Commissioners:
Patrick Gallagher (Chair)
Kevin Whipple (Vice Chair)
Sharon Blandford
Andrew Bramlett
Rachel Butler

Historic Preservation Commission
Meeting Agenda
February 21, 2025 8:00 AM
Council Chambers
(2529 J.O. Stephenson Avenue, Kennesaw, GA 30144)

This meeting may be accessed in-person or by using the following link: https://www.kennesaw-ga.gov/publicmeetings/.

HPC Application Acronyms:
Certificate of Appropriateness (COA), Certificate of Appropriateness Administrative (COAA), Central Business District (CBD) project and Public Arts Exhibit (PA)

1. **Call to Order / Roll Call**
2. **Approval of the Meeting Minutes**
   A. Approval of Meeting Minutes: January 17, 2024
3. **Financial Report**
4. **Old Business**
   A. **Exterior Renovation (Alteration): 2908 Moon Station Rd**
   Consideration of approval of a Certificate of Appropriateness application submitted by Kevin Lares for Arturo Paella Wine & Tapas Restaurant for an alteration of the historic structure located at 2908 Moon Station Rd. Said alterations include a new roof, repairing and adding new siding, installing new gutters, constructing a pergola and adding landscaping. Case #COA2025-01

   B. **Exterior Renovation (Alteration): 2981 North Main Street**
   Consideration of approval of a Certificate of Appropriateness application submitted by Orlando Orochena for an alteration of the historic structure located at 2981 North Main Street. Said alteration includes the addition of two dormers to the roof and the removal of the two unsafe chimneys for an attic renovation. Case # COA2025-02
5. **New Business**
   A. **Addition: 2982 North Main Street**

Consideration of approval of a Certificate of Appropriateness application submitted by Andrew Mackey for an addition to the existing house located at 2982 N. Main Street. Case #COA2025-04

B. **Central Business District: 2615 & 2681 South Main Street**
Consideration to review a Central Business District (CBD) project application to construct a mixed-use development consisting of multi-family apartments and 2,500 sq. ft. of retail located at 2615 & 2681 South Main Street (Parcel # 20016700140 & 20016700990). Case #CBD2025-01

C. **Landscaping: 2966 North Main Street**
Consideration of a Certificate of Appropriateness application submitted by David Shelton for the replacement of a trident maple tree with a dogwood tree at 2966 N. Main Street. Case #COA2025-05

6. COAA Approval by City Staff and HPC Chair

A. COAA2025-01 - 2926 Lewis St

7. Discussion

8. Public Comments

9. Staff Comment

A. Updates on the Locally Funded Survey

1. Introduction of students from the Public History Program at Kennesaw State University (KSU)

10. Adjourn

The next scheduled meeting of the Historic Preservation Commission will be Friday, March 21, 2025 at 8:00 a.m.

NOTICE: Any person who desires to appeal any decision from this meeting will need a record of the proceedings, and for the purpose may need to ensure that a verbatim record of the proceedings is made which includes the testimony and evidence upon which the appeal is based. The Agenda is designed to make more efficient use of the HPC's time. It is not designed to curtail discussion or input. If you need special accommodation to attend or participate in our meetings, please contact City Hall at least 24 hours in advance of the specific meeting you are planning to attend.

MINUTES OF HISTORIC PRESERVATION COMMISSION MEETING
CITY OF KENNESAW
Council Chambers
(2529 J.O. Stephenson Avenue, Kennesaw, GA 30144)
January 17, 2025
8:00 AM

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1. Call to Order / Roll Call

Chairman Whipple called the meeting to order at 8:00 a.m.
Roll Call: Rachel Butler, Andrew Bramlett, Patrick Gallagher, Sharon Blandford, Zach Buffington
Staff Present: Darryl Simmons (Planning & Zoning Administrator), Chanelle Campbell (Assistant Zoning Administrator & City Planner), and Rebecca Goldstein (Community Development Administrative Assistant)
Speakers Present: Kevin Lares (Applicant), Scott Banks (Building Services Director), Orlando Orochena (Property Owner / Applicant), Ricky Stewart (Public Works Director)

2. Election of Officers

Chairman Whipple nominates Patrick Gallagher as Chair.
Vote taken, Patrick Gallagher is declared elected unanimously, as Chairman.

Commissioner Blandford nominates Kevin Whipple as Vice Chair.
Vote taken, Kevin Whipple is declared elected unanimously, as Vice Chairman.

3. Approval of the Meeting Minutes

A. Approval of Meeting Minutes: December 20, 2024

Chairman Whipple called for a motion to approve the meeting minutes from December 20, 2024.
Motion to approve the meeting minutes from December 20, 2024 by Commissioner Blandford.
Seconded by Commissioner Bramlett.
Chairman Whipple proceeded with a roll call for approval of the meeting minutes.
Vote taken. Motion unanimously approved 5-0. Motion carried.

4. Financial Report

Mr. Darryl Simmons introduced the financial report. As of December 30, 2024, there have been no new expenditures. $23,398 is the remaining balance in the collected revenues and donations, specifically earmarked for use by the Historic Preservation Commission. In the Planning and Zoning budget, $1,200 is set aside for travel expenses for training and networking opportunities for members of the HPC to travel within Georgia. There is an education and training budget of $3,700 and a historic preservation general earmark of $1,000 for additional expenses.

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Chairman Whipple called for a motion to approve the financial report.
Motion to approve the financial report by Vice Chair Gallagher.
Seconded by Commissioner Blandford.
Chairman Whipple proceeded with roll call for approval.
Vote taken. Motion unanimously approved 5-0. Motion carried.

5. New Business

A. **Exterior Renovation (Alteration): 2908 Moon Station Road**
Consideration of approval of a Certificate of Appropriateness application submitted by Kevin Lares for Arturo Paella Wine & Tapas Restaurant for an alteration of the historic structure located at 2908 Moon Station Road. Said alterations include a installing a new roof, repairing and adding new siding, installing new gutters, constructing a pergola, and adding some landscaping. Case # COA2025-01

Mr. Darryl Simmons presented this item. This is an exterior alteration for 2908 Moon Station Road. The application is for the renovation of the historic structure, including installing a new roof, repairing and adding siding, installing new gutters, constructing a pergola, and adding some landscaping to the property. The property is located in the big shanty village historic district. There is currently a stop work order for the property due to the building's condition.

Mr. Scott Banks (Building Services Director) explained the reason for the stop work order posted on the property. The applicant came to the Building Services department with a request to remove interior elements to view the condition of the structure's foundation and determine the cost and scope of repairs needed for the foundation to comply with commercial building standards. It was the understanding of the building services department that the applicant would come back and apply for another permit in order to do any additional work. The applicant continued work beyond the scope of the initial permit, including removing the two chimneys on either side of the historic structure. While the chimneys were likely dangerous and in poor condition, the removal was completed without a permit and the building was left open and vacant. Citations were issued for working without a permit and for being open and vacant.

Mr. Kevin Lares (Applicant) stated he spoke with Mr. Banks about the City's recommendation to obtain an engineer's letter for the chimneys because they were separating from the building and presented a hazard. In the process of obtaining the letter from the engineer, the building owner went on the property to complete some interior demolition and removed the chimneys despite the contractor's instructions to wait until proper documentation was obtained. Mr. Lares has the letter from the engineer regarding the chimneys. Mr. Lares's intent is to continue with the permit process to build or rebuild what is currently on the property and notes that they also intend to rebuild the chimneys as they were previously.

Chairman Whipple asked about the extent of siding removal and what material would be used. Mr. Lares responded that they would try to repair as much siding as possible

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and replace what cannot be repaired, including additional siding for a bathroom addition. He stated that the siding material will be wood.

Chairman Whipple asked if the scope of the project included new gutters and downspouts. Mr. Lares stated that they would be installing new roofing gutters and downspouts.

Chairman Whipple asked if the roof would be an architectural shingle roof. Mr. Lares confirmed the roof would be an architectural shingle roof.

Chairman Whipple inquired about further details on the replacement of the existing chimneys. Mr. Lares stated the chimney replacements would be done with all new masonry as the existing bricks were crumbling and could not be reused.

Chairman Whipple asked about the engineer's letter and whether the letter specified that the chimneys were recommended for demolition and reconstruction due to their structural integrity and imminent danger. Mr. Lares confirmed.

Chairman Whipple asked what additions to the structure would be made aside from the roof, siding, gutters, and chimney replacements. Mr. Lares stated that a pergola and an exterior bathroom addition would be added to the structure. Vice Chair Gallagher asked if the roofline on the exterior bathroom addition would match the existing roofline. Mr. Lares confirmed.

Vice Chair Gallagher referenced the applicant to Section 6.6.01 on architectural details of the Design Guidelines, which states additions to the building must be period specific. He expressed concern that the pergola was not period specific to the historical setting of the building. Mr. Lares stated he knew the pergola materials have to be fire retardant but needed to know if it is possible or not to add the pergola before designs were finalized. Commissioner Butler asked if the pergola was tied to the building. Mr. Lares stated that the pergola would be independent and not tied to the existing building.

Commissioner Bramlet asked if the archway on the main entrance was also detached from the building. Mr. Lares stated that the archway would be attached to the building.

Commissioner Blandford commented that the existing chimney had a different shape from the proposed chimney replacement design.

Vice Chair Gallagher asked if there was a full landscaping plan showing the types of plantings and locations. Mr. Lares responded that they do not have a landscaping plan. Currently, they intend to clean up the existing landscaping and keep the trees on the property.

Vice Chair Gallagher asked if the applicant was planning on adding a front patio area with seating, and if so, what material would be used for the patio. Mr. Lares confirmed a front patio was planned and that gravel will be used. He also stated that they planned to

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use gravel for the pergola floor.

Chairman Whipple asked if the bathroom addition would be clad in a similar siding to match the siding on the existing building. Mr. Lares confirmed.

Chairman Whipple asked if the pergola would be free standing, and if so, what material would be used. Mr. Lares stated that they know from the fire marshal that the material needs to be fire resistant. They put on the plans that the exact material of the pergola was to be determined. Chairman Whipple asked if the applicant intended to complete the pergola at the same time the rest of the work on the historic structure was being completed and if he intended for the work to be on the same permit. Mr. Lares confirmed.

Chairman Whipple stated that the Commission would struggle to make a decision without defined decisions on building materials and actual construction plans. Issues noted included whether the applicant could find a wood siding to match the existing siding, the material for the pergola, and the shape of the chimneys. Mr. Lares stated that there is a company in downtown Atlanta that makes a matching siding with the caveat that the product might be thinner than the existing siding. He stated that he has to go to the company with a piece of the current siding to ensure the materials match. Mr. Simmons stated that the Commission can consider a condition to bring final construction plans back to the Historic Preservation Commission (HPC), including a correct rendering that shows the pergola as free standing instead of tying into the building.

Mr. Banks stated that in order to complete the court case, he will require the applicant to hire an engineer to do some internal and external bracing to safeguard the structure. He stated he would like to give the applicant permission for the supports without needing to submit an additional request to the HPC. Chairman Whipple stated that the HPC would include that information in their recommendations with the intent to secure the structure and prevent any further degradation or damage.

Mr. Lares stated that they have a structural plan for supporting the structure. His main concern is the outside of the house because after removing the floor, they discovered foundation missing from some areas of the house. Exterior supports would make the structure safe. Mr. Banks agreed with the applicant and recommended allowing a quarter or footing to be temporarily redone for structural integrity until HPC approves a plan.

Chairman Whipple asked for clarification on the style and specifications for exterior light fixtures noted in the plan. Mr. Lares responded that they intend to install carriage type lamps on the outside on the front of the building and a chandelier on the inside of the archway, but noted the design was not finalized.

Chairman Whipple informed the applicant that the HPC's jurisdiction is solely the building exterior and thus the Commission required detailed information about exterior

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materials, exterior massing, and other exterior elements as possible. He also recommended the applicant reference the HPC Design Guidelines.

Commissioner Bramlett asked if the applicant had any details on the signage for the building. Mr. Lares responded that the sign would likely be close to the sidewalk and that the owner was working with the sign company to get a simple design. Chairman Whipple asked the applicant to note that the sign will be separate from the building and free standing on future plans. He also noted that the sign will be under a separate permit and require a separate application. Commissioner Butler asked the applicant to reference section 6.9 of the Design Guidelines when designing the sign for the property.

Commissioner Blandford commented that the arch is shown on the elevation without details. She asked if the arch was attached to the building. Mr. Lares responded that the arch was attached to the structure. Commissioner Blandford stated that more details for the arch would also be needed in subsequent plans because the arch does not align with the historical look of the building.

Chairman Whipple asked if mechanical improvements would be made to the building, and if the mechanical units were noted on the plans. Mr. Lares stated that mechanical improvements and unit locations are notated on the structural plans. Chairman Gallagher asked if exterior mechanical units would be located at the rear of the building and screened. Mr. Lares confirmed and stated that the units are currently on the side but would be moved to the back of the structure.

Commissioner Blandford commented that the existing structure has no roof vents. She asked the applicant to confirm that the drawings show a roof vent on the front and on the restroom addition. Mr. Lares stated there would be roof vents on the front and on the restroom addition. Commissioner Blandford asked if any other vents would be visible from the front. Mr. Lares stated that no other roof vents would be visible from the front.

Mr. Banks recommended that the bracing and shoring be completed with the approval of the building services department. Mr. Lares asked if an application would need to be submitted for that approval. Mr. Banks instructed the applicant to have an engineer submit a plan to the building services department for a minimal building permit. A licensed contractor will be needed to complete the bracing and shoring as a temporary measure. Building services will need to approve the plan and issue a work permit before work is started.

Chairman Whipple called for a motion for the Certificate of Appropriateness application. Motion by Vice Chair Gallagher to approve the exterior renovation with the following conditions:
1. The applicant will return to the Historic Preservation Commission with detailed plan specifications of exterior materials for the siding and roof, and added lighting fixtures for review and approval;

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2. The chimneys will be designed and reconstructed to the existing form, function, shape, and mass to the building line with final review and approval by the Historic Preservation Commission;
3. The pergola will be redesigned and reestablished to be a free-standing structure to the building, and the materials used for the pergola will be presented to the Historic Preservation Commission for review and approval;
4. The applicant will return with a detailed landscaping plan for any site improvements;
5. The applicant will coordinate with and return to the Building Services department with a plan and detailed specifications to shore and brace the building to retain structural stability in the interim as the final plans for the foundation and exterior renovations are completed. This item will be completed as soon as possible to prevent detrimental effect to the structure.
Seconded by Commissioner Blandford.
Chairman Whipple proceeded with a roll call for approval.
Vote taken. Motion approved 5-0. Motion carried to approve the applicant request with conditions.

B. **Exterior Renovation (Alteration): 2981 North Main Street**
Consideration of approval of a Certificate of Appropriateness application submitted by Orlando Orochena for an alteration of the historic structure located at 2981 North Main Street. Said alteration includes the addition of two dormers to the roof and the removal of the two unsafe chimneys for an attic renovation. Case # COA2025-02

Mr. Darryl Simmons introduced this agenda item. This is a Certificate of Appropriateness application for an exterior alteration to the historic structure located at 2981 North Main Street, which include the addition of two dormers to the roof and the removal of two chimneys for an attic renovation. The structure is a contributing structure to the Main Street historic district and is identified as the Wilder House, built in 1919. Pictures of the property's existing conditions, existing homes on North Main Street that show the predominate architectural elements, and the applicant's rendering showing the proposed dormers and chimney removals are included in the agenda packet. Mr. Simmons noted that while the overhang on the front elevation is not present in the rendering, the applicant has confirmed the feature will not be removed.

Mr. Orlanda Orochena (Property Owner / Applicant) stated that the application for the Certificate of Appropriateness was for an attic renovation is to accommodate his growing family. The renovation includes placing two bedrooms in the attic space and constructing dormers to satisfy ceiling height requirements. He informed the commissioners that the porch would remain attached to the house. He also stated that they viewed the chimneys unsafe due to crumbling brick and mortar and wanted to at least remove the chimneys in the attic space. For materials, Hardie Plank siding would be used for the dormer. Mr. Orochena was under the impression that the materials needed to be different for additions but added that if allowed he would match the concrete shingles currently on home's exterior. The paint and roof shingles would match the existing house.

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Commissioner Butler informed Mr. Orochena that additions to the house cannot correlate to the historic building. With an attic renovation, building materials can match the existing house.

Chairman Whipple asked whether the applicant was replacing the siding on the entire house or was only installing new siding on the dormers. Mr. Orochena responded that new siding would be placed on the gabled dormer. Commissioner Blandford asked if the profile on the new Hardie Plank siding would match the 8.25 inch profile on the existing siding. Mr. Orochena stated the current siding material on the house is concrete shingles, but they would match the material if possible. Commissioner Blandford restated her question, clarifying that she was asking if the height of the existing siding would be matched on the dormer. Mr. Orochena confirmed. Chairman Whipple clarified that the size of the reveal between the laps was being discussed. He further explained that historic homes have a much shorter reveal, maybe four or five inches, compared to a new home, which might have a seven inch reveal. He also stated that a stipulations would be that even if the material is not the same, the profile on the siding would need to match.

Chairman Whipple asked if a new roof would be installed on the entire house with materials as presented. Mr. Orochena responded that new roofing would only be installed on the dormers.

Chairman Whipple asked if the chimney removal was integral to the ability to build out the bedrooms. Mr. Orochena responded that it was possible that the dormer could be built around the chimney, but they would like to remove the chimney for safety reasons as his daughter would be in one of the bedrooms. He stated the safety of the structure was his main concern. Chairman Whipple referenced the Design Guidelines which states "Chimney materials and placement are character defining features of historic buildings and must be preserved when feasible. The location of chimneys is essential to house type identification." He stated that the two chimneys are interior to the perimeter of the building and do not have the same character defining form and function as seen with 2908 Moon Station Road. Chairman Whipple also commented that if the application was approved, he would prefer the chimneys remain. Mr. Orochena stated they would be open to keeping the exterior portions of the chimneys on the roof but would like to remove the portion of the structure in the attic to continue with the renovation.

Vice Chair Gallagher expressed apprehension to removing the chimneys, stating that the location and style of the chimneys is a characteristic feature of the Georgian Cottage style structure distinct for early 1900s development in the Georgia piedmont region. He commented that removing the chimneys would remove the historic nature, look, and feel of the property. Vice Chair Gallagher also referenced the Design Guidelines regarding the placement of dormers and stated that while dormers were allowed at side elevation of the roofline, they cannot be a prominent feature and must be in a style typical for the period, He commented that the scale and mass of the dormers are not of a style that would have been prominent at the turn of the century. Vice Chair Gallagher then asked if the applicant had considered using a larger dormer

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and extending to the back to prevent visibility from the street and preserve the characteristic chimneys on either side of the structure. Mr. Orochena argued that the proposed dormers match the size and location of dormers on other houses on North Main Street. He stated that the dormer could be moved to the back of the house, but they wanted to avoid that to allow future solar panel placement on the back roof. He also stated that two bedrooms would not fit in a single dormer. Commissioner Bramlett expressed concern about the chimneys. He also stated that while other houses on North Main Street had dormers, the dormers are a different style and on a different style of house.

Commissioner Butler asked if the dormer was the entire bedroom. Mr. Orochena responded that the dormer would hold most of the bedroom. He stated that the size was mainly for ceiling height and egress but expressed willingness to make the dormers thinner.

Commissioner Butler commented that a double wide window on the dormer and the dormer height was of concern. Mr. Orochena responded that the window could be changed to a single wide window

Vice Chair Gallagher asked if consideration been given to adding an addition to the back of the house instead of renovating the attic. Mr. Orochena stated that the option was considered, but due to the size of the garage, limited space due to neighboring properties, and a desire to keep the backyard, they decided to renovate the attic space.

Mr. Simmons stated that the scale and architectural elements of the front dormer are characteristic of the cottage style. He added that a smaller scale dormer closer to the roofline with a single wide window that matches the front dormer would be more appropriate for the intent of the cottage style architecture. Mr. Simmons also stated that the double chimney was a unique architectural element for this style of house and recommended exploring options to keep the chimney and have it shored up on the inside. For the shoring of the chimneys, the City of Kennesaw's Building Department would guide Mr. Orochena accordingly.

Chairman Whipple summarized the major concerns expressed by the HPC, which includes the proposed chimney removals and the proposed massing of the dormers. He recommended the applicant resubmit an updated design and investigate the potential feasibility of one large dormer in the rear of the structure to accommodate two bedrooms. He stated the HPC did not have concerns regarding the dormer materials. Vice Chair Gallagher agreed, adding that the scale and location of the dormer with respect to the cottage style of the house, and retaining of the chimneys were particularly important.

Mr. Orochena asked if it would be possible to keep the exterior portion of the chimney on the roof and remove the portions inside the attic or if they could remove the chimney and rebuild the exterior portion. Chairman Whipple stated that the interior could be

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structured differently for the attic renovation to flow correctly, but the exterior portion of the chimney must remain. Commissioner Butler expressed that she would like to see the chimney shored up on the inside to keep the brick material. Commissioner Bramlett agreed.

Commissioner Bramlett commented that he prefers the dormers in their current proposed location with the centerline aligned with the chimneys as opposed to pushing the dormers further to the back of the house. Mr. Orochena responded that they would like to keep the dormers on the sides because there is less space on the back roofline. He also stated that they would try to downsize the dormers and keep the chimneys. Vice Chair Gallagher stated that he proposed placing the dormer on the back to allow for a single large dormer screened from view.

Commissioner Blandford sought clarification on the mention of a kitchen addition. Mr. Orochena clarified that the kitchen addition was before his family bought the house. Commissioner Butler sought to confirm that the kitchen addition was on the first floor. Mr. Orochena confirmed.

Chairman Whipple expressed that the HPC wanted to work with Mr. Orochena. The HPC wants families to be able to grow in these historic homes, and it is a challenge the Commission is currently facing.

Mr. Orochena asked for next steps. Chairman Whipple stated that a formal motion would be made. Mr. Simmons explained that the Commission can put a hold or postponement on the application with the understanding that the HPC requires more information. The applicant can continue with the application, but must update the application. Mr. Simmons confirmed with the applicant that 90 days was sufficient time for changes to be made.

Chairman Whipple called for a motion for the Certificate of Appropriateness application.
Motion by Commissioner Buffington to table the application for resubmittal within 90 days to allow the applicant to examine and resubmit alternative locations and size for the dormers, alternatives for the chimney removal, and to reiterate on the revised plans that the front porch will remain unchanged.
Seconded by Vice Chair Gallagher.
Chairman Whipple proceeded with a roll call for approval.
Vote taken. Motion unanimously approved 5-0. Motion carried to table the applicant request.

C. **Landscaping: 2529 J. O. Stephenson Avenue**
Consideration of approval of a Certificate of Appropriateness application submitted by the City of Kennesaw for the removal of six trees for the rebuilding of an ADA parking lot and re-landscaping of City Hall. Case #COA2025-03.

Mr. Simmons introduced this agenda item. This is a landscaping approval for 2529 J.O. Stephenson Avenue, city hall. The consideration for approval of the Certificate of

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Appropriateness was submitted by the City of Kennesaw for the removal of six trees for the rebuilding of an ADA parking lot on the front left side of City Hall and the re-landscaping of City Hall. This is a set project regarding the renovation and beautification of the City Hall facility.

Commissioner Buffington recused himself from this agenda item as his firm was selected for on call engineering services for the City of Kennesaw. The contract was put on the consent agenda during the work session on January 13th.

Mr. Ricky Stewart (Public Works Director) presented the specifics of the Certificate of Appropriateness application. This project is a pedestrian and ADA safety project. Currently the smaller parking lot to the east side of city hall cannot be used as an ADA parking lot due to root intrusion from the two oaks on Lil General Cloggers Lane. Tree removal is required to rebuild the parking lot. On the western side of City Hall, alterations will be made because the steps leading from the employee door to the parking lot have irregular steps. The last step is about three inches taller than the other steps and has resulted in falls. The sidewalk connection in that location will be removed and a planter will be put in place to act as a barrier to direct City Hall foot traffic to the street sidewalk. The sidewalk brick, which is a tripping hazard and maintenance challenge, will also be replaced. The intent is to improve pedestrian traffic, improve the ADA accessibility and improve the landscaping in front of City Hall.

Chairman Whipple asked about the status of the remaining four trees along J.O. Stephenson Avenue. Mr. Stewart responded that the remaining four trees consist of two dogwoods and two additional oaks. The oaks constantly drop acorns in the fall and have resulted in several slips despite attempts to clear acorns from the sidewalk. The oaks are native oaks. The dogwoods are non-native plantings.

Chairman Whipple asked for a walkthrough of the proposed replanting. Mr. Stewart stated that the plant list included Arborvitae and some shrubs. The Arborvitae would be placed on both sides of the main entrance into City Hall where the monument sign currently stands. Additional width will be added on either side of the monument as it enters the front door because the current sidewalk does not provide sufficient space for a wheelchair. The sidewalk corners will be mitered to widen the sidewalk for wheelchair accessibility.

Commissioner Blandford commented that the rendered plan shows more planting around the new parking area that was not visible on the landscaping plan. She asked what would be planted in the parking lot area. Mr. Stewart responded that some items shown on the rendering are existing plantings from when the parking lot side was relandscaped six or seven years ago. Those plantings include Arborvitae and shrubs.

Commissioner Gallagher commented that the plan shows an overlay on a section of J.O. Stephenson Avenue in front of City Hall, but does not show the current accessibility path on the north side of J.O. Stephenson Avenue or accessibility curving that provides that path to travel from the public right-of-way on the north side to City

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Hall. He asked if those two accessibility features would be restored. Mr. Stewart stated that the features would not be restored. Currently there are three brick paver crosswalks that invites mid-block foot traffic. One has no handicap curb cuts, one has only one handicap curb cut, and the third has a curb cut but no wheelchair ramp. The renovations would direct people to cross at appropriate intersections to travel from the north side of J.O Stephenson Avenue to the south side of J.O. Stephenson Avenue. One crossing was already constructed at Dallas Street. Another will be added along Lil General Cloggers Lane once the ramp is reconfigured to receive from the corner. Vice Chair Gallagher confirmed that the intersections at Dallas and Lil General Cloggers Lane would be accessible. Mr. Stewart confirmed and added that the crossings at the intersection would be safer.

Chairman Whipple commented that no replanting was identified for the removed oaks on Lil General Cloggers Lane. He asked if only grass would be on the corner. Mr. Stewart confirmed that only grass will be on the corner.

Commissioner Bramlett asked if the planters in front of City Hall would be brick or stone. Mr. Stewart responded that the material would be brick as similar as possible to what currently exist along the front of City Hall.

Mr. Simmons commented that when the Community Development department was in City Hall, there were complaints that the two oaks along Lil General Clogger Lane created visibility issue for motorists.

Commissioner Butler commented that according to section 6.11.02 in the Design Guidelines, existing vegetation, when feasible, must be preserved, and new vegetation will be added that complements the historical character of the building. She expressed that while she understands there is a visibility issue, it seemed problematic to not replace the trees.

Vice Chair Gallagher stated he understood the necessity for removing the larger trees. He agreed with Commissioner Butler and expressed that he would like to see some replanting along Lil General Cloggers Lane to complement the prior existence of oak trees in that location. Mr. Stewart commented that replanting on the corner could be replanted, but not necessarily within the sight triangle. He also mentioned that there is a waterline administered by Cobb Water on that corner. Any planting that would reach the size of the existing oaks would not be replanted to avoid damaging the waterline. Commissioner Butler expressed that a smaller tree like the dogwoods being removed for accessibility would be sufficient size, granted they do not interfere with the waterline.

Chairman Whipple stated that the HPC was amiable to removing the trees. He summarized that the project was for the public benefit to address challenges at the front of City Hall. He added that the city should investigate understory plantings the corner of

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Lil General Clogger Lane. Mr. Stewart responded that there could be a consideration for planting on the corner. If planting in that location was not feasible, the city will follow the tree ordinance, where, if the trees cannot be replaced in that area, another suitable location would be used for replanting. Chairman Whipple expressed that the HPC would be amiable to that solution.

Commissioner Blandford commented that the flagpoles are not present on the plan. She asked if there will be a flagpole at the front of City Hall. Mr. Stewart responded that there is currently one flagpole at the Council Chamber entrance. The three flagpoles at the front of City Hall would be removed and two additional flagpoles would be placed at the Council Chamber entrance. The city, state, and US flags would thus all be at the back of City Hall.

Chairman Whipple called for a motion for the Certificate of Appropriateness Application.
Motion by Vice Chair Gallagher to approve with the condition that the City of Kennesaw assess the feasibility of planting along Lil General Cloggers Lane, and if planting in this location not feasible with public safety, the City will relocate planting to another location.
Seconded by Commissioner Bramlett.
Chairman Whipple proceeded with a roll call for approval.
Vote taken. Motion approved 4-0. Motion carried to approve the applicant request with conditions.

6. Discussion

Commissioner Buffington announced that his firm was selected for on-call engineering services for the City of Kennesaw. The contract was put on the consent agenda during the Mayor and Council Work Session on January 13, 2025. This will be his last HPC meeting and he will be submitting his letter of resignation to the Mayor on January 22. Chairman Whipple thanked Commissioner Buffington and expressed that it had been a pleasure serving with him on the HPC.

7. Public Comments

8. Staff Comment

Mr. Simmons stated that staff had a couple of updates. Mr. Simmons thanked the Commissioners for their work and congratulated the new officers for 2025. He also thanked Commissioner Buffington for his service and expressed that he had been an asset to the HPC and staff with his insights.

Ms. Chanelle Campbell provided an update on the HPC Survey. The survey is underway to begin in March. On February 4th, Planning and Zoning staff will be meeting with KSU students and DCA. They will be going to KSU to give a presentation on historic preservation and updating GNAHRGIS. Commissioner Bramlett asked about potentially meeting the students; Ms. Campbell shared that this was in discussion. Letters will also be mailed to properties owners in the historic district to let property owners aware of the upcoming survey.

Draft

9. Adjourn

Chairman Whipple adjourned the meeting at 9:18 a.m.

Draft

Item Report

TO: The Historic Preservation Commission

FROM: Darryl Simmons, Zoning Administrator

DATE: February 21, 2025

TITLE: **Exterior Renovation (Alteration): 2908 Moon Station Rd**
Consideration of approval of a Certificate of Appropriateness application submitted by Kevin Lares for Arturo Paella Wine & Tapas Restaurant for an alteration of the historic structure located at 2908 Moon Station Rd. Said alterations include a new roof, repairing and adding new siding, installing new gutters, constructing a pergola and adding landscaping. Case #COA2025-01

Summary:

Recommendation:

Fiscal Impact:

Attachments:
1. COA2025-01_2908 Moon Station Rd_Application Packet

CERTIFICATE OF APPROPRIATENESS APPLICATION

□ Application Fee: $50.00 □ Demolition Fee: $150.00

All new construction and exterior remodeling of buildings within the Kennesaw Historic District shall be subject to the architectural review and approval of the Historic Preservation Commission (**HPC**). HPC approval is also required for Kennesaw Downtown Development Authority (KDDA) Façade and Signage Grants.

Darryl Simmons, Planning and Zoning Administrator for the City of Kennesaw will meet with you to direct your application process. To make an appointment, please call 770-590-8268.

A Certificate of Appropriateness (COA) shall be obtained from the **HPC** prior to the issuance of a building permit. The **HPC** shall consider a variety of issues in rendering its decision including, but not limited to the following:

a. The surrounding development
b. The best interest of the community
c. Previous studies undertaken by the City as well as the standards contained herein.

Application for signage to include

□ Material Specifications
□ Drawing of Sign with Dimensions and Colors to be used
□ Façade detail of fonts

Application for landscaping to include

□ Variety of trees and shrubs
□ Indicate size and location of plantings

Application for exterior renovations and additions to include

□ Existing conditions site plan depicting location of addition in relation to the existing property
□ Existing floor plan of building
□ Proposed floor plan of building including portions not to be altered
□ Elevations of all exterior façade of addition including relationship to existing building
□ Detail of trim to be utilized on façade
□ Manufacturer's specifications for windows, doors and lighting that will be installed-including a photograph or sketch
□ Photographs of all existing facades; existing structures adjacent to property; and views from the façade to be altered

CONSISTENT WITH THE UNITED STATES CONSTITUTION AND THE RELIGIOUS LAND USE AND INSTITUTIONALIZED PERSONS ACT OF 2000, THE CITY OF KENNESAW DOES NOT DISCRIMINATE ON THE BASIS OF RELIGION IN THE APPLICATION OF ITS LAWS, POLICIES, OR PROCEDURES, INCLUDING THE APPLICATION OF ITS LAND USE REGULATIONS AND ZONING LAWS.

Under the Religious Land Use and Institutionalized Persons Act of 2000 ("RLUIPA"), no government, including the City of Kennesaw, may apply its zoning or land use laws in a manner that imposes a substantial burden on the religious exercise of a person, including a religious assembly or institution. RLUIPA also provides that no government, including the City of Kennesaw, may apply a land use regulation in a manner that treats a religious assembly or institution (a church, for example) on less than equal terms than a nonreligious institution or assembly (a day care center or movie theater, for example). Finally, RLUIPA provides that no government, including the City of Kennesaw, may impose or implement a land use regulation in a manner that discriminates against a religious assembly or institution.

If you believe that the City of Kennesaw, or any other local government or municipality, has discriminated against you in the implementation of its zoning or land use laws, please contact the United States Department of Justice.

United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

1. **NAME OF APPLICANT: _Kevin Lares for Arturo Paella Wine & Tapas Rest.**
   Owner
   Other
   Other, please specify _Agent, owner representative and builder_____

   APPLICANT MAILING ADDRESS: [redacted]

   30144 _____

   (Home#)_____ (Cell#) [redacted] (Email) [redacted]

   PROPERTY ADDRESS: 2908 Moon station Rd.,NW, Kennesaw, Ga 30144

   Land Lot 138 Tax Parcel 20013801440 Lot Size 0.26 +/- acres

   Current zoning on property: Commercial_____

2. **NAME OF ATTORNEY OR REPRESENTATIVE:**

   Kevin Lares_____

   (Home#)_____ (Cell#) [redacted] (Email) [redacted]

   NAME OF OWNER: Arturo Yzaguirre_____

   (Home#)_____ (Cell#) [redacted] (Email) [redacted]_

3. **ACTIVITY**

New Construction	□ Exterior Architectural Features
Demolition	□ Exterior Environmental Feature Change
Awnings	□ Moving a Building
□Fence	□ Sign Erection
Ξ Repairs or Alterations □	□ Sign Placement *
Landscaping	*** (NOTE – Business License required before signage installation)**

Please describe your proposed work as simply and accurately as possible. Use the attached submittal criteria checklist to guide you in your description. Be sure to indicate materials to be used. Accurate drawings and photographs are required. (Use extra sheet, if necessary.) **Signed and sealed drawings from an architect, engineer or other design professional are required when construction of a new building, alterations and/or additions to existing structures are being made (Code 800.14.1).**

Interior remodel of an existing building, to include new interior wall layout, drywall on walls and ceilings, new floors, HVAC, plumbing for new restroom and kitchen,electrical. Paint inside and .out. Repair and/por add new siding to match existing, new roof, gutters, new exterior pergola, some landscaping.

Important: This form must be completed before the Historic Preservation Commission will consider the approval of any material change to a property within a Historic District. This form, along with supporting documents must be filed with 1 Original (4) copies including color photos (excluding models, material and color samples, where one (1) is sufficient). The application and supporting documents are to be placed on a **CD in a PDF format**.

Incomplete applications will not be docketed for consideration by the Historic Preservation Commission.

The City of Kennesaw will not issue any permits until 7 days after the Commission's decision, per City Ordinance No. 2003-51, Section Two. 800.20 –Any person or persons jointly or severally aggrieved by any decision of the Kennesaw HPC may appeal to the Mayor and City Council. The appeal must be filed within 7 days of the decision of the Commission and must be made by written petition delivered to the zoning administrator. The appeal shall be on the application exactly as presented to the commission.

Kevin Lares 01/10/2025

Signature of Applicant **Date**

01/10/2025

Signature of Owner **Date**

(If different from applicant, consenting to work to be performed on said property.

CERTIFICATE OF APPROPRIATENESS

APPROVAL SIGNATURES

_____

Darryl Simmons (Application Deemed Complete)
Planning & Zoning Administrator Date: _____

_____

(Application Administratively Approved)
HPC Chair Date: _____

☐ GRANTED
☐ DENIED Reason for denial _____
☐ REQUIRES HPC APPROVAL

Historic Preservation Commission consideration:

HEARING DATE:_____

ACTION BY COMMISSION:

☐ GRANTED

☐ DENIED

APPROVED WITH CONDITIONS:

_____

_____

DENIED: Reason for denial

_____

_____

(May re-submit within 60 days)

POSTPONED/TABLED_____

_____

Signature, Historic Preservation Commission Date

Upon Administrative Approval scan and send document to Commission for review

MAYOR
Derek Easterling

City Manager
Jeff Drobney, ICMA-CM

City Clerk
Lea Alvarez, CMC

COUNCIL
Mayor Pro Tem Pat Ferris
Antonio Jones
Madelyn Orochena
Tracey Viars
Anthony Gutierrez

January 17, 2025

Kevin Lares c/o Arturo Paella Wine & Tapas Restaurant
2090 Baker Rd, Ste 304-121
Kennesaw, GA 30144

Subject: Certificate of Appropriateness (COA) Application
2908 Moon Station Rd, Kennesaw GA 30144, Parcel - 20013801440

Dear Mr. Lares,

The City of Kennesaw Historic Preservation Commission (HPC) held their regularly scheduled meeting on January 17, 2025, to review the above-referenced application. This letter is written to inform you of their actions.

Your case sought approval for a Certificate of Appropriateness for repairs/alterations to the historic structure located at 2908 Moon Station Rd. The proposed exterior alterations included installing a new roof, repairing and adding new siding, installing new gutters, constructing a pergola and adding landscaping to the site. The HPC Board voted to **approve the request with the following conditions:**

1. The applicant will return to the Historic Preservation Commission (HPC) with detailed plan specifications of exterior materials for siding, roof, and lighting fixture for review and approval;
2. The chimneys will be designed and reconstructed to the existing form, function, shape and mass to the building line with final review and approval by the HPC Board;
3. The pergola will be redesigned and reestablished to be a free-standing structure to the building, and the materials used for the pergola will be presented to the HPC for review and approval;
4. The applicant will return with detailed landscaping plan for any site improvements;
5. The applicant will coordinate with and return to the Building Services department with a plan and detailed specifications to shore and brace the building to retain structural stability in the interim as the final plans for the foundation and exterior renovations are completed. This item will be completed as soon as possible to prevent detrimental effect to the structure.

Once the plans for exterior alterations have been finalized, please send an email with the revisions to be added to the HPC agenda for review. Resubmittals should be provided to the Planning and Zoning Department at least two weeks prior to the scheduled Historic Preservation Commission meeting.

Please note that the commercial remodel permit submitted under permit #242385 has been voided. A new application will be required; the new submission for the commercial remodel must include approved plans from Cobb County Fire Marshal that includes the design specifications (siding material, roofing material, details for the two chimney replacements, light fixtures, etc.) that have been reviewed and approved by the HPC Board.

If you have questions or concerns, please contact Planning and Zoning at (770) 590-8268 or zoningdept@kennesaw-ga.gov .

Sincerely,

Darryl Simmons

Darryl Simmons
Planning and Zoning Administrator

SHEET INDEX:

A0.0 COVER SHEET
A1.0 AS-BUILT FLOOR PLAN
A1.1 DEMO FLOOR PLAN
A1.2 AS- BUILT ROOF PLAN

A2.0 EXISTING ELEVATIONS

A3.0 PROPOSED FLOOR PLAN
A3.1 REFLECTED CEILING FLOOR PLAN
A3.2 PROPOSED ROOF PLAN

A4.0 PROPOSED ELEVATIONS
A4.1 DETAILS

R5.0 EXTERIOR VIEW 1
R5.1 EXTERIOR VIEW 2
R5.2 EXTERIOR VIEW 3

R6.0 LIFE SAFETY PLAN

S0.0 - S4.0 STRUCTURAL PLANS

M1.0-M4.0 MECHANICAL PLANS

E1.0 - E5.0 ELECTRICAL PLANS

P1.0-P7.0 PLUMBING PLANS

CONSTRUCTION CODES

The following will be the State of Georgia's minimum Standard Construction Codes:

- International Building Code,
  - 2018 Edition, with Georgia Amendments (2018) - (Effective January 1, 2020)
- International Residential Code,
  - 2018 Edition, with Georgia Amendments (2018) - (Effective January 1, 2020)
- International Fire Code,
  - 2018 Edition, with Georgia Amendments (2020) - (Effective January 1, 2020)
- International Plumbing Code,
  - 2018 Edition, with Georgia Amendments (2020) - (Effective January 1, 2020)
- International Mechanical Code,
  - 2018 Edition, with Georgia Amendments (2020) - (Effective January 1, 2020)
- International Fuel Gas Code,
  - 2018 Edition, with Georgia Amendments (2020) - (Effective January 1, 2020)
- National Electrical Code,
  - 2020 Edition, with no Georgia Amendments (Effective February 1, 2021).
- International Energy Conservation Code,
  - 2015 Edition, with Georgia Supplements and Amendments (2020) - (Effective January 1, 2020)
- International Swimming Pool and Spa Code,
  - 2018 Edition, with Georgia Amendments (2020) - (Effective January 1, 2020)
- NFPA 101
  - Life Safety Code 2018 Edition with State Amendments (2020) - (Effective January 1, 2020)

COBB COUNTY FIRE MARSHAL'S OFFICE

REVISION

DATE MAM INIT 02/05/2025

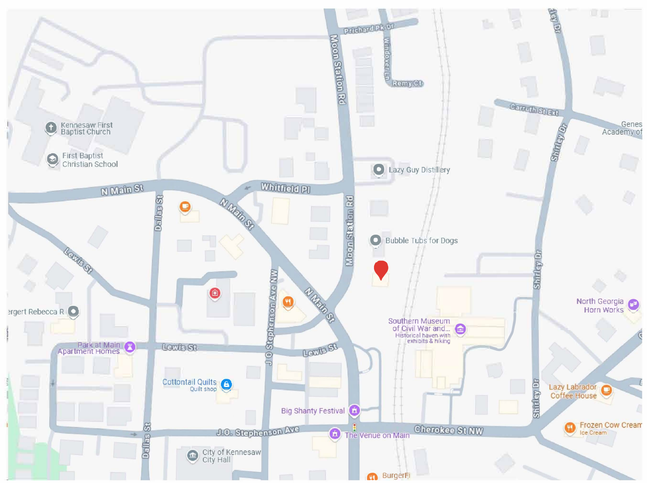
Kitchen hood plans are for
Reference Only
Separate Submittal is required by sub-contractors

GEORGIA REGISTERED 01/22/25 No. PE033659 PROFESSIONAL ENGINEER NURUDEEN O OLAYIWOLA

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS

BY ORDER OF THE FIRE MARSHAL
THIS SET OF PLANS IS REQUIRED TO BE ON THE JOBSITE

VICINITY MAP:



PROJECT ADDRESS:

2908 MOON STATION RD KENNESAW, GA 30144

PROJECT OWNER:

ARTURO YZAGUIRRE

CONTRACTOR & 24 HR-CONTACT:

KEVIN LARES
404-551-0102

SCOPE OF WORK:

OWNER BUILD OUT TO BE A NEW RESTAURANT NAME ARTURO'S PAELLA

TOTAL EXISTING SQUARE FOOTAGE (HEATED AREA): 1,431 SF approx

TOTAL PROPOSED SQUARE FOOTAGE (HEATED AREA): 1,465 SF

TOTAL UNHEATED: 528 SF approx.

HEIGHT OF THE HOUSE: 20 Ft approx.

PROPOSED

OCCUPANCY TYPE: ASSEMBLY, A-2
CONSTRUCTION TYPE= VB
NUMBER OF STORIES: ONE STORY
AREA FOR OCCUPANCY,.... Ae= 1585 SFT
BUILDING FIRE PROTECTION: NOT SPRINKLER
TOTAL NUMBER OF OCCUPANCY= 47 OCCUPANTS.
(NOTE: CALCULATED LOAD DETERMINES THE MAXIMUM PROBABLE OCCUPANT LOAD PER LSC A.7.3.1.2).

SYMBOLS AND KEYS

DOOR AND WINDOW SIZE KEY
2868 = 2'-8" WIDE x 6'-0" HIGH

DRAWING # 1 / SHEET # 3 = SECTION OF ELEVATION

ROOM TITLE
KITCHEN

14.00' = ELEVATION ABOVE SEA LEVEL

1 = REVISION NUMBER

= REVISION CLOUD

RELEASED FOR CONSTRUCTION

MFC REMODELS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

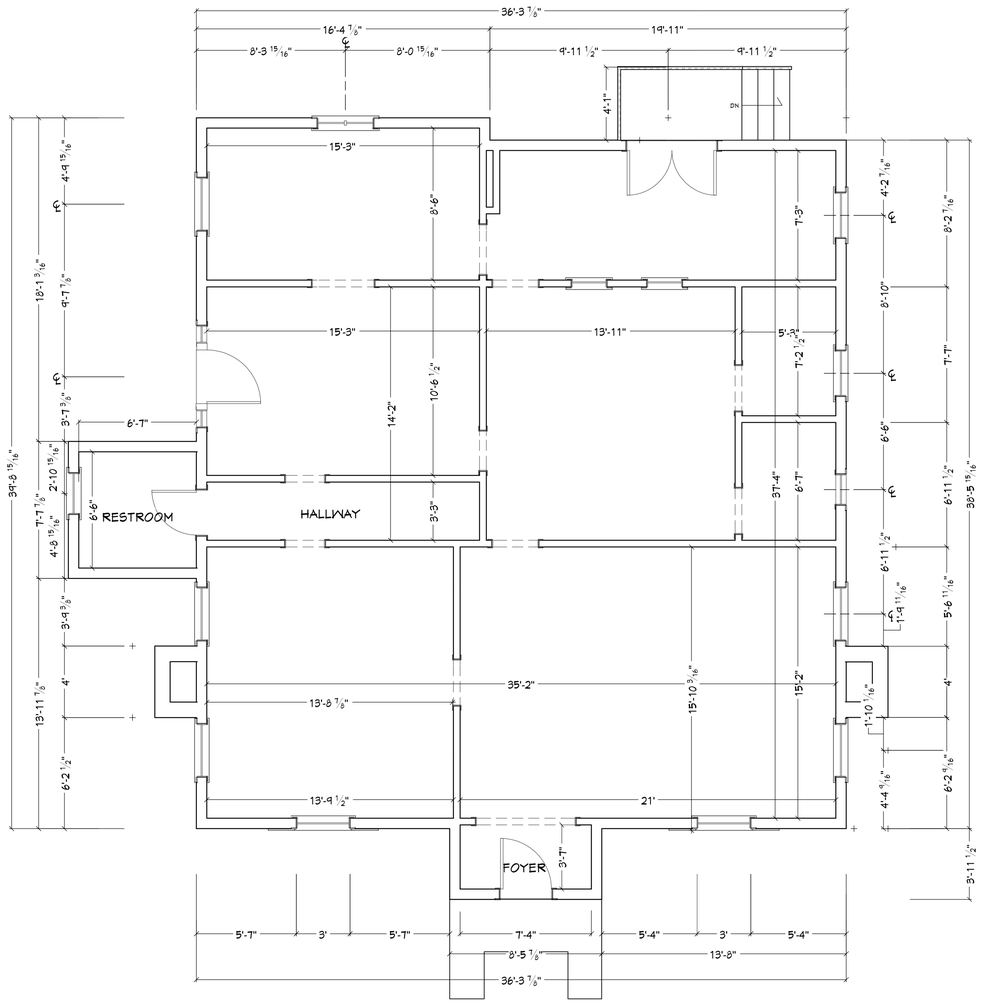
Revision Table
Label | Date | Description

COVER SHEET

DATE:
1/21/2025

SCALE:

SHEET:
A0.0



01
A1.0

AS-BUILT FLOOR PLAN

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

MFC REMODELS

CONTRACTOR:
Kevin Lares
2090 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table

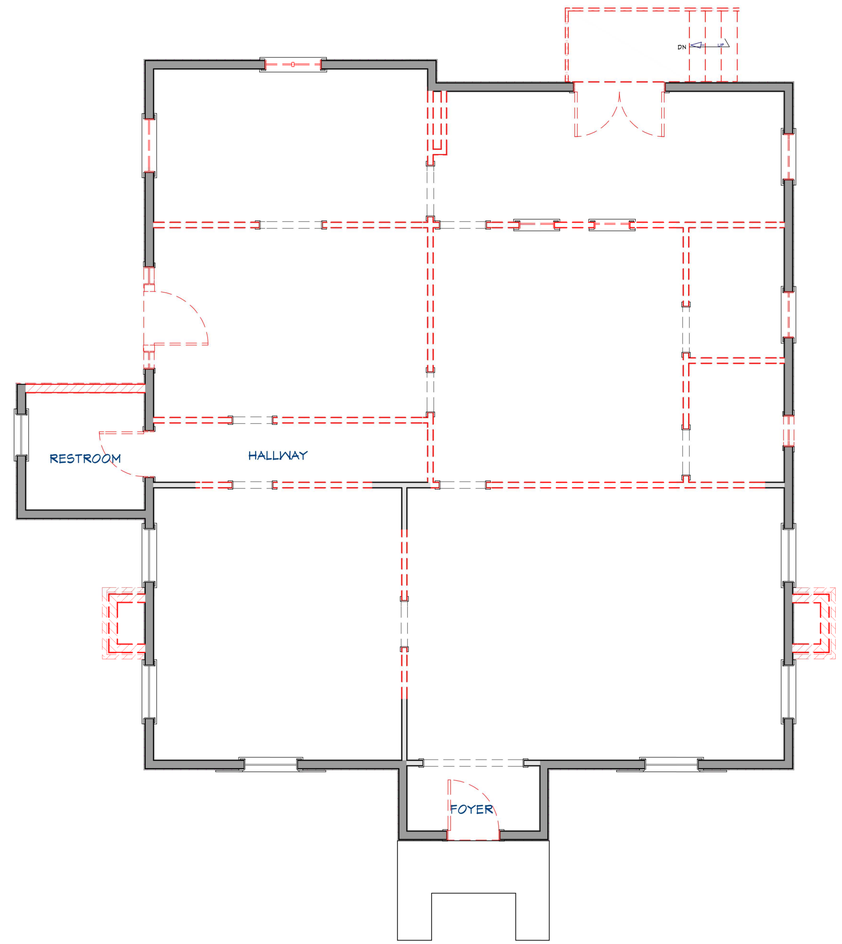
Label	Date	Description

AS-BUILT FLOOR PLAN

DATE:
1/21/2025

SCALE:

SHEET:
A1.0



01
A1.1

DEMO FLOOR PLAN

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ARCHITECT
NURUDEEN O OLAYINKA

MFC REMODELS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

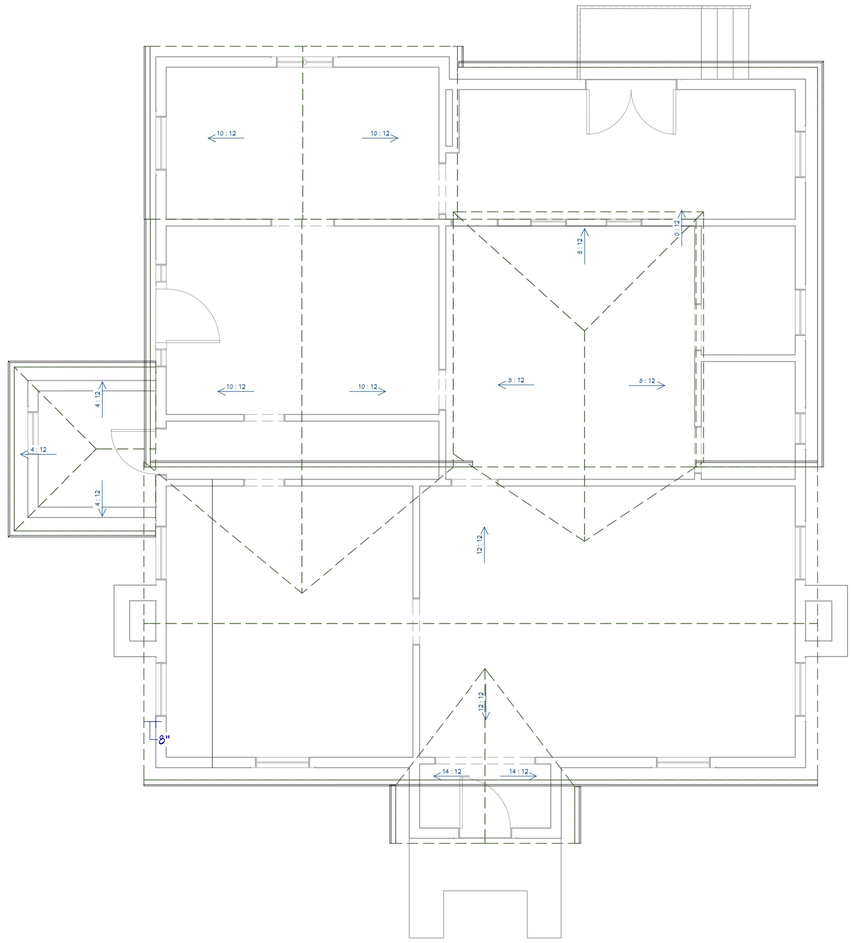
DEMO
FLOOR PLAN

DATE:
1/21/2025

SCALE:

SHEET:
A1.1

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ENGINEER
NURUDEEN O OLAYIWOLA



01
A1.2

AS-BUILT ROOF PLAN

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

MFC REMODELS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

AS-BUILT
ROOF PLAN

DATE:
1/21/2025

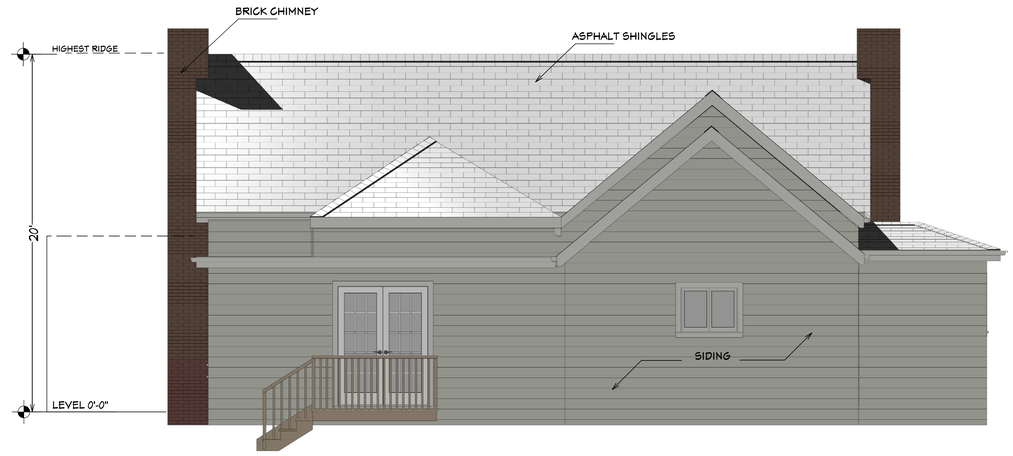
SCALE:

SHEET:
A1.2

01 A2.0

EXISITNG FRONT ELEVATION

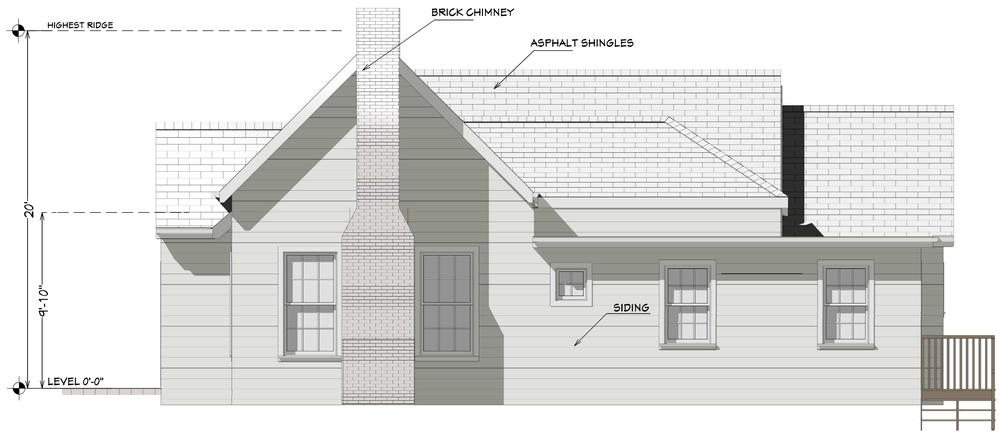
SCALE 1/4 = 1'-0"



02 A2.0

EXISITNG REAR ELEVATION

SCALE 1/4 = 1'-0"



03 A2.0

EXISTING RIGHT SIDE ELEVATION

SCALE 1/4 = 1'-0"

04 A2.0

EXISTING LEFT SIDE ELEVATION

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

CONTRACTOR:
Kevin Lares
2090 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

EXISTING ELEVATIONS

DATE: 1/21/2025

SCALE:

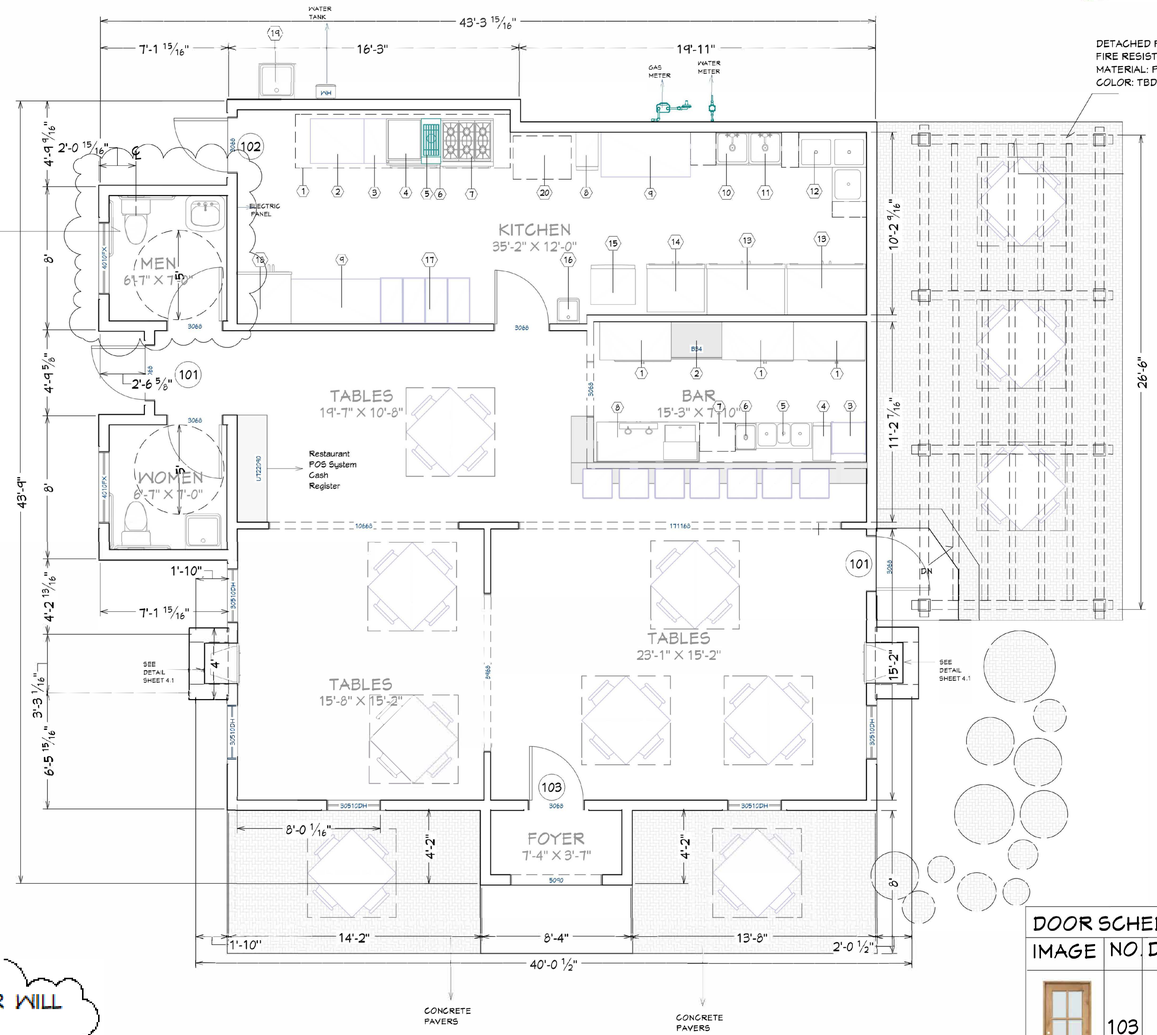
SHEET: A2.0

Kitchen hood plans are for
Reference Only
Separate Submittal is required by sub-contractors

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS

GEORGIA REGISTERED 01/22/25 No. PE033659 PROFESSIONAL ENGINEER NURUDEEN O OLAYIWOLA

THE NEW RESTROOM IS A MIRROR/ COPY OF THE EXISTING ONE



01
A3.0

PROPOSED FLOOR PLAN

SCALE 1/4 = 1'-0"

NOTE: THE EXTERIOR SEATING FLOOR WILL BE CONCRETE PAVERS
THE EXTERIOR LIGHT FIXTURES WILL BE CARRIAGE LIGHTS TYPE.

RELEASED FOR CONSTRUCTION

NOTE:

-"Fire suppression hood system will be installed by 3rd party contractor with approved shop drawings per NFPA-96"
- All dimensions are to be Checked and verified on site

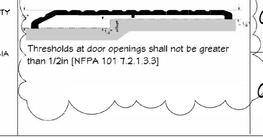
	EQUIPMENT SCHEDULE - KITCHEN	
No	ITEM	SIZE
1	Commercial Hood 12'	120"
2	Countertop cooking 36"	36"x 30" x 24"
3	Gas Floor Fryer 15"	15-3/5"x 30-1/10" x 44-2/5"
4	Griddle Gas 24"	24"x 28-3/5" x 15-1/5"
5	Charbroiler Gas	12" 30.000 BTU
6	Refrigerated Base	36" x 33" x 26-3/5"
7	Range 36" 6 Burners	36" 32,000 BTU
8	Trash can	12"
9	Work Table	60" x 30" x 35"
10	One Compartment Sink	39" x 24" 45"
11	One compartment Sink	21.2" x 21.6" x 45"
12	Corner Sink (3) compartment	57" x 57" x 23-1/2"
13	Reach-IN Freezer	54-2/5" x 31-7/10" x 83"
14	Reach In Refrigerator Desserts	39 3/5"
15	Ice maker, Cube Style	30.2" x 24.45"
16	Hand Sink	15" x 17"
17	Hot Food Serving Counter	60" x 30-5/8" x 34"
18	Mega Top Sandwich	36-5/16" x 34" x 46-5/8"
19	Mop Sink	24" x 24"
20	Possible Diswasher	

	EQUIPMENT SCHEDULE - BAR AREA	
No	ITEM	SIZE
1	Back Bar Cabinet	48" x 28-1/10" x 40"
2	Storage Cabinet 33"	33" x 24"
3	Glass Rack	24" x 21.5" x 33"
4	Trash can	12"x 24"
5	Underbar Sink units	38-1/2" x 18-3/4" x 33"
6	Underbar Sink	14" x 18-1/2" x 33"
7	Ice Bin	24" x 18.5" x 12"
8	Draft Beer Cooler	69" x 27-1/4" x 37-1/8"

DOOR SCHEDULE. INTERIOR DOORS

IMAGE	NO.	DIMENSIONS	MAT'L	HARDWARE SET
	103	36" X 80"	Wood 3/4 Lite Solid Core	03
	104	32" X 80"	METAL DOOR FIRE RATED	03

DOOR HARDWARE SET

NO.	LOCKSET	HINGES	THRESHOLD
03	GYLINDER LEVER LOCKSET	HEAVY DUTY SPRING HINGES AND COMMERCIAL HINGES	 Thresholds at door openings shall not be greater than 1/2in [NFPA 101 7.2.1.3.3]

DOOR SCHEDULE. EXTERIOR DOORS

IMAGE	NO.	DIMENSIONS	MAT'L	HARDWARE SET
	101	36" X 80"	ALUM/ GLASS	01
	102	36" X 80"	METAL FIRE RATED	02

DOOR HARDWARE SET

NO.	LOCKSET	HINGES	CLOSER	DOOR BAR	THRESHOLD
01	DEADLOCKS HEAVY DUTY STRAIGHT BOLT COMMERCIAL DOOR PLATE STYLE PULL HANDLE	COMMERCIAL ALUMINUM STOREFRONT DOOR BUTT HINGES	TOP JAMB MOUNT STOREFRONT DOOR CLOSER 1600 SERIES	PULL BAR WITH PLATE STYLE PULL HANDLE	Thresholds at door openings shall not be greater than 1/2in [NFPA 101 7.2.1.3.3]
02	DEADLOCKING LATCH BOLT WITH 5/8" PROJECTION BRASS CYLINDER AND AND PULL PLATE	COMMERCIAL DOOR HINGES	HEAVY DUTY COMMERCIAL DOOR CLOSER	PANIC HARDWARE PUSH BAR EMERGENCY EXIT DEVICE	Thresholds at door openings shall not be greater than 1/2in [NFPA 101 7.2.1.3.3]

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table		
Label	Date	Description
1	12/19/2024	Threshold

PROPOSED FLOOR PLAN

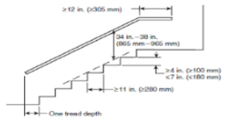
DATE:
1/21/2025

SCALE:

SHEET:
A3.0

Stairs & Handrails

2018 Edition NFPA 101
2010 ADA Standards



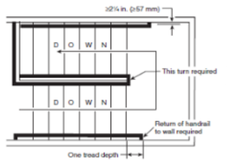


FIGURE A.7.2.2.3.5(a) Riser Measurement with Tread Slope to Front.

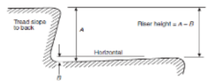
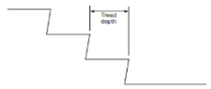
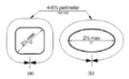


FIGURE A.7.2.2.3.5(b) Riser Measurement with Tread Slope to Back.



Non-Circular Cross Sections



Tread depth shall be not less than 13 in. for elevation changes of 21 in. or less. The presence and location of each step shall be readily apparent. **Section 7.1.7**

Guards in accordance with 7.2.2.4 shall be provided at the open sides of means of egress that exceed 30 in. above the floor or finished ground level below. **Section 7.1.8**

Stair treads and landings shall be solid, without perforations. Stair treads and landings shall be free of projections or lips that could trip stair users. **Section 7.2.2.3.3**

The tread and landing slope shall not exceed ¼ in./ft. **Section 7.2.2.3.4**

Variations in excess of 3/16 in. in the sizes of adjacent treads depths or in the height of adjacent risers shall be prohibited. **Section 7.2.2.3.6.1**

The variations between the sizes of the largest and smallest riser or between the largest and smallest tread depths shall not exceed ⅜ in. in any flight. **Section 7.2.2.3.6.2**

Open risers are not permitted. **ADA 504.3; NFPA 101 Section 7.2.2.3.3.2**

Stairs and ramps shall have handrails on both sides. **Section 7.2.2.4.1.1**

Required guards and handrails shall continue for the full length of each flight of stairs. At turns of new stairs, inside rails shall be continuous between flights at landing. **Section 7.2.2.4.2**

The design of guards and handrails and the hardware for attaching handrails to guards, balusters, or walls shall be such that there are no projections that might engage loose clothing. **Section 7.2.2.4.3**

New handrails on stairs shall not be less than 34 in., and not more than 38 in., above the surface of the tread, measured vertically to the top of the rail from the leading edge of the tread. **Section 7.2.2.4.5.1**

New handrails shall be installed to provide a clearance of not less than 2¼ in. between the handrail and the wall to which it is fastened. **Section 7.2.2.4.5.5**

New handrails shall be continuously graspable along their entire length. **Section 7.2.2.4.5.7**

New handrail ends shall return to the wall or floor or shall terminate at newel posts. **Section 7.2.2.4.5.9**

Guards shall not be less than 42 in. high. **Section 7.2.2.4.6.2**

Open guards shall have intermediate rails (vertical intermediate rails are preferred) such that a sphere 4 in. in diameter is not able to pass through any opening up to a height of 34 in. **Section 7.2.2.4.6.3**

Handrails shall have a circular cross section with an outside diameter of not less than 1¼ in. and not more than 2 in. Shape other than circular shall meet requirements of Section 7.2.2.4.5.6 (1 and 2). **Section 7.2.2.4.5.6**

Table 7.2.2.2.1.1(a) New Stairs

Minimum Width	See 7.2.2.2.1.2
Maximum height of risers	7 inches
Minimum height of risers	4 inches
Minimum tread depth	11 inches
Minimum headroom	6 feet 8 inches
Maximum height between landings	12 feet

01
A3.1

REFLECTED CEILING PLAN

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

GEORGIA REGISTERED 01/22/25 No. PE033659 PROFESSIONAL ARTURO OLAYA YZAGUIRRE

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

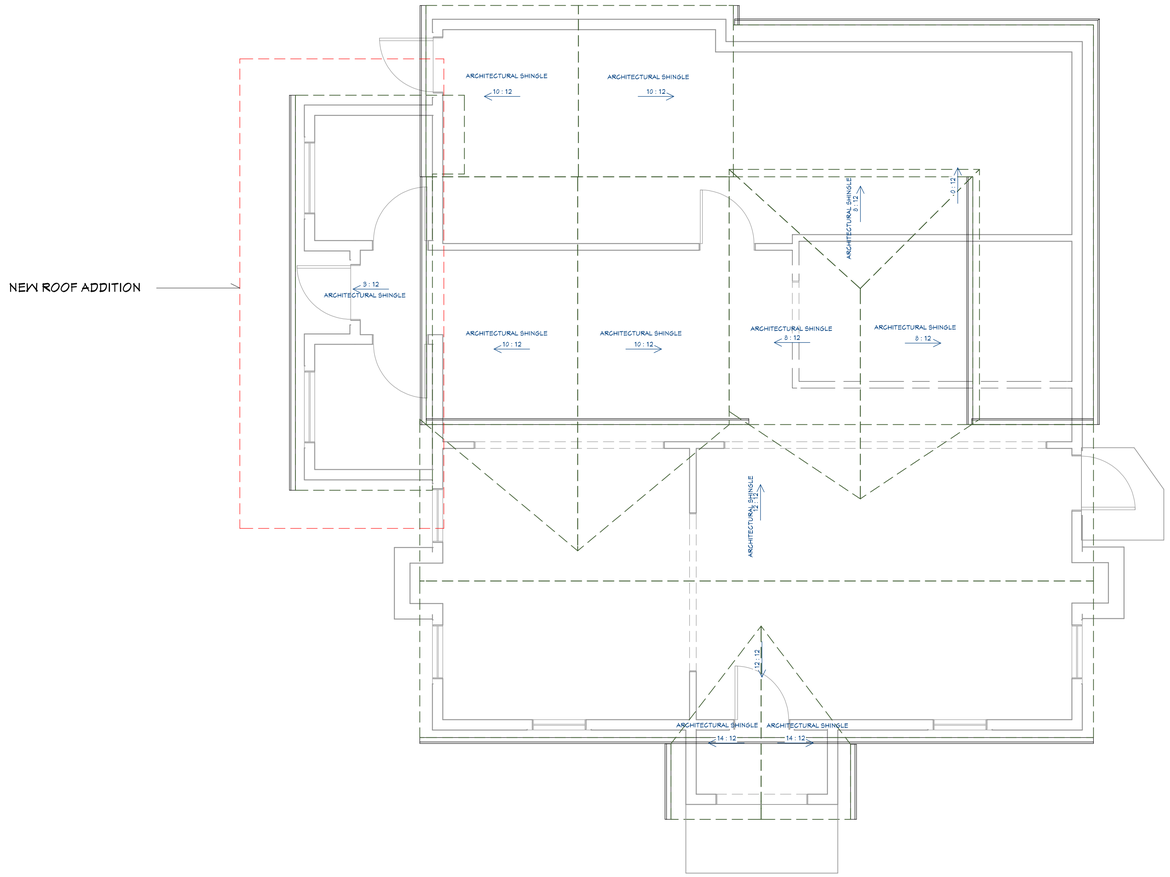
REFLECTED CEILING PLAN

DATE:
1/21/2025

SCALE:

SHEET:
A3.1

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ARTURO OLAYA



01
A3.2

PROPOSED ROOF PLAN

SCALE 1/4 = 1'-0"

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

MTC PLANS

CONTRACTOR:
Kevin Lares
2090 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

DATE:
1/21/2025

SCALE:

SHEET:
A3.2

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS

01
A4.0

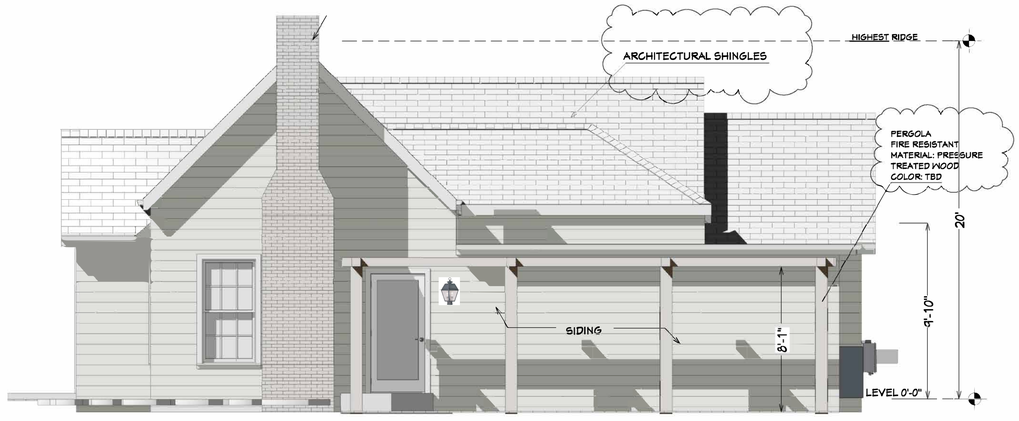
PROPOSED FRONT ELEVATION

SCALE 1/4 = 1'-0"

02
A4.0

PROPOSED REAR ELEVATION

SCALE 1/4 = 1'-0"

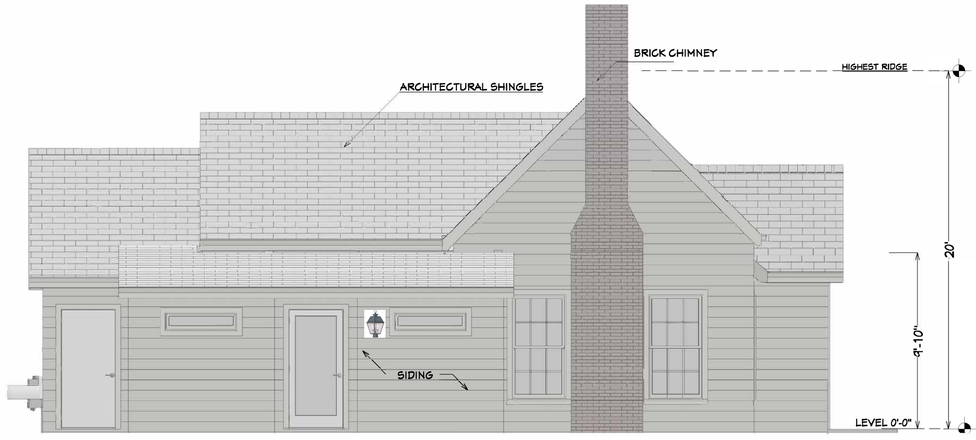


03
A4.0

PROPOSED RIGHT SIDE ELEVATION

SCALE 1/4 = 1'-0"

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS



04
A4.0

PROPOSED LEFT SIDE ELEVATION

SCALE 1/4 = 1'-0"

NOTE: THE STYLE OF THE PERGOLA WILL MATCH THE SAME HISTORIC/CLASSIC STYLE OF THE PROPERTY

NOTE: THE CHIMNEYS WILL BE RECONSTRUCTED TO THE EXISTING FORM, FUNCTION AND SHAPE AND MASS TO THE BUILDING
THE SIDING WILL MATCH EXISTING THROUGHOUT

RELEASED FOR CONSTRUCTION

NOTE: All dimensions are to be Checked and verified on site

GEORGIA REGISTERED 01/22/25 No. PE033659 PROFESSIONAL ARTURO OLAYA

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table

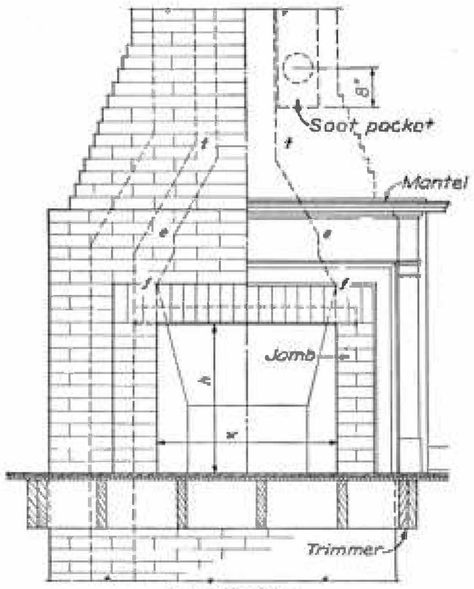
Label	Date	Description

PROPOSED ELEVATIONS

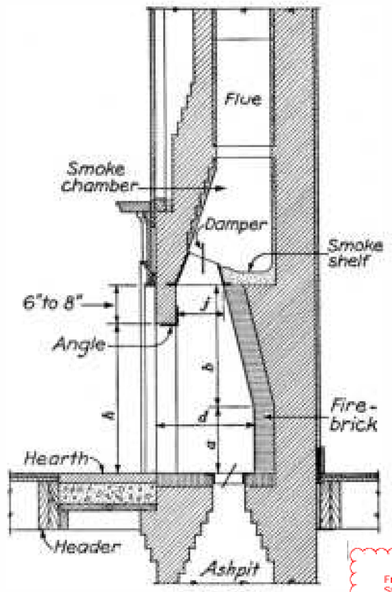
DATE:
1/21/2025

SCALE:

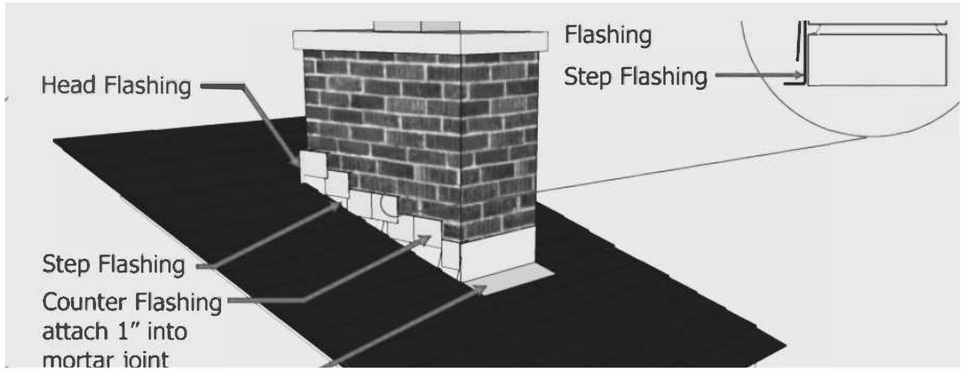
SHEET:
A4.0



ELEVATION

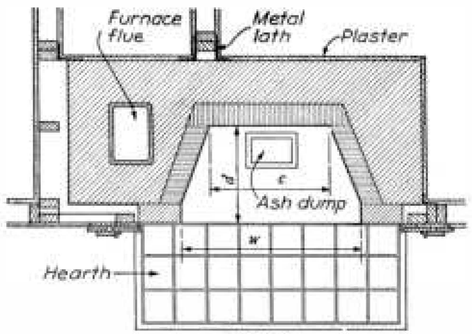


SECTION

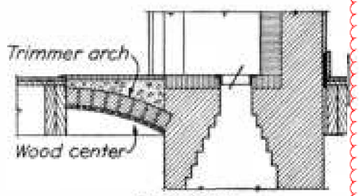


02
A4.1

FIREPLACE, DETAIL OF CONSTRUCTION



PLAN



SECTION
SHOWING ALTERNATE HEARTH

01
A4.1

FIREPLACE, DETAIL OF CONSTRUCTION

NOTE: THE CHIMNEYS WILL BE RECONSTRUCTED TO THE EXISTING FORM, FUNCTION AND SHAPE AND MASS TO THE BUILDING

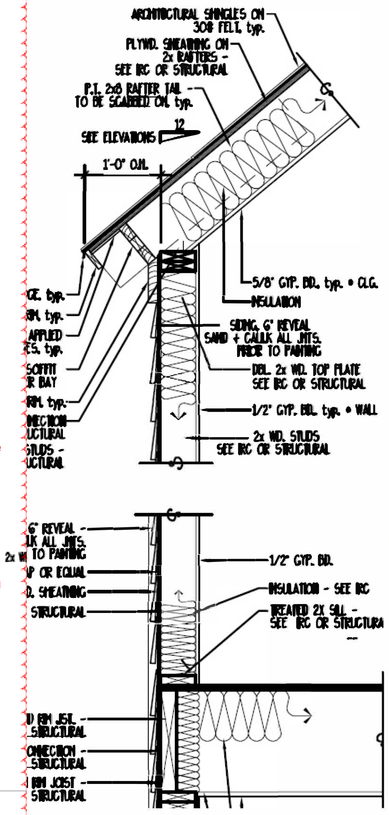
RELEASED FOR CONSTRUCTION

From NFPA 211 there is only one section for using wood in "Table 13.6.1 Standard Clearances for Solid Fuel–Burning Appliances" at the footnote "a"

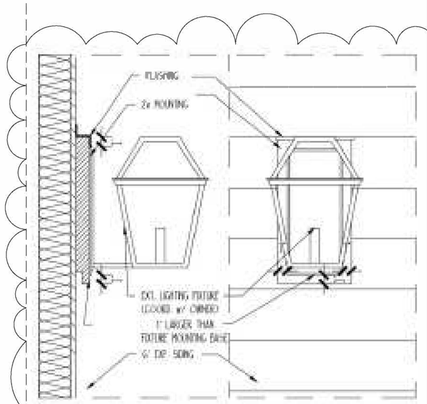
Wood storage for fireplace is governed predominately by IFC 315

SECTION 315
GENERAL STORAGE
315.1 General. Storage shall be in accordance with Sections 315.2 through 315.6. ...
315.2 Permit required. A permit for miscellaneous combustible storage shall be required as set forth in Section 105.6.
315.3 Storage in buildings. Storage of materials in buildings shall be orderly and stacks shall be stable. Storage of combustible materials shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.
315.3.1 Ceiling clearance. Storage shall be maintained 2 feet (610 mm) or more below the ceiling in nonsprinklered areas of buildings or not less than 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings.
Exceptions:
1. The 2-foot (610 mm) ceiling clearance is not required for storage along walls in nonsprinklered areas of buildings.
2. The 18-inch (457 mm) ceiling clearance is not required for storage along walls in areas of buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3
315.3.2 Means of egress.
Combustible materials shall not be stored in exits or enclosures for stairways and ramps.
315.3.3 Equipment rooms.
Combustible material shall not be stored in boiler rooms, mechanical rooms, electrical equipment rooms or in fire command centers as specified in Section 508.1.5.
315.3.4 Attic, under-floor and concealed spaces.
Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistance-rated construction.Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1 3/4 inches (44.5 mm) in thickness. Storage shall not be placed on exposed joists.
Exceptions:
1. Areas protected by approved automatic sprinkler systems.
2. Group R-3 and Group U occupancies.
315.4 Outside storage.
Outside storage of combustible materials shall not be located within 10 feet (3048 mm) of a lot line.
Exceptions:
1. The separation distance is allowed to be reduced to 3 feet (914 mm) for storage not exceeding 6 feet (1829mm) in height.
2. The separation distance is allowed to be reduced where the fire code official determines that hazard to the adjoining property does not exist.
315.4.1 Storage beneath overhead projections from buildings.
Where buildings are protected by an automatic sprinkler system, the outdoor storage, display and handling of combustible materials under eaves, canopies or other projections or overhangs are prohibited except where automatic sprinklers are installed under such eaves, canopies or other projections or overhangs.
315.4.2 Height.
Storage in the open shall not exceed 20 feet (6096 mm) in height.
315.5 Storage underneath high-voltage transmission lines.
Storage located underneath high-voltage transmission lines shall be in accordance with Section 316.6.2.
315.6 Storage in plenums.
Storage is prohibited in plenums.
Abandoned material in plenums shall be deemed to be storage and shall be removed. Where located in plenums, the portion of abandoned cables that are able to be accessed without causing damage requiring demolition to the building shall be identified for future use with a tag or shall be deemed storage and shall be removed.

03
A4.1



WALL SECTION



04
A4.1

EXTERIOR LIGHT CARRIAGE HOUSE

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ENGINEER
AUBURN O OLAY

MTC BUILDERS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table	
Label	Date	Description

DETAILS

DATE:
1/21/2025

SCALE:

SHEET:
A4.1

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ARTURO OLAYA

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS

RELEASED FOR CONSTRUCTION

01
R5.0

EXTERIOR VIEW 1

MTC BUILDS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2408 MOON STATION RD KENNESAW, GA 30144

Revision Table
Label | Date | Description

EXTERIOR VIEW 1

DATE:
1/21/2025

SCALE:

SHEET:
A5.0

ALL STAIR SHALL BE COMPLIANT WITH NFPA 101 SEE ATTACHED CODE SHEET FOR SPECIFIC REQUIREMENTS

RELEASED FOR CONSTRUCTION

01
R5.1

EXTERIOR VIEW 2

GEORGIA REGISTERED 01/22/25 No. PE033659 PROFESSIONAL ENGINEER NURUDEEN O OLAYIWOLA

MFC REMODELS

CONTRACTOR:
Kevin Lares
2090 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

EXTERIOR VIEW 2

DATE:
1/21/2025

SCALE:

SHEET:
A5.1

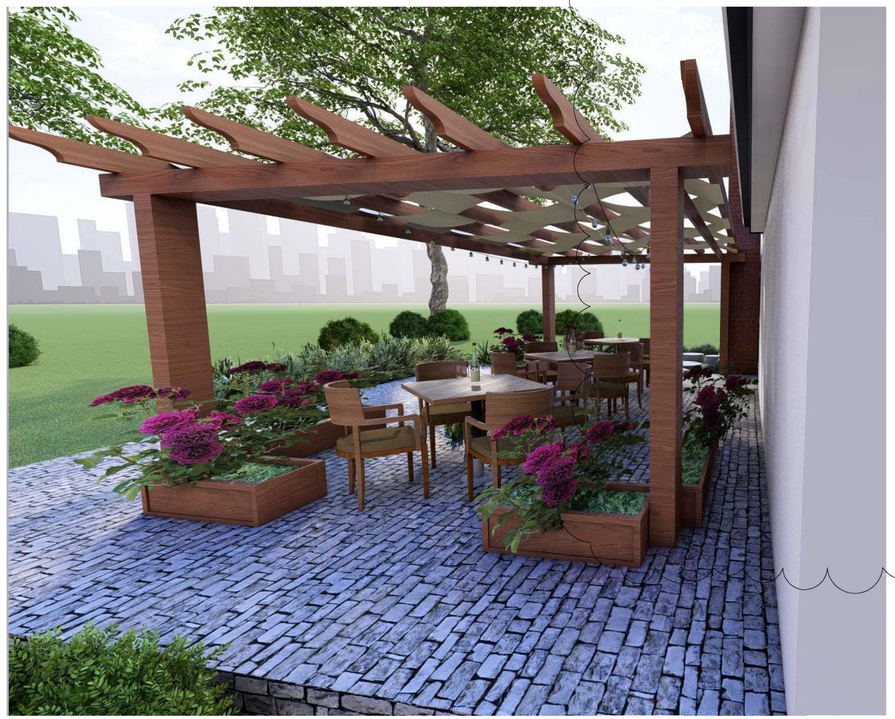
RELEASED FOR CONSTRUCTION

01
R5.2

EXTERIOR VIEW 3

GEORGIA
REGISTERED
01/22/25
No. PE033659
PROFESSIONAL
ARTURO OLAYA

DETACHED PERGOLA



02
R5.2

EXTERIOR VIEW 4

NOTE: THE STYLE OF THE PERGOLA WILL MATCH THE SAME HISTORIC/CLASSIC STYLE OF THE PROPERTY

MTC BUILDS

CONTRACTOR:
Kevin Lares
2040 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2906 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

EXTERIOR VIEW 3

DATE:
1/21/2025

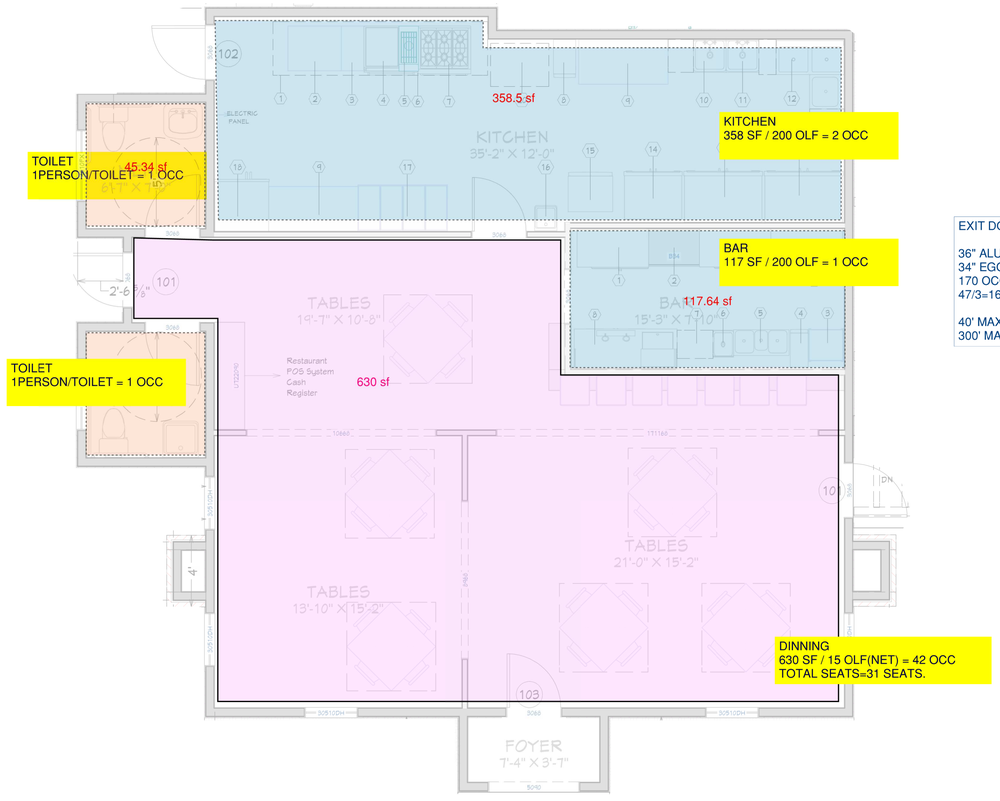
SCALE:

SHEET:
A5.2

PROPOSED
OCCUPANCY TYPE: ASSEMBLY, A-2
CONSTRUCTION TYPE=VB
NUMBER OF STORIES: ONE STORY
AREA FOR OCCUPANCY, ...Ae=1585 SFT
BUILDING FIRE PROTECTION: NOT SPRINKLERED
TOTAL NUMBER OF OCCUPANCY=47 OCCUPANTS.
(NOTE: CALCULATED LOAD DETERMINES THE MAXIMUM
PROBABLE OCCUPANT LOAD PER LSC A.7.3.1.2).

OCCUPANT LOAD CALCULATION.
(PER RESTAURANT OCCUPANT LOAD LSC TABLE 7.3.1.2
AND A.7.3.1.2

TOTAL OCCUPANT LOAD=42+2+1+1+1=47 OCCUPANTS.



FLOOR PLAN IDENTIFYING OCCUPANCY AREA
SCALE:1/4"=1'

DOOR SCHEDULE. INTERIOR DOORS				
IMAGE	NO.	DIMENSIONS	MAT'L	HARDWARE SET
	103	36" X 80"	Wood 3/4 Lite Solid Core	03

DOOR SCHEDULE. EXTERIOR DOORS				
IMAGE	NO.	DIMENSIONS	MAT'L	HARDWARE SET
	101	36" X 80"	ALUM/ GLASS	01
	102	36" X 80"	METAL FIRE RATED	02

DOOR HARDWARE SET		
NO.	LOCKSET	HINGES
03	CYLINDER LEVER LOCKSET	HEAVY DUTY SPRING HINGES AND COMMERCIAL HINGES

DOOR HARDWARE SET				
NO.	LOCKSET	HINGES	CLOSER	DOOR BAR
01	DEADLOCKS HEAVY DUTY STRAIGHT BOLT COMMERCIAL DOOR PLATE STYLE FULL HANDLE	COMMERCIAL ALUMINUM STOREFRONT DOOR BUTT HINGES	TOP JAMB MOUNT STOREFRON T DOOR CLOSER 1600 SERIES	FULL BAR PATH PLATE - STYLE PULL HANDLE
02	DEADLOCKING LATCH BOLT WITH 5/8" PROJECTION KEYED CYLINDER AND FULL PLATE	COMMERCIAL DOOR HINGES	HEAVY DUTY COMMERCIAL DOOR CLOSER	PANIC HARDWARE PUSH BAR EMERGENCY EXIT DEVICE

LEGEND: LIFE SAFETY PLAN

●	STARTING POINT
→	DIRECTION OF TRAVEL
D= X'-X"	DISTANCE OF TRAVEL
X'-X" PATH TO EGRESS	TOTAL DISTANCE TO EXIT THROUGH DOOR
	LED EMERGENCY LIGHT
	ILLUMINATED LED EMERGENCY EXIT SIGN
FE	PORTABLE FIRE EXTINGUISHER

NOTE: FIRE EXTINGUISHER TYPE

1. THE SIZE SHALL BE A MINIMUM OF 2-A-10-BC,1 IS ARE REQUIRED AND SHALL BE INSTALLED AT A MAXIMUM OF 48" ABOVE FINISHED FLOOR TO THE TOP OF THE HANDLE

AS PER IBC-2018 LIFE SAFETY INFORMATION

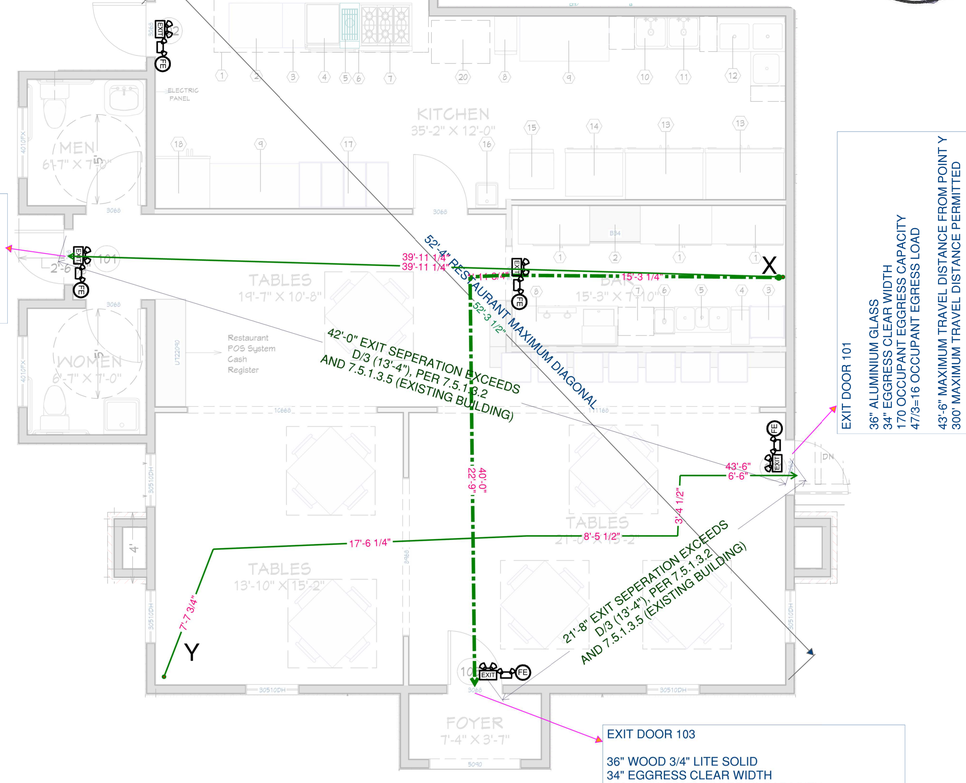
NO OF DOOR REQUIRED=2 .....PROVIDING 3
WIDTH OF DOOR 32".....PROVIDING 3-36"
REQUIRED TRAVEL DISTANCE=300'....DESIGNED TRAVEL
DIATANCE=40'-0" MAX AT WORST CASE SCINERIO
REQUIRED FIRE EXTINGUISHER=N/A..PROVIDING 4

GEORGIA REGISTERED No. PE033659 PROFESSIONAL ENGINEER NURUDEEN O OLAYIWOLA
11/14/24

EXIT DOOR 101

36" ALUMINIUM GLASS
34" EGGRESS CLEAR WIDTH
170 OCCUPANT EGGRESS CAPACITY
47/3=16 OCCUPANT EGRESS LOAD

40' MAXIMUM TRAVEL DISTANCE FROM POINT X
300' MAXIMUM TRAVEL DISTANCE PERMITTED



EXIT DOOR 103

36" WOOD 3/4" LITE SOLID
34" EGGRESS CLEAR WIDTH
170 OCCUPANT EGGRESS CAPACITY
47/3=16 OCCUPANT EGRESS LOAD

40' MAXIMUM TRAVEL DISTANCE FROM POINT X
300' MAXIMUM TRAVEL DISTANCE PERMITTED

LIFE SAFETY PLAN
SCALE: 1/4"=1'

MFC REMODELS

CONTRACTOR:
Kevin Lares
2090 Baker Rd Suite 304-121,
Kennesaw, GA 30144

Designed by:
KR DESIGN & DRAFTING

OWNER: ARTURO YZAGUIRRE
2908 MOON STATION RD KENNESAW, GA 30144

Revision Table

Label	Date	Description

LIFE SAFETY PLAN

DATE:
10/28/2024

SCALE:

SHEET:
R6.0

APPLICABLE CODE:

THE CURRENT STATE MINIMUM STANDARD CODES
THE FOLLOWING ARE THE CURRENT STATE MINIMUM STANDARD CODES FOR CONSTRUCTION
AS ADOPTED BY THE BOARD OF COMMUNITY AFFAIRS.
CURRENT MANDATORY CODES AS ADOPTED BY DCA:
- INTERNATIONAL BUILDING CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020), (2022), (2024)
- INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020), (2024)
- INTERNATIONAL FIRE CODE, 2018 EDITION (CONTACT STATE FIRE MARSHAL BELOW)
- INTERNATIONAL PLUMBING CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020), (2022), (2023),(2024)
- INTERNATIONAL MECHANICAL CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020), (2024)
- INTERNATIONAL FUEL GAS CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020), (2022)
- NATIONAL ELECTRICAL CODE, 2020 EDITION, WITH GEORGIA AMENDMENTS (2021)
- INTERNATIONAL ENERGY CONSERVATION CODE, 2015 EDITION, WITH GEORGIA SUPPLEMENTS AND AMENDMENTS (2020), (2022), (2023)
- INTERNATIONAL SWIMMING POOL AND SPA CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020)
- NFPA 101 / LIFE SAFETY CODE, 2018 EDITION, WITH GA FIRE MARSHAL MODIFICATIONS, 120-3-3.
- INTERNATIONAL FIRE CODE, 2018 EDITION, WITH GA FIRE MARSHAL MODIFICATIONS, 120-3-3.
- GEORGIA ACCESSIBILITY CODE 120-3-20 (.01-.08)
- ADA 2010.
- 0.C.G.A TITLE 25 & 30.
(FOR INFORMATION AND QUESTIONS REGARDING THE LIFE SAFETY CODE (NFPA 101),
IFC GEORGIA AMENDMENTS OR THE GEORGIA ACCESSIBILITY CODE PLEASE CONTACT THE STATE FIRE MARSHAL'S OFFICE.)

CURRENT PERMISSIVE CODES AS ADOPTED BY DCA:
DISASTER RESILIENT BUILDING CODE IBC APPENDIX (2013)
DISASTER RESILIENT BUILDING CODE IRC APPENDIX (2013)
INTERNATIONAL PROPERTY MAINTENANCE CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2021)
INTERNATIONAL EXISTING BUILDING CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2021)

NATIONAL GREEN BUILDING STANDARD, 2008 EDITION, WITH GEORGIA AMENDMENTS (2011)

DESIGN LOADS:

-EARTH PRESSURE: BASED ON THE MINIMUM SOIL SITE CLASS D,
-MINIMUM SURCHARGE FOR GARDENING PLUS THE SUPER IMPOSED DEAD LOAD

DEAD LOAD:
SELF WEIGHT CONCRETE.....150PCF
SUPER IMPOSED OF THE ROOF 20PSF
PARTITION DEAD LOAD ----------15PSF

LIVE LOAD:
OFFICE SPACE.....60PSF
CORRIDOR 100PSF
STAIR CASE 100PSF
SUPER IMPOSED OF THE ROOF 20PSF

RAIN LOAD:
RAIN LOAD.....20PSF
NO NEED TO CONSIDER THE PONDING EFFECT ON ROOF

WIND LOADS:
(WIND FORCE CONTROLLS FOR THE BASE SHEAR,
SEISMIC FORCE DOES NOT CONTROL).
A. LOADS BASED ON ASCE 7-16 WIND LOAD CRITERIA.
BASIC WIND SPEED, 3 SECOND GUST..... 105 MPH
HURRICANE PRONE REGION..... NO
WINDBORNE DEBRIS REGION..... NO
BUILDING CLASSIFICATION CATEGORY..... II
IMPORTANCE FACTOR..... 1.00
INTERNAL PRESSURE COEFFICIENT..... +/- 0.18
WIND EXPOSURE CATEGORY..... C (WORST CASE)
WIND TOPOGRAPHIC FACTOR, Kzt..... 1.0
NET WIND VELOCITY PRESSURE=.....28PSF
NET WIND PRESSURE ON THE WALL=.....28PSF.

SEISMIC:
RISK CATEGORY.....=II
IMPORTANCE FACTOR .....Ie= 1.00
SITE CLASS .....D
Ss.....=0.234
S1.....=0.091
SDS.....=0.25
SD1.....=0.146
R.....=6.5; Cd.....=4.00
Cs.....=0.0385
BASE SHEAR EACH ORTHOGONAL DIRECTION .....V=0.0385W
SEISMIC DESIGN CATEGORY (SDC).....C
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE.

PROJECT SCOPE:

An interior tenant build-out and converting the occupancy from Residential into a new Restaurant, including mechanical, electrical & plumbing work

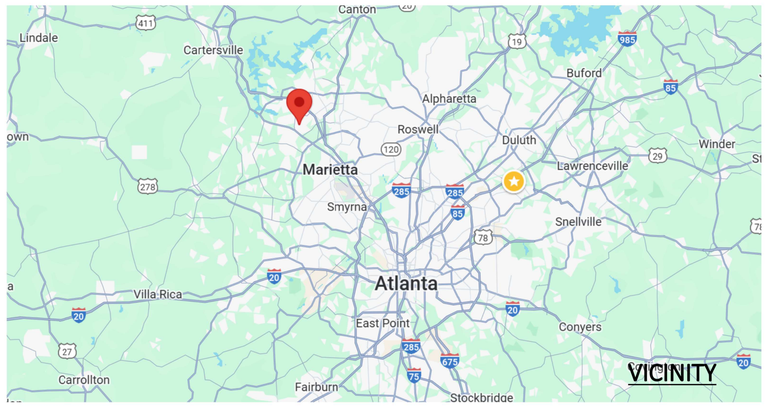
EXISTING

Search Information

Address:	2908 MOON STATION RD NW, KENNESAW GA-30144
Coordinates:	34.0340157, -84.616399
Elevation:	1016 ft
Timestamp:	2024-10-25T01:24:26.738Z
Hazard Type:	Wind

ASCE 7-16		ASCE 7-10		ASCE 7-05	
MRI 10-Year	72 mph	MRI 10-Year	76 mph	ASCE 7-05 Wind Speed	90 mph
MRI 25-Year	78 mph	MRI 25-Year	84 mph		
MRI 50-Year	84 mph	MRI 50-Year	90 mph		
MRI 100-Year	90 mph	MRI 100-Year	96 mph		
Risk Category I	98 mph	Risk Category I	105 mph		
Risk Category II	105 mph	Risk Category II	115 mph		
Risk Category III	112 mph	Risk Category III-IV	120 mph		
Risk Category IV	117 mph				

WIND



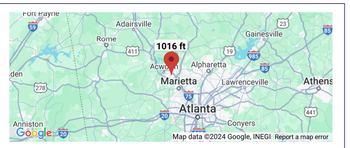
VICINITY

ADDRESS

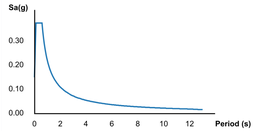
2908 MOON STATION RD NW, KENNESAW GA-30144

Search Information

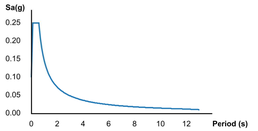
Address:	2908 MOON STATION RD NW, KENNESAW GA-30144
Coordinates:	34.0340157, -84.616399
Elevation:	1016 ft
Timestamp:	2024-10-25T01:25:59.593Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	II
Site Class:	D-default



MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
S_S	0.234	MCE_R ground motion (period=0.2s)
S_1	0.091	MCE_R ground motion (period=1.0s)
S_{MS}	0.375	Site-modified spectral acceleration value
S_{M1}	0.219	Site-modified spectral acceleration value
S_{DS}	0.25	Numeric seismic design value at 0.2s SA
S_{D1}	0.146	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	C	Seismic design category
F_a	1.6	Site amplification factor at 0.2s
F_v	2.4	Site amplification factor at 1.0s
CR_S	0.942	Coefficient of risk (0.2s)
CR_1	0.91	Coefficient of risk (1.0s)
PGA	0.127	MCE_G peak ground acceleration
F_{PGA}	1.546	Site amplification factor at PGA
PGA_M	0.196	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	0.234	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.249	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.091	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.1	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

SEISMIC

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ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED 511424 PROFESSIONAL ENGINEER — ENGINEER — FLEACTO ENGINEERING

COVER PAGE

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

S0.0

GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS, INCLUDING THE SIZE AND LOCATION OF MISCELLANEOUS ITEMS AFFECTING THE STRUCTURAL WORK SUCH AS SMALL OPENINGS, PIPE SLEEVES, RECESSES, BENT PLATES, ETC. PROMPTLY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR OMISSIONS. OPENINGS THROUGH BEAMS, GIRDERS AND/OR COLUMNS SHALL BE VERIFIED BY ENGINEER.

2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING SITE CONDITIONS PRIOR TO COMMENCING WORK. PROMPTLY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE CONTRACT DOCUMENTS.

3. THE CONTRACTOR SHALL VERIFY ALL FLOOR AND ROOF MOUNTED MECHANICAL EQUIPMENT DIMENSIONS AND WEIGHTS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND REVIEWED SHOP DRAWINGS.

4. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. THE ERECTION PROCEDURE AND SEQUENCE INCLUDING THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, RE-SHORING, TEMPORARY SUPPORTS, ETC., ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

5. DO NOT SCALE DRAWINGS. ALL WORK REQUIRING MEASURING SHALL BE DONE ACCORDING TO FIGURES ON DRAWING. ANY MISSING DIMENSIONS WILL BE FURNISHED UPON REQUEST.

6. WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.

7. THESE GENERAL NOTES APPLY WHERE OTHER PROVISIONS ARE NOT PROVIDED BY THE DRAWINGS, SPECIFICATIONS OR TYPICAL DETAILS. IN CASE OF SPECIAL CONDITIONS INDICATED ON DRAWINGS, THE DRAWINGS SHALL GOVERN OVER THE SPECIFICATIONS.

8. THE CONTRACTOR SHALL PROVIDE ALL CENTERLINE-TO-CENTERLINE DIMENSIONS TO THE STEEL FABRICATOR PRIOR TO SHOP DRAWING SUBMITTAL AND FABRICATION OF STRUCTURAL STEEL.

9. CONSTRUCTION SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ORDINANCES, AND THE INTERNATIONAL BUILDING CODE 2012.

DELEGATED (SPECIALTY) ENGINEERING REQUIREMENTS:

1. SEE "MINIMUM REQUIRED SUBMITTALS" TABLE IN THESE DRAWINGS FOR STRUCTURAL ELEMENTS/PRODUCTS WHICH REQUIRE SUBMITTALS.

2. DEFINITION OF DELEGATED (SPECIALTY) ENGINEER: A PROFESSIONAL ENGINEER, WHO IS LICENSED IN THE SAME STATE AS THE PROJECT, NOT THE STRUCTURAL ENGINEER OF RECORD, WHO SPECIALIZES IN AND WHO UNDERTAKES THE DESIGN OF STRUCTURAL COMPONENTS PREPARED FOR THIS PROJECT.

3. SUBMITTALS FOR CUSTOM DESIGNED, MANUFACTURED OR FABRICATED LOAD CARRYING ITEMS, AND CUSTOM FABRICATED ITEMS THAT ARE REQUIRED BY CODES OR STANDARDS TO RESIST FORCES AND STRESSES, INCLUDING THEIR CONNECTIONS, ANCHORAGES, AND ATTACHMENTS REQUIRE A DELEGATED ENGINEER.

4. FOR EACH CATEGORY OF SUBMITTAL REQUIRING INPUT FROM A DELEGATED ENGINEER, THE CONTRACTOR SHALL ATTACH TO THE FIRST SUBMITTAL A SIGNED AND SEALED LETTER FROM THE RESPONSIBLE DELEGATED ENGINEER STATING: "I CERTIFY THAT THE DESIGN AND DRAFTING OF THE SHOP DRAWINGS WHICH ARE SIGNED AND SEALED BY ME WERE PREPARED UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE THE SHOP DRAWINGS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND CONTRACT DRAWINGS.

5. REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO THE FOLLOWING:
   a. THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
   b. THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
   c. THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. NO DETAIL CHECK OF CALCULATIONS WILL BE MADE.
   d. THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. NOT DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.

6. SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED.

7. "COMPLETED STRUCTURAL SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE DESIGN TEAM-OF-RECORD AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA ADN GET APPROVAL FROM ENGINEER IN RECORD PRIOR TO THE SUBMITTAL (SEE SUBMITTAL REQUIREMENTS) AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION."

SUBMITTAL NOTES:

1. THE GENERAL CONTRACTOR SHALL SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO CONSTRUCTION BEGINNING ON THE PROJECT. THE SCHEDULE SHOULD DESCRIBE WHAT EACH SUBMITTAL IS, WHETHER IT IS THE ENTIRE PACKAGE, OR BROKEN INTO PHASES FOR REVIEW.

2. THE GENERAL CONTRACTOR SHALL ALLOW FOR 10 BUSINESS DAYS OF ALL STRUCTURAL SUBMITTALS. IF THE CONTRACTOR WISHES TO EXPEDITE OR REDUCE THE REVIEW TIME, IT SHALL BE DONE FOR AN ADDITIONAL CHARGE AND MUST BE NEGOTIATED PRIOR TO THE SUBMISSION OF THE PACKAGE.

3. IN THE EVENT THAT THE CONTRACTOR ATTEMPTS TO SUBMIT THE ENTIRE PROJECT AT THE SAME TIME FOR SUBMISSION, ADDITIONAL TIME WILL BE REQUIRED BEYOND THE STANDARD 10 DAY REVIEW TIME.

4. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF EACH BUILDING COMPONENT NOT DESIGNED BY THE DESIGN TEAM-OF-RECORD AND NOT SPECIFIED ON THE PROJECT CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION."

FOUNDATION:

1. TYPICAL WALL FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. SOIL BEARING TO BE IMPROVED USING RAMMED AGGREGATE PIERS IF REQ'D. THESE VALUES SHALL BE VERIFIED BY A REGISTERED SOIL ENGINEER PRIOR TO FOUNDATION CONSTRUCTION. IF ACTUAL VALUES VARY BY MORE THAN TEN PERCENT FROM DESIGN BEARING PRESSURE, FOOTINGS SHALL BE REDESIGNED. ALL FOOTINGS ARE TO BE PLACED ON UNDISTURBED ORIGINAL SOIL OR COMPACTED FILL.

2. ALL BACKFILLING SHALL BE ACCOMPLISHED USING MATERIAL CONSISTING OF CRUSHED STONE AND/OR MATERIAL APPROVED BY A REGISTERED SOILS ENGINEER. FILL MATERIAL TAKEN FROM SITE EXCAVATION SHALL HAVE OPTIMUM MOISTURE CONTENT FOR COMPACTION AND BE FREE OF ANY DEBRIS. BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D698, IN MAXIMUM LIFTS OF EIGHT INCHES. NO BACKFILL MATERIAL SHALL BE PLACED AGAINST WALLS WITHOUT PROVISIONS FOR ADEQUATE BRACING OF THESE WALLS.

3. FILL MATERIAL SHALL BE ADEQUATELY DRAINED TO PREVENT ANY DAMAGE TO THE BUILDING'S FOUNDATION BY GROUND WATER FLOWS OR SURFACE WATER RUN-OFF.

4. REMOVE ORGANIC MATERIALS AND LARGE ROCKS AND PROVIDE TERMITE TREATMENT PRIOR TO PLACING VAPOR BARRIER AND CONCRETE SLABS.

5. ALL SOIL CONDITIONS ARE SUBJECT TO EVALUATION BY A SOILS ENGINEER PRIOR TO FOUNDATION CONSTRUCTION. SOILS WITHOUT ADEQUATE CAPACITY TO SUPPORT DESIGN LOADS MUST BE REPLACED OR MODIFIED PRIOR TO PROCEEDING WITH CONSTRUCTION.

6. PATIO SLABS ARE TO BE 4" THICK STANDARD CONCRETE SLABS WITH TURNED DOWN EDGE.

7. ALL WIRE MESH AND REBARS ARE TO BE PLACED ON SUPPORTS PER ACI STANDARDS PRIOR TO POURING CONCRETE.

8. SEE ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHING REQUIREMENT

REINFORCING:

1. CONCRETE REINFORCING STEEL SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A615, GRADE 40 FOR #3 BARS AND ASTM A615, GRADE 60 FOR #4 AND LARGER BARS.

2. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315, LATEST EDITION.

3. REINFORCING STEEL SHALL BE SPLICED ONLY AS INDICATED ON THE PLANS. WHEN SPLICE LENGTHS ARE NOT GIVEN ON THE PLANS, THEY SHALL BE TAKEN FROM THE TABLE BELOW. LAPS SHOWN ARE "CLASS B" PER INDICATED CONCRETE STRENGTH.

BAR SIZE	TOP BARS 3.5KSI | 4.5KSI	OTHER BARS 3.5KSI | 4.5KSI
#3	15.6" | 15.6"	15.6" | 15.6"
#4	20.6" | 18.1"	15.8" | 15.6"
#5	30.6" | 27.0"	23.5" | 20.8"
#6	42.1" | 37.1"	32.4" | 28.5"
#7	68.5" | 60.4"	52.7" | 46.4"
#8	85.7" | 75.6"	65.9" | 58.1"
#9	109.0" | 96.2"	83.9" | 74.0"
#10	138.2" | 121.9"	106.3" | 93.8"
#11	170.4" | 150.3"	131.1" | 115.6"

LAPS SHOWN ABOVE WERE CALCULATED PER ACI 318-11, EQ. 12-1 FOR MATS, WALLS, BEAMS, COLUMNS AND SLABS. VALUES ASSUMED ARE: Ktr=0, 1" MIN COVER AND 3" MIN CLEAR BETWEEN BARS. SHORTER LAPS MAY BE CALCULATED FOR SOME SPECIFIC CONDITIONS SUCH AS TIED BEAMS OR ADDITIONAL COVER. LAPS MUST BE INCREASED 50% PER ACI 318-11 FOR EPOXY COATED REBAR, OR 30% FOR LIGHTWEIGHT CONCRETE.

4. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND HAVE 90-DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL BAR PLACING DETAILS UNLESS OTHERWISE SHOWN.

5. LAPS IN W.W.F. SHOULD BE ONE MESH PLUS TWO INCHES AT SPLICES.

6. PROVIDE EXTRA REINFORCING AROUND ALL OPENINGS, INCLUDING DOOR OPENINGS: TWO #5 BARS AT ALL FOUR SIDES OF EACH OPENING AND EXTEND 2'-0" BEYOND THE CORNERS OF THE OPENING. ADD TWO #5 BARS 4'-0" LONG AS DIAGONAL BARS AT EACH CORNER.

7. TEMPERATURE STEEL FOR SLABS SHALL BE #3 @ 16" O.C. OR WWM PLACED 1" FROM TOP OF SLAB UNLESS SHOWN OTHERWISE. WHERE WWM IS USED, USE PLASTIC MESH 'CHAIRS' SPACED SO THAT NO MORE THAN 3 SQ FEET OF MESH IS SUPPORTED ON EACH 'CHAIR', UNLESS OTHERWISE SPECIFIED

8. ALL BAR HOOKS SHALL BE STANDARD 90-DEGREE HOOKS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE", EXCEPT AS NOTIFIED BY THE REQUIREMENTS OF THESE STRUCTURAL DRAWINGS.

2. STRUCTURAL CONCRETE SHALL BE NORMAL WEIGHT, HAVE A ±6" SLUMP, AND HAVE A DESIGNATED COMPRESSIVE STRENGTH (F'c) IN 28 DAYS AS FOLLOWS (TYP. U.N.O.):
   SLAB ON GRADE FOOTINGS: ..... 3000 PSI
   WALLS, COLUMNS: ..... 3000 PSI
   ELEVATED SLAB: ..... 3000 PSI

3. SAWN CONTROL JOINTS IN FLOOR SLABS, AS INDICATED ON THE PLANS BY "C.J.", SHALL BE ⅛" WIDE x 1" DEEP AND SHOULD BE CUT (AS SOON AS CONDITIONS ALLOW) WITHIN 12 HOURS AFTER CONCRETE IS PLACED. MAXIMUM "C.J." SPACING SHALL BE 15 FT IN EITHER DIRECTION AND ALIGNED WITH COLUMNS IF POSSIBLE.

4. SLAB-ON-GRADE NOT OTHERWISE SPECIFIED, SHALL BE 4" THICK MINIMUM WITH 6x6-W2.9xW2.9 WELDED WIRE MESH PLACED 1" FROM TOP OF SLAB. ALL WIRE MESH AND REBARS ARE TO BE PLACED ON SUPPORTS PER ACI STANDARDS PRIOR TO POURING CONCRETE. SLAB SHALL BE PLACED ON VAPOR BARRIER ON 4" OF #57 STONE OR COMPACTED SAND OR CRUSHER RUN. VAPOR BARRIER MAY BE OMITTED FROM DRIVES, WALKS, PATIOS, AND OTHER FLAT WORK NOT LIKELY TO BE ENCLOSED AND HEATED AT A LATER DATE. JOINTS LAPPED NOT LESS THAN 6".

5. CONCRETE COARSE AGGREGATE, WITH A MAXIMUM SIZE OF 1" MAY BE USED IN FOUNDATIONS. ALL OTHER CONCRETE SHALL HAVE A COARSE AGGREGATE WITH A MAXIMUM SIZE OF ¾".

6. CONCRETE MIXING, TRANSPORTING, PLACING, AND CURING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF ACI 301. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH REQUIREMENTS OF ASTM C94 OR ASTM C685.

7. SAMPLES FOR STRENGTH TESTS SHALL BE TAKEN IN ACCORDANCE WITH ASTM C172. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CU YD OF CONCRETE NOR LESS THAN ONCE FOR EACH 5,000 SQ FT OF SURFACE AREA FOR SLABS OR WALLS. A STRENGTH TEST SHALL BE THE AVERAGE OF THE STRENGTHS OF TWO CYLINDERS MADE FROM THE SAME SAMPLE OF CONCRETE AND TESTED AT 28 DAYS OR AT THE TEST AGE DESIGNATED FOR DETERMINATION OF F'c.

8. CYLINDERS FOR STRENGTH TESTS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31 AND TESTED IN ACCORDANCE WITH ASTM C39.

9. NO CONSTRUCTION LOADS SHALL BE SUPPORTED ON, NOR ANY SHORING REMOVED FROM, ANY PART OF THE STRUCTURE UNDER CONSTRUCTION EXCEPT WHEN THAT PORTION OF THE STRUCTURE IN COMBINATION WITH REMAINING FORMING AND SHORING SYSTEM HAS SUFFICIENT STRENGTH TO SUPPORT SAFELY ITS WEIGHT AND LOADS PLACED THEREON.

10. BEAMS, GIRDERS, HAUNCHES, DROP PANELS, AND CAPITALS SHALL BE PLACED MONOLITHICALLY AS PART OF A SLAB SYSTEM UNLESS OTHERWISE SHOWN IN THE DRAWINGS OR SPECIFICATIONS.

11. THE CLEAR DISTANCE BETWEEN REINFORCING BARS, BUNDLED BARS, PRE-STRESSING TENDONS, AND DUCTS SHALL BE IN ACCORDANCE WITH THE LIMITATIONS OF ACI 318.

12. ALL EQUIPMENT FOR MIXING AND TRANSPORTING CONCRETE SHALL BE CLEAN. ALL DEBRIS, WATER AND ICE SHALL BE REMOVED PRIOR TO PLACING CONCRETE. FORMS SHALL BE PROPERLY COATED. MASONRY FILLER UNITS THAT WILL BE IN CONTACT WITH CONCRETE SHALL BE WELL DRENCHED. REINFORCEMENT SHALL BE CLEAN OF ICE OR OTHER DELETERIOUS COATING. ALL LAITANCE AND OTHER UNSOUND MATERIAL SHALL BE REMOVED BEFORE ADDITIONAL CONCRETE IS PLACED AGAINST HARDENED CONCRETE.

13. MINIMUM COVER FOR CAST-IN-PLACE CONCRETE REINFORCEMENT (U.N.O.):

	MINIMUM COVER (IN)
(a) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
(b) CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2
#5 BAR, W31 OR D31 WIRE, AND SMALLER	1½
(c) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLAB, WALLS, JOIST: #11 BARS AND SMALLER	¾
BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1½

GEORGIA REGISTERED 31724 PROFESSIONAL ENGINEER — COMMONWEALTH OF KENTUCKY — NUMBER 31724

ENGINEER

FLEACTO ENGINEERING

FLEACTO ENGINEERING — FLEACTO.COM — 678-979-6464 — fleacto@aol.com

GENERAL NOTES AND SPECIFICATION 01

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

S1.0

ISSUED FOR CONSTRUCTION

WOOD:

1. ALL CONVENTIONAL TIMBER CONSTRUCTION SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" BY THE AMERICAN FOREST AND PAPER ASSOCIATION. ALL STUDS SHALL BE #2 SPRUCE-PINE-FIR OR BETTER. ALL OTHER TIMBER SHALL BE STRUCTURAL GRADED #2 SOUTHERN PINE OR BETTER UNLESS NOTED OTHERWISE. PLYWOOD CONSTRUCTION SHALL UTILIZE AMERICAN PLYWOOD ASSOCIATION RATED MATERIALS. CONVENTIONAL LIGHT FRAME WOOD DESIGN PER IBC 2018 AND NDS 2018. FINGER-JOINTED LUMBER IS NOT ACCEPTABLE FOR STRUCTURAL USE.

2. ALL TIMBER IN CONTACT WITH CONCRETE OR MASONRY WITHIN 6" OF GRADE, OR REMAIN EXPOSED TO WEATHER SHALL BE PRESSURE TREATED #2 SOUTHERN PINE.

3. AT LOAD BEARING WALLS, TOP PLATE SHALL BE DOUBLE, SILL PLATE SHALL BE SINGLE.

4. ROOF SHEATHING SHALL BE 24/16 $^{19}/_{32}$" MIN. APA RATED SHEATHING U.N.O., LAID WITH FACE GRAIN PERPENDICULAR TO THE FRAMING AND STAGGERED 4'-0".

5. SUB-FLOOR SHEATHING SHALL BE 48/24 $^{3}/_{4}$" APA RATED PLYWOOD U.N.O. GLUED AND NAILED TO JOISTS. MINIMUM NAILING SHALL BE 10d NAILS AT 6" O.C. ON PANEL EDGES AND 12" O.C. AT INTERIOR SUPPORTS.

6. ALL EXTERIOR WALL SHEATHING AND SHEAR PANEL SHEATHING SHALL BE $^{15}/_{32}$" PLYWOOD U.N.O. WITH PANELS APPLIED WITH LONG DIMENSION ACROSS STUDS. CONTRACTOR OPTION: $^{7}/_{16}$" OSB, APA RATED 24/16 EXPOSURE 1, TO REPLACE $^{15}/_{32}$" PLYWOOD. OSB, IF UTILIZED, IS TO BE PROTECTED FROM WEATHER AT ALL TIMES TO PREVENT SWELLING.

7. ALL LOAD BEARING AND EXTERIOR WALLS SEE WALL SCHEDULE

8. PLACE (2) STUDS MINIMUM IN WALLS FOR BEARING OF ALL BEAM, HIP, VALLEY MEMBERS U.N.O AS GREATER ON PLANS. CONTINUE ALL POSTS DOWN TO FOUNDATION OR TRANSFER BEAMS BELOW.

9. BEAMS DESIGNATED ON THE PLANS AS LVL SHALL BE 2.0E LAMINATED VENEER LUMBER AS MANUFACTURED BY WEYERHAUSER OR APPROVED ALTERNATE. SEE MANUFACTURER SPECIFICATIONS FOR ALLOWABLE HOLES, AS WELL AS MINIMUM ATTACHMENTS AND FASTENING REQUIREMENTS. BEAMS DESIGNATED ON THE PLANS AS P.T. PSL SHALL BE PRESSURE TREATED 2.0E PARALLEL STRAND LUMBER AS MANUFACTURED BY WEYERHAUSER, OR APPROVED ALTERNATE. BEAMS DESIGNATED ON THE PLANS AS GLULAMS SHALL BE PRESSURE TREATED 24F-V3 GLUED LAMINATED TIMBER AS MANUFACTURED BY ANTHONY FOREST PRODUCTS, OR APPROVED ALTERNATE.

10. DURING CONSTRUCTION, PROVIDE TEMPORARY BRACING FOR FRAMING UNTIL ALL ELEMENTS FOR EXTERIOR/INTERIOR SHEAR WALLS AND FLOOR DIAPHRAGMS ARE IN PLACE. TRUSSES TO BE BRACED IN ACCORDANCE WITH BCSI 1-08, "THE GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" AND RELATED SUMMARY SHEETS.

11. UNLESS DETAILED SPECIFICALLY OTHERWISE, USE A METAL CONNECTOR AT ALL BEAM & TRUSS SUPPORTS, BEAM TO BEAM, POST TO BEAM, AND POST TO FLOOR CONNECTIONS. USE SIMPSON PRODUCTS, SIZED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS FOR CONNECTION TYPE AND LOADS ENCOUNTERED.

12. PROVIDE $^{1}/_{2}$"ø ANCHOR BOLT AT SILL PLATE, @ 4'-0" O.C. & 12" MAX FROM ENDS, UNLESS NOTED OTHERWISE.

13. ALL FASTENERS AND CONNECTORS AT THE EXTERIOR WALLS TO BE HOT-DIPPED GALVANIZED, STAINLESS STEEL, OR OTHERWISE FRT RATED.

14. ALL NAILS REFERENCED IN THE DRAWINGS (UNLESS NOTED OTHERWISE) ARE COMMON WIRE NAILS TO BE SIZED AS FOLLOWS:
    8d = 0.131"ø
    10d = 0.148"ø
    16d = 0.162"ø

WOOD STUD WALL SCHEDULE NOTES:

1. 2x4 AND 2x6 STUD MATERIAL:
   COMMERCIAL GRADE..... #2
   SPECIES..... SPRUCE-PINE-FIR
   GRADING RULES AGENCY..... NLGA
   MOISTURE CONTENT..... ≤ 19%
   (Fb=875 psi; Fc parallel=1150 psi; E=1400 ksi)

2. MID-POINT BLOCKING: AT FLOOR LOAD BEARING WALLS, A MINIMUM OF (1)2x4 OR (1)2x6 STUD IS REQUIRED MID-WAY BETWEEN FLOOR TRUSSES IN WALLS WHERE TRUSSES ARE PERPENDICULAR TO WALLS. SEE FRAMING PLANS FOR TRUSS ORIENTATION.

3. LOAD BEARING STUD WALLS TO HAVE 2x4 OR 2x6 DOUBLE TOP PLATES AND 2x4 OR 2x6 SINGLE BOTTOM PLATES. MATERIAL FOR PLATES TO BE NO. 2 SOUTHERN PINE P.T. FOR SILL PLATE IN CONTACT WITH FOUNDATION, AND NO. 2 SPRUCE-PINE-FIR FOR PLATES ABOVE GROUND LEVEL. PROTECT ALL WOOD FRAMING FROM MOISTURE ON THE JOBSITE. IT IS RECOMMENDED THAT ALL HORIZONTAL PLATES HAVE A MOISTURE CONTENT OF 15% OR LESS TO REDUCE SHRINKAGE EFFECTS.

4. NON-LOAD BEARING WALLS THAT ARE NOT SHEAR WALLS SHALL BE STANDARD GRADE SPF OR BETTER @ 24" O.C. MAX. WITH SINGLE UTILITY TOP & SINGLE UTILITY BOTTOM PLATE. SILL PLATE IN CONTACT WITH FOUNDATION SHALL BE NO. 3 SOUTHERN PINE PT.

5. ALL WOOD POSTS & STUDS INDICATED IN THIS SCHEDULE ARE DESIGNED WITH THE ASSUMPTION THAT SHEATHING (EITHER GYPSUM OR OSB/PLYWOOD) IS ATTACHED TO ONE (1) 1⅜" WIDE FACE OF EACH STUD CONTINUOUSLY PER THE INDICATED ATTACHMENT SPACING IN THE FINAL CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE TEMPORARY BRACING UNTIL ALL ELEMENTS SHOWN ARE IN PLACE

6. EACH LAYER OF MULTIPLE STUDS SHALL BE NAILED TO ADJACENT STUDS WITH 10d NAILS @ 8" O.C. STAGGERED. STUD POST SIZE SHALL MATCH STUD WALL SIZE, EXCEPT AS NOTED ON PLAN.

7. CUTTING, NOTCHING, AND BORING OF ALL LOAD BEARING STUDS SHALL NOT EXCEED A DEPTH OF 25% OF THE STUD WIDTH ($^{7}/_{8}$" FOR 2x4 STUDS, 1$^{3}/_{8}$" FOR 2x6 STUDS), AND ALL AFFECTED STUDS SHALL BE REINFORCED WITH A SIMPSON SS STUD SHOE. NOTCHES OR BORED HOLES EXCEEDING 25% OF STUD WIDTH AND LESS THAN 50% SHALL BE REINFORCED WITH A SIMPSON HSS STUD SHOE. AS AN ALTERNATIVE TO USING STUD SHOES, AT ALL NOTCHED OR BORED STUDS THE NUMBER OF STUDS AT THE LOCATION OF THE NOTCHING OR BORING SHALL BE DOUBLED (≤ 25% NOTCH/BORED) OR TRIPLED (25%-50% NOTCH/BORED). ALL BORES SHOULD BE LOCATED AS CLOSE TO THE CENTERLINE OF THE STUD AS POSSIBLE. NO MORE THAN TWO SUCCESSIVE STUD GROUPS SHALL BE CUT, NOTCHED, OR BORED. CONTACT THE STRUCTURAL ENGINEER OF RECORD AT LOCATIONS REQUIRING LARGER NOTCHES OR BORES. POSTS SHALL NOT BE CUT, NOTCHED, OR BORED UNLESS SPECIFICALLY NOTED IN THESE DRAWINGS.

WOOD STRUCTURAL PANEL ROOF SHEATHING NAILING SCHEDULE			ROOF FASTENING ZONES (C)		
			(1)	(2)	(3)
			FASTENING SCHEDULE (inches on center)		
THICKNESS	NAILS	PANEL LOCATION			
1/2" OR LESS	8d COMMON	PANEL EDGE (a)	6	4 (b)	3 (b)
		PANEL FIELD	6	6 (b)	3 (b)
19/32" OR GREATER	10d COMMON	PANEL EDGE (a)	6	4 (b)	3 (b)
		PANEL FIELD	6	6 (b)	3 (b)

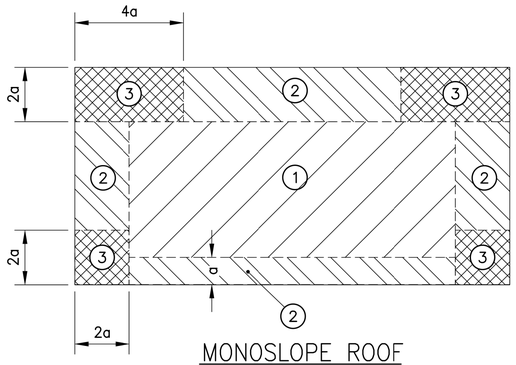
(a) EDGE SPACING ALSO APPLIES OVER ROOF FRAMING AT GABLE END WALLS.

(b) USE RING-SHANK NAILS IN THIS ZONE.

(c) THE ROOF FASTENING ZONES CORRESPOND TO THE C&C WIND ZONE DIAGRAMS

TYP. ROOF FASTENING SCHEDULE

SCALE: N.T.S.



MONOSLOPE ROOF

TYP. UNMARKED HEADER SCHEDULE			
SPAN LESS THAN	2x4 LOAD BEARING WALLS	2x6 LOAD BEARING WALLS	NON LOAD BEARING WALLS
3'-0"	(2)2x8*	(3)2x6*	(2)2x6*
4'-0"	(2)2x10*	(3)2x8*	(2)2x8*
5'-0"	(2)2x12**	(3)2x10*	(2)2x8*
7'-6"	(2)1¾"x9½"LVL**	(2)1¾"x9½"LVL**	(2)2x8*
9'-0"	(2)1¾"x11⅞"LVL**	(3)1¾"x9½"LVL**	(2)2x8*

PROVIDE FULL-HEIGHT KING STUDS TO MATCH THE NUMBER OF STUDS REPLACED BY THE OPENING, HALF (ROUND UP) PLACED ON EACH SIDE OF THE OPENING, (2)KING STUDS MIN.
*PROVIDE (1) JACK STUD MIN.
**PROVIDE (2) JACK STUDS MIN.

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING OF FASTENERS
	Roof		
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2$^{1}/_{2}$" × 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2$^{1}/_{2}$" × 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie to rafter, face nail or 1$^{1}/_{4}$" × 20 gage ridge strap	3-10d (3" × 0.128")	—
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3$^{1}/_{2}$" × 0.135") or 3-10d common nails (3" × 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss[i]
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3$^{1}/_{2}$" × 0.135") 3-16d (3$^{1}/_{2}$" × 0.135")	—
	Wall		
7	Built-up studs-face nail	10d (3" × 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 ½" x 0.135")	12" o.c.
9	Built-up header, two pieces with $^{1}/_{2}$" spacer	16d (3$^{1}/_{2}$" × 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3$^{1}/_{2}$" × 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2$^{1}/_{2}$" × 0.113")	—
12	Double studs, face nail	10d (3" × 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" × 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3$^{1}/_{2}$" × 0.135")	—
15	Sole plate to joist or blocking, face nail	16d (3$^{1}/_{2}$" × 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3$^{1}/_{2}$" × 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2$^{1}/_{2}$" × 0.113") or 2-16d (3$^{1}/_{2}$" × 0.135")	— —
18	Top or sole plate to stud, end nail	2-16d (3$^{1}/_{2}$" × 0.135")	—
19	Top plates, laps at corners and intersections, face nail	2-10d (3" × 0.128")	—
20	1" brace to each stud and plate, face nail	2-8d (2$^{1}/_{2}$" × 0.113") 2 staples 1$^{3}/_{4}$"	— —
21	1" × 6" sheathing to each bearing, face nail	2-8d (2$^{1}/_{2}$" × 0.113") 2 staples 1$^{3}/_{4}$"	— —
22	1" × 8" sheathing to each bearing, face nail	2-8d (2$^{1}/_{2}$" × 0.113") 3 staples 1$^{3}/_{4}$"	— —
23	Wider than 1" × 8" sheathing to each bearing, face nail	3-8d (2$^{1}/_{2}$" × 0.113") 4 staples 1$^{3}/_{4}$"	— —
	Floor		
24	Joist to sill or girder, toe nail	3-8d (2$^{1}/_{2}$" × 0.113")	—
25	Rim joist to top plate, toe nail (roof applications also)	8d (2$^{1}/_{2}$" × 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 ½" × 0.113")	6" o.c.
27	1" × 6" subfloor or less to each joist, face nail	2-8d (2$^{1}/_{2}$" × 0.113") 2 staples 1$^{3}/_{4}$"	— —
28	2" subfloor to joist or girder, blind and face nail	2-16d (3$^{1}/_{2}$" × 0.135")	—
29	2" planks (plank & beam - floor & roof)	2-16d (3$^{1}/_{2}$" × 0.135")	at each bearing
30	Built-up girders and beams, 2-inch lumber layers	10d (3" × 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3$^{1}/_{2}$" × 0.135")	At each joist or rafter

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER[a, c, e]	SPACING OF FASTENERS: Edges (inches)[i]	SPACING OF FASTENERS: Intermediate supports[c, e] (inches)
	Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing			
32	$^{3}/_{8}$" - $^{1}/_{2}$"	6d common (2" × 0.113") nail (subfloor, wall)[f] 8d common (2$^{1}/_{2}$" × 0.131") nail (roof)[f]	6	12[g]
33	$^{19}/_{32}$" - 1"	8d common nail (2$^{1}/_{2}$" × 0.131")	6	12[g]
34	1$^{1}/_{8}$" - 1$^{1}/_{4}$"	10d common (3" × 0.148") nail or 8d (2$^{1}/_{2}$" × 0.131") deformed nail	6	12
	Other wall sheathing[b]			
35	$^{1}/_{2}$" structural cellulosic fiberboard sheathing	1$^{1}/_{2}$" galvanized roofing nail, $^{7}/_{16}$" crown or 1" crown staple 16 ga., 1$^{1}/_{4}$" long	3	6
36	$^{25}/_{32}$" structural cellulosic fiberboard sheathing	1$^{3}/_{4}$" galvanized roofing nail, $^{7}/_{16}$" crown or 1" crown staple 16 ga., 1$^{1}/_{2}$" long	3	6
37	$^{1}/_{2}$" gypsum sheathing[d]	1$^{1}/_{2}$" galvanized roofing nail; staple galvanized, 1$^{1}/_{2}$" long; 1$^{1}/_{4}$ screws, Type W or S	7	7
38	$^{5}/_{8}$" gypsum sheathing[d]	1$^{3}/_{4}$" galvanized roofing nail; staple galvanized, 1$^{3}/_{4}$" long; 1$^{5}/_{8}$" screws, Type W or S	7	7
	Wood structural panels, combination subfloor underlayment to framing			
39	$^{3}/_{4}$" and less	6d deformed (2" × 0.120") nail or 8d common (2$^{1}/_{2}$" × 0.131") nail	6	12
40	$^{7}/_{8}$" - 1"	8d common (2$^{1}/_{2}$" × 0.131") nail or 8d deformed (2$^{1}/_{2}$" × 0.120") nail	6	12
41	1$^{1}/_{8}$" - 1$^{1}/_{4}$"	10d common (3" × 0.148") nail or 8d deformed (2$^{1}/_{2}$" × 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 Ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
b. Staples are 16 gage wire and have a minimum $^{7}/_{16}$-inch on diameter crown width.
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2$^{1}/_{2}$" × 0.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.
h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.
i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED 31714 PROFESSIONAL ENGINEER MICHAEL G. SMEPPU 10 NOVEMBER 2024
ENGINEER
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GENERAL NOTES AND SPECIFICATION 02

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

S2.0

NOTES AND SCHEDULE:

F2X2: 24"X24"X12" WITH 3#4 EACH WAY BOTTOM BARS. 2#4 HOOKED DOWELS OUT FOR THE PIER PR. FOR THE 16"X16" CMU PIER PR. 15"X15"X3" PT SILL PLATE WITH 5/8"D AND 7" LONG MINIMUM ANCHOR BOLT @32" OC. USE 2-1/2" DIA WASHER FOR THE ANCHOR BOLT. SEE ARCHITECTURAL FOR THE HEIGHT AND ELEVATION.

F1: 20"WX12"D CONTINUOUS FOOTING W/3#4 CONTINUOUS REBARS. FOR THE 8" CMU WALL W1. #5 DOWELS OUT@32" OC FOR THE NEW CMU. EXISTING CMU AND OR BRICKS SUPPORTING FOUNDATIONS ARE NOT STRUCTURALLY ADEQUATE. REPLACE THE ENTIRE FOUNDATION AS SPECIFIED IN HERE.

P1: WOOD POST 6X6 TYPICAL. USE ABWZ SIMPSON POST BASE FOR THE LATERAL RESISTANCE. AND USE SIMPSON BCS AT THE POST-BEAM CONNECTION. SEE ARCHITECTURAL FOR THE HEIGHT AND ELEVATION AND THE BOX DECORATION.

P2: 3-2X6 STUD PACK OR 6X6 POSTS.

PR: NEW 16"X16" CMU PIER WITH 2#4 BARS DOWEL THRU THE 2 CELLS SHALL BE FILLED WITH 3000PSI GROUT. TWO-5/8" DIA ANCHOR BOLTS SHALL BE ANCHORED INTO THESE CELLS. 7" LONG MINIMUM ANCHOR BOLT. USE 2-1/2" DIA WASHER FOR THE ANCHOR BOLT. SEE ARCHITECTURAL FOR THE HEIGHT AND ELEVATION. REPLACE EXISTING ANY PIERS AND FOLLOW THE NEW LAYOUT.

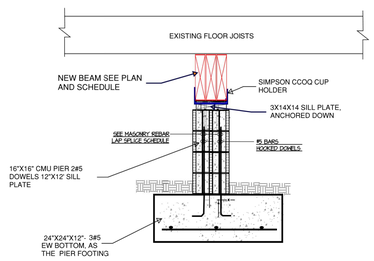
W1: 8" BOUNDARY CMU WALL AT FOUNDATION TO MAIN FLOOR, JUST THE CRAWL SPACE. POUR 3000PSI GROUT AT FILLED CELLS WITH #5 BARS @32"OC. EXISTING 2X4 @16"OC STUD WALL ABOVE THE SILL PLATE AT MAIN FLOOR LEVEL REMAIN UNCHANGED, HOWEVER REPLACE AND OR REPAIR THE DAMAGED SILL PLATE AND THE DAMAGED STUDS.

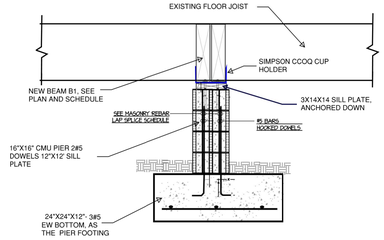
W2: INTERIOR WALLS 2X4 @16"OC STUD WALL ABOVE THE SILL PLATE AT MAIN LEVEL .

B11: USE 3-2X12 BY HOLDING DOWN WITH SIMPSON BRACKET PA51 OR WITH HTT4.

B12: 2-2X12 OR 3-2X10 SP#2 PT.

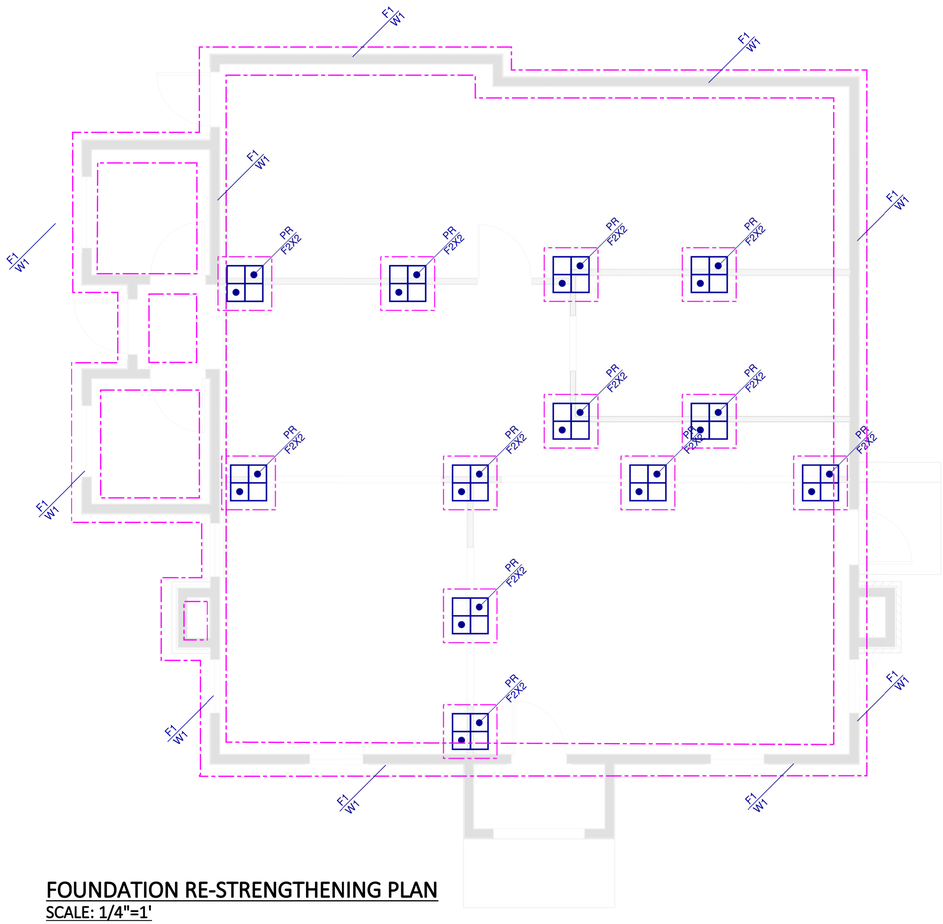
PLEASE VERIFY THE ARCHITECTURAL DRAWING FOR ALL THE REQUIRED DIMENSION.



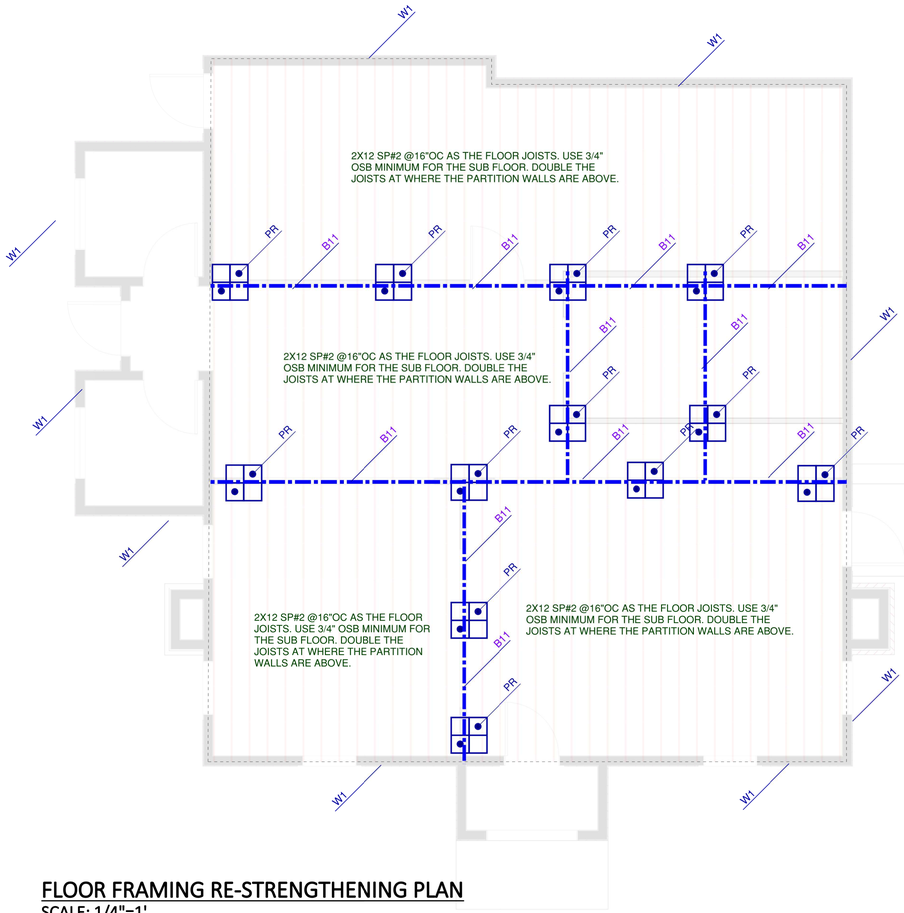


OR

TYP: CMU PIER FOOTING SUPPORTING WOOD BEAM



FOUNDATION RE-STRENGTHENING PLAN
SCALE: 1/4"=1'



FLOOR FRAMING RE-STRENGTHENING PLAN
SCALE: 1/4"=1'

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE036569 — 11/14/24 — COMMONWEALTH OF MURDEEN

ENGINEER

FLEACTO ENGINEERING

FLEACTO ENGINEERING — FLEACTO.COM — 678-979-6464 — fleacto@aol.com

FOUNDATION AND FRAMING RE-STRENGTHENING PLAN

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
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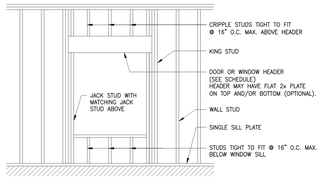
S1.0



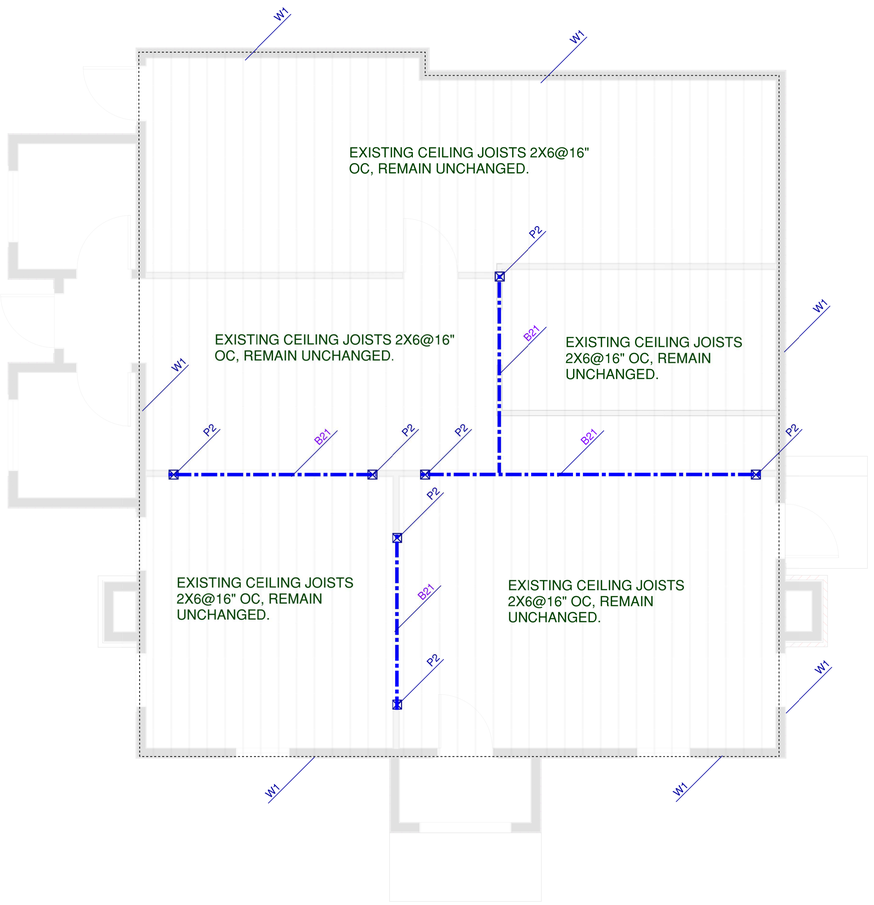
WOOD JACK/KING STUD SCHEDULE (U.N.O.)			
	STUDS	JACK STUD	KING STUD
	(5) GANGED STUDS	(2) STUDS	(3) STUDS
	(4) GANGED STUDS	(2) STUDS	(2) STUDS
	(3) GANGED STUDS	(1) STUDS	(2) STUD
	(2) GANGED STUDS	(1) STUDS	(1) STUDS

TYP. WOOD FRAMING AT OPENING

SCALE: N.T.S.

TYP. UNMARKED HEADER SCHEDULE			
SPAN LESS THAN	2x4 LOAD BEARING WALLS	2x6 LOAD BEARING WALLS	NON LOAD BEARING WALLS
3'-0"	(2)2x6*	(3)2x6*	(2)2x6*
4'-0"	(2)2x10*	(3)2x8*	(2)2x8*
5'-0"	(2)2x12**	(3)2x10*	(2)2x8*
7'-6"	(2)1¾"x9¼"LVL**	(2)1¾"x9¼"LVL**	(2)2x8*
9'-0"	(2)1¾"x11⅞"LVL**	(3)1¾"x9¼"LVL**	(2)2x8*

PROVIDE FULL-HEIGHT KING STUDS TO MATCH THE NUMBER OF STUDS REPLACED BY THE OPENING, HALF (ROUND UP) PLACED ON EACH SIDE OF THE OPENING, (2)KING STUDS MIN.
*PROVIDE (1) JACK STUD MIN.
**PROVIDE (2) JACK STUDS MIN.



CEILING FRAMING RE-STRENGTHENING PLAN

SCALE: 1/4"=1'

NOTES FOR RE-STRENGTHENING THE ROOF:
EXISTING ROOF RAFTERS AND FRAMING SHALL BE SATISFIED AS PER FOLLOWING:

1. ALL ROOF RAFTERS ARE 2X6 SP#2@16"OC. UNLESS NOTED OTHER WAYS. IF RAFTERS SPAN EXCEEDS 8'-0". PROVIDE PURLIN BRACING 2-2X8 SP#2 CONTINUOUS AND PURLIN 2-2X4 @4'OC.

2. ALL RIDGE BOARDS, VALLEY RAFTERS AND HIP RAFTERS SHALL BE 2-2X6 SP#2. UNLESS NOTED OTHERWAYS.

3. SUPPORT ALL RIDGE BOARD AT THE ENDS AND @6'OC BY 2-2X4 OVER LOAD BEARING WALLS/BEAMS TYPICAL. SUPPORT ALL HIP AND VALLEY RAFTERS AT THE ENDS AND @6'OC BY 2-2X4 OVER LOAD BEARING WALLS/BEAMS TYPICAL.

4. IF LENGTH OF ANY ROOF JACK EXCEEDS 8'-0", PROVIDE HORIZONTAL TIE USING 1-2X8 AT MID HEIGHT OF THE ROOF JACK. THE OTHER END OF HORIZONTAL TIE SHOULD BE ATTCHED TO ANOTHER ROOF TIE OR ANY HOUSING FRAMING MEMBER.

5. ALL POINT LOADS MUST BE STACKED DOWN TO THE FOUNDATION

6. ALL ROOF PITCHES AND OTHER ROOF GEOMETRY ABOVE ARE PER ARCHITECTURER PLAN.

7. ALL THE DORMER WALL, CEILING AND RAFTERS SHALL BE 2X6@16"OC. PLEASE FIELD VERIFY THE LOCATIONS OF DORMER.

NOTES AND SCHEDULE:

P1: WOOD POST 6X6 TYPICAL. USE ABWZ SIMPSON POST BASE FOR THE LATERAL RESISTANCE. AND USE SIMPSON BCS AT THE POST-BEAM CONNECTION. SEE ARCHITECTURAL FOR THE HEIGHT AND ELEVATION AND THE BOX DECORATION.
P2: 3-2X6 STUD PACK OR 6X6 POSTS.
PR: NEW 16"X16" CMU PIER WITH 2#4 BARS DOWEL THRU THE 2 CELLS SHALL BE FILLED WITH 3000PSI GROUT. TWO-5/8" DIA ANCHOR BOLTS SHALL BE ANCHORED INTO THESE CELLS. 7" LONG MINIMUM ANCHOR BOLT. USE 2-1/2" DIA WASHER FOR THE ANCHOR BOLT. SEE ARCHITECTURAL FOR THE HEIGHT AND ELEVATION. REPLACE EXISTING ANY PIERS AND FOLLOW THE NEW LAYOUT.
W1: 8" BOUNDARY CMU WALL AT FOUNDATION TO MAIN FLOOR, JUST THE CRAWL SPACE. POUR 3000PSI GROUT AT FILLED CELLS WITH #5 BARS @32"OC. EXISTING 2X4 @16"OC STUD WALL ABOVE THE SILL PLATE AT MAIN FLOOR LEVEL REMAIN UNCHANGED, HOWEVER REPLACE AND OR REPAIR THE DAMAGED SILL PLATE AND THE DAMAGED STUDS.
B21: USE 3-(1.75)"X(14)" LVL BEAM SUPPORTED BY 4X6 OR 4-2X4 STUD PACK AND ECCQ SIMPSON BRACKET AT THE JOINT.
B22: USE 2-(1.75)"X(14)" LVL BEAM SUPPORTED BY 4X6 OR 4-2X4 STUD PACK AND ECCQ SIMPSON BRACKET AT THE JOINT.

PLEASE VERIFY THE ARCHITECTURAL DRAWING FOR ALL THE REQUIRED DIMENSION.

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER
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CEILING ROOF RE-STRENGTHENING PLAN

2908 MOON STATION RD NW, KENNESAW GA-30144

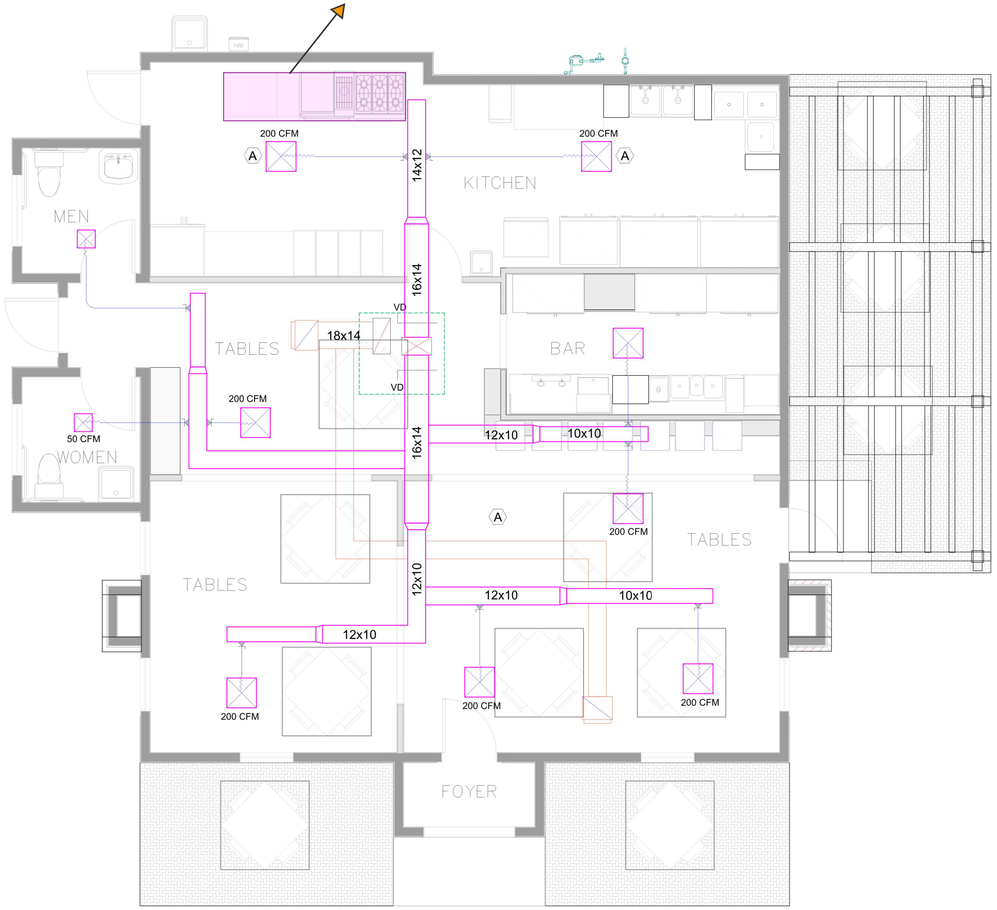
Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

S2.0

Kitchen hood plans are for
Reference Only
Separate Submittal is required by sub-contractors

NOTE:
-"Fire suppression hood system will be installed by 3rd party contractor with approved shop drawings per NFPA-96"
- All dimensions are to be Checked and verified on site



MECHANICAL LEGEND

	SUPPLY DUCT UP		PIPING DOWN
	SUPPLY DUCT DOWN		PIPING UP
	RETURN DUCT UP		TURNING VANES
	RETURN DUCT DOWN		VOLUME DAMPER
FD	FIRE DAMPER	C	CONDENSATE DRAIN
SD	SMOKE DAMPER	M	MOTORIZED DAMPER
C/D	COMB. FIRE/SMOKE DAMPER		BACKDRAFT DAMPER
BD	BACKDRAFT DAMPER	A	REMOTE ANNUNCIATOR
SD	SMOKE DETECTOR	S	REMOTE TEMP. SENSOR
	SPIN-IN WITH VOLUME DAMPER	T	THERMOSTAT
	45° RETURN DUCT TAP WITH VOL. DAMPER		FLEX DUCT
	DIFFUSER		LINEAR DIFFUSER WITH FLEX CONNECTION
	DIFFUSER WITH FLEX CONNECTION		ROUND DUCT UP
	GRILLE/REGISTER		ROUND DUCT DOWN
	SIDEWALL GRILLE/ REGISTER/ DIFFUSER		REDUCER
	CONNECT TO EXISTING		EXTENT OF DEMOLITION

ABBREVIATIONS

(D)	DEMOLITION	DN	DOWN
(E)	EXISTING	EA	EXHAUST AIR
(F)	FUTURE	EFF	EFFICIENCY
(R)	(RELOCATE)	EXH	EXHAUST
AAV	AUTOMATIC AIR VENT	MFR	MANUFACTURER
AFF	ABOVE FINISHED FLOOR	N/A	NOT APPLICABLE
BAS	BUILDING AUTOMATIC SYSTEM	NTS	NOT TO SCALE
BDD	BACKDRAFT DAMPER	OA	OUTSIDE AIR
BFP	BACKFLOW PREVENTER	RA	RETURN AIR
BOB	BOTTOM OF BEAM	SA	SUPPLY AIR
BOD	BOTTOM OF DUCT	TCP	TEMPERATURE CONTROL PANEL
BOP	BOTTOM OF PIPE	TYP	TYPICAL
BOS	BOTTOM OF STRUCTURE	UNO	UNLESS NOTED OTHERWISE

GENERAL NOTES:

A. ALL WORK TO BE PERFORMED TO MEET ALL STATE, CITY & LOCAL CODE REQUIREMENTS.

B. ALL DUCTWORK TO BE CONSTRUCTED OF GALVANIZED METAL ACCORDING TO SMACNA STANDARDS.

C. ALL CONCEALED DUCTWORK AND PLENUMS TO BE WRAPPED WITH 1 1/2" FIBERGLASS INSULATION. INSULATION TO HAVE A DENSITY OF 1.0 PCF WITH A THERMAL CONDUCTIVITY (K-VALUE) NOT GREATER THAN 0.27 AT 75°F.

D. ALL WALL PATCHING TO BE BY THE GENERAL CONTRACTOR.

E. HVAC CONTRACTOR IS TO COORDINATE WITH OTHER TRADES BEFORE INSTALLING DUCTWORK. IF THE HVAC CONTRACTOR FAILS TO COORDINATE WITH OTHER TRADES AND THE WORK MUST BE ALTERED, THE HVAC CONTRACTOR WILL CHANGE IT AT HIS OWN EXPENSE.

F. ONCE THE SYSTEM IS COMPLETE AND ALL CEILING TILES ARE INSTALLED, THE SYSTEM FILTER SHALL BE CHANGED AND THE AIR SIDE SHALL BE BALANCED. SUBMIT ELECTRONIC COPY OF BALANCE REPORT TO ENGINEER FOR REVIEW.

G. COORDINATE THE EXACT LOCATION OF ALL GRILLES, REGISTERS & DIFFUSERS WITH ARCHITECTURAL REFLECTED CEILING PLAN. ALSO COORDINATE MOUNTING HEIGHTS OF FIXTURES.

H. HVAC CONTRACTOR IS TO VISIT THE SITE PRIOR TO SUBMITTING A BID & INCLUDE IN THE BID ANY ITEMS NECESSARY FOR A COMPLETE & OPERATIONAL SYSTEM.

I. DRAWINGS ARE SCHEMATIC IN NATURE. HVAC CONTRACTOR IS TO INCLUDE ANY ITEMS REQUIRED FOR A COMPLETE & OPERATIONAL SYSTEM, WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.

J. HVAC CONTRACTOR TO FURNISH ALL PERMITS REQUIRED FOR HIS PORTION OF THE WORK.

K. HVAC CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR CONCERNING ELECTRICAL REQUIREMENTS BEFORE ORDERING ANY EQUIPMENT.

L. FLEXIBLE DUCTS SHALL BE WIREMOLD TYPE WGC, 1-1/2" INSULATION, & RATED AT 10" W.C WITH A MAXIMUM LENGTH OF 5'-0".

M. CONTRACTORS TO ENSURE THAT EXISTING THERMOSTATS ARE PROTECTED DURING CONSTRUCTION AND REUSED.

N. ALL MATERIALS ABOVE THE CEILING SHALL BE PLENUM RATED.

EXHAUST FAN SCHEDULE
BASED ON GREENHECK U.N.O

UNIT DATA				PERFORMANCE DATA								
TAG	MODEL	FUNCTION	FAN TYPE	CFM	ESP	RPM	DAMPER	BELT OR DIRECT	HP	FLA	VOLT	PH	COMMENTS
EF-1	SP-A110	GENERAL	CEILING	100	0.25	950	BDD	DIRECT	FRAC.	-	115	1	1

NOTES: 1. FAN TO RUN 24/7

TAG-NECK SIZE
CFM

AIR TERMINAL SCHEUDLE
BASED ON TITUS U.N.O.

D = DIFFUSER, G = GRILLE
R = REGISTER

UNIT DATA				PERFORMANCE DATA					
TAG	FUNCTION	MODEL	FACE SIZE	FRAME TYPE	MATERIAL	FINISH	BALANCE DAMPER	MAX N.C.	COMMENTS
D1	SUPPLY	OMNI	24" x 24"	LAY-IN	STEEL	WHITE	-	25	1,2
G1	RETURN	50F	24" x 24"	LAY-IN	ALUMINUM	WHITE	-	25	-
G2	RETURN	50F	24" x 12"	LAY-IN	ALUMINUM	WHITE	-	25	-
G3	RETURN	50F	12" x 12"	LAY-IN	ALUMINUM	WHITE	-	25	-

NOTES: 1. SUPPY DIFFUSERS TO BE INSULATED VIA FACTORY SYSTEM.
2. DUCT CONNECTION SIZE AS CALLED OUT ON PLANS.

REGISTERED
PROFESSIONAL
ENGINEER
GEORGIA
51714.24
No.
COMMONWEALTH OF
NUMBER
ENGINEER
FLEACTO ENGINEERING
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MECHANICAL PLAN

2908 MOON STATION RD NW,
KENNESAW GA-30144

Revision:
10/24/24
11/06/24
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12/19/24

Drawn By: MGK
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Date: 10/15/24
Project No: 24274-SMEP

M1.0

MECHANICAL PLAN
SCALE: 1/4"=1'

ISSUED FOR CONSTRUCTION

SPECIFICATIONS - DIVISION 23 - HVAC

SECTION 230500 - GENERAL MECHANICAL REQUIREMENTS:

HVAC SUBCONTRACTOR SHALL PROVIDE AT BID TIME A BID TO PROVIDE PREVENTATIVE MAINTENANCE SERVICES FOR ONE YEAR.

FURNISH TO THE OWNER ALL OPERATING & MAINTENANCE MANUALS, RECORD DRAWINGS, TEST & BALANCE REPORT. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER REPRESENTATIVES FOR EMPLOYEE TRAINING REQUIREMENTS FOR ALL EQUIPMENT.

MECHANICAL CONTRACTOR SHALL SUBMIT COMPLIANCE CHECKLIST TO BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION OF PROJECT.
PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.

DEFINITIONS:
FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION.
INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE.
PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

WARRANTY:
PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.
CONTRACTOR SHALL INCLUDE ONE YEAR WARRANTY ON OWNER FURNISHED EQUIPMENT. CONTRACTOR SHALL INCLUDE COSTS FOR RECEIVING, HANDLING, STORAGE, AND HOISTING OF OWNER FURNISHED EQUIPMENT.

COORDINATION:
COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

DUCT DIMENSIONS:
UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

TESTING AND BALANCING:
THE OWNER SHALL CONTRACT DIRECTLY WITH SUPERIOR INC. TO PROVIDE A THIRD PARTY TEST AND BALANCE OF THE HVAC SYSTEM. THE GC IS RESPONSIBLE FOR SCHEDULING THE TEST AND BALANCE. CONTACT SUPERIOR INC. (ERIC HOLCOMB) @ (800) 222-1819 AND (615) 479-1578 FOR COORDINATION AND SCHEDULING. IF THE SITE IS NOT READY WHEN SUPERIOR INC. ARRIVES AT THE SCHEDULED TIME, ALL COSTS REQUIRED FOR SUPERIOR TO RETURN TO THE SITE SHALL BE THE GC'S RESPONSIBILITY. TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH NBC AND ASHRAE STANDARDS. ELIMINATE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. SUBMIT COMPLETED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR, WITH NBC CERTIFICATION. BALANCE ALL SYSTEMS TO WITHIN 5% OF AIR FLOWS INDICATED ON THE DRAWINGS, AND REPORT ALL DISCREPANCIES TO HVAC INSTALLER FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.

MAKE-UP AIR UNIT:
UNIT SHALL HAVE AN INTEGRAL DISCHARGE THERMOSTAT LINKED TO THE INTERNAL CONTROLS. THE HEATER SHALL BE SET TO MAINTAIN DUCT SUPPLY TEMPERATURE AT NO LESS THAN 65 DEG. F. (ADJ.).
HIGH LIMIT SWITCH SET TO 180 DEG. F.
INTAKE AIR SENSOR SET TO 10 DEG. F. (ADJ.) LOWER THAN DISCHARGE AIR SENSOR.

TEMPERATURE CONTROLS:
PROVIDE PROGRAMMABLE THERMOSTATS WITH REMOTE TEMPERATURE SENSORS AND REMOTE HUMIDISTATS COMPATIBLE WITH ROOFTOP UNIT. CONTROL WIRING SHALL BE INSTALLED IN CONDUIT. THERMOSTAT SHALL MEET SETPOINT ADJUSTMENT FOR UNOCCUPIED MODE: HEATING DOWN TO 55 DEGREES AND COOLING UP TO 85 DEGREES. PROVIDE INTERLOCK CONTROL WIRING BETWEEN HOOD EXHAUST FANS AND ROOFTOP UNITS.

END OF SECTION

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. SUBMITTALS:
1. CERTIFIED TAB REPORTS.
B. TAB FIRM QUALIFICATIONS: NBC CERTIFIED.
C. TAB REPORT FORMS: STANDARD TAB CONTRACTOR'S FORMS APPROVED BY ARCHITECT.
PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION
3.1 EXAMINATION
A. EXAMINE THE CONTRACT DOCUMENTS TO BECOME FAMILIAR WITH PROJECT REQUIREMENTS AND TO DISCOVER CONDITIONS IN SYSTEMS' DESIGNS THAT MAY PRECLUDE PROPER TAB OF SYSTEMS AND EQUIPMENT.
B. EXAMINE THE APPROVED SUBMITTALS FOR HVAC SYSTEMS AND EQUIPMENT.
C. EXAMINE SYSTEMS FOR INSTALLED BALANCING DEVICES, SUCH AS TEST PORTS, GAGE COCKS, THERMOMETER WELLS, FLOW-CONTROL DEVICES, BALANCING VALVES AND FITTINGS, AND MANUAL VOLUME DAMPERS. VERIFY THAT LOCATIONS OF THESE BALANCING DEVICES ARE ACCESSIBLE.
D. EXAMINE SYSTEM AND EQUIPMENT INSTALLATIONS AND VERIFY THAT FIELD QUALITY-CONTROL TESTING, CLEANING, AND ADJUSTING SPECIFIED IN INDIVIDUAL SECTIONS HAVE BEEN PERFORMED.
E. EXAMINE HVAC EQUIPMENT AND FILTERS AND VERIFY THAT BEARINGS ARE GREASED, BELTS ARE ALIGNED AND TIGHT, AND EQUIPMENT WITH FUNCTIONING CONTROLS IS READY FOR OPERATION.
F. EXAMINE TERMINAL UNITS, SUCH AS VARIABLE-AIR-VOLUME BOXES, AND VERIFY THAT THEY ARE ACCESSIBLE AND THEIR CONTROLS ARE CONNECTED AND FUNCTIONING.
G. EXAMINE AUTOMATIC TEMPERATURE SYSTEM COMPONENTS TO VERIFY THE FOLLOWING:
1. DAMPERS, VALVES, AND OTHER CONTROLLED DEVICES ARE OPERATED BY THE INTENDED CONTROLLER.
2. DAMPERS AND VALVES ARE IN THE POSITION INDICATED BY THE CONTROLLER.
3. INTEGRITY OF DAMPERS AND VALVES FOR FREE AND FULL OPERATION AND FOR TIGHTNESS OF FULLY CLOSED AND FULLY OPEN POSITIONS. THIS INCLUDES DAMPERS IN MULTIZONE UNITS, MIXING BOXES, AND VARIABLE-AIR-VOLUME TERMINALS.
4. AUTOMATIC MODULATING AND SHUTOFF VALVES, INCLUDING TWO-WAY VALVES AND THREE-WAY MIXING AND DIVERTING VALVES, ARE PROPERLY CONNECTED.
5. THERMOSTATS AND HUMIDISTATS ARE LOCATED TO AVOID ADVERSE EFFECTS OF SUNLIGHT, DRAFTS, AND COLD WALLS.
6. SENSORS ARE LOCATED TO SENSE ONLY THE INTENDED CONDITIONS.
7. SEQUENCE OF OPERATION FOR CONTROL MODES IS ACCORDING TO THE CONTRACT DOCUMENTS.
8. CONTROLLER SET POINTS ARE SET AT INDICATED VALUES.
9. INTERLOCKED SYSTEMS ARE OPERATING.
10. CHANGEOVER FROM HEATING TO COOLING MODE OCCURS ACCORDING TO INDICATED VALUES.
H. REPORT DEFICIENCIES DISCOVERED BEFORE AND DURING PERFORMANCE OF TEST AND BALANCE PROCEDURES.
3.2 GENERAL PROCEDURES FOR TESTING AND BALANCING
A. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THE PROCEDURES CONTAINED IN AABC'S "NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE", NBC, ASHRAE 111, NEBB'S "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS" OR SMACNA'S "HVAC SYSTEMS - TESTING, ADJUSTING, AND BALANCING" AND IN THIS SECTION.
B. CUT INSULATION, DUCTS, PIPES, AND EQUIPMENT CABINETS FOR INSTALLATION OF TEST PROBES TO THE MINIMUM EXTENT NECESSARY FOR TAB PROCEDURES. AFTER TESTING AND BALANCING, PATCH PROBE HOLES IN DUCTS WITH SAME MATERIAL AND THICKNESS AS USED TO CONSTRUCT DUCTS. INSTALL AND JOIN NEW INSULATION THAT MATCHES REMOVED MATERIALS. RESTORE INSULATION, COVERINGS, VAPOR BARRIER, AND FINISH.
C. MARK EQUIPMENT AND BALANCING DEVICES, INCLUDING DAMPER-CONTROL POSITIONS, VALVE POSITION INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL TO SHOW FINAL SETTINGS.
3.3 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS
A. PREPARE SCHEMATIC DIAGRAMS OF SYSTEMS' "AS-BUILT" DUCT LAYOUTS.
B. FOR VARIABLE-AIR-VOLUME SYSTEMS, DEVELOP A PLAN TO SIMULATE DIVERSITY.
C. DETERMINE THE BEST LOCATIONS IN MAIN AND BRANCH DUCTS FOR ACCURATE DUCT AIRFLOW MEASUREMENTS.
D. VERIFY THAT MOTOR STARTERS ARE EQUIPPED WITH PROPERLY SIZED THERMAL PROTECTION.
E. CHECK FOR AIRFLOW BLOCKAGES.
F. CHECK CONDENSATE DRAINS FOR PROPER CONNECTIONS AND FUNCTIONING.
G. CHECK FOR PROPER SEALING OF AIR-HANDLING UNIT COMPONENTS.
H. CHECK FOR PROPER SEALING OF AIR DUCT SYSTEM.
3.4 TOLERANCES
A. SET HVAC SYSTEM AIRFLOW AND WATER FLOW RATES WITHIN THE FOLLOWING TOLERANCES:
1. SUPPLY, RETURN, AND EXHAUST FANS AND EQUIPMENT WITH FANS: PLUS OR MINUS 5 PERCENT.
2. AIR OUTLETS AND INLETS: PLUS OR MINUS 10 PERCENT.

END OF SECTION

SECTION 230700 - HVAC INSULATION

PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. QUALITY ASSURANCE: LABELED WITH MAXIMUM FLAME-SPREAD INDEX OF 25 AND MAXIMUM SMOKE-DEVELOPED INDEX OF 50 ACCORDING TO ASTM E 84.
PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. SURFACE-BURNING CHARACTERISTICS:
1. INDOOR INSULATION AND RELATED MATERIALS: TO BE FACTORY LABELED DESIGNATING MAXIMUM FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS ACCORDING TO ASTM E 84.
2.2 INSULATION MATERIALS
A. FLEXIBLE ELASTOMERIC: CLOSED-CELL, SPONGE- OR EXPANDED-RUBBER MATERIALS. COMPLY WITH ASTM C 534, TYPE I FOR TUBULAR MATERIALS AND TYPE II FOR SHEET MATERIALS.
B. MINERAL-FIBER BLANKET INSULATION: COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE I.
1. FSK JACKET: ALUMINUM-FOIL, FIBERGLASS-REINFORCED SCRIM WITH KRAFT-PAPER BACKING; COMPLYING WITH ASTM C 1136, TYPE II.
2. FSK TAPE: FOIL-FACE, VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE; COMPLYING WITH ASTM C 1136.
C. MINERAL-FIBER, PIPE AND TANK INSULATION: COMPLYING WITH ASTM C 1393, TYPE II OR TYPE IIIA CATEGORY 2, OR WITH PROPERTIES SIMILAR TO ASTM C 612, TYPE IB; AND HAVING FACTORY-APPLIED ASJ JACKET. NOMINAL DENSITY IS 2.5 LB/CU. FT. OR MORE. THERMAL CONDUCTIVITY (K-VALUE) AT 100 DEG F IS 0.29 BTU X IN./H X SQ. FT. X DEG F OR LESS.
1. ASJ: WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE I.
2. ASJ TAPE: WHITE VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE, COMPLYING WITH ASTM C 1136.
D. FLEXIBLE ELASTOMERIC ADHESIVE: COMPLY WITH MIL-A-24179A, TYPE II, CLASS I.
E. MINERAL-FIBER ADHESIVE: COMPLY WITH MIL-A-3316C, CLASS 2, GRADE A.
F. VAPOR-BARRIER MASTIC: WATER BASED; SUITABLE FOR INDOOR AND OUTDOOR USE ON BELOW AMBIENT SERVICES; COMPLY WITH MIL-PRF-19565C, TYPE II.
PART 3 - EXECUTION
3.1 INSULATION INSTALLATION
A. COMPLY WITH REQUIREMENTS OF THE MIDWEST INSULATION CONTRACTORS ASSOCIATION'S "NATIONAL COMMERCIAL & INDUSTRIAL INSULATION STANDARDS" FOR INSULATION INSTALLATION ON PIPES AND EQUIPMENT.
B. INSULATION INSTALLATION AT INTERIOR WALL AND PARTITION PENETRATIONS (THAT ARE NOT FIRE RATED): INSTALL INSULATION CONTINUOUSLY THROUGH WALLS AND PARTITIONS.
C. INSULATION INSTALLATION AT FIRE-RATED WALL, PARTITION, AND FLOOR PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH PENETRATIONS. SEAL PENETRATIONS. COMPLY WITH REQUIREMENTS IN SECTION 078400.
D. FLEXIBLE ELASTOMERIC INSULATION INSTALLATION:
1. SEAL LONGITUDINAL SEAMS AND END JOINTS WITH ADHESIVE TO ELIMINATE OPENINGS IN INSULATION THAT ALLOW PASSAGE OF AIR TO SURFACE BEING INSULATED.
2. INSULATION INSTALLATION ON PIPE FITTINGS AND ELBOWS: INSTALL MITERED SECTIONS OF PIPE INSULATION. SECURE INSULATION MATERIALS AND SEAL SEAMS WITH ADHESIVE TO ELIMINATE OPENINGS IN INSULATION THAT ALLOW PASSAGE OF AIR TO SURFACE BEING INSULATED.
E. MINERAL-FIBER INSULATION INSTALLATION:
1. INSULATION INSTALLATION ON STRAIGHT PIPES AND TUBES: WHERE VAPOR BARRIERS ARE INDICATED, SEAL LONGITUDINAL SEAMS, END JOINTS, AND PROTRUSIONS WITH VAPOR-BARRIER MASTIC AND JOINT SEALANT.
2. FOR INSULATION WITH FACTORY-APPLIED JACKETS ON ABOVE AMBIENT SURFACES, SECURE LAPS WITH OUTWARD CLINCHED STAPLES AT 6 INCHES O.C.
3. FOR INSULATION WITH FACTORY-APPLIED JACKETS ON BELOW AMBIENT SURFACES, DO NOT STAPLE LONGITUDINAL TABS BUT SECURE TABS WITH ADDITIONAL ADHESIVE AS RECOMMENDED BY INSULATION MATERIAL MANUFACTURER AND SEAL WITH VAPOR-BARRIER MASTIC AND FLASHING SEALANT.
4. BLANKET INSULATION INSTALLATION ON DUCTS AND PLENUMS: SECURE WITH ADHESIVE AND INSULATION PINS.
5. FOR DUCTS AND PLENUMS WITH SURFACE TEMPERATURES BELOW AMBIENT, INSTALL A CONTINUOUS UNBROKEN VAPOR BARRIER.
F. PLENUMS AND DUCTS REQUIRING INSULATION:
1. CONCEALED SUPPLY AIR.
2. CONCEALED AND EXPOSED OUTDOOR AIR.
3. CONCEALED AND EXPOSED RETURN AIR LOCATED IN NONCONDITIONED SPACE.
3.2 DUCT AND PLENUM INSULATION SCHEDULE

RETAIN " ONE OF" OPTION IN PARAGRAPHS IN THIS ARTICLE TO ALLOW CONTRACTOR TO SELECT PIPING MATERIALS FROM THOSE RETAINED.

A. CONCEALED DUCT INSULATION SHALL BE 1-1/2" THICK MINERAL-FIBER BLANKET WITH A 1.5-LB/CU. FT. NOMINAL DENSITY.
3.3 HVAC PIPING INSULATION SCHEDULE
A. CONDENSATE PIPING: INSULATION SHALL BE 1" THICK FLEXIBLE ELASTOMERIC.
B. REFRIGERANT PIPING: INSULATION SHALL BE 1" THICK FLEXIBLE ELASTOMERIC.

END OF SECTION

SECTION 232300 - REFRIGERANT PIPING

PART 2 - PRODUCTS
2.1 TUBES AND FITTINGS
A. COPPER TUBE: ASTM B 88, TYPE K OR TYPE L, ANNEALED OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS.
B. WROUGHT-COPPER FITTINGS AND UNIONS: ASME B16.22.
C. SOLDER FILLER METALS: ASTM B 32. USE 95-5 TIN ANTIMONY OR ALLOY HB SOLDER TO JOIN COPPER SOCKET FITTINGS ON COPPER PIPE.
D. BRAZING FILLER METALS: AWS A5.8.
2.2 VALVES AND SPECIALTIES
A. AS REQUIRED BY THE KITCHEN EQUIPMENT MANUFACTURER.
PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL REFRIGERANT PIPING AND CHARGE WITH REFRIGERANT ACCORDING TO ASHRAE 15.
B. INSTALL REFRIGERANT PIPING AS REQUIRED BY THE KITCHEN EQUIPMENT MANUFACTURER.

END OF SECTION

SECTION 233100 - HVAC DUCTS AND CASINGS

PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
B. STRUCTURAL PERFORMANCE: DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS DESCRIBED IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
C. COMPLY WITH NFPA 96 FOR DUCTS CONNECTED TO COMMERCIAL KITCHEN HOODS.
2.2 DUCTS
A. ELECTROGALVANIZED-STEEL SHEET: ASTM A 879
1. PAINTLOK/PAINTLOCK OR EQUAL.
B. GENERAL DUCTWORK SHALL BE GALVANIZED STEEL, ASTM A653/A635M, CONSTRUCTED TO THE GAUGE AND CORRESPONDING REINFORCING SCHEDULE AS INDICATED IN THE LATEST EDITION OF SMACNA.
C. TYPE 1 KITCHEN EXHAUST DUCTWORK
1. FACTORY-BUILT COMMERCIAL KITCHEN GREASE DUCT:
a. INSTALL REDUCED CLEARANCE, ROUND, DOUBLE-WALL GREASE DUCT AS SPECIFIED MEETING UL 1978 REQUIREMENTS. REFER TO KITCHEN EQUIPMENT SUPPLIER DRAWINGS FOR REQUIREMENTS.
b. DUCTWORK AND FITTINGS FURNISHED BY OWNER FOR INSTALLATION BY THIS CONTRACTOR.
c. NO FIRE WRAP SHALL BE REQUIRED FOR THIS INSTALLATION.
D. TYPE 2 KITCHEN EXHAUST DUCTWORK: 18 GAUGE ALUMINUM OR STAINLESS STEEL. SEAMS SHALL BE CONTINUOUSLY WELDED LIQUID TIGHT.
E. JOINT AND SEAM TAPE, AND SEALANT: COMPLY WITH UL 181A. PROVIDE POLYMERIC RUBBER TYPE SEALANT FOR USE ON BOTH INTERIOR LOCATED DUCTWORK AND DUCTWORK EXPOSED TO OUTDOOR CONDITIONS. SEALER SHALL HAVE HIGH BONDING STRENGTH FOR SURE, FIRST TIME SEALING OF JOINTS IN LOW, MEDIUM, AND HIGH PRESSURE DUCT SYSTEMS. SEALER SHALL BE HIGH IN SOLID CONTENT. PROVIDE A TWO PART TAPE SEALING SYSTEM, CONSISTING OF WOVEN FIBER TAPE IMPREGNATED WITH A GYPSUM MINERAL COMPOUND, AND A MODIFIED ACRYLIC/SILICONE ACTIVATOR THAT REACTS EXOTHERMICALLY WITH THE TAPE. TWO PART TAPE SEALING SYSTEM MUST BE RATED FOR BOTH INDOOR AND OUTDOOR APPLICATION. TAPE SHALL NOT CONTAIN ASBESTOS.
F. METAL DUCT FABRICATION: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."
2.3 ACCESSORIES
A. VOLUME DAMPERS AND CONTROL DAMPERS: SINGLE-BLADE AND MULTIPLE OPPOSED-BLADE DAMPERS, STANDARD LEAKAGE RATING, HEAVY DUTY, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS; FACTORY FABRICATED AND COMPLETE WITH REQUIRED HARDWARE AND ACCESSORIES.
2. ROUND VOLUME DAMPERS: PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEET METAL BRACKET BEYOND DUCT COVERING. WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE, PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.
3. RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM ½" HEXAGONAL AXLE, BOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".
B. FLEXIBLE DUCT CONNECTORS: FLAME-RETARDED OR NONCOMBUSTIBLE FABRICS, COATINGS, AND ADHESIVES COMPLYING WITH UL 181, CLASS 1. CONNECTOR TO BE 30 OUNCE, NEOPRENE COATED, FIBERGLASS FABRIC.
C. FLEXIBLE DUCTS: FACTORY ASSEMBLED, UL 181, CLASS 1, WITH 1-1/2-INCH THICK (R-5 MIN.), 1 PCF FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR BARRIER. FLEXIBLE DUCT SHALL MEET NFPA 90A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR MINIMUM 2-INCH WG PRESSURE AND 0 TO 250°F TEMPERATURE. PROVIDE SCREW-OPERATED METAL ADJUSTABLE CLAMPING DEVICES. USE TWIST-LOCK CONICAL TAP COLLARS AT CONNECTIONS INTO SHEET METAL DUCTWORK. MAXIMUM EXTENDED LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 5 FEET.
D. TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS". PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.
E. BIRD SCREENS AND FRAMES: PROVIDE BIRD SCREENS THAT CONFORM TO ASTM E 2016, NO. 2 MESH, ALUMINUM OR STAINLESS STEEL. FROVIDE "MEDIUM-LIGHT" RATED ALUMINUM SCREENS. PROVIDE "LIGHT" RATES STAINLESS STEEL SCREENS.
F. DUCT-MOUNTED ACCESS DOORS: FABRICATE ACCESS PANELS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE"; FIGURES 2-10, "DUCT ACCESS DOORS AND PANELS," AND 2-11, "ACCESS PANELS - ROUND DUCT."
PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL DUCTWORK, ACCESSORIES, AND SUPPORTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" UNLESS OTHERWISE INDICATED.
B. SEAL DUCTS TO THE FOLLOWING SEAL CLASSES ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE": 1-INCH WG, SEAL CLASS A.
C. AVOID PASSING THROUGH OR ABOVE ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES.
D. CLEAN DUCT SYSTEMS BEFORE TESTING, ADJUSTING, AND BALANCING.
3.2 DUCTWORK SCHEDULE
A. EXPOSED DUCTWORK IN ARCHITECTURALLY FINISHED SPACES- ELECTRO-GALVANIZED STEEL SHEET.
B. CONCEALED DUCTWORK AND DUCTWORK IN UNFINISHED ARCHITECTURAL SPACES- GALVANIZED STEEL.

END OF SECTION

SECTION 233423 - HVAC EXHAUST FANS

PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. PRODUCTS SHALL BE LICENSED TO USE THE AMCA-CERTIFIED RATINGS SEAL.
B. EXHAUST FANS SHALL COMPLY WITH UL 705. TYPE 1 FANS SHALL ALSO COMPLY WITH UL 762.
C. TYPE 1 FANS TO BE DESIGNED FOR HIGH HEAT OPERATION AT 300°F.
D. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2.2 CENTRIFUGAL VENTILATORS
A. HOUSING: REMOVABLE, SPUN-ALUMINUM, DOME TOP AND OUTLET BAFFLE; SQUARE, ONE-PIECE, ALUMINUM BASE WITH VENTURI INLET CONE.
1. UPBLAST UNITS: ALUMINUM DISCHARGE BAFFLE TO DIRECT DISCHARGE AIR UPWARD, WITH RAIN AND SNOW DRAINS.
B. FAN WHEELS: ALUMINUM HUB AND WHEEL WITH BACKWARD-INCLINED BLADES.
C. BELT-DRIVEN DRIVE ASSEMBLY: RESILIENTLY MOUNTED TO HOUSING.
1. FAN SHAFT: TURNED, GROUND, AND POLISHED STEEL; KEYED TO WHEEL HUB.
2. SHAFT BEARINGS: PERMANENTLY LUBRICATED, PERMANENTLY SEALED, SELF-ALIGNING BALL BEARINGS.
3. PULLEYS: CAST-IRON, ADJUSTABLE-PITCH MOTOR PULLEY.
4. FAN AND MOTOR ISOLATED FROM EXHAUST AIRSTREAM.
D. ACCESSORIES:
1. DISCONNECT SWITCH: NON-FUSIBLE TYPE, WITH THERMAL-OVERLOAD PROTECTION, FACTORY WIRED THROUGH AN INTERNAL ALUMINUM CONDUIT.
2. BIRD SCREENS: REMOVABLE, 1/2-INCH MESH, ALUMINUM OR BRASS WIRE.
3. DAMPERS: COUNTERBALANCED, PARALLEL-BLADE, BACKDRAFT DAMPERS MOUNTED IN CURB BASE; FACTORY SET TO CLOSE WHEN FAN STOPS.
4. MOTORIZED DAMPERS: PARALLEL-BLADE DAMPERS MOUNTED IN CURB BASE WITH ELECTRIC ACTUATOR; WIRED TO CLOSE WHEN FAN STOPS.
E. ROOF CURBS: 20 GAUGE GALVANIZED STEEL; MITERED AND WELDED CORNERS; 1-1/2-INCH THICK, RIGID, FIBERGLASS INSULATION ADHERED TO INSIDE WALLS; AND 1-1/2-INCH WOOD NAILER. SIZE AS REQUIRED TO SUIT ROOF OPENING AND FAN BASE.
1. CONFIGURATION: SELF-FLASHING WITHOUT A CANT STRIP, WITH MOUNTING FLANGE.
2. OVERALL HEIGHT: 12 INCHES FOR GENERAL EXHAUST FANS; 20 INCHES FOR KITCHEN EXHAUST FANS.
3. PITCH MOUNTING: MANUFACTURE CURB FOR ROOF SLOPE.
4. MOUNTING PEDESTAL: GALVANIZED STEEL WITH REMOVABLE ACCESS PANEL.
5. TYPE 1 ROOF CURBS TO BE VENTED TYPE.
6. TYPE 1 AND TYPE 2 ROOF CURBS TO BE HINGED TYPE.
F. CAPACITIES AND CHARACTERISTICS:
1. SEE SCHEDULE.
G. MOTORS
A.A. COMPLY WITH NEMA DESIGNATION, TEMPERATURE RATING, SERVICE FACTOR, ENCLOSURE TYPE, AND EFFICIENCY REQUIREMENTS FOR MOTORS.
1.1. MOTOR SIZES: MINIMUM SIZE AS INDICATED. IF NOT INDICATED, LARGE ENOUGH SO DRIVEN LOAD WILL NOT REQUIRE MOTOR TO OPERATE IN SERVICE FACTOR RANGE ABOVE 1.0.
A.B. ENCLOSURE TYPE: TOTALLY ENCLOSED, FAN COOLED.
PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL UNITS WITH CLEARANCES FOR SERVICE AND MAINTENANCE.
B. ROOF-MOUNTED UNITS: INSTALL ROOF CURB ON ROOF STRUCTURE, ACCORDING TO ARI GUIDELINE B. INSTALL AND SECURE ROOF-MOUNTED FANS ON CURBS, AND COORDINATE ROOF PENETRATIONS AND FLASHING WITH ROOF CONSTRUCTION.

END OF SECTION

SECTION 233713 - DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL
PART 2 - PRODUCTS
2.1 DIFFUSERS, REGISTERS, AND GRILLES:
A. REFER TO SCHEDULES FOR FINISH TYPE, COLOR, MATERIAL, AND MOUNTING.
PART 3 - EXECUTION
3.1 INSTALLATION
A. INSTALL DIFFUSERS, REGISTERS, AND GRILLES LEVEL AND PLUMB.
B. CEILING-MOUNTED OUTLETS AND INLETS: DRAWINGS INDICATE GENERAL ARRANGEMENT OF DUCTS, FITTINGS, AND ACCESSORIES. MAKE FINAL LOCATIONS WHERE INDICATED, AS MUCH AS PRACTICAL. FOR UNITS INSTALLED IN LAY-IN CEILING PANELS, LOCATE UNITS IN THE CENTER OF PANEL UNLESS OTHERWISE INDICATED. WHERE ARCHITECTURAL FEATURES OR OTHER ITEMS CONFLICT WITH INSTALLATION, NOTIFY ARCHITECT FOR A DETERMINATION OF FINAL LOCATION.
C. AFTER INSTALLATION, ADJUST DIFFUSERS, REGISTERS, AND GRILLES TO AIR PATTERNS INDICATED, OR AS DIRECTED, BEFORE STARTING AIR BALANCING.

2. END OF SECTION

Kitchen hood plans are for
Reference Only
Separate Submittal is required by sub-contractors

ISSUED FOR CONSTRUCTION

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MECHANICAL SPECIFICATIONS-01

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

M2.0

Kitchen hood plans are for
Reference Only
Separate Submittal is required by sub-contractors

SPECIFICATIONS - DIVISION 23 - HVAC (CONTINUED)

SECTION 237339 - DIRECT-FIRED MAKE-UP AIR UNIT

PART 2 - PRODUCTS

2.1 PACKAGED UNITS

A. FACTORY-ASSEMBLED, PREWIRED, SELF-CONTAINED UNIT CONSISTING OF CABINET, SUPPLY FAN, CONTROLS, FILTERS, AND DIRECT-FIRED GAS FURNACE TO BE INSTALLED OUTSIDE THE BUILDING.

2.2 CABINET

A. CABINET: GALVANIZED-STEEL PANELS WITH LIFTING LUGS. CABINET SHALL BE FULLY WEATHERIZED FOR OUTDOOR INSTALLATION.. HEAT-RESISTANT, BAKED-ENAMEL FINISH. VERTICAL-PATTERN, GALVANIZED-STEEL DISCHARGE PLENUM WITH DIFFUSERS INCORPORATING INDIVIDUALLY ADJUSTABLE VANES.

B. ROOF CURB: FULL-PERIMETER CURB OF SHEET METAL, MINIMUM 20 INCHES HIGH, WITH WOOD NAILER, NEOPRENE SEALING STRIP, AND WELDED 2-BAR FLASHING.

C. OUTDOOR-AIR INTAKE: GALVANIZED-STEEL HOOD WITH RAIN BAFFLES, BIRD SCREEN, AND FINISH TO MATCH CABINET; AND SIZED TO SUPPLY 100 PERCENT OUTDOOR AIR. GALVANIZED-STEEL, OPPOSED-BLADE MOTORIZED DAMPERS WITH VINYL BLADE SEALS AND STAINLESS-STEEL JAMB SEAL.

D. FILTERS: COMPLY WITH NFPA 90A; 1 INCH THICK.

2.3 SUPPLY-AIR FAN

A. FAN: CENTRIFUGAL, RATED ACCORDING TO AMCA 210; STATICALLY AND DYNAMICALLY BALANCED, GALVANIZED STEEL; MOUNTED ON SOLID-STEEL SHAFT.

B. MOTOR: TOTALLY ENCLOSED, SINGLE SPEED MOTOR.

C. DRIVE: V-BELT DRIVE WITH MATCHING FAN PULLEY AND ADJUSTABLE MOTOR SHEAVES AND BELT ASSEMBLY.

D. GAS PRESSURE GAUGE: 2-1/2 INCH DIAMETER AND 1/4 INCH THREAD SIZE.

2.4 DIRECT-FIRED GAS FURNACE

A. DESCRIPTION: FACTORY ASSEMBLED, PIPED, AND WIRED; AND COMPLYING WITH ANSI Z83.4, ANSI Z83.18, AND NFPA 54. CAST-IRON BURNER WITH STAINLESS-STEEL MIXING PLATES. SINGLE-STAGE CONTROL VALVE. FUEL: NATURAL GAS.

B. SAFETY CONTROLS: AIRFLOW PROVING SWITCH; HIGH-TEMPERATURE LIMIT; SAFETY LOCKOUT; REDUNDANT, AUTOMATIC, MAIN GAS VALVES; ELECTRIC PILOT VALVE; MODULATING TEMPERATURE CONTROL VALVE; MAIN AND PILOT GAS REGULATORS; MAIN AND PILOT MANUAL SHUTOFF VALVES; MAIN AND PILOT PRESSURE TAPS; AND HIGH-LOW GAS PRESSURE SWITCHES TO COMPLY WITH ANSI STANDARDS.

2.5 CONTROLS

A. FACTORY-WIRED, FUSE-PROTECTED CONTROL TRANSFORMER, CONNECTION FOR POWER SUPPLY AND FIELD-WIRED UNIT TO REMOTE CONTROL PANEL.

1. FAN CONTROL: INTERLOCK FAN TO START WITH EXHAUST FAN(S) AND WITH RTU COOLING CYCLE.
2. OUTDOOR-AIR DAMPER CONTROL: OUTDOOR-AIR DAMPER OPENS WHEN SUPPLY FAN STARTS, AND CLOSES WHEN FAN STOPS.
3. TEMPERATURE CONTROL: OPERATES GAS VALVE TO MAINTAIN SUPPLY-AIR TEMPERATURE.

2.6 INSTALLATION

A. INSTALL GAS-FIRED UNITS ACCORDING TO NFPA 54.

B. INSTALL ROOF CURB ON ROOF STRUCTURE, ACCORDING TO ARI GUIDELINE B OR NRCA'S "LOW-SLOPE MEMBRANE ROOFING CONSTRUCTION DETAILS MANUAL."

C. CONNECT GAS PIPING WITH SHUTOFF VALVE AND UNION AND WITH SUFFICIENT CLEARANCE FOR BURNER REMOVAL AND SERVICE.

D. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF DUCTS. CONNECT SUPPLY DUCTS TO DIRECT-FIRED MAU WITH FLEXIBLE DUCT CONNECTORS; FLEXIBLE DUCT CONNECTORS ARE SPECIFIED IN SECTION 233100 "HVAC DUCTS AND CASINGS."

END OF SECTION

SECTION 237413 - PACKAGED ROOFTOP UNITS

1.1 SUMMARY

A. THIS SECTION INCLUDES PACKAGED, ROOFTOP UNITS WITH THE FOLLOWING COMPONENTS AND ACCESSORIES:

1. DIRECT-EXPANSION COOLING.
2. HUMIDITY CONTROL WITH HOT-GAS REHEAT (OPTIONAL)
3. GAS FURNACE.
4. ECONOMIZER OUTDOOR-AND RETURN-AIR DAMPER SECTION.
5. INTEGRAL, SPACE TEMPERATURE CONTROLS.
6. ROOF CURBS.

1.2 SECTION REQUIREMENTS

A. SUBMITTALS:

1. PRODUCT DATA: INCLUDE MANUFACTURER'S TECHNICAL DATA FOR EACH RTU, INCLUDING RATED CAPACITIES, DIMENSIONS, REQUIRED CLEARANCES, CHARACTERISTICS, FURNISHED SPECIALTIES, AND ACCESSORIES.

PART 2 - PRODUCTS

2.1 CASING

A. GENERAL FABRICATION REQUIREMENTS FOR CASINGS: FORMED AND REINFORCED INSULATED PANELS, FABRICATED TO ALLOW REMOVAL FOR ACCESS TO INTERNAL PARTS AND COMPONENTS, WITH JOINTS BETWEEN SECTIONS SEALED.

B. EXTERIOR CASING MATERIAL: GALVANIZED STEEL WITH FACTORY-PAINTED FINISH, WITH PITCHED ROOF PANELS AND KNOCKOUTS WITH GROMMET SEALS FOR ELECTRICAL AND PIPING CONNECTIONS AND LIFTING LUGS.

1. CASING THICKNESS: 16 GAUGE THICK.

C. CASING INSULATION AND ADHESIVE: COMPLY WITH NFPA 90A.

1. MATERIALS: ASTM C 1071, TYPE I.
2. THICKNESS: 1/2 INCH
3. LINER MATERIALS SHALL HAVE AIR-STREAM SURFACE INSULATED WITH A MINIMUM 1/2-IN. THICK, MINIMUM 1 1/2 LB DENSITY, FLEXIBLE FIBERGLASS INSULATION BONDED WITH A PHENOLIC BINDER, NEOPRENE COATED ON THE AIR SIDE.
4. LINER ADHESIVE: COMPLY WITH ASTM C 916, TYPE I.

D. UNIT SHALL HAVE A THRU-THE-BASE GAS AND ELECTRICAL CONNECTIONS.

2.2 FANS

OPTION A OR B:

A. DIRECT-DRIVEN SUPPLY-AIR FANS; DOUBLE WIDTH, BACKWARD INCLINED, CENTRIFUGAL; WITH PERMANENTLY LUBRICATED, MOTOR RESILIENTLY MOUNTED IN THE FAN INLET. ALUMINUM OR PAINTED-STEEL WHEELS, AND GALVANIZED- OR PAINTED-STEEL FAN SCROLLS.

B. BELT-DRIVEN SUPPLY-AIR FANS; DOUBLE WIDTH, FORWARD CURVED, CENTRIFUGAL; WITH PERMANENTLY LUBRICATED, SINGLE-SPEED MOTOR INSTALLED ON AN ADJUSTABLE FAN BASE RESILIENTLY MOUNTED IN THE CASING. ALUMINUM OR PAINTED-STEEL WHEELS, AND GALVANIZED- OR PAINTED-STEEL FAN SCROLLS.

C. CONDENSER-COIL FAN: DIRECT DRIVE, PROPELLER, MOUNTED ON SHAFT OF PERMANENTLY LUBRICATED MOTOR WITH THERMAL OVERLOAD PROTECTION.

D. POWER EXHAUST: FORWARD CURVED, SHAFT MOUNTED ON PERMANENTLY LUBRICATED MOTOR.

2.3 COILS

A. SUPPLY-AIR REFRIGERANT COIL:

1. ALUMINUM-PLATE FIN AND SEAMLESS INTERNALLY GROOVED COPPER TUBE IN STEEL CASING WITH EQUALIZING-TYPE VERTICAL DISTRIBUTOR.
2. POLYMER STRIP SHALL PREVENT ALL COPPER COIL FROM CONTACTING STEEL COIL FRAME OR CONDENSATE PAN.
3. CATHODIC EPOXY COATING.
4. CONDENSATE DRAIN PAN: GALVANIZED STEEL WITH CORROSION-RESISTANT COATING FORMED WITH PITCH AND DRAIN CONNECTIONS.

B. OUTDOOR-AIR REFRIGERANT COIL:

1. ALUMINUM-PLATE FIN AND SEAMLESS INTERNALLY GROOVED COPPER TUBE IN STEEL CASING WITH EQUALIZING-TYPE VERTICAL DISTRIBUTOR.
2. POLYMER STRIP SHALL PREVENT ALL COPPER COIL FROM CONTACTING STEEL COIL FRAME OR CONDENSATE PAN.
3. CATHODIC EPOXY COATING.

C. HOT-GAS REHEAT REFRIGERANT COIL (OPTIONAL):

1. ALUMINUM-PLATE FIN AND SEAMLESS INTERNALLY GROOVED COPPER TUBE IN STEEL CASING WITH EQUALIZING-TYPE VERTICAL DISTRIBUTOR.
2. POLYMER STRIP SHALL PREVENT ALL COPPER COIL FROM CONTACTING STEEL COIL FRAME OR CONDENSATE PAN.
3. CATHODIC EPOXY COATING.

2.4 REFRIGERANT CIRCUIT COMPONENTS

A. NUMBER OF REFRIGERANT CIRCUITS: TWO

B. COMPRESSOR: HERMETIC, SCROLL, MOUNTED ON VIBRATION ISOLATORS; WITH INTERNAL OVERCURRENT AND HIGH-TEMPERATURE PROTECTION, INTERNAL PRESSURE RELIEF AND CRANKCASE HEATER.

C. REFRIGERATION SPECIALTIES:

1. REFRIGERANT: R-410A
2. EXPANSION VALVE WITH REPLACEABLE THERMOSTATIC ELEMENT.
3. REFRIGERANT FILTER/DRYER.
4. MANUAL-RESET HIGH-PRESSURE SAFETY SWITCH.
5. AUTOMATIC-RESET LOW-PRESSURE SAFETY SWITCH.
6. MINIMUM OFF-TIME RELAY.
7. AUTOMATIC-RESET COMPRESSOR MOTOR THERMAL OVERLOAD.
8. BRASS SERVICE VALVES INSTALLED IN COMPRESSOR SUCTION AND LIQUID LINES.
9. LOW-AMBIENT KIT HIGH-PRESSURE SENSOR.
10. HOT-GAS REHEAT SOLENOID VALVE WITH A REPLACEABLE MAGNETIC COIL.

2.5 AIR FILTRATION

A. PROVIDE 2" THROW-AWAY FIBERGLASS FILTERS.

2.6 GAS FURNACE

A. BURNERS: IN-SHOT TYPE CONSTRUCTED OF ALUMINUM-COATED STEEL.

1. FUEL: NATURAL GAS.
2. IGNITION: DIRECT SPARK IGNITION (DSI).

VERIFY AVAILABILITY OF HIGH-ALTITUDE FEATURE WITH MANUFACTURERS.

3. HIGH-ALTITUDE KIT: FOR PROJECT ELEVATIONS MORE THAN 2,000 FEET ABOVE SEA LEVEL.

B. HEAT-EXCHANGER AND DRAIN PAN: STAINLESS STEEL.

C. INDUCED DRAFT COMBUSTION BLOWER.

D. SAFETY CONTROLS:

1. GAS CONTROL VALVE: TWO STAGE.
2. GAS TRAIN: SINGLE-BODY, REGULATED, REDUNDANT, 24-V AC GAS VALVE ASSEMBLY CONTAINING PILOT SOLENOID VALVE, PILOT FILTER, PRESSURE REGULATOR, PILOT SHUTOFF, AND MANUAL SHUTOFF.

2.7 DAMPERS

A. OUTDOOR AND RETURN AIR MIXING DAMPERS: PARALLEL OR OPPOSED-BLADE GALVANIZED-STEEL DAMPERS MECHANICALLY FASTENED TO CADMIUM PLATED FOR GALVANIZED-STEEL OPERATING ROD IN REINFORCED CABINET. CONNECT OPERATING RODS WITH COMMON LINKAGE AND INTERCONNECT LINKAGES SO DAMPERS OPERATE SIMULTANEOUSLY.

1. DAMPER MOTOR: MODULATING WITH ADJUSTABLE MINIMUM POSITION.
2. RELIEF AIR DAMPER: GRAVITY ACTUATED, WITH BIRD SCREEN AND HOOD.

2.8 ELECTRICAL POWER CONNECTION

A. PROVIDE FOR SINGLE CONNECTION OF POWER TO UNIT WITH UNIT-MOUNTED DISCONNECT SWITCH ACCESSIBLE FROM OUTSIDE UNIT AND CONTROL-CIRCUIT TRANSFORMER WITH BUILT-IN OVERCURRENT PROTECTION.

2.9 CONTROLS

A. BASIC UNIT CONTROLS:

1. CONTROL-VOLTAGE TRANSFORMER.
2. WALL-MOUNTED THERMOSTAT OR SENSOR WITH THE FOLLOWING FEATURES:
   a. HEAT-COOL-OFF SWITCH.
   b. FAN ON-AUTO SWITCH.
   c. FAN-SPEED SWITCH.
   d. AUTOMATIC CHANGEOVER.
   e. ADJUSTABLE DEADBAND.
   f. EXPOSED SET POINT.
   g. EXPOSED INDICATION.
   h. DEGREE F INDICATION.
   i. UNOCCUPIED-PERIOD-OVERRIDE PUSH BUTTON.
   j. DATA ENTRY AND ACCESS PORT TO INPUT TEMPERATURE AND HUMIDITY SET POINTS, OCCUPIED AND UNOCCUPIED PERIODS, AND OUTPUT ROOM TEMPERATURE AND HUMIDITY, SUPPLY-AIR TEMPERATURE, OPERATING MODE, AND STATUS.
3. WALL-MOUNTED HUMIDISTAT OR SENSOR WITH THE FOLLOWING FEATURES:
   a. EXPOSED SET POINT.
   b. EXPOSED INDICATION.
4. REMOTE WALL-MOUNTED ANNUNCIATOR PANEL WITH KEYED ACCESS FOR EACH UNIT:
   a. LIGHTS TO INDICATE POWER ON, UNIT ALARM OR FAILURE, SMOKE DETECTION.

B. DDC CONTROLLER:

1. CONTROLLER SHALL HAVE VOLATILE-MEMORY BACKUP.
2. SAFETY CONTROL OPERATION:
   a. SMOKE DETECTORS: STOP FAN AND CLOSE OUTDOOR-AIR DAMPER IF SMOKE IS DETECTED. PROVIDE ADDITIONAL CONTACTS FOR ALARM INTERFACE TO FIRE ALARM CONTROL PANEL.
   b. FIRE ALARM CONTROL PANEL INTERFACE WHERE APPLICABLE.
   c. LOW-DISCHARGE TEMPERATURE: STOP FAN AND CLOSE OUTDOOR-AIR DAMPER IF SUPPLY AIR TEMPERATURE IS LESS THAN 40°F.
   RETAIN FIRST SUBPARAGRAPH BELOW FOR AIR-TO-AIR HEAT-PUMP FEATURE.
   d. DEFROST CONTROL FOR CONDENSER COIL: PRESSURE DIFFERENTIAL SWITCH TO INITIATE DEFROST SEQUENCE.
3. UNIT SHALL BE CAPABLE OF DIRECT COMMUNICATION WITH GENERIC OPEN PROTOCOL SUCH AS BACNET MS/TP, LONTALK, OR MODUS. THIS WILL ALLOW THE UNIT TO INTEGRATE WITH A FACILITY ENERGY MANAGEMENT SYSTEM.
4. SCHEDULED OPERATION: OCCUPIED AND UNOCCUPIED PERIODS ON SEVEN-DAY CLOCK WITH A MINIMUM OF FOUR PROGRAMMABLE PERIODS PER DAY.
5. UNOCCUPIED PERIOD:
   a. HEATING SETBACK: 10°F.
   b. COOLING SETBACK: SYSTEM OFF.
   c. OVERRIDE OPERATION: TWO HOURS.
6. SUPPLY FAN OPERATION:
   a. OCCUPIED PERIODS: RUN FAN CONTINUOUSLY.
   b. UNOCCUPIED PERIODS: CYCLE FAN TO MAINTAIN SETBACK TEMPERATURE.
7. REFRIGERANT CIRCUIT OPERATION:
   a. OCCUPIED PERIODS: CYCLE OR STAGE COMPRESSORS AND OPERATE HOT-GAS BYPASS TO MATCH COMPRESSOR OUTPUT TO COOLING LOAD TO MAINTAIN ROOM TEMPERATURE AND HUMIDITY. CYCLE CONDENSER FANS TO MAINTAIN MAXIMUM HOT-GAS PRESSURE. OPERATE LOW-AMBIENT CONTROL KIT TO MAINTAIN MINIMUM HOT-GAS PRESSURE.
   b. UNOCCUPIED PERIODS: CYCLE COMPRESSORS AND CONDENSER FANS FOR HEATING TO MAINTAIN SETBACK TEMPERATURE.
8. HOT-GAS REHEAT-COIL OPERATION (OPTIONAL):
   a. OCCUPIED PERIODS: HUMIDISTAT OPENS HOT-GAS VALVE TO PROVIDE HOT-GAS REHEAT, AND CYCLES COMPRESSOR.
   b. UNOCCUPIED PERIODS: REHEAT NOT REQUIRED.
9. GAS FURNACE OPERATION:
   a. OCCUPIED PERIODS: STAGE BURNER TO MAINTAIN ROOM TEMPERATURE.
   b. UNOCCUPIED PERIODS: CYCLE BURNER TO MAINTAIN SETBACK TEMPERATURE.
10. FIXED MINIMUM OUTDOOR-AIR DAMPER OPERATION:
    a. OCCUPIED PERIODS: OPEN TO 25 PERCENT.
    b. UNOCCUPIED PERIODS: CLOSE THE OUTDOOR-AIR DAMPER.
11. ECONOMIZER OUTDOOR-AIR DAMPER OPERATION:
    a. OCCUPIED PERIODS: OPEN TO 25 PERCENT FIXED MINIMUM INTAKE, AND MAXIMUM 100 PERCENT OF THE FAN CAPACITY TO COMPLY WITH ASHRAE CYCLE II. CONTROLLER SHALL PERMIT AIR-SIDE ECONOMIZER OPERATION WHEN OUTDOOR AIR IS LESS THAN 60 ° F. USE MIXED-AIR TEMPERATURE AND SELECT BETWEEN OUTDOOR-AIR AND RETURN-AIR ENTHALPY TO ADJUST MIXING DAMPERS DURING ECONOMIZER CYCLE OPERATION. LOCK OUT COOLING.
    b. UNOCCUPIED PERIODS: CLOSE OUTDOOR-AIR DAMPER AND OPEN RETURN-AIR DAMPER.

2.10 ACCESSORIES

A. DUPLEX, 115-V, GROUND-FAULT-INTERRUPTER OUTLET WITH 15-A OVERCURRENT PROTECTION. INCLUDE TRANSFORMER IF REQUIRED.

B. LOW-AMBIENT KIT STAGED DOWN TO 0°F.

C. FILTER DIFFERENTIAL PRESSURE SWITCH WITH SENSOR TUBING ON EITHER SIDE OF FILTER. SET FOR FINAL FILTER PRESSURE LOSS.

D. HAIL GUARDS OF GALVANIZED STEEL, PAINTED TO MATCH CASING.

E. DUCT MOUNTED SMOKE DETECTOR IN RETURN AIR STREAM CAPABLE OF SHUTTING DOWN THE UNIT IN THE PRESENCE OF SMOKE DETECTION.

2.11 ROOF CURBS

A. MATERIALS: GALVANIZED STEEL WITH CORROSION-PROTECTION COATING, WATERTIGHT GASKETS, AND FACTORY-INSTALLED WOOD NAILER; COMPLYING WITH NRCA STANDARDS.

1. CURB INSULATION AND ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B.
   a. MATERIALS: ASTM C 1071, TYPE I OR II.
   b. THICKNESS: 1-1/2 INCHES.
2. APPLICATION: FACTORY APPLIED WITH ADHESIVE AND MECHANICAL FASTENERS TO THE INTERNAL SURFACE OF CURB.
   a. LINER ADHESIVE: COMPLY WITH ASTM C 916, TYPE I.
   b. MECHANICAL FASTENERS: GALVANIZED STEEL, SUITABLE FOR ADHESIVE ATTACHMENT, MECHANICAL ATTACHMENT, OR WELDING ATTACHMENT TO DUCT WITHOUT DAMAGING LINER WHEN APPLIED AS RECOMMENDED BY MANUFACTURER AND WITHOUT CAUSING LEAKAGE IN CABINET.
   c. LINER MATERIALS SHALL HAVE AIR-STREAM SURFACE INSULATED WITH A MINIMUM 1/2-IN. THICK, MINIMUM 1 1/2 LB DENSITY, FLEXIBLE FIBERGLASS INSULATION BONDED WITH A PHENOLIC BINDER, NEOPRENE COATED ON THE AIR SIDE.
   d. LINER ADHESIVE: COMPLY WITH ASTM C 916, TYPE I.

B. CURB HEIGHT: 14 INCHES TYPICAL UNO. PROVIDE 24 INCH CURB IN AREAS WITH EXPECTED HEAVY SNOWFALL.

PART 3 - EXECUTION

3.1 EXAMINATION

A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF RTUS.

B. EXAMINE ROUGHING-IN FOR RTUS TO VERIFY ACTUAL LOCATIONS OF PIPING AND DUCT CONNECTIONS BEFORE EQUIPMENT INSTALLATION.

C. EXAMINE ROOFS FOR SUITABLE CONDITIONS WHERE RTUS WILL BE INSTALLED.

D. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 INSTALLATION

A. ROOF CURB: INSTALL ON ROOF STRUCTURE, LEVEL AND SECURE. INSTALL RTUS ON CURBS AND COORDINATE ROOF PENETRATIONS AND FLASHING WITH ROOF CONSTRUCTION. RTUS TO UPPER CURB RAIL, AND SECURE CURB BASE TO ROOF FRAMING OR CONCRETE BASE WITH ANCHOR BOLTS.

3.3 CONNECTIONS

A. . THE FOLLOWING ARE SPECIFIC CONNECTION REQUIREMENTS:

1. INSTALL DUCTS TO TERMINATION AT TOP OF ROOF CURB.
2. REMOVE ROOF DECKING ONLY AS REQUIRED FOR PASSAGE OF DUCTS. DO NOT CUT OUT DECKING UNDER ENTIRE ROOF CURB.

3.4 COORDINATION

A. CONTRACTOR TO COORDINATE WITH KITCHEN EQUIPMENT SUPPLIER TO ENSURE THAT THE RTUS ARE COORDINATED WITH THE KITCHEN EQUIPMENT, PARTICULARLY THE EXHAUST HOODS AND THE MAKE-UP AIR UNIT, TO PROPERLY PRESSURIZE THE BUILDING/SPACE.

B. CONTRACTOR TO ENSURE THAT ALL THERMOSTATS AND SENSORS ARE COMPATIBLE WITH THE RTU CONTROLS.

3.5 FIELD QUALITY CONTROL

A. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT, TEST, AND ADJUST COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS. REPORT RESULTS IN WRITING.

B. PERFORM TESTS AND INSPECTIONS AND PREPARE TEST REPORTS.

1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING. REPORT RESULTS IN WRITING.

C. TESTS AND INSPECTIONS:

1. AFTER INSTALLING RTUS AND AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST UNITS FOR COMPLIANCE WITH REQUIREMENTS.
2. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.
3. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.

D. REMOVE AND REPLACE MALFUNCTIONING UNITS AND RETEST AS SPECIFIED ABOVE.

3.6 STARTUP SERVICE

A. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM STARTUP SERVICE.

B. COMPLETE INSTALLATION AND STARTUP CHECKS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND DO THE FOLLOWING:

1. INSPECT FOR VISIBLE DAMAGE TO UNIT CASING, FURNACE COMBUSTION CHAMBER, COMPRESSOR, COILS, AND FANS.
2. VERIFY THAT LABELS ARE CLEARLY VISIBLE. CLEARANCES HAVE BEEN PROVIDED FOR SERVICING. CONTROLS ARE CONNECTED AND OPERABLE, AND FILTERS ARE INSTALLED.
3. CLEAN CONDENSER COIL AND FURNACE AND INSPECT FOR CONSTRUCTION DEBRIS.
4. REMOVE PACKING FROM VIBRATION ISOLATORS.
5. VERIFY LUBRICATION ON FAN AND MOTOR BEARINGS.
6. INSPECT FAN-WHEEL ROTATION FOR MOVEMENT IN CORRECT DIRECTION WITHOUT VIBRATION AND BINDING.
7. ADJUST FAN BELTS TO PROPER ALIGNMENT AND TENSION.
8. START UNIT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   a. INSPECT AND RECORD PERFORMANCE OF INTERLOCKS AND PROTECTIVE DEVICES; VERIFY SEQUENCES.
10. OPERATE UNIT FOR AN INITIAL PERIOD AS RECOMMENDED OR REQUIRED BY MANUFACTURER.
11. PERFORM THE FOLLOWING OPERATIONS FOR BOTH MINIMUM AND MAXIMUM FIRING, ADJUST BURNER FOR PEAK EFFICIENCY.
    a. MEASURE GAS PRESSURE ON MANIFOLD.
    b. INSPECT OPERATION OF POWER VENTS.
    c. MEASURE SUPPLY-AIR TEMPERATURE AND VOLUME WHEN BURNER IS AT MAXIMUM FIRING RATE AND WHEN BURNER IS OFF. CALCULATE USEFUL HEAT TO SUPPLY AIR.
20. ADJUST AND INSPECT HIGH-TEMPERATURE LIMITS.
21. INSPECT OUTDOOR-AIR DAMPERS FOR PROPER STROKE AND INTERLOCK WITH RETURN-AIR DAMPERS.
22. INSPECT CONTROLS FOR CORRECT SEQUENCING OF HEATING, MIXING DAMPERS, REFRIGERATION, AND NORMAL AND EMERGENCY SHUTDOWN.
23. SIMULATE MAXIMUM COOLING DEMAND AND INSPECT THE FOLLOWING:
    a. COMPRESSOR REFRIGERANT SUCTION AND HOT-GAS PRESSURES.
    b. SHORT CIRCUITING OF AIR THROUGH CONDENSER COIL OR FROM CONDENSER FANS TO OUTDOOR-AIR INTAKE.
27. VERIFY OPERATION OF REMOTE PANEL INCLUDING PILOT-LIGHT OPERATION AND FAILURE MODES. INSPECT THE FOLLOWING:
    a. HIGH-TEMPERATURE LIMIT ON GAS-FIRED HEAT EXCHANGER.
    b. LOW-TEMPERATURE SAFETY OPERATION.
    c. FILTER HIGH-PRESSURE DIFFERENTIAL ALARM.
    d. ECONOMIZER TO MINIMUM OUTDOOR-AIR CHANGEOVER.
    e. RELIEF-AIR FAN OPERATION.
    f. SMOKE ALARMS.
28. AFTER STARTUP AND PERFORMANCE TESTING AND PRIOR TO SUBSTANTIAL COMPLETION, REPLACE EXISTING FILTERS WITH NEW FILTERS.

3.7 CLEANING AND ADJUSTING

A. OCCUPANCY ADJUSTMENTS: WHEN REQUESTED WITHIN 12 MONTHS OF DATE OF SUBSTANTIAL COMPLETION, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING SYSTEM TO SUIT ACTUAL OCCUPIED CONDITIONS. PROVIDE UP TO TWO VISITS TO SITE DURING OTHER-THAN-NORMAL OCCUPANCY HOURS FOR THIS PURPOSE.

B. AFTER COMPLETING SYSTEM INSTALLATION AND TESTING, ADJUSTING, AND BALANCING RTU AND AIR-DISTRIBUTION SYSTEMS, CLEAN FILTER HOUSINGS AND INSTALL NEW FILTERS.

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER
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PE 011424
No. PE009569
ENGINEER
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MECHANICAL SPECIFICATIONS-02

2908 MOON STATION RD NW, KENNESAW GA-30144

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11/06/24
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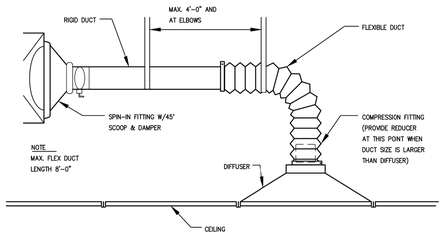
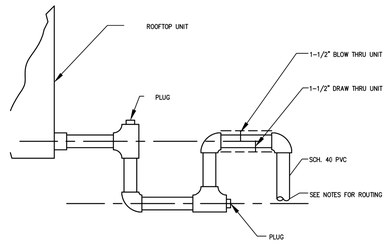
M3.0



3 Duct/Diffuser Detail

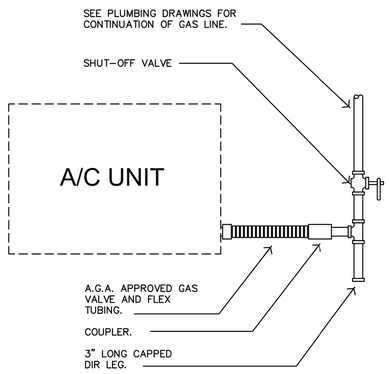
None

None



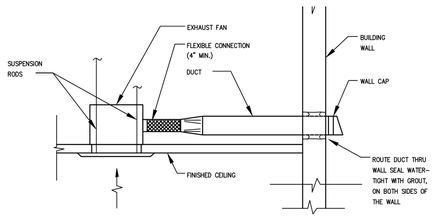
2 Condensate Trap Detail

NONE



6 Gas Connection Detail

None



5 Exhaust Fan Thru Wall Detail

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE033659 11/14/24 NURDDEEN O. OLAYIWOLA

ENGINEER

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MECHANICAL DETAILS-01

2908 MOON STATION RD NW, KENNESAW GA-30144

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PANEL-LP1
MAIN ELECTRIC PANEL(REPLACE THE EXISTING PANEL AND WIRES WITH NEW)

VOLTAGE: 120/208V, 3PH, 4W
MAIN: 225 AMP M.L.O
MOUNTING: SURFACE

MIN. PANEL A.I.C: 10,000 MINIMUM
ENCLOSURE: NEMA 1
SERVICE ENTRANCE LABEL: NO

CKT. NO.	NO. OF POLES	TRIP	OPT	VOLT AMPS	REMARKS	PH: A (VA)	PH: B (VA)	PH:C (VA)	CKT. NO.	NO. OF POLES	TRIP	OPT	VOLT AMPS	REMARKS
1	1	20	L	700	LIGHTING BUFFET	1,700			2	1	20	R	1000	ECEPTACLES BUFFET AREA
3	1	20	L	1000	LIGHTING DINING AREA-1		2,000		4	1	20	R	1000	ECEPTACLES DINING AREA-1
5	1	20	L	1000	LIGHTING DINING AREA-2			2,000	6	1	20	R	1000	ECEPTACLES DINING AREA-2
7	1	20	L	1000	LIGHTING DINING AREA-3	2,000			8	1	20	R	1000	ECEPTACLES DINING AREA-3
9	1	20	L	700	LIGHTING COUNTER		1,700		10	1	20	R	1000	RECEPTACLES LOBBY
11	1	20	L	700	LIGHTING ENTRANCE+CLOSET			1,400	12	1	20	R	700	RECEPTACLES ENTRANCE+CLOSET
13	1	20	L	700	LIGHTING FREEZER+COOLER	1,400			14	1	20	R	700	RECEPTACLES FREEZER+COOLER
15	1	20	L	700	LIGHTING KITCHEN		1,700		16	1	20	R	1000	RECEPTACLES KITCHEN
17	1	20	L	1000	LIGHTING OUTSIDE			2,000	18	1	20	R	1000	RECEPTACLES OUTSIDE
19	1	20	L	500	LIGHTING EMRGNCY CONTROL	1,200			20	1	20	R	700	RECEPTACLES COUNTER-1
21	1	20	L	500	DOOR WARMER		1,200		22	1	20	R	700	RECEPTACLES COUNTER-2
23	1	20	L	500	LIGHTING SIGNAGE			1,500	24	1	20	R	1000	RECEPTACLES BATH ROOMS
25	1	20	L	500	LIGHTING MEN'S ROOM	4,100			26	3	60	C	3,600	HVAC OUTDOOR (RTU)
27	1	20	L	500	LIGHTING WOMEN'S ROOM		4,100		28	...	...	C	3,600	...
29	2	20	W	720	WATER HEATER			4,320	30	...	...	C	3,600	...
31	...	...	W	720	....	4,320			32	3	40	C	3,600	HVAC INDOOR
33	2	50	M	1,000	COFFEE MACHINE-1		4,600		34	...	...	C	3,600	...
35	...	...	M	1,000	...			4,600	36	...	...	C	3,600	...
37	3	40	C	1,300	OUTDOOR FREEZER	2,300			38	1	20	C	1,000	INDOOR FREEZER
39	...	...	C	1,300	...		1,300		40					SPARE
41	...	...	C	1,300	...			1,300	42					SPARE
43	3	40	C	1,300	OUTDOOR WALKN COOLER	2,300			44	1	20	C	1,000	INDOOR WALKIN COOLER
45	...	...	C	1,300	...		1,300		46					SPARE
47	...	...	C	1,300	...			1,300	48					SPARE
49					SPARE				50					SPARE
51					SPARE				52					SPARE
			TOTAL VA's=	21,240		19,320	17,900	18,420			TOTAL VA's=		34,400	

PANEL CALCULATION:

PHASE A=104.17%
PHASE B=96.51%
PHASE C=99.31%

TOTAL CONNECTED VA: 55,640; 18,547 VA/PER PHASE(AVRG)
TOTAL DEMAND AMPS: 167
EXISTING FEEDER SIZE: 225 AMP

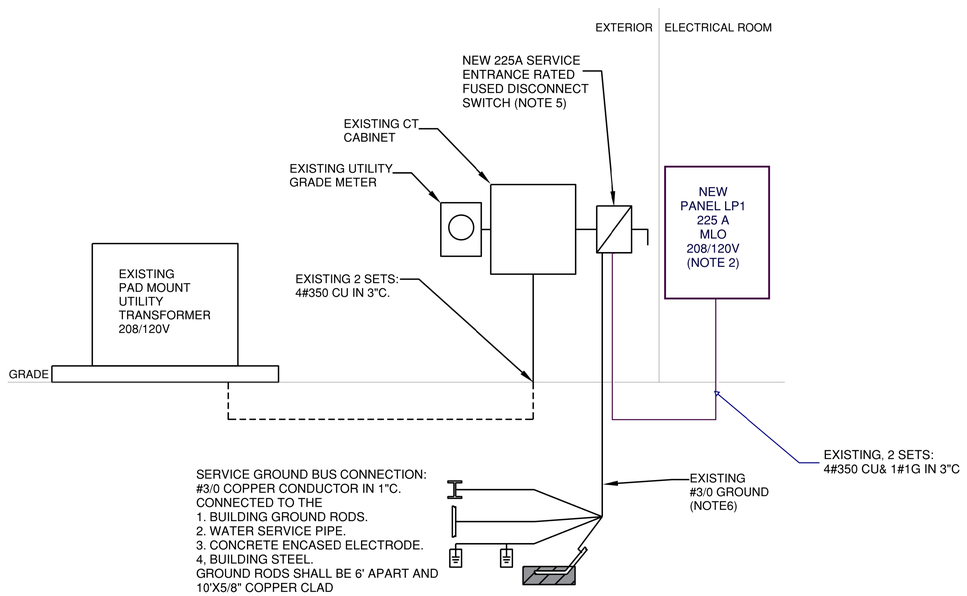
SIMBLE	DESCRIPTION	CONNECTED LOAD(VA)	MAX LOAD/PHASE(VA)	DEMAND LOAD (VA)
L (125%)	LIGHTS	10,000	3,334	4,168
R (65%)	RECEPTACLES	10,800	3,600	2,340
M (100%)	MACHINE	2,000	1,000	1,000
MS (100%)	MISCELLANEOUS	00	00	00
W (100%)	WATER HEATER	1,440	720	720
C (100%)	HVAC+COOLER	31,400	11,800	11,800
TOTAL				20,028

TOTAL DEMAND LOAD PER PHASE MAX=20,028 VA>>(CONNECTED MAXIMUM AT PHASE-A=19,320 VA) (DEMAND LOAD PER PHASE, CONTROLLS).
TOTAL MAX DEMAND LOAD AT ANY PHASE=20,028 VA.
(LOAD AT 120/208V/3-PHASE/4W)=20,028/120=166.90AMP=167 AMP ROUND UP.
SO, TOTAL REQUIRED DEMAND AMP=167 AMP. THE EXISTING FEEDER AND CONNECTED 225 AMP (OK)

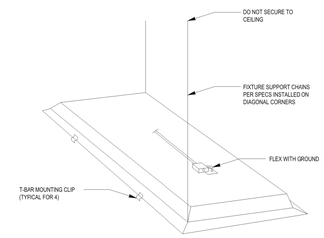
PANEL SHALL BE LABELED PER ARTICLE 408.4 OF THE NATIONAL ELECTRICAL CODE.
PROVIDE GFI TYPE CIRCUITE BREAKER, HANDLE TIES ON BRAKERS W/SHARED NEUTRALS

PANEL SHALL BE LABELED PER ARTICLE 408.4 OF THE NATIONAL ELECTRICAL CODE.
PROVIDE GFI TYPE CIRCUITE BREAKER, HANDLE TIES ON BRAKERS W/SHARED NEUTRALS

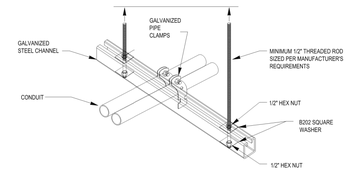
MODIFIED PANEL BOARD PANEL-LP1



POWER PANEL BOARDS AND POWER RISER DIAGRAM (NTS)



TROFFER HANGING DETAIL
NTS



CONDUIT ROUTING DETAIL
NTS

RISER DIAGRAM NOTES:

1. CONTRACTOR TO PROVIDE ALL EQUIPMENT SHOWN, ALL NECESSARY EQUIPMENT FOR THE NEW ELECTRICAL SERVICE INCLUDING PERMITS, FEES, TRANSFORMER PAD, DISCONNECT, METER BASE, CT CABINET, PANELS GROUNDING, CONDUIT, AND WIRE. COORDINATE WITH LOCAL UTILITY ON ALL REQUIRMENTS AND THEIR CALCULATED AVAILABLE FAULT CURRENT ON TRANSFORMER OUTPUT TERMINALS. ALL EQUIPMENT SHALL BE RATED FOR 65KAIC UNLESS WRITTEN DOCUMENT FROM UTILITY IS PROVIDED TO ENGINEER STATING LOWER VALUES.

2. REPLACE THE EXISTING 225A MLO/3PH/208V PANEL WITH TIN PLATED COPPER BUS AND UTILIZE BOLT-ON BREAKERS FOR NEW MAIN PANEL LP1. ENSURE PANEL PURCHASED CAN ACCOMMODATE 52-POLES AND 125A ANY BRANCH BREAKS TO FEED SUB PANELS IN FUTURE IF NEEDED.

3. INCASE ADDITIONAL PANEL REQUIRES, PROVIDE NEW 125A MLO/3PH/208V 30-POLE PANEL WITH TIN PLATED COPPER BUS AND UTILIZE BOLT-ON BREAKERS IF NEEDED.

4. EXISTING CT CABINET AND METER BASE. COORDINATE WITH UTILITY ON REQUIREMENTS.

5. PROVIDE 225A, 208/120V, NEMA 3R FUSED DISCONNECT THAT IS SERVICE ENTRANCE RATED AND MOUNT WHERE SHOWN ON PLANS.

6. EXISTING GROUNDING SYSTEM AS SHOWN. ROUTE GROUNDING ELECTRODE IN 1" PVC AND ATTACH TO COLD WATER PIPE ENTRY, BUILDING STEEL, CONCRETE ENCASED ELECTRODE, AND GROUND RODS SPECIFIED. INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF 2020 NEC ARTICLE 250.

NOTE: CONTRACTOR TO LABEL AVAILABLE FAULT PROVIDED BY UTILITY ON SERVICE ENTRANCE DISCONNECT WITH ENGRAVED NAME PLATE

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE036569 911424 ENGINEER
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PANEL BOARDS AND POWER RISER DIAGRAM

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
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Checked By:
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Project No: 24274-SMEP

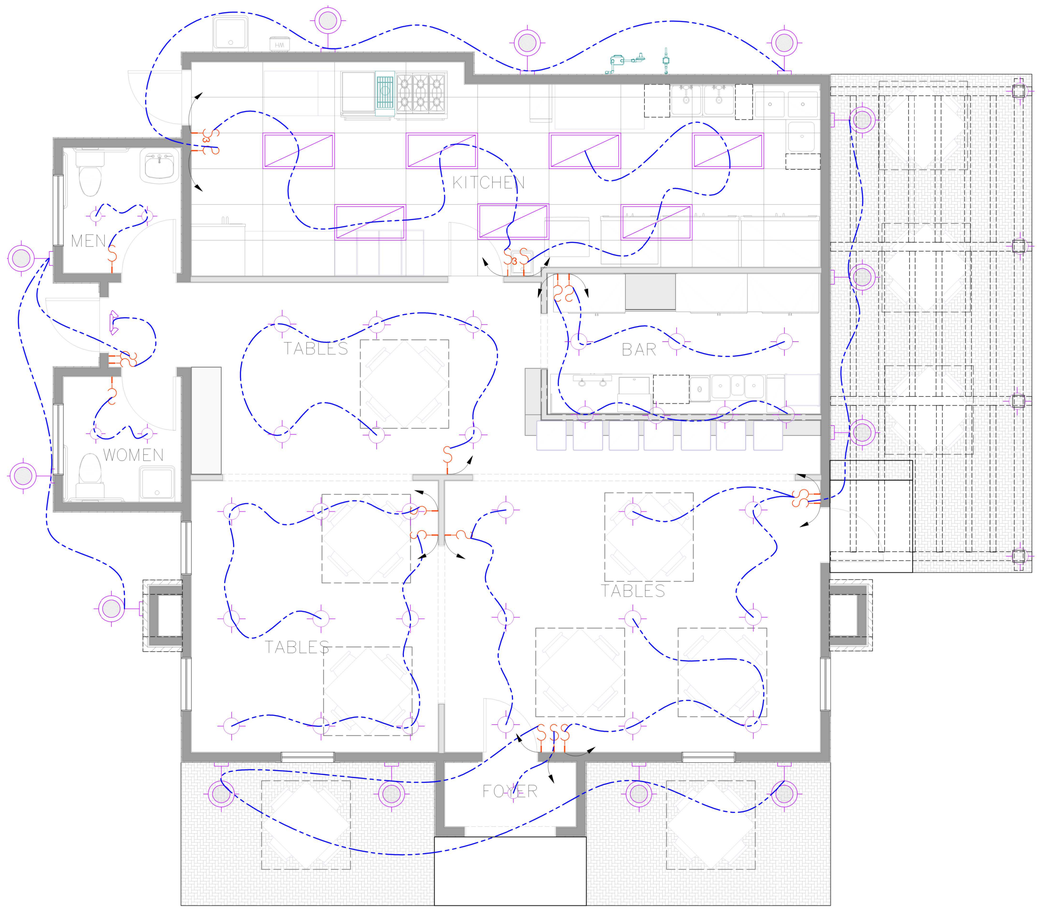
E1.0

LUMINAIRE SCHEDULE

TAG	DESCRIPTION	BASE OF DESIGN	MODEL	LAMP	HOUSING / MOUNTING	FINISH/COLOR	BALLAST / DRIVER	COMMENTS	VOLTS	INPUT WATTS
R1	2x4 LED FLAT PANEL	ATTAIN LED	AT-PN-24-40-37-W	LED ENGINE	RECESSED	WHITE	LED DRIVER	VERIFY CCT WITH CLIENT PRIOR TO ORDERING	MULTI	40
R1EM	2x4 LED FLAT PANEL W/ EM BATTERY	ATTAIN LED	AT-PN-24-40-37-W-EM	LED ENGINE	RECESSED	WHITE	LED DRIVER	VERIFY CCT WITH CLIENT PRIOR TO ORDERING	MULTI	40
ST2	2FT LED STRIP LIGHT	LITHONIA	ZL1D-L24-SMR-1500LM-FST-MV-OLT-35K-80CRI	LED ENGINE	SURFACE	WHITE	LED DRIVER		120	17
EX1	EXIT SIGN	LITHONIA	LQM-SW-3R-MV OLT-ELN	N/A	SURFACE	WHITE	N/A		120	2.2

Occupant sensor controls shall be installed to control lights at the following:

1. Men's Room and Women's Room.
2. Break Room.
3. Facial Rooms.
4. Security Room.



LIGHTING LEGEND

TAG	DESCRIPTION
	INTERIOR RECESSED DOWNLIGHT
	PENDANT
	RECESSED CAN LIGHT
	WALL SCONCE
	2X4 LAY-IN TROFFER
	2X4 NIGHT LIGHT
	2X4 EMERGENCY LIGHT
	EXIT/EMERGENCY LIGHT W/ BATTERY PACK AND DUAL HEADS
	EXIT/EMERGENCY LIGHT WITH BATTERY PACK
	EXIT LIGHT (SURFACE MOUNTED)
	EXIT LIGHT (CEILING MOUNTED)
	REMOTE EMERGENCY HEADS
	EMERGENCY BATTERY PACK AND DUAL HEADS
S	DIMMER SWITCH EQUAL TO LUTRON NOVA SERIES T
S	TOGGLE SWITCH SINGLE POLE SWITCH WITH COVER PLATE
S3	TOGGLE SWITCH 3 WAY SWITCH WITH COVER PLATE
PC	PHOTOCELL
S	WALL MOUNTED OCCUPANCY SENSOR
S	CEILING MOUNTED OCCUPANCY SENSOR

ELECTRICAL LIGHTING PLAN
SCALE: 1/4"=1'

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED 911424 PROFESSIONAL ENGINEER No. PE009569 MICHAEL GREEN QUINTERO

ENGINEER

FLEACTO ENGINEERING

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ELECTRICAL
LIGHTING PLAN

2908 MOON STATION RD NW,
KENNESAW GA-30144

Revision:
10/24/24
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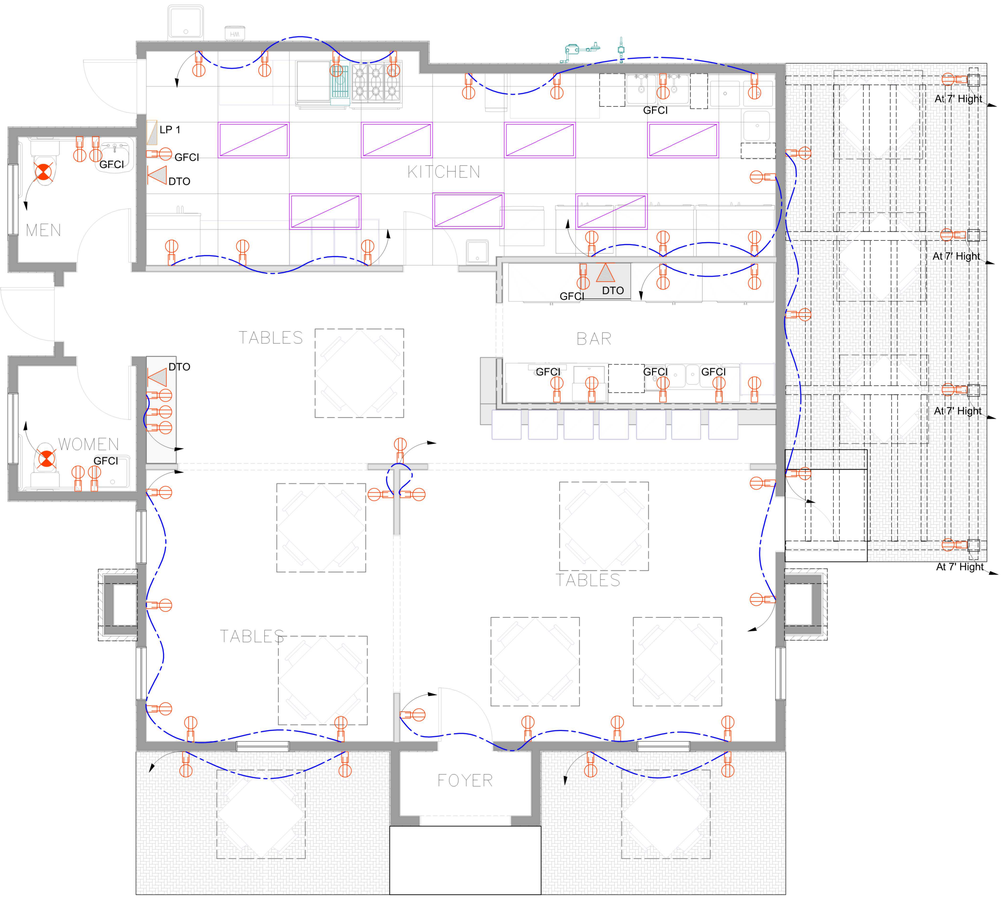
E2.0

S	SINGLE POLE SWITCH		GARAGE DISPOSAL		BATH FAN		CLOSET CASTER LIGHT
S3	THREE WAY SWITCH	S	SMOKE DETECTOR WALL/CLG		BATH FAN / LIGHT COMBO		LIGHTED CEILING FAN PACKAGE
S4	FOUR WAY SWITCH		CARBON MONOXIDE WALL/CLG	PC	PULL CHAIN FIXTURE		
DM S	DIMMER SWITCH	T	THERMOSTAT		CEILING FIXTURE - FLUSH MOUNT		CEILING LIGHT WITH ROUGH IN FOR FAN (TWO SWITCHES)
	PHOTO CELL SWITCH		DATA OUTLET		CEILING KEYLESS LIGHT		
S	SWITCH AND OUTLET	DB	DOOR BELL BUTTON	WP	WATERPROOF RECESSED CAN		
	SINGLE OUTLET	C	DOOR BELL CHIMES	HANG	HANGING CEILING FIXTURE	1 X 4	FLUORESCENT PACKAGE
	DUPLEX OUTLET	TV	TELEVISION OUTLET		WALL FIXTURE CEILING		
CLG	CELING OUTLET		TELEPHONE OUTLET		RECESSED CAN LIGHT FIXTURE		UNITS IGNITION SOURCE ARE ELECTRICAL, SEE ELECTRICAL PLANS FOR LOCATIONS
	FLOOR OUTLET		ELECTRICAL PANEL		RECESSED EYEBALL CAN FIXTURE		
GFI	GROUND FAULT CIRCUIT INTERRUPT OUTLET (GFCI)		2X4 LAY-IN TROFFER		BATH STRIP LIGHT		
R	RANGE OUTLET		2X4 EMERGENCY LIGHT BATTERY BACK UP	WALL	WALL FIXTURE /STAIR LIGHT		
WP GFI	WATERPROOF GFCI OUTLET		EXTERIOR WALL FIXTURE	U. C.	UNDER CABINET LIGHT FIXTURE		
	HIGH VOLTAGE OUTLET (200) GFCI	GSD	GARAGE SERVICE DOOR	PENDANT	PENDANT LIGHT FIXTURE		



ELECTRICAL POWER PLAN
SCALE: 1/4"=1'

VERIFY FIELD ALL CONDITIONS:

A. DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

B. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE CONSTRUCTION MANAGER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

C. BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT THE CONSTRUCTION MANAGER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

Occupant sensor controls shall be installed to control lights at the following:

1. Men's Room and Women's Room.
2. Break Room.
3. Facial Rooms.
4. Security Room.

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED 911424 PROFESSIONAL ENGINEER No. PE009569 QUINTON NURMEEN

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POWER PLAN

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
- 10/24/24
- 11/06/24
- 11/11/24
- 12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

E3.0

SPECIFICATIONS - DIVISION 26 - ELECTRICAL

SECTION 26 00 01 - GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTAL CONDITIONS AND DIVISION-1 SPECIFICATION SECTIONS, APPLY TO WORK OF DIVISION 26 SECTIONS.

B. E-SERIES DRAWINGS APPLY TO WORK OF DIVISION 26 SECTIONS AND VICE VERSA.

1.2 GENERAL STANDARDS

A. PROVIDE WORK IN COMPLIANCE WITH APPLICABLE PROVISIONS OF THE FOLLOWING STANDARDS. PROVIDE UL LISTING AND UL LABEL FOR ALL ELECTRICAL MATERIALS, EQUIPMENT, LUMINAIRES, DEVICES, ETC., IN CASES WHERE UL LISTING AND/OR LABELING IS NOT AVAILABLE FOR A PARTICULAR PRODUCT, PROVIDE EQUIVALENT LISTING AND LABELING FROM ANOTHER THIRD PARTY NATIONALLY RECOGNIZED CERTIFICATION LABORATORY, SUBJECT TO APPROVAL BY LOCAL ELECTRICAL INSPECTOR AND AUTHORITIES HAVING JURISDICTION.

B. PROVIDE WORK IN STRICT ACCORDANCE WITH THE LATEST EDITION OF APPLICABLE CODES INCLUDING (BUT NOT LIMITED TO) THE FOLLOWING CODES AND STANDARDS.

1. NATIONAL ELECTRICAL CODE (NEC), NFPA 70.
2. LIFE SAFETY CODE, NFPA 101.
3. OTHER PROVISIONS OF NFPA AS APPLICABLE.
4. LOCAL ELECTRICAL CODES.
5. LOCAL UTILITY COMPANY REQUIREMENTS.
6. ADA/ADAAG REQUIREMENTS.
7. ASME.
8. INTERNATIONAL BUILDING CODE.
9. INTERNATIONAL ENERGY CONSERVATION CODE.

1.3 MATERIALS AND EQUIPMENT

A. UNLESS SPECIFICALLY INDICATED OTHERWISE PROVIDE (FURNISH AND INSTALL) ALL SPECIFIED AND DRAWN EQUIPMENT, RACEWAY, BOXES, LUMINAIRES, CONTROLS, WIRING, CABLING, SUPPORTS AND OTHER MATERIALS AS REQUIRED TO RENDER ALL ELECTRICAL AND ELECTRICALLY OPERATED EQUIPMENT, LUMINAIRES, DEVICES, ETC. FULLY OPERATIONAL, UNLESS SPECIFICALLY INDICATED OTHERWISE PROVIDE (FURNISH AND INSTALL) ALL MATERIALS THAT ARE SPECIFIED UNDER DIVISION 26. DISCREPANCIES OR UNCERTAINTIES PERCEIVED BY A BIDDER, OR OTHER QUESTIONABLE INTERPRETATIONS BY A BIDDER, ARE SUBJECT TO FINAL INTERPRETATIONS AND DECISIONS BY THE OWNER'S REPRESENTATIVE UNLESS ADDRESSED BEFORE BIDDING BY ADDENDUM OR UNLESS QUALIFIED OR EXCEPTED WITHIN BIDS.

B. PROVIDE MATERIALS THAT ARE NEW, FULL WEIGHT, OF THE BEST QUALITY. PROVIDE SIMILAR MATERIALS THAT ARE OF THE SAME TYPE AND MANUFACTURER. PROVIDE MATERIALS, APPARATUS AND EQUIPMENT WITH UNDERWRITER'S LABORATORY, INC. LABEL WHERE REGULARLY SUPPLIED.

C. MAINTAIN SAFETY AND GOOD CONDITION OF THE MATERIALS AND EQUIPMENT INSTALLED UNTIL FINAL ACCEPTANCE BY THE OWNER. STORE MATERIALS TO PREVENT DAMAGE AND WEATHERING PRIOR TO INSTALLATION.

D. WHEN SEVERAL MATERIALS, PRODUCTS OR ITEMS OF EQUIPMENT ARE SPECIFIED BY NAME FOR ONE USE, SELECT ONE OF THOSE SPECIFIED.

END OF SECTION

SECTION 26 00 01 - BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 GENERAL

A. FURNISH AND INSTALL ALL LABOR AND MATERIAL, TOOLS AND EQUIPMENT NECESSARY TO RENDER ALL SYSTEMS COMPLETE AND OPERATIONAL, AND READY FOR TURNOVER TO OWNER.

1.2 HEIGHT OF BOXES

A. CONTRACTOR TO VERIFY THE EXACT MOUNTING HEIGHTS (AND LOCATIONS) OF OUTLETS IN THE FIELD WITH RELATION TO ARCHITECTURAL DETAIL AND EQUIPMENT BEING SERVED. COORDINATE OUTLET LOCATION WITH EQUIPMENT, WITH FURNITURE PLANS AND WITH ARCHITECTURAL ELEVATION PLANS. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, CONTACT THE OWNER'S REPRESENTATIVE FOR DIRECTION.

B. PRIOR TO ROUGH-IN, COORDINATE FINAL MOUNTING HEIGHTS OF SYSTEM OUTLET BOXES IN FIELD WITH OWNER'S REPRESENTATIVE. INSTALL BOXES AT HEIGHTS AS FOLLOWS, TO CENTER OF BOX, UNLESS DIRECTED OTHERWISE IN FIELD OR OTHERWISE NOTED ON E-SERIES DRAWINGS OR ARCHITECTURAL PLANS. HEIGHT OF BOXES DIMENSIONED FROM CEILING APPLY TO ROOMS HAVING CEILINGS 9' OR LESS; IN ROOMS HAVING HIGHER CEILINGS, LOCATE THESE AS DIRECTED IN THE FIELD.

SWITCHES - COUNTERS	44" (FIELD VERIFY & MATCH COUNTER RECEPT. HEIGHTS)
SWITCHES - ELSEWHERE	48" TO TOP OF OUTLET BOX
OCCUPANCY SENSORS - WALLBOX SWITCHES	48" TO TOP OF OUTLET BOX
OCCUPANCY SENSORS - ELSEWHERE	AS RECOMMENDED BY MANUFACTURER
RECEPTACLES - COUNTERS	44" (FIELD VERIFY)
RECEPTACLES - ELSEWHERE	18"
DISCONNECTS	46"
CIRCUIT BREAKER PANELBOARDS	72" TO TOP OF PANEL UNLESS SPECIAL CIRCUMSTANCES ARE INDICATED OR OTHERWISE APPLY
WALL MOUNTED LUMINAIRES	AS NOTED ON PLANS OR AS DIRECTED BY ARCHITECT
CONTROL STATIONS	46"
FIRE ALARM MANUAL PULL STATIONS	46" TO TOP OF OPERATING HANDLE
FIRE ALARM AUDIO/VISUAL ANNUNCIATORS	80" TO BOTTOM OF OUTLET BOX
TELEPHONE OUTLETS - DESK PHONE	18"
TELEPHONE OUTLETS - WALL PHONE	46"
DATA OUTLETS	18" TO TOP OF OUTLET BOX.

1.3 ELECTRICAL INSTALLATIONS

A. INSTALL WORK CONDUIT, WIRING, OUTLET BOX TYPE WORK IN FINISHED AREAS CONCEALED. SUCH WORK INSTALLED IN UNFINISHED AREAS MAY BE EXPOSED AT THE DISCRETION OF THE OWNER'S REPRESENTATIVE.

B. VERIFY DIMENSIONS BY FIELD MEASUREMENTS. TAKE MEASUREMENTS AND BE RESPONSIBLE FOR EXACT SIZE AND LOCATIONS OF OPENINGS REQUIRED FOR THE INSTALLATION OF WORK. FIGURED DIMENSIONS ARE REASONABLY ACCURATE AND SHOULD GOVERN IN SETTING OUT WORK. WHERE DETAILED METHOD OF INSTALLATION IS NOT INDICATED OR WHERE VARIATIONS EXIST BETWEEN DESCRIBED WORK AND APPROVED PRACTICE, FOLLOW DIRECTION OF THE OWNER'S REPRESENTATIVE.

C. PROVIDE BRANCH SUBFEEDER CIRCUITS AS SHOWN ON THE PLANS. THE SYMBOLS USED TO INDICATE THE PURPOSE OF WHICH THE VARIOUS OUTLETS ARE INTENDED ARE IDENTIFIED IN THE ELECTRIC LEGEND. WHERE OUTLETS ARE INDICATED BY LETTERS ON PLANS, PROVIDE CORRESPONDING SWITCHES TO CONTROL THEM.

D. PROVIDE NO WIRE SIZE SMALLER THAN NO. 12 FOR BRANCH CIRCUITS UNLESS OTHERWISE NOTED ON PLANS FOR CONTROL CIRCUITS. PROVIDE LARGER SIZES WHERE REQUIRED BY PREVAILING CODES OR INDICATED ON CONTRACT DOCUMENTS. PROVIDE NEUTRAL CONDUCTOR FOR ALL MULTI-POLE FEEDERS. PROVIDE NEUTRAL CONDUCTOR(S) FOR ALL MULTI-POLE FEEDERS AND BRANCH CIRCUITS UNLESS THIS CONTRACTOR DETERMINES IN FIELD THAT THE AFFECTED LOAD(S) WILL NEVER HAVE NEED FOR A NEUTRAL CONDUCTOR AND NEC DOES NOT MANDATE OTHERWISE.

1.4 COORDINATION

A. PLANS ARE DIAGRAMMATIC INDICATING DESIGN INTENT AND INDICATING REQUIRED SIZE, POINTS OF TERMINATION AND, IN SOME CASES, SUGGESTED ROUTES OF RACEWAYS, ETC. HOWEVER, IT IS NOT INTENDED THAT DRAWINGS INDICATE FULLY COORDINATED CONDUIT ROUTING, NECESSARY OFFSETS, ETC. THE DRAWINGS ARE AN OUTLINE TO INDICATE THE APPROXIMATE LOCATION AND ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, OUTLETS, RACEWAYS, CABLES, ETC. INSTALL PIPING, CONDUIT, RACEWAYS, CABLE ASSEMBLIES, ETC., AS STRAIGHT AS POSSIBLE AND SYMMETRICAL (PERPENDICULAR TO OR PARALLEL WITH) WITH ARCHITECTURAL ITEMS. WORK IN AND ON THE BUILDING INSTALLED DIAGONAL TO BUILDING MEMBERS IS PROHIBITED.

B. CONSULT THE PLANS OF OTHER TRADES BEFORE INSTALLING WORK SO THAT WORK WILL NOT INTERFERE WITH THOSE.

C. PARTICIPATE IN COORDINATION EFFORTS AND IN PREPARATION OF COORDINATION DRAWINGS PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, MATERIALS, ETC. COORDINATE ACTUAL CLEARANCES OF INSTALLED EQUIPMENT. COORDINATE EXACT LOCATION OF ELECTRICAL OUTLETS, LIGHTING FIXTURES, CONDUITS, RACEWAYS, EQUIPMENT, CABLE ASSEMBLIES, APPLICABLE DEVICES, ETC. WELL IN ADVANCE OF INSTALLATION SO THERE WILL BE NO INTERFERENCES AT INSTALLATION BETWEEN THE VARIOUS TRADES.

D. ENSURE THAT WORK AND WORKING CLEARANCES IN ELECTRICAL ROOMS AND SIMILAR SPACES COMPLIES WITH NEC ARTICLE 110, THIS ALSO APPLIES TO FINALIZING LOCATIONS OF DISCONNECTS, STARTERS, CONTACTORS AND OTHER ELECTRICALLY OPERATED EQUIPMENT THAT MAY REQUIRE TESTING OR MAINTENANCE WHILE ENERGIZED.

E. COORDINATE AND CORRECT CONFLICTS IN EQUIPMENT AND MATERIALS PRIOR TO INSTALLATION. IF A CONFLICT CANNOT BE RESOLVED, REFER THE MATTER TO THE OWNER'S REPRESENTATIVE FOR A FINAL DECISION AS TO METHOD AND MATERIAL.

1.5 IDENTIFICATION

A. CABLE AND CONDUCTOR IDENTIFICATION

1. PROVIDE MANUFACTURER'S STANDARD VINYL-CLOTH SELF-ADHESIVE CONDUCTOR MARKERS OF WRAP-AROUND TYPE, EITHER PRE-NUMBERED PLASTIC COATED TYPE, OR WRITE-ON TYPE WITH CLEAR PLASTIC SELF-ADHESIVE COVER FLAP; NUMBERED TO SHOW CIRCUIT IDENTIFICATION. PROVIDE ON CONDUCTORS. PROVIDE COLOR CODED INSULATION FOR CONDUCTORS. PROVIDE COLOR CODED JACKETS FOR CABLES. MATCH COLOR SCHEMES WITH MARKING SYSTEM USED IN SUBMITTALS, CONTRACT DOCUMENTS, INDUSTRY STANDARDS, ETC. APPLY CABLE/CONDUCTOR IDENTIFICATION ON EACH CABLE IN EACH BOX/ENCLOSURE/CABINET FOR CABLES THAT ARE NOT AVAILABLE WITH COLOR CODED INSULATION OR JACKETS.

2. USE THE FOLLOWING INSULATION COLOR CODE FOR POWER SYSTEM AND VOLTAGE IDENTIFICATION. THIS APPLIES TO BOTH FEEDER AND BRANCH CIRCUIT WIRING. DO NOT INTERCHANGE COLORS. THE USE OF SCOTCH COLOR CODING TAPES FOR PHASE IDENTIFICATION MAY BE USED ON FEEDER CABLES ONLY (#4 AWG AND LARGER).

a. 480Y/277V SYSTEM: BROWN, ORANGE, YELLOW & GRAY (NEUT.)
b. 208Y/120V SYSTEM: BLACK, RED, BLUE & WHITE (NEUTRAL)
c. 240V DELTA SYSTEM: BLACK, RED & BLUE
d. 120/240V SYSTEM: BLACK, RED & WHITE (NEUTRAL)
e. ELECTRONIC GROUND: GREEN WITH YELLOW TRACER (NEUTRAL)
f. EQUIPMENT GROUNDING: GREEN

C. RACEWAY IDENTIFICATION

1. PROVIDE MANUFACTURER'S STANDARD SELF-ADHESIVE VINYL TAPE NOT LESS THAN 3 MILS THICK BY 1-1/2" WIDE, UNLESS OTHERWISE INDICATED OR REQUIRED BY GOVERNING REGULATIONS PROVIDE BLACK LETTERING ON ORANGE BASE WITH MINIMUM 1/2" HIGH LETTERING. AS A MINIMUM, NEATLY INSTALL MARKERS AT EACH AND EVERY ENTRY POINT TO ROOMS, JUNCTION BOXES, PULL BOXES, EQUIPMENT CONNECTIONS, ETC. DO NOT INSTALL THESE MARKERS ON EXPOSED RACEWAYS IN FINISHED AREAS THAT WILL BE OCCUPIED.

D. EMERGENCY SYSTEMS

1. PROVIDE PERMANENT IDENTIFICATION FOR BOXES, ENCLOSURES, ETC. THAT ARE ASSOCIATED WITH EMERGENCY SYSTEM WORK. PAINT AND IDENTIFY EMERGENCY SYSTEM PULL BOXES, JUNCTION BOXES, AND OTHER ACCESS/PULL POINTS (BOXES AND COVERS) IN ACCORDANCE WITH NEC. PROVIDE EMERGENCY SYSTEM EQUIPMENT PANELBOARDS, CABINETS, ENCLOSURES, ETC. WITH RED MECHANICALLY FASTENED ENGRAVED NAMEPLATES WITH THE FIRST LINE OF TEXT TO READ "EMERGENCY CIRCUITS" AND THE REMAINING LINES TO INCLUDE THE NECESSARY DESCRIPTIVE TEXT.

E. FIRE ALARM SYSTEMS

1. PROVIDE PERMANENT IDENTIFICATION FOR BOXES, ENCLOSURES, ETC. THAT ARE ASSOCIATED WITH FIRE ALARM SYSTEM WORK. PAINT AND IDENTIFY FIRE ALARM SYSTEM PULL BOXES, JUNCTION BOXES, AND OTHER ACCESS/PULL POINTS (BOXES AND COVERS) IN ACCORDANCE WITH NEC/NFPA. PROVIDE FIRE ALARM SYSTEM CONTROL PANEL EQUIPMENT CABINETS, ENCLOSURES, ETC. WITH RED MECHANICALLY FASTENED ENGRAVED NAMEPLATES WITH THE FIRST LINE OF TEXT TO READ "FIRE ALARM" AND THE REMAINING LINES TO INCLUDE THE NECESSARY DESCRIPTIVE TEXT.

F. KITCHEN EQUIPMENT RECEPTACLES

1. LABEL EACH RECEPTACLE FOR PROPER DEDICATED EQUIPMENT INDICATED.

FIRE ALARM SYSTEMS

1.6 CUTTING, PATCHING AND SEALING

E. GENERAL

1. PROVIDE CUTTING AND PATCHING FOR THE ADMISSION OF WORK. PERFORM CUTTING, FITTING, AND PATCHING FOR ELECTRICAL EQUIPMENT AND MATERIALS AS REQUIRED TO:
   a. UNCOVER WORK TO PROVIDE FOR INSTALLATION OF ILL-TIMED WORK.
   b. REMOVE AND REPLACE DEFECTIVE WORK.
   c. REMOVE AND REPLACE WORK NOT CONFORMING TO REQUIREMENTS OF THE CONTRACT DOCUMENTS.
   d. REMOVE SAMPLES OF INSTALLED WORK AS SPECIFIED FOR TESTING.
   e. INSTALL EQUIPMENT AND MATERIALS IN EXISTING BUILDINGS.
2. PATCH SURFACES AND BUILDING COMPONENTS USING NEW MATERIALS MATCHING EXISTING MATERIALS AS APPLICABLE AND USING EXPERIENCED INSTALLERS.

B. GROUT

1. PROVIDE NON-SHRINK, NONMETALLIC GROUT, PREMIXED, FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT, RECOMMENDED FOR INTERIOR AND EXTERIOR APPLICATIONS.

C. GENERAL FIRE STOPPING MATERIAL APPLICATION

1. FIRE STOPPING REQUIREMENTS/LOCATIONS ARE NOT INDICATED ON ELECTRICAL DRAWINGS. REVIEW ARCHITECTURAL AND OTHER DRAWINGS TO DETERMINE FIRE/SMOKE RATED WALLS AND FLOORS AND RATING REQUIREMENTS OF SAME. PROVIDE REQUIRED FIRE STOPPING WORK ASSOCIATED WITH ELECTRICALLY RELATED PENETRATIONS. PROVIDE FIRE STOP PILLOWS, PUTTY OR SEALANT, AS APPLICABLE, WITH MINIMUM UL CLASSIFICATION FOR 3 HOUR FIRE AND COLD SIDE TEMPERATURE RATINGS.

END OF SECTION

SECTION 26 05 01 - EXISTING CONDITIONS AND DEMOLITION

PART 1 - GENERAL

1.1 RELATED WORK

A. WHERE THE TERM "DEMOLITION" IS USED HEREIN, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" AS APPLICABLE..

B. EXISTING ELECTRICAL WORK IS SHOWN TO A LIMITED EXTENT ON DRAWINGS AND IS SHOWN FOR GENERAL PLANNING REFERENCE ONLY. LOCATIONS AND INFORMATION WERE DERIVED FROM CURSORY VISUAL OBSERVATIONS OR FROM PORTIONS OF DOCUMENTS THAT WERE PREPARED FOR PREVIOUSLY INSTALLED WORK (NOT FROM RECORD DRAWINGS OR "AS-BUILTS").

C. HOLD ROUTING OF NEW RACEWAYS IN EXISTING BUILDINGS AS TIGHTLY AS POSSIBLE TO THE STRUCTURE ABOVE. OBTAIN APPROVAL OF OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

1.2 AFFECT ON ADJACENT OCCUPIED AREAS

A. MAINTAIN EXISTING ELECTRICAL SERVICE AND FEEDERS TO OCCUPIED AREAS AND OPERATIONAL FACILITIES, UNLESS OTHERWISE INDICATED, OR WHEN AUTHORIZED OTHERWISE IN WRITING BY OWNER'S REPRESENTATIVE. PROVIDE TEMPORARY SERVICE DURING INTERRUPTIONS TO EXISTING FACILITIES. SCHEDULE MOMENTARY OUTAGES WHEN NECESSARY FOR REPLACING EXISTING WIRING SYSTEMS WITH NEW WIRING SYSTEMS. WHEN THAT "CUTTING-OVER" HAS BEEN SUCCESSFULLY ACCOMPLISHED, REMOVE RELATED WIRING THAT HAS BEEN ABANDONED.

1.3 GENERAL DEMOLITION

A. PROVIDE ELECTRICAL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.

B. PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION.

END OF SECTION

SECTION 26 05 19 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 GENERAL

A. PROVIDE WIRE AND CABLE SUITABLE FOR THE TEMPERATURE, CONDITIONS, AND LOCATION WHERE INSTALLED.

1.2 CONDUCTORS

A. PROVIDE COPPER CONDUCTOR MATERIAL FOR WIRES AND CABLES UNLESS SPECIFICALLY INDICATED OTHERWISE ON SINGLE-LINE DIAGRAM ON DRAWINGS.

B. CONDUCTOR SIZES INDICATED ARE BASED ON COPPER UNLESS SPECIFICALLY INDICATED OTHERWISE ON SINGLE-LINE DIAGRAM ON DRAWINGS.

C. PROVIDE MINIMUM #12 AWG CONDUCTOR SIZE.

D. STRANDED OR SOLID CONDUCTORS MAY BE USED FOR TYPE MC CABLE CONDUCTORS THAT ARE #10 AWG OR LESS WHERE PERMITTED BY PREVAILING CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE STRANDED CONDUCTORS FOR ALL OTHER APPLICATIONS.

E. PROVIDE THE FOLLOWING MINIMUM WIRE SIZES BASED ON DISTANCES FROM PANEL TO FIRST DEVICE OF A 15 OR 20 AMPERE GENERAL LIGHTING OR RECEPTACLE BRANCH CIRCUIT. IN ADDITION TO UPSIZING CONDUCTORS AS REQUIRED FOR VOLTAGE DROP, PROVIDE MINIMUM #10 AWG CONDUCTORS TO THE LAST DEVICE FOR BRANCH CIRCUITS MORE THAN 150 FEET IN LENGTH.

DISTANCE	AWG WIRE SIZES
UP TO 60 FEET	#12
61 TO 90 FEET	#10
91 TO 150 FEET	#8
151 TO 240 FEET	#6

F. PROVIDE THE FOLLOWING MINIMUM AWG CONDUCTOR SIZES FOR GENERAL BRANCH CIRCUITING, BASED ON USING COPPER CONDUCTORS, WHERE APPLICABLE INCREASE AS REQUIRED TO ACCOMMODATE VOLTAGE DROP AND TO ACCOMMODATE SPECIAL CONDITIONS. DO NOT DERATE ANY GROUNDED (NEUTRAL) CONDUCTORS.

	EQUIPMENT GROUNDING	
SOURCE BREAKER/FUSE	AWG WIRE SIZE	AWG WIRE SIZE
15 AMPERE	#14	#14
20 AMPERE	#12	#12
25 AMPERE	#10	#10
30 AMPERE	#10	#10
35 AMPERE	# 8	#10
40 AMPERE	# 8	#10
45 AMPERE	# 8	#10
50 AMPERE	# 6	#10
60 AMPERE	# 6	#10
70 AMPERE	# 4	#8
80 AMPERE	# 4	#8
90 AMPERE	# 2	#8
100 AMPERE	# 2	#8

G. PROVIDE CONDUCTOR INSULATION RATED AT 600VAC AND 90 DEGREES C. PROVIDE THHN/THWN INSULATION FOR CONDUCTORS SIZE 500 KCMIL AND LARGER, AND FOR CONDUCTORS # 8 AWG AND SMALLER. PROVIDE THW OR THHN/THWN INSULATION FOR OTHER SIZES AS APPROPRIATE FOR THE LOCATIONS WHERE INSTALLED.

H. PROVIDE XHHW-2 INSULATION FOR WIRING BELOW GRADE AND FOR WIRING SUBJECT TO MOISTURE CONDITIONS.

I. PROVIDE DEDICATED PARITY SIZED GROUNDED (NEUTRAL) CONDUCTOR FOR EACH BRANCH CIRCUIT PHASE CONDUCTOR FED FROM 15 AMPERE AND 20 AMPERE BRANCH CIRCUIT BREAKERS.

J. PROVIDE GROUNDED (NEUTRAL) CONDUCTOR(S) FOR ALL MULTI-POLE FEEDERS UNLESS INDICATED OTHERWISE ON POWER DISTRIBUTION SINGLE-LINE DIAGRAM.

K. PROVIDE GROUNDED (NEUTRAL) CONDUCTOR(S) FOR ALL MULTI-POLE BRANCH CIRCUITS.

1.3 TYPE AC/MC CABLES

A. PROVIDE TYPE AC/MC CABLES THAT ARE MINIMUM 90 DEGREES C RATED, WITH COMPONENTS AND FITTINGS LISTED FOR GROUNDING, AND COMPLIANT WITH THE FOLLOWING.

1. UL STD.4 AND UL STD. 83.
2. ANSI E119 AND E814.
3. NEC ARTICLES 250 AND 333.

B. PROVIDE CABLE FORMED FROM CONTINUOUS LENGTH OF SPIRALLY WOUND, INTERLOCKED ZINC-COATED OR GALVANIZED (INSIDE & OUTSIDE) STRIP STEEL. PROVIDE CABLES WITH FULL PARITY SIZED GREEN INSULATED EQUIPMENT GROUND CONDUCTOR.

C. PROVIDE COMPATIBLE STEEL FITTINGS WITH INTEGRAL RED PLASTIC INSULATED THROAT BUSHINGS, COMPLIANT WITH NEC 350-5.

D. TYPE AC/MC CABLE MAY BE UTILIZED ONLY IF NEC APPROVED AND IF APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION AND IF INCLUDED IN THE LIMITED APPLICATIONS DEFINED BELOW.

1. PROVIDE FOR NEW 15 THROUGH 20 AMPERE BRANCH CIRCUIT WORK. THIS APPLIES ONLY UNDER ALL OF THE FOLLOWING CIRCUMSTANCES AND CONDITIONS.
   a. PROVIDE ONLY WHERE CONCEALED (INSTALL WIRING FOR EXPOSED APPLICATIONS IN RACEWAY).
   b. ALL EQUIPMENT WIRING SHALL BE IN CONDUIT.
   c. ROUTE CABLES PERPENDICULAR AND PARALLEL TO THE BUILDING ARCHITECTURAL LINES, SURFACES, AND STRUCTURAL MEMBERS, KEEPING OFFSETS TO A MINIMUM AND FOLLOWING SURFACE CONTOURS WHERE POSSIBLE. MAINTAIN A UNIFORM ELEVATION FOR CABLE RUNS WHEREVER POSSIBLE. SUPPORT AND ANCHOR CABLES AT MAXIMUM 4 FOOT INTERVALS AND WITHIN 12" OF BOX OR OUTLET IN A MANNER THAT PREVENTS SAGGING. INSTALL CABLES IN A MANNER THAT PREVENTS OVERHEATING. FASTEN CABLES DIRECTLY TO THE STRUCTURE USING FACTORY CLAMPS AND CLIPS SPECIFICALLY DESIGNED FOR THE RESPECTIVE CABLE (CADDY OR EQUAL).
   d. PROVIDE ONLY WHERE INSTALLED FOR NORMAL UTILITY CIRCUITS. INSTALL WIRING FOR EMERGENCY SYSTEM CIRCUITS IN STEEL CONDUIT, NO EXCEPTIONS.

1.4 THE USE OF NM/NMS CABLE IS PROHIBITED.

PART 2 - EXECUTION

2.1 INSTALLATION

A. PROVIDE GROUNDED ("NEUTRAL") CONDUCTOR IN ALL LIGHTING CONTROL DEVICE (SWITCH, DIMMER, OCCUPANCY SENSOR, ETC.) WALL OUTLET BOXES, EVEN IF NOT IMMEDIATELY USED.

B. CONNECT WIRES #6 AWG AND LARGER TO PANELS AND APPARATUS BY MEANS OF APPROVED LUGS OR CONNECTORS LARGE ENOUGH TO ENCLOSE ALL STRANDS OF THE CONDUCTORS. PROVIDE SOLDERLESS TYPE CONNECTORS.

C. PROVIDE FACTORY SPLICE KITS (U.L. APPROVED FOR SUBMERSION IN WATER AND DIRECT BURIAL) FOR WIRE SPLICING IN OUTDOOR GRADE, OR SLAB ON GRADE, JUNCTION BOXES.

END OF SECTION

SECTION 26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. THIS SECTION INCLUDES GROUNDING AND BONDING REQUIREMENTS FOR ELECTRICAL AND TELECOMMUNICATIONS SYSTEMS, CIRCUITS, AND EQUIPMENT.

B. PROVIDE THE FOLLOWING MINIMUM REQUIREMENTS FOR GROUNDING.

1. NFPA: - COMPONENTS AND INSTALLATION SHALL COMPLY WITH NFPA 70, "NATIONAL ELECTRICAL CODE" (NEC).
2. UL - COMPLY WITH UL 467, "GROUNDING AND BONDING EQUIPMENT."
3. ANSI/TIA/EIA-607, "COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS.

PART 2 - PRODUCTS

2.1 MATERIALS

A. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE GROUNDING AND BONDING PRODUCT MANUFACTURERS OF THE INSTALLER'S CHOICE UNLESS NOTED OTHERWISE.

B. EXCEPT AS OTHERWISE INDICATED, PROVIDE COPPER ELECTRICAL GROUNDING AND BONDING SYSTEMS AND MATERIALS WITH ASSEMBLY OF MATERIALS INCLUDING BUT NOT LIMITED TO CABLES/WIRES, CONNECTORS, SOLDERLESS LUG TERMINALS, GROUNDING ELECTRODES AND PLATE ELECTRODES, BONDING JUMPER BRAID, AND ADDITIONAL ACCESSORIES NEEDED FOR A COMPLETE INSTALLATION, WHERE MATERIALS OR COMPONENTS ARE NOT INDICATED, PROVIDE PRODUCTS THAT COMPLY WITH NEC, UL, AND IEEE REQUIREMENTS, AND WITH ESTABLISHED INDUSTRY STANDARDS FOR THOSE APPLICATIONS INDICATED. UTILIZE COMPATIBLE METALLIC MATERIALS THROUGHOUT SYSTEM TO ELIMINATE GALVANIC ACTION.

C. PROVIDE STEEL GROUNDING ELECTRODES WITH COPPER WELDED EXTERIOR, AND 3/4" DIAMETER BY 10 FEET LENGTH. PROVIDE SHEET COPPER PLATE ELECTRODES THAT ARE 20-GAGE BY 36" BY 36", WITH CABLE ATTACHMENTS (MINIMUM QUANTITY OF 2), SIZED FOR CABLES AS NECESSARY TO FULFILL PROJECT GROUNDING REQUIREMENTS. PROVIDE COPPER GROUND PLATES WHERE GROUND RODS CANNOT BE USED. PROVIDE CONNECTIONS TO GROUND ELECTRODES AT A POINT NOT LESS THAN 1 FOOT BELOW GRADE LEVEL, AND NOT LESS THAN 2 FEET AWAY FROM FOOTINGS AND FOUNDATIONS. WELD GROUNDING CONDUCTORS TO UNDERGROUND GROUNDING ELECTRODES WHERE MECHANICAL CONNECTIONS CAN NOT, OR SHOULD NOT, BE UTILIZED.

PART 3 - EXECUTION

3.1 INSTALLATION

A. TERMINATE FEEDER AND BRANCH CIRCUIT INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH GROUNDING LUG, BUS, OR BUSHING. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND AND PROTECTIVE DEVICES IN SHORTEST AND STRAIGHTEST PATHS AS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.

B. INSTALL CLAMP-ON CONNECTORS ON CLEAN METAL CONTACT SURFACES, TO ENSURE ELECTRICAL CONDUCTIVITY AND CIRCUIT INTEGRITY.

C. PROVIDE CORROSION-RESISTANT FINISH TO FIELD-CONNECTIONS, TO PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DAMAGED, AND WHERE SUBJECT TO CORROSIVE ACTION.

D. ROUTE GROUND CONDUCTORS USED FOR BONDING IN PROTECTIVE CONDUIT SLEEVES. PROVIDE BOTH ENDS OF THESE CONDUIT SLEEVES WITH GROUND BUSHINGS, AND BOND GROUND BUSHINGS TO ENCLOSURES AND GROUND TERMINATIONS AT BOTH ENDS USING JUMPERS, SIZE GROUND JUMPER CONDUCTORS THE SAME AS THE RESPECTIVE GROUND CONDUCTOR THAT IS BEING PROTECTED WITHIN THE RESPECTIVE CONDUIT.

E. PROVIDE CORROSION-RESISTANT FINISH TO BURIED METALLIC GROUNDING AND BONDING PRODUCTS.

F. TERMINATE GROUND ELECTRODE CONDUCTORS WITH TWO-HOLE COMPRESSION LUGS. TERMINATE BONDING JUMPER CONDUCTORS WITH ONE-HOLE COMPRESSION LUGS.

G. INSTALL BRAIDED TYPE BONDING JUMPERS WITH GROUND CLAMPS ON VALVED WATER PIPING WHERE SUCH PIPING PENETRATES EXTERIOR WALLS AND FIRE WALLS. INSTALL WATER PIPE CONNECTOR FITTINGS SO THAT THEY MAKE CONTACT WITH THE WATER PIPE FOR A MINIMUM DISTANCE OF 1-1/2 INCHES (MEASURED ALONG THE AXIS), AND HAVE A MINIMUM CONTACT SURFACE AREA OF 3 SQUARE INCHES.

H. EQUALIZE (BOND TOGETHER) GROUND POTENTIALS ASSOCIATED WITH THE ELECTRICAL DISTRIBUTION SYSTEM, SEPARATELY DERIVED SYSTEMS, STEEL STRUCTURAL SYSTEMS, AND WATER SERVICES PER NEC AND AS APPLICABLE.

I. SERVICE ENTRANCE GROUNDING REQUIREMENTS

1. PROVIDE A PARITY SIZED INSULATED GROUNDED CONDUCTOR (NEUTRAL) FOR EACH SET OF SERVICE ENTRANCE FEEDER PHASE/LINE CONDUCTORS, TERMINATED AND BONDED TO SERVICE EQUIPMENT. THIS APPLIES WHETHER OR NOT DOWNSTREAM LOADS REQUIRE A NEUTRAL CONDUCTOR. INSTALL THESE NEUTRAL CONDUCTORS UNSPLICED AND UNBROKEN.
2. CONNECT GROUNDING ELECTRODE CONDUCTORS TO 1-INCH DIAMETER, OR GREATER, METALLIC COLD WATER PIPE AT SERVICE ENTRANCE USING A SUITABLY SIZED GROUND CLAMP. PROVIDE CONNECTIONS TO FLANGED PIPING AT STREET SIDE OF FLANGE. GROUND ELECTRICAL SERVICE SYSTEM NEUTRAL AT SERVICE ENTRANCE EQUIPMENT TO GROUNDING ELECTRODES. INSTALL BRAIDED TYPE BONDING JUMPERS WITH CODE-SIZED GROUND CLAMPS ON WATER METER PIPING TO ELECTRICALLY BYPASS WATER METERS AND WATER SERVICE ENTRANCE VALVES.
3. CONTACT AHJ ELECTRICAL INSPECTOR IN ADVANCE OF INSTALLING SERVICE GROUNDING WORK. DETERMINE LOCALLY APPROVED METHODS THAT MUST BE USED FOR RE-BAR GROUNDING THAT THE AHJ CONSIDERS COMPLIANT WITH NATIONAL ELECTRICAL CODE ARTICLE 250.52.
4. UPON COMPLETION OF INSTALLATION OF ELECTRICAL GROUNDING AND BONDING SYSTEMS, TEST GROUND RESISTANCE WITH GROUND RESISTANCE TESTER. WHERE TESTS SHOW RESISTANCE-TO-GROUND IS OVER 3 OHMS, TAKE APPROPRIATE ACTION TO REDUCE RESISTANCE TO 3 OHMS, OR LESS. BY DRI

SPECIFICATIONS - DIVISION 26 - ELECTRICAL (CONTINUED)

SECTION 26 05 33 - RACEWAYS FOR ELECTRICAL SYSTEMS (CONTINUED)

G. PROVIDE CCONDUIT FITTINGS WITH INSULATED THROATS, OR PLASTIC BUSHINGS FOR CONDUITS 2" AND LARGER WHERE INSULATED THROATS ARE NOT READILY AVAILABLE.

H. PROVIDE MAXIMUM OF 40 PERCENT FILL FOR RACEWAYS, OR A THRESHOLD OF LESS IF REQUIRED BY NEC.

PART 2 - PRODUCTS

2.1 ELECTRICAL METALLIC TUBING (EMT)

A. PROVIDE GALVANIZED OR ZINC COATED STEEL EMT COMPLIANT WITH FS WW-C-563, ANSI C80.3 AND UL 797.

B. PROVIDE EMT FOR ABOVE-GRADE CONDUIT, EXCEPT WHERE INDICATED OTHERWISE HEREIN, UNDER OTHER DIVISION 26 SECTIONS, OR ON DRAWINGS.

2.2 STEEL RIGID METAL CONDUIT (RMC)

A. PROVIDE RIGID STEEL, HEAVY WALL, FULL WEIGHT, ZINC-COATED, THREADED TYPE (GALVANIZED AFTER CUTTING/THREADING) CONDUIT CONFORMING TO ANSI C80.1 AND UL 6. PROVIDE ZINC COATING FUSED TO INSIDE AND OUTSIDE WALLS OF CONDUIT.

B. PROVIDE GALVANIZED OR ZINC COATED STEEL THREADED FITTINGS.

C. PROVIDE FOR THE FOLLOWING APPLICATIONS.
1. CONDUIT INSTALLED EMBEDDED IN CONCRETE, OR MASONRY.
2. CONDUITS (GROUNDED) THAT TURN UP FROM BELOW GRADE OR BELOW SLAB, EXCLUDING THE 90 DEGREE FITTINGS THAT CONNECT TO HORIZONTAL CONDUITS BELOW GRADE OR SLAB.
3. OTHER APPLICATIONS AS INDICATED IN PROJECT MANUAL OR ON DRAWINGS, AS REQUIRED BY NEC, OR AS OTHERWISE REQUIRED FOR SPECIAL PHYSICAL PROTECTION (I.E. NEARBY VEHICULAR/EQUIPMENT TRAFFIC, SITE MAINTENANCE EQUIPMENT, ETC.).

2.3 PVC COATED STEEL RIGID METAL CONDUIT (PVC/RMC)

A. PROVIDE RIGID STEEL, HEAVY WALL, FULL WEIGHT, THREADED TYPE (GALVANIZED AFTER CUTTING/THREADING INSIDE AND OUT) PVC COATED CONDUIT CONFORMING TO UL 6 STANDARD FOR SAFETY, RIGID METAL CONDUIT, AND UL514B STANDARD FOR SAFETY, FITTINGS FOR CONDUIT AND OUTLET BOXES

B. THE PVC COATED GALVANIZED RIGID CONDUIT MUST BE ETL VERIFIED TO THE INTERTEK ETL SEMKO HIGH TEMPERATURE H2O PVC COATING ADHESION TEST PROCEDURE FOR 200 HOURS. THE PVC COATED GALVANIZED RIGID CONDUIT MUST BEAR THE ETL VERIFIED PVC-001 LABEL TO SIGNIFY COMPLIANCE TO THE ADHESION PERFORMANCE STANDARD.

C. PROVIDE FOR APPLICATIONS SPECIFICALLY DESIGNATED ON DRAWINGS.

2.4 FLEXIBLE METAL CONDUIT (FMC)

A. PROVIDE FLEXIBLE METAL CONDUIT COMPLIANT WITH FS WW-C-566 AND UL 1, AND FORMED FROM CONTINUOUS LENGTH OF SPIRALLY WOUND, INTERLOCKED ZINC-COATED OR GALVANIZED (INSIDE & OUTSIDE) STRIP STEEL. PROVIDE CONDUIT FITTINGS FOR USE WITH FLEXIBLE STEEL CONDUIT OF THREADLESS HINGED CLAMP TYPE, WITH INSULATED THROATS. PROVIDE STRAIGHT TERMINAL CONNECTORS CONSISTING OF ONE PIECE BODY, FEMALE END WITH CLAMP AND DEEP SLOTTED MACHINE SCREW FOR SECURING CONDUIT, AND MALE THREADED END WITH LOCKNUT. DO NOT USE 45 DEGREE OR 90 DEGREE TERMINAL ANGLE CONNECTORS FOR FLEXIBLE OR WATER-TIGHT FLEXIBLE METAL CONDUIT IN LOCATIONS THAT WILL NOT BE FULLY ACCESSIBLE AFTER COMPLETION OF CONSTRUCTION. PROVIDE FULL SIZE GREEN INSULATED GROUND WIRE FOR ALL APPLICATIONS, REGARDLESS OF LENGTH. PROVIDE FLEXIBLE METAL CONDUIT FOR THE FOLLOWING CONDITIONS AS APPLICABLE.
1. PROVIDE FOR FINAL 72 INCHES FROM OUTLET/JUNCTION BOXES TO RECESSED LUMINAIRES THAT ARE LOCATED IN ACCESSIBLE CEILING SYSTEMS. OPTIONALLY, TYPE AC/MC CABLE MAY BE USED FOR "FIXTURE WHIPS" (REFER TO SECTION 26 05 19).
2. PROVIDE FOR FINAL 24-72 INCHES OF CONNECTION TO INDOOR EQUIPMENT THAT IS SUBJECT TO MOVEMENT OR VIBRATION. LEAVE SUFFICIENT SLACK IN FLEXIBLE CONDUIT TO PERMIT MOVEMENT FROM VIBRATION WITHOUT ADVERSELY AFFECTING CONDUITS AND CONNECTIONS.

PART 3 - EXECUTION

A. GENERAL
1. PROVIDE CONDUIT, TUBING AND FITTINGS OF TYPES, GRADES, SIZES AND WEIGHTS (WALL THICKNESSES) FOR APPLICATIONS AS NEEDED TO RENDER ELECTRICAL WORK FULLY OPERATIONAL,.
2. PROPERLY SUPPORT AND ANCHOR RACEWAYS FOR THEIR ENTIRE LENGTH USING STRUCTURAL MATERIALS. DO NOT SPAN ANY SPACE UNSUPPORTED.

END OF SECTION

SECTION 26 05 34 - BOXES AND FITTINGS FOR ELECTRICAL SYSTEMS

PART 1 - PRODUCTS

1.1 INDOOR BOXES

A. PROVIDE MINIMUM SIZE OF 4 INCHES SQUARE 3Y 1-1/2 INCHES DEEP FOR OUTLET BOXES AND JUNCTION BOXES. PROVIDE OUTLET BOX ACCESSORIES AS REQUIRED FOR EACH INSTALLATION, INCLUDING BOX SUPPORTS, MOUNTING EARS AND BRACKETS, WALLBOARD HANGERS, BOX EXTENSION RINGS, FIXTURE STUDS, CABLE CLAMPS, AND METAL STRAPS FOR SUPPORTING OUTLET BOXES, WHICH ARE COMPATIBLE WITH OUTLET BOXES BEING USED TO FULFILL INSTALLATION REQUIREMENTS FOR INDIVIDUAL WIRING SITUATIONS. PROVIDE WITH STAINLESS STEEL NUTS, BOLTS, SCREWS AND WASHERS.

1.2 FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS AND FIRE PARTITIONS

A. STEEL OUTLET BOXES THAT DO NOT EXCEED 16 SQUARE INCHES IN AREA MAY BE USED IN FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS, AND FIRE PARTITIONS ONLY IF THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA.

B. PROVIDE A MINIMUM OF 24 INCHES OF SEPARATION BETWEEN OUTLET BOXES ON OPPOSITE SIDES OF A COMMON WALL.

C. PROVIDE OUTLET BOXES, EQUIPMENT BACK-BOXES, ETC. IN FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS, AND FIRE PARTITIONS THAT ARE OF THE TYPE TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES. INSTALL IN ACCORDANCE WITH THE TESTED ASSEMBLY, AND WITH THE INSTRUCTIONS INCLUDED IN THE LISTING.

1.3 DAMP AND WET LOCATION OUTLET BOXES AND COVERS

A. PROVIDE CORROSION-RESISTANT WEATHERTIGHT/RAINTIGHT OUTLET WIRING BOXES, OF TYPES, SHAPES AND SIZES, INCLUDING DEPTH OF BOXES, WITH THREADED CONDUIT HOLES FOR FASTENING ELECTRICAL CONDUIT, SUITABLY CONFIGURED FOR EACH APPLICATION, INCLUDING FACE PLATE GASKETS AND CORROSION-RESISTANT PLUGS AND FASTENERS. PROVIDE WEATHERTIGHT OUTLETS FOR INTERIOR AND EXTERIOR LOCATIONS EXPOSED TO WEATHER OR MOISTURE, I.E. IN DAMP OR WET LOCATIONS.

B. PROVIDE MINIMAL PROFILE ASSEMBLIES THAT ARE RATED NEMA 3R WHILE IN USE AND THAT EMPLOY RECESSED BOX AND COVER DESIGN, EQUAL TO THOMAS & BETTS "RED DOT" SERIES. PROVIDE TRIM COLOR(S) AS DIRECTED BY ARCHITECT.

PART 2 - EXECUTION

2.1 INSTALLATION

A. INSTALL ELECTRICAL BOXES IN THOSE LOCATIONS THAT ENSURE ACCESSIBILITY TO ENCLOSED ELECTRICAL WIRING.

B. DO NOT INSTALL ALUMINUM PRODUCTS IN CONCRETE.

C. CONSIDER THE OUTLET, JUNCTION, AND PULL BOX LOCATIONS INDICATED ON DRAWINGS APPROXIMATE. STUDY THE GENERAL CONSTRUCTION WITH RELATION TO SPACES AND EQUIPMENT SURROUNDING EACH OUTLET, AND NEATLY INSTALL OUTLETS ACCORDINGLY.

END OF SECTION

SECTION 26 05 80 - MECHANICAL EQUIPMENT

PART 1 - GENERAL

1.1 RELATED WORK

A. PROVIDE ALL NECESSARY ELECTRICALLY RELATED WORK AS REQUIRED TO RENDER ALL MECHANICAL EQUIPMENT (INCLUDING PLUMBING, HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT) FULLY OPERATIONAL AND FULLY COMPLIANT WITH NEC. THIS INCLUDES, PRIOR TO ORDERING MATERIALS OR COMMENCING WITH ROUGH-IN, REVIEWING EQUIPMENT SUBMITTAL DATA AND COORDINATING WITH INSTALLING CONTRACTORS TO ENSURE THE CORRECT SIZE, RATING AND QUANTITY OF CONDUCTORS ARE PROVIDED.

PART 2 - EXECUTION

2.1 INSTALLATION

A. GENERAL
1. PROVIDE DISCONNECT SWITCH AHEAD OF ALL EQUIPMENT, INCLUDING CONTROLS, UNLESS THE MECHANICAL EQUIPMENT COMES WITH INTEGRAL NEC-COMPLIANT DISCONNECT(S). PROVIDE NEMA 3R ENCLOSURES WHERE INSTALLED OUTDOORS AND WHERE INSTALLED INDOORS IN AREAS SUBJECT TO MOISTURE. GROUND METAL FRAMES OF EQUIPMENT BY CONNECTING FRAMES TO THE GROUNDED METAL RACEWAY OR TO A FULL SIZE GREEN GROUND CONDUCTOR OR BOTH. PROVIDE THE NECESSARY ELECTRICAL CONNECTIONS BETWEEN THE SPECIFIED EQUIPMENT AND THE JUNCTION BOX NEAR EQUIPMENT WITH FLEXIBLE METALLIC CONDUIT (LIQUID-TIGHT OUTDOORS) AND MATCHED CONNECTORS (SEE SECTION 26 05 33). WHERE MECHANICAL EQUIPMENT LUGS CANNOT ACCOMMODATE CONDUCTOR SIZES SHOWN ON DRAWINGS, PROVIDE ILSCO CLEARTAP INSULATED MULTI-TAP CONNECTORS.
2. SIZES, ELECTRICAL RATINGS, ETC. OF EQUIPMENT AND WIRING SHOWN ON DRAWINGS ARE BASED ON THE RESPECTIVE EQUIPMENT DESIGN BASE MANUFACTURERS. IF DIFFERENT MANUFACTURER(S) OR MODEL(S) ARE ACTUALLY SUPPLIED, PROVIDE NECESSARY COORDINATION IN FIELD (PRIOR TO ORDERING MATERIALS AND PRIOR TO ROUGH-IN) AND PROVIDE THE NECESSARY SIZE OF RELATED ELECTRICAL EQUIPMENT, WIRING, CONDUIT, ETC.
3. PRIOR TO FURNISHING SUBMITTALS AND PRIOR TO ROUGH-IN, DETERMINE EXACT ELECTRICALLY RELATED CHARACTERISTICS, LOADS, VOLTAGES, DISCONNECT AND STARTER REQUIREMENTS, LOCATIONS, MOUNTING HEIGHTS, CONNECTION POINTS, ETC. OF MECHANICAL EQUIPMENT.

B. HACR BREAKERS
1. COORDINATE IN FIELD WITH THE RESPECTIVE TRADES AND DETERMINE CASE BY CASE, WHICH EQUIPMENT IS FACTORY LISTED FOR USE WITH HEATING AND AIR CONDITIONING RATED (HACR) BREAKERS. IN AN EFFORT TO MINIMIZE REQUIREMENTS FOR STOCKING OF FUSES BY THE OWNER, UTILIZE HACR BREAKERS AT THE SOURCE PANELBOARDS AS THE NEC REQUIRED OVERCURRENT PROTECTION WHEREVER POSSIBLE (IN LIEU OF FUSING LOCAL DISCONNECT SWITCHES).

C. DISCONNECT SWITCH AND STARTER LOCATIONS
1. LOCATIONS OF DISCONNECTS AND STARTERS SHOWN ON DRAWINGS ARE INDICATED FOR SCHEMATIC PURPOSES ONLY. DETERMINE EXACT LOCATIONS IN FIELD SO THAT THEY ARE COMPLIANT WITH NEC ARTICLE 110 REQUIREMENTS FOR PANELBOARDS.
2. COMMERCIAL KITCHEN EXHAUST HOODS AND RELATED FAN EQUIPMENT
a. SEE DETAILS ON DRAWINGS.
b. REFER TO FOOD SERVICE DRAWINGS, FOOD SERVICE SPECIFICATIONS AND MANUFACTURER'S SUBMITTALS FOR SPECIFIC INFORMATION. FIELD COORDINATE WORK WITH AFFECTED ENTITIES.
c. PROVIDE INTERLOCK WIRING AND CONNECTIONS TO AND FROM THE VARIOUS EQUIPMENT AND CONTROLS.
d. PROVIDE CONTROL WIRING FROM THE FAN UNITS TO RESPECTIVE REMOTE DUCT STATS.
e. PROVIDE AUXILIARY CONTROL CIRCUIT WIRING FROM THE FACTORY MICRO-SWITCH IN THE HOOD FIRE SUPPRESSION SYSTEMS TO RESPECTIVE DEDICATED FIRE ALARM SYSTEM MONITOR MODULES TO INITIATE ALARM SIGNAL WHEN RESPECTIVE HOOD FIRE PROTECTION SYSTEM IS ACTIVATED.
f. PROVIDE AUXILIARY CONTROL CIRCUIT WIRING FROM THE FACTORY MICRO-SWITCH IN THE HOOD FIRE SUPPRESSION SYSTEM TO CONTACTOR CONTROL COIL(S).
g. PROVIDE EMPTY OCTAGON BOX FOR MECHANICAL MANUAL PULL STATION (AND INSTALL PULL STATION) FOR EACH HOOD FIRE PROTECTION SYSTEM (MOUNTED AT 48" ABOVE FINISHED FLOOR TO TOP OF OUTLET BOX) WITH (1) 1/2" EMPTY CONDUIT ROUTED UP AND OVER TO HOOD AS DIRECTED BY HOOD INSTALLER IN FIELD (W/SWEEP 90'S). FIELD VERIFY LOCATION.
h. PROVIDE INTERLOCK CONTROL WIRING BETWEEN GAS SOLENOID SHUT OFF VALVES AND RESPECTIVE KITCHEN HOOD FIRE SUPPRESSION SYSTEM. COORDINATE WITH AFFECTED INSTALLERS.

END OF SECTION

SECTION 26 27 26 - WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. PROVIDE WIRING DEVICES, IN TYPES, CHARACTERISTICS, GRADES, COLORS, AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED WHICH ARE UL LISTED AND WHICH COMPLY WITH NEMA WD 1 AND OTHER APPLICABLE UL AND NEMA STANDARDS. VERIFY COLOR SELECTIONS WITH OWNER'S REPRESENTATIVE.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING.

SWITCHES: LEVITON, HUBBELL, BRYANT, PASS & SEYMOUR, COOPER
DIMMERS: LUTRON
RECEPTACLES: LEVITON, HUBBELL, BRYANT, PASS & SEYMOUR, COOPER
WALL PLATES: LEVITON, HUBBELL, BRYANT, PASS & SEYMOUR, COOPER

2.2 WIRING DEVICE COLORS

A. PROVIDE WHITE COLOR FOR ALL NORMAL UTILITY WIRING DEVICES UNLESS NOTED BELOW:
1. PROVIDE STAINLESS STEEL FOR ALL RECEPTACLES, JUNCTIONS BOXES, AND SWITCHPLATES INSTALLED IN THE KITCHEN WORK AREA AND PREP/STORAGE ROOMS WHERE STAINLESS STEEL OR TILE IS THE WALL FINISH.
2. PROVIDE BLACK FOR ALL RECEPTACLES AND JUNCTION BOXES INSTALLED WHERE THE WALL OR CEILING FINISH IS BLACK IN COLOR.

2.3 SPECIFICATION GRADE RECEPTACLES

A. STANDARD SPECIFICATION GRADE DUPLEX/SINGLE RECEPTACLES
5. PROVIDE DUPLEX RECEPTACLES EQUAL TO LEVITON #5342 SERIES. FOR RECEPTACLE CIRCUITS PROTECTED WITH 15A BREAKERS, PROVIDE NEMA 5-15R EQUIVALENTS. PROVIDE RECEPTACLES EQUAL TO LEVITON #5361 SERIES FOR SIMPLEX (SINGLE) APPLICATIONS.

B. GROUND-FAULT INTERRUPTER SPECIFICATION GRADE RECEPTACLES
1. PROVIDE GROUND FAULT CIRCUIT INTERRUFTER DUPLEX RECEPTACLES EQUAL TO LEVITON #8898 SERIES. FOR RECEPTACLE CIRCUITS PROTECTED WITH 15A BREAKERS, PROVIDE NEMA 5-15R EQUIVALENTS.
2. RECEPTACLES INDICATED AS GFI MAY BE GFI-PROTECTED BY AN UPSTREAM GFI RECEPTACLE ON THE SAME CIRCUIT ONLY IF LOCATED IN THE SAME ROOM. OTHERWISE PROVIDE A SEPARATE GFI RECEPTACLE FOR EACH ONE SHOWN.

C. ISOLATED GROUND SPECIFICATION GRADE RECEPTACLES
1. PROVIDE DUPLEX ISOLATED GROUND RECEPTACLES EQUAL TO LEVITON #5362-IG. PROVIDE SIMPLEX (SINGLE) ISOLATED GROUND RECEPTACLES EQUAL TO LEVITON #5361-IG. FOR RECEPTACLE CIRCUITS PROTECTED WITH 15A BREAKERS, PROVIDE NEMA 5-15R EQUIVALENTS. PROVIDE DEDICATED INSULATED ISOLATED GROUND CONDUCTORS (GREEN WITH YELLOW TRACER) FOR EACH APPLICATION.

D. WEATHER RESISTANT GFCI RECEPTACLES
1. PROVIDE DUPLEX WEATHER RESISTANT RECEPTACLES EQUAL TO LEVITON # W7899 SERIES. FOR RECEPTACLE CIRCUITS PROTECTED WITH 15A BREAKERS, PROVIDE NEMA 5-15R EQUIVALENTS.

2.4 WIRING DEVICE ACCESSORIES

A. WALL PLATES
1. PROVIDE SINGLE AND COMBINATION, OF TYPES, SIZES, AND WITH GANGING AND CUTOUTS AS REQUIRED TO ACCOMMODATE EACH APPLICATION. PROVIDE PLATES WHICH MATE AND MATCH WITH WIRING DEVICES TO WHICH ATTACHED. PROVIDE METAL SCREWS FOR SECURING PLATES TO DEVICES WITH SCREW HEADS COLORED TO MATCH FINISH OF PLATES. PROVIDE WALL PLATE COLOR TO MATCH WIRING DEVICES UNLESS SPECIFICALLY INDICATED OTHERWISE.
2. PROVIDE STANDARD SIZE WALL PLATES. DO NOT PROVIDE "MIDWAY", "OVERSIZED" ("JUMBO") OR "EXTRA DEEP" WALL PLATES.
3. PROVIDE COMMERCIAL SPECIFICATION GRADE THERMOPLASTIC WALL PLATES IN FINISHED AREAS.
4. PROVIDE STAINLESS STEEL FOR ALL COVER PLATES UNDER WAINSCOTING IN DINING ROOM.

PART 3 - EXECUTION

3.1 INSTALLATION

A. PROVIDE GROUNDED ("NEUTRAL") CONDUCTOR IN ALL LIGHTING CONTROL DEVICE (SWITCH, DIMMER, OCCUPANCY SENSOR, ETC.) WALL OUTLET BOXES, EVEN IF NOT IMMEDIATELY USED.

B. INSTALL RECEPTACLES SO THAT THE GROUND PIN IS ORIENTED IN A CONSISTENT MANNER THROUGHOUT THE FACILITY, SO THAT THE ORIENTATION IS COMPLIANT WITH ALL PREVAILING CODES AND REGULATIONS, AND SO THAT THE ORIENTATION IS ACCEPTABLE TO THE ELECTRICAL INSPECTOR.

END OF SECTION

SECTION 26 27 40 - DISCONNECTS, STARTERS, CONTACTORS

PART 1 - GENERAL

1.1 RELATED WORK

A. PROVIDE NEMA STANDARD EQUIPMENT, INCLUDING THOSE INCORPORATED AS AN INTEGRAL PART OF A FACTORY/SHOP PRE-FABRICATED PIECE OF EQUIPMENT. DO NOT USE IEC STANDARDS FOR EQUIPMENT.

B. PROVIDE UNITS AS INDICATED ON DRAWINGS AND AS INDICATED UNDER DIVISION 26 SECTIONS.

PART 2 - PRODUCTS

2.1 MATERIALS

A. DISCONNECT SWITCHES
1. PROVIDE DISCONNECT SWITCHES EQUAL TO SQUARE D TYPE HD, HEAVY DUTY, SAFETY TYPE, QUICK MAKE AND QUICK BREAK AND EXTERNALLY OPERATED.
2. PROVIDE FUSIBLE DISCONNECTS UNLESS NOTED OTHERWISE ON DRAWINGS OR DIRECTED OTHERWISE IN FIELD.
3. PROVIDE DISCONNECT SWITCHES BRACED FOR 200,000 A.I.C.
4. PROVIDE UNITS WITH FUSES OF CLASSES AND CURRENT RATINGS INDICATED, AND UL LISTED FOR USE AS SERVICE EQUIPMENT UNDER UL STANDARD 98 OR 869. SEE SECTION "FUSES" FOR FUSE SPECIFICATIONS. WHERE CURRENT LIMITING FUSES ARE INDICATED, PROVIDE SWITCHES WITH NON-INTERCHANGEABLE FEATURE SUITABLE ONLY FOR CURRENT LIMITING TYPE FUSES.
5. INSTALL DISCONNECT SWITCHES WITHIN SIGHT OF CONTROLLER POSITION UNLESS OTHERWISE INDICATED.

PART 3 - EXECUTION

3.1 INSTALLATION

A. PROVIDE UNITS WITH HORSEPOWER RATINGS SUITABLE TO THE LOADS. SIZE UNITS ACCORDING TO LOAD BEING SERVED OR AS NOTED ON DRAWINGS, WHICHEVER REQUIREMENT IS LARGER. INSTALL OVERLOADS AND FUSES AS NECESSARY TO FULFILL REQUIREMENTS OF EACH APPLICATION.

B. FURNISH ADDITIONAL FUSES/OVERLOADS AMOUNTING TO 10 PERCENT OF FUSES PROVIDED, BUT NOT LESS THAN ONE SET OF 3 OF EACH KIND, FOR REQUIRED TYPES AND RATINGS.

C. PROVIDE NEMA 3R ENCLOSURES FOR UNITS THAT ARE INSTALLED OUTDOORS, IN MOIST AREAS, AND IN OTHER ATMOSPHERES SUBJECT TO SIMILAR MOISTURE OR EXPOSURE.

END OF SECTION

GENERAL SCHEDULE

CALLOUT	SYMBOL	VOLTS	KVA	CIRCUIT	WIRE CALLOUT	DISCONNECT DESCRIPTION
EF-A		120V 1P 2W	0.1	R-7	1/2"C,1#12,#12N,#12G	SWITCHED WITH LIGHTS
EF-A		120V 1P 2W	0.1	C1-20	1/2"C,1#10,#10N,#10G	SWITCHED WITH LIGHTS
EF-A		120V 1P 2W	0.15	C1-20	1/2"C,1#10,#10N,#10G	SWITCHED WITH LIGHTS
HOOD		120V 1P 2W	0.6	C1-2	1/2"C,1#12,#12N,#12G	30A/1P/NEMA 1
KEF-1		120V 1P 2W	1.92	C1-29	1/2"C,1#12,#12N,#12G	30A/1P/NEMA 1
KSF-1		120V 1P 2W	1.92	C1-31	1/2"C,1#10,#10N,#10G	30A/1P/NEMA 1
RTU-1		208V 3P 4W	11.53	C1-24,26,28	1"C,3#6,#6N,#10G	60A/3P/NEMA 3R
RTU-2		208V 3P 4W	14.05	C1-30,32,34	1"C,3#6,#6N,#10G	60A/3P/NEMA 3R
RTU-3		208V 3P 4W	11.53	R-8,10,12	1"C,3#6,#6N,#10G	60A/3P/NEMA 3R
RTU-4		208V 3P 4W	11.53	R-14,16,18	1"C,3#6,#6N,#10G	60A/3P/NEMA 3R
WH-1		208V 3P 4W	4.3	C2-20,22,24	1/2"C,3#12,#12N,#12G	30A/3P/NEMA 1

ISSUED FOR CONSTRUCTION

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ELECTRICAL SPECIFICATIONS-02

2908 MOON STATION RD NW, KENNESAW GA-30144

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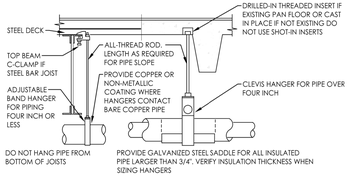
E5.0

ABBREVIATIONS

(D)	DEMOLITION	HD	HEAD
(E)	EXISTING	HGT	HEIGHT
(F)	FUTURE	HP	HORSEPOWER
(R)	RELOCATE	INV	INVERT
AAV	AIR ADMITTANCE VALVE	IW	INDIRECT WASTE
ABV	ABOVE	KEC	KITCHEN EQUIPMENT CONTRACTOR
AFF	ABOVE FINISHED FLOOR	LB	POUNDS
AFG	ABOVE FINISHED GRADE	LF	LINEAR FEET
AHJ	AUTHORITY HAVING JURISDICTION	LG	LENGTH
AUTO	AUTOMATIC	MAX	MAXIMUM
AVG	AVERAGE	MFC	MANUFACTURER
BLDG	BUILDING	MIN	MINIMUM
BOP	BOTTOM OF PIPE	MS	MOP SINK
BFP	BACKFLOW PREVENTER	N/A	NOT APPLICABLE
CA	COMPRESSED AIR	NC	NORMALLY CLOSED
CAP	CAPACITY	NO	NORMALLY OPEN
CFH	CUBIC FEET PER HOUR	NPW	NON-POTABLE WATER
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CO	CLEANOUT	OF	OWNER FURNISHED
CONN	CONNECTION OR CONNECT	PC	PLUMBING CONTRACTOR
CONT	CONTINUATION	PD	PUMPED DISCHARGE
CU FT	CUBIC FEET	PLBG	PLUMBING
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PPM	PARTS PER MILLION
DCW	DOMESTIC COLD WATER	PRS	PRESSURE
DEPT	DEPARTMENT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSI	POUNDS PER SQUARE INCH
DIA	DIAMETER	PSIG	PSI GAUGE
DN	DOWN	RP	RECIRCULATING PUMP
DW	DIRECT WASTE	RPZ	REDUCED PRESSURE ZONE
DWG	DRAWING	SH	SHOWER
DWV	DRAIN WASTE VENT	SRD	SECONDARY ROOF DRAIN
EL	ELEVATION	STD	STANDARD
EWC	ELECTRIC WATER COOLER	STR	STRAINER
EXH	EXHAUST	TEMP	TEMPERATURE
°F	DEGREES FAHRENHEIT	TMV	THERMOSTATIC MIXING VALVE
FD	FLOOR DRAIN	TOP	TOP OF PIPE
FIN	FINISHED	TP	TRAP PRIMER
FT	FOOT OR FEET	TS	TRAP SEAL
G	GAS	TWS	TEMPERED WATER SUPPLY
GA	GAUGE	TYP	TYPICAL
GAL	GALLONS	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR	UR	URINAL
GPD	GALLONS PER DAY	V	VENT
GPH	GALLONS PER HOUR	VB	VACUUM BREAKER
GPM	GALLONS PER MINUTE	VDC	VENTED DOUBLE CHECK
HB	HOSE BIBB	VTR	VENT THRU ROOF
HC	HVAC CONTRACTOR	WC	WATER CLOSET

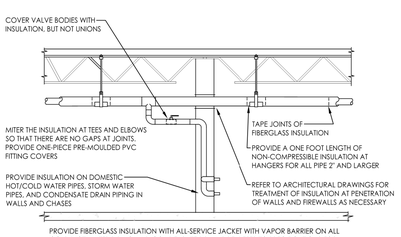
PLUMBING LEGEND

—— (E) ——	EXISTING TO REMAIN		PETE'S PLUG
------ (D) ------	EXISTING TO BE DEMOLISHED		BALL VALVE
——SAN——	SANITARY		BUTTERFLY VALVE
——STM——	STORM (PRIMARY)		GATE VALVE (FLANGED BODY)
——OF——	OVERFLOW (SECONDARY STORM)		BALANCING VALVE
——GW——	GREASE WASTE		CHECK VALVE
—— – DNT – ——	DO NOT TAP		PLUG VALVE
—— – —— – ——	DOMESTIC COLD WATER		THERMOSTATIC MIXING VALVE
—— – —— – ——	DOMESTIC HOT WATER		PRESSURE REDUCING VALVE
—— – – – ——	DOMESTIC HOT WATER RETURN		PRESSURE GAUGE
——MG——	MEDIUM PRESSURE NATURAL GAS		RELIEF VALVE
——G——	LOW PRESSURE NATURAL GAS		SOLENOID VALVE
— — — — — — —	VENT		STRAINER
—— – FW – ——	FILTERED WATER		UNION
—— – SODA – ——	SODA CONDUIT		WATER HAMMER ARRESTER
O—	PIPE TURNED UP		THERMOMETER
⊖—	PIPE TURNED DOWN		CONNECT TO EXISTING
—⊜—	PIPE BOTTOM CONNECTION		FLOOR PENETRATION MARKER

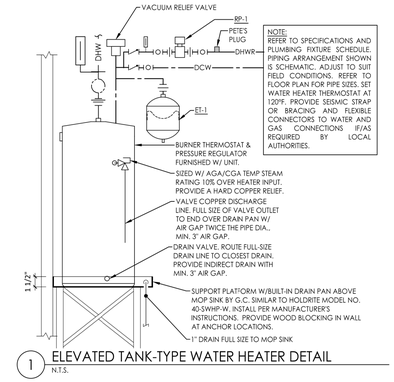


PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER. TRAPEZE HANGERS MAY BE USED FOR MULTIPLE PARALLEL PIPES. HANGER SPACING FOR PIPE SIZE: COPPER: 4"=12'; 3"=11'; 2-1/2"=10'; 2"=9'; 1-1/2"=8'; 1-1/4"=7'; 1"=6'; 3/4"=6'; 1/2"=5'. CAST IRON: 10' AND ONE NEAR ALL JOINTS. STEEL: 4"=14'; 3"=12'; 2-1/2"=11'; 2"=10'; 1-1/2"=9'; 1"=7'; 3/4"=6'; 1/2"=5'. LOCATE HANGERS AS CLOSE AS POSSIBLE TO TURNS AND TEES OF PIPE. PROVIDE SUPPLEMENTARY STEEL STRUTS BETWEEN JOISTS IF REQUIRED. LOCATE HANGERS TO TAKE LOAD OFF OF EQUIPMENT CONNECTIONS. ANCHOR WATER PIPE AGAINST SWAYING DUE TO CHANGES IN WATER VELOCITY. PROVIDE SEISMIC BRACING IF/AS REQUIRED BY LOCAL AUTHORITIES. CHAINS OR PERFORATED STRAP IRON OR STEEL IS NOT ACCEPTABLE. REFER TO CODES AND SPECIFICATIONS FOR FURTHER INFORMATION.

2 PIPE HANGER DETAIL
N.T.S.



3 PIPE INSULATION DETAIL
N.T.S.



1 ELEVATED TANK-TYPE WATER HEATER DETAIL
N.T.S.

GENERAL NOTES:

A. SUSPEND ALL HORIZONTAL SERVICE PIPING SHOWN ON THIS PROJECT SUCH AS, BUT NOT LIMITED TO, WATER, SANITARY, WASTE/VENT, STORM WATER, GAS, ETC. FROM UNDERSIDE OF ROOF AND/OR FLOOR STRUCTURE, UNLESS OTHERWISE NOTED OR INDICATED. HOLD SUCH PIPING HIGH AS POSSIBLE. EXTEND PIPING DOWN IN WALLS, PARTITIONS, CHASES, ETC. TO SERVE FIXTURES AND EQUIPMENT AS SHOWN ON PLANS.

B. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.

C. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE PIPE RISES, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK. IF PLUMBING CONTRACTOR FAILS TO COORDINATE WITH OTHER TRADES AND WORK IS REQUIRED TO BE ALTERED, THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR THE WORK AT THEIR OWN EXPENSE.

D. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS, ETC. AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM. SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS.

E. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PLUMBING CONTRACTOR SHALL PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.

F. PROVIDE BACKFLOW PREVENTION DEVICES IN WATER LINES FEEDING PLUMBING FIXTURES AND/OR EQUIPMENT, AS SHOWN ON PLANS AND ELSEWHERE AS REQUIRED BY LOCAL AUTHORITIES. USE DEVICES OF APPROVED TYPE (ASSE LISTED) AND MANUFACTURER (ATMOSPHERIC VACUUM, PRESSURE VACUUM, DOUBLE CHECK, AND REDUCED PRESSURE).

G. PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS TO FIXTURES AND EQUIPMENT. ITEMS INCLUDE TRAPS, STRAINERS, GAUGES, GAS AND WATER PRESSURE REGULATORS. FLEXIBLE CONNECTIONS, STOP VALVES, UNIONS, ETC. PROVIDE AND CONNECT PLUMBING PIPE FROM ROUGH-INS TO ITEMS AS SHOWN, SPECIFIED AND REQUIRED.

H. VISIT THE SITE PRIOR TO SUBMITTING BID. INCLUDE ANY ADDITIONAL ITEMS REQUIRED FOR A COMPLETE & OPERATIONAL SYSTEM.

I. ALL CUTTING AND PATCHING OF EXISTING FLOORS TO BE PART OF THE PLUMBING CONTRACTOR BID.

J. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL DRAWINGS. SET SLEEVES IN FLOORS AND WALLS AND ATTACHMENTS FOR HANGERS AS CONSTRUCTION PROGRESSES. ALL PENETRATIONS MUST BE SEALED AND HELD AS TIGHT TO COLUMNS OR WALLS AS POSSIBLE. EXISTING CORES SHALL BE FILLED AS REQUIRED.

K. ALL PIPING SHALL BE CONCEALED INSIDE WALLS, BELOW FLOORS OR ABOVE CEILINGS UNLESS INDICATED OTHERWISE.

L. ALL PIPING SHALL BE SLOPED AS PER THE MINIMUM GRADE REQUIRED BY CODE (UNLESS NOTED OTHERWISE) FOR EACH PARTICULAR PIPE SIZE.

M. COORDINATE UNDERGROUND PIPING WITH GRADE BEAMS AND WALL FOOTINGS.

N. DO NOT RUN PLUMBING PIPING THROUGH ELECTRICAL ROOMS, DIRECTLY ABOVE ELECTRICAL PANELS, OR THROUGH OTHER WATER SENSITIVE AREAS.

O. ALL EQUIPMENT, PIPING, APPURTENANCES SHALL BE PROTECTED FROM DEBRIS AND DAMAGE. SENSITIVE EQUIPMENT SHALL NOT BE DELIVERED TO THE JOB SITE UNTIL SUCH TIME AS IT IS TO BE INSTALLED. PIPING ENDS SHALL BE CLOSED BY TEMPORARY MEANS WHEN PORTIONS OF THE SYSTEM ARE NOT COMPLETE.

P. LOCATE ALL VALVES WHERE THEY ARE ACCESSIBLE FOR SERVICE AND USE. WHERE ACCESS PANELS ARE REQUIRED COORDINATE SELECTION AND LOCATION WITH ARCHITECT.

Q. ALL PENETRATIONS AT FLOORS AND RATED PARTITIONS SHALL HAVE A UL CLASSIFIED FIRE STOP SYSTEM TESTED TO ASTM E814 AND UL 1497 BY UNDERWRITERS LABORATORIES. FIRE STOP SYSTEMS SHALL BE PROSET SYSTEMS, PENSIL FIRESTOP SYSTEMS OR 3M COMPANY.

R. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES. EXACT LOCATION OF ALL FIXTURES MUST BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION. FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT.

S. PROVIDE NEW BRASS CLEAN OUT COVERS ON ALL NEW AND EXISTING PLUMBING LINE ACCESS POINTS.

T. ALL MIXING VALVES SHALL BE SET TO PROVIDE WATER AT TEMPERATURES THAT COMPLY WITH ASSE 1070 STANDARDS FOR PERFORMANCE REQUIREMENTS FOR WATER TEMPERATURE LIMITING DEVICES.

U. VERIFY INVERT/HEIGHTS OF ALL TIE-IN POINTS INDICATED ON PLAN PRIOR TO INSTALLATION. NOTIFY ENGINEER IMMEDIATELY IF EXISTING INVERT WILL BE INSUFFICIENT.

V. CONTRACTOR IS RESPONSIBLE FOR ADHERING TO THE ENTIRETY OF THIS DRAWING SET, INCLUDING BUT NOT LIMITED TO: PLANS, ELEVATIONS, DETAILS, SCHEDULES, AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DRAWINGS OF OTHER TRADES, INCLUDING BUT NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL AND STRUCTURAL.

AI. SCOPE AND JET EXISTING SANITARY LINES PRIOR TO CONSTRUCTION AND AFTER COMPLETION. VERIFY ALL TIE-IN POINTS FOR SANITARY PIPING PRIOR TO CONSTRUCTION. IF ANY ISSUES ARISE, CONTACT THE ARCHITECT AND ENGINEER OF RECORD IMMEDIATELY.

VERIFY FIELD ALL CONDITIONS

A. DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

B. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE CONSTRUCTION MANAGER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

C. BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT THE CONSTRUCTION MANAGER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

PLUMBING FIXTURE SCHEDULE								
MARK	ITEM	FIXTURE	FAUCET/VALVE	MTG. HT.	CW	HW	TRAP	ACCESSORIES
WC-1	WATER CLOSET (HANDICAP)	AM. STD. 215AA.004 CADET	--	16-1/2"	1/2"	--	INTEG.	NOTE-1
LAV-1	LAVATORY (HANDICAP)	AM. STD. 0355.012 LUCERNE	AM.STD. 7500.160.002	VERIFY W/ ARCH	1/2"	1/2"	1-1/2"	NOTE-2
SK-1	SINK	ELKAY CR2522	MOEN-CHATEAU 7425	COUNTER MOUNTED	1/2"	1/2"	2"	NOTE-4
SK-2	HAND SINK	ELKAY BLR-1516	MOEN 8279SMF12	COUNTER MOUNTED	1/2"	1/2"	2"	-

NOTE-1
FLOOR MOUNTED, VITREOUS CHINA, ELONGATED BOWL, 1.6 GPF, SIPHON-ACTION-JET. FURNISH WITH CHURCH #9500C OPEN FRONT SEAT LESS COVER. FLUSH LEVEL TO BE INSTALLED OPPOSITE OF WALL.

NOTE-2
WALL MOUNTED, VITEROUS CHINA, 20"x17" NOMINAL SIZE. FRONT OVERFLOW. PROVIDE WITH OFFSET DRAIN, OPEN GRID STRAINER, 0.50 GPM AERATOR. PROVIDE COMPLETE WITH 8DT (BELOW DECK THERMOSTATIC MIXING VALVE, ASSE 1070), WASTE DRAIN AND TRAP, SUPPLIES AND STOPS AND ESCUTCHEON. INSULATE ALL EXPOSED SANITARY AND DOMESTIC WATER PIPING WITH LAV GUARD PROTECTIVE PIPE COVERS AS MANUFACTURED BY TRUEBRO TO CONFORM WITH ADA REQUIREMENTS.

NOTE-3
FLOOR MOUNTED 24"x24" NOMINAL SIZE. DURASTONE. FURNISH WITH MUSTEE MODEL #67.2424 DURAGUARD WALL GUARDS, MODEL #63.401 VINYL BUMPER GUARDS, MODEL #65.700 HOSE AND BRACKET AND MODEL #65.600 MOP HANGER.

NOTE-4
COUNTER TOP SINGLE BOWL SINK, 15"Wx15"Lx7-1/8"D STAINLESS STEEL DROP-IN MOUNT, CENTER DRAIN. 2-4" ON CENTER HOLES WITH U-CHANNEL TYPE MOUNTING SYSTEM. PROVIDE WITH 1.2 GPM FLOW RESTRICTOR, 4" WRIST BLADE HANDLES, METAL CONSTRUCTION AND CHROME FINISH. MOEN-8279SMF12 OR SIMILAR. 1/2" SUPPLIES WITH STOPS.

WATER HEATER SCHEDULE							
TAG	ITEM	INPUT	RECOVERY	LEAVING TEMP	SPACE SERVED	MANUFACTURER/ MODEL NO.	DESCRIPTION
DWH-1	ELECTRIC STORAGE DOMESTIC WATER HEATER	12 KW	50 GPH @100°F RISE	140°F	RESTROOMS	A.O. SMITH DEL-30-4.5	30 GALLON STORAGE, 4.5 KW ELECTRIC INPUT, 208V, 1 PHASE 25 GPH RECOVERY AT 72 DEGREES F RISE, 95% THERMAL EFFICIENCY, ELECTRONIC CONTROLS: MICROPROCESSOR CONTROLS IGNITION AND THERMOSTAT, DIGITAL DISPLAY PANEL SHOWS OPERATING MODES, ALL USER SETTINGS AND ANY FAILURE MODES, GLASS LINED TANK, MAXIMUM 150 PSI WORKING PRESSURE, MEETING ASHRAE 90.1-2016 AND LOCAL ENERGY CONSERVATION REQUIREMENTS, FURNISHED WITH ASME RATED T&P RELIEF VALVE. INSTALL PER DETAIL AND PER MANUFACTURER'S INSTRUCTIONS. WATER HEATER FURNISHED AND INSTALLED BY PC. ALL OTHER ACCESSORIES PROVIDED BY PC. SET TEMPERATURE AT 109 DEGREES F.

DRAIN AND CLEANOUT SCHEDULE				
TAG	ITEM	MANUFACTURER	MODEL NO.	COMMENTS
FD-1	FLOOR DRAIN	ZURN	FR06NIC3N	LIGHT-DUTY PLASTIC FLOOR DRAIN WITH 6" DIA. NICKEL BRONZE STRAINER, MEMBRANE FLASHING CLAMP AND 1/2" TRAP PRIMER CONNECTION. PROVIDE OUTLET WITH P-TRAP. CLEAN AND POLISH ROUND STRAINER TOP AFTER INSTALLATION. PROVIDE TRAP SEAL FOR ALL FLOOR DRAINS.
CO-1	FINISHED AREA FLOOR CLEANOUT	ZURN	CR06NIC3N	LIGHT-DUTY CAST IRON CLEANOUT WITH GAS TIGHT POLYPROYLENE PLUG, AND 6" DIA. ADJUSTABLE SCORIATED NICKEL BRONZE TOP.
WCO	WALL CLEANOUT WITH COVER	ZURN	–	PROVIDE WALL CLEANOUT WITH STAINLESS STEEL COVER.

PLUMBING EQUIPMENT SCHEDULE				
TAG	ITEM	MANUFACTURER	MODEL NO.	COMMENTS
RP-1	DOMESTIC HOT WATER RECIRCULATION PUMP	GRUNDFOS	ALPHA 15-55SF	RECIRCULATION PUMP, STAINLESS STEEL, 2.5 GPM @ 12 FT HEAD, 115V, SINGLE PHASE. REFER TO DETAIL ON SHEET P4.20.
ET-1	THERMAL EXPANSION TANK	AMTROL	ST-12	THERMAL EXPANSION TANK FOR DHW-1. MOUNT ON WALL NEAR WATER HEATER. SEE PLANS FOR EXACT LOCATION.
TS-1	TRAP SEAL	SURESEAL	SS30000	BARRIER TYPE FLOOR DRAIN TRAP SEAL PROTECTION DEVICE MADE FROM ELASTOMERIC NEOPRENE MATERIAL AND SHALL NOT CREATE AN EFFECTIVE RESTRICTION ON WATER FLOW. DEVICE SHALL MEET LOCAL CODE REQUIREMENTS AND THE NEW ASSE 1073 FOR FLOW RATES. THE DEVICE SHALL CONNECT WITHIN FLOOR DRAINS THAT CONFORM TO ANSI/ASME A112.6.3. THE DEVICE SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. PROVIDE ON ALL FLOOR DRAINS.

- All backflows are to be tested and results sent to cross connection specialist at Forsyth County Water and Sewer.
- Contact Michael Burgess at (770) 205-4559 when RPZ backflows are installed and ready for inspection.
- If plumbing inspector requires internal device (RPZ or double check), device must be easily accessible; no higher than 7'.
- No condensate allowed in sanitary sewer.

FORGLA 5 REGISTERED 211424 PROFESSIONAL ENGINEER COMMONWEALTH OF VIRGINIA NUMBER 0

ENGINEER

FLEACTO ENGINEERING

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PLUMBING NOTES AND SCHEDULES

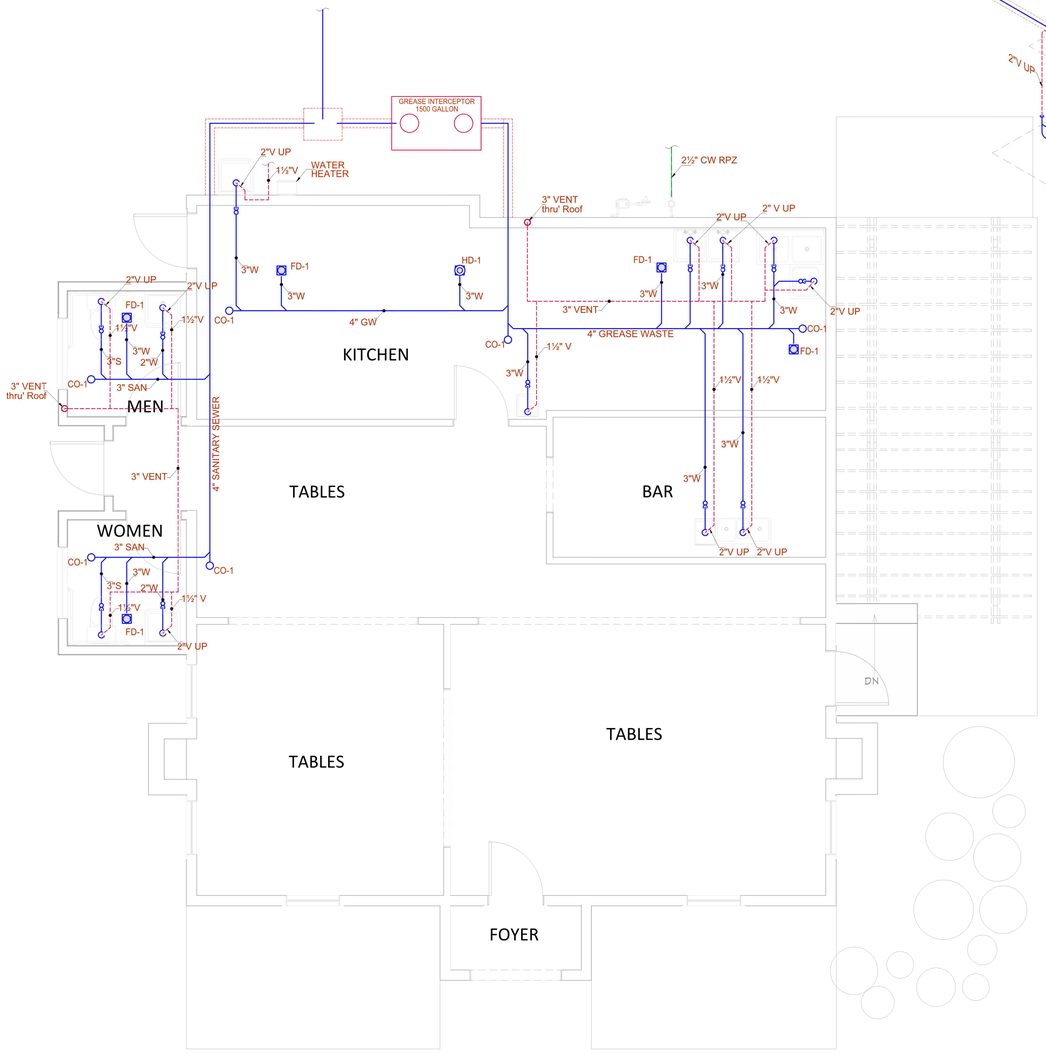
2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

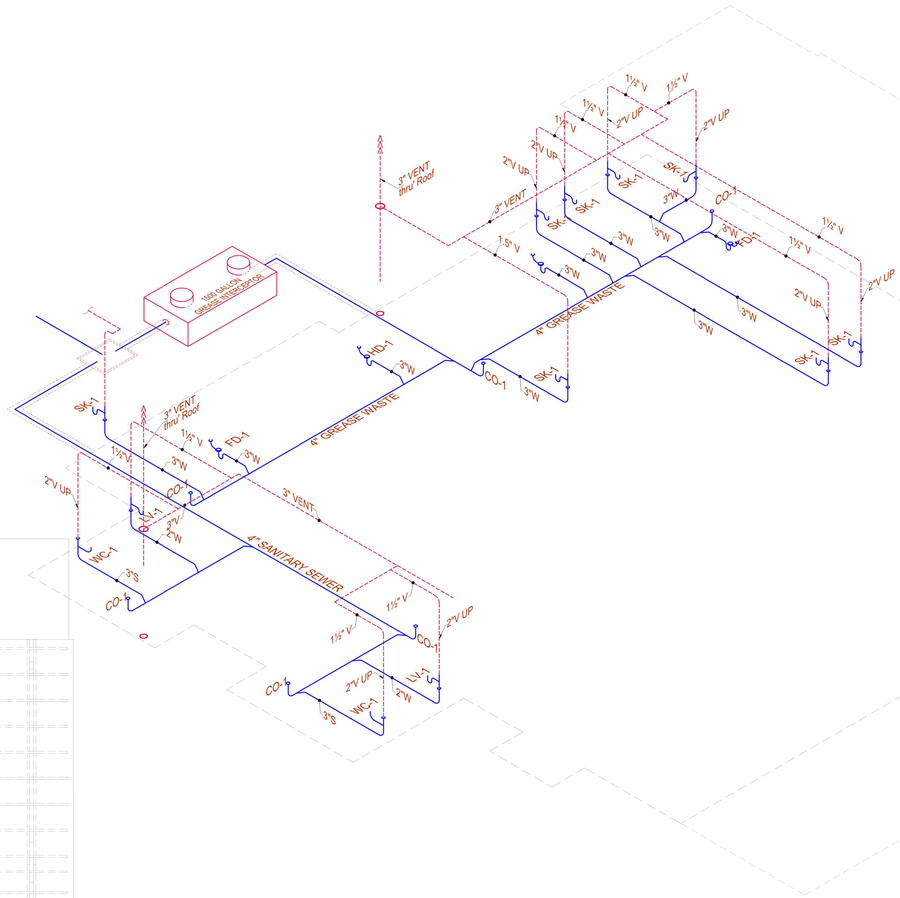
Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

P1.0

ISSUED FOR CONSTRUCTION



PLUMBING WASTE AND VENT PLAN
SCALE: 1/4"=1'



PLUMBING WASTE AND VENT RISER PLAN
SCALE: 1/4"=1'

GENERAL NOTES:

A. CONTRACTOR SHALL FIELD VERIFY EXACT CONTINUATION AND ROUTING OF SANITARY PIPING FOR A PROPER OPERATING SYSTEM. PLUMBING CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATION PRIOR TO SANITARY LINE INSTALLATION AND PRESSURE JET CLEAN SANITARY LINE AS REQUIRED. NOTIFY ARCHITECT/ENGINEER WITH ANY DISCREPANCIES IMMIDIATELY.

B. REFER TO STACK DIAGRAM AND SCHEDULES FOR COMPLETE PIPE SIZING INFORMATION.

C. SMOKE ALL PLUMBING VENT PIPING PRIOR TO CLOSING WALL CAVITIES AND PRIOR TO TURN OVER.

D. PLUMBING CONTRACTOR SHALL PROVIDE TRAP SEALS ON ALL FLOOR DRAINS/SINKS. REFER TO PLUMBING SCHEDULE FOR ADDITIONAL INFORMATION.

E. FURNISH AND INSTALL BRAIDED STAINLESS STEEL FAUCET CONNECTORS AT ALL EXPOSED FLEXIBLE HOSE LOCATIONS EXCEPT AT EQUIPMENT PROVIDED BY KES.

CODED NOTES SANITARY:

1. SANITARY WASTE MAIN. PLUMBING CONTRACTOR VERIFY EXACT LOCATION, SIZE AND INVERT PRIOR TO CONSTRUCTION. REMOVE ALL EXISTING SANITARY PIPING IF ANY AND BACK TO MAIN AND CAP. REMOVE ALL EXISTING PLUMBING FIXTURES AND ALL ASSOCIATED ACCESSORIES UNLESS NOTED OTHERWISE. EXISTING SANITARY PIPING SERVING OTHER SPACES TO REMAIN. VERIFY EXACT SCOPE PRIOR TO BID.

2. PROVIDE VENT PIPING TO MAIN SERVING FLOOR AND CONNECT. VERIFY EXACT LOCATION OF THE MAIN VENT PIPING PRIOR TO CONSTRUCTION.

3. PROVIDE SANITARY PIPING TO MAIN AND CONNECT. VERIFY EXACT LOCATION SANITARY MAIN PRIOR TO CONSTRUCTION.

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE033659 NURUDEEN O. OLAYIWOLA

ENGINEER

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PLUMBING WASTE AND VENT PLAN AND RISER PLAN

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

P2.0

GENERAL NOTES:

A. CONTRACTOR SHALL FIELD VERIFY EXACT CONTINUATION AND ROUTING OF SANITARY PIPING FOR A PROPER OPERATING SYSTEM. PLUMBING CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATION PRIOR TO SANITARY LINE INSTALLATION AND PRESSURE JET CLEAN SANITARY LINE AS REQUIRED. NOTIFY ARCHITECT/ENGINEER WITH ANY DISCREPANCIES IMMIDIATELY.

B. REFER TO STACK DIAGRAM AND SCHEDULES FOR COMPLETE PIPE SIZING INFORMATION.

C. SMOKE ALL PLUMBING VENT PIPING PRIOR TO CLOSING WALL CAVITIES AND PRIOR TO TURN OVER.

D. PLUMBING CONTRACTOR SHALL PROVIDE TRAP SEALS ON ALL FLOOR DRAINS/SINKS. REFER TO PLUMBING SCHEDULE FOR ADDITIONAL INFORMATION.

E. FURNISH AND INSTALL BRAIDED STAINLESS STEEL FAUCET CONNECTORS AT ALL EXPOSED FLEXIBLE HOSE LOCATIONS EXCEPT AT EQUIPMENT PROVIDED BY KES.

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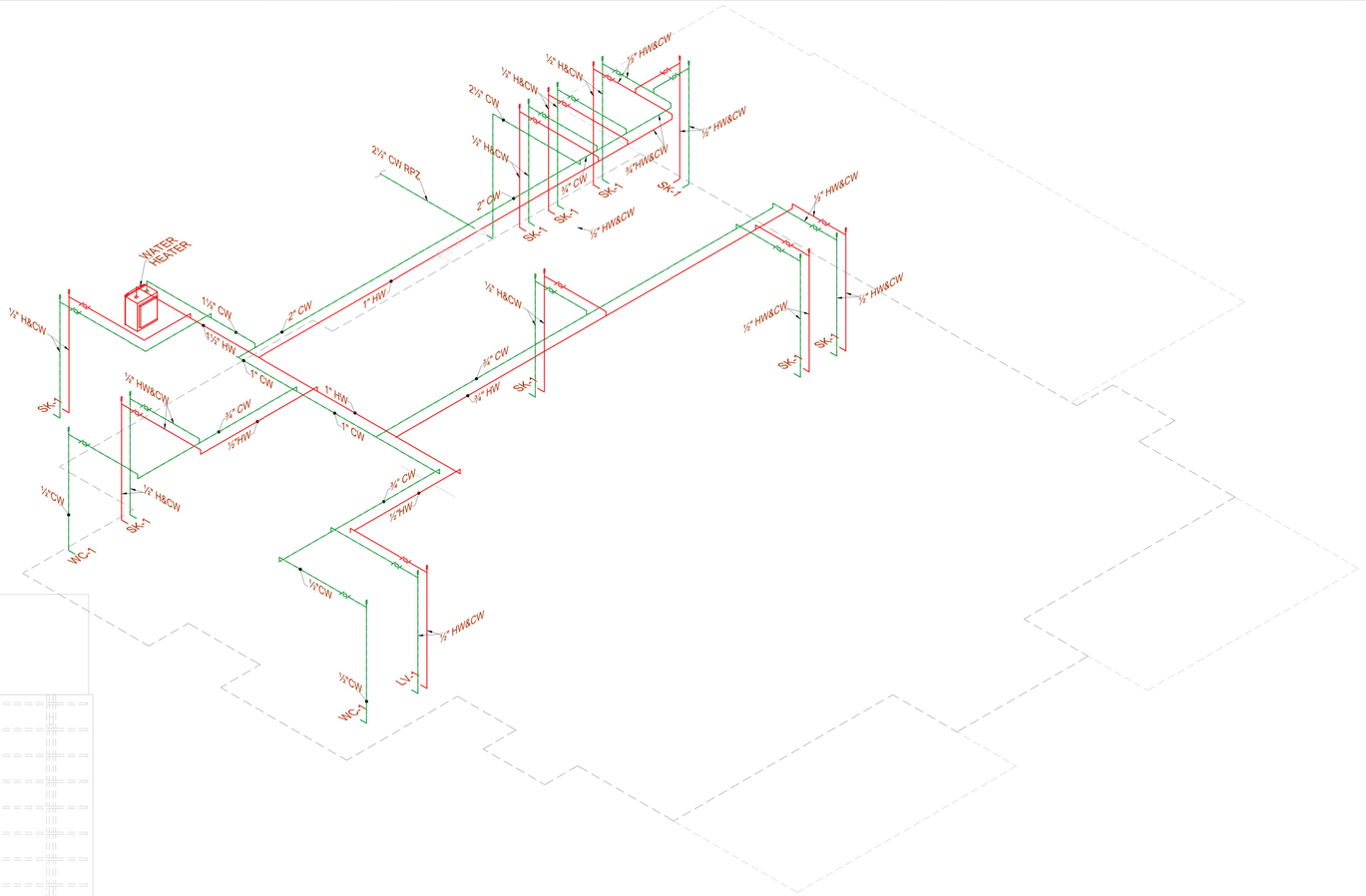
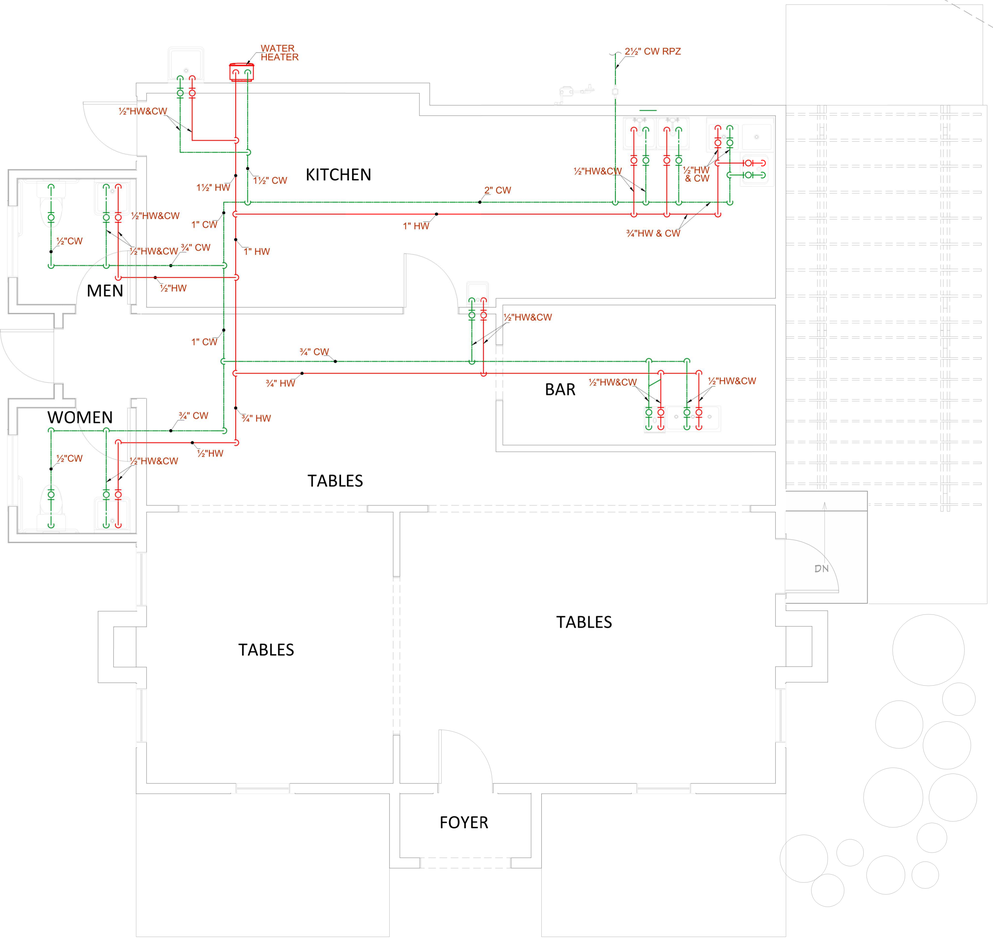
2. PROVIDE VENT PIPING TO MAIN SERVING FLOOR AND CONNECT. VERIFY EXACT LOCATION OF THE MAIN VENT PIPING PRIOR TO CONSTRUCTION.

3. PROVIDE SANITARY PIPING TO MAIN AND CONNECT. VERIFY EXACT LOCATION SANITARY MAIN PRIOR TO CONSTRUCTION.



PLUMBING WATER RISER PLAN
SCALE: 1/4"=1'



PLUMBING WATER SUPPLY PLAN
SCALE: 1/4"=1'

ISSUED FOR CONSTRUCTION

GEORGIA LICENSED PROFESSIONAL ENGINEER 31714 24 No. PE025569 MICHAEL GREGORY KOLLEN NUMBER ONE ENGINEERING

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PLUMBING WATER SUPPLY AND WATER RISER PLAN

2908 MOON STATION RD NW,
KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

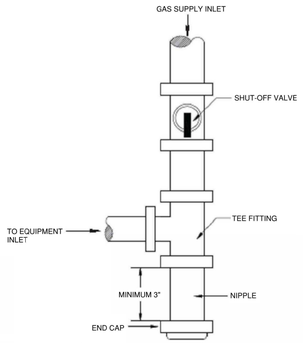
Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

P3.0

GAS PIPING MATERIAL AND CODE TABLES

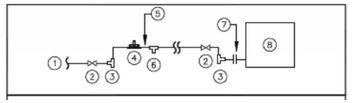
7" W.C. NATURAL GAS PIPING:
* LONGEST RUN: 64 FEET.
* TOTAL LOAD: 636 MBTUH.

* ABOVEGROUND PIPING FROM UTILITY METER/REGULATOR UP TO EACH INDIVIDUAL GAS APPLIANCE TO BE SCH 40 METALLIC PIPE @ 7" W.C. SIZED AS PER FUEL GAS CODE TABLE 402.4(2).



DRIP-TEE AT GAS APPLIANCE DETAIL

GAS PIPING DETAIL KEY NOTES



1) UPSTREAM NATURAL GAS PIPING FROM UTILITY.

2) SHUT-OFF VALVE.

3) THREADED AND PLUGGED TEE INSTALLED TO ALLOW CONNECTION TO A PRESSURE MEASURING INSTRUMENT, AND SHALL SERVE AS A SEDIMENT TRAP.

4) UTILITY METER AND PRESSURE REGULATOR LISTED FOR OUTDOOR INSTALLATION. MAINTAIN MINIMUM 10' CLEARANCE FROM SOURCES OF IGNITION, OR EXTEND VENT.

5) MAXIMUM 6" BETWEEN REGULATOR AND DOWNSTREAM PLUG.

6) THREADED AND PLUGGED TEE INSTALLED TO ALLOW CONNECTION TO A PRESSURE MEASURING INSTRUMENT.

7) PROVIDE UNION AS REQUIRED TO CONNECT PIPING TO APPLIANCE INLET. COORDINATE EXACT LOCATION OF STUB-UPS WITH OWNER. FUEL CONSUMPTION RATES SHOWN ARE ESTIMATES; VERIFY ALL VALUES WITH EQUIPMENT NAMEPLATE DATA AND NOTIFY ENGINEER OF ANY CHANGES PRIOR TO INSTALLATION. PIPING FROM UNION TO APPLIANCE SHALL BE FLEXIBLE AND LISTED IN ACCORDANCE WITH FBC. PROVIDE RESTRAINING CABLE PERMANENTLY FASTENED FROM APPLIANCE TO SLAB TO MAINTAIN 12" OF SLACK IN FLEXIBLE PIPING WHEN RESTRAINING CABLE IS FULLY EXTENDED IN ANY DIRECTION.

8) GAS UTILIZATION EQUIPMENT.

9) A YELLOW INSULATED COOPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NONMETALLIC PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATED ABOVE GROUND AT EACH END OF THE NONMETALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

NATURAL GAS KEY NOTES

1) PROPOSED LOCATION OF NATURAL GAS UTILITY METER. PROPOSED SERVICE LINE PRESSURE OF 2 PSI IS BASIS FOR DESIGN.

2) NEW REGULATOR AT UTILITY METER TO DROP TO 7" WC. PROVIDE VENTING WITH INSECT SCREEN EXTENDED AT LEAST 10' FROM BUILDING OPENINGS AND SOURCES OF IGNITION (I.E., CONDENSING UNITS). IF NECESSARY, COORDINATE REGULATOR SELECTION WITH TOTAL CAPACITY REQUIREMENTS OF ALL APPLIANCES AND PROVISIONS FOR FUTURE LOADS PRIOR TO PURCHASE. PROVIDE UNION AS REQUIRED TO CONNECT TANK OUTLET TO REGULATOR INLET.

3) ABOVEGROUND PIPING. SIZING IS BASED ON THE EQUIVALENT PIPING LENGTHS, EQUIPMENT CAPACITIES AND PRESSURE LISTED ON THE RISER. NOTIFY ENGINEER PRIOR TO INSTALLING ANY PIPING IF THESE VALUES ARE TO BE EXCEEDED.

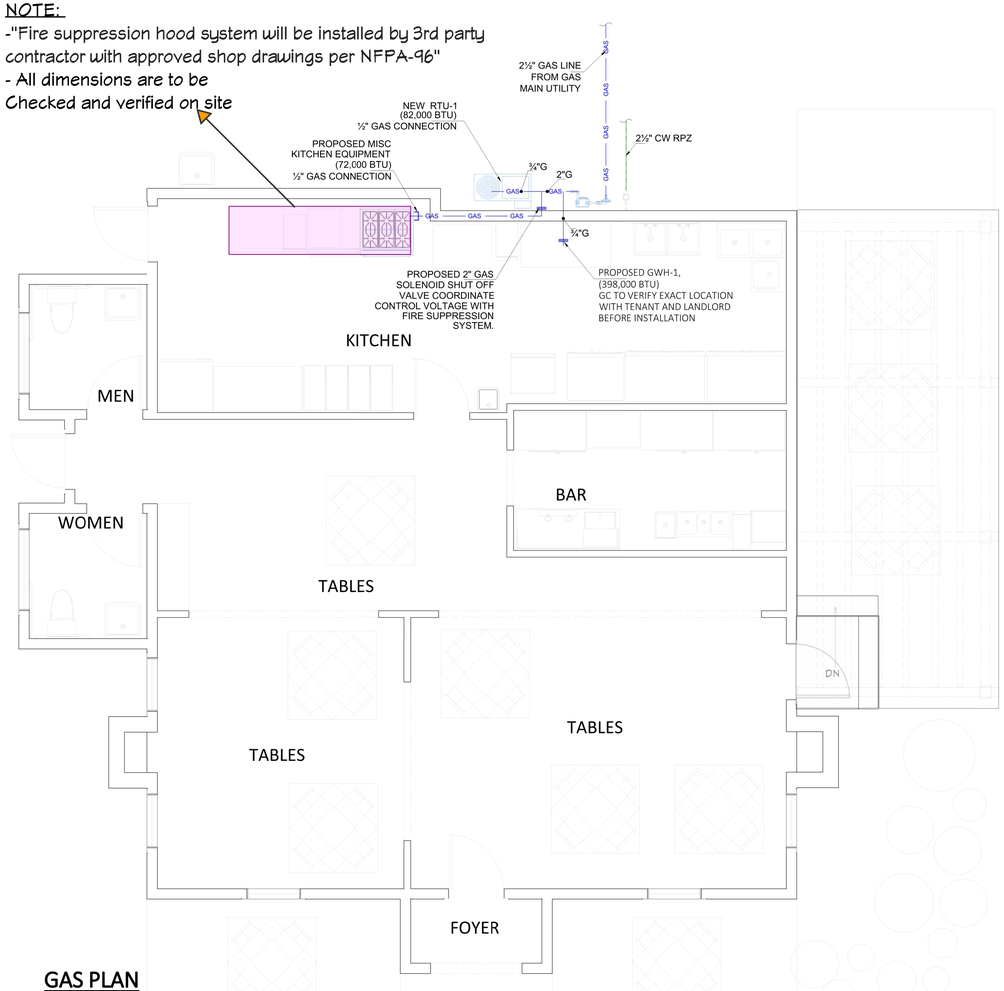
4) UNDERGROUND PIPING. SIZING IS BASED ON THE EQUIVALENT PIPING LENGTHS, EQUIPMENT CAPACITIES AND PRESSURE LISTED ON THE RISER. NOTIFY ENGINEER PRIOR TO INSTALLING ANY PIPING IF THESE VALUES ARE TO BE EXCEEDED. CONTRACTOR TO COORDINATE EXACT ROUTING WITH OWNER AND FIELD CONDITIONS. CALL 811 OR 800-432-4770 PRIOR TO DIGGING OR TRENCHING. A PROFESSIONAL UNDERGROUND LOCATOR SERVICE IS RECOMMENDED IN ADDITION.

5) PIPING PENETRATION THROUGH EXTERIOR WALL SHALL BE MINIMUM 12" AFF, SLEEVED IN SCHEDULE 40 PVC, AND ANNULAR SPACE SHALL BE SEALED.

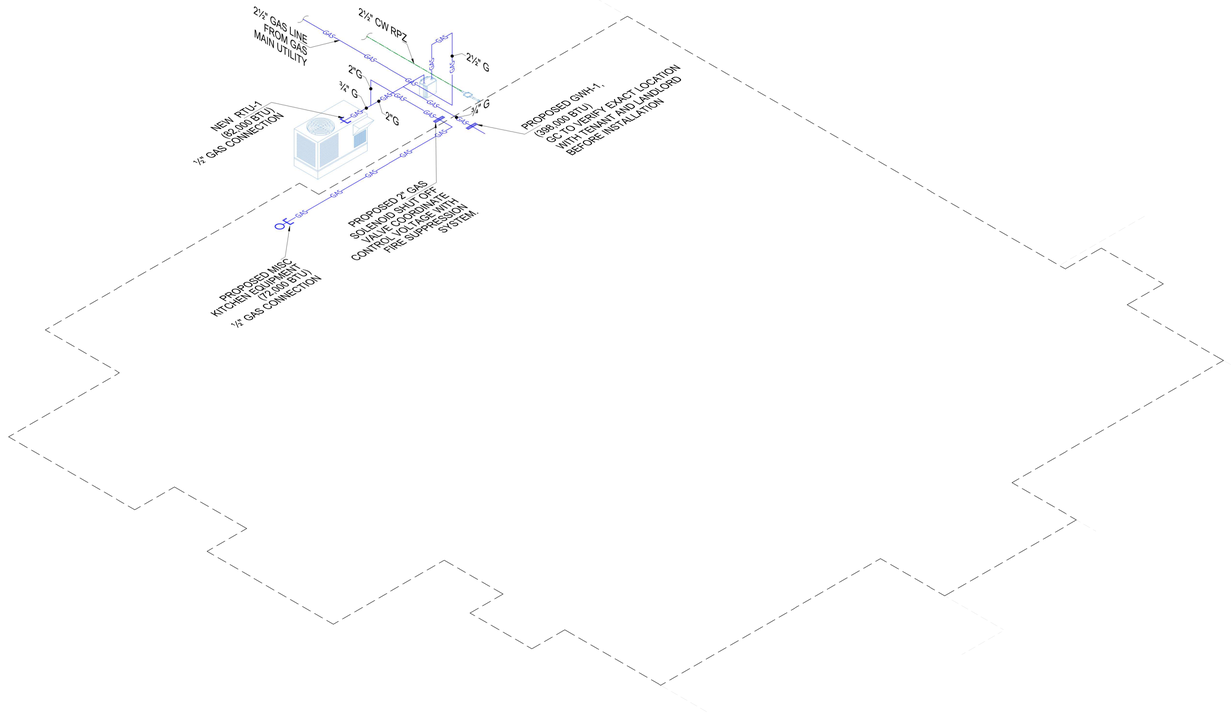
6) PROVIDE SEDIMENT TRAP WITH 90-DEGREE CHANGE OF DIRECTION OF GAS FLOW, TO HELP PREVENT SEDIMENT FROM FLOWING OVER THE TRAP. INSTALL AS CLOSE TO THE INLET OF THE EQUIPMENT AS PRACTICAL.

7) PROVIDE UNION WITH SHUTOFF VALVE AS REQUIRED TO CONNECT PIPING TO APPLIANCE INLET. COORDINATE EXACT LOCATION OF STUB-UPS WITH OWNER. FUEL CONSUMPTION RATES SHOWN ARE ESTIMATES; VERIFY ALL VALUES WITH EQUIPMENT NAMEPLATE DATA AND NOTIFY ENGINEER OF ANY CHANGES PRIOR TO INSTALLATION. PIPING FROM SHUTOFF VALVE TO APPLIANCE SHALL BE FLEXIBLE AND LISTED IN ACCORDANCE WITH FBC. PROVIDE RESTRAINING CABLE PERMANENTLY FASTENED FROM APPLIANCE TO SLAB TO MAINTAIN 12" OF SLACK IN FLEXIBLE PIPING WHEN RESTRAINING CABLE IS FULLY EXTENDED IN ANY DIRECTION. IMMEDIATELY NOTIFY ENGINEER IF PROPOSED APPLIANCE IS NOT LISTED FOR 11" WC NATURAL GAS.

NOTE:
-"Fire suppression hood system will be installed by 3rd party contractor with approved shop drawings per NFPA-96"
- All dimensions are to be
Checked and verified on site



GAS PLAN
SCALE: 1/4"=1'



GAS RISER PLAN
SCALE: 1/4"=1'

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED 31714 PROFESSIONAL ENGINEER NUMBER
ENGINEER
FLEACTO ENGINEERING
FLEACTO.COM
678-979-6464
fleacto@aol.com

GAS PLAN AND RISER DIAGRAM

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

P3.1

SPECIFICATIONS - DIVISION 22 - PLUMBING

SECTION 220500 - COMMON WORK RESULTS FOR PLUMBING

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. HANGERS AND SUPPORTS FOR PLUMBING PIPING EQUIPMENT:

1. STRUCTURAL PERFORMANCE: HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7.
   a. DESIGN SUPPORTS FOR MULTIPLE PIPES CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, AND SYSTEM CONTENTS.
   b. DESIGN EQUIPMENT SUPPORTS CAPABLE OF SUPPORTING COMBINED OPERATING WEIGHT OF SUPPORTED EQUIPMENT AND CONNECTED SYSTEMS AND COMPONENTS.

2.2 SLEEVES AND SLEEVE SEALS

A. GALVANIZED-STEEL-PIPE SLEEVES: ASTM A 53/A 53M, TYPE E, GRADE B, SCHEDULE 40, ZINC COATED, WITH PLAIN ENDS.

B. PVC-PIPE SLEEVES: ASTM D 1785, SCHEDULE 40.

C. GALVANIZED-STEEL-SHEET SLEEVES: 0.0239-INCH MINIMUM THICKNESS; ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT.

2.3 GROUT

A. STANDARD: ASTM C 1107/C 1107M, GRADE B, POST-HARDENING AND VOLUME-ADJUSTING, DRY, HYDRAULIC-CEMENT GROUT.

1. CHARACTERISTICS: NONSHRINK; RECOMMENDED FOR INTERIOR AND EXTERIOR APPLICATIONS.
2. DESIGN MIX: 5000-PSI, 28-DAY COMPRESSIVE STRENGTH.
3. PACKAGING: PREMIXED AND FACTORY PACKAGED.

2.4 ESCUTCHEONS AND FLOOR PLATES

A. ONE-PIECE, DEEP-PATTERN TYPE: DEEP-DRAWN, BOX-SHAPED BRASS WITH CHROME-PLATED FINISH AND SPRING-CLIP FASTENERS.

B. ONE-PIECE, STAMPED-STEEL TYPE: WITH CHROME-PLATED FINISH AND SPRING-CLIP FASTENERS.

C. ONE-PIECE FLOOR PLATES: CAST-IRON FLANGE WITH HOLES FOR FASTENERS.

2.5 PRESSURE GAGES AND TEST PLUGS

A. DIRECT-MOUNTED, METAL-CASE, DIAL-TYPE PRESSURE GAGES:

1. STANDARD: ASME B40.100.
2. CASE: SEALED OPEN-FRONT, PRESSURE RELIEF TYPE(S); CAST ALUMINUM OR DRAWN STEEL 4-1/2-INCH NOMINAL DIAMETER.
3. MOVEMENT: MECHANICAL, WITH LINK TO PRESSURE ELEMENT AND CONNECTION TO POINTER.
4. DIAL: NONREFLECTIVE ALUMINUM WITH PERMANENTLY ETCHED SCALE MARKINGS GRADUATED IN PSI.
5. ACCURACY: GRADE A, PLUS OR MINUS 1 PERCENT OF MIDDLE HALF OF SCALE RANGE.

B. TEST PLUG: CORROSION-RESISTANT BRASS OR STAINLESS-STEEL BODY WITH TWO SELF-SEALING RUBBER CORE INSERTS AND GASKETED AND THREADED CAP, WITH EXTENDED STEM FOR UNITS TO BE INSTALLED IN INSULATED PIPING, MINIMUM PRESSURE AND TEMPERATURE RATING 500 PSIG AT 200 DEG F.

2.6 HANGERS AND SUPPORTS FOR PLUMBING PIPING EQUIPMENT

A. CARBON-STEEL PIPE HANGERS AND SUPPORTS:

1. DESCRIPTION: MSS SP-58, TYPES 1 THROUGH 58, FACTORY-FABRICATED COMPONENTS.
2. GALVANIZED METALLIC COATINGS: PREGALVANIZED OR HOT DIPPED.
3. NONMETALLIC COATINGS: PLASTIC COATING, JACKET, OR LINER.
4. PADDED HANGERS: HANGER WITH FIBERGLASS OR OTHER PIPE INSULATION PAD OR CUSHION TO SUPPORT BEARING SURFACE OF PIPING.
5. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF CARBON STEEL.

B. COPPER PIPE HANGERS:

1. DESCRIPTION: MSS SP-58, TYPES 1 THROUGH 58, COPPER-COATED-STEEL, FACTORY-FABRICATED COMPONENTS.
2. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF COPPER-COATED STEEL.

C. FASTENER SYSTEMS:

1. MECHANICAL-EXPANSION ANCHORS: INSERT-WEDGE-TYPE, ZINC-COATED STEEL ANCHORS, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE; WITH PULL-OUT, TENSION, AND SHEAR CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS WHERE USED.

D. MISCELLANEOUS MATERIALS:

1. STRUCTURAL STEEL: ASTM A 36/A 36M, CARBON-STEEL PLATES, SHAPES, AND BARS; BLACK AND GALVANIZED.
2. GROUT: ASTM C 1107, FACTORY-MIXED AND -PACKAGED, DRY, HYDRAULIC-CEMENT, NONSHRINK AND NONMETALLIC GROUT; SUITABLE FOR INTERIOR AND EXTERIOR APPLICATIONS.
   a. PROPERTIES: NONSTAINING, NONCORROSIVE, AND NONGASEOUS.
   b. DESIGN MIX: 5000-PSI, 28-DAY COMPRESSIVE STRENGTH.

PART 3 - EXECUTION

3.1 GENERAL PIPING INSTALLATIONS

A. INSTALL PIPING FREE OF SAGS AND BENDS.

B. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.

C. SLEEVES:

1. INSTALL SLEEVES FOR PIPING PASSING THROUGH PENETRATIONS IN FLOORS, PARTITIONS, ROOFS, AND WALLS.
2. INSTALL SLEEVES IN CONCRETE FLOORS, CONCRETE ROOF SLABS, AND CONCRETE WALLS AS NEW SLABS AND WALLS ARE CONSTRUCTED.
   a. USE GROUT AND SEAL THE SPACE OUTSIDE OF SLEEVES IN SLABS AND WALLS WITHOUT SLEEVE-SEAL SYSTEM.
3. INSTALL SLEEVES FOR PIPES PASSING THROUGH INTERIOR PARTITIONS.
4. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT P PE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. COMPLY WITH REQUIREMENTS FOR FIRESTOPPING SPECIFIED IN SECTION 078446 "PENETRATION FIRESTOPPING."

D. ESCUTCHEONS AND FLOOR PLATES:

4. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FINISHED FLOORS.
5. INSTALL ESCUTCHEONS WITH ID TO CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF PIPING AND WITH OD THAT COMPLETELY COVERS OPENING.
6. INSTALL FLOOR PLATES FOR PIPING PENETRATIONS OF EQUIPMENT-ROOM FLOORS.
7. INSTALL FLOOR PLATES WITH ID TO CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF PIPING AND WITH OD THAT COMPLETELY COVERS OPENING.

F. METERS AND GAGES:

1. INSTALL DIRECT-MOUNTED PRESSURE GAGES IN PIPING TEES WITH PRESSURE GAGE LOCATED ON PIPE AT THE MOST READABLE POSITION.
2. INSTALL METERS AND GAGES ADJACENT TO MACHINES AND EQUIPMENT TO ALLOW SERVICE AND MAINTENANCE OF METERS, GAGES, MACHINES, AND EQUIPMENT.
3. ADJUST FACES OF METERS AND GAGES TO PROPER ANGLE FOR BEST VISIBILITY.

G. INSTALL UNIONS AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT.

H. INSTALL DIELECTRIC UNIONS AND FLANGES TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS IN GAS PIPING.

I. INSTALL DIELECTRIC COUPLING AND NIPPLE FITTINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS IN WATER PIPING.

3.2 HANGERS AND SUPPORTS

A. COMPLY WITH MSS SP-69 AND MSS SP-89. INSTALL BUILDING ATTACHMENTS WITHIN CONCRETE OR TO STRUCTURAL STEEL.

B. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS.

C. LOAD DISTRIBUTION: INSTALL HANGERS AND SUPPORTS SO PIPING LIVE AND DEAD LOADING AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT.

D. HORIZONTAL-PIPING HANGERS AND SUPPORTS: UNLESS OTHERWISE INDICATED AND EXCEPT AS SPECIFIED IN PIPING SYSTEM SPECIFICATION SECTIONS, INSTALL THE FOLLOWING TYPES:

1. ADJUSTABLE STEEL CLEVIS HANGERS (MSS TYPE 1): FOR SUSPENSION OF NONINSULATED OR INSULATED STATIONARY PIPES, NPS 1/2 TO NPS 30.
2. PIPE HANGERS (MSS TYPE 5): FOR SUSPENSION OF PIPES, NPS 1/2 TO NPS 4, TO ALLOW OFF-CENTER CLOSURE FOR HANGER INSTALLATION BEFORE PIPE ERECTION.
3. ADJUSTABLE STEEL BAND HANGERS (MSS TYPE 7): FOR SUSPENSION OF NONINSULATED STATIONARY PIPES, NPS 1/2 TO NPS 8.
4. ADJUSTABLE BAND HANGERS (MSS TYPE 9): FOR SUSPENSION OF NONINSULATED STATIONARY PIPES, NPS 1/2 TO NPS 8.
5. ADJUSTABLE SWIVEL-RING BAND HANGERS (MSS TYPE 10): FOR SUSPENSION OF NONINSULATED STATIONARY PIPES, NPS 1/2 TO NPS 2.

E. VERTICAL-PIPING CLAMPS: UNLESS OTHERWISE INDICATED AND EXCEPT AS SPECIFIED IN PIPING SYSTEM SPECIFICATION SECTIONS, INSTALL THE FOLLOWING TYPES:

1. EXTENSION PIPE OR RISER CLAMPS (MSS TYPE 8): FOR SUPPORT OF PIPE RISERS, NPS 3/4 TO NPS 20.
2. CARBON- OR ALLOY-STEEL RISER CLAMPS (MSS TYPE 42): FOR SUPPORT OF PIPE RISERS, NPS 3/4 TO NPS 20, IF LONGER ENDS ARE REQUIRED FOR RISER CLAMPS.

F. PIPING INSULATION SHOULD BE CONTINUOUS THROUGH HANGER ON SUPPORT. PROVIDE DOWEL ROD WITHIN HANGERS TO SUPPORT PIPING

3.3 GENERAL EQUIPMENT INSTALLATIONS

G. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS ARE NOT INDICATED.

H. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, UNLESS OTHERWISE INDICATED.

I. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO ACCESSIBLE LOCATIONS.

J. INSTALL EQUIPMENT TO ALLOW RIGHT OF WAY FOR PIPING INSTALLED AT REQUIRED SLOPE.

END OF SECTION

SECTION 220523 - GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. SUBMITTALS:

1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. ASME COMPLIANCE: ASME B16.10 AND ASME B16.34 FOR FERROUS VALVE DIMENSIONS AND DESIGN CRITERIA.

B. NSF COMPLIANCE: NSF 61 FOR VALVE MATERIALS FOR POTABLE-WATER SERVICE.

2.2 GENERAL-DUTY VALVES

A. VALVE SIZES: SAME AS UPSTREAM PIPING UNLESS OTHERWISE INDICATED.

B. VALVES IN INSULATED PIPING: WITH 2-INCH STEM EXTENSIONS.

C. END CONNECTIONS: THREADS SHALL COMPLY WITH ANSI B1.20.1. FLANGES SHALL COMPLY WITH ANSI B16.24 FOR BRONZE VALVES. SOLDER-JOINT CONNECTIONS SHALL COMPLY WITH ANSI B16.18.

D. ONE-PIECE, COPPER-ALLOY BALL VALVES: LEAD FREE BRONZE BODY WITH CHROME-PLATED BRASS BALL, MTFE SEATS, AND 600-PSIG MINIMUM CWP RATING.

E. TWO-PIECE, COPPER-ALLOY BALL VALVES: LEAD FREE BRONZE BODY WITH FULL-PORT, CHROME-PLATED BRASS BALL; RPTFE SEATS; AND 600-PSIG MINIMUM CWP RATING AND BLOWOUT-PROOF STEM.

F. LEAD FREE BRONZE, SWING CHECK VALVES: CLASS 125, BRONZE BODY WITH BRONZE DISC AND SEAT.

PART 3 - EXECUTION

3.1 INSTALLATION

A. USE BALL VALVES FOR SHUTOFF DUTY AND FOR THROTTLING DUTY.

B. LOCATE VALVES FOR EASY ACCESS AND PROVIDE SEPARATE SUPPORT WHERE NECESSARY.

C. INSTALL VALVES FOR EACH FIXTURE AND ITEM OF EQUIPMENT.

D. INSTALL VALVES IN HORIZONTAL PIPING WITH STEM AT OR ABOVE CENTER OF PIPE.

E. INSTALL VALVES IN A POSITION TO ALLOW FULL STEM MOVEMENT.

F. INSTALL CHECK VALVES FOR PROPER DIRECTION OF FLOW IN HORIZONTAL POSITION WITH HINGE PIN LEVEL.

END OF SECTION

SECTION 220700 - PLUMBING INSULATION

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. INSULATION INSTALLED INDOORS: FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS ACCORDING TO ASTM E 84.

2.2 INSULATION MATERIALS

A. MINERAL-FIBER, PREFORMED PIPE INSULATION: COMPLY WITH ASTM C 547, TYPE I, GRADE A, WITH FACTORY-APPLIED ASJ.

1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
   a. JOHNS MANVILLE; MICRO-LOK.
   b. KNAUF INSULATION; 1000-DEGREE PIPE INSULATION.
   c. OWENS CORNING; FIBERGLAS PIPE INSULATION.
2. TYPE I, 850 DEG F MATERIALS: MINERAL OR GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 547, TYPE I, GRADE A, WITH FACTORY-APPLIED ASJ. FACTORY-APPLIED JACKET REQUIREMENTS ARE SPECIFIED IN "FACTORY-APPLIED JACKETS" ARTICLE.

B. PROTECTIVE SHIELDING PIPE COVERS:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
   a. MCGUIRE MANUFACTURING.
   b. PLUMBEREX.
   c. TRUEBRO; A BRAND OF IPS CORPORATION.
   d. ZURN INDUSTRIES, LLC; TUBULAR BRASS PLUMBING PRODUCTS OPERATION.
2. DESCRIPTION: MANUFACTURED PLASTIC WRAPS FOR COVERING PLUMBING FIXTURE HOT- AND COLD-WATER SUPPLIES AND TRAP AND DRAIN PIPING. COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.

2.3 ADHESIVES

A. MINERAL-FIBER ADHESIVE: COMPLY WITH MIL-A-3316C, CLASS 2, GRADE A.

1. FOR INDOOR APPLICATIONS, ADHESIVE SHALL HAVE A VOC CONTENT OF 80 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).
2. ADHESIVE SHALL COMPLY WITH THE TESTING AND PRODUCT REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES' "STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL-SCALE ENVIRONMENTAL CHAMBERS."

2.4 MASTICS

A. VAPOR-BARRIER MASTIC: WATER BASED; SUITABLE FOR INDOOR USE ON BELOW AMBIENT SERVICES.

1. FOR INDOOR APPLICATIONS, USE MASTICS THAT HAVE A VOC CONTENT OF 50 G/L OR LESS.
2. WATER-VAPOR PERMEANCE: ASTM E 96/E 96M, PROCEDURE B, 0.013 PERM AT 43-MIL DRY FILM THICKNESS.
3. SERVICE TEMPERATURE RANGE: MINUS 20 TO PLUS 180 DEG F.
4. SOLIDS CONTENT: ASTM D 1644, 58 PERCENT BY VOLUME AND 70 PERCENT BY WEIGHT.
5. COLOR: WHITE.

B. BREATHER MASTIC: WATER BASED; SUITABLE FOR INDOOR AND OUTDOOR USE ON ABOVE AMBIENT SERVICES.

1. WATER-VAPOR PERMEANCE: ASTM F 1249, 1.8 PERMS AT 0.0625-INCH DRY FILM THICKNESS.
2. SERVICE TEMPERATURE RANGE: MINUS 20 TO PLUS 180 DEG F.
3. SOLIDS CONTENT: 60 PERCENT BY VOLUME AND 66 PERCENT BY WEIGHT.
4. COLOR: WHITE.

2.5 SEALANTS

A. JOINT SEALANTS:

1. MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES.
2. PERMANENTLY FLEXIBLE, ELASTOMERIC SEALANT.
3. SERVICE TEMPERATURE RANGE: MINUS 100 TO PLUS 300 DEG F.
4. COLOR: WHITE OR GRAY.
5. FOR INDOOR APPLICATIONS, SEALANTS SHALL HAVE A VOC CONTENT OF 420 G/L OR LESS.

B. ASJ FLASHING SEALANTS:

1. MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES.
2. FIRE- AND WATER-RESISTANT, FLEXIBLE, ELASTOMERIC SEALANT.
3. SERVICE TEMPERATURE RANGE: MINUS 40 TO PLUS 250 DEG F.
4. COLOR: WHITE.
5. FOR INDOOR APPLICATIONS, SEALANTS SHALL HAVE A VOC CONTENT OF 420 G/L OR LESS.

2.6 FACTORY-APPLIED JACKETS

A. INSULATION SYSTEM SCHEDULES INDICATE FACTORY-APPLIED JACKETS ON VARIOUS APPLICATIONS. WHEN FACTORY-APPLIED JACKETS ARE INDICATED, COMPLY WITH THE FOLLOWING:

1. ASJ: WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE I.

2.7 TAPES

A. ASJ TAPE: WHITE VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE, COMPLYING WITH ASTM C 1136.

1. WIDTH: 3 INCHES.
2. THICKNESS: 11.5 MILS.
3. ADHESION: 90 OUNCES FORCE/INCH IN WIDTH.
4. ELONGATION: 2 PERCENT.
5. TENSILE STRENGTH: 40 LBF/INCH IN WIDTH.
6. ASJ TAPE DISKS AND SQUARES: PRECUT DISKS OR SQUARES OF ASJ TAPE.

PART 3 - EXECUTION

3.1 PIPE INSULATION INSTALLATION

A. COMPLY WITH REQUIREMENTS OF THE MIDWEST INSULATION CONTRACTORS ASSOCIATION'S "NATIONAL COMMERCIAL & INDUSTRIAL INSULATION STANDARDS" FOR INSULATION INSTALLATION ON PIPES AND EQUIPMENT.

B. INSULATION INSTALLATION AT INTERIOR WALL AND PARTITION PENETRATIONS (THAT ARE NOT FIRE RATED): INSTALL INSULATION CONTINUOUSLY THROUGH WALLS AND PARTITIONS.

C. INSULATION INSTALLATION AT FIRE-RATED WALL, PARTITION, AND FLOOR PENETRATIONS: INSTALL INSULATION CONTINUOUSLY THROUGH PENETRATIONS. SEAL PENETRATIONS. COMPLY WITH REQUIREMENTS IN SECTION 078400.

D. MINERAL-FIBER INSULATION INSTALLATION:

1. INSULATION INSTALLATION ON STRAIGHT PIPES AND TUBES: WHERE VAPOR BARRIERS ARE INDICATED, SEAL LONGITUDINAL SEAMS, END JOINTS, AND PROTRUSIONS WITH VAPOR-BARRIER MASTIC AND JOINT SEALANT.
2. FOR INSULATION WITH FACTORY-APPLIED JACKETS ON ABOVE AMBIENT SURFACES, SECURE LAPS WITH OUTWARD CLINCHED STAPLES AT 6 INCHES O.C.
3. FOR INSULATION WITH FACTORY-APPLIED JACKETS ON BELOW AMBIENT SURFACES, DO NOT STAPLE LONGITUDINAL TABS BUT SECURE TABS WITH ADDITIONAL ADHESIVE AS RECOMMENDED BY INSULATION MATERIAL MANUFACTURER AND SEAL WITH VAPOR-BARRIER MASTIC AND FLASHING SEALANT.

E. INTERIOR PIPING SYSTEM APPLICATIONS: INSULATE THE FOLLOWING PIPING SYSTEMS:

1. DOMESTIC HOT WATER.
2. RECIRCULATED DOMESTIC HOT WATER.
3. EXPOSED WATER SUPPLIES AND SANITARY DRAINS OF FIXTURES FOR PEOPLE WITH DISABILITIES.

F. DO NOT APPLY INSULATION TO THE FOLLOWING SYSTEMS, MATERIALS, AND EQUIPMENT:

1. FLEXIBLE CONNECTORS.
2. SANITARY DRAINAGE AND VENT PIPING.
3. DRAINAGE PIPING LOCATED IN CRAWLSPACES UNLESS OTHERWISE INDICATED.
4. PIPING SPECIALTIES, INCLUDING AIR CHAMBERS, UNIONS, STRAINERS, CHECK VALVES, PLUG VALVES, AND FLOW REGULATORS.

3.2 INDOOR PIPING INSULATION SCHEDULE

A. DOMESTIC COLD WATER:

1. NPS 1 AND SMALLER: INSULATION SHALL BE THE FOLLOWING:
   a. MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I: 1/2 INCH THICK.
2. NPS 1-1/4 AND LARGER: INSULATION SHALL BE THE FOLLOWING:
   a. MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I: 1 INCH THICK.

B. DOMESTIC HOT AND RECIRCULATED HOT WATER:

1. NPS 2 AND SMALLER: INSULATION SHALL BE THE FOLLOWING:
   a. MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I: 1 INCH THICK.

C. EXPOSED SANITARY DRAINS, DOMESTIC WATER, DOMESTIC HOT WATER, AND STOPS FOR PLUMBING FIXTURES FOR PEOPLE WITH DISABILITIES:

1. ALL PIPE SIZES: INSULATION SHALL BE THE FOLLOWING:
   a. PROTECTIVE SHIELDING PIPING COVERS.
   b. MANUFACTURED PLASTIC WRAPS FOR COVERING PLUMBING FIXTURE HOT- AND COLD-WATER SUPPLIES AND TRAP AND DRAIN PIPING. COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.

D. PROTECTION OF INSULATION: FOR ALL PIPE INSULATION EXPOSED WITHIN 10 FEET ABOVE FINISHED FLOOR, FINISH WITH JOHNS-MANVILLE ZESTON 2000 PVC JACKET PIPING AND FITTING COVERS.

END OF SECTION

SECTION 221116 - DOMESTIC WATER PIPING

PART 2 - PRODUCTS

2.1 PREFORMANCE REQUIREMENTS

A. POTABLE-WATER PIPING AND COMPONENTS SHALL COMPLY WITH NSF 14 AND NSF 61.

2.2 PIPE AND FITTINGS

A. HARD COPPER TUBING: ASTM B 88, TYPE L, WATER TUBE, DRAWN TEMPER WITH WROUGHT-COPPER, SOLDER-JOINT FITTINGS. FURNISH WROUGHT-COPPER FITTINGS IF INDICATED.

1. COPPER UNIONS: CAST-COPPER-ALLOY, HEXAGONAL-STOCK BODY, WITH BALL-AND-SOCKET, METAL-TO-METAL SEATING SURFACES AND SOLDER-JOINT OR THREADED ENDS.
2. JOINING MATERIALS: USE ASTM B 813, WATER-FLUSHABLE, LEAD-FREE FLUX; ASTM B 32, LEAD-FREE-ALLOY SOLDER.

B. SOFT COPPER TUBING: ASTM B 88, TYPES K, WATER TUBE, ANNEALED TEMPER WITH COPPER PRESSURE FITTINGS, CAST-COPPER-ALLOY OR WROUGHT-COPPER, SOLDER-JOINT FITTINGS. FURNISH WROUGHT-COPPER FITTINGS IF INDICATED.

1. JOINING MATERIALS: USE ASTM B 813, WATER-FLUSHABLE, LEAD-FREE FLUX; ASTM B 32, LEAD-FREE-ALLOY SOLDER.

C. SPECIAL-DUTY VALVES

1. COMPLY WITH REQUIREMENTS IN SECTION 220523 "GENERAL-DUTY VALVES FOR PLUMBING PIPING" FOR GENERAL-DUTY METAL VALVES.
2. 2.COMPLY WITH REQUIREMENTS IN SECTION 221119 "DOMESTIC WATER PIPING SPECIALTIES" FOR BALANCING VALVES, DRAIN VALVES, BACKFLOW PREVENTERS, AND VACUUM BREAKERS

D. TRANSITION FITTINGS: MANUFACTURED PIPING COUPLING OR SPECIFIED PIPING SYSTEM FITTING. SAME SIZE AS PIPES TO BE JOINED AND PRESSURE RATING AT LEAST EQUAL TO PIPES TO BE JOINED:

E. FLEXIBLE CONNECTORS: STAINLESS-STEEL, CORRUGATED-METAL TUBING WITH WIRE-BRAID COVERING. WORKING-PRESSURE RATING A MINIMUM OF 200 PSIG.

PART 3 - EXECUTION

3.1 INSTALLATION

A. COMPLY WITH REQUIREMENTS IN SECTION 220500 "COMMON WORK RESULTS FOR PLUMBING" FOR BASIC PIPING INSTALLATION REQUIREMENTS.

B. INSTALL WALL PENETRATION SYSTEM AT EACH SERVICE PIPE PENETRATION THROUGH FOUNDATION WALL. MAKE INSTALLATION WATERTIGHT. COMPLY WITH REQUIREMENTS IN SECTION 220500 "COMMON WORK RESULTS FOR PLUMBING" FOR WALL PENETRATION SYSTEMS.

C. INSTALL SHUTOFF VALVE, HOSE-END DRAIN VALVE, STRAINER, PRESSURE GAGE, AND TEST TEE WITH VALVE, INSIDE THE BUILDING AT EACH DOMESTIC WATER SERVICE ENTRANCE.

D. INSTALL DOMESTIC WATER PIPING WITHOUT PITCH FOR HORIZONTAL PIPING AND PLUMB FOR VERTICAL PIPING.

E. SUPPORT VERTICAL PIPING AT EACH FLOOR.

3.2 INSPECTING AND CLEANING

A. INSPECT AND TEST PIPING SYSTEMS AS FOLLOWS:

1. FILL DOMESTIC WATER PIPING. CHECK COMPONENTS TO DETERMINE THAT THEY ARE NOT AIR BOUND AND THAT PIPING IS FULL OF WATER.
2. TEST FOR LEAKS AND DEFECTS IN NEW PIPING AND PARTS OF EXISTING PIPING THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED.

B. CLEAN AND DISINFECT POTABLE DOMESTIC WATER PIPING BY FILLING SYSTEM WITH WATER/CHLORINE SOLUTION WITH AT LEAST 50 PPM OF CHLORINE. ISOLATE WITH VALVES AND ALLOW TO STAND FOR 24 HOURS. FLUSH SYSTEM WITH CLEAN, POTABLE WATER UNTIL NO CHLORINE IS IN WATER COMING FROM SYSTEM AFTER THE STANDING TIME.

3.3 PIPING SCHEDULE

A. ABOVEGROUND DISTRIBUTION PIPING: TYPE L HARD COPPER TUBING.

B. BELOWGROUND DISTRIBUTION PIPING: TYPE K SOFT COPPER TUBING.

3.4 VALVE SCHEDULE

A. DRAWINGS INDICATE VALVE TYPES TO BE USED. WHERE SPECIFIC VALVE TYPES ARE NOT INDICATED, THE FOLLOWING REQUIREMENTS APPLY:

1. SHUTOFF DUTY: USE BRONZE BALL VALVES FOR PIPING NPS 2 AND SMALLER.
2. THROTTLING DUTY: USE BRONZE BALL VALVES FOR PIPING NPS 2 AND SMALLER.
3. HOT-WATER-PIPING, BALANCING DUTY: MEMORY-STOP BALANCING VALVES.
4. DRAIN DUTY: HOSE-END DRAIN VALVES.

B. INSTALL BALL VALVES CLOSE TO MAIN ON EACH BRANCH AND RISER SERVING TWO OR MORE PLUMBING FIXTURES OR EQUIPMENT CONNECTIONS AND WHERE INDICATED.

C. INSTALL BALL VALVES ON INLET TO EACH PLUMBING EQUIPMENT ITEM, ON EACH SUPPLY TO EACH PLUMBING FIXTURE NOT HAVING STOPS ON SUPPLIES, AND ELSEWHERE AS INDICATED.

D. INSTALL DRAIN VALVE AT BASE OF EACH RISER, AT LOW POINTS OF HORIZONTAL RUNS, AND WHERE REQUIRED TO DRAIN WATER DISTRIBUTION PIPING SYSTEM.

E. INSTALL SWING CHECK VALVE ON DISCHARGE SIDE OF EACH PUMP AND ELSEWHERE AS INDICATED.

F. INSTALL BALL VALVES IN EACH HOT-WATER CIRCULATING LOOP AND DISCHARGE SIDE OF EACH PUMP.

END OF SECTION

GEORGIA REGISTERED ENGINEER 39174 24 No. PROFESSIONAL ENGINEER 39174 24 COMMONWEALTH OF VIRGINIA NUMBER 0
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PLUMBING SPECIFICATIONS-01

2908 MOON STATION RD NW, KENNESAW GA-30144

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ISSUED FOR CONSTRUCTION

SPECIFICATIONS - DIVISION 22 - PLUMBING (CONTINUED)

SECTION 221119 - DOMESTIC WATER PIPING SPECIALTIES

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PIPING SPECIALTIES

A. POTABLE-WATER PIPING AND COMPONENTS SHALL COMPLY WITH NSF 61AND NSF 14.

2.2 PERFORMANCE REQUIREMENTS

A. MINIMUM WORKING PRESSURE FOR DOMESTIC WATER PIPING SPECIALTIES: 125 PSIG UNLESS OTHERWISE INDICATED.

2.3 MANUFACTURED UNITS

A. PIPE-APPLIED, ATMOSPHERIC-TYPE VACUUM BREAKERS:
1. STANDARD: ASSE 1001.
2. SIZE: NPS 1/4 TO NPS 3, AS REQUIRED TO MATCH CONNECTED PIPING.
3. BODY: BRONZE.
4. INLET AND OUTLET CONNECTIONS: THREADED.
5. FINISH: CHROME PLATED.

B. HOSE-CONNECTION VACUUM BREAKERS:
1. STANDARD: ASSE 1011.
2. BODY: BRONZE, NONREMOVABLE, WITH MANUAL DRAIN.
3. OUTLET CONNECTION: GARDEN-HOSE THREADED COMPLYING WITH ASME B1.20.7.
4. FINISH: CHROME OR NICKEL PLATED BRONZE.

C. REDUCED-PRESSURE-PRINCIPLE BACKFLOW PREVENTERS:
1. STANDARD: ASSE 1013.
2. OPERATION: CONTINUOUS-PRESSURE APPLICATIONS.
3. PRESSURE LOSS: 12 PSIG MAXIMUM, THROUGH MIDDLE THIRD OF FLOW RANGE.
4. BODY: LEAD FREE BRONZE OR STAINLESS STEEL FOR NPS 2 AND SMALLER.
5. END CONNECTIONS: THREADED FOR NPS 2 AND SMALLER.
6. CONFIGURATION: DESIGNED FOR HORIZONTAL, STRAIGHT-THROUGH FLOW.
7. ACCESSORIES:
a. VALVES NPS 2 AND SMALLER: BALL TYPE WITH THREADED ENDS ON INLET AND OUTLET.
b. AIR-GAP FITTING: ASME A112.1.2, MATCHING BACKFLOW-PREVENTER CONNECTION.

D. WATER REGULATORS:
1. STANDARD: ASSE 1003.
2. PRESSURE RATING: INITIAL WORKING PRESSURE OF 150 PSIG.
3. DESIGN OUTLET PRESSURE SETTING: 60 PSIG.
4. BODY: LEAD FREE BRONZE WITH CHROME-PLATED FINISH FOR NPS 2 AND SMALLER.
5. END CONNECTIONS: THREADED FOR NPS 2 AND SMALLER.

E. MEMORY-STOP BALANCING VALVES:
1. STANDARD: MSS SP-110 FOR TWO-PIECE, COPPER-ALLOY BALL VALVES.
2. PRESSURE RATING: 400-PSIG MINIMUM CWP.
3. SIZE: NPS 2 OR SMALLER.
4. BODY: LEAD FREE COPPER ALLOY.
5. PORT: FULL PORT.
6. BALL: CHROME-PLATED BRASS.
7. SEATS AND SEALS: REPLACEABLE.
8. END CONNECTIONS: SOLDER JOINT OR THREADED.
9. HANDLE: VINYL-COVERED STEEL WITH MEMORY-SETTING DEVICE.

F. THERMOSTATIC, WATER MIXING VALVES:
1. STANDARD: MSS SP-110 FOR TWO-PIECE. COPPER-ALLOY BALL VALVES.
2. PRESSURE RATING: 125 PSIG MINIMUM UNLESS OTHERWISE INDICATED.
3. TYPE: EXPOSED-MOUNTED, THERMOSTATICALLY CONTROLLED, WATER MIXING VALVE.
4. MATERIAL: LEAD FREE BRONZE BODY WITH CORROSION-RESISTANT INTERIOR COMPONENTS.
5. CONNECTIONS: THREADED OR UNION INLETS AND OUTLET.
6. ACCESSORIES: MANUAL TEMPERATURE CONTROL, CHECK STOPS ON HOT- AND COLD-WATER SUPPLIES, AND ADJUSTABLE, TEMPERATURE-CONTROL HANDLE.
7. TEMPERED-WATER SETTING: AS SPECIFIED ON DRAWINGS.
8. PRESSURE DROP AT DESIGN FLOW RATE: NOT EXCEED 15 PSIG.
9. VALVE FINISH: CHROME PLATED.

G. Y-PATTERN STRAINERS:
1. PRESSURE RATING: 125 PSIG MINIMUM UNLESS OTHERWISE INDICATED.
2. BODY: LEAD FREE BRONZE FOR NPS 2 AND SMALLER.
3. END CONNECTIONS: THREADED FOR NPS 2 AND SMALLER.
4. SCREEN: STAINLESS STEEL WITH ROUND PERFORATIONS UNLESS OTHERWISE INDICATED.
5. PERFORATION SIZE:
a. STRAINERS NPS 2 AND SMALLER: 0.020 INCH.
6. DRAIN: PIPE PLUG.

H. HOSE BIBBS:
1. STANDARD: ASME A112.18.1 FOR SEDIMENT FAUCETS.
2. BODY MATERIAL: BRONZE.
3. SEAT: BRONZE, REPLACEABLE.
4. SUPPLY CONNECTIONS: NPS 3/4 THREADED OR SOLDER-JOINT INLET.
5. OUTLET CONNECTION: GARDEN-HOSE THREAD COMPLYING WITH ASME B1.20.7.
6. PRESSURE RATING: 125 PSIG.
7. VACUUM BREAKER: INTEGRAL, NONREMOVABLE, DRAINABLE, HOSE-CONNECTION VACUUM BREAKER COMPLYING WITH ASSE 1011.
8. FINISH FOR EQUIPMENT ROOMS: ROUGH BRONZE, OR CHROME OR NICKEL PLATED.
9. FINISH FOR SERVICE AREAS: CHROME OR NICKEL PLATED.
10. FINISH FOR FINISHED ROOMS: CHROME OR NICKEL PLATED.
11. OPERATION FOR EQUIPMENT ROOMS: WHEEL HANDLE OR OPERATING KEY.
12. OPERATION FOR SERVICE AREAS: OPERATING KEY.
13. OPERATION FOR FINISHED ROOMS: OPERATING KEY.
14. INCLUDE OPERATING KEY WITH EACH OPERATING-KEY HOSE BIBB.
15. INCLUDE INTEGRAL WALL FLANGE WITH EACH CHROME- OR NICKEL-PLATED HOSE BIBB.

I. NONFREEZE WALL HYDRANTS:
1. STANDARD: ASME A112.21.3M FOR CONCEALED OR EXPOSED-OUTLET, SELF-DRAINING WALL HYDRANTS.
2. PRESSURE RATING: 125 PSIG.
3. OPERATION: LOOSE KEY.
4. CASING AND OPERATING ROD: OF LENGTH REQUIRED TO MATCH WALL THICKNESS. INCLUDE WALL CLAMP.
5. INLET: NPS 3/4.
6. OUTLET: CONCEALED, WITH INTEGRAL VACUUM BREAKER AND GARDEN-HOSE THREAD COMPLYING WITH ASME B1.20.7.
7. BOX: DEEP, FLUSH MOUNTED WITH COVER.
8. BOX AND COVER FINISH: CHROME PLATED.
9. OUTLET: EXPOSED, WITH INTEGRAL VACUUM BREAKER AND GARDEN-HOSE THREAD COMPLYING WITH ASME B1.20.7.
10. NOZZLE AND WALL-PLATE FINISH: POLISHED NICKEL BRONZE.
11. OPERATING KEYS: ONE WITH EACH WALL HYDRANT.

J. BALL-VALVE-TYPE, HOSE-END DRAIN VALVES:
1. STANDARD: MSS SP-110 FOR STANDARD-PORT, TWO-PIECE BALL VALVES.
2. PRESSURE RATING: 400-PSIG MINIMUM CWP.
3. SIZE: NPS 3/4.
4. BODY: COPPER ALLOY.
5. BALL: CHROME-PLATED BRASS.
6. SEATS AND SEALS: REPLACEABLE.
7. HANDLE: VINYL-COVERED STEEL.
8. INLET: THREADED OR SOLDER JOINT.
9. OUTLET: THREADED, SHORT NIPPLE WITH GARDEN-HOSE THREAD COMPLYING WITH ASME B1.20.7 AND CAP WITH BRASS CHAIN.

K. WATER-HAMMER ARRESTERS:
1. STANDARD: ASSE 1010 OR PDI-WH 201.
2. TYPE: COPPER TUBE WITH PISTON.
3. SIZE: ASSE 1010, SIZES AA AND A THROUGH F, OR PDI-WH 201, SIZES A THROUGH F.

L. SUPPLY-TYPE, TRAP-SEAL PRIMER DEVICE:
1. STANDARD: ASSE 1018
2. PRESSURE RATING: 125 PSIG MINIMUM.
3. BODY: BRONZE.
4. INLET AND OUTLET CONNECTIONS: NPS 1/2 THREADED, UNION, OR SOLDER JOINT.
5. GRAVITY DRAIN OUTLET CONNECTION: NPS 1/2 THREADED OR SOLDER JOINT.
6. FINISH: CHROME PLATED, OR ROUGH BRONZE FOR UNITS USED WITH PIPE OR TUBE THAT IS NOT CHROME FINISHED.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALL BACKFLOW PREVENTERS IN EACH WATER SUPPLY TO MECHANICAL EQUIPMENT AND SYSTEMS AND TO OTHER EQUIPMENT AND WATER SYSTEMS THAT MAY BE SOURCES OF CONTAMINATION. COMPLY WITH AUTHORITIES HAVING JURISDICTION.

B. INSTALL WATER REGULATORS WITH INLET AND OUTLET SHUTOFF VALVES. INSTALL PRESSURE GAGES ON INLET AND OUTLET.

C. INSTALL BALANCING VALVES IN LOCATIONS WHERE THEY CAN EASILY BE ADJUSTED.

D. INSTALL TEMPERATURE-ACTUATED, WATER MIXING VALVES WITH CHECK STOPS OR SHUTOFF VALVES ON INLETS AND WITH SHUTOFF VALVE ON OUTLET.

E. INSTALL Y-PATTERN STRAINERS FOR WATER ON SUPPLY SIDE OF EACH CONTROL VALVE, WATER PRESSURE-REDUCING VALVE, SOLENOID VALVE AND PUMP.

F. INSTALL WATER-HAMMER ARRESTERS IN WATER PIPING ACCORDING TO PDI-WH 201.

G. INSTALL SUPPLY-TYPE, TRAP-SEAL PRIMER VALVES WITH OUTLET PIPING PITCHED DOWN TOWARD DRAIN TRAP A MINIMUM OF 1 PERCENT, AND CONNECT TO FLOOR-DRAIN BODY, TRAP, OR INLET FITTING. ADJUST VALVE FOR PROPER FLOW.

3.2 FIELD QUALITY CONTROL

A. PERFORM THE FOLLOWING TESTS AND INSPECTIONS:
1. TEST EACH PRESSURE VACUUM BREAKER, REDUCED-PRESSURE-PRINCIPLE BACKFLOW PREVENTER, AND DOUBLE-CHECK BACKFLOW-PREVENTION ASSEMBLY ACCORDING TO AUTHORITIES HAVING JURISDICTION AND THE DEVICE'S REFERENCE STANDARD.
2. DOMESTIC WATER PIPING SPECIALTIES WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.
3. PREPARE TEST AND INSPECTION REPORTS.

END OF SECTION 221119

SECTION 221123 - DOMESTIC WATER PUMPS

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIRMENTS

A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. COMPLY WITH UL 778 FOR MOTOR-OPERATED WATER PUMPS.

2.2 DOMESTIC WATER PUMPS

A. HOT WATER CIRCULATOR PUMP, RP-1:
1. BASIS-OF-DESIGN PRODUCT: GRUNDFOS ALPHA 15-55SF, AS INDICATED ON DRAWINGS.
2. CASING: STAINLESS STEEL WITH COMPANION-FLANGE CONNECTIONS.
3. MOTOR: AUTOMATIC ADJUSTABLE, WET-ROTOR, PERMANENT MAGNET.

2.3 MOTORS

A. COMPLY WITH NEMA DESIGNATION, TEMPERATURE RATING, SERVICE FACTOR, ENCLOSURE TYPE, AND EFFICIENCY REQUIREMENTS FOR MOTORS.

B. MOTOR SIZES: MINIMUM SIZE AS INDICATED. IF NOT INDICATED, LARGE ENOUGH SO DRIVEN LOAD WILL NOT REQUIRE MOTOR TO OPERATE IN SERVICE FACTOR RANGE ABOVE 1.0.

2.4 CONTROLS

A. TIMERS: ELECTRIC, FOR CONTROL OF HOT-WATER CIRCULATION PUMP.
1. TYPE: PROGRAMMABLE, SEVEN-DAY CLOCK WITH MANUAL OVERRIDE ON-OFF SWITCH.
2. PROGRAMMABLE SEQUENCE OF OPERATION: UP TO TWO ON-OFF CYCLES EACH DAY FOR SEVEN DAYS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALL PUMPS WITH ACCESS FOR PERIODIC MAINTENANCE, INCLUDING REMOVAL OF MOTORS, IMPELLERS, COUPLINGS, AND ACCESSORIES.

B. SUPPORT PUMPS AND PIPING SO WEIGHT OF PIPING IS NOT SUPPORTED BY PUMP VOLUTE.

C. INSTALL ELECTRICAL CONNECTIONS FOR POWER, CONTROLS, AND DEVICES.

D. SUSPEND IN-LINE PUMPS INDEPENDENT FROM PIPING. USE CONTINUOUS-THREAD HANGER RODS AND VIBRATION ISOLATION HANGERS. FABRICATE BRACKETS OR SUPPORTS AS REQUIRED FOR PUMPS.

E. CONNECT PIPING WITH VALVES THAT ARE AT LEAST THE SAME SIZE AS PIPING CONNECTING TO PUMPS.

F. INSTALL SUCTION AND DISCHARGE PIPE SIZES EQUAL TO OR GREATER THAN DIAMETER OF PUMP NOZZLES.

G. INSTALL SHUTOFF VALVE AND STRAINER ON SUCTION SIDE OF PUMPS.

H. INSTALL NONSLAM CHECK VALVE AND THROTTLING VALVE ON DISCHARGE SIDE OF PUMPS.

I. INSTALL THERMOSTATS IN HOT-WATER RETURN PIPING.

J. INSTALL TEST PLUGS ON SUCTION AND DISCHARGE OF EACH PUMP. INSTALL AT INTEGRAL PRESSURE GAGE TAPPINGS WHERE PROVIDED.

END OF SECTION

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. COMPONENTS AND INSTALLATION SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING MINIMUM WORKING PRESSURE UNLESS OTHERWISE INDICATED:
1. SOIL, WASTE, AND VENT PIPING: 10-FOOT HEAD OF WATER.

B. PIPING MATERIALS SHALL BEAR LABEL, STAMP, OR OTHER MARKINGS OF SPECIFIED TESTING AGENCY.

C. COMPLY WITH NSF/ANSI 14, "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS," FOR PLASTIC PIPING COMPONENTS.

2.2 PIPES AND FITTINGS

A. COPPER DRAINAGE TUBE AND FITTINGS: ASTM B 306, TYPE DWV DRAWN TEMPER WITH ASME B16.23, CAST COPPER OR ASME B16.29, WROUGHT COPPER, SOLDER-JOINT FITTINGS.
1. COPPER FLANGES: ASME B16.24, CLASS 150, CAST COPPER WITH SOLDER-JOINT END.
a. FLANGE GASKET MATERIALS: ASME B16.21, FULL-FACE, FLAT, NONMETALLIC, ASBESTOS-FREE, 1/8-INCH MAXIMUM THICKNESS UNLESS THICKNESS OR SPECIFIC MATERIAL IS INDICATED.
b. FLANGE BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL UNLESS OTHERWISE INDICATED.
2. SOLDER: ASTM B 32, LEAD FREE WITH ASTM B 813, WATER-FLUSHABLE FLUX.

B. HUB-AND-SPIGOT CAST-IRON SOIL PIPE AND FITTINGS: ASTM A 74, SERVICE CLASS: ASTM C 564 RUBBER GASKETS.

C. HUBLESS CAST-IRON SOIL PIPE AND FITTINGS: ASTM A 888 OR CISPI 301, WITH ASTM C 1277 SHIELDED COUPLINGS.

D. PVC PLASTIC, DWV PIPE AND FITTINGS: ASTM D 2665, SCHEDULE 40, PLAIN ENDS WITH PVC SOCKET-TYPE, DWV PIPE FITTINGS.
1. ADHESIVE PRIMER: ASTM F 656.
a. ADHESIVE PRIMER SHALL HAVE A VOC CONTENT OF 550 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).
2. SOLVENT CEMENT: ASTM D 2564.
a. PVC SOLVENT CEMENT SHALL HAVE A VOC CONTENT OF 510 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. INSTALL CAST-IRON SOIL PIPING ACCORDING TO CISPI'S "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK," CHAPTER IV, "INSTALLATION OF CAST IRON SOIL PIPE AND FITTINGS."

B. INSTALL WALL PENETRATION SYSTEM AT EACH PIPE PENETRATION THROUGH FOUNDATION WALL. MAKE INSTALLATION WATERTIGHT. COMPLY WITH REQUIREMENTS IN SECTION 220513 "COMMON WORK RESULTS FOR PLUMBING" FOR WALL PENETRATION SYSTEMS.
1. SLEEVES ARE NOT REQUIRED FOR CAST-IRON SOIL PIPING PASSING THROUGH CONCRETE SLABS-ON-GRADE IF SLAB IS WITHOUT MEMBRANE WATERPROOFING.

D. MAKE CHANGES IN DIRECTION FOR SOIL AND WASTE DRAINAGE AND VENT PIPING USING APPROPRIATE BRANCHES, BENDS, AND LONG-SWEEP BENDS. SANITARY TEES AND SHORT-SWEEP 1/4 BENDS MAY BE USED ON VERTICAL STACKS IF CHANGE IN DIRECTION OF FLOW IS FROM HORIZONTAL TO VERTICAL. USE LONG-TURN, DOUBLE Y-BRANCH AND 1/8-BEND FITTINGS IF TWO FIXTURES ARE INSTALLED BACK TO BACK OR SIDE BY SIDE WITH COMMON DRAIN PIPE. STRAIGHT TEES, ELBOWS, AND CROSSES MAY BE USED ON VENT LINES. DO NOT CHANGE DIRECTION OF FLOW MORE THAN 90 DEGREES. USE PROPER SIZE OF STANDARD INCREASERS AND REDUCERS IF PIPES OF DIFFERENT SIZES ARE CONNECTED. REDUCING SIZE OF DRAINAGE PIPING IN DIRECTION OF FLOW IS PROHIBITED.

E. LAY BURIED BUILDING DRAINAGE PIPING BEGINNING AT LOW POINT OF EACH SYSTEM. INSTALL TRUE TO GRADES AND ALIGNMENT INDICATED, WITH UNBROKEN CONTINUITY OF INVERT. PLACE HUB ENDS OF PIPING UPSTREAM. INSTALL REQUIRED GASKETS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR USE OF LUBRICANTS, CEMENTS, AND OTHER INSTALLATION REQUIREMENTS. MAINTAIN SWAB IN PIPING AND PULL PAST EACH JOINT AS COMPLETED.

F. INSTALL SOIL AND WASTE DRAINAGE AND VENT PIPING AT THE FOLLOWING MINIMUM SLOPES, UNLESS OTHERWISE INDICATED:
1. HORIZONTAL SANITARY DRAINAGE PIPING: 2 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING NPS 2-1/2 AND SMALLER; 1 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING NPS 3 AND LARGER.
2. VENT PIPING: ALL VENT AND BRANCH VENT PIPING SHALL BE GRADED AND CONNECTED TO DRAIN BACK TOWARD VERTICAL FIXTURE VENT OR TOWARD VENT STACK.

G. INSTALL PVC SOIL AND WASTE DRAINAGE AND VENT PIPING ACCORDING TO ASTM D 2665.

H. INSTALL UNDERGROUND PVC SOIL AND WASTE DRAINAGE PIPING ACCORDING TO ASTM D 2321.

I. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY AUTHORITIES HAVING JURISDICTION.

J. COMPLY WITH REQUIREMENTS IN SECTION 220513 "COMMON WORK RESULTS FOR PLUMBING" FOR BASIC PIPING JOINT CONSTRUCTION.

K. SOLDERED JOINTS: USE ASTM B 813, WATER-FLUSHABLE, LEAD-FREE FLUX; ASTM B 32, LEAD-FREE-ALLOY SOLDER; AND ASTM B 828 PROCEDURE UNLESS OTHERWISE INDICATED.

L. COMPLY WITH REQUIREMENTS IN SECTION 220513 "COMMON WORK RESULTS FOR PLUMBING" FOR PIPE HANGER AND SUPPORT DEVICES.

3.2 PIPE SCHEDULE

A. ABOVEGROUND APPLICATIONS: HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS, HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS, PVC PLASTIC, DWV PIPE AND FITTINGS WITH SOLVENT-CEMENTED JOINTS, COPPER DRAINAGE TUBE AND FITTINGS WITH SOLDERED JOINTS, PVC PLASTIC PIPE AND FITTINGS SHALL NOT BE PERMITTED FOR INSTALLATION IN RETURN AIR PLENUMS OR LOCATIONS EXPOSED TO RETURN AIR PLENUMS. ANY EXPOSED SEWER WASTE PIPE SHALL NOT BE PLASTIC OF ANY KIND.

B. BELOWGROUND APPLICATIONS: HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS, PVC PLASTIC, DWV PIPE AND DRAINAGE-PATTERN FITTINGS WITH CEMENTED JOINTS.

END OF SECTION

SECTION 221319 - SANITARY WASTE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. SUBMITTALS:
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
a. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, AND ACCESSORIES FOR GREASE INTERCEPTORS.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. DRAINAGE PIPING SPECIALTIES SHALL BEAR LABEL, STAMP, OR OTHER MARKINGS OF SPECIFIED TESTING AGENCY.

2.2 MANUFACTURED UNITS - AS INDICATED ON DRAWINGS

A. FLOOR CLEANOUTS: PER STANDARD ASME A112.36.2M-2002.

B. FLOOR DRAINS: PER STANDARD ASME A112.6.3-2001.

C. CAST IRON FLOOR SINKS: PER STANDARD ASME A112.6.7-2001.

D. PVC PLASTIC FLOOR SINKS: PER STANDARD ASME A112.6.7-2001.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALL CLEANOUTS AT GRADE AND EXTEND TO WHERE BUILDING SANITARY DRAINS CONNECT TO BUILDING SANITARY SEWERS.

B. INSTALL FLOOR DRAINS AT LOW POINTS OF SURFACE AREAS TO BE DRAINED. SET GRATES OF DRAINS FLUSH WITH FINISHED FLOOR UNLESS OTHERWISE INDICATED.
1. INSTALL FLOOR-DRAIN FLASHING COLLAR OR FLANGE SO NO LEAKAGE OCCURS BETWEEN DRAIN AND ADJOINING FLOORING. MAINTAIN INTEGRITY OF WATERPROOF MEMBRANES WHERE PENETRATED.
2. INSTALL INDIVIDUAL TRAPS FOR FLOOR DRAINS CONNECTED TO SANITARY BUILDING DRAIN, UNLESS OTHERWISE INDICATED.

END OF SECTION

SECTION 22 34 00 - FUEL-FIRED, DOMESTIC WATER HEATERS

PART 1 - GENERAL

1.1 QUALITY ASSURANCE

A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. NSF COMPLIANCE: FABRICATE AND LABEL EQUIPMENT COMPONENTS THAT WILL BE IN CONTACT WITH POTABLE WATER TO COMPLY WITH NSF 61, "DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS."

1.2 COORDINATION

A. COORDINATE SIZES AND LOCATIONS OF CONCRETE BASES WITH ACTUAL EQUIPMENT PROVIDED.

1.3 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF FUEL-FIRED, DOMESTIC-WATER HEATERS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
a. STRUCTURAL FAILURES INCLUDING STORAGE TANK AND SUPPORTS.
b. FAULTY OPERATION OF CONTROLS.
c. DETERIORATION OF METALS, METAL FINISHES, AND OTHER MATERIALS BEYOND NORMAL USE.
2. WARRANTY PERIODS: FROM DATE OF SUBSTANTIAL COMPLETION.
a. COMMERCIAL, GAS-FIRED, STORAGE, DOMESTIC-WATER HEATERS:
1) STORAGE TANK: THREE YEARS.
2) CONTROLS AND OTHER COMPONENTS: ONE YEAR.

PART 2 - PRODUCTS

A. COMMERCIAL, GAS-FIRED, HIGH-EFFICIENCY, STORAGE, DOMESTIC-WATER HEATER, DWH-1:
1. A.O. SMITH BTH-199, PROVIDED BY THE OWNER.
2. STANDARD: ANSI Z21.10.3/CSA 4.3.
3. STORAGE-TANK CONSTRUCTION: NON-ASME-CODE STEEL WITH 150-PSIG WORKING-PRESSURE RATING.
4. POWER DIRECT VENT SYSTEM: EXHAUST FAN, INTERLOCKED WITH BURNER.

2.2 DOMESTIC WATER HEATER ACCESSORIES

A. DOMESTIC WATER COMPRESSION TANKS:
1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
a. AMTROL INC
b. SMITH, A. O. WATER PRODUCTS CO.; A DIVISION OF A. O. SMITH CORPORATION
c. WATTS WATER TECHNOLOGIES, CO.
2. DESCRIPTION: STEEL, PRESSURE-RATED TANK CONSTRUCTED WITH WELDED JOINTS AND FACTORY-INSTALLED BUTYL-RUBBER DIAPHRAGM. INCLUDE AIR PRECHARGE TO MINIMUM SYSTEM-OPERATING PRESSURE AT TANK.
3. CONSTRUCTION:
a. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING, INCLUDE ASME B1.20.1 PIPE THREAD.
b. INTERIOR FINISH: COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.
c. AIR-CHARGING VALVE: FACTORY INSTALLED.

B. DRAIN PANS: CORROSION-RESISTANT METAL WITH RAISED EDGE. COMPLY WITH ANSI/CSA LC 3. INCLUDE DIMENSIONS NOT LESS THAN BASE OF DOMESTIC-WATER HEATER, AND INCLUDE DRAIN OUTLET NOT LESS THAN NPS 3/4 WITH ASME B1.20.1 PIPE THREADS OR WITH ASME B1.20.7 GARDEN-HOSE THREADS.

C. PIPING-TYPE HEAT TRAPS: FIELD-FABRICATED PIPING ARRANGEMENT ACCORDING TO ASHRAE/IESNA 90.1.

D. GAS SHUTOFF VALVES: ANSI Z21.15/CSA 9.1-M, MANUALLY OPERATED. FURNISH FOR INSTALLATION IN PIPING.

E. GAS PRESSURE REGULATORS: ANSI Z21.18/CSA 6.3, APPLIANCE TYPE. INCLUDE 1/2-PSIG PRESSURE RATING AS REQUIRED TO MATCH GAS SUPPLY.

F. AUTOMATIC GAS VALVES: ANSI Z21.21/CSA 6.5, APPLIANCE, ELECTRICALLY OPERATED, ON-OFF AUTOMATIC VALVE.

G. COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVES: INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT, AND INCLUDE PRESSURE SETTING LESS THAN DOMESTIC-WATER HEATER WORKING-PRESSURE RATING. SELECT RELIEF VALVES WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.
1. GAS-FIRED, DOMESTIC-WATER HEATERS: ANSI Z21.22/CSA 4.4-M.

2.3 SOURCE QUALITY CONTROL

A. HYDROSTATICALLY TEST COMMERCIAL DOMESTIC-WATER HEATERS TO MINIMUM OF ONE AND ONE-HALF TIMES PRESSURE RATING BEFORE SHIPMENT.

B. DOMESTIC-WATER HEATERS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

C. PREPARE TEST AND INSPECTION REPORTS.

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PLUMBING SPECIFICATIONS-02

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
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Checked By:
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ISSUED FOR CONSTRUCTION

SPECIFICATIONS - DIVISION 22 - PLUMBING (CONTINUED)

PART 3 - EXECUTION

3.1 DOMESTIC WATER HEATER INSTALLATION

A. INSTALL GAS-FIRED, DOMESTIC-WATER HEATERS ACCORDING TO NFPA 54.

1. INSTALL GAS SHUTOFF VALVES ON GAS SUPPLY PIPING TO GAS-FIRED, DOMESTIC-WATER HEATERS WITHOUT SHUTOFF VALVES.
2. INSTALL GAS PRESSURE REGULATORS ON GAS SUPPLIES TO GAS-FIRED, DOMESTIC-WATER HEATERS WITHOUT GAS PRESSURE REGULATORS IF GAS PRESSURE REGULATORS ARE REQUIRED TO REDUCE GAS PRESSURE AT BURNER.
3. INSTALL AUTOMATIC GAS VALVES ON GAS SUPPLIES TO GAS-FIRED, DOMESTIC-WATER HEATERS IF REQUIRED FOR OPERATION OF SAFETY CONTROL.

B. INSTALL COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVES IN TOP PORTION OF STORAGE TANKS. USE RELIEF VALVES WITH SENSING ELEMENTS THAT EXTEND INTO TANKS. EXTEND COMMERCIAL-WATER-HEATER RELIEF-VALVE OUTLET, WITH DRAIN PIPING SAME AS DOMESTIC-WATER PIPING IN CONTINUOUS DOWNWARD PITCH, AND DISCHARGE BY POSITIVE AIR GAP ONTO CLOSEST FLOOR DRAIN.

C. INSTALL WATER-HEATER DRAIN PIPING AS INDIRECT WASTE TO SPILL BY POSITIVE AIR GAP INTO OPEN DRAINS OR OVER FLOOR DRAINS. INSTALL HOSE-END DRAIN VALVES AT LOW POINTS IN WATER PIPING FOR DOMESTIC-WATER HEATERS THAT DO NOT HAVE TANK DRAINS.

3.2 FIELD QUALITY CONTROL

A. PERFORM TESTS AND INSPECTIONS.

1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.
2. LEAK TEST: AFTER INSTALLATION, CHARGE SYSTEM AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.
3. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER OPERATION.
4. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.

B. DOMESTIC-WATER HEATERS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

C. PREPARE TEST AND INSPECTION REPORTS.

END OF SECTION

SECTION 224000 - PLUMBING FIXTURES

PART 1 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. REGULATORY REQUIREMENTS: COMPLY WITH REQUIREMENTS IN ICC A117.1, "ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES", PUBLIC LAW 90-480, "ARCHITECTURAL BARRIERS ACT"; AND PUBLIC LAW 101-336, "AMERICANS WITH DISABILITIES ACT" FOR PLUMBING FIXTURES FOR PEOPLE WITH DISABILITIES.

B. REGULATORY REQUIREMENTS: COMPLY WITH REQUIREMENTS IN PUBLIC LAW 102-486, "ENERGY POLICY ACT," ABOUT WATER FLOW AND CONSUMPTION RATES FOR PLUMBING FIXTURES.

C. NSF STANDARD: COMPLY WITH NSF 61, "DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS," FOR FIXTURE MATERIALS THAT WILL BE IN CONTACT WITH POTABLE WATER.

D. FIXTURES SHALL BE PROVIDED AS SCHEDULED ON THE DRAWINGS.

PART 2 - EXECUTION

3.1 INSTALLATIONS

A. INSTALL FITTING INSULATION KITS ON FIXTURES FOR PEOPLE WITH DISABILITIES.

B. INSTALL FIXTURES WITH FLANGES AND GASKET SEALS.

C. INSTALL TANKS FOR ACCESSIBLE, TANK-TYPE WATER CLOSETS WITH LEVER HANDLE MOUNTED ON WIDE SIDE OF COMPARTMENT.

D. FASTEN WALL-HANGING PLUMBING FIXTURES SECURELY TO SUPPORTS ATTACHED TO BUILDING SUBSTRATE WHEN SUPPORTS ARE SPECIFIED, AND TO BUILDING WALL CONSTRUCTION WHERE NO SUPPORT IS INDICATED.

E. FASTEN FLOOR-MOUNTED FIXTURES TO SUBSTRATE. FASTEN FIXTURES HAVING HOLES FOR SECURING FIXTURE TO WALL CONSTRUCTION, TO REINFORCEMENT BUILT INTO WALLS.

F. FASTEN WALL-MOUNTED FITTINGS TO REINFORCEMENT BUILT INTO WALLS.

G. FASTEN COUNTER-MOUNTING PLUMBING FIXTURES TO CASEWORK.

H. SECURE SUPPLIES TO SUPPORTS OR SUBSTRATE WITHIN PIPE SPACE BEHIND FIXTURE.

I. SET MOP BASINS IN LEVELING BED OF CEMENT GROUT.

J. INSTALL INDIVIDUAL SUPPLY INLETS, SUPPLY STOPS, SUPPLY RISERS, AND TUBULAR BRASS TRAPS WITH CLEANOUTS AT FIXTURE. ALL ABOVE FLOOR FIXTURE TRAPS DIRECTLY CONNECTED TO SANITARY WASTE SYSTEMS SHALL BE CHROME PLATED 17 GAUGE SEAMLESS TUBULAR CAST BRASS P-TRAPS WITH CLEANOUTS.

K. INSTALL WATER-SUPPLY STOP VALVES IN ACCESSIBLE LOCATIONS.

L. INSTALL TRAPS ON FIXTURE OUTLETS. OMIT TRAPS ON FIXTURES HAVING INTEGRAL TRAPS. OMIT TRAPS ON INDIRECT WASTES UNLESS OTHERWISE INDICATED.

M. INSTALL ESCUTCHEONS AT WALL, FLOOR, AND CEILING PENETRATIONS IN EXPOSED, FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK. USE DEEP-PATTERN ESCUTCHEONS WHERE REQUIRED TO CONCEAL PROTRUDING PIPE FITTINGS.

N. SEAL JOINTS BETWEEN FIXTURES AND WALLS, FLOORS, AND COUNTERS USING SANITARY-TYPE, ONE-PART, MILDEW-RESISTANT, SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.

O. INSTALL PIPING CONNECTIONS BETWEEN PLUMBING FIXTURES AND PIPING SYSTEMS AND PLUMBING EQUIPMENT. INSTALL INSULATION ON SUPPLIES AND DRAINS OF FIXTURES FOR PEOPLE WITH DISABILITIES.

END OF SECTION

SECTION 226316 - FACILITY NATURAL-GAS PIPING

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. MINIMUM OPERATING-PRESSURE RATINGS:

1. PIPING AND VALVES: 100 PSIG MINIMUM UNLESS OTHERWISE INDICATED.

B. NATURAL-GAS SYSTEM PRESSURE WITHIN BUILDING: ONE DISTRIBUTION PRESSURE. 14" W.C., BUT NOT MORE THAN 2.0 PSIG.

2.2 PIPES, TUBES, AND FITTINGS

A. STEEL PIPE: ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B.

1. MALLEABLE-IRON THREADED FITTINGS: ASME B16.3, CLASS 150, STANDARD PATTERN.
2. WROUGHT-STEEL WELDING FITTINGS: ASTM A 234/A 234M FOR BUTT WELDING AND SOCKET WELDING.
3. UNIONS: ASME B16.39, CLASS 150, MALLEABLE IRON WITH BRASS-TO-IRON SEAT, GROUND JOINT, AND THREADED ENDS.
4. PROTECTIVE COATING FOR UNDERGROUND PIPING: FACTORY-APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE.

B. CORRUGATED, STAINLESS-STEEL TUBING: COMPLY WITH ANSI/IAS LC 1; INCLUDE FLAME-RETARDANT PE COATING, COPPER-ALLOY THREADED ENDS, AND STRIKER PLATES.

2.3 SPECIALTIES

A. APPLIANCE FLEXIBLE CONNECTORS:

1. INDOOR, FIXED-APPLIANCE FLEXIBLE CONNECTORS: COMPLY WITH ANSI Z21.24.
2. INDOOR, MOVABLE-APPLIANCE FLEXIBLE CONNECTORS: COMPLY WITH ANSI Z21.69.
3. OUTDOOR, APPLIANCE FLEXIBLE CONNECTORS: COMPLY WITH ANSI Z21.75.
4. CORRUGATED STAINLESS-STEEL TUBING WITH POLYMER COATING.

B. STRAINERS: ASTM A 126, CLASS B, CAST-IRON BODY, Y-PATTERN, FULL SIZE OF CONNECTING PIPING, CWP RATING OF 125 PSIG, INCLUDE 40-MESH STARTUP STRAINER, AND PERFORATED STAINLESS-STEEL BASKET.

C. WEATHERPROOF VENT CAP: CAST- OR MALLEABLE-IRON INCREASER FITTING WITH CORROSION-RESISTANT WIRE SCREEN, WITH FREE AREA AT LEAST EQUAL TO CROSS-SECTIONAL AREA OF CONNECTING PIPE AND THREADED-END CONNECTION.

2.4 VALVES

A. GENERAL REQUIREMENTS FOR METALLIC MANUAL GAS SHUTOFF VALVES: COMPLY WITH ASME B16.33.

1. CWP RATING: 125 PSIG.

B. ONE-PIECE, BRONZE BALL VALVE WITH BRONZE TRIM: MSS SP-110.

1. BODY: BRONZE, COMPLYING WITH ASTM B 584.
2. BALL: CHROME-PLATED BRASS.
3. STEM: BRONZE; BLOWOUT PROOF.
4. SEATS: REINFORCED TFE; BLOWOUT PROOF.
5. PACKING: SEPARATE PACKNUT WITH ADJUSTABLE STEM PACKING THREADED ENDS.
6. CWP RATING: 600 PSIG.
7. LISTING: VALVES NPS 1 AND SMALLER SHALL BE LISTED AND LABELED BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
8. SERVICE: SUITABLE FOR NATURAL-GAS SERVICE WITH "WOG" INDICATED ON VALVE BODY.

C. TWO-PIECE, FULL-PORT, BRONZE BALL VALVES WITH BRONZE TRIM: MSS SP-110.

1. BODY: BRONZE, COMPLYING WITH ASTM B 584.
2. BALL: CHROME-PLATED BRONZE.
3. STEM: BRONZE; BLOWOUT PROOF.
4. SEATS: REINFORCED TFE; BLOWOUT PROOF.
5. PACKING: THREADED BODY PACKNUT DESIGN WITH ADJUSTABLE STEM PACKING.
6. CWP RATING: 600 PSIG.
7. LISTING: VALVES NPS 1 AND SMALLER SHALL BE LISTED AND LABELED BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
8. SERVICE: SUITABLE FOR NATURAL-GAS SERVICE WITH "WOG" INDICATED ON VALVE BODY.

D. BRONZE PLUG VALVES: MSS SP-78.

1. BODY: BRONZE, COMPLYING WITH ASTM B 584.
2. PLUG: BRONZE.
3. OPERATOR: SQUARE HEAD OR LUG TYPE WITH TAMPERPROOF FEATURE WHERE INDICATED.
4. PRESSURE CLASS: 125 PSIG.
5. LISTING: VALVES NPS 1 AND SMALLER SHALL BE LISTED AND LABELED BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
6. SERVICE: SUITABLE FOR NATURAL-GAS SERVICE WITH "WOG" INDICATED ON VALVE BODY.

E. CAST-IRON, NONLUBRICATED PLUG VALVES: MSS SP-78.

1. BODY: CAST IRON, COMPLYING WITH ASTM A 126, CLASS B.
2. PLUG: BRONZE OR NICKEL-PLATED CAST IRON.
3. SEAT: COATED WITH THERMOPLASTIC.
4. STEM SEAL: COMPATIBLE WITH NATURAL GAS.
5. SERVICE: SUITABLE FOR NATURAL-GAS SERVICE WITH "WOG" INDICATED ON VALVE BODY.

F. ELECTRICALLY OPERATED, AUTOMATIC GAS VALVES: COMPLY WITH UL 429.

2.5 PRESSURE REGULATORS

A. GENERAL REQUIREMENTS: SINGLE STAGE, STEEL JACKETED, AND CORROSION RESISTANT. INCLUDE ELEVATION COMPENSATOR.

B. LINE PRESSURE REGULATORS: ANSI Z21.80; 2-PSIG MAXIMUM INLET PRESSURE. FACTORY- OR FIELD-INSTALLED, STAINLESS-STEEL SCREEN IN VENT OPENING IF NOT CONNECTED TO VENT PIPING.

C. APPLIANCE PRESSURE REGULATORS: ANSI Z21.18; 2-PSIG MAXIMUM INLET PRESSURE. REGULATOR MAY INCLUDE VENT LIMITING DEVICE, INSTEAD OF VENT CONNECTION, IF APPROVED BY AUTHORITIES HAVING JURISDICTION.

PART 3 - EXECUTION

3.1 OUTDOOR PIPING INSTALLATION

A. INSTALL SHUTOFF VALVE, DOWNSTREAM FROM GAS METER, OUTSIDE BUILDING AT GAS SERVICE ENTRANCE.

B. INSTALL WALL PENETRATION SYSTEM AT EACH SERVICE PIPE PENETRATION THROUGH EXTERIOR WALL. MAKE INSTALLATION WATERTIGHT.

3.2 INDOOR PIPING INSTALLATION

A. INSTALL PIPING IN CONCEALED LOCATIONS UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS.

B. INSTALL ESCUTCHEONS AT PENETRATIONS OF INTERIOR WALLS, CEILINGS, AND FLOORS.

C. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. COMPLY WITH REQUIREMENTS IN SECTION 078413 "PENETRATION FIRESTOPPING."

D. INSTALL GAS STOPS FOR SHUTOFF TO APPLIANCES WITH LOW-PRESSURE GAS SUPPLY.

E. INSTALL NATURAL-GAS PIPING AT UNIFORM GRADE OF 2 PERCENT DOWN TOWARD DRIP AND SEDIMENT TRAPS.

F. USE ECCENTRIC REDUCER FITTINGS TO MAKE REDUCTIONS IN PIPE SIZES. INSTALL FITTINGS WITH LEVEL SIDE DOWN.

G. CONNECT BRANCH PIPING FROM TOP OR SIDE OF HORIZONTAL PIPING.

H. INSTALL UNIONS IN PIPES NPS 2 AND SMALLER, ADJACENT TO EACH VALVE, AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT. UNIONS ARE NOT REQUIRED AT FLANGED CONNECTIONS.

I. INSTALL STRAINER ON INLET OF EACH LINE PRESSURE REGULATOR AND AUTOMATIC OR ELECTRICALLY OPERATED VALVE.

J. INSTALL PRESSURE GAGE PLUG UPSTREAM AND DOWNSTREAM FROM EACH LINE REGULATOR.

K. CONNECT GAS PIPING TO EQUIPMENT AND APPLIANCES WITH SHUTOFF VALVES AND UNIONS. INSTALL GAS VALVE UPSTREAM FROM AND WITHIN 72 INCHES OF EACH APPLIANCE USING GAS. INSTALL UNION OR FLANGED CONNECTIONS DOWNSTREAM FROM VALVES.

L. EXTEND RELIEF VENT CONNECTIONS FOR SERVICE REGULATORS, LINE REGULATORS, AND OVERPRESSURE PROTECTION DEVICES TO THE OUTDOORS AND TERMINATE WITH WEATHERPROOF VENT CAP.

M. DO NOT USE NATURAL-GAS PIPING AS GROUNDING ELECTRODE.

3.3 PIPING JOINT CONSTRUCTION

A. THREADED JOINTS: THREAD PIPE WITH TAPERED PIPE THREADS COMPLYING WITH ASME B1.20.1.

B. WELDED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS D10.12M/D10.12, USING QUALIFIED PROCESSES AND WELDING OPERATORS.

C. JOINTS IN STEEL PIPING WITH PROTECTIVE COATING: APPLY JOINT COVER KITS TO PIPE AFTER JOINING TO COVER, SEAL, AND PROTECT JOINTS.

D. FLANGED JOINTS: INSTALL GASKET MATERIAL, SIZE, TYPE, AND THICKNESS APPROPRIATE FOR NATURAL-GAS SERVICE. INSTALL GASKET CONCENTRICALLY POSITIONED.

3.4 VALVE INSTALLATION

A. INSTALL MANUAL GAS SHUTOFF VALVE FOR EACH GAS APPLIANCE AHEAD OF CORRUGATED STAINLESS-STEEL TUBING, ALUMINUM, OR COPPER CONNECTOR.

B. INSTALL REGULATORS AND OVERPRESSURE PROTECTION DEVICES WITH MAINTENANCE ACCESS SPACE ADEQUATE FOR SERVICING AND TESTING.

3.5 OUTDOOR PIPING SCHEDULE

A. ABOVEGROUND NATURAL-GAS PIPING SHALL BE THE FOLLOWING:

1. STEEL PIPE WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS. COAT PIPE AND FITTINGS WITH PROTECTIVE COATING FOR STEEL PIPING.
2. STEEL PIPING TO BE PROVIDED WITH ONE COAT OF PRIMER AND TWO COATS OF WEATHER RESISTANT FINISH PAINT. FINISH COLOR TO BE YELLOW, UNLESS ANOTHER COLOR IS REQUIRED BY THE LANDLORD/GAS UTILITY PROVIDER AND/OR REVIEW, INSPECTION AND APPROVAL AUTHORITIES.

3.6 INDOOR PIPING SCHEDULE FOR SYSTEM PRESSURES MORE THAN 7" W.C. AND LESS THAN 5 PSIG.

A. ABOVEGROUND, BRANCH PIPING NPS 1 AND SMALLER SHALL BE THE FOLLOWING:

1. CORRUGATED STAINLESS-STEEL TUBING WITH MECHANICAL FITTINGS HAVING SOCKET OR THREADED ENDS TO MATCH ADJACENT PIPING.
2. STEEL PIPE WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS.

B. ABOVEGROUND, DISTRIBUTION PIPING SHALL BE THE FOLLOWING:

1. STEEL PIPE WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS.

END OF SECTION

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PLUMBING SPECIFICATIONS-03

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
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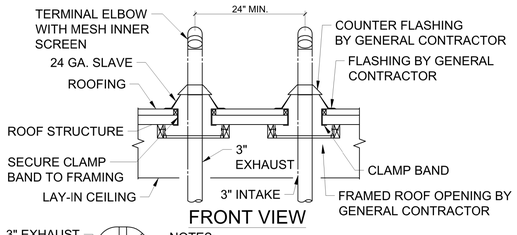
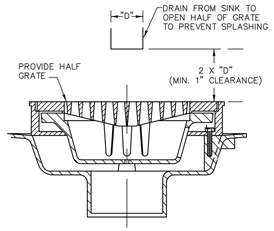
ISSUED FOR CONSTRUCTION

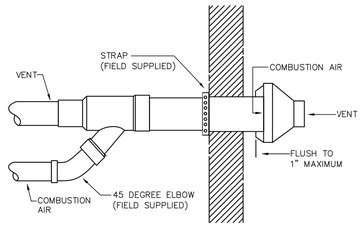


NOTES:
1. INSTALLATION SHALL BE PER MANUFACTURER'S INSTALLATION GUIDELINES AND INSTRUCTIONS
2. THE INTAKE AND VENT TERMINALS MUST BE ORIENTED FACING DOWNWARD IN THE SAME DIRECTION, AND USING THE SAME PROCEDURE.
3. LAYOUT OF VENT SYSTEM TO USE A MINIMUM OF VENT PIPE AND ELBOWS. MAXIMUM EQUIVALENT LENGTH OF 3" VENT PIPE SHALL BE 65' TOTAL, AND EACH 90° ELBOW HAS THE EQUIVALENT LENGTH OF 5'.
4. INTAKE AND EXHAUST VENT TERMINALS SHALL BE 24" MINIMUM ABOVE ROOF OR SNOW ACCUMULATION LEVEL.

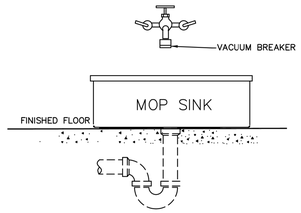
WATER HEATER DIRECT VENT DETAIL
SCALE: NTS



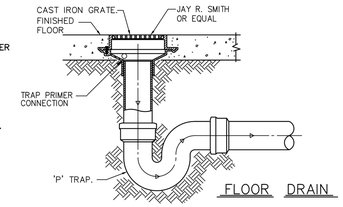
1 AIR GAP DETAIL
SCALE: NONE



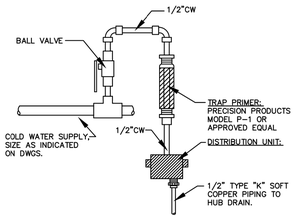
2 CONCENTRIC FLUE VENT DETAIL
SCALE: NONE



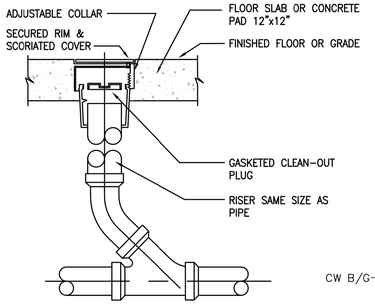
3 MOP SINK DETAIL
SCALE: NONE



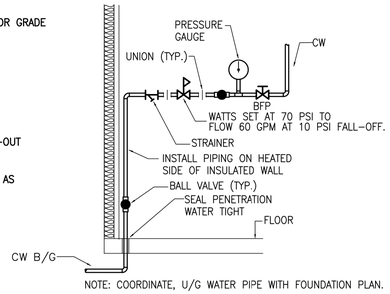
4 FLOOR DRAIN DETAIL
SCALE: NONE



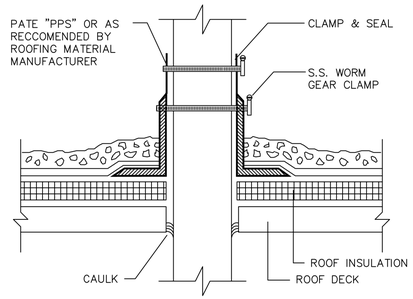
5 TRAP PRIMER DETAIL
SCALE: NONE



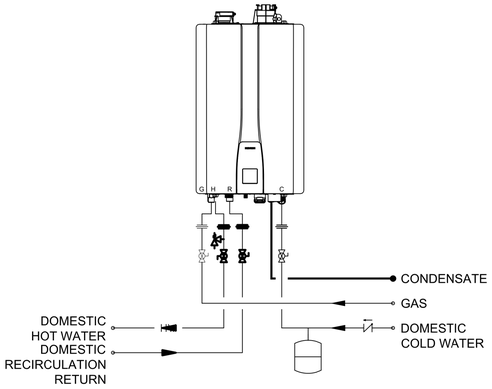
7 CLEANOUT DETAIL
SCALE: NONE



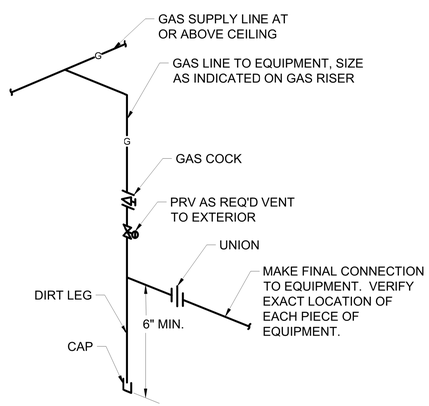
8 WATER ENTRANCE DETAIL
SCALE: NONE



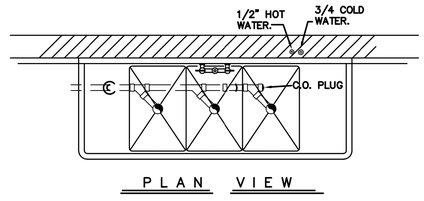
9 PIPE FLASHING DETAIL
SCALE: NONE



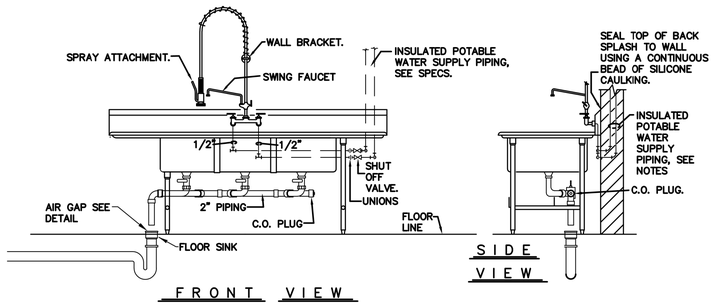
TANKLESS WATER HEATER DETAIL
SCALE: NTS



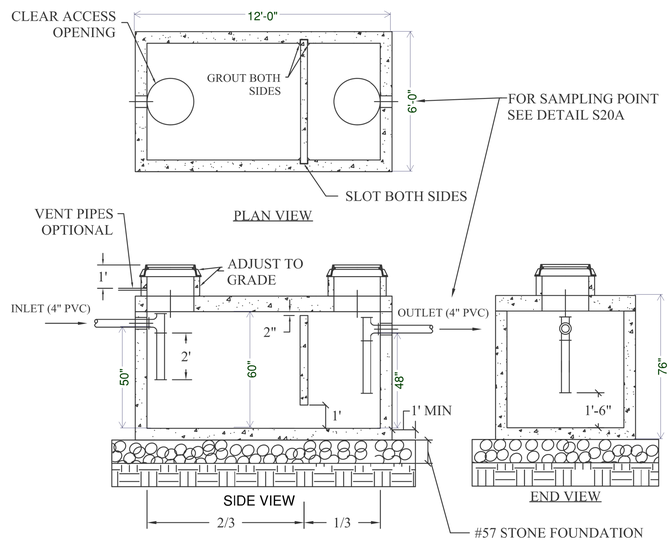
GAS CONNECTION DETAIL
SCALE: NTS



NOTES:
1. ALL WATER SUPPLY PIPING SHALL BE TYPE 'L' HARD COPPER.
2. ALL DRAIN PIPING SHALL BE PVC SCHEDULE 40 OR TYPE 'L' COPPER.
3. PIPING WILL NOT BE PERMITTED IN COOLER OR FREEZER WALLS.



10 MULTIPLE COMPARTMENT SINK DETAIL
SCALE: NONE



1500 GALON GREASE TRAP DETAIL

ISSUED FOR CONSTRUCTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 31424 PROFESSIONAL ENGINEER
ENGINEER
FLEACO ENGINEERING
FLEACO.COM
678-979-6464
fleaco@aol.com

PLUMBING DETAILS-01

2908 MOON STATION RD NW, KENNESAW GA-30144

Revision:
10/24/24
11/06/24
11/11/24
12/19/24

Drawn By: MGK
Checked By:
Date: 10/15/24
Project No: 24274-SMEP

P7.0

EVERBILT

BARBER SHOP

EVERBILT
EVERBILT

EVERBILT
THE HOME DEPOT

EVERBRIT
EVERBRIT

LEGAL NOTICE

CITY OF KENNESAW
BUILDING INSPECTION DEPARTMENT

DATE 11-26-2024

Article 18, Section 66 of the Zoning Ordinance

WHEREAS, violations of Article 18, Section 66 of the Building Code have been found on the premises, NOTICE IS HEREBY GIVEN in accordance with the above Code that all persons cease, desist from and

STOP WORK

at once on any construction, alterations or repairs on these premises known

as 2908 Moon Station Rd

All persons acting contrary to this notice or removing or mutilating it are liable to summary arrest unless such action is authorized by the Department.

By _____ Inspector

_____ Inspection Department

Item Report

TO: The Historic Preservation Commission

FROM: Darryl Simmons, Zoning Administrator

DATE: February 21, 2025

TITLE: **Exterior Renovation (Alteration): 2981 North Main Street**
Consideration of approval of a Certificate of Appropriateness application submitted by Orlando Orochena for an alteration of the historic structure located at 2981 North Main Street. Said alteration includes the addition of two dormers to the roof and the removal of the two unsafe chimneys for an attic renovation. Case # COA2025-02

Summary:

Recommendation:

Fiscal Impact:

Attachments:
1. COA2025-02_2981 N Main St_Application Packet

CERTIFICATE OF APPROPRIATENESS APPLICATION

□ Application Fee: $50.00 □ Demolition Fee: $150.00

All new construction and exterior remodeling of buildings within the Kennesaw Historic District shall be subject to the architectural review and approval of the Historic Preservation Commission (**HPC**). HPC approval is also required for Kennesaw Downtown Development Authority (KDDA) Façade and Signage Grants.

Darryl Simmons, Planning and Zoning Administrator for the City of Kennesaw will meet with you to direct your application process. To make an appointment, please call 770-590-8268.

A Certificate of Appropriateness (COA) shall be obtained from the **HPC** prior to the issuance of a building permit. The **HPC** shall consider a variety of issues in rendering its decision including, but not limited to the following:

a. The surrounding development
b. The best interest of the community
c. Previous studies undertaken by the City as well as the standards contained herein.

Application for signage to include

□ Material Specifications
□ Drawing of Sign with Dimensions and Colors to be used
□ Façade detail of fonts

Application for landscaping to include

□ Variety of trees and shrubs
□ Indicate size and location of plantings

Application for exterior renovations and additions to include

□ Existing conditions site plan depicting location of addition in relation to the existing property
□ Existing floor plan of building
□ Proposed floor plan of building including portions not to be altered
□ Elevations of all exterior façade of addition including relationship to existing building
□ Detail of trim to be utilized on façade
□ Manufacturer's specifications for windows, doors and lighting that will be installed-including a photograph or sketch
□ Photographs of all existing facades; existing structures adjacent to property; and views from the façade to be altered

CONSISTENT WITH THE UNITED STATES CONSTITUTION AND THE RELIGIOUS LAND USE AND INSTITUTIONALIZED PERSONS ACT OF 2000, THE CITY OF KENNESAW DOES NOT DISCRIMINATE ON THE BASIS OF RELIGION IN THE APPLICATION OF ITS LAWS, POLICIES, OR PROCEDURES, INCLUDING THE APPLICATION OF ITS LAND USE REGULATIONS AND ZONING LAWS.

Under the Religious Land Use and Institutionalized Persons Act of 2000 ("RLUIPA"), no government, including the City of Kennesaw, may apply its zoning or land use laws in a manner that imposes a substantial burden on the religious exercise of a person, including a religious assembly or institution. RLUIPA also provides that no government, including the City of Kennesaw, may apply a land use regulation in a manner that treats a religious assembly or institution (a church, for example) on less than equal terms than a nonreligious institution or assembly (a day care center or movie theater, for example). Finally, RLUIPA provides that no government, including the City of Kennesaw, may impose or implement a land use regulation in a manner that discriminates against a religious assembly or institution.

If you believe that the City of Kennesaw, or any other local government or municipality, has discriminated against you in the implementation of its zoning or land use laws, please contact the United States Department of Justice.

United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

1. **NAME OF APPLICANT:** Orlando Orochena

☒ Owner
☐ Other
☐ Other, please specify _____

APPLICANT MAILING ADDRESS: 2981 North Main St NW Kennesaw GA 30144

(Home#)_____ (Cell#) [redacted] (Email) [redacted]

PROPERTY ADDRESS: 2981 N Main St NW Kennesaw GA 30144

Land Lot _____ Tax Parcel _____ Lot Size _____

Current zoning on property: _____

2. **NAME OF ATTORNEY OR REPRESENTATIVE:**

_____

(Home#)_____ (Cell#) _____ (Email) _____

NAME OF OWNER:

_____

(Home#)_____ (Cell#) _____ (Email) _____

3. **ACTIVITY**

☐ New Construction
☐ Demolition
☐ Awnings
☐ Fence
☐ Repairs or Alterations
☐ Landscaping

☒ Exterior Architectural Features
☐ Exterior Environmental Feature Change
☐ Moving a Building
☐ Sign Erection
☐ Sign Placement *

*** (NOTE – Business License required before signage installation)**

Please describe your proposed work as simply and accurately as possible. Use the attached submittal criteria checklist to guide you in your description. Be sure to indicate materials to be used. Accurate drawings and photographs are required. (Use extra sheet, if necessary.) **Signed and sealed drawings from an architect, engineer or other design professional are required when construction of a new building, alterations and/or additions to existing structures are being made (Code 800.14.1).**

We plan on renovating our attic to add additional living space. Because of ceiling requirements, we will need to add two dormers (12 ft wide) to our roof, one on each side of the house when looking at it from the front/street. Please see attached page for building materials and 3d rendering. We will match paint color and roof shingles as best we can.

Important: This form must be completed before the Historic Preservation Commission will consider the approval of any material change to a property within a Historic District. This form, along with supporting documents must be filed with 1 Original (4) copies including color photos (excluding models, material and color samples, where one (1) is sufficient). The application and supporting documents are to be placed on a **CD in a PDF format**.

Incomplete applications will not be docketed for consideration by the Historic Preservation Commission.

The City of Kennesaw will not issue any permits until 7 days after the Commission's decision, per City Ordinance No. 2003-51, Section Two. 800.20 –Any person or persons jointly or severally aggrieved by any decision of the Kennesaw HPC may appeal to the Mayor and City Council. The appeal must be filed within 7 days of the decision of the Commission and must be made by written petition delivered to the zoning administrator. The appeal shall be on the application exactly as presented to the commission.

1/13/25

Signature of Applicant **Date**

Signature of Owner **Date**

(If different from applicant, consenting to work to be performed on said property.

CERTIFICATE OF APPROPRIATENESS

APPROVAL SIGNATURES

_____

Darryl Simmons (Application Deemed Complete)
Planning & Zoning Administrator Date: _____

_____

(Application Administratively Approved)
HPC Chair Date: _____

☐ GRANTED
☐ DENIED Reason for denial _____
☐ REQUIRES HPC APPROVAL

Historic Preservation Commission consideration:

HEARING DATE:_____

ACTION BY COMMISSION:

☐ GRANTED

☐ DENIED

APPROVED WITH CONDITIONS:

_____

_____

DENIED: Reason for denial

_____

_____

(May re-submit within 60 days)

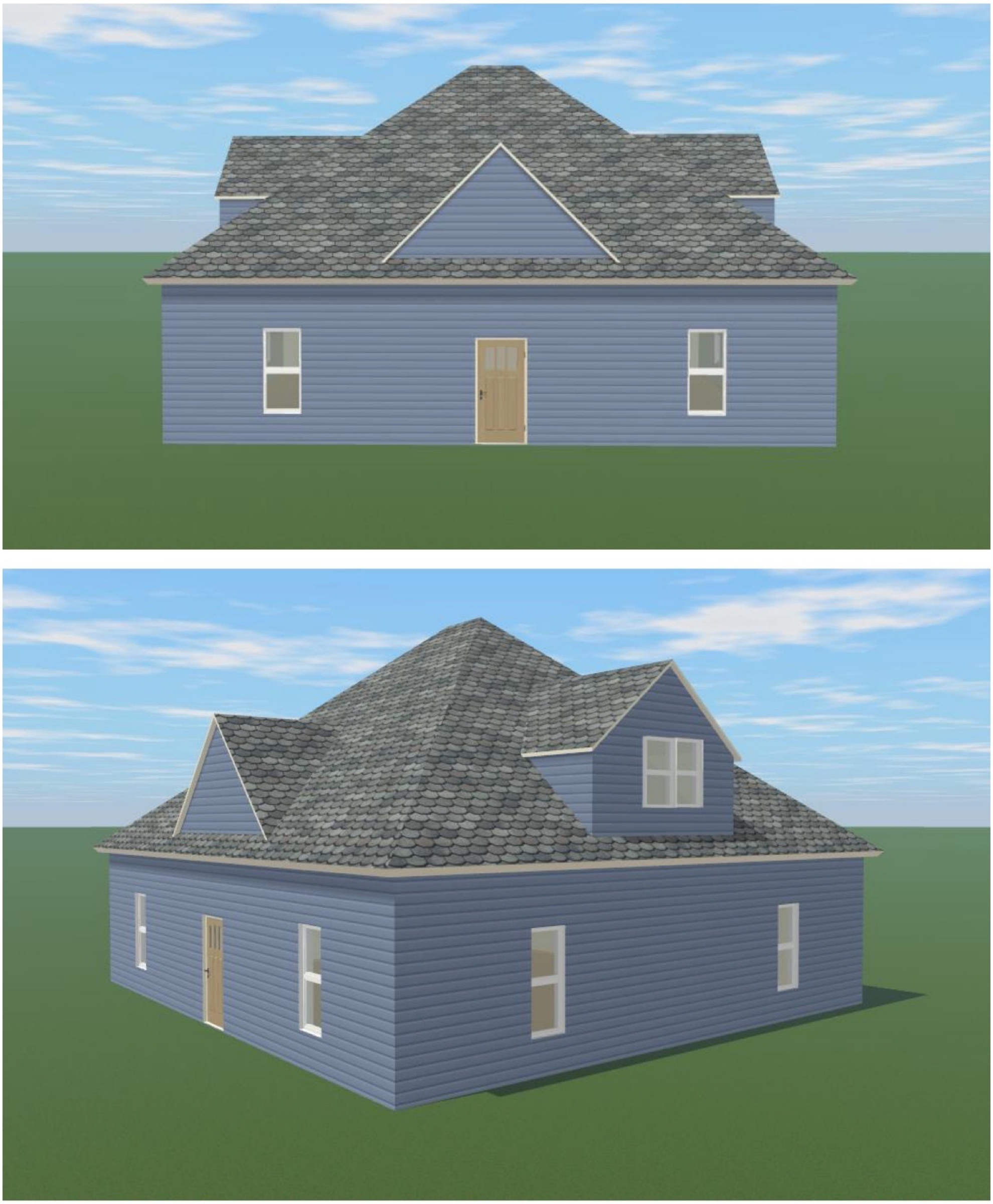
POSTPONED/TABLED_____

_____

Signature, Historic Preservation Commission Date

Upon Administrative Approval scan and send document to Commission for review

Google



Building Materials for Dormer:

GAF Timberline HDZ Pewter Gray Algae Resistant Laminated High Definition Shingles (33.33 sq. ft. per Bundle)

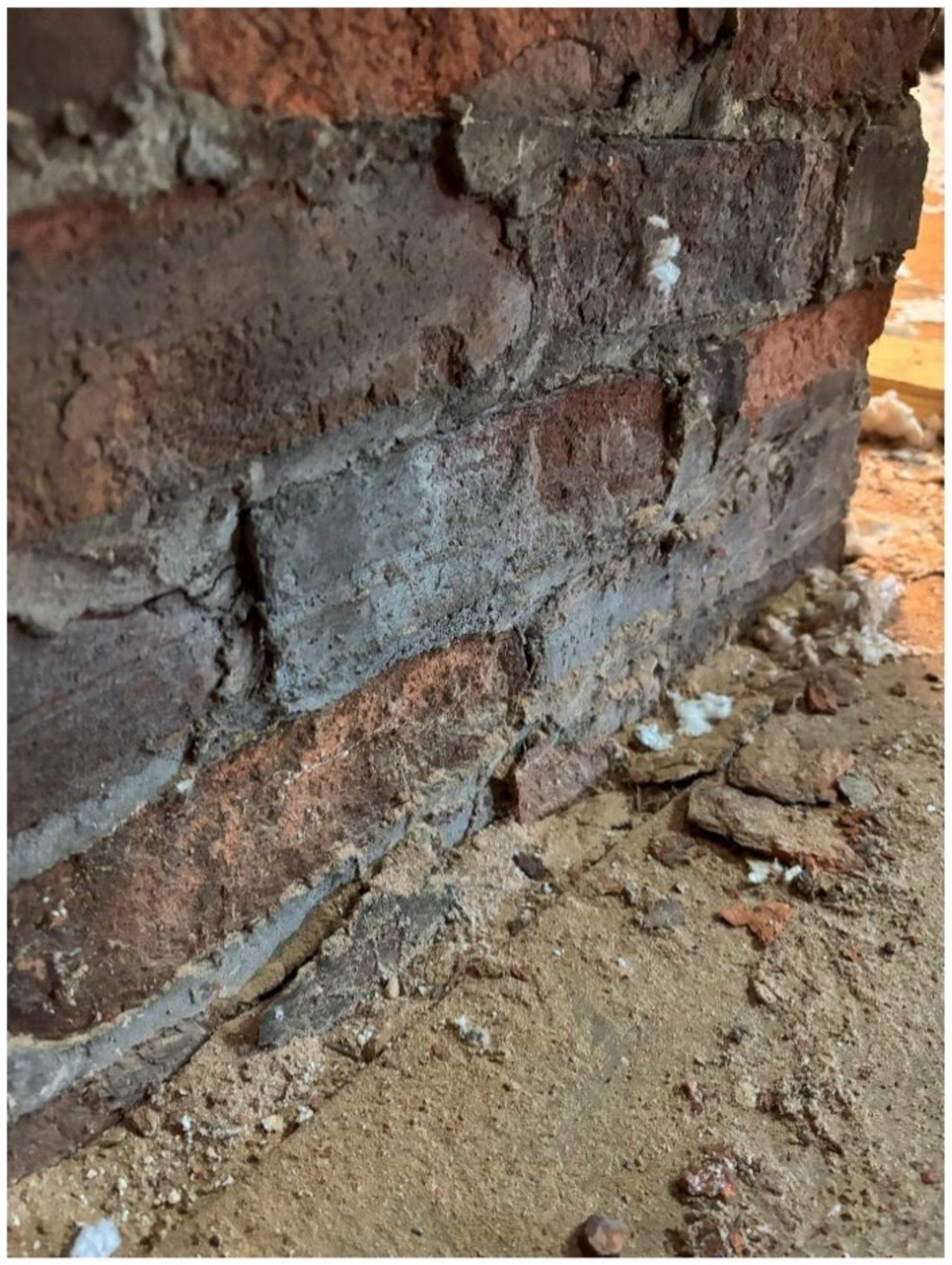
Hover Image to Zoom

Hardie Plank HZ10 8.25 in. x 144 in. Primed Smooth Fiber Cement Lap Siding

Andersen

27-1/2 in. x 47-1/2 in. 200-Series White Double-Hung Clad Wood Window with White Interior Low-E Glass and White Hardware

Both chimneys are severely damaged and will need to be removed due to their unsafe condition.



MAYOR
Derek Easterling

City Manager
Jeff Drobney, ICMA-CM

City Clerk
Lea Alvarez, CMC

COUNCIL
Mayor Pro Tem Pat Ferris
Antonio Jones
Madelyn Orochena
Tracey Viars
Anthony Gutierrez

January 17, 2025

Orlando Orochena
2981 N Main St, Kennesaw, GA 30144

Subject: Certificate of Appropriateness (COA) Application
2981 N. Main St, Kennesaw GA 30144, Parcel - 20013900180

Dear Mr. Orochena,

The City of Kennesaw Historic Preservation Commission (HPC) held their regularly scheduled meeting on January 17, 2025, to review the above-referenced application. This letter is written to inform you of their actions.

Your case sought an approval for a Certificate of Appropriateness for alteration to the historic structure located at 2981 N. Main St. The proposed alterations included the addition of two (2) dormers to the roof and the removal of two (2) unsafe chimneys for an attic renovation. **The HPC Board voted to table the request, requiring resubmittal within 90 days to allow the applicant to investigate alternative locations and size for the dormers, alternatives for the chimney removal, and to reiterate on the plans that the front porch will remain intact.**

Once the revisions have been finalized, please send an email with the updates to be added to the HPC agenda. Resubmittals should be provided to the Planning and Zoning Department at least two weeks prior to the scheduled Historic Preservation Commission meeting.

Please note that the residential remodel permit submitted under permit #250048 is still under review pending the approval of the exterior alteration by the HPC Board. If you have questions or concerns, please contact Planning and Zoning at (770) 590-8268 or zoningdept@kennesaw-ga.gov .

Sincerely,

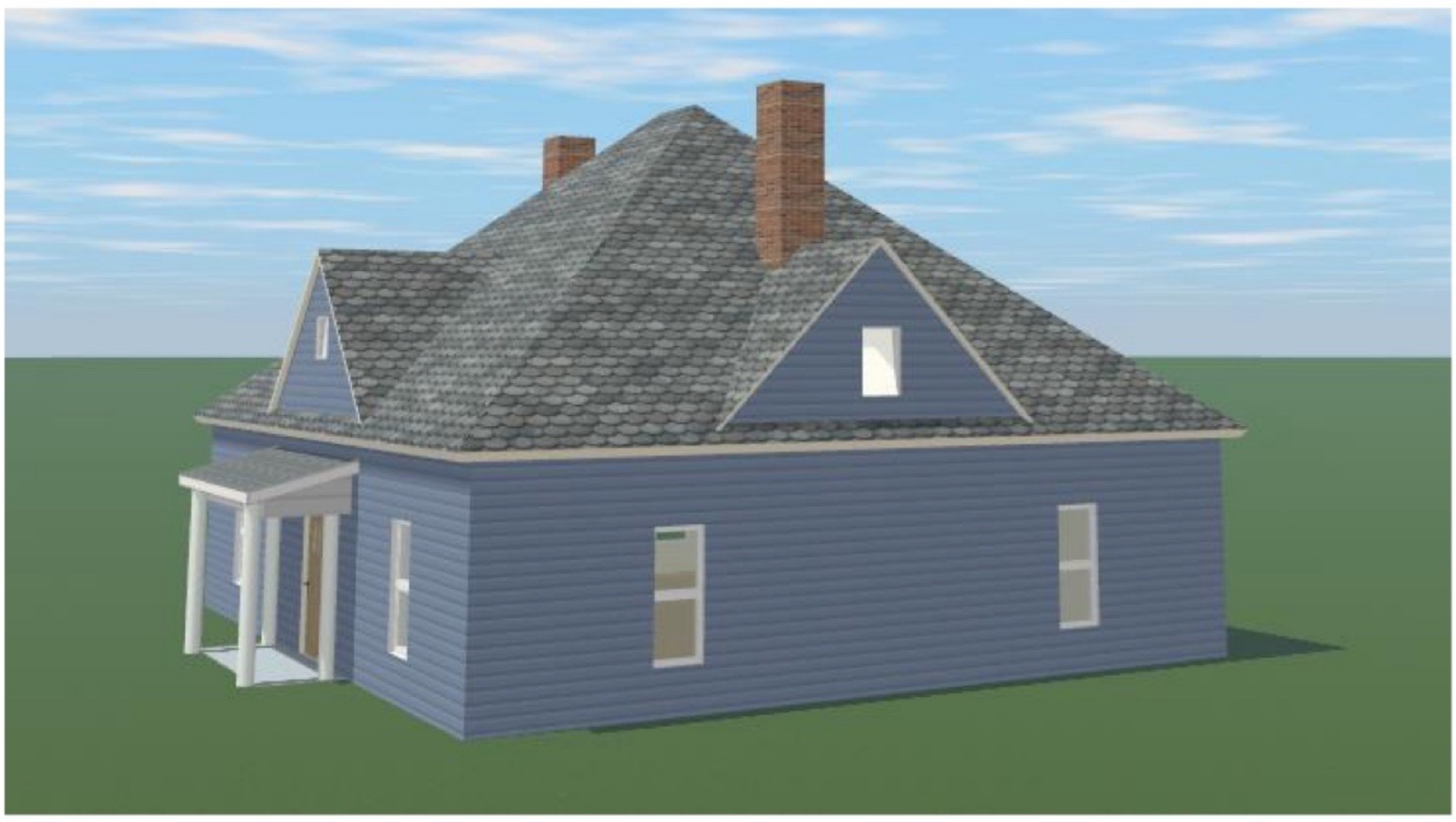
Darryl Simmons

Darryl Simmons
Planning and Zoning Administrator

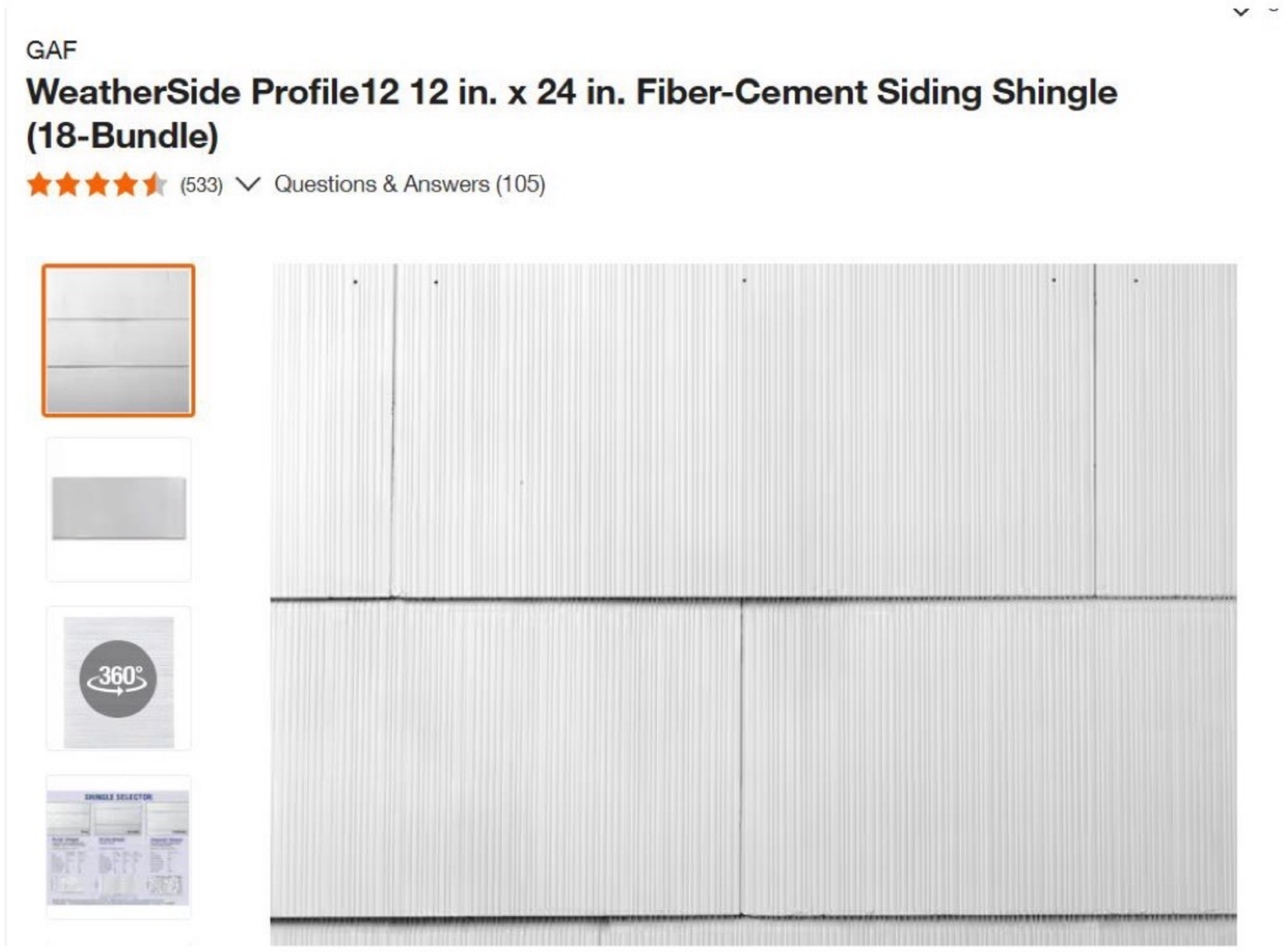
COA2025-02_2981 N. Main St - Revisions

Updated 3d renders:

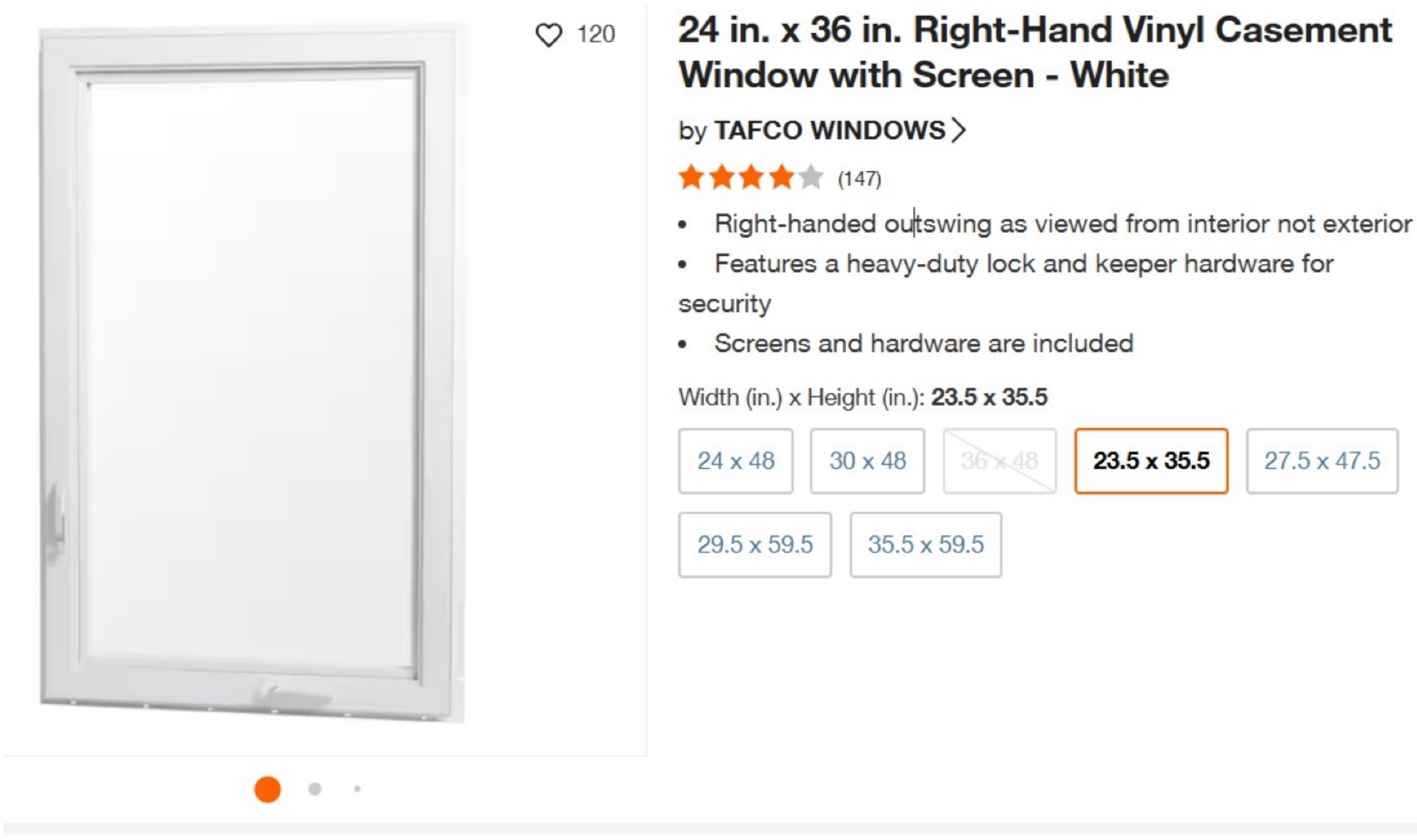
Rather than the original larger dormers, we propose to build the same style and size dormer that is currently on the front of our house. They will be located on the left and right sides of the house (centered), since there is no room for both to fit in the rear. These will be considerably smaller than the previously proposed dormers and match what's existing to the house already.



We will match the shingles using the cement siding shingles, and match paint color as well as overlap between the siding shingles.



We will plan to use a Casement window to meet egress requirements within the dormers.



The current rear roof line does not allow for 2 dormers, only possibly one small one.

Also, attached is a letter from a certified engineer, explaining the poor condition the existing chimneys are in and the hazards posed by them. The letter explains they need to be removed, however if deemed historically necessary by the HPC we will rebuild to best match how they look today.

Daniel T. Sheehan, P.E.

168 Elm St

Jefferson, GA 30549

770/367/5310

February 1, 2025

Orlando A. Orochena III
Re: Chimneys
Address: 2981 N. Main St.
Kennesaw, GA 30144

Re: Chimneys – Your Residence

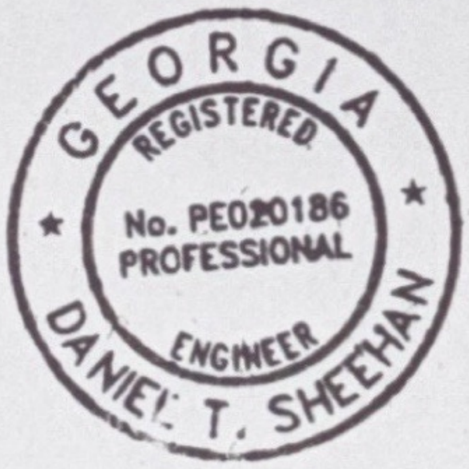
To Whom It May Concern:

There are two chimneys on the above referenced residence. Both service fireplaces that are not usable. The chimneys are constructed with brick with flues; the mortar has deteriorated so that the chimneys are weakened and are potential collapse hazards from wind. The chimneys as currently constructed also appear to be too short to meet current requirements. It is my professional opinion they should be removed.

If there are any questions or any additional information is required, please contact me.

Sincerely,

Daniel T. Sheehan, P.E.
State of GA #20186



2581

Item Report

TO: The Historic Preservation Commission

FROM: Darryl Simmons, Zoning Administrator

DATE: February 21, 2025

TITLE: **Addition: 2982 North Main Street**
Consideration of approval of a Certificate of Appropriateness application submitted by Andrew Mackey for an addition to the existing house located at 2982 N. Main Street. Case #COA2025-04

Summary:

Recommendation:

Fiscal Impact:

Attachments:
1. COA2025-04_2982 N Main Street_Application Packet

CERTIFICATE OF APPROPRIATENESS APPLICATION

☑ Application Fee: $50.00 ☐ Demolition Fee: $150.00

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A Certificate of Appropriateness (COA) shall be obtained from the **HPC** prior to the issuance of a building permit. The **HPC** shall consider a variety of issues in rendering its decision including, but not limited to the following:

a. The surrounding development
b. The best interest of the community
c. Previous studies undertaken by the City as well as the standards contained herein.

Application for signage to include

☐ Material Specifications
☐ Drawing of Sign with Dimensions and Colors to be used
☐ Façade detail of fonts

Application for landscaping to include

☐ Variety of trees and shrubs
☐ Indicate size and location of plantings

Application for exterior renovations and additions to include

☐ Existing conditions site plan depicting location of addition in relation to the existing property
☐ Existing floor plan of building
☐ Proposed floor plan of building including portions not to be altered
☐ Elevations of all exterior façade of addition including relationship to existing building
☐ Detail of trim to be utilized on façade
☐ Manufacturer's specifications for windows, doors and lighting that will be installed-including a photograph or sketch
☐ Photographs of all existing facades; existing structures adjacent to property; and views from the façade to be altered

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United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

1. **NAME OF APPLICANT:** Andrew Mackey
   - [x] Owner
   - [ ] Other
   - [ ] Other, please specify _____

APPLICANT MAILING ADDRESS: 2982 N. Main St

_____

(Home#)_____ (Cell#) [redacted] l) [redacted]

PROPERTY ADDRESS: 2982 N Main St

Land Lot 139 Tax Parcel 20013900070 Lot Size _____

Current zoning on property: R-20, Single Family Residential

2. **NAME OF ATTORNEY OR REPRESENTATIVE:**

_____

(Home#)_____ (Cell#) _____ (Email) _____

NAME OF OWNER:

Andrew Mackey

(Home#)_____ (Cell#) [redacted] mail) _____

3. **ACTIVITY**

- [ ] New Construction
- [ ] Demolition
- [ ] Awnings
- [ ] Fence
- [x] Repairs or Alterations
- [ ] Landscaping
- [x] Exterior Architectural Features
- [x] Exterior Environmental Feature Change
- [ ] Moving a Building
- [ ] Sign Erection
- [ ] Sign Placement *

*** (NOTE – Business License required before signage installation)**

Please describe your proposed work as simply and accurately as possible. Use the attached submittal criteria checklist to guide you in your description. Be sure to indicate materials to be used. Accurate drawings and photographs are required. (Use extra sheet, if necessary.) **Signed and sealed drawings from an architect, engineer or other design professional are required when construction of a new building, alterations and/or additions to existing structures are being made (Code 800.14.1).**

Create addition to back of existing house.

Hardie siding materials to match existing
Windows and Doors to match existing
Roof materials to match existing
Gutters to match existing
Paint to match existing

Important: This form must be completed before the Historic Preservation Commission will consider the approval of any material change to a property within a Historic District. This form, along with supporting documents must be filed with 1 Original (4) copies including color photos (excluding models, material and color samples, where one (1) is sufficient). The application and supporting documents are to be placed on a **CD in a PDF format**.

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2-03-2025

Signature of Applicant **Date**

2-03-2025

Signature of Owner **Date**

(If different from applicant, consenting to work to be performed on said property.

CERTIFICATE OF APPROPRIATENESS

APPROVAL SIGNATURES

Darryl Simmons (Application Deemed Complete)
Planning & Zoning Administrator Date: _____

(Application Administratively Approved)
HPC Chair Date: _____

- ☐ GRANTED
- ☐ DENIED Reason for denial _____
- ☐ REQUIRES HPC APPROVAL

Historic Preservation Commission consideration:

HEARING DATE: _____

ACTION BY COMMISSION:

- ☐ GRANTED
- ☐ DENIED

APPROVED WITH CONDITIONS:

_____

_____

DENIED: Reason for denial

_____

_____

(May re-submit within 60 days)

POSTPONED/TABLED _____

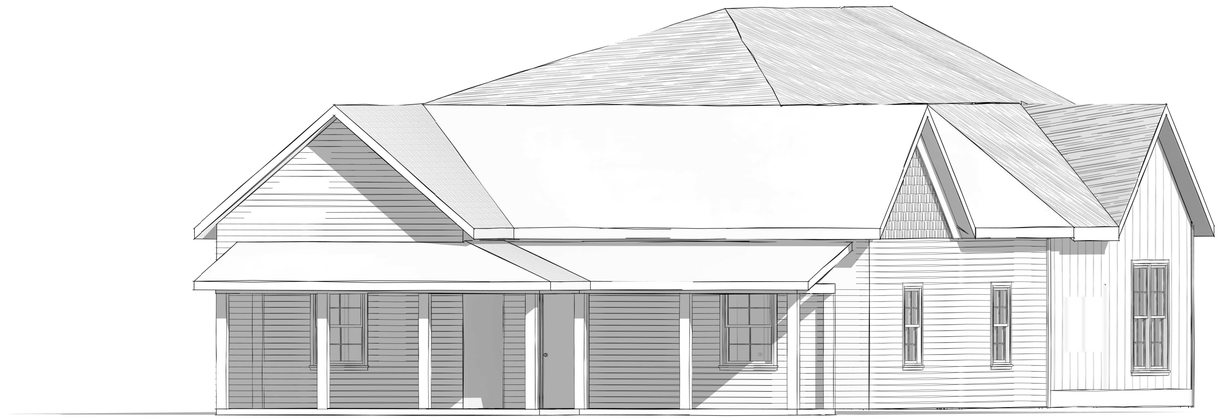
Signature, Historic Preservation Commission Date

Upon Administrative Approval scan and send document to Commission for review

MACKEY RESIDENCE

located at

2982 NORTH MAIN STREET
KENNESAW, GA 30144



SHEET INDEX

SHEET NUMBER	SHEET NAME
01 ARCHITECTURAL	
A-0.0	COVER SHEET
A-0.1	GENERAL INFORMATION
A-0.2	ARCHITECTURAL SITE PLAN
A-1.1	MAIN FLOOR PLAN
A-1.2	SECOND FLOOR & ROOF PLAN
A-2.1	EXTERIOR ELEVATIONS
A-2.2	EXTERIOR ELEVATIONS

EXISTING PHOTO OF HOUSE

GENERAL NOTES

1. It is the responsibility of the Contractor to insure all of the following:
   - Verify ALL dimensions PRIOR to construction
   - Verify compliance with ALL local building codes in or where structure will be built
   - Engineering aspects must incorporate actual site conditions - this plan indicates locations only
2. The architect assumes no liability for any home constructed from this plan. It is the responsibility of the builder of this plan to review and comply with the plans and notes carefully before and during the construction of the home.
3. The following notes are suggested minimum requirements only. Refer to and comply with all applicable building codes and consult with a local engineer for all structural requirements.
4. Contractor shall verify all conditions and dimensions at the building site before beginning construction. Any discrepancies of errors on the plans shall be reported to the architect for justification and/or correction before proceeding with the work. Contractors shall assume all responsibility for errors that are not reported.
5. Contact the architect if changes are necessary to these drawings with respect to size, spans, height, materials, configuration or loading.
6. Architect assumes no liability for any changes or modifications made to these plans by others.
7. All basement walls, footings, beams and columns shall be designed by a local structural engineer to meet all applicable building codes to accommodate actual site conditions.
8. All dimensions shall be read or calculated from the plans and never scaled.
9. All concrete, steel, and wood structural members shall meet all national, state and local building where applicable.
10. All dimensions at exterior walls are to outside face of stud unless otherwise noted. All dimensions at interior wall are to face of stud unless otherwise noted.
11. All angles are 45 degrees unless otherwise notes.

FRAMING NOTES

1. The number of treads and risers are based on the plate heights shown and an assumed floor thickness. Different framing systems and plate heights may require modifications to the stair design.
2. Number of treads and risers at exterior stairs shall be determined by the contractor according to actual site conditions.
3. Stud walls supporting two floors, ceiling, and roof loads shall consist of 2x6 at 16" on center; all other walls shall be 2x4 studs at 16" on center, unless otherwise noted. Stud walls up to 9'-0" shall be blocked solid at mid-height. Taller walls shall be blocked at third point.
4. Balloon frame all walls exceeding one story in height where lateral framing does not provide mid-height bracing. Provide adequate lateral stability of such walls by framing with 2x6 studs and/or LVL material.
5. All exterior inside and outside corners shall be braced as is required by applicable codes.
6. All columns, joists, rafters, trusses, engineered floor systems, and/or load-bearing framing shall be designed by a local structural engineer and shall extend down through all levels and terminate at the foundation at thickened slab, grade beam, or footing designed to carry the load.
7. All framed all dimensions are based on 2x4 studs unless otherwise noted.
8. Do not cut framing members for plumbing, electrical, mechanical, or other systems without reinforcing the member to its original capacity, or as is allowed by manufacturer.

FOUNATION NOTES

1. The foundation plan and details are illustrative and may not reflect your actual site conditions. It is strongly recommended that an investigative soils report be made to verify actual soil conditions. All foundations shall be designed to adequately support all loads as required based on actual soil conditions. Architect shall not be responsible for any structure as illustrated in these plans due to inadequate structural design by others.
2. All foundation and structural members shall be verified and stamped by an enigneer. The contractor is responsible for adjusting and verifying all structural details and conditions to meet all applicable building codes and to insure a quality and safe structure.
3. Framing shall be designed to carry all loads and shall extend down through the levels below to terminate at the foundation and be supported by a thickened slab, grade beam or footing designed to carry the load.
4. All footings to be below the frost line per local codes and must rest on undisturbed soil or engineered fill capable of handling the loads created by the building. Consult a local engineer for proper footing and reinforcing sizes.
5. All construction on fill soil shall be reviewed and approved by a registered geotechnical engineer.
6. Verify and locate all slab penetration for floor outlets, plumbing, etc. prior to pouring all slabs.

PROJECT TEAM

OWNER

Mackey Residence
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amackey89@gmail.com

ARCHITECT

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CODE ANALYSIS

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF THE FOLLOWING CODES AND ALL OTHER APPLICABLE LOCAL CODES,ORDINANCES, SUBDIVISION REGULATIONS AND COVENANTS, AND REQUIREMENTS:

INTERNATIONAL BUILDING CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020) (2022) (2024)
INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020) (2024)
INTERNATIONAL FIRE CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS
INTERNATIONAL PLUMBING CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020) (2022) (2023) (2024)
INTERNATIONAL MECHANICAL CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020) (2024)
INTERNATIONAL FUEL GAS CODE, 2018 EDITION, WITH GEORGIA AMENDMENTS (2020) (2022)
NATIONAL ELECTRICAL CODE, 2020 EDITION (2021)
INTERNATIONAL ENERGY CONSERVATION CODE, 2015 EDITION, WITH GEORGIA SUPPLEMENTS AND AMENDMENTS (2020) (2022) (2023)
2018 NFPA 101 LIFE SAFETY CODE
2010 ADA STANDARDS

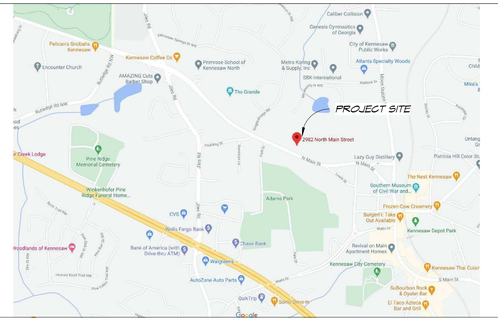
SCOPE OF WORK

NEW TWO STORY RESIDENCE W/ CRAWL SPACE

SQUARE FOOTAGE

HEATED - MAIN HOUSE	EXISTING	ADDITION
1ST FLOOR:	1,604 SF	500 SF
UPPER LEVEL:	0 SF	400 SF
TOTAL HEATED:	1,604 SF	2,504 SF
UNHEATED - MAIN HOUSE		
FRONT PORCH:	254 SF	

VICINITY MAP



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DRW:	R.B.
CHK:	K.W.

MACKEY RESIDENCE
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KENNESAW, GA 30144

COVER SHEET

A-0.0

DATE: 12/17/2024

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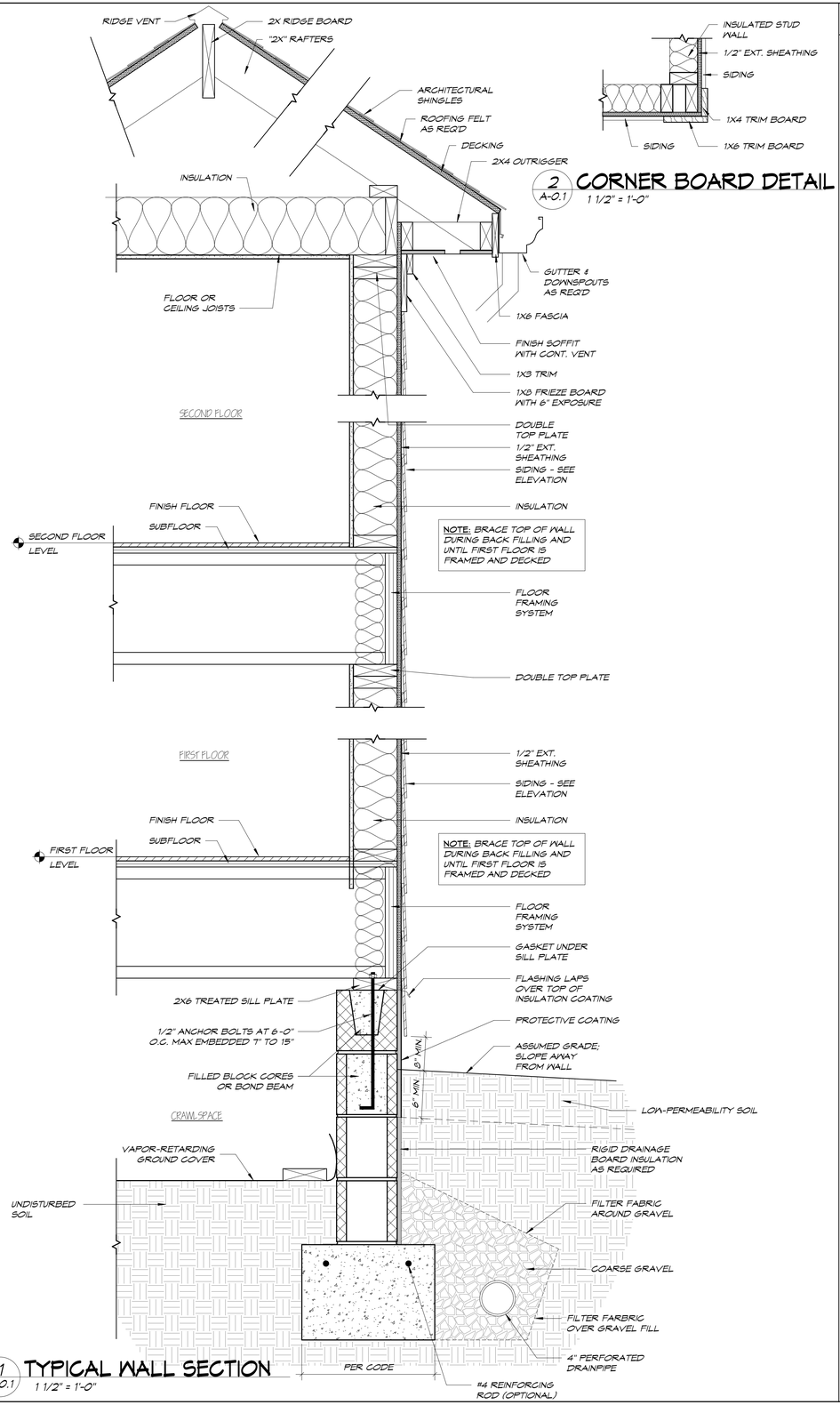

1 A-0.1 TYPICAL WALL SECTION

1 1/2" = 1'-0"

2 A-0.1 CORNER BOARD DETAIL

1 1/2" = 1'-0"

ABBREVIATIONS LIST

A	
A.B.	ANCHOR BOLT
A.C.T.	ACOUSTICAL CEILING TILE
A.F.F.	ABOVE FINISH FLOOR
ACOUST.	ACOUSTICAL
ADJ.	ADJUSTABLE
AGG.	AGGREGATE
ALT.	ALTERNATE
ALUM.	ALUMINUM
ANOD.	ANODIZED
APPLIC.	APPLICABLE
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASP.	ASPHALT
AUTO.	AUTOMATIC
AUX.	AUXILIARY
B	
B.L.	BORROWED LITE
B.S.	BOTH SIDES
B.U.R.	BUILT-UP ROOF
BD.	BOARD
BIT.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
BR.	BRONZE
BRDG.	BRIDGING
BRG.	BEARING
BRK.	BRICK
BTWN.	BETWEEN
C	
C.C.	CENTER TO CENTER
C.G.	CORNER GUARD
C.I.	CAST IRON
C.I.P.	CAST IN PLACE
C.J.	CONTROL JOINT
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CASED OPENING
C.T.	CERAMIC TILE
C.U.	CONDENSER UNIT
CAB.	CABINET
CEM.	CEMENT
CHAM.	CHAMFER
CL.	CENTER LINE
CLG.	CEILING
CLK.	CAULKING
CLO.	CLOSET
COL.	COLUMN
COMB.	COMBINATION
COMP.	COMPOSITION
CON.	CONNECTION
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
COR.	CORRIDOR
CTR.	CENTER
D	
D	DRYER
D.A.	DOUBLE ACTING
D.C.J.	DRYWALL CONTROL JOINT
D.F.	DRINKING FOUNTAIN
D.S.	DOWN SPOUT
D.V.	DRYER VENT
DBL.	DOUBLE
DEPT.	DEPARTMENT
DIA.	DIAMETER
DIAG.	DIAGONAL
DIFF.	DIFFUSER
DIM.	DIMENSION
DISP.	DISPENSER
DIV.	DIVIDER/DIVISION
DN.	DOWN
DTL.	DETAIL
DWG.	DRAWING
E	
E.	EAST
E.F.	EXHAUST FAN
E.H.D.	ELECTRIC HAND DRYER
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
E.J.	EXPANSION JOINT
E.J.C.	EXPANSION JOINT COVER
E.P.	ELECTRIC PANEL
E.S.	EACH SIDE
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
ENTR.	ENTRANCE
EQ.	EQUAL
EQPT.	EQUIPMENT
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F	
F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.E.B.	FIRE EXT. ON BRACKET
F.E.C.	FIRE EXT. CABINET
F.F.E.	FINISHED FLOOR ELEVATION
F.H.C.	FIRE HOSE CABINET
F.I.	X-RAY FILM ILLUNINATOR
F.O.C.	FACE OF CONCRETE
F.O.W.	FACE OF WALL
F.P.	FIREPLACE
F.R.	FIRE RESISTIVE
F.S.	FULL SIZE
FIN.	FINISH
FIN. E.	FINISHED EDGE
FIN. FLR.	FINISH FLOOR
FIN. SLAB	FINISH SLAB
FLASH.	FLASHING
FLR.	FLOOR
FLUOR.	FLUORESCENT
FT.	FOOT/FEET
FTG.	FOOTING
FURN.	FURNISH
FURR.	FURRING
FUT.	FUTURE
G	
G.B.	GRAB BAR
G.I.	GALVANIZED IRON
GA.	GAUGE
GALV.	GALVANIZED
GEN.	GENERAL
GL.	GLASS
GND.	GROUND
GR.	GRADE
GYP. BD.	GYPSUM WALL BOARD
H	
H.	HIGH
H.B.	HOSE BIB
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
HDW.	HARDWARE
HDWD.	HARDWOOD
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
I	
I.D.	INSIDE DIAMETER
I.P.	IRON PIPE
INFO.	INFORMATION
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
J	
J.V.	JOB VERIFY
JAN.	JANITOR
JST.	JOIST
JST. BRG.	JOIST BEARING
JT.	JOINT
K	
K.D.	KNOCK DOWN
K.O.	KNOCK OUT
L	
L.	LINEN CLOSET
LAD.	LADDER
LAM.	LAMINATE
LAV.	LAVATORY
LB.	POUND
LKR.	LOCKER
LT.	LIGHT
LVL.	LEVEL
LVR.	LOUVER
LYX.	LIGHTWEIGHT
M	
M.B.	MARKER BOARD
M.C.J.	MASONRY CONTROL JOINT
M.O.	MASONRY OPENING
MACH.	MACHINE
MAS.	MASONRY
MAT.	MATERIAL
MAX.	MAXIMUM
MDF.	MEDIUM DENSITY FIBERBOARD
MECH.	MECHANICAL
MED.	MEDIUM
MEMB.	MEMBERANE
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
MTD.	MOUNTED
MTL.	METAL
MUL.	MULLION
N	
N.	NORTH
N.I.	NOT INCLUDED
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
NOM.	NOMINAL
O	
O.A. DUCT	OUTSIDE AIR DUCT
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OVER HEAD
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
OZ.	OUNCE
P	
P.	PANTRY CLOSET
P.C.	PRECAST
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
P.T.D.	PAPER TOWEL DISPENSER
P.T.D./R.	PAPER TOWER DISP. / RECEPT.
P.V.C.	POLYVINYL CHLORIDE
PERF.	PERFORATED
PL.	PROPERTY LINE
PLAM.	PLASTIC LAMINATE
PLAS.	PLASTIC
PR.	PAIR
PROP.	PROPERTY
PTN.	PARTITION
PVMT.	PAVEMENT
PWD.	PLYWOOD
Q	
Q.T.	QUARRY TILE
R	
R.	RISER
R.D.	ROOF DRAIN
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
RAD.	RADIUS
REF.	REFRIGERATOR
REG.	REGISTER
REINF.	REINFORCEMENT
REQD.	REQUIRED
RESIL.	RESILIENT
RET.	RETAINING
REV.	REVISION
RF.	ROOF(ING)
RM.	ROOM
RTN.	RETURN
S	
S.	SOUTH
S.C.	SOLID CORE
S.D.	SOAP DISPENSER
S.F.	SQUARE FOOT
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKI RECEPTICLE
S.S.	STAINLESS STEEL
SAN.	SANITARY
SCHED.	SCHEDULE
SEC.	SECTION
SH.	SHELF
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SPL. BLK.	SPLASH BLOCK
SQ.	SQUARE
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENSION/SUSPENDED
SYN.	SYNTHETIC
SYS.	SYSTEM
T	
T & G	TONGUE AND GROOVE
T.	TREAD
T.O.C.	TOP OF CURB
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PAVEMENT
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.PL.	TOP OF PLATE
T.S.	TUBULAR STEEL
T.V.	TELEVISON
T/B	TOP AND BOTTOM
TELE.	TELEPHONE
TEMP.	TEMPERED
TER.	TERRAZO
THD.	THRESHOLD
THK.	THICK
TYP.	TYPICAL
U	
U.L.	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS OTHERWISE NOTED
UNF.	UNFINISHED
UR.	URINAL
UTIL.	UTILITY
V	
V.C.T.	VINYL COMPOSITION TILE
V.F.	VENTILATION FAN
V.I.F.	VERIFY IN FIELD
V.T.R.	VENT THRU ROOF
V.W.C.	VINYL WALL COVERING
VAN.	VANITY
VERT.	VERTICAL
VEST.	VESTIBULE
VIN.	VINYL
W	
W	WASHER
W.	WEST
W.C.	WATER CLOSET
W.H.	WATER HEATER
W.I.C.	WALK IN CLOSET
W.P.	WATERPROOF
W.R.	WATER RESISTIVE
W.W.M.	WELDED WIRE MESH
W/	WITH
W/O	WITH OUT
WD.	WOOD
WSCT.	WAINSCOT
WT.	WEIGHT

DRAWING SYMBOLS LEGEND

SHEET NUMBER

A-1.0

SHEET NUMBER

DISCIPLINE LETTER

VIEW TITLE

GRAPHIC SHEET POSITION — GRAPHIC DESCRIPTION

A1	View Name
A-1.1	1/8" = 1' - 0" | A1 / A-2.1

SHEET NUMBER — GRAPHIC SCALE — REFERENCE VIEW

NORTH ARROW

TRUE NORTH

GRAPHIC SCALE

0 2' 4' 8'

SCALE: 1" = 4'-0"

COLUMN CENTERLINE

X

EXISTING COLUMN CENTERLINE

X

SCOPE LEGEND

NEW WALL

EXISTING WALL

DEMOLISHED WALL

NOT IN SCOPE

ROOM NAME AND NUMBER

ROOM NAME

XXXX

DOOR TAG AND NUMBER

DOOR WIDTH X X DOOR HEIGHT

DEMOLITION NOTES TAG

D-X

NOTE, SHEET NOTE

X

EQUIPMENT AND FURNITURE TAG

XXX

MATCH LINE

MATCH LINE

SEE XX/X-XXX

SHEET NUMBER ON WHICH CONTUNATION IS FOUND

PARTITION TAG

XXX

WINDOW TYPE SYMBOL

WINDOW TYPE

WINDOW HEIGHT

DH3030

WINDOW WIDTH

BUILDING SECTION TAG

1 A-100 — 1' A-100

SECTION DESIGNATION

SHEET NUMBER

DETAIL/WALL SECTION TAG

1 A-100

SECTION DESIGNATION

SHEET NUMBER

PARTIAL PLAN AND DETAIL TAG

1 A-100

PLAN OR DETAIL DESIGNATION

SHEET NUMBER

EXTERIOR ELEVATION TAG

1 A-100

ELEVATION DESIGNATION

SHEET NUMBER

INTERIOR ELEVATION TAG

1 2 3 4 A-500

ELEVATION DESIGNATION

SHEET NUMBER

DRAWING REVISION

3.

VERTICAL ELEVATION

LEVEL 2 FFE 18'-6"

SPOT ELEVATION

SECOND FLOOR EL. 18'-6"

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CHK	K

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GENERAL INFORMATION

A-0.1

DATE 12/17/2024

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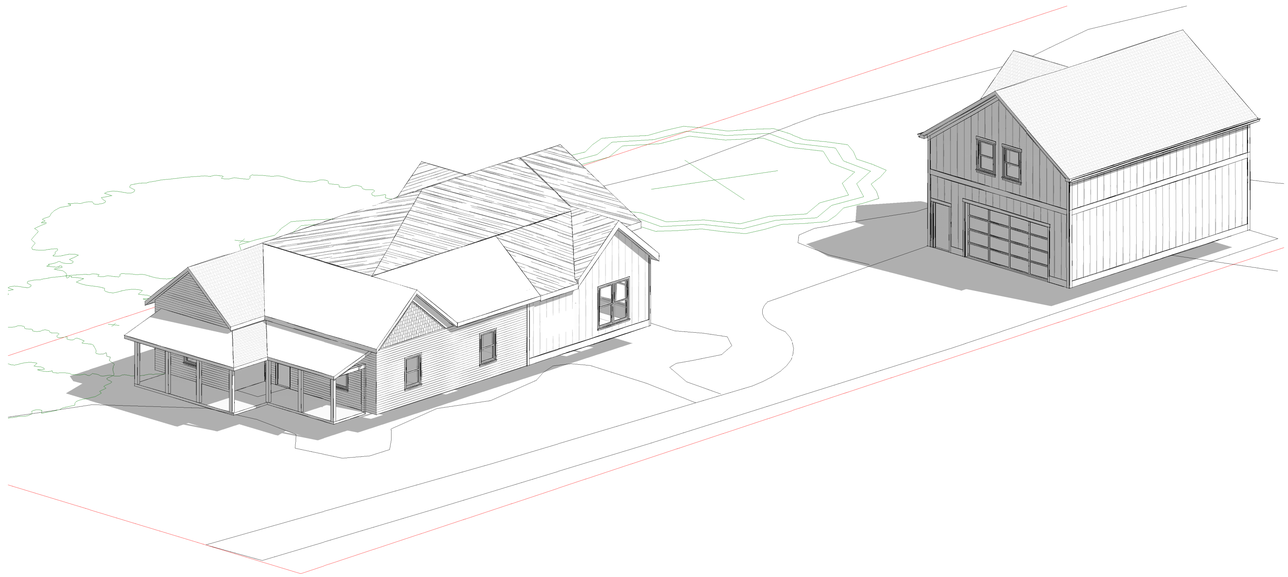

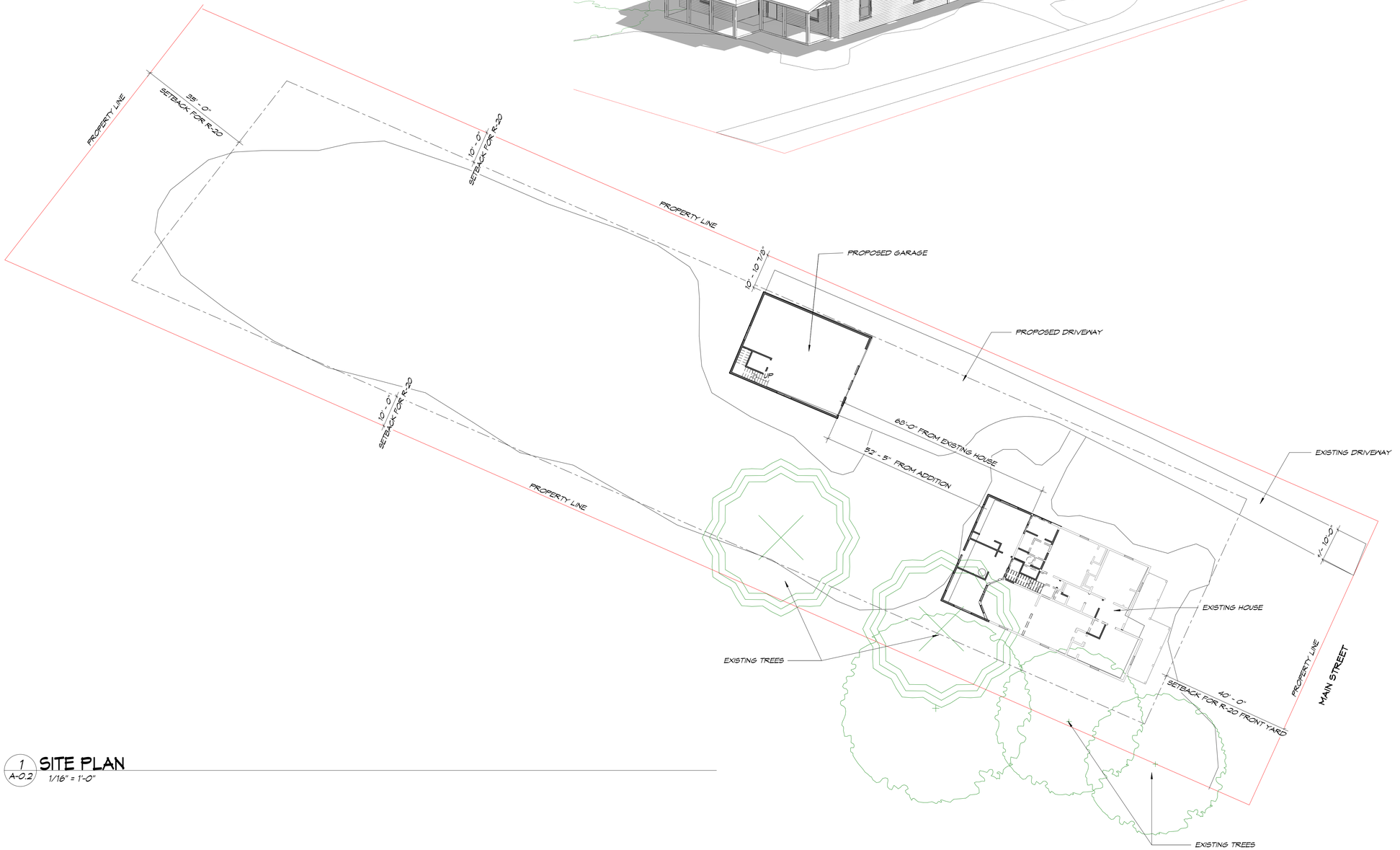

1 A-0.2 **SITE PLAN**
1/16" = 1'-0"

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ARCHITECTURAL SITE PLAN

A-0.2

DATE 12/17/2024

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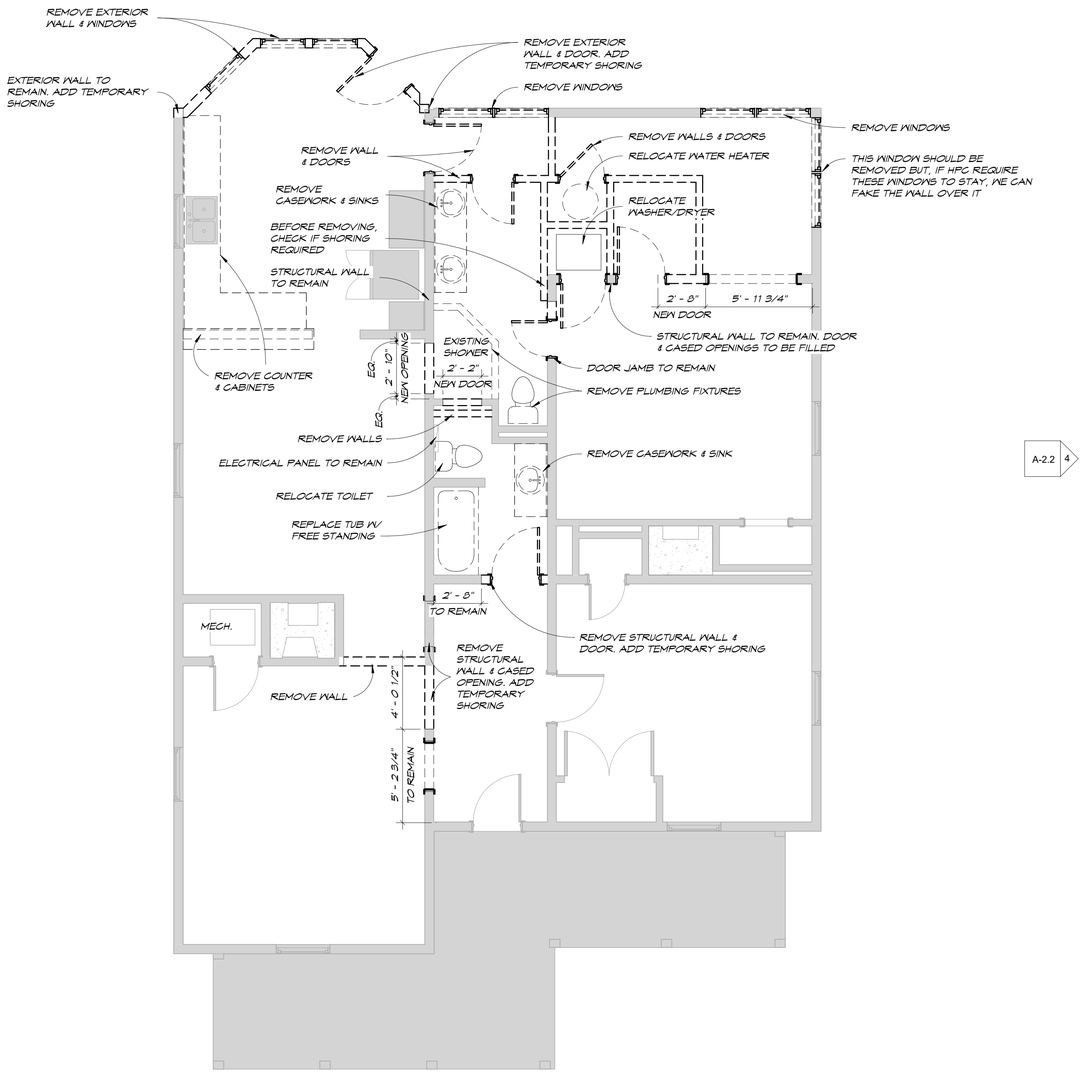
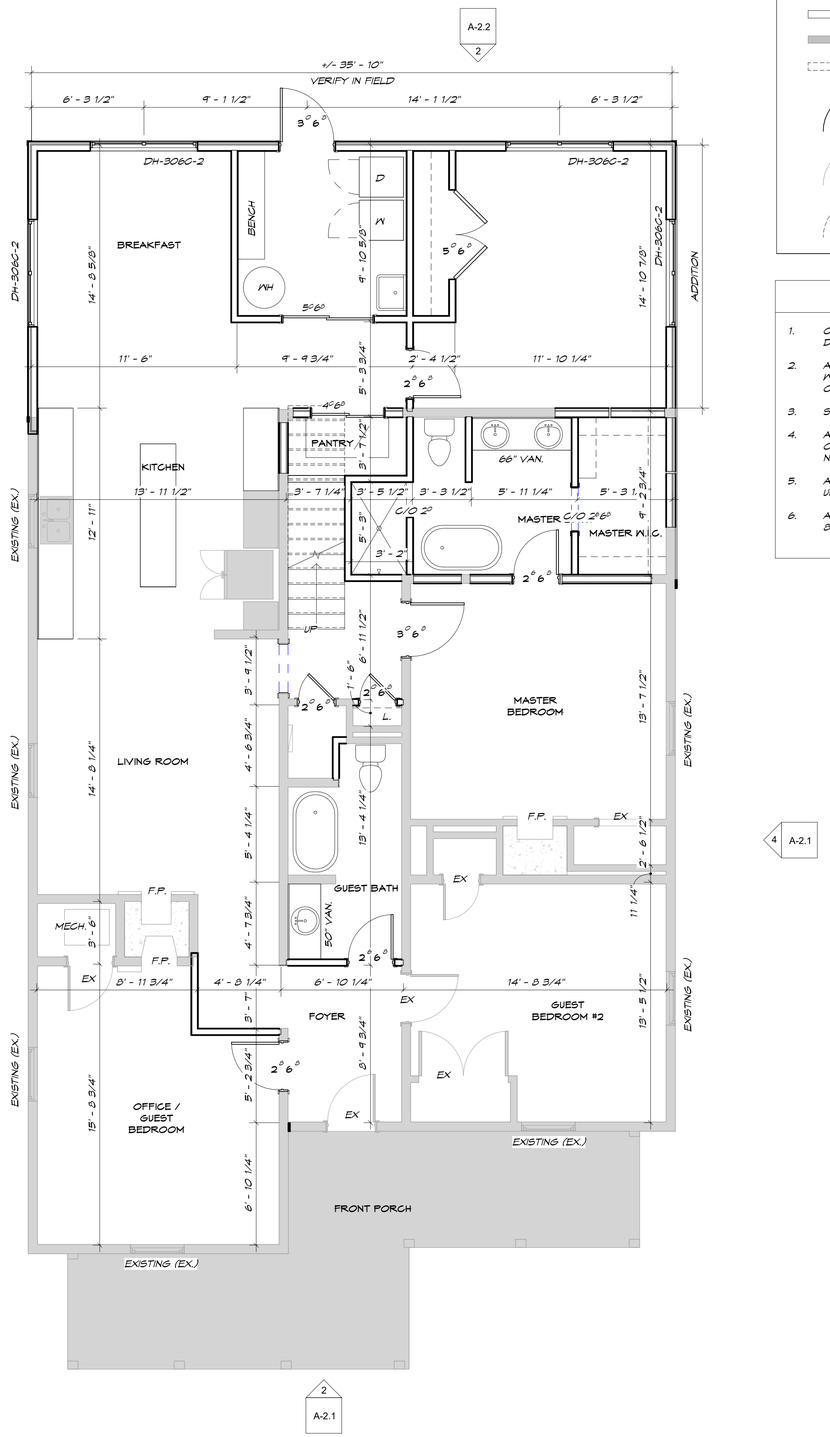
GENERAL DEMOLITION NOTES

1. CONTRACTOR TO CONFIRM ALL DIMENSIONS WITH EXISTING CONDITIONS
2. COORDINATE PHASING OF DEMOLITION WITH OWNER
3. COORDINATE EXTENT OF DEMO W/ NEW WORK.
4. PROTECT ALL EXISTING WORK TO REMAIN AND SHORE TEMPORARY STRUCTURES DURING CONSTRUCTION.
5. PROTECT EXISTING FINISHES TO REMAIN WITHIN CONSTRUCTION AREA. PATCH AND REPAIR FINISHES AS REQUIRED.
6. CAP AND LABEL ALL WIRING OF ELECTRICAL OUTLETS AFFECTED BY REMOVAL OF EXISTING WALLS. SEE ELECTRICAL DRAWINGS.
7. PROVIDE CLEAR MEANS OF EGRESS THROUGHOUT ALL PHASES OF CONSTRUCTION.
8. ALL MATERIALS, FIXTURES, CASENORK, DOORS, ETC. TO BE DISPOSED OF PER OWNERS REQUIREMENTS.
9. DO NOT REMOVE ANY STRUCTURAL COLUMNS, WALLS OR SUPPORTS. REMOVE ONLY INTERIOR PARTITIONS, PLUMBING FIXTURES, CASEMENT WORK, MILLWRK AND CEILINGS. IF THERE IS ANY CONCERN WHETHER AN ELEMENT IS STRUCTURAL, CONTACT ARCHITECT IMMEDIATELY FOR VERIFICATION.
10. COORDINATE REMOVAL OF OLD/NOT USED EQUIPMENT, CABLING, LOW-VOLTAGE WIRING, FIXTURES AND MISCELLANEOUS ITEMS WITH OWNERS REP.



A-2.2 4



FLOOR PLAN LEGEND

- NEW WALL
- EXISTING WALL
- DEMO WALL
- NEW DOOR
- EXISTING DOOR
- DEMO DOOR

GENERAL NOTES

1. CONTRACTOR TO CONFIRM ALL DIMENSIONS WITH EXISTING CONDITIONS
2. ALL FRAMING WALLS TO BE CONSTRUCTED W/ 2X4 ND STUDS #2 OR BETTER AT 16" O.C. UNLESS NOTED OTHERWISE
3. STAIRS ARE DESIGNED @ 10" TREAD DEPTH
4. ALL INTERIOR DOORS TO BE CENTERED OR 6" OFF THE WALL UNLESS OTHERWISE NOTED
5. ALL MAIN LEVEL CEILINGS TO BE 10' UNLESS NOTED OTHERWISE
6. ALL NEW MAIN LEVEL WINDOW HEADERS @ 8'-0" ABOVE FINISH FLOOR U.N.O.

1 A-1.1 EXISTING / DEMO MAIN FLOOR PLAN
1/4" = 1'-0"

2 A-1.1 MAIN FLOOR PLAN
1/4" = 1'-0"

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CHK	K

MAIN FLOOR PLAN

A-1.1

DATE 12/17/2024

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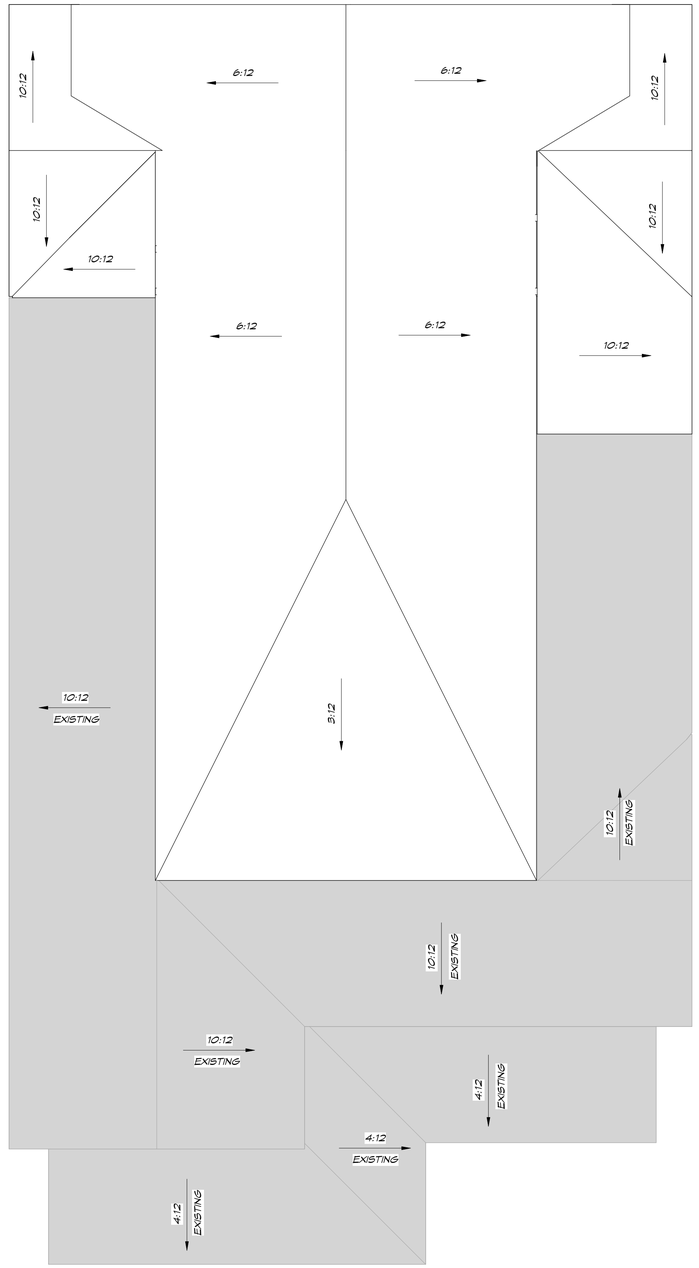
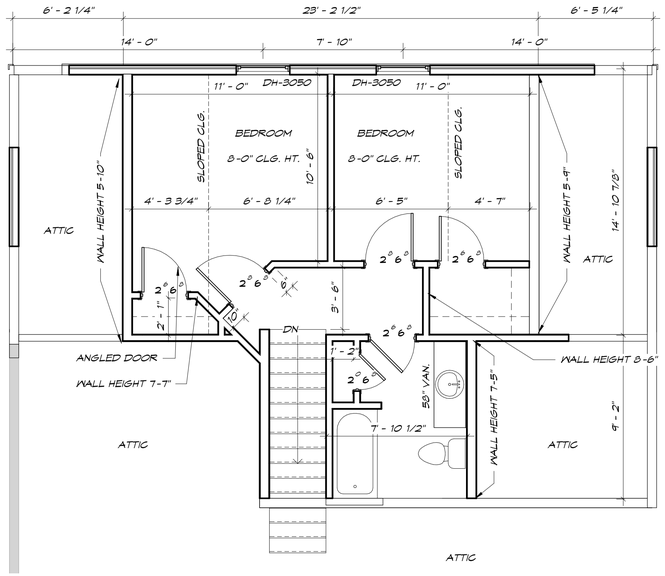
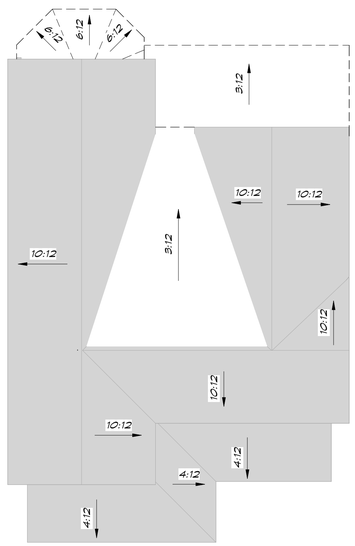


2 A-1.2 **ROOF PLAN**
1/4" = 1'-0"



1 A-1.2 **SECOND FLOOR PLAN**
1/4" = 1'-0"



3 A-1.2 **ROOF PLAN EXISTING**
1/8" = 1'-0"

FLOOR PLAN LEGEND

- NEW WALL
- EXISTING WALL
- DEMO WALL
- NEW DOOR
- EXISTING DOOR
- DEMO DOOR

GENERAL NOTES FOR SECOND FLOOR

1. CONTRACTOR TO CONFIRM ALL DIMENSIONS WITH EXISTING CONDITIONS
2. ALL FRAMING WALLS TO BE CONSTRUCTED W/ 2X4 NO STUDS #2 OR BETTER AT 16" O.C. UNLESS NOTED OTHERWISE
3. STAIRS ARE DESIGNED @ 10" TREAD DEPTH
4. ALL INTERIOR DOORS TO BE CENTERED OR 6" OFF THE WALL UNLESS OTHERWISE NOTED
5. ALL SECOND FLOOR CEILINGS TO BE 7'-0" VAULTED UNLESS NOTED OTHERWISE
6. ALL NEW SECOND FLOOR WINDOW HEADERS @ 7'-0" ABOVE FINISH FLOOR U.N.O.

CSC DESIGN, INC.
ARCHITECTS & ENGINEERS
135 P. Rickman Industrial Dr.
Suite 100, Canton, GA 30115
(770) 345-2579

JOB 20-060
DRN R
CHK K

MACKEY RESIDENCE

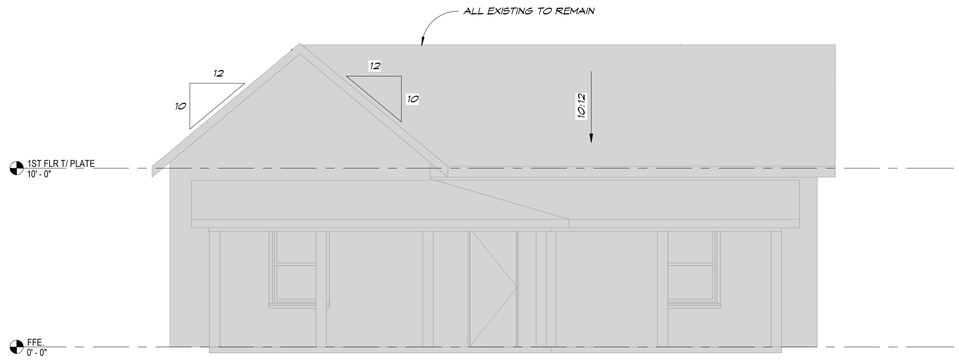
2982 NORTH MAIN STREET
KENNESAW, GA 30144

SECOND FLOOR & ROOF PLAN

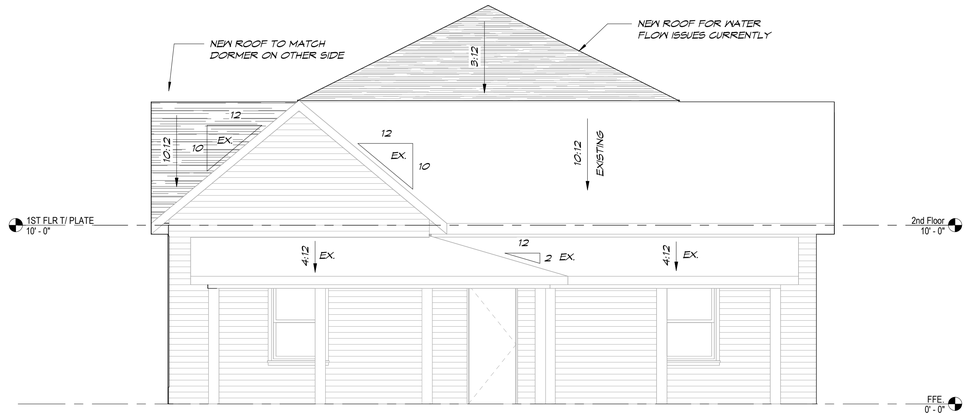
A-1.2

DATE 12/17/2024

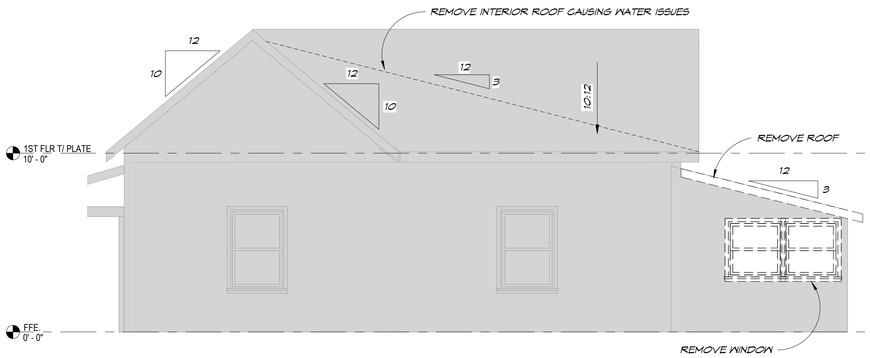
Copyright CSC DESIGN,



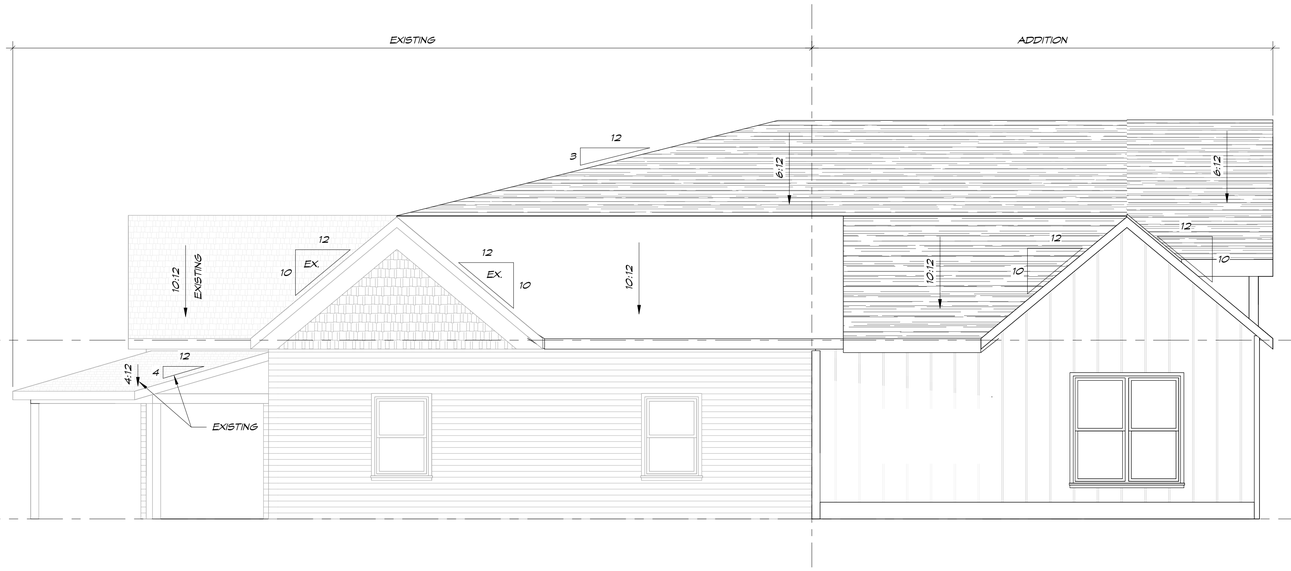
1 A-2.1 SOUTH ELEVATION (FRONT) - EXISTING / DEMO
1/4" = 1'-0"



2 A-2.1 SOUTH ELEVATION (FRONT)
1/4" = 1'-0"



3 A-2.1 WEST ELEVATION (RIGHT) - EXISTING / DEMO
1/4" = 1'-0"



4 A-2.1 WEST ELEVATION (RIGHT)
1/4" = 1'-0"

CSC DESIGN, INC.
ARCHITECTS & ENGINEERS
135 P. Rickman Industrial Dr.
Suite 100, Canton, GA 30115
(770) 345-2579

JOB 20-080
DRW R
CHK K

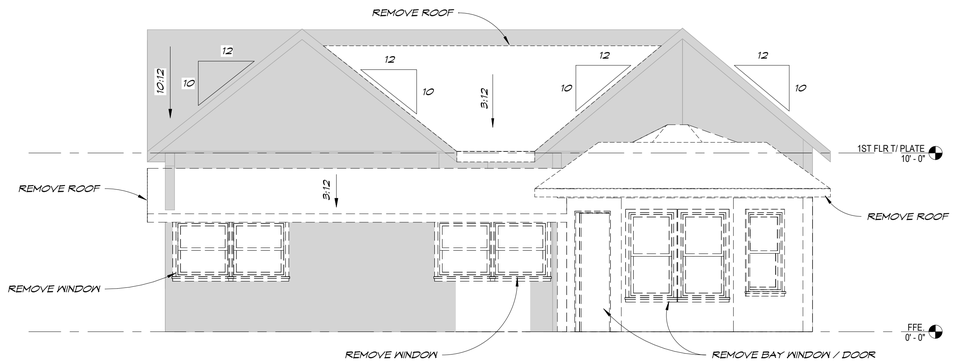
MACKEY RESIDENCE
2982 NORTH MAIN STREET
KENNESAW, GA 30144

EXTERIOR ELEVATIONS

A-2.1

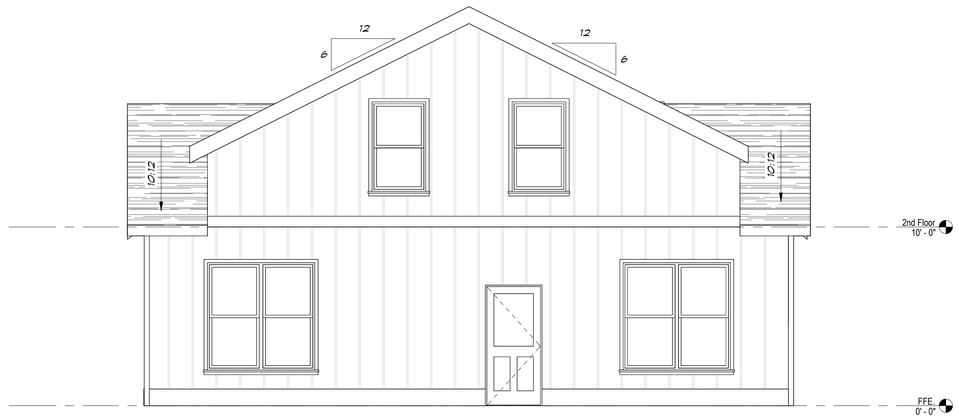
DATE 12/11/2024

Copyright CSC DESIGN,



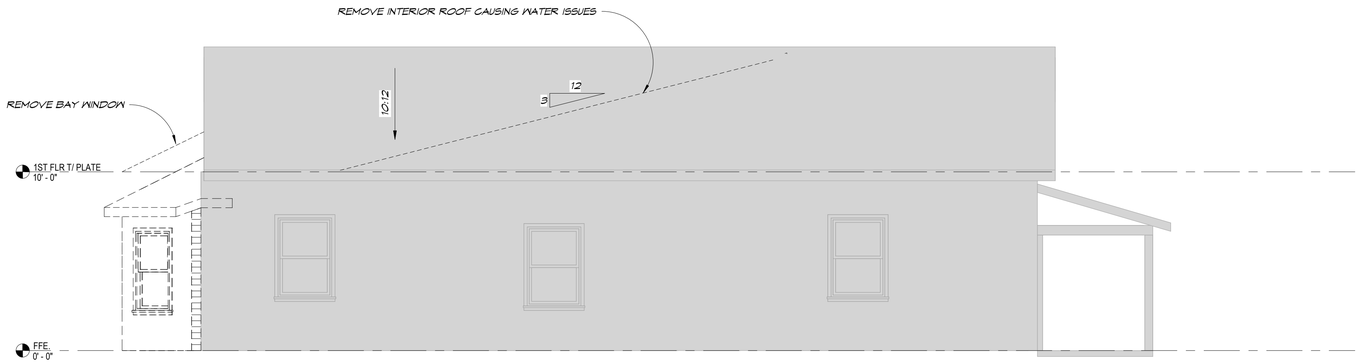
1 A-2.2 NORTH ELEVATION (BACK) - EXISITNG / DEMO

1/4" = 1'-0"



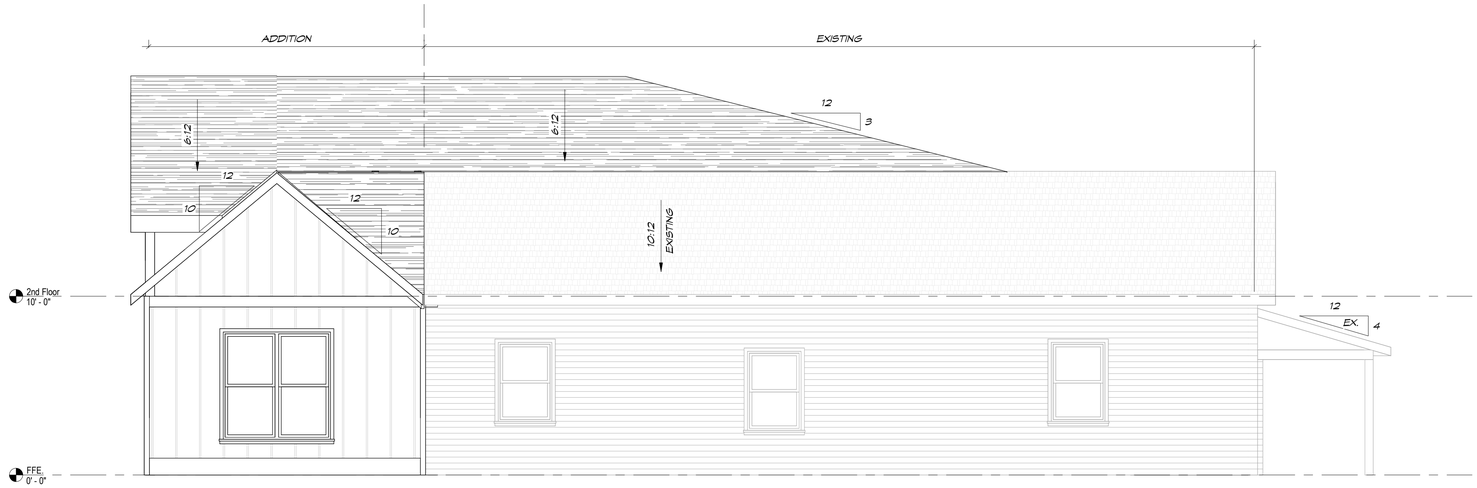
2 A-2.2 NORTH ELEVATION (BACK)

1/4" = 1'-0"



3 A-2.2 EAST ELEVATION (LEFT) - EXISTING / DEMO

1/4" = 1'-0"



4 A-2.2 EAST ELEVATION (LEFT)

1/4" = 1'-0"

CSC DESIGN, INC.
ARCHITECTS & ENGINEERS
135 P. Rickman Industrial Dr.
Suite 100, Canton, GA 30115
(770) 345-2579

JOB	20-080
DRW	R
CHK	K

MACKEY RESIDENCE

2982 NORTH MAIN STREET
KENNESAW, GA 30144

EXTERIOR ELEVATIONS

A-2.2

DATE 12/17/2024

Copyright CSC DESIGN,

MERRY CHRISTMAS

Item Report

TO: The Historic Preservation Commission

FROM: Darryl Simmons, Zoning Administrator

DATE: February 21, 2025

TITLE: **Central Business District: 2615 & 2681 South Main Street**
Consideration to review a Central Business District (CBD) project application to construct a mixed-use development consisting of multi-family apartments and 2,500 sq. ft. of retail located at 2615 & 2681 South Main Street (Parcel # 20016700140 & 20016700990). Case #CBD2025-01

Summary:

Recommendation:

Fiscal Impact:

Attachments:
1. CBD2025-01_2615 & 2681 S. Main St_CBD Application Packet

GARVIS L. SAMS, JR.
(RETIRED)
JOEL L. LARKIN
PARKS F. HUFF

SAMS, LARKIN & HUFF
A LIMITED LIABILITY PARTNERSHIP
SUITE 100
376 POWDER SPRINGS STREET
MARIETTA, GEORGIA 30064-3448

770•422•7016
TELEPHONE
770•426•6583
FACSIMILE

October 28, 2024

VIA EMAIL:

Mr. Darryl Simmons, Planning & Zoning Administrator
City of Kennesaw
2529 J. O. Stephenson Avenue
Kennesaw, GA 30144

Re: Central Business District Project Approval Application of Highpoint Acquisitions, LLC - a 7.096-Acre Tract located in Land Lots 167, 20th District, 2nd Section

Dear Darryl:

As you know, this firm has been engaged by and represents Highpoint Acquisitions, LLC ("Highpoint") concerning the above-captioned Central Business District Project ("CBD") Approval Application. In that regard, attached please find the completed application and the following supporting documentation:

1. A copy of the Warranty Deed that reflects the current property owner.

2. A copy of the South Main Street Mixed-Use Phase II Development Business Plan.

3. One (1) copy of the site plan for the proposed project which was submitted at the time of filing the Rezoning and Variance Applications.

Please do not hesitate to contact me should you have any questions or need any additional information or documentation.

Sincerely,

SAMS, LARKIN & HUFF, LLP

Parks F. Huff
phuff@samslarkinhuff.com

PFH/jac
Attachments

VIA HAND DELIVERY & EMAIL

cc: Dr. Jeff Drobney, City Manager (via email w/attachments)
Mr. Luke Howe, Economic Development Director (via email w/attachments)
Ms. Rashida Williamson, Zoning Clerk (via email w/attachment)
Mr. Ricky Stewart, Public Works Director (via email w/attachments)
Mr. Elliot Van Dyke, Highpoint (via email w/attachments)
Mr. Robert Jordan, III, Highpoint (via email w/attachments)

CENTRAL BUSINESS DISTRICT
PROJECT APPROVAL

Date Received 10/29/24
Staff's Initials CMC

Is this property located within the Kennesaw Historic District (yes) _____ (no) X ?

A minimum of one consultation to review project concept and factors to consider in the planning & design phase prior to initial site plan and architectural review, submission and hearing before the Mayor and Council is mandatory.

Date Received _____ Staff's Initials _____

Procedures for filing for CBD Approval:

1. **Original application completed, signed and notarized**
2. **Application must be filled out completely, signed and returned to the Zoning Administrator**
3. **Copy of Business Plan**
4. **Copy of warranty deed that reflects the current property owner**
5. **Copy of site plan with proposed project consistent with the Kennesaw Design Guidelines**
6. **Completed application and supporting documents listed on one Flash Drive or email to dsimmons@kennesaw-ga.gov in PDF format**

CBD Approval Process:

1. **Submittal to KDDA for review and comment**
2. **Submittal to HPC for Certificate of Appropriateness (if in HPC district) not in HPC district comments only required from HPC**
3. **Review/ Approval by Mayor and Council**

PROPERTY ADDRESS 2615 and 2681 South Main Street

Land Lot 167 Tax Parcel 20016700140 (2765 South Main Street/ CBD) and 20016700990 (2615 South Main Street/LI) Present Zoning CBD & LI - CBD is requested for PIN 20016700990-2615 South Main Street

Proposed Project for Property

Mixed-Use Development consisting of 300 multi-family apartments and 2,500 square feet of retail. The Development will be a combination of two parcels and will become Phase II of the applicant's development across South Main Street.

Add additional sheet if necessary

APPLICANT Highpoint Acquisitions, LLC

APPLICANT EMAIL [redacted]

Applicant address [redacted]

(Fax #)_____ (Work #) [redacted] (Cell #) _____

HANNAH HURLEY
Notary Public - State of Georgia
Gwinnett County
My Commission Expires Mar 14, 2028

Applicant Signature _____

Signed, sealed and delivered in presence of: _____ 10/28/2024
Notary **Date**

PIN 20016700140 (2765 South Main Street) Old South Village, LLC
TITLEHOLDER: PIN 20016700990 (2615 South Main Street) Richards-Gilstrap **Telephone:** _____
Holdings, LLC

Address: _____

Signature SEE ATTACHED SIGNATURE PAGES

Signed, sealed and delivered in presence of: _____
Notary **Date**

Z\P&Z FORMS\Applications 2020

CENTRAL BUSINESS DISTRICT PROJECT

CBD Project Administratively approved by:

_____
Darryl Simmons, Planning & Zoning Administrator

Date: _____

☐ APPROVED

☐ REQUIRES KDDA APPROVAL

☐ REQUIRES HPC APPROVAL

☐ MAYOR AND COUNCIL

KENNESAW DOWNTOWN DEVELOPMENT AUTHORITY:

Hearing Date: _____

Recommendation: see attached minutes

_____
Signature Kennesaw Downtown Development Authority:

HISTORIC PRESERVATION COMMISSION:

Hearing Date: _____

Recommendation: see attached minutes

_____
Signature Historic Preservation Commission

KENNESAW MAYOR AND COUNCIL:

Hearing Date: _____ see attached minutes

CAMPAIGN DISCLOSURE REPORT[1] BY APPLICANT[2]

Each applicant must complete a separate form

Has the applicant made, within two (2) years immediately preceding the filing of this application for rezoning, campaign contributions aggregating two hundred fifty dollars ($250.00) or more or made gifts having in the aggregate a value of two hundred fifty dollars ($250.00) or more to a member or members of the Mayor and Council or Planning Commission who will consider the application?

No

If "Yes," the applicant and the attorney representing the applicant must file a disclosure report with the Mayor and Council of the City of Kennesaw within ten (10) days after this application is first filed.

Please supply the following information that will be considered as the required disclosure:

The name of the member(s) of the Mayor and Council or Planning Commission to whom the campaign contribution or gift was made:

_____

_____

The dollar amount of each campaign contribution made by the applicant to the member(s) of the Mayor and Council or Planning Commission during the two (2) years immediately preceding the filing of this application and the date of each such contribution:

_____

_____

An enumeration and description of each gift having a value of two hundred fifty dollars ($250.00) or more made by the applicant to the member(s) of the Mayor and Council or Planning Commission during the two (2) years immediately preceding the filing of this application:

I certify that the foregoing information is true and correct, this 25 day of October, 2024

_____

Applicants Signature

HIGHPOINT ACQUISITIONS, LLC

[1] If the answer to any of the above is "Yes," then the member of the Mayor and Council or Planning Commission must immediately disclose the nature and extent of such interest, in writing, to the Mayor and Council of the City of Kennesaw, Georgia. A copy should be filed with this application. Such disclosures shall be a public record and available for public inspection at any time during normal working hours.

[2] Applicant means any person who applies for a rezoning action and any attorney or other person representing or acting on behalf of a person who applies for a rezoning action.

CAMPAIGN DISCLOSURE REPORT[1] BY APPLICANT[2]

A separate form must be completed by each applicant

Has the applicant made, within two (2) years immediately preceding the filing of this application for rezoning, campaign contributions aggregating two hundred fifty dollars ($250.00) or more or made gifts having in the aggregate a value of two hundred fifty dollars ($250.00) or more to a member or members of the Mayor and Council or Planning Commission who will consider the application?

_____

If "Yes," the applicant and the attorney representing the applicant must file a disclosure report with the Mayor and Council of the City of Kennesaw within ten (10) days after this application is first filed.

Please supply the following information that will be considered as the required disclosure:

The name of the member(s) of the Mayor and Council or Planning Commission to whom the campaign contribution or gift was made:

_____

_____

The dollar amount of each campaign contribution made by the applicant to the member(s) of the Mayor and Council or Planning Commission during the two (2) years immediately preceding the filing of this application and the date of each such contribution:

_____

_____

An enumeration and description of each gift having a value of two hundred fifty dollars ($250.00) or more made by the applicant to the member(s) of the Mayor and Council or Planning Commission during the two (2) years immediately preceding the filing of this application:

I certify that the foregoing information is true and correct, this 28th day of October, 2024

_____

Parks F. Huff/Attorney for Applicant

---

[1] If the answer to any of the above is "'Yes," then the member of the Mayor and Council or Planning Commission must immediately disclose the nature and extent of such interest, in writing, to the Mayor and Council of the City of Kennesaw, Georgia. A copy should be filed with this application. Such disclosures shall be a public record and available for public inspection at any time during normal working hours.

[2] Applicant means any person who applies for a rezoning action and any attorney or other person representing or acting on behalf of a person who applies for a rezoning action.

CENTRAL BUSINESS DISTRICT PROJECT

CONSISTENT WITH THE UNITED STATES CONSTITUTION AND THE RELIGIOUS LAND USE AND INSTITUTIONALIZED PERSONS ACT OF 2000, THE CITY OF KENNESAW DOES NOT DISCRIMINATE ON THE BASIS OF RELIGION IN THE APPLICATION OF ITS LAWS, POLICIES, OR PROCEDURES, INCLUDING THE APPLICATION OF ITS LAND USE REGULATIONS AND ZONING LAWS.

Under the Religious Land Use and Institutionalized Persons Act of 2000 ("RLUIPA"), no government, including the City of Kennesaw, may apply its zoning or land use laws in a manner that imposes a substantial burden on the religious exercise of a person, including a religious assembly or institution. RLUIPA also provides that no government, including the City of Kennesaw, may apply a land use regulation in a manner that treats a religious assembly or institution (a church, for example) on less than equal terms than a nonreligious institution or assembly (a day care center or movie theater, for example). Finally, RLUIPA provides that no government, including the City of Kennesaw, may impose or implement a land use regulation in a manner that discriminates against a religious assembly or institution.

If you believe that the City of Kennesaw, or any other local government or municipality, has discriminated against you in the implementation of its zoning or land use laws, please contact the United States Department of Justice.

United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

ATTACHMENT TO APPLICATION FOR CENTRAL BUSINESS DISTRICT PROJECT APPROVAL

Application Nos.: _____

PC Meeting Date: _____

Mayor and Council Meeting Date: _____

Applicant: Highpoint Acquisitions, LLC

Titleholder: OLD SOUTH VILLAGE, LLC

Parcel: 20016700140 (2765 South Main Street)

The undersigned(s) below, or as attached, is the owner of the property considered in this application.

OLD SOUTH VILLAGE, LLC

Gordon Matthew Olson

Managing Member

Printed Name: Gordon Matthew Olson

Date: 10/28/24

Address: [redacted]

Telephone No.: [redacted]

10/28/2024

Signature of Notary Public Date

(Notary Seal)

AVERY USHER NOTARY PUBLIC EXPIRES GEORGIA November 23, 2025 CHATHAM COUNTY

CERTIFICATE REGARDING AUTHORITY TO PURSUE CENTRAL BUSINESS DISTRICT PROJECT APPROVAL

1.

My name is G. Matthew Olsen. I am the officer who is delegated the responsibility for authenticating records of ***Old South Village, LLC,*** a Domestic Limited Liability Company ("Titleholder"). I am of legal age and suffer from no disabilities which would affect my competence to give this Certificate which is being given on my own personal knowledge for use with respect to the Applicant's Central Business District Project Approval regarding certain real property owned by the Titleholder Company located in Kennesaw, Cobb County, Georgia.

2.

In accordance with the Requirements for completing a Central Business District Project Approval, I hereby attest on behalf of the Titleholder Company that I have reviewed the Central Business District Project Approval Application and related documents which are being filed simultaneously therewith on behalf of the Applicant and Titleholder (collectively, the "Application") to which this Certificate is attached and hereby certify:

(a) That corporate seal or facsimile affixed to the Application is in fact the seal of the Titleholder Company or a true facsimile thereof; and

(b) That the officer or other representative of the Titleholder Company who executed the Application does in fact occupy the official position indicated, that the position that the signer occupies has the authority to execute the Application on behalf of the Titleholder Company, and that the signature of said officer or other representative is genuine; and

(c) That the execution of the Application and the filing of the Application on behalf of the Titleholder Company by the officer or other representative of the Applicant Company has been duly authorized by the Titleholder Company.

Old South Village, LLC

By: _____ (CORPORATE SEAL)

Print Name G. Matthew Olsen

Its: Manager Member
Title

_____
Signature of Notary Public

10/28/2024
Date

NOTARY SEAL

AVERY USHER NOTARY PUBLIC EXPIRES GEORGIA November 23, 2025 CHATHAM COUNTY

Mail

XR 2

After recording please return to:

The Katz Law Firm PC
5887 Glenridge Drive Suite 280
Atlanta, Georgia 30328

Cross Reference Plat Book 47 Page 166
Cross Reference Deed Book 14746 Page 95

18
44

Quit Claim Deed

STATE OF GEORGIA
COUNTY OF COBB

THIS INDENTURE, made the **23rd** day of **January**, in the year Two Thousand Fifteen **2015**, between **Old South Investors, LLC.** located at P.O. Box 725249 Atlanta, GA 31139, as party or parties of the first part, hereinafter called ("Grantor"), and **Old South Village, LLC.** located at P.O. Box 725249 Atlanta, GA 31139, as party or parties of the second part, hereinafter called ("Grantee") (the words "Grantor" and "Grantee" to include their respective heirs, successors, and assigns where the context requires or permits).

WITNESSETH that: Grantor, for and in consideration of the sum of ($10.00) TEN DOLLARS in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and since Grantee was to be the original person on the Deed, not the Grantor, the Grantor has granted, bargained, sold, aliened, conveyed, and by these presents does grant bargain, sell, alien, convey and forever **Quit Claim** unto the said Grantee, the below described tract or parcel of land on Exhibit "A" the Legal Description, Subject to the Permitted Exceptions on Exhibit "B", and subject to the Security Deed and Assignment of Rents to Touchmark National Bank, herein, more fully and completely described as follows:

Real Property Address / Commonly Known as:

2681 South Main Street, Kennesaw, Georgia 30144

All that tract or parcel of land lying and being in Land Lot 167 of the 20th District of Cobb County, Georgia (hereinafter referred to as the "Land"), and being more particularly described in Exhibit "A" attached hereto and incorporated herein.

TO HAVE AND TO HOLD the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit, and behalf of said Grantee, and not to the Grantor or anyone else.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed, the day and year above written.

Signed, sealed and delivered in the presence of:

(Seal)
Grantor Name

Witness

Notary Public (signature, stamp, and expiration)

Farrah Wilson Olsen
NOTARY PUBLIC
Fulton County, GEORGIA
My Commission Expires November 11, 2017

BK: 15214 PG: 5479-5496
Filed and Recorded Jan-30-2015 11:44:40AM
DOC#: D2015-006485
Real Estate Transfer Tax $0.00
0332015001394

REBECCA KEATON
CLERK OF SUPERIOR COURT Cobb Cty. GA.

EXHIBIT "A"

LEGAL DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN LAND LOT 167 of the 20th District, 2nd Section, Cobb County, Georgia, and being the property of Mrs. Elizabeth C. Grogan, as per plat recorded at Plat Book 47, Page 166, Cobb County, Georgia Records, and being more particularly described as follows:

BEGINNING at a point on the West side of Old U.S. Highway 41, 431.4 feet North, as measured along the West side of Old U.S. Highway 41 from the intersection of the West side of Old U.S. Highway 41 and the centerline of a railway spur track; running thence Northerly along the Westerly side of Old U.S. Highway 41 and following the curvature thereof 375.76 feet to an iron pin at the Southeast corner of property of B.O. Hood; thence South 73 degrees 19 minutes 29 seconds West 471.34 feet to an iron pin on the Northeasterly right-of-way of W & A Railroad; thence South 16 degrees 37 minutes 40 seconds East 318.10 feet to an iron pin; thence North 80 degrees 9 minutes 36 seconds East along the North line of property of E.R. Wilbur 395.35 feet to a point on the Westerly right-of-way of Old U.S. Highway 41, being the point of beginning.

EXHIBIT "A"

DESCRIPTION OF PROPERTY

All that tract or parcel of land lying and being in Land Lot 1167 of the 20th District, 2nd Section, Cobb County, Georgia being more particularly described as follows:

Commencing at the point of intersection of the centerline of a railway spur track and the westerly right-of-way of South Main Street also known as Old Highway 41 (60' R/W);
Thence northerly along said westerly right-of-way, 431.40 feet to a #5 rebar set at the northeasterly corner of the lands of Richards-Gilstrap Holdings, LLC (Deed Book 14746, Page 95), said point being the TRUE POINT OF BEGINNING;

Thence leaving said westerly right-of way along the northerly boundary of the lands of Richards-Gilstrap Holdings, LLC South 81 degrees 24 minutes 04 seconds West, 391.54 feet to a #4 rebar found on the easterly right-of-way of the Western & Atlantic Railroad (66' R/W);
Thence along said easterly right-of-way North 16 degrees 49 minutes 30 seconds West, 318.10 feet to a #5 rebar set at the southwesterly corner of the lands of Fred H. Chalker;
Thence along the southerly boundary of Fred H. Chalker North 74 degrees 21 minutes 22 seconds East, 244.66 feet to a #4 rebar found at the southwesterly corner of the lands of Misuni C. Edwards and Doug L. Edwards (Deed Book 14380, Page 4165);
Thence along the southerly boundary of the lands of Misuni C. Edwards and Doug L. Edwards North 74 degrees 32 minutes 07 seconds East, 226.68 feet to a #4 rebar found on the westerly right-of-way of South Main Street (60' R/W);
Thence along said westerly right-of-way the following courses and distances:
Along a curve to the right, an arc distance of 244.36 feet, said curve having a radius of 690.76 feet and being subtended by a chord of 243.09 feet, at South 07 degrees 24 minutes 58 seconds East, to a point;
South 02 degrees 43 minutes 06 seconds West, 131.45 feet to a #5 rebar set, said point being the TRUE POINT OF BEGINNING;

Said tract or parcel of land contains 3.499 acres and is more accurately depicted on a plat of survey prepared by Surveys Plus, Inc., dated September 7, 2011, job number 4498.

EXHIBIT "B"
PERMITTED EXCEPTIONS

1) All matters as shown on that certain ALTA/ACSM Land Title Survey prepared for Touchmark National Bank, North Atlanta Law Group, P.C., First American Title Insurance Company, Law Firm of Hodges and Broadaway and Virginia A. Brown prepared by Surveys Plus, Inc., bearing the seal of Joseph T. Baker, GRLS No. 2674 dated September 7, 2011, as last revised October 3, 2011, including the following:

   (A) Block & Wood Wall encroaches into right-of-way of South Main Street (Old Highway 41);

   (B) Brick Wall located in the following areas:

      (i) Along the eastern boundary;
      (ii) In the northeast corner around Mobile Home #21;
      (iii) Around the Dumpster pad in the Northeast corner;
      (iv) Around the 2-story Brick Building in the Southeast corner.

   (C) The following utilities/lines running throughout the property:

      (i) Sanitary sewer;
      (ii) CATV;
      (iii) Power/Electrical lines (both overhead and underground);
      (iv) Gas lines;
      (v) Water lines; and
      (vi) Pump Station.

2) Boundary Line Agreement by and between Elizabeth C. Grogan and E. R. Wilbur, dated _____, 1969, filed June 24, 1969 and recorded in Deed Book 1104, Page 690, records of the Superior Court of Cobb County, Georgia.

3) Boundary Line Agreement by and between Elizabeth C. Grogan and B. D. Hood, dated _____, 1969, filed June 24, 1969 and recorded in Deed Book 1104, Page 696, aforesaid records.

4) Easement from Cecil N. Brown to Georgia Power Company, dated July 31, 1969, filed October 13, 1969 and recorded in Deed Book 1123, Page 93, aforesaid records.

5) All matters affecting subject property as shown on plat recorded in Plat Book 47, Page 186, aforesaid records.

6) Rights of any railroad(s), its successors and/or assigns, in and to any railroad track or spurs, including appurtenances thereto and easements thereof, located within the boundaries of the subject property.

7) All taxes for the year 2012 and subsequent years which are liens but which are not yet due and payable.

ATTACHMENT TO APPLICATION FOR CENTRAL BUSINESS DISTRICT PROJECT APPROVAL

Application Nos.: _____

PC Meeting Date: _____

Mayor and Council Meeting Date: _____

Applicant: Highpoint Acquisitions, LLC

Titleholder: RICHARDS-GILSTRAP HOLDINGS, LLC

Parcel: 20016700990 (2615 South Main Street)

The undersigned(s) below, or as attached, is the owner of the property considered in this application.

RICHARDS-GILSTRAP HOLDINGS, LLC

Ruth Diane Richards

_____

Printed Name: Ruth Diane Richards

_____

Date: 10-28-24

Address: [redacted]

Telephone No.: [redacted]

Hannah Hurley 10/28/2024

Signature of Notary Public Date

(Notary Seal)

HANNAH HURLEY
Notary Public - State of Georgia
Gwinnett County
My Commission Expires Mar 14, 2028

CERTIFICATE REGARDING AUTHORITY TO PURSUE CBD PROJECT APPROVAL

1.

My name is Ruth Diane Richards. I am the officer who is delegated the responsibility for authenticating records of ***Richards-Gilstrap Holdings, LLC***, a Domestic Limited Liability Company ("Titleholder"). I am of legal age and suffer from no disabilities which would affect my competence to give this Certificate which is being given on my own personal knowledge for use with respect to the Applicant's Kennesaw Rezoning and Variance Applications regarding certain real property owned by the Titleholder Company located in Kennesaw, Cobb County, Georgia.

2.

In accordance with the Requirements for completing a Kennesaw Rezoning and Variance Applications, I hereby attest on behalf of the Titleholder Company that I have reviewed the Rezoning and Variance Applications and related documents which are being filed simultaneously therewith on behalf of the Applicant and Titleholder (collectively, the "Applications") to which this Certificate is attached and hereby certify:

(a) That corporate seal or facsimile affixed to the Applications is in fact the seal of the Titleholder Company or a true facsimile thereof; and

(b) That the officer or other representative of the Titleholder Company who executed the Applications does in fact occupy the official position indicated, that the position that the signer occupies has the authority to execute the Applications on behalf of the Titleholder Company, and that the signature of said officer or other representative is genuine; and

(c) That the execution of the Applications and the filing of the Applications on behalf of the Titleholder Company by the officer or other representative of the Applicant Company has been duly authorized by the Titleholder Company.

RICHARDS-GILSTRAP HOLDINGS, LLC

By Ruth Diane Richards (CORPORATE SEAL)

Print Name Ruth Diane Richards

Its: Owner
Title

Hannah Hurley
Signature of Notary Public

10/28/2024
Date

NOTARY SEAL

HANNAH HURLEY
Notary Public - State of Georgia
Gwinnett County
My Commission Expires Mar 14, 2028

AFTER RECORDING RETURN TO:
J. Christopher Geiger, PC
157 Reinhardt College Parkway, Suite 400
Canton, GA 30114

FILE NO. 09110344

...

Deed Book 14746 Pg 95
Filed and Recorded Dec-30-2009 01:29pm
2009-0162219
Real Estate Transfer Tax $0.00

Jay C. Stephenson
Clerk of Superior Court Cobb Cty. Ga.

WARRANTY DEED

STATE OF GEORGIA, CHEROKEE COUNTY

THIS INDENTURE, Made this 23 day of December in the year of our Lord Two Thousand and Nine between

JAMES C. RICHARDS

("Grantor") of the State of Georgia, and

RICHARDS-GILSTRAP HOLDINGS, LLC

("Grantee") of the State of Georgia, (the terms "Grantor" and "Grantee" to include the singular and the plural, and shall be deemed to refer equally to each of said person, firms or entities, their respective heirs, successors and assigns where the context hereof requires or permits),

WITNESSETH, That the said party of the first part, for and in consideration of the sum of Ten ($10.00) Dollars and other valuable considerations, in hand paid at and before the sealing and delivery of these presents, the receipt, adequacy and sufficiency of which being hereby acknowledge by Grantor, has granted, bargained, sold and conveyed, and by these presents does hereby grant, bargain, sell and convey unto Grantee, the following described real property, to wit:

All that tract or parcel of land lying and being in Land Lot 167 of the 20th District, 2nd Section, City of Kennesaw, Cobb County, Georgia, and being more particularly described on Exhibit "A" attached hereto and made a part hereof.

TO HAVE AND TO HOLD the above-described tract or parcel of land, together with all and singular the rights, members and appurtenances thereof, to the same being, belonging or in anywise appertaining to the only proper use, benefit and behoof of Grantee, forever, in **FEE SIMPLE.**

AND, SUBJECT TO the title matters expressly set forth hereinabove, if any, Grantor will warrant and forever defend the right and title to the above described property unto the Grantee against the claims of all person whomsoever.

IN WITNESS WHEREOF, Grantor has signed and sealed this Deed the day and year first above written.

Signed, sealed and delivered in the presence of:

Unofficial Witness

James Richards (Seal)
JAMES C. RICHARDS

Notary Public
My Commission Expires:

CHRISTOPHER J. GEIGER
NOTARY PUBLIC
CHEROKEE COUNTY, GEORGIA

EXHIBIT A

TRACT ONE:

All that tract or parcel of land lying and being in Land Lot 167 of the 20th District, 2nd Section of Cobb County, Georgia, in the City of Kennesaw, having an area of 1.16 acres, as shown on that certain plat of survey for Vincent Lee Rieke, prepared by W. E. Clonts, Ga. Registered Land Surveyor No. 2166, Tru-Line Surveying, Inc., dated 3-9-00, and more particularly described as follows:

BEGINNING at an iron pin located at the intersection of the new west right of way of State Route 293 – Old Highway 41 (aka South Main Street) and the northwest right of way of the Vulcan Materials Railroad Spur (50 foot right of way) and running thence along said railroad spur south 58 degrees, 17 minutes, 08 seconds west, a distance of 86.59 feet to an iron pin; continuing thence along said right of way and corner; along a curve to the left, an arc distance of 344.19 feet, (said arc subtended by a chord bearing of south 42 degrees, 28 minutes, 10 seconds west, a chord distance of 339.83 feet, and a radius of 623.43 feet) to an iron pin found on the east right of way of the CSX Railroad (66 foot right of way); running thence along said CSX Railroad right of way along a curve to the left, an arc distance of 371.04 feet, (said arc subtended by a chord bearing of north 0 degrees, 16 minutes, 37 seconds west, a chord distance of 370.05 feet, and a radius of 1465.40 feet) to a point and corner; running thence south 84 degrees, 04 minutes, 09 seconds east, a distance of 308.83 feet to an iron pin and corner on the new west right of way of State Route 293; running thence south 03 degrees, 05 minutes, 24 seconds west, a distance of 42.01 feet to an iron pin and the point of beginning.

TRACT TWO:

All that tract or parcel of land lying and being in Land Lot 167 of the 20th District, 2nd Section, Cobb County, Georgia, being 2.4721 acres as per plat of survey dated June 26, 2002, and prepared for Jeanee E. Ricky (sic) and Vincent L. Ricky (sic) by J.A. Evans Surveying Co., Inc., James A. Evans, Jr., G.R.L.S. No. 2167, and being more particularly described as follows:

Beginning at an iron pin located on the westerly side of the right of way of South Main Street, a/k/a Old Dixie Highway, a/k/a Old Highway 41, a/k/a State Route 293 (being a 60 foot right of way), which point is 72.63 feet north of the intersection of the westerly side of the right of way of South Main Street and the centerline of the Vulcan Materials Railroad Spur right of way, as measured along the westerly side of the right of way of South Main Street; from said beginning point, running thence North 84 degrees 04 minutes 09 seconds West for a distance of 312.17 feet to an iron pin and corner located on the easterly side of the right of way of CSX Railroad (being a right of way which is 66 feet in width); running thence along the arc of a curve to the left, in a counterclockwise direction along the easterly side of the right of way of CSX Railroad, having a radius of 1462.20 feet (said arc being subtended by a chord bearing North 11 degrees 43 minutes 28 seconds West a chord distance of 213.59 feet) for an arc distance of 213.78 feet to a point; running thence North 15 degrees 56 minutes 23 seconds West along the easterly side of the right of way of CSX Railroad for a distance of 54.98 feet to an iron pin and corner; running thence North 80 degrees 38 minutes 33 seconds East for a distance of 393.58 feet to an iron pin and corner located on the westerly side of the right of way of South Main Street; running thence South 03 degrees 05 minutes 24 seconds West along the westerly side of the right of way of South Main Street for a distance of 358.77 feet to an iron pin at the point of beginning.

South Main Mixed-Use Phase II Development

Business Plan

Project Summary

Redevelopment of approximately 7.10 acres located at 2615 and 2681 S Main St, Kennesaw, GA 30144 into a walkable, mixed-use project that includes retail and multifamily, in addition to extending the city's Gateway Park along South Main Street. This project will be the second phase of the Lacy at South Main, that will serve as a complement to the Lacy's retail, commercial, shared parking, and multifamily. Developer currently has approximately $2 billion in residential and mixed-use real estate investments, primarily concentrated in the greater Atlanta area, in addition to a multitude of other office and industrial real estate investments.

The subject property is located within an area denominated as Downtown Activity Center on the City's Future Land Use Map. This mixed-use proposal will provide stimulation and will enhance the vitality and economic growth of this sub-area. The project will transform the immediate area, providing a clean shift from the industrial node to the south and the Downtown Activity Center to the north. The property is better developed in conformity to the Main Street/Downtown standards as an entrance to downtown once drivers cross the railroad tracks.

The project will include 300 class A multifamily units and 2,500 square-feet of outparcel retail (restaurant/brewery) and a minimum of 2,500 square-feet of ground floor retail along South Main Street. The extension of the City's Gateway Park will front South Main Street, providing greenspace and connectivity to downtown Kennesaw. Multifamily amenities will include a clubhouse with a coffee bar, state of the art fitness facilities, a modern pool and outdoor grilling stations, and community courtyards, gathering places, and a dog park. Units will carry top of the line finishes and appliances, which include hard surface countertops (granite/quartz), stainless-steel appliances, in-unit washer and dryers, and contemporary cabinets. The project will likely begin in late-2025 with an estimated completion date of late-2028.

Project Details

Residential:

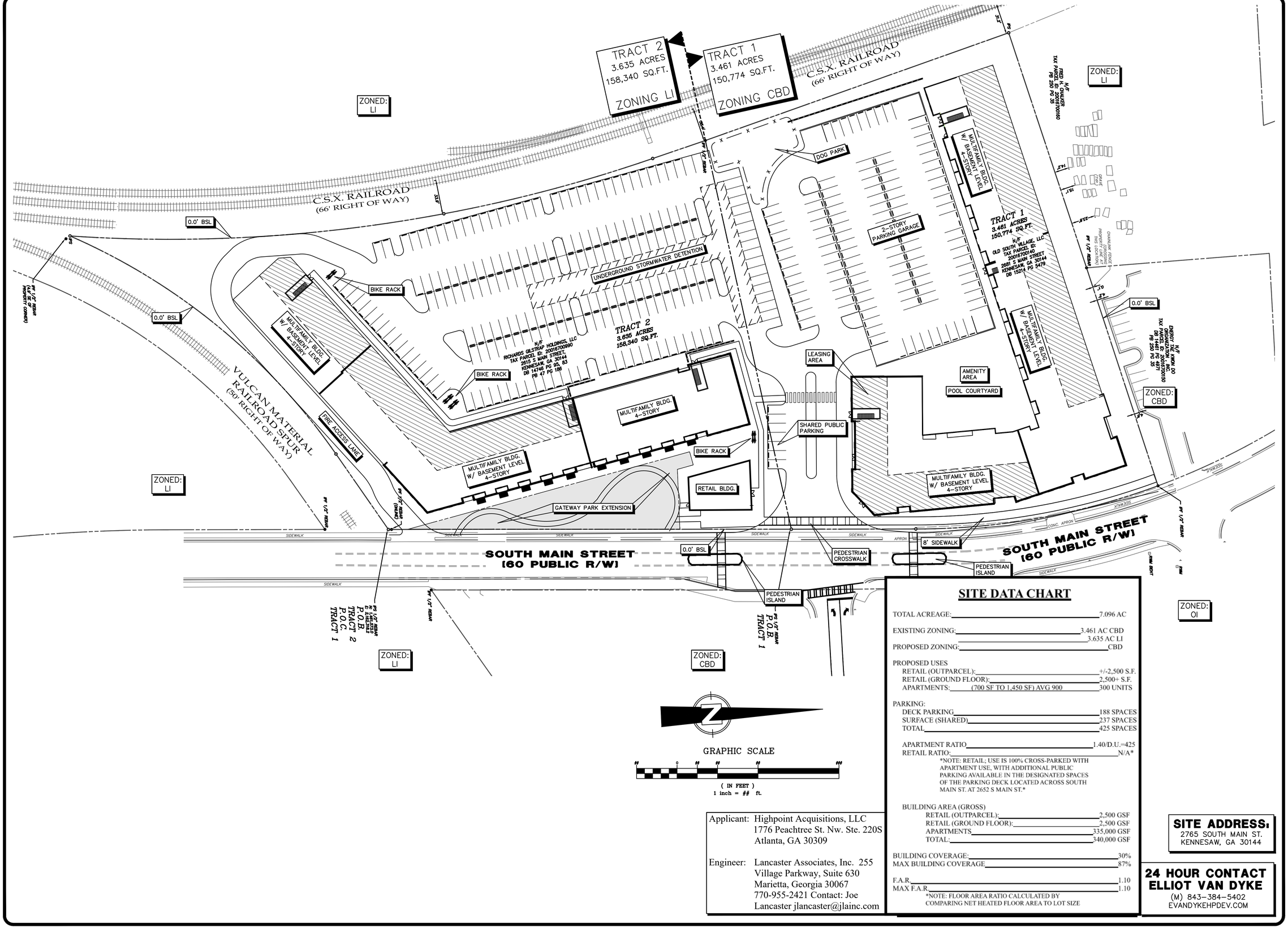
- 300 class A multifamily units
- Market rents
- 4/5 stories with elevators, interior corridors, surface and slip-deck parking
- Mix of 1-, 2-, and 3-bedroom units with the final unit mix still being contemplated
- Target demographics are young professionals and active adults / empty nesters
- Developer has strong relationships with top-tier institutional property management companies and plans to select a property manager as the project nears first unit deliveries
- Since 2010, Cobb County has grown 14%, keeping in line with the Metro-Atlanta's growth rate of 15%
- Atlanta's core-suburban submarkets, including Kennesaw, benefit from the region's fast-growing base of highly educated workers spanning numerous sectors
- The greater Atlanta region is the top destination in the South for recent US college graduates

Retail (Ground Floor):

- Minimum of 2,500 SF
- Surface parking
- Uses: small businesses, yoga studio, Pilates studio, pastry shop, coffee shop, etc.
- Fronting on South Main Street on the ground floor of Building 2
- Exact square footage and usage to be determined through leasing efforts
- Leasing efforts to begin near completion of the space (~ 12 months after starting construction)

Retail (Outparcel):

- 2,500 SF
- Surface parking with additional public parking in the Lacy's deck
- Retail use likely to be a restaurant
- Fronting on South Main Street directly across from the Lacy at South Main
- Exact square footage and usage to be determined through leasing efforts
- Leasing efforts to begin immediately



SITE DATA CHART

TOTAL ACREAGE:	7.096 AC
EXISTING ZONING:	3.461 AC CBD
	3.635 AC LI
PROPOSED ZONING:	CBD
PROPOSED USES	
RETAIL (OUTPARCEL):	+/-2,500 S.F.
RETAIL (GROUND FLOOR):	2,500+ S.F.
APARTMENTS: (700 SF TO 1,450 SF) AVG 900	300 UNITS
PARKING:	
DECK PARKING	188 SPACES
SURFACE (SHARED)	237 SPACES
TOTAL	425 SPACES
APARTMENT RATIO	1.40/D.U.=425
RETAIL RATIO:	N/A*

NOTE: RETAIL; USE IS 100% CROSS-PARKED WITH APARTMENT USE, WITH ADDITIONAL PUBLIC PARKING AVAILABLE IN THE DESIGNATED SPACES OF THE PARKING DECK LOCATED ACROSS SOUTH MAIN ST. AT 2652 S MAIN ST.

BUILDING AREA (GROSS)	
RETAIL (OUTPARCEL):	2,500 GSF
RETAIL (GROUND FLOOR):	2,500 GSF
APARTMENTS	335,000 GSF
TOTAL:	340,000 GSF
BUILDING COVERAGE:	30%
MAX BUILDING COVERAGE	87%
F.A.R.	1.10
MAX F.A.R.	1.10

*NOTE: FLOOR AREA RATIO CALCULATED BY COMPARING NET HEATED FLOOR AREA TO LOT SIZE

Applicant: Highpoint Acquisitions, LLC
1776 Peachtree St. Nw. Ste. 220S
Atlanta, GA 30309

Engineer: Lancaster Associates, Inc. 255
Village Parkway, Suite 630
Marietta, Georgia 30067
770-955-2421 Contact: Joe
Lancaster jlancaster@jlainc.com

SITE ADDRESS:
2765 SOUTH MAIN ST.
KENNESAW, GA 30144

24 HOUR CONTACT
ELLIOT VAN DYKE
(M) 843-384-5402
EVANDYKEHPDEV.COM

REVISIONS	BY
####	####

THIS DRAWING IS THE PROPERTY OF THE ENGINEER AND MAY NOT BE USED OR REPRODUCED WITHOUT HIS WRITTEN PERMISSION

GEORGIA REGISTERED NO. 8296 PROFESSIONAL EXPIRES-12/31/25 ENGINEER JOSEPH L. LANCASTER

Lancaster Associates, inc.
Engineering Surveying Planning
Phone: 770.955.2421 Fax: 770.955.2422
3600 MANSELL ROAD, SUITE 430
ALPHARETTA, GEORGIA 30022

KENNESAW APARTMENT OWNER, LLC
1776 PEACHTREE ST. NW, STE. 220S
ATLANTA, GA 30309
843-384-5402

ZONING SITE PLAN

SOUTH MAIN ST. MIXED-USE PHASE 2
LL 167, 20TH DISTRICT, COBB COUNTY, GEORGIA

DRAWN BY	X
CHECKED BY	JL
DATE	02-12-25
SCALE	1" = 40'
JOB NO.	24010
CAD FILE	24010-ZONING.dwg
SHEET	###

2/12/2025 12:55 PM J:\Jobs\24\24-JOBS\24010\24010-ZONING.dwg JSTOLBERG

SOUTH MAIN MIXED-USE - PHASE II
KENNESAW GA

OCTOBER 21, 2024

A RESIDENTIAL COMMUNITY DEVELOPED BY
HIGHPOINT DEVELOPMENT

NILES BOLTON ASSOCIATES

DOWNTOWN KENNESAW

RESTAURANTS

"Family owned and a favorite local eat in downtown Kennesaw that serves up classic comfort and southern American cuisine"

TRACKSIDE
Grill & Patio Bar

SURROUNDING DEVELOPMENT

SOUTH MAIN MIXED-USE - PHASE I

CIVIL WAR MUSEUM

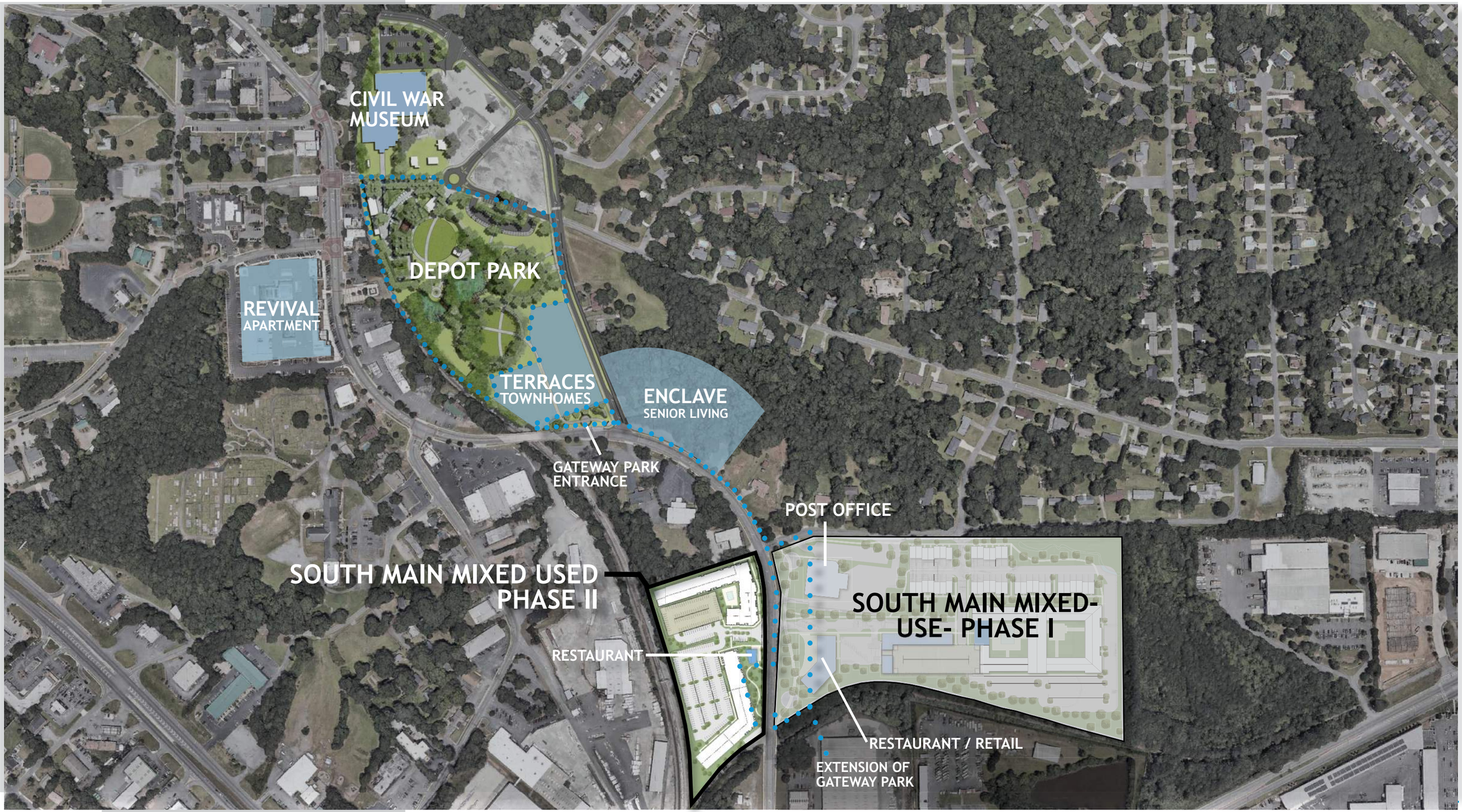
SENIOR LIVING

INSPIRATION

LUMEN BRIARCLIFF
NORTH DRUID HILLS, GA

CAMDEN BUCKHEAD
ATLANTA, GA

OVERALL
SITE PLAN



NILES BOLTON ASSOCIATES

SITE PLAN

RESIDENTIAL:
300 UNITS
60% 1-BEDROOM = 180 UNITS = 180 SPACES
@ 750 SF/UNIT = 135,000 RSF
35% 2-BEDROOM = 105 UNITS = 210 SPACES
@ 1,100 SF/UNIT = 115,000 RSF
5% 3-BEDROOM = 15 UNITS = 30 SPACES
@ 1,400 SF/UNIT = 19,500 RSF

RENDERINGS

RENDERINGS

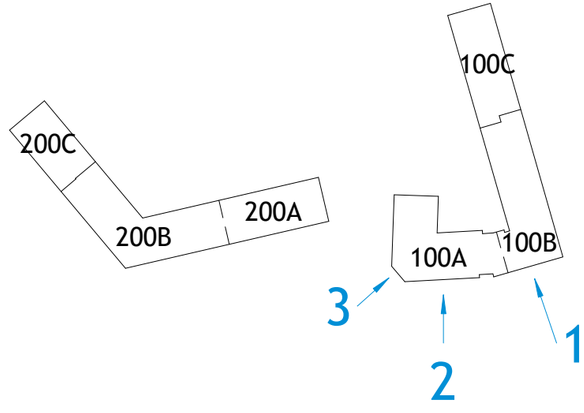
RENDERINGS

RENDERINGS

RENDERINGS

ELEVATIONS - BUILDING 100

1 A3-01 ELEVATION - BUILDING 100 - NORTHEAST
1/16" = 1'-0"



2 A3-01 ELEVATION - BUILDING 100 - SOUTHEAST
1/16" = 1'-0"

3 A3-01 ELEVATION - BUILDING 100 - SOUTHEAST CORNER
1/16" = 1'-0"

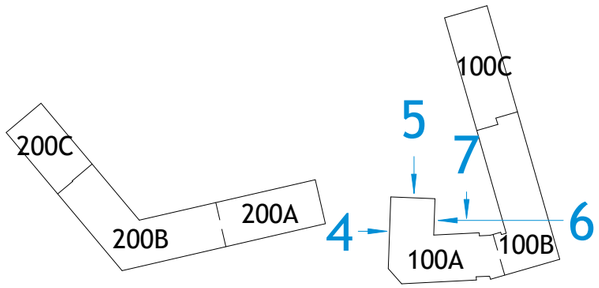
ELEVATIONS - BUILDING 100

4 A3-02 ELEVATION - BUILDING 100 - WEST
1/16" = 1'-0"

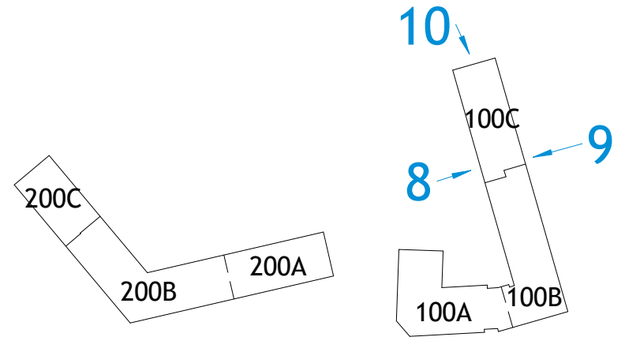
5 A3-02 ELEVATION - BUILDING 100 -SOUTH
1/16" = 1'-0"

6 A3-02 ELEVATION - BUILDING 100 - POOL COURTYARD NORTH
1/16" = 1'-0"

7 A3-02 ELEVATION - BUILDING 100 - POOL COURTYARD WEST
1/16" = 1'-0"

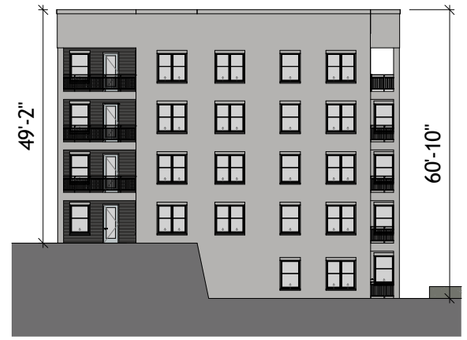


ELEVATIONS - BUILDING 100



9 A3-03 ELEVATION OVERALL - BUILDING 100 - NORTH
1/32" = 1'-0"

8 A3-03 ELEVATION OVERALL - BUILDING 100 - SOUTH
1/32" = 1'-0"



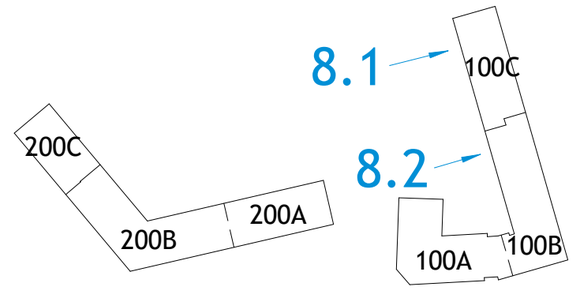
10 A3-03 ELEVATION - BUILDING 100 - EAST
1/32" = 1'-0"

A3-03

ELEVATIONS - BUILDING 100

8.1 / A3-04 — ELEVATION - BUILDING 100 - SOUTH 1

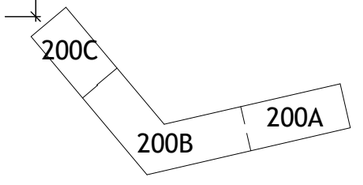
1/16" = 1'-0"

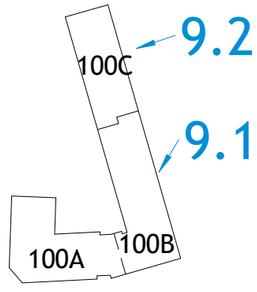


8.2 / A3-04 — ELEVATION - BUILDING 100 - SOUTH 2

1/16" = 1'-0"

ELEVATIONS - BUILDING 100





9.1 / A3-05 ELEVATION - BUILDING 100 - NORTH 1

1/16" = 1'-0"

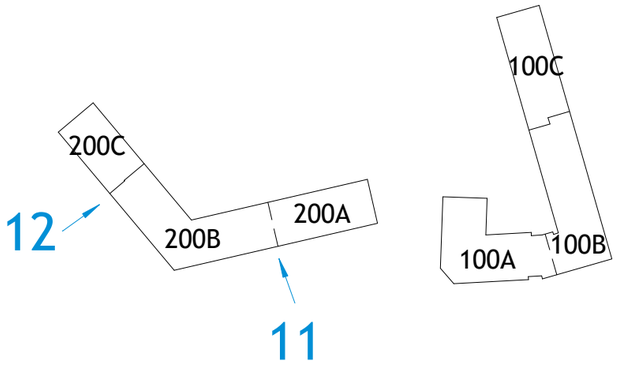
9.2 / A3-05 ELEVATION - BUILDING 100 - NORTH 2

1/16" = 1'-0"

ELEVATIONS - BUILDING 200

12 A3-06 ELEVATION OVERALL - BUILDING 200 - SOUTH EAST

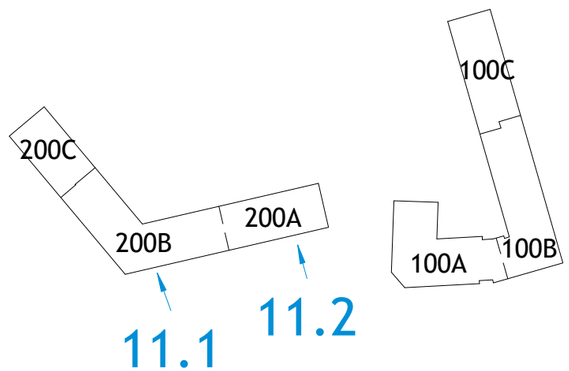
1/32" = 1'-0"



11 A3-06 ELEVATION OVERALL - BUILDING 200 - EAST

1/32" = 1'-0"

ELEVATIONS - BUILDING 200



11.1 / A3-07 ELEVATION - BUILDING 200 - EAST 1

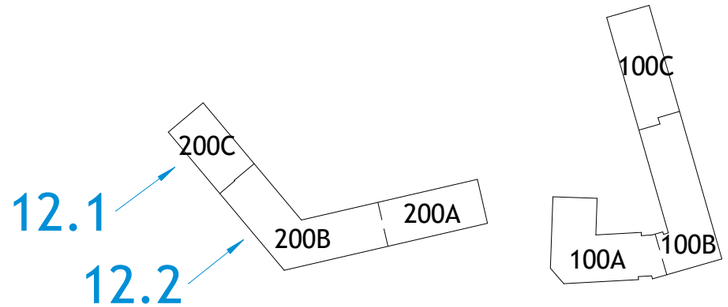
1/16" = 1'-0"

11.2 / A3-07 ELEVATION - BUILDING 200 - EAST 2

1/16" = 1'-0"

ELEVATIONS - BUILDING 200

12.1 ELEVATION - BUILDING 200 - SOUTHEAST 1
A3-08 1/16" = 1'-0"

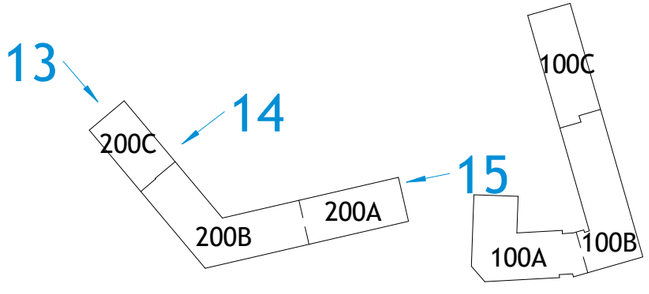


12.2 ELEVATION - BUILDING 200 - SOUTHEAST 2
A3-08 1/16" = 1'-0"

ELEVATIONS - BUILDING 200

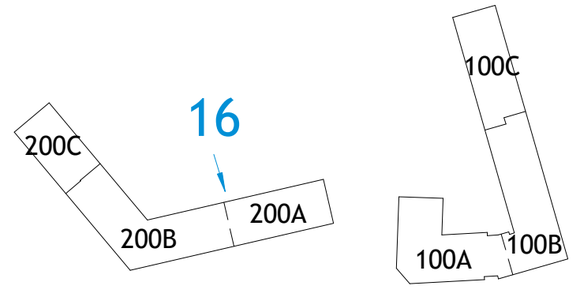
13 A3-09 ELEVATION - BUILDING 200 - SOUTHWEST
1/16" = 1'-0"

15 A3-09 ELEVATION - BUILDING 200 - NORTH
1/16" = 1'-0"



14 A3-09 ELEVATION OVERALL - BUILDING 200 - NORTHWEST
1/16" = 1'-0"

ELEVATIONS - BUILDING 200



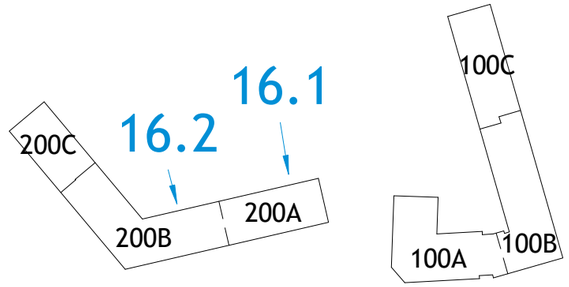
1 / A3-10 ELEVATION OVERALL - BUILDING 200 - WEST

1/32" = 1'-0"

ELEVATIONS - BUILDING 200

16.1 / A3-11 ELEVATION - BUILDING 200 - WEST 1

1/16" = 1'-0"



16.2 / A3-11 ELEVATION - BUILDING 200 - WEST 2

1/16" = 1'-0"

Item Report

TO: The Historic Preservation Commission

FROM: Darryl Simmons, Zoning Administrator

DATE: February 21, 2025

TITLE: **Landscaping: 2966 North Main Street**
Consideration of a Certificate of Appropriateness application submitted by David Shelton for the replacement of a trident maple tree with a dogwood tree at 2966 N. Main Street. Case #COA2025-05

Summary:

Recommendation:

Fiscal Impact:

Attachments:
1. COA2025-05_2966 N. Main St_Application_Packet

CERTIFICATE OF APPROPRIATENESS APPLICATION

☒ Application Fee: $50.00 □ Demolition Fee: $150.00

All new construction and exterior remodeling of buildings within the Kennesaw Historic District shall be subject to the architectural review and approval of the Historic Preservation Commission (**HPC**). HPC approval is also required for Kennesaw Downtown Development Authority (KDDA) Façade and Signage Grants.

Darryl Simmons, Planning and Zoning Administrator for the City of Kennesaw will meet with you to direct your application process. To make an appointment, please call 770-590-8268.

A Certificate of Appropriateness (COA) shall be obtained from the **HPC** prior to the issuance of a building permit. The **HPC** shall consider a variety of issues in rendering its decision including, but not limited to the following:

a. The surrounding development
b. The best interest of the community
c. Previous studies undertaken by the City as well as the standards contained herein.

Application for signage to include

□ Material Specifications
□ Drawing of Sign with Dimensions and Colors to be used
□ Façade detail of fonts

Application for landscaping to include

☒ Variety of trees and shrubs
☒ Indicate size and location of plantings

Application for exterior renovations and additions to include

□ Existing conditions site plan depicting location of addition in relation to the existing property
□ Existing floor plan of building
□ Proposed floor plan of building including portions not to be altered
□ Elevations of all exterior façade of addition including relationship to existing building
□ Detail of trim to be utilized on façade
□ Manufacturer's specifications for windows, doors and lighting that will be installed-including a photograph or sketch
□ Photographs of all existing facades; existing structures adjacent to property; and views from the façade to be altered

CONSISTENT WITH THE UNITED STATES CONSTITUTION AND THE RELIGIOUS LAND USE AND INSTITUTIONALIZED PERSONS ACT OF 2000, THE CITY OF KENNESAW DOES NOT DISCRIMINATE ON THE BASIS OF RELIGION IN THE APPLICATION OF ITS LAWS, POLICIES, OR PROCEDURES, INCLUDING THE APPLICATION OF ITS LAND USE REGULATIONS AND ZONING LAWS.

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If you believe that the City of Kennesaw, or any other local government or municipality, has discriminated against you in the implementation of its zoning or land use laws, please contact the United States Department of Justice.

United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

1. **NAME OF APPLICANT:** David Shelton
   - [x] Owner
   - [ ] Other
   - [ ] Other, please specify _____

   APPLICANT MAILING ADDRESS: [redacted]

   (Home#) [redacted] (Cell#) [redacted] Email) [redacted]

   PROPERTY ADDRESS: 2966 N. Main St.

   Land Lot 128 & 129 Tax Parcel 2001390040 Lot Size 3.077 acres

   Current zoning on property: Residential R-20

2. **NAME OF ATTORNEY OR REPRESENTATIVE:**

   _____

   (Home#)_____ (Cell#) _____ (Email) _____

   NAME OF OWNER:

   David + Diane Shelton

   (Home#)_____ (Cell#) [redacted] ail) [redacted]

3. **ACTIVITY**

   - [ ] New Construction
   - [ ] Demolition
   - [ ] Awnings
   - [ ] Fence
   - [ ] Repairs or Alterations
   - [x] Landscaping
   - [ ] Exterior Architectural Features
   - [ ] Exterior Environmental Feature Change
   - [ ] Moving a Building
   - [ ] Sign Erection
   - [ ] Sign Placement *

   *** (NOTE – Business License required before signage installation)**

Please describe your proposed work as simply and accurately as possible. Use the attached submittal criteria checklist to guide you in your description. Be sure to indicate materials to be used. Accurate drawings and photographs are required. (Use extra sheet, if necessary.) **Signed and sealed drawings from an architect, engineer or other design professional are required when construction of a new building, alterations and/or additions to existing structures are being made (Code 800.14.1).**

- Replace existing Trident Maple (planted by us - not native to property). Replace with Dogwood.
- See attached notes for reason to replace, along with photos and research documentation.

Important: This form must be completed before the Historic Preservation Commission will consider the approval of any material change to a property within a Historic District. This form, along with supporting documents must be filed with 1 Original (4) copies including color photos (excluding models, material and color samples, where one (1) is sufficient). The application and supporting documents are to be placed on a **CD in a PDF format**.

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W. David Shelton — 2/13/2025

Signature of Applicant **Date**

2/13/2025

Signature of Owner **Date**

(If different from applicant, consenting to work to be performed on said property.

CERTIFICATE OF APPROPRIATENESS

APPROVAL SIGNATURES

Darryl Simmons (Application Deemed Complete)
Planning & Zoning Administrator Date: _____

(Application Administratively Approved)
HPC Chair Date: _____

☐ GRANTED
☐ DENIED Reason for denial _____
☐ REQUIRES HPC APPROVAL

Historic Preservation Commission consideration:

HEARING DATE: _____

ACTION BY COMMISSION:

☐ GRANTED

☐ DENIED

APPROVED WITH CONDITIONS:

_____

_____

DENIED: Reason for denial

_____

_____
(May re-submit within 60 days)

POSTPONED/TABLED _____

_____
Signature, Historic Preservation Commission Date

Upon Administrative Approval scan and send document to Commission for review

Shelton @ 2966 N Main St – Box Elder bug infestation:

Boxwood Elder bugs have infested our property for approximately 3-4 months.

They come out only on warm days and mass on sunny south and west sides of structures.

Northwest Exterminating found them infested and massed in the maple. They were treated, but returned a few days later.

When in mass on front of small white outbuilding, there are many clustered around door, inhibiting entrance. Brushing them away is difficult because they fly and return.

Pictures of shutters show them massed on a cool day in the warmest spot they can find. We have no idea how many are nesting behind shutters.

Droppings are seen on white siding below shutters. This is seen under several shutters.

They also inhabit the pine straw and grass in front of the house. We plan to replace the pine straw with cedar mulch once another pesticide treatment has been done on a sunny, dry day.

Documentation from Northwest Exterminating is enclosed.

We are treating for bug removal, but also want to remove the maple and replace with a tree that is less attractive to boxelder bugs. Dogwood is on the approved list.

Boxelder Bug Infestation

Overview:
Boxelder bugs are small, reddish-brown insects that are commonly found in North America. They are attracted to boxelder trees, but can also infest other trees, shrubs, and even homes.

Signs of Infestation:

- Clusters of boxelder bugs on walls, windows, and doors
- Black stains on surfaces from their droppings
- Eggs, which are small and oval, laid on leaves or bark

Life Cycle:
Boxelder bugs hatch from eggs in the spring. They go through several molting stages before reaching adulthood in the summer. In the fall, they gather in large groups and seek shelter for the winter, often in homes.

Control Methods:
Exclusion:

- Seal cracks and gaps around windows and doors
- Remove wood piles and debris near the house
- Trim tree branches that overhang the house
-

Chemical Treatments:

- Use insecticides specifically designed for boxelder bugs
- Apply diatomaceous earth, a natural powder that dehydrates and kills insects
-

Other Methods:

- Vacuum up boxelder bugs regularly
- Use a soapy water spray to kill them on contact
- Set up traps to attract and capture bugs
-

Prevention:

- Remove boxelder trees from the yard if possible
- Plant trees that are less attractive to boxelder bugs
- Inspect and clean gutters and downspouts regularly

If you are seeing box elder bugs aggregating on your home now (in the early spring), they are adults that have overwintered and are starting to disperse to host trees. During cool weather in the spring, the bugs will aggregate on warm, sunny southern / western walls of buildings, similar to what they do in the fall.

Example of what we had on front of small outbuilding and front of house.

AI Overview

No, dogwood trees are generally not considered attractive to boxelder bugs; boxelder bugs are primarily drawn to maple trees, especially boxelder maple trees, as well as ash trees, so they are unlikely to be significantly attracted to a dogwood tree.

Northwest Exterminating Co
3650 New Mcever Road Acworth, GA 30101

678-810-0032

Creating Healthier Living and Working Environments for Homes and Businesses

Extraordinary Service Performed At: **Extraordinary Service Performed By:**

[redacted]

Billing Address	Service Address
David and Diane Shelton 2966 N Main St NW Kennesaw, GA 30144-2735	David and Diane Shelton 2966 N Main St NW Kennesaw, GA 30144-2735

Service Professional Details

Name	Reg./Cert.#	License #
Clifton (Brad) Smith	SP13585	100105

Date Completed: 1/13/2025
Time Started: 1:51PM
Time Completed: 1:54PM

Recommendations and Observations from Your Service Professional

110-155. Hey, good to see you! While performing the green pest management service I noticed box elder bugs that I treated. Everything else is looking good! Please let me know if you need anything! Thanks so much

Materials Used

Materials	EPA #	Active %	QTY	Location	Application Method	Target Pests
Microcare 3% CS (.02%)	1021-2839	3%	0.50 gal	Exterior Perimeter-Foundation, Exterior Perimeter-Hardscapes, Exterior PerimeterSoil/Mulch	Crack and Crevice,Fan Spray	Ants, Roaches, Spiders, Box Elder Bugs
Intice 10 Perimeter Bait	73079-6	10%	0.50 lbs	Exterior Perimeter-	Perimeter Broadcast	Ants, Roaches

Precautions:
Keep people and pets out of area until dry
For flea treatment, allow 4 hours for area to dry before entering
Keep pest control devices away from children and pets
No food present during time of application
Clean surfaces before preparing food
No children present during application

Signature

Service Professional

Brad Smith

Customer

WELCOME

Certificate of Appropriateness

Is hereby granted by Approval by the

Historic Preservation Commission

to: Tyler Lenn

For: 2926 Lewis Street

Scope of Work: Tree Removal

Darryl Simmons

Darryl Simmons, Administrator
Planning & Zoning Department

01/22/2025

Date

Patrick Gallagher

Patrick Gallagher, Chairperson
Historic Preservation Commission

01/22/2025

Date

Expires
01/22/2026

CERTIFICATE OF APPROPRIATENESS APPLICATION

□ Application Fee: $50.00 □ Demolition Fee: $150.00

All new construction and exterior remodeling of buildings within the Kennesaw Historic District shall be subject to the architectural review and approval of the Historic Preservation Commission (**HPC**). HPC approval is also required for Kennesaw Downtown Development Authority (KDDA) Façade and Signage Grants.

Darryl Simmons, Planning and Zoning Administrator for the City of Kennesaw will meet with you to direct your application process. To make an appointment, please call 770-590-8268.

A Certificate of Appropriateness (COA) shall be obtained from the **HPC** prior to the issuance of a building permit. The **HPC** shall consider a variety of issues in rendering its decision including, but not limited to the following:

a. The surrounding development
b. The best interest of the community
c. Previous studies undertaken by the City as well as the standards contained herein.

Application for signage to include

☐ Material Specifications
☐ Drawing of Sign with Dimensions and Colors to be used
☐ Façade detail of fonts

Application for landscaping to include

☐ Variety of trees and shrubs
☐ Indicate size and location of plantings

Application for exterior renovations and additions to include

☐ Existing conditions site plan depicting location of addition in relation to the existing property
☐ Existing floor plan of building
☐ Proposed floor plan of building including portions not to be altered
☐ Elevations of all exterior façade of addition including relationship to existing building
☐ Detail of trim to be utilized on façade
☐ Manufacturer's specifications for windows, doors and lighting that will be installed-including a photograph or sketch
☐ Photographs of all existing facades; existing structures adjacent to property; and views from the façade to be altered

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United States Department of Justice
Civil Rights Division
Housing and Civil Enforcement Section
950 Pennsylvania Ave. N.W. –G St.
Washington, DC 20530

1. **NAME OF APPLICANT:** Tyler Lenn
   - ☐ Owner
   - ☐ Other
   - ☑ Other, please specify Consulting Arborist

   APPLICANT MAILING ADDRESS: [redacted]

   [redacted]

   (Home#)_____ (Cell#) [redacted] (Email) [redacted]

   PROPERTY ADDRESS: 2926 Lewis St.

   Land Lot _____ Tax Parcel 20013900250 Lot Size 0.662 acres

   Current zoning on property: R4

2. **NAME OF ATTORNEY OR REPRESENTATIVE:**

   Same as applicant/consulting arborist

   (Home#)_____ (Cell#) _____ (Email) _____

   NAME OF OWNER:

   Alc. Costa (Vazco Properties LLC)

   (Home#)_____ (Cell#) [redacted] (Email) [redacted]

3. **ACTIVITY**

   - ☐ New Construction
   - ☐ Demolition
   - ☐ Awnings
   - ☐ Fence
   - ☐ Repairs or Alterations
   - ☑ Landscaping
     - * Tree removal
   - ☐ Exterior Architectural Features
   - ☐ Exterior Environmental Feature Change
   - ☐ Moving a Building
   - ☐ Sign Erection
   - ☐ Sign Placement *

   *** (NOTE – Business License required before signage installation)**

Please describe your proposed work as simply and accurately as possible. Use the attached submittal criteria checklist to guide you in your description. Be sure to indicate materials to be used. Accurate drawings and photographs are required. (Use extra sheet, if necessary.) **Signed and sealed drawings from an architect, engineer or other design professional are required when construction of a new building, alterations and/or additions to existing structures are being made (Code 800.14.1).**

The property owner wants to remove three trees on the property. Two are large and in very poor condition. My report with my findings are attached.

Important: This form must be completed before the Historic Preservation Commission will consider the approval of any material change to a property within a Historic District. This form, along with supporting documents must be filed with 1 Original (4) copies including color photos (excluding models, material and color samples, where one (1) is sufficient). The application and supporting documents are to be placed on a **CD in a PDF format.**

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Tyler Lee — 20 January 2025

Signature of Applicant — **Date**

JAN-20-25

Signature of Owner — **Date**

(If different from applicant, consenting to work to be performed on said property.

CERTIFICATE OF APPROPRIATENESS

APPROVAL SIGNATURES

Darryl Simmons (Application Deemed Complete)
Planning & Zoning Administrator Date: 1-22-25

(Application Administratively Approved)
HPC Chair Date: January 22, 2025

X GRANTED
☐ DENIED Reason for denial _____
☐ REQUIRES HPC APPROVAL

Historic Preservation Commission consideration:

HEARING DATE: _____

ACTION BY COMMISSION:

☐ GRANTED

☐ DENIED

APPROVED WITH CONDITIONS:

_____

_____

DENIED: Reason for denial

_____

_____

(May re-submit within 60 days)

POSTPONED/TABLED _____

_____
Signature, Historic Preservation Commission Date

Upon Administrative Approval scan and send document to Commission for review

18 January 2025

From: Tyler Lenn, ISA Certified Arborist GO-0017-A
Trident Forestry & Natural Resources Management, LLC

To: Mr. Alci Costa
2926 Lewis Street
Kennesaw, GA 30144

Copy to: City of Kennesaw Public Works Department
3080 Moon Station Road
Kennesaw, GA 30144

Subject: Tree Health and Risk Assessments

Executive Summary

The scope of this report is to provide health assessments, tree risk assessments, and management recommendations for three trees at 2926 Lewis Street in Kennesaw, Georgia. The 47.8-inch water oak near the roadway is in severe decline or dying and is already failing in pieces while the bulk of the remaining tree is diseased and has extreme decay. It has high target potential. A small Callery pear (a non-native invasive or noxious species) along the side property line has damage and now an odd, shrub-like form. It will not strike any targets if it fails, but it is providing no ecological or ornamental value. The 31.1-inch red maple in the back has extreme decay and a huge cavity in its primary stem, or trunk, and a severe lean directly over a shed and corner of the house. **I recommend all three trees, especially the large water oak near the roadway and the red maple, be removed as soon as possible.**

Figure 1. The three subject trees: a 47.8-inch declining/dying water oak (left), a small and oddly shaped ornamental pear (center), and a 31.1-inch red maple with a giant cavity and severe decay and rot (right).

Introduction

The scope of this report is to provide health assessments, tree risk assessments, and management recommendations for three trees at 2926 Lewis Street in Kennesaw, Georgia. I am reporting objective findings and making unbiased recommendations. Any limitations to the assessments are reported as needed.

Disclaimer: Arboriculture involves living organisms in dynamic environments within the natural world. Assessments are based on established and emerging discoveries in arboriculture and related sciences. It is impossible for any person, including highly trained experts, to make guarantees or absolute predictions. Trees have the potential to fail in part or in whole and cause harm to life, limb, and property at any time regardless of their condition. The assessing arborist assumes no liability for any said failure. These assessments and recommendations are based on my knowledge, education, training, experience, and observations while following International Society of Arboriculture (ISA) and the American National Standard for Tree Care Operations (ANSI A300) standards and Best Management Practices (BMPs) to the best of my ability on this site at the time of the assessment.

Figure 2. An aerial view of the parcel, from the Cobb County qPublic site, identifying the approximate locations of the subject trees.

Methodology

These trees were assessed based on the industry standard protocols for a Level 2 assessment. The Level 2 assessment requires the assessing arborist to inspect all reasonably visible parts of the tree and immediate growing conditions. A key task of the assessment is to identify biotic problems (*e.g.*, disease, insect infestations, suppression by other vegetation), abiotic problems (*e.g.*, soil compaction, root-damaging landscape practices), and structural problems (*e.g.*, structural root plate instability, severe asymmetry causing increased load). Another key task is to identify the core physical characteristics of the tree, such as species identification, DBH (diameter at breast height or 4.5 feet above the ground), height, and live crown ratio (the percentage of the full height of the primary stem, or trunk, that contains smaller stems, or branches, and foliage). Subject trees are assigned a condition ranking based on the collective information from the assessment:

Tree Conditions:

- **Poor:** The tree exhibits below average health and vigor for its species. The tree has likely exceeded at least one physiological and/or structural threshold to be restored to improved vigor with remediating measures. It may have significant pathological problems such as disease from wood decay fungus or a wood boring insect attack. *Trees that are clearly dead are assessed as *dead* rather than *poor*.
- **Fair:** The tree exhibits typical health and vigor for its species. It may have one or more physiological, pathological, and/or structural defects but nothing of major concern. The tree will likely exhibit a positive response from appropriate remediating measures.
- **Good:** The tree exhibits typical to superior vigor for its species. It has no (externally detectable) significant physiological, pathological, and/or structural defects.

Tree risk assessments are conducted using criteria and definitions from the International Society of Arboriculture (ISA) Best Management Practices, including the categorizations and ratings in Tables 1 and Table 2, and the ISA Tree Risk Assessment Qualification (TRAQ) curriculum and methodology.

Likelihood of Failure	Likelihood of Impact			
	Very Low	Low	Medium	High
Imminent	Unlikely	Somewhat Likely	Likely	Very Likely
Probable	Unlikely	Unlikely	Somewhat Likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat Likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Table 1. *Matrix 1. Likelihood matrix.*

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very Likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat Likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Table 2. *Matrix 2. Risk rating matrix.*

The following definitions apply to the terminology utilized in the Tree Risk Assessment methodology.

Likelihood of Failure:

- **Imminent:** Failure has started or is most likely to occur in the near future, even if there is not significant wind or increased load.
- **Probable:** Failure may be expected under normal weather conditions within the specified time frame.
- **Possible:** Failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame.
- **Improbable:** The tree or tree part is not likely to fail in extreme weather conditions within the specified time frame.

Likelihood of Impacting a Target:

- **High:** The failed tree or tree part is likely to impact the target.
- **Medium:** The failed tree or tree part could impact the target but is not expected to do so.
- **Low:** There is a slight chance that the failed tree or tree part will impact the target.
- **Very Low:** The chance of the failed tree or tree part impacting the specified target is remote.

Consequences of Failure:

- **Severe:** Consequences that could involve serious personal injury or death, high-value property damage, or major disruption of important activities.
- **Significant:** Consequences that involve substantial personal injury, property damage of moderate to high value, or considerable disruption of activities.
- **Minor:** Consequences that involve minor personal injury, low to moderate value of property damage, or small disruption of activities.
- **Negligible:** Consequences that do not result in personal injury or involve low-value property damage or disruptions that can be replaced or repaired.

Limitations: Tree height and live crown ratio were estimated visually. No internal, aerial, or underground testing or inspections typical of a Level 3 (advanced) assessment were performed.

Trident Forestry & Natural Resources Management LLC

Results and Recommendations

Tree #1

- Identification: Water oak (*Quercus nigra*).
- DBH: 47.8 inches.
- Height: Approximately 65 to 75 feet (estimated visually).
- Live Crown Ratio: Approximately 75 percent. However, a lot of that live crown is full of epicormic branches and dead and diseased wood.
- Biological condition: Poor.
- Structural condition: Poor.
- Overall condition: Poor.
- Observations:
  - Several branches have failed recently. Some branch failures can be normal, especially in the foul and freezing weather we have had here recently. However, the quantity of recent branch failures evident based on all the debris present on scene is not normal. Also, the fallen branches are covered with *Hypoxylon*, a fungus that kills and feeds on trees.
  - Dead branches are present throughout the crown. Some dead branches can be normal. However, this tree has several, and they are dead starting at the tips and working back toward the interior of the crown. This systemic branch dieback is indicative of overall decline in the tree.
  - A significant amount of the tree's branches are epicormic shoots. Some epicormic branching is typical, especially if the tree has lost branches for one reason or another. However, this tree has a lot of them, likely caused or exacerbated by the abundant dead, broken, and decayed stubs of remaining branches and several other injuries throughout the tree. Although it is good that the tree has enough resources to push out new growth, this indicates overwhelming stress that is further taxing the tree's remaining health.
  - Targets include static targets like the house on this lot, utility lines, the roadway, and structures across the street within striking distance. Although the house on this lot has a low occupancy rate, the structures across the street appear to have a high occupancy rate, and the roadway has a sporadic but moderately high occupancy rate. Targets like the people across the street and walking or driving along the right-of-way (ROW) may be mobile, but consequences would be severe if they were impacted by the failing tree.
- **Risk Analysis:**
  Partial (branch or partial stem) failure:
  - Likelihood of Failure (within one to three years with typical weather conditions and patterns): ***Probable*.** Branch failure is already happening frequently during foul but typical weather as well as calm weather conditions, especially because of all the dead and diseased branches.
  - Likelihood of Impact: ***High***. Breaking branches and a failed top could strike the house on this lot, utility lines along the ROW, and pedestrian, drivers, and vehicles in the ROW.
  - Likelihood of Failure and Impact: ***Likely***, based on a *probable* likelihood of failure and *high* likelihood of impact.

- Consequences of Failure: ***Significant.*** Consequences could involve substantial personal injury, property damage of moderate to high value, or considerable disruption of activities, pending the occupancy of mobile targets (pedestrians, drivers, and vehicles) in the ROW.
- Risk Rating: ***High***, based on a *likely* likelihood of failure and impact and *significant* consequences of failure.

Total (whole tree) failure:

- Likelihood of Failure (within one to three years with typical weather conditions and patterns): ***Probable*.** Failure may be expected under normal weather conditions within the specified time frame due to the declining health and strength of the tree.
- Likelihood of Impact: ***High***. The entire tree falling could strike the house on this lot, utility lines along the ROW, and pedestrian, drivers, and vehicles in the ROW.
- Likelihood of Failure and Impact: ***Likely***, based on a *probable* likelihood of failure and *high* likelihood of impact.
- Consequences of Failure: ***Severe.*** Consequences could involve serious personal injury or death, high-value property damage, or major disruption of important activities – such as crushing the house on this lot or blocking the entire ROW – due to the increased mass falling.
- Risk Rating: ***High,*** based on a *likely* likelihood of failure and impact and *severe* consequences of failure.

Overall Final Risk Rating: *High*, based on the *high* risk rating for both partial and total failure.

- **Recommendations:**
  - **Remove the tree as soon as possible.**
  - **Do not loiter in the area beneath the tree, especially during high winds and generally foul weather.**
  - **No mitigating measures or practices, such as pruning or plant health care treatments, will reverse the declining condition of the tree or make it safer.**

Trident Forestry & Natural Resources Management LLC

Figure 3. Two views of Tree #1, with orange arrows calling out some of the dead branches (left).

Figure 4. A significant quantity of failed branches on the ground and on the roof of this lot's house.

Figure 5. Close-up views of recently failed branches covered in *Hypoxylon* and extensive decay pre-dating their failures.

Figure 6. The *Hypoxylon* is the gray/white to blue-ish colored spots on the branches, called out by the orange arrows. This fungus is all over the fallen branches and parts of the remaining tree.

Figure 7. More views of dead branch tips, called out by orange arrows, indicating systemic decline.

Figure 8. Areas of *Hypoxylon* (here white to tan) on the tree's primary stem, or trunk, and injuries from either an external impact or internal decay reaching the outer bark.

Tree #2

- Identification: Callery or Bradford pear (*Pyrus calleryana*).
- DBH: Approximately 9 inches (estimated visually because I could not get my logger's tape through all the shrubby stems).
- Height: Approximately 18 to 21 feet.
- Live Crown Ratio: 100 percent.
- Biological condition: Fair.
- Structural condition: Poor.
- Overall condition: Poor.
- Observations:
  - The tree is exhibiting some odd behavior. Most of it is dormant, but it has all these epicormic shoots (that are now pretty large) that have emerged from around its base and has live foliage. It looks like the base is damaged, perhaps leading to the advantageous growth as a stress response. It is also possible that seedlings have emerged right around the base and just grown up around the parent tree, and now all the stems are growing together to appear like one big, messy shrub.
  - Callery pears are considered an invasive species or, at best, considered noxious by some. Once planted as an ornamental, most people realize that they are prolific seeders and have weak wood, which causes branches to break frequently.
  - This tree has no static targets, and it is small enough that if it failed, it likely would not cause much, if any, damage to mobile targets.
- **Risk Analysis:**

  Partial (branch or partial stem) failure:
  - Likelihood of Failure (within three years with typical weather conditions and patterns): ***Possible.*** Failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame.
  - Likelihood of Impact: ***Very low.*** The chance of a failed branch impacting a target is remote.
  - Likelihood of Failure and Impact: ***Unlikely***, based on a *possible* likelihood of failure and *very low* likelihood of impact.
  - Consequences of Failure: ***Negligible.*** Consequences would result in no or negligible personal injury or involve low-value property damage or disruptions that can be replaced or repaired.
  - Risk Rating: ***Low*** based on an *unlikely* likelihood of failure and impact and *negligible* consequences of failure.

  Total (whole tree) failure:
  - Likelihood of Failure (within three years with typical weather conditions and patterns): ***Possible.*** Failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame.
  - Likelihood of Impact: ***Very low.*** The chance of a failed branch impacting a target is remote.
  - Likelihood of Failure and Impact: ***Unlikely***, based on a *possible* likelihood of failure and *very low* likelihood of impact.

- Consequences of Failure: ***Negligible.*** Consequences would result in no or negligible personal injury or involve low-value property damage or disruptions that can be replaced or repaired.
- Risk Rating: ***Low*** based on an *unlikely* likelihood of failure and impact and *negligible* consequences of failure.

Overall Final Risk Rating: *Low,* based on the *moderate* risk rating for both partial and total failure.

- **Recommendations:**
  - **Remove the tree. I see no point in keeping it considering its species, form, and lack of function or purpose in the current landscape conditions.**

Figure 9. Multiple views of Tree #2 (left and center), with the odd, unexplained damage to the base mostly obscured by the shrub-like growth (right).

Tree #3

- Identification: Red maple (*Acer rubrum*).
- DBH: 31.1 inches.
- Height: Approximately 55 to 65 feet (estimated visually).
- Live Crown Ratio: Approximately 50 percent. The live crown ratio appears greater because one large branch is hanging very low, especially because one of its lateral are broken.
- Biological condition: Fair.
- Structural condition: Poor.
- Overall condition: Poor.
- Observations:
  - This tree has a severe lean to the east, directly over the shed and corner of the house.
  - This primary stem, or trunk, has a huge cavity right above breast height that encompasses most of the cross-sectional area of the stem. It has extensive decay and severe rot.
  - The tree has multiple other cavities and large areas of decay higher up the stem and in the crown.
  - The tree has some major broken branches.
  - Targets include the previously mentioned shed and house, any occupants that would happen to be inside at the time of failure (although infrequent now), and other trees along the rear of the house.
- **Risk Analysis:**

  Partial (branch or partial stem) failure:
  - Likelihood of Failure (within one to three years with typical weather conditions and patterns): ***Probable.*** Branch failure is already happening since several are broken.
  - Likelihood of Impact: ***High***. Breaking branches and a failed top could strike the noted targets.
  - Likelihood of Failure and Impact: ***Likely***, based on a *probable* likelihood of failure and *high* likelihood of impact.
  - Consequences of Failure: ***Significant.*** Consequences could involve substantial personal injury, property damage of moderate to high value, or considerable disruption of activities.
  - Risk Rating: ***High***, based on a *likely* likelihood of failure and impact and *significant* consequences of failure.

  Total (whole tree) failure:
  - Likelihood of Failure (within one to three years with typical weather conditions and patterns): ***Probable.*** The tree is severely structurally compromised.
  - Likelihood of Impact: ***High***. The entire tree falling could strike the noted targets.
  - Likelihood of Failure and Impact: ***Likely***, based on a *probable* likelihood of failure and *high* likelihood of impact.
  - Consequences of Failure: ***Severe.*** Consequences could involve serious personal injury or death, high-value property damage, or major disruption of important activities due to the increased mass falling.

- Risk Rating: ***High,*** based on a *likely* likelihood of failure and impact and *severe* consequences of failure.

Overall Final Risk Rating: *High*, based on the *high* risk rating for both partial and total failure.

- **Recommendations:**
  - **Remove the tree as soon as possible.**
  - **Do not loiter in the area beneath the tree, especially during high winds and generally foul weather.**
  - **No mitigating measures or practices can put the wood back on this tree.**

Figure 10. Tree #3 leaning and curving over its closest target, the shed.

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Figure 11. The orange arrows are calling out areas of decay and broken branches, which are difficult to see because of the cloudy conditions at the time of the assessment and the mess of abundant branches.

Figure 12. Multiple views of the massive cavity on the lower stem of Tree #3, with extensive decay and rot.

Conclusion

These observations and recommendations are not identified to cause alarm or to paint trees as a liability or burden. Trees are a valuable part of any property that require routine maintenance and, occasionally, special care or action, just like the other elements of a property.

In addition to the recommendations made for the subject trees, I recommend a Level 2 assessment by a professional arborist for all the trees on the property at least annually.

All tree care operations, including removals, should be performed by a professional, licensed, and insured tree service provider that follows ISA BMPs, ANSI A300 standards, and the American National Standard for Arboricultural Operations – Safety Requirements (ANSI Z133).

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Very Respectfully,

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