1. **BUILDING CODE**: 2012 INTERNATIONAL BUILDING CODE

2. **ANY REFERENCES TO VARIABLE TRADE CODES THROUGHOUT THESE NOTES ARE TO THE YEAR OF THE CODE CITED IN THE ABOVE REFERENCE BUILDING CODE.**

3. **DEFINITIONS**

   **ROOF STRUCTURAL ELEMENTS** shall be designed for the most critical of the following load cases:
   - Dead Load
   - Wind Load
   - Snow Load
   - Live Load
   - Rain Load

   **SEISMIC IMPORTANCE FACTOR** (IE)

   **ANALYSIS PROCEDURE UTILIZED**

   - 0.2 SEC SPECTRAL RESPONSE ACCELERATION (SS)
   - DEFLECTION AMPLIFICATION FACTOR (CD)

   **CONCRETE AIR CONTENT, SLUMP AND WATER/CEMENT RATIOS** shall be as follows:

4. **DESIGN LOADS**

   **ROOF**
   - 15 PSF

   **LATERAL LOADS**

   A. **WIND LOAD ANALYSIS**

   B. **RISK CATEGORY**
   - I

   C. **ULTIMATE WIND VELOCITY (VULT)**
   - 115 MPH

   D. **NORMAL WIND SPEED (VNSG)**
   - 89 MPH

   E. **INTRA-NATIONAL COEFFICIENT (Cn)**
   - 0.10

   F. **ASD COMPONENTS AND CLADDING NET DESIGN WIND Pressures (PSF)**

   - ZONE 1
     - 15 PSF
   - ZONE 2
     - 30 PSF
   - ZONE 3
     - 45 PSF
   - WALL
     - 15 PSF
   - 30 PSF

5. **LOAD REQUIREMENTS**

   **SUBMITTAL**

   - ALL EXISTING MATERIALS NOTED IN THE DRAWINGS TO BE DEMOLISHED SHALL BE SUBMITTED TO THE PROJECT ARCHITECT FOR REVIEW, ALONG WITH A MINIMUM OF TWO VIEWS FOR EACH DRAWING.

   - THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED IN THE PROJECT SPECIFICATIONS.

   - THE SHEETING AND SHORING DESIGN SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

6. **DIFFERENT SPECIFICATIONS**

   **SPECIAL INSPECTIONS**

   - SPECIAL INSPECTIONS ARE REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE. THE TERM SPECIAL INSPECTOR REFERS TO THE SPECIAL INSPECTING ENGINEER ON RECORD FOR THE PROJECT.

   - 1. **FOUNDATION SUBSIDENCE**
   - 2. **CONCRETE FORMWORK AND REINFORCING**
   - 3. **CONCRETE SLABS ON GRADE**
   - 4. **MASONRY REINFORCING**
   - 5. **MASONRY GROUT**

**PROJECT SPECIAL INSPECTOR**

- THE FOLLOWING LIST IS NOT INTENDED TO BE ALL INCLUSIVE, BUT MERELY TO PROVIDE EXAMPLES OF ITEMS THAT MUST BE COMPLIANT WITH THE PROJECT SPECIFICATIONS.

**BUILDING HEIGHT LIMITATIONS**

- 115 MPH

**ZONE 5**

- FLAT ROOF SNOW LOAD (PF) - 28 PSF

**SITE CLASS**

- SI-1

**SOIL CLASS**

- 1

**GENERAL NOTES**

- REFER TO THE ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING SPECIFICATIONS NOTED IN THE STRUCTURAL NOTES AND PROJECT SPECIFICATIONS.

- ALL MATERIALS shall be in conformance with the latest edition of the ASTM SPECIFICATION NOTED IN THE STRUCTURAL NOTES AND PROJECT SPECIFICATIONS.

- ALL DRAWINGS AND CALCULATIONS NOTED HEREIN ARE TO BE APPROVED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. THE CONTRACTOR RESPONSIBILITIES ARE FOR ADDITIONAL REQUIREMENTS.

- REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONSTRUCTION DOCUMENTS FOR USE AS SHOP DRAWINGS IS FORBIDDEN.
8. All tension splices in the reinforcing steel, unless otherwise noted, shall have a minimum net area of 0.75 square inches.  

   BAR SIZE  | MINIMUM BAR DIAMETER | LAP SPlice  | TOP BARS | OTHER BARS  
   ---  | ---  | ---  | ---  | ---  
   #3  | 7/8"  | 1-1/2"  | 2"  | "  
   #4  | 11/16" | 2"  | 2-1/2" | 2-1/2"  

10. Prove concrete protection for reinforcing bars in accordance with the following:

   FOOTINGS: 3"  
   INTERIOR SLABS: 3/4"  
   EXTERIOR SLABS: 1-1/2"  
   WALLS: OUTSIDE FACE: 3/4"  INSIDE FACE: 1/2"  

11. All concrete work, reinforcing placement, formwork and shoring shall be inspected under the supervision of the Freeholder of the County Inspector. Quality control, inspection and testing shall be in strict accordance with A4921 and the local building code requirements.

CONSTRUCTION PRACTICES:

1. Wet topping of decks into the footing will not be accepted.  
2. The inspector shall perform a minimum of one concrete test for each 100 cubic yards of concrete placed at the project. At least one test for each day that concrete is poured. Each concrete test shall include a slump test and five laboratory cubes. Each laboratory cube shall be cast at the same time the concrete is poured and shall be placed in a curing medium at a temperature of at least 60°F. The special inspector shall submit written test reports to the architect and structural engineer. The architect and structural engineer shall be notified of all tests that do not meet the project specifications within 24 hours.

SLAB ON GRADE

1. Provide a minimum 8" thick concrete slab reinforced with 4 x 6 - 1/2 x 9/16 welded wire fabric on 6" o.c. 1/2\10/16 continuous rebar steel. The welded wire fabric shall be placed at the top of the slab, 6 inches below the top surface of the slab. The reinforcing steel shall be ASTM C-536, size 6/8.  
2. Contractor's option - Provide synthetic polypropylene reinforcing fiber in place of welded wire mesh in the slab on grade.  
3. Concrete shall be placed at the time the concrete will not be contaminated.  
4. Add the concrete at the point per the fiber manufacturer's recommendations.  
5. Concretes with fibers during laying shall have high-range water reducers per ASTM C-494, type F or G.

MASONRY

1. All masonry construction shall be in accordance with following standards:
   
   a. Building code requirements for masonry structures - AC-304.5.4.1  
   b. Specifications for masonry structures - AC-304.5.4.1  
   d. The minimum area net compressive strength of masonry (f'_m) shall be 2,000 psi.
   e. Mortar shall conform to the requirements of the American Concrete Specifications for Mortar for Unit Masonry.  
   f. All masonry having a compressive strength of masonry (f'_m) shall be a minimum of 2,000 psi.  
   g. All masonry having a compressive strength of masonry (f'_m) shall be 2,000 psi.  
   h. Masonry units shall conform to A108.1, American Concrete Institute.  
   i. Masonry units shall have a compressive strength of masonry (f'_m) of 2,000 psi.  
   j. All masonry shall be installed in accordance with the project specifications.

WOOD FRAME

1. All lumber, unless otherwise noted, shall have a minimum net area of 0.75 square inches.  
2. All structural wood members shall be a hem fib for equivalent with the following combinations of unit stresses, unless otherwise noted on the drawings.

Extreme fiber stress in bending  
850 psi  
1,300 psi  

MODULUS OF ELASTICITY  
1,300,000 psi  
2,100,000 psi  

SHORE STRESS  
75 psi  

NOT TO SCALE

TYPICAL STEPPED WALL FOOTING DETAIL

TYPICAL PIPE TRENCH/ SITE STRUCTURE EXCAVATION DETAIL

TYPICAL WALL FOOTING AT UTILITIES DETAIL

TYPICAL WALL FOOTING AT UTILITIES DETAIL

TYPICAL GARAGE WALL STUD ANCHOR DETAIL

TYPICAL NON-BEARING TIMBER WALL ANCHOR DETAIL

TYPICAL SLAB ON GRADE CONSTRUCTION JOINT DETAIL

TYPICAL SLAB ON GRADE CONSTRUCTION JOINT DETAIL
1. See sheets S1-1 thru S3-2 for structural notes and typical details. The typical details on sheets S3-1 thru S3-2 apply wherever the condition exists unless detailed otherwise.

2. Provide a 4" concrete slab on grade with HRF per the Structural Notes on S1-1. See the Plan for the top of slab elevation. The top of slab elevation is indicated on the plan (S2-1). X'-X"

3. C.J. indicates a control joint in the grade slab. See details 10 S3-1 and 11 S5-1.

4. See the plan for top of wall footing and column footing elevations. Top of interior column footings shall be 8" below finished floor elevation unless noted otherwise.

5. Bottom of all exterior footings shall be a minimum of 2'-0" below finished exterior grade elevations unless noted otherwise. Coordinate elevations with the approved site plan. The top of footing elevations are indicated on plan (S3-2). (X'-X") referenced from elevation (0'-0"") Use value shown or 2'-0" to bottom of footing as shown on plan. Footing elevations shall not be adjusted based on field conditions encountered during excavation.

6. The top of piers elevation shall be a minimum of 8" below the top of floor slab or the top of exterior grade elevation unless noted otherwise. Piers shall not project beyond the outside face of the exterior wall.

7. See the typical wall footing at utilities details 4-5 on sheet S2-1. Step all wall footings as indicated or required below underground utilities per details 1 and 4-5-1. The contractor shall verify the pier/elevation of all utilities with the top of footing elevations shown. Coordinate all utility locations with site. Refer to utility crossing a wall on the plan. Utilities are shown on this drawing as an effort to aid in the coordination of trades. It is not intended to be a complete representation of all utilities. C.J. to coordinate footing steps with utility contractor and concrete contractor prior to footing pour.

8. The symbols C1, P1, and F4.0 on the footing refers to designations in the column, pier, and footing schedules located on sheet S2-3.

9. Refer to the architectural drawings for dimensions not shown.

10. It is the contractor's responsibility to coordinate between the architectural and structural drawings. It is not intended that the structural drawings are used independently of the architectural drawings. Any discrepancies, including dimensions, shall be brought to the attention of the architect and engineer before proceeding with the work.

11. Existing concrete slab on grade.

12. Saw cut and remove existing concrete slab on grade as required for new work. Patch slab on grade as required to match existing.

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**Foundation Plan Notes**

1. See sheets S1-1 thru S3-2 for structural notes and typical details. The typical details on sheets S3-1 thru S3-2 apply wherever the condition exists unless detailed otherwise.

2. See the column schedule on sheet S3-1 for column sizes.

3. Joist bearing elevations (JBE = X'-X") are indicated as elevations above the finished floor reference elevation of 0'-0". Joist bearing elevations are to the top plate.

4. Refer to the architectural drawings for dimensions not shown.

5. It is the contractor's responsibility to coordinate between the architectural and structural drawings. It is not intended that the structural drawings be used independently of the architectural drawings. Any discrepancies, including dimensions, shall be brought to the attention of the architect and engineer before proceeding with the work.

6. Slope roof structure to drain, top. See Arch. for slopes.

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**Roof Framing Notes**

1. See sheets S1-1 thru S3-2 for structural notes and typical details. The typical details on sheets S3-1 thru S3-2 apply wherever the condition exists unless detailed otherwise.

2. See the column schedule on sheet S3-1 for column sizes.

3. Joist bearing elevations (JBE = X'-X") are indicated as elevations above the finished floor reference elevation of 0'-0". Joist bearing elevations are to the top plate.

4. Refer to the architectural drawings for dimensions not shown.

5. It is the contractor's responsibility to coordinate between the architectural and structural drawings. It is not intended that the structural drawings be used independently of the architectural drawings. Any discrepancies, including dimensions, shall be brought to the attention of the architect and engineer before proceeding with the work.

6. Slope roof structure to drain, top. See Arch. for slopes.
ADTEK PROJECT NUMBER: 1116.0005

FOUNDATION PLAN NOTES:
1. SEE SHEETS S1-1 THRU S2-2 FOR STRUCTURAL NOTES AND TYPICAL DETAILS. THE TYPICAL DETAILS ON SHEETS S1-1 THRU S2-2 APPLY WHEREVER THE CONDITION EXISTS UNLESS NOTED OTHERWISE.

2. PROVIDE A P Concrete Slab on Grade with WWF per the Structural Notes on S1-1. See the Plan for the Top of Slab Elevation. The Top of Slab Elevation is indicated on the plan thus: (EL. = X'-X")

3. C.J. Indicate a control joint in the Grade Slab. See Details 10, S2-1 and 11/2/S2-1.

4. See the Plan for Top of Wall Footing and Column Footing Elevations. Top 10" Interior Column Footings shall be 8" below finished floor elevation unless noted otherwise.

5. Bottom of all Exterior Footings shall be a minimum of 2' 6" below finished exterior grade elevations unless noted otherwise. Coordinate Elevations with the Approved Site Plan. The Top of Footing Elevations are indicated on Plan. Bottom of Footing shall be a minimum of 8' below Finished Exterior Grade, whichever is deeper. Footing Elevations are for biding purposes only and may have to be adjusted based on field conditions encountered during excavation.

6. The Top of Pier Elevation shall be a minimum of 6" below the Top of Floor Slab or the Top of Exterior Grade Elevation, unless noted otherwise. Piers shall not project beyond the outside face of the exterior wall.

7. See the Typical Wall Footing at Utilities Details 4-5 on sheet S2-1. Step all Wall Footings as indicated or required below underground utilities per Details 1 and 4/S2-1. The Contractor shall verify the Inverted Elevations of all Utilities with the Top of Footing Elevations Shown. Coordinate all Utility Locations with Site, Plumbing, Electrical, and Mechanical Drawings. The Symbol ----- Indicated a utility crossing a Wall on the Plan. Utilities are shown on this Drawing as an effort to aid in the Coordination of Trades. It is not intended to be a complete representation of all Utilities.

8. The Symbols C1, P1, and F4.0 on the Footing Refer to Designations in the Column, Pier and Footing Schedules Located on Sheet S3-2.

9. Refer to the Architectural Drawings for Dimensions Not Shown.

10. It is the Contractor's Responsibility to Coordinate Between the Architectural and Structural Drawings. It is Not Intended that the Structural Drawings be Used Independently of the Architectural Drawings. Any Discrepancies, Including Dimensioning, Shall be Brought to the Attention of the Architect and Engineer Before Proceeding With the Work.

11. Demo Existing Concrete Slab on Grade and Replace.

12. Saw Cut and Remove Existing Concrete Slab on Grade as Required for New Work. Patch Slab on Grade as Required to Match Existing.
ROOF FRAMING NOTES

1. SEE SHEETS S1-1 THRU S3-2 FOR STRUCTURAL NOTES AND TYPICAL DETAILS. THE TYPICAL DETAILS ON SHEETS S1-1 THRU S2-2 APPLY WHEREVER THE CONDITION EXISTS UNLESS DETAILED OTHERWISE.

2. SEE THE COLUMN SCHEDULE ON SHEET S3-2 FOR COLUMN SIZES.

3. JOIST BEARING ELEVATIONS (J.B.E = X'-X") ARE INDICATED AS ELEVATIONS ABOVE THE FINISHED FLOOR REFERENCE ELEVATION OF 0'-0".

4. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. IT IS NOT INTENDED THAT THE STRUCTURAL DRAWINGS BE USED INDEPENDENTLY OF THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES, INCLUDING OMISSIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.

6. SLOPE ROOF STRUCTURE TO DRAIN, TYP. SEE ARCH. FOR SLOPES.
Option 1

Low End Bearing (1¾" Min. Bearing Req'd)

Option 2 - Birdsmouth

Beveled Web Steepliner
EA. Side of I-Joist Web

I-Joist Flange Must Be Fully On Pl. Birdsmouth
Cut Must Not Overhang Inside Face of Pl.

I-Joist to Bearing Plate Detail

Note:

1. 8d Nail EA. Side

NOTE:

1. 8d Nail EA. Side

Shear Transfer Nailing:
Use Connections Equivalent to Sheathing Nail Schedule.

Beveled 2x4 Block
Per Arch
2'-0" Max.
4'-0" Min.

NEW Lintel

Not to Scale

Section

Not to Scale

1 2 3 4 5

SS-1

SS-1

SS-1

SS-1

SS-1