



City of Wilson, NC.

Request for Proposals #: 2022-34

ACE BID# 19-0500

**Title: Maplewood Cemetery Masonry Arched Entrance
Improvements/Repairs**

Date of Issue: 09-20-22

Proposal Opening Date: 10-12-2022

@ 2:00 pm - City of Wilson Operations

Center Public Works Conference Room

Direct all questions for this RFP to:

Bill Bass

Director of Public Works

Email: bbass@wilsonnc.org

SECTION 001001–SPECIAL CONDITIONS/SCOPE OF WORK

(Last revised 9/14/22)

I. GENERAL

1. The scope of this project consists of, but is not limited to the following:
 - A. Furnishing all materials, labor, and equipment necessary to construct the project in accordance with the Specifications and the directions of the Owner and/or their representative. Refer to the Contract Documents and other related technical specifications for specifics governing this work.
 - B. Background:
 1. There is an existing Architecturally historic drive through entry into the cemetery. The City intends to retain the structure, make the necessary repairs to prevent further degradation of brick and mortar from wind driven rain and wind, and use the structure as the entryway into the cemetery. Consequently, the City of Wilson had an assessment of the structure to determine both the extent of distress, the likely causes and what improvements may be needed to prolong the life of the structure.
 2. The intent of the bid is to obtain the services of a North Carolina licensed contractor experienced in both building construction and masonry restoration; particularly historic masonry preservation and repairs. Contractor must also be familiar with the materials and methods specified in these contract documents.

II. PROPOSED SCOPE OF WORK:

The scope of work is to include, but is not necessarily limited to, the following:

1. **GENERAL:**
 - A. **Permit fees:** The Contractor is to include all taxes and permit fees in his proposal. At completion of the work, the tax affidavit is to be provided to the City with his final payment.
 - B. **Minor Sitework Required:** Some minor landscaping may be required only to the extent disturbed by the contractor in executing this work as described in the contract documents.
 - C. **Protection of Existing Facility:** Prior to masonry repair, Contractor is to locate/designate all existing electrical conduit and building wiring that may interfere with masonry work. If necessary, the City Facilities Supervisor may request that the Contractor make such adjustments as needed using the services of a licensed

Electrical Contractor; the associated cost of same to be deducted from the 5% contingency if applicable.

- D. **Existing Building to Remain:** The City intends to leave the existing Arched Gateway/Building in place. No demolition is to occur except where warranted due to decay from either insects or moisture.
- E. Contractor shall include in his bid all costs associated with masonry repair of this facility.
- F. All construction and materials are to comply with the **2018 NC State Building Code** (IBC with NC Amendments).
- G. **Unit Price Bid Items:** Where unit prices have been requested, contractor may only bill for the actual quantities/units field verified by the Engineer to have been employed in construction.
- H. **Contact fore Access and General Guidance:**
 - 1. City of Wilson's Facilities Supervisor: Wayne Robbins, 252.205.3783 (cell)

2. **SITE & BUILDING**

- A. **Primary Scope of work is:**
 - a. To include the repair to the two drive through arches (which is likely to require removal and replacement of archway brick, shoring, falsework, etc.).
 - b. Select coping removal/replacement with new through wall flashing, etc.
 - c. Potentially, placement of helical piers as designated by the Project Engineer (an allowance of 5 piers has been provided in the proposal).
 - d. Pointing of mortar joints found to be soft, powdery or having sustained significant loss of mortar depth (greater than $\frac{3}{4}$ " in depth),
 - e. Pointing of all cracks (whether related to foundation subsidence or thermal expansion/contraction),
 - f. Removal and replacement of mortar in joints previously repaired with a gray hard mortar (non-NHL mortar),
 - g. Cleaning Building Brick Veneer (A lump sum deduct bid item has been included should the City elect to forego cleaning). See paragraph 3.14.E in Specification Section 004900.
 - h. Caulking (around timber trim, doors, and windows, at flashing abutting brickwork), etc.
- B. **Limbing Overhanging Trees/Tree Roots:** Contractor shall include tree limbing and root removal deemed to be in conflict with the structure. Limbs shall be cut back a minimum of 6 feet from structure, as applicable. The costs of limbing and the associated disposal of same is to be included in the base bid...NOT A BID ITEM.
- C. **Access Through the Arches:** Continue to block public access through the drive through arches until the masonry arches are satisfactorily repaired and self-supporting. Coordinate daily (or more) barricade removal with the City's Facility

Supervisor until such time the brickwork/arch repairs are complete. At the end of each day's work the archway is to continue to be barricaded from public use/access. Post adequate warning signs and barricades to both protect and warn pedestrians.

3. FOUNDATION

- A. **Post-Construction Helical Piering - Contingency:** In the Base Bid proposal, a contingency is being requested for the installation of post-construction helical piers to shore in place/support the existing footings at locations designated by Project Engineer. Base bid to assume piers placed to a pay depth of 40 feet per pier.

4. MASONRY

- A. **Drive Through Arch Repair:** The repair of the two drive through arches.
- B. Shoring two primary Porte-cochere 13' wide arches, repositioning of failed keystones, and mortaring or pointing, as applicable, of the mortar joints. Repair is likely to require removal and replacement of archway brick).
- C. **Falsework and Shoring:** Contractor is to provide all labor and materials for all associated falsework and shoring required to support existing masonry lintels, parapets, and arches during wall or arch repairs; the cost of same to be included in the base bid...NOT A BID ITEM.
- D. **Joint Pointing:**
1. See Specification Section 004900 for limits of repointing/repair; specifically, paragraph 3.6.
- E. **Parapet coping removal/replacement with the addition of through-wall flashing:** Contractor to remove existing coping and any existing flashing, stabilize the existing masonry course as needed, replace the through-wall flashing, and then replace the coping; all costs to be included in the base bid price... NOT A BID ITEM. The precast/limestone coping may have dowels. Preserve dowels and reuse; aligning coping when re-setting. Punch holes in flashing for dowels and place sealant around annular space of dowel hole.

Parapet Coping Removal/Replacement Locations (Base Bid):

1. East end wall
2. Ornamental coping above rear arch

Undesignated Coping Removal and Replacement Locations:

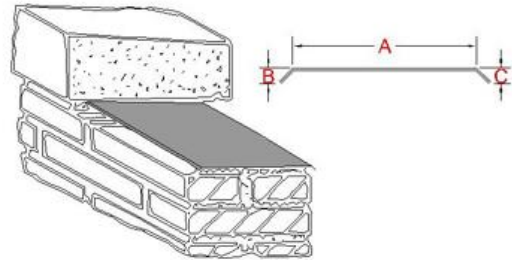
A contingency is also being requested for the parapet removal and replacement with through-wall flashing for areas not shown above and added by either the Project Engineer or the City Engineer's representative over and above the base bid. To be measured and paid for by the linear foot (LF) of coping removed and replaced.

Where coping is removed and replaced, re-condition the top 1 or 2 courses as necessary by removing the brick and replacing in new mortar; ensuring a level base surface upon which the new flashing and replaced coping can be set and mortared.

Other coping caps that are not removed and reflashed, or otherwise designated by the project engineer to be removed/replaced, are to have the head joints cleaned and repointed/sealed as necessary.

Through-Wall Flashing:

Through-wall flashing to be either: Minimum 24 gauge galvanized steel, 26 gauge Stainless Steel, 16 oz (24 ga) copper, or an approved equal.



Key to Detail (above):

A (width): To be net width of wall thickness.

B (Front side; exterior): Drip edge to be 3/8" placed on a 45 degree angle.

Set break line of flashing at face of masonry parapet wall.

C (Backside; interior): Drip edge to be 3/8" placed on a 45 degree angle. Set break line of flashing at rear face of masonry parapet wall.

- F. **Unsightly Masonry Veneer Cracks:** No repair or replacement of the brick itself is proposed at this time. However, in some areas where the uncracking is determined by the City to be unsightly to the public eye, the brick veneer should be removed and replaced using lime mortar. At the time of Appian's inspection, no areas were observed to be in particular need or determined to be necessary.

Wider than normal mortar joints may exist after pointing (where cracks currently exist) but if mixed properly and a reasonable attempt at color matching is tried, the repair may be difficult to detect by the untrained eye to.

Any masonry crack repair required in areas that the engineer designated to be shored with helical piercing, delay crack repair in those areas for at least 45 days following piercing to allow the building structure to adjust to the new pier reactions.

A contingency item has been provided in the proposal for brick removal/replacement with new NHL/PHL mortar.

- G. **Brick and Mortar Tinting:** All costs associated with tinting of new brick or mortar is to be included in the base bid price of exposed surface masonry repaired. See Part 2, Specification Section 004900 regarding Lime Mortar Materials....NOT A BID ITEM.

5. **Exclusions:** The scope of work shall exclude the following:

- A. Roof repair/replacement (either low-sloped single-ply or pitched roof terra cotta or metal),
- B. Roof flashing. If wall flashing is deemed by the Project Engineer to be in need of replacement, the costs associated with flashing replacement will be deducted from the 5% contingency.
- C. Any and all joints found to be sound and showing no signs of significant mortar loss (in the form of soft powdery mortar) or degradation. Existing mortar requiring etching by a knife or tool to remove is not eligible. To be eligible, mortar must be able to be easily removed by hand or air pressure.
- D. Masonry waterproofing.
- E. Exterior trim/facade painting and painting of timber windows and doors.
- F. Interior or exterior coatings or sealants, other than specified.
- G. **Electrical:** Electrical work (not specially allowed under the Contractor's license and proposed to be performed by the Contractor's Electrical Subcontractor) that interferes with placement/replacement of damaged timber or brickwork within the scope of work as defined in this proposal, is to be covered in the base bid.

However, any latent or undiscovered electrical work that is clearly outside the scope of work and ordered by either the City's Facility Manager or the Project Engineer (upon approval by the Project Engineer), is considered to be an extra cost; said cost to be deducted from the 5% contingency. Furthermore, any areas of concern discovered by the Contractor with regard to electrical is to be brought to the attention of the Facilities Manager or the Project Engineer.

6. **Taxes:**

Contractor to include all applicable taxes and permits/permit fees.

7. **Storage/Lay-down:**

Contractor may store materials on site as required. Coordinate location of material lay-down/staging as required with City's facilities Supervisor.

8. **Work Hours:**

Typically, the hours of construction available to the contractor will be from 7:00 AM to 7:00 PM Monday through Saturday. Coordinate work hours with the City's Facilities Supervisor.

9. **Landscaping:**

After all construction is complete, ensure ruts are filled and site is graded to drain and in a condition equal to or better than the original condition. Where stone has been removed, place a minimum of 4 inches of ABC (or match existing type). Grassed area to be reseeded in accordance with section 02920 of the City of Wilson's Manual of Specifications, Standards & Design (available on line).

10. **Preconstruction Video/Photography:**

Contractor to video/photograph site, hardscape features, concrete pads and stone drive's or aprons around building before moving any equipment on site to protect contractor from unwarranted claims from damage.

11. **Final Cleaning:**

Provide final cleanup and landscaping as applicable on the job. Conduct cleaning and waste removal operations to comply with local laws and ordinances and Federal and local environmental and anti-pollution regulations. All exterior grounds shall be cleaned thoroughly as approved by the Owner. Contractor shall leave site in an equal to or better condition. For this purpose, the Contractor is advised to video the site, top and exterior prior to construction in order to have a record of the pre-construction conditions.

Contractor will be responsible for any damages to the existing building or grounds by his storage of materials or work.

End of Section

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Section 004900 – MASONRY REPOINTING AND RECONSTRUCTION

NATURAL HYDRAULIC LIME MORTAR (NHL)

POZZOLANIC HYDRAULIC LIME (PHL)

PART 1 – GENERAL

1.1 Summary

A. Section Includes

1. Careful salvaging and cleaning of historic materials.
2. Raking out of all unsound mortar from all exterior brick joints.
3. Removal of mortar excess from brick faces.
4. Repointing of all exterior brick joints.

1.2 References

A. American Society for Testing and Materials

1. ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
2. ASTM C141 – Standard Specification for Hydraulic Lime for Structural Purposes.
3. ASTM C144 – Standard Specification – Aggregate for Masonry Mortar.

1.3 Performance Requirements

A. Product Data:

1. Natural Hydraulic Lime: Product Data Sheets.
2. Aggregate: Sieve Analysis

B. Samples

1. Submit one cup (8 oz.) sample of sand aggregate.
2. Submit 4" x 4" x 4" dried mortar sample.

1.4 Quality Assurance

A. Perform Work in accordance with Manufacturer's Instructions

B. Masons:

1. Raking, repointing, removal, material salvage, and finishing operations shall be performed by craftspersons who are familiar with historic lime mortar formulations, curing conditions and performance characteristics. Contractor shall provide proof of such knowledge.
2. Only skilled masons who are familiar and experienced with the materials and methods specified and are familiar with the design requirements shall be used for masonry restoration.

1.5 Qualifications

- A. Installer: An experienced company specializing in performing brick/mortar restoration and plaster/stucco work with minimum of three 3 years' experience.

1.6 Delivery, Storage, and Handling

- A. Deliver materials to site and store in manufacturer's original unopened containers and packaging.
- B. Protect restoration materials during storage and construction from adverse conditions.

1.7 Project Conditions

- A. Do not perform any masonry application unless air temperatures are between 40 degrees Fahrenheit and 85 degrees Fahrenheit and will remain so for at least 48 hours after completion of work or provide proper protection.
- B. Provide sun, wind, and rain protection.

PART 2 – PRODUCTS

2.1 Lime Mortar Materials

- A. Lime Mortars (PHL an NHL) Manufacturers: Lancaster LimeWorks, Henry Frerk Sons, or their authorized distributors, or an approved equal.
- B. The contractor's selected Manufacturer shall be able to offer mortar testing and analysis to match mortar to the original based on the result of laboratory testing. Materials preferably to be a "fast track" mortar; manufacturer able to match/choose color formulations that the manufacturer has on hand.
- C. NHL takes 20 days to cure and achieve strength. PHL usually takes around 7 days to cure and achieve strength.
- D. A property blend (pre-mixed off site [with sand additive] to specific physical specifications for strength and permeability) is recommended though proportion blend (mixed on site) is acceptable.

2.2 Components

A. Mortar Materials

1. Binder: Natural Hydraulic Lime (NHL) or Pozzolanic Hydraulic Lime (PHL); a midrange natural hydraulic lime, moderately hydraulic, for moderate strengths and freeze-thaw resistant.; often used for base coats work. It is critically important that the replacement mortar material strength be compatible with both the original brick and the original mortar.
2. Aggregate: **Well graded natural** or Manufactured Sharp Sand with at least 4 grades forming a substantial part of the sand and no more than 3% of particles smaller than grade #200.
3. Casein for Lime Mortar Grouts (Superplasticizer): Casein powder additive by American Casein Company or approved equal.
4. Pigments: Iron oxide pigments, blended to match existing mortar as close as possible.

2.3 Tools and Accessories

- A. Chisels: Carbide-tipped stone carving chisels.
 - 1. Hand Chisels
 - 2. Barre $\frac{1}{2}$ " type B short stroke pneumatic carving tool.
- B. Pointing Irons: Width slightly less than joint width. Various widths required to suit project conditions.
- C. Brushes of various sizes for cleaning raked-out joints.
- D. Garden sprayer, water hose, and shop-type vacuum for cleaning raked-out joints.
- E. Hand water mister bottle and garden sprayer for curing, cleaning, and finishing pointed joints.
- F. Grinders:
 - 1. Blade width limited to $\frac{1}{16}$ ".
 - 2. Equip grinders with source extraction vacuum units to contain dust
- G. Mortar Injectors: For full-depth pointing, if Contractor so elects, Contractor will be permitted to use powered injection equipment of suitable design, providing that Contractor demonstrates that joints can be completely filled and compacted to the same degree as accomplished by hand placement of mortar by conventional methods. Where mortar injectors are employed, the final $\frac{5}{8}$ " shall be placed by hand.
- H. Mixing Equipment: Standard paddle mixer for mixing mortar.
- I. Other tools as necessary for the Work.

2.4 Mortar Mixes

- A. NHL/PHL Mix Design:
 - 1. Mix design to be determined from laboratory analysis of existing mortar. In the absence of analysis, assume 1 part NHL midrange and 2.5 parts of sand, proportioned by volume. Mortar should be mixed for at least 10 minutes. Greater workability and better mortar performance is achieved with less water and longer mixing. (Mortars can be left to stand and fatten up for up to 1-3 hours depending on the mix; and tempered before use.) Mortar can be reworked up to 8 hours after mixing.
 - 2. Casein Lime Grout:
 - 1. Mix NHL Mortar as described in 2.4 A. 1.
 - 2. Add 1% by weight casein powder until desired consistency.

PART 3 – EXECUTION

3.1 Examination

- A. Examine conditions, with installer present, for compliance with requirements for installation tolerances and other specific conditions affecting performance of unit masonry.

- B. Do not proceed until unsatisfactory conditions have been corrected.
- C. Before removing any deteriorated work, establish bonding patterns, levels, and coursings.

3.2 Protection

- A. Prevent repointing mortar from staining the face of the masonry or other surfaces to be left exposed.
- B. Remove repointing mortar that comes in contact with such surfaces.
- C. Cover partially completed work when work is not in progress.
- D. Protect sills, ledges, and projections from droppings.

3.3 Temporary Support

- A. Provide temporary support where necessary to prevent displacement of keystone or brick during repointing and until mortar has achieved sufficient strength.

3.4 Removing Anchors

- A. Remove and discard anchors, nails, pins, and similar devices or embedment items.
- B. Remove ferrous material completely. Do not allow portions to remain embedded.
- C. Point hole with mortar.

3.5 Removing Joint Sealant (if present) from Joints

- A. Cut out joint sealant with a caulking cutter (Fein tool) assisted by hand tools.
- B. Trim joint sealant from joint faces.
- C. Grind remaining sealant from joint faces without appreciably widening joint width or altering appearance of units. Leave edges of units square and perpendicular to exposed face of unit. Do not round of edges of units
- D. Vigorously scrub joint faces with a stiff brush to remove embedded dust and debris from joint faces, followed by vacuuming, working from top to bottom of wall.
- E. Remove existing underlying mortar to the depth specified prior to repointing.

3.6 Removing Existing Mortar

- A. **Drive Through Arch Ways:** Due to the soft mortar undergoing compression and loss from rain and wind erosion, all arches over the drive through are likely to need complete removal and replacement. Shore as required to

permit same. If at some vertical depth it is determined jointly by the contractor and Project Engineer that the mortar is sound, arch brick removal may be truncated to a shallower depth.

B. Where NOT to Remove Mortar from Joints for Repointing:

1. Any and all joints found to be sound and showing no signs of significant mortar loss (in the form of soft powdery mortar) or degradation. Existing mortar requiring etching by a knife or tool to remove is not eligible.
2. To be eligible, mortar must be able to be easily removed by hand or air pressure.
3. This project is NOT a wholesale building mortar joint repair project; only those areas exhibiting degradation/loss of mortar (See Scope of Work, Section 001001, paragraph 2 for a description of the general scope of work). However, a contingency price is being requested in the proposal for wholesale building mortar joint repointing in the event the City should choose such an option (bid item C4).

C. Previously Mortared Joint Repair:

1. Some mortar joints have been patched with a typical Type N, S or M gray mortar. Where such mortar exists, remove the mortar as required to obtain a somewhat uniform depth as noted in paragraph A, above.
2. An attempt has been made in the past at some areas to point some of the mortar joints with a tinted mortar. Those areas appear to be associated with some past isolated repairs (i.e., roof repairs). If the joints appear to be sound, do not disturb.

D. Existing horizontal mortar joints (bed joints) that are pointed with a hard Portland cement mortar may be raked out by a skilled mason by carefully scoring the center of the mortar joint with a rotary grinder to relieve the stress on the joint. The remaining mortar in head and bed joints shall be removed to the required depth using hard or pneumatic stone carving chisels or by hand. Do not grind the mortar from the face of the joints.

E. Vertical joints (head joints) shall not be raked out using a grinder. All vertical head joints must be removed by hand in brickwork.

F. All joints that are to be repaired shall be raked back to sound, solid, back up material. Raking out shall leave a clean, square face at the back of the joint to provide for maximum contact of pointing mortar with the masonry back up mortar. Shallow or feather edging will not be permitted.

G. Existing historic lime-based mortar shall be removed using only small-headed hand or pneumatic stone carving chisels that are no wider than half the width of the existing masonry joints.

H. Do not widen the existing masonry joints. Do not spall or chip the surrounding masonry edges in the process of mortar removal. Damage to surrounding brick or stone resulting from rotary blade over running shall not be permitted. Contractor shall replace brick or stone damaged during mortar removal with replacement units that match the original as determined by the Architect.

I. Brush joint faces and vacuum debris from joint to remove dirt and loose debris, working from top to bottom of wall.

3.7 Mortar Removal Depth

A. Existing brick or keystone mortar joints shall be raked out to a whichever depth is greatest:

1. 5/8 inch

2. 2-1/2 times the width of the existing mortar joint,
 3. The depth necessary to remove previously pointed Portland cement mortar.
 4. Until bonded, cohesive existing lime mortar is encountered.
- B. Where keystones are removed/reset, assume full depth mortar removal/replacement unless otherwise approved by the Project Engineer.

3.8 Full Depth Pointing

- A. Provide temporary support where necessary to prevent displacement of brick during repointing and until mortar has achieved sufficient strength.
- B. Where required to maintain support of units, rake out and repoint each unit in stages, allowing freshly repointed portions to cure sufficiently before raking out and repointing remaining portion of joints supporting the unit.
- C. Remove temporary shims and supports when no longer necessary, and repoint voids left by temporary shims and supports.

3.9 Prewetting

- A. Brush joint faces and flush out joints with water to remove dirt, soft mortar, and loose debris, working from top to bottom of walls. Rinse brick joints with water to remove dust and mortar particles. Thoroughly wet wall below to avoid soiling. Joint surfaces should be damp but free from standing water.
- B. Prior wetting is necessary to achieve the proper absorption rate before masonry repair commences and is essential to good masonry practice. Presoak walls and joints with water as required by project and weather conditions. During hot or windy weather, wet walls and joints several times in advance of pointing. Re-wet walls and joints yet to be pointed if masonry dries out before pointing. Masonry units shall be damp but without standing water at the time of pointing.
- C. Maintain hand mister bottles or a garden sprayer with clean, clear, potable water immediately available to masons at all times during the repointing process. A very low pressure spray (garden hose with nozzle adjusted to a fine, low-volume mist) may be used over large areas providing erosion of joints is prevented.
- D. Exposed surface of masonry adjacent to joint shall be wet prior to repointing.

3.10 Repointing of Mortar Joints

- A. Joints shall be pointed in layers or "lifts" where the joints are deeper than $\frac{3}{4}$ inch.
1. Joints greater than $\frac{3}{4}$ inches deep shall be pointed with an initial lift to bring the joint depth to a uniform $\frac{3}{4}$ inches deep.
 2. Compact each layer at the time it is placed in the joint by applying firm pressure with the pointing tool.
 3. Allow each lift to become thumbprint hard before applying the next lift.
- B. Finish joints uniformly. Do not overwork. Leave the surface of the masonry clean.

3.11 Grouting with Casein Lime Mortar (if applicable):

- A. Control of absorption rate is critical for flowing material. Thoroughly pre-wet cavity with water.
- B. Casein mortar can be injected with a grout pump or poured in place as project conditions permit.
- C. Form a dam with either pointing mortar at the face of the joint or cavity, or use a backer rod to be removed after the casein mortar firms up. Ensure that area of grout is contained.
- D. Inject or pour mortar and, if backer rod used, remove backer rod when mortar is firm. Proceed with repointing if necessary.

3.12 Cleaning

- A. Maintain clean surfaces on the face, sills, ledges, and projections of masonry on a daily basis.
- B. With a trowel, strike off minor dabs of adherent mortar from face of masonry.
- C. Remove minor mortar marks from masonry by misting with water and brushing with a small, stiff-bristle brush.
- D. See also, [paragraph 3.14, item E](#), below.

3.13 Curing

- A. Keep mortar from drying out too quickly.
- B. Mist walls with water as required by project and weather conditions to insure slow curing of the lime mortar.
- C. Shield from direct sun and drying winds for the first 48 hours after installation.

3.14 **Other improvements:**

- A. If any areas of the building are shored with post-construction helical piers, point up all stair-step cracks and other cracks associated with foundation subsidence (associated cracks to be determined by Project Engineer). Point with NHL mortar. Pointing cracks related to foundation subsidence should not occur sooner than 45 days following foundation piling.
- B. Remove any old embedded insulators or other such embedded items determined no longer to be needed. Mortar holes.
- C. Perimeter caulking of windows, doors, and roof trim abutting brick veneer/repointed mortar joints. Caulk to have a minimum 15-year life. Submit cut sheet from manufacturer indicating sealant typical applications and properties. Caulking to be placed in accordance with manufacturer's recommendations; including prep of surfaces at mating point.

- D. Recaulking of roof flashing abutting newly pointed wall mortar joints/brick with a roofing caulk suitable for mating metal flashing to brick. Caulk to have a minimum 15-year life. Submit cut sheet from manufacturer indicating sealant typical applications and properties. Caulking to be placed in accordance with manufacturer's recommendations; including prep of surfaces at mating point.
- E. **Cleaning of existing brick** – Entire Building: The existing brick veneer has an aggregate exposed surface on the face of the brick. The staining on the existing brick appears to be due to atmospheric soiling or possibly bacterial growth. Existing brick stains are to be attempted to be removed before repointing of mortar joints or joint repair.
1. Methods typically used for cleaning historic brick shall be employed to minimize or avoid damaging the brick; methods such as using a soft bristle brush with a mild detergent or non-acidic light duty restoration cleaner. If necessary, hot water can be used in the cleaning process.
 2. Contractor to perform a trial test of cleaning under/within the drive through tunnel first. If the proposed cleaning method/means are deemed satisfactory in the trail test, the rest of the faces (front, rear and ends) are to be cleaned using the same measures.
 3. No harsh acid(s) or high pressure washers are to be used.

END OF SECTION 004900

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Last revised 9/14/22

GENERAL

1. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE (2018 IBC WITH NC AMENDMENTS).
2. SPECIAL INSPECTIONS: ARE NOT REQUIRED.
3. WHERE A SECTION OR DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE AND SIMILAR CONDITIONS.
4. TEMPORARY BRACING, GUY WIRES, SHORING, FALSEWORK, ETC. SHALL BE USED AS NECESSARY TO RESIST ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED DURING CONSTRUCTION, INCLUDING EQUIPMENT AND OPERATION.
5. ALL SECTIONS AND DETAILS, WHETHER EXPLICITLY CUT ON PLAN OR NOT, SHALL BE CONSIDERED TYPICAL AND SHALL APPLY AT SIMILAR CONDITIONS.
6. THE SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND SUBCONTRACTOR PRIOR TO BEING SUBMITTED TO THE ENGINEER FOR APPROVAL.

HELICAL SCREW PILE NOTES

(POST-CONSTRUCTION HELICAL PIERS/FOOTING)

(Last Revised 9/6/22)

1. DESIGN LOADS, IF SHOWN ON THE PLANS (E.G. 12K, -4.1K), ARE UNFACTORED DESIGN LOADS. ULTIMATELY, IT IS THE INSTALLERS RESPONSIBILITY TO OBTAIN THE BEARING SHOWN TIMES A SAFETY FACTOR OF 2 AND PROVIDE A LOG INDICATING THE DEPTH, TORQUE EQUATED TO BEARING PRESSURE OBTAINED (VS. DESIGN). MULTIPLY LOADS SHOWN ON PLAN BY 2 TO DETERMINE THE MINIMUM LOAD REQUIRED FOR INDIVIDUAL HELICAL PIERS.
2. INSTALLATION UNITS SHALL BE CAPABLE OF DEVELOPING THE MINIMUM TORQUE AS REQUIRED BUT SHALL NOT EXCEED THE TORQUE PRESCRIBED BY THE ANCHOR MANUFACTURER. INSTALLATION TORQUE SHALL BE MONITORED THROUGHOUT THE INSTALLATION PROCESS.
3. THE FIRST PIER INSTALLED SHALL BE WITNESSED BY THE ENGINEER OR HIS REPRESENTATIVE AND A PRINTOUT PROVIDED TO THE ENGINEER SHOWING TORQUE VS. CAPACITY. THIS GUIDE IS TO BE USED IN ESTABLISHING THE APPROXIMATE DEPTH FOR THE OTHER HELICAL PILE

(PROVIDED UNIFORMITY IN TORQUE IS ATTAINED). IF THE CONDITIONS CHANGE REQUIRING EXTRA DEPTH, A SECOND PRINTOUT IS TO BE PROVIDED ON THE NEXT FOLLOWING PIER; AGAIN, SHOWING TORQUE VS. CAPACITY TO DETERMINE IF THIS IS A RANDOM ANOMALY. PROVIDE TO ENGINEER.

4. POST-CONSTRUCTION HELICAL PIERS TO SHORE IN PLACE/SUPPORT EXISTING FOOTINGS ARE TO BE PLACED AT LOCATIONS DESIGNATED BY THE PROJECT ENGINEER. DO NOT OVER-JACK PEIRS AS THIS IS, UNLESS OTHERWISE DESIGNATED BY THE PROJECT ENGINEER, A SHORE-ON PLACE.
5. BASE BID TO ASSUME PIERS PLACED TO A PAY DEPTH OF 40 FEET PER PIER. PROVIDE A UNIT PRICE PER VERTICAL FOOT FOR ANY ADDITIONAL DEPTH BELOW 40 FT.
6. HELICAL PIERS SHALL BE MANUFACTURED TO ICC ESR-1854 GUIDELINES.
7. PIERS SHALL BE INSTALLED BY AN AUTHORIZED INSTALLING CONTRACTOR WHO HAS SATISFIED THE CERTIFICATION REQUIREMENTS RELATING TO THE TECHNICAL ASPECTS OF THE PRODUCT AND THE ASCRIBED INSTALLATION TECHNIQUES. PROOF OF CURRENT CERTIFICATION BY THE HELICAL PIER MANUFACTURER MAY BE REQUESTED BY THE ENGINEER.
8. ALL WORK AS DESCRIBED HEREIN SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES IN EFFECT AT THE TIME OF INSTALLATION.
9. HELICAL PIERS AS SPECIFIED SHALL CONFORM TO EITHER THE NC STATE BUILDING CODE AND/OR AN OFFICIAL EVALUATION REPORT WITH ASSIGNED NUMBER PRESENTED UPON REQUEST BY THE ENGINEERS.
10. THE HELICAL LEAD SECTIONS AND EXTENSION SECTIONS SHALL BE SOLID STEEL, ROUND CORNERED SQUARE SHAFT, OR ROUND STEEL PIPE SHAFT, OR COMPOSITE STEEL AND GROUT SHAFT CONFIGURED WITH ONE OR MORE HELICAL BEARING PLATES WELDED TO THE SHAFT.
11. ALL PIERS MUST BE CORROSION PROTECTED BY HOT DIP GALVANIZATION.
12. INSTALLATION UNITS SHALL CONSIST OF A ROTARY TYPE TORQUE MOTOR WITH FORWARD AND REVERSE CAPABILITIES.
13. INSTALLATION UNITS SHALL BE CAPABLE OF POSITIONING THE HELICAL PIER AT THE PROPER INSTALLATION ANGLE. THIS ANGLE MAY VARY

BETWEEN VERTICAL AND 5 DEGREES DEPENDING UPON APPLICATION AND TYPE OF LOAD TRANSFER DEVICE SPECIFIED OR REQUIRED.

- 14. THE APPROPRIATE STEEL NEW CONSTRUCTION LOAD TRANSFER DEVICE SHALL BE USED.**

JOINT SEALANT:

- 1. NON-SAG (FOR VERTICAL AND HORIZONTAL APPLICATIONS, SEALANT FOR EIFS, & SUBMERGED ENVIRONMENTS): USE A NON-SAG FLEXIBLE EXTERIOR GRADE POLYURETHANE SEALANT SUCH AS SIKAFLEX 2C NS MEETING ASTM C-920, TYPE M, GRADE NS, CLASS 25, OR APPROVED EQUAL.**

BRICK MASONRY

- 1. CLAY MASONRY UNITS: MATCH EXISTING BRICK AS CLOSE AS POSSIBLE IN COLOR AND TEXTURE.**
- 2. MORTAR FOR NON-REINFORCED BRICK MASONRY SHALL BE NATURAL HYDRAULIC LIME (NHL) OR POSSOLANIC HYDRAULIC LIME (PHL). SEE SPECIFICATION SECTION 004900 - *MASONRY REPOINTING AND RECONSTRUCTION*, PART 2 - PRODUCTS.**

NEW BRICK JOINTS ARE TO BE 3/8-INCH THICKNESS, OR WHEN LAID ADJACENT TO EXISTING BRICK, JOINTS SHALL MATCH EXISTING MORTAR JOINT THICKNESS FOR BOTH HORIZONTAL AND VERTICAL HEAD JOINTS. NEW MORTAR JOINTS SHOULD BE COMPLETELY FILLED AND SHOVED INTO CONTACT WITH THE PREVIOUSLY LAID UNITS.

- 3. CRACK SEALING OF CRACKS IN BRICK VENEER:**
 - A. CRACK SEALING OF CRACKS IN BRICK VENEER WALLS: SEE SPECIFICATION SECTION 004900 - *MASONRY REPOINTING AND RECONSTRUCTION*, PART 2 - PRODUCTS.**
 - B. CONTRACTOR TO TINT THE MORTAR TO MATCH AS CLOSE AS REASONABLY POSSIBLE THE EXISTING MORTAR.**
 - C. BRUSH THE WALL. WHEN THE MORTAR IS FIRM TO THE TOUCH, BRUSH DIAGONALLY ACROSS IT TO REMOVE ANY DRY MORTAR CRUMBS. (BRUSHING IN LINE WITH THE JOINTS CAN PULL OUT THE FRESH MORTAR.) THEN CAREFULLY SPONGE MORTAR RESIDUE OFF THE**

BRICK FACES. FOR THE NEXT THREE DAYS, USE A TARP TO PROTECT THE SOFT JOINTS FROM THE SUN, WIND, OR HARD RAIN, AND GIVE THE WALL A DAILY MISTING TO KEEP THE BRICK AND MORTAR MOIST.

TIMBER FRAMING

- 1. ALL LUMBER SHALL BE SOUTHERN YELLOW PINE (MINIMUM SPECIFIC GRAVITY OF 0.55) #2 OR BETTER FRAMING UNLESS NOTED OR SPECIFIED OTHERWISE. REFER TO PLANS FOR SIZE.**
- 2. PRESSURE TREATED TIMBER TO BE TREATED TO AWPA UC4C (ABOVE GROUND OR GROUND CONTACT), MINIMUM (OR UC5B WHERE APPLICABLE). MINIMUM NET RETENTION OF PRESERVATIVES SHALL BE IN ACCORDANCE WITH AWPA USE CATEGORY U1.**
 - A. CUT SURFACES OF TREATED TIMBER MUST BE FIELD TREATED. 2% COPPER NAPHTHENATE IS RECOMMENDED.**
- 3. PROVIDE PROPER SIZE AND NUMBER OF NAILS IN ALL DESIGNATED HOLES OF THE SIMPSON CONNECTORS TO ACHIEVE FULL RATED LOAD OF CONNECTOR.**

FASTENERS AND CONNECTORS

(APPLICABLE TO COASTAL ENVIRONMENTS AND/OR WHEN SUCH ITEMS ARE USED WITH ACQ OR CA TREATED TIMBER)

- 1. CORROSION PROTECTION (GENERAL):**
 - A. PRESERVATIVE-TREATED WOOD USED IN A GROUND CONTACT AND IN COASTAL ENVIRONMENTS OFTEN CONTAINS CHEMICAL PRESERVATIVES SUCH AS ALKALINE COPPER QUAT (ACQ), COPPER AZOLE (CA-C), DISPERSED OR MICRONIZED COPPER (CA-C), OR COPPER NAPHTHENATE (CUN-W). FASTENERS MUST BE COMPATIBLE WITH THE WOOD PRESERVATIVE PER THE MANUFACTURERS RECOMMENDATIONS. THEY SHALL ALSO BE COMPATIBLE WITH THE ENVIRONMENT IN WHICH THEY WILL BE USED.**
 - B. CCA TREATMENT FORMULATION WAS COMMON FOR GROUND CONTACT TIMBER PRIOR TO 2003. HOWEVER, THE CURRENT ACQ OR CA TREATMENT FORMULATION IS 2 TO 3 TIMES AS CORROSIVE AS THE FORMER CCA TREATMENT FORMULATION. AS SUCH, WHEN THERE IS AN OPTION, STAINLESS STEEL FASTENERS AND PLATE CONNECTORS SHOULD BE STRONGLY CONSIDERED IN LIEU OF HDG TO REDUCE THE RATE OF FASTENER AND PLATE CORROSION.**

2. WHERE TO USE STAINLESS STEEL PLATES, STRAPS, RODDED CROSS-BRACING AND FASTENERS:

A. INLAND AND IN AQUATIC ENVIRONMENTS:

1. USE TYPE 316/305/304 STAINLESS STEEL WHEN IN CONTACT WITH ACQ OR CA TREATED TIMBER IN EITHER DRY OR WET EXTERIOR ENVIRONMENTS. ACQ IS 2 TO 2.5 TIMES AS CORROSIVE AS THE OLDER CCA TREATMENT (CCA TREATMENT METHOD WAS USED PRIOR TO 2004 AND VOLUNTARILY WITHDRAWN EXCEPT FOR SPECIAL APPLICATIONS).

A. EXCEPTION: WHERE THE ITEM SPECIFIED ON THE PLANS IS NOT COMMERCIALY AVAILABLE (OR CANNOT BE SHOP FABRICATED), ON A CASE-BY-CASE BASIS, THE ENGINEER WILL APPROVE THE USE OF ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD.

2. PREFORMED CONNECTORS, STEEL PLATES AND STRAPS:

A. IN CONTACT WITH ACQ TREATED TIMBER: UNLESS OTHERWISE INDICATED ON THE PLANS, HARDWARE SUCH AS PREFORMED CONNECTORS, STEEL PLATES OR STRAPS HAVING A BASE METAL THICKNESS EQUAL TO LESS THAN 1/8" SHALL BE TYPE 316 STAINLESS STEEL (SEE EXCEPTION 1 UNDER PARAGRAPH 2.A IMMEDIATELY ABOVE).

B. WHEN GALVANIZED MATERIALS ARE SPECIFIED OR SHOWN ON THE PLANS, STRUCTURAL SHAPES HAVING A BASE METAL THICKNESS GREATER THAN 1/8", ANCHORS BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A653, A123 TO G185 COATING THICKNESS STANDARD (1.85 OUNCE/SF [1.56 MILS])

3. G90 COATING IS NOT PERMITTED AS A FASTENER COATING WHEN SUCH FASTENER IS PROPOSED TO BE USED WITH ACQ PRESSURE TREATED TIMBER.

4. ALUMINUM OR ELECTROPLATED GALVANIZED FASTENERS ARE NOT PERMITTED FOR ANY EXTERIOR APPLICATIONS WHEN USED WITH EITHER CONNECTOR PLATES OR STRAPS.

3. NAILS, SCREWS, AND BOLTS (AND THEIR APPLICABLE HARDWARE):

A. WHEN PREFORMED PLATE CONNECTORS, PLATES OR STRAPS ARE SPECIFIED BY A PARTICULARLY MANUFACTURER (I.E. SIMPSON, USP, ETC.), IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR USE THE FASTENERS THAT ARE TYPICALLY SUPPLIED BY THE MANUFACTURER TO ENSURE THE REQUIRED GRADE, LENGTH, AND DIAMETER OF FASTENER MATCHES THE REFERENCED PLATE OR STRAP. FOR EXAMPLE, 10D NAILS ARE AVAILABLE IN BOTH 1 ½" AND 3" LENGTHS FROM THE PLATE MANUFACTURER DEPENDING ON THE STRAP LOAD REQUIREMENTS. REQUEST THAT THE MANUFACTURER SEND THE FASTENER THAT CORRESPONDS TO THE PLATE OR STRAP SPECIFIED OR BEING REQUESTED. VERIFY WHEN ORDERING THAT THE FASTENERS ARE INCLUDED!

1. EXCEPTION: LOCAL COMMERCIALY AVAILABLE FASTENERS MEETING THE PLATE OR STRAP MANUFACTURER'S SAME PRODUCT SPECIFICATIONS (I.E. DIAMETER, LENGTH, GRADE, ETC.). MAY BE USED WHEN APPROVED BY THE ENGINEER AND/OR VERIFIED TO BE THE SAME BY THE PROJECT INSPECTOR).

B. IF NAIL GUNS ARE BEING USED ON THE PLATE OR STRAP CONNECTORS, ADVISE MANUFACTURER AND REQUEST ACCORDINGLY.

4. JOINING DISSIMILAR METALS: VERIFY THAT THE CONNECTOR PLATE AND THE FASTENER ARE THE SAME TYPE OF METAL. AVOID JOINING DISSIMILAR METALS, ESPECIALLY THOSE WITH HIGH GALVANIC POTENTIAL (E.G., COPPER AND STEEL) BECAUSE THEY ARE MORE PRONE TO CORROSION. DO NOT MIX STAINLESS MATERIAL STEEL AND GALVANIZED STEEL MATERIAL. IF THEY MUST BE JOINED, AN INSULATING MATERIALS SUCH AS A NYLON WASHER, OR OTHER PLASTIC OR RUBBER WASHER, SHALL BE USED TO SEPARATE THE DISSIMILAR MATERIALS.

5. RESIDENTIAL FASTENING SCHEDULE: FASTENING OF MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF TABLES R602.3(1) THROUGH R602.3(3) OF THE 2018 NORTH CAROLINA STATE BUILDING CODE - RESIDENTIAL CODE (2015 IRC WITH NC AMENDMENTS). THE FASTENER MATERIAL (I.E. HDG, STAINLESS STEEL, PLAIN) IS SUBJECT TO PARAGRAPHS 1 AND 2 ABOVE.

6. CONNECTIONS TO WOOD FRAMING, SPECIFIED ON THESE PLAN, ARE BASED ON LUMBER HAVING A MINIMUM SPECIFIC GRAVITY OF 0.55 (SOUTHERN YELLOW PINE).

GROUT

1. PROVIDE NON-SHRINK, NON-METALLIC PRE-MIXED GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES. GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF 7,000 PSI 7 DAYS. NON-SHRINK GROUT SHALL BE IN ACCORDANCE WITH CRD-C621 SPECIFICATIONS, AND SHALL BE NON-CORROSIVE, NON-STAINING AND NON-METALLIC, PREMIXED PRODUCT.

DESIGN CRITERIA AND GOVERNING NOTES (ASCE7-16):

1. THE 2018 NORTH CAROLINA STATE BUILDING CODE (2018 IBC WITH NC AMENDMENTS).
2. 2016 EDITION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE 7-16), "MINIMUM LOADS FOR BUILDINGS AND OTHER STRUCTURES."
3. FIFTEENTH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "MANUAL OF STEEL CONSTRUCTION", ALLOWABLE STRESS DESIGN AND "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR 490 BOLTS".
4. 2019 EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI 318), "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
5. LATEST EDITION OF THE AMERICAN STANDARDS OF TESTING OF MATERIALS (ASTM), "STANDARDS IN BUILDING CODES", VOLUME I AND II.
6. LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS), "STRUCTURAL WELDING CODE".
7. LATEST EDITION OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.

EXISTING CONDITIONS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING WORK SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR POSSIBLE CLARIFICATION OF RECONCILIATION.

CONSTRUCTION SAFETY

1. THESE DRAWINGS DO NOT CONTAIN THE REQUIREMENTS FOR JOB SAFETY. ALL PROVISIONS FOR SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



Know what's below.
Call before you dig.

GENERAL TERMS AND CONDITIONS

1. **DEFAULT:** In case of default by the contractor, the City of Wilson may procure the articles or services from other sources and hold the contractor responsible for any excess cost occasioned thereby.
2. **BID BOND/DEPOSIT (WAIVED):** No proposal shall be considered or accepted by the City of Wilson unless, at the time of its filing, the proposal shall be accompanied by a deposit with the City of Wilson of cash, a cashier's check or a certified check on a bank or trust company insured by the Federal Deposit Insurance Corporation in an amount equal to but not less than five percent (5%) of the proposal. In lieu of making the cash deposit, as provided above, bidders may file a Bid Bond executed by a corporate surety licensed under the laws of North Carolina to execute the contract in accordance with the bid bond. This deposit shall be retained by the City of Wilson if the successful bidder fails to execute the contract within ten (10) days after the award or fails to give satisfactory surety as required. Bid bond shall be enclosed in a separate sealed envelope with "Bid Bond" printed on the envelope.
3. **PERFORMANCE AND PAYMENT BONDS:** Performance and Payment Bonds, issued in accordance with Article 3 of Chapter 44A of the General Statutes, each having a penal sum in the full amount of the contract sum, will be required on such contract(s) as may be awarded. This will be required of contractor after award is made.
4. **GOVERNMENTAL RESTRICTIONS:** In the event any Governmental restrictions are imposed which necessitate alternation of the material, quality, workmanship or performance of the items prior to delivery, it shall be the responsibility of the contractor to notify, in writing, the issuing purchasing office at once, indicating the specific regulation, which required such alternations. The City of Wilson reserves the right to accept any such alternations, including any price adjustments occasioned thereby, or to cancel the contract.
5. **AVAILABILITY OF FUNDS:** Any and all payments to the contractor are dependent upon and subject to the availability of funds to the City for the purpose set forth in this agreement.
6. **TAXES:** Any applicable taxes shall be invoiced as a separate item. The City is not exempt from local or North Carolina sales tax.
7. **SITUS AND GOVERNING LAWS:** This Contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to its conflict of laws rules, and within which state all matters, whether sounding in Contract or tort or otherwise, relating to its validity, construction, interpretation and enforcement shall be determined.
8. **PAYMENT TERMS:** Payment terms are Net not later than 30 days after receipt of a correct invoice or acceptance of goods, whichever is later. Invoices are preferred to be sent to: City of Wilson Attn: Public Works Dept. PO Box 10 Wilson, NC. 28794-0010.
9. **NON-DISCRIMINATION:**
 - a. The Vendor will take necessary action to comply with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination on the basis of any prohibited

grounds as defined by Federal and State law.

- b. The vendor will take necessary action to ensure its internal employee policies and procedures are consistent with Executive Order #82 (Roy Cooper, December 6, 2018), which extends workplace protections and accommodations to pregnant employees.

10. **CONDITION AND PACKAGING**: Unless otherwise provided by special terms and conditions or specifications, it is understood and agreed that any item offered or shipped has not been sold or used for any purpose and shall be in first class condition. All containers/packaging shall be suitable for handling, storage or shipment.
11. **INTELLECTUAL PROPERTY WARRANTY AND INDEMNITY**: Vendor shall hold and save the City, its officers, agents and employees, harmless from liability of any kind, including costs and expenses, resulting from infringement of the rights of any third party in any copyrighted material, patented or patent-pending invention, article, device or appliance delivered in connection with The Contract.
12. **TERMINATION FOR CONVENIENCE**: If this contract contemplates deliveries or performance over a period of time, the City may terminate this contract at any time by providing 60 days' notice in writing from the City to the Vendor. In that event, any or all finished or unfinished deliverables prepared by the Vendor under this contract shall, at the option of the City, become its property. If the contract is terminated by the City as provided in this section, the City shall pay for those items for which such option is exercised, less any payment or compensation previously made.
13. **ADVERTISING**: Vendor agrees not to use the existence of The Contract or the name of the City as part of any commercial advertising or marketing of products or Services. A Vendor may inquire whether the City is willing to act as a reference by providing factual information directly to other prospective customers.
14. **ACCESS TO PERSONS AND RECORDS**: An independent auditor shall have access to persons and records as a result of all contracts or grants entered into by the City of Wilson in accordance with General Statute 147-64.7.
15. **ASSIGNMENT**: No assignment of the Vendor's obligations nor the Vendor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority and solely as a convenience to the Vendor, the City may:
 - a) Forward the Contractor's payment check directly to any person or entity designated by the Contractor, and
 - b) Include any person or entity designated by Vendor as a joint payee on the Contractor's payment check. In no event shall such approval and action obligate the City to anyone other than the contractor and the contractor shall remain responsible for fulfillment of all Contract obligations.
16. **INSURANCE**: *A copy of Contractors Insurance Certificate is required to be submitted upon award.*

COVERAGE - During the term of the Contract, the Vendor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the Contract. As a minimum, the Vendor shall provide and maintain the following coverage and limits:

 - a) **Worker's Compensation** - The Vendor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$500,000.00, covering all of Vendor's employees who are engaged in any work under the Contract in North Carolina. If any work is sub-contracted, the Vendor shall require the sub-Contractor to provide the same coverage for any of his employees engaged in any work under the

Contract within the State.

b) **Commercial General Liability** - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$1,000,000.00 Combined Single Limit. Defense cost shall be in excess of the limit of liability.

c) **Automobile** - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used within North Carolina in connection with the Contract. The minimum combined single limit shall be \$250,000.00 bodily injury and property damage; \$250,000.00 uninsured/under insured motorist; and \$2,500.00 medical payment.

REQUIREMENTS - Providing and maintaining adequate insurance coverage is a material obligation of the Vendor and is of the essence of The Contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The Vendor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or The Contract. The limits of coverage under each insurance policy maintained by the Vendor shall not be interpreted as limiting the Vendor's liability and obligations under the Contract.

17. **GENERAL INDEMNITY**: The Vendor shall hold and save the City, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, Services, materials, or supplies in connection with the performance of The Contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the Vendor in the performance of The Contract and that are attributable to the negligence or intentionally tortious acts of the Vendor provided that the Vendor is notified in writing within 30 days from the date that the City has knowledge of such claims. The Vendor represents and warrants that it shall make no claim of any kind or nature against the City's agents who are involved in the delivery or processing of Vendor deliverables or Services to the City. The representation and warranty in the preceding sentence shall survive the termination or expiration of The Contract.
18. **CONFIDENTIALITY**: Any City information, data, instruments, documents, studies or reports given to or prepared or assembled by or provided to the Vendor under The Contract shall be kept as confidential, used only for the purpose(s) required to perform The Contract and not divulged or made available to any individual or organization without the prior written approval of the City.
19. **COMPLIANCE WITH LAWS**: Vendor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business and its performance in accordance with The Contract, including those of federal, state, and local agencies having jurisdiction and/or authority.
20. **ENTIRE AGREEMENT**: This document and any others incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This document, any addenda hereto, and the Vendor's proposal are incorporated herein by reference as though set forth verbatim.

All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.
21. **AMENDMENTS**: This Contract may be amended only by a written amendment duly executed by the City and the Vendor.

22. **FORCE MAJEURE:** Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations as a result of events beyond its reasonable control, including without limitation, fire, power failures, any act of war, hostile foreign action, nuclear explosion, riot, strikes or failures or refusals to perform under subcontracts, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.
23. **SOVEREIGN IMMUNITY:** Notwithstanding any other term or provision in The Contract, nothing herein is intended nor shall be interpreted as waiving any claim or defense based on the principle of sovereign immunity or other state or federal constitutional provision or principle that otherwise would be available to the City under applicable law.
24. **E-VERIFY:** Contractor understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work of authorization of newly hired employees pursuant to federal law in accordance with NCGS 64-25 et seq. Contractor is aware of and in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes. To the best of Contractor's knowledge, any subcontractors employed by it as a part of this contract are in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statute.
25. **IRAN DIVESTMENT ACT CERTIFICATION:** Contractor certifies that, as of the date listed (2017), it is not on the Final Divestment List as created by the State Treasurer pursuant to N.C.G.S. Chapter 147 Article 6E. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. Chapter 147 Article 6E, Contractor shall not utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List.
26. **EVALUATION OF BID:** All qualified proposals/bids will be evaluated and award made to the firm(s) whose proposal/bid is deemed to be in the best interest of the City of Wilson, all factors considered. The City of Wilson reserves the right to reject any and all offers if determined in its best interest.
27. **BID/PROPOSAL PUBLIC RECORD:** All proposals/bids received become the property of the City of Wilson and information included therein or attached thereto shall become public record upon their delivery to the city. Submission of a bid/proposal in response to a request constitutes acceptance of all terms and conditions and requirements contained in the request.
28. **RECOMMENDATION OF AWARD:** The recommendation of award by city council represents a preliminary determination and not a legally binding acceptance of the bid or proposal until the city has executed a written agreement in a form agreeable by an authorized city official.
29. **COST FOR PROPOSAL PREPARATION:** Any costs incurred by Vendor in preparing or submitting offers are the Vendor's sole responsibility; the City will not reimburse any Vendor for any costs incurred or associated with the preparation of proposals.
30. **INSPECTION AT VENDOR'S SITE:** The City reserves the right to inspect, at a reasonable time, the equipment, item, plant or other facilities of a prospective Vendor prior to Contract award, and during the Contract term as necessary for the City's determination that such equipment, item, plant or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Contract.
31. **PRICE ADJUSTMENTS:** A requested price increase may only become effective after approval of the

Purchasing Manager in writing. Price increases will need to have sufficient justification as to the reason why the increase is being requested. The City will need 30 days written notice before price increases can become effective, failure to notify the City of a price increase will result in payment of invoice at prior written contracted/agreed upon pricing until the conditions are met. A price decrease will only need to be communicated to the Purchasing Manager for documentation purposes.

32. LIQUIDATED DAMAGES: Liquidated damages is an amount reasonably estimated or agreed upon in advance to cover the losses incurred by the Owner by reason of failure on the Contractor to complete the work within the specified time of completion.

33. VENDOR REGISTRATION: All vendors (new, current or potential) must register with our Vendor Registration system through Vendor Registry at the following link.

<https://vrapp.vendorregistry.com/Vendor/Register/Index/city-of-wilson-nc-vendor-registration>

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BID FORM

**Maplewood Cemetery Masonry Arched Entrance Improvements/Repairs
City of Wilson, NC**

ACE Bid No.: 19-050

Rev 9/14/22

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ARTICLE 1 – PROPOSER RECIPIENT

1.01 This Bid is to be submitted to:

**Mr. Bill Bass, PE, Public Works Director
PO Box 10
Wilson, NC 27894**

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – PROPOSER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – PROPOSER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has:

1. Conducted such field investigations he/she deems necessary as they relate to the execution of the proposed improvements and repairs.
2. Visited the site and carefully studied the work conditions relating to the proposed repairs, feasibility, near-surface soil conditions, and the both the building and the site as relates to safety and potential damage resulting from the execution of the proposed improvements and repairs.
3. Obtained and carefully studied (or accepts the consequences for not doing so) all applicable additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities as applicable) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

- E. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- F. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- H. Prior to bid, the Bidder has given the City of Wilson written notice of all potential issues or conditions that would or could impact the execution of the proposed scope of work and/or cost in the form of a Request for Information (RFI); and, has obtained a response in writing from the City providing a satisfactory answer or resolution to the potential issues or conditions Bidder raised by the Bidder, prior to their submitting a bid; making no further claims for extra cost or damages. Such questions shall be presented to the City 7 days prior to bid date to allow time for Engineer to respond, and post response, 3 days prior to bid date. All questions will be addressed in a single RFI response with same made available to all prospective bidders.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- J. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 – FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

ARTICLE 5 – BASIS OF PROPOSAL

5.01 Major contract items are identified in the proposal. No adjustment will be made for over- or under-runs of any contingency items, if applicable unless such over- or under-runs are approved by the City Project Inspector, Project Engineer or City Engineer

Refer to Project Special Provisions for description and measurement for payment for items of work under this contract.

- A. Major Contract Items, including any associated elements not noted, for this project include.
 - 1. Repairs and/or reconditioning of existing brick masonry/mortar in a manner consistent with recognized conventional practices for preservation of Historic Masonry Buildings.
 - 2. The general scope of repairs is to be based on the recommendations outlined in the report on *“Maplewood Cemetery Entrance Bldg.; Inspection, Evaluation and Recommendation for Remedial Repairs”* by Applan Consulting Engineers, PA, dated June 18, 2019; copy attached.
 - 3. Any and all associated Mechanical, Electrical and Plumbing required for either adjustments or repairs required in the execution of the proposed scope of work; to be included in the scope of work.

5.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

No.	Description	Quantity	Unit	Unit Price	Extension
LUMP SUM BASE BID					
1	Base Bid includes, but is not necessarily limited to, improvements and repairs to the Maplewood Cemetery Masonry Arched Entrance as described in Specification Section 001001 "Special Conditions Scope of Work, Maplewood Cemetery," Specification Section 004900, and as shown or depicted in the report by Appian Consulting Engineers dated June 18, 2019. Work is to include repointing and crack repair/sealing as specified in the scope of work, associated forms and falsework required for temporarily providing support to existing masonry arches during arch repairs., building permit fees, Certificate of Occupancy (CO) if required, site cleanup and minor landscaping repair associated with performance of work, tree limbing & disposal, scaffolding/lifts, cranes, safety equipment and barriers, etc., all permits, warranty, complete in every detail unless covered as a separate pay item (provided/shown below).	1	LS	-	\$
2	Brick and Mortar Tinting: Associated cost for tinting new brick or new mortar; to be included in the base bid price, base bid item 1, above.	-	-	-	No Bid
3	Timber framing repair due to termite damage: Placement of full-span sister joists/studs or, where sistering is not possible, complete removal and replacement of severely damaged or decayed joists or studs (full span); New or sister joists or studs are to be minimum #2SYP pressure treated and are to match the size of the member being replaced (dimensionally as close to size of the member being sistered or replaced). For bidding purposes, assume all members to be sistered or replaced are 2x6's.	80	LF	\$	\$
4a	Contingency: Post-Construction Helical piers to <u>shore in place/support existing footings</u> in locations designated by Project Engineer. Base bid to assume piers placed to a pay depth of 40 feet per pier.	5	EA	\$	\$
4b	Contingency-for Excess Piering Depth: Provide a unit price per vertical foot for any additional depth below 40 feet base pay depth.	75	VF	\$	\$
Subtotal					\$
5	5% of base bid Contingency for unforeseen elements (as determined and authorized by Engineer if so determined to be a needed.	1	LS	\$	\$
GRAND TOTAL OF BASE BID					\$

ADD/CONTINGENCY BID ITEMS					
C-1	Removal of existing brick veneer in areas NOT exposed to the public (e.g., on side walls within drive through tunnel) and replacement with new brick veneer/mortar (NHL or PHL) closely matching the existing brick veneer/mortar. Cost to include tinting of new brick/mortar if needed. Price to include contractor's markup, coordination, overhead and profit, etc. Pay item to be based	40	SF	\$	\$

	on square foot of vertical wall surface of 4-inch brick veneer.				
C-2	Removal of existing brick veneer in areas Exposed to the public (e.g., front, rear, or side walls of structure) and replacement with salvaged brick veneer removed from drive through tunnel side walls. Includes new mortar (NHL or PHL). Price to include contractor's markup, coordination, overhead and profit, etc. Pay item to be based on square foot of vertical wall surface of 4-inch brick veneer.	40	SF	\$	\$
C3	Parapet Coping removal and replace with new through-wall flashing at locations designated by the Project Engineer (and not included in the base bid). See Section 001001, paragraph II.4.E, Masonry.	40	LF	\$	\$
A1	Total ADDITIONAL Lump Sum Cost of Repointing the Entire Building's Brick Veneer. Excludes repointing already covered under Base Bid (Drive through arch repairs, crack repairs, removal/replacement of gray hard mortar, etc.)	1	LS	-	\$
DEDUCT ITEMS					
D1	Total Lump Sum Deduct for eliminating exterior cleaning of building brickwork.	1	LS	-	\$

CONTINGENCY / ADD & DEDUCT ALTERNATES

1. The award of a contract will be made to the lowest responsible bidder meeting the requirements of the Contract Documents. However, when it comes to evaluation of the proposal based on cost alone, the determination of the lowest bidder will be based solely on the Grand Total Base Bid, shown above, without adjustments or from unsolicited bid qualifiers – no exceptions.

NAME OF BIDDER: _____

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees to complete work in accordance with the Owners' scheduling priorities and that the Work will be substantially complete within **120 calendar days** (THIS TIME ASSUMES A 45-DAY ALLOWANCE FOR BUILDING FOUNDATION TO ADJUST TO NEW HELICAL PIER REACTIONS) after the date when the Contract Times commence to run as provided and will be completed and ready for final payment within **145 calendar days** after the date when the Contract Times commence to run.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Times.

ARTICLE 7 – ATTACHMENTS TO THIS PROPOSAL

- 7.01 The following documents are attached to and made a condition of this Bid:
 - A. Building Documents:
 1. *Special Conditions Section 001001*
 2. *Project Specification Section 004900 COW Maplewood Masonry-Repointing-Reconstruction Specifications*
 3. *Copy of Appian's June 18, 2019 "Maplewood Cemetery Entrance Bldg.; Inspection, Evaluation and Recommendation for Remedial Repairs."*

4. *Report Photo Log of Front, East & West (P-1) & Photo Log of Rear (P-2); both 24x36*
5. Structural Notes pages N-1 through N-8

ARTICLE 8 – OTHER REQUIRED DOCUMENTS

- A. Bid Bond: Not required.
- B. Performance Bond: Required at time of contract execution.
- C. Payment Bond: Required at time of contract execution.
- D. 00 45 19 Non-Collusion Affidavit and Debarment Certification.
- E. Insurance Requirements
- F. Supplementary Conditions
- G. Certificate of Insurance
- H. Sales Tax Form
- I. E-Verify Affidavit Form
- I. Historically Underutilized Business (HUB) Form

ARTICLE 9 – PROPOSAL SUBMITTAL

9.01 This Proposal submitted by:

If Proposer is:

An Individual

Name (typed or printed): _____

By: _____ (SEAL)
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

Date of Qualification to do business in North Carolina ____ \ ____ \ ____.

A Joint Venture

Name of Joint Venturer: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business address: _____

Phone: _____ Facsimile: _____

Submitted on _____, 20____.

State Contractor License No. _____

License Type: _____

Non-Collusion Affidavit and Debarment Certification

State of North Carolina
City of Wilson

I _____, being first duly sworn, deposes and says that:

He/She is the _____ of _____, the Proposer that has submitted the attached proposal;

He/She is fully informed respecting the preparation and contents of the attached proposal and of all pertinent circumstances respecting such proposal; Such proposal is genuine and is not a collusive or sham proposal;

Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, Employees or parties of interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other proposer, firm or person to submit a collusive or sham proposal in connections with the contract for which the attached proposal has been submitted or to refrain from proposing in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached proposal or of any other Proposer or to fix overhead, profit or cost element of the bid price of any other Proposer or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Wilson or any person interested in the proposed contract; and

The price or prices quoted in the attached proposal are fair, proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

Signature and Title

State of North Carolina

County of _____

Subscribed and sworn before me,

This _____ day of _____, 2022

Notary Public

My commission expires _____

Certification Regarding Debarment and Suspension

Contracts for construction or services shall comply with the provisions of 43 CFR Part 12, Subpart C (Uniform Administrative Requirements for Grants and Cooperative Agreements with State and Local Governments). In order to comply with this provision, no contract may be awarded by the grantee (City of Wilson), a sub-grantee or contractor of any grantee or sub-grantee to any party that has been debarred or suspended under Executive Order 12549. By signing this document, you certify to the best of your knowledge that the company, its principals, and its subcontractors which may be awarded a contract with the City of Wilson:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offence in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission or embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally charged by a governmental entity (Federal, State, or local) with commission of any of the offenses in paragraph (b) of this certification; and
- d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Insurance Requirements

for

MAPLEWOOD MASONRY-REPOINTING-RECONSTRUCTION SPECIFICATIONS
ACE Project Number: 19-050

Prepared for:
Mr. Bill Bass, PE, Public Works Director
112 Goldsboro St. E
Wilson, NC 27894

Prepared by:
Appian Consulting Engineers, PA
154 Roundabout Ct.
PO Box 7966
Rocky Mount, NC 27804
252.972.7703

Supplementary Conditions

TABLE OF CONTENTS

	Page
I. CONTRACTOR'S LIABILITY INSURANCE	1

Supplementary Conditions

I. CONTRACTOR'S LIABILITY INSURANCE

The limits of liability for the insurance required shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages:

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoreman's): Statutory
- c. Employer's Liability: \$1,000,000

2. Contractor's General Liability shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- a. General Aggregate \$2,000,000
- b. Products - Completed Operations Aggregate \$2,000,000
- c. Personal and Advertising Injury \$1,000,000
- d. Each Occurrence (Bodily Injury and Property Damage) \$ 2,000,000
- e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable.
- f. Excess or Umbrella Liability
 - 1) General Aggregate \$1,000,000
 - 2) Each Occurrence \$1,000,000

3. Automobile Liability:

- a. Bodily Injury:
 - Each person \$ 2,000,000
 - Each Accident \$ 5,000,000
- b. Property Damage:
 - Each Accident \$1,000,000
- c. Combined Single Limit of \$1,000,000

4. The Contractual Liability coverage required shall provide coverage for not less than the following amounts:

- a. Bodily Injury:
 - Each person \$2,000,000
 - Each Accident \$2,000,000

b. Property Damage:
Each Accident \$1,000,000
Annual Aggregate \$2,000,000

5. Persons or entities to be included on policy as additional insured are as follows:

- a. City of Wilson
- b. Appian Consulting Engineers, PA

CERTIFICATE OF INSURANCE

_____ COMPANY DATE: _____

THIS IS TO CERTIFY TO THE CITY OF WILSON, NC
(Name of Certificate Holder)

of 1800 Herring Avenue, Wilson NC 27894
(Address of Certificate Holder)

that on the above date, the following described insurance policies issued by this Company are in full force and effect:

Name of Insured _____

Address of Insured _____

TYPES OF INSURANCE		POLICY NUMBER	POLICY PERIOD	LIMITS OF LIABILITY	
				BODILY INJURY	PROPERTY DAMAGE
				Statutory	No Coverage
Workmen' Compensation and Employers' Liability				\$	
				\$ Each Person \$ Each Occurrence \$ Aggregate	\$ Each Occurrence \$ Aggregate
Comprehensive Automobile Liability				\$ Each Person \$ Each Occurrence	\$ Each Occurrence
AUTO LIABILITY	Owned Autos			\$ Each Person \$ Each Occurrence	\$ Each Occurrence
	Hired Autos			\$ Each Person \$ Each Occurrence	\$ Each Occurrence
	Other Non-Owned Autos			\$ Each Person \$ Each Occurrence	\$ Each Occurrence
Other					
Description and Location of Operations					

ABOVE POLICIES INCLUDE THE FOLLOWING COVERAGES:

- _____ Premises - Operations - Elevator
- _____ Occurrence B.I. on both General and Automobile Liability
- _____ Occurrence P.D. on both General and Automobile Liability
- _____ Contractors Protective (Independent Contractors)
- _____ Products - Completed Operations
- _____ Personal Inquiry (False Arrest, Libel, Wrongful Eviction, Etc.)
- _____ Broad Form P.D.
- _____ XCU Exclusions Deleted Where Applicable
- _____ Contractual Liability With Respect to Indemnity Agreement as States on Page 1510-1, without subrogation.

_____ Name of Insurance Company Name of Agency Issued At

CONTRACTOR'S SALES TAX REPORT - NC STATE & LOCAL TAXES PAID

OWNER:	City of Wilson	PROJECT NAME:	PROJECT NUMBER:
CONTRACTOR:			
CONTRACTOR ADDRESS:		PAYMENT APPLICATION NUMBER(S):	
		PERIOD:	
		From	to

<u>Vendor Name</u>	<u>Vendor Address</u>	<u>(if any) Invoice #</u>	<u>Date</u>	<u>Invoice Amount</u>	<u>NC Tax</u>	<u>County Tax</u>	<u>Name of County</u>
TOTAL							

Certification:

This is to certify that the foregoing or attached statements are a true and complete statement of all State and County Sales or Use Tax paid by the undersigned contractor from for the period referenced, inclusive for the materials and equipment that were or will become a part of the construction of the above referenced project

(THE FOLLOWING PORTION TO BE FILLED OUT BY GENERAL CONTRACTOR ONLY)

It is further certified that the following are all of the subcontractors that are, or were engaged by this contractor in the performance of this contract and whose tax statements are also enclosed herewith.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Signature

Title

Subscribed and sworn to before me this _____ day of _____, 20 _____ .

Notary Public

My Commission Expires:

STATE OF NORTH CAROLINA

AFFIDAVIT

COUNTY OF _____

I, _____ (the individual attesting below), being duly authorized by and on behalf of _____ (the entity bidding on project hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hires employees pursuant to federal law in accordance with NCGS 64-25(5).

2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCSG 64-25(a).

3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. **(Mark Yes or No)**

a. YES _____, or

b. NO _____

4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This _____ day of _____, 2022.

Signature of Affiant

Print or Type Name: _____

State of _____, County of _____

Signed and sworn to (or affirmed) before me, this the day of _____, 2022

My Commission Expires:

Notary Public

(Affix Official/Notarial Seal)

HISTORICALLY UNDERUTILIZED BUSINESSES

Historically Underutilized Businesses (HUBs) consist of minority, women and disabled business firms that are at least fifty-one percent owned and operated by an individual(s) of the categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

Pursuant to G.S. 143B-1361(a), 143-48 and 143-128.4, the City of Wilson invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. This includes utilizing subcontractors to perform the required functions in this RFP. Any questions concerning NC HUB certification, contact the [North Carolina Office of Historically Underutilized Businesses](#) at (919) 807-2330. The Vendor shall respond to question #1 and #2 below.

a) Is Vendor a Historically Underutilized Business? Yes No

b) Is Vendor Certified with North Carolina as a Historically Underutilized Business? Yes No

If so, state HUB classification:

MINORITY BUSINESS PARTICIPATION

The Bidder has the responsibility to make a good faith effort to solicit minority proposals. We encourage all Bidders even MWBE/HUBs to obtain the goal where subcontracting and supplier opportunities exist.

MWBE FIRM	OWNERSHIP STATUS	ADDRESS	WORK TYPE

ATTACHMENTS

1. Copy of Appian's June 18, 2019 *"Maplewood Cemetery Entrance Bldg.; Inspection, Evaluation and Recommendation for Remedial Repairs."*
2. *Photo Log of Front, East & West (P-1) & Photo Log of Rear (P-2); both 24x36*
3. Structural Notes pages N-1 through N-8



June 18, 2019

Mr. Bill Bass, IV, PE
Director of Public Works
The City of Wilson
1800 Herring Ave
Wilson, NC 27893

Re: Maplewood Cemetery Entrance Bldg.
Inspection, Evaluation and Recommendation for Remedial Repairs

Dear **Mr. Bass**:

At your request, we visited the building at the Maplewood Cemetery to inspect and determine the probable cause of the cracking and apparent failure of the arches above the drive-through openings. My observations and recommendations follow below.

OBSERVATIONS

Exterior

1. The structure is comprised of multi-wythe brick walls with timber ceiling and roof framing. With the exception of the rectangular windows, all doors and other wall fenestrations have arched lintels with what appears to be limestone keystones.



2. Brick & Mortar Condition:

- a. The mortar used on this structure is a Lime mortar (made up of lime putty and sand); a mortar common in the era in which this building was constructed. Lime mortar is softer than cement mortars, porous (which allows water to enter and leave freely); and, with age, begins to breakdown as the lime is leached from the mortar (due to exposure to rain). With exposure to weather, the exterior surface of brick veneer masonry will tend to exhibit loss of lime mortar.

Lime based mortar can allow minor movement without cracking. Lime based mortar can also be somewhat capable of self-healing as small cracks can tend to close up as a result of some of the lime dissolving and mobilizing during wet weather. However, with wetting, lime can also leach out of the mortar; leaving a soft and often loose powder sand in the mortar joint. Both wind and rain can erode the loose sand from the joint leaving open joints particularly in and around exterior fenestration overhangs.

At the two 13-foot wide primary arches where the brick is suspended overhead and exposed to the weather and gravity, the bottom mortar joints have sustained severe loss of mortar as well as softening of the remaining mortar.



Arching action, braced by a shear wall at each end, supports the weight of the two arches and the roof framing it carries. However, with the softening of and partial loss of mortar, the arch is failing. The keystone at the pinnacle of both the front and rear porte-cochere arches has dropped; the front about 1 ½ inches. The rear arch keystone has sustained both a vertical and inward lateral displacement. Fortunately, at both arches, the wedge shape of the keystone has prevented them from falling.

The keystone in the front westward wing-wall arch has sustained a 2-inch vertical drop with cracking radiating upward to the upper arched fenestration.

- b. To a lesser degree, distress was observed at some of the other smaller door arches with both loss of mortar and cracks above the arch where the distance is the narrowest between the parapet and sides of the door openings.
 - c. An inlaid limestone plaque at the top of the front wall states the dates 1876 and 1922.
 - d. A significant number of cracks was found throughout the structure; most located at the corner or apex of fenestrations. The most visually significant and discernable crack as shown on the attached photographic log.
 - e. Most of the cracking has followed the soft mortar joints. There is very little cross-brick cracking. Had the mortar been hard cement-based mortar, the brick too would have cracked.
 - f. A lot of brick exposed to the weather has weathered leaving a very rough sand-like aggregate surface (as opposed to the apparent original wire cut surface finish observed on unweather brick).
3. Subsidence:
- a. Soils are classified by NRCS as NuB which is Norfolk-Urban Land. Norfolk soils typically consist of a surface layer of sandy loamy sand (6"-19") overlaying sandy loam, sandy clay loam, or clay loams (USC type SC, SM). Such soils are sensitive to water and can consolidate when saturated; normally early in the life of the structure. The soils observed at this building are consistent with that designated on the NCRC soils map.
 - b. The LiDAR scans do not indicate an apparent differential settlement. Rather, the scans tend to indicate a somewhat level structure. On the other hand; however, the presence of a number stair-step like cracks observed would typically be indicative of foundation subsidence. Except for the bottom of the front windows, the majority of cracking/lateral movement is somewhat confined to the level above the lower level window headers. Below the windows noted, the cracking may very likely be more related to freeze-thaw cycles than subsidence since the cracks are concentrated at the interior of the walls, away from corners and absent a corresponding crack on the opposing wall at the corners.
4. Freeze-Thaw Contribution:
- a. The cracks in the upper region (typically from the top of the windows/doors to the roof framing) exhibit movements that somewhat correspond to freeze-thaw cycles. Freeze-thaw cycles can cause the brick/mortar to expand and contract resulting in cracks that can widen with each passing cold-weather

season. Lateral movement does not tend to recover once expanded. This could be one of the primary reasons the cracks are wider at the upper elevations of the walls than the lower.

5. Parapet Leakage:

- a. The limestone parapet coping is uneven with many open vertical joints as well as vertical displacement of the caps in some locations. We could not tell definitively if through-wall flashing had been used. There was no visible drip edge or reveal which would normally be present at the face of the masonry wall for through-wall flashing.
- b. The poor condition of the parapet coping allows water to enter the top of the wall and wick down into the soft mortar.

Interior

1. The two storage rooms on either side of the porte-cochere have plastered interior walls. The plaster has been applied over timber furring which, in turn, is attached to the masonry walls. Some walls have had the plaster/furring removed exposing the brick wall.

2. Evidence of Termite Infestation and some Damage to Timber Framing:

- a. We observed what appears to be evidence of past termite damage to some of the roof framing. Termites can reach the roof via wall cracks (which could be hidden from sight) or they can swarm to a wet location during.
- b. Some isolated repairs to a portion of the ceiling/roof framing was observed.
- c. Filling and/or point the cracks will seal off direct access to the roof framing.



OPINION

The primary failure points in this building are:

1. The aging and weathering of the soft lime mortar which has resulted in significant loss of mortar in some critical areas.
2. Poor detailing of the parapets which allows water to enter the exterior walls.
3. Impact of freeze-thaw cycles on the porous mortar which has likely resulted in cracks in the brick veneer.

It is my opinion that the structure can be safely repaired and placed into a condition that will greatly extend the life and safety of this structure.

RECOMMENDATIONS

1. Continue to block public access through the carriage house arches until the masonry arches are satisfactorily repaired.
2. Develop contract documents and obtain bids for the following repairs:

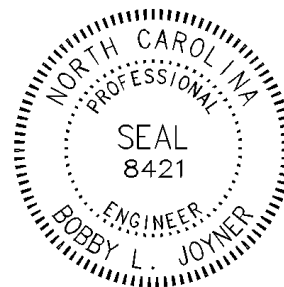
- a. Shoring two primary Porte-cochere 13' wide arches, repositioning of failed keystones, and pointing of the mortar joints.
 - b. Pointing the apparent joints exposed to weather where loss has been so significant (greater than 3/8" to 1/2" in depth and where found to be soft/powdery). Pointing to be done to the recognized standards for pointing and/or repointing of historic masonry buildings. The mortar used for repointing should also be a lime mortar in order to avoid damaging the brick masonry and trapping moisture inside the wall (mortar should be softer than the brick it bonds/cushions). Typically, a chemical analysis is used to determine the proper mortar proportions.
 - c. Parapet coping removal/replacement with the addition of through-wall flashing.
 - d. In some areas where the uncracking is determined by the City to be unsightly to the public eye, the brick veneer can be removed and replaced using lime mortar. However, I did not observe any particular areas where this would be necessary. Wider than normal mortar joints may exist after pointing (where cracks currently exist) but if mixed properly and a reasonable attempt at color matching is tried, the repair may be difficult to detect by the untrained eye to.
3. No repair or replacement of the brick itself is proposed at this time.
 4. Coordination and/or approval of any and all proposed repairs with the local historic or cemetery commission.
 5. Either start or continue to periodically treat the soil for subterranean termites.

I estimate that the repairs noted above could be in the range of \$100,000 to \$125,000 or more depending on contractor availability and repairs ultimately determined to be needed.

I trust the information we have offered above will be helpful. If you have any questions regarding any of the above statements or opinions, please call me.

Sincerely,
 Appian Consulting Engineers, PA

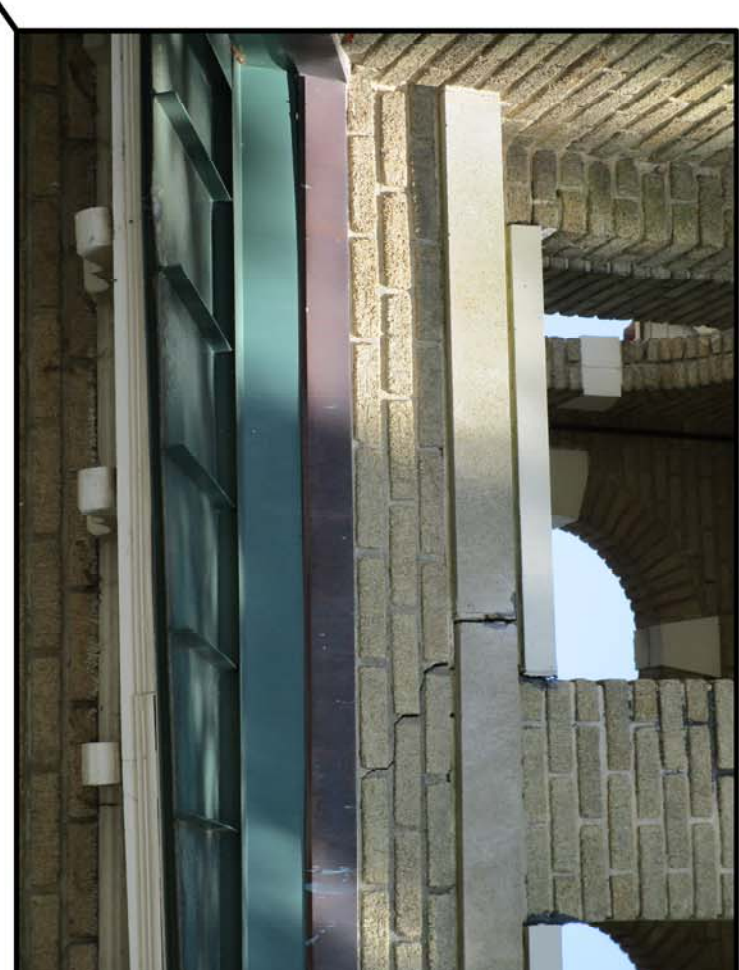
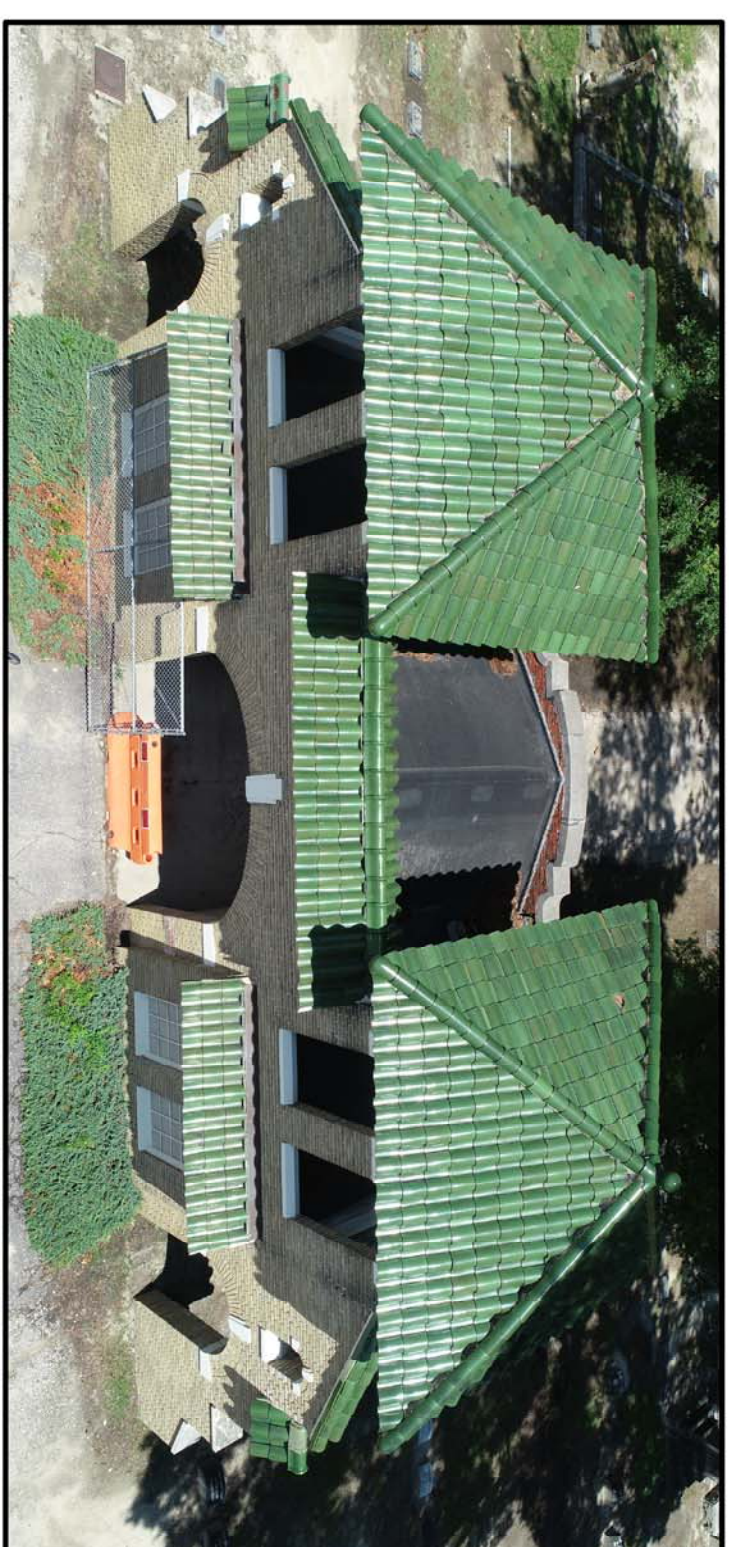
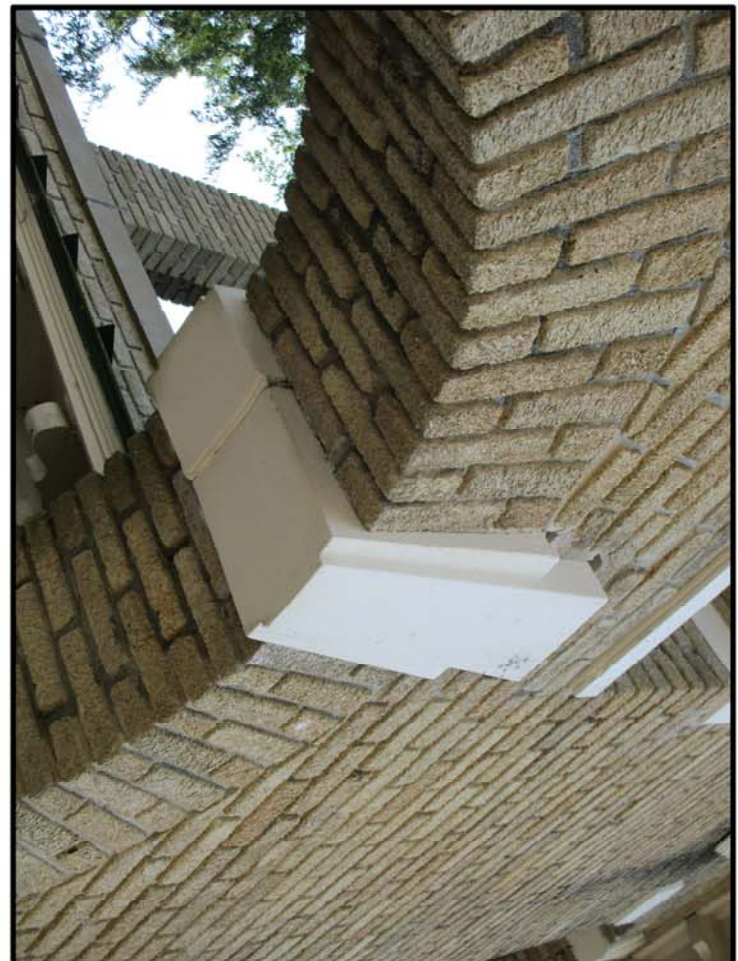
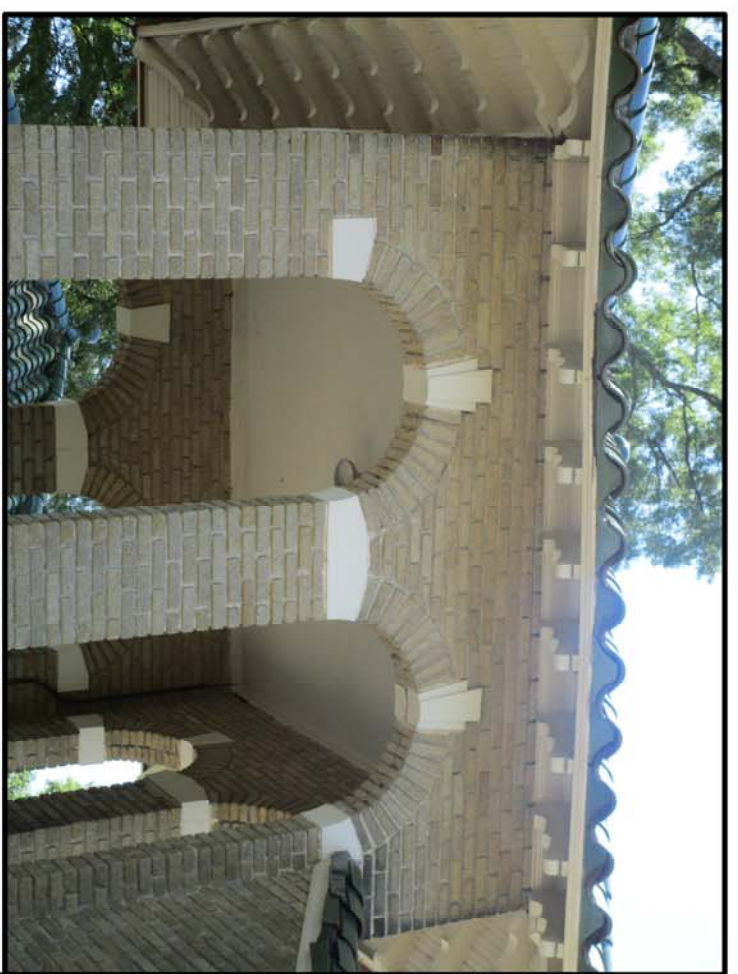
Bobby L. Joyner, PE



cc File

Attachment

bj.Reports.Buildings.City of Wilson.Maplewood Cemetery Entrance Bldg 061319.Maplewood Cemetery Arched Porte-Cochere/Bldg 061319.docx



HR. SCALE:	N/A	DATE:	06/19/2019	DESIGN:	Bobby Joyner
VER. SCALE:	N/A	DRAWN BY:	Kelly Williams	CHKD:	
REVISIONS					
NO.	DATE:	DESCRIPTION:	BY:	CAD:	

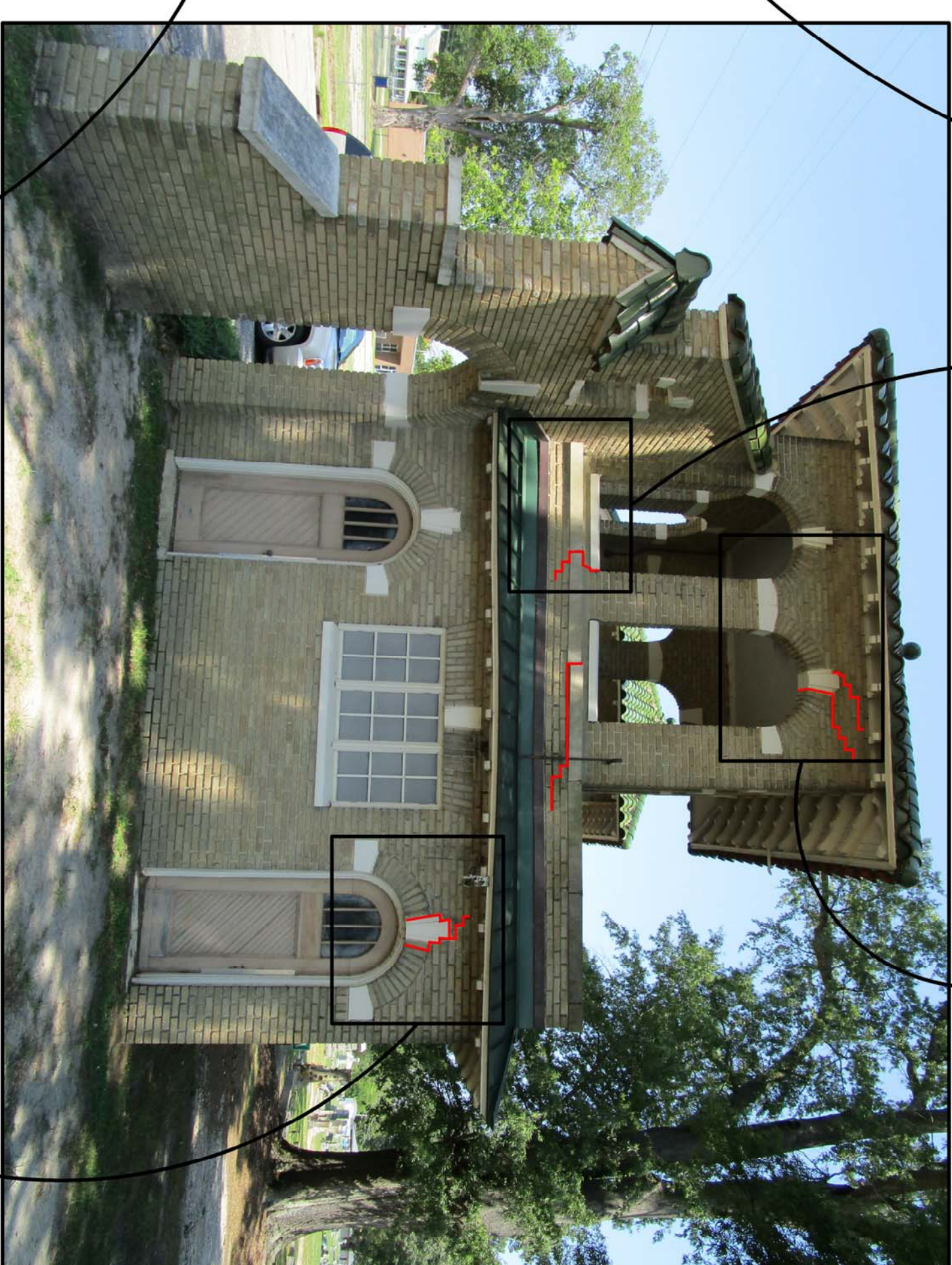
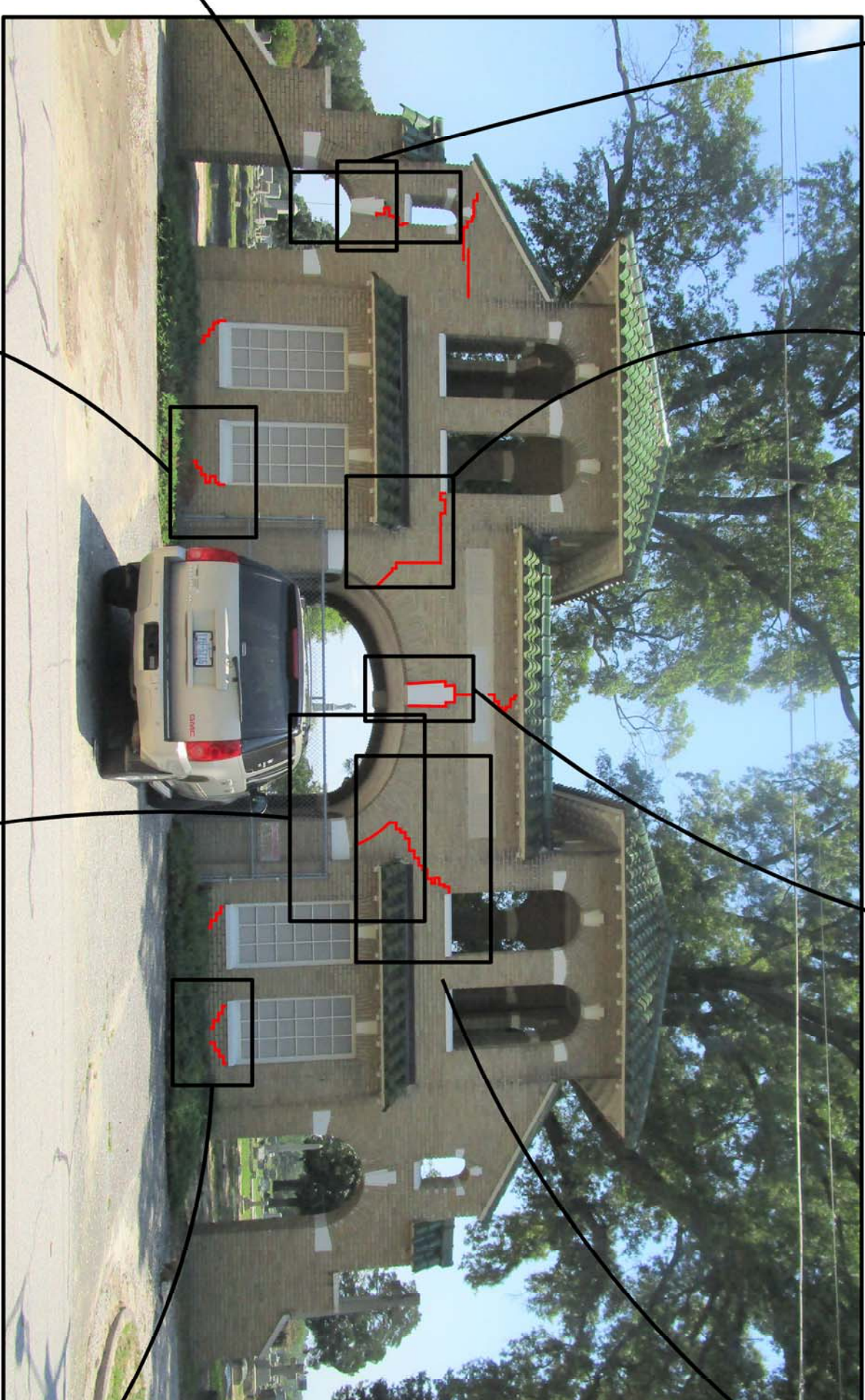


CONSULTING ENGINEERS, P.A.
 CIVIL, MUNICIPAL, &
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 BLN # 6552
 154 Roundabout Ct.
 P.O. Box 7966
 Rocky Mount, N.C. 27804
 Phone: (252) 972-7703
 www.applanengineers.com
 admin@applanengineers.com

WEST END
(LOOKING EAST)

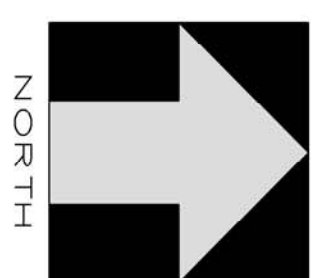
FRONT
(LOOKING NORTH)

EAST END
(LOOKING WEST)



**MAPLEWOOD CEMETERY
 WILSON, N.C.**

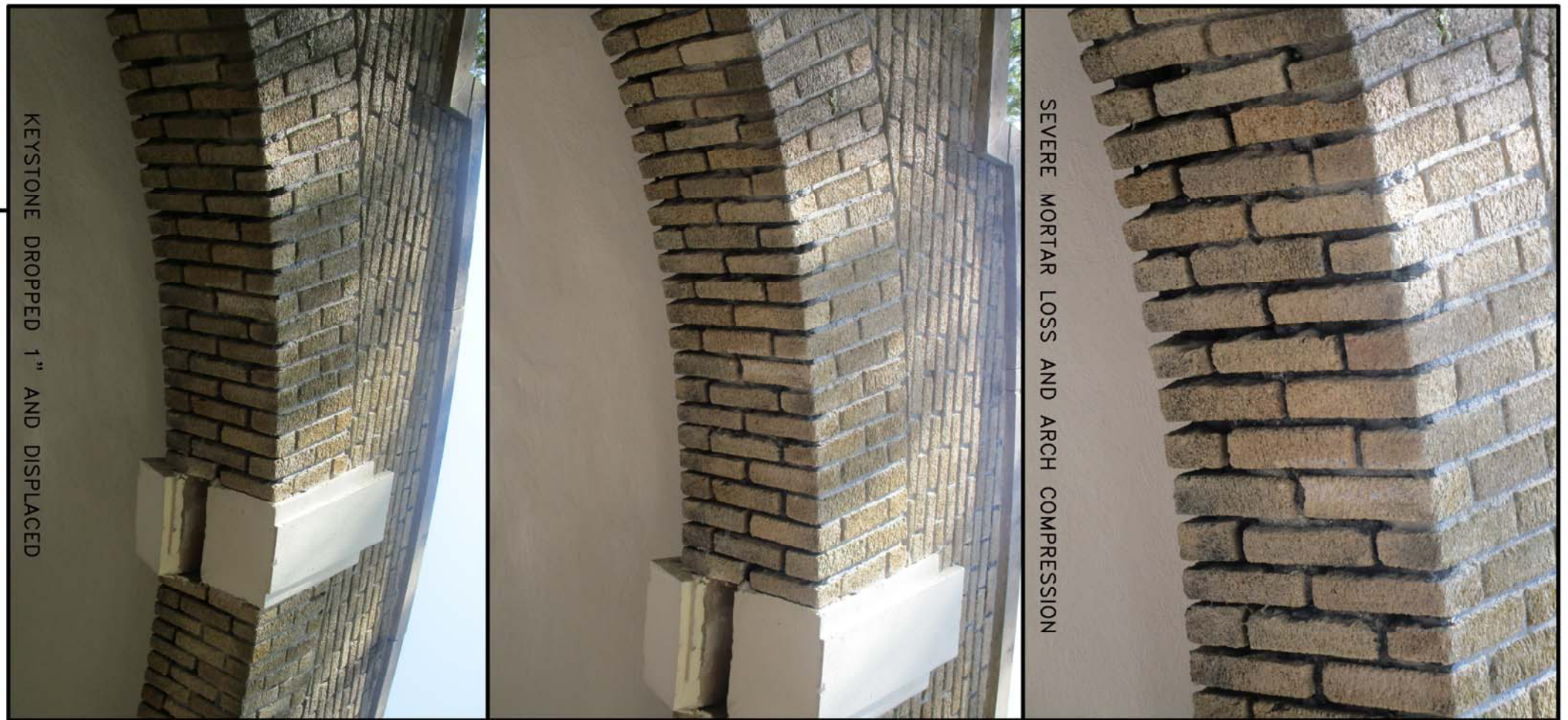
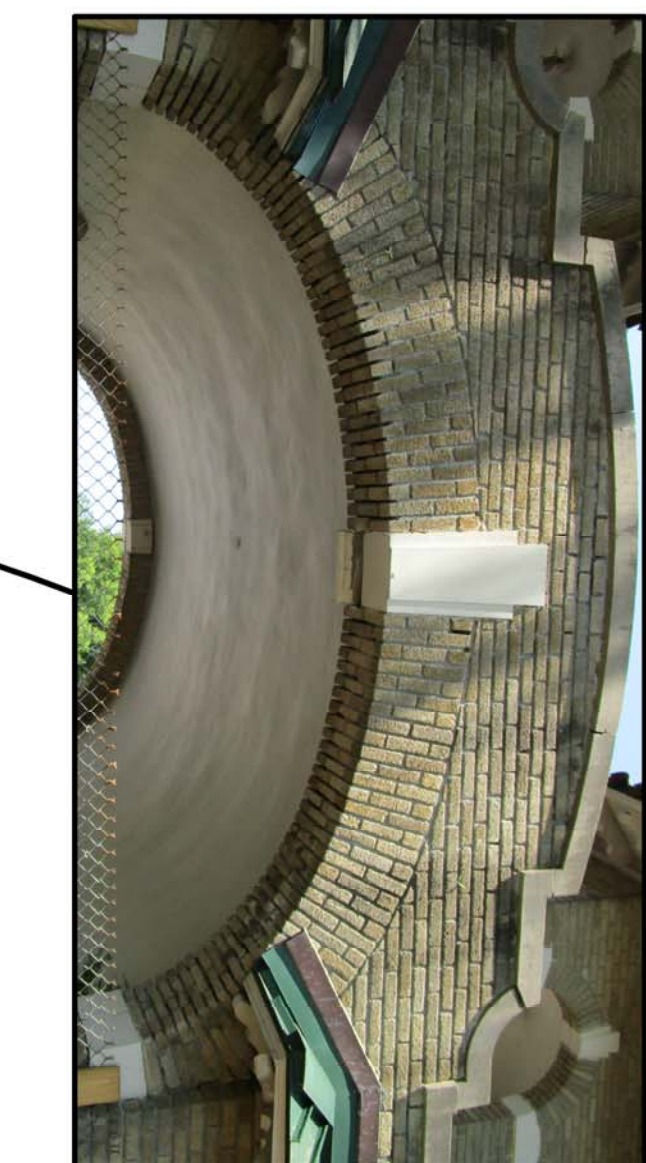
19-050
 D-0000
 P-1



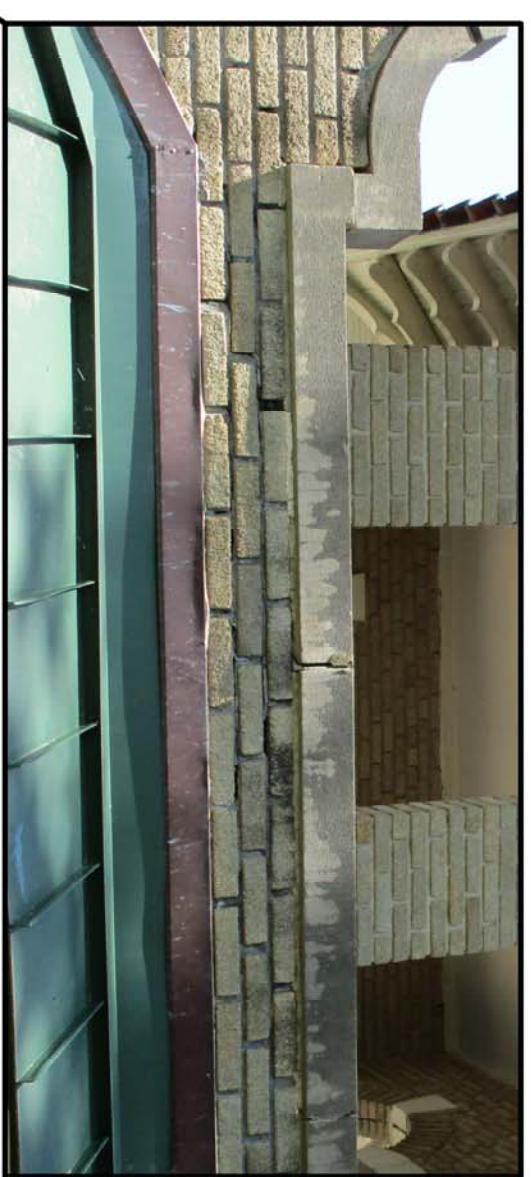
HOR. SCALE:	N/A	DATE:	06/19/2019	DESIGN:	Bobby Joyner
VER. SCALE:	N/A	DRAWN BY:	Kelly Williams	CHKD:	
REVISIONS					
NO.	DATE:	DESCRIPTION:	BY:	CAD:	



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 admin@applanengineers.com



REAR
(LOOKING SOUTH)



Final Drawings
 Review Purposes Only
 PRELIMINARY DWGS

NOT FOR CONSTRUCTION

**MAPLEWOOD CEMETERY
 WILSON, N.C.**

19-050
 D-0000
P-2