the dimensions and conditions shown.

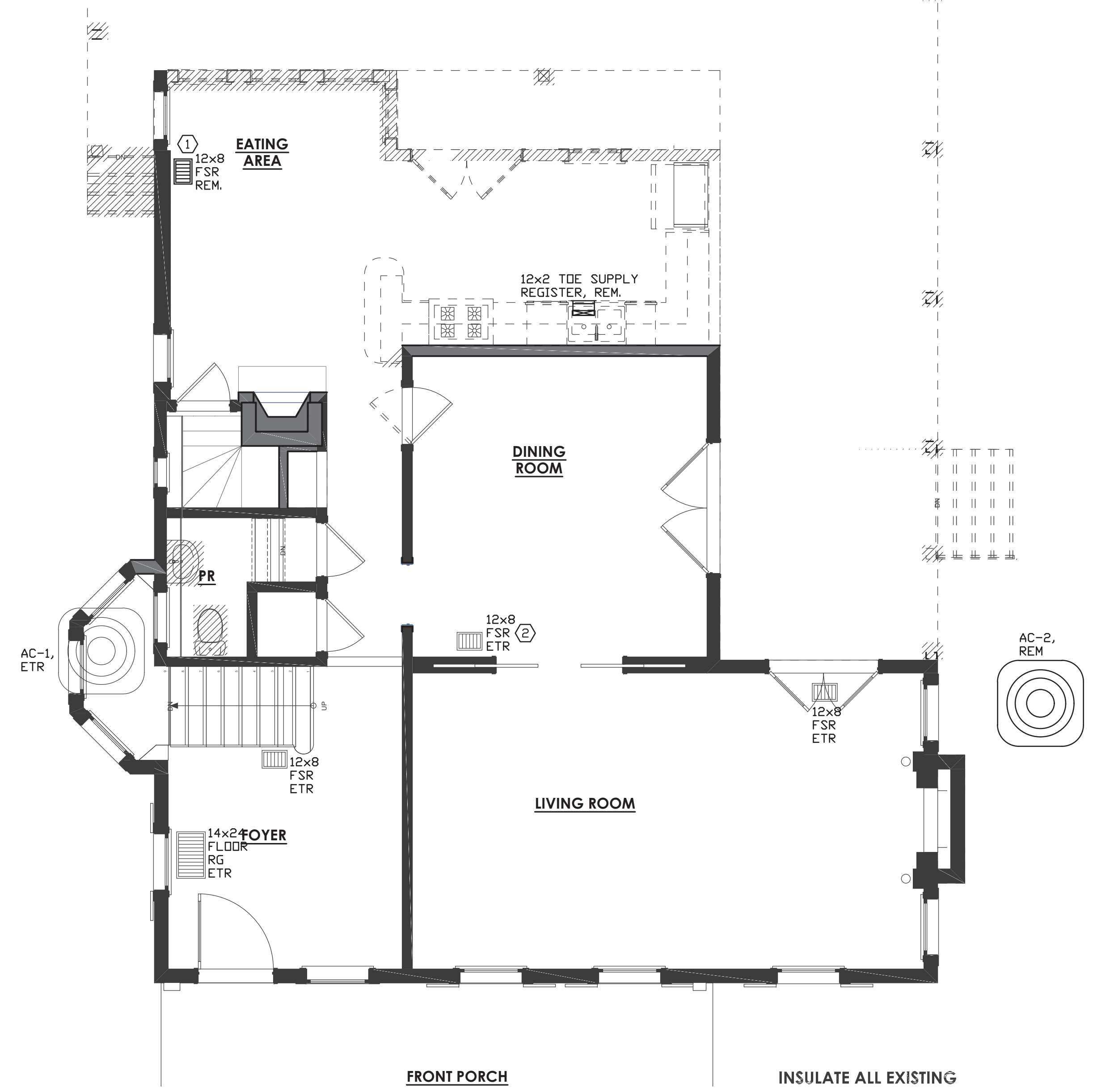
- PLAN NOTES**
- 1 SALVAGE THE REMOVE ANTIQUE FLOOR REGISTER AND REUSE IN THE NEW WORK.
 - 2 FLOOR SUPPLY REGISTER IS OPEN TO BASEMENT. REGISTER WILL BE RECONNECTED UNDER THE NEW WORK PLAN.
 - 3 TWO 2"Ø PVC FLUE PIPES, MODIFY AS NECESSARY TO INSTALL CONCENTRIC REDUCER.
 - 4 REMOVE FLAT PANEL COMBINATION EXHAUST AND MAKEUP AIR DEVICE AND REPLACE WITH A CONCENTRIC PVC EXHAUSTER.
 - 4 REMOVE DRYER VENT AND WALL CAP.

- GENERAL DEMOLITION NOTES:**
1. CONTRACTOR SHALL ARRANGE THE EVACUATION AND REMOVAL OF THE REFRIGERANT CONTENTS OF ANY A/C EQUIPMENT PRIOR TO DEMOLITION WORK. NO REFRIGERANT DISCHARGE TO ATMOSPHERE IS ALLOWED. ALL REMOVAL AND EXTRACTION OF REFRIGERANT SHALL BE IN STRICT ACCORDANCE WITH LOCAL AND FEDERAL ENVIRONMENTAL PROTECTION RULES AND REGULATIONS AND BY LOCAL AND FEDERAL CERTIFIED AND QUALIFIED PERSONNEL AND FIRMS.
 2. DISCONNECT POWER CONNECTIONS BEFORE DEMOLISH ANY EQUIPMENT.
 3. DEMOLISHED ITEMS SUCH AS DUCTWORK & PIPING SHALL NOT BE ABANDONED IN PLACE.
 4. COORDINATE WITH ARCHITECTURAL CONTRACTOR ON DEMOLISHING HVAC RELATED ITEMS WHICH WERE NOT SHOWN IN HVAC DRAWINGS.
 5. COORDINATE WITH ARCHITECTURAL CONTRACTOR ON REPAIRS & PATCHING HOLES & OPENINGS RELATED TO DEMOLITION WORK.



AC-2, BRYANT
 3 TON, R22, 6 LBS.
 VERY OLD, (REMOVE
 & REPLACE)

BASEMENT FLOOR PLAN – HVAC DEMO



1ST FLOOR PLAN – HVAC DEMO

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022

Professional Certification: I, SHAHRIYAR SHARAFI hereby certify that documents were prepared or approved by me and that I am duly licensed professional engineer under the laws of the State of Maryland, License No. 16452, Expiration Date: 04-19-2021

MEPTECH ENGINEERING
 4803 WESTWAY DRIVE
 BELTSVILLE, MD 20816
 Phone: 301.299.7000
 mep@meptech.com

MANION ARCHITECTS, P.C.
 7307 MACARTHUR BLVD #216
 PHOENIX, AZ 85020
 PHONE: 301.299.7000

PROJECT PHASE: PERMIT
 ISSUE DATE: 4/2/2021
 DRAWN BY: SS
 REVISIONS:
 CHECKED BY: SS

Professional
Sharp Residence
 3944 Baltimore St. Kensington, MD 20895
BASEMENT AND FIRST FLOOR - HVAC DEMO

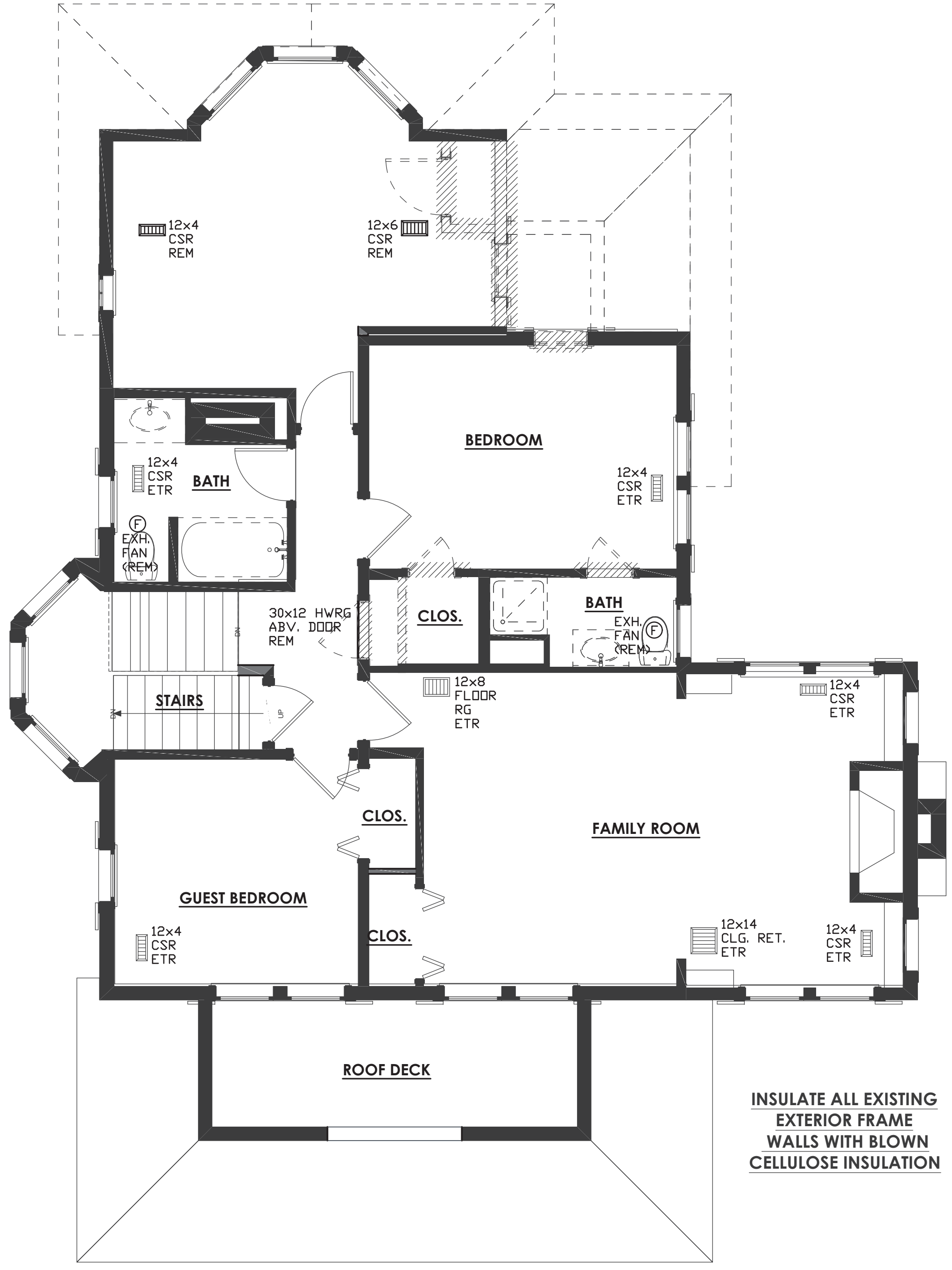
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M002
 M SHEET 2 OF 6

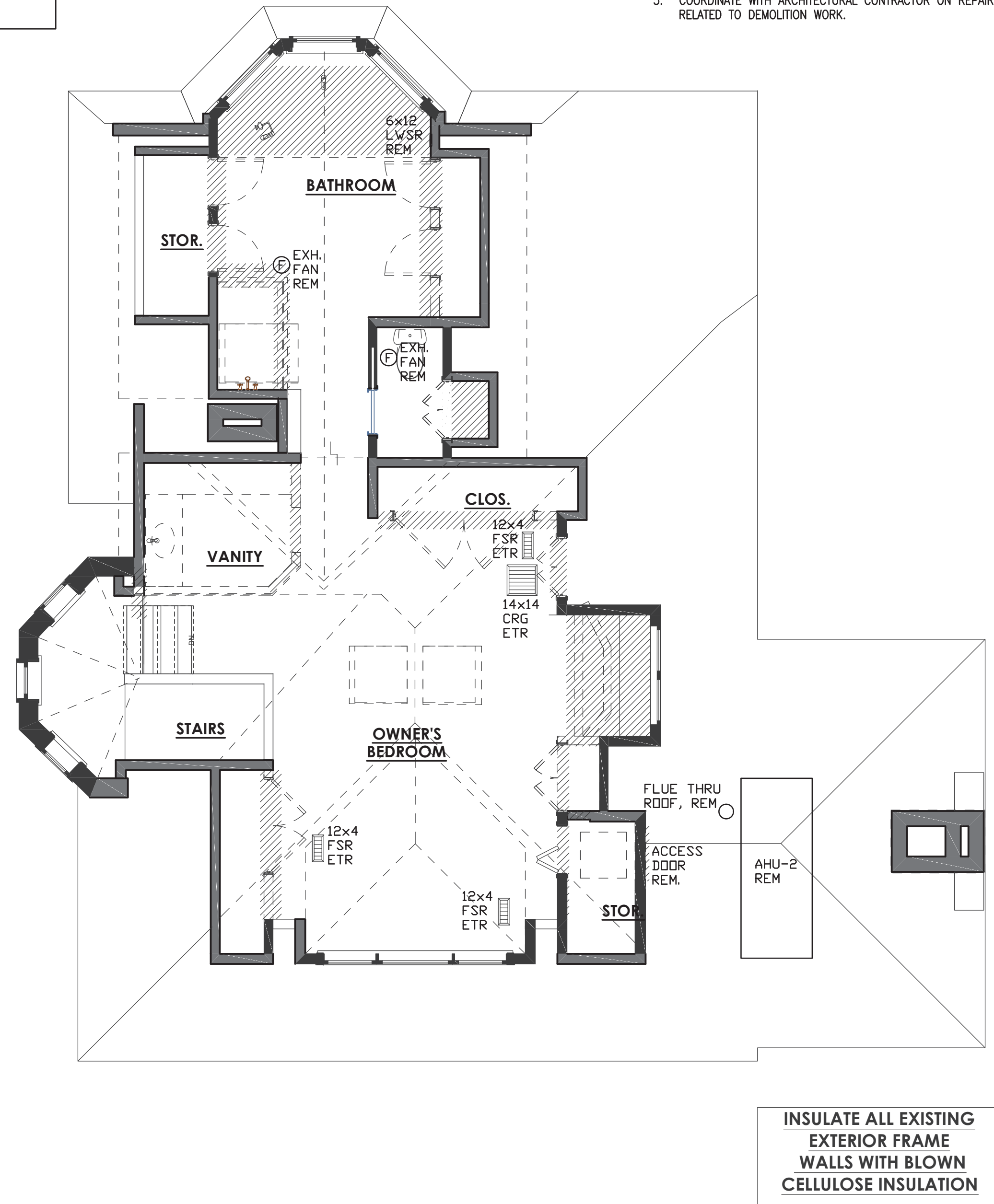
APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022

APPROVED
 Department of Permitting Services
 Permit # BLDG06 95068
 Date 08/03/21



Z SECOND FLOOR PLAN – HVAC DEMO



Z THIRD FLOOR PLAN – HVAC DEMO

- GENERAL DEMOLITION NOTES:**
1. CONTRACTOR SHALL ARRANGE THE EVACUATION AND REMOVAL OF THE REFRIGERANT CONTENTS OF ANY A/C EQUIPMENT PRIOR TO DEMOLITION WORK. NO REFRIGERANT DISCHARGE TO ATMOSPHERE IS ALLOWED. ALL REMOVAL AND EXTRACTION OF REFRIGERANT SHALL BE IN STRICT ACCORDANCE WITH LOCAL AND FEDERAL ENVIRONMENTAL PROTECTION RULES AND REGULATIONS AND BY LOCAL AND FEDERAL CERTIFIED AND QUALIFIED PERSONNEL AND FIRMS.
 2. DISCONNECT POWER CONNECTIONS BEFORE DEMOLISH ANY EQUIPMENT.
 3. DEMOLISHED ITEMS SUCH AS DUCTWORK & PIPING SHALL NOT BE ABANDONED IN PLACE.
 4. COORDINATE WITH ARCHITECTURAL CONTRACTOR ON DEMOLISHING HVAC RELATED ITEMS WHICH WERE NOT SHOWN IN HVAC DRAWINGS.
 5. COORDINATE WITH ARCHITECTURAL CONTRACTOR ON REPAIRS & PATCHING HOLES & OPENINGS RELATED TO DEMOLITION WORK.

Professional Certification: I SHARIYAR SHARAFI hereby certify that documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 16452. Expiration Date: 04-19-2021

MEPERTECH
 ENGINEERING
 4803 WESTWAY DRIVE
 BETHESDA, MD 20816
 301.291.8888
 mpe@mepertech.com

MANION ARCHITECTS, P.C.
 7307 MACARTHUR BLVD #216
 PHOENIX, AZ 85020
 PROJECT PHASE: PERMIT
 ISSUE DATE: 4/2/2021
 DRAWN BY: SS
 REVISIONS:
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Sharp Residence
 3944 Baltimore St. Kensington, MD 20895
 2ND AND 3RD FLOOR - HVAC DEMO

DO NOT SCALE DRAWINGS
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M003
 M SHEET 3 OF 6

APPROVED
Montgomery County
Historic Preservation Commission

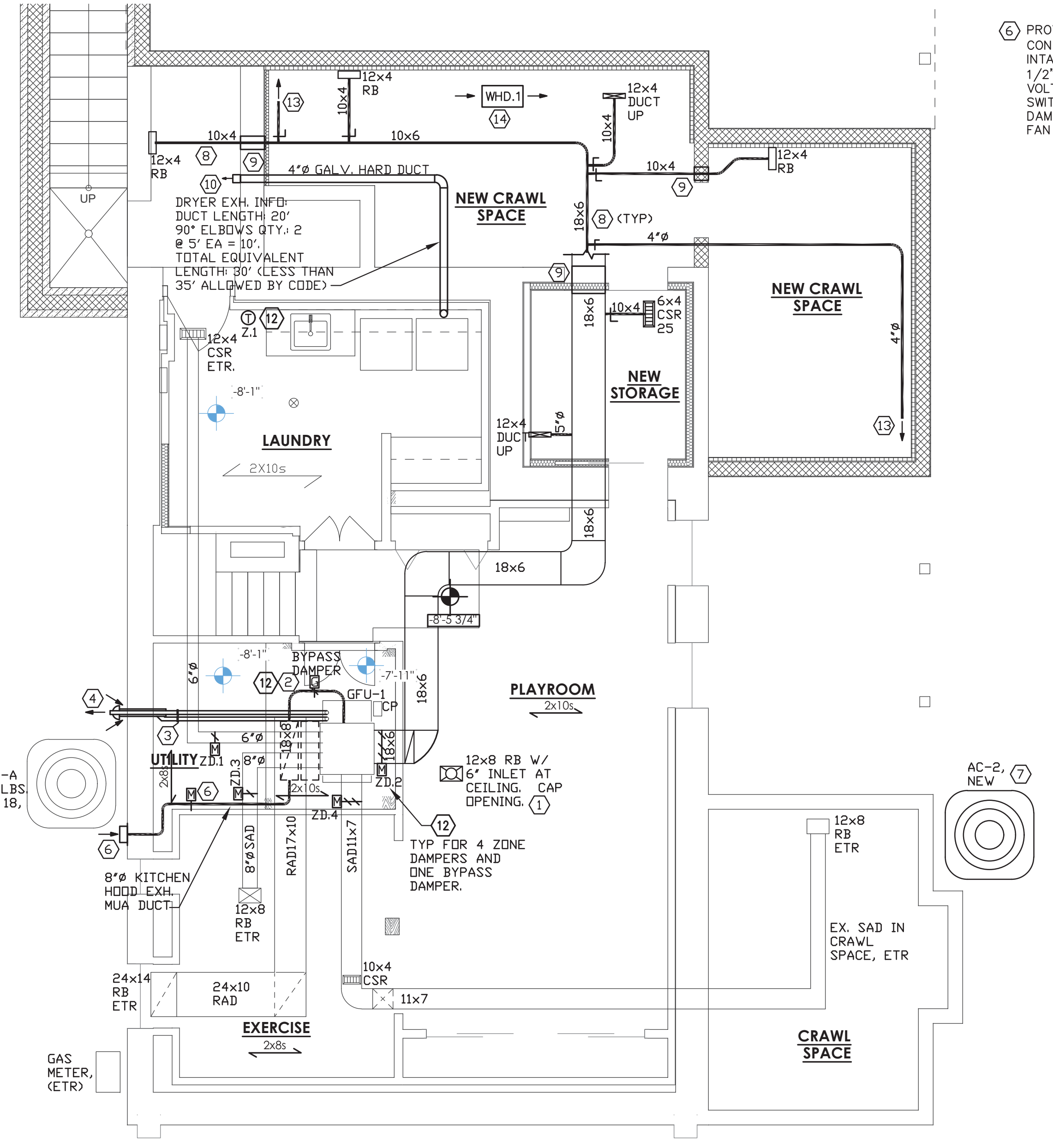
REVIEWED
By Dan.Bruechert at 2:22 pm, Mar 25, 2022

GENERAL NOTES:

- FOR MECHANICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES, REFER TO DRAWING M-1.
- USE OF FLEXIBLE DUCT ON THIS PROJECT IS NOT ALLOWED EXCEPT FOR THE FINAL 3' LENGTH TO CONNECT TO A REGISTER OR GRILL. STRETCH FLEX DUCT AS MUCH AS POSSIBLE AND ONLY INSTALL AS NEEDED. ALL BRANCH DUCTS SHALL UTILIZE HARD GALVANIZED DUCTS WITH EXTERNAL INSULATION WRAP.
- CONTRACTOR SHALL PLACE ALL FLOOR AND CEILING REGISTERS AND GRILLES AS PER ARCHITECTURAL DRAWINGS. ALL REGISTERS AND GRILLES SHALL BE CENTERED IN FRONT OF WINDOWS. NOTIFY PROJECT ARCHITECT WHERE THE LOCATIONS INTERFERE WITH STRUCTURAL OR OTHER TRADES. ALL CEILING DIFFUSERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING LAYOUTS. REPORT ALL DISCREPANCIES TO PROJECT ARCHITECT BEFORE INSTALLATION.
- ALL REGISTER SIZES ARE GIVEN AS NECK SIZES. VERIFY EXISTING OPENINGS BEFORE ORDERING ANY REGISTERS. COORDINATE REGISTER STYLES, COLORS AND FINISHES WITH PROJECT ARCHITECT BEFORE ORDERING ANY NEW MATERIALS. ALL FLOOR REGISTERS SHALL BE HEAVY DUTY RATED FOR FLOOR INSTALLATION.
- WHERE BEING REUSED, REPLACE ALL EXISTING TO REMAIN REGISTERS AND GRILLES WITH NEW COVER OF SAME SIZE AND PATTERN.
- FOR REGISTERS AND GRILLES, SUBMIT PRODUCT DATA AND SAMPLES TO PROJECT ARCHITECT FOR APPROVAL PRIOR TO ORDERING PRODUCTS.
- SEAL AROUND THE REGISTER BOOT TO ASSURE NO AIR LOSS THRU PARTITION WALLS AND INTERSTITIAL SPACES. ALL FLOOR REGISTERS SHALL BE OF HEAVY DUTY TO PREVENT DAMAGE DUE TO NORMAL TRAFFIC.
- ALL NEW SUPPLY DUCTWORK (MAINS AND BRANCHES) SHALL BE WRAPPED (INSULATED).
- USE ONLY UL 181 LISTED FOIL DUCT TAPE FOR MECHANICAL APPLICATION.

PLAN NOTES

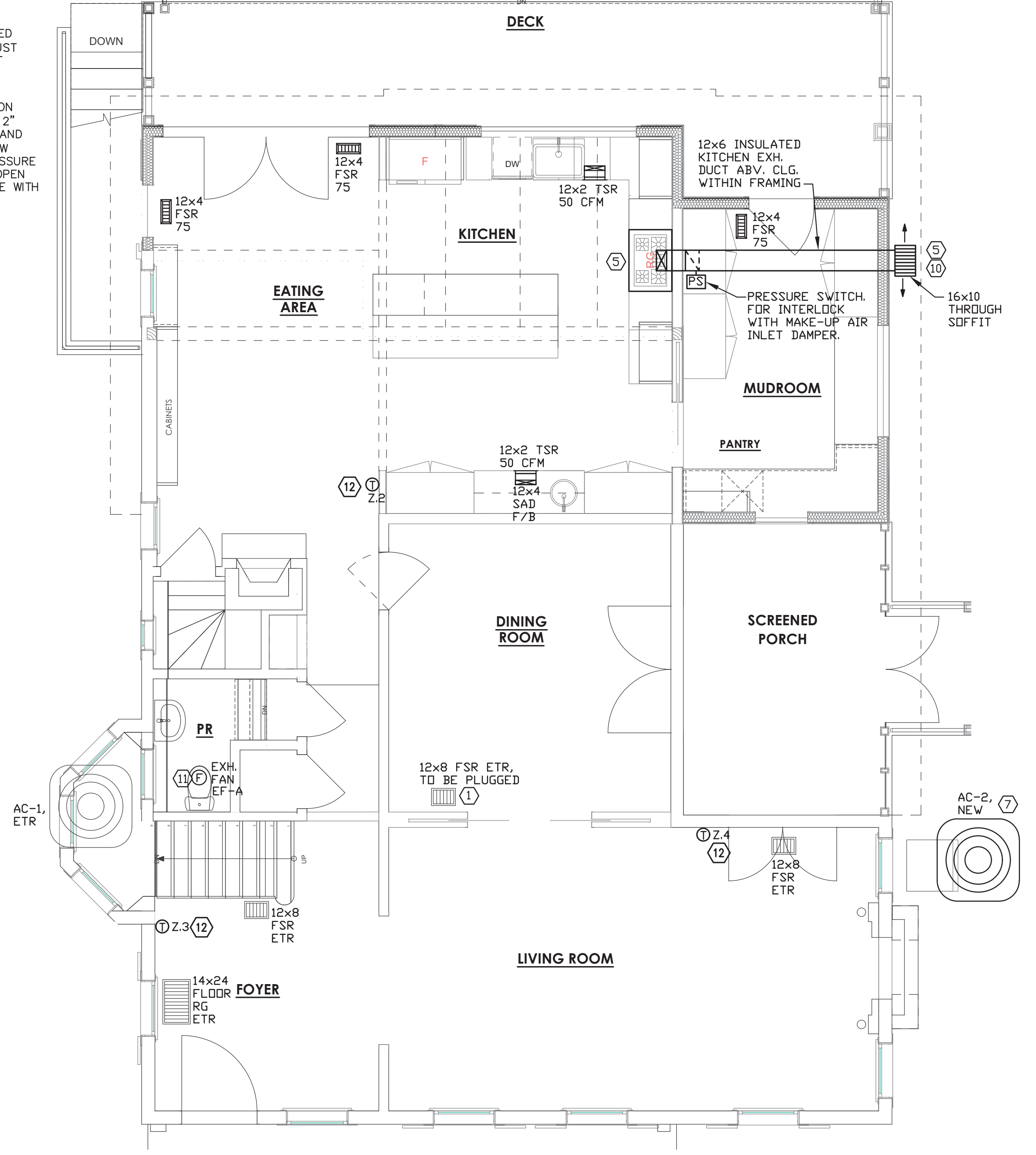
- FLOOR SUPPLY REGISTER IS OPEN TO BASEMENT. CAP THE OPENING FROM THE BASEMENT SIDE.
- PROVIDE 8" BYPASS DAMPER WITH GRAVITY BALANCED COUNTERWEIGHT.
- (2) 2" PVC FLUE PIPES, ETR.
- REMOVE FLAT PANEL COMBINATION EXHAUST AND MAKEUP AIR DEVICE AND REPLACE WITH A CONCENTRIC PVC EXHAUSTER.
- 600 CFM EXHAUST HOOD. PROVIDE HARD GALVANIZED EXHAUST DUCT AS SHOWN. PROVIDE 12"x12" EXHAUST LOUVER AT WALL DISCHARGE POINT WITH BACKDRAFT DAMPER AND 1/2" STL. STL. WIRE MESH SCREEN.
- PROVIDE 8" MAKE-UP AIR DUCT WITH R-8 INSULATION CONNECT TO FURNACE RETURN DUCT. PROVIDE 12"x12" INTAKE LOUVER AT WALL WITH BACKDRAFT DAMPER AND 1/2" STL. STL. WIRE MESH SCREEN. PROVIDE 8" LOW VOLTAGE MOTORIZED DAMPER. INTERLOCK WITH PRESSURE SWITCH AT THE KITCHEN HOOD EXHAUST DUCT, TO OPEN DAMPER WITH HOOD EXHAUST FAN START AND CLOSE WITH FAN OFF.



BASEMENT FLOOR PLAN - HVAC NEW WORK

APPROVED Department of Permitting Services
Permit # B04016955066
Date 08/01/21

- PROVIDE A NEW 3 TON AC UNIT (AC-2) FOR THE GFU-2. INSTALL UNIT ON A COMPACTED LEVEL GROUND ON A 3" THICK HI-DENSITY POLY PLASTIC PAD.
- DUCT EXPOSED TO OUTSIDE OR IN CRAWL SPACE. PROVIDE MIN. R-8 INSULATION.
- PROVIDE WALL SLEEVE THROUGH MASONRY WALL WITH WALL LINTEL AT THE OPENING. SEAL AROUND DUCT AS PER DETAILS PROVIDED.
- DRYER EXHAUST DUCT. 26 GAGE GALVANIZED HARD DUCT & SHALL BE SUPPORTED AT 4-FOOT INTERVALS. DO NOT USE SCREWS THAT WOULD PROTRUDE INTO DUCTWORK. USE UL 181B DUCT TAPE TO MAKE ALL JOINTS. INSTALL SECTIONS IN THE DIRECTION OF AIRFLOW SO TO AVOID DUCT ENDS FROM OBSTRUCTING AIR FLOW. PROVIDE DISCHARGE WALL OUTLET WITH DRYER VENT MAGNETIC FLAPPER (SCREEN AT OUTLET IS NOT PERMITTED). THE MAXIMUM TOTAL EQUIVALENT LENGTH (TEL) OF THE DUCT SHALL NOT EXCEED 35 FEET. FOR TEL EXCEEDS 35 FEET, THE DRYER MANUFACTURER SHALL APPROVE THE LONGER LENGTH IN WRITING & THE INSTALLATION SHALL FOLLOW MANUFACTURE'S INSTRUCTIONS. A WARNING PLACARD (IN-O-VATE OR EQUAL) SHALL BE PLACED WITHIN 6' OF THE DRYER. DRYER TRANSITION FLEX DUCT SHALL BE SINGLE LENGTH, 8' MAXIMUM, UL 2158A LISTED (IN-O-VATE OR EQUAL).
- MAINTAIN MINIMUM 3" FOR ALL ENVIRONMENTAL EXHAUST OPENINGS TO OPENABLE WINDOWS AND DOORS AND TO ALL OTHER OPENINGS AND AIR INTAKES.
- REPLACE EXISTING EXHAUST FAN WITH A NEW EXHAUST FAN.
- PROVIDE RED-LINK ZONE DAMPER SYSTEM BY HONEYWELL (OR APPROVED EQUAL) WITH ZONE DAMPERS, CONTROLLER SYSTEM, FOUR SISED SLAVE CONTROLLERS AND ADDITIONAL WIRELESS CONTROLLERS AS NEEDED. PROVIDE A WEIGHTLESS BYPASS DAMPER AT THE UNIT (HONEYWELL TRUEZONE BYPASS DAMPER)
- OPEN ENDED DUCT W/ 1/2" WMS COVER. BALANCE TO MAX. 10 CFM SUPPLY.
- CRAWL SPACE DEHUMIDIFIER, 70 PINTS PER DAY, BY MOISTURE MEDIC, 120 VOLT, 5.8 AMPS, 200 CFM, WEIGHT 56 LBS., W/ MERV8 WASHABLE FILTER, ENERGY FACTOR: 2.1 L/KW-HR, 8" POWER CORD, R410A REFRIGERANT. PROVIDE WITH HANGING KIT AND A 3/4" CONDENSATE DRAIN TO OUTSIDE. SET HUMIDISTAT AT 50% RH.



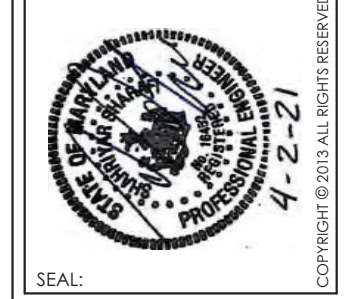
1ST FLOOR PLAN - HVAC NEW WORK

I, SHARIFAS SHARAFI, hereby certify that documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 16452, Expiration Date: 04-19-2021

MEPTECH ENGINEERING
4803 WESTWAY DRIVE
BETHESDA, MD 20816
mep@meptech.com

MANION ARCHITECTS, P.C.
7307 MACARTHUR BLVD #216
PHOENIX, AZ 85020
PHONE: 301.293.7000

PROJECT PHASE: PERMIT
ISSUE DATE: 4/2/2021
DRAWN BY: SS
CHECKED BY: SS



3944 Baltimore St. Kensington, MD 20895

BASEMENT AND 1ST FLOOR - HVAC NEW WORK

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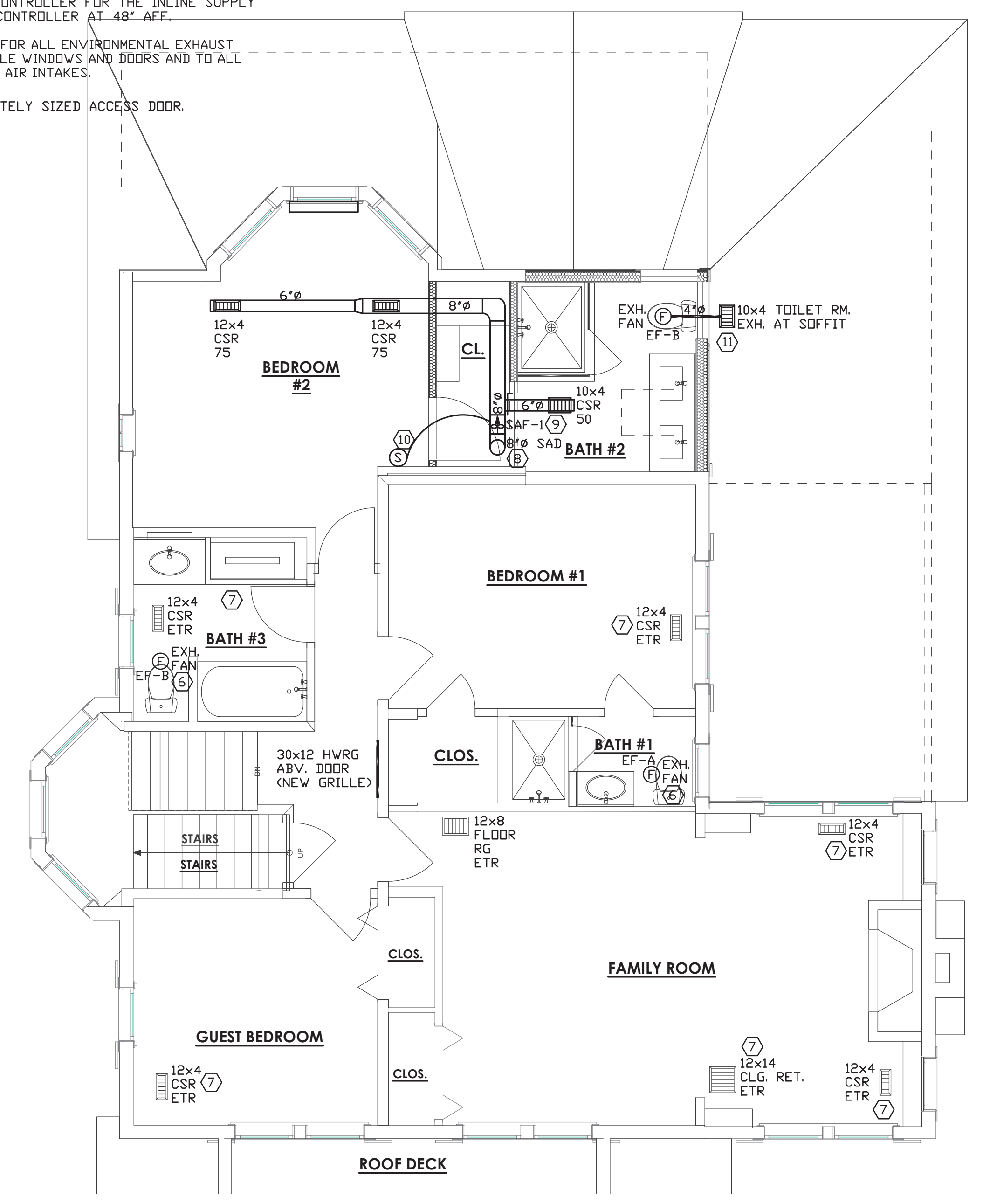
M004
M SHEET 4 OF 6

PLAN NOTES

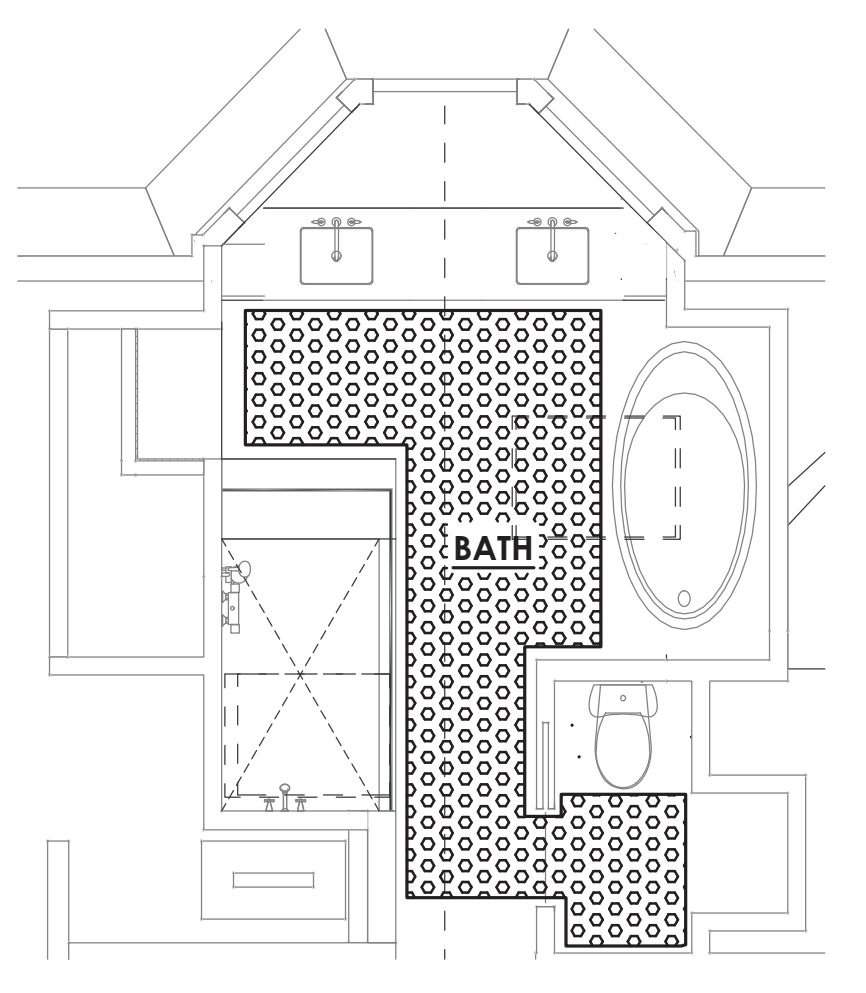
1. PROVIDE A NEW AUXILIARY DRAIN PAN WITH 3/4" DRAIN TO OUTSIDE. DRAIN PAN SHALL EXTEND A MINIMUM OF 6" BEYOND ALL PARTS OF THE AIR HANDLER. PROVIDE A HIGH WATER LEVEL KILL SWITCH INSIDE THE DRAIN PAN.
2. FOR THE COOLING COIL CONDENSATE DRAIN, PROVIDE A 3/4" DRAIN LINE WITH P-TRAP AND OVERFLOW KILL SWITCH (EZ-TRAP). COOLING COIL DRAIN SHALL RUN OUTSIDE AND DISCHARGE TO STORM DOWNSPOUTS.
- FOR HEATING FURNACE DRAIN, PROVIDE A 3/4" DRAIN LINE TO A SERVICE SINK INSIDE THE BUILDING. PROVIDE CONDENSATE NEUTRALIZATION KIT FOR FURNACE CONDENSATE DRAIN DISCHARGE TO A SERVICE SINK INSIDE THE BUILDING.
3. (2) 2" PVC FLUE PIPES THROUGH OUTSIDE ROOF.
4. PROVIDE FLUE VENTS THROUGH THE ROOF AND INSTALL AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. ADJUST VENT OUTLET HEIGHT WITH NEW SINK. PROVIDE NEW REGISTER.
6. REPLACE EXISTING EXHAUST FAN WITH A NEW EXHAUST FAN.
7. REPLACE ALL EXISTING TO REMAIN REGISTERS AND GRILLES WITH A NEW REGISTER AND GRILLE OF THE SAME SIZE AND DESIGN.
8. 8" SUPPLY AIR DUCT, CONNECT TO EXISTING MAIN SUPPLY IN 3RD FLOOR EVE.
9. INLINE 8" SUPPLY AIR BOOSTER FAN SAF-1. INSTALL IN THIRD FLOOR ATTIC EVE SPACE. PROVIDE PRESSURE SWITCH AT GFU-2 SUPPLY DUCT AND INTERLOCK SAF-1 WITH THE GFU-2 TO START AND STOP WITH GFU-2.
10. PROVIDE A SPEED CONTROLLER FOR THE INLINE SUPPLY FAN. MOUNT SPEED CONTROLLER AT 48" AFF.
11. MAINTAIN MINIMUM 3" FOR ALL ENVIRONMENTAL EXHAUST OPENINGS TO OPENABLE WINDOWS AND DOORS AND TO ALL OTHER OPENINGS AND AIR INTAKES.
12. PROVIDE AN ADEQUATELY SIZED ACCESS DOOR.

GENERAL NOTES:

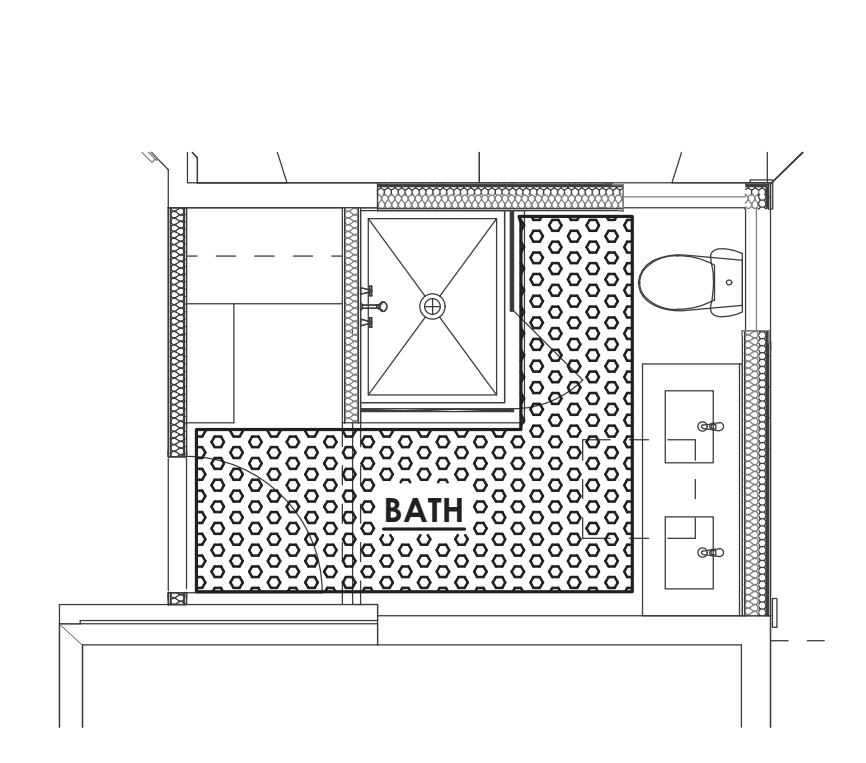
1. FOR MECHANICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES, REFER TO DRAWING M-1.
2. USE OF FLEXIBLE DUCT ON THIS PROJECT IS NOT ALLOWED EXCEPT FOR THE FINAL 3' LENGTH TO CONNECT TO A REGISTER OR GRILLE. STRETCH FLEX DUCT AS MUCH AS POSSIBLE AND ONLY INSTALL AS NEEDED. ALL BRANCH DUCTS SHALL UTILIZE HARD GALVANIZED DUCTS WITH EXTERNAL INSULATION WRAP.
3. CONTRACTOR SHALL PLACE ALL FLOOR AND CEILING REGISTERS AND GRILLES AS PER ARCHITECTURAL DRAWINGS. ALL REGISTERS AND GRILLES SHALL BE CENTERED IN FRONT OF WINDOWS. NOTIFY PROJECT ARCHITECT WHERE THE LOCATIONS INTERFERE WITH STRUCTURAL OR OTHER TRADES. ALL CEILING DIFFUSERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING LAYOUTS. REPORT ALL DISCREPANCIES TO PROJECT ARCHITECT BEFORE INSTALLATION.
4. ALL REGISTER SIZES ARE GIVEN AS NECK SIZES. VERIFY EXISTING OPENINGS BEFORE ORDERING ANY REGISTERS. COORDINATE REGISTER STYLES, COLORS AND FINISHES WITH PROJECT ARCHITECT BEFORE ORDERING ANY NEW MATERIALS. ALL FLOOR REGISTERS SHALL BE HEAVY DUTY RATED FOR FLOOR INSTALLATION.
5. WHERE BEING REUSED, REPLACE ALL EXISTING TO REMAIN REGISTERS AND GRILLES WITH NEW COVER OF SAME SIZE AND PATTERN.
6. FOR REGISTERS AND GRILLES, SUBMIT PRODUCT DATA AND SAMPLES TO PROJECT ARCHITECT FOR APPROVAL PRIOR TO ORDERING PRODUCTS.
7. SEAL AROUND THE REGISTER BOOT TO ASSURE NO AIR LOSS THRU PARTITION WALLS AND INTERSTITIAL SPACES. ALL FLOOR REGISTERS SHALL BE OF HEAVY DUTY TO PREVENT DAMAGE DUE TO NORMAL TRAFFIC.
8. ALL NEW SUPPLY DUCTWORK (MAINS AND BRANCHES) SHALL BE WRAPPED (INSULATED).
9. USE ONLY UL 181 LISTED FOIL DUCT TAPE FOR MECHANICAL APPLICATION.



SECOND FLOOR PLAN - HVAC NEW WORK



3RD FLOOR BATHROOM FLOOR HEATING
 SCALE: 1/4" = 1'-0"



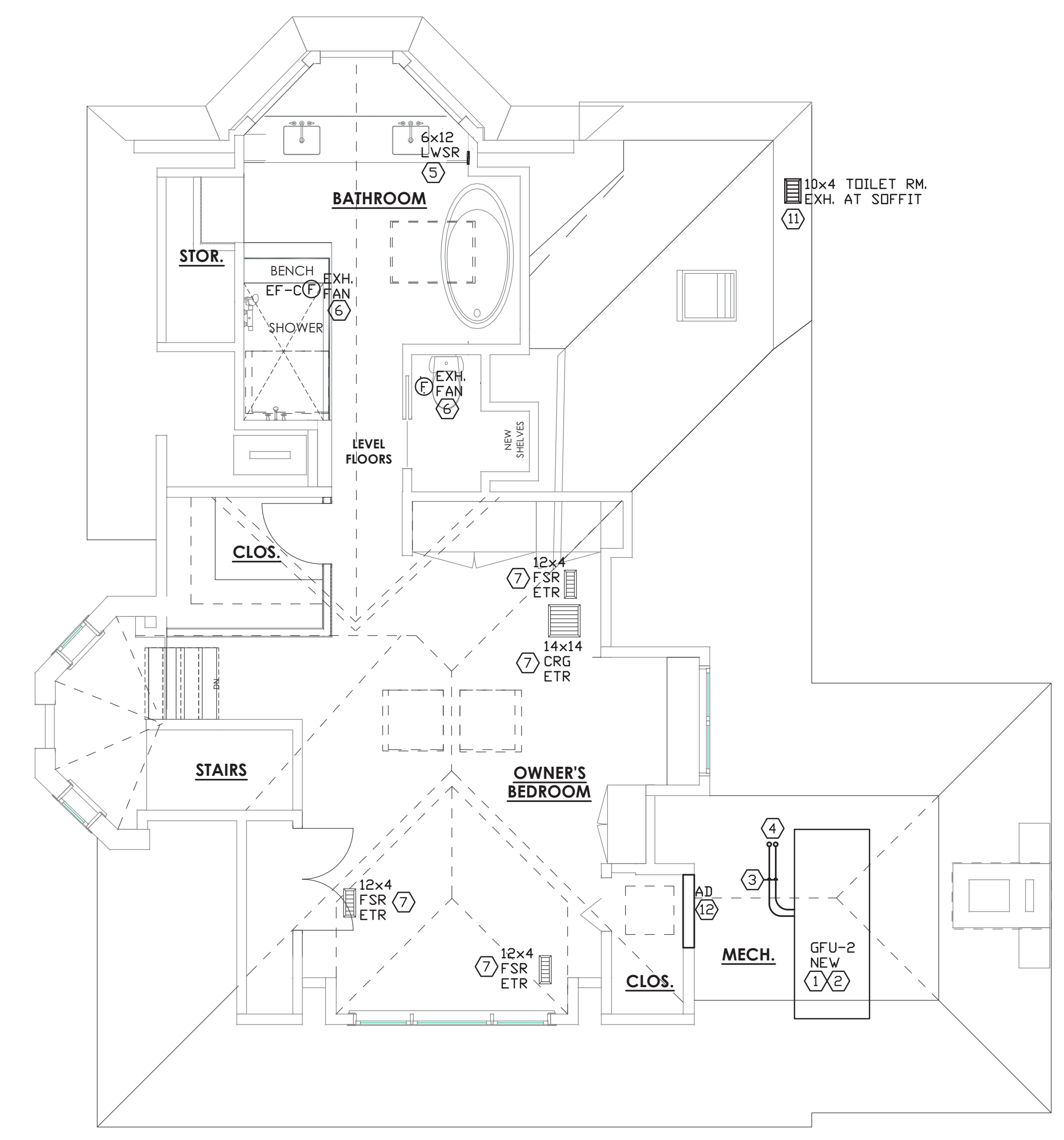
2ND FLOOR BATHROOM FLOOR HEATING
 SCALE: 1/4" = 1'-0"

RADIANT FLOOR HEATING

FLOOR HEATING SYSTEM:
 THE AREA CROSS HATCHED IN BATHROOMS AND OTHER AREAS SHALL BE PROVIDED WITH ELECTRIC MAT FLOOR HEATING SYSTEM OF 12 WATTS/SF UNLESS NOTED OTHERWISE.
 PROVIDE REMOTE WALL THERMOSTATS FOR CONTROL AND SHUTOFF SWITCH. FOR EACH ZONE, PROVIDE ONE DEDICATED 120V, 1/60, 20 AMPS, 1 POLE, GFCI CIRCUIT TO FEED THE FLOOR HEATING SYSTEM.

ZONE 1: 2ND FL. BATHROOM: 40 SF, TOTAL WATTAGE: 480 WATTS.
 ZONE 2: 3RD FL. BATHROOM: 60 SF, TOTAL WATTAGE: 720 WATTS.

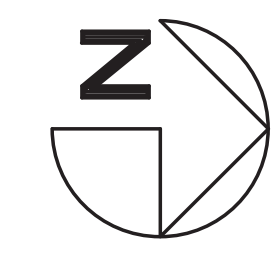
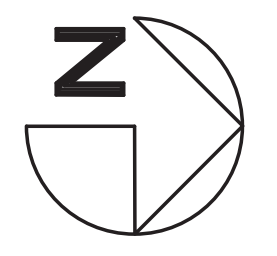
NOTE: MAXIMUM ALLOWED WATTAGE ON A 20A CIRCUIT: 1350 WATTS.
 DO NOT EXCEED THIS WATTAGE ON ANY 20A CIRCUIT.



THIRD FLOOR PLAN - HVAC NEW WORK

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022



Professional Certification: I SHARIYAR SHARAFI hereby certify that documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 16452. Expiration Date: 04-19-2021

MEPTECH ENGINEERING
 4805 WESTWAY DRIVE
 BELTSVILLE, MD 20816
 (301) 281-1100
 mep@meptecheng.com

MANION ARCHITECTS, P.C.
 7307 MACARTHUR BLVD #216
 BETHESDA, MD 20814
 PHONE: 301.293.7000

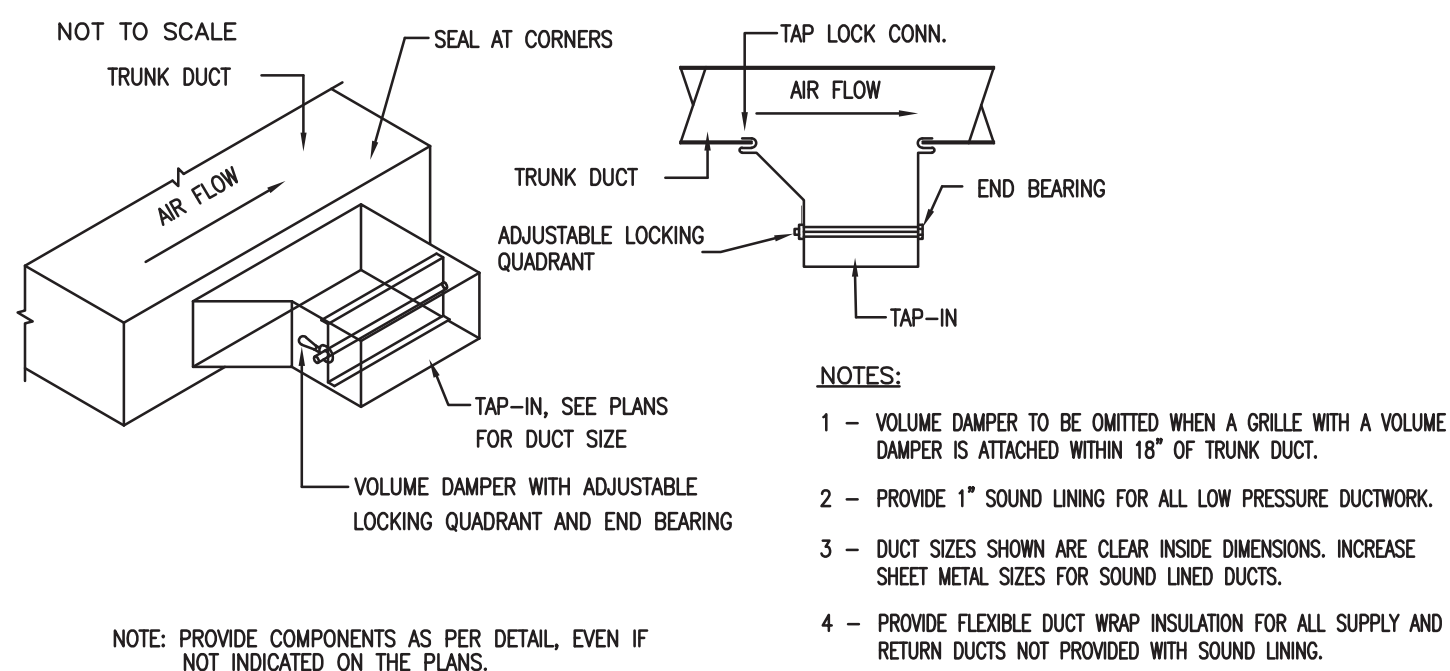


3944 Baltimore St. Kensington, MD 20895

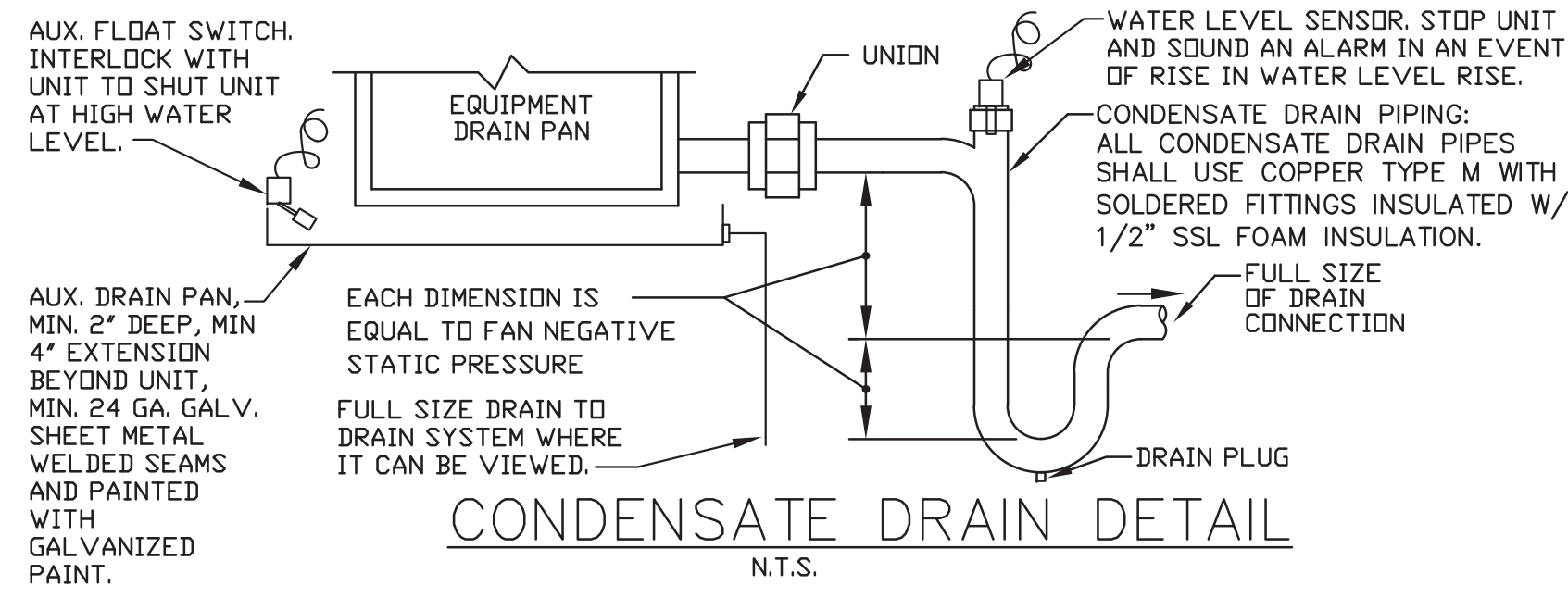
2ND AND 3RD FLOOR - HVAC NEW WORK

DO NOT SCALE DRAWINGS

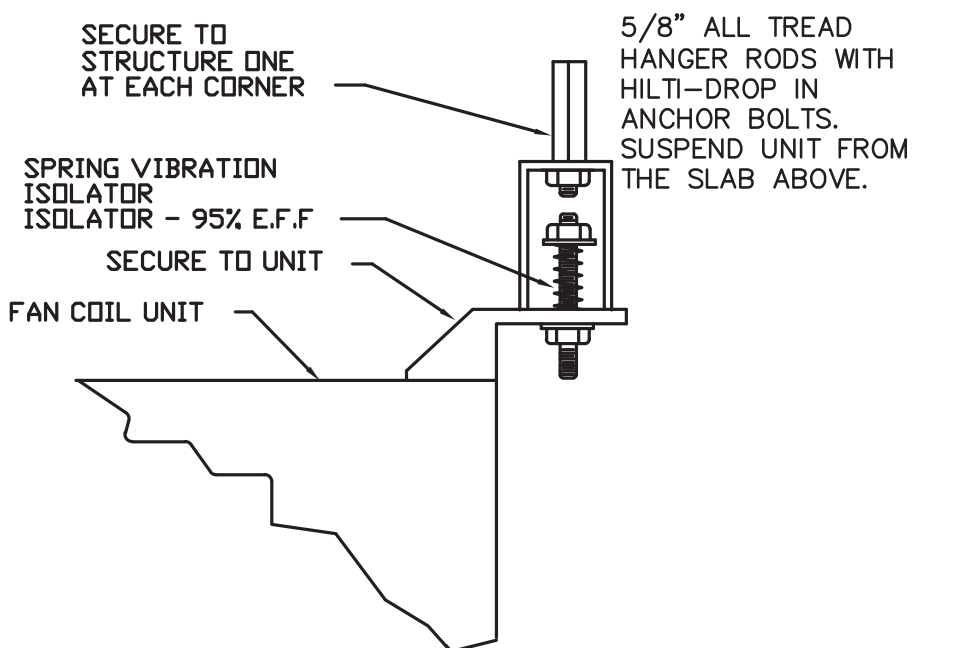
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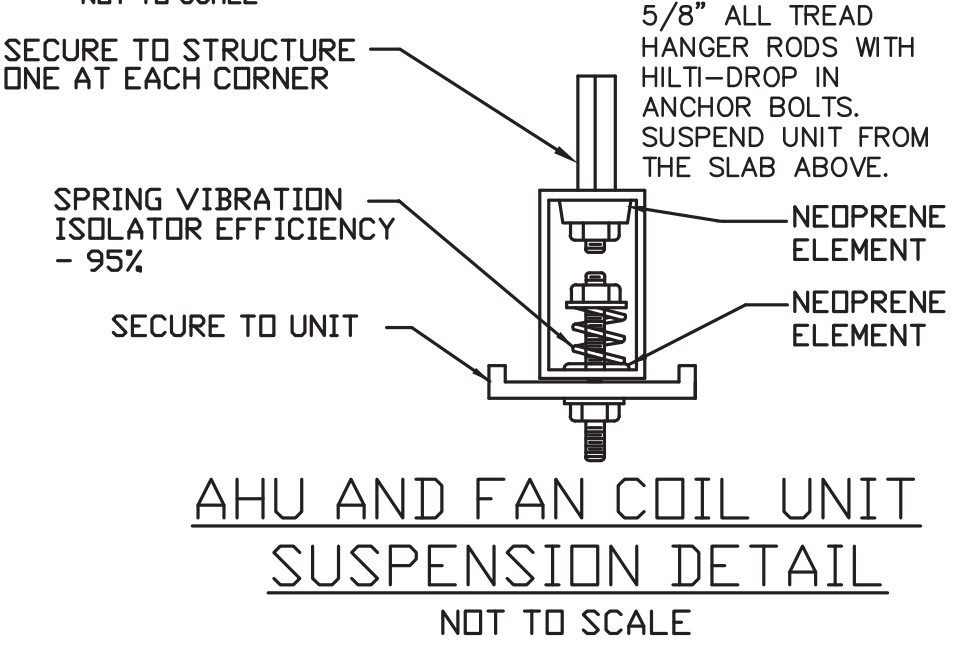
TYPICAL BRANCH DUCT CONNECTION DETAIL



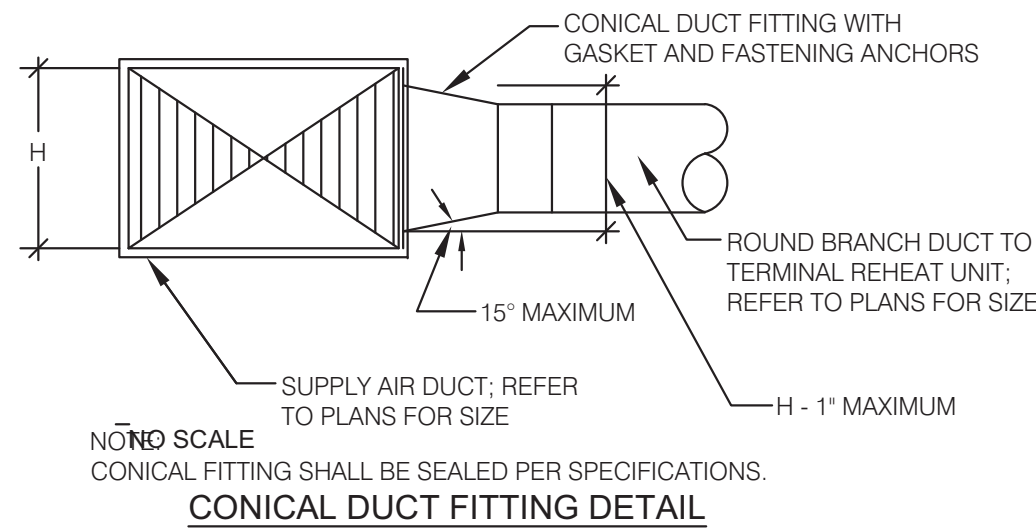
CONDENSATE DRAIN DETAIL



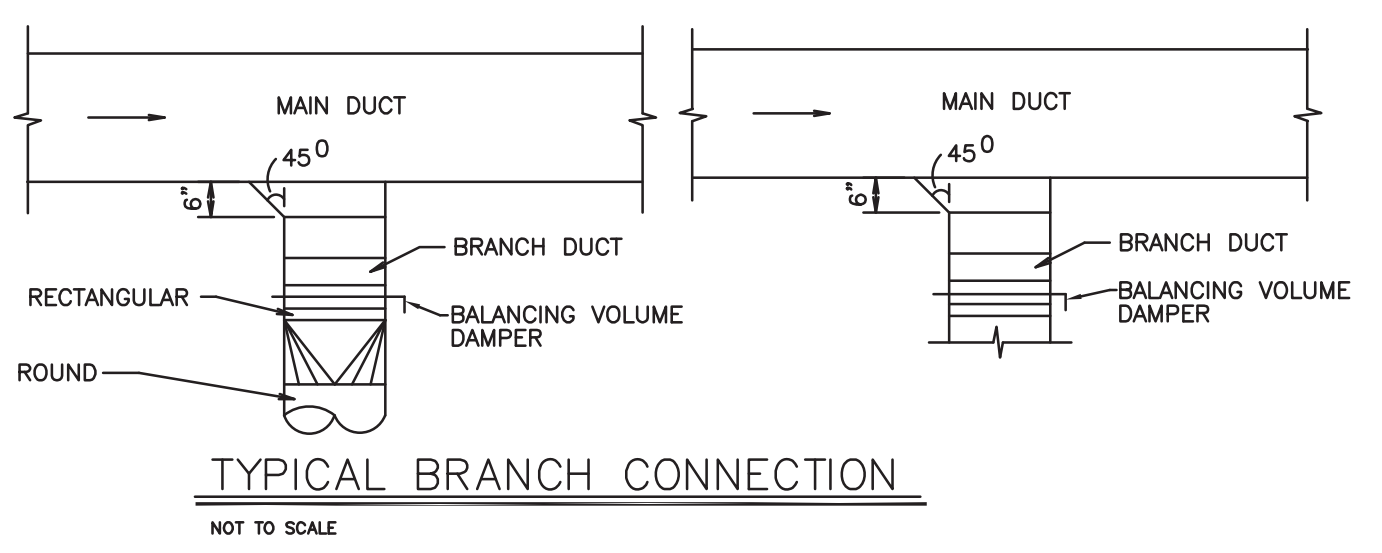
FAN COIL UNIT SUSPENSION DETAIL



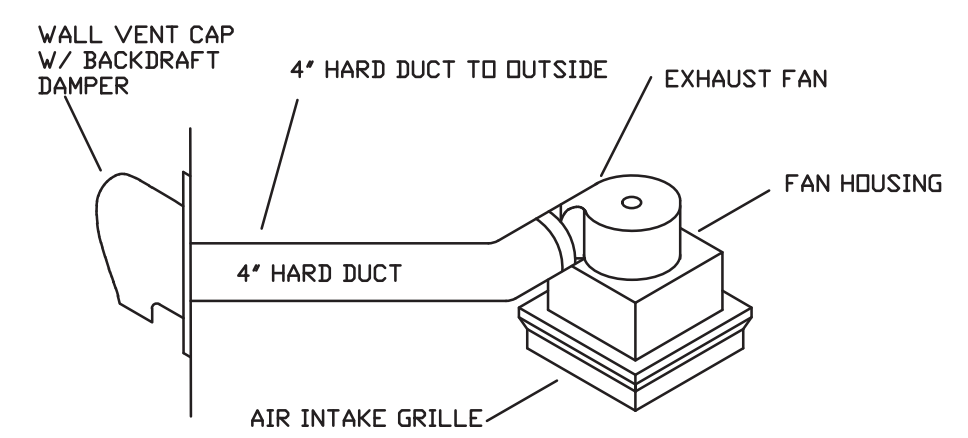
AHU AND FAN COIL UNIT SUSPENSION DETAIL



CONICAL DUCT FITTING DETAIL

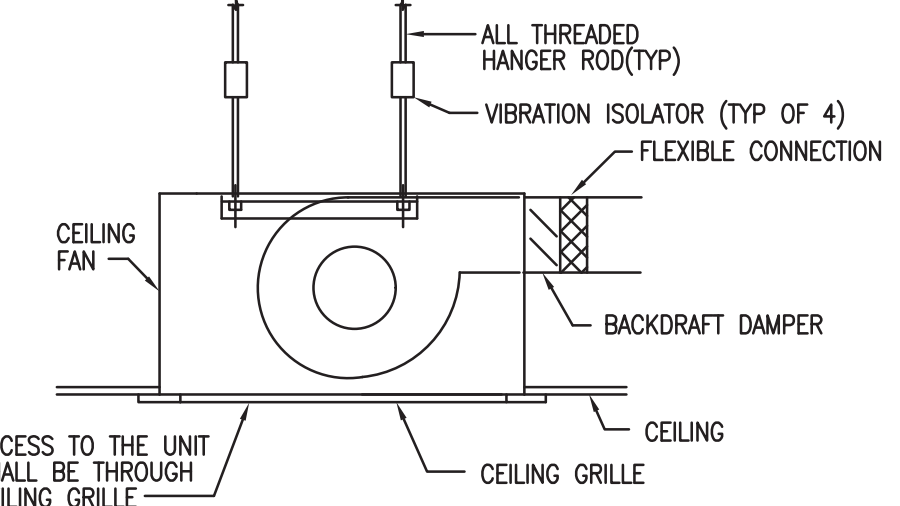


TYPICAL BRANCH CONNECTION

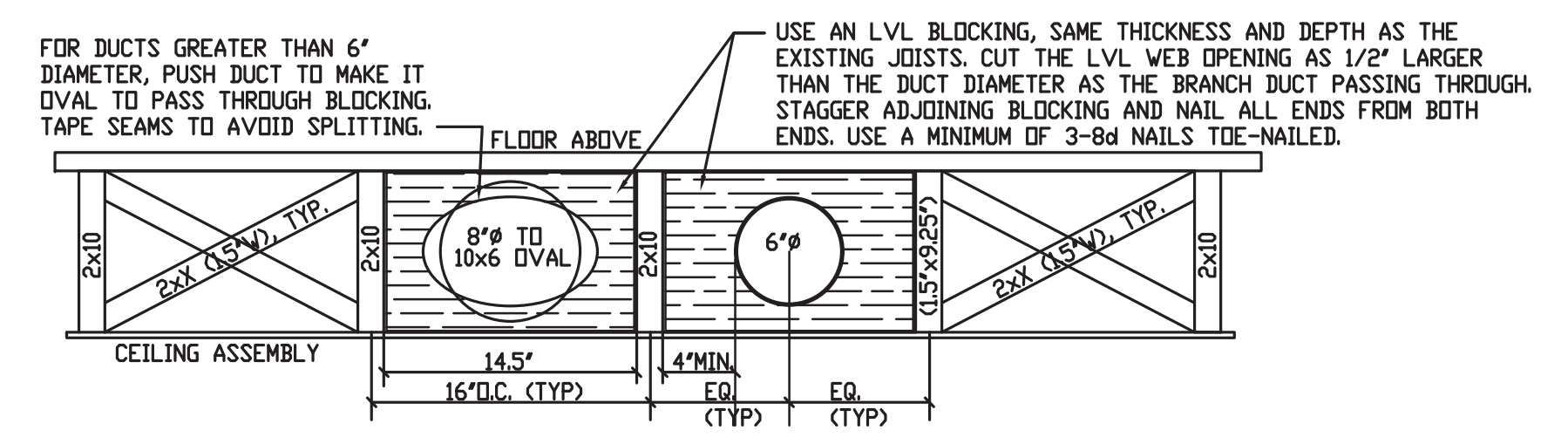


TYPICAL EXHAUST FAN DETAIL

CONDENSATE DRAIN PIPING:
 ALL CONDENSATE DRAIN PIPES SHALL USE COPPER TYPE M WITH SOLDERED FITTINGS INSULATED W/ 1/2\"/>

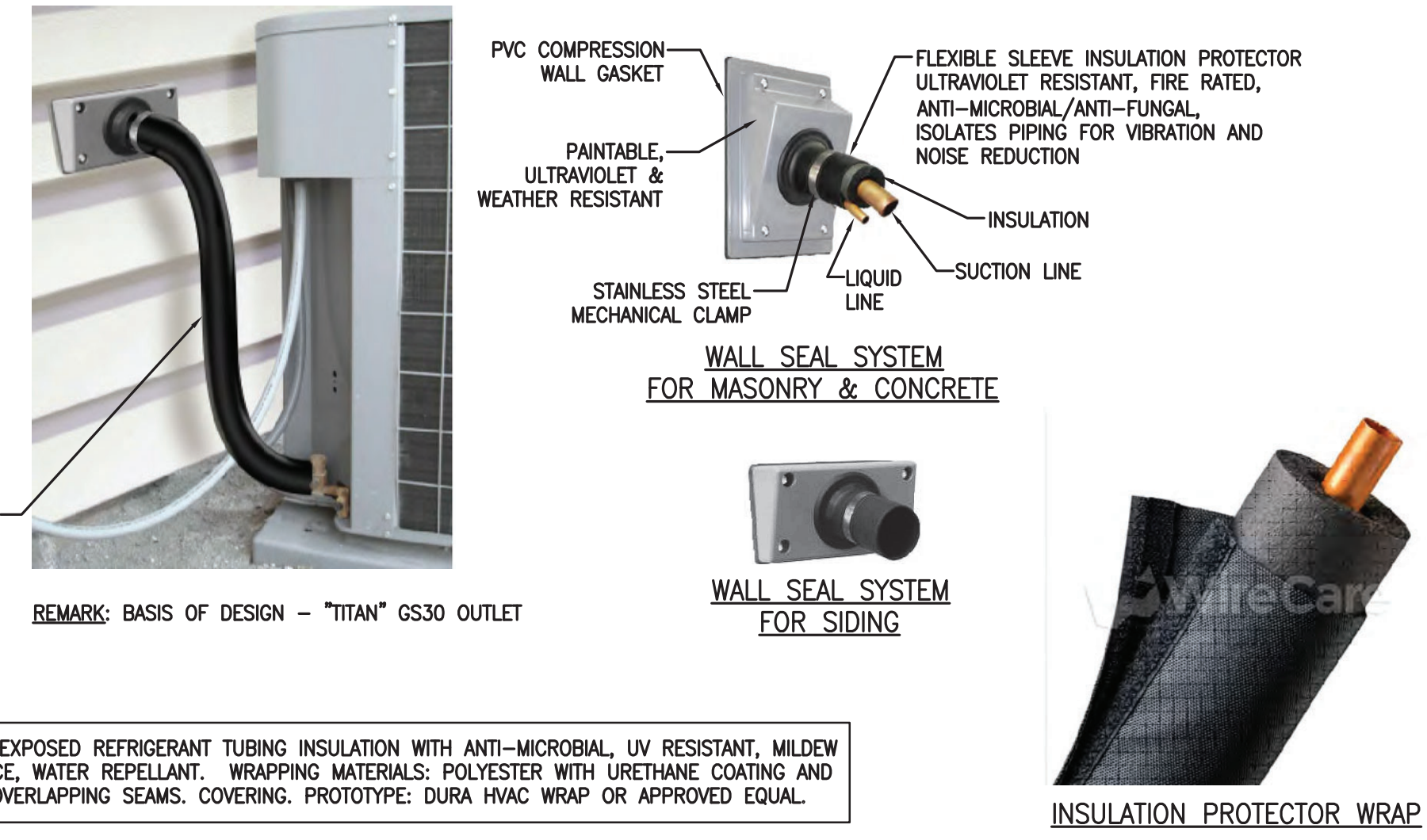


TYPICAL EXHAUST FAN DETAIL



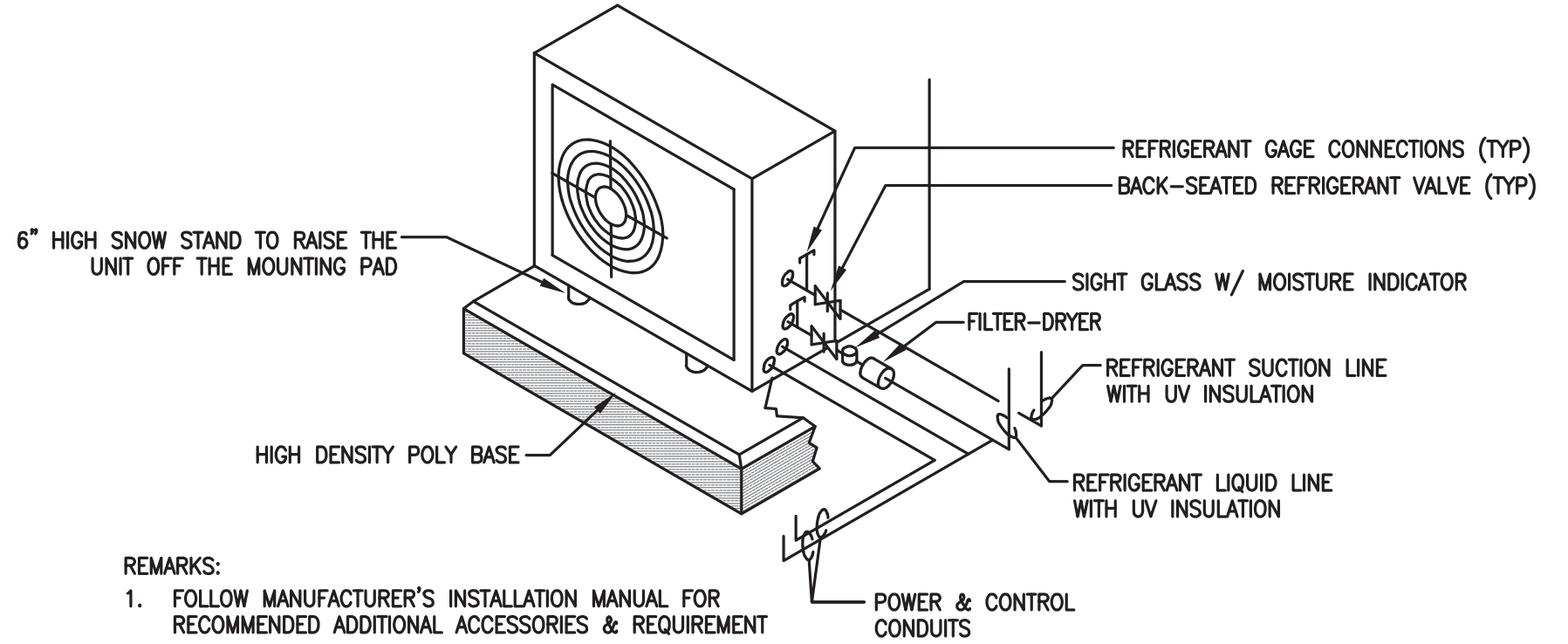
- DETAIL NOTES:
- OBTAIN WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER PRIOR TO REMOVAL OF ANY X-BRACING MEMBERS OR OMITTING ONE.
 - TO INSTALL BRANCH DUCTS 6\"/>

1 X-BRACING AND BRANCH DUCTWORK DETAIL



PROTECT EXPOSED REFRIGERANT TUBING INSULATION WITH ANTI-MICROBIAL, UV RESISTANT, MILDEW RESISTANCE, WATER REPELLANT, WRAPPING MATERIALS: POLYESTER WITH URETHANE COATING AND VELCRO OVERLAPPING SEAMS. COVERING, PROTOTYPE: DURA HVAC WRAP OR APPROVED EQUAL.

2 REFRIGERANT PIPING PENETRATION WALL SEAL AND INSULATION PROTECTION SYSTEM DETAIL



- REMARKS:
- FOLLOW MANUFACTURER'S INSTALLATION MANUAL FOR RECOMMENDED ADDITIONAL ACCESSORIES & REQUIREMENT

8 SPLIT-TYPE HEAT PUMP A/C SYSTEM OD UNIT (HP-1) INSTALLATION DETAIL

APPROVED
 Montgomery County
 Historic Preservation Commission

REVIEWED
 By Dan.Bruechert at 2:22 pm, Mar 25, 2022

I, SHARIYAH SHARAF, hereby certify that documents were prepared or checked by me as a Professional Engineer under the laws of the State of Maryland, License No. 161452, Expiration Date: 04-19-2021.

MEPERTECH
 ENGINEERING
 4803 WESTWAY DRIVE
 BETHESDA, MD 20816
 mmp@mepertech.com

MANION ARCHITECTS, P.C.
 7307 MACARTHUR BLVD #216
 PHOENIX, AZ 85016
 PHONE: 301.293.7000

PROJECT PHASE: PERMIT
 ISSUE DATE: 4/2/2021
 DRAWN BY: SS
 REVISIONS:
 CHECKED BY: SS



Sharp Residence
 3944 Baltimore St. Kensington, MD 20895

HVAC DETAILS

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M006