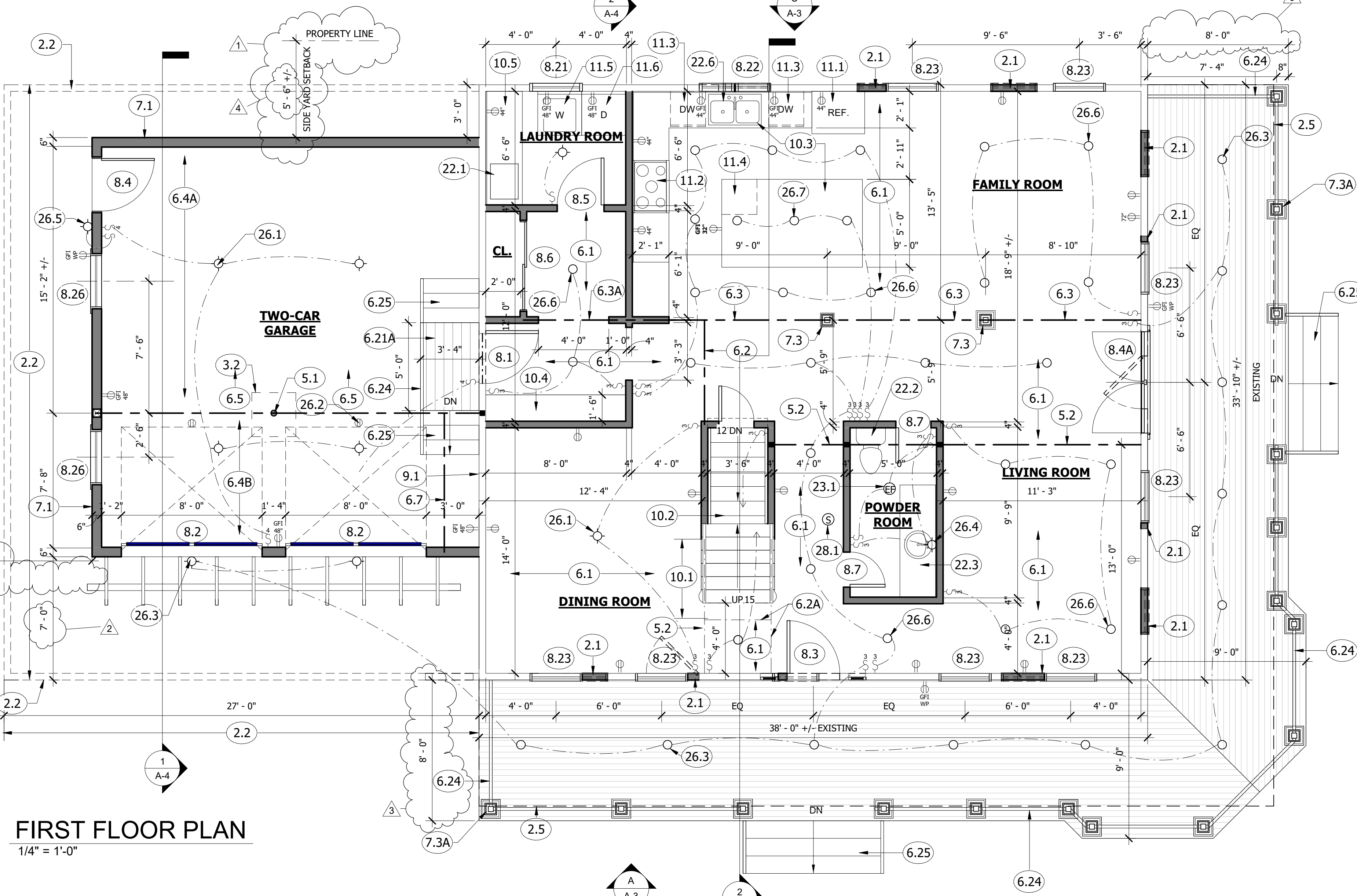
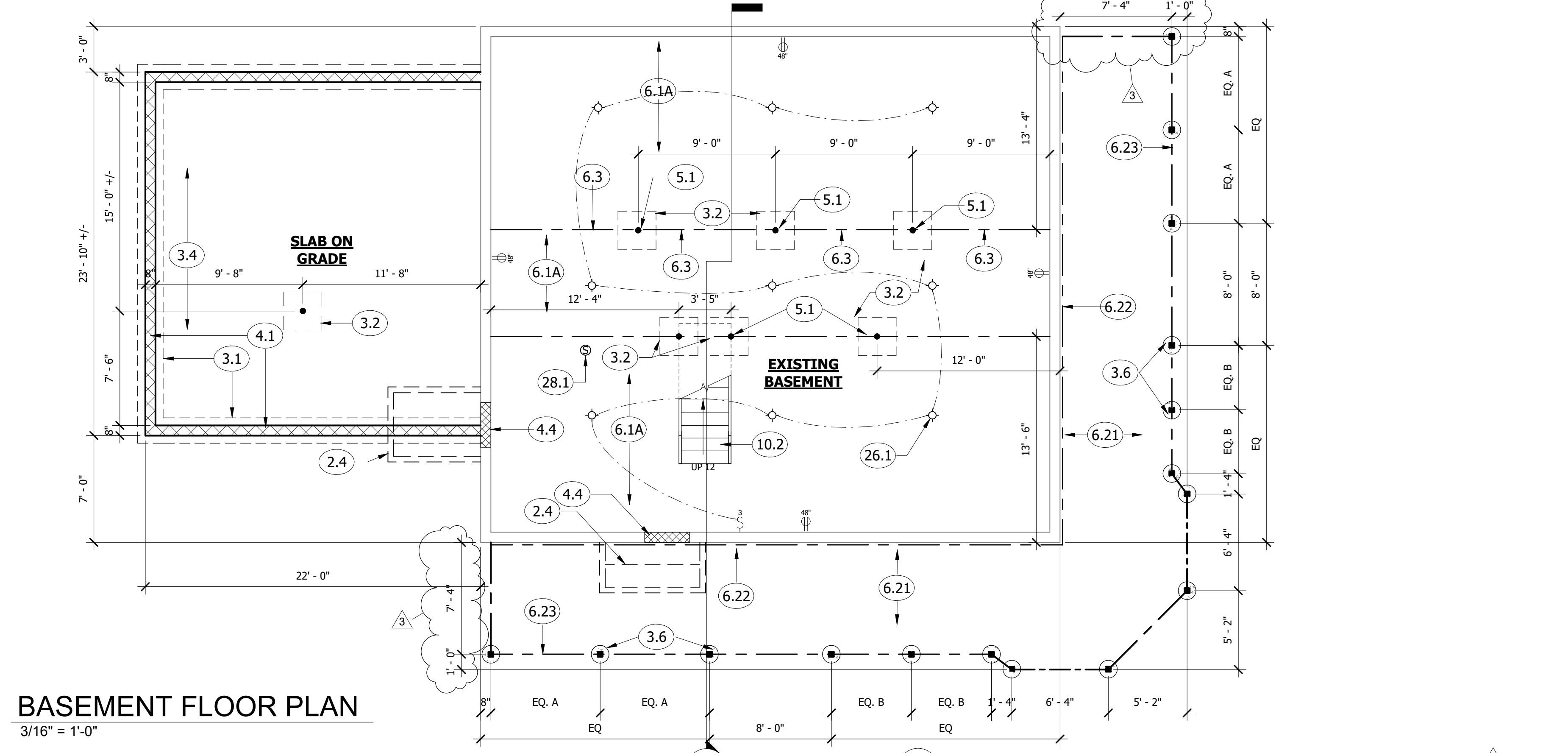
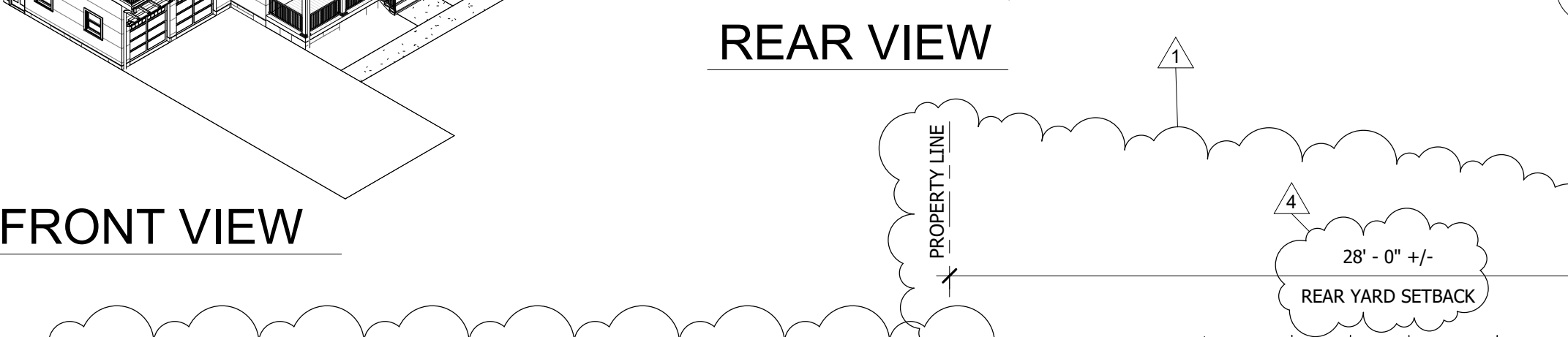
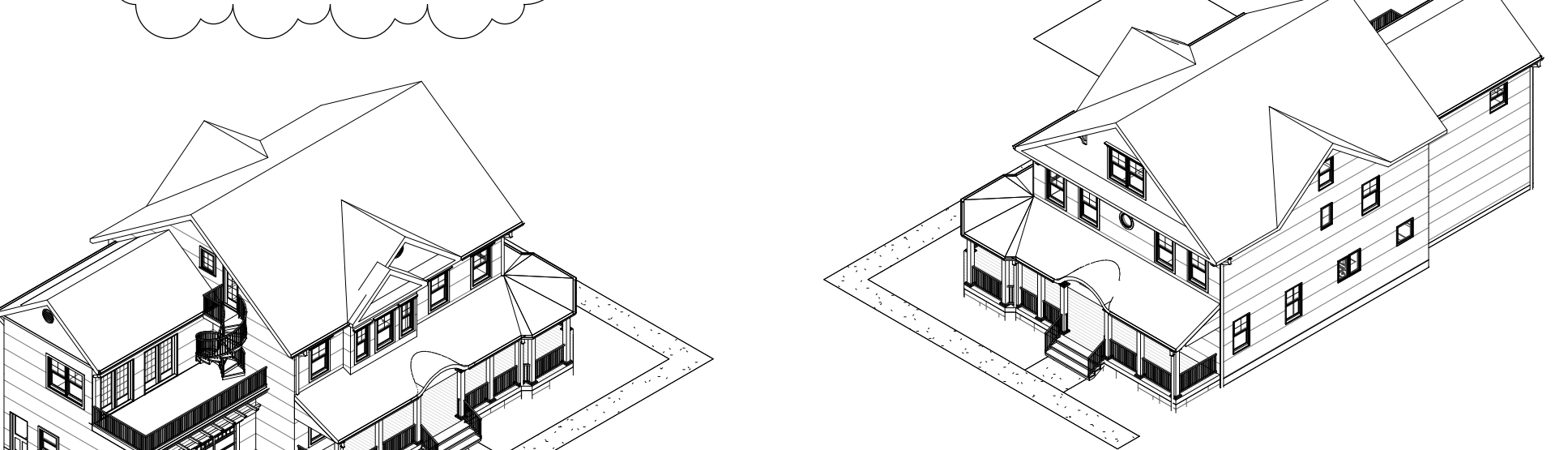


SITE SURVEY
1" = 20'-0"



ZONING ORDINANCE REQUIREMENTS
501 Park Place Avenue, Bradley Beach, NJ
R-1 Zone

Item Regulated	Required	Existing	Proposed
Lot Size	5,000 sf	5,000 sf	5,000 sf
Lot Width	50 ft	50 ft	50 ft
Lot Depth	100 ft	100 ft	100 ft
Principal Building Setbacks (min. feet)			
Front (N-S) - House	15 ft	13 ft (Fletcher-Lake Avenue)	13 ft (Fletcher-Lake Avenue)
Front (N-S) - Porch	15 ft	8 ft (Fletcher-Lake Avenue)	8 ft (Fletcher-Lake Avenue)
Front (E-W) - House	25 ft	15 ft (Park Place Avenue)	15 ft (Park Place Avenue)
Front (E-W) - Porch	25 ft	6 ft (Park Place Avenue)	6 ft (Park Place Avenue)
Rear	25 ft	25 ft	28 ft
Side	5 ft	5 ft	5.5 ft
Building Coverage	35%	44% (2,203 sf)	36% (1,809 sf)
Impervious Coverage	60%	58%	50.1% (2,505 sf)
Height	35 ft	34 ft	34 ft

* Variance Required

SEE DRAWING A-4 FOR CONSTRUCTION NOTES.

NO.	REVISION	DATE
1	GARAGE SETBACKS	09/30/2019
2	ZONING REQ.	10/23/2019
3	PORCH REVISION	01/07/2020
4	ZONING COMMENTS	01/04/2021
5	ZONING COMMENTS	03/23/2021
6	ZONING COMMENTS	04/19/2021

FORTUNATO ARCHITECTURE
NEW JERSEY #A1 12392
NEW YORK #021463-1
PENNSYLVANIA #RA-014182B

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609-683-0180 • www.fortunatoarchitecture.com

RENOVATIONS TO:
FRENCH RESIDENCE
501 Park Place Avenue
Bradley Beach, NJ

DRAWN EAM/TRM
CHECKED DF
DATE 08/01/2019
SCALE As indicated
JOB NO. 2019-001
SHEET

A-1
1 OF 5 SHEETS
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NO.	REVISION	DATE
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2	ZONING REQ.	10/23/2019
3	PORCH REVISION	01/07/2020

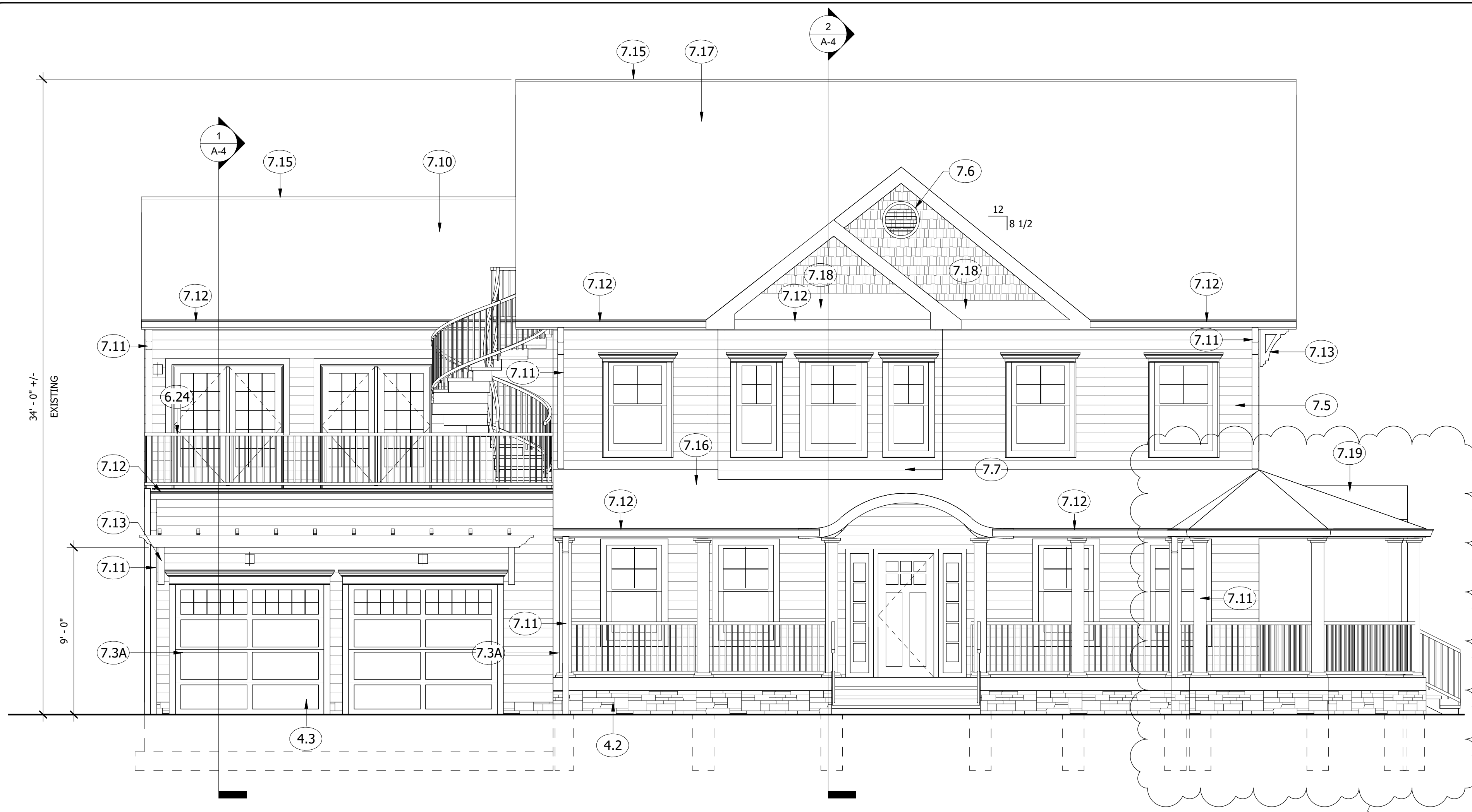
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 NEW JERSEY #A1 12392
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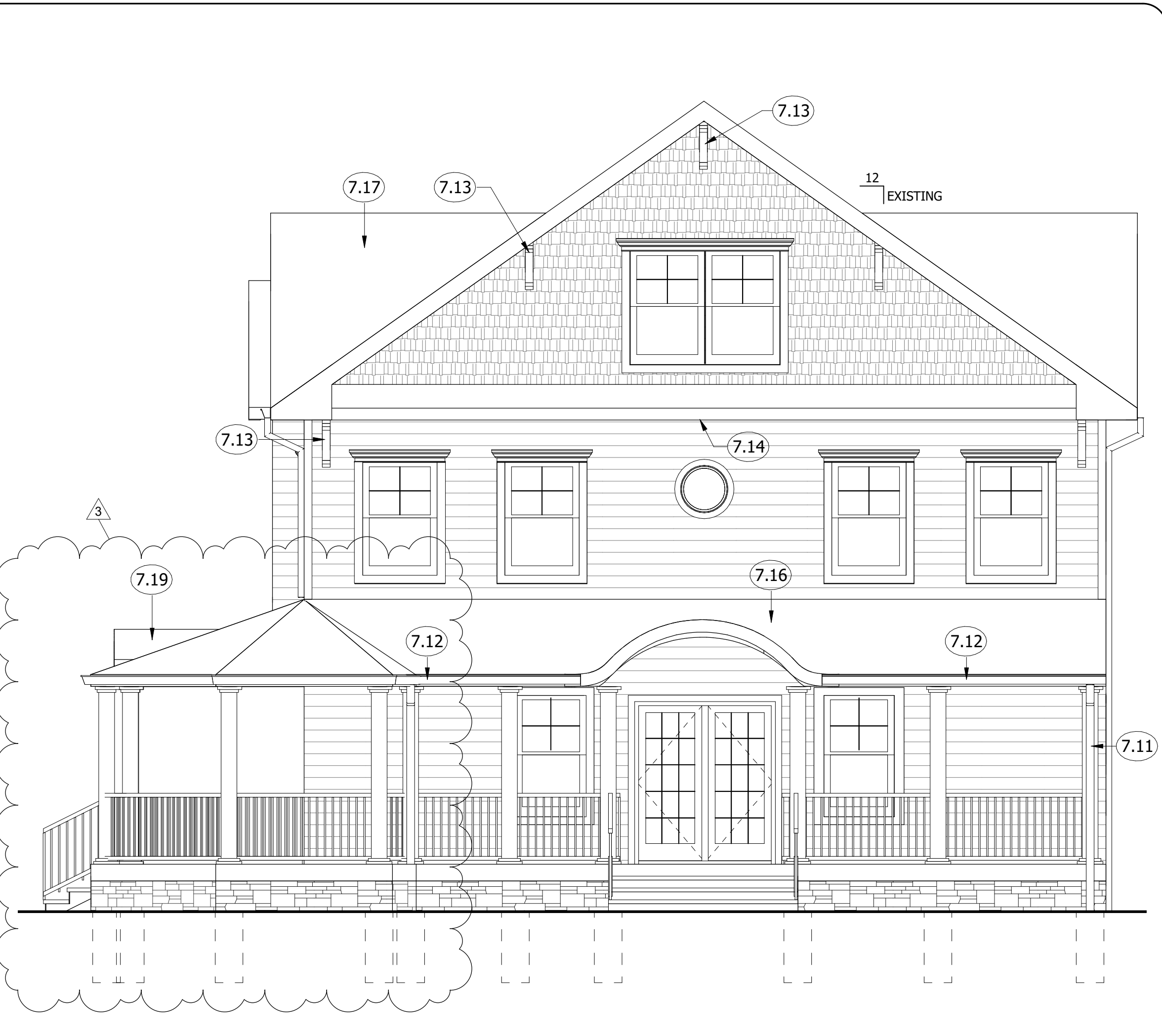
RENOVATIONS TO:
FRENCH RESIDENCE
 501 Park Place Avenue
 Bradley Beach, NJ

DRAWN
 EAM/TRM
 CHECKED
 DF
 DATE
 08/01/2019
 SCALE
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 JOB NO.
 2019-001
 SHEET

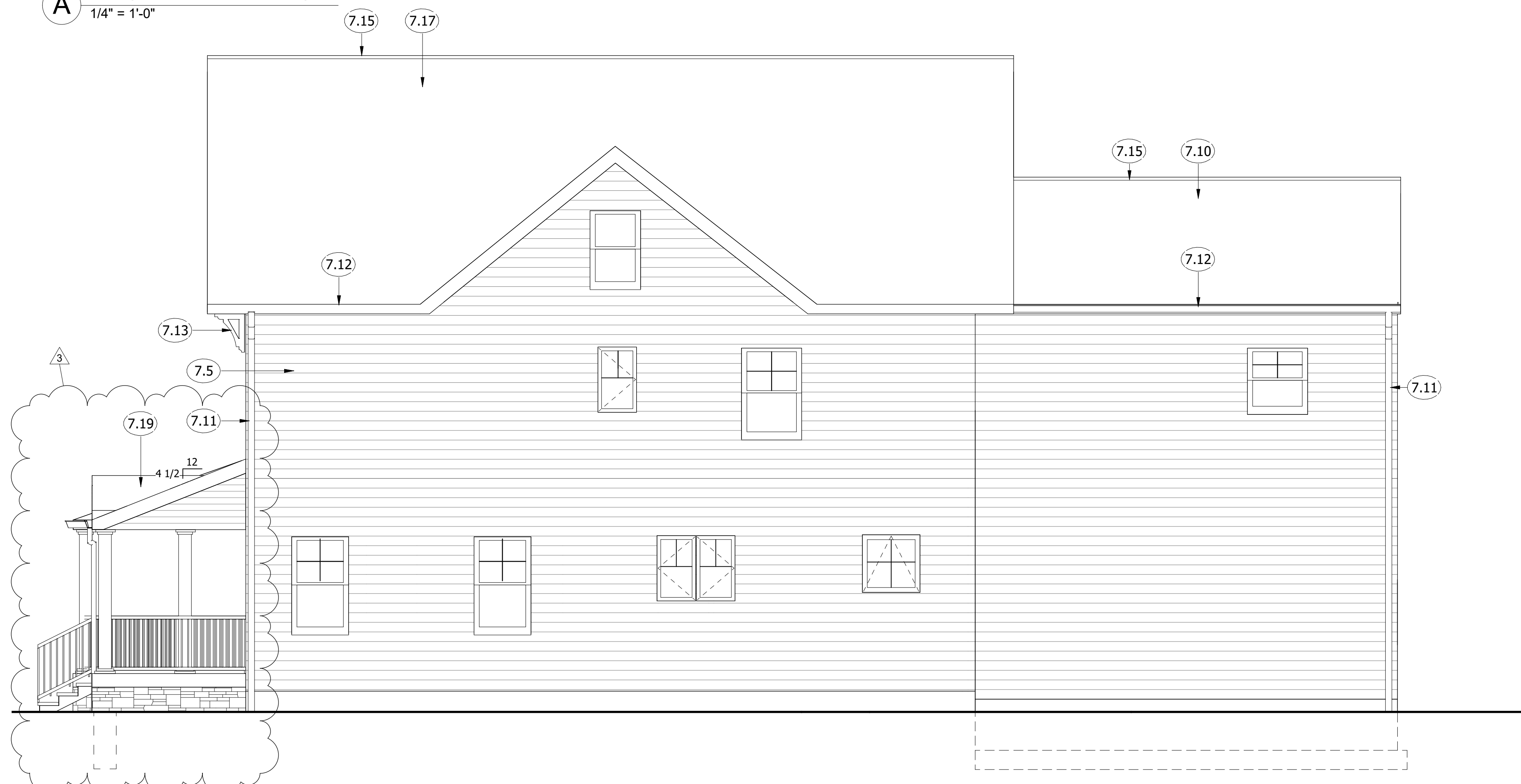
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 3 OF 5 SHEETS
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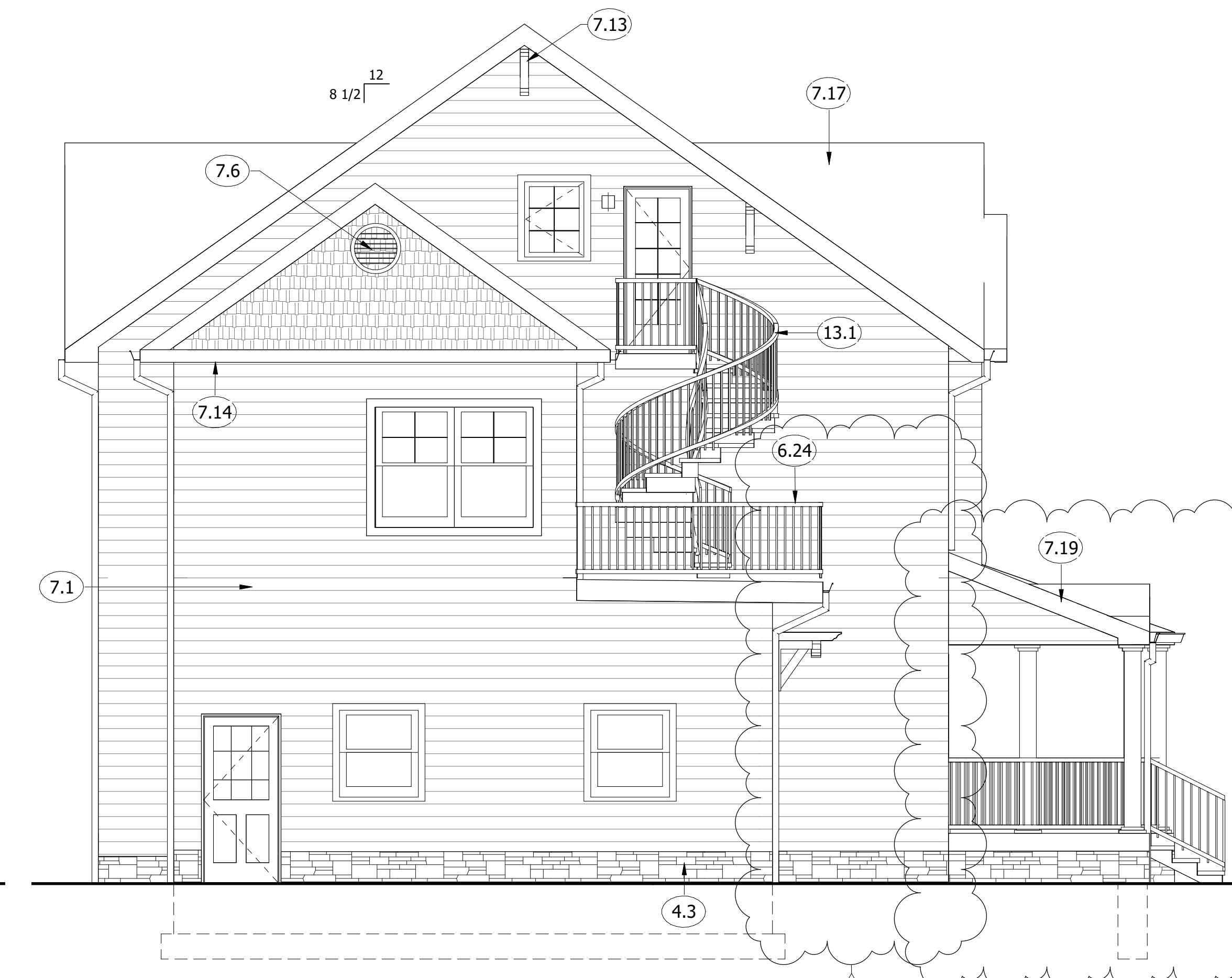
A FRONT ELEVATION
 1/4" = 1'-0"



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



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



D SIDE ELEVATION
 1/4" = 1'-0"

SEE DRAWING A-4 FOR CONSTRUCTION NOTES.

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

- Definitions:
 - Contractor - General Contractor, Subcontractors or their agents or employees, and/or any person performing portions of the Work.
 - Owner - person(s) who own the property and/or paying for services for proposed project.
 - Work - All information documented on drawings and specifications.
- All conditions noted shall be observed strictly in the construction of the project. Contractor shall coordinate, and verify necessary, all code requirements before commencement of construction and bring any discrepancies between code requirements and the construction documents to the attention of the Architect. Architect not responsible for expense of additional requirements requested by local building department jurisdiction, whether code related or not.
- New wall construction shall be constructed in accordance with the latest edition of the International Building Code (IBC) and other material not included in dimension. Exterior wall indicates rough stud dimension plus 1/2" exterior plywood sheathing.
- Details and sections on the drawings are shown at specific locations and are intended to show general requirements throughout. Details noted "typical" imply all conditions thereon unless otherwise specified, but necessary for proper construction of any part of the work shall be included. The work is not limited to that shown on the drawings for a complete job.
- Do not scale drawings.
- All materials and construction to be incorporated into the work shall be in strict accordance with the latest edition of the ASTM specifications of the various trade industries (ACI, AISC, etc.) where applicable.
- The Architect shall have no control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor for taking any steps to achieve compliance with any rules or regulations related to construction means, methods, techniques, sequences or procedures or safety precautions and programs in connection with the Work promulgated by the Federal Occupational Safety and Health Administration (OSHA), or by any similar State agency since all of these undertakings are solely for the Contractor's responsibility.
- The Owner and Architect agree the Architect has not undertaken any responsibility for the maintenance of safe conditions at or around the job site during the construction of the project.
- The Architect shall not be responsible for the Contractor's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect shall not be responsible for any delay or acts or omissions of the Contractor, Subcontractors or their agents or employees, or of any other person performing portions of the Work. Any damage to the existing structure or adjacent areas shall be rectified to the satisfaction of the Owner at the Contractor's expense.
- In the performance of architectural services, the Architect's responsibility and liability for any error in design, design, losses, or expenses, shall be limited to the amount recoverable under insurance insuring the Architect for such errors, losses, and expenses, and shall not exceed the original contract cost of the work being rendered. The Architect's responsibility and liability for any omission in the design, which may result in additional work, shall not exceed the cost of modifying the existing work to correct said omission. The Architect shall have no responsibility or liability for any costs or sums paid on account of said additional work. The Architect shall not be liable or responsible for any costs for any change which results in the addition of previously omitted work or for any improvement or betterment to the original contract or for any change requested by the Owner.
- Any consultant hired by the Owner and/or Architect shall hold the Architect harmless from responsibility and liability for any error in design, losses, or expenses.

DIVISION 1 - CONTRACTOR

- The Contractor shall visit the building and site of the proposed work and examine the existing conditions prior to contract signing. The Contractor shall compare the existing conditions to the intent of the contract documents and shall notify the Architect of all discrepancies or qualifications, which may arise before proceeding with that portion of the work. Failure to notify will not relieve the Contractor of the responsibility of performing the work as intended by the contract documents. The Contractor shall make all corrections required due to his failure to coordinate such discrepancies.
- Contractor shall bring errors and omissions, which may occur, in Contract Documents to the attention of the Architect in writing prior to bidding and writing instructions shall be provided before proceeding with the work. The Contractor shall be held responsible for the results of any errors, discrepancies or omissions in the Contract Documents, of which the Contractor failed to notify the Architect before construction and/or fabrication of the work.
- The Contractor shall verify all dimensions and job conditions at the job site sufficiently in advance of work to be performed to ensure that all work is done in accordance with the contract documents and that all work is done in the existing area from deterioration of damage. The Contractor shall verify all underground utilities before starting any excavation and by contacting 1-800-272-1000. Contractor shall relocate all utilities in the way of new work.
- The Contractor shall protect all existing work and shall repair and/or replace any items damaged during the course of work to the satisfaction of the Owner at no additional cost.
- The Contractor shall provide protection for the general public and construction workers in and around the construction area. Adequate barriers shall be provided to exercise control of safe ingress and egress of premises. Erection areas shall be clearly marked and locked.
- The Contractor shall provide and maintain temporary facilities for protection and/or enclosure of areas of work and protection of areas where there is no further work. Remove temporary facilities when no longer required.
- The Contractor shall coordinate all operations with the Owner and local jurisdiction, such as work areas used for storage, access to and from the work area, timing of work, special considerations of noisy operations, interruptions for mechanical and electrical services, etc. No flammable or toxic materials should be stored inside the building.
- The Contractor shall not disrupt, disturb or encroach upon any adjoining properties. Use complete and adequate means to protect and maintain adjoining properties from and against construction conditions, which may be disruptive or damaging. Liability resulting from the execution of the work shall be the sole responsibility of the Contractor.
- The Contractor shall supply all labor, materials and equipment required to complete the work as indicated on the drawings.
- The Contractor shall be bound to perform in strict compliance with the manufacturer's specifications and/or labels.
- The Contractor is always responsible for providing safe and appropriate structural support for all material and equipment during demolition and construction such as wall and/or roof removal, pipes, mechanical equipment etc.
- The Contractor shall make no changes to any structural elements without the written approval of the Architect. Should unauthorized work of this nature cause any damage, the Contractor will be fully liable for all damages caused to the building or any person or property.
- Contractors shall maintain the premises clean and free of all trash, debris and shall protect all adjacent work from damage, soiling, staining, etc. All fixtures, equipment, glazing, floors, etc., shall be kept clean and ready for occupancy upon completion of the project.
- The Contractor shall maintain insurance during the progress of the work to properly protect all employees, Subcontractors, and Deliverment, and hold the Owner and Architect harmless by adding as additional insureds.
- The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other person performing portions of the Work under a contract with the Contractor.
- The Contractor shall obtain the building permit, and other permits and governmental, licenses and inspections, and reimbursed by the Owner, necessary for proper execution and completion of the Work which are customarily secured after execution of the Work and are the Contractor's responsibility and obligation under the contract documents.
- Contractor shall obtain an amended certification of occupancy upon completion of work.
- The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations on the Work and shall be responsible for the removal of such materials and rubbish about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

DIVISION 1 - OWNER

- The Owner shall furnish additional surveys describing physical characteristics, legal limitations and utility locations for the site of the Project if necessary.
- Obtaining permits is the responsibility of the Contractor, the Owner shall secure and pay for necessary permit fees, approvals, assessments, and charges required for construction, use or occupancy of permanent structures or other permanent changes in existing facilities.
- The Owner is responsible for any additional expenses that would be required to perform and complete work due to unforeseen conditions, local building officials inspections and comments, and/or required third-party inspections or certifications.
- The Owner shall provide the Contractor with clear and unobstructed access to the Project. All utility cut during construction shall be paid for by the Owner. All temporary adjustments to the utilities shall be provided by the Contractor.
- The Owner is responsible for all color and finish selections unless otherwise indicated on Drawings.

DIVISION 2 - DEMOLITION

- The scope of demolition and removal to be performed shall not be limited by the drawings or specifications but shall include any and all work that shall be required, or directed by the Architect and/or Owner, in order to facilitate the new work.
- All demolition materials and debris shall be legally disposed of by the Contractor away from the premises.
- Each contractor shall do all cutting, patching, repairing, etc., as required to complete his portion of the work.
- The Contractor shall be responsible for protecting all work areas from demolition by means of debris, damage, breakage, collapse, distortion and misalignment according to applicable code standards and good practice.

DIVISION 3 - CONCRETE

- All concrete work shall comply with the requirements of the ACI Building Code, and Chapter 4 of the IRC.
- Concrete shall have a minimum of 28-day compressive strength of 3,500 psi.
- All concrete shall be ready mix type. All concrete mixes shall be certified by supplier with certified design mix and delivery tickets and shall not exceed ninety (90) minutes placed time between materials mixing and depositing.
- Concrete Materials:
 - Portland Cement: Shall conform with ASTM C150, Type I, unless otherwise acceptable to Architect. Use one brand of cement throughout project.
 - Aggregates: Shall conform with ASTM C33 (1 1/2" maximum for footings and 3/4" maximum for walls and slabs). Provide aggregates from a single source for exposed concrete.
 - Water: Drinkable.
- Reinforcing:
 - Bar steel shall meet the requirements of ASTM A615 Grade 60. Provide standard hook - 180 degrees where required to connect rebar. WWP shall comply with ASTM A185.
 - Clearances of reinforcing shall be 3 inches from both surfaces of footings and 1 1/2" concrete cover from earth or weather side vertically.
 - Where continuous bars are called for, they shall run continuously around corners and lapped at necessary splices or hooked at discontinuous ends. Laps shall be 40 bar diameters. Bar laps may be offset to avoid control or construction joints.
- Provide concrete reinforcing bars in locations, and of sizes as indicated on the drawings. Lap all bars a minimum of 40 diameters.
- Prior to construction of new concrete slabs, all existing topsoil shall be removed and the exposed subgrades shall be Backfill Monthly profiled, compacted and covered with a 2" minimum sand or silt free bedding in accordance with Division 32.
- Within 90 days of concrete slabs, install 6" x 6" - W1.4 x W1.4 welded wire fabric (WWF).
- All slabs on grade shall be over crushed stone, mechanically compacted to 98% maximum density as determined by ASTM D1557 consisting of gravel or crushed stone containing not more than 10 percent of material that passes through a No. 4 sieve. All exterior concrete and garage floor slabs shall be air entrained 4% to 6%. All interior concrete slabs, which will be left exposed, shall be sealed.
- Provide and install a 30-mil polyethylene vapor barrier complying with ASTM E1745. Install over gravel base, place concrete reinforcement with 2" minimum clearances as indicated on the drawings.
- Finish present, overlap 12" and joint. All penetrations must be sealed using a combination tape and/or mastic.
- If radon slabs conform to Chapter 11, ACI 301. Slabs shall be placed in one operation and finished monolithically.
- Provide adequate means and safeguards as required and further identified in ACI standards for "cold weather concrete" placement and protection.
- Provisions must be taken to protect all concrete work from frost damage with special attention paid to footings and other above-grade construction prior to back filling and enclosing the building.
- Footings elevations shown on the drawings are for general purpose of the work and are intended to establish a contract grade of work.
- Control joints, bond breakers and expansion joints to be placed where indicated or otherwise required by ACI standards.
- Construction joints 3/8 inch in width and 4 inch in depth shall be provided between concrete paving, curb, and building.
- Acts with paving and curbs, they shall be spaced at equal intervals and, in no case, exceed 6 feet. All joints shall contain 3/8-inch thick pre-molded joint filler and edges shall be formed with a joint 1/8-inch radius.
- Allow suitable provisions to prevent cold jointing of concrete.
- No chemical curing agents shall be allowed without express written permission of the Architect.
- The Contractor shall be responsible for and provide concrete testing by an independent testing agency in accordance with ASTM C31 and ASTM C36.

DIVISION 4 - MASONRY

- All masonry construction shall comply with IRC R606. All masonry units shall be carefully laid, plumb, true to line, and level with well-filled mortar joints and solid mortar beds. Masonry units shall be laid in running bond with vertical joints in alignment in alternate courses. When connecting new masonry to existing, provide water tight seal.
- All exposed joints shall be compacted and troweled to produce a slightly concave joint. Joints unportained in the finish work shall be struck, such as parged surfaces. CMU walls shall be parged on the exterior surface above ground level with not less than 3/8 inch Portland cement mortar. Waterproofing to be installed over cmu below grade.
- Provide hot-dipped galvanized truss horizontal joint reinforcement (min. 9 gage) at 16" on center vertically in all masonry walls complying with ASTM A82. Provide fabricated corner sections at all corners.
- Concrete masonry units shall be Grade N, Type II standard 8" X 16" with thickness as indicated on the drawings and comply with ASTM C90 and C145. Manufactured by a member of NCMMA with a minimum compressive strength of 1,900 psi at 28 days.
- Use concrete masonry units in running bond with mortar joints not less than 2 inches. Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- Mortar:
 - All mortar shall be type M for below grade, and N above grade, minimum 3,500 psi.
 - Water shall be potable and free from injurious amounts of oil, soluble salts, alkali, acids, organic impurities and other deleterious materials.
- Stone Veneer:
 - Stone veneer finish system by Versetta Stone (www.versettastone.com) shall be selected by Owner and installed in accordance with manufacturer's installation instructions. Details noted "typical" imply all conditions thereon unless otherwise specified with manufacturer's installation instructions.
 - Anchor bolts shall be placed 12 inches from the end of each section of plate, with intermediate bolts spaced a maximum of 6 feet. Install sill gasket between top of cmu and sill plates.
- Crawl Space:
 - Install corrosion-resistant wire mesh in foundation wall openings located a maximum of 3 feet from corners or where indicated on plan. Provide 1 square foot of ventilation for every 150 square feet of under-floor open space.
 - Provide opening into crawl space from existing basement to crawl space. Install wood header over opening to support existing floor construction above.

DIVISION 5 - METALS

- All structural steel material, fabrication and erection shall comply with the requirements of the AISC Standard Specifications for Structural Steel with Supplements to date (Fy=36 ksi).
- All connections not detailed on the drawings shall conform to those shown in the manual of steel construction of the AISC. All connections shall be high-strength bolted. Bolted connections shall conform to the Specifications for Structural Joints of the Research Council on Riveted and Bolted Joints of the Engineering Foundation.
- All welding shall be in accordance with the Standard Code for Arc and Gas Welding in Building Construction of the American Welding Society.
- Steel columns shall have 1/4" steel base plate and concrete as per manufacturers recommendation. Provide steel top plate secured to beam as per manufacturers recommendation. Burned in holes are not acceptable.
- All new steel shall be coated with rust proofing, applied in accordance with the manufacturer's recommendations.
- Fitch Beam:
 - Fitch beam to consist of ASTM Grade 36 steel plate between two (2) wood members, in sizes as indicated on drawing(s).
 - Secure with 1/2" diameter A325 steel bolts, washers, and nuts. Complete beam assembly to have two (2) bolts at each bearing end of beam (top and bottom no closer than 1 1/2" from edge), and staggered 12" on center for length of beam.

DIVISION 6 - WOOD

- Rough Carpentry:
 - Provide framing members of sizes and in spacing shown. Do not splice structural members between supports. Do not notch any beams or structural members without consent of Architect.
 - Anchor and nail to comply with IRC Fastener Schedule for Structural Members Table R602.3 (1) and R602.3(2). All fasteners, flashing, brackets and hangers that come in contact with pressure treated wood, in any fashion, shall be stainless steel (grade 304 or 316), or high grade galvanized steel (G-185). All steel shall have 1/4" steel base plate and concrete as per manufacturers recommendation. Burned in holes are not acceptable.
 - All new steel shall be coated with rust proofing, applied in accordance with the manufacturer's recommendations.
- Fitch Beam:
 - Fitch beam to consist of ASTM Grade 36 steel plate between two (2) wood members, in sizes as indicated on drawing(s).
 - Secure with 1/2" diameter A325 steel bolts, washers, and nuts. Complete beam assembly to have two (2) bolts at each bearing end of beam (top and bottom no closer than 1 1/2" from edge), and staggered 12" on center for length of beam.
- Finish Carpentry:
 - Nominal sizes are indicated. Provide actual sizes as required by PS20, for moisture content specified for each use. Provide dressed lumber, S4S. Provide seasoned lumber with 19% maximum moisture content at time of dressing and planing. Framing studs and joists: Douglas Fir-Larch, #2 Grade or better, Fb = 1,000 P.S.I. minimum.
 - Anchor and nail to comply with IRC Fastener Schedule for Structural Members Table R602.3 (1) and R602.3(2). All fasteners, flashing, brackets and hangers that come in contact with pressure treated wood, in any fashion, shall be stainless steel (grade 304 or 316), or high grade galvanized steel (G-185). All steel shall have 1/4" steel base plate and concrete as per manufacturers recommendation. Burned in holes are not acceptable.
 - Any wood occurring at an exterior condition, ground, concrete, and/or masonry contact, or within 8" of grade shall be pressure treated lumber.
 - Laminated Veneer Lumber (LVL), Parallel Strand Lumber (PSL):
 - All Microlam and/or Parallel beams, and columns to be as engineered and manufactured by Level by Weyerhaeuser and installed as per manufacturer's recommendations.
 - All connections are to be made using prefabricated connectors. Toenailing will not be permitted. Connectors to be manufactured by Simpson or approved equal.
 - Provide 1" air gap (vertically) between masonry or concrete. Bearing point of beam on masonry or concrete to rest on aluminum flashing. Beam cannot be in contact with masonry or concrete.
 - Rimboards to be minimum 1 1/4" installed as per manufacturer.
 - Install blocking panels under all load bearing walls. Frame out with 2" x 4" for duct or pipe passing through. Install blocking panel at all cantilevers.
 - Provide minimum 3" bearing for beams.
 - Joist Hangers and Connectors:
 - All joist hangers and connectors to be by Simpson, where indicated on drawing, or as required.
 - The vertical load bearing capacity, torsion moment capacity, and deflection characteristics of joist hangers shall be determined in accordance with ASTM D1761.
 - Construction Panels:
 - Each panel shall be identified with the appropriate trademark of APA, and shall meet the requirements of the latest edition of Voluntary Product Standard PS 1, Voluntary Product Standard PS 2, or APA PRP-108 Performance Standards.
 - All panels which have any edge or surface exposed long term to the weather shall be classed Exterior.
 - Sub-flooring: 3/4" APA Performance rated plywood, Exposure 1 durability classification.
 - Install with long dimension or strength axis of the panel across supports, and with panel continuous over two or more spans. Panel end joints shall occur over framing. Spacing of 1/8" is recommended at panel ends and edges, unless otherwise indicated by the panel manufacturer (supported panel joints shall occur approximately along the centerline of framing with a minimum bearing of 1/2").
 - Nail 6" o.c. along supported panel edges and 12" o.c. at intermediate supports with 8d common nails. Glue plywood to joists.
 - Span subfloor joists if necessary to smooth surface prior to installing finish flooring.
 - Wall sheathing: 1/2" APA Performance rated plywood sheathing, Exposure 1 durability classification.
 - Spacing of 1/8" is recommended at panel ends and edges, unless otherwise indicated by the panel manufacturer (supported panel joints shall occur approximately along the centerline of framing with a minimum bearing of 1/2").
 - Wood siding, sheathing and wall framing on the exterior of the building having a clearance of less than 6 inches from the ground shall be pressure-treated.
 - Roof Sheathing: Install 1/2" (unless otherwise indicated on drawings) performance rated plywood sheathing, Exposure 1 durability classification. Install gable sheathing 1/4" class as required.
 - Install with long dimension or strength axis of the panel across supports, and with panel continuous over two or more spans. Suitable edge support shall be provided by use of panel clips, tongue-and-groove edges, or lumber blocking between joists.
 - Panel and joints shall occur over framing. Spacing of 1/8" is recommended at panel ends and edges, unless otherwise indicated by the panel manufacturer (supported panel joints shall occur approximately along the centerline of framing with a minimum bearing of 1/2").
 - Nail 6" o.c. along supported panel edges and 12" o.c. at intermediate supports with 8d common nails.
 - Cover roof sheathing as soon as possible with roofing felt or single underlayment for protection against excessive moisture prior to roofing application.
 - Finish Carpentry:
 - All work shall conform to the quality standards of the Architectural Woodwork Institute (AWI) Section 300 for Premium Grade work. Finished woodwork shall be dressed and sanded, free from machine and tool marks, abrasions, raised grain or other defects on surfaces exposed to view. Exposed wood or laminate surfaces shall be uniform in color, texture, and/or grain.
 - Lumber shall be sound and dry, selected for compatibility of grain and color and containing no defects that cannot be concealed by finishing methods indicated, i.e. stained transparent or opaque paint finish as selected by Owner. Scribing and joining shall accomplish hairline joints. Finish trim corner shall be mitered.
 - All wood base, door and window trim shall be selected by Owner, including side casing, fillet, freeze and cap over door and window openings, and stool and anchor at window sills.
 - Sink all nail heads in finished work with a nail set. Nails and screws, where possible, shall be concealed. All nails shall be blind-nailed wherever possible; otherwise the nailing shall be located, driven any and not to be visible in the finish. Countersink face screws and plug with matching wood.
 - All kitchen cabinets, bathroom vanities, and counter tops shall be selected by Owner.
 - Coordinate with electrical, plumbing fixtures, trim and related to selections.
 - Caulk at all perimeter wall edges.
 - Stairs:
 - Interior stair construction to be as follows:
 - Stringers: Clear, softwood 5/4" x 12" minimum with 3 1/2" effective depth.
 - Treads: Hardwood, 9" minimum depth plus 1" bull-nosing (10" total tread depth).
 - Risers: Clear softwood 8 1/4" maximum height. Solid risers or risers permitting no more than a 4" sphere are required.
 - Stairwell clearance minimum 6'-8".
 - Handrails to be minimum 34", maximum 38" above front edge of step nosing with cross section of 1 1/4" to a maximum of 2 5/8" and a minimum clearance of 1 1/2" between the wall and the handrail.
 - Guardrails to be 36" high minimum with balusters constructed such that a sphere with a diameter of 4 inches cannot pass through any opening, and no more than 6" sphere where bottom of railing meets risers and treads. Wood species and finish for treads, risers, handrails, guardrails, balusters, newel posts, and all trim to be selected by Owner.
 - Install handrails and guardrails shall be designed and constructed for a concentrated load of 200 pounds applied at any point and in any direction along the top railing member. The in-fill area of the guard system shall be constructed for a horizontal concentrated load of 200 pounds applied on a one square foot area at any point.
 - Provide continuous hand and house for ventilation and drainage by using 1 1/4" diameter galvanized washers. Provide continuous copper, aluminum, or PVC edg cap flashing at the face of the house to prevent the passage of moisture into the wall, or to any untreated wood. Overlap step flashing over ledger and up behind siding 8" above deck.
 - Guard rail and hand rail system to be selected by Owner. Guardrails to be 36 inches above finished deck with balusters constructed such that a sphere with a diameter of 4 inches cannot pass through any opening, and no more than 6" sphere where bottom of railing meets risers and treads. Wood species and finish for treads, risers, handrails, guardrails, balusters, newel posts, and all trim to be selected by Owner.
 - Deck floor joists shall be pressure treated wood framing members and supported by joist hangers connected to a pressure treated wood ledger that matches size of joists. Verify with deck material manufacturer for proper joist spacing - base bid 12" o/c.
 - All wood base, door and window trim shall be selected by Owner, including side casing, fillet, freeze and cap over door and window openings, and stool and anchor at window sills.
 - Coordinate with electrical, plumbing fixtures, trim and related to selections.
 - Caulk at all perimeter wall edges.

DIVISION 6 - WOOD (CONT.)

- Deck Stair Construction:
 - Stair construction to be as follows:
 - Stringers: 2" x 12" minimum with 3 1/2" effective depth, 9" o/c. Verify with deck material manufacturer for proper joist spacing.
 - Treads: 1 1/2" minimum depth plus 1" nosing.
 - Risers: 8 1/4" maximum height. Solid risers or risers permitting no more than a 4" sphere required.
 - Minimum Stair Width: 48".
 - Dimensional Uniformity: There shall not be a variation exceeding 3/16" in the depth of adjacent treads or the spacing of adjacent risers. The tolerance between the largest and smallest riser or tread shall not exceed 3/8" in any flight of stairs.
 - Guardrails to be 36" high minimum with balusters constructed such that a sphere with a diameter of 4 inches cannot pass through any opening, and no more than 6" sphere where bottom of railing meets risers and treads. Wood species and finish for treads, risers, handrails, guardrails, balusters, newel posts, and all trim to be selected by Owner.
- Handrails:
 - All handrails with 3 or more risers require continuous handrails and guardrails (on both sides).
 - All stairwells shall have a circular cross section with an outside of 1 1/2". Edges shall have a minimum radius of 1/8".
 - Handrails shall be smooth and free of any sharp edges or splinters.
 - The clear space between the handrail and adjacent wall or surface shall not be less than 1 1/2".
 - Handrails to be minimum 34", maximum 38" above front edge of step nosing, and shall be continuous the full length of the stairs, and both ends returned to posts.
 - Handrails shall be designed and constructed for a concentrated load of 200 pounds applied at any point.
- Deck Joist Hangers and Connectors:
 - All joist hangers to be Simpson 2Max rated G-185 coating for hot-dipped galvanized gable posts as follows:
 - Post to Concrete Footing: #ABW44Z for 4" x 4" wood posts; #ABW66Z for 6" x 6" wood posts.
 - Post to Girders: #FLPC4 for 4" x 4" wood posts; #FLPC6 for 6" x 6" wood posts.
 - Post to Curbs: #FH.
 - Joist Hanger: #HLU2B for 2" x 8" joists; #HLU2C for 2" x 10" joists.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- Basement Waterproofing:
 - Clear loose mortar or concrete from the wall and apply waterproofing seal membrane horizontally with overlapping sealed seams to top and over footing installed as per manufacturers recommendation.
 - Install heating cable fill framing spaces including areas between joists and outside headers, behind the membrane is applied so that they are sealed in place.
 - See Division 31 for foundation / footing drain.
 - Knit-Faced Batt Insulation:
 - Insulation shall be furnished in thickness and with R-values as indicated on the drawings, and in widths to match frame spacing stud spacing. Insulation shall have a flame-spread index not to exceed 25 with an accompanying smoke-developed index not to exceed 450 when tested in accordance with ASTM E84.
 - Fire resistant mineral wool insulation shall be used in areas between joists and outside headers, behind electrical outlets and piping and other areas in such a way as to form a complete insulating blanket around the heated areas of the structure.
 - Vapor barriers shall be positioned on the heated side of the insulation blanket.
 - Install vent chutes at all soffits vent locations where required, and as indicated on drawings.
 - Flashing:
 - Provide and install flashing as indicated on the drawings and as for roof-to-wall conditions, exterior openings, and exterior window and exterior partitions, washing machines, and bath tubs.
 - Corrosion-resistant flashing shall be minimum 26 gage steel sheet and extend 10 inches from the centerline each way. Provide kick-out at base of all flashing at roof-to-wall conditions. Install adhesive membrane over step flashing.
 - Consolidated copper or aluminum flashing 5 ounce at all pressure-treated wood conditions. For exposed conditions use 16 ounce copper for all flashing including open roof valleys and roofing finish.
 - Pan flash all window and door openings.
 - Install flashing and sheet metal in compliance with "Architectural Sheet Metal Manual" by SHACNA.
 - Infiltration Barrier:
 - Install Tyvek House Wrap according to manufacturer's recommendations and at vertical walls over plywood sheathing and floor and rim joist areas.
 - Apply any sealant or caulking at the corners, large bodies of water, or in very humid climates.
 - Install Tyvek Flex Wrap at all sides of window and door openings.
 - Hardie Siding:
 - Hardie Plank siding material and accessories by James Hardie Company, style and color to be selected by Owner. Include fill trim and corner pieces as required and installed as per manufacturer's recommendations.
 - Joint flashing behind field but joints is required for ColorPlus and recommended for primed products. Do not caulk joints. Use wood siding, bracing, or blocking shall be acceptable on primed siding products that is to be field painted. Caulk where HardiePlank meets vertical trim.
 - Maintain a 2" minimum clearance between James Hardie products and paths, steps and driveways.
 - Maintain a 1/4" clearance between the bottom of James Hardie products and horizontal finishing. Do not caulk gaps. Maintain a 1/4" gap between gutter caps and siding & trim. Maintain a 2" minimum clearance between James Hardie products and decking material.
 - Fasteners must be corrosion resistant, galvanized, or stainless steel. James Hardie recommends the use of quality, hot-dipped galvanized nails. Stainless steel fasteners are recommended when installing James Hardie products near exterior water. Use stainless steel fasteners for all exterior applications. ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products.
 - Fasteners shall attach to studs and joists. Use approved fasteners for hot-dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3. Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
 - Molded Millwork:
 - Provide high-density polymer molded millwork as indicated on drawings and manufactured by Fyron or approved equal.
 - Contractor shall provide a complete system including all adhesives, fasteners, etc., and shall store, handle, install and finish all molded millwork in strict accordance with manufacturer's best recommendation.
 - Roof Trim:
 - Finish rake and box return, and fascia at gable with 1" x 5/4" finished stock. Finish rake with second 1" x 4" Azek trim stock member. Use tight miter joints. Use 45z Azek stair joints. Upper piece to overlap lower piece.
 - Finish fascia boards shall not project higher than roof line.
 - Asphalt Shingle Roofing:
 - Asphalt roof shingles to be laminate shingles by Owens-Corning or approved equal. Color and style as selected by Owner from the manufacturers standard range. Asphalt shingles shall conform to Class A - ASTM D3462 or D225. Install as per manufacturer's recommendations from 2:12 roof pitch and higher.
 - 2-tab shingles shall be installed as required. All supply and return air flow to be ducted and Contractor shall provide a complete system including all adhesives, fasteners, etc., and shall store, handle, install and finish all molded millwork in strict accordance with manufacturer's best recommendation.
 - Install roofing to comply with 130 mph wind with six (6) 1 1/4" minimum non-corrosive roofing nails.
 - Install one layer (2 rolls) of polymer-modified asphalt with an adhesive backing (W.R. Grace Ice & Water Shield membrane or equal), from roof edge at gutter and extend up along roof sheathing 48" or to top of a parapet wall, 24 inches from inside of exterior wall.
 - Install synthetic roof underlayment as per manufacturer's recommendation over Ice & Water Shield.
 - Gutters and Leaders:
 - Provide and install aluminum gutters and leaders as indicated on the drawings. If required, connect to and match existing gutters and leaders.
 - Color selected by Owner from standard range.
 - Provide hangers, anchors and accessories as recommended by manufacturer for a complete installation. Extend leaders to underground drains or splash blocks as directed by Owner.
 - Vents:
 - Ridge vent to be Cor-A-Vent Model #V-400E, or approved equal. Maximum 1" total ridge opening in plywood sheathing.
 - Continuous soffit vents to be Cor-A-Vent Model #PS-400 Strip Vent, or approved equal; or Certain-Teed Board vented soffit panel system.
 - Crawl space ventilation lower to be 8" x 16" Foundation Seal by Mid-America Building Products Corporation, or approved equal.
 - Sealant:
 - Furnish and install sealant as indicated and otherwise required.
 - Colored urethane sealant for exterior use (Note: Install sealant on top and sides of windows and doors).
 - Paintable acrylic latex sealant for general interior use.
 - White silicone sealant for around plumbing fixtures.
 - Materials shall be delivered to the site and stored in unopened containers bearing the manufacturer's name and product identification. Follow manufacturer's recommendations for handling products containing toxic materials. Keep flammable materials away from heat, sparks, and open flame.
 - All caulking and sealant, primers and accessories shall be non-staining to adjacent exposed materials. Primers shall be applied to the substrate and shall be compatible with the sealant and primer type. Colors shall be selected by the Owner from approved manufacturer's standard range. Use gum consistency compounds unless otherwise required by job conditions.
 - Primers shall be as recommended for each substrate by approved manufacturer of each caulking and sealant material used.
 - Sealant shall be applied by the gun method using nozzles of proper size to fit the several widths of the joints.
 - The sealant shall be driven into the joint grooves with sufficient pressure to force out all air and to solidify fill the joint grooves. Sealant where exposed shall be free of wrinkles and shall be uniformly smooth. Joints in wash surfaces shall be filled slightly convex to obtain a flush joint when dry. Upon completion of caulking, any joints not entirely filled shall be roughened and filled as specified and the exposed surface shall be connected to the indicated structure 16" in length with 1/4" diameter galvanized washers.
 - The surface of all materials adjoining caulked joints shall be cleaned of all films of compound or other solids due to application of sealant.
 - Waterproofing:
 - Deck/Roof Exterior Floor Covering (deckrite.com) consisting of welded seam PVC waterproofing installed as per manufacturer's instructions and recommendations, including precautions required for seaming and adhering membrane.
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 - Product specifications:
 - Sheet width: 72 inches.
 - Sheet thickness: 3/16 inches.
 - Color to be selected by Owner.
 - Bonding Adhesive: Supplied by membrane manufacturer to adhere membrane to substrate.
 - Termination Bar: 1" X 10" aluminum bar, supplied by the membrane manufacturer to terminate membrane.
 - Perimeter Fasteners: Mechanical fastening devices furnished by the membrane manufacturer; color coordinated to membrane color.
 - Caulk: Color matched caulk, as supplied by the membrane manufacturer.
 - Deck/Roof Exterior Floor Covering (deckrite.com) consisting of welded seam PVC waterproofing installed as per manufacturer's instructions and recommendations, including precautions required for seaming and adhering membrane.
 - Verify that surface and site conditions are ready to receive work and conform to membrane manufacturer's instructions. Verify that all screws and/or nailheads are flush with or countersunk in the plywood surface being fastened to the joists/supports.
 - 3/4" pressure treated exterior grade ACQ plywood.

DIVISION 8 - DOORS AND WINDOWS

- General:
 - Plans show nominal door width, all door heights to be 6'-8" unless otherwise noted. Provide doors with minimum clearances or overlaid necessary for operation without binding. Allow 1/2" clearance for door operation.
 - Glazing in locations which may be subject to human impact such as in fixed, sliding or swinging panels of sliding or swinging type doors; glazed sidelights adjacent to operable doors; shall be tempered / safety glazing. All glazed panels located within 24 inches of a door opening, shall be tempered glass.
 - Any windows surrounding both tubs and showers; windows above bathtubs and showers; windows within 5-feet of stairs shall be tempered glass.
 - Provide and install doors and windows in accordance with the manufacturer's instructions.
 - Provide a complete weather tight installation as follows: Maintain alignment with adjacent work. Secure assembly to framed openings, plumb, and square, without distortion. Place insulation in shim spaces around unit perimeter, to maintain continuity of building thermal barrier. Install sealant and related backing materials at perimeter of assembly.
- Interior Windows:
 - All doors shall be 1 3/8" thick by size specified, raised panel hollow core doors, unless otherwise directed by Owner.
 - Door between the garage and adjacent interior space shall be a minimum of 1 1/4 inch solid core wood or 1 1/4 inch solid or honeycomb steel.
 - Fit hardware prior to the application of painter's finish, remove during the finishing operation and reset after completion of the finish.
- Exterior Entry Door:
 - Door to be Thermo-Tri polystyrene core-insulated steel clad panel door with adjustable oak sill. Style and color to be selected by Owner.
- Wood Windows and Patio Doors:
 - Windows and Door units shall be 400 Series, High Performance Low-E glass, manufactured by Andersen Window Corporation.
 - Provide a complete window installation, including but not limited to factory assembled clad windows, glass and glazing, muntin grilles, sub sill, anchors, brackets, and shims in accordance with the drawings and the best recommended practice of the window manufacturer and as follows:
 - Double hung windows to include screens, stool, and interior wood trim.
 - Provide 1/2" weather resistant gypsum board complying with ASTM C636, and in maximum lengths available to minimize end-to-end butt joints, edges to be tapered. All surfaces exposed for finish painting to be finished to Level 4.
 - Joint treatment materials to comply with ASTM C475, type recommended by the manufacturer for the application indicated. Tape or mesh can be used with setting-type compound.
 - Use only with ready-mix compound.
 - Provide 1/2" water resistant gypsum board complying with ASTM G630 in all areas subject to moisture, and in maximum lengths available to minimize end-to-end butt joints with edges to be tapered. Finish to Level 1.
 - Dens Shield Tile Backer underlayment to be used for all tile applications (i.e. around tub and shower enclosures at walls, ceilings, and tub platforms). Finish to Level 1.
 - Provide single layer of 5/8" Type-X fire-retardant gypsum board on garage side of ceiling in garage (UL Design #1203). Provide two layers of 5/8" Type-X, fire-retardant gypsum board on garage side of ceiling in garage (UL Design #1502 - conventional lumber). (UL Design #1547 - 1-joints). Both applications to comply with ASTM C36. Finish to Level 3.
 - Openings for steel electrical outlet boxes in rated garage separation assemblies, that do not exceed 16 square inches, are permitted but cannot exceed 100 square inches for any 100 square feet of wall area. Outlet boxes on opposite sides of the assembly shall be separated by a horizontal distance of not less than 24 inches.

DIVISION 9 - FINISHES

- Gypsum Board:
 - Provide and install gypsum wallboard of the type and thickness indicated with metal corner reinforcing. Provide all materials and accessories as required for a complete installation in accordance with the manufacturer's recommendation and the "Gypsum Construction Handbook" published by United States Gypsum Co.
 - Provide 1/2" gypsum board for ceiling and exterior walls in garage and structure over garage side of walls in garage (UL Design #1203). Provide two layers of 5/8" Type-X, fire-retardant gypsum board on garage side of ceiling in garage (UL Design #1502 - conventional lumber). (UL Design #1547 - 1-joints). Both applications to comply with ASTM C36. Finish to Level 3.
 - Openings for steel electrical outlet boxes in rated garage separation assemblies, that do not exceed 16 square inches, are permitted but cannot exceed 100 square inches for any 100 square feet of wall area. Outlet boxes on opposite sides of the assembly shall be separated by a horizontal distance of not less than 24 inches.
- Specialties:
 - Minimum width shall be 26 inches with tread having 7 1/2 inch minimum tread width at 12 inches from the narrow edge. All treads shall be identical, and the rise shall be no more than 9 1/2 inches.
 - Handrails to be minimum 34", maximum 38" above front edge of step nosing.
 - Guardrails to be 36" high minimum with balusters constructed such that a sphere with a diameter of 4 inches cannot pass through any opening.
 - Handrails and guardrails shall be designed and constructed for a concentrated load of 200 pounds applied at any point and in any direction along the top railing member. Guardrails shall also be designed and constructed for a uniform load of 50 pounds per foot applied horizontally at the required guard height and a simultaneous uniform load of 100 pounds per foot applied vertically downward at the top of the guard rail.

DIVISION 10 - SPECIALTIES

- Exterior Stair Construction (stair design to be selected by Owner):
 - Minimum width shall be 26 inches with tread having 7 1/2 inch minimum tread width at 12 inches from the narrow edge. All treads shall be identical, and the rise shall be no more than 9 1/2 inches.
 - Handrails to be minimum 34", maximum 38" above front edge of step nosing.
 - Guardrails to be 36" high minimum with balusters constructed such that a sphere with a diameter of 4 inches cannot pass through any opening.
 - Handrails and guardrails shall be designed and constructed for a concentrated load of 200 pounds applied at any point and in any direction along the top railing member. Guardrails shall also be designed and constructed for a uniform load of 50 pounds per foot applied horizontally at the required guard height and a simultaneous uniform load of 100 pounds per foot applied vertically downward at the top of the guard rail.
- Plumbing Contractor shall verify all conditions on the plans and at the site prior to starting any work. Selection of fixtures, hardware, and colors by Owner.
- Contractor shall provide labor, materials and equipment necessary to install plumbing and related fixtures as selected by Owner. Contractor shall coordinate work with all other trades, architectural and structural conditions. No cutting and/or notching structural members shall be performed without consulting Architect first. Contractor shall install and check all pressure reducing valves, pop off valves and other safety devices and test all installations to assure proper operation.
- Toilets to be 1.6-gallon tank type and are selected by Owner.
- All vents shall be a minimum 1/2" diameter and 3-feet vertically from the top of an operable window.
- Provide shut off valve for all gas appliances.
- Contractor to coordinate location of utility meters with site plan and locate away from public view. Visual impact shall be minimized. Mount as low as allowed by code.