MAGNOLIA ACRES

LOT #40 FONTANA V1.5 ELEV. 31
272 WHITE MAGNOLIA LANE
FUQUAY-VARINA, NC
(GARAGE LEFT)

CARUSO HOMES

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

SHEET INDEX

TITLE	DESCRIPTION
A0.1	GENERAL NOTES
A1.1.31	FRONT & REAR ELEVATIONS, ELEV. 31
A1.2.31	SIDE ELEVATIONS, ELEV. 31
A1.4.31	ROOF PLAN, ELEV. 31
A2.1.31	CRAWL SPACE FOUNDATION PLAN, ELEV. 31
A3.1.31	FLOOR PLANS, ELEV. 31
A3.2.31	FLOOR PLANS, ELEV. 31
A4.1	BUILDING SECTIONS
E1.1	ELECTRICAL PLANS

GENERAL REVISIONS

#	DATE	DESCRIPTION
0	10.10.25	PERMIT SET

AREA CALCULATIONS

	HEATED	COVERED / UNHEATED	UNHEATED
BASE HOUSE			
FIRST FLOOR – ELEV. 31	1273 SF		
PORCH – ELEV. 31		142 SF	
GARAGE		445 SF	
SECOND FLOOR – ELEV. 31	1544 SF		
BASE HOUSE TOTAL	2817 SF	587 SF	

FILE: Magnolia Acres Lot #40.dwg DATE: 10/10/2025 9:27 AM

GENERAL REQUIREMENTS

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES AND ALL AUTHORITIES HAVING JURISDICTION.
2. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS IN WRITING PRIOR TO COMMENCEMENT OF THE WORK. ALL DIMENSIONS SHALL BE READ OR CALCULATED, NEVER SCALED. SHOP DRAWINGS MUST BE SUBMITTED TO THE OWNER BEFORE PROCEEDING WITH FABRICATION OF STAIRS, ROOF, AND FLOOR TRUSSES.
3. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR, AND WILL NOT HAVE ANY CONTROL OVER: CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OR FOR THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND WILL NOT BE RESPONSIBLE FOR THE FAILURE OF THE CLIENT OR HIS CONTRACTORS, SUBCONTRACTORS, OR ANYONE ELSE PERFORMING ANY PART OF THE WORK.
4. THE ARCHITECT ACCEPTS NO RESPONSIBILITY FOR CHANGES AND DEVIATIONS FROM THESE PLANS UNLESS SUCH CHANGES ARE MADE BY SIGNED LETTER OR CHANGE ORDER.
5. ALL PLUMBING, MECHANICAL, AND ELECTRICAL WORK IS TO BE COORDINATED BETWEEN THE TRADES AS PART OF THEIR INSTALLATION LAYOUT.
6. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE RESPONSIBILITY OF EACH SUB-CONTRACTOR.
7. THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED AS PART OF THE CONDITIONS OF THE WORK. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN IN THE DRAWINGS, CURRENT NATIONAL, STATE AND LOCAL CODES AND ORDINANCES, REGULATIONS OR AGREEMENTS AS WELL AS CURRENT ACCEPTABLE BUILDING PRACTICES SHALL GOVERN.
8. ALL PRODUCTS AND MATERIALS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IF A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE MANUFACTURER'S INSTRUCTIONS, CONTACT THE ARCHITECT FOR CLARIFICATION. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS INSTALLED COMPLY WITH APPLICABLE CODES AND REGULATIONS.
9. PROVIDE A MINIMUM OF 6'-8" HEAD CLEARANCE FOR ALL STAIRS. STAIR RISERS SHALL NOT EXCEED 7 3/4" AND TREADS SHALL BE AT LEAST 10", UNLESS LOCAL CODES REQUIRE OTHERWISE.
10. SLOPE ALL CONCRETE STOOPS, PORCHES, WALKS, AND GARAGE SLABS 1/8" PER 12" TO DRAIN, OR AS NOTED ON PLANS.
11. PROVIDE 22 1/2" X 30" ATTIC ACCESS WITH SWITCHED LIGHT, UNLESS OTHERWISE NOTED.
12. HANDRAIL HEIGHT SHALL BE 34" MINIMUM AND 38" MAXIMUM MEASURED VERTICALLY FROM THE LEADING EDGE OF THE NOSING. HANDRAILS MUST BE CONTINUOUS THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. THE HANDRAIL ENDS SHALL SHALL TERMINATE IN NEWEL POST OF SAFETY TERMINAL.
13. PROVIDE GUARDRAILS AT RAISED FLOORS, BALCONIES, ETC, 30" OR MORE ABOVE GRADE OR FLOOR BELOW. GUARDS SHALL BE A MINIMUM OF 36" HIGH (UNLESS NOTED OTHERWISE) AND HAVE BALUSTERS SPACED TO PREVENT PASSAGE OF A 4" SPHERE. HANDRAILS SHALL HAVE A MAXIMUM 2" GRIP CIRCULAR CROSS SECTION.
14. PROVIDE NOMINAL 2X FIRE BLOCKING AT EVERY FLOOR INTERVAL, BULKHEADS, CHASES, AND AT MAXIMUM 10' HEIGHT FOR WALLS OVER 10' TALL. IF OPEN WEB FLOOR TRUSSES ARE USED, PROVIDE DRAFT STOPPING FOR AREAS TO NOT TO EXCEED 1000 S.F.
15. ALL DESIGNS FOR MANUFACTURED FLOOR JOIST, RAFTERS, AND TRUSSES SHALL BE CERTIFIED BY THE MANUFACTURER. INSTALLATION OF SUCH ITEMS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SHOP DRAWINGS AND RECOMMENDATIONS.
16. THE CONTRACTOR SHALL SEAL ALL PENETRATIONS AND OPENINGS IN FLOORS AND WALLS TO MINIMIZE THE TRANSFER OF DRAFTS AND MOISTURE. SHEATHING PENETRATIONS SHALL BE PATCHED AND REPAIRED TO MANUFACTURER'S SPECIFICATIONS.
17. CHIMNEYS SHALL EXTEND A MINIMUM OF 2' ABOVE ANY ROOF STRUCTURE WITHIN 10', BUT NOT LESS THAN, 3' AT POINT OF ROOF PENETRATION.

EXCAVATION AND SITE WORK

1. SOIL BEARING CAPACITY SHALL BE VERIFIED BY THE CONTRACTOR.
2. EXCAVATION SHALL BE SUFFICIENT TO PROVIDE FULL DESIGN DIMENSIONS OR TO ALLOW FOR FORMING AS REQUIRED. NO FOOTINGS SHALL BE PLACED ON UNUSABLE MATERIAL (PROVIDING LESS THAN 1500 P.S.F. CAPACITY).
3. BACKFILL SHALL ONLY BE CLEAN EARTH CONTAINING NO ORGANIC MATTER, GRADED WITH POSITIVE SLOPE. FILL BENEATH STRUCTURE SHALL BE COMPACTED TO 95% DENSITY AS PER ASTM D1557 METHOD D. DO NOT COMPACT BACKFILL UNTIL 1ST FLOOR FRAMING OR TEMPORARY BRACING IS IN PLACE.
4. PROVIDE 4" MINIMUM CONTINUOUS DRAIN TILE AROUND PERIMETER OF BASEMENT FOUNDATION. OPTIONAL INTERIOR DRAIN TILE MAY BE INSTALLED AT THE BUILDERS DISCRETION UNLESS WHERE OTHERWISE REQUIRED BY AHJ.
5. PROVIDE PASSIVE UNDER SLAB RADON VENTING WHEN REQUIRED BY LOCAL CODES IN ACCORDANCE WITH APPENDIX F OF THE I.R.C. CODES.
6. NO STRUCTURES SHALL BE BUILT ON OR ADJACENT TO GRADES EXCEEDING 33.3%, UNLESS SPECIFICALLY ENGINEERED FOOTINGS AND FOUNDATIONS ARE UTILIZED CONFORMING TO R403.1.7.

CONCRETE

1. REFERENCE STRUCTURAL NOTES AND DRAWINGS.

VERTICAL MASONRY

1. REFERENCE STRUCTURAL NOTES AND DRAWINGS.

STEEL

1. REFERENCE STRUCTURAL NOTES AND DRAWINGS.

CARPENTRY

1. REFERENCE STRUCTURAL NOTES AND DRAWINGS.

THERMAL AND MOISTURE PROTECTION

1. PROVIDE DAMPPROOFING PER IRC SECTION R406.1 TO THE EXTERIOR OF ALL BELOW GRADE WALLS AT BASEMENT CONDITIONS WHERE WATERPROOFING IS NOT REQUIRED. WATERPROOFING SHALL COMPLY WITH IRC SECTION R406.2, WHERE REQUIRED.
2. PROVIDE 6-MIL POLYETHYLENE VAPOR BARRIER BENEATH SLAB, OVERLAP ALL EDGES 6" MINIMUM.
3. PROVIDE COMPRESSIBLE FIBERGLASS SILL SEALER OR OTHER APPROVED SILL SEALER BENEATH ALL EXTERIOR SILL PLATES.
4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT THE INTERSECTIONS OF MASONRY AND WOOD FRAME CONSTRUCTION, OVER PROJECTING WOOD TRIM, WHERE DECKS, PORCHES, ETC., ARE ATTACHED TO WOOD FRAME CONSTRUCTION AT WALL AND ROOF INTERSECTIONS, AT CHIMNEY AND ROOF INTERSECTIONS, IN ROOF VALLEYS, AT ALL ROOF PENETRATIONS, AND AT WALL OPENINGS AS RECOMMENDED BY WINDOW AND DOOR MANUFACTURERS TO MEET IRC R703.4
5. PROVIDE AND INSTALL THERMAL INSULATION TO MEET THE ADOPTED ENERGY CODE. COMPLIANCE METHOD SHALL BE DETERMINED BY THE BUILDER. ALL INSULATION SHALL INCLUDE AN INTEGRAL VAPOR BARRIER POSITIONED ON THE WARM SIDE OF THE WALL / CEILING. EXPOSED INSULATION IN UNFINISHED SPACE SHALL HAVE A MIN. FS-25 FACING.
6. ROOFING, UNLESS NOTED OTHERWISE, SHALL BE MIN. CLASS C FIBERGLASS BASED ASPHALT SHINGLES OVER 15# FELT. ATTACH STRIP SHINGLES W/ MIN. OF 4 FASTENERS. EAVE FLASHING TO A POINT 24" INSIDE OF INTERIOR FACE OF WALL LINE MAY BE INSTALLED AT THE OWNER'S DISCRETION. PROVIDE DOUBLE UNDERLAYMENT FOR ROOF SLOPES UP TO 4/12 PITCH.
7. PROVIDE AND INSTALL CONTINUOUS STRUCTURAL WOOD PANEL SHEATHING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MODEL CODE REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS.
8. PROVIDE SIDING MATERIAL AS SHOWN ON ELEVATIONS. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL OVER #15 FELT OR APPROVED WEATHER RESISTIVE MATERIALS, AIR INFILTRATION BARRIER OR MOISTURE RESISTANT SHEATHING.
9. GUTTERS SHALL BE .032" PREFINISHED ALUMINUM GUTTERS WITH .024" PREFINISHED ALUMINUM LEADERS. LEAD TO SPLASH BLOCKS OR AS REQUIRED BY THE AHJ. COORDINATE WITH SITE PLAN.
10. PROVIDE SOFFIT VENTS, RIDGE VENTS, AND/OR GABLE END VENTS AS REQUIRED TO MAINTAIN A MINIMUM 1/150 NET FREE VENTILATION FOR HORIZONTALLY PROJECTED ROOF AREA PER IRC SECTION R806. ALTERNATIVELY, PROVIDE 1/300 NET FREE VENTILATION FOR HORIZONTALLY PROJECTED ROOF AREA, PROVIDED THERE IS A MIN 40% TO MAX 50% OF REQUIRED VENTILATION LOCATED NOT MORE THAN 3' BELOW RIDGE OR HIGHEST POINT OF THE SPACE MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION SHALL BE PROVIDED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. INSTALL PLASTIC OR CARDBOARD BAFFLES IN EACH TRUSS / RAFTER BAY TO MAINTAIN FREE AIR FLOW, MINIMUM 1" BETWEEN INSULATION AND ROOF SHEATHING. PROVIDE OPENING IN OVERFRAMING AREAS AS ALLOWED PER STRUCTURAL DRAWINGS TO MAINTAIN FREE AIR FLOW.
11. ALL LOOSE FILL INSULATION MATERIAL INCLUDING FACING MUST HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE-DEVELOPMENT INDEX THAT DOES NOT EXCEED 450. ALL LOOSE FILL INSULATION SUPPORT MUST COMPLY WITH ABOVE LIMITS IF IT DOES NOT COMPLY WITH ASTM E84 OR UL 723.
12. WALL COVERINGS, BACKING MATERIALS AND THEIR ATTACHMENTS SHALL BE CAPABLE OF RESISTING WIND LOADS IN ACCORDANCE WITH TABLES R301.2(2) AND R301.2(3).

DOORS, WINDOWS, AND GLAZING

1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ROUGH OPENINGS FOR ALL DOORS AND WINDOWS PRIOR TO START OF CONSTRUCTION. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. ALL DWELLINGS SHALL BE PROVIDED WITH A MEANS OF EGRESS IN ACCORDANCE WITH IRC SECTION R311 THAT LEADS TO A PUBLIC WAY.
3. EACH BEDROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW WITH 5.75F (5.0 SF AT GRADE CONDITIONS) OF NET CLEAR OPENING AS CERTIFIED BY THE MANUFACTURER, WITH A SILL HEIGHT OF NOT MORE THAN 44" AFF OR OTHER DIRECT MEANS OF EGRESS TO THE OUTSIDE. WINDOW WELLS, IF REQUIRED, SHALL BE 3'X3' MINIMUM.
4. SAFETY GLAZING SHALL BE PROVIDED AND CLEARLY LABELED PER R308.1 IN HAZARDOUS LOCATIONS PER IRC SECTION 308.4 INCLUDING:
   - ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS
   - ALL SHOWER AND TUB ENCLOSURES
   - WINDOWS WITHIN 60" OF TUB OR SHOWER AND BOTTOM GLAZING IS LESS THAN 60"AFF
   - FIXED PANELS GREATER THAN 9.0 SF WITHIN 18" AFF
   - GLAZING WITHIN 36" OF THE WALKING SURFACE OF STAIRS, LANDINGS BETWEEN FLIGHTS OF STAIRS, AND RAMPS.
   - GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36" ABOVE THE LANDING AND WITHIN A 60" HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.
   - GLAZING WITHIN 24" RADIUS OF THE EITHER SIDE OF DOORS IN THE PLANE OF THE DOOR IN A CLOSED POSITION
   - GLAZING ON A WALL LESS THAN 180 DEGREES FROM THE PLANE OF A DOOR IN A CLOSED POSITION AND WITHIN 24" OF THE HINGE SIDE OF AN IN-SWINGING DOOR
5. PROVIDE SELF-CLOSING DOOR BETWEEN DWELLING AND GARAGE 1 3/4" THICK SOLID WOOD OR INSULATED STEEL W/ 20 MINUTE FIRE RATING.
6. AUTOMATIC OVERHEAD GARAGE DOOR OPENERS SHALL BE UL LISTED IN ACCORDANCE WITH UL 325.

FINISHES

1. PROVIDE 1/2" TAPERED EDGE GYPSUM BOARD TO BE APPLIED, TAPED, AND FINISHED IN ACCORDANCE WITH GYPSUM ASSOCIATION GA-216 AND ASTM C-840.
2. PROVIDE 5/8" TYPE X GYPSUM BOARD AT GARAGE TO COMPLETELY SEPARATE GARAGE FROM LIVING AREA PER IRC SECTION R302.6.
3. PROVIDE FIRE RATED ASSEMBLIES, IF APPLICABLE, AS DETAILED FOR PARTYWALLS OR OTHER RATED WALLS OR FLOORS. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TESTING AGENCY'S REQUIREMENTS.
4. UNDERSIDE AND WALLS OF ACCESSIBLE ENCLOSED SPACE UNDER STAIRS SHALL BE PROTECTED WITH MINIMUM 1/2" GYPSUM BOARD.
5. PROVIDE WATER RESISTANT FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM BACKERS, OR FIBER-REINFORCED GYPSUM BACKERS IN COMPLIANCE WITH ASTM C 1288, C 1325, C 1178, OR C1278, AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS BACKER BOARD FOR WALL TILE AT TUBS AND SHOWER AREA AND WALL PANELS IN SHOWER AREAS AS SHOWN ON THE DETAILS IN THE ARCHITECTURAL DRAWINGS, OR A MINIMUM OF 6' ABOVE THE DRAIN IF NOT INDICATED OTHERWISE.
6. ALL MATERIAL FINISHES AND STYLES INCLUDING BUT NOT LIMITED TO EXTERIOR SIDING, ROOFING, WINDOWS, EXTERIOR TRIM, ALL INTERIOR MILLWORK, FLOORING, TILE, ETC. SHALL BE APPROVED BY OWNER.

SPECIALTIES

1. PRE-BUILT FIREPLACES SHALL BE UL LISTED AND INSTALLED ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. BATHROOM ACCESSORIES SHALL BE AS SPECIFIED BY THE OWNER.
3. MIRROR QUALITY AND SIZE SHALL BE SPECIFIED BY THE OWNER.

MECHANICAL AND PLUMBING

1. ALL WORK SHALL BE IN COMPLIANCE WITH ALL LOCAL MECHANICAL AND PLUMBING CODES. HVAC AND PLUMBING CONTRACTORS SHALL COORDINATE ALL OPENINGS IN JOISTS, TRUSSES, ETC. WITH GENERAL CONTRACTOR BEFORE PROCEEDING WITH ANY WORK.
2. PROVIDE ONE DAMPER REGISTER PER 900 SF OF UNFINISHED BASEMENT, IF APPLICABLE.
3. PROVIDE EXHAUST FANS AT EACH BATHROOM AND VENT TO EXTERIOR OF DWELLING.
4. IF APPLICABLE AND REQUIRED BY THE AHJ, PROVIDE FIRE SUPPRESSION SYSTEMS IN ACCORDANCE WITH NFPA D. CONFIRM REQUIREMENTS WITH LOCAL JURISDICTION BEFORE PROCEEDING WITH ANY WORK.
5. DUCTWORK PENETRATING A RATED WALL OR FLOOR ASSEMBLY SHALL BE PROVIDED WITH FIRE DAMPERS.
6. ALL VENTS AND FLUES SHALL BE INSTALLED WITH A MINIMUM OF 1" CLEARANCE TO ADJACENT WOOD FRAMING, GREATER IF SPECIFIED BY MANUFACTURER.
7. PROVIDE SLEEVE FOR ANY PIPING PASSING UNDER FOOTINGS OR THROUGH A FOUNDATION WALL OR SLAB. SLEEVE SHALL BE TWO PIPE SIZES LARGER THAN SUBJECT PIPE.
8. PROVIDE OVERFLOW PANS AND DRAINS FOR WASHER AND/OR HOT WATER HEATER WHEN LOCATED WHERE LEAKAGE WILL CAUSE DAMAGE.
9. PROVIDE HOSE BIBBS (FROST-FREE OR WITH SHUT-OFF) AT FRONT AND REAR OF DWELLING OR WHERE SHOWN ON PLANS.
10. PROVIDE 1 1/2" CONDENSATE LINE FROM WATER HEATER AND AIR HANDLER TO POSITIVE OUTFALL OR TO SUMP PUMP IF PROVIDED, OR AS REQUIRED BY AHJ.

ELECTRICAL

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY, AND ALL APPLICABLE LOCAL REGULATIONS.
2. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
3. PROVIDE GFI RECEPTACLES AT ALL WET LOCATIONS, KITCHEN COUNTERS, WITHIN 6' OF A SINK, TUB, OR SHOWER, IN GARAGES, IN UNFINISHED BASEMENTS, AND IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE REQUIREMENTS. ALL BRANCH CIRCUITS NOT COVERED BY GFI RECEPTACLES SHALL BE PROTECTED BY ARC-FAULT CIRCUIT INTERRUPTERS PER NATIONAL ELECTRICAL CODE.
4. PROVIDE HARDWIRED SMOKE DETECTORS IN EACH SLEEPING ROOM AND AT EACH FLOOR LEVEL WITHIN 10' OF EACH SLEEPING AREA, NOT CLOSER THAN 4' FROM RETURN AIR INLETS, AND NOT CLOSER THAN 3' FROM A DOOR TO A BATHROOM CONTAINING A TUB OR SHOWER. ALL DETECTORS SHALL BE INTERCONNECTED TO SOUND SIMULTANEOUSLY.
5. PROVIDE CARBON MONOXIDE DETECTORS WITHIN 10' OF EACH SLEEPING AREA. CARBON MONOXIDE DETECTORS ARE REQUIRED TO BE INTERCONNECTED.
6. IF REQUIRED BY THE LOCAL JURISDICTION, PROVIDE FOR FUTURE INSTALLATION OF AN ACTIVE RADON EXTRACTION FAN (W/ SWITCH), LOCATED IN ATTIC SPACE.
7. ALL PERMANENT APPLIANCES SHALL BE PROVIDED WITH BRANCH CIRCUIT OVER CURRENT DISCONNECTION. FOR APPLIANCES RATED OVER 300 VOLT-AMPERES, OR 1/8 H/P, DISCONNECT SHALL BE WITHIN LINE OF SIGHT.
8. PROVIDE PROGRAMMABLE THERMOSTAT WITH SETBACK CAPABILITY.
9. NOT LESS THAN 75% OF THE LAMPS IN PERMANENTLY INSTALLED FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

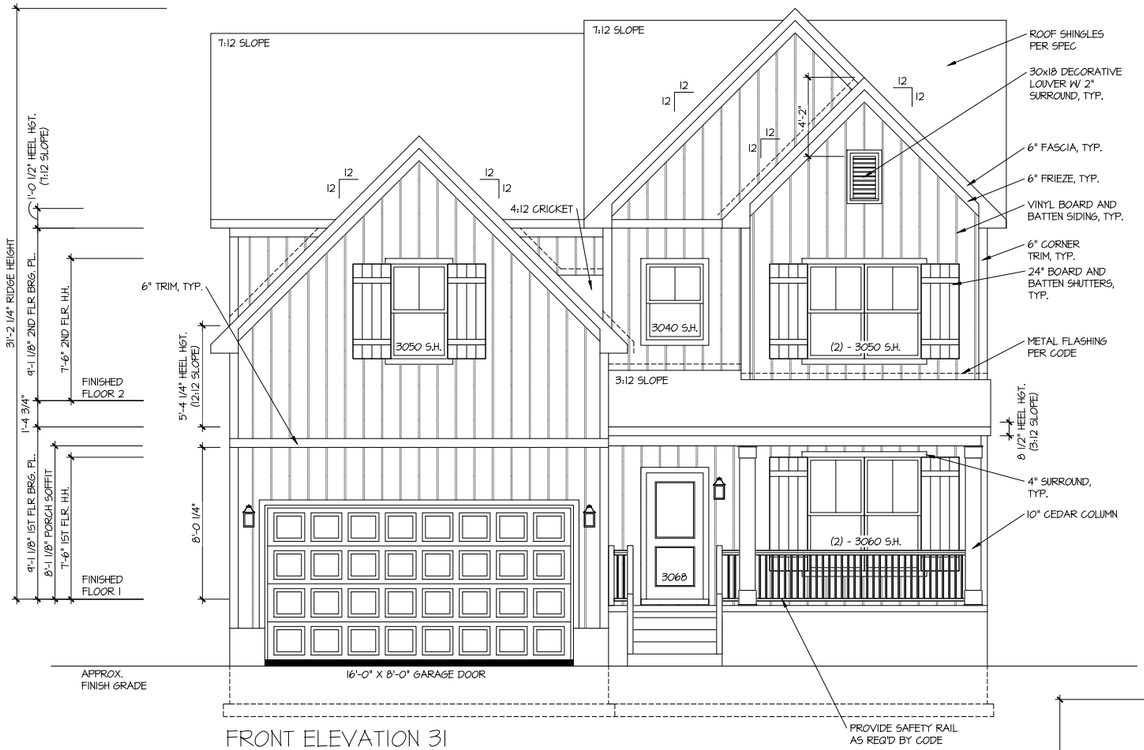
SEAL

DRAWN BY: RPS
DATE: 10.10.25

CARUSO HOMES

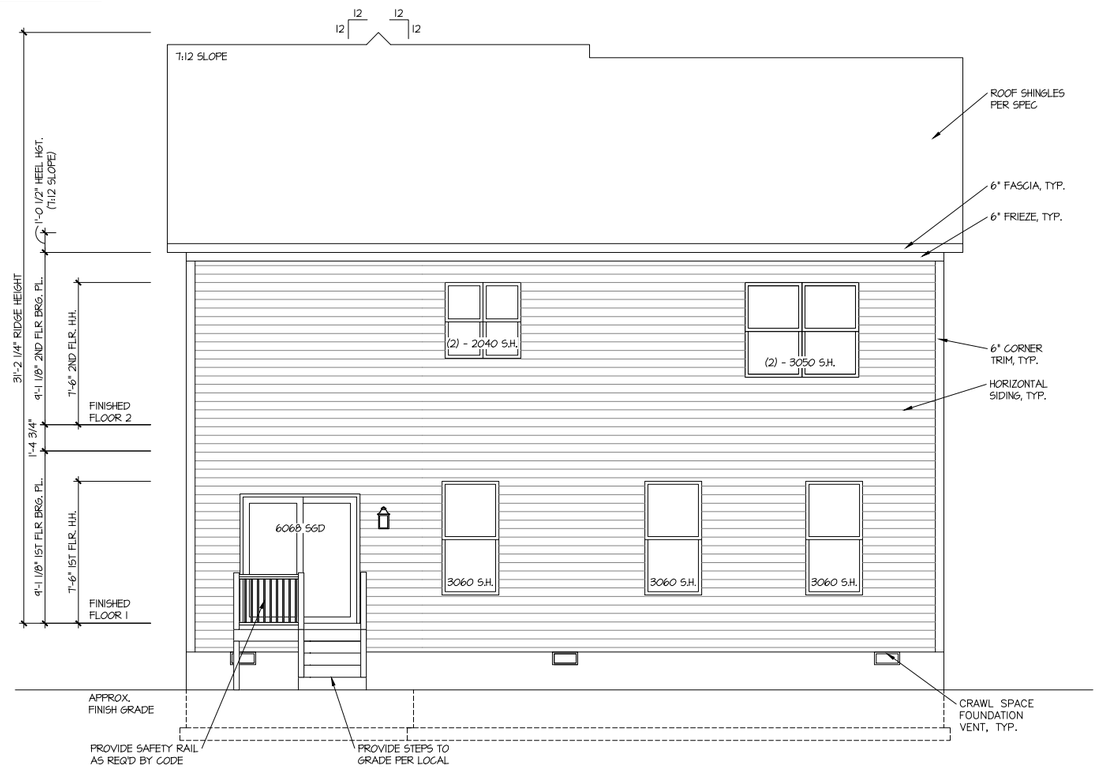
HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: GENERAL NOTES

SHEET No. A0.1



FRONT ELEVATION 31

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)



REAR ELEVATION 31

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

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THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

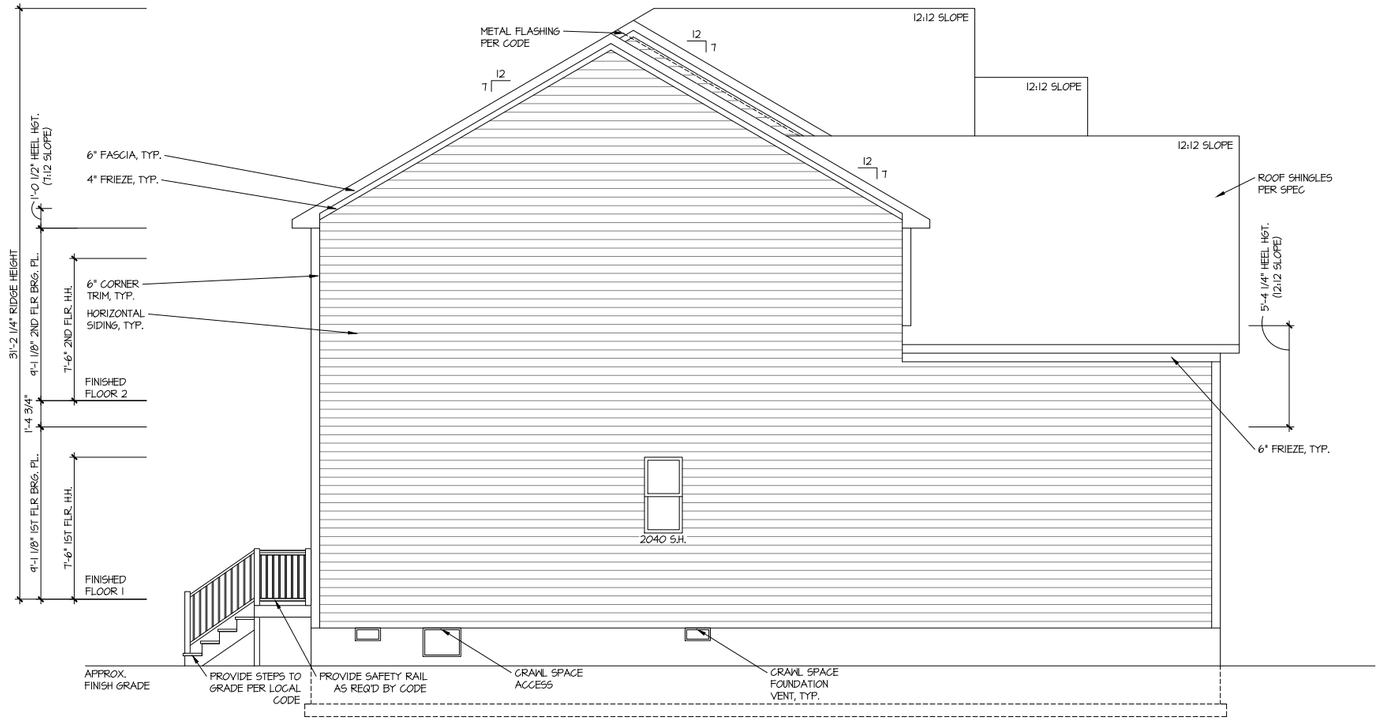
SEAL

DRAWN BY: RPS
DATE: 10.10.25

CARUSO HOMES

HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: FRONT & REAR ELEVATIONS ELEV. 31

SHEET No. A1.1.31



LEFT SIDE ELEVATION 31

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

RIGHT SIDE ELEVATION 31

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

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SEAL

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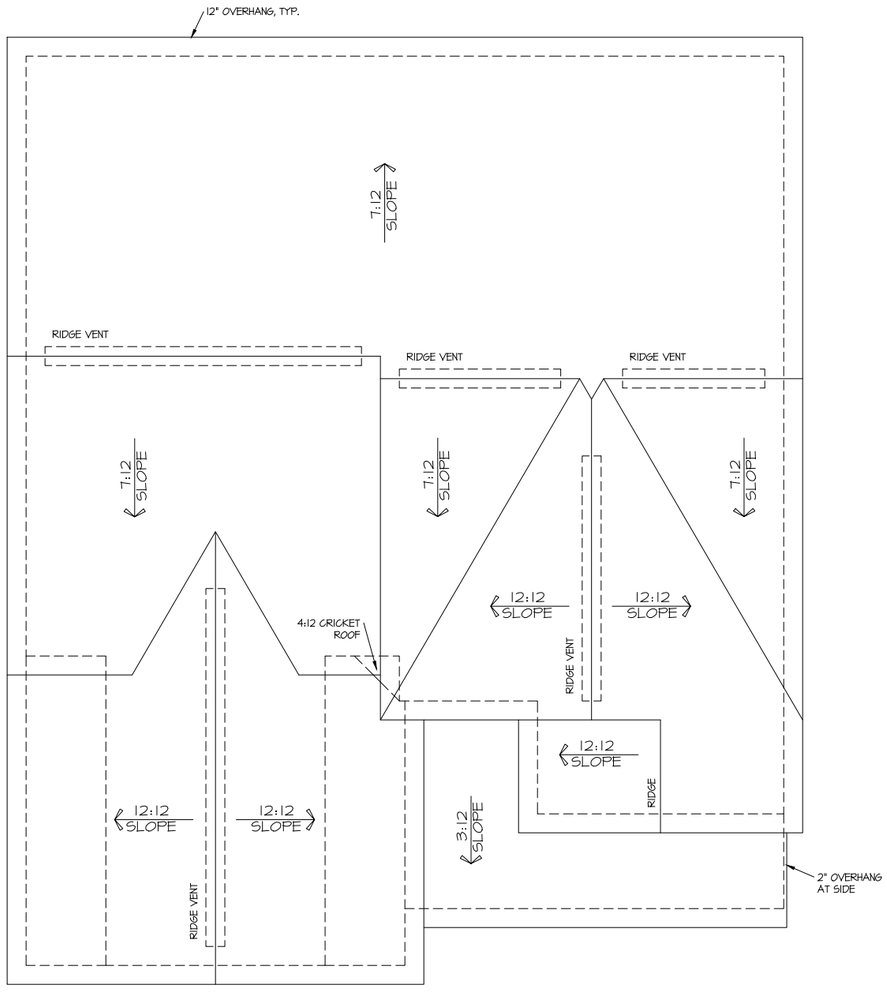
HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: SIDE ELEVATION, ELEV. 31

SHEET No. A1.2.31



ELEVATION 31
ROOF PLAN

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

MAIN ROOF VENTILATION CALCULATIONS

ROOF AREA	1,392 SF
TOTAL NET FREE AREA REQ'D (1 TO 150)	1,337 SQ. IN.
TOTAL NET FREE AREA REQ'D (1 TO 300)*	668.0 SQ. IN.
INTAKE (50% SOFFIT) VENTILATION REQ'D @ 1/300	334.0 SQ. IN.
EXHAUST (50% RIDGE) VENTILATION REQ'D @ 1/300	334.0 SQ. IN.

* PER R806, NOT LESS THAN 40% AND NOT MORE THAN 50% OF THE REQ'D VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. THE BALANCE OF THE REQ'D VENTILATION SHALL BE PROVIDED BY EAVE OR CORNICE VENTS.

GARAGE ROOF VENTILATION CALCULATIONS

ROOF AREA	326 SF
TOTAL NET FREE AREA REQ'D (1 TO 150)	313 SQ. IN.
TOTAL NET FREE AREA REQ'D (1 TO 300)*	157.0 SQ. IN.
INTAKE (50% SOFFIT) VENTILATION REQ'D @ 1/300	79.0 SQ. IN.
EXHAUST (50% RIDGE) VENTILATION REQ'D @ 1/300	79.0 SQ. IN.

* PER R806, NOT LESS THAN 40% AND NOT MORE THAN 50% OF THE REQ'D VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. THE BALANCE OF THE REQ'D VENTILATION SHALL BE PROVIDED BY EAVE OR CORNICE VENTS.

PORCH ROOF VENTILATION CALCULATIONS

ROOF AREA	142 SF
TOTAL NET FREE AREA REQ'D (1 TO 150)	137 SQ. IN.
TOTAL NET FREE AREA REQ'D (1 TO 300)*	68.0 SQ. IN.
INTAKE (50% SOFFIT) VENTILATION REQ'D @ 1/300	34.0 SQ. IN.
EXHAUST (50% RIDGE) VENTILATION REQ'D @ 1/300	34.0 SQ. IN.

* PER R806, NOT LESS THAN 40% AND NOT MORE THAN 50% OF THE REQ'D VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. THE BALANCE OF THE REQ'D VENTILATION SHALL BE PROVIDED BY EAVE OR CORNICE VENTS.

GENERAL ROOF NOTES

1. PROVIDE ROOF VENTILATION AS REQUIRED PER IRC SECTION R806. CONTRACTOR SHALL VERIFY NET FREE AREA OF THE VENT PRODUCT SELECTED BY OWNER. INSTALL VENT PRODUCTS PER MANUFACTURER'S REQUIREMENTS AND WRITTEN INSTRUCTIONS. PROVIDE INSULATION BAFFLE AS REQUIRED TO MAINTAIN NOT LESS THAN 1" SPACE BETWEEN INSULATION AND ROOF SHEATHING PER R806.3.
2. IN AREAS OF OVERFRAMING, SHEATHING SHALL BE INTERRUPTED FOR CONTINUITY OF ATTIC VENTING, SEE STRUCTURAL DRAWINGS.
3. ALL FIREPLACE FLUE VENTS PENETRATING THE ROOF SHALL COMPLY WITH ALL CODE & MANUFACTURER HEIGHT / OFFSET DISTANCE REQUIREMENTS AND BE APPROPRIATELY FLASHED.
4. ALL GUTTERS AND LEADERS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, LOCATE PER BUILDER.
5. ALL PLUMBING VENTS SHALL BE COMBINED INTO A MINIMUM AMOUNT OF ROOF PENETRATIONS. ALL ROOF PENETRATIONS SHALL OCCUR TO THE REAR OF THE MAIN RIDGE.

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

SEAL

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DATE: 10.10.25

CARUSO HOMES

HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: ROOF PLAN, ELEV. 31

SHEET No. A1.4.31

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ELEVATION 31
CRAWL SPACE PLAN

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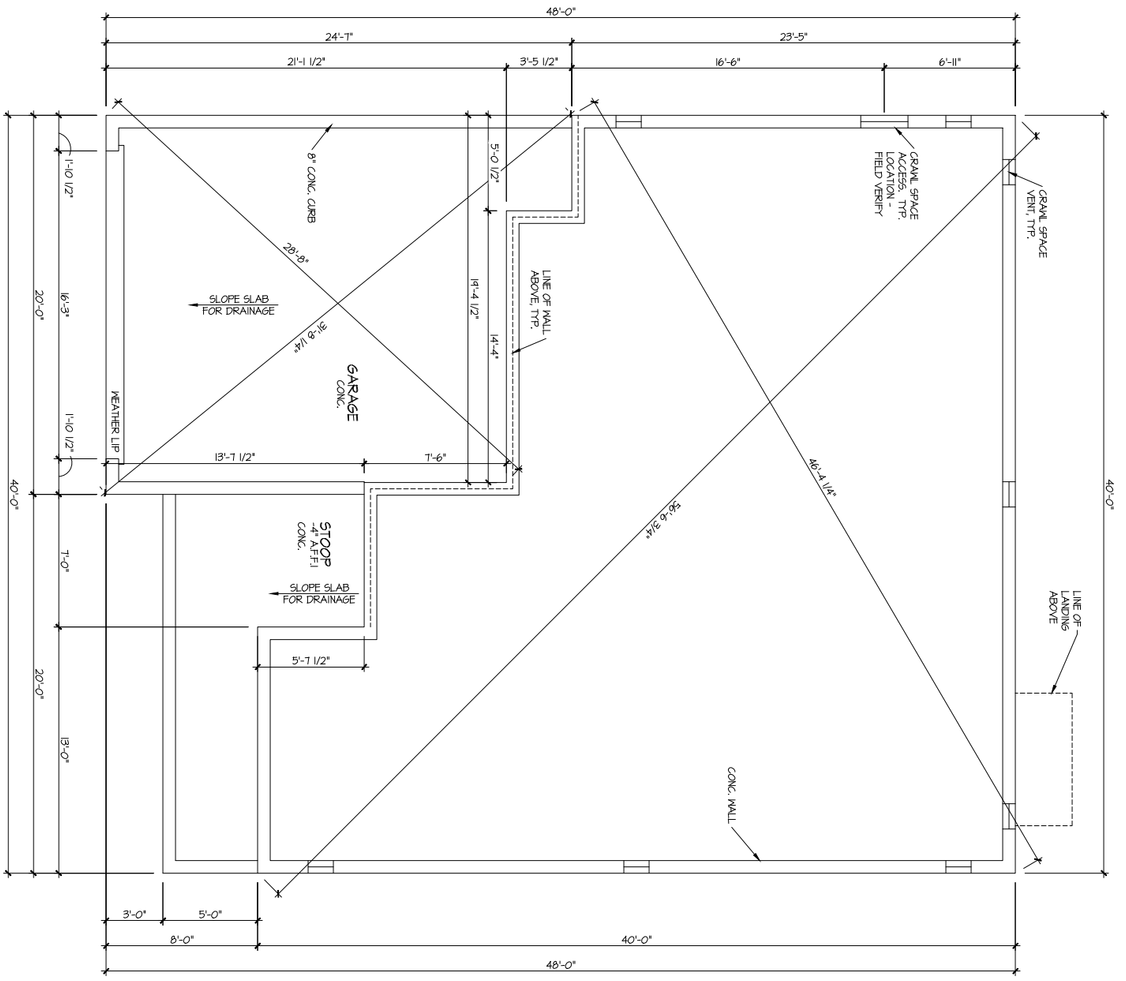


SHEET No. A2.1.31

HOUSE NAME:
FONTANA V1.5 – LOT #40

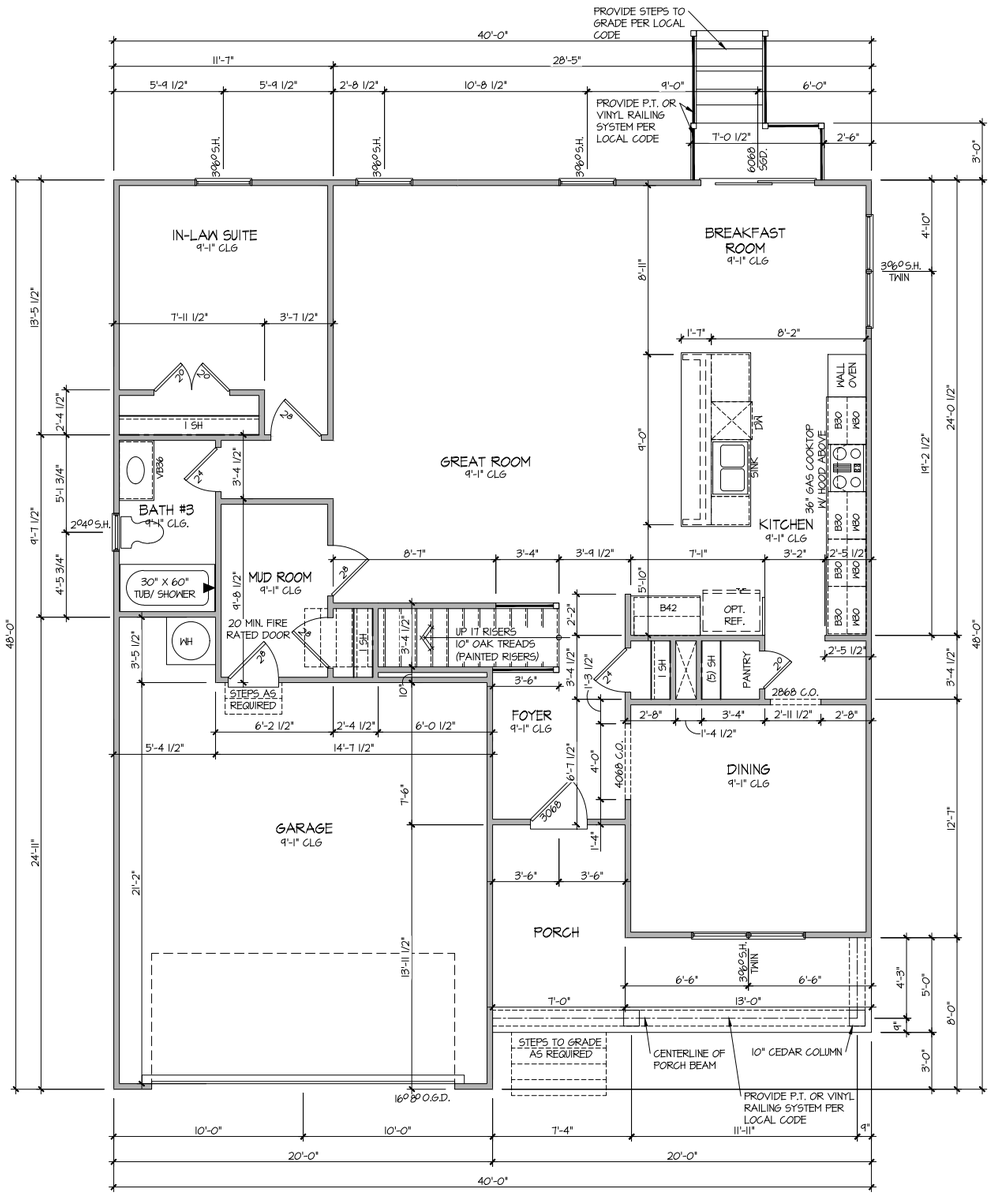
DRAWING TITLE
CRAWL SPACE FOUNDATION PLAN, ELEV. 31

CARUSO HOMES

DRAWN BY: RPS
DATE: 10.10.25

SEAL

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951



ELEVATION 31
FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

GENERAL PLAN NOTES

1. ALL DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE READ OR CALCULATED, NEVER SCALED. WRITTEN DIMENSIONS AND NOTES SHALL GOVERN.
2. ALL ANGLED WALLS ARE 45½ UNLESS NOTED OTHERWISE.
3. GARAGE SHALL BE SEPARATED WITH MIN. 5/8" TYPE X GYPSUM BOARD ON CEILING AND MIN. 1/2" GYPSUM BOARD ON WALLS AND SUPPORTING STRUCTURE PER TABLE R302.6.
4. SURFACES WITHIN ENCLOSED SPACE UNDER STAIRS ACCESSED BY A DOOR OR ACCESS PANEL SHALL BE COVERED WITH MIN. 1/2" GYPSUM BOARD.
5. ALL DOORS ARE 4" FROM HINGED CORNER OR CENTERED UNLESS NOTED OTHERWISE.
6. HANDRAILS SHALL HAVE A HEIGHT OF 34" - 38" ABOVE TREAD NOSING.
7. PER IRC SECTION R311.7.5.1 AND SECTION R311.7.5.2, MAXIMUM RISER HEIGHT AT STAIRS SHALL BE 7 3/4", MINIMUM TREAD DEPTH SHALL BE 10". VERIFY WITH ANY AND ALL LOCAL ORDINANCES, COUNTY AND STATE CODE AMENDMENTS.

WALL LEGEND

- 2x6 FRAME WALL
- 2x4 FRAME WALL
- NON-STANDARD WALL - SEE NOTES ON PLAN

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

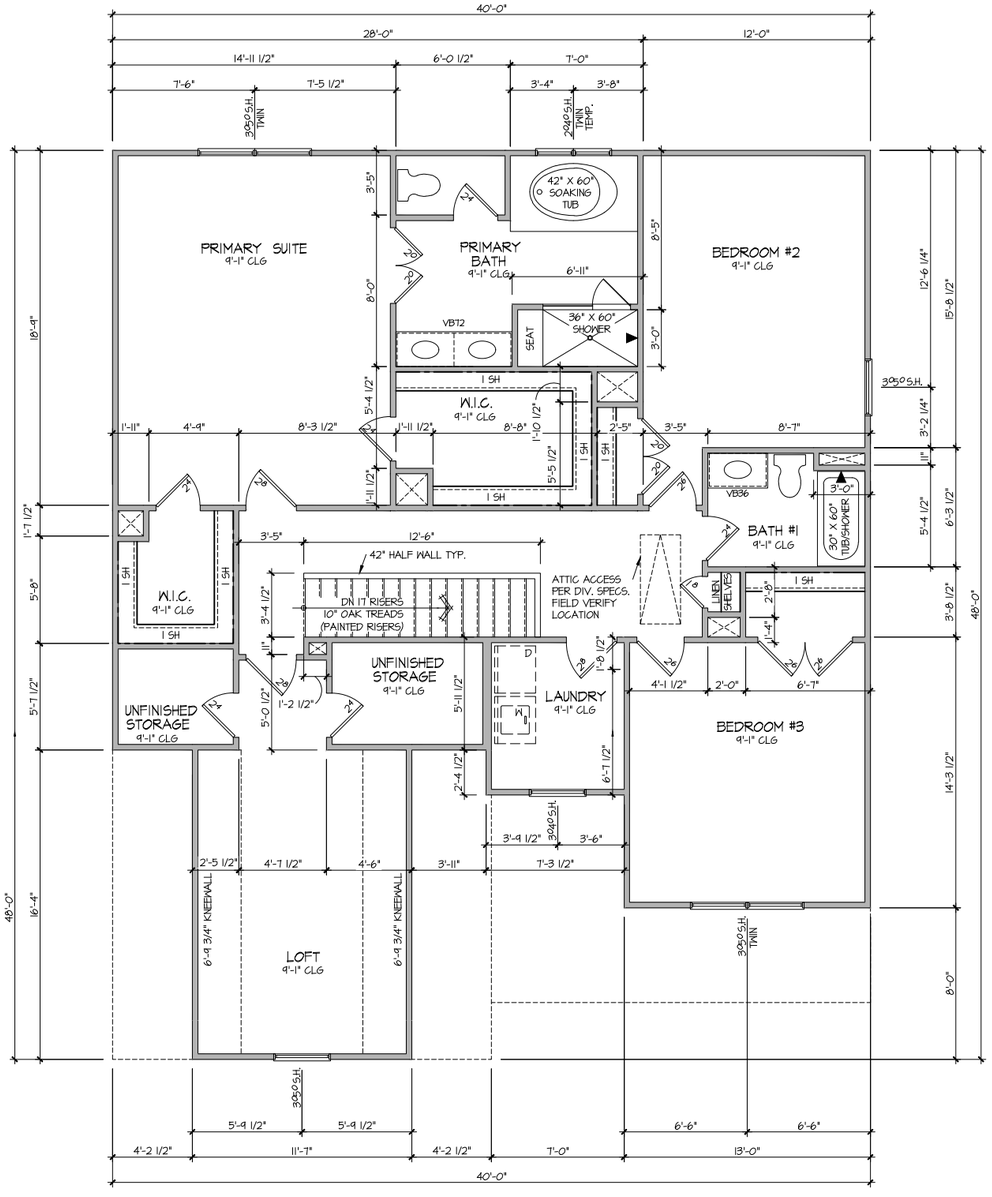
SEAL

DRAWN BY: RPS
DATE: 10.10.25

CARUSO HOMES

HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: FLOOR PLANS, ELEV. 31

SHEET No. A3.1.31



ELEVATION 31
SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

GENERAL PLAN NOTES

1. ALL DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE READ OR CALCULATED, NEVER SCALED. WRITTEN DIMENSIONS AND NOTES SHALL GOVERN.
2. ALL ANGLED WALLS ARE 45½ UNLESS NOTED OTHERWISE.
3. GARAGE SHALL BE SEPARATED WITH MIN. 5/8" TYPE X GYPSUM BOARD ON CEILING AND MIN. 1/2" GYPSUM BOARD ON WALLS AND SUPPORTING STRUCTURE PER TABLE R302.6.
4. SURFACES WITHIN ENCLOSED SPACE UNDER STAIRS ACCESSED BY A DOOR OR ACCESS PANEL SHALL BE COVERED WITH MIN. 1/2" GYPSUM BOARD.
5. ALL DOORS ARE 4" FROM HINGED CORNER OR CENTERED UNLESS NOTED OTHERWISE.
6. HANDRAILS SHALL HAVE A HEIGHT OF 34" - 38" ABOVE TREAD NOSING.
7. PER IRC SECTION R311.7.5.1 AND SECTION R311.7.5.2, MAXIMUM RISER HEIGHT AT STAIRS SHALL BE 7 3/4", MINIMUM TREAD DEPTH SHALL BE 10". VERIFY WITH ANY AND ALL LOCAL ORDINANCES, COUNTY AND STATE CODE AMENDMENTS.

WALL LEGEND

- 2x6 FRAME WALL
- 2x4 FRAME WALL
- NON-STANDARD WALL - SEE NOTES ON PLAN

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

SEAL

DRAWN BY: RPS
DATE: 10.10.25

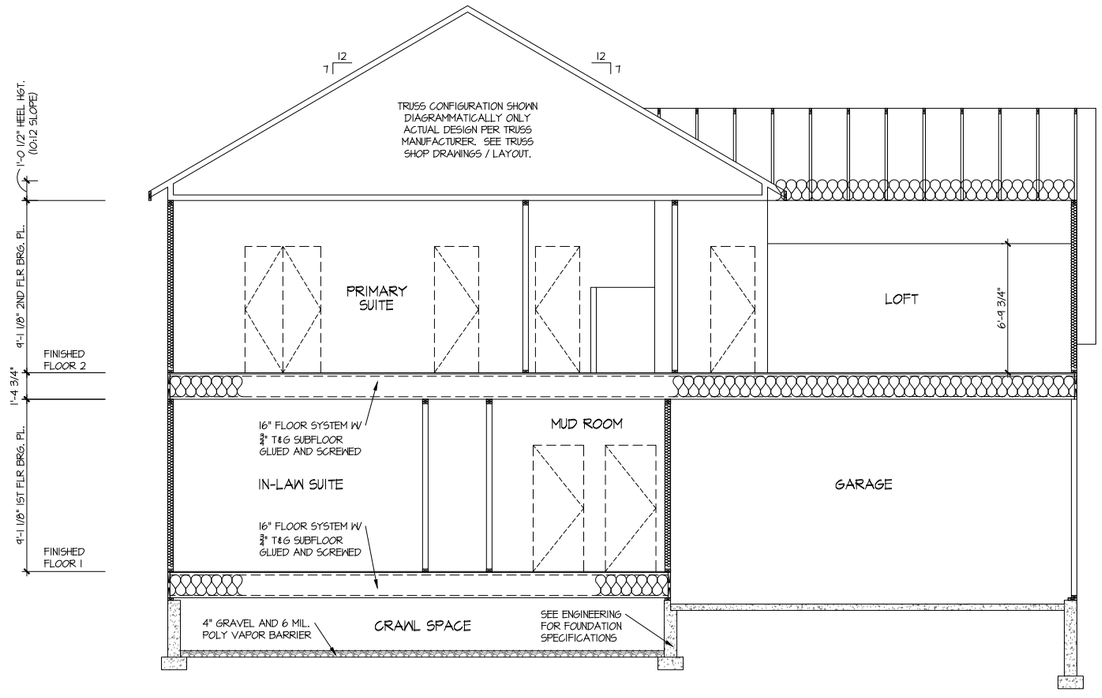
CARUSO HOMES

HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: FLOOR PLANS, ELEV. 31

SHEET No. A3.2.31

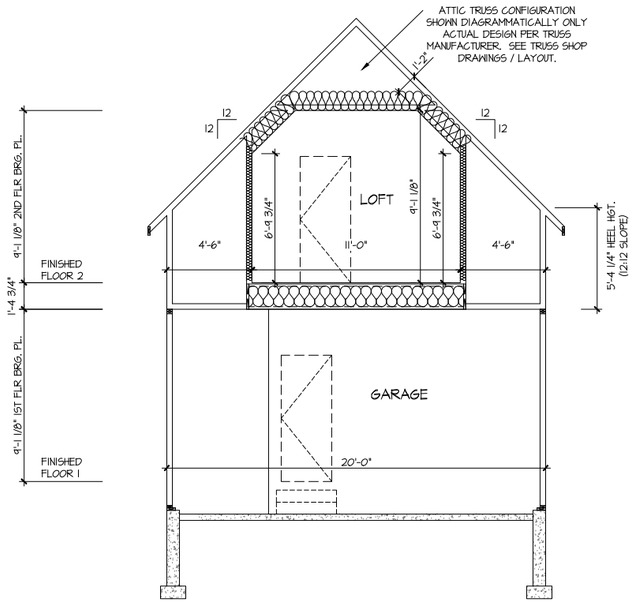
GENERAL SECTION NOTES

1. BUILDING SECTIONS DEPICT VOLUME SPACES WITHIN THE STRUCTURE. REFER TO STRUCTURAL DRAWINGS, TRUSS DRAWINGS, STRUCTURAL DETAILS AND CALCULATIONS BY OTHERS FOR ALL STRUCTURAL INFORMATION.
2. PROVIDE INSULATION PER STATE RESIDENTIAL CODE. COMPLIANCE METHOD TO BE DETERMINED BY BUILDER.



BUILDING SECTION 1

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)



BUILDING SECTION 2

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

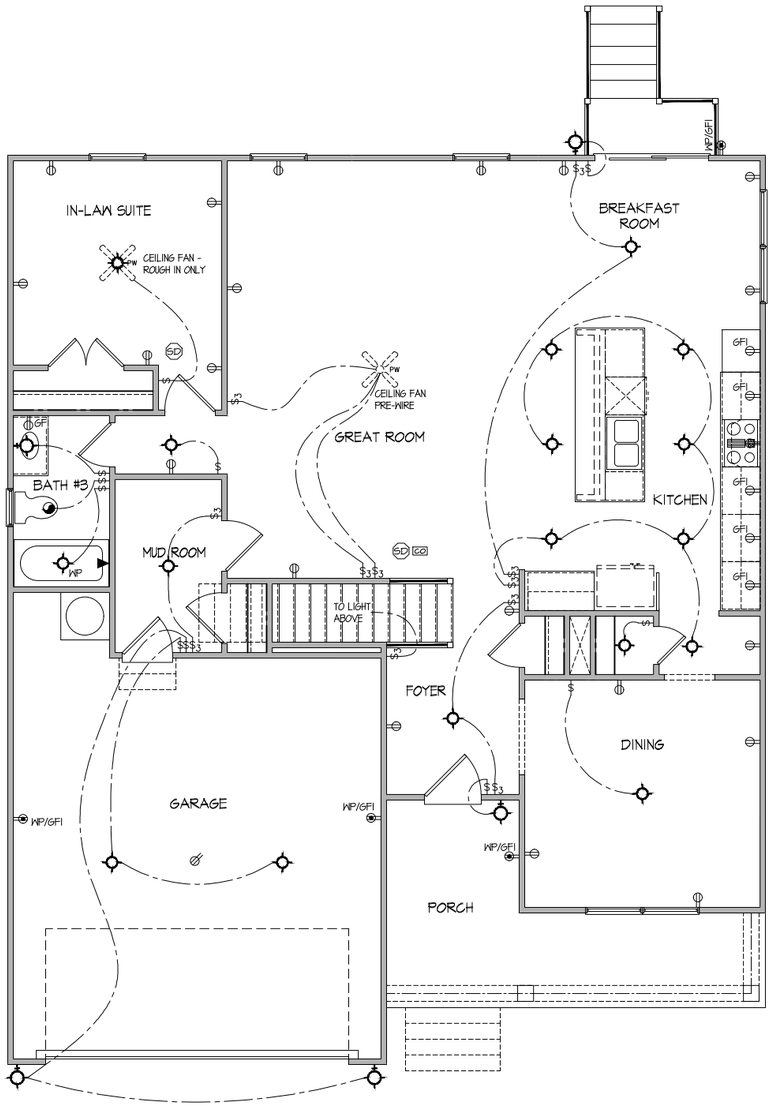
SEAL

DRAWN BY: RPS
DATE: 10.10.25

CARUSO HOMES

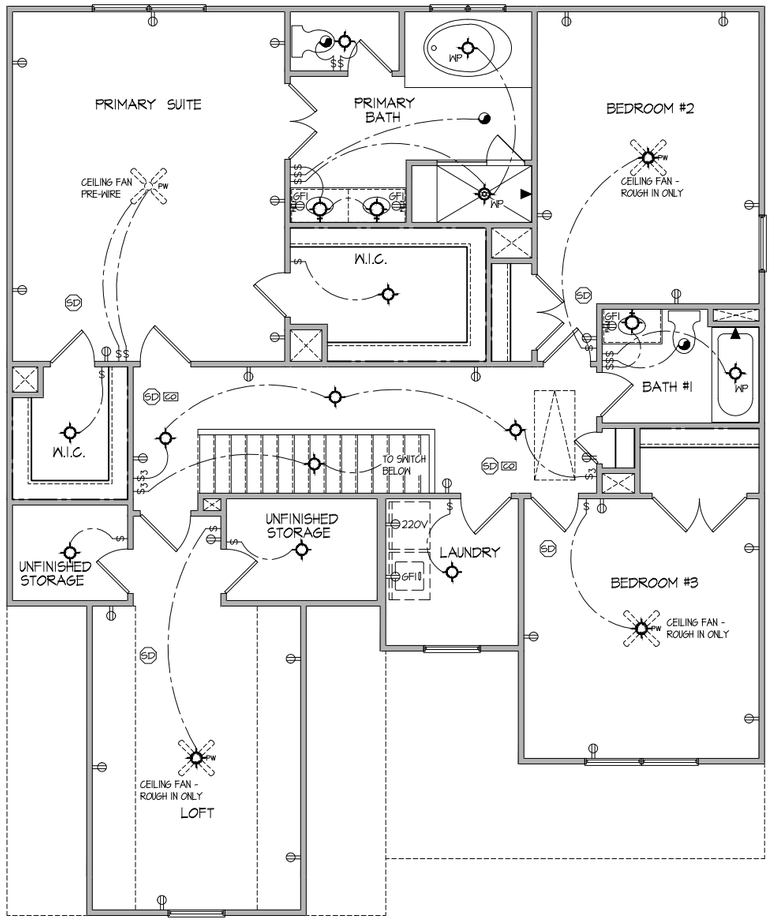
HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: BUILDING SECTIONS

SHEET No. A4.1



FIRST FLOOR ELECTRICAL PLAN

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)



SECOND FLOOR ELECTRICAL PLAN

SCALE: 1/8" = 1'-0" (11"x17" SHEET SIZE)
SCALE: 1/4" = 1'-0" (22"x34" SHEET SIZE)

ELECTRICAL LEGEND

$	SINGLE POLE SWITCH
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
	DUPLEX AFCI RECEPTACLE
	DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
	DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
220V	RECEPTACLE - 220V
GFI	DUPLEX AFCI RECEPTACLE - GFI
WP/GFI	DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
SD	SMOKE DETECTOR - WIRED IN SERIES
	EXHAUST FAN MOTOR
CO	CO DETECTOR
DC	DOOR CHIME
	LIGHT FIXTURE - WALL MOUNTED
	LIGHT FIXTURE - CEILING MOUNTED
	LIGHT FIXTURE - LED SURFACE MOUNT
P	PENDANT
PC	PULLCHAIN LAMPHOLDER
K	KEYLESS LAMPHOLDER
	GARAGE DOOR BUTTON

NOTE: ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY AND TO ALL APPLICABLE LOCAL REGULATIONS.

THE KSE GROUP ARCHITECTURE
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951

SEAL

DRAWN BY: RPS
DATE: 10.10.25

CARUSO HOMES

HOUSE NAME: FONTANA V1.5 – LOT #40
DRAWING TITLE: ELECTRICAL PLANS

SHEET No. E1.1

KSE ENGINEERING
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951
www.kse-eng.com (215) 804-4449

FONTANA

VERSION 1.5

MAGNOLIA ACRES LOT 40

RALEIGH, NORTH CAROLINA

DESIGN SPECIFICATIONS:

DESIGN BUILDING CODE (REFERRED TO HEREIN AS 'THE BUILDING CODE'):
- 2024 NORTH CAROLINA RESIDENTIAL CODE

DESIGN LIVE LOADS:
- ROOF = 20 PSF (LOAD DURATION FACTOR=1.25)
- UNINHABITABLE ATTICS WITH LIMITED STORAGE = 20 PSF (WHERE SPECIFIED ON PLANS)
- HABITABLE ATTICS AND ATTICS SERVED WITH FIXED STAIRS = 30 PSF
- FLOOR = 40 PSF
- FLOOR (SLEEPING AREAS) = 30 PSF
- DECK = 40 PSF
- BALCONY = 40 PSF
- STAIRS = 40 PSF

DESIGN DEAD LOADS:
- ROOF TRUSS = 17 PSF (TC=7, BC=10)
- FLOOR TRUSS = 15 PSF (TC=10, BC=5)
- FLOOR JOIST = 10 PSF
- STANDARD BRICK = 40 PSF
- QUEEN ANNE BRICK = 25 PSF
- TILE = 10 PSF (WHERE NOTED ON PLANS)

NOTE: STRUCTURAL FRAMING HAS NOT BEEN DESIGNED FOR GRANITE, MARBLE OR OTHER MATERIALS HEAVIER THAN THE ABOVE LOADING UNLESS SPECIFICALLY NOTED ON PLANS..

DESIGN WIND LOADS:
- ULTIMATE WIND SPEED = 120 MPH
- EXPOSURE CATEGORY = B

ASSUMED SOIL BEARING CAPACITY = 2000 PSF

ASSUMED LATERAL SOIL PRESSURE = 60 PCF

FROST DEPTH = 12"

SEISMIC DESIGN CATEGORY = B

ENGINEERED LUMBER SHALL HAVE THE FOLLOWING MINIMUM DESIGN VALUES:
- TJI 210 SERIES (SERIES AND SPACING PER PLANS)
- LSL: E=1,550,000 PSI, F_B=2,325 PSI, F_V=310 PSI, F_C=900 PSI
- LVL: E=2,000,000 PSI, F_B=2,600 PSI, F_V=285 PSI, F_C=750 PSI
- PSL: E=2,000,000 PSI, F_B=2,900 PSI, F_V=290 PSI, F_C=625 PSI

NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046096 ENGINEER ANDREW A. MOORE
10/22/25

KSE ENGINEERING
1900 AM DRIVE, SUITE 201, QUAKERTOWN, PA 18951
www.kse-eng.com (215) 804-4449

CARUSO HOMES

Cover Sheet
Magnolia Acres Lot 40
Fontana Version 1.5
120 M.P.H.
Raleigh, North Carolina

Project #:	108-24004
Designed By:	AAM
Checked By:	KRK
Issue Date:	10/22/25
Re-Issue:	
Scale:	

S-0

GENERAL STRUCTURAL NOTES:

1. THE DESIGN PROFESSIONAL WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE STRUCTURAL ENGINEER OF RECORD (SER) FOR THIS PROJECT. THE SER BEARS THE RESPONSIBILITY OF THE PRIMARY STRUCTURAL ELEMENTS AND THE PERFORMANCE OF THIS STRUCTURE. NO OTHER PARTY MAY REVISE, ALTER, OR DELETE ANY STRUCTURAL ASPECTS OF THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN CONSENT OF KSE ENGINEERING, P.C. OR THE SER. FOR THE PURPOSES OF THESE CONSTRUCTION DOCUMENTS, THE SER AND KSE ENGINEERING SHALL BE CONSIDERED THE SAME ENTITY.
2. THE STRUCTURE IS ONLY STABLE IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION TO STABILIZE THE STRUCTURE.
3. THE SER IS NOT RESPONSIBLE FOR CONSTRUCTION SEQUENCES, METHODS, OR TECHNIQUES IN CONNECTION WITH THE CONSTRUCTION OF THIS STRUCTURE. THE SER WILL NOT BE HELD RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CONFORM TO THE CONTRACT DOCUMENTS, SHOULD ANY NON-CONFORMITIES OCCUR.
4. THE SER DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF GEOMETRY. THE SER ASSUMES NO LIABILITY FOR CHANGES MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THE PLANS. THE SER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES ARE NOTED ON THE PLANS.
5. ANY STRUCTURAL ELEMENTS OR DETAILS NOT FULLY DEVELOPED ON THE CONSTRUCTION DRAWINGS SHALL BE COMPLETED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO KSE ENGINEERING FOR REVIEW BEFORE ANY CONSTRUCTION BEGINS. THE SHOP DRAWINGS WILL BE REVIEWED FOR OVERALL COMPLIANCE AS IT RELATES TO THE STRUCTURAL DESIGN OF THIS PROJECT. VERIFICATION OF THE SHOP DRAWINGS FOR DIMENSIONS, OR FOR ACTUAL FIELD CONDITIONS, IS NOT THE RESPONSIBILITY OF THE SER OR KSE ENGINEERING, P.C.
6. VERIFICATION OF ASSUMED FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE SER. THE CONTRACTOR SHALL VERIFY THE FIELD CONDITIONS FOR ACCURACY AND REPORT ANY DISCREPANCIES TO KSE ENGINEERING, P.C. BEFORE CONSTRUCTION BEGINS.
7. THE SER IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL ELEMENTS OR NON-STRUCTURAL ELEMENTS, EXCEPT FOR THE ELEMENTS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.
8. THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE BUILDING CODE AND ANY LOCAL CODES OR RESTRICTIONS.
9. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS OTHERWISE NOTED.
10. PROVIDE MOISTURE PROTECTION AND FLASHING PER ARCHITECTURAL DETAILS.

FOUNDATIONS:

1. FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE BUILDING CODE.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. THE BUILDER SHALL FURNISH ANY AND ALL REPORTS RECEIVED FROM THE GEOTECHNICAL ENGINEER ON THE STUDY OF THE PROPOSED SITE TO THE DESIGNER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR.
3. MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN THE BUILDING CODE.
4. THE SER HAS NOT PERFORMED A SUBSURFACE INVESTIGATION. VERIFICATION OF THE ASSUMED VALUE IS THE RESPONSIBILITY OF THE OWNER OR THE CONTRACTOR. SHOULD ANY ADVERSE SOIL CONDITION BE ENCOUNTERED, THE SER MUST BE CONTACTED BEFORE PROCEEDING.
5. THE BOTTOM OF ALL FOOTINGS SHALL EXTEND BELOW THE FROST LINE FOR THE REGION IN WHICH THE STRUCTURE IS TO BE CONSTRUCTED, BUT NOT LESS THAN A MINIMUM OF 12" BELOW GRADE. ALL FOOTINGS TO HAVE A MINIMUM PROJECTION OF 2" ON EACH SIDE OF FOUNDATION WALLS. MAXIMUM FOOTING PROJECTION SHALL NOT EXCEED THE THICKNESS OF THE FOOTING.
6. WOOD SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WITH ½" ANCHOR BOLTS WITH MINIMUM 7" EMBEDMENT, SPACED A MAXIMUM OF 6'-0" O.C. INSTALL MINIMUM 2 ANCHOR BOLTS PER SECTION, 12" MAXIMUM FROM CORNERS. ½" DIAMETER x 8" LONG SIMPSON TITEN HD OR USP SCREW-BOLT+ SCREWS MAY BE SUBSTITUTED ON A 1 FOR 1 BASIS.
7. ANY FILL SHALL BE PLACED UNDER THE DIRECTION OR RECOMMENDATION OF A LICENSED PROFESSIONAL ENGINEER. THE RESULTING SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY.
8. EXCAVATIONS OF FOOTINGS SHALL BE LINED TEMPORARILY WITH A 6 MIL POLYETHYLENE MEMBRANE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF EXCAVATION.
9. NO CONCRETE SHALL BE PLACED AGAINST ANY SUBGRADE CONTAINING WATER, ICE, FROST, OR LOOSE MATERIAL.
10. PROVIDE FOUNDATION WATERPROOFING AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS (SEE ARCHITECTURAL PLANS AND DETAILS).
11. NONE OF THE FOUNDATION DESIGNS IN THESE DOCUMENTS ARE SUITABLE FOR INSTALLATION IN SHRINK/SWELL CONDITIONS. REFER TO GEOTECHNICAL ENGINEER FOR APPROPRIATE DESIGN.
12. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST TEN FEET.
13. CRAWL SPACE TO BE GRADED LEVEL AND CLEAR OF ALL DEBRIS.
14. PROVIDE MINIMUM 6 MIL APPROVED VAPOR BARRIER. ALL JOINTS TO BE LAPPED MINIMUM 12" AND SEALED.

CONCRETE & REINFORCING

1. CONCRETE DESIGN BASED ON ACI 318 AND ACI 318.1 OR ACI 332. CONCRETE SHALL HAVE A NORMAL WEIGHT AGGREGATE AND A MINIMUM COMPRESSIVE STRENGTH (f'c) = 3,000 PSI MINIMUM AT 28 DAYS PER CODE (VARIES W/ WEATHER), UNLESS OTHERWISE NOTED ON THE PLAN.
2. CONCRETE SHALL BE PROPORTIONED, MIXED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 318: "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ACI 301: "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
3. AIR ENTRAINED CONCRETE MUST BE USED FOR ALL STRUCTURAL ELEMENTS EXPOSED TO FREEZE/THAW CYCLES AND DEICING CHEMICALS. AIR ENTRAINMENT AMOUNTS (IN PERCENT) SHALL BE WITHIN -1% TO +2% OF 5% FOR FOOTINGS AND EXTERIOR SLABS.
4. NO ADMIXTURES SHALL BE ADDED TO ANY STRUCTURAL CONCRETE WITHOUT WRITTEN PERMISSION OF THE SER. WATER ADDED TO CONCRETE ON SITE SHALL NOT EXCEED THAT ALLOWED BY THE MIX DESIGN.
5. CONCRETE SLABS-ON-GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1R: "GUIDE FOR CONCRETE SLAB AND SLAB CONSTRUCTION".
6. CONTROL OR SAW CUT JOINTS (CUT OR TOOLED) SHALL BE SPACED IN INTERIOR SLABS-ON-GRADE AT A MAXIMUM OF 15'-0" O.C. AND IN EXTERIOR SLABS-ON-GRADE AT A MAXIMUM OF 10'-0" UNLESS OTHERWISE NOTED. CARE SHALL BE TAKEN TO AVOID RE-ENTRANT CORNERS.
7. CONTROL OR SAW CUT JOINTS SHALL BE PRODUCED USING CONVENTIONAL CUT OR TOOLED PROCESSES WITHIN 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED.
8. ALL WELDED WIRE FABRIC (W.W.F.) FOR CONCRETE SLABS-ON-GRADE SHALL BE PLACED AT MID-DEPTH OF SLAB. THE W.W.F. SHALL BE SECURELY SUPPORTED DURING THE CONCRETE POUR. FIBROUS CONCRETE REINFORCEMENT, OR POLYPROPYLENE FIBERS MAY BE USED IN LIEU OF W.W.F. APPLICATION OF POLYPROPYLENE FIBERS PER CUBIC YARD OF CONCRETE SHALL BE PER MANUFACTURER AND COMPLY WITH ASTM C1116, ANY LOCAL BUILDING CODE REQUIREMENTS AND SHALL MEET OR EXCEED CURRENT INDUSTRY STANDARD.
9. POLYPROPYLENE REINFORCING TO BE 100% VIRGIN, CONTAINING NO REPROCESSED OLEFIN MATERIALS AND SPECIFICALLY MANUFACTURED FOR USE AS CONCRETE SECONDARY REINFORCEMENT.
10. STEEL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.
11. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315: "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES".
12. HORIZONTAL FOOTING AND WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90° BENDS, OR CORNER BARS WITH THE SAME SIZE/SPACING AS THE HORIZONTAL REINFORCEMENT.
13. PROVIDE REINFORCEMENT LAP AS NOTED BELOW, UNLESS NOTED OTHERWISE:
    #4 BARS - 30" LENGTH
    #5 BARS - 38" LENGTH
    #6 BARS - 45" LENGTH
14. WHERE REINFORCING DOWELS ARE REQUIRED, THEY SHALL BE EQUIVALENT IN SIZE AND SPACING TO THE VERTICAL REINFORCEMENT. THE DOWEL SHALL EXTEND 48 BAR DIAMETERS VERTICALLY AND 20 BAR DIAMETERS INTO THE FOOTING. SEE KSE FOUNDATION DETAILS.
15. WHERE FOOTING BOTTOMS ARE TO BE STEPPED AT SLOPING GRADE CONDITIONS, PROVIDE CONTINUOUS REINFORCING WITH Z BARS (TO MATCH FOOTING REINFORCING) AS REQUIRED.
16. BAR SUPPORT ACCESSORIES SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, EXCEPT THAT REINFORCING SHALL BE CHAIRED ON THE BOTTOM AND/OR THE SIDES ON BOLSTERS SPACED NOT MORE THAN 4 FEET ON CENTER. NO ROCKS, CMU, CLAY TILE, OR BRICK SHALL BE USED TO SUPPORT REINFORCING.
17. FOR GRADE SUPPORTED SLABS, SLAB REINFORCING SHALL BE HELD IN PLACE BY BAR SUPPORTS AND ACCESSORIES AS DESCRIBED IN THE CRSI MANUAL OF STANDARD PRACTICE. BAR SUPPORTS SHALL BE SPACED A MAXIMUM OF 4'-0" O.C. BOTH WAYS IN STRAIGHT LINES ON THE MESH GRID.

MASONRY

1. ALL MASONRY SHALL CONFORM TO ASTM C-90, F'_m=1500 PSI. ALL BRICK SHALL CONFORM TO ASTM C-216, F'_m=1500 PSI. ALL MORTAR SHALL BE TYPE 'S' (TYPE 'M' BELOW GRADE) AND CONFORM TO ASTM C-270. COARSE GROUT SHALL CONFORM TO ASTM C-476 WITH A MAXIMUM AGGREGATE SIZE OF ⅜" AND A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
2. ALL MASONRY WORK SHALL BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530/ASCE 5/TMS 402 AND "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1/ ASCE 6/TMS 602.
3. THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION. UNFILLED HOLLOW PIERS MAY BE USED IF THE UNSUPPORTED HEIGHT IS NOT MORE THAN FOUR TIMES THEIR LEAST DIMENSION.
4. EACH CRAWL SPACE PIER SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING AND EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS. PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
5. TOP COURSE OF MASONRY SHALL BE GROUTED SOLID.
6. HORIZONTAL WALL JOINT REINFORCEMENT SHALL BE STANDARD 9 GAGE GALVANIZED LADDER OR TRUSS TYPE SPACED AT 16" O.C., UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
7. SPLICED WIRE REINFORCEMENT SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 6". LAP WITH STANDARD 'T' AND 'L' SHAPED PIECES AT INTERSECTIONS AND CORNERS.

WOOD FRAMING:

1. SOLID SAWN WOOD FRAMING MEMBERS SHALL CONFORM TO THE SPECIFICATIONS LISTED IN THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION": (NDS). UNLESS OTHERWISE NOTED, ALL WOOD FRAMING MEMBERS ARE DESIGNED TO BE:
   SPRUCE-PINE-FIR (SPF) WITH THE FOLLOWING MINIMUM DESIGN VALUES:
   E=1,400,000 PSI, F_b=875 PSI, F_v=135 PSI
   1.1. FRAMING: SPF #2.
   1.2. PLATES: SPF #2.
   1.3. STUDS: SPF STUD GRADE.
2. WALL STUD SPACING, (MAXIMUM 10' NOMINAL PLATE HEIGHT):
   1 & 2 STORY EXTERIOR AND INTERIOR BEARING:
   2x4 @ 16" O.C. OR 2x6 @ 24" O.C., U.N.O.
   BOTTOM OF 3 STORIES EXTERIOR AND INTERIOR BEARING:
   2x6 @ 16" O.C., U.N.O.
   INTERIOR NON-BEARING:
   2x @ 24" O.C., U.N.O.
3. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED SOUTHERN YELLOW PINE #2 OR BETTER.
4. ANCHOR SILL PLATES IN ACCORDANCE W/ GENERAL STRUCTURAL NOTES.
5. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY BE SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION.
6. NAILS SHALL BE COMMON WIRE NAILS UNLESS OTHERWISE NOTED.
7. BOLT HOLES AND LEAD HOLES FOR LAG SCREWS SHALL BE IN ACCORDANCE WITH NDS SPECIFICATIONS.
8. INDIVIDUAL STUDS FORMING A COLUMN SHALL BE ATTACHED WITH (2) ROWS 10d NAILS @ 6" O.C. STAGGERED. THE STUD COLUMN SHALL BE FULLY BLOCKED AT ALL FLOOR LEVELS TO ENSURE PROPER LOAD TRANSFER. WALL SHEATHING SHALL BE NAILED TO EDGE OF EACH STUD.
9. FACE NAIL ALL MULTI-PLY BEAMS AND HEADERS WITH (2) ROWS 16d COMMON NAILS @ 16" O.C., STAGGERED, OR PER MANUFACTURER'S SPECIFICATIONS FOR ENGINEERED LUMBER. APPLY NAILING FROM BOTH FACES FOR (3) OR MORE PLIES.
10. FASTEN 4-PLY BEAMS WITH (1) ½" DIAMETER THROUGH BOLT W/ NUTS AND WASHERS AT 12" O.C. STAGGERED TOP AND BOTTOM, 1½" MINIMUM EDGE DISTANCE. (UNLESS OTHERWISE NOTED)
11. ALL BEAMS AND HEADERS SHALL HAVE (1)2x JACK STUD & (1)2x KING STUD UNLESS OTHERWISE NOTED. THE NUMBER OF STUDS INDICATED ON PLANS ARE THE TOTAL NUMBER OF JACK STUDS REQUIRED, UNLESS OTHERWISE NOTED.
12. PROVIDE KING STUDS AT EACH END OF HEADERS AS NOTED BELOW.
    (1) STUD UP TO 6' OPENING
    (2) STUDS UP TO 8' OPENING
    (3) STUDS UP TO 9' OPENING
13. ALL BEAMS TO BE CONTINUOUSLY SUPPORTED LATERALLY AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED WITH A MINIMUM OF TWO STUDS, UNLESS OTHERWISE NOTED. ALL BEAM SPLICES SHALL OCCUR OVER SUPPORTS.
14. SOLID BLOCKING TO BE PROVIDED AT ALL POINT LOADS THROUGH FLOOR LEVELS TO THE FOUNDATION OR TO OTHER STRUCTURAL COMPONENTS.
15. ALL LUMBER SPECIFIED ON DRAWINGS IS INTENDED FOR DRY USE ONLY (MOISTURE CONTENT <19%) UNLESS OTHERWISE NOTED.
16. ALL WATERPROOFING AND FIRE SAFETY SYSTEMS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE DESIGNED AND DETAILED BY OTHERS.
17. ANY WOOD FRAME INTERIOR BEARING WALL STUDS THAT HAVE HOLES IN THE CENTER OF THE STUD UP TO 1" DIAMETER SHALL HAVE STUD PROTECTION SHIELDS. ALL HOLES OVER 1" IN DIAMETER FOR PLUMBING LINES, ETC. SHALL BE REPAIRED WITH SIMPSON HSS2 OR USP STS1 STUD SHOES, TYPICAL, UNLESS OTHERWISE NOTED.
18. BEARING WALLS SHALL BE SHEATHED ON NOT LESS THAN ONE SIDE WITH OSB OR GYPSUM BOARD. BRIDGING SHALL BE INSTALLED NOT GREATER THAN 4 FEET APART MEASURED VERTICALLY FROM EITHER END OF THE STUD IN LIEU OF SHEATHING.
19. DIAGONAL BRACING SHALL BE INSTALLED AT EACH END OF BASEMENT BEARING WALLS AND NOT MORE THAN 20' ON CENTER.

EXTERIOR WOOD FRAMED DECKS:

1. DECKS ARE TO BE FRAMED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND AS REFERENCED ON THE STRUCTURAL PLANS, EITHER THROUGH CODE REFERENCES OR CONSTRUCTION DETAILS.
2. PRESERVATIVE TREATED WOOD FRAMING TO BE SOUTHERN YELLOW PINE #2 OR BETTER.
3. GUARD RAILS REQUIRED AT DECKS. DESIGN BY OTHERS TO MEET MINIMUM CODE REQUIREMENTS.
4. PROVIDE DECK LATERAL LOAD AND BRACING CONNECTIONS PER BUILDING CODE.

RAFTER FRAMED ROOF CONSTRUCTION:

1. PROVIDE 2x4x4'-0" RAFTER TIES AT 48" O.C.
2. RAFTERS SHALL BE SUPPORTED BY PURLINS AND PURLIN BRACES AS SHOWN ON THE PLAN. PURLIN BRACES SHALL NOT BEAR ON ANY CEILING JOIST, STRONGBACK OR HEADER UNLESS SPECIFICALLY SHOWN ON PLAN. RAFTERS MAY BE SPLICED AT PURLIN LOCATIONS.
3. CEILING JOISTS SHALL HAVE LATERAL SUPPORT W/ 1x4 FLAT BRACING ON TOP EDGE OF JOIST AT LOOSE JOIST ENDS (WHERE JOISTS NOT FASTENED TO RAFTERS) OR FULL DEPTH BLOCKING. FASTEN END OF BRACING TO RAFTER OR GABLE END FRAMING.
4. FASTEN RAFTER AND CEILING JOIST WITH (6) 12d NAILS UNLESS OTHERWISE NOTED.
5. PROVIDE VERTICAL 2x6 STRONGBACKS AT CEILING JOISTS @ 8'-0" O.C. TIE STRONGBACK ENDS TO GABLE STUDS OR RAFTERS WHERE POSSIBLE. PROVIDE BLOCKING BETWEEN TOP PLATES AND STRONGBACKS. PROVIDE 2x4 FLAT FASTENED TO EACH JOIST WITH (2) 12d NAILS. FASTEN STRONGBACK TO 2x4 FLAT WITH 12d NAILS @ 12" O.C. AND FASTENED TO EACH JOIST WITH (1) 12d TOENAIL.

WOOD TRUSSES (FLOOR & ROOF):

1. THE WOOD TRUSS MANUFACTURER/FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF THE WOOD TRUSSES. SUBMIT SEALED SHOP DRAWINGS AND SUPPORTING CALCULATIONS TO THE SER FOR REVIEW PRIOR TO FABRICATION. THE SER SHALL HAVE A MINIMUM OF (5) DAYS FOR REVIEW. THE REVIEW BY THE SER SHALL BE FOR OVERALL COMPLIANCE OF THE DESIGN DOCUMENTS. THE SER SHALL ASSUME NO RESPONSIBILITY FOR THE CORRECTNESS OF THE STRUCTURAL DESIGN FOR THE WOOD TRUSSES.
2. THE WOOD TRUSSES SHALL BE DESIGNED FOR ALL REQUIRED LOADINGS AS SPECIFIED IN THE LOCAL BUILDING CODE, THE ASCE STANDARD "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES." (ASCE 7), AND THE LOADING REQUIREMENTS SHOWN ON THESE SPECIFICATIONS. THE TRUSS DRAWINGS SHALL BE COORDINATED WITH ALL OTHER CONSTRUCTION DOCUMENTS AND PROVISIONS PROVIDED FOR LOADS SHOWN ON THESE DRAWINGS INCLUDING BUT NOT LIMITED TO HVAC EQUIPMENT, PIPING, AND ARCHITECTURAL FIXTURES ATTACHED TO THE TRUSSES.
3. THE TRUSSES SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE ANSI/TPI 1: "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION".
4. THE TRUSS MANUFACTURER SHALL PROVIDE ADEQUATE BRACING INFORMATION IN ACCORDANCE WITH "BUILDING COMPONENT SAFETY INFORMATION GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" (BCSI). THIS BRACING, BOTH TEMPORARY AND PERMANENT, SHALL BE SHOWN ON THE SHOP DRAWINGS. ALSO, THE SHOP DRAWINGS SHALL SHOW THE REQUIRED ATTACHMENTS FOR THE TRUSSES.
5. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING TEMPORARY BRACING AND SHORING FOR THE FLOOR AND ROOF TRUSSES AS REQUIRED DURING CONSTRUCTION. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE LATEST BCSI. THE CONTRACTOR SHALL KEEP A COPY OF THE BCSI SUMMARY SHEETS ON SITE.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PERMANENT TRUSS BRACING SHOWN IN THE STRUCTURAL DRAWINGS AND IN THE TRUSS DESIGNS. ALL CONTINUOUS LATERAL BRACING OF WEBS REQUIRES BRACES. REFER TO BCSI SUMMARY SHEET B3 FOR TYPES OF DIAGONAL BRACES TO PROVIDE AT EACH CONTINUOUS LATERAL BRACE LINE. SUCH DIAGONAL BRACES SHALL NOT BE SPACED MORE THAN 20 FEET O.C. DIAGONAL BRACES SHALL BE FASTENED TO EACH TRUSS WEB WITH A MINIMUM OF TWO 10d FACE NAILS. WHERE CONTINUOUS LATERAL BRACING CANNOT BE INSTALLED, DUE TO A MINIMUM OF THREE ADJACENT TRUSSES NOT BEING IDENTICAL, THE CONTRACTOR SHALL COORDINATE WITH THE TRUSS SPECIALTY ENGINEER/MANUFACTURER TO DETERMINE WHAT TYPE OF ALTERNATE BRACE (I.E., T OR L BRACE, ETC.) IS REQUIRED.
7. ANY CHORDS OR TRUSS WEBS SHOWN ON THESE DRAWINGS HAVE BEEN SHOWN AS A REFERENCE ONLY. THE FINAL DESIGN OF THE TRUSSES SHALL BE PER THE MANUFACTURER.
8. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN ON THE SEALED STRUCTURAL DRAWINGS. TRUSS PROFILES TO BE SEALED BY THE TRUSS MANUFACTURER. TRUSS PLANS TO BE COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS.
9. TRUSS MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTORS FOR ALL TRUSSES.
10. PROVIDE SIMPSON H2.5A, USP RT7 OR EQUIVALENT AT EACH TRUSS TO TOP PLATE CONNECTION, UNLESS OTHERWISE NOTED.

WOOD STRUCTURAL PANELS:

1. FABRICATION AND PLACEMENT OF STRUCTURAL WOOD SHEATHING SHALL BE IN ACCORDANCE WITH THE APA DESIGN/CONSTRUCTION GUIDE "RESIDENTIAL AND COMMERCIAL," AND ALL OTHER APPLICABLE APA STANDARDS.
2. ALL REQUIRED WOOD SHEATHING SHALL BEAR THE MARK OF THE APA.
3. WOOD WALL SHEATHING SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODES FOR THE APPROPRIATE STATE AS INDICATED ON THESE DRAWINGS. REFER TO WALL BRACING NOTES IN PLAN SET FOR MORE INFORMATION. EXTERIOR WALLS TO BE FULLY SHEATHED USING 7/16" OSB OR PLYWOOD MINIMUM. AT BRACED WALL PANELS, PROVIDE BLOCKING AT ALL SHEET EDGES NOT FALLING ON STUDS OR PLATES.
4. ROOF SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1 OR 2. ROOF SHEATHING SHALL BE CONTINUOUS OVER TWO SUPPORTS MINIMUM AND ATTACHED TO ITS SUPPORTING ROOF FRAMING WITH 8d NAILS AT 6" O.C. AT PANEL EDGES AND AT 6" O.C. IN PANEL FIELD UNLESS OTHERWISE NOTED ON THE PLANS. SHEATHING SHALL BE APPLIED WITH THE LONG DIRECTION PERPENDICULAR TO FRAMING. SHEATHING SHALL HAVE A SPAN RATING CONSISTENT WITH THE FRAMING SPACING. PROVIDE SUITABLE EDGE SUPPORT BY USE OF PLYWOOD CLIPS OR LUMBER BLOCKING UNLESS OTHERWISE NOTED. PANEL END JOINTS SHALL OCCUR OVER FRAMING. ROOF SHEATHING TO BE 7/16" OSB MINIMUM.
5. WOOD FLOOR SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1 OR 2. ATTACH SHEATHING TO ITS SUPPORTING FRAMING WITH (1) 10d NAIL AT 6" O.C. AT PANEL EDGES AND AT 12" O.C. IN PANEL FIELD UNLESS OTHERWISE NOTED ON THE PLANS. SHEATHING SHALL BE APPLIED PERPENDICULAR TO FRAMING. SHEATHING SHALL HAVE A SPAN RATING CONSISTENT WITH THE FRAMING SPACING. PROVIDE SUITABLE EDGE SUPPORT BY USE OF T&G PLYWOOD OR LUMBER BLOCKING UNLESS OTHERWISE NOTED. PANEL END JOINTS SHALL OCCUR OVER FRAMING.
6. SHEATHING SHALL HAVE A ⅛" GAP AT PANEL ENDS AND EDGES AS RECOMMENDED IN ACCORDANCE WITH THE APA.

STRUCTURAL FIBERBOARD PANELS:

1. STRUCTURAL FIBERBOARD SHEATHING SHALL ONLY BE USED WHERE SPECIFICALLY NOTED ON THE STRUCTURAL PLANS.
2. FABRICATION AND PLACEMENT OF STRUCTURAL FIBERBOARD SHEATHING SHALL BE IN ACCORDANCE WITH THE APPLICABLE AFA STANDARDS.
3. FIBERBOARD WALL SHEATHING SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODES FOR THE APPROPRIATE STATE AS INDICATED ON THESE DRAWINGS. REFER TO WALL BRACING NOTES IN PLAN SET FOR MORE INFORMATION.
4. SHEATHING SHALL HAVE A ⅛" GAP AT PANEL ENDS AND EDGES AS RECOMMENDED IN ACCORDANCE WITH THE AFA.

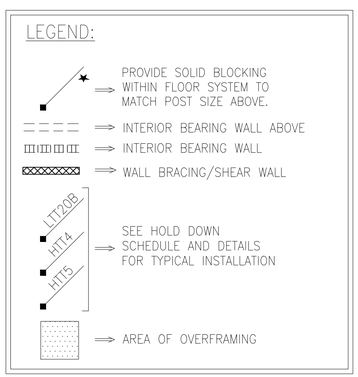
STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AND OF THE MANUAL OF STEEL CONSTRUCTION "LOAD RESISTANCE FACTOR DESIGN" LATEST EDITIONS.
2. ALL STEEL SHALL HAVE A MINIMUM YIELD STRESS (F_y) OF 50 KSI UNLESS OTHERWISE NOTED.
3. WELDING SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE AWA D1.1. ELECTRODES FOR SHOP AND FIELDING WELDING SHALL BE CLASS E70XX. ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER PER THE ABOVE STANDARDS.
4. ALL STEEL BEAMS TO BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3½" AND FULL FLANGE WIDTH UNLESS OTHERWISE NOTED. BEAMS MUST BE ATTACHED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR (2) ½" x 4" LAG SCREWS UNLESS OTHERWISE NOTED.
5. INSTALL 2x WOOD PLATE ON TOP OF STEEL BEAMS, RIPPED TO MATCH BEAM WIDTH. FASTEN PLATE TO BEAM W/ HILTI X-DNI 52 P8 PINS AT 12" O.C. STAGGERED OR ½" DIAMETER BOLTS AT 24" O.C.

MECHANICAL FASTENERS:

1. ALL METAL HARDWARE AND FASTENERS TO BE SIMPSON STRONG-TIE OR APPROVED EQUIVALENT.
2. ALL HARDWARE AND FASTENERS IN CONTACT WITH PRESERVATIVE PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 153, G-185.
3. MANY OF THE NEW PRESSURE TREATED WOODS USE CHEMICALS THAT ARE CORROSIVE TO STEEL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE TYPE OF WOOD TREATMENT AND SELECT APPROPRIATE CONNECTORS THAT WILL RESIST THE APPLICABLE CORROSIVE CHEMICALS.

LEGEND:



BRICK VENEER LINTEL SCHEDULE

SPAN	LINTEL SIZE	END BEARING
UP TO 3'-0"	3½"x3½"x¼"	4"
UP TO 6'-3"	5"x3½"x5/16" L.L.V.	8"
UP TO 9'-6"	6"x3½"x5/16" L.L.V.	12"

LINTELS ARE NOT DESIGNED TO BE BOLTED TO HEADERS UNLESS SPECIFIED ON UNIT PLANS.
SPANS OVER 4'-0" SHALL BE SHORED UP UNTIL CURED.

NC Firm #C-2101
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10/22/25

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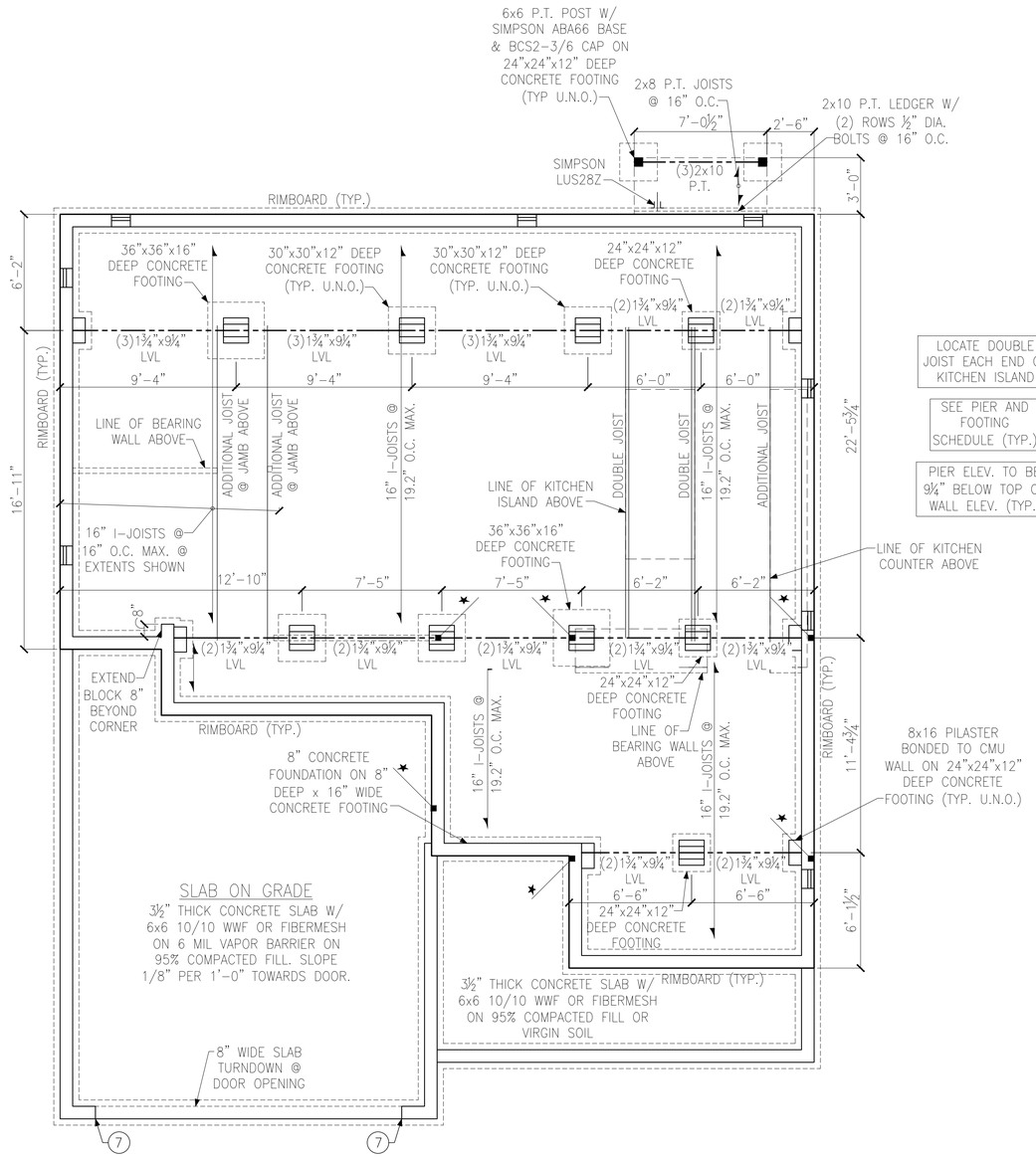
CARUSO HOMES

General Structural Notes

120 M.P.H.
Raleigh, North Carolina

Project #:	108-20000
Designed By:	KRK
Checked By:	
Issue Date:	1/1/20
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

S-0.1



CRAWL SPACE FOUNDATION PLAN

DECK FRAMING NOTES:
- DECK CONSTRUCTION PER NCRC, CHAPTER 47, U.N.O.
- GUARD RAIL REQUIRED, DESIGN BY OTHERS (TYP.)
- PROVIDE LATERAL BRACING PER NCRC, CHAPTER 47

LOCATE DOUBLE JOIST EACH END OF KITCHEN ISLAND

SEE PIER AND FOOTING SCHEDULE (TYP.)

PIER ELEV. TO BE 9¼" BELOW TOP OF WALL ELEV. (TYP.)

LEGEND

- ★ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

FLOOR FRAMING TO BE 16" DEEP TJI 210 I-JOISTS @ 19.2" O.C. MAXIMUM OR EQUAL

KEYNOTES:

(7) REINFORCE 8" CMU WALL AND FOOTING UNDER PORTAL FRAME PER DETAIL B/SD-4.

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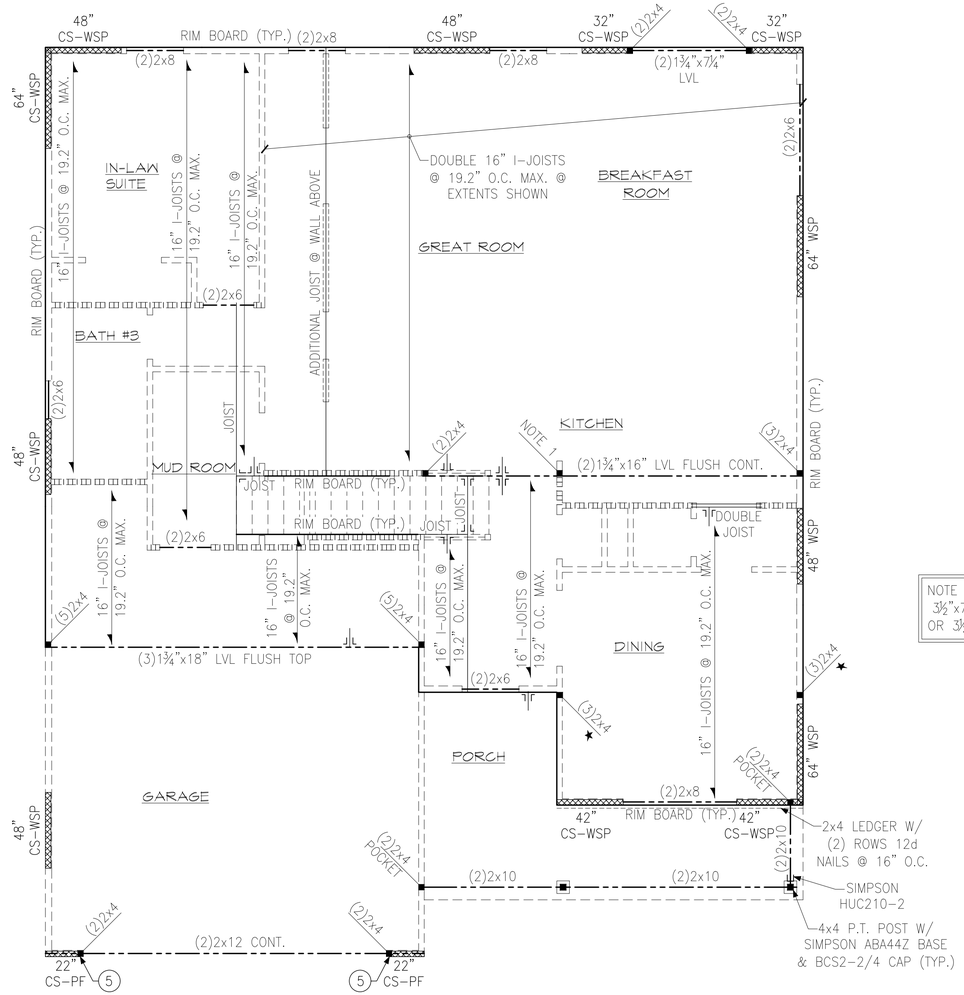
CARUSO HOMES

Crawl Space Foundation Plan
Magnolia Acres Lot 40
Fontana Version 1.5
120 M.P.H.
Raleigh, North Carolina

Project #:	108-24004
Designed By:	AAM
Checked By:	KRK
Issue Date:	10/22/25
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

S-1



NOTE 1:
3½"x7½" 1.3E TIMBERSTRAND LSL COLUMN
OR 3½"x7½" 2.0E LVL COLUMN

LEGEND

- ★ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

PLAN DESIGNED WITH 9' WALL PLATES

FLOOR FRAMING TO BE 16" DEEP TJI 210 I-JOISTS @ 19.2" O.C. MAXIMUM OR EQUAL

KEYNOTES:

(5) INSTALL TWO PANEL CS-PF PORTAL FRAME PER DETAIL A OR B/SD-4.

SECOND FLOOR FRAMING PLAN

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SEAL
046986
ENGINEER
ANDREW A. MOORE
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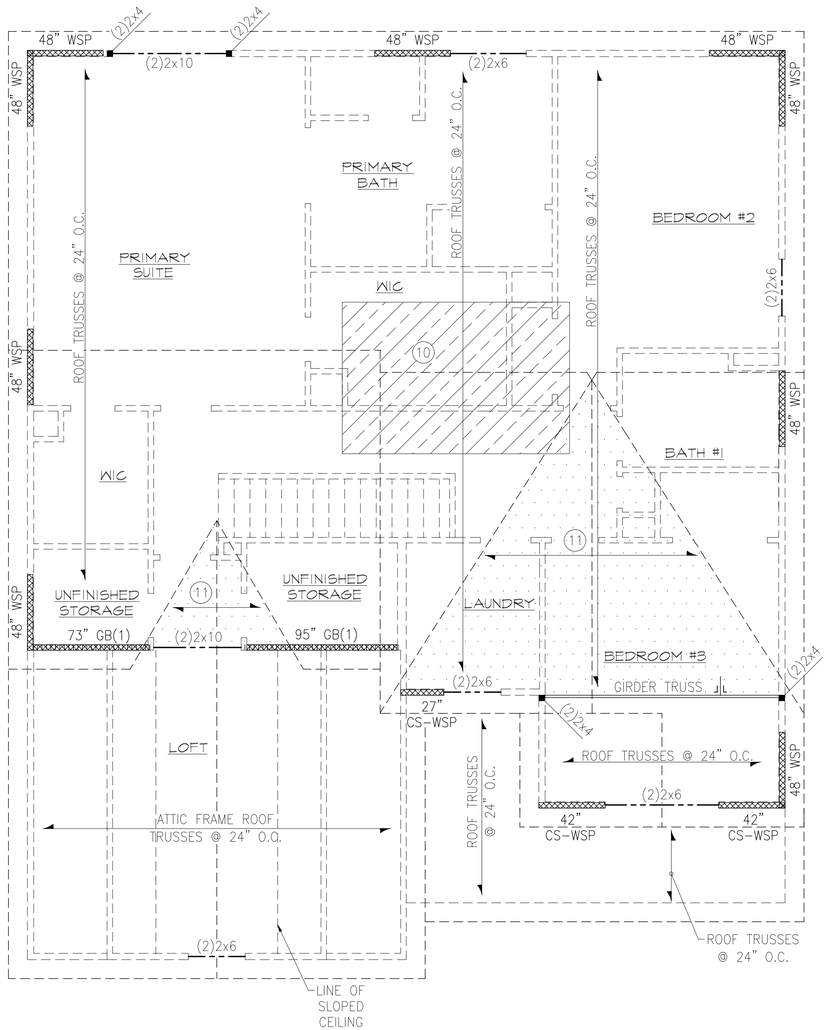
CARUSO HOMES

Second Floor Framing Plan
Magnolia Acres Lot 40
Fontana Version 1.5
120 M.P.H.
Raleigh, North Carolina

Project #:	108-24004
Designed By:	AAM
Checked By:	KRK
Issue Date:	10/22/25
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

S-2



ROOF FRAMING PLAN

LEGEND

- ★ ⟹ PROVIDE SOLID BLOCKING WITHIN FLOOR SYSTEM TO MATCH POST SIZE ABOVE.
- ⟹ BEARING WALL ABOVE
- ⟹ INTERIOR BEARING WALL
- 48" WSP ⟹ BRACED WALL PANEL (SEE KSE STRUCTURAL DETAILS SET FOR BRACED WALL PANEL SHEATHING FASTENING & BLOCKING DETAILS)

REFER TO KSE STRUCTURAL DETAILS SET FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS

PLAN DESIGNED WITH 9' WALL PLATES

KEYNOTES:

(10) 8'x12' HVAC PLATFORM TRUSSES DESIGNED TO SUPPORT HVAC UNITS.

(11) VALLEY SET TRUSSES @ 24" O.C. OR 2x6 OVERFRAMING @ 24" O.C. W/ 2x8 RIDGE & VALLEY PLATES (TYP.)

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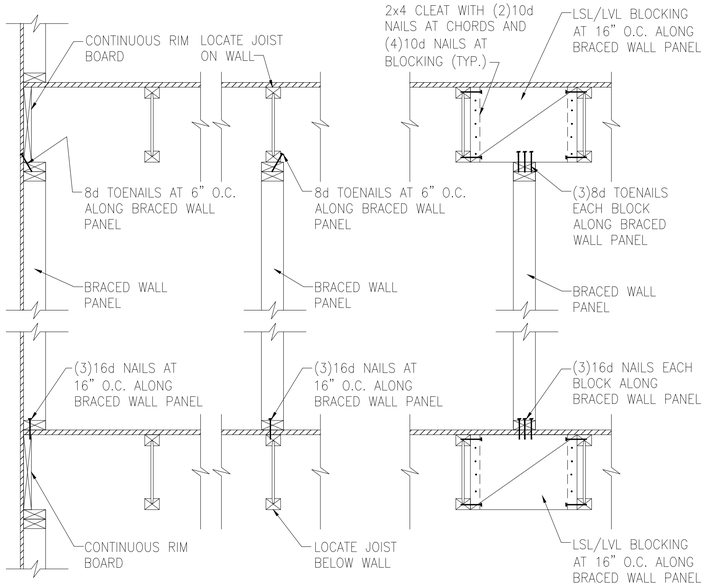
CARUSO HOMES

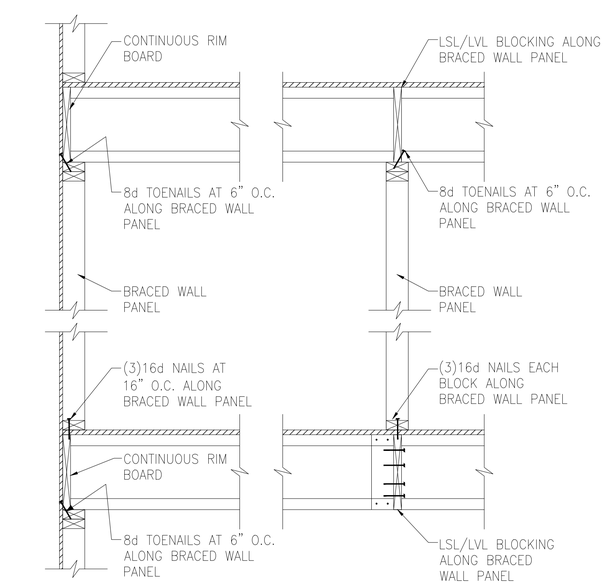
Roof Framing Plan
Magnolia Acres Lot 40
Fontana Version 1.5
120 M.P.H.
Raleigh, North Carolina

Project #: 108-24004
Designed By: AAM
Checked By: KRK
Issue Date: 10/22/25
Re-Issue:
Scale: 1/8"=1'-0" @ 11x17
1/4"=1'-0" @ 22x34

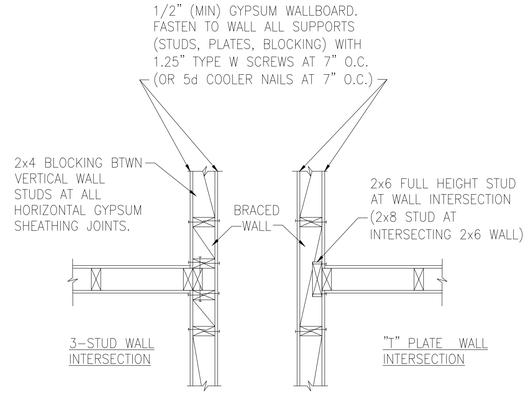
S-3



A TYPICAL BRACED WALL PANEL TO FLOOR/CEILING CONNECTION
BRACED WALL PANELS PARALLEL TO I-JOISTS

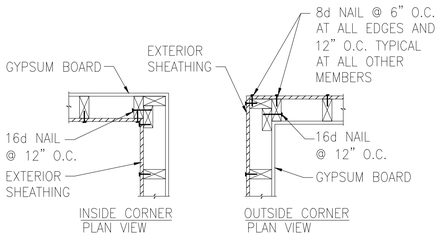


B TYPICAL BRACED WALL PANEL TO FLOOR/CEILING CONNECTION
BRACED WALL PANELS PERPENDICULAR TO I-JOISTS

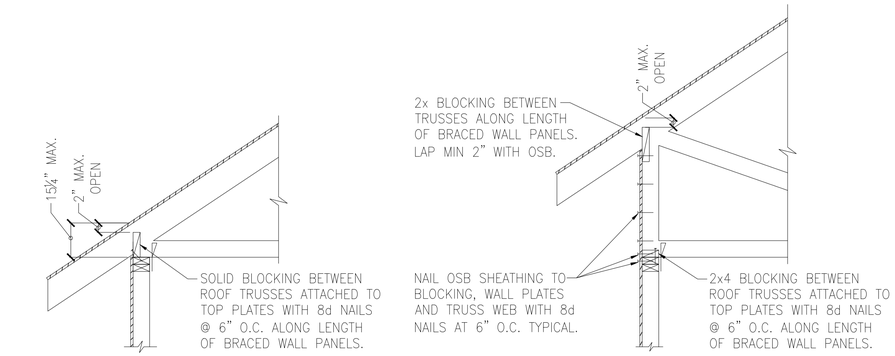


BRACED WALL INTERSECTIONS MAY BE FRAMED USING EITHER THE 3-STUD OR THE T-PLATE METHOD.

C METHOD GB(1) AND GB(2) INTERSECTION DETAILS



D TYPICAL EXTERIOR CORNER WALL FRAMING



E ROOF TRUSS BEARING/BLOCKING AT BRACED WALL PANELS
ONLY REQUIRED AT BRACED WALL PANELS

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CARUSO HOMES

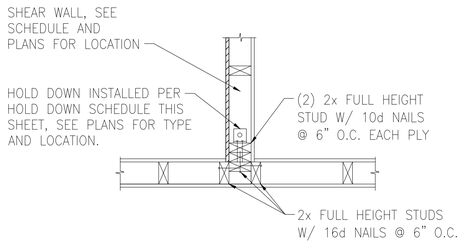
Braced Wall Details

120 M.P.H.
Raleigh, North Carolina

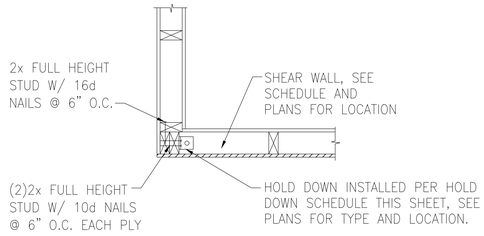
Project #:	108-20000
Designed By:	KRK
Checked By:	
Issue Date:	1/1/20
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046496 ENGINEER ANDREW A. MOORE
10/22/25

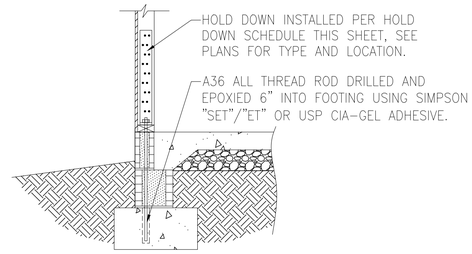
SD-1



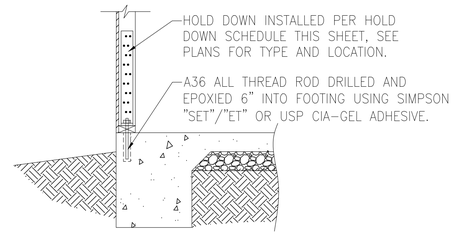
A TYPICAL HOLD DOWN DETAIL



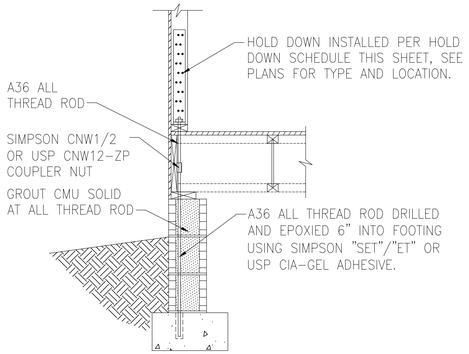
B TYPICAL HOLD DOWN DETAIL



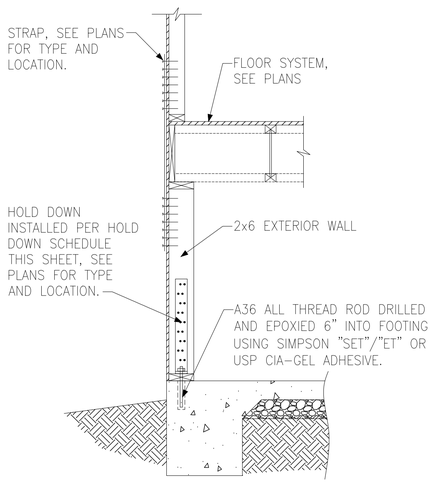
C HOLD DOWN AT STEMWALL SLAB FOUNDATION



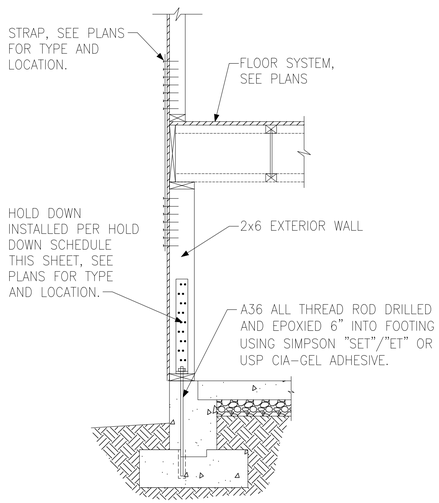
D HOLD DOWN AT MONOLITHIC SLAB FOUNDATION



E HOLD DOWN AT CRAWL SPACE FOUNDATION



F HOLD DOWN AT BASEMENT FOUNDATION
MONOLITHIC TURN-DOWN



G HOLD DOWN AT BASEMENT FOUNDATION
STEM WALL

HOLD DOWN SCHEDULE			
HOLD DOWN		ALL THREAD ROD	FASTENERS
SIMPSON	USP		
LTT20B	LTS20B	½" DIA.	(10)10d NAILS
HTT4	HTT16	⅝" DIA.	(18)16dx2½" LONG NAILS
HTT5	HTT45	⅝" DIA.	(26)16dx2½" LONG NAILS

NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046496 ENGINEER ANDREW A. MOORE
10/22/25

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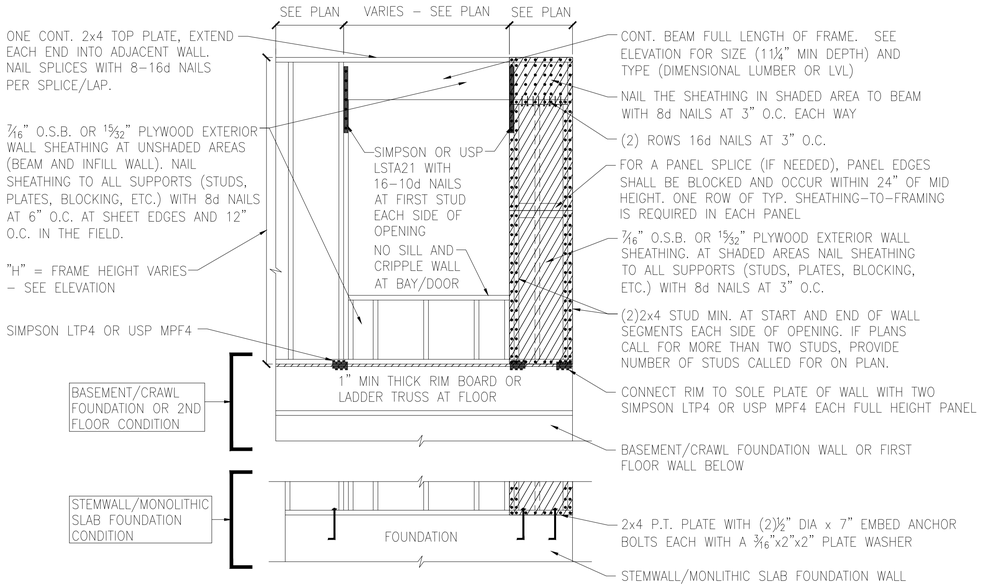
(215) 804-4449
www.kse-eng.com

CARUSO HOMES

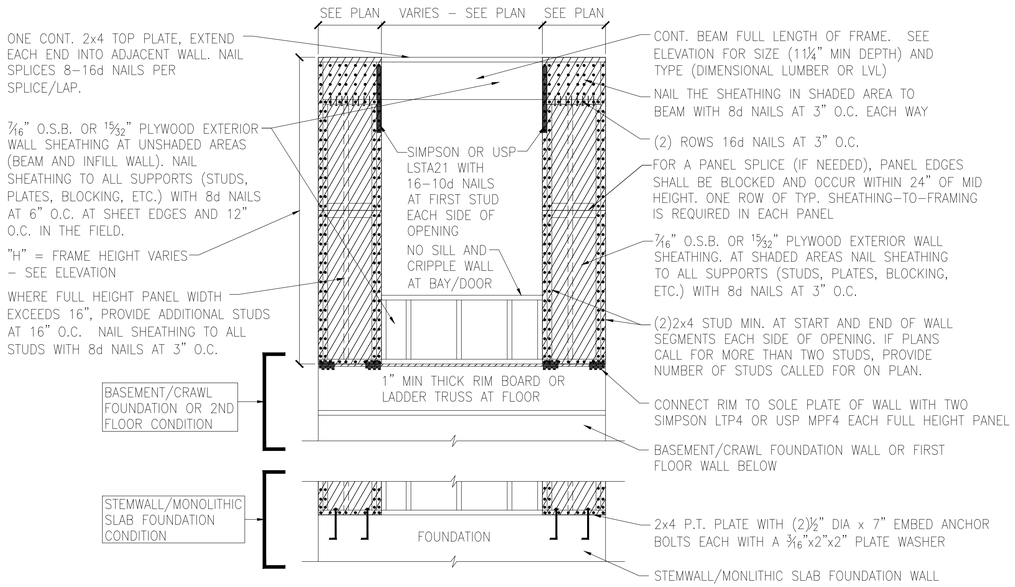
Hold Down Details
120 M.P.H.
Raleigh, North Carolina

Project #: 108-20000
Designed By: KRK
Checked By:
Issue Date: 1/1/20
Re-Issue:
Scale: 1/8"=1'-0" @ 11x17
1/4"=1'-0" @ 22x34

SD-2



A METHOD CS–PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
ONE BRACED WALL SEGMENT



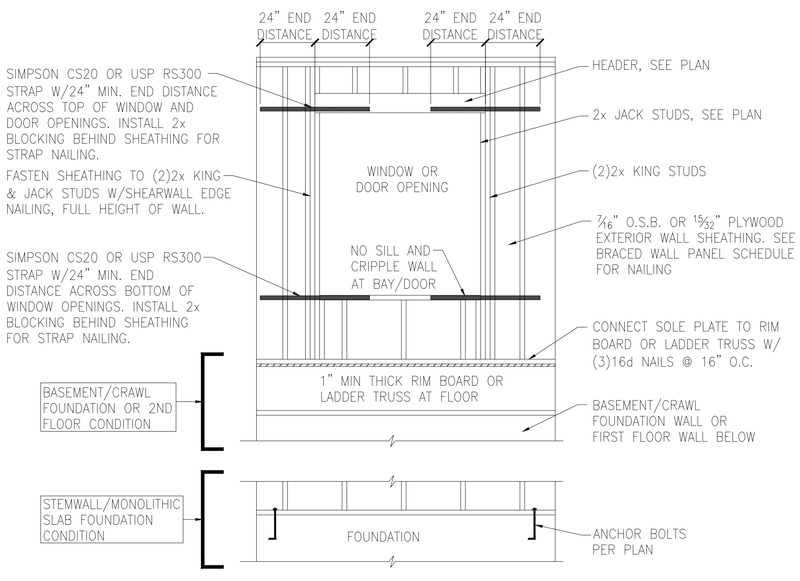
B METHOD CS–PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
TWO BRACED WALL SEGMENTS

BRACED WALL PANEL AND ENGINEERED SHEAR WALL SCHEDULE

PANEL TYPES	PANEL TYPE	MATERIAL	FASTENERS
WSP	INTERMITTENT WOOD STRUCTURAL PANEL	7/16" OSB	6D OR 8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. (6" O.C. AT INTERIOR WALL LOCATIONS) AT INTERMEDIATE SUPPORTS. ENGINEERED ALTERNATIVE: 16 GAGE BY 1.75" LONG STAPLES AT 3" O.C. AT SHEET EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS
GB(1)	INTERMITTENT GYPSUM BOARD (SHEATHING ONE FACE OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 7" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
GB(1)–4	INTERMITTENT GYPSUM BOARD (SHEATHING ONE FACE OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 4" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
GB(2)	INTERMITTENT GYPSUM BOARD (SHEATHING BOTH FACES OF WALL)	1/2" GYPSUM	1.5" LONG GALV. ROOFING NAILS, 6d COMMON NAILS, OR 1.25" LONG TYPE W DRYWALL SCREWS AT 7" O.C. AT SHEET EDGES AND INTERMEDIATE SUPPORTS.
CS–WSP	CONTINUOUS SHEATHED WOOD STRUCTURAL PANEL	7/16" OSB	6D OR 8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. (6" O.C. AT INTERIOR WALL LOCATIONS) AT INTERMEDIATE SUPPORTS. ENGINEERED ALTERNATIVE: 16 GAGE BY 1.75" LONG STAPLES AT 3" O.C. AT SHEET EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS
CS–PF	CONTINUOUS SHEATHED PORTAL FRAME	7/16" OSB	NAILING PER DETAIL
PFH	PORTAL FRAME WITH HOLD DOWNS	7/16" OSB	NAILING PER DETAIL
CS–ESW(1)	ENGINEERED SHEAR WALL, TYPE 1	7/16" OSB	8D COMMON NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS
CS–ESW(2)	ENGINEERED SHEAR WALL, TYPE 2	7/16" OSB	8D COMMON NAILS AT 4" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS
CS–ESW(3)	ENGINEERED SHEAR WALL, TYPE 3	7/16" OSB	8D COMMON NAILS AT 3" O.C. AT SHEET EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. CONTINUOUS OSB AROUND DOOR/WINDOW OPENINGS

BRACED WALL PANEL NOTES:

1. ALL BRACED WALL PANELS, EXCEPT GB(1) & GB(2), SHALL HAVE 2x BLOCKING BETWEEN WALL STUDS AT ALL HORIZONTAL SHEET EDGES.
2. PROVIDE NAILING/BLOCKING ABOVE AND BELOW ALL BRACED WALL PANELS PER KSE BRACED WALL DETAILS.
3. SHEATH ALL EXTERIOR WALLS OF THE HOUSE WITH 7/16" O.S.B., OR 15/32" PLYWOOD, FASTENED PER IRC. AT EXTERIOR CORNERS, SHEATHING SHALL BE FASTENED PER KSE BRACED WALL DETAILS. AT INTERIOR WALL INTERSECTIONS, FASTEN STUDS & WALL BRACING PER KSE BRACED WALL DETAILS.
4. BRACED WALL PANELS AND ENGINEERED SHEAR WALLS ARE PROVIDED PER IRC. PANEL LENGTHS SHOWN ON PLANS ARE THE MINIMUM LENGTH REQUIRED.



C WINDOW OR DOOR REINFORCEMENT IN ENGINEERED SHEAR WALL
ONLY REQUIRED WHERE SPECIFED ON PLANS

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ANDREW A. MOORE
10/22/25

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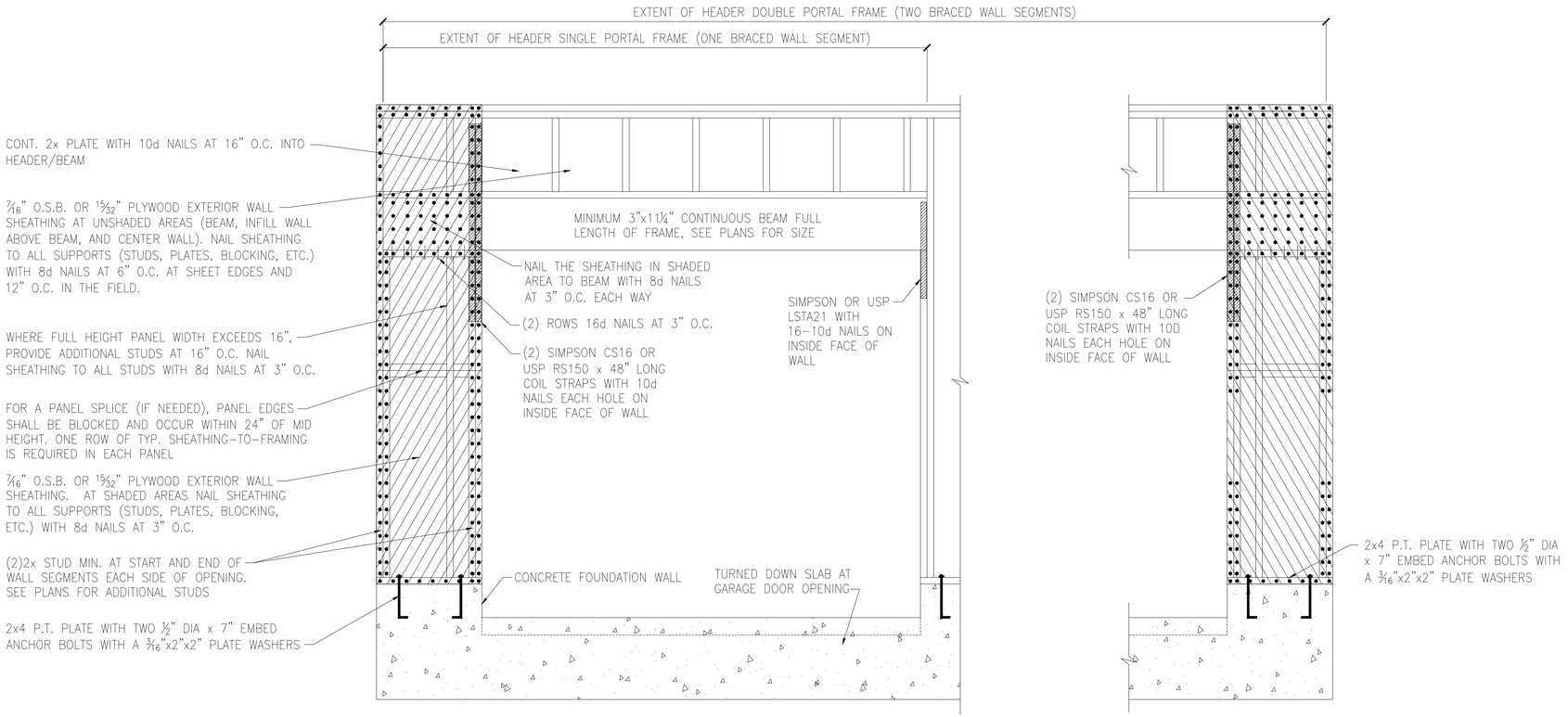
Braced Wall Notes & Details

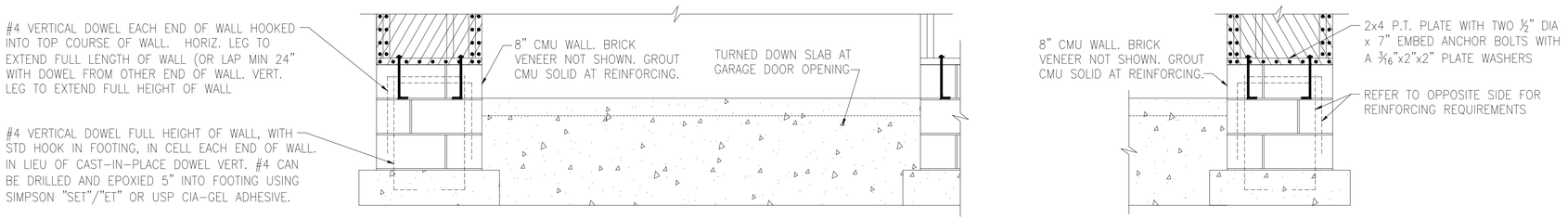
120 M.P.H.
Raleigh, North Carolina

Project #:	108–20000
Designed By:	KRK
Checked By:	
Issue Date:	1/1/20
Re–Issue:	
Scale:	1/8"=1'–0" @ 11x17 1/4"=1'–0" @ 22x34

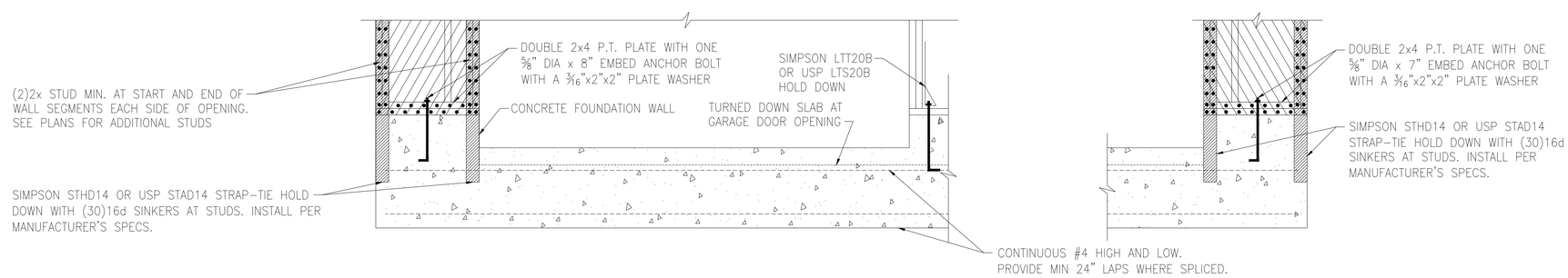
SD–3



A METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
MONOLITHIC SLAB OR BASEMENT FOUNDATION



B METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION
STEMWALL SLAB OR CRAWL SPACE FOUNDATION



C METHOD PFH: PORTAL FRAME WITH HOLD-DOWNS
MONOLITHIC SLAB OR BASEMENT FOUNDATION

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CARUSO HOMES

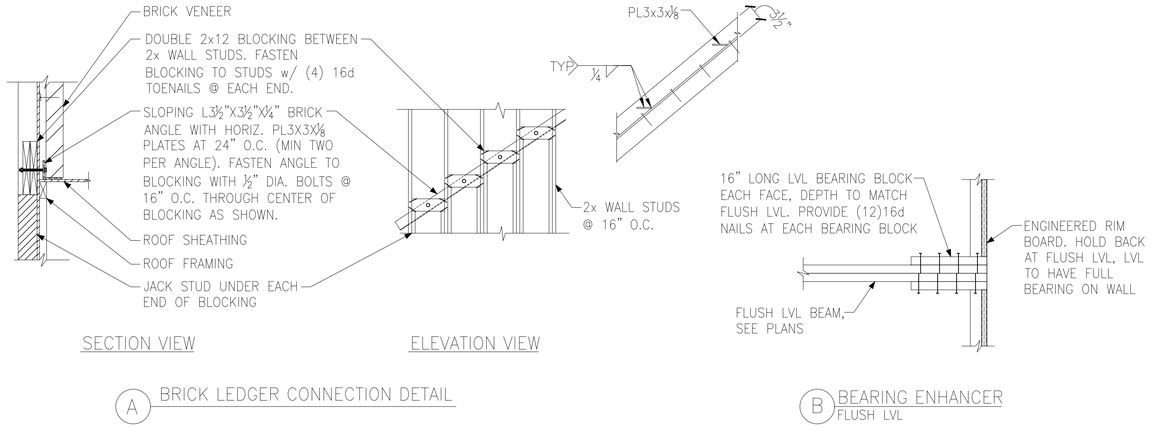
Portal Frame Details

120 M.P.H.
Raleigh, North Carolina

Project #:	108-20000
Designed By:	KRK
Checked By:	
Issue Date:	1/1/20
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

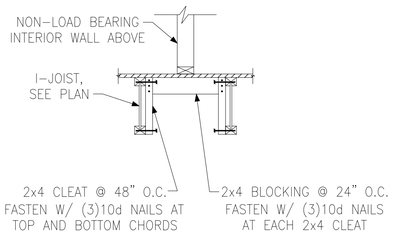
NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046496 ENGINEER ANDREW A. MOORE
10/22/25

SD-4

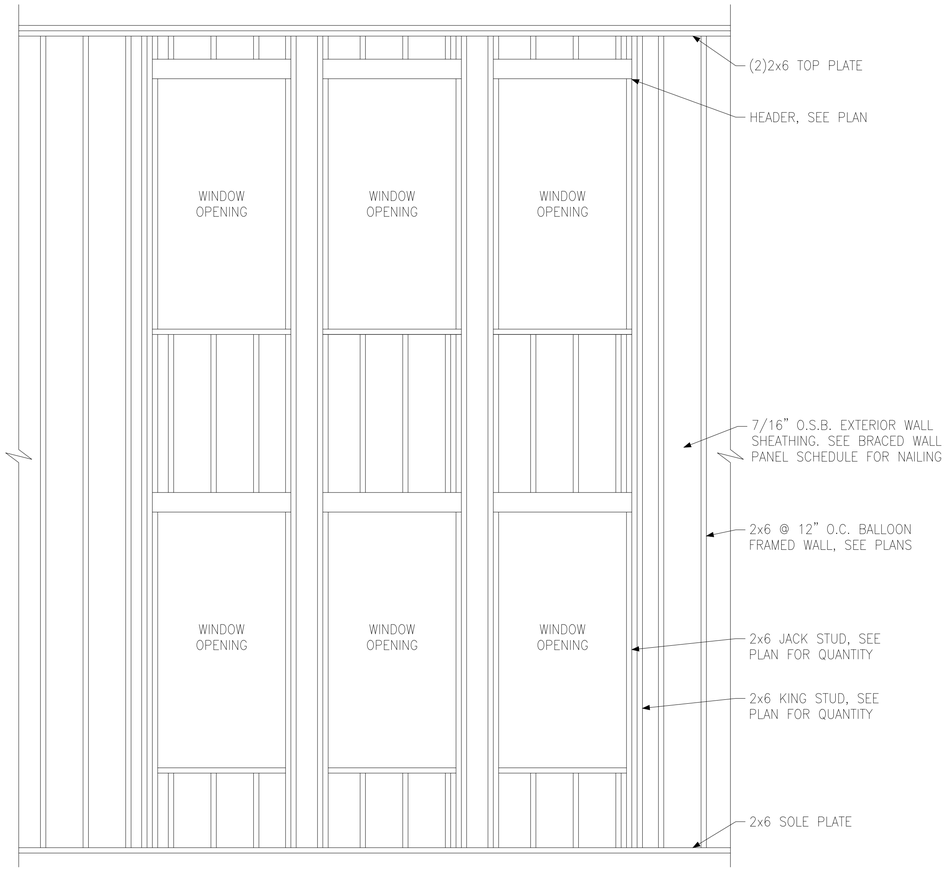


A BRICK LEDGER CONNECTION DETAIL

B BEARING ENHANCER
FLUSH LVL



C I-JOIST LADDER BLOCKING
AS REQUIRED @ PARALLEL WALLS



D BALLOON FRAMED WALL DETAIL
N.T.S.

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Miscellaneous Framing Details

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Raleigh, North Carolina

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Checked By:	
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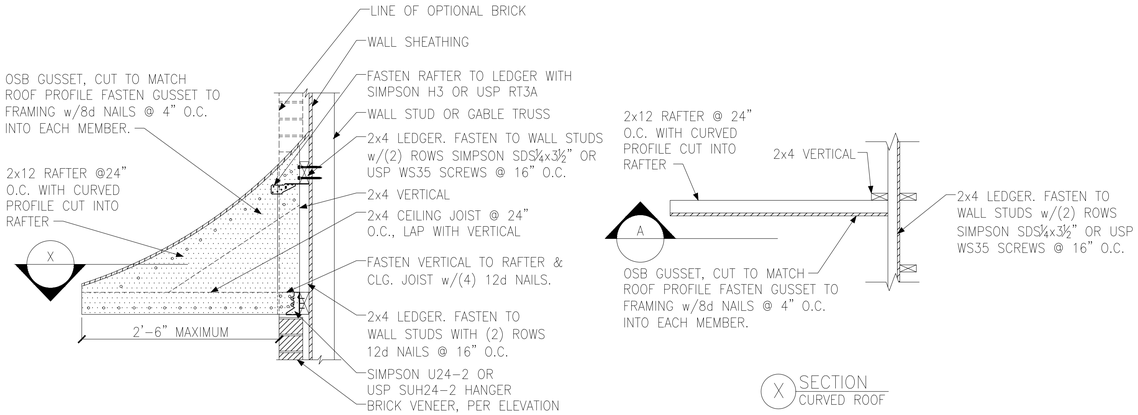
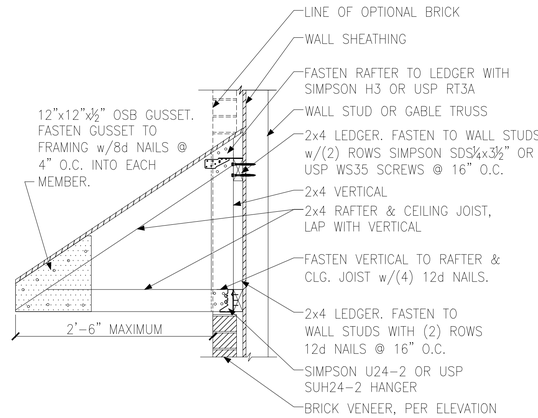
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

SD-5

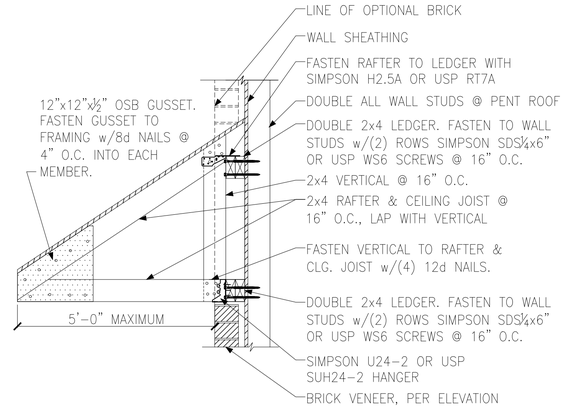
NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL
SEAL
046986
ENGINEER
ANDREW A. MOORE
10/22/25



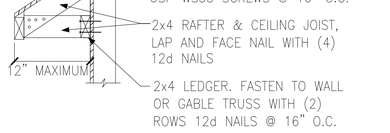
A PENT ROOF DETAIL
CURVED ROOF



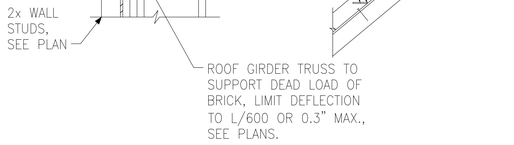
B PENT ROOF DETAIL
STRAIGHT ROOF



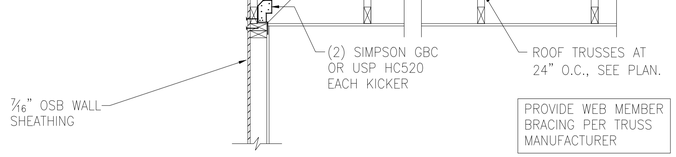
B PENT ROOF DETAIL
STRAIGHT ROOF 5'-0" MAXIMUM SPAN



C EYEBROW ROOF DETAIL
STRAIGHT ROOF



D TRUSS DETAIL



E GABLE END WALL DETAIL

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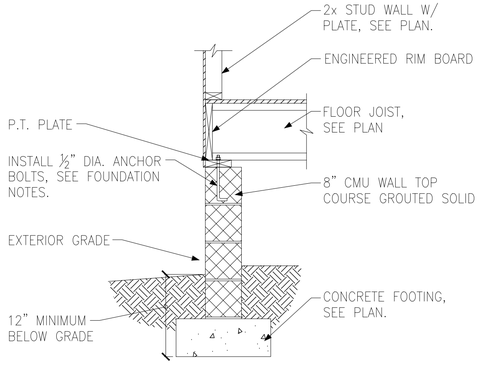
Miscellaneous Framing Details

120 M.P.H.
Raleigh, North Carolina

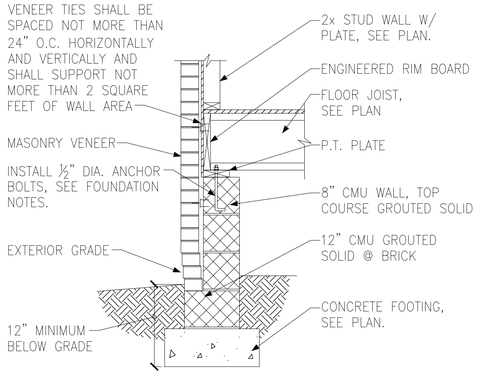
Project #:	108-20000
Designed By:	KRK
Checked By:	
Issue Date:	1/1/20
Re-Issue:	
Scale:	1/8"=1'-0" @ 11x17 1/4"=1'-0" @ 22x34

NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046096 ENGINEER ANDREW A. MOORE
10/22/25

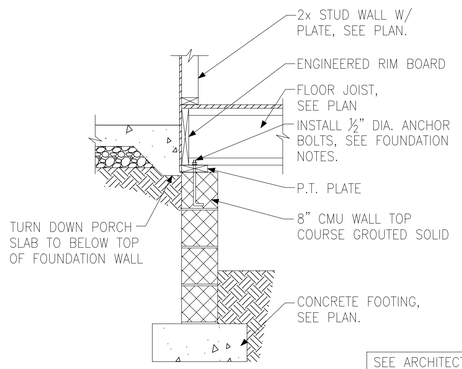
SD-6



A FOUNDATION SECTION
EXTERIOR WALL

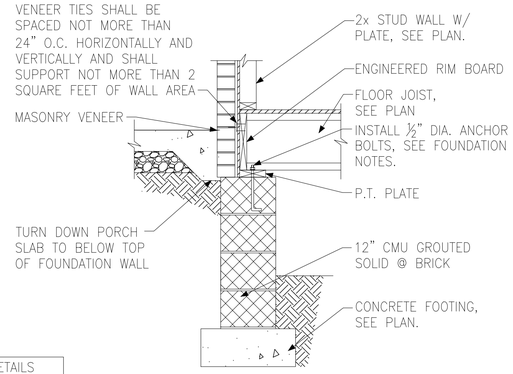


B FOUNDATION SECTION
EXTERIOR WALL @ MASONRY VENEER



C FOUNDATION SECTION
EXTERIOR WALL AT PORCH

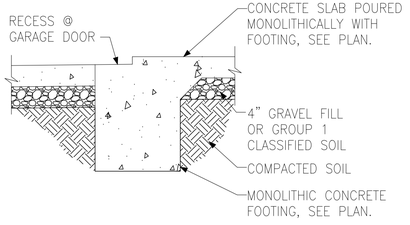
SEE ARCHITECTURAL DETAILS FOR WATERPROOFING AT PORCH SLAB/WOOD FRAMING.



D FOUNDATION SECTION
EXTERIOR WALL AT PORCH W/ MASONRY VENEER

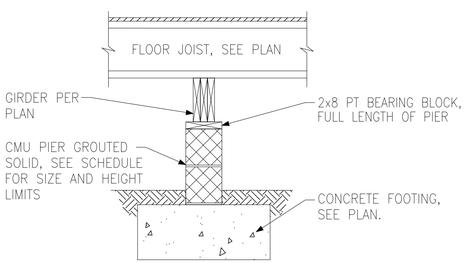
E FOUNDATION SECTION
EXTERIOR GARAGE WALL

F FOUNDATION SECTION
EXTERIOR GARAGE WALL @ MASONRY VENEER

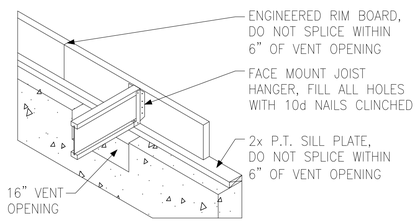


G FOUNDATION SECTION
GARAGE DOOR

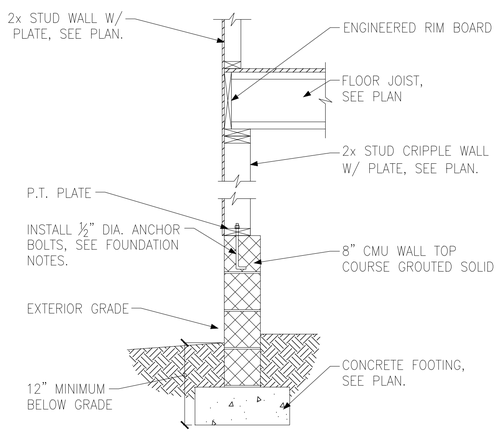
H FOUNDATION SECTION
INTERIOR GARAGE WALL



J FOUNDATION SECTION
INTERIOR PIER



K CRAWL SPACE VENT DETAIL



L FOUNDATION SECTION
EXTERIOR WALL W/ CRIPPLE WALL

PIER AND FOOTING SCHEDULE		
PIER HEIGHT	PIER SIZE	MIN. FOOTING SIZE
UP TO 2'-8"	8" x 16"	24" x 24" x 12" U.N.O.
UP TO 5'-4"	16" x 16"	24" x 24" x 12" U.N.O.
UP TO 8'-0"	16" x 16"	30" x 30" x 12" U.N.O.

NOTE:
PIERS SHALL BE CAPPED WITH 8" OF SOLID MASONRY OR CONCRETE OR TOP COURSE FILLED SOLID WITH CONCRETE/MORTAR.
PIERS OVER 5'-4" SHALL BE BE FILLED SOLIDLY WITH CONCRETE OR TYPE M OR S MORTAR.
FOR PIERS OVER 8'-0" CONTACT KSE ENGINEERING FOR PIER AND FOOTING DESIGN.

NC Firm #C-2101
NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER ANDREW A. MOORE
10/22/25

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CARUSO HOMES

Crawl Space Foundation Details

120 M.P.H.
Raleigh, North Carolina

Project #: 108-20000
Designed By: KRK
Checked By:
Issue Date: 1/1/20
Re-Issue:
Scale: 1/8"=1'-0" @ 11x17
1/4"=1'-0" @ 22x34

SD-9