HISTORIC PRESERVATION COMMISSION

Marc Elrich
County Executive

Sandra I. Heiler
Chairman

Date: November 2, 2020

MEMORANDUM

TO: Hadi Mansouri
Department of Permitting Services
FROM: Michael Kyne
Historic Preservation Section
Maryland-National Capital Park & Planning Commission
SUBJECT: Historic Area Work Permit #907051: Porch Construction

---

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 March 25, 2020 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: Nathan and Sarah Engle (Luke Olson, Architect)
Address: 3929 Baltimore Street, 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 Michael Kyne at 301.563.3403 or michael.kyne@montgomeryplanning.org to schedule a follow-up site visit.

ENGLE RESIDENCE
FRONT PORCH ADDITION
3929 BALTIMORE STREET
KENSINGTON, MD 20895

SCOPE OF WORK: REBUILD HISTORIC FRONT PORCH, ADD BATHROOM AND OFFICE TO EXISTING ATTIC SPACE (NEW SPACE ENTIRELY WITHIN EXISTING THERMAL ENVELOPE OF HOUSE)

GRAPHIC SYMBOLS

- A / A-5 — SECTION SHEET NO.
- A / A-5 — SECTIONAL DETAIL SHEET NO.
- A / A-5 — DETAIL TARGET, ENLARGEMENT SHEET NO.
- N / A-12 — EXTERIOR ELEVATION SHEET NO.
- N / W 2 E / A-12 / S — INTERIOR ELEVATION SYMBOL DRAWING NO. SHEET NO.
- ELEV. 42.00 — DATUM ELEVATION
- 106 — ROOM NUMBER
- 4 — DOOR NUMBER
- W1 — WINDOW TYPE
- 1 — REVISION NUMBER
- P1 — PARTITION TYPES SEE SCHEDULE
- T — TEMPERED GLASS

LIST OF DRAWINGS

CALCULATIONS

EXISTING LIVING SPACE

FIRST FLOOR:	1,276.2 S.F. +/-
SECOND FLOOR:	873.1 S.F. +/-
ATTIC FLOOR:	413.2 S.F. +/-
TOTAL	2,562.5 S.F. +/-

PROPOSED ADDITION

FRONT PORCH:	340.1 S.F.
ATTIC FLOOR:	150.7 S.F.
TOTAL	490.8 S.F.

GROSS SQUARE FOOTAGE:

EXISTING SF:	2,562.5 S.F. +/-
ADDITION:	490.8 S.F.
TOTAL	3,053.3 S.F.

ZONED: R-60 ZONING DATA

	PROVIDED	REQUIRED
LOT AREA	20,960 S.F.	6,000 S.F. MIN.
LOT COVERAGE	1,874.6 S.F.	35% MAX. (7,336 S.F.)
FRONT YARD SETBACK	44,5' EXG.	25'-0" MIN.
SIDE YARD SETBACK	+/-29,7' EXG./12.6' ONE SIDE	20.0'/ 10.0' ONE SIDE (T.O.K.)
REAR YARD SETBACK	+/- 159' EXG.	20' MIN.
LOT FRONTAGE	62.05' EXG.	60.0' MIN.
BUILDING HEIGHT	27,5' +/- EXG. (NO CHANGE)	2 ½ STORIES, 30' MAX

LOT SIZE: 20,960 SF

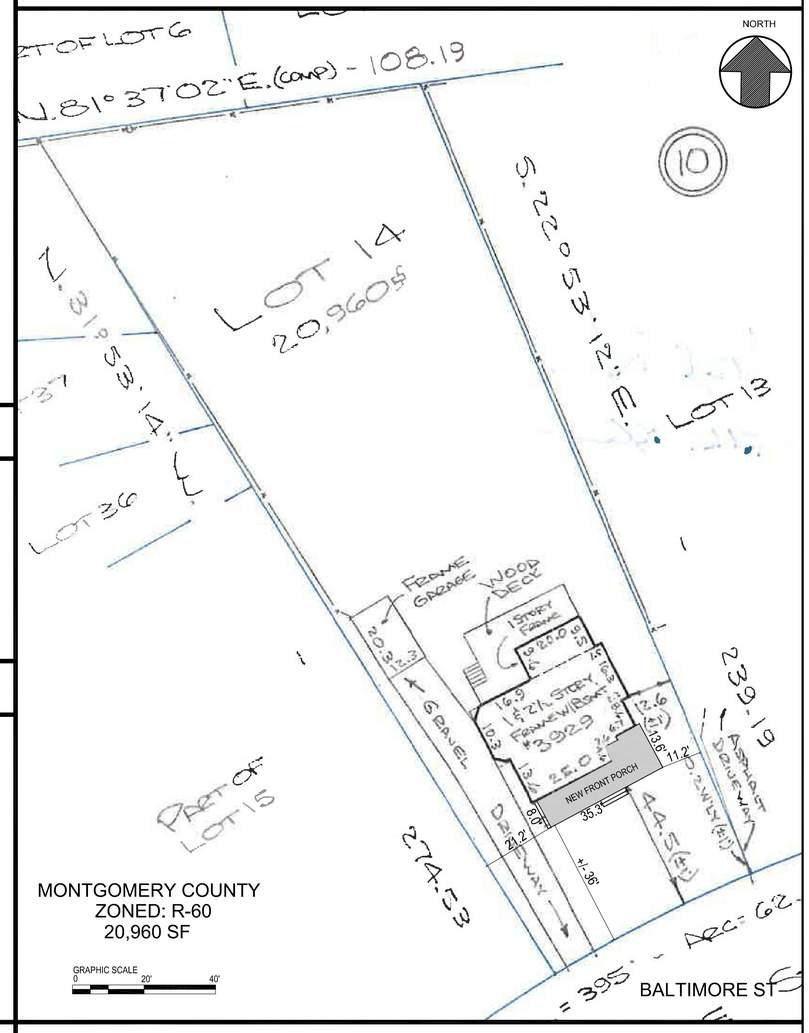
BUILDING AREA:

1,874.6 S.F. MAIN BLDG FOOTPRINT (INCLUDING FRONT PORCH & DETACHED GARAGE) (MAX ALLOWABLE = 7,336.0 SF)

PERCENTAGE OF LOT OCCUPANCY:

1,874.6 S.F. / 20,960 SF = 8.9% (ALLOWABLE = 35%)

SITE PLAN



MATERIAL SYMBOLS

- EARTH
- CONCRETE
- STEEL
- BRICK
- FINISH WOOD
- CONCRETE MASONRY UNIT
- ROUGH LUMBER BLOCKING
- GYPSUM SHEATHING
- SLAT BOARD
- ACOUSTICAL TILE

ABBREVIATIONS

ABOVE FINISH FLOOR	AFF	EACH	EA	INTERIOR	INT	PLATE	PL	VESTIBULE	VEST
ACOUSTIC	ACST	EAST	E			PLUMBING	PLMB	VINYL COMPOSITE TILE	VCT
ADJUSTABLE	ADJ	ELECTRIC, ELECTRICAL	ELEC	JANITOR'S CLOSET	JC	PLYWOOD	PLYWD	VOLTS	V
AIR CONDITIONING	A/C	ELEVATION	EL	JOINT	JT	POLYVINYL CHLORIDE	PVC		
AIR HANDLING	AH	ELEVATOR	ELEV	JOIST	JST	POUND	LB	WALLBOARD	WB
AIR HANDLING UNIT	AHU	EMERGENCY POWER	EM	JUNCTION BOX	JB	POUNDS PER SQUARE INCH	PSI	WELDED WIRE FABRIC	WWF
ALTERNATE	ALT	EMPTY CONDUIT	EC			PREFABRICATED	PREFAB	WIDTH	W
ALTERNATE CURRENT	AC	ENGINEER	ENGR	LAMINATED	LAM	PREFINISHED	PREFIN	WINDOW	WDW
ALUMINUM	AL	ELECTRIC WATER COOLER	EWC	LAVATORY	LAV	PRELIMINARY	PRELIM	WITH	W/
AMPERES	AMP	EXHAUST	EXH	LEFT HAND	LH			WITHOUT	W/O
ANCHOR BOLT	AB	EXISTING	EX	LENGTH	L	QUARRY TILE	QT	WOOD	WD
ARCHITECT	ARCH	EXPANSION	EXP	LIBRARY	LIB				
AT	@	EXPANSION JOINT	EXP JT	LINEAR FEET	LF	RADIUS	RAD, R	YARD	YD
AVERAGE	AVG	EXTERIOR	EXT	LONG LEG HORIZONTAL	LLH	REFRIGERATOR	REF		
				LONG LEG VERTICAL	LLV	REINFORCING	REINF		
BEAM	BM	FAHRENHEIT	F			REQUIRED	REQD		
BOARD	BD	FEET PER MINUTE	FPM	MAINTENANCE	MAINT	RESILIENT	RES		
		FEET, FOOT	FT	MANUFACTURER	MFR	RETURN AIR	RA		
CABINET	CAB	FINISH	FIN	MASONRY	MAS	REVISION	REV		
CATALOG	CAT	FIRE EXTINGUISHER CAB.	FEC	MASONRY OPENING	MO	RIGHT HAND	RH		
CEILING	CLG	FLOOR	FL	MAXIMUM	MAX	ROOM	RM		
CENTERLINE	CL	FLUORESCENT	FLOUR	MECHANICAL	MECH	ROUGH OPENING	RO		
CERAMIC TILE	CT	FIRE RATED	FR	MEDIUM	MED				
CLOSET	CLO			MEZZANINE	MEZZ	SCHEDULE	SCHD		
COLUMN	COL	GAUGE	GA	MINIMUM	MIN	SECTION	SECT		
COMPANY	CO	GALLON	GAL	MISCELLANEOUS	MISC	SERVICE SINK	SS		
CONCRETE	CONC	GALLONS PER MINUTE	GPM	MOUNTED	MTD	SIMILAR	SIM		
CONCRETE MASONRY UNITS	CMU	GALVANIZED	GALV	MULLION	MUL	SOUND TRANSMISSION	STM		
CONFERENCE	CONF	GENERAL CONTRACTOR	GC			SPECIFICATION	SPEC		
CONTINUOUS	CONT	GROUNDED FAULT INTERUPT.	GFI	NOT IN CONTRACT	NIC	SQUARE	SQ		
CONTROL JOINT	CJ	GYPSUM	GYP	NOT TO SCALE	NTS	STANDARD	STD		
COORDINATE	COORD	GYPSUM WALLBOARD	GWB	NUMBER	#, NO	STAND PIPE	ST		
CORRIDOR	CORR					STAINLESS STEEL	SS		
CUBIC FEET	CF	HANDICAPPED	HDCP	OFFICE	OFF	STATION	STA		
CUBIC FEET PER MINUTE	CFM	HARDWARE	HDW	ON CENTER	OC	STEEL	STL		
		HARDWOOD	HDWD	OPENING	OPNG	STORAGE	STOR		
DEDICATED	DED	HEIGHT	HGT, H	OPPOSITE	OPP	STRUCTURAL	STRUCT		
DEPARTMENT	DEPT	HERTZ	HZ	OUNCE	OZ	SUSPENDED CEILING	SUSP		
DEPTH	D	HOLLOW METAL	HM	OVERALL	OA				
DETAIL	DET	HORIZONTAL	HORIZ	OVERHEAD	OH	TELEPHONE	TEL		
DIAGONAL	DIAG	HORSE POWER	HP			THICK OR THICKNESS	THK		
DIAMETER	DIA	HOT WATER HEATER	HWH	PAINTED	PTD	THRESHOLD	THRSLD		
DIMENSION	DIM	HOUR	HR	PANEL	PNL	TILE	T		
DISHWASHER	DW			PARTITION	PTN	TO BE SELECTED	TBS		
DOOR	DR	INCH	IN	PERPENDICULAR	PERP	TONGUE & GROOVE	T & G		
DOWN	DN	INFORMATION	INFO	PERSONAL COMPUTER	PC	TOP	T		
DRAWING	DWG	INSIDE DIAMETER	ID	PHASE	PH	TYPICAL	TYP		

PROJECT INFORMATION

CLIENT
NATHAN & SARAH ENGLE
3929 BALTIMORE STREET
KENSINGTON, MD 20895
NLENGLE@GMAIL.COM
SARAHHARADON@GMAIL.COM

ARCHITECT
GTM ARCHITECTS
CONTACT: LUKE OLSON
7735 OLD GEORGETOWN ROAD
BETHESDA, MD 20814
(240) 333-2021
(240) 333-2001 FAX
lolson@gtmarchitects.com

CONTRACTOR
THE RANSOM COMPANY, LLC
211 N. UNION STREET
ALEXANDRIA, VA 22314
703.646.0645
ROBERT@THERANSOMCOMPANY.COM

STRUCTURAL ENGINEER
STRUCTURAL ENGINEERING UNLIMITED, LLC
CONTACT: JUAN UTRERA
341 W. PATRICK STREET
FREDERICK, MD 21701
(240) 815-6760
jutrera@se-u.com

PLANS PREPARED BASED ON THE FOLLOWING CODES:
INTERNATIONAL RESIDENTIAL CODE 2018
MONTGOMERY COUNTY EXECUTIVE REGULATION 31-19
INTERNATIONAL ENERGY CONSERVATION CODE 2018
INTERNATIONAL EXISTING BUILDING CODE 2018

APPROVED
Montgomery County
Historic Preservation Commission

GTM ARCHITECTS
7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

Seal

I certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

PERMIT SET	10/23/2020
Issue Description	Date

GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
COVER SHEET

Sheet No.
001

FILE NAME:

SPECIFICATIONS FOR RESIDENTIAL CONSTRUCTION

The purpose of the following specifications is to establish the level of quality required for both materials and workmanship. These notes are intended as a general outline; specific and additional requirements are indicated on the drawings. The contractor should also note that not all of the items mentioned below may apply to the project.

GENERAL REQUIREMENTS

1. All work shall conform to the International Residential Code (IRC), 2018 edition and all applicable sections of the Montgomery County code for single family construction and applicable building codes including (but not limited to) IECC 2018.
2. The General Contractor shall stake off area of new construction and designate trees and shrubs for removal as required. Protect all landscaping beyond the areas of construction.
3. The General Contractor shall coordinate phasing and time limits for new construction with the Owner, so as to establish an acceptable payment schedule related to the status of the project.
4. Any permits required for the project shall be obtained by the General Contractor, unless informed otherwise by the Architect that the permit has been obtained.
5. The General Contractor shall store materials and equipment in a safe and suitable place during the construction process. The Owner is not responsible for any losses of material.
6. All debris shall be periodically removed from the site so as to not create a physical or visual hazard to the Owner.
7. The General Contractor shall be licensed in Montgomery County, Maryland, and shall guarantee the project labor and materials for a period of one year after the Architect determines the work to be substantially complete, as per county laws.
8. The General Contractor shall provide competent daily supervision of the project.
9. The General Contractor shall notify the related authorities for inspection of the work as related to the specific areas required by the county.
10. The General Contractor shall Carry Workmen's Compensation Insurance for every person employed by him on the premises and shall maintain such insurance in full force during the entire time of this contract. The General Contractor shall carry Comprehensive General and Automotive Liability Insurance of $25,000 to $50,000 minimum. These requirements can be amended by the Owner if specified by the contract.
11. All drawings, specifications, and copies furnished by the Architect are the documents for the construction of this project only and shall not be used in any other circumstance.
12. The General Contractor shall carefully study the contract documents and report to the Architect any error, omission, or inconsistency they may discover.
13. The General Contractor shall provide and pay for all labor, materials, equipment, tools, machinery and other facilities and services necessary for proper execution and completion of the work, and shall guarantee no mechanic liens against the project at completion.
14. The Contract Sum is stated in the agreement and is the total amount payable by the Owner, which designates the addition, deletion, or revision to the contract. The Change Order must also designate the change in the original contract sum.
15. At least seven days before the date of each progress payment established by the agreement, the General Contractor shall submit to the Architect and Owner an itemized application designating which portion of the work has been completed.
16. The Contractor shall verify dimensions prior to construction, and all discrepancies shall be brought to the attention of the Architect so that clarifications can be made. The Contractor shall field verify all dimensions related to existing conditions. Written dimensions take precedence over scaled sizes. Do not scale drawings to determine missing dimensions.
17. The Contractor shall be responsible to have new utility line services (gas, electric, telephone) installed to the house connection/meter location.

DEMOLITION NOTES

1. Every care shall be taken during demolition to protect the house by means of temporary supports and braces as necessary to prevent any structural failure during removal and replacement of existing structural members.
2. Temporary walls and dust barriers shall be installed as necessary to prevent circulation of dirt and dust into portions of the house that are not part of the work.
3. All dashed walls, fixtures, windows, etc., are to be removed. See Demolition Sheets for additional information.
4. Conduct all demolition operations in compliance with applicable codes and ordinances.
5. Coordinate demolition with work of subcontractors.
6. Maintain the existing structure in a watertight condition at all times.
7. Provide the necessary enclosures to allow the owner to maintain comfortable temperatures within the occupied portions of the home during construction.

GENERAL STRUCTURAL NOTES

1. Work shall be done in accordance with the International Residential Code (IRC), 2018 Edition.
2. The design gravity live loads are as follows:
   - Roof load (snow): 30 LL + 15 DL = 45 PSF
   - Living Spaces: (1st Floor) 40 LL + 15 DL = 55 PSF
   - Sleeping Spaces: (2nd Floor) 30 LL + 15 DL = 45 PSF
   - Exterior Decks: 60 LL + 15 DL = 75 PSF
   - Live Load Deflection Limitation for floors and stairs shall be L/360
   - Live Load Deflection Limitation for roofs shall be L/240

FOUNDATIONS

1. The foundation for the structure has been designed for the assumed bearing pressure of 1,500 PSF. This is to be verified by the contractor prior to the footings being poured. It is also assumed that there is no water condition present.
2. Basement walls have been designed for an assumed equivalent fluid pressure of 55 PSF.
3. Excavations for spread footings and continuous footings shall be cleaned and hand tamped to a uniform surface.
4. Slabs on grade shall be underlaid by a minimum of 4" of granular material having a maximum aggregate size of 1.5 inches and no more than 2% fines. Prior to placing the granular material, the floor subgrade shall be properly compacted, proofrolled, free of standing water, mud, and frozen soil. Before placement of concrete, a vapor barrier shall be placed on top of the granular fill.
5. Bottoms of all exterior footings shall be 2'-6" minimum below finished grade. Footings shall project a minimum of 12" into undisturbed existing natural ground having allowable bearing capacity stated. Depths of footings subject to change if soil conditions are other than assumed.

ENERGY CONSERVATION

1. The following provisions for thermal resistance meet or exceed the requirements stipulated by the 2018 International Energy Conservation Code (IECC), climate zone 4A. These values are the minimum acceptable. See drawings for specific values required for the project.
2. Insulation

	2. Insulation	IECC
A.	Ceiling (of uppermost story)	R-49, or R-38 continuous
B.	Vaulted Ceiling allowance	R-49 w/lesser of 500 sf or 20% of total insulated ceiling area R-30
C.	Frame walls (with storm window or double glazing)	R-20 or 13+5 (exterior)
D.	Rim Joists	Equal to wall below
E.	Floors over unheated spaces (including floor overhangs)	R-38
F.	Masonry walls (enclosed heated living areas)	R-13 or R-10 continuous
G.	Slab on grade (heated space) 24" Perimeter Insulation	R-10
H.	Windows	U-0.35 SHGC-0.40
I.	Doors	See section R402.3.4

3. Air Infiltration
   - A. Provide $\frac{1}{4}$" x 5.5" compressible sill sealer between foundation wall and all sill plates.
   - B. Windows: Not exceeding three tenths (0.3) CFM of sash crack
   - C. Sliding glass doors: not exceeding three tenths (0.3) CFM per square foot of door area
   - D. Swinging doors: Not exceeding five tenths (0.5) CFM per square foot of door area. Provide 1" compressible sill sealer between foundation wall and all sill plates.
   - E. Building thermal envelopes shall be tested per IECC R402.4.1.2 and verified as having air leakage not to exceed 3 air changes per hour.
   - F. Recessed lighting in the thermal envelope shall comply with IECC R402.4.4
   - G. Systems duct and piping installation shall comply with IECC R403 including Whole-House Mechanical Ventilation system installation.

TERMITE CONTROL SOIL TREATMENT

1. Treat soil with Bayer Corporation, Premise 75, in strict accordance with manufacturer's recommendations.
2. Remove all extraneous sources of wood cellulose and other edible materials such as wood debris, tree stumps and roots, stakes, formwork, and construction waste wood from soil within and around foundations. Loosen, rake, and level soil to be treated except previously compacted areas under slabs and footings.
   - A. Slabs-on-Grade and Basement Slabs: Under ground-supported slab construction, including footings, building, slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.
   - B. Foundations: Adjacent soil including soil along the entire inside perimeter of foundation walls, along both sides of interior partition walls, around plumbing pipes and electric conduit penetrating the slab, and around interior column footers, piers, and chimney bases; also along the entire outside perimeter, from grade to bottom of footing. Avoid soil washout around footings.
   - C. Crawlspaces: Soil under and adjacent to foundations as previously indicated. Treat adjacent areas including around entrance platform, porches, and equipment bases. Apply overall treatment only where attached concrete platform and porches are on fill or ground.Crawlspaces used as plenum spaces strictly follow manufacturer's recommendedations.
   - D. Along driplines of roof overhangs without gutters.
   - E. Where condensate lines from mechanical equipment drip or drain to soil.
   - F. At plumbing penetrations through ground-supported slabs.
   - G. Other sites and locations as determined by licensed installer.

WARRANTY

Special Warranty: Manufacturer's standard form, signed by Applicator and Contractor certifying that termite control work, consisting of applied termiticide treatment, will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered during warranty period of five (5) years from Substantial Completion, re-treat soil and repair or replace damage caused by termite infestation.

CONCRETE

1. All concrete construction shall conform to the latest A.C.I. code 332.
2. Concrete shall have natural sand fine aggregates and normal weight coarse aggregates conforming to ASTM C33, Type 1 Portland Cement conforming to ASTM 150, and shall have a minimum 28-day compressive strength (F/C) as follows:
   - F/C = 2,500 PSI for footings, interior slabs on grade (except garages) and fill in concrete blocks
   - F/C = 3,000 PSI for foundation walls exposed to weather.
   - F/C = 3,500 PSI for drives, porches, walks, steps, and garage slabs.
   - F/C = 4,000 PSI for precast concrete units.
3. All poured in place concrete exposed to weather conditions, including the garage floor, shall be air entrained by 6% of concrete volume. No calcium chloride or other admixtures shall be used except as approved in writing by the Owner.
4. Slabs on grade: except where otherwise noted, shall be min. 4" thick, reinforced with 6x6 W1.4xW1.4 WWF Lap mesh 6" in each direction. Slab shall be placed on a layer of 6 mil polyethylene over a 4" layer of washed gravel. Refer to drawings for location of thermal insulation.
5. Concrete finish: Exposed exterior steps, stoops and slabs shall first have a steel trowel finish and then a very light broom finish. Exposed interior and garage shall receive a steel trowel finish.
6. Expansion joints: Non-organic, Owner approved, expansion joint material shall be cast in place where slabs abut masonry or concrete walls to prevent bonding between the two materials.
7. Curing: Exposed concrete surfaces shall be sealed with an approved chemical curing compound within one hour of the final troweling. Curing compound label shall state that its use will not interfere with adhesion of subsequent floor finishes.
8. Reinforcing steel: Reinforcing steel for the ties shall be intermediate grade deformed billet steel conforming to ASTM spec. A615-40. All other reinforcing steel shall conform to ASTM spec. A615-60. Welded wire fabric to conform to ASTM A-185. Fabric shall be supplied in flat sheets and lapped to mesh at splices. All reinforcing shall be detailed, fabricated and installed in accordance with the latest detailing manual A.C.I. 315.
9. Reinforcement designated as "continuous" shall lap 36 bar diameters at splices unless noted otherwise.
10. Horizontal footing and walls: reinforcement shall be continuous and shall have 90 degree bends and extensions, or corner bars of equivalent size lapped 36 bar diameters, at corners and intersections.
11. Footings:
    - A. Bottom of footings shall extend a minimum of 2'-6" below any surface subject to freezing: footings shall extend at least 12" into undisturbed soil or set on controlled compacted fill. Depth of footing subject to change if soil conditions are other than assumed. Bearing value of soil is assumed to be 1,500 PSF with no water condition present. Minimum bearing value of controlled fill shall be certified by a licensed geotechnical engineer.
12. Anchor bolts: set anchor bolts or approved straps as shown. Bolts for wood sill plates shall be $\frac{1}{2}$" in diameter and project 8" into concrete; set straps or bolts 12" max from end of any plate and 6'-0" max O.C. spacing, unless shown otherwise.

MASONRY

1. Brick shall conform to ASTM C-62. Mortar shall conform to federal specifications SS-C-18IE-type II. Lay brick only when outside temperature is 45° F and rising. Protect all work from cold and frost and ensure that mortar will cure without freezing. Calcium chloride and antifreeze admixture will not be acceptable.
2. Bearing steel and wood beams shall be supported on solid masonry piers as indicated. Other structural members (lintels, etc.) shall be supported on 8" of solid masonry. All beams and lintels shall have minimum horizontal bearing of 4".
3. Anchor bolts: Set anchor bolts or approved anchor straps as required. Bolts for wood sill plates shall be $\frac{1}{2}$" diameter and project 16" into masonry. Set bolts or straps 12" max. from end of any plate.
4. CMU walls shall have horizontal wire joints reinforcement at 16" O.C. vertically, or as indicated.
5. Provide 4" solid masonry on all sides of joists or beams entering masonry party walls.
6. Brick Veneer:
   - A. Secure brick veneer with 16 GA hot-dipped zinc coated wall ties at 16" O.C. horizontally and vertically.
   - B. Provide flashing at first course above grade, at lintels, sills and elsewhere as shown. Provide $\frac{3}{16}$" diameter tube weeps or cellular plastic head joint-type weeps at 24" O.C.
   - C. Provide through-wall flashing above all unsheltered openings. Flashing shall be end-dammed at all terminations.
   - D. Install high-density polyethylene or polyester cavity drainage material, equal to "mortar net," above all flashing. Material shall be sized to fill the width of the cavity.
7. Stone Veneer:
   - A. Vapor permeable weather-resistive barriers: two-ply asphalt saturated Kraft Grade D breather type sheathing paper.
   - Basis of design is FortifiberΦ / two-ply super jumbo texΦ 60 minute
   - Reference standard; federal specification W-B-790A, Type I, Grade D, Style 2
   - Moisture vapor transmission: 35 grams minimum; ASTM E 96
   - Water resistance: 150 minutes (Professional), ASTM D 779
8. C.M.U.'s to have water repellent block admixture; 'Dry-Block' by W.R. Grace recommended.
9. Exterior mortar to have water repellent admixture.
10. Unless noted otherwise, tool all joints concave.
11. Fully bed in mortar face shells and webs of first course of CMU.
12. All masonry joints shall be fully filled with mortar, including head joints.

STEEL

1. Structural steel shall conform to ASTM A36
2. Steel beams shall conform to ASTM A572 Grade 50.
3. All steel angles, lintels, beams, columns, etc. are to be shop primed with red lead or red oxide primer or approved equal. Structural steel at or below grade shall be painted with two coats on an asphaltic base paint and protected with a minimum of 2" solid masonry or concrete.
4. For all openings or recesses in brick or brick-faced masonry walls not specifically detailed, provide one steel angle for each 4" of wall thickness. Provide lintels according to the schedule below:

Lintel	Masonry Opening	Min. Bearing
L 3-1/2 X 3-1/2 X 1/4	Up to 3'-0"	4"
L 3-1/2 X 3-1/2 X 5/16	3'-1" to 4'-0"	6"
L 4 X 3-1/2 X 1/4	4'-1" to 5'-0"	6"
L 4 X 3-1/2 X 5/16	5'-1" to 6'-0"	6"
L 5 X 3-1/2 X 5/16	6'-1" to 7'-0"	8"
L 6 X 4 X 3/8	7'-1" to 8'-0"	8"

Note: For openings greater than 8'-0", consult with Architect and Engineer.

WOOD & CARPENTRY

1. Unless otherwise noted on drawings, all structural wood members shall be #2 Southern Pine or equal, with the following combination of unit stresses:

Extreme fiber stress in bending	1,200 PSI
Compression parallel to the grain	1,000 PSI
Compression perpendicular to the grain	565 PSI
Modulus of Elasticity Shear Stress	1,500,000 PSI

2. Manufactured joists and trusses (if shown on drawings) must be designed and certified by a licensed engineer and submitted to the Architect and local building department for approval.
3. Roof rafters and/or trusses shall be connected at each bearing point with one prefab-90 PSI galvanized rafter tie (hurricane clip) by Simpson or approved equal. Similarly, floor joists and trusses shall be connected with one prefabricated joist hanger. Each anchor shall be 18 GA minimum thick.
4. Provide double joists under all parallel partitions, at joists that support headers, and at headers that support joists. Use joist hangers where applicable.
5. All joists and rafters shall be rigidly braced at intervals not exceeding 8'-0".
6. Double studs at header bearing, double joists and rafters at all openings according to schedule below (unless noted otherwise on drawings):
   Double 2 x 4 Up to 3'-0"
   Double 2 x 6 Up to 4'-0"
   Double 2 x 8 Up to 5'-0"
   Double 2 x 10 Up to 7'-0"
   Double 2 x 12 Up to 8'-0"
   All double headers and joists shall be joined with a minimum of two rows of 16 d nails 12" on center.
7. Provide blocking, banding, crush blocks, stiffeners, or rim joists, as required, at joist ends.
8. Floor joists shall have a minimum bearing of 2" on framed walls. All beams shall have minimum bearing of 4" bearing on all supports. Provide moisture protection to end of beams pocketed into masonry walls.
9. Wood joists, studs, and beams shall not be cut or notched unless authorized by the Architect. Drilled holes shall be centered at mid-depth of the member and the hole diameter shall not exceed $\frac{1}{3}$ the actual depth of the member. No holes shall be drilled within 2' from the ends or within the middle $\frac{1}{3}$ of the span. Provide 4" clear between holes.
10. Existing conditions shall be verified by the Contractor. Any existing damaged wood members shall be identified and replaced by the Contractor.
11. Contractor shall be responsible for providing necessary bracing and shoring of existing members and walls while altering the structure.
12. Provide 2x4 intermediate blocking at all bearing and non-bearing partitions.
13. All plywood shall be APA span rated. Use exterior grade plywood wherever edge of face will be exposed to weather. Interior plywood exposed to weather during construction shall be Exposure I min.
    - A. Exterior wall sheathing shall be $\frac{1}{2}$" plywood unless noted otherwise.
    - B. Subflooring shall be $\frac{3}{4}$" tongue and groove plywood, glued and screwed to the floor joists as per APA recommendations.
    - C. Where spacing of roof structure members is 16" O.C., roof sheathing shall be $\frac{1}{2}$" plywood ($\frac{3}{4}$" where roofing is slate or tile). Where spacing of roof structure members is 24" O.C., roof sheathing shall be $\frac{5}{8}$" plywood ($\frac{3}{4}$" where roofing is slate or tile). Provide "H" clips at butt joints of roof sheathing.
14. MICRO-LAM L.V.L. (laminated veneer lumber) beams shall be manufactured by Trus Joist MacMillan or approved equal. Beams shall be installed according to manufacturer's recommendations. When fastening two or more beams together, provide a minimum of two rows of 16 d nails 12" on center.
15. TJI Floor Joists are to be manufactured by Trus Joist MacMillan or approved equal. Install per manufacturer's recommendations.
16. The following wood elements are to be pressure treated with preservative:
    - A. Sill plates resting on concrete or masonry walls.
    - B. Sill plates resting on concrete slabs on grade.
    - C. Joists which enter concrete or masonry walls and have less than $\frac{1}{2}$" clearance on tops, sides, and ends.
    - D. Sleepers resting directly on concrete slabs.
    - E. Exterior porch and deck framing, decking, and stairs.
17. Fasteners, hangers, and metal accessories used in pressure treated wood construction shall be type 304 or 316 stainless steel. Treated lumber shall not be placed in contact with aluminum flashing or other aluminum components.
18. Exterior Wood Trim:
    - A. All exterior wood trim shall be clear pine or redwood.
    - B. All trim shall be primed on both sides prior to installation.
    - C. All outside corners shall be mitered. No butt joints will be accepted
19. Exterior Synthetic Trim shall be "AZEK," with traditional smooth surface. Fasteners, joint cement, and installation procedures shall be in accordance with manufacturer's recommendations.
20. Siding: Refer to drawings for type specified.
    - A. Cement board shall be non-asbestos fiber-cement material complying with ASTM Standard Specification C1186 Grade II, Type A. Materials shall be equal to those manufactured by James Hardie Building Products.
    - B. Wood siding and sidewall Shingles shall be kiln dried Western Red Cedar, "Clear V.G. Heart" grade for clear and transparent stain finishes, and "A Clear" grade for semi-transparent stain or opaque finishes. Semi-transparent stain or opaque finish shall be applied in strict accordance to manufacturer's recommendations; including, but not limited to, substrate preparation and primer/sealer application to all wood surfaces (6-sides). Fasteners shall generally be type 304 stainless steel, but shall be type 316 for coastal applications. Install wood siding and shingle products over "Cedar Breather" by Benjamin Obdyke Inc. and 30# felts in accordance with manufacturer's instructions.
21. Coordinate all floor and wall framing with ductwork. Refer to mechanical notes.
22. Folding Attic Access Ladder shall be 22 $\frac{1}{2}$" x 44" with self-trimming flange, pre-finished door panel, and gas-piston counterbalance. The door panel shall have continuous integral weatherstripping, R-10 insulation, and two key operated locking pins to draw the door tight. Ladder steps shall be pine, doweled to pine stringers. Contact Resource Conservation Technology at 410-366-1146. Additional insulation hood shall be provided to meet required insulation value per IECC R402.2.4.

RADON DETECTION AND TREATMENT

1. The Contractor shall provide a venting system consisting of a minimum of 3" diameter ABS, PVC or equivalent gas-tight plumbing pipe inserted into the sub-slab gravel base (at all new concrete slabs). A 'T' fitting or equivalent method shall be used to ensure that the pipe opening remains with the sub-slab permeable material. The pipe shall terminate at least 12" above the high side of the roof penetration. Contractor shall coordinate location of pipe with Architect prior to installing the pipe.
2. Install, per IRC, 2018 edition, Appendix F 'Radon Control Methods.'
3. The Contractor shall provide any other measures as required by local codes.

VENTILATION

1. Where attics are indicated to be ventilated, they are to be vented in one of the following ways (refer to drawings for specifics):
   - A. Continuous ridge venting and continuous soffit venting. Ridge vent shall be by Cor-A-Vent or approved equal. Continuous screen soffit vents shall be a minimum of 2" wide. Circular louver vents between each rafter may be used at the soffit if shown on the drawings.
   - B. Screen louvers or vents with an open area equal to one square foot for every 300 square feet of attic space.
2. Provide foundation vents for all crawl spaces. Refer to drawings for locations.
3. Venting for appliances and exhaust fans:
   - A. Provide venting to the exterior as per manufacturer's recommendations for all appliances. Location of ductwork and vent on exterior shall be approved by Architect prior to installation.
   - B. Provide exhaust fans for bathrooms, etc., as shown on drawings. Location of ductwork and vent on exterior shall be approved by Architect prior to installation. Ducts within unconditioned spaces shall be insulated to prevent condensation.
4. Provide Whole-House ventilation system to comply with IECC R403.5

MOISTURE PROTECTION

1. Appropriate sealants shall be selected for each substrate depending upon location (interior or exterior), humidity, moisture conditions, and traffic conditions. Use primers as required.
2. Color of caulking shall be coordinated with adjacent materials and must be approved by Architect prior to application.
3. Joint fillers shall be used:
   - A. To control the depth of sealants in joints.
   - B. To meet the requirements for resilient separations in horizontal joints in floor, pavements, patios, sidewalks, and other light traffic areas.
4. Bond breakers shall be used to prevent adhesion to more than two surfaces.
5. Masonry foundations shall be parged to a thickness of $\frac{3}{4}$" minimum.
6. Waterproof all below grade foundation walls with a polymer-modified asphalt emulsion similar to CETCO "Strataseal." Dry/ cured membrane thickness shall be minimum 60 mil. Installation and substrate preparation shall be per manufacturer's recommendations. Reinforce corners and concrete cold joints by embedding fiberglass fabric around corners and across joints in accordance with manufacturer's recommendations. Install subsurface drainage composite similar to CETCO "Aquadrain IOX" over the cured membrane.
7. Footing drains shall be min. 4" in diameter and installed on the exterior of all foundations.
8. All flashing shall be installed according to the building code. An eave flashing strip of 40 mil. self-adhering rubberized asphalt sheet membrane shall be applied to extend from the edge of the roof to a point 24" min. inside the interior wall line of the structure, and at all valleys.
9. All membrane roofing to be approved by Architect prior to installation.
10. All roof shingles to be approved by Architect prior to installation.
11. Asphalt shingle roofs with slopes from 2 in 12 to 4 in 12 shall have two layers of #15 roofing felt applied in accordance with with the International Residential Code.
12. Flashing"
    - A. Through-wall and other concealed flashing shall be a composite of fiberglass fabric, 5 oz. copper and asphalt, equal to York Copper Fabric.
    - B. Exposed flashing shall be 16 oz. copper.
13. Painted aluminum drip strips shall be installed at the eave and rake edges of the roof sheathing for shingle roofs, and above window and door trim where indicated.
14. Exterior Insulation and Finish Systems (EIFS) shall be equal to Dryvit, Residential MD System, with Dryvit drainage mat installed between the secondary weather barrier and the insulation board.
15. Cedar roof shingles shall be No. 1, Blue Label, red cedar. Install over "Cedar Breather" by Benjamin Obdyke Inc. and 30# felts in accordance with manufacturer's instructions.
16. Standing seam roofing shall be 16 ounce copper with water-tight standing seams. For slopes greater than 3 in 12 provide #30 roofing felt underlayment on solid sheathing. For slopes 3 in 12 or less provide self-adhering 40 mil ice and water guard membrane over the entire area to receive standing seam roofing.

ze

FINISHES

Gypsum Wallboard:

1. Gypsum wallboard shall be ASTM C-36 as follows:
   - A. Regular ($\frac{1}{2}$"): except where noted.
   - B. Water resistant ($\frac{1}{2}$"): at bathroom ceilings and walls that are not tiled.
   - C. Durock interior tile backer board ($\frac{1}{2}$"): at all surfaces that have tile.
2. Gypsum boards shall have tapered edges to accommodate joint reinforcement.
3. Provide edge corner beads, trim, taping, and joint compounds as required for the proper completion of the job. Materials shall be by U.S. Gypsum or approved equal.
4. Finishing requirements:
   - A. For typical walls and ceilings provide a Level 4 Finish as defined by the Gypsum Association.
   - B. For surfaces noted to receive semi-gloss or gloss paint provide a Level 5 Finish as defined by the Gypsum Association.

Hardwood Flooring:

1. Unless noted otherwise, provide wood strip flooring where shown on the drawings.
2. Wood strip flooring to be oak. Where abutting existing floor, new floor shall match existing in size and grain. Elsewhere, oak shall be "clear" grade, in accordance with the national Oak Flooring Manufacturer's Association.
3. Install flooring in strict accordance with the recommendation of the National Oak Flooring Manufacturer's Association.
4. After the floors have been sanded, the flooring contractor shall apply a minimum of four stain and urethane samples in two foot by two foot areas on the floor for the owner to review. The owner shall have a minimum of two days to make a selection.

Ceramic Tile:

1. Provide ceramic tile and accessories in accordance with the Tile Council of American Specifications 137.1, in colors and patterns to be specified by the owner.
2. Setting materials: comply with pertinent recommendations contained in the Tile Council of America "Handbook for Ceramic Tile Installation."
3. Installation: comply with ANSI A108.1, ANSI A108.2, and the "Handbook for Ceramic Tile Installation" of the Tile Council of America.
   - A. Extend tile into recesses and under equipment and fixtures to form a complete covering without interruptions.
   - B. Terminate tile neatly at obstruction, edges, and corners, without disruption of pattern or joint alignment.
   - C. Align joints when adjoining tiles on floor, base, trim, and walls are the same size.
   - D. Layout tile work and center the tile fields in both directions in each space or on each wall area.
4. Replacement reserve: Contractor shall furnish to the Owner one unopened box of additional tiles for future repairs and maintenance work.

Carpet:

1. Provide carpeting as indicated on the drawings. Refer to allowances on schedule sheet.

Vinyl Tile:

1. Installation of all vinyl composition tile (VCT) shall be done in a manner which conforms with:
   ASTM E 648,
   ASTM E 84, AND
   ASTM E 662.
2. Replacement reserve: Contractor shall furnish Owner with one unopened box of additional tile for future repairs and maintenance.

Paint:

1. All paint and primers to be Benjamin Moore or approved equal. Refer to schedule for colors and types.
2. All surfaces to be painted shall receive one primer coat and two finish coats.
3. All paint shall be applied according to manufacturer's recommendations.

Architectural Woodwork and Trim:

1. All millwork trim and molding shall be installed accordingly to the quality of standards of the Architectural Woodwork Institute (AWI).
2. All interior trim and millwork shall conform to AWI "custom standards."
3. Flat trim shall be clear pine or approved equal.
4. All corners of trim and siding are to be mitered, except inside corners of interior running trim which shall be coped. Exposed end grains will not be accepted.
5. All millwork and trim shall be installed by craftsmen with experience in work of this type. All work shall be first class in every regard and consistent with the best practices of the trade.

FIRE AND LIFE SAFETY

1. Stairs:
   - A. 7$\frac{3}{4}$" max rise
   - B. 10" min tread
   - C. 6'-8" min head room
   - D. Height of handrails shall be continuous, 34" (min) to 38" (max) above finished stair treads. Handrails required at stairs with 3 or more risers.
   - E. Guardrails shall be 36" (min) to 42" (max) above finished floor.
2. Provide a clear window opening of 5.7 square feet with no less than 20" clear wide and 24" clear high for sleeping area. The sill of this windows shall be no more than 44" above the finished floor.
3. Provide safety glass in all exterior doors, storm doors, sliding glass doors, shower doors, and tub enclosures above and adjacent to spas and tubs and where the glass is closer than 18" to the floor and exceeds 9 square feet in area.
4. Ground metal siding.
5. Smoke detectors shall be provided on every floor, in each bedroom and in each hall outside of bedrooms, and integrated with the electrical system with battery backup.
6. If a fuel-burning appliance, fireplace, or attached garage is present, an interconnected battery back up carbon monoxide alarm or detector must be installed outside all sleeping areas and on all floors. If fuel-buring appliance or fireplace is present in any sleeping area, an interconnected carbon monoxide alarm or detector must also be installed in that room as required per local jurisdiction.
7. Flues shall be class B except solid fuel flues, which shall be class A.
8. Top of flue shall be 2'-0" above any part of structure within 10'-0" of flue.
9. Interior finish of walls and ceiling shall have a flame spread rating not greater than Class III.
10. Carpeting shall meet federal regulation DOC FF-1.
11. Prefab fireplaces shall be (U.L.) rated and installed according to manufacturer's specifications.
12. Provide outside air for combustion in all prefab and masonry fireplaces.

ELECTRICAL AND LIGHTING NOTES

1. Electrical contractor shall size and arrange all circuits in accordance with the National Electric Code as well as all local codes. Service to be upgraded as required.
2. Wall outlets are to be mounted 1'-6" above finished floor unless noted otherwise.
3. Switches are to be mounted 4'-0" above finished floor unless noted otherwise.
4. Mounting heights are to the vertical center of the equipment to the finished elevation of the floor.
5. All new switch and outlet styles are to be approved by Owner prior to installation.
6. Provide hardwired smoke detectors on all floors, located as per Montgomery County Code.
7. Electrician shall locate all fixtures, switches, outlets, etc. prior to running wiring. Owner, Architect, and Electrician to meet at a mutually agreed upon time to review locations. The purpose of which is to allow for possible relocation prior to wiring.
8. Owner is allowed to add an additional ten (10) items (switches, cable, phone, outlet, etc., or any combination) at no additional charge to the owner.
9. Contractor shall determine, based on an on-site review of existing and proposed electrical systems, whether an electrical service heavy-up will be required, and shall include the costs of all required upgrades in their Contract Amount.
10. Provide door bell, transformer, and chime for front door and where indicated. In lieu of Owner's selection otherwise, price shall be based on the following: Illuminated Button - Destination Lighting product number 15921; Transformer - 16V; Chimes - Teiber Model CTSB-or STPW-, in Owner's choice of finish. Verify all selections and mounting locations with Owner prior to purchasing.

MECHANICAL NOTES

1. All work shall be done in accordance with the International Residential Code (IRC), 2018 Edition, as well as IECC 2018 and other local codes.
2. Contractor shall submit all duct layouts and air handler locations (and thermostat locations) to the Owner and the Architect for approval prior to the commencement of framing. No extras will be given for any modification required to the framing due to ductwork.
3. All exterior unit locations to be coordinated with Owner and Architect.
4. Air conditioners shall be Energy Star rated and shall have a minimum 13 SEER rating with two zones each. Gas furnaces shall have a minimum Annual Fuel Utilization Efficiency rating of 90%.
5. Equipment will be Carrier or approved equal.
6. Ductwork will be galvanized sheet metal and flex.
7. Registers and return grilles are Hart & Cooley or equal.

PLUMBING NOTES

1. All work shall be done in accordance with the International Residential Code (IRC), 2018 Edition, as well as IECC 2018 and other local codes.
2. Contractor shall provide riser diagrams as required for permit, and shall submit to the Architect proposed locations of all waste and supply lines prior to the commencement of framing. No extras will be given for any modification required to the framing due to plumbing lines. Provide cast iron at vertical waste lines.
3. Install water heater and reserve tank per requirements of the house with recirculate system.
4. Provide drain pans under all water heaters and washing machines, and pipe the pan to the sanitary drain upstream of a trap.
5. Contractor shall make a count of existing and proposed fixtures to determine whether a water or sewer upgrade will be required, and shall include the costs of all required upgrades in his Contract Amount. The count of existing fixtures shall be based on an on-site inspection.
6. Provide cast iron at vertical waste lines.
7. Locate plumbing clean out plugs in bottom $\frac{1}{3}$" of wall, typical.

STEAM SHOWER

1. Wall construction: Provide ceramic tile over dryset or latex Portland cement mortar bond coat over tile backer board over Dow insulation board over 2x4 studs.
2. Ceiling construction: Same as walls, provide continuous sloped ceiling ($\frac{1}{2}$" per foot), and provide rounded inside corner tile at joint between wall and ceiling.
3. Insulate all walls, ceiling, and floor adjacent to steam shower.
4. Steam shower to be watertight, including a watertight shower door.
5. Steam Unit: "Mr. Steam model #MS-150, 6kw or approved equal. Provide the following connections: water inlet $\frac{3}{8}$" NPT, steam outlet NPT, drain $\frac{3}{8}$" NPT. Follow all manufacturer's specifications.

FILE NAME:

REVIEWED
By Michael Kyne at 4:00 pm, Nov 02, 2020

APPROVED
Montgomery County
Historic Preservation Commission
Sandra I. Heiler

GTM ARCHITECTS

7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

GTM

Seal

STATE OF MARYLAND · REGISTERED ARCHITECT · 8385

I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

Issue Description	Date
PERMIT SET	10/23/2020

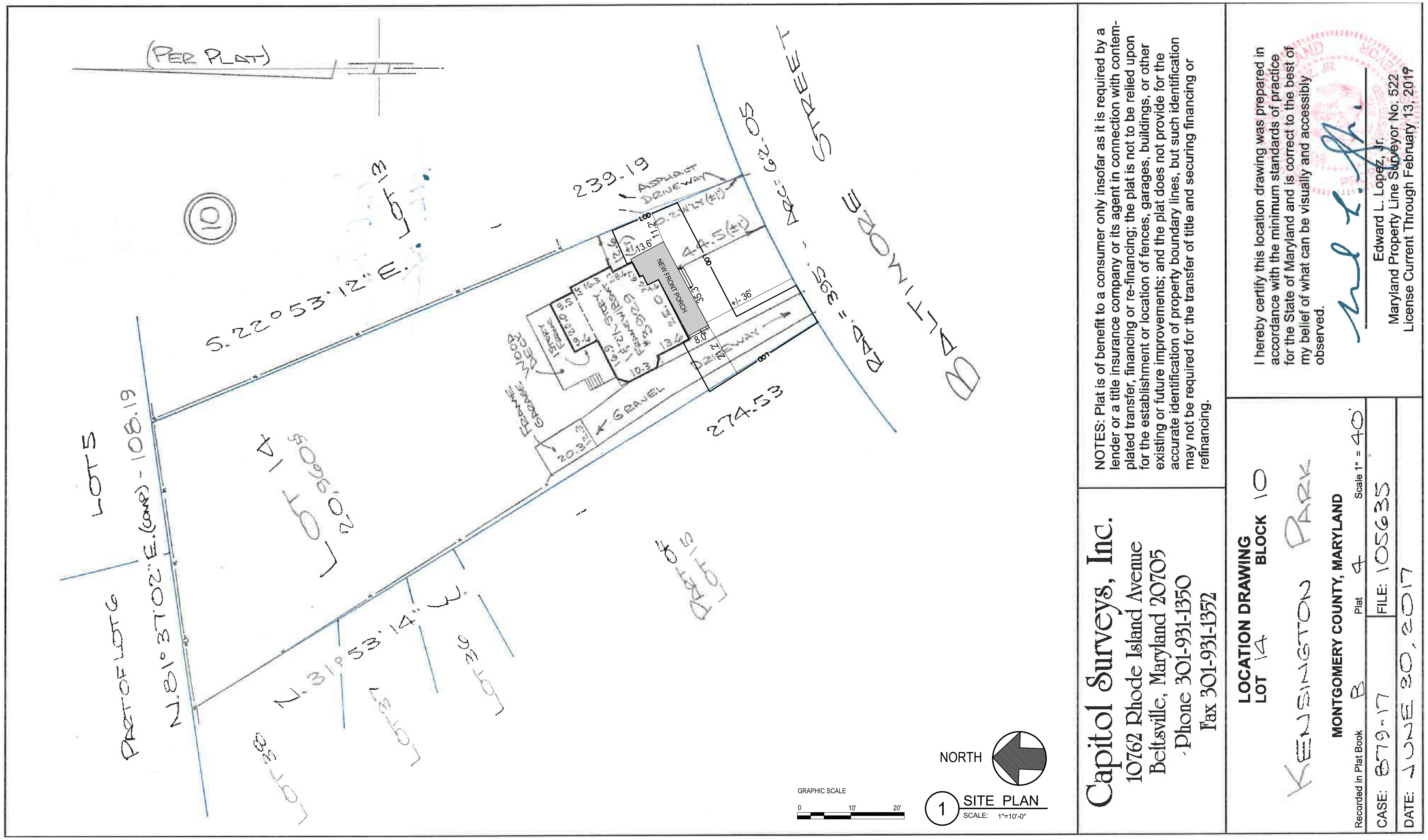
GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
SPECIFICATIONS

Sheet No.
002

REVIEWED
By Michael Kyne at 4:00 pm, Nov 02, 2020

APPROVED
Montgomery County
Historic Preservation Commission
Sandra I. Heiler



1 SITE PLAN
SCALE: 1"=10'-0"

LEGEND

CLEAN OUT	FIRE HYDRANT	AIR CONDITIONER UNIT
SEWER MANHOLE	GAS METER	WINDOW WELL
STORM DRAIN MANHOLE	MAILBOX	REBAR AND CAP
ROOF DRAIN SPOUT	BURIED SEWER LINE	IRON PIPE
UTILITY POLE	BURIED WATER LINE	MONUMENT
GUY WIRE	WOOD FENCE	BUSH
LIGHT	CHAIN LINK FENCE	SINGLE TREE WITH SIZE & TYPE
ELECTRIC BOX	METAL HANDRAIL	TWIN TREE WITH SIZE & TYPE
SIGN	OVER HEAD WIRE	TRIPLE TREE WITH TYPE & SIZE
WATER VALVE	WOODS LINE	QUADRUPLE TREE WITH TYPE & SIZE
WATER METER	LANDSCAPE AREA	LIMIT OF DISTURBANCE

LOT INFO

3929 BALTIMORE STREET
-KENSINGTON PARK-
LOT 14 - BLOCK 10

ZONED: R-60
LOT AREA= 20,960 SQ. FT.

CALCULATIONS

LOT AREA = 20,960 SF

LOT IS AT LEAST 15,000 S.F. - DRAINAGE PLAN IS NOT REQUIRED

TOTAL SF OF DISTURBED LAND AREA = 1,970 SF

PROJECT IS EXEMPT FROM STORMWATER MANAGEMENT REQUIREMENTS AS IT DISTURBS LESS THAN 5,000 SF OF LAND AREA PER SECTION 19-31 OF THE MONTGOMERY COUNTY CODE

TOTAL SF INCREASE IN LOT COVERAGE = 340 SF
TOTAL VOLUME OF EARTH MOVEMENT = 6 CY

NO DRAINAGE PLAN IS REQUIRED AS THE ADDITION DOES NOT INCREASE THE BUILDING LOT COVERAGE BY MORE THAN 400 SQUARE FEET AND INVOLVES LESS THAN 100 CUBIC YARDS OF EARTH MOVEMENT PER SECTION 8-29B OF THE MONTGOMERY COUNTY CODE.

GTM ARCHITECTS
7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

Seal
STATE OF MARYLAND · GEORGE T. MYERS · 8385 · ARCHITECT

I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

Issue Description	Date
PERMIT SET	10/23/2020

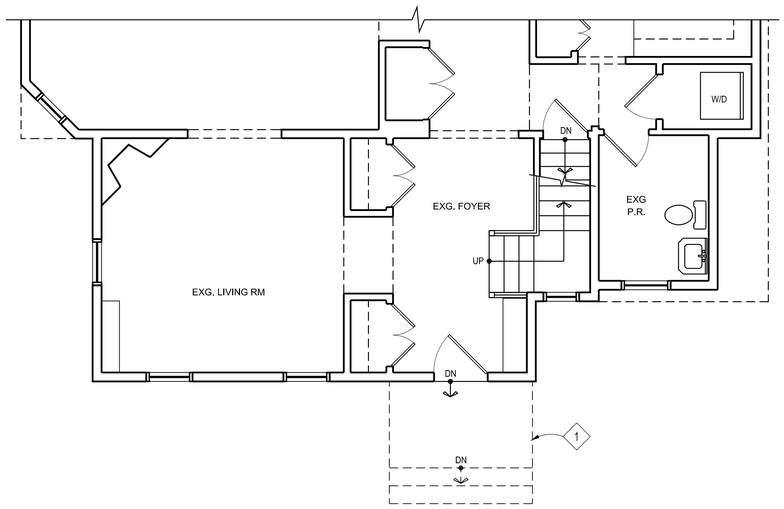
GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
SITE PLAN

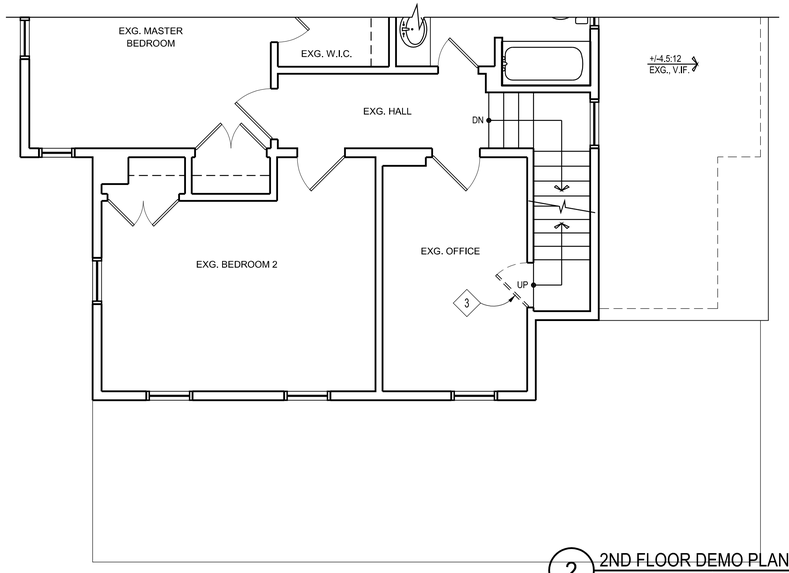
Sheet No.
003

FILE NAME:

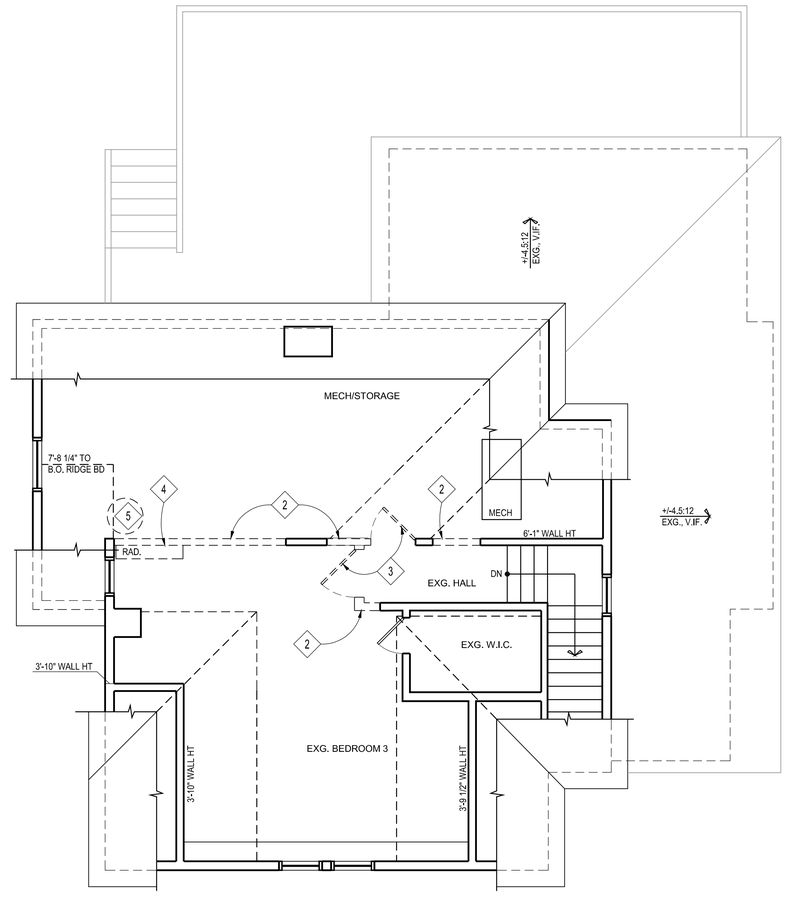
PLAN NORTH



1 1ST FLOOR DEMO PLAN
SCALE: 1/4"=1'=0



2 2ND FLOOR DEMO PLAN
SCALE: 1/4"=1'=0



3 ATTIC DEMO PLAN
SCALE: 1/4"=1'=0

CONSTRUCTION NOTES

1. REMOVE EXISTING FRONT STOOP/STEPS
2. REMOVE PORTION OF EXISTING WALL. PROVIDE TEMPORARY SHORING AS REQUIRED
3. REMOVE EXISTING DOORS, SALVAGE AND STORE FOR RE-USE
4. EXG. RADIATOR TO BE REMOVED, SALVAGE AND STORE FOR RE-USE
5. EXG. HYDRONIC HEATING EQUIPMENT TO BE REMOVED

GTM ARCHITECTS

7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

Seal

I 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 number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

PERMIT SET	10/23/2020
Issue Description	*Date*

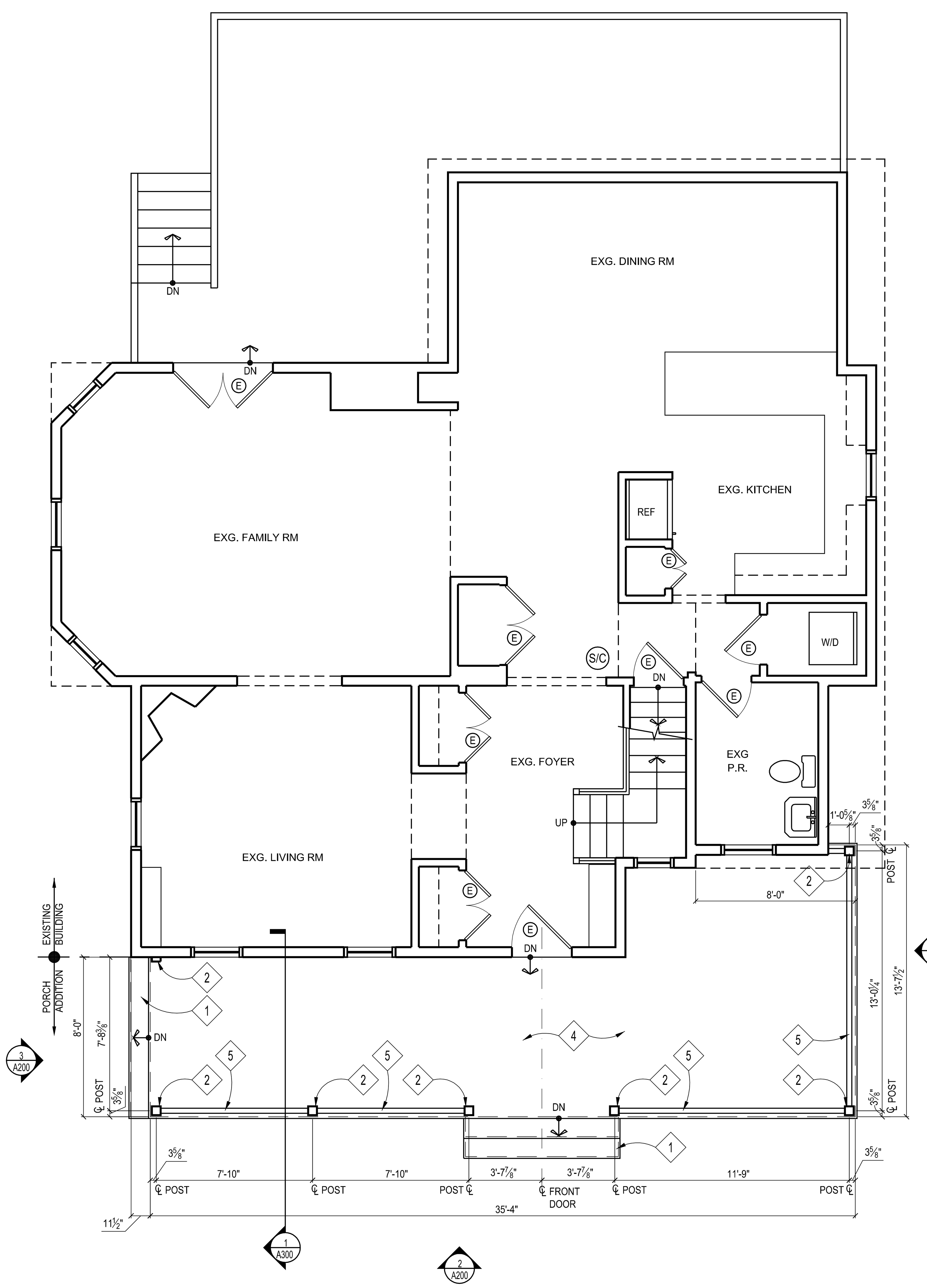
GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
DEMOLITION PLANS

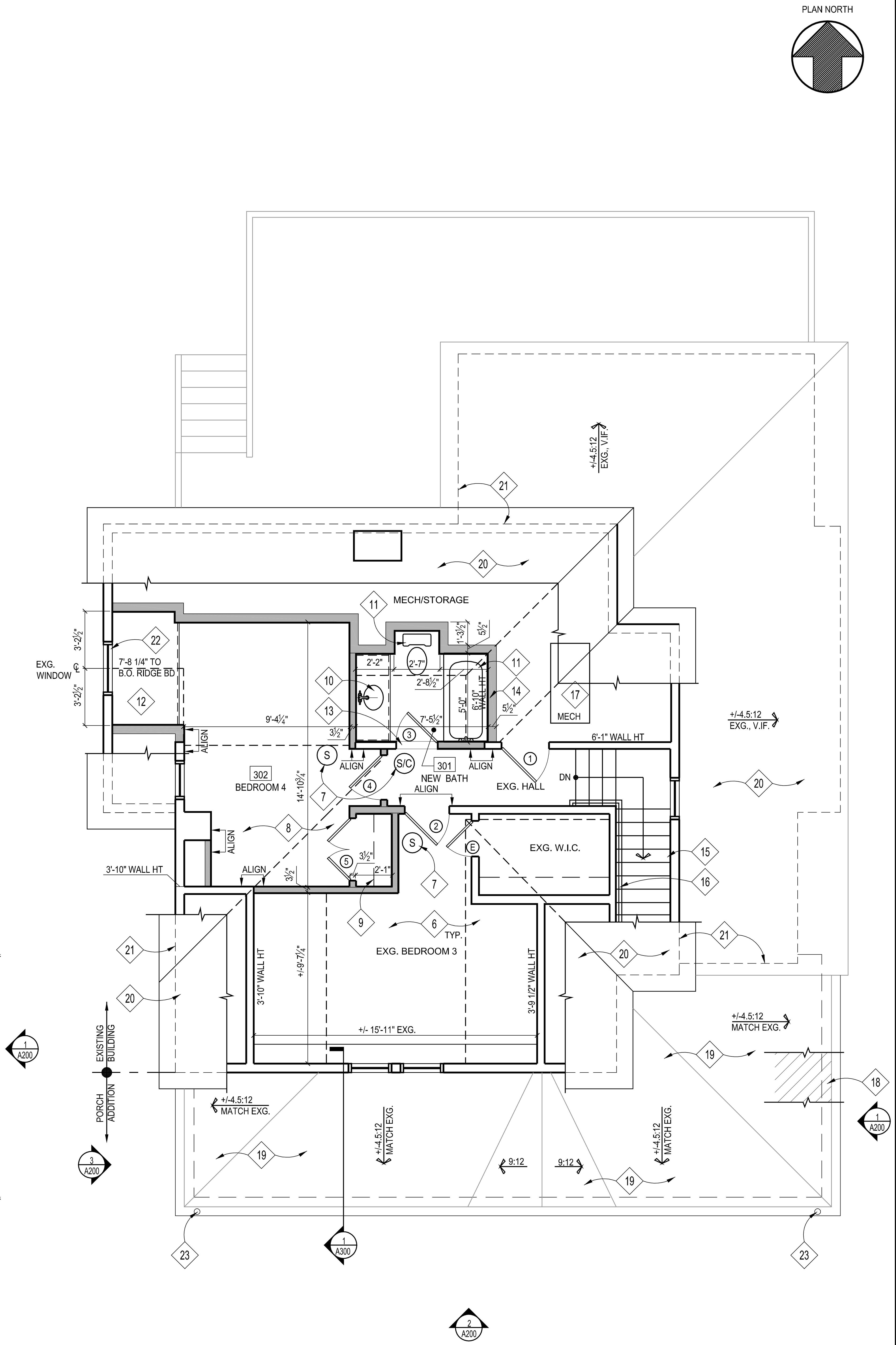
Sheet No.
D100

FILE NAME:

REVIEWED
By Michael Kyne at 4:00 pm, Nov 02, 2020



1 1ST FLOOR PLAN
SCALE: 1/4"=1'=0



2 ATTIC PLAN
SCALE: 1/4"=1'=0

CONSTRUCTION NOTES

1. PTD. WOOD STEPS TO GRADE. F.V. RISE AND RUN, COORD. W/ CIVIL DRAWINGS
2. PTD. 6X6 TURNED WOOD POST, CENTURY POST VICTORIAN OR EQ.
3. ENGAGED PTD. WOOD PILASTER AT WALL TO MATCH POSTS
4. PTD. WOOD 5/4X6 T&G DECKING T.B.S.
5. PTD. 30" H. DECORATIVE WOOD GUARDRAIL, CONFIRM DECK IS NO MORE THAN 30" ABOVE GRADE AT ALL POINTS
6. GC TO PATCH & REPAIR EXISTING DRYWALL AS REQUIRED BY DEMO & PROVIDE NEW FINISHES, TRIM, ETC. TO MATCH NEW CONSTRUCTION
7. CONFIRM EXG. / PROVIDE NEW HARDWIRED SMOKE/CARBON MONOXIDE DETECTOR W/ BATTERY BACKUP PER IRC 2018
8. TOOTH-IN NEW HARDWOOD FLOORING INTO EXISTING, ALIGN NEW FLOORING W/ EXISTING AND MATCH FINISHES
9. NEW 1 1/2"| WD. ROD, PTD W/ 14" WD SHELF, PTD.
10. NEW VANITY WITH SINK, FAUCET AND COUNTERTOP, T.B.S.
11. NEW PLUMBING FIXTURES, & ACCESSORIES T.B.S. BY OWNER, TYP.
12. BUILT-IN BENCH SEAT/DAYBED, SEE 9/A300
13. MARBLE THRESHOLD, T.B.S., SEE 6/A300, SIM.
14. TILED RECESS W/ SLOPED SILL @ 42" A.F.F., COORD. W/ OWNER, SEE 7/A300
15. EXG. WOOD STAIRCASE TO REMAIN
16. HANDRAIL @ 34" ABOVE NOSING, HANDRAIL HT AND GRIPSIZE PER IRC 2018.
17. EXISTING HVAC TO REMAIN, EXTEND EXG. DUCTWORK AS REQUIRED FOR ADDITION
18. ICE AND WATER GUARD AT ALL EAVES, VALLEYS AND LOW SLOPE ROOFS; SEE GENERAL ROOFING NOTE #1 BELOW
19. NEW ASPHALT SHINGLE ROOFING TO MATCH EXISTING
20. EXISTING ROOF TO REMAIN
21. DASHED LINE OF EXG. FRAME WALL BELOW
22. EXISTING OPERABLE AWNING WINDOW WITH 35.5" CLEAR WIDTH, 24.5" CLEAR HEIGHT AND +/- 28" SILL HEIGHT MEETS EGRESS REQUIREMENTS, SCRAPE, PAINT & REPAIR AS NEEDED
23. PTD. ALUM 6" HALF-ROUND GUTTERS AND 4" ROUND DOWNSPOUTS TO SPLASHBLOCKS @ GRADE

NOTE:
1. VERIFY ALL EXTERIOR RISER & TREAD DIMENSIONS IN FIELD
2. UNLESS INDICATED OTHERWISE, DIMENSIONS ARE TO FACE OF FRAMING
3. TONED WALLS INDICATE NEW 2x STUD WALLS, SEE PLAN
4. SAND & STAIN EXISTING HARDWOOD FLOORING, TYPICAL

LEGEND

LOW SLOPE ROOF, PROVIDE ICE & WEATHER GUARD

GENERAL ROOFING NOTES

1. PROVIDE SELF-ADHERING, 40 MIL ICE AND WATER GUARD UNDERLAYMENT UNDER SHINGLES AT ALL VALLEYS AND FROM LOWEST EDGE OF ROOF SURFACES TO A POINT AT LEAST 24" INSIDE THE EXTERIOR WALL LINE, AND ON ALL AREAS WITH A SLOPE LESS THAN 4:12.
2. SEE FRAMING PLAN FOR OVERBUILD AREAS
3. DOTTED LINE INDICATES LINE OF BUILDING BELOW

DOOR SCHEDULE

DOOR				HARDWARE	REMARKS
NO.	SIZE	MATERIAL	MANUF.		
1	2^{8} x 6^{0} x 1 3/4"	MDF, PAINTED	TBD	PASSAGE SET	
2	2^{8} x 7^{0} x 1 3/4"	MDF, PAINTED	TBD	PRIVACY LOCK	RE-USE EXISTING ATTIC BEDROOM DOOR
3	2^{4} x 7^{0} x 1 3/4"	MDF, PAINTED	TBD	PRIVACY LOCK	MATCH EXISTING DOOR STICKING PROFILE
4	2^{6} x 7^{0} x 1 3/4"	MDF, PAINTED	TBD	PRIVACY LOCK	MATCH EXISTING DOOR STICKING PROFILE
5	DBL 1^{9} x 7^{0} x 1 3/4"	MDF, PAINTED	TBD	BALL CATCHES & DUMMY KNOBS	MATCH EXISTING DOOR STICKING PROFILE

APPROVED
Montgomery County
Historic Preservation Commission

GTM ARCHITECTS

7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

GTM

Seal

I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

PERMIT SET	10/23/2020
Issue Description	Date

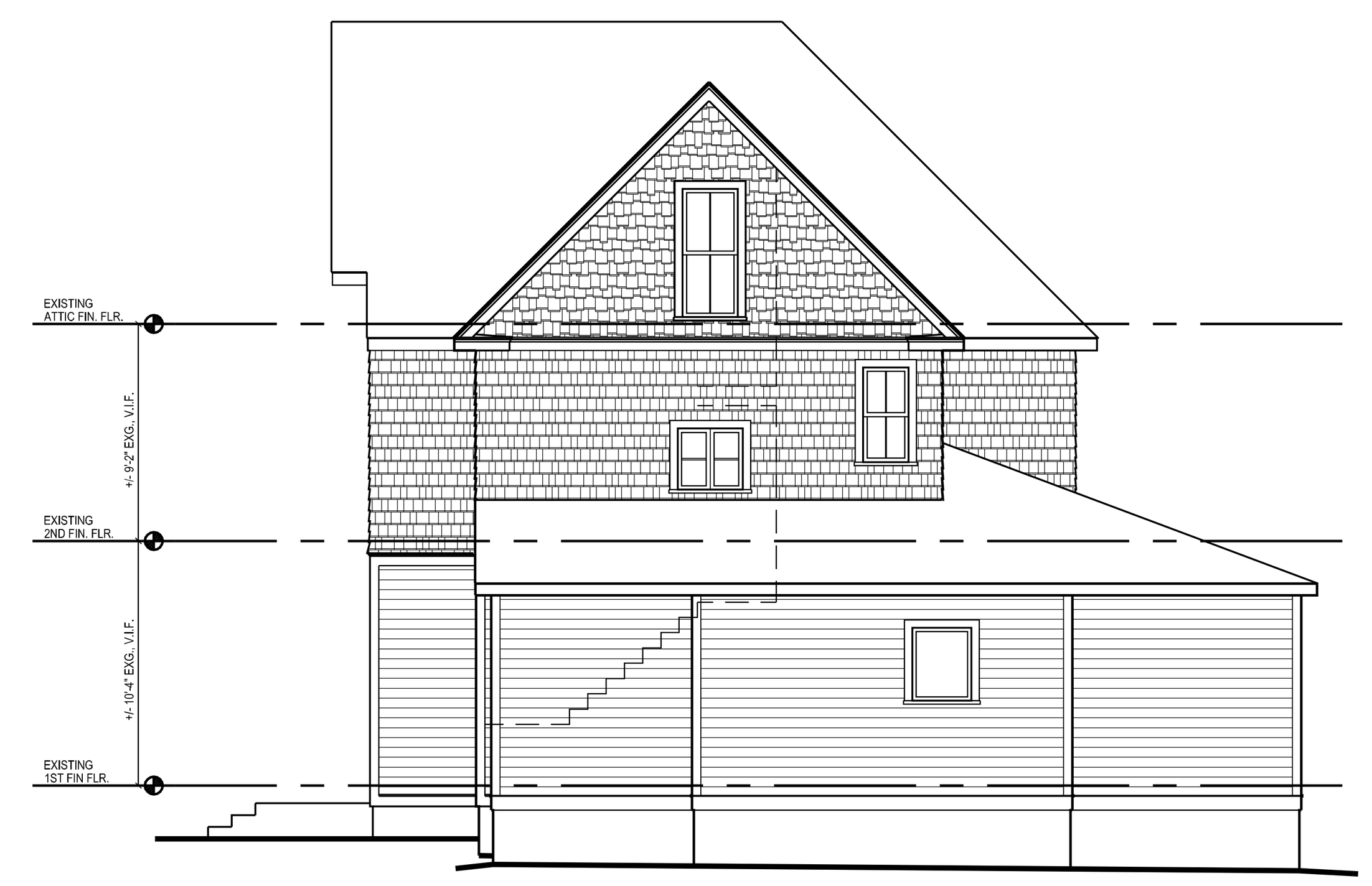
GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
FLOOR PLANS

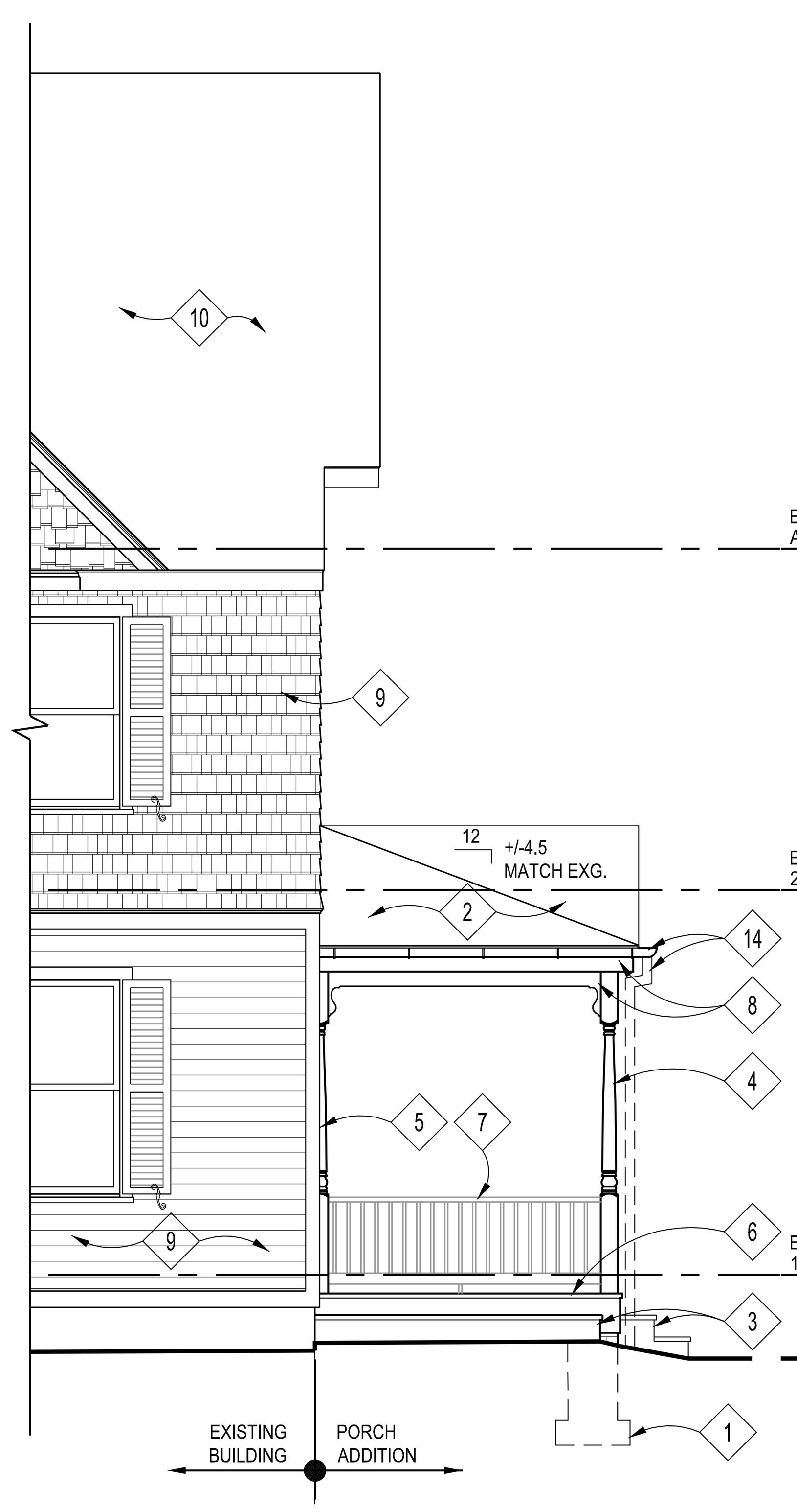
Sheet No.
A100

6 EXISTING RIGHT SIDE ELEVATION
Scale: 1/8"=1'-0"

5 EXISTING FRONT ELEVATIONS
Scale: 1/8"=1'-0"

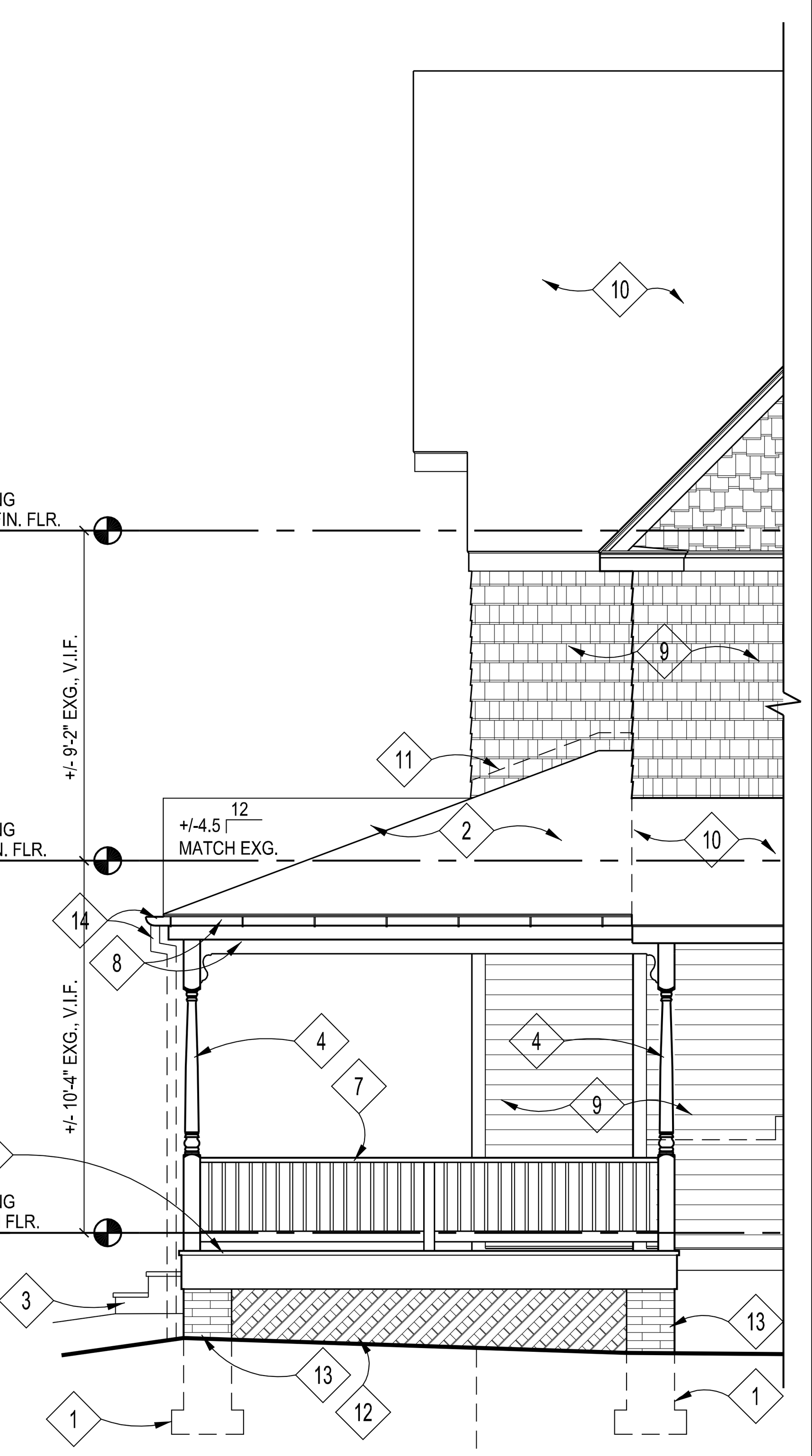


4 EXISTING RIGHT SIDE ELEVATION
Scale: 1/8"=1'-0"



3 LEFT SIDE ELEVATION
Scale: 1/4"=1'-0"

2 FRONT ELEVATION
Scale: 1/4"=1'-0"



1 RIGHT SIDE ELEVATION
Scale: 1/4"=1'-0"

CONSTRUCTION NOTES

1. LINE OF FOOTING & FOUNDATION WALL BELOW, TYP., SEE STRUCTURAL DWGS
2. ASPHALT ROOF SHINGLES TO MATCH EXISTING; SEE ROOF PLAN
3. PTD. WOOD STEPS TO GRADE. F.V. RISE AND RUN, COORD. W/ CIVIL DRAWINGS
4. PTD. 6X6 TURNED WOOD POST, CENTURY POST VICTORIAN OR EQ.
5. ENGAGED PTD. WOOD PILASTER AT WALL TO MATCH POSTS
6. PTD. WOOD 5/4X6 T&G DECKING T.B.S.
7. PTD. 30" H. DECORATIVE WOOD GUARDRAIL, CONFIRM DECK IS NO MORE THAN 30" ABOVE GRADE AT ALL POINTS
8. PTD. WOOD TRIM, SEE DETAILS
9. EXISTING SIDING TO REMAIN
10. EXISTING ROOF TO REMAIN
11. CONCEALED ALUM. FLASHING, EXTEND MIN. 8" BEHIND SIDING
12. PTD. CEDAR LATTICE PANEL, SEE 2/A300. PROVIDE ONE HINGED ACCESS PANEL
13. PTD. BRICK PIER, SEE STRUCTURAL DRAWINGS
14. PTD. ALUM 6" HALF-ROUND GUTTERS AND 4" ROUND DOWNSPOUTS T.B.S., PIPE TO SPLASHBLOCKS @ GRADE

NOTE:
1. VERIFY ALL EXTERIOR RISER & TREAD DIMENSIONS IN FIELD

APPROVED
Montgomery County
Historic Preservation Commission

GTM ARCHITECTS
7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

Seal
I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

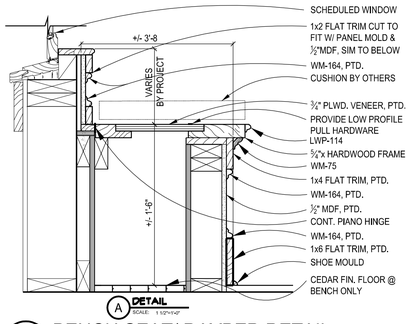
Issue Description	Date
PERMIT SET	10/23/2020

GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

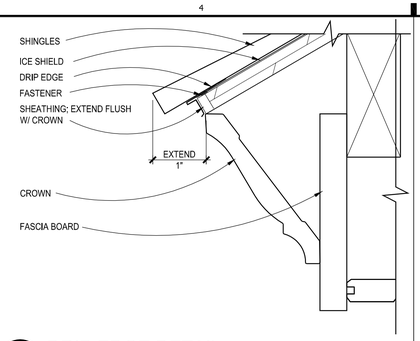
Sheet Title
ELEVATIONS

Sheet No.
A200

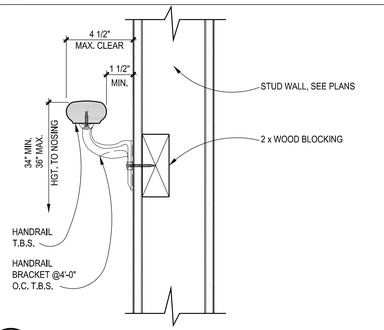
FILE NAME:



9 BENCH SEAT/ DAYBED DETAIL
SCALE: AS NOTED

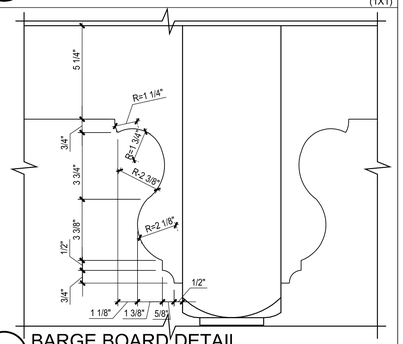


5 DRIP EDGE DETAIL
SCALE: 6"=1'-0"



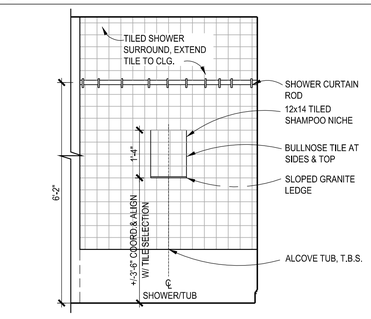
8 INTERIOR HANDRAIL DETAIL
SCALE: 3"=1'-0"

R08-044

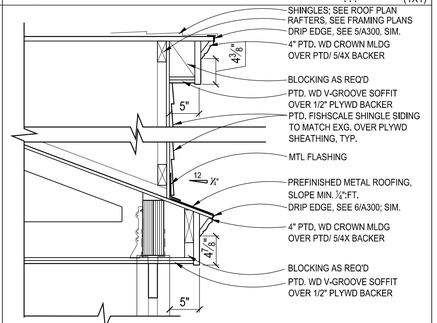


4 BARGE BOARD DETAIL
SCALE: 3" = 1'-0"

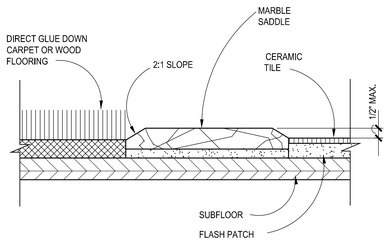
* ARCHITECT CAN PROVIDE FULL-SCALE TEMPLATE UPON REQUEST



7 TYPICAL BATHROOM DETAILS
SCALE: 1/2"=1'-0"

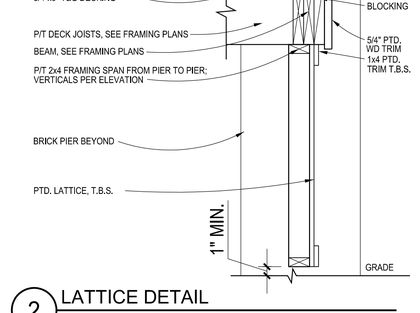


3 PORCH GABLE RAKE DETAIL
SCALE: 1" = 1'-0"



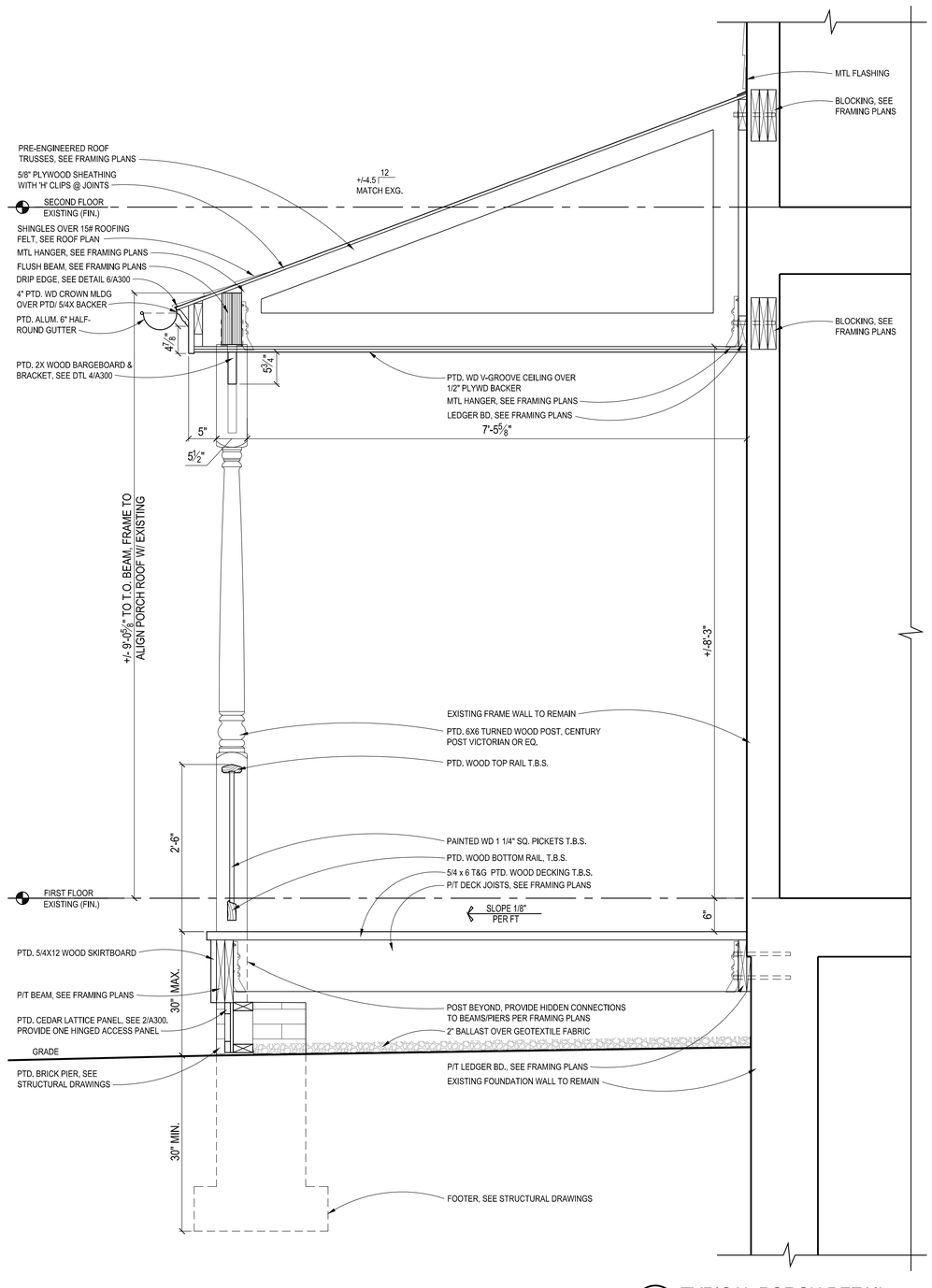
6 THRESHOLD DETAIL
SCALE: N.T.S.

S14-003 (1X1)



2 LATTICE DETAIL
SCALE: 1"=1'-0"

R08-038 (1X1)



1 TYPICAL PORCH DETAIL
SCALE: 1/2"=1'-0"

GTM ARCHITECTS

7735 OLD GEORGETOWN ROAD
SUITE 700
BETHESDA, MD 20814
(240)333-2000
(240)333-2001 FAX
WWW.GTMARCHITECTS.COM

Seal

I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 8385, Expiration Date: 12-06-2020.

Consultant

Project
ENGLE RESIDENCE
3929 BALTIMORE ST., KENSINGTON, MD 20895

Owner

Developer

PERMIT SET	10/23/2020
Issue Description	*Date*

GTM Project No.	19.0654
Checked By	GTM
Drawn By	LEO
Scale	AS NOTED

Sheet Title
SECTION & DETAILS

Sheet No.
A300

FILE NAME:

PRE-ENGINEERED WOOD TRUSSES

TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THESE SPECIFICATIONS AND WHERE ANY APPLICABLE DESIGN FEATURE IS NOT SPECIFIED HEREIN, DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) AMERICAN FOREST AND PAPER ASSOCIATION (AFPA), AND DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1), TRUSS PLATE INSTITUTE (TPI), AND CODES OF JURISDICTION. FABRICATE, SUPPLY AND ERECT WOOD TRUSSES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. WORK SHALL INCLUDE ALL ANCHORAGE, BLOCKING, CURBING, MISCELLANEOUS FRAMING AND BRACING.

LUMBER USED FOR TRUSS MEMBERS SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION AGENCY, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS. TRUSSES SHALL BE HANDLED DURING FABRICATION, DELIVERY AND AT JOBSITE SO AS NOT TO BE SUBJECTED TO EXCESSIVE BENDING. TRUSSES SHALL BE UNLOADED ON SMOOTH GROUND TO AVOID LATERAL STRAIN. TRUSSES SHALL BE PROTECTED FROM DAMAGE THAT MIGHT RESULT FROM ON-SITE ACTIVITIES AND ENVIRONMENTAL CONDITIONS. PREVENT TOPPLING WHEN BANDING IS REMOVED.

HANDLE DURING INSTALLATION IN ACCORDANCE WITH HANDLING, INSTALLING AND BRACING WOOD TRUSSES (HIB-91), TPI, AND ANSI/TPI 1-1995. INSTALLATION SHALL BE CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING PRACTICES. TRUSSES SHALL BE SET AND SECURED LEVEL AND PLUMB, AND IN CORRECT LOCATION. TRUSSES SHALL BE HELD IN CORRECT ALIGNMENT UNTIL SPECIFIED PERMANENT BRACING IS INSTALLED. CUTTING AND ALTERING OF TRUSSES IS NOT PERMITTED. CONCENTRATED LOADS (FULL BUNDLES OF DECKING) SHALL NOT BE PLACED ATOP TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND DECKING IS PERMANENTLY NAILED IN PLACE. ERECTION BRACING IS ALWAYS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FURNISHING THE MATERIALS USED FOR INSTALLATION AND PERMANENT BRACING.

STRUCTURAL ENGINEER OF RECORD SHALL APPROVE SHOP DRAWINGS PRIOR TO SUBMITTAL TO BUILDING OFFICIAL. BUILDING OFFICIAL SHALL APPROVE SHOP DRAWING PRIOR TO INSTALLATION. TRUSSES SHALL BE FABRICATED FROM APPROVED SHOP DRAWINGS.

MANUFACTURER SHALL SUBMIT 3 COPIES OF TRUSS DESIGN DRAWINGS BEARING SEAL OF PROFESSIONAL ENGINEER FOR APPROVAL PRIOR TO ERECTION AND ENGINEERING FRAMING PLANS FOR ALL FLAT CHORD TRUSSES. ALL TRUSS SHOP DRAWINGS MUST BE REVIEWED AND APPROVED IN WRITING, BY GENERAL CONTRACTOR, PRIOR TO SUBMITTAL OF SHOP DRAWINGS TO STRUCTURAL ENGINEER AND MUST INCLUDE THE FOLLOWING:
1. STAMP AND SIGNATURE OF ENGINEER, WHO IS REGISTERED IN THE STATE WHERE THE JOB IS TO BE CONSTRUCTED, RESPONSIBLE FOR PREPARATION OF ALL TRUSS DESIGN AND LAYOUT DRAWING.
2. ALLOWABLE LOADS IN LBS/EFFECTIVE NAIL OR PSI FOR LUMBER & PLATES USED AS ALLOWED BY ICBO, CURRENT ICBO REPORT NUMBER & BY SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL.
3. STRESS REDUCTION FACTORS USED FOR PLATES.
4. TOP AND BOTTOM CHORD DESIGN LOADS IN PLF.
5. SIZE, GAUGE, AND EXACT LOCATION BY DIMENSION OF PLATES.
6. LUMBER SPECIES AND GRADES USED.
7. NAME & TRADEMARK OF PLATE MANUFACTURER, TRUSS FABRICATOR & PROJECT NAME/LOCATION
8. CONCENTRATED LOAD REQUIREMENTS HAVE BEEN DESIGNED FOR AND SHOWN ON DOCUMENTS.
9. TRUSS CONNECTION HARDWARE REQUIREMENTS.

ALL TRUSSES MUST BE DESIGNED FOR UPLIFT LOADS. UPLIFT VALUES @ EACH TRUSS BEARING POINT MUST BE SHOWN ON TRUSS ENGINEERING SHEET.

ALL ROOF TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

ALL FLOOR TRUSSES ON THE LOWEST FLOOR W/ TRUSSES SHALL BE ATTACHED TO PERPENDICULAR NON-LOAD BEARING WALLS WITH TRUSS CLIPS. CEILING GWB SHALL BE ATTACHED TO BLOCKING ON THE WALL AND NOT TO THE TRUSS FOR A DISTANCE OF 18" FROM THE WALL.

LIVE LOAD DEFLECTION SHALL NOT EXCEED ½" OR L/480 FOR FLOOR TRUSSES AND ½" OR L/360 FOR ROOF TRUSSES.

THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, HOLD-DOWN CLIPS, AND OTHER SPECIAL HARDWARE.

MASONRY

ALL MASONRY WORK SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF BIA AND NCMA SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION (ACI 513.1-76) AND "SPECIFICATIONS FOR MASONRY STRUCTURE (ACI 530.1-02)" PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE.

PROVIDE CONTINUOUS MASONRY BOND BEAM SPANNING ALL EXPANSION JOINTS & WALL INTERSECTIONS.

PROVIDE (2) #5 BENT BARS WITH 3-FOOT LEGS AT EVERY CORNER OR WALL INTERSECTION.

CONTINUOUS TIE OR BOND BEAMS SHALL BE REINFORCED WITH NOT LESS THAN 2 #5 CONTINUOUS BARS. LINTELS SHALL BE THE SIZES SHOWN AND REINFORCED AS INDICATED ON THE DRAWINGS.

REINFORCED MASONRY WALLS SHALL HAVE ALL REINFORCED CELLS FILLED WITH CONCRETE. CONCRETE MAY BE PLACED IN MAXIMUM VERTICAL LIFTS NOT TO EXCEED 4-FEET. ROUGHEN ALL SURFACES OF CONCRETE FILL WHICH ARE TO RECEIVE ADDITIONAL LIFTS ABOVE.

MASONRY WALLS SHALL HAVE "DUR-O-WALL" (OR APPROVED EQUAL) TRUSS TYPE HORIZONTAL REINFORCEMENT AT 16"oc VERTICALLY ABOVE GRADE AND 8"oc VERTICALLY BELOW GRADE. COORDINATE BRICK TIE BACK REQUIREMENTS WITH ARCHITECTURAL DRAWINGS. UNLESS NOTED OTHERWISE, STOP ALL HORIZONTAL JOINT REINFORCING AT CONTROL JOINTS.

BRICK VENEER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16"oc VERTICALLY AND HORIZONTALLY AND COMPLY WITH ASTM A82 WITH A153, CLASS B-2 COATING. MINIMUM WIRE DIAMETER SHALL BE 0.1875 INCHES. PROVIDE WEEP HOLES AT 24"oc AT BASE FLASHING.

PROVIDE MIN. 2 COURSES 8"x 16" SOLID BEARING AT BEAM & HEADER BEARING POINTS IN CMU WALLS.

A36 STEEL LINTEL SIZES FOR OPENINGS PER 4" THICKNESS OF MASONRY WALL AS FOLLOWS:

4'-0" SPAN OR LESS	L3"x 3" 1/2"x 5/16"	7'-6" SPAN OR LESS	L5"x 3 1/2"x 5/16"
5'-6" SPAN OR LESS	L4"x 3 1/2"x 5/16"	9'-0" SPAN OR LESS	L6"x 3 1/2"x 5/16"

PROVIDE MIN. 6" BEARING, EACH END & BRICK TIES, 16"oc @ 1st COURSE ABOVE LINTEL.

FILL SOLIDLY w/2,500psi ASTM C-476 GROUT, ALL BOND BEAMS, CELLS THAT ARE REINFORCED, WILL SECURE EXPANSION BOLTS, SILL PLATE ANCHOR BOLTS OR OTHER MECHANICAL ATTACHMENTS AND ALL CELLS BELOW GRADE.

REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A-615, GRADE 60. SHOP FABRICATES REINFORCING BARS, WHICH ARE SHOWN TO BE HOOKED, OR BENT. PROVIDE A MINIMUM LAP OF 48 BAR DIAMETERS AT ALL SPLICES, UNLESS INDICATED OTHERWISE.

UNLESS OTHERWISE NOTED, ALL WALLS SHALL BE LAID IN RUNNING BOND. BOND CORNERS AND INTERSECTIONS OF LOAD-BEARING WALLS.

PROVIDE VERTICAL REINFORCING BARS OF THE GIVEN SIZE AND SPACING AS INDICATED. PROVIDE BARS AT ALL WALL CORNERS, INTERSECTIONS AND OPENINGS EDGES.

PROVIDE REBAR DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90-DEGREE HOOKS AND LAP WITH THE FIRST LIFT OF REINFORCING.

PROVIDE BOND BEAM LINTELS AND BRICK SHELF ANGLES ABOVE ALL WALL OPENINGS.

PROVIDE JOIST & BEAM BEARING PLATES w/OTHER ACCESSORIES AS INDICATED, WITH 3 COURSES OF SOLIDLY GROUTED CMU BELOW ALL BEAM BEARINGS OVER A WIDTH OF 2'-8" CENTERED ON THE BEAM.

PROVIDE CMU CONTROL JOINTS AS INDICATED, w/ADDITIONAL JOINTS SUCH THAT THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 3x WALL HEIGHT, 35' MAXIMUM. WHERE BEAMS OR LINTELS BEAR AT CMU CONTROL JOINTS, OFFSET & LAP THE VERTICAL REINFORCING AS INDICATED.

MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION.

WOOD FRAMING

NAIL IN ACCORDANCE WITH RECOMMENDED WOOD FASTENING SCHEDULE IN APPLICABLE BUILDING CODES (LATEST EDITION/HIGH WIND REGION). PROVIDE BLOCKING, BRIDGING AND BRACING PER SAME CODE. AT A MIN., PROVIDE BRIDGING AT EACH END OF THE JOIST, AND ONE ROW OF SOLID BRIDGING BELOW ALL INTERIOR BEARING PARTITIONS.

FASTENERS: JOIST HANGERS, HURRICANE ANCHORS, POST BASES AND OTHER FRAMING ANCHORS ARE TO BE AS MANUFACTURED BY SIMPSON STONG-TIE, U.S.P., OR EQUAL, AND ARE TO BE USED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. ALL FASTENERS TO BE 16 GA. MIN. UNLESS NOTED OTHERWISE. PROVIDE GALV. FINISH UNLESS NOTED OTHERWISE. JOIST HANGERS SHALL BE MIN. 16 GA. WITH SIZE AND PROFILE TO SUIT APPLICATION (U.N.O.). PROVIDE JOIST HANGERS FOR ALL FLUSH FRAMED JOISTS. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE Z-MAX OR TRIPLE ZINC COATED, U.N.O.

THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL EXCEED THE NUMBER OF MEMBERS IN THE BEAM BY ONE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS. (UNLESS NOTED OTHERWISE ON PLAN) ALL MICRO-LAM BEAMS SHALL HAVE 3 STUDS (MIN. & EXCEED WIDTH OF BEAM). CONTINUE THESE STUDS TO THE FOUNDATION WITH INTERMEDIATE SUPPORTS THROUGH FLOOR, BETWEEN LOWER WALL TOP PLATE & UPPER WALL BOTTOM PLATE.

ALL EXTERIOR POSTS TO BE TREATED 6X6 (U.N.O.). NOTCH TOP OF POST FOR BEAM BRG. (3" MAX.) AND THRU BOLT BEAM TO POST WITH (2) 1/2" DIA. GALV. BOLTS. ALTERNATE: PROVIDE COLUMN CAP CONNECTION WITH #AC SERIES BY SIMPSON STONG-TIE OR EQ. PROVIDE SOLID BLOCKING BELOW ALL COLUMNS, TO TRANSFER LOAD DIRECTLY TO FRAMING/FOUNDATION BELOW.

PROVIDE DOUBLE JOIST UNDER ALL PARTITIONS PARALLEL TO JOIST SPAN AND AROUND ALL FLOOR AND ROOF OPENINGS. SPACE & BLOCK IF PARTITIONS ABOVE IS A PLUMBING WALL. PROVIDE SOLID BLOCKING AT 12"oc BETWEEN JOISTS UNDER PARTITIONS ABOVE) WHICH ARE PARALLEL TO THE JOISTS BUT NOT DIRECTLY OVER THE JOISTS. BLOCKING SHALL BE NOT LESS THAN 2" IN. THICKNESS & SHALL MATCH THE DEPTH OF THE JOISTS. TRUSSES MAY USE TRUSS BLOCKS.

ALL MULTI-PLY BEAMS SHALL BE NAILED WITH 3 ROWS OF 10d NAILS AT 8"oc STAGGERED OR BOLTED WITH 1/2" DIA. BOLTS AT 16"oc STAGGERED (U.N.O.).

PROVIDE COLLAR TIES OF 1X6 BOARDS AT UPPER 1/3 DOWN FROM RIDGE BEAMS SPACED 48"oc MAXIMUM. (FOR CONVENTIONAL FRAMING)

BALLOON FRAME ALL END WALLS WITH CATHEDRAL CEILING (U.N.O.):
2x4 @ 16"oc UP TO 9'-0", 2x6 @ 16"oc UP TO 14'-0" & 2x8 @ 16"oc UP TO 18'-0"

FASTEN GABLE-END WALL STUDS TO CEILING DIAPHRAGM BY FASTENING NAILER TO EACH STUD AND BY FASTENING CEILING TO NAILER WITH 8d NAILS AT 6"oc

WHERE DECKS FASTEN TO HOUSE FRAMING, PROVIDE CONTINUOUS TREATED LEDGER THRU-BOLTED TO FLOOR STRUCTURE WITH (2) 1/2" DIA. BOLTS AT 16"oc PROVIDE HOT-DIPPED GALV. JST. HANGER TO LEDGER.

ALL EXTERIOR WALLS SHALL BE STUDS AT 16"oc AS SPECIFIED ON PLANS WITH 7/16" OSB EXTERIOR SHEATHING. BLOCKING OF HORIZONTAL PANEL EDGES IS NOT REQUIRED. NAIL ALL REQUIRED PANEL EDGES WITH 8d NAILS AT 6"oc AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc

ROOF AND FLOOR FRAMING LAYOUTS ARE PROVIDED TO ILLUSTRATE CONDITIONS OF CONSTRUCTION AND DO NOT NECESSARILY INDICATE SPECIFIC QUANTITIES OF MATERIALS OR COMPONENTS REQUIRED FOR CONSTRUCTION.

CONSTRUCTION BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO MAINTAIN THE BUILDING PLUMB AND TRUE. THIS BRACING SHALL REMAIN UNTIL THE SPECIFIED SHEARWALLS ARE TOTALLY INSTALLED.

PRESCRIPTIVE BRACED WALL SEGMENTS SHALL HAVE STUDS AT 16"oc (MAX.) WITH 7/16" OSB EXTERIOR SHEATHING. BLOCKING OF HORIZONTAL PANEL EDGES IS NOT REQUIRED. NAIL ALL SHEATHING PANEL EDGES WITH 8d NAILS AT 6"oc AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc

SHEARWALLS SHALL HAVE STUDS @ 16"oc (MAX.) WITH 7/16" OSB EXTERIOR SHEATHING (U.N.O., SEE PLAN). BLOCKING OF HORIZONTAL PANEL EDGES IS REQUIRED. NAIL ALL SHEATHING PANEL EDGES WITH 8d NAILS AT 6"oc (U.N.O., SEE PLAN) AND INTERMEDIATE STUDS WITH 8d NAILS AT 12"oc (U.N.O., SEE PLAN)

SHEAR WALL HOLD-DOWNS: ALL SHEAR WALLS SHOWN ON PLANS TO HAVE HOLD-DOWNS AT THE BASE AT EACH WALL END SHALL BE AS FOLLOWS:
* AT UPPER FLOORS USE (2) SIMPSON HD8A'S OR (1) SIMPSON FTA7 AT EACH END OF SHEAR WALL SEGMENT AND EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
* AT CONCRETE FOUNDATIONS USE (1) SIMPSON HD2A AT EACH END OF SHEAR WALL SEGMENT AND AT EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
* AT PILE/GIRDER SUPPORTED FLOOR, USE (2) SIMPSON HD8A'S OR (1) SIMPSON FTA7 AT EACH END OF SHEAR WALL SEGMENT AND AT EACH EXTERIOR CORNER OF BUILDING.(U.N.O., SEE PLAN)
* PROVIDE 3 STUDS MIN. AT EACH HOLD-DOWN.(U.N.O., SEE PLAN)
* PROVIDE TRIPLE JOISTS BELOW SHEAR WALLS THAT RUN PARALLEL TO FLOOR FRAMING.(U.N.O., SEE PLAN)

ALL INTERIOR SHEAR WALLS SHOWN ON THE PLANS SHALL HAVE STRUCTURAL SHEATHING THAT EXTENDS TO THE UNDERSIDE OF THE FLOOR SHEATHING ABOVE. WHERE JOISTS RUN PARALLEL TO THE SHEAR WALL, PROVIDE A DBL.-JOIST ABOVE THE SHEAR WALL. WHERE JOISTS RUN PERPENDICULAR, PROVIDE 2X BRIDGING ABOVE SHEAR WALL AND "TOOTH" PLYWOOD AROUND JOISTS. NAIL THROUGH FLOOR SHEATHING ABOVE INTO WALL WITH (2) 10d NAILS AT 4"oc

ALTERNATE POWER NAILS (FOR FRAMING MEMBERS ONLY,- 0.113ϕ x 2⅜" FOR 8d NAILS & 0.131ϕ x 3" FOR 16d NAILS
PROVIDE DEFORMED SHANK NAILS AS REQD. BY U.L. RATINGS.

STEEL

FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

PROVIDE WELDED CONNECTIONS TYPICALLY UNLESS OTHERWISE NOTED.

WELDS SHALL BE MADE ONLY BY WELDERS WHO HAVE BEEN PREQUALIFIED BY TESTS OF THE AMERICAN WELDING SOCIETY, PRESCRIBED IN THE STRUCTURAL WELDING CODE," AWS D1.1 (LATEST EDITION).

ANY CONNECTION NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL STEEL FABRICATOR. SEE THE TYPICAL BEAM CONNECTION DETAILS ON THE DRAWINGS.

MILL BOTTOM OF ALL COLUMNS AND FINISH TOP OF ALL BASE PLATES IN ACCORDANCE WITH A.I.S.C.
SPECIFICATIONS. BASE PLATES SHALL BE WELDED TO BOTTOM OF COLUMNS.

CONNECTIONS SHALL BE AISC STANDARD.

PROVIDE BASE PLATE FOR ALL STRUCTURAL STEEL BEAMS BEARING ON CONCRETE OR MASONRY. GROUT FOR SETTING BEARING SURFACES SHALL BE NON-SHRINK, NOT-STAINING, EQUAL TO "MASTERFLOW 713" BY THE MASTER BUILDERS CORPORATION.

SPECIFIED GROUT THICKNESS INCLUDES 1/4 INCH THICK LEVELING PLATES WHICH SHALL BE USED UNDER ALL BEAMS AND COLUMNS RESTING ON CONCRETE.

SCHEDULE OF CONSTRUCTION MATERIALS

CONCRETE

LOCATION	COMP. STRENGTH	SLUMP
BASEMENT WALLS & FDN NOT EXPOSED TO WEATHER	3000 PSI (2)	4" +/- 1"
BASEMENT SLABS AND INTERIOR SLABS ON GRADE	3000 PSI	4" +/- 1"
BASEMENT WALLS, FDNS, EXTERIOR WALLS & OTHER CONCRETE EXPOSED TO WEATHER	3000 PSI (3)	4" +/- 1"
DRIVEWAYS, CURBS, WALKS, PATIOS, STEPS AND UNHEATED GARAGE FLOORS EXPOSED TO WEATHER	3500 PSI (3)	4" +/- 1"

NOTES
1) THE COMPRESSIVE STRENGTH IS BASED 28-DAY COMPRESSIVE STRENGTH.
2) CONCRETE SUBJECTED TO FREEZE AND THAW CONDITIONS DURING CONSTRUCTION SHALL BE AIR-ENTRAINED (6% +/- 1%).
3) CONCRETE SHALL BE AIR-ENTRAINED (6% +/- 1%).

MASONRY

MATERIAL	SPECIFICATION
HOLLOW CMU	NORMAL WEIGHT: ASTM C90, GRADE N, Fm= 1500 PSI
FACE BRICK	ASTM C216, SEVERE WEATHER BRICK, TYPE FBX, Fm=2000 PSI
STONE VENEER	OWNER APPROVED
CONCRETE BRICK	ASTM C95 TYPE I, GRADE 8
SOLID CMU	NORMAL WEIGHT: ASTM C145, GRADE N
MORTAR: SINGLE WYTHE ABOVE GRADE	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE S HYDRATED LIME AND APPROVED AGGREGATE, WITH 1800 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.
MORTAR: SINGLE WYTHE BELOW GRADE	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE M HYDRATED LIME AND APPROVED AGGREGATE, WITH 2500 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.
MORTAR: VENEER	ASTM C270 PROJECTION SPECIFICATION MORTARS SHALL CONSIST OF TYPE I PORTLAND CEMENT, TYPE N HYDRATED LIME AND APPROVED AGGREGATE, WITH 750 psi MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 2-INCH CUBES AT 28-DAYS.

REINFORCING STEEL

SPECIFICATION

MATERIAL	SPECIFICATION
REBAR	HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 PSI) - DEFORMED
WELDED WIRE FABRIC	ASTM A-185

PROTECTION

LOCATION	CLEAR COVER (IN)
FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH	2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR EARTH	1½"
SLABS ON GROUND, UNLESS OTHERWISE NOTED	MID-DEPTH OF SLAB
REINFORCED MASONRY WALLS	MID-DEPTH OF WALL

STRUCTURAL STEEL

SHAPE	SPECIFICATION
I-BEAMS	STRUCTURAL STEEL I BEAMS SHALL CONFORM TO ASTM A572 GRADE 50 (50 KSI).
TUBE	STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B, UNLESS OTHER SIDE NOTED IN THE PROJECT SPECIFICATIONS
PIPE	STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A36 (36KSI), UNLESS OTHER SIDE NOTED IN THE PROJECT SPECIFICATIONS
ALL OTHER SHAPES	ALL OTHER STRUCTURAL STEEL, INCLUDING PLATES AND MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A36 (36KSI).
CONNECTION	SPECIFICATION
BOLTS	BOLTS FOR CONNECTING STRUCTURAL STEEL SHAPES SHALL BE ASTM A325-N, ¾-INCH DIAMETER, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE PROJECT SPECIFICATION
ANCHOR BOLTS	ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
WELDS	WELDING ELECTRODES SHALL BE E70 SERIES.

WOOD

DIMENSION AND STRUCTURAL COMPOSITE LUMBER

MATERIAL		DESIGN VALUES (1)					
		Fb	Ft	Fv	Fc⊥	Fc II	E x 10⁶
UNTREATED FRAMING (2)	2X. 3X, OR 4X	875	450	135	425	1150	1.4
	5X5 AND LARGER(B)	600	300	125	425	425	1.0
	5X5 AND LARGER(P)	500	325	125	425	500	1.0
TREATED FRAMING (3)	2X4	1500	825	175	565	1650	1.6
	2X6	1250	725	175	565	1600	1.6
	2X8	1200	650	175	565	1550	1.6
	2X10	1050	575	175	565	1500	1.6
	2X12	975	550	175	565	1450	1.6
	5X5 AND LARGER	850	550	165	375	525	1.2
LVL	COLUMNS AND BEAMS	2650	1650	285	750	3000	1.7
LVL (2.0E)	BEAMS	3100	2150	285	750	3000	2.0

STRUCTURAL GLUED LAMINATED TIMBER (GLULAM)

MATERIAL		DESIGN VALUES (1)					
		Fb COMP ZONE	Fb TENSION ZONE	Fv	Fc⊥	Fc II	E x 10⁶
UNTREATED FRAMING	BEAMS 24F-1.8E	2400	1850	240	650	1600	1.8
		Fbx	Fby	Fv	Fc⊥	Fc II	E x 10⁶
	COLUMNS #2 DF	1700	1800	180	560	1950	1.6

ENGINEERED WOOD PRODUCTS

MATERIAL	SPECIFICATION
PREFABRICATED WOOD I-JOISTS	PREFABRICATED WOOD I-JOISTS SHALL BE MANUFACTURED BY BOISE CASCADE, LLC. OR APPROVED SUBSTITUTE. THE MANUFACTURER SHALL SUPPLY ALL REQUIRED HANGERS, WEB STIFFENERS, SQUASH BLOCKS, BEVELED BEARING PLATES, AND OTHER SPECIAL HARDWARE. THE MANUFACTURER SHALL SUBMIT ERECTION DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION ALL PREFABRICATED WOOD I-JOISTS SHALL BE INSTALLED AND. BRACED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
PLYWOOD/OSB	DOC PS1, DOC PS2, CSA0437 OR CSA0325 ADVARYTECH, STRUCTURE WOOD NOT ALLOWED.

NOTES
1) DESIGN VALUES ARE FOR NORMAL LOAD DURATION AND DRY SERVICE CONDITIONS. SEE NDS OR MANUFACTURES SPECIFICATION FOR A COMPREHENSIVE DESCRIPTION OF DESIGN VALUE ADJUSTMENT FACTORS.
2) FRAMING DESIGN VALUES ARE BASED ON SPF No.2.
3) FRAMING DESIGN VALUES ARE BASED ON SYP No.2.

GOVERNING BUILDING CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.
* INTERNATIONAL RESIDENTIAL CODE (IRC), INTERNATIONAL CODE COUNCIL, INC., 2015
* MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ANSI/ASCE 07-10), AMERICAN SOCIETY OF CIVIL ENGINEERS.
* BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-11, AMERICAN CONCRETE INSTITUTE.
* ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5 - 2011
* MANUAL OF STANDARD PRACTICE, CONCRETE REINFORCING STEEL INSTITUTE.
* MANUAL OF STEEL CONSTRUCTION - 13TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (INCLUDING SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, AND AISC CODE OF STANDARD PRACTICE WITH EXCEPTION, IF ANY, AS INDICATED IN THE SPECIFICATIONS).
* MANUAL OF STEEL CONSTRUCTION, VOLUME II CONNECTIONS, ASD 13TH EDITION/LRFD 1ST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
* DETAILING FOR STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
* STRUCTURAL WELDING CODE ANSI/AWS D 1.1-92, AMERICAN WELDING SOCIETY.
* DESIGN MANUAL FOR FLOOR DECKS AND ROOF DECKS, STEEL DECK INSTITUTE.
* SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AMERICAN IRON AND STEEL INSTITUTE, AISI S100-2007.
* BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-10/ASCE 5-05/TMS 402-05) & SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-05/ASCE 6-05/TMS 602-05).
* NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION/ 2012, AMERICAN FOREST & PAPER ASSOCIATION.

DESIGN LOADS

	LIVE LOADS	DEAD LOADS	TOTAL
ROOF TRUSSES	30 PSF	10 PSF (TOP & BOTTOM)	50 PSF
RAFTERS	30 PSF	12 PSF	42 PSF
ATTIC FLOORS (TYP)	30 PSF	12 PSF	42 PSF
LTD STORAGE	20 PSF	12 PSF	32 PSF
NO STORAGE	10 PSF	5 PSF	15 PSF
SLEEPING ROOMS	30 PSF	12 PSF	42 PSF
OTHER FLOORS	40 PSF	12 PSF	52 PSF
GARAGE FLOORS	50 PSF	50 PSF	100 PSF
DECKS	40 PSF	10 PSF	50 PSF
BALCONY	60 PSF	10 PSF	70 PSF
STAIRS	40 PSF	20 PSF	60 PSF

ROOF LIVE LOAD — DESIGN: 30 PSF; MINIMUM: 16 PSF

WIND LOAD	BASIC WIND SPEED (3 SEC GUST)	115 MPH
	WIND PRESSURE (ROOF AVG.)	10.0 PSF
	WIND PRESSURE (WALL AVG.)	27.9 PSF
	WIND LOAD IMPORTANCE	1.0
	WIND EXPOSURE CATEGORY	EXPOSURE B
SNOW LOAD	GROUND SNOW LOAD (P_g)	30 PSF
	THERMAL FACTOR	1.1
	SNOW EXPOSURE FACTOR (C_e)	1.0
	SNOW LOAD IMPORTANCE FACTOR	1.00
	SNOW LOAD (ROOF)	18 PSF
	MINIMUM SNOW LOAD	20 PSF
	RAIN-ON-SNOW	23.0 PSF

ADDITIONAL DRIFT AND SLIDING SNOW LOADS HAVE BEEN CONSIDERED WHERE APPLICABLE.

SEISMIC	PEAK VELOCITY-RELATED ACCELERATION(A)	0.07
	PEAK ACCELERATION (A)	0.05
	SEISMIC HAZARD EXPOSURE GROUP	I
	SEISMIC DESIGN CATEGORY	C
	SOIL PROFILE TYPE	2 (UNKNOWN)
	BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM	LOAD BEARING WALL SYSTEM LIGHT FRAMED WALLS w/SHEAR PANELS
	RESPONSE MODIFICATION FACTOR (R	6½
	DEFLECTION AMPLIFICATION FACTOR (C)	4
	ANALYSIS PROCEDURE (ELEP OR MAP)	ELEP

SOIL BEARING CAPACITY 2000 PSF

IF IT IS DETERMINED THAT THE SOIL CAPACITY AT THE SITE IS LESS THAN 2000 PSF, THE FOUNDATION MUST BE RE-EVALUATED.

BACK FILL 60 PCF EQUIVALENT FLUID WEIGHT, UNLESS OTHERWISE NOTED

MECHANICAL UNITS & OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200# SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

REVIEWED
By Michael Kyne at 4:01 pm, Nov 02, 2020

APPROVED
Montgomery County
Historic Preservation Commission
Sandra I. Heiler

STRUCTURAL ENGINEERING UNLIMITED, LLC
341 W. PATRICK STREET
FREDERICK, MD 21701
240-815-6760
301-748-2769

3929 BALTIMORE ST, KENSINGTON MD 20895

GTM ARCHITECTS
ARCHITECT

CONTRACTOR
CONTRACTOR:

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.: 24518 EXPIRATION DATE: 09-21-2021

10/29/2020

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	04-27-2020

REVISION:		
1	FRAMING REVISION	10-29-2020
2		
3		
4		
5		
6		
7		
8		

GENERAL STRUCTURAL NOTES & SCHEDULES

S001

10/29/2020 --- 10:27:26 AM

e:\documents_seu - cluod\public_clients\2019\gtm architects_2020\engle - porch\2020-10-29 baltimore st.3929.dwg

1 | 2 | 3 | 4 | 5 | 6

CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTION ACI 318. ALL PLAIN CONCRETE TO CONFORM TO ACI 318.1 AND ACI 332 GUIDE TO RESIDENTIAL CAST IN PLACE CONCRETE CONSTRUCTION. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.53 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.45 FOR ALL EXTERIOR EXPOSED CONCRETE.

CONCRETE MATERIALS SHALL CONFORM TO ASTM C150, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH-RANGE WATER REDUCERS (SUPER-PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID-MEMBRANE CURING COMPOUNDS SHALL BE HIGH-SOLIDS, WATER AND ACRYLIC-BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156. SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 4-INCHES AND A MAXIMUM OF 6-INCHES. SEE THE PROJECT SPECIFICATIONS. THE COMPRESSIVE STRENGTH IS BASED 28-DAY COMPRESSIVE STRENGTH.

SLAB ISOLATION JOINTS: PROVIDE PRE-MOLDED JOINT FILLER AROUND ALL PIPING, PIERS & FOUNDATION WALLS.

ALL CONCRETE TO BE PLACED IN THE CELLS OF CONCRETE MASONRY UNITS (CMU BLOCK FILL), OR IN THE VOIDS OF BRICK MASONRY CONSTRUCTION, SHALL CONTAIN PEA GRAVEL (3/8"ϕ STONE) IN LIEU OF COARSE AGGREGATE. THE CONCRETE MIX SHALL CONTAIN A HIGH-RANGE WATER REDUCER (SUPERPLASTICIZER). SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 6" AND A MAXIMUM OF 9". SEE THE PROJECT SPECIFICATIONS.

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED, 6% +/-1%. USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED. DO NOT USE HIGH-RANGE WATER REDUCING ADMIXTURES IN AIR-ENTRAINED CONCRETE. CONFORM TO ASTM C260.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED. SEE THE PROJECT SPECIFICATIONS FOR REQUIREMENTS OF WATER ADDITION TO CONCRETE AT THE JOBSITE.

SLABS ON GRADE SHALL BE 4" THICK CONCRETE AND REINFORCED w/6x6 W1.4xW1.4 WWF. WELDED WIRE FABRIC SHALL BE SUPPORTED ON HIGH CHAIRS SO THAT THE FABRIC IS POSITIONED AT MID-DEPTH OF THE SLAB THICKNESS. LAP ONE FULL MESH PLUS 2" AT SPLICES IN EACH DIRECTION. PLACE CONCRETE OVER 6 MIL. POLYETHYLENE VAPOR BARRIER AND 4" MINIMUM COURSE AGGREGATE OR AS RECOMMENDED BY SOILS ENGINEER. THE AGGREGATE LAYER SHALL BE PLACED OVER FIRM NATURAL SUBGRADE OR ON COMPACTED AND CONTROLLED FILL. FILL UNDER SLABS SHALL BE COMPACTED IN 8 INCH LAYERS TO 95% MAX. DENSITY. USE AIR-ENTRAINED AT ALL EXTERIOR SLABS.

CONCRETE FOR SLABS-ON-GRADE SHALL BE PLACED IN A SEQUENCE AND MANNER THAT IS CONSISTENT WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE. LOCATE CONSTRUCTION AND CONTROL JOINTS IN SUCH A WAY TO MINIMIZE THE EFFECTS OF SHRINKAGE OF THE CONCRETE SLAB SECTIONS. SUBMIT TO THE ARCHITECT/ENGINEER THE SEQUENCE AND METHOD OF CASTING CONCRETE SLABS-ON-GRADE PRIOR TO PLACING THESE ELEMENTS. POUR SLABS IN ALTERNATE PANELS WITH A MAXIMUM OF 600 SF AND PROVIDE CONTROL AND CONSTRUCTION JOINTS AT 15'-0" MAXIMUM OR AS REQUIRED TO PREVENT UNCONTROLLED CRACKING.

SLAB CONTROL JOINTS: SAW CUT OR FORM TO 1/3 SLAB DEPTH. SPACE NO MORE THAN 15 FEET APART. DISCONTINUE WELDED WIRE FABRIC AT CONTROL JOINTS. PROVIDE JOINTS ON GROUND SUPPORTED SLABS IN RECTANGULAR CONFIGURATION, WITH THE LONGER SIDE NO MORE THAN ONE-AND-ONE-HALF TIMES THE LENGTH OF THE SHORTER SIDE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE PLACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

PROVIDE 8' X 8' CORNER BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 36 BAR DIAMETERS. PROVIDE DOWELS BETWEEN ALL FOOTINGS, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

DRY PACK SHALL CONSIST OF SIKA GROUT 212 OR APPROVED SUBSTITUTE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

WOOD

FLITCH BEAMS SHALL BE SIZED AS INDICATED ON THE DRAWINGS, USING #2 SPF MINIMUM AND A-86 STEEL PLATE. USE TWO ROWS OF 1/2" DIAMETER THROUGH BOLTS 2" FROM TOP AND BOTTOM, SPACED 16"oc AT TOP AND 32"oc AT THE BOTTOM. BEGIN BOLTING ROWS 6" FROM ENDS. STEEL FLITCH PLATES MUST BE EITHER FULL LENGTH OR FULL MOMENT BUTT SPLICE.

WOOD EXPOSED TO THE ELEMENTS, WOOD IN CONTACT WITH CONCRETE OR MASONRY, AND WOOD DESIGNATED "TREATED" SHALL BE #2 GRADE SOUTHERN PINE OR BETTER & PRESSURE IMPREGNATED WITH ALKALINE COPPER QUATERNARY (ACQ) IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD C2, WITH A MIN. RETENTION OF 0.40 LBS. PER CUBIC FOOT OF WOOD. MIN. DEPTH OF PENETRATION SHALL BE 2.5" OR 85% OF THE SAPWOOD.

ALL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH WFOPA. MEMBERS ARE NOT TO BE DRILLED IN EXCESS OF NDS OR LOCAL CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ALL POSTS AND MULTIPLE STUDS SHALL BE RUN CONTINUOUSLY TO SOLID BEARING ON FOUNDATION WALL OR BEAMS, PROVIDE SOLID BLOCKING AT FLOORS. COLUMNS SHALL BE ADEQUATELY ANCHORED TO PREVENT INTERNAL DISPLACEMENT.

FRAME CHIMNEYS: FRAME CHIMNEYS SHALL BE CONSTRUCTED OF MINIMUM #2 SPF STUDS, MAXIMUM 16"oc USE 2 X 4 IF CHIMNEY EXTENDS LESS THAN 8' ABOVE ROOF, OTHERWISE USE 2 X 6. SHEATH WITH 1/2" APA OR APPROVED SUBSTITUTE RATED SHEATHING CONTINUOUS ACROSS PLATES AND JOISTS, GLUE, AND NAIL WITH 8D NAILS @ 6"oc SECURE TO ROOF. STUDS MUST BE CONTINUOUS ACROSS ROOF INTERSECTION.

NO STRUCTURAL MEMBER SHALL BE OMITTED, NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER OR STRUCTURAL ENGINEER. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF BOTH.

CUTTING OF WOOD BEAMS, JOISTS AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-SIXTH THE MEMBER DEPTH AND SHALL NOT BE LOCATED WITHIN THE MIDDLE THIRD OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE MEMBER DEPTH SHALL NOT EXCEED ONE-FIFTH THE DEPTH. HOLES BORED OR CUT INTO JOISTS SHALL BE MIN. 2" CLEAR FROM THE TOP OR BOTTOM OF THE JOIST AND THE HOLE DIAMETER SHALL NOT EXCEED ONE-THIRD OF THE JOIST DEPTH.

THERE SHALL NOT BE LESS THAN ONE LINE OF BRIDGING IN EVERY EIGHT FEET OF SPAN IN FLOOR, ATTIC AND ROOF FRAMING. THE BRIDGING SHALL CONSIST OF NOT LESS THAN ONE BY THREE INCH LUMBER DOUBLE NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL RIGIDITY. MIDSPAN BRIDGING IS NOT REQUIRED FOR FLOOR, ATTIC OR ROOF FRAMING WHERE JOIST DEPTH DOES NOT EXCEED TWELVE INCHES NOMINAL. BLOCK ALL STUD WALLS AT MAXIMUM INTERVALS OF EIGHT FEET WITH A MINIMUM OF TWO-BY SOLID MATERIAL WITH TIGHT JOINTS. PROVIDE TWO-BY FIRE STOPS AT MID-POINT OF STUD WALLS.

UNLESS NOTED OTHERWISE, BRACE EXTERIOR CORNERS OF BUILDING WITH 1 X 4 DIAGONALS, LET INTO STUDS, OR 4 X 8 PLYWOOD SHEET OF THICKNESS TO MATCH THAT OF SHEATHING, OR WITH METAL STRAPS. LAP PLATES AT ALL CORNERS.

MISCELLANEOUS

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT AND FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.

THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURE. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR IS TO VERIFY ALL OPENING SIZES AND LOCATIONS WITH THE REQUIREMENTS OF OTHER TRADES PRIOR TO FABRICATION AND ERECTION.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH STRUCTURAL WORK.

EARTH RETAINING WALLS, OTHER THAN CANTILEVERED TYPE WALLS, SHALL BE ADEQUATELY BRACED UNTIL CONCRETE FOR SUPPORTING SLABS HAS BEEN PLACED AND ALL CONCRETE HAS CURED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING AND REMOVING ANY TEMPORARY SHORING AND BRACING DURING CONSTRUCTION

THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ALL ITEMS ARE READY FOR OBSERVATION. SUFFICIENT NOTICE SHALL BE GIVEN BY THE CONTRACTOR TO ALLOW FOR SCHEDULING OF OBSERVATIONS.

SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED BY THE CONTRACTOR OR SUBCONTRACTOR DURING ALL TIMES OF WORK ON THIS PROJECT. THE ARCHITECT OR ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR ACTS OF OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL SPECIALTY BOLTS, INCLUDING EXPANSION TYPE AND EPOXY TYPE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE CONTRACTOR SHALL PROTECT FROM DAMAGES EXISTING BUILDING(S), OWNER EQUIPMENT, ROADS, WALKS AND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THESE DURING THE COURSE OF THE WORK, AND SHALL REPAIR ALL DAMAGES AT NO ADDITIONAL EXPENSE TO THE OWNER.

IN AREAS WHERE THE DRAWINGS DO NOT ADDRESS METHODOLOGY, THE CONTRACTOR SHALL BE BOUND TO PERFORM IN STRICT COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.

THE GENERAL NOTES AND TYPICAL DETAILS APPLY THROUGHOUT THE JOB UNLESS OTHERWISE NOTED OR SHOWN.

THE CONTRACTOR SHALL COMPARE AND COORDINATE ALL DRAWINGS. IF A DISCREPANCY EXISTS, HE SHALL PROMPTLY REPORT IT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.

IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED.

THESE PLANS ARE SUBJECT TO MODIFICATIONS AS NECESSARY TO MEET CODE REQUIREMENTS OR TO FACILITATE MECHANICAL, PLUMBING INSTALLATIONS OR TO INCORPORATE DESIGN IMPROVEMENTS.

DO NOT BUILD OVER GAS LINES OR ENCLOSE THE METER. CONSULT THE LOCAL GAS COMPANY PRIOR TO CONSTRUCTION.

CHIMNEY SHALL EXTEND AT LEAST 2 FEET HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10 FEET, BUT SHALL NOT BE LESS THAN 3 FEET ABOVE THE POINT WHERE IT PASSES THROUGH THE ROOF.

DECKS ARE NOT APPROVED FOR FUTURE HOT TUB INSTALLATION.

NO OPENING NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

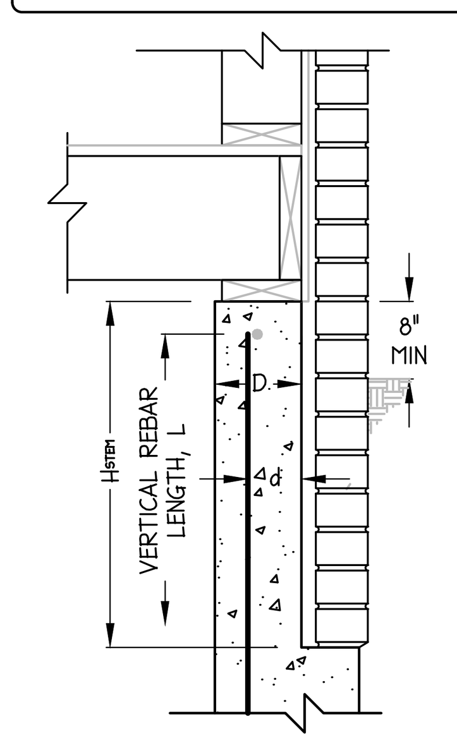
CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDANT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING, BRACING, GUYS, ETC., TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS.

CONTRACTOR SHALL NOT PLACE BACK FILL AGAINST BASEMENT WALLS UNTIL THE FLOOR SYSTEM IS COMPLETELY INSTALLED OR CONTRACTOR HAS PROVIDED ADEQUATE SHORING AND BRACING. ANY QUESTIONS REGARDING TEMPORARY SHORING REQUIREMENTS SHOULD BE FORWARDED TO THE STRUCTURAL ENGINEER FOR REVIEW.

FOUNDATION STEM WALL REINFORCEMENT SCHEDULE

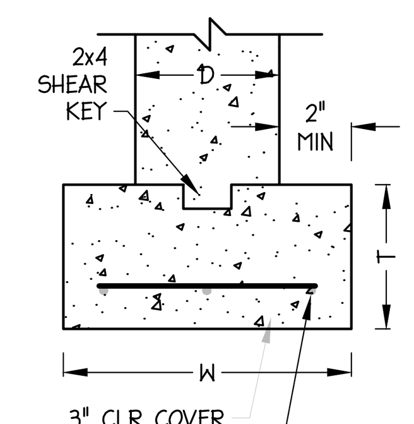


6" CONCRETE STEM WALL (D) VERT. REINFORCEMENT

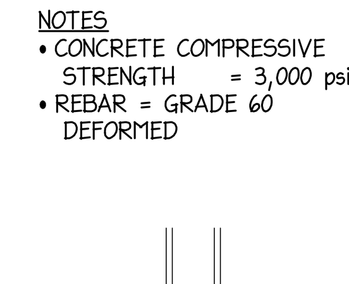
STEM WALL HEIGHT (HSTEM)	LENGTH (L)	SOIL CLASSIFICATIONS (EQUIVALANT FLUID PRESSURE) GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
8' WALL HEIGHT (H)				
16"	36"	N/A		
24"	44"			#4 @ 16"oc
32"	52"		#4 @ 18"oc	#4 @ 16"oc
40"	60"		#4 @ 16"oc	#4 @ 12"oc
48"	68"		#4 @ 16"oc	#4 @ 12"oc
9' WALL HEIGHT (H)				
16"	36"	N/A		
24"	44"		#4 @ 18"oc	#4 @ 16"oc
32"	52"		#4 @ 16"oc	#4 @ 12"oc
40"	60"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc
48"	68"	#4 @ 16"oc	#4 @ 12"oc	#4 @ 8"oc

d = 3.5"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi

FOUNDATION WALL STRIP FOOTING SCHEDULE



NOTES
- CONCRETE COMPRESSIVE STRENGTH = 3,000 psi
- REBAR = GRADE 60 DEFORMED



THICKENED SLABS	
MARK	EQUIVALENT WALL FOOTING
TS16	W8C
TS18	W8D
TS20	W8E
TS22	W8F
TS24	W8G

8" CONCRETE WALL (D) FOOTING SIZES

MARK	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES: CL, ML, MH & CH (1500 psf) SIZE (TxW)	SW, SP, SM, SC, GM & GC (2000 psf) SIZE (TxW)	(2500 psf) SIZE (TxW)	GW, GP (3000 psf) SIZE (TxW)
W8A	8" x 16"			
W8B	8" x 18"	8" x 16"		
W8C	8" x 20"		8" x 16"	
W8D	8" x 22"			
W8E	8" x 24"	8" x 18"		8" x 16"
W8F	10" x 26"	8" x 20"		
W8G	10" x 28"	8" x 22"	8" x 18"	
W8H	12" x 30"	8" x 24"		
W8I	12" x 32"		8" x 20"	
W8J	12" x 34"	10" x 26"	8" x 22"	8" x 18"
W8K	14" x 36"	10" x 28"		

10" CONCRETE WALL (D) FOOTING SIZES

MARK	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES: CL, ML, MH & CH (1500 psf) SIZE (TxW)	SW, SP, SM, SC, GM & GC (2000 psf) SIZE (TxW)	(2500 psf) SIZE (TxW)	GW, GP (3000 psf) SIZE (TxW)
W10B	8" x 18"			
W10C	8" x 20"	8" x 18"		
W10D	8" x 22"			
W10E	8" x 24"		8" x 16"	
W10F	8" x 26"	8" x 20"		8" x 18"
W10G	10" x 28"	8" x 22"		
W10H	10" x 30"	8" x 24"		
W10I	12" x 32"		8" x 20"	
W10J	12" x 34"	8" x 26"	8" x 22"	
W10K	14" x 36"	10" x 28"		

12" CONCRETE WALL (D) FOOTING SIZES

MARK	SOIL CLASSIFICATIONS / PRESUMPTIVE BEARING CAPACITIES: CL, ML, MH & CH (1500 psf) SIZE (TxW)	SW, SP, SM, SC, GM & GC (2000 psf) SIZE (TxW)	(2500 psf) SIZE (TxW)	GW, GP (3000 psf) SIZE (TxW)
W12C	8" x 20"			
W12D	8" x 22"	8" x 20"		
W12E	8" x 24"			
W12F	8" x 26"		8" x 20"	
W12G	8" x 28"	8" x 22"		8" x 20"
W12H	10" x 30"	8" x 24"		
W12I	12" x 32"			
W12J	12" x 34"	8" x 26"	8" x 22"	
W12K	14" x 36"	10" x 28"		

ISOLATED FOOTING SCHEDULE

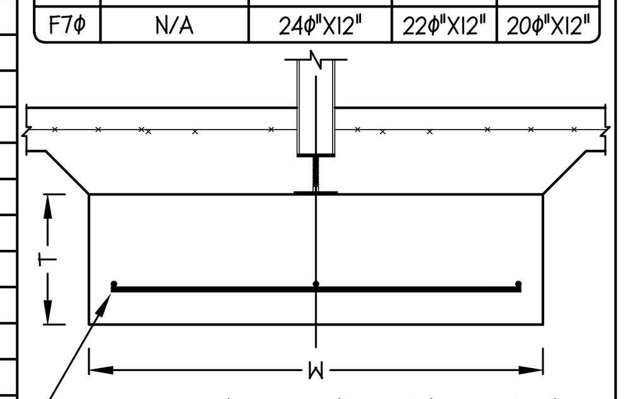
SQUARE, ISOLATED FOOTING SPECIFICATIONS

MARK (F##)	SOIL CLASSIFICATIONS/PRESUMPTIVE BEARING CAPACITIES: CL, ML, MH & CH (1500psf) SIZE WxT-N	EQUIVALENT FOOTINGS: SW, SP, SM, SC, GM & GC (2000psf) SIZE WxT-N	(2500psf) SIZE WxT-N	GW, GP (3000psf) SIZE WxT-N
FA	30"X12" -0	24"X12" -0	24"X12" -0	24"X12" -0
FB	32"X12" -0	26"X12" -0	24"X12" -0	24"X12" -0
FC	34"X12" -0	28"X12" -0	24"X12" -0	24"X12" -0
FD	36"X12" -0	30"X12" -0	26"X12" -0	26"X12" -0
FE	38"X12" -0	32"X12" -0	30"X12" -0	28"X12" -0
FF	40"X12" -0	34"X12" -0	32"X12" -0	28"X12" -0
FG	44"X12" -3	36"X12" -0	32"X12" -0	30"X12" -0
FH	46"X12" -3	38"X12" -2	34"X12" -2	32"X12" -2
FI	48"X12" -3	40"X12" -2	36"X12" -2	34"X12" -2
FJ	50"X12" -3	42"X12" -3	38"X12" -2	34"X12" -2
FK	52"X12" -3	44"X12" -3	40"X12" -2	36"X12" -2
FL	54"X12" -3	46"X12" -3	42"X12" -3	38"X12" -2
FM	58"X12" -4	48"X12" -3	44"X12" -3	40"X12" -2
FN	60"X12" -5	50"X12" -4	46"X12" -4	42"X12" -3
FO	62"X12" -5	52"X12" -4	48"X12" -4	42"X12" -3
FP	64"X12" -6	54"X12" -4	48"X12" -4	44"X12" -4
FQ	66"X12" -6	56"X12" -5	50"X12" -5	46"X12" -4
FR	68"X12" -7	58"X12" -6	52"X12" -5	48"X12" -5
FS	72"X12" -8	60"X12" -6	54"X12" -6	50"X12" -5
FT	74"X12" -9	62"X12" -7	56"X12" -6	50"X12" -5
FU	76"X12" -10	64"X12" -8	58"X12" -7	52"X12" -6
FV	78"X14" -10	66"X12" -8	60"X14" -8	54"X12" -7
FW	80"X14" -11	68"X14" -9	62"X14" -8	56"X14" -7
FX	82"X14" -11	70"X14" -9	62"X14" -8	58"X14" -8
FY	86"X14" -12	72"X14" -10	64"X14" -9	58"X14" -8
FZ	88"X14" -13	74"X14" -11	66"X14" -9	60"X14" -8

N = NUMBER OF #4 BOTTOM BARS, EACH WAY

ROUND FOOTING SCHEDULE

MARK, F#ϕ	SOIL CLASSIFICATIONS & PRESUMPTIVE BEARING CAPACITIES: CL, ML, MH & CH (1500psf) FOOTING SIZE (DIA x T)	EQUIVALENT FOOTINGS: SW, SP, SM, SC, GM & GC (2000psf)	(2500psf)	GW, GP (3000psf)
F1ϕ	14ϕ"X12"	12ϕ"X12"	12ϕ"X12"	12ϕ"X12"
F2ϕ	18ϕ"X12"	14ϕ"X12"	14ϕ"X12"	12ϕ"X12"
F3ϕ	20ϕ"X12"	16ϕ"X12"	14ϕ"X12"	14ϕ"X12"
F4ϕ	22ϕ"X12"	18ϕ"X12"	16ϕ"X12"	16ϕ"X12"
F5ϕ	24ϕ"X12"	20ϕ"X12"	18ϕ"X12"	18ϕ"X12"
F6ϕ	N/A	22ϕ"X12"	20ϕ"X12"	18ϕ"X12"
F7ϕ	N/A	24ϕ"X12"	22ϕ"X12"	20ϕ"X12"



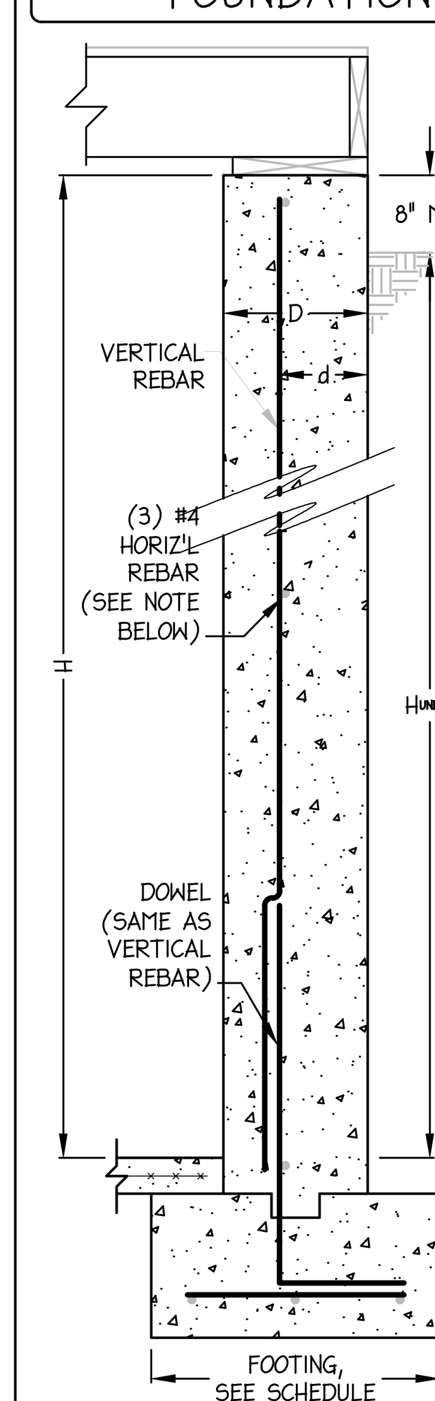
FLEXURE REINFORCEMENT, BOTH DIRECTIONS PER FOOTING SCHEDULE, MIN. 2" & 3" CLEAR FROM FOOTING SIDE & BOTTOM, RESPECTIVELY.

SQUARE FOOTING, TYPICAL SECTION

REINFORCEMENT EQUIVALENTS

NUMBER #4 BARS SPEC'D	NUMBER #5 BARS REQ'D
2	2
3-4	3
5-6	4
7	5
8-9	6
10	7
11-12	8
13	9
14-15	10

FOUNDATION WALL REINFORCEMENT SCHEDULE



HORIZONTAL REINFORCEMENT
(3) #4 REBAR (≤ 8' WALL)
(4) #4 REBAR (> 8' WALL)

8" CONCRETE WALL (D) VERTICAL REINFORCEMENT

MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (HUNBAL)	SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE) GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 36"oc
	6'-4"	N/A	#4 @ 24"oc	#4 @ 18"oc
8'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 24"oc
	7	N/A	#4 @ 24"oc	#4 @ 18"oc
	7'-4"	#4 @ 30"oc	#4 @ 18"oc	#4 @ 12"oc
9'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 24"oc
	7	N/A	#4 @ 18"oc	#4 @ 16"oc
	8	#4 @ 24"oc	#4 @ 16"oc	#4 @ 12"oc
	8'-4"	#4 @ 20"oc	#4 @ 12"oc	#4 @ 8"oc
10'	4,5	N/A	N/A	N/A
	6	N/A	N/A	#4 @ 20"oc
	7	N/A	#4 @ 18"oc	#4 @ 12"oc
	8	#4 @ 24"oc	#4 @ 12"oc	#4 @ 8"oc
	9	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc
	9'-4"	#4 @ 12"oc	#4 @ 8"oc	#4 @ 8"oc

d = 5"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi

10" CONCRETE WALL (D) VERTICAL REINFORCEMENT

MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (HUNBAL)	SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE) GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5,6,6'-4"	N/A	N/A	N/A
8'	4,5,6,7	N/A	N/A	N/A
	7'-4"	N/A	N/A	#4 @ 20"oc
9'	4,5,6	N/A	N/A	N/A
	7	N/A	N/A	#4 @ 20"oc
	8	N/A	#4 @ 20"oc	#4 @ 16"oc
	8'-4"	N/A	#4 @ 18"oc	#4 @ 12"oc
10'	4,5,6	N/A	N/A	N/A
	7	N/A	N/A	#4 @ 18"oc
	8	N/A	#4 @ 18"oc	#4 @ 16"oc
	9	#4 @ 48"oc	#4 @ 16"oc	#4 @ 12"oc
	9'-4"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 8"oc

d = 6¾"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi

12" CONCRETE WALL (D) VERTICAL REINFORCEMENT

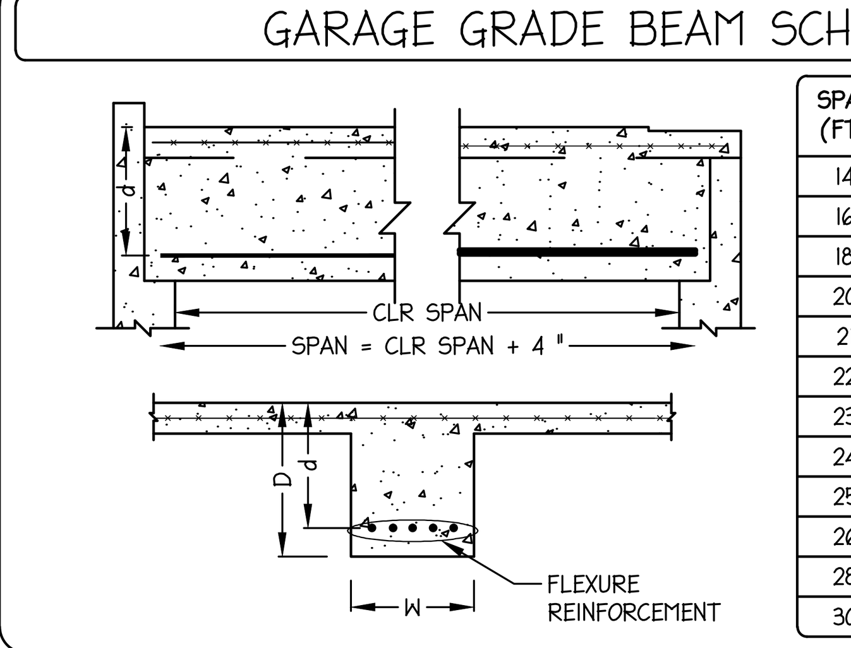
MAXIMUM WALL HEIGHT (H)	MAXIMUM UNBALANCED HEIGHT (HUNBAL)	SOIL CLASSIFICATIONS (EQUIVALENT FLUID PRESSURE) GW, GP, SW & SP (30pcf)	GM, GC, SM, SM-SC AND ML (45 pcf)	SC, MH, ML-CL, INORGANIC CL (60 pcf)
5'	4,4'-4"	N/A	N/A	N/A
6'	4,5,5'-4"	N/A	N/A	N/A
7'	4,5,6,6'-4"	N/A	N/A	N/A
8'	4,5,6,7,7'-4"	N/A	N/A	N/A
9'	4,5,6,7	N/A	N/A	N/A
	8	N/A	N/A	#4 @ 48"oc
	8'-4"	N/A	N/A	#4 @ 16"oc
10'	4,5,6,7	N/A	N/A	N/A
	8	N/A	N/A	#4 @ 18"oc
	9	N/A	#4 @ 48"oc	#4 @ 12"oc
	9'-4"	N/A	#4 @ 16"oc	#4 @ 12"oc

d = 8¾"(MIN), CONCRETE COMPRESSIVE STRENGTH = 3,000 psi

REBAR CONVERSION CHART

ORIGINAL	#5 EQUAL
#4 @ 6"oc	#5 @ 9"oc
#4 @ 8"oc	#5 @ 12"oc
#4 @ 12"oc	#5 @ 18"oc
#4 @ 16"oc	#5 @ 24"oc
#4 @ 18"oc	#5 @ 24"oc
#4 @ 24"oc	#5 @ 36"oc

GARAGE GRADE BEAM SCHEDULE



SPAN (FT)	BEAM SIZE (WxD)	FLEXURE REINFORCEMENT
14	12" x 18"	(3) #4
16	12" x 20"	(4) #4
18	12" x 22"	(4) #4
20	12" x 24"	(5) #4
21	14" x 22"	(5) #4
22	14" x 24"	(5) #4
23	16" x 24"	(6) #4
24	16" x 24"	(6) #4
25	18" x 24"	(7) #4
26	18" x 24"	(7) #4
28	18" x 26"	(8) #4
30	18" x 30"	(9) #4

REVIEWED
By Michael Kyne at 4:01 pm, Nov 02, 2020

APPROVED
Montgomery County
Historic Preservation Commission
Sandra I. Heiler

STRUCTURAL ENGINEERING UNLIMITED, LLC
341 W. PATRICK STREET
FREDERICK, MD 21701
240-815-6760
301-748-2769

3929 BALTIMORE ST, KENSINGTON MD 20895

GTM ARCHITECTS
ARCHITECT

CONTRACTOR
CONTRACTOR:

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.: 24518 EXPIRATION DATE: 09-21-2021

STATE OF MARYLAND · JUAN JOSE MORALES-UTRERA · No. 24518 · PROFESSIONAL ENGINEER

10/29/2020

SCALE: AS NOTED
DRAWN BY: SL CHECKED BY: JMU

ISSUE:	DATE:
ISSUED FOR PERMITS	04-27-2020

REVISION:		
1	FRAMING REVISION	10-29-2020
2		
3		
4		
5		
6		
7		
8		

GENERAL STRUCTURAL NOTES & SCHEDULES

S002

10/29/2020 --- 10:27:27 AM

e:\documents_seu - cluod\public_clients\2019\gtm architects_2020\engle - porch\2020-10-29 baltimore st.3929.dwg